

We are committed to providing [accessible customer service](#).

If you need accessible formats or communications supports, please [contact us](#).

Nous tenons à améliorer [l'accessibilité des services à la clientèle](#).

Si vous avez besoin de formats accessibles ou d'aide à la communication, veuillez [nous contacter](#).



CANADIAN EXPLORATION SERVICES LTD

JAMES TINNEY

Q3047 – Dokis Property – East Extension

Magnetometer and VLF EM Surveys

C Jason Ploeger, P.Geol.

July 22, 2022

JAMES TINNEY

Abstract

CXS was contracted to perform a magnetometer survey over a portion of the Dokis Property. The crew accessed the site on July 18, 2022.

A total length of 3 kilometres was covered with 246 magnetometer samples taken at a 12.5-meter interval. Two parallel magnetic units were identified with a VLF EM signature flanking the northern feature.

JAMES TINNEY

**Q3047 – Dokis Property – East Extension
Magnetometer and VLF EM Surveys**

C Jason Ploeger, P.Geol. – July 22, 2022

TABLE OF CONTENTS

1.	SURVEY DETAILS	3
1.1	PROJECT NAME.....	3
1.2	CLIENT	3
1.3	OVERVIEW	3
1.4	OBJECTIVE.....	3
1.5	SURVEY & PHYSICAL ACTIVITIES UNDERTAKEN.....	3
1.6	SUMMARY OF RESULTS, CONCLUSIONS & RECOMMENDATIONS.....	4
1.7	CO-ORDINATE SYSTEM	4
2.	SURVEY LOCATION DETAILS	5
2.1	LOCATION.....	5
2.2	ACCESS.....	5
2.3	MINING CLAIMS	5
2.4	PROPERTY HISTORY	7
2.5	GENERAL REGIONAL/LOCAL GEOLOGICAL SETTINGS.....	7
2.6	TARGET OF INTEREST	8
3.	SURVEY WORK UNDERTAKEN.....	9
3.1	SUMMARY.....	9
3.2	SURVEY GRID	9
3.3	SURVEY LOG.....	9
3.4	PERSONNEL.....	9
3.5	SAFETY	10
2.2	SURVEY SPECIFICATIONS.....	10
3	OVERVIEW OF SURVEY RESULTS	11
3.1	SUMMARY.....	11

LIST OF APPENDICES

APPENDIX A	STATEMENT OF QUALIFICATIONS
APPENDIX B.....	THEORETICAL BASIS AND SURVEY PROCEDURES
APPENDIX C.....	INSTRUMENT SPECIFICATIONS
APPENDIX D.....	LIST OF MAPS (IN MAP POCKET)

LIST OF TABLES AND FIGURES

Figure 1: Location of the Dokis Property	5
Figure 2: Claim Map with the Dokis Property Traverse	6
Figure 3: Magnetometer Plan Map on Google Earth	11

Table 1: Survey and Physical Activity Details	3
Table 2: Mining Lands and Cells Information	6
Table 1: Survey Log	9

1. SURVEY DETAILS

1.1 PROJECT NAME

This project is known as the **Dokis Property – East Extension**.

1.2 CLIENT

James Tinney
Box 191
Chaput Hughes, Ontario
P0K1A0

1.3 OVERVIEW

CXS was contracted to perform a magnetometer survey over a portion of the Dokis Property. The crew accessed the site on July 18, 2022.

A total length of 3 kilometres was covered with 246 magnetometer samples taken at a 12.5-meter interval. Two parallel magnetic units were identified with a VLF EM signature flanking the northern feature.

1.4 OBJECTIVE

The objective of the magnetometer survey was to create a magnetic map of the area of interest. The magnetic map would then assist in theorizing the strike geologic units and identify areas of potential, for future exploration programs.

1.5 SURVEY & PHYSICAL ACTIVITIES UNDERTAKEN

Survey/Physical Activity	Dates	Total Days in Field	Total Line Kilometers
Magnetometer	July 18, 2022	1	3
VLF EM	July 18, 2022	1	3

Table 1: Survey and Physical Activity Details

1.6 SUMMARY OF RESULTS, CONCLUSIONS & RECOMMENDATIONS

CXS was contracted to perform a magnetometer survey over a portion of the Dokis Property. The crew accessed the site on July 18, 2022.

A total length of 3 kilometres was covered with 246 magnetometer samples taken at a 12.5-meter interval. Two parallel magnetic units were identified with a VLF EM signature flanking the northern feature.

1.7 CO-ORDINATE SYSTEM

Projection: UTM zone 17N

Datum: NAD83

UTM Coordinates near center of grid: 604750 Easting and 5362680 Northing

2. SURVEY LOCATION DETAILS

2.1 LOCATION

The Dokis Property is located approximately 31.0 kilometers north of Virginiatown, Ontario. The survey on the property covers a portion of mining claims 146463 and 142564 located in Dokis Township within the Larder Lake Mining Division.

