GEOPHYSICAL REPORT
FOR
OUTOKUMPU MINES LIMITED
ON THE
LANGMUIR PROPERTY
LANGMUIR TOWNSHIP,
PORCUPINE MINING DIVISION
NORTHEASTERN, ONTARIO

Qual. # 2.3943
Prepared by: J.C.Grant, CET, FGAC
April, 1996

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INTRODUCTION

The services of Exsics Exploration Limited were retained by Outokumpu Mines Limited to complete a linecutting and geophysical program on a group of their claims located in Langmuir Township of the Porcupine Mining Division of Northeastern, Ontario.

The purpose of this program was to test the property's potential for favourable geological structure which would be suitable horizons for base metal deposition. The program commenced on the 6th of March and was completed on the 6th of April, 1996. A total of 6.9 kilometers of grid lines were cut and surveyed on the property. This report will deal with the results of the recent ground program.

PROPERTY LOCATION AND ACCESS

The Langmuir property is located in the west-northwest section of Langmuir Township which is located in the Porcupine Mining Division, District of Cochrane, in Northeastern, Ontario. Figure 1. More specifically it is situated southeast of the southern tip of Night Hawk Lake and southeast of the Carshaw Mine site located in Carman and Shaw Townships. The entire grid is situated approximately 21 kilometers southeast of the Town of South Porcupine. Figure 2.

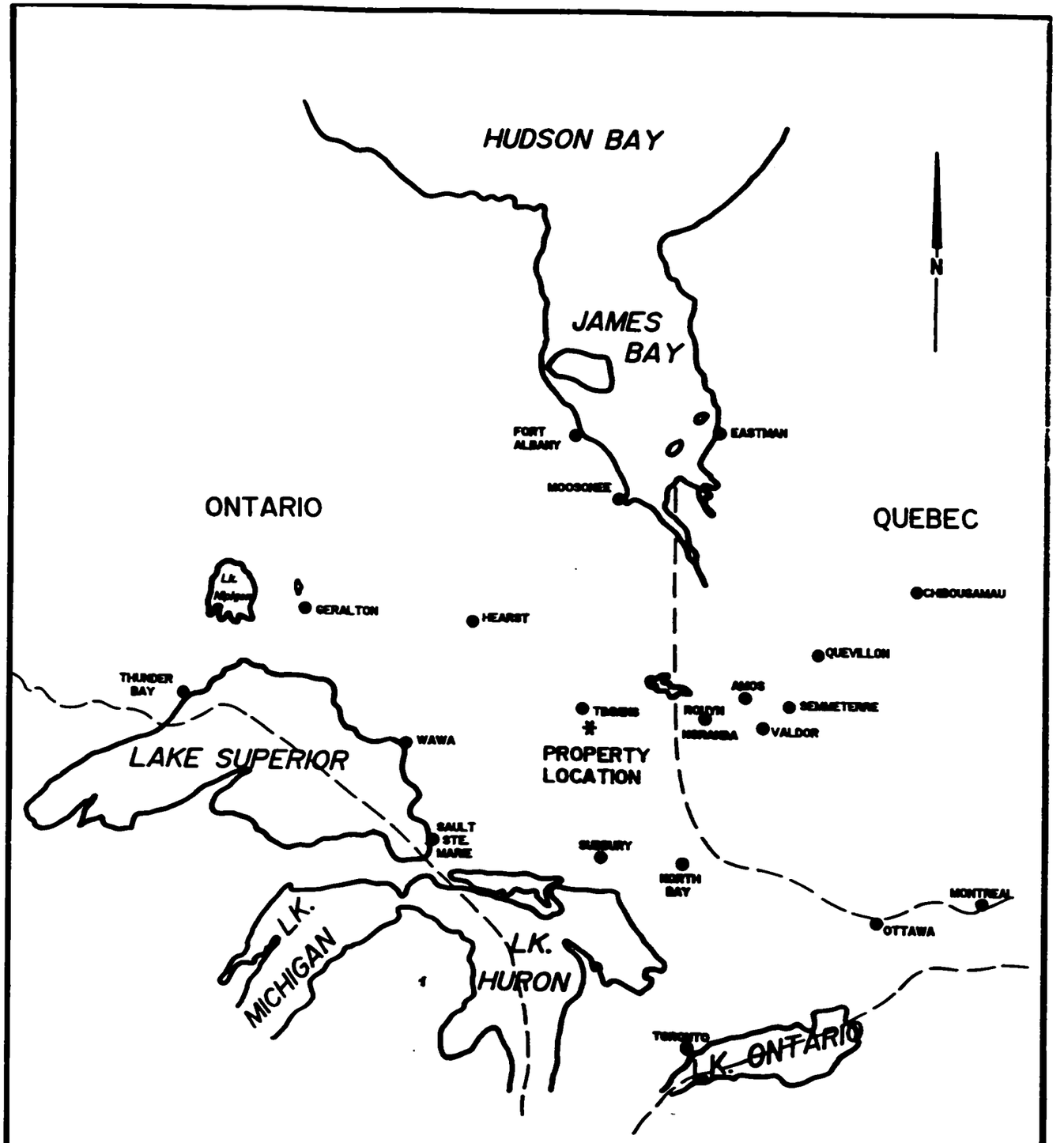
Access to the property was ideal during the survey period. South Porcupine is serviced by Highway 101 East which travels east from the City of Timmins. A good gravel road, locally called the Langmuir Road,runs south-southeast off of Highway 101 East, through the Town of South Porcupine and eventually terminates at the south end of Night Hawk Lake. This same gravel road crosses the north boundary of the claim group. Access during the survey period was by truck to within 3 kilometers of the grid. A short skidoo ride allowed access to the northern section of the grid. Travelling time from Timmins to the grid is approximately 30 minutes.

CLAIM GROUP

The claim numbers which form the Langmuir Property are as follows:

P-1204465	6 units

Refer to figure 3, copied from MNDM Plan Map, G-3226.



EXSICS EXPLORATION LTD.
P.O. Box 1988, P6N-7X1
Suite 12, Hollinger Bldg, Timmins Ont.
Telephone: 705-267-4151

