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CANADIAN EXPLORATION SERVICES LTD

ERIC MARION

Q3008 – Ospwakan One Property Magnetometer Survey

C Jason Ploeger, P.Geo. – May 9, 2022

ERIC MARION

Abstract

CXS was contracted to perform a magnetometer survey over a portion of the Ospwakan One Property. The crew accessed the site on April 22, 2022.

A total length of 1 kilometer was covered with 84 magnetometer samples taken at a 12.5-meter interval. There appears to be a localized magnetically elevated target, however it is unconstrained to the north making it difficult to identify the source of the anomaly.

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1. SURVEY DETAILS

1.1 PROJECT NAME

This project is known as the **Ospwakan One Property**.

1.2 CLIENT

Eric Marion

126 Duncan Avenue
Kirkland Lake, Ontario
P2N 1Y5

1.3 OVERVIEW

CXS was contracted to perform a magnetometer survey over a portion of the Ospwakan One Property. The crew accessed the site on April 22, 2022.

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1.4 OBJECTIVE

The objective of the magnetometer survey was to investigate the existence and define a Keating Anomaly from OGS Map M82057.

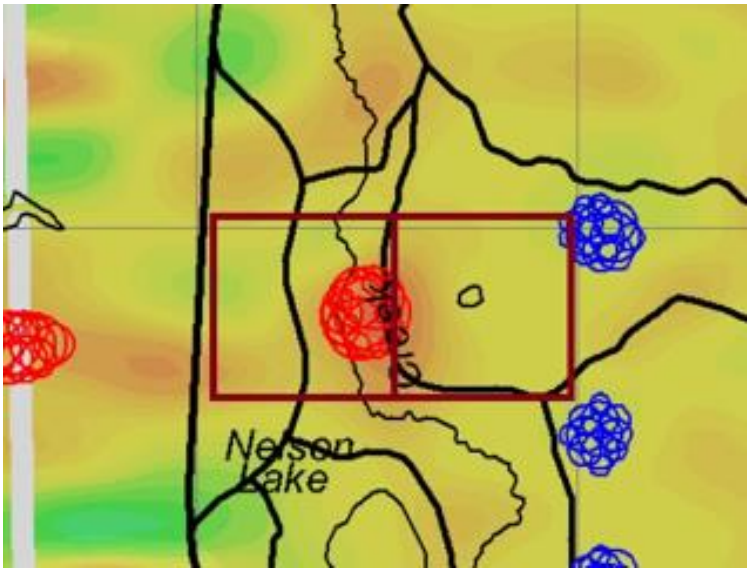

Figure 1: Keating Anomaly from OGS Map M82057

1.5 Survey & Physical Activities Undertaken

Survey/Physical Activity	Dates	Total Days in Field	Total Line Kilometers
Magnetometer	April 22, 2022	1	1

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 Ospwakan One Property. The crew accessed the site on April 22, 2022.

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1.7 Co-ordinate System

Projection: UTM zone 17N
Datum: NAD83
UTM Coordinates near center of grid: 583500 Easting and 5343950 Northing

2. SURVEY LOCATION DETAILS

2.1 LOCATION

The Ospwakan One Property is located approximately 16.0 kilometers northeast of Kirkland Lake, Ontario. The survey on the property covers a portion of mining claims 567134 and 579686 located in Arnold Township within the Larder Lake Mining Division.

