010

Report on a Magnetometer Survey

Emmons Property
Turtlepond Lake Area

A. Scott Fleming
A. MacTavish

St. Joe Canada
Toronto, Ontario
November 5, 1987

EMMONS PROPERTY

Location and Access:

The Emmons Property consists of eight contiguous claims (K869820 to 869823, inclusive; and K897366 to 897369 inclusive) located approximately 25km south-southeast of the town of Dryden, and 5km west-southwest of Stanawan Bay, Dinorwic Lake (Figure 1). The western boundary of the claim group coincides with a short north-south section of the Manitou Road (highway 812), approximately 41km drive from Dryden. Access to the property is excellent via this highway, and a good secondary road that passes through the northern part of the claim group. A short, well-cut trail leads south, from the secondary road, for about 400m, to the north shore of Emmons Lake.

Emmons Lake is situated within the south-central portion of the claim group. South of the lake the topography is hummocky, particularly near outcrop, while the land to the north slopes gently toward the lake, but still retains a hummocky nature.

Exploration History:

1960: Newconex Ltd. completed a program that included geological mapping, magnetometer, vertical and horizontal loop-EM, one inclined and nine vertical packsack drill holes, totalling 369 ft. A reconnaissance IP-EM survey was recommended, but never initiated.

1962: McIntyre Porcupine Mines Ltd. completed four diamond drill holes, totalling 1008 ft.

1969: Carbec Mines Ltd. carried out a ground magnetometer survey, geological mapping and prospecting on property owned by Canadian Geomarine Corporation. This work was done on a claim group that partially surrounded, but did not include, St. Joe Canada's present claims.

1969-1971: During late 1969 and early 1970 line cutting, magnetometer and EM surveys were completed by A.O. Lentz. Two diamond drill holes, totalling 32 ft., were completed late in 1971.

1977: Beth-Canada Mining Co. Ltd. ran an orientation survey that included soil and rock sampling and a magnetometer survey in the vicinity of the trenches. Additional soil sampling and magnetometer surveys were implemented after the orientation work was completed.

General Geology:

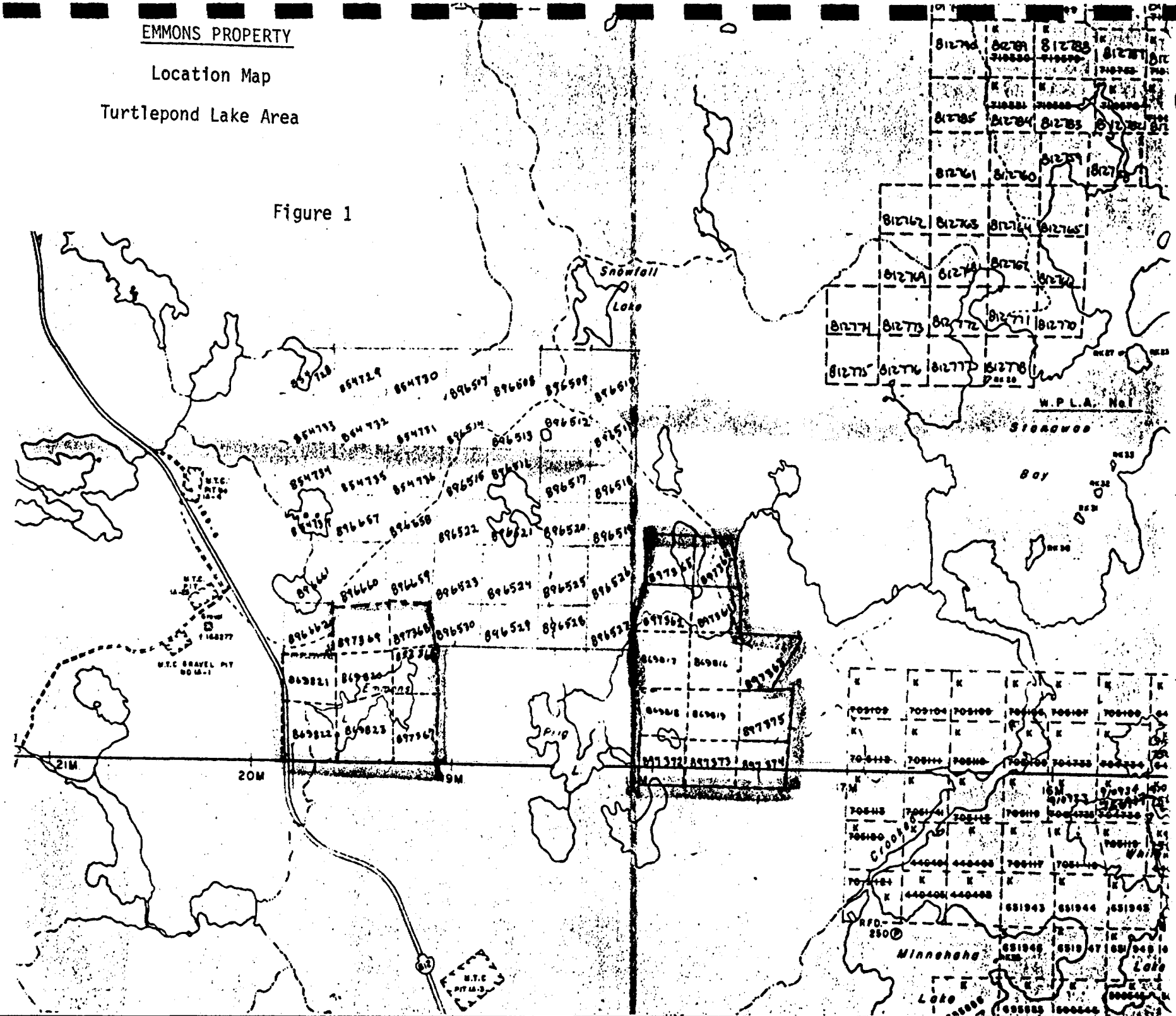
Satterly (Vol. L, Part 2, ODM Annual Report, 1941, Map No. 50e, The Dryden-Wabigoon Area) indicates that the present property is underlain by diorites, quartz-hornblende diorites, and some porphyritic biotite granodiorites that comprise the extreme eastern border zones of the very large Atikwa Batholith. Satterly's contact between the felsic to

EMMONS PROPERTY

Location Map

Turtlepond Lake Area

Figure 1



intermediate batholithic rocks, and a very thick pile of north-south striking, slightly metamorphosed, intermediate to mafic volcanic rocks, occurs approximately 500m east of Emmons Lake. On Satterly's map gabbroic rocks occur in minor quantities immediately south of Emmons Lake, however, later exploration work indicates that most of the rocks near Emmons Lake are medium-grained gabbros, hornblende gabbros, and locally quartz gabbro. These gabbros appear to grade into the surrounding dioritic phases without recognizable contacts.

