



42A12SE0250 63.2097 ROBB

2097

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INTRODUCTION

During the period from April 28, 1964 to June 5, 1964 a magnetic survey was carried out over a group of 53 claims located in Robb Township, Porcupine Mining Division.

LOCATION AND ACCESS

The claim group is located in the east central portion of Robb township about 15 miles northwest of Timmins, Ontario. The group is readily accessible via highways 101 and 576.

PREVIOUS WORK

The area has been covered by three combined electromagnetic and magnetic surveys and portions of the area received ground magnetic and electromagnetic coverage by Dominion Gulf Company in the early 1950's.

INSTRUMENTS USED AND SURVEY METHOD

The baselines were read with an Askania magnetometer. All crosslines were read with a Fluxgate MF-1 Magnetometer. All data were reduced to a common baselevel and corrected for drift. The results were plotted on the accompanying map. A total of 4794 stations were established.

SURVEY RESULTS

The magnetic results have been of little use in providing much information about the geology of the area. The most obvious features are the northwesterly striking diabase dikes which occur in the central and eastern

portions of the area.


Magnetic relief is considerably greater in the western portion of the area. The strong easterly trending magnetic anomalies are believed to be due to concentrations of magnetite within rocks of andesitic composition.

CONCLUSIONS AND RECOMMENDATIONS

The magnetic results provide little information about the nature of the bedrock geology. Further work on this ground should be based on the results of electromagnetic or induced polarization surveys.

Respectfully submitted

MESPI MINES LIMITED


J.E. Steers
Exploration Manager

JES/jf



42A128E0250 63.2097 ROBB

INTRODUCTION

During the period from March 3 to April 6, 1965, an induced polarization survey was conducted by Mespi Mines Limited, Timmins, Ontario for Cincinnati-Porcupine Mines Limited, 80 Richmond Street, West, Toronto, Ontario

LOCATION AND ACCESS

The claim group is located in the northeast portion of Robb Township approximately twenty miles northwest of Timmins, Ontario. The group is readily accessible via highways 101 and 576 from Timmins, Ontario.

INSTRUMENT USED AND SURVEY METHOD

A pulse-transient type of induced polarization unit manufactured by Crone Geophysics Limited of Port Credit, Ontario was used for this survey.

With this method current is applied to the ground in a "square wave" pattern. The cycling sequency[?] is current on positive for 2 seconds, current for two seconds, current on negative two seconds.

Field measurements are made of the primary current (I) primary voltage (V_p) and secondary voltage (V_s).

The secondary voltage measurement is made over a period of one second twenty seconds after the current has been shut off. This measurement is an integrated measurement over a one second period and has millivolt seconds as the unit of measurement.

The final "IP" unit plotted is in milliseconds and is obtained by normalizing the secondary voltage against the primary voltage i.e. Apparent chargeability (V_s / V_p) milliseconds.

In this survey the power supply was a 2500 watt, 400 cycle, 3 phase generator driven by a 6 H.P. Briggs and Stratton engine controlled by a transistorized circuit box.

The entire survey was conducted using a gradient array.

SURVEY RESULTS

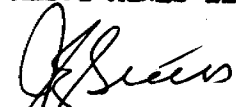
No anomalous areas were found although one or two reading highs were occasionally obtained. It is felt that these readings are spurious and would not be reproducible.

CONCLUSIONS AND RECOMMENDATIONS

No further work is warranted on this ground at this time.

Respectfully submitted

MESPI MINES LIMITED


J. B. Steers
Exploration Manager

JES/jf

June 23rd 1965

The Induced Polarisation Method

This method was developed by Dr. Brant while at the University of Toronto in 1947. It was further developed and engineered as a field method by Dr. Brant and Newmont Mining Company.

With the method a pulse of current is placed through the ground and then abruptly shut off. If sulphides are present a charge appears to build up around the sulphide-rock interface while the current is going through the ground. When the current is abruptly shut off this charge decays over a period of 1/2 to 1.1/2 seconds. Thus after the primary current is shut off a sensitive detector is used to detect any residual current flowing through the ground due to the decay from the sulphide-rock interface. The greater the primary current and the larger the sulphide-rock interface area the greater this decay signal will be. Thus the method is most effective in the detection of disseminated sulphide deposits.

