

2.466



42A06SE0158 2.466 ADAMS

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JUN 23 1971

PROJECTS
SECTION

MAGNETOMETER SURVEY

on the

Remo Opatowski Properties

Adams Township, Ontario

Timmins, Ontario,

May 13, 1971.

R. J. Bradshaw, P. Eng.,

Consulting Geologist.

INTRODUCTION

A magnetic survey has been completed on the properties of Remo Opatowski in Adams Township, Ontario.

A picket line grid system was established on the properties during the period March 2 to April 17, 1971, and the magnetic survey was carried out during the month of April.

Object of the survey on the two claim blocks is to assist in the evaluation of the base metal potential of the property, primarily for nickel.

The east portion of the Opatowski property overlies the southwest rim of a domical structure centred in Shaw Township immediately northeast of Adams Township. Along the rim of the domical structure are nickel-bearing serpentized ultramafic bodies. Noranda-Inco, to the east, in Langmuir Township are presently preparing their nickel orebody for production.

PROPERTY, LOCATION AND ACCESS

The properties include two separate claim blocks totalling
⁴65 claims. The claims in the east block, designated 278770,
~~delete 279964~~
279231 to 279235 inclusive; 279379, 279962 to 279966 inclusive;
¹⁴and 313774 to 313776 inclusive, total 15 claims all contiguous
and unpatented. Those in the west block, also contiguous and
unpatented, total 50 claims and are designated 255919 to 255926
inclusive; 256200 to 256217 inclusive; 256561 to 256565 inclusive;

278487 to 278495 inclusive; 279227 to 279230 inclusive; 292335 to 292337 inclusive; 301355, 313772 and 313773.

The north boundary of the two claim blocks coincides with the north boundary of Adams Township approximately 10 miles south of Timmins, Ontario.

A gravel road extending south from Timmins crosses the extreme west sector of the west claim block thereby providing access to the properties.

PREVIOUS WORK

Some previous work has been completed on the Opatowski properties, mainly for gold.

In the east sector of the west claims group, a number of holes were drilled by Balmoral Porcupine Gold Mines Limited in 1947. Some interesting but erratic gold intersections were encountered in carbonatized rocks.

One or two other holes were drilled on the west group for gold, with negative results.

On claim 279232, of the east group, the Opatowski interests did some rock trenching in 1970, apparently for fresh samples of the magnesite-bearing carbonatized ultramafic exposures.

GEOLOGY

Issued in 1969, Map F571 by the Ontario Department of Mines, displays the geology of Adams Township. Rock exposure is

exceedingly limited, particularly in the north portion of the Township, probably amounting to less than one percent on the Opatowski properties. The regional geology of the area is best displayed on a plan, at a scale of one inch to two miles, issued with Miscellaneous Paper 41 by the Ontario Department of Mines in 1970.

The southwest rim of a domical structure, centred in Shaw Township about 4 miles northeast, is present in the northeast sector of Adams Township. Nickel-bearing alpine type serpentinized ultramafic intrusives form the rim of the dome. The Noranda-Inco nickel deposit in Langmuir Township, currently being prepared for production, is located at the contact of a serpentinized ultramafic body.

Based on a few rock exposures it is postulated on Map P571 that the entire Opatowski east block is underlain by serpentinized and carbonatized ultramafic to mafic intrusives. In the northeast sector of the west Opatowski block these ultramafic to mafic rocks are interpreted as forming a generally conformable southeasterly trending contact with amphibolitized mafic volcanic flows and pyroclastics. These volcanic rocks display a foliation which strikes southeasterly and dips about 60° southwest. Based on a few rock exposures along the Mountjoy River, the entire west two thirds of the Opatowski west block is interpreted to be underlain by granodiorite.

An occurrence of magnesite in the northwest sector of the Opstowski east block is described on Map P571. In the east sector of the west block is present gold mineralization in a carbonatized northeast trending shear zone.

