



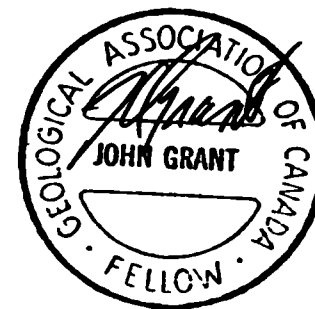
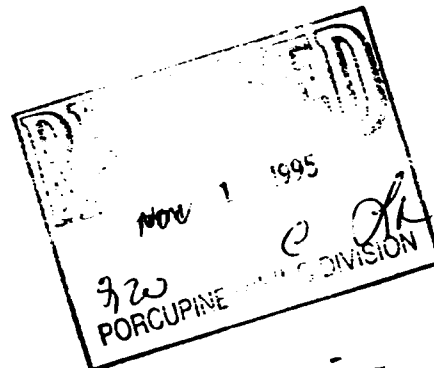
42A07NWD003 2.16374 CARMAN

010

GEOPHYSICAL REPORT
FOR
OUTOKUMPU MINES LIMITED
ON THE
CARMAN-LANGMUIR PROPERTY
CARMAN AND LANGMUIR TOWNSHIPS
PORCUPINE MINING DIVISION
NORTHEASTERN ONTARIO

PREPARED BY: J.C. GRANT, CET, FGAC
OCTOBER, 1995

2.16374



2.16374



42A07NW0003 2.16374 CARMAN

010C

TABLE OF CONTENTS

	PAGE
INTRODUCTION.....	1
PROPERTY AND LOCATION.....	1
CLAIM GROUP.....	1-2
PERSONNEL.....	2
GROUND PROGRAM.....	2
MAGNETIC SURVEY.....	3
HLEM SURVEY.....	3
SURVEY RESULTS.....	4
ZONE A.....	4
ZONE B.....	4-5
ZONE C & C'.....	5
ZONE D.....	5
ZONE E.....	5
ZONE F.....	6
ZONE G.....	6
ZONE H.....	6
ZONE J.....	6
ZONE K & L.....	7
ZONE M.....	7
CONCLUSIONS AND RECOMMENDATIONS.....	7
CERTIFICATE	
FIGURES 1- LOCATION MAP	
2- PROPERTY LOCATION MAP	
3- CLAIM SKETCH	
APPENDIX A- BRGM OMNI IV SYSTEM	
B- APEX PARAMETRICS MAX MIN II SYSTEM	
MAPS- MAGNETIC SURVEY	
- 444 HZ FREQUENCY MAX MIN II SURVEY	
-1777 HZ FREQUENCY MAX MIN II SURVEY	

INTRODUCTION

The services of Exsics Exploration Limited were retained by Outokumpu Mines Limited to complete a ground geophysical program on a block of claims located in the south central section of Carman Township and the north central section of Langmuir Township of the Porcupine Mining Division. Figure 1.

The purpose of this program was to locate and outline a number of airborne targets which were considered as favourable horizons for base metal deposition.

The linecutting portion of the program was completed between August 14 and September 20, 1995. The follow up geophysical program was completed between September 17 and October 7, 1995.

This report will deal with the results of the present program.

PROPERTY LOCATION AND ACCESS

The Carman-Langmuir property is located on the west shore of Carman Bay which is located on the southern tip of Night Hawk Lake. The majority of the grid is located in the central section of Carman Township with a small section extending into the north central section of Langmuir Township. Figure 2. The entire property is located approximately 20 kilometers south-southeast of the City of Timmins.

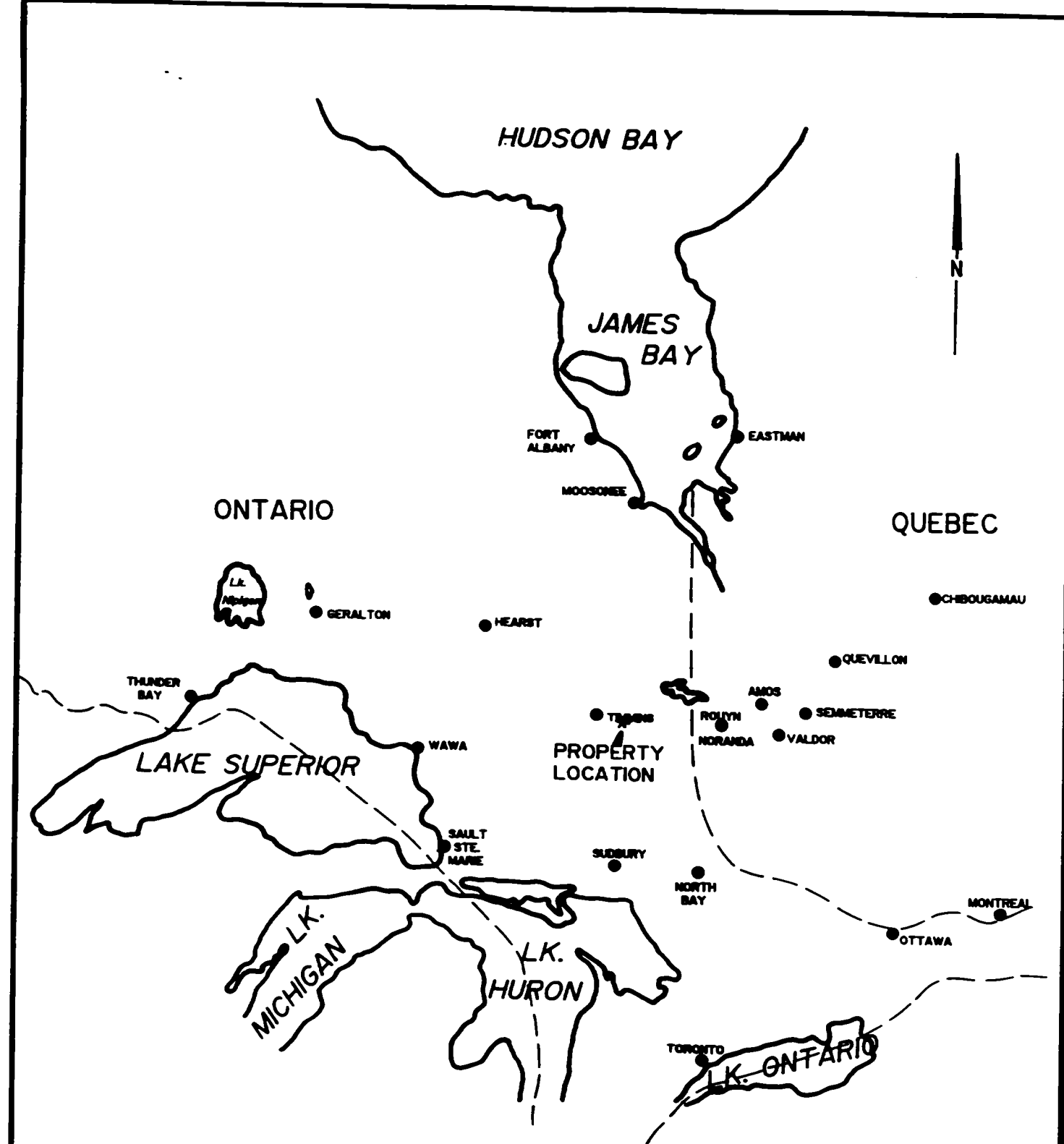
Access to the grid during the survey period was relatively easy. A good gravel road, locally called the Langmuir road, travels south and southeast from the Town of South Porcupine and provides two wheel drive access to a boat launching site situated on the west shore of Carman Bay. A short boat ride of approximately 10 minutes will provide access to the south and east section of the cut grid. The Town of South Porcupine is accessible by vehicle from Timmins by either the Back road out of the City or by following Highway 101 east. Travelling time from Timmins to the boat launching site is approximately 30 minutes. Figure 2.


