Ontario

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

ASHLEY GOLD MINES LIMITED

Q2607 – Fawn Property
Magnetometer & VLF EM Survey

C Jason Ploeger, P.Geo.
Melanie Postman, GIT

February 21, 2019

Abstract:

Canadian Exploration Services Limited (CXS) was contracted to perform a walking magnetometer and VLF EM survey over the Fawn Property to target a previously determined airborne magnetic and EM anomaly.

The magnetic and VLF EM surveys successfully resolved the target anomaly. A strong magnetic response with a coincident VLF EM response was produced that most likely represents a mineralized interflow sequence.

ASHLEY GOLD MINES LIMITED

Q2607 – Fawn Property
Magnetometer & VLF EM Survey

C Jason Ploeger, P.Geo.
Melanie Postman, GIT **February 21, 2019**

Contributions by Mandy Lim (B.Sc.) & Andrew Salerno (B.Sc.)

TABLE OF CONTENTS

LIST OF APPENDICES

LIST OF TABLES AND FIGURES

1. SUMMARY

1.1 Project Name

This project is known as the **Fawn Property.**

1.2 Client

Ashley Gold Mines Limited

14579 Government Rd.
Larder Lake, Ontario
P0K1L0

1.3 Overview

Canadian Exploration Services Limited (CXS) performed both a magnetometer and VLF EM survey over the Fawn Property for Ashley Gold Mines Limited. A total of 57.35-line kilometres of magnetometer and VLF EM samples was read over the Fawn Property between January 28th, 2019 and February 15th, 2019. This consisted of 2338 magnetometer and VLF EM samples taken at a 25-metre sample interval.

1.4 Objective

The magnetometer and VLF EM surveys were designed to provide improved ground resolution and location over a known anomaly from a historic airborne magnetic and electromagnetic survey.

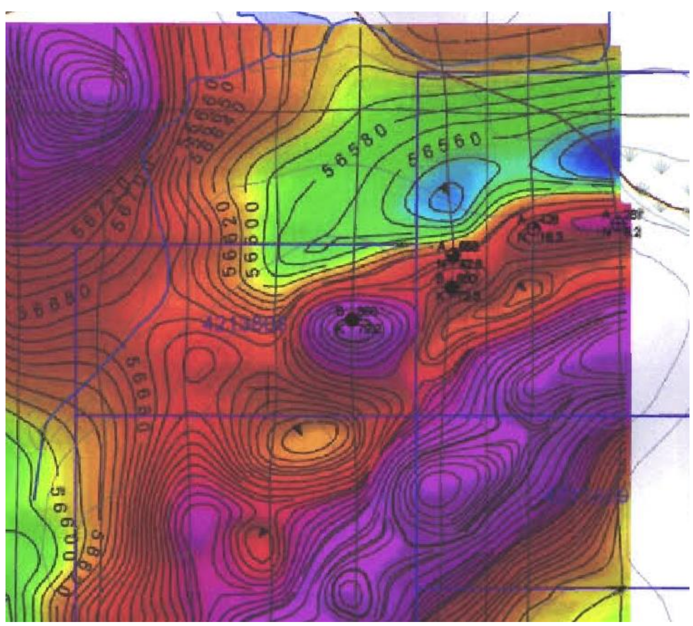


Figure 1: 2008 airborne magnetic grid by Aeroquest showing anomaly being investigated

1.5 Surveys & Physical Activities Undertaken

Survey/Physical Activity	Dates	Total Days in Field	Total Line Kilometres
Magnetometer	January 28, 2019 – February 15, 2019	15	57.35
VLF EM	January 28, 2019 – February 15, 2019	15	57.35

Table 1: Survey & Physical Activity Details Undertaken

1.6 Summary of Results, Conclusions & Recommendations

The magnetic and VLF EM surveys successfully indicated the presence of a strong magnetic response with a coincident VLF EM response. This appears to represent the previously identified airborne anomaly. The anomaly most likely represents a mineralized interflow sequence.

The interpreted interflow sequence should be further investigated through prospecting, trenching and an IP survey.

1.7 Co-ordinate System

Projection: UTM zone 17N
Datum: NAD83
UTM Coordinates near center of grid: 383738 Easting and 5273108 Northing

2. SURVEY LOCATION DETAILS

2.1 Location

The Fawn Property is located approximately 15-kilometres east of Sultan, Ontario.

Figure 2: Location of the Fawn Property (Map data ©2019 Google)

2.2 Access

Access to the property was via a 4x4 pickup truck and snowmobiles. The crew was based near the Highway 144 and Sultan Industrial Road intersection. Sultan Industrial Road was driven west for approximately 60 kilometres. The north of the grid was accessed along Sultan Industrial Road at this location. For further access to the south of the grid an unnamed forestry access road was travelled south via snowmobile.

2.3 Mining Claims

The survey area covers a portion of mining claims located in Fawn and Hong Kong Townships, within the Porcupine Mining Division. The property is owned by Ashley Gold Mines Limited. The details of these claims are in the table below.

Cell Number	Cell Type	Ownership of Land	Township
331514	Claim	Ashley Gold Mines Limited	Fawn & Hong Kong
112546	Claim	Ashley Gold Mines Limited	Fawn & Hong Kong
158012	Claim	Ashley Gold Mines Limited	Fawn
339187	Claim	Ashley Gold Mines Limited	Fawn
109195	Claim	Ashley Gold Mines Limited	Fawn
263774	Claim	Ashley Gold Mines Limited	Fawn
280759	Claim	Ashley Gold Mines Limited	Fawn
300317	Claim	Ashley Gold Mines Limited	Fawn
202637	Claim	Ashley Gold Mines Limited	Fawn
247580	Claim	Ashley Gold Mines Limited	Fawn
144882	Claim	Ashley Gold Mines Limited	Fawn
247581	Claim	Ashley Gold Mines Limited	Fawn
586721	Claim	Ashley Gold Mines Limited	Fawn
173480	Claim	Ashley Gold Mines Limited	Fawn
194386	Claim	Ashley Gold Mines Limited	Fawn
132320	Claim	Ashley Gold Mines Limited	Fawn
294024	Claim	Ashley Gold Mines Limited	Fawn
172756	Claim	Ashley Gold Mines Limited	Fawn
285996	Claim	Ashley Gold Mines Limited	Fawn
126173	Claim	Ashley Gold Mines Limited	Fawn

Cell Number	Cell Type	Ownership of Land	Township
144881	Claim	Ashley Gold Mines Limited	Fawn
313621	Claim	Ashley Gold Mines Limited	Fawn
313620	Claim	Ashley Gold Mines Limited	Fawn
228747	Claim	Ashley Gold Mines Limited	Fawn
209706	Claim	Ashley Gold Mines Limited	Fawn
107290	Claim	Ashley Gold Mines Limited	Fawn
285995	Claim	Ashley Gold Mines Limited	Fawn
256934	Claim	Ashley Gold Mines Limited	Fawn
218074	Claim	Ashley Gold Mines Limited	Fawn
294023	Claim	Ashley Gold Mines Limited	Fawn

Table 2: Mining Land Cells Information

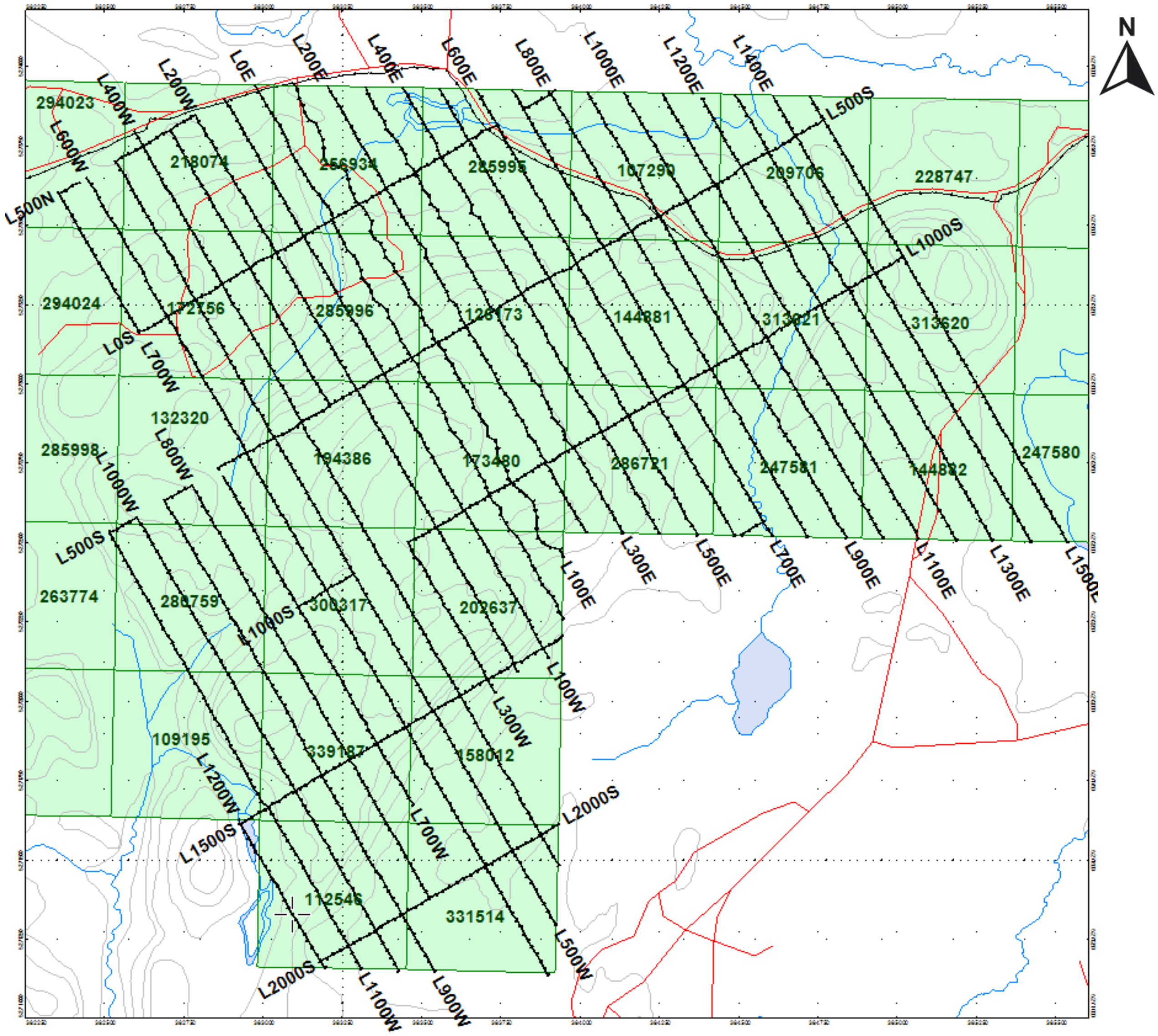


Figure 3: Operational Claim Map with Survey Grid

2.4 Property History

Significant historical exploration has been 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, 2018).

- **1966: Inco Ltd (File 41O10SE0020)**
  Diamond Drilling – Shipley Township
  Inco Ltd. performed diamond drilling on claim S.131904 to obtain a 402 feet core.

- **1992: M A Tremblay (File 42B02SE0011)**
  Prospecting, Open Cutting, Overburden Stripping, Geological Survey, Mapping, Geochemistry, and VLF EM – Bliss, Cochrane, Delmage, Druilettes, Gilliland, Greenlaw, Hong Kong, Marshall, Panet, Peters, Shipley, Silk, Strathearn, Wakami Townships
  Geological, geophysical and geochemical surveys were conducted in the Woman River, Windermere Lake, Ridout River, and Cochrane Township areas. The Ridout River and Cochrane Township properties showed potential for volcanogenic massive sulphide mineralization. Iron formation was observed in the Ridout property and pyroclastic units, in Cochrane Township. Further surveying was required for the Woman River property. The Windermere project successfully located dike rock in the kimberlitic range.

