

COPY OF:

INDUCED POLARIZATION SURVEY

FARO AREA, Y.T.

ANVIL MINING CORPORATION LIMITED

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016018

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SUMMARY

An induced polarization survey of portions of the Faro property has disclosed good responses over the Faro nos. 1 and 2 zones.

CONCLUSIONS

The induced polarization method gave satisfactory responses over known mineralization of interest and is considered a good exploration method in conjunction with other geophysical and geochemical techniques.

RECOMMENDATIONS

It is recommended that the anomaly of the north ends of lines 32W to 1W be tested by vertical drill-holes at 1100N on L24W and 1700N on L1W.

INTRODUCTION

An induced polarization survey has been carried out on portions of the Faro property of Anvil Mining Corporation. This property is located north of the Pelly River at about  $62^{\circ}$  N,  $133^{\circ}$  W.

Field work was carried out between July 15 and 25, 1966, inclusive. Geophysicists operating the equipment were D.A. McDonald and D.B. Trussell. They were assisted by two men provided by Anvil.

### INSTRUMENTATION

The induced polarization equipment was manufactured by Geoscience Incorporated of Lexington, Massachusetts. The Sender supplies a preset constant current that is applied to the ground through two electrodes. The voltage between two potential electrodes is passed into the Receiver. A meter is nulled at one frequency and gives a direct reading of the percent frequency effect at a second frequency. From the applied current and received potential, the apparent resistivity of the medium may be calculated.

### FIELD PROCEDURE

The electrodes are in a collinear array, with the current electrodes separated by a distance "a". The potential electrodes are also separated by a distance "a". The nearest current and potential electrodes are separated by a distance "Na", where  $N = 1, 2$  or  $3$ . By varying  $N$ , the sender-receiver spacing, one obtains a depth-probing effect, since the effective depth of exploration varies with this spacing. The results are plotted at the intersection between  $45^\circ$  diagonal lines drawn from the midpoints of the sender and receiver dipoles. Percent frequency effect values are plotted below the reference line, resistivity values in ohm-feet above. The row of data nearest the reference line corresponds with  $N = 1$  values, the second row  $N = 2$  and the third  $N = 3$ .

RESULTS

The results are plotted on the accompanying sectional diagrams. L64W was surveyed using an electrode spacing  $a = 200$  feet. The other lines, 72W, 56W, 32W, 24W, 16W, 8W and 1W were surveyed at  $a = 300$  feet.

L64W - The anomaly due to the Faro No. 1 orebody does not show on the first row of data ( $N = 1$ ). The anomaly maximum for  $N = 2$  and  $N = 3$  occurs at 16N, slightly north of the center of the orebody as shown on Section 6. This is probably a reflection of the shallower depth to the zone on the north side. The anomaly shows good contrast with the surrounding background values on both the p.f.e. and resistivity.

L72W - The overall anomaly is centered at 18N, again showing a bias toward the northern, shallower side of the orebody. An enhancement of the p.f.e. anomaly at 21N appears to be due to a source at a depth of some 400 - 500 feet. There is no corresponding enhancement of the resistivity low. The overall anomaly is consistent with a depth to the source of less than 200 feet.

L56W - A moderate anomaly occurs for  $N = 3$  at 650N, indicating the south side of the ore zone at a depth of some 500 feet. The anomaly again shows on  $N = 3$  centered at 1850N and  $N = 2$  at 17N, reflecting the zone

at shallower depth on the north side. This correlates well with the orebody as shown on Sections 3 and 4.

L32W - The very strong anomaly centered at 16S (N = 1) correlates well with the mineralization of the Faro No. 2 zone which occurs at shallow depth. A second anomaly occurs at the north end of this line.

L24W - The Faro No. 2 zone shows more weakly on this line at 19S. The second anomaly between 8N and 14N appears to be due to a north-dipping zone.

L16W - The anomaly at 14 - 20N may be a continuation of the second anomaly on L24W.

L8W - The anomaly at 11 - 17N is not adequately delimited, but appears due to a south-dipping zone.

L1W - The anomaly at 14 - 23N appears due to a south-dipping zone.

