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MCPHAR GEOPHYSICS LIMITED

**REPORT ON THE
INDUCED POLARIZATION SURVEY
GOWGANDA AREA
VAN HISE & HAULTAIN TWPS., ONTARIO
FOR
SILVERPLACE MINES LIMITED**

1. INTRODUCTION

At the request of Mr. L. G. Phelan, consultant to Silverplace Mines Ltd., an induced polarization survey has been carried out over part of the Company's property in the Gowganda Area. The claim group straddles the north-south boundary between Van Hise and Haultain Townships, Montreal Mining Division, Ontario.

The induced polarization surveying was carried out to locate any anomalies that might be indicative of the narrow silver-bearing veins which are the typical ore structures of the Gowganda Area. The initial work was carried out along known or assumed faults and linear features. The most interesting indications obtained in this surveying were checked by perpendicular traverses.

The field surveying was carried out during October, 1964.

2. PRESENTATION OF RESULTS

The I.P. and resistivity results are shown on the following data plots which accompany this report. The results are plotted in the

manner described in the notes preceding this report.

The pole-dipole configuration using 50 foot spreads was used for all of the surveying.

<u>Line No.</u>	<u>Dwg. No.</u>
0	2198-1
1	2198-2
2	2198-3
Baseline	2198-4
120N	2198-5
117N	2198-6
108N	2198-7
3	2198-8
3A	2198-9
4	2198-10
5	2198-11
Baseline	2198-12
6	2198-13
7	2198-14
8	2198-15
9	2198-16
10	2198-17
11	2198-18

Enclosed with this report is Dwg. Misc. 4110, a plan map of the property at a scale of 1"=200'. The definite and possible induced polarization anomalies are indicated by solid and broken bars respectively

on this plan map as well as the data plots. These bars represent the surface projection of the anomalous zones as interpreted from the location of the transmitter and receiver electrodes when the anomalous values were measured.

Since the induced polarization measurement is essentially an averaging process, as are all potential methods, it is frequently difficult to exactly pinpoint the source of an anomaly. Certainly, no anomaly can be located with more accuracy than the spread length; i. e. when using 50' spreads the position of a narrow sulphide body can only be determined to lie between two stations 50' apart. In order to locate sources at some depth, larger spreads must be used, with a corresponding increase in the uncertainties of location. Therefore, while the center of the indicated anomaly probably corresponds fairly well with source, the length of the indicated anomaly along the line should not be taken to represent the exact edges of the anomalous material.

3. DISCUSSION OF RESULTS

Due to the limited width of the silver bearing veins in this area, the metallic content by volume may be very small and consequently the observed I.P. effects are not expected to be large. For this reason, many small responses have been interpreted as being anomalous and are considered worthy of investigation.

Line 0

There is a weak, but quite distinct anomaly near 3S on this line. It appears to have some depth to the top or to lie to one side of the line.

It may correlate with a somewhat similar response on cross line 117N, which was run to check it. This anomaly is associated with relatively high resistivity and could lie either within the diabase or close to its contact. For convenience it has been designated Zone A.

From 1S to 2+50N there is continuous low-values response that correlates with a swampy area and low resistivity values. This is considered to be of minor importance at present.

Line 1

The I.P. results on this line are quite complex and may be caused by several sources between 5N and 8N.

Zone B appears to be centered near 5+50N and may be remote from the line. It may have been confirmed by the results on Line 117N and is strong enough to warrant at least one test hole.

The shallow response that is shown to extend from 6+50N to 8+00N has been designated Zone C. The metal factor values are of moderate magnitude, but the corresponding resistivities are quite low and consequently Zone A has been assigned a second priority classification.

A weak response occurs near 1+50S on Line 1. This may be the westward continuation of Zone D on Line 2.

Line 2 Baseline

Near 2+50N the I.P. data suggest a narrow steeply dipping source. The anomalous pattern is quite definite although the I.P. effects are not strong. This anomaly, together with a somewhat weaker response on the Baseline at 111+00N, suggest a continuous zone that trends in a

NE-SW direction and may extend as far west as Line 1. Because, of the indicated continuity, Zone D is also considered worthy of test drilling.

On the north end of Line 2, the results suggest a broad zone of low metallic content.

Line 120N

The broad zone on the north end of Line 2 was checked by this E-W traverse. A few above background metal factor values occur in the vicinity of 8+00W, but these are considered to be of minor importance at present.

Line 117N

This E-W traverse was run to check Zones A & B. The results appear to indicate two separate sources centered at 8+25W and 9+25W. However, somewhat similar results could be obtained from a single source centered at 8+75W. The latter interpretation would correlate quite closely with Zone B and consequently no further work is recommended on the anomalies on Line 117N until the results of drilling Zone B are available for study.

Line 108N

A weak, but definite anomaly, Zone E, is shown to be centered near 9+25W. The source appears to be narrow and shallow in this vicinity, but may broaden considerably at depth. All of the anomalous values of Zone E are associated with relatively high resistivities and the source could lie entirely within the diabase. The strike of Zone E is difficult to determine

but it may correlate with the weak shallow responses located at 7+50W and 9+00W on Line 3.

Although the I.P. effects on Zone E are not strong, it appears to lie entirely within the diabase and is also considered worthy of at least one test hole.

Line 3 and Line 3A

The weak anomalies near 7+50W and 9+00W may correlate with Zone E. Further investigation of these responses should be deferred until Zone E has been tested.

Zone F has been interpreted from a group of high metal factor values that are typical of the results obtained from parallelling a weak source. Line 3A was run in a N-S direction to check this possibility. On this line, the data show a weak source centered on Line 3, but the results are not impressive. Zone F has been picked-up on two perpendicular traverses and probably warrants further investigation. However, it is shown to lie in the Lorraine Formation and for this reason is considered a secondary target.

Line 4

A weak shallow source is indicated to extend from 5+00W to 6+00W on this line. It appears to correlate with an area of weakly disseminated sulphides and is probably due to this material. The metal factor values are too weak to warrant further investigation at present.

Line 5

There is a single high metal factor value on the extreme west

of this data plot. Additional surveying to the west would be required to establish the existence of this anomaly.

Lines 6, 7 and Baseline

There are a few above background metal factor values on each of these three lines. However, the contour patterns are not definite and none of the effects are strong to warrant further work.

Line 8

The results on this line are essentially negative. The single high value on the south end of the line is associated with low resistivities and is probably of minor importance. Additional surveying would be required to fully evaluate this weak indication.

Lines 9, 10 and 11

There are no strong anomalous responses on these three lines. However, on each line, there is a weak I.P. response on the south edge of a slight resistivity low. Together, these three anomalies suggest the existence of a N-S trending zone lying entirely within the diabase, which has been designated Zone G. The strongest response was obtained near 15+00W on Line 10. Because of the weak nature of these effects, additional detailed surveying would be required to firmly establish the existence of Zone G and assess its possible importance.

4. SUMMARY AND RECOMMENDATIONS

Seven induced polarization zones have been interpreted from the survey results and have been lettered alphabetically.

Zones A, B, D and E are considered to be of primary importance and their testing should be included in the initial drilling program. With the possible exception of Zone E, there is insufficient geophysical data to determine the exact location or attitude of the sources. Because, all of these sources appear to be quite shallow it is recommended that a series of short holes be drilled to test them on the basis of available geologic features such as contacts and faults. However, should this program fail to reveal the cause of these anomalies, then additional detailed I.P. surveying would be warranted to pinpoint the sources.

Zone C is an apparently shallow source, associated with low resistivity values and is not typical of the results obtained over narrow veins. However, it is relatively strong and should be considered as a second priority anomaly.

Zone F has been found on two perpendicular lines and is one of the best-located zones on the property. Nevertheless, the I.P. effects are not strong and its geologic setting is considered to be unfavourable. It has also been assigned a second priority classification.

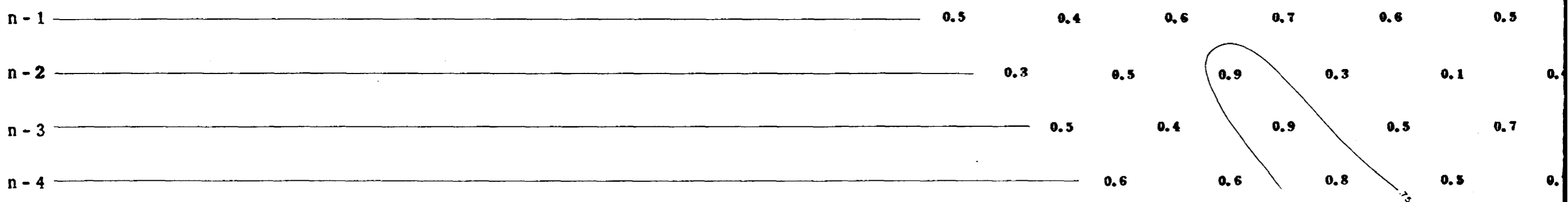
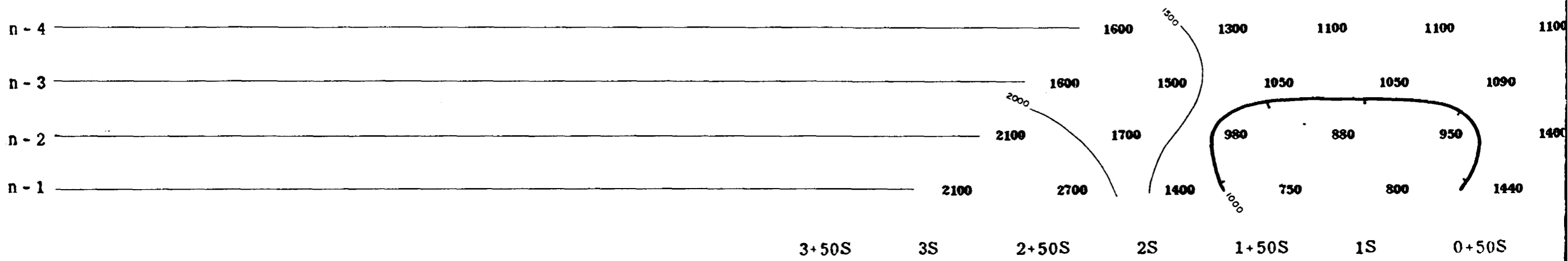
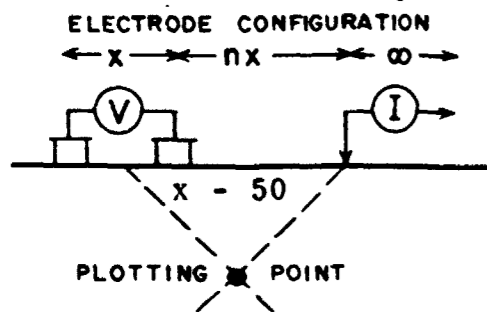
Zone G is a very weak anomaly that has been interpreted from three minimal responses. Detailed I.P. surveying would be required to firmly establish the existence of this zone and assess its importance. Its location, within the diabase, enhances its possible value.

McPHAR GEOPHYSICS LIMITED



D. B. Sutherland,
Geophysicist.

Dated: November 30, 1964



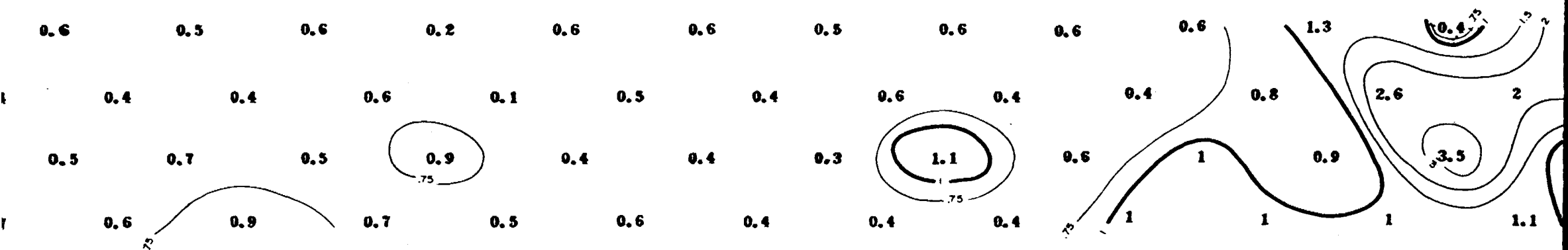
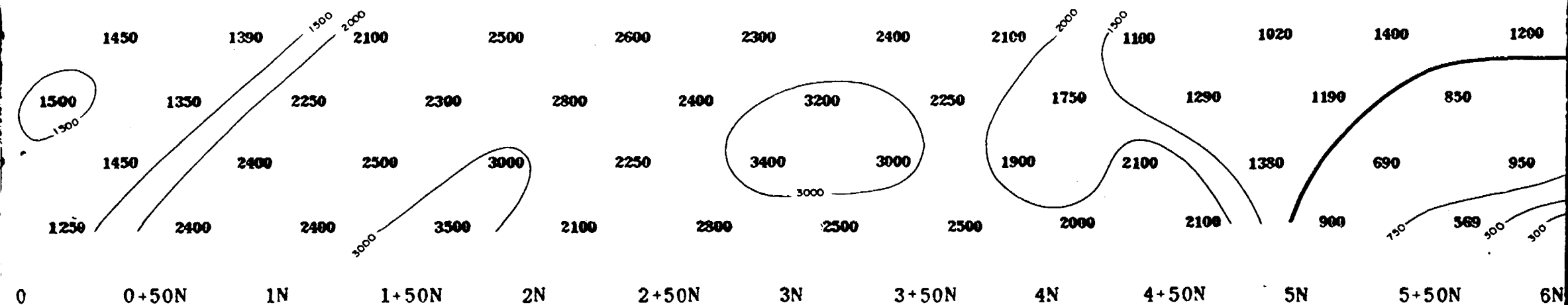
ANOMALOUS ZONE

POSSIBLE ANOMALOUS ZONE

NOTE
LOGARITHMIC CONTOUR INTERVAL

McPHAR GEOPHYSICS LIMITED

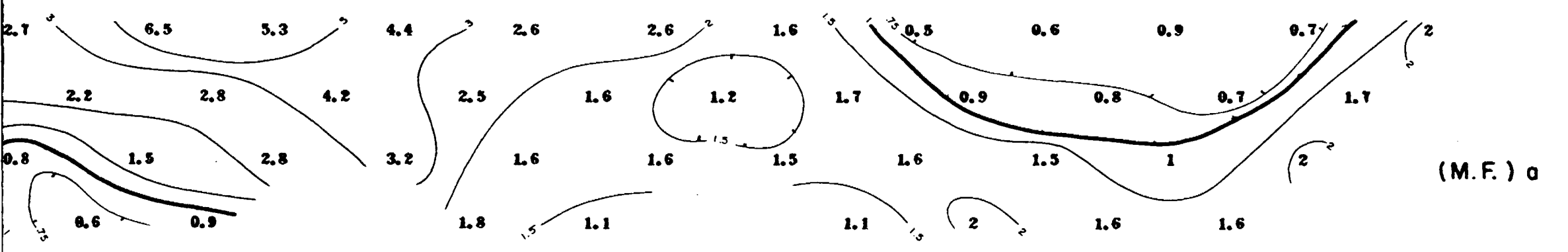
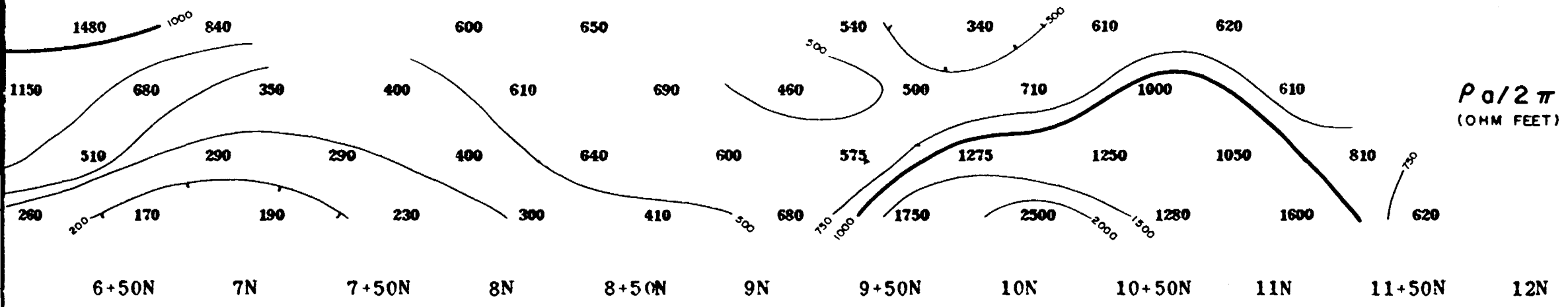
INDUCED POLARIZATION AND RESISTIVITY SURVEY



SILVERPLACE MINES LIMITED

GOWGANDA AREA—VAN HISE & HAULTAIN TWPS.—MONTREAL M.D., ONTARIO.

