

GEOPHYSICAL REPORT  
FOR  
MR. DOUGLAS LALONDE  
ON THE  
MASSEY PROJECT  
MASSEY AND WHITESIDES TOWNSHIPS  
PORCUPINE MINING DIVISION  
NORTHEASTERN ONTARIO

2.35412



Prepared By: J.C. Grant, CET, FAGC  
July, 2007



TABLE OF CONTENTS

	PAGE
ABSTARCT	
INTRODUCTION.....	1
PROPERTY LOCATION AND ACCESS.....	1
CLAIM GROUP.....	1
PERSONNEL.....	2
GROUND PROGRAM.....	2
VLF-EM SURVEY RESULTS .....	3
CONCLUSION AND RECOMMENDATIONS .....	5,6
CERTIFICATE	
APPENDICIES: APPENDIX A, SCINTREX ENVI MAG-EM SYSTEM	
LIST OF FIGURES:	
FIGURE 1	LOCATION MAP
FIGURE 2	PROPERTY LOCATION MAP
FIGURE 3	CLAIM MAP
FIGURE 4	GEOLOGY MAP
POCKET MAPS:	
PROFILED VLF-EM SURVEY,	1:2500
CONTOURED FRASER FILTER,	1:2500

ABSTRACT:

The Lalonde property that straddles the Township line between Massey and Whitesides has had several surveys completed across it. In 1996 Morgain Minerals completed a Pulse Electromagnetic, (PEM), survey across a portion of the ground to follow up on a Horizontal Loop Electromagnetic, (HLEM), survey that had been completed on the ground in 1992. The 1992 survey outlined two parallel conductive horizons striking north-south across lines 2600MN to and including 2100MN. Both of these targets were reinterpreted by Grant in 1996 and were found to represent legitimated bedrock conductors ranging from 25 to 50 mhos in conductivity and situated at a depth to source of 35 to 55 meters.

Based on these results, a drill hole was spotted on line 2300MN at approximately 12.5 meters east of the baseline to test the two targets. The drill hole returned ore grade copper and nickel assays in both targets with the eastern zone representing the higher grade zone.

Due to the success of this drill hole and the favourable assay results, Mr. Lapierre suggested that the grid should be resurveyed with a deep penetrating EM system.

Exsics Exploration Limited was hire to complete the Deep-EM survey over the drilled HLEM targets with the idea of testing the zone at depth and on strike to better define an area for further drilling.

The PEM survey was successful in locating and defining the original HLEM conductors as was expected. The PEM survey also suggests the zone extends at depth and appears to be as conductive as the upper sections

The PEM survey did confirm the down dip extension of the drilled zones labelled A and B. The survey was also successful in outlining a new parallel zone to the east of the main zone which, from drilling, has proven ore grade assays of copper and nickel. This would make this new zone, C, a prime target for drilling. Due to the success of the initial hole, any and all zones should be followed up by further geophysics as well as drilling.

**INTRODUCTION**

The services of Exsics Exploration Limited were retained by Mr. D. Lalonde to complete the plotting and interpretation of a VLF-EM survey that was completed across the claim block by Mr. Lalonde.

The ground program consisted of a detailed compassed, paced and flagged grid that was completed across a total of 24.90 kilometers of grid lines. The VLF-EM survey was completed across all of the cross lines.

**PROPERTY LOCATION AND ACCESS**

The Massey claim group is located in the south central section of Massey Township and the north central section of Whitesides Township. Both of these Townships are located in the Porcupine Mining Division of North-eastern Ontario. Figure 1 and 2. More specifically the claims are located to the immediate west of the Kamiskotia River which flows generally north-south through the townships. The township line between Massey and Whitesides cuts the claim group in half in an east-west direction. Figure 3.

Access to the property during the survey period was relatively easy. Approximately 10 kilometers west of the City of Timmins, Malette Lumber maintains an all weather gravel road to their current and ongoing logging operations in a number of townships to the west and northwest of Timmins.

