MAGNETOMETER and VLF

SURVEYS

TABOR LAKE PROPERTY

APRIL 1980

Project 3220   J.L.Wright

INTRODUCTION

The Tabor Lake Property (Project 3220) is situated in northwestern Ontario in an area noted for interesting gold mineralization. Indeed, the Tabor Lake Gold Mine is situated at the center of the grid. The exploration work described herein was directed primarily toward a gold target. Both a Magnetometer and Very Low Frequency (VLF) Electromagnetic survey were performed. Magnetic data was intended as both a geologic mapping tool as well as a possible indicator of alteration products associated with gold mineralization. The VLF survey was intended to map shear zones associated with known gold occurrences. This report will outline the above program and present the data in a format suitable for assessment credits.

LOCATION and ACCESS

Lying roughly 350 km east of Winnipeg and 225 km westerly of Thunder Bay, the property is situated in a classic northwestern Ontario setting. More exactly it lies 8 km southwest of Borups Corners and 19 km south-southeast of Dinorwic. Its northern boundary is a portion of the southern boundaries of Satterly and Melgund Townships. The center of the claim group has a latitude and longitude as follows:

Latitude: 49° 32' 12" N

Longitude: 92° 24' 30" W

Access is via paved highway 17 for 35 km southeasterly of Dryden then right on to a Great Lakes pulp and paper gravel logging road for approximately 11.5 km. This road traverses the property in an east-west direction.

Details concerning the property's location can be found on the accompanying location map as well as the topographic map NTS 52F/9.

