965

REPORT ON THE
INDUCED POLARIZATION
AND RESISTIVITY SURVEY
ON THE
PINNACLE CLAIM GROUP
KAMLOOPS AREA, BRITISH COLUMBIA
FOR
FIDELITY MINING INVESTMENTS LTD.

92I/9W

BY

PHILIP G. HALLOF, Ph.D.

AND

ROBERT A. BELL

NAME AND LOCATION OF PROPERTY

PINNACLE CLAIM GROUP, KAMLOOPS AREA

KAMLOOPS MINING DIVISION, B.C. 120°W - 50°N

DATE STARTED - October 30, 1966

DATE COMPLETED - December 3, 1966

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McPHAR GEOPHYSICS LIMITED

REPORT ON THE

INDUCED POLARIZATION

AND RESISTIVITY SURVEY

ON THE

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KAMLOOPS AREA, BRITISH COLUMBIA

FOR

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1. INTRODUCTION

At the request of Mr. L. G. Phelan, Geologic Consultant for the Company, a brief induced polarization and resistivity survey has been carried out on the Pinnacles Claim Group. The property is in the Kamloops Mining Division, just south of Kamloops; it is located in the northeast quadrant of the one degree quadrilateral whose southeast corner is at 120°W - 50° N.

Previous drilling and underground work on the Claim Group has shown disseminated copper mineralization at the Joker Adit, near 0+00 on the baseline. If enough tonnage of this low grade copper mineralization could be located, an open-pit mining operation might be possible. The induced polarization and resistivity survey at the Pinnacle Claim Group was planned in an attempt to locate and outline any unknown zones of disseminated metallic mineralization that might be present.

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 No.	Electrode Interval	Frequencies	Dwg. No.
20N	200'	0.2 - 5.0 cps	IP 2626-1
12N	200'	0.3 - 5.0 cps	IP 2626-2
	200'	d.c. - 5.0 cps	IP 2626-3
east portion	100'	0.3 - 5.0 cps	IP 2626-4
west portion	100'	0.3 - 5.0 cps	IP 2626-5
8N	200'	0.3 - 5.0 cps	IP 2626-6
(electrode interchanged)	200'	0.3 - 5.0 cps	IP 2626-7
0+00	200'	0.3 - 5.0 cps	IP 2626-8
(Repeat)	200'	0.3 - 5.0 cps	IP 2626-9
(electrode interchanged)	200'	0.3 - 5.0 cps	IP 2626-10
	200'	d.c. - 5.0 cps	IP 2626-11
4S	200'	0.3 - 5.0 cps	IP 2626-12
12S	200'	0.3 - 5.0 cps	IP 2626-13
16S	200'	0.3 - 5.0 cps	IP 2626-14

Also enclosed with this report is Dwg. Misc. 3232, a plan map of the grid surveyed at a scale of 1" = 400'. 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

The known mineralization on the Pinnacles Claim Group is very disseminated. The copper is contained in altered, fractured diorite; at the surface, only carbonates and other products of weathering are present. Some magnetite has been identified in the rocks in the area; since magnetite is metallic, anomalous IP effects can be expected if concentrations are present.

The IP effects measured on Line 0+00, just east of the baseline, are very weak; however, they are about equal to what could be expected from the weak mineralization known. There are other broad areas of equal magnitude IP anomalies on the Pinnacles Claim Group.

The large magnitude IP anomalies measured west of the base line on Line 20N, Line 12N and Line 8N have been found to be due to a buried pipe. These effects will have masked the effects from any mineralization in this area.

East of the base line, there is a power line along the highway; some noise interference was encountered in this area. The frequency effects measured could be expected to be somewhat inaccurate due to this noise. However, in several places the presence of weakly anomalous IP effects was confirmed by interchanging the current and potential electrodes.

In the vicinity of the known mineralization, the apparent resistivities are moderately high; the anomalous frequency effects are large enough to be definite. To the east, the resistivity level is lower. In this area, the frequency effects are very low in magnitude; it is difficult to consider them definitely anomalous. Some of these weak anomalies have been checked using d.c. - 5.0 cps; the anomalous effects increase as expected.

4. CONCLUSIONS AND RECOMMENDATIONS

The anomalies shown on Dwg. Misc. 3232 show the widespread presence of very disseminated metallic mineralization. Since the recent drill holes just east of the base line on Line 0+00 have intersected native copper and chalcocite, it is possible that very small concentrations of mineralization could be of economic interest. Some of the weakly anomalous areas will have to be tested.

The IP anomalies in the low resistivity area east of the base line have also been tested by a recent drill hole. The hole intersected basic and ultra-basic rocks; there are appreciable concentrations of metallic magnitite in these rocks. It is therefore probable that some of the IP effects on the Pinnacles Claim Group are due to concentration of magnetite.

The weak IP anomalies should be correlated with the available geological and/or geochemical data to determine their importance. Further drilling can then be planned.

McPHAR GEOPHYSICS LIMITED

Philip G. Hallof,
Geophysicist.

Robert A. Bell,
Geologist.

Dated: January 18, 1967

ASSESSMENT DETAILS

SPONSOR: Fidelity Mining		MINING DIVISION: Kamloops
LOCATION: Pinnacle Claim Group		PROVINCE: British Columbia
TYPE OF SURVEY: I.P.		
OPERATING MAN DAYS:	22 3/4	DATE STARTED: Oct. 30
EQUIVALENT 8HR. MAN DAYS	169	DATE FINISHED: Dec. 3
CONSULTING MAN DAYS:	2	NUMBER OF STATIONS: 402
DRAUGHTING MAN DAYS:	5	NUMBER OF READINGS: 2070
TOTAL MAN DAYS:	176	MILES OF LINE SURVEYED: 13

FIELD TECHNICIANS:
J. Parker, Box 340, Choiceland, Saskatchewan.
R. Quesnel, 36 Penhurst Ave., Etobicoke, Ontario.
Helper - Lee Ferguson, Barry Slater, John Bentley.