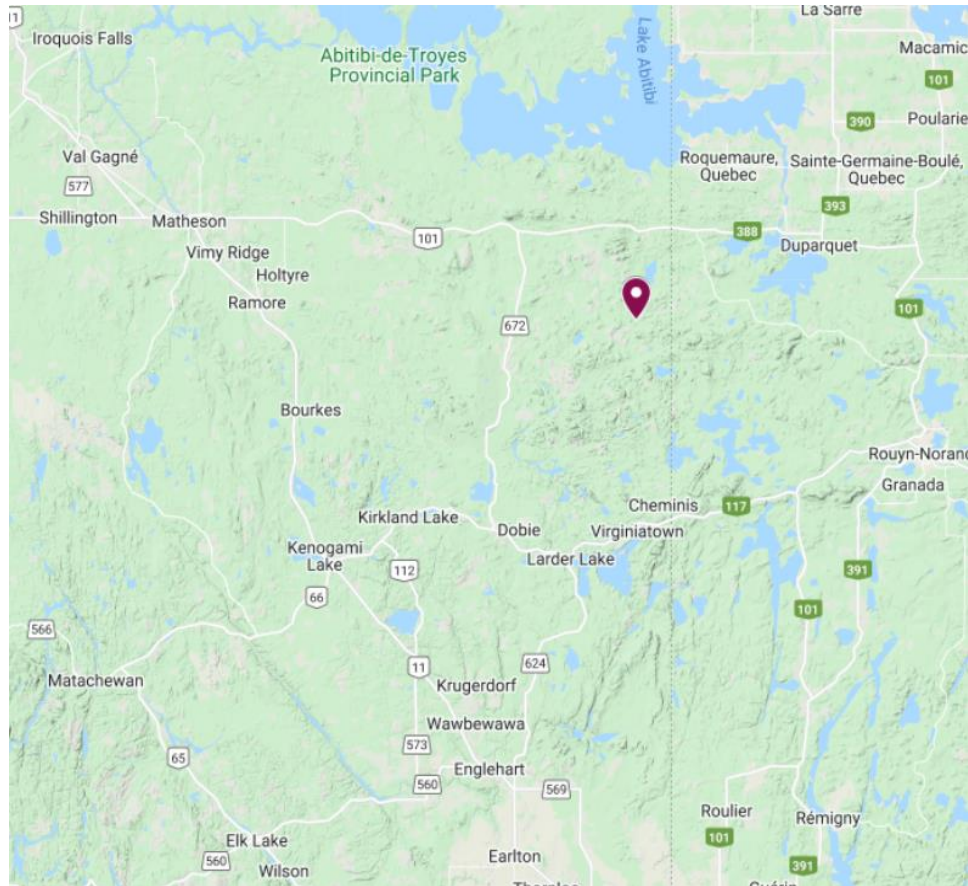


Figure 1: Location of the Dokis Property

2.2 ACCESS

Access to the Dokis Property was attained with a 4x4 truck and ATV via Highway 672. From the intersection with highway 66, highway 672 was travelled north for a distance of 33 kilometers. From here, the Magusi Road is traveled for an additional 18.5km. At this point an ATV was used for the final 5.3 km along the McDiarmid Lake Road to the survey area.

2.3 MINING CLAIMS

The survey area covers a portion of mining claims 146463 and 142564 all located in Dokis Township, within the Larder Lake Mining Division.

Cell Number	Provincial Grid Cell ID	Ownership of Land	Township
146463	32D05H027	James Tinney	Dokis
142564	32D05H047	James Tinney	Dokis