PROPERTY STATUS

The property consists of thirty-seven (37) contiguous claims as numbered below:
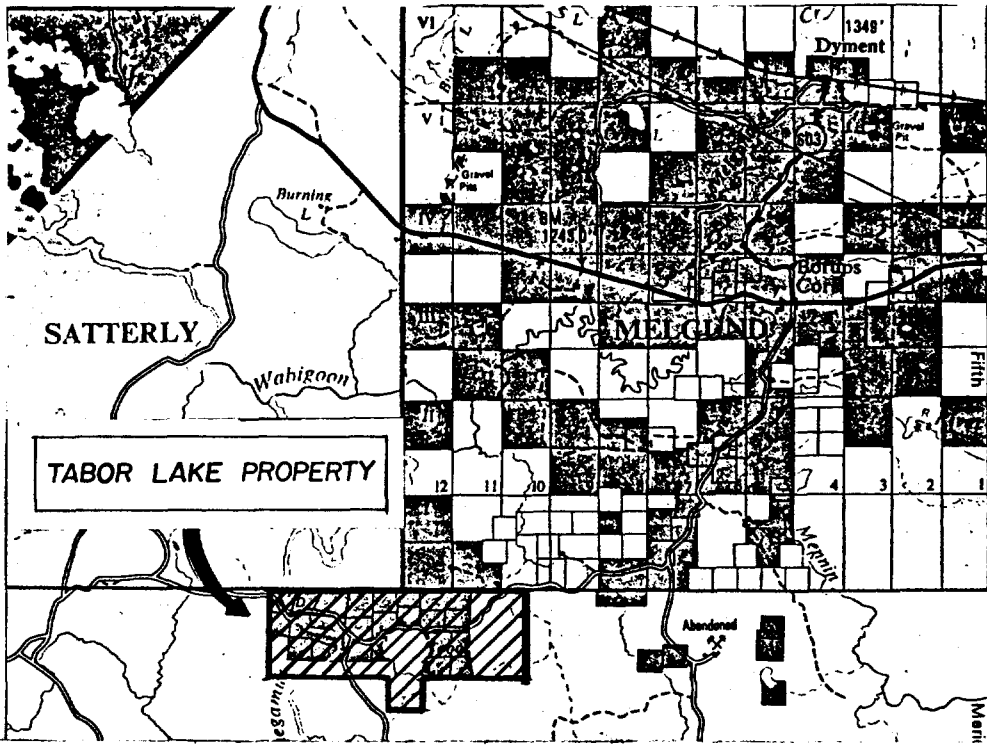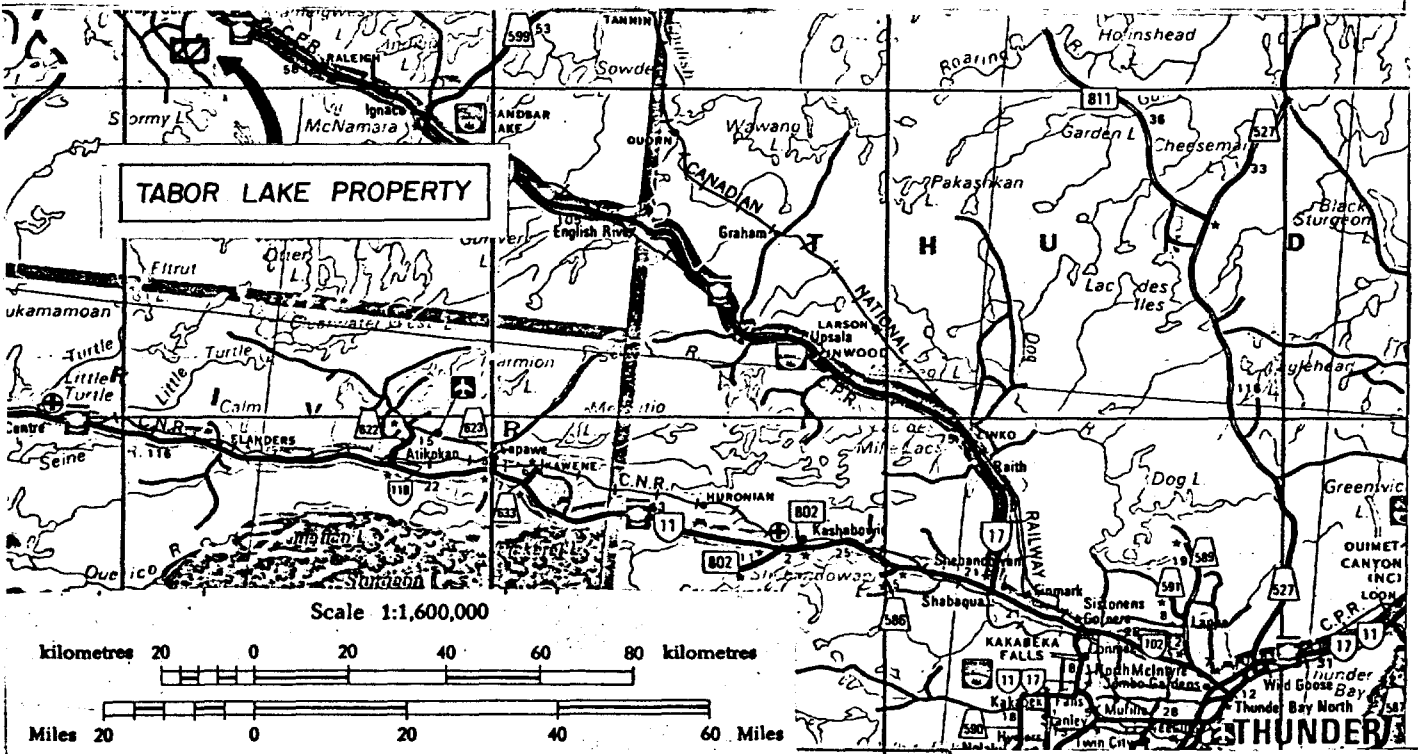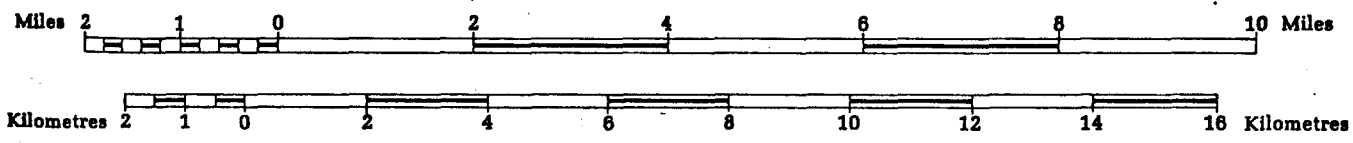
K509446-K509475 (all series inclusive)

K533096-K533097

K510202-K510204 *

K502044-K502045 *

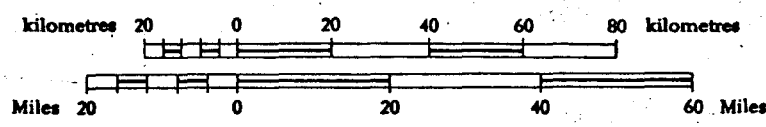The five claims marked with an asterisk (*) are under option to St.Joseph Explorations Limited with the thirty-two remaining claims having been staked by St.Joseph Explorations Limited to consolidate the land position.

SATTERLY

TABOR LAKE PROPERTY

Scale 1:126,720 or 1 Inch to 2 Miles

Miles 2   1   0   2   4   6   8   10 Miles

Kilometres 2   1   0   2   4   6   8   10   12   14   16 Kilometres

TABOR LAKE PROPERTY

Scale 1:1,600,000

kilometres 20   0   20   40   60   80 kilometres

Miles 20   0   20   40   60 Miles

All of the above claims are in good standing, however, several are under extension pending completion of the work described herein.

The work covered by this report was done by and for St.Joseph Explorations Limited, 90 Elginton Ave. West, Suite 505, Toronto, Ontario. M4R 2E4.

