Highrock Lake Uranium Project

<u>Geological Prospecting, Rock Sampling, Radon Flux Survey, Ground Resistivity and Gravity Surveys</u>

Highrock Lake Uranium Properties

(MC00005102, MC00005103, MC00009471 & MC00009482)

NTS Map Sheet 74H

UTM Coordinate: 470000mE/6330000mN (NAD 83 Zone 13)

Work from June, 2017 to June 2018

GTUranium Energy Inc.

527 Smoothstone Cres, Saskatoon, SK, Canada S7J 4T4

Linglin Chu, *M.Sc., P. Geo.*

June 16th, 2018

TABLE OF CONTENTS

1.0 INTRODUCTION 1

1.1 Location and Access 1

1.2 Climate and Physiography 1

2.0 REGIONAL GEOLOGY 4

3.0 PROPERTY GEOLOGY 6

4.0 EXPLORATION HISTORY 8

5.0 CURRENT EXPLORATION 9

5.1 Prospecting 9

5.1.1 Sampling Methods 9

5.1.2 Analytical Methods 9

5.2 Radon Flux Survey 10

5.3 Ground Geophysics 11

5.3.1 DC Resistivity Surveys 12

5.3.2 Gravity Survey 13

6.0 RESULTS 14

6.1 Prospecting 14

6.1.1 Field Description at the Roberts' Showing 14

6.1.2 Uranium Assay Results 18

6.1.3 XRD Analysis 18

6.2 Radon Flux Survey 19

5.3 Ground Geophysics 20

5.3.1 3D Resistivity 20

5.3.2 Gravity 20
7.0 DISCUSSION.. 21
7.1 Uranium Mineralization 21
7.2 Radon Survey.. 21
7.3 Ground Geophysics 21
7.4 Relation of the Roberts' Showing to Radon, Resistivity, and Gravity Anomalies 22
8.0 CONCLUSIONS AND RECOMMENDATION 24
9.0 REFENRENCE 25
10.0 LIST OF FIGURES.. 26
11.0 LIST OF TABLES.. 27
12.0 LIST OF PHOTOS 28
13.0 APPENDICIES 29

1.0 INTRODUCTION

1.1 Location and Access

The Highrock Lake Project locates in northern Saskatchewan, Canada, with its northern boundary approximately 12 kilometers to the Key Lake Uranium Mill (Figure 1). The property is covered by the NTS Map Sheet 74H and lies between 57° and 58°N Latitude and 105° and 106°W Longitude. The approximate center of the property is a the UTM Location (NAD 83 Zone 13) 470000E/6330000N. The property has a elongate shape with a 23-24 kilometers long axis oriented in the northeast-southwest direction and a width of 5-6 kilometers (Figure 2).

The property is accessible by helicopter or float plane onto lakes in summer, and also by driving on the highway 914 to the Key Lake Uranium Mill and then by winter road in winter. The nearest towns providing mechanical services, equipment storage and camp supplies are La Ronge, approximately 220 kilometers to the south of the property, and Points North, approximately 160 kilometers to the northeast of the property.

During the summer exploration of 2017, the nearby Costigan Lake Lodge was contracted for accommodation and food supply, a helicopter from Arrowhead Helicopter Ltd. was hired for transporting crews from the lodge to the property, and the highway 914 was used for transporting jet fuel from La Ronge. During the spring exploration of 2018, a camp was set up nearby the Highrock Lake and managed by the Discovery International Geophysics Inc, and snow machines were used for travelling from the camp to the working site.

1.2 Climate and Physiography

The property area lies in a sub-arctic climate region with cold winters and warm summers. Winters are extremely cold and dry, with usual temperatures dropping below -30°C. The period of freeze up is from January to April, which allows for a sufficient ice thickness to support snow machines. Temperatures in summer vary widely with yearly maxima of about 30°C.

The topography is characterized by gently rolling relief covered by thinly wooded boreal forest. Lakes and ponds are generally elongated in the northeast-southwest direction and comprise approximate 30% of the property area. Vegetation comprises thinly distributed black spruce, alder, jack pine and birch, while ground cover comprises mostly Labrador tea and Reindeer lichen.