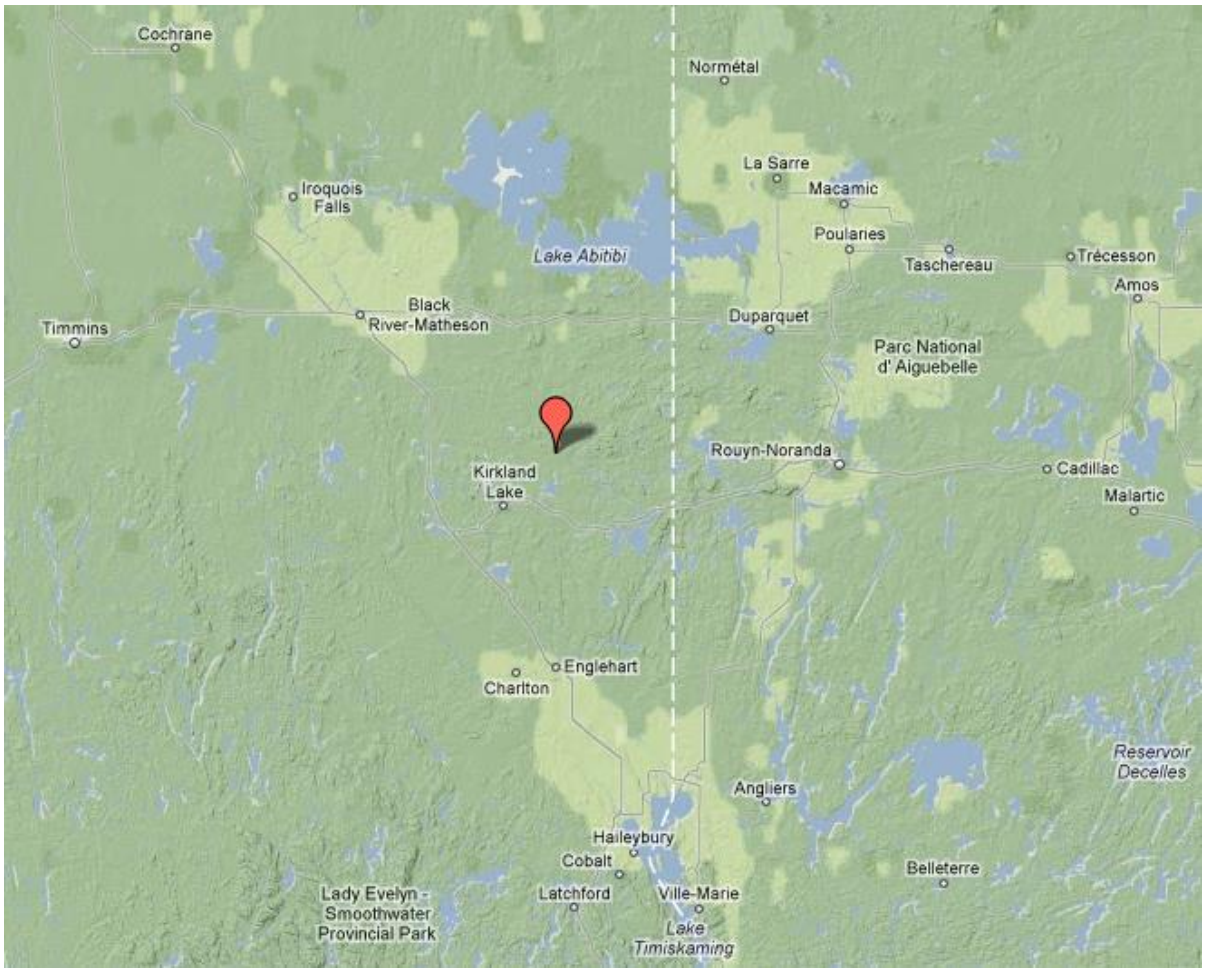

Figure 2: Location of the Ospwakan One Property

2.2 ACCESS

Access to the property was attained with a 4x4 truck via highway 672 approximately 14km north of the junction of highways 672 and 66. At this point, the property borders the highway.

2.3 MINING CLAIMS

The survey area covers a portion of mining claims 567134 and 579686 all located in Arnold Township, within the Larder Lake Mining Division.

