



41P118E0013 2.1752 MACMURCHY

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PROJECTS UNIT.

GEOPHYSICAL SURVEY
GOLD BELLE MINES LIMITED
MACMURCHY AND FAWCETT
TOWNSHIPS
DISTRICT OF SUDBURY
ONTARIO

FEBRUARY 19, 1975

J. D. McOANNELL.

The Directors
Gold Belle Mines Limited
Suite 520
25 Adelaide Street East
Toronto, Ontario

Gentlemen:

This report describes the results of an electromagnetic survey conducted over your Company's group of seventeen mining claims located in MacMurchy and Fawcett Townships, Shiningtree Area, Ontario. This work was carried out during the latter part of January and the early part of February, 1975. Some magnetometer work was also completed in conjunction with the electromagnetic surveying.

The claims group forms an oblong block 10,200 feet in a north south direction, parallel to the formational strike. East-west picket lines were cut and the geophysical observations made along these east-west lines. The electromagnetic observations were recorded with a Geonics EM-16 instrument and the magnetometer readings with a Scintrex MF-1 Fluxgate Magnetometer.

Three zones of interest on the property, were known to the writer prior to commencing the geophysical work. The first was a north-south fault structure extending through Foisey Lake. The second was a north-east striking zone of silicification in the south-east corner of the claims group. This zone is exposed on surface for about 400 feet and was observed to carry some pyrite and chalcopyrite mineralization mostly concentrated near the walls of the zone. The third was a northwest striking five-foot quartz vein with a few inches of heavy pyrite near the contacts and carrying good values in gold. This showing is in claim 367671 near the number 2 post.

The electromagnetic survey indicated a strong conductor ex-

tending through Foisey Lake and coinciding with the known fault. The survey results did not show any conductivity over the two siliceous zones in the south part of the claims group. The high quartz content in these zones could greatly reduce the conductivity of any sulphides present and associated with the quartz.

It is recommended that Gold Belle Mines Limited carry out a minimum of 1,000 feet of diamond drilling at an estimated cost of fifteen thousand dollars to check the three zones mentioned above.

PROPERTY, LOCATION AND ACCESS

The property covered by this report, consists of a group of seventeen contiguous mining claims located in Macmurchy and Fawcett Townships, Larder Lake Mining Division, District of Sudbury, Ontario. The claims form an irregular "L" shaped group resulting from the fact that they were staked to cover two zones about eight thousand feet apart. The claims included in the group are further described as follows: 367668 to 367671 incl., 393521 to 393523 incl., 415476 to 415483 incl., 393507 and 393508.

The property is only approximately three miles from highway 560 but there are no roads leading into the immediate area. The most direct means of access at the present time, is by canoe via Cryderman, Clark and Caswell Lakes which involves three short portages, the longest being about two hundred feet.

TOPOGRAPHY

The topography of the area is fairly flat with occasional low outcrop and boulder ridges. The entire area with the exception of a few small lakes or ponds, is covered by a growth of medium sized timber. The bush is fairly open and there are no areas of swamp and thick underbrush. Rock exposures are sufficiently

numerous to permit detailed geological mapping of the property and in many places rock can be exposed by light stripping.

GENERAL GEOLOGY

The geology of Macmurchy and Fawcett Townships is shown on two preliminary sheets, P. 765 and P. 819. Both were issued by the Department of Natural Resources, Division of Mines, Ontario in 1972 and 1973 respectively. These sheets were published on the scale of one inch to one quarter mile and show the geology in considerable detail. They are accompanied by fairly extensive descriptive notes.

Macmurchy and Fawcett Townships are located in the south part of the Shiningtree Area greenstone belt. These rocks are largely of volcanic origin but include some sedimentary formations. They form a part of an extensive greenstone belt that underlies much of the area between Shiningtree on the south and the Timmins area on the north and extends east through Kirkland Lake. There are locally, considerable variations in these rocks and in the Shiningtree area, they are often quite schistose and have been intruded by numerous dikes and sills of granite and quartz-feldspar porphyry. The main greenstone belt is composed of rocks of Keewatin age and the acid intrusives are probably Algomian. Numerous diabase dikes, classified as Matachewan, and usually striking in a north or north-west direction also occur throughout the general area.

