



42A12NE0028 63.2168 THORBURN

INTRODUCTION

During the period from October 15 to 17, 1966 inclusive an electromagnetic survey was carried out on a group of 6 claims situated in along the common boundary of Loveland and Thorburn Townships. The work was carried out for Mespi Mines Limited, 1705 Victory Building, 80 Richmond Street, West, Toronto 1, Ontario.

LOCATION AND ACCESS

The claim group is located along the common boundary between Loveland and Thorburn Townships, approximately twenty-one miles northwest of Timmins, Ontario.

The group is accessible by an all weather road, suitable for four wheel drive vehicles, which extends north from highway 576.

The claim group is numbered as follows: P. 90993, P. 90994, P. 90997, P. 90998, P. 91007, P. 91008.

PREVIOUS WORK

The area has been covered by two combined magnetic and electromagnetic airborne surveys. One survey was conducted in 1957 along north bearing flight lines and the other was conducted in 1964 along northeasterly bearing flight lines. Several weak electromagnetic anomalies were indicated on the ground.

INSTRUMENTS USED AND SURVEY METHOD

The electromagnetic survey was conducted using a Crone J.E.M. dual frequency transceiver unit. The in-line method was employed.

Coils spacing was maintained at 300 feet and readings were taken at 100 foot intervals. The dip angles shown on the accompanying plan are resultant dip angles and are plotted at the

midpoint between the coils.

10.5 miles of line were cut and 490 readings were taken.

SURVEY RESULTS


Three weakly conductive zones were indicated on claims P. 90997 and P. 91008. The zones apparently strike north northwesterly and dip westerly. The high to low frequency ratios indicate fair to poor conductivity and are probably due to disseminated sulphide mineralization.

CONCLUSIONS AND RECOMMENDATIONS

A fixed transmitter dual frequency vertical loop survey and a magnetometer survey are recommended before any consideration be given to testing these conductor by drilling.

Respectfully submitted,

MESPI MINES LIMITED


J.E. Steers
Exploration Manager

JES/jf

Crone J.E.M. Unit

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

The system required two units each of which is both a transmitter and a receiver. The units are set at a 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.