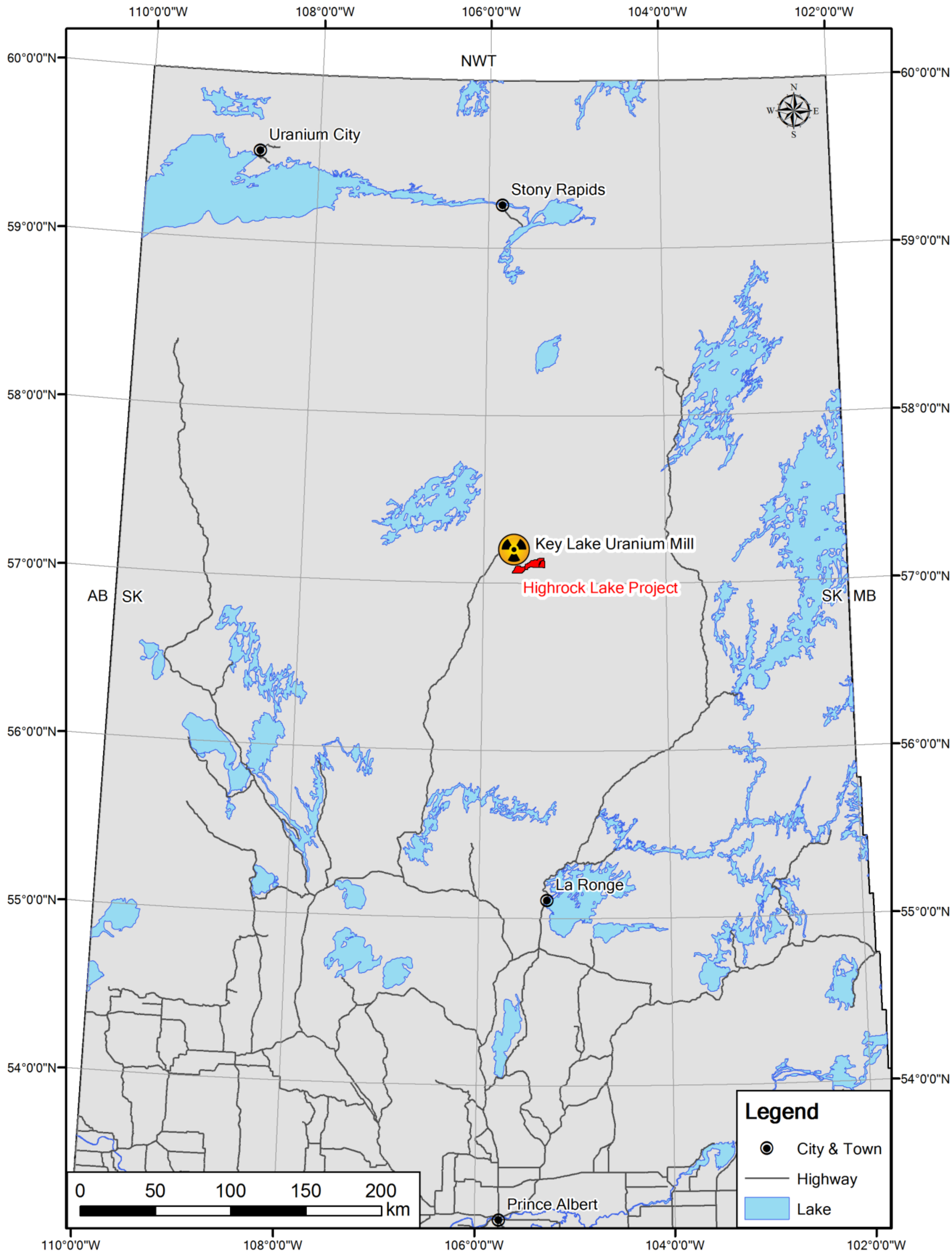

Figure 1. Location Map

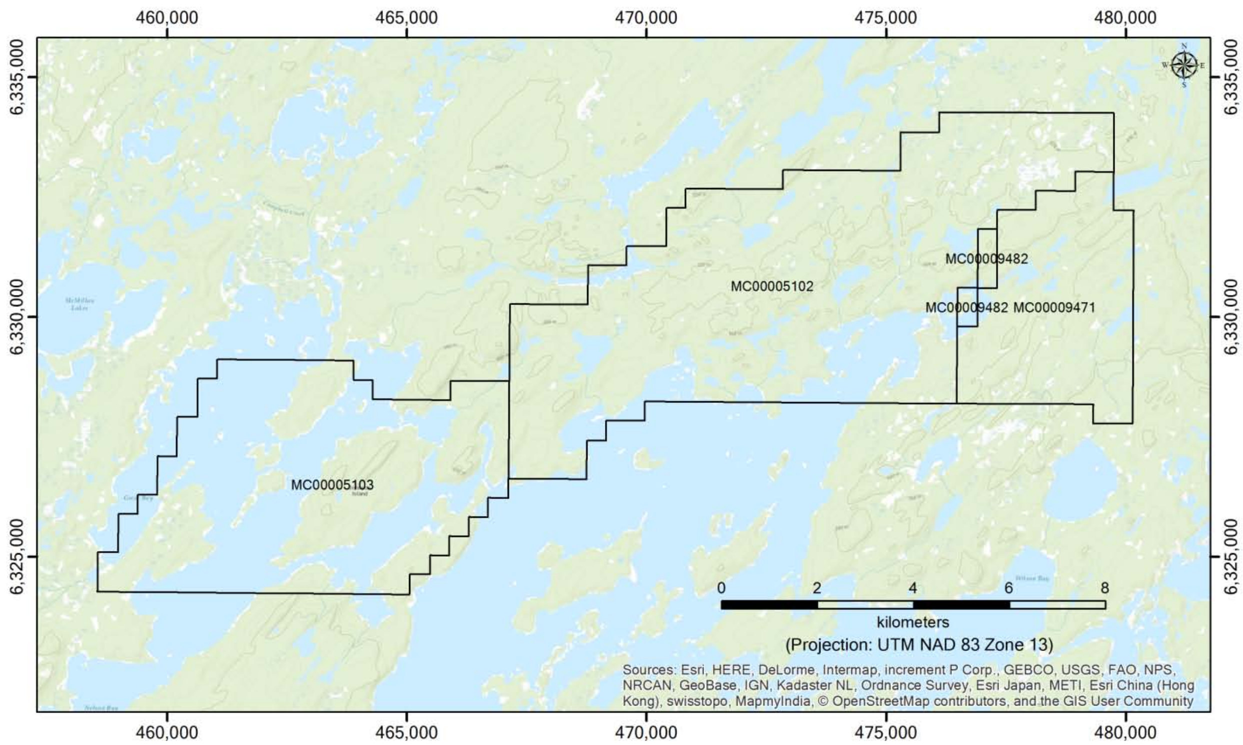

Figure 2. Disposition Location Map

1.3 Disposition

The Highrock Lake property consists of four mineral dispositions, which are listed in the Table 1, with the total area of 9,425 Hecares. Mineral dispositions MC00005102 and MC00005103 were staked in September, 2016, and mineral dispositions MC00009471 and MC00009482 were staked in November, 2017. All of these four mineral dispositions are 100% owned by GTUranium Energy Inc.

Table 1. Mineral Dispositions

Disposition	Ownership	Area (Hectare)	Effective Date	Expire Date
MC00005102	GTUranium Energy Inc., 100%	4,743	2016/9/19	2018/12/18
MC00005103	GTUranium Energy Inc., 100%	3,152	2016/9/19	2018/12/18
MC00009471	GTUranium Energy Inc., 100%	1,447	2017/11/6	2020/2/4
MC00009482	GTUranium Energy Inc., 100%	83	2017/11/6	2020/2/4
Total Area		9,425		

2.0 REGIONAL GEOLOGY

The Highrock Lake property lies in the west-central part of the Wollaston Domain and adjacent to the southeast margin of the current Athabasca Basin (Figure 3).

The Athabasca Basin extends approximately 450 kilometers in the east-west direction and 230 kilometers in the north-south direction, which is covered by undeformed clastic rocks of the Mesoproterozoic Athabasca Group.