DRAUGHTSMAN:
Paul Coulson, 6 Paradise Ave., Markham, Ontario.
S. Woods, Apt. 401, 1222 York Mills Road, Don Mills, Ontario.

McPHAR GEOPHYSICS LIMITED

Philip G. Hallof

Philip G. Hallof,
Geophysicist.

Dated: January 18, 1967

STATEMENT OF COSTS

Fidelity Mining Inc. - B.C.

Crew

20 days Operating	@ $215.00/day	$4,300.00
2 3/4 days Operating	@ $205.00/day	563.75
5 days Bad Weather)		
1/2 days Standby) 5 1/2 days	@ $ 75.00/day	412.50
		5,276.25

Expenses

Transportation - Air	109.00	
Rented Vehicles	922.02	
Taxis	4.50	
Freight and Brokerage	21.99	
Meals and Accommodation	911.87	
Telephone & Telegraph	90.81	
Supplies	125.91	2,186.10
Extra Labour	1218.75 + 20%	1,462.50
		$8,924.85

McPHAR GEOPHYSICS LIMITED

Philip G. Hallof,
Geophysicist.

Dated: January 18, 1967

CERTIFICATE

I, Philip George Hallof, of the City of Toronto, Province of Ontario, do hereby certify that:

1. I am a geophysicist residing at 5 Minorca Place, Don Mills, (Toronto), Ontario.

2. I am a graduate of the Massachusetts Institute of Technology with a B.S. Degree (1952) in Geology and Geophysics, and a Ph.D. Degree (1957) in Geophysics.

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

4. I have been practising my profession for twelve years.

5. I have no direct or indirect interest, nor do I expect to receive any interest, direct or indirect, in the property or securities of Fidelity Mining Investments Ltd.

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

Dated at Toronto

This 18th day of January 1967

Philip G. Hallof

Philip G. Hallof, Ph.D.

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 sixteen 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 Fidelity Mining Investments Ltd.

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

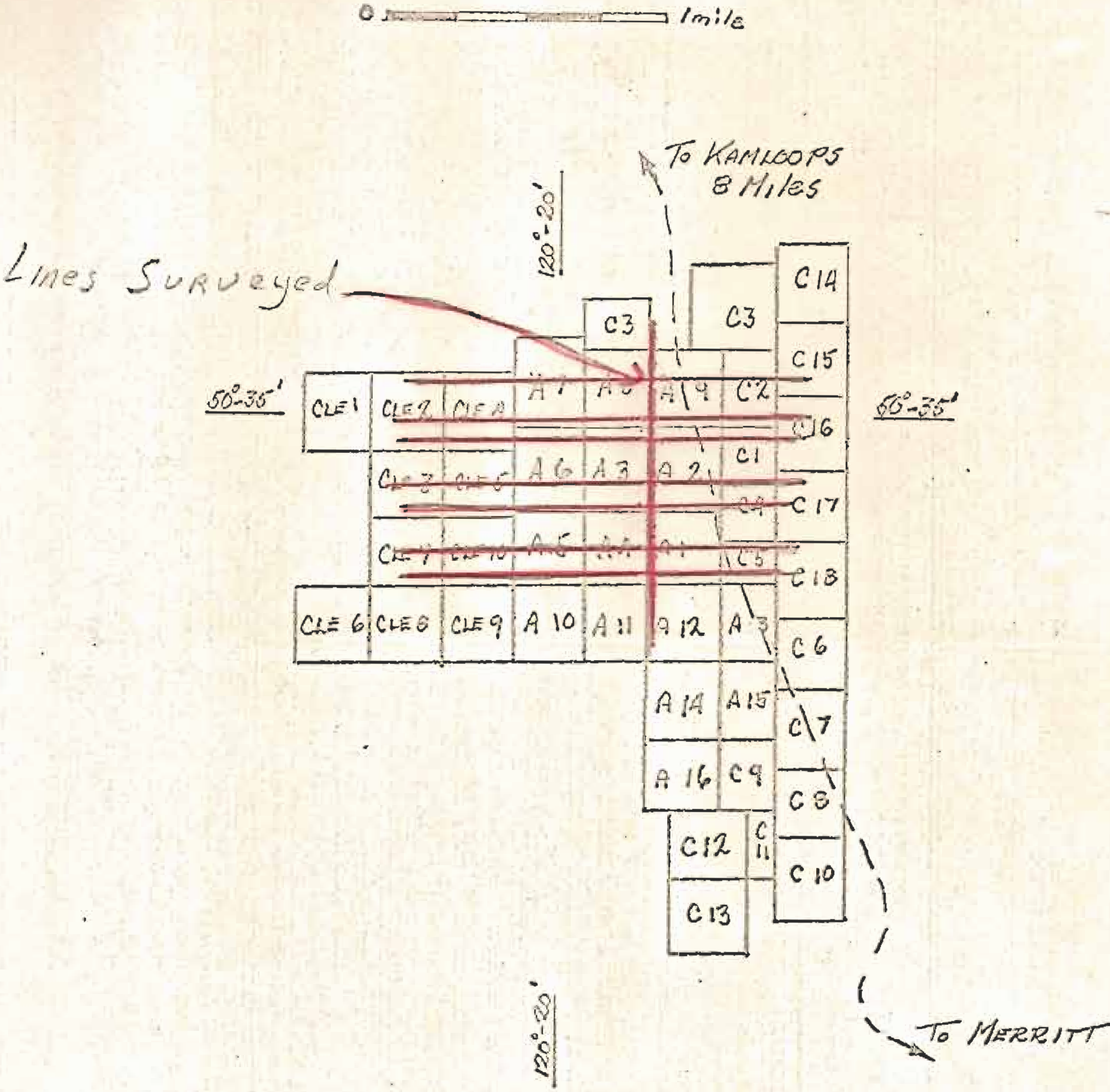
Dated at Toronto

This 18th day of January 1967

Robert A. Bell.

Robert A. Bell, Ph.D.

