



42A09SW0118 2.1472 BEATTY

010

REPORT ON GEOPHY.  
BEATTY BLOCK OF CLAIMS  
BEATTY TOWNSHIP  
LARDER LAKE MINING DIVISION  
PROVINCE OF ONTARIO.

Introduction:

The following report describes the magnetic and electromagnetic surveys completed during the early part of the winter of 1974 on a group of ten claims recorded in the name of Canadian Johns-Manville Co. Limited and located in Beatty Township, Larder Lake Mining Division.

Cutting and chaining of picket lines were carried out by Company personnel under the direction of P. Brown, geologist. Magnetometer surveying was conducted by J. Goodger, geologist, using a Scintrex Fluxgate instrument. Electromagnetic surveying was carried out by P. Brown using a McPhar R. E. M. vertical loop unit.

Supervision and interpretation of these exploration programs were the responsibility of the writer, Regional Geologist with Canadian Johns-Manville Co. Limited and based at Matheson, Ontario.

Property:

The claims surveyed are situated in Beatty Township, Larder Lake Mining Division and are described as follows; -

Group No. 2 - 4 claims numbered 367318 - 19 - 20 - 21, recorded on March 14<sup>th</sup>, 1973 and transferred to Canadian Johns-Manville Co. Limited on March 5<sup>th</sup>, 1974. These claims are further described as follows; NE and NW one-quarters of the south one-half of Lot 3, Concession 1, and the NE and NW one-quarters of the south one-half of Lot 2, Concession 1.

APRIL 19, 1974  
MATHESON, ONTARIO

EXPLORATION DEPT.  
CANADIAN JOHNS-MANVILLE CO. LIMITED

Property: (cont'd)

Group No. 3 - 2 claims numbered 372094 - 95, recorded on June 5<sup>th</sup>, 1973 and transferred on March 5<sup>th</sup>, 1974. These claims are further described as the SE and NE one-quarters of the north one-half of Lot 4, Concession 1.

Group No. 4 - 1 claim numbered 372077, recorded on June 11<sup>th</sup>, 1973 and transferred on March 5<sup>th</sup>, 1974. This claim is described as the SW one-quarter of the north one-half of Lot 4, Concession 1.

Group No. 5 - 3 claims numbered 382389 - 90 - 91, recorded on February 27<sup>th</sup>, 1974 and transferred on March 5<sup>th</sup>, 1974. These claims are located in Lot 4, Concession 1 and cover the NW one-quarter of the north one-half and both the NW and NE one-quarters of the south one-half. These ten claims comprise approximately 400 acres, and are shown on the accompanying Property Plan on a scale of 1" = 1,000 feet.

Location and Accessibility:

The Canadian Johns-Manville Co. Limited claims are located in the southeast part of Beatty Township, Larder Lake Mining Division, Province of Ontario.

Access is provided by Highway #101 which passes approximately seven miles to the east of Matheson. A bush road, three-quarters of a mile in length, extends from the Highway north to the Stewart-Abate shaft which is situated in the central part of the block.

Topography:

The claims are characterized by low, gently undulating topography

with semi-bare outcrop areas surrounded by tag alder swamp and spruce muskeg. Poplar and birch trees grow along the fringes of the higher ground while spruce and balsam border the low-lying areas.

Drainage is to the west into Salve Creek through a series of streams and beaver ponds located in the north part of the group.

Previous Work:

Beatty Township was mapped by J. Satterly and H. S. Armstrong of the Ontario Dept. of Mines in 1944 - 45 with the results being published in the Fifty-Sixth Annual Report, Part 7, 1947. Previously mapping was carried out in the area by Government geologists in 1911 and 1914.

Mr. Abate staked the claims and prospected in 1914. Trenching, test pitting and sampling were carried out in the same year by Hudson Bay Mining Co. In 1915 a shaft, inclined at  $-73^{\circ}$ , was sunk to a depth of 104 feet by Munro Consolidated Mines Limited.

Work was resumed in 1934 at which time surface diamond drilling was conducted by Stewart-Abate Gold Mines Limited. Later, in 1941 the shaft was deepened to 122 feet and 210 feet of drifting was completed on the 65 foot level. Results of this work showed a length of 180 feet in the 65 foot level having a width of 4 feet and an average gold content of 0.31 ounces per ton.

The claims were later allowed to lapse and same were staked by Canadian Johns-Manville Co. Limited. The north half of Lot 3 in Concession 1 was purchased from the Township of Black River - Matheson. Same had reverted to the Township due to non-payment of taxes.

In 1972 - 73 the purchased block was intensively explored for

Cu - No mineralization under Government Financial Assistance Program Contract KL-21. In 1973 and early 1974, six of the ten claims covered in this report, were explored for gold and sulphide mineralization under Government Financial Assistance Program Contract KL-38.