MAGNETIC SURVEY RESULTS AND INTERPRETATION

Picket Lines have been established on the properties in a north-northeast direction at 400 foot intervals. The magnetic-survey data is plotted and contoured on the accompanying plan at a scale of one inch to four hundred feet. The survey method and instrument is described in the Appendix to this report.

The magnetic relief on the property is generally not pronounced despite the presence of ultramafic to mafic rocks on the east claims. Where the magnetic relief is more pronounced particularly to the east, the isomagnetics trend generally east-southeast thereby reflecting the strike of the rocks in the area. In the extreme west portion of the claims the isomagnetics depart from the usual trend a reflection of unconformable intrusives in the area. The very much less pronounced trend of the isomagnetics in the central portion of the claims, between base lines 1 and 2, is partially a result of variable depths of overburden in an area of low magnetic relief.

In the west claim group are present a number of oval shaped magnetic highs oriented in a southeasterly direction. All of the rock exposures in this area, with one exception, consist of ultramafic to mafic rocks, variably carbonatized and serpentinized.

Normally the magnetic highs represent serpentized ultramafic rocks. The intervening magnetic low area may represent highly carbonized ultramafic to mafic intrusives or alternatively, less resistant, nonexposed, metasedimentary and metavolcanic rocks.

North of base line 3, between Lines 16E and 36E is a strong lineal magnetic, peaking at 11520 gammae. This anomaly represents an iron formation horizon probably sulphide-bearing. The magnetic susceptibilities indicate a dip to the south corresponding to geological data observed on mafic volcanic exposures where the power transmission line intersects the Township boundary. If the iron formation is sulphide bearing and in contact with ultramafic rocks, a favourable condition for the presence of nickel mineralization exists.

On map P571 an exposure of diabase probably corresponds with an exposure noted by the instrument operator at the south end of Line 24E (base line 3). However, the magnetic linear, generally representative of diabase dykes, is not apparent.

The contact zone between the dominantly ultramafic to mafic rock assemblage to the east and adjacent rocks to the west is indicated on the accompanying plan several hundred feet north of base line 2. This contact zone generally parallels the base line in an east-southeast direction and is marked by fairly well defined change in the magnetic susceptibilities.

From this contact zone to almost the west boundaries of the west claim group the magnetic susceptibilities show little

relief except for a very general magnetic low area extending south-east from the Township boundary to Line 120E on base line 1. Based on previous drilling and rock exposures where the power line crosses the Township boundary, amphibolitized mafic flows and pyroclastics are interpreted, by the D.D.M., to form a belt averaging 3000 feet wide. This belt strikes east-southeast and dips southwest at 60°. These rocks are highly altered as a result of a granodiorite intrusion to the south covering most of the Township. A few rock exposures, along the Mountjoy River near the south boundary, accounts for the contact interpreted by the D.D.M. as being located midway between base lines 1 and 2.

Along the southwest boundary of the west claim group is a lineal magnetic high which strikes north 30° east. This feature is interpreted as a diabase dyke intruding the granodiorite.

In the extreme northwest sector of the west claim group is a magnetic high which appears to trend in a northeasterly direction. The magnetic susceptibilities are similar in magnitude to those representing ultramafic to mafic intrusives and these rocks are known to be present a half mile to the northwest.

CONCLUSIONS

The magnetic susceptibilities and trends on the Dpatowski properties agree fairly well with the geology as interpreted by the D.D.M., with some exceptions. In the area east of the contact zone, along base line 2, the few rock exposures are ultramafic to

mafic rocks, therefore, indicating that the entire area is underlain by these type rocks. However, the anomalously high magnetic areas, normally expected, are isolated amongst magnetic lows. Either carbonitization of the ultramafics has eliminated the magnetic minerals or the magnetic lows represent metalvolcanic and metasedimentary rocks. Support for the presence of sedimentary-volcanic rocks is provided by the presence of an iron formation horizon, north of base line 3 as indicated by a prominent lenticular magnetic high. Magnetic profiles across the indicated iron formation indicate a south dip of the rocks coinciding with data on rock exposures.