KEY PLAN



0
1 mile
To KAMLOOPS
8 Miles
Lines Surveyed
120°-20'
50°-35'
C3
C3
C14
C15
CLE 1
CLE 2
A 7
C2
C16
C1
A 6
A 3
A 2
C 17
C 18
CLE 6
CLE 8
CLE 9
A 10
A 11
A 12
C 6
A 14
A 15
C 7
A 16
C 9
C 8
C 12
C 11
C 10
C 13
To MERRITT

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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 South-western 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

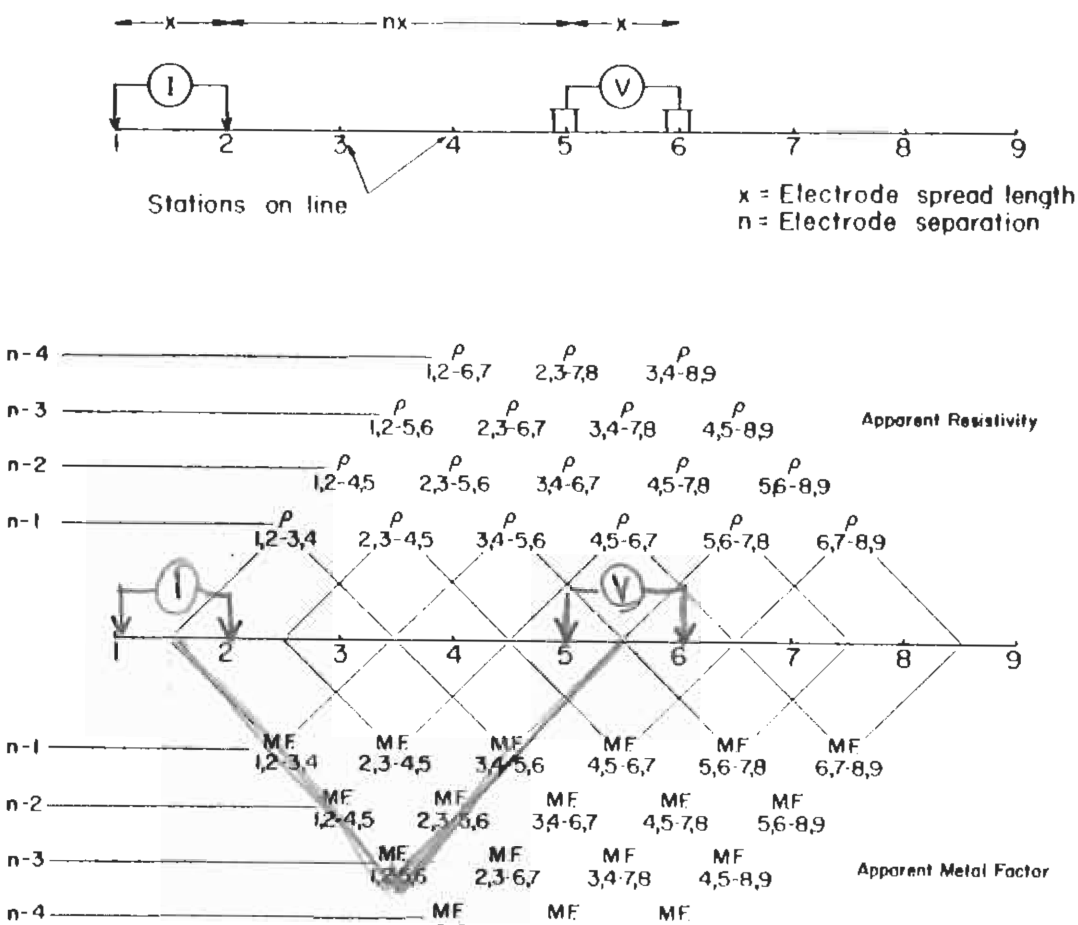

FIG I

DWG. NO.—I.P.—2626—1

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INDUCED POLARIZATION AND RESISTIVITY SURVEY

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

FIDELITY MINING INVESTMENTS LTD.

PINNACLE CLAIM GROUP, KAMLOOPS M. D., B. C.

Scale—One inch = 200 Feet

NOTE: LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE
PROBABLE
POSSIBLE

965

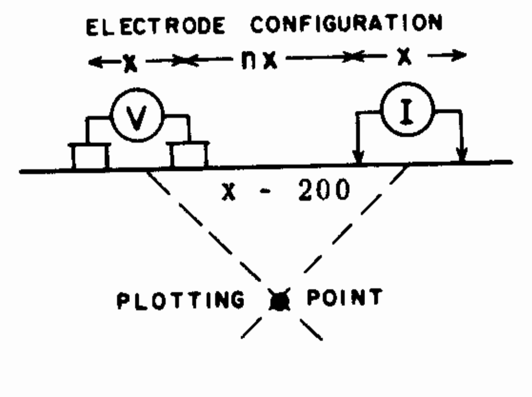
FREQUENCY 0.3-5.0 C.P.S.
DATE SURVEYED NOV-DEC 66
APPROVED
DATE 1/4/67

DWG. NO.—I.P.—2626-2

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

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



LINE NO—12 N

FIDELITY MINING INVESTMENTS LTD.

PINNACLE CLAIM GROUP, KAMLOOPS M.D., B.C.

Scale—One inch = 200 Feet

NOTE: LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

965

FREQUENCY 0.3–5.0 C.P.S.

