



42A02SW0030 2.1369 BADEN

MAGNETOMETER

BADEN TOWNSHIP PROPERTY  
RONDA COPPER MINES LIMITED  
SUITE 3102, SIMPSON TOWER  
401 BAY STREET  
TORONTO

INTRODUCTION

An exploration drilling program in the late summer of 1973 disclosed gold-bearing quartz veins near the contacts of a diabase dyke. A magnetometer survey was authorized to locate the extension of the dyke and to look for similar conditions elsewhere on the property.

PROPERTY, LOCATION AND ACCESS

The area surveyed consists of 19 claims numbered as follows:

- L-341769 to 773, inclusive
- L-341777 to 783, "
- L-341788 to 791, "
- L-343796 and 343797
- also MR-81186, a leased claim.

The ground is located in the southwest quarter of Baden Township some 10 miles northwest of the Town of Matachewan.

Access is made by car on route 566 west of Matachewan for about 8 miles to the crossing of the West Montreal River, then by boat down the river to the north for another 3 miles.

There is an all-land approach, suitable for muskeg tractors or small tracked vehicles. It leads north from the property, around the north end of Matachewan Lake, and then east to the automobile road from the Indian reserve. The total distance is about 5 miles of bush travel.

## HISTORY

Various showings of gold in quartz veins, or quartz stockworks, associated with red syenite porphyry have been known and worked from time to time, particularly since 1931. (See O.D.M. Geological Report 51, Matachewan Area 1967 for details)

The leased claim MR-81186 has the old "French Vein" or "McVittie Showing" on it. This was drilled by Hollinger in 1934 and ran about 1½ ounces of gold over 11 inches of vein for 90 feet in length.

## THE MAGNETOMETER SURVEY

The survey was done by the writer during the period October 21 to 27, 1973, the lines having been cut during the previous two weeks by George Watisis and Reg Charon of Wanapitei, Ontario.

One of the new Coniagas Research Coni-Mags was used (#00122) which read variations of the earth's vertical magnetic field to an accuracy of about plus or minus one scale division (or one digit). In the range of values encountered, the scale constant was 19 gammas per digit.

The survey was conducted in the conventional manner with readings on a base station taken every two hours or less, in order to compensate for any diurnal changes. A continuous trace of the vertical magnetic intensity was obtained from both the Ottawa and Great Whale River recording stations. The traces are similar, except that Great Whale River is 10 to 15 times the magnitude of the change at Ottawa for the same time. The continuous recordings showed that October 20 and part of 21 were poor days for a mag survey, due to diurnal storms. This was already suspected from the erratic results of the 20th and 21st. (The poor work was discarded.)

Readings were taken at 50-foot intervals on lines 400 feet apart. The main base station was established atop the post at zero zero. Its value

was established by comparing it to the Teck-Label base station on the eastern edge of Kirkland Lake. This latter station is gone now due to the University, but an average value of the vicinity of the old station was obtained.

Sub base stations were established on each line, at the base line, as far as 40 E and to 20 W. A total of 1462 stations were read, for 13.63 miles of survey on 15.1 miles of picket and base lines.

The individual magnetic scale division readings are really the digital readings of a micrometer screw that moves a compensating magnetic so as to nullify the vertical magnetic field effect on the magnetic system within the instrument. These readings, in digits, were corrected for total diurnal, both day to day and hourly, also in digits.

The main base station was assigned the value of 500 gammas for a digit reading of 1380. This meant that no values below zero would be encountered and very few above 1,000 gammas. The figure 57,800 gammas should be added to each map reading to get the approximate total value in gammas, e.g., the main base station of 500 gammas is correctly about 58,300 gammas.

Each diurnal corrected station was then converted to its gamma difference from the main base station using 19 gammas per scale division.

INTERPRETATION OF RESULTS

The purpose of the survey was to find diabase or gabbro dykes and to establish the trend of the formations.