Localized mineralization consists of 1 to 15% finely disseminated to blebby chalcopyrite and pyrrhotite within a highly vari-textured (medium-grained to pegmatitic) gabbro to melagabbro.

Magnetometer Survey:

MPH Consulting Limited of Toronto was contracted to carry out the magnetometer survey in March and April, 1987. A cut grid with lines spaced 100m apart and stations chained and picketed at 25m intervals was used for control.

Approximately 16.1 line km of total field surveying was conducted. Readings were recorded every 12.5m on all north-south grid lines.

An EDA PPM 350 proton precision magnetometer was used to measure the total field values. An EDA PPM 400 base station was employed to record and correct for diurnal variations. The specifications for these instruments are given in Appendix A.

Interpretation of Results:

The geophysical data was stored on diskette and computer generated maps were produced and interpreted by St. Joe Mineral's geophysical department in Tucson, Arizona.

The data are presented as stacked profiles and as contours (Maps 1 and 2). Both plan maps are at a scale of 1:2500. The contour map was prepared by gridding the drift-corrected field data on a 12.5 meter square mesh with a minimum horizontal curvature algorithm. These gridded data were then smoothed by being upward continued 6.25 meters using a Fourier transform. These smoothed data were then contoured on an interval of 25 gammas. Posted values are drift corrected magnetic readings as taken in the field before filtering or smoothing.

The magnetic data permit some general interpretation to made of the local geology. Several contacts and possible structures can be inferred. An area of locally decreased magnetic response lies just north of Emmons Lake; this area may represent a sequence of metavolcanics. The several strong magnetic highs on Line 4E near the shore of Emmons Lake are of interest as historical records indicate that drilling in this vicinity encountered disseminated sulphides.

Linear features visible as magnetic lows extend east and west off the grid from the ends of the zone of decreased magnetic response. Two small pods of relatively low magnetic response can also be seen, one on Lines 8E and 9E at about 4+50S and one on Lines 8E and 9E at about 6+50N. The southern pod may be an expression of a possible contact which is visible on the southern end of many of the grid lines.

Outside the large zone of low magnetic response the data are irregular, varying from relatively smooth to quite erratic in places. No pronounced linear trends can be seen, but a possible low may run from about 6+00N on Line 5E to 4+50N on Line 7E; it may continue further east through the large magnetic low.

At the northeast end of the property the magnetic relief gets quite large and the profiles and contours show this. This may represent a more magnetic phase of the gabbroic rocks. A very strong peak at 4+00N on Line 12E may be a plug worthy of further interest.

Conclusions and Recommendations:

The magnetic data has been useful in interpreting the geology on the Emmons Lake property, however, an Induced Polarization Survey is recommended in order to establish drill targets specifically in areas of magnetic relief such as the two peaks on Line 4E and the major peak on Line 12E.

CERTIFICATE OF QUALIFICATION

I, Allan MacTavish of 548 McMaster St., Thunder Bay, Ontario due hereby certify that:

1. I am a graduate of Laurentian University, Sudbury, Ontario and hold and Honours Bachelor of Science degree in geological sciences (1977).

2. I am a geologist employed by St. Joe Canada Inc. and have practiced my profession continuously since graduation.

3. I am a fellow, in good standing, of the Geological Association of Canada.

4. I personally supervised the fieldwork described herein.

Al MacTavish

Appendix A

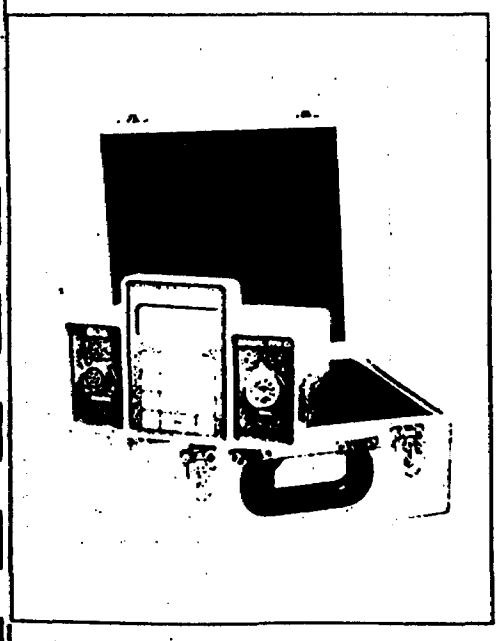
OMNIMAG PPM-350
Total Field Magnetometer

Description

The EDA OMNIMAG PPM-350 is a high-technology, proton precession total field magnetometer that measures and records the earth's magnetic field at the simple touch of a key. It identifies and records the location, time of each measurement, computes the statistical error, and records the decay and strength of the signal being measured.

The PPM-350 is a microprocessor-based system and employs a memory magnetometer concept pioneered by EDA.

Packaged in a compact, lightweight, rugged housing, the PPM-350 incorporates ergonomic-design features that provide maximum comfort and ease-of-operation in the field. It is used in a chest-mounted mode with a shoulder-harness. It has a large Liquid Crystal Display for easy reading, even in direct sunlight, and its oversized touch-sensitive keyboard permits cold-weather operation without having to remove gloves.