Table 2: Mining Lands and Cells Information

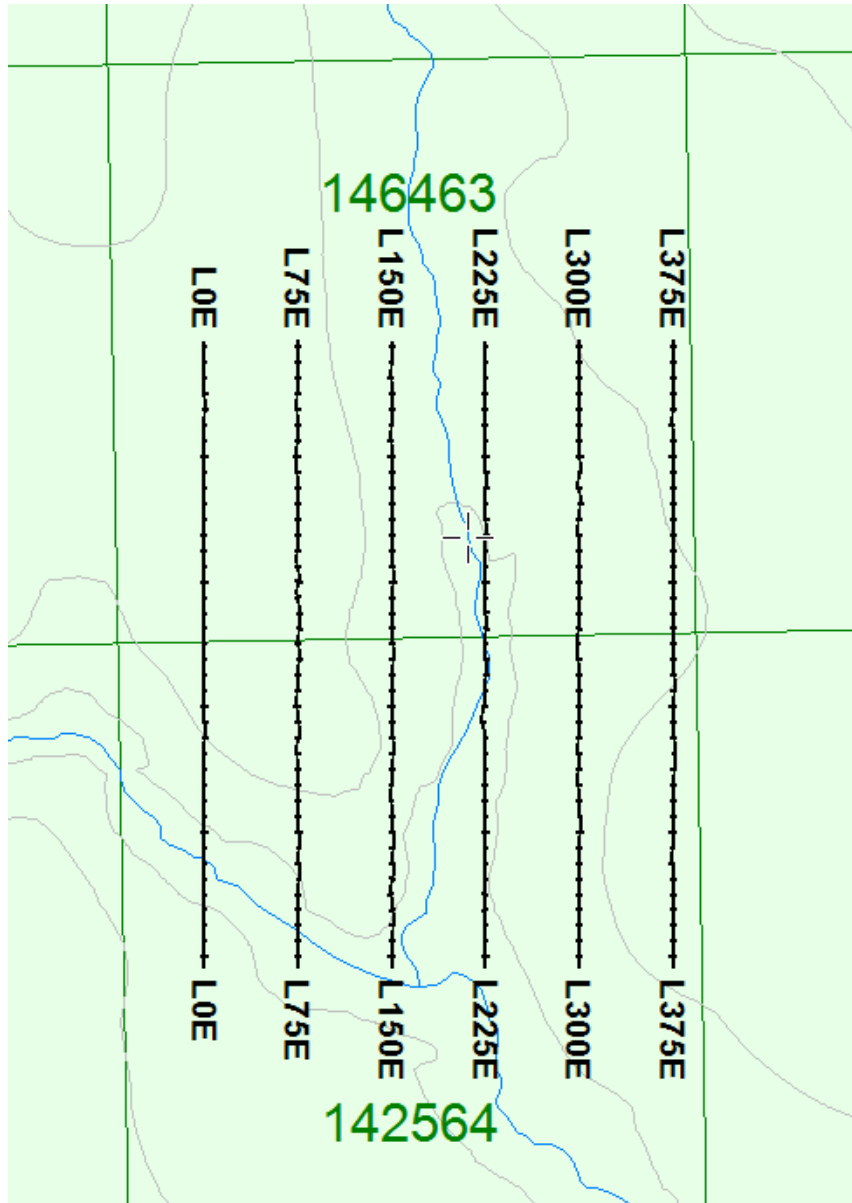


Figure 2: Claim Map with the Dokis Property Traverse

2.4 PROPERTY HISTORY

There have been many historical exploration projects carried out over the years all over the survey area. The following list describes details of the previous geoscience work which was collected by the Mines and Minerals division and provided by OGSEarth (MNDM & OGSEarth, 2022).

- **1960: Southwest Potash Corp. (File 32D05NE0018)**
Geological
In 1960 Southwest Potash reported mapping the geology in the area.
- **1994: Edouard Poirier (File 32D05NE0018)**
Geological, Geochemical
In 1994 Poirier reported mapping some geology along with performing some geochemical sampling and microscopic work.
- **1997 - 2014: Eric Marion and Alain Carreau (Files 32D05NE2008, 32D05NE2011, 32D05NE2019, 32D05NE2022, 32D05NE2039, 20000014875, 20000006346 and 20000014822)**
Geological, Ground Geophysical, Diamond Drilling
Between 1997 and 2014 Marion and Carreau reported performing magnetometer, VLF EM and IP surveys. It is also reported that some stripping and trenching was performed. 5 diamond drill holes along with one hole extension were also reported for a total of 3084 feet.
- **2019: James Tinney (File 20000017883)**
Prospecting
In 2019 Tinney prospected the area directly south of the survey area.

2.5 GENERAL REGIONAL/LOCAL GEOLOGICAL SETTINGS

General Geology:

Taken from Marion, 2010.

This property lies in the Blake River Group of the Abitibi Greenstone Belt. To the north about 10 kilometers is the Porcupine-Destor Deformation Zone, which is a prolific host to gold deposits in the region. The Holt McDermott and Teddy Bear mines being only 10 kilometers north and the Ross, Glimmer and Stock mines further to the west. Literally tens of advanced stage projects and defined resources also occur along this corridor. Southwest trending splays of the PDDZ are proven to be gold bearing and are being mined at both Holloway Twp. mines to the north.

To the south about 7 kilometers are what have been interpreted to be two volcanic ventral areas, which may be the source of some of the Blake River rocks. The rocks in the surrounding region are folded in a series of synclines and anticlines, which

tend to reflect these domal areas. Mafic intrusives are present through out the area and limited drilling by previous companies on these mafic plugs (sub-cropping mag features were tested as kimberlitic targets) has inadvertently defined at least one gabbro exhibiting chlorite/serpentine/sulphide altered layering with related anomalous Ni Cu Au values and in retrospect anomalous Pd.(ref.KL3401 assessment file, Grid "B")

2.6 TARGET OF INTEREST

Targetting for the survey was an area of interest provided by the client .

3. SURVEY WORK UNDERTAKEN

3.1 SUMMARY

CXS was contracted to perform a magnetometer survey over a portion of the Dokis Property. The crew accessed the site on July 18, 2022.

A total length of 3 kilometres was covered with 246 magnetometer samples taken at a 12.5-meter interval. Two parallel magnetic units were identified with a VLF EM signature flanking the northern feature.