DATE SURVEYED NOV-DEC 66

APPROVED

DATE 1/4/67

DWG. NO.-I.P.-2626-3

ELECTRODE CONFIGURATION

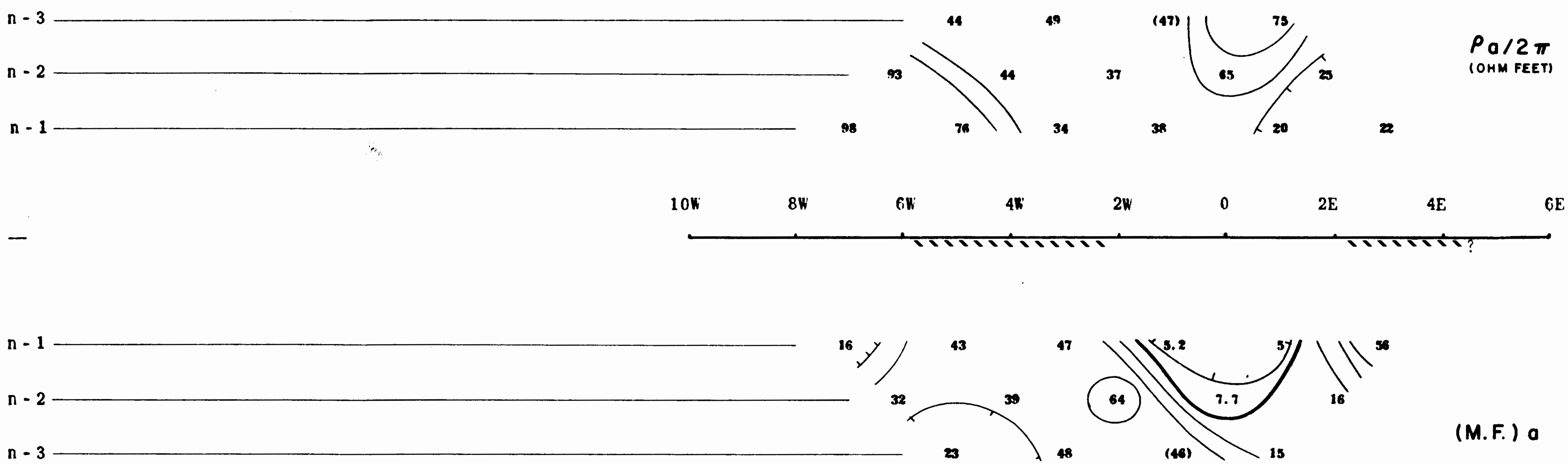
x - 200

PLOTTING POINT

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

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



LINE NO.-12N

FIDELITY MINING INVESTMENTS LTD.

965

PINNACLE CLAIM GROUP, KAMLOOPS M. D., B. C.

Scale-One inch = 200 Feet

NOTE: LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

FREQUENCY DC - 5.0 C. P. S.

DATE SURVEYED NOV-DEC 66

APPROVED

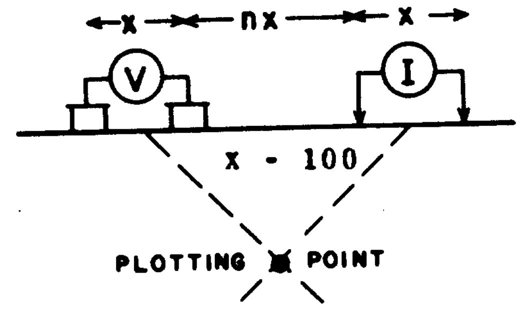
DATE

DWG. NO.-I.P.-2626-4

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

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



LINE NO.-12N

FIDELITY MINING INVESTMENTS LTD.

PINNACLE CLAIM GROUP, KAMLOOPS M.D., B.C.

Scale-One inch=100 Feet

NOTE: LOGARITHMIC CONTOUR INTERVAL

965

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

FREQUENCY

DATE SURVEYED NOV-DEC. 66

APPROVED Pl

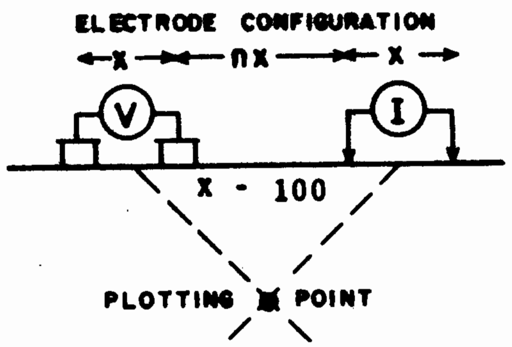
DATE

McPHAR GEOPHYSICS LIMITED

DWG. NO.-I.P.-2626-5

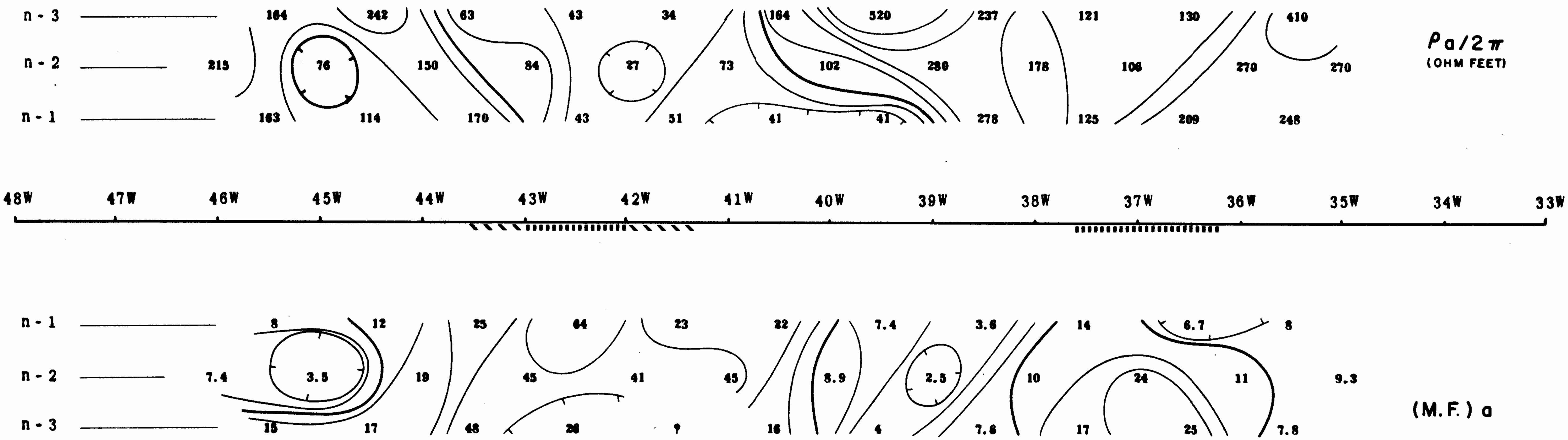
McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



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

LINE NO.-12N



FIDELITY MINING INVESTMENTS LTD.