CLIENT: OUTOKUMPU MINES LTD

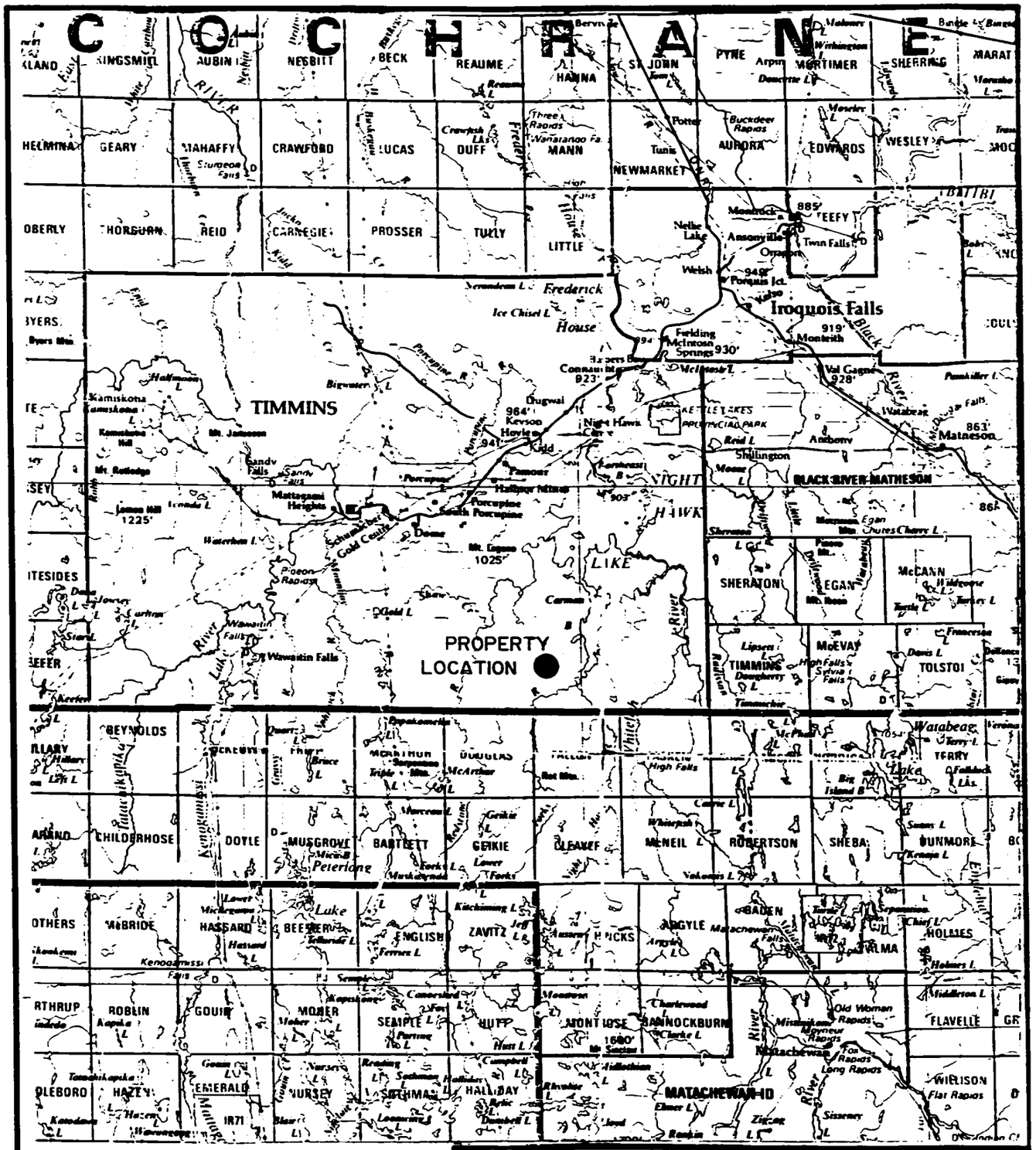
PROPERTY: LANGMUIR PROPERTY

TITLE:

LOCATION MAP

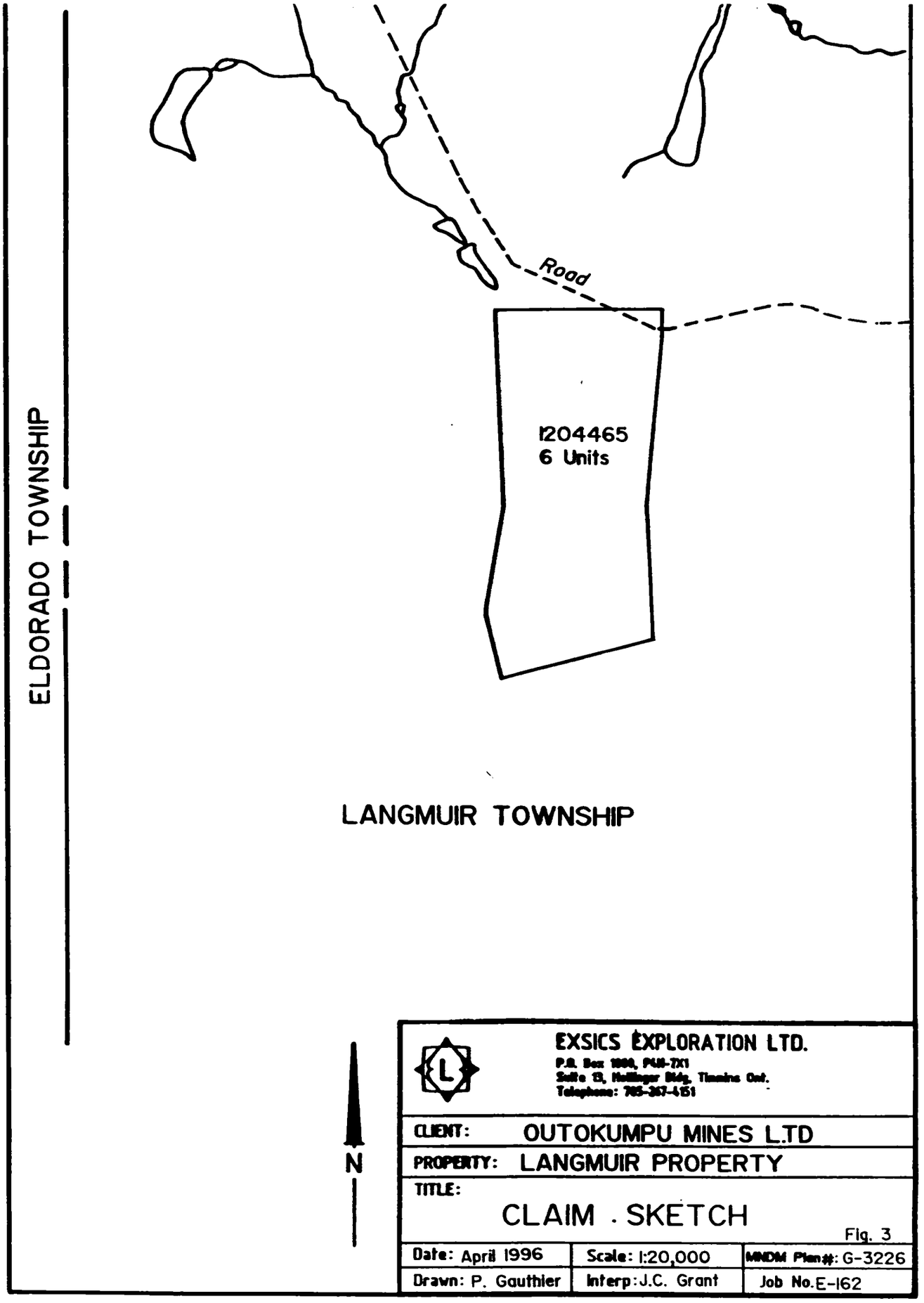
Fig. 1

Date: April 1996	Scale: 1"=125miles	MNDM Plan#:
Drawn: P. Gauthier	Interp: J.C. Grant	Job No. E-162



EXSICS EXPLORATION LTD.
P.O. Box 1900, P4N-7X1
Suite 12, Hollinger Bldg., Timmins Ont.
Telephone: 705-267-4151

CLIENT: OUTOKUMPU MINES LTD		
PROPERTY: LANGMUIR PROPERTY		
TITLE: PROPERTY LOCATION		Fig. 2
Date: April 1996	Scale: 1:600,000	MNDM Plan #: 22-6
Drawn:	Interp: J.C. Grant	Job No. E-162



EXSICS EXPLORATION LTD.
P.O. Box 1000, PUR-7X1
Suite 13, Hollinger Bldg, Timmins Ont.
Telephone: 705-267-4151

CLIENT: OUTOKUMPU MINES LTD		
PROPERTY: LANGMUIR PROPERTY		
TITLE: CLAIM . SKETCH		Fig. 3
Date: April 1996	Scale: 1:20,000	MNDM Plan#: G-3226
Drawn: P. Gauthier	Interp: J.C. Grant	Job No. E-162

PERSONNEL

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

John DerWeduwen..... South Porcupine, Ontario
Bruce Pigeon..... South Porcupine, Ontario
Norm Collins..... Timmins, Ontario

The work was completed under the direct supervision of J.C. Grant and all of the plotting and computor compilation was completed by P. Gauthier of Exsics Exploration Limited.

GROUND PROGRAM

The ground program was completed in two phases. The first phase of the program was to cut a detailed metric grid across the property. This was done by establishing an east-west tieline across the grid at the northend of the property. This tieline was cut at 090 degrees from line 1850ME to and including line 2350ME. The line was chained with 20 meter stations. Cross lines were then turned off of this tie line at 100 meter intervals and cut to the southern claim boundary. All of these cross lines were chained with 20 meter station intervals. A series of tie lines were cut across the property at specified intervals to control the cross lines. A total of 6.9 kilometers of grid lines were established on the property.

