1155

REPORT ON
INDUCED POLARIZATION
AND RESISTIVITY SURVEY
ON THE 92 I/6E, 11E
AL & IC CLAIM GROUPS
HIGHLAND VALLEY AREA, BRITISH COLUMBIA
FOR
ARLINGTON SILVER MINES LTD. (N.P.L.)

BY

D. B. SUTHERLAND, M.A.

R.A. BELL, Ph.D.

NAME AND LOCATION OF PROPERTY:

HIGHLAND VALLEY AREA,

KAMLOOPS MINING DIVISION, B.C. 50°N, 121°W - SE

DATE STARTED: November 20, 1967

DATE FINISHED: December 14, 1967

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McPHAR GEOPHYSICS LIMITED

REPORT ON

INDUCED POLARIZATION

AND RESISTIVITY SURVEY

ON THE

AL & IC CLAIM GROUPS

HIGHLAND VALLEY AREA, BRITISH COLUMBIA

FOR

ARLINGTON SILVER MINES LTD. (N.P.L.)

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1. INTRODUCTION

At the request of Mr. Harold A. Quinn, a Consulting Geologist, an Induced Polarization and Resistivity Survey has been carried out over the AL & IC Claim Groups for Arlington Silver Mines Ltd. (N.P.L.). These claims are located in the Highland Valley Area, Kamloops Mining Division, British Columbia and lie in the NE & SE quadrants of the 1° quadrilateral whose SE corner is at 50°N, 121°W.

The property lies within the Guichon Batholith and adjoins the Bethlehem Copper property on the east. According to the B.C. Department of Mines geological map by Carr and Lee, Kamloops Group rocks outcrop north of the road and one outcrop of Bethsaida granite is shown on the southwest portion of the claims. The property is of interest due to visible chalcopyrite in acidic intrusives observed in trenches near 12S on Line 5W and 15S on Line 0.

A McPhar frequency type IP unit, Model P654 was used for the field surveying during November and December 1967. The purpose of the work was to outline areas of metallic mineralization that might be representative of the disseminated sulphide deposits that occur elsewhere in the Guichon Batholith.

2. PRESENTATION OF RESULTS

The induced polarization and resistivity results are shown on the following data plots in the manner described in the notes preceding this report.

Line No.	Electrode Intervals	Dwg. No.
5W	200 feet	IP 2780-1
0	200 feet	IP 2780-2
5E	200 feet	IP 2780-3
10E	200 feet	IP 2780-4
15E	200 feet	IP 2780-5
20E	200 feet	IP 2780-6
25E	200 feet	IP 2780-7
30E	200 feet	IP 2780-8
35E	200 feet	IP 2780-9
40E	200 feet	IP 2780-10
45E	200 feet	IP 2780-11
50E	200 feet	IP 2780-12

Enclosed with this report is Dwg. Misc. 3285, a plan map of the property at a scale of 1" = 400 feet. The definite and possible induced polarization anomalies are indicated by solid and broken bars respectively on this plan map as well as the data plots. These bars represent the surface projection of the anomalous zones as interpreted from the location of the transmitter and receiver electrodes when the anomalous values were measured.

Since the induced polarization measurement is essentially an averaging process, as are all potential methods, it is frequently difficult to exactly pinpoint the source of an anomaly. Certainly, no anomaly can be located with more accuracy than the spread length; i. e. when using 200' spreads the position of a narrow sulphide body can only be determined to lie between two stations 200' apart. In order to locate sources at some depth, larger spreads must be used, with a corresponding increase in the uncertainties of location. Therefore, while the center of the indicated anomaly probably corresponds fairly well with source, the length of the indicated anomaly along the line should not be taken to represent the exact edges of the anomalous material.

3. DISCUSSION OF RESULTS

Our experience in other areas has shown that the induced polarization method can be successfully used to locate, and outline, zones of disseminated sulphide mineralization of the "porphyry copper" type. In most cases the interpretation of the IP results is simple and straightforward. The results shown in Figure 1 and Figure 2 are typical.

INDUCED POLARIZATION

AND

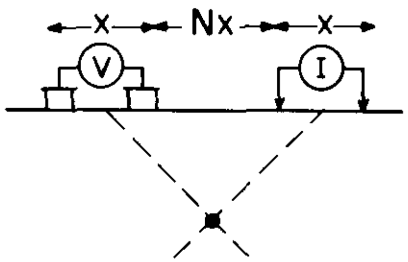
DRILLING RESULTS

FROM

COPPER MOUNTAIN AREA
GASPE, QUEBEC

LINE - 31 N

FREQUENCIES - 0·31 & 2·5 CPS.



X EQUALS 300 FEET

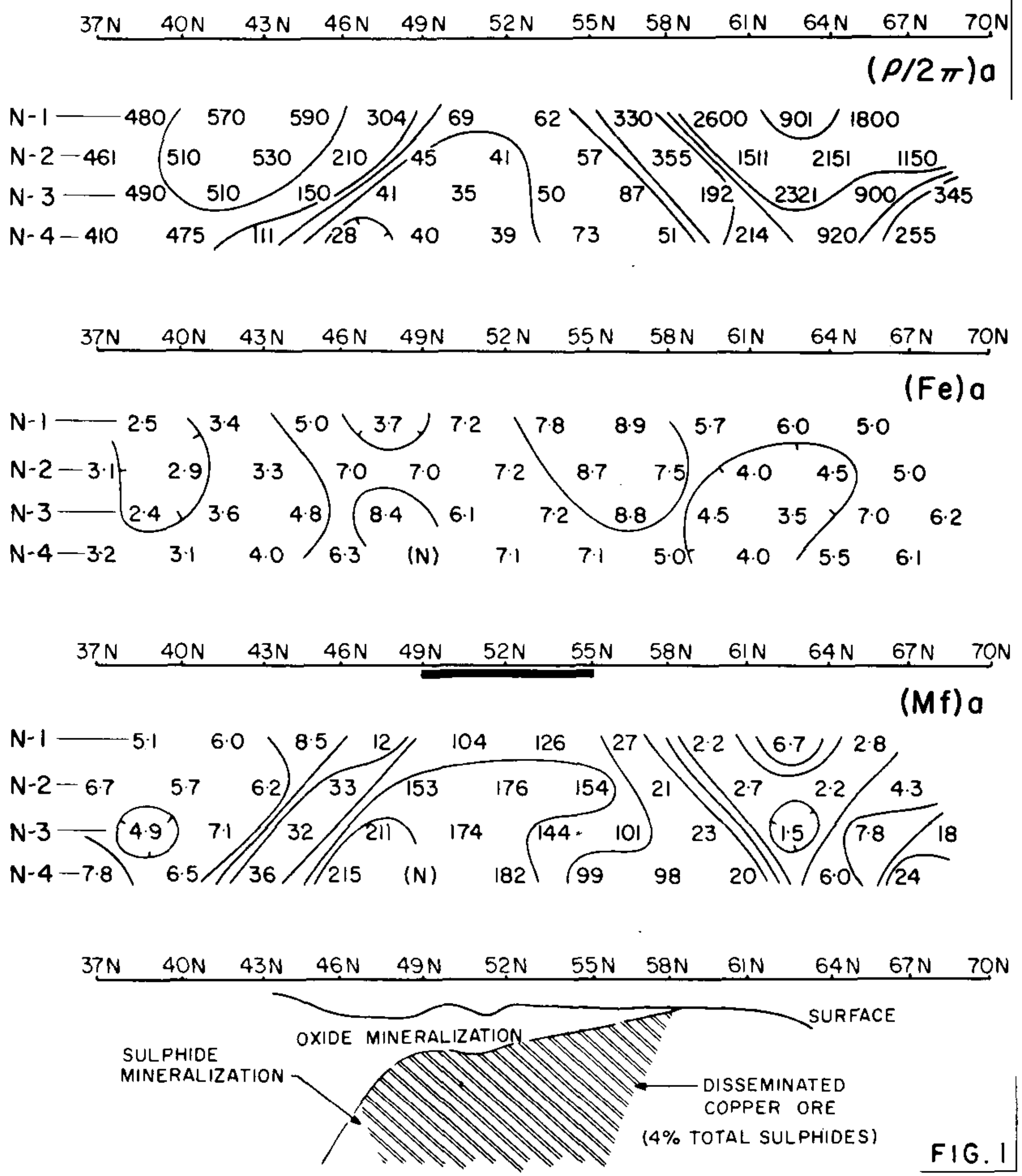


FIG. 1

INDUCED POLARIZATION

AND

DRILLING RESULTS

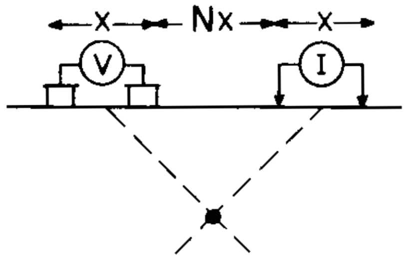
FROM

WESTERN NEW MEXICO

U.S.A.

LINE - 40 W

FREQUENCIES - 0·31 & 2·5 CPS.



