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**CANADIAN EXPLORATION SERVICES LTD**

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# **TIGER GOLD EXPLORATION CORPORATION**

## **Magnetometer Survey Over the HARKER HERITAGE PROPERTY AREA 11**

### **Holloway and Marriott Town- ships, Ontario**

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C Jason Ploeger, B.Sc, P.Geo  
August 23, 2016

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## 1. SURVEY DETAILS

### 1.1 PROJECT NAME

This project is known as the **Harker Heritage Property – Area 11**.

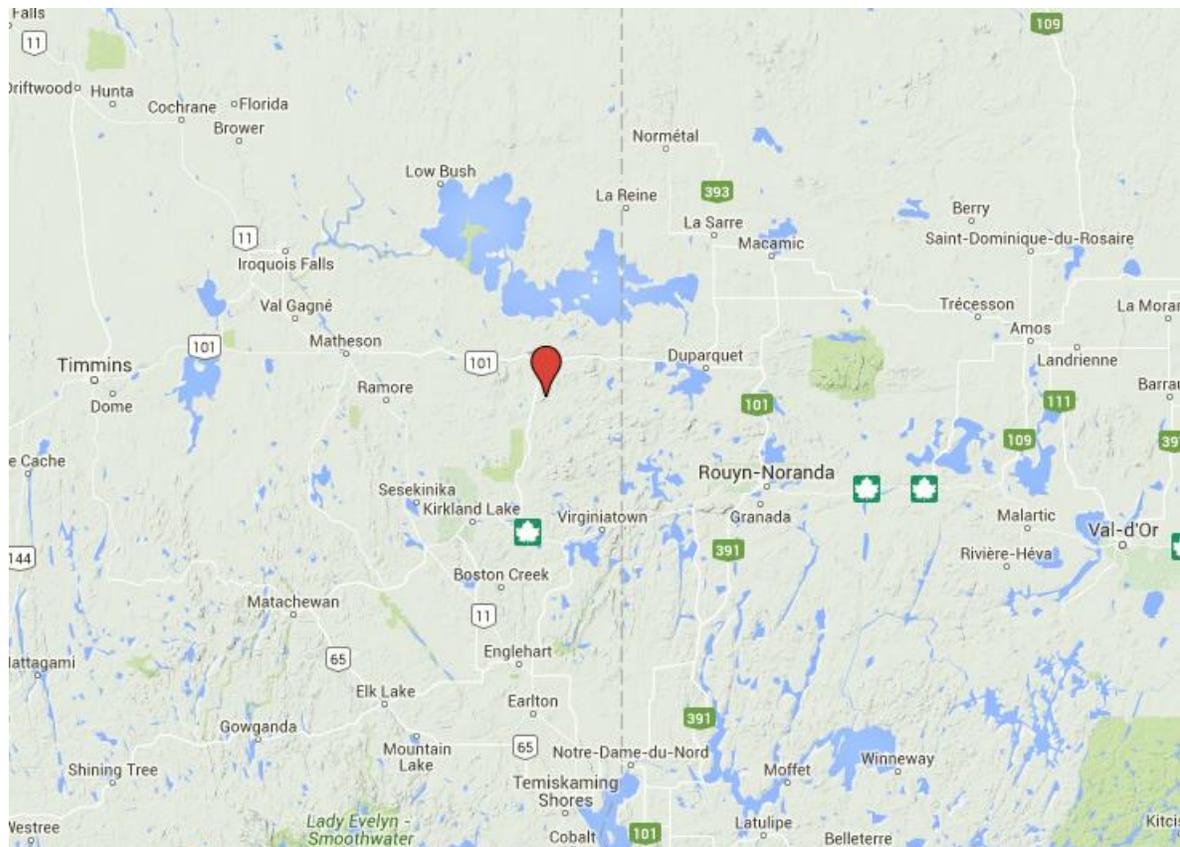
### 1.2 CLIENT

TIGER GOLD EXPLORATION CORPORATION,

103 Government Road.  
Kirkland Lake, Ontario  
P2N 1A9

### 1.3 LOCATION

The Harker Heritage Property is located approximately 50 km northeast of Kirkland Lake, Ontario. The property consists of 375 mining claims comprising of over 850 units spanning Clifford, Elliott, Harker, Holloway, Tannahill and Marriott Townships within the Larder Lake Mining Division.



**Figure 1: Location of the Harker Heritage Property**

#### **1.4 ACCESS**

Access to the property was attained with a 4x4 truck via highway 672 and highway 101. Numerous forestry access roads and trails were travelled by snowmobile to access the various parts of the property.

Area 11 is located within Holloway and Marriott Township. Access to this area was via the Rosko Forestry Road which can be found 31.5 kilometers north along highway 672 from its intersection with highway 66. Rosko Forestry Road is then travelled for an additional 21 kilometers to the edge of the survey area. From this location, a snowmobile was used to access the traverse area.

#### **1.5 SURVEY AREA**

The survey area was designed to be a reconnaissance survey through the claim group. The traversed lines were established using a GPS in conjunction with the execution of the survey and were based on topography and a path of least resistance.

