



42A13SE0100 63.1806 REID

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REPORT

ON

COMBINED ELECTROMAGNETIC AND MAGNETIC SURVEY

DONE FOR

MESPI MINES LIMITED, TORONTO

ON THEIR

CLAIM GROUP IN REID TOWNSHIP

PORCUPINE MINING DIVISION, ONTARIO

WORK BY

MESPI MINES LIMITED

TIMMINS, ONTARIO

WORK CONDUCTED BETWEEN FEBRUARY 27 TO MARCH 27/65

SEPTEMBER 22, 1965

W.E. NYMAN

## INTRODUCTION

During the period from February 27, 1965 to March 27, 1965, a combined Ronka method electromagnetic and a vertical magnetic geophysical survey was conducted by Mespi Mines Limited of 1705 Victory Building, 80 Richmond Street, West, Toronto, Ontario on one of their claim groups in Reid township.

## LOCATION OF CLAIMS

Eighteen claims located in the north west quarter of Reid township, Porcupine Mining Division, Ontario are numbered as follows:

P. 55182, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99.

The property is approximately eighteen air miles to the north west of Timmins, Ontario.

## ACCESS

Access to this group of claims was made via the Ontario Hydro's winter service road to the Sturgeon Falls power dam in Mahaffy township. At a point near the Reid-Mahaffy township line a camp was established and access from here was by means of skidoos down the frozen Mattagami River and across country to the claim group.

## PREVIOUS WORK

The complete group has been covered by two combined magnetic-electromagnetic airborne surveys.

Canadian Aero Mineral Surveys flew the ground in a NW-SE direction with 1/8 mile flight line spacing in 1963 for Mr. B.W. Lang of Toronto.

The ground was reflown in May 1964 by Hunting Survey Corporation for Mespil Mines Limited in a NE-SW direction once again using 1/8 mile flight line spacing.

Both airborne surveys showed electromagnetic conductors paralleling a strong north-easterly striking magnetic feature.

#### INSTRUMENTS USED AND METHOD OF SURVEY

The electromagnetic survey was conducted using a Ronka Mark IV, horizontal loop electromagnetic unit with a frequency of 876 cps. A coil separation of 300' was used and readings were taken every 100 feet. Readings obtained and plotted are the in-phase and out-of-phase components of the secondary magnetic field in terms of per cent of the normal field.

There were 40.5 miles of line cut and 1645 stations were read with the E.M. unit.

For the magnetic work, a Sharpe MF-1 fluxgate magnetometer was used to measure changes in the vertical component of the earth's magnetic field. The sensitivity was 20 gammas per scale division on the most sensitive scale. All readings have been tied into a base system on the grid and all drifts have been corrected. A total of 1661 stations were established with the magnetometer survey.

#### SURVEY RESULTS

##### Electromagnetic

Three electromagnetic anomalies were detected that appear to be caused by bedrock conductors. Due to deep conductive overburden in the area conductivity analysis was difficult

to obtain.

These anomalies are located on:

- (a) claims P. 55194 and P. 55184 from L-8W to L-16E
- (b) claims P. 55192 and P. 55182 from L-16E to L-30E
- (c) claim P. 55182 from L-26E to L-34E.

Magnetic

The main trend of the isomagnetic lines is in a northeast-southwest direction. The magnetics in this direction probably represent an underlying basic intrusive plug.

A second pattern of magnetic anomalous conditions showed up perpendicular to the main trend. These are fairly narrow in width and probably represent diabase dikes.


CONCLUSIONS AND RECOMMENDATIONS

Investigation of the electromagnetic anomalies by diamond drilling, in order to determine whether ore bearing sulphides are the cause is definitely warranted.

It is recommended that a minimum of three diamond drill holes be bored to investigate the respective anomalous conditions. Additional drilling would depend upon the results obtained from these initial holes.