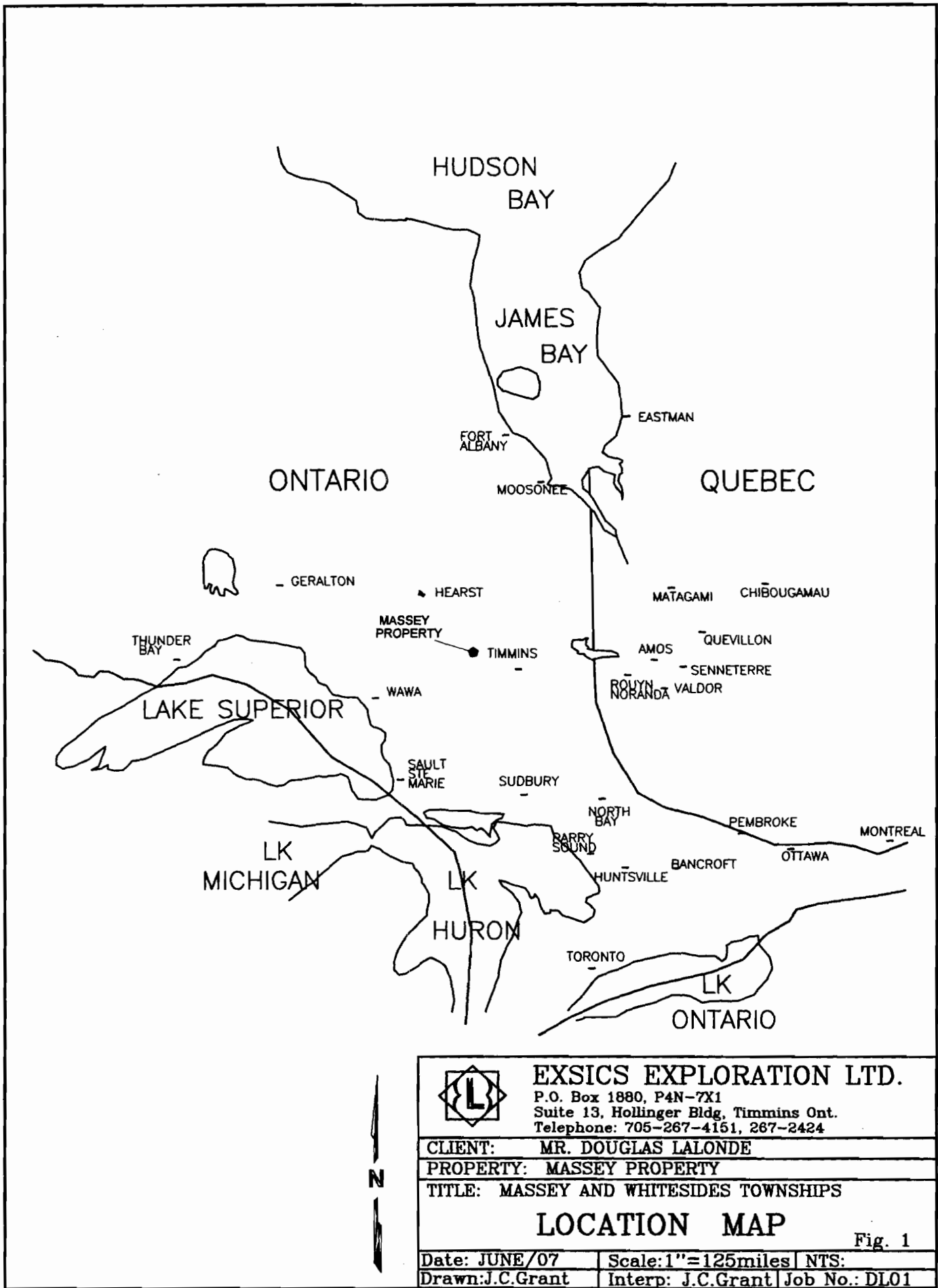
This gravel road commences immediately west of the Malette Mill and runs north and northwest off of Highway 101 west. A twenty minute ride north-northwest along this gravel road will bring one to the 27 kilometre marker and a bridge across the Kamiskotia River. One kilometre further north-northwest of this bridge will access the old drill road which has been clearly marked. A short ATV ride along this drill road for 6 kilometers will access the grid. Travelling time from Timmins to the grid is approximately 60 minutes.