Underlying the eastern part of the Athabasca Basin, the Wollaston Domain is a northeast-trending fold-and-thrust belt composed of Paleoproterozoic Wollaston Group metasediments overlying Archean granitoid gneisses, whereas the Mudjatik Domain is a northeast-trending, in part shear-hounded belt consisting mainly of Archean felsic gneisses (Portella and Annesley, 2000).

Different in rock compositions and aeromagnetic features, the Wollaston Domain is divided into the eastern part and the western part. As described by Portella and Annesley (2000), the eastern Wollaston Domain corresponds to a overall aeromagnetic high and comprises a Paleoproterozoic upper sequence of alc-silicate- and magnetite-bearing siliciclastic metasediments, overlying a Paleoproterozoic lower sequence of magnetite-rich to magnetite-poor pelitic to psammitic gneisses with locally infolded Archean orthogneisses. The western Wollaston Domain corresponds to a overall aeromagnetic low and consists mainly of a Paleoproterozoic lower sequence of graphitic pelitic gneiss, garnetite, pelitic gneiss, calc-pelitic gneiss, psammopelitic gneiss, psammitic gneiss, and metaquartzite, overlying and intercalated with Archean orthogneisses. Rocks of the Wollaston Domain have been subjected to a complex history of polyphase deformation and metamorphism, which relates to the Trans-Hudson Orogen (Portella and Annesley, 2000). The Highrock Lake property is situated at the transition zone between the eastern part and the western part of Wollaston Domain.