The profile method was used as being the simplest way of recognizing a magnetite content feature, from one line to the next.

(1) The "French diabase dyke" (in claim MR-81186) was easily detected on lines 0 to 12 W. To the east it is discernable on line 8 E and may still exist at depth (100 feet or so) beneath lines 16 E and 20 E.

(2) A "Fault Dyke" of gabbro was detected parallel to, or in, the north-

*my mistake since  
this is  
done  
practice  
reading values  
of  
is  
set  
can*

south fault that cuts beneath the base line at 32 E.

(3) The "Power Line Dyke" detected at the east edge of the property is probably a gabbro similar to the Fault Dyke, but no outcrop was seen.

(4) The "Swamp Dykes" at 10S to 12S on lines 28 E, 32 E and 36 E are the most interesting because of the similarity in trend and magnetic profile to that of the French dyke.

(5) Some minor variations in the magnetic profiles 1,000 feet northwest of the French Dyke were connected and thus suggest a northeast trend to the underlying volcanics. Similar trends near the west base line and in the northwest corner again imply a northeast trend.

The geological map of the area (O.D.M. #2109) shows northwest to be the likely trend.

Some local geological mapping will have to be done to resolve the conflict.

#### CONCLUSION

The drilling has disclosed a system of quartz veins with gold mineralization to extend continuously as far as it has been drilled along the north contact of the French dyke (800 feet so far).

The magnetometer survey has indicated that the French Dyke, its extension, or a similar one, continues, with interruptions, for 5,400 feet.

This entire length is considered favourable for gold mineralization and should be tested at 400 or 500 foot intervals to see if an economic deposit can be found.

#### RECOMMENDATIONS

(1) Examine the outcrop areas to ascertain the variation in rock types on the property and their probable trend. Particular attention should be paid to the contact zone of the French Dyke in the search for gold-bearing quartz

veins. Some trenching will be necessary to try to expose the contact.

(2) Where no outcrop is available a short drill hole (150 feet) should probe the north contact so that it is tested at about 400-foot intervals throughout the whole mile of probable contact. Thus, exposure or drill hole intersections should be obtained near 12 W, 8 W, 4 E, 8 E, 12 E, 16 E, 32 E, and 36 E.

(3) The south contact zone should also be tested near line 4W and between 8 W and 12 W.


#### COST ESTIMATE

(1) Stripping and trenching by men for two weeks, followed by 3 to 5 days geological mapping: \$2,300.

(2 & 3) Nine drill holes at 160 feet each, that is 1440, say 1500, feet of drilling, at \$10 per foot is \$15,000.

Hence, a total of \$20,000 should be available to complete the program and allow for some extras.

Respectfully submitted,



Michael Ogden, B.A.Sc., P.Eng.

Toronto, Ontario

November 30, 1973

GEOPHYSICAL - GEOLC  
TECHNICAL DA



900

DEC 5 1973

PROJECTS SECTION

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 MAGNETOMETER  
Township or Area BADEN  
Claim holder(s) RONDA COPPER MINES LIMITED  
Author of Report MICHAEL OGDEN BAS. P. ENG.  
Address DEANWOOD, RR-4 STOUFFVILLE ONT.  
Covering Dates of Survey OCT. 8 TO NOV. 30  
(linecutting to office)  
Total Miles of Line cut 15.1

MINING CLAIMS TRAVERSED  
List numerically

- L - 341769 ✓
  - L - 341770 ✓
  - L - 341771 ✓
  - L - 341772 ✓
  - L - 341773 ✓
  - L - 341777 ✓
  - L - 341778 ✓
  - L - 341779 ✓
  - L - 341780 ✓<sup>lit</sup>
  - L - 341781 ✓
  - L - 341782 ✓
  - L - 341783 ✓
  - L - 341788 ✓
  - L - 341789 ✓
  - L - 341790 ✓
  - L - 341791 ✓
  - L - 343796 ✓
  - L - 343797 ✓
- TOTAL CLAIMS 18

SPECIAL PROVISIONS  
CREDITS REQUESTED

ENTER 40 days (includes line cutting) for first survey.  
ENTER 20 days for each additional survey using same grid.