**CLAIM GROUP**

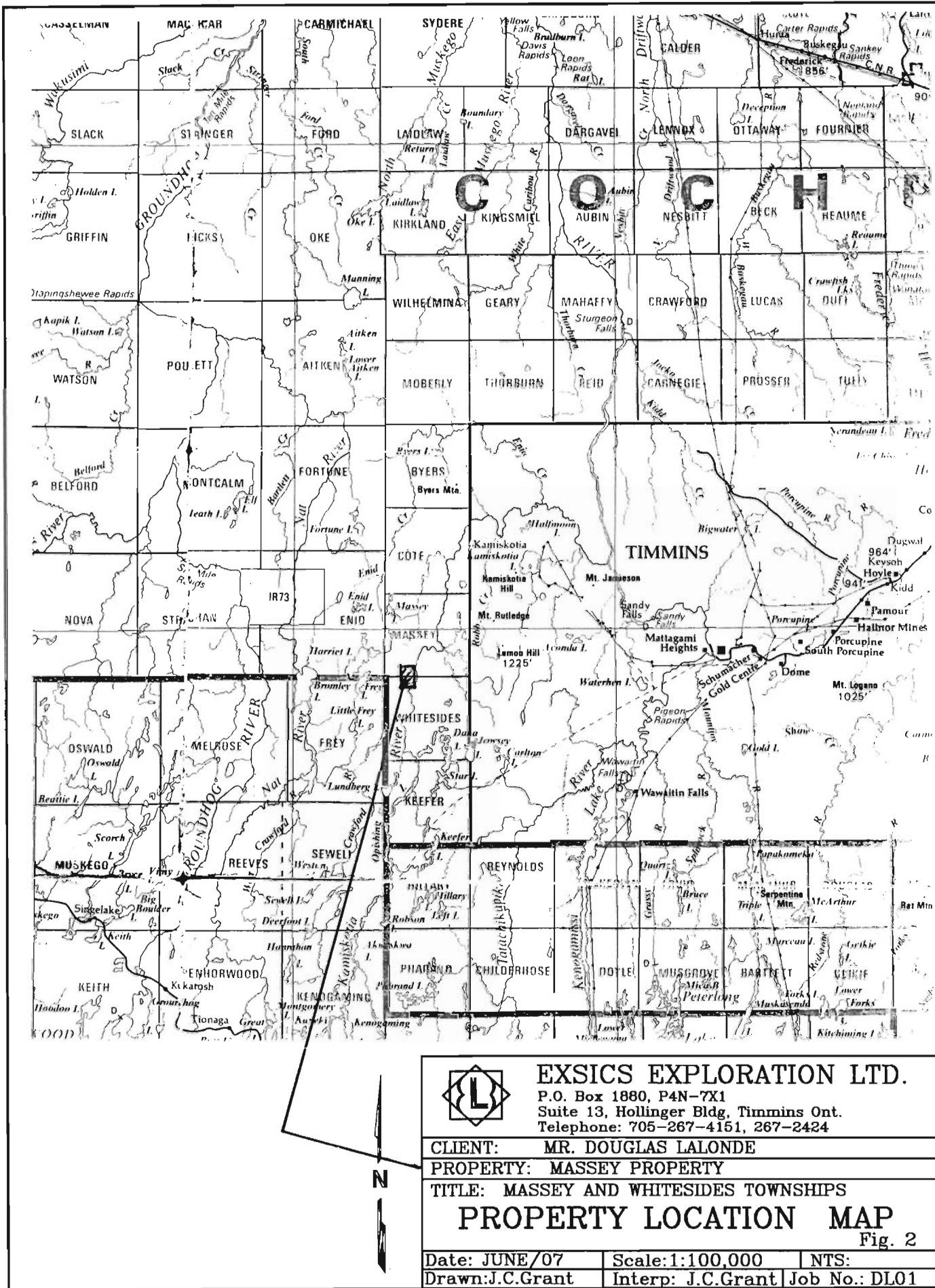
The claim numbers which were covered by this program are as follows.

P-4206296	16 units Whitesides Township
P-4201798	6 units Massey Township

Refer to figure 3, copied from MNDM Plan Map, M-296 and G-3230, of Whitesides and Massey Townships for the location of the claims within the townships.



	<b>EXSICS EXPLORATION LTD.</b>	
	P.O. Box 1880, P4N-7X1 Suite 13, Hollinger Bldg, Timmins Ont. Telephone: 705-267-4151, 267-2424	
<b>CLIENT:</b>		<b>MR. DOUGLAS LALONDE</b>
<b>PROPERTY:</b>		<b>MASSEY PROPERTY</b>
<b>TITLE:</b>		<b>MASSEY AND WHITESIDES TOWNSHIPS</b>
<b>LOCATION MAP</b>		
Fig. 1		
<b>Date:</b> JUNE/07	<b>Scale:</b> 1"=125miles	<b>NTS:</b>
<b>Drawn:</b> J.C.Grant	<b>Interp:</b> J.C.Grant	<b>Job No.:</b> DL01



**EXSICS EXPLORATION LTD.**

P.O. Box 1880, P4N-7X1  
 Suite 13, Hollinger Bldg, Timmins Ont.  
 Telephone: 705-267-4151, 267-2424