All work reports and maps have been filed with the Ministry of Natural Resources as required by the terms of the Agreement.

General Geology:

The general geology of the surveyed area is shown on Map No. 1947 - 2 entitled "Township of Beatty" prepared by Dr. J. Satterly and Dr. H. S. Armstrong.

Detailed mapping of the claims was carried out in 1972 - 73 by P. Brown and J. H. Morris, geologists with Canadian Johns-Manville Co. Limited and the maps and reports filed with the Ministry of Natural Resources under Government Financial Assistance Program Contract KL-21.

All basement rocks are Archaean, being metasediments - arenite, argillite - diorite, feldspar porphyry, lamprophyre and diabase/gabbro. The metasediments predominate in the map area.

A diorite sill, ranging in width from 200 to 400 feet, parallels the bedding of the metasediments - strike S70°E - and dips moderately to steeply to the south. Feldspar porphyry occurs as a prominent plug in the north part of Lot 3, Concession 1 - narrow dikes have also been mapped. Sections of the porphyry show carbonate and sericite alteration.

Line Cutting and Chaining:

In 1972 the No. 1 base line was started from a point 10+50 feet north of the No. 4 post of claim 367318 on the boundary between Lots

3 and 4, Concession 1 and extended to the east for a length of 2,600 feet on a bearing of N88°E.

Right-angled picket lines spaced at 200 foot intervals were cut to the north and south to cover the north-half of Lot 3 in Concession 1.

Base Line No. 2 from 11+50 feet south of base line No. 1 on picket line 26+00E was cut due east for a length of 2,600 feet. Right-angled offset lines were established at 200 foot intervals along this second base line and cut to the north and south as required to cover the diorite sill.

Under the 1974 program the No. 1 base line was extended to the west for a length of 2,600 feet. Right angled offset lines were established at 200 foot intervals and cut to the north and south to the outside boundaries of the claims. To the east on Base Line No. 1 previously established picket lines were extended to the south from the boundary of the purchased lot to the south limit of the claims. This included lines 0+00 to 26+00E.

Base Line No. 2 was brushed out and rechained and lines 28+00E to 52+00E inclusive extended to the south boundary of the group.

Pickets were established at 100 foot intervals along all lines by chainage.

During the course of the program 0.98 miles of base and 16.55 miles of picket lines were cut and chained.

All work was carried out by Company personnel based at Matheson, Ontario. Cutting and chaining were started in mid 1973 and finally completed in February, 1974. The program was delayed due to the higher priority of other projects.

Electromagnetic Survey:

An electromagnetic survey was conducted over the Beatty Town-  
ship claims by P. Brown, geologist, assisted by R. Haley, geophysical  
operator. Both men are Company employees based at Matheson, Ontario.  
Work was carried out during February and March, 1974. Readings were  
recorded using a McPhar Dual Frequency Vertical Loop Reconnaissance  
Electromagnetic unit operating on a frequency of 1,000 cycles per  
second.

The McPhar unit is suitable for use as both a reconnaissance  
and relatively detailed instrument. In this the transmitter was held  
vertically at a distance of 200 feet from the receiver; the receiver  
was then tilted about the axis joining the two coils until a null was  
observed. Both transmitter and receiver were moved on the same  
picket line, 200 feet apart, and readings were recorded at 25 or 50  
foot intervals, depending upon the detail required. Under these  
operating conditions a depth penetration of 100 feet was attained.

Null widths, which were extremely low, were recorded at each  
station but have not been shown on the accompanying plan. Walki-talki  
units were used by the operators for control and communication through-  
out this work. A total of 1999 stations was recorded during the course  
of the survey.

Detail work - 25 foot stations - was conducted in the area to  
the west of the Stewart-Abate shaft straddling the diorite sill to  
check for sulphide mineralization in narrow quartz veins and along  
shear zones. The results of the survey are shown on the accompanying  
Electromagnetic Profile Plan on a scale of one inch equals 200 feet.  
Profiles have been plotted on a scale of one inch equals 20 degrees.

No crossovers indicative of conducting zones were indicated by

the R. E. H. survey. It should be noted that since completion of this survey, check work was carried out using a McPhar - MS-1000 vertical loop unit with depth penetrations conducted to 500 feet. Several weak conductors were delineated to the west of the shaft by this survey. It is planned to further test these zones by diamond drilling.

Magnetometer Survey:

A magnetometer survey was conducted over the Beatty claims by J. Goodger and A. Brooks, both geologists with Canadian Johns-Manville Co. Limited, based at Matheson. Readings were recorded using a Scintrex Fluxgate Magnetometer - Model MF-1 (Serial No. 607220) having sensitivities of 20, 50, 200, 500 and 2000 gammas as per division for the corresponding scales. Work was carried out during February and March, 1974.

