



41P15NE8272 2.1529 POWELL

010

MAGNETOMETER SURVEY

on

MINERAL CLAIM No. 373404

POWELL TOWNSHIP, ONTARIO

RECEIVED

JUL 30 1974

PROJECTS UNIT

INTRODUCTION

A reconnaissance magnetometer survey was made on June 10th, 1974, on claim No. 373404 in Powell Township, Larder Lake Mining Division. This report and the map attached cover the work done and show the results of the survey.

Claim 373404 is located about two miles north-west of the village of Matachewan and about 1 claim west of the north end of Otisse Lake. Access is from Highway 566 by means of an old road, now overgrown, that runs east from the highway to the north end of Otisse Lake and crosses the claim.

The area is covered with bush, logged over many years ago. The topography is relatively flat with some low lying wet areas, particularly in the southeastern part of the claim. Drainage is toward the south but by low areas rather than distinct drainage channels.

Bedrock can be seen in a number of places, mostly in the northern half and toward the east and west boundaries. Overburden is probably fairly shallow in general but could be deeper in some of the swampy areas.

GEOLOGY

Geology of the area is described in the Ontario Department of Mines Geological Report No. 51 and Map 2110 which accompanies the report. A band of syenite porphyry classified as an Algoman intrusive strikes east-west through the central and northern part of the claim. Timiskaming sediments occupy the rest of the claim south of the intrusives and possibly a slice in the north-east corner of the claim. A later diabase dyke is thought to run north and south through the centre of the claim.

Map 2110 shows one small gold showing in the north east part of the claim, and pyrite is believed to occur in places in sediments.

SURVEY GRID

For the reconnaissance survey the old road cutting through the claim was used as a base line and pace and compass lines were run north and south of the road to the north and south boundaries. Lines were spaced generally about 225 feet apart, and stations were marked every 100 feet along lines using red plastic flagging.

The method of gridding is not entirely accurate. However with the relatively short length of lines from the road to the boundaries and by checking the distance from line to line no large errors could accumulate. Thus the position of

each station is fairly accurate in relation to nearby stations, or sufficiently so for a reconnaissance survey.

MAGNETOMETER SURVEY

A Sharpe Fluxgate magnetometer Model MF-1 with a sensitivity of about 20 gammas per scale division was used for the survey. The magnetometer indicates the vertical component only of the earth's magnetic intensity at the point read, in gammas.

Readings were taken every 100 feet along each line with a number of readings at 50 foot intervals along the road. A total of 113 readings were made. No diurnal readings or corrections were made, but frequent checks to a central base station showed no appreciable variations.

SURVEY RESULTS

The map enclosed shows all the magnetic readings taken. Contour lines have been drawn along lines of equal intensity and colours show some interpreted zones of magnetic intensity.

Over most of the claim the magnetic readings don't show much variation and range from about minus 2200 to minus 2500 gammas. In the south half of the claim there are two fair sized areas and three small ones in which readings are lower than minus 2500 gammas, while in the centre there are two north-south trending zones with readings above minus 2000 gammas.

There is no discernable pattern to the magnetic readings, or any clear difference that might represent different formations or outline the contact between sediments and intrusives, which as mapped should strike about east-west through the centre of the surveyed area.

The north-south trending zones on Lines 4 and 6 with readings above minus 2000 gammas, may however represent a diabase dyke which is shown in about this position on the geological map. Readings in this north-south zone average about 400 or 500 gammas higher than readings on each side.

At one location along the trail half way between Lines 6 and 8 there are two readings 25 feet apart with a difference of over 3000 gammas. A small stream was noted at this point, and while it was not checked at the time a culvert could be the cause of the erratic readings.

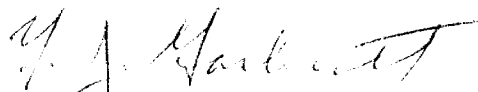
Over the property generally the horizontal gradient is rather low and seldom do readings 100 feet apart differ by more than 200 gammas.

CONCLUSIONS

The survey did not clearly distinguish between areas underlain by sediments and those underlain by intrusives. Thus

the survey offers no assistance in geological mapping of the contacts between formations.

A band with higher magnetic readings, with a north-south trend, is believed to outline a diabase dyke.



F. J. Garbutt, P.Eng.

June 18, 1974



GEOPHYSICAL - GEOLOGICAL
TECHNICAL DATA



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900

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 Survey
Township or Area Powell Twp.
Claim holder(s) F. J. Garbutt
Author of Report F. J. Garbutt
Address 242 Hanna Rd., Toronto.
Covering Dates of Survey June 10, 16 & 18, 1974
(linecutting to office)
Total Miles of Line cut none.