## 2. SURVEY WORK UNDERTAKEN

### 2.1 SURVEY LOG

Date	Description	Total Survey (km)
March 14, 2016	Locate traverse area and begin magnetic traverses.	5.5
March 15, 2016	Continue magnetic survey.	12.043
March 16, 2016	Continue magnetic survey.	9.989
March 17, 2016	Continue magnetic survey.	5.49
March 18, 2016	Continue magnetic survey.	12.146
March 22, 2016	Complete magnetic reconnaissance survey over Area 11.	4.361

**Table 1: Survey Log**

### 2.2 PERSONNEL

Bruce Lavalley and Claudia Moraga both of Britt, Ontario operated the Magnetometers along with the performing the GPS navigation.

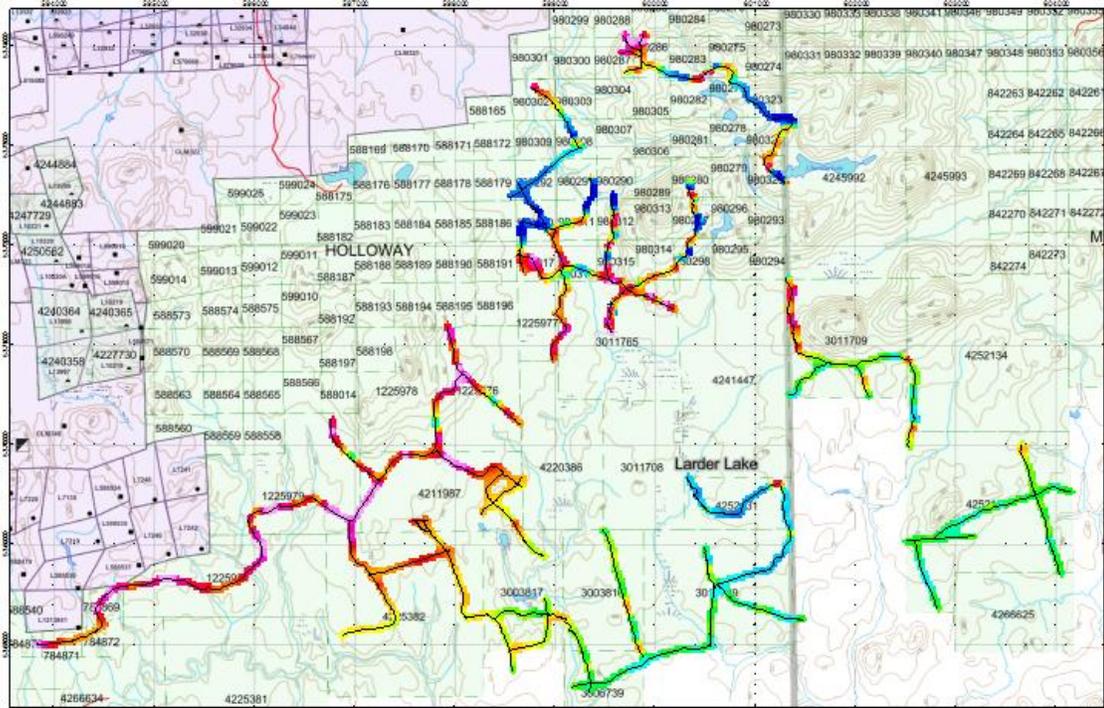
### 2.3 SURVEY SPECIFICATIONS

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 49.529 line kilometers of Magnetometer was read over the Harker Heritage Property between March 14<sup>th</sup> and March 22<sup>nd</sup>, 2016. This consisted of 51606 magnetometer samples taken at a 1 second sample interval.

### 3. OVERVIEW OF SURVEY RESULTS

#### 3.1 SUMMARY



**Figure 2: Magnetometer Readings**

The purpose of the magnetic survey was as a reconnaissance tool and to assist in tying historic surveys together. A total of 49.529 kilometers of traverses was performed over area 11.

Generally, the reconnaissance area indicates the general existence of an east-north-east magnetic fabric. This most likely reflects the various volcanic geological layers in the region.

Three distinct magnetic variations are visible within the reconnaissance area. The southern signature appears over claim 4252131. This is represented by a region of depressed magnetic values that do not appear to trend with the magnetic fabric. This may indicate the presence of an intrusive in this general vicinity.

The northern part of the reconnaissance area exhibits an elevated signature followed by a magnetic low signature. This interaction may represent a magnetite rich unit of the volcanic pile with an alteration depleting the magnetite. The limited traverses over this make it difficult to predict, and a more detailed magnetic survey is recommended.

I would recommend compiling the historic ground magnetic data and leveling it to this survey. This compared with other geoscientific data will provide a more reliable geological image of the area.

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## APPENDIX A

### STATEMENT OF QUALIFICATIONS

I, C. Jason Ploeger, hereby declare that:

1. I am a professional geophysicist with residence in Larder Lake, Ontario and am presently employed as a Geophysicist and Geophysical Manager of Canadian Exploration Services Ltd. of Larder Lake, Ontario.
2. I am a Practising Member of the Association of Professional Geoscientists, with membership number 2172.
3. I graduated with a Bachelor of Science degree in geophysics from the University of Western Ontario, in London Ontario, in 1999.
4. I have practiced my profession continuously since graduation in Africa, Bulgaria, Canada, Mexico and Mongolia.
5. I am a member of the Ontario Prospectors Association, a Director of the Northern Prospectors Association and a member of the Society of Exploration Geophysicists.
6. I do not have nor expect an interest in the properties and securities of **Tiger Gold Exploration Corporation.**
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  
August 23, 2016

