1121

92H/16E

REPORT ON THE INDUCED POLARIZATION AND RESISTIVITY SURVEY ON THE FWP, LAKE AND SLIM CLAIMS BRENDA LAKE PROPERTY, B. C. FOR LARGO MINES LIMITED (N. P. L.)

BY

D. B. SUTHERLAND

A. W. MULLAN

NAME AND LOCATION OF PROPERTY:

BRENDA LAKE PROPERTY, PEACHLAND AREA

OSOYOOS MINING DIVISION, B. C. 49°N/120° W-NE

DATE STARTED: July 11, 1967

DATE COMPLETED: July 27, 1967

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McPHAR GEOPHYSICS LIMITED

REPORT ON THE INDUCED POLARIZATION AND RESISTIVITY SURVEY ON THE FWP, LAKE AND SLIM CLAIMS BRENDA LAKE PROPERTY, B. C. FOR LARGO MINES LIMITED (N. P. L.)

1. INTRODUCTION

As authorized by Largo Mines Limited (N. P. L.) an induced polarization and resistivity survey has been carried out over parts of the FWP, LAKE and SLIM claims of the Company's Brenda Lake Property. The property lies in the Osoyoos Mining Division near Peachland, British Columbia and is located in the northeast quadrant of the one degree quadrilateral whose southeast corner is at 49° N and 120° W.

The IP field surveying was carried out with a McPhar dual frequency unit, Model P654, during July, 1967. The purpose of the surveying was to outline any metallic material, in the hope that it would be of economic importance.

2. PRESENTATION OF RESULTS

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

Line	Electrode Intervals	Dwg. No.
0	200 Foot	IP 2718-1
6S	200 Foot	IP 2718-2
12S	200 Foot	IP 2718-3
18S	200 Foot	IP 2718-4
24S	200 Foot	IP 2718-5
30S	200 Foot	IP 2718-6
36S	200 Foot	IP 2718-7
42S	200 Foot	IP 2718-8
48S	200 Foot	IP 2718-9
54S	200 Foot	IP 2718-10
60S	200 Foot	IP 2718-11
66S	200 Foot	IP 2718-12
70S	200 Foot	IP 2718-13

Enclosed with this report is Dwg. Misc. 3226, a plan map of the grid area at a scale of 1" = 500'. 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

Most of the area covered by the survey is mapped as argillite and pyrrhotized andesite of the Nicola Group. The north part of the property is shown to be underlain by altered diorite. The contact between the diorite and the Nicola Group trends E-W in the vicinity of Line 18S. The area north of 18S and east of the base line is relatively free of anomalous effects. However, the remainder of the grid is characterized by unusually high metal factor values associated with low resistivities. Many of these strongly anomalous effects occur over areas of outcropping Nicola rocks which are reported to contain disseminated pyrite, pyrrhotite and graphite. This material could account for all of the strongly anomalous effects that occur in the Nicola formations.

Because of the unusually strong nature of the IP responses on the property, the anomaly symbols have been used to indicate the relative intensity of the IP effects rather than their certainty. The possible economic importance of the IP anomalies is difficult to assess. Important concentrations of copper and/or molybdenum can occur in association with IP effects that vary from intense to very weak. Figure 1 shows the results obtained over a nearby deposit that contains less than 2 per cent sulphides. Anomalies of a similar magnitude will be shown in this report as possible anomalies; any of these that occur in the diorite will warrant careful evaluation.

Lines 0, 6S, 12S and 18S

The relatively weak effects on the east end of these lines will warrant detailed investigations if the host rock can be definitely established to be diorite. Locations for the initial work should include: from 12W to 6W on Line 0, 5E to 8E on Line 6S and 5E to 9E on Line 18S. Somewhat stronger sources are centered near 4E on Line 12S and 13E on Line 18S; these also merit further work.

The remaining responses appear to represent a broad area of widespread but variable metallic material. The strongest and shallowest effects occur near 16W on Line 12S and the cause of the anomalies may be observable in outcrops near this locality.

Lines 24S to 70S inclusive

Virtually all of the remainder of the grid is strongly anomalous. The solid bars have been used to indicate the more concentrated portions. Many of the values suggest that the source material is quite shallow and detailed surface geology is recommended at the following localities to determine the cause of the anomalous effects: 16W on Line 30S, 18W and 12E on Line 36S, 2E on Line 42S, 8W and 2E on Line 48S, 12W and 6E on Line 54S, 14W and 8E on Line 60S, and 14E on Line 66S. On Lines 66S and 70S there is strong evidence that the source material dips or plunges gently to the west. Similar effects could be caused by increased overburden thickness on this portion of the grid.

4. SUMMARY AND RECOMMENDATIONS

Unusually strong IP effects and associated low resistivities were encountered over most of the grid area. South of Line 18S, these correspond to an area of Nicola Group volcanics and sediments that are reported to contain pyrite, pyrrhotite and graphite. This material could account for all of the observed IP response, nevertheless, surface investigations have been recommended for a number of localities where the source material is indicated to be both highly concentrated and at shallow depth.

On the basis of geology and the IP results obtained on the nearby Brenda property, the most favourable localities for further work may be the weaker IP effects that occur on the northeast portion of the property, which is shown to be underlain by diorite. Shallow sources of low metallic content are indicated by the data in the following areas: from 12W to 6W on Line 0, 5E to 8E on Line 6S, and 5E to 9E on Line 18S. In our opinion, these localities warrant detailed surface investigations followed by drilling if the geology is favourable.

Moderate amplitude anomalies that suggest moderately concentrated sources lying within the diorite are centered near 4E on Line 12S and 13E on Line 18S. These also merit detailed geologic examination.

In the area north of Line 18S and west of the base line the IP effects are similar to those obtained over the Nicola Group rocks to the south but somewhat lower in magnitude. Surface investigations are suggested near 16W on Line 12S to determine the nature of the source material which may outcrop in this vicinity.

McPHAR GEOPHYSICS LIMITED

D. B. Sutherland,
Geophysicist.

A. W. Mullan,
Geologist

Dated: August 15, 1967

Should be Nicola M.D.

ASSESSMENT DETAILS

PROPERTY: Lake FWP Slim Claims	**MINING DIVISION:** Osoyoos
SPONSOR: Largo Mines	**PROVINCE:** B. C.
LOCATION: Brenda Lake Area	
TYPE OF SURVEY: Induced polarization	
OPERATING MAN DAYS: 39	**DATE STARTED:** July 11, 1967
EQUIVALENT 8 HR. MAN DAYS: 59	**DATE FINISHED:** July 27, 1967
CONSULTING MAN DAYS: 1	**NUMBER OF STATIONS:** 273
DRAUGHTING MAN DAYS: 7	**NUMBER OF READINGS:** 1326
TOTAL MAN DAYS: 67	**MILES OF LINE SURVEYED:** 9.8

CONSULTANTS:
D. B. Sutherland, Apt. 2518, 47 Thorncliffe Park Drive, Toronto 17, Ontario
A. W. Mullan, 11 Park Glen Drive, Don Mills, Ontario.