Prior to the survey the instrument had been checked and adjusted so that a gamma value of 1220 corresponds closely with an absolute value of  $57,599 \pm 15$ .

On the claims surveyed base control stations were established as shown below: -

- B.C.S. No. 1 - Line 2+00W; 100' south of base line No. 1 - 1050 gammas
- B.C.S. No. 2 - Line 2+00W; 1000' south of base line No. 1 - 740 gammas
- B.C.S. No. 3 - Line 22+00E; 1300' south of base line No. 2 - 670 gammas

During the course of the survey, base control stations were observed at regular intervals (four readings per day) as a check on the working condition of the instrument and to record the daily diurnal variation. Stations were spaced at 50 foot intervals along the picket lines and a total of 1756 readings recorded on the claims group. A skidoo was used to transport the operator to the base

stations for the more open sections of the property.

The results of the survey are depicted on the accompanying Geo-Magnetic Contour Plan on a scale of one inch equals 200 feet. Contour lines of equal magnetic intensity have been drawn at 500 gamma intervals from 500 to 4,000 gammas.

Interpretation has been based upon a study of the contoured magnetic plan, geological data and aerial photographs.

Magnetic intensities over the metasediments are weak and relatively uniform ranging from 1500 gammas along the diorite sill contacts to less than 200 gammas in the northwest part of the claims. Average values fall within the range of 650 to 850 gammas.

Readings over the southeasterly trending, south dipping diorite sill range in value from 1000 to 1500 gammas along the contacts, to over 4000 gammas where bedrock exposures occur in the central part of the sill.

The northwesterly trending fault pattern shown by Dr. Satterly on the geological map of Beatty Township has been sharply defined by the magnetic survey. Cross structures offsetting the sill have been shown on the Geo-Magnetic Contour Plan.

#### Conclusions and Recommendations:

Electromagnetic surveying using the R. E. M. unit failed to delineate any conducting zones on the claims group, probably due to the shallow depth of penetration - maximum 10 feet. Subsequent work using the deep penetration MS-1000 unit, testing to 500 foot depth, indicated several weak conductors in the area immediately to the west of the Stewart-Abate Shaft.


Magnetometer surveying delineated the contacts of the diorite sill and six northeasterly trending cross structures.



Conclusions and Recommendations: (cont'd)

It is recommended that a program of diamond drilling be carried out to test quartz veins and shear zones in the area to the west of the shaft.

Submitted: April 19<sup>th</sup>, 1974

  
by: F. J. Evelegh  
Regional Geologist

## GEOLOGICAL LEGEND

- 6 Quartz diabase, diabase.
- 5 Granite 5a, Syenite 5b, Feldspar porphyry 5c, Quartz feldspar 5d, Felsite 5e, Lamprophyre 5f.
- Diorite 4a, Gabbro diabase 4b,
- 4c Peridotite & Dunite (Serpentinized)  
(Asb. - Asbestos recognized)
- 4d Pyroxenite 4d.
- 3 Rhyolite fragmental lava
- 2 Andesite basalt pillow lava 2a, Diabasic lava 2b, Spherulitic lava 2c, Fragmental lava 2d, Tuff & chert 2e, Talc-chlorite schist 2f.
- Greywacke 1a, Arkose 1b, Quartzite 1c, Argillite or shale 1d, Conglomerate 1e, Iron formation 1f, Chlorite schist 1g.
- 0b Carbonate rock
- 

## GEO-MAG SYMBOLS

- @ 500 Contour interval 500 gammas
- BCS#1 Magnetic Base Control Station
- Geological Contact  
G- Geological
- Fault Zone M- Magnetic  
T- Topographic

## TOPO-SYMBOLS

- Outcrop
- Higher ground
- Scarp
- Muck or Swamp
- Creek
- Drill hole
- Bush road
- Direction in which lava flows  
face, indicated by shape of pillows

## ELECTRO-MAG SYMBOLS

### GEONICS 15 UNIT

- △-△ Conductive Zone (Red)
- Magnetic Conductor (Blue)
- Nil
- Scale - 20 units = 1 inch
- West & South - Pos. (Red)
- East & North - Neg. (Blue)