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

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

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

DATE: DEC 3/73 SIGNATURE: Michael Ogden  
Author of Report or Agent

PROJECTS SECTION

Res. Geol. \_\_\_\_\_ Qualifications 63A.383

Previous Surveys L.D.

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

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

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

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

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

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 1462 Number of Readings 1462  
Station interval 50 FEET  
Line spacing 400 FEET (SOME 200)  
Profile scale or Contour intervals 1 INCH = 500 GAMMA IN PROFILE  
(specify for each type of survey)

MAGNETIC

Instrument CONI - MAG SERIAL NR 00122  
Accuracy - Scale constant ± 19 GAMMA, - 19 GAMMA  
Diurnal correction method ON BASE STATION EVERY 2 HRS + ONWAY POINTS  
Base station location 00, AND AT BASE LINE AND EACH LINE TO ROW 4 TO 40E

ELECTROMAGNETIC

Instrument \_\_\_\_\_  
Coil configuration \_\_\_\_\_  
Coil separation \_\_\_\_\_  
Accuracy \_\_\_\_\_  
Method:  Fixed transmitter  Shoot back  In line  Parallel line  
Frequency \_\_\_\_\_  
(specify V.L.F. station)

Parameters measured \_\_\_\_\_

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 \_\_\_\_\_

Robertson Twp. M.310

Shebo Twp. M.385

THE TOWNSHIP  
OF  
**BADEN**

DISTRICT OF  
TIMISKAMING

LARDER LAKE  
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.

Summer resort locations patented for surface rights only shown thus ⊙.

Flooding rights to contour 870' to H.E.P.C. L.O. 7601. File 12290 vol. 2.

