Geophysical Interpretation
and
Target Selection
Ni-PGE Exploration
Langmuir Township
Timmins Ontario

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submitted to
Liberty Mineral Exploration Inc.

by

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TABLE OF CONTENTS

1.0 Introduction 2

Sketch Map 1: Shaw Dome Study Area
Sketch Map 2: Langmuir Township Interpretation Area

2.0 Geophysical Data And Data Processing 2

2.1 Magnetic Data 2

2.2 EM Anomaly Database 6

2.3 Gravity Data 7

3.0 Regional Geology: Langmuir Township 13

4.0 Geophysical Interpretation And Target Selection: Langmuir Township 14

4.1 Geophysical Interpretation 14

4.2 Target Selection 15

Summary 22

References 23

Certificate: D.J. Misener Ph.D. P. Eng.

Appendix A: Landholders, Langmuir Township

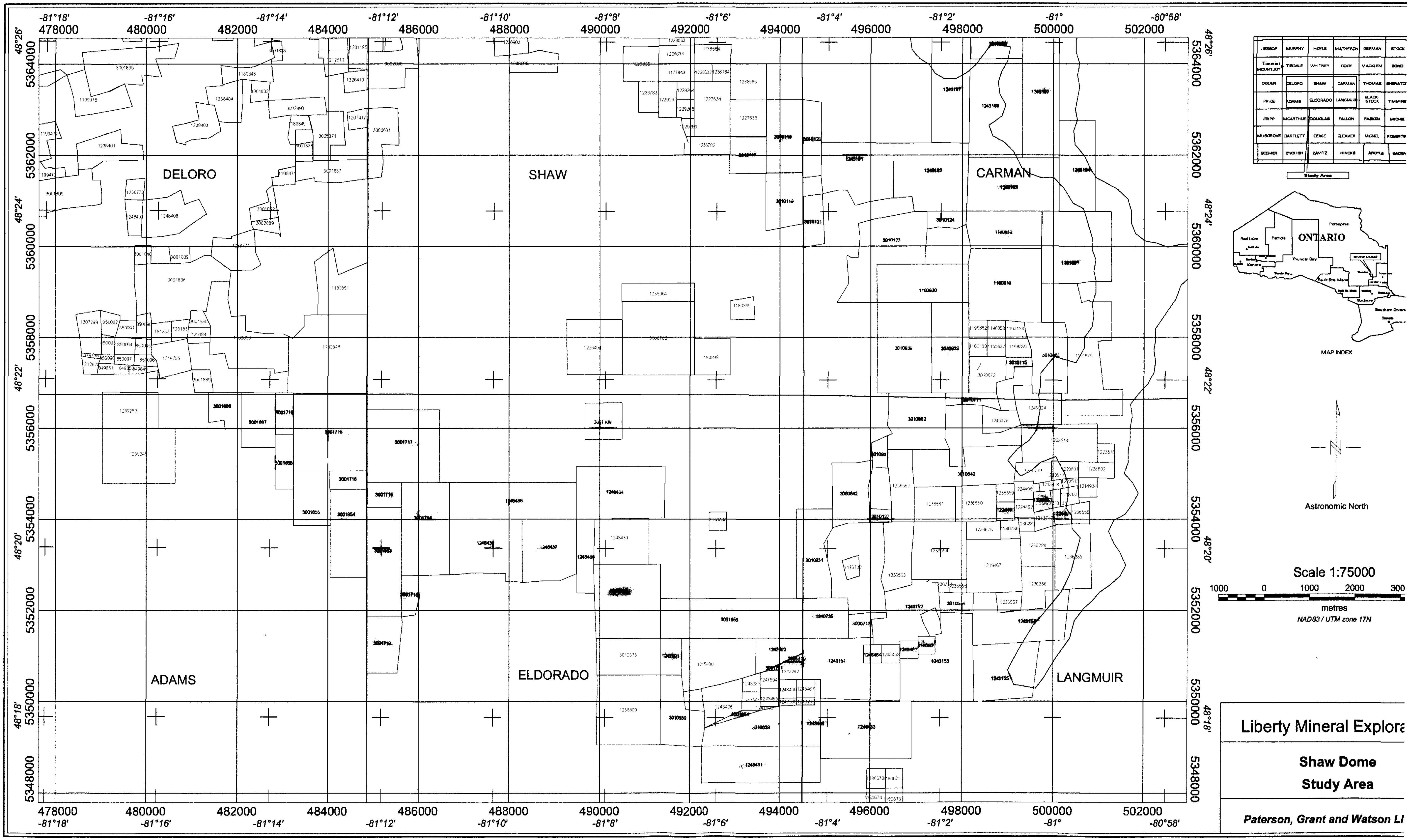
MAPS (in pocket)
1) Geophysical Interpretation and Target Selection: Langmuir Township
scale: 1:10,000

2) Airborne Magnetic and Electromagnetic Survey Lines and Electromagnetic Anomalies: Langmuir Township
scale 1:20,000

3) Total Magnetic Field: Langmuir Township
scale 1:20,000

4) Pole-Reduced First Vertical Derivative of Total Magnetic Field: Langmuir Township
scale 1:20,000

5) Analytical Signal of Total Magnetic Field: Langmuir Township
scale 1: 20,000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Astronomic North
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Shaw Dome
Study Area
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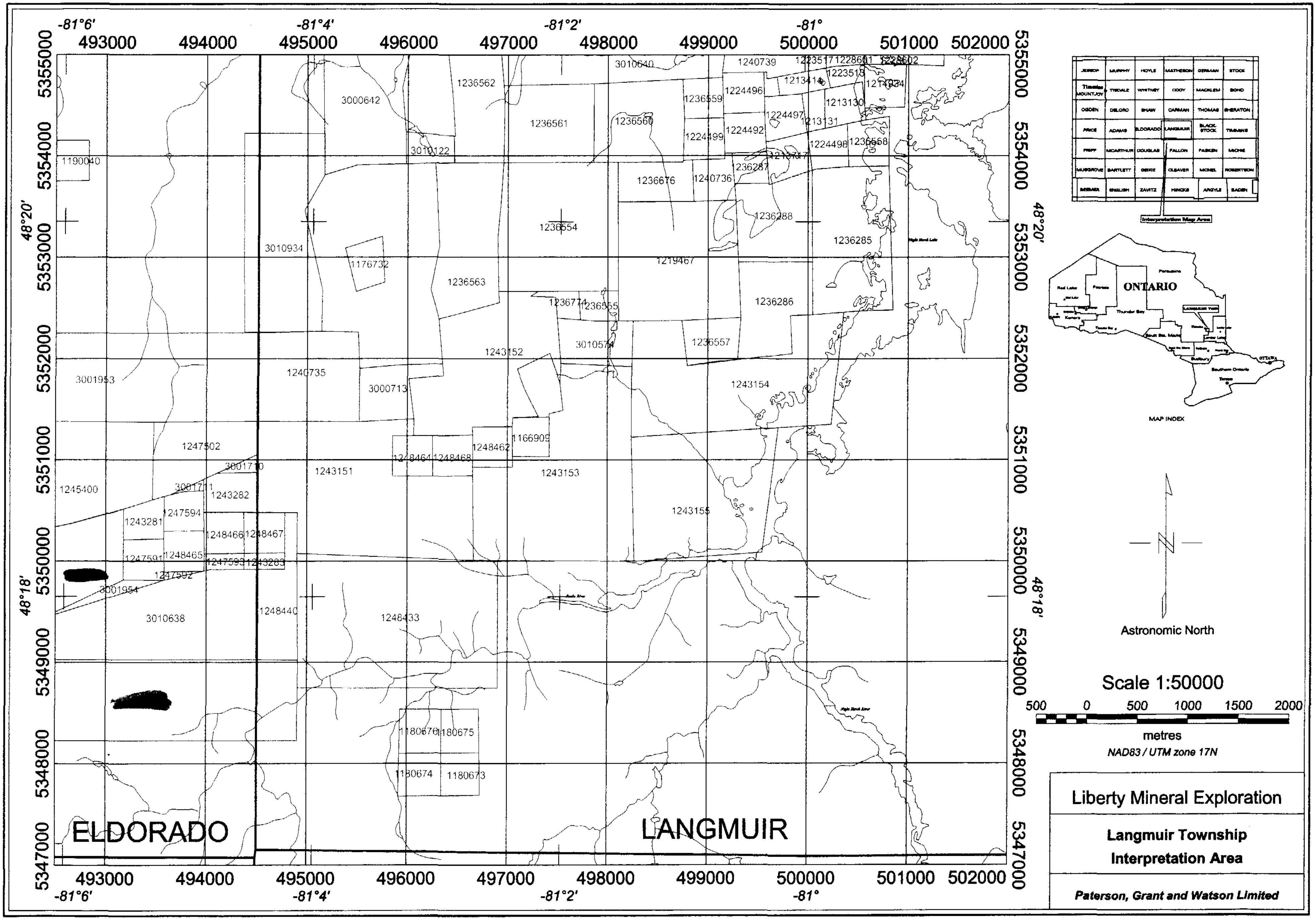

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LANGMUIR
ONTARIO
MAP INDEX
Astronomic North
Scale 1:50000
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metres
NAD83 / UTM zone 17N
Liberty Mineral Exploration
Langmuir Township
Interpretation Area
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1.0 INTRODUCTION

In March 2003, Paterson Grant & Watson Ltd. were contracted by Liberty Mineral Exploration Inc. (LME) to process and interpret geophysical data sets in the Shaw Dome area of Timmins, Ontario as part of an on-going program of Ni-PGE exploration being carried out by LME in the region.

The current report covers the geophysical data processing and interpretation over the Liberty Mineral Exploration claim holdings in Langmuir Township. The work was carried out between April and June, 2003. The mining claims covered in this report and the names and addresses of the land holders are included as Appendix A: Landholders; Langumuir Township to this report.

The location of the regional Shaw Dome study area is illustrated on Sketch Map 1 and the Langmuir Township Interpretation area is shown on Sketch Map 2.

The centre of Langmuir Township is approximately 30km southeast of Timmins, Ont. Access to Langmuir Township is by following Highway 101 east from Timmins to South Porcupine, then southeast through Shaw Township by all-weather road to the Shaw-Langmuir Township boundary.

The primary objectives of the current geophysical study in Langmuir Township were to:

i) Outline the structural, lithology and intrusive activity as interpreted from the airborne geophysics and correlated with surface mapping, and.

ii) Select favourable zones and specific target areas that exhibit an increased potential for Ni-PGE mineralization.

In total, six (6) target areas have been selected that warrant ground follow-up. Four of these targets are first priority and two are viewed as second priority for follow up. The specific positive attributes of each target area will be outlined briefly in the Interpretation Section.

2.0 GEOPHYSICAL DATA AND DATA PROCESSING

2.1 MAGNETIC DATA

The Shaw Dome area is covered by the Timmins MNDM areomagnetic survey.

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The survey details are as follows:

Contractor:	Geoterrex Ltd.
Type of Survey:	TDEM (GEOTEM)
Size:	31,521 line-km
Dates flown:	March 9 to April 15, 1987
Flight grid:	N-S lines at 200 m spacing 4 E-W control lines
Magnetometer	
Model:	VARIAN
Type:	Cesium vapour
Sensitivity:	0.01 nT
Sampling interval:	1 second
Installation:	Tail stinger
Aircraft	
Type:	CASA C-212
Average airspeed:	120 knots
Mean terrain clearance:	120 m
Magnetic sensor height:	120 m

The final magnetic data has been edited, IGRF removed, microlevelled and levelled to the GSC master grid. The final magnetic data sets are image quality and conform to the criteria described below. All reprocessing corrections are incorporated into the profile data as well as the final grids.

Editing of Magnetic Data

The original magnetic profiles were viewed and edited for spikes, discontinuities, or other noise attributable to problems with the measuring and recording instruments and/or digitizing errors.

