**TECHNICAL REPORT** 

NI 43-101

ON THE

# **HPU PROPERTY**

# **HYMAN AND PORTER TOWNSHIPS**

DISTRICT OF SUDBURY

ONTARIO

for

Vinergy Resources Ltd.

Robert G. Komarechka, P.Geo. of Bedrock Research Corp. 9, January, 2014

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#### 1. SUMMARY

The Hyman Porter Uranium Property (HPU Property) owned 100% by GTO Resources Inc. (previously referred to herein as being held by "Firebird", "Falcon Ventures Inc.," or "Falcon Ventures International Inc.", "the Company") is an early stage exploration property located approximately 50 kilometres west of Sudbury, Ontario (see Figures 1 & 2). The property is located in the Sudbury Mining Division, District of Sudbury at -81.69°W longitude and 46.42°N Longitude (NTS Map 41-I/14) or in NAD83 co-ordinates Zone 17 446858m E, 5141763m N.

The property consists of 5 contiguous unpatented, unleased mining claims composed of 70 claim units covering approximately 1,120 hectares in Hyman and Porter Townships. By an agreement ("the Agreement") dated January 6, 2014, Vinergy Resources Ltd. has the exclusive right to acquire a 50% interest in the HPU Property subject to certain conditions involving cash payments, exploration expenditures and the issuance of shares. As of the date of this report all terms of the Vendor Agreement have been met and this Agreement is in good standing, subject to the payment of annual advance royalties of at least \$12,000 to the Vendor regardless of any production or not commencing. The royalty to the Vendor is for \$0.20/lb of uranium produced from the HPU property and/or a second property to a maximum of \$1,200,000. The royalty can be bought at any time. An area of mutual interest exists inclusive of the optioned claims and having a radius of one mile around the perimeter of the claims.

The HPU Property is underlain by Archean granitic rocks of the Superior Province unconformably overlain by Proterozoic Huronian metasediments intruded with Nipissing Gabbro sills. Later diabase dykes intrude the earlier Archean and Proterozoic rocks. Anomalous uranium mineralization has been reported near the Archean-Paleoproterozoic unconformity. The uranium mineralization occurs within the Paleoproterozoic metasediments, primarily within pyritiferous argillite, oligiomictic quartz pebble paraconglomerate and polymictic

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paraconglomerate paleoplacer deposits that were formed in braided stream channels on the Archean basement erosional surface. This situation occurs in the Matinenda and Mississauga formations. Anomalous uranium mineralization has also been found within thin east-west shear zones. Uraniferous conglomerates of the Matinenda Formation, the same age formation as the previously mined deposits of Elliot Lake, were mined from the Agnew Lake Property located 1.8 km to the east outside of the HPU property.

Rare earth element (REE) mineralization is intimately associated with the uranium mineralization in Hyman and Porter townships. On the adjacent Agnew Lake Property, within the Matinenda Formation, the principal uranium bearing mineral of the Agnew Lake ore is uranothorite which occurs in quartz sericite conglomerates. In addition to uranothorite, some brannerite, monazite also occur. Generally Agnew Lake ores contain more thorium than uranium and have a  $ThO_2/U_3O_8$  ratio of 3:1<sup>1</sup>. In any mill or concentrator the REE report in the acid leach solutions with the uranium.

Several known uranium occurrences are found within the Mississagi Formation on the HPU claims with associated anomalous historic assay values. These are recorded in the Mineral Deposit Inventory (MDI) records of the Ontario Ministry of Northern Development and Mines as being on the HPU Property, these being the Richore (Rose) Occurrence (0.08% to 1.00%  $U_3O_8$ ), the Pennbec Occurrence, the New Mylamaque (0.018% to 0.02%  $U_3O_8$ ) and the Brewis Occurrence (0.01% to 0.02%  $U_3O_8$ ). See figure 5 and table 2 for more information on these occurrences.

<sup>&</sup>lt;sup>1</sup> Haque, K.E. et al. 1981

Anomalous uranium assays have also been recorded on the property by GTO Resources Inc. The highest being 583 ppm U or 0.063% U<sub>3</sub>O<sub>8</sub> in sample number 51208<sup>1</sup>. Additional uranium occurrences are also found in the area, outside the property, mostly within rocks of the Mississagi and Matinenda Formations near the unconformable Archean-Paleoproterozoic contact. Anomalous uranium has also been recorded in shear zones within the granitic Birch Lake Batholith to the north and in fractures within Huronian rocks overlying the Mississagi and Matinenda conglomerates

**Note:** All resource estimates presented in this report are historical and were prepared before the introduction of National Instrument 43-101 - Standards of Disclosure for Mineral Projects ("NI 43-101"). These resource estimates may not be relied upon until they are confirmed using methods and standards that comply with those required by NI 43-101. The potential for the exploration target to replicate the historical resource, or to reach the indicated range of tonnages, is conceptual and is based on historical reports, which cite approximately lengths, widths, depths, grades and projections of the historical resource. Readers are cautioned that a qualified person has not completed sufficient exploration, test work or examination of past work to define a resource that is currently compliant The Company further cautions that there is a risk that with NI 43-101. exploration and test work will not result in the delineation of such a currently compliant resource. Neither the Company nor its personnel treat the historical resource estimate or the historical data as defining a current mineral resource, as defined under NI 43-101, nor do they rely upon the estimate or the data for evaluation purposes; however, these data are considered relevant and will be used to guide exploration as the Company develops new data to support a current mineral/resource estimate in accordance with the requirements of NI 43-101.

Over the past few years, the use of rare earth elements (REE) in various aspects of modern technology has increased significantly. China has been producing approximately 95% of the world's supply and on 1 September 2009 China announced that it would reduce its export quota by about 70% to 35,000 tonnes per year for the period 2010-2015 so as to protect the environment and to conserve scarce resources for domestic use. This, coupled with the increasing demand, has resulted in significant price increases for several of the REEs.

<sup>&</sup>lt;sup>1</sup> Brown, W. 2011

The Elliot Lake area, located 73 km. to the west of the HPU property, is the type area for the Ontario, Paleoproterozoic sediment-hosted uranium deposits, with REEs associated with the uranium mineralization. East of Elliot Lake, (62 Km west from the HPU Property) Pele Mountain Resources Inc. is developing their Eco Ridge Mine project. In their main conglomerate bed, within the Matinenda Formation, they are reporting the full range of REE plus yttrium associated with the uranium mineralization<sup>1</sup>. Pele also reports that leaching tests show that over 60% of the REE are available in the uranium leach solutions and that the REE have been successfully recovered commercially in the past from the leach solutions.

Recent sampling<sup>2</sup> by the GTO Exploration Inc. on the HPU Property has indicated the presence of REE associated with the airborne anomalies and anomalous uranium mineralization. At this time the highest value of 6,665.75ppm TREE (less scandium and promethium) was obtained from sample 51208 described as a gray arkosic quartzite with black coated fractures. this sample assayed: 1,640 ppm La, 3,070 ppm Ce, 334 ppm Pr, 1,090 ppm Nd, 159 Sm, 7.56 ppm Eu, 117 ppm Gd, 12.2 ppm Tb, 54.7ppm Dy, 117ppm, 7.59 ppm Ho, 15.3 ppm Er, 2.31 ppm Tm, 10.7 ppm Yb, 1.39 ppm Lu, 144 ppm Y, 1776 ppm Th. The next highest reading of 5,066.66ppm TREE (less scandium and promethium) was obtained from sample 688646 described as a polymictic conglomerate with granitic fragments. Other anomalies still remain to be examined on the property. Note that the above REE analysis undertaken were not all inclusive of the complete rare earth suite. These samples were analyzed by AGAT Laboratories using their Analysis No. 201078-Lithium Borate Fusion, ICPMS Finish. Summation of all oxides and analysis No. 201076 Lithium Borate Fusion, ICP-OES finish was also undertaken. Structural folding and faulting add to the complexity of the continuity of mineralization in the areas so far examined.

<sup>&</sup>lt;sup>1</sup> Pele Mountain Resources Inc. 2010

<sup>&</sup>lt;sup>2</sup> Brown, W. 2011

Previous work on the Property mainly took place starting in the 1950's through to the 1980's. Thereafter decreased demand for uranium resulted in significant price drops. During this 30 year period, work on the subject property consisted of geological mapping, prospecting, sampling, soil geochemical surveys, geophysical surveys, and diamond drilling. With the increase in the price of uranium starting in 2007 there was renewed interest in the Property and ground and airborne geophysical surveys, prospecting, geological mapping, stripping and sampling were carried out by the Company and its predecessor companies.

The model for uranium mineralization with associated REE of economic interest on the Property is a Proterozoic pyritic paleoplacer type<sup>1</sup> associated with early pre-oxygenated Proterozoic quartz pebble oligiomictic conglomerate. These conditions exist in both in the Matinenda and Mississaga formations which occur on the property. The potential for REE mineralization also exists along North-South striking alkalic dikes and breccia units noted in the area and believed to be associated with the Spanish River Carbonatite event<sup>2</sup>. Recently paleoplacer gold up to 18.35 grams per tonne has been found in pyritic Paleoproterozoic basal conglomerates (Mississagi Fm.) in Pardo Township<sup>3</sup> about 76 kilometres to the east of GTO Resources Inc.'s HPU Property. A grab sample of pyritiferous quartz pebble conglomerate found at the Richmore North Occurrence recently collected by GTO assayed 0.44 g/t Au. The potential for gold within the basal conglomerates of the HPU Property requires further investigation.

The Property is at an early stage of evaluation and has potential for both Uranium and associated Rare Earths. The recommended exploration program consists of localized detailed ground radiometric surveys, stripping, localized mapping and sampling with an initial drilling program to test radiometric targets of

<sup>&</sup>lt;sup>1</sup> Eckstrand, 1984

<sup>&</sup>lt;sup>2</sup> Easton, 2005

<sup>&</sup>lt;sup>3</sup> Endurance Gold Corporation, 2007

interest and to provide geological and mineralization information as the basis for further work as warranted.

A recommended phase 1 exploration program budgeted at \$274,443 and a tentative phase 2 diamond drill program of 2,000 metres budgeted at \$777,248 is proposed as shown in table 6. The total budget for both being \$1,051,691

# 2. INTRODUCTION

# 2(a) <u>Issuer</u>

This Technical Report has been prepared by Robert G. Komarechka, P.Geo. at the request of Vinergy Resources Ltd. The report is based on a detailed review of assessment reports, government data, recently acquired ground and airborne geophysical data. Much of this work was supervised by the author. Information was also collected from a site visit conducted on February 25, 2012. The author also supervised the stripping and initiated the mapping at the Richore Occurrence on the HPU property during May 2012.

# 2(b) <u>Terms of Reference and Purpose</u>

The purpose of this report is to review the past work, geology and economic potential of the property, with particular focus on uranium and the Rare Earth Elements (REE). The report includes a proposed exploration program and budget to evaluate the mineral potential of the Property.

This Technical Report is prepared in compliance with National Instrument 43-101 (NI 43-101). Standards of Disclosure for Mineral Projects, Form 43-101F1, Companion Policy 43-101CP and Related Consequential Amendments as published June 24, 2011 and posted on the Ontario Securities Commission's Securities Law & Instruments website.

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Historical Assessment data on the Property and the adjacent area were reviewed in the library of the Ministry of Northern Development Mines and Forest (MNDMF) in Sudbury Ontario as well as their internet sites http://www.geologyontario.mndm.gov.on.ca/ and http://www.mndm.gov.on.ca/mines/geo-claims e.asp. Other public documents, as well as conventional mineral exploration data were also included in the study. Discussions with other technical persons are also referred to in this report.

The author is familiar with the area geology as a result of past exploration consulting work, mapping both Huronian and Archean rocks in the Sudbury area for numerous clients, contract work and employment with the Ontario Ministry of Northern Development, Mines (MNDM) throughout the Sudbury Mining District. The author has also been involved in the exploration programs of GTO and its precursor companies on this property and another uranium property, the Hyman Porter Uranium Property, also in the Sudbury Mining District.

#### 2(b)-1 Abbreviations, Conversions

Conversion factors used:

 $1 \text{lb/ton} = .05\% \text{ U}_3 \text{O}_8$ 

 $1\% U_3O_8 = 20$  lbs/ton or 22 lbs/tonne

1% U<sub>3</sub>O<sub>8</sub> = 1.1792 %U

#### Abbreviations:

AFRI: Assessment File Report Inventory AMIS: Abandoned Mines Inventory System BG: Background cpm: counts per minute cps: counts per second °C: Celsius degrees eU: uranium equivalent, see definition below

eTh: thorium equivalent g: grams Ga: Billion years ago GPS: Geographic Positioning System GSC: Geological Survey of Canada IOCG: Iron Oxide Copper Gold (a style of mineralization) lb: pound = 0.454 kilogram M: Million m: metre Ma: million years ago mm: millimetres MDI: Mineral Database Inventory (Ontario) MNDM: Ministry of Northern Development and Mines (Ontario) MNDMF: Ministry of Northern Development Mines and Forests (Ontario) NI: National Instrument (Canada) NAD: North American Datum NMDI: National Mineral Data Inventory (Canada) NTS: National Topographic System OGS: Ontario Geological Survey oz: ounce = 28.3495 gm ppm: parts per Million REE: Rare Earth Elements (see Item 2(b)-3 Definitions on rare earth elements) TREE: Total Rare Earth Elements TREO: Total Rare Earth Oxides t: metric ton or tonnes = 2,200 lbs UTM: Universal Transverse Mercator VLF: Very Low Frequency (EM radiation)

# 2(b)-2 Units of Measurement

All units reported in this report are in the metric (SI) system unless otherwise noted. Precious metal contents are reported in grams per metric tonne (g Au/t or g Ag/t). Uranium contents are reported using the standard convention of pounds or kilograms of uranium oxide (U<sub>3</sub>O<sub>8</sub>) per short ton or metric tonne, respectively or % uranium (U) or ppm uranium (U). All dollar amounts are in Canadian Dollars unless otherwise noted.

#### 2(b)-3 Definitions

Archean: This is a geologic eon or time period extending from 2500 million years ago (Ma) to the oldest dated rocks on earth.

argillite: A sedimentary rock derived from a siltstone or shale that has undergone, as a result of induration, some degree of recrystallization.

- conglomerate: A sedimentary rock in which the grain size is greater than 4 mm and may range to pebbles, cobbles and boulders greater than 256 mm in size.
  - oligomictic conglomerate: A conglomerate in which the cobbles or pebbles are mainly of one material such as quartz, quartzite or chert.
  - polymictic conglomerate: A conglomerate in which the cobbles or pebbles have a diverse or heterogeneous composition.
  - paraconglomerates: Those conglomerates in which the matrix is in excess of the large fragments such as pebbles and cobbles and is matrix supported..
- diabase: An igneous rock composed of dark iron and magnesium-rich minerals plus calcium-rich feldspars. It commonly occurs in dykes and sills.
- dip: The dip of a planar geological unit is the slope or angle measured below the horizontal, perpendicular to the strike (direction) of the unit.
- fault: A surface or zone along which a rock has broken and on which there has been movement of one side relative to the other.
- Gamma radiation (or gamma rays) (<sup>y</sup>). This is electromagnetic radiation of high frequency and very short wave length emitted by a nucleus as a result of radioactive decay of an element such as uranium, thorium and potassium.
- granite: An intrusive igneous rock comprised dominantly of quartz (>10%), alkali feldspars and less amounts of iron-magnesium-rich dark minerals.
- Gray: The gray (Gy) has units of joules/kilogram (J/kg), and is the SI unit of absorbed dose of radiation. It is the amount of radiation required to deposit 1 joule of energy in 1 kilogram of any kind of material.

- greenstones or greenstone belt: They are elongate or belt-like, kilometre-scale assemblages of volcanic and sedimentary rocks within granite-greenstone subprovinces with tectonic or intrusive boundaries.
- grit: Sandstones with a relatively coarse grain size in the 2 mm range may be referred to as grit.
- limestone: This is a general term for those sedimentary rocks that contain greater than 80% carbonates of calcium and/or magnesium.
- Proterozoic: This is the geological eon or time period extending from 2500 million years ago (2500 Ma) to 542 Ma.
  - Paleoproterozoic: The oldest or earliest part of the Proterozoic eon from 2500 Ma to 1600 Ma.
- quartzite: The metamorphic equivalent of a quartz sandstone in which the sedimentary quartz grains have been fused due to the increase in temperature and pressure during metamorphism.
  - feldspathic quartzite: A quartzite in which the feldspar mineral content may be up to 25%.
- rare earth elements: The rare earth elements or rare earth metals are a group of 17 chemical elements in the periodic table; scandium, yttrium and the 15 lanthanoid elements.
- siltstone: A sedimentary rock in which the grain size of the constituent grains ranges between  $1/_{16}$  mm to  $1/_{256}$  mm.
- strike: The strike of a geological unit is the direction as indicated by a bearing or azimuth of a horizontal line on the surface of the unit.
- unconformity: An unconformity represents a period of erosion or non-deposition between overlying units and the underlying ones.
- uranium equivalent eU or Ueq: The uranium equivalent is an estimate of the uranium concentration in a rock based on the measurement of the uranium mineral sourced gamma ( $\lambda$ ) radiation as measured by a scintillometer or spectrometer. This may be reported as ppm or percent U<sub>3</sub>O<sub>8</sub> the equivalent uranium value. In Appendix 1 the method used by Terraquest Ltd. is presented to indicate how their eU values were

calculated. The equivalent uranium value can also be determined by comparison of radiometric readings to those given off by known standards or sources.

# 2(c) <u>Sources of Information</u>

In addition to data collected from the site by the author, GTO Resources Inc., and their precursor companies, data for this report has been derived from the assessment files of the Ontario Ministry of Northern Development and Mines, reports, maps and posters of the Ontario Geologic Survey, documentation from the Geological Survey of Canada, communication with Ontario Geological Survey Geologists, the original claimholder, as well as various corporate documentation reports and information available on the internet such as the Ministry of Northern Development and Mines Mining Claims Information (MCI) site. These are documented in the bibliography of this report.

# 2(d) <u>Property Inspection</u>

The writer of this report, R.G. Komarechka, P.Geo., was on site at the HPU property on February 25, 2012 to carry out a property visit to confirm the location of some recently staked claim boundaries, to observe the geology, terrain and current winter access. Another 5 day period on the site was spent from May 10, 2012 to May 30, 2012 to locate occurrences and supervise and assist with a more detailed examination and stripping of the Richore Occurrence.

# 3. RELIANCE ON OTHER EXPERTS

This Technical Report contains information from government documents, company reports, public documents and other technical reports. These reports may not have been written by Qualified Persons as defined by NI 43-101. The author has reviewed the information and there do not appear to be significant

discrepancies in the information. Minor variations, when encountered, were noted in this report. The author was not able to verify any of the historical assays or earlier survey data.

The data on the location of the claims is believed accurate and is based on the maps provided by the Ministry of Northern Development and Mines (MNDM), now renamed as the Ministry of Northern Development and Forests (MNDMF) and field data provided by claimstakers, line-cutters and geophysical technicians.

To further confirm details, the author, R.G. Komarechka, P.Geo., has discussed the history and tenure of the area with Ed Rose, the original claimholder of this claim area and current vendor/optionor. Komarechka also discussed the results of ground geophysical surveys carried out on behalf of the Company with the independent consultant, Dave Laronde, of Meegwich Limited as well as the geophysics with Terraquest and Abitibi Geophysical. The geology and mineralization of the Paleoproterozoic uranium mineralization in this area was also discussed with Dr. Mike Easton of the Ontario Geological Survey.

# 4. PROPERTY DESCRIPTION AND LOCATION

#### 4(a) Property Area

The HPU Property consists of five contiguous unpatented, unleased mining claims composed of 70 claim units covering about 1120 hectares in Hyman and Porter Townships.

#### 4(b) Location

The HPU Property is located in central Ontario, about 50 kilometres west of Sudbury approximately 4 kilometres north of Agnew Lake. The centre of the Property is located at longitude 81.69°W longitude and 46.42°N Latitude (NTS Map 41-I/14) or in NAD83 co-ordinates 446858m E, 5141763m N in Zone 17

(see Figures 1 & 2). The property is located in the Sudbury Mining Division, District of Sudbury.

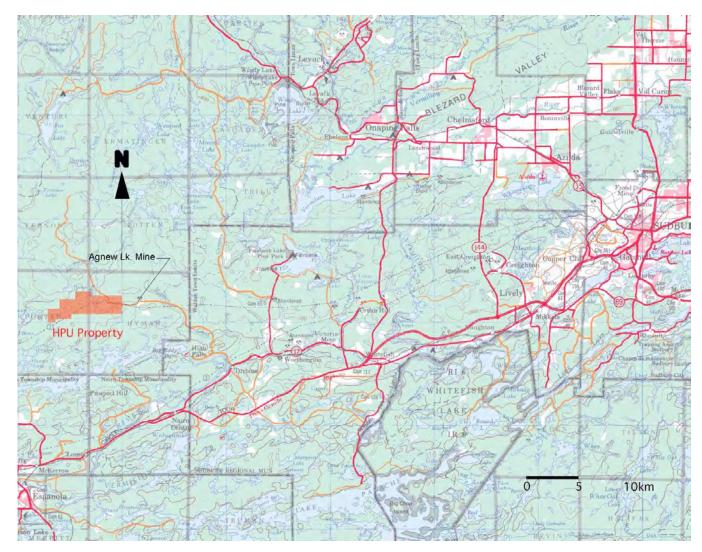


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Approximate location of GTO Resources Inc. HPU Property

# Figure 1 – Index Map of HPU Property



**Figure 2: Access Location Map** HPU Claim Area shown in orange by RGK. The Greater Municipality of Sudbury is shown to the east. Base map from Natural Resources Canada 1:250,00 scale Sudbury topographic map 411 vers.3

# 4(c) <u>Tenure</u>

In the fall of 2011 all the claims held by GTO Resources Inc., except for claim 420324 in Porter twp came due and were immediately re-staked. Claim 420324 was to come due on Feb. 3, 2011. An extension for 6 months to complete the required exploration work has been applied for and has been confirmed in writing by MNDMF. Details of the property are presented in Table 1 showing the current due dates. This table also shows four previous claim numbers that covered the same areas of the newly re-staked claims. These earlier claim numbers are shown on the maps of previous work undertaken and shown in this report. An extension for 3 months to complete required exploration work has been approved by MNDMF for 4 of these claims. Claim 4254057 has also had one year's worth of work applied from reserve which has been filed with MNDMF, but not yet registered. Details of the property are presented in Table 1 below showing the extended due dates.

Township or Area	Current Claim Number	Previous Claim Number	Claim Recording Date	Claim Due Date	Status	No. of Units	Annual Expenditures
HYMAN	4254056	3016128	2011-Nov-16	2014-Feb-17	Active'	* 16	\$ 6,400
HYMAN	4254057	3016027	2011-Nov-16	2014-Nov-16	Active	16	\$ 6,400
PORTER	4203204	4203204	2005-Feb-03	2014-Feb-03	Active	8	\$ 2,298
PORTER	4254054	4203205	2011-Nov-16	2014-Feb-17	Active'	* 15	\$ 6,000
PORTER	4254055	4203206	2011-Nov-16	2014-Feb-17	Active'	*	\$ 6,000
TOTALS		5 Claims				70 Units	\$13,600

TABLE 1 GTO RESOURCES INC. HPU PROPERTY, MINERAL CLAIMS

\*Claims under extension <sup>1</sup>One year's work applied from reserve submitted

# 4(d) Nature and Extent of Title

The HPU Property claim block forms an irregular block about 7 kilometres long east west and 1.5 kilometres wide north-south with the claims held in the name of GTO Resources Inc. (100%). Under the Ontario Mining Act, the staking of a

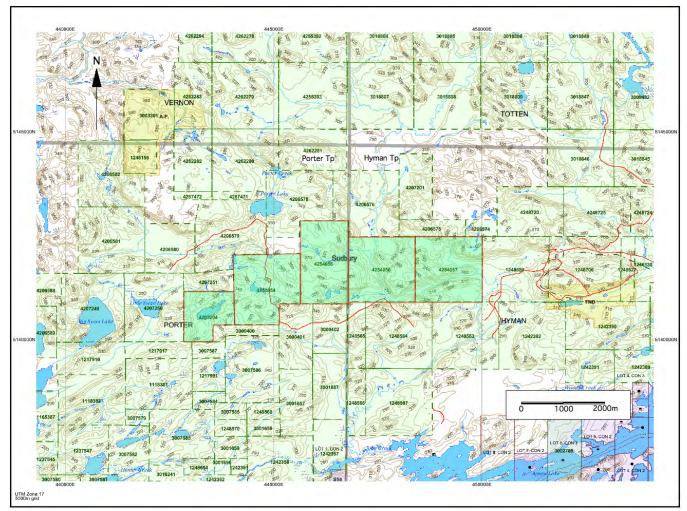
mining claim does not confer title, it only gives the claim holder certain rights to enter onto the land and carry out exploration and other activities subject to certain conditions as specified in the Mining Act, R.S.O. 1990, c. M.14 Sections 50 (1) (a) and (b) and 50 (2). To maintain a mining claim in Ontario in good standing an exploration expenditure of \$400 per unit is required on or before 2 years from the date of recording and in each subsequent year.