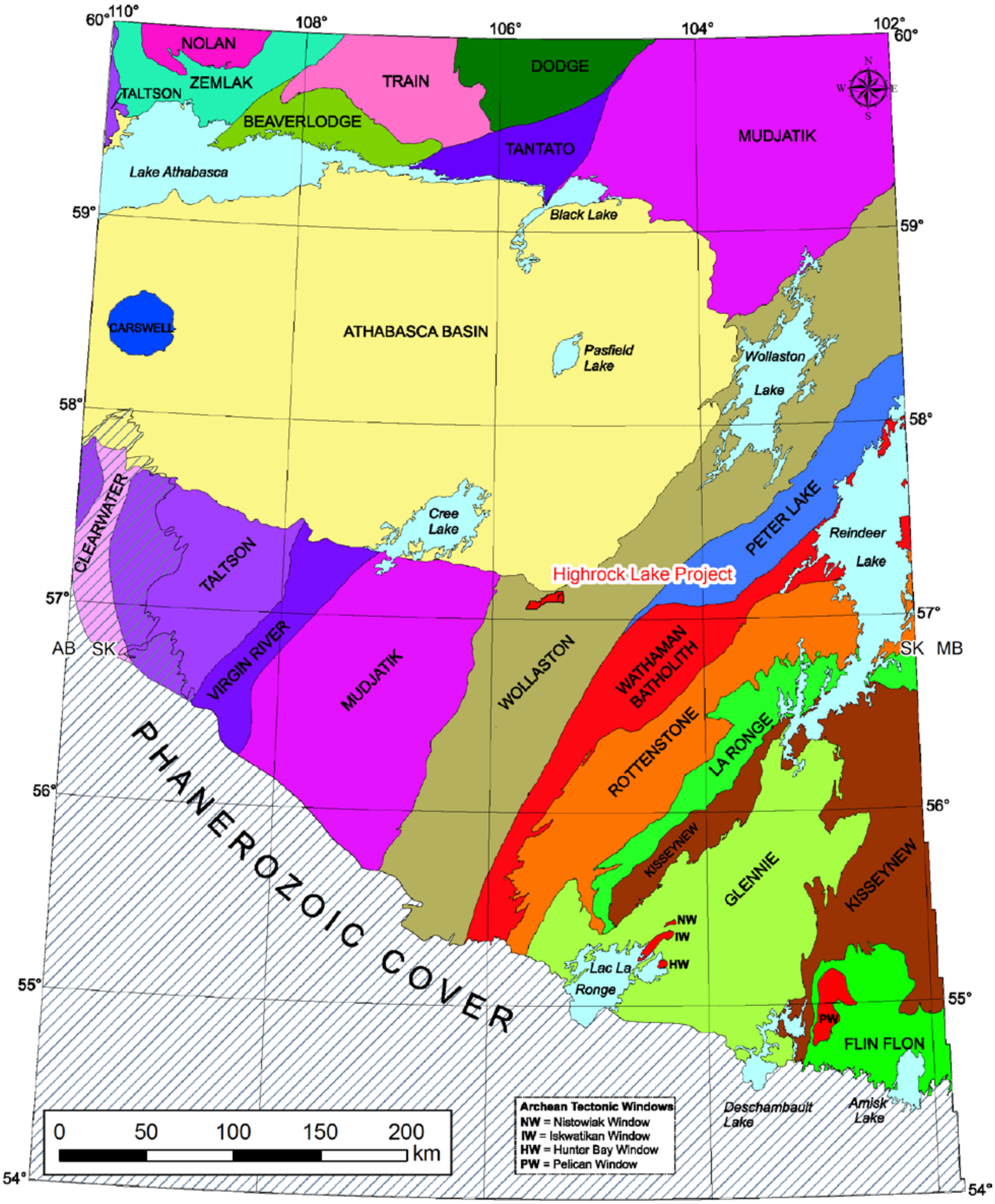

Figure 3. Regional Geology

The background map is from the website of Saskatchewan Geological Survey.

3.0 PROPERTY GEOLOGY

Yeo and Savage (1999) mapped the Highrock Lake area, which covered most of the Highrock Lake property except a small portion of the northeastern part. This section is cited from the mapping report of Yeo and Savage (1999), and references therein. Although rock units, such as Amphibolite (3), Plagioclase (10), and Sandstone (12), do not exist in the property, the numbered labels are still kept consistent with those by Yeo and Savage (1999).

Five main lithological subdivisions are distinguished in the Highrock Lake area:

1) an Archean basement complex, which includes granite, granite-granodiorite, and amphibolite;

2) a Paleoproterozoic lower sedimentary sequence, comprising basal garnet-bearing pelite and psammopelite, overlain by cordierite-and sillimanite-bearing psammopelite, magnetite-rich and magnetite-poor psammopelite and psammite, transitional to interbedded psammopelite and arkose;

3) a Paleoproterozoic upper sedimentary sequence of typically calc-silicate-bearing siliciclastic rocks;

4) late syn-tectonic to post-tectonic granites and pegmatites; and

5) Mesoproterozoic Athabasca Group sandstone.

