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INTRODUCTION

During the period from March 21 to March 26, 1965 a Crone method elec tromagnetic survey was conducted by Mespi Mines Limited of 1705 Victory Building, 80 Richmond Street, West, Toronto, Ontario on one of their claim groups in Byers Township.

LOCATION OF CLAIMS

Twelve claims, located in Byers township surrounding and including most of Byers lake, in the Porcupine Mining Division, Ontario are numbered as follows: P. 53231 to P. 53241 inclusive and P. 57568.

ACCESS

Easiest access is by aircraft to Byers Lake which is approximately 24 miles Northwest of Timmins, Ontario.

PREVIOUS WORK

The complete area has been covered by four different combined magnetic-electromagnetic surveys.

Aeromagnetic Surveys flew the area in February 1955 in a N-S direction for Mr. P... Lang of Toronto.

In March 1963, Canadian Aero Mineral Surveys flew the ground twice, once with N-S flight lines and once in a NE-SW direction, also for Mr. Lang.

Hunting Survey Corporation in May 1964 covered the area with an E-W survey for Mespi Mines Limited.

In all surveys several weak conductors were detected, concentrated under and on the shore of Byers Lake.

GEOLOGY

The only geology of the area to date is shown on Map No. 40 c by A.R. Graham published by the Ontario Department of Mines, 1931, under the title "Groundhog-Kamiscotia Area".

The geology is very sketchy and shows the area to be underlain by altered greenstones cut by diabase dikes. Intrusive granites are shown to lie both north and south of the claim group.

#### TYPE AND METHOD OF SURVEY

A Crone dual frequency transceiver unit was used for the electromagnetic work. The initial survey was carried out using an in-line method, a coil separation of 300 feet with readings taken at 100 foot intervals closing to 50 feet in anomalous areas. The dip angles shown on the plan are the resultant angles. Vertical loop work was done previous to drilling the anomaly obtained on claim P. 57568.

A total of 12.6 miles of line were cut and 558 stations were read with the instrument.

#### SURVEY RESULTS

Two conductors were detected on the initial survey, one of which has been detailed and drilled. These are on claims P. 57568 and the north west corner of P. 53240.

Detail work on claim P. 57568 showed a conductor with good conductivity and a strike length of 700 feet dipping easterly. Drilling corroborated this interpretation and the conductor proved to be a band of interbedded sediments and tuff with conductive pyrite stringers.