505 M

LOVELAND TWP

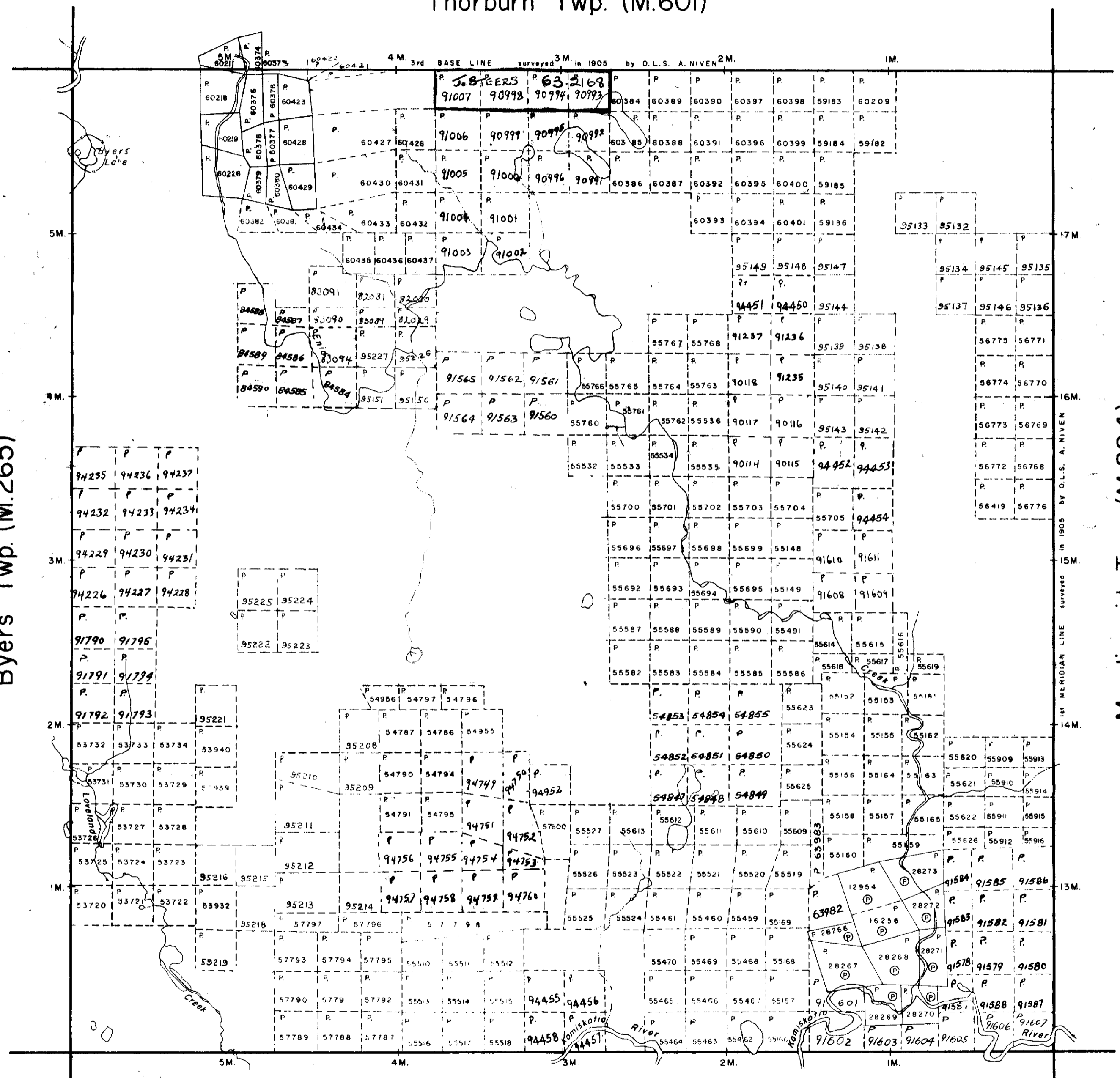
505 M

Thorburn Twp. (M.601)

Byers Twp. (M.265)

Macdairmid Twp. (M.294)

Robb Twp. (M.309)



THE TOWNSHIP OF
OF
LOVELAND

DISTRICT OF COCHRANE

PORCUPINE MINING DIVISION

SCALE: 1-INCH = 40 CHAINS

LEGEND

- PATENTED LAND Ⓢ
- CROWN LAND SALE C.S.
- LEASES Ⓛ
- LOCATED LAND Loc.
- LICENSE OF OCCUPATION L.O.
- MINING RIGHTS ONLY M.R.O.
- SURFACE RIGHTS ONLY S.R.O.
- ROADS —
- IMPROVED ROADS —
- KING'S HIGHWAYS —
- RAILWAYS —
- POWER LINES —
- MARSH OR MUSKEG —
- MINES —
- CANCELLED —

NOTES

400' Surface Rights Reservation around all lakes and rivers.

DATE OF ISSUE
AUG 1 1967
ONT. DEPT. OF MINES
MINING LANDS BR.
THIS MAP FOR CHECKING
PURPOSES ONLY - MUST
NOT BE SOLD.

PLAN NO. **M-293**
DEPARTMENT OF MINES
- ONTARIO -



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DATE OF ISSUE

AUG 31 1957

ONTARIO DEPT. OF AGRIC.

P.	P.	P.	P.
95064	95063	95062	95061
P.	P.	P.	P.
95065	95066	95067	95068

85259

82979

82794 82793

P.	P.	P.	P.
77809	77808	77807	58617
P.	P.		
77813	77812		

Thorburn NO OPEN GROUND Cr.

P.	P.	P.									P.	P.
83924	83920	83919									59469	59470
D.	P.	P.									P.	P.
83925	83921	83918									59472	59471
P.	P.	P.	P.	P.	P.	P.	P.	P.	P.			
95192	95191	83926	83923	83922	83917	85146	85147	85152	85153	83927		
P.	P.	P.	P.	P.	P.	P.	P.	P.	P.	P.		
95193	95190	83929	83930									
P.	P.	P.	P.	P.	P.	P.	P.	P.	P.	P.		
95194	95195	85141	85142	85145	85148	85147	85154	85151	85154	83928		
P.	P.	P.	P.	P.	P.	P.	P.	P.	P.	P.		
95194	95189	85138	85139	85140	85143	85144	85149	85150	85155	82978		
P.	P.	P.	P.	P.	P.	P.	P.	P.	P.	P.		
95195	95188	86040	86039	86038	86037	95228	95229					
P.	P.	P.	P.	P.	P.	P.	P.					
86045	86044	86043	86042	86041								
P.	P.	P.	P.	P.								
95230	95231											
P.	P.											
91008	90997											

P.	P.
59485	60405
	P.
	59171

Creek

P.	P.
60211	60374
P.	5M
60218	

4M.

