447

REPORT ON GEOPHYSICAL SURVEY
(INDUCED POLARIZATION)
ON THE
ALBERNI PROPERTY
ON VANCOUVER ISLAND, B.C.
FOR
CRUIKSHANK EXPLORATIONS LIMITED

92F/2W

BY

P. G. HALLOF, PH. D.

AND

R. A. BELL, PH. D.

NAME AND LOCATION OF PROPERTY:

ALBERNI: 1/2 MILE E. OF PORT ALBERNI, 49°, 125° SW

DATE STARTED - MARCH 17, 1962

DATE COMPLETED - APRIL 27, 1962

DOMINION OF CANADA:
PROVINCE OF BRITISH COLUMBIA.
TO WIT:

In the Matter of EVIDENCE OF EXPENDITURE INCURRED IN CONNECTION WITH INDUCED POLARIZATION SURVEY CRUICKSHANK A CLAIM GROUP + B & C CLAIM GROUPS

I, Edward P. Chapman, Jr.

of 525 Vernon Drive, Vancouver 6, B. C.

in the Province of British Columbia, do solemnly declare that I am the president of Chapman, Wood & Griswold Ltd., consulting mining engineers and geologists of Vancouver, B. C.; that our company retained Underhill & Underhill, Provincial Land Surveyors of Vancouver, B. C. to cut picket lines and set stations and McPhar Geophysics Ltd. of Toronto, Ontario to perform an induced polarization survey on the Cruickshank mineral claims in the Alberni Mining Division, B. C.; that the following persons were employed at the rates of fees and wages set forth:

Name	Position	Days	Rate per day	total
Underhill & Underhill				
T. L. Jones	Surveyor	31	50.00	$1,550.00
	Compassman	27	40.00	1,080.00
Eight	Helpers	259	25.00	6,475.00
McPhar				
F. Bottos	Technician	26 1/2	140.00	3,710.00
R. Auge	Technician	26 1/2	13.20	349.80
R. Moyer	Helper	26 1/2	13.20	349.80
C. Charles	Helper	26 1/2	13.20	349.80
H. Levys	Helper	26 1/2	13.20	349.80
	Total			$14,214.20

And I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath and by virtue of the "Canada Evidence Act."

Declared before me at the City of Vancouver, in the Province of British Columbia, this 31st day of July, 1962, A.D.

E. P. Chapman Jr.

Shirley Gearnotte
~~A Commissioner for taking Affidavits within British Columbia or~~
~~A Notary~~ Public in and for the ~~Province of British Columbia~~.
Sub-mining Recorder

★○

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

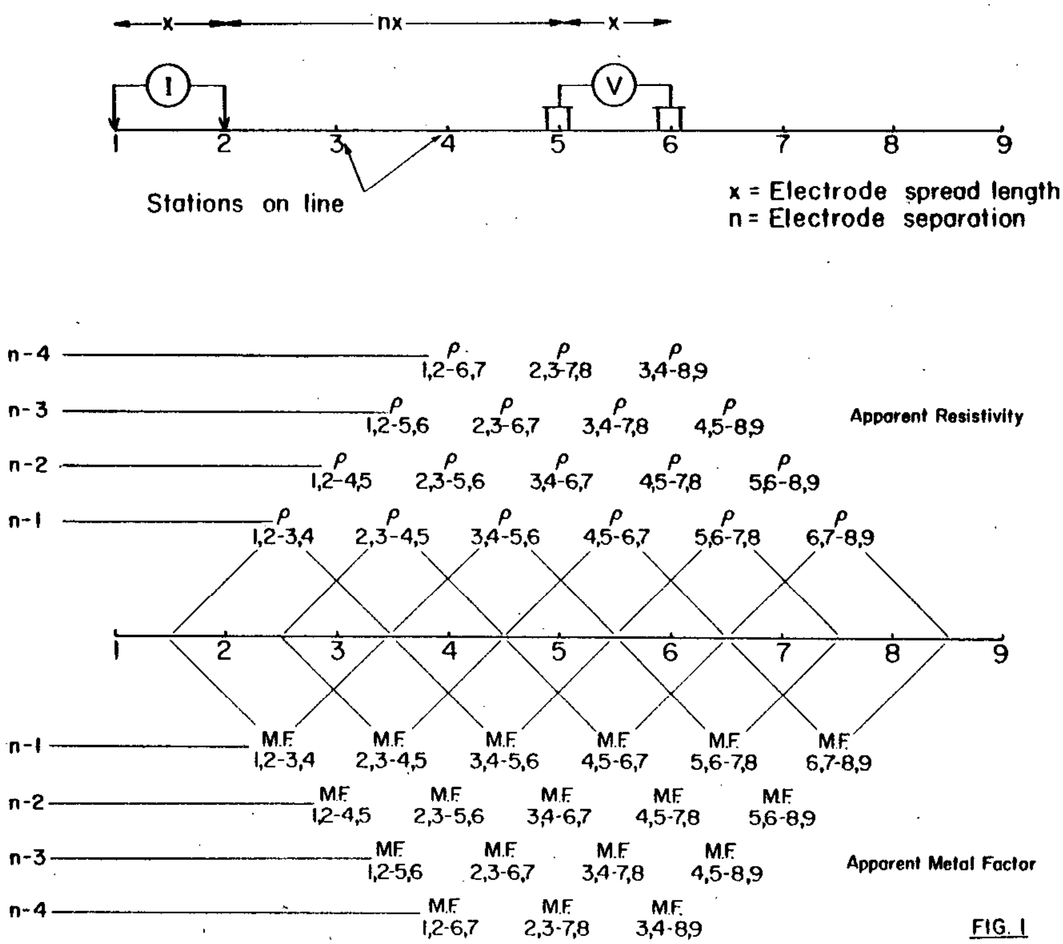

FIG. 1

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McPHAR GEOPHYSICS LIMITED

REPORT ON
AN INDUCED POLARIZATION SURVEY
NEAR PORT ALBERNI
ON VANCOUVER ISLAND, BRITISH COLUMBIA
FOR
CRUIKSHANK EXPLORATIONS LIMITED

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1. INTRODUCTION

At the request of Chapman, Wood and Griswold Limited, consultants for the company, an Induced Polarization and Resistivity Survey has been carried out in an area on the west coast of Alberni Inlet, Vancouver Island, British Columbia on behalf of Cruikshank Explorations Limited. The reconnaissance procedure was followed in making the I. P. measurements, using a light-weight I. P. unit.

The topography in the area covered by the survey is very rough, and little or no geologic information is available. There are some old workings along the coast, and a few drill holes near the coast have confirmed the presence of disseminated copper mineralization. The induced polarization survey was planned in an attempt to locate any mineralization that might be present in the areas where the rocks could not be observed.

The field measurements were made during March and April of this year.

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 857N	300' spreads	Dwg. I. P. 2891-1
Line 867N	300' spreads	Dwg. I. P. 2891-2
Line 877N	300' spreads	Dwg. I. P. 2891-3
Line 887N	300' spreads	Dwg. I. P. 2891-4
Line 897N	300' spreads	Dwg. I. P. 2891-5
Line 917N	300' spreads	Dwg. I. P. 2891-6
Line 927N	300' spreads	Dwg. I. P. 2891-7
Line 937N	300' spreads	Dwg. I. P. 2891-8
Line 947N	300' spreads	Dwg. I. P. 2891-9
Line 957N	300' spreads	Dwg. I. P. 2891-10
Line 967N	300' spreads	Dwg. I. P. 2891-11
Line 977N	300' spreads	Dwg. I. P. 2891-12
Line 987N	300' spreads	Dwg. I. P. 2891-13
Line 997N	300' spreads	Dwg. I. P. 2891-14
Line 1002N	100' spreads	Dwg. I. P. 2891-15
Line 1007N	300' spreads	Dwg. I. P. 2891-16
	100' spreads	Dwg. I. P. 2891-17
Line 1012N	100' spreads	Dwg. I. P. 2891-18
Line 1017N	300' spreads	Dwg. I. P. 2891-19
	100' spreads	Dwg. I. P. 2891-20

Line 1027N	300' spreads	Dwg. I. P. 2891-21
Line 535E	300' spreads	Dwg. I. P. 2891-22

Enclosed with this report is Dwg. Misc. 4712, a plan map of the reconnaissance I. P. grid. 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 300' spreads the position of a narrow sulphide body can only be determined to lie between two stations 300' 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 apparent resistivites measured in the survey were unusually high. This is due to the thin overburden and the non-porous character of the underlying rocks. Under these conditions, the expected I. P. effects are small, and the results must be interpreted accordingly. However, the background I. P. effects are also very low, so that anomalous effects measured are considerably above background.

