

1972 Geophysical Report on Ground Magnetometer
and Induced Polarization Surveys on the
LENNAC LAKE COPPER PROPERTY

Claims Thezar 49-56, 71, 73, 75, 77, 57-62, 79, 81,
83, 85, 80, 82, 84, 86, 101-104, 72, 74, 76, 78, 91-100

Located 16 miles SW of Granisle at Latitude
54°45'N, Longitude 126°20'W 93 L 16 & 9
Omineca Mining Division

By G.M. DePaoli, B.Sc. Geophysicist and
J.F. Allan, P.Eng. (B.C.) for
Amax Potash Limited

Work was carried out during July 2 - 20, 1972

93L/9W

3808

1972 Geophysical Report

3808

TITLE	Geophysical Report on Ground Magnetometer & Induced Polarization Surveys on the LENNAC LAKE COPPER PROPERTY
AUTHORS	G.M. DePaoli, B.Sc. Geophysicist and J.F. Allan, P. Eng. (B.C.)
DATE	August 1972
COMMODITY	Cu
LOCATION-Area	Babine Lake
-Mining Division	Omineca
-Coordinates	54°45'N latitude & 126°20'W longitude
-NTS	93 L 16 and 9

AMAX VANCOUVER OFFICE

Department of	
Mines and Petroleum Resources	
ASSESSMENT REPORT	
NO. 3808	MAP.....

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SUMMARY

A ground magnetometer and an induced polarization survey were completed on the Lennac Lake Copper Property during July 2 - July 20, 1972. The results reveal that a small magnetic low is coincident with the center of a large induced polarization/resistivity anomaly occurring in the western part of the grid area. Chalcopyrite mineralization is associated with the two anomalies.

INTRODUCTION

The Lennac Lake Copper Property is located in the Babine Lake area of Central B.C. The property consists of 132 claims owned by Amax Potash Limited. During the period July 2 to July 20, 1972 two geophysical surveys were completed to aid in the geological evaluation of the property. The following report describes the instrumentation, field procedure and results obtained from the two surveys.

At the request of Amax Potash Limited and under the supervision of G.M. DePaoli an induced polarization contract was awarded to Dennis F. Morrison, an independent geophysical contractor. Per cent frequency effect and resistivity measurements were obtained in the frequency domain and each line of the grid was surveyed.

A ground magnetometer survey was also executed over the grid by G.M. DePaoli. In anticipation of relatively low magnetic gradients a proton precession magnetometer was employed for the survey.

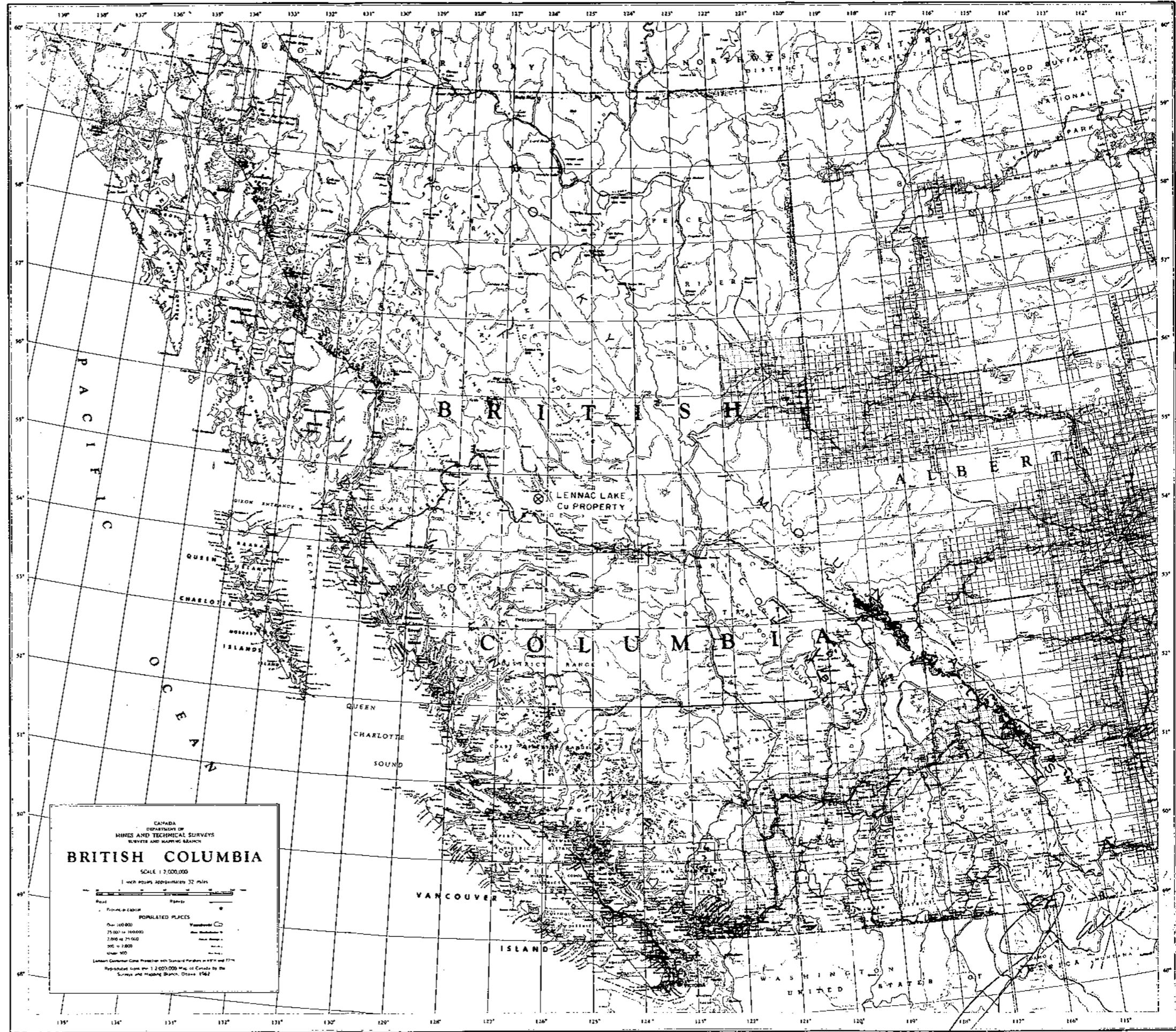
Location and Access

The property is located within the Nechako Plateau $8\frac{1}{2}$ air miles southwest of Topley Landing. It lies in the Omineca Mining Division at $54^{\circ}45'N$ latitude and $126^{\circ}20'W$ longitude. Access is available by vehicle along a gravel road from Topley on Highway 16 and by an access road, constructed by AMAX in 1971, leading from the Fulton Lake road (Figure 2).

Grid Control

The control grid consists of 20.5 miles of cut, chained and picketed lines. The central baseline is 9800 feet long and trends 120° . Two tie lines parallel to the baseline were also cut 3000 feet north and south of the baseline. Perpendicular cross lines were cut at 800 foot intervals. All of the line cutting was done by line of sight picketing and azimuths were periodically checked by compass.

Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. 3808 MAP #1



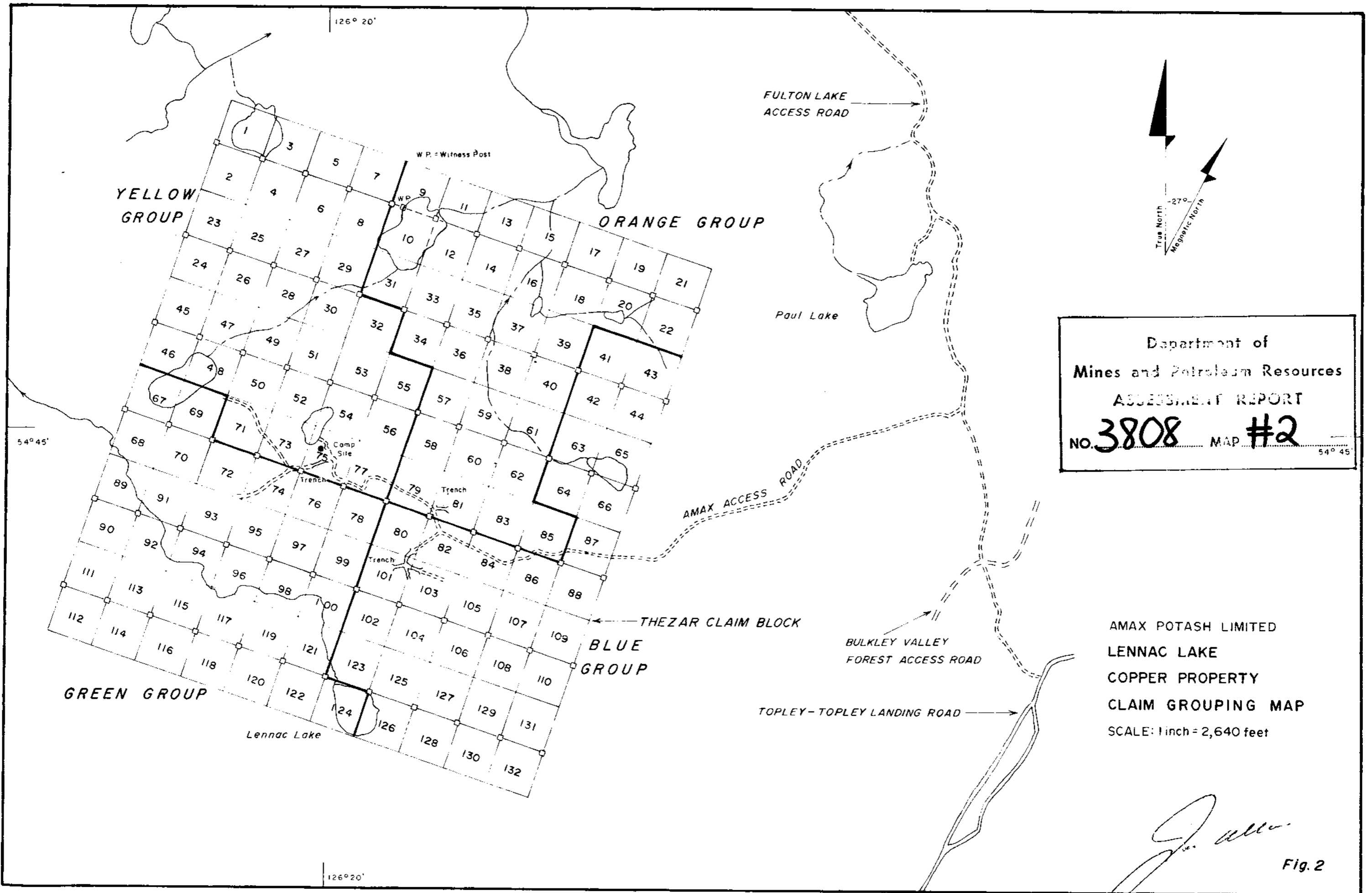
CANADA
 DEPARTMENT OF
 MINES AND TECHNICAL SURVEYS
 SURVEYS AND MAPPING BRANCH
BRITISH COLUMBIA
 SCALE 1:2,000,000
 1 inch equals approximately 32 miles

POPULATED PLACES

Over 100,000	100,000 to 75,000	75,000 to 50,000	50,000 to 25,000	25,000 to 10,000	Under 10,000
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Least Common Scale Projection with Standard Parallels at 49°N and 52°N
 Reproduced from the 1:2,000,000 map of Canada by the
 Survey and Mapping Branch, Ottawa 1962

GENERAL LOCATION MAP FIG. 1



GENERAL GEOLOGY

The property is underlain by a sequence of Jurassic basic to acid volcanic and equivalent intrusive rocks and minor sedimentary rocks of the Hazelton Group.