Five phases of deformation affected the Hirghrock Lake area. D1resulted iin development of the dominant regional foliation (S1) and isoclinal folding (F1). D2 refolded F1 folds to produce type 3 interference patterns locally. Although well-developed regionall, especially to the west, F2 and F1 folds generally could not be distinguished. D3 produced the northeast-trending, dominant regional F3 folds and a steeply dipping S3 axial planar foliation. D4 deformation resulted in very open, northwest-trending F4 folds. D5 produced late, steeply dipping, faults.

The rocks have undergone high-temperature, low-pressure metamorphism, to upper amphibolite-granulite facies. There have been at least two phases of metamorphic mineral growth, broadly coeval with D1/D2 and D3 deformation events.

At Key Lake, as at most other Athabasca Basin uranium occurrences, uranium is localized in fault zones at or near the unconformity between Mesoproterozoic lower Wollaston Group graphitic sediments. The Highrock Lake area is of particular geological interest as the closest area of extensive exposure of Wollastoon Domain rocks to Key Lake mine.

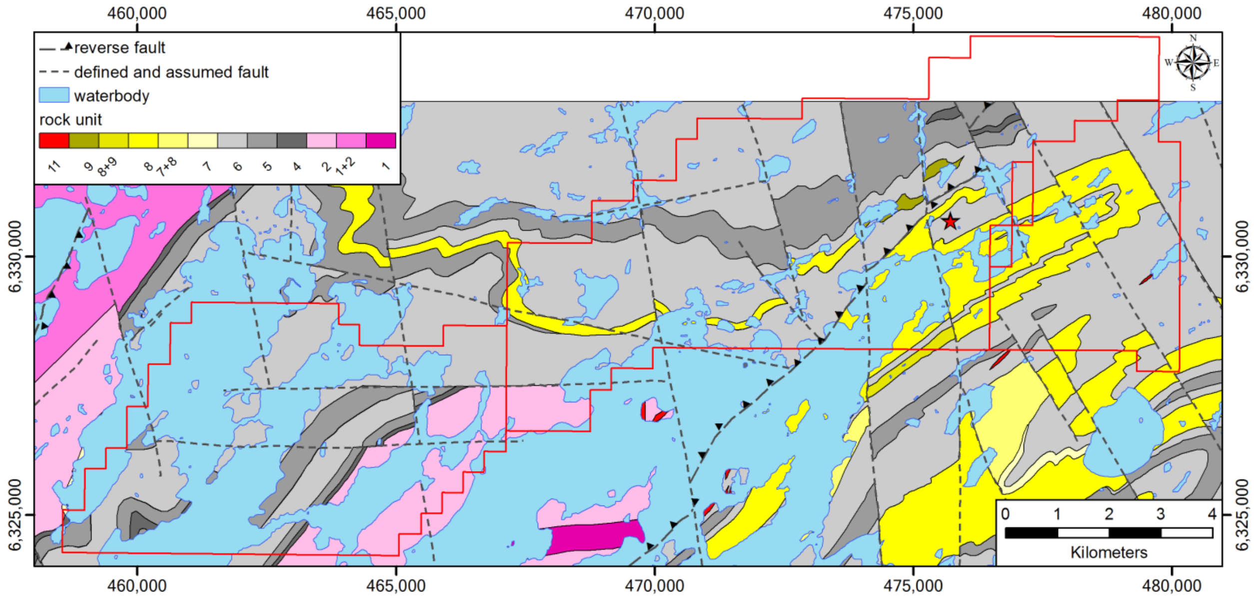

Figure 4. Property Geology

Projection System: UTM NAD 83 Zone 13. The background map is from Yeo and Savage (1999). 1. Monzogranite - Granodiorite, 2 Granodiorite - Tonalite - Quartz Diorite, 4. Garnet Psammopellite and Pelite, 5. Cordierite-sillimanite Psammopelite and Pelite, 6. Psammopelite and Arkose, 7. Interbedded Psammopelite and Arkose, 8. Arkose and Calc-silicate-bearing Arkose, 9. Arkose and Pebble Conglomerate, 11. Pegmatite and Granite.

4.0 EXPLORATION HISTORY

In 1968, on behalf of Dynamic Petroleum Products Ltd., Seigel Associates Ltd. undertook airborne geophysical surveys at the DPP Permit #3 area, which covered the current Highrock Lake project area. The airborne survey included electromagnetic, magnetic and radiometric surveys, with the purpose to map the distribution of sub-surface conducting systems and radioactive materials in the area. (AF 74H03-0004)

In 1976 and 1977, Colt Resources Ltd. conducted a program of prospecting, line cutting, radiometric and emanometer surveys over the Highrock Lake area. (AF 74H03-0010)

In 1980 and 1981, on behalf of Norcen Energy Resources Ltd., Questor Surveys Ltd. flew airborne electromagnetic and magnetic surveys over the Highrock Lake area. In the summer of 1981, a prospecting program was carried out, which discovered and sluiced the Roberts' Showing. (AF 74H03-0022)

No more exploration work has been recorded since those of Norcen Energy Resources Ltd. in 1981.