On the southeast part of the property, in the vicinity of the old workings and two of the drill holes, the lines could not be extended far enough east to completely survey the known mineralization. However, some weak anomalies were found on Line 857N and Line 877N.

The most definite I. P. anomalies were located on the northern part of the grid, in the vicinity of the third drill hole. In this area, some detail measurements have been made using shorter electrode separations. In addition, there is a shallow anomaly at 512E to 515E on Line 947N that should be checked with shorter electrode separations, and a weaker anomaly at 514E to 517E on Line 977N that warrants further investigation.

The most important I. P. anomalies are located on the following lines.

Line 1002N

Detail was done on this line to check the definite anomaly on Line 1007N. The results using 100' spreads show a broad zone of slightly anomalous effects at 524E to 526E and a narrow, definite anomaly at 518E to 519E. The data does not extend far enough to the west to completely outline the anomaly.

The narrow anomaly at 518E to 519E is certainly worth further investigation. Since the source appears to be at some depth, the survey should be repeated using 200' spreads at the dipole-dipole configuration.

In addition, lines should be surveyed 200' each side of Line 1002N to better locate the source.

Line 1007N

The reconnaissance results on this line using 300' spreads suggested the presence of several anomalies. One was detailed using 100' spreads (which may be too small) and a broad anomaly was outlined from 524E to 529E. The eastern part of the source seems to give rise to the largest I. P. effects. This source could correlate with the anomaly on Line 1002N.

Line 1012N

The results on this line show a narrow, weak anomaly at 527E to 528E, but the effects are much less than to the south.

Line 535E

The 300' spread reconnaissance results on this line show a narrow source at 1006N to 1009N. This should be checked with shorter spreads.

4. CONCLUSIONS AND RECOMMENDATIONS

The reconnaissance I. P. results on the claim group on the west side of Alberni Inlet show that there is an anomalous zone in the northern part of the area. The zone occurs near, but does not correlate exactly with the mineralization in D. D. H. #3. Line 1017N passed very near and over the mineralization intersected in D. D. H. #3, but little or no I. P. effects were measured. However, the geometry of the mineralization is not well known.

The anomalous I. P. zone that extends southwest of D. D. H. #3 is fairly definite. Some further investigation in that area is certainly worthwhile. The geologic examination should be completed in order to determine, if possible, the geologic situation. Then, a limited amount of detailed I. P. work should be done in order to choose a location to drill.

McPHAR GEOPHYSICS LIMITED

P. G. Hallof

Philip G. Hallof,
Geophysicist.

Robert A. Bell

Robert A. Bell,
Geologist.

Dated: June 11, 1962.

ASSESSMENT DETAILS

PROPERTY: Alberni Property

MINING DIVISION: Alberni

SPONSOR: Cruikshank Explorations Ltd.

PROVINCE: British Columbia

LOCATION: Alberni Inlet, Vancouver Island

TYPE OF SURVEY: Induced Polarization

OPERATING MAN DAYS:	132-1/2	DATE STARTED:	March 17, 1962
EQUIVALENT 8 HR. MAN DAYS:	198-3/4	DATE FINISHED:	April 27, 1962
CONSULTING MAN DAYS:	2	NUMBER OF STATIONS OCCUPIED:	397
DRAUGHTING MAN DAYS:	5	NUMBER OF READINGS TAKEN:	1632
TOTAL MAN DAYS:	205-3/4	MILES OF LINE SURVEYED:	17.8

$ 447/line mile

CONSULTANTS:
P. G. Hallof, 5 Minorca Place, Don Mills, Ontario
R. A. Bell, 12 Cottonwood Drive, Don Mills, Ontario

FIELD TECHNICIANS:
F. Bottos, 10 Hursting Avenue, Toronto 10, Ontario
R. Auge, Box 343, Espanola, Ontario
R. Moyer, Helper, General Delivery, Port Alberni, B. C.
C. Charles, Helper, General Delivery, Port Alberni, B. C.
H. Levys, Helper, General Delivery, Port Alberni, B. C.

DRAUGHTSMEN:
D. Grant, 85 Yardley Avenue, Toronto 16, Ontario
R. MacKenzie, 55 Shannon Drive, Scarborough, Ontario.

McPHAR GEOPHYSICS LIMITED

Robert A. Bell

Robert A. Bell,
Geologist.

Dated: June 11, 1962.

SUMMARY OF COST

Crew

26-1/2 days Operating	@ $140.00/day	$3,710.00
10-1/2 days Travel, Bad Weather & Standby	@ $ 50.00/day	525.00

Expenses

Extra Labour - 147 man days @ $12.00/day + 10%	$1,940.40	
Airfare-Winnipeg-Vancouver-1 man, Vancouver-Toronto-1/2 charge	112.50	
Meals and Accommodation	571.00	
Supplies	100.07	
Transportation-Boat, taxi fares - Boat, car rental	770.94	
Airfreight	135.36	
Telephone and Telegraph	87.63	3,717.90
		$7,952.90

McPHAR GEOPHYSICS LIMITED

Robert A. Bell

Robert A. Bell,
Geologist.

Dated: June 12, 1962.

CERTIFICATE

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

1. I am a geologist residing at 12 Cottonwood Drive, 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. (1952).

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 ten 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 Cruikshank Explorations Limited.

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

Dated at Toronto

This 12th day of June, 1962

Robert A. Bell

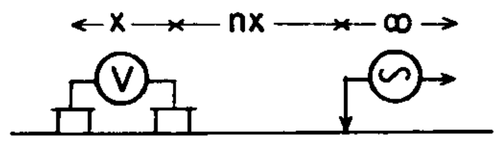
Robert A. Bell, Ph. D.

DWG. NO.-I.P.-2891-1

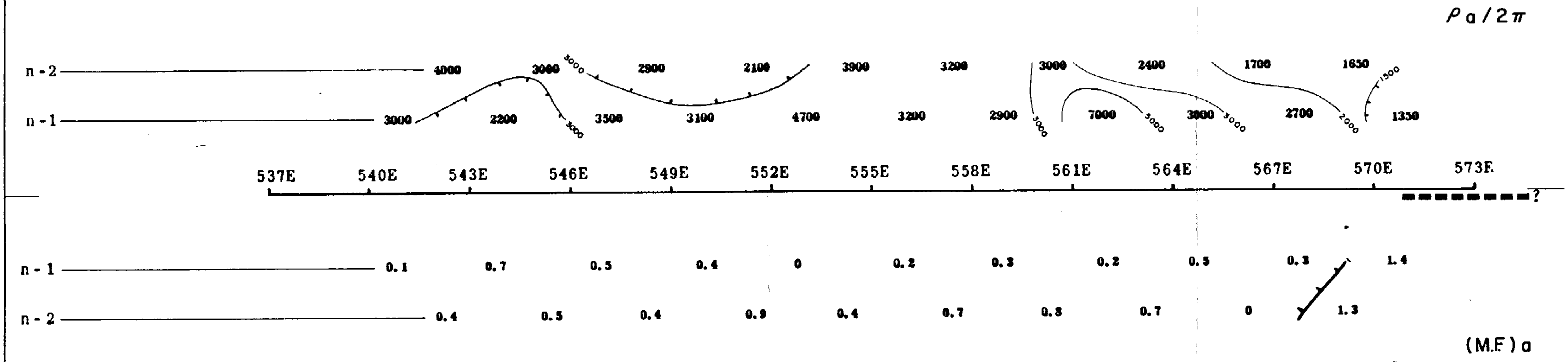
447

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



ELECTRODE CONFIGURATION
x - 300



LINE NO.-857N

(MI)

CRUIKSHANK EXPLORATIONS LIMITED

ALBERNI INLET, VANCOUVER ISLAND, BRITISH COLUMBIA.