The claims in the HPU Property (the Property) have not been legally surveyed and the position of the claim posts is based on information supplied to the Ontario Ministry of Mines by the claimstakers. In Ontario, claims are staked by placing claim posts or cutting off existing trees, marked with appropriate markings, on the ground at required intervals around their perimeter and blazing between them. Claims staked in this manner give the claimholder the exclusive right to explore for minerals and obtain the mineral rights as per the Mining Act of Ontario. No surface rights are allocated in this staking. At this time the surface rights on the Property are held by the Crown.

# 4(e) Agreements, Royalties and Encumbrances

By an agreement dated 20 January 2005, GTO Resources Inc. has acquired a 100% interest in the HPU property subject to the following conditions:

- pay a royalty to the Vendors of \$0.20/lb of uranium produced from the RCU and/or a second property to a maximum of \$1,200,000. The royalty can be paid out at any time by the Company.
- as of 28 January 2010 pay annual advance royalties of at least \$12,000 to the Vendors regardless of any production or not.
- there is an area of joint interest of one (1) mile (1610 metres) beyond the perimeter of the RCU property.
- keep the property in good standing.



**Figure 3: Claim Map** *Current HPU Claim Area shown in green above as of Feb 18, 2012. Base map from the Ontario MNDMF ClaiMaps website at <u>http://www.mndm.gov.on.ca/mines/claimaps\_e.asp</u> <i>Co-ordinates shown in NAD 83 UTM Zone 17T. Prepared by Robert G. Komarechka* 

The Vendor/Optionor, Ed Rose, has advised the writer that, at the date of this report, all obligations to date have been met.

GTO Resources Inc. (the "Company") was incorporated on May 10, 2011 under the Business Corporations Act (British Columbia). Pursuant to an arrangement agreement between Firebird Resources Inc. ("Firebird") and the Company dated May 12, 2011, the Company acquired all of Firebird's interest in and to the Roberts Creelman Property and the Hyman Porter Property located in Ontario, in exchange for common shares of the Company (the "Arrangement"). The common shares of the Company commenced trading on the TSX Venture Exchange under the stock symbol GTR effective July 28, 2011.

Firebird Resources Inc. is the successor company to several prior companies domiciled in both British Columbia and Alberta as follows:

- Pan Oceanic Ventures Inc. (a British Columbia Company) changed its name to Falcon Ventures International Corp. on December 6, 1991 under the British Columbia Companies Act.
- Falcon Ventures International Corp. changed its name under the British Columbia Companies Act to Falcon Ventures Incorporated on December 24, 2002.
- On January 25, 2008 Falcon Ventures Incorporated continued from British Columbia to Alberta.
- On June 25, 2008 Falcon Ventures Incorporated changed its name back to Falcon Ventures International Inc.
- On November 4, 2009 Falcon Ventures International Inc. returned to British Columbia under the British Columbia Corporations Act and changed its name to Firebird Resources Inc.

Reference to some of these earlier company names, previously involved in the HPU property, may be discussed in the body of this report or references.

Pursuant to an agreement dated January 3, 2014, Jescorp Capital Inc. (Jescorp) a British Columbia Corporation, acquired the right to purchase a 50% interest in the GTO Resources Inc.'s HPU Property for cash payments over a 2 year period ending December 31, 2015. Subsequently by an agreement dated January 6, 2014, Vinergy Resources Ltd., a British Columbia Corporation, acquired the right from Jescorp Capital Inc. to earn a 50% interest by making specific cash payments and property expenditures over a 3 year period. Vinergy Resources Limited specifically stated its intention to assign its interest in the HPU Property to a wholly owned British Columbia subsidiary called Jonpol Rare Earths Inc.

#### 4(f) Environmental Liabilities

There are no known existing environmental liabilities to which the Property is subject. Review of the Ontario Ministry of Northern Development and Mines Abandoned Mines Information Database revealed only two location sites, these being AMIS #05215 and 05216, both located on claim 4254057. AMIS #05215 is known as the Richore Uranium Thorium Occurrence and has at least one trench located at NAD83 UTM Zone 17 co-ordinates 5141394mN and 449248mE (location based on AMIS database). AMIS #05216 is known as the East Bay Thorium Uranium Occurrence and also has at least one known trench located at NAD83 UTM Zone 17 co-ordinates 5141265mN and 448909mE (location based on AMIS database). None of the above locations have been visited and these locates may be suspect due to conflicting data found in the assessment files. In Ontario liability for past exploration work on lands that have reverted to the Crown generally becomes the responsibility of the Crown unless the property is taken to lease or further disturbance occurs at the location of the previous work (R.S.O., 1990). The author is unaware of any environmental or safety concerns regarding these trenches.

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Aside from the standard rights of way that may exist with existing roads on the Property, standard native right considerations, forest operations on crown lands and development constraints along waterways, the author is not aware of any constraints on mineral exploration on the HPU Property.

## 4(g) <u>Permits or Notifications</u>

As of this report date, all work proposed in this report may be undertaken as long as the claims and option are held in good standing. Notification is required to the Ontario Ministry of Mines, under the terms of advanced exploration prior to stripping an area in excess of 10,000 square metres or displacement of material in excess of 10,000 cubic metres or in excess of 10,000 square metres or displacement of material in excess of 2500 cubic metres within 100 metres from a body of water. Dewatering of shafts and reopening of past workings may also require notification of the Ontario Ministry of Mines. Notification is also required to the Minister of Labour prior to undertaking diamond drilling. Contact with the holders of the timber rights is recommended prior to the stripping and trail construction. Fees may be required for lost timber values. Work restrictions may also prevent activities at various times of high forest fire risk. Contact with the local Sagamok Anishnawbek First Nation has been established via liaison with Gary Toulouse, Director of Lands Resources and Infrastructure who has been informed of the exploration activities to date. No concerns have been expressed with any of the work undertaken on these claims by GTO Resources Inc.

#### 4(h) <u>Risks</u>

Although a complete perimeter claim survey was not undertaken on the claims, recent re-staking has indicated that logging activity since the first staking has removed some of the earlier claim lines and posts. Re-staking in the fall of 2011 was undertaken to match the preceding claims as accurately as possible and

have been registered on the MNDMF claim maps with the same boundaries of the preceding claims. Confirmation of some of the earlier claim boundaries was established while undertaking the cutting of a grid at the northeast part of the Property. No variations from the claim map were reported by the line-cutters or later by the geophysical technicians in the field. A site visit on February 25, 2012 confirmed the accurate location of the east N-S claim line between claim post 1 and 2 of the recently staked claim 4254057 as being adjacent to the westernmost claim line of pre-existing claim 1248680 in the vicinity of the power line. Additional claim lines encountered along the main access road on the appeared to be properly located according to the claim maps submitted.

The claims in the HPU Property have not been legally surveyed and the position of the claim posts is based on information supplied to the Ontario Ministry of Mines by the claimstakers. In Ontario, claims are staked by placing claim posts or cutting existing trees, marked with appropriate markings, on the ground at required intervals around their perimeter and blazing between them. Claims staked in this manner give the claimholder the exclusive right to explore for minerals and obtain the mineral rights as per the Mining Act of Ontario. No surface rights are allocated in this staking. At this time the surface rights on the HPU property are held by the Crown.

Aside from the standard rights of way that may exist with existing roads on the Property, standard native right considerations, forest operations on crown lands and development constraints along waterways, the author is not aware of any constraints on mineral exploration on the HPU Property.

At this time no formal Impacts and Benefits Agreement with the local First Nations is in effect. It appears the Sagamok Anishnawbek First Nation of this area appears very proactive towards mineral exploration and have signed an Impacts and Benefits Agreement with both Vale to the east Ursa Major Minerals Incorporated to the west.

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Cottage owners are present 4 kilometres to the south on Agnew Lake. They, and the representative First Nation group, would need to be consulted should any advanced mineral exploration develop. This is not anticipated as a problem at this time. The nearby mine of Ursa Major Minerals Incorporated, located outside of the HPU property, is within a similar distance from Agnew Lake.

# 5. <u>PHYSIOGRAPHY, CLIMATE, ACCESS, LOCAL RESOURCES AND</u> <u>INFRASTRUCTURE</u>

## 5(a) Topography, Elevation, Vegetation and Climate

The HPU property is located at an elevation varying from 280-370m above sea level. The terrain of the area consists of rocky hummocks rising above small creeks, swamps, small lakes and beaver ponds. Geological report #34 by the Ontario Department of Mines (Card, K.D., 1965) describes the country as rugged with granite and quartzite ridges rising 60 m, and occasionally 160 m, above the more easily weathered pelitic sedimentary and olivine diabasic rocks. The old granites to the north form a ridge between 50 and 100 m high. Glacial transported till, gravels and extensive flat areas of glaciofluvial cross-bedded sands and fine gravels fill in the lower elevations. Drainage is controlled by this primarily east-west ridge and gully topography controlled by the synclinorium plunging to the west. The water on the east side of the property flows into the drainage system of John Creek then southward into Agnew Lake. The western claims in Porter township drain directly into Agnew Lake (see figure 3).

The high ground is well-treed boreal forest with second-growth spruce, mixed poplar, birch, balsam fir and scattered jack pine. Low ground and ravines are forested with black spruce, cedar and tag alder. Recent logging in some parts of the area has created areas with thick young new growth.

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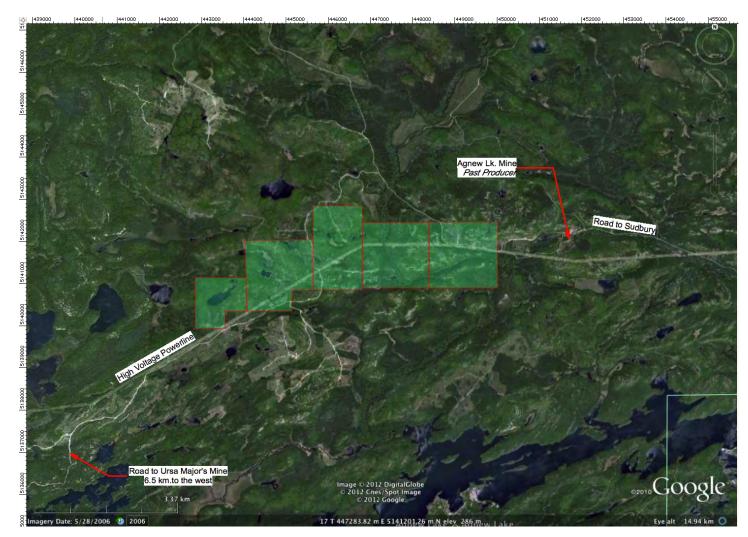
The climate of the area is moderate to cool with temperatures in the summer of about 20°C to 35°C. Winter temperatures range from -5°C to -25°C during the day and as cold as -35°C at night. Snow generally covers the ground from mid December to early-April. Work can be carried out on the subject property all year long with mapping and sampling confined to the summer months. Drilling can be done all year long.

# 5(b) Access

The property is road accessible from Highway 17 travelling approximately 40 km. west of Sudbury, turning north on Worthington road, then west on Decou road to Manninon road and to the intersection of Nain-Turbine road. Turn north and follow the signs to the High Falls road across the railway tracks, proceed west on High Falls road to the turn off on Agnew Lake road. Turn northward on the Agnew Lake road and travel 13.5 km to the eastern boundary of the HPU Property. The claims can be accessed by following the URSA Major Minerals access road to the west (see figure 4). The condition of the road is good, being passable by 4-wheel drive vehicles in winter, and by car in the summer. At the time of the author's visit on February 25, 2012 the road was plowed and accessible by a two-wheel drive truck. It should be noted that the road network as shown on the current government claim map is inaccurate as recent logging and road building has changed the road fabric. The Google Earth image of figure 4 shows the current road network on the property.

# 5(c) Local Resources and Infrastructure

A good road network is found across the property due to recent logging activities and new road construction due to Ursa Major Mining Inc.'s nearby open pit, which is not on the HPU property. A major electrical power line extends through the middle of the claim block in both Hyman and Porter Townships. Power lines also supplied the past producing Agnew Lake Mine about 1.5 kilometres to the east off of the HPU property. Mining personnel and industrial suppliers are readily available to support any exploration or mining activities in the major mining centre of Sudbury located 76 km to the east of the HPU property. Tailing ponds, waste disposal areas and processing plants are present in the region outside the claim area as a result of past and current mining operations in the region.



**Figure 4: Access & Infrastructure** *HPU Claim Area shown in green above. Note new roads. Basemap from Google Earth. Graphic overlays prepared by R. Komarechka* 

If an exploitable mineral deposit should be outlined on the Property there is sufficient area within the Property for consideration of tailings disposal area, waste disposal areas, heap leach sites or mineral processing plants as required. Nearby mining operations and past operations exist nearby with similar facilities. Sufficient water for any mining operation is readily available in the area. At this time, other than the high voltage power line, there are no surface rights encumbrances on the property.

## 6. <u>HISTORY</u>

#### 6(a) <u>Historic Regional Exploration</u>

The Agnew Lake area was the subject of much exploration during the mid-1950s as part of the rush following the uranium discoveries in the Elliot Lake area and then more locally with the discovery of the nearby Agnew Lake Uranium Mine. The uranium in the Agnew Lake Mine area, located 1.5 kilometres to the east outside of the HPU property, is currently held by the claimholder Ursa Major Minerals Inc. The uranium occurrence in the area of this past minesite was originally discovered by a prospecting team for New Thurbois Mines. Diamond drilling starting in the mine area in1954 and further active exploration work continued in the surrounding area wherever conglomeritic rocks occurred. The Agnew Lake Minesite area was later acquired by Kerr Addison Mines who undertook, in 1965 and 1967, 13,000 metres of diamond drilling.<sup>1</sup> In June 1967, Agnew Lake Mines was incorporated to develop the property and undertook production.

<sup>&</sup>lt;sup>1</sup> McBride, Derick & Workman, Al, 2005 p. 10

During its operation from 1979 to 1983 under the control of Kerr Addison Mines Ltd., uranium ore was mined from the Agnew Lake Mine, crushed and subjected to surface leaching operations for recovery of uranium. Watts, Griffith and McOuat Limited in their report<sup>1</sup> on the Agnew Lake Mine, stated *"it seems reasonable that there remains approximately 5.3 M tons (4.8 Mt) of ore in the mine with a fully diluted grade of approximately 0.8-1.0 lbs U3O8 per ton or 0.4-0.5 kg U3O8 per tonne."* 

The Ontario Geological Survey also published a series of geological maps of the area. The Federal Government Collins<sup>2</sup> in 1938 undertook regional mapping that included this area. A geological map of Porter township<sup>3</sup> was published in 1961 from mapping done in 1956 and 1957 and a geologic map of Hyman township was published in 1965<sup>4</sup>. The Sudbury Cobalt Compilation sheet, map M2361, published in 1977<sup>5</sup> by the Ontario Geological Survey, combines these two maps and shows the extent of the Huronian formations in this area. Map M2360<sup>6</sup> was prepared covering the Sudbury-Manitoulin Areas of the Southern province but fails to discriminate between the Mississagi and Matinenda Formations in the Hyman Porter Area. Recently, in 2006<sup>7</sup>, a detailed geological map over the Hyman Porter township area by Easton represents the most current geology of that area.

- <sup>4</sup> Card, K.D., 1965
- <sup>5</sup> Card, K.D. & Lumbers, S. A., 1977
- <sup>6</sup> Card, K.D., 1978
- <sup>7</sup> Easton, 2006

<sup>&</sup>lt;sup>1</sup> McBride, Derick & Workman, Al, 2005 p. 14

<sup>&</sup>lt;sup>2</sup> Collins, 1938

<sup>&</sup>lt;sup>3</sup> Ginn, R.M., 1961

Assessment work in the general area on and surrounding the HPU property consisted of sampling, trenching, geophysical and geochemical surveys and diamond drilling. A more detailed summary of the assessment done in the area can be found up to 1986 in the GDIF reports and maps of Hyman Township GDIF282<sup>1</sup> and up to 1988 in Porter Township GDIF419<sup>2</sup>. More recent assessment work can be viewed in the assessment files at the Ontario Ministry of Mines Library in Sudbury Ontario. The recent MNDM geoclaims website <u>http://www.geologyontario.mndm.gov.on.ca/website/geoclaims/viewer.asp</u> was very useful for locating historic work undertaken on by others.

# 6.(b) <u>Historic Local Exploration</u>

Historic local exploration work, undertaken on the HPU property has been retrieved from the assessment files report index (AFRI) of the Sudbury Resident Geologist's office of the Ontario Ministry of Northern Development of Mines and Forests. This work is described below in terms of the major regional surveys conducted and the main known occurrences over the area of the HPU property. The work conducted on the more significant occurrences, described as Mineral Deposit Inventory (MDI) numbers and Abandoned Mines Information System (AMIS) numbers are described below in table 2. Associated maps, georeferenced to the current claim fabric and areas of past surveys and drilling undertaken by others, are also shown in figures 5 - 12. Note that there is an east-west extended distortion on these maps as obtained from the Ministry's No alteration of the Ministry data was undertaken by the author. website. Further details of significance on these surveys are described later in the text under item 7(b) Property Exploration under the AFRI numbers as shown on figures 5-12.

<sup>&</sup>lt;sup>1</sup> Sudbury Regional Geologists Office, 1986

<sup>&</sup>lt;sup>2</sup> Sudbury Regional Geologists Office, 1988

No production or significant historical mineral resources or mineral reserve estimates, in accordance with section 2.4 of NI43-101, have been determined from any of the known occurrences on the HPU property.

In the remainder of this section historical results are reported. These results were normally reported as pounds (lb) of  $U_3O_8$  (uranium oxide) per short ton of 2000 lb. or %  $U_3O_8$ . The author is unaware of the sample quality, their representativeness and any bias, however, it is believed they were in line with the standards at that time. The precise locations of the historic drillholes and samples collected are somewhat vague due to the poor quality of the earlier claim maps.

MDI/AFRI	Occurrence Name	Тwp	Claim	Easting	Northing	Formation	Lithology	U308	ThO2
33	Pennbec	Porter	4254055	446256	5142654	Mississagi	Conglomerate		
41I05NE0072	1955: Agnew Lake Uranium Gold Mines and New Thurbois Mines, Geological and ground geophysical survey.								
41I05NE0102	1966: Pennbec Mining Corp., Ground Scintillometer. survey, 3 diamond drill hole program totalling 2 035 feet.								
42C02SE1210	1974: Consolidated Morrison Explorations Ltd., ground geological and geophysical (radiometric) survey,								
	airborne (electromagnetic, magnetic, radiometric) surveys.								
34	NEW MYLAMAQUE	Porter	4254054	445149	5140897	Mississagi	Conglomerate		
41I05NE0094	1954:New Malamaque Exploration Ltd., geological and geophysical (radiometric) surveys. 0.018-0.02%								
2000004945	1969:Canadian John	s-Mainvill	le Ltd., airbo	orne geoph	nysical (radi	ometric and r	magnetometer)	survey.	
41I05NE0054	1969: G.L. Phelan, P	ojex Ltd.,	, 4 Diamond	drill hole	program to	talling 2 634 i	feet.		
42C02SE1210	1974: Consolidated I	Morrison	Explorations	Ltd. Airbo	orne Geophy	<u>vsical (EM, ma</u>	agnetic and rad	liometric) surv	eys.
35	Brewis	Porter			5140548		Conglomerate		
41I05NE0095	1954: Brewis and Wi								
41I05NE0085	1955: Agnew Lake U					·			
2000004945	1969: Canadian Johr								
42C02SE1210	1974: Consolidated I	Morrison	Explorations	Ltd., Airb	orne geoph	ysical (magne	etic, EM and rad	1	/eys
	and assays.							0.01-0.02%	
38	Richore	Hyman	4254057	449410	5141296	Birch Lk	Granite		
						?	Conglomerate		
41I05NE0052	1968-69: Richore Go								
41I05NE0053	1967-69: East Bay C								
41I05NE0062	1968: Monteagle Mir							of D.W. Sulliva	an
41I05NE0078	1973-75: E. Rose: m					Resources Lto	1 mapping.		
41I05NE0046	1977: Consolidated I								
	Radioactivity detecte								
	elevated zones of rad							nes in the gra	nite.
	U and Th values also								
	Samples collected by						etween	0.06-0.12%	0.450/
	Assays from East Ba								0.15%
									1.00%
	A 4.2 ft section of co	re trom N	'ionteagle Mi	inerais Lto	arili hole M	11 assayed		0.17%	0.58%

#### Notes for Table 2

Note 1: UTM Datum: NAD83

Note 2: All MDI numbers above are preceeded by MDI41I05NE00

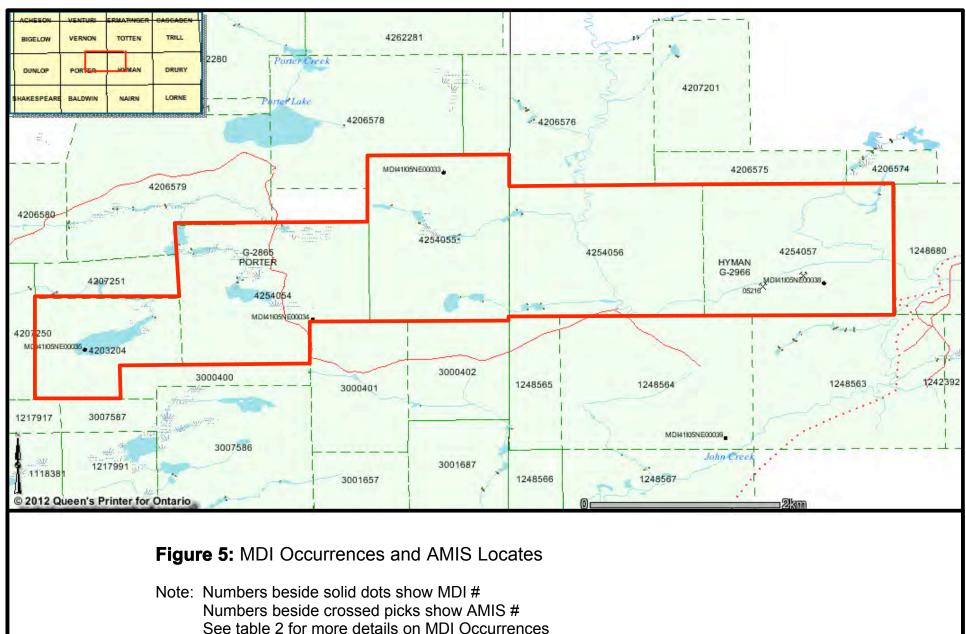
Note 3: Formations in red may not be correct

Note 4: Location of MDI41I05NE0039 is incorrectly located on MNDM maps. Correct locate is given by AMIS file # 05216

Note 5: All data above has been obtained from the Mineral Deposit Inventory (MDI) records as catalogued by the Ministry of Northern Development of Mines. These are historical values and should not be considered as indicative of an existing resource.

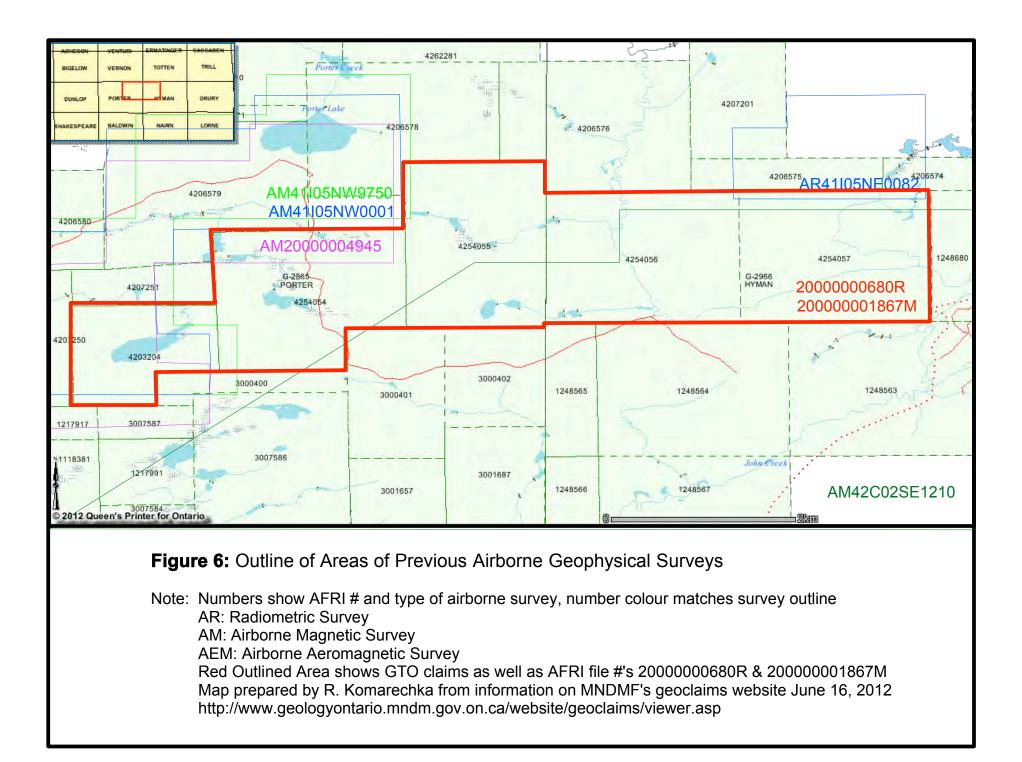
Note 6: At the time of this report, the blue coloured AFRI numbers are active links that can be clicked on to receive the actual reports from the MNDMF website.