Phase two of the program was to complete a Total Field Magnetic survey as well as a Horizontal Loop, Electromagnetic, HLEM, survey across the cut lines. The Magnetic survey was completed using the BRGM, OMNI IV system. Specifications for this system can be found as Appendix A of this report. The HLEM survey was completed using the Apex Parametrics, MaxMin II system. Specifications for this system can be found as Appendix B of this report.

The following parameters wer kept constant for each survey method throughout the survey period.

Magnetic Survey:

Line spacing..... 100 meters
Station spacing..... 20 meters
Reading interval..... 10 meters
Diurnal monitoring..... base station recorder
Record interval..... 30 seconds
Reference field..... 58570 gammas
Datum subtract..... 57500 gammas
Unit accuract..... +/- 0.1 gammas

The collected, corrected and levelled magnetic data was then plotted diectly onto a base map at a scale of 1:5000 and then contoured at 50 gamma intervals where possible. A copy of this contoured base map is included in the back pocket of this report.

HLEM Survey:

Line spacing	100 meters
Station interval	20 meters
Reading interval	20 meters
Coil seperation	120 meters
Theoretical search depth	60-70 meters
Frequencies recorded	1777hz, 444hz
Parameters measured	inphase and quadrature components of the secondary field
Unit accuracy	+/- 0.5 percent

The collected data was then plotted onto a base map, one base map for each frequency, and then profiled at 1cm to +/- 10 percent. An interpretation for all of the conductive zones has been placed on these base maps were possible. The interpretation consists of the depth to source and the approximate conductivity of the zone. A copy of each of these maps is also included in the back pocket of this report.

SURVEY RESULTS

The surveys were successful in locating and outlining several conductive zones across the property. Each of the zones has been labelled and each will be discussed seperately and in detail.

ZONE A:

This feature represents the strongest and most predominant structure on the grid. It generally strike east-west from line 1850ME to 2350ME and appears to continue off of the grid in both directions. Interpretation of the zone suggests the target is situated at a depth to source of 60 to 72 meters from west to east and that the zone has a conductivity range of 5 to 9 mhos from west to east. The zone lies along the northern flank of a strong magnetic high unit from line 1850ME to 2150ME but appears to cross cut a strong north trending magnetic high unit. In fact, the western extension of the zone seems to relate to a magnetic low unit. This, however, may be a dipole effect due to the extreme magnetic high unit striking southwest-northeast across the central section of the grid.

ZONE B:

This feature represents a weak questionable zone possibly a small narrow splay off of the more predominant zone A. The zone appears to lie along the north flank of the magnetic low unit which covers most of zone A. At this writing, the zone is too weak for a proper interpretation.

ZONE C:

This feature represents a moderate conductor situated at a depth to source of 45 meters and with a conductivity of 4 mhos. The zone continues off of the grid to the east. The entire length of the zone outlined by the HLEM survey lies along the north flank of a strong magnetic unit.

ZONES D,E:

These two features closely parallel one another and both of the zone continue off of the grid to the east. Zone D appears to represent a deep zone situated at a depth of 70 meters and with a conductivity of 12 mhos. The conductivity is questionable at this time due to the lack of proper coverage. Zone E may also represent a bedrock conductor but further coverage would be required to better define the target. Both targets appear to cross cut the general magnetic trend of the area.

ZONE F:

This feature appears to represent a structural target which appears to cross cut the magnetic high unit striking northeast-southwest across the grid. The zone seems to outline a conductor situated at a depth to source of 60 meters with a moderate conductivity of 4 mhos. The zone appears to continue off of the grid to the northeast and may also be strengthening to the northeast. This zone may relate to minor cross faulting.

MAGNETIC RESULTS:

The magnetic highs outlined on the grid appear to relate to the metamorphosed ultramafic intrusives rocks which have been cross cut by a number of faults and lineaments. In particular, the Montreal River Fault cross cuts the northeastern section of the grid and can be traced from line 1850ME/1500MN to line 2350ME/750MN. This is represented by the moderate magnetic high low unit striking in the same direction. As mentioned above, Zone F may relate to a minor cross fault or lineament which seems to parallel the contact between the ultramafic intrusive and the felsic, calc-alkalic metavolcanic flows.

CONCLUSIONS AND RECOMMENDATIONS

The surveys were successful in locating and outlining several conductive zones on the grid. Certainly, Zones A, C and F should be followed-up further to better define the zones. At this writing, Zone A can be drill tested. Zones C and F as well as D should be followed-up further with the same geophysical program. The grid should be extended to the east to trace the extent of these zones and to better define their sources.

Respectfully submitted

J.C.Grant, CET, FGAC
April, 1996

CERTIFICATE

I, John C. Grant, hereby certify that:

1) I am a graduate geophysicist (1975) of the three year program in Geological Technology at Cambrian College of Applied Arts and Technology, Sudbury, Campus. I have worked subsequentely as an Exploration Geophysicist for Teck Exploration Limited (5 years), North Bay office, and as Exploration Manager and Geophysicist for Exsics Exploration Limited from 1980 to present.

2) I am a Member of the Certified Engineering Technologist Association since 1984.

3) I am a member of the Geological Association of Canada.

4) I have been actively engaged in my profession for the last twenty (20) years, including all aspects of exploration studies, surveys and interpretations.

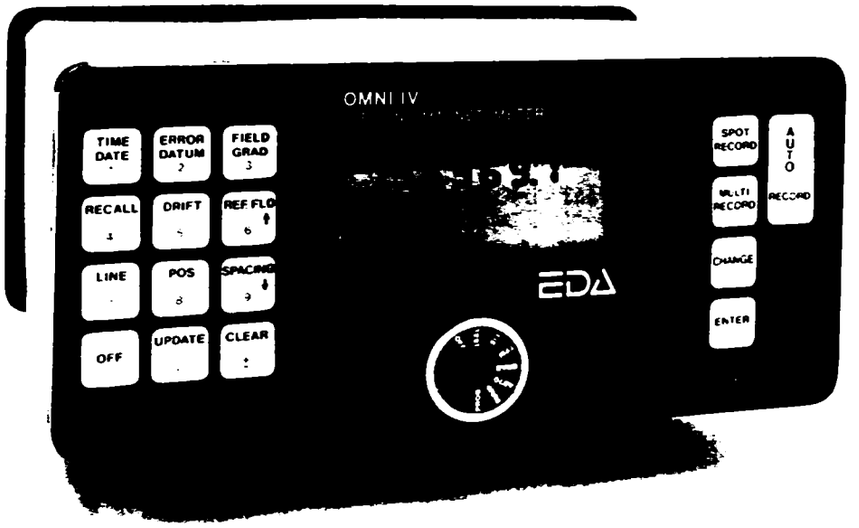
5) I have no specific or special interest in the described property. I have been retained as a Consulting Geophysicist by the claim holders.