Functions

In a typical field survey operation, the PPM-350 can perform all of the following functions:

- A visual readout and storage of the following information *in an absolutely secure memory that prevents data loss or tampering:*
  - total magnetic field magnitude
  - time of measurement
  - grid coordinates for every reading
  - statistical error of total field reading
  - signal strength and decay measurement
- Users have a choice of three *input*, or data storage, modes:
  - manual record
  - spot record
  - automatic update record
- Users also have a choice of three *output* modes:
  - to a DCU-200 magnetic cassette recorder
  - to a DCU-040 or DCU-400 thermal printer
  - to any RS-232C-compatible microcomputer
- Each reading is automatically assigned a record number which can also be used to identify locations of measurements taken off the grid. This also serves to recall data, as well, simply by keying in the record number.
- Sub-grid coordinates and position up-date are given, permitting more detailed study within the main grid, without altering main grid data.
- Many readings can be taken at one point to verify a reading, without updating the position.

Features and Benefits

Productivity Up, Costs Down

Users of the OMNIMAG PPM-350 can enjoy increases in survey productivity by as much as 50% because of the solid-state features that are designed into it. This increase in productivity, with resultant lower survey costs, is made possible because it enables the operator to take measurements faster and with greater accuracy than conventional techniques permit. This, in turn, allows the survey operator to spend more time in the field surveying significantly more area than would be otherwise possible.

Automatic Diurnal Correction

Diurnal variations are corrected automatically and in just a few minutes, instead of the two or three hours required in manual operation. The raw total field data collected and stored in the PPM-350 is corrected by the PPM-400 Base Station Magnetometer through a single cable link. Using the linear interpolation method, corrected data is produced faster and more accurately, because the possibility of human error is reduced.

Programmable Grid Coordinates

Measurements are also made faster and more accurately because the location of each reading is taken automatically on an incremental basis, and recorded along with the time of that measurement. An additional benefit of this feature is that it can provide the basis for computer plotting to obtain survey profiles.

Highly Reproduceable Data

The PPM-350 provides users with the highest confidence level in the

EDA

dustry. Its highly reproduceable data is a result of four leading-edge design features that minate the need for taking multiple readings:

- An exclusive Signal Processing Technique*
- Constant Energy Polarization that maintains equal energy to the sensor even when the main battery supply decreases
- Sensitivity to ±0.02 gamma that ensures repeatability of readings
- Automatic Fine-Tuning that takes the previous reading as the base for the next

gonomic Design

Operator comfort and efficiency were prime considerations in the design of the new PPM-350. It is lightweight and is encased in a rugged housing that permits operation in a wide variety of field conditions. The oversize keyboard enables the operator to take measurements without removing gloves. Large LCD's make reading much easier, even in bright sunlight.

ldwork Simplified

Since each reading is automatically stored in a non-volatile memory, the need to make handwritten notebook entries on total field magnitude, time of reading, line and station numbers, etc. is eliminated. This reduces the need for notebook usage by the operator, thereby improving productivity. Also, it allows field surveys to be made under all weather conditions.

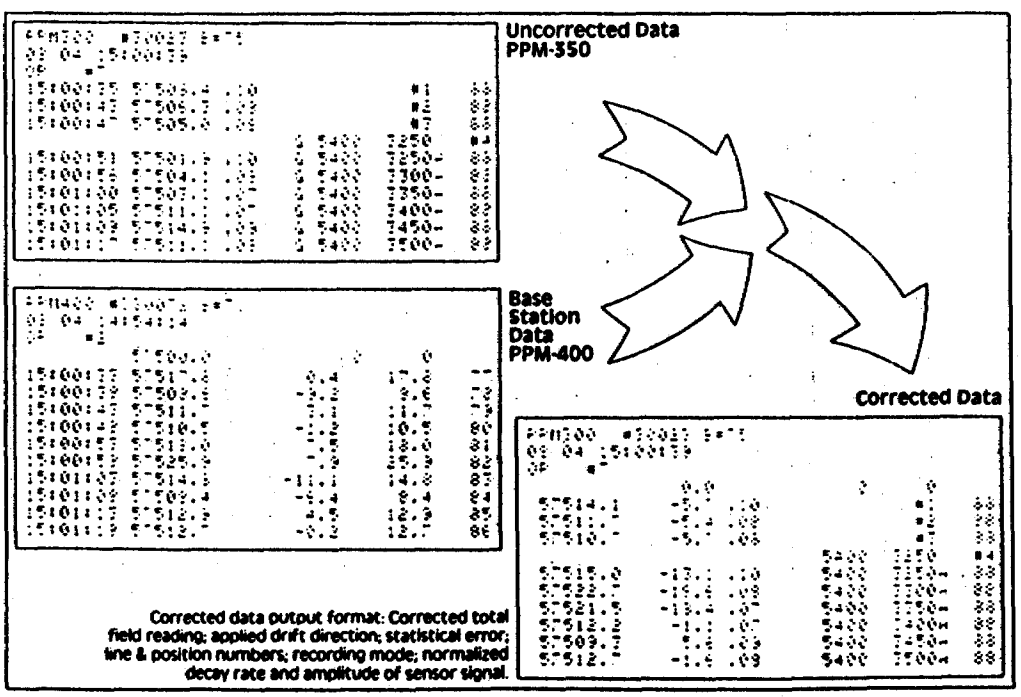
nputer Compatible

All EDA OMNIMAG systems can interface with any computer using RS232C standard. This enables generation of profiles, contour maps, etc.