Scale—One inch = 50 Feet



LINE NO.-1

FREQUENCY 0.31-5 CPS

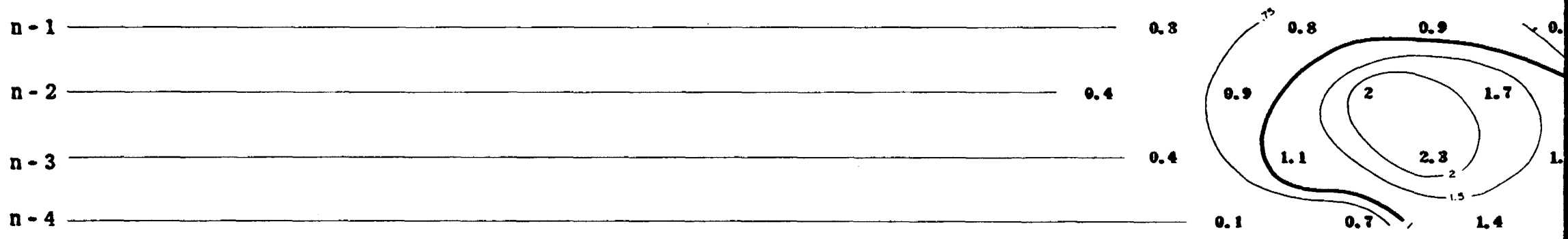
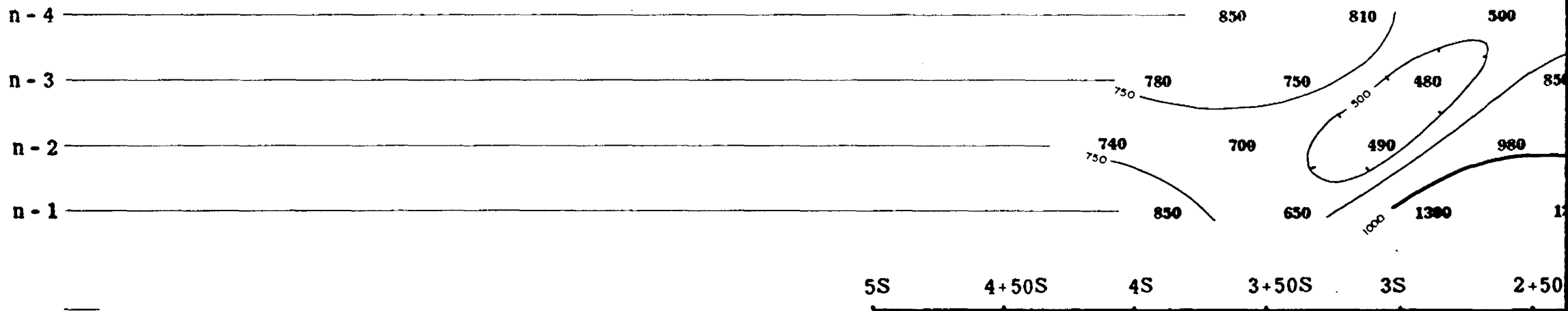
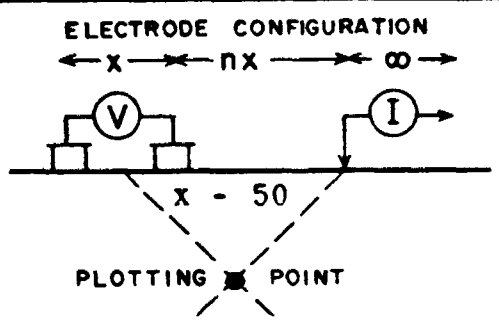
DATE SURVEYED OCT/1964

APPROVED *ASL*

DATE *Nov 30/64*

McPHAR GEOPH

INDUCED POLARIZATION AN



ANOMALOUS ZONE

POSSIBLE ANOMALOUS ZONE

NOTE
LOGARITHMIC CONTOUR INTERVAL

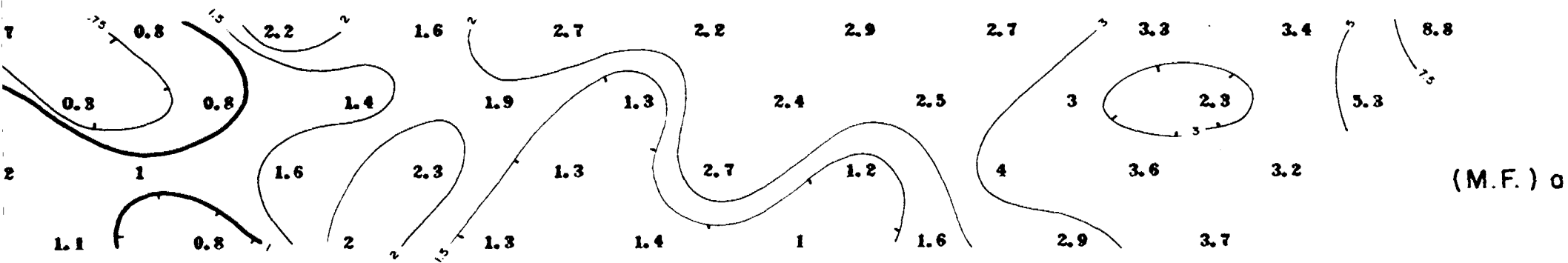
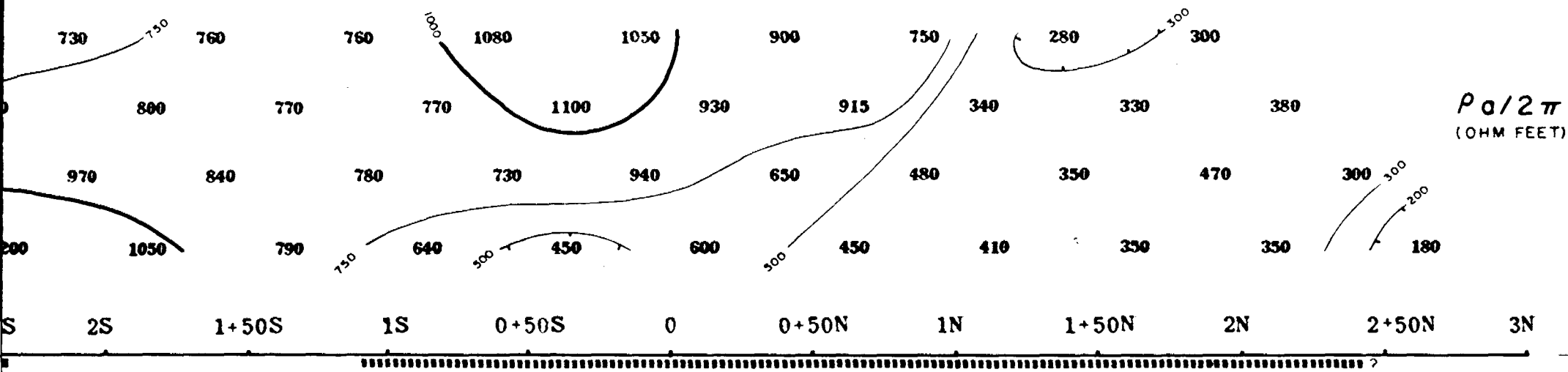
SILVERPLACE

GOWGANDA AREA - VAN HISE & HAULTA

Scale - One inch

PHYSICS LIMITED

AND RESISTIVITY SURVEY



LINE NO.-0

MINES LIMITED

IN TWPS.-MONTREAL M.D., ONTARIO.

1 = 50 Feet

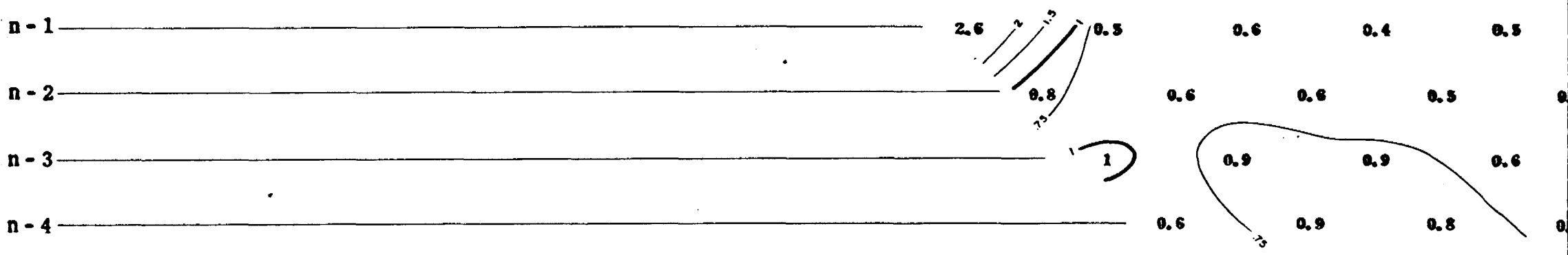
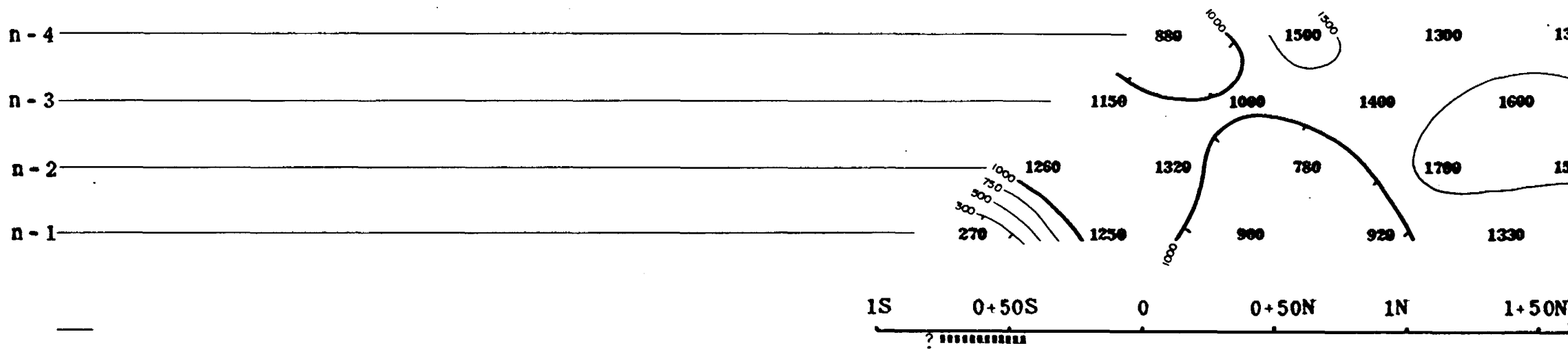
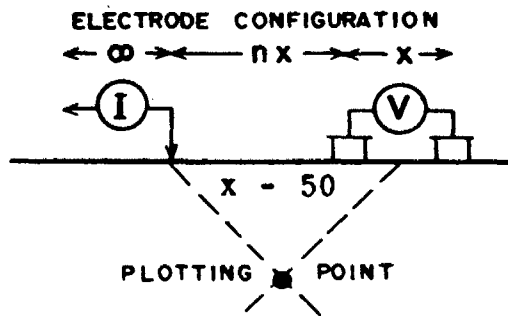
FREQUENCY 0.31-5 CPS

DATE SURVEYED OCT/1964

APPROVED *dB*

DATE *Nov 30/64*

McPHAR GEOPH INDUCED POLARIZATION A



ANOMALOUS ZONE **—————**

POSSIBLE ANOMALOUS ZONE **.....**

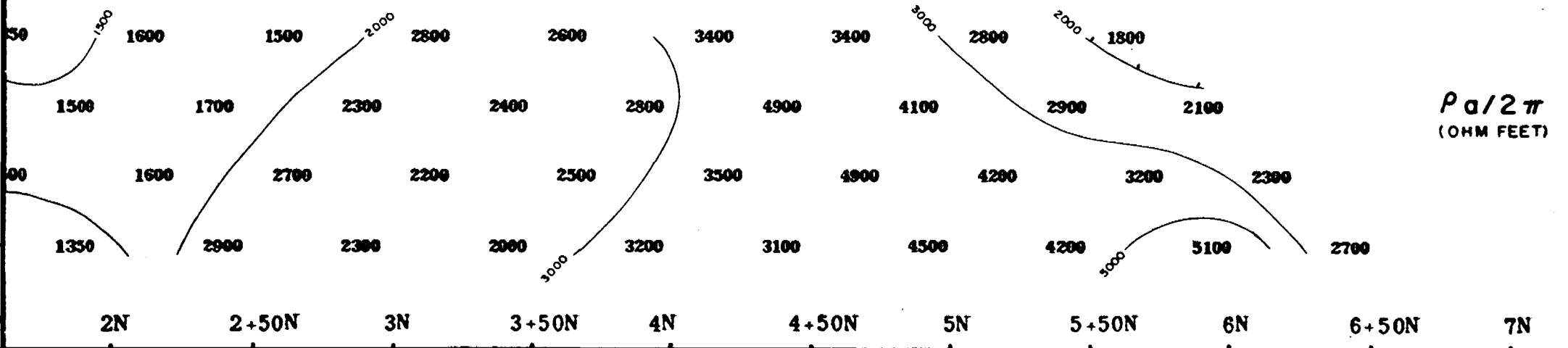
NOTE
LOGARITHMIC CONTOUR INTERVAL

SILVERPLACE

GOWGANDA AREA-VAN HISE & HAULTA

Scale—One inc

PHYSICS LIMITED
 AND RESISTIVITY SURVEY



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0.2	0.2	0.3	0.6	0.2	0.2	0.2	0.2	0.2	0.3	
0.3	0.5	0.3	0.2	0.5	0.2	0.2	0.3	0.4		
0.6	0.3	0	0.2	0.3	0.3	0.3	0.3	0.3		

FREQUENCY 0.31-5 CPS

DATE SURVEYED OCT/1964

APPROVED *[Signature]*

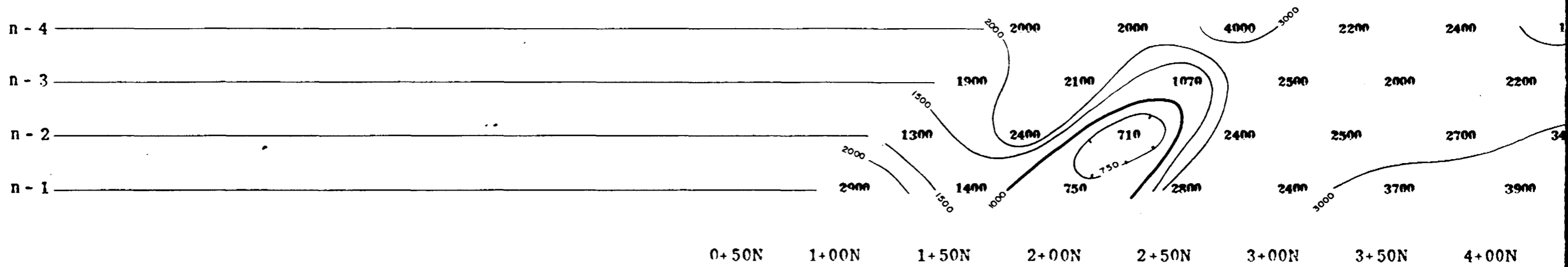
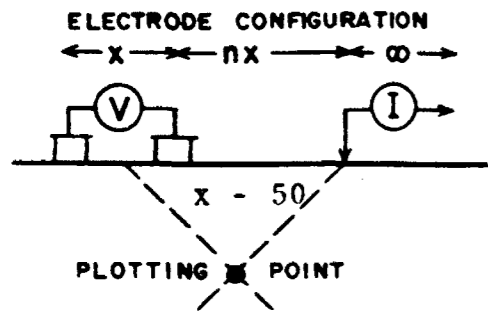
DATE Nov 30/64

MINES LIMITED

MAIN TWPS.-MONTREAL M.D., ONTARIO.

h= 50 Feet

LINE NO-8



	0+50N	1+00N	1+50N	2+00N	2+50N	3+00N	3+50N	4+00N
n - 1		0.2	0.4	0.4	0.2	0.3	0.3	0.4
n - 2		0.4	0.3	0.1	0.3	0.4	0.1	0.1
n - 3		0.3	0.5	0.7	0.3	0.4	0.6	0.6
n - 4		0.1	0.2	0.2	0.3	0.5	0.5	0.5

