010

REPORT ON LINECUTTING AND GROUND MAGNETOMETER

ON

BRISTOL # 1 AND 2, MATTAGAMI RIVER AND HWY 144 GRIDS

THORNELOE AND BRISTOL TOWNSHIPS

NTS: 42A/5, 6

DISTRICT OF COCHRANE

2.10967

FOR

ESSO MINERALS CANADA

Timmins, Ontario
February 29, 1988
Disk.122

Joseph A. MacPherson
Geologist

Dual 2.5167

TABLE OF CONTENTS

	Page
1. INTRODUCTION	1
2. LOCATION AND ACCESS	1
3. TOPOGRAPHY AND VEGETATION	1
5. DISCUSSION OF SURVEY RESULTS	3
Bristol #1 Grid	3
Bristol #2 Grid	3
Highway 144 Grid	3
Mattagami River Grid	4
6. SUMMARY AND CONCLUSIONS	4

LIST OF FIGURES

	Pocket
Location Map, Robele Joint Venture	Page 2
Map 1a: Contoured Magnetics, Bristol #1 Grid, East Sheet, 1:2500	1
Map 1b: Contoured Magnetics, Bristol #1 Grid, West Sheet, 1:2500	1
Map 2: Contoured Magnetic, Bristol #2 Grid, 1:2500	2
Map 3: Contoured Magnetic, Mattagami River Grid, 1:2500	2
Map 4: Contoured Magnetic, Highway 144 Grid, 1:2500	3

APPENDICES

Appendix 1	Statement of Qualifications
Appendix 2	Magnetometer Survey Specifications
Appendix 3	Claim List, by Group

INTRODUCTION

This report discusses the results of linecutting and ground magnetometer surveys carried out over portions of the 199 claim group held by Esso Minerals Canada in Thorneloe and Bristol Townships, 15 miles southeast of the city of Timmins.

The work was carried out on behalf of Esso Minerals Canada by Exsics Exploration Ltd. of Timmins, Ontario, during June, July and August of 1987. Four separate grids on this contiguous claim group are discussed in this report. These are the Bristol #1, Bristol #2, Mattagami River and Highway 144 Grids.

LOCATION AND ACCESS

The Bristol #1 Grid covers 55 claims in southeast Bristol Township. The Tatachikapika River swings in a large loop along the west, north and east boundaries of this grid and makes land access difficult. However,several old logging roads running south from Highway 101 reach the north bank of the river and thus a short boat ride across the river can access the north part of the grid.

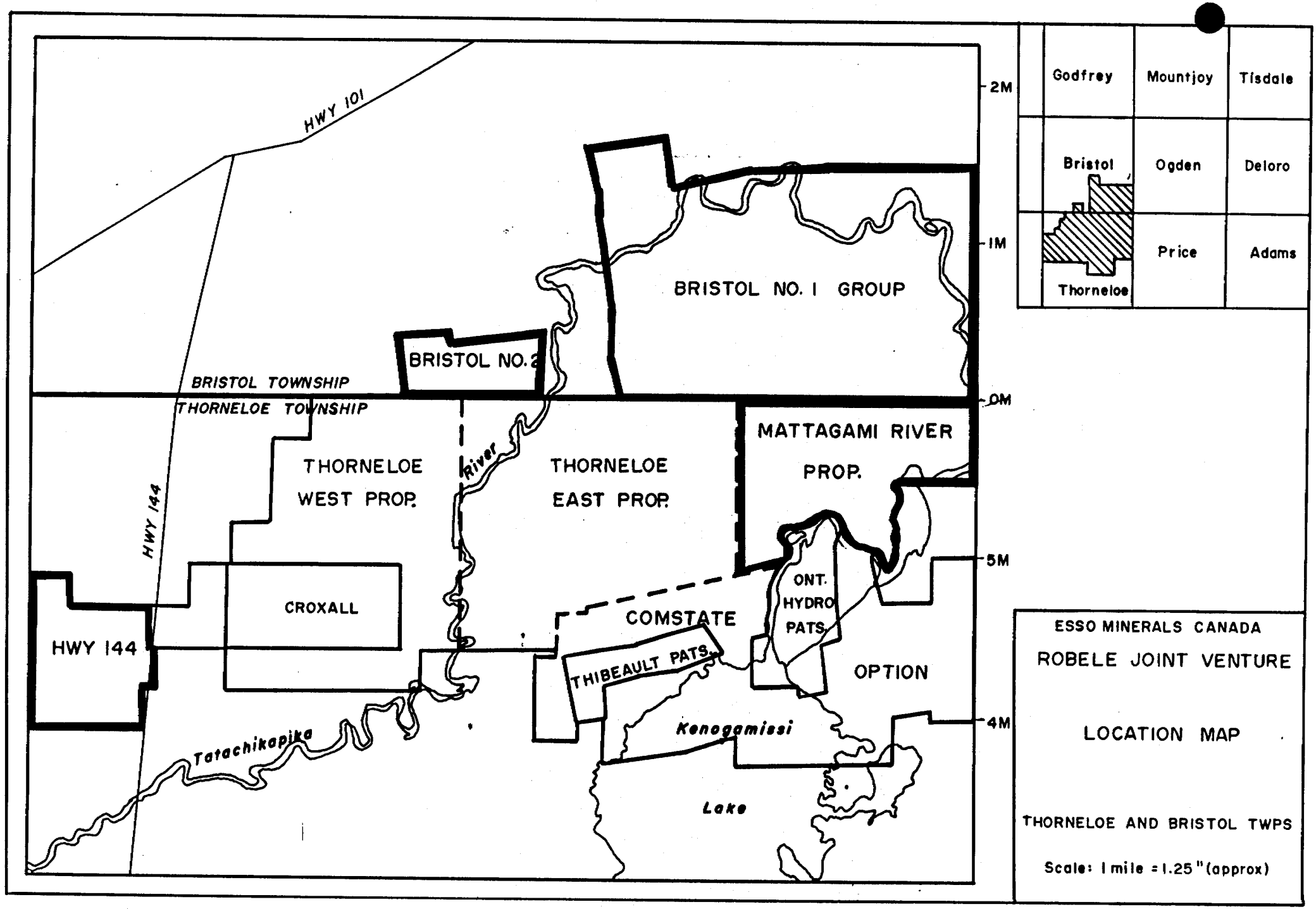
The Bristol #2 Grid consists of 6 claims located at the central point of the Thorneloe-Bristol Township boundary in Bristol Township. These claims are easily accessed by a network of bush roads leading north and east from Highway 144 just north of the Tatachikapika River Bridge.

The Mattagami River Grid is located in the northeast corner of Thorneloe Township. The only direct access to the grid is by boat across the Mattagami River north of Ontario Hydro's power dam at Wawaitin Falls.

The Highway 144 Grid is bounded to the east by Highway 144 and to the west by the Denton-Thorneloe Township boundary. Access is excellent via bush road from Highway 144.

TOPOGRAPHY AND VEGETATION

Generally, the topography consists of low, rolling sand hills with flat, locally swampy areas in between. Outcrop is rare, except locally along the bank of the Mattagami River north of the power dam. Vegetation is tall, mature spruce on the sand hills, and/or a mixture of spruce, alders and moss with some poplar on the flat areas. Water is plentiful and the sources include the Mattagami River and Tatachikapika River along with numerous streams and beaver ponds.



ESSO MINERALS CANADA

ROBELE JOINT VENTURE

LOCATION MAP

THORNELOE AND BRISTOL TWPS

Scale: 1 mile = 1.25" (approx)

Details concerning equipment, survey procedures and data reduction and presentation are contained in Appendix 11 to this report. The reader is also referred to Maps 1 to 4 accompanying this report.