CLAIM GROUP

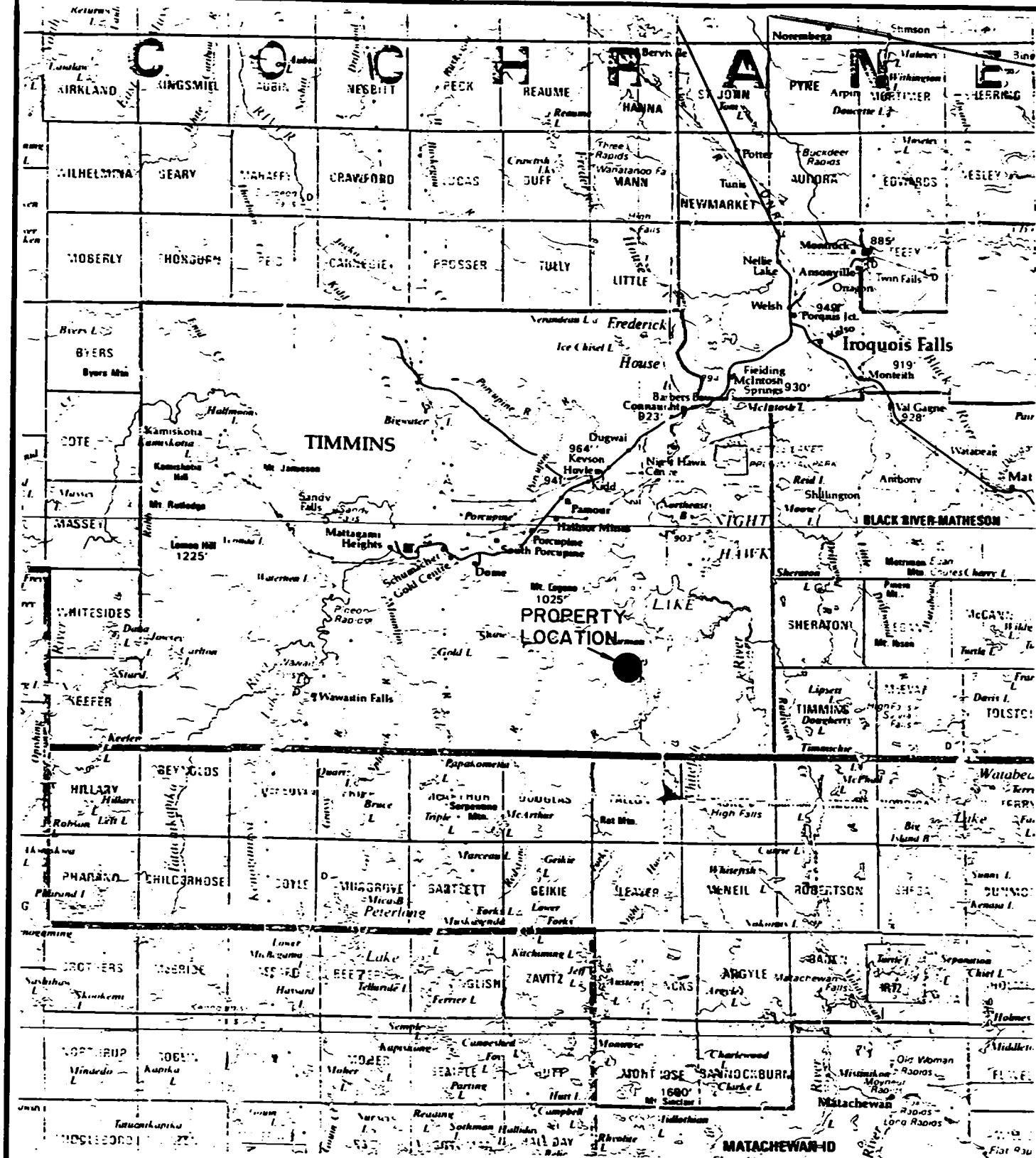
The claim numbers which make up the Carman-Langmuir property are as follows:

Carman Township

P-1189286.....	6 units
P-1201192.....	3 units
P-1198905.....	4 units
P-1189735.....	4 units
P-1198906.....	1 unit



			EXSICS EXPLORATION LTD. P.O. Box 1000, P4N-7X1 Suite 13, Hollinger Bldg, Timmins Ont. Telephone: 705-267-4151		
			CLIENT: OUTOKUMPU MINES LIMITED		
PROPERTY: CARMAN-LANGMUIR PROPERTY			TITLE:		
LOCATION MAP			Fig. 1		
Date: Sept. 1995		Scale: 1"=125miles		MNDM Plan#:	
Drawn: P. Gauthier		Interp: J.C. Grant		Job No. E-122	



EXSICS EXPLORATION LTD.

P.O. Box 1000, P4N-7X1
 Suite 13, Hollinger Bldg, Timmins Ont.
 Telephone: 705-267-4151

CLIENT: **OUTOKUMPU MINES LIMITED**

PROPERTY: **CARMAN-LANGMUIR PROPERTY**

TITLE:

PROPERTY LOCATION

Fig. 2

Date: **Sept. 1995**

Scale: **1:600,000**

MNDM Plan#: **22-6**

Drawn:

Interp: **J.C. Grant**

Job No. **E-122**

Claim Group con't

P-1204403..... 4 units
 P-1204402..... 4 units
 P-1204120..... 4 units
 P-1204401..... 2 units
 P-1198862..... 1 unit
 P-1198858..... 1 unit
 P-1160188..... 1 unit
 P-1160189..... 1 unit
 P-1155637..... 1 unit
 P-1198859..... 1 unit
 P-1204519..... 1 unit
 P-1204518..... 1 unit
 P-1204517..... 1 unit
 P-1204516..... 1 unit
 P-1204515..... 1 unit
 P-1204514..... 1 unit
 P-1204513..... 1 unit

Langmuir Township

P-1204520..... 1 unit
 p-1202432..... 1 unit

Refer to Figure 3, copied from the MNDM plan maps of Carman, (G-4000), and Langmuir, (G-3226), Townships, scale 1:20.000.

PERSONNEL

The crew directly responsible for collecting the field data were as follows: B. Pigeon.....South Porcupine, Ont.
S. Olink.....Timmins, Ontario

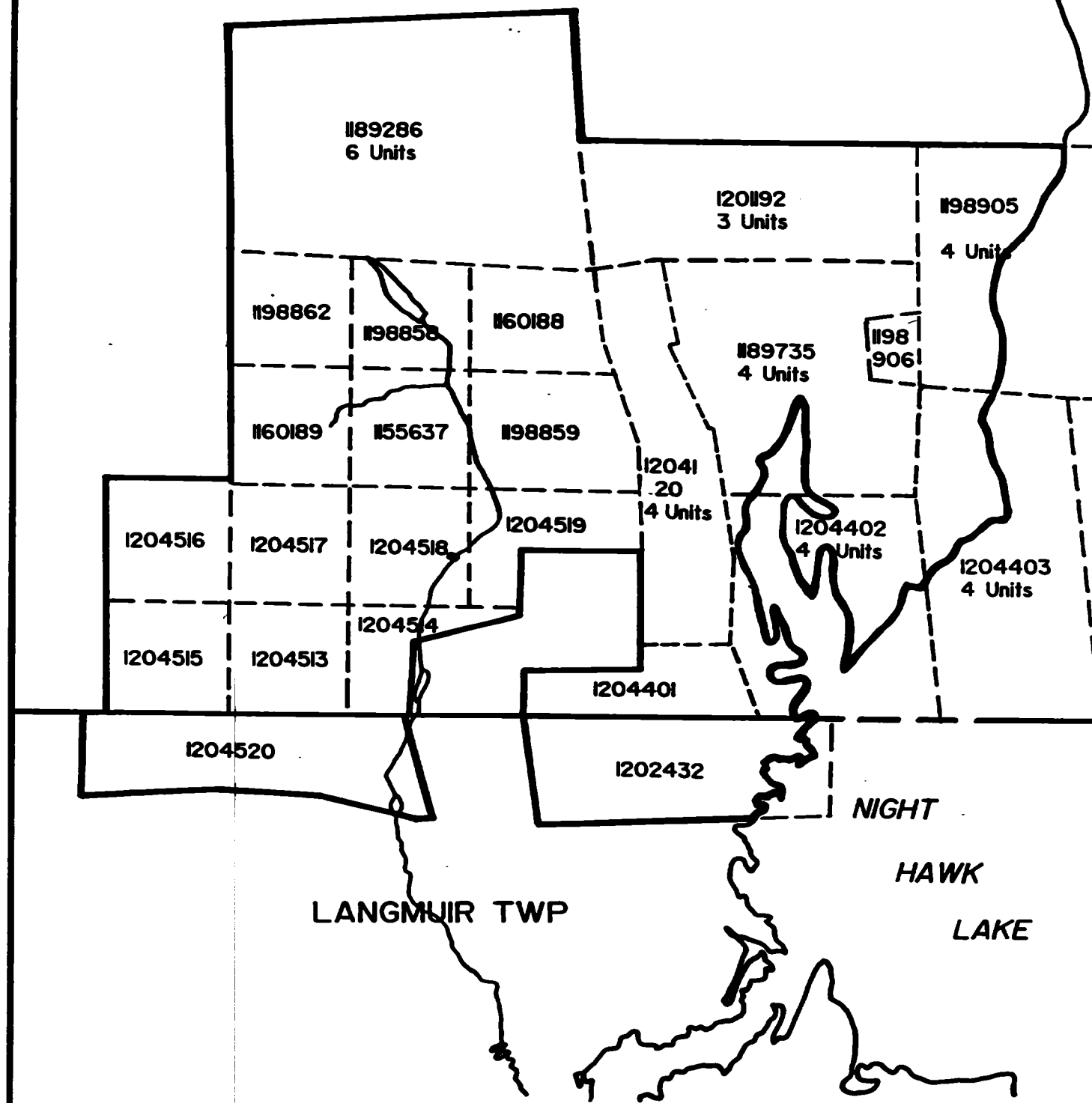
The entire program was completed under the direct supervision of J.C.Grant. The plotting and compilation was completed by P.Gauthier of Exsics Exploration Limited.

GROUND PROGRAM

The ground program consisted of two phases. The first phase of the program was to cut a detailed metric grid across the property using a line spacing of 100 meters. All of the cut lines were chained with 20 meter pickets which were metal tagged. A series of baselines and tie lines were also cut perpendicular to the cross line which would aid in controlling the direction of the cross lines. In all, a total of 78 kilometers were established across the property.