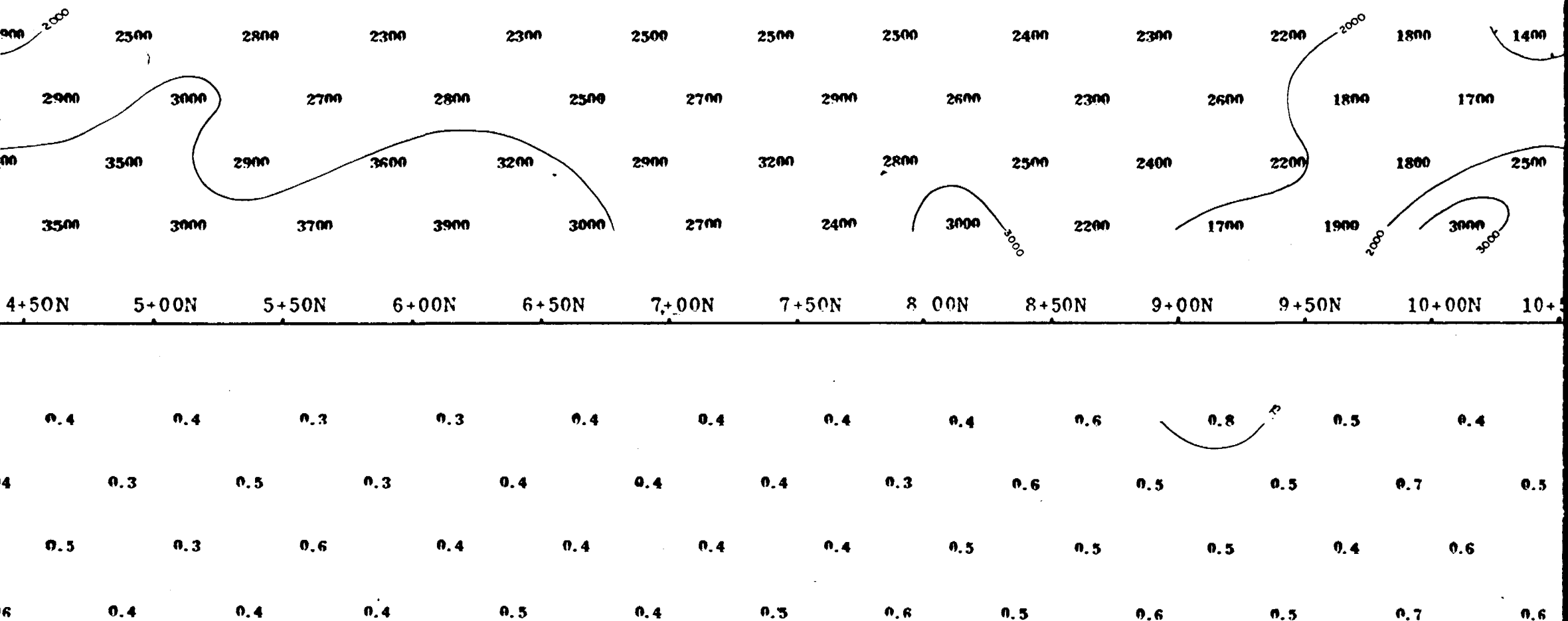
ANOMALOUS ZONE

POSSIBLE ANOMALOUS ZONE

NOTE
LOGARITHMIC CONTOUR INTERVAL

McPHAR GEOPHYSICS LIMITED

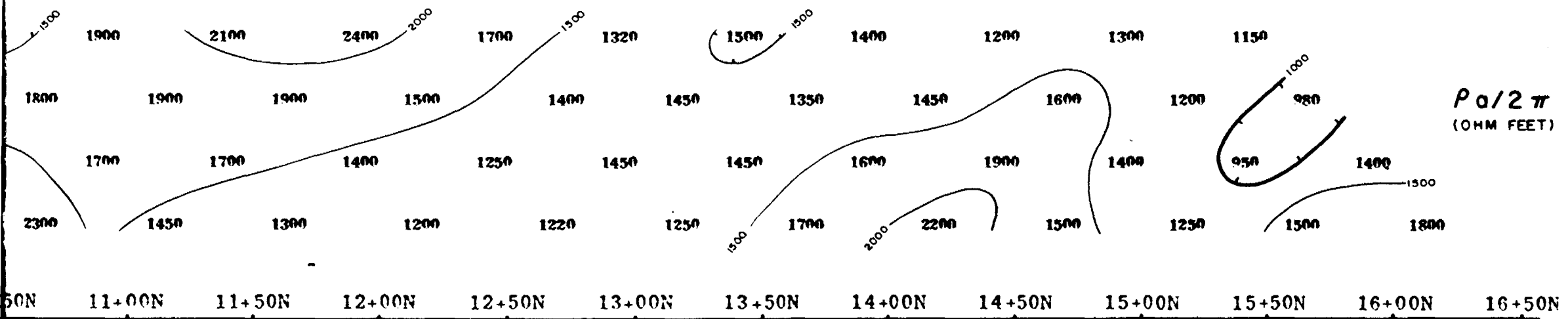
INDUCED POLARIZATION AND RESISTIVITY SURVEY



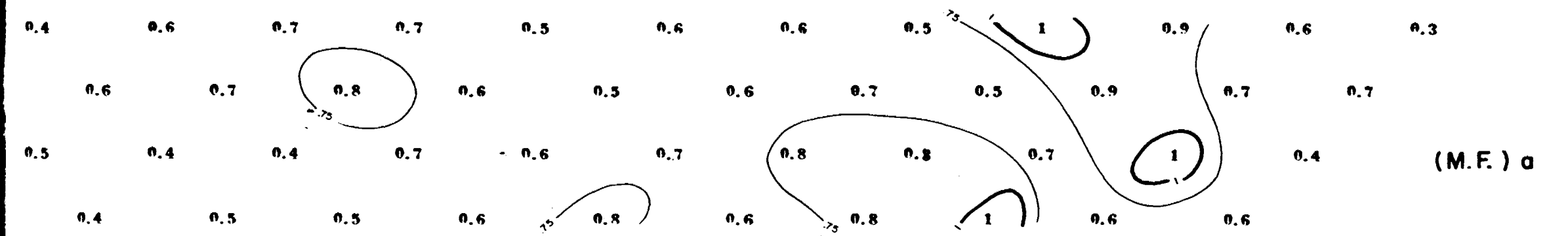
SILVERPLACE MINES LIMITED

GOWGANDA AREA—VAN HISE & HAULTAIN TWPS.—MONTREAL M.D., ONTARIO.

Scale—One inch= 50 Feet



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FREQUENCY 0.31-5 CPS

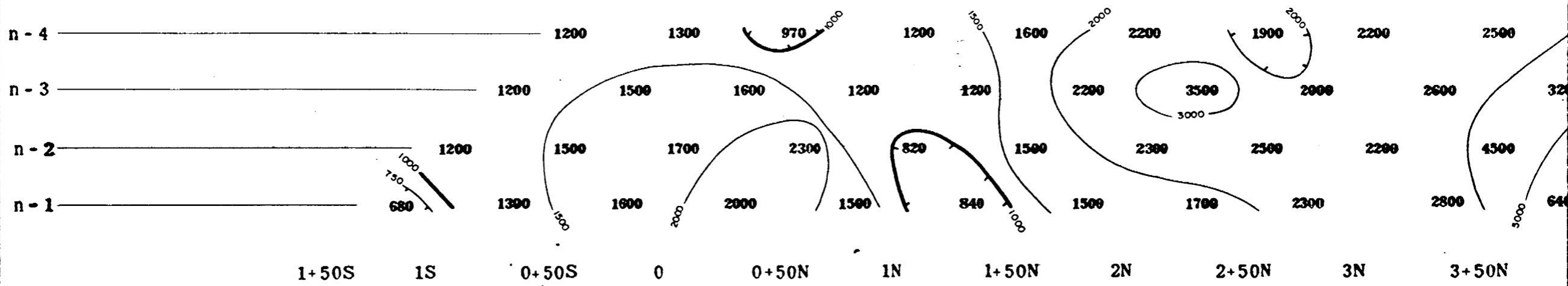
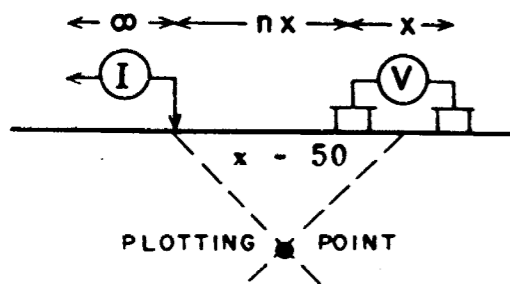
DATE SURVEYED OCT/1964

APPROVED *dsj*

DATE Nov 30/64

LINE NO.- 7

ELECTRODE CONFIGURATION



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n - 2	0.2	0.2	0.3	0.1	0.4	0.2	0.4	0.6	0	0.1	0.7
n - 3	0.8	0.4	0.1	0.2	0.2	0.5	0.3	0.5	0	0.7	0.7
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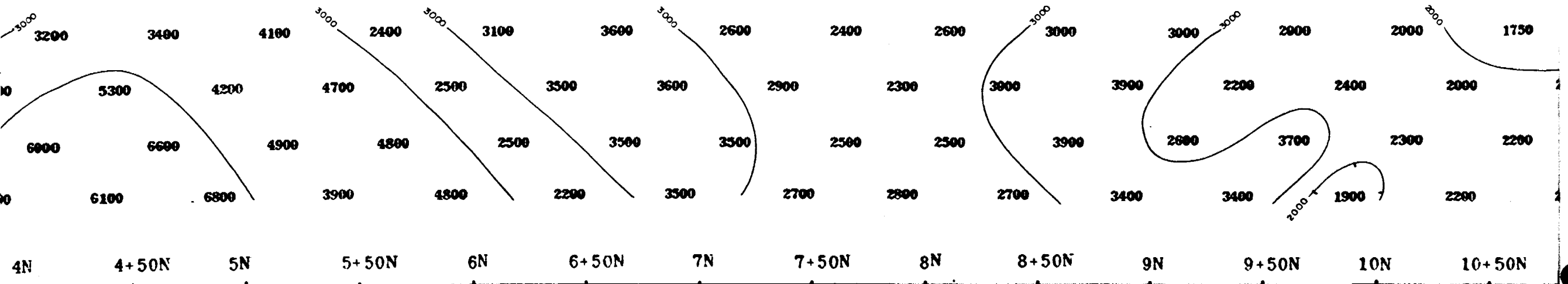
ANOMALOUS ZONE

POSSIBLE ANOMALOUS ZONE

NOTE
LOGARITHMIC CONTOUR INTERVAL

McPHAR GEOPHYSICS

INDUCED POLARIZATION AND RESISTIVITY

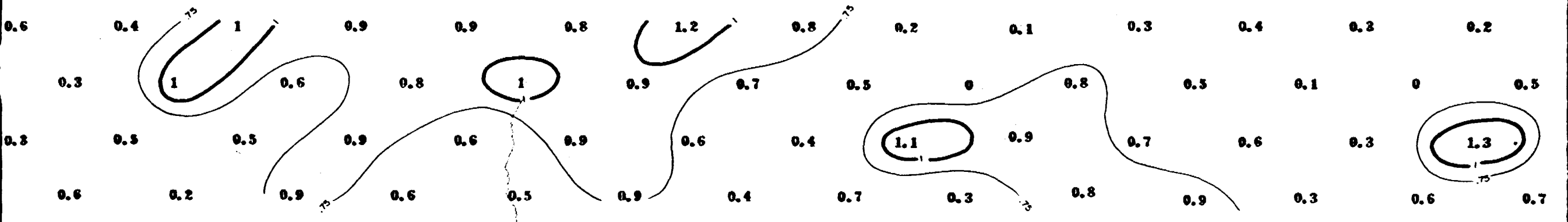
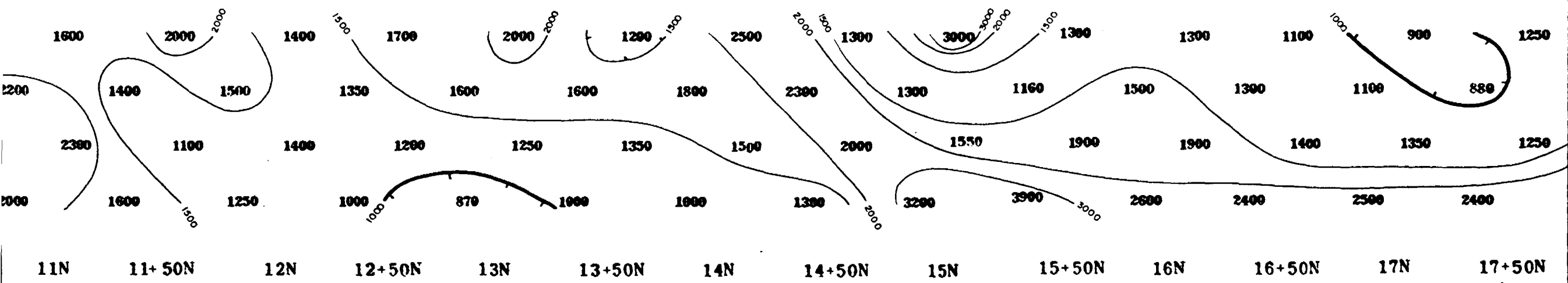


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0.1	0.1	0.6	0.3	0.2	0.2	0.4	0.4	0.3	0.3	0.5	0.4	0.4	
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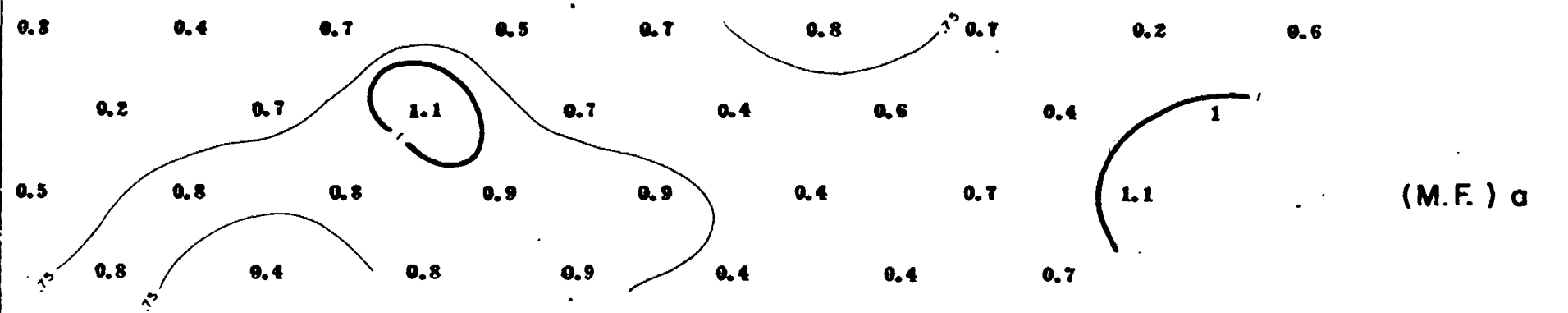
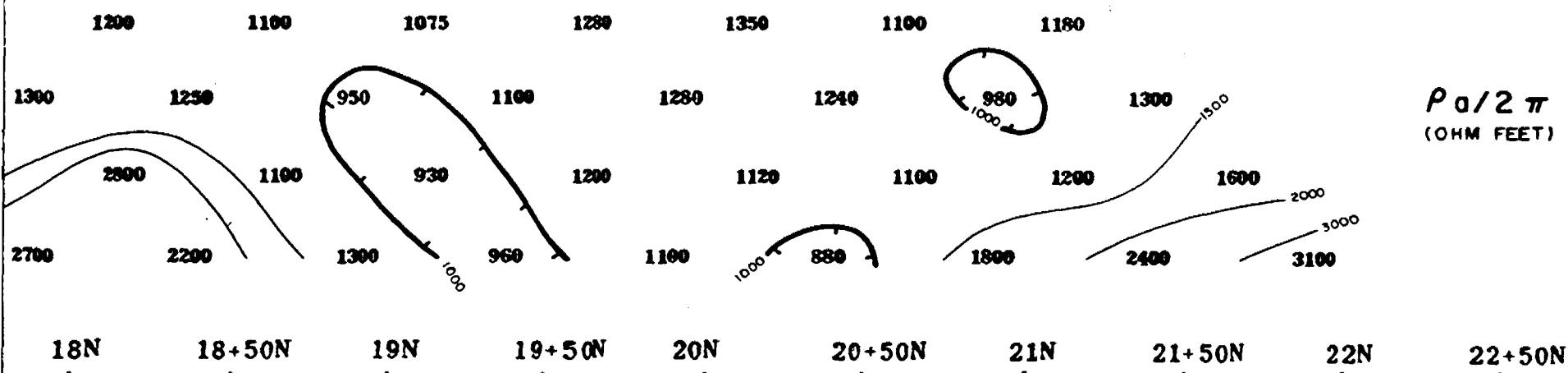
SILVERPLACE MINES
 GOWGANDA AREA - VAN HISE & HAULTAIN TWPS. - M
 Scale - One inch = 50 Feet

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MONTREAL M.D., ONTARIO.