X EQUALS 200 FEET

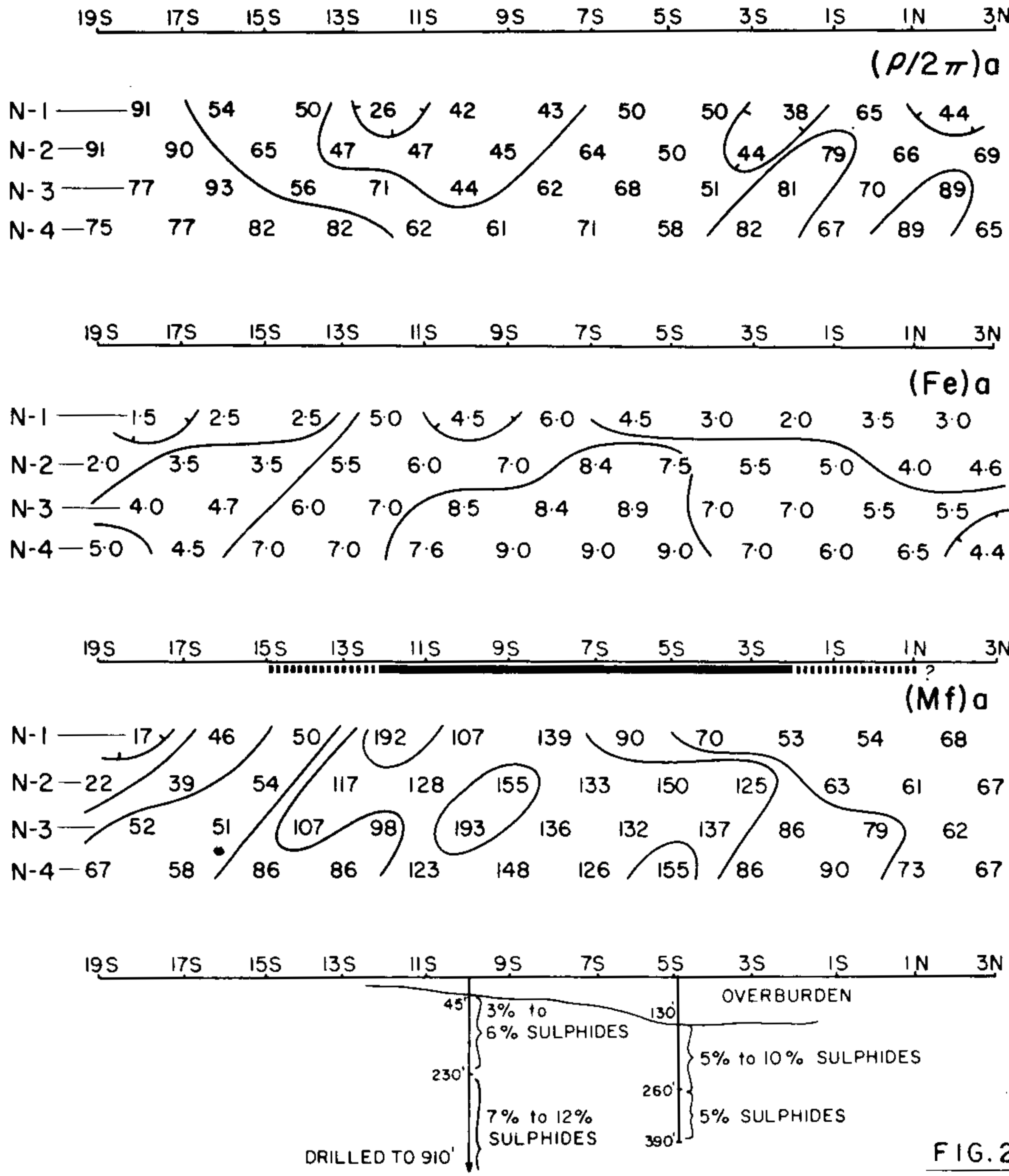


FIG. 2

The source of the moderate magnitude IP anomaly shown in Figure 1 contains approximately 4% metallic mineralization. The zone is of limited lateral extent and enough copper is present to make the mineralization "ore grade". The presence of the surface oxidation can be seen in the fact that the apparent IP effects increase for n = 2.

The IP anomaly shown in Figure 2 has about the same magnitude as that described above. It should be noted that appreciably greater concentrations of metallic mineralization are present; further, there is little or no copper present. These results illustrate the fact that IP results can not be used to determine the exact amount of metallic mineralization present or to determine the economic importance of a mineralized zone. In some geologic situations zoning is present; the zones of mineralization of greatest economic value may contain less total metallic mineralization than other zones in the same general area.

In the proper geologic environment, the method will detect even very low concentrations of metallic mineralization. The IP results shown in Figure 3 located the ore zone at the Brenda Property near Peachland, B.C. The zone contains 1.3 to 1.5 per cent metallic mineralization; however, the mineralization is "ore grade" because only molybdenite, bornite and chalcopyrite are present.

On the Arlington Silver property most of the responses are broad and have been interpreted from quite small IP effects. In general, they suggest wide areas of variably low to moderate metallic content. It is interesting that the IP responses are very weak in the vicinity of the known mineralization on the south end of Line 0 and 5W.

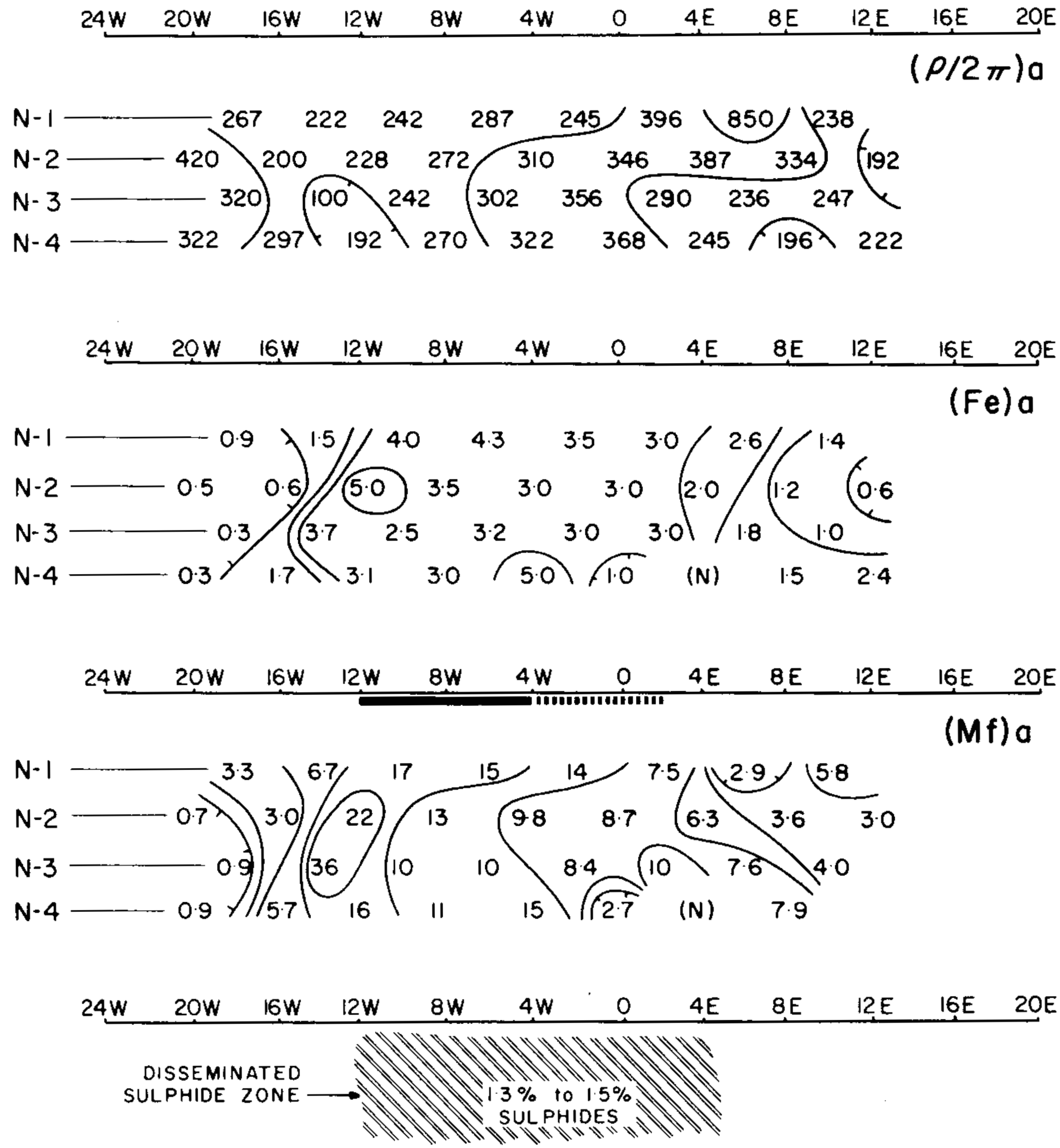
INDUCED POLARIZATION

AND

DRILLING RESULTS

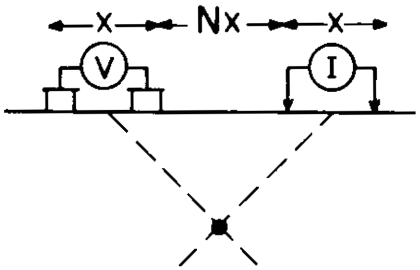
FROM

BRENDA AREA
PEACHLAND, B.C.



LINE - 8S

FREQUENCIES - 0·31 & 5·0 CPS.



X EQUALS 400 FEET

FIG. 3

The individual anomalies have been correlated into three anomalous zones which are described below.

Zone A

Zone A occurs on the western part of the claim group and appears to be open to the west. The IP results on Line 0 and 5W indicate a broad source that has some depth to the top of its strongest portion. Surface examination on either of these lines may reveal part of its cause but a thorough test would require a series of holes, spaced at intervals of 200 feet and drilled to a depth of at least 300 feet. The IP effects on Line 5W are somewhat stronger and it is suggested that the cross-sectioning be done on this line.