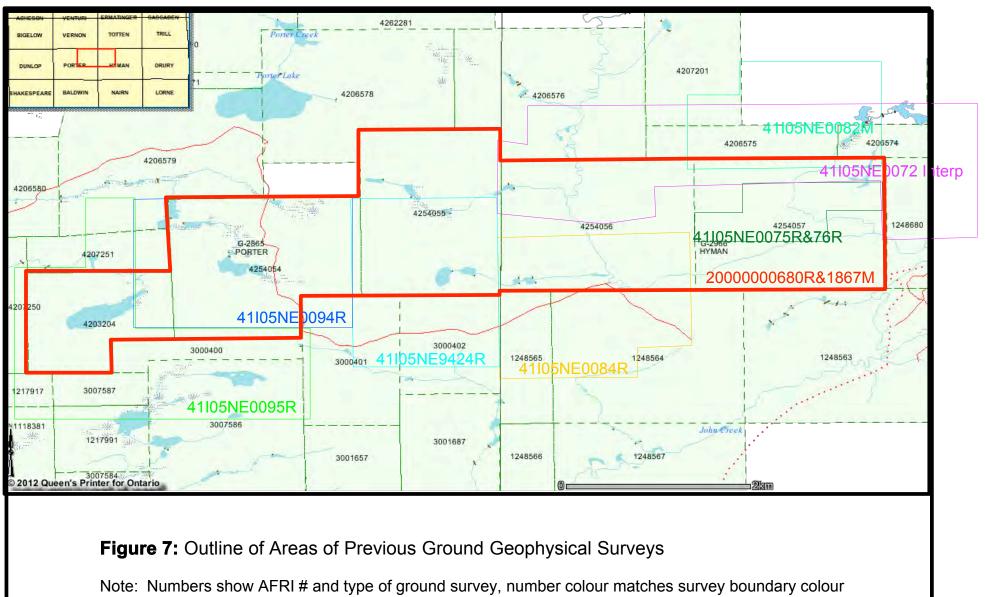
Note 7: All resource estimates presented in this report on the HPU property are historical and were prepared before the introduction of National Instrument 43-101 – Standards of Disclosure for Mineral Projects ("NI 43-101"). These resource estimates may not be relied upon until they are confirmed using methods and standards that comply with those required by NI 43-101. The potential for the exploration target to replicate the historical resource, or to reach the indicated range of tonnages, is conceptual and is based on historical reports, which cite approximate lengths, widths, depths, grades and projections of the historical resource. Readers are cautioned that a qualified person has not completed sufficient exploration, test work or examination of past work to define a resource that is currently compliant with NI 43-101. The Company further cautions that there is a risk that exploration and test work will not result in the delineation of such a currently compliant resource. Neither the Company nor its personnel treat the historical resource estimate or the historical data as defining a current mineral resource, as defined under NI 43-101, nor do they rely upon the estimate or the data for evaluation purposes; however, this data is considered relevant and will be used to guide exploration as the Company develops new data to support a current mineral/resource estimate in accordance with the requirements of NI 43-101.



Red Outlined Area shows GTO claims

Map prepared by R. Komarechka from information on MNDMF's geoclaims website June 16, 2012 http://www.geologyontario.mndm.gov.on.ca/website/geoclaims/viewer.asp

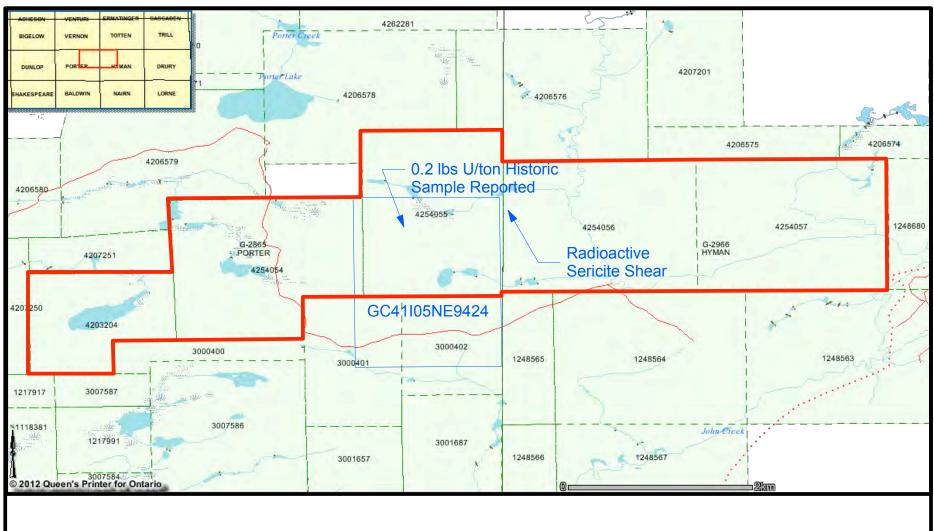




R: Radiometric Survey

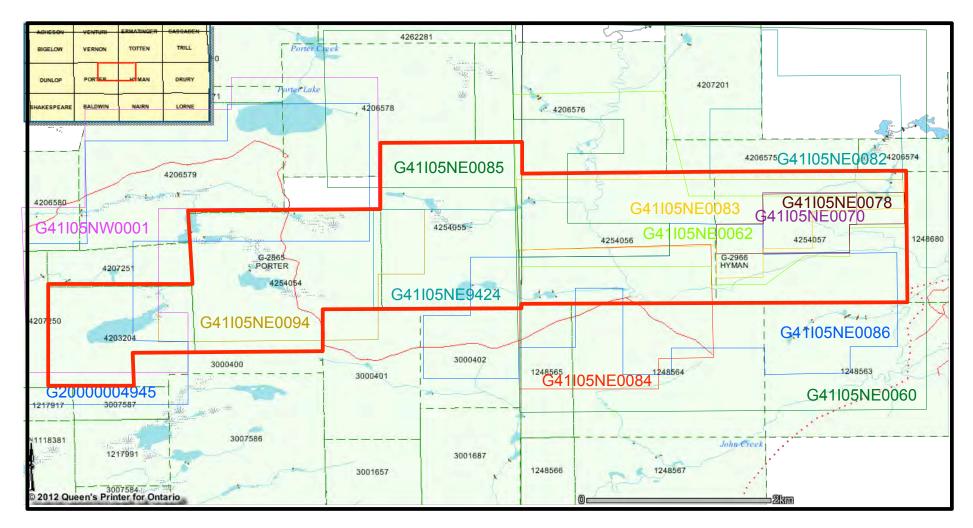
M: Magnetic Survey

Red Outlined Area shows GTO claims as well as AFRI file #'s 20000000680R & 20000001867M Map prepared by R. Komarechka from information on MNDMF's geoclaims website June 16, 2012 http://www.geologyontario.mndm.gov.on.ca/website/geoclaims/viewer.asp



# Figure 8: Outline of Previous Geochemical Surveys

Note: Numbers show AFRI # and type of survey GC: Geochemical (Radiometric) Survey Red Outlined Area shows GTO claims Blue outline shows area of geochemical survey Map prepared by R. Komarechka from information on MNDMF's geoclaims website June 16, 2012 http://www.geologyontario.mndm.gov.on.ca/website/geoclaims/viewer.asp



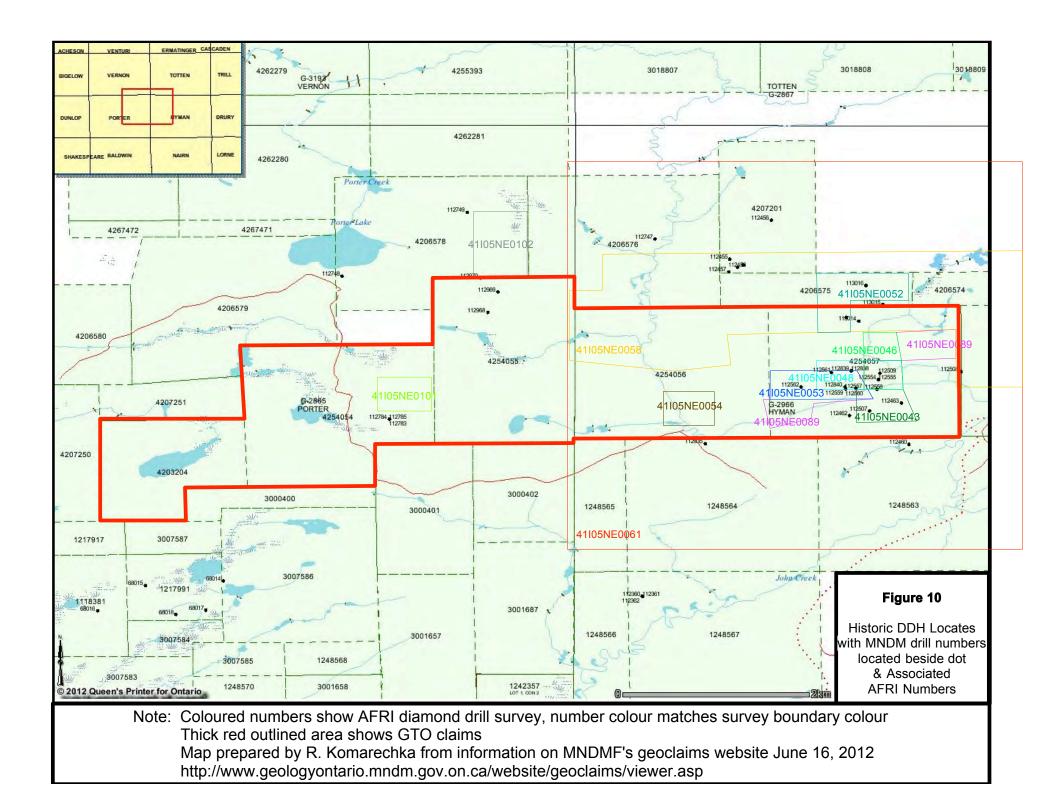
# Figure 9: Outline of Areas of Previous Geological Surveys

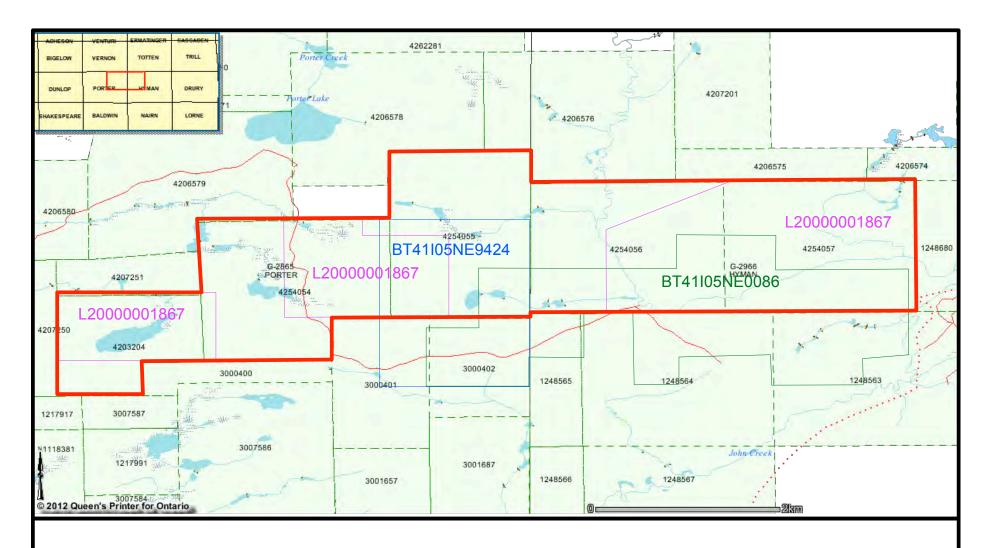
Note: Numbers show AFRI # and type of survey, number colour matches survey boundary colour

G: Geologic Survey

Red Outlined Area shows GTO claims

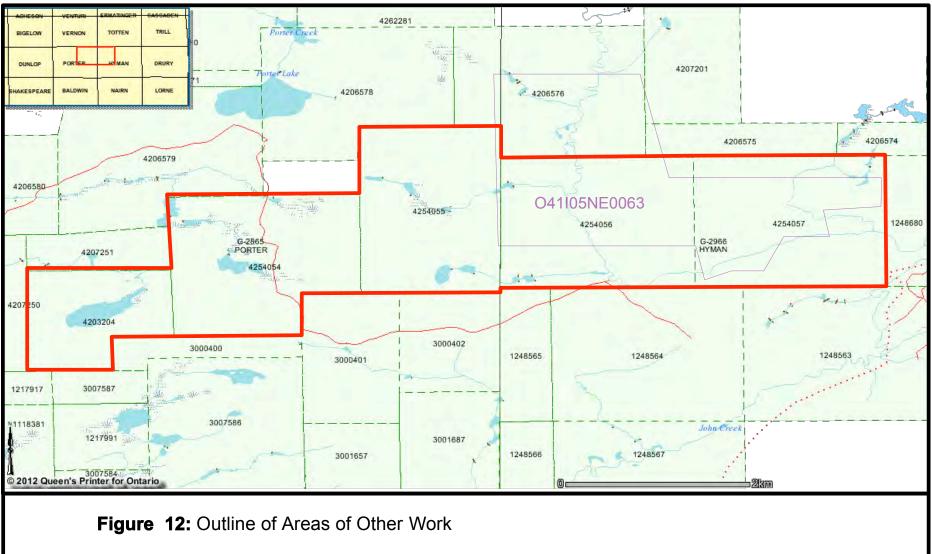
Map prepared by R. Komarechka from information on MNDMF's geoclaims website June 16, 2012 http://www.geologyontario.mndm.gov.on.ca/website/geoclaims/viewer.asp





# Figure 11: Outline of Areas of Previous Physical Work

Note: Numbers show AFRI # and type of physical work. BT: Bedrock Trenching, L: Linecutting Red outlined area shows GTO claims Map prepared by R. Komarechka from information on MNDMF's geoclaims website June 16, 2012 http://www.geologyontario.mndm.gov.on.ca/website/geoclaims/viewer.asp



Note: Numbers show AFRI # and type of survey, number colour matches survey boundary colour

O: Share Offering Report / assay values

Red Outlined Area shows GTO claims

Map prepared by R. Komarechka from information on MNDMF's geoclaims website June 17, 2012 http://www.geologyontario.mndm.gov.on.ca/website/geoclaims/viewer.asp

### 6(b)-1 Discussion of Local Historical Work

The following summary outlines the work done on the HPU property, organized into the categories as described in figures 6-11. Note that each work record is shown preceded with their AFRI (Assessment File Report Index) number. When coloured blue this number is an active link that at the date of this report, when clicked on, can take you to the MNDMF website for downloading a pdf of the file. The historic work is reported in each category from the earliest to latest date.

#### <u>Airborne Geophysical Surveys – see figure 6</u>

41105NE0082 Richore Mines Limited, in 1968, undertook a ground magnetometer, ground scintillometer survey and an airborne radiometric survey against the northern contact of the Huronian sediments with the underlying Birch Lake Granite, and investigated anomalies along the contact with a further detailed ground scintillometer survey. Further geological mapping undertaken located polymictic conglomerates. A suggested possible deep contact of a radioactive conglomerate with the Birch Lake granite as a proposed target was not determined, however a drill program to investigate this possibility was proposed.

20000004945 Consolidated Johns – Manville Co. Limited in 1968 conducted an airborne radiometric and magnetic survey to the north of current claim 4254054 and on current claim 4203204. The magnetometer survey defined a linear diabase dike and a possible mafic intrusive plug within the metasediments. Three uranium anomalies were found. One of which may be on the north edge of GTO claim 4264054 within the Mississagi formation and another to the west off the GTO claims along the Swan Fault west of Cygnet Pond. The other anomaly was over drift covered granite to the northwest off the claims of GTO. A ground survey to examine these anomalies was suggested. 41105NW0001 This is a duplicate of 20000004945 above, but having higher resolution graphics.

41I05NW9750 This is also a duplicate of 20000004945 above.

42C02SE1210 Consolidated Morrison Explorations Limited, in 1974, contracted a large scale airborne magnetometer and radiometric survey with Aerodat Limited over the eastern part of the current GTO claim area. The magnetic survey helped distinguish lithological units such as diabase dikes and gabbroic Nipissing intrusive sills. A total of eight anomalous thorium anomalies with co-incident uranium anomalies were indicated by this survey. Potassium anomalies were generally uniform and reflective of rock exposure.

2000000680 Falcon Ventures International Inc. in 2006 undertook a triaxial Magnetometer and triaxial VLF and radiometric airborne survey by Terraquest as described later in this report under Item 9, Exploration.

20000001867 Falcon Ventures International Inc. in 2006 commissioned an interpretation of a triaxial Magnetometer and triaxial VLF and radiometric airborne survey undertaken by Abitibi Geophysics. This report was prepared by Bedrock Research Corp as described later in this report under item 9, Exploration.

## Ground Geophysical Surveys – see figure 7

41105NE0094 New Mylamaque Explorations Limited in 1954 undertook a ground geologic and radiometric survey in the area of the current claims 4254054 and the east portion of claim 4203204. Lines were cut 300 feet apart and readings taken every 50 feet with an Electronic Associates model EA135 geiger counter with continuous headphone observations between stations. The survey revealed an average background count of 240 cps with readings of 300 cps in

conglomerate units, increasing in rusty and sheared zones. The highest reading being 400cps. Extensive overburden inhibited examination of the south part of the property. Brewster and White Limited recorded .02 and .018%  $U_3O_8$  to the south of the New Mylamaque Explorations Limited property. Speculation of continuity of this zone under the overburden was suggested along with a proposed drill program to confirm this.

41105NE0095 Brewster and White Limited in 1954 undertook a ground radiometric and geologic survey over part of the current area of GTO's claim 4203204. Lines were cut 200 feet apart and readings taken every 50 feet with an Electronic Associates model EA135 geiger counter with continuous headphone observations between stations. The general background over the property was in the vicinity of 200 counts per minute, except for exposures of "Bruce conglomerates which had readings of about 320 counts per minute. The higher readings being obtained in rusty pyritiferous conglomerate and in areas of shearing in the rusty conglomerate. Two readings of .010% U<sub>3</sub>O<sub>8</sub> located150 metres apart was obtained near the west end of Cygnet Pond on GTO's current claim number 4203204. Two other samples located near the southwest corner of GTO's current claim number 4254055 yielded .020 and .018% U<sub>3</sub>O<sub>8</sub> 122 metres apart within a conglomerate, unit shown on their mapping to be about 100 feet wide. These readings were associated within a rusty sheared conglomerate. About 800 feet to the east of this a conglomerate unit was mapped at a point where the flank of the syncline joins the nose of the fold. This conglomerate was shown on their map to have a width of about 275 metres at the eastern edge of their mapping. In the recommendations of this report it was suggested that as the uranium on surface at Elliot Lake was leached it was proposed that higher grade Uranium could be found at depth. Further more detailed radiometric examination and shallow drilling was recommended in the areas of anomalous uranium assays.

41105NE0072 New Thurbois Mines Limited had an interpretation report prepared in 1955 by L.G. Phelan that discusses the geology of the Agnew Lake Mine Area (prior to its development). The report does not mention anything on the area of their claims that overlaid the current claims of GTO. However on page 3 of the report the following is stated:

"In the #2 and #3 zones, described below, there is a main ore-bearing conglomerate horizon, continuous but of varying grade. This horizon is flanked by two or more parallel conglomerates which are lenticular in habit, reappearing at irregular intervals in more or less the same stratagraphic position. In both the main and flanking conglomerates the walls are indefinite, there is a central higher grade core which grades outward into barren and more or less pebble-free quartzite." This report also states the ratio of Thorium: Uranium, although variable, averages from 3:1 to 4:1.

41105NE9424 W. W. Davis Lic #A38904 the claim owner of this property, in 1967, undertook line cutting with 100' line spacing with stations every 100' followed by a ground radiometric survey using a Model 107c unit from Professional Precision Radiation Instruments Inc. Two radioactive zones were located: a guartz pebble conglomerate and a sericitic shear zone. The radioactive shear zone was sheared quartzite with heavy sericitic alteration having bright green alteration. This site was discovered 122 metres north of their No 2 post of the historic claim number 13671 and 6 metres east of the historic claim line. This would place this location near the western boundary of current claim 4254056. The bed of pebble conglomerate was approximately 6 metres wide was traced about 114 metres. It was stated to be mineralized with pyrite and having a reading twice that of background. Four trenches were blasted to a depth of 2 feet across the pebble conglomerate bed. A historic sample collected from this zone ran 0.2 pounds uranium per ton. This area would be in the vicinity of the northwestern part of claim 4252055. Detailed mapping and diamond drilling of the sericite and pebble conglomerate zones was recommended.

41105NE0082 This work was undertaken by Richore Gold Mines Limited in 1968 is discussed in the airborne geophysical section.

41105NE0084 Newlund Mines Limited in 1968 undertook a geological and ground radiometric survey over the south half of the current GTO claim 4254058. This survey was conducted by G.C. Campbell. This work consisted of linecutting at 400 feet intervals with stations at 200 feet and scintillometer readings taken at every 100 feet. A geologic survey was conducted over the area and one diamond drill hole located north of John Creek on a localized radiometric reading of 3x background was drilled to a depth of 104 feet. Overburden limited comprehensive coverage of the area, readings 3 times background were observed in the central part of current claim 4254058 along its eastern boundary. These anomalous readings were believed to be due to granitic boulders. Another area of 3x background was located in the northwest corner of the study area which would be along the west boundary of current claim 4254058 on a cliffside outcrop of quartzite. No conglomerate was noted in the mapping.

41105NE0076 E. A. Rose in 1975 contracted a Scintillometer survey on the Ed Rose Group claims, currently in the vicinity of the centre of claim 4254057. This work was undertaken by M.W Harrison, geological technician. North-south lines were cut 200 feet apart with stations at 100 feet. The instrument used was a type EA-135 Scintillometer made by Electronic Associates Ltd which measured total counts per minute (cpm). Three anomalies were located over the background of less than 30 cpm. These were 230cpm, 530cpm and 840cpm and were located in the vicinity of previous trenching in the area of GTO's latest stripping program. A drill program was recommended for this area in the conclusion of this report.

41105NE0075 Kerr Addison Mines Limited in 1976 contracted a Radon Gas Survey on the Ed Rose Group claims currently in the vicinity of the centre of claim 4254057. This work was undertaken by C.K. Wilton, senior development geologist. Survey lines were cut chained and flagged in a north-south direction at 400 foot intervals. Radon gas readings were taken at 100 foot intervals and at 50-foot intervals on each side of anomalous readings. Areas of outcrop, marshswamp and creeks could not be surveyed. Background was 10 cpm (counts per minute), anything greater than 20cpm was considered anomalous. The ratio of the first minute cpm reading divided by the 3 minute cpm reading was used to discriminate uranium. A ratio greater than 50% being indicative of uranium. The report stated no uraniferous zones of interest were detected.

20000001867 Falcon Ventures International Inc. in 2006 contracted linecutting and ground VLF magnetometer surveys over three areas of the GTO claim area. This work was undertaken by Meegwich Consultants Inc. The location of this work is shown generally in figure 7 and more accurately in figure 11. Further details on this work is described later in this report under Item 9, Exploration.

2000000680 Falcon Ventures International Inc. in 2009 contracted out a ground radiometric survey by Abitibi Geophysics Inc. This work was undertaken over the same area as the Meegwich ground geophysical survey AFRI # 2001867. Further details on this work is described later in this report under Item 9, Exploration.

### Ground Geochemical Surveys - see figure 8

41105NE9424 This 1967 radiometric survey was described earlier under ground geophysics. Figure 8 shows the areas of anomalous readings encountered in this survey.

### Ground Geological Surveys - see figure 9

41105NE0094 This 1954 report combined geological and geophysical survey by New Mylamaque Explorations Limited survey is discussed earlier in the ground geophysical section. 41105NE0086 Chemical Research Corporation Canada Ltd. had a geological report prepared in October 22, 1954 by G.L. Hammond, Mining Engineer, in the vicinity of the southern part of claims 4254057, 424056 and the southeastern part 4254055 of the current GTO claim fabric. Lines were cut and mapped at 400 foot intervals with stations at 100 feet. Trenching, blasting and channel sampling was undertaken along with geiger counter readings. It was stated that 2-3' below the rock surface was generally adequate to get representative readings from unleached rock. It was noted that the radioactivity was enhanced in the oligiomictic conglomerate and along the adjacent shears near these conglomerates. While locating several sites of significant assays the lack of continuity was disconcerting, however the report mentioned large radioactive zones known on the property not yet investigated. The most significant of these radioactive anomalies was in the area of the Richore Occurrence. The report gives a good history of the geologic understanding of the area to the date of its publication and the map shows the area of trenching.

41105NE0085 Agnew Lake Uranium Mines Limited in 1955 undertook a geological survey, cutting north south lines 400 feet apart, with stations at 100 foot intervals. The property was mapped and readings taken with a Geiger counter. The report stated that a large part of the property was overlain with the Mississagi formation but no appreciable radioactivity was detected. Also covered in this survey, but not shown on the Ministry index maps, was the area around Porter Lake, west of the outlined area. A recommendation to undertake further Geiger Counter readings towards the southeast of Porter Lake was proposed.

41105NE0083 East Bay Gold Limited in June and July of 1967 undertook a radiometric survey over all its property and a geological survey over the western part of its property. Survey lines were cut at 400 foot intervals for the surveys. The area of the radiometric survey covers parts of GTO claims 4254055 and 4254056 while the geologic survey included just the west part of GTO's current

claim 424056. No conglomerate beds were noted in this study of the west claims. No geologic map was given over the other area with the radiometric anomalies. Several radiometric anomalies and significant assays were discussed in the area of the current Richore occurrence.

