(0540) 6000 0119

#12

SUPPLEMENTARY REPORT
ON THE
INDUCED POLARIZATION
AND RESISTIVITY RESULTS
FROM THE
AFTERTHOUGHT PROSPECT
MINERAL COUNTY, NEVADA
FOR
WALKER-MARTEL MINING COMPANY

FOR GOVERNMENT USE ONLY

McPHAR GEOPHYSICS LIMITED

SUPPLEMENTARY REPORT ON THE INDUCED POLARIZATION AND RESISTIVITY RESULTS FROM THE AFTERTHOUGHT PROSPECT MINERAL COUNTY, NEVADA FOR WALKER-MARTEL MINING COMPANY

1. INTRODUCTION

A previous report dated August 13, 1964 describes the original IP results from the Afterthought Area. A definite anomaly was outlined, and the zone has been tested with two vertical drill holes on Line 3+00E. Sulphide mineralization was intersected in both drill holes; some copper was present, but not in enough quantity to be of economic interest.

The original results from the Afterthought did not determine the strike length of the zone. The rocks, alteration and mineralization intersected on Line 3+00E could indicate the nearby presence of mineralization of more economic interest. The measurements described in this report were made to determine the strike length, and the character, of the zone.

2. PRESENTATION OF RESULTS

The induced polarization and resistivity results are shown on the

following enclosed data plots. The results are plotted in the manner described in the notes preceding this report.

Skarn Line	200' electrode intervals	Dwg. IP 2394-1
Line 27E	500' electrode intervals	Dwg. IP 2394-2
Line 21E	500' electrode intervals	Dwg. IP 2394-3
Line 15E	500' electrode intervals	Dwg. IP 2394-4
Line 15W	500' electrode intervals	Dwg. IP 2394-5
Line 18W	500' electrode intervals	Dwg. IP 2394-6
Line 21W	500' electrode intervals	Dwg. IP 2394-7
Line 27W	500' electrode intervals	Dwg. IP 2394-8
Line 33W	500' electrode intervals	Dwg. IP 2394-9

Also enclosed with this report is Dwg. Misc. 4210, a plan map of the Afterthought Prospect Area. This map also includes the lines previously surveyed. 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 500' spreads the position of a narrow sulphide body can only be determined to

lie between two stations 500' apart. In order to locate sources at some depth, larger spreads must be used, with a corresponding increase in the uncertainties of location. Therefore, while the center of the indicated anomaly probably corresponds fairly well with source, the length of the indicated anomaly along the line should not be taken to represent the exact edges of the anomalous material.

3. DISCUSSION OF RESULTS

The IP results from this survey show that the mineralized zone at the Afterthought extends from Line 21E to at least Line 33W. The source is therefore at least a mile long. It seems fairly clear that further drilling on other lines is necessary before the zone can be dismissed as being unimportant.

There are no anomalous effects on Line 27E, and the anomaly on Line 21E is not definite. On Line 21E, the pattern suggests a relatively broad zone of weak mineralization. To the west, the anomaly is of larger magnitude, and more definite.

The patterns suggest a zone of more disseminated mineralization with local zones of more concentrated mineralization. The drilling on Line 3+00E confirms this type of mineralization, although there is perhaps not as much concentrated mineralization as would be expected. However, vertical holes were used for the drilling and the sampling may not have been complete.

The narrow, large magnitude part of the anomaly appears to be striking slightly south of west. On Line 21W the source appears to be strong,

and relatively narrow. The tabular source would be centered at about 5S. A second source is indicated to be at considerable depth at about 30S on this line. Recent sediments cover the surface in this area, and the apparent resistivities are low. The surface rocks may also be the reason for the depth indicated.

On Line 27W, the entire area is covered by recent sediments. The anomalous pattern still shows the two sources, although there could be just one broad anomaly. Both sources appear to be at considerable depth, although the source centered at 10S to 5S could have ended to the east.

The only anomaly on Line 33W is centered at 25S to 20S; this position correlates best with the southern anomaly on the lines to the east. The source is indicated to be at considerable depth, but since 1.25 cps was used for the measurement there is no difficulty from inductive coupling. The depth to the top of the source may be as much as 1.5 electrode intervals; i.e. 750 feet.

4. CONCLUSIONS AND RECOMMENDATIONS

These further results show that the anomalous zone at the Afterthought is at least a mile long. To the east the source terminates at about Line 21E; to the west the source is double, and is very deep in the sediment covered area west of Line 33W.

On Line 21W, the source appears to be stronger, and of less width, than on Line 3+00E. Further drilling is recommended on this line. Angle holes would be desirable, but if vertical holes are necessary, the first hole should be at 4+00S. The next holes should be 200 to 250 feet to

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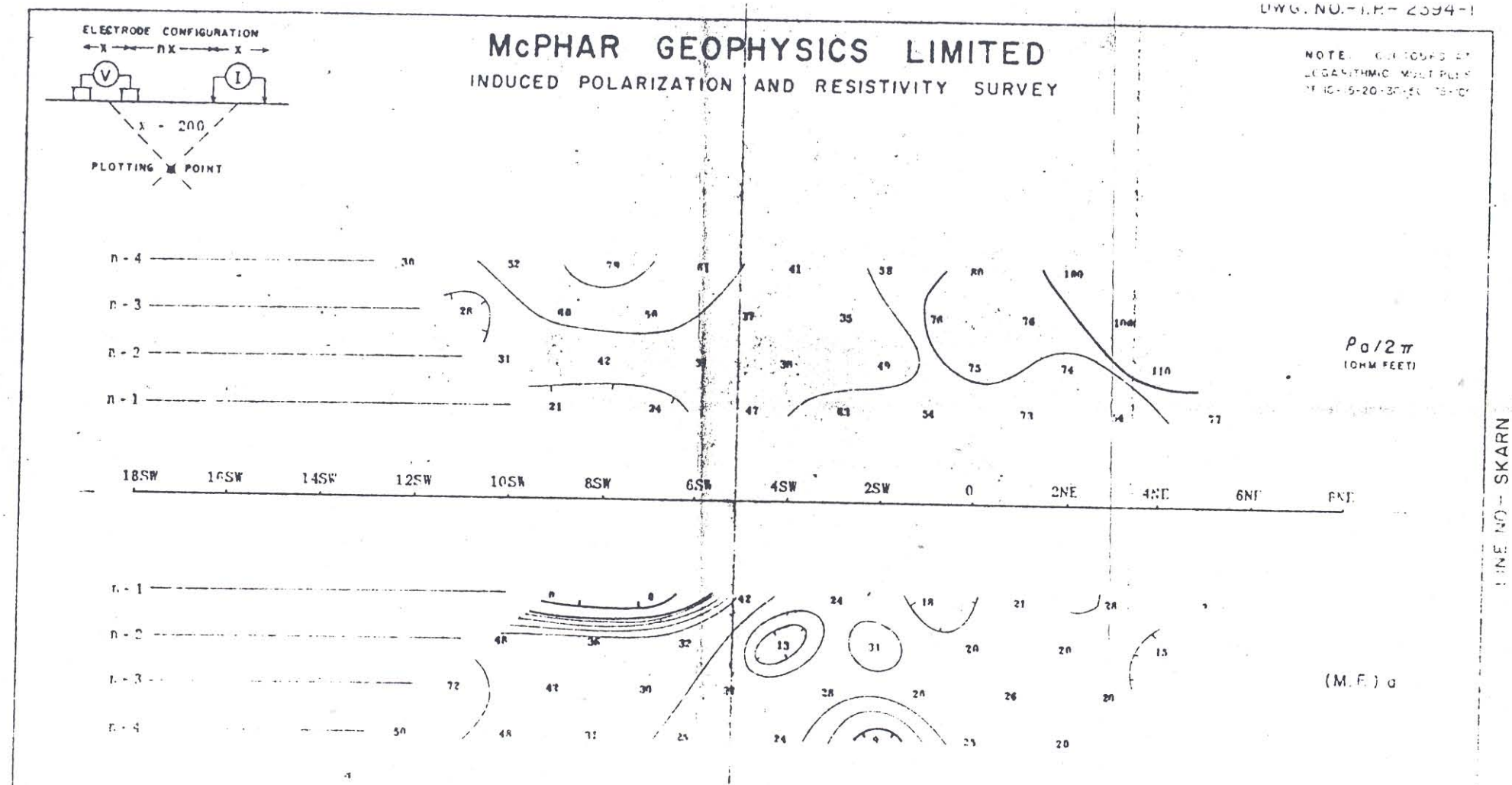
DWG. NO.-I.P.- 2594-1