ALBERNI MINING DIVISION

Scale - One inch = 300 Feet

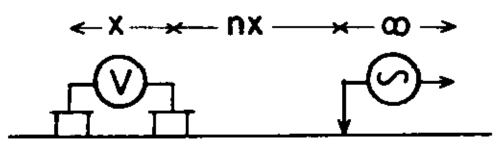
ANOMALOUS ZONE
POSSIBLE ANOMALOUS ZONE
NOTE
LOGARITHMIC CONTOUR INTERVAL

FREQUENCY - 31 - 2.5 CPS.
DATE SURVEYED APR. 1962
APPROVED PA
DATE 6/7/62

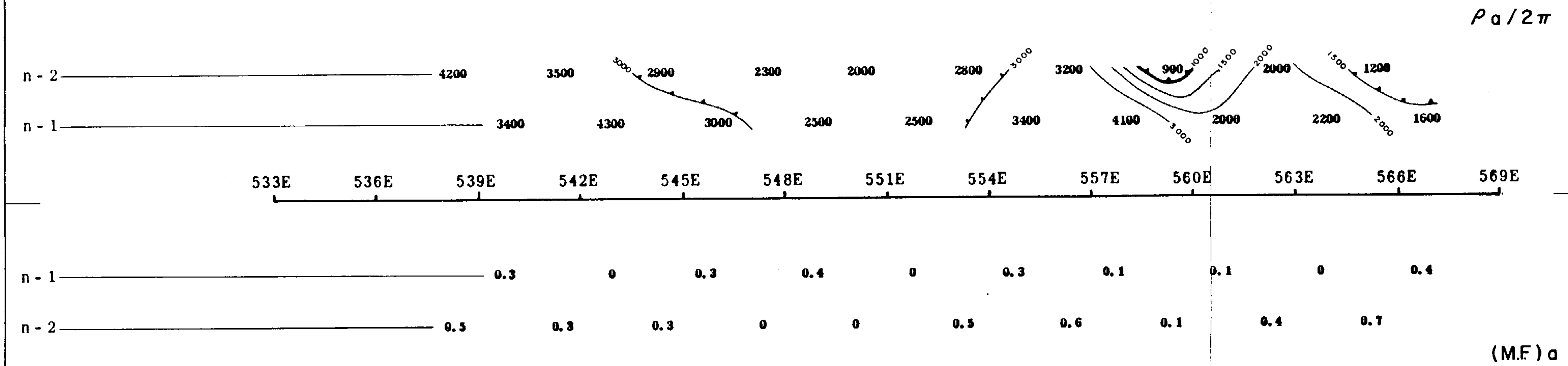
DWG. NO.-I.P.-2891-2

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



ELECTRODE CONFIGURATION
x - 300



LINE NO.- 867N

CRUIKSHANK EXPLORATIONS LIMITED

ALBERNI INLET, VANCOUVER ISLAND, BRITISH COLUMBIA.

ALBERNI MINING DIVISION

Scale - One inch = 300 Feet

ANOMALOUS ZONE ————

POSSIBLE ANOMALOUS ZONE — — —

NOTE
LOGARITHMIC CONTOUR INTERVAL

FREQUENCY .31 - 2.5 CPS.

DATE SURVEYED APR 1962

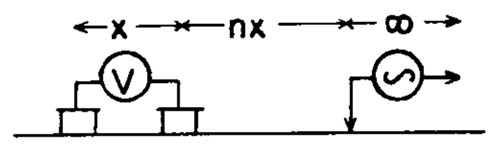
APPROVED PH

DATE 6/7/62

DWG. NO.-I.P.-2891-3

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



x - 300

CRUIKSHANK EXPLORATIONS LIMITED

ALBERNI INLET, VANCOUVER ISLAND, BRITISH COLUMBIA.

ALBERNI MINING DIVISION

Scale - One inch = 300 Feet

ANOMALOUS ZONE

POSSIBLE ANOMALOUS ZONE

NOTE
LOGARITHMIC CONTOUR INTERVAL

FREQUENCY- 31 - 2.5 CPS

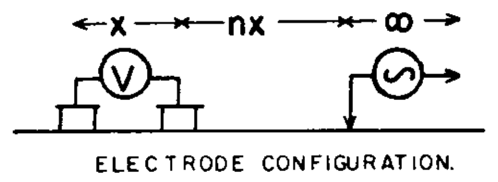
DATE SURVEYED APR 1962

APPROVED [signature]

DATE 6/7/62

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



LINE NO.-887 N

CRUIKSHANK EXPLORATIONS LIMITED

ALBERNI INLET, VANCOUVER ISLAND, BRITISH COLUMBIA.

ALBERNI MINING DIVISION

Scale- One inch = 300 Feet

ANOMALOUS ZONE
POSSIBLE ANOMALOUS ZONE
NOTE
LOGARITHMIC CONTOUR INTERVAL

FREQUENCY-.31-2.5 CPS
DATE SURVEYED APR. 1962
APPROVED P.H.
DATE 6/7/62

DWG. NO.-I.P.-2891-5

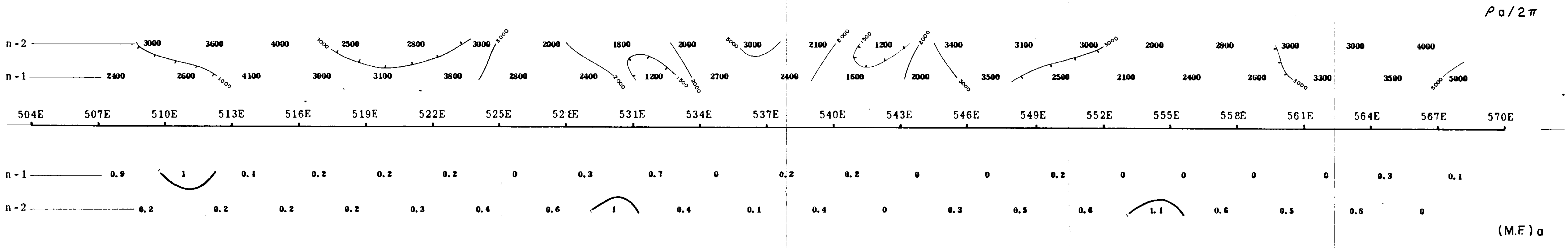
McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

ELECTRODE CONFIGURATION.

x - 300

LINE NO.- 897 N



M5

CRUIKSHANK EXPLORATIONS LIMITED

ALBERNI INLET, VANCOUVER ISLAND, BRITISH COLUMBIA.