2.1369

MINING LANDS -  
DATE OF ISSUE  
DEC - 6 1973  
MINISTRY  
OF NATURAL RESOURCES

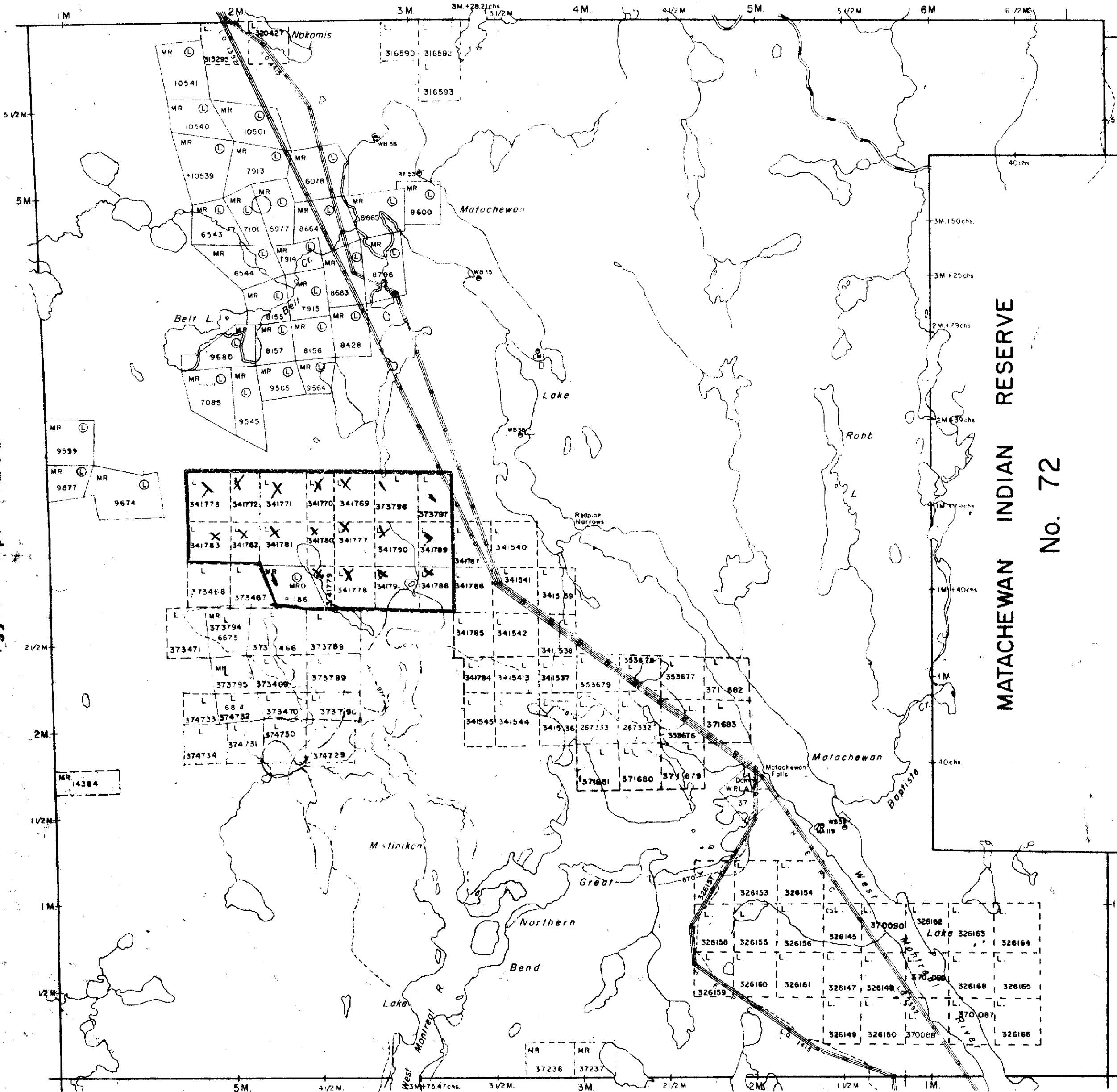
PLAN NO. **M.205**

ONTARIO  
MINISTRY OF NATURAL RESOURCES  
SURVEYS AND MAPPING BRANCH

Argyle Twp. M.203

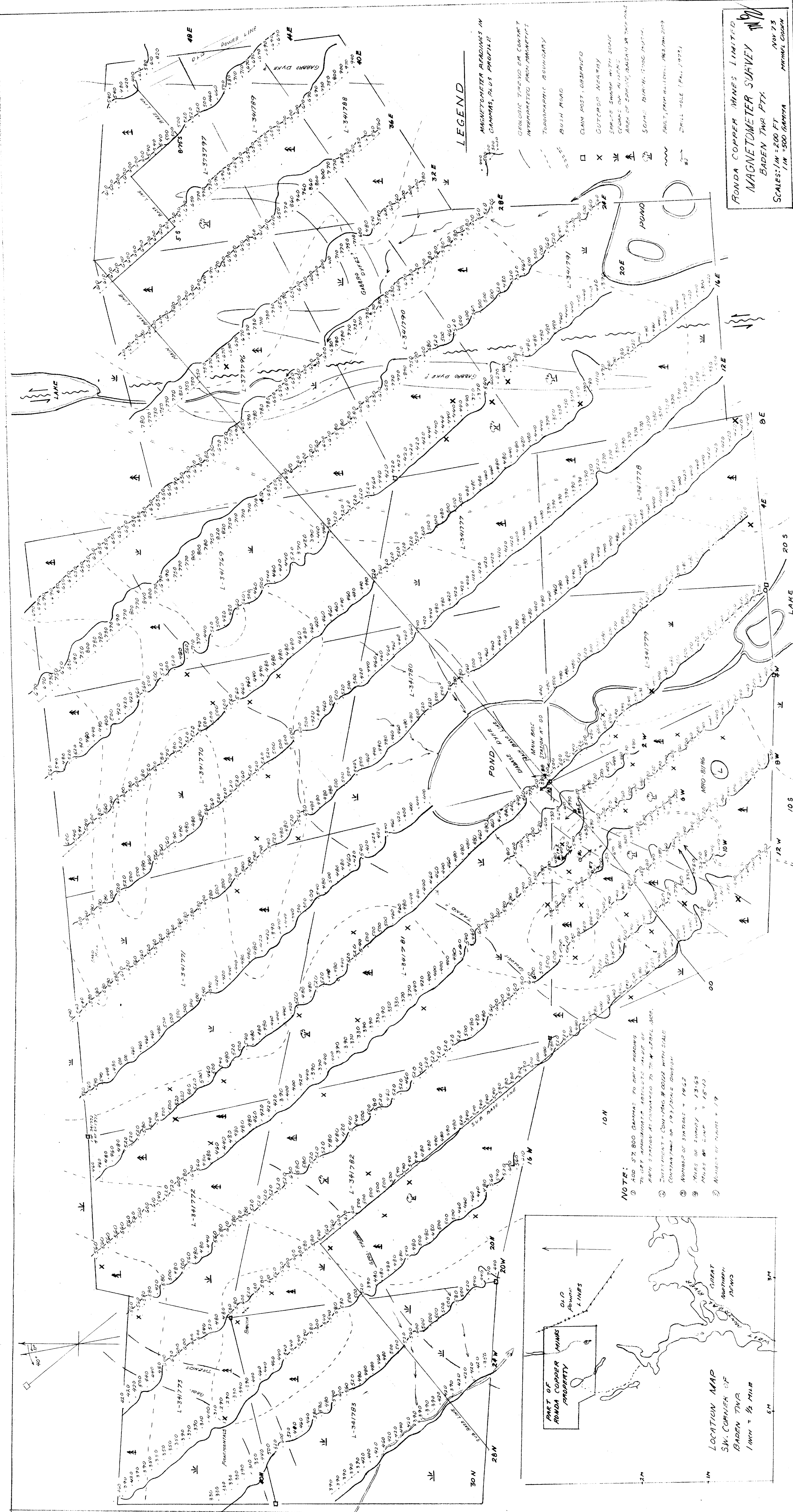
Alma Twp. M.202

MATACHEWAN INDIAN RESERVE  
No. 72



Powell Twp. M.241





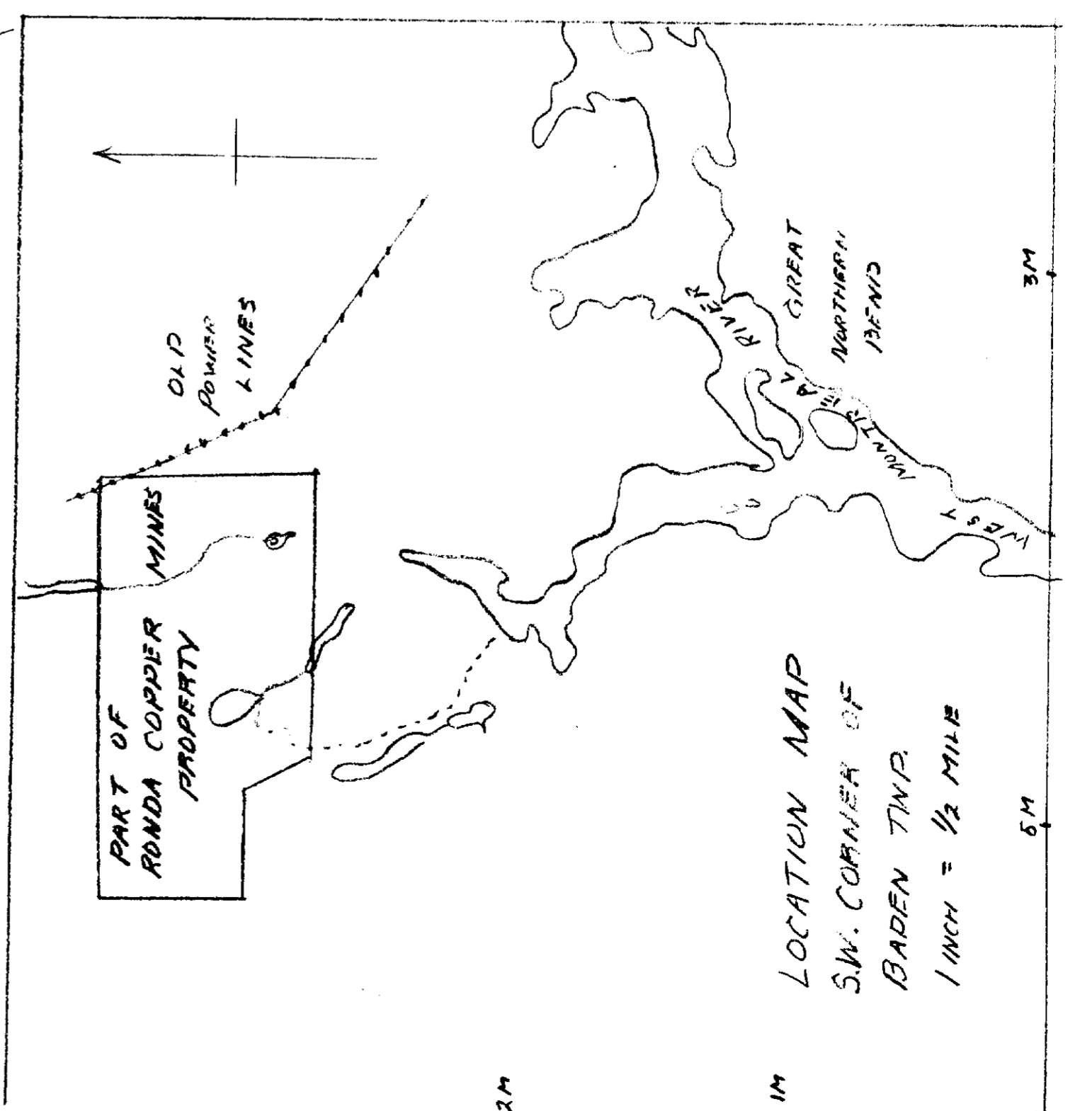