*Patent Pending

Other Features

- *Data Recall.* Daily readings can be recalled either by record number or in sequence.
- *Non-Volatile Memory.* A lithium battery with a life-expectancy of 4 years provides total protection of data stored in memory and of the real-time clock in case the primary battery runs down or is removed.
- *Environmental Dependability.* PPM-350 operates in temperature extremes of –35°C to 55°C. At –25°C, a heater automatically activates to ensure LCD performance. Environmental sealing allows operation in very high humidity and in driving rain.
- *Higher Gradient Tolerance.* More accurate readings are obtained because the PPM-350's optimized sensor geometry and reduced size result in higher tolerances to local gradients.
- *Power Supply Versatility.* Users can choose from a variety of power packages:
  - rechargeable sealed lead acid battery belt or cartridge
  - disposable alkaline "C" cell battery belt or cartridge.
- *Error Analysis.* This unique feature is a great time saver because the calculation of the statistical error of each reading lets the operator make an on-the-spot decision whether that reading should be stored or not.
- *Memory Upgrade.* The standard memory of 1383 readings is optionally expandable up to 2555 readings.
- *Decimal Spacing.* Intermediate readings can be stored every 12.5 units, while using the usual 25-unit station interval.
- *Internal Real-Time Clock.* More accurate and reliable measurements can be made and stored because time is taken to the nearest second. Also, the operator need not wear a wristwatch, which is a common and often overlooked source of magnetic interference.



Corrected data output format: Corrected total field reading; applied drift direction; statistical error; line & position numbers; recording mode; normalized decay rate and amplitude of sensor signal.

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Specifications

Dynamic Range	18,000 to 93,000 gammas
Sensitivity	± 0.02 gamma
Statistical Error Resolution	0.01 gamma
Standard Memory Capacity	1383 data blocks or readings
Absolute Accuracy	± 15 ppm at 23°C, 50 ppm over the operating temperature range
Display Resolution	0.1 gamma
Capture Range	± 25% relative to ambient field strength of last stored value
Display	Custom-designed, ruggedized liquid crystal display with an operating temperature range from −35°C to +55°C
Gradient Tolerance	5,000 gammas per meter
Sensor	Optimized miniature design. Magnetic cleanliness is consistent with the specified absolute accuracy
Sensor Cable	Remains flexible in temperature range; includes low strain connector
Operating Environmental Range	−35°C to +55°C; 0–100% relative humidity; weather-proof
Power Supply	Non-magnetic rechargeable sealed lead acid battery cartridge or belt; or, Disposable "C" cell battery cartridge or belt
Battery Cartridge Life	2,000 to 5,000 readings, depending upon ambient temperature and rate of readings
Weight and Dimensions	
Instrument Console only	3.4 kg, 238 x 150 x 250 mm
Lead Acid Battery Cartridge	1.9 kg
Sensor	1.2 kg, 56 mm diameter x 200 mm
System Complement	Electronics console; sensor with 3-meter cable; sensor staff; power supply; harness assembly; operation manual.

EDA is a pioneer in the development of advanced geophysical systems and has created many innovations that increase field productivity and lower survey costs.

EDA's OMNIMAG series consists of the PPM-350 Total Field Magnetometer, PPM-400 Base Station Magnetometer, and the PPM-500 Vertical Gradiometer. Contact us *now* for details.

E D A Instruments Inc.
1 Thorncliffe Park Drive
Toronto, Ontario
Canada M4H 1G9
Telex 06 23222 EDA TOR
Cable Instruments Toronto
(416) 425-7800

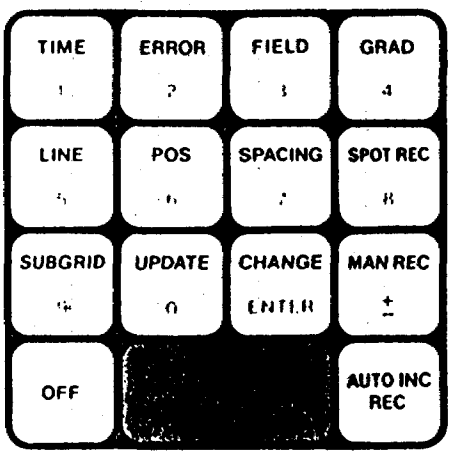
In U.S.A.
E D A Instruments Inc.
5151 Ward Road
Wheat Ridge, Colorado
U.S.A. 80033
Telex 00 450681 DVR
(303) 422-9112

PPM Series
Portable Magnetometers

EDA

PPM-500 Magnetic Gradiometer

With a sensitivity of better than 0.1nT per metre, the PPM-500 represents the world's first inexpensive high reliability vertical gradiometer. In addition to providing the differential reading between the two sensors, the upper of which is typically three metres above the ground, it also provides the absolute measurement of the total field. All readings are taken simultaneously. Other features such as grid co-ordinate incrementing, time recording, statistical error analysis and data storage are identical to those in the PPM-300.



NOT ACTUAL SIZE

The PPM Series joins a successful line of advanced instruments and systems used in the fields of geophysics, geochemistry, and environmental monitoring.

DATA COLLECTION UNITS

General Description

These compact and sturdy field portable data recording devices may service any number of PPM-300's, 400's or 500's. Each is either battery or AC powered, and meets with the high standards of reliability customary with EDA's products.

DCU-100 Thermal Printer

This data recorder prints 20 characters per line at a rate of 1.5 lines per second, thus providing a listing of daily results.

DCU-200 Magnetic Cassette Recorder

Data recorded from the magnetometers in this manner may be computer processed in the field or office for speed operations and reduce human error. Computer compatible RS-232 I/0 port allows direct input to most computers.

EDA Instruments Inc., Head Office: 1 Thorncliffe Park Drive Toronto Canada M4H 1G9
Telephone (416) 425 7900. Telex: 06 23222 EDA TOR Cables INSTRUMENTS TORONTO

In USA EDA Instruments Inc., 5151 Ward Road, Wheat Ridge, Colorado 80033
Telephone (303) 422 9112

PPM SERIES Portable Magnetometers

EDA

General Description

The portable PPM Series magnetometers consist of four standard field units which have a number of common features and specifications. They represent the most advanced application of microprocessor technology, sophisticated software and system design available to date.

