2.41017

GEOPHYSICAL REPORT
FOR
MR. DOUGLAS LALONDE
ON THE
HUNT, JAMIESON AND ROSS/OBRIAN MINE PROPERTIES
LYNDOCH, RAGLAN AND BROUGHAM TOWNSHIPS
SOUTHERN ONTARIO MINING DIVISION
RENFREW COUNTY, ONTARIO

Prepared by: J. C. Grant,
March, 2009

TABLE OF CONTENTS

ABSTRACT

The Hunt, Jamieson and Ross/Obrien properties generally lie to the east and west of the Spain Property that consists of the former Spain Molybdenite Mine property and the Legree Molybdenite Prospect. The Legree Prospect consists of only 2 small prospect pits, however the original Spain Mine property that started operation in 1912, has a large open cut, 2 shallow shafts and several pits and trenches.

A report written in 1925 mentioned that 28 tons of pure molybdenite had been extracted from the Spain mine workings by 1916 and that the stockpiled material was processed over the next few years with all development work on the property ceasing in 1919. The property lay dormant until the Second World War, when North American Molybdenite Corp. completed and extensive stripping, trenching and diamond drilling program that outlined a new Molybdenum, (Moly), deposit on the property reported to contain 5,200 tons of unknown grade. The property again lay dormant until the mid 1960's when New Far North Exploration Limited is reported to have re-sampled the original Spain workings, completed a Self Potential survey and diamond drilling. It was reported that this company completed 52 vertical drill holes outlining 18,000 to 20,000 tons of 1.67 % Moly in the K zone as well as the possibility of a further 4,500 to 5,000 tons of 1.0 to 1.5 % Moly remaining in the Spain open cut.

These resources estimates are historical in nature and are not National Instrument 43-101 compliant.

The Hunt Molybdenum Mine is a past producer located on the southern slope of Kennellys Mountain facing Condon Lake about 4 kilometers southeast of the Village of Mount St. Patrick. It lies within Lots 8 and 9, Concession 11 of Brougham Township. There is a cottage gravel road that provides access to the deposit. The property was operated as a mine from 1915 to 1918 by Renfrew Molybdenum, (Moly) Mines limited with a total production of 96,660 pounds of concentrate, 85 % of which averaged 95 % Moly. This would make the Hunt mine the largest producer of Moly in southeastern Ontario. All of the ore mined and milled was obtained from underground workings consisting of 1800 to 2000 feet of crosscuts and drifts on four levels between the depths of 40 to 150 feet and they are connected by 230 feet of shafts and raises.

The Jamieson Mine is located in Lots 5 and 6 of Lyndoch Township. The property can be reached from highway 41 at Griffith bridge by going northeast to a bridge crossing Highland creek and then by foot along and old trail for about 1 mile to the old workings on top of a hill. The mine was first worked in 1907 by R.A Jamieson and then again in 1915 to 1916 by the International Molybdenum Company Limited. There are no records of the ore extracted by Jamieson. During the latter part of 1915 about 80 tons of hand cobbed ore was sent to Orillia. The greatest part of this was cobbed to 20 or 30 % MoS2 and 1.5 tons was pure flake. In 1916 recorded shipments amounted to 73 tons of 3% ore and 12.5 tons of hand-cobbed ore assaying 18% MoS2. It is stated that in all a total of 285 tons of ore containing about 12,760 pounds of pure moly was taken from this mine. Besides this there is about 200 tons of 1% ore on the dump.

The Ross-Obrien mine property is located about 800 meters southwest of Jacktar Lake in Lots 16 and 17 Concession 11 and Lots 18 Concession 12 of Brougham Township. It is 6.25 miles by road from the Village of Mount St. Patrick. The original discovery was in 1908 and was then acquired and worked by M.J. Obrien from 1908 to 1915. In 1916 the International Molybdenum Company was formed and they shipped over 300 tons of hand-cobbed ore containing 3 to 6 % MoS2 to Ottawa and Orrilia. In 1942 to 1943 the Mount St. Patrick Molybdenite Syndicate completed surface work and 20 tons of ore was shipped to Quyon which yielded 423 pounds of MoS2. later during this same period 18 drill holes for a total of 1,000 feet was completed which indicated possible reserves of 2,000 tons of ore grading 1% MoS2. it has been estimated that 500 tons of ore was shipped from the property.

INTRODUCTION:

The services of Exsics Exploration Limited were retained by Mr. D. Lalonde to complete a total field magnetic and a VLF-EM survey across a selected group of grid lines that were compassed paced and flagged across a portion of their claim holdings in Raglan, Brougham and Lyndoch Townships that are situated 37 kilometers southwest of the Town of Renfrew in the amalgamated municipality of the Township of Greater Madawaska, Renfrew County, Ontario.