GEOLOGICAL SUMMARY

The area of the property is underlain with Keewatin basic volcanic rocks including Basalts, Pillowed Basalts, Gabbroic Lavas and Amphibolite Hornblende Schists. In the area, particularly easterly, are large exposures of Granites or Quartz Feldspar Porphyries. Rocks in the general area of the grid strike roughly east-west with dips being quite steep. Small islands of acid volcanics are also noted within this broad area of basic volcanics. Also traversing the area is the occasional Quartz Diabase Dike.

Further details concerning the geology of the area can be found in numerous government geological publications.

PREVIOUS WORK

The Tabor Lake Mine was held in 1898 by J.Tabor and J.Stephenson at Wabigoon. In 1935, Clark Gold Mines Ltd. produced gold to the value of $1,248. from the property. In 1942 the property was acquired by Tabor Lake Gold Mines Ltd. and in 1957 was leased to Pantan Mines Ltd. This company carried out a program of diamond drilling of six holes in early 1958, dewatered the shaft for sampling in July, and in late 1958 erected a new headframe and did development work on the 400-foot level. To the author's knowledge little significant work was subsequently done until St.Joseph Explorations Limited involvement.

SURVEY PROCEDURE

Grid

Kozowy Campground and Exploration Ltd., P.O. Box 1260, Ignace, Ontario, POT 1TO cut and chained a grid from August 8 - October 17, 1979. The grid consists of 63 line-km with a line spacing of 100m and pickets each 25m. Line orientation is north-south.

Magnetometer Survey

Logistical details concerning the survey are tabulated below.

Survey Dates:	February 24 - 29, 1980
Personnel:	C.Bishop, S.Medd
Instrumentation:	Barringer GM-122 Proton Precession Magnetometer Scintrex MBS-2 Base Station
Base Station Location:	L0+75E, 0+37S
Base Station Value:	60250 gammas
Parameters Read:	Amplitude of Total Magnetic Field

The total magnetic field amplitude was recorded to a resolution of ±1 gamma with diurnal control provided by a continuously recording magnetic base station. Monitoring of the field was done each minute and the variations adjust to an arbitrary datum of 60250 gammas. These diurnally corrected data were then plotted upon a base map at a scale of 1:5000 and contoured with an interval of 100 gammas to ±500 gammas then a 500 gamma interval over ±500 gammas. In addition, to facilitate plotting a datum of 60200 gammas was subtracted before the actual drafting. Prints of the above described maps can be found in the map pocket at the rear of the report. In addition, specifications for the instrumentation can be found in the appendices.

VLF Survey

Logistical details concerning the survey are tabulated below.

Survey Dates:	February 24 - 29, 1980
Personnel:	L.Stoliker, D.Windsor
Instrumentation:	Geonics EM-16
Transmitter Station:	Cutler, Maine, U.S.A.
Frequency:	17.8 KHz
Parameters Read:	Dip Angle of Resultant Field

The dip angle information was recorded to an accuracy of $\pm1°$ and plotted upon a grid map at a scale of 1:5000 with a profile scale of 1 cm = 20°. Details concerning the plotting convention can be found upon a print of this map located in the map pocket at the rear of the report. In addition, the dip angle data was processed with the well known Fraser Filter and plotted upon a grid map as well. This data was then contoured with an interval of 20 units. This map can also be found in the map pocket. As with the magnetics an equipment specification can be found in the appendices.

INTERPRETATION

Magnetometer Survey

Magnetic relief is fairly low with a total differential on the order of 3000 gammas. Texturally the area is marked with fairly large relatively magnetically 'flat' areas traversed by what appears to be at least three semi-linear features. A few isolated high pops are also noted.

The low relief areas show a differential of about 150 gammas with Tabor Lake itself being outlined quite well. Water depth as well as increased overburden have reduced magnetic relief over the lake to about 50 gammas.

The three linear features are designated Anomalies A, B, and C with line locations tabulated below.

Anomaly A: L5E, 1050S   L8E, 1150S
                    L6E, 1100S   L9E, 1200S
                    L7E, 1100S   L10E, 1150S

Anomaly B: L10E, 320N   L16E, 70-200S
                    L11E, 230N   L17E, 60-230S
                    L12E, 190N   L18E, 90-300S
                    L13E, 50-150N   L19E, 70-230S
                    L14E, 50S & 100N L20E, 50S & 220S
                    L15E, 75S & 150S L21E, 100-250S

Anomaly C: L30E, 170S   L33E, 425S
                    L31E, 275S   L34E, 575-700S & 775-875S
                    L32E, 425S   L35E, 750S & 875S

All three features appear to cut the expected strike and generally trend northwest-southeast with anomaly C being most skewed. Due to contouring bias it may be quite tenuous to connect certain of the anomalies as indicated. This is particularly true in the case of anomaly C. Anomaly B is particularly interesting in that it is in quite close proximity to known gold mineralization. Anomaly A is somewhat broader in appearance and may represent a different source.