FIELD TECHNICIANS:
G.M. Trefananko, 651 Sheppard Avenue West, Toronto, Ontario.
T. Yeo, Box 355, Fox, Saskatchewan.
1 Labourer, D. Dunkin, RR#1, Peachland, B.C.

DRAUGHTSMEN:
I. Ayre, 219 Wilson Avenue, Toronto 12, Ontario.
D. Jenkins, 2911 Bayview Avenue, Suite 117D, Willowdale, Ontario.

McPHAR GEOPHYSICS LIMITED

D. B. Sutherland,
Geophysicist.

Dated: August 15, 1967

SUMMARY OF COST

Largo Mines Limited (N. P. L.)

Crew

13 days Operating	@ $215.00/day	$2,795.00
2 days Travel) 4 2 days Standby)	@ $ 75.00/day	300.00

Extra Labour

13 days	@ $ 20.00/day = $260.00 + 20%	312.00

Expenses

Vehicle Expenses	$ 52.26	
Mileage Allowance	65.70	
Meals and Accommodation	95.97	
Freight and Brokerage	56.30	
Telephone and Telegraph	18.90	
Supplies	27.05	
Groceries	168.47	
Estimate of costs not yet received	300.00	
	$784.65	784.65
		$4,191.65

McPHAR GEOPHYSICS LIMITED

D. B. Sutherland,
Geophysicist.

Dated: August 15, 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 Apt. 2518, 47 Thorncliffe Park Drive, 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 nine 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 Largo Mines Limited (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 15th day of August 1967

Don B. Sutherland, M. A.

CERTIFICATE

I, Ashton W. Mullan, of the City of Toronto, in the Province of Ontario, hereby certify:

1. That I am a geologist and a fellow of the Geological Association of Canada with a business address at 139 Bond Avenue, Don Mills, Ontario.

2. That I am registered as a member of the Association of Professional Engineers of the Province of Ontario.

3. That I hold a B. Sc. degree from McGill University.

4. That I have been practising my profession as a geologist for about 20 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 Largo Mines Limited (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 15th day of August 1967