FREQUENCY 0.31 - 5 CPS

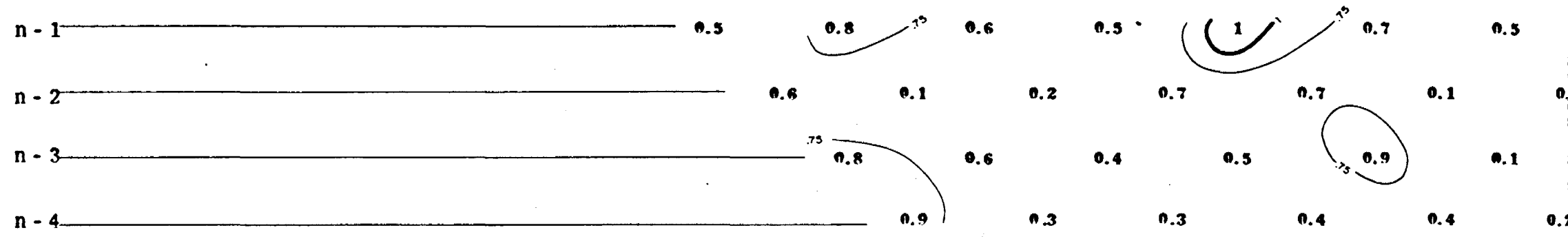
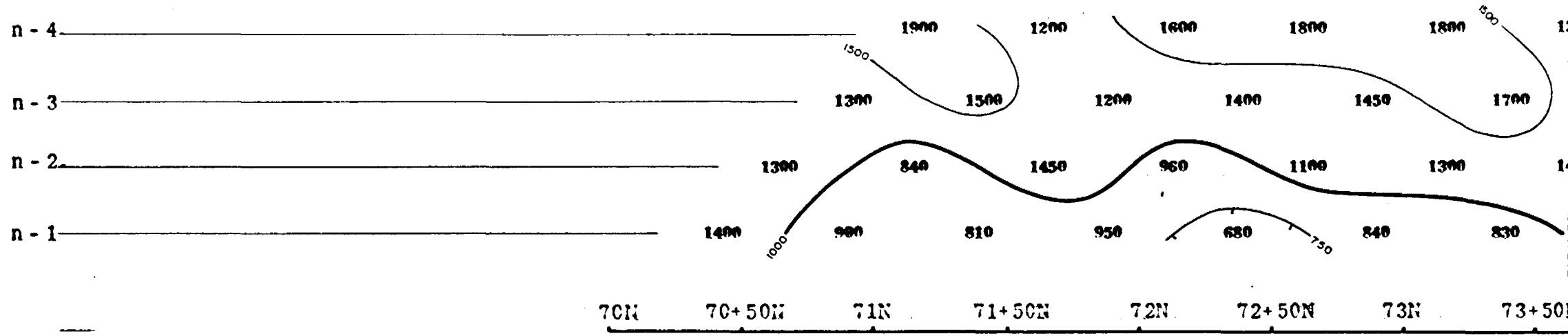
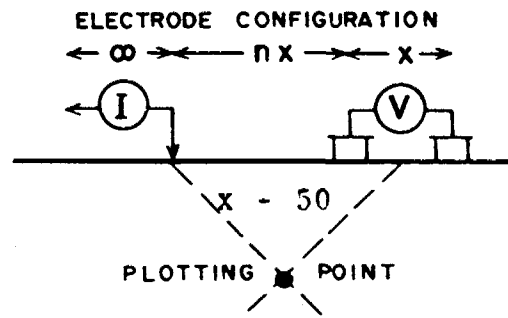
DATE SURVEYED OCT/1964

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DATE *Nov 30/64*

LINE NO.- 6

McPHAR GEOPH INDUCED POLARIZATION A



ANOMALOUS ZONE

POSSIBLE ANOMALOUS ZONE

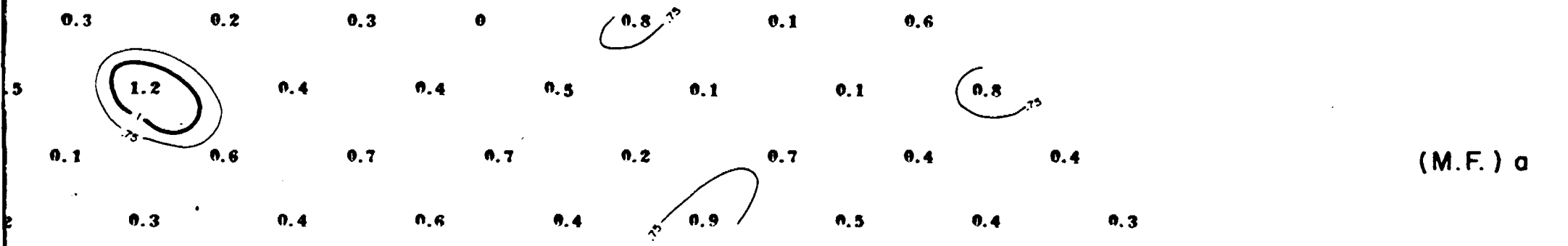
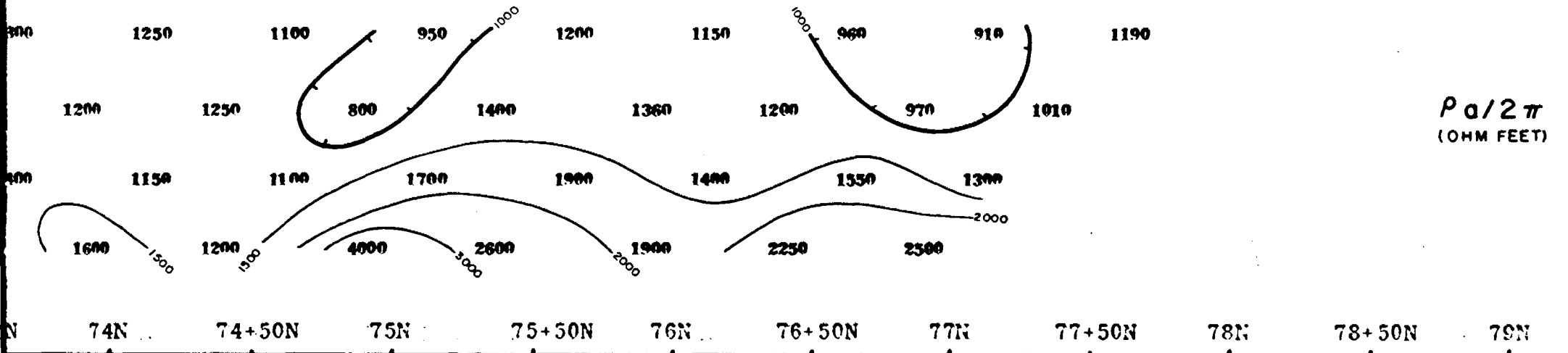
NOTE
LOGARITHMIC CONTOUR INTERVAL

SILVERPLACE

GOWGANDA AREA-VAN HISE & HAULTA

Scale-One inc

PHYSICS LIMITED
 AND RESISTIVITY SURVEY



LINE NO.- B/L

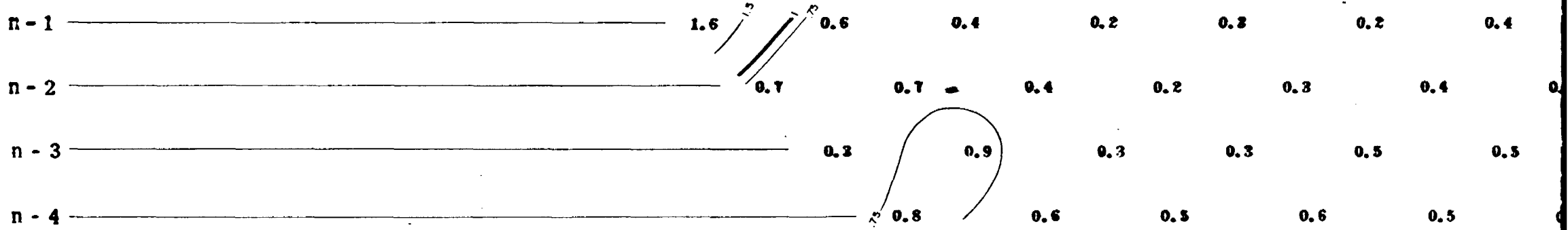
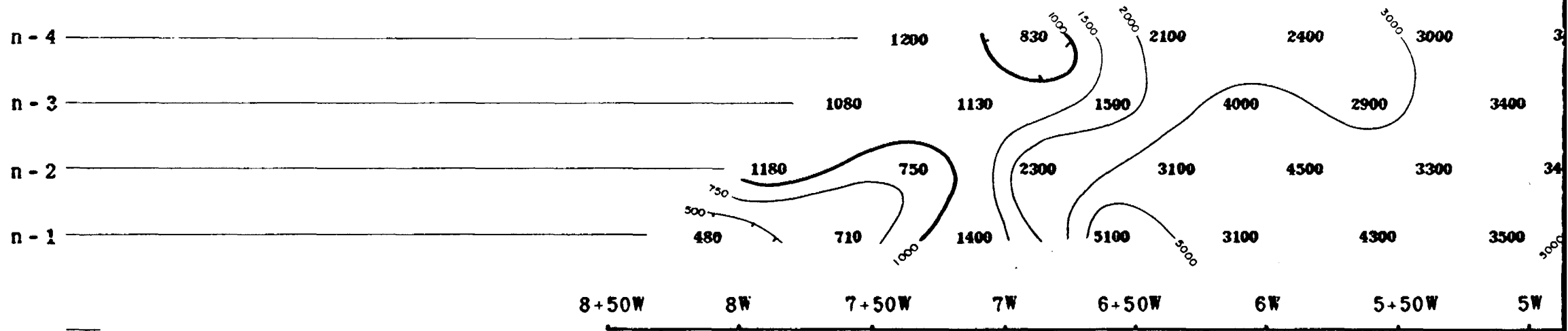
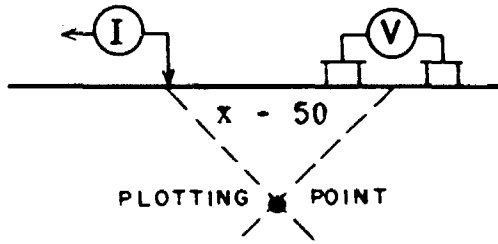
MINES LIMITED
 MAIN TWPS.-MONTREAL M.D., ONTARIO.
 h= 50 Feet

FREQUENCY 0.31-5 CPS
 DATE SURVEYED OCT/1964
 APPROVED *ASS*
 DATE *Nov 30/64*

McPHAR GEOPH INDUCED POLARIZATION AN

ELECTRODE CONFIGURATION

$\infty \leftarrow \pi x \rightarrow x \rightarrow$



ANOMALOUS ZONE

POSSIBLE ANOMALOUS ZONE

NOTE

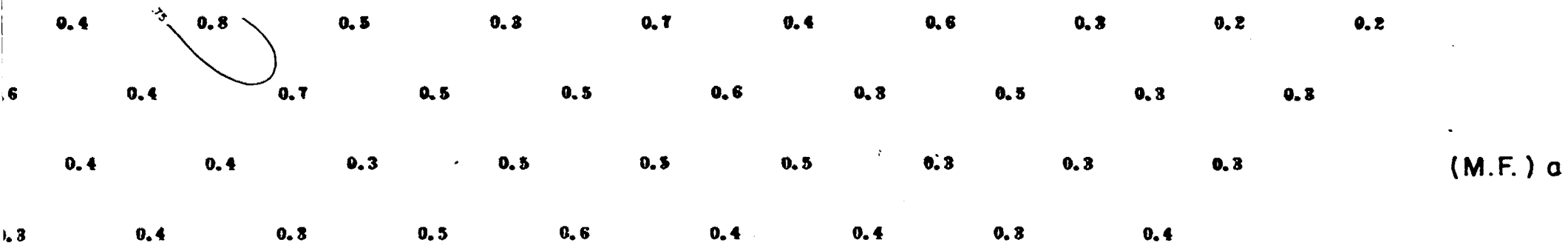
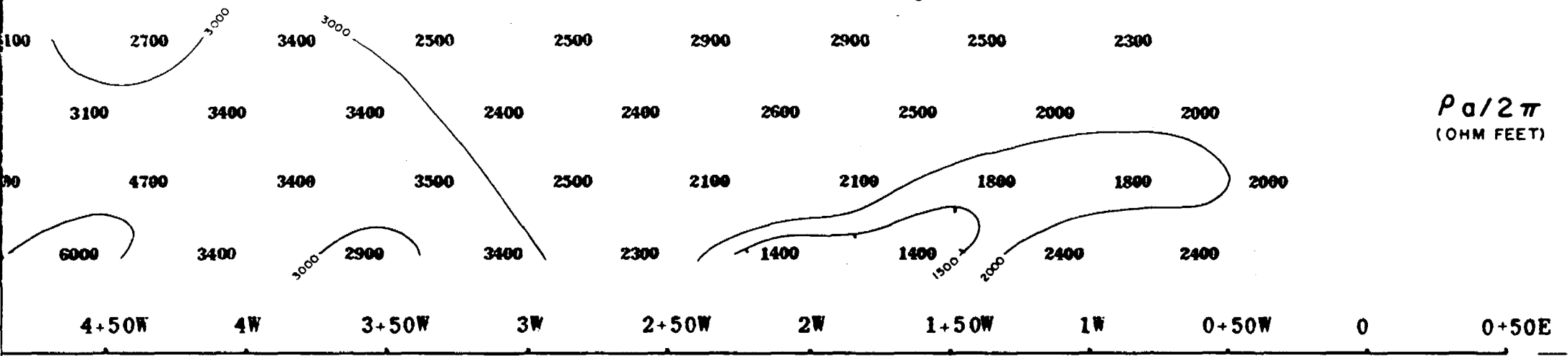
LOGARITHMIC CONTOUR INTERVAL

SILVERPLACE

GOWGANDA AREA-VAN HISE & HAULTA

Scale-One inch

PHYSICS LIMITED
 AND RESISTIVITY SURVEY



FREQUENCY 0.31-5 CPS

DATE SURVEYED OCT/1964

APPROVED *ASB*

DATE Nov 30/64

MINES LIMITED

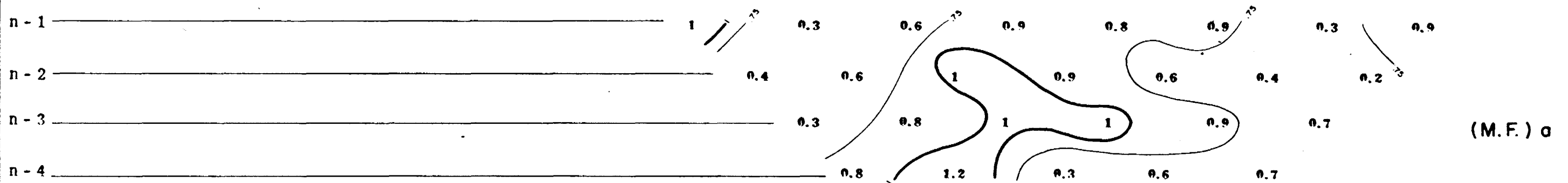
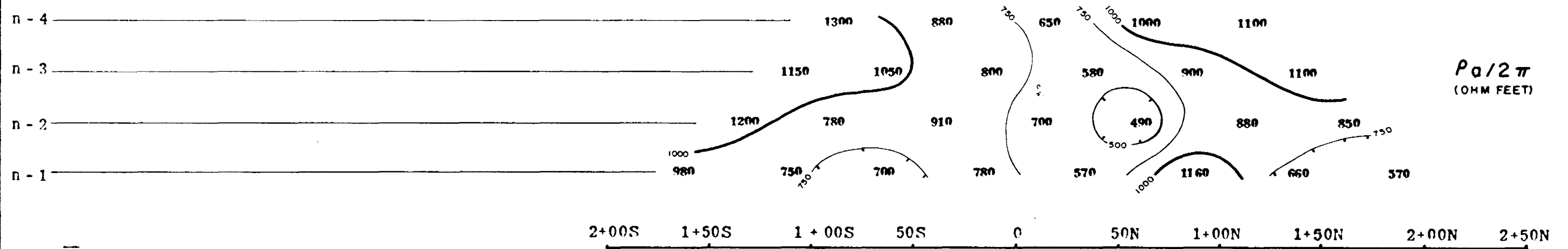
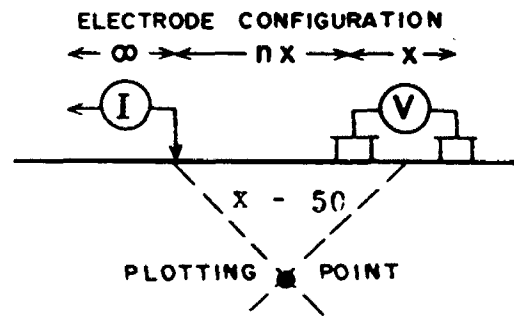
IN TWPS.-MONTREAL M.D., ONTARIO.

h= 50 Feet

LINE NO.- 5

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



ANOMALOUS ZONE

POSSIBLE ANOMALOUS ZONE

NOTE
LOGARITHMIC CONTOUR INTERVAL

SILVERPLACE MINES LIMITED
 GOWGANDA AREA-VAN HISE & HAULTAIN TWPS.-MONTREAL M.D., ONTARIO.

