

W0430.01215

ST. ANTHONY / STURGEON LAKE
- Emerald Fields Resource Corporation -
Kenora, Ontario P9N 2K2

~~2.28178~~

2.28203

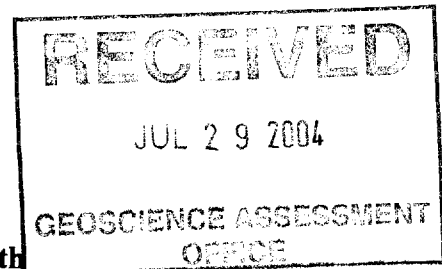
BECKINGTON LAKE (G-2532)
and
SQUAW LAKE (G-3140)
- Patricia Mining Division - 30 -

NTS 52 J/02 SE

AIRBORNE GEOPHYSICAL SURVEY
- Project 446 -

by

GEOTECH LTD.
30 Industrial Parkway, South
Aurora, Ontario L4G 3W2



July 2004



52J02NE2002 2.28203

BECKINGTON LAKE

010

PROJECT / PROPERTY NAME: St. Anthony / Sturgeon Lake

LOCATION: - Patricia (Ontario) Mining Division - 30
- Beckington Lake (G-2532) and Squaw Lake (G-3140)
- Co-ordinates 50 degrees 06' 25" N by 90 degrees 40' 00"
- UTM (GPS) - Zone 15 NAD 83 5558931 N by 668215 E
- NTS 52 J/02 SE
(Location map enclosed)

MINERAL COMMODITY: Gold (Au)

RECORDED MINING CLAIMS: The property consists of block of nineteen (19) contiguous mining claims totaling 206 - 16 ha claim units located in Beckington Lake and Squaw Lake Area within the Patricia Mining Division. The claims are registered in the name of Emerald Fields Resource Corporation, Kenora, Ontario (8 claims - 79 units) and Michael Robert Stares, Thunder Bay, Ontario (11 claims - 127 units). (A summary of the claim holdings enclosed .)

ACCESS: The St. Anthony / Sturgeon Lake property is situated at the north end of Sturgeon Lake, approximately 210 km northwest of the city of Thunder Bay, Ontario. Access to the area is by paved Highway 599 north from Ignace to Savant Lake. Numerous forestry and the old St. Anthony mining road provide access into the property east off the stated highway at the north end of Sturgeon Lake and east of the community of Savant about 20 kilometres. Other aspects of the property can be reached by boat.

HISTORY: The history of the area is best provided by Trowell, N.F., 1983: Geology of the Squaw Lake - Sturgeon Lake Area, District of Thunder Bay; Ontario Geological Survey , Report 227, 114p. Accompanied by map 2420, scale 1:31 680.

SURVEY TYPE: Helicopter-borne electromagnetic & magnetic geophysical survey

SURVEY PERFORMED BY: Geotech Ltd.; 30 Industrial Parkway, South; Aurora, Ontario L4G 3W2 . A combined survey. Project 446

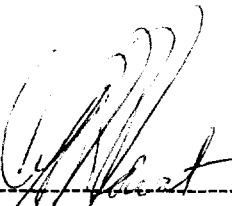
SURVEY DATE: May 18th to May 20th, 2004

DISCUSSION: Emerald Fields's contracted out an airborne geophysical survey to Geotech Ltd., Aurora, Ontario.

The purpose of the survey was to evaluate the known historical gold showings and to extrapolate these zones with geophysical anomalous resulting from this survey.

CONCLUSION: Geotech ltd. has prepared a report which is attached to this document. The airborne data was also presented in CD computer format which is being geophysically and

geologically processed and reviewed. Ground work to follow.

Submission by:  -----
Alasdair J. M. Mowat, C.E.T.
Agent for Emerald Fields Resource Corporation

Dated at : Kenora, Ontario

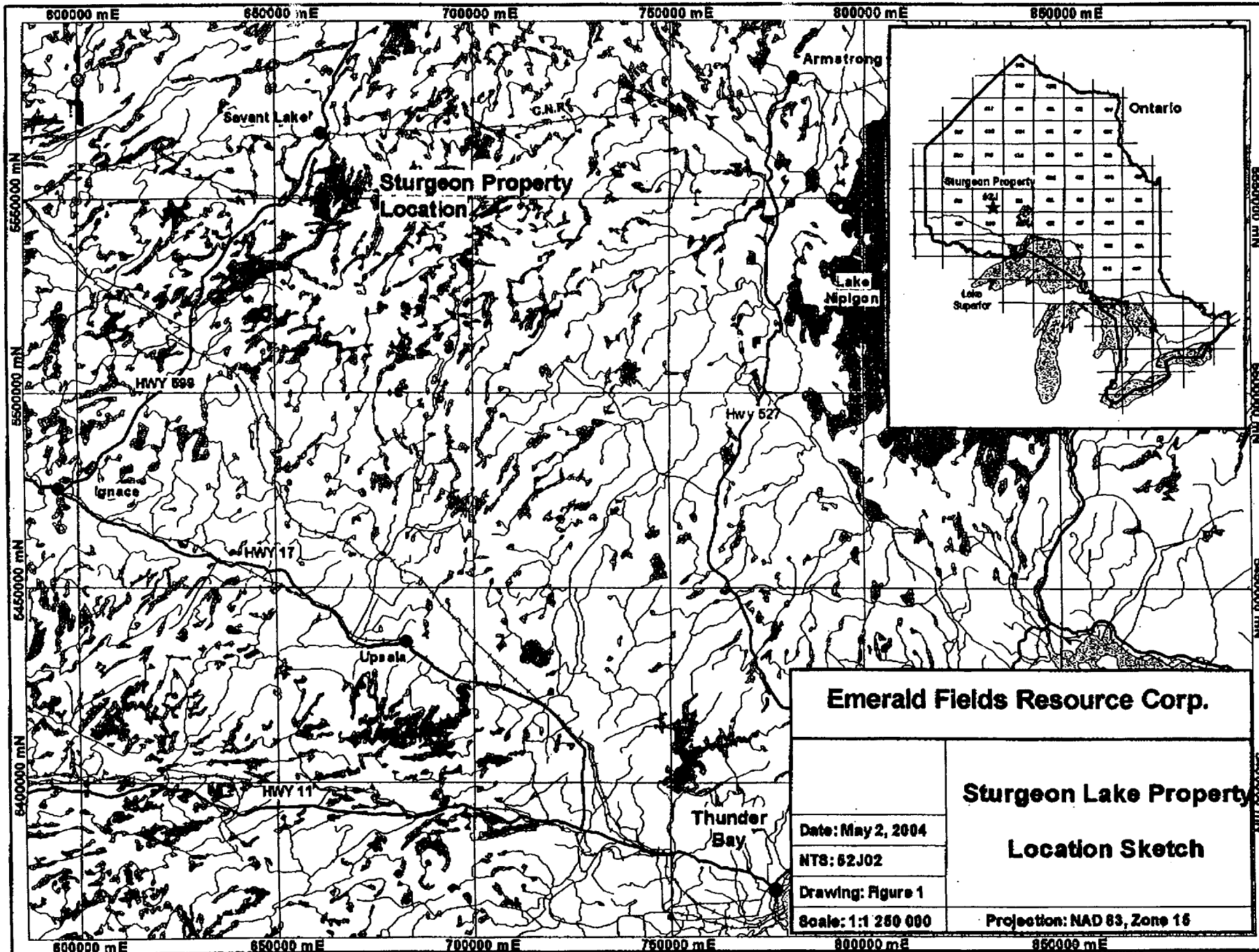
Dated: July, 2004

ENCLOSURES

1/. Area location Map

2/. Claim Map

3/. Summary of Claim Holdings



Emerald Fields Resource Corp.