Scale - 40 units = 1 inch

- Conducting Zone - S - Strong  
M - Medium  
W - Weak

### RONKA H.L. UNIT

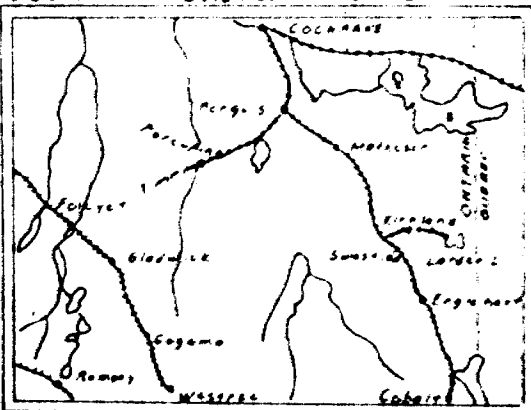
- In phase curve
- Out phase curve
- NPCS Not proper coil spacing
- East - Positive. West - Negative

### M'PHAR V.L. UNIT

- Dip angle profile
- North & East - Positive
- South & West - Negative

Geol. Survey by -  
Mag. Survey by -  
E.M. Survey by -

LOCATION SKETCH - 1" = 50 MILES



**CANADIAN JOHNS-MANVILLE CO. LTD.**  
MATHESON MUNRO MINE ONTARIO  
**LEGEND SHEET**  
PROVINCE OF ONTARIO

SCALE \_\_\_\_\_ DATE \_\_\_\_\_

DRAWN - *MS*

TRACED

APPROVED - *F J E*

GEOPHYSICAL - GEC  
TECHNICAL



300

PROJECTS UNIT

TO BE ATTACHED AS AN APPENDIX TO TECHNICAL REPORT  
FACTS SHOWN HERE NEED NOT BE REPEATED IN REPORT  
TECHNICAL REPORT MUST CONTAIN INTERPRETATION, CONCLUSIONS ETC.

Type of Survey Geophysical

Township or Area Beatty

Claim holder(s) Canadian Johns-Manville Co., Limited

Author of Report F. J. Eveleigh

Address P. O. Box 610, MATHESON, Ont. R0K 1N0

Covering Dates of Survey 7/7/73 to 7/3/74  
(linecutting to office)

Total Miles of Line cut 17.53

MINING CLAIMS TRAVERSED  
List numerically

(prefix)	(number)
367318	
367319	
367320	
367321	
372077	
372094	
372095	
382389	
382390	
382391	

SPECIAL PROVISIONS  
CREDITS REQUESTED

ENTER 40 days (includes line cutting) for first survey.

ENTER 20 days for each additional survey using same grid.

	DAYS per claim
Geophysical	
-Electromagnetic	40
-Magnetometer	20
-Radiometric	
-Other	
Geological	
Geochemical	

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)

Magnetometer \_\_\_\_\_ Electromagnetic \_\_\_\_\_ Radiometric \_\_\_\_\_  
(enter days per claim)

DATE: April 19/74 SIGNATURE: [Signature]  
Author of Report or Agent

PROJECTS SECTION

Res. Geol. \_\_\_\_\_ Qualifications 63.1067

Previous Surveys 63.3083 (Not for assessment credits)

Checked by \_\_\_\_\_ date \_\_\_\_\_

GEOLOGICAL BRANCH \_\_\_\_\_

Approved by LD date \_\_\_\_\_

GEOLOGICAL BRANCH \_\_\_\_\_

Approved by \_\_\_\_\_ date \_\_\_\_\_

TOTAL CLAIMS 40

OFFICE USE ONLY

If space insufficient, attach list

Show instrument technical data in each space for type of survey submitted or indicate "not applicable"

## GEOPHYSICAL TECHNICAL DATA

### GROUND SURVEYS

Number of Stations 1756 (mag); 1999 (E.M.) Number of Readings 1792 (mag); 1999 (E.M.)  
Station interval 50 feet (magnetic) and 25 & 50 feet (electromagnetic)  
Line spacing 200 feet  
Profile scale or Contour intervals 500 gammas (magnetic) and 1" = 20' (electromagnetic)  
(specify for each type of survey)

### MAGNETIC

Instrument Scintrex Fluxgate Magnetometer Model MF-1  
Accuracy - Scale constant see photocopy (attached) accordingly.  
Diurnal correction method base stations read at regular intervals & readings corrected  
Base station location No. 1 - Line 2+00W; 200' South of base Line No. 1; No. 2 - 2+00W; 1000' South of Base Line No. 1; No. 3 - Line 22+00E; 1500 feet South of Base Line No. 2.