Interpretation of the magnetometer survey results for each of the four survey grids follows:

Bristol #1 Grid

This group is interpreted to be underlain by metasediments of the Porcupine and/or Timiskaming Group. The contoured magnetic values reflect this, showing very little variation. The only magnetic contrast is supplied by diabase dykes. The strongest response is given by a Keeweenawan diabase which trends roughly northwest. This dyke intersects and locally offsets north-south trending Matachewan diabase dykes which typically have a weaker response. Complex magnetic patterns are generated in the vicinity of the intersections of the two sets of dykes.

Bristol #2 Grid

Background magnetic values are in the vicinity of 58,750 gammas with no significant magnetic contrast observed over the central and eastern portions of the survey grid.

A relatively narrow, moderately magnetic (200 to 300 gamma) feature is observed standing N-S along survey line 4800W. This dyke - like feature (Matachewan diabase?) is open to the north and south of the survey grid.

Localized, highly magnetic values (800 - 2000 gammas) observed along the west side of the survey grid on Line 5640W and 5760W may represent one or more diabase dykes striking at a relatively shallow angle to the survey lines. Further surveying is required to delineate the source(s) of these anomalous features. The low magnetic values observed in the vicinity of 4+00N to 5+00N on lines 5520W to 5760W suggest an E-W fault/shear zone in this area.

Highway 144 Grid

A strong magnetic gradient (approximately 100 gammas/100 metres over the south half of the grid) is observed increasing from north to south over the survey

grid. This gradient is interpreted to be caused by highly magnetic ultramafic rocks associated with the Destor Porcupine Fault system located immediately south of the survey area. The survey grid is mainly underlain by Temiskaming and Porcupine metasediments.

The herringbone pattern observed in the contoured magnetic data west of line 600W suggests two relatively weak magnetic sources striking roughly N-S in the vicinity of lines 720W and 1080W respectively. Again, the high magnetic values observed on line 1320W suggest a dyke(s) occuring at a shallow angle to the survey line. Further surveying at 60 metre line spacing is required to outline the source(s) of these magnetic anomalies.

Mattagami River Grid

The background magnetic response is in the order of 58500 to 58600 gammas, indicative of relatively non-magnetic metasediments underlying the survey area.

The anomalous magnetic responses observed in the survey area are attributed to diabase dykes; these dykes show three prominent strikes directions - North-South (see line 72+00E and line 62+40E), 10-15 degrees W of N (see lines 76+80E - 78+00E and lines 63+60E - 64+80E) and approximately NW-SE.

The observed magnetic values indicate variable concentration of magnetite along the strike extent of these dykes. It is possible that these dykes are offset in certain areas by faults/shear zones but further surveying is required to determine if the apparent offsets are due to the low angle at which some of these dykes are intersected by the survey lines. The N-S dykes observed along the south half of line 72+00E appears to be cut off to the north by the NW-SE trending dykes extending from L66+00E to L76+80E.

SUMMARY AND CONCLUSIONS

The magnetic data is essentially flat over most of the area covered by these four grids. This suggests the area is underlain by rocks exhibiting uniform magnetic characteristics, such as a substantial thickness of turbiditic sediments. This interpretation agrees with known outcrop exposure and drill core data.

The background magnetic response is in the order of 58,500 to 58,600 gammas on all four survey grids and is interpreted to be indicative of relatively non-magnetic metasedimentary rocks underlying the survey area. Anomalous

magnetic responses are attributed to diabase dykes which show three main strike directions: N-S, NW-SE and 10-15 degrees W of N - particularly on the Mattagami River Grid. Detailed surveying along survey lines spaced 60 metres apart is required to outline these dykes and to determine if offsets and/or localized magnetic lows are caused by faults/shears within the bedrock.

J. A. MacPherson

Joseph A. MacPherson

APPENDIX I

STATEMENT OF QUALIFICATIONS

I, Joseph A. MacPherson, do certify the following:

1. I am a graduate of Laurentian University in Sudbury, Ontario, and hold an Honours Bachelor of Scidence degree in Geology.

2. I have been practising my profession continuously since graduation in 1980.

3. I have no personal monetary or stock interest in any of the properties which are discussed in this report.

Date: March 1/88 Signed: J. MacPherson

APPENDIX II
MAGNETOMETER SURVEY SPECIFICATIONS

Equipment and Survey Procedures

An EDA OMNI IV portable, proton procession magnetometer, together with an EDA base station recorder, was used for this survey. Both instruments measure the earth's total magnetic field strength by means of a sensor (coil with electronics) which measures the frequency at which protons (hydrogen atoms in a sample of kersone) precess about the axis of the earth's magnetic field. The precessing atoms then generate a small signal, a signal whose frequency is precisely proportioned to the total magnetic intensity. The value of the magnetic field intensity is than stored in memory inside the instrument console.

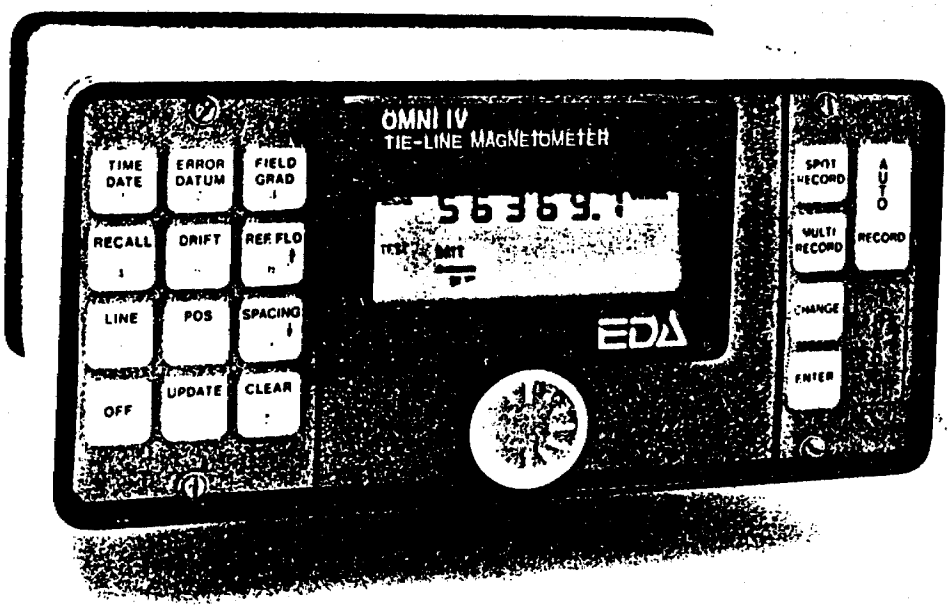
Readings were generally taken with the OMNI IV at 12.5 metre intervals along survey crosslines spaced 120 metres apart and at 20 metre intervals along grid baselines/ tielines. To correct for time variations of the earth's magnetic field strength (diurnal), a base station magnetometer was established within or near the survey grids and readings were obtained at regular intervals (generally 30 seconds or less) during the survey day.

Data Reduction and Presentation

As discussed above, total field readings were taken with the base station magnetometer at regular intervals during the course of the survey day. Changes in the base station reading were then removed from the total field readings obtained with the OMNI IV along the survey crosslines/tielines/baselines. A datim level of 58,522 gammas was taken and subtracted from the corrected total field reading for plotting purposes.

The total field magnetometer survey results are posted and contoured in plan form on Maps 1 to 4 at a scale of 1:2500.

OMNI IV "Tie-Line" Magnetometer



OMNI IV's Major Benefits

- 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 III

LIST OF CLAIMS

Bristol #1 Grid

952796 to 952825	inclusive	30
955374 to 955398	inclusive	25
	TOTAL	55

Bristol #2 Grid

930787 to 930791	inclusive	5
923649		1
	TOTAL	6

Mattagami River Grid

923601 to 923618	inclusive	18
892792		1
	TOTAL	19

Highway 144 Grid

792829		1
796737 to 796739	inclusive	3
892793		1
892796 to 892800	inclusive	5
	Inclusive	10

NOTE: These grids form part of a contiguous group of claims in Thorneloe and Bristol Townships. See Location Sketch.