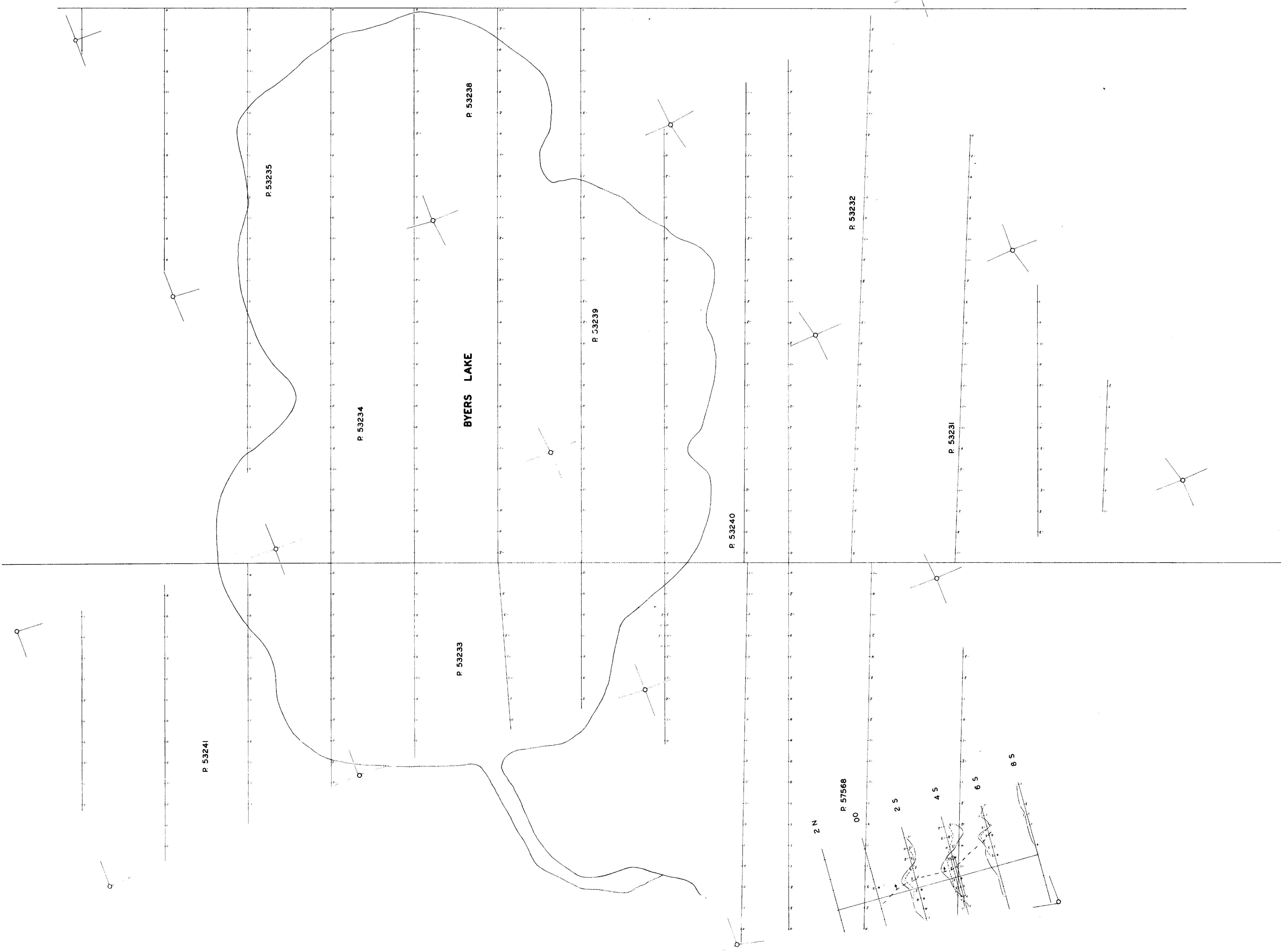
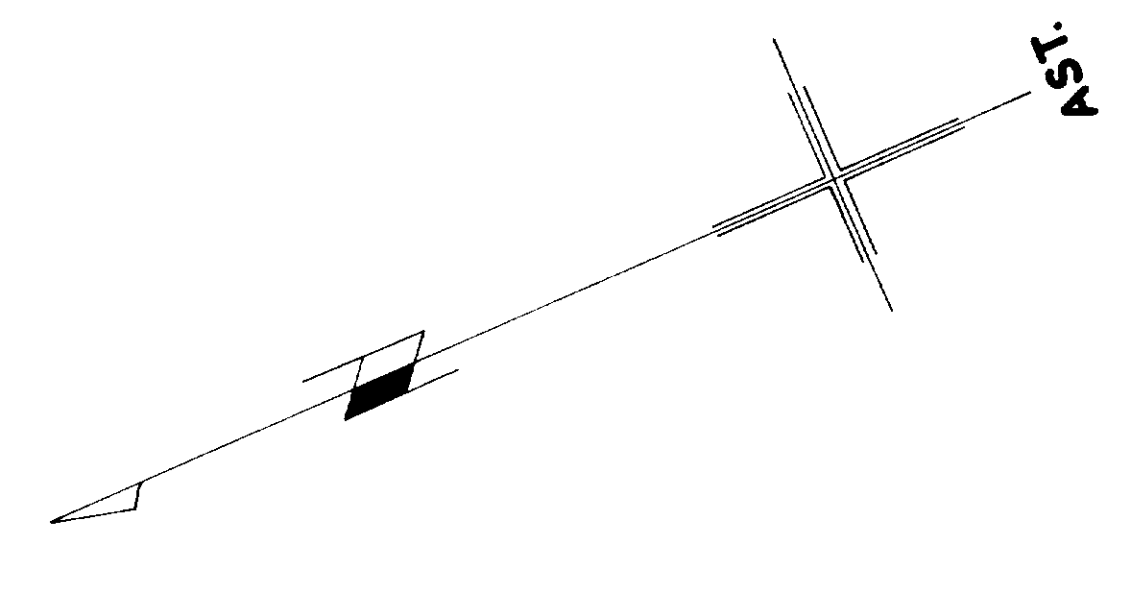