CLIENT: **MR. DOUGLAS LALONDE**

PROPERTY: **MASSEY PROPERTY**

TITLE: **MASSEY AND WHITESIDES TOWNSHIPS**

**PROPERTY LOCATION MAP**

Fig. 2

Date: **JUNE/07**

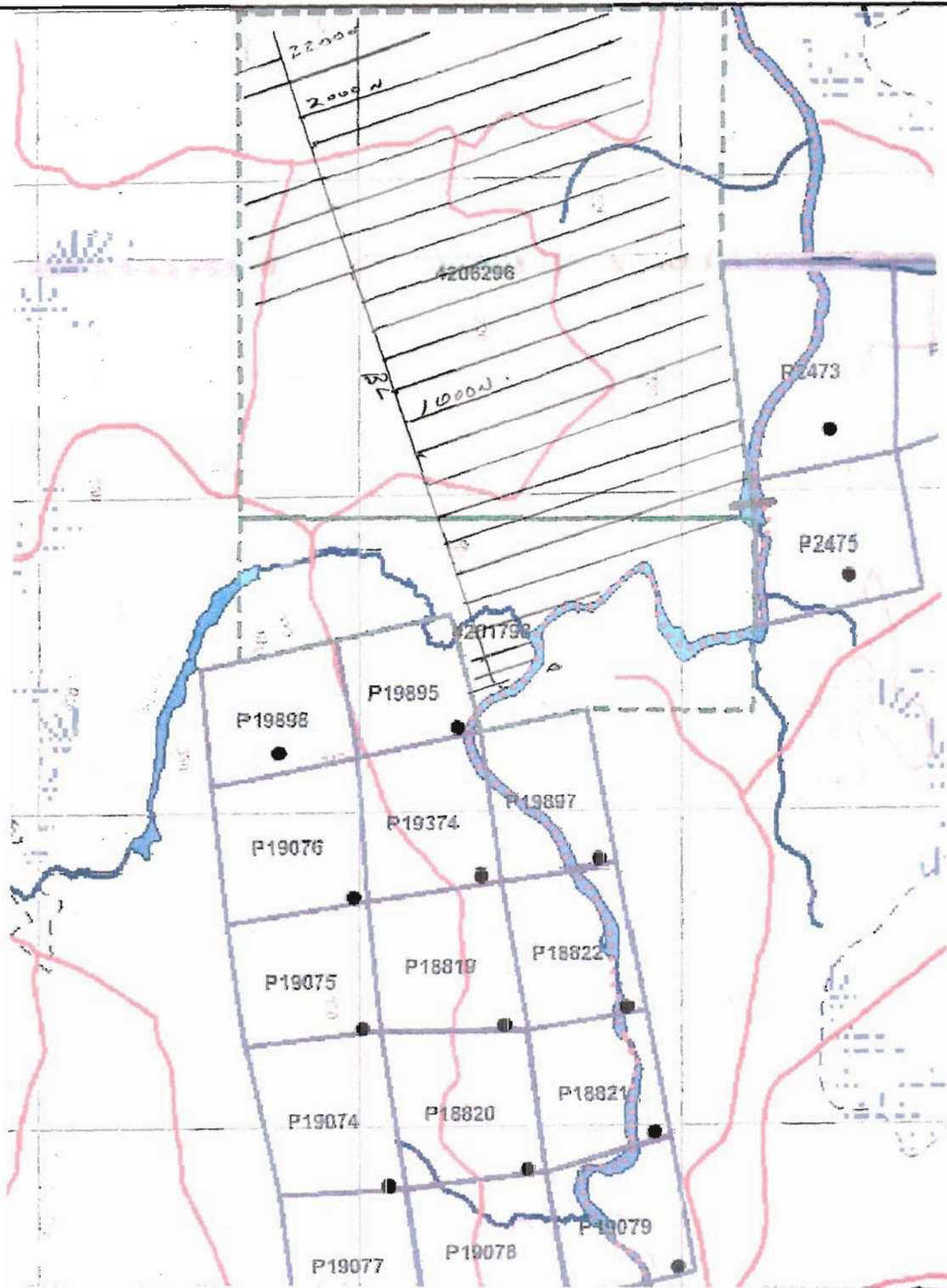
Scale: **1:100,000**

NTS:

Drawn: **J.C. Grant**

Interp: **J.C. Grant**

Job No.: **DL01**



**EXSICS EXPLORATION LTD.**

P.O. Box 1880, P4N-7X1  
 Suite 13, Hollinger Bldg, Timmins Ont.  
 Telephone: 705-267-4151, 267-2424