Ministry of Northern Affairs and Mines
Ontario

Report of Work
(Geophysical, Geological, Geochemical and Expenditures)

DOCUMENT No. W8806.063

Mining Act 2.1

42A06NW0317 2.10967 THORNELOE

900

Type of Survey(s)
Linecutting and magnetometer

Township or Area
Thorneloe

Claim Holder(s)
Esso Resources of Canada Ltd

Prospector's Licence No.
T-872

Address
1800-120 Adelaide St. West, Toronto, Ontario

Survey Company
Exsics Exploration

Date of Survey (from & to): 01 | 07 | 87 | 01 | 08 | 87 (Day | Mo. | Yr. | Day | Mo. | Yr.)

Total Miles of line Cut
9.5

Name and Address of Author (of Geo-Technical report)
Joseph A. MacPherson, Esso Minerals Canada, P.O. Box 290 Timmins, Ontario, P4N 7N6

Credits Requested per Each Claim in Columns at right

Special Provisions		Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	Geophysical - Electromagnetic	
	Geophysical - Magnetometer	40
For each additional survey: using the same grid: Enter 20 days (for each)	Geophysical - Radiometric	
	Geophysical - Other	
	Geological	
	Geochemical	

Man Days		Days per Claim
Complete reverse side and enter total(s) here	Geophysical	
	- Electromagnetic	
	- Magnetometer	
	- Radiometric	
	- Other	
	Geological	
	Geochemical	

Airborne Credits		Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Radiometric	

RECEIVED
APR 8 1988
MINING LANDS SECTION

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
P	792829	
	796737	
	796738	
	796739	
	892793	
	892796	
	892797	
	892798	
	892799	
	892800	

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.

ONTARIO GEOLOGICAL SURVEY
ASSESSMENT FILES OFFICE
MAY 12 1988
RECEIVED

RECORDED
MAR 23 1988

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

RECEIVED
MAR 23 1988
MINING LANDS DIVISION

Calculation of Expenditure Days Credits

Total Expenditures: $ ÷ 15 = Total Days Credits

Instructions
Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

Total number of mining claims covered by this report of work: 10

For Office Use Only		
Total Days Cr. Recorded: 400	Date Recorded: March 23, 1988	Mining Recorder: S White
	Date Approved as Recorded: 5 May 88	Branch Director: [signature]

Date: March 5, 1988

Recorded Holder or Agent (Signature): J. A. MacPherson

Certification Verifying Report of Work

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

Name and Postal Address of Person Certifying
Joseph A. MacPherson, Esso Minerals Canada P.O. Box 290 Timmins, Ontario, P4N 7N6

Date Certified: March 5, 1988

Certified by (Signature): J. A. MacPherson

MAR 24

Ministry of Northern Affairs / Mines
Ontario

Report of Work
(Geophysical, Geological, Geochemical and Expenditures)

DOCUMENT No. W 8806-017

Mining Act 2.10967

Instructions: – Please type or print.
– If number of mining claims traversed exceeds space on this form, attach a list.
Note: – Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns.
– Do not use shaded areas below.

Type of Survey(s)	Township or Area
Magnetometer/ Line cutting	Thorneloe

Claim Holder(s)	Prospector's Licence No.
Esso Resources of Canada Ltd.	T-872

Address: 1800-120 Adelaide St. West, Toronto, Ontario

Survey Company	Date of Survey (from & to)	Total Miles of line Cut
Exsics Exploration Ltd.	Day 01 Mo. 06 Yr. 87 / Day 31 Mo. 08 Yr. 87	20

Name and Address of Author (of Geo-Technical report)
Joseph A. Mac Pherson, Esso Minerarls Canada P.O. Box 290 Timmins, Ontario.

Credits Requested per Each Claim in Columns at right

Special Provisions		Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	Geophysical - Electromagnetic	
	Geophysical - Magnetometer	40
For each additional survey: using the same grid: Enter 20 days (for each)	Geophysical - Radiometric	
	Geophysical - Other	
	Geological	
	Geochemical	

Man Days		Days per Claim
Complete reverse side and enter total(s) here	Geophysical - Electromagnetic	
	Geophysical - Magnetometer	
	Geophysical - Radiometric	
	Geophysical - Other	
	Geological	
	Geochemical	

RECEIVED
MAR 07 1988
MINING LANDS SECTION

Airborne Credits		Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Radiometric	

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
	See Attached List	

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.

RECORDED
FEB 3 - 1988

Total number of mining claims covered by this report of work: 19

Expenditures (excludes power stripping)

Type of Work Performed

Performed on Claim(s)

RECEIVED
FEB - 3 - 1988

Calculation of Expenditure Days Credits

Total Expenditures $ ÷ 15 = Total Days Credits

Instructions
Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

Date	Recorded Holder or Agent (Signature)
January 28, 1988	J. MacPherson

For Office Use Only		
Total Days Cr. Recorded: 760	Date Recorded: Feb. 3/88	Mining Recorder:
	Date Approved as Recorded: See revised statement	Branch Director:

Certification Verifying Report of Work

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

Name and Postal Address of Person Certifying
Joseph A. MacPherson, Geologist, Esso Minerals Canada, P.O. Box 290, Timmins, Ontario P4N 7N6

Date Certified	Certified by (Signature)
January 28, 1988	J. MacPherson

MATTAGAMI RIVER GRID

Claim #	Days Requested
923601	40
923602	40
923603	40
923604	40
923605	40
923606	40
923607	40
923608	40
923609	40
923610	40
923611	40
923612	40
923613	40
923614	40
923615	40
923616	40
923617	40
923618	40
-892792 w/Report 341/87	40

Total Claims = 19

Ministry of Northern Affairs and Mines
Ontario

Report of Work
(Geophysical, Geological, Geochemical and Expenditures)

DOCUMENT No. 8806·049

Mar 24

Mining Act 2.10967

Instructions: – Please type or print.
– If number of mining claims traversed exceeds space on this form, attach a list.
Note: – Only days credits calculated in the "Expenditures" section may be entered in the "Expend. Days Cr." columns.
– Do not use shaded areas below.

Type of Survey(s)	Township or Area
Magnetometer/Line cutting	Bristol

Claim Holder(s)	Prospector's Licence No.
Esso REsources of Canada Ltd	T-872

Address: 1800-120 Adelaide St. West, Toronto, Ontario

Survey Company	Date of Survey (from & to)	Total Miles of line Cut
Exsics Exploration Ltd	Day 01 Mo. 06 Yr. 87 to Day 31 Mo. 08 Yr. 87	78

Name and Address of Author (of Geo-Technical report): Joseph A. MacPherson, Esso Minerals Canada, P.O. Box 290 Timmins, Ontario

Credits Requested per Each Claim in Columns at right

Special Provisions		Days per Claim
For first survey: Enter 40 days. (This includes line cutting)	Geophysical	
	· Electromagnetic	
	· Magnetometer	40
For each additional survey: using the same grid: Enter 20 days (for each)	· Radiometric	
	· Other	
	Geological	
	Geochemical	

Man Days		Days per Claim
Complete reverse side and enter total(s) here	Geophysical	
	· Electromagnetic	
	· Magnetometer	
	· Radiometric	
	Geological	
	Geochemical	

Airborne Credits		Days per Claim
Note: Special provisions credits do not apply to Airborne Surveys.	Electromagnetic	
	Magnetometer	
	Radiometric	

RECEIVED
MAR 23 1988
MINING LANDS SECTION

Expenditures (excludes power stripping)

Type of Work Performed

Performed on (Claim(s))

Calculation of Expenditure Days Credits

Total Expenditures: $ ÷ 15 = Total Days Credits

Instructions: Total Days Credits may be apportioned at the claim holder's choice. Enter number of days credits per claim selected in columns at right.

