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December 21, 2021

Revised April 10, 2022

Total Field Magnetics Survey Report

**Work Performed by
Dan Patrie Exploration Ltd.
On Behalf of**

Bear Creek Gold Ltd.

In

**Lizar Township
District of Algoma, Ontario**

Brent Patrie

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REPORT AUTHORS, CONTRIBUTORS & QUALIFICATIONS

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INTRODUCTION

Bear Creek Gold Ltd. holds a series of claim groups within the central area of Lizar Township. A Total Field Magnetism (TFM) survey was performed within the claim group consisting of 68 contiguous single cell mining claims that host the past-producing Hiawatha Gold Mine (Mining Lease Patent -108432) (**Figure 1**).

Between December 1st to December 10th 2021. Dan Patrie Exploration Ltd. carried out 21.175 line-kilometers of Magnetic Field Surveying as shown in (**Figure 3**). The objectives of the magnetic survey was to extend the present magnetic coverage of the claim group and utilize the TFM readings to aid in mapping lithologies due to low outcrop exposure. The following report is a summary of the work carried out and the results obtained.

LOCATION AND ACCESS

The Project is located within the central area of Lizar Township (District of Algoma at NTS NAD 83, UTM Zone 16, 685000mE, 5415000mN) (**Figure 1**)

The Property can be reached by road from White River, Ontario. From here, secondary highway 631 goes to Hornepayne. At about 60km north of White River / 40km South of Hornepayne on highway 631, forest access roads lead to the east and from here a bush road for equipment and ATV's leads directly to the site and the old Hiawatha Gold Mines area (**Figure 2**).

HIAWTHA LIZAR HOLDINGS & PLAN PERMIT

The Hiawatha claim group consisting of 68 contiguous single cell mining claims, as well as the contained Mining Patent Lease in Lizar Township held by Bear Creek Gold Ltd. are represented in **Table 1** including the active Plan & Permit for the property.

Table 1 – Claim List, Lease, Plan & Permit

102445	223790	276986	337421
102446	229754	277584	337480
104386	229755	277585	337481
104387	229756	277657	338065
119582	229824	278272	338708
129136	229825	278437	538070
157697	230413	279056	538071
162996	241931	279782	538072
163066	241932	289086	538073
163151	242527	296448	538074
163785	258955	298416	538075
175863	259017	298417	538076
176449	259103	325055	538077
192546	259104	325056	538078
192547	259105	325624	538079
221793	259106	325692	538080
223076	276985	327036	538081

LEA - 108432

PL - 19-000143

PR - 19-000041

REGIONAL GEOLOGY

On a regional basis the Property is located in the southwestern end of an approximately 100 km long, arcuate shaped (convex to the north) Archean age greenstone belt located within the Superior Province of the Canadian Shield. The main lithological units within the greenstone belt are mafic to intermediate metavolcanic flows and pyroclastics with minor sedimentary rocks including chert and iron formation. These units have been folded, faulted and intruded by a suite of rocks of tonalitic composition that are foliated to gneissic. In the southwestern end of the greenstone belt, the adjacent country rocks are dominantly massive granodiorite and granite with some tonalitic phases. Proterozoic age (Keweenawan) mafic dykes trending northeasterly are present in the southwestern part of the area.

PROPERTY GEOLOGY

The subject Property is underlain by a northeast-trending and vertical to sub-vertical dipping suite of mafic metavolcanics which are dominantly flows. The folded metavolcanics have been strongly sheared along the northeast trend and a feldspar porphyry dyke in turn has intruded the shear zone. Lamprophyre dykes are also present within this structural corridor.

D. Sharpstone, Consulting Engineer, in a report dated 26 August 1939 described the main mineralized zone as follows. "The principal showing is a strong shear zone in a wide granodiorite dyke which follows its long axis. This shear has been followed on the bottom level for about 2000 feet and on the 150-foot level for less than 1000 feet. On surface, it appears to have been followed for 3000 feet.

