



32D04SW0208 2.3701 MCELROY

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MINING LANDS SECTION

REPORT ON
MAGNETOMETER SURVEY
MOLY HILL GROUP
MC ELROY TOWNSHIP, ONTARIO

by

R.A. MacGregor, P. Eng.

January 21, 1981

I. INTRODUCTION

Linecutting followed by a magnetometer survey was carried out on a block of 13 claims in the west central part of McElroy Township. The linecutting commenced in November 1980 and instument work was completed in December 1980.

II. LOCATION, ACCESS AND OWNERSHIP

The property is located in the west central part of McElroy Township, Ontario, Larder Lake Mining Division, west of the Misema River. There are 13 claims covered by the survey numbered L512332 to L512341 inclusive, L522718; L522739 and L571814. The claims are owned by Corporation Falconbridge Copper, P.O. Box 40, Commerce Court West, Toronto, Ontario. The grid also extends across some unowned claims to provide continuity.

A good gravel road leading from the Adams Iron Mine of Dofasco Limited to their pumphouse on the Misema River bisects the claims. The Adams mine may be reached from Highway 112 by way of a paved secondary Highway 650 from Dane, Ontario about 10 miles south of Kirkland Lake. Permission to use the pumphouse road which is closed to traffic by a gate, may be obtained at the Mine security office.

There is a large diameter water-line buried along the north side of the road. A powerline to the pumphouse runs just to the south of the road. There is also a decant tower from the tailing pond which covers the south west part of the claims, with a buried pipeline running to the Misema River to carry the decant overflow.

III. PREVIOUS EXPLORATION

There are a number of old pits and trenches on the claims from previous surface prospecting. A number of these contain molybdenum mineralization with other sulphides.

In the area where line 46SE crosses the baseline, there is evidence of old diamond drilling. Assessment records record the drilling of 4 holes by the McElroy Syndicate on this showing. The holes record a breccia with scattered molybdenum values.

IV. TOPOGRAPHY

The topography of the claims is relatively flat with considerable swamp and beaver ponds. Rock outcrops usually 20 to 30 feet above the surrounding level ground or swamp and are often quite rugged. The entire area has been cut over and is covered with a dense second growth of small trees, underbrush and tag alders. The south west part of the claims are flooded by the decant area of the Adams mine tailing area.

V. GEOLOGY

The area was mapped in some detail by E.M. Abraham ⁽¹⁾ in 1947-1948. Abraham's map No. 150-3 at 1 inch = 1,000 feet shows the claims to be underlain by sedimentary and volcanic rocks intruded by small mafic dykes and plugs. The McElroy stock lies just to the east of the claims and possibly under-lying part of the south-east corner of the claims.

(1) E.M. Abraham O.D.M. Vol. 59 part 6 1950

VI. SURVEY PROCEDURE

A previously cut baseline to the north was extended from picket 36SE to 54SE. A tie line was turned off at 90° from 46 SE and cut SW to the Adams Mine tailings decant pond. At 28 + 00 SW a baseline was turned off at 90° (parallel to the previous baseline) and cut north-west to picket 24SE and south-east to picket 84SE. Crosslines were cut at 200 foot intervals perpendicular to the baseline north-east to the claim boundaries or the north baseline and south-west to the tailings decant pond or a previously cut tieline. All lines were chained and picketed every 100 feet.

Magnetometer readings were taken with a Barringer GM-122 Proton Precession Magnetometer at 50-foot intervals along all lines. The looping method was used for control of diurnal variation. In this method a base station is selected, and readings taken along lines describing a loop, arriving back at the starting base station in less than two hours. A second loop is then started using either the same base station or another which is tied to the previous loop. Readings are then corrected for diurnal variation by assuming the time between readings is the same and distributing any variation equally among the intervening readings. No correction was applied less than the accuracy of the base station readings.

VII. DISCUSSION OF RESULTS

The magnetometer survey gives an approximate outline of the areas underlain by sediments and volcanics. The volcanics are characterized by a higher and more irregular magnetic profile.

DISCUSSION OF RESULTS (Continued)

They appear to be confined to the area between the baseline and the road to the Adams Mine pumphouse. A number of small highs may be due to ultramafic intrusives. The largest magnetic anomaly in the central part of the Grid is probably an ultramafic volcanic? A good deal of caution must be used with the magnetic map, and related to a survey of existing features. The roads and dams constructed in the area used waste from the Adams mine, much of which is highly magnetic iron formation, but some of which is non-magnetic waste. This can be seen as spot highs and narrow magnetic features along the roads. As well the area is crossed by a power line, and large diameter steel pipe to carry water to the mine and effluent from the tailings decant area. These areas usually show as a magnetic gradient too steep to read with the proton magnetometer.

