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CANADIAN EXPLORATION SERVICES LTD

# **NEW FOUND GOLD CORP.**

Q2442 – Lucky Strike Property – Lemieux Group Magnetometer Survey

C Jason Ploeger, P.Geo – October 17, 2017

# NEW FOUND GOLD CORP.

#### Abstract

CXS was contracted by New Found Gold Corp. to perform a magnetometer survey over part of the Lucky Strike Property, in particular the Lemieux Group.

A strong magnetic signature was located on the south-west shore of Lemieux Lake.

**NEW FOUND GOLD CORP.** 

Q2442 – Lucky Strike Property - Lemieux Group Magnetometer Survey

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#### 1. SURVEY DETAILS

#### 1.1 PROJECT NAME

This project is known as the Lucky Strike Property – Lemieux Group.

#### 1.2 CLIENT

New Found Gold Corp.

69 Young St. Suite 1010 Toronto, Ontario M5E 1K3

#### **1.3 LOCATION**

The Lucky Strike Property is located approximately 9km north-east of Larder Lake, Ontario. The survey area is located on a portion of mining claim 4225515 and 4274133, located in McVittie Township, within the Larder Lake Mining Division.

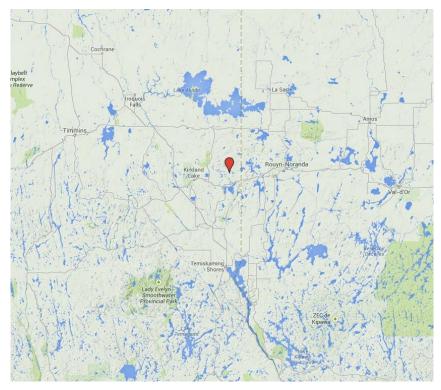


Figure 1: Location of the Lucky Strike Property – Lemieux Group



#### 1.1 ACCESS

Access to the property was attained with a 4x4 truck via the Larder Station Road which is located just east of Larder Lake off provincial highway 66. The Larder Station Road was followed north for approximately 10km to a point at which a trail extends eastward to Lemieux Lake.

# 1.2 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 12.5m in front of the VLF EM operator. GPS waypoints, VLF EM 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.

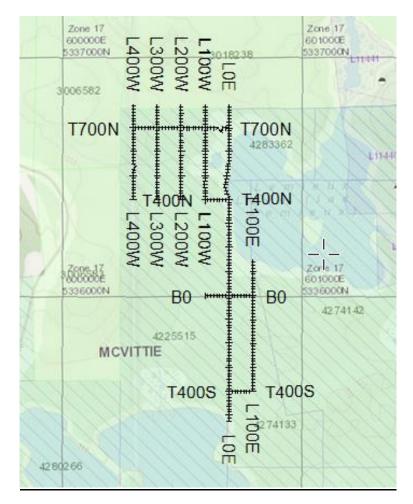


Figure 2: Claim Map with Lucky Strike – Lemieux Group Traverses



#### 2. SURVEY WORK UNDERTAKEN

#### 2.1 SURVEY LOG

Date	Description	Line	Min Extent	Max Extent	Total Survey (m)
October 6, 2016	Locate survey area and con-				
	duct survey.	400W	400N	800N	400
		300W	400N	800N	400
		200W	400N	800N	400
		100W	400N	800N	400
		0E	525S	800N	1325
		100E	400S	150N	550
		700N	400W	0	400
		400N	100W	0	100
		0	100W	100E	100
		400S	0	100E	100

## Table 1: Survey Log

#### 2.2 PERSONNEL

Claudia Moraga operated the magnetometer and Bruce Lavalley navigated and collecting the GPS waypoints. Both are from Britt, Ontario.

#### 2.3 SURVEY SPECIFICATIONS

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

A total of 4.175 line kilometers of magnetometer was read over the Lucky Strike Property – Lemieux Block on October 6, 2017. This consisted of 334 magnetometer samples taken at a 12.5m sample interval.