The shear ranges from 2 feet to 12 feet in width and probably averages four feet. Mineralization varies from sericitization of the granite and pyritization to extensive silicification with numerous parallel stringers of quartz, 0.5 to 6.0 inches in width. Numerous showings of free gold have been found in the quartz stringers, but altered granite in the shear appears to be barren. Likewise, all the gold appears to be free, with little or none in the sulphides".

In addition to pyrite, chalcopyrite, galena and molybdenite are associated with the gold mineralization.

BRIEF HISTORY OF EXPLORATION

Hiawatha Gold Mines was incorporated in 1936 based on the spectacular gold assay returns from surface pits on the Lizar township property. The company proceeded to explore and develop the prospect during the next three years, however, all activity stopped in 1939 as a result of the outbreak of World War II.

During the period 1937-1939, Hiawatha Gold Mines Limited, carried out surface prospecting, trenching, diamond drilling and sank a three-compartment shaft to a depth of 325 feet and established levels at 150 feet and 275 feet.

On the 150-foot level, 967 feet of crosscutting and 847 feet of drifting is reported. On The 275-foot level, 1750 feet of crosscutting, 2547 feet of drifting and 250 feet of raising is reported, for a total of 6361 feet.

A 20-ton test mill was also built on the property.

The last completed assessment of the work on the Hiawatha Mine was done by D. Sharpstone, Consulting Engineer, dated August 26, 1939, extracts of which are as follows: "Main showing: The principal showing is a strong shear zone in a wide granodiorite dyke which follows its long axis. The shear has been followed on the bottom level for about 2000 feet and on the 150-foot level for less than 1000 feet. On surface, it appears to have been followed for 3000 feet."

Stope preparation was underway and partially completed at the time the mine was closed in 1939.

F.A. Enders, President of Hiawatha in his report to the shareholders Oct. 15, 1938 states that a shipment of ore of one half ton to the Dominion Government Laboratories Ottawa assayed 0.9 oz gold per ton or \$31.50 a ton.

G.L. Holbrooke reports that a trial shipment of one ton of material was made from a pit in the area known as the West A zone 2900 feet south-west of the shaft it returned over \$2,000,00. This information is contained in a letter to W.V. Moat

dated September 18, 1937 from G.L. Holbrooke superintendent of Erie Canadian Mines Limited.

The West A zone is described by Holbrooke, as a gold bearing quartz vein investigated over 200 feet, having a width of 3.5 feet. Four diamond drill holes 50 feet apart along strike intersected the zone at depth.

WORK PERFORMED AND PERSONNEL

The Total Field Magnetism survey was carried out along cut lines for a total of 21.175km. The magnetic readings were taken along the lines spaced at 100metres with readings at 25meter intervals along the lines (**Figure 3**).

Three Dan Patrie Exploration Ltd. employees carried out the field survey, Gabriel Roy, Joshua Francis and Calder McKenna from the dates of December 1st to December 10th 2021. Accommodations and daily travel was based out of White River, Ontario for the duration of the work.

CONCLUSIONS

Referring to Figure 5, the magnetic survey and resultant TFM readings outline several different lithologies. These lithologies are consistent with magnetic surveys and signatures completed to the northeast of the December 2021 survey. A series of lithologies including mafic volcanics, felsic volcanics, sediments, intermediate intrusive rocks, mafic intrusive rock, mafic dyke and later cross-cutting Matachewan diabase dykes.

Gold mineralization at Hiawatha is contained in quartz veins within a sheared and sericitic granodiorite. The survey appears to have been successful in tracing this favourable lithological unit further to the southwest and thus will warrant additional exploration. As cross-cutting Matachewan diabase dykes are post mineralization, these areas can be avoided for future exploration expenditures.

DATA AND RECOMMENDATIONS

The TFM readings were corrected for diurnal magnetic field variations by subtraction of the base station readings taken at the same time. The contoured and color-coded data interpretations are presented in **Figures 4-5**.