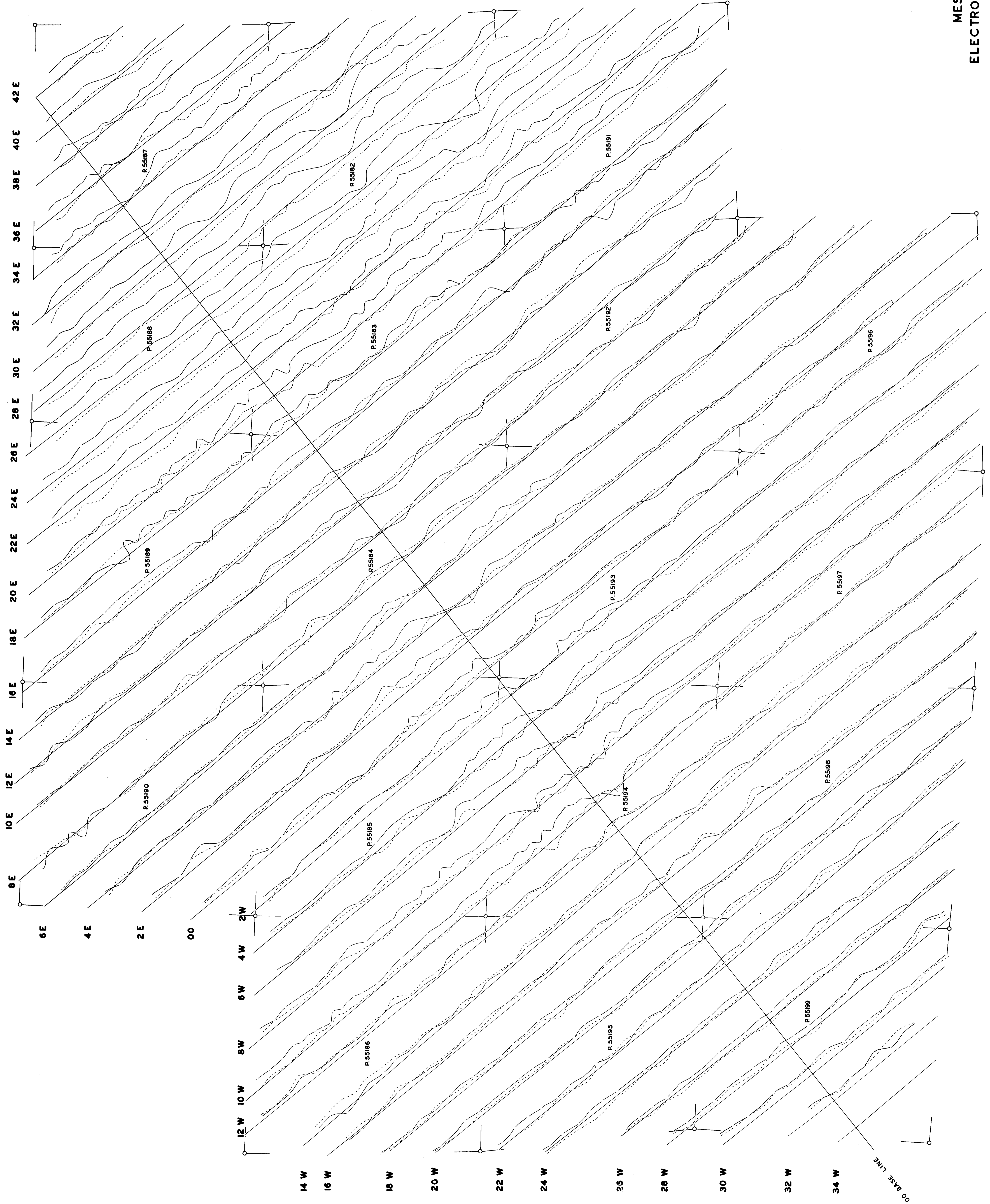
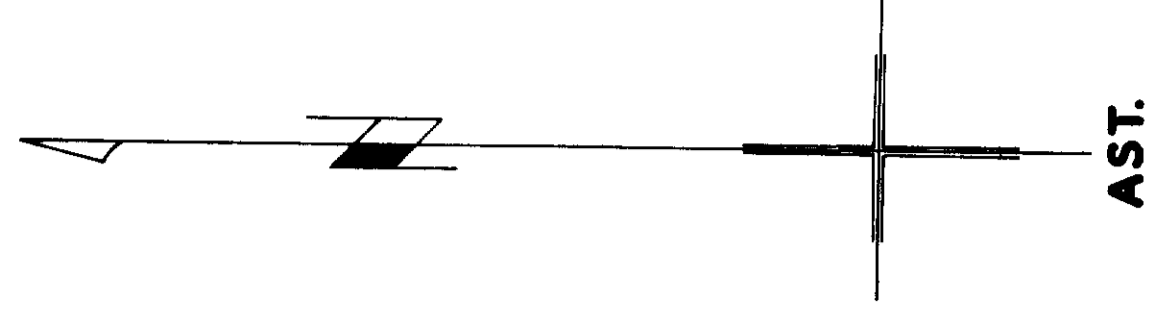
