We are committed to providing <u>accessible customer service</u>. If you need accessible formats or communications supports, please <u>contact us</u>.

Nous tenons à améliorer <u>l'accessibilité des services à la clientèle</u>. Si vous avez besoin de formats accessibles ou d'aide à la communication, veuillez <u>nous contacter</u>.





BEN NEVIS RESOURCES INC. **Q2425 – Ben Nevis Property Magnetometer Survey** C Jason Ploeger, P.Geo. – August 31, 2017

Ben Nevis Resources Inc.

Abstract

CXS was contracted by Ben Nevis Resources Inc. to perform approximately 3.5 kilometers of magnetometer survey over its Ben Nevis Property near Larder Lake.

The survey indicated numerous 100 degree striking magnetically elevated signatures. These may represent ideal targets for additional exploration.

Ben Nevis Resources Inc.

Q2425 – Ben Nevis Property Magnetometer Survey

C Jason Ploeger, P.Geo. - August 31, 2017



TABLE OF CONTENTS

1.		SURVEY DETAILS	3
	1.1	PROJECT NAME	3
	1.2	CLIENT	3
	1.3	LOCATION	3
	1.4	Access	4
	1.5	Survey Area	4
2.		SURVEY WORK UNDERTAKEN	5
	2.1	Survey Log	5
	2.2	Personnel	5
	2.3	SAFETY	5
	2.4	SURVEY SPECIFICATIONS	5
		_	_
3.		OVERVIEW OF SURVEY RESULTS	b
3.	3.1	SUMMARY	_
			_
LI AF AF	ST OI PPENI PPENI PPENI	SUMMARY	_
AF AF AF	ST OI PPENI PPENI PPENI PPENI	SUMMARY F APPENDICES DIX A: STATEMENT OF QUALIFICATIONS DIX B: THEORETICAL BASIS AND SURVEY PROCEDURES DIX C: INSTRUMENT SPECIFICATIONS	_
AF AF AF	ST OI PPENI PPENI PPENI PPENI PPENI	SUMMARY F APPENDICES DIX A: STATEMENT OF QUALIFICATIONS DIX B: THEORETICAL BASIS AND SURVEY PROCEDURES DIX C: INSTRUMENT SPECIFICATIONS DIX D: LIST OF MAPS (IN MAP POCKET)	6
AF AF AF	PPENI PPENI PPENI PPENI PPENI Figur	SUMMARY F APPENDICES DIX A: STATEMENT OF QUALIFICATIONS DIX B: THEORETICAL BASIS AND SURVEY PROCEDURES DIX C: INSTRUMENT SPECIFICATIONS DIX D: LIST OF MAPS (IN MAP POCKET)	6

Table 1: GPS Claim Coordinate Data Sheet Error! Bookmark not defined.



1. SURVEY DETAILS

1.1 PROJECT NAME

This project is known as the **Ben Nevis Property**.

1.2 CLIENT

BEN NEVIS RESOURCES INC.

14579 Government Road Larder Lake, Ontario P0K 1L0

1.3 LOCATION

The Ben Nevis Property is located approximately 25.0 kilometres northeast of Larder Lake, Ontario. The property covers a portion of mining claim 1167260 located in Ben Nevis Township within the Larder Lake Mining Division.

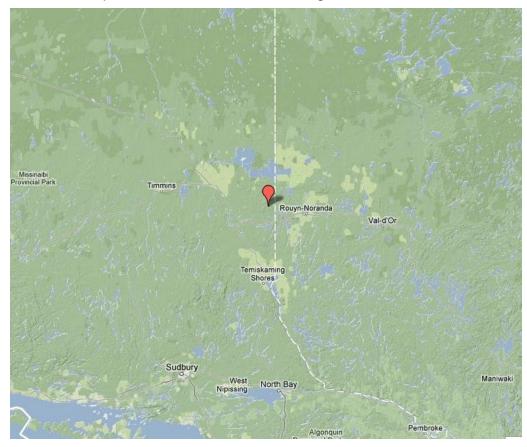


Figure 1: Location of the Ben Nevis Property



1.4 Access

Access to the Ben Nevis property was attained with a 4x4 truck via the Larder Station Road which is located just east of Larder Lake off of provincial highway 66. The Larder Station Road was followed north for approximately 25km to a point at the traverse area crosses the road.

1.5 SURVEY AREA

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 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.