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## APPENDIX B

### THEORETICAL BASIS AND SURVEY PROCEDURES

#### TOTAL FIELD MAGNETIC SURVEY

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

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

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## 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 recommended
Battery life:	20 hours
Waterproof:	yes (IPX7)
Floats:	no
High-sensitivity receiver:	yes

Interface:	high-speed USB and NMEA 0183 compatible
<b>Maps &amp; Memory:</b>	
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
<b>Features &amp; Benefits:</b>	
Automatic routing (turn by turn routing on roads):	yes (with optional mapping for detailed roads)
Electronic compass:	yes (tilt-compensated, 3-axis)
Touchscreen:	no
Barometric altimeter:	yes
Camera:	no
<u>Geocaching-friendly:</u>	yes (paperless)
<u>Custom maps compatible:</u>	yes
Photo navigation (navigate to geotagged photos):	yes
Outdoor GPS games:	no
Hunt/fish calendar:	yes
Sun and moon information:	yes

Tide tables:	yes
Area calculation:	yes
Custom POIs (ability to add additional points of interest):	yes
Unit-to-unit transfer (shares data wirelessly 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](http://www.garmin.com)*

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**APPENDIX D**

**LIST OF MAPS (IN MAP POCKET)**

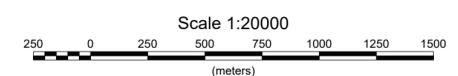
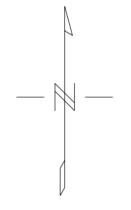
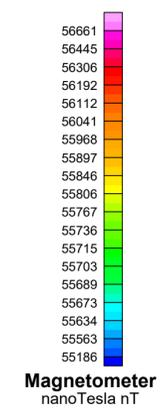
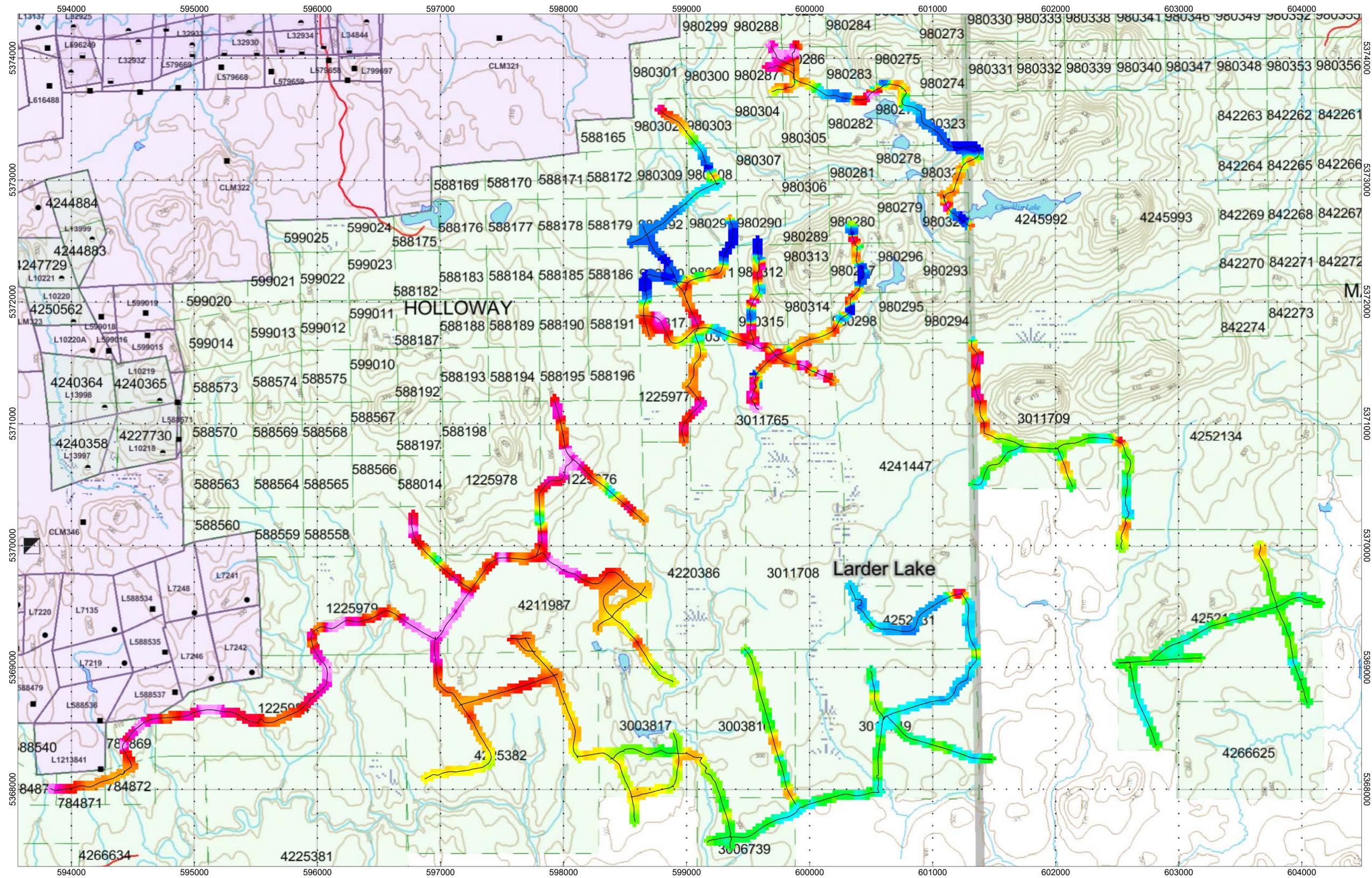
Magnetometer plan map (1:20000)