### ELECTROMAGNETIC

Instrument McPhar Dual Frequency Reconnaissance Electromagnetic Unit  
Coil configuration vertical  
Coil separation 200 feet  
Accuracy \_\_\_\_\_  
Method:  Fixed transmitter  Shoot back  In line  Parallel line  
Frequency 1000 cps  
(specify V.L.F. station)  
Parameters measured dip angle and width of null

### GRAVITY

Instrument \_\_\_\_\_  
Scale constant \_\_\_\_\_  
Corrections made \_\_\_\_\_  
Base station value and location \_\_\_\_\_

Elevation accuracy \_\_\_\_\_

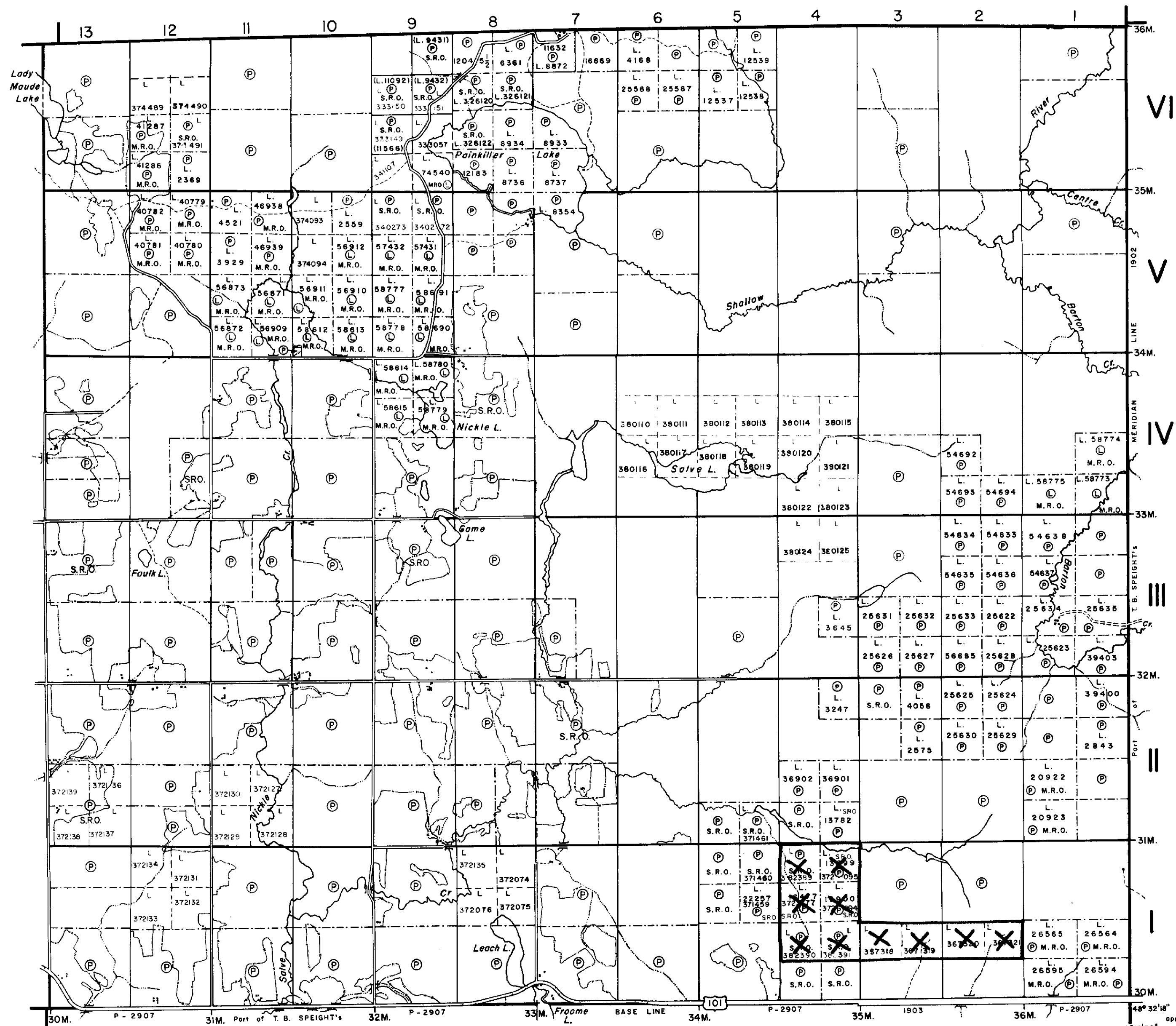
### INDUCED POLARIZATION - RESISTIVITY

Instrument \_\_\_\_\_  
Time domain \_\_\_\_\_ Frequency domain \_\_\_\_\_  
Frequency \_\_\_\_\_ Range \_\_\_\_\_  
Power \_\_\_\_\_  
Electrode array \_\_\_\_\_  
Electrode spacing \_\_\_\_\_  
Type of electrode \_\_\_\_\_

Coulson Twp. (M.340)

NOTES

400' Surface Rights Reservation along the shores of all lakes and rivers.