- **1993: M Tremblay (File 41O15NE0001)**
  Prospecting, Overburden Studies, and Geochemical Sampling – Blamey, Cochrane, Coppell, Hong Kong, Neill, and Shipley Townships
  Mike Tremblay collected rock and soil samples from properties over Cochrane Shipley-Hong Kong, and Neill Townships for geochemical assaying and geological mapping. XRAL Laboratories performed geochemical analysis on collected samples. Anomalous returns were noted.

- **1995: Asarco Exploration Company of Canada Ltd (File 41O10SE0001)**
  Geochemical Sampling – Blamey, Kaplan, Shipley, and Wakami Townships
  Bondar Clegg performed geochemical assaying on 28 overburden samples collected from the Sultan Area. No significant results were observed except anomalous gold and mercury on samples SUL94-24 and SUL94-26. Drilling was recommended to decipher an explanation for anomalous glacial trains.

- **2008: Wallbridge Mining Company Ltd (File 20000002875)**
  Airborne Electromagnetic and Magnetometer Surveys – Edith, Fawn, Hong Kong, and Shipley Townships
  Aeroquest performed 443 line-kilometers of airborne electromagnetic and magnetometer surveys over the Shipley Block in Gogama area owned by Wallbridge Mining Company Ltd.

- **2008: Wallbridge Mining Company Ltd (File 20000003892)**
  Airborne Electromagnetic and Magnetometer Surveys – Fawn and Hong Kong Townships
  Aeroquest performed 423.2 line-kilometers of airborne electromagnetic and magnetometer surveys over the Shipley Block in Gogama area owned by Wallbridge Mining Company Ltd.

- **2008: Wallbridge Mining Company Ltd (File 20000003595)**
  Geological Surveying, Geological Mapping, and Geochemical Assaying and Analyses – Blamey, Hong Kong, and Shipley Townships
  Joshua Bailey conducted geological surveying and observed gold within a siliceous chert-iron formation. It was interpreted that the Shipley Property hosts a compelling target for a large low-grade gold deposit. Completion of an airborne survey to decipher unexplained targets was recommended.

- **2008-2009: Wallbridge Mining Company Ltd (File 20000004156)**
  Diamond Drilling and Geochemical Assaying – Shipley Township
  Summit Drilling Services of Capreol, Ontario was contracted to perform diamond drilling to obtain a total of seven diamond drill holes that provided a total of 984.25 meters of core sample. Rock samples were then sent to ALS Chemex for geochemical assaying. A promising gold result was observed as a result of this survey.

- **2011-2012: Cascadero Copper Corporation (File 20000007771)**
  Geochemical Assaying and Analyses – Benton, Edith, Esther, Fingal, Groves, Hong Kong, Marion, and Osway Townships
  Mark Fedikow of Mount Morgan Resources Ltd. performed geochemical assaying on soil samples collected from Cascadero Copper Properties. Integration of all geochemical and geophysical data was recommended prior to conducting diamond drill testing.

- **2012-2013: Cascadero Copper Corporation (File 20000008665)**
  Geochemical Assaying and Analyses – Edith, Fawn, Fingal, Hong Kong, and Osway Townships
  R.K. Bezys of Wildwood Geological Services Inc. performed geochemical assaying on soil samples collected from Cascadero Copper's property in Hong Kong Township. The most significant multi-element anomaly was observed in the southeast area of the survey. A base metal anomaly was also observed in the northwest area of the survey.

2.5 General Regional/Local Geological Settings

The Fawn Property is underlain by the Swayze area of the Neoarchean Abitibi Greenstone Belt. The region consists of upright bedding that has undergone complex metamorphism, folding, shearing, and faulting. The Swayze area is composed of ultramafic, mafic, felsic intrusive and extrusive, as well as clastic and chemical sedimentary rocks. This region is bounded by the Nat River granitoid complex in the North, the Kapuskasing Structural Zone in the West, the Ramsey-Algoma granitoid complex to the South, and the Kenogamissi granitoid complex to the East.

The general structural trend in this region is dominated by doubly E-W plunging regional and parasitic F2 folds and an axial planar foliation which folded the primary bedding and an earlier S1 foliation. D2 high strain zones occur along major lithological boundaries, and brittle ductile occur in later deformations.

Property Geology:

The Fawn Property is located on the northern end of the Biscotasing Arm of the Swayze area greenstone which extends over 50 kilometers southeast of the greenstone area. The area is composed of highly strained and metamorphosed to amphibolite facies. Rock types observed in the area have strong penetrative foliation and/or extensional lineation. The Fawn Property is dominated by intermediate volcanic and volcaniclastic meta-sedimentary rocks, with lesser felsic volcanic rocks, felsic tuff, gabbro, and diabase. Meta-sedimentary rocks were found within areas stripped based on a previous airborne mag-EM survey.

2.6 TARGET OF INTEREST

Historical airborne magnetic and electromagnetic surveys were conducted in 2008. These indicated the presence of an anomalous magnetic target with an associated EM axis. These southwest-northeast trending anomalous features were the target of these surveys. Ground magnetic and VLF EM surveys were conducted to ground locate, ground truth and better resolve these anomalies.

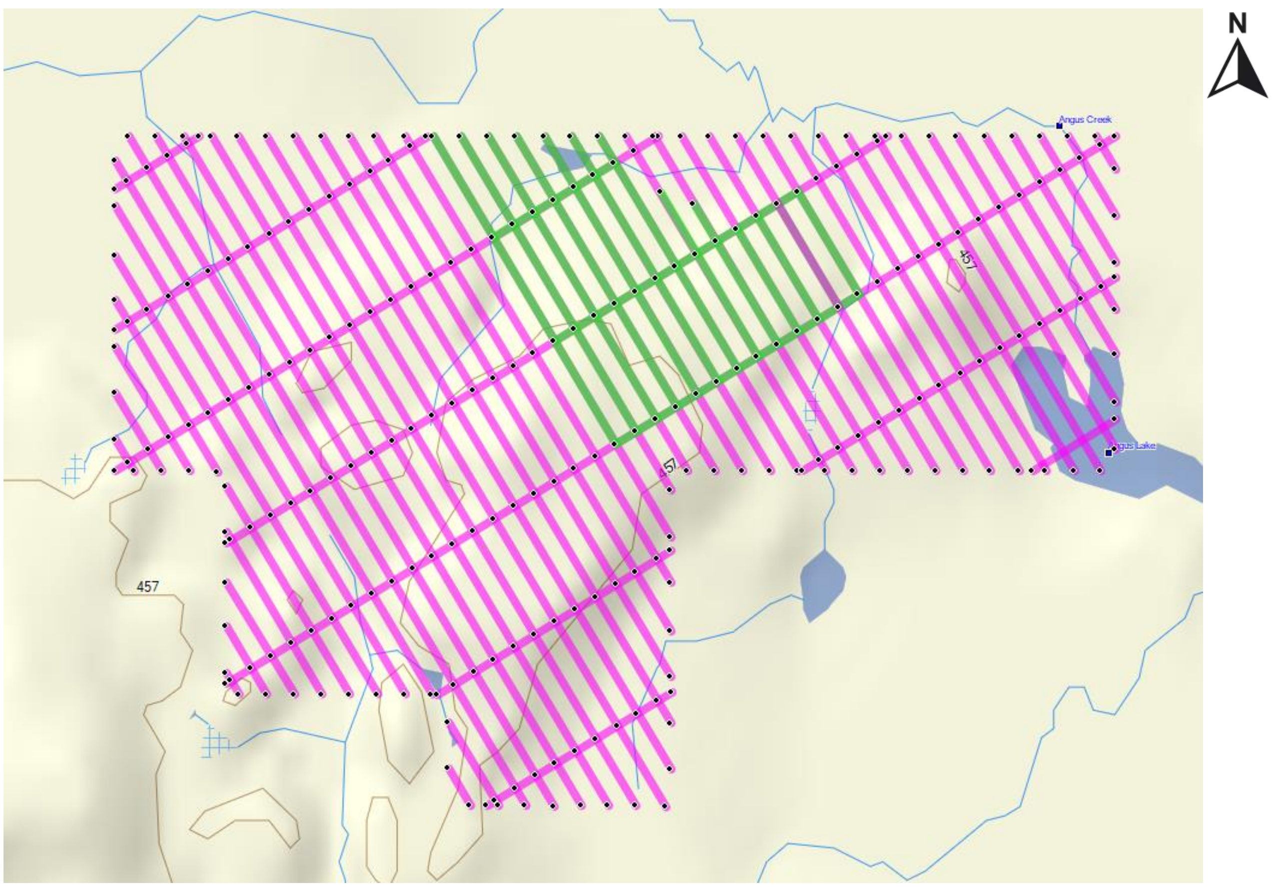
3. PLANNING

3.1 Exploration Permit/Plan

The Magnetometer and VLF EM surveys were performed over claims owned by Ashley Gold Mines Limited. For these surveys no line cutting, or generators were needed therefore no plan was required for these surveys.

3.2 Survey Design

This survey was designed to better resolve previously determined airborne magnetic and EM anomalies. Routes spaced at 100-metre intervals were planned to cross the southwest-northeast anomalies perpendicularly at 330-degrees. Tie-line traverses were planned every 500m at 60-degrees. The green routes seen in Figure 4, were highest priority to intersect the anomaly. The pink routes were extra routes provided to ensure that the anomaly would not be missed and to be able to follow the anomaly. Magnetometer and VLF EM measurements were intended along the routes, spaced at 25-metre intervals.



<u>Figure 4: Survey Design</u>

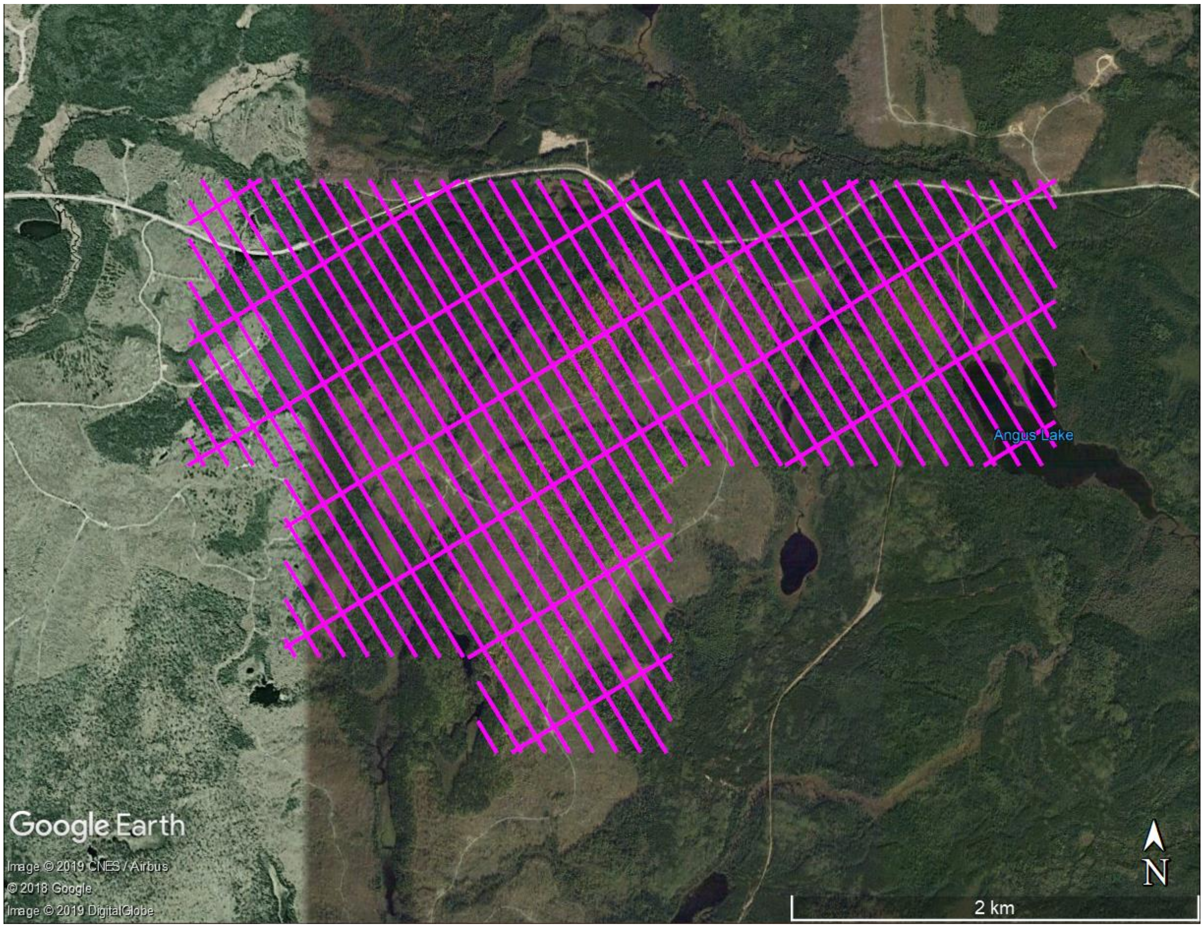


Figure 5: Survey Design overlaid on Google Earth. (©2018 Google, Image ©2019 DigitalGlobe & Image ©2019 CNES/Airbus)