Sturgeon Lake Property

Location Sketch

Date: May 2, 2004

NTS: 62J02

Drawing: Figure 1

Scale: 1:1 250 000

Projection: NAD 83, Zone 16

NW 0000979

NW 0000985

NW 0000972

NW 0000979

Date / Time of Issue: Thu May 06 18:24:35 EDT 2004

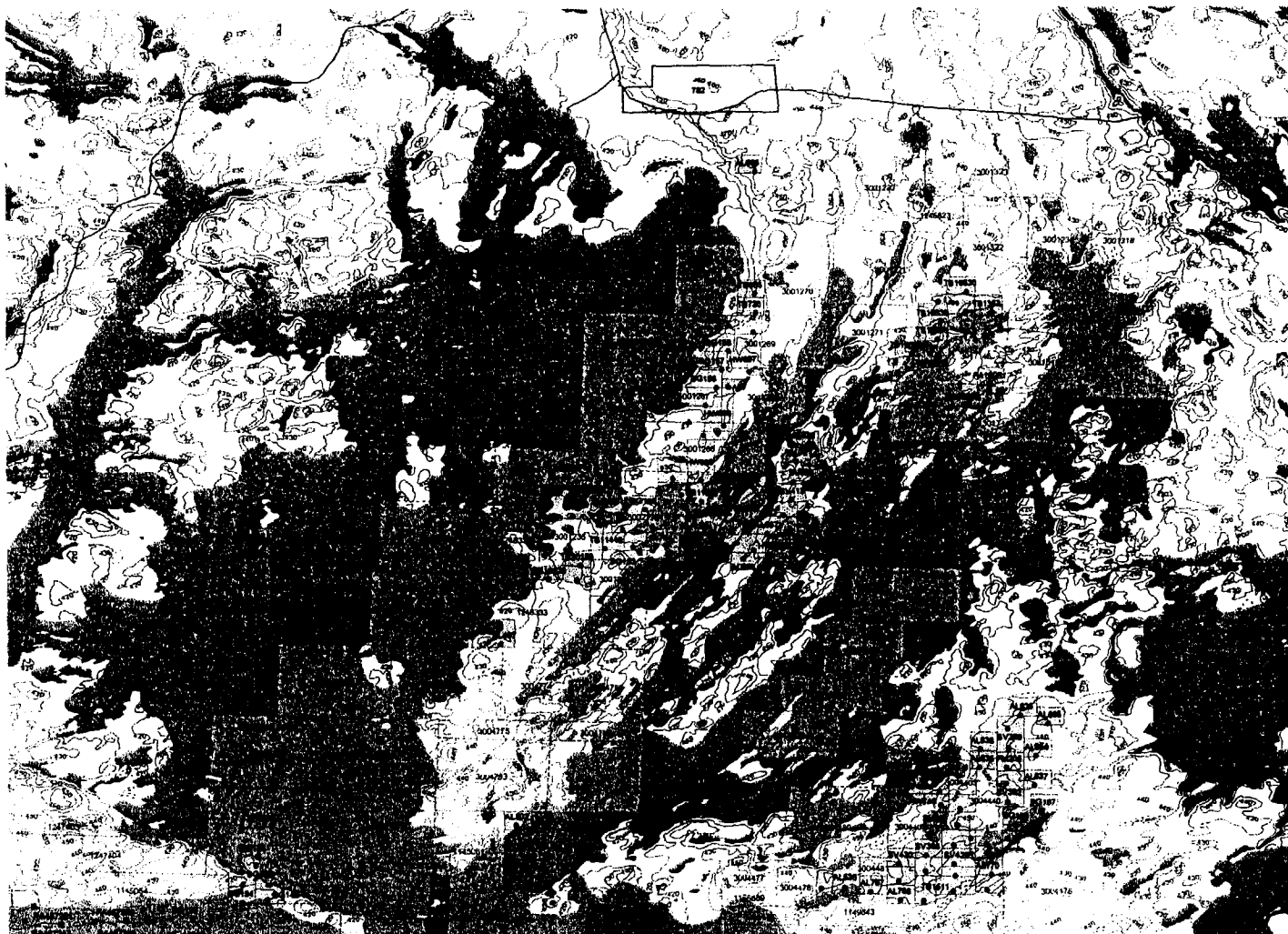
TOWNSHIP / AREA
SQUAW LAKE AREA

PLAN
G-3140

ADMINISTRATIVE DISTRICTS / DIVISIONS

Mining Division
Land Titles/Registry Division
Ministry of Natural Resources District

Patricia
THUNDER BAY
DRYDEN



TOPOGRAPHIC

- Alternative Boundaries
- Tourism
- Construction Lot
- Provincial Park
- Water Reserve
- Out. P.E. & P.S.
- Canal
- Major Roads
- Minor Roads
- Railway
- Road
- Tier
- Natural Gas Pipeline
- Utility
- Tower

Land Tenure

- Priority Patent**
 - Surface And Mining Rights
 - Surface Rights Only
 - Mining Rights Only
- Leasehold Patent**
 - Surface And Mining Rights
 - Surface Rights Only
 - Mining Rights Only
- License of Occupancy**
 - Uses Not Specified
 - Surface And Mining Rights
 - Surface Rights Only
 - Mining Rights Only
 - Land Use Permit
 - Order In Council (not open for mining)
 - Water Power Lease Agreement
 - Mining Claim
 - Past Only Mining Claims



- LAND TENURE WITHDRAWALS**
- 12% Areas Management Area Disposition
 - Surface Area Withdrawal Types
 - Surface Area Mining Rights Withdrawal
 - Surface Rights Only Withdrawal
 - Mining Rights Only Withdrawal
 - Order In Council Withdrawal Types
 - Surface Area Mining Rights Withdrawal
 - Surface Rights Only Withdrawal
 - Mining Rights Only Withdrawal

IMPORTANT NOTICES



HAD 83
8 August 04

Those wishing to stake mining claims should consult with the Provincial Mining Recorders' Office of the Ministry of Northern Development and Mines for additional information on the status of the lands shown hereon. This map is not intended for managerial, survey, or land use determination purposes as the information shown on this map is compiled from various sources. Completeness and accuracy are not guaranteed. Additional information may also be obtained through the local Land Titles or Registry Office, or the Ministry of Natural Resources.

The information shown is derived from digital data available in the Provincial Mining Recorders' Office at the time of downloading from the Ministry of Northern Development and Mines web site.

General Information and Limitations
 Contact Information:
 Provincial Mining Recorders' Office
 1140 Green Millar Centre 533 Ramsey Lake Road
 Sudbury ON P3E 9B5
 Home Page: www.mdmn.gov.on.ca/ANONMINE/ENL/ENLindexpage.htm

Map Data: HAD 83
Projection: Geographic Coordinates
Topographic Data Source: Land Information Ontario
Mining Land Tenure Source: Provincial Mining Recorders' Office