MINING LANDS  
DATE OF ISSUE  
MAY - 3 1974  
MINISTRY  
OF NATURAL RESOURCES

File - 2.1472

LEGEND

- PATENTED LAND Ⓟ or ●
- PATENTED FOR SURFACE RIGHTS ONLY Ⓟ
- LEASE Ⓞ
- LICENSE OF OCCUPATION L.O.
- CROWN LAND SALE C.S.
- LOCATED LAND Loc.
- CANCELLED c.
- MINING RIGHTS ONLY M.R.O.
- SURFACE RIGHTS ONLY S.R.O.
- HIGHWAY & ROUTE No.
- ROADS
- TRAILS
- RAILWAYS
- POWER LINES
- MARSH OR MUSKOG
- MINES

\*used only with summer resort locations or when space is limited.

TOWNSHIP OF  
**BEATTY**  
DISTRICT OF  
COCHRANE 2412  
LARDER LAKE  
MINING DIVISION

SCALE: 1 INCH = 40 CHAINS (1/2 MILE)

DR. k.k.  
DATE Oct./71  
PLAN No. **M.324**

ONTARIO  
MINISTRY OF NATURAL RESOURCES  
SURVEYS AND MAPPING BRANCH

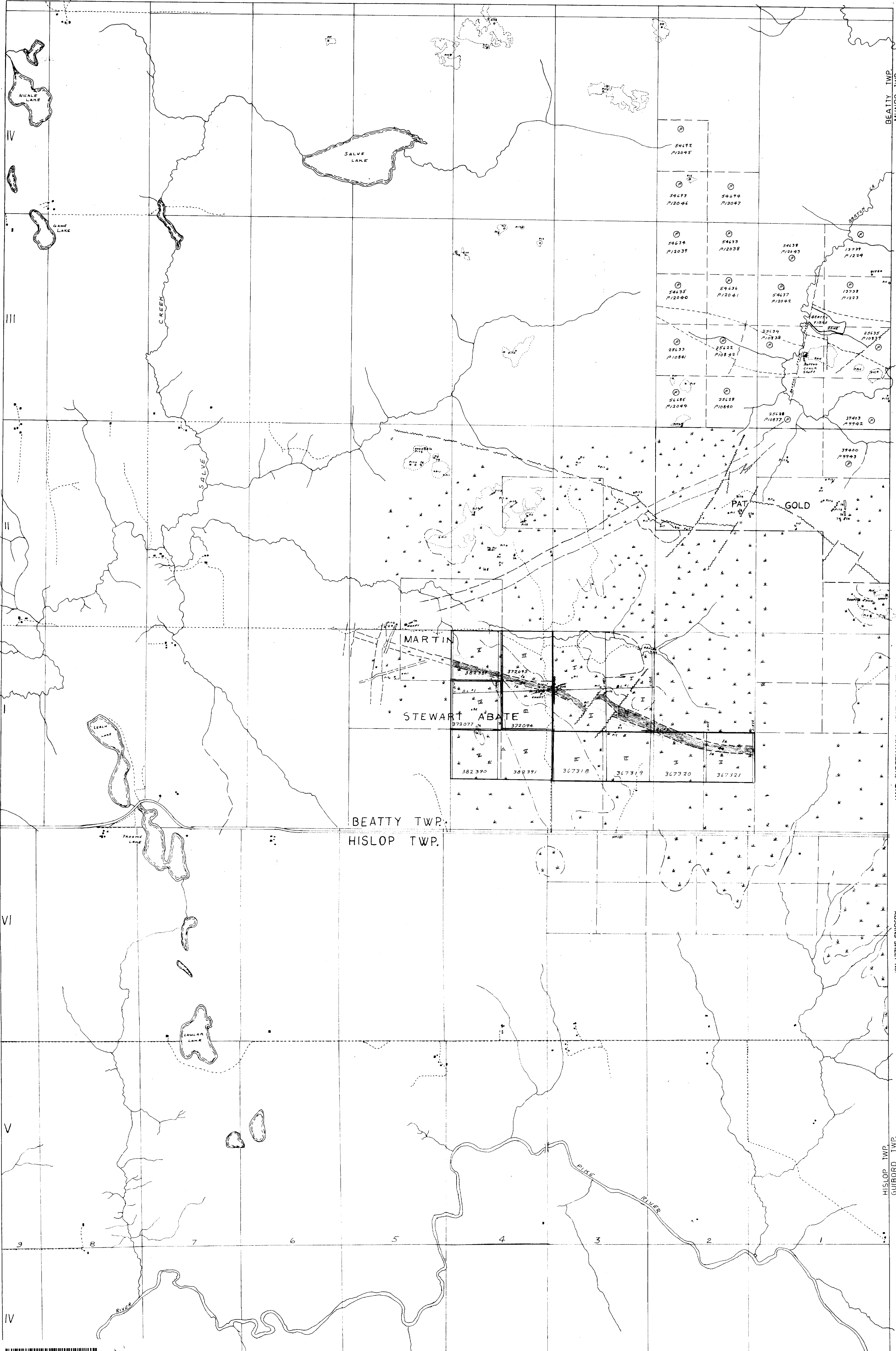
Carr Twp. (M.335)

Munro Twp. (M.376)

Hislop Twp. (M.355)







BEATTY TWP.  
MUNRO TWP.