CLIENT: MR. DOUGLAS LALONDE

PROPERTY: MASSEY PROPERTY

TITLE: MASSEY AND WHITESIDES TOWNSHIPS

**CLAIM MAP/GRID MAP**

Fig. 3

Date: JUNE/07

Scale: 1:20,000

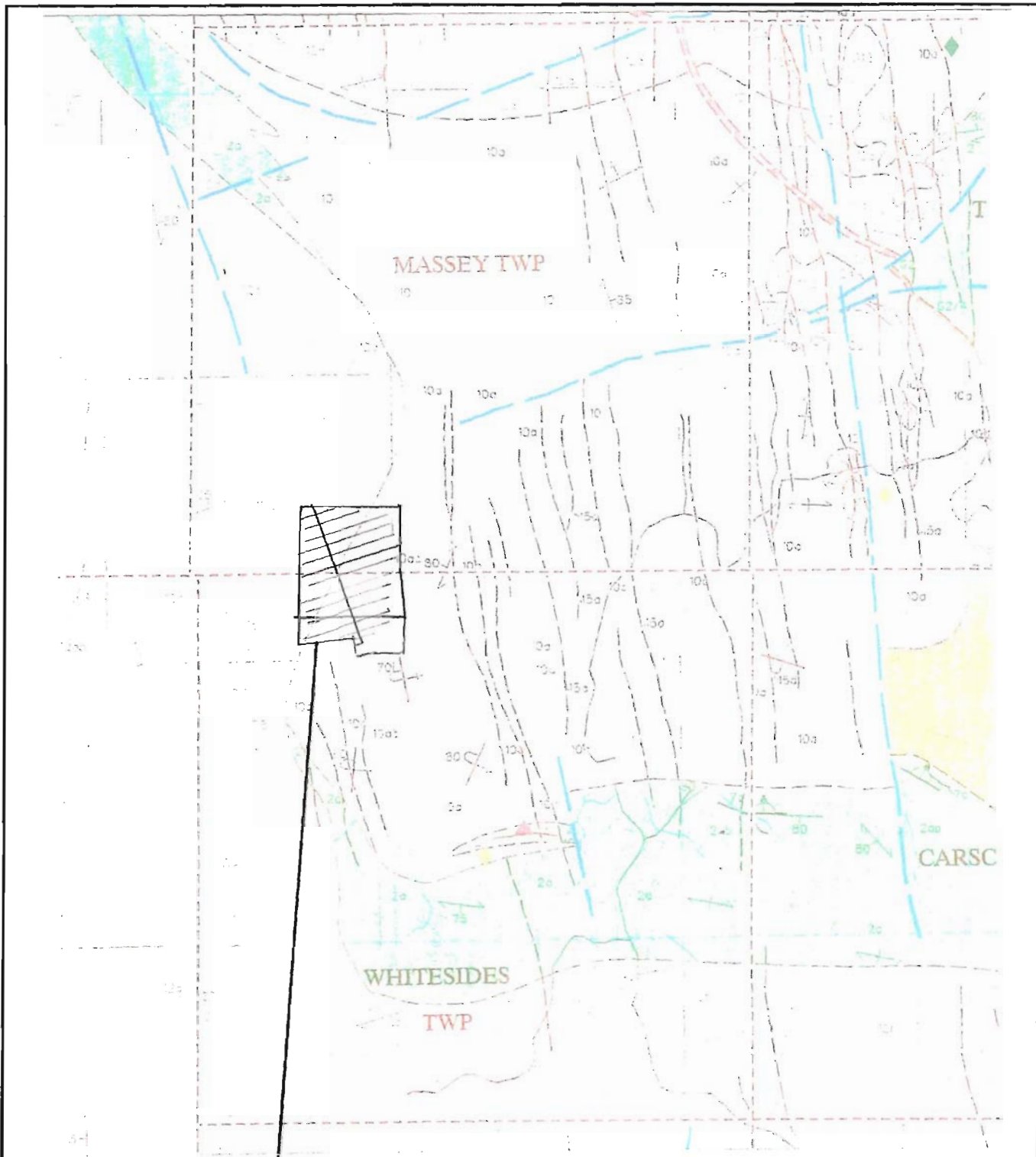
NTS:


Drawn: J.C. Grant

Interp: J.C. Grant

Job No.: DL01





 <b>EXSICS EXPLORATION LTD.</b> P.O. Box 1880, P4N-7X1 Suite 13, Hollinger Bldg, Timmins Ont. Telephone: 705-267-4151, 267-2424		
CLIENT: MR. DOUGLAS LALONDE		
PROPERTY: MASSEY PROPERTY		
TITLE: MASSEY AND WHITESIDES TOWNSHIPS		
<b>LOCAL GEOLOGY MAP</b>		
Fig. 4		
Date: JUNE/07	Scale: 1:100,000	NTS:
Drawn: J.C. Grant	Interp: J.C. Grant	Job No.: DL01



**PERSONNEL**

The field crew directly responsible for the collection of all of the raw data was contracted separately by D. Lalonde.

The plotting, compilation, interpretation and report was completed by J. Grant.

**GROUND PROGRAM**

This program consisted of a detailed VLF-EM survey that was completed over 24.9 kilometers of grid lines that had been paced and flagged across the claim block.

The grid consisted of 100 meter spaced lines that were turned off of a base line that ran at 340 degrees from line 0 to and including 2200MN. These lines were flagged at 50 meter intervals with readings recorded at 25 meter intervals. All of the lines generally ran from 1000ME to the base line with the exception of lines 2200MN, 2100MN, 1800MN, 1700MN, 1600MN, 1500MN, 100MN and line 0 that extended to the west.

All of the cross lines were also read with a VLF-EM survey using the Scintrex Envi Mag/VLF-EM system. Specifications for this unit can be found as Appendix A of this report. The following parameters were kept constant throughout the survey.