Standard features of all units include:

- Improved accuracy.
- Enhanced data reliability and validity.
- Automatic fine tuning.
- Programmable 24 hour clock.
- 5000nT per metre gradient tolerance.
- Unique interchangeable sensor design.
- Only two simple controls, a keypad and mode switch.
- Custom-designed low temperature LCD which displays field reading, error, time, signal quality and decay rate, battery status and descriptors.
- Elimination of all cables by attaching sensor to console.
- Patent pending signal processing technique.
- Statistical error analysis of signal.
- Keypad with audio feedback.
- Switch selectable test mode to verify subsystem status and system performance.
- Internal lithium battery back-up system to protect status tables, programmes and data.
- Constant energy polarization.
- Convenient snap-in power cartridges containing any disposable "C" cells or rechargeable sealed lead acid batteries.
- Operating temperature – 30°C to +50°C.
- Rugged custom designed aluminum investment cast case offering complete protection against rain and dust.
- Lightweight construction. Weighs as little as 4.0kg.

PPM-200 Total Field Magnetometer

As the basic unit in the series, the PPM-200 measures the earth's magnetic field to sensitivities of 0.1nT and displays the resulting data on the high visibility LCD. This unit has automatic power-off capability to prevent the unnecessary consumption of power. The standard sensor attached to the main electronics console leaves the operator with complete freedom from cables and the incessant problems they create. This unit can be upgraded at a later date to higher capability levels by adding additional electronics, memory and software subroutines.

PPM-300 Total Field Magnetometer

This model is the most advanced field magnetometer in the world. In addition to providing the total field magnitude and time, it also records on its internal solid state memory, the grid co-ordinates (line and station) and reading error. The non-volatile memory can store up to 700 data blocks, therefore eliminating any need to record data manually. Accumulated data is regularly transferred into either of two Data Collection Units, the DCU-100 Thermal Printer or the DCU-200 Magnetic Cassette Recorder. The use of the latter unit permits the complete computer handling of data which includes background and diurnal corrections, automatic plotting and routine geophysical interpretation.

PPM-400 Base Station Magnetometer

This integral sensor and console package is the first magnetometer specifically designed for base station applications, which include airborne and ground survey corrections. It's unique configuration allows it to be set up above the ground and away from hazards and local magnetic interferences. Unlike other base station magnetometers which have a limited number of switch selected sample periods and limited versatility, the PPM-400 is completely programmable through its keypad. This includes operator selection of either relative (differential) or absolute measurements. As in the PPM-300, all data is stored internally in a high capacity non-volatile memory which is transferred periodically into either the DCU-100 or DCU-200. Also unique to this instrument is a "snooze" alarm to conserve power. In simple terms, the microprocessor acts as an alarm clock and turns power-draining circuits off following each reading and automatically powers up just prior to taking a subsequent reading.

Ministry of Northern Development and Mines

Ontario

Mining Lands

Report of Work

(Geophysical, Geological, Geochemical and Expenditures)

52F10SE0026 2.10524 TURTLEPOND LAKE

900

Mining Act — Do not use shaded areas below

Type of Survey(s): Magnetometer W 87 #1 177	Township or Area: Turtlepond Area
Claim Holder(s): St. Joe Canada Inc.	Prospector's Licence No.: T3608
Address: 111 Richmond St. W. Ste 1116. Toronto. Ont M5H 2J4	
Survey Company: MPH Consulting Ltd.	Date of Survey (from & to): 15 09 87 / 15 04 87 (Day / Mo. / Yr.)
Name and Address of Author (of Geo Technical report): Robin Jowett, St. Joe Canada Inc. 111 Richmond St. W.	Total Miles of line Cut: 20 kms

Credits Requested per Each Claim in Columns at right

Special Provisions		Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	Geophysical	
	· Electromagnetic	
	· Magnetometer	40
	· Radiometric	
For each additional survey: using the same grid: Enter 20 days (for each)	· Other	
	Geological	
	Geochemical	

Man Days		Days per Claim
Complete reverse side and enter total(s) here	Geophysical	
	· Electromagnetic	
	· Magnetometer	
	· Radiometric	
	· Other	
	Geological	
	Geochemical	

Airborne Credits.		Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Radiometric	

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
	869820	
	869821	
	869822	
	869823	
	897366	
	897367	
	897368	
	897369	

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.

RECEIVED 1987 MINING LANDS SECTION

KENORA MINING DIV. RECEIVED SEP 18 1987 AM 7 8 9 10 11 12 1 2 3 4 5 6 PM

Total number of mining claims covered by this report of work: 8

Expenditures (excludes power stripping)

Type of Work Performed:

Performed on Claim(s):

Calculation of Expenditure Days Credits

Total Expenditures: $ ÷ 15 = Total Days Credits

Instructions: Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
320	87.09.18	
	Date Approved as Recorded: 16 Nov 87	Branch Director

Date: Sept 14. 1987 — Recorded Holder or Agent (Signature): Robin Jowett

Certification Verifying Report of Work

I hereby certify that I have a personal and intimate knowledge of the facts set forth in the Report of Work annexed hereto, having performed the work or witnessed same during and/or after its completion and the annexed report is true.

Name and Postal Address of Person Certifying: Robin Jowett. 893 Swansdale Bend Mississauga. Ont L5J 1G1

869820

Date Certified: Sept 14/87 — Certified by (Signature): R Jowett

1262 (85/12)

Ontario

Ministry of Natural Resources

File 177-87

GEOPHYSICAL – GEOLOGICAL – GEOCHEMICAL TECHNICAL DATA STATEMENT

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 Turtlepond Area
Claim Holder(s) St. Joe Canada Inc.
1116-111 Richmond St.W.
Survey Company MPH Consulting Ltd.
Author of Report Angus Scott-Fleming c/o St Joe Canada
Address of Author 111 Richmond St W. Toronto M5H 2G4
Covering Dates of Survey 15/03/87 – 15/04/87 (linecutting to office)
Total Miles of Line Cut 20 kms

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
–Magnetometer
–Radiometric
–Other
Geological
Geochemical

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

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

DATE: Nov 10/87 SIGNATURE: Robin Jewett
Author of Report or Agent

Res. Geol. ____ Qualifications 2,10522 (This File)