CANADIAN JOHN MANVILLE CO. LTD. - MATHESON, ONT.

ADJOINS SHEET No.

HISLOP TWP.  
GUBORD TWP.

ADJOINS SHEET No.

VI

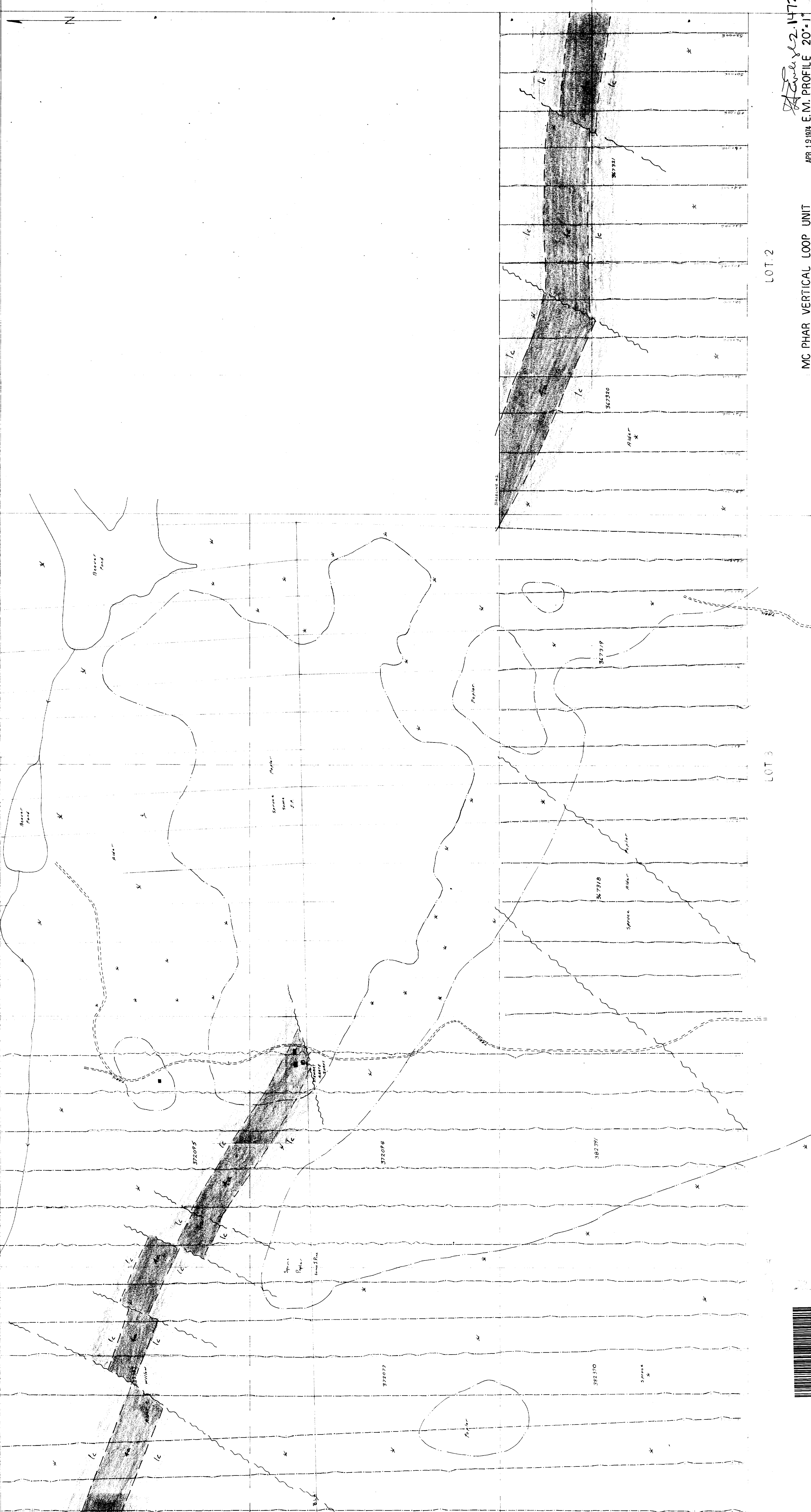
V

IV

BEATTY TWP.  
HISLOP TWP.