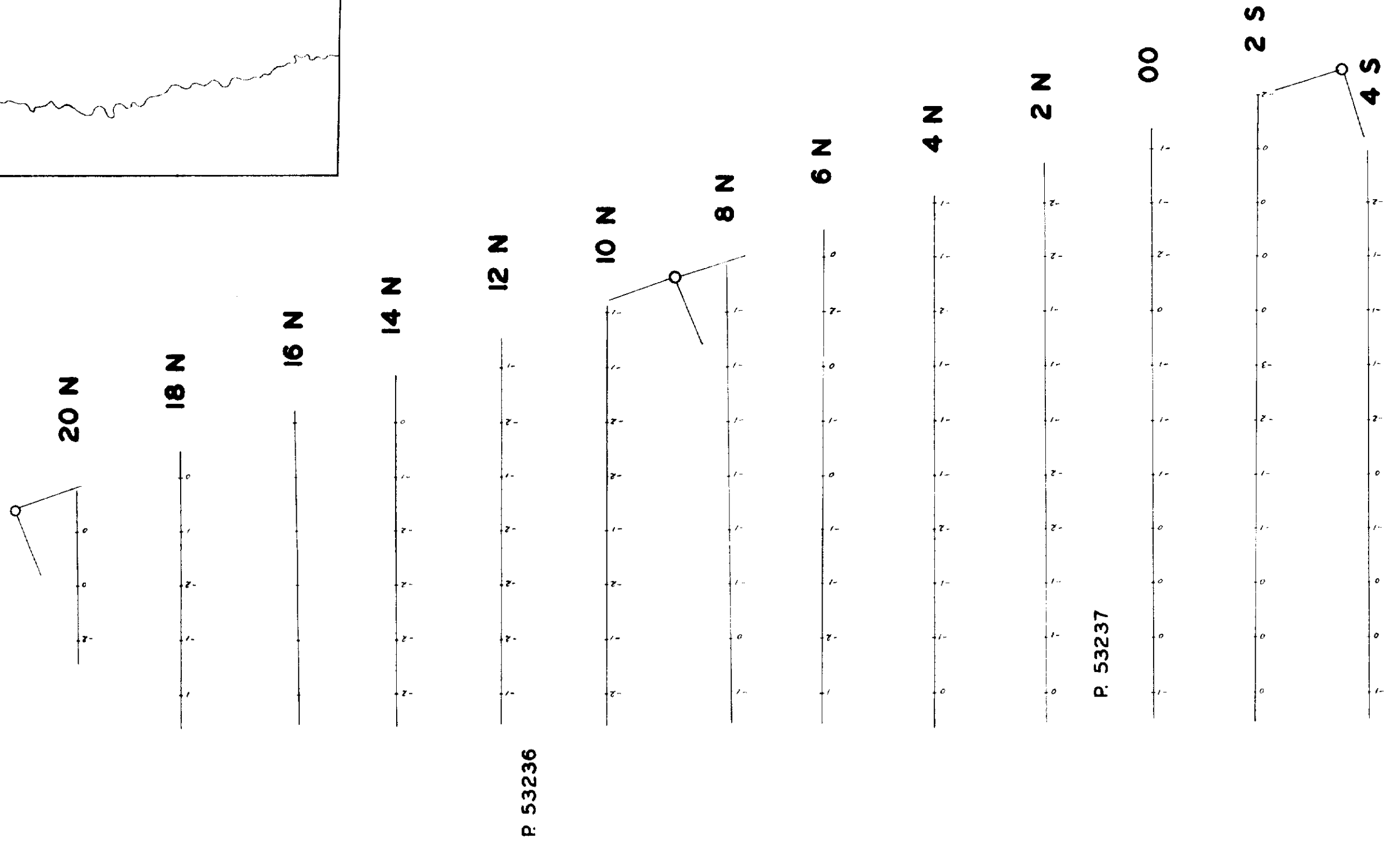
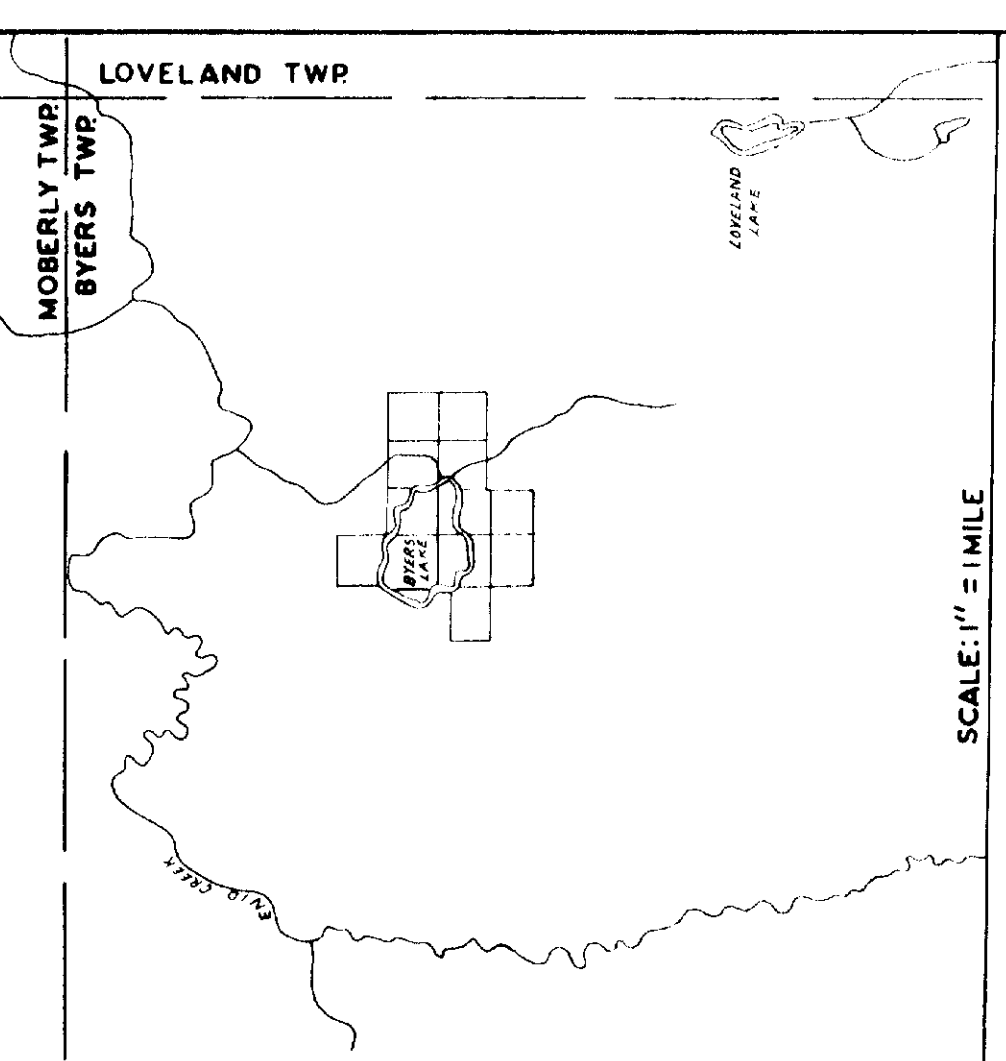
#### RECOMMENDATIONS AND CONCLUSIONS

