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Vol 1.

REGISTERED

VOLUME I
REPORT ON
INDUCED POLARIZATION
AND RESISTIVITY SURVEY
IN THE
MT. TYNDALL AREA, TASMANIA
FOR
MOUNT LYELL MINING AND
RAILWAY COMPANY LIMITED

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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

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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

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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 chalcopryrite, 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

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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

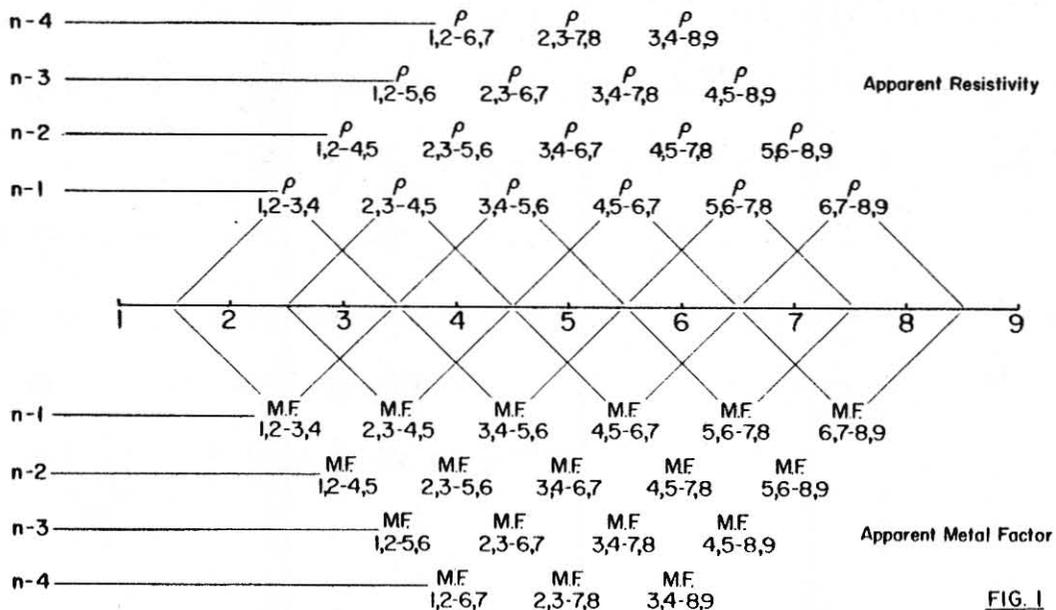
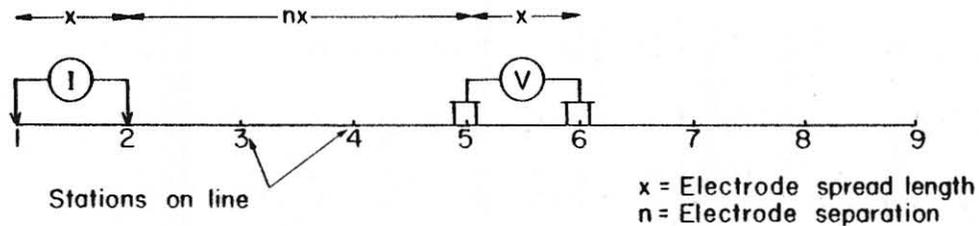
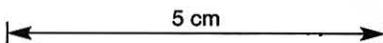


FIG. 1



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REPORT ON

INDUCED POLARIZATION

AND RESISTIVITY SURVEY

IN THE

MT. TYNDALL AREA, TASMANIA

FOR

MOUNT LYELL MINING AND

RAILWAY COMPANY LIMITED

1. INTRODUCTION

A reconnaissance induced polarization and resistivity survey has been carried out in the favourable geologic area between Queenstown, Tasmania and Rosebery, Tasmania. The work was done on behalf of The Consolidated Syndicate; The Mt. Lyell Mining and Railway Company Limited, one of the partners in the Syndicate, supervised the work.

The area for the survey was chosen on the basis of the geologic environment. The IP lines surveyed covered the contact between the Mt. Read (Cambrian) Volcanics to the west and the Owen (Ordovician) Conglomerate to the east. This geologic setting is similar to that containing the mineralization at Queenstown and Rosebery, and the IP survey was planned in an attempt to locate any zones of metallic mineralization that might be present.

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2. PRESENTATION OF RESULTS

The Induced Polarization results are shown on the following data plots in the accompanying booklet. The results are plotted in the manner described in the notes preceding this report.

<u>Line</u>	<u>Spreads</u>	<u>Dwg. No.</u>
2	300 feet	IP 2679-1
4	300 feet	IP 2679-2
4	200 feet	IP 2679-3
4	100 feet	IP 2679-4
6	300 feet	IP 2679-5
6	200 feet	IP 2679-6
8	300 feet	IP 2679-7
8	100 feet	IP 2679-8
10	300 feet	IP 2679-9
10	200 feet	IP 2679-10
12	300 feet	IP 2679-11
12	200 feet	IP 2679-12
12	100 feet	IP 2679-13
14	300 feet	IP 2679-14
16	300 feet	IP 2679-15
16	200 feet	IP 2679-16
16	100 feet	IP 2679-17
18	300 feet	IP 2679-18
18	200 feet	IP 2679-19
20	300 feet	IP 2679-20

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<u>Line</u>	<u>Spreads</u>	<u>Dwg. No.</u>
20	100 feet	IP 2679-21
22	400 feet	IP 2679-22
22	300 feet	IP 2679-23
22	200 feet	IP 2679-24
24	300 feet	IP 2679-25
24	200 feet	IP 2679-26
24; offset	200 feet	IP 2679-27
26	300 feet	IP 2679-28
28	300 feet	IP 2679-29
28	200 feet	IP 2679-30
30	300 feet	IP 2679-31
30	200 feet	IP 2679-32
32	300 feet	IP 2679-33
32	200 feet	IP 2679-34
34	400 feet	IP 2679-35
34	300 feet	IP 2679-36
34	200 feet	IP 2679-37
36	300 feet	IP 2679-38
36	200 feet	IP 2679-39
38	300 feet	IP 2679-40

Enclosed with this report is Dwg. Misc. 3252-1, 2, a plan map of the grid survey at a scale of 1" = 1000'. The definite and possible induced polarization anomalies are indicated by solid and broken bars

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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-foot spreads the position of a narrow sulphide body can only be determined to lie between two stations 300 feet 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.

The position of the geologic contact shown on Dwg. Misc. 3252-1, 2 are supplied by the staff of Mount Lyell Mining and Railway Company Limited.

3. DISCUSSION OF RESULTS

The induced polarization results from the Mt. Tyndall Grid are of definite interest. Several anomalous zones have been outlined and further work is warranted.

Line No. 2

This is the southernmost of the lines surveyed. There is a

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weak, shallow anomaly centered at 12E, and a definite source at depth (or to the side of the line) centered at 63E to 66E.

Line No. 4

On this line the western source is less definite, but the eastern anomaly is quite strong. The source is indicated to be at less depth than on Line No. 2. The enclosed theoretical data (Case II-0.5-BU-10-a; Case II-1.5-BU-10-a) show the typical patterns for shallow and deep sources. When the source is at depth, the anomalous values are measured only for the larger values of (n).

The eastern anomaly has been checked with 200-foot electrode intervals. A definite, complex source is indicated; since the measurements for n = 1 are anomalous, the anomaly should be checked using 100-foot electrode intervals.

Line No. 6

On this line the measurements using 300-foot electrode intervals show two narrow, shallow sources. The anomalous patterns are typical for narrow sources, in cases where the electrode interval is appreciably greater than the width of the source.

The theoretical results shown in Figure 1, Figure 2 and Figure 3 indicate the anomalous pattern to be expected from this type of source. The results show that when the electrode interval is appreciably greater than the width of the source, a large volume of unmineralized earth is averaged into each measurement. The apparent IP effect

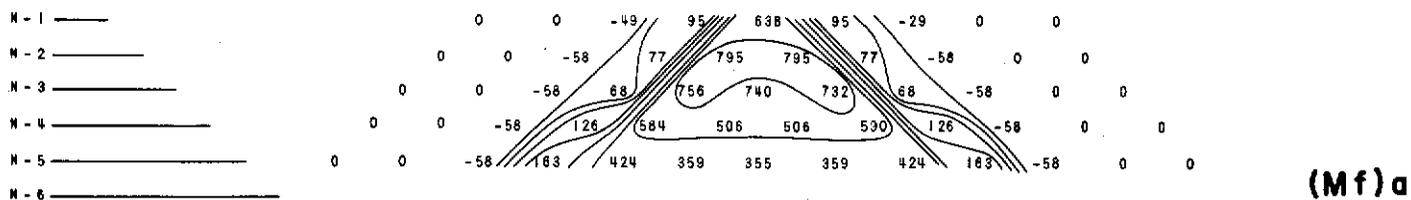
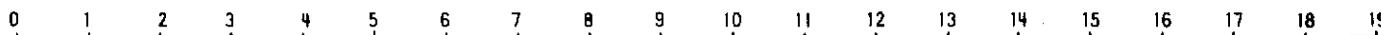
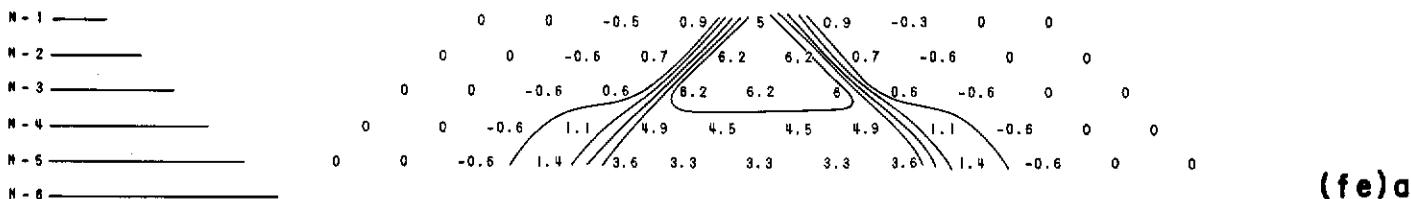
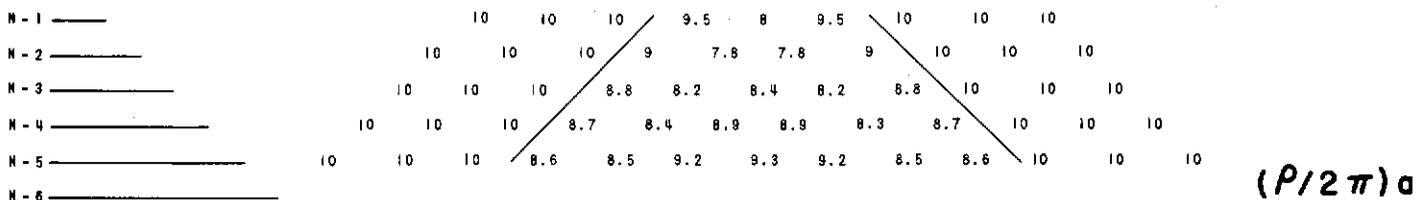
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Theoretical Induced Polarization and Resistivity Studies

Scale Model Cases



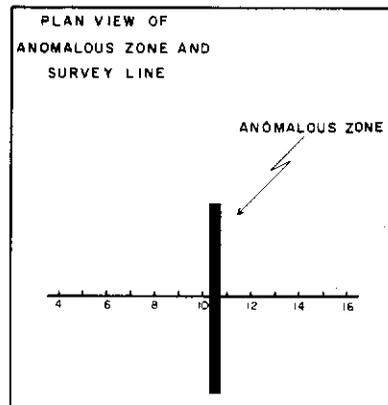
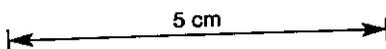
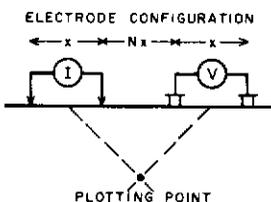
$(P/2\pi)_1 = 10$

$(Mf)_1 = 0$

$(P/2\pi)_2 = 2.51$

$(Mf)_2 = 10000$

$(fe)_2 = 25\%$



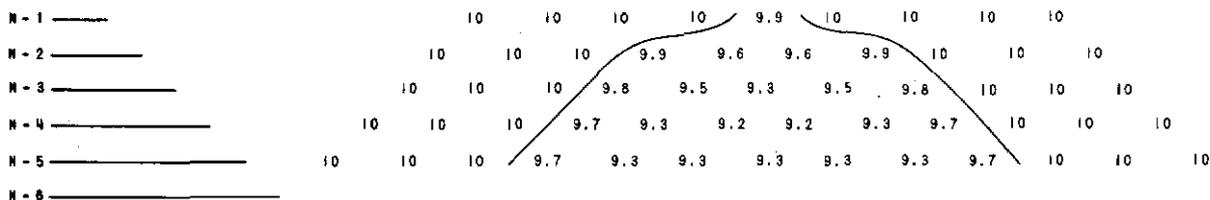
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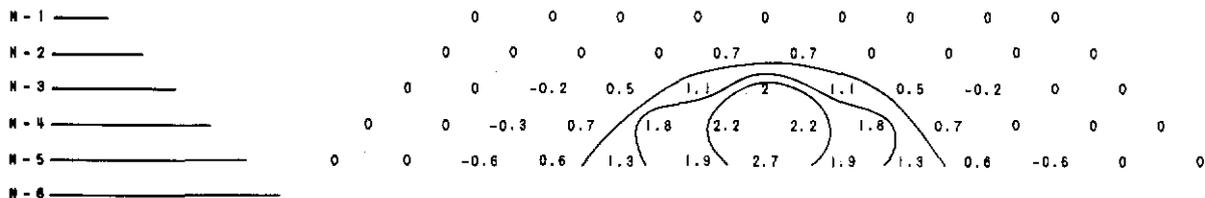
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Theoretical Induced Polarization and Resistivity Studies

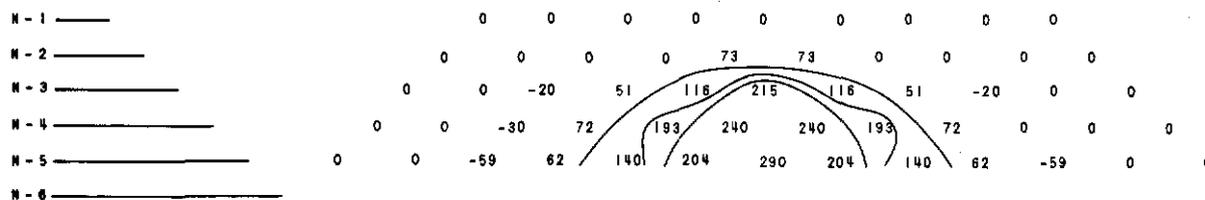
Scale Model Cases



$(P/2\pi)\alpha$



$(fe)\alpha$



$(Mf)\alpha$



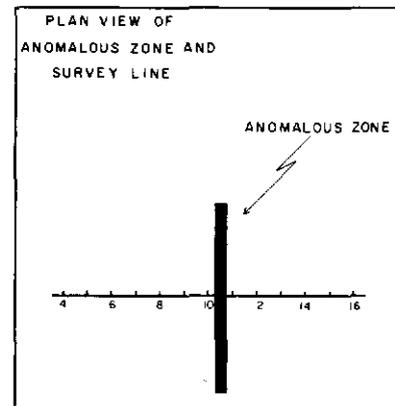
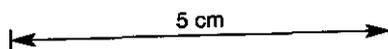
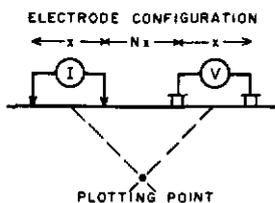
$(P/2\pi)_1 = 10$

$(Mf)_1 = 0$

$(P/2\pi)_2 = 2.6$

$(Mf)_2 = 9250$

$(fe)_2 = 24\%$



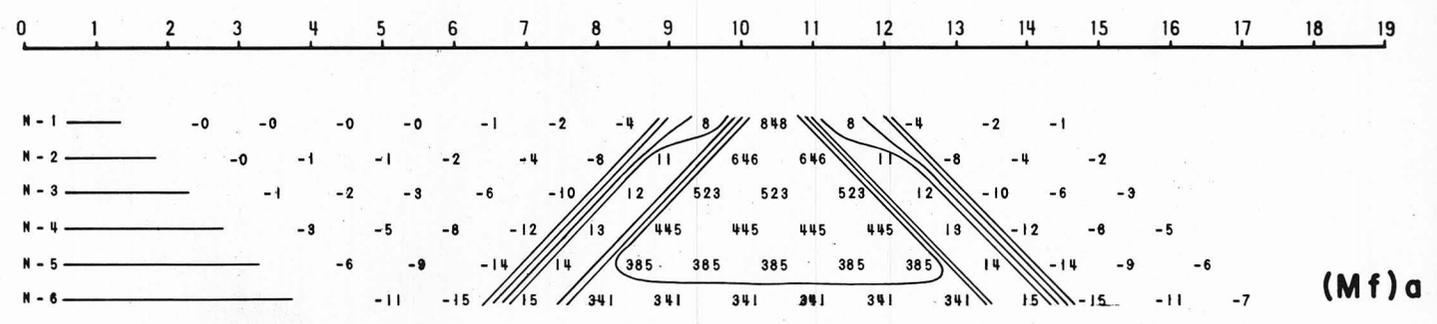
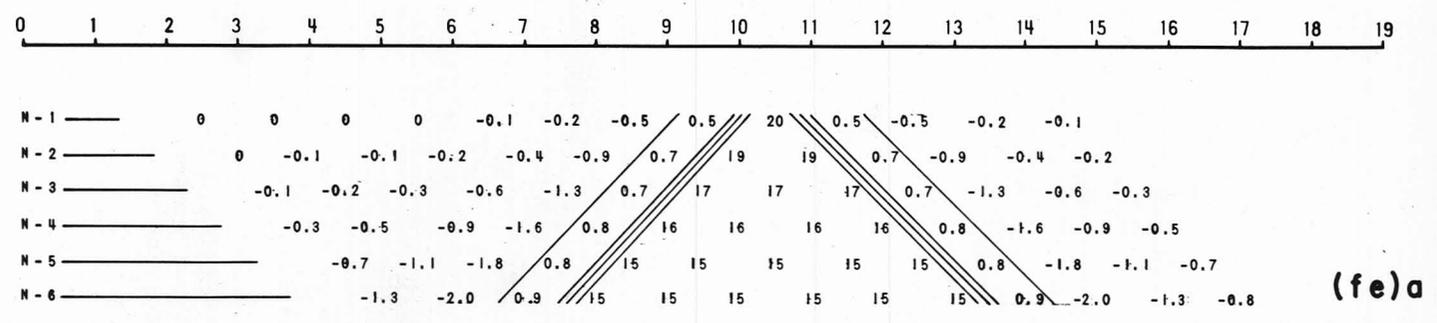
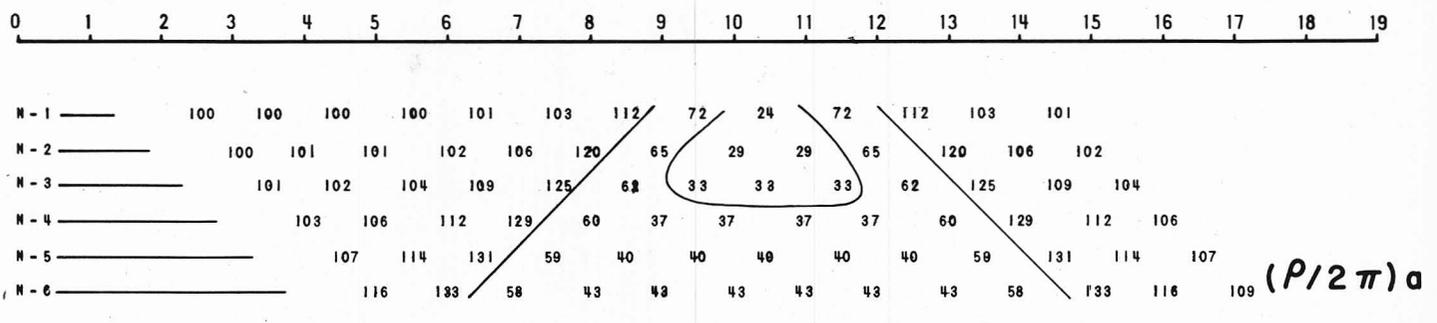
CASE II-15-BU-10-a

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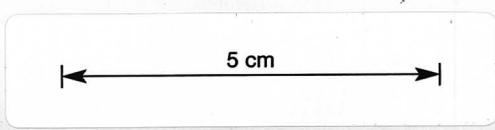
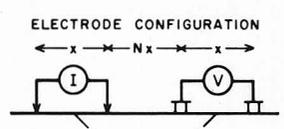
Theoretical Induced Polarization and Resistivity Studies Calculated Cases