Previous Surveys

File No.	Type	Date	Claim Holder

MINING CLAIMS TRAVERSED
List numerically

(prefix)	(number)
K	869820
	869821
	869822
	869823
	897366
	897367
	897368
	897369

If space insufficient, attach list

RECEIVED
NOV 12 1987
MINING LANDS SECTION

TOTAL CLAIMS 8

OFFICE USE ONLY

837 (5/79)

GEOPHYSICAL TECHNICAL DATA

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

Number of Stations 1288 Number of Readings 1288

Station interval 12.5 m Line spacing 100 m

Profile scale 200 gammas per cm

Contour interval 25 gammas

MAGNETIC

Instrument EDA PPM 350 protonprecision magnetometer with PPM 400 Base Station

Accuracy – Scale constant ±15 ppm at 23°C

Diurnal correction method automatic through linear interpolation

Base Station check-in interval (hours) 6 hrs.

Base Station location and value on the surveyed grid.

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

SELF POTENTIAL

Instrument _____ Range _____

Survey Method _____

_____

Corrections made _____

_____

RADIOMETRIC

Instrument _____

Values measured _____

Energy windows (levels) _____

Height of instrument _____ Background Count _____

Size of detector _____

Overburden _____

(type, depth – include outcrop map)

OTHERS (SEISMIC, DRILL WELL LOGGING ETC.)

Type of survey _____

Instrument _____

Accuracy _____

Parameters measured _____

_____

Additional information (for understanding results) _____

_____

_____

AIRBORNE SURVEYS

Type of survey(s) _____

Instrument(s) _____

(specify for each type of survey)

Accuracy _____

(specify for each type of survey)

Aircraft used _____

Sensor altitude _____

Navigation and flight path recovery method _____

_____

Aircraft altitude _____ Line Spacing _____

Miles flown over total area _____ Over claims only _____

GEOCHEMICAL SURVEY – PROCEDURE RECORD

Numbers of claims from which samples taken _____

Total Number of Samples _____

Type of Sample _____
(Nature of Material)

Average Sample Weight _____

Method of Collection _____

Soil Horizon Sampled _____

Horizon Development _____

Sample Depth _____

Terrain _____

Drainage Development _____

Estimated Range of Overburden Thickness _____

SAMPLE PREPARATION
(Includes drying, screening, crushing, ashing)

Mesh size of fraction used for analysis _____

General _____

ANALYTICAL METHODS

Values expressed in: per cent ☐
p. p. m. ☐
p. p. b. ☐

Cu, Pb, Zn, Ni, Co, Ag, Mo, As,-(circle)

Others _____

Field Analysis (_____ tests)

Extraction Method _____

Analytical Method _____

Reagents Used _____

Field Laboratory Analysis

No. (_____ tests)

Extraction Method _____

Analytical Method _____

Reagents Used _____

Commercial Laboratory (_____ tests)