20000004945 This 1968 report included some airborne geophysical work described in the airborne geophysics section. A preliminary report of the geology of an area outside of the Hyman Porter area is presented along with the earlier 1960 Porter Vernon township geology map (OGS map 2011), underlying the magnetic survey of the northern part of GTO's current claim 4203204. No comments of significance on the geology of the HPU Property was presented in this report. This report was discussed earlier in this item under airborne geophysical surveys.

41I05NW0001 This report is a duplicate of the above report 20000004945 but having better graphics.

41I05NE9424 This radiometric survey was described earlier under ground geophysics. Figure 8 shows the areas of anomalous readings encountered in this survey.

41105NE0084 This Newlund Mines Limited survey undertaken in 1968 is described above under Ground Geophysical Surveys.

41105NE0060 This Economic Geology Report of Agnew Lake Mines Ltd. Hyman Tp. By J. K. Carrington, Engineering Supervisor, Agnew Lake Mines Ltd. and C.K. Wilton Senior Geologist Kerr Addison Mines Ltd. dated April 21-23, 1969, is a compilation report providing a good compilation of work undertaken and the uranium mineralization geology and structural occurring at the Agnew Lake Mine and surrounding area. 41105NE0082 This work of Richore Mines Limited, in 1968 is described in the ground geophysical section.

41105NE0062 Monteagle Minerals Limited in a report by D. W. Sullivan dated Dec. 7, 1968, submitted as part of an offering, reported earlier diamond 1966-67 drill results by East Bay, Kerr Addison and Newlund of:

Hole	width	$U_3O_8$	ThO <sub>2</sub>					
East E.B. 1	1.5'	0.6 lbs/ton	3.0 lbs/ton					
West E.B. 3	5.5'	1.08 lbs/ton	1.34 lbs/ton					
West E. B. 3 deeper in hole	3.7'	0.36 lbs/ton	1.16 lbs/ton					
Note the wider widths in E.B. 3 included weighted averages as the grade was								
variable over the intervals. Assaying was done by X-Ray Assay Laboratories of								
Don Mills, Ontario.								

This report also mentioned a uranium bearing quartz-pebble conglomerate existed on the property and stated "it would appear to have an east-west strike length of up to 7,000 ft strike length" pg. 5. It is uncertain if this lower Mississagi? Qtz pebble conglomerate is the Matinenda Formation. A map showing a detail of the previous and proposed drilling relative to the claim fabric was contained in the submission.

A letter dated March 21, 1969 in this submission discusses results of the first hole drilled, M2. Assays reported stated 4.4 feet of 3.4 lbs  $U_3O_8$ /ton, 3.6 ft averaging 1.0 lb  $U_3O_8$  per ton and 8 feet averaging 1.2 lbs  $U_3O_8$ /ton. A second hole was stated to be drilled but no further info was supplied. A further 4,000 ft diamond drill program in the area was recommended.

The above work in this area occurred on part of the largest radiometric anomaly located by the recent Terraquest survey flown over the HPU Property. Recent stripping was also undertaken by GTO around this area.

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At this time there was confusion regarding the stratigraphy of the area as indicated by the following quote from AFRI 41105NE0062, Monteagle Minerals Limited Report "Now, it is known that the favourable uranium-bearing quartz pebble conglomerate of the Lower Mississagi is present in several places along the margin of the Huronian Basin east of Blind River and is now being developed in Hyman Township in the Agnew Lake (Espanola) area where the stratigraphic succession above the radio-active conglomerates north of Agnew Lake is identical with that of the Quirke Lake trough" (O. D.M. Geol Report No.1, J. E. Thompson, 1960).

41105NE0078 A preliminary geological report was prepared by Ed Rose on May 12, 1975. The report recommends undertaking a scintillometer survey, more detailed mapping and trenching and sampling of the conglomerate. The geologic map shows a trend of conglomerate and the location of some old drill holes.

41105NE0070 This geological report of the Rose Showing was completed in July 25, 1977 by David S Robertson & Associates Limited in an option with Norcen Energy and Resources Limited and Consolidated Morrison Explorations. Linecutting was undertaken on the property with lines at 100 foot spacing followed by geological mapping and monitoring radiometrics with a BGS-1S scintillometer. The report discusses a uraniferous pyritic conglomerate consisting of well packed quartz pebbles less than 1 inch in diameter within a dark-gray quartzitic matrix occurs approximately 50 feet stratigraphicaly above the granitic basement. Assays in excess of 3 lbs U<sub>3</sub>O<sub>8</sub> per ton with higher ThO<sub>2</sub> contents are reported. The report states that the geologic relationships at the Rose showing are more complex than previously described. The report recommends additional mapping in adjoining claims to fully assess the Rose Showing. A reading of 45,000 cpm was noted on their geological map on an island in John Creek.

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#### Historic Diamond Drilling - see figure 10

41105NE0058 Canadian Thorium Corporation Ltd. on acquisition of the property from New Thurbois Mines Limited in Sept. 1956 prepared a report of the previous work done by New Thurbois Mines Limited, inclusive of L.G. Phelan's report dated Nov. 21, 1955. The drilling discussed in this report is off the GTO property.

41105NE0061 New Thurbois Mines Limited drilled 4 holes, being hole ALV1, Hole ALV2, ALV3 and hole #1. No date or locates are shown on the assessment submission. No radioactivity or assays are reported in the core. No record of these holes were found in the MNDM diamond drill database.

41I05NE0102 Pennbec Mining Corp. in 1966 drilled 3 holes totaling 2,035 ft. The logs reported quartzite with minor conglomerate, siltstone, greywacke and greenstone rocks being reported. No assays or radiometric readings were given. A drill locate map is has local geology shown.

41105NE0053 East Bay Gold Ltd. with Monteagle Minerals Ltd. (George N. Milner) in 1967, drilled 5 holes namely, EB-1 (112554), EB-2 (112555), EB-3 (112556), EB-4 (112557), EB-5 (112558) and drilled 4 holes:
M-1 (112559), M-2 (112560) M-4 (112561) and M-8 (112562) in 1969 for a total footage of 6303'. Abundant faulting and shearing was noted with disjointed blocks making continuity determinations difficult. Intersections of interest:
<u>Hole EB-1:</u> 60.9-62.4 ft., Conglomerate & dark greywacke, very low pyrite, slightly radioactive,

Assayed 0.03% U<sub>3</sub>O<sub>8</sub> and 0.15% ThO<sub>2</sub>.

<u>Hole EB-2:</u> 100-101.5 ft., Quartz pebble conglomerate, black, somewhat radioactive.

Assayed: trace  $U_3O_8$  and  $ThO_2$ .

Hole EB-3: 60.7-61.3 ft., Quartzite and sericite

5,000 cpm. Assayed: 0.43% U<sub>3</sub>O<sub>8</sub> and 0.28% ThO<sub>2</sub>.

66.0-66.2 ft., Grit bed

3,500 c.p.m. Assayed: 0.19%  $U_3O_8$  and 1.00%  $ThO_2$ 

<u>Hole EB-4:</u> Granite boulder conglomerate, exhibiting radioactivity – no values given

<u>Hole EB-5:</u> Was drilled southward under John Creek where it encountered a sheared conglomerate with abundant lost core. Note the drill hole data base of MNDM shows this hole collared on the south of the creek while the more accurate assessment report shows it on the north of the creek.

<u>Hole M1:</u> Several ultrabasic peridotite dikes with angular inclusions up to 4" were encountered. Intersections of interest:

372.0-378.0 Pebble conglomerate or silicified grit, minor pyrite, radioactive Assayed 0.02%  $U_3O_8$ , 0.11% ThO<sub>2</sub>

378.0-380.0 Pebble conglomerate or silicified grit, minor pyrite, radioactive Assayed  $0.037\% U_3O_8$ ,  $0.17\% ThO_2$ 

410.3-413.9 Pebble conglomerate or silicified grit, minor pyrite, radioactive Assayed  $0.05\% U_3O_8$ ,  $0.16\% ThO_2$ 

1134.4-1134.9 Quartz pebble conglomerate and grit. Minor pyrite,

radioactive Assayed tr.  $U_3O_8$ , 0.03% ThO<sub>2</sub>

Hole M2: Intersections of interest:

845.2-851.9 Feldspathic Grit or Feldspathic Conglomerate

Assayed:  $0.01\% U_3O_8$ ,  $0.06\% ThO_2$ , containing interval

846.7-846.9

Assaying 0.26% U<sub>3</sub>O<sub>8</sub>, 1.10% ThO<sub>2</sub>.

Hole M4: Intersections of interest:

1640-1640.7 Grit, radioactive, sampled but no assay given.

Hole M8: Intersections of interest:

1640-1640.7 Grit, radioactive, sampled but no assay given.

Samples from two areas were taken namely the East Showing above hole EB-1 with a pit and lower trench and the West Showing above hole EB-3, consisting of

an upper and lower trench (same area as recently sampled by GTO). These areas were assayed with the following results:

West Showing:

Upper Trench	1.5' of $0.181\%$ U $_3O_8$ and $0.142\%$ ThO $_2$					
Lower Trench	unreadable width of 0.11 $\%~U_3O_8$ and 0.73% $ThO_2$					
East Showing:						
Pit	9.0' of .080 % U3O8					
Lower Trench	Grab sample of 0.08% $U_3O_8$ and 0.09% ThO <sub>2</sub>					

41105NE0054 Newlund Mines Ltd. in July 1968 drilled one hole. The log stated only grey coloured quartzite was encountered. The location of the hole as per the diamond drill database is located more accurately and may actually be off the current claims of GTO.

41I05NE0101 In 1969, L. Phelan drilled three holes (Holes #1 (112783), Holes #2 (112784) and Porter 1 and Porter 2 (112785) in 1969. Although the AFRI report states 4 holes were drilled, the diamond drill database shows only 3 holes drilled in this area. No significant results were reported. MDI locate MDI41I05NE00034 relates to this work and others in this general area.

41105NE0089 Monteagle Minerals Ltd. drilled 5 holes in 1969, these being hole no.'s M-3, M-5, M-6, M-7 and M-9. Weakly anomalous intersections were only noted on Hole <u>M-7</u> and included:

Quartz Pebble Conglomerate: from 33.3 to 35.3 ft. pebbles up to 1/4" in sericitic matrix with radioactivity of 1.8x background,

Grit: from 988.5-990.0 ft bluish quartz, 1.2x background.

Grit: from 995.7-996.0 ft, 20% rice sized pebbles (granules) of bluish quartz with 1.3X background.

None of these holes are shown in the diamond drill database.

41105NE0052 Richore Mines Limited in Feb 20, 1970, prepared a report of work undertaken on 10 zones located by a previous airborne and ground radiometric surveys. This work included stripping, a drill report on 4 holes namely: R-1 (113013), R-2 (113014), R-3 (113015) and R-4 (113016), drilled in 1969 and blasting for bulk sampling. This report discusses the drilling undertaken. It should be noted that the MNDM AFRI outline of the area of work is incorrect. The ddh database appears more correct. Of the 4 holes drilled 2 R-1 and R-2 are on the property of GTO while hole R-3 appears to be on the northern edge of the property. No assays were reported for this drilling. Intersections of interest are described below:

<u>Hole R-1:</u> The drill log of this hole reported primarily granodiorite that had radioactivity primarily in the fractures associated with yellow, red alteration or black veins. No values were given of the assays.

<u>Hole R-2</u>: Diorite and granodiorite was reported throughout the hole with radioactive fracture zones sometimes associated with yellow coloured material in the fractures.

<u>Hole R-3:</u> Granodiorite was predominantly reported throughout this hole. Minor radioactivity was reported in recrystallized granodiorite.

41105NE0043 Consolidated Morrison Exploration in 1978 drilled a 3,146 ft <u>hole</u> <u>78-1A</u> (112460) south of the Rose Showing. Note that the location of the AFRI area for this work does not match the hole located to the south from the OGS diamond drill dataset. This vertical hole hit 53.5' of basement granite to a depth of 855.4 metres. The hole was collared with an azimuth of 345° and an inclination of -80°. At the end of the hole at 871.7 metres the hole had a dip test reading of -28° inclination. Intersections of interest included:

1516.5 – 1926 Ft. polymictic conglomerate with occasional localized pyrite having 2x background.

2523.0 - 2523.8 ft polymictic conglomerate radioactivity up to 25,000 total cpm. Radioactive minerals concentrated in dark grey concentrations along crossbedding.

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41105NE0046 Consolidated Morrison Exploration Ltd. diamond in 1977, drilled 7 holes 77-1 (112507), 77-4 (112508), 77-5 (112509). Two of these holes 77-4 and 77-5 were drilled one the north side of John Creek and one on the south side of John Creek on the Richore Occurrence. No assays were given for this work. Holes 77-6, 77-7, 77-8, and 77-9 in this report were drilled on locations off the current GTO claims. Another hole, N78-1 drilled in 1978 and within this report was drilled off the GTO claim group as well. No assays were released of any of this work.

41105NE0048 Consolidated Morrison Exploration Ltd. diamond drilled 2 holes <u>77-2</u> (112462) and <u>77-3</u> (112463) of 1919 ft. in August 1977 on the south side of John Creek on the Rose Option. No assays were released of this work.

#### Previous Physical Work - see figure 11

20000001867 This Linecutting work was undertaken by Meegwich Consulting for Falcon Ventures Incorporated in 2006. Three grid areas were cut on the property at 100 metre intervals for undertaking a ground magnetometer, VLF and a later ground radiometric survey.

20000001867 This area on the figure 11 also shows the general area where bedrock trenching work was undertaken by Bedrock Research Corp. for Firebird Resources Inc. in 2009 and was to undertake sampling in areas with anomalous radiometrics and overburden. Field supervision was undertaken by Prospectors Guy Shouinard and Don Lashbrook. Further details on this work is described later in this report under Item 9, Exploration.

Bedrock trenching work was undertaken by CCIC for GTO Resources Inc. in 2011 and was to undertake sampling in areas with anomalous radiometrics and overburden. Field supervision of this work was done by Wolf Mtn. Further

details on this work and its location is described later in this report under Item 9, Exploration.

### Other Work – see figure 12

41I05NE0063 This is a Offering of shares document by Monteagle Minerals Limited dated 1970 and discusses some information of previous work and reports on the property as well as changes in ownership and funds expended in the Agnew Lake Area..

**Note:** All resource estimates presented in this report are historical and were prepared before the introduction of National Instrument 43-101 - Standards of Disclosure for Mineral Projects ("NI 43-101"). These resource estimates may not be relied upon until they are confirmed using methods and standards that comply with those required by NI 43-101. The potential for the exploration target to replicate the historical resource, or to reach the indicated range of tonnages, is conceptual and is based on historical reports, which cite approximately lengths, widths, depths, grades and projections of the historical resource. Readers are cautioned that a qualified person has not completed sufficient exploration, test work or examination of past work to define a resource that is currently compliant The Company further cautions that there is a risk that with NI 43-101. exploration and test work will not result in the delineation of such a currently compliant resource. Neither the Company nor its personnel treat the historical resource estimate or the historical data as defining a current mineral resource, as defined under NI 43-101, nor do they rely upon the estimate or the data for evaluation purposes; however, these data are considered relevant and will be used to guide exploration as the Company develops new data to support a current mineral/resource estimate in accordance with the requirements of NI 43-101.

#### 7. GEOLOGICAL SETTING and MINERALIZATION

#### 7(a) Regional Geology

Regionally the HPU property is situated in central Ontario north of Lake Huron in a band of Paleoproterozoic rocks known as the Huronian Supergroup consisting of oscillating formations of metasedimentary rocks of conglomerate, sandstone, greywacke and some minor limestone. Metavolcanics are also present in the lower Huronian but these do not occur on the HPU property. The metasedimentary sequence is repeated four times resulting in the 4 groups within the Huronian sequence. These Paleoproterozoic rocks, form the youngest part of the Southern structural province of the Canadian Shield and unconformably overlying the older Archean granites of the Superior Province which outcrop to the north. Some later granitic and gabbro intrusions are also present within these Huronian rocks. A regional southward dip of the formations exist in the East-west folding and faulting during the Penokean orogeny also region. contributed to the structural complexity of the area. About 50 km., off the property and to the southeast, the gneissic rocks of the Grenville Province are thrusted from the south over the Huronian rocks of the Southern Province. To the south, the Southern Province and Grenville Province rocks are unconformably overlain by the Paleozoic carbonates and shales of the Manitoulin Island Area. Figure 13 shows the regional geologic setting of the above and the location of the later Sudbury Structure, believed to be a remnant crater caused by meteoric impact. Anomalous to economic uranium values have been found within Huronian conglomeritic units near the underlying unconformable Archean granites. These conglomerates have been the source of ores for both the Elliot Lake Area and the nearby Agnew Lake Mine, both outside of the HPU property.

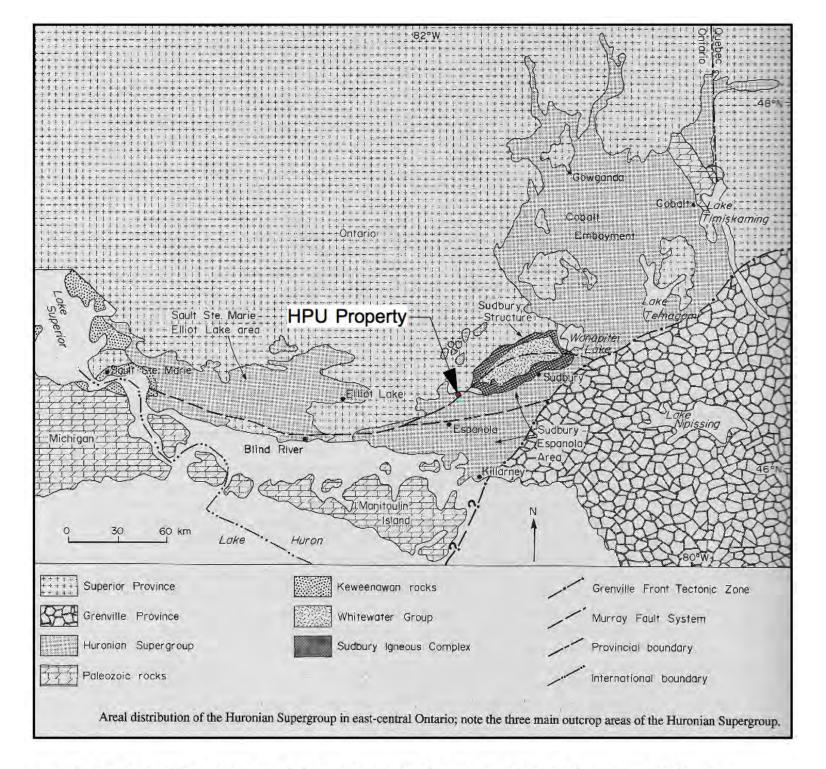


Figure 13: Basemap from pg. 550 of Bennett, G., et al. 1991 in Geology of Ontario

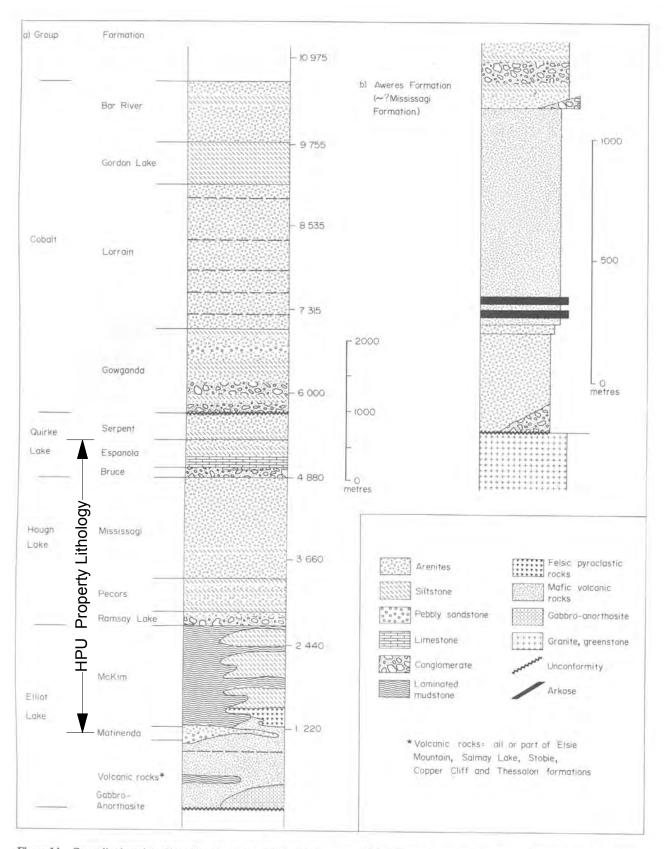


Figure 14 Generalized stratigraphic section of a) the Huronian Supergroup, and b) the Aweres Formation. The Aweres Formation in the Sault Ste. Marie area is thought to be equivalent to parts of the Mississagi Formation. Lithology table from pg. 552 of Bennett, G., et al. 1991 in Geology of Ontario. HPU Lithology demarcation by R Komarechka.

### 7 (b) Local Geology

The HPU Property occurs at the northern edge of the Southern Province north of Agnew Lake and is comprised primarily of Proterozoic metasedimentary rocks, specifically of the Quirke Lake, Hough Lake and Elliot Lake groups of the Huronian Supergroup as shown in the Huronian Supergroup Stratigraphic section of Figure 14.

Two formations within the Elliot Lake and Hough Group, respectively are known to contain anomalous uranium, these being the Matinenda and Mississagi formations. At this time, mapping by the Ontario Geologic Survey (OGS) shows the Mississagi formation being found exposed throughout the HPU Property with the Matinenda only outcropping on the northeast corner of the property on claim 4254057. The later Penokean Orogeny deformed the beds with NE striking folds and faults. Figure 15 is a section of the Sudbury Cobalt Compilation map that shows the formations and major faults, structure and geology of the local geology in the area. Figure 16 contains the legend for the map in figure 15.

In the past (pre-1960), both the Matinenda and the Mississagi formations were collectively called the Bruce Series then the Bruce Group. Later a distinction was made to an upper and lower Mississagi unit and now the lower Mississagi unit is known as the Matinenda formation while the upper Mississagi unit is now known as the Mississagi formation. The variation in names in the regional stratigraphy of the Huronian is shown in Table 3. Some of these earlier formation names are described in the earlier assessment and geological reports of the area prior to the establishment of the current Huronian Supergroup stratigraphic nomenclature.

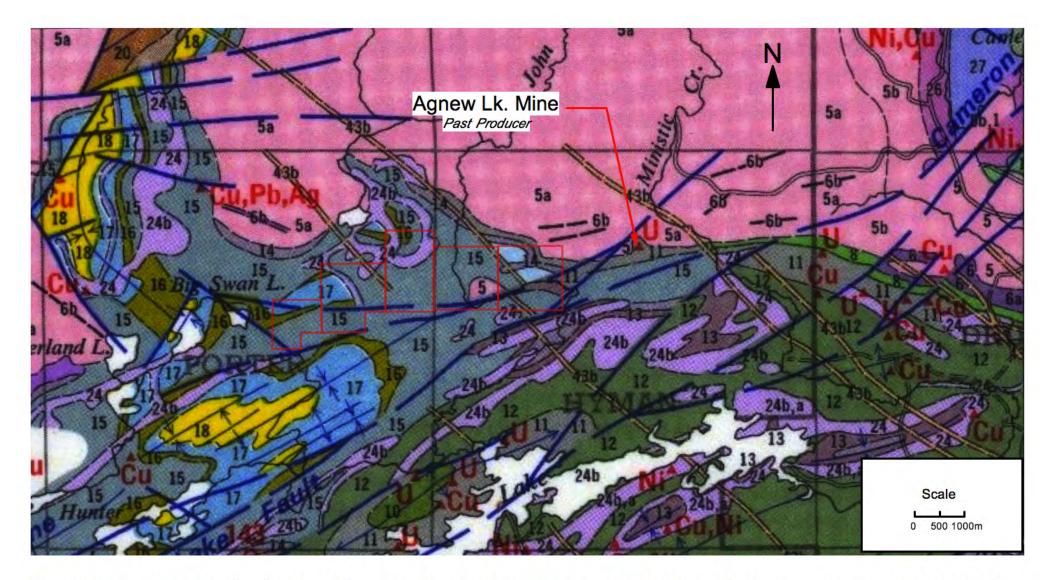


Figure 15: Local Geology showing the HPU claim ouline in red and the Agnew Lake Mine. Geology map sectioned from OGS Map 2361 of the Sudbury-Cobalt Geological Compilation Series 1975. HPU claim overlay and Agnew Lake Mine locate prepared by R. G. Komarechka, June 26, 2012. For Legend see figure 16.