$(P/2\pi)_1 = 100$
 $(Mf)_1 = 0$

$(P/2\pi)_2 = 5.0$
 $(Mf)_2 = 5000$
 $(fe)_2 = 25\%$

$(P/2\pi)_3 = 100$
 $(Mf)_3 = 0$



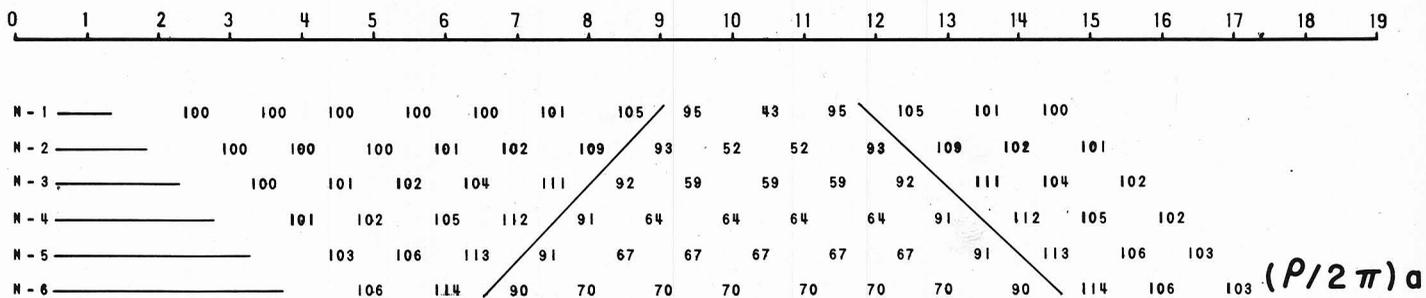
CASE
III-AX-dd-1

Fig.1

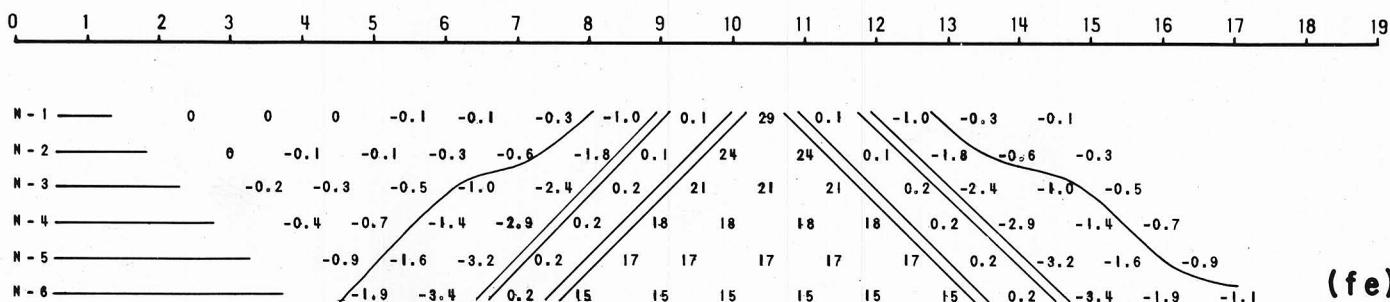
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Theoretical Induced Polarization and Resistivity Studies

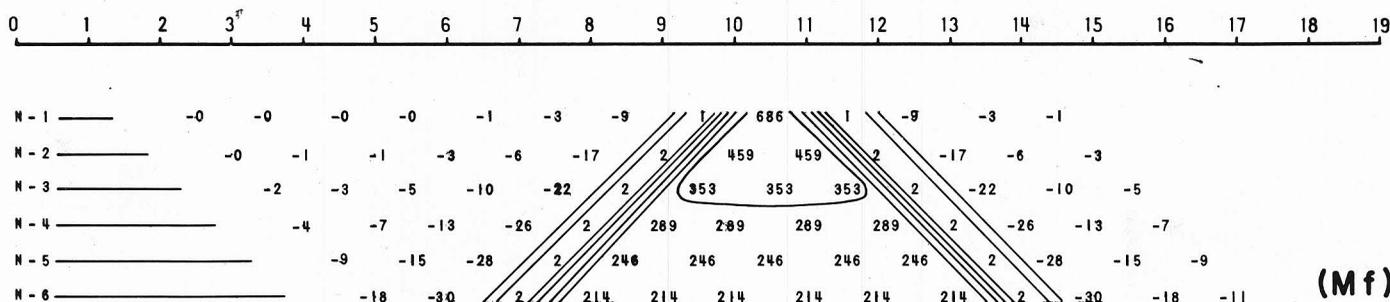
Calculated Cases



$(P/2\pi)a$

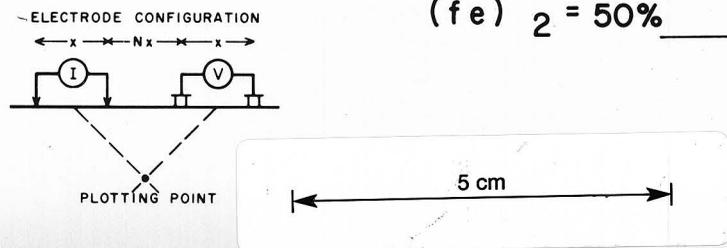


$(fe)a$



$(Mf)a$

$(P/2\pi)_1 = 100$ $(P/2\pi)_2 = 5.0$ $(P/2\pi)_3 = 100$
 $(Mf)_1 = 0$ $(Mf)_2 = 10,000$ $(Mf)_3 = 0$
 $(fe)_2 = 50\%$



CASE
I-BX-dd-1

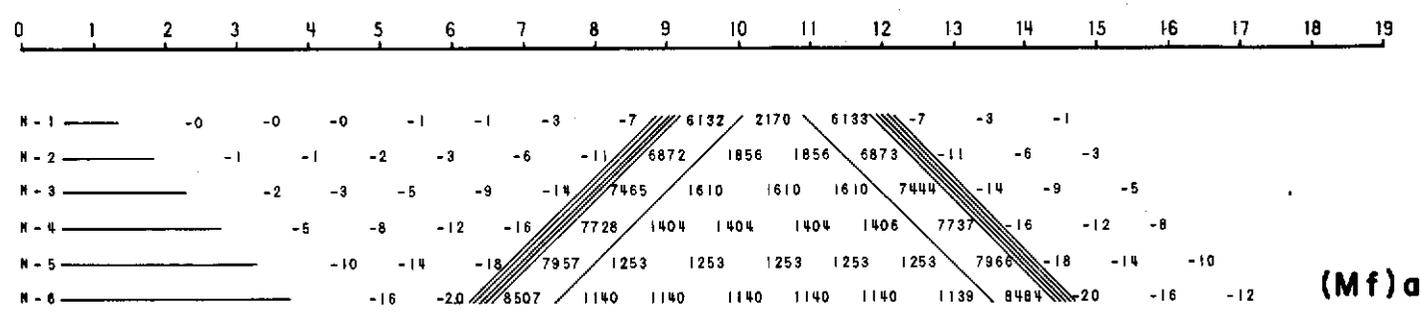
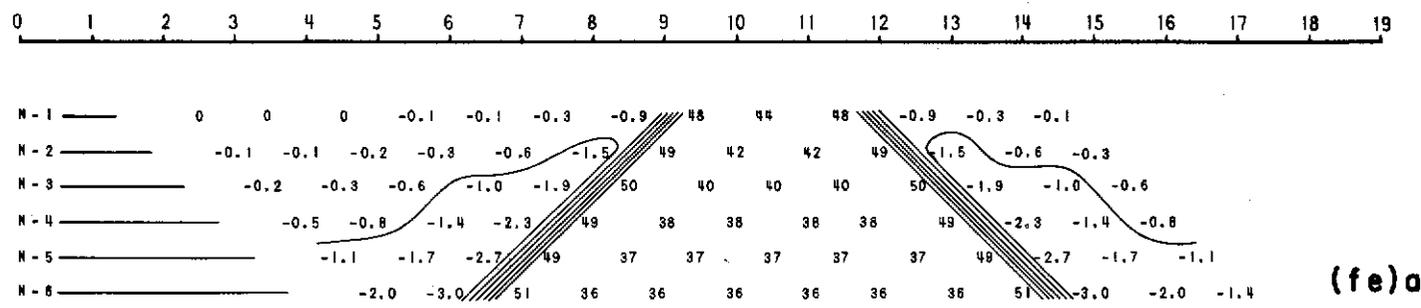
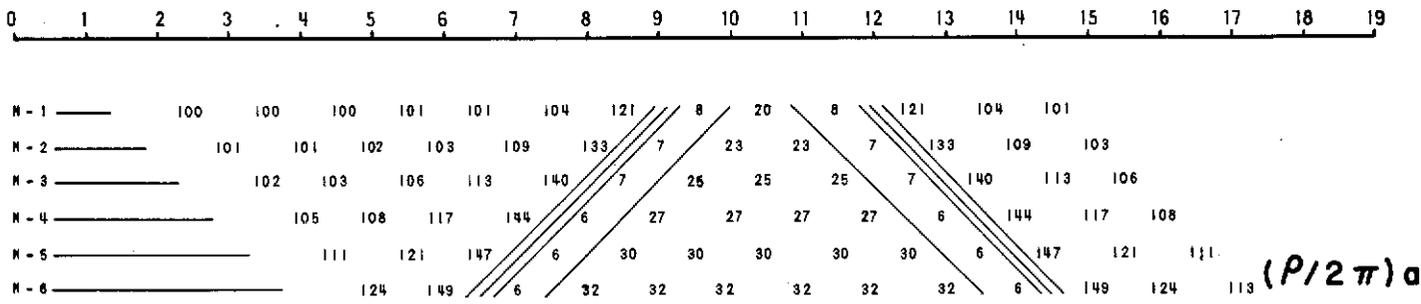
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Theoretical Induced Polarization and Resistivity Studies

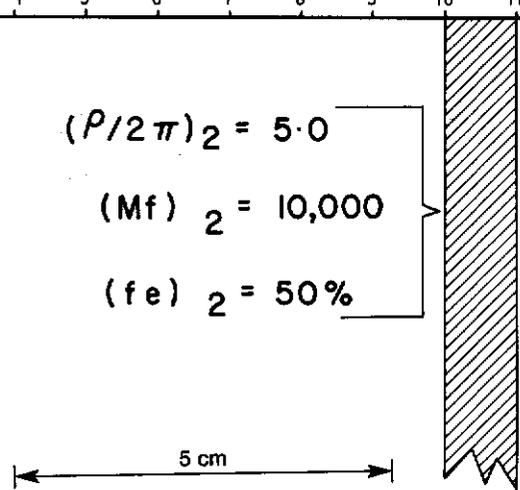
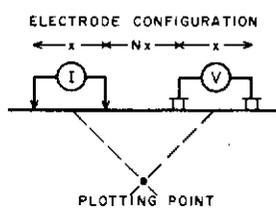
Calculated Cases



$(P/2\pi)_1 = 100$
 $(Mf)_1 = 0$

$(P/2\pi)_2 = 5.0$
 $(Mf)_2 = 10,000$
 $(fe)_2 = 50\%$

$(P/2\pi)_3 = 100$
 $(Mf)_3 = 0$



CASE
IV-BX-dd-1

Fig. 3

measured at the surface is much lower in magnitude than the true IP effect in the source. Under these conditions, the apparent anomaly from a broad zone of mineralization is much the same as that from a narrower source of more concentrated mineralization. When the size of the electrode interval used is reduced until it is approximately equal to the width of the source, the apparent effects measured will increase in magnitude.

The detailed measurements with 200-foot spreads on the eastern anomaly show a shallow, narrow anomaly centered at 46E. This source can be better located and evaluated by using 100-foot electrode intervals. Closely spaced parallel lines should also be surveyed.

The anomaly centered at 2W to 0+00 has a source at some depth, when checked using 200-foot electrode intervals. The anomaly should be checked using 200-foot electrode intervals and the odd-numbered stations. Parallel lines should also be checked.

Line No. 8

On this line, the anomalous IP effects are very weak. No further work seems to be warranted at this time.

Line No. 10

These results are very similar to those on the lines to the south. There is a moderate magnitude, shallow source centered at 36E to 39E, and a weak, shallow source at 15E. The 200-foot spread detail confirms a narrow, shallow anomaly at 36E to 37E. The anomaly should be checked with 100-foot spreads, and parallel lines should be surveyed.

Line No. 12

The narrow anomaly to the east is somewhat stronger on this line. It should be checked with 100-foot spreads, and parallel lines should be surveyed.

Line No. 14

The results on this line show the background values for the area. There is one weak IP source at depth at 12E to 13E that may warrant further work. Lines should be surveyed 300 feet to the north and south.

Line No. 16

One of the most definite anomalies located during the reconnaissance survey is centered at about 6E on this line. The details with 200-foot electrode intervals confirm the presence of the anomaly. The source is indicated to be relatively wide, and detail with 100-foot electrode intervals should be carried out to better locate and evaluate the source. Parallel lines should also be surveyed.

The 100-foot spread measurements at 22E to 23E are east of the data from the reconnaissance survey. The results show a narrow source at depth, that is of definite interest. Lines 100 and 200 feet to the north and south should be surveyed with 100-foot spreads.

Line No. 18

The reconnaissance results show a shallow anomaly at approximately 0+00 on this line. The 200-foot spread results confirm the shallow source. Detail with 100-foot spreads is warranted and parallel lines should be surveyed.

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Line No. 20

Only background IP effects were measured on this line.

Line No. 22

The results on this line confirm a complex source in the interval 24W to 15W. Lines 200 and 400 feet to the north and south should be surveyed using 200-foot electrode intervals. The shallow source centered at 23W should be checked with 100-foot spreads.

Line No. 24

There is a definite anomaly centered at 23W on this line. It should be checked with 100-foot spreads and parallel lines should be surveyed.

Line No. 26

There are no anomalous IP effects measured on this line.

Line No. 28

There is a single anomaly centered at 30W on this line. The anomaly is moderate in magnitude, and the pattern is typical for a shallow, narrow, near-vertical tabular source. The anomaly should be checked using 100-foot electrode intervals. Parallel lines should also be surveyed.

Line No. 30

The 200-foot spread detail on this line shows two weak, shallow sources. They should be checked with 100-foot spreads.

Line No. 32

The IP anomaly centered at 8E on this line is quite low in magnitude. It should be checked with 100-foot spreads.

Line No. 34

The detailed results here show an anomalous pattern centered at 20W. There may be two narrow sources, or a single broad source. The anomaly should be checked with 100-foot spreads, and parallel lines should be surveyed.

Line No. 36

There are several weak anomalies located on this line. The shallow source located at 23W should be checked with 100-foot spreads.

Line No. 38

This is the northernmost of the lines surveyed. There are shallow anomalies centered at 37+50W and at 12W. The sources should be checked using shorter electrode intervals.

4. CONCLUSIONS AND RECOMMENDATIONS

The reconnaissance induced polarization and resistivity survey in the Mt. Tyndall Area has shown the presence of several definite IP anomalies. The anomalies are quite definite, and in some cases they can be correlated into zones; this has been done on Dwg. Misc. 3252-1, -2.

The resistivity results from the Mt. Tyndall Area are also of interest. There are definite contacts between high resistivity rock (greater than 1000) and low resistivity rocks (less than 100). Typical

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contacts are shown at Line No. 2, 54E and Line 36E, 30W and 18W.

An attempt has been made to correlate these resistivity units into zones (Dwg. No. R3253-1, -2). In some places the correlation is quite straightforward, but in others there is some ambiguity. This may be due to flat-dipping contacts, intermediate rock-types, etc. There is no obvious correlation between these resistivity zones, and the Cambrian-Ordovician contact. However, the zones should be correlated with the available geologic information.

There are several of the IP anomalies that are definite enough to warrant drilling; however, additional measurements would be needed before holes can be spotted. The existing reconnaissance lines are at ^{1/4 mile} ~~one-half mile~~ intervals, and the intermediate lines should be surveyed to confirm the somewhat uncertain correlations that have been made.

The detailed IP work that has been recommended in this report should be completed before any holes are drilled. Many of the anomalies must be better located using shorter electrode intervals; closely spaced, parallel lines must also be surveyed in order to determine the strike direction of the source.

When the detailed data is available, several holes will be warranted to determine the nature of the mineralization causing the IP anomalies.

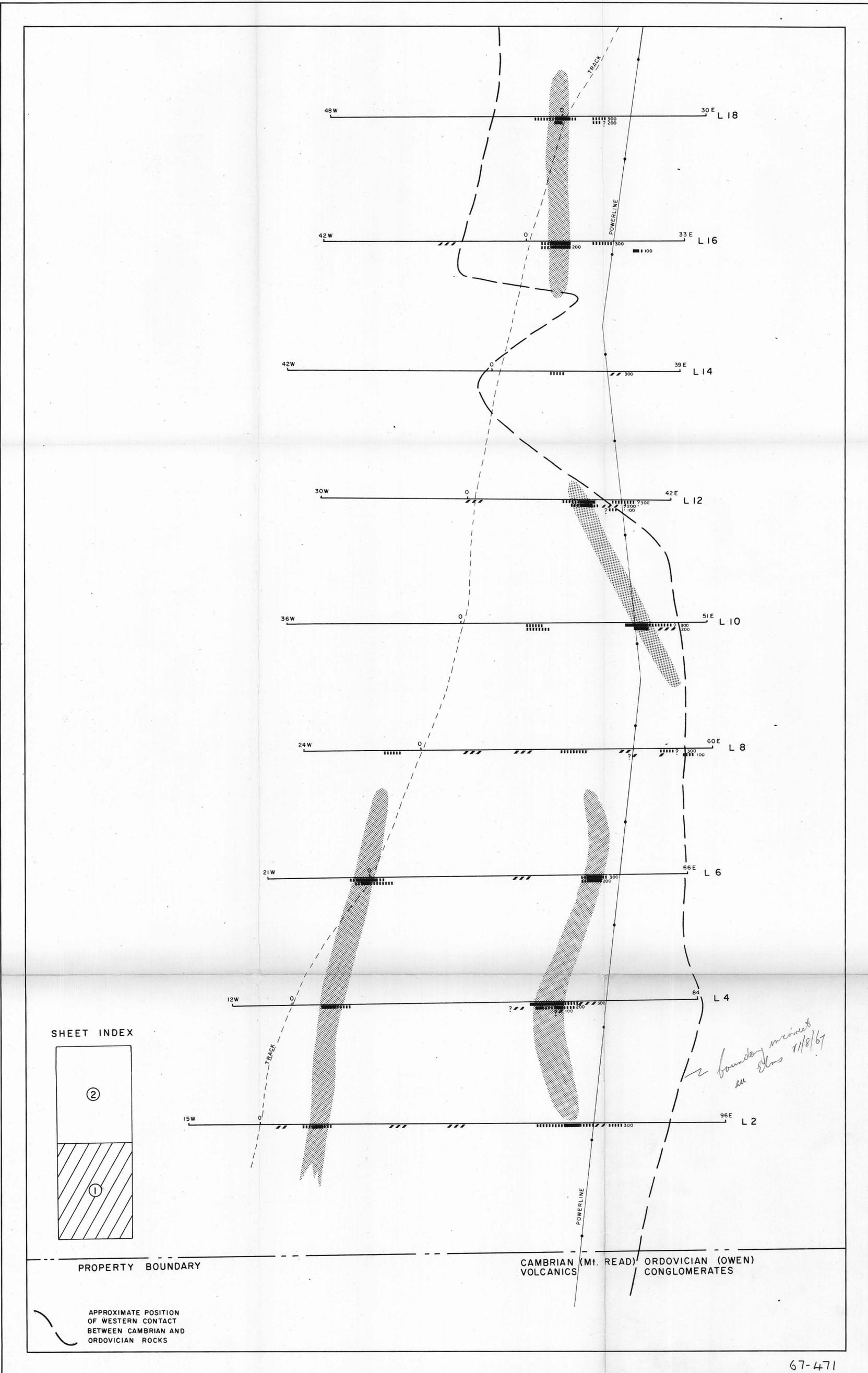
McPHAR GEOPHYSICS LIMITED

Philip G. Hallof,
Geophysicist.

Dated: June 9, 1967

McPHAR GEOPHYSICS LIMITED
 INDUCED POLARIZATION AND RESISTIVITY SURVEY
 PLAN MAP

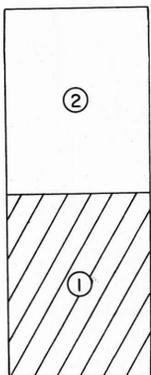
DWG. MISC. 3252-1



*boundary moved
 see Elms 11/8/67*

67-471

SHEET INDEX



PROPERTY BOUNDARY

APPROXIMATE POSITION
 OF WESTERN CONTACT
 BETWEEN CAMBRIAN AND
 ORDOVICIAN ROCKS

CAMBRIAN (MT. READ)
 VOLCANICS

ORDOVICIAN (OWEN)
 CONGLOMERATES

SURFACE PROJECTION
 OF ANOMALOUS ZONES

DEFINITE —————
 PROBABLE ·········
 POSSIBLE - - - - -
 Numbers at the end of the
 anomalies indicate spread used.

THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

MOUNT TYNDALL AREA, TASMANIA.

