



INTRODUCTION

During the period from March 22 to March 31, ¹⁹⁶⁶ an electromagnetic survey was carried out on a group of fifteen contiguous claims located in westcentral Reid Township.

The claims are recorded in the name Mespi Mines Limited, 1705 Victory Building, 80 Richmond Street, West, Toronto 1, Ontario and are numbered as follows:

P. 85159, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73.

LOCATION AND ACCESS

The claims are located in westcentral Reid Township about 2 miles west of the Mattagami River and some 12 miles northwest of Timmins, Ontario.

Motorized toboggans were used to provide access between Mespi Mines' semi-permanent camp on Thorburn Lake and the claim group. The camp was serviced by helicopter and fixed wing aircraft.

PREVIOUS WORK

The claim group has been covered by two combined airborne magnetic and electro-magnetic surveys.

Canadian Aero Mineral Surveys conducted the first survey for Mr. B.W. Lang of Toronto in 1963. Flight lines were oriented northwest and spaced 1/8 mile apart.

The area was reflight in a northeasterly direction in 1964 by Hunting Survey Corporation for Mespi Mines Limited.

INSTRUMENTS USED AND SURVEY METHOD

A Crone J.E.M. dual frequency transceiver unit was used for the entire survey. The in-line method with a coil separation of 300 feet was employed.

The Crone J.E.M. makes use of the "shoot-back" method which is designed to eliminate fictitious dip angles due to coil misalignment in rugged terrain when more conventional methods are employed.

The system requires two units each of which is both a transmitter and receiver. The units are set at fixed distance apart along the same line and measurements are usually made at 100 foot intervals along the line.

The axis of one coil is oriented towards the other so that the axis is inclined at an angle of 15 degrees below the horizontal. A dip angle is measured at the other coil about a horizontal axis which is perpendicular to the traverse line. The roles of transmitter and receiver are then interchanged. The transmitter is this time oriented 15 degrees above the horizontal and a dip angle measurement is then made at the receiver. In the absence of a conductor the dip angles should be roughly of the same magnitude but opposite in sign. The algebraic sum of the two dip angles is then recorded as the resultant dip angle.

In the presence of a conductor the anomalous field will have the opposite effect upon the dip angles yielding an algebraic result greater or less than zero.

Interpretation of the results is based on the use of type curves.

In the absence of a conductor, resultant dip angles should be approximately zero regardless of substantial elevation differences between the two coils.

The units operate at two frequencies 1800 c.p.s. and 480 c.p.s. Normally only the higher frequency is read however if anomalous dip

angles are recorded at 1800 c.p.s. the procedure is repeated using the lower frequency. The ratio of the resultant angles obtained at the two frequencies gives some idea of the conductivity of the conductive body.

SURVEY RESULTS

23.5 line miles of line were read and 1243 readings were taken.

Survey lines were first read in a northwesterly direction. Some anomalous readings were obtained but proved very difficult to interpret. It was then decided to re-read the area along northeast lines. Again anomalous results were obtained which failed to clarify the picture.

A fixed transmitter V.E.M. unit was used to attempt to clarify the situation. The conductor axes obtained are shown on the accompanying plan.

Subsequent work in the area indicated that some of the anomalous results obtained were caused by highly conductive overburden and some were due to legitimate conductors.

Three of the conductors were tested by diamond drilling and proved to be carbonaceous ^{pyritic} ~~graphitic~~ slates.

An attempt to test the north striking conductor was abandoned when bedrock was not encountered at a depth of 306 feet.

The faults shown on the plan are interpreted from magnetic and gravimetric data.

CONCLUSIONS AND RECOMMENDATIONS

No further work is recommended on this group at this time.