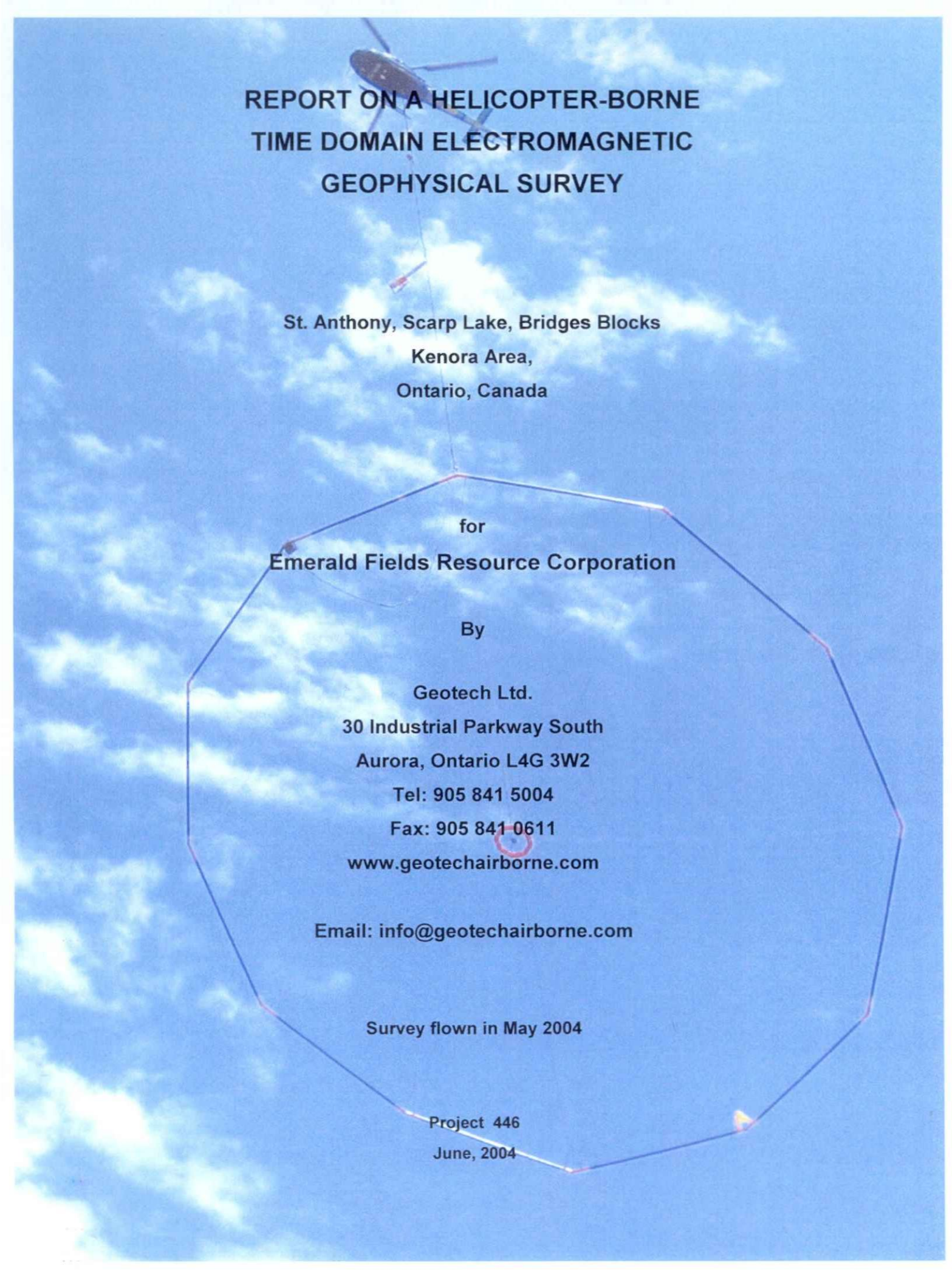
This map may not show unregistered land tenure and interests in land including certain patents, leases, easements, right of way, bonding rights, licences, or other forms of disposition of rights and interests from the Crown. Also certain land tenure and land uses that conflict or prohibit free entry to staking mining claims may not be illustrated.

CLAIM HOLDINGS AND PROPERTY DISPOSITION

The property consists of nineteen (19) contiguous claim blocks totaling 206 claim units located in the Beckington Lake (G-2532) and Squaw Lake (G-3140) areas within the Thunder Bay Mining District. The claims are registered in the name of Emerald Fields Resource Corporation (79 units within 8 claims) and Michael Robert Stares (127 units within 11 claims).

A summary of the claim holdings is given in Table 1 below.

Claim	Units	Recording Date	Due Date	Assessment Due (\$)	Ownership
3001265	4	June 03/02	June 03/04	1600	Emerald Fields Resources Corp.
3001266	15	June 03/02	June 03/04	6000	Emerald Fields Resources Corp.
3001267	6	June 03/02	June 03/04	2400	Emerald Fields Resources Corp.
3001268	9	June 03/02	June 03/04	3600	Emerald Fields Resources Corp.
3001269	15	June 03/02	June 03/04	6000	Emerald Fields Resources Corp.
3001270	6	June 03/02	June 03/04	2400	Emerald Fields Resources Corp.
3001271	9	June 03/02	June 03/04	3600	Emerald Fields Resources Corp.
3002776	15	June 03/02	June 03/04	6000	Emerald Fields Resources Corp.
3001233	15	June 17/02	June 17/04	6000	Michael Stares
3001234	9	June 17/02	June 17/04	3600	Michael Stares
3001235	7	June 17/02	June 17/04	2800	Michael Stares
3001318	9	June 17/02	June 17/04	3600	Michael Stares
3001319	9	June 17/02	June 17/04	3600	Michael Stares
3001320	14	June 17/02	June 17/04	5600	Michael Stares
3001321	16	June 17/02	June 17/04	6400	Michael Stares
3001322	15	June 17/02	June 17/04	6000	Michael Stares
3001323	15	June 17/02	June 17/04	6000	Michael Stares
3002034	14	June 27/02	June 27/04	5600	Michael Stares
1245823	4	June 27/02	June 27/04	1600	Michael Stares



**REPORT ON A HELICOPTER-BORNE
TIME DOMAIN ELECTROMAGNETIC
GEOPHYSICAL SURVEY**

**St. Anthony, Scarp Lake, Bridges Blocks
Kenora Area,
Ontario, Canada**

**for
Emerald Fields Resource Corporation**

By

**Geotech Ltd.
30 Industrial Parkway South
Aurora, Ontario L4G 3W2
Tel: 905 841 5004
Fax: 905 841 0611
www.geotechairborne.com**

Email: info@geotechairborne.com

Survey flown in May 2004

**Project 446
June, 2004**

TABLE OF CONTENTS

INTRODUCTION	3
SURVEY OPERATIONS.....	5
AIRCRAFT AND EQUIPMENT	7
1 Aircraft.....	7
2 Electromagnetic System.....	7
3 Airborne magnetometer	8
4 Ancillary Systems	8
4.1 Radar Altimeter.....	8
4.2 GPS Navigation System.....	8
4.3 Digital Acquisition System.....	8
5 Base Station	9
PERSONNEL	10
DATA PROCESSING AND PRESENTATION.....	10
DELIVERABLES.....	11
CONCLUSIONS.....	12

TABLE OF FIGURES

FIGURE 1 - LOCATION MAP.....	4
FIGURE 2.....	7
FIGURE 3.....	7

TABLES

TABLE 1 - SURVEY BLOCKS.....	5
TABLE 2 - SURVEY SCHEDULE.....	6
TABLE 3 - SAMPLING RATES	9



REPORT ON A HELICOPTER-BORNE TIME DOMAIN ELECTROMAGNETIC SURVEY

St. Anthony, Scarp Lake, Bridges Blocks, Kenora Area, Ontario, Canada

INTRODUCTION

This report describes the helicopter-borne geophysical survey carried out on behalf of Emerald Fields Resource Corporation by Geotech Ltd. under an agreement dated May 2004. Principal geophysical sensors included a time domain electromagnetic system and a cesium magnetometer. Ancillary equipment included a GPS navigation system and a radar altimeter.

Three blocks, referred to as St. Anthony, Scarp Lake, Bridges blocks, were surveyed. The St. Anthony block is located approximately 95 km east of Sioux Lookout. The coordinates of the centre of the St. Anthony block are: 90° 38' W, 53° 9' N. The Scarp Lake block is located approximately 28 km south of Vermilion Bay. The coordinates of the centre of the Scarp Lake block are: 93° 27' W, 49° 37' N. The Bridges block is located approximately 16 km west of Vermilion Bay. The coordinates of the centre of the Bridges block are: 93° 39' W, 49° 51' N. The total area of the blocks is 150.8 km², the total line kilometres flown was 1620 km. Data acquisition was initiated on May 10th and completed on May 27th, 2004.

This report describes the survey, the data processing and presentation.



SURVEY AREA

The survey area is shown in figure 1.