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AFTERTHOUGHT PROSPECT, MINERAL CTY., NEVADA - U.S.A.

Scale - One inch = 200 Feet

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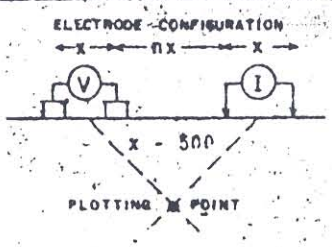
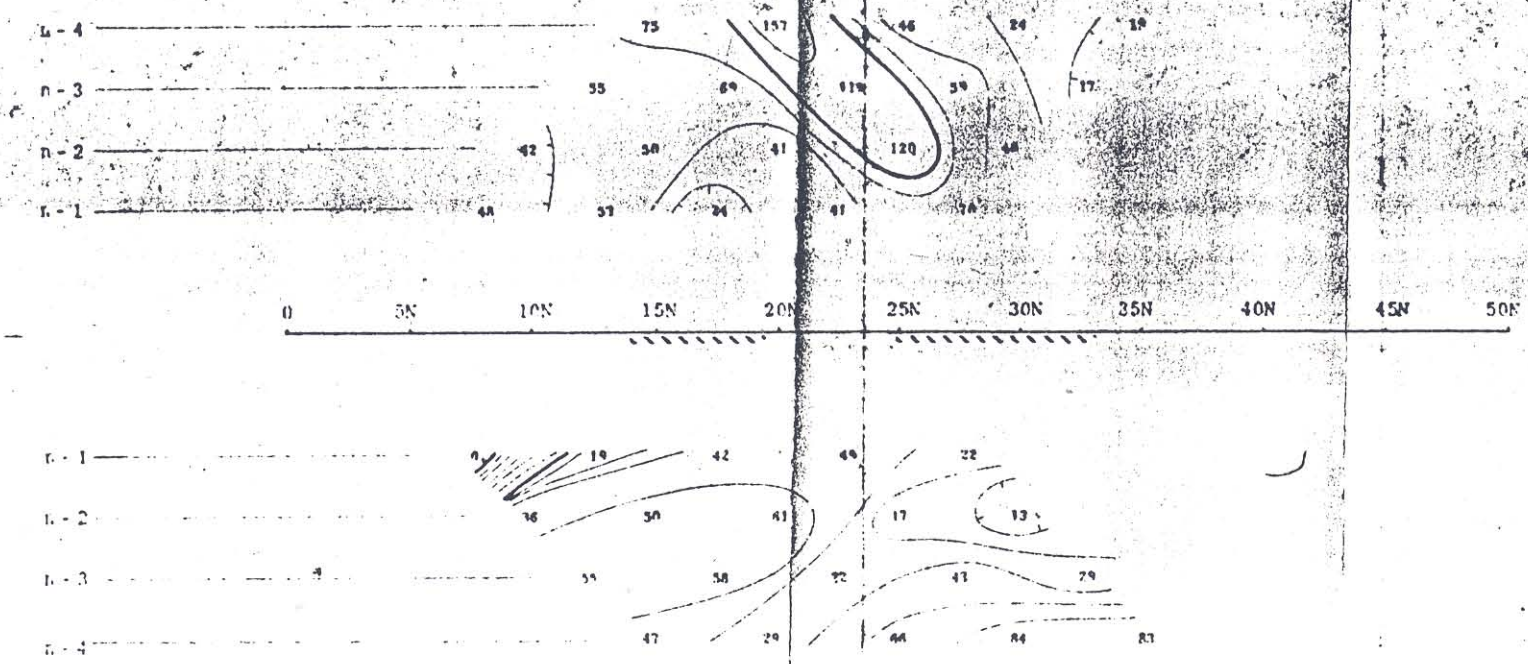
INDUCED POLARIZATION AND RESISTIVITY SURVEY



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



LINE NO. - 27 E

WALKER-MARTEL MINING COMPANY

AFTERTHOUGHT PROSPECT, MINERAL CTY., NEVADA - U.S.A.