Scale-One inch= 50 Feet

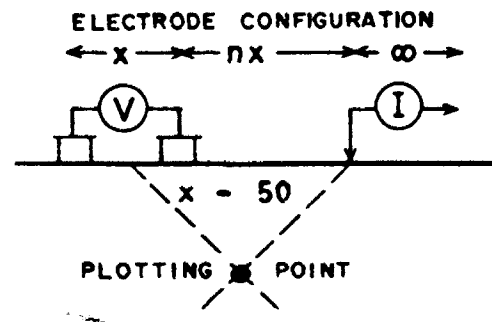
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DATE SURVEYED OCT/1964

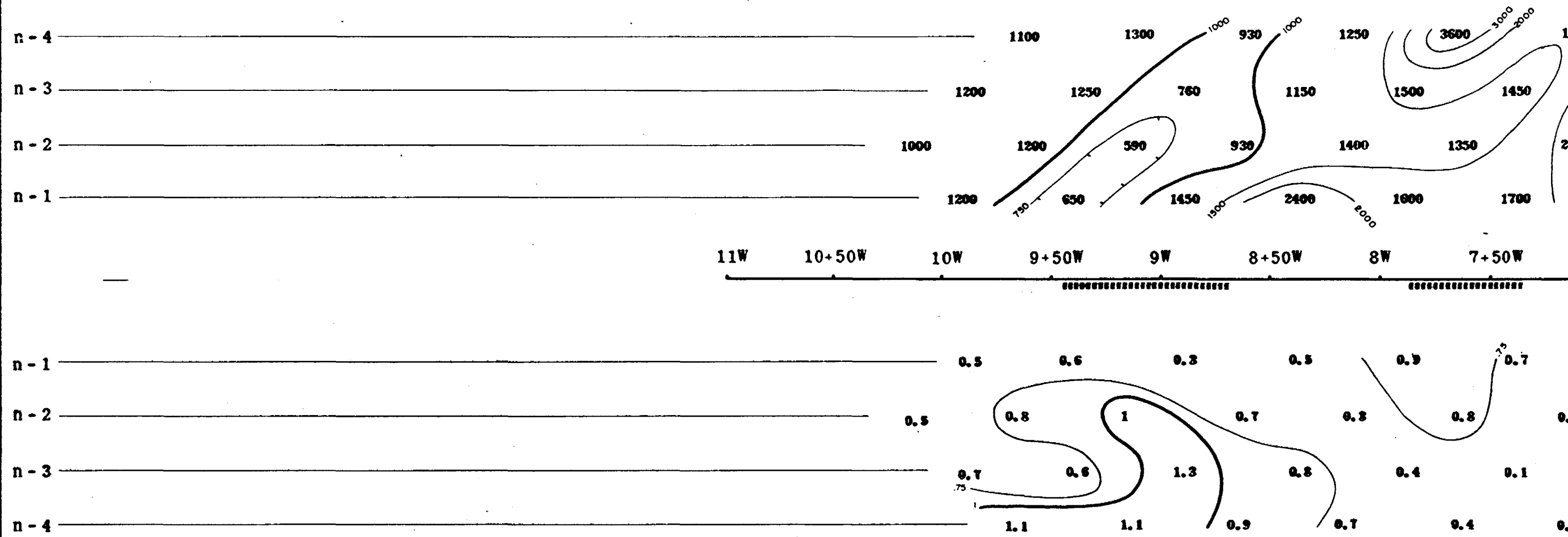
APPROVED *ds*

DATE Nov 30/64

LINE NO.- 3 A



McPHAR
INDUCED POLARIZATION



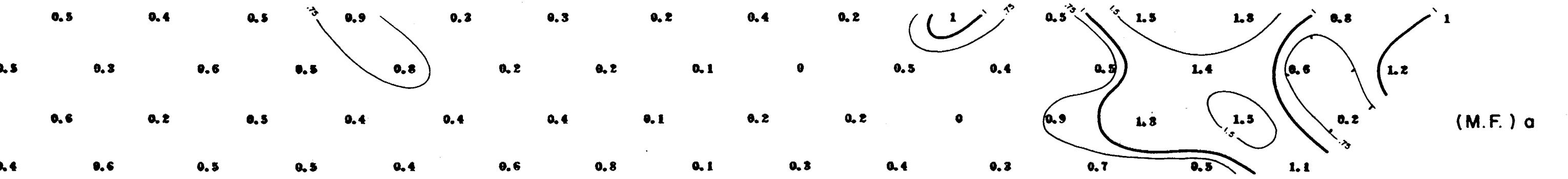
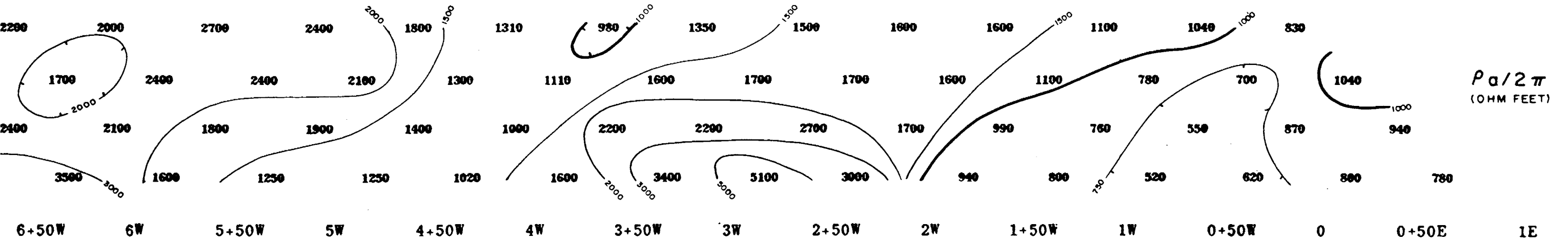
ANOMALOUS ZONE

POSSIBLE ANOMALOUS ZONE

NOTE
LOGARITHMIC CONTOUR INTERVAL

SILVER
GOWGANDA AREA - VAN H

PHYSICS LIMITED
 ON AND RESISTIVITY SURVEY



E MINES LIMITED
 AULTAIN TWPS.- MONTREAL M.D., ONTARIO.

1 inch = 50 Feet

FREQUENCY 0.31 - 5 CPS

DATE SURVEYED OCT/1964

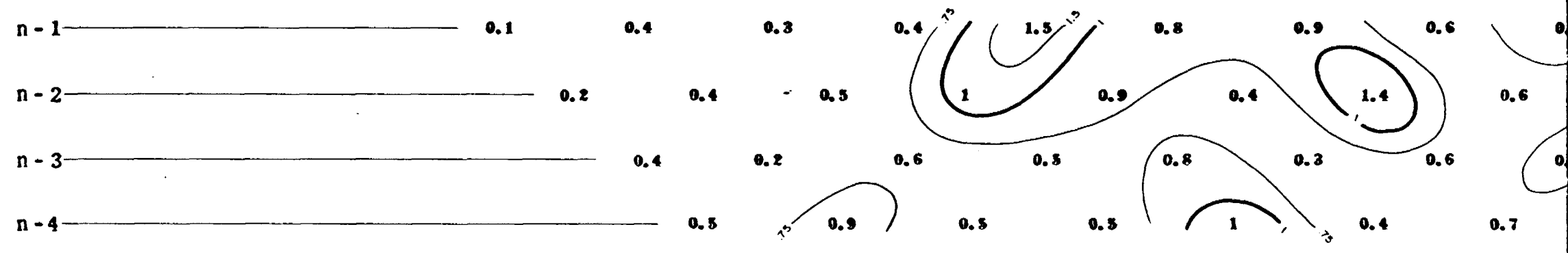
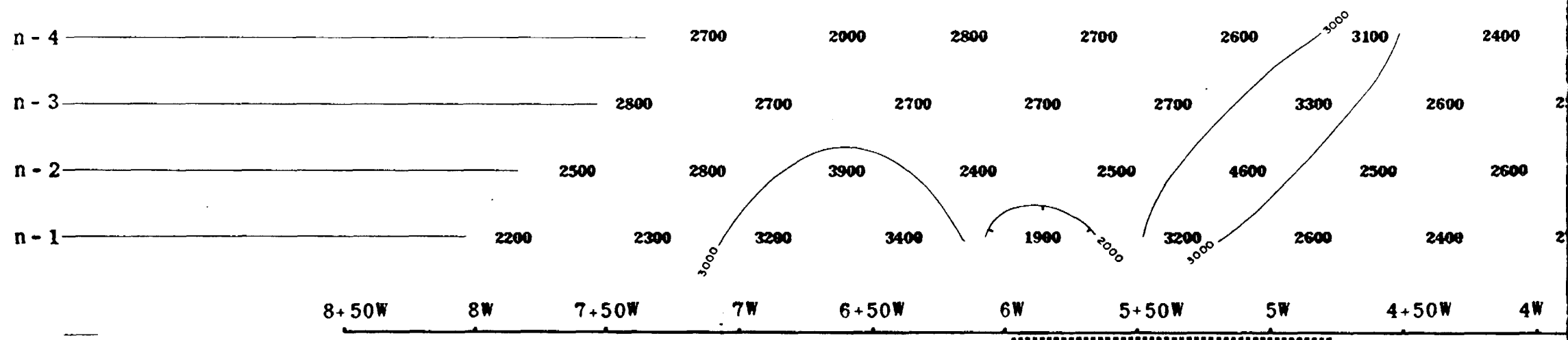
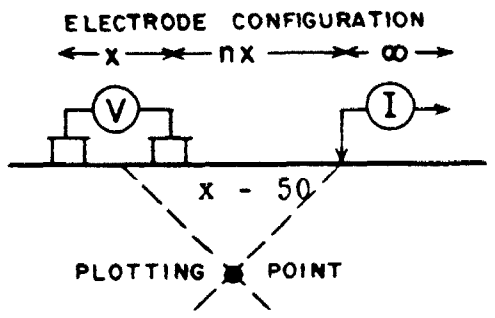
APPROVED *ABS*

DATE Nov 30/64

LINE NO.- 3

McPHAR GEOPH

INDUCED POLARIZATION A



ANOMALOUS ZONE

POSSIBLE ANOMALOUS ZONE

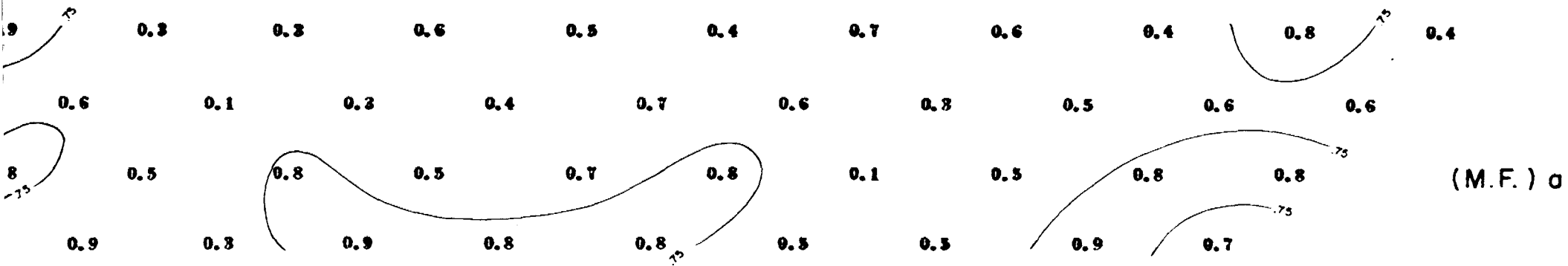
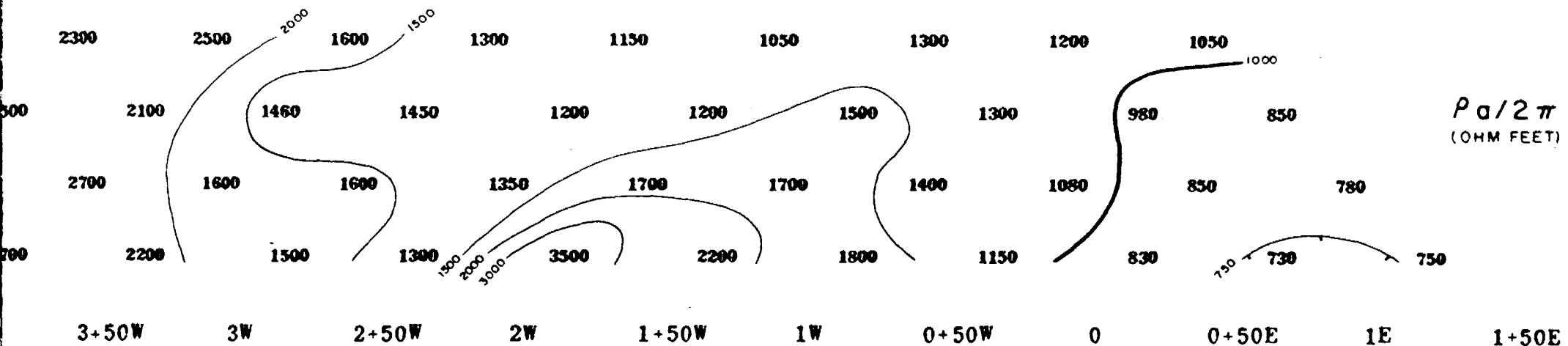
NOTE
LOGARITHMIC CONTOUR INTERVAL

SILVERPLACE

GOWGANDA AREA - VAN HISE & HAULTA

Scale - One inch

PHYSICS LIMITED
 AND RESISTIVITY SURVEY



MINES LIMITED

IN TWPS.-MONTREAL M.D., ONTARIO.

= 50 Feet

FREQUENCY 0.31-5 CPS

DATE SURVEYED OCT/1964

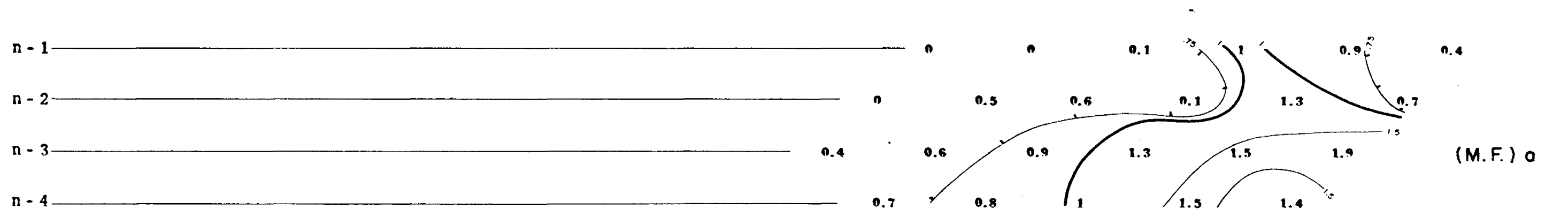
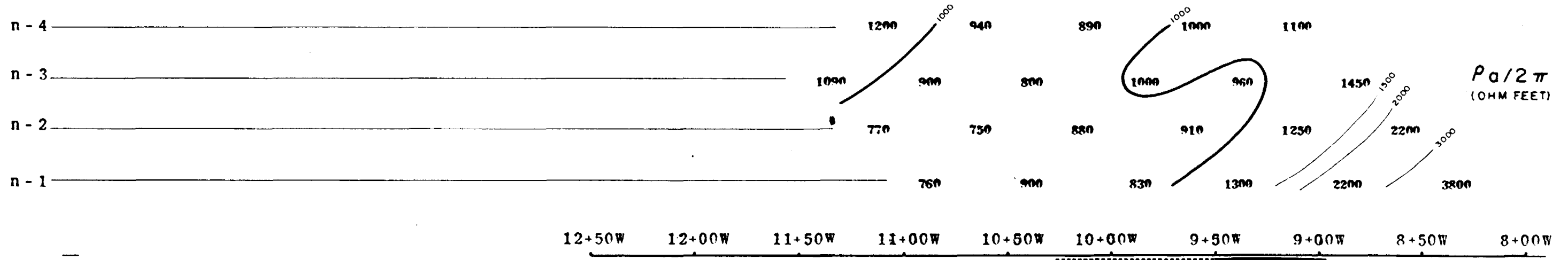
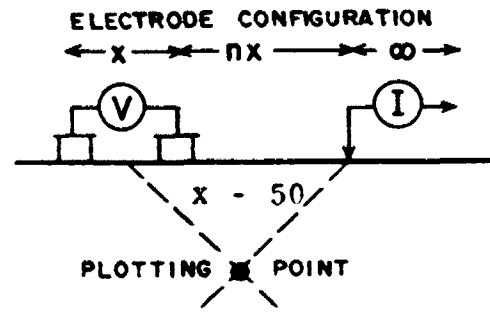
APPROVED *ABS*

DATE *Nov 30/64*

LINE NO-4

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



ANOMALOUS ZONE

POSSIBLE ANOMALOUS ZONE

NOTE
LOGARITHMIC CONTOUR INTERVAL

SILVERPLACE MINES LIMITED

GOWGANDA AREA - VAN HISE & HAULTAIN TWPS. - MONTREAL M.D., ONTARIO.

Scale - One inch = 50 Feet

FREQUENCY 0.31 - 5 CPS

DATE SURVEYED OCT/1964

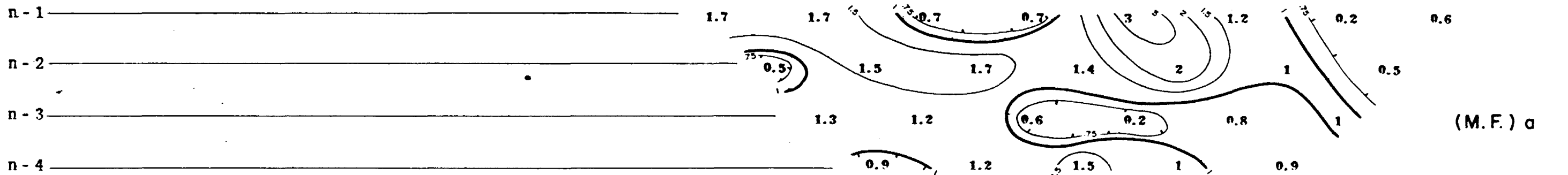
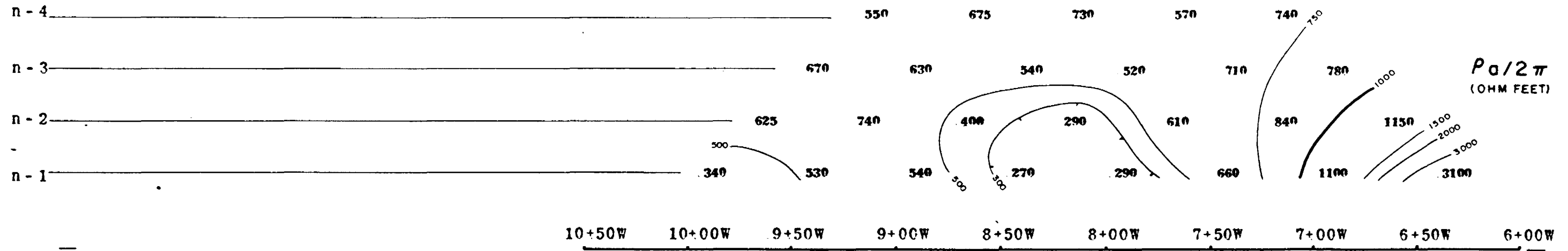
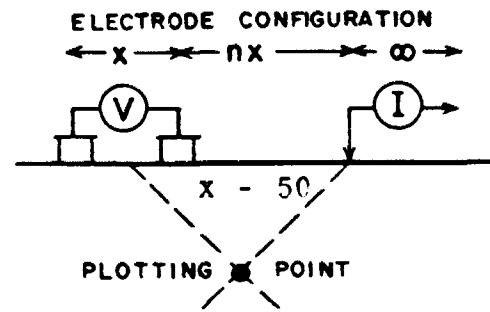
APPROVED *[Signature]*

DATE Nov 30/64

LINE NO. - 108 N

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



LINE NO.-120 N

ANOMALOUS ZONE
 POSSIBLE ANOMALOUS ZONE
NOTE
 LOGARITHMIC CONTOUR INTERVAL

SILVERPLACE MINES LIMITED
 GOWGANDA AREA-VAN HISE & HAULTAIN TWPS.-MONTREAL M.D., ONTARIO.