Porphyritic dykes of probable Early Tertiary age intrude the Hazelton Group rocks. Pyrite and chalcopyrite is associated with the dykes.

MAGNETOMETER SURVEY

Introduction and Theory

Because of the gentle topography and the abundance of lakes and swamps outcrop exposure is limited in the area. A ground magnetometer survey was carried out to further define the distribution and boundaries of major rock units. It was also hoped that the results of the survey would aid in the interpretation of structure and recognition of hydrothermal alteration on the property.

The magnetism of all rocks is controlled by their content of ferromagnetic material, i.e. substances possessing a relatively high susceptibility and capable of acquiring permanent magnetization. Often intrusions are accompanied by widespread hydrothermal alteration zones in which ferromagnetic minerals, principally magnetite, may be redistributed in such a way that the altered zone is characterized by a distinctive magnetic signature.

Instrument and Procedure

The instrument employed was the Model G-806 portable Proton Magnetometer manufactured by Geometrics of 914 Industrial Avenue, Palo Alto, California 94303. This proton free precession magnetometer operates on the principles of nuclear magnetic resonance to produce a measurement of the total magnetic intensity of the earth's field. The instrument is comprised of an electronic package (9.5 lbs.) battery pack, (10.0 lbs.) and a sensor (3.5 lbs.). Sensitivity is ± 1 gamma and values are obtained from a digital display readout. Operating temperatures are from 0 - 50°C.

Station 108+00E, 100+00N was selected as the datum value for the survey. The baseline was first surveyed from this point, at 100 foot intervals, in an easterly direction to station 148+00E, 100+00N and then resurveyed back to the starting station. Special care was observed on cross line intersections and corrections were made for the diurnal variation. In a similar fashion magnetic reference points were obtained for the western half of the baseline. The north-south oriented cross lines were then surveyed at 100 foot stations, and diurnal corrections were calculated from baseline reference points. Corrected values were plotted on a scale of 1"=400' and are presented in Figure 3.

Results and Discussion

The data was contoured employing a 100 gamma interval and the resulting magnetic patterns are displayed in Figure 3.

Three features dominate the isomagnetic map. The first is a large magnetic high centered on line 132+00E south of the baseline. This is possibly a reflection of increased magnetite content with volcanic tuffs and breccias outcropping in this area. The magnetic pattern is broken in the central part of the grid by an area of low magnetic relief trending north-northeast. On the northwest quadrant of the grid a small magnetic low partially ringed by highs is positioned between lines 76+00E and 84+00E. This low is coincident with a large I.P. anomaly and can be interpreted as portraying a redistribution of ferromagnetic minerals as a result of hydrothermal activity.

INDUCED POLARIZATION SURVEY

Introduction and Theory

During the period July 2 to July 20, 1972, 18.3 line miles of induced polarization/resistivity surveying were completed over the property by D.F. Morrison. Because of limited outcrop exposure the survey was initiated to determine the lateral and vertical distribution of sulphides throughout the total grid area.

Resistivity information is useful in inferring overburden depths, defining abrupt lithological changes, and assessing the importance of any I.P. effects obtained.

The term induced polarization means electrical polarization (i.e. separation of charges) induced by an applied electric field. The cause of this polarization is changes in the mobilities of ions within a rock. At the interfaces between zones of different mobilities, excesses or deficiencies of ions occur; the concentration gradients developed oppose the current flow and cause a polarizing effect. When mineral grains block the pore passages of rocks and a current is applied, a concentration of ions builds up at the electrolyte (water)-metal interface while awaiting an electrochemical reaction which must occur before the electric charge can be transferred from an ion in the electrolyte to a free electron in the metal. The forces which oppose the current flow are said to polarize the interface and the added voltage necessary to drive the current across this barrier is known as "overvoltage".

It takes a finite time to build up overvoltages and one finds that the impedances of these zones (Warburg Impedance) decreases with increasing frequency. In the frequency domain system that was employed the decrease in the Warburg Impedance was measured between current applied at 0.3 hertz (AC 1) to current applied at 5.0 hertz (AC 2).

Instrument and Procedure

A multiple frequency McPhar induced polarization system Model P660, was employed in measuring the polarization and resistivity parameters. The transmitter is a manually variable voltage source. The output current can be selected from both polarities and varies from direct current to automatically alternating output frequencies of 0.05, 0.1, 0.3, 1.25, 2.5 and 5.0 hertz.

On this survey the low and high frequencies employed were

0.3 and 5.0 hertz. Power was obtained from a $2\frac{1}{2}$ KW - 400 hertz motor generator. The maximum output current for the transmitting system is 5 amp. while the maximum output voltage is 690 volts.

The receiver employed was the new 1969 A.C. P660 model. This is a potentiometer type where the amplified and filtered signal is compared with a reference voltage. It is powered by six 8V alkaline transistor batteries and draws 7.5 ma. Total weight including carrying case and batteries is 5 pounds.

An in line dipole-dipole array was employed in the survey. Dipole length was 300 feet and measurements were taken on four separations ($n = 1, 2, 3, 4$). Survey procedure required the preparation of a "set-up" station near the center of each line. The receiver and its motor generator power supply remained stationary at the set-up position and wires in increasing three hundred foot intervals were strung out in both directions. Care was taken to ensure that the wires were well separated to prevent inductive coupling effects. The ends of the wires were connected to four stainless steel rods which had been hammered into the ground. Where possible the receiving dipole also utilized the stainless steel rods for electrode connections. Once the receiver dipole moved past the last steel rod emplaced for the transmitting set up connections were made via porous pots. Radio contact between the receiver and transmitter operators coordinated power "on" and "off" periods.

Results and Discussion

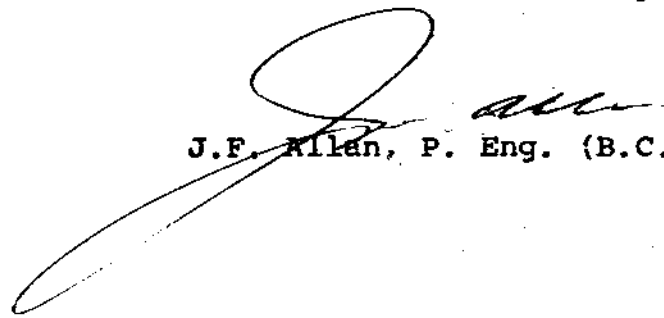
The data is plotted in fifteen pseudosections after Page 9. A plan view was also made of the first separation per cent frequency effects and is presented in Figure 4.

On the plan map an arcuate pattern of very high frequency effects (15 - 24%) is evident. Within this ring lower I.P. effect were encountered, however they are above background and are anomalous. Outcrop exposed along the ring of high I.P.

response is pyritized while chalcopyrite mineralization is visible within the ring structure.

August 1972


G.M. DePaoli, B.Sc. Geophysicist


J.F. Allan, P. Eng. (B.C.)

ASSESSMENT DETAILSLIST OF CLAIMS

<u>Claim Name</u>	<u>Record Number</u>	<u>Anniversary Date</u>
Thezar #49-56 inclusive	100177-100184 inclusive	July 27, 1973
#71, 73	100199, 100201	"
#75, 77	100203, 100205	"
#57-62 inclusive	100185-100190 inclusive	"
#79, 81	100207, 100209	"
#83, 85	100211, 100213	"
#80, 82	100208, 100210	"
#84, 86	100212, 100214	"
#101-104 inclusive	100229-100232 inclusive	"
#72, 74	100200, 100202	"
#76, 78	100204, 100206	"
#91-100 inclusive	100219-100228 inclusive	"

Summary of Work

20.5 miles line cutting - June 14 - July 5, 1972
 18.3 line miles I.P. survey - July 2 - July 20, 1972
 19.5 line miles Magnetometer survey - July 6 - July 11, 1972

Line Cutting

20.5 miles - lines cleared by axe and power saw, chained
 and picketed at 200 foot intervals by
 Gerard Auger, Contractor, @ \$120.00/mile \$2,460.00
 Board for 6 man line cutting crew -
 76 days @ \$10.00/day 760.00

I.P. Survey

18.3 line miles - I.P. contracted to Dennis Morrison
 13 operating days @ \$200.00/day 2,600.00
 5 standby & travel days @ \$100.00/day 500.00
 - Personnel & Salaries -
 Dennis Morrison - IP Contractor, Box 418, Gravenhurst,
 Ontario - 18 days
 Marcel Arsenault - IP Assistant, Box 28, R.R.#3, Abrams
 Village, P.E.I. - 18 days
 G.M. DePaoli - Geophysicist, 601-535 Thurlow St., Vancouver 5, B.C.
 4 days @ \$51.21/day 204.84
 R.G. Fellers - Labourer, Box 474, Houston, B.C.
 16 days @ \$25.00/day 400.00
 G.W. Anderson - Labourer, Box 392, Houston, B.C.
 16 days @ \$25.00/day 400.00
 - Board - 72 man days @ \$10.00/day 720.00

Declared before me at the *City*
of *Vancouver*, in the
Province of British Columbia, this *25*
day of *August* 1972, A.D.

Colquhoun & Boyd

Jan Lunn
A Commissioner for taking Affidavits within British Columbia or
A Notary Public in and for the Province of British Columbia.

Sub-mining Recorder

Magnetometer Survey

Minimum 2 week rental of Geometrics Proton Precession Magnetometer	\$300.00
G.M. DePaoli - Geophysicist, 601-535 Thurlow Street, Vancouver, B.C. 6 days @ \$51.21/day	307.26
Board - 6 man days @ \$10.00/day	60.00
<u>Report Preparation and Drafting</u>	<u>250.00</u>
Total	\$8,962.00 =====

This work is to be applied for two years on the above listed Thezar claims

Declared before me at the City
of Vancouver, in the
Province of British Columbia, this 25
day of August 1972, A.D.