Scale - One inch = 500 Feet

NOTE - LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

FREQUENCY

DATE SURVEYED

APPROVED RAB

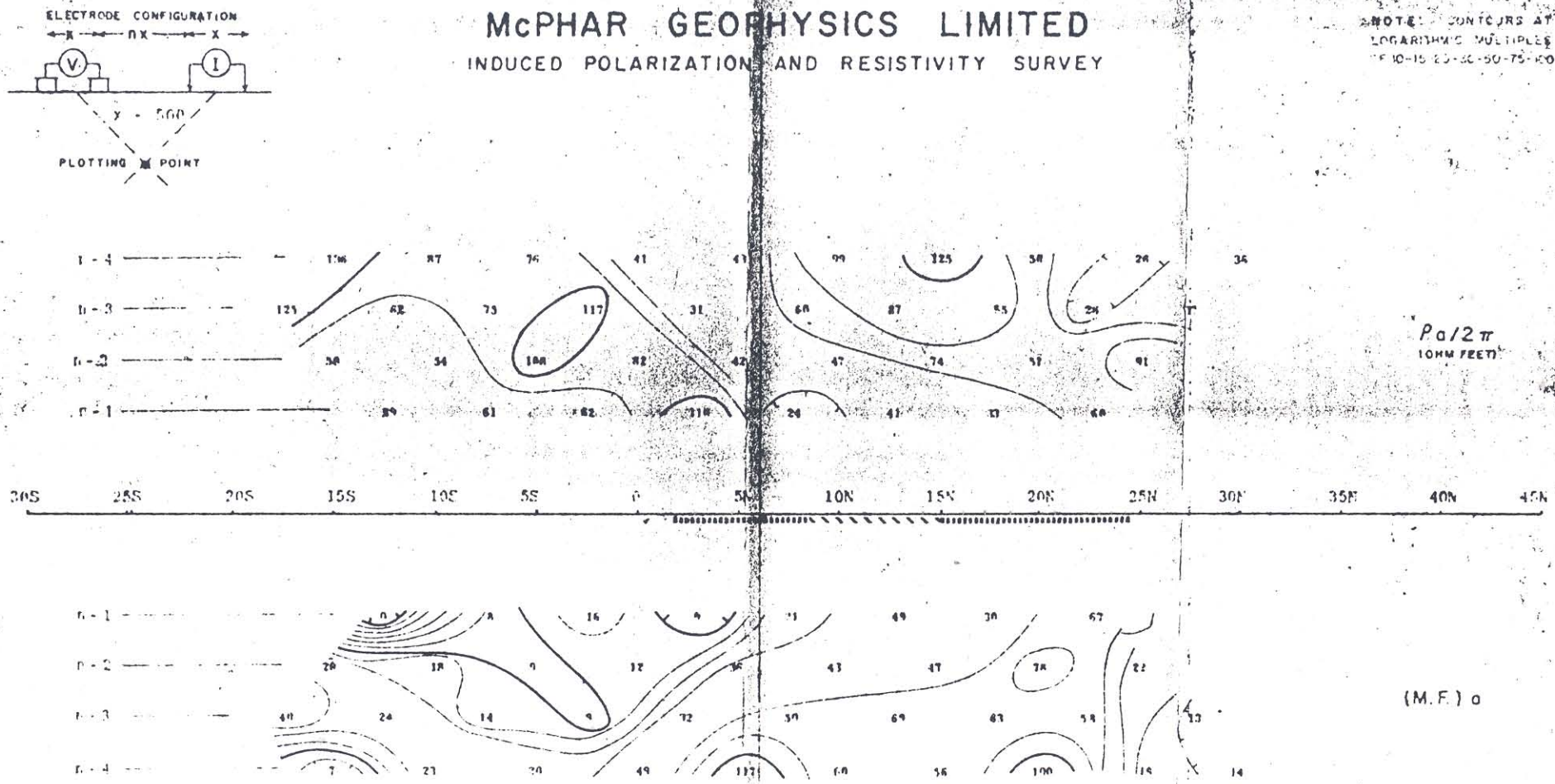
DATE

McPHAR GEOPHYSICS LIMITED

6000 0119 (0540)

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



WALKER-MARTEL MINING COMPANY

AFTERTHOUGHT PROSPECT, MINERAL CTY., NEVADA - U.S.A.

Scale - One inch = 500 Feet

FREQUENCY
DATE SURVEYED
APPROVED
DATE

McPHAR GEOPHYSICS LIMITED

6000 0119 (0540)

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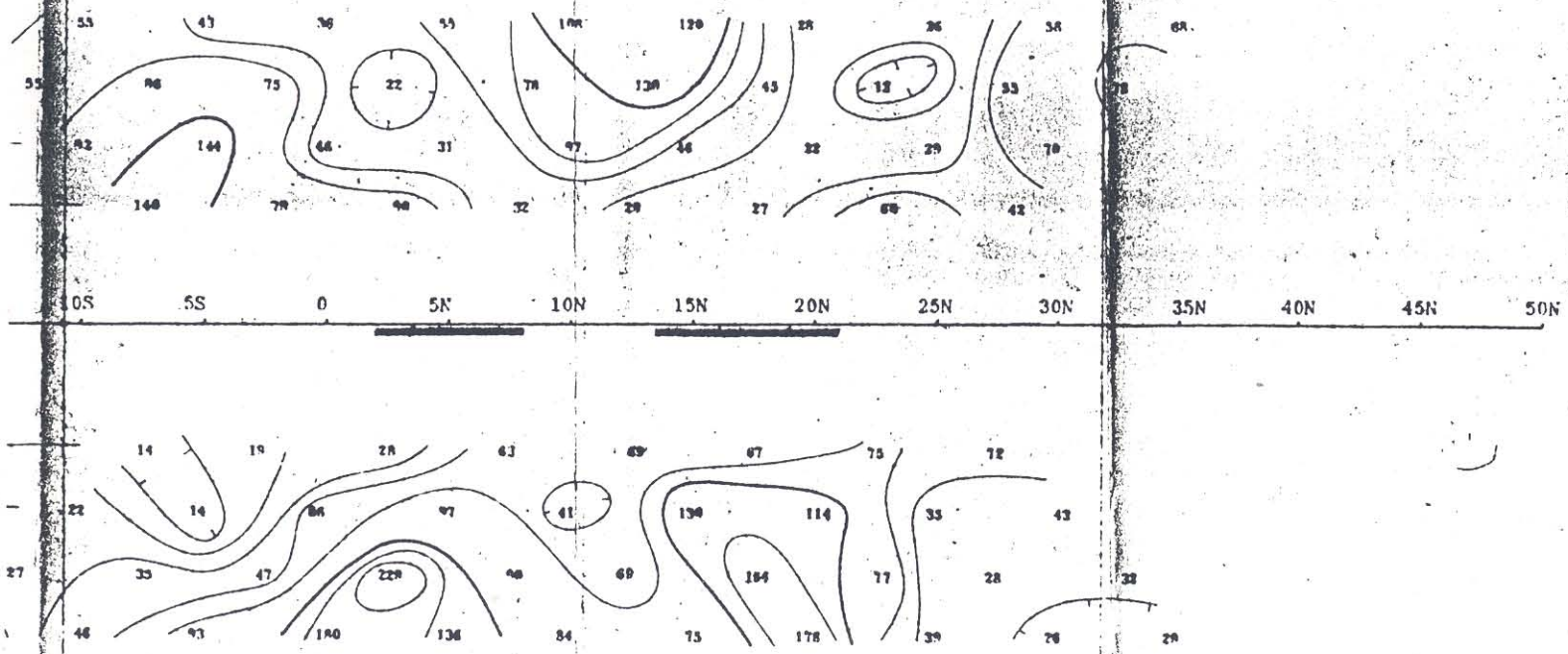
INDUCED POLARIZATION AND RESISTIVITY SURVEY

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



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

(M.F.) o

LINE NO.—15E

WALKER-MARTEL MINING COMPANY

AFTERTHOUGHT PROSPECT, MINERAL CTY., NEVADA - U.S.A.

Scale—One inch = 500 Feet

NOTE LOGARITHMIC CONTOUR INTERVAL

FREQUENCY [illegible] CPS

DATE SURVEYED JAN 1966

APPROVED [illegible]

DATE [illegible]