John Charles Grant, CET, FGAC

APPENDIX A

Omni IV "Tie-Line" Magnetometer

EDA



- Four Magnetometers in One
- Self Correcting for Diurnal Variations
- Reduced Instrumentation Requirements
- 25% Weight Reduction
- User Friendly Keypad Operation
- Universal Computer Interface
- Comprehensive Software Packages

Specifications

Dynamic Range	18,000 to 110,000 gammas. Roll-over display feature suppresses first significant digit upon exceeding 100,000 gammas.
Tuning Method	Tuning value is calculated accurately utilizing a specially developed tuning algorithm
Automatic Fine Tuning	± 15% relative to ambient field strength of last stored value
Display Resolution	0.1 gamma
Processing Sensitivity	± 0.02 gamma
Statistical Error Resolution	0.01 gamma
Absolute Accuracy	± 1 gamma at 50,000 gammas at 23°C ± 2 gamma over total temperature range
Standard Memory Capacity	
Total Field or Gradient	1,200 data blocks or sets of readings
Tie-Line Points	100 data blocks or sets of readings
Base Station	5,000 data blocks or sets of readings
Display	Custom-designed, ruggedized liquid crystal display with an operating temperature range from −40°C to +55°C. The display contains six numeric digits, decimal point, battery status monitor, signal decay rate and signal amplitude monitor and function descriptors.
RS 232 Serial I/O Interface	2400 baud, 8 data bits, 2 stop bits, no parity
Gradient Tolerance	6,000 gammas per meter (field proven)
Test Mode	A. Diagnostic testing (data and programmable memory) B. Self Test (hardware)
Sensor	Optimized miniature design. Magnetic cleanliness is consistent with the specified absolute accuracy.
Gradient Sensors	0.5 meter sensor separation (standard), normalized to gammas/meter. Optional 1.0 meter sensor separation available. Horizontal sensors optional.
Sensor Cable	Remains flexible in temperature range specified, includes strain-relief connector
Cycling Time (Base Station Mode)	Programmable from 5 seconds up to 60 minutes in 1 second increments
Operating Environmental Range	−40°C to +55°C; 0–100% relative humidity; weatherproof
Power Supply	Non-magnetic rechargeable sealed lead-acid battery cartridge or belt; rechargeable NiCad or Disposable battery cartridge or belt; or 12V DC power source option for base station operation.
Battery Cartridge/Belt Life	2,000 to 5,000 readings, for sealed lead acid power supply, depending upon ambient temperature and rate of readings
Weights and Dimensions	
Instrument Console Only	2.8 kg, 238 x 150 x 250mm
NiCad or Alkaline Battery Cartridge	1.2 kg, 235 x 105 x 90mm
NiCad or Alkaline Battery Belt	1.2 kg, 540 x 100 x 40mm
Lead-Acid Battery Cartridge	1.8 kg, 235 x 105 x 90mm
Lead-Acid Battery Belt	1.8 kg, 540 x 100 x 40mm
Sensor	1.2 kg, 56mm diameter x 200mm
Gradient Sensor (0.5 m separation - standard)	2.1 kg, 56mm diameter x 790mm
Gradient Sensor (1.0 m separation - optional)	2.2 kg, 56mm diameter x 1300mm
Standard System Complement	Instrument console; sensor; 3-meter cable, aluminum sectional sensor staff, power supply, harness assembly, operations manual.
Base Station Option	Standard system plus 30 meter cable
Gradiometer Option	Standard system plus 0.5 meter sensor

E D A Instruments Inc.
4 Thorncliffe Park Drive
Toronto, Ontario
Canada M4H 1H1
Telex: 06 23222 EDA TOR
Cable: Instruments Toronto
(416) 425 7800

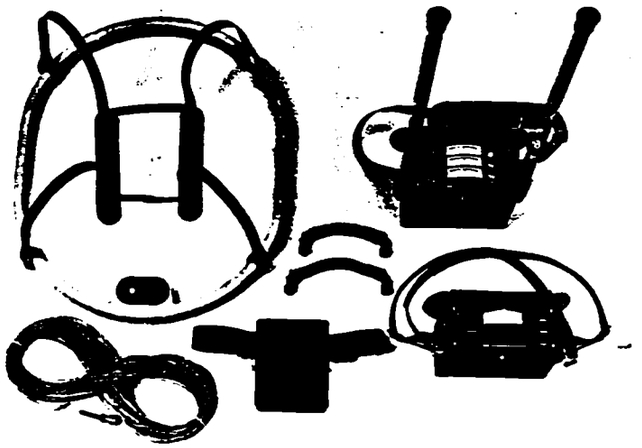
In U.S.A.
E D A Instruments Inc.
5151 Ward Road
Wheat Ridge, Colorado
U.S.A. 80033
(303) 422 9112

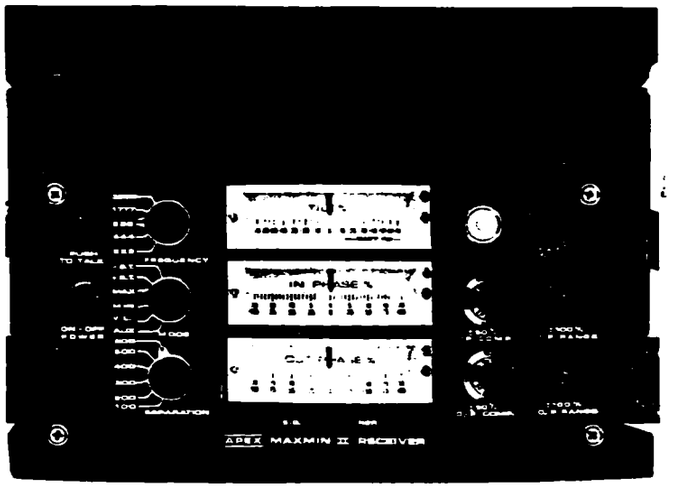
Printed in Canada

APPENDIX B

APEX MAXMIN II
PORTABLE EM

- Five frequencies: 222, 444, 888, 1777 and 3555 Hz.
- Maximum coupled (horizontal-loop) operation with reference cable.
- Minimum coupled operation with reference cable.
- Vertical-loop operation without reference cable.
- Coil separations: 25, 50, 100, 150, 200 and 250 m (with cable) or 100, 200, 300, 400, 600 and 800 ft.
- Reliable data from depths of up to 180 m (600 ft).
- Built-in voice communication circuitry with cable.
- Tilt meters to control coil orientation.





Frequencies:	222, 444, 888, 1777 and 3555 Hz.
Coil Plane Orientation:	MAX: Transmitter coil plane and receiver coil plane horizontal (Max-coupled; Horizontal-loop mode). Used with reference cable. MIN: Transmitter coil plane horizontal and receiver coil plane vertical (Min-coupled mode). Used with reference cable. V.L. : Transmitter coil plane vertical and receiver coil plane horizontal (Vertical-loop mode). Used without reference cable, in parallel lines.
Coil Separations:	25, 50, 100, 150, 200 & 250 m (MMII) or 100, 200, 300, 400, 600 and 800 ft. (MMIIF). Coil separations in V.L. mode not restricted to fixed values.
Parameters Read:	- In-Phase and Quadrature components of the secondary field in MAX and MIN modes. - Tilt-angle of the total field in V.L. mode.
Readout:	- Automatic, direct readout on 90 mm (3.5") edgewise meters in MAX and MIN modes. No nulling or compensation necessary. - Tilt angle and null in 90 mm edgewise meters in V.L. mode.
Scale Ranges:	In-Phase: ±20%, ±100% by push-button switch. Quadrature: ±20%, ±100% by push-button switch. Tilt: ±75% slope. Null (V.L.): Sensitivity adjustable by separation switch.
Repeatability:	In-Phase and Quadrature: 0.25% to 0.5%; Tilt: 1%.
Reproducibility:	±0.25% to ±1% normally, depending on conditions, frequencies and coil separation used.
Transmitter Output:	- 222 Hz : 220 Atm² - 444 Hz : 200 Atm² - 888 Hz : 120 Atm² - 1777 Hz : 60 Atm² - 3555 Hz : 30 Atm²
Receiver Batteries:	9V trans. radio type batteries (4). Life: approx. 35 hrs. continuous duty (alkaline, 0.5 Ah), less in cold weather.
Transmitter Batteries:	12V 6 Ah Gel-type rechargeable battery. (Charger supplied).
Reference Cable:	Light weight 2-conductor teflon cable for minimum friction. Unshielded. All reference cables optional at extra cost. Please specify.
Voice Link:	Built-in intercom system for voice communication between receiver and transmitter operators in MAX and MIN modes, via reference cable.
Indicator Lights:	Built-in signal and reference warning lights to indicate erroneous readings.
Temperature Range:	-40°C to +60°C (-40°F to +140°F).
Receiver Weight:	6kg (13 lbs.)
Transmitter Weight:	13kg (29 lbs.)
Shipping Weight:	Typically 60kg (135 lbs.), depending on quantities of reference cable and batteries included. Shipped in two field/shipping cases.