MINING CLAIMS TRAVERSED
List numerically

L 373404
(prefix) (number)

J

If space insufficient, attach list

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	<u>12.25</u>
- Magnetometer	<u>20</u>
- Radiometric	
- Other	
Geological	
Geochemical	

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

Magnetometer _____ Electromagnetic _____ Radiometric _____
(enter days per claim)

DATE: July 27, 1974 SIGNATURE: F. J. Garbutt
Author of Report or Agent

PROJECTS SECTION

Res. Geol. _____ Qualifications 63.1081

Previous Surveys 2.86 (Mag + GP)

Checked by _____
different instrument
- done in 1970

GEOLOGICAL BRANCH

LD
Approved by _____ date _____

GEOLOGICAL BRANCH

Approved by _____ date _____

TOTAL CLAIMS _____

OFFICE USE ONLY

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

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS

Number of Stations 113 82 Number of Readings 113
Station interval 100 feet, with some at 50 feet
Line spacing 225 feet, approx.
Profile scale or Contour intervals As per map. - varying contours
(specify for each type of survey)

MAGNETIC

Instrument Sharpe Fluxgate, Model MF-1
Accuracy - Scale constant 20 gammas per scale division.
Diurnal correction method Multiple checks to intermediate stations
Base station location 0 North on line 2

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 _____

Baden Twp. (M.205)

THE TOWNSHIP OF
OF
POWELL

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 along the shores of all lakes and rivers.

L.O. 7601 Covers Flooding Rights In This Twp To Below Contour 870.00 To H.E.P.C. File: 12290 Vol. 2.

L.O. 11167 Shown thus: File 90970

MINING LANDS -
DATE OF ISSUE
JUL 30 1974
MINISTRY
OF NATURAL RESOURCES

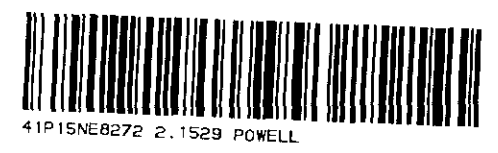
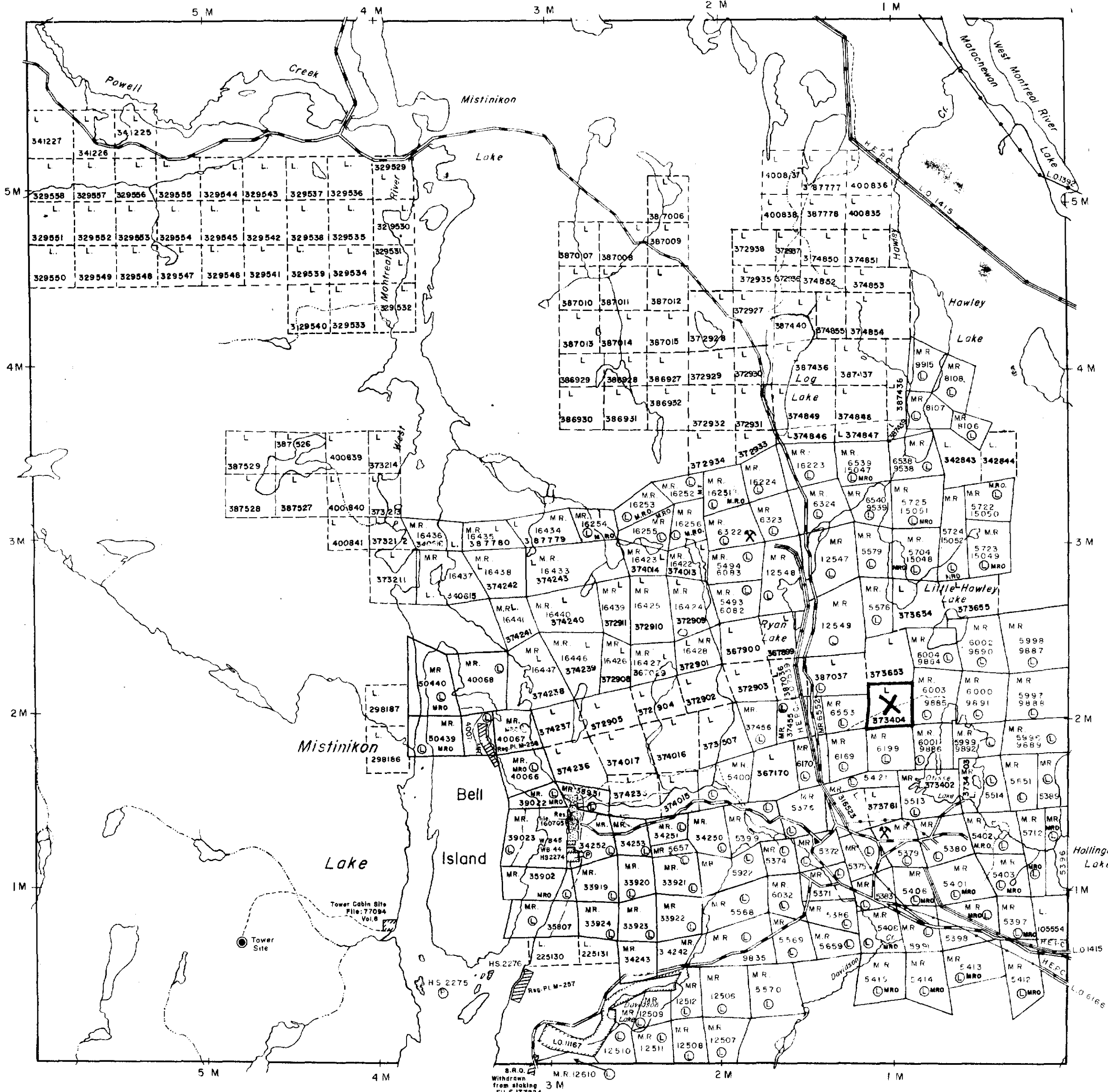
PLAN NO. **M.241**