Quartz veining is quite commonly associated with the greenstone formations in the Shiningtree area. These quartz veins vary in width from narrow stringers an inch or less in width, up to veins fifty feet wide, and along with zones of silicification in

shearing, are often mineralized with pyrite, pyrrhotite and small amounts of chalcopyrite, sphalerite and galena. Gold is also often associated with the quartz veins and silicified shear zones. It sometimes occurs as coarse free gold resulting in very spectacular showings, a condition that caused much of the early prospecting interest in the area. Sulphide mineralization occurring in quartz veins and zones of silicification is also often accompanied by variable amounts of both gold and silver.

Much of the mining exploration work that has been carried out in the Shiningtree area in the past, has been centred around the southwest corner of Macmurchy Township. Fairly extensive underground work was carried out on the properties of the Ronda Gold Mines Limited, Bilmac Gold Mines Limited and the Lake Caswell Mines Limited. Several other shafts were sunk on other properties in the area but they were usually less than one hundred feet in depth.

The claims group discussed in this report is located within the Shiningtree greenstone belt. The formations underlying the property are largely basic to intermediate volcanics consisting of both flows and pyroclastics with some inclusions of highly altered sediments. This group of older rocks has been intruded by dikes of quartz-feldspar porphyry as well as by dikes of later Matachewan diabase. A large mass of Nipissing quartz diabase underlies the west part of the claims group, along the boundary between Fawcett and Asquith Townships.

A major fault structure, referred to as the Mishiwakenda Lake Fault, strikes in a slightly east of south direction starting at the north boundary and continuing for the full north-south length of the claims group. Also, two parallel fault structures

are shown on Preliminary Map Number 819 as extending through the area and immediately east of the Mishiwakenda Lake Fault. An examination of the claims group showed that the rocks were quite schistose in a direction about parallel to these faults and there was evidence of additional faulting in this same direction.

A quartz vein was observed on claim 367671, about 100 feet west of the number 2 post and striking north 40° west. Seven trenches were previously put down through overburden along a strike length of 225 feet to trace this vein. The trenches are now partially caved but the vein is exposed in three of them, the best exposure being near the north end. Here, the vein is exposed for a width of five feet but it was not definitely determined by the writer if this represented the full width. The quartz is a greenish white somewhat opaque variety and is in places mineralized with pyrite and pyrrhotite. A sample of the barren quartz only returned a trace of gold, but a sample of the material showing some sulphide mineralization returned an assay of 0.78 ounces of gold per ton. A sample across six inches at the west side of the trench which could represent the west wall of the vein and well mineralized with pyrite and pyrrhotite, returned an assay of 1.40 ounces of gold and 9.58 ounces of silver to the ton.

Some trenching has been done on a zone of quartz veining and silicification about 500 feet south and 500 feet east of the number 4 post of claim 367670. This zone strikes north 35° east and has been traced for a strike length of 400 feet. At the south end, it disappears under overburden but at the north end it is cut off by a northwest striking fault. This quartz zone dips to the north at about 70° and has a total width of twenty feet. The 10

feet on the north side is almost barren of sulphide mineralization, but the south ten feet of the zone is mineralized with variable amounts of chalcopyrite and very minor pyrite and pyrrhotite. An assay of a sample taken across ten feet of the mineralized part of the zone exposed in a large rock trench at the south end of the quartz vein structure, returned 0.005 ounces of gold and 1.04% copper per ton. A sample across four feet on the footwall side of this same trench where the zone carries several narrow seams of massive chalcopyrite, returned an assay of 2.59% copper and nil in gold per ton. A sample of the quartz showing no sulphide mineralization showed only traces of gold.

Two other copper showings indicated on Preliminary Map No. 819, one on claim 367670 near the southwest end of a small lake, and the other in the central part of claim 367668, have not had any work done on them but they appear to be associated with quartz veining and silicification and conform in strike and dip to the first zone. It is possible that all three zones are part of the same structure but could be slightly offset by northwest striking faults. A fourth copper showing indicated on Map No. 819 and located near the number 3 post of claim 367671, was not located by the writer.

What could be a significant feature with respect to this property, is a north-south striking gold bearing quartz vein, with observed widths of up to twenty feet and located on the patented claim TRS-3544, adjoining claim 415476 of the present group on the north. This claim along with the one adjoining it on the north, was held for many years by the late Mike Riel but the present ownership of the ground is not known to the writer. In past years, this

was considered one of the better gold prospects in the Shiningtree area. No work has been done to trace this quartz vein south on claim 415476 but there is no reason to believe that it does not extend south through Foisey Lake. The extension of this vein structure north of the Riel ground, forms the Ribble Vein on the property of the Ronda Gold Mines Limited. It is quite possible that there is a relationship between this quartz vein and the Mishiwakenda Lake Fault, which can be traced geologically and by topographic lineaments for several miles.

