



32D04SW0067 2.2166 GAUTHIER

010

A MAGNETOMETRIC SURVEY
ON
THE GAUTHIER TOWNSHIP PROPERTY
MAYFAIR MINES, LIMITED
KIRKLAND LAKE AREA

AUG 4 1976

PROJECTS UNIT

LOCATION & DESCRIPTION

The groups consists of 5 contiguous unpatented mining claims numbered as follows: L.428868 - 428871 inclusive and L.373804. Located in the southeast corner of Gauthier Township, the claims lie 12 miles east of Kirkland Lake, Ontario and are crossed by Highway 66, the O. N. Railway and power lines of the Ontario Hydro. Numerous bush roads passable to tractors give access to other parts of the property.

HISTORY

Prior to 1938 the following work had been completed:

1. Line cutting at 200 foot centres over the property north of the Misema River.
2. A geological survey
3. Prospecting, trenching and 3 shallow shafts
4. A drilling program by Olivet Mines
5. A drilling program by Ventures Limited
6. A geophysical survey (type unknown)

A copy of the geological map exists but unfortunately the rock types are not identified. It does, however, show the locations of drill holes, shafts and trenches. The records of the Ministry of Natural Resources in Kirkland Lake show logs for 29 drill holes, the location of which are shown on Map 50C which accompanies the report. Total footages drilled in the 29 holes was 14,703 feet.

GENERAL GEOLOGY

The Timiskaming Group unconformably overlies a thick volcanic succession up to 19,000 metres thick (Ridler, 1970). The composition of these volcanics ranges from tholoiitic basalts to rhyolites, with the more felsic material generally higher in the stratigraphic section.

Conglomerate, sandstone, siltstone, argillite, chert and iron formation are contained in the sedimentary portion of the Timiskaming. The Timiskaming also includes volcanic rocks which are largely trachytic and leucitic in composition, along with some minor basalt and andesite.

ECONOMIC GEOLOGY OF THE AREA

Several types of gold ores are recognized in the Kirkland-Larder area. In the Town of Kirkland Lake, the mines which were 7 in number occur along the Kirkland Lake fault zone where it cuts a syenitic intrusive. The zone is a network of faults and fractures containing quartz, calcite, pyrite and gold.

At the Kerr Addison Gold Mines Limited, two types of orebodies are recognized. The carbonate type consists of irregular lenses of gold-bearing quartz stockworks lying within the altered and brecciated carbonate zone. The second type, called flow ores, consists of lenses of mineralized and silicified volcanic flow rocks lying south of the carbonate zone. Pyrite is the principal mineralization and contains most of the gold.

The most favourable area on the property is along the Larder Lake 'break' and the carbonate zone which accompanies it. This zone extends for 3,000 feet across the property.

PROCEDURE

Magnetic readings were taken at 100 foot intervals along each traverse line. Diurnal drift was corrected by the standard looping method every two hours or so and distributing the drift linearly with time. A base station was established at O, L 10 E on the main or south base line and all readings were adjusted to conform with the magnetometer survey on the adjoining Mayfair claims which was submitted as assessment work on 3 November, 1975.

DISCUSSION OF RESULTS

O.D.M. Geological Map 50C, Gauthier Township, shows the area to be underlain by fine grained Temiskaming sediments.

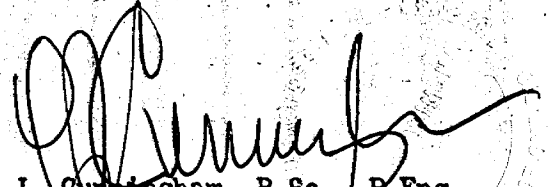
The magnetics show only two areas of variable relief. Immediately north of the railroad track in claim L.428868, several readings, ranging over 1000 gammas above background, are believed to represent a narrow band of oxide iron formation. As noted on the map, a band of oxide iron formation has been located and traced across claims 373801 and 373803. The anomalous readings on L 26 E, Claim L.428868, are believed to represent the continuation of this band.

An anomaly of low intensity at 23N, L 2 E, is unexplained but may be due to a diabase dike which dikes are not uncommon in the area. The high reading on L 18 E is thought to be caused by a drill casing.

In the writer's opinion, the magnetic survey confirms the existence of the oxide iron formation across the Mayfair property.

In the last few years Dr. R. H. Ridler, Geological Survey of Canada, has suggested in a number of papers that the carbonate gold ores of the Larder Lake Area are metamorphosed facies iron formation and that oxide facies may grade laterally into carbonate facies. If Ridler's theory is valid the recognition of the iron formation on the Mayfair property may have economic significance.