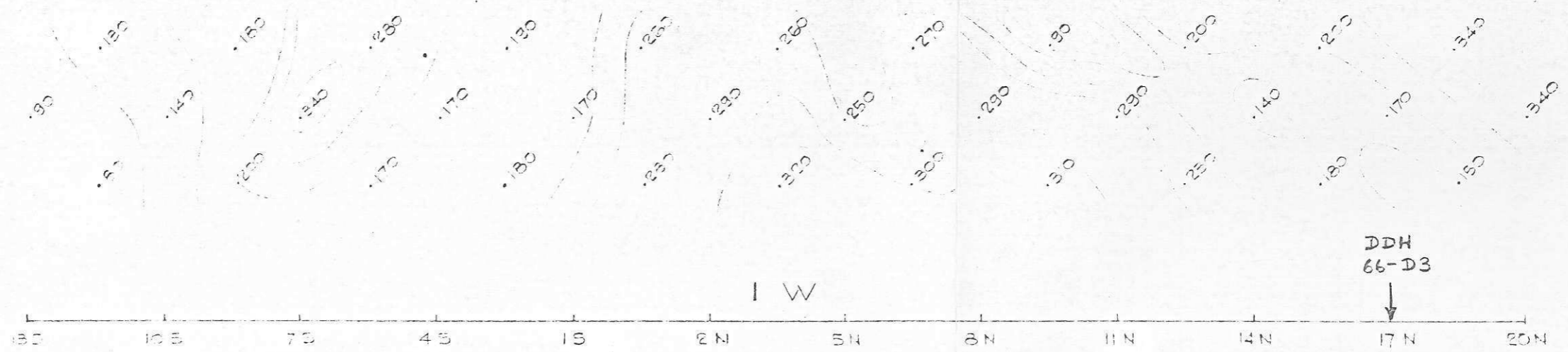
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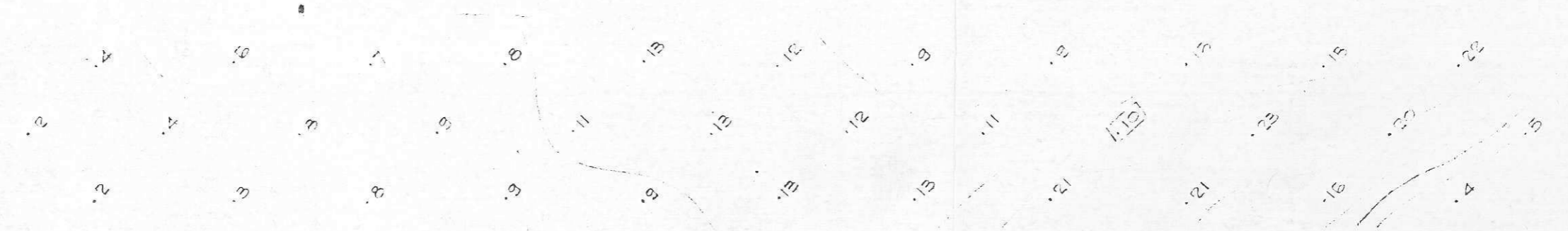
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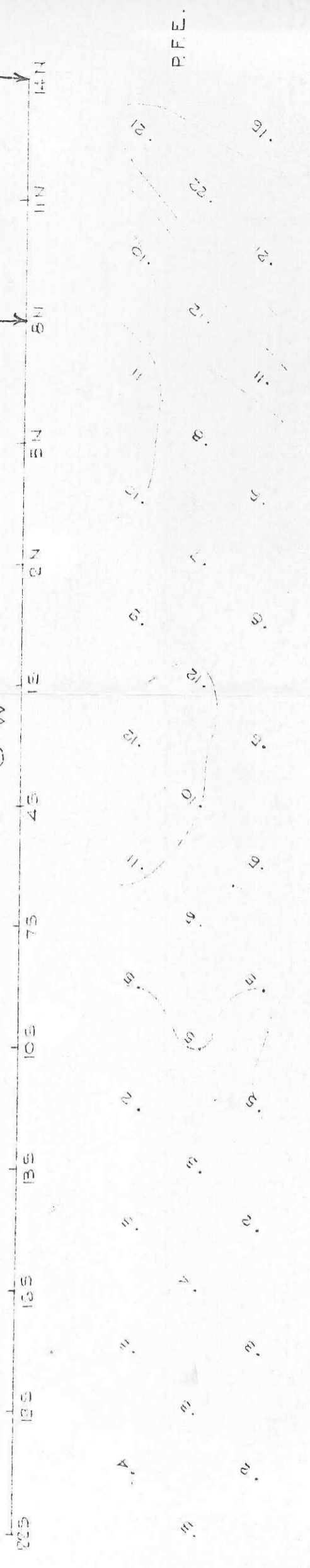