Line spacing:	100 meters
Station spacing:	50 meters
Reading intervals:	25 meters
Transmitter station:	Cutler, Maine, 24.0kHz
Parameters measured:	In phase and quadrature components of the secondary field.
Parameters plotted:	In phase component
Unit accuracy:	+/- 0.1 %

Once the data was collected it was then plotted onto a base map at a scale of 1:2500 and then profiled at 1cm=+/- 20%. Any and all conductor axis were then placed on the base map. A copy of this profiled map is included in the back pocket of this report.

A low pass filtering called Fraser Filtering was applied to the in phase data and then contoured at 10 unit intervals. This color contoured map is also included in the back pocket. This filtering helps with the geological characteristics of the conductors as well as their strikes and widths.

**VLF-EM Survey Results:**

The VLF-EM survey was successful in locating and outlining several conductive horizons across the grid area. These conductive horizons generally strike in a north to northwest direction and all generally continue off of the grid in both directions.

The VLF zones can be grouped into 4 distinct conductive horizons. They will be called 1,2,3 and 4 going from east to west.

Zone 1 can be followed from line 500MN/900ME to and including 1600MN/775ME. This zone continues as far as line 2200MN but appears to have been faulted and or folded along line 1700MN. This zone is quite strong and correlates to a narrow magnetic high zone that was noted in earlier magnetic surveys completed by D. Lalonde. The zone may relate to a deep rooted dike like feature.

Zone 2 can be traced from line 400MN/600ME to line 2200MN/400ME albeit it has been somewhat distorted by faulting and or folding along its strike length. There also appears to be several minor splays striking off of this zone which may relate to the cross faulting. This zone parallel the strike of Zone 1. This zone correlates to the eastern contact of a broad magnetic feature outlined in earlier surveys by D. Lalonde.

Zone 3 can be followed from line 200MN/325ME to at least line 1600MN/100ME and it has also been distorted by several cross structures. That portion of the zone between lines 1300MN and 1600MN correlates to the old drilling that returned good copper assays of up to 3.62%. This section also correlates to a good magnetic target that represents a blow out along a more structural trend.

Zone 4 can be traced from line 0/250MW to line 200MN/225MW and may also relate to the zone that was noted striking across line 1500MN/200MW to line 1800MN/275MW. The southern portion of the zone correlates to an airborne target as well as a good magnetic high zone.

The northern extension of this zone has a west parallel feature that strikes across lines 1700MN and 1800MN at 375MW. These two zones may relate to dike like features that are well defined in the magnetic survey completed by Lalonde earlier.

**CONCLUSIONS AND RECOMMENDATIONS**

The VLF-EM survey was successful in locating and outlining at least 4 conductive horizons across the claim block. Previous geophysical surveys have defined good bedrock conductors across the same area. At least one of the zone, possibly Zone 3 has been drill tested and returned ore grade copper values across narrow widths.

The Warren ground to the south straddles an north striking contact between a mafic intrusive body and intercalated felsic and intermediate volcanic rocks. Chalcopyrite-pyrrhotite mineralization is mainly present in gabbro within a few hundred feet of the volcanic contact. Passed drilling of two zones has returned assays between 0.31 and 0.32 Cu and 0.19 and 0.10 Ni over average widths of 15.3 feet for a length of 400 feet.

Drilling by Morgain in 1996 in the area of VLF Zone 3, returned 3.62% copper over 1.5 feet with the best intercept being 10.8 feet grading 1.03% copper.

The price of copper has increased significantly since 1996 and the area should be covered completely with a detailed magnetic survey which should be followed up with an Induced Polarization, (IP), survey. These two methods should outline and define the conductive zones to depth that would aid in spotting a detailed drill program.

The Warren ground to the south of this claim group should also be considered in this follow up program.

Respectfully submitted

J.C.Grant, CET, FGAC.  
June, 2007



---

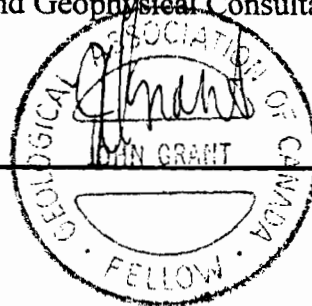
---

**CERTIFICATION**

I, John Charles Grant, of 108 Kay Crescent, in the City of Timmins, Province of Ontario, hereby certify that:

- 1). I am a graduate of Cambrian College of Applied Arts and Technology, 1975, Sudbury Ontario Campus, with a 3 year Honors Diploma in Geological and Geophysical Technology.
- 2). I have worked subsequently as an Exploration Geophysicist for Teck Exploration Limited, (5 years, 1975 to 1980), and currently as Exploration Manager and Chief Geophysicist for Exsics Exploration Limited, since May, 1980.
- 3). I am a member in good standing of the Certified Engineering Technologist Association, (CET), since 1984.
- 4). I am in good standing as a Fellow of the Geological Association of Canada, (FGAC), since 1986.
- 5). I have been actively engaged in my profession since the 15<sup>th</sup> day of May, 1975, in all aspects of ground exploration programs including the planning and execution of field programs, project supervision, data compilation, interpretations and reports.
- 6). I have no specific or special interest nor do I expect to receive any such interest in the herein described property. I have been retained by the property holders and or their Agents as a Geological and Geophysical Consultant and Contract Manager.