In the central portion of the west claim group there is no readily apparent difference between the magnetic susceptibilities of areas underlain by granodiorite and volcanic rocks. The volcanic rocks are expected to be quite highly altered by the granodiorite intrusion, particularly since the volcanics dip towards the intrusion. This alteration has probably eliminated the magnetic minerals. The contact area of the granodiorite intrusion is favourable to the occurrence of gold mineralization as exemplified by the Balmorsl occurrence (See Previous work).

The presence of a diabase dyke, striking about northwest, along the west boundary is indicated by the magnetic susceptibilities.

In the extreme northwest sector of the west group, the presence of ultramafic rocks is suggested by the magnetic survey which is not indicated on the U.D.M. map.

Since nickel mineralization is associated with ultramafic to mafic rocks in the area, those areas postulated to be underlain by these type rocks on the Gpatowski claims merit further investigation. An area of perhaps special importance is that about the postulated iron formation horizon on the east claim group, particularly if it is sulphide-bearing.

RECOMMENDATIONS

It is recommended that a deep penetrating electromagnetic method be utilized to investigate selected areas of the Gpatowski claims to determine if sulphide bodies sufficiently massive to form conductors are present. These areas include those that are expected to be underlain by ultramafic to mafic intrusives and associated metavolcanic and metasedimentary rocks. The three areas proposed for investigation are:

1. That area bounded by Line 28E and the north, west and south boundary of the west claim block. Since the postulated ultramafic rocks here, appear to strike northeast it is advisable to establish a second grid with lines paralleling the base line for control of part of the electromagnetic survey. Total survey work on each grid would amount to about 6 miles.
2. That area extending to the northeast bounded from base line 2. Survey work required here, amounts to about 6.5 miles.
3. That area of the east claim group which totals about 8.5 miles.

Taking into consideration the fact that most of the survey is to be conducted along winter cut lines, thereby slowing progress, it is estimated that the survey work would cost as follows:

1. Northwest area

Linecutting: 3 mi. @ \$85/mi. 255.00
Electromagnetic survey: 6 mi. @ \$150/mi. 900.00 \$ 855.00

2. Central area

Electromagnetic survey: 6.5 mi. @ \$150./mi. 675.00

3. East area

Electromagnetic survey: 8.5 mi. @ \$150./mi. 1275.00

Estimated detailed survey work: 5 days at \$175./day 875.00

Mobilization and demobilization by swamp machine 200.00

TOTAL \$3880.00

It is probable that a drill investigation of the properties could be formulated on the basis of this work.

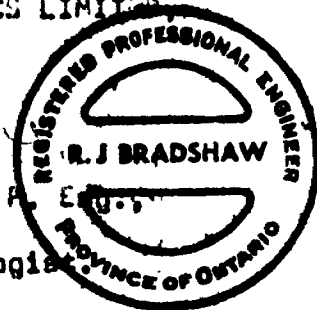
Respectfully submitted,

SHIELD GEOPHYSICS LIMITED

R. J. Bradshaw

R. J. Bradshaw, P. Eng.

Consulting Geologist



Timmins, Ontario,

May 13, 1971.



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ASSESSMENT WORK DETAILS

Township or Area Adams Township

Type of Survey Magnetic
A separate form is required for each type of survey

Chief Line Cutter D. Young Shield Geophysics Ltd.
or Contractor 26 Pine St. S. Timmins, Ont.
Name Address

Party Chief R. Draper, Shield Geophysics Ltd.
26 Pine St. S. Timmins, Ont.
Name Address

Consultant R.J. Bradshaw Shield Geophysics Ltd.
26 Pine St. S. Timmins, Ont.
Name Address

COVERING DATES

Line Cutting March 2 - April 17, 1971

Field April 1 - 30, 1971
Instrument work, geological mapping, sampling etc.