3.2 SURVEY GRID

The traversed lines were established using a GPS in conjunction with the execution of the survey. The GPS operator would establish sample locations while remaining approximately 25m in front of the magnetometer operator. GPS waypoints and magnetic samples were taken every 12.5m along these controlled traverses. The GPS used was a Garmin GPSMAP 62s with an external antenna for added accuracy.

3.3 SURVEY LOG

Date	Description	Line	Min Extent	Max Extent	Total Survey (m)
July 18, 2022	Mobilize, locate survey area and perform magnetometer survey.	0	0	500N	500
		75	0	500N	500
		150	0	500N	500
		225	0	500N	500
		300	0	500N	500
		375	0	500N	500

Table 3: Survey Log

3.4 PERSONNEL

Claudia Moraga of Dobie, ON conducted all the magnetic data collection with Bruce Lavalley of Dobie, ON being responsible for GPS control and waypoint collection.

3.5 SAFETY

Canadian Exploration Services prides itself in creating and maintaining a safe work environment for its employees. Each crew member is briefed on the jobsite location, equipment safety, standard operating procedures along with our health and safety manual. An emergency response plan is generated relating to the specific job and with the jobsite predominantly in the field, which is unpredictable, morning safety briefings are essential. Topics are generally chosen based off jobsite characteristics of the area, time of year and crew experience.

2.2 SURVEY SPECIFICATIONS

The survey was conducted with a GSM-19 v7 Overhauser magnetometer/VLF with a second GSM-19 magnetometer for a base station mode for diurnal correction.

A total of 3-line kilometers of magnetometer was read over the Dokis Property on July 18, 2022. This consisted of 246 magnetometer samples taken at a 12.5m sample interval.