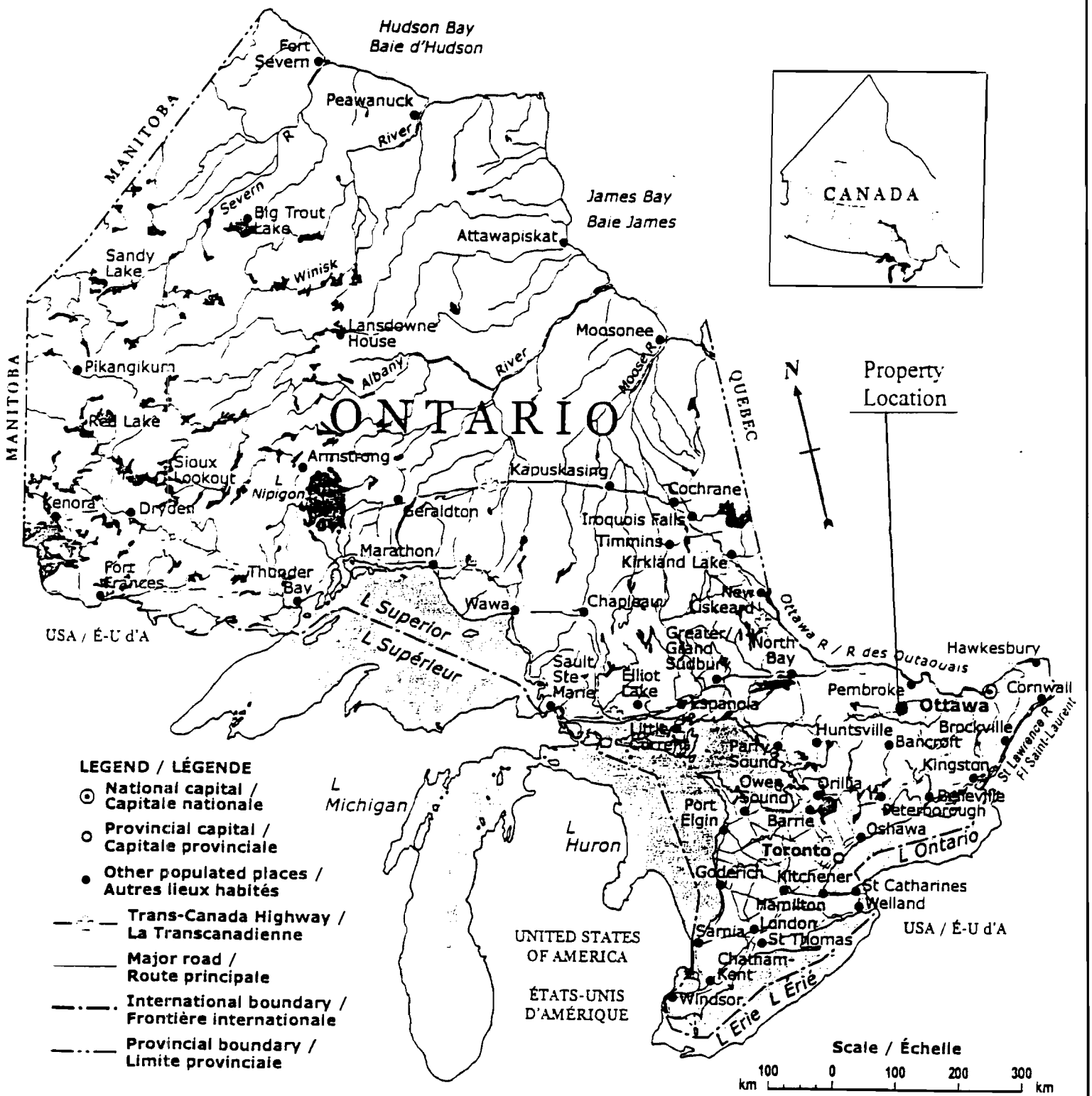
The property is generally underlain by a sequence of gneissic metasedimentary and alkalic intrusive rocks belonging to the Bancroft Terrain of the Central Medasedimentary Belt within the Grenville Structural Province of the Canadian Shield. The Haley Lake Fault, a northwesterly trending fault related to the Bonnechere-Ottawa Valley graben structure crosses through the central portion of the property.

PROPERTY LOCATION AND ACCESS:

The 3 mine Properties are located approximately 27 kilometers south of the Town of Eaganville and 37 kilometers southwest of the Town of Renfrew and it is cross cut by Highway 41. Renfrew is approximately 100 kilometers west of Ottawa, Renfrew County in the Province of Ontario. Refer to Figures 1 and 2.

The properties are accessible by traveling south from Eaganville for about 34 kilometers along Highway 41. This Highway generally cuts through the central portion of the north half of the Spain Property which generally lies in the middle of that area with the Jamieson mine to the west and the Ross-Obrien and Hunt mines lying to the east.

There are a series a good ATV and or drivable road that branches off of this highway and provide access to the individual mine sites. Refer to Figure 2 for the location of the individual mine properties.