PINNACLE CLAIM GROUP, KAMLOOPS M. D., B. C.

Scale-One inch = 100 Feet

NOTE LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

965

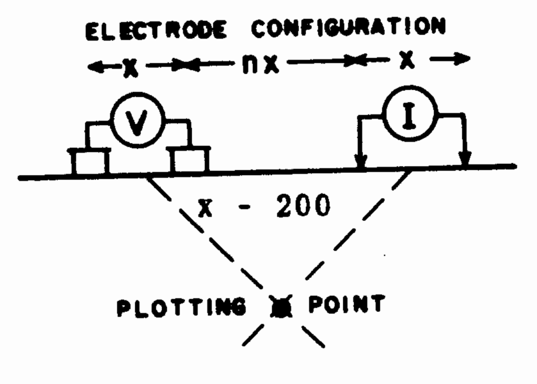
FREQUENCY 0.3-5.0 C. P. S.

DATE SURVEYED NOV-DEC 66

APPROVED

DATE

McPHAR GEOPHYSICS LIMITED



McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

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

LINE NO.—8N

FIDELITY MINING INVESTMENTS LTD.

PINNACLE CLAIM GROUP, KAMLOOPS M. D., B. C.

Scale—One inch = 200 Feet

NOTE: LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE
PROBABLE
POSSIBLE

965

FREQUENCY 0.31-5.0 C.P.S.
DATE SURVEYED NOV.-DEC. 66
APPROVED PI
DATE 1/4/67

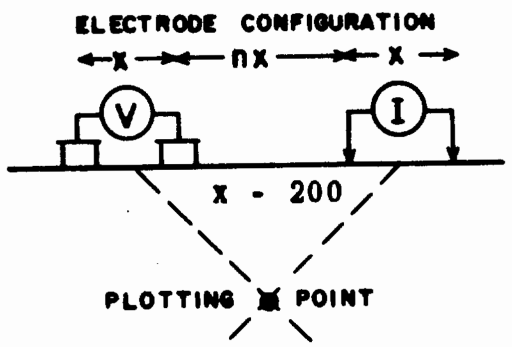
DWG. NO.-I.P.-2626-7

McPHAR GEOPHYSICS LIMITED

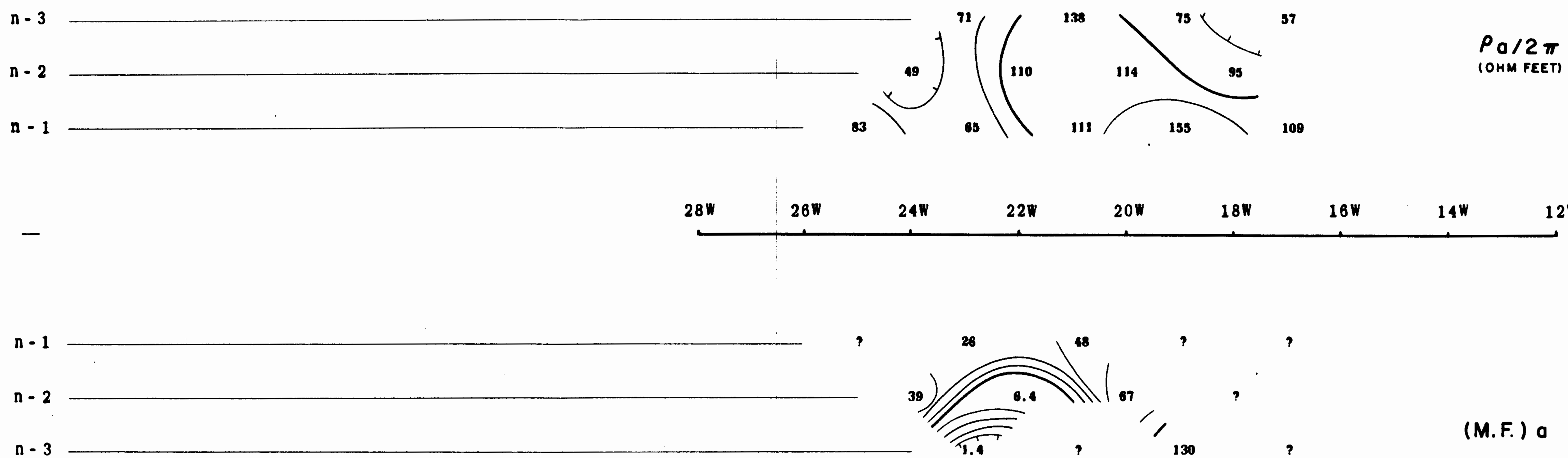
INDUCED POLARIZATION AND RESISTIVITY SURVEY

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

ELECTRODE CONFIGURATION



LINE NO.-8N (ELECTRODES INTERCHANGED)



FIDELITY MINING INVESTMENTS LTD.

PINNACLE CLAIM GROUP, KAMLOOPS M. D., B. C.

Scale-One inch = 200 Feet

NOTE LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE
PROBABLE
POSSIBLE

FREQUENCY 0.3-5.0 C.P.S.
DATE SURVEYED NOV-DEC 66
APPROVED
DATE

McPHAR GEOPHYSICS LIMITED

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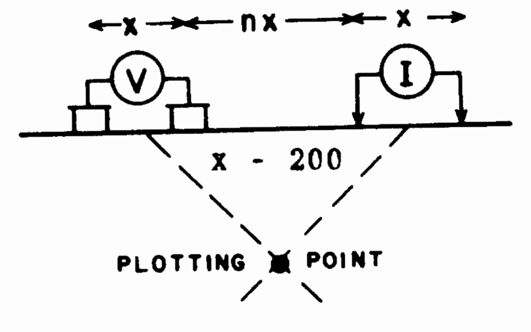
McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

ELECTRODE CONFIGURATION



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

LINE NO.—O

FIDELITY MINING INVESTMENTS LTD.