Respectfully submitted

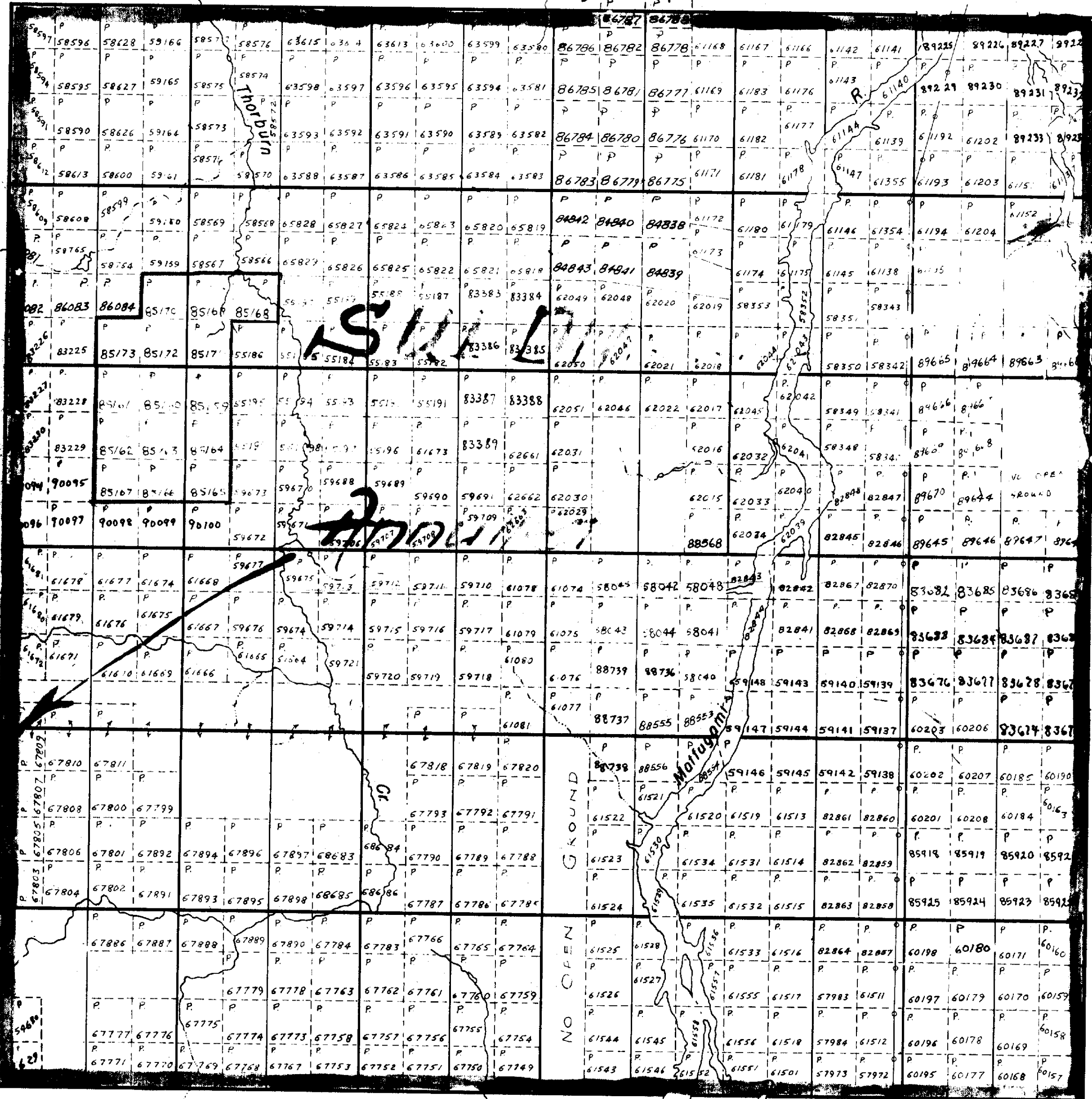
MESPI MINES LIMITED

J.E. Steers
J.E. Steers, Exploration Manager

REID TWP

Thorburn Twp

Mahaffy Twp.



Macdiarmid Twp.

VI

V

IV

III

II

Carnegie Twp.