4. SURVEY WORK UNDERTAKEN

4.1 Summary

CXS was contracted to perform a Magnetometer and VLF EM survey over the Fawn Property. A total of 57.35-line kilometres of Magnetometer and VLF EM samples was read over the Fawn Property between January 28, 2019 and February 15, 2019. This consisted of 2338 magnetometer and VLF EM samples taken at a 25-metre interval.

4.2 Survey Grid

No survey grid was used in this project. Traverses were completed based on GPS corridors and a general route plan.

4.3 Data Acquisition

Magnetometer and VLF EM Surveys

Magnetometer and VLF EM data acquisition took place between January 29, 2019 and February 15, 2019. One magnetometer was set in a fixed position (385292E, 5273724N) in a region of stable geomagnetic gradient to monitor and correct for daily diurnal drift. A second magnetometer was being operated to acquire magnetic data along traverses. This second unit was set to a stop-and-go mode for magnetometer and VLF readings. GPS data was collected at each 25-metre interval prior to the magnetic and VLF EM acquisition at that corresponding location. The GPS operator stayed a minimum of 10 metres away from the magnetometer operator, to refrain from causing any magnetic interference from the GPS.

A total of 57.35-line kilometres of both magnetometer and VLF EM measurements was taken. This consisted of 2338 magnetometer and VLF EM samples read at a 25-metre interval over a 14-day period. The following figure shows the path taken by the VLF EM magnetometer operators, while acquiring data.

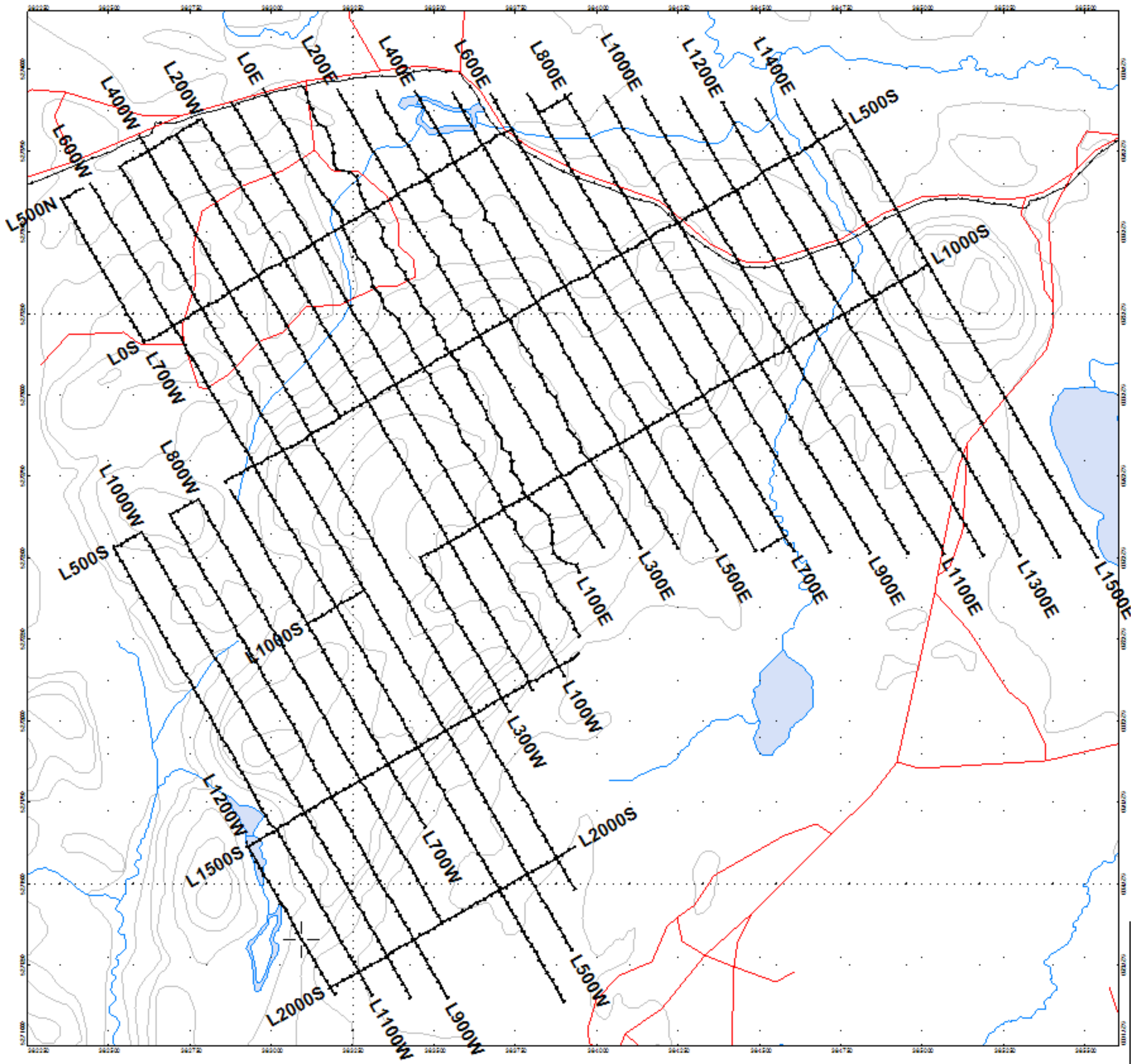


Figure 6: Traverses by Field Crew

4.4 Survey Logs

Magnetometer and VLF EM Survey Log					
Date	**Description**	**Line**	**Min Extent**	**Max Extent**	**Total Survey (m)**
January 28, 2019	Mobe to survey location. Check access and test run.				
January 29, 2019	Begin VLF EM and	L0E	1450S	500N	1950

Magnetometer and VLF EM Survey Log					
Date	**Description**	**Line**	**Min Extent**	**Max Extent**	**Total Survey (m)**
	Mag surveys	L100E	1300S	425N	1725
					3675
January 30, 2019	Continue surveys.	L0N	0E	600E	600
		L1000S	200E	300E	100
		L200E	1000S	0N	1000
		L300E	1000S	325N	1325
		L400E	250S	250N	500
					3525
January 31, 2019	Continue surveys	L500S	400E	1200E	800
		L400E	1375S	500S	875
		L500E	1425S	200N	1625
		L600E	225S	125N	350
					3650
February 1, 2019	Continue surveys	L500S	1100W	1000W	100
		L1100W	2075S	500S	1575
		L1000W	2150S	500S	1650
		L900W	2200S	1850S	350
					3675
February 2, 2019	Continue surveys	L500S	900W	800W	100
		L1000S	700W	600W	100
		L900W	1850S	500S	1350
		L800W	2000S	500S	1500
		L700W	1725S	1000S	725
		L600W	1675S	1000S	675
					4450
February 3, 2019	Continue surveys	L2000S	1200W	325W	875
		L1500S	1200W	25W	1175
		L1200W	2025S	1475S	550
		L600W	2400S	1700S	700
		L500W	2275S	1650S	625
		L400W	2100S	1600S	500
					4425

Magnetometer and VLF EM Survey Log					
Date	**Description**	**Line**	**Min Extent**	**Max Extent**	**Total Survey (m)**
February 4, 2019	Continue surveys	L1000S	600W	500W	100
		L1000S	300W	200W	100
		L500S	700W	600W	100
		L500S	500W	400W	100
		L700W	1000S	500S	500
		L600W	1000S	500S	500
		L500W	1625S	500S	1125
		L400W	1600S	500S	1100
		L300W	1550S	1000S	550
		L200W	1525S	1000S	525
					4700
February 5, 2019	Continue surveys	L1000S	200W	100W	100
		L500S	400W	300W	100
		L500N	300W	200W	100
		L400W	500S	550N	1050
		L300W	500S	500N	1000
		L200W	1000S	500N	1500
		L100W	1000S	500N	1500
					5350
February 6, 2019	Continue surveys and demobilize	L500N	500W	300W	200
		L500N	700W	600W	100
		L0N	700W	0E	700
		L500S	600W	500W	100
		L700W	0N	500N	500
		L600W	500S	500N	1000
		L500W	500S	500N	1000
					3600
February 11, 2019	Mobilize to site and continue surveys	200E	0	375N	375
		400E	500S	250S	250
		500S	300W	400E	700
					1325
February 12, 2019	Continue surveys	600E	1500S	225S	1275

Magnetometer and VLF EM Survey Log					
Date	**Description**	**Line**	**Min Extent**	**Max Extent**	**Total Survey (m)**
		700E	1550S	75N	1625
		800E	1600S	0	1600
		900E	1675S	400S	1275
		0N	700E	825E	125
		1500S	600E	700E	100
					6000
February 13, 2019	Continue surveys	900E	400S	50S	350
		1000E	1750S	100S	1650
		1100E	1800S	175S	1625
		1200E	550S	225S	325
		1300E	600S	300S	300
		1400E	500S	350S	150
		500S	1200E	1400E	200
					4600
February 14, 2019	Continue surveys	1200E	1850S	550S	1300
		1300E	1900S	600S	1300
		1400E	1975S	500S	1475
		1500E	2025S	400S	1625
		500S	1400E	1500E	100
					5800
February 15, 2019	Finish surveys and demobilize	1000S	300E	1500E	1200
		300E	1300S	1000S	300
		200E	1250S	1000S	250
		1000S	100W	200E	300
		100W	1525S	1000S	525
					2575
Total	**57.35 Line Kilometers**				

Table 3: Survey Log

4.5 Personnel

Crew Member / Contractor	Position	Resident	Province
Andrew Salerno	Magnetometer/GPS Operator	Larder Lake	Ontario
David Postman	Magnetometer/GPS Operator	Niagara	Ontario
Jason Ploeger P.Geo	Senior Geophysicist	Larder Lake	Ontario
Melanie Postman GIT	Junior Geophysicist	Larder Lake	Ontario
Mandy Lim	Junior Geophysicist in training	St. John's	NL

Table 4: Magnetometer and VLF EM Survey Personnel

4.6 Field Notes: Conditions & Culture

The average temperature over the field between January 28th and February 15, 2019 was -14°C. The lowest recorded temperature during the survey period was -45C. Generally, the weather conditions were sunny however numerous winter storms resulted in heavy accumulations.