In this survey square wave pulses are placed through the ground-current on positive for 2 seconds -- current off for 2 seconds -- current on negative for 2 seconds -- current off for 2 seconds, etc. The power is supplied by a 2500 watt generator and controlled by a transistorised circuit box. As much current is put into the ground as possible. The current electrodes are placed between 2000 and 6000 feet apart. Two porous pots spaced 200' apart are used as electrodes to measure both the primary voltage in millivolts

while the current is on and the secondary voltage. The station being read is mid-way between the two pots. The receiver measures the voltage (in volts) between the two pots while the primary current is on. It also senses and locks into this signal in order to have a timing reference to measure the secondary voltage. When the current is shut off there is a 20 millisecond delay then a 1 second sample is taken of the secondary signal. This is an integration of the voltage against time and is measured in millivolt-seconds. The final "IP" measurement is normalized against primary voltage and thus has the units $\frac{\text{millivolt seconds}}{\text{volts}}$ = milliseconds. The resistivity can be calculated from the primary current and primary voltage (at the pots) reading multiplied by a factor depending on the geometric position of the 2 pots with respect to the 2 current stakes.

The field procedure is to lay out the current electrodes such that the line joining them is perpendicular to strike. A square grid of lines is run the sides of the square equal to approximately 1/2 the distance between the current stakes. The lines are parallel to the line between the current stakes. The equipment on the lines consists of the receiver and the two porous pots. The current going into the ground is noted along with the primary voltage between the 2 pots and the secondary voltage - ~~time~~ in millivolt seconds. From these readings the apparent resistivity and apparent chargeability (IP effect) can be calculated for each station.