Isolated magnetic anomalies are noted in the following locations:

L17E 150N   L26E, 775S   L30E, 925S   L34E, 1250S
L21E 550S   L29E, 925S   L31E, 975S

The anomalies on L26E, L29E, L30E and L31E might well be connected to form a fourth linear feature. It is difficult to surmise with the available data.

VLF Survey

The following discussion will be confined solely to the Fraser Plot.

VLF anomalies over the property are quite numerous and of very high amplitude. Fraser plot values in excess of 190 are noted. The general lack of swamps and little correlation between known swamps and anomalies would indicate numerous bedrock sources are involved. It is impossible to list all line locations but a general east-west trend is definitely indicated with little or no correlation between magnetic anomalies and VLF responses. Two particularly prominent trends traverse the grid completely from east to west at approximately the 600S and 900S levels. The pattern is slightly disrupted by the masking effect of Tabor Lake itself and to a lesser extent the Kawashegamuk River. Another fairly major trend enters the grid's northwest corner and traverses southeasterly to a point near L20E, 600S where it intersects the more northerly trend noted earlier. A faint continuation seems possible. Finally, an isolated area of high values is centered in the vicinity of L18E, 100N.

RECOMMENDATIONS and CONCLUSIONS

Ground examination of the magnetic and VLF anomalies noted is strongly recommended. Some detailed magnetic and VLF work would also help greatly in elucidating inferred anomaly connections. Input from both geological and geochemical data should help select anomalies for further follow-up. It would seem that this follow-up should include limited Induced Polarization (I.P.) surveys on selected targets as well as high frequency H.L.E.M. data to further define some of the VLF conductors.

James L. Wright

James L. Wright

JLW*MS

Ministry of Natura

GEOPHYSICAL – GEOLOGIC.
TECHNICAL DATA

52F09SW0038 2.3279 TABOR LAKE

900

Ontario

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) __Geophysical__

Township or Area __Tabor Lake Area Plan No. M2653__

Claim Holder(s) __St.Joseph Explorations Limited,__

__90 Eglinton Ave.W., Ste.505, Toronto, Ont.__
M4R 2E4

Survey Company __Same__

Author of Report __James L. Wright__

Address of Author __As above__

Covering Dates of Survey __August 8, 1979 – February 29, 1980__
(linecutting to office)

Total Miles of Line Cut __63 line-km__

MINING CLAIMS TRAVERSED
List numerically

(prefix)   (number)

S E E T A C H E D   L I S T

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	40
—Magnetometer	20
—Radiometric	
—Other	
Geological	
Geochemical	

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

Magnetometer_____ Electromagnetic _____ Radiometric _____
(enter days per claim)

DATE:_____ SIGNATURE:_____
Author of Report or Agent

L.D

Res. Geol._____ Qualifications __2.2330__

Previous Surveys

File No.	Type	Date	Claim Holder

TOTAL CLAIMS____ 37

If space insufficient, attach list

GEOPHYSICAL TECHNICAL DATA

<u>GROUND SURVEYS</u> — If more than one survey, specify data for each type of survey

Number of Stations __VLF-2507   Magnetics-2507__   Number of Readings __VLF-2507   Magnetics-2507__

Station interval __VLF-25m   Magnetics-25m__   Line spacing __100m__

Profile scale __VLF - 1cm = 20°__   Magnetics - N/A

Contour interval __VLF 20 units__   Magnetic - 100 gammas

MAGNETIC

Instrument __Barringer GM122   Magnetometer + Scintrex MBS-2 Base Station__

Accuracy — Scale constant __± 1 gamma__

Diurnal correction method __Recording Base Station__

Base Station check-in interval (hours) __Reading each minute__

Base Station location and value __Location L0+75E   0+37S__

ELECTROMAGNETIC

Instrument __Geonics EM-16__

Coil configuration __Transmitter - Dipolar Antenna__   Receiver: Dip Angle

Coil separation __N/A__

Accuracy __± 1°__

Method: ☒ Fixed transmitter   ☐ Shoot back   ☐ In line   ☐ Parallel line

Frequency __17.8kHz - Culter, Maine, U.S.A.__
<div align="center">(specify V.L.F. station)</div>