Zone B

This zone has been interpreted from a series of anomalies that vary appreciably in magnitude and character but correlate from line to line. It should be noted that the northern limit of Zone B has not been defined in the section between Line 10E and Line 35E.

Most of the IP responses are more than 1000 feet wide. Because of this width, the apparent metal factor values may be very close to the true metal factor of the source material and could be caused by a small percentage of metallic mineralization.

The most interesting IP results occur on Lines 30E and 35E. Surface examination may reveal part of the cause of the anomalies but similar to Zone A, the more concentrated metallics are indicated to occur at depth. A cross-section of holes on Line 35E spaced at 200 foot intervals and drilled to a depth of 200 feet is suggested as an initial test of Zone B.

Zone C

Zone C also appears to be a wide source of irregular outline. Surface examination or shallow trenching between 6S and 11S may reveal its cause. However, there is some indication of improvement with depth and a program of several holes 200 feet deep should be considered to test this anomalous zone on Line 20E.

4. SUMMARY AND RECOMMENDATIONS

Three anomalous zones have been interpreted from the IP results. These appear to represent broad areas of low to moderate metallic content. Some of the IP effects may be due to quite shallow mineralization and surface examination may reveal part of their cause. However, there is a definite indication of more concentrated material at depth and a cross-section of holes should be considered for each of the zones.

The following drill program is suggested for a thorough test of the property if the geological setting is considered to be favourable.

Zone A - A cross-section of holes drilled to a depth of 300 feet between 0 and 6N on Line 5W.

Zone B - A cross-section of holes drilled to a depth of 200 feet between 8N and 14N on Line 35E.

Zone C - Shallow trenching and/or a cross-section of holes drilled to a depth of 200 feet between 5S and 11S on Line 20E.

The remaining IP anomalies should be re-assessed on the basis of the results obtained in the initial drilling.

McPHAR GEOPHYSICS LIMITED

D. B. Sutherland,
Geophysicist.

R. A. Bell,
Geologist.

Dated: December 27, 1967

D. K. Fountain,
Geophysical Consultant,
P. Eng. (B.C.)

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
D. K. FOUNTAIN

Expiry Date: April 25, 1968

ASSESSMENT DETAILS

PROPERTY: AL & IC Claim Groups

MINING DIVISION: Kamloops

SPONSOR: Arlington Silver Mines Ltd.

PROVINCE: British Columbia.

LOCATION: Highland Valley Area

TYPE OF SURVEY: Induced Polarization

OPERATING MAN DAYS:	58	DATE STARTED: November 20, 1967
EQUIVALENT 8 HR. MAN DAYS:	87	DATE FINISHED: December 14, 1967
CONSULTING MAN DAYS:	3	NUMBER OF STATIONS: 271
DRAUGHTING MAN DAYS:	5	NUMBER OF READINGS: 1338
TOTAL MAN DAYS:	95	MILES OF LINE SURVEYED: 10.11

CONSULTANTS:

Mr. D. B. Sutherland, Apt. 2518, 47 Thorncliffe Park Drive, Toronto 17, Ont.
Dr. R. A. Bell, 50 Hemford Crescent, Don Mills, Ontario.

FIELD TECHNICIANS:

Mr. R. Fernholm, 44 Kenwood Avenue, Toronto 10, Ontario.
Plus 3 Helpers:
Mr. J. Peterson, Box 343, Ashcroft, B. C.
Mr. P. Dykes, Box 519, Ashcroft, B. C.
Mr. T Belsheim, c/o Sand "N" Sage Hotel, Ashcroft, B. C.

DRAUGHTSMEN:

Mr. V. Young, Apt. 507, 320 Tweedsmuir Avenue, Toronto 10, Ontario.
Miss D. Jenkins, 74 Havenbrook Blvd. Willowdale, Ontario.
Mrs. N. Lade, Apt. 503, 35 Esterbrooke Avenue, Willowdale, Ontario.

McPHAR GEOPHYSICS LIMITED

D. B. Sutherland,
Geophysicist.

Dated: December 27, 1967.

STATEMENT OF COST

Arlington Silver Mines - B. C.

Crew

14-1/2	days	Operating	@ $220.00/day	$3,190.00
2	days	Travel)		
1-3/4	days	Bad Weather) 6-1/2	@ $ 85.00/day	552.50
2-3/4	days	Standby)		

Expenses

Vehicle Rental	$340.00	
Meals and Accommodation	536.50	
Supplies	138.43	
Telephone and Telegraph	20.95	
		$1,035.88
Estimate of Charges not yet received		100.00
		$4,878.38

McPHAR GEOPHYSICS LIMITED

D. B. Sutherland,
Geophysicist.

Dated: December 27, 1967.

CERTIFICATE

I, Don Benjamin Sutherland of the City of Toronto, Province of Ontario, do hereby certify that:

1. I am a geophysicist residing at 47 Thorncliffe Park Drive, Apartment 2518, Toronto 17, Ontario.

2. I am a graduate of the University of Toronto in Physics and Geology with the degree of Bachelor of Arts (1954); and a graduate of the University of Toronto in Physics with the degree of Master of Arts (1955).

3. I am a member of the Society of Exploration Geophysicists and a member of the European Association of Exploration Geophysicists.

4. I have been practising my profession for over eleven years.

5. I have no direct or indirect interest, nor do I expect to receive any interest directly or indirectly, in the property or securities of Arlington Silver Mines Ltd. (N. P. L.) or any affiliate.

6. The statements made in this report are based on a study of published geological literature and unpublished private reports.

7. Permission is granted to use in whole or in part for assessment and qualification requirements but not for advertising purposes.

Dated at Toronto

This 27th day of December 1967.

Don B. Sutherland, M. A.

CERTIFICATE

I, Robert Alan Bell, of the City of Toronto, Province of Ontario, do hereby certify that:

1. I am a geologist residing at 50 Hemford Crescent, Don Mills, (Toronto) Ontario.

2. I am a graduate of the University of Toronto in Physics and Geology with the degree of Bachelor of Arts (1949); and a graduate of the University of Wisconsin in Economic Geology with the degree of Ph. D. (1953).

3. I am a member of the Society of Economic Geologists and a fellow of the Geological Association of Canada.

4. I have been practising my profession for over fifteen years.

5. I have no direct or indirect interest, nor do I expect to receive any interest directly or indirectly, in the property or securities of Arlington Silver Mines Ltd. (N. P. L.) or any affiliate.

6. The statements made in this report are based on a study of published geological literature and unpublished private reports.

7. Permission is granted to use in whole or in part for assessment and qualification requirements but not for advertising purposes.

Dated at Toronto

This 27th day of December 1967.

Robert A. Bell

Robert A. Bell, Ph.D.

CERTIFICATE

I, David K. Fountain, of the City of Toronto, Province of Ontario, do hereby certify that:

1. I am a geophysicist residing at 44 Highgate Road, Toronto 18, Ontario.

2. I am a graduate of the University of Toronto in Engineering Physics (Geophysics) with the degree of Bachelor of Applied Science (1961).

3. I am a member of the Society of Exploration Geophysicists, the European Association of Exploration Geophysicists and the Canadian Institute of Mining and Metalurgical Engineers.

4. I have been practising my profession for over seven years.

5. I am a registered Professional Engineer in the Provinces of Ontario and British Columbia.

6. I have no direct or indirect interest, nor do I expect to receive any interest directly or indirectly, in the property or securities of Arlington Silver Mines Ltd. (N.P.L.) or any affiliate.

7. The statements made in this report are based on a study of published geological literature and unpublished private reports.

8. Permission is granted to use in whole or in part for assessment and qualification requirements but not for advertising purposes.

Dated at Toronto

This 31st day of January 1968.

David K. Fountain, B.A. Sc.

Expiry Date: April 25, 1968

McPHAR GEOPHYSICS LIMITED

NOTES ON THE THEORY OF INDUCED POLARIZATION AND THE METHOD OF FIELD OPERATION

Induced Polarization as a geophysical measurement refers to the blocking action or polarization of metallic or electronic conductors in a medium of ionic solution conduction.

This electro-chemical phenomenon occurs wherever electrical current is passed through an area which contains metallic minerals such as base metal sulphides. Normally, when current is passed through the ground, as in resistivity measurements, all of the conduction takes place through ions present in the water content of the rock, or soil, i.e. by ionic conduction. This is because almost all minerals have a much higher specific resistivity than ground water. The group of minerals commonly described as "metallic", however, have specific resistivities much lower than ground waters. The induced polarization effect takes place at those interfaces where the mode of conduction changes from ionic in the solutions filling the interstices of the rock to electronic in the metallic minerals present in the rock.

The blocking action or induced polarization mentioned above, which depends upon the chemical energies necessary to allow the ions to give up or receive electrons from the metallic surface, increases with the time that a d.c. current is allowed to flow through the rock; i. e. as ions pile up against the metallic interface the resistance to current flow increases. Eventually, there is enough polarization in the form of excess ions at the interfaces to effectively stop all current flow through the metallic particle. This polarization takes place at each of the infinite number of solution-metal interfaces in a mineralized rock.

When the d. c. voltage used to create this d. c. current flow is cut off, the Coulomb forces between the charged ions forming the polarization cause them to return to their normal position. This movement of charge creates a small current flow which can be measured on the surface of the ground as a decaying potential difference.

From an alternate viewpoint it can be seen that if the direction of the current through the system is reversed repeatedly before the polarization occurs, the effective resistivity of the system as a whole will change as the frequency of the switching is changed. This is a consequence of the fact that the amount of current flowing through each metallic interface depends upon the length of time that current has been passing through it in one direction.