ALBERNI MINING DIVISION

Scale-One inch = 300 Feet

ANOMALOUS ZONE ———

POSSIBLE ANOMALOUS ZONE — — —

NOTE
LOGARITHMIC CONTOUR INTERVAL

FREQUENCY 31 - 2.5 CPS

DATE SURVEYED APR 1962

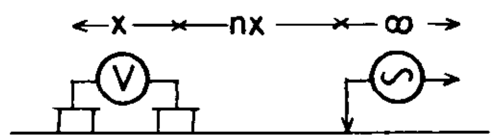
APPROVED [signature]

DATE 6/7/62

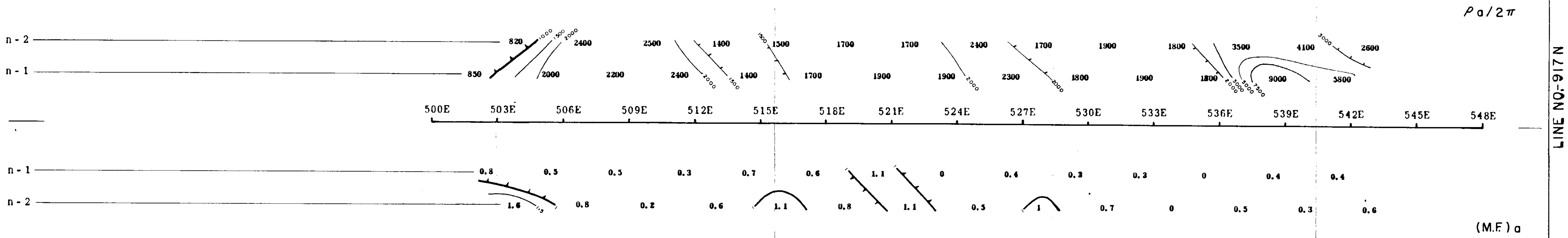
DWG. NO.-I.P.-2891-6

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



ELECTRODE CONFIGURATION.
x - 300



CRUIKSHANK EXPLORATIONS LIMITED

ALBERNI INLET, VANCOUVER ISLAND, BRITISH COLUMBIA.

ALBERNI MINING DIVISION

Scale-One inch = 300 Feet

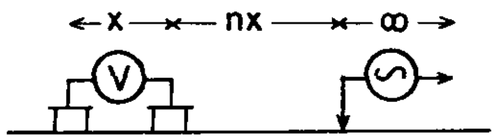
ANOMALOUS ZONE
POSSIBLE ANOMALOUS ZONE
NOTE
LOGARITHMIC CONTOUR INTERVAL

FREQUENCY ·31 - 2·5 CPS
DATE SURVEYED APR 1962
APPROVED PH
DATE 6/7/62

DWG. NO.-I.P.-2891-7

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



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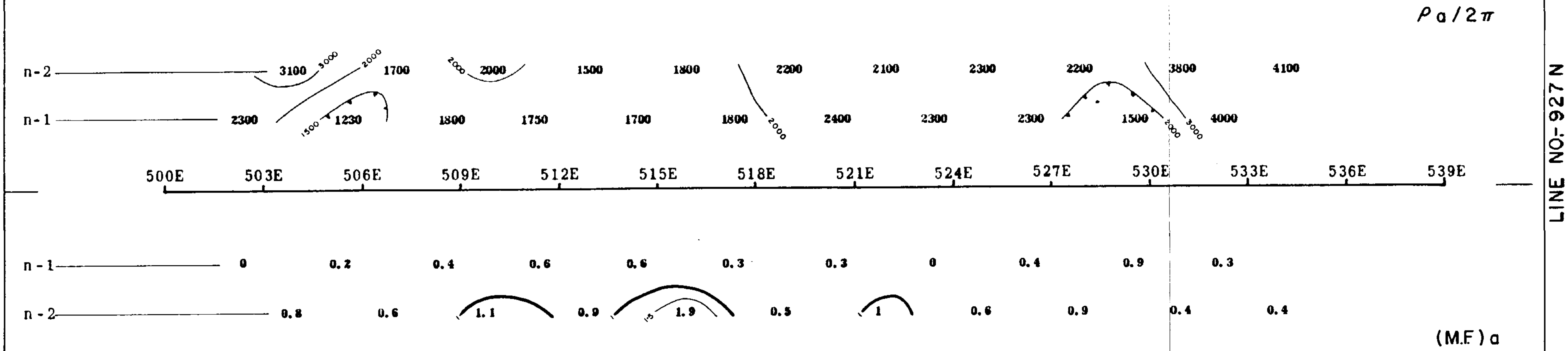


CRUIKSHANK EXPLORATIONS LIMITED

ALBERNI INLET, VANCOUVER ISLAND, BRITISH COLUMBIA.

ALBERNI MINING DIVISION

Scale - One inch = 300 Feet

ANOMALOUS ZONE

POSSIBLE ANOMALOUS ZONE

NOTE

LOGARITHMIC CONTOUR INTERVAL

FREQUENCY 31-2.5 CPS.

DATE SURVEYED APR. 1962

APPROVED

DATE 6/7/62

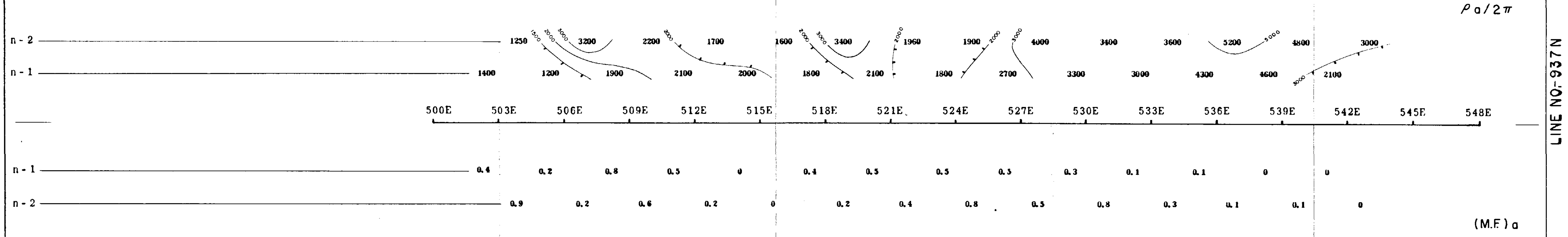
DWG. NO.-I.P.-2891-8

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

ELECTRODE CONFIGURATION

x - 300



CRUIKSHANK EXPLORATIONS LIMITED

ALBERNI INLET, VANCOUVER ISLAND, BRITISH COLUMBIA.

ALBERNI MINING DIVISION

Scale-One inch = 300Feet

ANOMALOUS ZONE

POSSIBLE ANOMALOUS ZONE

NOTE

LOGARITHMIC CONTOUR INTERVAL

FREQUENCY-31-2.5CPS

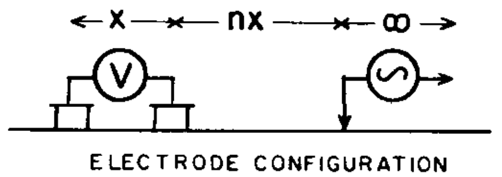
DATE SURVEYED APR 1962

APPROVED

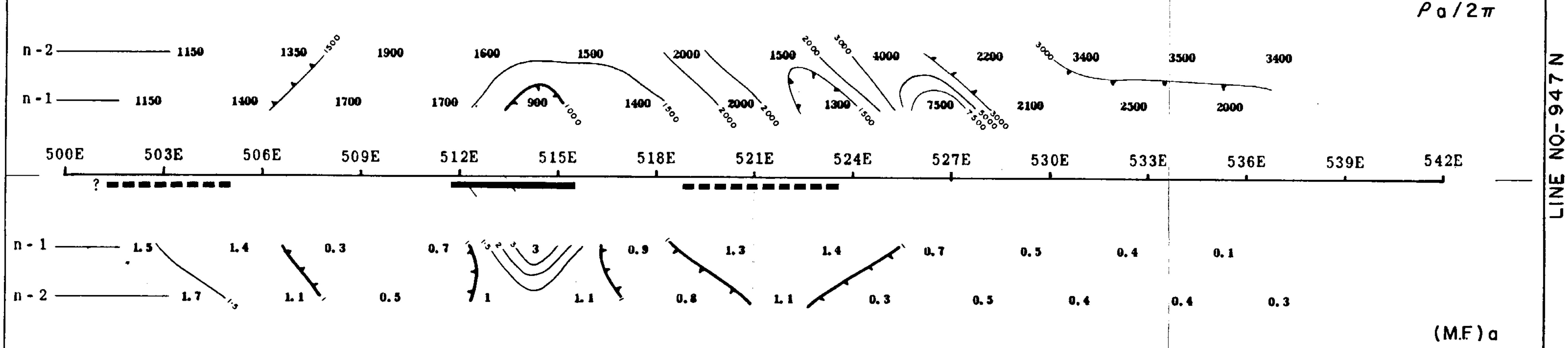
DATE 6/7/62

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



x - 300



CRUIKSHANK EXPLORATIONS LIMITED

ALBERNI INLET, VANCOUVER ISLAND, BRITISH COLUMBIA.