Signed,



L. J. Cunningham, B.Sc., P.Eng.,
Mining Engineer

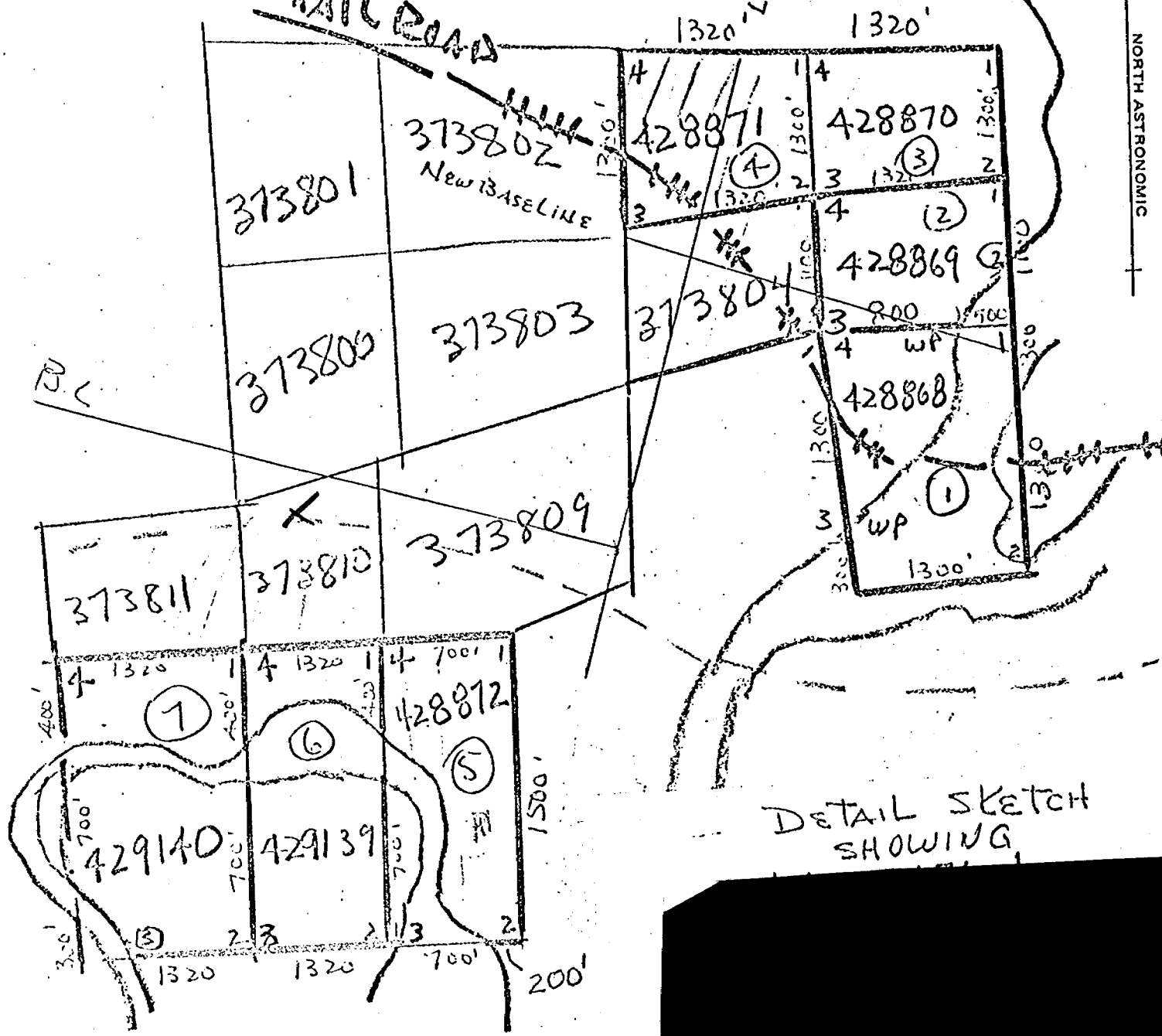
Dated at
Kirkland Lake, Ontario
30th July, 1976

GAUTHIER TWP

RAILROAD

1320' L.O.E.

NORTH ASTRONOMIC



373801

373802
New Baseline

428871
④

428870
③

373805

373803

373804

428869
②

428868
①

373811

373810

373809

①

⑥

428872

⑤

429140

429139

③

②

③

③

②

200'

DETAIL SKETCH
SHOWING

[Handwritten Signature]



Ministry of Natural Resources

GEOPHYSICAL - GEOLOGICAL
TECHNICAL DATA



32D045W0067 2.2166 GAUTHIER

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.