The values of the "metal factor" or "M. F." are a measure of the amount of polarization present in the rock mass being surveyed. This parameter has been found to be very successful in mapping areas of sulphide mineralization, even those in which all other geophysical methods have been unsuccessful. The induced polarization measurement is more sensitive to sulphide content than other electrical measurements because it is much more dependent upon the sulphide content. As the sulphide content of a rock is increased, the "metal factor" of the rock increases much more rapidly than the resistivity decreases.

Because of this increased sensitivity, it is possible to locate and outline zones of less than 10% sulphides that can't be located by E. M. Methods. The method has been successful in locating the disseminated "porphyry copper" type mineralization in the Southwestern United States.

Measurements and experiments also indicate that it should be possible to locate most massive sulphide bodies at a greater depth with induced polarization than with E. M.

Since there is no I. P. effect from any conductor unless it is metallic, the method is useful in checking E. M. anomalies that are suspected of being due to water filled shear zones or other ionic conductors. There is also no effect from conductive overburden, which frequently confuses E. M. results. It would appear from scale model experiments and calculations that the apparent metal factors measured over a mineralized zone are larger if the material overlying the zone is of low resistivity.

Apropos of this, it should be stated that the induced polarization measurements indicate the total amount of metallic constituents in the rock. Thus all of the metallic minerals in the rock, such as pyrite, as well as the ore minerals chalcopyrite, chalcocite, galena, etc. are responsible for the induced polarization effect. Some oxides such as magnetite, pyrolusite, chromite, and some forms of hematite also conduct by electrons and are metallic. All of the metallic minerals in the rock will contribute to the induced polarization effect measured on the surface.

In the field procedure, measurements on the surface are made in a way that allows the effects of lateral changes in the properties of the ground to be separated from the effects of vertical changes in the properties. Current is applied to the ground at two points a distance (X) apart. The potentials are measured at two other points (X) feet apart, in line with the current electrodes. The distance between the nearest current and potential electrodes is an integer number (N) times the basic distance (X).

The measurements are made along a surveyed line, with a constant distance (NX) between the nearest current and potential electrodes. In most surveys, several traverses are made with various values of (N); i.e. (N) = 1, 2, 3, 4, etc. The kind of survey required (detailed or reconnaissance) decides the number of values of (N) used.

In plotting the results, the values of the apparent resistivity and the apparent metal factor measured for each set of electrode positions are plotted at the intersection of grid lines, one from the center point of the current electrodes and the other from the center point of the potential electrodes. The resistivity values are plotted above the line and the metal factor values below. The lateral displacement of a given value is determined by the location along the survey line of the center point between the current and potential electrodes. The distance of the value from the line is determined by the distance (NX) between the current and potential electrodes when the measurement was made.

The separation between sender and receiver electrodes is only one factor which determines the depth to which the ground is being sampled in any particular measurement. These plots then, when contoured, are not section maps of the electrical properties of the ground under the survey line. The interpretation of the results from any given survey must be carried out using the combined experience gained from field, model and theoretical investigations. The position of the electrodes when anomalous values are measured must be used in the interpretation.

In the field procedure, the interval over which the potential differences are measured is the same as the interval over which the electrodes are moved after a series of potential readings has been made. One of the advantages of the induced polarization method is that the same equipment can be used for both detailed and reconnaissance surveys merely by changing the distance (X) over which the electrodes are moved each time. In the past, intervals have been used ranging from 100 feet to 1000 feet for (X). In each case, the decision as to the distance (X) and the values of (N) is largely determined by the expected size of the mineral deposit being sought, the size of the expected anomaly and the speed with which it is desired to progress.

The diagram in Figure 1 below demonstrates the method used in plotting the results. Each value of the apparent resistivity and the apparent "Metal factor" is plotted and identified by the position of the four electrodes when the measurement was made. It can be seen that the values measured for the larger values of (n) are plotted farther from the line indicating that the thickness of the layer of the earth that is being tested is greater than for the smaller values of (n); i. e. the depth of the measurement is increased.

METHOD USED IN PLOTTING DIPOLE-DIPOLE
INDUCED POLARIZATION AND RESISTIVITY RESULTS

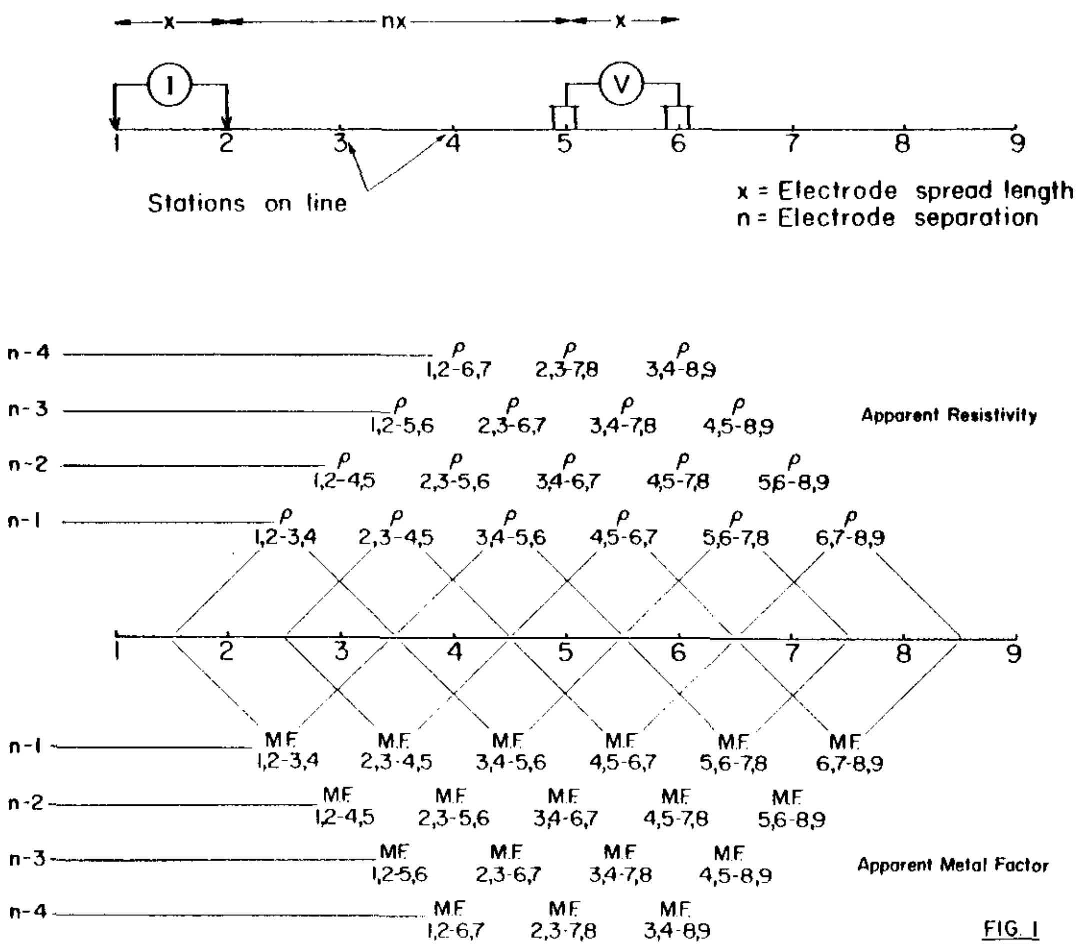
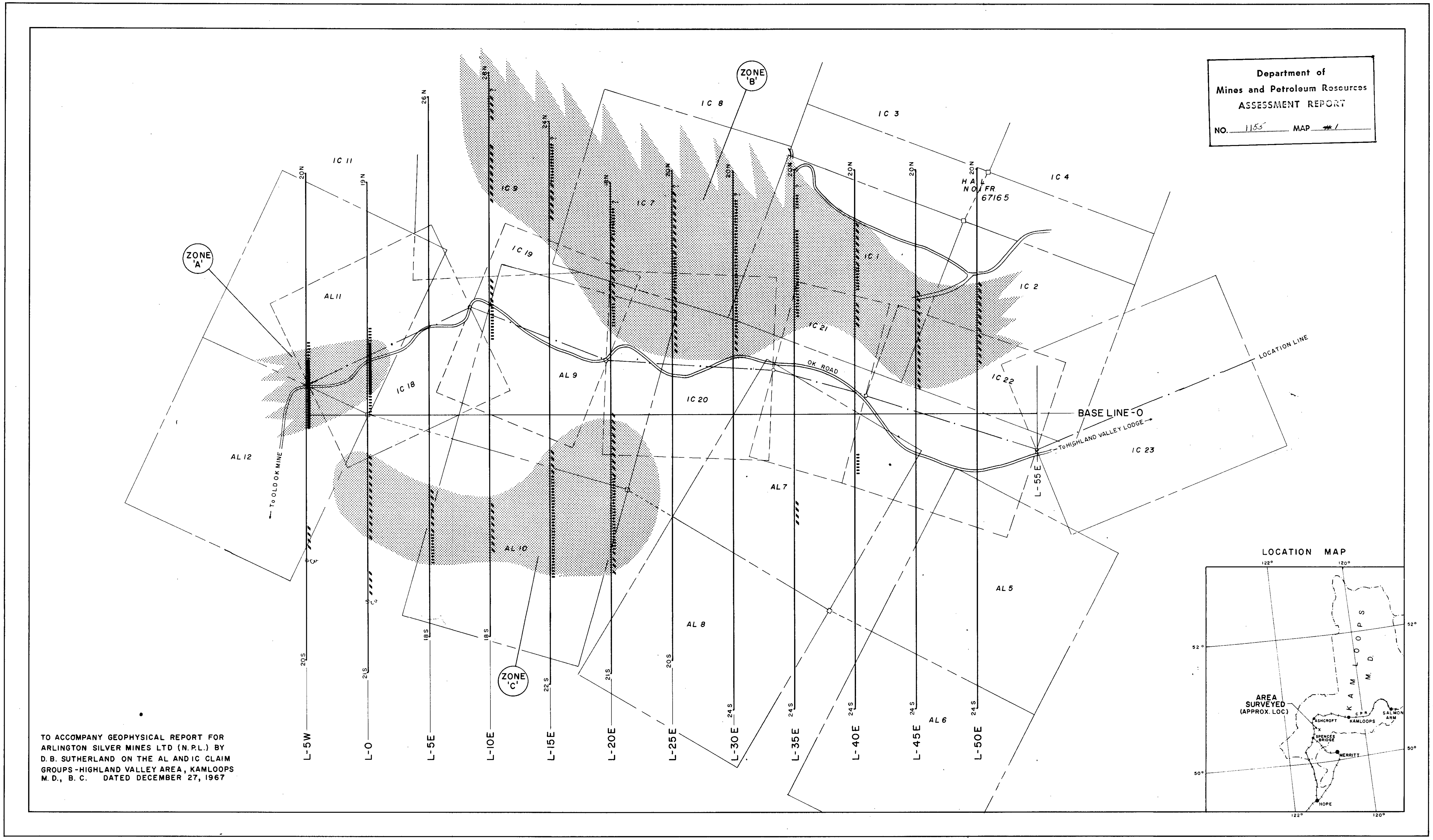