Mining Claims Traversed (List in numerical sequence)

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.
	See Attached List	

Mining Claim Prefix	Mining Claim Number	Expend. Days Cr.

RECORDED
FEB - 3 1987

Total number of mining claims covered by this report of work: 61

For Office Use Only

Total Days Cr. Recorded	Date Recorded	Mining Recorder
2440	Feb. 3, 1988	
	Date Approved as Recorded	Branch Director
	See revised Statement	

Date	Recorded Holder or Agent (Signature)
January 29, 1988	

Certification Verifying Report of Work

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

Name and Postal Address of Person Certifying: Joseph A. MacPherson, Geologist, Esso Minerals Canada, Box 290, Timmins, Ontario P4N 7N6

Date Certified	Certified by (Signature)
January 29, 1988	

BRISTOL #1 GRID

Claim #	Days Requested
923649	40
930787	40
930788	40
930789	40
930790	40
930791	40

BRISTOL #2 GRID

Claim #	Days Requested
952796	40
952797	40
952798	40
952799	40
952800	40
952801	40
952802	40
952803	26
952804	40
952805	40
952806	25
952807	40
952808	36
852809	40
952810	40
952811	40
952812	40
952813	40
952814	20
952815	40
952816	40
952817	32
952818	40
952819	40
952820	40
952821	10
952822	40
952823	40
952824	40
952825	40
955374	40
955375	40

Claim #	Days Requested
955376	40
955377	40
955378	40
955379	40
955380	40
955381	40
955382	40
955383	40
955384	40
955385	40
955386	30
955387	40
955388	40
955389	40
955390	40
955391	40
955392	26
955393	0
955394	40
955395	40
955396	10
955397	20
955398	0

Total Claims = 61

Ontario

Ministry of
Northern Development
and Mines

Ministère du
Développement du Nord
et des Mines

May 4, 1988

Your File: W8806-17
W8806-49
Our file: 2.10967

Mining Recorder
Ministry of Northern Development and Mines
60 Wilson Avenue
Timmins, Ontario
P4N 2S7

Dear Sir:

RE: Notice of Intent dated April 19, 1988
Geophysical (Magnetometer) Survey
submitted on Mining Claims P 923601 et al
in the Townships of Thorneloe and Bristol

The assessment work credits, as listed with the above-mentioned Notice of Intent, have been approved as of the above date.

Please inform the recorded holder of these mining claims and so indicate on your records.

Yours sincerely,

W.R. Cowan, Manager
Mining Lands Section
Mines and Minerals Division

Whitney Block, Room 6610
Queen's Park
Toronto, Ontario
M7A 1W3

Telephone: (416) 965-4888

AB
AB:pl
Enclosure: Technical Assessment Work Credits

cc: Mr. G.H. Ferguson
Mining & Lands Commissioner
Toronto, Ontario

Resident Geologist
Timmins, Ontario

Esso Resources of Canada Ltd.
Suite 1800
120 Adelaide Street West
Toronto, Ontario
M5H 1T1

Ministry of Northern Development and Mines
Ontario

Technical Assessment Work Credits

File: 2.10967

Date: April 19, 1988

Mining Recorder's Report of Work No.: W8806-17

Recorded Holder: Esso Resources of Canada Ltd.

Township or Area: Thorneloe

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical	
Electromagnetic _____ days	P 923601 to 18 inclusive
Magnetometer 40 days	
Radiometric _____ days	
Induced polarization _____ days	
Other _____ days	
Section 77 (19) See "Mining Claims Assessed" column	
Geological _____ days	
Geochemical _____ days	
Man days ☐ Airborne ☐	
Special provision ☒ Ground ☒	
☐ Credits have been reduced because of partial coverage of claims.	
☐ Credits have been reduced because of corrections to work dates and figures of applicant.	

Special credits under section 77 (16) for the following mining claims

20 days

P 892792

No credits have been allowed for the following mining claims

☐ not sufficiently covered by the survey ☐ insufficient technical data filed

The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on each claim does not exceed the maximum allowed as follows: Geophysical - 80; Geologocal - 40; Geochemical - 40; Section 77(19) - 60.

Ministry of Northern Development and Mines
Ontario

Technical Assessment Work Credits

File: 2.10967

Date: April 19, 1988

Mining Recorder's Report of Work No.: W8806-49

Recorded Holder: Esso Resources of Canada Ltd.

Township ~~XXXX~~: Bristol

Type of survey and number of Assessment days credit per claim	Mining Claims Assessed
Geophysical	
Electromagnetic _____ days	P 923649 930787 to 91 inclusive 952796 to 825 inclusive 955374 to 92 inclusive
Magnetometer 40 days	
Radiometric _____ days	
Induced polarization _____ days	
Other _____ days	
Section 77 (19) See "Mining Claims Assessed" column	
Geological _____ days	
Geochemical _____ days	
Man days ☐ Airborne ☐	
Special provision ☒ Ground ☒	
☐ Credits have been reduced because of partial coverage of claims.	
☐ Credits have been reduced because of corrections to work dates and figures of applicant.	

Special credits under section 77 (16) for the following mining claims

10 days	20 days
P 955396	P 955397

No credits have been allowed for the following mining claims

☒ not sufficiently covered by the survey ☐ insufficient technical data filed

P 955393 to 95 inclusive
955398

The Mining Recorder may reduce the above credits if necessary in order that the total number of approved assessment days recorded on each claim does not exceed the maximum allowed as follows: Geophysical - 80; Geologocal - 40; Geochemical - 40; Section 77(19) - 60.

828 (85/12)

REFERENCES

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
) SEC. 43/70		17/5/72	S.R.O.	164384
) FILED ONLY Nos. 15/85, 832526, 838701/84				

SAND AND GRAVEL

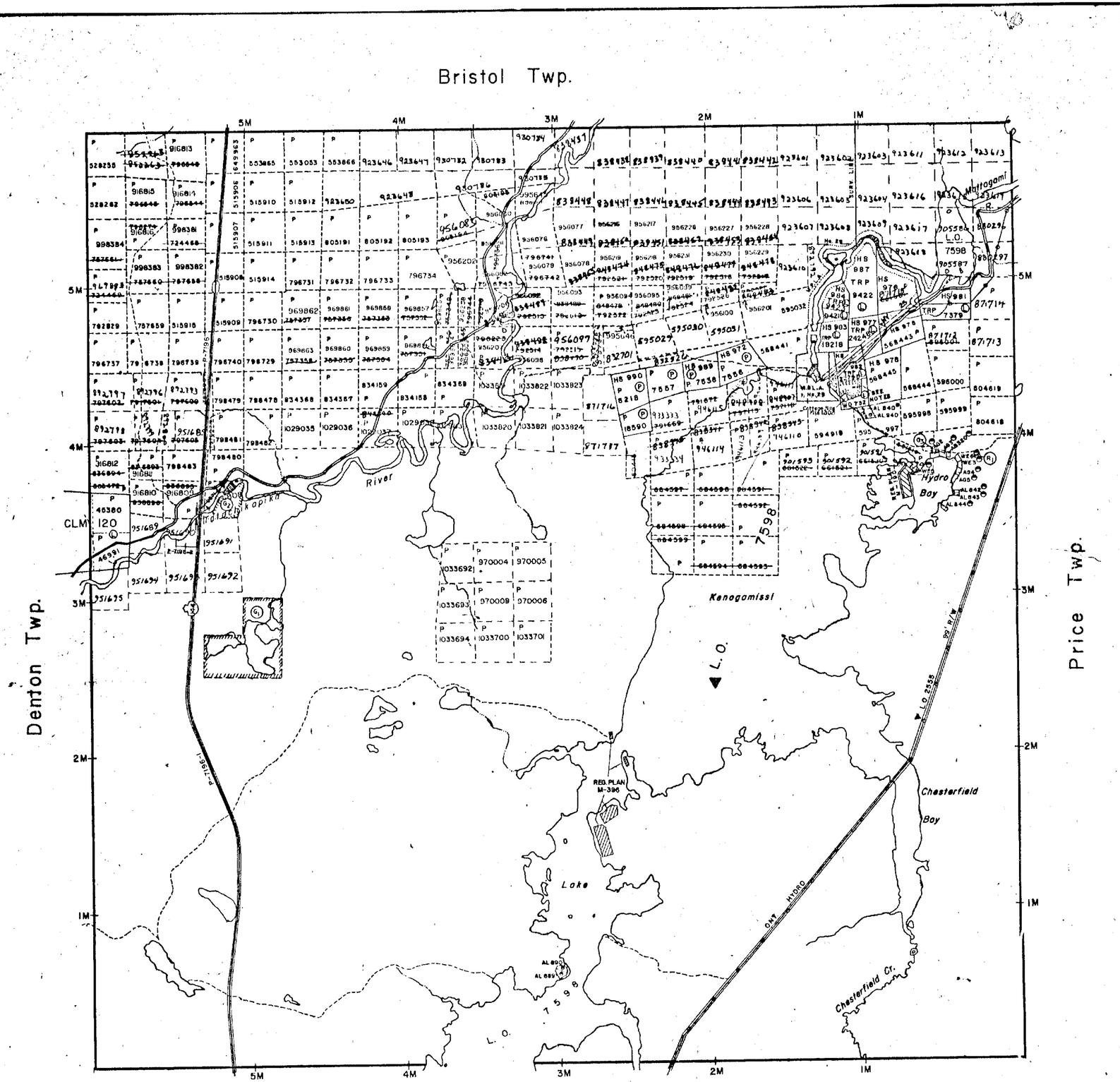
1) GRAVEL — FILE 143834
2) M.N.R. GRAVEL RESERVE
3) M.N.R. GRAVEL PIT ESE — FILE 111467