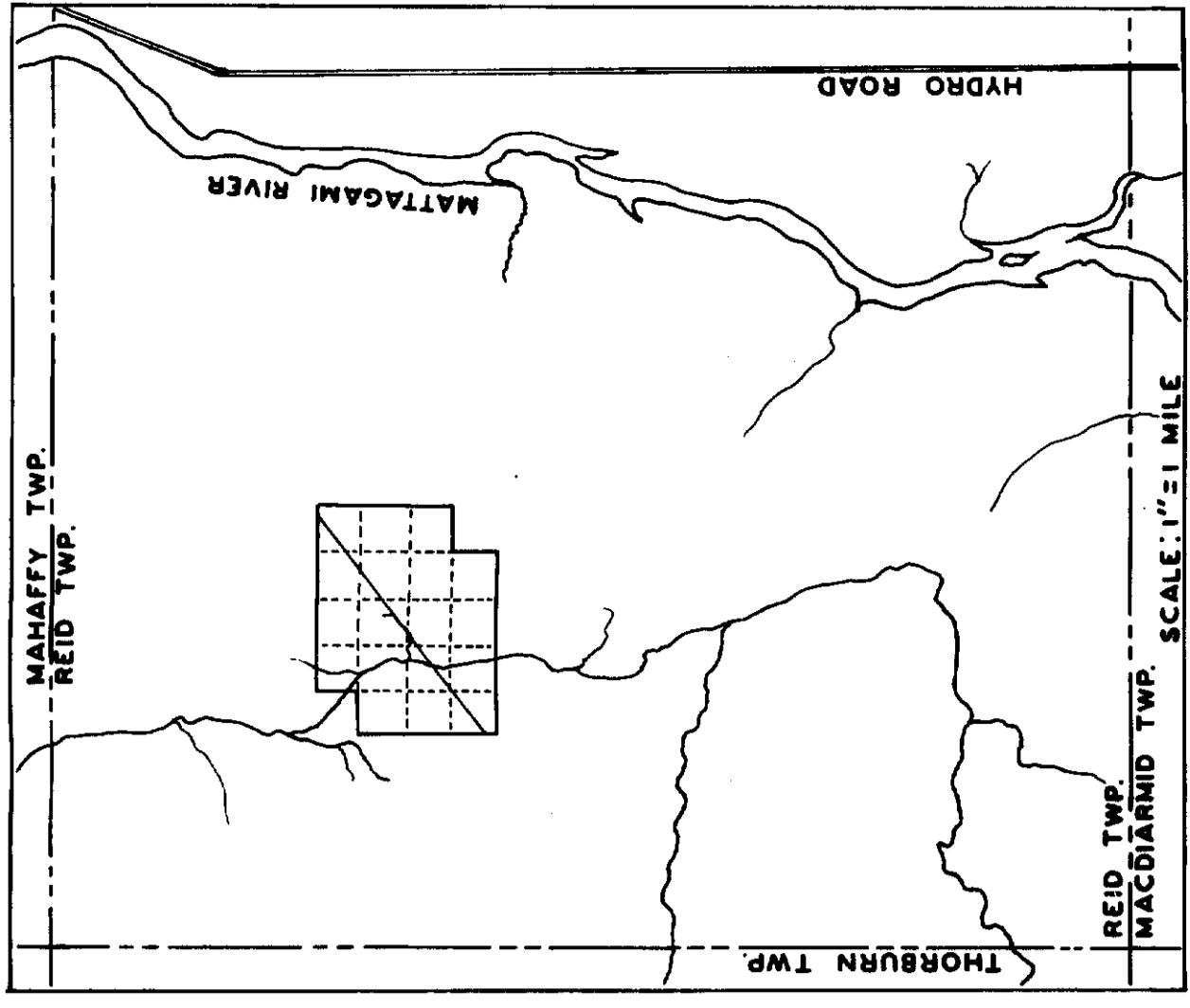
Respectfully submitted