3 OVERVIEW OF SURVEY RESULTS

3.1 SUMMARY

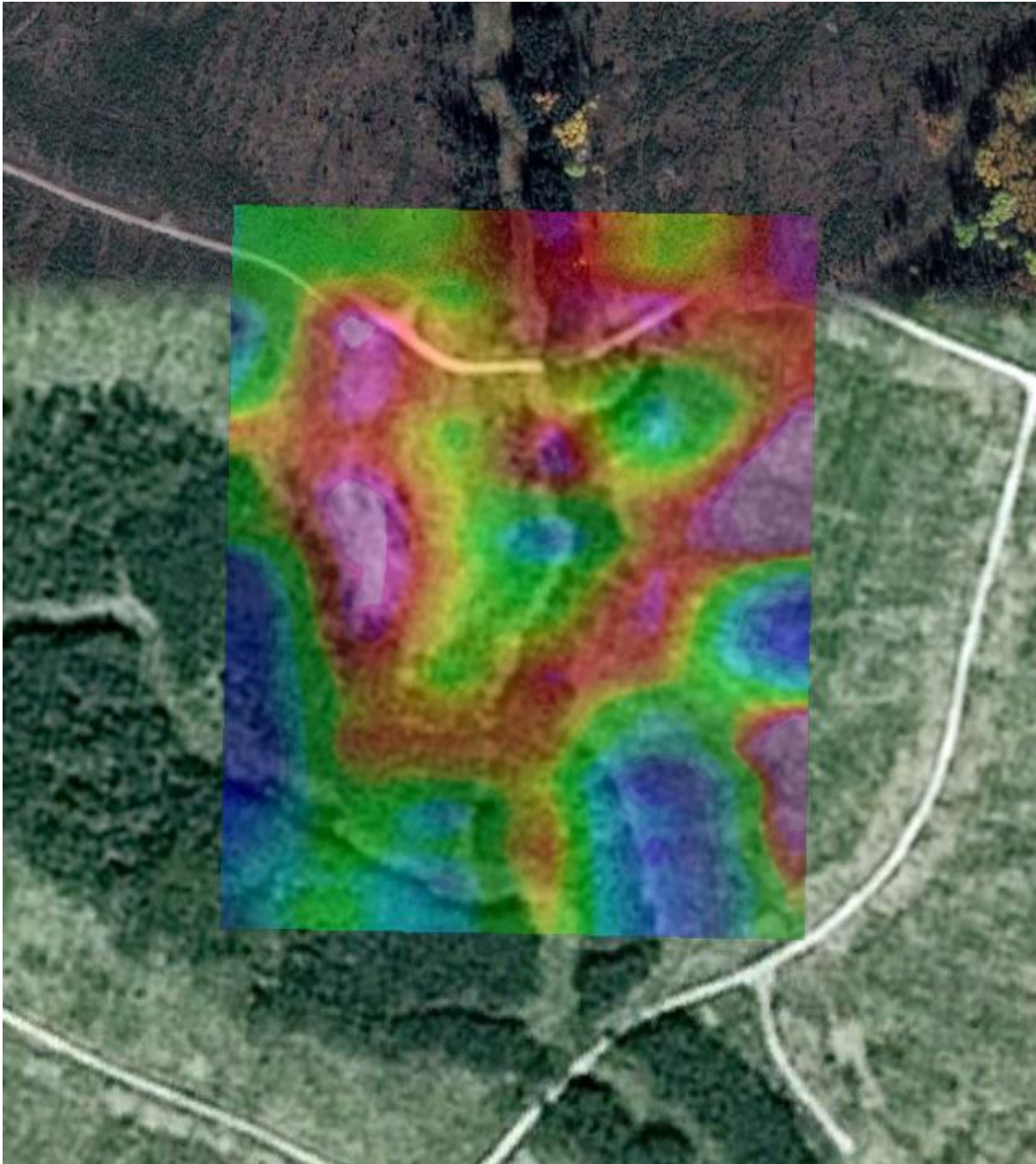


Figure 3: Magnetometer Plan Map on Google Earth

The only culture noted was culverts at the creek crossing. The culverts don't appear to have affected the data.

The survey area is small and therefore difficult to interpret in a regional context. Locally the magnetic survey appears to indicate that not much variation occurs within the underlying geological units. A linear magnetic signature, with some north-south offsets, may be interpreted as crossing the property striking at 70 degrees. The signature appears to strengthen to the east which may indicate that the overburden cover is thinner and outcropping may exist.

A second more disjointed and weaker magnetic signature parallels the first 125m to the north. Flanking the south edge of this anomaly is a VLF EM signature. The magnetic and VLF EM signature are interrupted with a north-south magnetic signature between lines 75e and 150E. This interruption may indicate that a north-south dike may exist at this location.

Where the VLF EM signature extends onto line 0 a strong response occurs along with a magnetic low response. This may be indicating that a conductive horizon occurs along the dike a strong geological contact occurs.

It is recommended that a compilation be done of the historic work on the property. This dataset should be incorporated into it to help determine the source of the anomaly.

Prospecting should also be performed along the strike the magnetically elevated unit to determine its source.

The interaction between the north-south dike and the VLF EM response may also be a target worth further investigation.

APPENDIX A

STATEMENT OF QUALIFICATIONS

I, C. Jason Ploeger, hereby declare that:

1. I am a professional geophysicist with residence in Larder Lake, Ontario and am presently employed as a Geophysicist and Geophysical Manager of Canadian Exploration Services Ltd. of Larder Lake, Ontario.
2. I am a Practising Member of the Association of Professional Geoscientists, with membership number 2172.
3. I graduated with a Bachelor of Science degree in geophysics from the University of Western Ontario, in London Ontario, in 1999.
4. I have practiced my profession continuously since graduation in Africa, Bulgaria, Canada, Mexico and Mongolia.
5. I am a member of the Ontario Prospectors Association, a Director of the Northern Prospectors Association and a member of the Society of Exploration Geophysicists.
6. I do not have nor expect an interest in the properties of **James Tinney**.
7. I am responsible for the final processing and validation of the survey results and the compilation of the presentation of this report. The statements made in this report represent my professional opinion based on my consideration of the information available to me at the time of writing this report.



C. Jason Ploeger, P.Ge., B.Sc.
Geophysical Manager
Canadian Exploration Services Ltd.

July 22, 2022

APPENDIX B

THEORETICAL BASIS AND SURVEY PROCEDURES

TOTAL FIELD MAGNETIC SURVEY

Base station corrected Total Field Magnetic surveying is conducted using at least two synchronized magnetometers of identical type. One magnetometer unit is set in a fixed position in a region of stable geomagnetic gradient, and away from possible cultural effects (i.e. moving vehicles) to monitor and correct for daily diurnal drift. This magnetometer, given the term ‘base station’, stores the time, date and total field measurement at fixed time intervals over the survey day. The second, remote mobile unit stores the coordinates, time, date, and the total field measurements simultaneously. The procedure consists of taking total magnetic measurements of the Earth’s field at stations, along individual profiles, including Tie and Base lines. A 2 meter staff is used to mount the sensor, in order to optimally minimize localized near-surface geologic noise. At the end of a survey day, the mobile and base-station units are linked, via RS-232 ports, for diurnal drift and other magnetic activity (ionospheric and spheric) corrections using internal software.

For the gradiometer application, two identical sensors are mounted vertically at the ends of a rigid fiberglass tube. The centers of the coils are spaced a fixed distance apart (0.5 to 1.0m). The two coils are then read simultaneously, which alleviates the need to correct the gradient readings for diurnal variations, to measure the gradient of the total magnetic field.

APPENDIX C

GSM 19



Specifications

Overhauser Performance

- Resolution: 0.01 nT
- Relative Sensitivity: 0.02 nT
- Absolute Accuracy: 0.2nT
- Range: 20,000 to 120,000 nT
- Gradient Tolerance: Over 10,000nT/m
- Operating Temperature: -40°C to +60°C

Operation Modes

- Manual: Coordinates, time, date and reading stored automatically at min. 3 second interval.
- Base Station: Time, date and reading stored at 3 to 60 second intervals.
- Walking Mag: Time, date and reading stored at coordinates of fiducial.
- Remote Control: Optional remote control using RS-232 interface.
- Input/Output: RS-232 or analog (optional) output using 6-pin weatherproof connector.