Office May 1 - 13, 1971

INSTRUMENT DATA

Make, Model and Type Scintrex M.F. -1-100 fluxgate

Scale Constant or Sensitivity + or -5 gammas
Or provide copy of instrument data from Manufacturer's brochure.

Radiometric Background Count _____

Number of Stations Within Claim Groups 2808

Number of Readings Within Claim Groups 5616

Number of Miles of Line cut Within Claim Groups 54

Number of Samples Collected Within Claim Group _____

| | | | |
|--------------------------|-----------------------------|-------------------------------------|---|
| <u>CREDITS REQUESTED</u> | <u>20 DAYS</u> per claim | <u>40 DAYS</u> per claim | Includes (Line cutting) |
| Geological Survey | <input type="checkbox"/> | <input type="checkbox"/> | |
| Geophysical Survey | <input type="checkbox"/> | <input checked="" type="checkbox"/> | Show Check <input checked="" type="checkbox"/> |
| Geochemical Survey | <input type="checkbox"/> | <input type="checkbox"/> | |

DATE June 16, 1971

SIGNED [Signature]

List numerically

See list

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JUN 23 1971

PROJECTS SECTION

TOTAL 654

If space insufficient, attach list

Send in duplicate to:

FRED W. MATTHEWS
SUPERVISOR-PROJECTS SECTION
DEPARTMENT OF MINES &
NORTHERN AFFAIRS
WHITNEY BLOCK
QUEEN'S PARK
TORONTO, ONTARIO

SCHEDULE OF CLAIMS

East Block

P278770
279231
279232
279233
279234
279235
279379
279962
279963
~~279964~~ - ~~1-15~~
279965
279966
* 313774
* 313775
* 313776

West Block

| | |
|---------|-------------------|
| P255919 | P256217 |
| 255920 | 256561 |
| 255921 | 256562 |
| 255922 | 256563 |
| 255923 | 256564 |
| 255924 | 256565 |
| 255925 | 278487 |
| 255926 | 278488 |
| 256200 | 278489 |
| 256201 | 278490 |
| 256202 | 278491 |
| 256203 | 278492 |
| 256204 | 278493 |
| 256205 | 278494 |
| 256206 | 278495 |
| 256207 | 279227 |
| 256208 | 279228 |
| 256209 | 279229 |
| 256210 | 279230 |
| 256211 | 279231 |
| 256212 | 278496 |
| 256213 | 278497 |
| 256214 | 301355 |
| 256215 | * 313772 |
| 256216 | * 313773 |
| | 292335 |
| | 292336 |
| | 292337 |

* These 5 claims were recorded after line cutting
and survey / No Credit

Deloro Twp - M.272

THE TOWNSHIP
OF

ADAMS

Claim map
DISTRICT OF
TIMISKAMING

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)
- 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
JUN 28 1971
ONT. DEPT. OF MINES
AND NORTHERN AFFAIRS