- 1) TIGER-HARKER HERITAGE-AREA 11-MAG

Posted Magnetometer plan maps (1:5000)

- 2) TIGER-HARKER HERITAGE-AREA 11a-MAG
- 3) TIGER-HARKER HERITAGE-AREA 11b-MAG
- 4) TIGER-HARKER HERITAGE-AREA 11c-MAG
- 5) TIGER-HARKER HERITAGE-AREA 11d-MAG
- 6) TIGER-HARKER HERITAGE-AREA 11e-MAG

**TOTAL MAPS = 6**



**TIGER GOLD  
EXPLORATION CORPORATION**

**HARKER HERITAGE PROPERTY  
Area 11  
Holloway and Marriott Townships, Ontario**

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TOTAL FIELD MAGNETIC CONTOURED PLAN MAP  
Base Station Corrected

Posting Level: 0nT  
Field Inclination/Declination: 74degN/12degW  
Station Separation: 1 second intervals

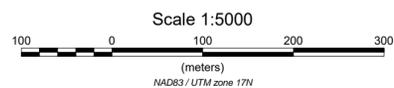
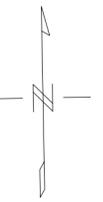
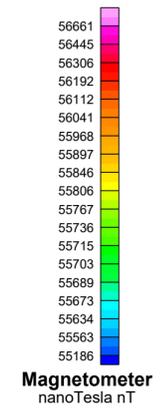
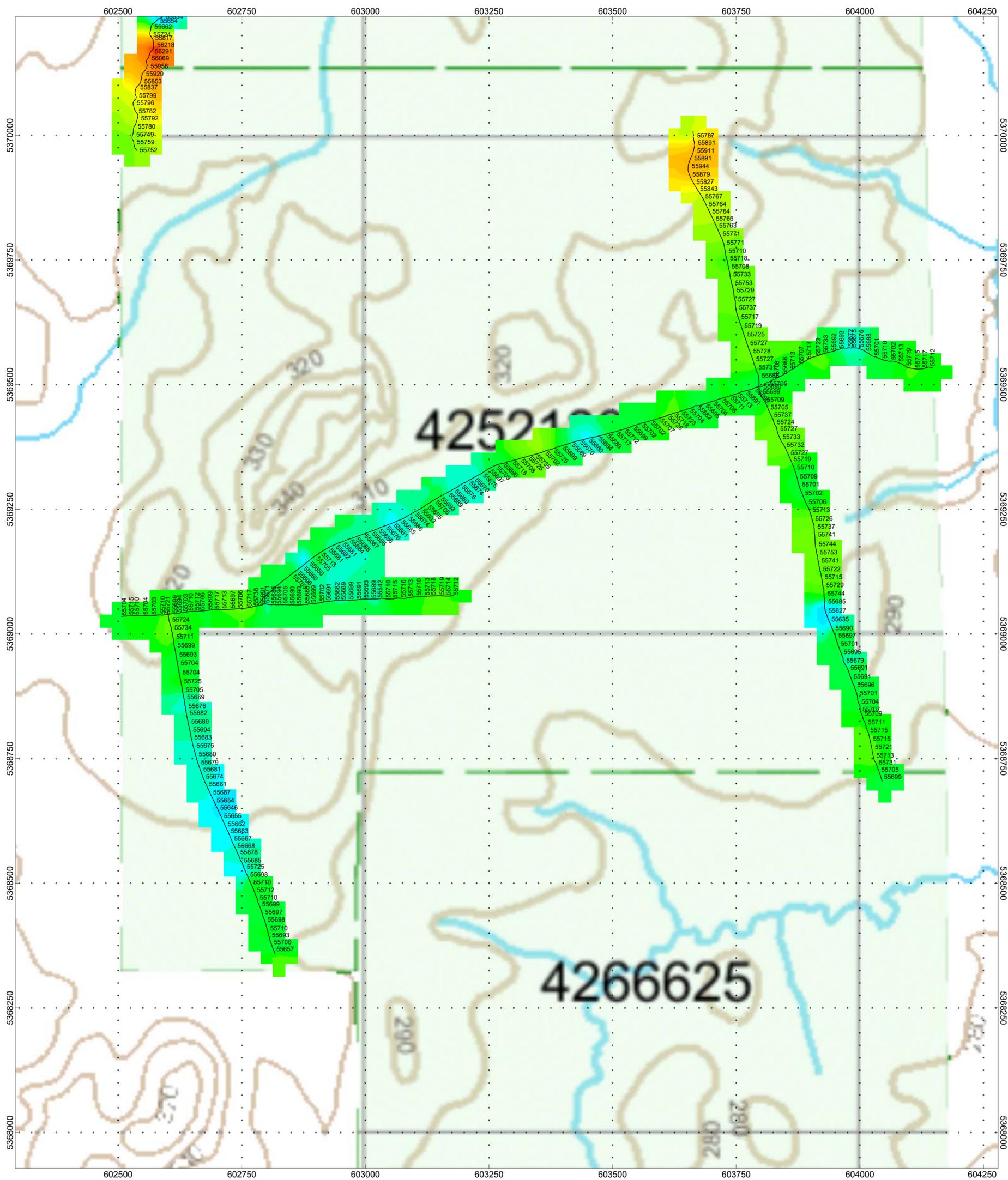
GSM-19 OVERHAUSER MAGNETOMETER v7