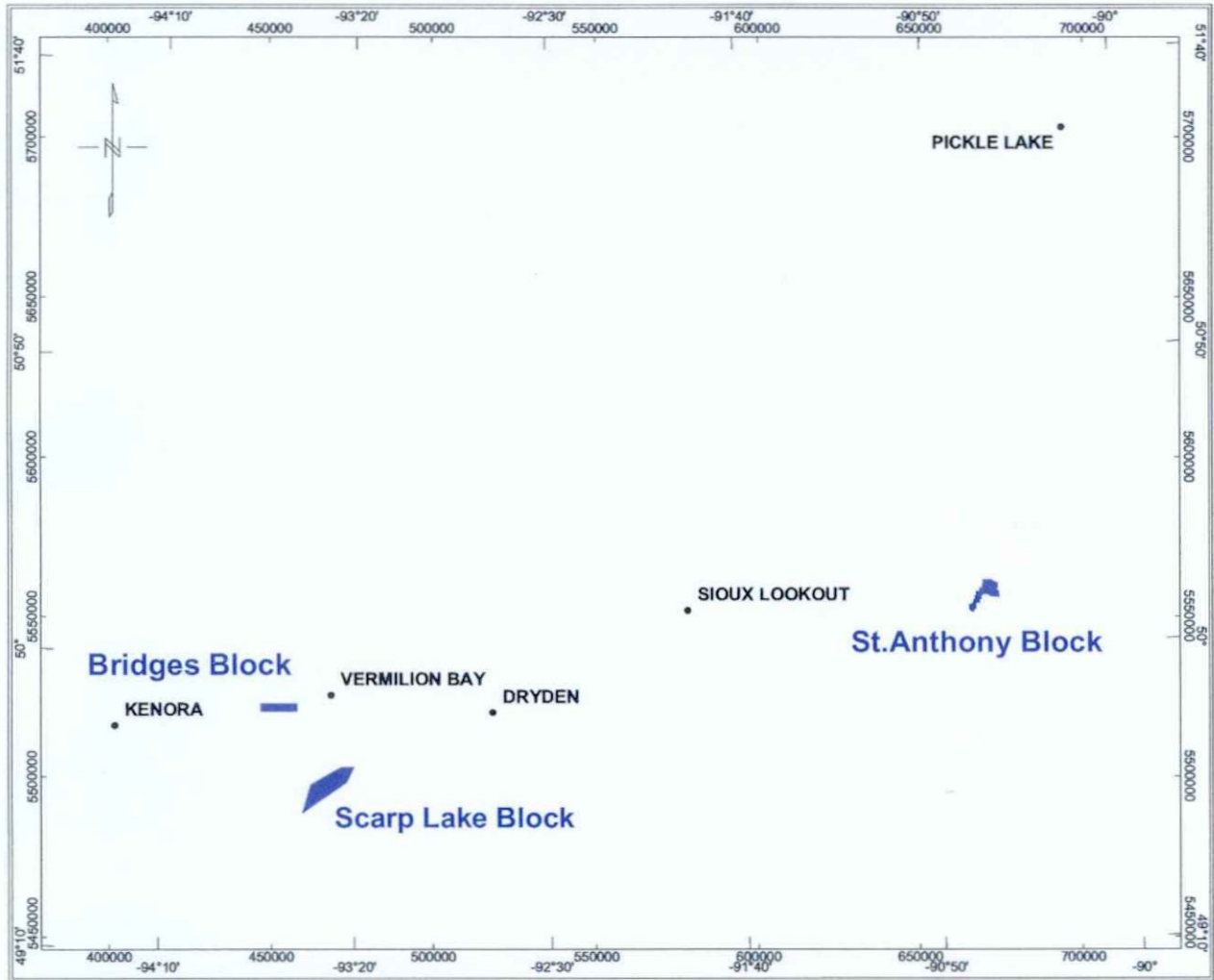


Figure 1 - Location Map

The survey specifications are summarised in the following table:

BLOCK NAME	AREA KM ²	LINE SPACING	LINE KM	FLIGHT DIRECTION
St. Anthony	36.1	50 m	690	N-S
Scarp Lake	85.7	150 m	616	N-S
Bridges	29.0	100 m	314	N60W

Table 1 - Survey Blocks

SURVEY OPERATIONS

Survey operations were based out of Sioux Lookout (St. Anthony block) and Dryden (Scarp Lake and Bridges blocks). The following table shows the timing of the flying.

Date	Flight #	Block flown, comments	Flown, km	Stand-by reason
May 9		Crew arrived to Sioux Lookout		
May 10		No production due to snow storm	0	Snow storm starts
May 11		No production due to snow storm	0	Snow storm
May 12		No production due to snow storm	0	Snow storm ends
May 13		The system is damaged		
May 14		The system is damaged		
May 15	1,2	No production, test flights		
May 16	3	No production, test flights		
May 17	4,5	No production, test flights		
May 18	6,7,8	St. Anthony block	265	
May 19	9,10	St. Anthony block	197	Rain after 1 p.m.
May 20	11,12,13	St. Anthony block	228	
May 21	14	Ferry from Sioux Lookout to Dryden	0	
May 22	15,16	Scarp Lake	224	
May 23	17,18,19	Scarp Lake	392	
May 24	20,21	Flight 20 is a test flight	33	
May 25		No production due to rain	0	Rain, low ceiling
May 26		No production due to rain	0	Rain, low ceiling
May 27	22,23,24		281	
		TOTAL	1620	



Table 2 - Survey Schedule

The nominal EM sensor terrain clearance was 30 m (EM bird height above ground, i.e. helicopter is maintained 70 m above ground). Nominal survey speed was 80 km/hour. The data-recording rates of the data acquisition was 0.1 second for electromagnetics and magnetometer, 0.2 second for altimeter and GPS. This translates to a geophysical reading about every 2 metres along flight track. Navigation was assisted by a GPS receiver and data acquisition system, which reports GPS co-ordinates as latitude/longitude and directs the pilot over a pre-programmed survey grid.

The operator was responsible for monitoring of the system integrity. He also maintained a detailed flight log during the survey noting the times of the flight as well as any unusual geophysical or topographic feature.

On return of the aircrew to the base camp the survey data was transferred from a compact flash card (PCMCIA) to the data processing computer.



AIRCRAFT AND EQUIPMENT

1 Aircraft

An Astar BA helicopter, registration C-GHSM - owned and operated by Abitibi Helicopters was used for the survey. Installation of the geophysical and ancillary equipment was carried out by Geotech Ltd.

2 Electromagnetic System

The electromagnetic system was a Geotech Time Domain EM system. The layout is as indicated in Figures 2 below.

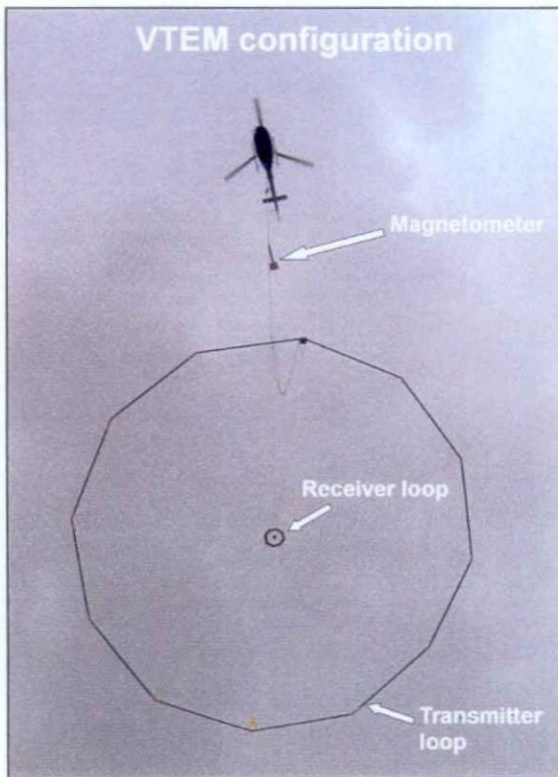


Figure 2

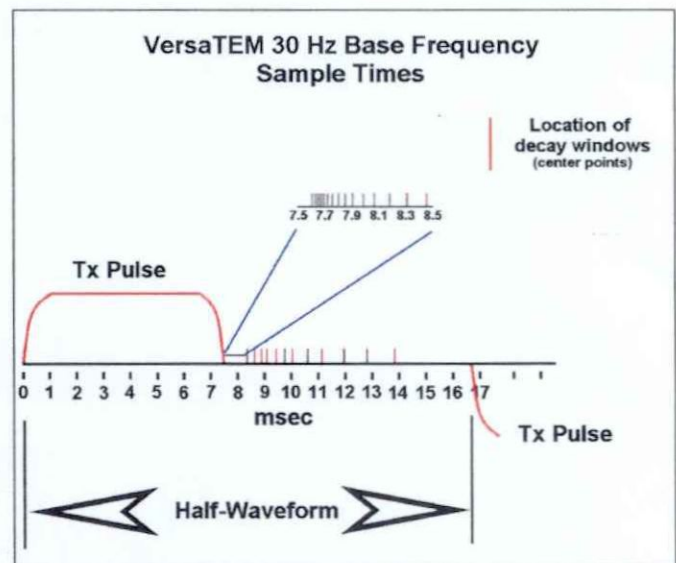


Figure 3

Receiver and transmitter coils were concentric and Z-direction oriented.
Transmitter coil diameter was 26 metres, the number of turns was 3.
Receiver coil diameter was 1.1 metre, the number of turns was 60.
Transmitter pulse repetition rate was 30 Hz.

