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TIGER GOLD EXPLORATION CORPORATION

Spectrometer Survey Over the HARKER HERITAGE PROPERTY AREA 1 Clifford, Elliott, Harker, Hol-Ioway, Tannahill and Marriott Townships, Ontario



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	SURVEY SPECIFICATIONS	5
3.		OVERVIEW OF SURVEY RESULTS	6
	3.1	SUMMARY	6

LIST OF APPENDICES

APPENDIX A: STATEMENT OF QUALIFICATIONS APPENDIX B: THEORETICAL BASIS AND SURVEY PROCEDURES APPENDIX C: INSTRUMENT SPECIFICATIONS APPENDIX D: LIST OF MAPS (IN MAP POCKET)

LIST OF TABLES AND FIGURES

Figure 1: Location of the Harker Heritage Property	3
Figure 2: Spectrometer Potassium Readings	6
Figure 3: Spectrometer Uranium Readings	7
Figure 4: Spectrometer Thorium Readings	8

able 1: Survey Log5



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1. SURVEY DETAILS

1.1 PROJECT NAME

This project is known as the Harker Heritage Property – Area 1.

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 ATV to access the various parts of the property.

Area 1 is located within Clifford Township. Access to this area was directly off of highway 672 approximately 25.5 kilometers north of its intersection with highway 66. From here an ATV was used to access the survey region.

1.5 SURVEY AREA

The survey area was designed to be a reconnaissance survey through the claim group. The traverses were performed with a spectrometer reading taken every 100 meters along the traverse routes.



2. SURVEY WORK UNDERTAKEN

2.1 SURVEY LOG

Date	Description	Total Survey (km)
November 20, 2015	Begin spectrometer survey	
	over area 1.	8.875
November 23, 2015	Continue spectrometer survey	
	over Area 1.	7.95
November 24, 2015	Complete spectrometer sur-	
	vey over area 1.	7.3

Table 1: Survey Log

2.2 PERSONNEL

Jason Ploeger of Larder Lake, Ontario operated the Spectrometer system along with the navigation using a GPS along the traverses.

2.3 SURVEY SPECIFICATIONS

The survey was conducted with a Radiation Solutions RS-230 – BGO SUPER-SPEC spectrometer. The operator traversed the outlined block until the unit detected a cps above background. Once this was detected, the operator backtracked 50m, a GPS waypoint was taken with a corresponding 60 second stacked Spectrometer assay for K%, U ppm and Th ppm. At this point the operator took a sample every 25m until the anomalous region was traversed. Otherwise the operator took an assay and GPS reading every 100m. All data was both electronically noted and written in a notebook.

The background of the instrument was automatically set during the auto-calibration process and it was around 50nGy/h. The device was set to emit an audible alarm if the background was exceeded by two times the level. This was considered by the operator to be anomalous and at this point the operator increased the sample density.

A total of 24.125 kilometers of no grid spectrometer survey was performed between November 20th and 24th, 2015. This consisted of 224 K, U and Th samples taken.



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3. OVERVIEW OF SURVEY RESULTS



3.1 SUMMARY

Figure 2: Spectrometer Potassium Readings



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Figure 4: Spectrometer Thorium Readings



A large region of the Harker Heritage Property was traversed within Area 1 with a total of 24.125 kilometers of traverse performed. During the traverse it was noted that the background counts for the spectrometer averaged around 50 counts. At no time within the region did the counts increase to a point where the audible notification would occur, therefore indicating no areas of over 100 counts were encountered.

No anomalous areas were located during the survey; however, one area of interest has been highlighted. This is located at 587414E and 5354082N and can be seen on the above sketches under the township name Clifford. The Potassium and Thorium response dramatically drops at this location which may be an indication of an alteration zone. Any previous data from this area should be compiled along with some additional geophysics and soil sampling campaign be performed through this region.



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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 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 **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 December 8, 2015



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APPENDIX B

THEORETICAL BASIS AND SURVEY PROCEDURES

Gamma-Ray Spectrometry (GRS) provides a direct measurement of the surface of the earth, with no significant depth of penetration. This at-surface characteristic allows us to reliably relate the measured radioelement contrasts to mapped bedrock and surficial geology, and alteration associated with mineral deposits. All rocks, and materials derived from them are radioactive, containing detectable amounts of a variety of radioactive elements. A gamma-ray spectrometer is designed to detect the gamma rays associated with these radioactive elements and to accurately sort the detected gamma rays by their respective energies. It is this sorting ability that distinguishes the spectrometer from instruments that measure only total radioactivity.