Scale-One inch= 50 Feet

FREQUENCY 0.31-5 CPS

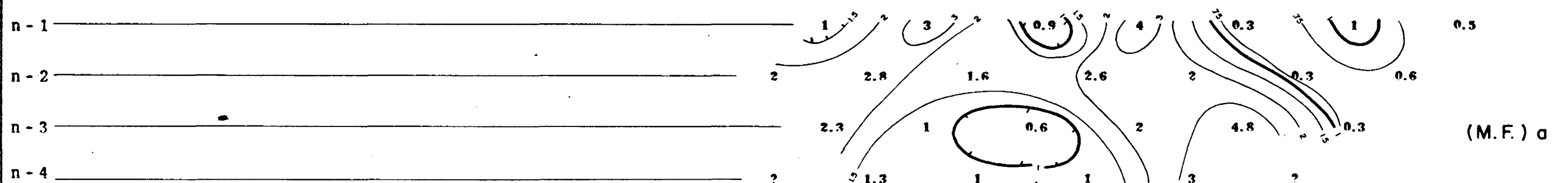
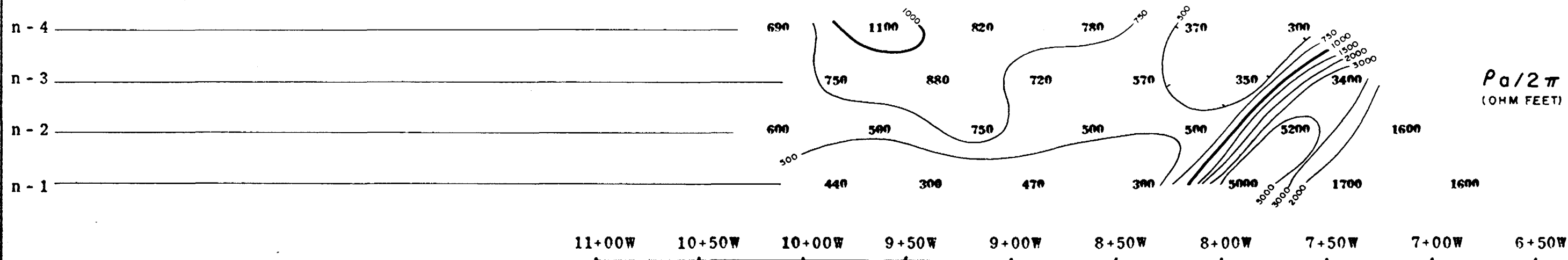
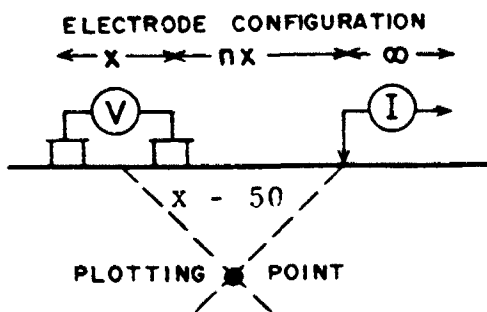
DATE SURVEYED OCT/1964

APPROVED *DBS*

DATE Nov 30/64

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



ANOMALOUS ZONE
 POSSIBLE ANOMALOUS ZONE
 NOTE
 LOGARITHMIC CONTOUR INTERVAL

SILVERPLACE MINES LIMITED
 GOWGANDA AREA-VAN HISE & HAULTAIN TWPS.-MONTREAL M.D., ONTARIO.

Scale-One inch= 50 Feet

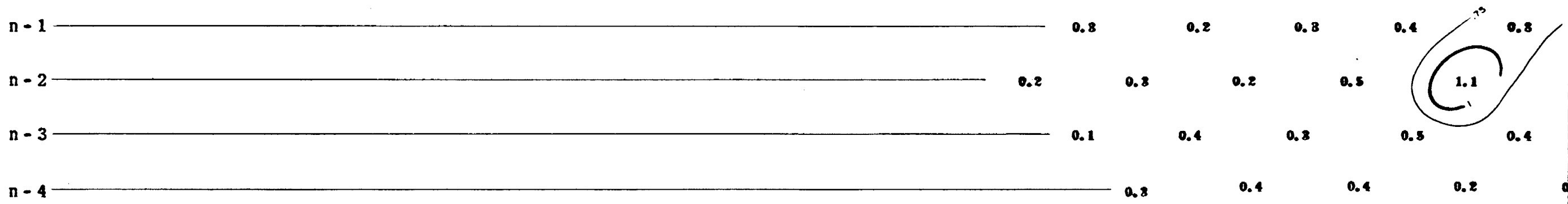
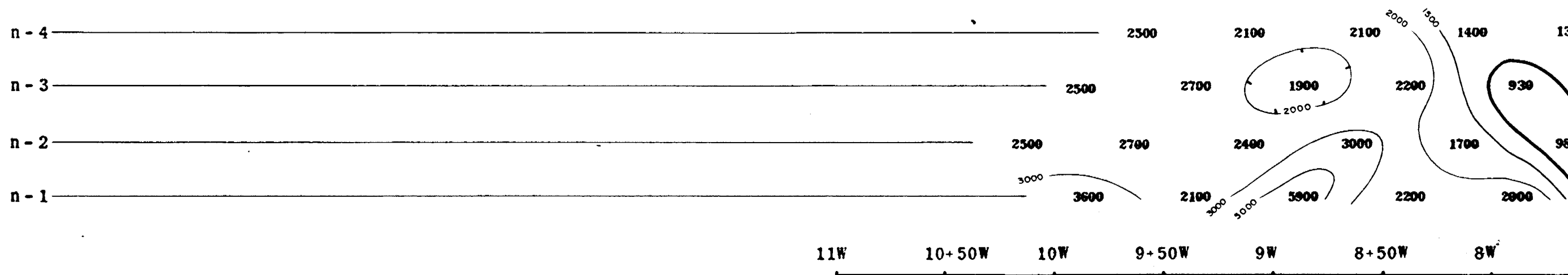
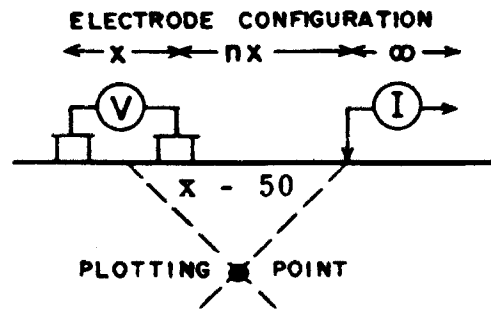
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DATE SURVEYED OCT/1964

APPROVED *[Signature]*

DATE *Nov 30/64*

LINE NO.-117N



ANOMALOUS ZONE

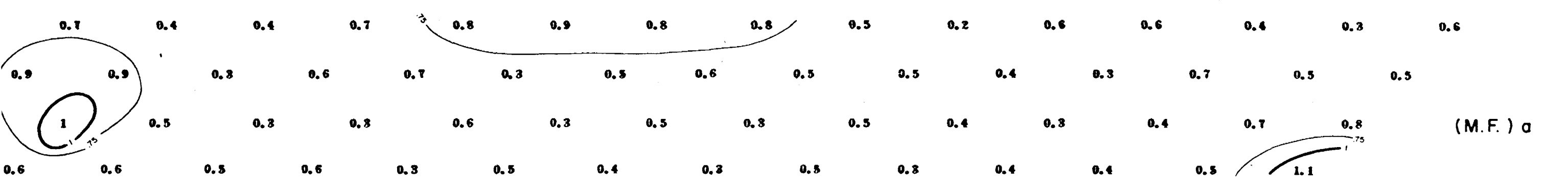
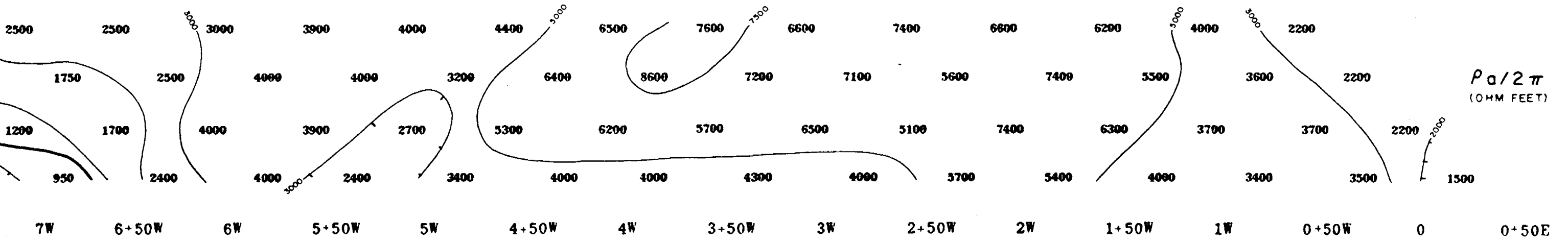
POSSIBLE ANOMALOUS ZONE

NOTE
LOGARITHMIC CONTOUR INTERVAL

SILVER
GOWGANDA AREA - VAN H

PHYSICS LIMITED

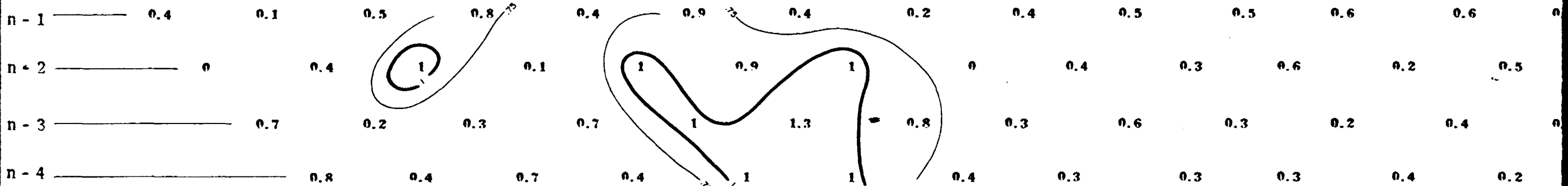
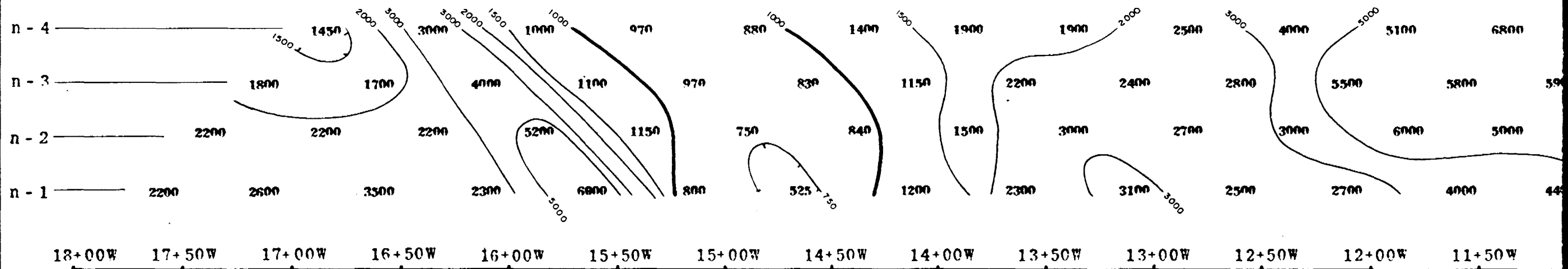
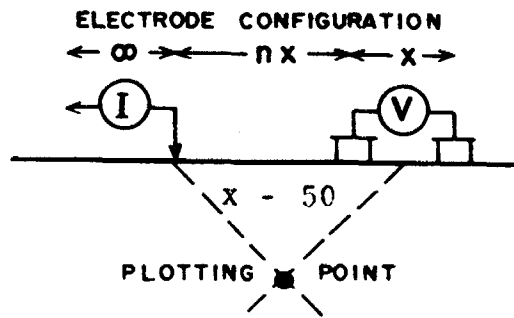
ION AND RESISTIVITY SURVEY



E MINES LIMITED
 MOUNTAIN TWPS.- MONTREAL M.D., ONTARIO.
 1 inch = 50 Feet

FREQUENCY 0.31-5 CPS
 DATE SURVEYED OCT/1964
 APPROVED *[Signature]*
 DATE *Nov 30/64*

LINE NO.-9



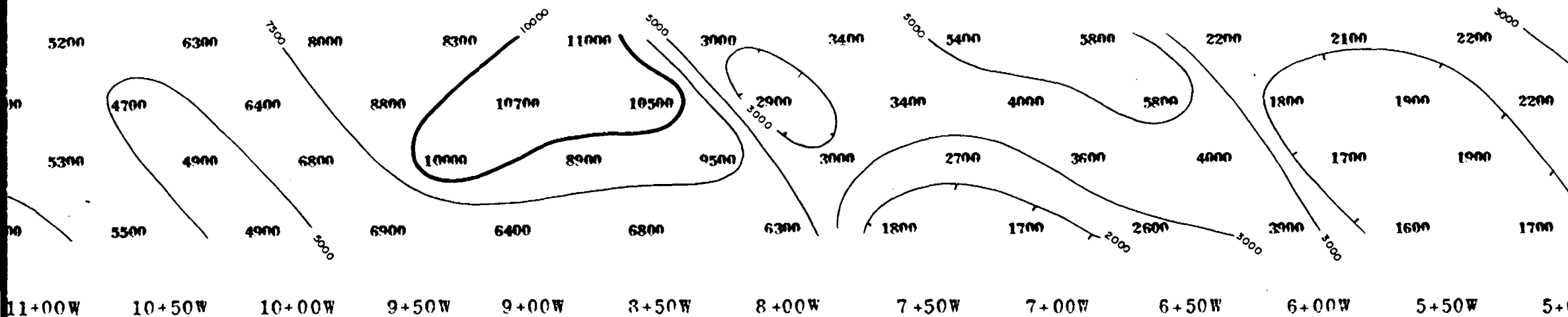
ANOMALOUS ZONE

POSSIBLE ANOMALOUS ZONE

NOTE
LOGARITHMIC CONTOUR INTERVAL

McPHAR GEOPHYSICS LIMITED

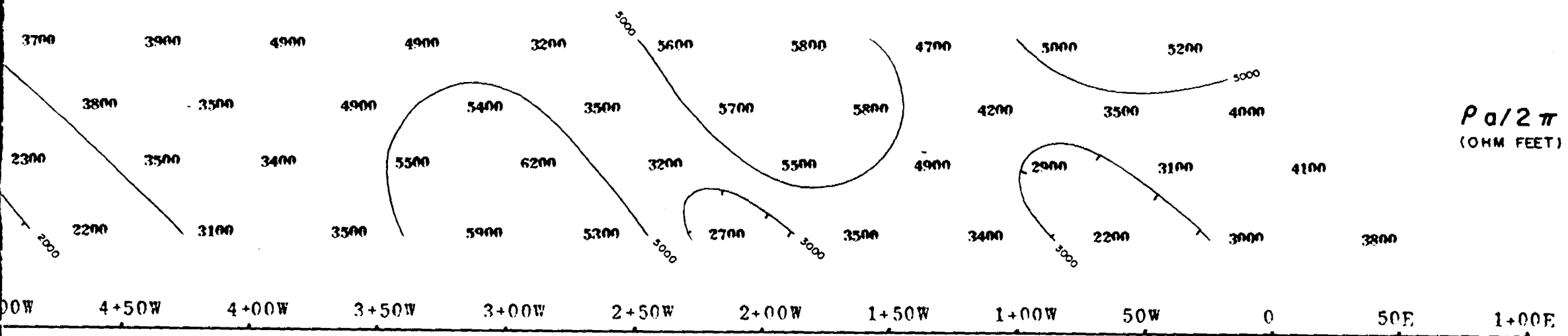
INDUCED POLARIZATION AND RESISTIVITY SURVEY



SILVERPLACE MINES LIMITED

GOWGANDA AREA—VAN HISE & HAULTAIN TWPS.—MONTREAL M.D., ONTARIO.