Low culture was reported by the survey crew. The reported culture was the Sultan Highway with a powerline. This passed through the northern part of the survey area. Generally, there was no effect in the magnetic dataset, however the powerline is visible in the VLF data.

4.7 Safety

Canadian Exploration Services Ltd 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, weather conditions, timing and crew experience. All possible topics discussed during a survey, dependent on field conditions and time of the year, are listed in the following table.

Safety Topic	Protocol
Active Work Site	Be aware of surrounding activities – drilling, mine monitoring, and traffic. Caution when working near roads, and post safety signs to alert passers-by of ongoing geophysical surveys.
ATV	Conduct circle check before operating an ATV. Ensure brakes and tires are in good working condition. Drive at reasonable speeds according to terrain to avoid accidents. The use of helmets is mandatory.

Safety Topic	Protocol
Extreme Temperatures	With temperatures down to -40, there is an increased risk of cold related injuries (i.e. frostbite, hypothermia). Dress accordingly and take breaks to warm up if necessary. Bring extra clothing to anticipate for possible drop in temperature throughout the day. With temperatures up to +30C, there is an increased risk of heat stroke. Keep hydrated throughout the day and in shaded areas if possible.
Communication	Check in with the crew leader or any crew member when working individually to inform the team of your safety and well-being.
Heavy Lifting	When lifting equipment individually, always lift with your legs rather than your back. Always ask fellow crew members for help when lifting or moving heavy and large equipment (i.e. transmitter, generator, snowmobile, etc.).
Hunting Seasons	There may be more traffic during hunting season. Be careful when crossing. Wear proper (high-visibility) attire to avoid being mistaken for an animal in the bush.
Power Protocol	When in doubt, always assume that power is on and stay clear of survey circuits until confirmed otherwise.
Power Tools	Be alert when operating power tools – chainsaw, Tanaka, etc. Do not operate equipment when unsure of safety instructions for the specific tool.
Rain	Terrains may be slippery. Traverse carefully to avoid slipping, especially when ascending, descending, or walking along side of hills. When there is a chance of thunderstorm, notify person in-charge of transmitter when thunder is heard. Be extra careful with power protocol due to increased risk of shock. Bring extra clothing in case gear gets too wet and heavy.
Sharp Tools	Be careful when handling tools such as a machete and knives to avoid injuries. Inform another crew member of any injuries.
Slips, Trips and Falls	Increased risk of hidden hazards with snow coverage. Proper use of snow shoes is encouraged to avoid injuries from slipping, tripping, or falling. 3 points of contact is encouraged.
Snowmobile	Proper use of PPE (i.e. safety helmet, high visibility attire, etc.). Practice safety checks before operating snowmobiles. Ensure that engines and brakes are in good working condition. Ensure that oil, coolant, and gasoline levels are sufficient for distance of travel. Check that snowmobile is physically safe to operate (i.e. no broken parts).
Truck and Trailer	Conduct safety checks prior to operation of company trucks to ensure engines, brakes, tires, and etc. are in good working condition prior to operating vehicle. Conduct circuit checks when mobilizing and de-mobilizing trailers.

Safety Topic	Protocol
Water Hazards	Creeks, lakes, and swamps may not be fully frozen even under very low temperatures. The use of a stick or pole is encouraged for testing water bodies prior to crossing.
Wildlife	Always be aware of surroundings, keeping an eye out for animals such as bears, moose and wolves. Carry bear spray when in the field during the summer.
Winter Driving	Snow accumulation, freezing rain and icy conditions create added road hazards. Road into field sites may be rough. Drive at appropriate speeds according to road conditions.

Table 5: General Safety Topic Protocols

Emphasized daily topics discussed in the field for this project include:

Date	Safety Topic
January 28, 2019	Circuit checks, winter driving, and equipment orientation
January 29, 2019	Safe parking procedures on logging roads
January 30, 2019	Safety while hiking and snowshoeing
January 31, 2019	Safety checks on work truck
February 1, 2019	Potential safety hazards while driving and working
February 2, 2019	Review of emergency procedures
February 3, 2019	Proper maintenance of snowmobile
February 4, 2019	Proper work attire and staying warm in cold weather
February 5, 2019	Proper lifting of heavy objects
February 6, 2019	Circuit checks and properly tying down and storing equipment in truck for demobilization
February 11, 2019	Review of safe parking procedures on logging roads
February 12, 2019	Make sure to keep hydrated during the day
February 13, 2019	Proper safety while snowshoeing/hiking
February 14, 2019	Driving safety checks
February 15, 2019	Circuit checks and properly tying down and storing equipment in truck for demobilization

Table 6: Daily Safety Topics

5. INSTRUMENTATION & METHODS

5.1 INSTRUMENTATION

The survey was conducted with a GSM-19 v7 Overhauser magnetometer in stop and go mode with a second GSM-19 magnetometer in base station mode for diurnal correction. The system was also configured to collect VLF EM data.

The GSM-19 measures the Earth's magnetic field with less than 0.1 nT sensitivity, 0.01 resolution, and 0.2 nT absolute accuracy over its full temperature range.

The VLF EM receiver measures the vertical and horizontal in-phase (IP) and quadrature (OP) components of the anomalous field from electrically conductive zones.

5.2 THEORETICAL BASIS

Magnetometer Survey

The GSM-19 Overhauser magnetometer measures the Earth's magnetic field in a multi-step process that provides better results by using the Overhauser effect. The Overhauser effect occurs when a special liquid (with unpaired electrons) is combined with hydrogen atoms. The unpaired electrons couple with the protons within the hydrogen atom, to produce a two-spin system. This electron-proton coupling is then disturbed once exposed to secondary polarization from a strong radio frequency (RF) magnetic field. The unpaired electrons transfer their stronger polarization to hydrogen atoms, which allows an increased polarization of protons in the sensor liquid. Thus, generating a strong precession signal, which causes a deflection of the proton magnetization into the plane of precession. A pause then allows the electrical transient to die off. This leaves the proton precession signal to slowly decay above the noise level. Following this slow decay, the proton precession frequency is counted, measured and converted into magnetic field units. Finally, the results are stored in memory with the date, time, and coordinates of the measurements. In the base station mode, only the time and total field are stored (GEM Systems, 2007).

VLF EM Survey

The frequency domain VLF electromagnetic survey is designed to measure both the vertical and horizontal in-phase (IP) and quadrature (OP) components of the anomalous field from electrically conductive zones. The sources for VLF EM surveys are several powerful radio transmitters located around the world which generate EM radiation in the low frequency band of 15-25kHZ. The signals created by these long-range communications and navigational systems may be used for surveying up to several thousand kilometres away from the transmitter. The quality of the incoming VLF signal can be monitored using the field strength. A field strength above 5pT will produce excellent quality results. Anything lower indicates a weak signal strength, and possibly lower data quality. A very low signal strength (<1pT) may indicate the radio station is down (GEM Systems, 2007).

The EM field is planar and horizontal field at a large distance from the EM source. The two horizontal components, p and v, created by the source field are orthogonal to each other. The first horizontal component's (p) axis is parallel to the operator's direction while the second horizontal component's (v) axis lies at right angles to the direction of the operator's propagation. In order to ensure good coupling, the strike of possible conductors should lie in the direction of the transmitter to allow one of the horizontal vectors to pass through the anomaly, in turn, creating a secondary EM field which is measured as the In Phase and Out of Phase measurements. (GEM Systems, 2007).

The VLF EM receiver has two orthogonal aerials which are tuned to the frequency of the transmitting station. The direction of the source station is located by rotating the sensor around a vertical axis until a null position is found.

5.3 Survey Specifications

Magnetometer Survey

Base station corrected Total Magnetic Field surveying was used for this magnetometer survey. Two synchronized GSM-19 v7 Overhauser magnetometers of identical type were needed. One magnetometer unit was 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 of the magnetic field. This magnetometer, given the term 'base station', stored the time, date and total field measurement at fixed time intervals over the survey day. A second, remote mobile unit was set to magnetometer mode. Readings were taken at 25-metre increments determined by previously the GPS operator. It stored the grid coordinates time, date, and the total field measurements, simultaneously. The procedure consisted of taking total field magnetic measurements of the Earth's magnetic field along traverse corridors at 25-metre intervals.

VLF EM Survey

Each morning the availability of VLF EM stations would be checked. This would involve frequencies 24.0, 24.8 and 25.2. The stations that returned a signal strength greater than 3 would be used for the days. The VLF EM sample points consists of taking measurements at 25 meter along predetermined traverse corridors.

6. QUALITY CONTROL & PROCESSING

6.1 DATA QC & PROCESSING

For optimal data quality, when conducting the survey, ferromagnetic objects were kept away from the operator, so as not to impair the quality of measurements. A sensor was mounted on a backpack at a height of approximately 2-metres, in order to optimally minimize localized near-surface geologic noise. Noise spikes and/or nulls during acquisition were noted and repeats at those locations were taken until the readings normalized. These noise spikes and nulls were removed during post processing.

The VLF EM sensor was mounted on the back of a backpack along with the mag sensor. Three frequencies were set during the survey. Frequencies that had a weak signal (<5 pt) was removed at the time of processing.

At the end of a survey day, the mobile and base-station units were linked, via RS-232 ports, for diurnal drift and other magnetic activity (ionospheric and sferic) corrections using internal software. Diurnally corrected magnetic data (Total Field Magnetic; TFM) was gridded using the Minimum Curvature Gridding option in Geosoft Oasis (Figure 14). If necessary, lines were returned to and repeated and/or manual edits were made.

Repeats were also taken during the course of the survey day. The start and finish of each survey line was repeated and compared for consistency. The operator also repeated any survey point which was deemed to be inconsistent.

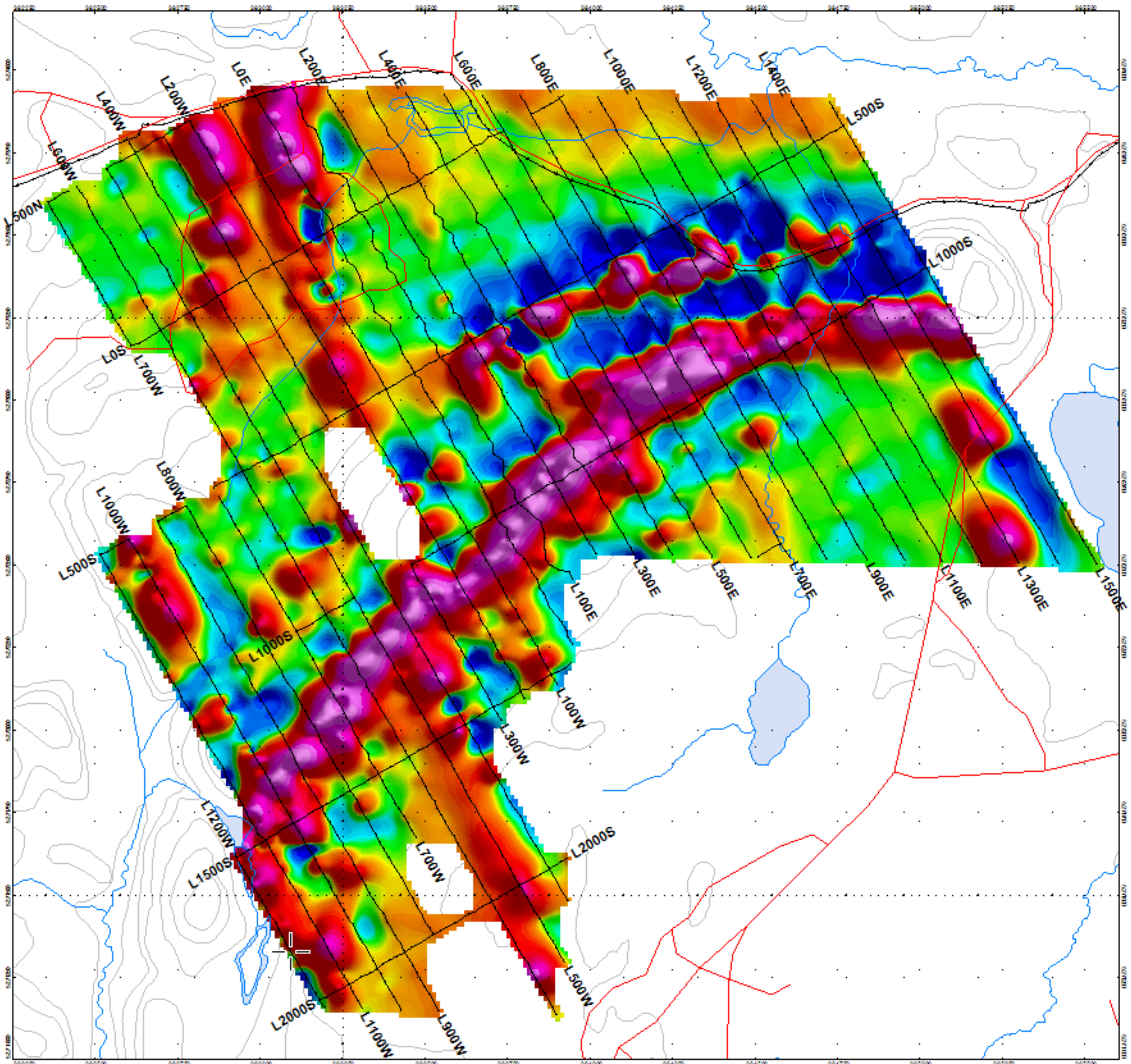


Figure 7: Diurnally Corrected Mag Grid (TFM)