Elyse L. Boyd

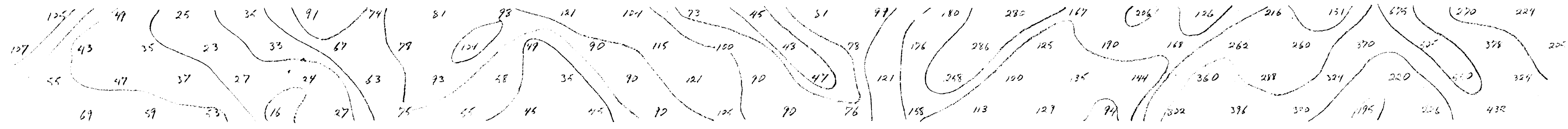
Joan Burns

A Commissioner for taking Affidavits within the Province of British Columbia
A Notary Public in and for the Province of British Columbia

Sub-mining Recorder

Joan Burns

465 485 515 545 575 605 635 665 695 725 755 785 815 845 875 905 935 965 995 1025 1055 1085 1115 1145 1175 1205 1235 1265 1295



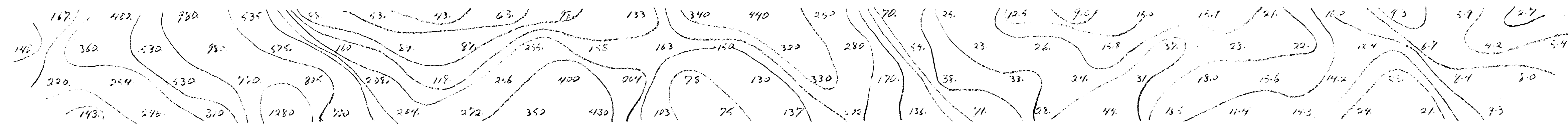
Pa/2 II

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. **3808** MAP #3

INSTRUMENT High Power I. P. (Dipole - Dipole)
FREQUENCY 0.3 and 5 c. p. s.
OPERATOR D. F. Morrison
DATE July 1972

BASE LINE 100+00 N

100 60 400 200



M. F. **3808** M-3

AMAX POTASH LIMITED

LENNAC LAKE COPPER PROPERTY
OMINECA MINING DIVISION - BRITISH COLUMBIA

INDUCED POLARIZATION SURVEY

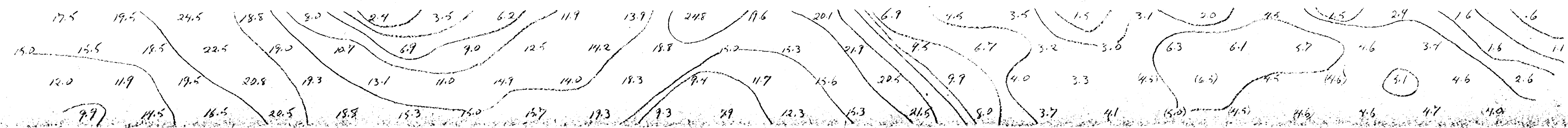
BASE LINE 100+00 N

SCALE 1" = 300'

R. E. F.

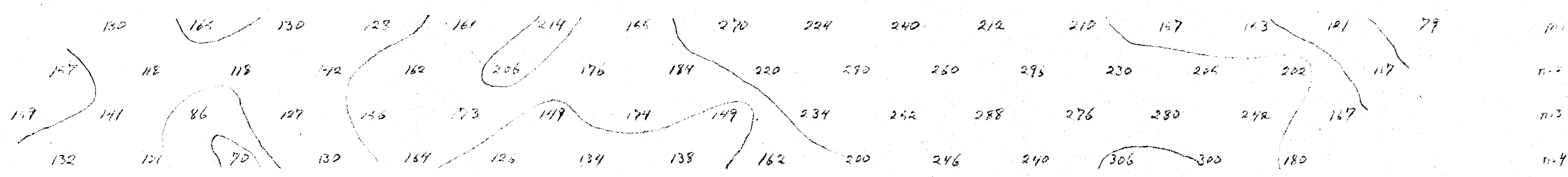
To accompany geophysical report on the "LENNAC LAKE COPPER PROPERTY" by G. M. DePaoli and J. E. Allan.

APPENDIX 1a



n=1
n=2
n=3
n=4

47E 51E 54E 57E 60E 63E 66E 69E 72E 74E 78E 81E 84E 87E 90E 93E 95E 98E 100E 102E 105E



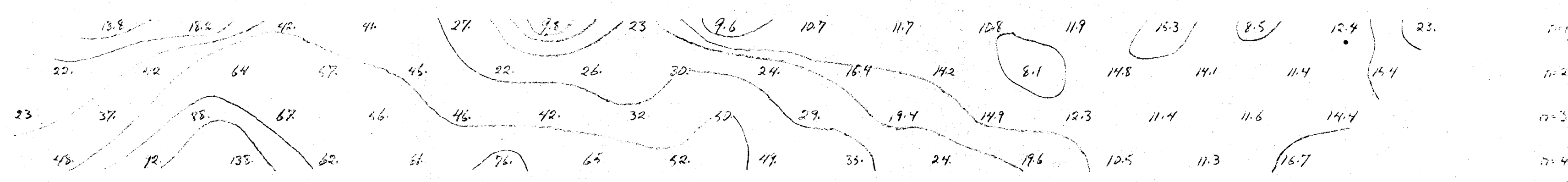
Pa/2π

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. **3808** MAP. **#4**

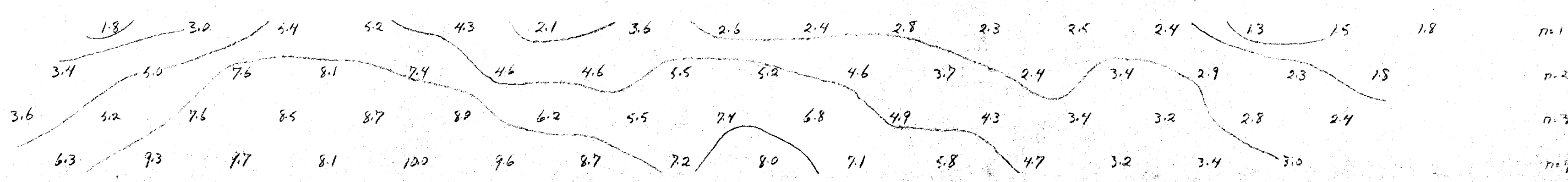
INSTRUMENT High Power. I. P. (Dipole - Dipole)
FREQUENCY 0.3 and 5 c. p. s.
OPERATOR D. F. Morrison
DATE July 1972

2.00E ENDS

CREEK



M. F.



P. E. F.

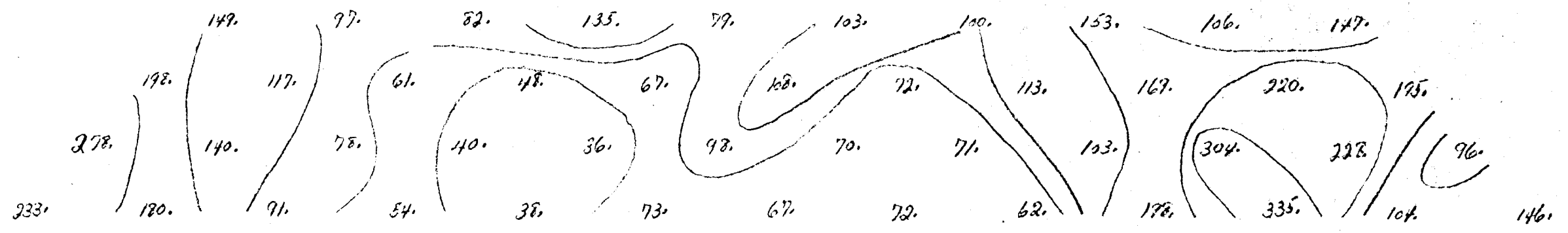
AMAX POTASH LIMITED
LENNAC LAKE COPPER PROPERTY
OMINECA MINING DIVISION — BRITISH COLUMBIA
INDUCED POLARIZATION SURVEY
TIE LINE 130+00 N

SCALE 1" = 300'

To accompany geophysical report on the "LENNAC LAKE COPPER PROPERTY" by: G. M. DePaoli and J. F. Allon.

Jan
APPENDIX I b

78W 79W 82W 85W 88W 91W 94W 97W 100W 103W 106W 109W 112W 115W 118W 121W 124W 127W 130W

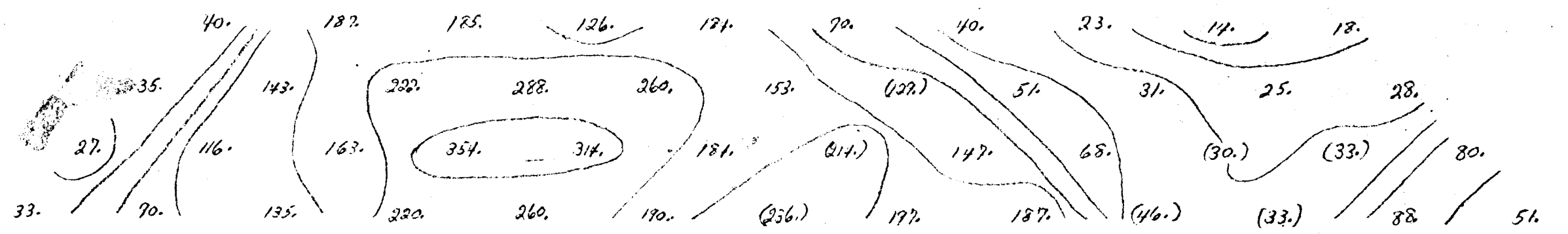


N=1
N=2
N=3
N=4

Pa/2ii

INSTRUMENT High Power I.P. (Dipole - Dipole)
FREQUENCY 0.3 and 5 c.p.s.
OPERATOR D. F. Morrison
DATE July 1972

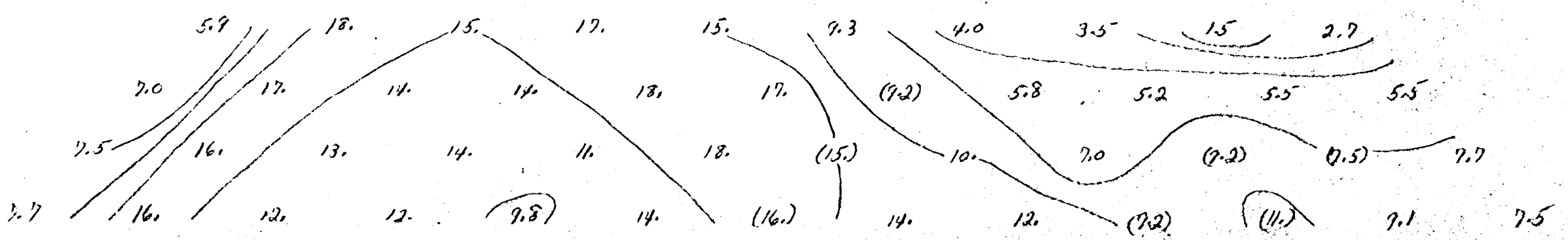
300 450 L30



N=1
N=2
N=3
N=4

M. F.

76W 79W 82W 85W 88W 91W 94W 97W 100W 103W 106W 109W 112W 115W 118W 121W 124W 127W 130W

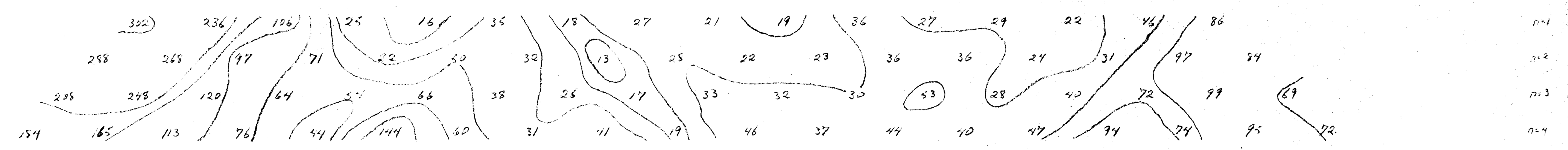


N=1
N=2
N=3
N=4

P. E. F.

AMAX POTASH LIMITED
LENNAC LAKE COPPER PROPERTY
OMINECA MINING DIVISION - BRITISH COLUMBIA
INDUCED POLARIZATION SURVEY
LINE 52+00'E
SCALE 1" = 300'
To accompany geophysical report on the "LENNAC LAKE COPPER PROPERTY" by: G. M. DePaoli and J. F. Allan.
APPENDIX I C