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

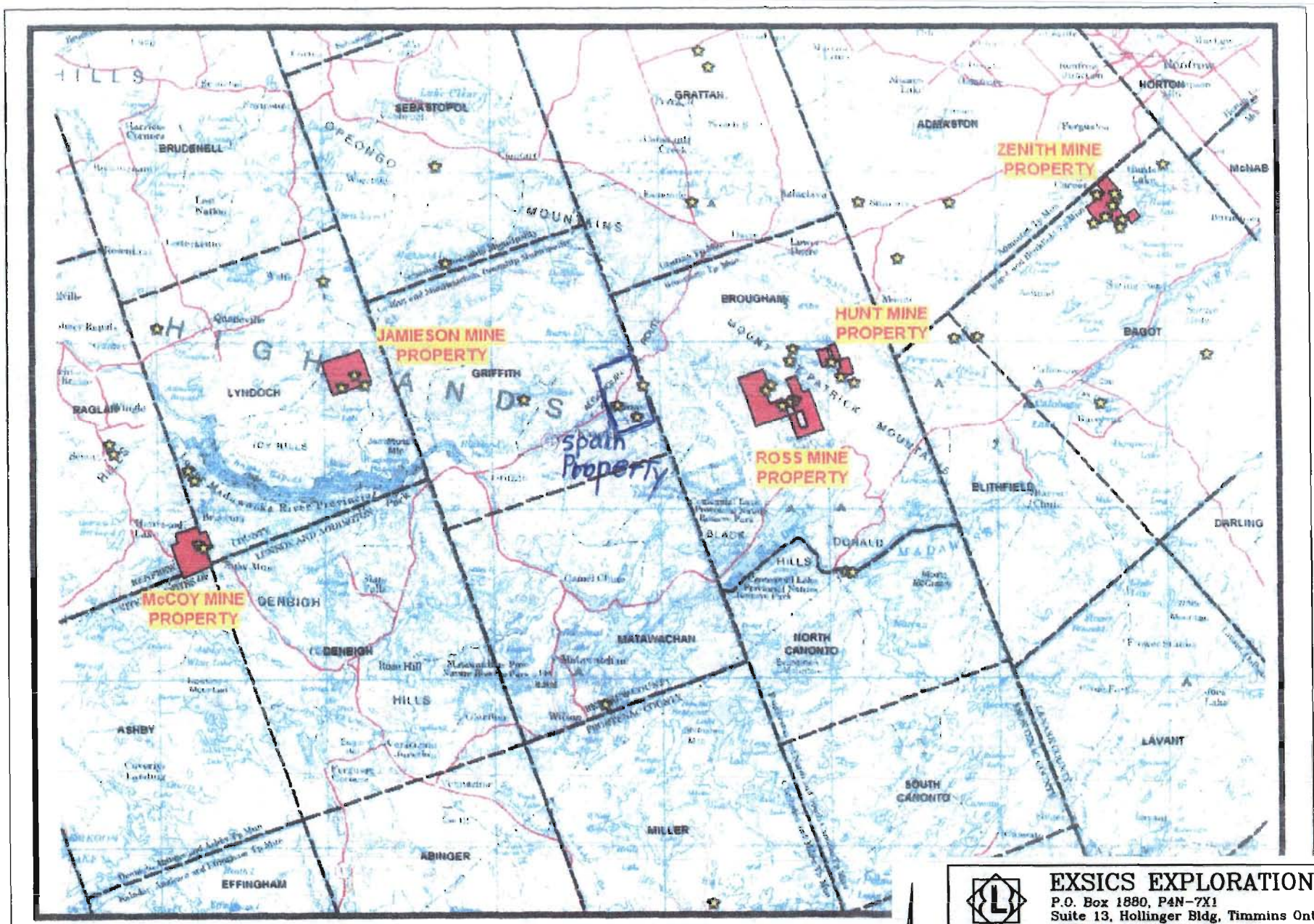
CLIENT: MR. DOUGLAS LALONDE

PROPERTY: JAMIESON, ROSS/OBRIEN & HUNT MINESITE PROPERTIES
LYNDOCH AND BROUGHAM TOWNSHIPS

LOCATION MAP

Fig. 1

Date: JUNE/07	Scale:	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:JAMIESON,ROSS/OBRIEN & HUNT MINESITE PROPERTIES
LYNDOCH AND BROUGHAM TOWNSHIPS

PROPERTY LOCATION MAP

Fig. 2

Date: JUNE/07	Scale:1:600,000	NTS:
Drawn:J.C.Grant	Interp: J.C.Grant	Job No.: DL01

CLAIM BLOCK:

The Properties consists of the following mining claims .

Ross-Obrien Mine:	4209574	7 units
Brougham Township	4216745	8 units
	4220791	4 units
Jamieson Mine:	4216747	12 units
Lyndoch Township	4216748	12 units
Hunt Mine:	4209575	2 units
Brougham Township	4209576	4 units
	4220798	4 units

Refer to Figure 3 copied from MNDM Plan Maps of Brougham and Lyndoch Townships for the location of the claims within the Townships.

PERSONNEL:

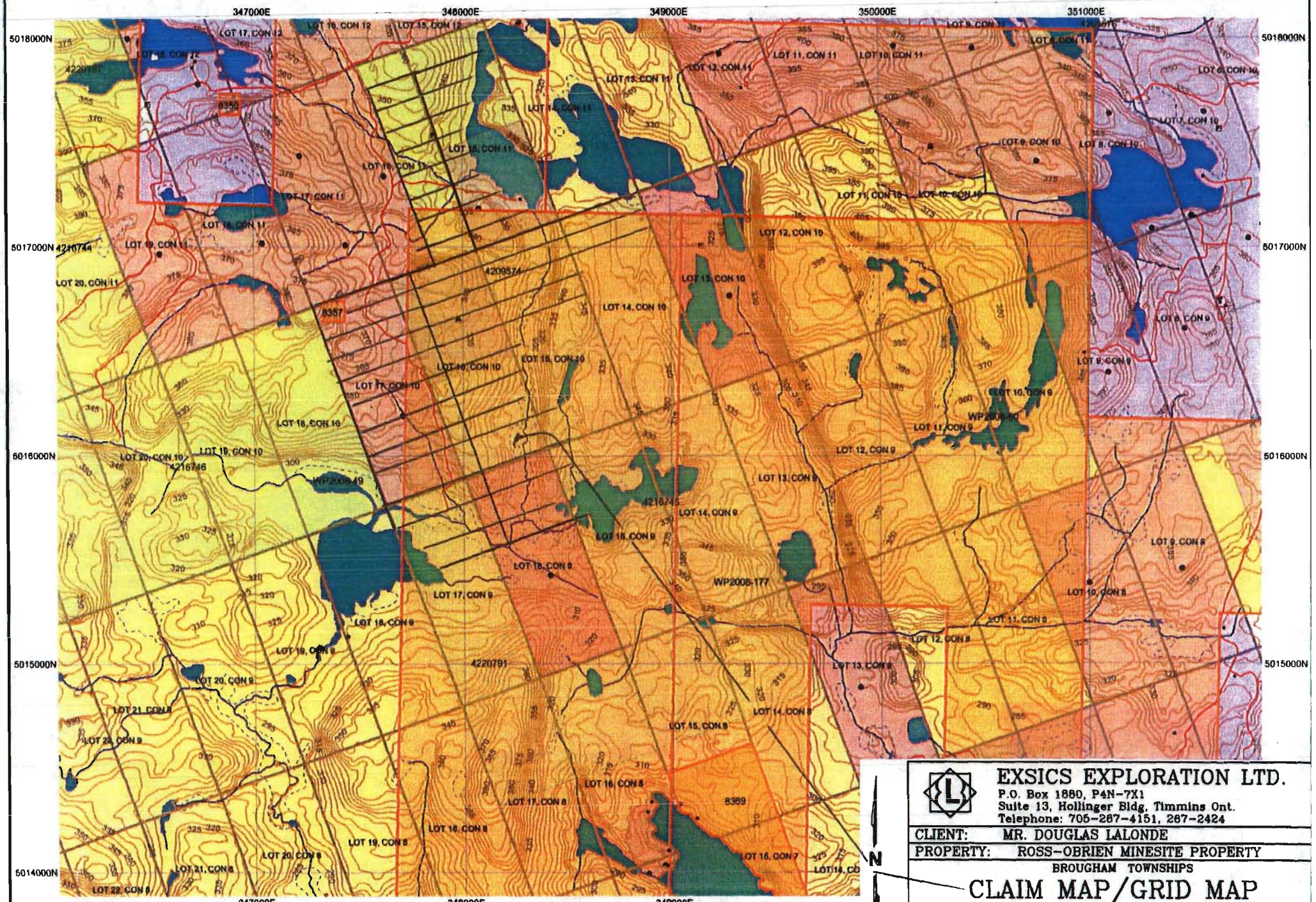
The field crew directly responsible for the collection of all the raw data were as follows.

E. Jaakkola	Timmins, Ontario
R. Bradshaw	Timmins, Ontario

The plotting, interpretation and report were completed by J. C. Grant of Exsics Exploration Limited.

GROUND PROGRAM:

The ground program consisted of a detailed total field magnetic survey that was done in conjunction with a VLF-EM survey. Both of these surveys were completed across grid lines that had been established across the properties by compass pace and flagging. The ground program commenced on the 10th of September and was completed on the 22nd of October 2008. The Hunt mine site was revisited between March 20th and 24th to complete a magnetic survey across the lake to the south of the original coverage. In all a total of 65 kilometers of grid lines and surveys were completed across the three grid areas. The kilometers covered on each of the grids are as follows.



UTM Zone 18
1000m grid

EXSICS EXPLORATION LTD.