Peak current was 145 A.

Duty cycle was 40%.

Peak dipole moment was 230000 NIA.

Wave form – trapezoid.

Twenty-five measurement gates were used in the range from 130 μ s to 6340 μ s.

The transmitter waveform and the receiver decay recording scheme is shown diagrammatically in Figure 3.

Recording sampling rate was 10 samples per second.

The EM bird was towed 40 m below the helicopter.

3 Airborne magnetometer

The magnetic sensor utilized for the survey was a Geometrics optically pumped cesium vapor magnetic field sensor, mounted in a separate bird towed 15 m below the helicopter. The sensitivity of the magnetic sensor is 0.02 nanoTesla (nT) at a sampling interval of 0.1 seconds. The magnetometer sends the measured magnetic field strength as nanoTeslas to the data acquisition system via the RS-232 port.

4 Ancillary Systems

4.1 Radar Altimeter

A Terra TRA 3000/TRI 30 radar altimeter was used to record terrain clearance. The antenna was mounted beneath the bubble of the helicopter cockpit.

4.2 GPS Navigation System

The navigation system used was a Geotech PC based navigation system utilizing a NovAtel's WAAS enable OEM4-G2-3151W GPS receiver, Geotech navigate software, a full screen display with controls in front of the pilot to direct the flight and an NovAtel GPS antenna mounted on the helicopter tail.

The co-ordinates of the blocks were set-up prior to the survey and the information was fed into the airborne navigation system.

4.3 Digital Acquisition System

A Geotech data acquisition system recorded the digital survey data on an internal compact flash card. Data is displayed on an LCD screen as traces to allow the operator to monitor the integrity of the system. Contents and update rates were as follows:



DATA TYPE	SAMPLING
TDEM	0.1 sec
Magnetometer	0.1 sec
GPS Position	0.2 sec
RadarAltimeter	0.2 sec

Table 3 - Sampling Rates

5 Base Station

A combine magnetometer/GPS base station was utilized on this project. A Scintrex CS-2 Cesium vapour magnetometer was used as a magnetic sensor with a sensitivity of 0.001 nT. The base station was recording the magnetic field together with the GPS time at 1 Hz on a base station computer. The base station magnetometer sensor was installed in Sioux Lookout (St. Anthony block) and in Dryden (Scarp Lake and Bridges) away from electric transmission lines and moving ferrous objects such as motor vehicles. The magnetometer base station's data was backed-up to the data processing computer at the end of each survey day.

PERSONNEL

The following Geotech Ltd. personnel were involved in the project

Field

Geophysicists/Data Processor: Shawn Grant
Operator: Michel Roy

Office

Data Processing/Reporting: Andrei Bagrianski

The survey pilot and the mechanic were employed directly by the helicopter operator – Abitibi Helicopters.

Pilot: Don Plattel
Mechanic: Marco Blais

Overall management of the survey was carried out from the Aurora offices of Geotech Ltd. by Edward Morrison, President.

DATA PROCESSING AND PRESENTATION

Flight Path

The flight path, recorded by the acquisition program as WGS 84 latitude/longitude, was converted into the UTM co-ordinate system in Oasis Montaj.

The flight path was drawn using linear interpolation between x,y positions from the navigation system. Positions are updated every second and expressed as UTM eastings (x) and UTM northings (y).

Electromagnetic Data

A three stage digital filtering process was used to reject major spheric events and to reduce system noise. Local spheric activity can produce sharp, large amplitude events that cannot be removed by conventional filtering procedures. Smoothing or stacking will reduce their amplitude but leave a broader residual response that can be confused with geological phenomena. To avoid this possibility, a computer algorithm searches out and rejects the major spheric events. The filter used was a 16 point non-linear filter.

The signal to noise ratio was further improved by the application of a low pass linear digital filter. This filter has zero phase shift which prevents any lag or peak displacement from occurring, and it suppresses only variations with a wavelength less than about 1 second or 20 metres. This filter is a symmetrical 1 sec linear filter.

The results are presented as stacked profiles of EM voltages for the gate times.

Magnetic Data

The processing of the magnetic data involved the correction for diurnal variations by using the digitally recorded ground base station magnetic values. The base station magnetometer data was edited and merged into the Geosoft GDB database on a daily basis. The aero magnetic data was corrected for diurnal variations by subtracting the observed magnetic base station deviations. The corrected magnetic line data from the survey was interpolated between survey lines using a random point gridding method to yield x-y grid values for a standard grid cell size of approximately 0.2 cm at the mapping scale. The Minimum Curvature algorithm was used to interpolate values onto a rectangular regular spaced grid.

DELIVERABLES

The survey is described in a report, which is provided in two copies. The preliminary and final maps were produced at a scale of 1:20,000.

MAPS

The final results of the survey are presented in a colour magnetic contour map and an EM profiles map at a logarithmic scale. The coordinate/projection system used was WGS84(NAD83), Universal Transverse Mercator, zone 15. For reference the WGS84 latitude and longitude are also noted on the maps. All the maps show the flight path trace.

The map products are as follows:



Standard maps:

1. Total Field Magnetic color contour map on the GPS flight path, on paper in two copies
2. EM Profile Map at a logarithmic scale of the twenty one gates times (220 – 6340 μ s) on the GPS flight path, on paper in two copies.

DIGITAL DATA on CD-ROM

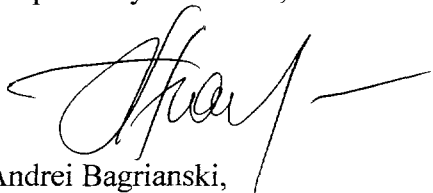
Two copies of CD-ROMs were prepared to accompany the report. Each CD-ROM contains a digital file of the line data in GDB Geosoft Montaj format in addition to the maps in Geosoft Montaj Map format. A *readme.txt* file may be found on the CD-ROM that describes the contents in more detail.

CONCLUSIONS

A time domain electromagnetic helicopter-borne geophysical survey has been completed over three blocks in the Kenora Area, Ontario, Canada. The total areal coverage amounts to 150.8 km². Total survey line coverage is 1620 line kilometres. The principal sensors included a Time Domain EM system and a magnetometer. Results have been presented as colour maps at a scale of 1:20,000.

A number of EM anomaly groupings were identified. Ground follow-up of those anomalies should be carried out if favourably supported by other geoscientific data.

Respectfully submitted,



Andrei Bagrianski,
Geotech Ltd.



Date: 2004-OCT-19

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

MICHAEL ROBERT STARES
831 MINNESOTA ST.
THUNDER BAY, ONTARIO
P7C 3L7 CANADA

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

Submission Number: 2.28203
Transaction Number(s): W0430.01215

Dear Sir or Madam

Subject: Approval of Assessment Work

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

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

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

Yours Sincerely,



Ron C. Gashinski
Senior Manager, Mining Lands Section

Cc: Resident Geologist

Alasdair James Mowat
(Agent)

Michael Robert Stares
(Assessment Office)

Assessment File Library

Michael Robert Stares
(Claim Holder)

Emerald Fields Resource Corporation
(Claim Holder)