The large magnetic area at the south east corner of the grid is believed to be magnetic waste from the building of a tailings dam. Another magnetic high at the north-west end of the baseline may also be magnetic waste or a bedrock feature. A careful check of all magnetic features should be made on the ground after the snow has gone to determine which are caused by bedrock and which by man-made features.

Respectfully submitted



Robert A. MacGregor, P. Eng.

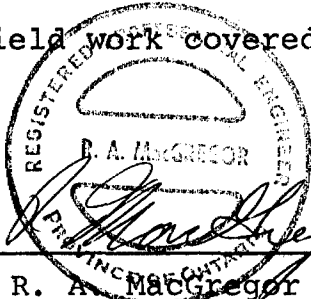
January 21, 1980

C E R T I F I C A T E

I, Robert A. MacGregor, certify:

1. I am a Mining Engineer residing at 134 Palace Drive, Sault Ste. Marie, Ontario. I have worked as a mining engineer and geologist for the past 17 years.
2. I am a member of the Association of Professional Engineers of the Province of Ontario and a member of the Canadian Institute of Mining and Metallurgy.
3. I attended Queen's University for two years in the Mining-Geology course.
4. I personally supervised the field work covered by this report.

Jan 21/81
DATE

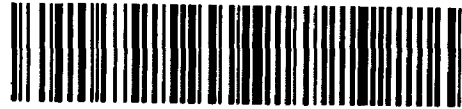
A circular seal for a Registered Professional Engineer in the Province of Ontario. The seal contains the text "REGISTERED PROFESSIONAL ENGINEER" around the top edge and "PROVINCE OF ONTARIO" around the bottom edge. In the center, the name "R. A. MACGREGOR" is printed. A handwritten signature is written across the seal.

R. A. MacGregor



Ministry of

GEOPHYSICAL - GEO
TECHNICAL



32D045W0208 2.3701 MCELROY

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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(s) Magnetometer
Township or Area McElroy
Claim Holder(s) Corporation Falconbridge Copper

Survey Company Colex Explorations Inc.
Author of Report R.A. MacGregor
Address of Author P.O. Box 1110, Sault Ste. Marie
Covering Dates of Survey November - December 1980
(linecutting to office)
Total Miles of Line Cut 16.15

MINING CLAIMS TRAVERSED	
List numerically	
<u>L512332</u>	(number)
<u>L512333</u>	(number)
<u>L512334</u>	(number)
<u>L512335</u>	(number)
<u>L512336</u>	(number)
<u>L512337</u>	(number)
<u>L512338</u>	(number)
<u>L512339</u>	(number)
<u>L512340</u>	(number)
<u>L512341</u>	(number)
<u>L522718</u>	(number)
<u>L522739</u>	(number)
<u>L571814</u>	(number)
TOTAL CLAIMS <u>13</u>	

SPECIAL PROVISIONS CREDITS REQUESTED	DAYS per claim
Geophysical	
--Electromagnetic	
--Magnetometer	<u>40</u>
--Radiometric	
--Other	
Geological	
Geochemical	

AIRBORNE CREDITS (Special provision credits do not apply to airborne surveys)
Magnetometer _____ Electromagnetic _____ Radiometric _____
(enter days per claim)

DATE: Jan. 21, 1981 SIGNATURE: [Signature]
Author of Report or Agent

Res. Geol. _____ Qualifications 2, 1102

Previous Surveys			
File No.	Type	Date	Claim Holder
			<u>[Signature]</u>

OFFICE USE ONLY

If space insufficient, attach list

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS - If more than one survey, specify data for each type of survey

Number of Stations 1800 Number of Readings 1800
Station interval 50 feet Line spacing 200 feet
Profile scale
Contour interval 500 gammas

MAGNETIC

Instrument Barringer GM-122
Accuracy - Scale constant 1 gamma
Diurnal correction method Looping Method
Base Station check-in interval (hours) 2 hours or less
Base Station location and value Various along base line

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
Method [] Time Domain [] Frequency Domain
Parameters - On time Frequency
- Off time Range
- Delay time
- Integration time
Power
Electrode array
Electrode spacing
Type of electrode

Mc ELROY

DISTRICT OF
TIMISKAMING

LARDER LAKE
MINING DIVISION

SCALE: 1-INCH = 40 CHAINS

LEGEND

- PATENTED LAND ● or ⊕
- 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.
- PATENTED FOR SURFACE RIGHTS ONLY ⊙

NOTES

400' Surface rights reservation along the shores of all lakes & rivers

Areas withdrawn from staking under Section 42 of the Mining Act.