6700 7000 7300 7600 7900 8200 8500 8800 9100 9400 9700 10000 10300 10600 10900 11200 11500 11800 12100 12400 12700 13000 13300 13600 13900

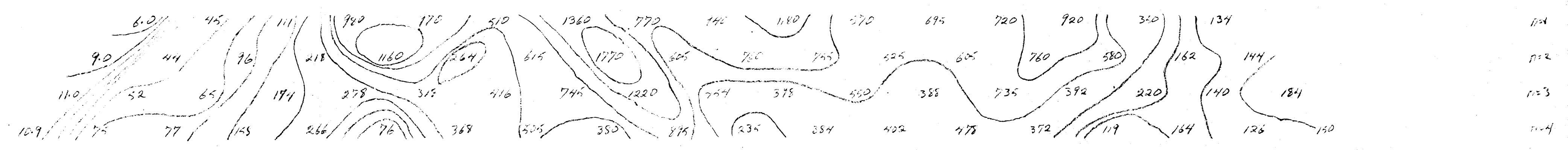


Pa/2 ii

Department of
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ASSESSMENT REPORT
NO. **3808** MAP # **6**

INSTRUMENT High Power I. P. (Dipole - Dipole)
FREQUENCY 0.3 and 5 c. p. s.
OPERATOR D. F. Morrison
DATE July 1972

800



M. F.

AMAX POTASH LIMITED

LENNAC LAKE COPPER PROPERTY
OMINECA MINING DIVISION — BRITISH COLUMBIA

INDUCED POLARIZATION SURVEY

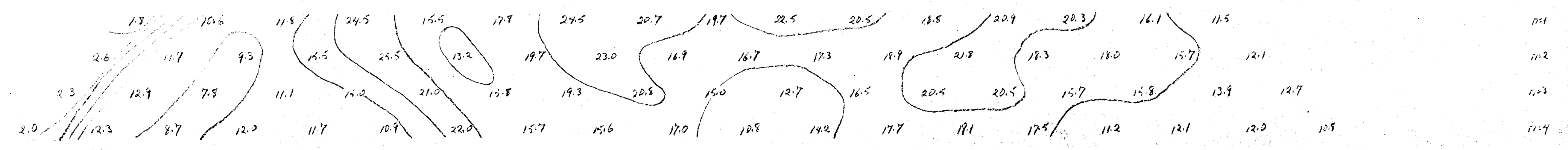
LINE 60+00 E

SCALE 1" = 300'

P. E. F.

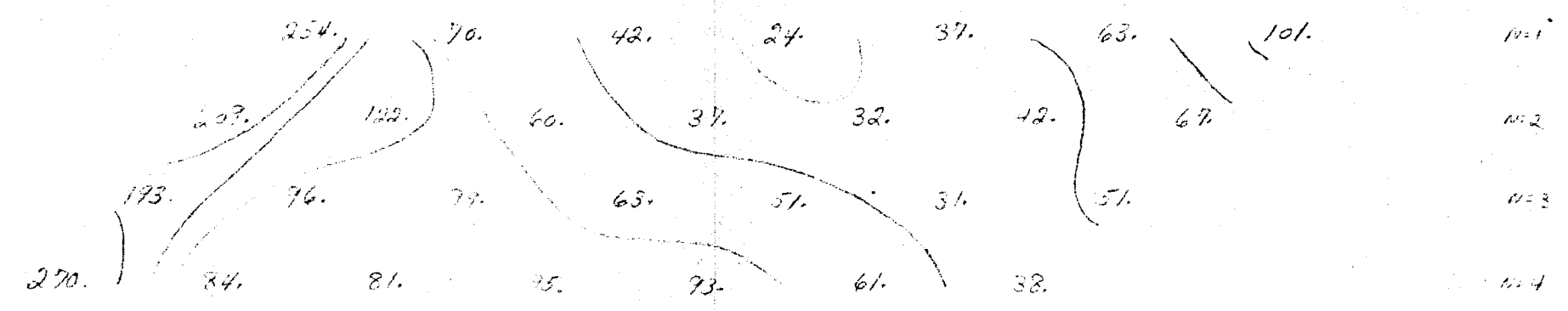
To accompany geophysical report on the "LENNAC LAKE COPPER PROPERTY" by: G. M. DePaoli and J. F. Allan.

APPENDIX I d



1800 E

70N 73N 76N 79N 82N 85N 88N 91N 94N 97N 100N 103N 106N

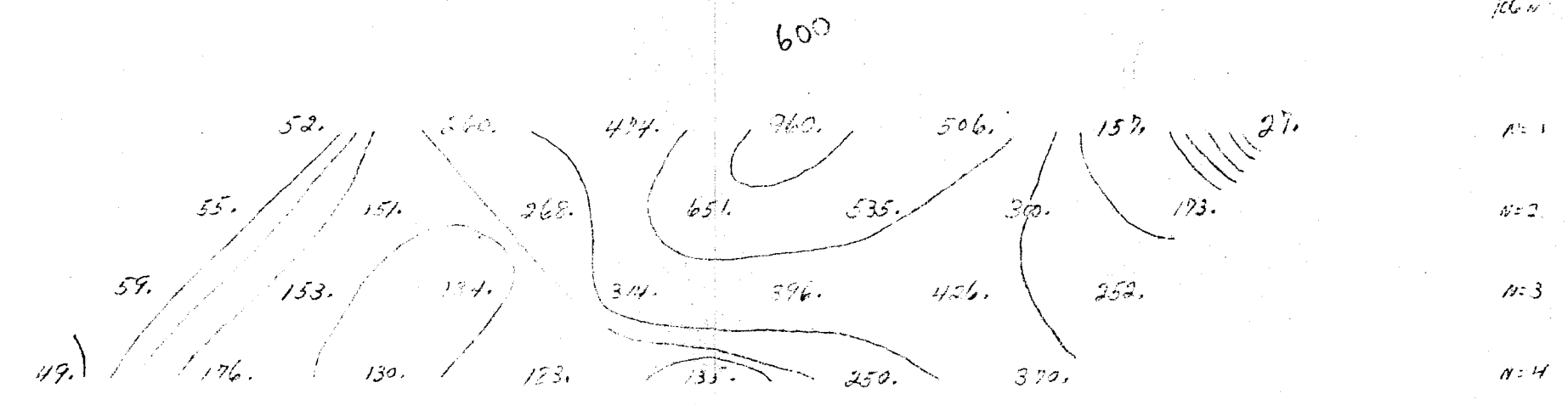


Pa/2 ii

Department of
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ASSESSMENT REPORT
NO. **3808** MAP **#7**

INSTRUMENT High Power I. P. (Dipole - Dipole)
FREQUENCY 0.3 and 5 c. p. s.
OPERATOR D. F. Morrison
DATE July 1972

715 m
Road



M. F.

AMAX POTASH LIMITED

LENNAC LAKE COPPER PROPERTY
OMINECA MINING DIVISION — BRITISH COLUMBIA

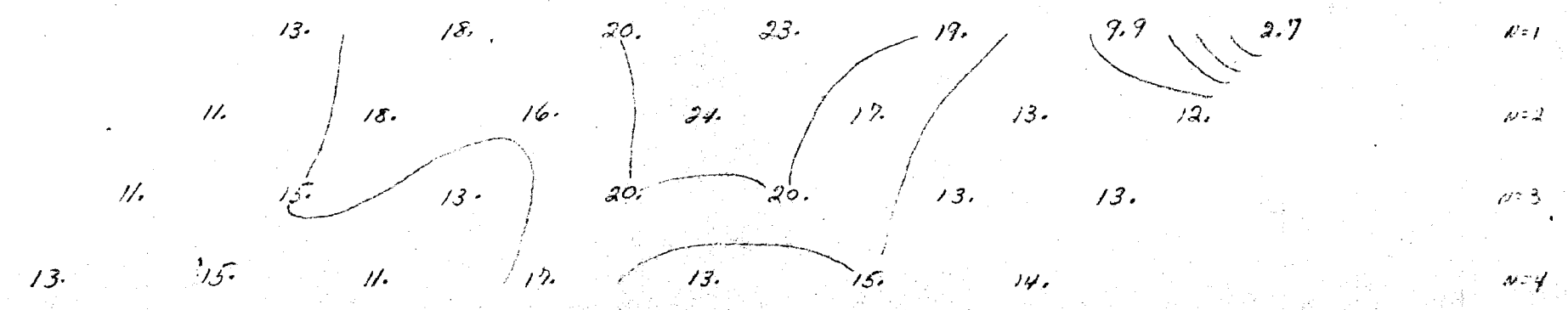
INDUCED POLARIZATION SURVEY
LINE 68+00 E

SCALE 1" = 300'

To accompany geophysical report on the "LENNAC LAKE COPPER PROPERTY" by: G. M. DePaoli and J. F. Allan.