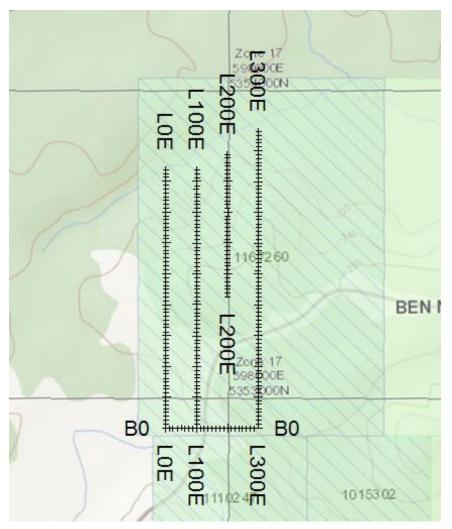


Figure 2: Claim Map with Magnetic Traverses



2. SURVEY WORK UNDERTAKEN

2.1 SURVEY LOG

Date	Description	Line	Min Extent	Max Extent	Total Survey (m)
August 23, 2017	Locate survey area and begin				
August 23, 2017	magnetometer survey.	0E	0	850N	850
		100E	0	850N	850
		200E	425N	900N	475
		300E	0	975N	975
		0	0	300E	300

Table 1: Survey Log

2.2 Personnel

Patrick McGuinty of Pickering, Ontario conducted all the magnetic data collection while Claudia Moraga of Britt, Ontario was responsible for the GPS control and GPS waypoint collection.

2.3 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.

2.4 SURVEY SPECIFICATIONS

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

A total of 3.45 line kilometers of magnetometer was read over the Ben Nevis Project on August 23, 2017. This consisted of 276 magnetometer samples taken at a 12.5 metre sample interval.



3. OVERVIEW OF SURVEY RESULTS

3.1 SUMMARY

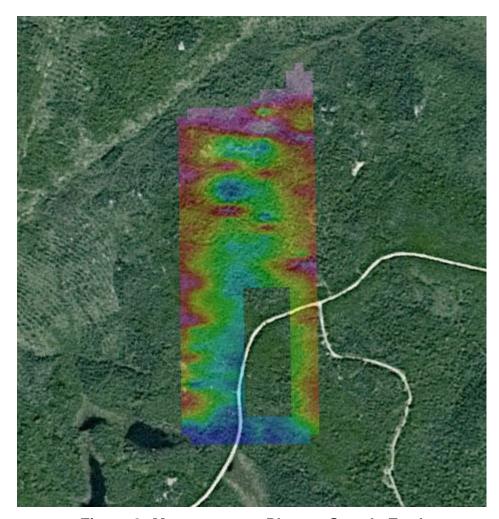


Figure 3: Magnetometer Plan on Google Earth

The survey covered a portion of claim number 1167260. The Larder Station Road crosses the southern portion of the traverse area. No culture was noted that would influence the survey results.

The magnetic data indicates the presence of three or more magnetic high linear features, which strike across the survey area at approximately 100 degrees. These appear to be intrusive features and may represent gabbro dikes. The interaction of these dikes with the volcanics may represent areas to target for further exploration.

I would recommend extending the magnetic survey to the east. I would also recommend prospecting the area and performing a soil geochem survey. An IP survey over the area around line 200E near 825N and line 300E at 800N is also merited.



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.
- 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 **Ben Nevis resources Inc.**
- 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.

August 31, 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 ±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 62S



Physical & Performance	e:
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 receiver:	yes

Magnetometer Survey Ben Nevis Property Ben Nevis Township, Ontario

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/locations:	2000	
Routes:	200	
Track log:	10,000 points, 200 saved tracks	

Features & Benefits:	
Automatic routing (turn by turn routing on	yes (with optional mapping for detailed
roads):	roads)
Electronic compass:	yes (tilt-compensated, 3-axis)
Touchscreen:	no
Barometric altimeter:	yes
Camera:	no
Geocaching-friendly:	yes (paperless)
Custom maps compatible:	yes
Photo navigation (navigate to geotagged	yes
photos):	
Outdoor GPS games:	no
Hunt/fish calendar:	yes
Sun and moon information:	yes

Magnetometer Survey Ben Nevis Property Ben Nevis Township, Ontario

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, categorize and share data):	yes

Specifications obtained from www.garmin.com



APPENDIX D

LIST OF MAPS (IN MAP POCKET)