Scale—One inch= 50 Feet



	4+50W	4+00W	3+50W	3+00W	2+50W	2+00W	1+50W	1+00W	50W	0	50E	1+00E
0.4	0.5	0.5	0.2	0.2	0.4	0.4	0.4	0.4	0.4	0.2	0.2	
0.3	0.5	0.4	0.2	0.2	0.4	0.2	0.2	0.3	0.2	0.2		
0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.3	0.2		
0.3	0.2	0.2	0.1	0.3	0.1	0.2	0.2	0.2	0.2	0.2		

(M.F.) a

FREQUENCY 0.31-5 CPS

DATE SURVEYED OCT/1964

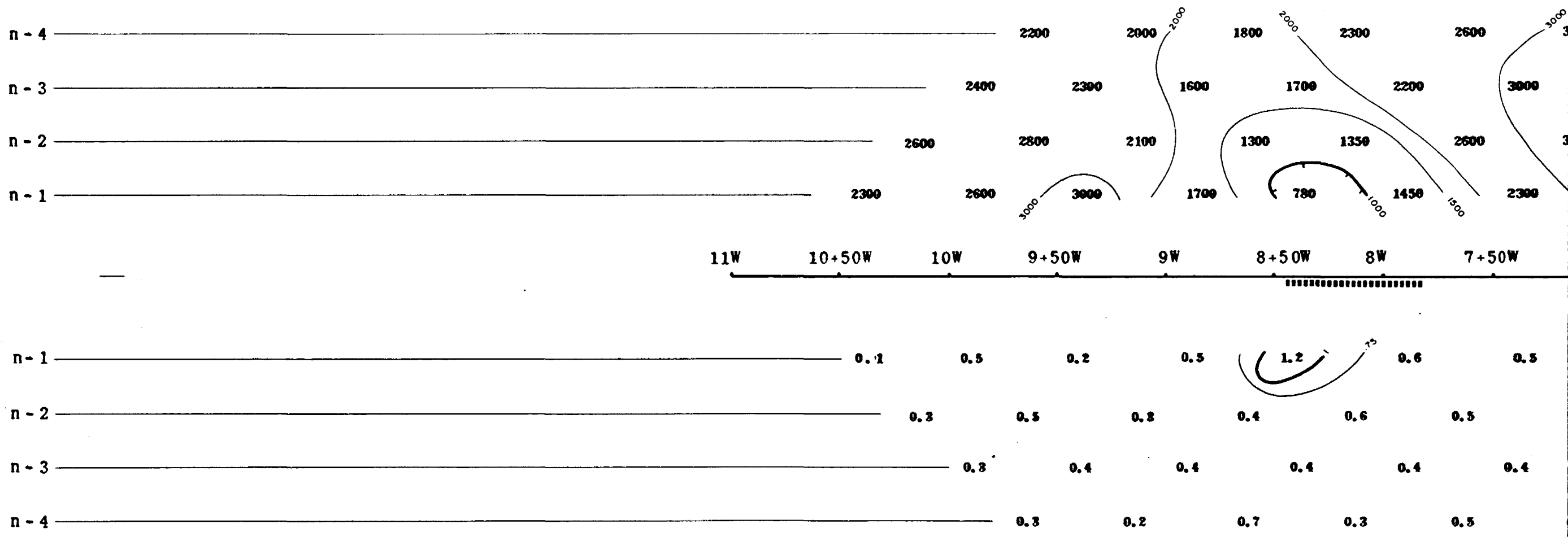
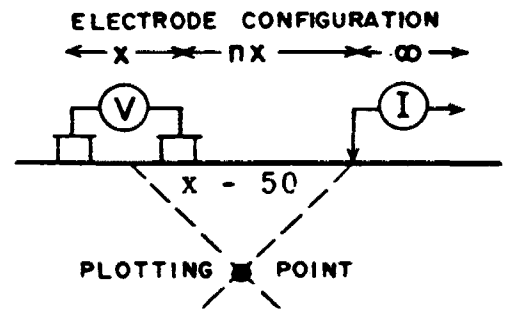
APPROVED *[Signature]*

DATE Nov 30/64

LINE NO-10

McPHAR

INDUCED POLA



ANOMALOUS ZONE

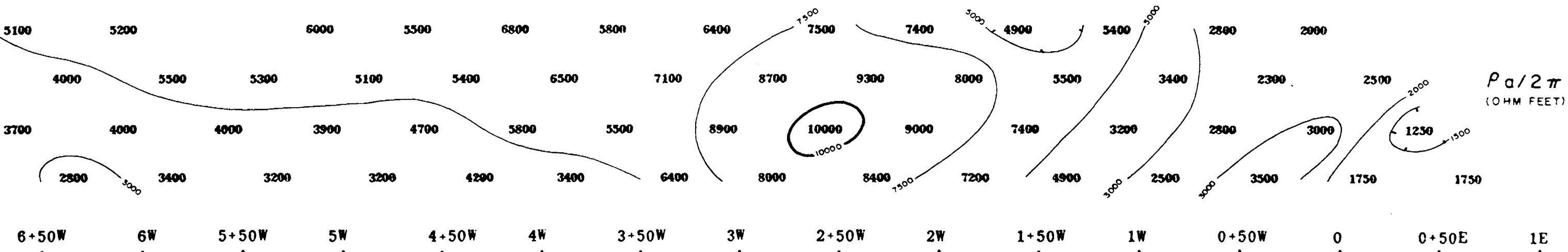
POSSIBLE ANOMALOUS ZONE

NOTE
LOGARITHMIC CONTOUR INTERVAL

SILVER

GOWGANDA AREA - VAN H

PHYSICS LIMITED
 ON AND RESISTIVITY SURVEY



0.5	0.2	0.5	0.4	0.3	0.8	0.4	0.3	0.3	0.2	0.2	0.2	0.1	0.7	0.2
0.3	0.4	0.4	0.4	0.4	0.3	0.4	0.3	0.2	0.1	0.2	0.3	0.3	0.3	0
0.4	0.3	0.4	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.1	(M.F.) a
0.2	0.3	0.2	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.3	0.3	0.4	0.3	

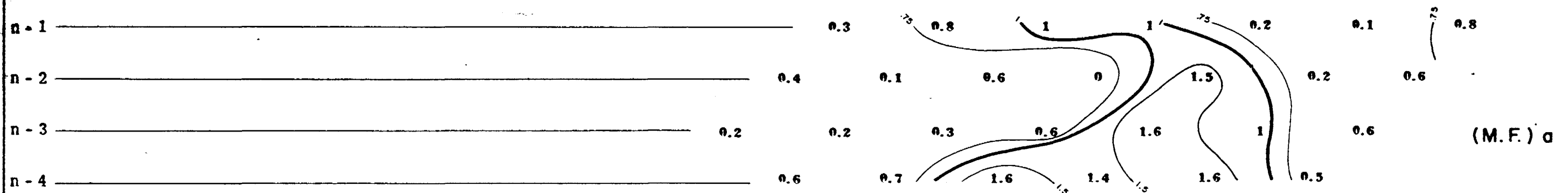
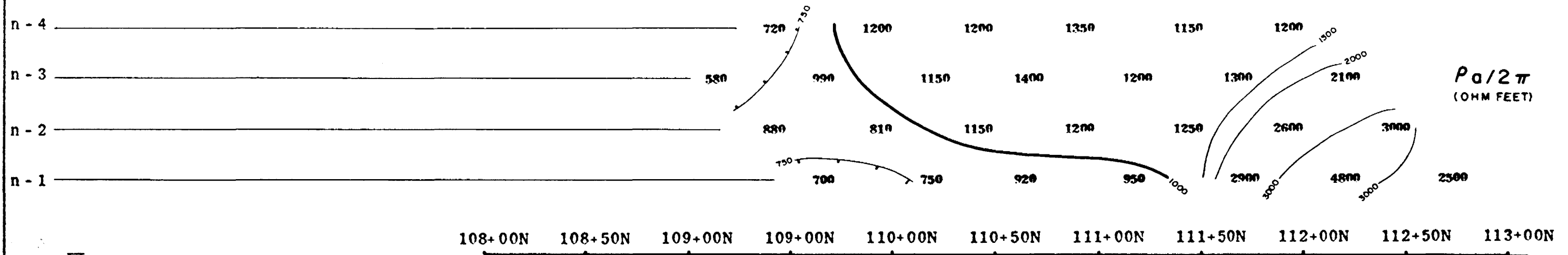
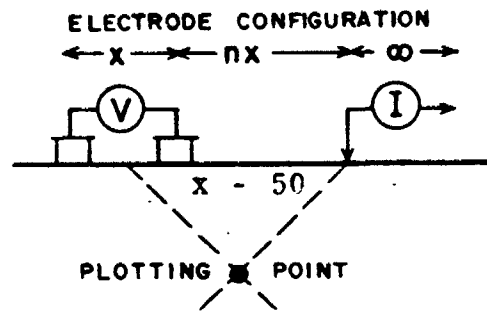
E MINES LIMITED
 AULTAIN TWPS.- MONTREAL M.D., ONTARIO.
 1 inch = 50 Feet

FREQUENCY 0.31-5 CPS
 DATE SURVEYED OCT/1964
 APPROVED *[Signature]*
 DATE *Nov 30, 1964*

LINE NO.- II

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



ANOMALOUS ZONE
 POSSIBLE ANOMALOUS ZONE
 NOTE
 LOGARITHMIC CONTOUR INTERVAL

SILVERPLACE MINES LIMITED
 GOWGANDA AREA - VAN HISE & HAULTAIN TWPS. - MONTREAL M.D., ONTARIO.

Scale - One inch = 50 Feet

FREQUENCY 0.31 - 5 CPS

DATE SURVEYED OCT/1964

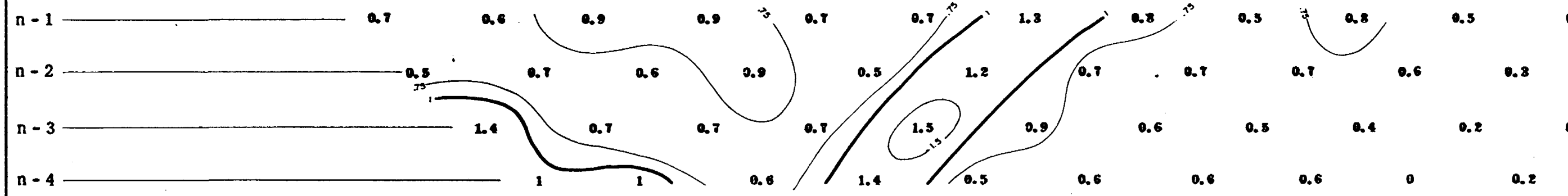
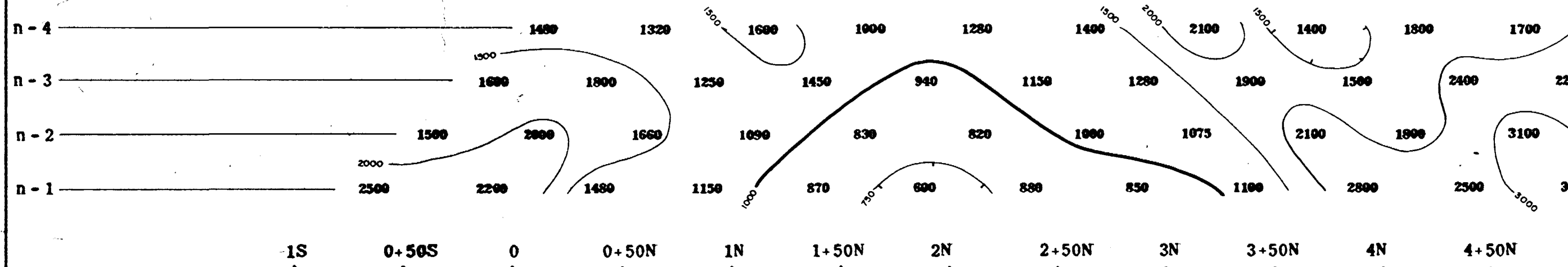
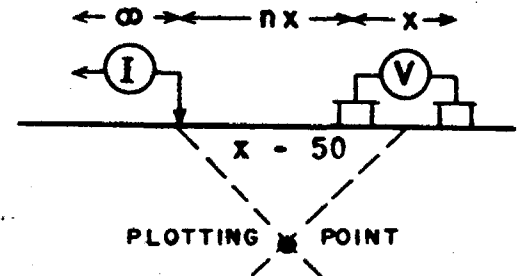
APPROVED *ABJ*

DATE *Nov 30/64*

LINE NO. - B/L

McPHAR INDUCED POLA

ELECTRODE CONFIGURATION



ANOMALOUS ZONE

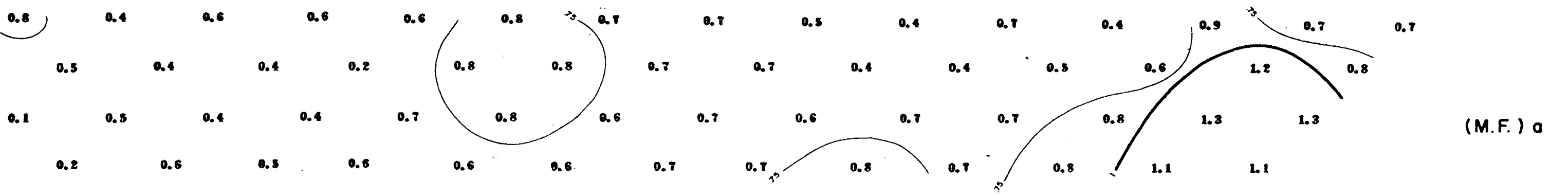
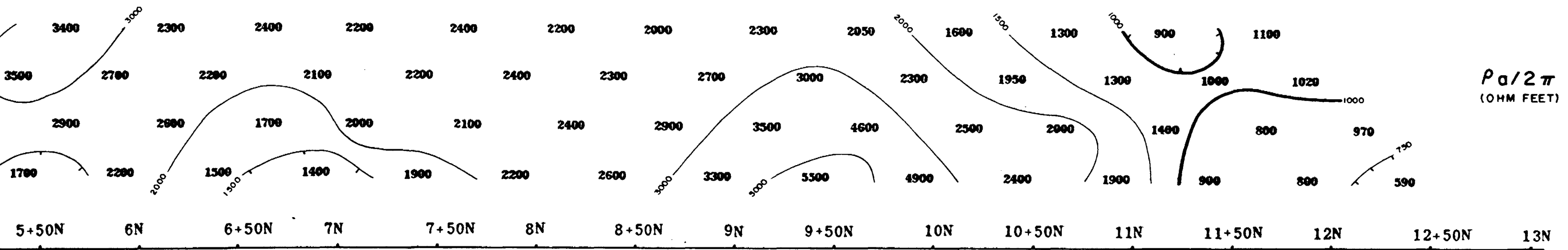
POSSIBLE ANOMALOUS ZONE

NOTE
LOGARITHMIC CONTOUR INTERVAL

SILVER
GOWGANDA AREA-VAN H

PHYSICS LIMITED

ION AND RESISTIVITY SURVEY



E MINES LIMITED
 AULTAIN TWPS.-MONTREAL M.D., ONTARIO.
 ne inch= 50 Feet

FREQUENCY 0.31-5 CPS
 DATE SURVEYED OCT/1964
 APPROVED *[Signature]*
 DATE Nov 30/64

LINE NO.-2



41P10NE0022 63.1354 HAULTAIN

020

REPORT ON
SILVERPLACE MINES LIMITED
VAN HISE AND HAULTAIN TOWNSHIPS PROPERTY
GOWGANDA AREA, ONTARIO

Silverplace Mines Limited holds 32 contiguous, unpatented mining claims situated along the boundary between Van Hise and Haultain Townships, District of Temiskaming, Ontario.

This report deals with a geological survey of 11 of those claims, carried out during the month of October, 1963.

PROPERTY, LOCATION, ACCESS:

The 11 claims herein considered cover approximately 440 acres of which approximately 85 acres are covered by the waters of Obushkong and Davidson Lakes. The claims are numbered MR 30654, MR 30653, MR 30645 to MR 306^{50RR}~~5~~ inclusive and MR 30794 and MR 30796 inclusive.

The three southernmost claims are in Haultain Township along the east shore of Obushkong Lake; the eight Van Hise Township claims lie along and west of Davidson Lake.

The property lies about 3 miles north of Gowganda Townsite and can be reached by following a road from Highway 564, one mile north to Edith Lake, then following Edith Lake for one mile to the short portage to Obushkong Lake.

The eleven mapped claims lie along a low, north trending, diabase ridge with maximum relief of about 50 feet. The ridge falls off on either side to the lakes or to low swampy areas.

To the south the ridge is bordered by sharp north trending topographic linears. Along its entire length the ridge is broken by minor but abrupt east to west linears.

WORK PERFORMED:

A grid of east to west picket lines was established from three north-south base lines. The picket lines were cut every 300 feet along the base lines.

Using the line grid as control the outcrop geology was mapped and the results plotted at a scale of 200 feet to one inch.

A total of 11.25 miles of control and picket lines were established.

GENERAL GEOLOGY:

All of the consolidated rocks of the area are Precambrian in age.

The Table of Formations, after Ontario Department of Mines Report 64, Part 5, is as follows:

KEWEENAWAN: Olivine and quartz diabase dikes
Intrusive contact
Nipissing quartz diabase sill
Intrusive contact

HURONIAN (COBAIT SERIES):

Lorrain Formation:
Conglomerate, arkose, quartzite
Disconformity

Gowganda Formation:

Conglomerate, greywacke, quartzite
Great Unconformity

MATACHEWAN: Quartz diabase dikes
Intrusive contact

ALGOMAN: Granite, syenite, gneiss
Intrusive contact

KEEWATIN: Acid lavas and intrusives
Basic to intermediate lavas and pyroclastics.

The older Keewatin series of highly altered and steeply dipping basic and intermediate lavas and tuffs, and the chlorite, mica and hornblende schists derived from the volcanics, are well exposed in southern Van Hise and Haultain Townships, and in a narrow band running east from Davidson Lake across Haultain Township.

GENERAL GEOLOGY: (Cont'd.)

The Algonian granitic rocks which intruded the Keewatin are exposed north of the volcanics in Van Hise, Haultain and the townships to the north. Matachewan quartz diabase intrudes both the volcanics and granites, generally as narrow, north trending dikes.