7. RESULTS, INTERPRETATION & CONCLUSIONS

7.1 RESULTS

The following figures show the results obtained from the magnetic and VLF EM surveys over the Fawn Property.

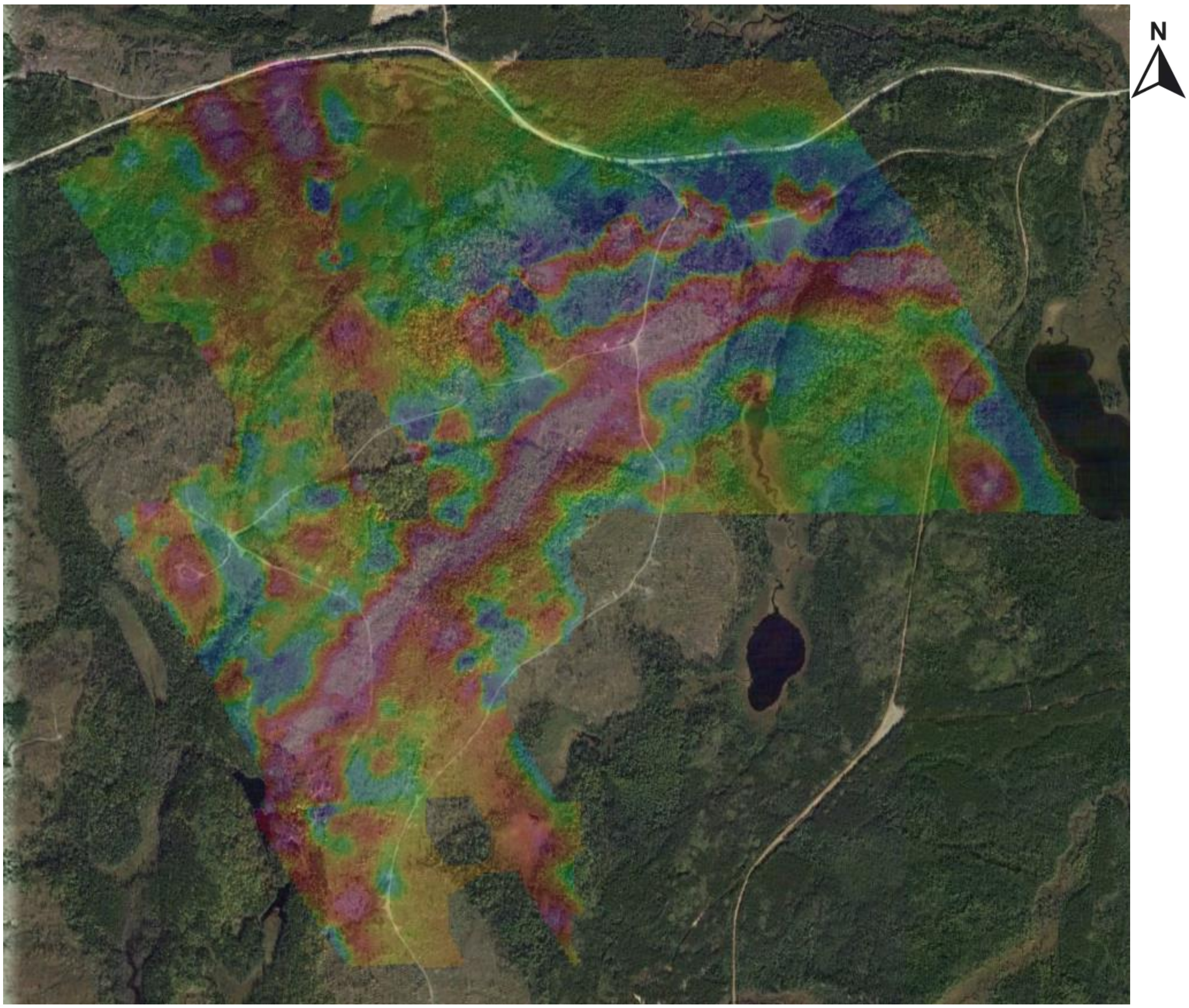


Figure 8: Magnetic plan over the Fawn Property on Google Earth. (©2018 Google, Image ©2019 DigitalGlobe & Image ©2019 CNES/Airbus)

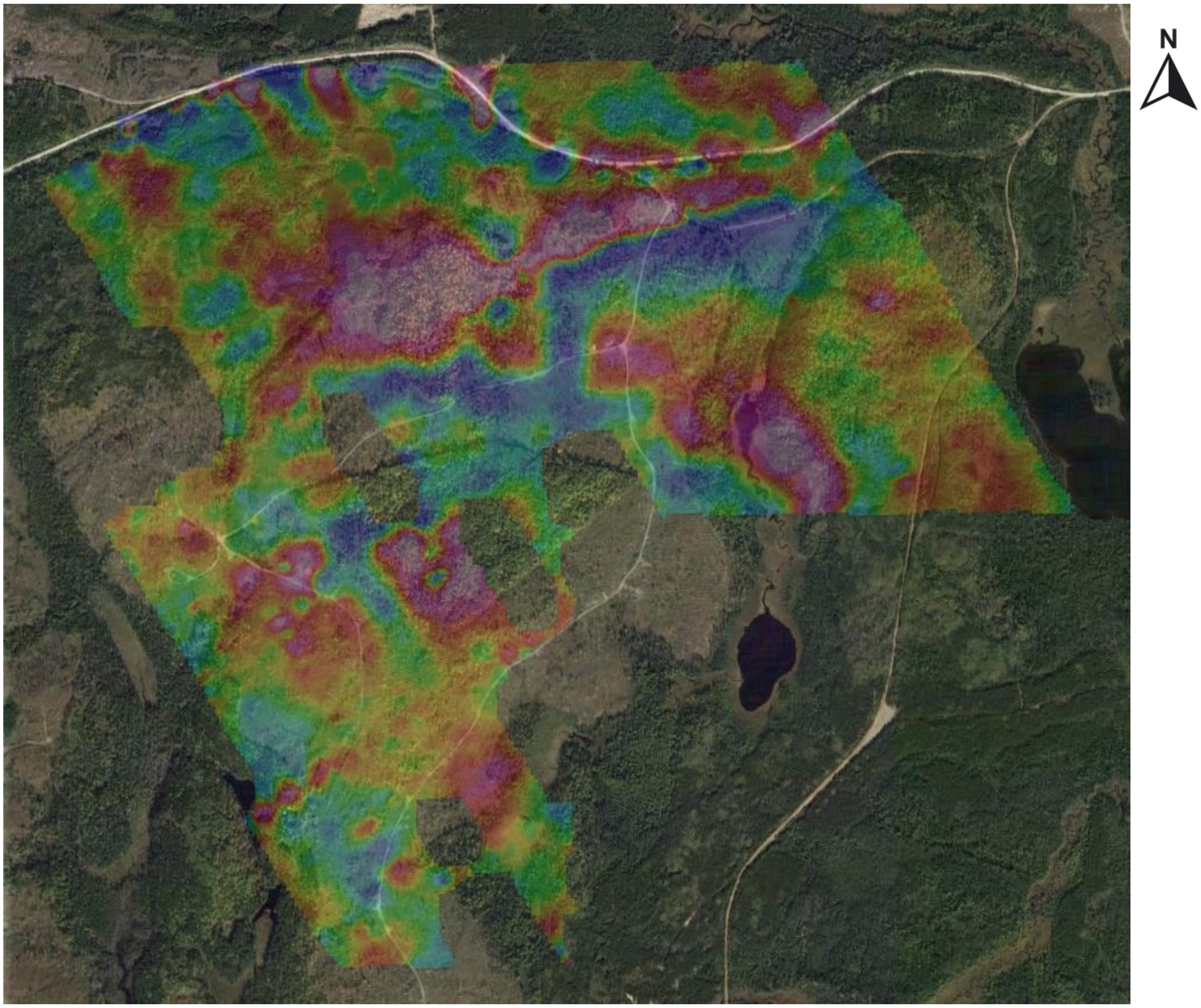


Figure 9: VLF EM frequency NAA and NML In-Phase response. (©2018 Google, Image ©2019 DigitalGlobe & Image ©2019 CNES/Airbus)