Why do we need to know about K, U, and Th?

Potassium (K), uranium (U) and thorium (Th) are the three most abundant, naturally occurring radioactive elements. K is a major constituent of most rocks and is the predominant alteration element in most mineral deposits. Uranium and thorium are present in trace amounts, as mobile and immobile elements, respectively. As the concentration of these different radio elements varies between different rock types, we can use the information provided by a gamma-ray spectrometer to map the rocks. Where the 'normal' radioelement signature of the rocks is disrupted by a mineralizing system, corresponding radioelement anomalies provide direct exploration guidance.

Ground surveys do not require a corresponding airborne survey. They are easily conducted by one person as a reconnaissance survey or more formally using a series of grid lines. The resulting geochemical information provides an important additional layer of information significantly improving bedrock and surficial mapping and ore vectoring.

The Gamma-ray Energy Spectrum

The primary acquisition data set is a multichannel gamma-ray energy spectrum. The area from 0 to 0.4 MeV is not used and consists of counts created by Compton scattering. For geological mapping, the K⁴⁰ (potassium), Bi²¹⁴ (uranium) & Tl²⁰⁸ (thorium) peaks are of interest. During the aerial survey, the full spectrum of counts is recorded once per second, using a 256-channel histogram. During post-flight data processing, the counts for the radio elements of interest (K⁴⁰, Bi²¹⁴, Tl²⁰⁸) are accumulated. The summation includes the counts for a range of energies (a 'window' or 'region of interest') centred on each peak.



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The accumulated count rates are then converted to **equivalent** ground concentrations of **potassium**, **uranium** & **thorium** using a set of calibration constants that are a characteristic of each spectrometer system.



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APPENDIX C

RS-230 BGO Super Spec Gamma Spectrometer Handheld Gamma-Ray Spectrometer



Specifications

Memory:

- Internal Data Storage memory
- Assay + 1024 channel Spectra: 128 samples

Data Input / Output:

(Using supplied RS-Analyst software) -USB -Bluetooth -GPS link via Bluetooth

Temperature Range:

-20 to +50 degrees Celsius

Control:

-Single one button, Thumb activated

Alarm:

-Audio via miniature speaker -Variable audio threshold set point -Audio proportional to count rate

Weight:

4.5 lb (2.04 kg) including batteries



RS-230 Size & Package Style

-10.2" x 3.2" x 3.8" (259 mm x 81. mm x 96 mm)
-1 mm aluminum outer case
-In a flashlight configuration with side support strap and handle

Display:

-128 x 64 pixels, 1 1/8 x 2 3/8"

-Graphic LCD display with white backlight and automatic dimming

Readout:

-Search Mode: Counts in CPS from 0 to 65,535 and Histogram chart -Assay Mode: Display in %K, ppm of U & Th

Energy Response:

30 keV - 3000 keV

Internal Sampling:

20 readings per second

Batteries:

-Internal battery pack module (4xAA) easily replaceable -Rechargeable or Alkaline (optional) -Life: 8 + hours at 20 degrees C

The performance of the 6.3 in³ (103 cm³) higher density Bismuth Germanate (BGO) detector is an equivalent of a 21 in³ (390 cm³) Sodium Iodide (NaI) commonly used with larger portable units and approximately more than 3 times the same size NaI crystal.

The spectrometer is auto-stabilizing on the naturally occurring (K, U, & Th) radioactivity and does not require any test sources.