SCALE

ONE INCH EQUALS ONE THOUSAND FEET

168023

ANOMALOUS I.P. ZONES

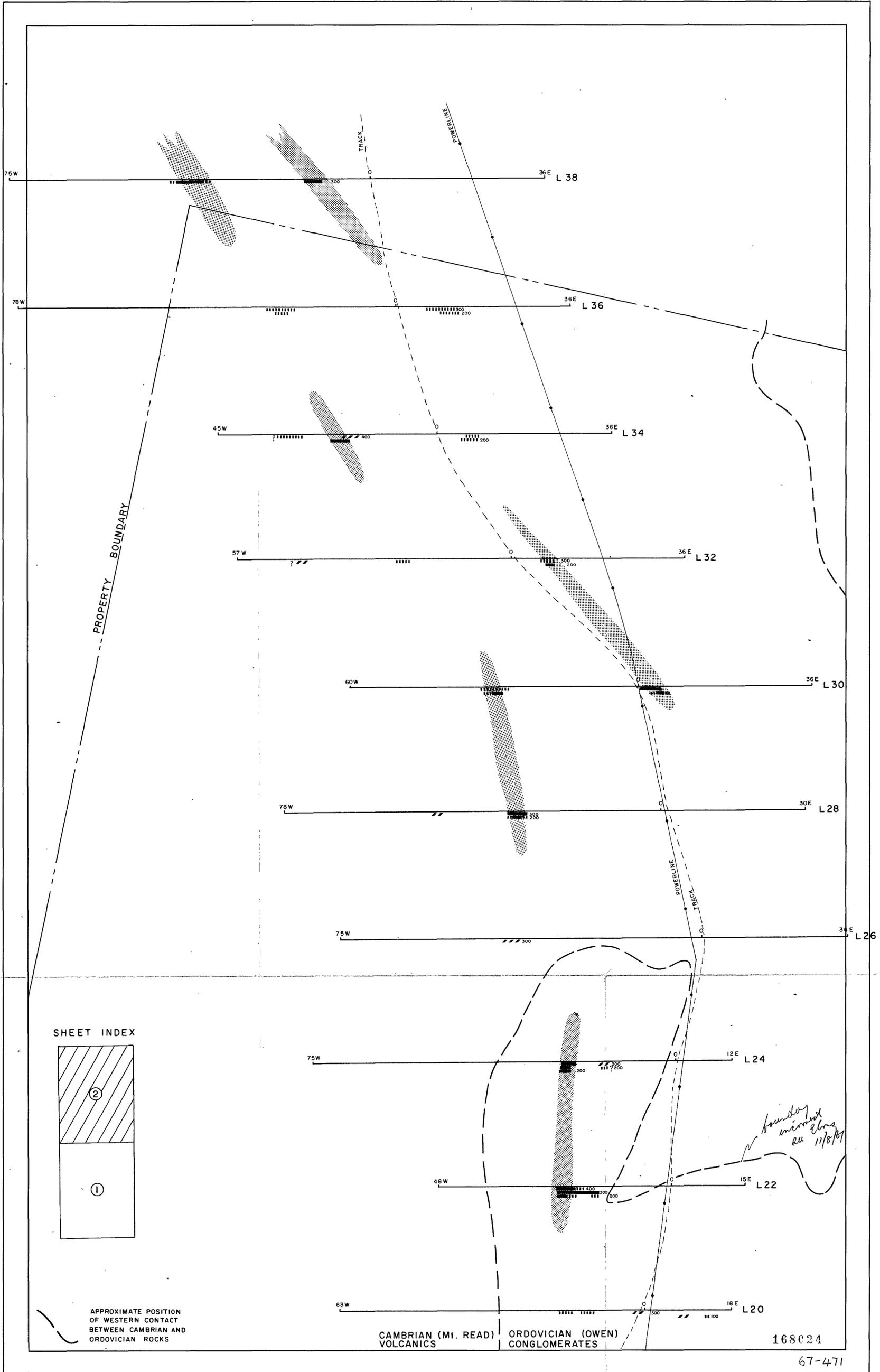
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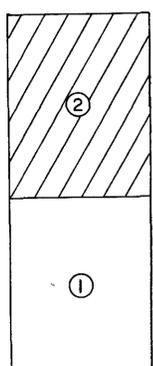
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DWG. MISC. 3252-1

McPHAR GEOPHYSICS LIMITED
INDUCED POLARIZATION AND RESISTIVITY SURVEY
PLAN MAP



SHEET INDEX



APPROXIMATE POSITION OF WESTERN CONTACT BETWEEN CAMBRIAN AND ORDOVICIAN ROCKS

CAMBRIAN (Mt. READ) VOLCANICS ORDOVICIAN (OWEN) CONGLOMERATES

168024

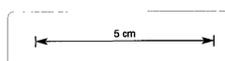
67-471

THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

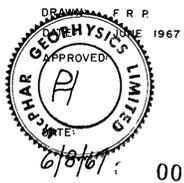
MOUNT TYNDALL AREA, TASMANIA.

SCALE

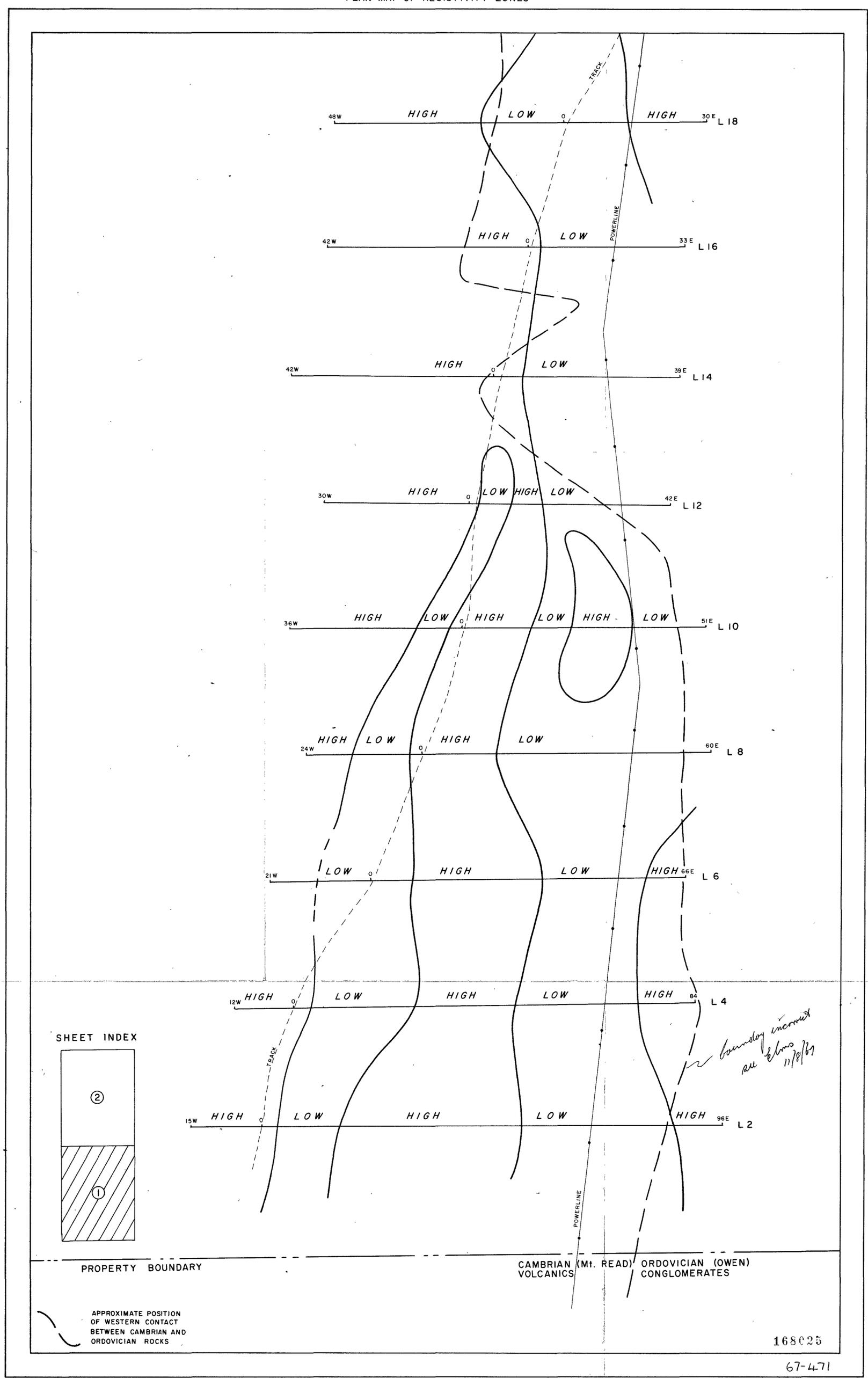
ONE INCH EQUALS ONE THOUSAND FEET



ANOMALOUS I.P. ZONES



McPHAR GEOPHYSICS LIMITED
INDUCED POLARIZATION AND RESISTIVITY SURVEY
PLAN MAP OF RESISTIVITY ZONES

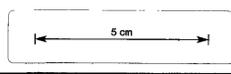


LOW Resistivity less than 1000
 HIGH Resistivity greater than 1000

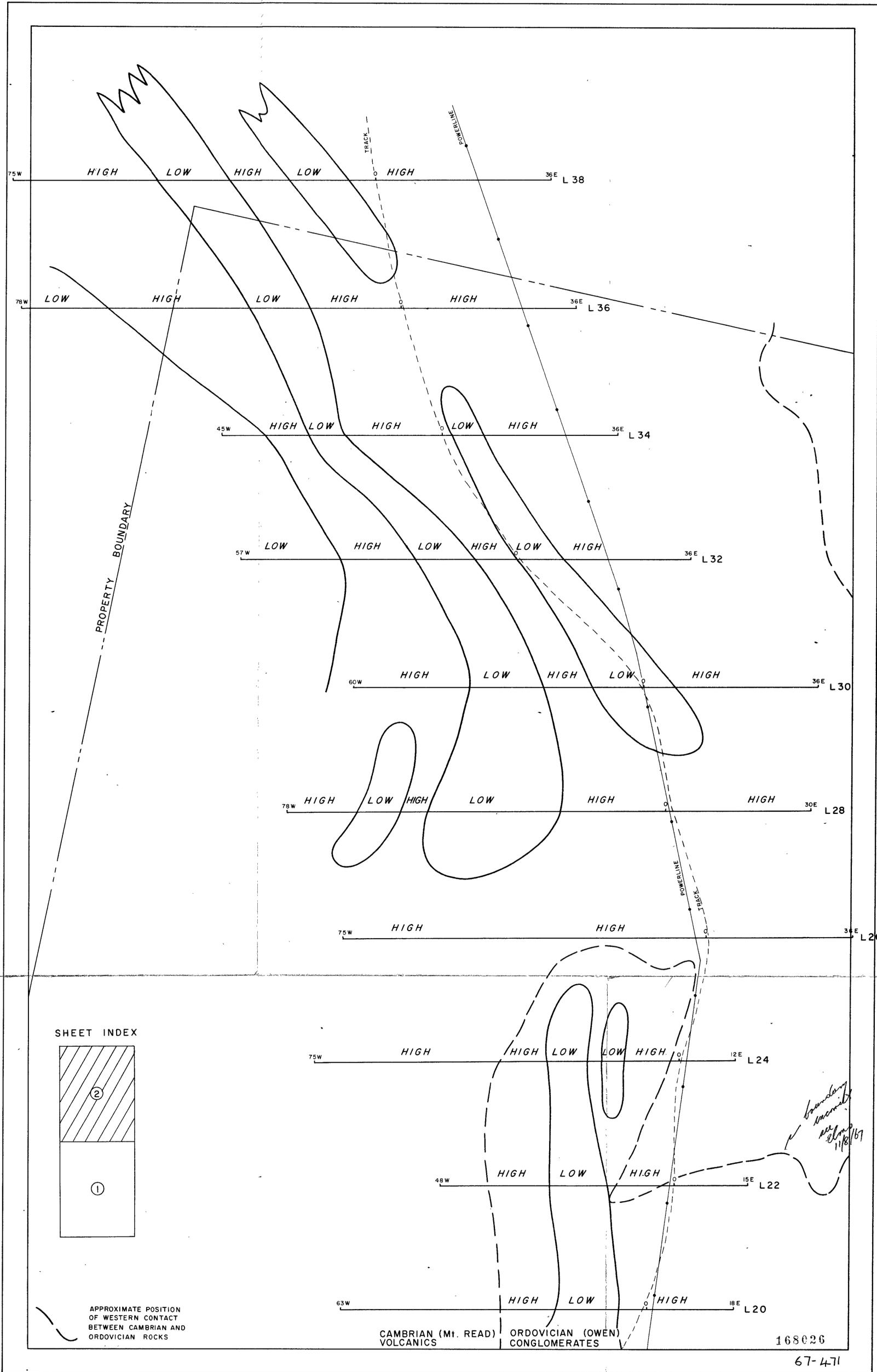
THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

MOUNT TYNDALL AREA, TASMANIA.

SCALE
ONE INCH EQUALS ONE THOUSAND FEET



McPHAR GEOPHYSICS LIMITED
INDUCED POLARIZATION AND RESISTIVITY SURVEY
PLAN MAP OF RESISTIVITY ZONES



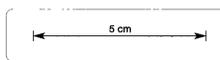
LOW Resistivity less than 1000
HIGH Resistivity greater than 1000

THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

MOUNT TYNDALL AREA, TASMANIA.

SCALE

ONE INCH EQUALS ONE THOUSAND FEET



F. R. P. JUNE 1967

004

168027

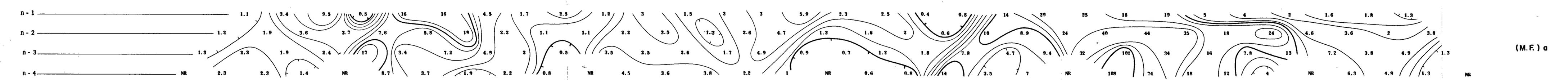
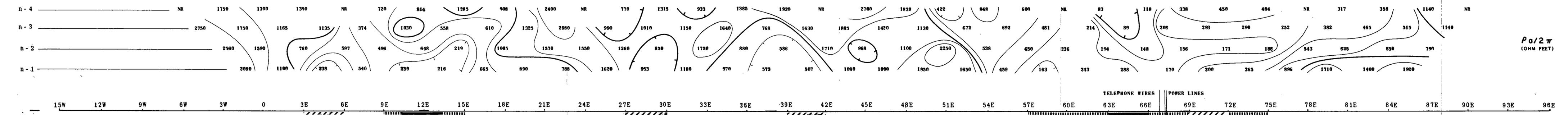
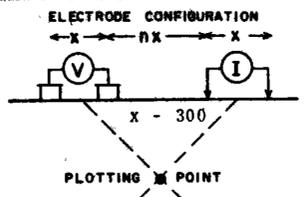
VOLUME II *E.L. 9/66*
INDUCED POLARIZATION
AND RESISTIVITY DATA PLOTS *951/16*
IN THE
MT. TYNDALL AREA, TASMANIA
FOR
MOUNT LYELL MINING AND
RAILWAY COMPANY LIMITED

OPEN FILE

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

168028 NOTE: CONTOURS AT LOGARITHMIC MULTIPLES OF 10-15-20-30-50-75-100



THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

MOUNT TYNDALL AREA, TASMANIA

Scale—One inch= 300 Feet

NOTE: LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES
DEFINITE
PROBABLE
POSSIBLE

FREQUENCY 031 & 2.5 CPS

DATE SURVEYED FEB - APR 1967

APPROVED

DATE 1/1/67

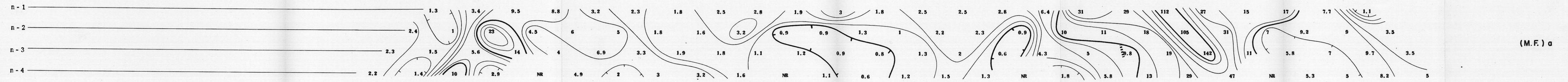
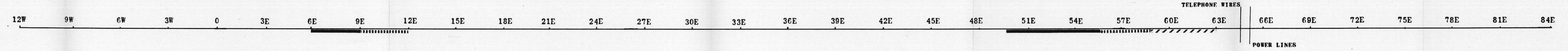
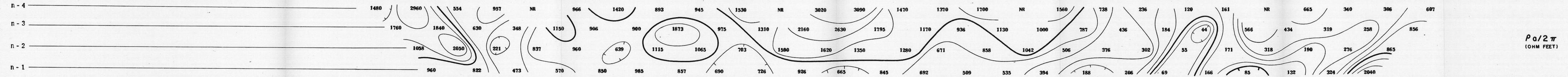
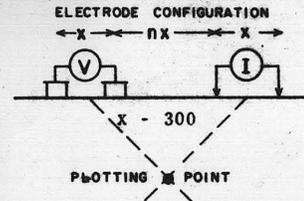
005

LINE NO. 1. 2

168029 NOTE: CONTOURS AT LOGARITHMIC MULTIPLES OF 10-15-20-30-50-75-100

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



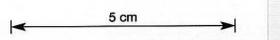
THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

MOUNT TYNDALL AREA, TASMANIA

Scale—One inch = 300 Feet

NOTE: LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES
DEFINITE
PROBABLE
POSSIBLE



FREQUENCY 0.31 & 2.5 C.P.S.

DATE SURVEYED FEB. 1967

APPROVED

DATE 12/1/67

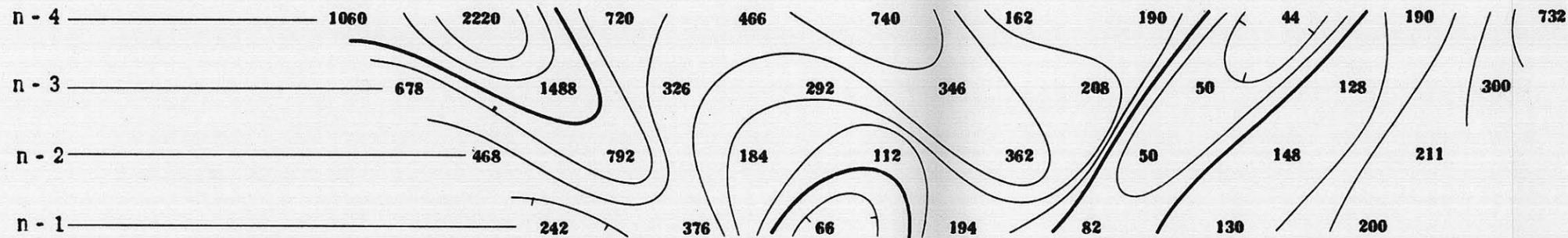
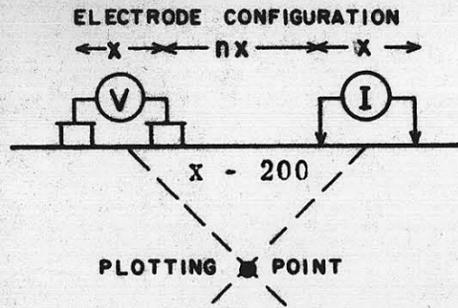
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168030

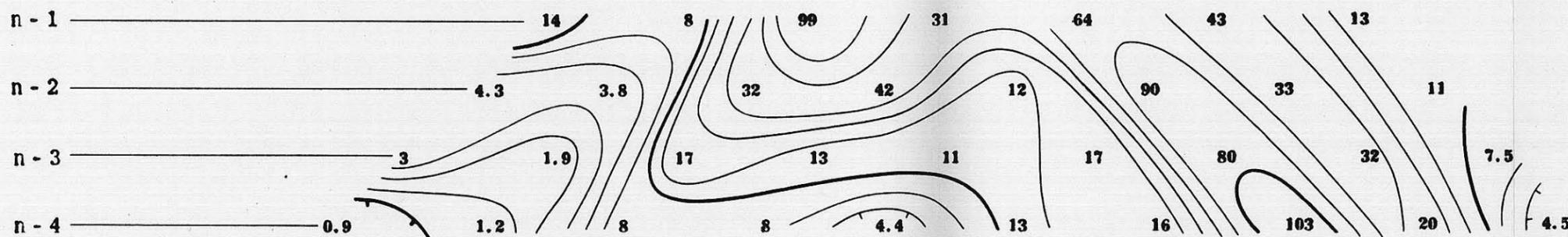
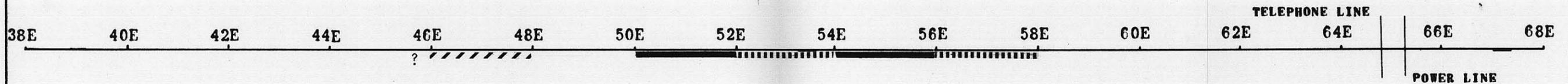
NOTE: CONTOURS AT LOGARITHMIC MULTIPLES OF 10-15-20-30-50-75-100

McPHAR GEOPHYSICS LIMITED

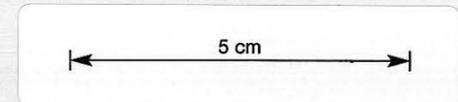
INDUCED POLARIZATION AND RESISTIVITY SURVEY



$P_a/2\pi$
(OHM FEET)



(M.F.) a



THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

MOUNT TYNDALL AREA, TASMANIA

Scale - One inch = 200 Feet

NOTE: LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES

- DEFINITE
- PROBABLE
- POSSIBLE

FREQUENCY 0.31 & 2.5 CPS

DATE SURVEYED FEB - ARR

APPROVED

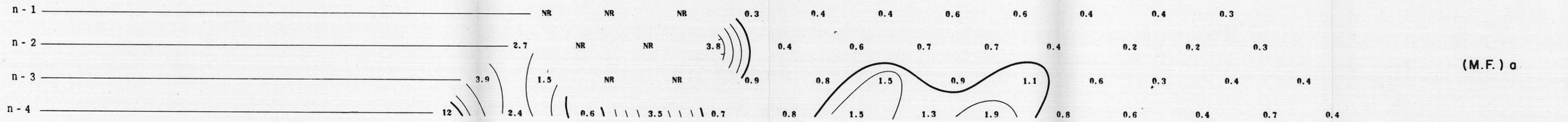
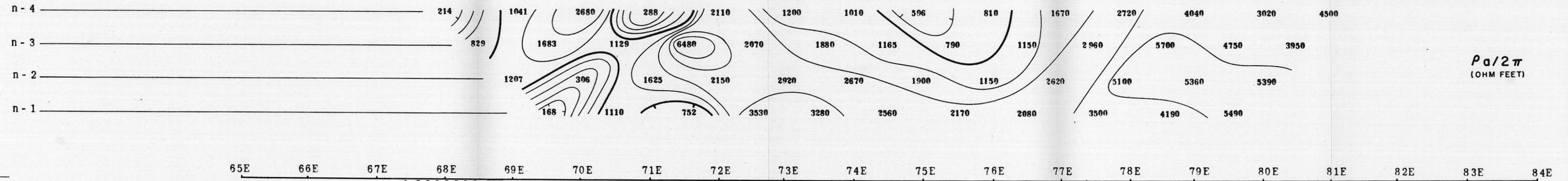
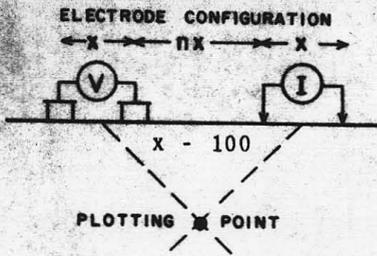
DATE 1/1/67