AUG 1976
MINING CLAIMS SECTION

AUG 4 1976

Type of Survey(s) MAGNETOMETER
Township or Area GAUTHIER TWP
Claim Holder(s) Mayfair Mine Ltd
Suite 508 100 Adelaide St. W.
Toronto
Survey Company _____
Author of Report L. J. CUNNINGHAM
Address of Author 1 MCPHEE AVE KIRKLAND LAKE ONT
Covering Dates of Survey 10 Feb/76 - 30 June/76
(linecutting to office)
Total Miles of Line Cut 4 MILES

PROJECTS UNIT
MINING CLAIMS TRAVERSED
List numerically

L 428868 1/2
(prefix) (number)
L 428869 ✓
L 428870 ✓
L 428871 ✓
L 373804 1/2
allow 30 days
30

SPECIAL PROVISIONS
CREDITS REQUESTED

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

ENTER 20 days for each
additional survey using
same grid.

Geophysical

-Electromagnetic

-Magnetometer 40

-Radiometric

-Other

Geological

Geochemical

DAVS
per claim

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

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

DATE: 30 July/76 SIGNATURE: [Signature]
Author of Report or Claim

Res. Geol. L.P.D. Qualifications 6.3.1603

Previous Surveys

File No.	Type	Date	Claim Holder

TOTAL CLAIMS 5

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 150 Number of Readings 150
Station interval 100 FT Line spacing 400 FT
Profile scale
Contour interval 100 GAMMAS

MAGNETIC

Instrument MCPHAR M700
Accuracy - Scale constant VERTICAL FIELD 10 GAMMAS
Diurnal correction method BY A LOOPING METHOD + DISTRIBUTION OF DRIFT
Base Station check-in interval (hours) 2 HOURS
Base Station location and value SOUTH BASE LINE at 0, L10E - 360 gamma

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

POLARIZATION RESISTIVITY

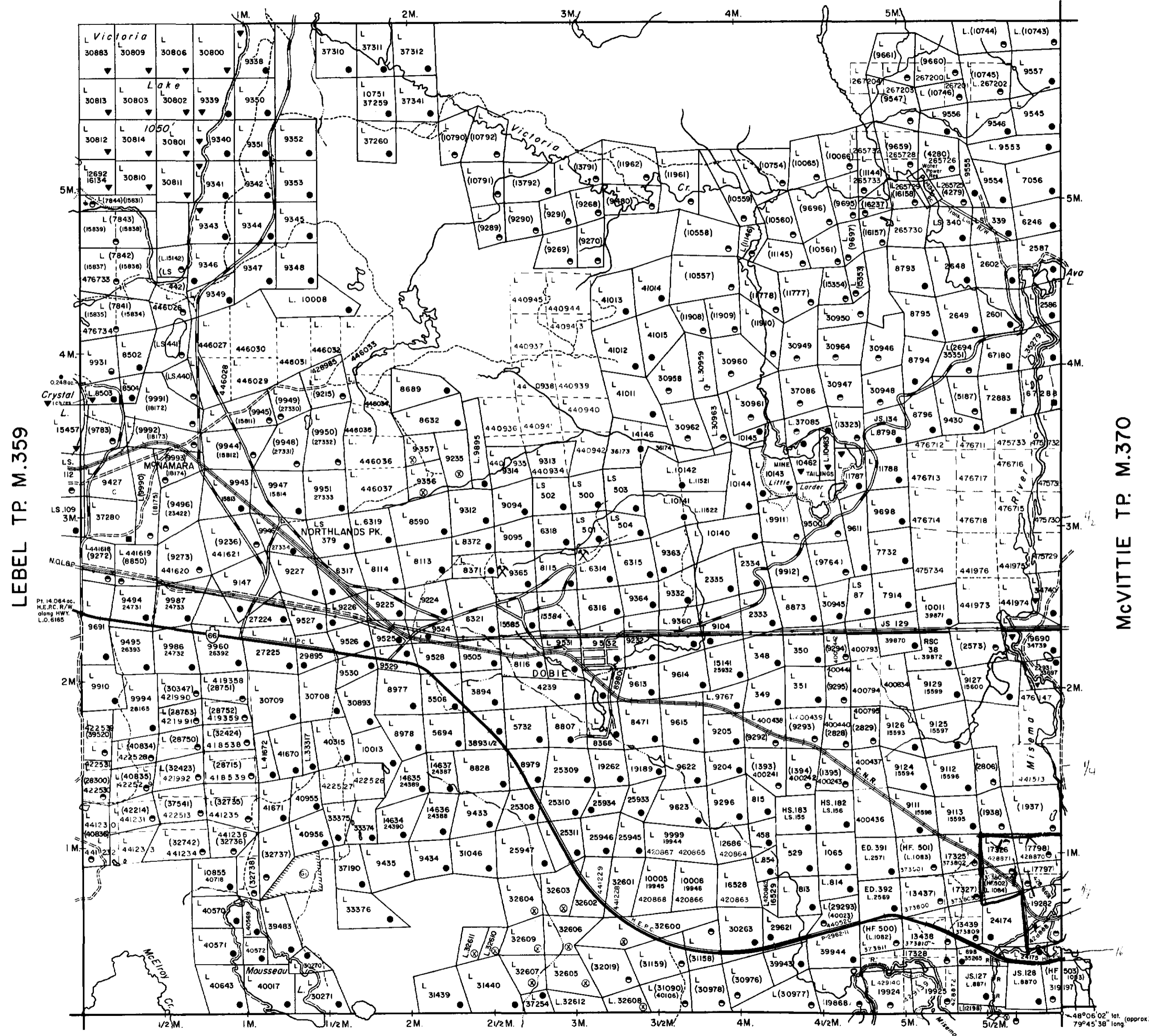
Instrument
Method [] Time Domain [] Frequency Domain
Parameters - On time Frequency
- Off time Range
- Delay time
- Integration time
Power
Electrode array
Electrode spacing
of electrode