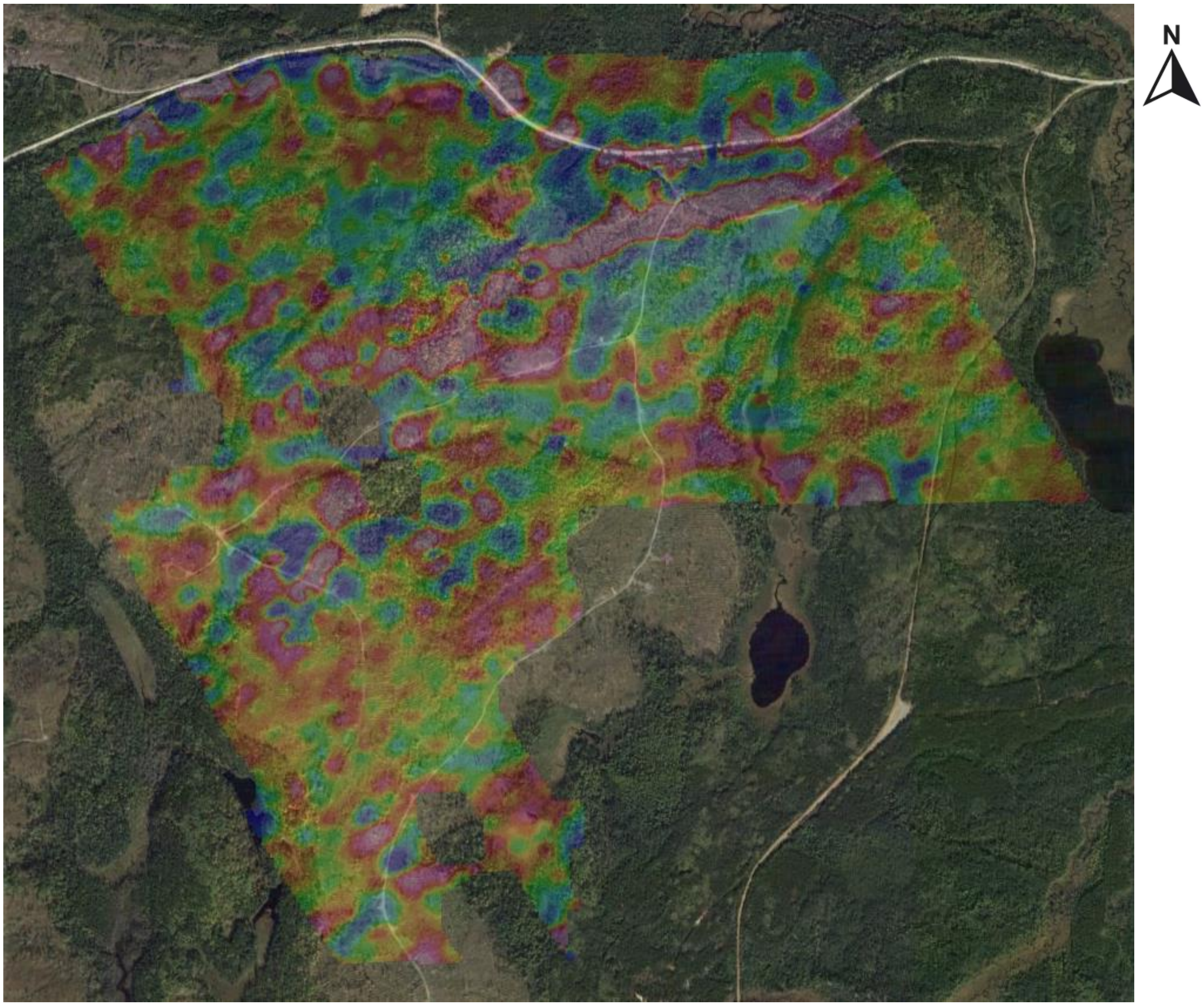


Figure 10: Fraser filter of the VLF EM frequency NAA and NML. (©2018 Google, Image ©2019 DigitalGlobe & Image ©2019 CNES/Airbus)

7.2 INTERPRETATIONS

These magnetic and VLF EM surveys were designed to define and ground truth a magnetic and airborne anomaly that was observed in a historic assessment file (Figure 11).

Some culture that could affect the survey results was noted by the field crew. This culture, located along the north end of the grid, consisted of the Sultan Highway corridor, which was an unpaved road with a power/phone line following it.

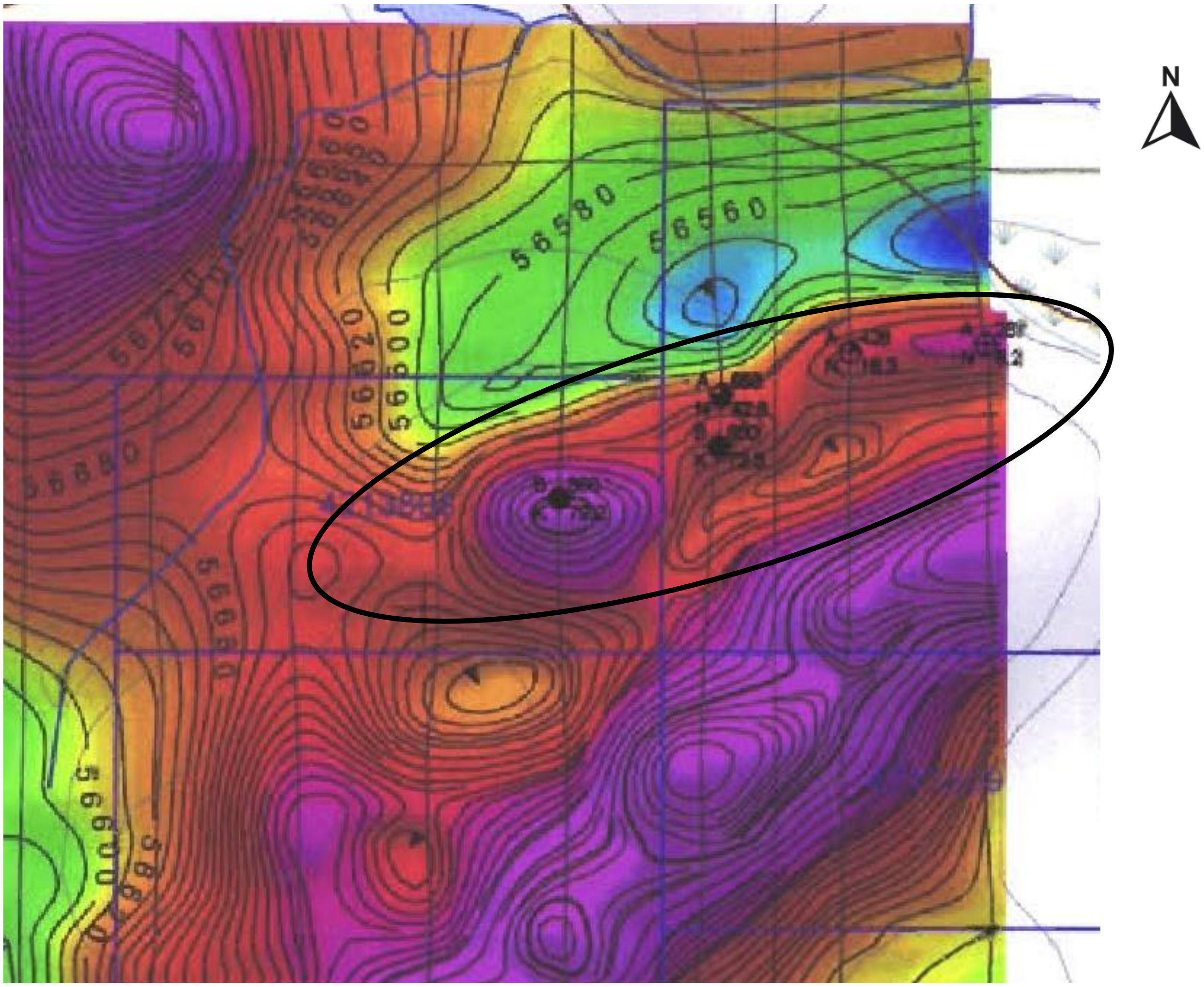


Figure 11: 2008 airborne magnetic grid by Aeroquest showing anomaly being investigated

The target anomaly seen in the airborne signature was highlighted in the ground survey. It was resolved by both the magnetic and VLF EM signatures and extends over lines 1300E through 100W, just southeast of tieline 500S (Figure 12; 1). This anomaly is represented by a strong linear magnetic signature that strikes grid west across the lines with a correlating VLF EM axis. The VLF EM axis strikes from a tight strong region (Figure 13; 1) into a weaker, broader region (Figure 13; 2). This may be indicative of a system changing from a massive to a more disseminated or stringer system.

A similar signature to the stringer system can be seen at 500W through 800W at approximately 900S (Figure 13; 3). The stringer system and this anomaly fall on either side of a magnetically elevated signature striking at 340 degrees (Figure 12; 2). This may indicate that the stringer system has been displaced and that this anomaly is a continuation of the main system.

The nature of the 340-degree anomaly indicates that magnetite is present along with a conductive feature. This is similar to an anomaly that would be expected with an interflow sulphide deposit.

A third strong magnetic signature can be seen paralleling the primary signature approximately 250m to the south (Figure 12; 3). This signature continues to strike west, however appears to slowly start striking southward. This anomaly does not have a correlating VLF signature and may be related to a gabbro.

Numerous north-south linear magnetic features also become evident within the dataset. These linear magnetic features most likely relate to regional dikes.

Offsets occur in the interpreted gabbro. These can also be correlated to changes within the primary anomaly from the more massive signature to the disseminated/stringer signature. This may indicate some late structural features crossing the region.