MESPI MINES LIMITED



W.E. Nyman  
Exploration Manager

WEN/jf



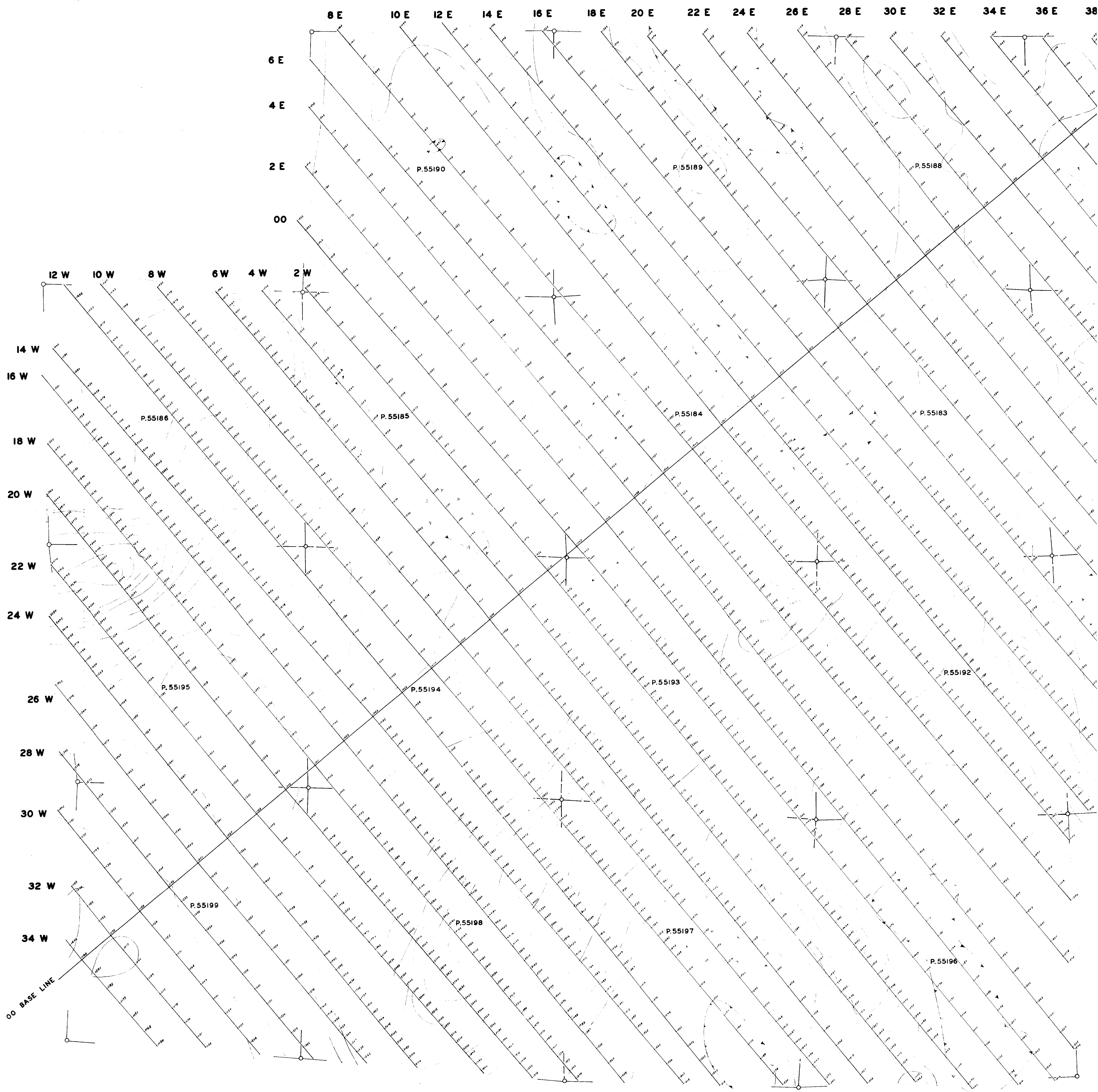
MESPI MINES LTD.  
ELECTRO-MAGNETIC SURVEY