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

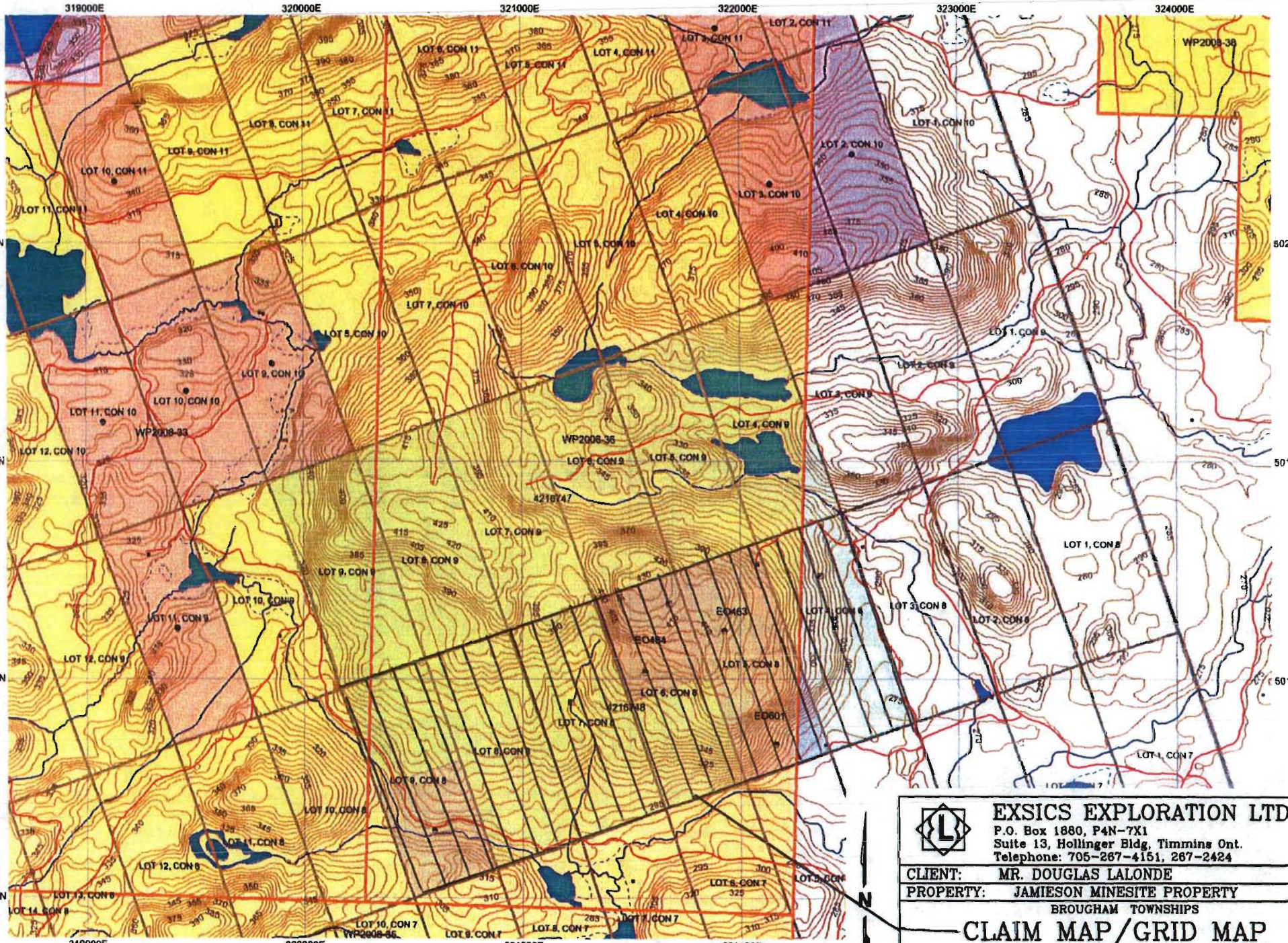
CLIENT: MR. DOUGLAS LALONDE

PROPERTY: ROSS-OBRIEN MINESITE PROPERTY
BROUGHAM TOWNSHIPS

CLAIM MAP/GRID MAP

Fig. 3a

Date: JUNE/07	Scale:1:60,000	NTS:
Drawn:J.C.Grant	Interp: J.C.Grant	Job No.: DL01



UTM Zone 18
1000m grid

EXSICS EXPLORATION LTD.
P.O. Box 1660, P4N-7X1
Suite 13, Hollinger Bldg, Timmins Ont.
Telephone: 705-267-4151, 267-2424