A quartz vein about ten feet in width was located by the writer in the northwest part of claim 367670, near the south boundary of claim 367671. This vein was exposed by stripping moss on an outcrop of sheared basic volcanics. A few chips of this quartz sent for assay returned nil in gold however it would require some dilling and blasting to obtain a proper assessment of this vein.

GEOPHYSICAL SURVEY

An electromagnetic survey with a limited amount of magnetometer check work was conducted over the seventeen claims covered by this report. The electromagnetic observations were made using a Geonics EM-16 instrument and the magnetometer readings were taken with a Scintrex MF-1 instrument. East-west picket lines were cut at 400-foot intervals to provide control for this work and where more detail was required, the lines were spaced at 200-foot intervals. The observation stations for both geophysical methods were located 100 feet apart along these east-west picket lines. The field work was carried out during the period January 13th to February 1st,

1975. A total of 18 miles of line was cut and chained including base lines, 16 miles was surveyed by the electromagnetic method and 11 miles with the magnetometer.

The electromagnetic observations indicated a fairly strong conductor extending for 1,100 feet in a north-south direction through the lower part of Foisey Lake in the north part of the claims group. This conductor lies directly along the Mishiwakenda Lake Fault as shown on published geological maps of the area. If this anomaly was influenced by lake bottom, it should have occurred all along the lake instead of being localized in the south part. Also there is a low narrow muskeg lineament extending in a southerly direction through to the south boundary of claim 393507 which showed little influence with respect to the electromagnetic readings.

The narrow mineralized quartz vein in the southeast corner of claim 415483 showed no response to either of the geophysical methods. Some evidence of conductivity was indicated in claim 367670 in the vicinity of the wide siliceous zone carrying sulphide mineralization on both walls. This zone is located between lines 28+00S and 32+00S in the central part of the claim. It appears to strike North 35° East and the cross-over at 11+50E on line 26+00S could be on the northeast extension of this zone. There is not enough geological information available to the writer at this time to explain the other electromagnetic cross-overs in this immediate area but it may be that they are at least in part associated with localized zones of sulphide mineralization reported in this part of the claims group.

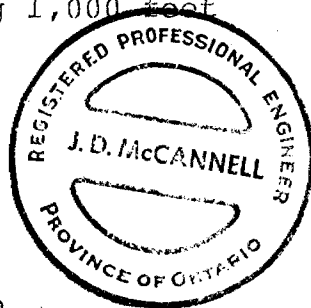
The magnetometer survey did not reveal any information of particular significance as the readings within a very narrow range and the magnetic properties of the underlying formations were not strong.

CONCLUSIONS AND RECOMMENDATIONS

The electromagnetic survey showed a fairly strong conductor in the north part of the claims group and coinciding with the location of the Mishiwakenda Lake Fault. This fault is a regional structure and is believed to be the control for mineralization as well as quartz veining at several locations to the north of the present claims group.

It is recommended that Gold Belle Mines Limited proceed with a minimum of 1,000 feet of diamond drilling to further explore this property. At least one hole should be drilled under Foisey Lake to cut the Mishiwakenda Lake Fault at a point where the electromagnetic survey showed good conductivity such as on line 48+00N. Also some drilling should be done to check the gold bearing quartz vein in the southeast corner of claim 415483 and the siliceous zone with chalcocopyrite mineralization in claim 367670. This initial drilling should be done during the winter months as the property would be quite accessible over the ice and the muskeg area and Foisey Lake will be frozen. In the spring however the property should be mapped geologically and prospected in detail. The three areas mentioned above for immediate drilling would not be improved or discounted by anything short of diamond drilling. The estimated cost of the above work is as follows:

Geological mapping and prospecting	\$ 3,000.00
Diamond drilling 1,000 feet	<u>14,000.00</u>
Total	\$17,000.00