CON II



CON I



220

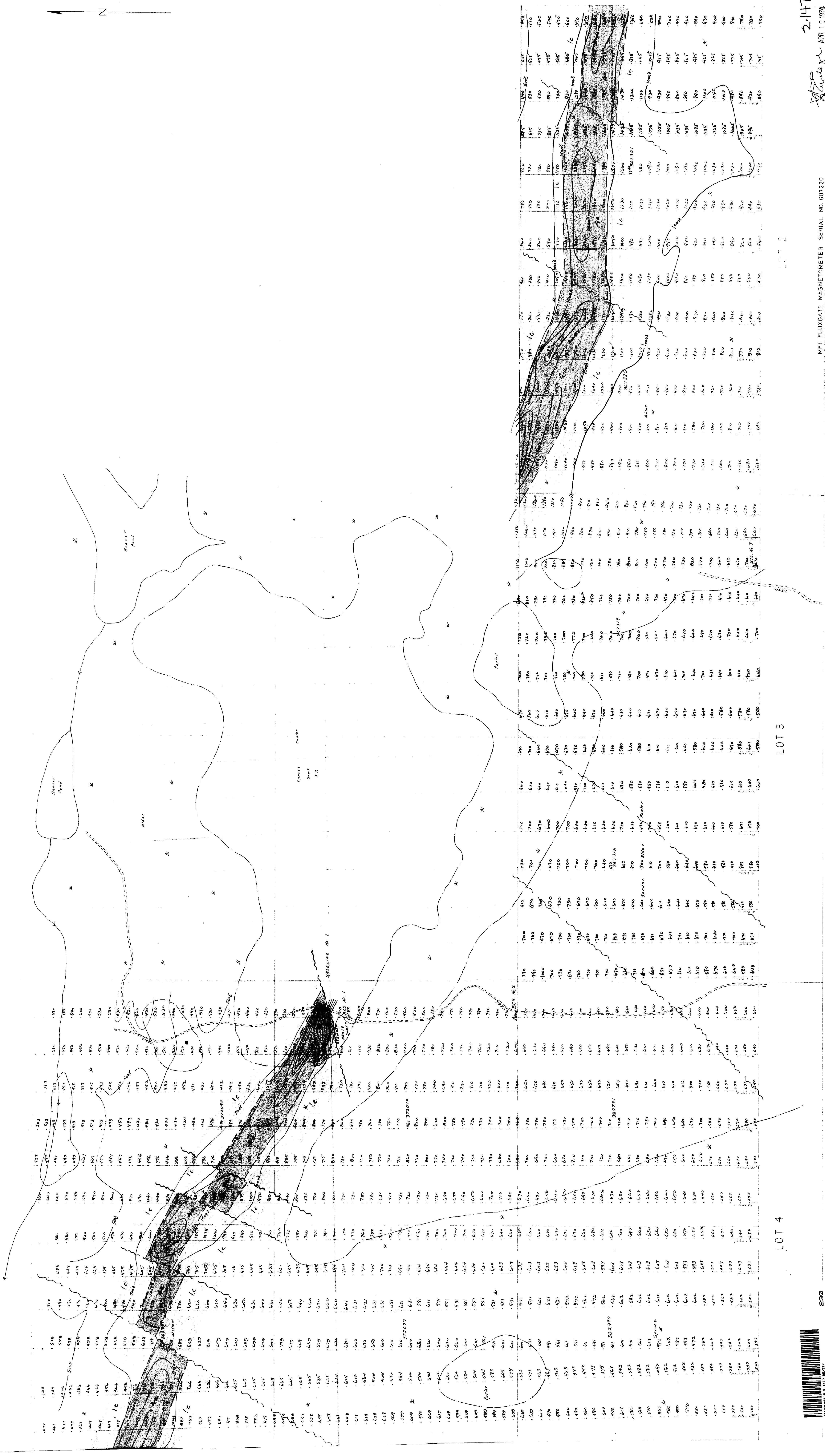
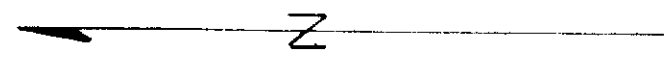
LOT 3

LOT 2

Handwritten: 2.1472

MC PHAR VERTICAL LOOP UNIT  
 APR 19 1974 E.M. PROFILE 20'-1"  
 ONT. 1"=200 REM. PROFILE PLAN IN-LINE METHOD BEATTY TWP





2-1472

APR 12 1974

MF1 FLUXGATE MAGNETOMETER SERIAL NO. 607220

CONTOUR GEO-MAGNETIC

PLAN

LOT 3

LOT 4

230