NOTES

Reservation for Deputy Chief Ranger's Headquarters site shown thus [redacted], File: 110657

Flooding Rights on Kenogamissi Lk. & Mattagami R. are reserved to Ont. Hydro — L.O. 7598. File: 1163 vol. 3

This township lies within the Municipality of the CITY OF TIMMINS.



LEGEND

- HIGHWAY AND ROUTE No.
- OTHER ROADS
- TRAILS
- SURVEYED LINES:
  - TOWNSHIPS, BASE LINES, ETC.
  - LOTS, MINING CLAIMS, PARCELS, ETC.
- UNSURVEYED LINES:
  - LOT 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	(P) or
" , SURFACE RIGHTS ONLY	
" , MINING RIGHTS ONLY	
LEASE, SURFACE & MINING RIGHTS	(L) or
" , SURFACE RIGHTS ONLY	
" , MINING RIGHTS ONLY	
LICENCE OF OCCUPATION	L.O. or
ORDER-IN-COUNCIL	OC
RESERVATION	(R)
CANCELLED	(C)
SAND & GRAVEL	(S)

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6, 1913, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 380, SEC. 63, SUBSEC 1.

SCALE: 1 INCH = 40 CHAINS

FEET 0 1000 2000 4000 6000 8000
METRES 0 200 1000 (1 KM) 2000 (2 KM)

TOWNSHIP

THORNELOE

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

Ministry of Natural Resources — Land Management Branch
Ontario

Date MARCH 1985
April 4/85 – D.M. c.g.

Number G-3229

200

M.Z.

MAP SYMBOLOLOGY

Aerial Cableway
Boundary
International
Interprovincial
District, Township, Indian Reserve
Approximate
Lot, Concession
Approximate
Park Boundary
Bridge
Road, Railroad
Building
Chimney
Cliff, Pit, Pile
Contours
Interpolated
Approximate
Depression
Control Points
Horizontal △ 0:77405
Vertical ○ 300 02
Culvert
Falls
Double line river
Fence, Hedge, Wall
Feature Outline (Construction features, etc.)
Flooded Land
Lock
Marsh or Swamp
Mast
Mine Head Frame
Outcrop

Pipeline (above ground)
Railroad
Single Track
Double Track
Abandoned
Turntable
Road
Highway, County Township
Access (road of doughtful maintenance or significant driveway)
Trail, Bush Road (portage alley)
Rapids
Double line river with multiple rapids
Double line river with multiple rapids
Reservoir
River, Stream, Canal
Approximate seasonal
Direction of flow
Rock
Significant
Shoal
Spot Elevation (lake elevations) 300.0
Tower
Transmission Line
Poles
Pylons
Tunnel
Utility Poles
Wharf, Dock, Pier
Wooded Area

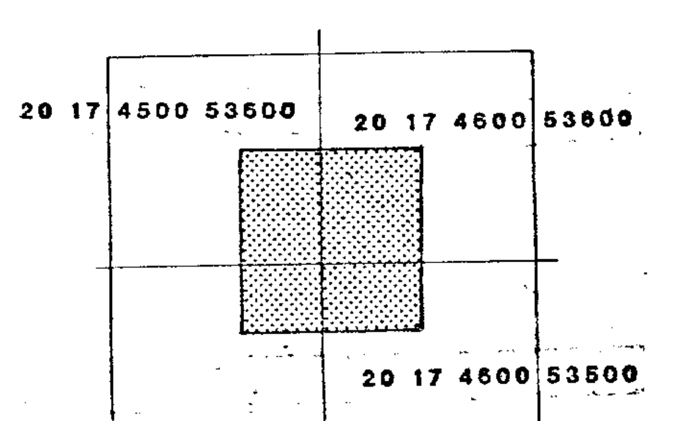
AREAS WITHDRAWN FROM DISPOSITION

M.R.O. – MINING RIGHTS ONLY
S.R.O. – SURFACE RIGHTS ONLY
M.+ S. – MINING AND SURFACE RIGHTS

	Description	Order No.	Date	Disposition	File
R1				S.R.O.	164584
R2	~~SEC. 30/85~~	~~W. 22/85~~	~~19/11/85~~	~~M+S~~	~~NRW 39/85~~