Parameters measured __Dip Angle Total Field__

GRAVITY

Instrument _____

Scale constant _____

Corrections made _____

Base station value and location _____

Elevation accuracy _____

INDUCED POLARIZATION   RESISTIVITY

Instrument _____

<u>Method</u>   ☐ Time Domain   ☐ Frequency Domain

Parameters — On time _____   Frequency _____

  — Off time _____   Range _____

  — Delay time _____

  — Integration time _____

Power _____

Electrode array _____

Electrode spacing _____

Type of electrode _____

K 509446	K 509458	K 509470
K 509447	K 509459	K 509471
K 509448	K 509460	K 509472
K 509449	K 509461	K 509473
K 509450	K 509462	K 509474
K 509451	K 509463	K 509475
K 509452	K 509464	K 533096
K 509453	K 509465	K 533097
K 509454	K 509466	K 502044
K 509455	K 509467	K 502045
K 509456	K 509468	K 510202
K 509457	K 509469	K 510203
		K 510204

AREA OF
2.3279

TABOR LAKE

DISTRICT OF KENORA

KENORA 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 S R O	⊖

NOTES

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

Roads indicated PRIVATE may be used by prospectors only after permission is obtained from Dryden Paper Co., Dryden, Ontario

Areas withdrawn from staking under Section 43 of the Mining Act. (R.S.O. '70)