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Operated By: Bruce Lavalley  
Processed by: C Jason Ploeger, B.Sc.  
Map Drawn by: C Jason Ploeger, B.Sc.  
August 2016



Drawing: Q2154-TIGER-HARKER HERITAGE-AREA-11-MAG



**TIGER GOLD  
EXPLORATION CORPORATION**

**HARKER HERITAGE PROPERTY  
Area 11a  
Holloway and Marriott Townships, Ontario**

TOTAL FIELD MAGNETIC CONTOURED PLAN MAP  
Base Station Corrected

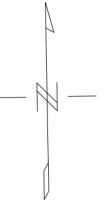
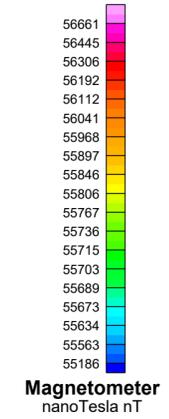
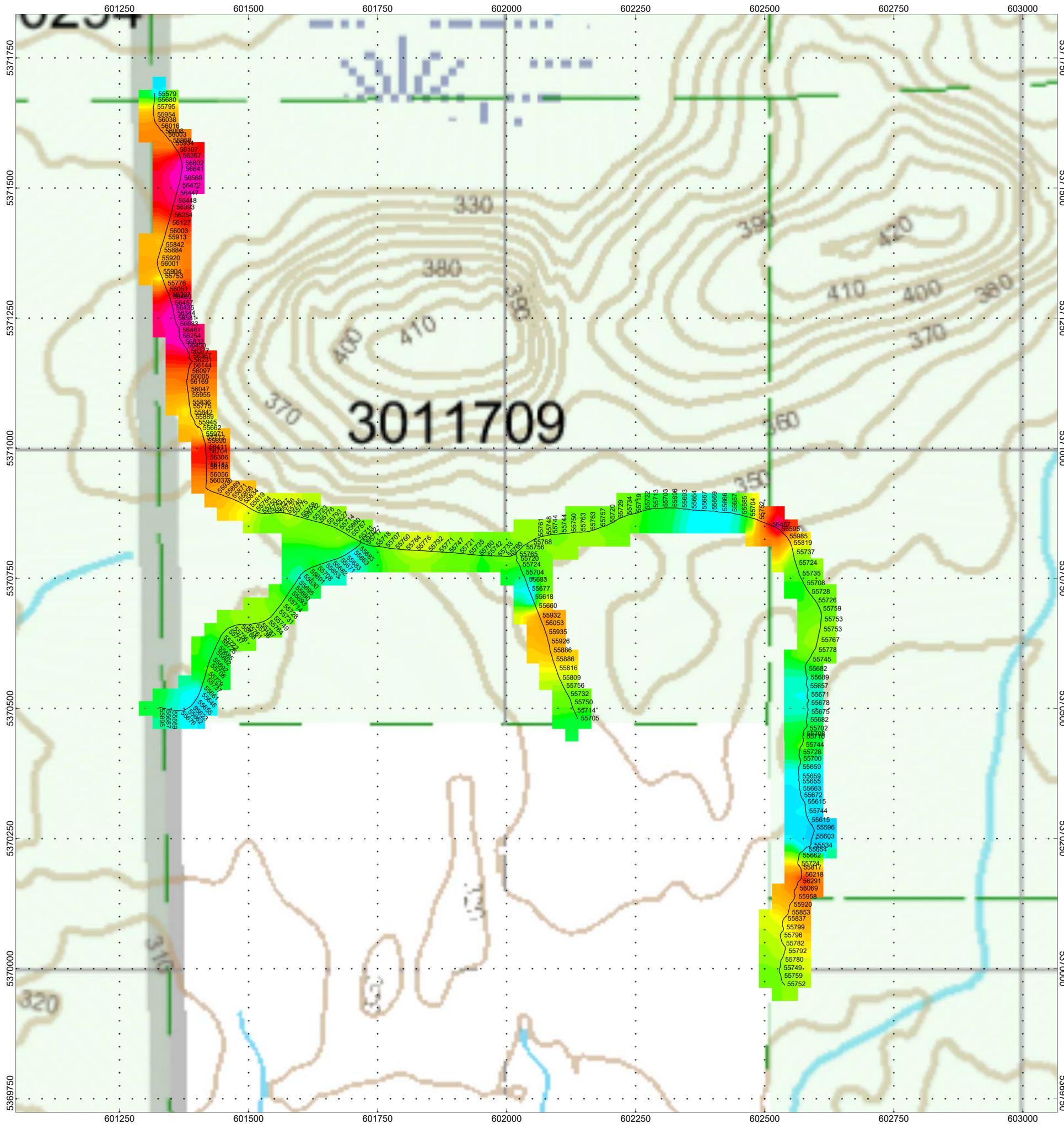
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Field Inclination/Declination: 74degN/12degW  
Station Separation: 1 second intervals

GSM-19 OVERHAUSER MAGNETOMETER v7

Operated By: Bruce Lavalley  
Processed by: C Jason Ploeger, B.Sc.  
Map Drawn By: C Jason Ploeger, B.Sc.  
August 2016