PINNACLE CLAIM GROUP, KAMLOOPS M. D., B. C.

Scale—One inch = 200 Feet

NOTE: LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE
PROBABLE
POSSIBLE

965

FREQUENCY .05-2.5 C.P.S.
DATE SURVEYED NOV.-DEC. '66
APPROVED
DATE

McPHAR GEOPHYSICS LIMITED

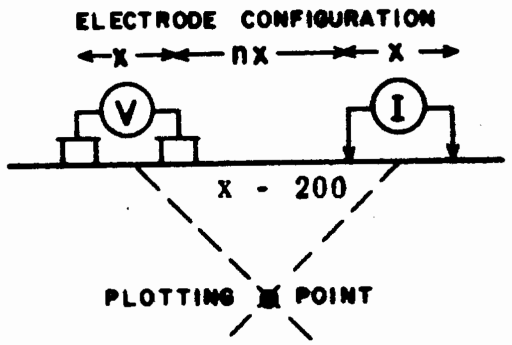
DWG. NO.-I.P.-2626-9

McPHAR GEOPHYSICS LIMITED

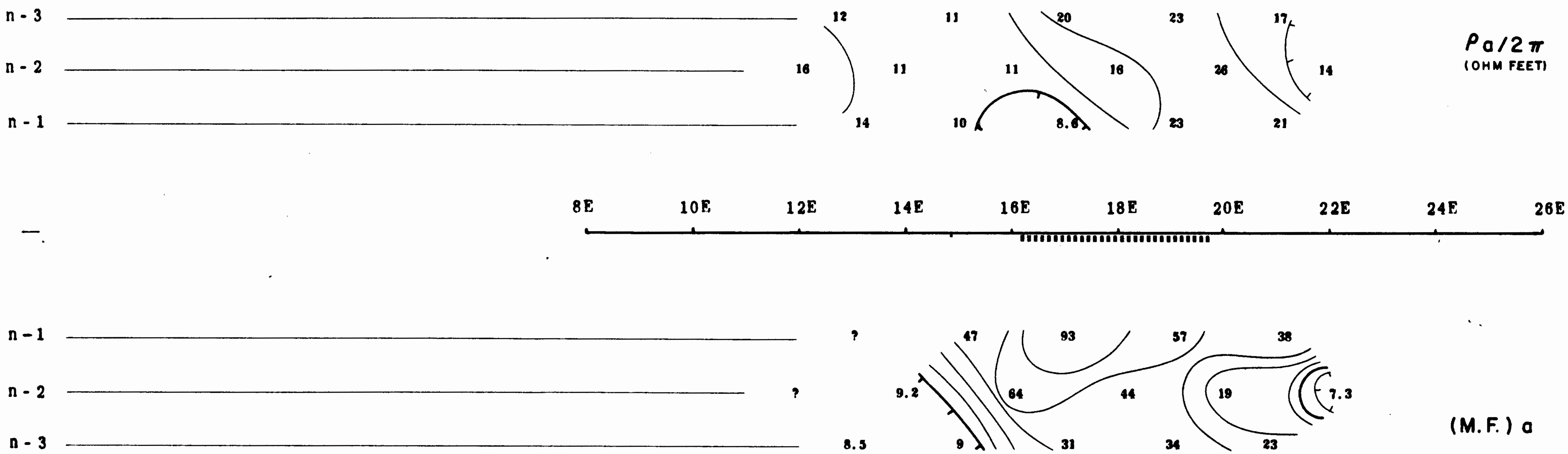
INDUCED POLARIZATION AND RESISTIVITY SURVEY

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

ELECTRODE CONFIGURATION



LINE NO.-O (ELECTRODES INTERCHANGED)



FIDELITY MINING INVESTMENTS LTD.

965

PINNACLE CLAIM GROUP, KAMLOOPS M. D., B. C.

Scale—One inch = 200 Feet

NOTE: LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE
PROBABLE
POSSIBLE

FREQUENCY 0.3-5.0 C. P. S.