ALBERNI MINING DIVISION

Scale-One inch=300 Feet

ANOMALOUS ZONE

POSSIBLE ANOMALOUS ZONE

NOTE

LOGARITHMIC CONTOUR INTERVAL

FREQUENCY-31-2.5CPS.

DATE SURVEYED APR 1962

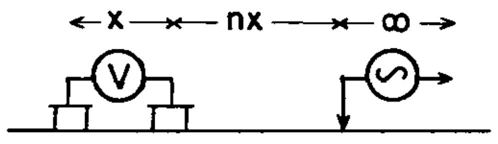
APPROVED PH

DATE 6/7/62

DWG. NO.-I.P.-2891-10

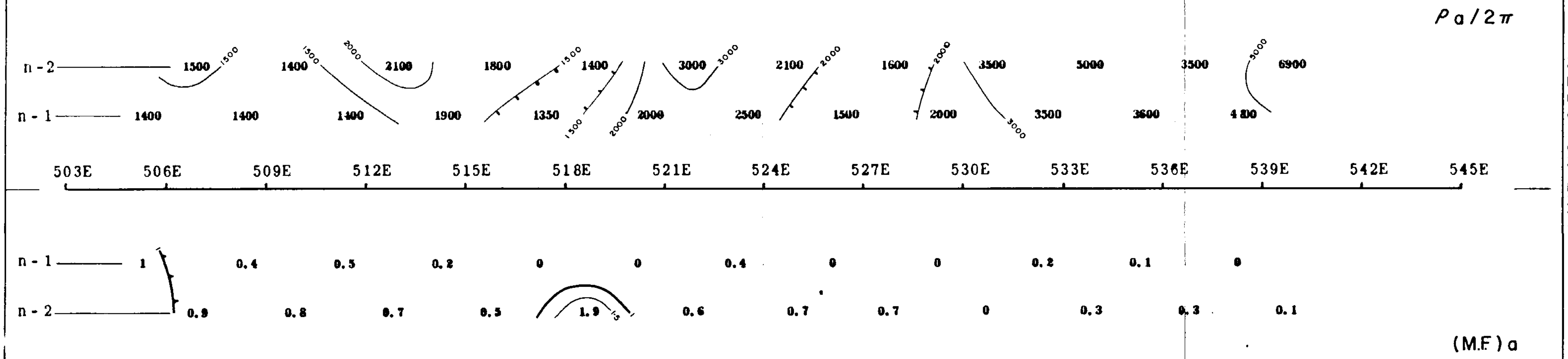
McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



ELECTRODE CONFIGURATION

X - 300



M10

CRUIKSHANK EXPLORATIONS LIMITED

ALBERNI INLET, VANCOUVER ISLAND, BRITISH COLUMBIA.

ALBERNI MINING DIVISION

Scale - One inch = 300 Feet

ANOMALOUS ZONE ▬▬▬

POSSIBLE ANOMALOUS ZONE ▬ ▬ ▬

NOTE

LOGARITHMIC CONTOUR INTERVAL

FREQUENCY .31-2.5CPS.

DATE SURVEYED APR. 1962

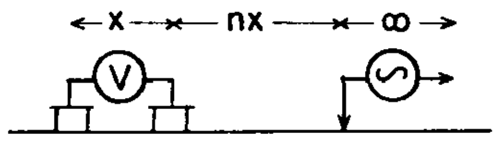
APPROVED PH

DATE 6/7/62

DWG. NO.-I.P.-2891-11

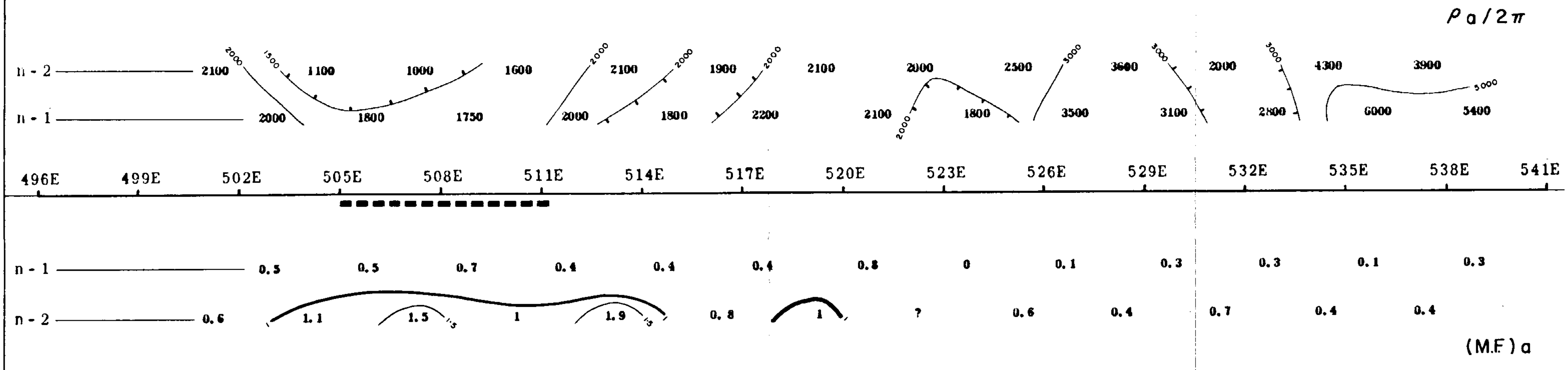
McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



ELECTRODE CONFIGURATION

x - 300



LINE NO.-967N

CRUIKSHANK EXPLORATIONS LIMITED

ALBERNI INLET, VANCOUVER ISLAND, BRITISH COLUMBIA.

ALBERNI MINING DIVISION

Scale - One inch = 300 Feet

ANOMALOUS ZONE ▬▬▬

POSSIBLE ANOMALOUS ZONE ▬ ▬ ▬

NOTE
LOGARITHMIC CONTOUR INTERVAL

FREQUENCY - 3.1 - 2.5 CPS.

DATE SURVEYED APR. 1962

APPROVED PH

DATE 6/7/62

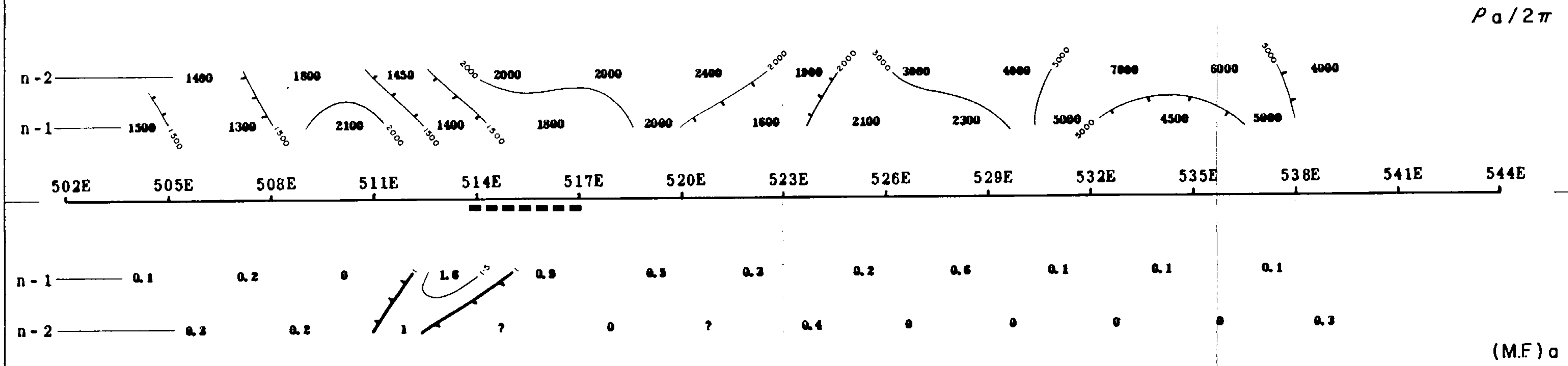
DWG. NO.- I. P.-2891-12

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

ELECTRODE CONFIGURATION

x - 300



LINE NO.- 977N

CRUIKSHANK EXPLORATIONS LIMITED

ALBERNI INLET, VANCOUVER ISLAND, BRITISH COLUMBIA.