LINE NO.-4

168031 NOTE: CONTOURS AT LOGARITHMIC MULTIPLES OF 10-15-20-30-50-75-100

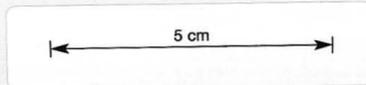
McPHAR GEOPHYSICS LIMITED
INDUCED POLARIZATION AND RESISTIVITY SURVEY



65E 66E 67E 68E 69E 70E 71E 72E 73E 74E 75E 76E 77E 78E 79E 80E 81E 82E 83E 84E

$\rho a / 2\pi$
(OHM FEET)

(M.F.) a



THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

MOUNT TYNDALL AREA, TASMANIA

Scale - One inch = 100 Feet

NOTE LOGARITHMIC CONTOUR INTERVAL

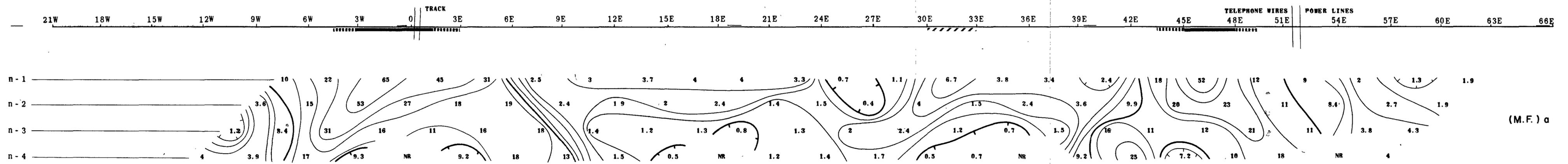
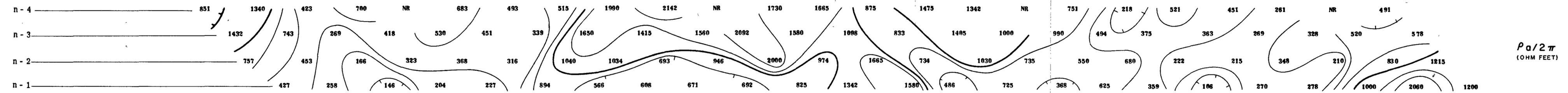
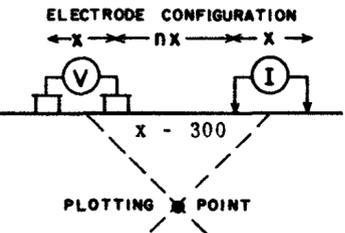
SURFACE PROJECTION OF ANOMALOUS ZONES
DEFINITE
PROBABLE
POSSIBLE

FREQUENCY 0.318 25 CPS
DATE SURVEYED FEB - APR 62
APPROVED
DATE 1/1/67

LINE NO. - 4

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



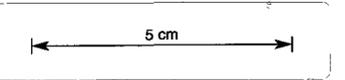
SURFACE PROJECTION OF ANOMALOUS ZONES
DEFINITE
PROBABLE
POSSIBLE

THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

MOUNT TYNDALL AREA, TASMANIA

Scale—One inch= 300 Feet

NOTE LOGARITHMIC CONTOUR INTERVAL



FREQUENCY 0.31 & 2.5 CPS

DATE SURVEYED APR 27 1967

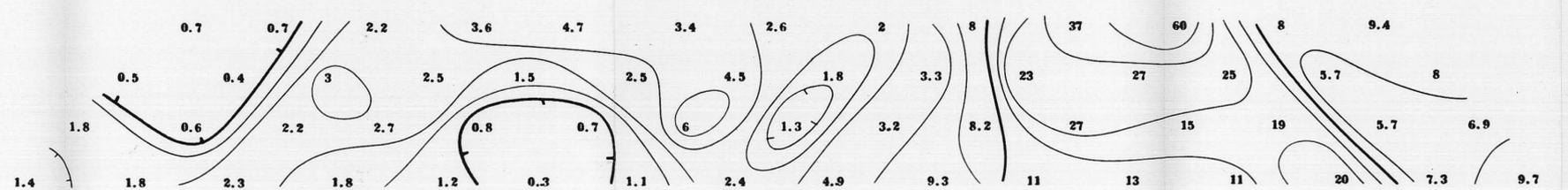
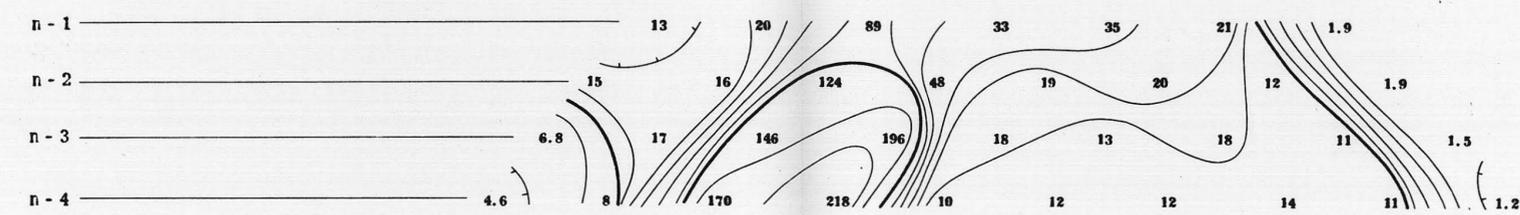
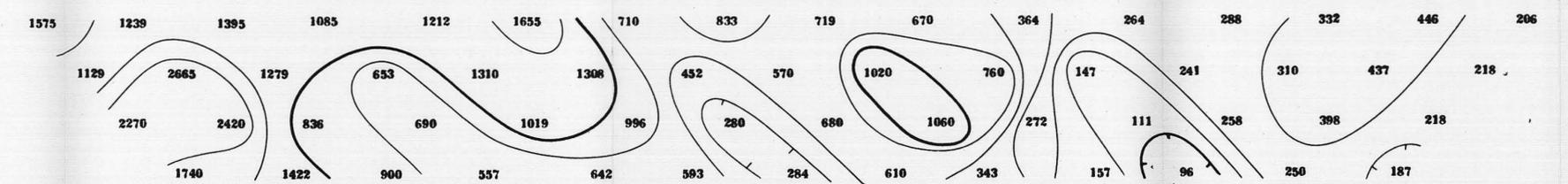
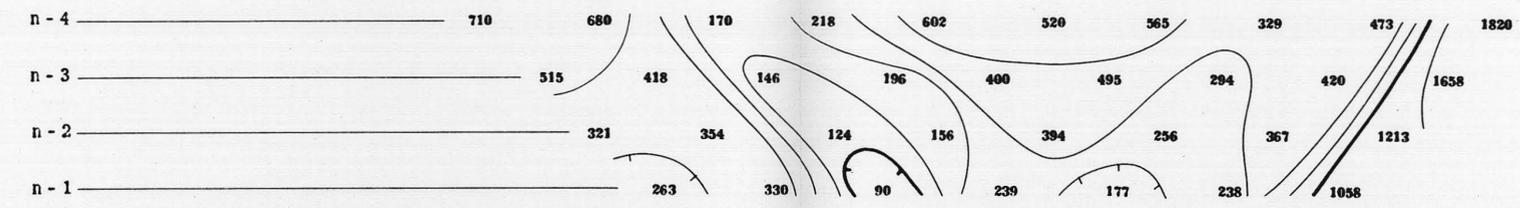
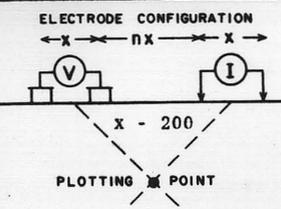
APPROVED

DATE 5/6/67

LINE NO 1 6

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



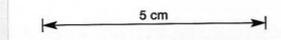
THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

MOUNT TYNDALL AREA, TASMANIA

Scale—One inch= 200 Feet

NOTE: LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES
DEFINITE
PROBABLE
POSSIBLE



FREQUENCY .031 & 2.5 CPS.

DATE SURVEYED FEB. 1967

APPROVED

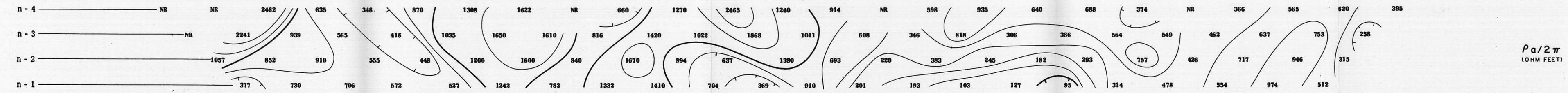
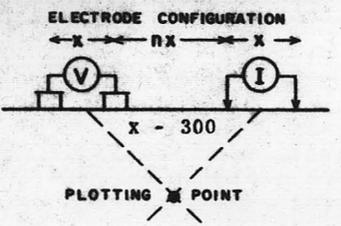
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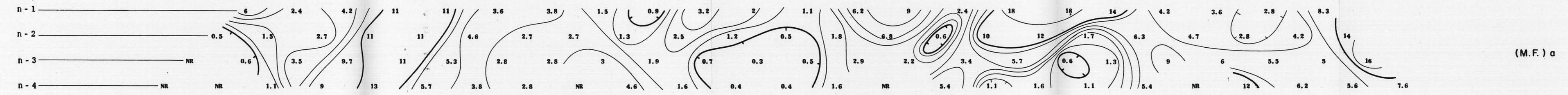
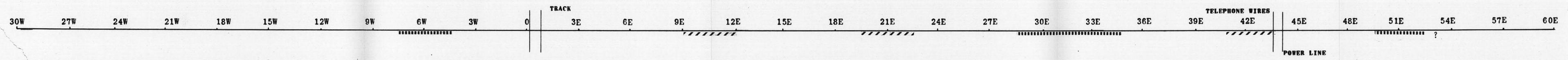
168034 NOTE: CONTOURS AT LOGARITHMIC MULTIPLES OF 10-15-20-30-50-75-100

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



$\rho_a / 2\pi$
(OHM FEET)



(M.F.) a

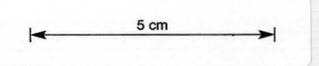
THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

MOUNT TYNDALL AREA, TASMANIA

Scale—One inch= 300 Feet

NOTE: LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES
DEFINITE
PROBABLE
POSSIBLE



FREQUENCY 0.31 & 2.5 CPS.

DATE SURVEYED APR 56

APPROVED

DATE 1/6/67



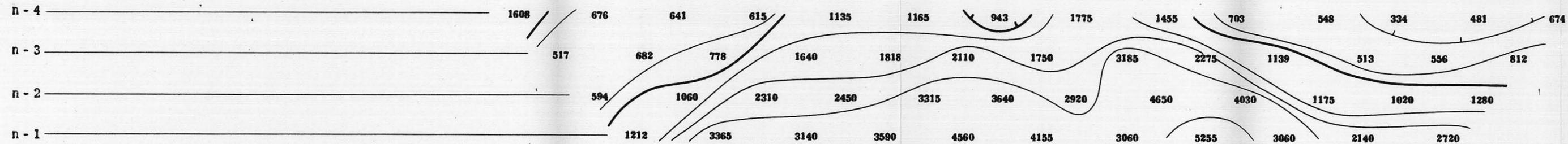
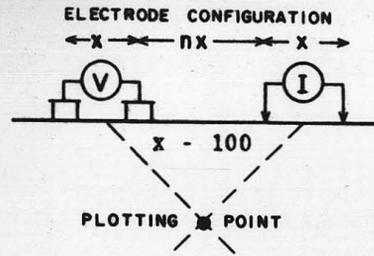
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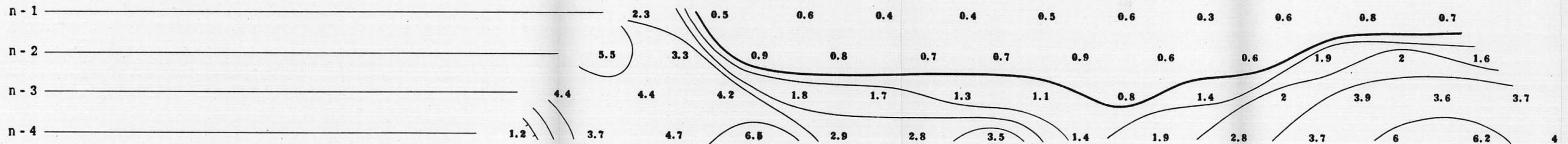
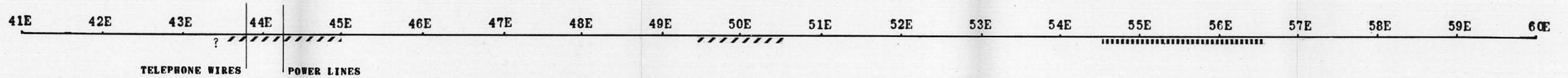
NOTE: CONTOURS AT LOGARITHMIC MULTIPLES OF 10-15-20-30-50-75-100

McPHAR GEOPHYSICS LIMITED

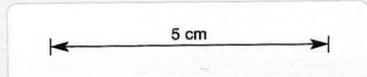
INDUCED POLARIZATION AND RESISTIVITY SURVEY



$\rho_a / 2\pi$
(OHM FEET)



(M.F.) a



THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

MOUNT TYNDALL AREA, TASMANIA

Scale - One inch = 100 Feet

NOTE LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES

- DEFINITE
- PROBABLE
- POSSIBLE

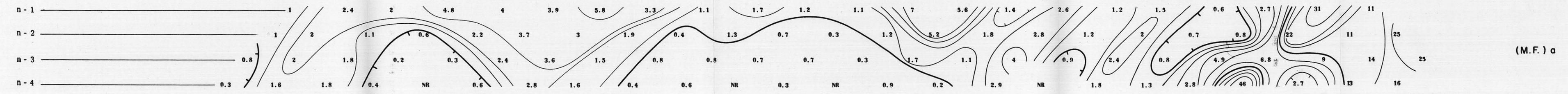
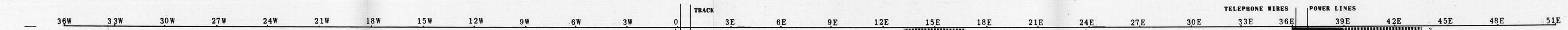
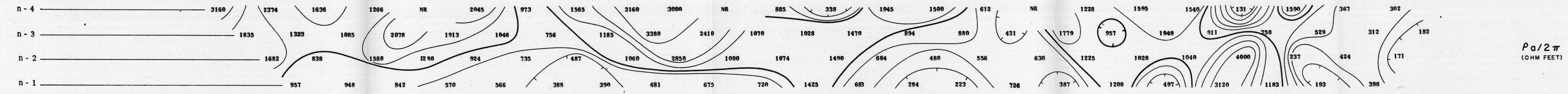
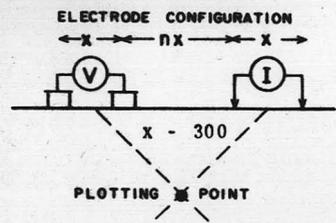
FREQUENCY 0.318 2.5 CPS
 DATE SURVEYED FEB.-APR '67
 APPROVED
 DATE 1/1/67

168036

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

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



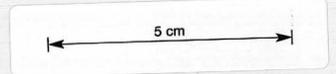
SURFACE PROJECTION OF ANOMALOUS ZONES
DEFINITE
PROBABLE
POSSIBLE

THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

MOUNT TYNDALL AREA, TASMANIA

Scale—One inch= 300 Feet

NOTE: LOGARITHMIC CONTOUR INTERVAL



FREQUENCY 0.31 & 2.5 CPS

DATE SURVEYED FEB - APR 57

APPROVED

DATE 2/16/67

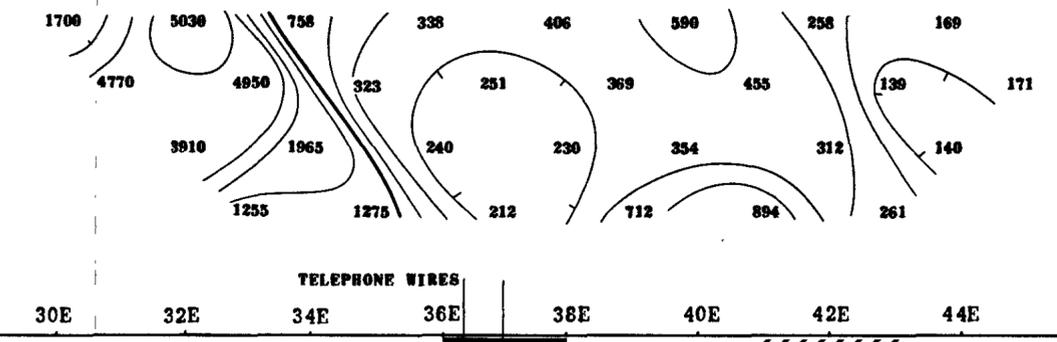
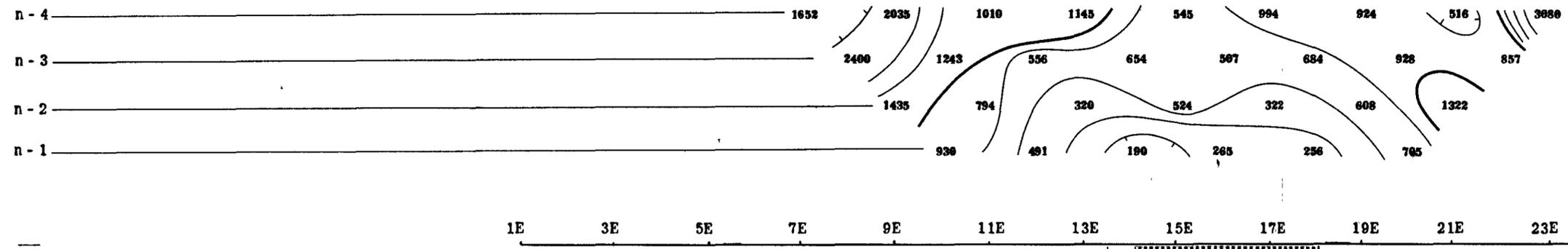
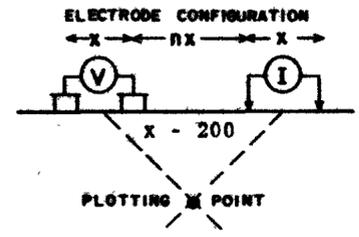
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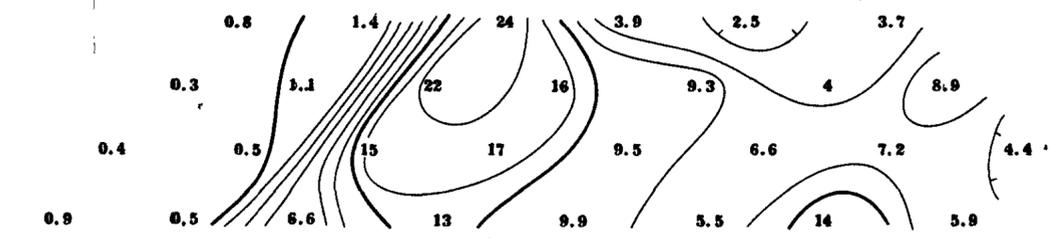
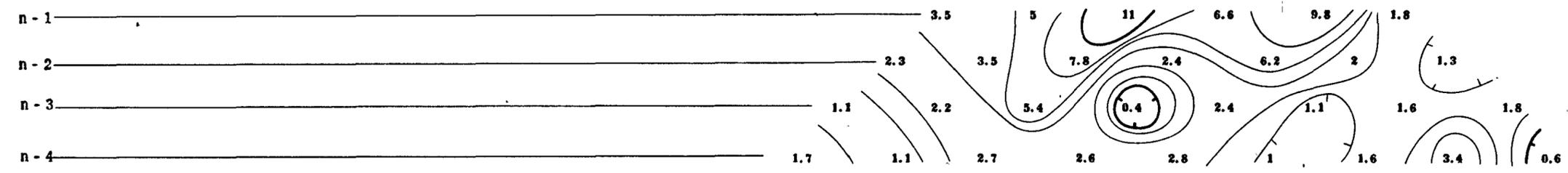
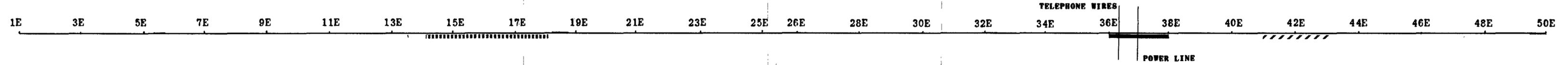
NOTE: CONTOURS AT LOGARITHMIC MULTIPLES OF 10-15-20-30-50-75-100

McPHAR GEOPHYSICS LIMITED

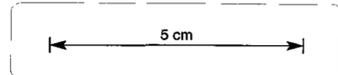
INDUCED POLARIZATION AND RESISTIVITY SURVEY



$\rho_a / 2\pi$
(OHM FEET)



(M.F.) a



THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

MOUNT TYNDALL AREA, TASMANIA

Scale - One inch = 200 Feet

NOTE: LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES
DEFINITE
PROBABLE
POSSIBLE

FREQUENCY 0.31 & 2.5 CPS.