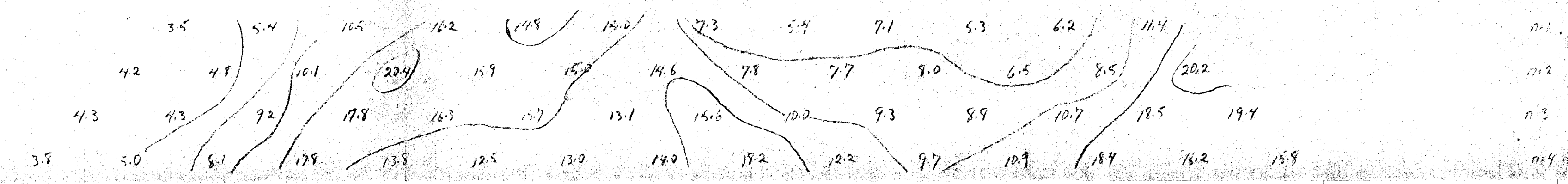
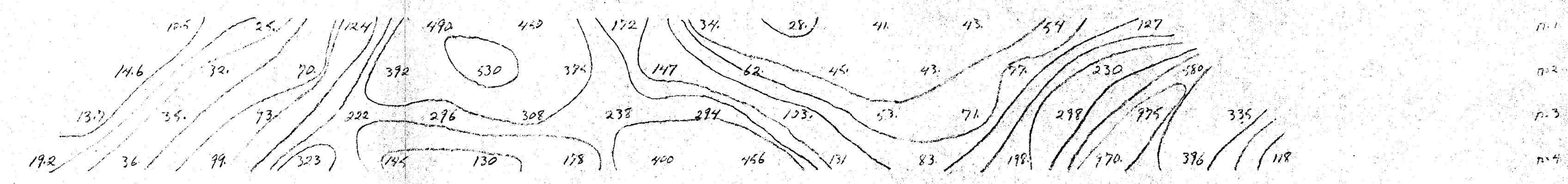
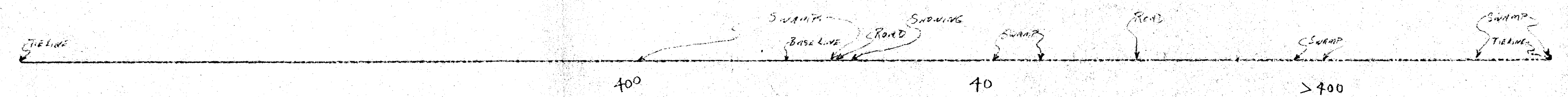
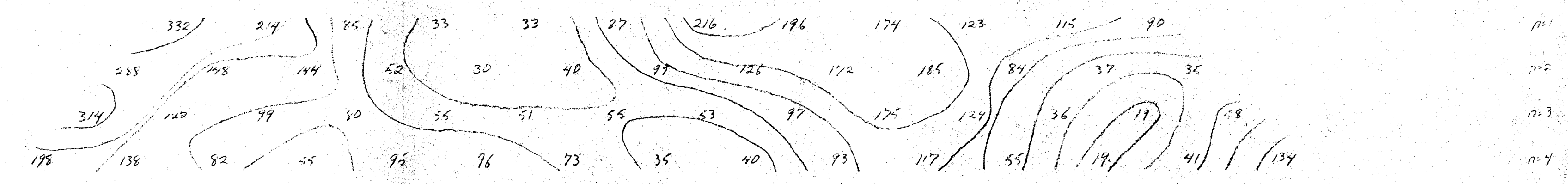
APPENDIX I e

70N 73N 76N 79N 82N 85N 88N 91N 94N 97N 100N 103N 106N



P. E. F.

70N 73N 76N 79N 82N 85N 88N 91N 94N 97N 100N 103N 106N 109N 112N 115N 118N 121N 124N 127N 130N



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 3808 MAP #8

INSTRUMENT High Power I. P. (Dipole - Dipole)
FREQUENCY 0.3 and 5 c.p.s.
OPERATOR D. F. Morrison
DATE July 1972

AMAX POTASH LIMITED
LENNAC LAKE COPPER PROPERTY
OMINECA MINING DIVISION — BRITISH COLUMBIA
INDUCED POLARIZATION SURVEY
LINE 76+00 E

SCALE 1" = 300'
To accompany geophysical report on the "LENNAC LAKE COPPER PROPERTY" by: G. M. DePaoli and J. F. Allan.
APPENDIX I I

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 3808 MAP #9

Pa/2ii

INSTRUMENT High Power I. R. (Dipole - Dipole)
 FREQUENCY 0.3 and 5 c.p.s.
 OPERATOR D. F. Morrison
 DATE July 1972

M. F.

NOTE -
(9.5) noisy reading.

AMAX POTASH LIMITED

LENNAC LAKE COPPER PROPERTY
 OMINECA MINING DIVISION - BRITISH COLUMBIA

INDUCED POLARIZATION SURVEY

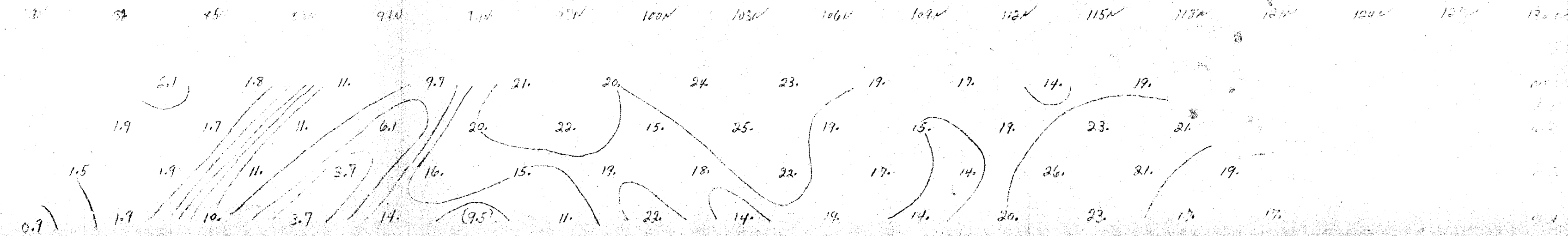
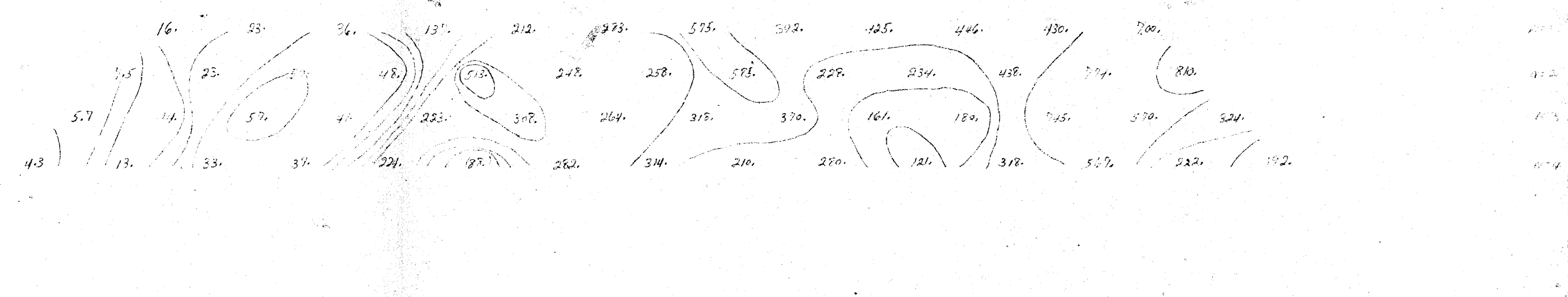
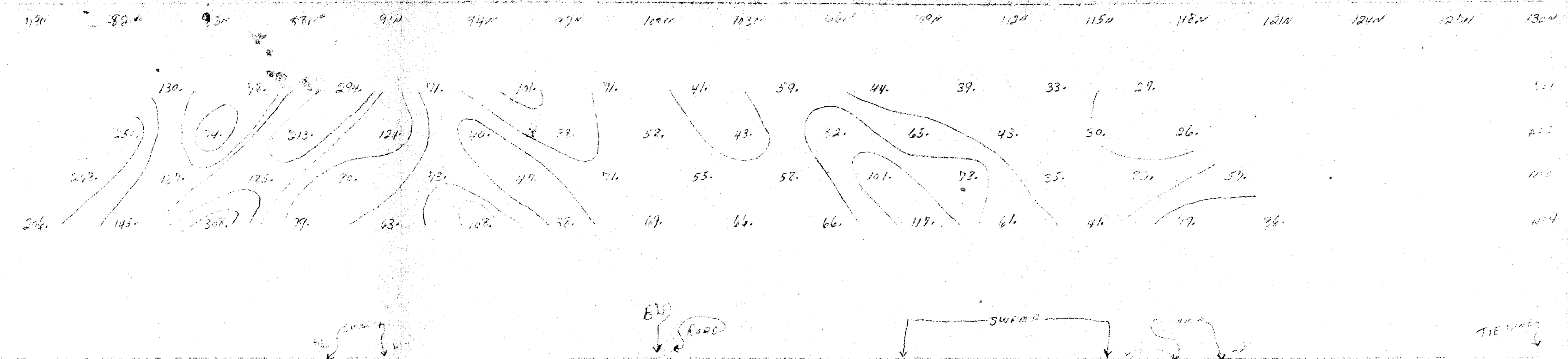
LINE 84+00 E

SCALE 1" = 300'

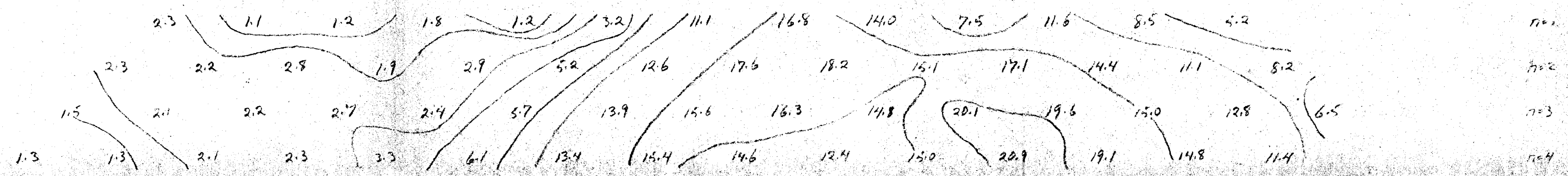
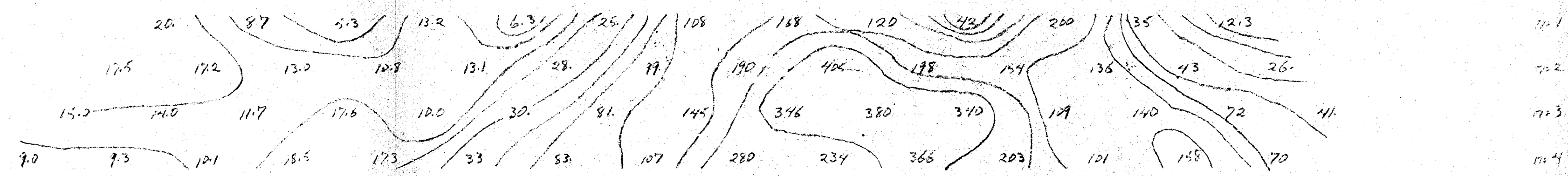
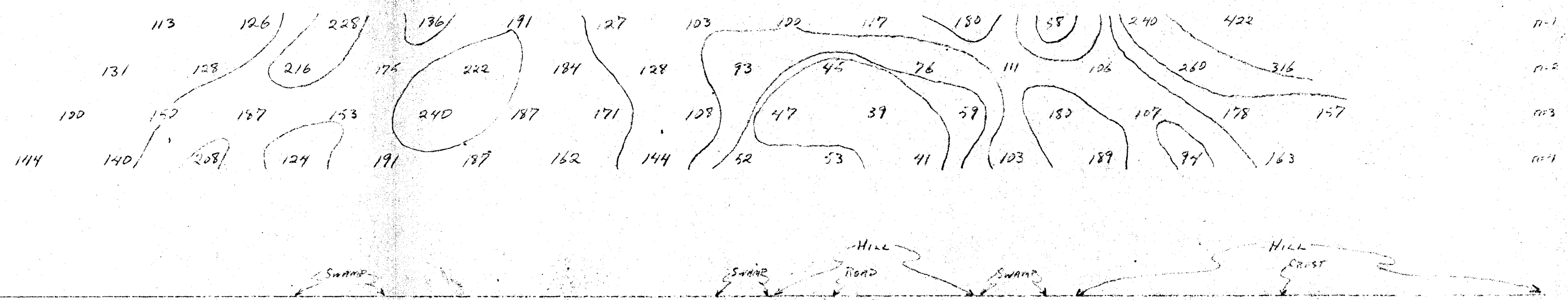
P. E. F.