Specifications subject to change without notification

200 STEELCASE RD. E., MARKHAM, ONT., CANADA, L3R 1G2

Phone: (416) 495-1612 Cables: APEXPARA TORONTO Telex: 06-966773 NORDVIK TOR

Ministry of Northern Development and Mines
Ontario

Report of Work Conducted After Recording Claim

Mining Act

Transaction Number: W9660 00334

Personal information collected on this form is obtained under the authority of the Mining Act. This information will be used for correspondence. Questions about this collection should be directed to the Provincial Manager, Mining Lands, Ministry of Northern Development and Mines, Fourth Floor, 159 Cedar Street, Sudbury, Ontario, P3E 6A5, telephone (705) 670-7264.

2.16663

Instructions:
- Please type or print and submit in duplicate.
- Refer to the Mining Act and Regulations
  Recorder.
- A separate copy of this form must be co
- Technical reports and maps must accom
- A sketch, showing the claims the work is

ng

42A06SE0071 2 16663 LANGMUIR

900

Recorded Holder(s): Outokumpu Mines Ltd		Client No.: 178525
Address: P.O. Box 1123, Timmins, Ontario P4N 7H9		Telephone No.: (705) 264-5024
Mining Division: Porcupine	Township/Area: Langmuir Township	M or G Plan No.: G-3226
Dates Work Performed — From: March 6, 1996	To: April 6, 1996	

Work Performed (Check One Work Group Only)

	Work Group	Type
	Geotechnical Survey	Line Cutting, Magnetometer and Mag-Mobile Surveys
	Physical Work, Including Drilling	
	Rehabilitation	
	Other Authorized Work	
	Assays	
	Assignment from Reserve	

RECEIVED
JUL 10 1996
MINING LANDS BRANCH

Total Assessment Work Claimed on the Attached Statement of Costs $ 4,000

Note: The Minister may reject for assessment work credit all or part of the assessment work submitted if the recorded holder cannot verify expenditures claimed in the statement of costs within 30 days of a request for verification.

Persons and Survey Company Who Performed the Work (Give Name and Address of Author of Report)

Name	Address
John Grant, Eastern Exploration Ltd.	P.O. Box 1880, Timmins, Ontario, P4N 7X1

(attach a schedule if necessary)

Certification of Beneficial Interest * See Note No. 1 on reverse side

I certify that at the time the work was performed, the claims covered in this work report were recorded in the current holder's name or held under a beneficial interest by the current recorded holder.	Date: April 25, 1996	Recorded Holder or Agent (Signature): Jarmo Vesanto

Certification of Work Report

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

Name and Address of Person Certifying: Jarmo Vesanto P.O. Box 1123 Timmins, Ont		
Telephone No.: (705) 264-5024	Date: April 25, 1996	Certified By (Signature): Jarmo Vesanto

For Office Use Only

Total Value Cr. Recorded: 4,000	Date Recorded	Mining Recorder: Not Dated Gary White	Recorded Stamp: RECEIVED APR 26 1996
	Deemed Approved Date: July 25/96	Date Approved	
	Date Notice for Amendments Sent		

0239

1241 (03/91)

Work Report Number for Applying Reserve	Claim Number (see Note 2)	Number of Claim Units	Value of Assessment Work Done on this Claim	Value Applied to this Claim	Value Assigned from this Claim	Reserve: Work to be Claimed at a Future Date
	1204461	4	0	1,600	0	—
	1204465	6	4,000	2,400	4,000	—
	Total Number of Claims: 2		Total Value Work Done: 4,000	Total Value Work Applied: 4,000	Total Assigned From: 4,000	Total Reserve: —

Credits you are claiming in this report may be cut back. In order to minimize the adverse effects of such deletions, please indicate from which claims you wish to priorize the deletion of credits. Please mark (✓) one of the following:

1. ☐ Credits are to be cut back starting with the claim listed last, working backwards.
2. ☐ Credits are to be cut back equally over all claims contained in this report of work.
3 ☐ Credits are to be cut back as priorized on the attached appendix.

In the event that you have not specified your choice of priority, option one will be implemented.

Note 1: Examples of beneficial interest are unrecorded transfers, option agreements, memorandum of agreements, etc., with respect to the mining claims.

Note 2: If work has been performed on patented or leased land, please complete the following:

I certify that the recorded holder had a beneficial interest in the patented or leased land at the time the work was performed.	Signature	Date

Ministry of Northern Development and Mines

Ontario

Ministère du Développement du Nord et des mines

Statement of Costs for Assessment Credit

État des coûts aux fins du crédit d'évaluation

Mining Act/Loi sur les mines

Transaction No./N° de transaction: W 9660-00334

2.16663

Personal information collected on this form is obtained under the authority of the **Mining Act**. This information will be used to maintain a record and ongoing status of the mining claim(s). Questions about this collection should be directed to the Provincial Manager, Minings Lands, Ministry of Northern Development and Mines, 4th Floor, 159 Cedar Street, Sudbury, Ontario P3E 6A5, telephone (705) 670-7264.

Les renseignements personnels contenus dans la présente formule sont recueillis en vertu de la **Loi sur les mines** et serviront à tenir à jour un registre des concessions minières. Adresser toute quesiton sur la collece de ces renseignements au chef provincial des terrains miniers, ministère du Développement du Nord et des Mines, 159, rue Cedar, 4e étage. Sudbury (Ontario) P3E 6A5, téléphone (705) 670-7264.

1. Direct Costs/Coûts directs

Type	Description	Amount Montant	Totals Total global
Wages Salaires	Labour Main-d'oeuvre		
	Field Supervision Supervision sur le terrain		
Contractor's and Consultant's Fees Droits de l'entrepreneur et de l'expert-conseil	Type Line cutting	1730	
	Magnetometer Survey	615	
	Horizontal Survey	855 800	4,000
Supplies Used Fournitures utilisées	Type Reporting		
Equipment Rental Location de matériel	Type		
	Total Direct Costs Total des coûts directs		4,000

2. Indirect Costs/Coûts indirects

** **Note:** When claiming Rehabilitation work Indirect costs are not allowable as assessment work.
Pour le remboursement des travaux de réhabilitation, les coûts indirects ne sont pas admissibles en tant que travaux d'évaluation.

Type	Description	Amount Montant	Totals Total global
Transportation Transport	Type		
Food and Lodging Nourriture et hébergement			
Mobilization and Demobilization Mobilisation et démobilisation			
	Sub Total of Indirect Costs Total partiel des coûts indirects		
	Amount Allowable (not greater than 20% of Direct Costs) Montant admissible (n'excédant pas 20 % des coûts directs)		
	Total Value of Assessment Credit (Total of Direct and Allowable indirect costs) / **Valeur totale du crédit d'évaluation (Total des coûts directs et indirects admissibles**		

Note: The recorded holder will be required to verify expenditures claimed in this statement of costs within 30 days of a request for verification. If verification is not made, the Minister may reject for assessment work all or part of the assessment work submitted.

Note : Le titulaire enregistré sera tenu de vérifier les dépenses demandées dans le présent état des coûts dans les 30 jours suivant une demande à cet effet. Si la vérification n'est pas effectuée, le ministre peut rejeter tout ou une partie des travaux d'évaluation présentés.

Filing Discounts

1. Work filed within two years of completion is claimed at 100% of the above Total Value of Assessment Credit.

2. Work filed three, four or five years after completion is claimed at 50% of the above Total Value of Assessment Credit. See calculations below:

Total Value of Assessment Credit	Total Assessment Claimed
× 0.50 =	

Remises pour dépôt

1. Les travaux déposés dans les deux ans suivant leur achèvement sont remboursés à 100 % de la valeur totale susmentionnée du crédit d'évaluation.

2. Les travaux déposés trois, quatre ou cinq ans après leur achèvement sont remboursés à 50 % de la valeur totale du crédit d'évaluation susmentionné. Voir les calculs ci-dessous.