The second phase of the program was to complete a Total Field Magnetism survey as well as an HLEM survey along the cut lines. The magnetic survey was completed over the entire cut grid and the HLEM survey was completed on the cross lines only.

CARMAN TWP



EXSICS EXPLORATION LTD.

P.O. Box 1000, P4M-7X1
Suite 13, Hollinger Bldg, Timmins Ont.
Telephone: 705-267-4551

CLIENT: OUTOKUMPU MINES LIMITED

PROPERTY: CARMAN-LANGMUIR PROPERTY

TITLE: CLAIM SKETCH

Fig. 3

Date: Sept. 1995

Scale: 1:20,000

MNDM Plan#: 6-3226
6-4000

Drawn: P. Gauthier

Interp: J.C. Grant

Job No. E-122

Magnetic Survey:

This survey was completed using the BGRM OMNI IV system. Specifications for this system can be found as Appendix A of this report. The following parameters were kept constant throughout the survey period.

Linespacing	-100 meters
Station interval	-20 meters
Reading interval	-10 meters
Diurnal correction	-Base station recorder
Base station record interval	-30 seconds
Reference field	-57850 gammas
Datum subtraction	-57500 gammas
Accuracy	-+/-0.1 gammas

The corrected, levelled data was then plotted onto a mylar base map at a scale of 1:5000 and contoured at 100 gamma intervals where possible. A copy of this contoured base map is included in the back pocket of this report.

HLEM Survey:

This survey was completed using the Apex Parametrics, MaxMin II system. Specifications for this unit can be found as Appendix B of this report. The following parameters were kept constant throughout the survey period.

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

The collected data was then plotted directly onto a mylar base map at a scale of 1:5000, one map for each frequency. The data was then profiled at 1:20% were possible. All conductor axis were placed directly onto these mylar maps and their characteristics were printed directly on each line axis as they apply. This was done for a quick reference of each zone located.

A copy of the base map for each frequency has been included in the back pocket of this report.

SURVEY RESULTS

The HLEM survey was successful in locating and outlining a number of conductive zones across the grid. There are several extremely strong features as well as a number of weaker and questionable zones.

Each of these zones have been lettered and will be discussed seperately and in detail. Magnetic correlation will accompany each zone as it applies.

ZONE A

This conductor represents one of the most consistent as well as one of the strongest features on the grid. It is situated between lines 3900MN and 2500MN and generally strikes at an azimuth of 020 to 040 degrees. The northern extension of the zone, between lines 3300MN and 3700MN, is situated at a depth of 10 to 50 meters with a conductivity range of 25 to 80 mhos. The southern extension of the zone, between lines 3100MN and 2700MN is situated at a depth of 20 to 60 meters with a conductivity range of 20 to 60 mhos. There appears to be an offset in the strike of the conductor between lines 3100MN and 3200MN which may indicate faulting or folding.

The magnetics suggest that the zone lies along the west flank of a strong magnetic unit which may relate to an iron rich formation. This would suggest that Zone A may infact relate to a contact zone. The magnetic survey also confirms the existence of a cross structure, cutting across the grid and generally parallel to line 3000MN. This structure is probably indicative of a fault zone. A second faulf structure can be traced striking off of this main fault zone at an azimuth of 270 degrees commencing on line 3000MN at approximately 3400ME. A second fault zone parallelling this feature appears to commence on L3000MN at 2900ME.

The shift in thestrike of Zone A is most probably due to the presence of the faults.

ZONE B:

This conductor represents the second most predominant zone on the grid as well as the next strongest. The zone lies between lines 4400MN and 2900MN and continues off of the grid in both directions. Again the strike of the zone appears to have been interrupted especially across lines 3500MN. The northern section of the zone, between lines 3900MN and 3600MN is situated at a depth of 20 to 40 meters with a conductivity range of 17 to 40 mhos. The southern section of the zone, between lines 3400MN and 3000MN is situated at a depth of 10 to 25 meters with a conductivity range of 40 to 75 mhos.

The magnetic survey shows direct magnetic high association with the conductor suggesting a possible iron rich formation. This conductor is typical of most iron formations as it shows a number of off-sets along it's strike which usually relate to multiple lenses and stringers of iron rich material within the overall unit.

ZONE C,C':

This conductive zone lies between lines 2900MN and 2100M and probably relates to two parallel zones too close for the HLEM survey to seperate. The zone lies at a depth of 45 to 66 meters and has a conductivity range of 15 to 45 mhos. The strongest portion of the zone lies between lines 2800MN and 2300MN which is south of the suspected fault zones. However, it would be safe to assume that Zone C probably extends as far as line 4300MN and may continue off of the grid to the north.

The magnetic survey would suggest that the southern portion of the zone has direct magnetic high association and probably relates to an iron formation. The northern portion of the zone has a moderate magnetic low association which may be due to the presence of the iron rich formations to the east and west.

ZONE D:

This zone appears to relate to a legitimate bedrock conductor situated between lines 3800MN and 4300MN. It also appears to continue off of the grid to the north. The zone closely parallels the strike of Zone C and is situated at a depth of 55 to 60 meters which is just about the limits of the survey's penetration capabilities. The conductivity ranges from 5 to 25 mhos.

The zone appears to lie along the outer east flank of a magnetic high unit.

ZONE E:

This feature represent a weak questionable zone at this writing. The conductor strikes parallel to Zone A and lies across lines 3500MN and 3800MN.

The entire zone lies along the east flank of a strong magnetic unit suggesting it may relate to a contact zone.

ZONE F:

This zone appears to relate to a legitimate, albeit deep bedrock conductor. The zone generally parallels the structural trends of the grid which are well defined by Zones A, B and C. The conductor lies between lines 3000MN and 3400MN and is situated at a depth of 60 to 70 meters with a conductivity range of 10 to 12 mhos. Again the zone lies at the limits of the HLEM penetration capabilities.

The magnetic for the same area suggest that the zone probably represents a contact zone between the intermediate to felsic rocks and the mafic to ultramafic intrusives. The conductor is terminated on it's southern tip by the fault structure.

ZONE G:

This conductive zone appears to represent a moderate to weak zone between lines 2200MN and 2300MN and again across lines 2600MN and 2800MN. The zone appears to lie at a depth of 40 meters with moderate conductivity of 7 mhos.

The conductor appears to be along the west flank of a moderate magnetic high unit. The southern extension of the zone appears to relate to a contact zone between the ultramafic flows and intermediate to felsic rocks.

ZONE H:

This is a weak questionable zone at this writing as it appears to relate to a fault zone striking west off of the major northwest striking fault zone. The magnetics confirm the presence of the fault in relation to the location of Zone H. The distortion in the creek along strike of this zone suggest minor cross structures may be evident.

ZONE J:

This zone also represent a weak questionable structure at this time. Again the zone closely parallels the strike of Zone A. Infact, the zone may represent a contact zone between the intermediate to felsic rocks and the mafic to ultramafic intrusives.

The southern extension of the zone lies along the east flank of a good magnetic high unit. However, the northern extension appears to extend into the intermediate to felsic unit and is somewhat weaker.

ZONES K,L:

These zones are considerably weaker and somewhat questionable at this writing. Both features generally parallel the stratigraphy of the property but for the most part are single line responses.

The magnetic survey would suggest that Zone K may relate to a fault zone. Zone L appears to have been crosscut by a structure parallelling line 1400MN.

ZONE M:

This zone represents a weak conductor of 6 mhos situated at a depth of 45-50 meters. The zone has a direct magnetic low association and an east flanking magnetic high. This may suggest the zone may relate to a thin iron rich stringer.

CONCLUSIONS AND RECOMMENDATIONS

The ground program was successful in locating and outlining a number of strong, moderate and weak zones across the property. The HLEM as well as the Magnetic surveys was successful in outlining the structural trends of the property.

Zone A, B, C and C' probably relate to a formation consisting of parallel lenses of iron rich material which generally follow the strike of the property geology.

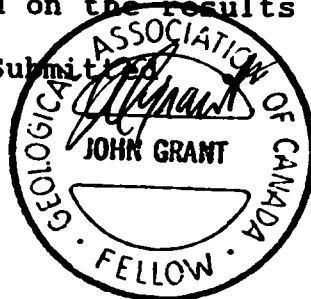
The magnetic survey was also successful in outlining one major cross structure parallelling line 3000MN which relates to a fault zone. There also appears to be two cross faults striking at 270 degrees and parallelling zones H and K. Both faults continue off of the grid to the southwest. A diabase dike is evident cross cutting the west end of lines 4000MN to 3000MN and stopping next to the main fault.

A follow up program should consist of detailed mapping as there appears to be abundant outcrop in the area as well as evidence of old pits and trenches. Soil sampling may also aid in identifying the conductors.

A number of the conductors, especially A, B, C, C', D and F all relate to legitimate bedrock zones. Drill hole locations for any and all of these zones can be spotted with general ease and confidence. Several of the weaker zones especially G, M and J would be based on the results of the initial targets.

Respectfully Submitted

John C. Grant.



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 subsequently 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.