THE TOWNSHIP OF

REID

Q3.2056

DISTRICT OF COCHRANE

PORCUPINE MINING DIVISION

SCALE: 1-INCH=40 CHAINS

LEGEND

PATENTED LAND	(P)
CROWN LAND SALE	C.S.
LEASES	(L)
LOCATED LAND	Loc.
LICENSE OF OCCUPATION	L.O.
ROADS	(---)
IMPROVED ROADS	(---)
KING'S HIGHWAY	(---)
RAILWAYS	(---)
POWER LINES	(---)
MARSH OR MUSKEG	(---)
MINES	(X)
MINING RIGHTS ONLY	MR
SURFACE RIGHTS ONLY	S.R.
CANCELLED	(C)

NOTES

LO 1344 to H.E.P.C. of Ont. covers flooding along shores of Mattagami River.

To be staked as in unsurveyed territory - Subsection (1) of Section 52a

400' Surface Rights Reservation around all Lakes and Rivers.

DATE OF ISSUE

FEB 1 1967

ONTARIO DEPT. OF MINES

ONT. DEPT. OF MINES MINING LANDS BR.

THIS MAP FOR CHECKING PURPOSES ONLY - MUST NOT BE SOLD.

PLAN NO. - M-575

DEPARTMENT OF MINES -ONTARIO-

GEM.