Recommendations for near future work on the property consists of a 6 level Pole-Dipole Induced Polarization survey covering the existing grid area. Expansion of the grid area to the east, continuing with TFM & IP geophysics. Soil sampling and coincident IP anomalies within favourable magnetic signatures would provide targets for diamond drilling.

INSTRUMENTATION

The survey instruments used were Scintrex Envi Magnetometers which has the capability to record the Earth's Total Magnetic Field(**Figure 6**). An additional Envi Magnetometer was set up at as a Base Station for correcting the diurnal magnetic field drift. The Envi Magnetometer measures the TMF through the use of proton precessional effects caused by the interaction of a magnetic field with a spin aligned proton rich fluid. An instrument accuracy precision and resolution of 0.1 nT may be obtained with these instruments under ideal conditions Microprocessors contained in these instruments allow for the collection of the readings along with the time and the location in digital form suitable for downloading to a computer for data processing.

Figure 1. Hiawatha property and claim fabric.

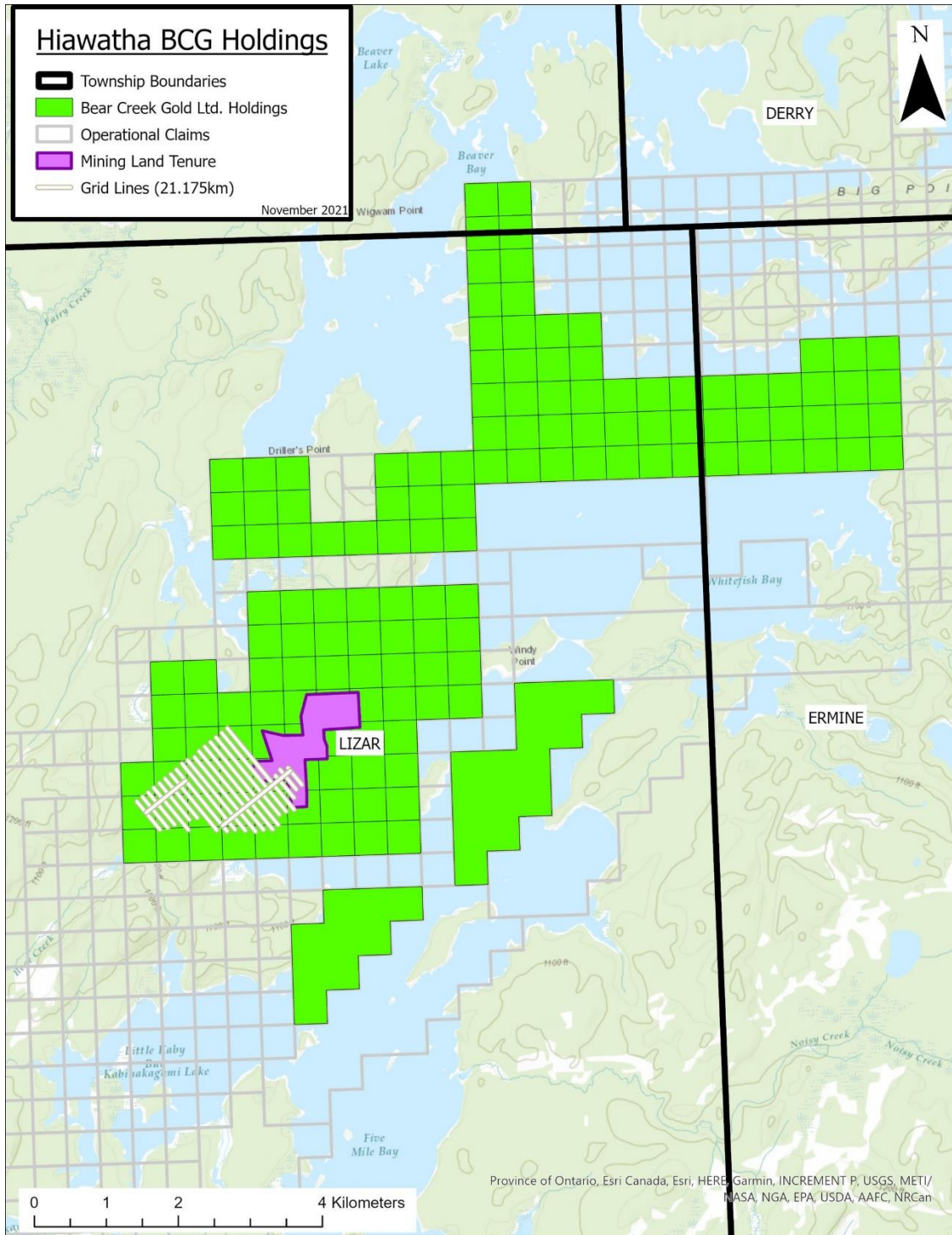


Figure 2. Property locations and access map.