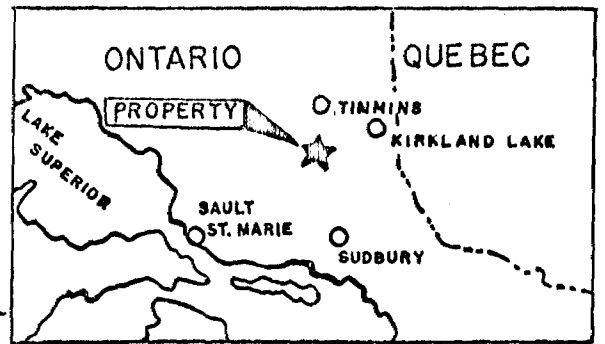
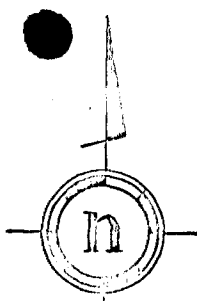


Toronto, Ontario
February 19, 1975

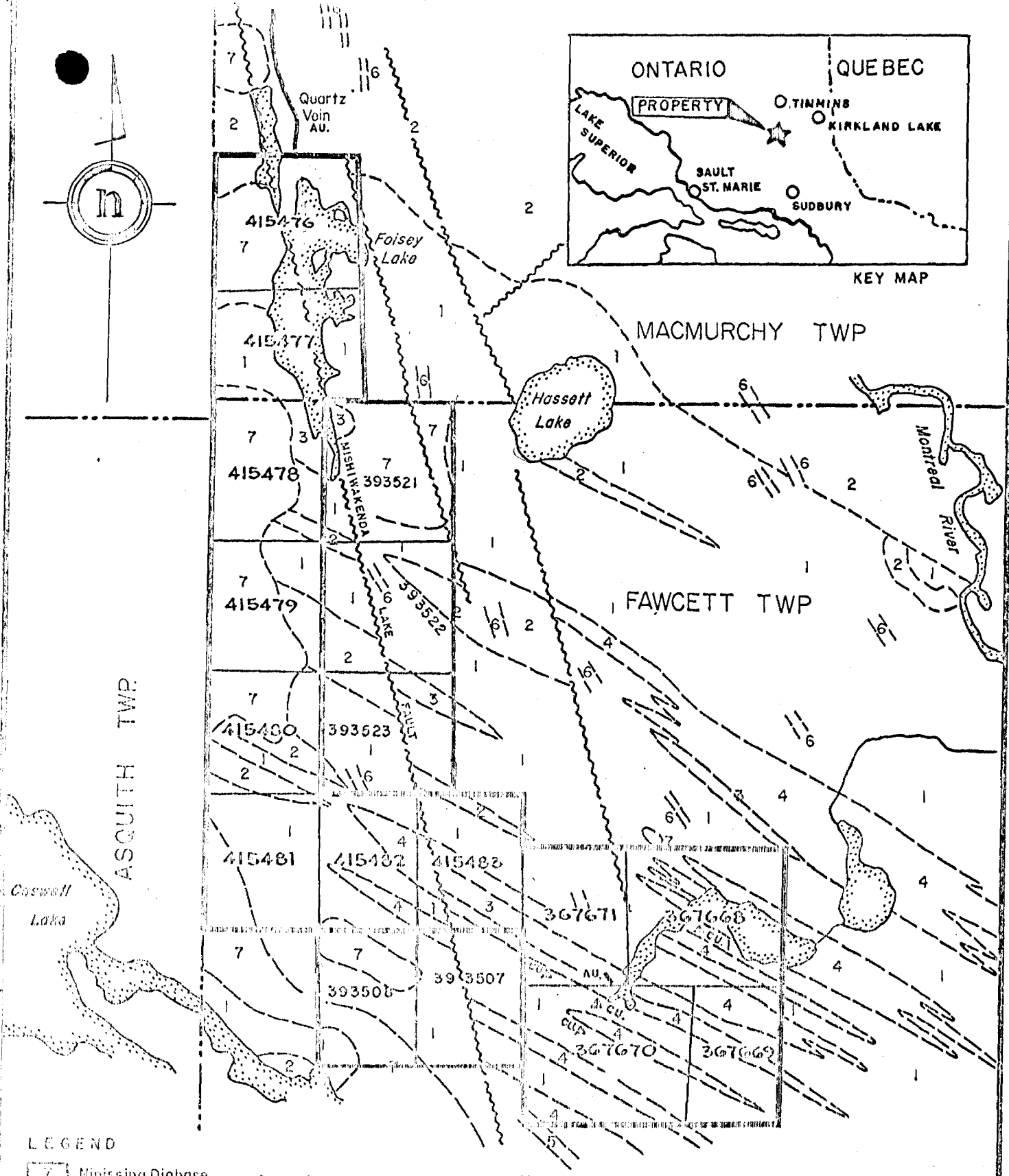
Respectfully submitted,

J.D. McCannell
James D. McCannell, P.Eng.,
Consulting Geologist.