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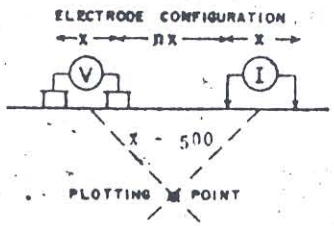
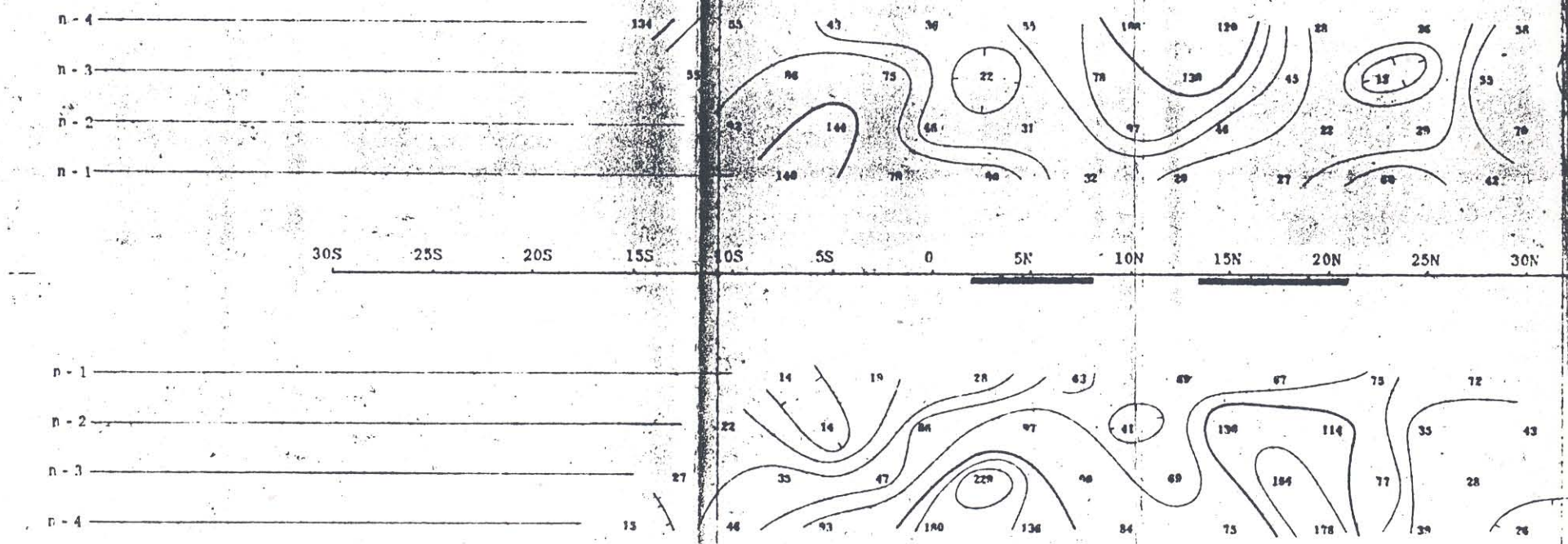
INDUCED POLARIZATION AND RESISTIVITY SURVEY





SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

WALKER-MARTEL MINING COMPANY

AFTERTHOUGHT PROSPECT, MINERAL CTY., NEVADA - U.S.A.

Scale—One inch = 500 Feet

NOTE LOGARITHMIC CONTOUR INTERVAL

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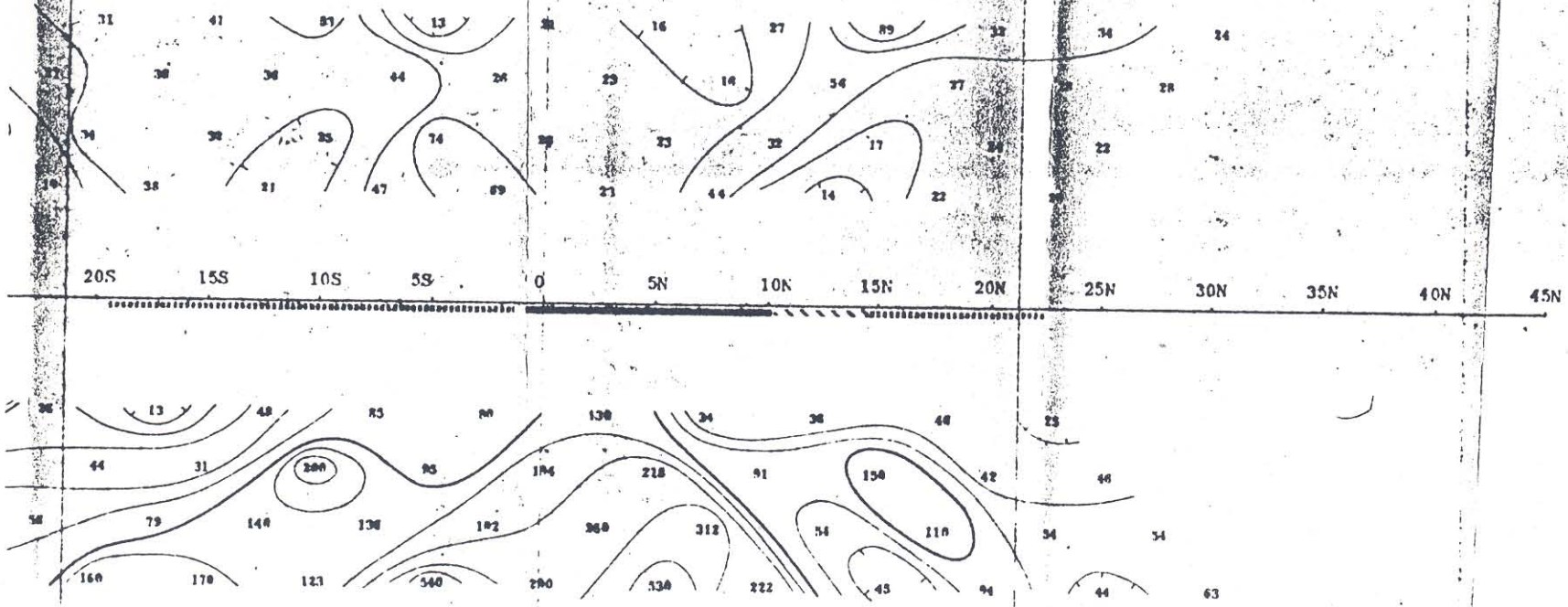
INDUCED POLARIZATION AND RESISTIVITY SURVEY

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



LINE NO.-15 W

WALKER-MARTEL MINING COMPANY

AFTERTHOUGHT PROSPECT, MINERAL CTY., NEVADA - U.S.A.