A. W. Mullan, B.Sc. P.Eng.

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

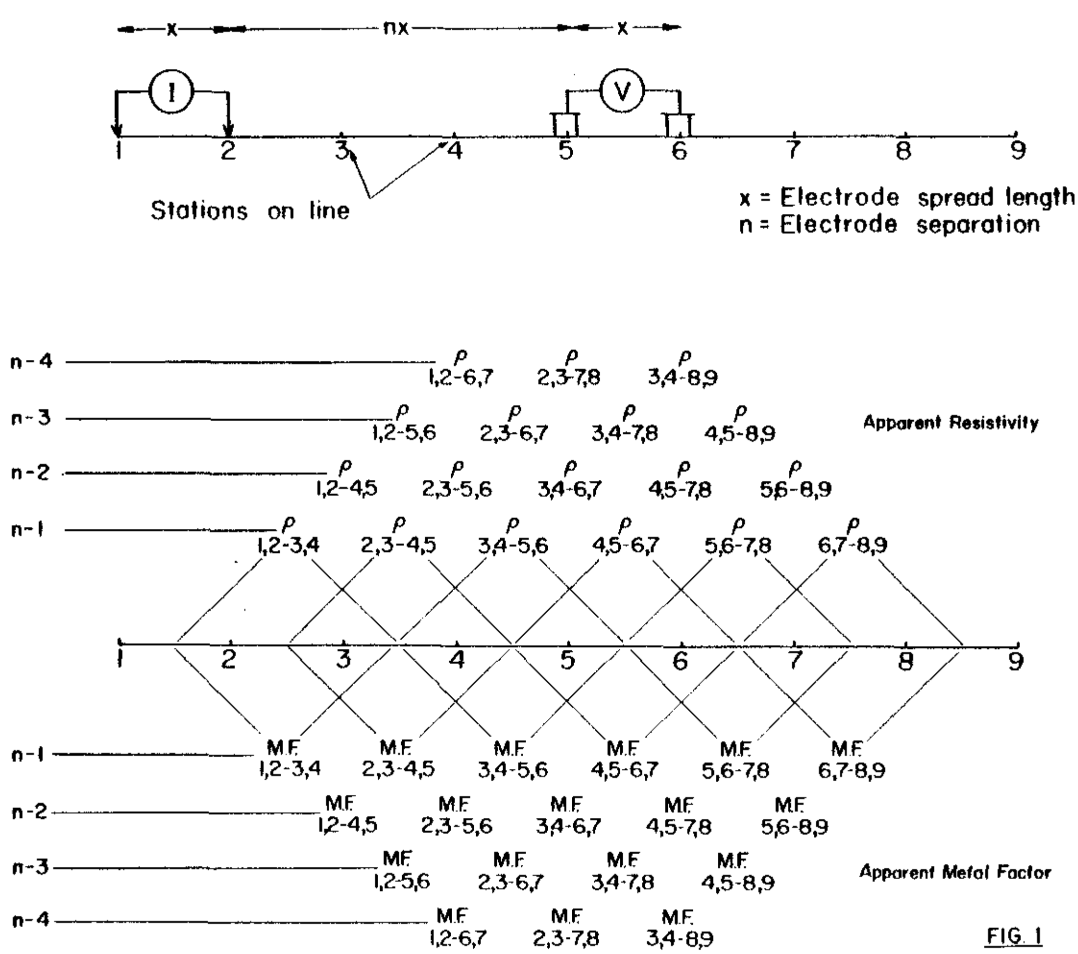


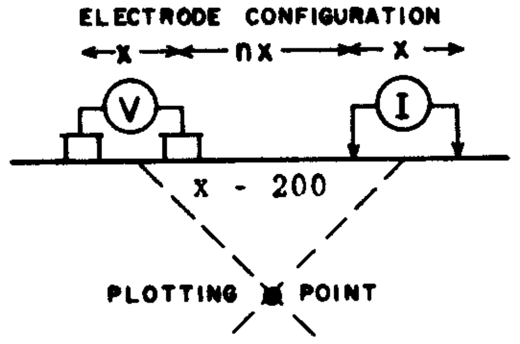
FIG. 1

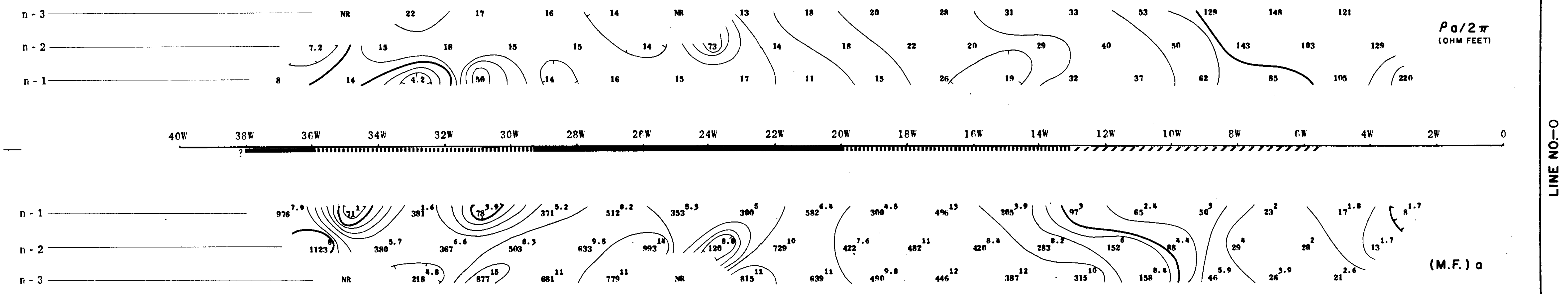
DWG. NO.-I.P.-2718-1

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

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





LARGO MINES LIMITED (N.P.L.)

LAKE, FWP, SLIM CLAIMS, BRENDA LAKE AREA, OSOYOOS M.D., B.C.

Scale-One inch = 200 Feet

NOTE LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

1121

FREQUENCY 0.3-5.0 C.P.S.

DATE SURVEYED JULY, 1967

APPROVED

DATE 5/18/67

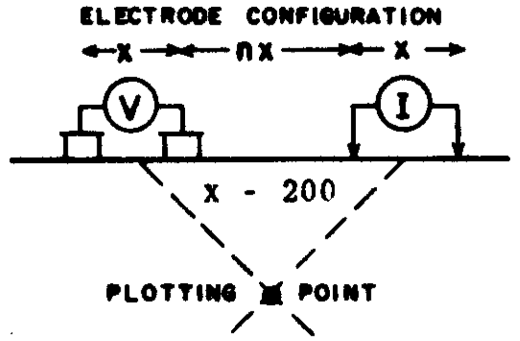
McPHAR GEOPHYSICS LIMITED

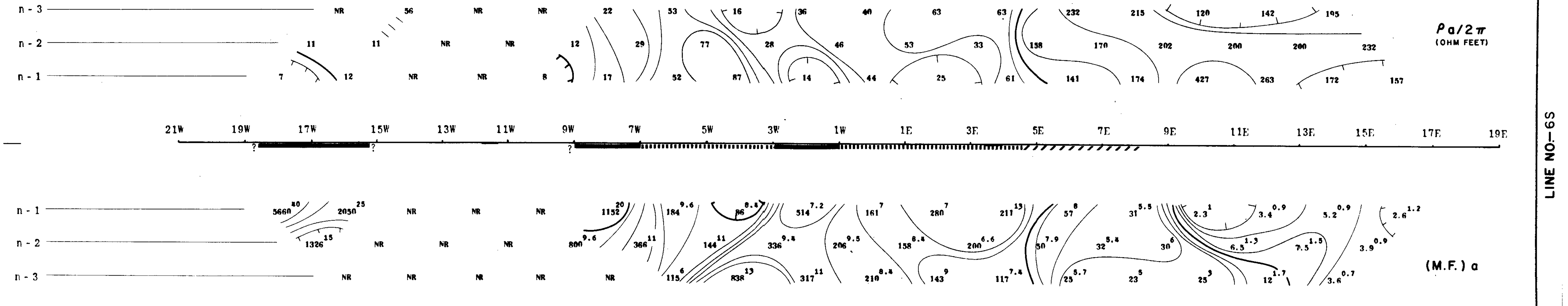
DWG. NO.-I.P.-2718-2

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

LARGO MINES LIMITED (N.P.L.)

LAKE, FWP, SLIM CLAIMS, BRENDA LAKE AREA, OSOYOOS M.D., B.C.

Scale—One inch = 200 Feet

NOTE LOGARITHMIC CONTOUR INTERVAL

FREQUENCY 0.31&5 C.P.S.

DATE SURVEYED JULY, 1967

APPROVED

DATE

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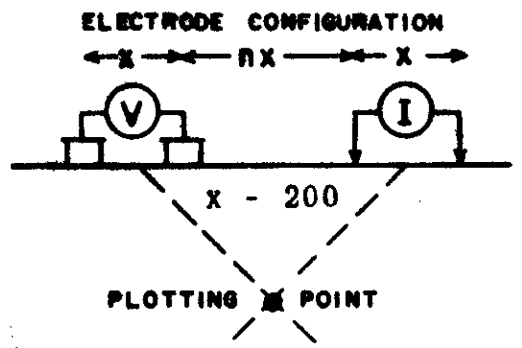
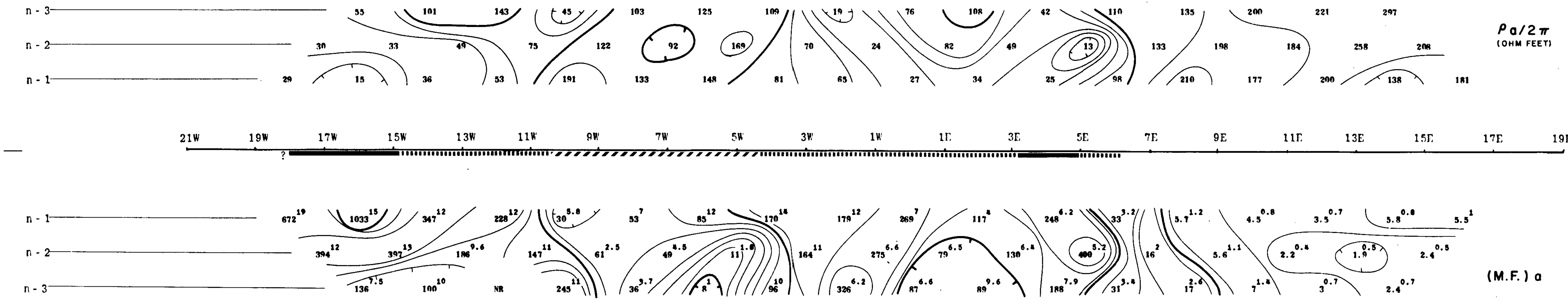


McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

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



LINE NO.– 12 S

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

LARGO MINES LIMITED (N.P.L.)