Cell Number	Provincial Grid Cell ID	Ownership of Land	Township
567134	32D04L040	Matthew Eric Marion	Arnold
579686	32D04K021	Matthew Eric Marion	Arnold

Table 2: Mining Lands and Cells Information

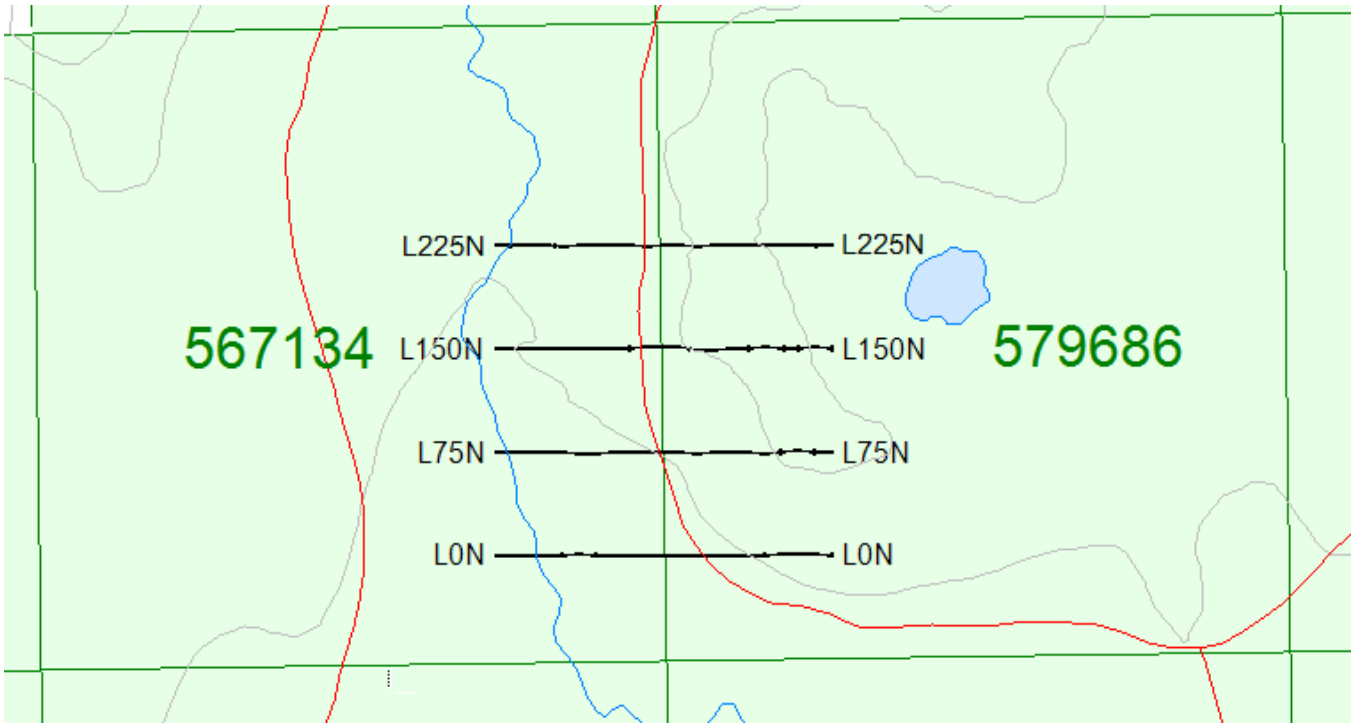

Figure 3: Claim Map with the Ospwakan One Property Traverse

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).

- **1969: Palco Exploration Limited (File 32D04NW0049)**
  Ground Geophysical
  In 1969 Palco performed both a magnetometer and VLF EM survey.

- **1987: Lac Minerals Ltd (File 32D04NW0015)**
  Ground Geophysical
  In 1987 Lac Minerals performed a magnetometer survey.

- **2011-2014: Gold Diamet Resources Inc. (File 20000006364, 20000007045, 20000007955, 20000014055, 20000008417, 20000014056 and 20000014054)**

- ***Ground Geophysical***
  Between 2001 and 2014 Gold Diamet performed various geophysical surveys along with prospecting.