DATE SURVEYED NOV-DEC 66

APPROVED

DATE 1/4/67

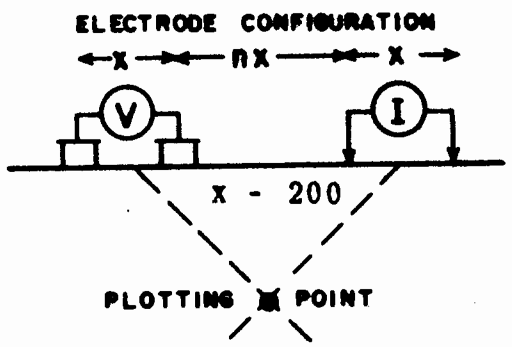
McPHAR GEOPHYSICS LIMITED

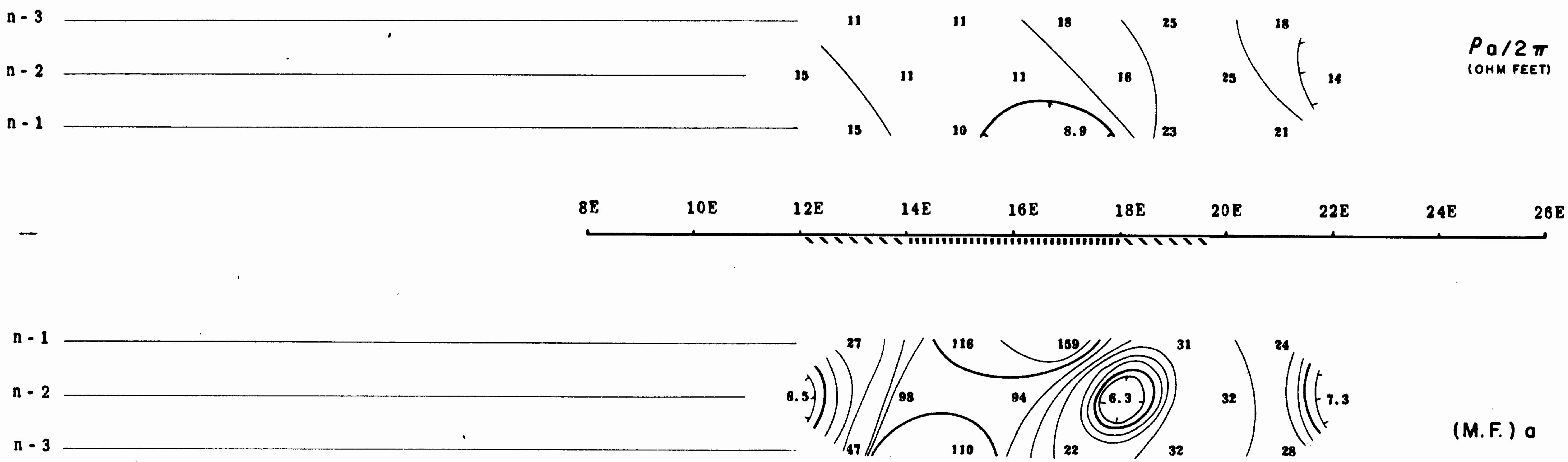
DWG. NO.-I.P.-2626-10

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

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





LINE NO.-0 (REPEAT)

FIDELITY MINING INVESTMENTS LTD.

PINNACLE CLAIM GROUP, KAMLOOPS M. D., B. C.

Scale-One inch = 200 Feet

NOTE LOGARITHMIC CONTOUR INTERVAL

965

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE
PROBABLE
POSSIBLE

FREQUENCY 0.3-5.0 C.P.S.

DATE SURVEYED NOV-DEC 66

APPROVED

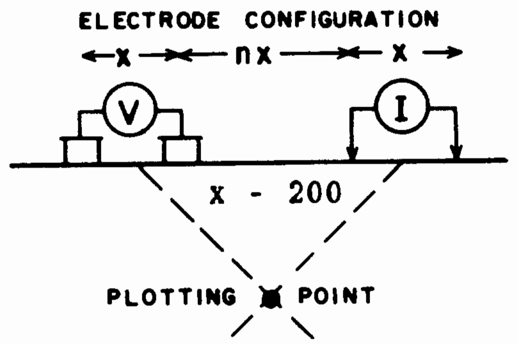
DATE 1/9/67

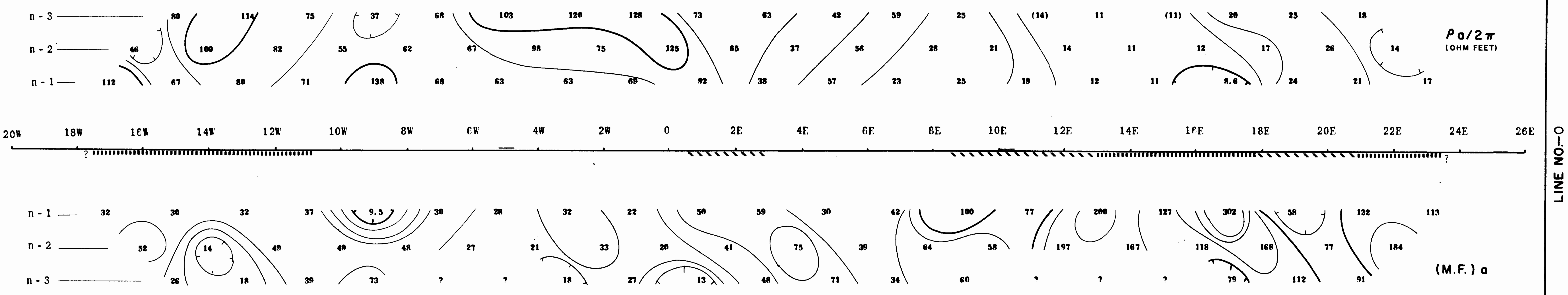
DWG. NO.–I.P.–2626–11

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

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





FIDELITY MINING INVESTMENTS LTD.

PINNACLE CLAIM GROUP, KAMLOOPS M. D., B. C.

Scale–One inch = 200 Feet

NOTE LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

965

FREQUENCY D.C.-5.0 CPS

DATE SURVEYED NOV.-DEC. 66

APPROVED

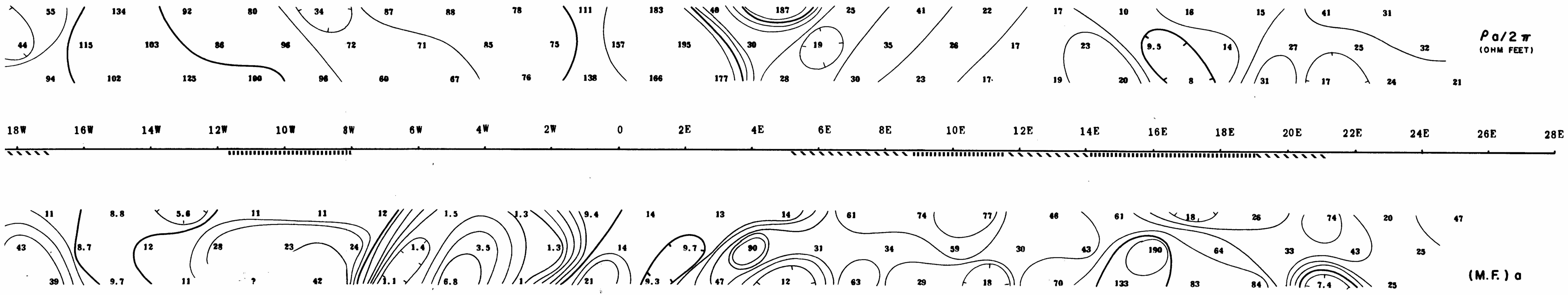
DATE

DWG. NO.–I.P.–2626–12

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

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



LINE NO.–4S

FIDELITY MINING INVESTMENTS LTD.

PINNACLE CLAIM GROUP, KAMLOOPS M. D., B. C.

Scale–One inch = 200 Feet

NOTE: LOGARITHMIC CONTOUR INTERVAL

965

FREQUENCY 0.3–5.0 C.P.S.