J. D. McCANNELL



KEY MAP



LEGEND

- 7 Nipissing Diabase
- 6 Matichewan Diabase
- 5 Porphyry
- 4 Lower Metasediments
- 3 Felsic Metavolcanics
- 2 Intermediate Metavolcanics
- 1 Mafic Metavolcanics
- Fault

Geology and Claims Location Map

GOLD BELLE MINES LIMITED
 MACMURCHY & FAWCETT TWP., DISTRICT OF SUDBURY - ONT.

Scale: 1 inch to 1/4 mile

July 1974



41P11SE0013 2.1752 MACMURCHY

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APR 4 1975

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.

PROJECTS UNIT

Type of Survey Electromagnetic and magnetometer
Township or Area McMurphy and Fawcett
Claim holder(s) H. Shlesinger (Gold Belle Mines)
520 - 25 Adelaide St. W. Toronto, Ont.
Author of Report James D. McCannell
Address 501 - 326 Adelaide St. W. Toronto, Ont.
Covering Dates of Survey Jan. 13 - Feb. 4, 1975
(linecutting to office)
Total Miles of Line cut 18.0

MINING CLAIMS TRAVERSED
List numerically

(prefix)	(number)
	367668*
	367669*
	367670*
	367671*
	393507*
	393508*
	393521
	393522
	393523
	415476*
	415477*
	415478
	415479
	415480
	415481*
	415482
	415483

If space insufficient, attach list

SPECIAL PROVISIONS CREDITS REQUESTED	Geophysical	DAYS per claim
ENTER 40 days (includes line cutting) for first survey.	-Electromagnetic	40
	-Magnetometer	20
ENTER 20 days for each additional survey using same grid.	-Radiometric	
	-Other	
	Geological	
	Geochemical	

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

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

DATE: April 3, 1975 SIGNATURE: *J. D. McCannell*
Author of Report

PROJECTS SECTION L.D.
Res. Geol. _____ Qualifications 63.2502

Previous Surveys 63.3290 not for assessment credits

Checked by _____ date _____

GEOLOGICAL BRANCH _____

Approved by _____ date _____

GEOLOGICAL BRANCH _____

Approved by _____ date _____

* claims on which both
EM and Mag surveys
carried out.

TOTAL CLAIMS 17

OFFICE USE ONLY

GEOPHYSICAL TECHNICAL DATA

GROUND SURVEYS

Number of Stations EM 844 Mag. 580 Number of Readings EM 844 Mag. 580
Station interval 100 feet
Line spacing 200 and 400 feet
Profile scale or Contour intervals EM 1" = 40% Mag. 1,000λ
(specify for each type of survey)

MAGNETIC

Instrument Scintrex MF-1
Accuracy - Scale constant + or - 20λ
Diurnal correction method Base Stations Hourly
Base station location L56N & BL, L52N 6+50W, L44N 6+00W, L13S & BL, L20S & BL, L26S & BL, L24S 15+00W.

ELECTROMAGNETIC

Instrument Geonics EM-16
Coil configuration _____
Coil separation _____
Accuracy + or - 1%
Method: Fixed transmitter Shoot back In line Parallel line
Frequency 24.0 kHz Balboa, C.Z.
(specify V.L.F. station)
Parameters measured in phase out of phase

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 _____

MACMURCHY TWP M-842

THE TOWNSHIP

OF

2.1752













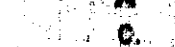


FAWCETT

DISTRICT OF
SUDBURY

LARDER LAKE
MINING DIVISION

SCALE: 1-INCH = 40 CHAINS

LEGEND

- PATENTED LAND 
- CROWN LAND SALE 
- LEASES 
- LOCATED LAND 
- LICENSE OF OCCUPATION 
- MINING RIGHTS ONLY 
- SURFACE RIGHTS ONLY 
- ROADS 
- IMPROVED ROADS 
- KING'S HIGHWAYS 
- RAILWAYS 
- POWER LINES 
- MARSH OR MUSHEG 
- MINES 
- CANCELLED 