ALBERNI MINING DIVISION

Scale - One inch = 300 Feet

ANOMALOUS ZONE

POSSIBLE ANOMALOUS ZONE

NOTE
LOGARITHMIC CONTOUR INTERVAL

FREQUENCY - 31 - 2.5 CPS.

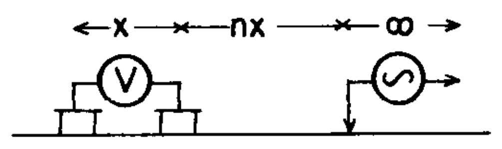
DATE SURVEYED APR. 1962

APPROVED PH

DATE 6/7/62

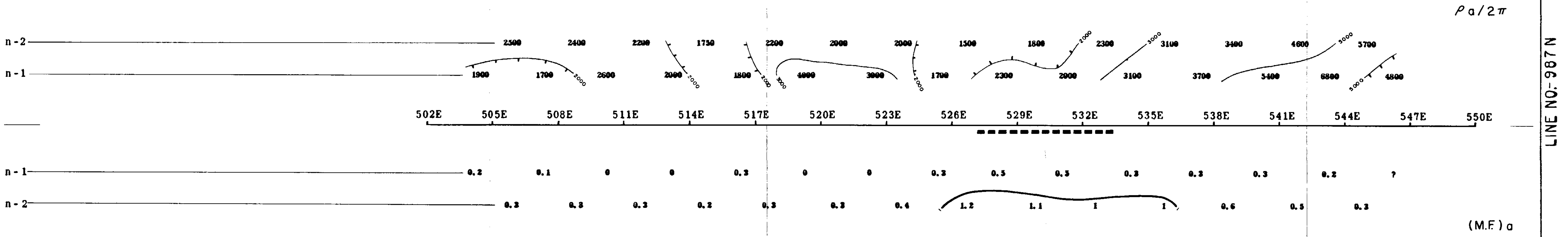
McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



ELECTRODE CONFIGURATION.

x - 300



CRUIKSHANK EXPLORATIONS LIMITED

ALBERNI INLET, VANCOUVER ISLAND, BRITISH COLUMBIA.

ALBERNI MINING DIVISION

Scale-One inch = 300 Feet

ANOMALOUS ZONE ————
POSSIBLE ANOMALOUS ZONE — — —
NOTE
LOGARITHMIC CONTOUR INTERVAL

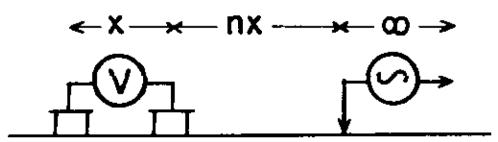
M13

FREQUENCY ·31 - 2·5 CPS
DATE SURVEYED APR 1962
APPROVED PH
DATE 6/7/62

DWG. NO.-I.P.-2891-14

McPHAR GEOPHYSICS LIMITED

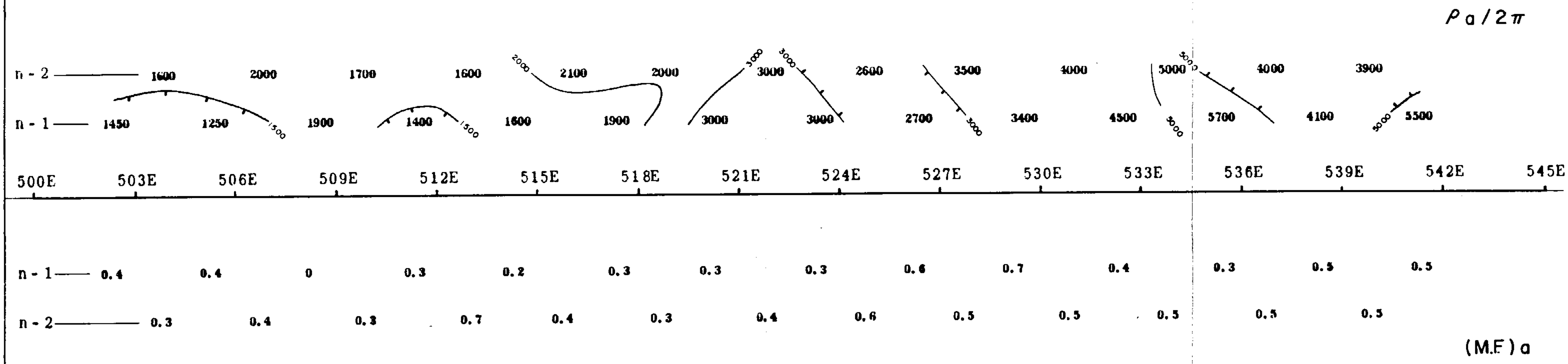
INDUCED POLARIZATION AND RESISTIVITY SURVEY



ELECTRODE CONFIGURATION

x - 300

LINE NO.-997 N



CRUIKSHANK EXPLORATIONS LIMITED

ALBERNI INLET, VANCOUVER ISLAND, BRITISH COLUMBIA.

ALBERNI MINING DIVISION

Scale- One inch = 300 Feet

ANOMALOUS ZONE

POSSIBLE ANOMALOUS ZONE

NOTE
LOGARITHMIC CONTOUR INTERVAL

FREQUENCY - 31 - 2.5 CPS.

DATE SURVEYED APR. 1962

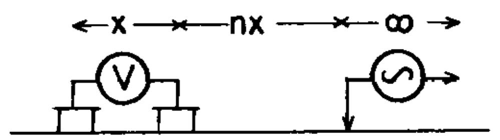
APPROVED

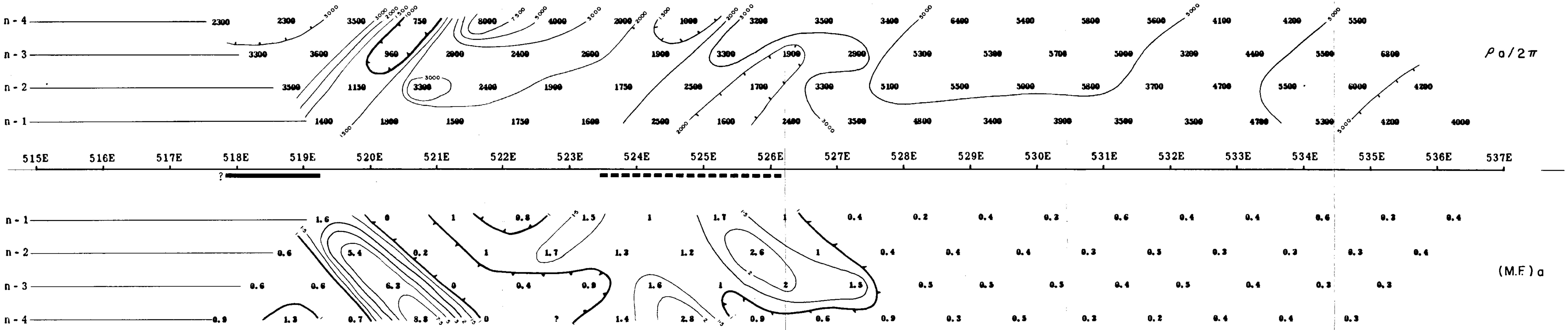
DATE 6/7/62

DWG. NO.-I.P.-2891-15

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY





LINE NO.-1002N

M15

CRUIKSHANK EXPLORATIONS LIMITED

ALBERNI INLET, VANCOUVER ISLAND, BRITISH COLUMBIA.