#### 3. OVERVIEW OF SURVEY RESULTS

3.1 SUMMARY

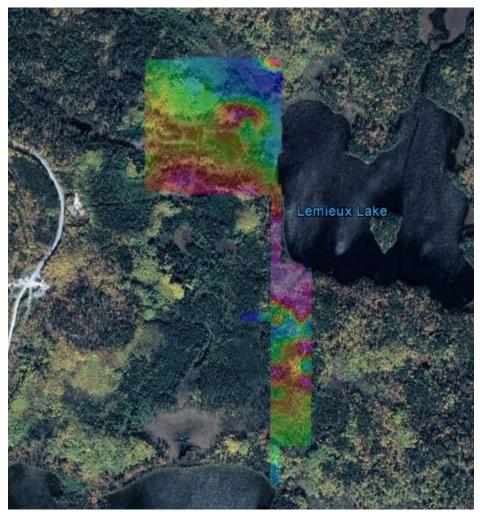


Figure 3: Magnetometer Plan on Google Earth

No cultural features were noted within the survey area.

A strong magnetic signature occurs in the central region of the survey area which is located along the south-west shore of Lemieux Lake. This response was intense enough to knock the magnetometer out of tune on numerous occasions. This indicates the presence of a geological unit rich in magnetite. The signature is unconstrained and open both east, west and north into the lake. These should be closed off with an additional magnetometer survey.

South of this appears two narrow magnetically elevated units. These appear as narrow 45 degree linear features. These signatures are similar to that which would be expected from series of porphyry dikes.





I would recommend extending the magnetometer survey east-west and over Lemieux Lake. This would better constrain the magnetic high signature. I would also recommend prospecting this region to help determine the source of the anomaly.



#### **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 Inc. 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 and securities of **New Found Gold Corp.**
- 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 Inc.

> Larder Lake, ON October 17, 2017





#### **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  $\pm 200\%$  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 62S**



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:	9.2 oz (260.1 g) with batteries	
Battery:	2 AA batteries (not included); NiMH or Lithium recom- mended	
Battery life:	20 hours	
Waterproof:	yes (IPX7)	
Floats:	no	
High-sensitivity re- ceiver:	yes	



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Interface:	high-speed USB	and NMEA 0183 compatible	
Maps & Memory:			
Basemap:		yes	
Preloaded maps:		no	
Ability to add maps:		yes	
Built-in memory:		1.7 GB	
Accepts data cards:		microSD™ card (not included)	
Waypoints/favorites/loc	ations:	2000	
Routes:		200	
Track log:		10,000 points, 200 saved tracks	
Features & Benefits:			
Automatic routing (turn	by turn routing	yes (with optional mapping for detailed	
on roads):		roads)	
Electronic compass:		yes (tilt-compensated, 3-axis)	
Touchscreen:		no	
Barometric altimeter:		yes	
Camera:		no	
Geocaching-friendly:		yes (paperless)	
Custom maps compatil	<u>ole</u> :	yes	
Photo navigation (navigate to ge- otagged photos):		yes	
Outdoor GPS games:		no	
Hunt/fish calendar:		yes	
Sun and moon informa	tion:	yes	





Tide tables:	yes
Area calculation:	yes
Custom POIs (ability to add additional points of interest):	yes
Unit-to-unit transfer (shares data wire- lessly with similar units):	yes
Picture viewer:	yes
Garmin Connect™ compatible (online community where you analyze, catego-rize and share data):	yes

• Specifications obtained from www.garmin.com





**APPENDIX D** 

LIST OF MAPS (IN MAP POCKET)