PLAN NO. **M.261**

ONTARIO
DEPARTMENT OF MINES
AND NORTHERN AFFAIRS

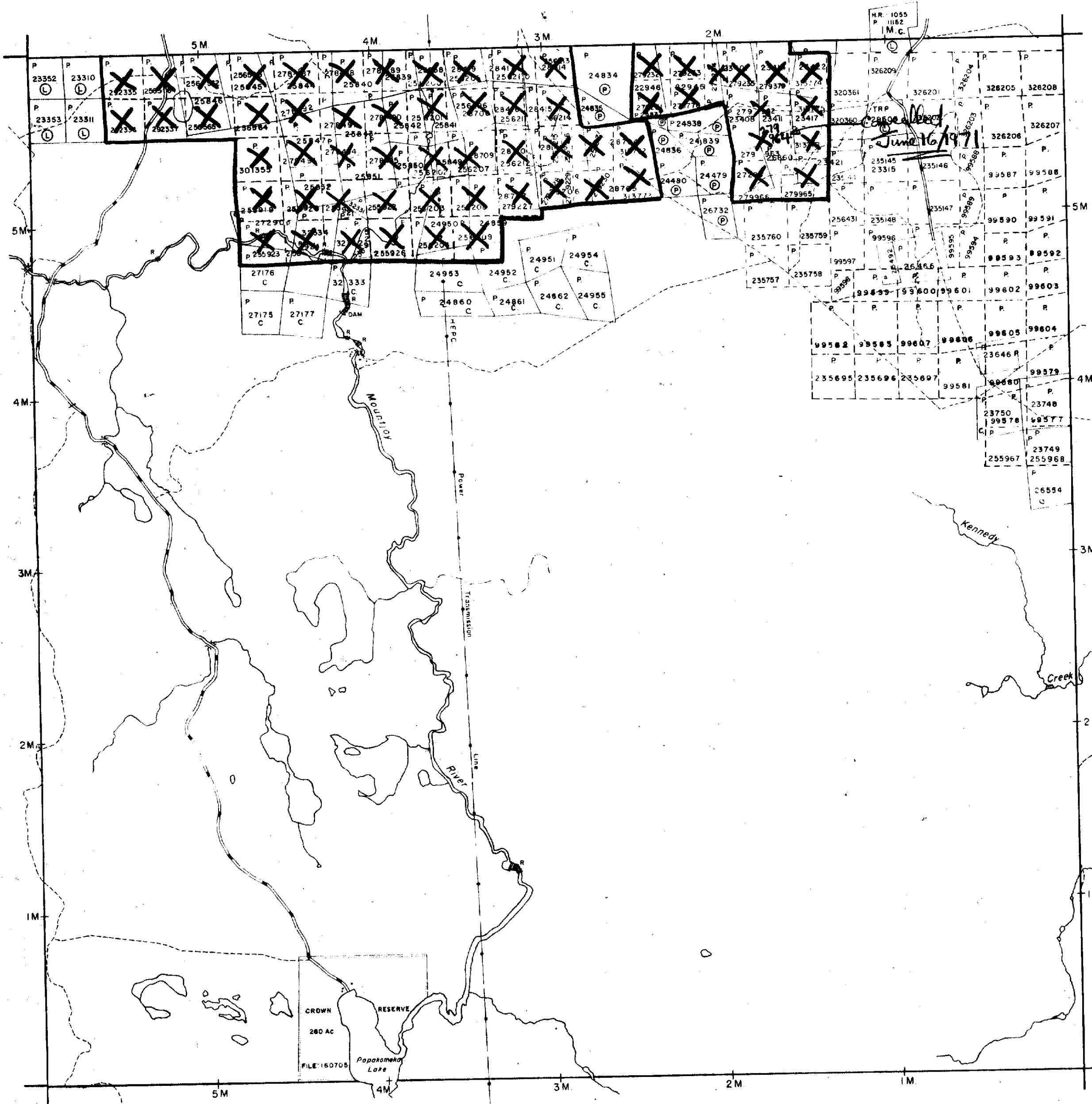
Price Twp - M.307

Eldorado Twp - M.276

McArthur Twp - M.298



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mining claim map

Deloro Twp. - M.272