NOTES

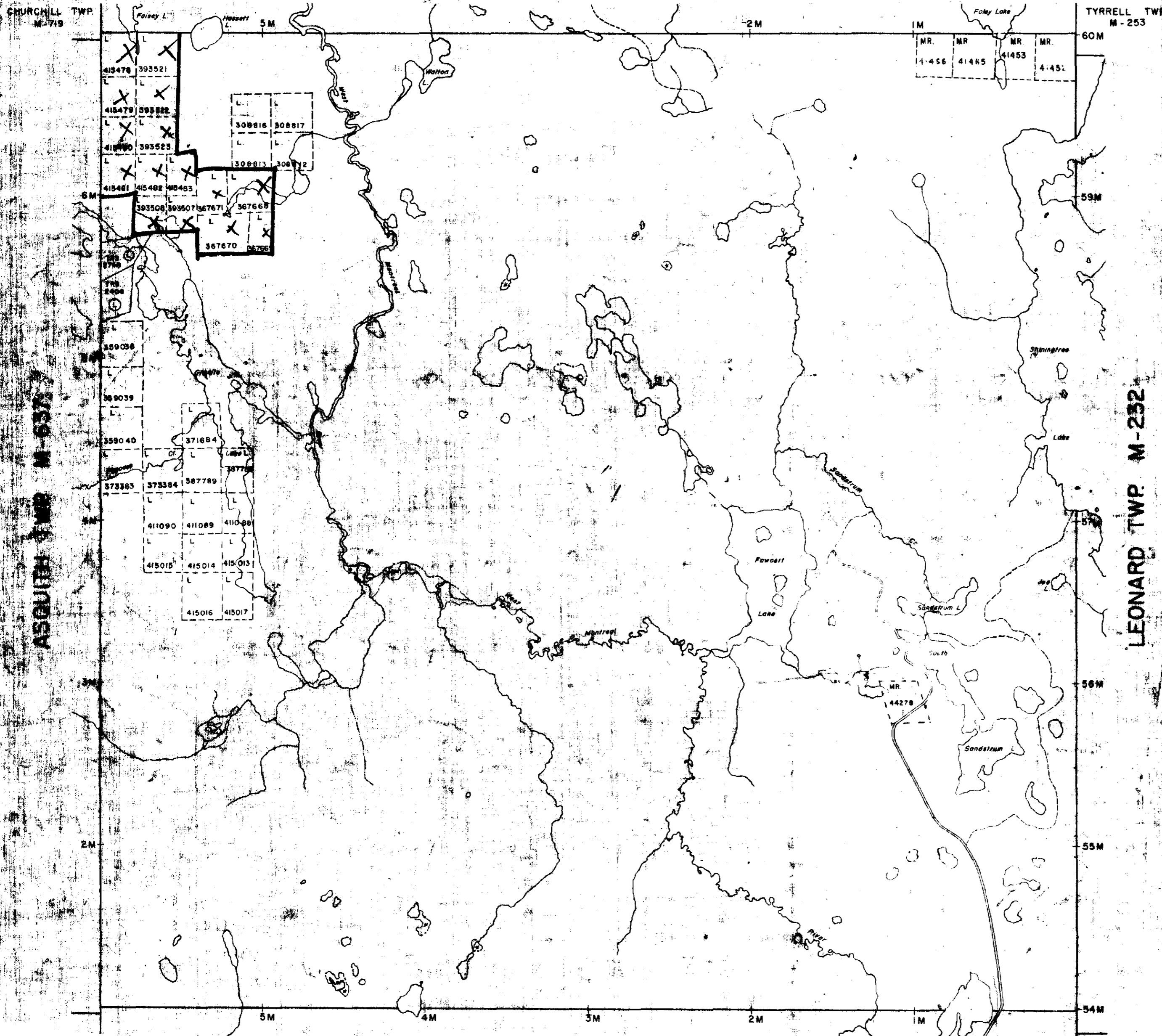
400' surface rights reservation around oil takes and

MINING LANDS
DATE OF ISSUE
APR - 7 1975
MINISTRY
OF NATURAL RESOURCES

PLAN NO. M-803

ONTARIO
MINISTRY OF NATURAL RESOURCES

SURVEYS AND MAPPING BRANCH



OGILVIE TWP M-1035



NATAL TWP. M-885

THE TOWNSHIP OF

2.1752

MACMURCHY

DISTRICT OF SUDBURY

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 Ⓞ
- PATENTED S.R.O. Ⓞ

NOTES

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

Parts of Hydro Power Transmission Line not shown on this plan as they follow more or less R/W of H-wy 560.