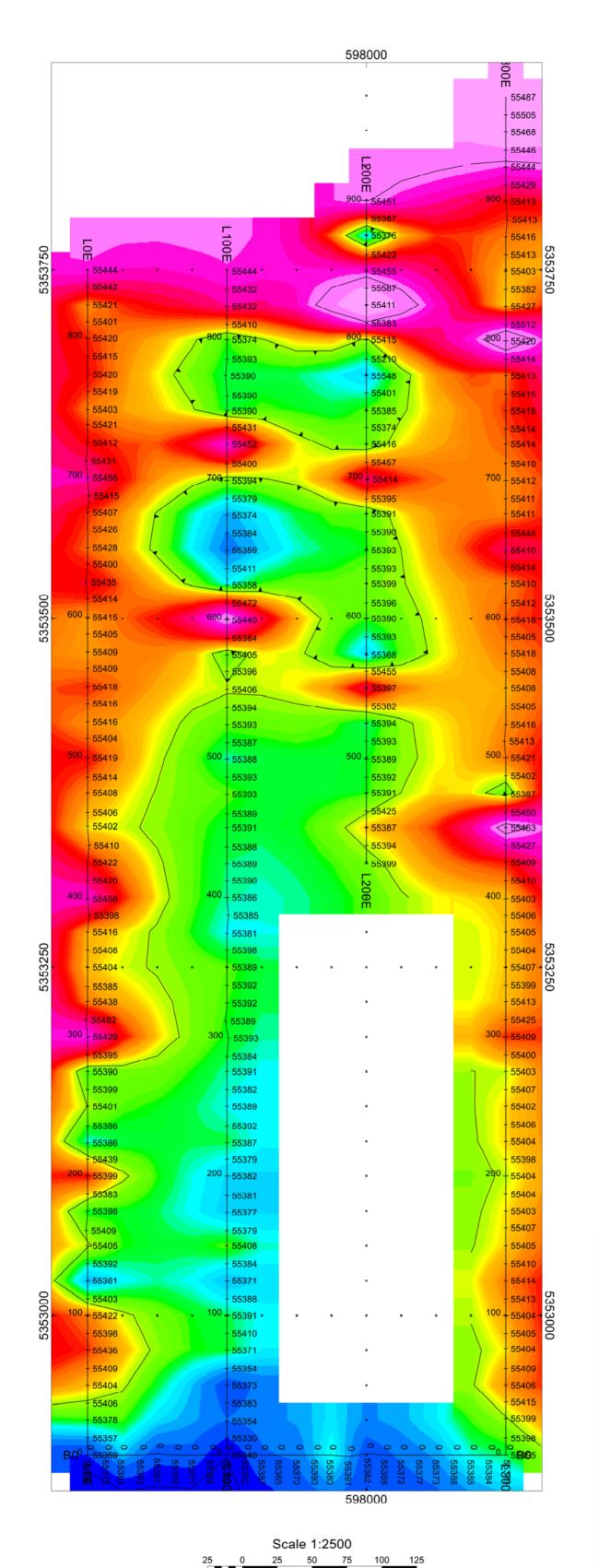
Magnetometer Plan Map (1:2500)

1) Q2425-Ben Nevis-Ben Nevis-Mag-Cont

Traverse Plan Map (1:20000)

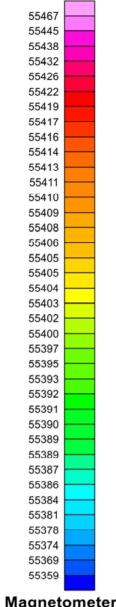
2) Q2425-Ben Nevis-Ben Nevis-Traverse

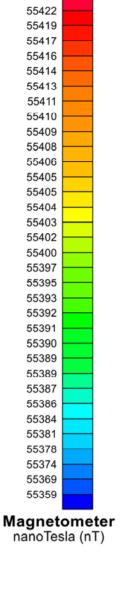
TOTAL MAPS = 2



(meters)

NAD83 / UTM zone 17N





BEN NEVIS RESOURCES INC.

BEEMER PROPERTY Beemer Township, 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: 50nT

GSM-19 OVERHAUSER MAGNETOMETER v7

Reciever Operated By: Patrick McGuinty GPS Operated By: Claudia Moraga Processed by: C Jason Ploeger, P.Geo. Map Drawn By: C Jason Ploeger, P.Geo. August, 2017



Drawing: Q2425-Ben Nevis-Ben Nevis-Mag-Cont