CLIENT: MR. DOUGLAS LALONDE

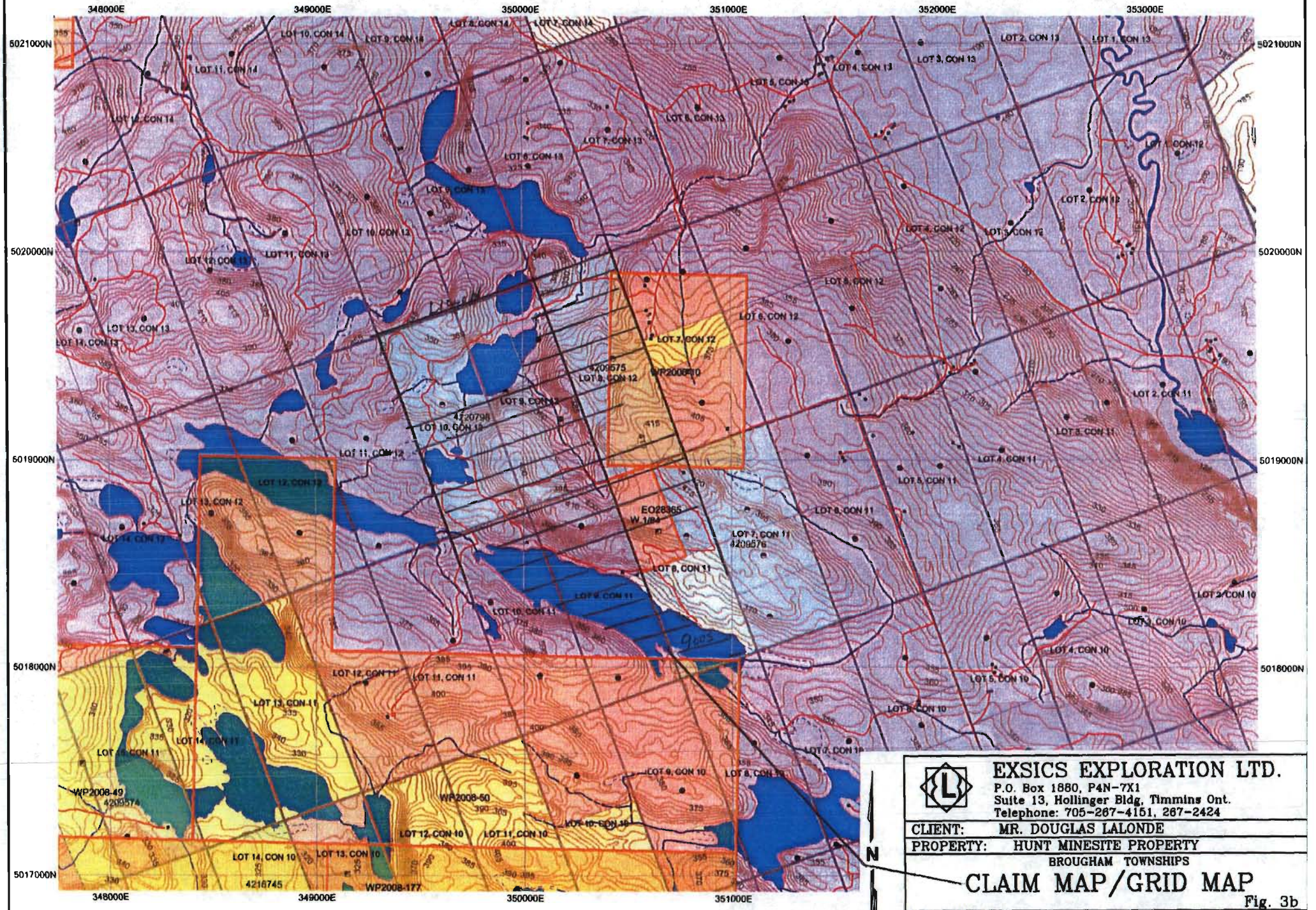
PROPERTY: JAMIESON MINESITE PROPERTY

BROUGHAM TOWNSHIPS

CLAIM MAP/GRID MAP

Fig. 3

Date: JUNE/07	Scale:1:60,000	NTS:
Drawn:J.C.Grant	Interp: J.C.Grant	Job No.: DL01



UTM Zone 18
1000m grid

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: HUNT MINESITE PROPERTY
BROUGHAM TOWNSHIPS

CLAIM MAP/GRID MAP

Fig. 3b

Date: JUNE/07	Scale:1:60,000	NTS:
Drawn:J.C.Grant	Interp: J.C.Grant	Job No.: DL01

Ontario
MINISTRY OF NORTHERN DEVELOPMENT AND MINES

- Home
- Mines and Minerals
- Northern Development
- News
- Site Map
- Contact Us

Mining Claim Client Reports
| Main Menu | Back |

SOUTHERN ONTARIO Mining Division - 156077 - LALONDE, DOUGLAS JOSEPH

Township/Area	Claim Number	Recording Date	Claim Due Date	Status	Percent Option	Work Required	Total Applied	Total Reserve	Claim Bank
BAGOT	4216740	2007-May-17	2009-May-17	A	100 %	$ 1,600	$ 0	$ 0	$ 0
BAGOT	4216741	2007-May-17	2009-May-17	A	100 %	$ 2,400	$ 0	$ 0	$ 0
BAGOT	4216742	2007-May-17	2009-May-17	A	100 %	$ 800	$ 0	$ 0	$ 0
BAGOT	4221805	2007-Aug-08	2009-Aug-08	A	100 %	$ 3,200	$ 0	$ 0	$ 0
BROUGHAM	4209574	2007-Mar-29	2009-Mar-29	A	100 %	$ 2,800	$ 0	$ 0	$ 0
BROUGHAM	4209575	2007-Mar-29	2009-Mar-29	A	100 %	$ 800	$ 0	$ 0	$ 0
BROUGHAM	4209576	2007-Mar-29	2009-Mar-29	A	100 %	$ 1,600	$ 0	$ 0	$ 0
BROUGHAM	4216744	2007-Mar-29	2009-Mar-29	A	100 %	$ 400	$ 0	$ 0	$ 0
BROUGHAM	4216746	2007-Mar-29	2009-Mar-29	A	100 %	$ 4,000	$ 0	$ 0	$ 0
BROUGHAM	4220791	2007-May-17	2009-May-17	A	100 %	$ 1,600	$ 0	$ 0	$ 0
BROUGHAM	4220797	2007-May-17	2009-May-17	A	100 %	$ 800	$ 0	$ 0	$ 0
BROUGHAM	4220798	2007-May-17	2009-May-17	A	100 %	$ 1,600	$ 0	$ 0	$ 0
LYNDOCH	4216747	2007-Mar-29	2009-Mar-29	A	100 %	$ 4,800	$ 0	$ 0	$ 0
LYNDOCH	4216748	2007-Mar-29	2009-Mar-29	A	100 %	$ 4,800	$ 0	$ 0	$ 0
LYNDOCH	4221801	2007-Aug-08	2009-Aug-08	A	100 %	$ 800	$ 0	$ 0	$ 0
RAGLAN	4221802	2007-Aug-08	2009-Aug-08	A	100 %	$ 1,600	$ 0	$ 0	$ 0
RAGLAN	4221803	2007-Aug-08	2009-Aug-08	A	100 %	$ 4,000	$ 0	$ 0	$ 0
RAGLAN	4221804	2007-Aug-08	2009-Aug-08	A	100 %	$ 4,000	$ 0	$ 0	$ 0

- Home
- Mines and Minerals
- Northern Development
- News

Jamieson Mine:	26.3 kilometers of grid lines and surveys
Ross-Obrien Mine:	21.1 kilometers of grid lines and surveys
Hunt Mine:	17.52 kilometers of grid lines and surveys.