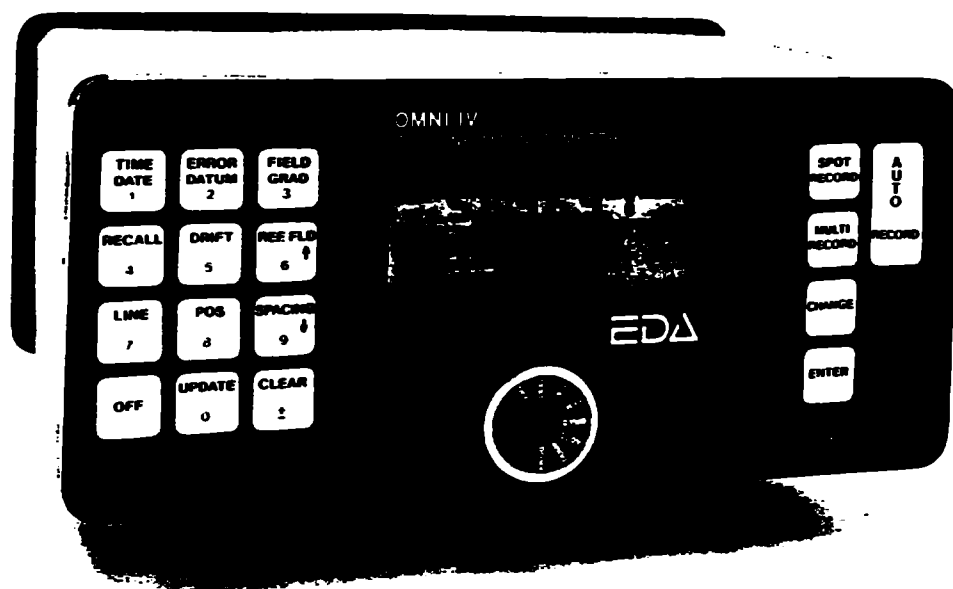
John Charles Grant, CET, FGAC



APPENDIX A

OMNI IV
"The 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
Timing 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

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

Printed in Canada

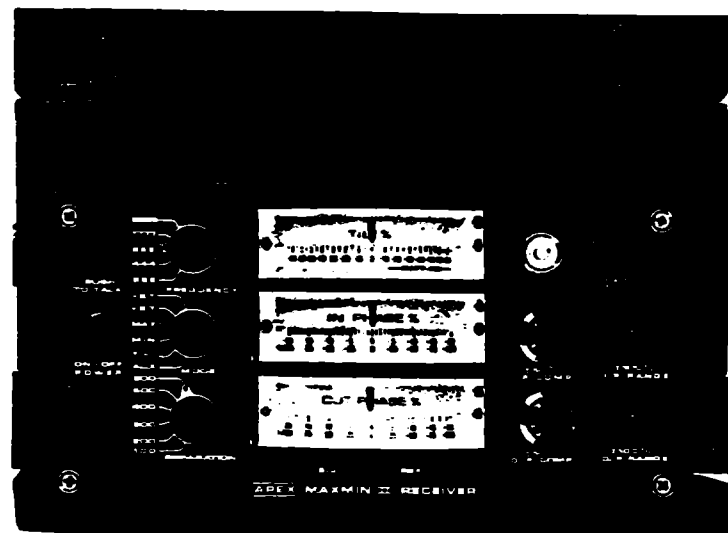
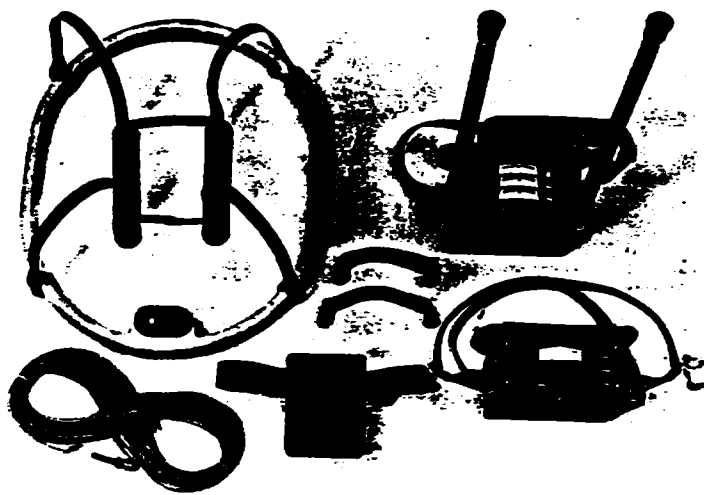
APPENDIX B

APEX

MAXMIN II PORTABLE EM

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





SPECIFICATIONS :

Frequency:	222, 444, 888, 1777 and 3555Hz.	Accuracy:	±0.25% to ±1% normally, depending on conditions, frequencies and coil separation used.
Mode of Operation:	<p>MAX: Transmitter coil plane and receiver coil plane horizontal (Max-coupled; Horizontal-loop mode). Used with refer. cable.</p> <p>MIN: Transmitter coil plane horizontal and receiver coil plane vertical (Min-coupled mode). Used with reference cable.</p> <p>V.L.: Transmitter coil plane vertical and receiver coil plane horizontal (Vertical-loop mode). Used without reference cable, in parallel lines.</p>	Transmitter Output:	<ul style="list-style-type: none"> - 222Hz : 220 Atm² - 444Hz : 200 Atm² - 888Hz : 120 Atm² - 1777Hz : 60 Atm² - 3555Hz : 30 Atm²
Coil Separations:	25, 50, 100, 150, 200 & 250m (MMI) or 100, 200, 300, 400, 600 and 800 ft. (MMIF). Coil separations in VL mode not restricted to fixed values.	Receiver Batteries:	9V trans. radio type batteries (4). Life: approx. 35hrs. continuous duty (alkaline, 0.5 Ah), less in cold weather.
Parameters Read:	<ul style="list-style-type: none"> - In-Phase and Quadrature components of the secondary field in MAX and MIN modes. - Tilt-angle of the total field in V.L. mode. 	Transmitter Batteries:	12V 6Ah Gel-type rechargeable battery. (Charger supplied).
Readouts:	<ul style="list-style-type: none"> - Automatic, direct readout on 90mm (3.5") edgewise meters in MAX and MIN modes. No nulling or compensation necessary. - Tilt angle and null in 90mm edgewise meters in V.L. mode. 	Reference Cable:	Light weight 2-conductor teflon cable for minimum friction. Unshielded. All reference cables optional at extra cost. Please specify.
Scale Ranges:	<p>In-Phase: ±20%, ±100% by push-button switch.</p> <p>Quadrature: ±20%, ±100% by push-button switch.</p> <p>Tilt: ±75% slope.</p> <p>Null (V.L.): Sensitivity adjustable by separation switch.</p>	Voice Link:	Built-in intercom system for voice communication between receiver and transmitter operators in MAX and MIN modes, via reference cable.
Readability:	In-Phase and Quadrature: 0.25% to 0.5% ; Tilt: 1%.	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

APEX

PARAMETRICS LIMITED

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

Phone: (416) 495-1612

Cables: APEX PARA TORONTO

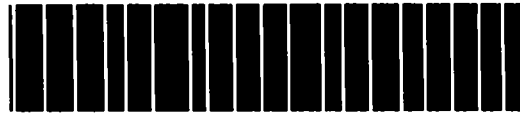
Telex: 06-966773 NOROVIK TOR



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, 180 Cedar Street, Sudbury, Ontario, P3E 6A5, telephone (705) 670-7264.

2.16374

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



42A07NW0003 2 16374 CARMAN

900

Recorded Holder(s) <i>Oatokumpu Mines Ltd. (J.P. KERSER)</i>		Client No. <i>178525</i>
Address <i>P.O. Box 1123, Timmins, Ontario, P4N 7H9</i>		Telephone No. <i>(705) 264-5024</i>
Mining Division <i>Porcupine</i>	Township/Area <i>Corman and Langmuir Twp.</i>	M or G Plan No. <i>6-4000, 6-3226</i>
Date Work Performed From: <i>August 14, 1995</i>		To: <i>October 7, 1995</i>

Work Performed (Check One Work Group Only)

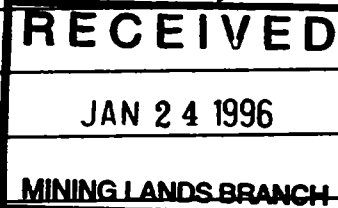
Work Group	Type
<input checked="" type="checkbox"/> Geotechnical Survey	<i>Line cutting, Magnetic Survey, Map-Min Survey</i>
<input type="checkbox"/> Physical Work, Including Drilling	
<input type="checkbox"/> Rehabilitation	
<input type="checkbox"/> Other Authorized Work	
<input type="checkbox"/> Assays	
<input type="checkbox"/> Assignment from Reserve	

Total Assessment Work Claimed on the Attached Statement of Costs \$ *31,075.00*

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
<i>John Grant, Excise Exploration Ltd.</i>	<i>P.O. Box 1880, Timmins, Ontario, P4N 7X1</i>



(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 <i>Oct 24, 1995</i>	Recorded Holder or Agent (Signature) <i>Paul</i>
--	-----------------------------	---

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 <i>Paul Davis, Oatokumpu Mines Ltd., P.O. Box 1123, Timmins, Ontario, P4N 7H9</i>		Certified By (Signature) <i>Paul Davis</i>
Telephone No. <i>(705) 264-5024</i>	Date <i>Oct 26/95</i>	

For Office Use Only

Total Value Cr. Recorded <i>31,075</i>	Date Recorded	Mining Recorder <i>[Signature]</i>	
Deemed Approval Date <i>Jan 30/96</i>	Date Approved <i>[Signature]</i>		
Date Notice for Amendments Sent			



Ministry of
Northern Development
and Mines

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

W19560.00486

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 question sur la collecte de ces renseignements au chef provincial des terrains miniers, ministère du Développement du Nord et des Mines, 159, rue Cedar, 4^e 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 Logging	\$ 16,837 ⁰⁰	
	Prog and HLEM budgets	\$ 14,238 ⁰⁰	
			\$ 31,075 ⁰⁰
Supplies Used Fournitures utilisées	Type		
Equipment Rental Location de matériel	Type		
Total Direct Costs Total des coûts directs			\$ 31,075 ⁰⁰

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'excedant pas 20 % des coûts directs)			
Total Value of Assessment Credit (Total of Direct and Allowable Indirect costs)		Value 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
	x 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.