63.2168
J. STEERS

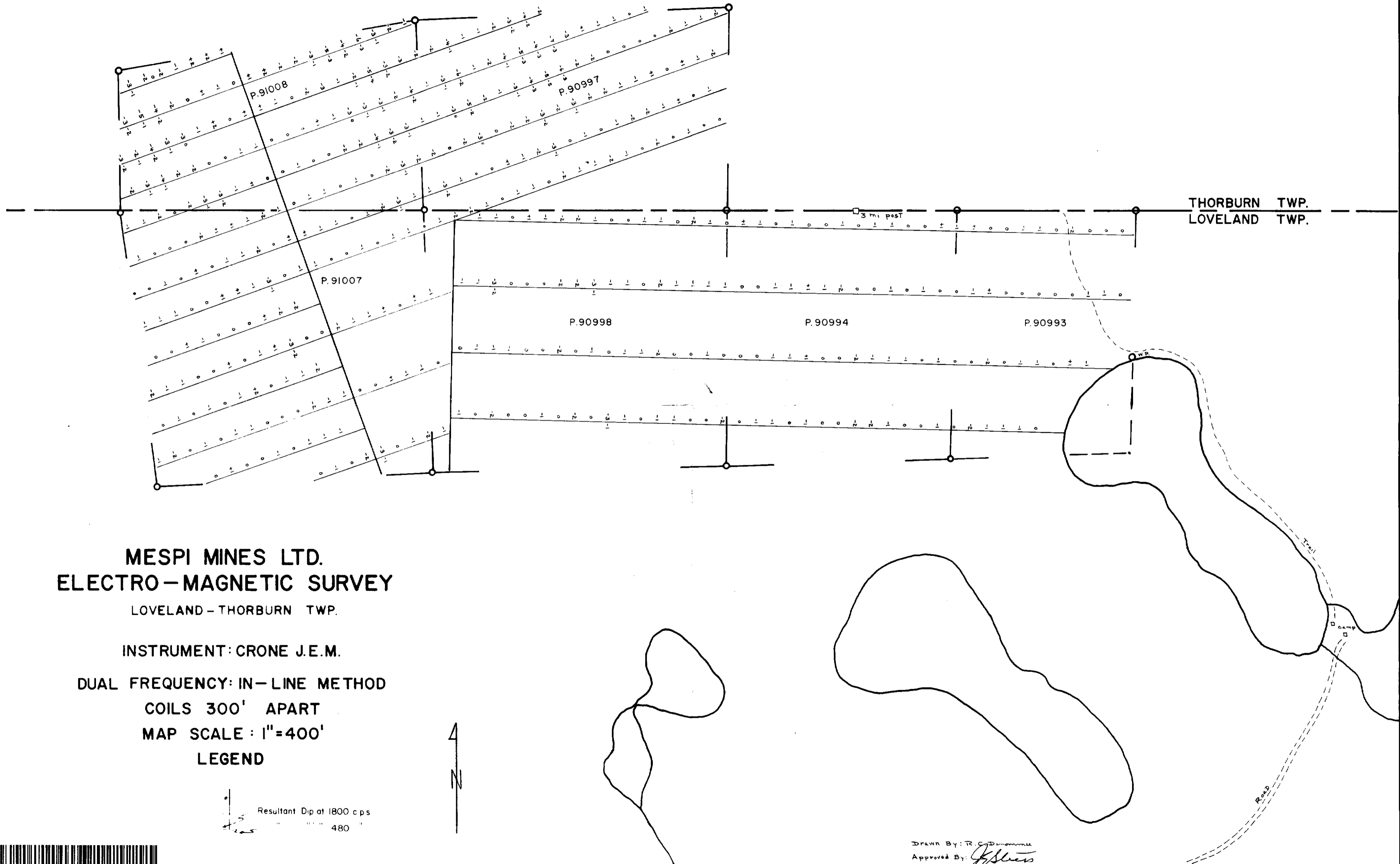
3M.

2M.



42A12NE0028 63.2168 THORBURN

210



THORBURN TWP.
LOVELAND TWP.

**MESPI MINES LTD.
ELECTRO-MAGNETIC SURVEY**

LOVELAND - THORBURN TWP.

INSTRUMENT: CRONE J.E.M.

DUAL FREQUENCY: IN-LINE METHOD

COILS 300' APART

MAP SCALE: 1" = 400'

LEGEND

Resultant Dip at 1800 cps
480'



Drawn By: R.C. Dinnon
Approved By: *[Signature]*