LAKE, FWP, SLIM CLAIMS, BRENDA LAKE AREA, OSOYOOS M.D., B.C.

Scale–One inch = 200 Feet

NOTE LOGARITHMIC CONTOUR INTERVAL

1121

FREQUENCY 0.3183 C.P.S.

DATE SURVEYED JULY, 1967

APPROVED

DATE

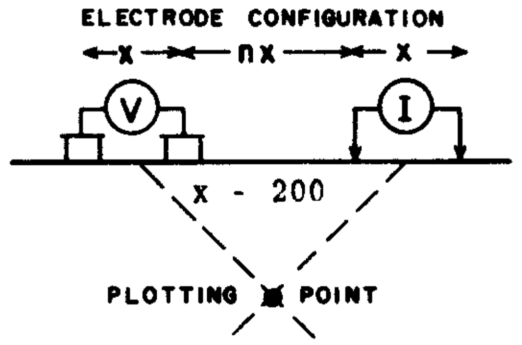
McPHAR GEOPHYSICS LIMITED

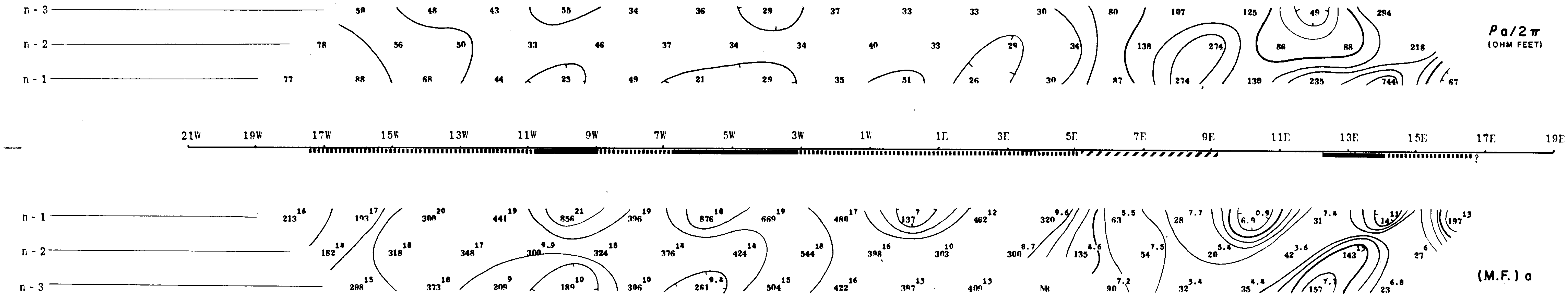
DWG. NO.–I.P.– 2718-4

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

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





LINE NO.– 18S

LARGO MINES LIMITED (N.P.L.)

LAKE, FWP, SLIM CLAIMS, BRENDA LAKE AREA, OSOYOOS M.D., B.C.

Scale–One inch = 200 Feet

NOTE LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

1121

FREQUENCY 0.31 & 5 C.P.S.

DATE SURVEYED JULY, 1967

APPROVED

DATE

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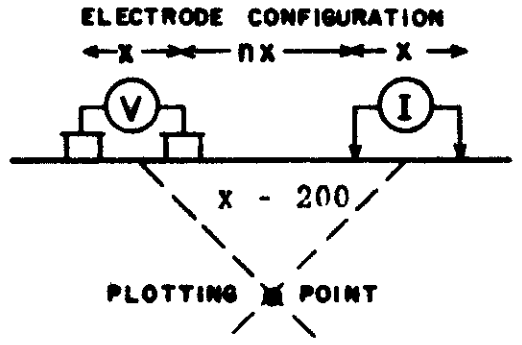
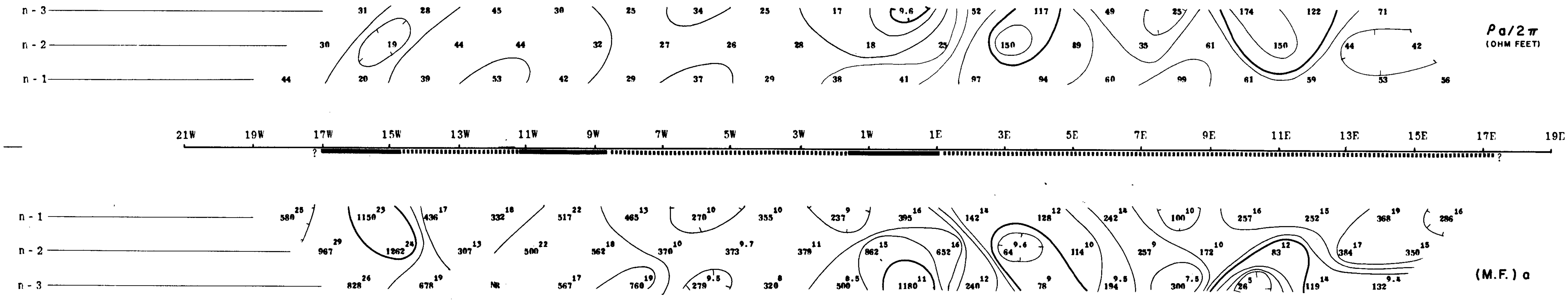


McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

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



LINE NO.- 24 S

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE
PROBABLE
POSSIBLE

LARGO MINES LIMITED (N.P.L.)

LAKE, FWP, SLIM CLAIMS, BRENDA LAKE AREA, OSOYOOS M.D., B.C.

Scale—One inch = 200 Feet

NOTE LOGARITHMIC CONTOUR INTERVAL

1121

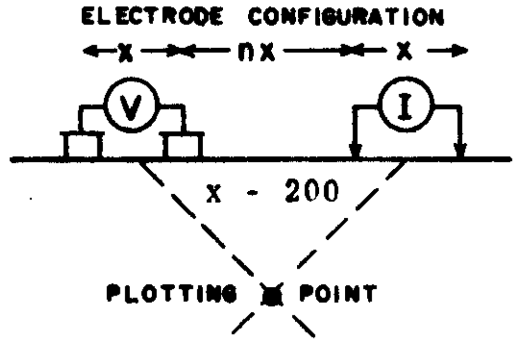
FREQUENCY 0.31 & 5 C.P.S.