M.309

ROBB TWP

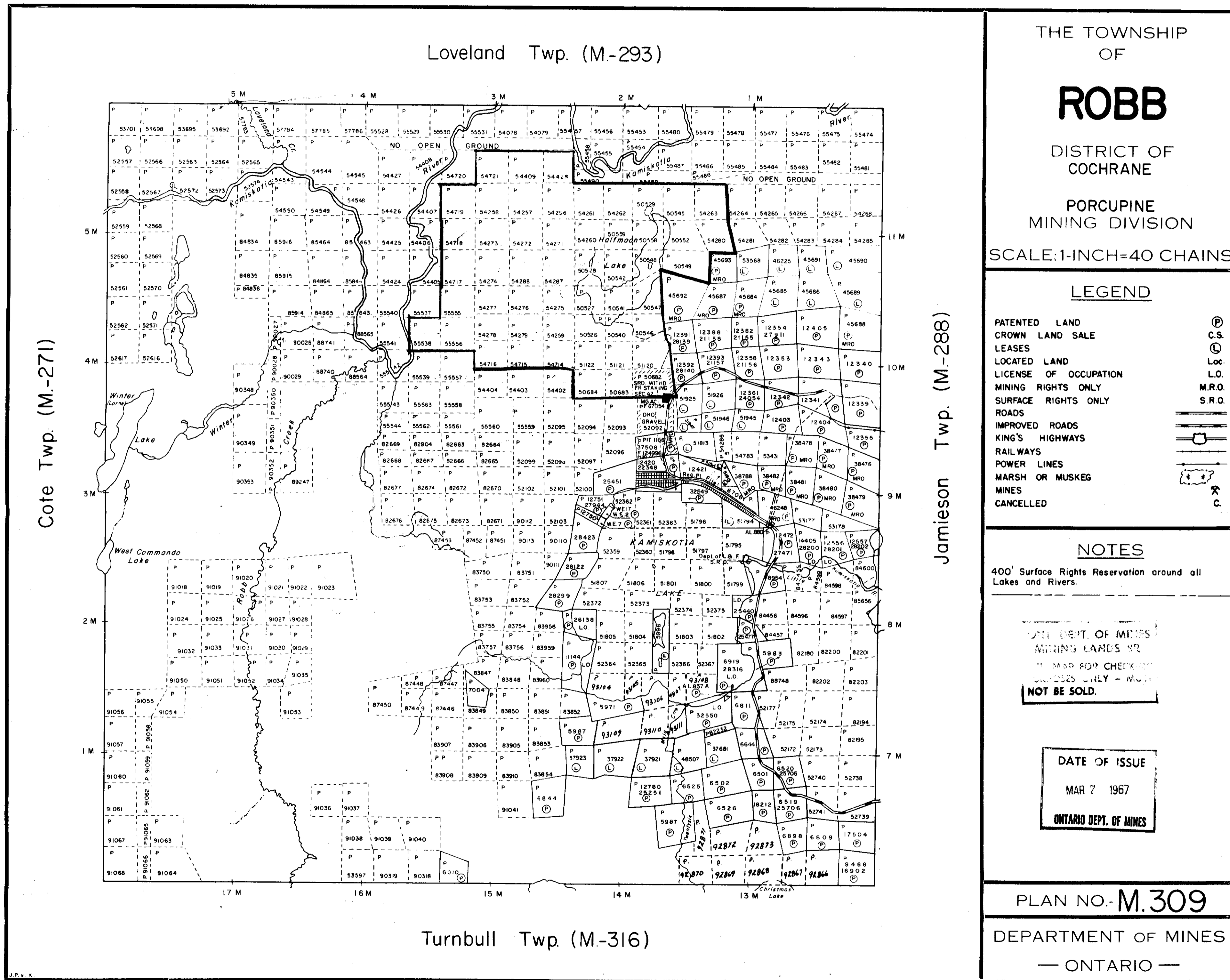
ROBB TWP

TRIM LINE

M.309

ROBB TWP

ROBB TWP



THE TOWNSHIP OF

ROBB

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 | C. |

NOTES

400' Surface Rights Reservation around all Lakes and Rivers.

ONT. DEPT. OF MINES
MINING LANDS ARE
TO BE CHECKED
OWNERS ONLY - MUST
NOT BE SOLD.