IGRF Removal

An IGRF grid was calculated for the survey area and year based on coefficients supplied by the United States National Geophysical Data Center. The IGRF grid was calculated at 1 km cell size and then extracted to the profile data using cubic spline interpolation between grid points. The extracted IGRF values were then subtracted from the magnetic data values to give the IGRF corrected profile data. Both the IGRF values and the IGRF -corrected survey data are stored in the magnetic profile database.

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Micro-Levelling

Micro-levelling (Minty, 1991) was applied to remove low-amplitude flight line noise that remained in the magnetic data after tie line levelling by the original survey contractor. In this process a level correction channel is calculated and added to the profile database. This correction is then subtracted from the original data to give a set of levelled profiles, from which a levelled grid may then be generated. Micro-levelling has the advantage over standard methods of decorrugation that it better distinguishes flight line noise from geological signal, and thus can remove the noise without causing a loss in resolution of the data. Noise due to flight line level drift has been removed so that the background level of line noise visible in magnetically quiet areas is no more than 1 nT. The micro-levelling process is described below.

First the edited and IGRF-corrected profile data is gridded, with a cell size equal to 1/5 of the flight line spacing. Then a directional high-pass filter is applied in the Fourier-domain, to produce a grid known as the decorrugation noise grid, since it contains the noise to be removed from the data for decorrugation purposes. The decorrugation noise filter is a sixth-order high-pass Butterworth filter with a cutoff wavelength of four times the flight line spacing, combined with a directional filter. The directional filter coefficient as a function of angle is $F = \sin 2a$, where a is the angle between the direction of propagation of a wave and the flight line direction (i.e. F=0 for a wave travelling along the flight lines, and F=1 for a wave travelling perpendicular to them). This is the opposite of what is usually called a decorrugation filter, since the intention here is to pass the noise only, rather than reject it.

The decorrugation noise grid will contain the line level drift component of the data, but it will also contain some residual high-frequency components of the geological signal. Flight line noise appears in the decorrugation noise grid as long stripes in the flight line direction, whereas anomalies due to geological sources appear as small spots and cross-cutting lineaments, generally with a higher amplitude than the flight line noise, but with a shorter wavelength in the flight line direction. The noise and the geological signal can be separated on the basis of these two criteria, i.e. amplitude and wavelength in the flight line direction. The operator examines the noise grid and estimates the maximum amplitude and minimum wavelength of the flight line noise. The noise grid is then extracted as a new channel in the database. Next, amplitude limiting is applied to this channel, such that any values exceeding the estimated maximum amplitude of the flight line noise are set to zero. Finally, the amplitude-limited noise channel is filtered with a Naudy non-linear low-pass filter (Naudy and Dreyer, 1968). The filter width is set so that any features narrower than half the estimated minimum wavelength of the flight line noise are eliminated.

What remains at the end of all these filtering steps should be the component of line level drift only. This is then subtracted from the original data to give a better levelled set of profiles.

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In the Timmins survey it was difficult to separate flight line noise from geology in this survey since there were many dikes running North-South, parallel to the flight lines. These often produced low-amplitude linear magnetic anomalies which would run for some distance along a single flight line. Since they were so similar in character to the flight line noise, it was difficult to filter out the noise without removing these dikes as well. The best compromise between signal and noise removed was achieved with an amplitude limit of 20 nT for the removed noise and a Naudy filter length of 2000 metres.

Levelling to Ontario Master Aeromagnetic Grid

The magnetic data is adjusted to the base level of the Ontario Master Aeromagnetic Grid, a linked and levelled magnetic reference grid at 200 m cell size and 300 m drape height for all of Ontario (Reford et al., 1990; Gupta et al. 1989). This has been done for the sake of consistency, so that adjacent surveys can be linked together seamlessly, and all of the survey data from this project can be conveniently linked with existing magnetic survey coverage in other areas. The base-level adjustment was applied as follows: The survey data was gridded at 200 m cell size and upward continued to 300 m observation height to match the Ontario grid. The difference of the two grids was computed, and then smoothed with a 15-km-wavelength low-pass filter. This low-frequency difference grid was then extracted to the profile database and subtracted from the original survey data values, to bring the survey to the same base level as the Ontario grid. After the base shift has been applied, the reprocessed magnetic profiles and grids are still effectively at the same observation height as the original data, so that no resolution is lost.

Gridding of Magnetic Data

The magnetic data was windowed to the Shaw Dome region. The window extents are 474400 to 505600 metres Easting and 5347000 to 5370600 metres Northing. The datum and projection of the data is NAD83 and UTM 17 N, respectively.

The final microlevelled, GSC levelled data channel (fmagontl) was gridded using a minimum curvature gridding algorithm with a grid cell size of 40 metres. Other gridding parameters are a starting search radius of 640 metres, starting coarse grid of 8, blanking distance of 300 metres and a tolerance of 0.001. The total magnetic intensity grid was regridded to 20 metres so that contours plotted at 1:10,000 would have a smooth appearance.

Enhanced Grids

The total magnetic field reduced to the pole was calculated in the Fourier domain with a magnetic inclination of 75.56°, declination of –10.97°, and phase amplitude of 20°.

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The first vertical derivative of the pole reduced field was calculated in the Fourier domain with a Butterworth filter of 200 metres to remove high frequency noise. The second vertical derivative of the pole reduced field was also calculated in the Fourier domain with a Butterworth filter of 200 metres.

The analytic signal is the square root of the sum of the squares of the 3 derivatives of the magnetic field in the x, y, and z directions. The x and y derivatives are calculated in the spatial domain and the z derivative is calculated in the Fourier domain.

2.2 EM ANOMALY DATABASE

Historically, the OGS EM surveys were focused on base metal exploration in the greenstone belts. In order not to detract from this objective, the original contractors compiling the EM anomaly database, were requested not to display the EM response from surficial/overburden conductors on the EM anomaly maps. This resulted in criticism from the users of the published maps, since incomplete EM information on the maps led to sometimes inappropriate methods or survey specifications for ground follow-up and could also lead to missing a valid weak or deep conductor which could have been initially misinterpreted as a surficial source. In the current project, from the revised and base level corrected electromagnetic channels, all anomalous EM responses have been picked. This has resulted in an increased number of anomalies than shown on the published OGS maps. The separation of bedrock from surficial response is both subjective and interpretive. The interpretation of the EM anomaly's significance is dependent upon the type of target sought, it's relationship to the geology, associated geochemical or magnetic responses, etc. The deletion or even the classification of anomalies based upon the EM response alone is not only inappropriate but possibly misleading. Therefore all anomalies have been represented in the database. Classification is interpretation which is best left to the user of the data; however, in the present case the sub-classifications of cultural, surficial, and normal (bedrock) responses has been done.

The University of Toronto Plate programme, with some modifications, is used to compute the theoretical secondary field response produced by various common geological models, relating amplitude and decay rate of the secondary field to the conductivity-thickness and depth of the causative body. For base metal exploration in greenstone belts, typically a vertical plate model (600 m strike length by 300 m depth extent) is used as the model for anomaly fitting. The anomaly selection routine scans the amplitude, width and decay of each anomaly simultaneously. Having located an anomaly (from its peak value), the routine computes the conductivity-thickness product and the depth to the top of the plate below surface. With reference to a provisional EM anomaly map, the selection is then studied on a graphic screen by an experienced geophysicist to ensure that all valid anomalies have been selected. Any errors in the automated anomaly selection are

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corrected directly via a graphic screen editing routine. After reprocessing of the data, all anomalies (even if only affecting the 1st off-time channel) were identified with the following information (when applicable) stored in the anomaly database:

- Flight number;
- Line number;
- Line part number;
- Line heading;
- Anomaly type;
- Anomaly identifier;
- Fiducial position of conductor axis;
- Latitude;
- Longitude;
- UTM Easting;
- UTM Northing;
- Flying altitude above ground;
- Amplitude of initial picking channel (ppm);
- Amplitude of a later reference channel (ppm);
- Number of channels affected above background noise;
- Derived conductivity-thickness-product (siemens);
- Derived depth below surface to the top of the source;
- Computed decay constant value;
- Computer apparent resistivity value.

The information contained in the updated anomaly database was plotted and verified against the original published OGS maps to ensure that all the original anomaly information had been retained and to control the amount of new information being added.

The EM anomalies were classified according to the conductance intensity. Variously filled circles represent bedrock conductors. Anomalies classified as surficial and cultural are represented by an asterisk and box, respectively.

2.3 GRAVITY DATA

The gravity point data for the Shaw Dome area was windowed from the Timmins Collaborate Gravity Survey Project (Miscellaneous Release – Data 79) using the same window extents as the magnetic data. The number of gravity stations within this window is 494.

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Survey Specifications

General

Abitibi Geophysics completed a regional gravity survey in the Timmins area on behalf of the TCGSP. A total of 1855 stations were read between February 7 and March 31, 2001. The survey was planned on a 1 km x 1 km grid. The planned survey was completed as far as the bush conditions allowed with a reasonable amount of effort. The stations were read with a gravity meter and their positions were measured with differential GPS.

Location and Access

The TCGSP was carried out in an area bounded by UTM zone 17 (NAD27) coordinates 440588mE, 500264mE, 5344268mN, and 5396103mN. The following townships are covered, at least in part, by the survey:

Loveland	MadDiarmid	Kidd	Wark	Gowan	Robb
Jamieson	Jessop	Murphy	Hoyle	Turnbull	Godfrey
Mountjoy	Tisdale	Whitney	Carscallen	Bristol	Ogden
Deloro	Shaw	Denton	Thorneloe	Price	Adams
Eldorado	Evelyn	Matheson	Cody	Carman	Langmuir
Whitesides					

The survey area falls is in the James Bay watershed and is generally flat, except on riverbanks, hills, and on the edges of tailings dams and waste piles. The Mattagami River crosses the area from south to north. The notable lakes are the Kenogamissi, Kamiskotia, and Night Hawk.

Highway 101 crosses the area from SW to NE. Road 655 connects Highway 101 with Highway 11 to the north, and road 144 extends south from Highway 101 in the southwest portion of the survey area. There is a paved road between Lake Kamiskotia and Highway 101. With plowed secondary roads, gravel roads and logging roads, there is vehicle access to most of the townships, but not all. A major snowmobile trail passes through Godfrey, Turnbull, and Carscallen townships.

Some of the stations were accessible by truck on paved highways, secondary roads, and logging roads. Snowmobiles were used to access the remainder of the stations. Permission was obtained for access to the following sites: Dome Mine, Kinross Mine, Kidd Creek Met Site, Kidd Creek Mine, Timmins Airport.

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The distribution on the measurements was not even over a 1 x 1 km grid because access by snowmobile was impeded by the absence of roads in areas of thick bush, and also by uncrossable rivers and streams.

Survey Equipment and Personnel

Gravity Instrumentation

Gravity Meters:	Scintrex CG3 – serial #X0404, #X0484, #X0344
Reading Resolution:	0.001 mGal
Minimum Operating Range:	8000 mGal
Residual Long-term Drift:	Less then 0.02 mGal per day
Typical Repeatability:	Less than 0.01 mGal standard deviation
Range of Auto Tilt Correction:	± 200 arc sec
Dimensions:	240 mm x 310 mm x 320 mm
Weight:	11 kg, with standard battery
Noise Rejection:	Rejects samples of more than 4 standard deviations

GPS Instrumentation

Receivers :	Leica System 500, Type SR530 Serial #0032900, #0033177, #0033184
Radio Modem, base:	Pacific Crest RFM6W – Power 35W – Serial #00267065
Antennae:	Leica AT502 – Serial #4854, #2458, #3907

The user interface to the Leica System 500 is a keypad with an LCD display. The data are recorded on PCM cards. These cards are removed at the end of the survey day and inserted into a computer to transfer the data.