DATE SURVEYED FEB - APR 61

APPROVED

DATE 2/16/61



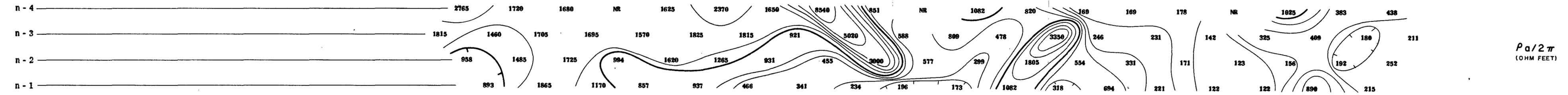
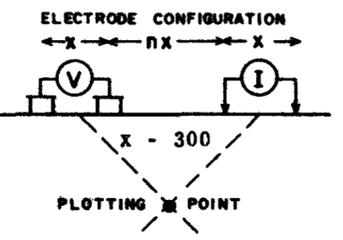
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168038

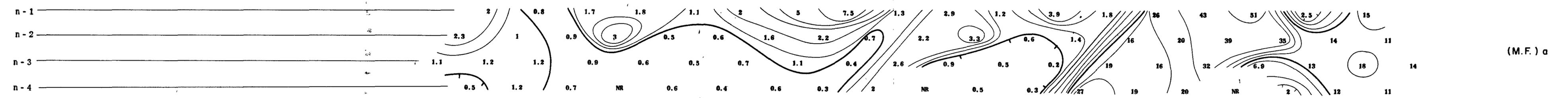
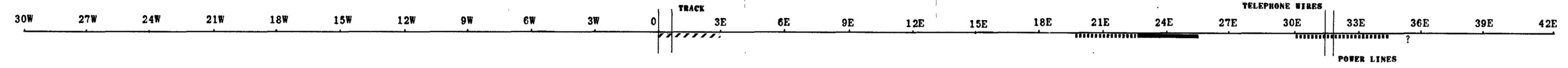
NOTE: CONTOURS AT LOGARITHMIC MULTIPLES OF 10-15-20-30-50-75-100

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



$\rho_a / 2\pi$
(OHM FEET)



(M.F.) a

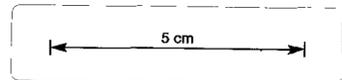
THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

MOUNT TYNDALL AREA, TASMANIA

Scale—One inch= 300 Feet

NOTE: LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES
DEFINITE
PROBABLE
POSSIBLE



FREQUENCY 0.31 & 2.5 CPS

DATE SURVEYED APR 67

APPROVED

DATE 5/1/67



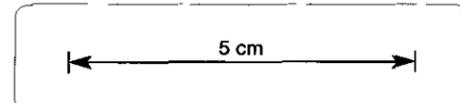
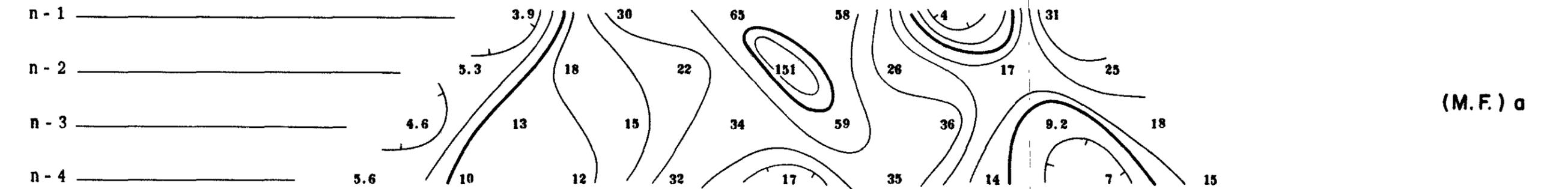
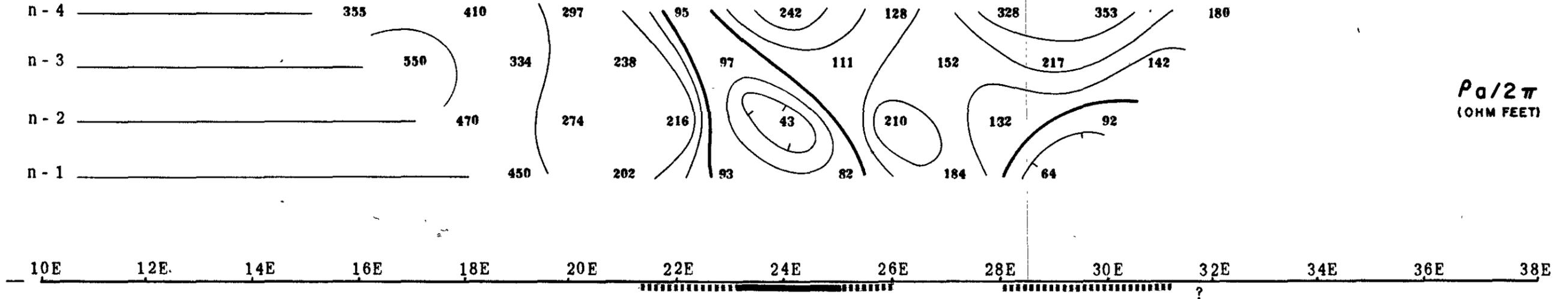
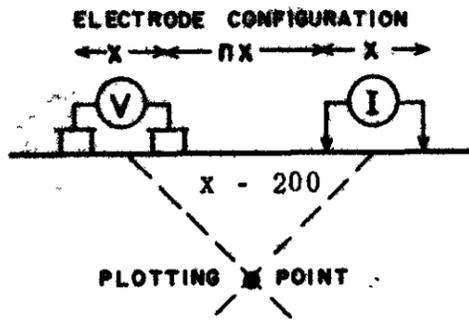
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168039

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

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

MOUNT TYNDALL AREA, TASMANIA

Scale - One inch = 200 Feet

NOTE LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

FREQUENCY 0.31 & 2.5 CPS

DATE SURVEYED FEB - APR 1967

APPROVED

DATE 1/1/67

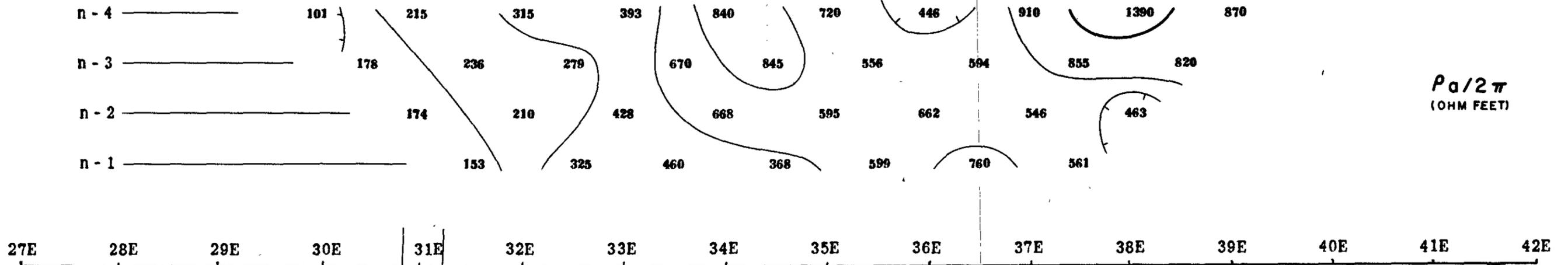
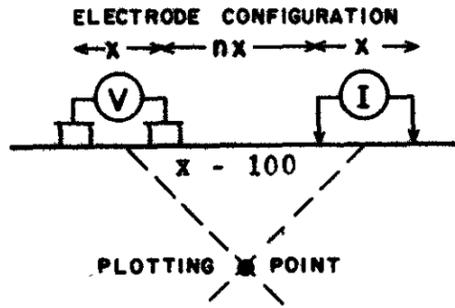


168040

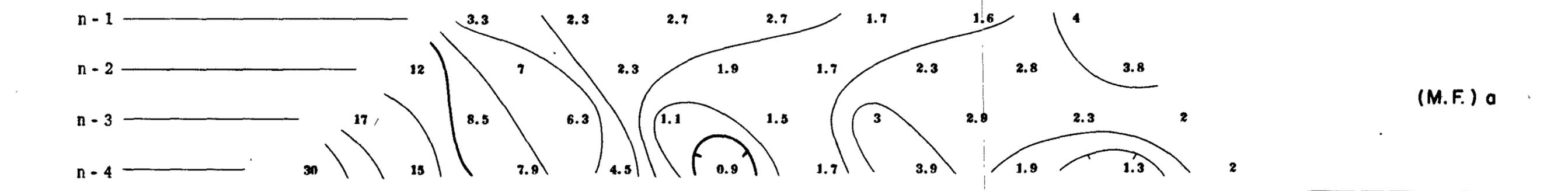
NOTE: CONTOURS AT LOGARITHMIC MULTIPLES OF 10-15-20-30-50-75-100

McPHAR GEOPHYSICS LIMITED

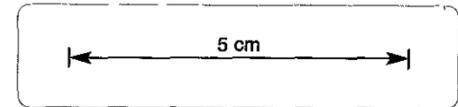
INDUCED POLARIZATION AND RESISTIVITY SURVEY



$\rho_a / 2\pi$
(OHM FEET)



(M.F.) a



THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

MOUNT TYNDALL AREA, TASMANIA

Scale - One inch = 100 Feet

NOTE LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES
DEFINITE
PROBABLE
POSSIBLE

FREQUENCY 0.31 & 2.5 CPS

DATE SURVEYED FEB - APR

APPROVED

DATE 12/1/67

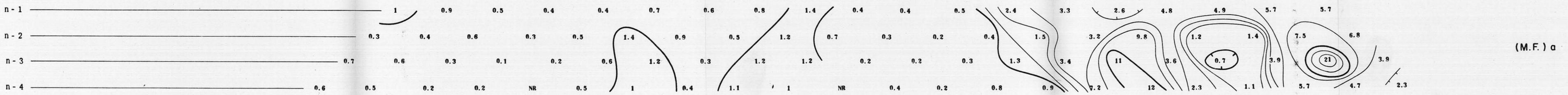
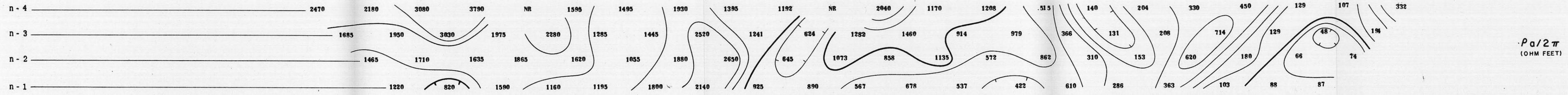
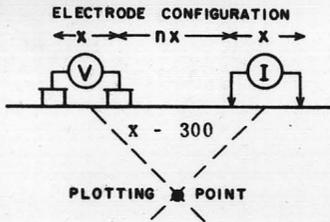
LINE NO.- 12

168041

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

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



42W 39W 36W 33W 30W 27W 24W 21W 18W 15W 12W 9W 6W 3W 0 TRACK 3E 6E 9E 12E 15E 18E 21E TELEPHONE WIRES 24E POWER LINES 27E 30E 33E 36E 39E

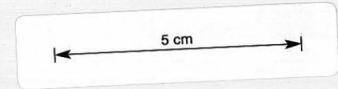
THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

MOUNT TYNDALL AREA, TASMANIA

Scale—One inch= 300 Feet

NOTE: LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES
DEFINITE
PROBABLE
POSSIBLE



FREQUENCY 0.31 & 2.5 CPS.

DATE SURVEYED FEB - APR 67

APPROVED

DATE 16/6/67

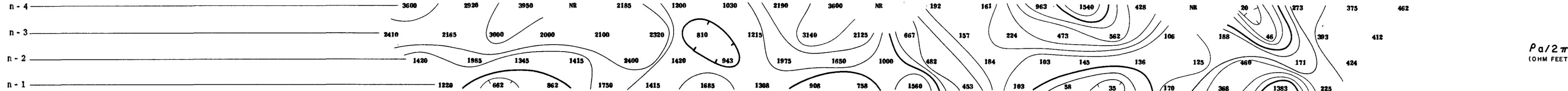
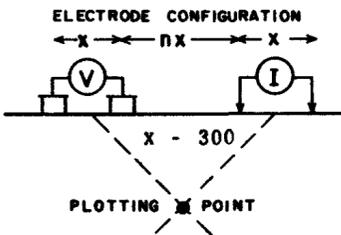
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168042

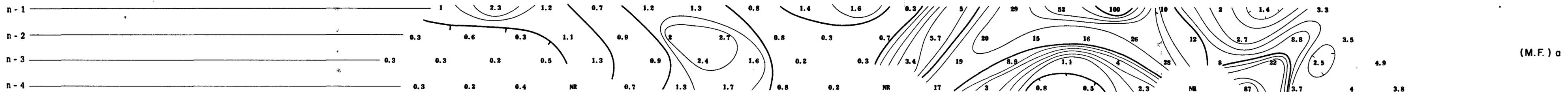
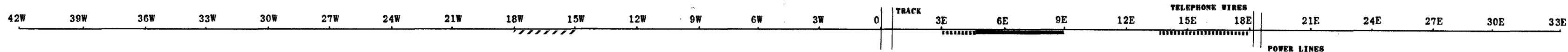
NOTE: CONTOURS AT LOGARITHMIC MULTIPLES OF 10-15-20-30-50-75-100

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



$\rho_a / 2\pi$
(OHM FEET)



(M.F.) α

THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

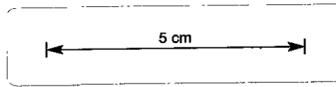
MOUNT TYNDALL AREA, TASMANIA

Scale—One inch= 300 Feet

NOTE: LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES

- DEFINITE
- PROBABLE
- POSSIBLE



FREQUENCY 0.31 & 2.5 CPS.

DATE SURVEYED FEB 28 1967

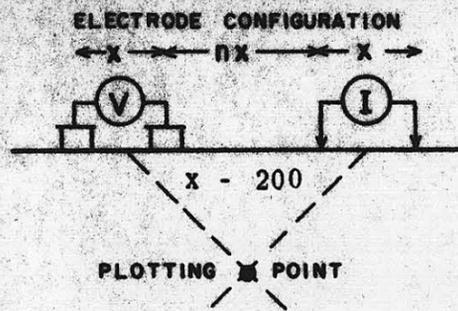
APPROVED

DATE 2/28/67

LINE NO.- 16

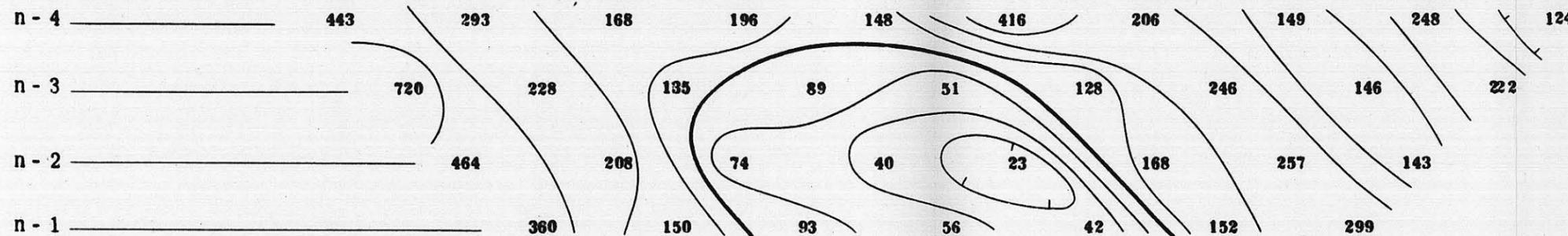
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NOTE: CONTOURS AT LOGARITHMIC MULTIPLES OF 10-15-20-30-50-75-100

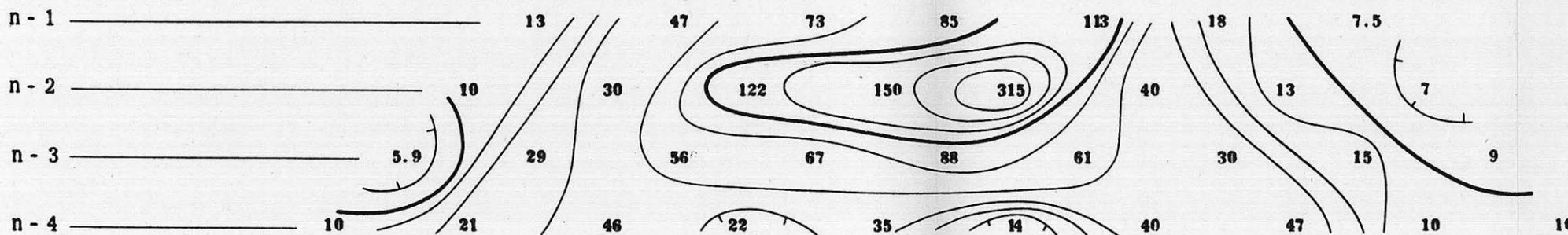


McPHAR GEOPHYSICS LIMITED

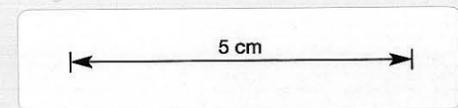
INDUCED POLARIZATION AND RESISTIVITY SURVEY



$P_a/2\pi$
(OHM FEET)



(M.F.) α



THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

MOUNT TYNDALL AREA, TASMANIA

Scale - One inch = 200 Feet

NOTE: LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

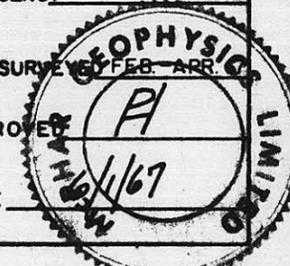
POSSIBLE

FREQUENCY 0.31 & 2.5 CPS

DATE SURVEYED FEB - APR

APPROVED

DATE 1/1/67

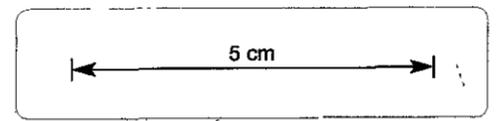
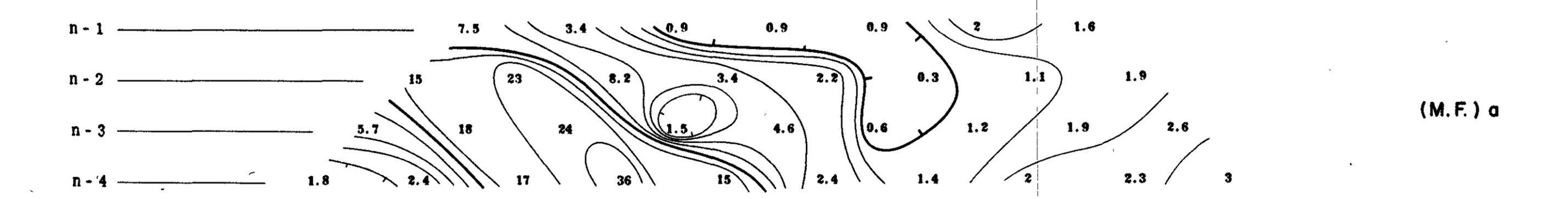
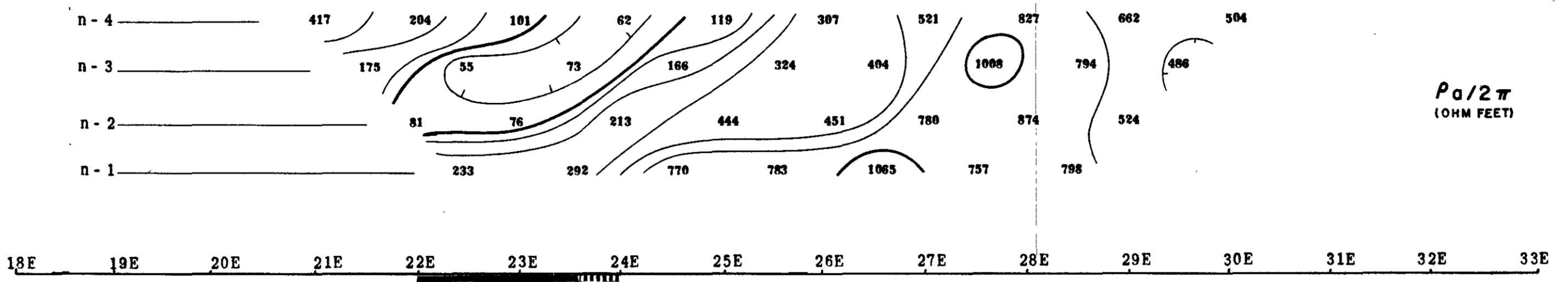
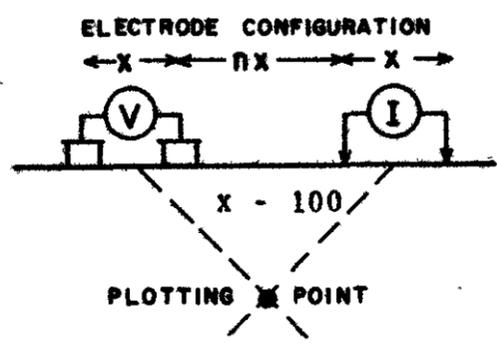


168044

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

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

MOUNT TYNDALL AREA, TASMANIA

Scale - One inch = 100 Feet

NOTE LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

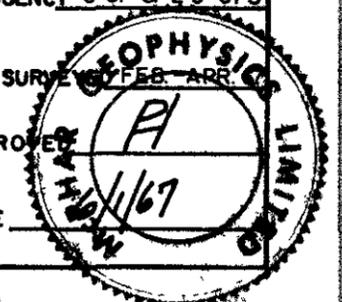
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FREQUENCY 0.31 & 2.5 CPS

DATE SURVEYED FEB - APR 1967

APPROVED

DATE 20/1/67



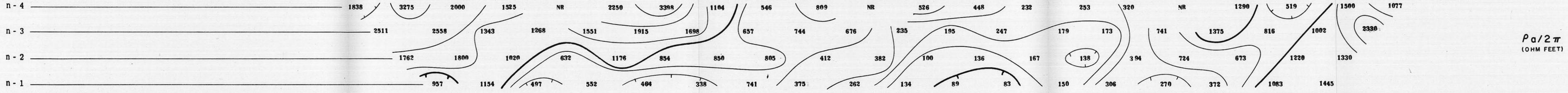
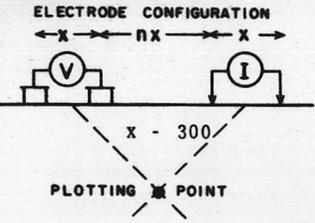
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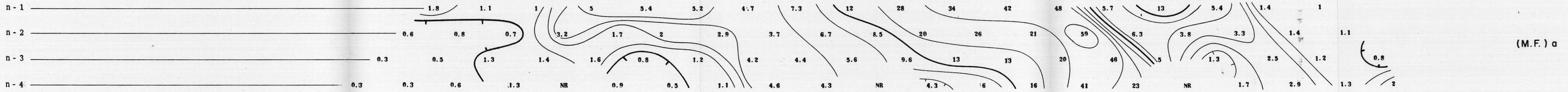
NOTE: CONTOURS AT LOGARITHMIC MULTIPLES OF 10-15-20-30-50-75-100