NOTES

400' surface rights reservation along the shores of all lakes and rivers.

© M.T.C. File 101421 Pit No.1666

ARNOLD TP. M.321

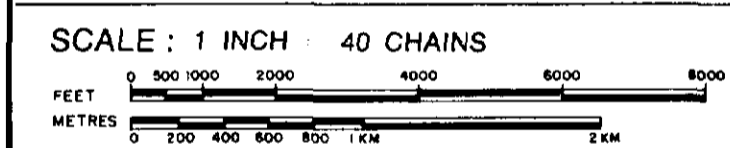


LEGEND

- HIGHWAY AND ROUTE No.
- OTHER ROADS
- TRAILS
- SURVEYED LINES:
 - TOWNSHIPS, BASE LINES, ETC.
 - LOTS, MINING CLAIMS, PARCELS, ETC.
- UNSURVEYED LINES:
 - LOT LINES
 - PARCEL BOUNDARY
 - MINING CLAIMS ETC.
- RAILWAY AND RIGHT OF WAY
- UTILITY LINES
- NON-PERENNIAL STREAM
- FLOODING OR FLOODING RIGHTS
- SUBDIVISION
- ORIGINAL SHORELINE
- MARSH OR MUSKEG
- MINES

DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT	SYMBOL
PATENT, SURFACE & MINING RIGHTS	●
" SURFACE RIGHTS ONLY	○
" MINING RIGHTS ONLY	◐
LEASE, SURFACE & MINING RIGHTS	■
" SURFACE RIGHTS ONLY	◼
" MINING RIGHTS ONLY	◻
LICENCE OF OCCUPATION	▼
CROWN LAND SALE	C.S.
ORDER-IN-COUNCIL	OC
RESERVATION	○
CANCELLED	⊗
SAND & GRAVEL	⊙