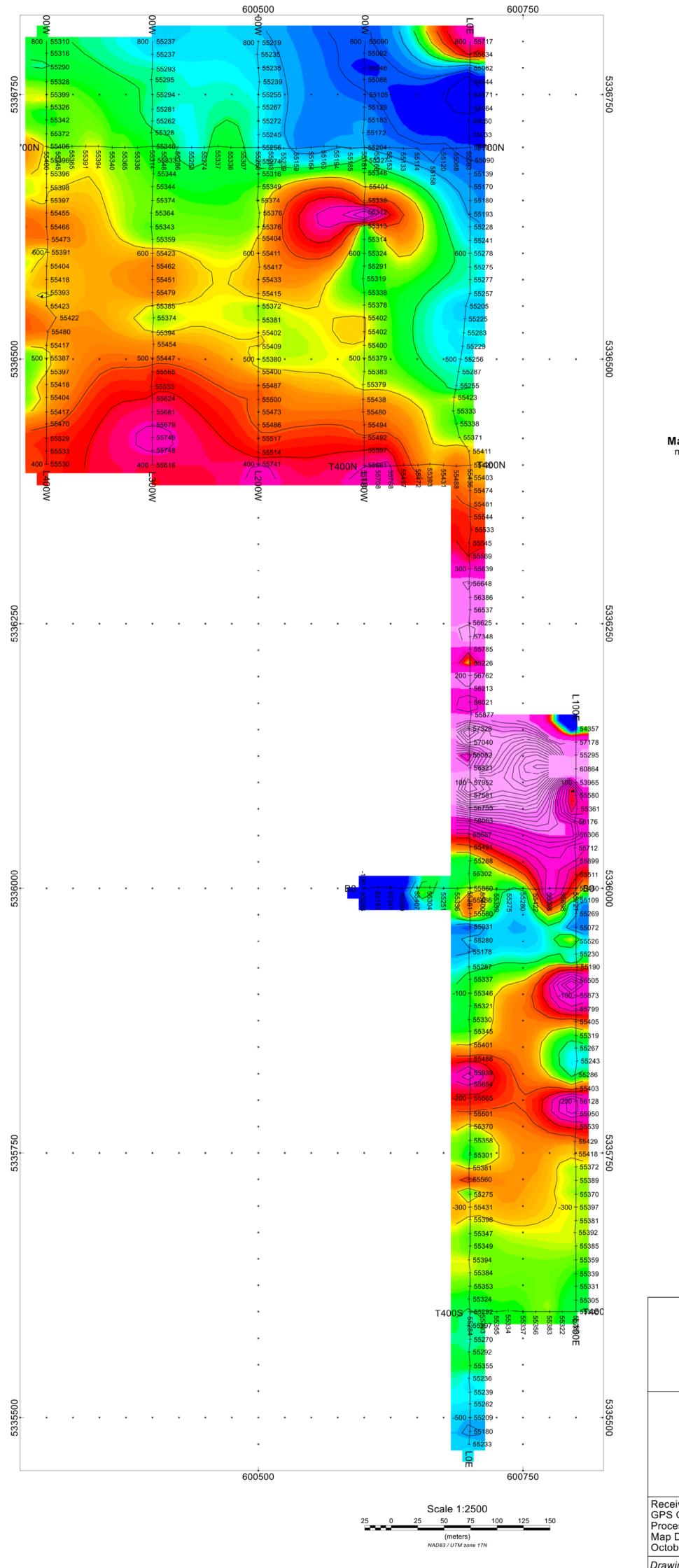
Posted Contoured Magnetometer Plan Map (1:2500)

1) Q2442-New Found Gold-Lucky Strike-Lemieux-Mag-Cont

Grid Sketch on Claim Map (1:20000)

2) Q2442-New Found Gold-Lucky Strike-Lemieux-Traverse

TOTAL MAPS = 2



Magnetometer nanoTesla (nT)



LUCKY STRIKE PROPERTY LEMIEUX GROUP McVittieTownship, Ontario

TOTAL FIELD MAGNETIC CONTOURED PLAN MAP Base Station Corrected

Posting Level: 0nT Field Inclination/Declination: 74degN/12degW Station Seperation: 12.5 meters Total Field Magnetic Contours: 100 nT

#### GSM-19 OVERHAUSER MAGNETOMETER v7

Receiver Operated By: Claudia Moraga GPS Operated By: Bruce Lavalley Processed by: Jason Ploeger Map Drawn By: C Jason Ploeger, B.Sc. October 2017



Drawing: Q2442-New Found Gold-Lucky Strike-Lemieux-Mag-Cont