ALBERNI MINING DIVISION

Scale-One inch = 100 Feet

ANOMALOUS ZONE ————

POSSIBLE ANOMALOUS ZONE — — —

NOTE
LOGARITHMIC CONTOUR INTERVAL

FREQUENCY ·31 - 2·5 CPS

DATE SURVEYED APR 1962

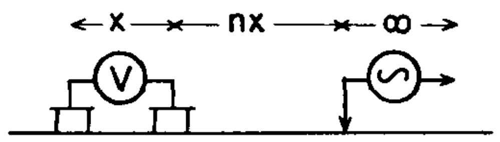
APPROVED PH

DATE 6/7/62

DWG. NO.- I. P.-2891-16

McPHAR GEOPHYSICS LIMITED

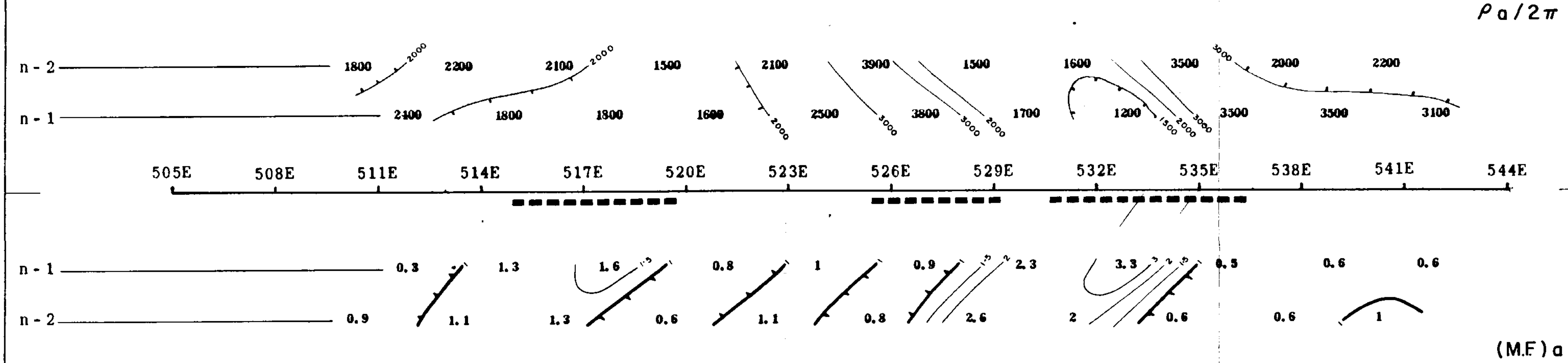
INDUCED POLARIZATION AND RESISTIVITY SURVEY



ELECTRODE CONFIGURATION

x - 300

LINE NO.- 1007 N



M16

CRUIKSHANK EXPLORATIONS LIMITED

ALBERNI INLET, VANCOUVER ISLAND, BRITISH COLUMBIA.

ALBERNI MINING DIVISION

Scale - One inch = 300 Feet

FREQUENCY 31 - 2.5 CPS.

DATE SURVEYED APR. 1962

APPROVED PH

DATE 6/7/62

ANOMALOUS ZONE

POSSIBLE ANOMALOUS ZONE

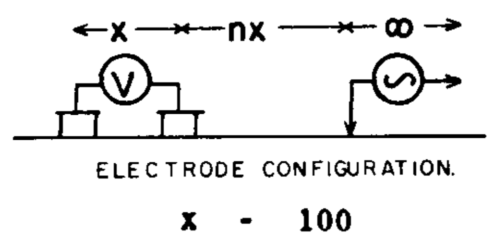
NOTE

LOGARITHMIC CONTOUR INTERVAL

DWG. NO.– I. P.– 2891– 17

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



CRUIKSHANK EXPLORATIONS LIMITED

ALBERNI INLET, VANCOUVER ISLAND, BRITISH COLUMBIA.

ALBERNI MINING DIVISION

Scale– One inch = 100 Feet

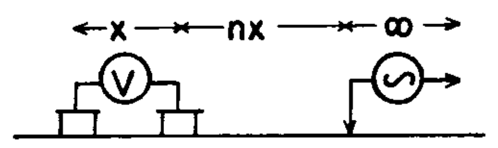
ANOMALOUS ZONE
POSSIBLE ANOMALOUS ZONE
NOTE
LOGARITHMIC CONTOUR INTERVAL

FREQUENCY .31 – 2.5 CPS
DATE SURVEYED APR. 1962
APPROVED PH
DATE 6/7/62

DWG. NO.-I.P.-2891-18

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



ELECTRODE CONFIGURATION.

x - 100

CRUIKSHANK EXPLORATIONS LIMITED

ALBERNI INLET, VANCOUVER ISLAND, BRITISH COLUMBIA.

ALBERNI MINING DIVISION

Scale- One inch = 100 Feet

ANOMALOUS ZONE

POSSIBLE ANOMALOUS ZONE

NOTE
LOGARITHMIC CONTOUR INTERVAL

MB

FREQUENCY: 31-2.5 CPS

DATE SURVEYED APR 1962

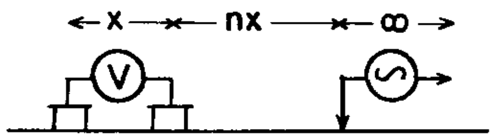
APPROVED 7H

DATE 6/7/62

DWG. NO.-I.P.-2891-19

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



ELECTRODE CONFIGURATION

x - 300

LINE NO.-1017 N

$\rho a/2\pi$

n - 2	2000	3000	3100	3700	4000	2800	3000	3500	2600	2300	2000	900
n - 1	2300	3700	4100	4500	4200	3000	4000	3500	3100	2500	1600	1500

Contours: 3000, 3000, 3000, 2000, 1000, 1500

503E 506E 509E 512E 515E 518E 521E 524E 527E 530E 533E 536E 539E 542E 545E

n - 1	0.1	0.4	0.3	0.8	0.2	0.3	0.2	0.1	0.3	0.4	0.5	0.3
n - 2	0.3	0.2	0.7	0.3	0	0.1	0.3	0.5	0.7	0.5	0.2	0

(M.F.) a

M19

CRUIKSHANK EXPLORATIONS LIMITED

ALBERNI INLET, VANCOUVER ISLAND, BRITISH COLUMBIA.