Scale - One inch = 500 Feet

NOTE LOGARITHMIC CONTOUR INTERVAL

FREQUENCY [illegible] CPS

DATE SURVEYED JAN. 1966

APPROVED RAB

DATE 24/2/66

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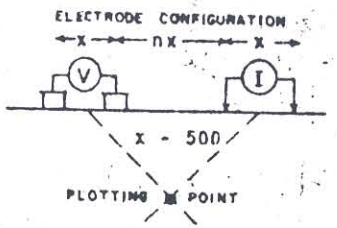
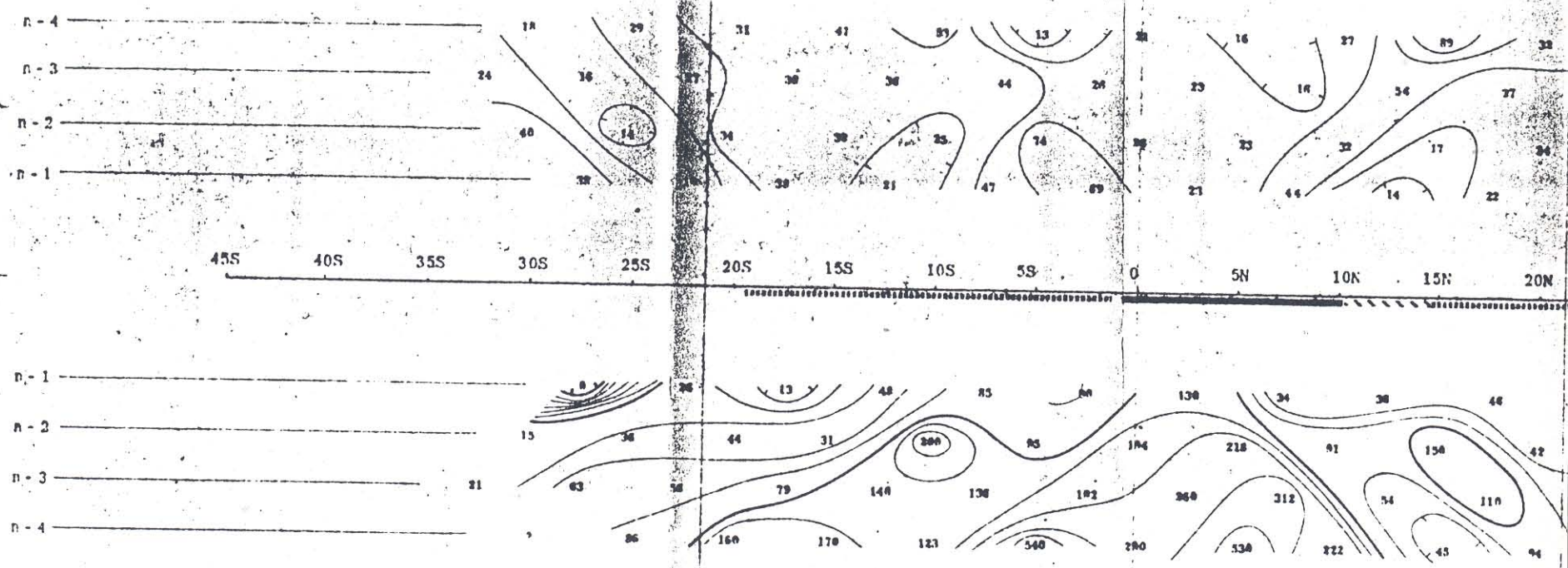
6000 0119 (0540)

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY





SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

WALKER-MARTEL MINING COMPANY

AFTERTHOUGHT PROSPECT, MINERAL CTY., NEVADA - U. S. A.

Scale—One inch = 500 Feet

NOTE LOGARITHMIC CONTOUR INTERVAL

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DWG. NO.-I.P.-2394-6

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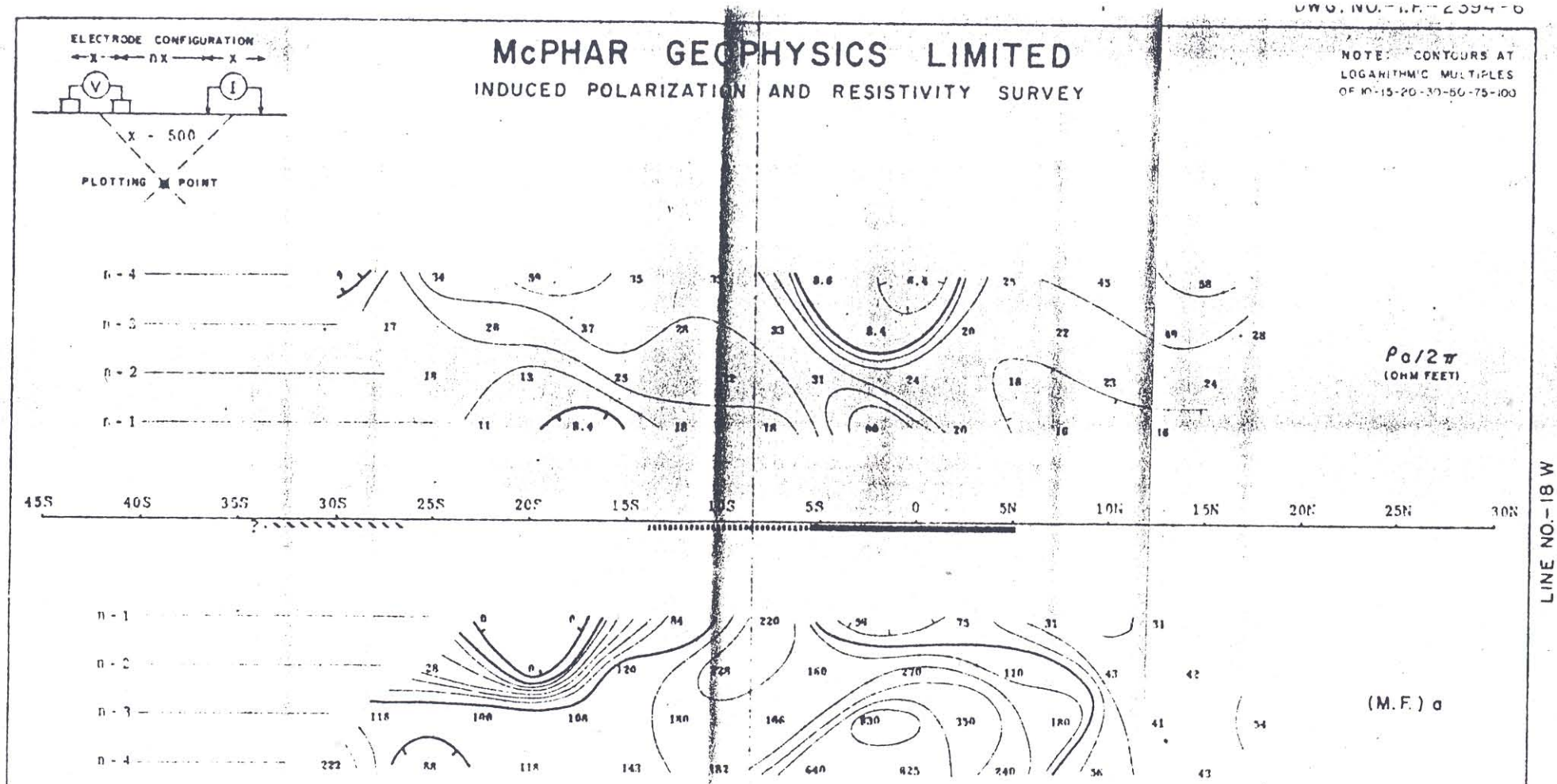
INDUCED POLARIZATION AND RESISTIVITY SURVEY



WALKER-MARTEL MINING COMPANY

AFTERTHOUGHT PROSPECT, MINERAL CTY., NEVADA - U.S.A.