Name of Laboratory _____

Extraction Method _____

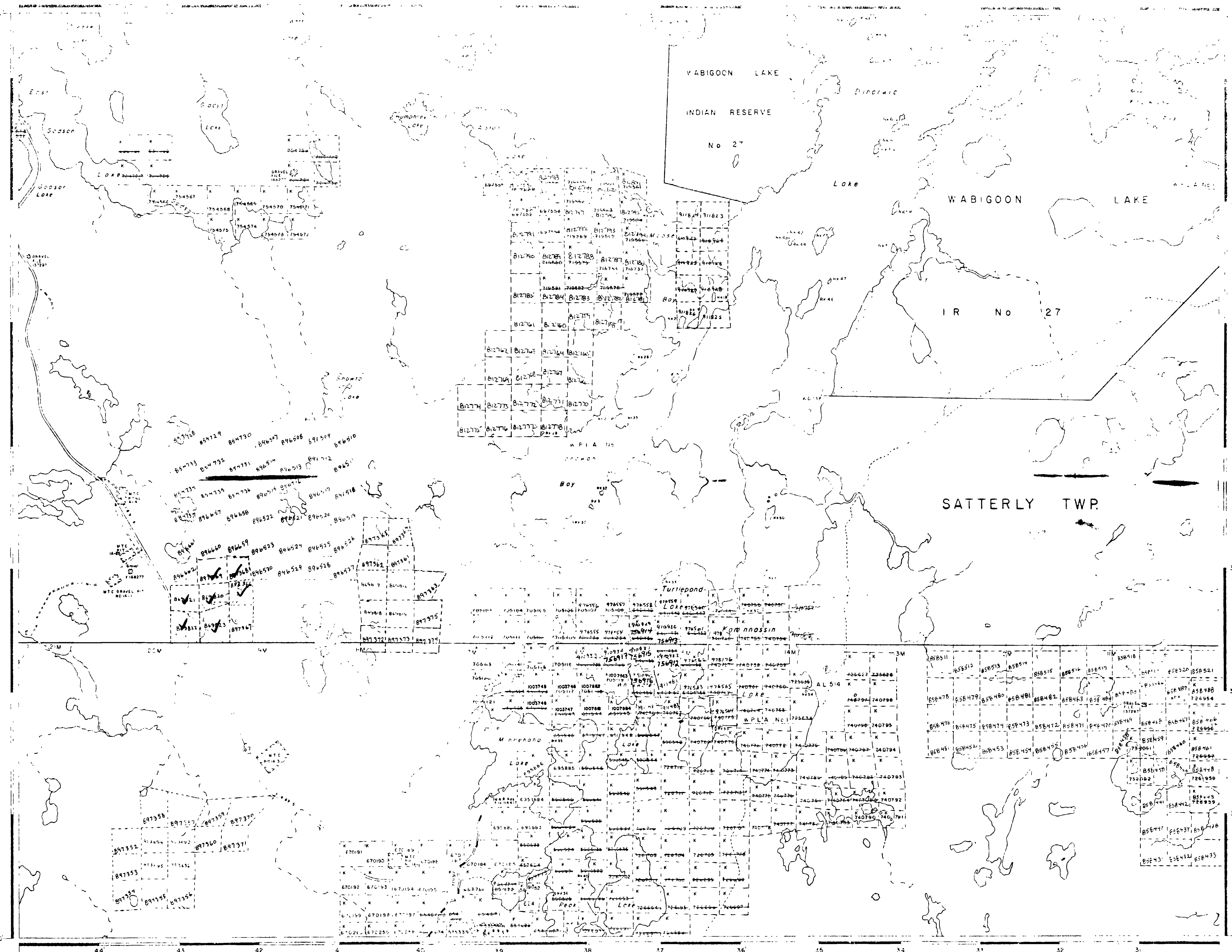
Analytical Method _____

Reagents Used _____

General _____

BUTLER LAKE - G-576

UKIK LAKE - G-2596



TABOR LAKE - G-2592

BOYER LAKE - G-2572

LEGEND

PATENTED LAND	Ⓟ
CROWN LAND SALE	CS
LEASES	Ⓛ
LOCATED LAND	Loc
LICENSE OF OCCUPATION	LO
MINING RIGHTS ONLY	MRO
SURFACE RIGHTS ONLY	SRO
ROADS	
IMPROVED ROADS	
KING'S HIGHWAYS	
RAILWAYS	
POWER LINES	
MARSH OR MUSKEG	
MINES	
CANCELLED	C
PATENTED S.R.O.	

REFERENCES

AREAS WITHDRAWN FROM DISPOSITION

M.R.O. - MINING RIGHTS ONLY
S.R.O. - SURFACE RIGHTS ONLY
M + S - MINING AND SURFACE RIGHTS

Description	Order No	Date	Disposition	File
				SPRING 86

ROADS INDICATED DRYDEN PAPER CO ARE PRIVATE ROADS, BUT MAY BE USED BY PROSPECTORS ONLY AFTER PERMISSION IS OBTAINED FROM DRYDEN PAPER CO. DRYDEN ONTARIO

FLOODING

RESERVING THE RIGHT TO HOLD THE WATERS OF THE WABIGOON RIVER AND WABIGOON LAKE INCLUDING DINORWIC, PELEFRED, AND MINNEHAHA LAKES AND CROOKED RIVER TO AN ELEVATION NOT EXCEEDING 1209.30'

WITH ... LEASE AGREEMENT N. ... 26 FEB 19..

SCALE 1 INCH = 40 CHAINS

AREA TURTLEPOND LAKE

M.N.R. ADMINISTRATIVE DISTRICT
DRYDEN

MINING DIVISION
KENORA

LAND TITLES / REGISTRY DIVISION
KENORA

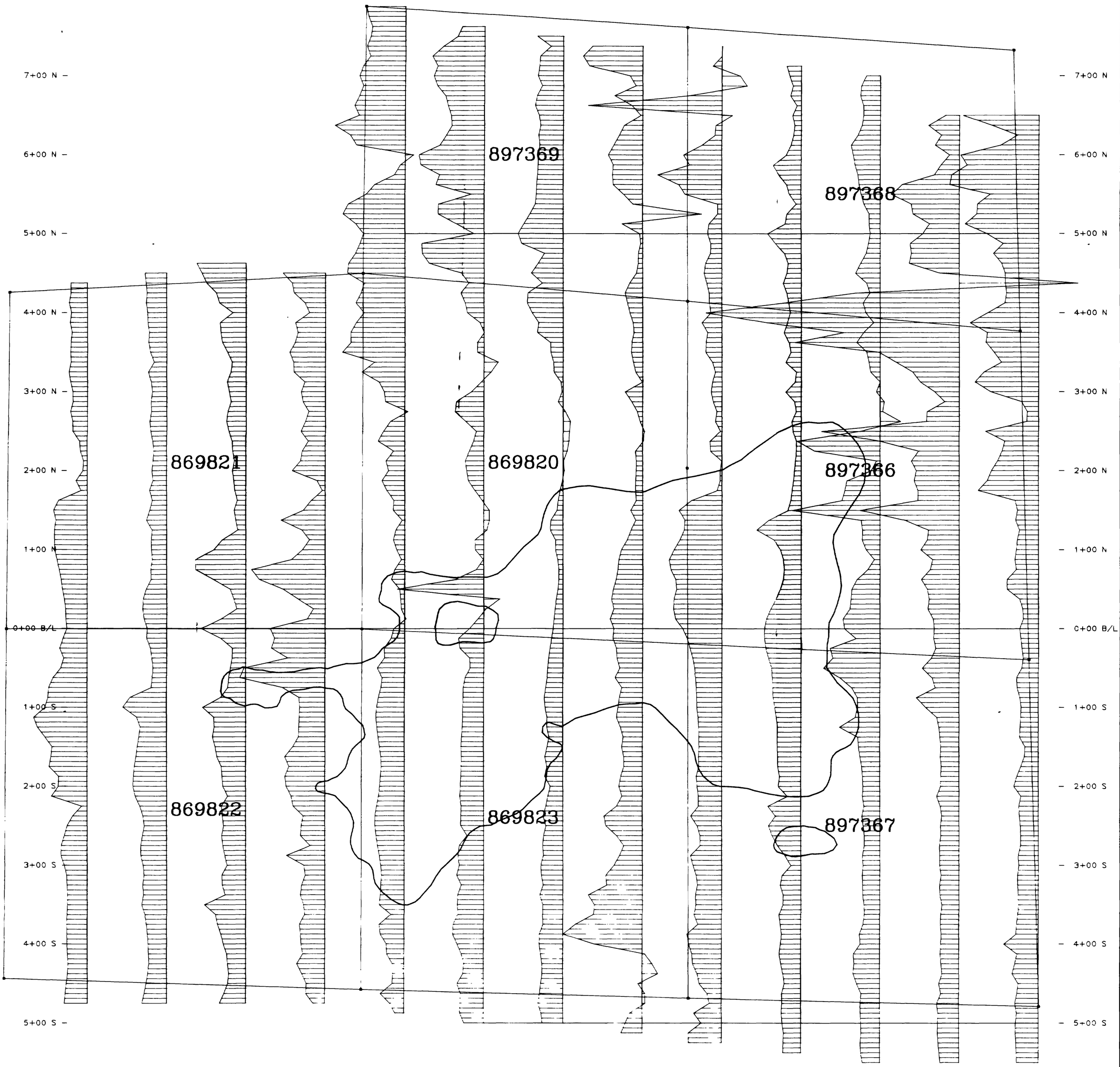
Ontario Ministry of Natural Resources — Land Management Branch