DATE SURVEYED JULY, 1967

APPROVED

DATE

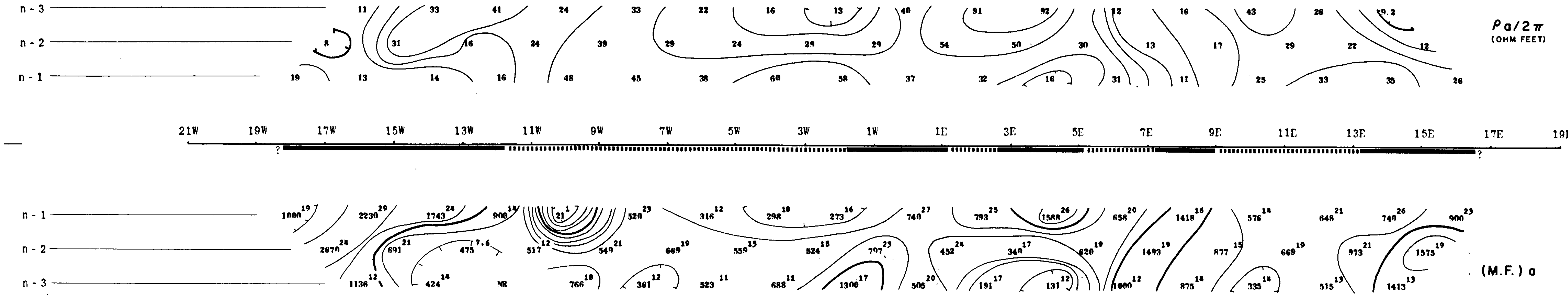
DWG. NO.-I.P.- 2718-6



McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

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



LINE NO.— 30S

LARGO MINES LIMITED (N.P.L.)

LAKE, FWP, SLIM CLAIMS, BRENDA LAKE AREA, OSOYOOS M.D., B.C.

Scale—One inch = 200 Feet

NOTE LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

1121

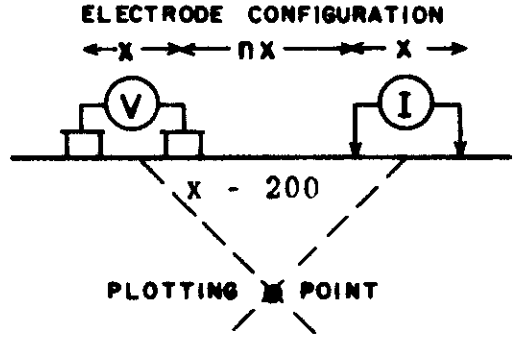
FREQUENCY 0.3185 C.P.S.

DATE SURVEYED JULY, 1967

APPROVED

DATE

DWG. NO.–I.P.–2718–7

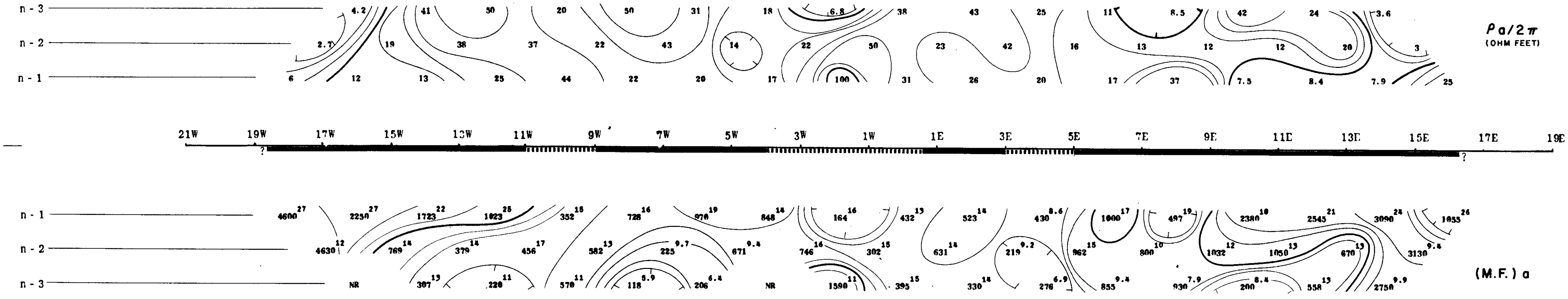


McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

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

LINE NO.–36S



LARGO MINES LIMITED (N.P.L.)

LAKE, FWP, SLIM CLAIMS, BRENDA LAKE AREA, OSOYOOS M.D., B.C.

Scale–One inch = 200 Feet

NOTE LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

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FREQUENCY 0.31&5 C.P.S.

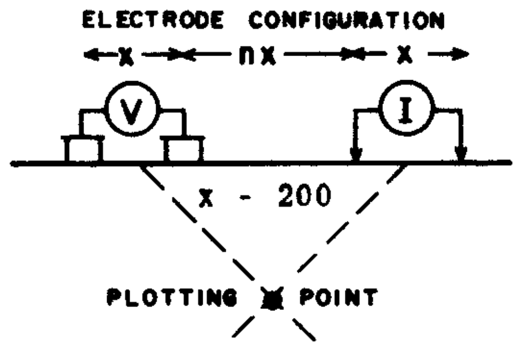
DATE SURVEYED JULY, 1967

APPROVED

DATE

McPHAR GEOPHYSICS LIMITED

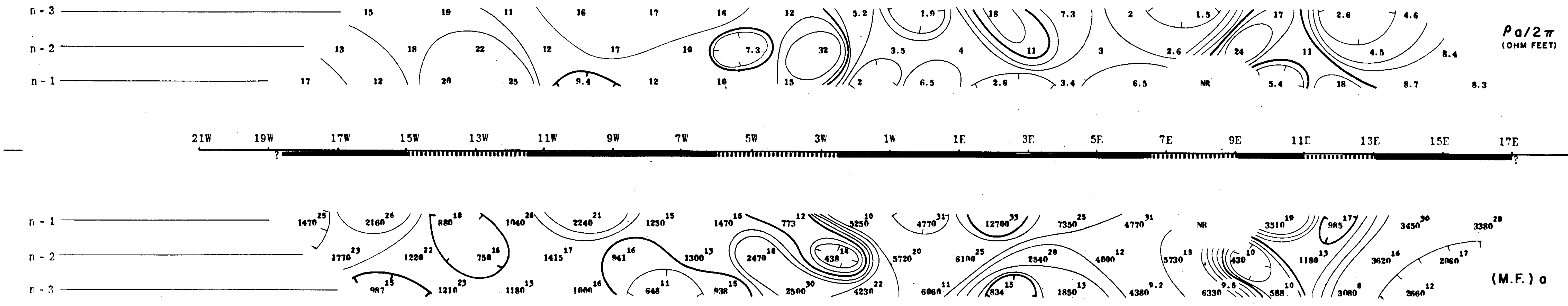
DWG. NO.-I.P.-2718-8



McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

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



LINE NO.-42S

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

LARGO MINES LIMITED (N.P.L.)