Project Personnel

Overall TCGSP project management was carried out by Mr. Roy Cooper, of the Ontario Ministry of Northern Development and Mines. The following personnel from Abitibi Geophysics were involved with the survey:

Mr. Dennis Palos, Geophysicist	Crew chief and gravity data processor
Mr. Sylvain Allard, Surveyor	Gravity, GPS surveys and GPS processor
Mr. Martin Dubois, Geophysicist	Gravity and GPS surveys
Mr. Bruno Chartrand, Technician	Gravity and GPS surveys
Mr. Denis Leclerc, Technicien	Area reconnaissance and GPS surveys

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Mr. Herbert Pribil, Technician	Area reconnaissance and gravity surveys
Mr. Mario Chouinard, Technician	Gravity and GPS surveys
Mr. Marco Chouinard, Helper	Reconnaissance and surveys

Data Acquisition

On January 25, prior to the survey, a calibration run was made from the Timmins airport to Monteith on Highway 11 and on to Haileybury, and then back again. During this run, the TIMMINS HOUSE base was tied between the airport and Highway 11 with three instruments. On March 11, the TIMMINS HOUSE base was tied to the airport a further eight times. On March 31, a final calibration line was run. The TIMMINS HOUSE base was used for the whole gravity survey. It is located in the corner under the stairs of the townhouse at 626 Riverpark Road, unit 28, in Timmins.

Three gravity meters were used for the survey. The GPS survey was carried out with one base station receiver and two roving receivers. Four GPS base stations were used during the course of the survey. One additional base station was established to check the closure between two of the other base stations.

Each loop began and ended with a reading at the TIMMINS HOUSE gravity base station. The gravity base station readings were used to calculate the instrumental drift, and the drift correction was applied linearly to the gravity data in the loop.

Topographic maps, vehicle odometers, and handheld GPS units were used to navigate to the stations. Once a station location was chosen, the GPS antenna was set up on a tripod. The distance was measured between the antenna and the base of the gravity meter's tripod, to 1 millimeter precision, and was entered on the keypad.

Most of the GPS readings were taken in rapid-static mode. Readings were recorded for a period of about 5 minutes, and post-processed with the base station data to obtain the final position. The mobile and base units record information simultaneously every 5 seconds for the duration of the reading. During the static reading, the receiver displays the Position Dilution Of Precision, the PDOP, which indicates the quality of the reading. Readings were taken until the PDOP fell to less than 3. If the PDOP did not fall to this level, the reading was extended to over 5 minutes.

A few stations were located where a radio link could be established with the base station. In these cases, if the base and mobile units were receiving data from a sufficient number of satellites, the stations were read in real time.

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The following sequence was observed in taking gravity measurements. The gravity meter was placed on its tripod and levelled. Then the reading was started, while operator stayed still to avoid inducing motions in the ground that could adversely affect the gravity reading. The reading lasted until 120 samples were automatically recorded at a one second rate. During the measurement, the operator observed the levels to make sure that the instrument stayed level. The operator also ensured that the standard deviation was within reason given the local station conditions. If the reading did not achieve the required accuracy, the reading was repeated until an accurate measurement was achieved. The reading was then recorded in the instrument memory and in a field book. Water depths for Porcupine Lake were measured from the top of the ice to the bottom of the water and recorded in the notebook.

At the end of the loop, the GPS data were transferred to a computer and processed after each survey day with the SSKI-pro (ver 2.0) GPS processing software from Leica. The readings taken in real time did not require further processing. For the rapid static readings, the time-tagged information recorded by the mobile receiver and the base receiver were processed and the coordinates were calculated. The data was exported from the Leica processing system to an ASCII file for use by the gravity survey processing system.

After each survey day, the gravity data were downloaded from the CG-3 gravity meter through an RS232 cable to a computer's serial port. Verification and processing of the results on the field computer were carried out using the pcgravVB510 gravity data processing system from the Geodetic Survey Division of Geomatics Canada.

There were 58 station repetitions during the course of the survey. The average repetition error was 0.048 mGal with a standard deviation of 0.053 mGal. 97 loops were required to complete the survey. The closures have an average of 0.020 mGal with a standard deviation of 0.037 mGal. These closures are acceptable given the field conditions and mode of transport of the equipment.

Gravity Data Processing

Data Reduction

The quality assurance, quality control and reduction of the gravity data provided in this MRD were carried out by Natural Resources Canada - Geomatics Canada. In-field quality control and project management were provided by the Ontario Ministry of Northern Development and Mines. The gravity measurements have been processed according to the standards set forth by the International Gravity Standardization Net 1971 (IGSN71) and the Geodetic Reference System 1967 (GRS67); see Woolard, 1979) for inclusion in the National Gravity Data Base. The Bouguer gravity values were derived using a vertical gravity gradient of 0.3086 mgal/m and a crustal density of 2.67 g/cm^3. Terrain corrections were

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applied to 6 of the new data points. For the remainder of the stations, the terrain correction fell well within the noise envelope.

The quality validation of the newly collected data resulted in the identification and subsequent deletion of a total of 9 questionable stations from the pre-existing National Gravity Database. These stations are identified by project number and station number as follows:

project 1951001, stations 5101, 5107, 5110, 5112 & 5122
project 1963014, stations 3504 & 3509
project 1964006, stations 13503 & 13512

References for these points in the Ontario Single Master Gravity Database are as follows:

Line	Station
4828	27469
4834	27797
4841	28211
4842	28271
4845	28982
4862	30871
4865	31092
4866	31175
4868	31269

The errors in the deleted stations could be due to less accurate position or elevation determinations or to reworking of the terrain in the area. A few survey points were removed since they were very close and very similar to other survey points without being listed as actual repeat measurements.

The accuracy of the positional and gravity measurements were carried through the reduction process to provide a measure of the accuracy of the Bouguer gravity. All of the new measurements carry an accuracy of +/- 0.19 mGal or less.

Gridding

The Bouguer gravity data was gridded using a minimum curvature gridding algorithm with a grid cell size of 100 metres, a blanking distance of 5000 metres, and a tolerance of 0.01 mGals.

The first vertical derivative of the Bouguer gravity was calculated in the Fourier domain. The grid was also upward continued 300 metres to smooth out some of the noise.

The horizontal gradient of the Bouguer gravity was calculated from the x and y derivatives of the Bouguer gravity in the Fourier domain.

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3.0 REGIONAL GEOLOGY: LANGMUIR TOWNSHIP

The detailed study area in Langmuir Township, as defined by LME, comprises the southern three-quarters of the township area. As currently mapped, the area is underlain by alternating sequences of tholeiitic and komatiitic metavolcanics and metasediments striking northeast-southwest in the western and central parts of the township and bending to a nearly north-south strike in the Night Hawk Lake area as the sequence follows the edge of the Shaw Dome.

Within the metavolcanic sequences, two gabbroic intrusives have been mapped; one southeast of the Langmuir No. 1 showing and the other southsouthwest of the Galata showing. The other major intrusive activity, as mapped, is the Shaw Dome hornblende trondhjemite occurring in the northwest corner of the sheet, and extending as far east as the northwest-southwest striking Montreal River fault.

Structurally, the major fault on the Langmuir sheet is the previously noted Montreal River fault. Numerous north-south striking diabase dikes have been mapped as cross cutting the underlying volcanics and these features are probably associated with north-south faulting. As on the Eldorado sheet to the west, major right-lateral motion shear faults have been noted within the calc-alkaline and tholeiitic volcanics and in two cases these faults form contacts between the komatiites and the surrounding calc/alkaline sequences.

Two "bands" of mineral occurrences have been discovered in Langmuir township. The northernmost band of Au, Cu, Ag and Ni deposits (Galata, Langmuir No. 1, Bishop Claims and Langmuir No. 2) lie along a north northeast trending line, at komatiite/calc-alkaline volcanic contacts. The southern band of predominately Ni deposits (McWatters and First Nat.) are also associated with komatiite/calc-alkaline volcanic contacts.

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4.0 GEOPHYSICAL INTERPRETATION AND TARGET SELECTION

4.1 GEOPHYSICAL INTERPRETATION

The processing of the geophysical data, in particular the generation of the analytic signal and the first vertical derivative of the total magnetic field, has facilitated a detailed interpretation of the underlying lithology, and structure of the Langmuir Township Sheet. In addition, known mineral occurrences have been correlated with distinctive geophysical signatures that reflect important, or controlling geological criteria for sulphide and precious metal deposition.

In addition to the interpreted structure and lithology, known drill hole locations, known mineral occurrences and interpreted axes of airborne electromagnetic conductors have been included on the Geophysical Interpretation and Target Selection map.

For the Langmuir Sheet, the detailed structural and lithological interpretation has resulted in the clarification of the following salient features:

i) The current geological mapping has noted the major NW-SE striking Montreal River fault, a number WNW-ESE cross faults at the south end of Night Hawk Lake and two major right-lateral shear faults within the metavolcanic package. The detailed geophysical interpretation has confirmed these structures and has exhibited a much more complex structural picture for the area;

a) Multiple N-S faults have effected the lithological units, particularly between the western township boundary and Night Hawk Lake. These faults have severely disrupted the komatiites and tholeiites and have resulted in a distinct change in strike to a more northerly direction at the eastern edge of the Dome. Numerous diabase dikes have been mapped as coincident with these faults.

b) A well-represented E-W to WNW-ESE fault direction is also evident on the processed magnetic maps. Between the Galata and Langmuir No. 2 deposits, this structural trend takes on a ENE-WSW direction, resulting in a "zigzag" pattern of the regional E-W structures as one proceeds from south to north on the map sheet. The right-lateral motion observed along the inter-volcanic shears is associated predominately with the ENE-WSW faults detected on the interpretation map.

c) The third major fault trend strikes generally NS-SE, parallel to the Montreal River fault. The major influence of this direction is a relatively broad (approximately

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2km wide) fault, or deformation, zone (centered on the Montreal River fault) striking NW-SE and across the map sheet, between the McWatters and Langmuir No. 1 deposits.

ii) Within the Langmuir map sheet, two "local" intrusives of gabbro have been mapped; one at the western edge of the sheet, near the Galata deposit and the other east of the Montreal River fault, south of Langmuir No. 1. The interpreted geophysical maps indicate a much more extensive development of the gabbro intrusive event, similar to the gabbro exposures on the 1970 mapping. The Langmuir No. 1 – Galata gabbro has been interpreted as a continuous 5km long by 1.5km wide plateau that extends west into Eldorado Township. The current interpretation indicates that this intrusive underlies and intermixes with the overlying komatiites, probably causing alteration and metasomatism of the sequences. A second smaller buried gabbro has been detected west of Night Hawk Lake and south of Langmuir No. 2 and this feature maybe an extension of the major pluton to the southwest. A third oval-shaped gabbro, measuring 2km E-W by 1.5km N-S, has been interpreted at the southern edge of the map sheet.

iii) Lithologically, three major zones have been interpreted; the major E-W to NE-SW striking package of mainly komatiitie metavolcanics the extends from the western edge of sheet to the western shore of Night Hawk Lake. South and east of this zone is a mixed package of predominately tholeiite, with minor komatiite, that extends west from Night Hawk Lake, pinching down to approximately 1km in width at the western edge of the map. The third zone is komatiite metavolcanics, extending across the southern quarter of the sheet, to the south of the Forks River.

iv) As on the Eldorado Sheet to the west, a number of iron formation metasedimentary units have been mapped on the Langmuir Sheet and these have been included on the interpretation map. One notable iron-formation exhibits strong magnetic response, extending from the Langmuir-Eldorado boundary, southwest to the Hart deposit. This zone truly lies in Eldorado but has been included as part of the Langmuir interpretation due to the affinity with the NE-SW striking komatiites at the southeastern rim of the Shaw Dome.

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4.2 TARGET SELECTION

The selection of Ni-PGE target zones on the Langmuir sheet that warrant further study has been accomplished by searching for regions where the following set of geophysical/geological criteria have been found to co-exist and where, in our estimation, the area or target has been under-explored.

1) Evidence of probable sulphide mineralization as exhibited by either electromagnetic conductor axes or known sulphide/precious metal occurrences.