DATE OF ISSUE

MAR 7 1967

ONTARIO DEPT. OF MINES

PLAN NO. M.309

DEPARTMENT OF MINES

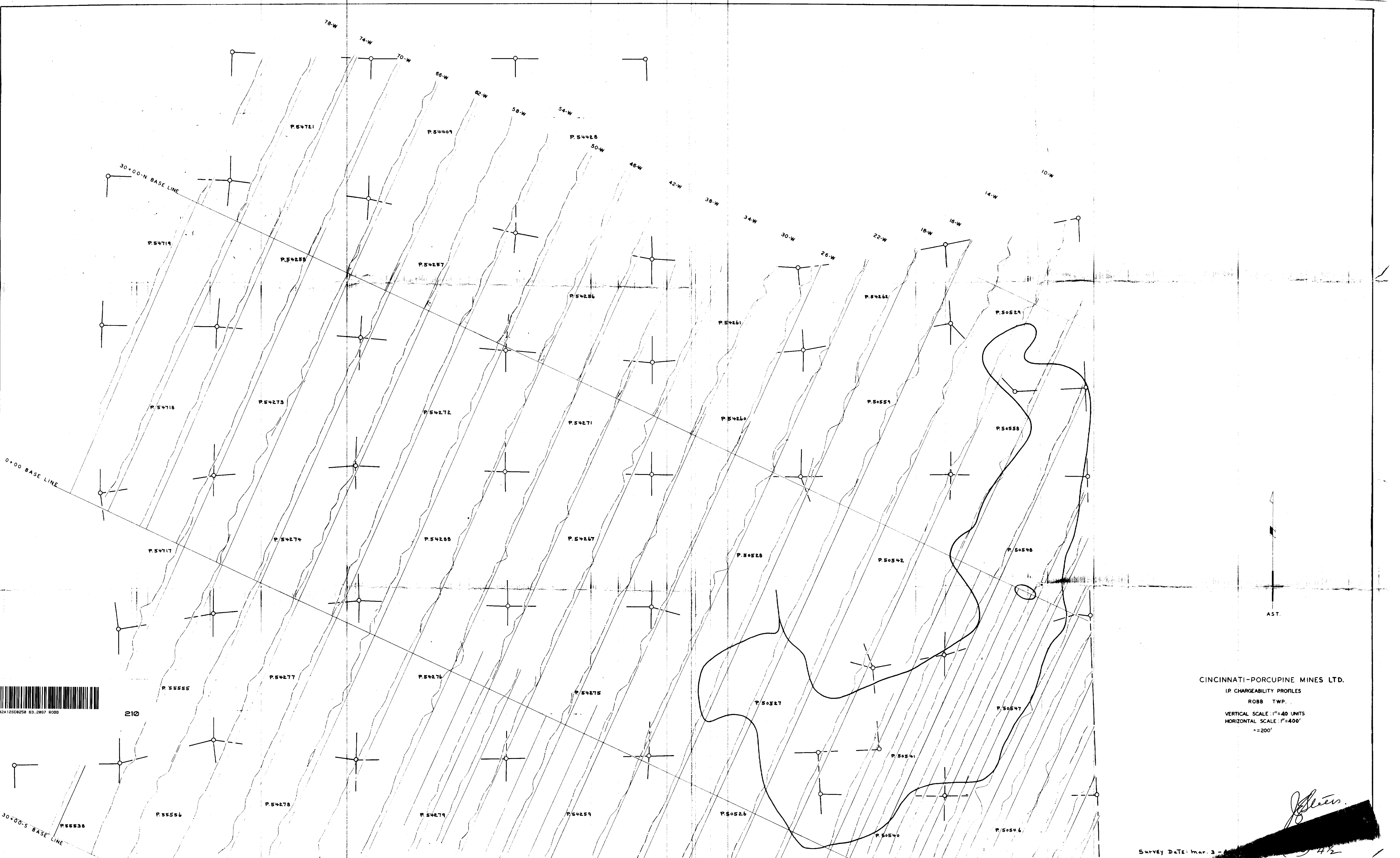

— ONTARIO —



42A1256R038 63-2637 Robb

200

TRIM LINE