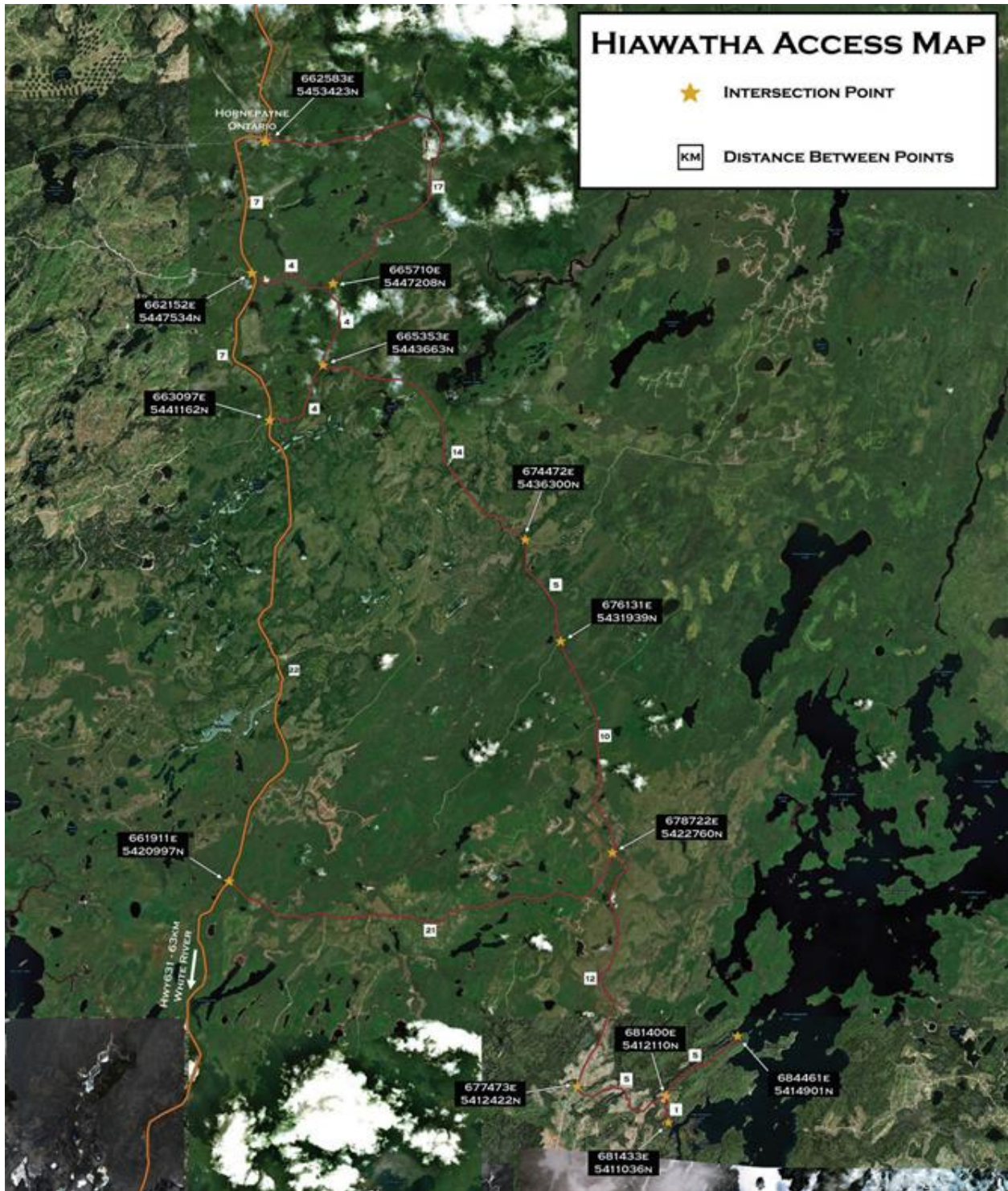


Figure 3. Survey grid map.