2.5 General Regional/Local Geological Settings

General Geology:

This area is underlain by the Precambian volcanic rocks of the Abitibi Greenstone belt which extends from east of Rouyn-Noranda, Quebec to west of Timmins, Ontario. The dominant rock type is intermediate to felsic volcanics of the Blake River and Kinojevis Groups with massive and pillow flows. Diorite intrusives of Archean age and late Precambrian diabase dikes are common. Kimberlite pipes are also noted in this area.

2.6 Target of Interest

Targetting for the survey was an area of interest provided by the client. This represented an airborne Keating Anomaly noted on OGS Map Map M82057which is located south of the A1 Kimberlite Pipe.

3. SURVEY WORK UNDERTAKEN

3.1 SUMMARY

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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)
April 22, 2022	Mobilize, locate survey area and perform magnetometer survey.	0N	0	250E	250
		75N	0	250E	250
		150N	0	250E	250
		225N	0	250E	250

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 length of 1 kilometer was covered with 84 magnetometer samples taken at a 12.5-meter interval.

3 OVERVIEW OF SURVEY RESULTS

3.1 SUMMARY

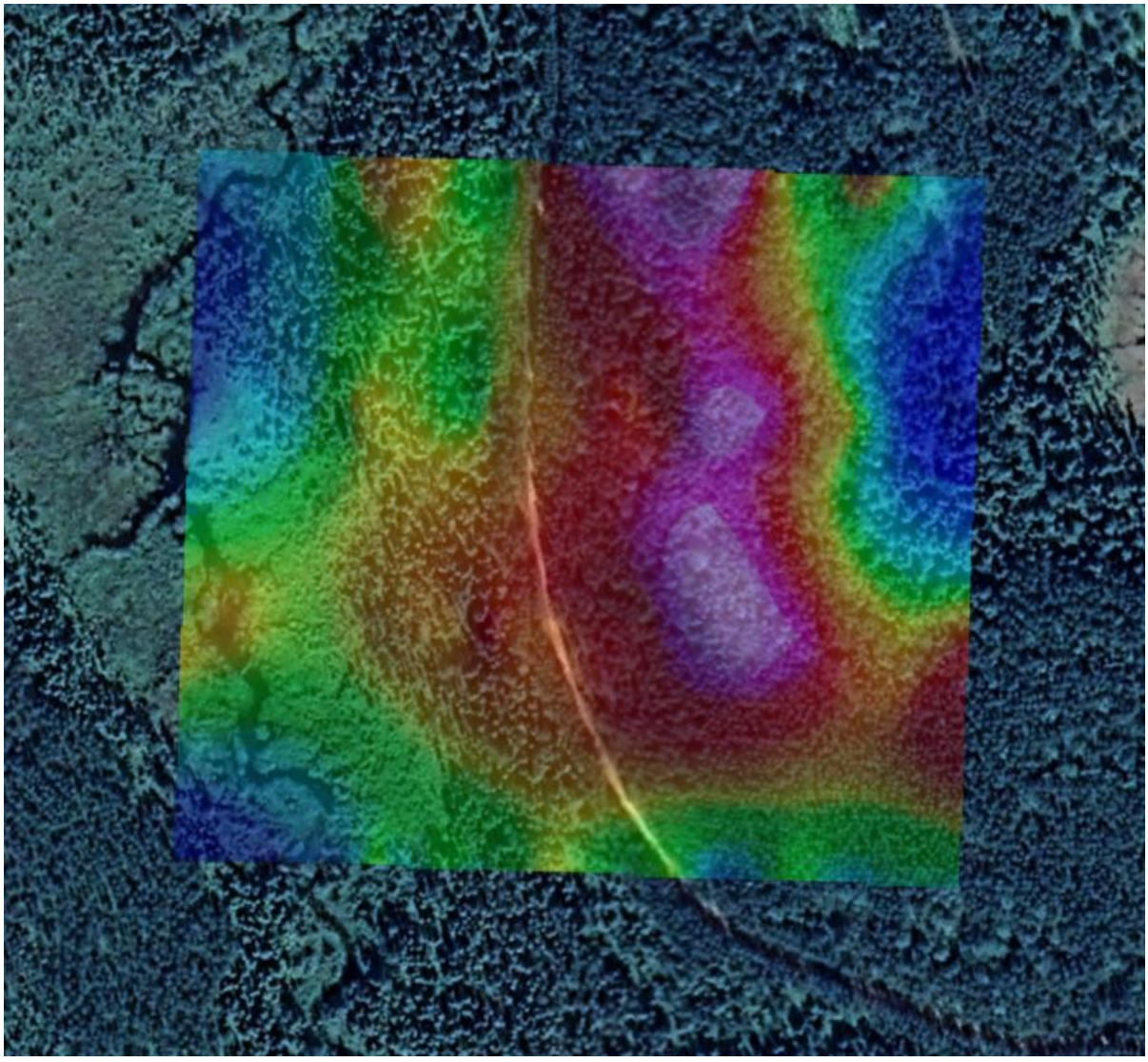

Figure 4: Magnetometer Plan Map on Google Earth

No culture was noted through the traverse area.

The survey area is small and therefore difficult to interpret in a regional context. Locally the magnetic survey appears to indicate the presence of two dikes, one being east-west and one being north-south.

The elevated magnetic region noted in the airborne geophysics may be related to the interaction of these two dikes. The north-south dike strikes into the known A1 kimberlite. The north strike of the anomaly is unconstrained which may also indicate that the north-south dike is also related to a finger extending southward off the A1

kimberlite.

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 if the source of the anomalies does represent the interaction of two dikes or a finger off the A1 kimberlite.

It is also recommended that the survey be extended in all directions with additional north-south lines being surveyed. This may better identify the existence and strikes of dikes that may be present.

I would also recommend an MMI survey. A case study from the C14 kimberlite by SGS indicated elevated rare earths around the rim and elevated Mg, Cr, Co in the core. This may help identify if it is a finger of the A1 kimberlite.

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 Practicing 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 **Eric Marion.**

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.Geo., B.Sc.
Geophysical Manager
Canadian Exploration Services Ltd.

May 9, 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 sferic) 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 ±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 ±10° 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 re-ceiver:	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)
Geocaching-friendly:	yes (paperless)
Custom maps compatible:	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 (1:2000)