Date / Time of Issue: Wed Oct 27 16:28:42 EDT 2004

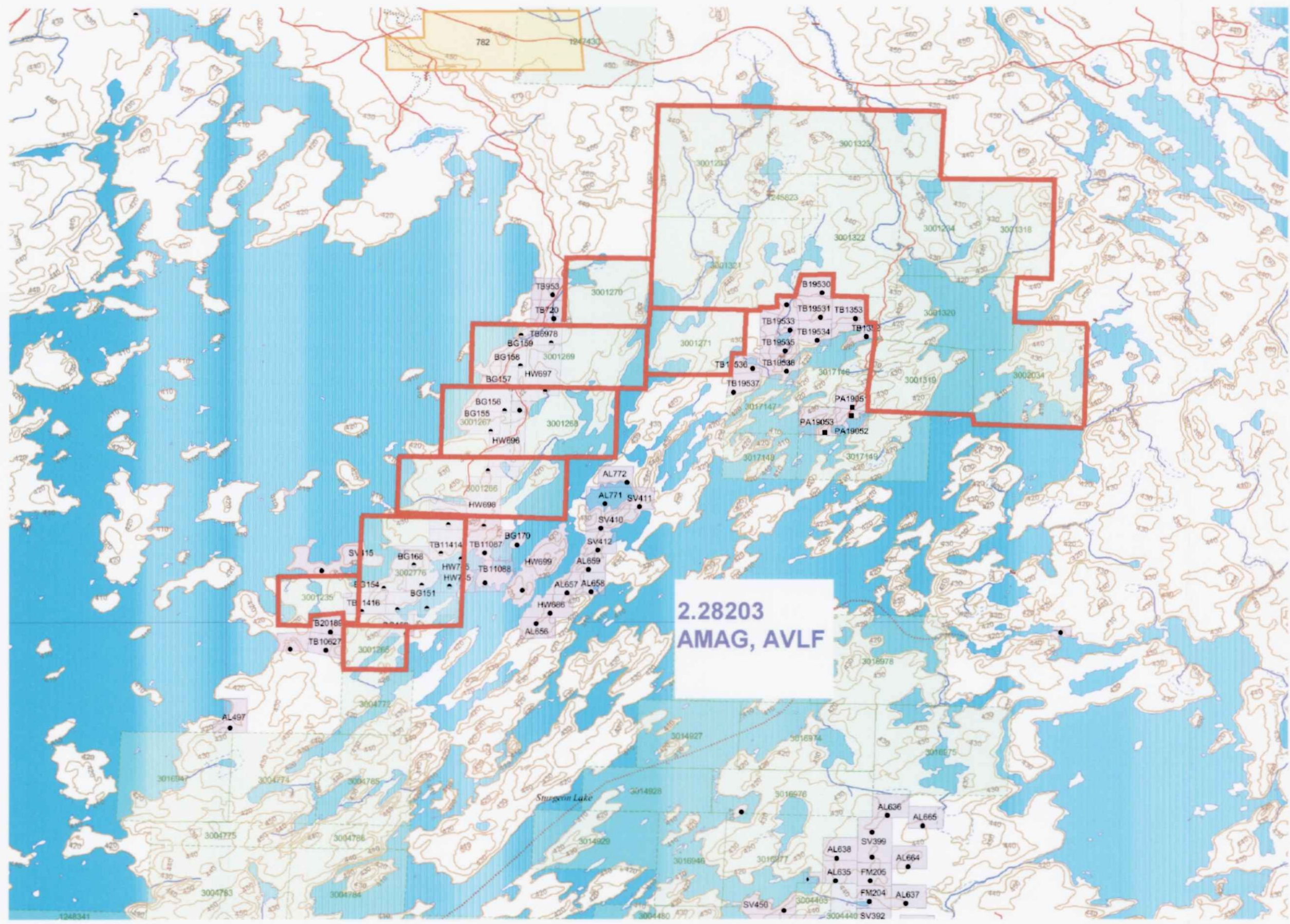
TOWNSHIP / AREA
BECKINGTON LAKE AREA

PLAN
G-2532

ADMINISTRATIVE DISTRICTS / DIVISIONS

Mining Division
Land Titles/Registry Division
Ministry of Natural Resources District

Patricia
THUNDER BAY
DRYDEN

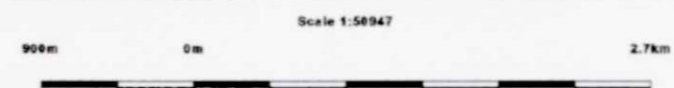
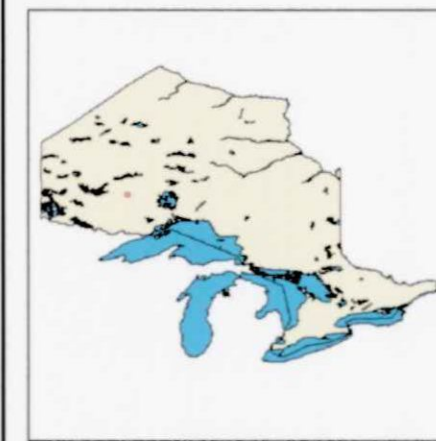


TOPOGRAPHIC

- Administrative Boundaries
- Township
- Concession, Lot
- Provincial Park
- Indian Reserve
- Cliff, Pit & Pile
- Contour
- Mine Shafts
- Mine Headframe
- Railway
- Road
- Trail
- Natural Gas Pipeline
- Utilities
- Tower

Land Tenure

- Freehold Patent**
 - Surface And Mining Rights
 - Surface Rights Only
 - Mining Rights Only
- Leasehold Patent**
 - Surface And Mining Rights
 - Surface Rights Only
 - Mining Rights Only
- Licence of Occupation**
 - Uses Not Specified
 - Surface And Mining Rights
 - Surface Rights Only
 - Mining Rights Only
 - Land Use Permit
 - Order In Council (Not open for staking)
 - Water Power Lease Agreement
- Mining Claim**
 - Mining Claim
 - Filed Only Mining Claims
- LAND TENURE WITHDRAWALS**
 - Areas Withdrawn from Disposition
 - Mining Acts Withdrawal Types**
 - Surface And Mining Rights Withdrawn
 - Surface Rights Only Withdrawn
 - Mining Rights Only Withdrawn
 - Order In Council Withdrawal Types**
 - Surface And Mining Rights Withdrawn
 - Surface Rights Only Withdrawn
 - Mining Rights Only Withdrawn
- IMPORTANT NOTICES**
 - IMPORTANT NOTICES



NAD 83
5 degree grid

Ministry of Northern Development and Mines for additional
title determination purposes as the information
additional information may also be obtained through the
Ministry of Northern Development and Mines

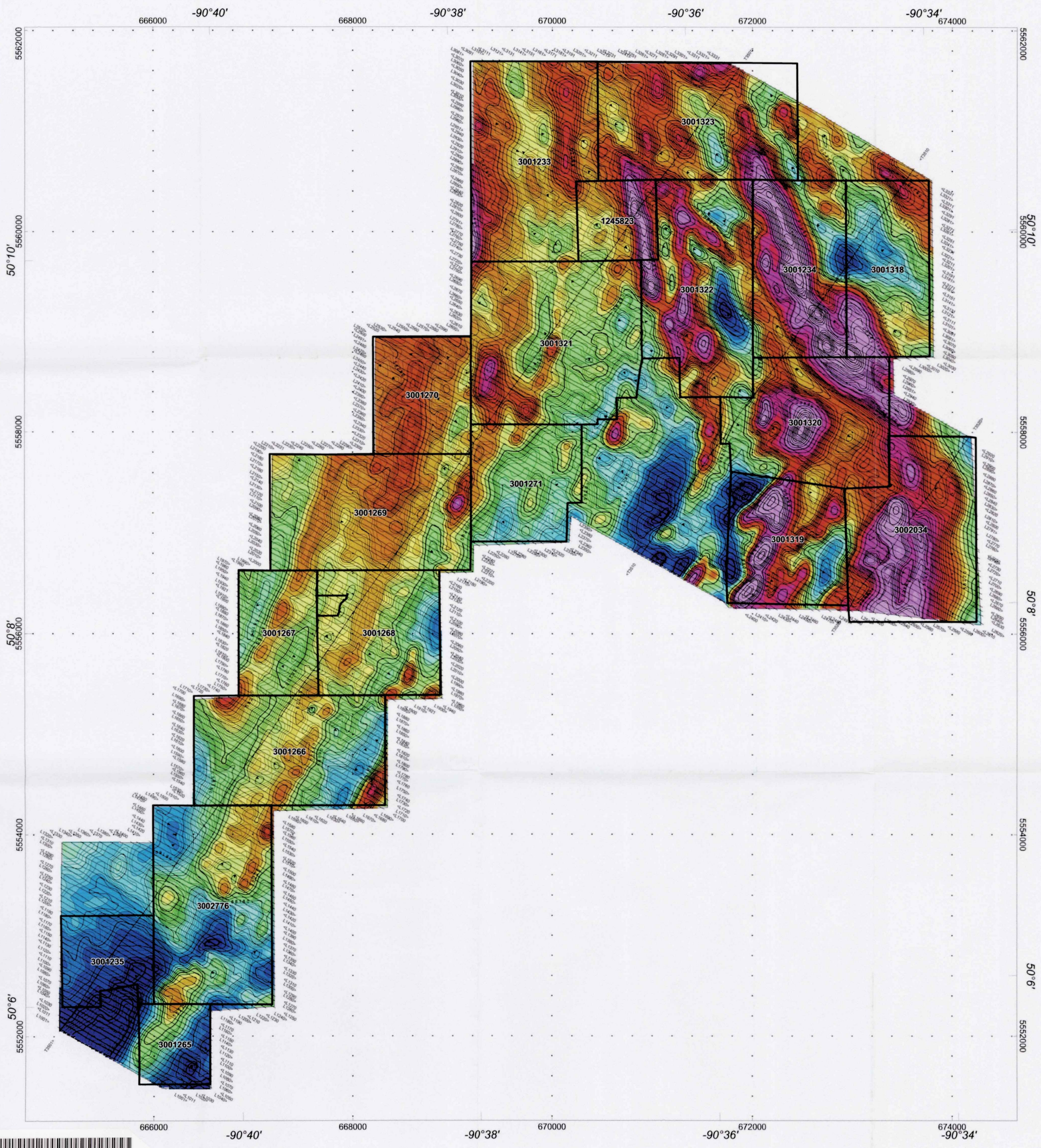
General Information and Limitations
Contact Information:
Provincial Mining Recorders' Office
Wilket Green Miller Centre 933 Ramsey Lake Road
Sudbury ON P3E 6B5
Home Page: www.mndm.gov.on.ca/MNDM/MINES/LANDS/htlmnpage.htm