DATE SURVEYED NOV.–DEC. 66

APPROVED PI

DATE 1/4/67

McPHAR GEOPHYSICS LIMITED

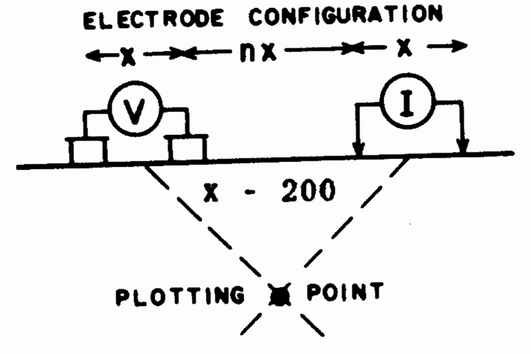
DWG. NO.—I.P.—2626—13

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—12 S

FIDELITY MINING INVESTMENTS LTD.

PINNACLE CLAIM GROUP, KAMLOOPS M. D., B. C.

Scale—One inch = 200 Feet

NOTE: LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

965

FREQUENCIES .3 - 5.0 C.P.S.

DATE SURVEYED NOV.-DEC. 68

APPROVED

DATE

DWG. NO.—I.P.—2626-14

ELECTRODE CONFIGURATION

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

LINE NO.—16S

FIDELITY MINING INVESTMENTS LTD.

PINNACLE CLAIM GROUP, KAMLOOPS M. D., B. C.

Scale—One inch = 200 Feet

NOTE: LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

965

FREQUENCY 0.3-5.0 C.P.S.

DATE SURVEYED NOV-DEC 66

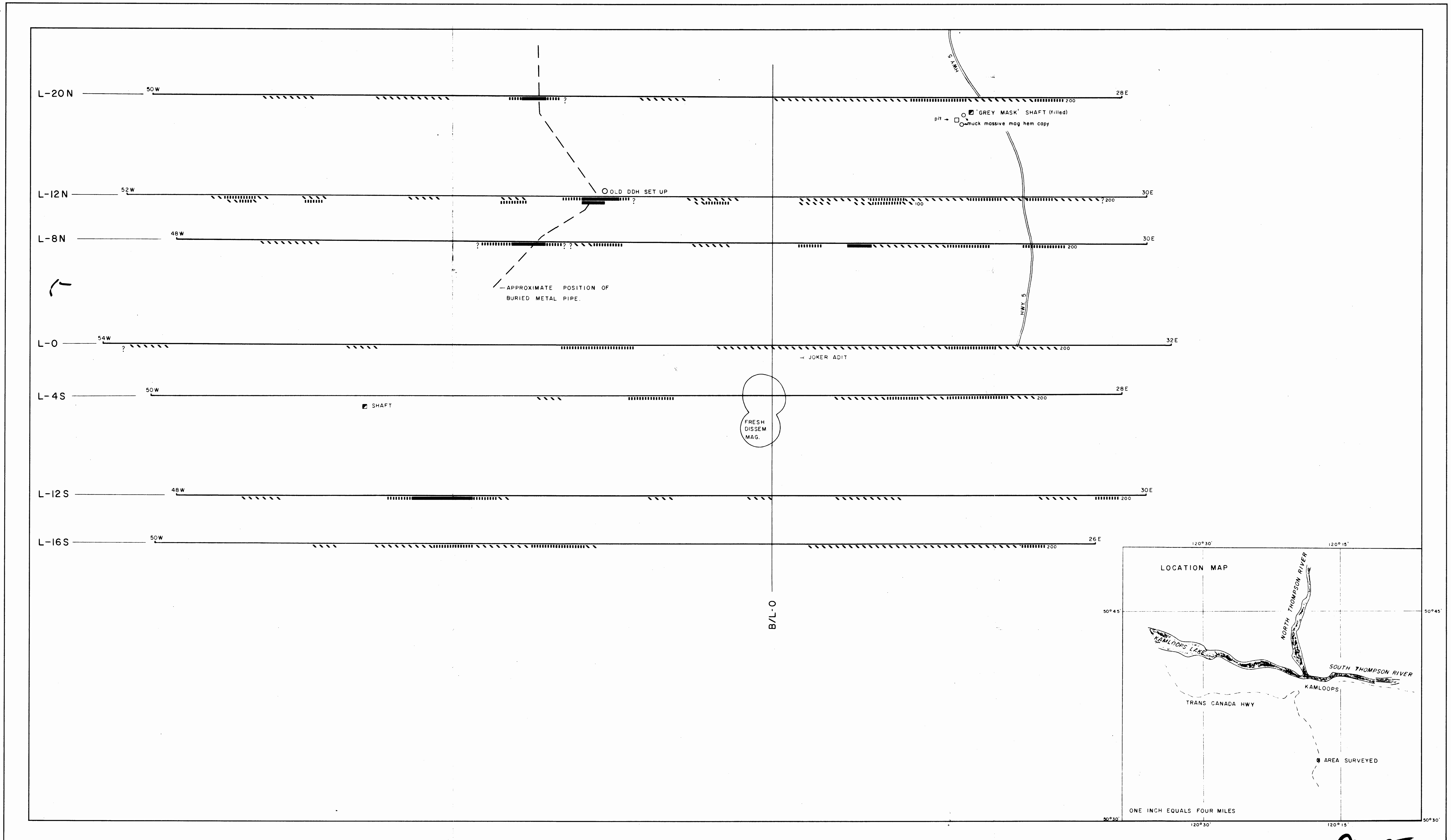
APPROVED

DATE

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

PLAN MAP



N

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

Number at the end of anomaly indicates spread used.

FIDELITY MINING INVESTMENTS LTD.

PINNACLE CLAIM GROUP, KAMLOOPS M. D., B. C.

SCALE

ONE INCH EQUALS FOUR HUNDRED FEET

965

Department of Mines and Petroleum Resources ASSESSMENT REPORT

NO. 965 MAP 1 ✓

DRAWN P.C. 1966

McPHAR GEOPHYSICS LIMITED APPROVED DATE

DWG. MISC. 3232