Scale - One inch = 500 Feet

NOTE LOGARITHMIC CONTOUR INTERVAL

SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE

PROBABLE

POSSIBLE

FREQUENCY

DATE SURVEYED

APPROVED

DATE

McPHAR GEOPHYSICS LIMITED

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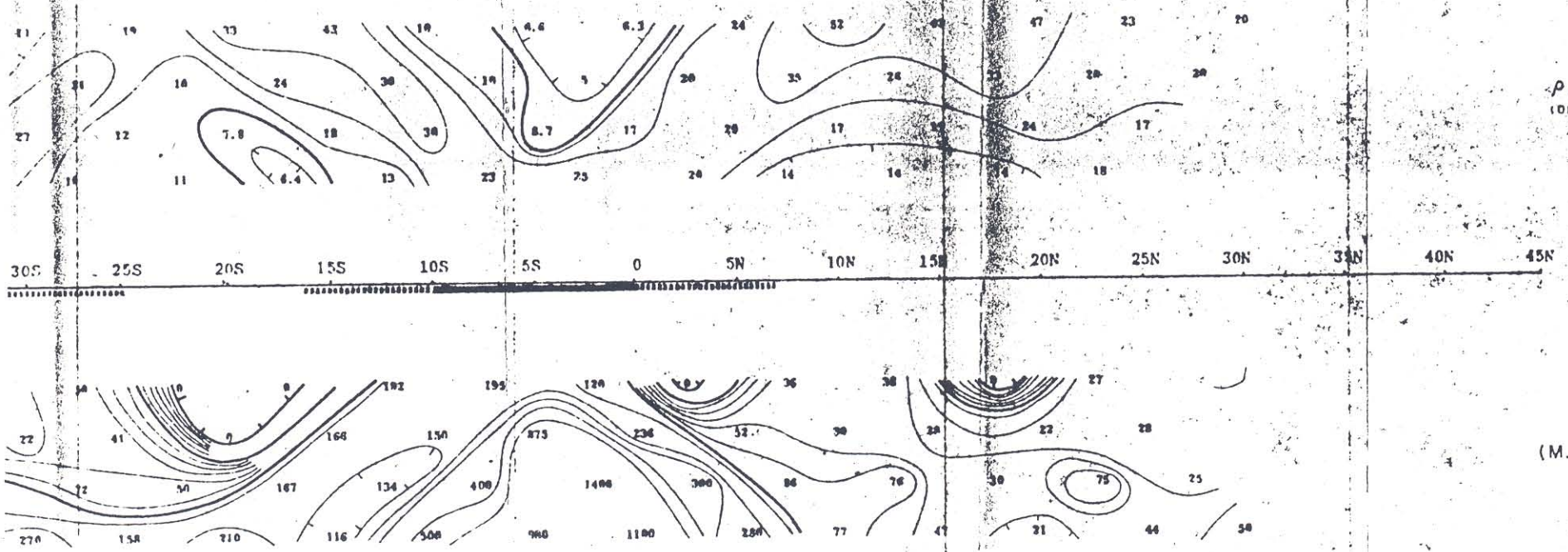
DWG. NO. I.P. 2051

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

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



LINE NO.—21 W

WALKER-MARTEL MINING COMPANY

AFTERTHOUGHT PROSPECT, MINERAL CTY., NEVADA - U.S.A.

Scale—One inch = 500 Feet

NOTE LOGARITHMIC CONTOUR INTERVAL

FREQUENCY

DATE SURVEYED JAN 1968

APPROVED RRB

DATE

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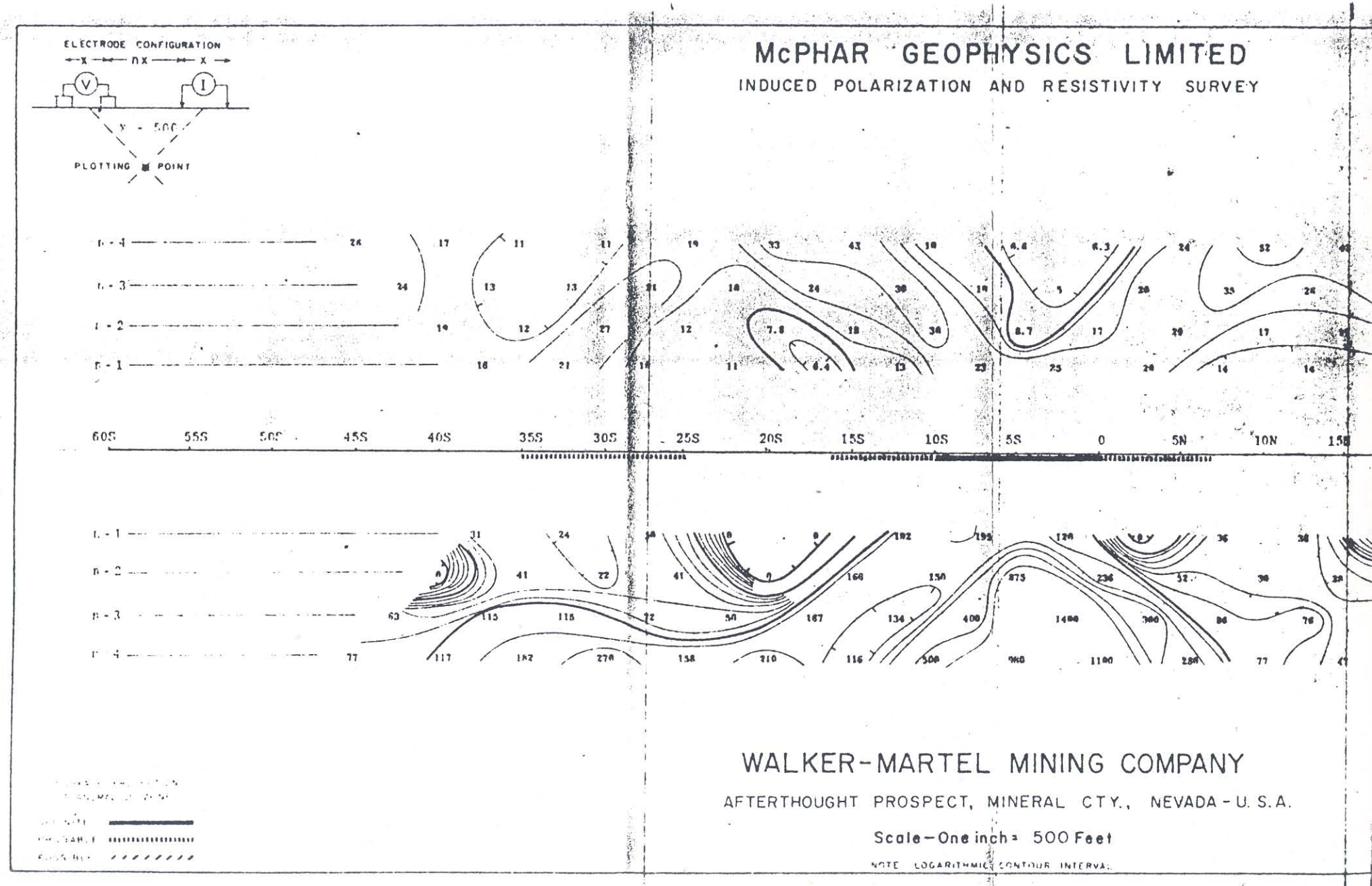