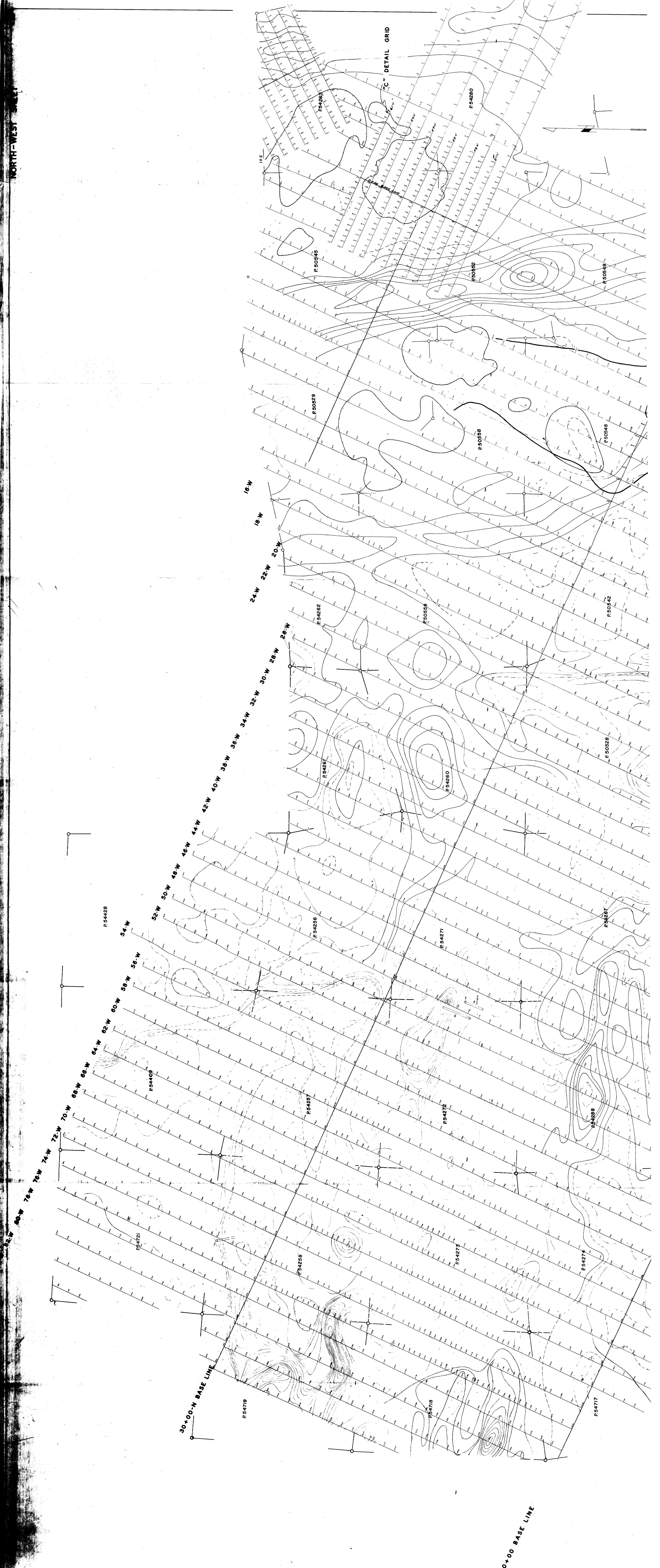
42A12558228 03.2807 ROSS

210

CINCINNATI-PORCUPINE MINES LTD.
 IP CHARGEABILITY PROFILES
 ROBB TWP.
 VERTICAL SCALE: 1"=40 UNITS
 HORIZONTAL SCALE: 1"=400'
 1"=200'