Magnetic Survey:

The magnetic survey was completed over all of the grid using the Scintrex Envi Mag system. Specifications for the unit can be found as Appendix A of this report.

The following parameters were kept constant throughout that survey.

Line spacing	100 meters
Station spacing	25 meters
Reading intervals	12.5 meters
Diurnal monitor	base station
Base record intervals	30 seconds
Reference field	55,500 nT
Datum subtracted	55,000 nT,54000 nT Jamieson
Unit accuracy	+/- 0.1 gamma

Once the survey was completed the field data was corrected, leveled and then plotted directly onto a base map at a scale of 1:2500 for the Hunt and Ross-Obrien properties and 1:5000 for the Jamieson Property. A datum level of 55,000 gammas was removed from the Ross-Obrien and Hunt data and 54,000 gammas from the Jamieson data before it was plotted onto the base map. The data was then contoured at 50 gamma intervals on the Jamieson and Hunt properties and 25 gammas on the Jamieson property wherever possible. A copy of these contoured color base maps are included in the back pocket of this report.

VLF-EM Survey:

The VLF-EM survey was done in conjunction with the Magnetic survey using the same unit. Specifications for the unit can be found as Appendix A. The following parameters were kept constant.

Line spacing	100 meters
Station spacing	25 meters
Reading intervals	12.5 meters
Transmitting station	Cutler, Maine, 25.0Khz
Parameters measured	Inphase and Quadrature components Field strength and tilt angle
Parameters plotted	Inphase component.
Profile scale:	+/- 20%

Once the survey was completed the collected inphase data was then plotted directly onto a base map at the appropriate scales listed above and then profiled at 1cm = +/- 10%-20%. Any and all conductor axis were then placed directly onto these profiled base maps. A copy of these profiled maps are included in the back pocket of this report.

MAGNETIC AND VLF-EM SURVEY RESULTS:

The survey results for each of the mine site properties will be discussed separately and in detail.

JAMIESON MINE SITE GRID:

The Jamieson grid consisted of a baseline being established across the property at an azimuth of 50 degrees. Lines were then turned off of this base line at 100M intervals and compassed and chained to 1000MS. All of the lines were then chained with 25 meter station intervals. The grid lines commenced at 200ME and ran to 2500ME.

The magnetic survey was successful in outlining the geological characteristics of the grid areas. The magnetic and VLF-EM survey results suggest that the underlying structures generally trend northeast to southwest generally paralleling the azimuth of the base line. The intense magnetic high situated between 700ME and 1300ME represents a significant high that is cross cut by at least three well defined VLF zones. The high itself appears to truncate to the east where it seems to run into a fault zone represented by a magnetic low. This low can be traced from the north end of line 1400ME to 450MS where it then seems to wrap around the southern extension of the magnetic high. The VLF zones also appear to stop at this eastern magnetic low.

The magnetic high may originate to the southwest where it appears to strike into the grid at line 200ME at about 500MS and strike at 050 degrees to line 600ME and then into the large high mentioned above. There are two well-defined VLF zones on either side of this narrow magnetic high cutting across line 200ME to 600ME.

There is another magnetic low striking parallel to lines 1900ME and 2000ME that has cut off the magnetic high that covers most of the grid. A narrow high parallels line 2100ME which may suggest a second cross structure.

Generally the VLF survey reacted well to the expected geological structure with the majority of the good zones centered between lines 300ME and 1400ME. Geological interpretation from past reports suggest that the moly is associated with areas of semi massive and massive pyrite and pyrrhotite. These are both good targets for the ground survey methods used.

THE ROSS-OBRIEN MINE SITE GRID:

The Ross-Obrien grid consisted of compass, flagged and paced lines that were turned off of a tie line labeled 1100MW that was first done across the area at an azimuth of 170 degrees. The lines were turned off at 100 meter intervals from line 3600MN that represented the northern limits of the grid to line 2800MN. These lines were then chained from the base line to a lake that lies along the eastern edge of the grid.

A second tie line labeled 1200MW was then established from line 2700MN to line 1300MN which represents the southern limits of the grid. Cross lines were also turned off of this tie line at 100 meter intervals and they were chained from 1600MW to another series of lakes and creeks that lie along the eastern edge of the grid area. All of the paced lines were flagged with 25 meter station intervals.

The general geology of the mine site is that the deposit occurs within a sequence of intercalated marbles and mudstones and sandstones near the northern end of a small granitic intrusion. The rock units generally strike northwest and dip slightly to the north. The moly mainly consist of coarse flakes in narrow conformable and vuggy pegmatitic layers and lenses of quartz, microline, pyrite and pyrrhotite. The layers and lenses only occur in the gneiss.