Valeur totale du crédit d'évaluation	Évaluation totale demandée
× 0,50 =	

Certification Verifying Statement of Costs

I hereby certify:
that the amounts shown are as accurate as possible and these costs were incurred while conducting assessment work on the lands shown on the accompanying Report of Work form.

that as District Manager, Exploration (Recorded Holder, Agent, Position in Company) I am authorized to make this certification

APR 23 1996

Signature: [signature] Date: April 25-1996.

Attestation de l'état des coûts

J'atteste par la présente :
que les montants indiqués sont le plus exact possible et que ces dépenses ont été engagées pour effectuer les travaux d'évaluation sur les terrains indiqués dans la formule de rapport de travail ci-joint.

Et qu'à titre de _____ (titulaire enregistré, représentant, poste occupé dans la compagnie) je suis autorisé à faire cette attestation.

Signature: [signature] Date: April 25-1996.

Nota : Dans cette formule, lorsqu'il désigne des personnes, le masculin est utilisé au sens neutre

Ontario

Ministry of
Northern Development
and Mines

Ministère du
Développement du Nord
et des Mines

Geoscience Assessment Office
933 Ramsey Lake Road
6th Floor
Sudbury, Ontario
P3E 6B5

Telephone: (705) 670-5853
Fax: (705) 670-5863

July 23, 1996

Our File: 2.16663
Transaction #: W9660.00334

Mining Recorder
Ministry of Northern Development & Mines
60 Wilson Avenue, 1st Floor
Timmins, Ontario
P4N 2S7

Dear Mr. White:

SUBJECT: APPROVAL OF ASSESSMENT WORK CREDIT ON MINING LAND, CLAIM(S) 1204465 (ET AL.) IN LANGMUIR TOWNSHIP(AREA)

Assessment work credit has been approved as outlined on the Declaration of Assessment Work Form accompanying this submission. The credit has been approved under Section 14, Geophysics(MAG,EM) of the Assessment Work Regulation.

The approval date is July 23, 1996. Please indicate this approval on the claim record.

If you have any questions regarding this correspondence, please contact Bruce Gates at (705) 670-5856.

Yours sincerely,
ORIGINAL SIGNED BY:

Ron C. Gashinski
Senior Manager, Mining Lands Section
Mines and Minerals Division

BIG/jf

cc: Resident Geologist
Timmins, Ontario

✓ Assessment Files Library
Sudbury, Ontario

G-3226

TOWNSHIP

LANGMUIR

MINING DIVISION
PORCUPINE
LAND TITLES / REGISTRY DIVISION
COCHRANE

2.16663

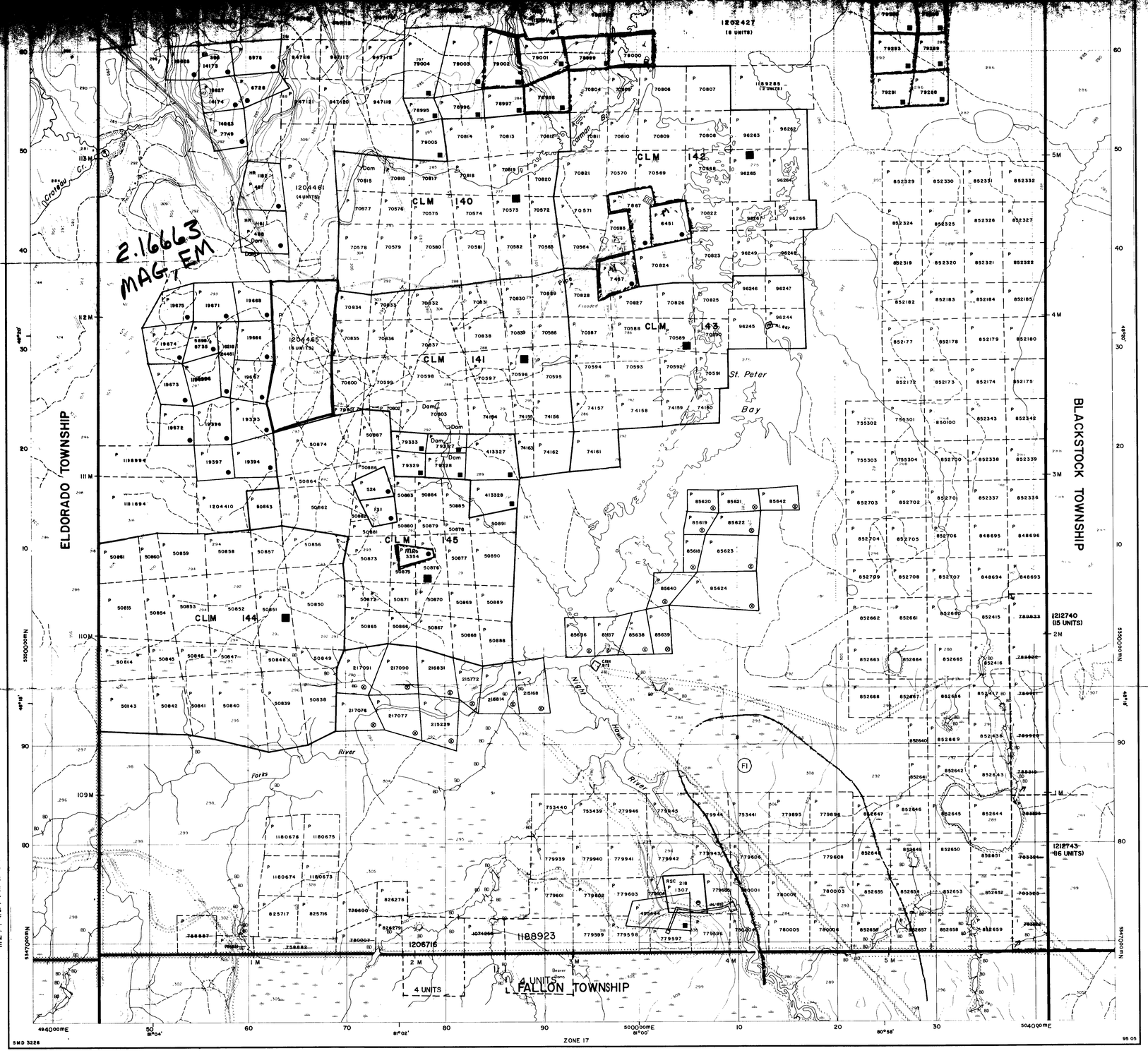
Scale 1:20 000

Metres 1000 0 1000 2000 Metres

Feet 1000 0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000 Feet

Contour Interval 10 Metres

2.16663
MAG, EM



SYMBOLS

- Boundary
  - Township, Meridian, Baseline
  - Road allowance; surveyed / shoreline
  - Lot/Concession; surveyed / unsurveyed
  - Parcel; surveyed / unsurveyed
  - Right-of-way; road / railway / utility
  - Reservation
- Cliff, Pit, Pile
- Contour
  - Interpolated
  - Approximate
  - Depression
- Control point (horizontal)
- Flooded land
- Mine head frame
- Pipeline (above ground)
- Railway; single track / double track / abandoned
- Road; highway, county, township / access / trail, bush
- Shoreline (original)
- Transmission line
- Wooded area

AREAS WITHDRAWN FROM DISPOSITION

MRO - Mining Rights Only
SRO - Surface Rights Only
M + S - Mining and Surface Rights

Description	Order No.	Date	Disposition	File
(N) APPLICATION PENDING UNDER P.L.A. — SURFACE RIGHT WITHDRAWN				

(FI) THIS TWP IS SUBJECT TO FOREST ACTIVITY IN 1995-96. FURTHER INFORMATION AVAILABLE ON FILE.

- 01 21. June 1/21.

NOTES

THIS TOWNSHIP LIES WITHIN THE MUNICIPALITY OF THE CITY OF TIMMINS

FLOODING RIGHTS ON NIGHT HAWK LAKE TO THE CONTOUR ELEVATION 903.5' RESERVED TO ONT. HYDRO.