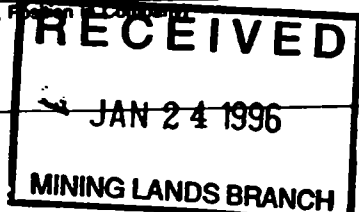
Value totale du crédit d'évaluation	Evaluation totale demandée
	x RECEIVED

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 Project Geologist I am authorized
(Recorded Holder, Agent, Representative)

to make this certification



Attestation de l'état des coûts
J'atteste par la présente :
que les montants indiqués sont le plus exact possible et que les 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 Project Geologist je suis autorisé
(titulaire enregistré, représentant, poste occupé dans la compagnie)

à faire cette attestation.

Signature Paul Date October 26, 1995

Ministry of
Northern Development
and Mines

Ministère du
Développement du Nord
et des Mines

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

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

January 30, 1996

Our File: 2.16374
Transaction #: W9560.00486

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

Dear Sir:

**Subject: APPROVAL OF ASSESSMENT WORK CREDITS ON MINING CLAIMS
P.1189286 ET AL IN CARMAN AND LANGMUIR TOWNSHIPS**

Assessment work credits have been approved as outlined on the original submission. The credits have been approved under Section 14, Geophysical, Mining Act Regulations.

The approval date is January 30, 1996.

If you have any questions regarding this correspondence, please contact Lucille Jerome at (705) 670-5858.

Yours Sincerely,
ORIGINAL SIGNED BY:



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

 LJ/jl
Enclosure:

cc: Resident Geologist
Timmins, Ontario

 Assessment Files Library
Sudbury, Ontario

G-4000

MAP SYMBOLOLOGY

	Pipeline
	Railroad
	Road
	Spot Elevation
	Tower
	Transmission Line
	Tunnel
	Utility Pole
	Wharf, Dock, Pier
	Wooded Area

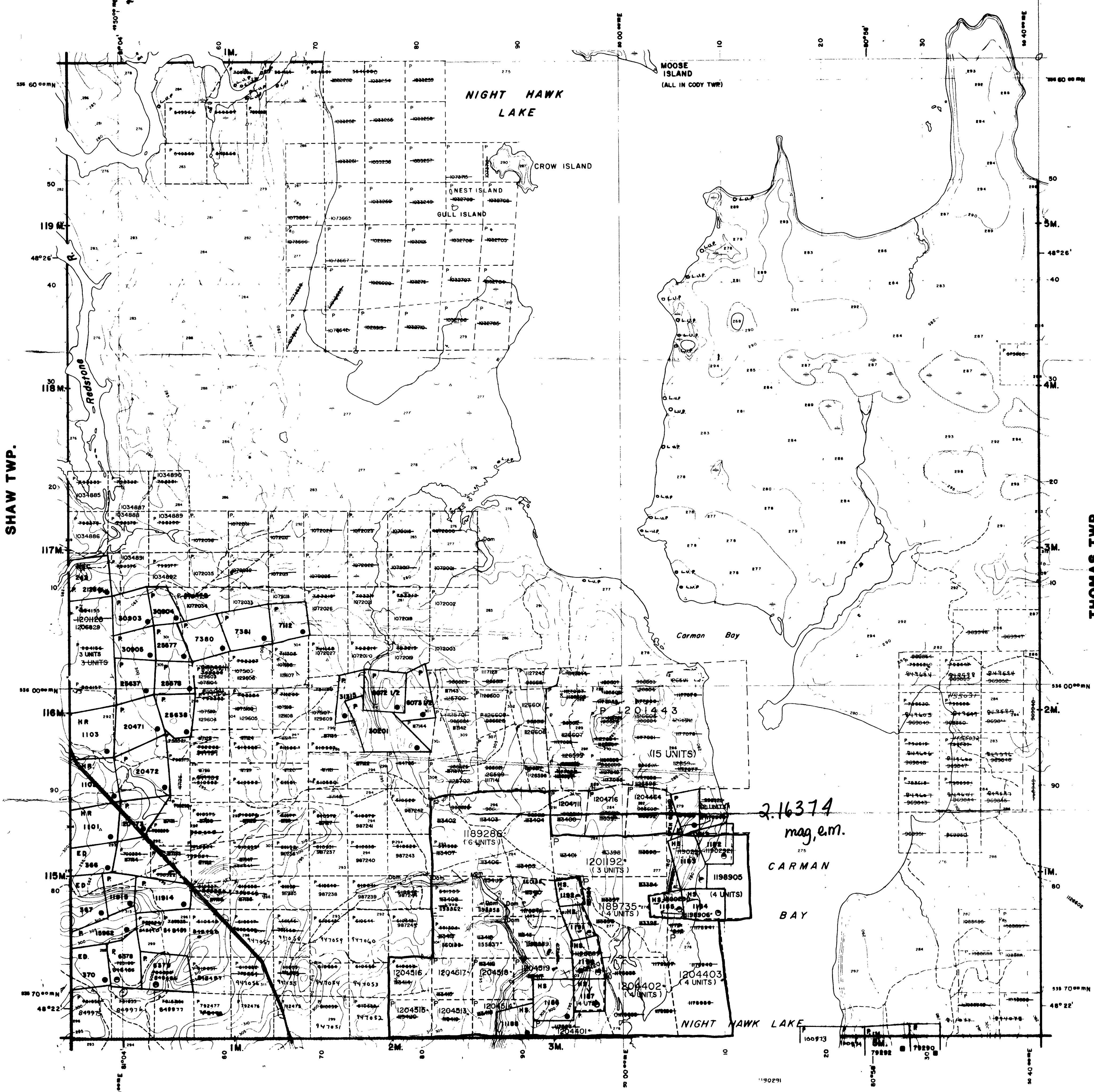
AREAS WITHDRAWN FROM DISPOSITION

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

Description	Order No.	Date	Disposition	File

THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES, AND ACCURACY IS NOT GUARANTEED. THOSE WISHING TO STAKE MINING CLAIMS SHOULD CONSULT WITH THE MINING RECORDER, MINISTRY OF NORTHERN DEVELOPMENT AND MINES, FOR ADDITIONAL INFORMATION ON THE STATUS OF THE LANDS SHOWN HEREON.

CODY TWP.



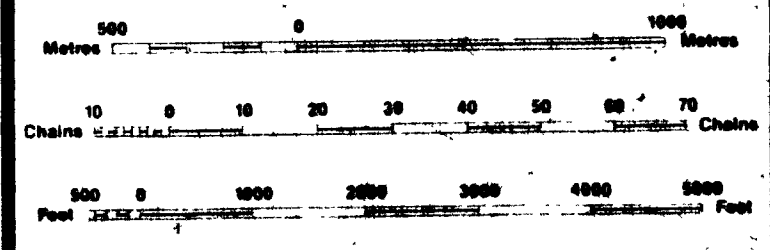
LEGEND

	Highway and Route No.
	Other Roads
	Trails
	Surveyed Lines
	Townships, Base Lines, Etc.
	Lot Lines
	Mining Claims, Parcels, Etc.
	Unsurveyed Lines
	Parcel Boundary
	Mining Claims Etc.
	Railway and Right of Way
	Utility Lines
	Non-perennial Stream
	Flooding or Flooding Rights
	Subdivision or Composite Plan
	Reservations
	Original Shoreline
	Marsh or Muskeg
	Mines
	Traverse Monument

DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT	SYMBOL
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	○
RESERVATION	○
CANCELLED	○
SAND & GRAVEL	○

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 4 1912, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970 CHAP 380, SEC 83, SUBSEC 1



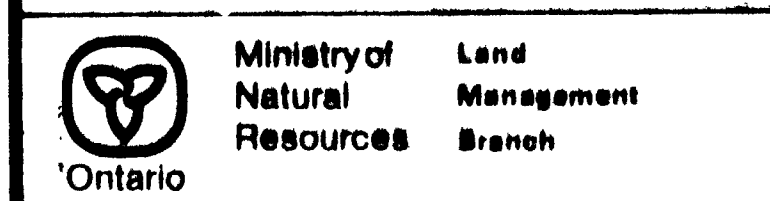
SCALE 1:20 000
 GRID ZONE: 17

THIS TWP. SUBJECT TO FOREST ACTIVITY IN 1992/93
 FURTHER INFORMATION ON FILE.