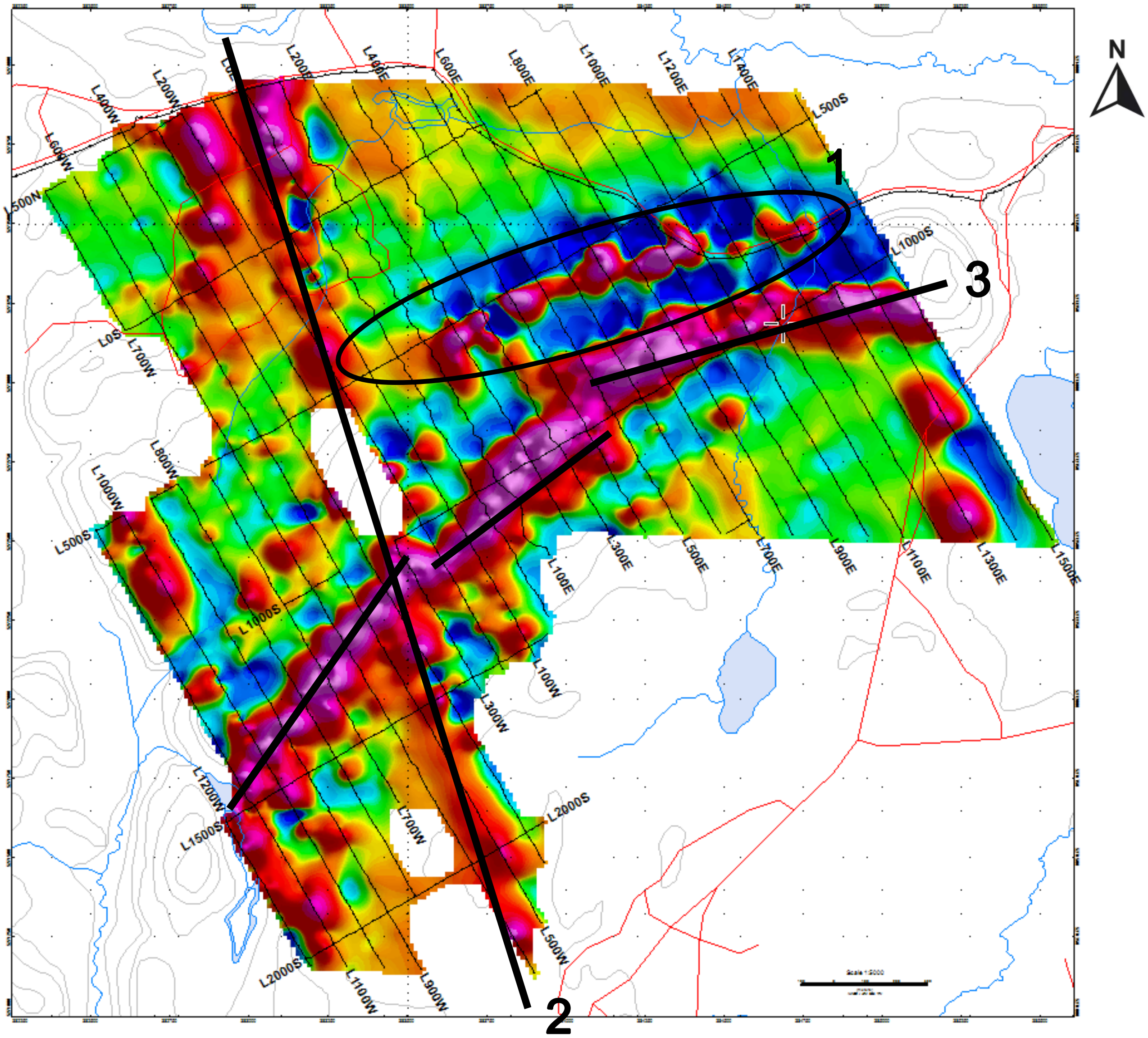


__Figure 12: Magnetic Grid with Interpretations__

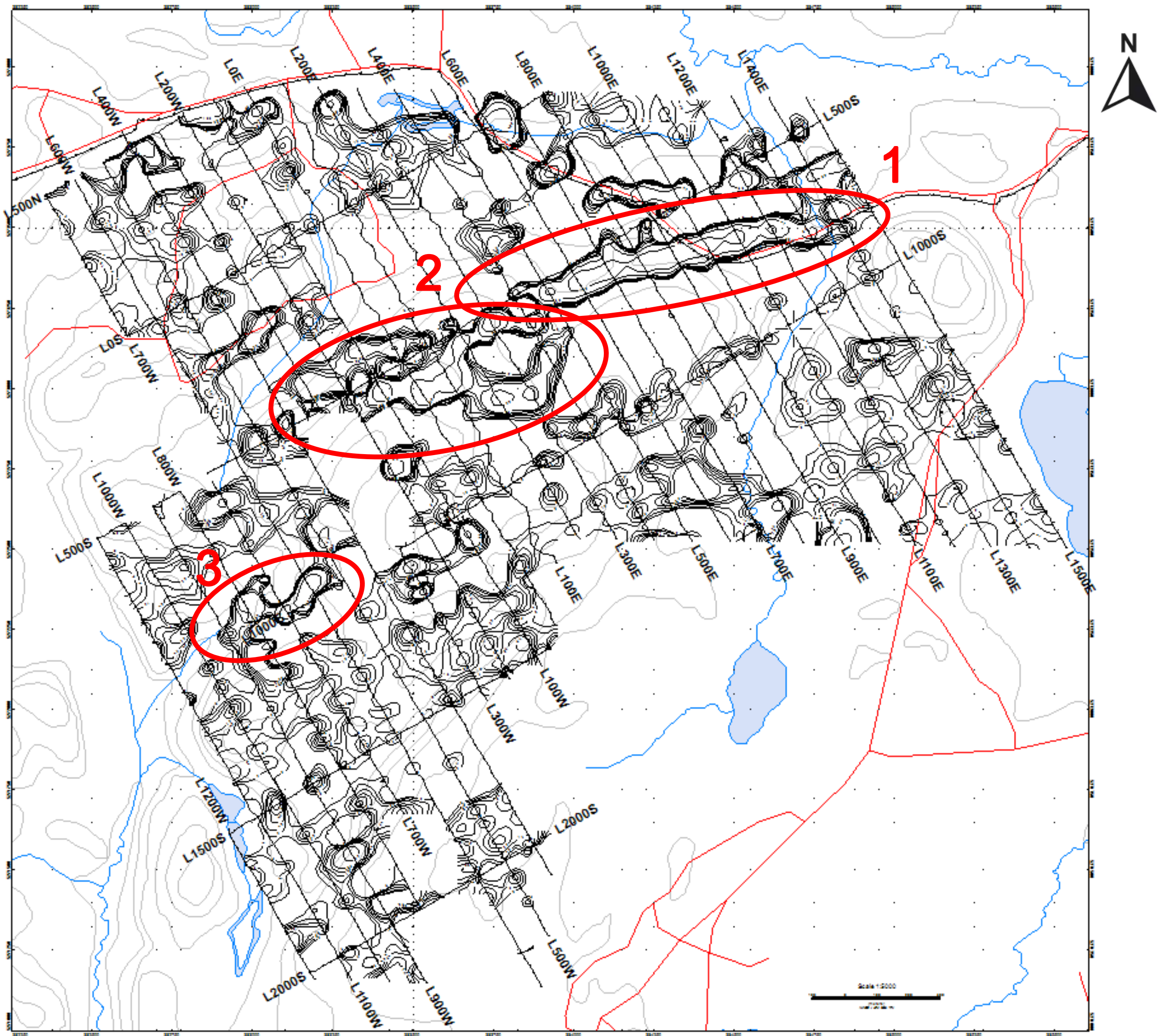


Figure 13: VLF EM Fraser Filter Contours of the NAA & NML Stations with Interpretations

7.3 Recommendations

A compilation of the historic work on the property is recommended. This may better identify the source of the anomalies.

The strength of the primary magnetic and VLF EM signatures indicates that the anomaly should outcrop. Prospecting and trenching should be performed on this strong magnetic signature and VLF EM axis. This would help determine the source of the anomaly.

Cutting a grid over all the lines and extending the grid eastward by 200 to 300 metres, from 0S to 1000S, is recommended. An IP survey could then be performed on this grid to determine the possible mineralization type.

7.4 Conclusions

The magnetic and VLF EM surveys successfully indicated the presence of a strong magnetic response with a coincident VLF EM response. This appears to represent the previously identified airborne anomaly. The anomaly most likely represents a mineralized interflow sequence.

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 and securities of **Ashley Gold Mines Limited.**

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.

Larder Lake, ON
February 21, 2019

APPENDIX A

STATEMENT OF QUALIFICATIONS

I, Melanie Postman, hereby declare that:

1. I am a Geoscientist-in-Training with residence in Larder Lake, Ontario and am presently employed as a Junior Geophysicist with Canadian Exploration Services Ltd. of Larder Lake, Ontario.

2. I graduated with a Bachelor of Science Honors specialization degree in geophysics for professional registration from the University of Western Ontario, in London Ontario, in 2017.

3. I am a member of the Association of Professional Geoscientists as a Geoscientist-in-Training (Member ID 10710).

4. I have previous geophysical work experience during and following my education.

5. I do not have nor expect an interest in the properties and securities of **Ashley Gold Mines Limited.**

6. I am responsible for assisting with 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 opinion based on my consideration of the information available to me at the time of writing this report.

Melanie Postman, G.I.T., B.Sc.
Junior Geophysicist

Larder Lake, ON
February 21, 2019

APPENDIX A

STATEMENT OF QUALIFICATIONS

I, Mandy Lim, hereby declare that:

7. I am a soon-to-be Geoscientist-in-Training with residence in St. John's, Newfoundland and am presently employed as a Junior Geophysicist with Canadian Exploration Services Ltd. of Larder Lake, Ontario.

8. I graduated with a Bachelor of Science Honours specialization degree in earth sciences, with focus on geophysics for professional registration from Memorial University of Newfoundland, in St. John's, Newfoundland, in 2018.

9. I am currently undergoing the application process to register as a Geoscientist-in-Training to later become a practicing member of the Professional Engineers and Geoscientists Newfoundland and Labrador.

10. I have previous geophysical work experience during my education.

11. I do not have nor expect an interest in the properties and securities of **Ashley Gold Mines Limited.**

12. I am responsible for assisting with 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 opinion based on my consideration of the information available to me at the time of writing this report.

Mandy Lim, B.Sc.
Junior Geophysicist
(non-Professional)

Larder Lake, ON
February 21, 2019

APPENDIX A

STATEMENT OF QUALIFICATIONS

I, Andrew Salerno, hereby declare that:

1. I am a soon-to-be Geoscientist-in-Training with residence in Virginiatown, Ontario and am presently employed as a Junior Geologist with Canadian Exploration Services Ltd. of Larder Lake, Ontario.

2. I graduated with a Bachelor of Science Honors specialization in geology from the University of Waterloo, in Waterloo, Ontario, in 2018.

3. I am currently undergoing the application process to register as a Geoscientist-in-Training to later become a practicing member of the Association of Professional Geoscientists.

4. I do not have nor expect an interest in the properties and securities of **Ashley Gold Mines Limited.**

5. I am responsible for assisting with 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.

Andrew Salerno, B.Sc.
Junior Geologist
(non-Professional)

Larder Lake, ON
February 21, 2019

APPENDIX B

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 diametre 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 (GEM Systems, 2007).

APPENDIX C

REFERENCES

Google. (2019). *Location of the Fawn Property.* Retrieved February 6, 2019 from https://www.google.ca/maps/@47.5585558,-82.8843768,8.17z

Google, CNES/Airbus & DigitalGlobe. (2019). *Fraser filter of the VLF EM frequency NAA and NML.* Google Earth. Imagery date June 17, 2011. Accessed on February 20, 2019.

Google, CNES/Airbus & DigitalGlobe. (2019). *Magnetic plan over the Fawn Property on Google Earth.* Google Earth. Imagery date June 17, 2011. Accessed on February 20, 2019.

Google, CNES/Airbus & DigitalGlobe. (2019). *Survey Design overlaid on Google Earth.* Google Earth. Imagery date June 17, 2011. Accessed on February 2, 2019.

Google, CNES/Airbus & DigitalGlobe. (2019). *VLF EM frequency NAA and NML In-Phase response.* Google Earth. Imagery date June 17, 2011. Accessed on February 20, 2019.

MNDM & OGSEarth. (2018). *OGSEarth*. Ontario Ministry of Northern Development and Mines.

GEM Systems. (2007). *GSM-19 v7.0 Instruction Manual.* GEM Systems Inc. Advanced Magnetometers.

APPENDIX D

DIGITAL DATA

The digital data contains

1) PDF copy of this report
2) PDF copy of the maps
3) Raw data in ascii format

Data Columns:

1 – X *(m)*
2 – Y *(m)*
3 – UTMX *(m)*
4 – UTMY *(m)*
5 – MSL Z *(m)*
6 – DISTANCE *(m)*
7 – UNCORRECTED MAG *(nT)*
8 – CORRECTED MAG *(cor-nT)*
9 – VLF STATION FREQUENCY *(kHz)*
10 – IN PHASE *(%)*
11 – QUADRATURE *(%)*
12 – p HORIZONTAL COMPONENT
13 – v HORIZONTAL COMPONENT
14 – FIELD STRENGTH *(pT)*

APPENDIX E

LIST OF MAPS (IN MAP POCKET)

Grid Sketch (1:5000)

1) Q2607-ASHLEYGOLD-FAWN-TRAVERSE-CLAIMS

Magnetometer Plan Map (1:5000)

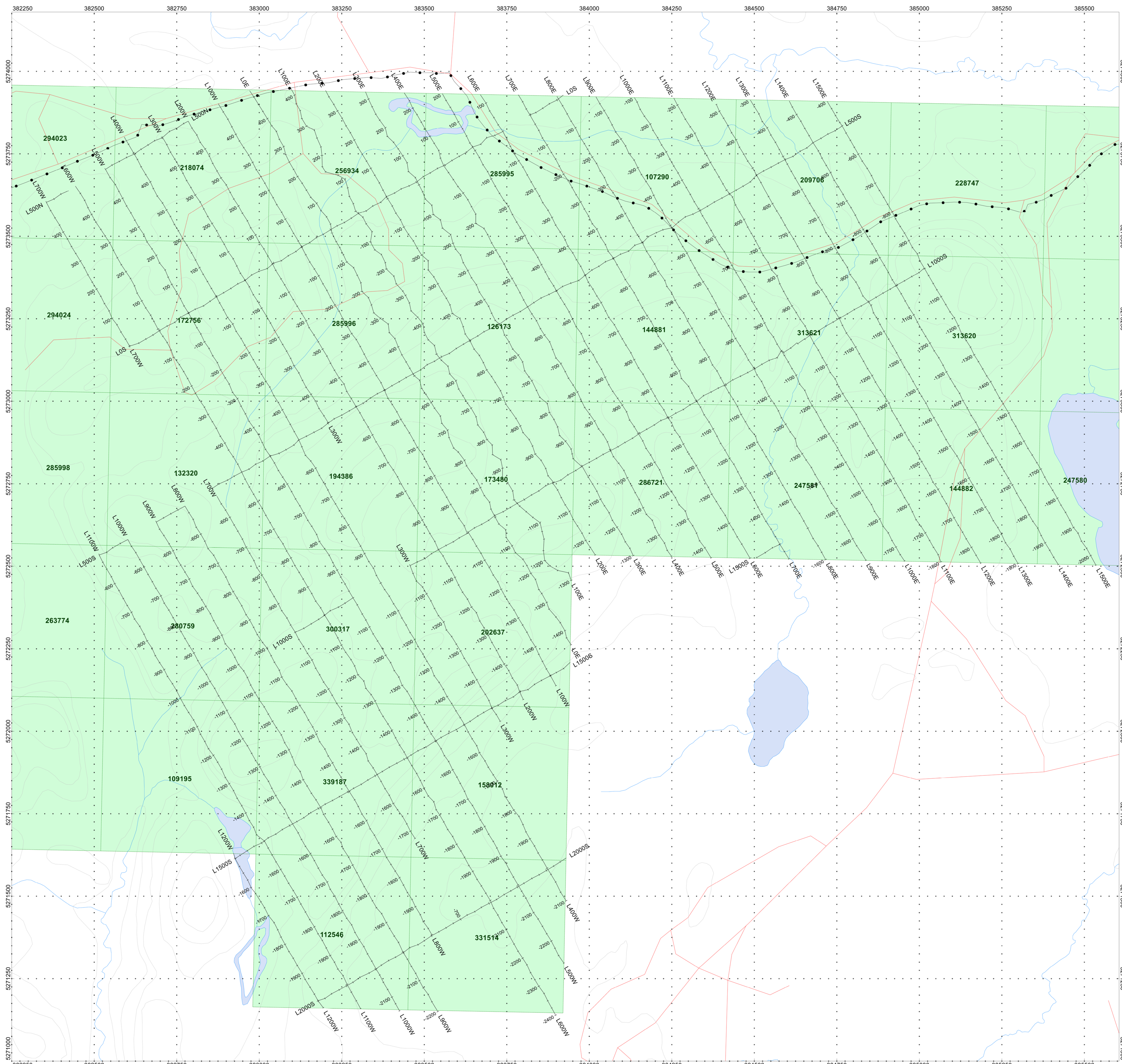
2) Q2607-ASHLEYGOLD-FAWN-MAG-CONT

VLF EM Plan Map (1:5000)