2) Association with komatiite volcanic sequences (basic Fe-rich basalts t metasediments).

3) Proximity to iron-formation metasedimentary units.

4) Evidence of structural deformation associated with a) E-W to NE-SW faults and cross-cutting, or disruptive, secondary faults and b) possible folding of the komatiite volcanics

5) Proximity or direct association with gabbroic and/or felsic intrusive activity.

For the first priority targets, at least four of these criteria must be present and the second priority targets should exhibit evidence of at least two or three of the criteria.

Two broad Prospective Regional Zones for Ni-PGE mineralization have been outlined on the geophysical interpretation. The primary zone 1 extends onto the Langmuir sheet from Eldorado Twp., following the 8km wide band of komatiites and gabbro that strike E-W than NE-SW between the Shaw Dome and Night Hawk Lake. A second separate Prospective Zone, Zone 2, extends east-west across the southern edge of the sheet, as far east as the Night Hawk River. As with the zone to the north, Zone 2 is underlain mainly by komatiite volcanics and an intrusive gabbro. All of the selected targets lie within the Prospective Zones.

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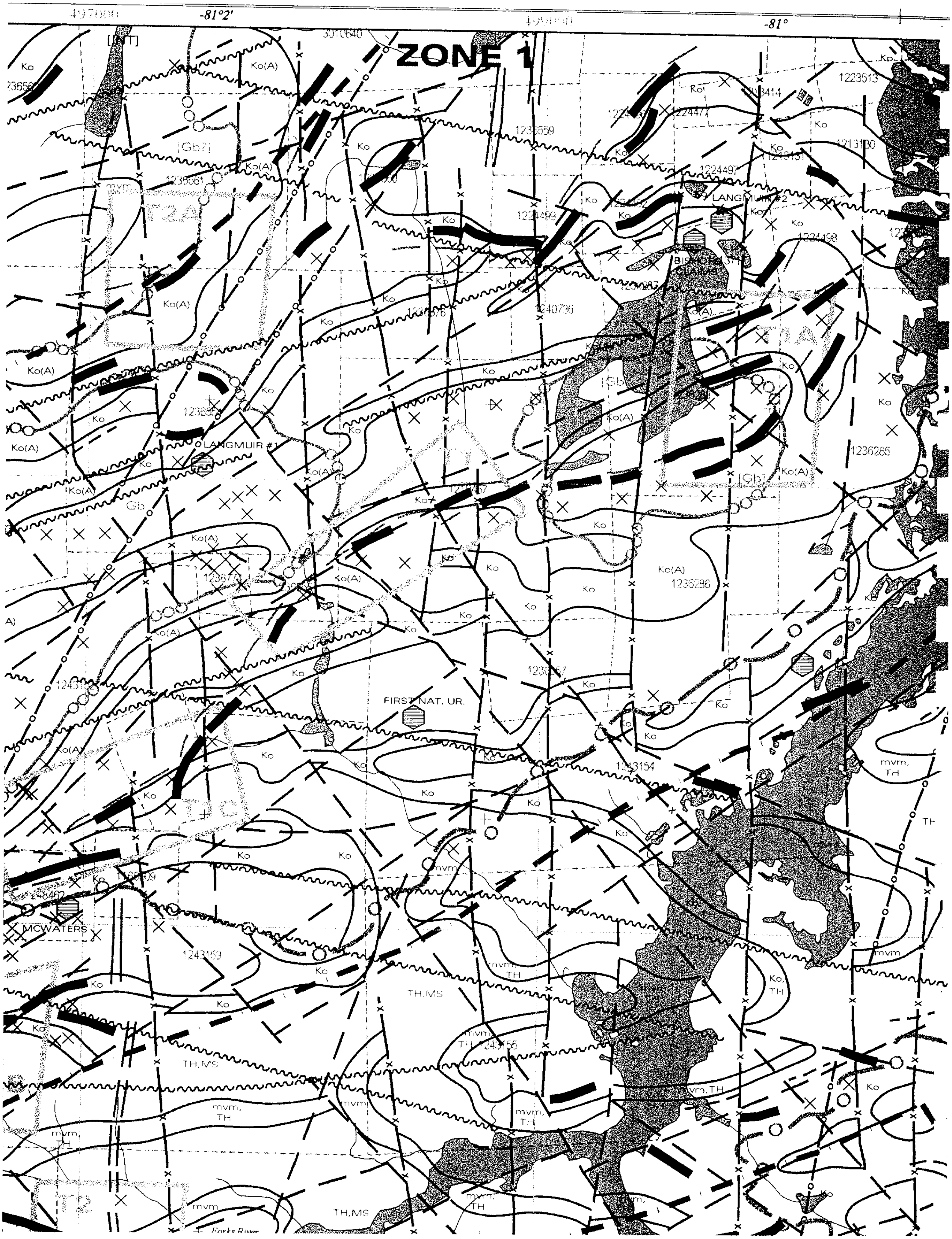

ZONE 1
-81°2'
-81°
LANGMUIR #1
LANGMUIR #2
FIRST NAT. UR.
MCWATERS
T2A
T1A
T2C
T2
[Gb]
[Gb?]
Ko
Ko(A)
Gb
mvm
mvm, TH
TH,MS
Ko, TH
1236561
1236659
1223513
1213130
1224497
1224499
1240736
1236286
1236285
1243154
1243153
1243155

TARGET 1 (T1)

Target 1 lies between the two interpreted gabbro intrusives and possesses all of the favourable geophysical/geological criteria for Ni-PGE mineralization. The main zone of interest is the contact, or correlation, of the southern edge of the interpreted komatiite with the mapped lean iron-formation. This formation sequence is marked by a series of strong, strike-limited E.M. conductors, indicative of sulphide mineralization at the komatiite southern contact.

The volcanic units have been sheared by the sub-parallel ENE-WSW regional faults and cross-cut and displaced by both NW-SW and N-S faulting. The southwestern half of the target may be the most prospective as the volcanics in the region are probably altered, Ko (A), by the proximity to the underlying gabbro and by the severe faulting and possible folding of the volcanics immediately southeast of the gabbro contact.

Recommendations:

i) Review all available drill-hole data and surface mapping in the target area and compile these data at 1:5,000 scale.

ii) Complete a detailed interpretation of T1 at 1:5,000 incorporating the results of i) above and propose a ground grid for E.M. or I.P. surveying to cover the complete length of the komatiite /iron-formation contact.

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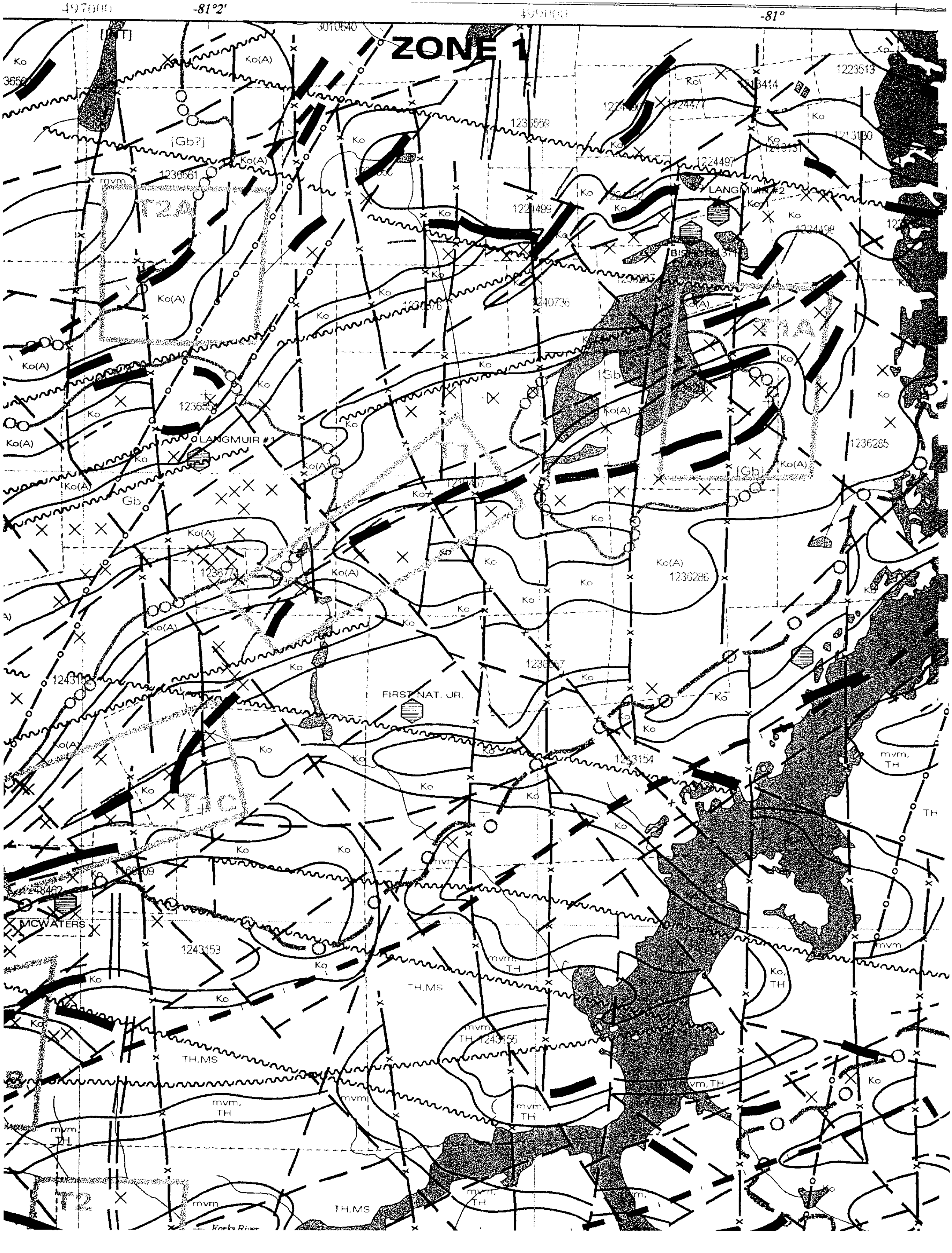

-81°2'
-81°
ZONE 1
3010640
1223513
1224477
1236559
1213130
1224497
1236561
T2A
LANGMUIR #2
1221499
BISHOP
1240736
T1A
Ko(A)
Ko
[Gb?]
[Gb]
1236265
LANGMUIR #1
Gb
1236774
1236286
FIRST NAT. UR.
1243154
T1C
MCWATERS
1243153
TH,MS
mvm,
TH
1243155
mvm, TH
T2
Forks River

TARGET 1A (T1A)

Target 1A, as with T1, exhibits all of the favourable criteria for Ni-PGE mineralization. Whereas we have noted the presence of seven historical drill holes within the target area, we believe that further investigation is warranted. Lithologically, the target is underlain by a tightly folded komatiitic unit that appears to wrap around the buried gabbro intrusive. The volcanics have been sheared by the regional ENE-WSW regional fault and cross-cut by two major N-S and two major NW-SE faults. The mapped iron-formations strike sub-parallel to the interpreted komatiites except in the area between the two N-S faults, where the iron-formation appears to cut the volcanics. If the location of the iron formation is correct, then the interpreted Ko unit may be evidence of "skarn" type alteration at the edge of gabbro.

Numerous strong, strike-limited, E.M. conductors have been detected along the komatiite contacts with the surrounding metasediments/volcanics and iron-formations. It appears from the location of the drill holes that each conductor may have been tested with one hole.

Recommendations:

i) All drill-hole results and recent detail mapping in the target area should be compiled at 1:5,000.

ii) The available geophysical data including any ground geophysics should be compiled along with the results of i) above at the 1:5,000 scale and a ground geophysical grid for E.M. or I.P. should be positioned in order to test the anomalous sources to the south and east of the small lake.