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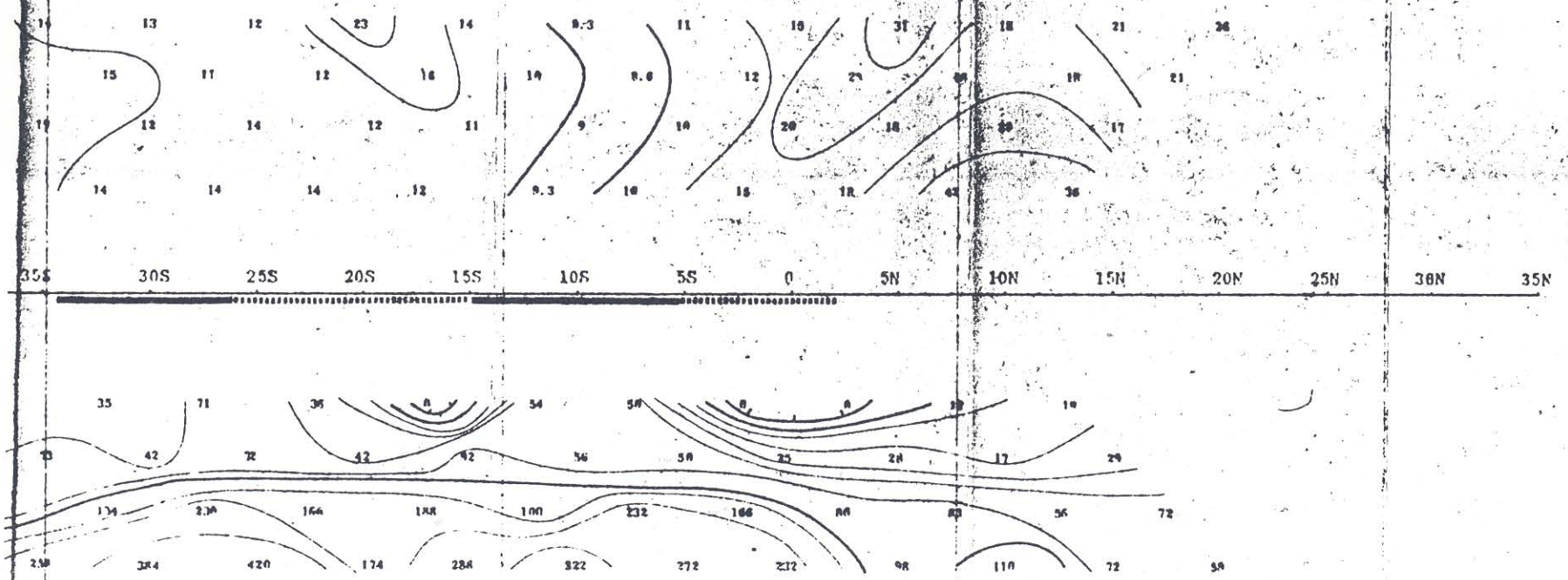
DWG. NO.-LP-2394-8

McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY

NOTE: CONTOURS AT LOGARITHMIC MULTIPLES OF [illegible] 75-100



LINE NO.-27 W.

WALKER-MARTEL MINING COMPANY

AFTERTHOUGHT PROSPECT, MINERAL CTY., NEVADA - U.S.A.

Scale—One inch = 500 Feet

NOTE: LOGARITHMIC CONTOUR INTERVAL

FREQUENCY [illegible]

DATE SURVEYED [illegible]

APPROVED RAB

DATE [illegible]

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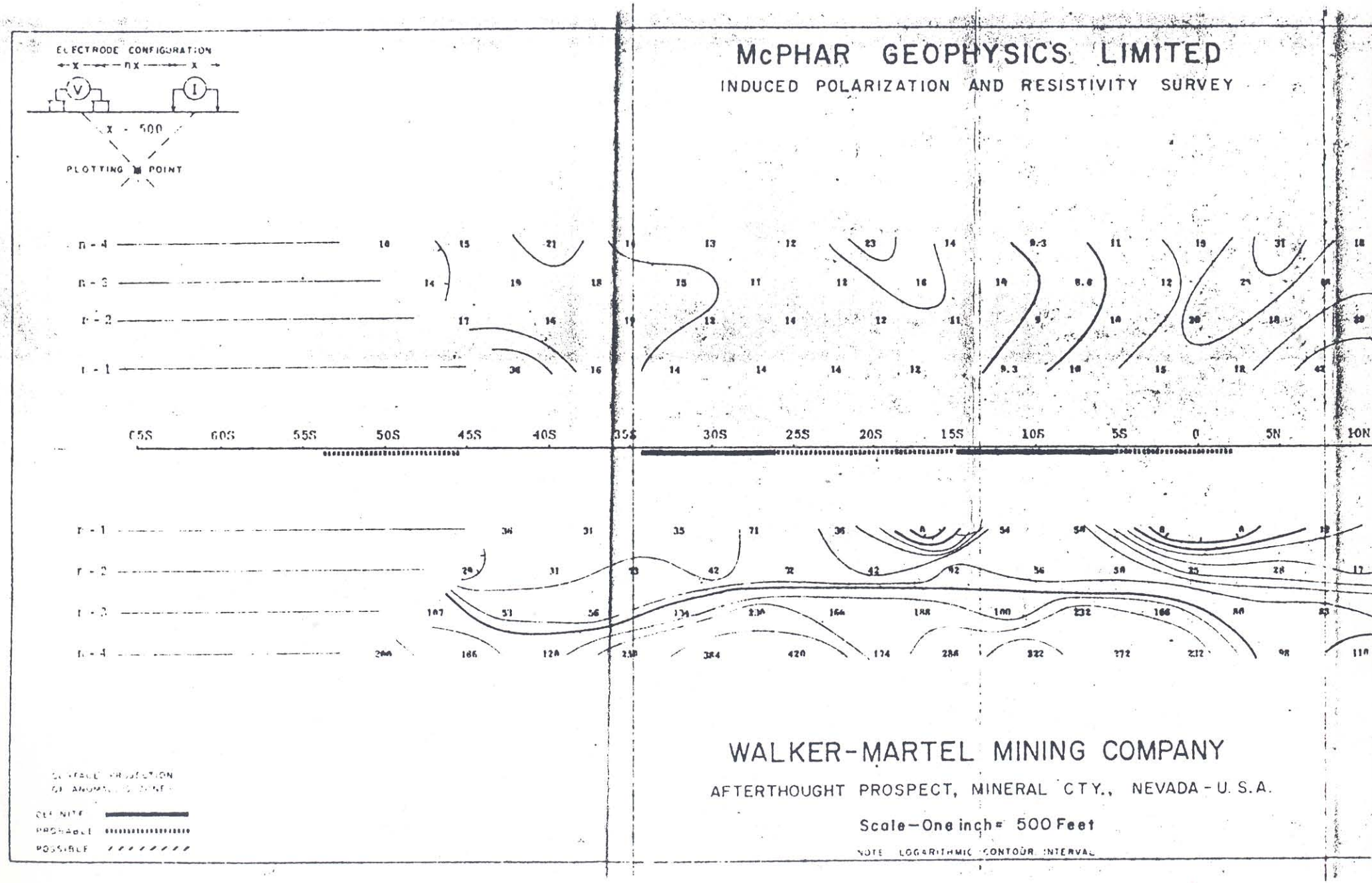