To accompany geophysical report on the "LENNAC LAKE COPPER PROPERTY" by: G. M. DePaoli and J. F. Allan.

APPENDIX 1g



70W 73W 76W 79W 82W 85W 88W 91W 94W 97W 100W 103W 106W 109W 112W 115W 118W 121W 124W 127W 130W



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. **3808** MAP #10

Pa/277

INSTRUMENT High Power I. P. (Dipole - Dipole)
FREQUENCY 0.3 and 5 c. p. s.
OPERATOR D. F. Morrison
DATE July 1972

M. F.

AMAX POTASH LIMITED

LENNAC LAKE COPPER PROPERTY
OMINECA MINING DIVISION — BRITISH COLUMBIA

INDUCED POLARIZATION SURVEY

LINE 92+00 E

SCALE 1" = 300'

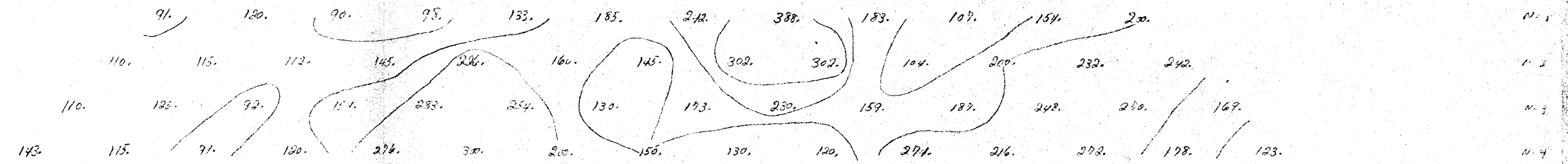
P. E. F.

To accompany geophysical report on the "LENNAC LAKE COPPER PROPERTY" by G. M. DePaoli and J. F. Allan.

APPENDIX I h

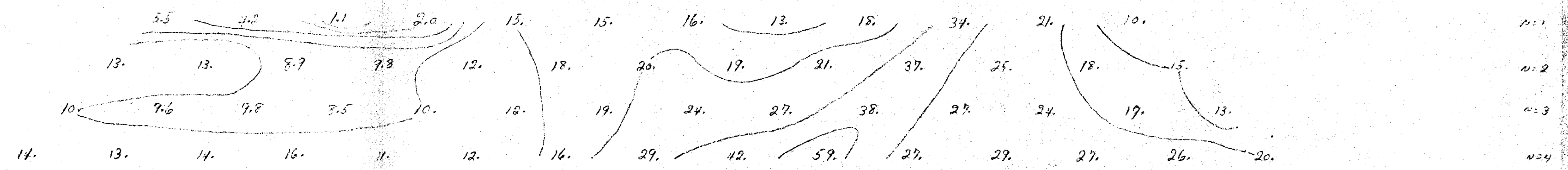
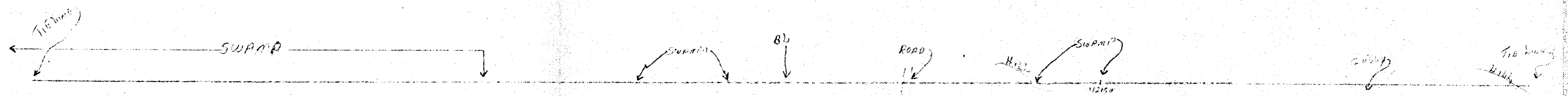
10000 E

71N 73N 76N 79N 82N 85N 88N 91N 94N 97N 100N 103N 106N 109N 112N 115N 118N 121N 124N 127N 130N



N=1
N=2
N=3
N=4

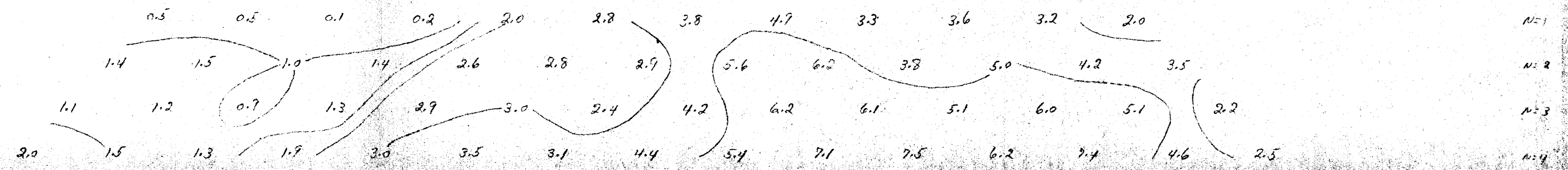
Pa/27



N=1
N=2
N=3
N=4

M.F

70N 73N 76N 79N 82N 85N 88N 91N 94N 97N 100N 103N 106N 109N 112N 115N 118N 121N 124N 127N 130N



N=1
N=2
N=3
N=4

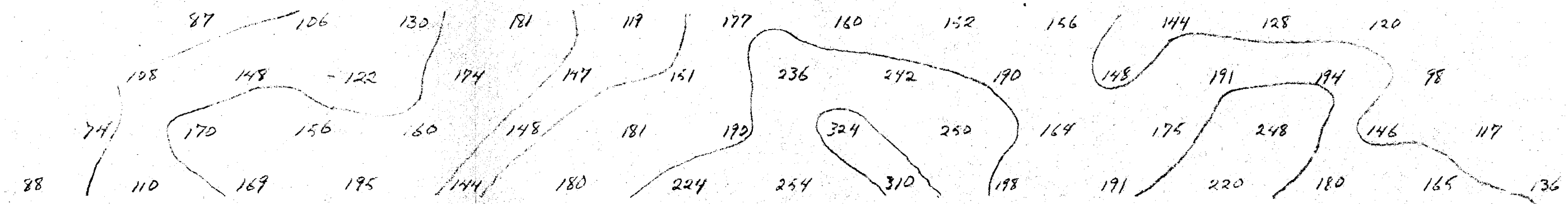
P.E.F

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 3808 MAP #11

INSTRUMENT High Power I. P. (Dipole - Dipole)
FREQUENCY 0.3 and 5 c.p.s.
OPERATOR D. F. Morrison
DATE July 1972

AMAX POTASH LIMITED
LENNAC LAKE COPPER PROPERTY
OMINECA MINING DIVISION - BRITISH COLUMBIA
INDUCED POLARIZATION SURVEY
LINE 100+00 E
SCALE 1" = 300'
To accompany geophysical report on the "LENNAC LAKE COPPER PROPERTY" by G. M. DePaoli and J. F. Allan.
APPENDIX II

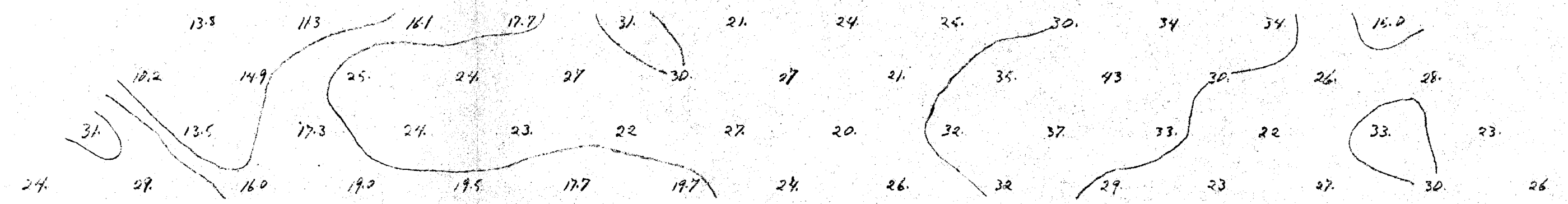
75.0 73.0 71.0 69.0 67.0 65.0 63.0 61.0 59.0 57.0 55.0 53.0 51.0 49.0 47.0 45.0 43.0 41.0 39.0 37.0 35.0 33.0 31.0 29.0 27.0 25.0 23.0 21.0 19.0 17.0 15.0 13.0 11.0 9.0 7.0 5.0 3.0 1.0



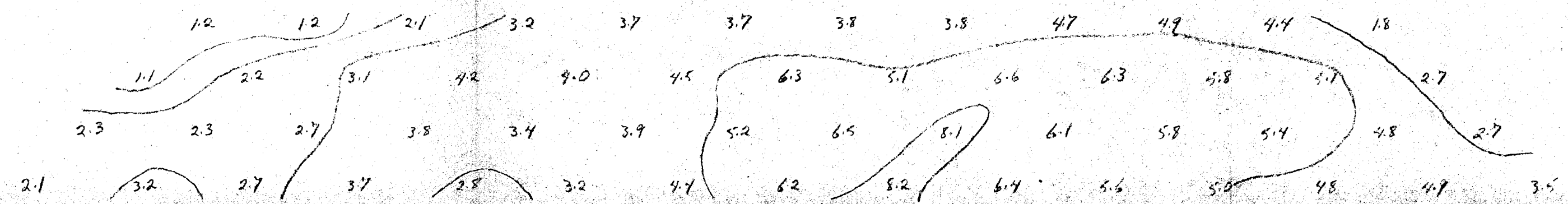
Pa/2.0

Mines and Petroleum Resources
ASSESSMENT REPORT
 NO. **3808** MAP **#12**

INSTRUMENT High Power I. P. (Dipole - Dipole)
 FREQUENCY 0.3 and 5 c. p. s.
 OPERATOR D. F. Morrison
 DATE July 1972



M.F.

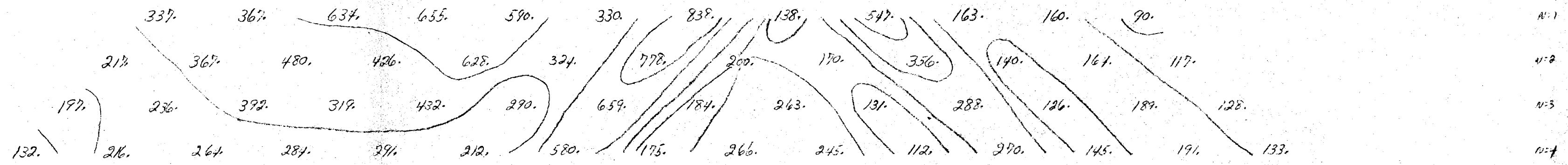


P.E.F.