LAKE, FWP, SLIM CLAIMS, BRENDA LAKE AREA, OSOYOOS M.D., B.C.

Scale-One inch= 200 Feet

NOTE LOGARITHMIC CONTOUR INTERVAL

1121

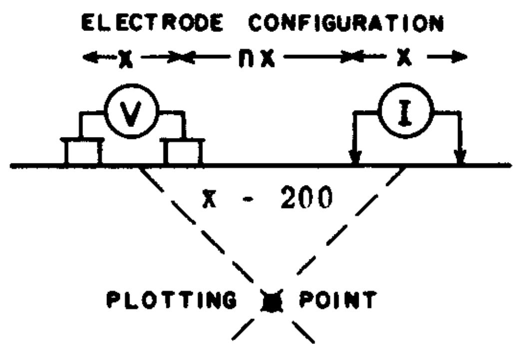
FREQUENCY 0.31 & 5 C.P.S.

DATE SURVEYED JULY, 1967

APPROVED

DATE

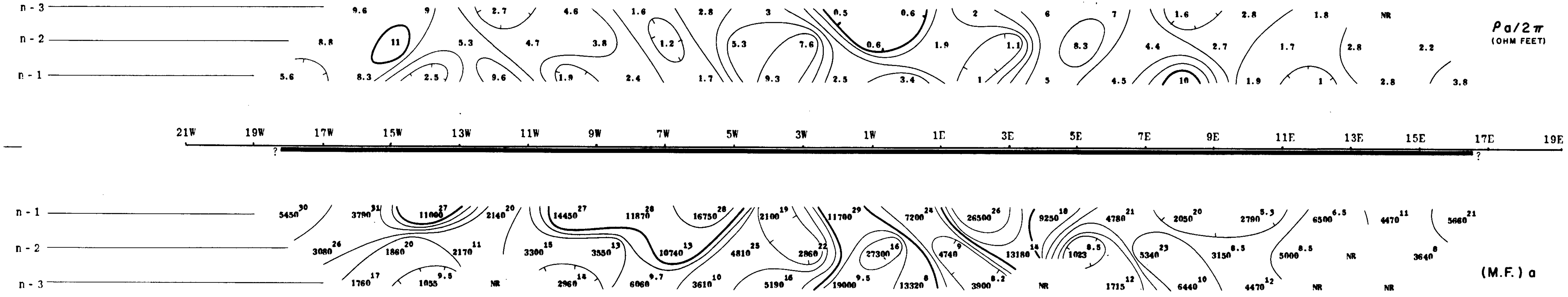
DWG. NO.-I.P.- 2718-9



McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

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



LINE NO.- 48S

LARGO MINES LIMITED (N.P.L.)

LAKE, FWP, SLIM CLAIMS, BRENDA LAKE AREA, OSOYOOS M.D., B.C.

Scale-One inch= 200 Feet

NOTE LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE
PROBABLE
POSSIBLE

1121

FREQUENCY 0.3125 C.P.S.

DATE SURVEYED JULY, 1967

APPROVED

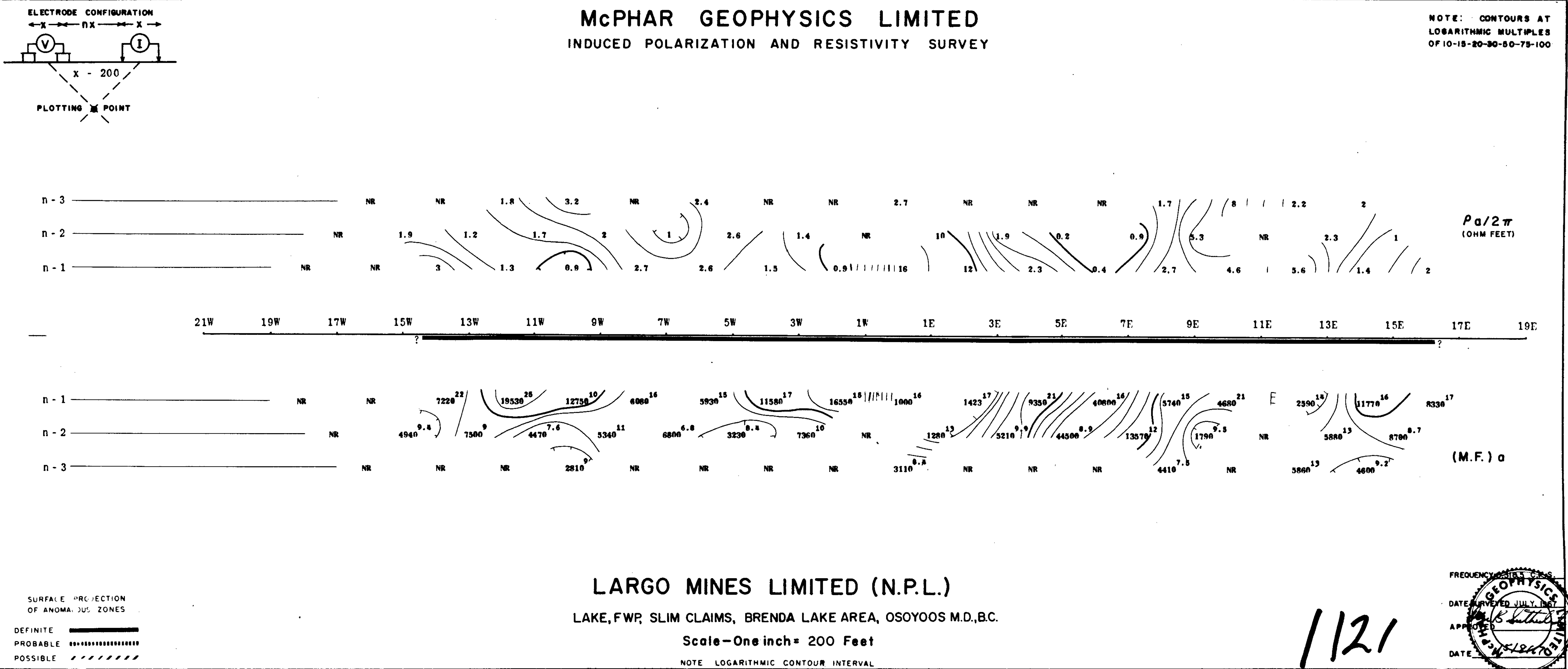
DATE

McPHAR GEOPHYSICS LIMITED

DWG. NO.-I.P.- 2718-10

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



LARGO MINES LIMITED (N.P.L.)

LAKE, FWP, SLIM CLAIMS, BRENDA LAKE AREA, OSOYOOS M.D., B.C.