Additional detailed survey work in the area of the conductor on claim P. 53240 should be considered. As there is considerable outcrop in the area a detailed geological survey should also be done.

As there were no values obtained from the sulphides cut on claim P. 57568 no further work is recommended here.

Respectfully submitted

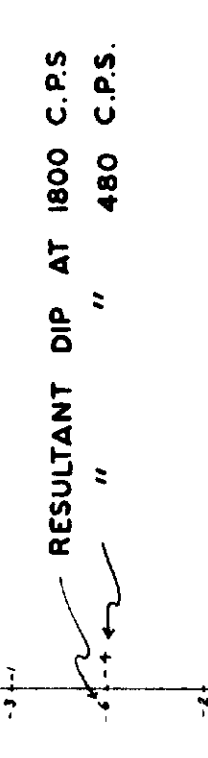
*W.E. Nyman*



MESPI MINES LTD.  
ELECTRO-MAGNETIC SURVEY  
BYERS TWP.

INSTRUMENT: CRONE J. E. M.  
DUAL FREQUENCY: IN-LINE METHOD  
COILS 300' APART  
MAP SCALE: 1" = 200'

LEGEND



APPROVED: *W. B. Caughell*  
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OPERATOR: MIKE SMITH  
SURVEY DATE: MARCH 21 TO 26, 1965