REOPENED - BY ORDER NRO 22/87
FEB, 19/87

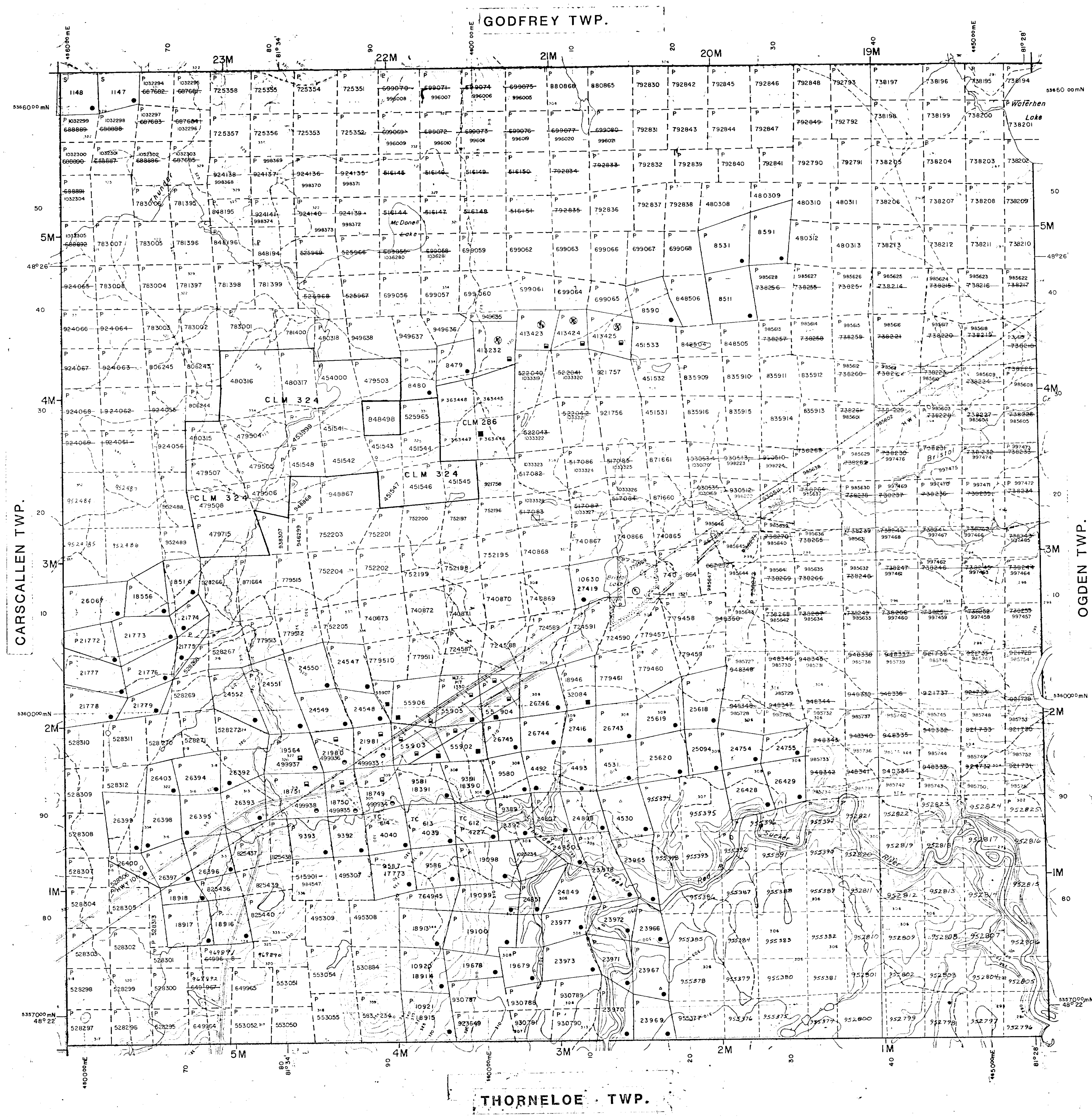
KEY PLAN
For O.B.M. Map



42A06NW0317 2.10967 THORNELOE

210

Not to scale



LEGEND

HIGHWAY AND ROUTE No
OTHER ROADS
TRAILS
SURVEYED LINES
TOWNSHIPS, BASE LINES, ETC.
LOTS, MINING CLAIMS, PARCELS, ETC.
UNSURVEYED LINES
LOT 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	OC
RESERVATION	Ⓡ
CANCELLED	⊗
SAND & GRAVEL	Ⓢ

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6, 1913, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 380, SEC. 63, SUBSEC 1.

SCALE 1:20 000
ZONE : 17

RECEIVED
MAY 3 1988

TOWNSHIP

BRISTOL

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

Ministry of Natural Resources
Land Management Branch
Ontario

ORIGINAL COMPILATION	JULY 1984	Number G-3998
REVISED :	FEB. 9/87 BB	

L 1320 W
L 1200 W
L 1080 W
L 960 W
L 840 W
L 720 W
L 600 W
L 480 W
L 360 W
L 240 W
L 120 W

3+00N
2+00N
1+00N
BL0
1+00S
2+00S
3+00S
4+00S
5+00S
6+00S
7+00S
8+00S
9+00S
10+00S
11+00S
12+00S

792829
796737
796738
796739
892797
892796
892793
892798
892799
892800

LEGEND

Instrument: EDA OMNI IV
Parametres Measured. Earth's total magnetic field.

Accuracy: +/- 1 nano-teslas
Diurnals: Corrected by base station recorder.
Contour Interval: 0,100,200,300,..

2.10967

ESSO MINERALS CANADA

ROBELE 1688

CONTOURED MAGNETOMETER SURVEY

HIGHWAY 144 GRID

EXSICS EXPL.

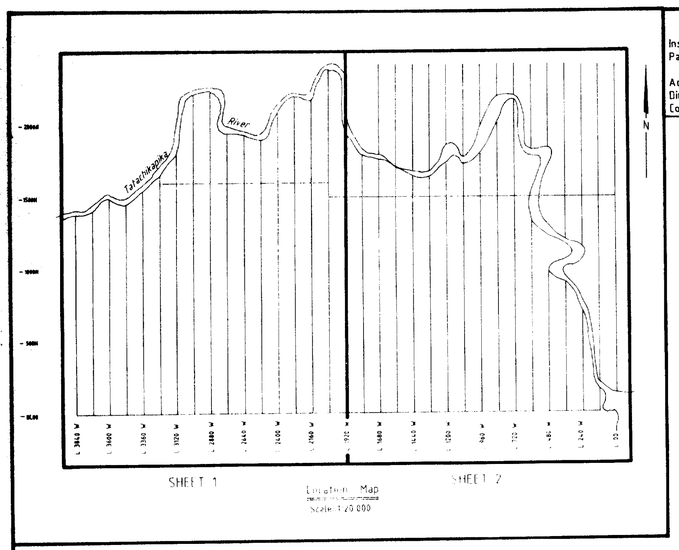
SCALE 1:2500

DATE SEPT. /87

LEGEND

Instrument: EDA OMNI IV
Parametres Measured: Earth's total magnetic field,

Accuracy: +/- 1 nano-teslas
Diurnals: Corrected by base station recorder.
Contour Interval: 0,100,200,300,.....



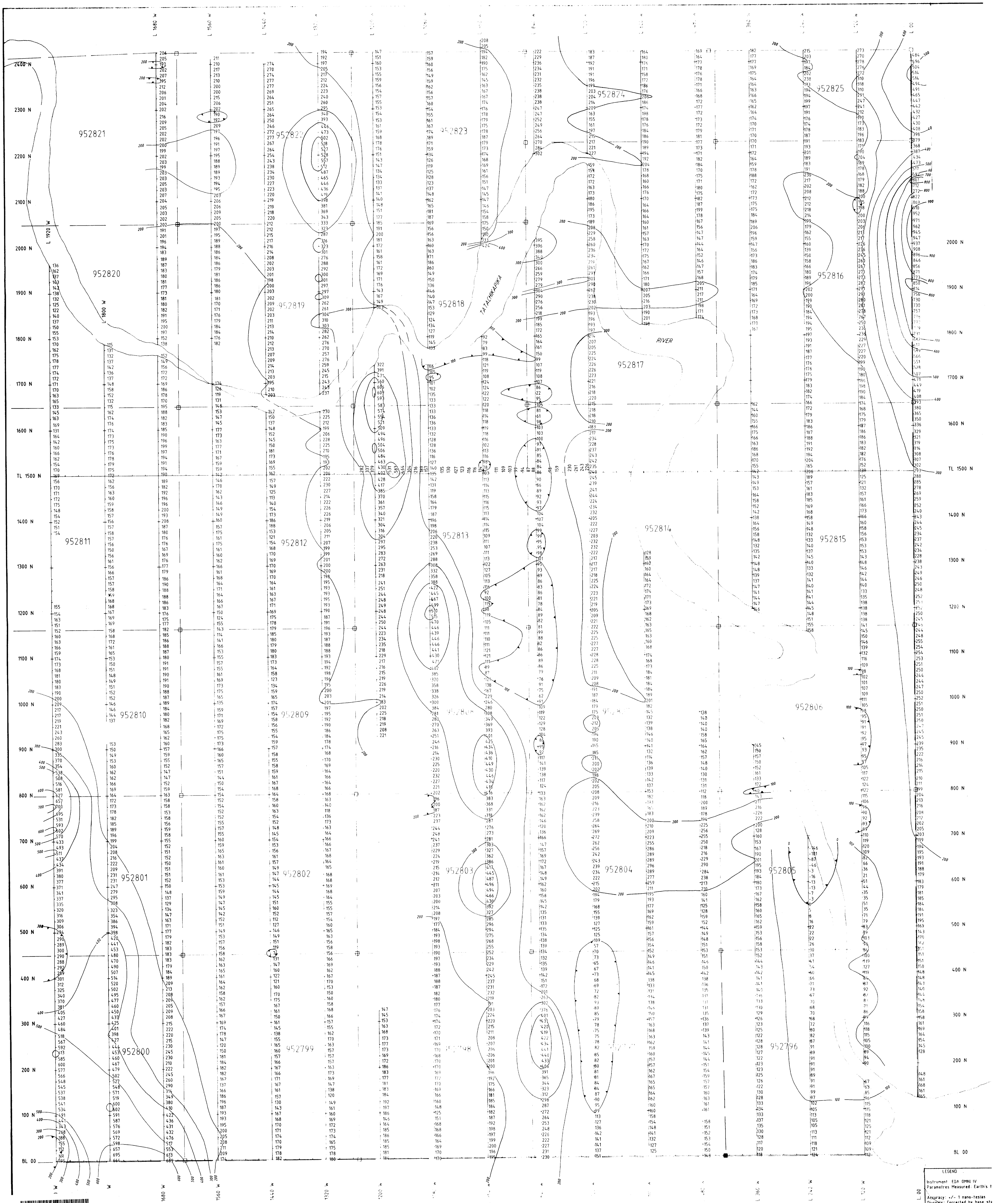
955396 955397 952821 955398 955393 955392 955391 955390 955386 955387 955388 955389 955385 955384 955383 955382 955378 955379 955380 955381 955377 955376 955375 955374 952800