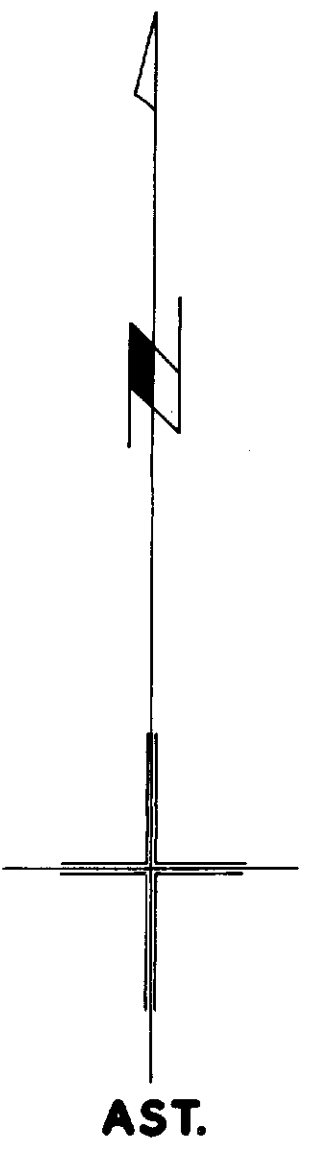
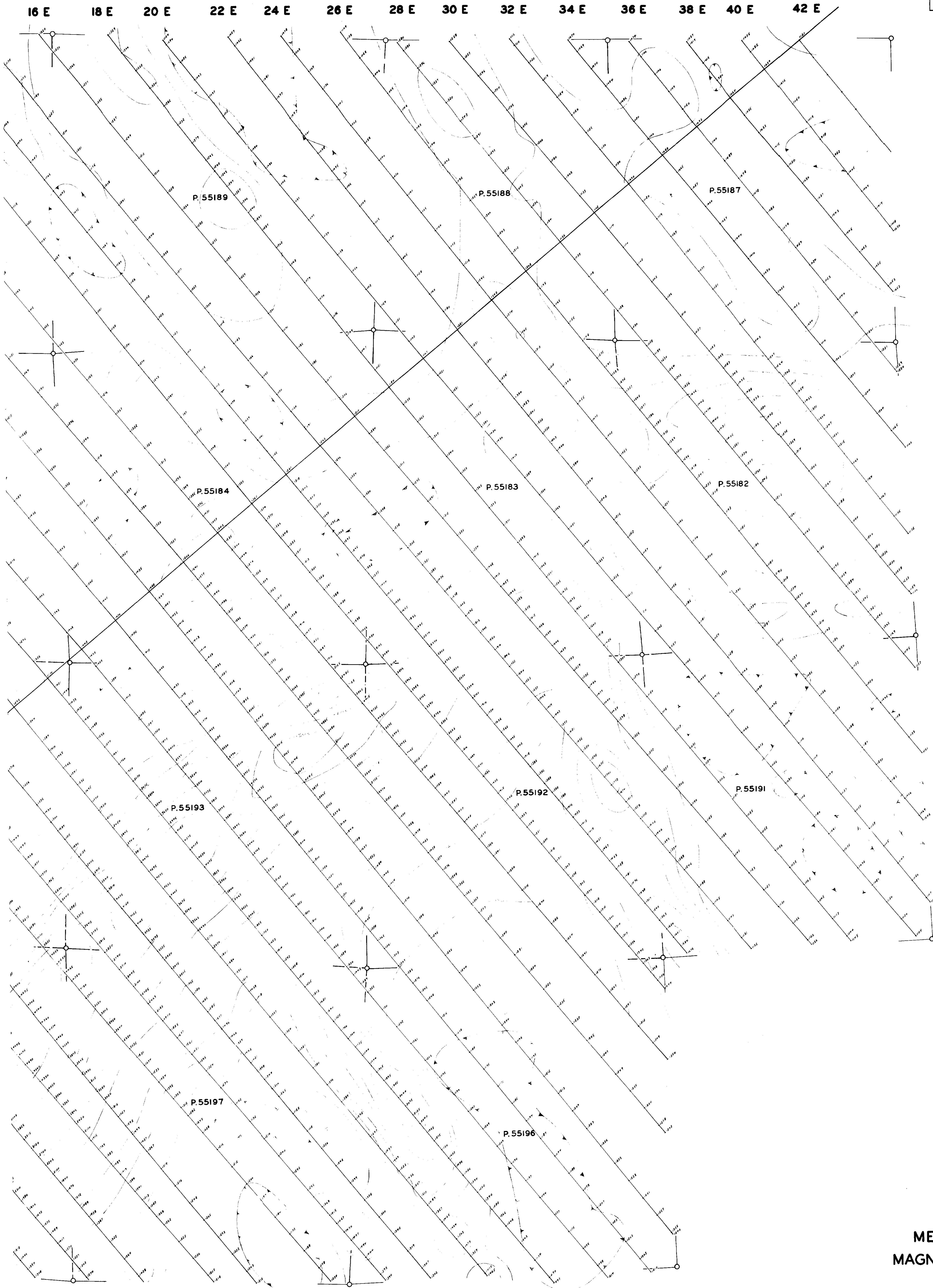
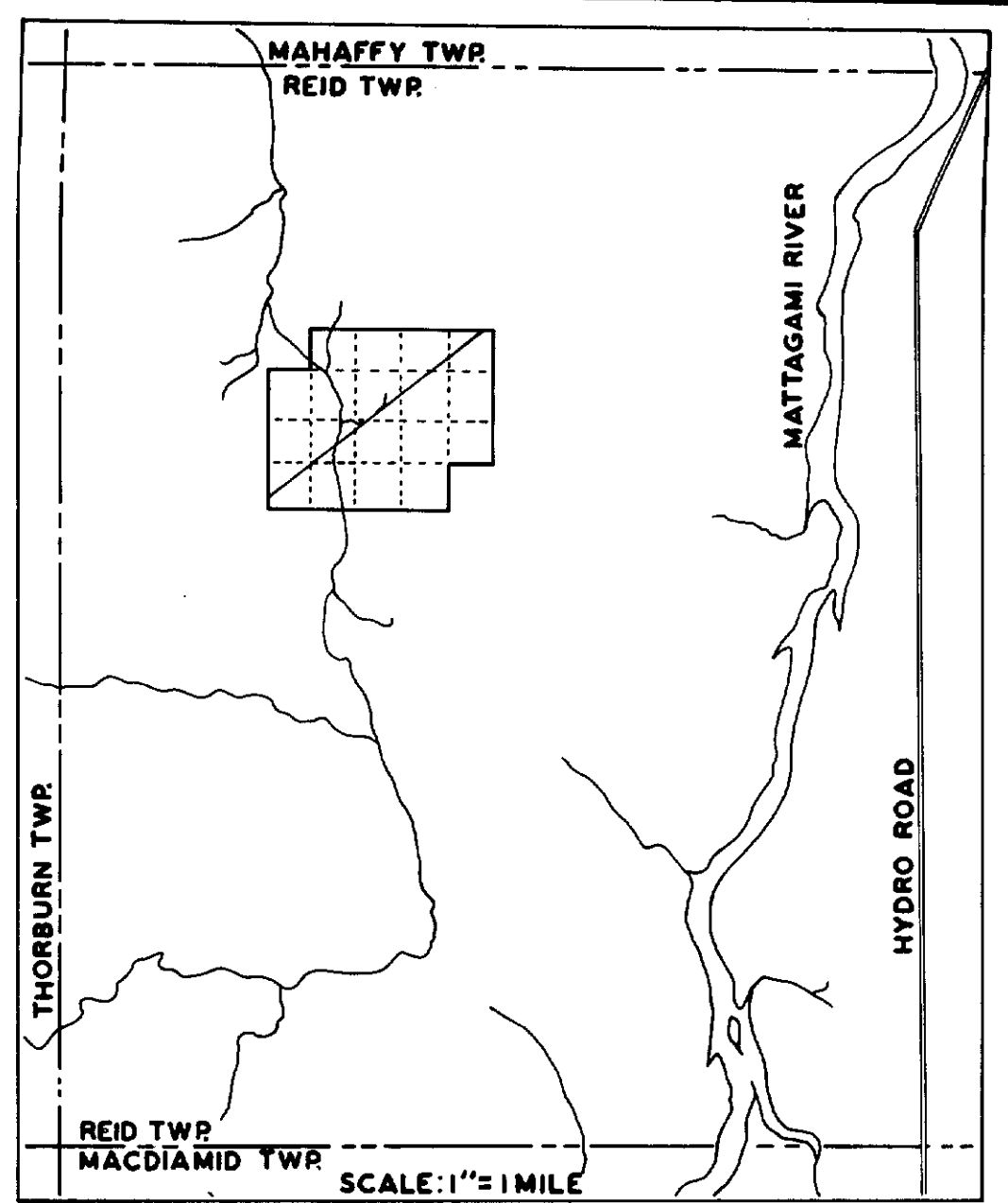
REID GRID  
INSTRUMENT: RONKA H.E.M.  
COILS 300' APART  
MAP SCALE: 1"=200'  
PROFILE SCALE: 1"=20%  
LEGEND IN PHASE  
OUT OF PHASE

DRAWN BY: R. C. DENONMEE  
APPROVED: [Signature]  
SURVEY DATE: MAR 18 1955

63.1806







MESPI MINES LTD.  
 MAGNETOMETER SURVEY  
 REID GRID  
 INSTRUMENT: FLUXGATE MF-1  
 MAP SCALE: 1"=200'

CONTOURS  
 100 GAMMA INTERVALS UP TO 1500 GAMMAS  
 500 " " FROM 1500 TO 3000 GAMMAS

DRAWN BY: R. C. DENOMMEE  
 APPROVED: *[Signature]*  
 SURVEY DATE: Mar 16-21 65