Operating Parameters

- Power Consumption: Only 2Ws per reading. Operates continuously for 45 hours on standby.
- Power Source: 12V 2.6Ah sealed lead acid battery standard, other batteries available
- Operating Temperature: -50°C to +60°C

Storage Capacity

- Manual Operation: 29,000 readings standard, with up to 116,000 optional. With 3 VLF stations: 12,000 standard and up to 48,000 optional.
- Base Station: 105,000 readings standard, with up to 419,000 optional (88 hours or 14 days uninterrupted operation with 3 sec. intervals)
- Gradiometer: 25,000 readings standard, with up to 100,000 optional. With 3 VLF stations: 12,000, with up to 45,000 optional.

Omnidirectional VLF

Performance Parameters: Resolution 0.5% and range to $\pm 200\%$ of total field.
Frequency 15 to 30 kHz.

Measured Parameters: Vertical in-phase & out-of-phase, 2 horizontal components, total field coordinates, date, and time.

Features: Up to 3 stations measured automatically, in-field data review, displays station field strength continuously, and tilt correction for up to $\pm 10^\circ$ tilts.

Dimensions and Weights: 93 x 143 x 150mm and weighs only 1.0kg.

Dimensions and Weights

Dimensions:

Console: 223 x 69 x 240mm

Sensor: 170 x 71mm diameter cylinder

Weight:

Console: 2.1kg

Sensor and Staff Assembly: 2.0kg

Standard Components

GSM-19 magnetometer console, harness, battery charger, shipping case, sensor with cable, staff, instruction manual, data transfer cable and software.

Taking Advantage of a “Quirk” of Physics

Overhauser effect magnetometers are essentially proton precession devices except that they produce an order-of magnitude greater sensitivity. These "supercharged" quantum magnetometers also deliver high absolute accuracy, rapid cycling (up to 5 readings / second), and exceptionally low power consumption.

The Overhauser effect occurs when a special liquid (with unpaired electrons) is combined with hydrogen atoms and then exposed to secondary polarization from a radio frequency (RF) magnetic field. The unpaired electrons transfer their stronger polarization to hydrogen atoms, thereby generating a strong precession signal-- that is ideal for very high-sensitivity total field measurement. In comparison with proton precession methods, RF signal generation also keeps power consumption to an absolute minimum and reduces noise (i.e. generating RF frequencies are well out of the bandwidth of the precession signal).

In addition, polarization and signal measurement can occur simultaneously - which enables faster, sequential measurements. This, in turn, facilitates advanced statistical averaging over the sampling period and/or increased cycling rates (i.e. sampling speeds).

- The unique Overhauser unit blends physics, data quality, operational efficiency, system design and options into an instrumentation package that ... exceeds proton precession and matches costlier optically pumped cesium capabilities

APPENDIX C

GARMIN GPS MAP 64



Physical & Performance:	
Unit dimensions, WxHxD:	2.4" x 6.3" x 1.4" (6.1 x 16.0 x 3.6 cm)
Display size, WxH:	1.43" x 2.15" (3.6 x 5.5 cm); 2.6" diag (6.6 cm)
Display resolution, WxH:	160 x 240 pixels
Display type:	transflective, 65-K color TFT
Weight:	8.1 oz (230 g) with batteries
Battery:	2 AA batteries (not included); NiMH or Lithium recommended
Battery life:	16 hours
Waterproof:	yes (IPX7)
Floats:	no

High-sensitivity receiver:	yes
Interface:	high-speed USB and NMEA 0183 compatible
Maps & Memory:	
Basemap:	yes
Ability to add maps:	yes
Built-in memory:	4 GB
Accepts data cards:	microSD™ card (not included)
Custom POIs (ability to add additional points of interest)	yes
Waypoints/favorites/locations:	5000
Routes:	200
Track log:	10,000 points, 200 saved tracks
Features & Benefits:	
Automatic routing (turn by turn routing on roads):	yes (with optional mapping for detailed roads)
<u>Geocaching-friendly:</u>	yes (paperless)
<u>Custom maps compatible:</u>	yes
Hunt/fish calendar:	yes
Sun and moon information:	yes
Tide tables:	yes
Area calculation:	yes
Picture Viewer	yes

- *Specifications obtained from www.garmin.com*

APPENDIX D

LIST OF MAPS (IN MAP POCKET)

Magnetometer Plan Map (1:2500)