3) Q2607-ASHLEYGOLD-FAWN-VLF-NAA-NML

TOTAL MAPS = 3

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



Scale 1:5000

100 0 100 200 300

(meters)

NAD83 / UTM zone 17N

ASHLEY GOLD MINES LIMITED

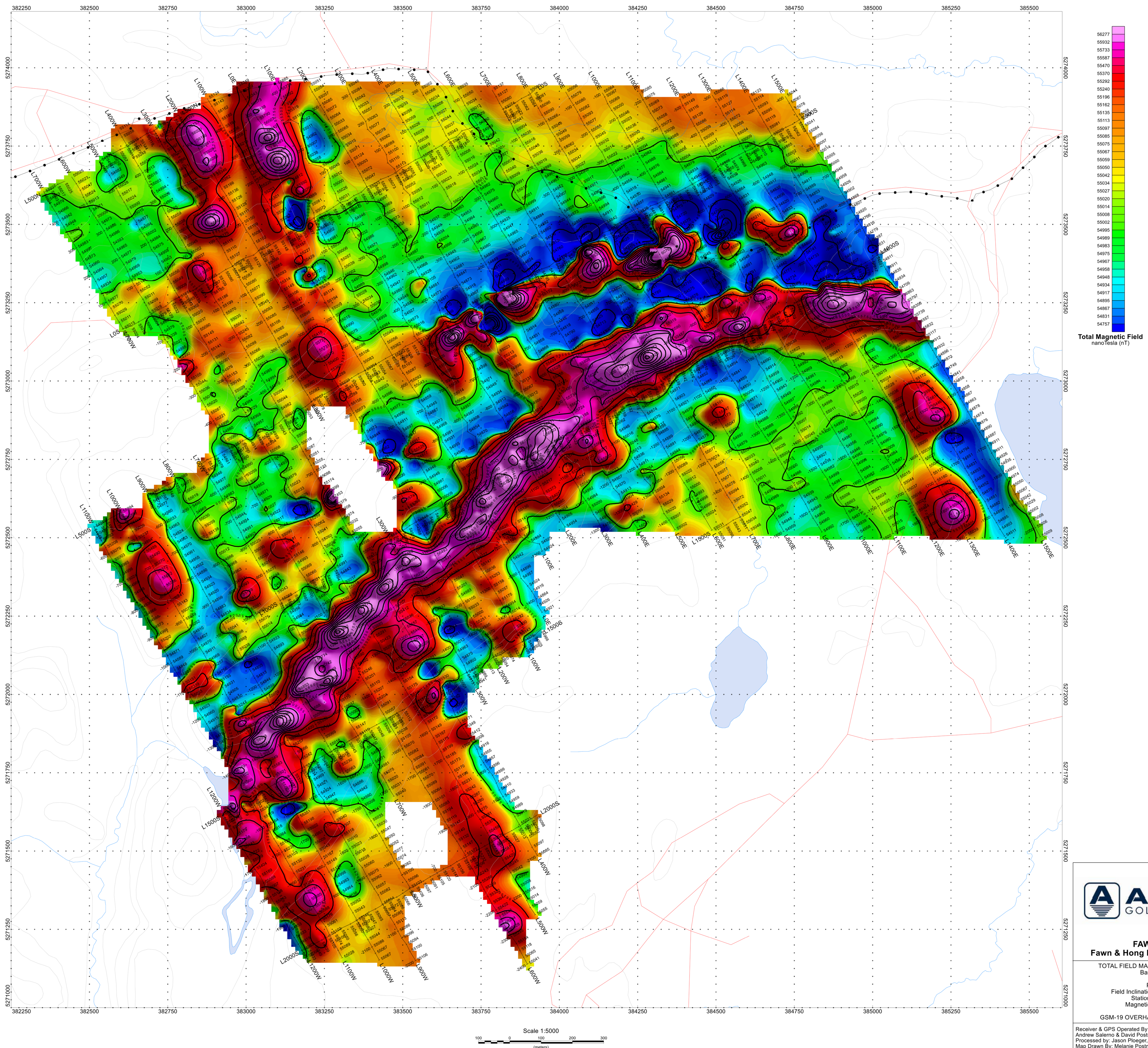
FAWN PROPERTY
Fawn & Hong Kong Townships, Ontario

MAGNETIC & VLF EM TRAVERSES
on OPERATIONAL CLAIM BOUNDARY

Receiver & GPS Operated By:
Andrew Salerno & David Postman
Processed by: Jason Ploeger, P.Geo.
Map Drawn By: Melanie Postman, GIT
February 2019

CXS CANADIAN EXPLORATION SERVICES LTD

Drawing: Q2607-ASHLEY-FAWN-TRAVERSE-CLAIMS



ASHLEY GOLD MINES LIMITED

FAWN PROPERTY
Fawn & Hong Kong Townships, Ontario

TOTAL FIELD MAGNETIC CONTOURED PLAN MAP
Base Station Corrected

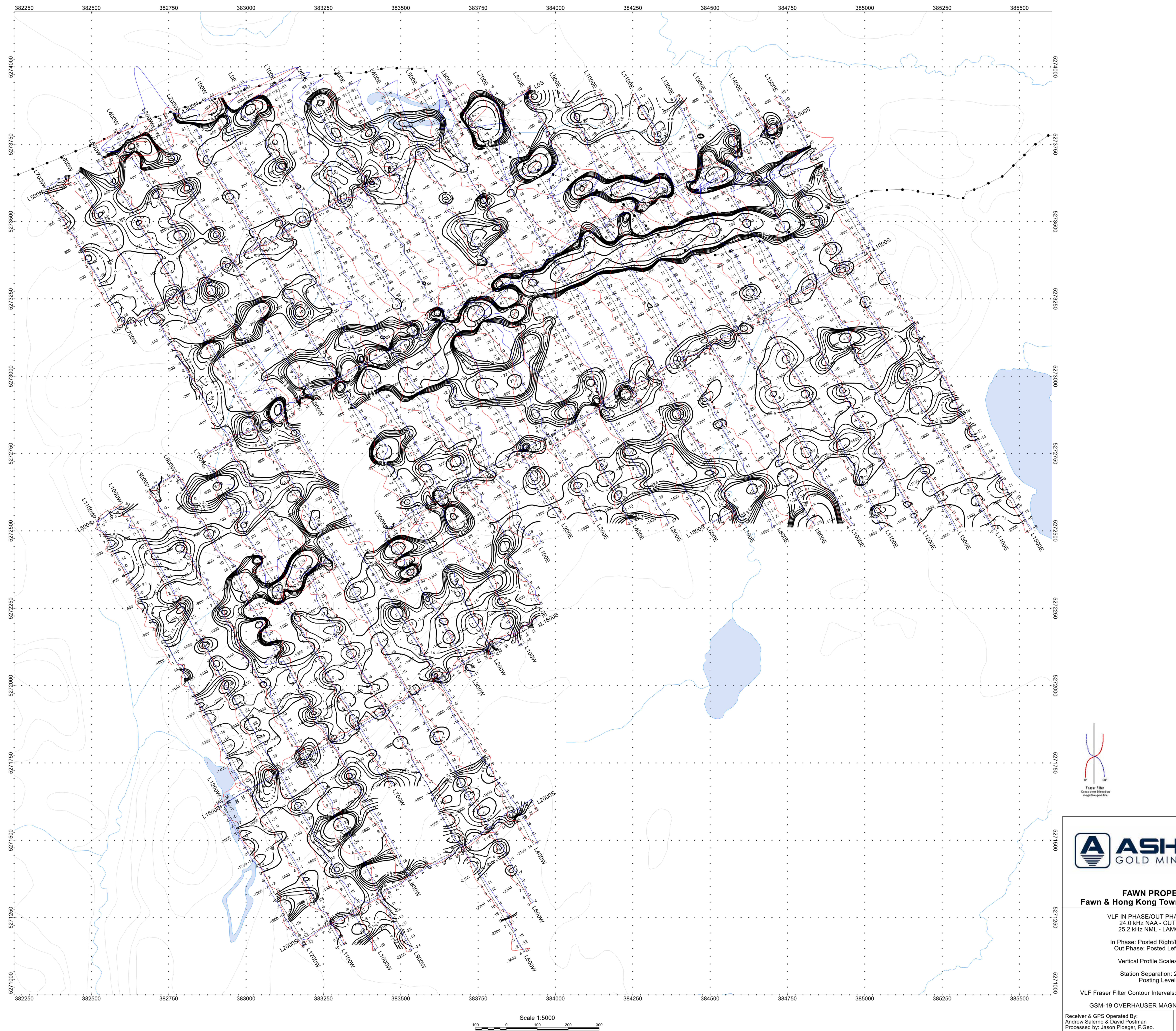
Posting Level: 0nT
Field Inclination/Declination: 73degN/9degW
Station Seperation: 25 meters
Magnetic Contour Interval: 250 nT

GSM-19 OVERHAUSER MAGNETOMETER/VLF v7

Receiver & GPS Operated By:
Andrew Salerno & David Postman
Processed by: Jason Ploeger, P.Geo.
Map Drawn By: Melanie Postman, GIT
February 2019

CXS CANADIAN EXPLORATION SERVICES LTD

Drawing: Q2607-ASHLEY-FAWN-MAG-CONT



ASHLEY GOLD MINES LIMITED

FAWN PROPERTY
Fawn & Hong Kong Townships, Ontario

VLF IN PHASE/OUT PHASE PROFILE
24.0 kHz NAA - CUTLER USA
25.2 kHz NML - LAMOUR USA

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

Vertical Profile Scales: 5 %/mm

Station Separation: 25 metres
Posting Level: 0

VLF Fraser Filter Contour Intervals: 0 5 10 15 20 25 50 100

GSM-19 OVERHAUSER MAGNETOMETER/VLF v7

Receiver & GPS Operated By:
Andrew Salerno & David Postman
Processed by: Jason Ploeger, P.Geo.
Map Drawn By: Melanie Postman, GIT
February 2019

CANADIAN EXPLORATION SERVICES LTD

Drawing: Q2607-ASHLEY-FAWN-VLF-NAA-NML