RIVER

TATACHIKAPIKA

L 3000 W L 2880 W L 2760 W L 2640 W L 2520 W L 2400 W L 2280 W L 2160 W L 2040 W L 1920 W
L 3120 W L 3240 W L 3360 W L 3480 W L 3600 W L 3720 W L 3840 W

2400 N 2300 N 2200 N 2100 N 2000 N 1900 N 1800 N 1700 N 1600 N TL 1500 N 1400 N 1300 N 1200 N 1100 N 1000 N 900 N 800 N 700 N 600 N 500 N 400 N 300 N 200 N 100 N BL 00



42A06NW0317 2.10967 THORNELOE

L 62+40E L 63+60E L 64+80E L 66+00E L 67+20E L 68+40E L 69+60E L 70+80E L 72+00E L 73+20E L 74+40E L 75+60E L 76+80E L 78+00E L 79+20E L 80+40E L 81+60E L 82+80E L 84+00E

BL 0+00

1+00S 2+00S 3+00S 4+00S 5+00S 6+00S 7+00S 8+00S 9+00S 10+00S 11+00S 12+00S 13+00S 14+00S 15+00S 16+00S 17+00S 18+00S 19+00S

923601 923602 923603 923604 923605 923606 923607 923608 923609 923610 923611 923612 923613 923614 923615 923616 923617 923618 892792

BRISTOL OGDEN
THORNELOE PRICE

MATTAGAMI RIVER

MATTAGAMI RIVER

LEGEND

Instrument EDA OMNI IV
Parametres Measured: Earth's total magnetic field.

Accuracy: +/- 1 nano-teslas
Diurnals Corrected by base station recorder
Contour Interval

2.10967

MAP #3

ROBELE 1688

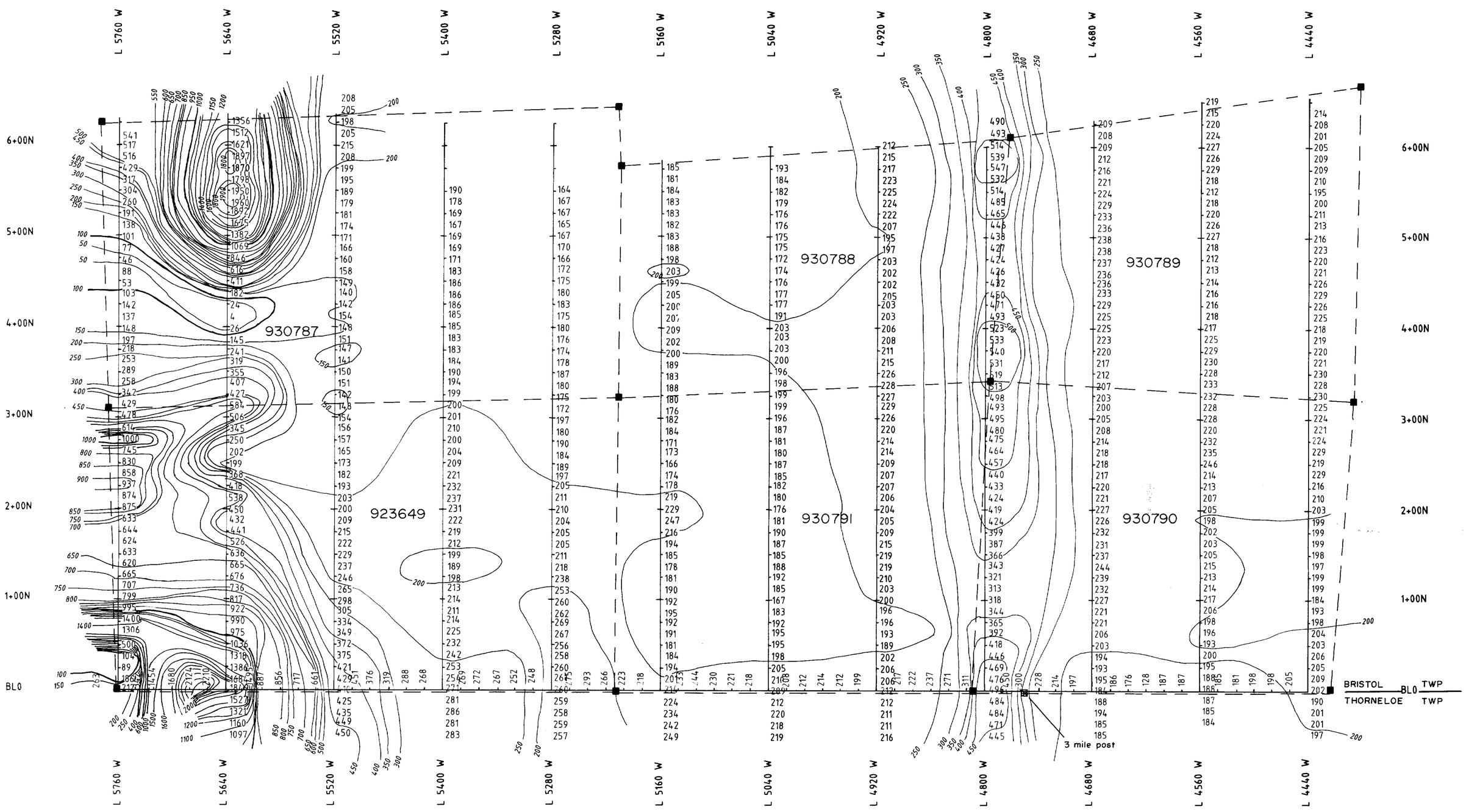
CONTOURED
MAGNETOMETER SURVEY

MATTAGAMI RIVER GRID

EXSICS EXPL

JMP 1:2500

424/5,6 SEPT. /87



2.10967

LEGEND

Instrument: EDA OMNI IV
Parametres Measured: Earth's total magnetic field,

Accuracy: +/- 1 nano-teslas
Diurnals: Corrected by base station recorder.
Contour Interval: 0.25,50,