Scale-One inch= 200 Feet

NOTE LOGARITHMIC CONTOUR INTERVAL

FREQUENCY
DATE SURVEYED JULY, 1967
APPROVED
DATE

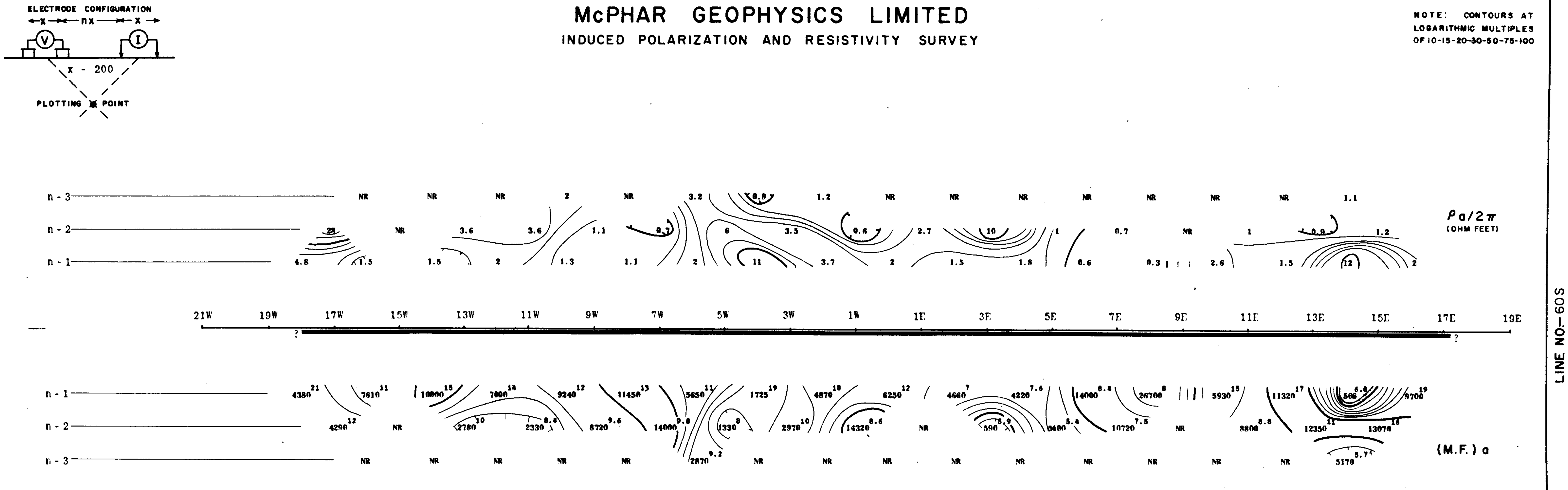
1121

DWG. NO.-I.P.- 2718-11

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

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



LARGO MINES LIMITED (N.P.L.)

LAKE, FWP, SLIM CLAIMS, BRENDA LAKE AREA, OSOYOOS M.D., B.C.

Scale—One inch= 200 Feet

NOTE LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

FREQUENCY 0.31 & 5 C.P.S.

DATE SURVEYED JULY, 1967

APPROVED

DATE

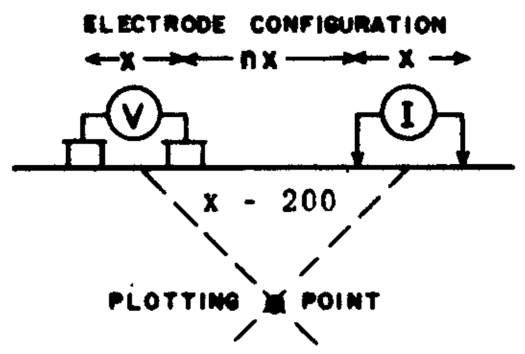
1121

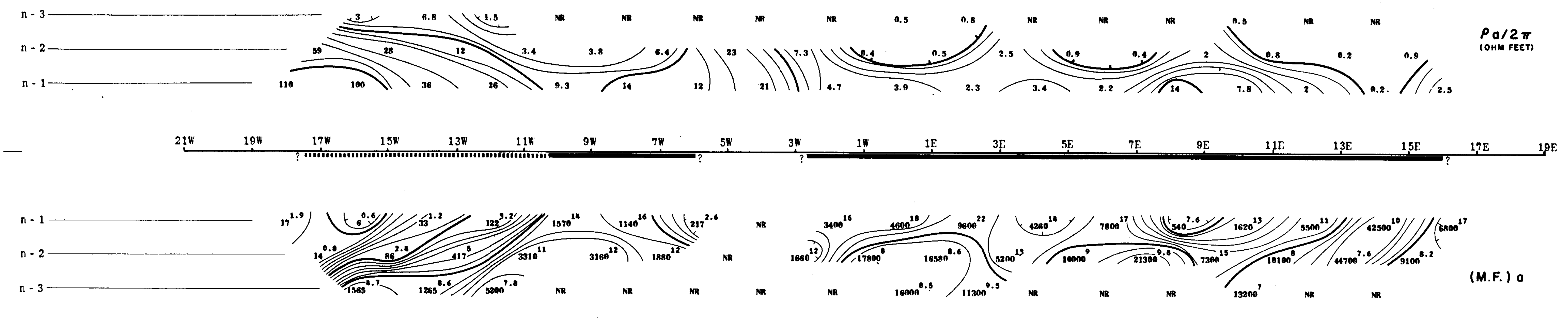
DWG. NO.-I.P.- 2718-12

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

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





LINE NO.- 66S

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

LARGO MINES LIMITED (N.P.L.)

LAKE, FWP, SLIM CLAIMS, BRENDA LAKE AREA, OSOYOOS M.D., B.C.

Scale—One inch= 200 Feet

NOTE LOGARITHMIC CONTOUR INTERVAL

1121

FREQUENCY 0.31&5 C.P.S.