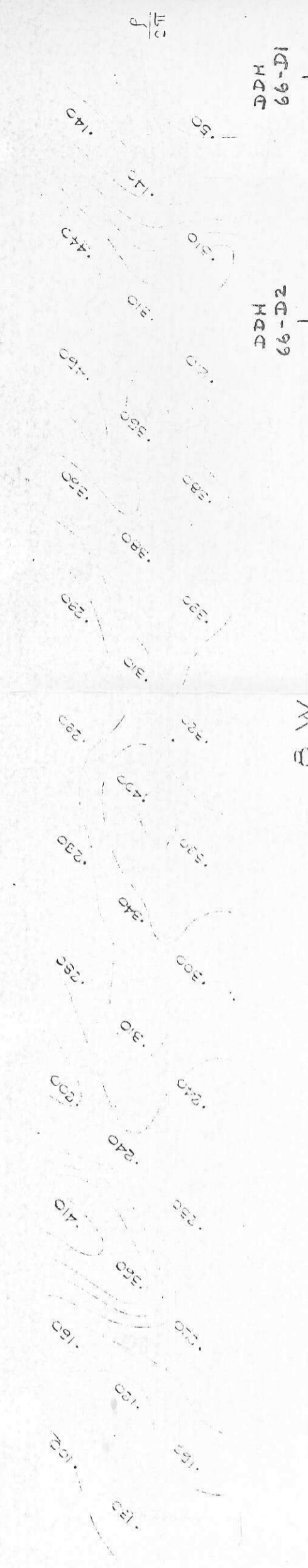
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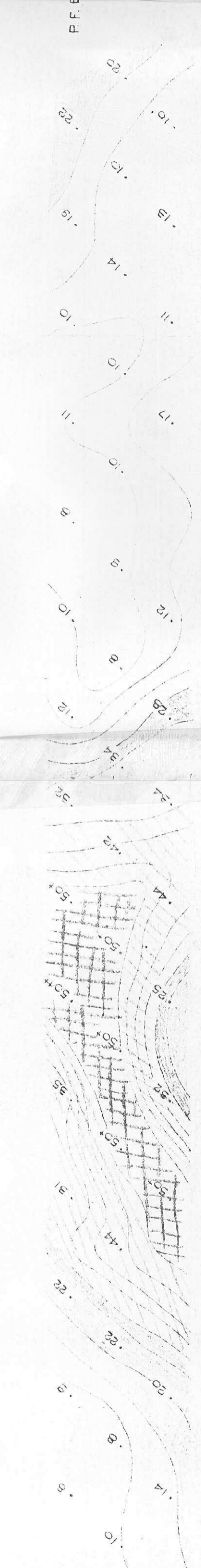
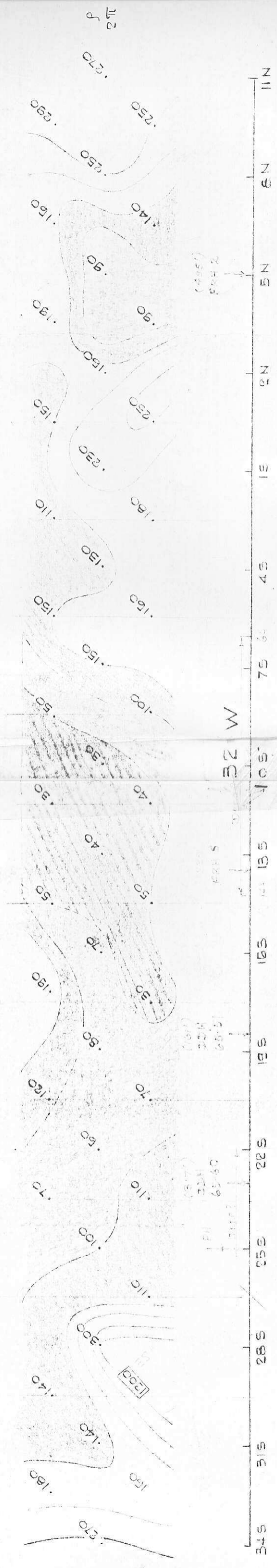
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P.F.E.