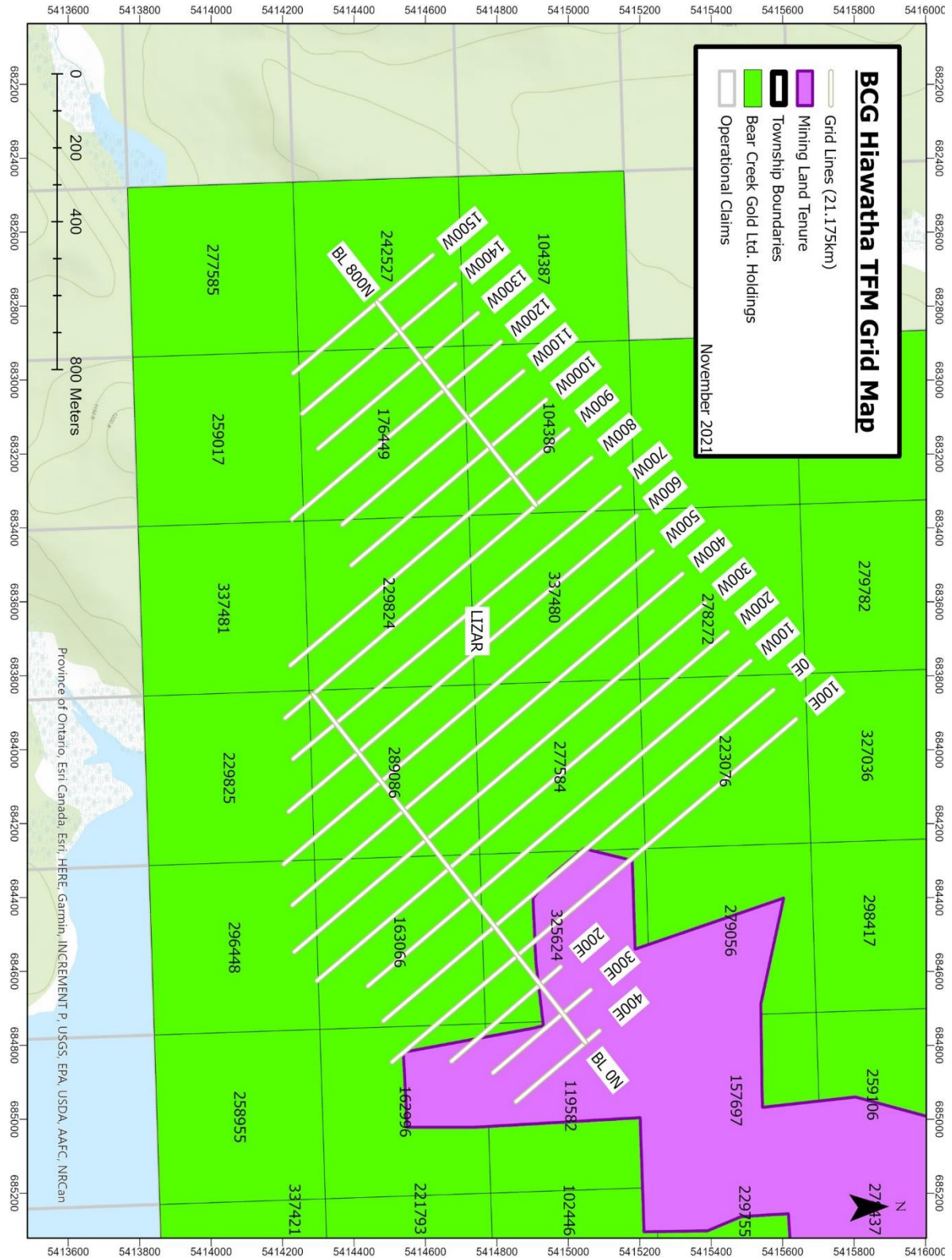


Figure 4. Contoured TFM results.