FIG. 1

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

PLAN MAP



SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

ARLINGTON SILVER MINES LTD (N.P.L.)

AL & IC CLAIM GROUPS - HIGHLAND VALLEY AREA, KAMLOOPS M. D., B. C.

SCALE

ONE INCH EQUALS FOUR HUNDRED FEET.

1155

DRAWN: V.T.Y.

DATE: DECEMBER, 1967

APPROVED:

DWG. MISC. 3285

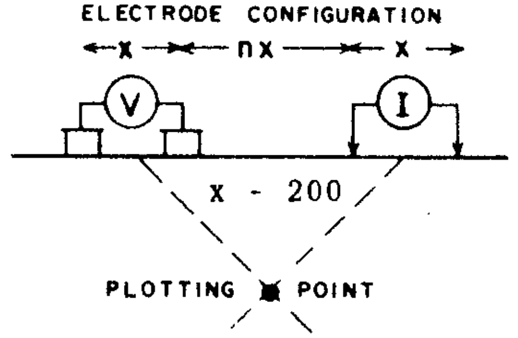
DWG. NO.-I.P.-2780-I

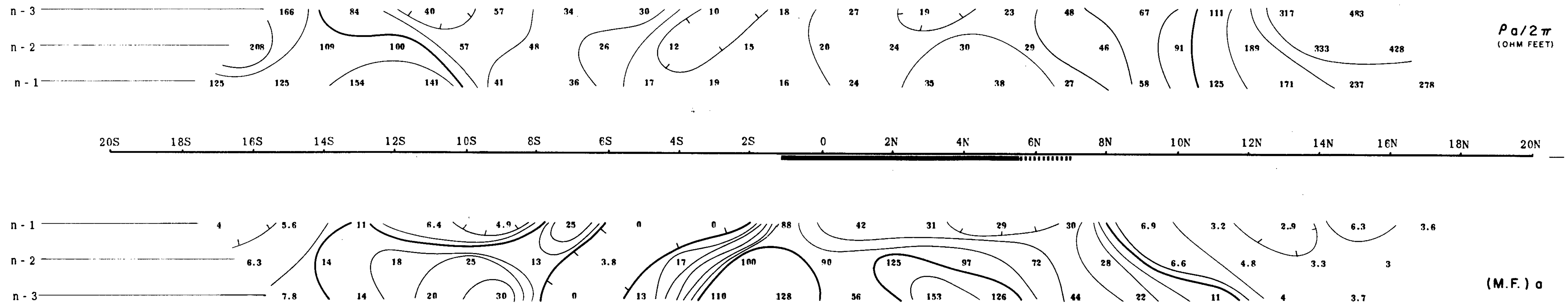
McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

NOTE: CONTOURS AT LOGARITHMIC MULTIPLES OF 10-15-20-30-50-75-100

ELECTRODE CONFIGURATION





SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE
PROBABLE
POSSIBLE

ARLINGTON SILVER MINES LTD (N.P.L.)

AL & IC CLAIM GROUPS - HIGHLAND VALLEY AREA, KAMLOOPS M.D., B.C.

Scale—One inch = 200 Feet

NOTE LOGARITHMIC CONTOUR INTERVAL

1155

FREQUENCY 0.3 & 5 CPS

DATE SURVEYED NOV.-DEC. 67

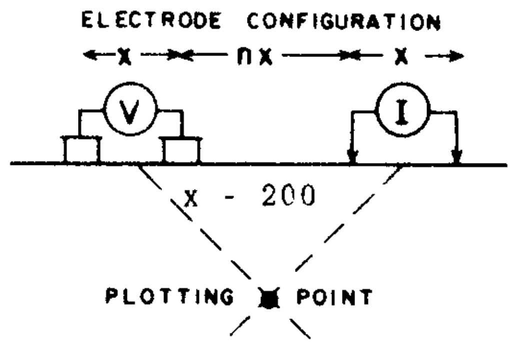
APPROVED

DATE

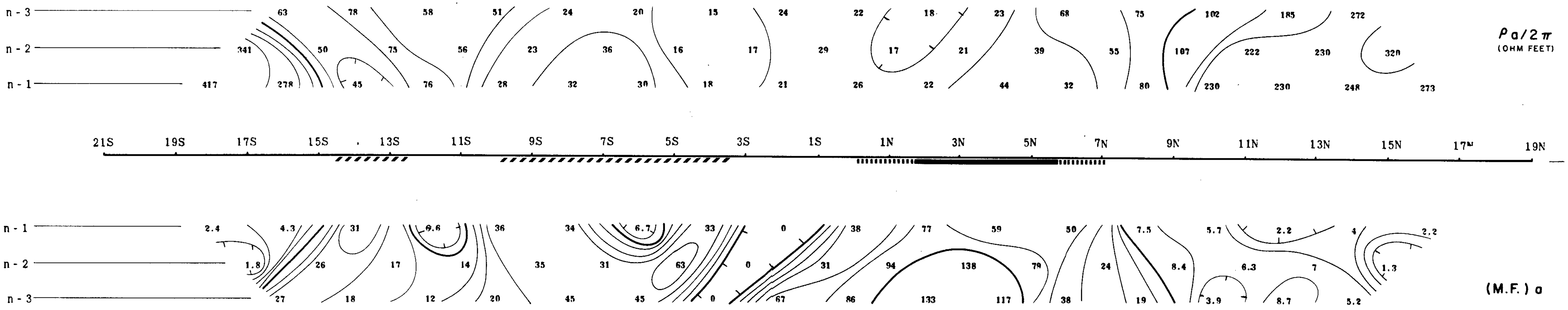
DWG. NO.-I.P.-2780-2

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



NOTE: CONTOURS AT LOGARITHMIC MULTIPLES OF 10-15-20-30-50-75-100



SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

ARLINGTON SILVER MINES LTD (N.P.L.)

AL & IC CLAIM GROUPS - HIGHLAND VALLEY AREA, KAMLOOPS M. D., B. C.

Scale-One inch= 200 Feet

NOTE LOGARITHMIC CONTOUR INTERVAL

1155

FREQUENCY 0.31-5 CPS

DATE SURVEYED NOV-DEC '67

APPROVED

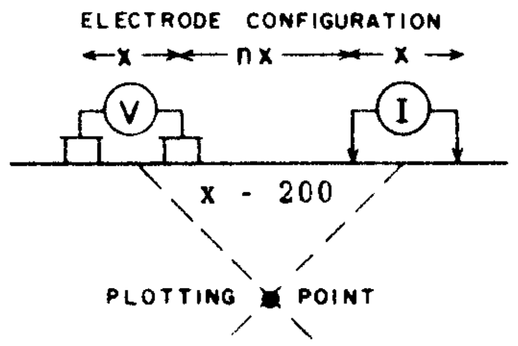
DATE

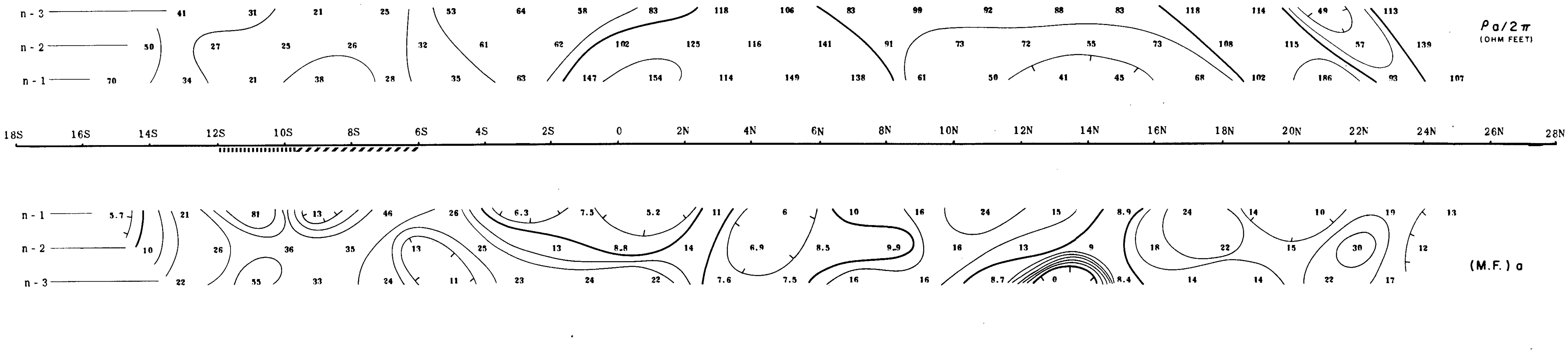
DWG. NO.–I.P.–2780–3

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

NOTE: CONTOURS AT LOGARITHMIC MULTIPLES OF 10-15-20-30-50-75-100





LINE NO.– 5E

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

ARLINGTON SILVER MINES LTD (N.P.L.)