1) Q3047-Tinney-Dokis-Mag-Cont

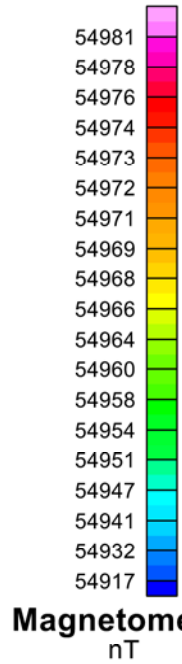
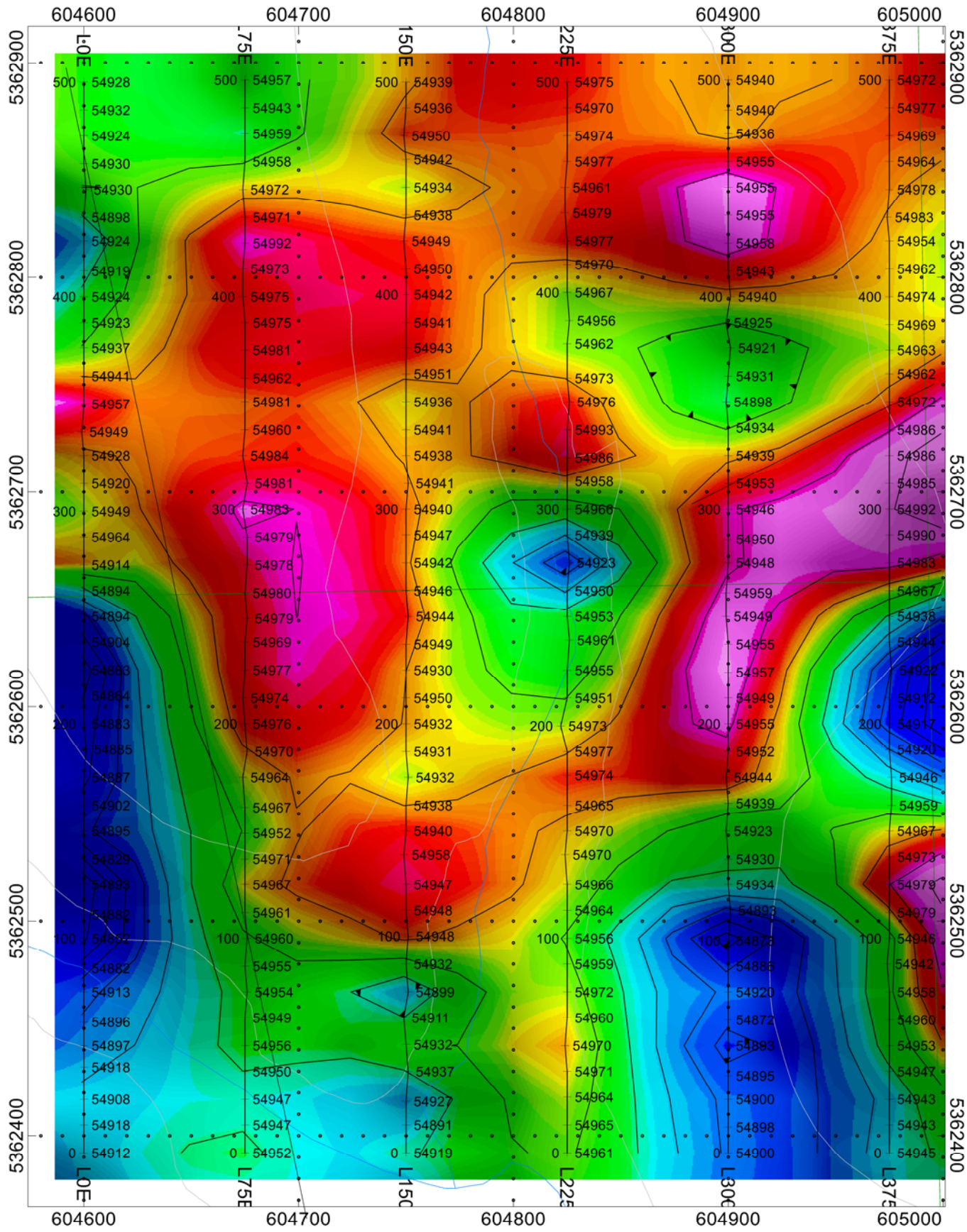
VLF EM Plan Map (1:2500)

2) Q3047-Tinney-Dokis-Mag-Cont

TOTAL MAPS = 2

877.504.2345 | info@cxsltd.com | www.cxsltd.com





Magnetometer
nT

JAMES TINNEY

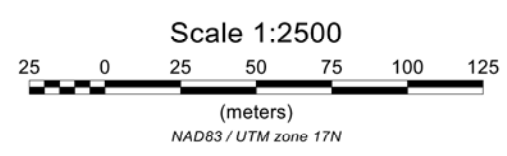
DOKIS PROPERTY - EAST EXTENTION Dokis Township, Ontario