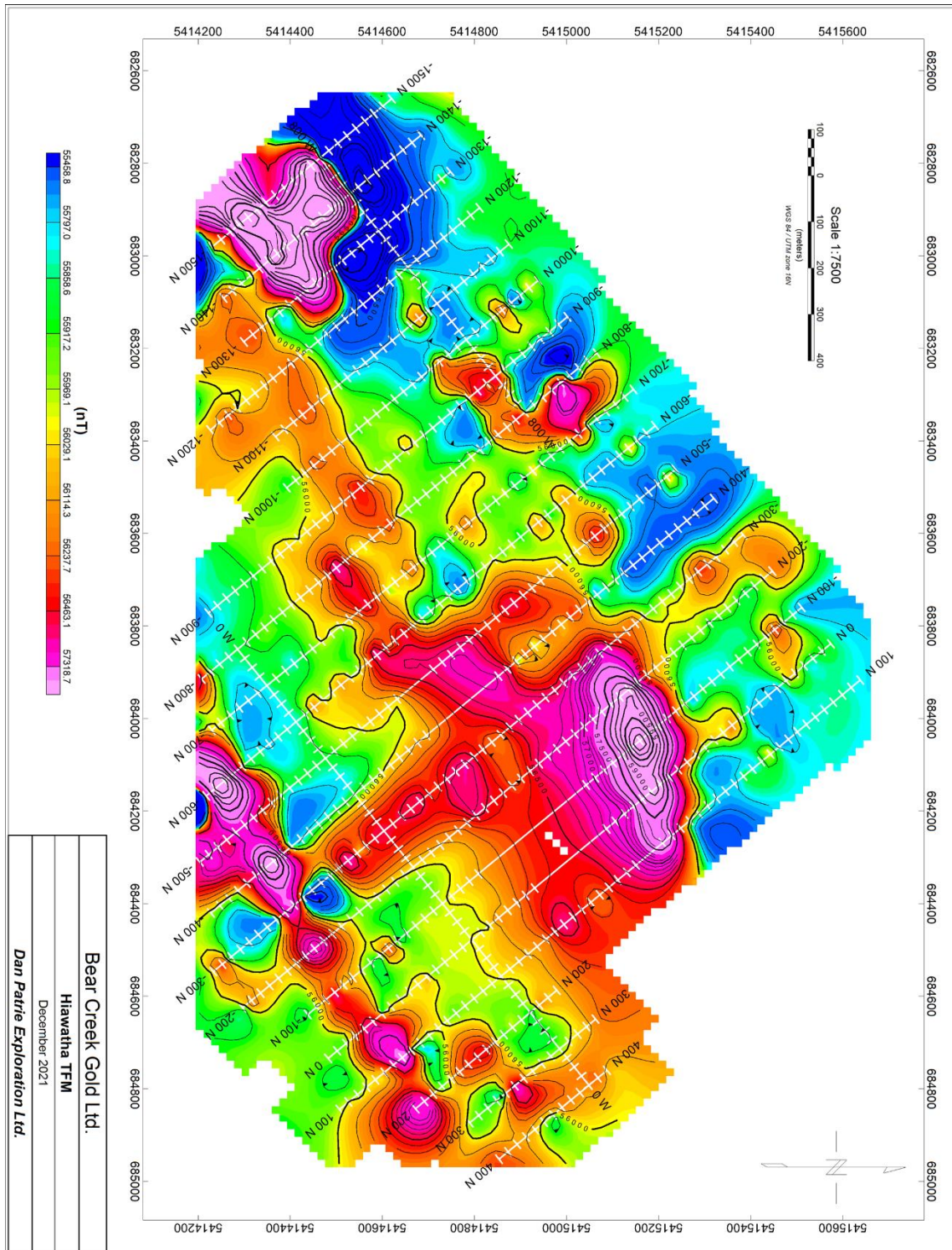


Figure 5 – L.D.S Winter TFM Interpretation

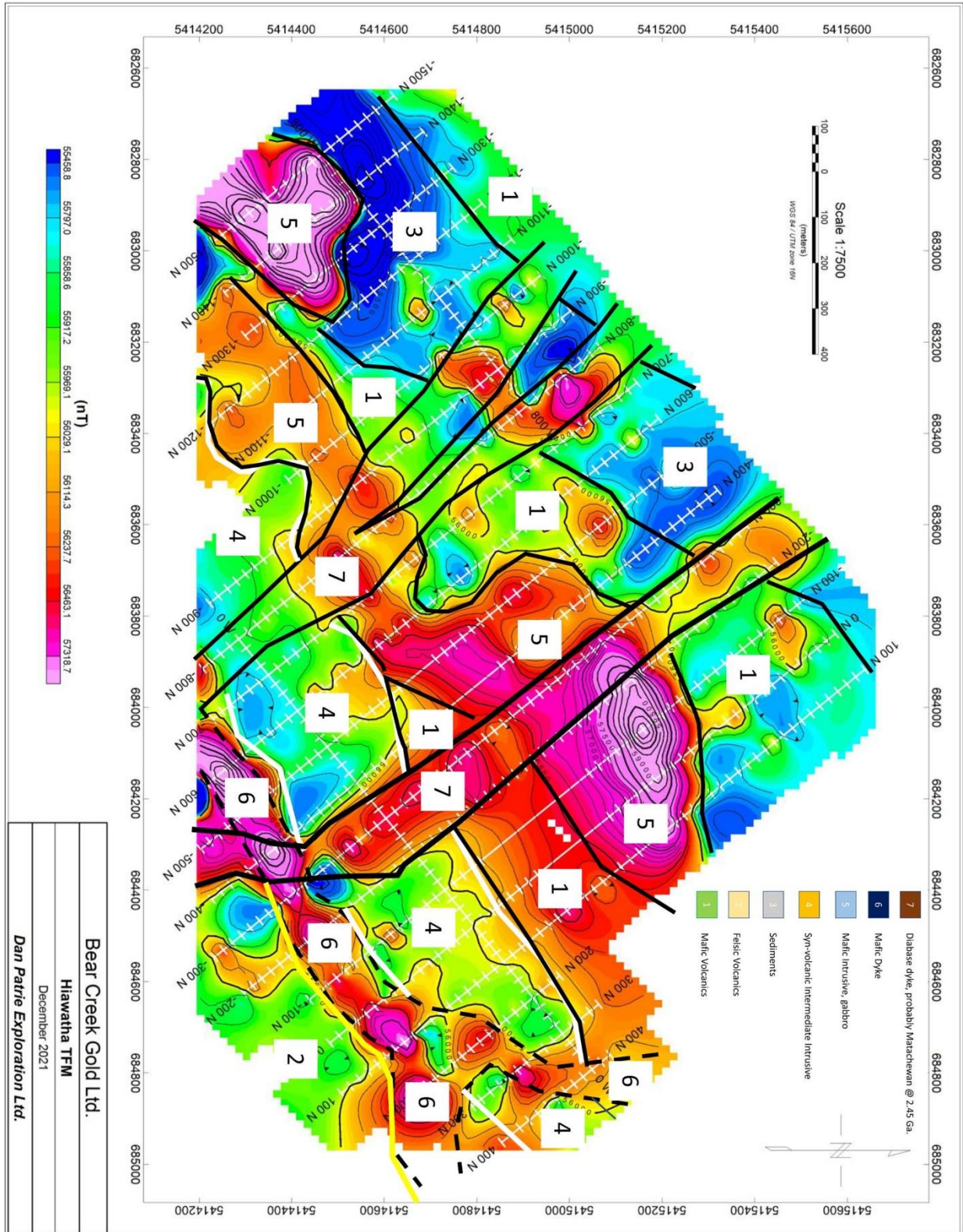


Figure 6 – Instrumentation Specifications



EQUIPMENT

REFERENCE: SCINTREX ENVI MAG BROCHURE

Total Field Operating Range

20,000 to 100,000 nT (gammas)

Total Field Absolute Accuracy:

±1 nT

Sensitivity:

0.1 nT at 2 second sampling rate

Tuning

Fully solid state. Manual or automatic, keyboard selectable

Cycling (Reading) Rates

0.5, 1 or 2 seconds

Gradiometer Option

Includes a second sensor, 1/2m (20 inch) staff extender and processor module.

VLF Option

Includes a VLF sensor and harness assembly

'WALKMAG' Mode

continuous reading, cycling as fast as 0.5 seconds

Digital Display

LCD "Super Twist", 240 x 64 dots graphics, 8 line x 40 characters alphanumeric

Display Heater

Thermostatically controlled, for cold weather operations

Keyboard Input

17 keys, dual function, membrane type

Notebook Function