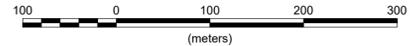


Drawing: Q2154-TIGER-HARKER HERITAGE-AREA-11a-MAG



3011709

Scale 1:5000



(meters)  
NAD83 / UTM zone 17N

**TIGER GOLD  
EXPLORATION CORPORATION**

**HARKER HERITAGE PROPERTY  
Area 11b  
Holloway and Marriott Townships, Ontario**

TOTAL FIELD MAGNETIC CONTOURED PLAN MAP  
Base Station Corrected

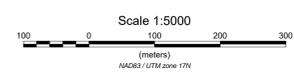
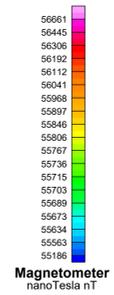
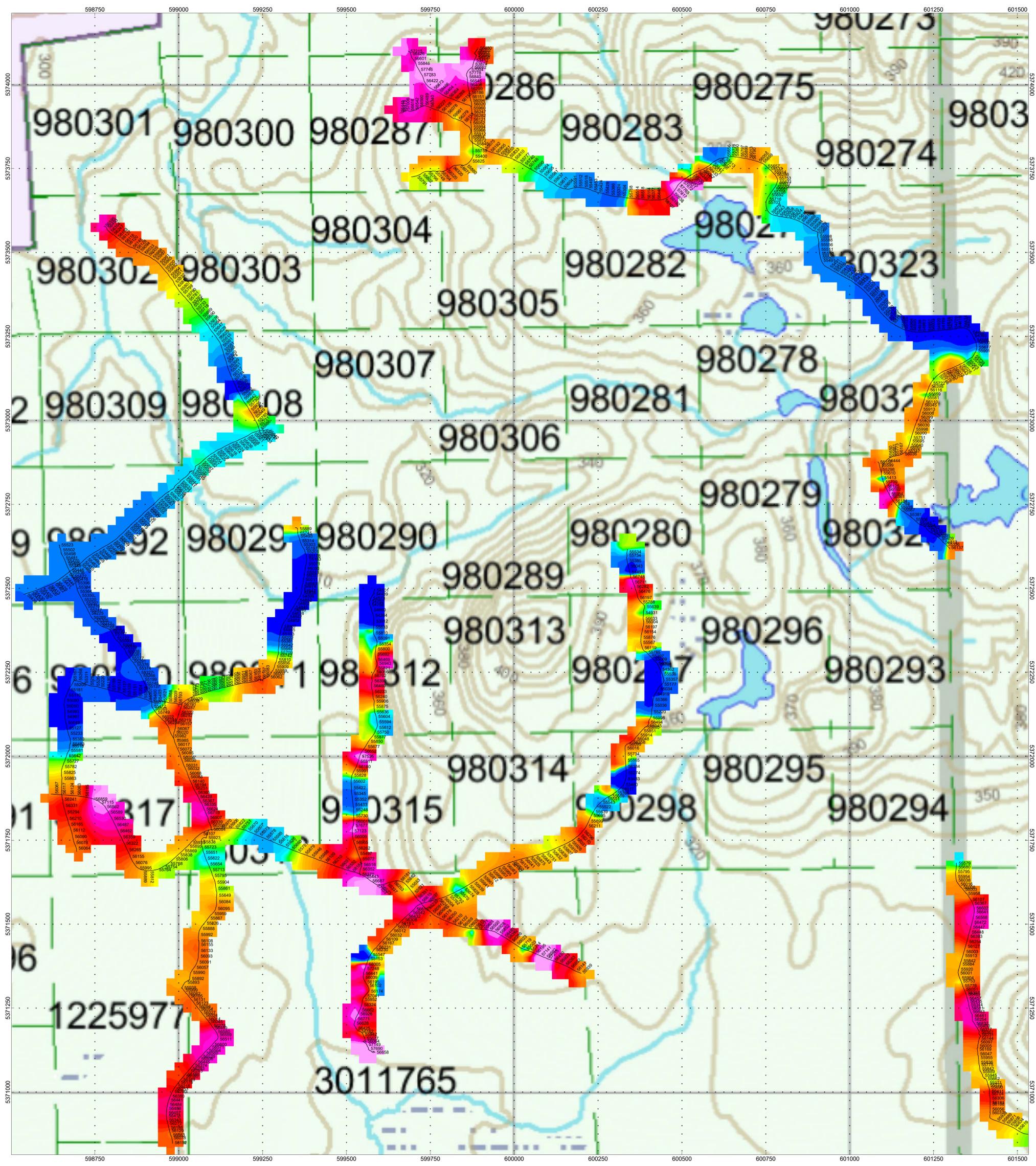
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Station Separation: 1 second intervals

GSM-19 OVERHAUSER MAGNETOMETER v7

Operated By: Bruce Lavalley  
Processed By: C Jason Ploeger, B.Sc.  
Map Drawn By: C Jason Ploeger, B.Sc.  
August 2016