Most of the Gowganda area is covered by Huronian sediments which lie unconformably, generally at low angles, over the volcanics and granites. A half mile to one and one half mile wide band of sediments extends north from Gowganda Townsite through Van Hise Township along the Haultain Township boundary. These rocks are mostly Lorrain quartzites, arkose and fine and pebble conglomerates except along the flanks of the sedimentary band and north of the Montreal River where the exposures are of the underlying Gowganda formation of tillite, greywacke, and fine quartzite.

In Keweenawan times extensive masses of "Nipissing" quartz diabase intruded all of the above rocks; followed by younger quartz and olivine diabase dikes.

The Nipissing diabase was generally intruded as a sill or series of sills but occurs as steep dipping dikes in places in the Gowganda area.

Most of the silver of the Gowganda area has been won from oreshoots in veins and their wall rocks which occur in joints, fractures, shears and faults in the Nipissing diabase sills, generally but not necessarily at or near the upper sill contact.

A narrow, north trending intrusion of Nipissing diabase follows the eastern edge of the sedimentary band mentioned above. From Gowganda Townsite northward the prominent Gowganda Lake normal fault runs along the east contact of the diabase and is assumed to have dropped the diabase sill downward some 500 feet. This fault continues northward along or near the diabase contact, into Davidson Lake where it may die out or terminate against a north-northeast

GENERAL GEOLOGY: (Cont'd.)

trending fault that appears to lie along the offset in Obushkong Lake.

There would appear to be a strong fault under the North Arm of Gowganda Lake which strikes north to the north end of Obushkong Lake where it may die out at a northeast striking minor fault.

Some faults in the area are seen to be older than the Huronian and many are known to be younger than the latest quartz diabase dikes. Some of the faults that have cut the Nipissing diabase would appear to be recurrent movements along fault zones that may have controlled the emplacement of the Nipissing diabase dikes.

GEOLOGY OF THE PROPERTY:

The claims considered herein cover a two and one half mile length of the narrow north striking diabase intrusion mentioned above, and the sediments found along its flanks.

Along the two southern claims of the group the Nipissing diabase appears sill-like along the contact between somewhat gneissic Algoman syenite to the east and Lorrain quartzite to the west. There are no good contact exposures but the diabase appears to dip shallowly to the east. Its surface exposure varies from 700 feet to 1,100 feet wide.

The sediments dip from 5° to 18° east and strike towards the north except near the south boundary of the group where the quartzites strike northeast and dip at 10° to the southeast.

Moving north, the diabase swings to the west, narrows down to from 500 feet to 200 feet wide, and trends sinuously north as a steep dipping dike, intruding Lorrain sediments which dip flatly towards the east. Near the west contact of the dike on claim MR 30649 the sediments may have been tilted by the intrusion to dip at 30° to the west.

GEOLOGY OF THE PROPERTY: (Cont'd.)

The Gowganda sediments which occur east of claim MR 30796 appear to have been tilted steeply to the east. The contact relationships are somewhat complex in this area and were not fully studied as the contact lies beyond the control grid.

A diamond drill hole on claim MR 30647 and two holes on claim MR 30645 prove the almost vertical attitude of the diabase dike.

The dike appears to end abruptly at the Montreal River, the north boundary of the property. O.D.M. Map 30b indicates Gowganda sediments overlying granite occur immediately north of the property on the north side of the river.

From claim MR 30648 northward the contact rocks are Lorrain quartzite to the west and an arkosic Lorrain quartzite to the east. This sequence is reversed on Claim MR 30653; the most northern contact rocks may be arkose to the west and conglomerate to the east. In this area the diabase rises abruptly from low ground and swamp.

During the course of the mapping and from examination of core from three drill holes the writer felt that the diabase as presently seen resulted from two or more intrusions of Nipissing diabase. Evidence for such repeated intrusions is difficult to indicate at the scale of the mapping; but the prominent shearing along the centre of the dike on the five northern claims may lie along a diabase to diabase contact. "Aplite" and granophyre seen in the core and on surface may in fact result from inclusions of adinole derived from the sediments. See also the diabase east of the fault at the east boundary of claim MR 30796.

STRUCTURAL GEOLOGY:

The prominent faults on each side of Obushkong Lake have been mentioned. The Gowganda Lake fault lies within the diabase as it nears Davidson Lake. It is felt that a number of northeast trending crossfaults lie between or cross the two prominent north striking faults.

In places the fault zones may be occupied by the northeast striking diabase indicated on O.D.M. Map 30b cutting the north trending band of Lorrain sediments.

The northernmost of these occurrences would lie on strike of the fault assumed to cut across claims MR 30645 and MR 30653. This fault is indicated by topography and abrupt change on strike of sedimentary strata. There is no direct evidence that it cuts the diabase.

A similar cross fault is postulated through claim MR 30648, on topographic evidence. An "aplite" dike conforming to the strike of the diabase dike is seen at the centre of the diabase at this point.

There is some structural and topographic evidence for another such fault through the sediments of claim MR 30794. Minor aplite and diabase dikes occur near the trace of the postulated fault.

Prominent north trending shears occur along the centre of the diabase dike from claim MR 30648 northward for one and one half miles. Many of these shears are filled with calcite veins with attendant cobaltite, chalcopryrite and pyrite. Pyrite and chalcopryrite were noted in this area in east to west shearing.

Shearing is not as prominent in the diabase to the south but some northwest, northeast and north striking shears were noted, particularly on claim MR 30794. These were not mineralized except for a twelve inch calcite vein at the northeast corner of the claim.

STRUCTURAL GEOLOGY: (Cont'd.)

On claims MR 30795 and MR 30796 a number of calcite and quartz calcite veins were seen in northeast striking fractures. One of these showed cobalt bloom.

The many minor east-west linears in the diabase probably indicate shearing or fracturing.

ECONOMIC GEOLOGY:

The vein occurrences have been mentioned above. Mr. L. G. Phelan, Consulting Geologist, in a private report to the company, reports minor silver values from veins in the vicinity of claim MR 30645.

In general, the mineralized veins which are uncovered occur mainly towards the centre of the diabase dike or rarely at or near its contacts. The most impressive of these veins are never more than 600 feet from the postulated cross faults mentioned above, if measurements are made normal to the strike of the faults. The most impressive mineralized area occurs between the cross faults on claims MR 30648 and MR 30653.

Similarly the veins to the south in the "sill" portion of the diabase lie close to the strike projection of the most southern postulated cross fault.

CONCLUSIONS:

Some silver is known to occur in calcite veins occupying shears and fractures in Nipissing diabase on the property of Silverplace Mines Limited.

The diabase has been demonstrated to be dike-like rather than a typical sill. Prominent shear zones occur towards the centre of the dike within the vicinity of postulated cross faults.

The search for further mineralized veins should be concentrated along the shear zones and their possible extensions.

CONCLUSIONS: (Cont'd.)

Since these zones may occur along contacts of repeated diabase intrusions, some detailed surface work indicating change in grain size and tendencies towards change to "granophyric" diabase could be of value in finding the zones.

RECOMMENDATIONS:

Mr. L.G. Phelan, the company's Consulting Geologist, recommended the geological mapping as a guide towards localizing areas for experimental induced polarization surveys in an effort to detect metalliferous portions of vein zones.

The areas conducive to such work that are immediately evident are:

Claim MR 30653	Central zone
Claim MR 30645	Central zone and west contact
Claims MR 30647 - 30648	Central zone and east contact
Claims MR 30795 - 30796	"Central zones" along base line

Of speculative interest are the overburden covered areas;

- from 900W on line 72 to the east contact of the diabase on line 81, and
- from 1,050W on line 78 to the east contact on line 87, and
- from 950W on line 87 to 700W on line 93.

Respectfully submitted,



Robert Liard, P.Eng.

508-80, Richmond Street West
Toronto 1, Ontario
October 7th, 1964



Assessment Work Breakdown

- 1. Type of Survey Induced Polarization
- 2. Township or Area Van Hise and Haultain
- 3. Mining claim numbers N.I. 30645 to 48, 30653, 30654, 30794 and 30795
-
-
-
- 4. Number of miles of line cut 3.7
- * 5. Type of instrument used Golden Induced Polarization Unit
- * 6. Scale constant or sensitivity
- * 7. Number of stations established 394

8. Summary of days worked (details on reverse side)

Total technical (include consultants, draughting etc. 41.75

Total line-cutting (~~maximum 5 man-days per claim~~) 10

Total man-days (technical plus line-cutting) 41.75 x 7 + 11 = 303.25

Assessment days credit per claim 37.9 allow (38)

(~~Total man-days multiplied by assessment factor 4 divided by total number of claims traversed~~)

9. Dated 35 December, 1964 Signed

L. G. Phelan

* Complete only if applicable

Complete list of names, addresses and dates on reverse side

Use for one type of survey only

Assessment Work Breakdown

1. Technical

<u>Type of Work</u>	<u>Name & Address</u>	<u>Dates Worked</u>	<u>Hours</u>	<u>Days</u>
E. Hottos	McPhar Geophysics, Don Mills	22-30 October, 1964	270	33.75
J. Nelson	139 Fairholme Ave., Toronto	22-30 October, 1964		
H. Forcier	Cobalt, Ontario	22-30 October, 1964		
Totals				33.75

Consultants

<u>Name & Address</u>	<u>Dates Worked (specify in field or office)</u>	<u>Hours</u>	<u>Days</u>
D. B. Sutherland,	McPhar Geophysics, Don Mills - office	1 to 30 Nov, 1964	3
Totals			3

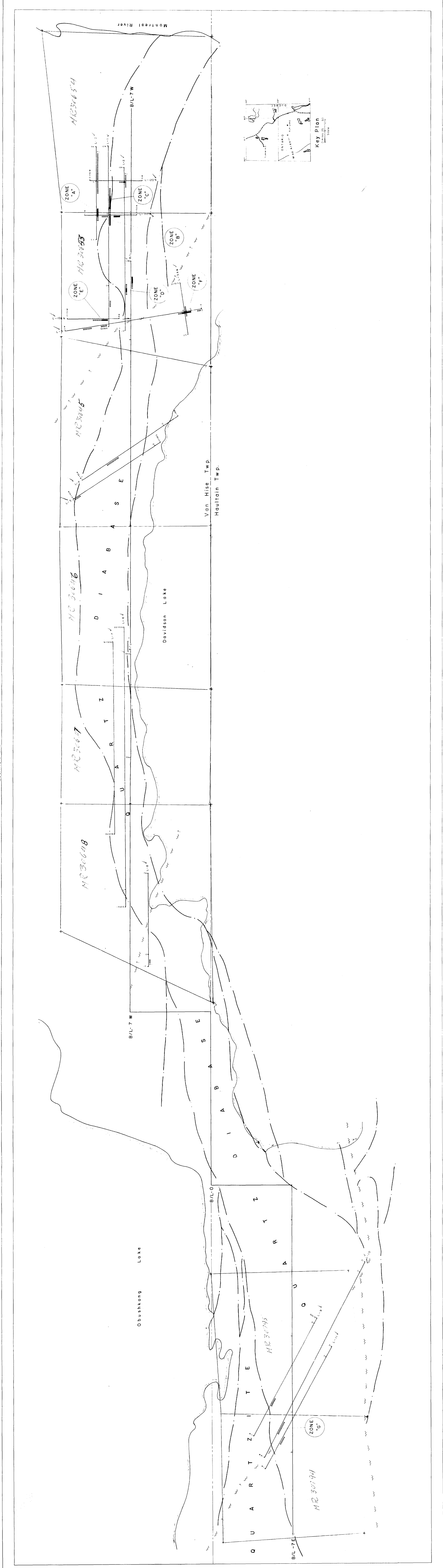
Draughtsman, Typing, others (specify)

<u>Name & Address</u>	<u>Type of Work</u>	<u>Dates Worked</u>	<u>Hours</u>	<u>Days</u>
L. Helko	McPhar Geophysics, Don Mills	1-30 November, 1964	40	5
D. Pounder	McPhar Geophysics, Don Mills	1-30 November, 1964		
R. Peer	McPhar Geophysics, Don Mills	1-30 November, 1964		
Totals			40	5

2. Line-Cutting

<u>Name</u>	<u>Address</u>	<u>Dates Worked</u>	<u>Hours</u>	<u>Days</u>
A. Pacher	Cobalt, Ontario	6-13 October, 1964		3
R. Forcier	Cobalt, Ontario	6-13 October, 1964		4
R. Scott	Cobalt, Ontario	6-13 October, 1964		4
Totals				11

McPHAR GEOPHYSICS LIMITED
INDUCED POLARIZATION AND RESISTIVITY SURVEY
LOCATION MAP



ANOMALOUS ZONE

POSSIBLE ANOMALOUS ZONE

GEOLOGICAL CONCRET

NO. RAU

SCALE

One Inch = Two Hundred Feet

8000

DWG. MSC-4110

DRAWN BY: _____

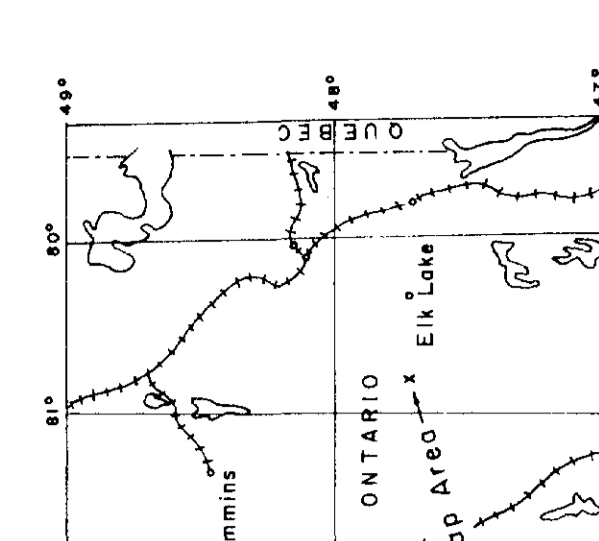
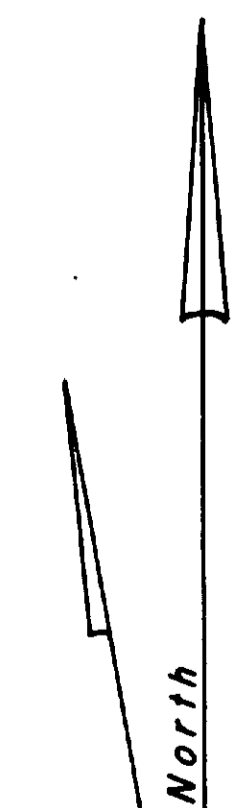
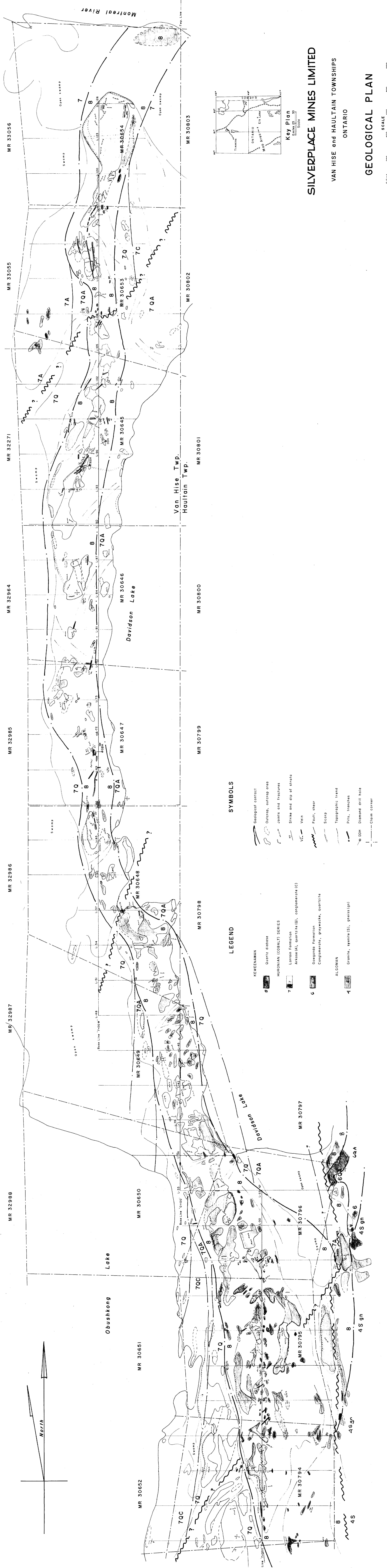
DATE: OCTOBER, 1964

APPROVED:

DATE: 10/20/64

SILVERPLACE MINES LIMITED
GOMGANDA AREA-VAN HISE & HAULTAIN TWS. - MONTREAL M.D., ONTARIO

Key Plan
ONTARIO
MONTREAL M.D.
STATE



LEGEND

- Keweenaw**
- Quartz diabase
- Huronian (Cobalt) Series**
- Lorrain Formation
- Archean (A), quartzite (Q), conglomerate (C)
- Goegande Formation**
- Conglomerate, greywacke, quartzite
- Algonian**
- Granite, syenite (S), gneiss (gn)

SYMBOLS

- Geological contact
- Outcrop, outcrop area
- Joints and fractures
- Strike and dip of strata
- Vein
- Fault, shear
- Scarp
- Topographic trend
- Pits, trenches
- DBH Diamond drill hole
- Claim corner

SILVERPLACE MINES LIMITED
 VAN HISE and HAULTAIN TOWNSHIPS
 ONTARIO

GEOLOGICAL PLAN

Scale: 0 Feet, 200, 400, 800, 1000
 October, 1963
 R. Lierd