# Figure 16: Legend for Figure 15



COLLINS (1925)			ROBERTSON (1967a)		ROSCOE (1960)		ROBER	ROBERTSON AND OTHERS (1969)	
Cobalt Series	BS	Upper White Q 1	9	Bar River		Cobalt Group	Upper White Q <sup>1</sup>	9	Bar River
	Ser	Banded Cherty	Group	Gordon Lak	8		Banded Cherty	l g	Gordon Lake
	balt	Lorrain	Cobalt	Lorrain	balt	Lorrain	Cobalt Group	Lorrain	
	ວິ	Gowganda	၂ပိ	Gowganda		ပိ	Gowganda	၂ပိ	Gowganda
Bruce Series		Serpent	T	Serpent			Serpent		Serpent
	165	Espanola		Espanola	Espanola String		Espanola	Quirke Lake Group	Espanola
	Ser	Bruce	٩	Bruce		jā-ē	Bruce	0-0	Bruce
	sruce	Mississagi	Group	Upper Missi	issagi		Mississagi	5 0	Mississagi
		Bruce		Middle Mississagi argillite		Hough Group	Pecors	Hough Lake Group	Pecors
		(Ramsay Lake)	B		Conglomerate	τσ	Whiskey	1 - O	Ramsay Lake
		Granites	1	Lower Mississagi argillite		r b ct	Nordic	up <sup>2</sup>	McKim
Archean	Sudbury Series WcKim		Quartzite		Elliot Group	Matinenda	Elliot Lake Group <sup>2</sup>	Matinenda	
			Archean	Algoman	Archean		Archean		
		Schist Complex							Keewatin

# TABLE 3 - SYSTEMS OF HURONIAN STRATIGRAPHIC NOMENCLATURE

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## <sup>1</sup>Q equals Quartzite

<sup>2</sup>Volcanic rocks are found locally in the Elliot Lake group: Livingstone Creek Formation locally underlies volcanic rocks. Original Table derived from Robertson et al. 1969 ODM, Misc. Paper 31

### 7(c) Property Geology

On the HPU Property, and the surrounding area, the Proterozoic metasedimentary rocks have been folded into a southwestward plunging synclinorium having intrusive Nipissing diabase sills along the synclinal limbs to the north and south. Much of this compressive folding has been associated with the late Penokean intrusion of the 1700-1750 Ma Killarney granitic Intrusions to the south of the claims. The whole package is cut by northwestward intruding diabase dikes and followed by later faulting which results in numerous displaced segments of Proterozoic strata. A later trend of narrow north-northwest trending alkalic mafic dikes and breccia dikes have been recorded which may be related to the Spanish River-Nemag carbonatite complexes<sup>1</sup>.

Basement Neoarchean granites of the Birch Lake outcrop to the north and are believed to form the unconformable basement rocks of the overlying Huronian package on the HPU property. The Birch Lake consists of a medium to coarse grained, pink weathering granite.

The Matinenda formation, the lowermost Huronian formation on the property and host of the past producing Agnew Lake Uranium Mine, outcrops on the northeast part of the property but has not been recognized outcropping elsewhere on the HPU property, although it may be present at depth. This formation can host uranium in conglomerates found near the unconformity with the underlying Archean granites. The uranium of the Elliot Lake Area was mined from the Matinenda Formation.

Aside from the easternmost claim of the HPU property, namely claim 4205047, rocks of the McKim, Ramsay Lake and Pecors formations are generally absent over the area of the HPU Property.

The most prominent rock observed over the HPU property consists of quartzites mapped as being the Mississagi formation. These quartzites are generally beige to light gray, fine grained to silty, well cemented and form weather resistant hilltop ridges on the property. These quartzites are often found intercalated as discontinuous bands within mudstones and greywacke beds. Polymictic, oligiomictic conglomerates of both pebble and granule sized clastics occur within this formation. The larger sized, well rounded quartz pebble oligiomictic conglomerate can contain areas of higher radioactivity and have been the target of previous uranium exploration activities on the HPU property.

Later Huronian rocks of the Bruce and Espanola formation can be found on the two most westerly claims 4203204 and 4254054. The presence of these younger rocks to the west suggests a synclinal fold structure. A brief description of these formations can be found in figure 14.

Nipissing Gabbro sills occur in the area intruding the Huronian rocks. Easton<sup>2</sup> recognized at least four or five possible stratigraphic gabbroic sills within the Huronian. One of these (sill 5) contains the nearby Copper Nickel deposit of Ursa Major. From the most recent mapping undertaken on the property<sup>1</sup> sill numbers one and two have been recognized on the HPU property.

Figure 15 shows the known geology of the area as of 1975. Figure 16 shows the legend to these lithological units. Since that time the geology of Vernon and Porter township has been remapped by Mike Easton of the Ontario Geological Survey in 2006. This later work showed better definition of the lithologic contacts, interpretation of distinct sills of the Nipissing gabbro suite, more detailed structural readings and interpretation, especially of the displacements along the northwest trending faults over these two townships. Breccia units and

<sup>&</sup>lt;sup>1</sup> Easton M. 2005

<sup>&</sup>lt;sup>2</sup> Easton, M. 2006

alkaline dikes believed associated with the Spanish River carbonatite were observed. Three locations of previously known Uranium occurrences in Porter township on the HPU property were located, these being: MDI41I05NE00033 Pennbec, MDI41I05NE00034 New Mylamaque and MDI41I05NE00035 Brewis. See figure 5 for their location.

### 7(d) <u>Property Mineralization</u>

Uranium mineralization is the main target commodity on this property, however the HPU property does have some other possibilities such as skarn, magmatic nickel copper and even possible IOCG and black shale mineralization as suggested by M. Easton in the notes on his 2006 mapping of this area.

### 7(d)-1 Uranium Mineralization

As shown in figure 5, four MDI locations of uranium mineralization as per the OGS MDI database, are shown for mineral occurrences on the HPU property,namely: the Pennbec Occurrence MDI41I05NE00033, the New Mylamaque Occurrence MDI41I05NE00034, the Brewis Occurrence MDI41I05NE00035 and the Richore Occurrence MDI41I05NE00038. Table 2 gives a brief outline of the historic work performed on these occurrences and some of the more significant assays reported. The AFRI file number in this table is an active link that will bring up a pdf of the assessment report related to the work described (note that an active internet connection and proper settings of preferences in the Adobe Acrobat are required to make these links active.. All of these occurrences occur within conglomerate units of the Mississagi Formation. The length, width and depth and continuity of the mineralization is poorly defined as the previous assessment reports and drilling are poorly located and lack detailed consistent descriptions. Core from the drill sites are either lost or left in the bush often in decaying core boxes with illegible markings.

The Pennbec Occurrence (MDI41105NE00033) is located in the north central area of claim 4254055. From Easton's 2006 mapping this occurrence is shown as being within the Mississagi Formation and on the southeast flank of an inlier structure. Interestingly Easton also shows on his mapping that this area has highly fractured and brecciated zones with hematitic alteration. Copper is also shown associated with uranium on Easton's 2006 mapping. No assays and limited information was obtained from the three diamond drill holes drilled in this area as well as the other references given in the MDI record and assessment files. A gamma-ray spectroscopic anomaly "D" was shown just to the west of this area, in the northwest corner of claim 42540555, by Easton on his 2005 poster display. On Easton's poster map this anomaly is a moderate potassium anomaly associated with uranium. Its location correlates with a recently found area of skarn mineralization. Its presence is also shown on the Terraquest airborne radiometric survey as an arcuate uranium anomaly around the east side of the inlier structure. Nippising gabbro samples collected from a sill in this area were all slightly anomalous with respect to Pd and Pt (greater than 30 and 35 ppb, respectively). In the northwest corner of claim 4254055 a magnetic anomaly occurs over an area mapped as the Espanola formation. It is possible that this may be related to magnetite developed from skarn mineralization

The <u>New Mylamaque Occurrence</u> (MDI41I05NE00034) is located along the southern boundary of claim 4254054 as shown in figure 5. The exact location may actually be south of the HPU property as shown in figure 18b. At this time its location has not been ground proofed by the author. According to Easton's 2006 mapping, (see figure 18b) this occurrence is located within the Mississagi formation in a zone of highly fractured and brecciated rocks with hematitic alteration. The site is also located south of the Cygnet fault along the apex of a southwest trending anticlinal arch. Brewis and White Ltd. in 1954 (AFRI # 41105NE0095) reported historic assays of 0.018% - 0.02% U<sub>3</sub>O<sub>8</sub> from surface sampling 122 metres apart of an easterly striking moderately sheared rusty conglomerate unit from this site. (Note that these values are not NI43-101

compliant.) The report stated that "The conglomerate unit at this point was some 900 feet wide and is located at a point where the flank of the syncline joins the nose of the fold and the change in strike may have produced a zone of weakness." Overburden inhibited further evaluation. Anomalous radioactivity over a large area (up to +300cps above BG) was also noted in a strongly sheared rusty conglomerate about 1.4 kilometres to the northwest of the New Mylamaque Occurrence as shown on mapping undertaken in 1954 by New Mylamaque. An associated Gamma ray spectroscopic anomaly "L" In Easton's 2005 poster display was shown to the west of this area, extending to, and beyond the Porter township boundary into Hyman township. A trend of several very weak anomalies occur in this area shown in Terraquest's airborne uranium survey. These weak anomalies appear to be along the trace of an anticlinal arch as mapped by Easton (2006).

The Brewis Occurrence (MDI41I05NE00035) is located at the west end of Cygnet Pond on current GTO claim 4203204 as shown in figure 5. Brewis and White Ltd. in 1954 (AFRI # 41105NE0095) reported historic assays of 0.010% U<sub>3</sub>O<sub>8</sub> from leached surface samples 220 feet apart of an easterly striking rusty weathering sheared conglomerate unit from this site containing minor fine pyrite. A suggestion of continued stronger shearing under the lake was proposed in this report. From Easton's 2006 mapping, see figure 18b, the occurrence is shown as a U being within the Mississagi quartzites, typically highly fractured, with localized breccia zones and/or greenish, fine-grained chloritic to micaceous alteration zones, sometimes vari-coloured. Not shown on Easton's mapping but shown on the preceding map 2011 of Porter Township by Ginn R. M. in 1961, are four areas of radioactivity located about 800 metres southeast of the Brewis Occurrence. These radioactivity anomalies are shown on map 2011 as having extensive brecciation, quartz veining and being along the South Cygnet fault which is shown by Easton's 2006 mapping to be further to the south. An associated potassic gamma-ray spectroscopic anomaly "Bk" was shown over this area by Easton on his 2005 poster display. The mapped Huronian host rocks of

this area are not normally potassic, so this may be suggestive of an alteration.

Ginn also shows four other radioactive anomalies about 1.5 km and 2km to the east-northeast of the Brewis Occurrence along the more or less continuous Cygnet Lake fault structure but northwest of the Richore Occurrence. The more easterly anomalies are off the HPU property, while the two westerly of these anomalies appear very close to the sothern border of the HPU claims. An associated uranium gamma-ray spectroscopic anomaly "Bu" was shown over this area by Easton on his 2005 poster display. This was one of the most intense uranium anomalies of Easton's map area (Porter and Vernon townships) and was suggested by him that such areas "may contain higher grades of uranium mineralization than previously reported from Porter Township". This area is mapped as the honfelsic Espanola and Bruce formations, neither normally radioactive. Easton, 2005, suggested that perhaps the stratigraphic assignment shown may be incorrect or there may be skarn mineralization present.

A more detailed delineation of these anomalies were produced in Terraquest's 2007 survey of this property as discussed under section 9 "Exploration" in this report.

The <u>Richore Occurrence</u> (MDI41I05NE00038) is located in the south central part of GTO's active claim 4254057. Figure 5 shows this location as a dot south of John Creek. This location may not be accurate as there have been several activities in the area on both sides of John Creek, in part illustrated by two AFRI sites in figure 5.

A 1954 report of G. L. Hammond for the Chemical Research Corporation (Canada) Ltd., AFRI report # 41105NE0086, first mentioned uranium in the area and shows a series of trenches on the north side of John Creek.

New Thurbois Mines Limited acquired the claims surrounding this area in 1955 and subsequently optioned them to Canadian Thorium Corporation in 1956.

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Between 1966 and 1967 East Bay Gold Mines Ltd. conducted a radiometric survey, trenched and completed five diamond drill holes with a total footage of 1,084 feet. The best intersection being in hole E.B. 3 with 5.5 feet of 1.08lbs/ton  $U_3O_8$  with 1.34 lbs/ton ThO<sub>2</sub>.

Monteagle Minerals Ltd. in a joint venture with Imperial Oil Limited, collared eight holes during 1969 to the north of John Creek. Hole M1 was reported to have intersected conglomerate from 370.2 to 455 feet and showed radioactivity throughout this length. A further 5 feet (of conglomerate) was cut deeper in the hole from 459 to 464 feet. The better assays of this upper interval reported:

From (ft)	To (ft)	Width (ft)	%U3O8	U <sub>3</sub> O <sub>8</sub> Lbs/ton	%ThO2	Sample #
372.0	380.0	8.0	0.07	1.2	0.17	2
410.3	413.9	3.6	0.05	1.0	0.16	3
438.9	443.1	4.2	0.17	3.4	0.58	4

Surface trench sampling in this area yielded 1.5 feet of  $0.1815 U_3O_8$  and  $0.1425 ThO_2$  in the West showing and 9.0 feet of 0.08% U3O8 in a pit on the East showing. More information on the above work of Monteagle Minerals Ltd. can be found in Item 6(b)i of this report under the Discussion of Local Historical Work under AFRI report numbers 41105NE0053 and 4205NE0062.

The Terraquest survey, see figures 17, 18a and 18b, has revealed several discreet uranium anomalies in the area around the Richman occurrence that have been grouped into anomaly 4a, the most westerly anomaly and 4b the cluster of the remaining 5 anomalies).

Recent exploration activity by GTO in this area, immediately to the north of John Creek, has revealed at least three old trenches. One of these trenches, recently stripped by GTO had readings of over 23,600 cps within a quartz pebble

conglomerate, as recorded by the author on site (see figure 20). The radioactivity in this area was strongest in an oligiomictic conglomerate lens consisting of well-rounded quartz pebbles within a wider conglomerate lens consisting of granule sized clastics. A selected surface sample, E5096669, collected by the author from this pebble conglomerate gave an assay of: U 202 ppm, Th 385 ppm, 760.87 TREE (excluding Scandium and Promethium) and 0.443 g/t Au.

Detailed localized mapping is currently in progress at this site. From results to date there is a suggestion that the 3 or so discrete conglomerate lenses in this area may represent:

1) a meandering creek channel or series of channels that may have flowed at different locations on a mud flat or alternatively

2) a series of beach bars.

To the north of the Richore Occurrence at the contact of the Birch Lake Granite, Richore Gold Mines Limited in 1969 undertook a bulk sampling program over an airborne radiometric anomaly, which upon assaying, revealed a fairly uniform distribution of .06 - 0.10 1bs/ton U3O8, the mineralization apparently being concentrated along vertical fractures in the granitic rocks. Detailed information on the selection and sample location map was not supplied in the assessment report of this work. A later diamond drill program in this granitic area in 1969, also by Richore Gold Mines Limited, encountered several radioactive anomalies (1.5 to 6 times BG).

# 7(d)-2 Rare Earth Mineralization

Although rare earth elements were recognized in the Elliot Lake area during the mining of uranium, there was little interest in their economic potential apart from yttrium due to the low concentrations per ton and their low prices at the time.

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Over the past few years however, the use of rare earth elements (REE) in various aspects of modern technology has increased significantly. China has been producing approximately 95% of the world's supply and on 1 September 2009 China announced that it would reduce its export quota by about 70% to 35,000 tonnes per year for the period 2010-2015 so as to protect the environment and to conserve scarce resources for domestic use. This, coupled with the increasing demand, has resulted in significant price increases for several of the REE.

In the Elliot Lake area, which is the type area for the Ontario, Paleoproterozoic sediment-hosted uranium deposits, REE occur associated with the uranium mineralization. Just east of Elliot Lake, Pele Mountain Resources Inc. is developing their Eco Ridge Mine project and they are reporting the full range of REE plus yttrium associated with the uranium mineralization in the main conglomerate bed (Pele Mountain Resources Inc., News Release, 28 September 2010). Pele also reports that leaching tests show that over 60% of the REE are available in the uranium leach solutions and that the REE have been successfully recovered commercially in the past from the leach solutions.

In an edition of Northern Ontario Business, July 5, 2012 issue, an article titled "Pele Mountain updates assessment for Elliot Lake project" stated that Pele Mountain has been able to upgrade recovery of both light and heavy rare earths from monazite by more than 10-fold for light REO (rare earth oxides) and more than double for heavy REO and by nearly 30 per cent for  $U_3O_8$ . The project is aiming for production of 9,000 tons per day of total REO and 27.5 million pounds of uranium over an 11 year mine life. Gross revenues over mine life is predicted at \$5.9 billion, with cumulative operating cash flow of \$2.16 billion.

Pele Mountain stated in their NI43-101<sup>1</sup> indicated Mineral Resources totaling 14.3Mt at grades of 0.048%  $U_3O_8$  and 0.164% total rare earth oxides (TREO), and inferred Mineral Resources totaling 33.1Mt of 0.043%  $U_3O_8$  and 0.132% TREO.

While the author has not visited the Eco Ridge Mine Project and recognizes that the mineralization there may not be typical of what exists on the HPU property, recent sampling by the Company and the author (see Item 9 of this report) has indicated the presence of REE associated with the uranium mineralization. At this time the highest value of 6,665.75ppm TREE (less scandium and promethium) was obtained from sample 51208 described as a gray arkosic quartzite with black coated fractures. The next highest reading of 5,066.66ppm TREE (less scandium and promethium) was obtained from sample 688646 described as a polymictic conglomerate with granitic fragments. These samples were collected during the Company's second sampling campaign as undertaken by Wolf Mountain Exploration Inc. for CCIC. Both samples were collected from the same area, about 120 metres SW of the anomalous uranium in the oligiomictic conglomerate of the Richore occurrence, shown as WP#77 on figure 20. No follow up has been done on this site for REEs. In both the above samples the thorium content was very high, being above 1,000ppm. Some of this REE mineralization may be related to the Spanish River Alkalic complex and associated black alkalic dikes as reported by Easton<sup>2</sup> in his mapping of Vernon township to the north. It should be noted that significant widths of peridotite breccia and black veins with associated radioactivity were encountered in previous diamond drilling by others in this general area<sup>3,4</sup>

<sup>&</sup>lt;sup>1</sup> Ciuculescu, Tudorel, Hwozdyk, Leo, Altman, Kathleen, Cox, Jason J., 2011

<sup>&</sup>lt;sup>2</sup> Easton, M, 2005

<sup>&</sup>lt;sup>3</sup> AFRI 41105NE0053, 1967

<sup>&</sup>lt;sup>4</sup> AFRI 41105NE0052, 1970

# 7(d)-3 Skarn Mineralization

Skarn mineralization has been found in the area as discussed in Easton's 2005 poster display. One of the areas described is located in the northwest corner of claim 4252055, a sill of Nipissing Gabbro intrudes the Espanola Formation and has resulted in an occurrence of talc. Another area, at the northwest portion of GTO's claim 4254054 and the north portion of claim 4203204 contains contact of the Espanola formation and a Nippissing Gabbro sill. Magnetic anomalies along this trend may suggest further skarn mineralization. At this time these areas have not been investigated on the ground by the Company.

# 7(d)-4 Magmatic Copper Nickel Mineralization

Nipissing Gabbro occurs as sills in the north and south and west on the HPU property. These rocks have been known to produce copper, nickel and PGEs as illustrated from the nearby Open Pit of Prophecy Platinum Corp.'s Shakespeare Cu-Ni deposit located about 10 kilometres to the west and described further under item23 Adjacent Properties. From Easton's 2006 mapping the Shakespeare Cu-Ni deposit and other Cu-Ni mineralization are believed to be hosted in sills 4 and 5 that are found south of the HPU property, while sills 1 and 2 of Nipissing Gabbro occur on the HPU property. This does not preclude similar mineralization in these sills as well.

# 7(d)-5 IOCG, Iron Oxide Copper Gold Mineralization

Easton<sup>1</sup> mentions that anomalous high concentrations of high field elements (eg. Zr, Hf, Rb, Th, U and Y) occurring in areas of widespread alteration apparently, in part, fault controlled in shaly horizons within the Mississagi Formation in the area of Porter and Vernon Townships. Iron oxide, copper, gold (IOCG) mineralization has been associated with large scale alteration and it is possible that such alteration may be associated with an IOCG mineralization event.

<sup>&</sup>lt;sup>1</sup> Easton, M. 2006

The Scadding Gold Mine, located well outside of the HPU claims in Scadding township, lies near the contact of the Serpent and Espanola Formation and has been suggested as being an IOCG type mineralization.

# 7(d)-6 Lead, Zinc Black Shales

Anomalous values of 383 ppm Pb, and 87 ppm Zn were noted at NAD 83 coordinates 445997mE and 5141380mN from a sample of black shale from the Mississaga Formation. This sample was collected for routine analysis by Easton in his 2006 mapping. This location lies within the southwest quadrant of GTO claim 4254055. While no mineralization of this style has previously been recorded within these rocks it does suggest that it may exist and has been recommended for exploration by Easton.

# 7(d)-7 Paleoplacer Gold

The presence of 0.443 g/t Au assayed in sample E5096669 within a strongly radioactive pyritic oligiomictic quartz pebble conglomerate suggests the possibility of paleoplacer gold in a possible Witwaterstrand style mineralization. Recently paleoplacer gold up to 18.35 grams per tonne has been found in pyritic Paleoproterozoic basal conglomerates (Mississagi Formation) in Pardo Township<sup>1</sup> about 76 kilometres to the east of GTO Resources Inc.'s HPU Property. At this time further evaluation would be required to determine if this style of mineralization exists on the property. Currently very limited gold assaying has been done for this style of mineralization on the HPU property.

# 8. <u>DEPOSIT TYPES</u>

The main deposit type currently being explored for on the HPU property is a Proterozoic uranium-bearing, pyritic, paleoplacer (Eckstrand, 1984) associated with early pre-oxygenated Proterozoic quartz pebble oligiomictic conglomerate. This type of mineralization may contain uranium, thorium, and rare earth

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elements (REE). Examples of this type of deposit include Elliot Lake, Ontario, Agnew Lake, Ontario, Padlei, North West Territories and the Otish and Sakami Lake areas, Quebec. As of 1978 these deposits accounted for half of Canada's domestic uranium reserves and one-third of the non-Communist uranium reserves. The Eco Ridge deposit in Ontario of Pele Mtn, Resources Inc., being currently explored, is another example of this type of mineralization. Tonnages of individual ore bodies of this type generally fall in the range of 10 to 400 million tonnes. Elliot Lake ore grade averaged 900 ppm U or .09% U (0.318% U<sub>3</sub>O<sub>8</sub>). Richer ore averaged 1200 ppm. U or 0.12% U (0.425% U<sub>3</sub>O<sub>8</sub>) and 250 ppm Th. Agnew Lake grade averaged 700 ppm U or .07% U (0.248% U<sub>3</sub>O<sub>8</sub>) and 2500 ppm Th (Eckstrand, 1984).

Due to the dramatic increase in the use of REE in modern technology, the REE component of these deposits is now becoming of considerable economic significance. The REE associated with these types of deposits have been a focus for Pele Mountain Resources Inc. in developing their Eco Ridge Mining project located about 20 km east of Elliot Lake, Ontario and 50 km to the west outside of the HPU property. In a news release dated 28 September 2010 they reported that, "Eco Ridge leach solutions could contain up to 218,000 kilograms of recoverable total Rare Earth Oxides (TREO) annually in addition to 826,000 pounds of uranium oxide. These projections are based on the Scoping Study and on rare earth oxide (REO) assays from 30 widely spaced drill holes and the results of leach tests performed at SGS Canada Inc." The REE-bearing minerals are intimately associated with the uranium-bearing minerals in the paleoplacer deposits and consequently report to the concentrator and in the leach solutions along with the uranium. Further information on the Eco Ridge Mining Property is found under Item 23, Adjacent Properties.

Note: The author of this report has not visited the Eco Ridge Mine project nor has he been able to verify the above reported information. It should be borne in

<sup>&</sup>lt;sup>1</sup> Endurance Gold Corporation, 2007

mind that the mineralization reported at the Eco Ridge Mine project is not necessarily indicative of the mineralization on the HPU Property that is the subject of this report.

The geologic setting of these deposits occur in quartzose arenites in a preoxygenated atmosphere that would not be amenable to iron oxidation and the production of (hematite) red beds. Deposition occurs in intracratonic rifts, basins or proximal parts of marginal basins that rest on Archean rocks. Host rocks include quartz pebble conglomerate and pebbly grit in coarse fluviatile sandstone with the uranium occurring mainly in the quartz pebble conglomerate beds and with heavy minerals in pyritic layers within arenite. Associated rocks include argillaceous and quartzose or feldspathic sandstone as well as polymictic paraconglomerate, siltstone, shale, orthoconglomerate with clasts of quartz and basalt, gabbroic sheet intrusions and basalt. The mineralization tends to form in extensive single or multiple lenses, ribbon or fan shaped in plan of uraniferous pyritic quartz pebble conglomerate and uraniferous heavy mineral layers in arenite near conglomerate beds. Ore minerals include uraninite, brannerite, uranothorite, uranoan monazite and native gold. Associated minerals include quartz as pebbles and smaller clasts, pyrite grains, interstitial sericite, K-feldspar grains, rutile-anatase, monazite, zircon and other heavy minerals.

The age of these deposits range from early Aphebian and Archean; none being younger than 2.2 Ga. Huronian rocks in Canada are between 2.7 and 2.25 Ga. The mineralization age is the same as the host rock; however, significant diagenetic modifications may have occurred such as the formation of brannerite within titanite (sphene) grains. The genetic model envisions a placer model, prior to the formation of an oxygen rich atmosphere, consisting of heavy minerals or their pre-diagenetic precursors along with detrital pyrite, iron and titanium oxide, monazite, zircon and other heavy minerals. Ore controls would include paleotopographic features of the underlying Archean terrain that would produce abrupt gradient changes from the drained granitic terrain including fault scarps, bajadas

and stream confluences. Guides to exploration would include seeking radioactivity in coarse layers, determining upstream direction and continuing in that direction to find coarser and thicker beds with higher U:Th ratios and the commonly associated rare earth elements (REE).