GEARY TWP

MAHAFFY TWP

146 E

152 E

158 E

P 58597

P 58596

P 58628

P 53166

P 58594

P 58595

P 58627

P 59165

112 E B.L.

108 E

104 E

100 E

96 E

32 N B.L.

92 E

28 N

88 E

84 E

24 N

P 58591

P 58590

P 58626

P 59164

P 58612

P 58613

P 58600

P 59161

P 58610

P 58609

P 58608

P 53559

P 59160

P 59159

P 85170

0+00 BASE LINE

22 MILE POST

28 S

34 S

36 S

42 S

46 S

50 S

54 S

58 S B.L.

62 S

66 S

70 S

74 S

52 E

78 S

56 E

P 85173

P 85172

P 85160

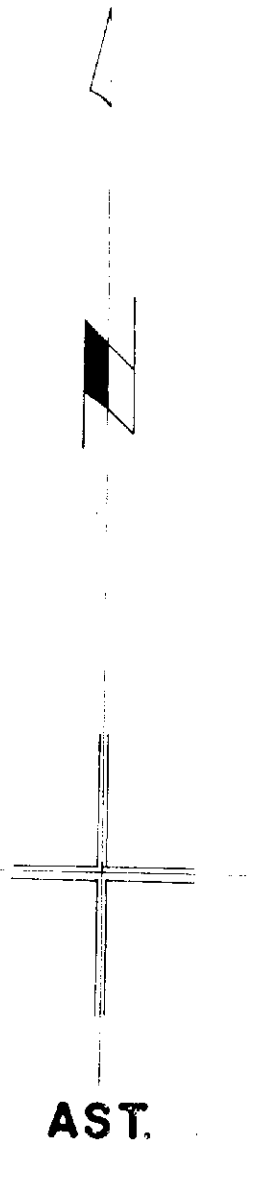