5.0 CURRENT EXPLORATION

5.1 Prospecting

Geoscientists Linglin Chu and Yongxin Liu were contracted to prospect and investigate historical radioactive anomalies within the property in June, 2017. Prospecting traverses and sampling locations are shown in Figure 5.

5.1.1 Sampling Methods

A RS-125 Spectrometer was carried for prospecting radioactive anomalies. Grab samples were collected with rock hammers from outcrops with radioactive count rate more than 1000 cps. Each sample has been recorded with coordinate and lithology (Table 3). A sample tag was directly inserted into each bag with the sample, and the sample number was written directly on the bag. Bags were stapled shut. A set of about twenty sample bags were then placed into rice bags, which were then ziptagged and labelled with sample numbers. Samples were driven directly to the Saskatchewan Research Council (SRC) lab in Saskatoon at the end of the field work.

5.1.2 Analytical Methods

Samples were received by the lab, sorted, and verified according to a sample submittal form. Any discrepancies were noted and reported. Crushers, rifflers, and pans were cleaned with compressed air between samples. Pulverizing pots and rings were brushed, hand cleaned, and air blown.

Samples were prepared and assayed at SRC in Saskatoon. The preparation procedures at SRC were as follows:

ICP Total and Partial Digestions

A 0.125 g pulp is gently heated in a mixture of ultrapure HF/HNO3/HClO4 until dry and the residue dissolved in dilute ultrapure HNO3.

Boron

A 0.1 gram pulp is fused at 650 C in a mixture of Na2O2/Na2CO3.

U3O8 ASSAY

An aliquot of sample pulp is digested in concentration HCl:HNO3. The digested volume is then made up to 100 mLs for analysis by ICP-OES.

XRD Analysis

A random aliquot of the ground sample was back-packed into a stainless steel holder and secured in place with a plastic backing. The minimum sample thickness was 1 mm – sufficient to be considered infinitely thick for X-ray diffraction using a Cu source.

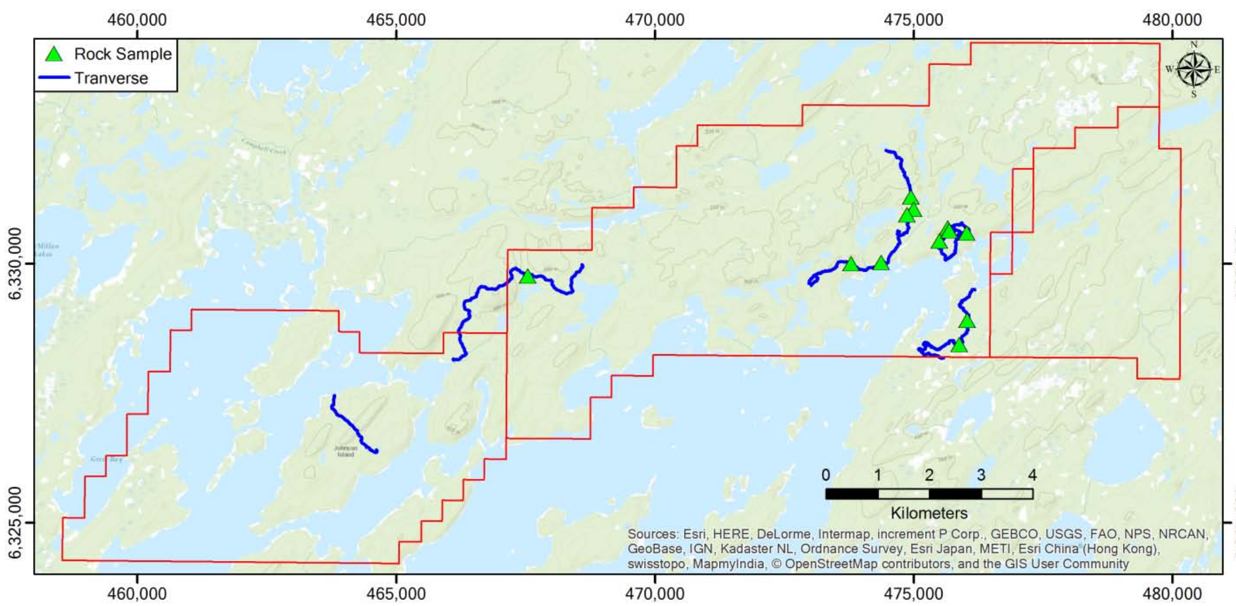

Figure 5. Prospecting Traverses and Sampling Locations

Projection System: UTM NAD 83 Zone 13.

5.2 Radon Flux Survey

On behalf of GTUranium Energy Inc., RadonEx Ltd. was carried out an electret ionization chamber radon flux survey at the Highrock Lake project in June, 2017, at the mean time of the prospecting. The radon flux survey grid was planned in a NNW-orientation and with 200 meters spacing and 50 meters station interval (Figure 6). The final survey covered 712 stations.