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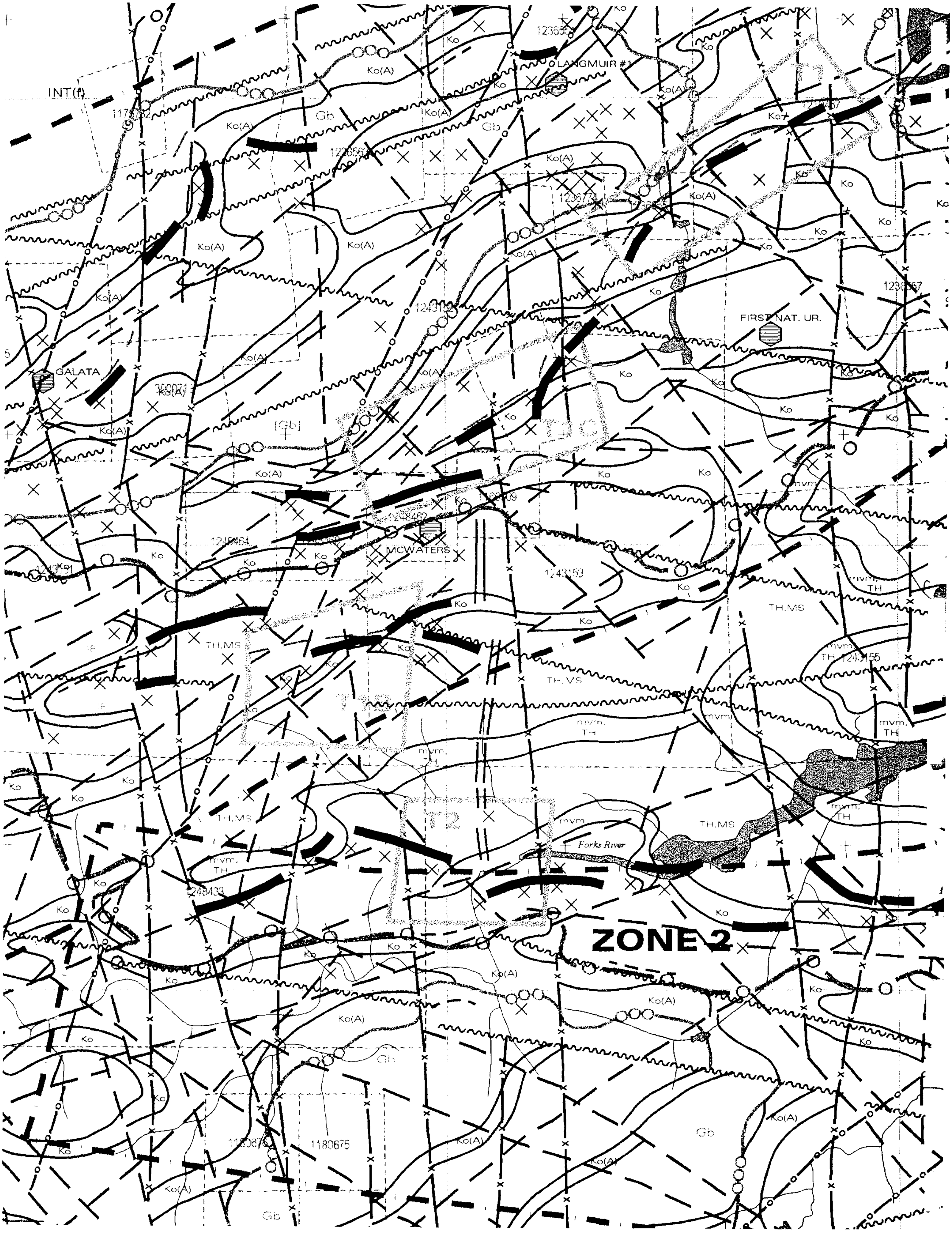
INT(f)
LANGMUIR #1
GALATA
FIRST NAT. UR.
MCWATERS
Forks River
ZONE 2
T2
Ko(A)
Ko
Gb
TH,MS
mvm,
TH
1180675

TARGET 1B (T1B)

Target 1B lies at the southern edge of the Prospective zone 1 and is focused on the komatiite volcanic unit that lies within the interpreted region of the tholeiite volcanic and metasediments. Two strong, strike-limited, E.M. conductors parallel the northern contact of the komatiite with the tholeiites and a mapped iron-formation and indicate the presence of sulphide mineralization. The target lies immediately south of the McWatters deposits, within a similar komatiite environment.

A major ENE-WSW to NE-SW regional shear fault crosses the target area just to the south of the komatiite and NW-SE and N-S structures disrupt the underlying volcanics. Previous mapping indicates that at least five test drill holes have been placed within the komatiitic unit; however, the E.M. conductors do not appear to have been adequately explained by drilling.

Recommendations:

i) As with the other first priority targets, the drilling results and any detailed mapping results should be re-compiled at the 1:5,000 scale and

ii) Correlated with a detailed interpretation of the geophysical data

iii) Based on i) and ii) above a ground geophysical grid should be designed in order to test the conductive komatiitie contact with either an E.M. or I.P. Survey.

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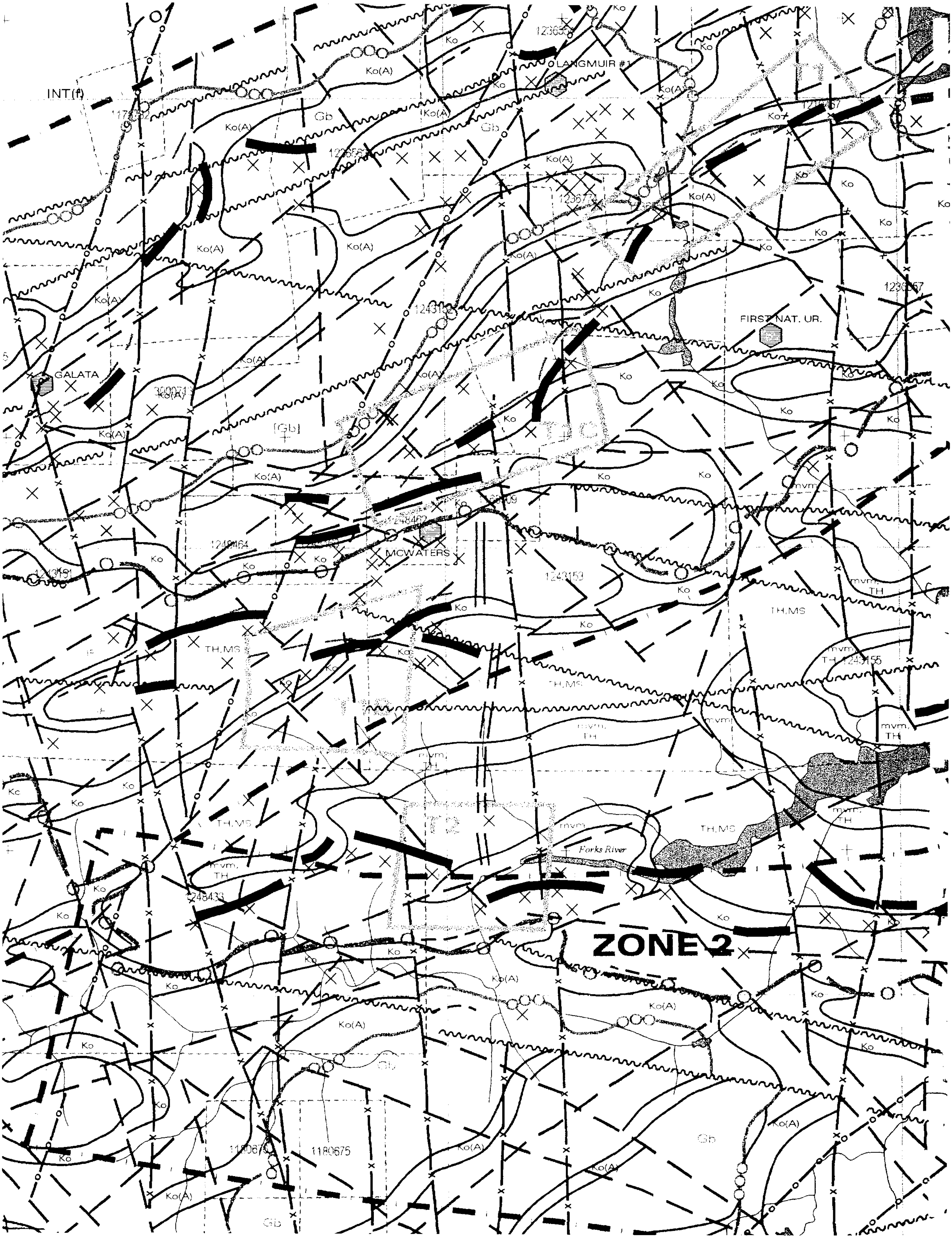

INT(f)
LANGMUIR #1
GALATA
FIRST NAT. UR.
MCWATERS
1243153
1243155
1180675
Forks River
ZONE 2
Ko
Ko(A)
Gb
TH,MS
mvm
TH

TARGET 1C (T1C)

Target 1C (North McWatters) has been focused on the northwesterly faulted extension of the komatiite unit that is associated with the McWatters Ni deposit. The target lithology comprises one main komatiite, bordered by a lean iron-formation and tholeiite metavolcanics and metasediments to the north.

Three strongly conductive E.M. zones have been identified within the target area. Two conductors lie along the northern contact of the northern edge of the "McWatters" komatiite. The target is bordered by the regional gabbroic intrusion to the north and this unit may extend under the volcanics within the target area.

In addition to the regional ENE-WSW shear faults within the area, two major N-S striking cross-faults appear to offset the volcanic units. These N-S faults have been mapped, particularly to the east of the McWatters deposit, with associated diabase dikes over part of their lengths. Five, or six, drill holes have been located within the target area, primarily; it appears, to test the E.M. conductive zones. With the high probability of further economic mineralization within the area, we feel that this is not a sufficient test.

Recommendations:

i) The drill hole results and possible detailed mapping within the north McWatters Target should be reviewed, re-complied and plotted at 1:5,000.

ii) The results of i) above should be incorporated in a more detailed 1:5,000 scale interpretation of all available airborne and detailed ground geophysical data in order to design an appropriate grid layout to survey with ground E.M. or I.P., as a precursor to further drill testing.