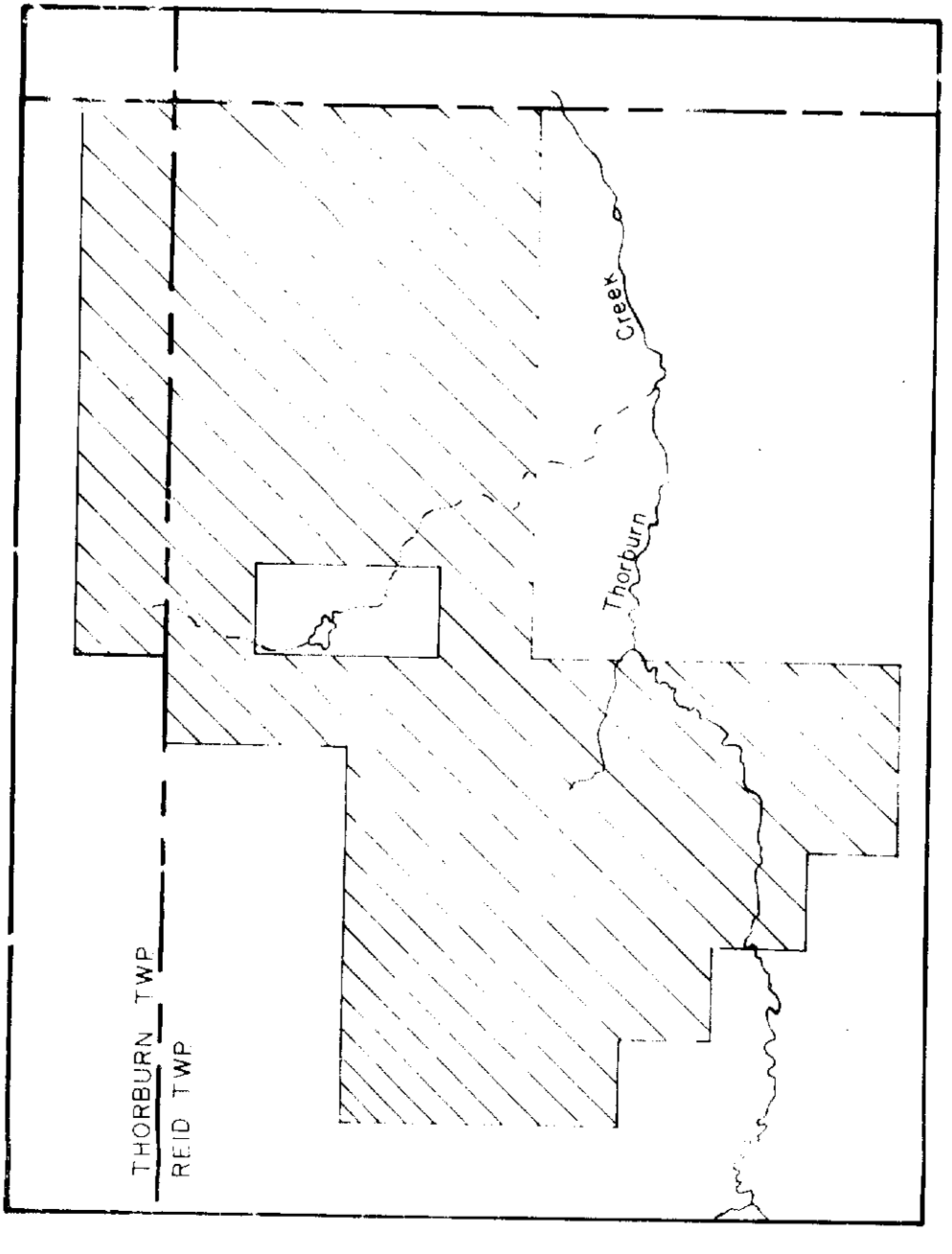
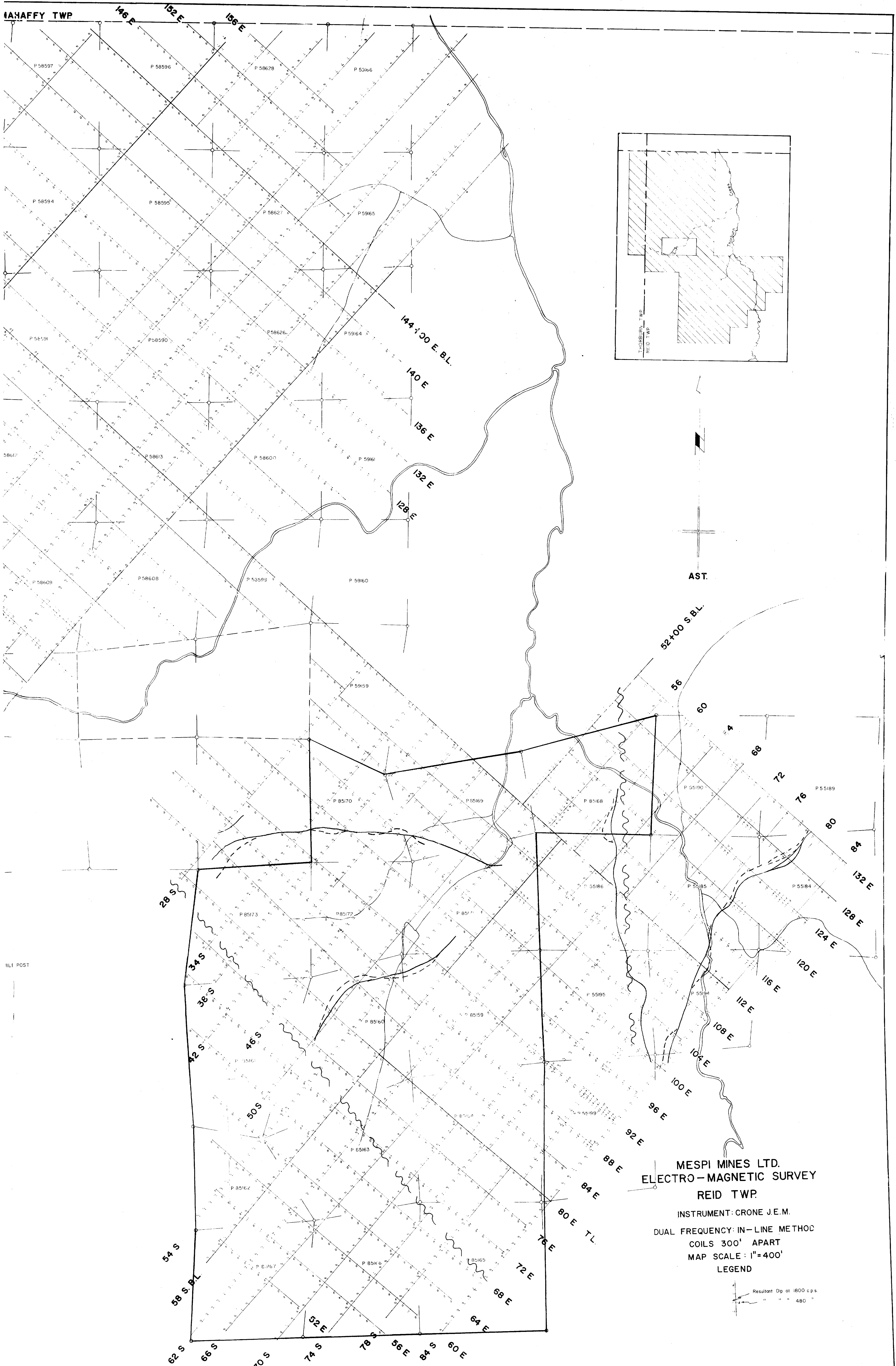
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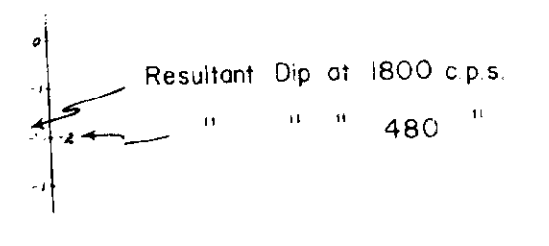
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P 85166





MESPI MINES LTD.
ELECTRO-MAGNETIC SURVEY
REID TWP.
 INSTRUMENT: CRONE J.E.M.
 DUAL FREQUENCY: IN-LINE METHOD
 COILS 300' APART
 MAP SCALE: 1"=400'
 LEGEND



SURVEY DATE: Mar 1/66 to Mar 31/66

Drawn by W.B. Caughell
 Approved by *[Signature]*

63.2056-