Date FEBRUARY, 1984

M-2663

Number G-2595

52F16SE0028 2.10524 TURTLEPOND LAKE 200



EXPLANATION

Data scale: 200 gammas/cm

Profile base level is 59,500 gammas

Denser shading for values above base level

——— Lake shore

▪ Claim post

ST.JOE CANADA INC.	GEOPHYSICS DEPARTMENT TUCSON, ARIZONA

TOTAL–FIELD MAGNETIC PROFILES

Emmons Lake Property

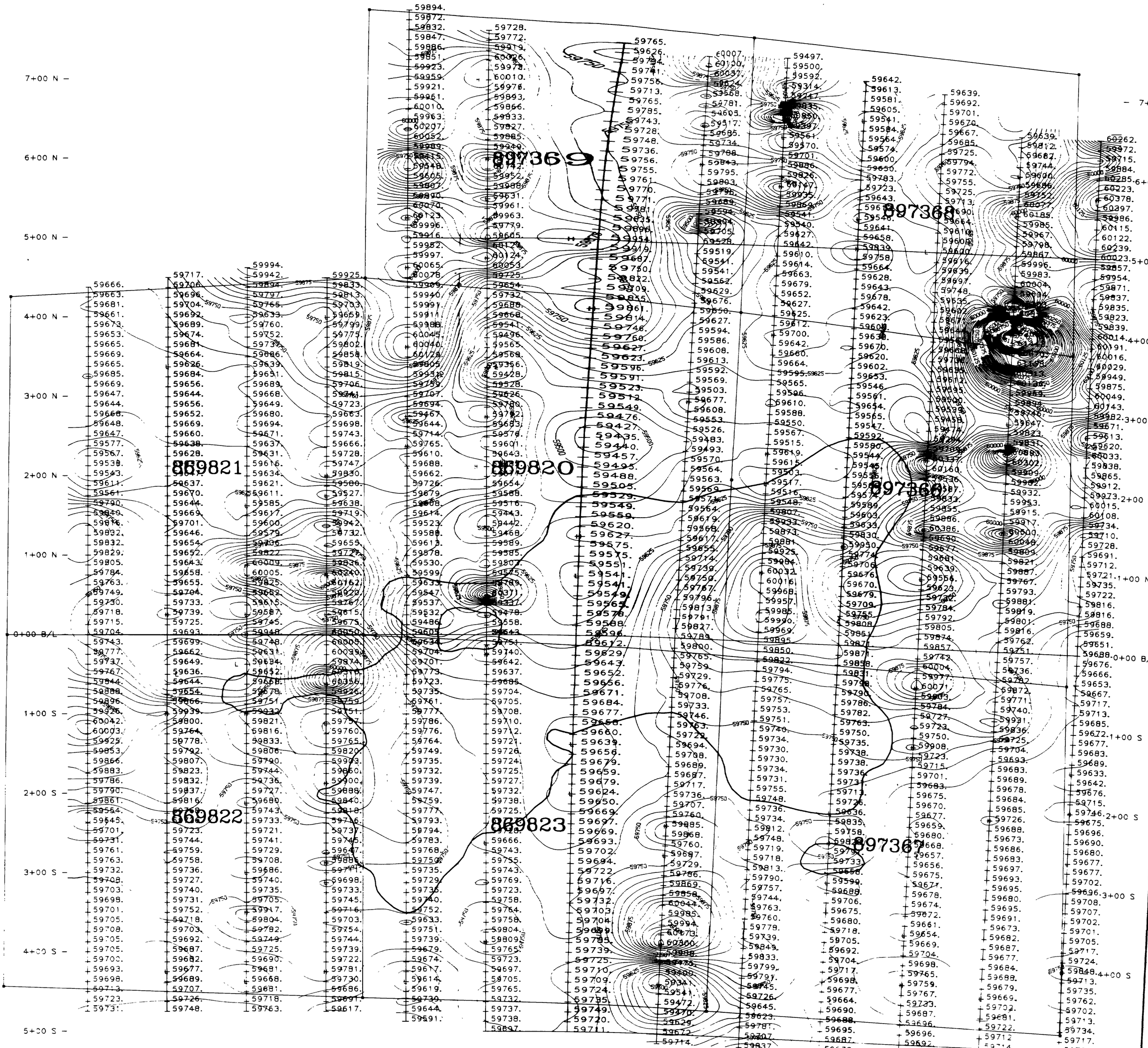
Turtlepond Lake Area

Northwestern Ontario

Scale: 1:2500

MAP 1		
	DATA BY: ST. JOE CANADA	SURVEY DATE: 1987
	PLOTTED BY: GRAFON 11	PLOT DATE: 16-OCT-87
	CHECKED BY:	

2.10524



EXPLANATION

Contour interval 25 gammas

Contoured values gridded on 12.5–meter grid using minimum–curvature program, then upward continued 6.25 meters

Posted values raw field data

——— Lake shore

▪ Claim post

ST. JOE CANADA INC | GEOPHYSICS DEPARTMENT TUCSON, ARIZONA

TOTAL–FIELD MAGNETIC CONTOUR MAP

Emmons Lake Property

Turtlepond Lake Area

Northwestern Ontario

Scale: 1:2500

MAP2

DATA BY: ST. JOE CANADA | SURVEY DATE: 1987
PLOTTED BY: GRDPLT 3H | PLOT DATE: 16–OCT–87
CHECKED BY:

2.10524