The detailed radon flux survey method and survey procedure are listed in the Appendix 2.

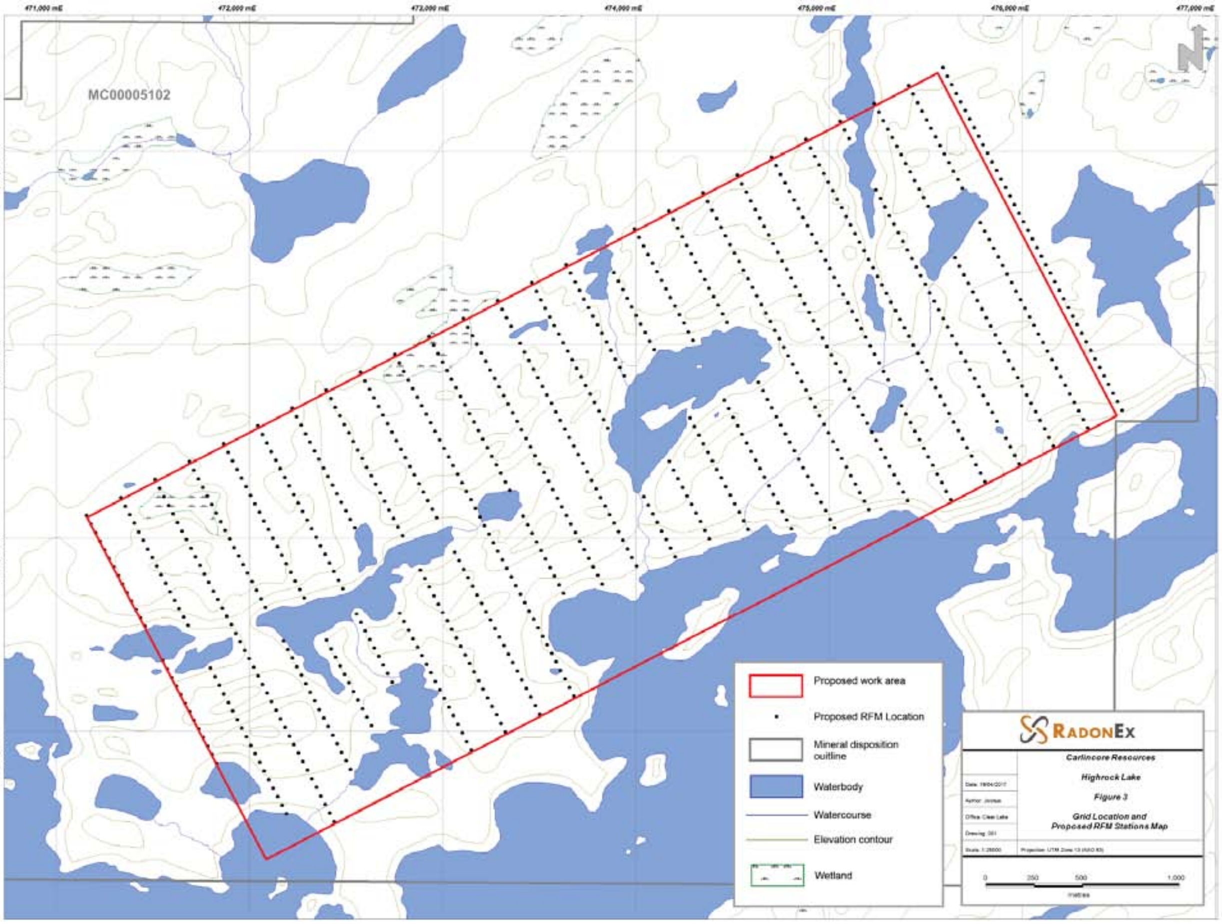

Figure 6. Radon Flux Survey Grid

This map is cited from the Appendix 2.

5.3 Ground Geophysics

This chapter is cited from the Interpretation Report by David Bingham (2018) (Appendix 5).

"Discovery Geophysics International Inc. conducted geophysical DC Resistivity and gravity surveys on the Project during Mar 26- Apr 18, 2018. The survey was conducted using the **DIAS$_{32}$** Distributed Array Resistivity/IP System and a Scintrex CG5 gravity meter with Spectral Precision SP-80 GNSS receivers.

The objectives of the surveys were to map potential structures and alteration specifically focused for basement mineralization potential. The DC Resistivity surveys consisted of 30.9 km of Pole-Dipole surveys (15 profiles). There were a total of 523 gravity stations occupied."