Mining Leases shown thus ⊕ have been terminated but Not Thrown Open For Staking.

- MINING LANDS -
DATE OF ISSUE
 APR - '7 1975
 MINISTRY
 OF NATURAL RESOURCES

PLAN NO. **M-842**

ONTARIO
MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

KNIGHT TWP
M-228

TYRRELL TWP.
M-253

61 M

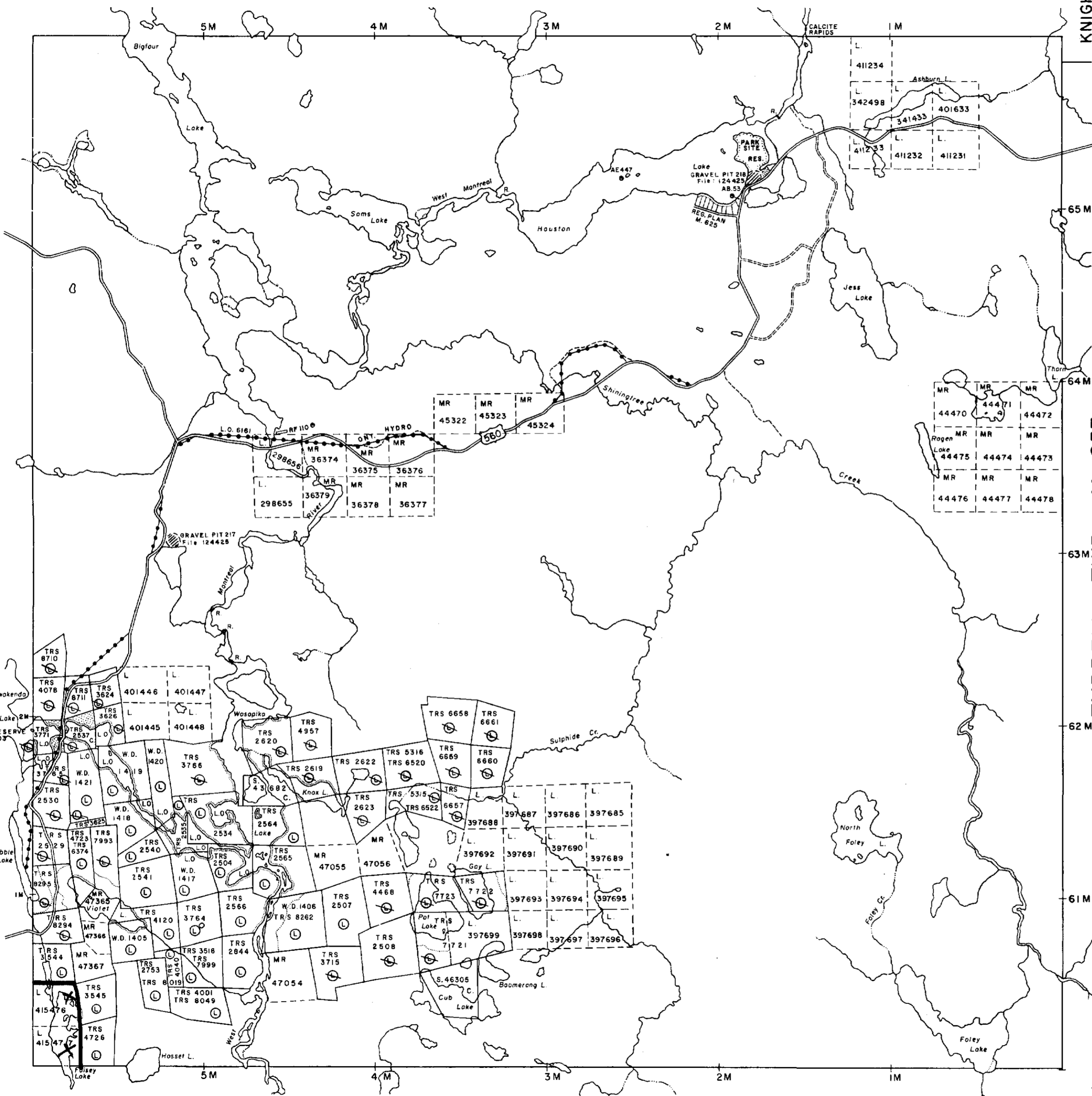
62 M

63 M

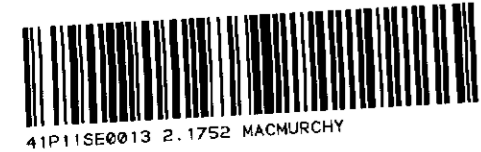
64 M

65 M

CHURCHILL TWP. M-719