The magnetic survey appears to have outlined the expected strike of the geological units. The main magnetic high unit is a good magnetic unit that can be traced from line 2400MN at the eastern edge to line 3100MN at the western edge. This high has a good albeit some what spotty VLF zone associated with its' entire strike length. This magnetic high unit may have been cross cut by a structure that runs from line 3100MN at the eastern edge of the line to line 3200MN at the western edge. The magnetic signature on this cross structure is a narrow low. The VLF zone also terminates at this cross structure or it may continue off of the grid to the northwest.

The magnetic high unit may extend past this cross structure and could be the narrow magnetic high unit that lies along the western ends of lines 3300MN to 3600MN. There is no VLF correlation with this high.

There is a good magnetic high building up on the eastern ends of lines 2500MN and 2600Mn that has an associated VLF zone but the strike of this unit could not be traced north or south due to the lake.

THE HUNT MINE SITE GRID:

The Hunt grid consisted of a detailed grid that was completed across the site by first establishing a base line across the property at an azimuth of 340 degrees. Cross lines were then turned off of this base line at 100 meter intervals from line 1000MN to and including 300MS. Lines 1000MN to 600MN were paced and flagged from 100MW to 400ME with the remainder of the lines being flagged and paced from 800MW to 800ME or to the limits of a thick growth of Juniper trees that was not accessible.

The survey crew returned to this property between the 20th and 24th of March 2009 to complete several lines across the lake to the south of line 300MS. Grid lines were again put in at 100 meter intervals from 300MS to and including 900MS to cover the lake only.

The main magnetic trend is about 335 degrees and this high can be traced from line 400MN at about 350MW to line 600MS at about 50MW. The north section of the magnetic high has an associated VLF-EM zone that generally lies along the western edge of the high.

The high is comprised of several narrow magnetic high lenses possibly comprised of pyrite and pyrrhotite mineralization.

There is another good magnetic high building up on the eastern ends of lines 700MN through to 1000MN and it continues off of the grid to the north. Several VLF zones correlate to this target and their strikes are open to the north and south.

CONCLUSIONS AND RECOMMENDATIONS:

The ground program was successful in locating and defining the areas of interest that appear to relate to the geological structures that are host to the Jamieson, Hunt and Ross-Obrien deposits. The VLF-EM and magnetic survey methods seem to be the best method to locate and follow the conductive horizons. Further work should consist of a detailed line cutting program that would then be covered with an Induced Polarization, (IP), survey to trace the conductive zones to their limits. The IP survey was completed across several grid lines on the Spain Mine site and the survey did outline the main EM zones and extended them to depth.

A detailed geological and or MMI survey should also be considered as a follow up to the initial IP surveys and to test the potential of strike extension to the main ore bearing zone.

Once this initial phase has been completed and interpreted then a follow up drill program should be considered to test the zones at depth.

Respectfully submitted

J.C. Grant, CET, FGAC
March 2009

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.

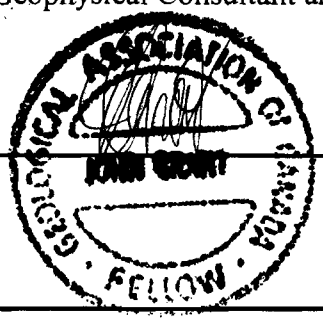
3). I am a member in good standing of the Certified Engineering Technologist Association, (CET), since 1984.

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 15th 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

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.

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

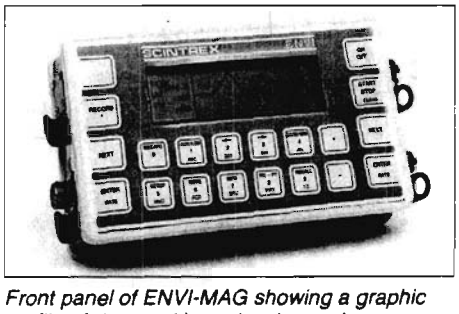
An optional upgrade kit is available to configure ENVI-MAG as a gradiometer to make true, simultaneous gradiometer measurements. Gradiometry is useful for geotechnical and archaeological surveys where small near surface magnetic targets are the object of the survey.

Selectable Sampling Rates

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

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.

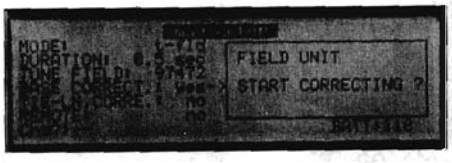
Large Screen Display

"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 Menus

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

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:

a) read the ENVI-MAG data and reformat it into a standard compatible with the ENVIMAP software
b) grid the data into a standard grid format
c) 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
d) contour the gridded data
e) 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
f) 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

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
0.5, 1 or 2 seconds, up to 9999 seconds for base station applications, keyboard selectable

Gradiometer Option
Includes a second sensor, 20 inch (½m) 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 alphanumerics

Display Heater
Thermostatically controlled, for cold weather operations

Keyboard Input
17 keys, dual function, membrane type

Notebook Function
32 characters, 5 user-defined MACRO's for quick entry

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