SURVEY DATE: MAY 3 -

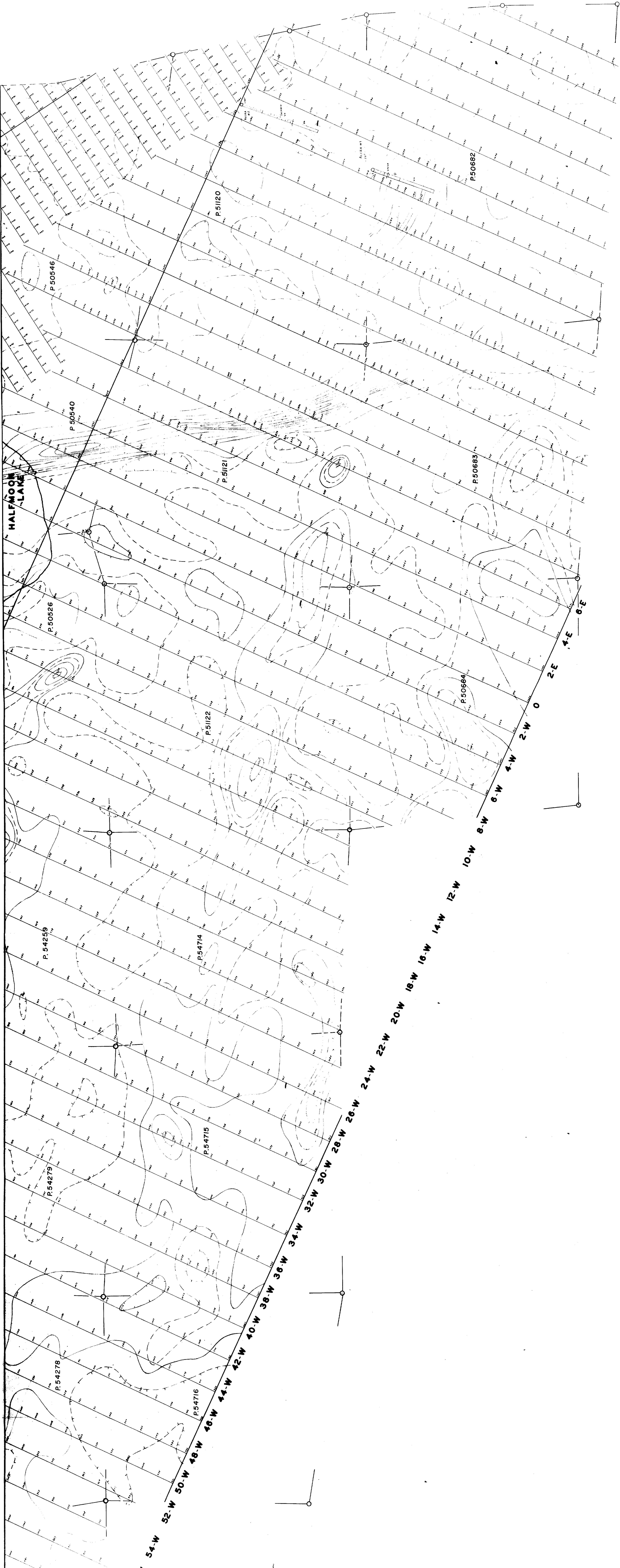
J. Stevens



30+00-N BASE LINE

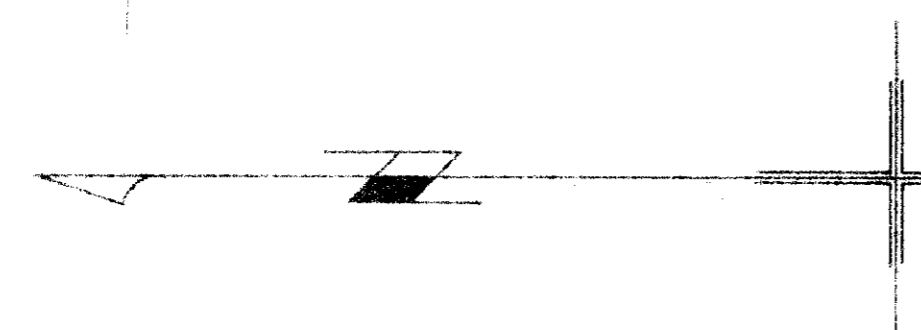
0+00 BASE LINE

"C" DETAIL GRID



HALFMOON LAKE

P. 55538 6c



AST.

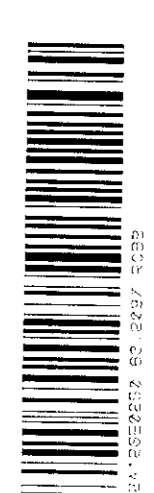
CINCINNATI-PORCUPINE MINES LTD.
MAGNETOMETER SURVEY
ROBB TWP.

INSTRUMENT: FLUXGATE MF-1
MAP SCALE: 1"=200'

SOUTH SHEET

Johns
CONTOURS

100 GAMMA INTERVALS
50 GAMMA INTERVALS (UP TO 100 GAMMA SURV)



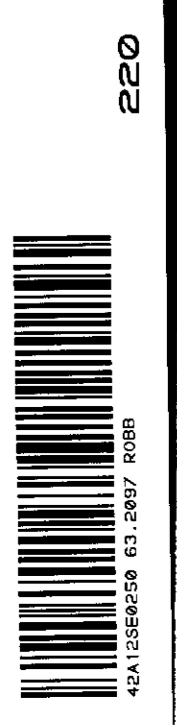


CINCINNATI-PORCUPINE MINES LTD.
 MAGNETOMETER SURVEY
 ROBB TWP.

INSTRUMENT: FLUXGATE MF-1
 MAP SCALE: 1"=200'

Albers
 CONTOURS
 100 GAMMA INTERVALS
 50 (UP TO 100 GAMMAS ONLY)

0x00 BASE LINE



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