File	Date	Disposition

DATE OF ISSUE

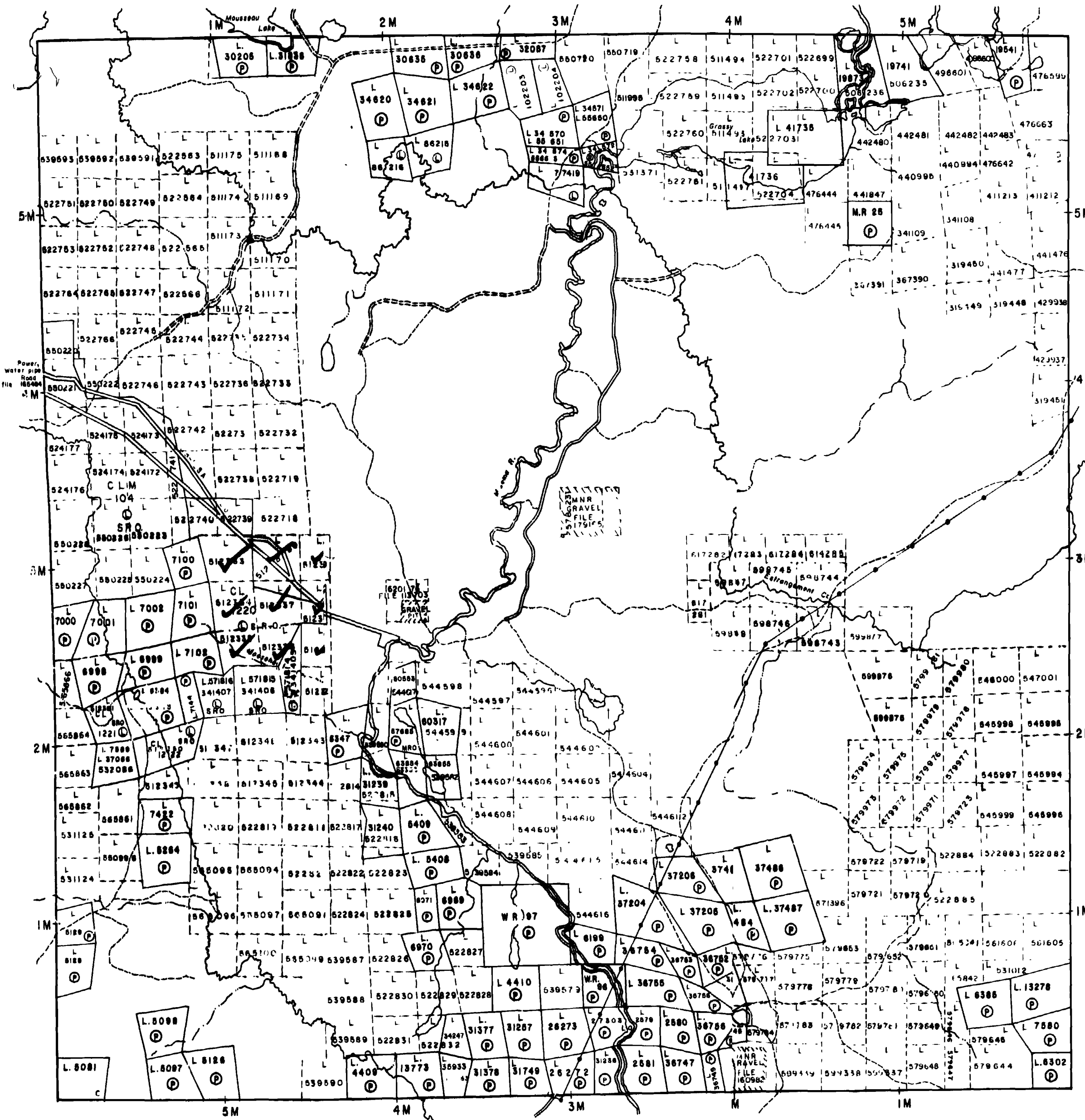
NOV 17 1981.