Order No	File	Date	Disposition
Ⓧ	W36/78 115978	10 July '78	M R O

DATE OF ISSUE
APR 29 1980
SURVEYS AND MAPPING BRANCH

NATIONAL TOPOGRAPHIC SERIES 52 F 9

PLAN NO. M.2653

ONTARIO
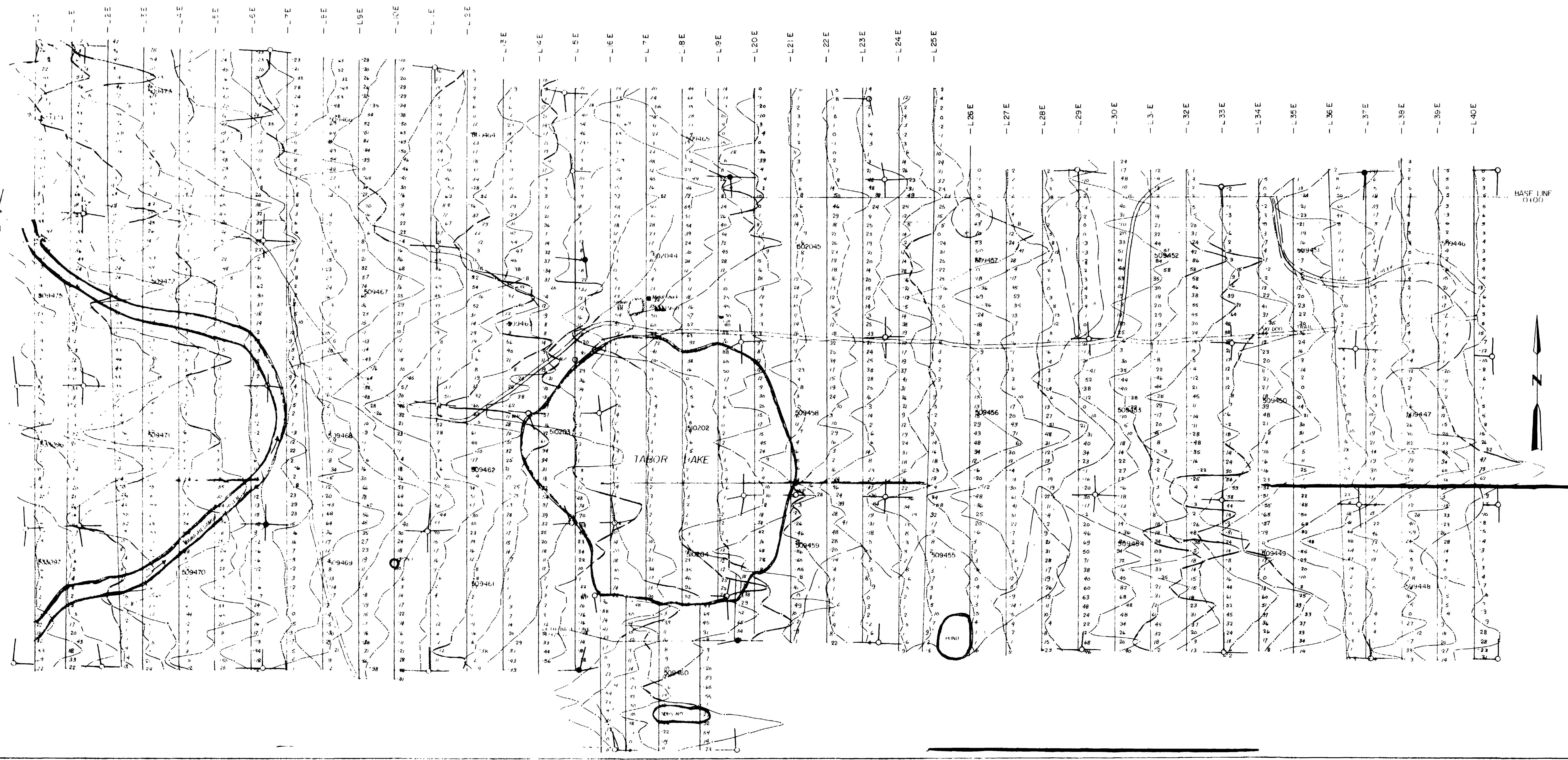MINISTRY OF NATURAL RESOURCES
SURVEYS AND MAPPING BRANCH

WABIGOON INDIAN RESERVE
No.27
Wabigoon Lake
Wabigoon River

SATTERLY TWP.
FOR STATUS REFER TO TWP PLAN
No M 2035

MELGUND TWP.
FOR STATUS REFER TO TWP PLAN
No M 2011

REVELL TWP.
FOR STATUS REFER TO TWP PLAN
No M 2029
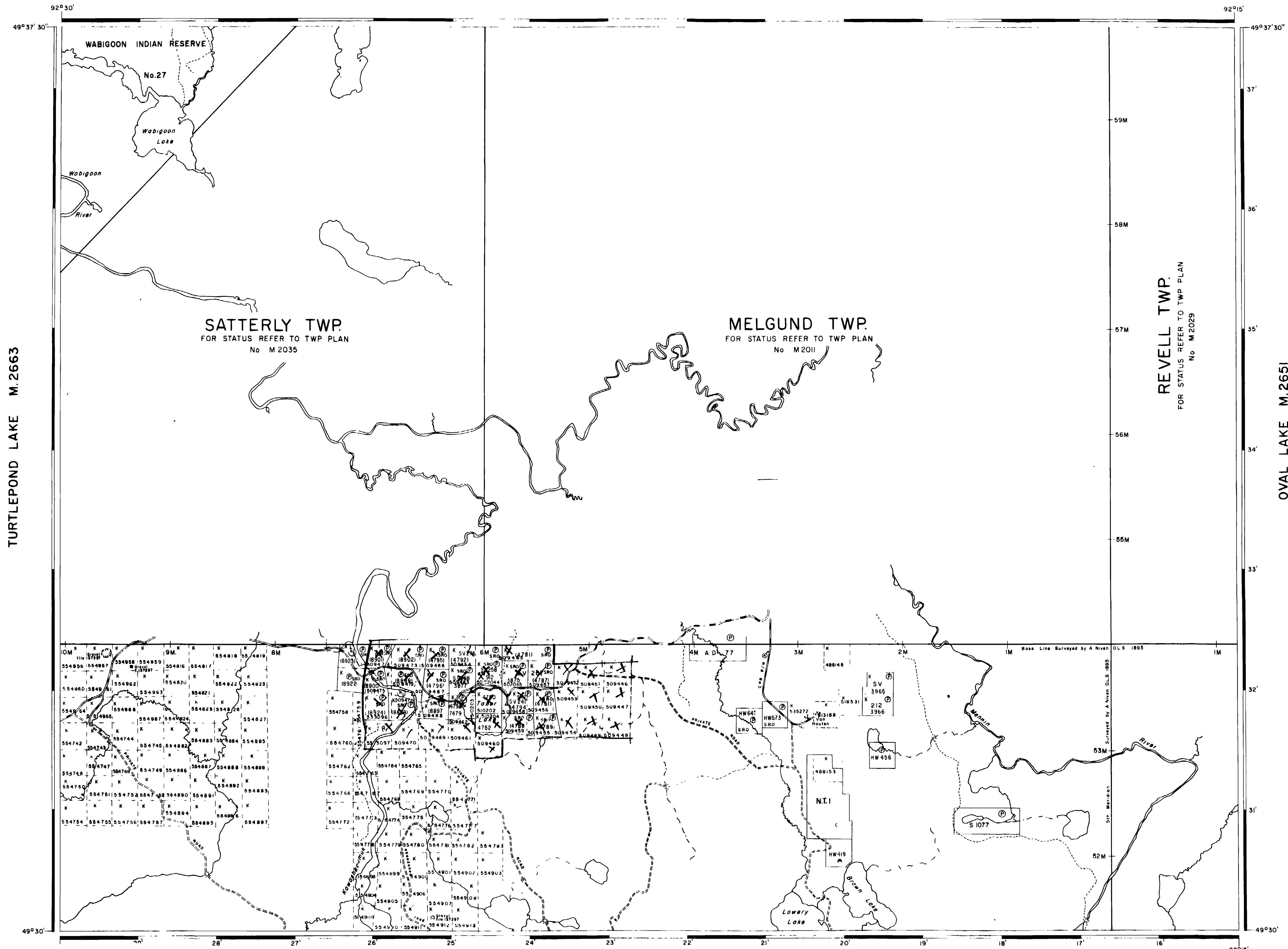
TURTLEPOND LAKE M.2663

OVAL LAKE M.2651

KAWASHEGAMUK LAKE M.2573

Lowery Lake

Base Line Surveyed by A Niven OLS 1893

Surveyed by A Niven OLS 1895

49°37'30"
92°30'
92°15'
49°37'30"
37'
36'
35'
34'
33'
32'
31'
49°30'
92°15'
49°30'
92°30'