1) Q3008-Marion-OspwakenOne-Mag-Cont

TOTAL MAPS = 1

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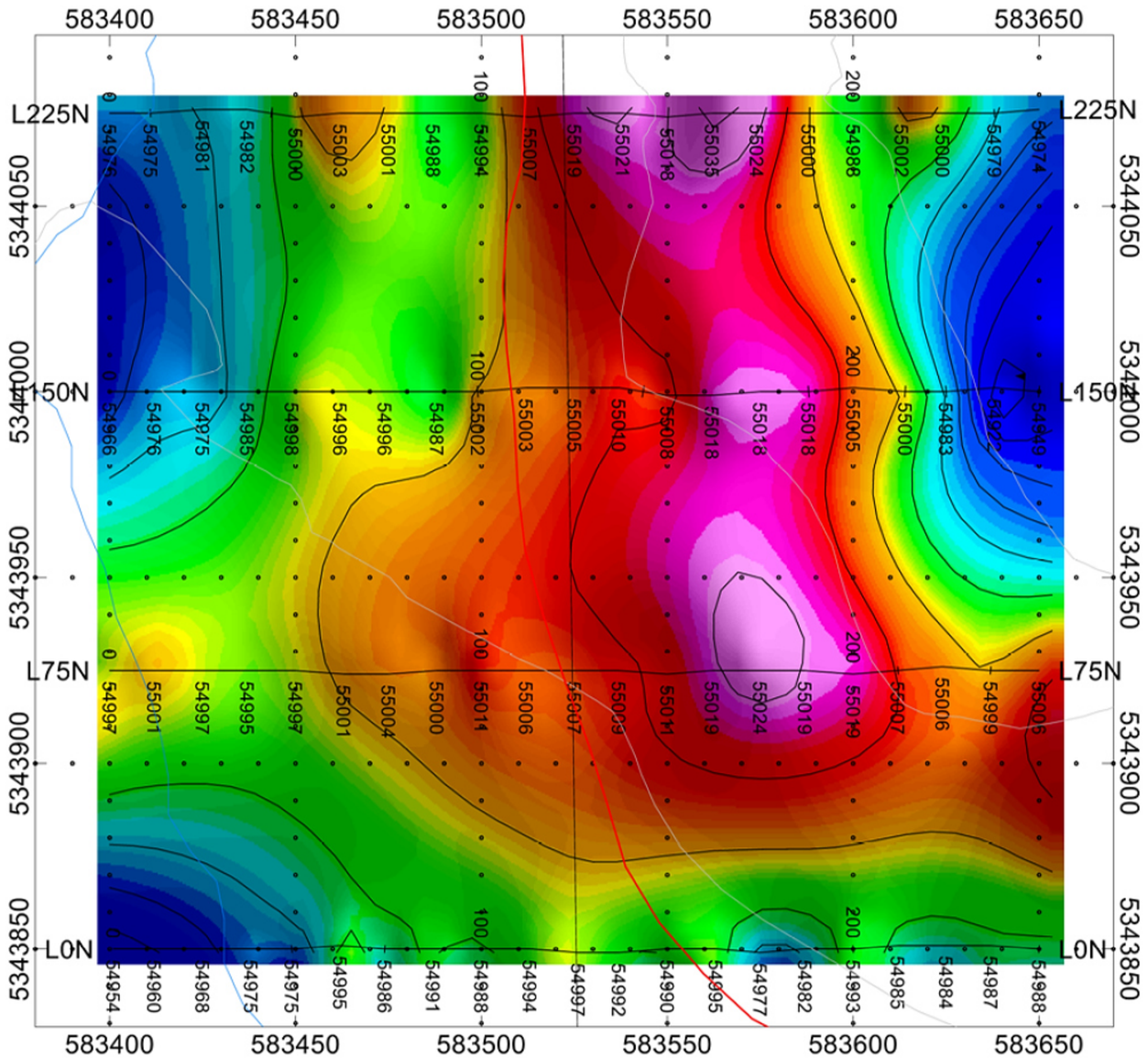

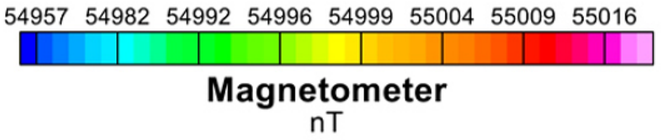

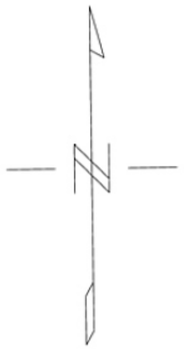

Scale 1:2000

25 0 25 50 75 100

(meters)

NAD83 / UTM zone 17N

ERIC MARION

OSPWAKAN ONE PROPERTY
Arnold Township, Ontario

TOTAL FIELD MAGNETIC CONTOURED PLAN MAP
Base Station Corrected

Posting Level: 0nT
Field Inclination/Declination: 72.5degN/11.2degW
Station Seperation: 12.5 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.
May 2022

CANADIAN EXPLORATION SERVICES LTD

Drawing: Q3008-Marion-OspwakanOne-Mag-Cont