The approach that has been used and is continuing to be used by companies to explore and evaluate these types of deposits usually consisted of prospecting with a scintillometer (often initially with airborne surveys) to identify areas of anomalous radioactivity followed by sampling, geological mapping and additional radiometric surveying. This work is then followed by stripping, trenching, blasting, sampling and detailed localized mapping with later diamond drilling to provide geological and mineral deposit information and chemical analyses.

The primary ore minerals of these deposits are detrital/heavy mineral grains such as uraninite, (radioactive), the main uranium-bearing mineral and monazite which carries 90% of the REE. Secondary minerals produced as alteration products of the placer minerals are also present. These minerals are found together usually in the pyritic quartz pebble conglomerate horizons. If the concentrations are high enough then these are the potentially economic zones of interest.

#### 9. EXPLORATION

Previous work was undertaken on the area of these claims by several precursor companies of the issuer as described earlier in Section 4(e), "Agreements Royalties and Encumbrances". The names of these precursor companies are shown below with the exploration work they did in a chronological order. From records of the Ministry of Northern Development and Mines and Forest's assessment office, total of \$169,098 has been expended by the Company on exploration work on this property. Of this amount \$111,652 has been expended in the last 3 years.

Work to date focused on radioactive oligiomictic quartz pebble and granule conglomerates as well as radioactive shear and fracture systems occurring in the Mississagi Formation.

Note that all co-ordinates given under this item 9 are NAD 83 co-ordinates.

# 9(a) Nov.15-Dec. 15, 2006 – Falcon Ventures Incorporated Ground Magnetometer & VLF Survey<sup>1</sup>

From November 15 to December 15, 2006 a program of linecutting and geophysical surveys was carried out over part of the HPU Grid on the previous claims 4203204 and 4203205. The area of claim 4203205 is now restaked as claim number 4254054. This work was submitted on behalf of Falcon Ventures Incorporated as an assessment report dated December 20, 2006. The work consisted of 35 km of chainsaw linecutting, This consisted of 32.60 km of crosslines cut across the strike of the bedding and a 2.40 km long baseline running at an azimuth of 090 degrees. All 35 km of line was surveyed with total field magnetics and VLF electromagnetics. A VLF-EM and a total field magnetometer survey was undertaken on this ground. This work was conducted by Meegwich Consulting Inc. and supervised by the author of this report, Robert Komarechka PGeol.

Total field magnetometer readings were taken at 12.5 metre stations with a GEM Systems GSM 19 Overhauser Magnetometer, Serial no. 58479. A base station Scintrex EDA Omni IV unit was set up near the property and used for control and corrections of diurnal variations. Both instruments are microprocessor based and measure the earth's total magnetic field intensity to an accuracy of less than 1/10 nT. The data collected was processed using Geosoft software to produce coloured contour format plans at a scale of 1:5000.

The VLF survey readings were undertaken at 25 metre stations on the same grid as the magnetic survey. A total of 1,400 readings were taken over the 35 line km surveyed. The instrument used was a Geonics VLF-EM receiver set to receive the Cutlet Maine transmitter at 24.0 kHz. The in-phase and quadrature components of the vertical magnetic field were measured as a percentage of the horizontal primary field, read to a resolution of +/- 1%. All readings were taken facing north.

Both the magnetic and VLF surveys were reviewed and approved by the authors as being compliant with industry standards.

This work identified 3 significant linear magnetic anomalies and numerous isolated highs. Nine weak conductors were also identified. One of these conductors (Conductor E), was associated with a magnetic high and was recommended for follow up. No ground follow up has been undertaken on any of these anomalies. The area of this work is shown as AFRI number 2000001867 in figure 7.

# 9(b) Nov. 13-Jan 17, 2008 – Falcon Ventures Incorporated

# Airborne Radiometric, Triaxial VLF and Gradient Magnetometer Survey

On January 17, 2008, Terraquest Ltd. completed their operational report on an airborne radiometric survey combined with a gradient magnetometer and triaxial VLF EM survey flown over the entire HPU property from Nov. 13-19<sup>th</sup> 2007.

Between November 13 and November 19, 2007, Terraquest Ltd. flew a combined airborne high sensitivity magnetic, XDS VLF-EM and gamma ray spectrometer survey over the entire HPU Property with 70 metre mean terrain

<sup>&</sup>lt;sup>1</sup> Laronde, David , 2006

clearance, 100 metre line intervals, 1000 metre tie line interval and with data sample points at 6-8 metres along the flight lines. The base of operations was at Sudbury, Ontario. A high sensitivity magnetic and a GPS base station located at the airport recorded the diurnal magnetic activity and reference GPS time during the survey for adherence to survey tolerances. This survey, consisting of 169 line kilometres, was undertaken for Falcon Ventures Incorporated and was completed in conjunction with another surveyed area, the RCU property, also held by Falcon Ventures Incorporated.

Three high-resolution cesium vapour magnetometer, manufactured by Scintrex, are mounted in a tail stinger and two wing-tip pods. Fluxgate tri-axial magnetometer, model TFM100-LN by Billingsley Magnetics Ltd., is mounted in front of the tail stinger to monitor aircraft manoeuvre and magnetic interference. The magnetic data is post-flight compensated for aircraft manoeuvre noise.

High sensitivity magnetic base station data was provided by a cesium vapour magnetometer logging onto a computer and with time synchronization from the GPS base station receiver. The magnetometer was the same as used in the aircraft, a CS-2 magnetometer manufactured by Scintrex. The magnetometer processor was a KMAG manufactured by Kroum VS Instruments and the data logger was an iPAQ PDA by Hewlett Packard. The counter was powered by a 10VAC 50/60hz to 30VDC 3.0 amp power supply with an internal 12VDC fan. The logging software SDAS-1 was written by Kroum VS Instrument Ltd. specifically for the pocket pc hardware. It supports real time graphics with selectable windows (uses two user selectable scales, coarse and fine). Time recorded was taken from the base GPS receiver. Magnetic data was logged at 2Hz. Data collection was by RS232 recording ASCII string and stored on a flash card.

The XDS VLF-EM System is currently being developed by Terraquest Ltd. and is included on this survey primarily to help further develop the system, but in

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addition if any useful data are obtained, then it may assist the client in their exploration program. It employs 3 orthogonal, air-core coils mounted in the pod of the tail stinger, and coupled with a receiver-console, tuned to receive a range of 22.0 kHz to 26.0 kHz (which includes both Cutler Maine NAA frequency 24 kHz and Seattle WA NLK frequency 24.8 kHz), and measures the X, Y and Z directions of the VLF field.

The field data were transmitted via internet back to the office to inspect the data for quality control and tolerances on all channels. This included any corrections to the flight path, making flight path plots, importing the base station data, creating a database on a flight-by-flight basis, and posting the data. All data were checked for continuity and integrity. Any errors or omission or data beyond tolerances were flagged for re-flight and the crew was notified ready for their flight in the morning.

Raw magnetic data was initially compensated for aircraft motion effects prior to calculating measured longitudinal and lateral magnetic gradients. The lateral magnetic gradient was calculated by subtracting the left wing sensor reading from the right wing sensor reading and dividing the resulting value by the tip-to-tip separation (14.6 metres), yielding the measurement expressed as nT/m. The longitudinal gradient was similarly calculated by subtracting the tail sensor measurement from the average of the wing-tip values normalized by the wing-centre to tail sensor separation (9.2 metres). Both gradients were "DC shifted" by subtracting the median value on a line-by-line basis and converted from aircraft-centric to survey grid orientation by selectively inverting (multiplying by -1) in the south and westbound directions. The gradient data was subsequently verified by generating a Reconstructed Total Field (RTF) grid using the Lateral and Longitudinal data grids as input.

In the final correction process, the compensated tail sensor magnetic data was initially corrected with standard tie-line intersection leveling. Tie line leveled Total Field Magnetic data from the Left Wing, Right Wing and Tail Sensors were subsequently subjected to an enhanced micro-leveling procedure, operating on the regional magnetic component (isolated by removal of the reconstructed Total Field). Leveling in this manner minimizes "damage" to higher frequency geologic anomalies and improves upon residual errors left by traditional tie-line leveling. The vertical magnetic field data grid (originating from the Tail Sensor). The finalized datasets were gridded with minimum curvature procedure with a cell size of 20 metres

The Terraquest XDS system produced good resolution and consistent results. The Terraquest XDS-VLF system is currently in the developmental stage and as such only basic processing has been performed on this data. The x, y and z components of the XDS-VLF-EM data in the range of 22.0 to 26.0 kHz (which include Cutler and Seattle transmitter signals), were inverted, normalized, mean leveled and micro-leveled. A 5 point positive Fraser Filter was applied to the vertical field. The data were gridded with a cell size of 20 metres and presented as contour plots of the a) Line Field (Vcx) coil, b) Ortho Field (Vcp) coil and c) Vertical Field (Hcp) coil.

The radiometric data were processed according to guidelines established in the definitive IAEA Technical Report "Airborne Gamma Ray Spectrometer Surveying" (IAEA Technical Reports Series No. 323, 1991). The following specifics were performed:

• Recorded as a 256 channel spectrum, the four raw integral (or "terrestrial") windows (Total Count, Potassium, Uranium and Thorium) were initially generated by summing the recorded counts between their appropriate channel limits – as specified below:

256 Channel ROI definitions (based on 0-255 channel indices):

30 - 233
115 - 131
139 - 156
201 - 233
(>3 MeV): 255

 Since the PicoEnvirotec GRS410 Spectrometer does not suffer from conventional measurement "dead time", no discrete correction for this effect need be applied.

• The raw count rates were corrected for static and ambient background sources (Aircraft, Cosmic and Radon) by using measurements from the frequent overwater crossings encountered during the survey and from pre- and post- flight over-water 'background' lines (where geologic radiation sources are suppressed).

• The background corrected measurements were corrected for Compton Scattering by application of "Stripping Coefficients" experimentally determined in a specific calibration exercise using standard large-scale radio-element sources (see Appendices).

• Count rates were further adjusted by correction to constant terrain clearance (altitude attenuation correction). This correction step includes the application of exponential attenuation coefficients, specific to each of the four integral windows, determined during a specific calibration procedure (see Appendices).

 As additionally recommended by the Geologic Survey of Canada, the final corrected count rates were passed through an optimized filter, sometimes referred to as a 'Savitsky-Golay' filter, designed to reduce sample overlap effects. This five-point convolution filter has the following (normalized) coefficients:

-.0857, 0.3429, 0.4857, 0.3429, -0.0857

• Corrected radiometric data are delivered both as count rates (counts-persecond) and as effective ground units by application of sensitivity factors determined experimentally over the Geologic Survey of Canada's test range (Breckenridge Calibration Range, Ottawa - see Appendices). Applicable ground units for each of the four integral windows are as follows:

Total Count :	Exposure Rate, micro Gray/hour
Potassium:	Percent (%K)
Uranium:	Parts per Million equivalent Uranium (ppm eU)
Thorium:	Parts per Million equivalent Thorium (ppm eTh)

The radiometric data was gridded by a minimum curvature method with a cell size of 20 metres and contoured to produce 2 sets of the following colour maps:

- a) Magnetics: total magnetic intensity of tail sensor and first vertical derivative, lateral and longitudinal gradients
- b) XDS VLF-EM: x, y and z fields
- c) Radiometrics: total count, potassium, uranium, thorium
- d) Flight Path and Digital Terrain Model.

An operational report of this work was completed on January 17, 2007. The area of this work is shown as AFRI number 2000000680 in figure 6. Numerous anomalies were identified and were later evaluated in the subsequent March 26, 2008 interpretation report of R. Komarechka.

# 9(c) March 26, 2008 – Falcon Ventures Incorporated

# Interpretive Report of Earlier Radiometric, Triaxial VLF and Gradient Magnetometer Data by Bedrock Research Corp.

On March 26. 2008, an interpretive report was prepared by Robert Komarechka of Bedrock Research Corp. of the earlier airborne survey conducted by Terraquest Ltd. as related to the latest geological mapping over the area.

This study located 8 areas of anomalous radioactivity believed to be derived from Uranium. These anomalies are shown in figure 17 of this report. Some of these sources were from granitic rocks, specific fault zones and from sediments of the Mississagi Formation.

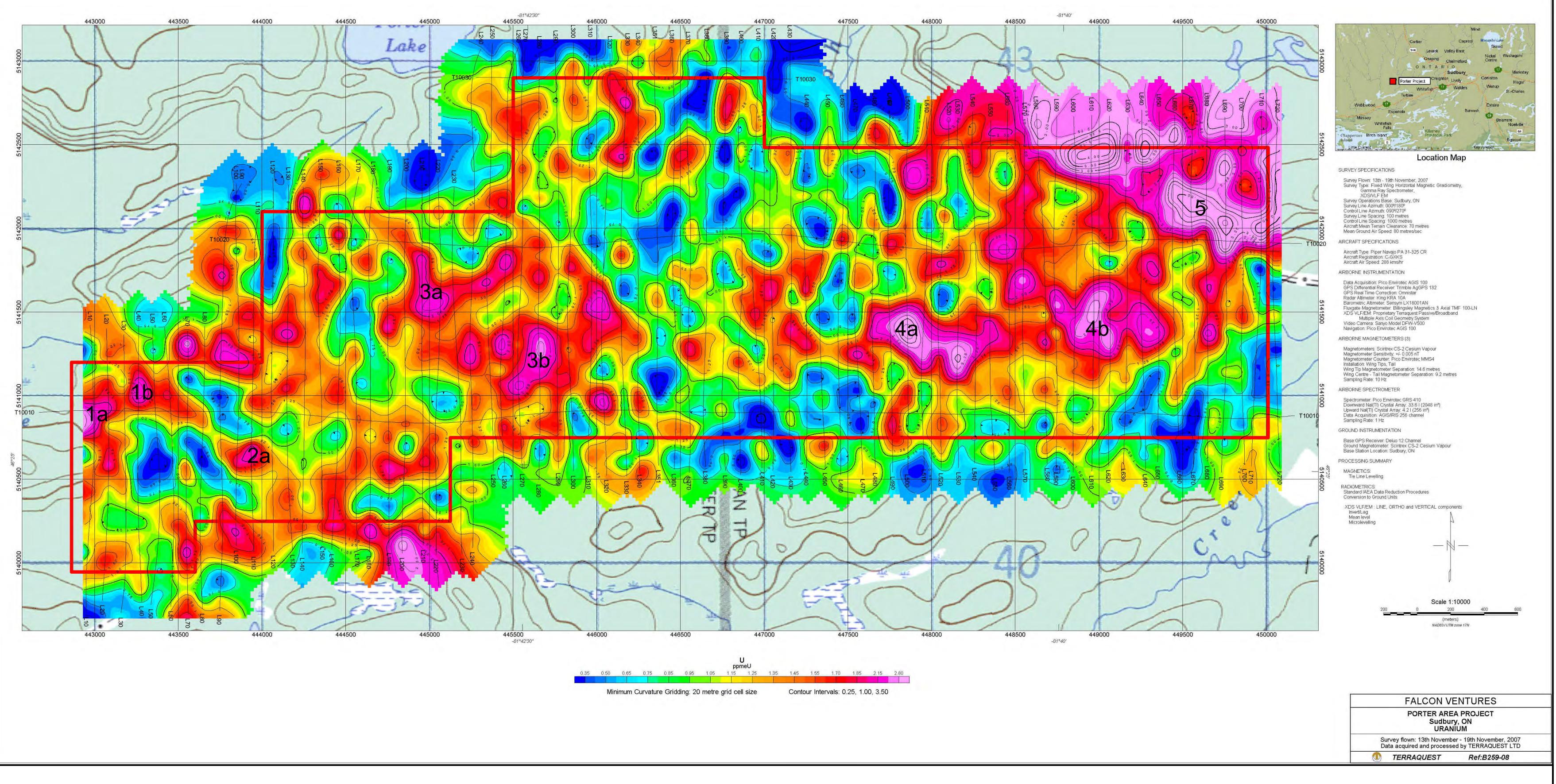


Figure 17: Airborne Survey Uranium Anomalies Basemap data obtained from Terraquest's 2007 airborne radiometric survey. Target anomaly numbers from Komarechka, 2008 Terraquest Interpretation Report. Compiled and prepared by R. Komarechka, July 18, 2012. Seven magnetic anomalies were examined that related to Nippising Gabbro intrusive sills and olivine diabase dikes. Eight VLF anomalies were studied these were believed to be derived from fault zones, conductive clays and possible conductive minerals such as pyrrhotite. Two anomalies were underlain with Nipissing gabbro one of which may be related to skarn mineralization near a limestone contact and the other may contain magmatic pyrrhotite. One anomaly was related to the existing powerline. The area of this work is shown as AFRI number 2000001867 in figure 6.

#### 9(d) Sept 2009 – Falcon Ventures International Inc.

#### Abitibi Geophysics Ground Radiometric Survey

A ground radiometric survey was undertaken by Abitibi Geophysics over part of the HPU property from September 9<sup>th</sup> to 12<sup>th</sup>, 2009 on behalf of the claimholder at that time, now Falcon Ventures International Inc. This survey consisted of 65.44 line kilometres with lines 100 metres apart over three discrete areas on the property to further investigate the known airborne radiometric anomalies. This grid being the same cut earlier by for the Meegwich ground magnetometer – VLF survey. Live GPS readings from a Garmin handheld receiver was used to orient the lines in the field. Readings were collected on four channels at the rate of one Hertz (1 reading per second). The four channels consisted of readings of Uranium (U), Thorium (Th), Potassium (K) and Total Dose Count. These results were displayed as %K, and ppm of U and Th. GPS data was simultaneously collected using a Bluetooth link.

Work was undertaken by three technicians using three RS-230 BGO Super-SPEC spectrometers manufactured by Radiation Solution Inc. Equipment was allowed to warm up at least 15 minutes prior to use and Bluetooth communication with the unit was confirmed each day prior to usage.

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Data recorded was downloaded at the end of each field day using the RS-Analyst software. The radiometric data was auto-corrected following the International Atomic Energy's standards.

The counts in the Potassium window are converted to ground concentration by weight (units: %). The counts in the Uranium window are converted to equivalent uranium concentration by weight (the spectrometer directly measures  $Bi_{214}$ , an indirect measure of uranium), (units: ppm). The counts in the Thorium window are converted to equivalent thorium concentration by weight (the spectrometer directly measures  $TI_{208}$ , an indirect measure of thorium), (units: ppm). The natural Air Absorbed Dose Rate (ADRN) is computed from K (%), eU (ppm) and eTh (ppm) concentrations using the following formula: ADRN = 13.08 K + 5.43 eU + 2.49 eTh , (nGy/h) Note that ADRN is different from the traditional 'Total Count'; it excludes radiation from man-made contaminants.

The processed data was then plotted using a minimum-curvature algorithm with a grid cell size of 25m., followed by a pass of a 3x3 Hanning filter, then segregation of the intervals using a Geosoft colour table.

Five maps were produced illustrating: Natural Air Absorbed Dose Rate,(nGy/h), Equivalent Uranium (eU, ppm), Equivalent Thorium (eTh, ppm), Potassium (%K) and a final map of the Geophysical Interpretation of the data in light of the previous known geology and the recently undertaken ground and airborne geophysics.

Figure 18a shows the area examined and the radiometric anomalies on the HPU property while figure 18b shows the geology underlying the survey.

As a result of this work 5 significant radiometric uranium-count anomalies ( $\geq$  4ppm eU) over the surveyed area were located and were recommended for immediate ground follow up as shown in Table 4. Other anomalies related to

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Thorium and Potassium were also located. Note that this ground radiometric survey area did not include all of the HPU Property.

A geophysical analysis of the earlier magnetic surveys was undertaken by Madjid Chemam P.Geo. of Abitibi Geophysics in this report. This survey was important in delineating potential faults which appear to have some relationship with some of the radioactive anomalies and enhanced the previous mapping of Easton 2006 as shown in figures 18a and 18b.

Target #	NAD 83 Co-ordinates	Anomaly Description
3с	445 227 mE, 5 141 246 mN	Single moderate eU anomaly on line L25+00 of about 75 m diameter. It is located on a K anomaly that runs with a NW- SE trend. The concentration values reached 11.4 eU ppm and 21.13 eTh ppm.
3d	445 926 mE, 5 141 472 mN	Single moderate eU anomaly on line L32+00 of about 50 m diameter. It is located along a K and Th anomalies. The concentration values reached 5.8 eU ppm, 9.4 eTh ppm and 2.2 % K.
4a	448 003 mE, 5 141 384 mN	Moderate anomaly about 200 m, located on a K anomaly, present on lines L52+00, L53+00 and L54+00. The concentration values reach 7.1 eU ppm and 2.2 % K.
4b	448 809 mE, 5 141 429 mN 449 008 mE, 5 141 514 mN 449 107 mE, 5 141 363 mN 449 405 mE, 5 141 350 mN 449 706 mE, 5 141 383 mN	Anomaly composed by a cluster of 5 eU anomalies, of various sizes varying from 25 to 50 m diameter. Some of the anomalies are partially related to a K anomaly, but there is no direct correlation. The concentration values reach 7.6 eU ppm and 3 % K.
5	448 799 mE, 5 142 422 mN 449 306 mE, 5 142 453 mN 449 304 mE, 5 142 181 mN 449 507 mE, 5 142 057 mN 449 710 mE, 5 142 057 mN 449 813 mE, 5 141 996 mN 449 997 mE, 5 142 022 mN 449 816 mE, 5 142 400 mN	Anomaly composed by a cluster of 8 eU anomalies, of various sizes and shapes, varying from 100 m diameters to 50 m wide by 300 m long. All anomalies are related to a Th anomaly and most of them are related to K anomalies. The concentration values reach 10.8 eU ppm, 37 eTh ppm and 3 % K. This region could be related to a granitic intrusion due to the moderate K values and it is the most interesting area on the property to prospect for uranium.