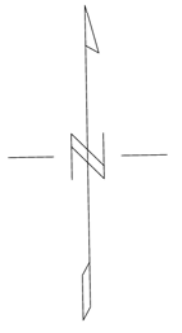
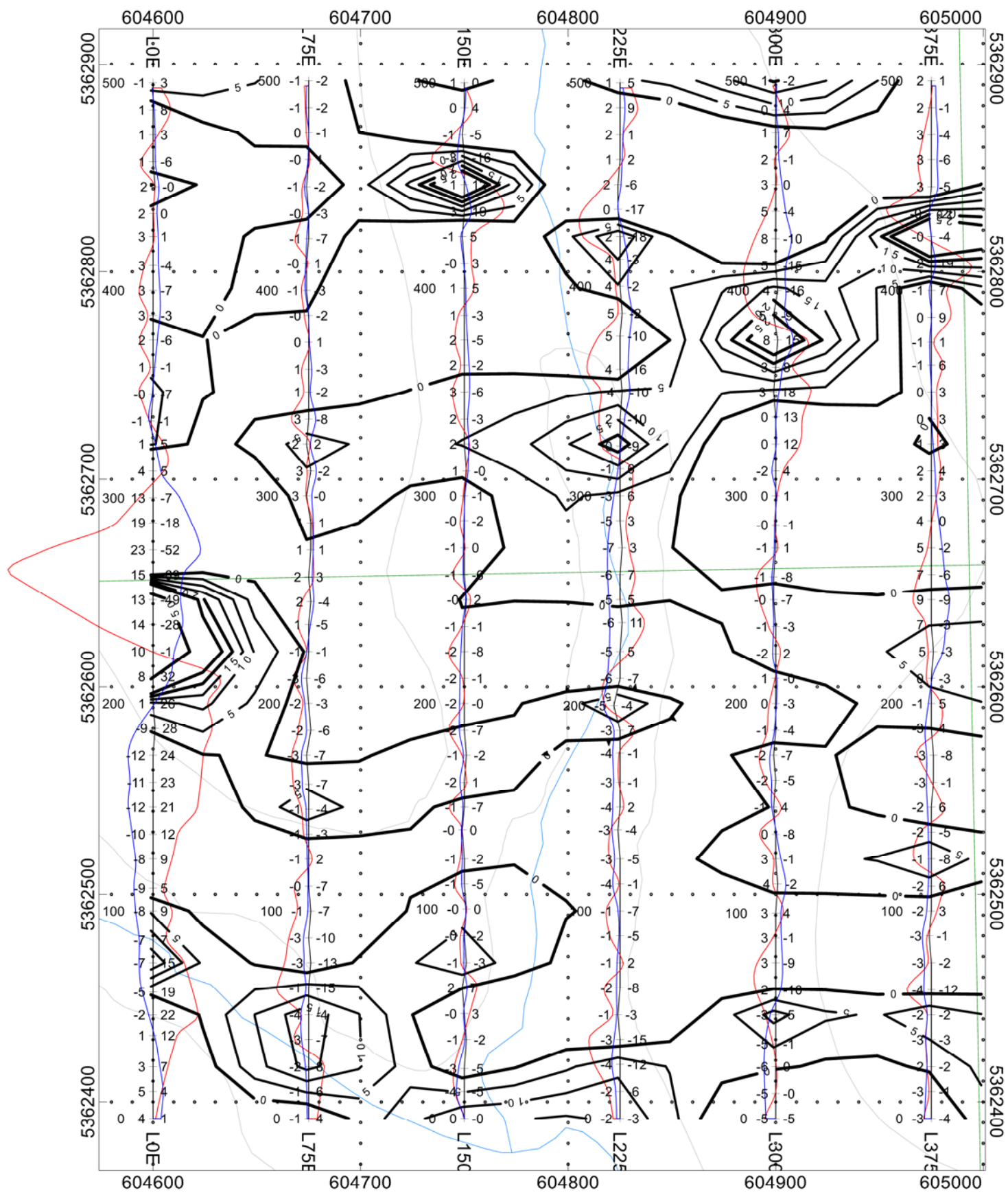
TOTAL FIELD MAGNETIC CONTOURED PLAN MAP
Base Station Corrected

Posting Level: 0nT
Field Inclination/Declination: 72.5degN/11.2degW
Station Separation: 1255 meters
Total Field Magnetic Contours: 10nT

GSM-19 OVERHAUSER MAGNETOMETER v7

Receiver Operated By: Claudia Moraga
GPS Operated By: Bruce Lavalley
Processed by: C Jason Ploeger, P.Geo.
Map Drawn By: C Jason Ploeger, P.Geo.
July 2022





JAMES TINNEY

DOKIS PROPERTY - EAST EXTENTION Dokis Township, Ontario

VLF IN PHASE/OUT PHASE PROFILE
25.2kHz NML - LAMOURE USA

In Phase: Posted Right/Bottom (Red)
Out Phase: Posted Left/Top (Blue)

Vertical Profile Scales: 2.5 %/mm

Station Separation: 12.5 meters
Posting Level: 0

GSM-19 VLF v7

Receiver Operated By: Claudia Moraga
GPS Operated By: Bruce Lavalley
Processed by: C Jason Ploeger, P.Geo.
Map Drawn By: C Jason Ploeger, P.Geo.
July 2022