Toll Free
Tel: 1 (888) 415-9845 ext 57
Fax: 1 (877) 670-1444

Map Datum: NAD 83
Projection: Geographic Coordinates
Topographic Data Source: Land Information Ontario
Mining Land Tenure Source: Provincial Mining Recorders' Office

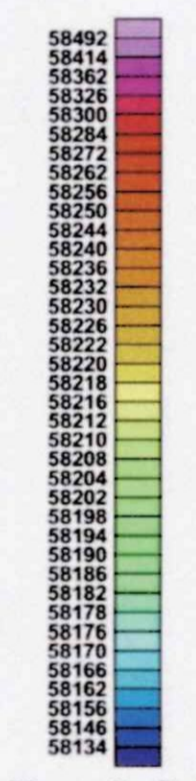
This map may not show unregistered land tenure and interests in
land including certain patents, leases, easements, right of ways,
flooding rights, licences, or other forms of disposition of rights and
interest from the Crown. Also certain land tenure and land uses
that restrict or prohibit free entry to stake mining claims may not be
illustrated.





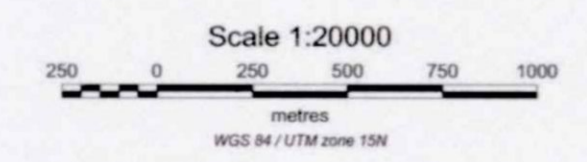
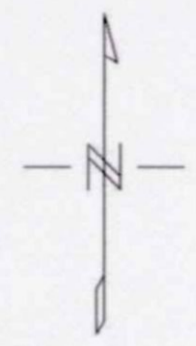
Survey Specifications:
 Aircraft: Astar BA helicopter, Registration C-GHSM
 Flight Line Spacing: 50 metres
 Nominal terrain clearance 70 metres
 EM sensor is 40 metres under helicopter
 Magnetic sensor is 15 metres under helicopter

Instruments:
 Geotech Time Domain Electromagnetic System
 with concentric RxTx geometry
 Geometrics Optically-pumped
 High Sensitivity Cesium Magnetometer
 Mag Resolution 0.02 nT at 10 samples/sec



Magnetic field (nT)

Contour intervals:
 10 nT
 50 nT
 200 nT
 1000 nT



MAP 7

**Emerald Fields
 Resource Corporation
 St. Anthony Block
 Ontario, Canada**

**Geotech TDEM System
 Total Field Magnetics**

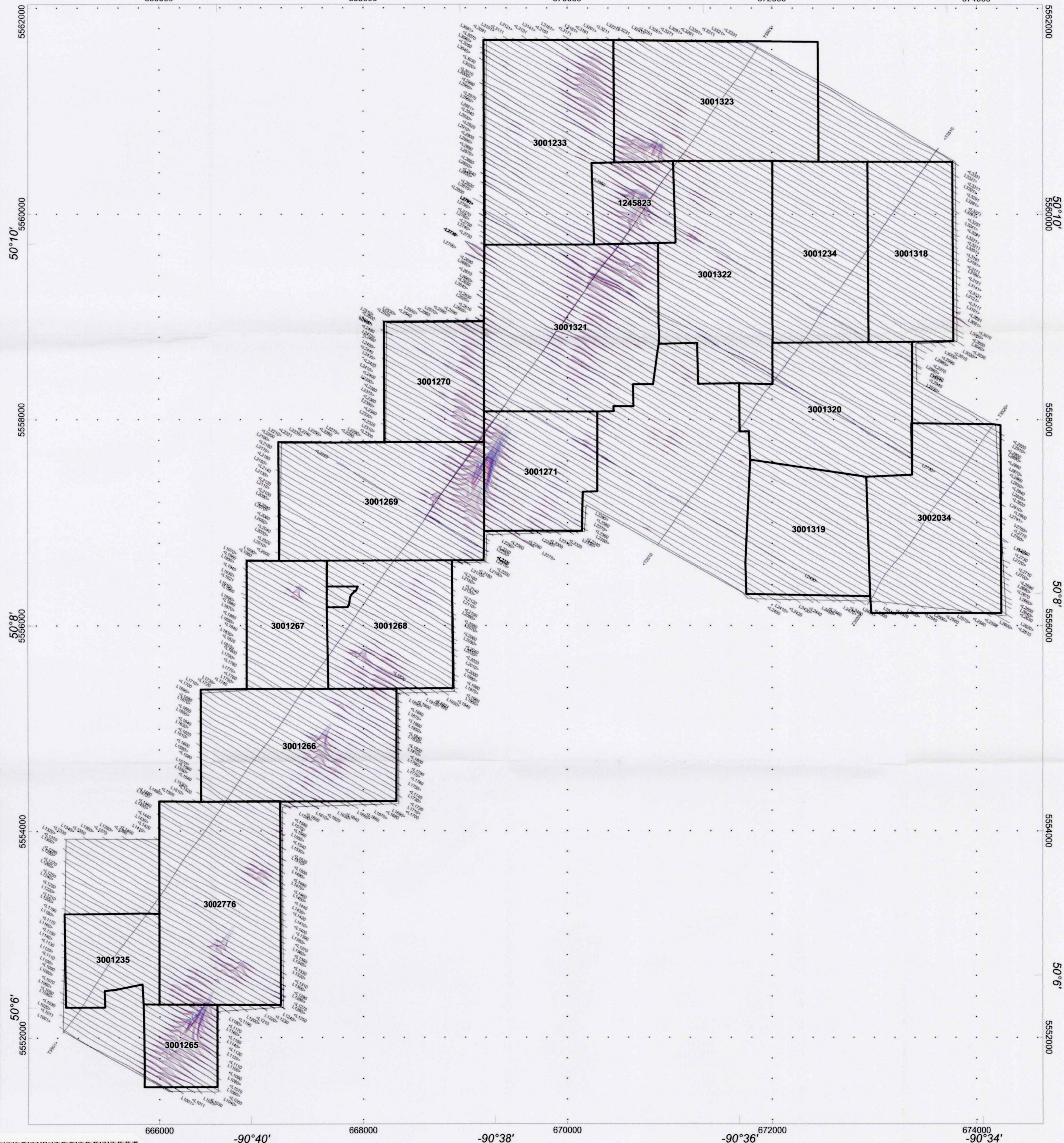
Flown and processed by Geotech Ltd.
 30 Industrial Parkway S.,
 Aurora, Ontario, Canada L4G 3W2
 www.geotechairborne.com