JAN 23 1995

Rec'd Jan 23/95

TOWNSHIP
CARMAN
 M.N.R. ADMINISTRATIVE DISTRICT
TIMMINS
 MINING DIVISION
PORCUPINE
 LAND TITLES / REGISTRY DIVISION
COCHRANE



ORIGINAL COMPILED JUL 1964
 REVISED
G-4000

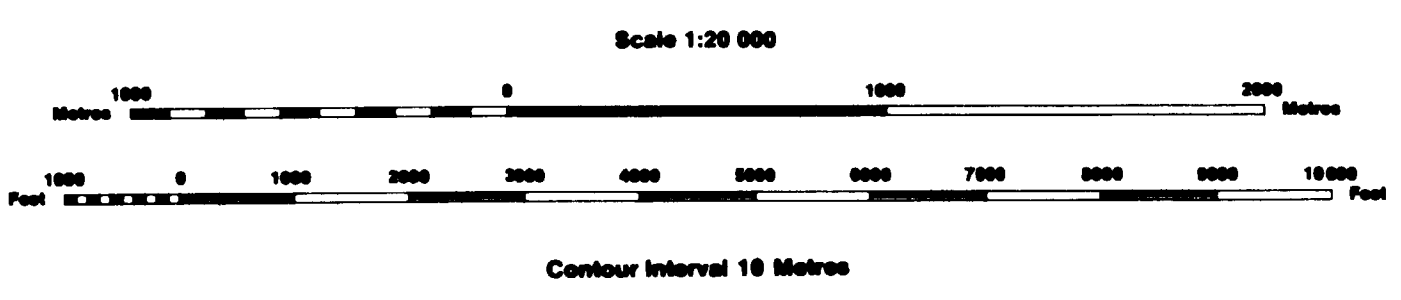


INDEX TO LAND DISPOSITION

PLAN
 G-3226
 TOWNSHIP

LANGMUIR

M.N.R. ADMINISTRATIVE DISTRICT
 TIMMINS
 MINING DIVISION
 PORCUPINE
 LAND TITLES/REGISTRY DIVISION
 COCHRANE



AREAS WITHDRAWN FROM DISPOSITION

MRO - Mining Rights Only
 SRO - Surface Rights Only
 MFS - Mining and Surface Rights

SYMBOLS

Description	Order No.	Date	Disposition	File
APPLICATION PENDING UNDER P.L.A. - SURFACE RIGHT WITHDRAWN				
THIS TWP IS SUBJECT TO FOREST ACTIVITY IN 1995 - 96 FURTHER INFORMATION AVAILABLE ON FILE.				
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				

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

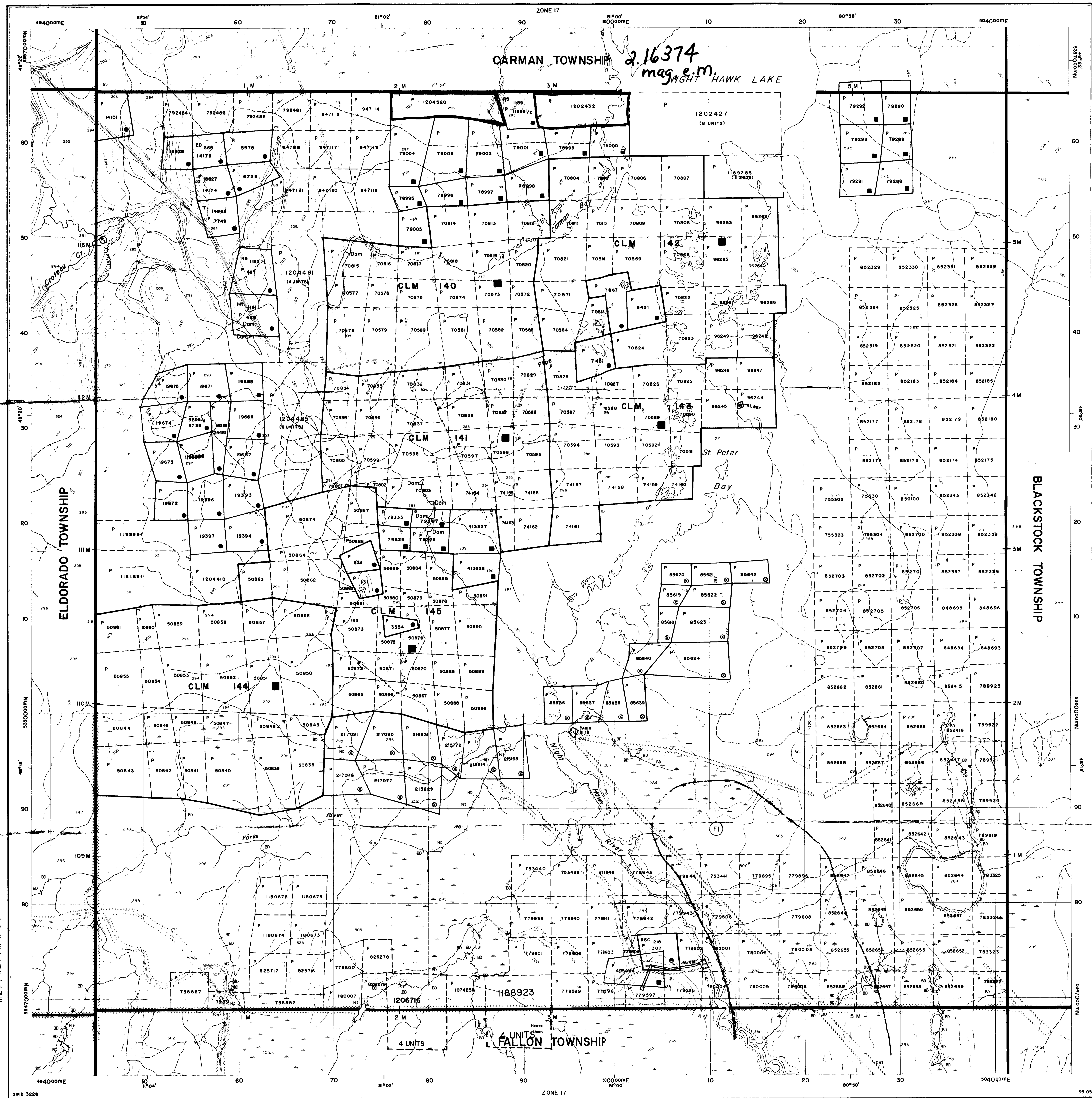
Patent	
Surface & Mining Rights	●
Surface Rights Only	○
Mining Rights Only	◐
Lease	
Surface & Mining Rights	■
Surface Rights Only	□
Mining Rights Only	◑
Licence of Occupation	◒
Order-in-Council	○
Cancelled	○
Reservation	○
Sand & Gravel	○

JAN 23 1995

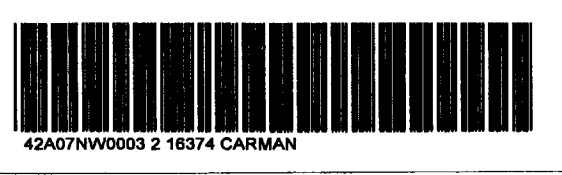
ACTIVATED JULY 1995 BY:

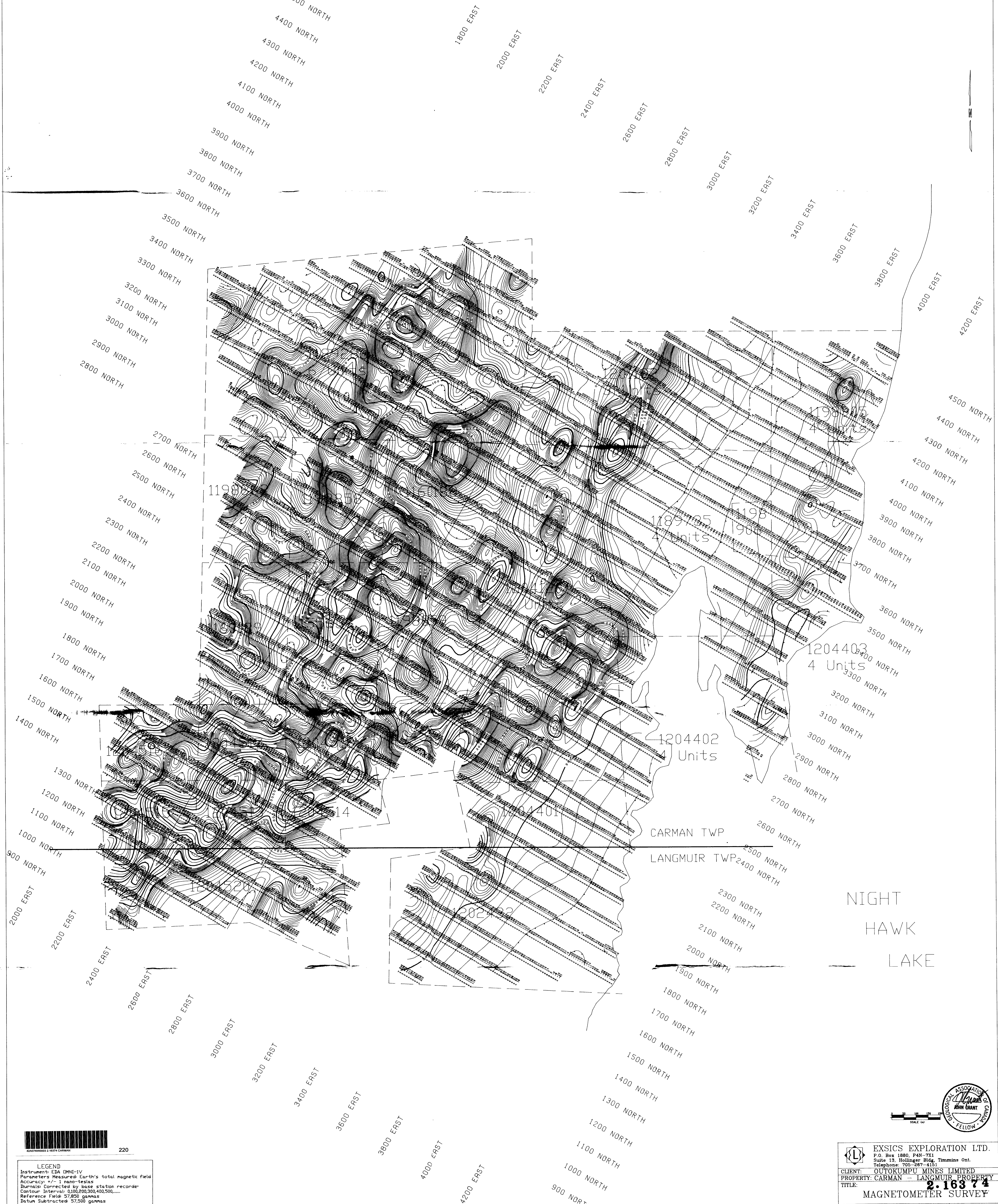
Map base and land disposition drafting by Surveys and Mapping Branch, Ministry of Natural Resources

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

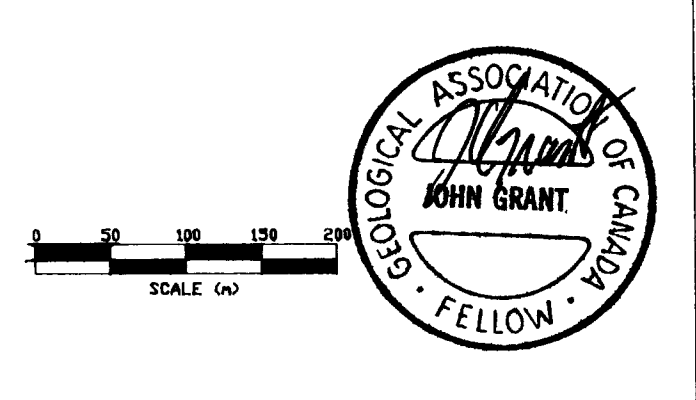


THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES, AND ACCURACY IS NOT GUARANTEED. THOSE WISHING TO STAKE MINING CLAIMS SHOULD CONSULT WITH THE MINING RECORDER, MINISTRY OF NORTHERN DEVELOPMENT AND MINES, FOR ADDITIONAL INFORMATION ON THE STATUS OF THE LANDS SHOWN HEREON.

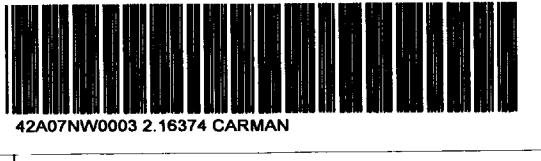
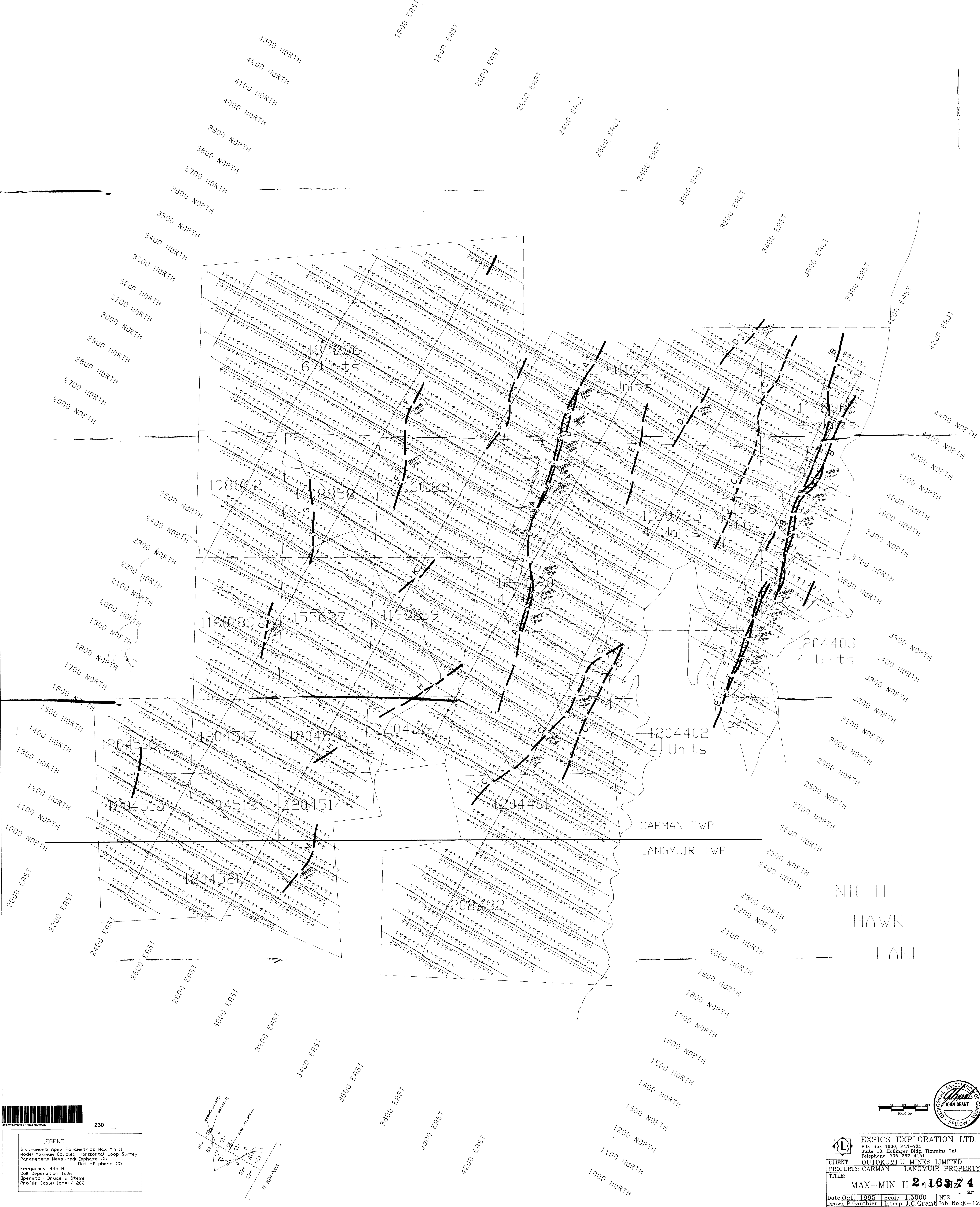




LEGEND
 Instrument: EDA DMNI-IV
 Parameters Measured: Earth's total magnetic field
 Accuracy: +/- 1 nano-Tesla
 Burn-in: Corrected by base station recorder
 Contour Interval: 0.100, 0.200, 0.300, 0.400, 0.500
 Reference Field: 57,850 gammas
 Datum: Subtract 57,500 gammas

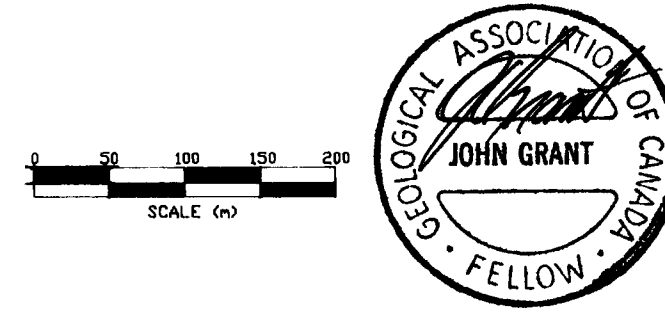
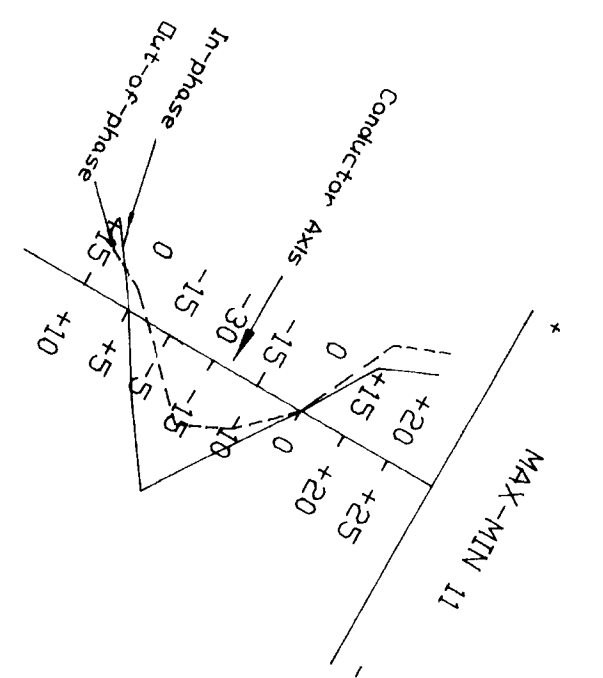