Price Twp. - M.307

Eldorado Twp. - M.276

McArthur Twp. - M.298

THE TOWNSHIP OF

ADAMS

DISTRICT OF
TIMISKAMING

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

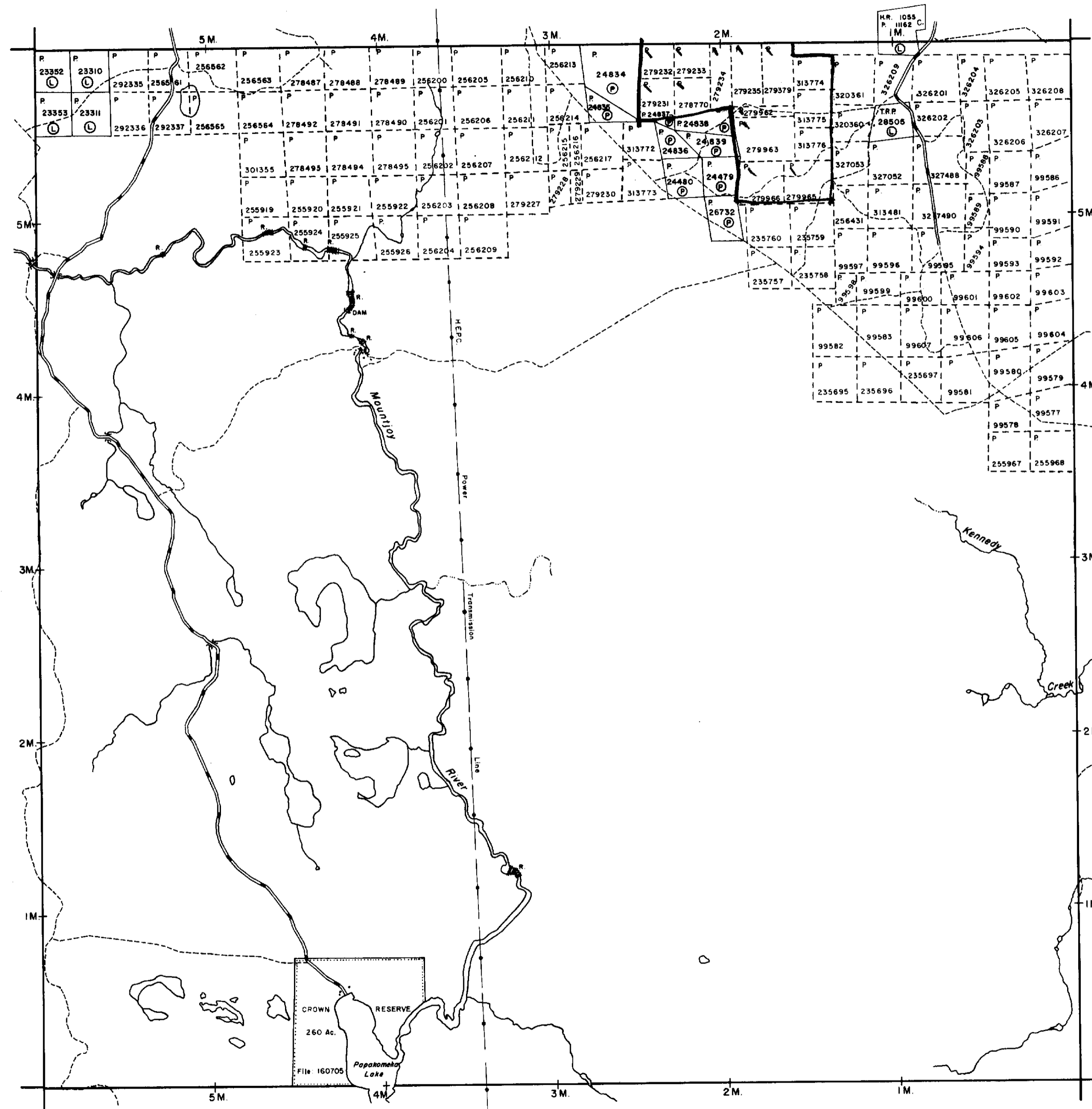
400' Surface Rights Reservation along the shores of all lakes and rivers.