Ministry of Natural Resources
TORONTO

2.3701

PLAN NO. M-366

MINISTRY OF NATURAL RESOURCES
SURVEY BRANCH

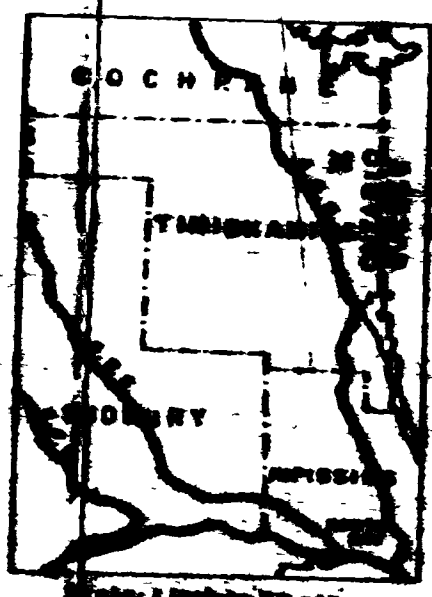
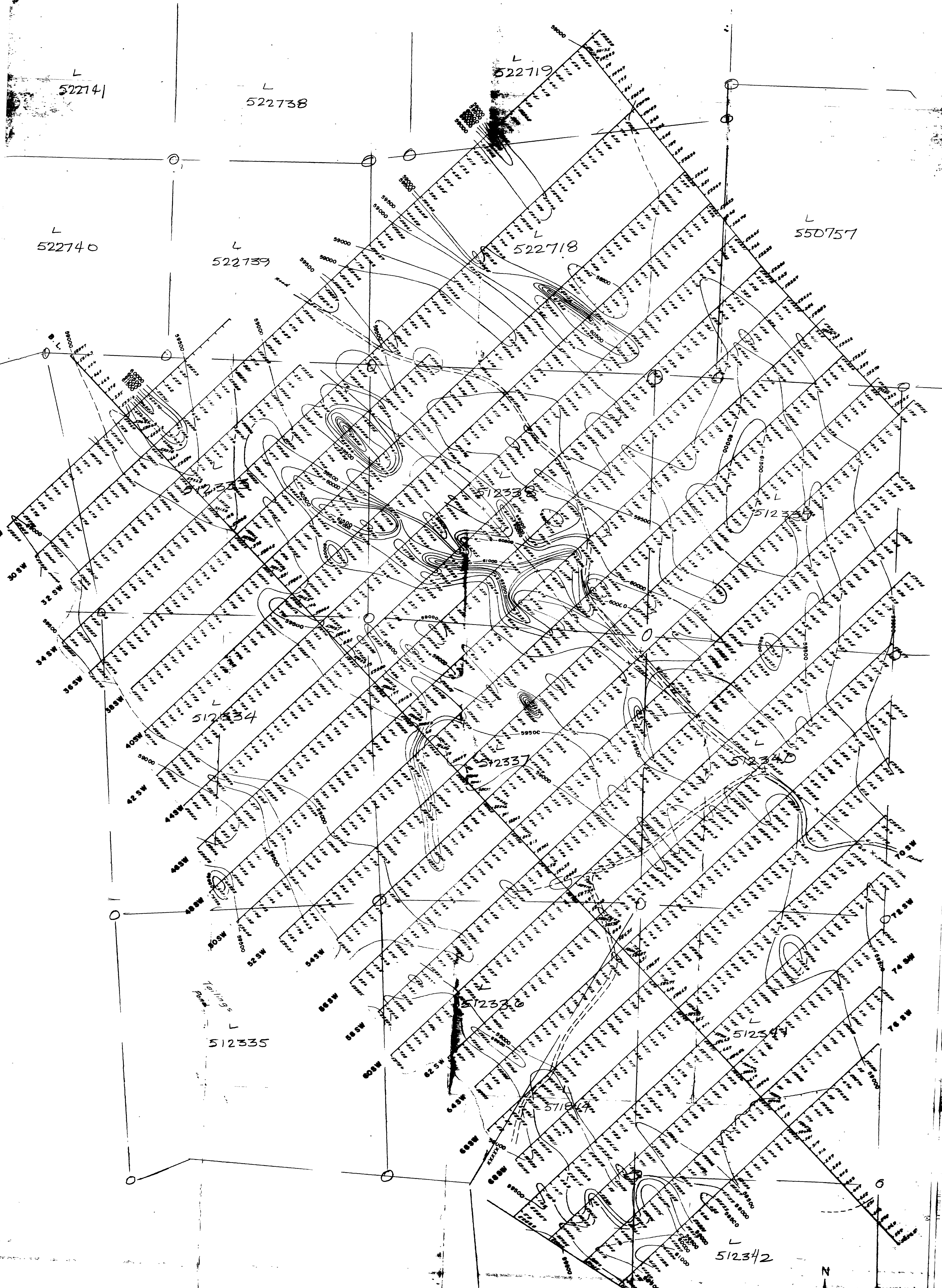


ROSTON Td M-332

HEARST Tp. M-354

CATHARINE Tp. M-336





INSTRUMENT-BARRINGER GN-122
 CONTOUR INTERVAL-500 GAMMA

MAGNETOMETER SURVEY
 HOLY HILL PROJECT
 McELROY TOWNSHIP
 SCALE 1"=500'