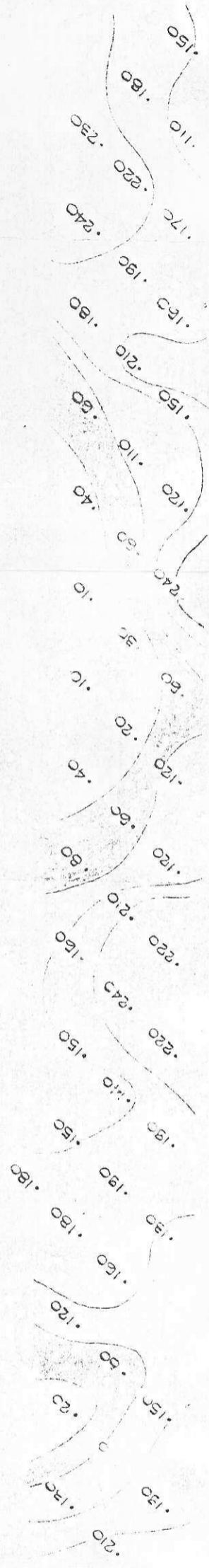


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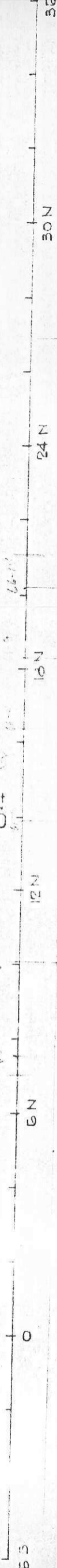
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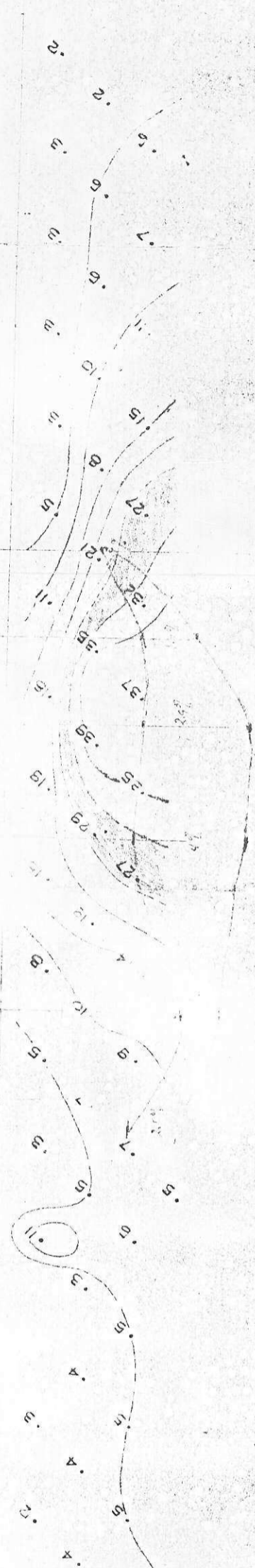
$\frac{P}{2\pi}$



Ez W



P.F.E.



Ez W

N 99° 30' E  
N 93°  
N 87°  
N 81°  
N 75°  
N 69°  
N 63°  
N 57°  
N 51°  
N 45°  
N 39°  
N 33°  
N 27°  
N 21°  
N 15°  
N 9°  
N 3°  
0°  
S 3°  
S 9°  
S 15°  
S 21°  
S 27°  
S 33°  
S 39°  
S 45°  
S 51°  
S 57°  
S 63°  
S 69°  
S 75°  
S 81°  
S 87°  
S 93°  
S 99° 30' E

72 W

$\frac{114}{24}$

P.F.E.