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



$\rho_a/2\pi$
(OHM FEET)



(M.F.) a

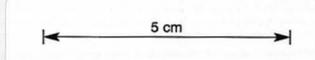
THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

MOUNT TYNDALL AREA, TASMANIA

Scale—One inch= 300 Feet

NOTE: LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES
DEFINITE
PROBABLE
POSSIBLE



FREQUENCY 0.31 & 2.5 CPS

DATE SURVEYED APR 67

APPROVED

DATE 6/4/67

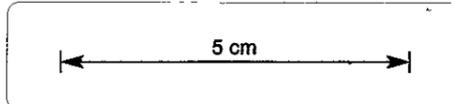
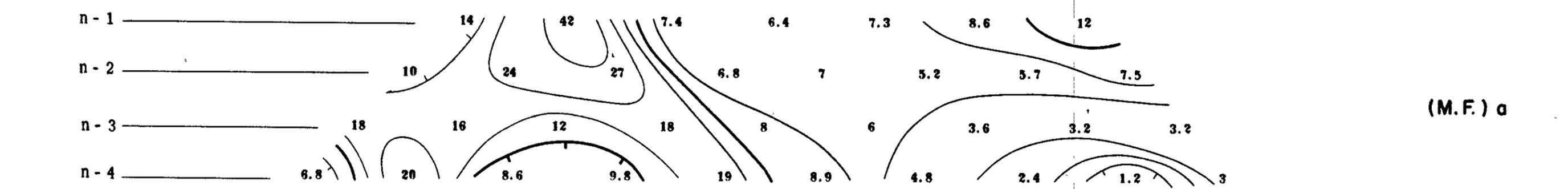
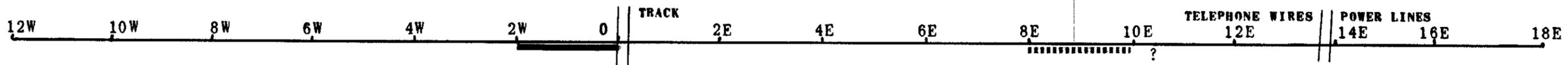
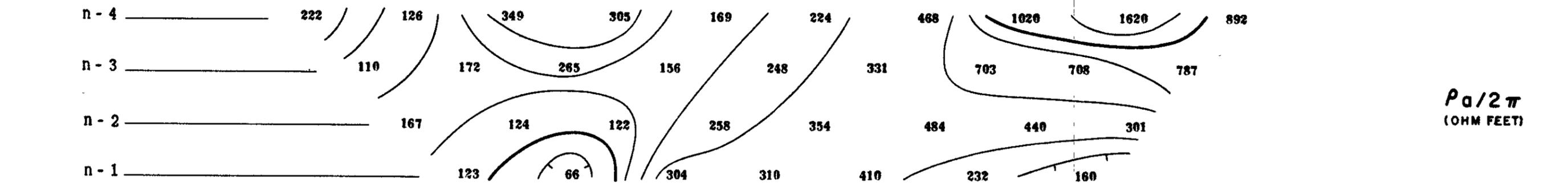
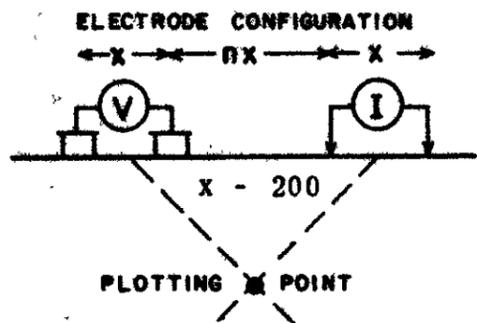
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McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

168046

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



THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

MOUNT TYNDALL AREA, TASMANIA

Scale - One inch = 200 Feet

NOTE LOGARITHMIC CONTOUR INTERVAL

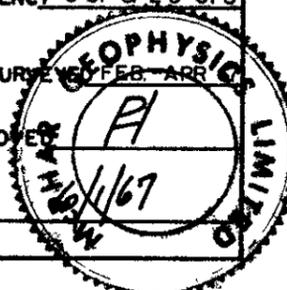
SURFACE PROJECTION OF ANOMALOUS ZONES
DEFINITE
PROBABLE
POSSIBLE

FREQUENCY 0.31 & 2.5 CPS

DATE SURVEY FEB - APR 1967

APPROVED

DATE 11/67



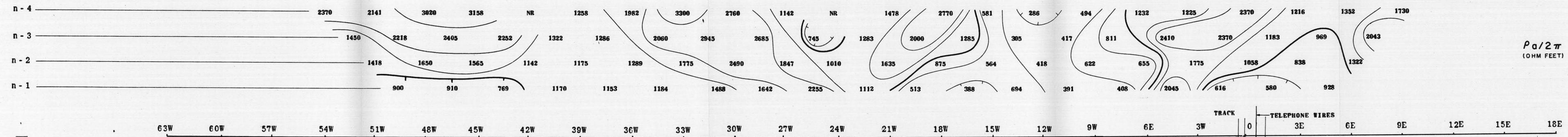
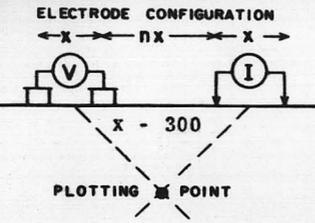
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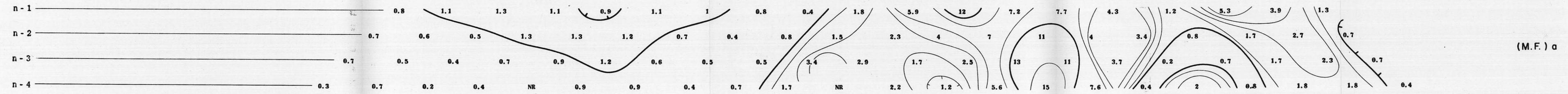
NOTE: CONTOURS AT LOGARITHMIC MULTIPLES OF 10-15-20-30-50-75-100

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



$\rho_a / 2\pi$
(OHM FEET)



(M.F.) a

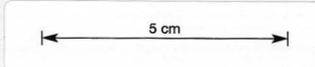
THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

MOUNT TYNDALL AREA, TASMANIA

Scale—One inch= 300 Feet

NOTE: LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES
DEFINITE
PROBABLE
POSSIBLE



FREQUENCY 0.31 & 2.5 CPS

DATE SURVEYED FEB. APR. 67

APPROVED

DATE 6/4/67

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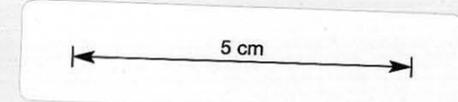
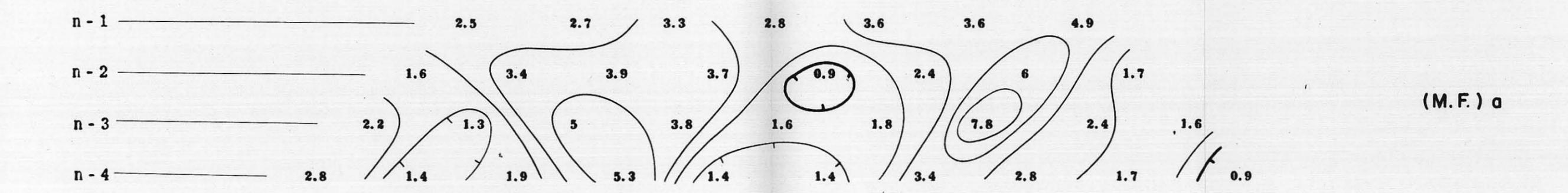
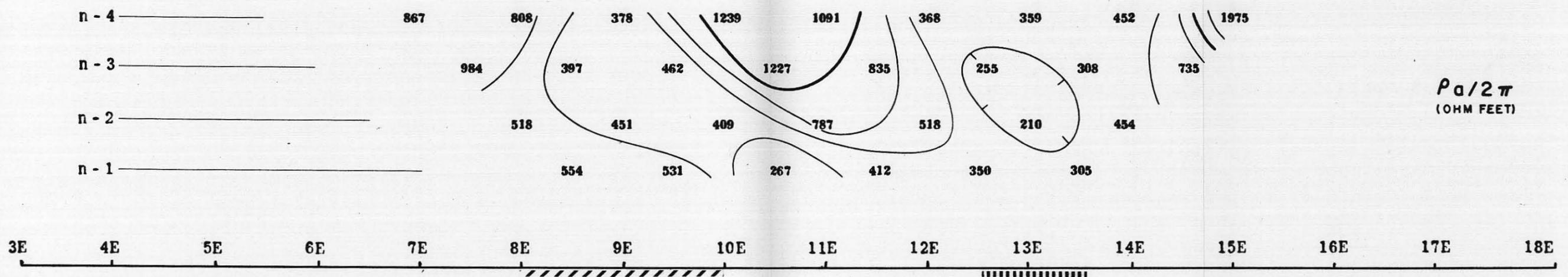
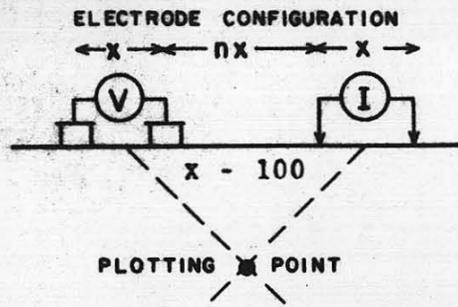
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168048

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

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

MOUNT TYNDALL AREA, TASMANIA

Scale - One inch = 100 Feet

NOTE: LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

FREQUENCY 0.31 & 2.5 CPS

DATE SURVEYED FEB - APR

APPROVED

DATE 1/1/67

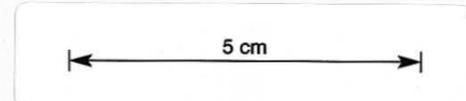
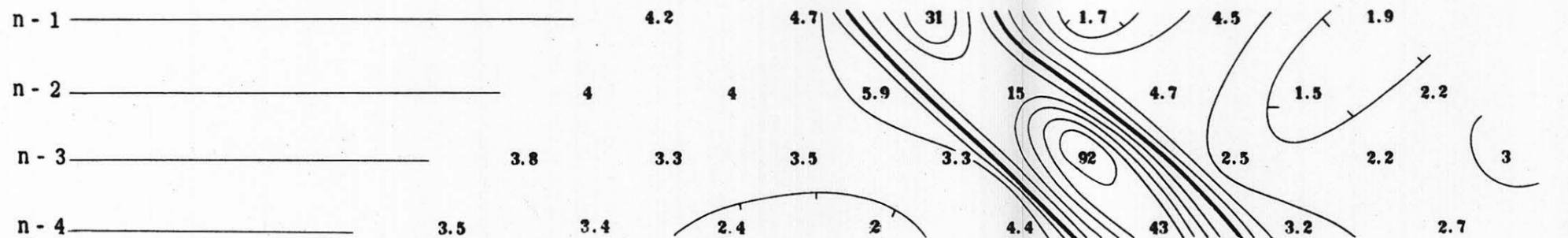
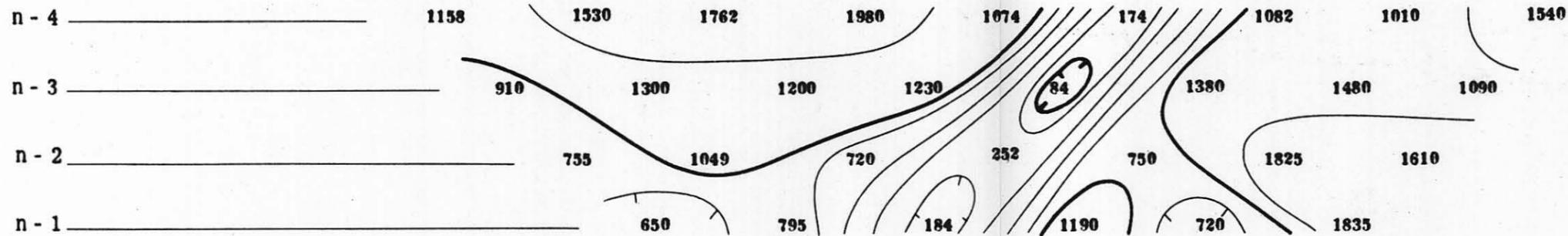
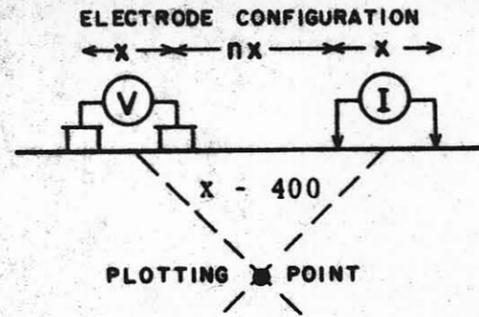


LINE NO.- 20

168049 NOTE: CONTOURS AT LOGARITHMIC MULTIPLES OF 10-15-20-30-50-75-100

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

MOUNT TYNDALL AREA, TASMANIA

Scale - One inch = 400 Feet

NOTE: LOGARITHMIC CONTOUR INTERVAL

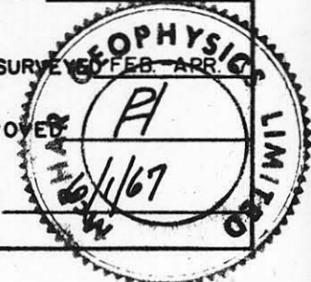
SURFACE PROJECTION OF ANOMALOUS ZONES
 DEFINITE
 PROBABLE
 POSSIBLE

FREQUENCY 0.31 & 2.5 CPS

DATE SURVEYED FEB - APR 67

APPROVED

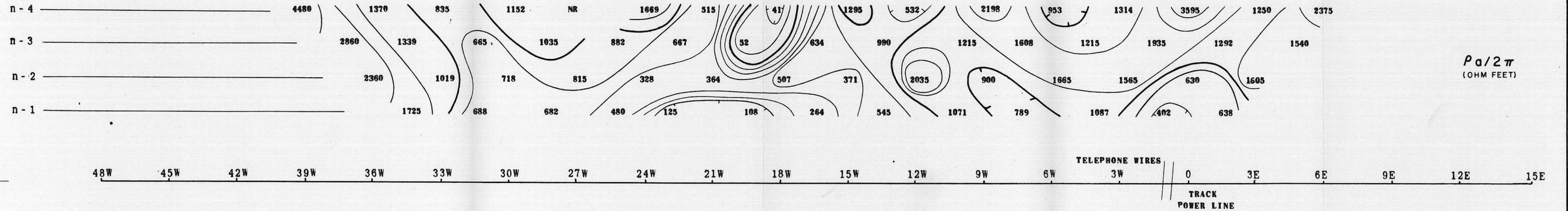
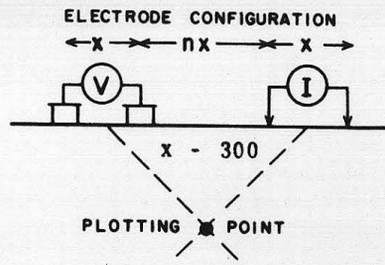
DATE 16/1/67



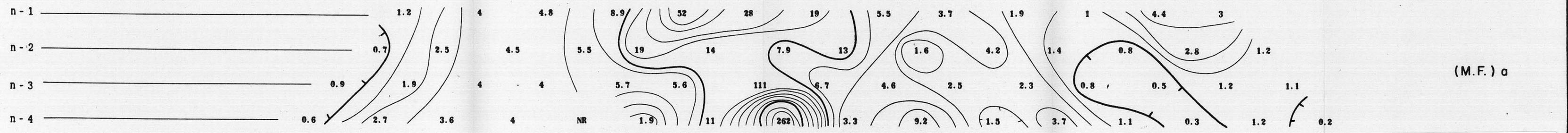
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168050 NOTE: CONTOURS AT LOGARITHMIC MULTIPLES OF 10-15-20-30-50-75-100

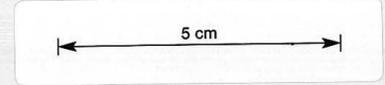
McPHAR GEOPHYSICS LIMITED
INDUCED POLARIZATION AND RESISTIVITY SURVEY



$\rho_a / 2\pi$
(OHM FEET)



(M.F.) α



THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

MOUNT TYNDALL AREA, TASMANIA

Scale - One inch = 300 Feet

NOTE LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES
DEFINITE
PROBABLE
POSSIBLE

FREQUENCY 0.31 & 2.5 CPS
DATE SURVEYED FEB - APR 67
APPROVED *P*
DATE 6/1/67

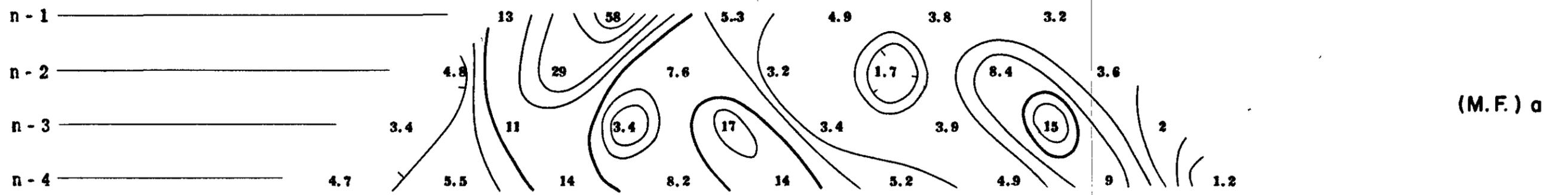
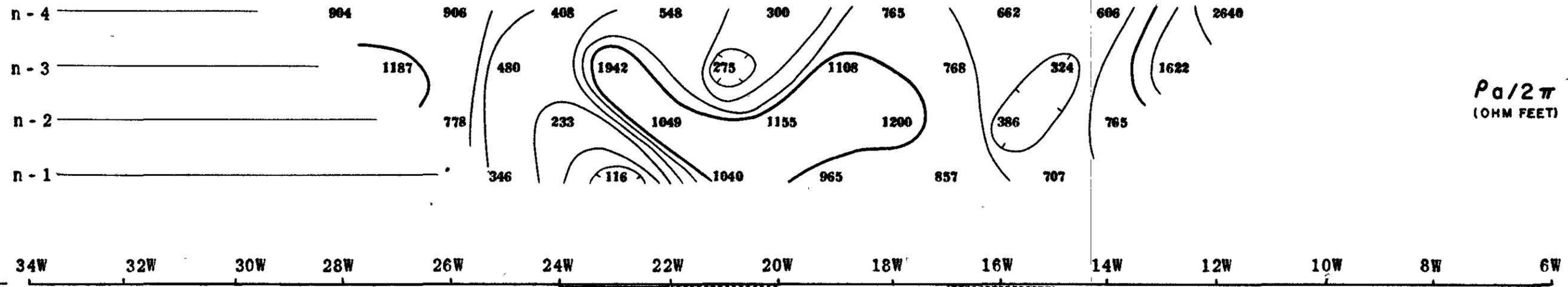
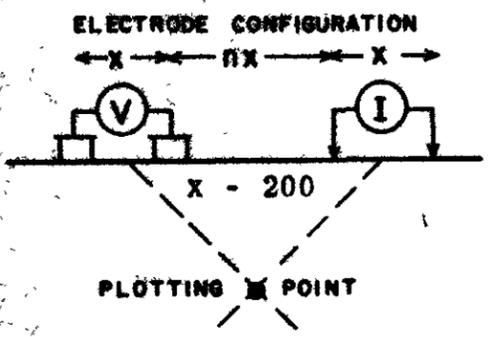
LINE NO.- 22

168051

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

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

MOUNT TYNDALL AREA, TASMANIA

Scale - One inch = 200 Feet

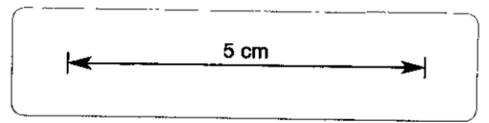
NOTE LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE



FREQUENCY 0.31 & 2.5 CPS

DATE SURVEYED FEB - APR

APPROVED

DATE 1/1/67

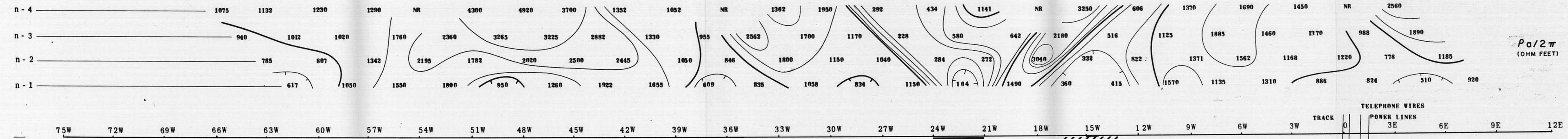
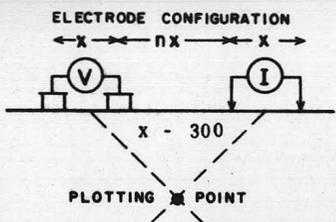


LINE NO.-22

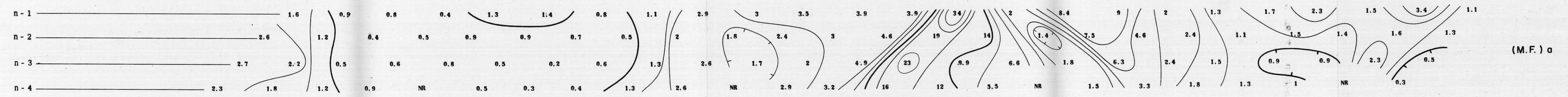
168052 NOTE: CONTOURS AT LOGARITHMIC MULTIPLES OF 10-15-20-30-50-75-100

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



$\rho_a / 2\pi$
(OHM FEET)



(M.F.) a

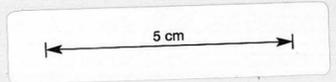
THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

MOUNT TYNDALL AREA, TASMANIA

Scale—One inch= 300 Feet

NOTE: LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES
DEFINITE
PROBABLE
POSSIBLE



FREQUENCY 0.31 & 2.5 CPS.