FAWCETT TWP. M-803

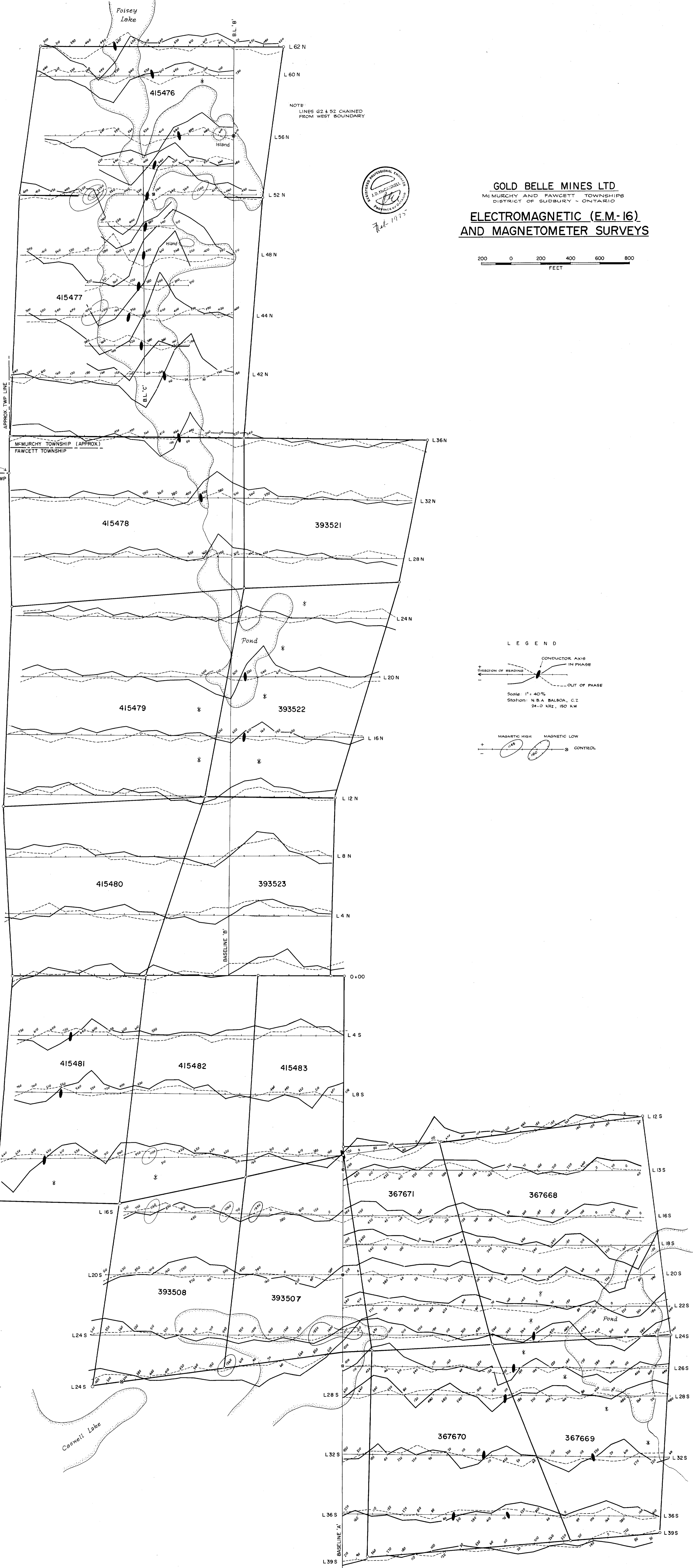


Foisy Lake

NOTE
LINES 52 & 52 CHAINED
FROM WEST BOUNDARY



GOLD BELLE MINES LTD
McMURCHY AND FAWCETT TOWNSHIPS
DISTRICT OF SUDBURY - ONTARIO
**ELECTROMAGNETIC (E.M.-16)
AND MAGNETOMETER SURVEYS**



LEGEND

CONDUCTOR AXIS
IN PHASE
OUT OF PHASE

Scale: 1" = 40'
Station: N.B.A. BALBOA, C.Z.
24.0 KHZ, 150 K.W.

MAGNETIC HIGH
MAGNETIC LOW
CONTROL