**LEGEND**

- MAGNETOMETER READINGS IN GAMMAS, PLUS PROFILE
- GEOLOGIC TRENDS OR CONTACTS INTERPRETED FROM MAGNETICS
- TOPOGRAPHIC BOUNDARY
- BUSH ROAD
- CLAIM POST, OBSERVED
- OUTCROP NEARBY
- SPURVE SHOWN WITH SCALE
- CLONES OR ALIENS
- AREA OF SPHERULES/BAISAN 30 THICKNESS
- SOME BURN, 19000 IN/IN
- FAULT, FROM HILLMAN, 1963, P. 2019
- DRILL HOLE (P. 1, 1972)

**RONDA COPPER MINES LIMITED**  
**MAGNETOMETER SURVEY**  
 BADEN TWP. P.T.  
 SCALES: 1/IN = 200 FT.  
 1/IN = 500 GAMMA

**NOTE:**

- 1) ADD 57,800 GAMMAS TO EACH READING TO GET APPROXIMATE ABSOLUTE VALUE OF EACH STATION AS COMPARED TO THE LOCAL ZERO.
- 2) INTERPOLATED CONTOUR # COULD VARY WITH SCALE.
- 3) NUMBER OF STATIONS = 1462
- 4) MILES OF SURVEY = 13.68
- 5) MILES OF LINE = 15.13
- 6) NUMBER OF DAYS = 17



**LOCATION MAP**  
 SW. CORNER OF  
 BADEN TWP.  
 1 INCH = 1/2 MILE