AL & IC CLAIM GROUPS – HIGHLAND VALLEY AREA, KAMLOOPS M.D., B.C.

Scale–One inch = 200 Feet

NOTE LOGARITHMIC CONTOUR INTERVAL

1155

FREQUENCY 0.31-2.5 CPS

DATE SURVEYED NOV-DEC '67

APPROVED

DATE Dec 2 '67

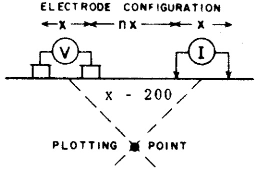
McPHAR GEOPHYSICS LIMITED

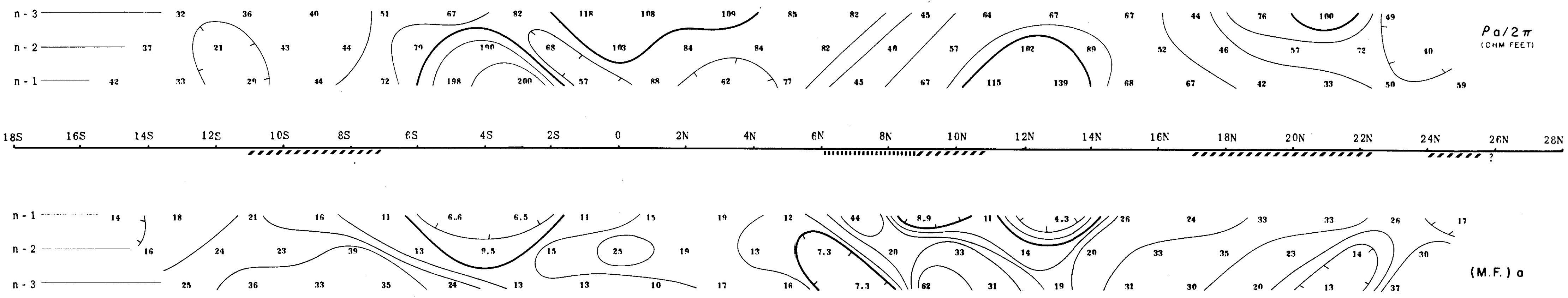
DWG. NO - I.P.- 2780 - 4

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

NOTE: CONTOURS AT LOGARITHMIC MULTIPLES OF 10, 15, 20, 30, 50, 75, 100





LINE NO. - 10E

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

ARLINGTON SILVER MINES LTD (N.P.L.)

AL & IC CLAIM GROUPS - HIGHLAND VALLEY AREA, KAMLOOPS M.D., B.C.

Scale - One inch = 200 Feet

NOTE: LOGARITHMIC CONTOUR INTERVAL

1155

FREQUENCY 0.31 - 5 CPS

DATE SURVEYED NOV - DEC '67

APPROVED

DATE Dec 1967

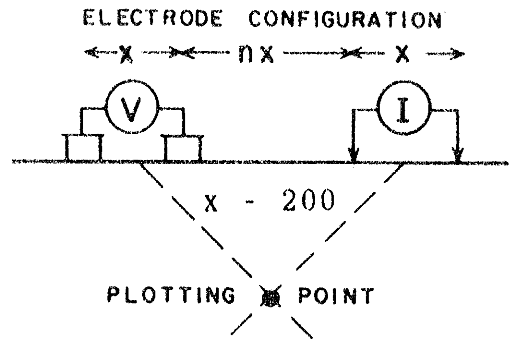
McPHAR GEOPHYSICS LIMITED

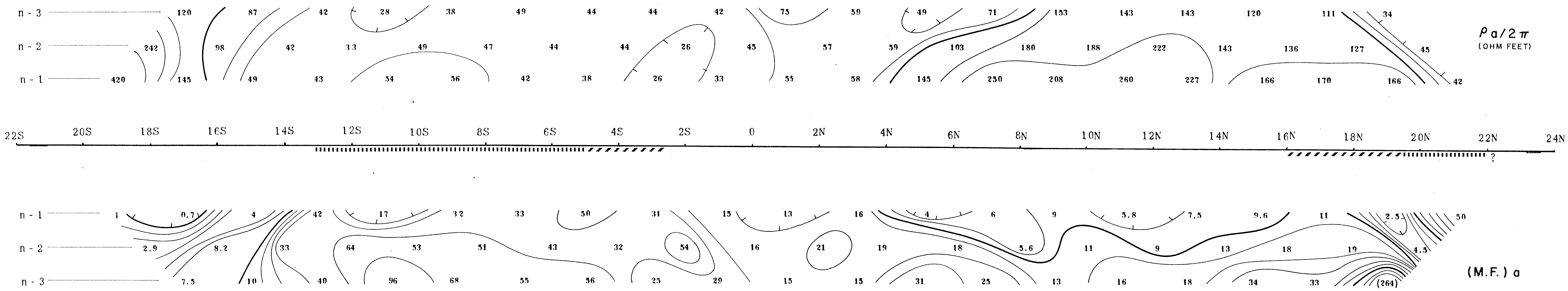
DWG. NO.-I.P.- 2780-5

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

NOTE: CONTOURS AT LOGARITHMIC MULTIPLES OF 10-15-20-30-50-75-100





LINE NO.- 15E

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

ARLINGTON SILVER MINES LTD (N.P.L.)

AL & IC CLAIM GROUPS - HIGHLAND VALLEY AREA, KAMLOOPS M.D., B.C.