32 characters, 5 user-defined MACRO's for quick entry

Standard Memory

Total Field Measurements: 28,000 readings

Gradiometer Measurements: 21,000 readings

Base Station Measurements: 151,000 readings

VLF Measurements: 4,500 readings for 3 frequencies

Expanded Memory

Total Field Measurements: 140,000 readings

Gradiometer Measurements: 109,000 readings

Base Station Measurements: 750,000 readings

VLF Measurements: 24,000 readings for 3 frequencies

Real-Time Clock

Records full date, hours, minutes and seconds with 1 second resolution, ±1 second stability over 24 hours

Digital Data Output

RS-232C interface, 600 to 57,600 Baud, 7 or 8 data bits, 1 start, 1 stop bit, no parity format. Selectable carriage return delay (0-999 ms) to accommodate slow peripherals. Handshaking is done by X-on/X-off. High speed Binary Dump. Selectable formats for easy interfacing to commercial software packages.

Analog Output

0-999 mV full scale output voltage with keyboard selectable range of 1, 10, 100, 1000 or 10,000 full scale

Power Supply

Rechargeable 'Camcorder' type, 2.3 Ah, Lead-acid battery

12 Volts at 0.65 Amp for magnetometer, 1.2 Amp for gradiometer

External 12 Volt input for base station operations

Optional external battery pouch for cold weather operations

Battery Charger

110 Volt-230 Volt, 50/60 Hz

Operating Temperature Range

Standard: -40° to 60°C

Dimensions & Weight

Console: 250mm x 152mm x 55mm (10" x 6" x 2.25")
2.45 kg (5.4 lbs) with rechargeable battery

Magnetic Sensor: 70mm x 175mm (2.75" d x 7")
1 kg (2.2 lbs)

Gradiometer Sensor: 70mm x 675mm (2.75" d x 26.5")
(with staff extender) 1.15 kg (2.5 lbs)

Sensor Staff: 25mm x 2m (1" d x 76")
.8 kg (1.75 lbs)

VLF Sensor Head: 140mm x 130mm (5.5" d x 5.1")
.9 kg (2 lbs)

VLF Sensor: 280mm x 190mm x 75mm (11" x 7.5" x 3")
1.7 kg (3.7 lbs)

Options

Base Station Accessories Kit

GPS

Software Packages

Training Programs

SCINTREX

SCINTREX

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