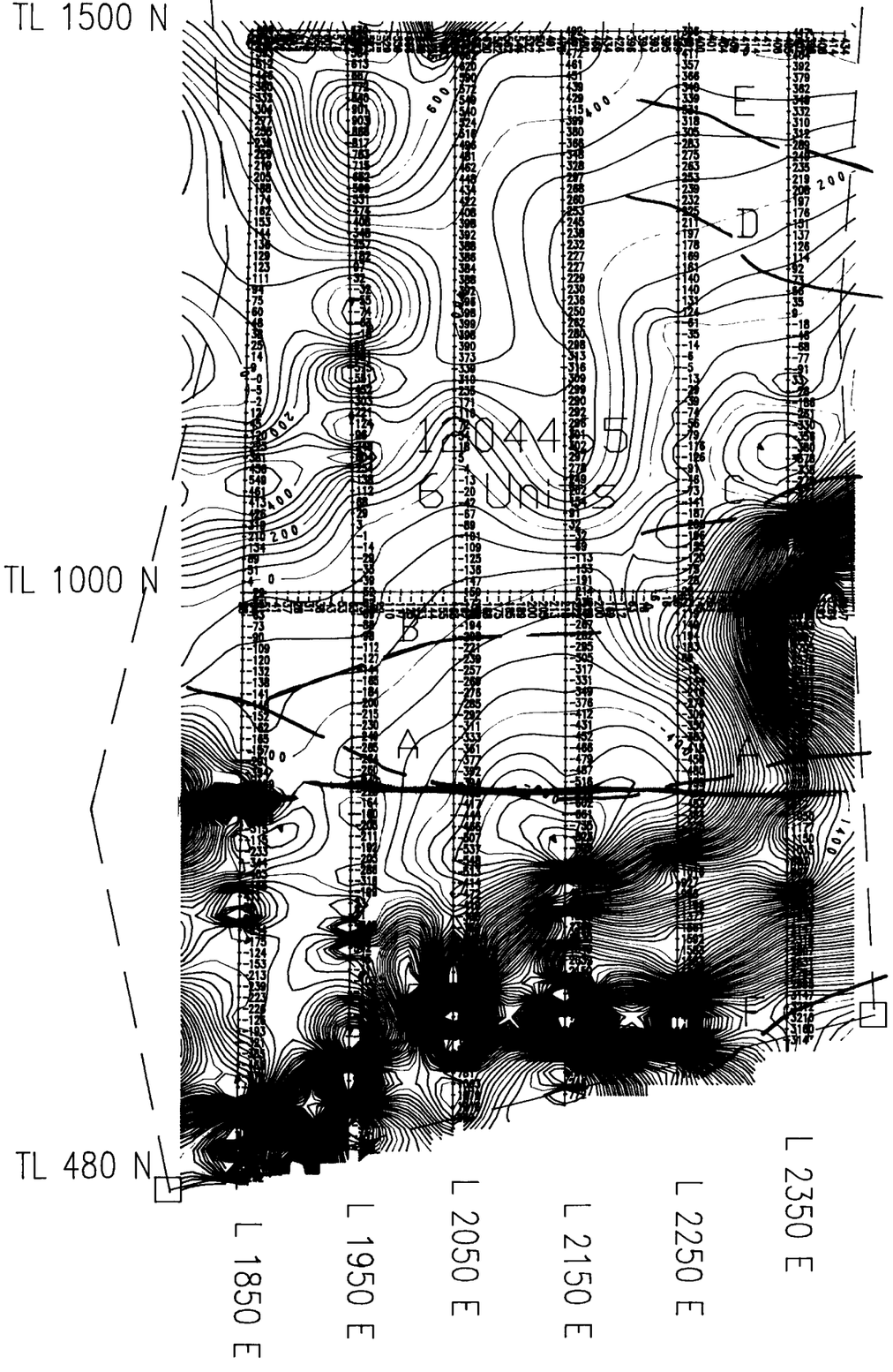
DISPOSITION OF CROWN LANDS

- Patent
  - Surface & Mining Rights
  - Surface Rights Only
  - Mining Rights Only
- Lease
  - Surface & Mining Rights
  - Surface Rights Only
  - Mining Rights Only
- Licence of Occupation
- Order-in-Council (OC)
- Cancelled
- Reservation
- Sand & Gravel

ACTIVATED JULY 18, 1995 BY:

Map base and land disposition drafting by Surveys and Mapping Branch, Ministry of Natural Resources.

The disposition of land, location of lot fabric and parcel boundaries on this index was compiled for administrative purposes only.



0 50 100 150 200
SCALE (m)

42A06SE0071 2 16663 LANGMUIR

210

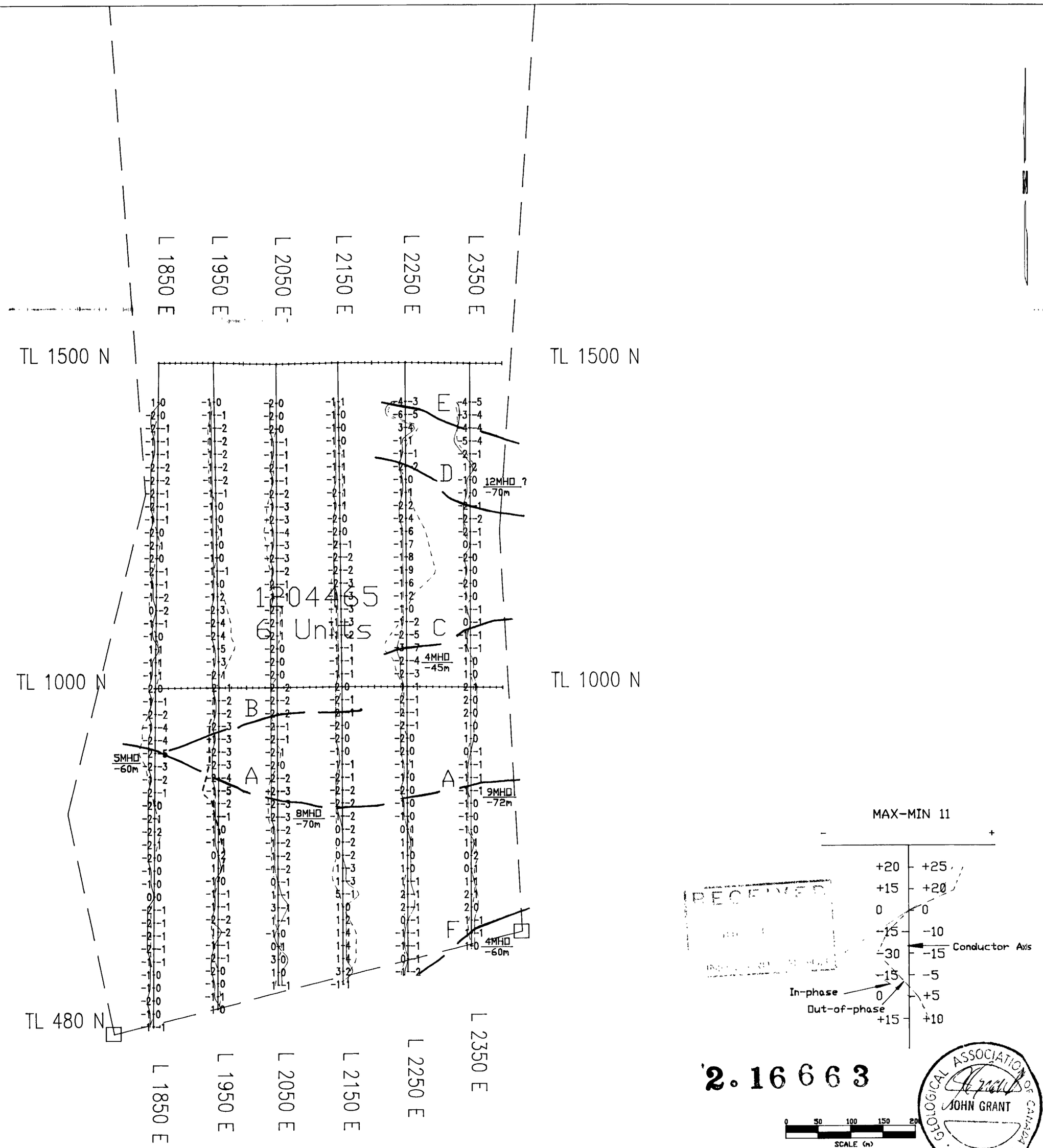
LEGEND
Instrument: BRGM OMNI-1V
Parameters Measured: Earth's total magnetic field
Accuracy: +/- 0.1 nano-teslas
Diurnals: Corrected by base station recorder
Contour Interval: 0,50,100,150,200,.....
Reference Field: 58,570 gammas
Datum Subtracted: 57,500 gammas