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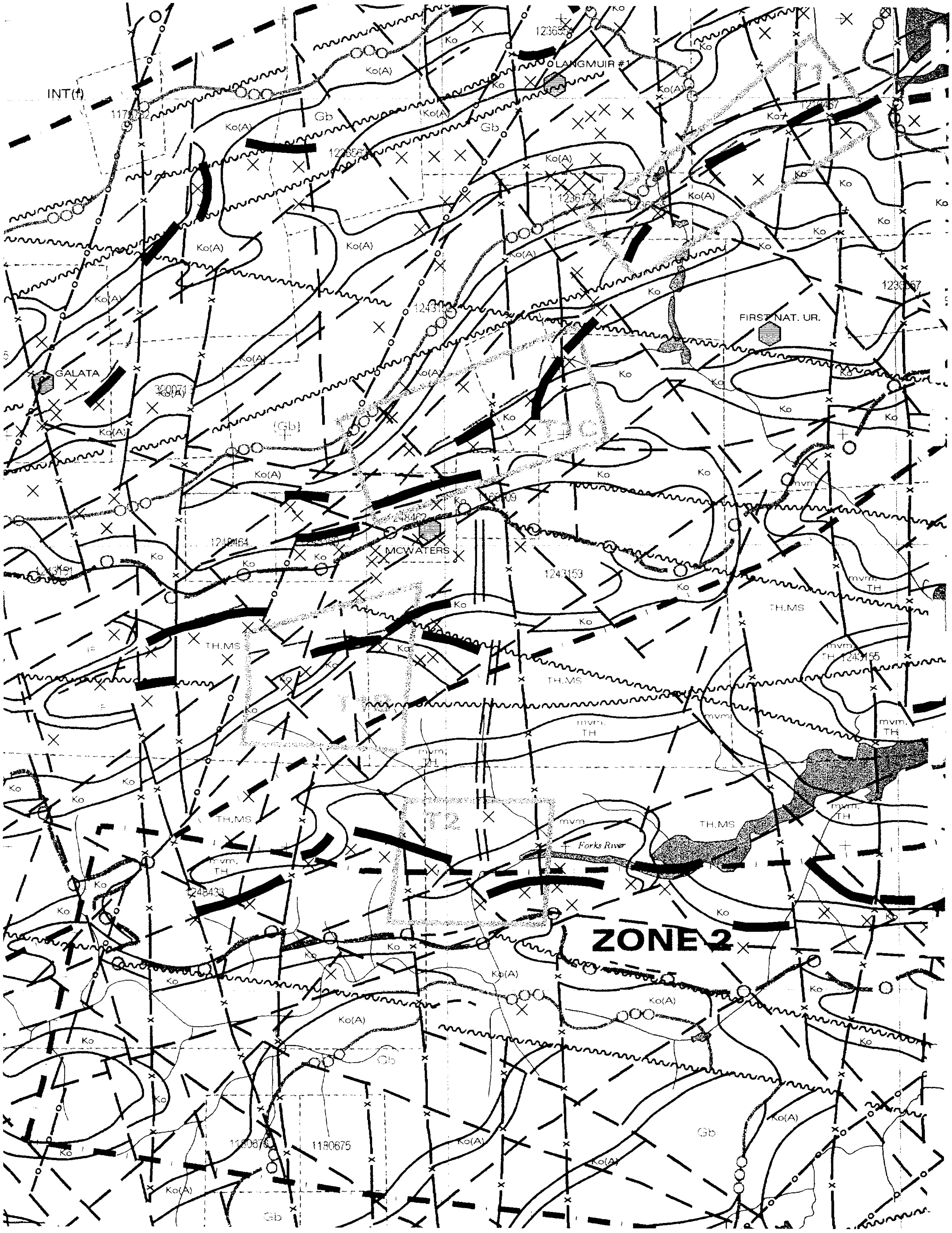

INT(f)
LANGMUIR #1
GALATA
FIRST NAT. UR.
MCWATERS
Ko
Ko(A)
Gb
TH.MS
mvm.
TH
1243153
1180675
Forks River
ZONE 2

TARGET 2 (T2)

Target 2, although it exhibits a strongly conductive E.M. zone, has been demoted to the second priority due to the lack of interpreted, moderately magnetic, komatiite metavolcanics. The conductive zone has been offset by a major NW-SE "Montreal River" fault and the underlying mafic metavolcanics (MVM, TH) has been sheared by the ENE-WSW Forks River fault.

Earlier work in the Target 2 area (Min-Ore and Mining Corporation) confirms that the area is underlain by metavolcanics and serpentinite; however, to date the drill hole results have not yielded economic sulphide mineralization.

Recommendations:

The ground geophysical data from the earlier work should be examined in order to i) correlate with the current interpretation and ii) to plan test lines of E.M. or I.P. to resample the airborne conductor along the sheared contact.

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497000
-81°2'
499000
-81°
ZONE 1
Ko
Ko(A)
[Gb?]
1236559
1236561
1224477
1224497
1223513
1224499
1224498
LANGMUIR #2
LANGMUIR #1
1240736
1236285
1236286
Gb
[Gb]
FIRST NAT. UR.
1243154
1243153
MCWATERS
mvm
TH
TH,MS
mvm, TH
Ko, TH
Forks River

TARGET 2A (T2A)

Target 2A or the Larchmont Target (former owner – Larchmont Mines) occurs at the northwestern edge of the Prospective Zone at the "buried" contact of the altered komatiite with the gabbro to the north. A lean, or silica-rich, iron-formation has been mapped near the gabbro - komatiite contact.

The area has been maintained as a second priority target due to the favourable lithology, the presence of the buried intrusive and the strong, strike-limited E.M. conductor located at the favourable contact.

Previous ground surveys (magnetics and I.P.) on the Larchmout Property apparently yielded negative results, as no drilling has been reported, to date.

Recommendations:

i) The earlier ground geophysical work should be reviewed and correlated with the current interpretation and a possible re-surveying of two test lines across the conductive favourable contact should be viewed as a second priority.

One other strongly conductive zone is apparent on the current interpretation map; namely, the Hart Iron-Formation zone that straddles the Eldorado-Langmuir township boundary. At present, this zone has not been selected as a follow-up target by the author, due to the large number of drill-holes that can be seen to have tested the zone. However, if examination of these drilling results indicates that the area has been inadequately tested, we would recommend raising the status of this Hart region to at least second priority.

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SUMMARY

The geophysical study of Langmuir Township has been successful in achieving the major objectives:

i) Clarification, in detail, of the underlying lithology and structure that is pertinent to possible sulphide –PGE and precious metal mineralization and,
ii) The determination of a set of geophysical/geological criteria that may be applied to the area in order to select targets for these types of mineralization, and
iii) The application of these criteria to select target areas for follow-up.

In total, four first priority targets have been selected that warrant immediate follow-up and two secondary targets within the Prospective Zones have also been selected. We would advise that work of the secondary targets and the investigation of the Hart region drilling be undertaken in tandem with the first priority target studies.

Respectively submitted,

PATERSON, GRANT & WATSON LIMITED

D. J. Misener Ph.D., P. Eng.

President

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References

Gupta, V., Paterson, N., Reford, S., Kwan, K., Hatch, D. and MacLeod, I., 1989. *Single master aeromagnetic grid and magnetic colour maps for the province of Ontario*; in Summary of Field Work and Other Activities 1989, Ontario Geological Survey, Miscellaneous Paper 146, p.244-250.

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Reford, S.W., Gupta, V.K., Paterson, N.R., Kwan, K.C.H. and MacLeod, I.N., 1990. *The Ontario master aeromagnetic grid: a blueprint for detailed compilation of magnetic data on a regional scale*; in Expanded Abstracts, Society of Exploration Geophysicists, 60th Annual International Meeting, San Francisco, v.1, p.617-619.

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Certificate

Donald James Misener, B.A.Sc., M.A.Sc., Ph.D., P.Eng. of Toronto, Ontario certify the following:

1) I am employed by Paterson, Grant & Watson Limited (PGW) a consulting geophysical firm whose address is 85 Richmond Street West, 8th Floor, Toronto, Ontario M5H 2C9
2) I reside at 17 Calvin Avenue, Toronto, Ontario M2N 5E4
3) I am a registered professional engineer in Ontario (#31985013). I am a graduate of the University of Toronto with a Bachelor of applied Science in Engineering and a Doctorate of Philosophy in Geology and Geophysics from the University of British Columbia.
4) I have been actively employed as a consulting Geophysicsts by PGW for over 25 years.
5) PGW has completed the work referred to below for Liberty Mineral Exploration regarding the Langmuir Township Property, Ontario. I have been the person at PGW who has been responsible for the work including the PGW report.
6) During April and May 2003 Ms. Edna Mueller and Mr. Nick Paskalev of PGW worked on the report, preparing geophysical data and computer drafting for the final results.
7) I am responsible for all of the Report.
8) I am not aware of any material fact or material change with respect to the subject matter of the Report, which is not reflected in the report, the omission to disclose which makes the Report misleading.
9) I am independent of Liberty Mineral Exploration Ltd., as set out and applying the test in section 1.5 (4) of NI 43-101.

Date: May 28, 2003

D.J. Misener Ph.D., P.Eng.

PROFESSIONAL ENGINEER LICENSED D. J. MISENER PROVINCE OF ONTARIO

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Appendix A

Landholders Langmuir Township

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APPENDIX A

Claims registered to 2004428 Ontario Inc. on behalf of Liberty Mineral Exploration Inc. in the Eldorado and Langmuir townships.

Company Adress:
Liberty Mineral Exploration Inc.
12th Floor, 20 Toronto Street, Toronto, ON M5C 2B8
Tel: (416) 869-0772 Fax: (416) 367-3638
mwebster@idirect.ca

2.25830

TOWNSHIP / AREA	Claim Number	TOWNSHIP / AREA	Claim Number
ELDORADO	P 1245400	LANGMUIR	P 1166909
ELDORADO	P 1245835	LANGMUIR	P 1224497
ELDORADO	P 1247501	LANGMUIR	P 1224498
ELDORADO	P 1247502	LANGMUIR	P 1224499
ELDORADO	P 1248406	LANGMUIR	P 1240735
ELDORADO	P 1248434	LANGMUIR	P 1243151
ELDORADO	P 1248435	LANGMUIR	P 1243152
ELDORADO	P 1248436	LANGMUIR	P 1243153
ELDORADO	P 1248437	LANGMUIR	P 1243154
ELDORADO	P 1248438	LANGMUIR	P 1243155
ELDORADO	P 1248439	LANGMUIR	P 1248431
ELDORADO	P 3001710	LANGMUIR	P 1248433
ELDORADO	P 3001711	LANGMUIR	P 1248440
ELDORADO	P 3001712	LANGMUIR	P 1248462
ELDORADO	P 3001713	LANGMUIR	P 1248464
ELDORADO	P 3001714	LANGMUIR	P 3000642
ELDORADO	P 3001715	LANGMUIR	P 3010111
ELDORADO	P 3001717	LANGMUIR	P 3010122
ELDORADO	P 3001953	LANGMUIR	P 3010574
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ELDORADO	P 3010638	LANGMUIR	P 3010862
ELDORADO	P 3010639	LANGMUIR	P 3010934
ELDORADO	P 3010678	LANGMUIR	P 3010937

Work Report Summary

Transaction No: W0360.01748 Status: APPROVED
Recording Date: 2003-NOV-06 Work Done from: 2003-MAR-01
Approval Date: 2004-JAN-28 to: 2003-JUN-30

Client(s):
400214 2004428 ONTARIO INC.

Survey Type(s):
OTHER

42A07SW2012 2.26599 LANGMUIR 900

Work Report Details:

Claim#		Perform	Perform Approve	Applied	Applied Approve	Assign	Assign Approve	Reserve	Reserve Approve	Due Date
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P	1180820	$350	$350	$350	$350	$0	0	$0	$0	2004-NOV-07
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P	1191880	$560	$560	$3,148	$3,148	$0	0	$0	$0	2004-NOV-07
P	1224497	$35	$35	$0	$0	$35	35	$0	$0	2004-JUN-02
P	1224498	$35	$35	$0	$0	$35	35	$0	$0	2004-JUN-02
P	1224499	$35	$35	$0	$0	$35	35	$0	$0	2004-JUN-02
P	1240735	$245	$245	$0	$0	$245	245	$0	$0	2004-JUN-04
P	1243151	$455	$455	$0	$0	$455	455	$0	$0	2004-JUN-19
P	1243152	$315	$315	$0	$0	$315	315	$0	$0	2004-JUN-19
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P	1243154	$455	$455	$0	$0	$455	455	$0	$0	2004-JUN-19
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P	1247502	$105	$105	$0	$0	$0	0	$105	$105	2004-MAY-28
P	1248406	$175	$175	$0	$0	$0	0	$175	$175	2004-JUL-03
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P	3000642	$245	$245	$0	$0	$245	245	$0	$0	2005-MAR-21

Work Report Summary

Transaction No:	W0360.01748	Status:	APPROVED
Recording Date:	2003-NOV-06	Work Done from:	2003-MAR-01
Approval Date:	2004-JAN-28	to:	2003-JUN-30

Work Report Details:

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P	3001715	$105	$105	$0	$0	$0	0	$105	$105	2004-APR-11
P	3001716	$70	$70	$0	$0	$70	70	$0	$0	2004-APR-11
P	3001717	$560	$560	$0	$0	$0	0	$560	$560	2004-APR-11
P	3001718	$560	$560	$0	$0	$560	560	$0	$0	2004-APR-11
P	3001719	$70	$70	$0	$0	$70	70	$0	$0	2004-APR-11
P	3001953	$560	$560	$0	$0	$0	0	$560	$560	2004-MAR-27
P	3001954	$70	$70	$0	$0	$0	0	$70	$70	2004-MAR-27
P	3010111	$105	$105	$0	$0	$0	0	$105	$105	2005-MAR-24
P	3010115	$70	$70	$0	$0	$0	0	$70	$70	2005-MAR-24
P	3010117	$140	$140	$0	$0	$0	0	$140	$140	2005-APR-07
P	3010118	$280	$280	$0	$0	$0	0	$280	$280	2005-APR-07
P	3010119	$210	$210	$0	$0	$0	0	$210	$210	2005-APR-07
P	3010120	$140	$140	$0	$0	$0	0	$140	$140	2005-APR-07
P	3010121	$105	$105	$0	$0	$0	0	$105	$105	2005-APR-07
P	3010122	$35	$35	$0	$0	$0	0	$35	$35	2005-APR-07
P	3010123	$560	$560	$0	$0	$0	0	$560	$560	2005-APR-07
P	3010124	$105	$105	$0	$0	$0	0	$105	$105	2005-APR-07
P	3010574	$70	$70	$0	$0	$0	0	$70	$70	2005-JAN-10
P	3010638	$350	$350	$0	$0	$0	0	$350	$350	2005-JAN-07
P	3010639	$210	$210	$0	$0	$0	0	$210	$210	2005-JAN-07
P	3010640	$385	$385	$0	$0	$0	0	$385	$385	2005-JAN-10
P	3010678	$280	$280	$0	$0	$0	0	$280	$280	2005-JAN-07
P	3010861	$315	$315	$0	$0	$0	0	$315	$315	2005-FEB-17
P	3010862	$350	$350	$0	$0	$0	0	$350	$350	2005-FEB-17
P	3010872	$140	$140	$0	$0	$0	0	$140	$140	2005-MAR-17
P	3010934	$350	$350	$0	$0	$0	0	$350	$350	2005-APR-07
P	3010936	$525	$525	$0	$0	$0	0	$525	$525	2005-MAR-24
P	3010937	$70	$70	$0	$0	$0	0	$70	$70	2005-MAR-21
P	3010939	$350	$350	$0	$0	$0	0	$350	$350	2005-MAR-21
		$19,950	$19,950	$10,458	$10,458	$8,428	$8,428	$9,492	$9,492	

Work Report Summary

Transaction No:	W0360.01748	Status:	APPROVED
Recording Date:	2003-NOV-06	Work Done from:	2003-MAR-01
Approval Date:	2004-JAN-28	to:	2003-JUN-30

External Credits: $0

Reserve:

$9,492	Reserve of Work Report#: W0360.01748
$9,492	Total Remaining

Status of claim is based on information currently on record.

Ministry of
Northern Development
and Mines

Ministère du
Développement du Nord
et des Mines

Ontario

GEOSCIENCE ASSESSMENT OFFICE
933 RAMSEY LAKE ROAD, 6th FLOOR
SUDBURY, ONTARIO
P3E 6B5

Tel: (888) 415-9845
Fax:(877) 670-1555

Date: 2004-JAN-28

2004428 ONTARIO INC.
12TH FLOOR-20 TORONTO ST
TORONTO, ONTARIO
M5C 2B8 CANADA

Submission Number: 2.26599
Transaction Number(s): W0360.01748

Dear Sir or Madam

Subject: Approval of Assessment Work

We have approved your Assessment Work Submission with the above noted Transaction Number(s). The attached Work Report Summary indicates the results of the approval.

At the discretion of the Ministry, the assessment work performed on the mining lands noted in this work report may be subject to inspection and/or investigation at any time.

If you have any question regarding this correspondence, please contact STEVEN BENETEAU by email at steve.beneteau@ndm.gov.on.ca or by phone at (705) 670-5855.

Yours Sincerely,

Ron C Gashinski

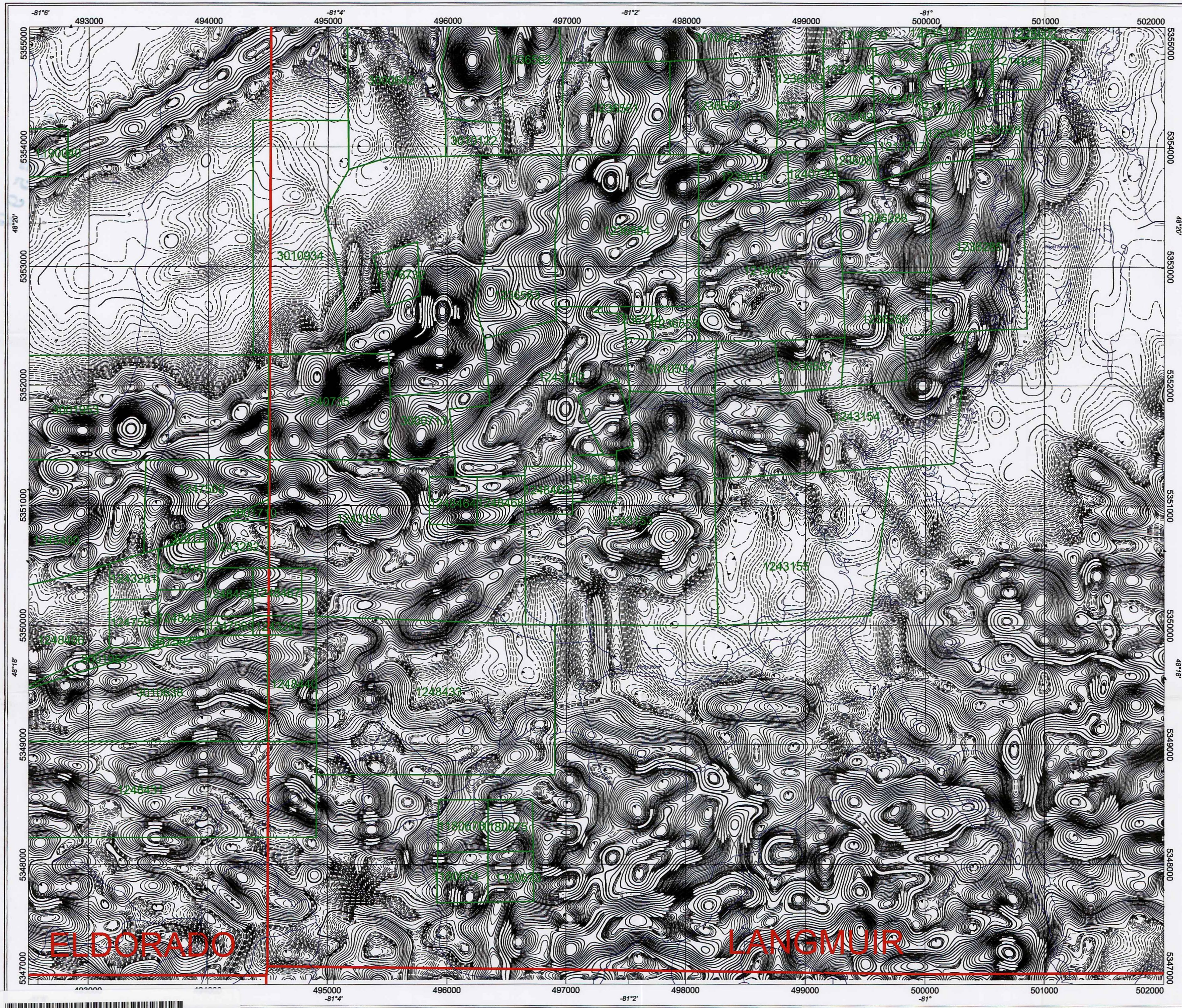
for Ron C. Gashinski
Senior Manager, Mining Lands Section