ACRES	HECTARES
40	16

TOWNSHIP 2.2166
GAUTHIER
 DISTRICT TIMISKAMING
 MINING DIVISION LARDER LAKE

Ministry of Natural Resources
 Ontario Surveys and Mapping Branch

Date JAN. 1973 Plan No. M.350
 Whitney Block Queen's Park, Toronto

DATE OF ISSUE
 AUG 9 1976

McELROY TP. M.366



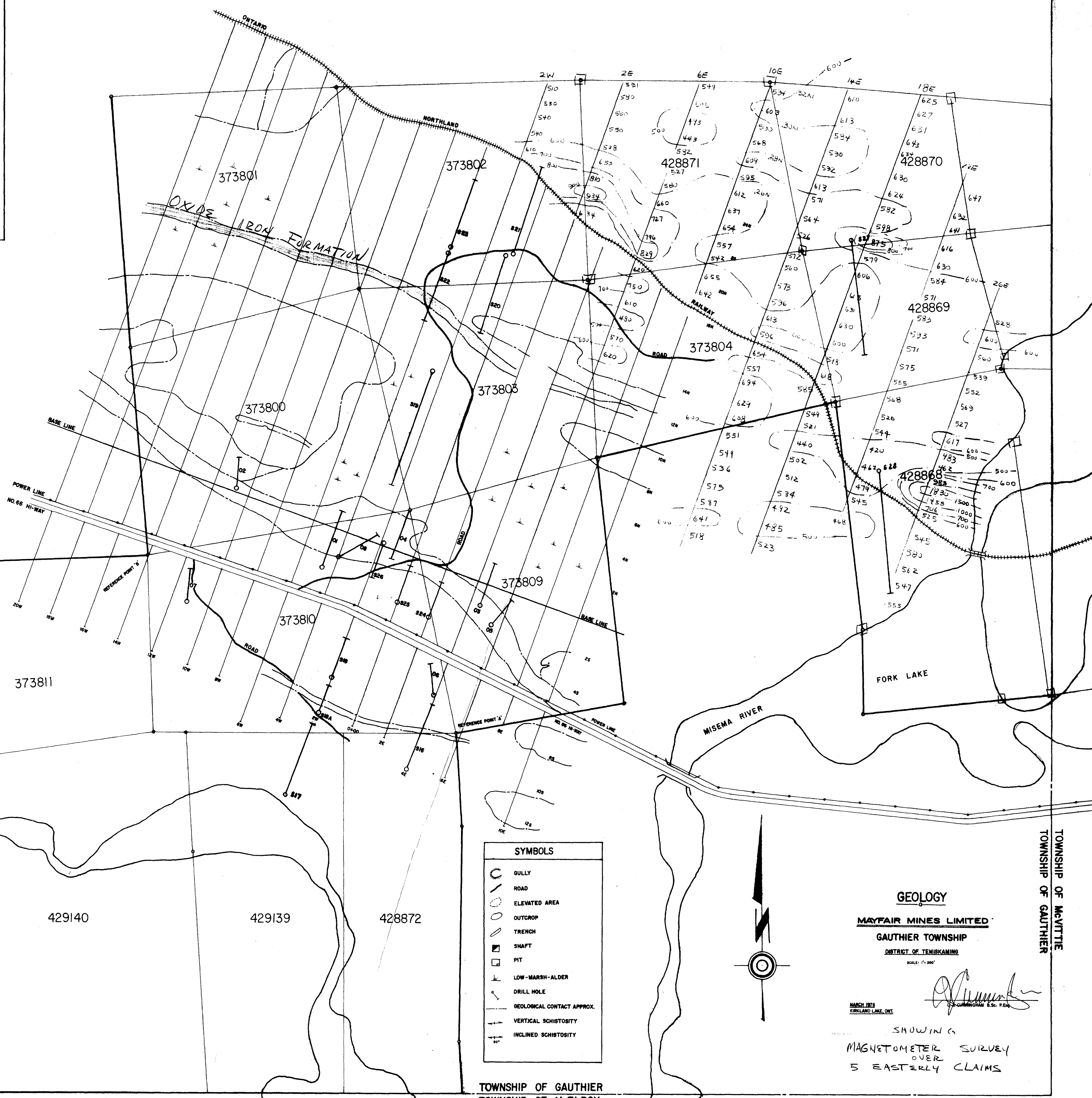
LEGEND

ALGOMAN

- 9a SYENITE
- 9b SYENITE PORPHYRY
-

TEMISKAMING

- 9b CARBONATED ROCKS
- 9v PARTIALLY CARBONATED
- 9a BASIC VOLCANICS - ANDEBITIC LAVAS
- 9c CHERT - MINOR SULPHIDE
- 81f MAGNETITE IRON FORMATION
- 8m ULTRA MAFIC VOLCANICS
- 7a TRACHYTE
- 7b TRACHYTE AGGLOMERATE
- 7c TRACHYTE TUFF-BEDED
- 6 FINE GRAINED META SEDIMENTS
GRAYWACKE - ARGILLITE



SYMBOLS	
	GULLY
	ROAD
	ELEVATED AREA
	OUTCROP
	TRENCH
	SHAFT
	PIT
	LOW-MARSH-ALDER
	DRILL HOLE
	GEOLOGICAL CONTACT APPROX.
	VERTICAL SCHISTOSITY
	INCLINED SCHISTOSITY



GEOLOGY
MAYFAIR MINES LIMITED
GAUTHIER TOWNSHIP
 DISTRICT OF TEMISKAMING
 SCALE: 1" = 200'

[Signature]
 S. CHAMBERLAIN B.Sc. P.E.M.

SHOWING
 MAGNETOMETER SURVEY
 OVER
 5 EASTERLY CLAIMS

TOWNSHIP OF GAUTHIER

TOWNSHIP OF GAUTHIER
 TOWNSHIP OF McELROY