Scale-One inch = 200 Feet

NOTE LOGARITHMIC CONTOUR INTERVAL

1155

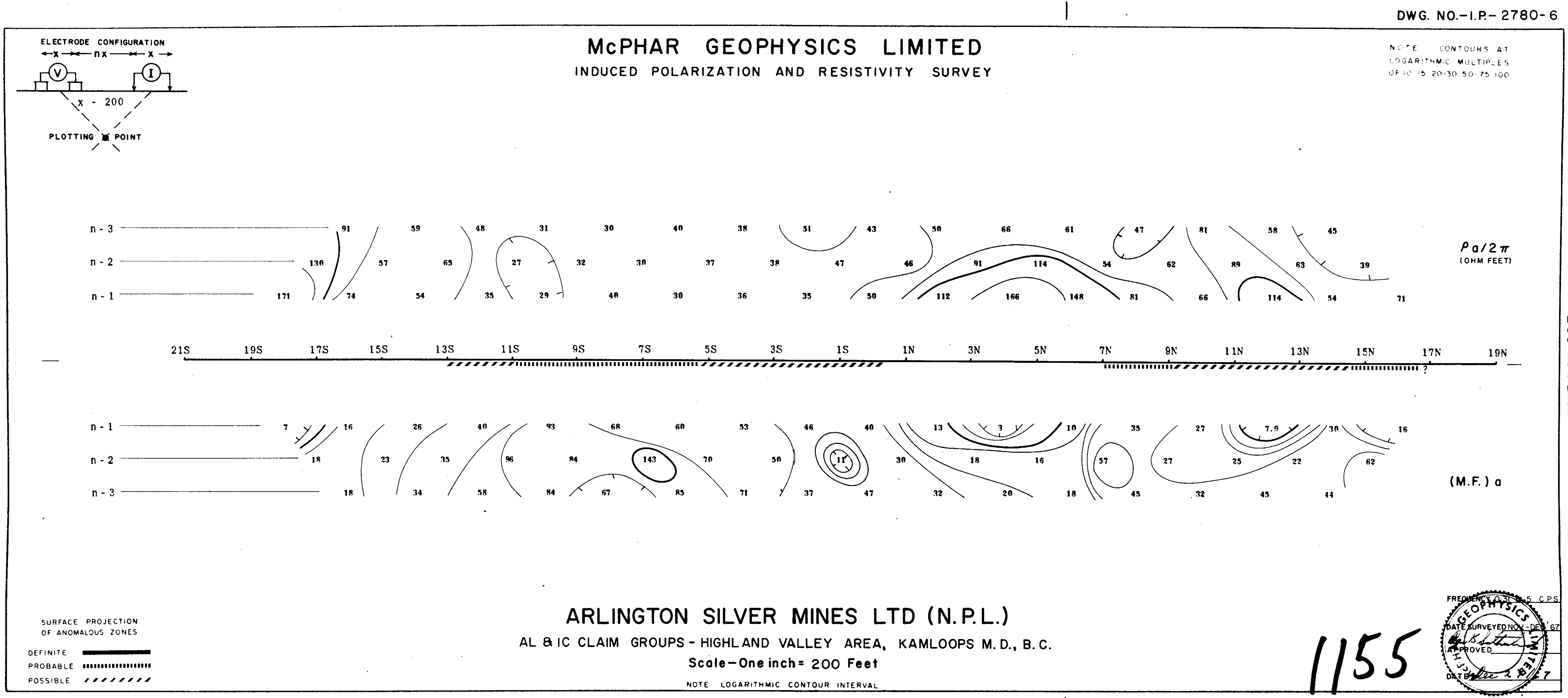
FREQUENCY 0.31-2.5 CPS

DATE SURVEYED NOV-DEC 67

APPROVED

DATE Dec 2 67

McPHAR GEOPHYSICS LIMITED

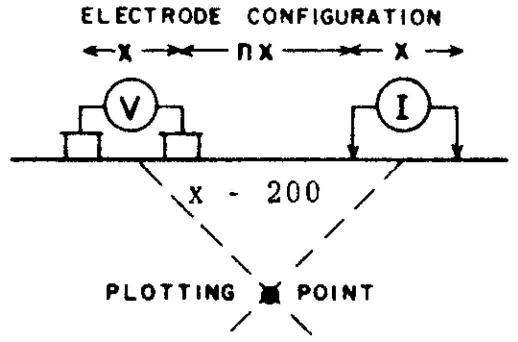

DWG. NO.-I.P.-2780-6
ELECTRODE CONFIGURATION
x nx x
V I
x - 200
PLOTTING POINT
McPHAR GEOPHYSICS LIMITED
INDUCED POLARIZATION AND RESISTIVITY SURVEY
NOTE CONTOURS AT LOGARITHMIC MULTIPLES OF 10 -15 20-30 50-75 100
n - 3 91 59 48 31 30 40 38 51 43 50 66 61 47 81 58 45
n - 2 130 57 65 27 32 30 37 38 47 46 91 114 54 62 89 63 39
n - 1 171 74 54 35 29 40 30 36 35 50 112 166 148 81 66 114 54 71
ρa/2π
(OHM FEET)
21S 19S 17S 15S 13S 11S 9S 7S 5S 3S 1S 1N 3N 5N 7N 9N 11N 13N 15N 17N 19N
?
n - 1 7 16 26 40 93 68 60 53 46 40 13 3 10 35 27 7.9 30 16
n - 2 18 23 35 96 84 143 70 50 11 30 18 16 57 27 25 22 62
n - 3 18 34 58 84 67 85 71 37 47 32 20 18 45 32 45 44
(M.F.) a
LINE NO.- 20E
SURFACE PROJECTION OF ANOMALOUS ZONES
DEFINITE
PROBABLE
POSSIBLE
ARLINGTON SILVER MINES LTD (N.P.L.)
AL & IC CLAIM GROUPS - HIGHLAND VALLEY AREA, KAMLOOPS M.D., B.C.
Scale-One inch= 200 Feet
NOTE LOGARITHMIC CONTOUR INTERVAL
1155
FREQUENCY 0.31-5 CPS
DATE SURVEYED NOV-DEC 67
APPROVED
DATE Dec 2 67
McPHAR GEOPHYSICS LIMITED

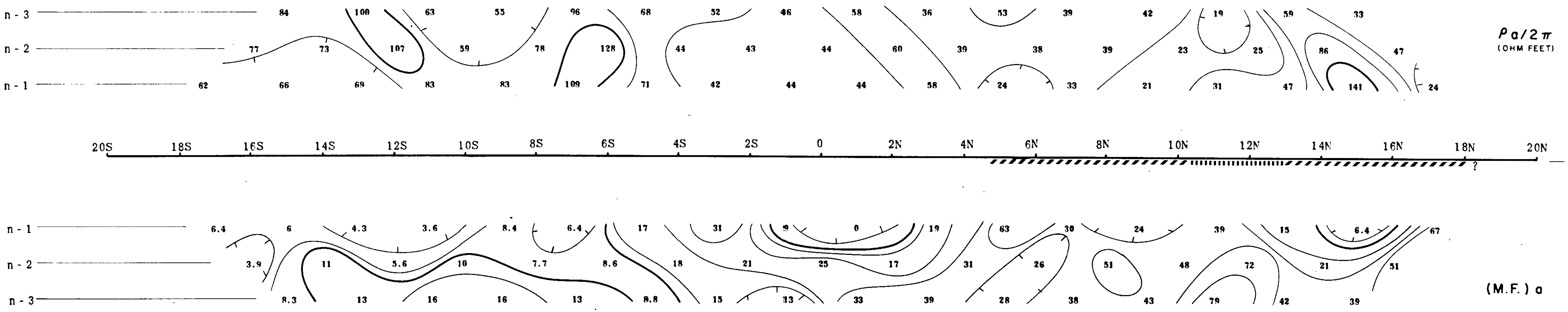
DWG. NO.-I.P.-2780-7

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

NOTE: CONTOURS AT LOGARITHMIC MULTIPLES OF 10-15-20-30-50-75-100





LINE NO - 25E

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

ARLINGTON SILVER MINES LTD (N.P.L.)

AL & IC CLAIM GROUPS - HIGHLAND VALLEY AREA, KAMLOOPS M.D., B.C.

Scale - One inch = 200 Feet

NOTE LOGARITHMIC CONTOUR INTERVAL

FREQUENCY 0.31-5 CPS

DATE SURVEYED NOV-DEC 67

APPROVED

DATE Dec 2 67

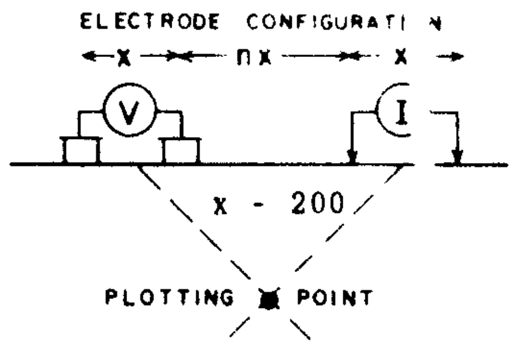
1155

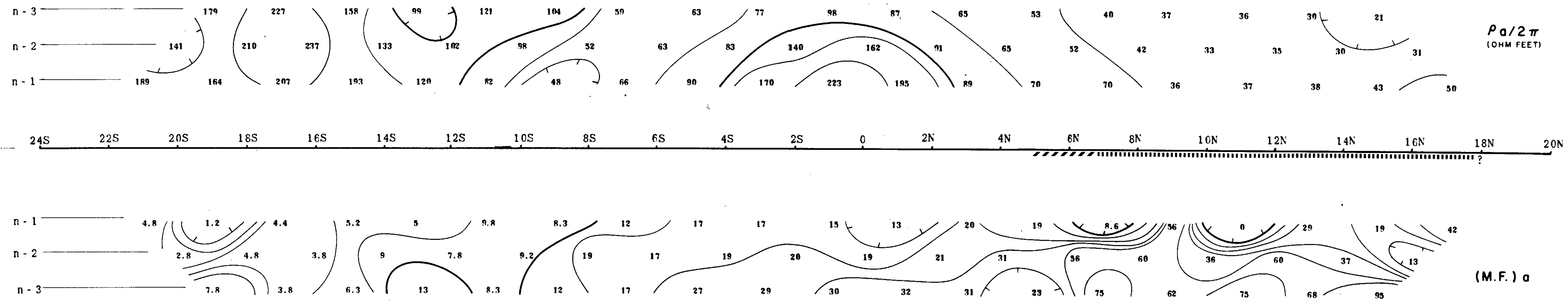
DWG. NO.-I.P.-2780-8

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

NOTE: CONTOURS AT LOGARITHMIC MULTIPLES OF 10-15-20-30-50-75-100





LINE NO.- 30E

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

ARLINGTON SILVER MINES LTD (N.P.L.)

AL & IC CLAIM GROUPS - HIGHLAND VALLEY AREA, KAMLOOPS M.D., B.C.

Scale—One inch = 200 Feet

NOTE LOGARITHMIC CONTOUR INTERVAL

1155

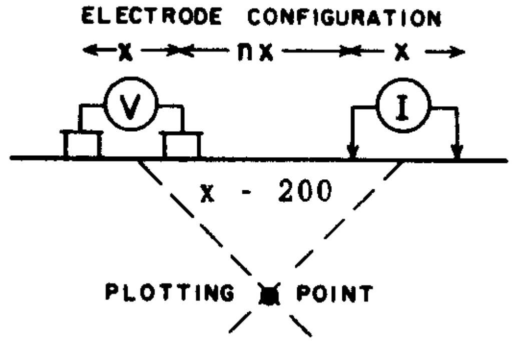
FREQUENCY 0.31 & 5 CPS

DATE SURVEYED NOV.-DEC. 67

APPROVED

DATE

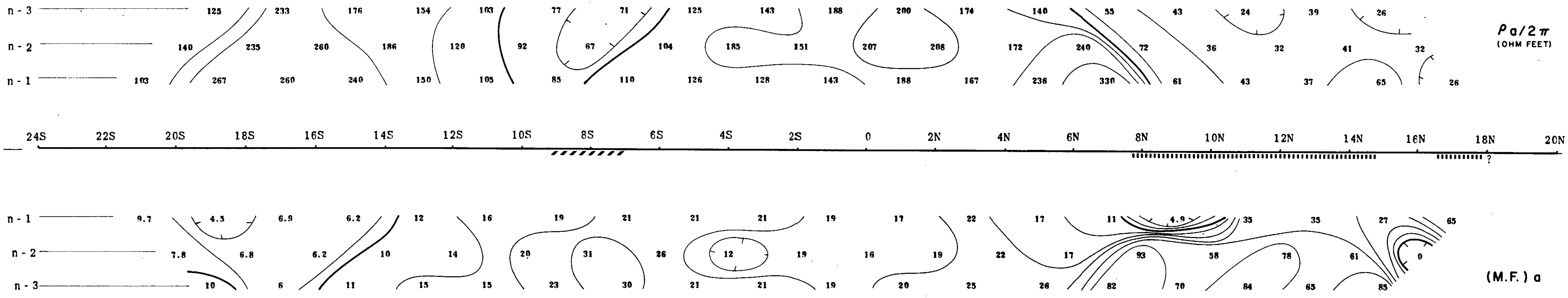
DWG. NO.-I.P.-2780-9



McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

NOTE: CONTOURS AT LOGARITHMIC MULTIPLES OF 10-15-20-30-50-75-100



LINE NO.- 35E

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

ARLINGTON SILVER MINES LTD (N.P.L.)