DATE OF ISSUE
 JUN 27 1912
 ONT. DEPT. OF MINES
 AND NORTHERN AFFAIRS

2907

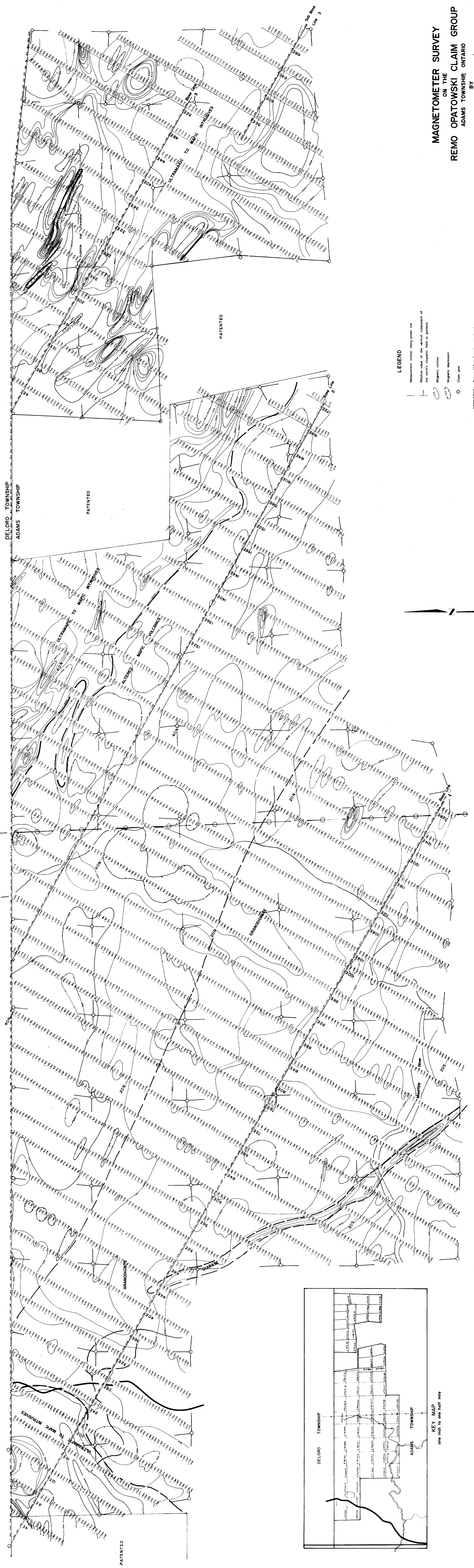
PLAN NO. M.261

ONTARIO
DEPARTMENT OF MINES
AND NORTHERN AFFAIRS



UUVVVC LWT

DE LORO TOWNSHIP
ADAMS TOWNSHIP

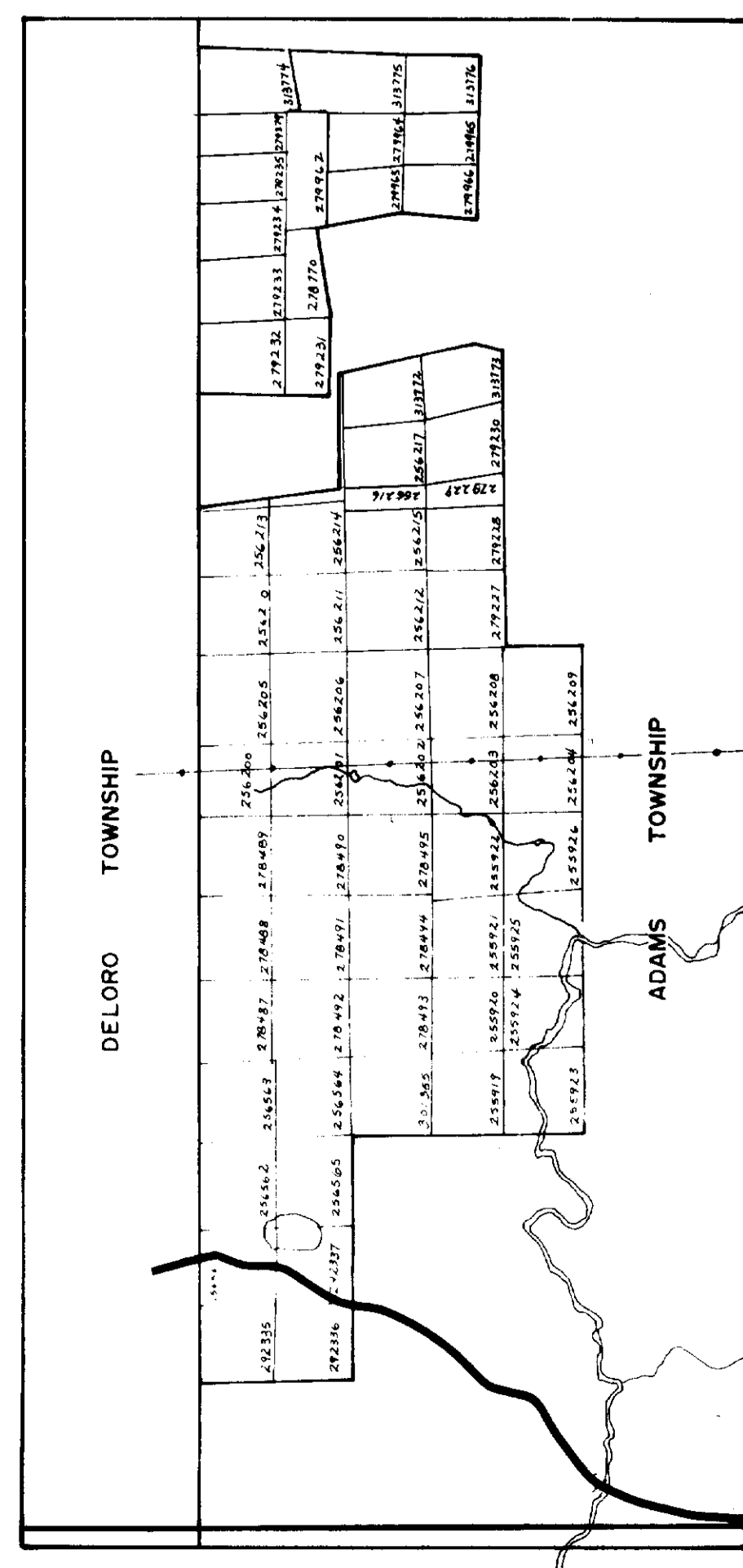
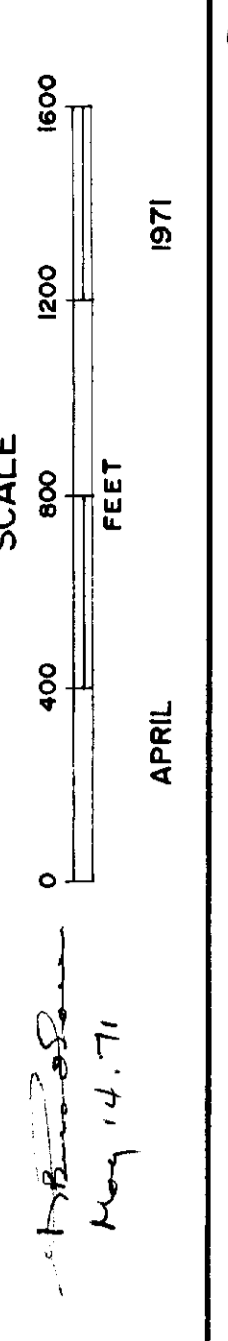


LEGEND

- Measurement station along picket line
- Relative value of the vertical component of the earth's magnetic field in gamma
- Magnetic contour
- Magnetic depression
- Claim post

INSTRUMENT: Searle M.F.-1 magnetic magnetometer

MAGNETOMETER SURVEY
ON THE
REMO OPATOWSKI CLAIM GROUP
ADAMS TOWNSHIP, ONTARIO
BY
SHIELD GEOPHYSICS LIMITED



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