AMAX POTASH LIMITED
 LENNAC LAKE COPPER PROPERTY
 OMINECA MINING DIVISION — BRITISH COLUMBIA
INDUCED POLARIZATION SURVEY
 LINE 108+00 E
 SCALE 1" = 300'
 To accompany geophysical report on the "LENNAC LAKE COPPER PROPERTY" by: G. M. De Paoli and J. F. Allan.
APPENDIX I

1600E

70N 73N 76N 79N 82N 85N 88N 91N 94N 97N 100N 103N 106N 109N 112N 115N 118N 121N 124N 127N 130N



Pa/2.11

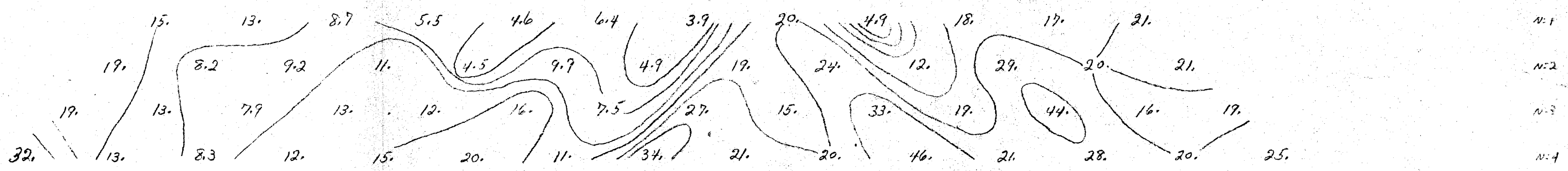
N-1
N-2
N-3
N-4

INSTRUMENT High Power I. P. (Dipole - Dipole)
 FREQUENCY 0.3 and 5 c.p.s.
 OPERATOR D. F. Morrison
 DATE July 1972

Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. 3808 MAP #13

TIE LINE

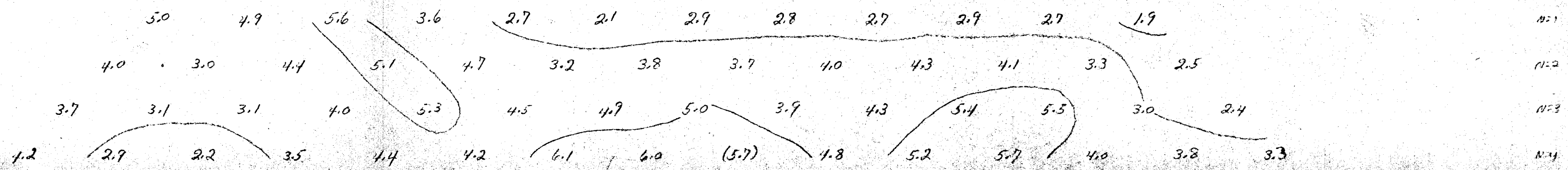
TIE LINE



M.F.

N-1
N-2
N-3
N-4

70N 73N 76N 79N 82N 85N 88N 91N 94N 97N 100N 103N 106N 109N 112N 115N 118N 121N 124N 127N 130N

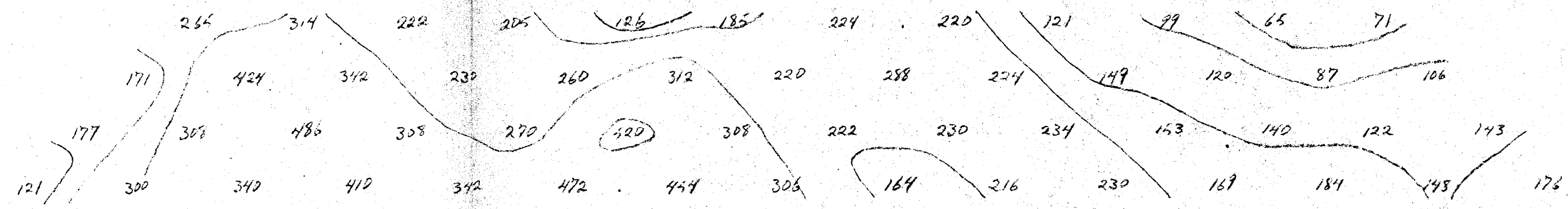


P.E.F.

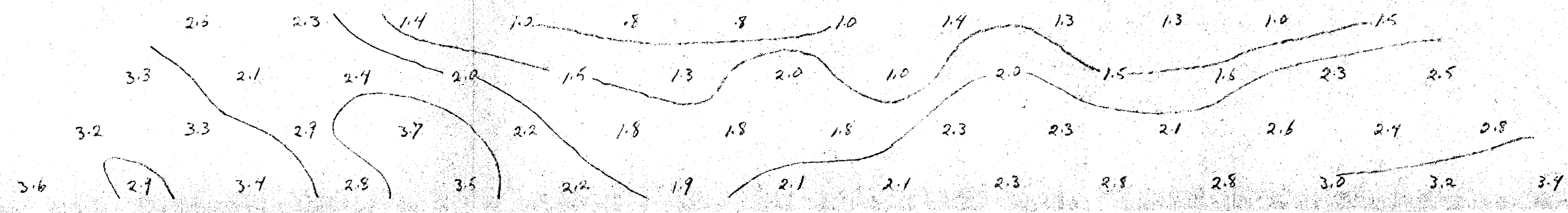
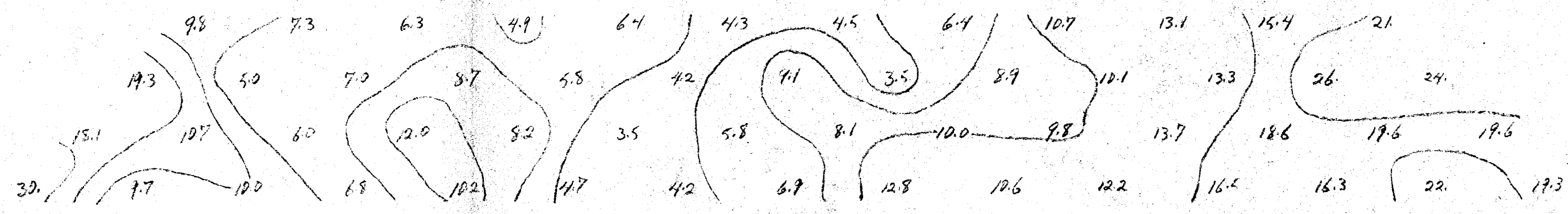
N-1
N-2
N-3
N-4

AMAX POTASH LIMITED
 LENNAC LAKE COPPER PROPERTY
 OMINECA MINING DIVISION - BRITISH COLUMBIA
 INDUCED POLARIZATION SURVEY
 LINE 116+00 E
 SCALE 1" = 300'
 To accompany geophysical report on the "LENNAC LAKE COPPER PROPERTY" by: G. M. DePaoli and J. F. Allan.
 APPENDIX I K

70W 73W 76W 79W 82W 85W 88W 91W 94W 97W 100W 103W 106W 109W 112W 115W 118W 121W 124W 127W 130W



Crest of Hill Pond Road Creek



Pa/211

M.F.

P.E.F.

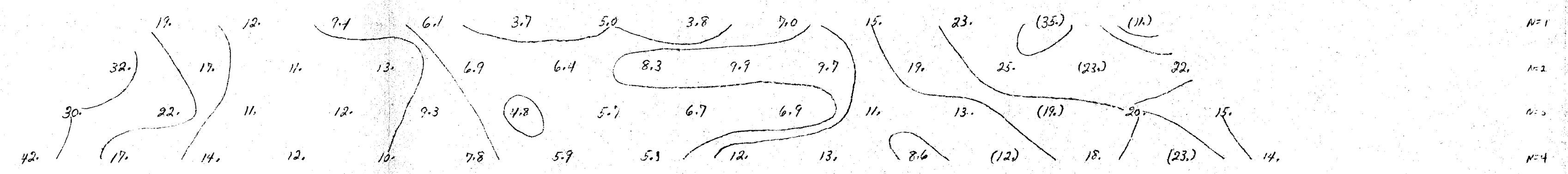
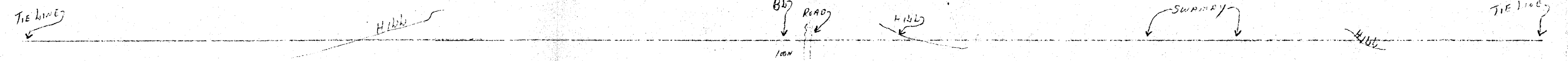
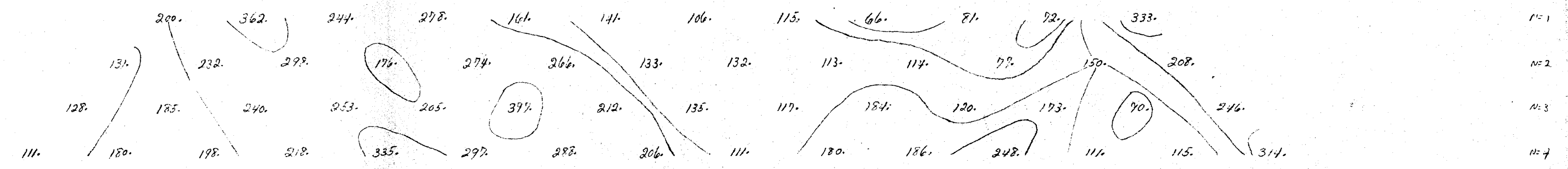
Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. **3808** MAP #14

INSTRUMENT High Power I.P. (Dipole - Dipole)
FREQUENCY 0.3 and 5 c.p.s.
OPERATOR D. F. Morrison
DATE July 1972

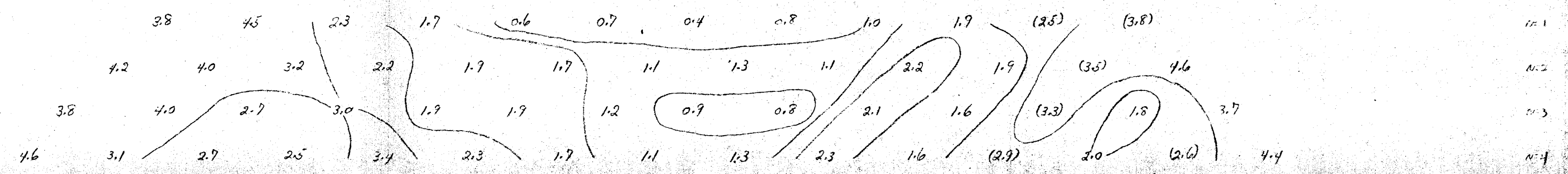
AMAX POTASH LIMITED
LENNAC LAKE COPPER PROPERTY
OMINECA MINING DIVISION — BRITISH COLUMBIA
INDUCED POLARIZATION SURVEY
LINE 126+00 E
SCALE 1" = 300'
To accompany geophysical report on the "LENNAC LAKE COPPER PROPERTY" by: G. M. DePaoli and J. F. Allan.
APPENDIX I I

7200 F

70N 73N 76N 79N 82N 85N 88N 91N 94N 97N 100N 103N 106N 109N 112N 115N 118N 121N 124N 127N 130N



70N 73N 76N 79N 82N 85N 88N 91N 94N 97N 100N 103N 106N 109N 112N 115N 118N 121N 124N 127N 130N



Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 3808 M.P. #15

Pa/27

INSTRUMENT High Power I. P. (Dipole - Dipole)
 FREQUENCY .03 and 5 c. p. s.
 OPERATOR D. F. Morrison
 DATE July 1972

M.F.