Cc: Resident Geologist

2004428 Ontario Inc.
(Claim Holder)

Assessment File Library

2004428 Ontario Inc.
(Assessment Office)



Astronomic North

Scale 1:20000

250 0 250 500 750 1000 1250 1500

metres

NAD83 / UTM zone 17N

1239609	Claim Boundary and Number
(red line)	Township Boundary
(blue line)	Drainage

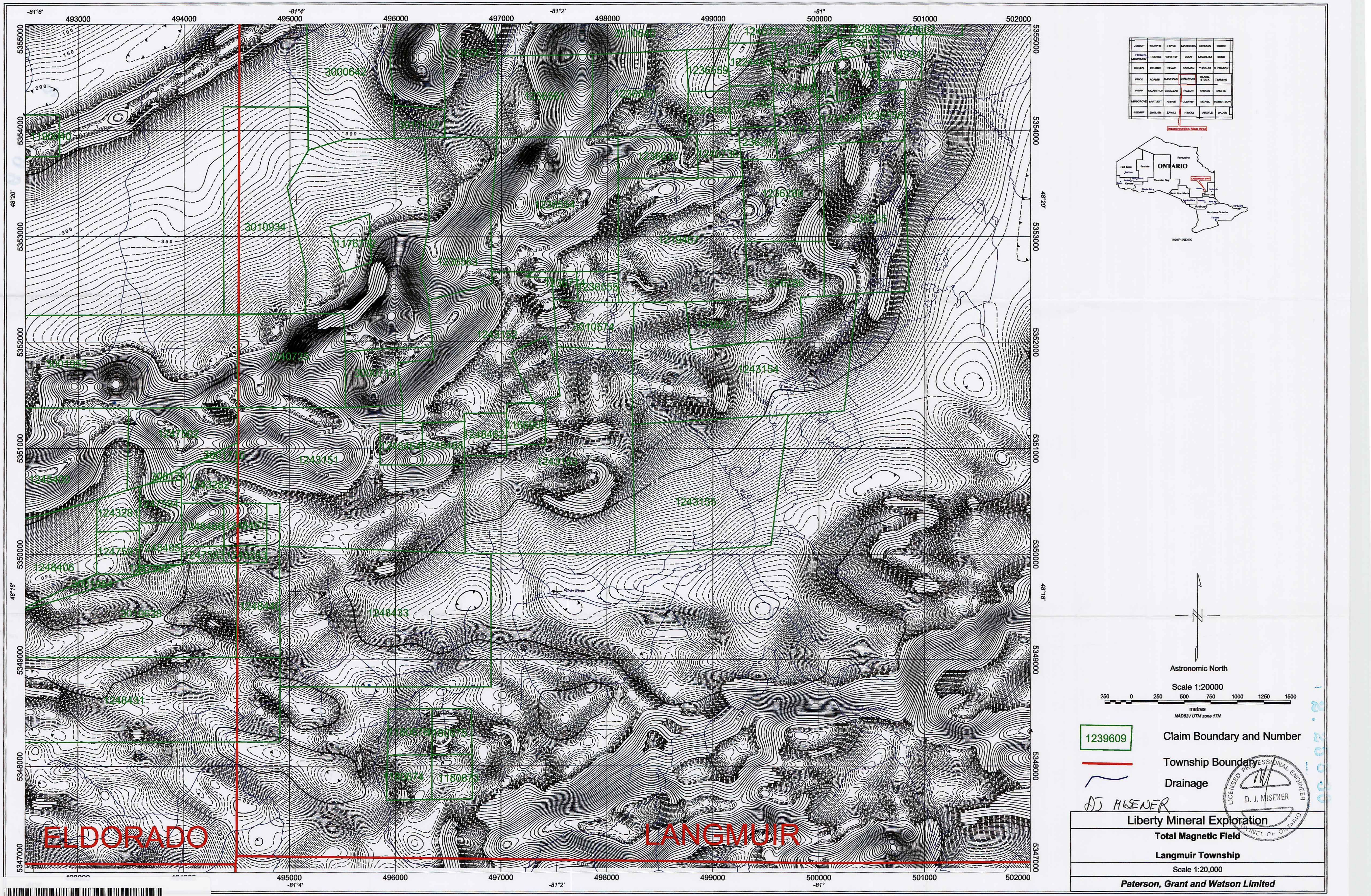
DJ MISENER

LICENSED PROFESSIONAL ENGINEER D. J. MISENER PROVINCE OF ONTARIO

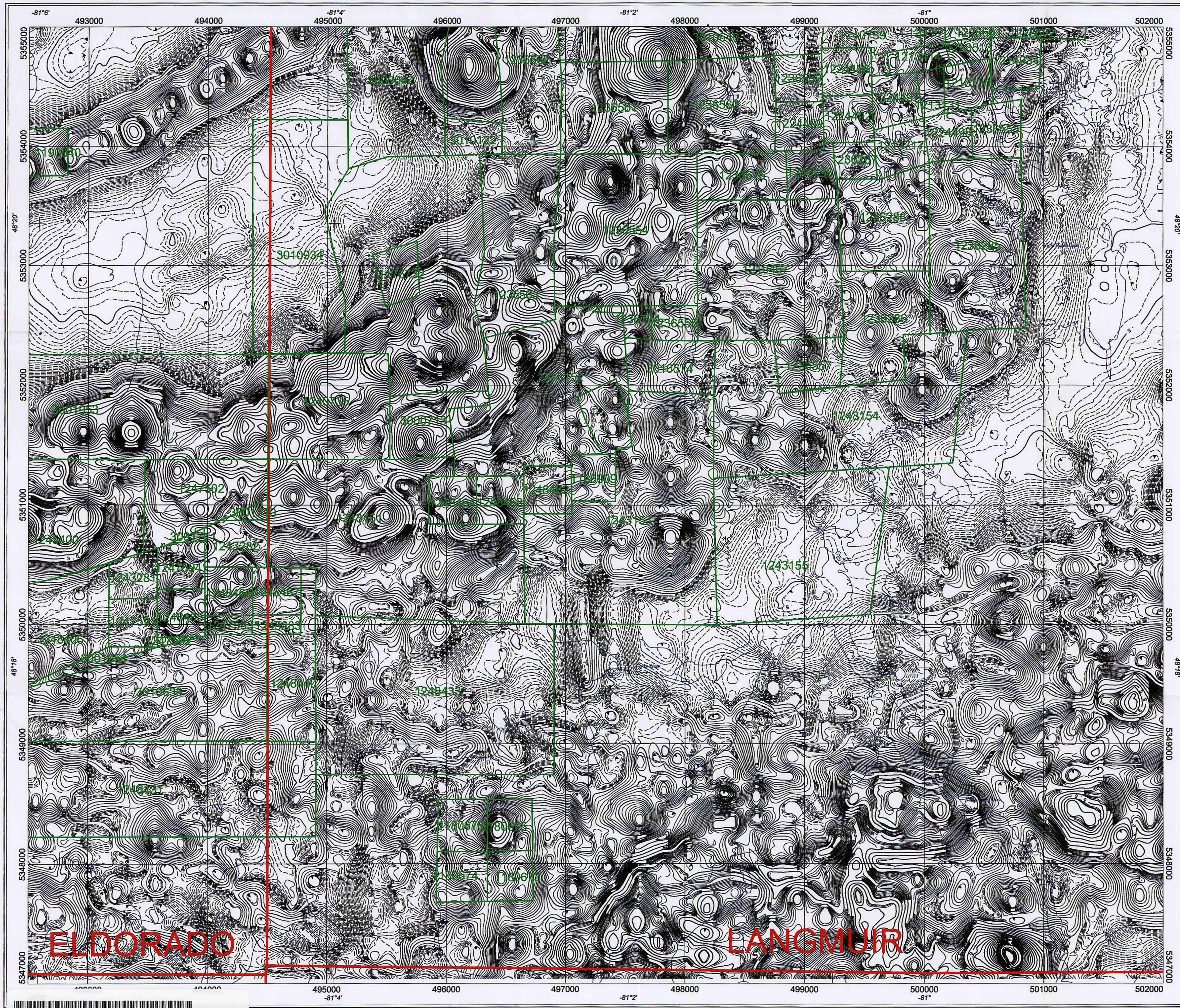
2 . 2 5 8 3 0

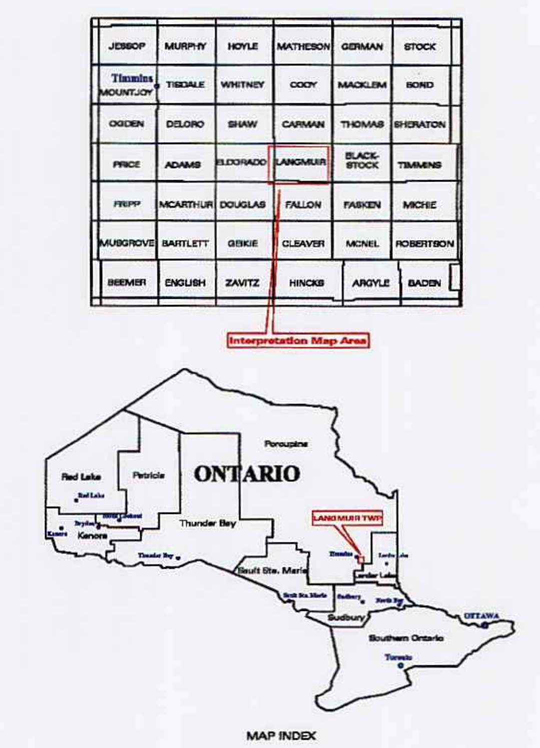
Liberty Mineral Exploration
Pole-Reduced First Vertical Derivative of TMI
Langmuir Township
Scale 1:20,000
Paterson, Grant and Watson Limited

42A07SW2012 2.26599 LANGMUIR 200



42A07SW2012 2.26599 LANGMUIR 210





Astronomic North

Scale 1:20000

250 0 250 500 750 1000 1250 1500

metres

NAD83 / UTM zone 17N

1239609	Claim Boundary and Number
(red line)	Township Boundary
(blue line)	Drainage

DJ MISENER

LICENSED PROFESSIONAL ENGINEER D. J. MISENER PROVINCE OF ONTARIO

2.25830

Liberty Mineral Exploration

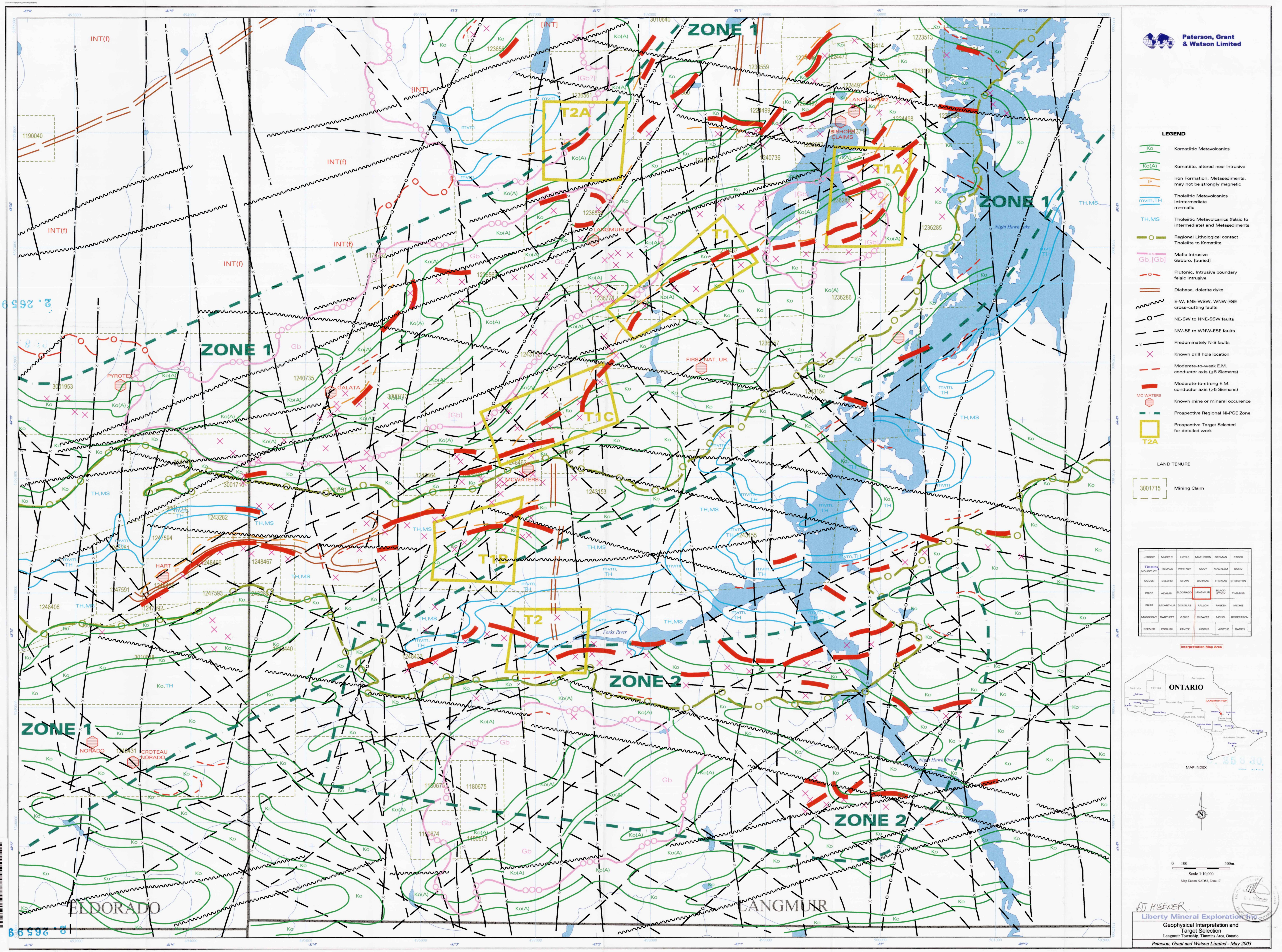
Analytic Signal of TMI

Langmuir Township

Scale 1:20,000

Paterson, Grant and Watson Limited

42A07SW2012 2.26599 LANGMUIR 220


ZONE 1
ZONE 2
T1
T1A
T1C
T2
T2A
ELDORADO
LANGMUIR
Night Hawk Lake
Forks River
Night Hawk River
PYROTEX
GALATA
HART
MCWATERS
FIRST NAT. UR.
BISHOP CLAIMS
LANGMUIR #2
NORADO
CROTEAU NORADO
INT(f)
[INT]
Paterson, Grant & Watson Limited
LEGEND
Ko Komatiitic Metavolcanics
Ko(A) Komatiite, altered near Intrusive
IF Iron Formation, Metasediments, may not be strongly magnetic
mvm,TH Tholeiitic Metavolcanics i=intermediate m=mafic
TH,MS Tholeiitic Metavolcanics (felsic to intermediate) and Metasediments
Regional Lithological contact Tholeiite to Komatiite
Gb,[Gb] Mafic Intrusive Gabbro, [buried]
Plutonic, Intrusive boundary felsic intrusive
Diabase, dolerite dyke
E-W, ENE-WSW, WNW-ESE cross-cutting faults
NE-SW to NNE-SSW faults
NW-SE to WNW-ESE faults
Predominately N-S faults
Known drill hole location
Moderate-to-weak E.M. conductor axis (≤5 Siemens)
Moderate-to-strong E.M. conductor axis (≥5 Siemens)
MC WATERS Known mine or mineral occurence
Prospective Regional Ni-PGE Zone
T2A Prospective Target Selected for detailed work
LAND TENURE
3001715 Mining Claim
ONTARIO
MAP INDEX
Interpretation Map Area
0 100 500m.
Scale 1:10,000
Map Datum NAD83, Zone 17
DJ MISENER
D. J. MISENER
PROVINCE OF ONTARIO
Liberty Mineral Exploration Inc.
Geophysical Interpretation and Target Selection
Langmuir Township, Timmins Area, Ontario
Paterson, Grant and Watson Limited - May 2003