Drawing: Q2154-TIGER-HARKER HERITAGE-AREA-11b-MAG



**TIGER GOLD  
EXPLORATION CORPORATION**

**HARKER HERITAGE PROPERTY  
Area 11c  
Holloway and Marriott Townships, Ontario**

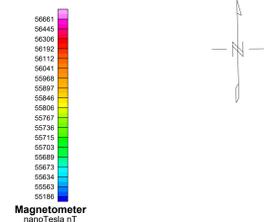
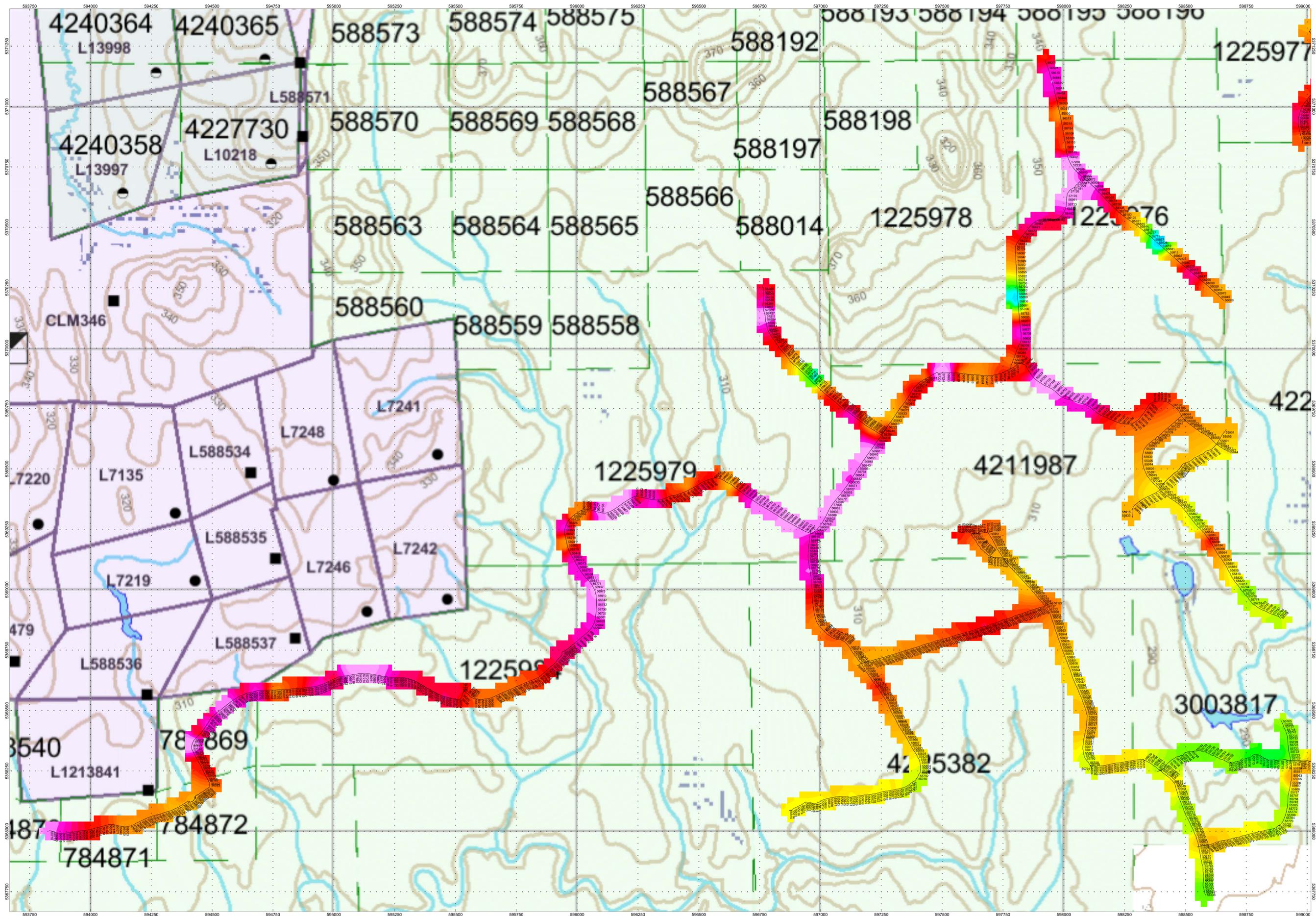
TOTAL FIELD MAGNETIC CONTOURED PLAN MAP  
Base Station Corrected

Posting Level: 0nT  
Field Inclination/Declination: 74degN/12degW  
Station Separation: 1 second intervals

GSM-19 OVERHAUSER MAGNETOMETER v7

Operated By: Bruce Lavalley  
Processed By: C Jason Ploeger, B.Sc.  
Map Drawn By: C Jason Ploeger, B.Sc.  
August 2016

Drawing: Q2154-TIGER-HARKER HERITAGE-AREA-11c-MAG



**TIGER GOLD EXPLORATION CORPORATION**

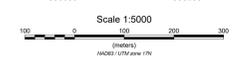
**HARKER HERITAGE PROPERTY**  
Area 11d  
Holloway and Marriott Townships, Ontario