EXSICS EXPLORATION LTD.
 P.O. Box 1880, P4N-7X1
 Suite 13, Hollinger Bldg, Timmins Ont.
 Telephone: 705-267-4151
 CLIENT: OUTOKUMPU MINES LIMITED
 PROPERTY: CARMAN - LANGMUIR PROPERTY
 TITLE: **2.16374**
MAGNETOMETER SURVEY
 Date: Oct. 1995 | Scale: 1:5000 | NTS:
 Drawn: P. Gauthier | Interp: J.C. Grant | Job No. E-122

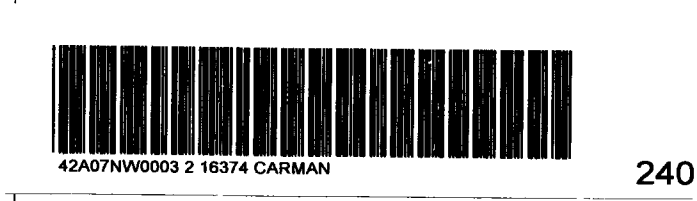
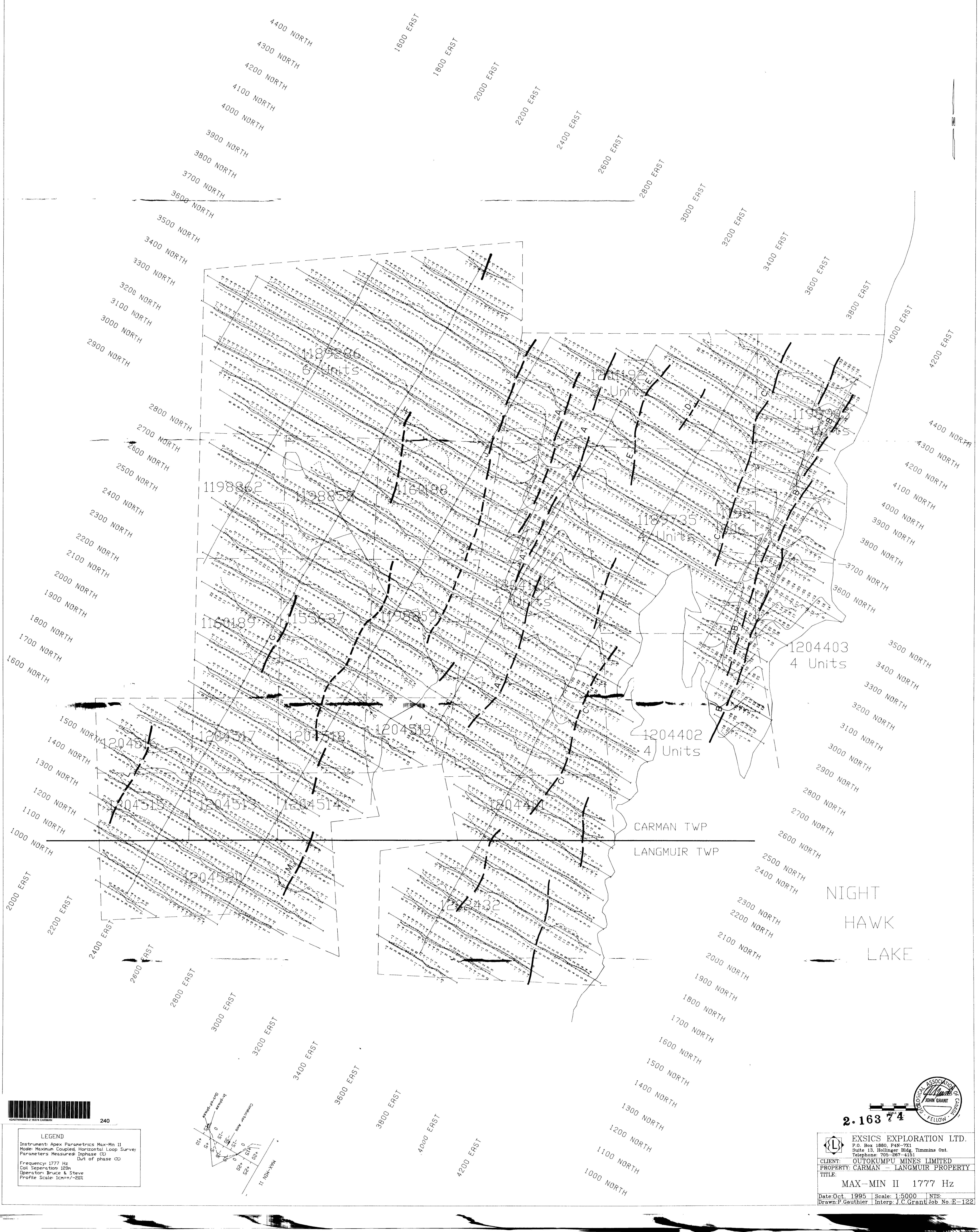


230

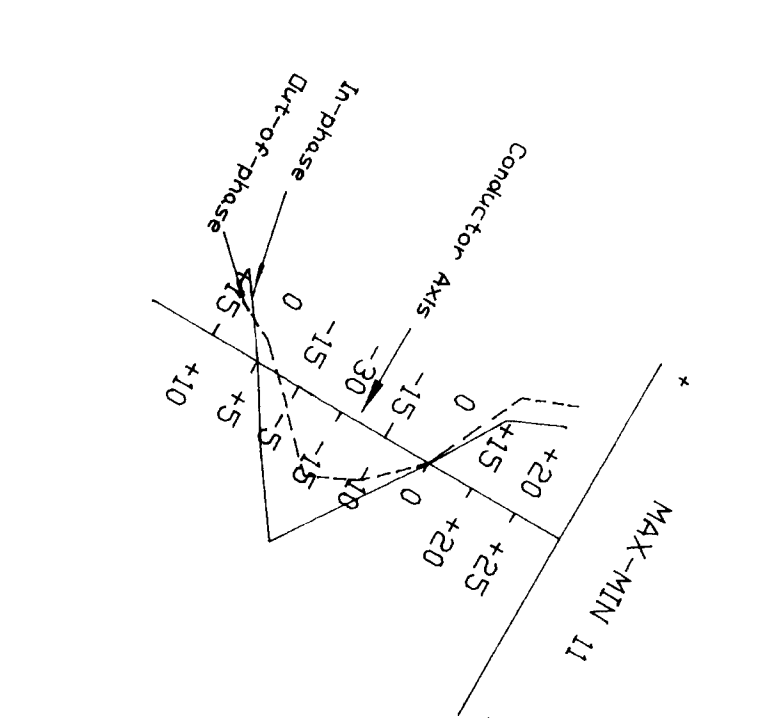
LEGEND
 Instrument Apex Parametrics Max-Min II
 Mode: Maximum Coupled, Horizontal Loop Survey
 Parameters Measured: Inphase (I) Out of phase (O)
 Frequency: 444 Hz
 Coil Separation: 120m
 Operator: Bruce & Steve
 Profile Scale: 1cm=+/-20%



EXSICS EXPLORATION LTD.
 P.O. Box 1880, P4N-7X1
 Suite 13, Hollinger Bldg, Timmins Ont.
 Telephone: 705-287-4151
 CLIENT: OUTOKUMPU MINES LIMITED
 PROPERTY: CARMAN - LANGMUIR PROPERTY
 TITLE: **MAX-MIN II 24163Z 4**
 Date: Oct. 1995 Scale: 1:5000 NTS.
 Drawn: P. Gauthier Interp: J.C. Grant Job No: E-122



LEGEND
 Instruments: Apex Parametrics Max-Min II
 Mode: Maximum Coupled, Horizontal Loop Survey
 Parameters Measured: Inphase (°)
 Frequency: 1777 Hz
 Coil Separation: 120m
 Operators: Bruce & Steve
 Profile Scale: 1cm=+-20%



2.163 74

EXSICS EXPLORATION LTD.
 P.O. Box 1880, P4W-7X1, Timmins Ont.
 Suite 13, Hollinger Bldg, Timmins Ont.
 Telephone: 705-267-4151
CLIENT: OUTOKUMPU MINES LIMITED
PROPERTY: CARMAN - LANGMUIR PROPERTY
TITLE: MAX-MIN II 1777 Hz
 Date: Oct. 1995 Scale: 1:5000 NTS
 Drawn: F. Gauthier Interp: J.C. Grant Job No. E-122