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APPENDIX C

GARMIN GPS MAP 62S



Physical & Performance:						
Unit dimensions, WxHxD:	2.4" x 6.3" x 1.4" (6.1 x 16.0 x 3.6 cm)					
Display size, WxH:	1.43" x 2.15" (3.6 x 5.5 cm); 2.6" diag (6.6 cm)					
Display resolution, WxH:	160 x 240 pixels					
Display type:	transflective, 65-K color TFT					
Weight:	9.2 oz (260.1 g) with batteries					
Battery:	2 AA batteries (not included); NiMH or Lithium recom- mended					
Battery life:	20 hours					
Waterproof:	yes (IPX7)					
Floats:	no					



High-sensitivity re- ceiver:	yes				
Interface:	high-speed USB and NMEA 0183 compatible				
Maps & Memory:					
Basemap:		yes			
Preloaded maps:		no			
Ability to add maps:		yes			
Built-in memory:		1.7 GB			
Accepts data cards:		microSD [™] card (not included)			
Waypoints/favorites/loc	ations:	2000			
Routes:		200			
Track log:		10,000 points, 200 saved tracks			
Features & Benefits:					
Automatic routing (turn	by turn routing	yes (with optional mapping for detailed			
on roads):		roads)			
Electronic compass:		yes (tilt-compensated, 3-axis)			
Touchscreen:		no			
Barometric altimeter:		yes			
Camera:		no			
Geocaching-friendly:		yes (paperless)			
Custom maps compatib	<u>ble</u> :	yes			
Photo navigation (navig otagged photos):	pate to ge-	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 wire- lessly with similar units):	yes
Picture viewer:	yes
Garmin Connect [™] compatible (online community where you analyze, catego- rize and share data):	yes

• Specifications obtained from www.garmin.com



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APPENDIX D

LIST OF MAPS (IN MAP POCKET)

Posted spectrometer plan maps (1:20000)

- 1) TIGER-HARKER HERITAGE-AREA 1-SPECT-U
- 2) TIGER-HARKER HERITAGE-AREA 1-SPECT-Th
- 3) TIGER-HARKER HERITAGE-AREA 1-SPECT-K
- 4) TIGER-HARKER HERITAGE-AREA 1-OUTCROP

TOTAL MAPS = 4



Operated By: C Jason Ploeger, B.Sc. Processed by: C Jason Ploeger, B.Sc. Map Drawn By: C Jason Ploeger, B.Sc. December 2015



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HARKER HERITAGE PROPERTY Area 1 **Clifford Township, Ontario**

URANIUM CONTOURED PLAN MAP Readings Taken On Ground

Posting Level: 0 ppm Station Seperation: varies during GPS traverse U Contours: 0 ppm

RS-230 BGO SUPER SPECTROMETER



Drawing: TIGER-HARKER HERITAGE-AREA 1-SPECT-U



3.2 3.1 3.0 2.9 2.9 2.8 2.7 2.6 2.6 2.5 2.5 2.4 2.4 2.3 2.3 2.2 2.2 2.1 2.1 2.0 1.9 1.9 1.8 1.8 1.7 1.6 1.6 1.5 1.4 1.2

Operated By: C Jason Ploeger, B.Sc. Processed by: C Jason Ploeger, B.Sc. Map Drawn By: C Jason Ploeger, B.Sc. December 2015



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HARKER HERITAGE PROPERTY Area 1 **Clifford Township, Ontario**

THORIUM CONTOURED PLAN MAP Readings Taken On Ground

Posting Level: 0 ppm Station Seperation: varies during GPS traverse Th Contours: 0 ppm

RS-230 BGO SUPER SPECTROMETER



Drawing: TIGER-HARKER HERITAGE-AREA 1-SPECT-Th





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HARKER HERITAGE PROPERTY Area 1 **Clifford Township, Ontario**

POTASSIUM CONTOURED PLAN MAP Readings Taken On Ground

Posting Level: 0 % Station Seperation: varies during GPS traverse K Contours: 0 %

RS-230 BGO SUPER SPECTROMETER

Operated By: C Jason Ploeger, B.Sc. Processed by: C Jason Ploeger, B.Sc. Map Drawn By: C Jason Ploeger, B.Sc. December 2015



Drawing: TIGER-HARKER HERITAGE-AREA 1-SPECT-K





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HARKER HERITAGE PROPERTY Area 1 **Clifford Township, Ontario**

OUTCROP LOCATION PLAN MAP

X - Outcrop location

RS-230 BGO SUPER SPECTROMETER

Operated By: C Jason Ploeger, B.Sc. Processed by: C Jason Ploeger, B.Sc. Map Drawn By: C Jason Ploeger, B.Sc. December 2015



Drawing: TIGER-HARKER HERITAGE-AREA 1-Outcrop