AL & IC CLAIM GROUPS - HIGHLAND VALLEY AREA, KAMLOOPS M.D., B.C.

Scale-One inch = 200 Feet

NOTE LOGARITHMIC CONTOUR INTERVAL

1155

FREQUENCY 0.31 & 5 CPS

DATE SURVEYED NOV-DEC 67

APPROVED

DATE Dec 2 67

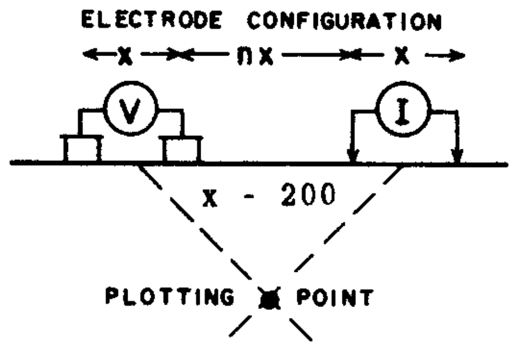
McPHAR GEOPHYSICS LIMITED

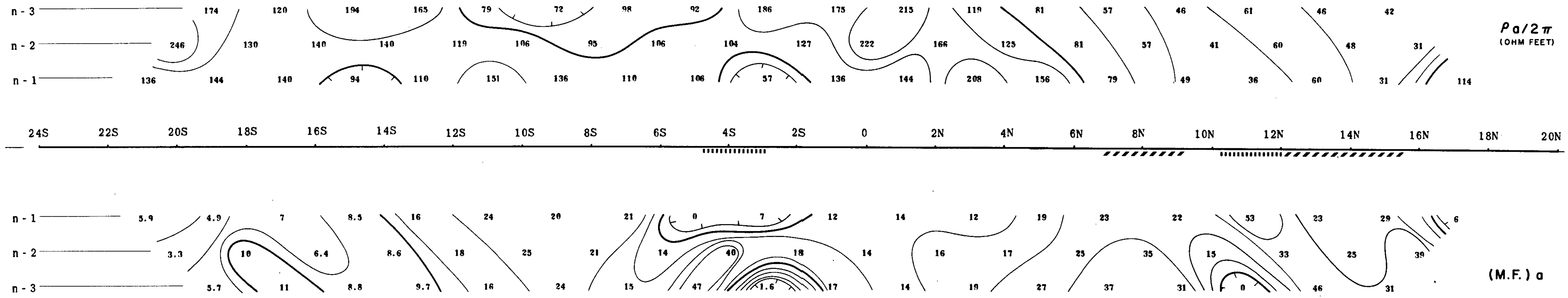
DWG. NO.-I.P.-2780-10

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

NOTE: CONTOURS AT LOGARITHMIC MULTIPLES OF 10-15-20-30-50-75-100





LINE NO.- 40 E

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

ARLINGTON SILVER MINES LTD (N.P.L.)

AL & IC CLAIM GROUPS - HIGHLAND VALLEY AREA, KAMLOOPS M.D., B.C.

Scale—One inch = 200 Feet

NOTE LOGARITHMIC CONTOUR INTERVAL

1155

FREQUENCY 0.31-5 CPS

DATE SURVEYED NOV-DEC '67

APPROVED

DATE

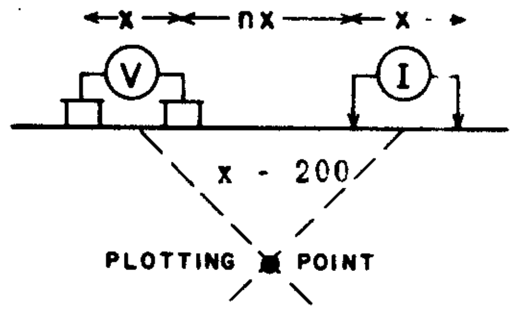
DWG. NO.-I.P.-2780-11

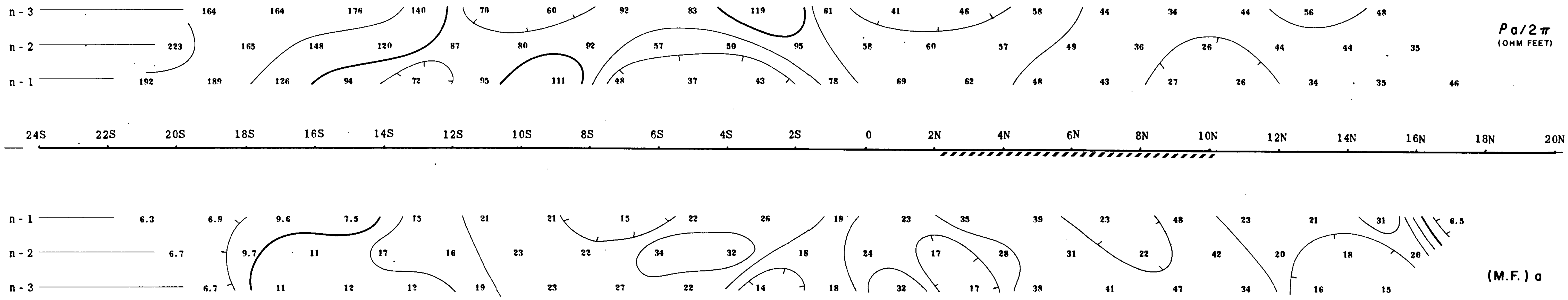
McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

NOTE: CONTOURS AT LOGARITHMIC MULTIPLES OF 10-15-20-30-50-75-100

ELECTRODE CONFIGURATION





LINE NO.- 45 E

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE
PROBABLE
POSSIBLE

ARLINGTON SILVER MINES LTD. (N.P.L.)

AL & IC CLAIM GROUPS - HIGHLAND VALLEY AREA, KAMLOOPS M.D., B.C.

Scale—One inch= 200 Feet

NOTE LOGARITHMIC CONTOUR INTERVAL

1155

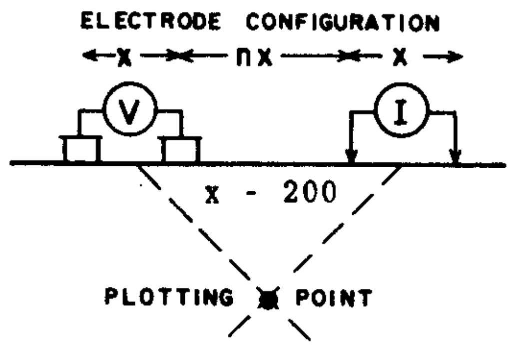
FREQUENCY 0.31-2.5 C.P.S.
DATE SURVEYED NOV.-DEC. 67
APPROVED
DATE Dec 2 67

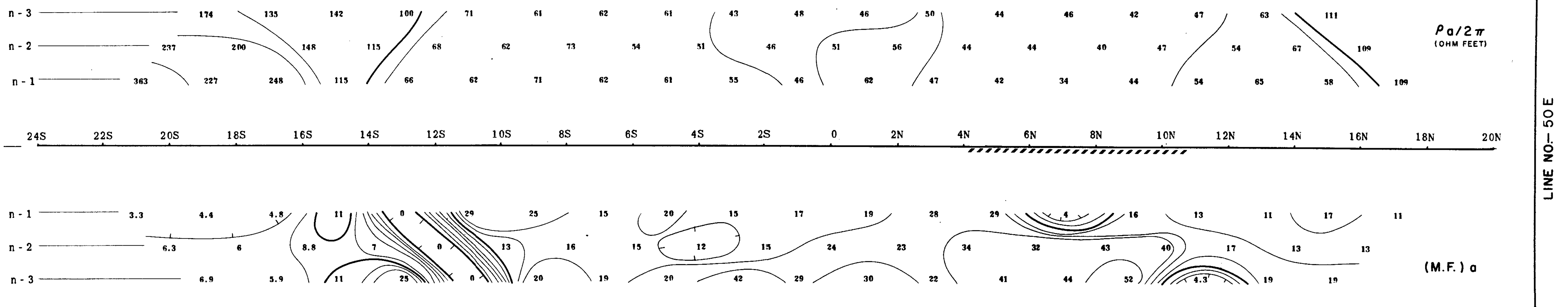
McPHAR GEOPHYSICS LIMITED

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

NOTE: CONTOURS AT LOGARITHMIC MULTIPLES OF 10-15-20-30-50-75-100





SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE
PROBABLE
POSSIBLE

ARLINGTON SILVER MINES LTD (N.P.L.)

AL & IC CLAIM GROUPS - HIGHLAND VALLEY AREA, KAMLOOPS M.D., B.C.

Scale—One inch = 200 Feet

NOTE LOGARITHMIC CONTOUR INTERVAL

1155

FREQUENCY 0.31 & 5 CPS
DATE SURVEYED NOV.-DEC. '67
APPROVED
DATE Dec 2 67