DATE SURVEYED FEB. APR. 67

APPROVED

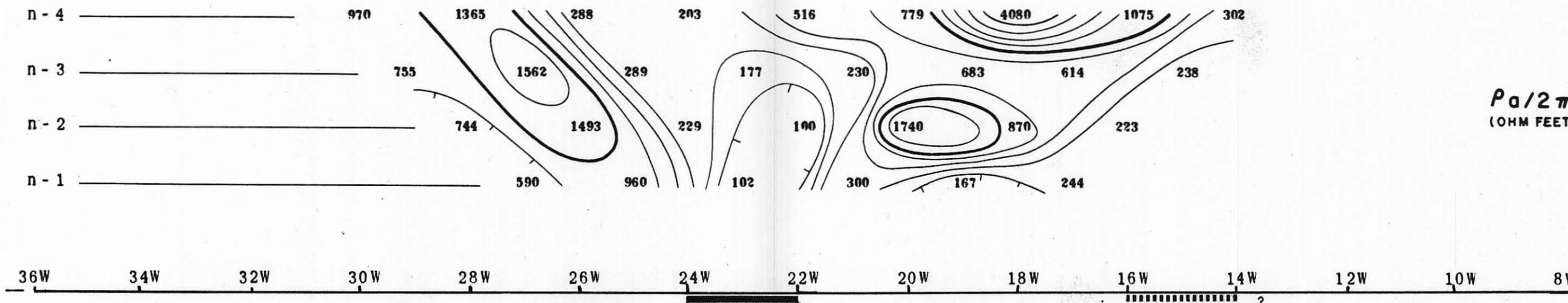
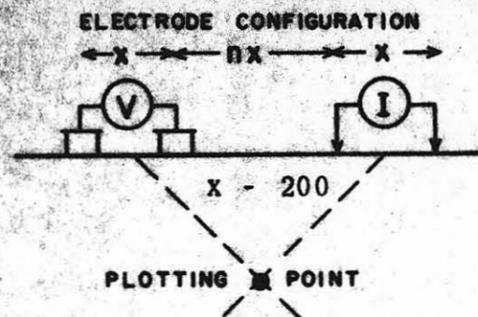
DATE 1/67

LINE NO.- 24

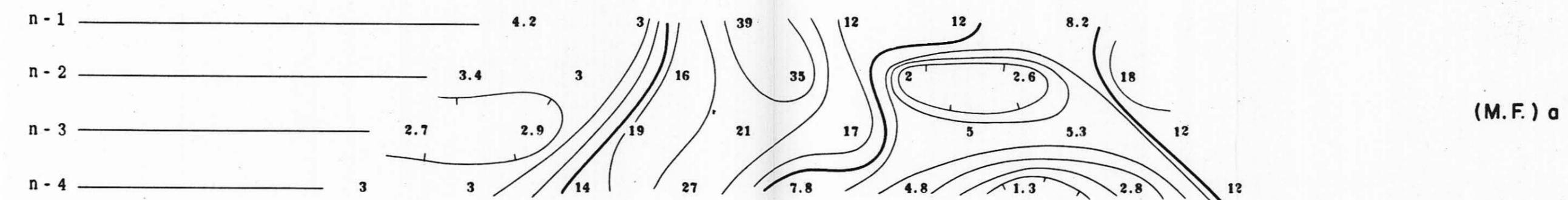
168053 NOTE: CONTOURS AT LOGARITHMIC MULTIPLES OF 10-15-20-30-50-75-100

McPHAR GEOPHYSICS LIMITED

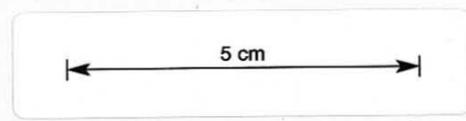
INDUCED POLARIZATION AND RESISTIVITY SURVEY



$P_a/2\pi$
(OHM FEET)



(M.F.) a



THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

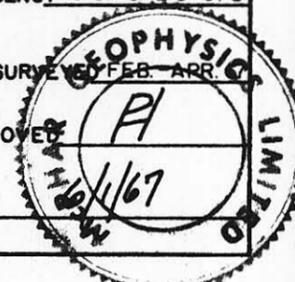
MOUNT TYNDALL AREA, TASMANIA

Scale - One inch = 200 Feet

NOTE: LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES
DEFINITE
PROBABLE
POSSIBLE

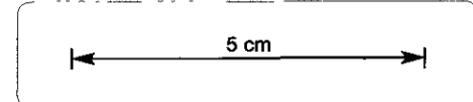
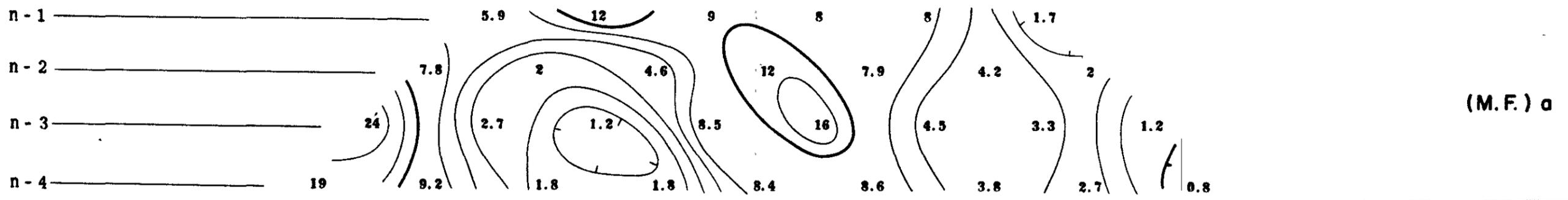
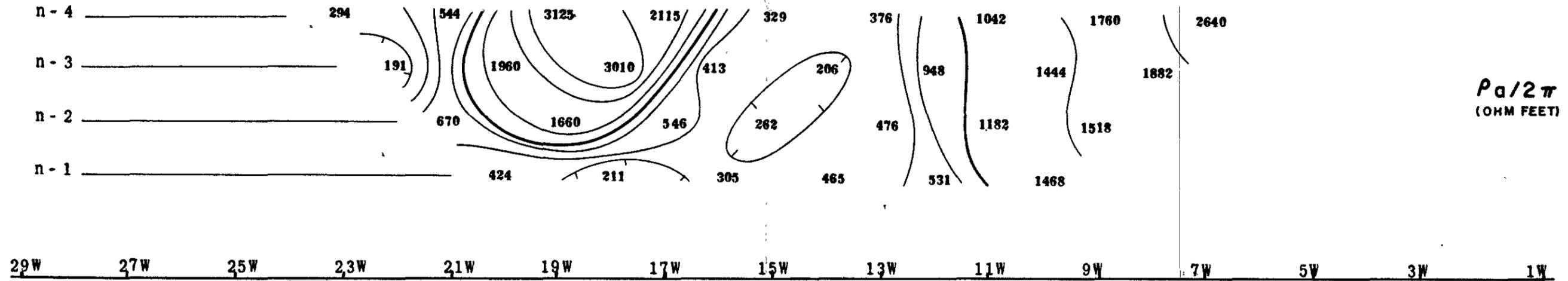
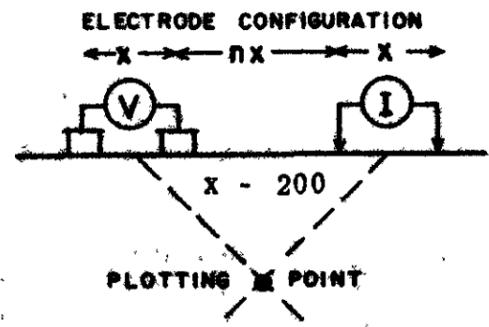
FREQUENCY 0.31 & 2.5 CPS
DATE SURVEYED FEB - APR 1967
APPROVED
DATE 26/1/67



168054 NOTE: CONTOURS AT LOGARITHMIC MULTIPLES OF 10-15-20-30-50-75-100

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

MOUNT TYNDALL AREA, TASMANIA

Scale - One inch = 200 Feet

NOTE LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

FREQUENCY 0.31 & 2.5 CPS

DATE SURVEYED FEB - APR

APPROVED

DATE 16/1/67



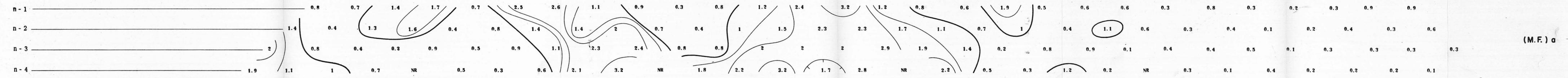
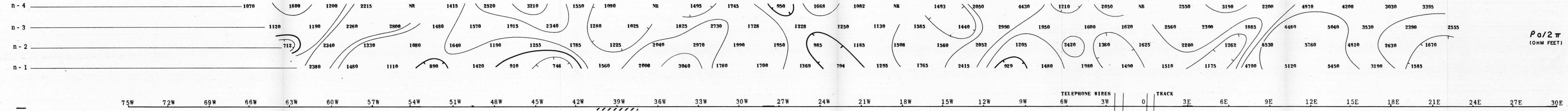
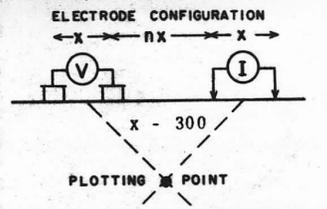
031

LINE NO.- 24

168055 NOTE: CONTOURS AT LOGARITHMIC MULTIPLES OF 10-15-20-30-50-75-100

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



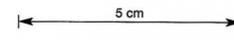
THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

MOUNT TYNDALL AREA, TASMANIA

Scale - One inch = 300 Feet

NOTE: LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES
DEFINITE
PROBABLE
POSSIBLE



FREQUENCY 0.31 & 2.5 CPS

DATE SURVEYED FEB - APR 1967

APPROVED

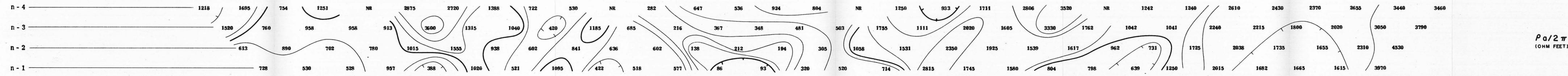
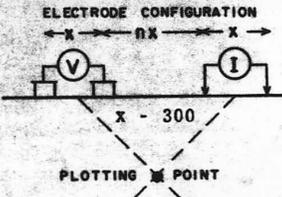
DATE 10/1/67

LINE NO. - 26

168056 NOTE: CONTOURS AT LOGARITHMIC MULTIPLES OF 10-15-20-30-50-75-100

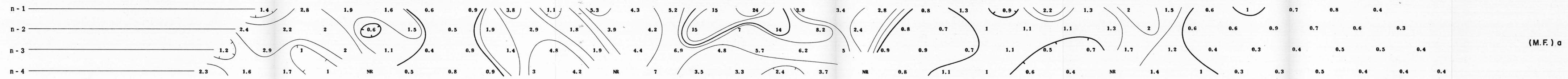
McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



78W 75W 72W 69W 66W 63W 60W 57W 54W 51W 48W 45W 42W 39W 36W 33W 30W 27W 24W 21W 18W 15W 12W 9W 6W 3W 3E 6E 9E 12E 15E 18E 21E 24E 27E 30E

TELEPHONE WIRES
TRACK POWER LINES



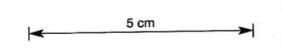
THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

MOUNT TYNDALL AREA, TASMANIA

Scale - One inch = 300 Feet

NOTE: LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES
DEFINITE
PROBABLE
POSSIBLE



FREQUENCY 0.31 & 2.5 CPS

DATE SURVEYED FEB - APR 1967

APPROVED

DATE 10/1/67

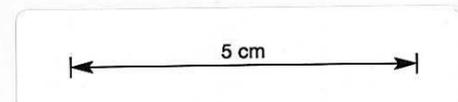
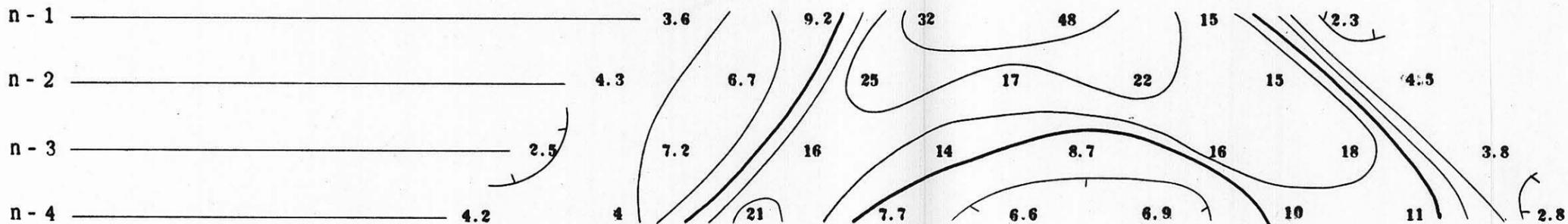
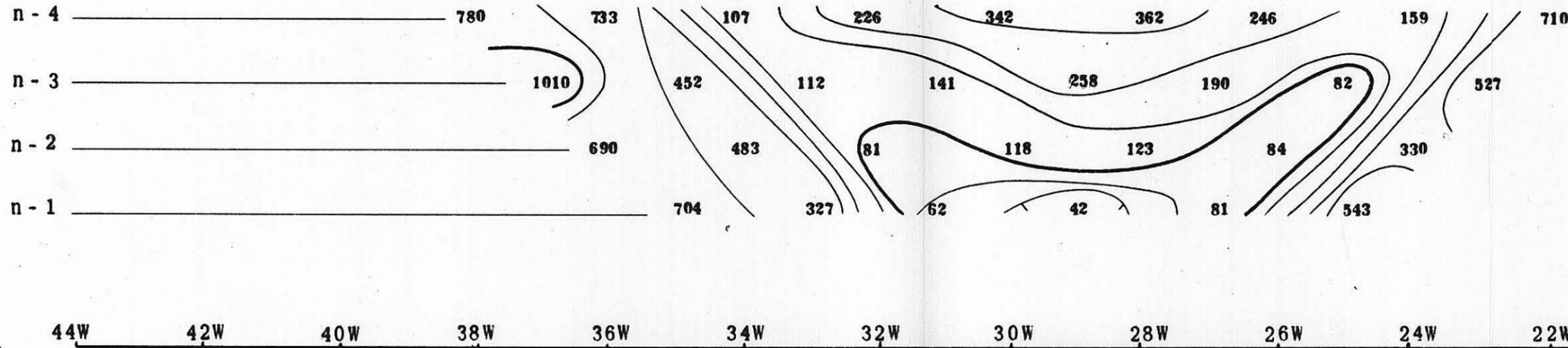
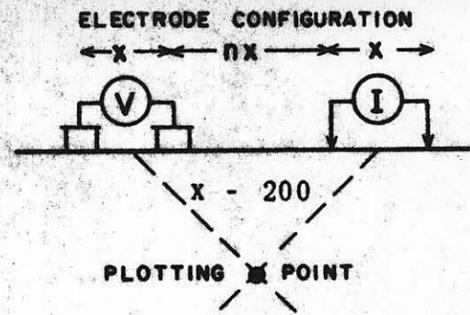
LINE NO - 28

168057

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

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

MOUNT TYNDALL AREA, TASMANIA

Scale - One inch = 200 Feet

NOTE: LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES

- DEFINITE
- PROBABLE
- POSSIBLE

FREQUENCY 0.31 & 2.5 CPS

DATE SURVEYED FEB. - APR. 1967

APPROVED

DATE 12/1/67

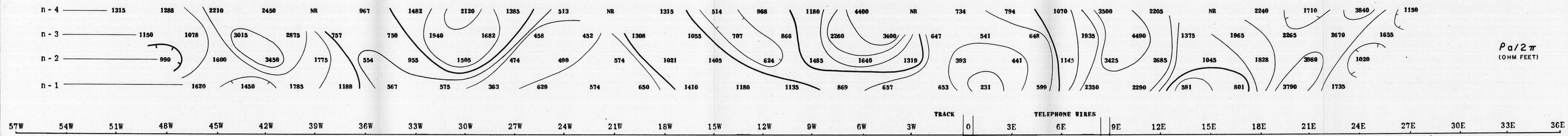
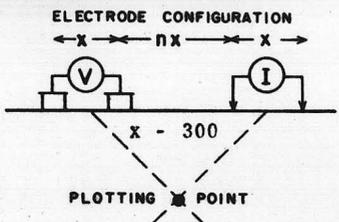


168058

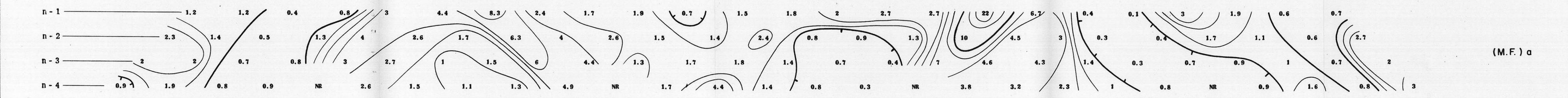
NOTE: CONTOURS AT LOGARITHMIC MULTIPLES OF 10-15-20-30-50-75-100

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



$\rho_a / 2\pi$
(OHM FEET)



(M.F.) a

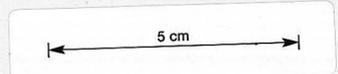
THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

MOUNT TYNDALL AREA, TASMANIA

Scale—One inch= 300 Feet

NOTE: LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES
 DEFINITE
 PROBABLE
 POSSIBLE



FREQUENCY 0.31 & 2.5 CPS.

DATE SURVEYED FEB. APR. 67

APPROVED

DATE



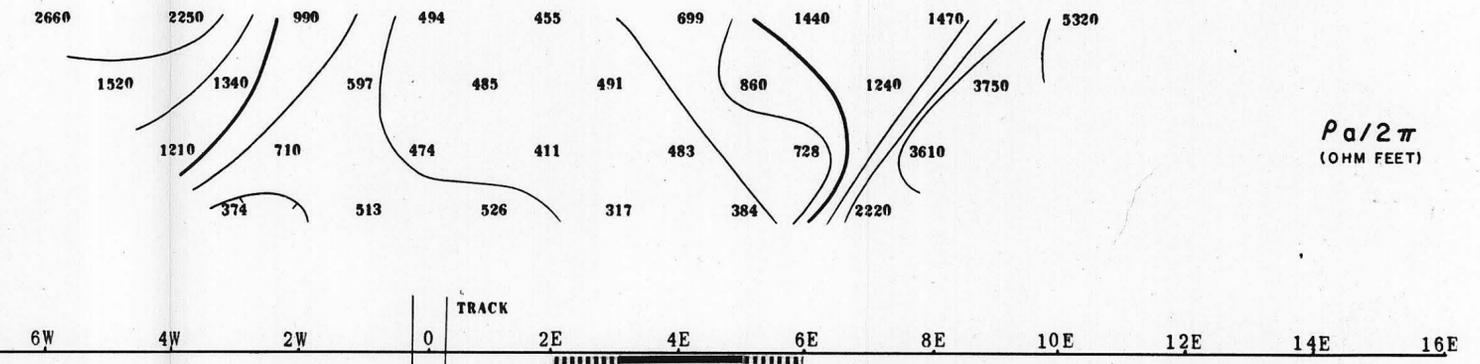
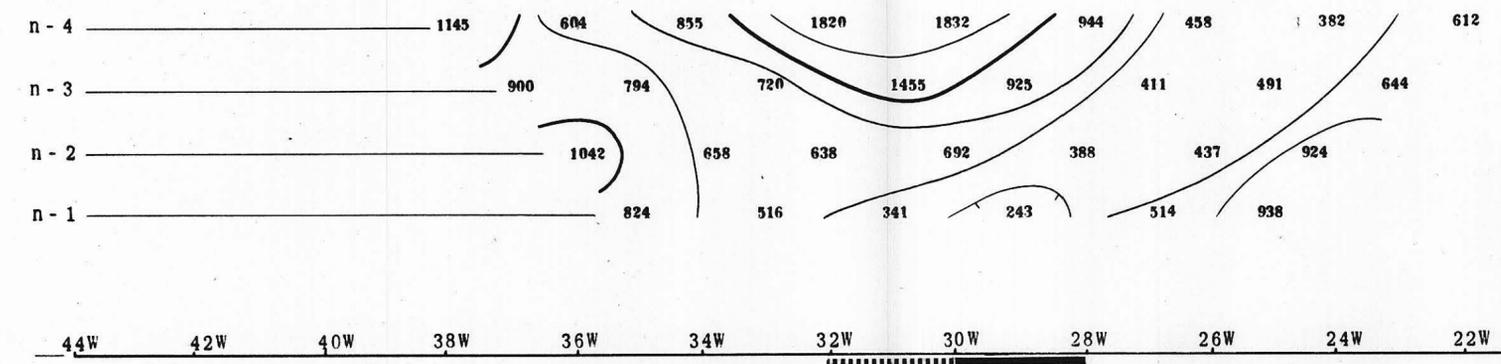
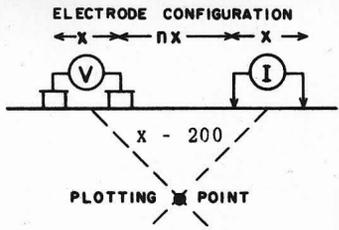
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McPHAR GEOPHYSICS LIMITED