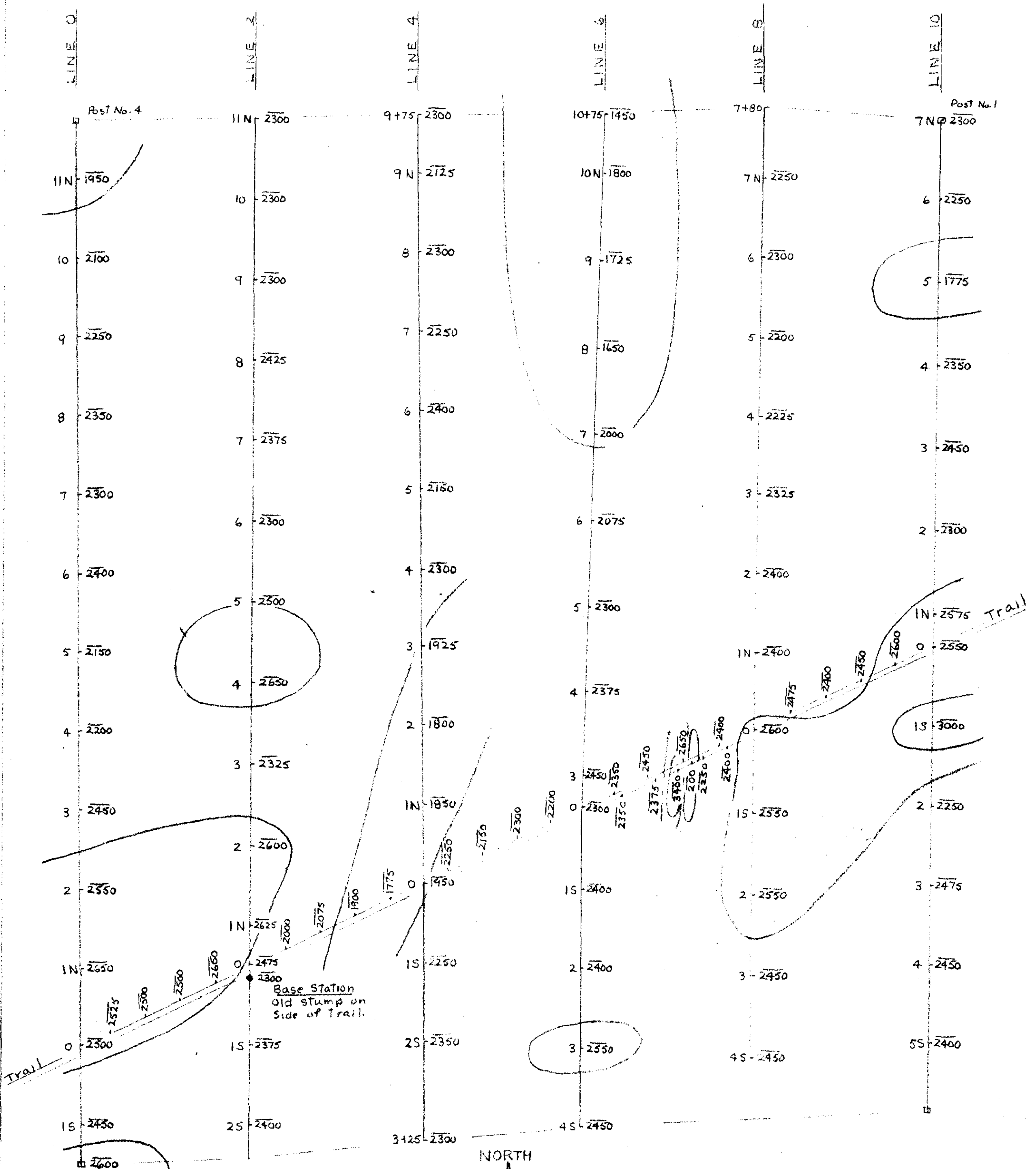
ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

Bannockburn Twp. (M.207)

Cairo Twp. (M.210)

Yarrow Twp. (M.260)





LEGEND

- 1050 - Negative Reading
- Below 3000 gammas
- 3000 To 2500 "
- 2500 To 2000 "
- Above 2000 "

Note - The reading shows the vertical of magnetic intensity ion.

MAGNETOMETER SURVEY

CLAIM No. 373404 - POWELL TWP

Scale: 1 inch = 100 feet



June 16, 1974

F.J. Garbutt, P. Eng.

F.J. Garbutt