John Charles Grant, CET., FGAC.



APPENDIX A

# SCINTREX

## ENVI-MAG Environmental Magnetometer/Gradiometer

### Locating Buried Drums and Tanks?

The ENVI-MAG is the solution to this environmental problem. ENVI-MAG is an inexpensive, lightweight, portable "WALKMAG" which enables you to survey large areas quickly and accurately.

ENVI-MAG is a portable, proton precession magnetometer and/or gradiometer, for geotechnical, archaeological and environmental applications where high production, fast count rate and high sensitivity are required. It may also be used for other applications, such as mineral exploration, and may be configured as a total-field magnetometer, a vertical gradiometer or as a base station.

#### The ENVI-MAG

- easily detects buried drums to depths of 10 feet or more
- more sensitive to the steel of a buried drum than EM or radar
- much less expensive than EM or radar
- survey productivity much higher than with EM or radar

### Features and Benefits

#### "WALKMAG" Magnetometer/Gradiometer

The "WALKMAG" mode of operation (sometimes known as "Walking Mag") is user-selectable from the keyboard. In this mode, data is acquired and recorded at the rate of 2 readings per second as the operator walks at a steady pace along a line. At desired intervals, the operator "triggers" an event marker by a single key stroke, assigning coordinates to the recorded data.

#### True Simultaneous Gradiometer

An optional upgrade kit is available to configure ENVI-MAG as a gradiometer to make true, simultaneous gradiometer measurements. Gradiometry is useful for geotechnical and archaeological surveys where small near surface magnetic targets are the object of the survey.

#### Selectable Sampling Rates

0.5 second, 1 second and 2 second reading rates user selectable from the keyboard.

#### Main features include:

- select sampling rates as fast as 2 times per second
- "WALKMAG" mode for rapid acquisition of data
- large internal, expandable memory
- easy to read, large LCD screen displays data both numerically and graphically
- ENVIMAP software for processing and mapping data

ENVI-MAG comprises several basic modules; a lightweight console with a large screen alphanumeric display and high capacity memory, a staff mounted sensor and sensor cable, rechargeable battery and battery charger, RS-232 cable and ENVIMAP processing and mapping software.

For gradiometry applications an upgrade kit is available, comprising an additional processor module for installation in the console, and a second sensor with a staff extender.



ENVI-MAG Proton Magnetometer in operation

For base station applications a Base Station Accessory Kit is available so that the sensor and staff may be converted into a base station sensor.

#### Large-Key Keypad

The large-key keypad allows easy access for gloved-hands in cold-weather operations. Each key has a multi-purpose function.



Front panel of ENVI-MAG showing a graphic profile of data and large-key keypad

#### Large Capacity Memory

ENVI-MAG with standard memory stores up to 28,000 readings of total field measurements, 21,000 readings of gradiometry data or 151,000 readings as a base station. An expanded memory option is available which increases this standard capacity by a factor of 5.

#### Easy Review of Data

For quality of data and for a rapid analysis of the magnetic characteristics of the survey line, several modes of review are possible. These include the measurements at the last four stations, the ability to scroll through any or all previous readings in memory, and a graphic display of the previous data as profiles, line by line. This feature is very useful for environmental and archaeological surveys.

#### Highly Productive

The "WALKMAG" mode of operation acquires data rapidly at close station intervals, ensuring high-definition results. This increases survey productivity by a factor of 5 when compared to a conventional magnetometer survey.

#### "Datacheck" Quality Control of Data

"Datacheck" provides a feature wherein at the end of each survey line, data may be reviewed as a profile on ENVI-MAG's screen. Datacheck confirms that the instrument is functioning correctly and



allows the user to note the magnetic relief (anomaly) on the line.

### Large Screen Display

"Super-Twist" 64 x 240 dot (8 lines x 40 characters), LCD graphic screen provides good visibility in all light conditions. A display heater is optionally available for low-temperature operations below 0°C.



Close-up of the ENVI-MAG screen showing data presented after each reading

### Interactive Menu

The set-up of ENVI-MAG is menu-driven, and minimizes the operator's learning time, and on-going tasks.