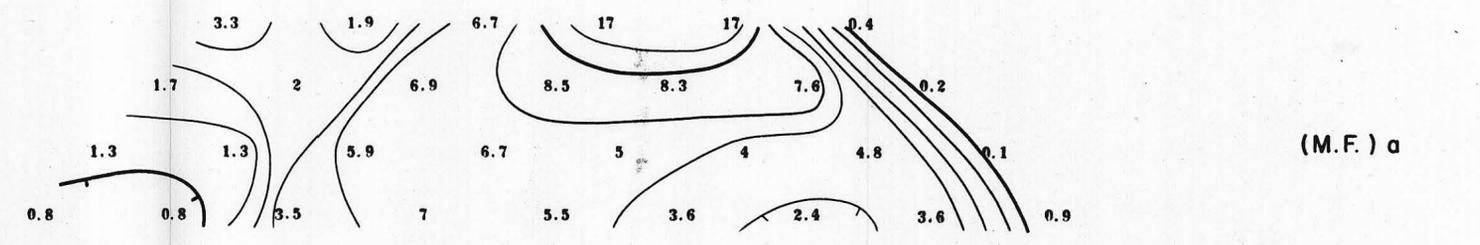
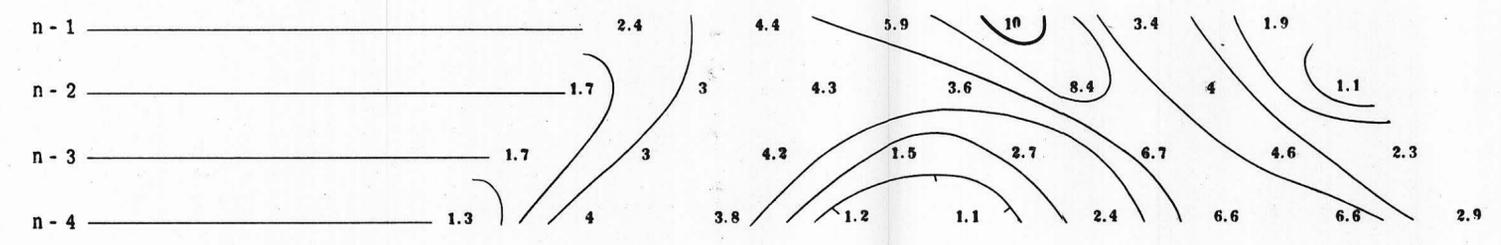
INDUCED POLARIZATION AND RESISTIVITY SURVEY

168059

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



$\rho_a / 2\pi$
(OHM FEET)



(M.F.) a

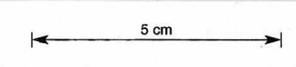
THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

MOUNT TYNDALL AREA, TASMANIA

Scale—One inch= 200 Feet

NOTE: LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES
DEFINITE
PROBABLE
POSSIBLE



FREQUENCY 0.31 & 2.5 CPS

DATE SURVEYED FEB. APR. 67

APPROVED

DATE 3/1/67



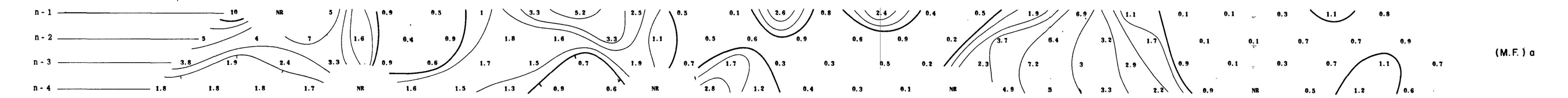
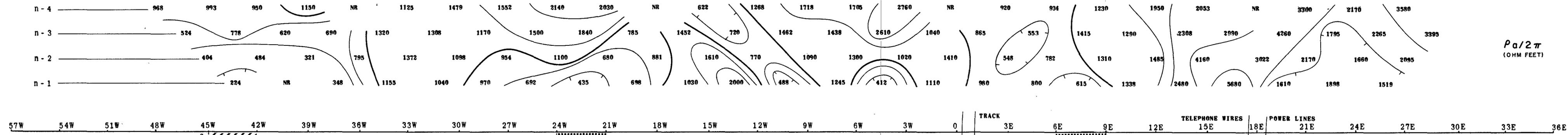
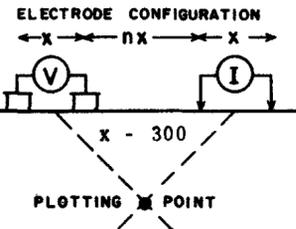
LINE NO. 30

168060

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

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



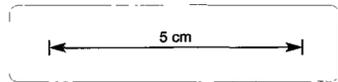
THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

MOUNT TYNDALL AREA, TASMANIA

Scale—One inch= 300 Feet

NOTE LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES
DEFINITE —————
PROBABLE
POSSIBLE - - - - -



FREQUENCY 0.31 & 2.5 CPS

DATE SURVEYED FEB. APR. 67

APPROVED [Signature]

DATE 4/67

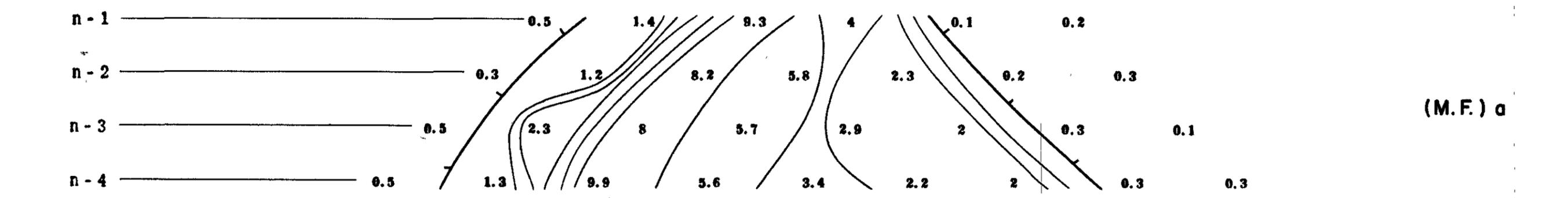
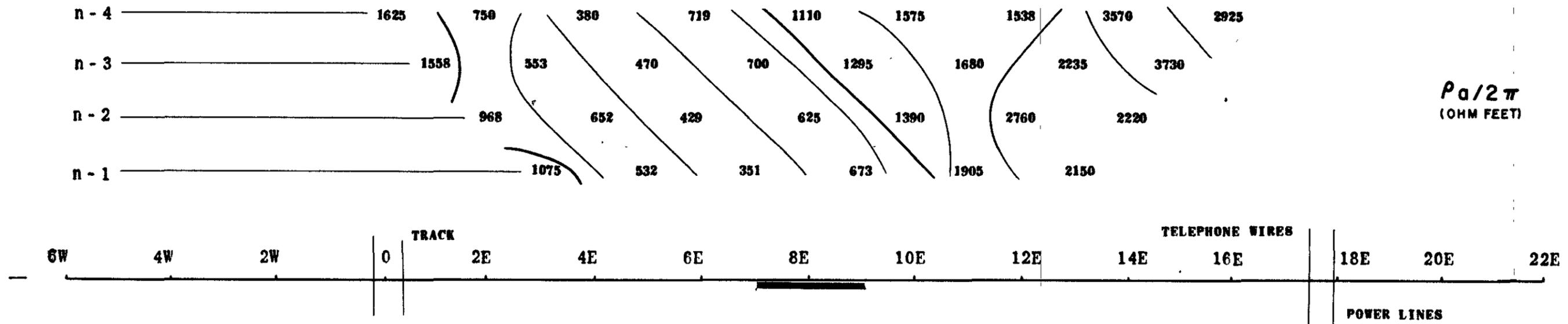
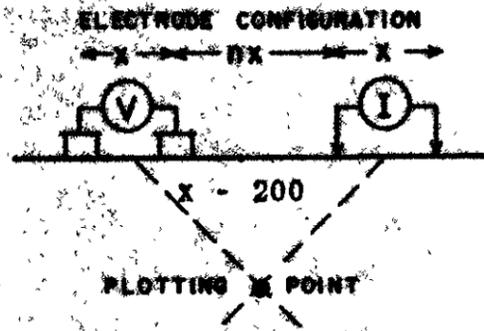
037

LINE NO. 32

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

168061 NOTE: CONTOURS AT LOGARITHMIC MULTIPLES OF 10-15-20-30-50-75-100



THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

MOUNT TYNDALL AREA, TASMANIA

Scale - One inch = 200 Feet

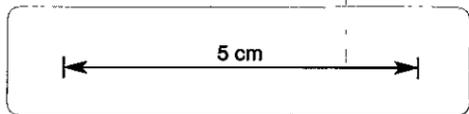
NOTE LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE



FREQUENCY 0.31 & 2.5 CPS

DATE SURVEYED FEB - APR 1967

APPROVED

DATE 1/1/67

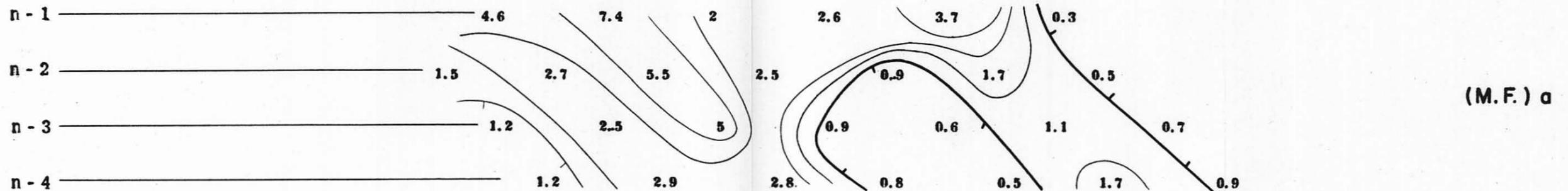
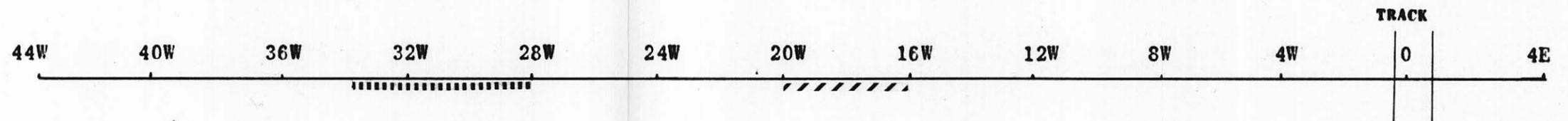
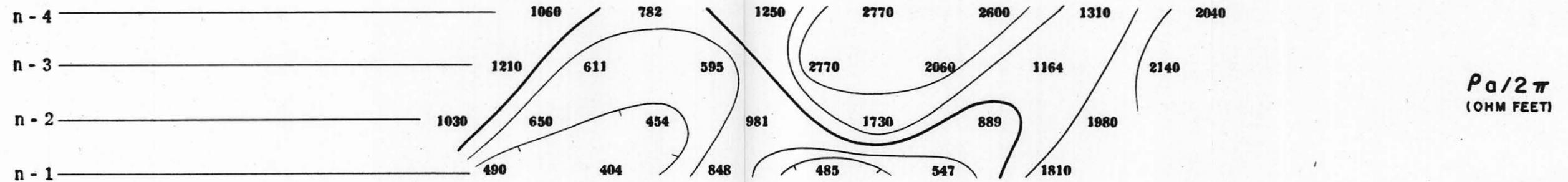
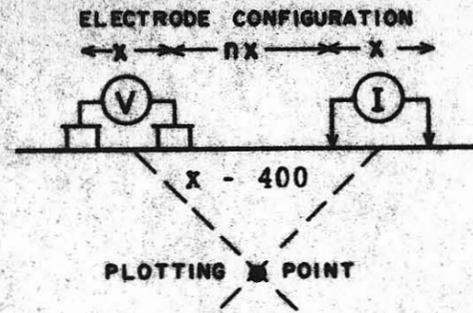


LINE NO.- 32

168062 NOTE: CONTOURS AT LOGARITHMIC MULTIPLES OF 10-15-20-30-50-75-100

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



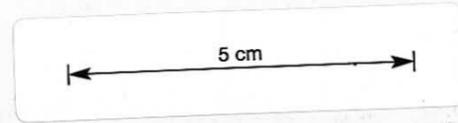
THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

MOUNT TYNDALL AREA, TASMANIA

Scale - One inch = 400 Feet

NOTE: LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES
DEFINITE
PROBABLE
POSSIBLE



FREQUENCY 0.31 & 2.5 CPS

DATE SURVEYED FEB - APR

APPROVED

DATE 10/1/67



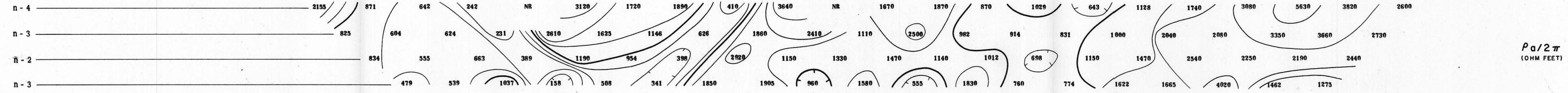
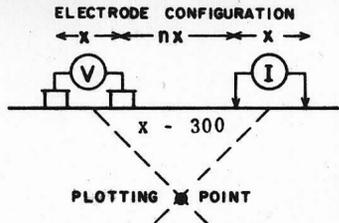
LINE NO.- 34

168063

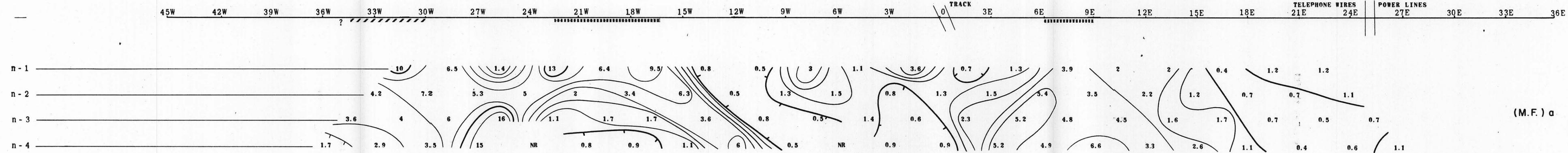
NOTE: CONTOURS AT LOGARITHMIC MULTIPLES OF 10-15-20-30-50-75-100

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



$\rho_a / 2\pi$
(OHM FEET)



(M.F.) a

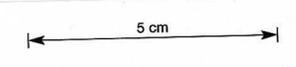
THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

MOUNT TYNDALL AREA, TASMANIA

Scale—One inch= 300 Feet

NOTE: LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES
DEFINITE
PROBABLE
POSSIBLE



FREQUENCY 0.31 & 2.5 CPS

DATE SURVEYED FEB. APR. 67

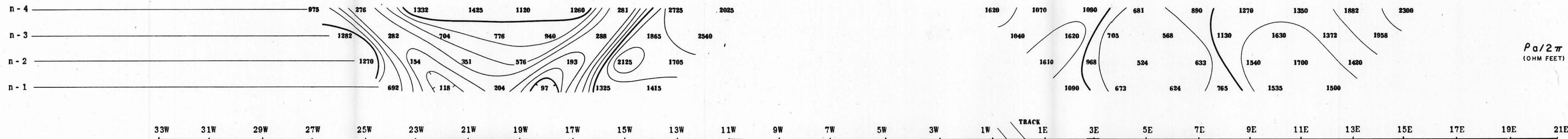
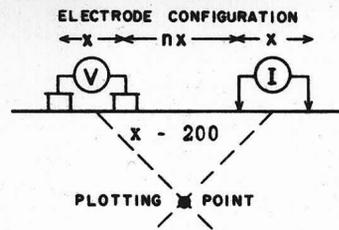
APPROVED

DATE 3/1/67

LINE NO.- 34

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



$\rho_a / 2\pi$
(OHM FEET)



(M.F.) α

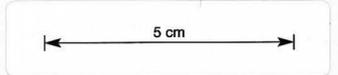
THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

MOUNT TYNDALL AREA, TASMANIA

Scale—One inch= 200 Feet

NOTE: LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES
DEFINITE
PROBABLE
POSSIBLE



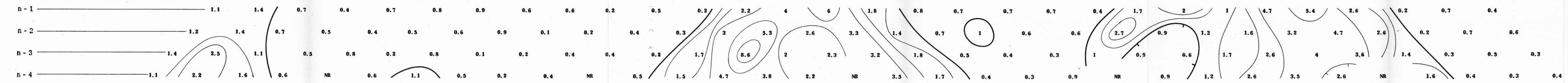
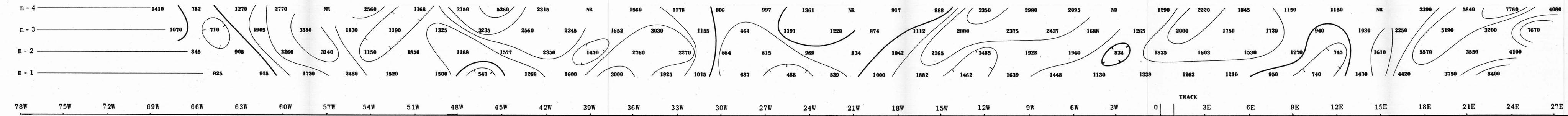
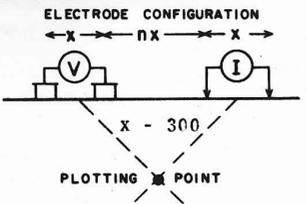
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DATE SURVEYED FEB - APR 67
APPROVED
DATE 3/6/67

LINE NO.- 34

168065 NOTE: CONTOURS AT LOGARITHMIC MULTIPLES OF 10-15-20-30-50-75-100

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



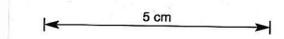
THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

MOUNT TYNDALL AREA, TASMANIA

Scale - One inch = 300 Feet

NOTE: LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES
DEFINITE
PROBABLE
POSSIBLE



FREQUENCY 0.31 & 2.5 CPS.

DATE SURVEYED FEB - APR 67

APPROVED

DATE 5/1/67

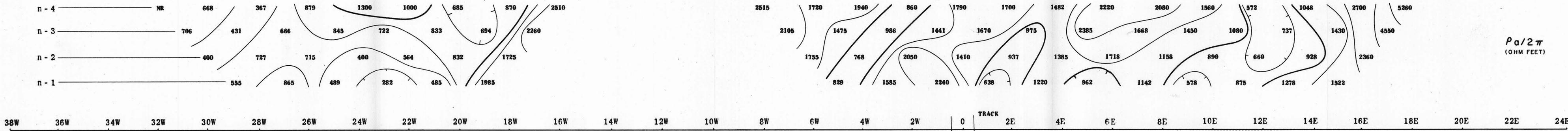
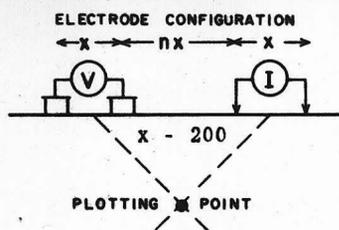
LINE NO - 36

168066

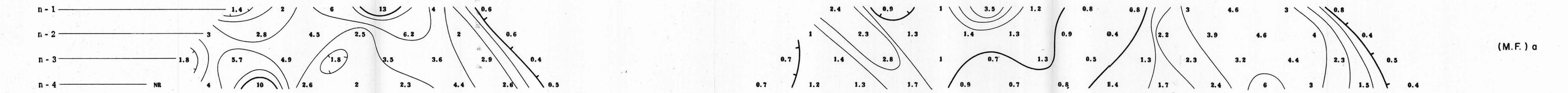
NOTE: CONTOURS AT LOGARITHMIC MULTIPLES OF 10-15-20-30-50-75-100

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



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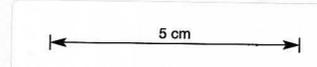
THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

MOUNT TYNDALL AREA, TASMANIA

Scale—One inch= 200 Feet

NOTE: LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES
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FREQUENCY 0.31 & 2.5 CPS

DATE SURVEYED FEB - APR 67

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DATE

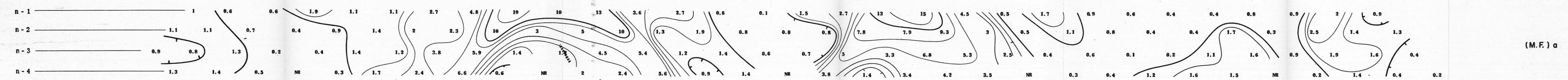
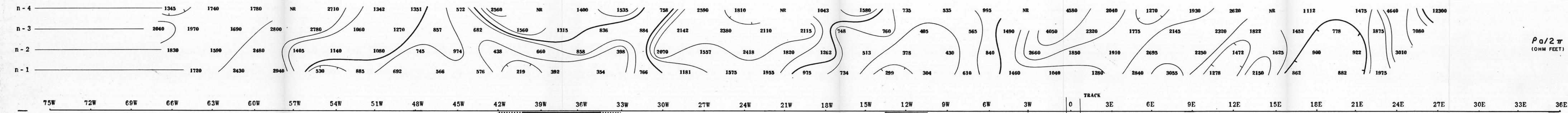
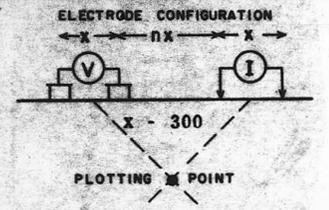


LINE NO- 36

168067 NOTE: CONTOURS AT LOGARITHMIC MULTIPLES OF 10-15-20-30-50-75-100

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



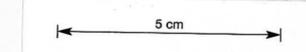
SURFACE PROJECTION OF ANOMALOUS ZONES
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THE MOUNT LYELL MINING & RAILWAY COMPANY LTD.

MOUNT TYNDALL AREA, TASMANIA

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FREQUENCY 0.31 & 2.5 CPS.

DATE SURVEYED FEB. 1967

APPROVED

DATE 16/1/67

LINE NO. 1-38