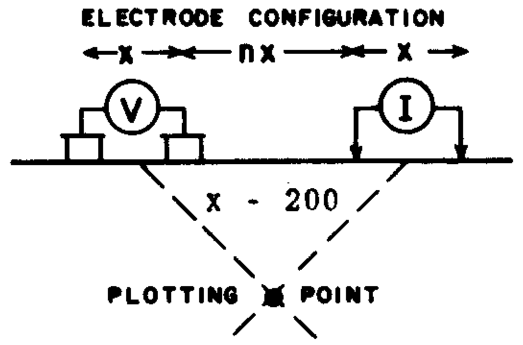
DATE SURVEYED JULY, 1967

APPROVED

DATE

McPHAR GEOPHYSICS LIMITED

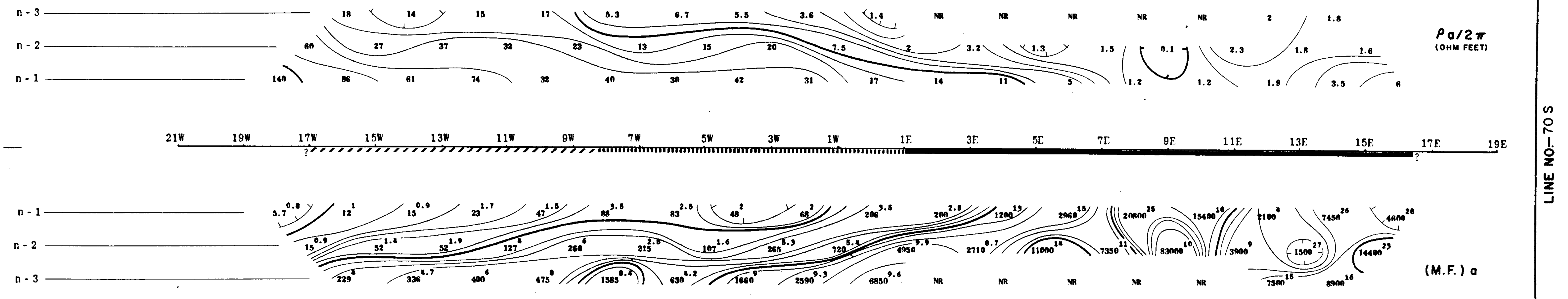
DWG. NO.-I.P.-2718-13



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

LARGO MINES LIMITED (N.P.L.)

LAKE, FWP, SLIM CLAIMS, BRENDA LAKE AREA, OSOYOOS M.D., B.C.

Scale—One inch = 200 Feet

NOTE LOGARITHMIC CONTOUR INTERVAL

1121

FREQUENCY 0.31 & 5 C.P.S.

DATE SURVEYED JULY, 1967

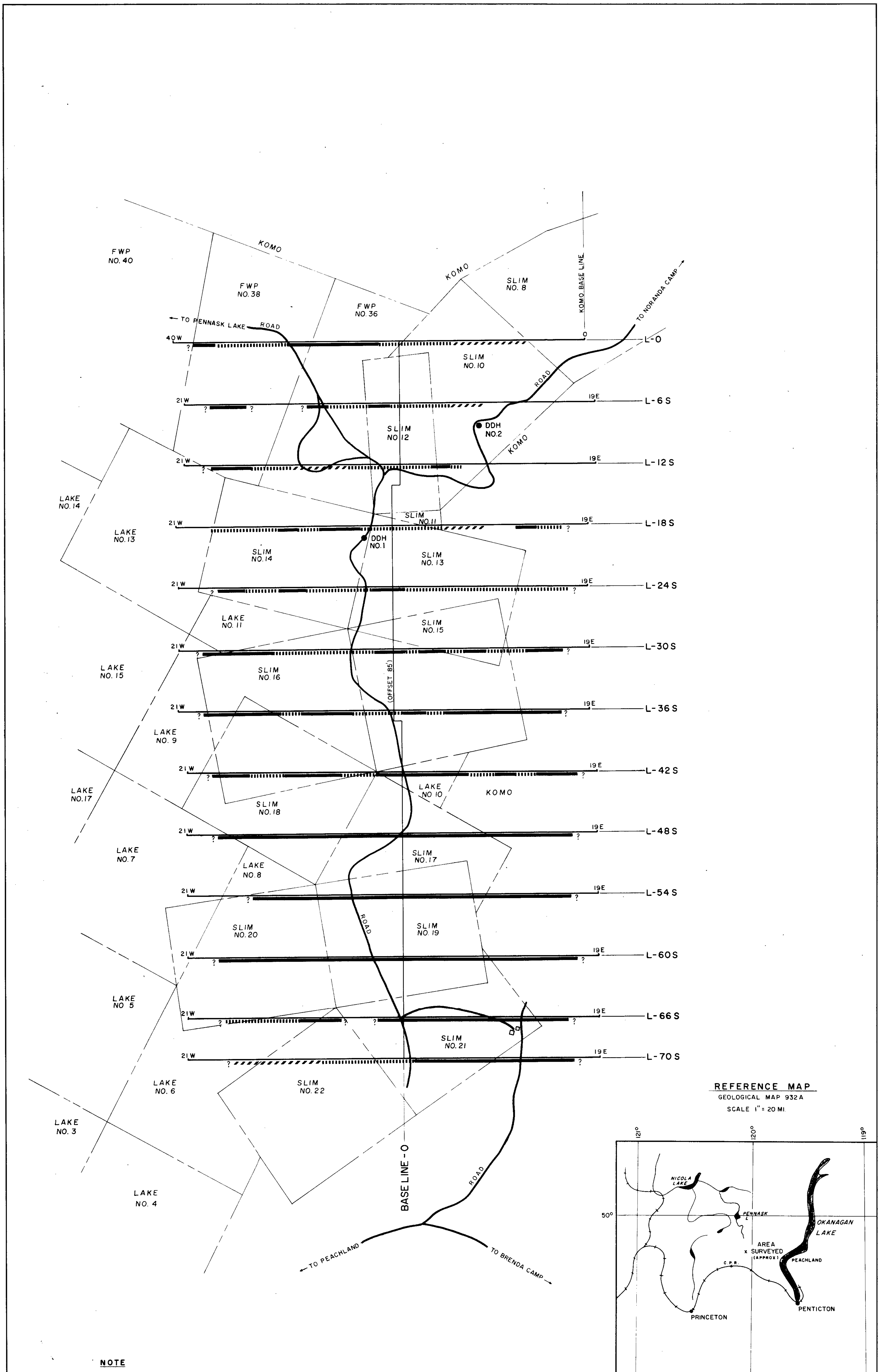
APPROVED

DATE

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

PLAN MAP



NOTE

TO ACCOMPANY GEOPHYSICAL REPORT
DATED AUG. 15/67 BY DON B. SUTHERLAND

SURFACE PROJECTION OF ANOMALOUS ZONES

- DEFINITE
- PROBABLE
- POSSIBLE

LARGO MINES LIMITED (N.P.L.)

LAKE, FWP, SLIM CLAIMS, BRENDA LAKE AREA, OSOYOOS M.D., B.C.

SCALE
ONE INCH EQUALS FIVE HUNDRED FEET.

1121

DRAWN: V.T.Y.
DATE: AUG. 1967
APPROVED: D. B. Sutherland
DATE: 15/8/67

DWG. MISC. 3266

DWG. MISC. 3266