June 2004

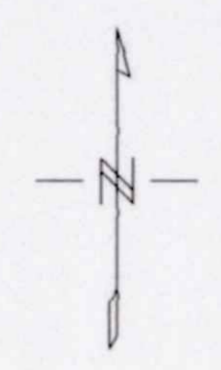


666000 -90°40' 668000 -90°38' 670000 -90°36' 672000 -90°34' 674000

Survey Specifications:
Aircraft: Astar BA helicopter, Registration C-GHSM
Flight Line Spacing: 50 metres
Nominal terrain clearance 70 metres
EM sensor is 40 metres under helicopter
Magnetic sensor is 15 metres under helicopter
Instruments:
Geotech Time Domain Electromagnetic System
with concentric Rx/Tx geometry
Geometrics Optically-pumped,
High Sensitivity Cesium Magnetometer
Mag Resolution 0.02 nT at 10 samples/sec



- 0.19 ms, 1mm = 0.5 pV/A/m²
- 0.22 ms, 1mm = 0.5 pV/A/m²
- 0.26 ms, 1mm = 0.5 pV/A/m²
- 0.30 ms, 1mm = 0.5 pV/A/m²
- 0.35 ms, 1mm = 0.5 pV/A/m²
- 0.41 ms, 1mm = 0.5 pV/A/m²
- 0.48 ms, 1mm = 0.5 pV/A/m²
- 0.57 ms, 1mm = 0.5 pV/A/m²
- 0.68 ms, 1mm = 0.5 pV/A/m²



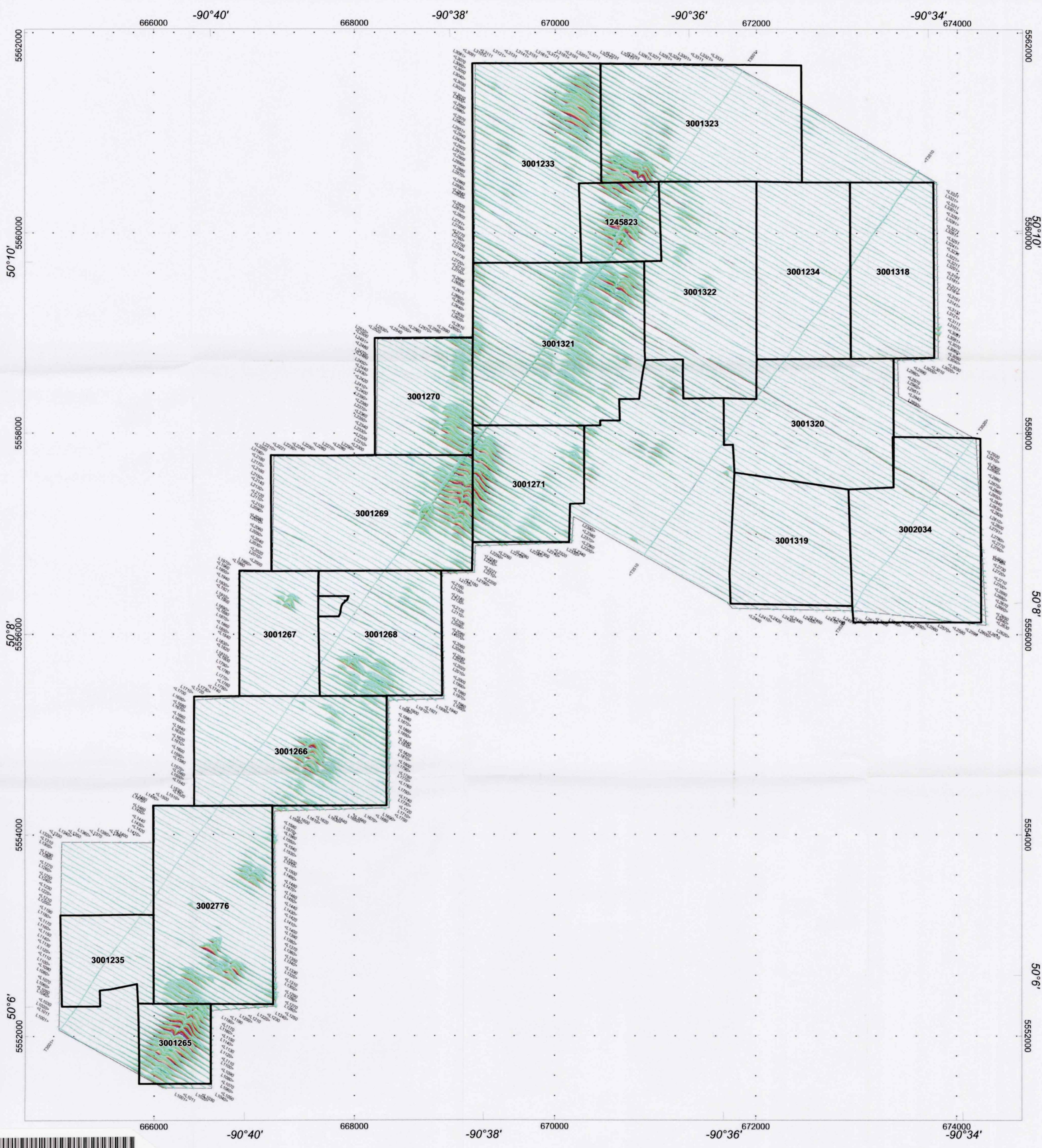
Scale 1:20000
metres
WGS 84 / UTM zone 18N

MAP 8
Emerald Fields
Resource Corporation
St. Anthony Block
Ontario, Canada
Geotech TDEM System
TDEM Profiles
Time Gates 0.19 - 0.68 ms

Flown and processed by Geotech Ltd.
30 Industrial Parkway S.,
Aurora, Ontario, Canada L4G 3W2
www.geotechairborne.com

June 2004



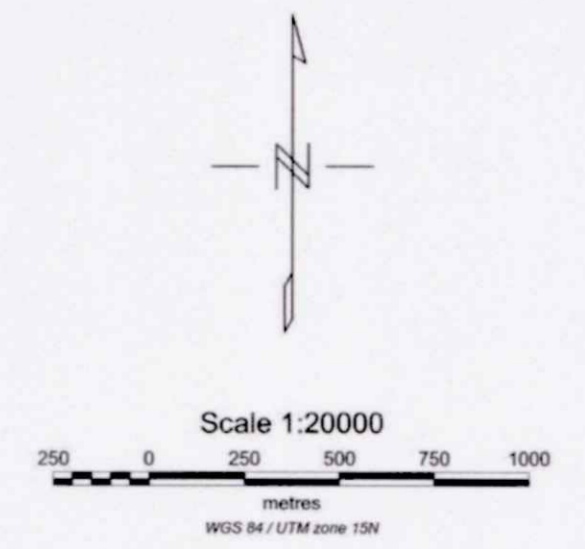


Survey Specifications:
 Aircraft: Astar BA helicopter, Registration C-GHSM
 Flight Line Spacing: 50 metres
 Nominal terrain clearance: 70 metres
 EM sensor is 40 metres under helicopter
 Magnetic sensor is 15 metres under helicopter

Instruments:
 Geotech Time Domain Electromagnetic System
 with concentric Rx/Tx geometry
 Geometrics Optically-pumped,
 High Sensitivity Cesium Magnetometer
 Mag Resolution 0.02 nT at 10 samples/sec

Profiles scale 1 mm = 0.1 pV/A/m²
 (Linear between +/- 0.2 pV/A/m²
 logarithmic above 0.2 pV/A/m²)

- 0.22 ms
- 0.26 ms
- 0.30 ms
- 0.35 ms
- 0.41 ms
- 0.48 ms
- 0.57 ms
- 0.68 ms
- 0.81 ms
- 0.96 ms
- 1.13 ms
- 1.34 ms
- 1.60 ms
- 1.90 ms
- 2.24 ms
- 2.66 ms
- 3.18 ms
- 3.78 ms
- 4.46 ms
- 5.30 ms
- 6.34 ms



MAP 9

**Emerald Fields
 Resource Corporation
 St. Anthony Block
 Ontario, Canada**

**Geotech TDEM System
 TDEM Profiles
 Time Gates 0.22 - 6.34 ms**

Flown and processed by Geotech Ltd.
 30 Industrial Parkway S.,
 Aurora, Ontario, Canada L4G 3W2
 www.geotechairborne.com

June 2004