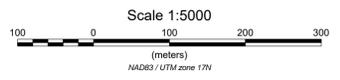
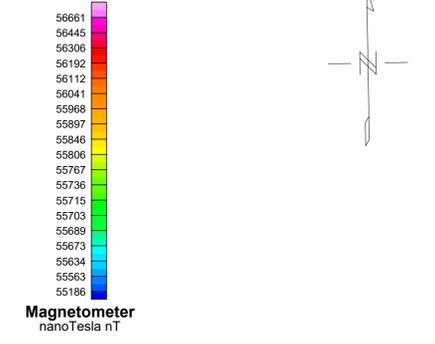
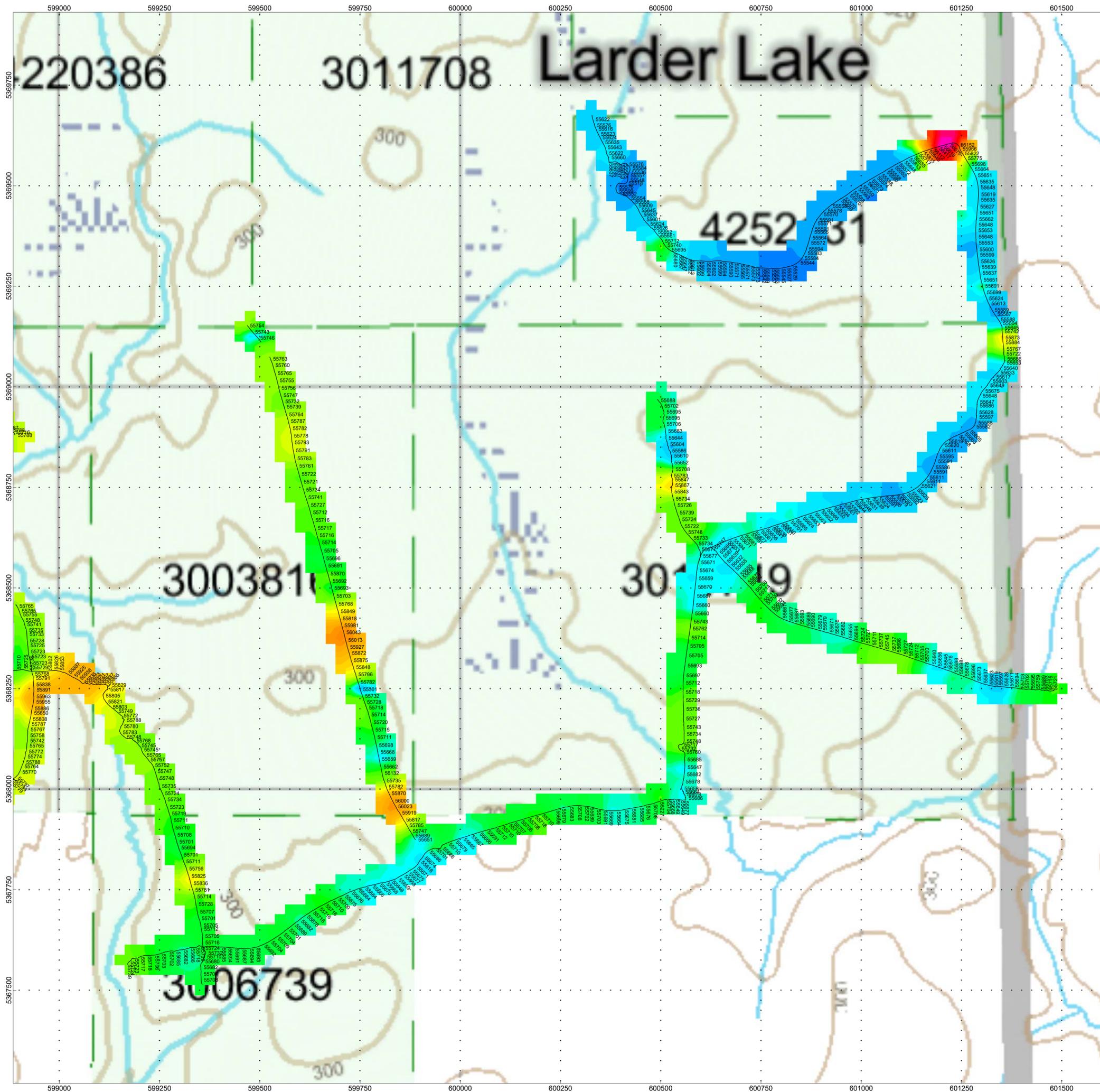
TOTAL FIELD MAGNETIC CONTOURED PLAN MAP  
Base Station Corrected

Posting Level: OnT  
Field Inclination/Declination: 74degN/12degW  
Station Separation: 1 second intervals  
GSM-19 OVERHAUSER MAGNETOMETER V7

Operated By: Bruce Lavalley  
Processed By: C. Jason Ploeger, B.Sc.  
Map Drawn By: C. Jason Ploeger, B.Sc.  
August 2016

Drawing: 02154-TIGER-HARKER HERITAGE-AREA-11d-MAG





**TIGER GOLD EXPLORATION CORPORATION**

**HARKER HERITAGE PROPERTY Area 11e**  
Holloway and Marriott Townships, Ontario

TOTAL FIELD MAGNETIC CONTOURED PLAN MAP  
Base Station Corrected

Posting Level: 0nT  
Field Inclination/Declination: 74degN/12degW  
Station Separation: 1 second intervals

GSM-19 OVERHAUSER MAGNETOMETER v7

Operated By: Bruce Lavalley  
Processed by: C Jason Ploeger, B.Sc.  
Map Drawn By: C Jason Ploeger, B.Sc.  
August 2016

**CXS**  
CANADIAN EXPLORATION SERVICES LTD.

Drawing: Q2154-TIGER-HARKER HERITAGE-AREA-11e-MAG