 Table 4 – Abitibi Radiometric Targets Recommendations for Follow Up

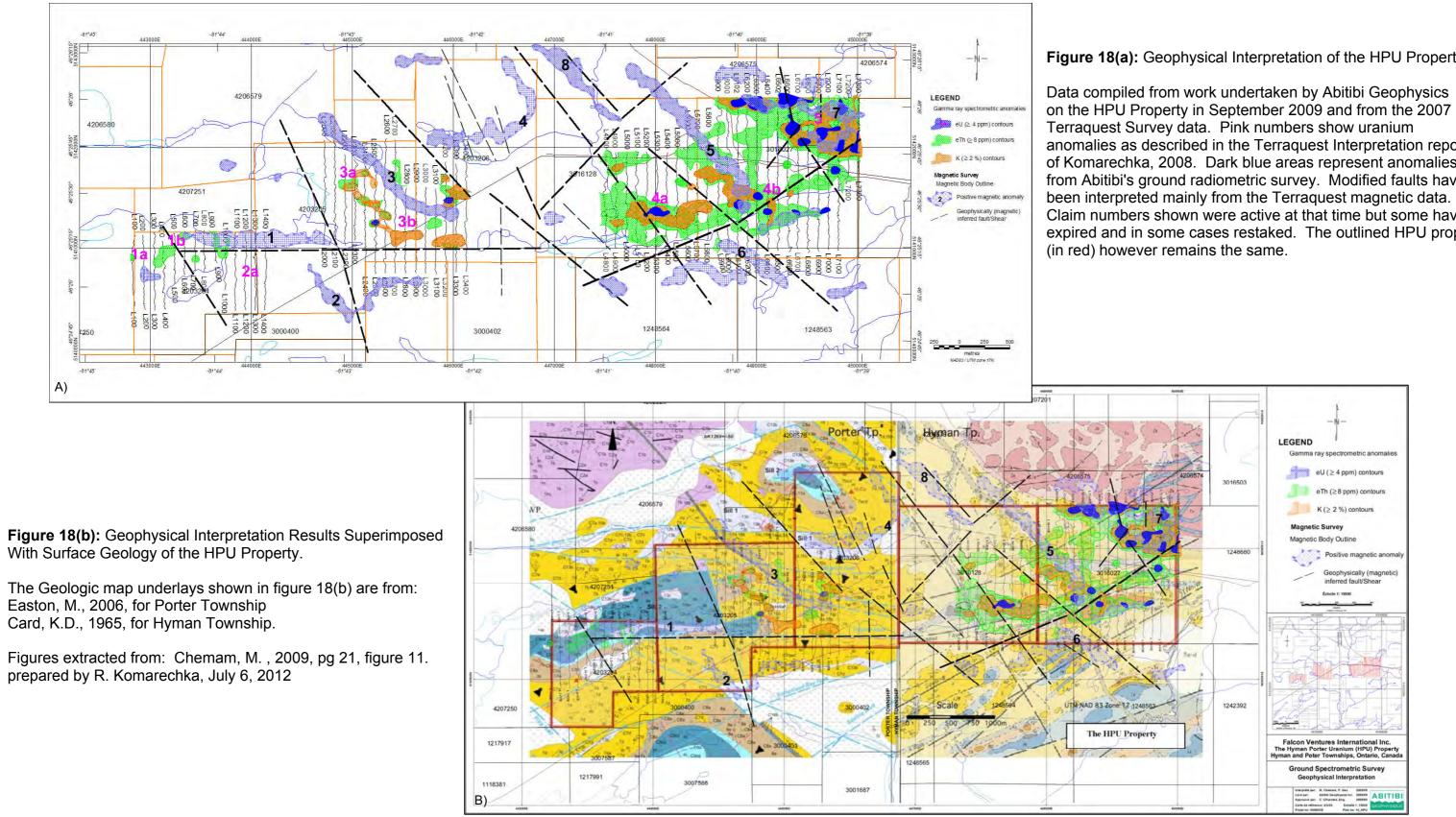


Figure 18(a): Geophysical Interpretation of the HPU Property.

anomalies as described in the Terraquest Interpretation report of Komarechka, 2008. Dark blue areas represent anomalies from Abitibi's ground radiometric survey. Modified faults have Claim numbers shown were active at that time but some have expired and in some cases restaked. The outlined HPU property

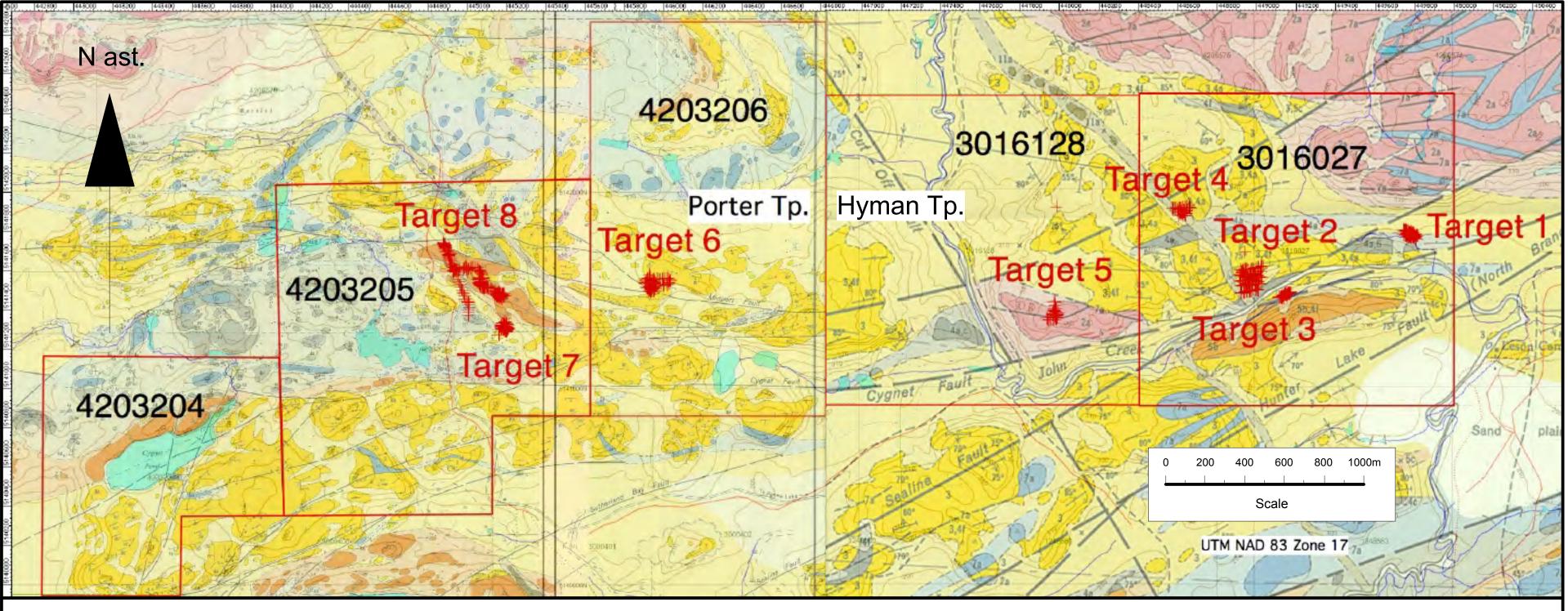


Figure 19a: Ground Targets Investigated

These target areas were selected for ground investigation in 2009 based on earlier radiometric surveys. Note the claim numbers were those at the time of the survey in 2009. The red outlined claim area still represents the area of the claims currently held by GTO Resources Inc. - See table 1 in this report for information on current claim numbers. The red crosses represent the locations of scintillometer readings undertaken by Abitibi Geophysics in their 2009 second detailed study over localized areas. Data for the geology on Hyman township was taken from Card, K.D. 1961, Map 2055. Data for the geology on Porter township was taken from Ginn, R. M. 1960. map 2011. The underlying topography and claim outline was taken from the MNDMNF ClaiMaps website. Note that some variations exist between the geology maps and the more current topographic maps. The two vertical lines on claim 4203206 represent artifacts from underlying scanned topographic maps. The perimeter grid numbers represent NAD 83 co-ordinates in metres. See figure 19a for legend of rock units. Map production and compilation was by R. Komarechka, July 18, 2012.



Figure 19b: Map legends for figure 19a

R. Komarechka July 19, 2012.

Hutton Township Legend for map 2055 Card, K. D. 1961

#### 9(e) Sept 2009 - Dec. 2009 Falcon Ventures International Inc.

# Bedrock Research Corp & Abitibi Geophysics - Detailed Ground Radiometric Survey, Stripping and Sampling Program

A program to evaluate some of the more significant eU anomalies was undertaken focussing on several of the earlier located anomalies, some described in table 3, by undertaking numerous further readings around the anomalous areas. These detailed scintillometer readings were undertaken by Abitibi Geophysics and were subsequently followed up with a power stripping, washing and minor sampling program over eight of the higher priority anomalies. QA/QC of the collected data was as in the previous Abitibi Survey described earlier. Field supervision of this work was undertaken by prospectors Guy Shouinard and Don Lashbrook who accompanied the Abitibi Geophysics' radiometric crew and collected samples. Preparation of the report was undertaken by the author of this technical report, Robert Komarechka as well as information supplied by Abitibi Geophysics.

The eight target anomalies described were selected based on access with minimal trail construction, minimal overburden, size of the radiometric anomaly, the relative strength of the anomaly and budget constraints. These anomalies were evaluated in the late fall by undertaking further ground radiometric readings with a Radiation Solutions Inc. Super-Spec RS-230 model Scintillometer, followed by a power stripping, washing and sampling program. This work was conducted from Nov 12 to Dec. 7, 2009, Snow and wet weather made for challenging conditions. Targets 1-5 are located in Hyman Township while targets 6-8 are located in Porter township. These locations are shown in figure 19a.

<u>Target 1:</u> was over the road bed and was not present in the ground on either side of the road. This anomaly was believed to be caused by the use of radioactive fill being deposited from the former Agnew Lake Mine area to fill in a low lying area.

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<u>Target 2:</u> 0448975mE, 5141519m, (incorrectly described as Target 3 in the prospecting report) was located over the Richore East Showing and was the area recently stripped. An old blasted trench here ran up to 12,000 cps. A sample was collected at this site.

Target 3: not examined due to access issues crossing John Creek.

<u>Target 4:</u> 0448637mE, 5141893mN, had readings of 900 cps, in an argillitic shear. This site is on the powerline and generally had a weak radioactive response.

<u>Target 5:</u> 0447987mE, 5141426mN had readings of 4 ppm eU, and 30 ppm eTh, within a medium to coarsely crystalline pink granite. A series of shears had elevated cps.

<u>Target 6</u>: 0445928mE, 5141564mN a sample of argillite had 1000cps with 90ppm eU and 130 ppm eTh., Stripping revealed shearing over a 20 metre length, 5 metres wide. While at 0445934mE and 5141551mN a sample of quartzite yielded 500 cps. At 0445937mE, 5141513mN a sample was taken from argillite in contact with a sheared quartzite gave 500 cps in outcrop. Nearby at 0445944mE, 5141499mN a sample gave 60ppm eU and 40 ppm eTh. Two areas 34 metres apart on strike were stripped in this area. Highest radiometric local readings occurred along parallel shears striking at 138°.

<u>Target 7:</u> 0445189mE, 5141315mN a sample was collected with 25.4 ppm eU, 31.3 ppm eTh, stripping undertaken exposed quartzite. Localized anomalous radioactivity was associated with minor shears striking at 136°.

<u>Target 8:</u> 0444896mE, 5141759mN yielded 11.5 ppm eU, 30.3 ppm eTh, stripping undertaken exposed quartzite with small fractures having 10ppm eU and 8ppm eTh at 0445761mE, 5141473mN.

Of the twenty samples assayed by AGAT Laboratories from the above areas, 12 gave uranium values above 10ppm U with values ranging from 11.63ppm U to 53.92ppm U. Of these 12 an average of 158.48ppm TREE was obtained from

values ranging from 698.27 to 54.64ppm TREE. Note that the TREE analyzed in these 12 samples excluded scandium, praseodymium, neodymium, promethium and samarium.

Unfortunately the sample bags used to collect these samples had snow in them which melted and caused the samples to be saturated with water for several weeks. This may have reduced the value of the uranium contained due to uranium's solubility in an oxidizing environment.

### 9(f) May 31 - June 15, 2011 Firebird Resources Inc.

# CCIC / Wolf Mtn Independent Technical Report on Scintillometer Study and selected areas for hand stripping, washing, blasting and sampling

Caracle Creek International Consulting Inc. ("CCIC") of Sudbury, Ontario, Canada was contracted by Firebird Resources Inc., Ontario, Canada, to carry out geological mapping and a geophysical survey consisting of a RS-125 Super-Spectrometer, on the Porter-Hyman property. The field work was supervised by Kyle Loney of Wolf Mtn. Exploration. The geological field work with report was undertaken between June 7 and June 15 by Wayne Brown. The geophysical survey was completed on June 15 by Wayne Brown and Dave Perron. The final report being completed on June 20, 2011.

A total of 40 grab and channel surface samples were collected primarily in the vicinity of the Richore occurrence based on their anomalous scintillometer readings. These samples were subsequently assayed by AGAT Laboratories. The uranium assays from all these samples ranged from 1.28ppm U to 583ppm U, averaging 73.8ppm U, with a median of 34.3ppm U. The highest uranium sample of 583ppm also had a thorium assay of 1,776ppm Th and 144ppm Y (Yttrium). Assays of the above 40 samples for TREE (less promethium and

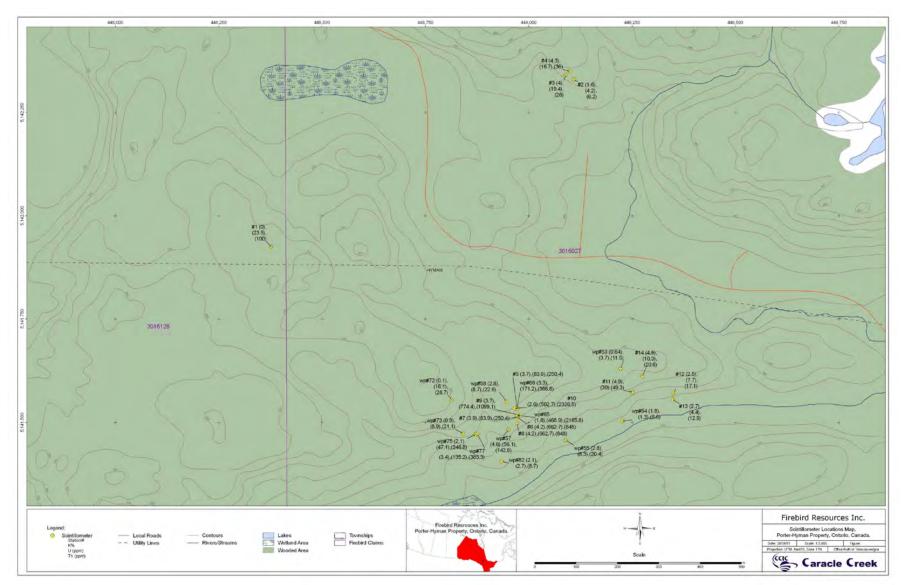
scandium) revealed a range from 32.46 to 6,665.75ppm TREE, an average of 927.27ppm TREE, and a median of 331.81ppm TREE.

The results of the 27 radiometric scintillometer readings are illustrated in table 3. Figure 20 shows the location of these values.

a: t	<b>D</b> (1	N. 41	D ( )	<b>TT T</b>	<b>m</b> 1 :	m . 1
Station number	Easting	Northing	Potassium	Uranium	Thorium	Total
1	448377	5141925	0.00%	23.5 ppm	100.0 ppm	
2	449110	5142330	1.60%	4.2 ppm	6.2 ppm	
3	449090	5142341	4.00%	19.4 ppm	26.0ppm	
4	449099	5142350	4.30%	16.7ppm	36.0,ppm	
5	448972	5141533	3.70%	83.9 ppm	250.4ppm,	
6	448972	5141513	4.20%	662.7ppm	848 ppm	
7	448972	5141513	3.9%,	83.9 ppm	250.4ppm,	5980 ppm
8	448972	5141497	4.20%	662.7ppm	848ppm	26577.6ppm
9	448980	5141517	3.70%	774.4ppm	1099.1ppm	35853.7ppm
10	448967	5141534	2.60%	502.7ppm	2326.5ppm	42485.1ppm
11	449251	5141573	4.90%	30ppm	49.3ppm	1155.1ppm
12	449351	5141571	2.50%	7.7ppm	17.1ppm	841.1ppm
13	449349	5141555	2.70%	4.4ppm	12.9ppm	609.8ppm
14	449275	5141612	4.90%	10.3ppm	20.6ppm	1024.3ppm
wp# 53	449222	5141630	0.64%	3.7ppm	11.5ppm	443.1ppm
wp# 54	449227	5141503	1.80%	1.3ppm	6.6ppm	428.4ppm
wp# 55	449090	5141457	2.80%	8.3ppm	20.4ppm	871.2ppm
wp# 56	440971	5141449	1.40%	2.7ppm	10.1ppm	448.2ppm
wp# 57	448951	5141482	4.60%	56.1ppm	142.8ppm	4158.2ppm
wp# 58	448946	5141551	2.80%	8.7ppm	22.6ppm	931.4ppm
wp# 65	448972	5141517	1.60%	468.9ppm	2165.8ppm	39319.1ppm
wp# 66	448972	5141537	3.30%	171.2ppm	366.8ppm	11600.8 ppm
wp# 72	448814	5141554	0.10%	16.1ppm	28.7ppm	134.5ppm
wp# 73	448841	5141473	0.90%	8.9ppm	21.1ppm	751.5ppm
wp# 75	448871	5141471	2.10%	47.1ppm	246.8ppm	4747.6ppm
wp# 77	448876	5141472	3.40%	135.2ppm	385.3ppm	8890.4ppm
wp# 82	448935	5141406	2.10%	2.7ppm	8.7ppm	540.3ppm

 Table 5: Caracle Creek RS125 Spectrometer Results

Brown's report concluded that most of the anomalies were in uranium-thorium enriched polymictic conglomerate or in fractures parallel to bedding that appear to have leached from a source below surface.



**Figure 20:** CCIC Scintillometer Readings and Locations. Note claim numbers have changed, see table 1. Info from *Brown, 2011*. Prepared by R. Komarechka July 29, 2011.

Brown also stated mapping in the area was challenging due to the intensity and displacement of folding and faulting across the claims and the apparent lack of linear continuity of the uranium bearing conglomerate beds. No geologic map was produced in his report.

# 9(g) May 2012 – Present GTO Resources Inc. Current Activities Power Stripping, Washing, Mapping and Sampling Bedrock Research Corp

In May 2012 the author of this report, R. Komarechka, supervised the initiation of a preliminary evaluation of the Richore Occurrence in the vicinity of the higher uranium values as shown in figure 20. This work involved a cursory scintillometer survey followed by the locating and flagging of a local grid and area for later stripping. Three old areas of blasted trenches were located. Figure 21 shows the area of one of the higher radiometric cps readings obtained from the south trench in an area of rusty pyritic oligiomictic quartz pebble conglomerate with the results as shown below.

Sample #	Northing	Easting	U	Th	TREE* ppm	Au g/t
	NAD83	NAD83	ppm	ppm		
E5096669	5141519	0448978	202	385	760.87	0.443

inclusive of all REE except for Promethium and Scandium.

Power stripping followed by pressure washing was undertaken to expose approximately 800 square metres of bedrock in the area. This area is now in the process of being mapped.

While mapping of the site is not completed yet, from observations so far, it appears that the bedding in the area strikes east-west with a very steep dip to the north. The 3 discrete radioactive conglomerate units so far identified appear to be steeply dipping lensoidal bodies several metres long, in the order of a metre or so wide and of unknown plunge, contained within a more extensive aureole of a smokey quartz granule conglomerate, also radioactive, but less stronger than the pebble conglomerate.

At this time it is believed the conglomerate lenses may be cross-sections of meandering drainage channels or possible beach bars. Further work needs to be undertaken to determine this.



**Figure 21:** Richore Conglomerate. Anomalous radioactivity (23,616 cpm) from rusty pyritiferous quartz pebble oligiomictic conglomerate, Richore Occurrence, south pit.

# 10. DRILLING

No drilling has been carried out on the HPU Property by the Company.

### 11. SAMPLING METHOD AND APPROACH

Three sampling campaigns have been undertaken on the HPU property. Each with its own methodology.

The first of these occurred during the examination of the site by the prospecting team Guy Shouinard and Don Lashbrook. A total of 20 samples were collected from the HPU property at that time. These samples were located in NAD83 coordinates using a Garmin hand held GPS units, labelled with these co-ordinates, then placed in labelled plastic bags and secured with black electrical tape while in the field. The samples were then hand delivered by the prospectors to Robert G. Komarechka P.Geo., who examined them about three weeks later and described them under a stereoscopic microscope. It was noted at this time that many of the sample bags were filled with water as they were collected in the snow which had since melted. A concern arose due to the solubility of uranium in oxidizing conditions as these surface weathered samples were exposed to water and may not represent the uranium content of the fresher underlying rock. The samples were then hand delivered by the author, Robert Komarechka, delivered to AGAT Laboratories preparation lab in Sudbury and then later sent to their Mississauga analytical lab for analysis using the Lanthanide analysis, 4 acid digestion with ICP-MS (mass spectrometer) finish.

The assay results were later received and matched to their appropriate locations for comparative analysis by the author of this report, Robert G. Komarechka and submitted as an assessment report to the Ministry of Northern Development.

The sampling by the two prospectors was carried between 16 November and 26 November 2009. The sampling conditions were less than ideal as there was a recent snowfall on the ground, the area is also covered by glacial till and rock exposures were limited to the higher elevation ridge areas. An attempt was made to sample areas of high radioactivity as reported by the Abitibi Geophysics

surveys, and as identified by a hand held RS-230 model scintillometer, however, due to the limited number of outcrops and the extensive overburden, samples were only taken on exposed outcroppings or where overburden could be hand stripped.

In summary, samples were taken on a random basis within previously defined radiometric anomalies selected where conditions permitted a sample to be taken. All samples were grab samples. The rock units sampled are from the Mississagi formation and were argillites, grits and fine conglomeratic units. Several granite samples were also assayed. These often tended to be along shears. No attempt was made by the prospectors to establish the controls to mineralization or the widths to the mineralization and it is not known if the collected samples represent higher grade material or not.

The rock samples were collected from surface bedrock in the field having anomalous radioactive counts per second by competent prospectors and placed in bags labelled with their GPS co-ordinates. These samples were hand delivered in sealed bags to a the author who examined and described them under a stereoscope microscope and hand delivered them to AGAT Laboratories prep lab in Sudbury where they were subsequently sent to their analytical lab in Mississauga. The samples were analyzed using standards supplied by the lab.

Samples were dried at 60C, crushed to 75% passing 2 mm, split to 250 g and pulverized to 85% passing 75 um. Samples were then fused using lithium borate techniques and the analysis performed using a Perkin Elmer Elan 9000 ICP-MS for all lanthanides, including uranium along with laboratory blanks, reference materials and replicate sample insertions.

The sampling showed that the units underlying the identified radioactive anomalies contain uranium and REE based on the AGAT analyses.

A second sampling program consisting of 40 samples was undertaken by CCIC (Caracle Creek International Corp.) with field supervision being undertaken by Wolf Mountain Exploration Inc. This program of stripping concentrated on two locations on claim 4254057 as shown in figure 19.

The survey used an RS-125 Super Spectrometer to locate the anomalous high gamma count indicated on the Abitibi Geophysics maps. CCIC then conducted its own survey to confirm Abitibi's readings and to outline the extent of the mineralization. The area was marked and data recording 'total length of time for the reading', 'total count', 'K % (potassium) as a percent', 'uranium in parts per million', and 'thorium in parts per million' were recorded. Grab samples were taken when possible and sample sections of up to one meter long were marked in paint on the rock for channel samples. Several anomalies at the Richore occurrence were located in a densely packed oligomictic conglomerate that had been previously trenched. This area was later blasted and sampled.

Channel samples were taken by cutting a parallel 5 cm deep cut by 2.5 – 4cm apart along the indicated reference line using a gas powered diamond saw. Samples were terminated by a cross cut and the layer of rock between the cuts removed by hammer and moil, bagged and labeled with the number of the tags of the assay lab inserted. The length of cut was recorded, rock type and the GPS location of the samples. The samples were placed in rice bags and placed is secure storage in the CCIC office. Metal tags were secured at the site of the samples collected. At the completion of the survey and collection of samples the samples were taken to the preparation AGAT laboratory at 2054 Kingsway Road on June 13, 2011 and then submitted to AGAT's analytical laboratory in Missisauga, Ontario for Analysis No. 201076-Lithium Borate Fusion-ICP-OES Finish, summation of all oxides; and analysis No. 201078 Lithium Borate Fusion, ICP/ICP-MS finish.

These samples were collected by an experienced field crew, overseen by CCIC. The author has been to one area of the sample collection and has seen the areas sampled and the sample numbers located on metal tags in the field. One sample over an anomalous zone was also collected by the author for comparative study. All sample collection appears to be of a professional nature.

A third sampling program, currently in progress, is being undertaken to better understand the uranium mineralization occurring around the Richore Occurrence. The program involved the use of an RS-125 Scintillometer to define radioactive areas and later collect samples. At this time only one sample has been collected from a surface fragment broken off an area of pyritic oligiomictic quartz pebble conglomerate as shown in figure 20. This sample was collected, labelled in a plastic bag with UTM co-ordinates recorded, as well as its position shown on a map, currently in preparation. The sample was described and transported by the author, Robert Komarechka, to AGAT Laboratories preparation Lab in Sudbury for subsequent analysis in Mississauga.

AGAT Laboratories with their Quality Management System is certified to the ISO 9001:2000 international standards.

No aspect of the sample collection or preparation was carried out by an employee, officer, director of either the Company or the original vendor.

No duplicate samples were taken in the field or submitted to AGAT Laboratories for analysis. AGAT Labs carried out standard and duplicate analyses and all analyses fell within the acceptable limits of 100% +/- 20%.

It is considered that the sample preparation, security, procedures and quality control (QC) were appropriate and carried out in a professional manner.

#### 12. DATA VERIFICATION

The author, Robert G. Komarechka, has reviewed and discussed the results of ground geophysical surveys carried out on behalf of the Company with Dave Laronde, President of Meegwich Consultants Inc. The data collected is of good quality and the interpretations expressed by the consultants are valid. Komarechka has also reviewed the reports and maps for the airborne geophysical surveys prepared by Terraquest Ltd. and they are considered to be of good quality.

In plotting the data from the Ontario Government Drill Hole Database it was found that the data for the AFRI assessment and government AMIS data did not always match. At this time no confirmation was made in the field to confirm the accuracy of these data sets although the AMIS data should be more correct as it was ground proofed by MNDM contractors.

The author has not confirmed, on site, any of the historical data and samples collected by others. Sixty samples were collected from the HPU property by prospectors and Wolf Mtn. Exploration Inc., however, it is not known how representative they are of the areas sampled or the mineralization in general.

The author was on site at the HPU property on February 25, 2012 to carry out a property visit and confirmed the location of some recently staked claim boundaries, confirm the geology, terrain and current winter access. Another 5 day period on the site was spent from May 10, 2012 to May 30, 2012 to locate occurrences, as well as supervise and assist with a more detailed examination and stripping of the Richore Occurrence. During this time radiometric readings and one grab sample, E5096669 (see figure 21), was collected from a previously trenched, highly anomalous, radioactive pyritic oligiomictic quartz pebble conglomerate lens by the author and sent for analysis. The results of this sample

and readings on site appear in line with previous assays and scintillometer readings in the area undertaken by Wolf Mountain Exploration Inc.

In general the scintillometer samples show low values in uranium with some of the samples from the Richore showing in the order of 760 ppm TREE i.e., 1.67 lb/tonne of REE. Since all samples are from surface, the low uranium values may, in part, be due to leaching of uranium from the rocks in the surface environment. This situation requires further investigation.

In summary, all three surveys, the Terraquest Ltd. airborne survey and the two Abitibi Geophysics ground surveys showed coincident radiometric anomalies which were followed up by limited ground sampling which showed the presence of both uranium and REE values in the underlying rock units.

The author has no reason to believe the data collected is not adequate for the purposes used in this technical report.

# Note: Items 13 -22 are not applicable to this report

# 23. ADJACENT PROPERTIES

Three significant adjacent properties all outside of the HPU property will be discussed below, these are: The Agnew Lake Property of Valencia Ventures Inc., The Shakespeare Nickel Mine now held by Prophecy Platinum Corp. as of June 2012, the proposed Eco Ridge Mine Rare Earths and Uranium Project of Pele Mountain Resources Inc. The Eco Ridge Property, while some distance away, is significant due to the similarities of their mineralization. In addition to the above the presence of other nearby uranium mineral occurrences are also mentioned.