Close-up of display of ENVI-MAG showing interactive set-up menu

## Specifications

### Total Field Operating Range

20,000 to 100,000 nT (gammas)

### Total Field Absolute Accuracy

+/- 1nT

### Sensitivity

0.1 nT at 2 second sampling rate

### Tuning

fully solid state. Manual or automatic, keyboard selectable

### Cycling (Reading) Rates

.5, 1 or 2 seconds, up to 9999 seconds for base station applications, keyboard selectable

### Gradiometer Option

includes a second sensor, 20 inch (1/2m) staff extender and processor module

### "WALKMAG" Mode

0.5 second for walking surveys, variable rates for hilly terrain

### Digital Display

LCD "Super Twist", 240 x 64 dots graphics, 8 line x 40 characters alphanumeric

### Display Heater

thermostatically controlled for cold weather operations

### Keyboard Input

7 keys, dual function, membrane type

### Notebook Function

40 characters, 5 user-defined MACRO's for quick entry

### Rechargeable Battery and Battery Charger

An "off-the-shelf" lead-acid battery and charger are provided as standard. The low-cost "Camcorder" type battery is available from electronic parts distributors everywhere.

### HELP-Line Available

Purchasers of ENVI-MAG are provided with a HELP-Line telephone number to call in the event assistance is needed with an application or instrumentation problem.

### ENVIMAP Processing and Mapping Software

Supplied with ENVI-MAG, and custom designed for this purpose, is easy-to-use, very user-friendly, menu driven data processing and mapping software called ENVIMAP. This unique software appears to the user to be a single program, but is in fact a sequence of separate programs, each performing a specific task. Under the menu system, there are separate programs to do the following:

- read the ENVI-MAG data and reformat it into a standard compatible with the ENVIMAP software
- grid the data into a standard grid format
- create a vector file of posted values

with line and baseline identification that allows the user to add some title information and build a suitable surround

- contour the gridded data
- autoscale the combined results of the posting/surround step and the contouring step to fit on a standard 8.5 ins. wide dot-matrix printer
- rasterize and output the results of step e) to the printer

ENVIMAP is designed to be as simple as possible. The user is required to answer a few basic questions asked by ENVIMAP, and then simply toggles "GO" to let ENVIMAP provide default parameters for the making of the contour map. The user can modify certain characteristics of the output plot. ENVIMAP'S menu system is both keyboard and mouse operable. HELP screens are integrated with the menu system so that HELP is displayed whenever the user requests it.

### Options Available

- True simultaneous gradiometer upgrade
- Base station upgrade
- Display heater for low temperature operations
- External battery pouch

### Standard Memory

Total Field Measurements: 28,000 readings  
Gradiometer Measurements: 21,000 readings  
Base Station Measurements: 151,000 readings

### Expanded Memory

Total Field Measurements: 140,000 readings  
Gradiometer Measurements: 109,000 readings  
Base Station Measurements: 750,000 readings

### Real-Time Clock

Records full date, hours, minutes and seconds with 1 second resolution, +/- 1 second stability over 12 hours

### Digital Data Output

RS-232C interface, 600 to 57,600 Baud, 7 or 8 data bits, 1 start, 1 stop bit, no parity format. Selectable carriage return delay (0-999 ms) to accommodate slow peripherals. Handshaking is done by X-on/X-off

### Analog Output

0 - 999 mV full scale output voltage with keyboard selectable range of 1, 10, 100, 1,000 or 10,000 nT full scale

### Power Supply

Rechargeable "Camcorder" type, 2.3 Ah, Lead-acid battery.

12 Volts at 0.65 Amp for magnetometer, 1.2 Amp for gradiometer,

External 12 Volt input for base station operations

Optional external battery pouch for cold weather operations

### Battery Charger

110 Volt - 230 Volt, 50/60 Hz

### Operating Temperature Range

Standard 0° to 60°C  
Optional -40°C to 60°C

### Dimensions

Console - 10 x 6 x 2.25 inches  
(250 mm x 152 mm x 55 mm)

T.F. sensor - 2.75 inches dia. x 7 inches  
(70 mm x 175 mm)

Grad. sensor and staff extender - 2.75 inches dia. x 26.5 inches (70 mm x 675 mm)

T.F. staff - 1 inch dia. x 76 inches (25 mm x 2 m)

### Weight

Console - 5.4 lbs (2.45 kg)  
with rechargeable battery

T. F. sensor - 2.2 lbs (1.15 kg)

Grad sensor - 2.5 lbs (1.15 kg)

Staff - 1.75 lbs (0.8 kg)

# SCINTREX

### Head Office

222 Snidercroft Road  
Concord, Ontario, Canada L4K 1B5  
Telephone: (905) 669-2280  
Fax: (905) 669-6403 or 669-5132  
Telex: 06-964570

### In the USA:

Scintrex Inc.  
85 River Rock Drive  
Unit 202  
Buffalo, NY 14207  
Telephone: (716) 298-1219  
Fax: (716) 298-1317