ALBERNI MINING DIVISION

Scale - One inch = 300 Feet

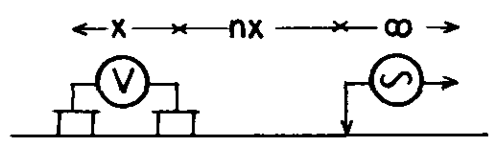
ANOMALOUS ZONE
POSSIBLE ANOMALOUS ZONE
NOTE
LOGARITHMIC CONTOUR INTERVAL

FREQUENCY · 31 - 2.5 CPS.
DATE SURVEYED APR 1962
APPROVED PH
DATE 6/7/62

DWG. NO.-I.P.-2891-20

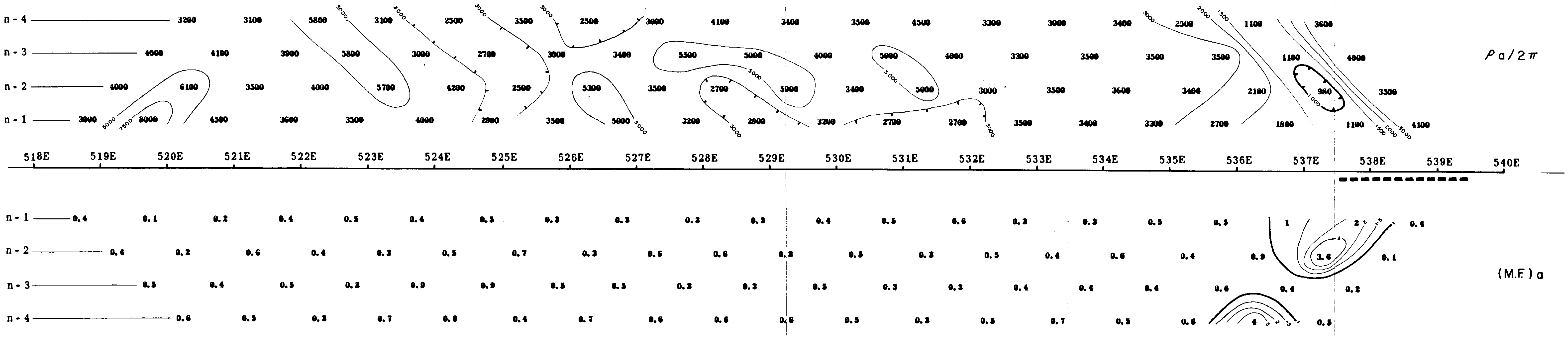
McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



ELECTRODE CONFIGURATION.

x - 100



LINE NO.-1017 N

M20

CRUIKSHANK EXPLORATIONS LIMITED

ALBERNI INLET, VANCOUVER ISLAND, BRITISH COLUMBIA.

ALBERNI MINING DIVISION

Scale-One inch = 100 Feet

ANOMALOUS ZONE

POSSIBLE ANOMALOUS ZONE

NOTE
LOGARITHMIC CONTOUR INTERVAL

FREQUENCY 3.1 - 2.5 CPS

DATE SURVEYED APR 1962

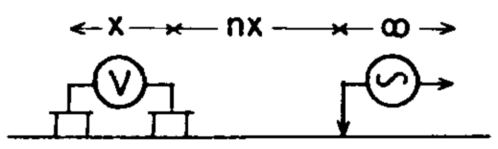
APPROVED PH

DATE 6/7/62

DWG. NO.-I. P.-2891-21

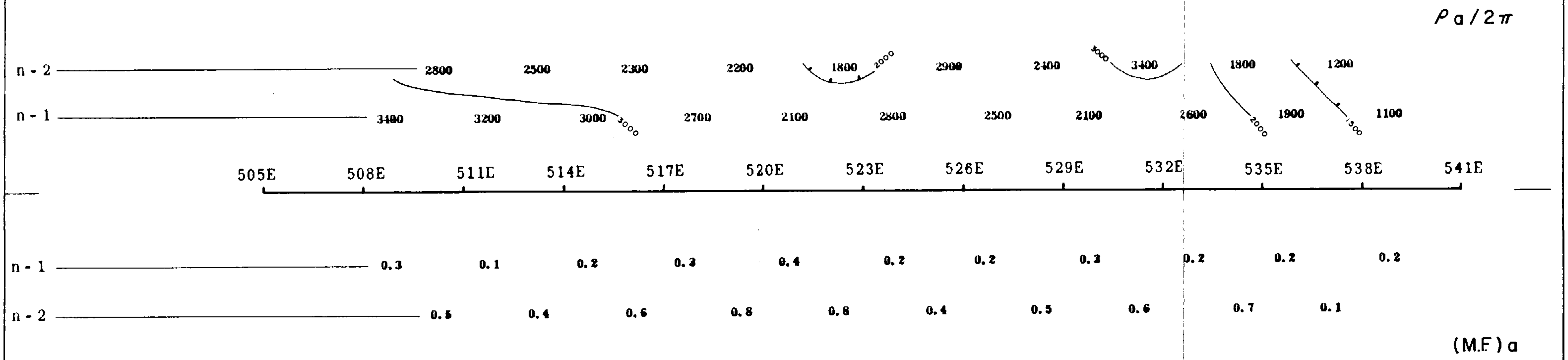
McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



ELECTRODE CONFIGURATION

x - 300



LINE NO.-1027 N

M21

CRUIKSHANK EXPLORATIONS LIMITED

ALBERNI INLET, VANCOUVER ISLAND, BRITISH COLUMBIA.

ALBERNI MINING DIVISION

Scale - One inch = 300 Feet

ANOMALOUS ZONE ▬▬▬

POSSIBLE ANOMALOUS ZONE ▬ ▬ ▬

NOTE

LOGARITHMIC CONTOUR INTERVAL

FREQUENCY · 31 - 2·5 CPS.

DATE SURVEYED APR. 1962

APPROVED PH

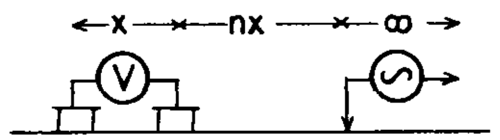
DATE 6/7/62

DWG. NO.-I.P.-2891-22

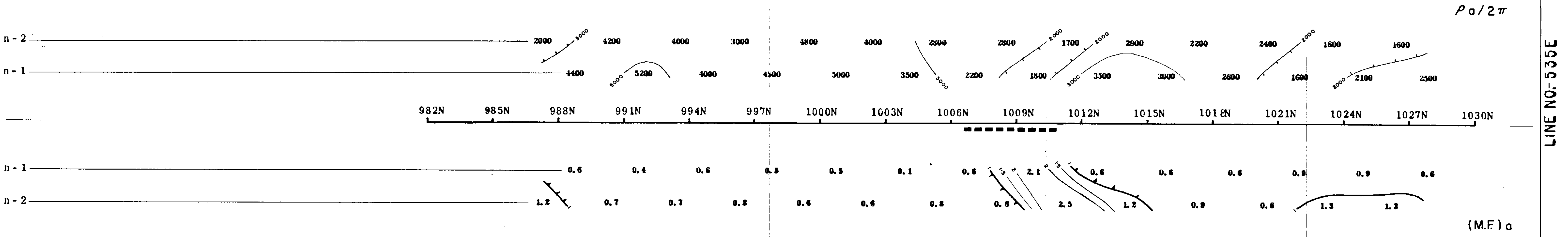
McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

447



ELECTRODE CONFIGURATION.
x - 300



M22

CRUIKSHANK EXPLORATIONS LIMITED

ALBERNI INLET, VANCOUVER ISLAND, BRITISH COLUMBIA.

ALBERNI MINING DIVISION

Scale-One inch = 300Feet

ANOMALOUS ZONE
POSSIBLE ANOMALOUS ZONE
NOTE
LOGARITHMIC CONTOUR INTERVAL

FREQUENCY ·31 - 2·5 CPS
DATE SURVEYED APR 1962
APPROVED PH
DATE 6/7/62

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

LOCATION MAP

NOTE:
ANOMALOUS ZONE
POSSIBLE ANOMALOUS ZONE
300' SPREAD ANOMALIES SOUTH OF LINE
100' SPREAD ANOMALIES NORTH OF LINE

CRUIKSHANK EXPLORATIONS LIMITED

ALBERNI INLET, VANCOUVER ISLAND, BRITISH COLUMBIA.

ALBERNI MINING DIVISION

SCALE

500 400 300 200 100 0 500 1000 1500 2000 2500 FEET

One Inch = Five Hundred Feet

Department of Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 447 MAP 1

447

Claim Boundaries added July, 1962
C.W.B.G. LTD.

(1123)

DRAWN D.A.G.
DATE JUNE 1962.
APPROVED
DATE 6/7/62

DWG. MISC-4712