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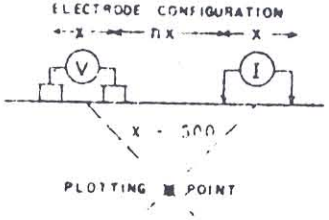
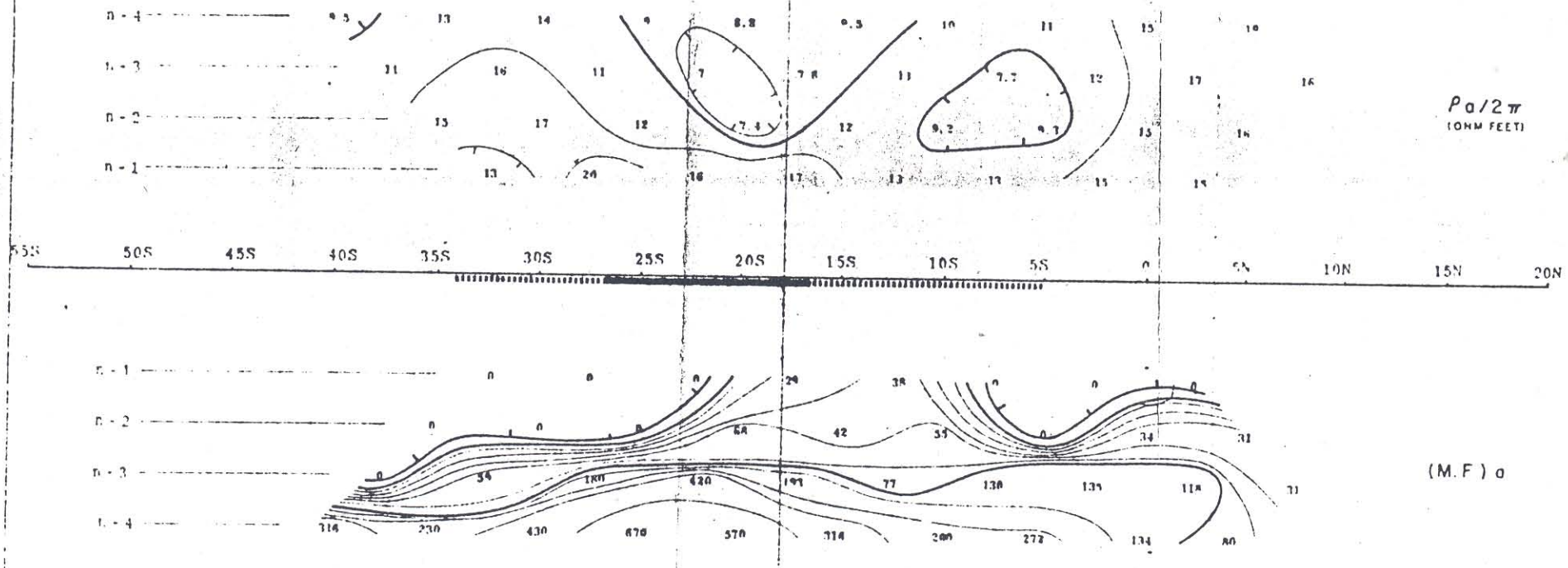
McPHAR GEOPHYSICS LIMITED

INDUCED POLARIZATION AND RESISTIVITY SURVEY



NOTE: CONTOURS AT LOGARITHMIC MULTIPLES OF 1.0, 2.0, 3.0, 4.0, 7.5, 10.0



LINE NO – 33 W

WALKER-MARTEL MINING COMPANY

AFTERTHOUGHT PROSPECT, MINERAL CTY., NEVADA – U.S.A.

Scale – One inch = 500 Feet

NOTE: LOGARITHMIC CONTOUR INTERVAL

FREQUENCY: 1.0 CPS

DATE SURVEYED:

APPROVED: RWB

DATE: 21/6/68

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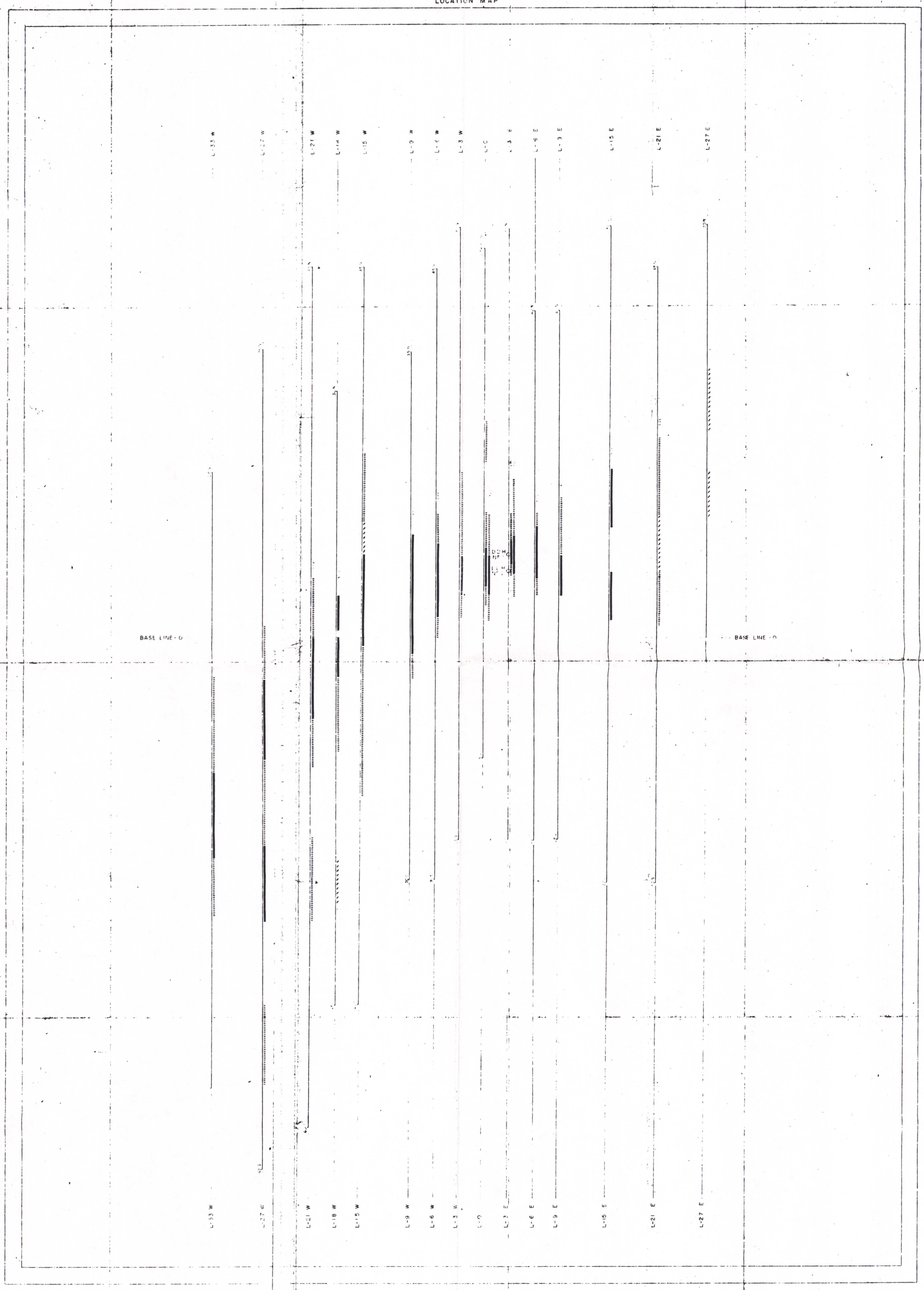
INDUCED POLARIZATION AND RESISTIVITY SURVEY

LOCATION MAP



SURFACE PROJECTION OF ANOMALOUS ZONES

DEFINITE
PROBABLE
POSSIBLE

Numbers at end of anomalies indicate spreads used

WALKER-MARTEL MINING COMPANY

AFTERTHOUGHT PROSPECT, MINERAL CTY., NEVADA - U. S. A.

SCALE

One Inch = 400 Feet

McPHAR GEOPHYSICS LIMITED RGG Feb 25/66

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DWG MISC 4210