MAP #2

ROBELE 1688

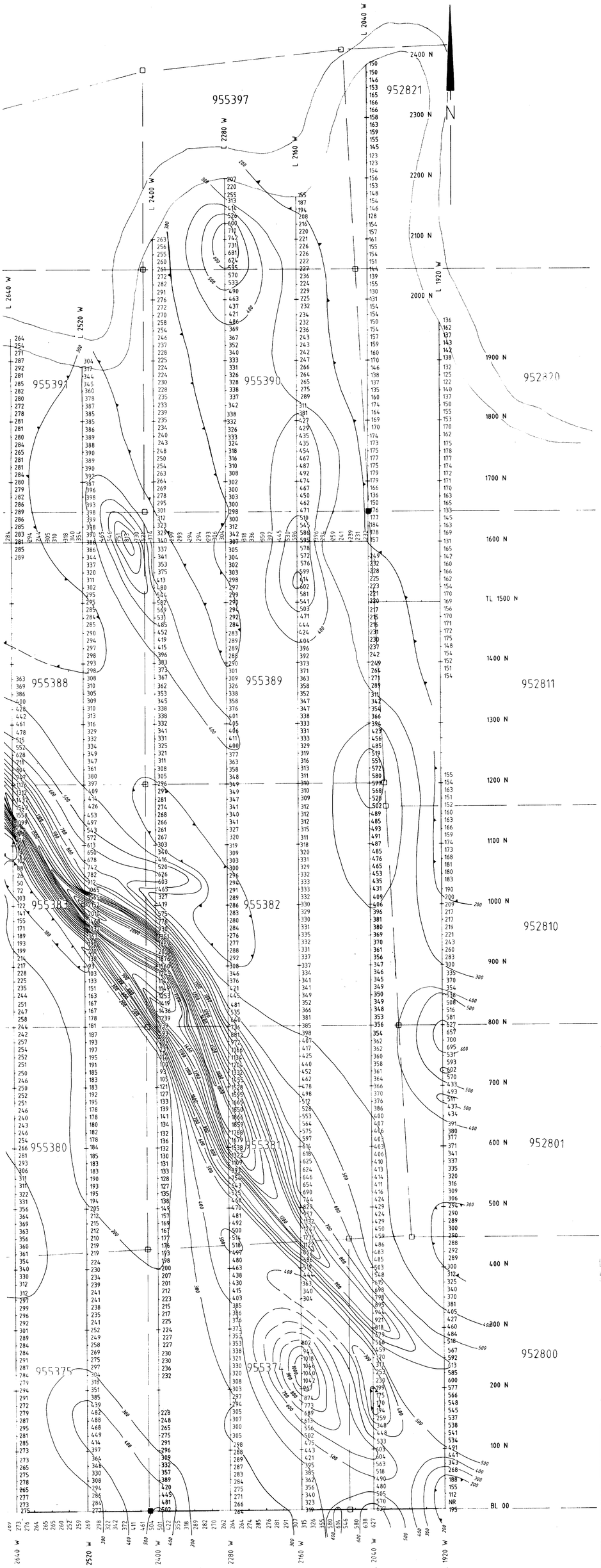
CONTOURED
MAGNETOMETER SURVEY

BRISTOL # 2 GRID

EXSICS EXPL.

1: 2500

SEPT. /87



2.10967

ESSO MINERALS CANADA

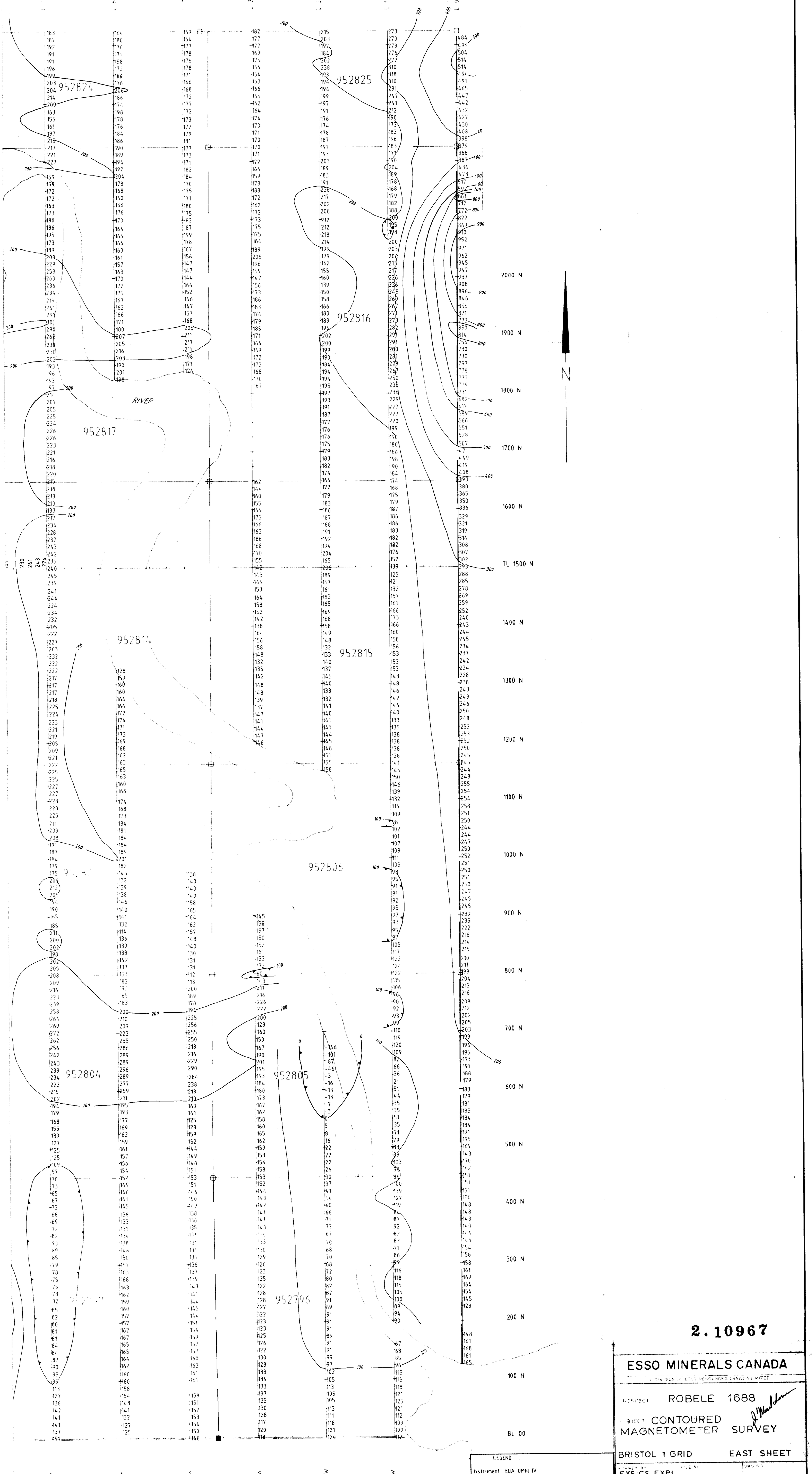
A DIVISION OF ESSO RESOURCES CANADA LIMITED

PROSPECT ROBELE 1688

SUBJECT CONTOURED MAGNETOMETER SURVEY

BRISTOL 1 GRID WEST SHEET

SURVEY BY EXSICS EXPL.	FILE NO.	DWG NO.	
DRAWN BY	SCALE 1:2500		
REVISED BY	NTS	DATE SEPT. / 87	



2.10967

LEGEND

Instrument: EDA OMNI IV
Parametres Measured: Earth's total magnetic field.
Accuracy: +/- 1 nano-teslas
Diurnals: Corrected by base station recorder
Contour Interval: 0,100,200,300,.....

ESSO MINERALS CANADA

A DIVISION OF ESSO RESOURCES CANADA LIMITED

PROJECT ROBELE 1688

SUBJECT CONTOURED MAGNETOMETER SURVEY

BRISTOL 1 GRID EAST SHEET

SURVEY BY EXSICS EXPL. FILE NO. DWG NO.

DRAWN BY SCALE 1:2500

CHECKED BY NTS DATE SEPT. 1/87