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

CLIENT: OUTOKUMPU MINES LTD
PROPERTY: LANGMUIR PROPERTY
TITLE:

MAGNETOMETER SURVEY

Date: April 1996	Scale: 1:5000	NTS:
Drawn: P.Gauthier	Interp: J.C.Grant	Job No.: E-162



MAX-MIN 11

2.16663

LEGEND

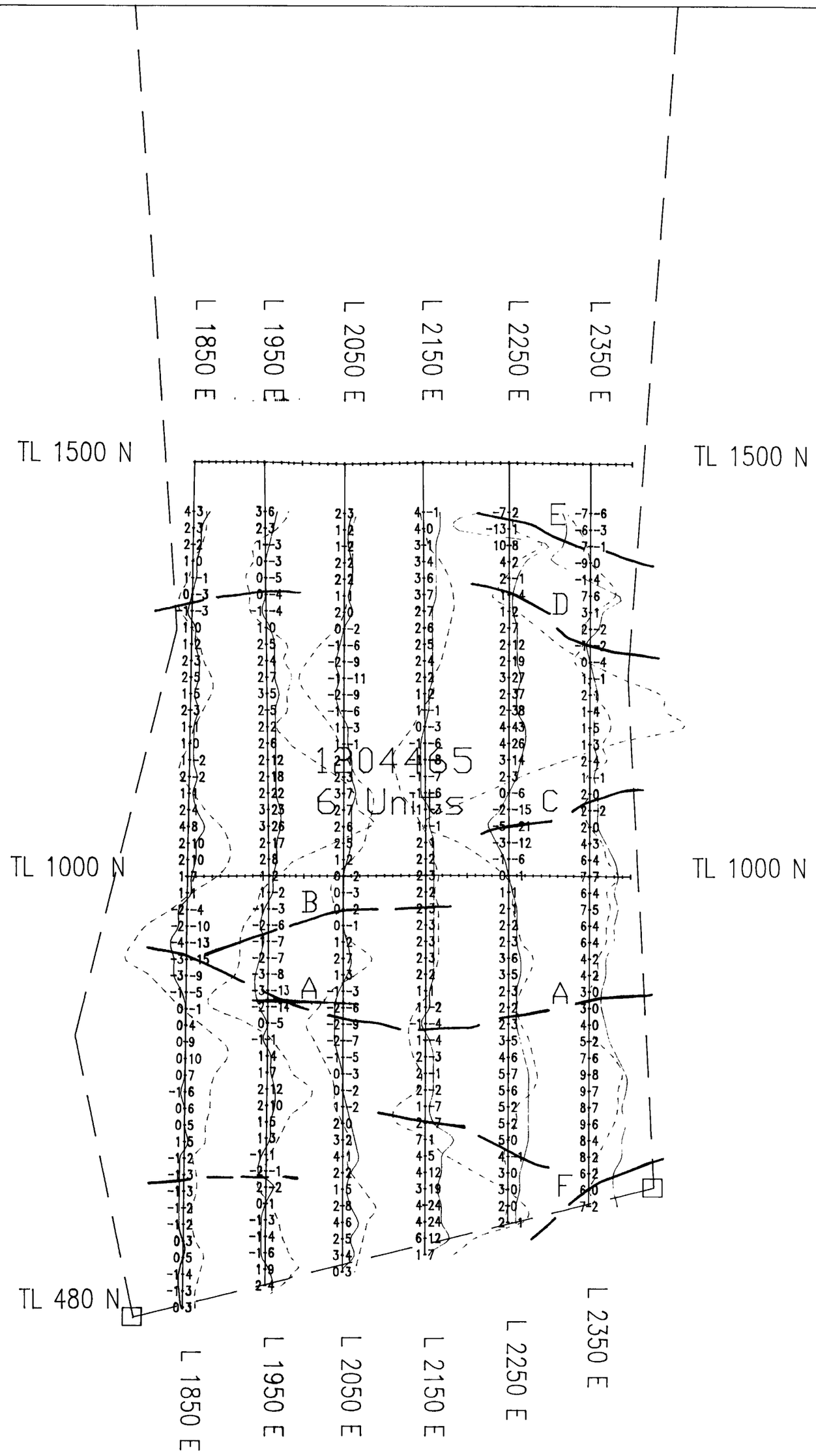
Instrument: Apex Parametrics Max-Min 11
Mode: Maximum Coupled, Horizontal Loop Survey
Parameters Measured: Inphase (%)
Out of phase (%)
Frequency: 444 Hz
Coil Seperation: 120m
Operator: J. DerWeduwen, B. Pigeon
Profile Scale: 1cm=+/-10%

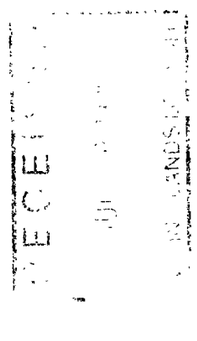
EXSICS EXPLORATION LTD.
P.O. Box 1880, P4N-7X1
Suite 13, Hollinger Bldg, Timmins Ont.
Telephone: 705-267-4151

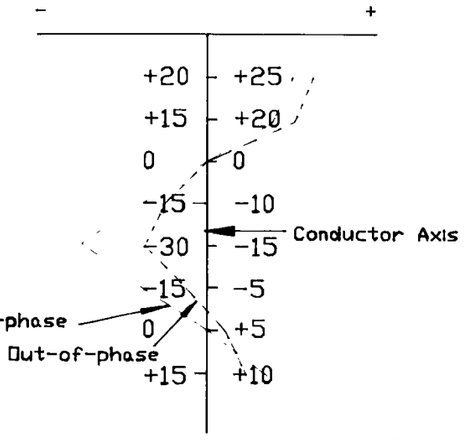
CLIENT: OUTOKUMPU MINES LTD
PROPERTY: LANGMUIR PROPERTY
TITLE:

MAX-MIN II 444 Hz

Date:April 1996	Scale: 1:5000	NTS:
Drawn:P.Gauthier	Interp: J.C.Grant	Job No.:E-162







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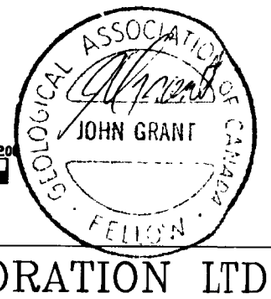

LEGEND

Instrument: Apex Parametrics Max-Min 11
Mode: Maximum Coupled, Horizontal Loop Survey
Parameters Measured: Inphase (%)
Out of phase (%)
Frequency: 1777 Hz
Coil Seperation: 120m
Operator: J. DerWeduwen, B. Pigeon
Profile Scale: 1cm=+/-10%

EXSICS EXPLORATION LTD.
P.O. Box 1860, P4N-7X1
Suite 13, Hollinger Bldg, Timmins Ont.
Telephone: 705-267-4151

CLIENT: OUTOKUMPU MINES LTD
PROPERTY: LANGMUIR PROPERTY
TITLE:

MAX-MIN II 1777 Hz

Date:April 1996	Scale: 1:5000	NTS:
Drawn:P.Gauthier	Interp: J.C.Grant	Job No.:E-162