The Agnew Lake Property hosting the past producing Agnew Lake Uranium Mine and is located 2 kilometres east of the eastern boundary of the HPU property. While this deposit occurs in the Matinenda Formation its style of mineralization has many similarities with the mineralization noted on the HPU property.

Most of the following information on the Agnew Lake Mine came from the McBride, Derek, Workman, AI., 2005 report, however a later NI43-101 technical report was prepared by Watts, Griffith and McOuat for Nyah Resources Corp. in 2007 but this was unavailable to the author.

The Agnew Lake Mine produced from 1979 to 1983 under the control of Kerr Addison Mines Ltd. From 1978 to 1983 it produced approximately 850,000 kg of U3O8 using a combined surface and in-situ (underground) leach system. The deposits were accessed by a 950 metre deep 6-compartment shaft and an uncertain amount of underground workings as well as a decline from surface to the 580 metre level. Originally discovered in the mid 1950's as an extension of the Elliot Lake uranium rush, the deposits were drilled by New Thurbois Mines and later in the 1960's by Kerr Addison Mines. Following delineation of a resource, a vertical shaft was sunk to 1,040 m. Exploration and development was carried out on six levels, the deepest being on the 945 metre level. A drop in the price of uranium led to curtailment of underground development. In the mid-1970's the mine was pumped out and prepared for solution mining which continued to 1983. Rehabilitation of the site was undertaken and when completed the property was returned to the Crown, subsequently staked by various parties and acquired in October 26, 2010 by Valencia Ventures Inc.

The following description of this property was extracted from page 22 of McBride, Derek, Workman, Al., 2005: *"The Agnew Lake uranium deposit is a paleo-placer deposit formed under anoxic conditions in river bottoms where pyrite and heavy minerals containing uranium and thorium mineralization were deposited in conglomerates and conglomeratic sandstones. The mineralization is quite similar to corresponding deposits in the Witwatersrand Basin in South Africa and in the Elliot Lake area.*  Conglomerates that are enriched in uranium and thorium-bearing minerals drape off the granitic hinterland to the north of the depositional basin. Several stacked conglomeratic horizons are present. Erosion has removed the proximal facies of the uppermost horizon which, post-folding, is now the most southerly and lying approximately 150-200 m above the granitic basement. It is likely that, down dip, additional horizons will either rest on the unconformity or extend disconformably from the granite at a shallow angle.

During the 1940s and 1950s, there was much debate over whether these deposits were truly syngenetic (placers) or whether they were epigenetic (grown in place) or purely hydrothermal. Davidson (1957) favoured a hydrothermal origin, which has largely fallen out of favour, although the potential for recrystallization of uraninite and accretion of additional uranium onto existing mineral grains is recognized as a possibility. As Friedman (1958) points out, the area of thorium enrichment is regional, and extends well beyond those zones of relative uranium enrichment which have been outlined by exploration drilling. He concludes that the weight of evidence suggests a sedimentary origin for the mineralization as no know hydrothermal process could explain the widespread thorium anomaly. This is supported by Roscoe (1959) of the Geological Survey of Canada who very concisely states "the ore deposits near Blind River represent exceptional, uranium-rich, deposits within and extensive province of thorium-rich clastic sedimentary rocks". The presence of resistate minerals, such as uranium bearing silicates (zircon) are also difficult to explain in an epigenetic model. In the Blind River District, the presence of brannerite (UTi<sub>2</sub>O<sub>6</sub>) and U-bearing phosphates such as monazite ({Ce,La,Nd,U,Th}PO4) and xenotime (Y-UPO4) relates quite well to the weathering of a U-Th and Ti enriched (granitic) source. Brannerite it is believed to have developed as a result of uranium ions adsorbing onto decomposing Ti minerals such as ilmenite."

The last reserve reported for the mine is found in the 1983-84 Canadian Mines Handbook (Northern Miner Press Ltd.) which reports a "mineable proven and probable reserve with dilution in place, broken in stopes and on surface leach pile estimated at 8,976,000 tons containing 7,161,000 lb U3O8" (0.8 lb U3O8/ton or 8,143,000 t @ 0.4 kg U3O8/t). This has to be reduced by 2,221,000tons (2,130,000t) of broken in-situ ore and 1,449,000 tons (1,315,000 t) of surface stockpiled ore that was continuously leached during 1982, although the grade of this ore was not reported. It seems reasonable that there remains approximately 0.8-1.0 lbs U3O8 per ton or 0.4-0.5 kg U3O8 per tonne. It is also apparent that recoveries of uranium from the ores leached during 1982 were lower than expected at approximately 50%. This may offer an opportunity to re-leach the surface stockpiled ores which may contain as much as 580,000 lbs (290,000 kg) of U3O8.<sup>1</sup>

Details on the mineralization at the Agnew Lake Uranium Mine and surrounding area is described below by McBride, Derek, Workman, Al., 2005, p25:

"Most recently, Robinson and Spooner (1984) have underscored the strong evidence for a paleo-placer origin for the uranium-thorium mineralization in the Blind River District, and added evidence that although the regional metamorphic grade is negligible in the area, the quartz-pebble conglomerates are affected by syn-depositional faulting consistent with a rift margin setting. The authors add that primary uraninite grains were deposited in association with coarse smoky quartz, perthitic microcline, magnetite with ilmenite lamellae, monazite and zircon, however, the bulk of the pyrite which constitutes 5-10 vol-% of the ore is post- depositional in origin. Pyrite occurs as overgrowths on detrital pyrite grains and on uraninite grains altering to coffinite.

In contrast to the Elliot Lake area, where the deposits were relatively rich in

<sup>&</sup>lt;sup>1</sup> McBride, Derek, Workman, Al., 2005, p14.

pyrite, brannerite and other uranium minerals such as uraninite and coffiniteuranothorite (after uraninite), the Agnew Lake area is distinguished by significantly higher thorium contents, a general lack of uraninite, lower brannerite contents and the prevalence of monazite. The Blind River ores also carry variable but relatively minor amounts of base metal sulphides (chalcopyrite, sphalerite, galena) as well as lesser amounts of stibnite, pyrrhotite, arsenopyrite, skutterudite, cubanite, linnaeite, cobaltite, niccolite, pentlandite and related minerals (Davidson, 1957). Researchers attribute this to variances in source areas between the two mining districts. The source area for the mineralization at Agnew Lake is thought to be to the northwest, comprising a sequence of granitic rocks that were particularly enriched in thorium.

Thucholite, a radioactive hydrocarbon found at Elliot Lake (uncertain at Agnew Lake), is post-depositional in origin as it coats and invades grains of uraninite. Its origin is uncertain, but one concept is that it formed by radiation-induced polymerization of mobile hydrocarbons in pore spaces. Interestingly, this mineral is also found in the uranium deposits of the Witwatersrand, South Africa.

The paleo-placer deposits are stratabound, commonly occurring in stacked sheet-like bodies of conglomerate. Mineralization is entire disseminated and the highest grades are associated with quartz-pebble conglomerates."

The most recent producing mine in the area is the Shakespeare copper, nickel, PGE open pit, recently acquired from Ursa Major Minerals Incorporated by Prophecy Platinum Corp. on July 16, 2012. The minesite is located about 10 kilometres to the west of the HPU property.

A brief description of the ore at this site was extracted from a March 2, 2012 press release of Prophecy Platinum Corp: *"In 2010 and 2011, through contract mining, the Company trucked and delivered a total of over 360,000 tonnes of ore to the Sudbury's Strathcona Mill for processing. Total revenue generated was* 

*over* \$20,000,000." Production stopped in 2012 due to a termination of the processing contract with Xstrata. The Prophecy press release further stated: "The feasibility study by Micon International Limited in January 2006 and subsequently updated in 2008, defined a Probable Reserve of 11,828,000 tonnes grading 0.33% nickel, 0.35% copper, 0.02% cobalt, 0.33 g/t platinum, 0.36 g/t palladium and 0.18 g/t gold. The mineral reserve is to a maximum depth of 250 metres below surface."

The sulphide mineralization at this site is a disseminated sulphide deposit contained within a magmatic segregation in a Nipissing Gabbro sill. The ore minerals include chalcopyrite, pentlandite with associated pyrrhotite.

A significant uranium rare earth property moving forward towards production with a similar style of mineralization is the Eco Ridge Mine Rare Earths and Uranium Project of Pele Mountain Resources Inc. This property is located about 62 km to the west of the HPU property south east of Elliot Lake. Mineralization occurs in sub-horizontal (dipping about 14° to the north) conglomerates of the Matinenda Formation. As of April 16, 2012 a total of 48,737,000 tonnes of indicated resources grading 0.026% U3O8 and 1,157ppm TREO and 37,863,000 tonnes of inferred resources grading 0.026% U3O8 and 1,100ppm TREO was estimated by RPA<sup>1</sup>.

Mineralization occurs both as primarly paleoplacer (believed to be formed by paleo-fluvial channels) and secondary enrichment caused by fluid movement through porous media and fault zones and deposited in chemically reduced areas, such as is often associated with pyrite. Mineralization occurs in several parallel beds along with "floater" beds of isolated bands occurring above the three main, more continuous, zones. These three main zones are labeled (from oldest to most recent stratigraphy ) Basement Conglomerate Bed, BCB, the Main

<sup>&</sup>lt;sup>1</sup> Ciuculescu, Tudorel, Hwozdyk, Leo, Altman, Kathleen, Cox, Jason J., 2011.

Conglomerate Bed, MCB and the Hanging Wall Zone, HWZ. The MCB being most continuous while the BCB and HWZ exhibit variable thickness.

Several occurrences outside the HPU Property existing in both Hyman and Porter Townships show indications of similar styles of uranium mineralization as on the HPU property and often within the Mississagi formation as reported in the publically available Assessment Files of the Ontario MNDMF. All of these reported showings or occurrences are apart from the subject claims and their existence is reported here to indicate that the area in general is enriched in uranium and possibly REE-type mineralization. Copper, nickel mineralization in Nipissing gabbro as well as additional skarn mineralization also occurs in Hyman and Porter township outside of the HPU claims. These will not be discussed further in this report.

**Note:** All resource estimates presented in this report are historical (except for those listed on the Agnew Lake Uranium Mine, The Shakespeare Mine and the resources of the Eco Ridge Project) and were prepared before the introduction of National Instrument 43-101 – Standards of Disclosure for Mineral Projects ("NI 43-101"). These resource estimates may not be relied upon until they are confirmed using methods and standards that comply with those required by NI 43-101. The potential for the exploration target to replicate the historical resource, or to reach the indicated range of tonnages, is conceptual and is based on historical reports, which cite approximately lengths, widths, depths, grades and projections of the historical resource. Readers are cautioned that a qualified person has not completed sufficient exploration, test work or examination of past work to define a resource that is currently compliant with NI 43-101. The Company further cautions that there is a risk that exploration and test work will not result in the delineation of such a currently compliant resource. Neither the Company nor its personnel treat the historical resource estimate or the data for evaluation purposes; however, these data are considered relevant and will be used to guide exploration as the Company develops new data to support a current mineral/resource estimate in accordance with the requirements of NI 43-101

<u>Note:</u> The author of this report has not visited any of the three above listed properties, showings or occurrences listed in this section nor has he been able to verify the reported information contained in the Assessment Files of the Ministry of Northern Development Mines and Forests of the Ontario Government. It should be borne in mind that the mineralization reported is not necessarily indicative of the mineralization on the HPU Property that is the subject of this report.

# 24. OTHER RELEVANT DATA AND INFORMATION

There is no additional significant relevant data or information.

## 25. INTERPRETATION AND CONCLUSIONS

From the historical data generated by work in the area since the 1950's, it is evident that pervasive low-grade Proterozoic age pyritic, paleoplacer-type uranium/REE mineralization occurs in many areas near the Archean unconformity within the Mississagi formation in Hyman and Porter Townships.

Several existing occurrences have been briefly examined by the Company and its precursor companies. Of those examined at this time the Richore Occurrence appears to exhibit the best potential for further evaluation. Several other areas still need to be examined.

No work has been undertaken by the company to determine the uranium mineral present on the property at this time although uranothorite with minor brannerite and monazite is suspected as occurs at the Agnew Lake Minesite. No mineralogical studies have been done on the REE minerals from the area.

It is recognized that the uranium occurs in both quartz granule and pebble oligiomictic conglomerates close to the underlying archean basement unconformity with the quartz pebble conglomerate having the higher values. Anomalous uranium values are also found along fractures and shears which may be derived from other adjacent or underlying sources. From preliminary work at the Richore showing it appears that the radioactive conglomerate lenses may represent the cross sections of a fluvial channel or a possible beach bar. These may represent a floating bed analogue as observed at the Echo Ridge Property of Pele Mtn. At this time no consistent underlying conglomerate beds have been located but these should be sought.

The airborne radiometric surveys show several anomalous areas of eU values. Eight of these areas of stronger anomalies were recommended to be examined in the field with more detailed follow up scintillometer ground surveys. One of the largest of these anomalies is in the area of the Richore Occurrence. Additional thorium and potassium anomalies, especially within rocks units normally low in these elements were also recorded. This is significant as a result of the anomalous thorium being associated with the higher rare earth assay values on the HPU property and the potential for locating extensive alteration zones demarked by potassium anomalies which may envelope various types of mineralization.

The September 2009 and November 2009 ground radiometric surveys by Abitibi Geophysics and a two man prospecting team detailed ground eU (equivalent uranium) anomalies associated with the previously identified airborne anomalies. This work better defined the location of the anomalies into discreet targets, some of these were stripped, crudely mapped and surface sampled. The result of this work showed low values of uranium were associated with conglomerates and shears and fractures in a variety of rocks. Several old trenches were also located. This work has indicated the presence of uranium and REE values associated with the previously identified radiometric anomalies, however, a well defined mapping and sampling program is required to adequately evaluate the bedrock units underlying the radiometric anomalies.

The recent 2011 field program undertaken by CCIC on this property focused a scintillometer and sampling program primarily on the Richore Occurrence and surrounding area. The elevated uranium scintillometer readings and assay values encountered helped define the local anomalies. In addition two samples collected about 120 metres SW of this area (see WP#31 on figure 20) assayed

6,665.75 and 5,066.66ppm TREE. This is very interesting due to the associated high concentration of +1,000 ppm thorium on these two samples. A closer examination for REE in the unexamined thorium anomalies is suggested.

The current stripping and ongoing detailed mapping around the seems to indicate that the greatest radioactivity occurs in several lensoidal bodies of rusty, pyritic, oligiomictic, quartz pebble conglomerate contained within a larger thinner lens of lesser radioactive gray, oligiomictic, smokey quartz granule conglomerate. The lenses observed dip steeply to the north and appear stacked but slightly staggered in the quartzite stratigraphy and may represent cross sections of a river channel or beach bar. Fractures in the area, concordant with the bedding and emanating from the oligiomictic conglomerates, also have anomalous radioactivity and support earlier suggestions that radioactive fractures may emanate radioactivity by carrying dissolved uranium in solution from nearby radioactive host rocks. The possibility of a larger conglomerate may also exist in the area as was found in the Eco Ridge Property with discrete "floating beds" of conglomerate above more consistent beds of conglomerate. This possibility would need to be proven by further evaluation of past work, detailed mapping on site and subsequent drilling.

Given the projected demand and price for uranium, as well as the rapidly increasing prices of, and demand for the REE, it is considered that a further examination of the HPU Property is now warranted. This study should attempt to determine the mineralogy and form of the mineralized zone(s) as a framework for further exploration. A more detailed and localized mapping program should be undertaken to define current deposition direction and the nature, genesis and form of the radioactive lenses. An attempt should then be undertaken to look upstream to find coarser detrital uranium mineralization, or parallel beds that may be present. The ultimate goal of this program would be to determine the overall size of the zones of combined uranium/REE mineralization on the HPU Property with the objective of defining a deposit of economic significance. Random sampling within these areas has shown the presence of uranium and REE mineralization. The purpose of the work to date was to determine the areas with the highest potential to host mineralization of economic interest. It is considered that this objective has in general been accomplished for those areas evaluated to date, however, to continue the evaluation of the Property additional mapping and sampling followed, if warranted, by drilling as required. The purpose of this work would be to provide geological and mineralization information for the units underlying the three zones and then, with this information better exploration models could be developed. A cursory examination of other potential mineralization should also be undertaken on the property.

Several risks and uncertainties are involved in the above work. As the beds are steeply plunging and the conglomerate bodies so far identified appear to be lensoidal, obtaining true widths and plunge directions may be challenging. The recognition of shearing along bedding, faulting and fracturing across bedding, later intrusive granitic rocks and frequent lithology changes from greywacke, to quartzite and occasional conglomerate, can add difficulties in establishing continuity of the conglomerate units.

Although the author was able to locate several drill holes and old workings by following the old drill trails in the area of the Richore Occurrence, the ability to locate all past drill holes and past workings for interpretive analysis is uncertain.

A final risk component has to do with recent changes in the Ontario Mining Act and Regulations regarding work permits and consultation with First Nations. These issues have the potential to increase costs and time to undertake the proposed work. The allocation of \$10,000 for this undertaking in each of the proposed phases of the budget may be inaccurate.

#### 26. <u>RECOMMENDATIONS</u>

Previous work on the HPU Property has indicated the presence of Paleoproterozoic - age, uranium and REE-bearing, sedimentary rocks with the potential to host mineralization of economic interest. Recent radiometric surveys in 2009-12 have outlined at least one major target area of particular interest; the Richore Occurrence. This area consists of several radioactive conglomerate lenses and at least one area of rare earth mineralization. Several other sites in the area have not yet been evaluated. To further evaluate the potential of the RCU Property a phase 1 program is recommended consisting of:

1) Locating in the field previous workings as described in the assessment reports including field locates of past diamond drilling,

2) Evaluating areas of anomalous mineralization as described by Easton's recent work in the area, including potential black shale, skarn and IOCG mineralization,

3) Investigate radiometric anomalies of thorium on the ground for potential rare earth mineralization,

4) Investigate potassium radiometric anomalies in low potassium host rocks for potential alteration halos that may be associated with mineralization,

5) Undertake a rating of the top 5 target areas for further examination

6) Grid, strip, map and sample the 5 areas of greatest potential

7) Undertake a consolidation of all data including, recent mapping, radiometrics, assays and structural information along with past historical drilling and topography to best prepare a 3D model to determine locations for a drill program.

The focus of this Phase 1 program would be on developing and testing an exploration model to be used in evaluating the potential of the Property to host a deposit of economic interest, with two possible co-products, uranium and REE, within the favourable areas outlined by the radiometric surveys. A cursory examination of other potential mineralization will also be undertaken. A \$1,051,691 total budget for a phase 1 program of \$274,443 and a tentative phase 2 drill program of \$777,248 is outlined below in table 6.

# TABLE 6HPU PROPERTYRECOMMENDED EXPLORATION PROGRAM AND BUDGET

# Phase 1

1.	Locating with GPS, ground prospecting and surveying,	
	sampling and prioritizing of radiometric anomalies	
	past occurrences, and potential alteration areas on	
	the HPU Property with a portable scintillometer	\$11,500
2.	Scintillometer rental for one month at \$3,500/mo	\$ 3,500
3.	Locating historic drillholes in field, compilation of drill	
	hole data and preparation of tentative digital sections	\$10,000
4.	Trail demarcation, construction, power stripping,	
	hand balming and washing in at least 5 areas	\$50,000
5.	Linecutting, geological mapping of the 5 areas accompanie	d
	by radiometric surveying & equipment rental	\$50,000
6.	Channel sampling of areas of interest	\$ 6,000
7.	Analyses (Assaying)	\$25,000
8.	Transportation	\$10,000
9.	Compilation of data, preparation of a digital terrain	
	model and 3D model of past drilling, identification of	
	potential drill targets for up to 5 sites	\$25,000
10.	Preparation of report, suitable for assessment submission	\$10,000
11.	Permits and Consultation	\$10,000
12.	Supervision and administration	\$10,000
	Subtotal	\$ 221,000
12. Contingency at 10%		
<u>13. HST (.13% x \$241,100)</u>		

Total of Phase 1	\$ 274,443
	Ψ = 1 +, ++0

Contingent on positive results from phase 1, a phase 2 program and budget is proposed as follows:

# Phase 2

	Total of P	hase 2	5 777,248
17.	. <u>HST 0.13% x \$687,830</u>		<u>89,418</u>
	. Contingency 10%		62,530
	Subtotal	g	625,300
10.			5 10,000
	Supervision & Administration		<u>5 15,000</u>
	Permits and consultation	9	,
	Report preparation	9	
12	Assaying & thin sections		5 30,000
	4 people @ \$200/day x 60 days		5 24,000
	Transportation, room & board for 2 d		2,000
	Shipping of core samples for assay	φ \$	
0. 9.	14" Saw blades @ \$300/blade x 2 bla		·
8.	14" Core Saw Rental @ \$900.00/mo		
1.	400km/day x 0.50/km x 60 days	stinician	12,000
0. 7.	Transportation of Geologist & core te		10,000
6.	Core technician @ \$300/day x 60 da	•	
5.	Logging core, Geologist @ \$600/day	•	
т.	and core logging facilities	s	10,000
4.	Transport and storage of core/corebo	•	2,000
3.	Mob & Demob	\$	·
2.	All in contract drilling of 2,000 metres		440,000
1.	Locate & spot 20 drill holes in field	\$	5,000

Above budget prepared by Robert G. Komarechka – Dec. 6, 2013

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#### DATE AND SIGNATURE PAGE

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#### **CERTIFICATE OF AUTHOR**

#### Robert Komarechka

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## Certificate of Robert G. Komarechka P.Geo., P.Geol.

I, Robert G. Komarechka, of 545 Granite Street, Sudbury, Ontario, hereby certify with respect to 'The Technical Report NI 43-101 on the HPU Property in Hyman and Porter Townships, District of Sudbury Ontario for Vinergy Resources Ltd., dated January 9, 2014, that:

- 1. I am an independent consulting geologist operating under the name of Bedrock Research Corp. with an office located at 545 Granite Street, Sudbury, Ontario.
- 2. I solely authored this report and am personally responsible for all items of this report.
- I have read the definition of "Qualified Person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience. I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101.
- 4. I graduated from Laurentian University in Sudbury with a B.Sc. (1978) with a major in Geology and have practised my profession since graduation.
- I have been a registered member of the Association of Professional Engineers Geologists and Geophysicists of Alberta (APEGGA) since 1985 with membership number M39059.
- 6. I have been a registered member of the Association of Professional Geoscientists of Ontario since 2004 with membership number 1150.
- 7. I am a Fellow of the Canadian Gemmological Association since graduation as a Gemmologist in 1990.

- 8. I have practiced my profession as a geologist for over 30 years since my graduation from university with government and in the private sector in Eastern, Central and Western Canada and in parts of the United States and Mexico reporting on, and managing projects in mineral exploration and mining. These commodities included gold, silver, platinum group elements, base metals, uranium, diamonds, dimension stone and industrial minerals.
- 9. I personally examined and studied the literature, assessment reports and company surveys on the property for Falcon Ventures Incorporated, renamed Falcon Ventures International Inc., renamed Firebird Resources Inc. and now as GTO Resources Inc. (a subsidiary of Firebird Resources Inc.). I am familiar with the project area and have supervised various exploration programs undertaken on this property. I have been on the property on February 25, 2012 and on May 10, 12, 23, 24 and May 30, 2012.
- 10. I have knowledge of the Geology and mineralization in this general area having undertaken geological mapping in rocks of similar age in the area for various clients and having undertaken contracts and being employed by the government to record and examine the mineral deposits in the area both under the MDI and AMIS programs. This work included uranium and rare earth elements. I have also been a co-author with L.D.S. Winter on an earlier NI43-101 Technical Report on the RCU (Roberts Creelman Uranium) Property, Roberts and Creelman Townships, District of Sudbury, Ontario for Firebird Resources Inc., December 6, 2013.
- 11. Aside from supervising various programs on this HPU property for GTO or its precursor companies I have had no prior involvement with the property that is the subject of the Technical Report.
- 12. I am not aware of any material fact or material change with respect to the subject matter of the Technical Report that is not reflected in the Technical Report, the omission to disclose which would make the Technical Report misleading.
- 13. I am independent of the issuer applying all of the tests in section 1.5 of National Instrument 43-101. I do not own, directly or indirectly, nor am I under an agreement, arrangement or understanding or expect to acquire any securities of Firebird Resources Inc., GTO Resources Inc., Vinergy Resources Ltd or any affiliated entity of these Companies. I hold no interest, directly or indirectly, in the mineral properties that are the subject of the forgoing report or in any adjacent mineral properties.

- 14. I have read.the National Instrument 43-101 Dated Dec. 23, 2005 and Form 43-101F dated Dec. 30, 2005 as well as the new June 30, 2011 amendments to National Instrument 43-101 Standards of Disclosure for Mineral Projects and Form 43-101F dated June 24, 2011 as well as Companion Policy 43-101CP dated June 24, 2011. The forgoing report has been prepared in accordance with current National Policies.
- 15. As of January 9, 2014, and to the best of my knowledge, information and belief, this technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading. I am not aware of any material excluded from this report that would make this report misleading.
- 16. I consent to the filing of the Technical Report with any Stock Exchange and other regulatory authority and any publication by them for regulatory purposes, including electronic publication in the public company files on their websites accessible by the public, of the Technical Report.

Dated this 9th day of January, 2014.

GEO morel PROFE Robert G. Komarechka, P.Geo., P.Geol ROBERT G. KOMARECHKA PRACTISING MEMBER 1150 ONTARIC