NOTE -
(3.5) noisy reading

AMAX POTASH LIMITED

LENNAC LAKE COPPER PROPERTY
 OMINECA MINING DIVISION - BRITISH COLUMBIA
 INDUCED POLARIZATION SURVEY
 LINE 132+00 E

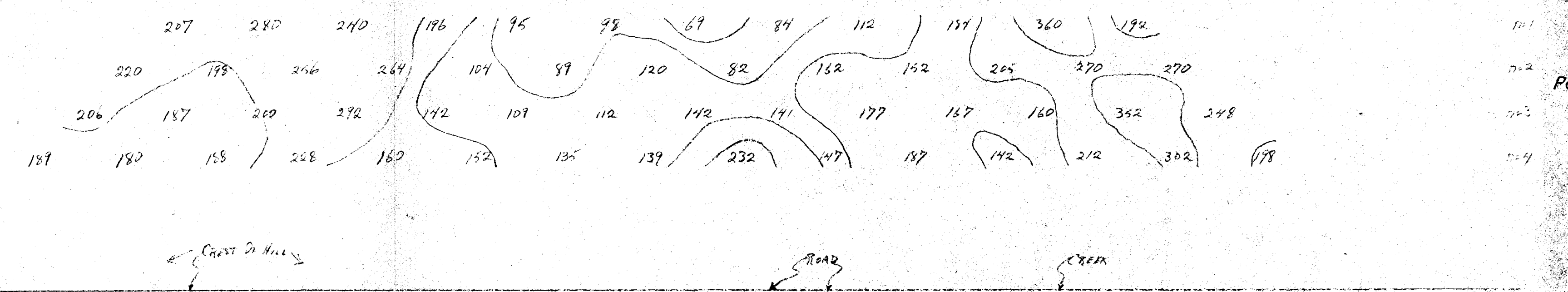
P.E.F.

SCALE 1" = 300'

To accompany geophysical report on the "LENNAC LAKE COPPER PROPERTY" by: G. M. DePaoli and J. F. Allan.

APPENDIX I.M

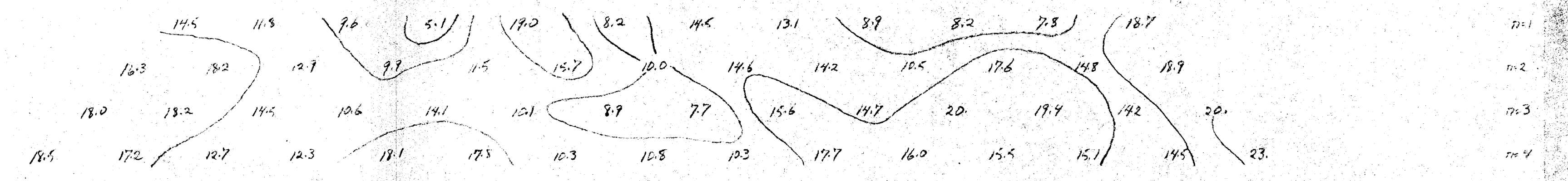
75W 76W 77W 78W 79W 80W 81W 82W 83W 84W 85W 86W 87W 88W 89W 90W 91W 92W 93W 94W 95W 96W 97W 98W 99W 100W 101W 102W 103W 104W 105W 106W 107W 108W 109W 110W 111W 112W 113W 114W 115W 116W 117W 118W 119W 120W 121W 122W 123W 124W 125W 126W 127W 128W 129W 130W



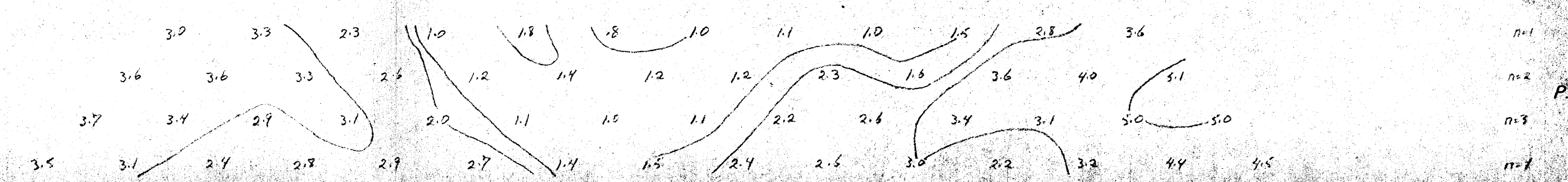
n=1
 n=2 Pa/27
 n=3
 n=4

Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. 3808 MAP #16

INSTRUMENT High Power I. P. (Dipole - Dipole)
 FREQUENCY 0.3 and 5 c.p.s.
 OPERATOR D. F. Morrison
 DATE July 1972



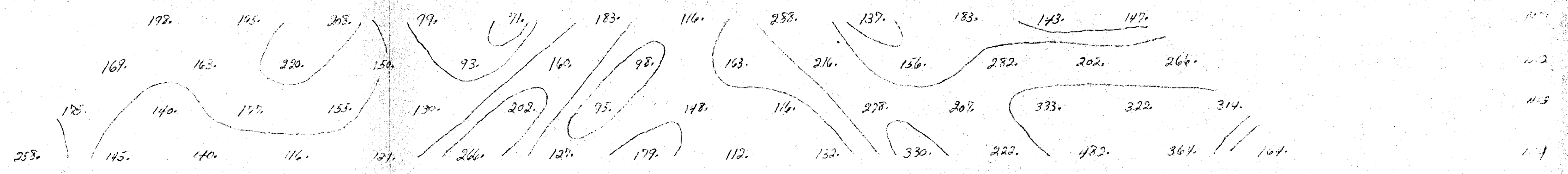
n=1
 n=2 M.F.
 n=3
 n=4



n=1
 n=2 P.E.F.
 n=3
 n=4

AMAX POTASH LIMITED
 LENNAC LAKE COPPER PROPERTY
 OMINECA MINING DIVISION — BRITISH COLUMBIA
 INDUCED POLARIZATION SURVEY
 LINE 140+00 E
 SCALE 1" = 300'
 To accompany geophysical report on the "LENNAC LAKE COPPER PROPERTY" by: G. M. DePaoli and J. F. Allan.
 APPENDIX I

70N 73N 76N 79N 82N 85N 88N 91N 94N 97N 100N 103N 106N 109N 112N 115N 118N 121N 124N 127N 130N



TIE LINE

SWAMP

BL

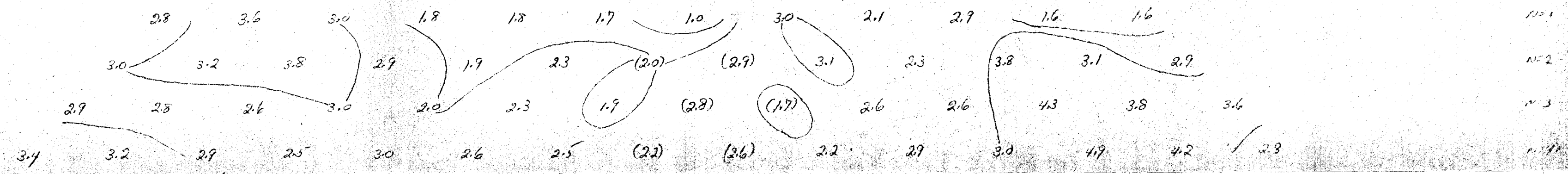
ROAD

CREEK TIE LINE

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 3808 MAP #17

INSTRUMENT High Power I. P. (Dipole - Dipole)
FREQUENCY 0.3 and 5 c.p.s.
OPERATOR D. F. Morrison
DATE July 1972

71N 73N 76N 79N 82N 85N 88N 91N 94N 97N 100N 103N 106N 109N 112N 115N 118N 121N 124N 127N 130N



P.E.F.

AMAX POTASH LIMITED

LENNAC LAKE COPPER PROPERTY
OMINECA MINING DIVISION - BRITISH COLUMBIA

INDUCED POLARIZATION SURVEY

LINE 148+00 E

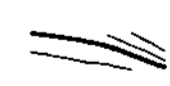

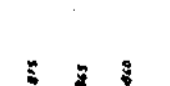



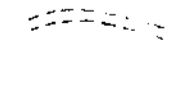
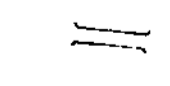
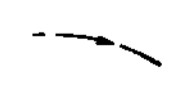
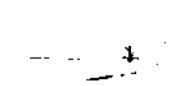
SCALE 1" = 300'

To accompany geophysical report on the "LENNAC LAKE COPPER PROPERTY" by: G. M. DePaoli and J. F. Allan.

APPENDIX 1.0



S Y M B O L S

-  Isomagnetic contour.
-  Magnetic low.
-  Picket line (magnetometer survey readings in gammas).
-  Claim post, claim location line.
-  Claim boundary line.
-  Road or trench.
-  Trench.
-  Stream.
-  Swamp, swamp boundary.
-  Esker.

INSTRUMENT Geometrics Proton Prec. G-806
 TOTAL FIELD 1,000 = 58,000 gammas actual earth's field
 CONTOUR INTERVAL 100 gammas
 OPERATOR G.M. De Paoli
 DATE July 1972

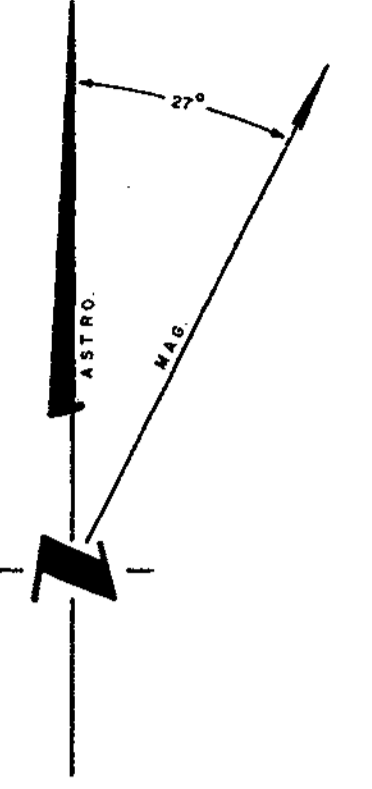
3808

Department of
 Mines and Petroleum Resources
 ASSESSMENT REPORT
 NO. 3808 M.P. #18

M-18 *J. Allen*

AMAX POTASH LIMITED			
LENNAC LAKE COPPER PROPERTY OMINECA MINING DIVISION — BRITISH COLUMBIA			
GROUND MAGNETIC MAP			
SCALE 1" = 400'			
DATE	DATE	DATE	FIG. 3
REVISED	PRINTED	Drawn by	
		N.T.S. File	
		93 L 16	

To accompany geophysical report on the "LENNAC LAKE COPPER PROPERTY" by G.M. De Paoli and J.F. Allen.



S Y M B O L S

FIRST SEPARATION P. F. E.

- > 15 %
- 9 - 15 %
- 3 - 9 %

- Picket line.
- Claim post, claim location line.
- Claim boundary line.
- Road or trench.
- Trench.
- Stream.
- Swamp, swamp boundary.
- Esker.

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 3808 MAP #19

AMAX POTASH LIMITED

LENNAC LAKE COPPER PROPERTY
OMINECA MINING DIVISION — BRITISH COLUMBIA
INDUCED POLARIZATION SURVEY
FIRST SEPARATION P.F.E.

SCALE 1" = 400'

DATE	DRAWN BY	DATE	DRAWN BY

FIG. 4

To accompany geophysical report on the "LENNAC LAKE COPPER PROPERTY" by: G. M. DePaoli and J. F. Allen.