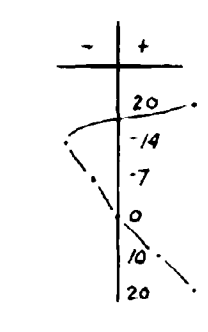52F9069069638 2.3279 TABOR LAKE
200
495922

LEGEND:

- Road
- Swamp
- ○ ● Claim post, located, unlocated
- W.P. Witness post

Instruments: Geonics EM-16
Transmitter station: Cutler, Maine, U.S.A.
Frequency: 17.8 KHz
Profile Scale: 1cm = 20°
Personnel: D. Windsor, L. Stalker
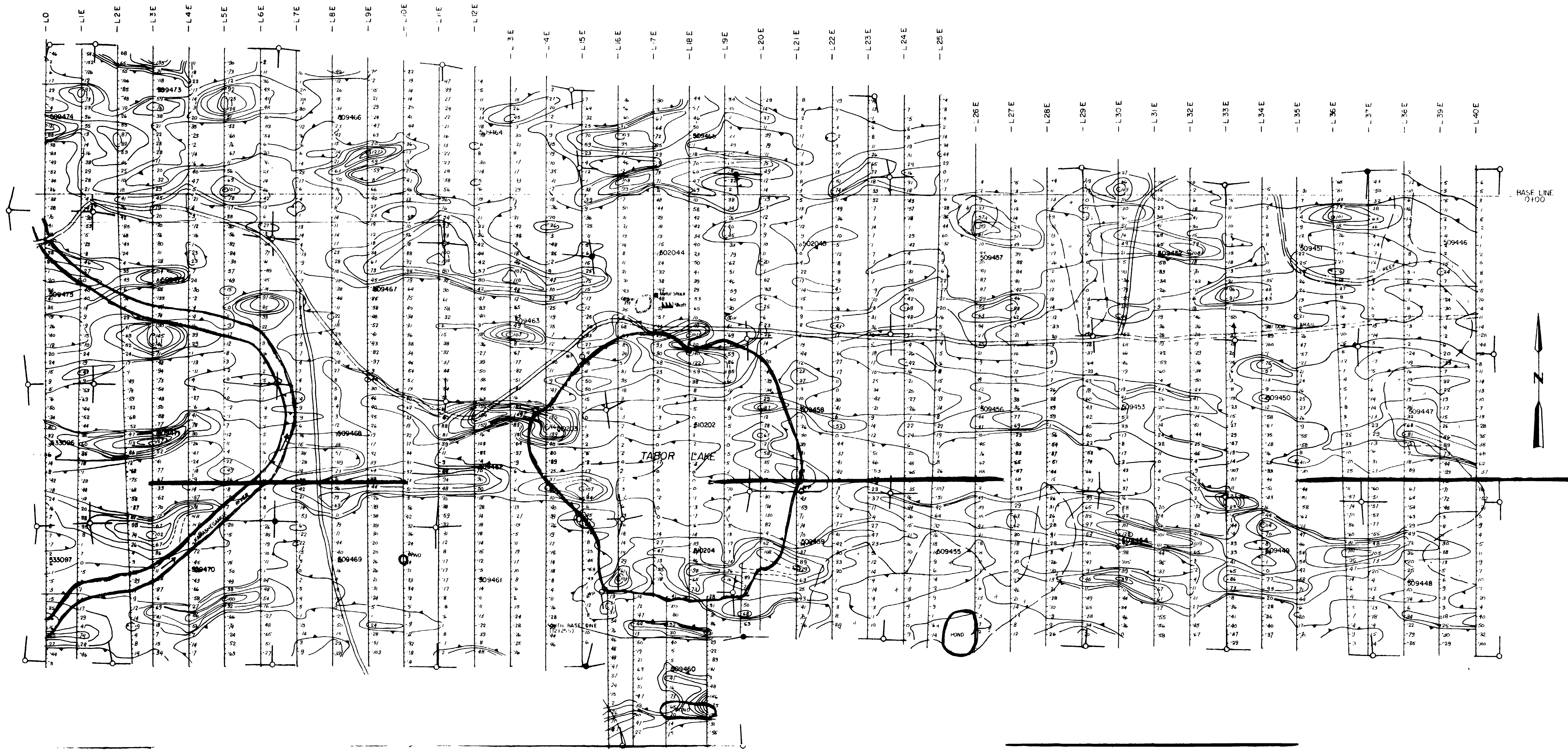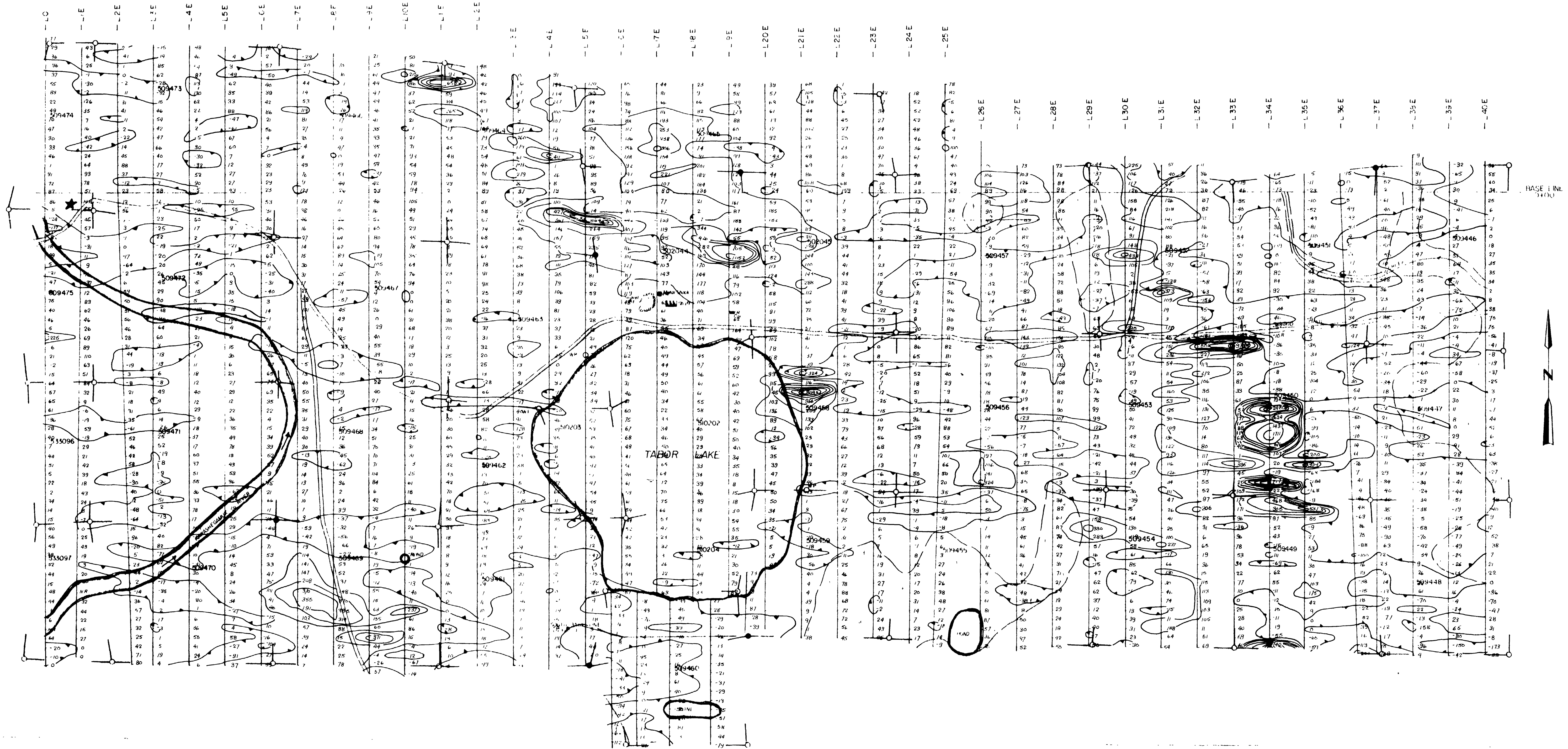Survey Dates: February 24-29, 1980

TABOR LAKE

1 cm : 20°

ST JOSEPH EXPLORATIONS LIMITED

TABOR LAKE, N.W. ONTARIO

VLF - FRASER PLOT

LEGEND

Road

Swamp

○ ● Claim post, located, unlocated

☆ ♭ Witness post

Instruments Barringer GM-122 Magnetometes
Scintrex MBS-2 Base Station
★ Magnetometer Base Station Location
Base Station Value 60250 ɤ
Datum Subtracted 60200 ɤ
Contour Interval 100 ɤ to 1500 ɤ
500 ɤ from 1500 ɤ
* Forced Reading
Personnel C Bishop, S Medd
Survey Dates February 24-29, 1980

ST JOSEPH EXPLORATIONS LIMITED

James J. Wright

TABOR LAKE, N W ONTARIO

MAGNETOMETER SURVEY

52F09SE0030 2.3279 TABOR LAKE