5.3.1 DC Resistivity Surveys

"DC Resistivity surveys are done by injecting a current (I) into the ground. The current is measured at the transmitter and usually consists of a modified square wave. For this survey, a modified pulse was used to try to reduce long transients due to the long infinite wire used for the potential readings (1 sec on, 1 sec off, 1 sec on reversed & 1 sec off). The receiver voltage (V) measurements are taken in line at an 'a' spacing at 'n a' distances from the current source. The current electrodes are usually moved along the profile at ½ of the "a-spacing" used for Pole-pole and Pole-Dipole surveys to double the data density at almost no extra cost. This results in an excellent spatial sampling of data along the line.

For **$DIAS_{32}$** surveys, traditional line cutting is not required. Where the vegetation is too dense to pass, the lines will need to be brushed out, but no picketing or flagging is required. For the **$DIAS_{32}$** Distributed Array System, each receiver is a single-channel recorder, so there are no restrictions for array layout. With a **$DIAS_{32}$** recorder at each receiver electrode, any survey method or array can be measured. Both forward (Pole-Dipole) and reverse (Dipole-Pole) measurements were recovered.

The Pole-Dipole Array is an asymmetrical array with the center point defined as the mid-point between the Current and leading Potential electrodes. The Pole Dipole Array is maintains good signal strength and is well suited to depths of up to 400m. The pole-dipole array shows a theoretical depth penetration equivalent to ~0.43 times the largest separation measured.

An 'a'-spacing of 50m was used for the Pole-Dipole survey grid with current injections at 25m intervals. The survey has both Pole-Pole and Pole Dipole data sets which can be combined and inverted together to provide superior resolution.

Data Inversion is crucial for Resistivity arrays. The inversion compensates for and removes geometrical effects such as "pant-leg" type responses and enables a more direct geological correlation of the resistivity data and the geology. The inversion process is also important for distinguishing the source of any anomalies (i.e. deep or shallow). RES2DINV and RES3DINV are Windows based computer programs which will automatically determine a resistivity model for the subsurface using the data obtained from electrical imaging surveys.

Electricity goes where it wants not necessarily where you want it to go. A 2D Resistivity profile often measures anomalies to as far to the side of the profile as the depth of investigation. So, any IP/Resistivity survey is 3D. To overcome the pitfalls in 2D inversions and to map large areas, multiple 2D profiles are inverted with the RES3DINV algorithms.

The resistivity survey consisted of 15 2D profiles, with both forward and reverse pole-dipole measurements The resistivity data was inverted in 3D with RES3DINV using the arbitrary array format. An HP Z820 Workstation configured with 256 GB of RAM was used for the final 3D inversion. A 25m x 25m cell size with 14 layers was used in the inversion. A total of 27269 discrete data points were used in the 3D inversion."

5.3.2 Gravity Survey

"By measuring Earth's gravity field, we are able to map variations in the mass distribution of Earth's crust. These variations are due to differences in the density of the underlying material. The Density of a material is its mass per unit volume measured in g/cc. Unlike other physical properties, the densities of the commonest rock forming minerals are remarkably close together. In practice, bulk densities are often controlled more by the porosity, the degree of cementation, and the mixing of materials, than by the mineral composition.

The variations in gravity are miniscule, so we use smaller units. In honor of Galileo, because he was just an all-around cool guy, 1 cm/s2 is called a gal. Gravity units in exploration are milligals. The Earth's gravity is approximately 9.8 m/sec-squared or 32 ft/sec-squared. 1g = approximately 980,000 milligals).

The magnitude of the gravity value depends on the latitude, elevation above sea level (the geoid), geology, isostasy, the earth tide caused by the moon and sun's gravitation, as well as the topography. Geophysicists and geologists are interested in the part of the gravity value that is affected by the mass distribution of Earth's crust, i.e. the geology. The gravity value is therefore reduced by these other factors in order to obtain only those gravity deviations which are related to the geology. These deviations are called terrain corrected Bouguer anomalies, which illustrate the mass distribution (density variation) of the subsurface down to great depths in Earth's crust.

Once the corrections have been made, the Bouguer anomaly should contain information about the subsurface density. A map of the Bouguer anomaly gives an impression of the subsurface density. Low (negative) values indicate lower density beneath the measurement point and high values of Bouguer anomaly indicate higher density beneath the measurement point."

6.0 RESULTS

6.1 Prospecting

Five traverses were prospected with a spectrometer. The highest spectrometer readings were obtained at the historical Roberts' Showing (Photo 1), with the highest radioactive count up to 63006 cps (Photo 2). On the traverse to the south of the Highrock Lake, bedrock was commonly altered with clay and chlorite minerals (Photo 4).

6.1.1 Field Description at the Roberts' Showing

The Roberts' Showing is an historically sluiced outcrop with elongated ‘egg’ shape in approximately 30 meters by 12 meters. The long axis of the outcrop is trending 45°. Glacial striations are commonly observed with the flowing direction of 215- 220°.

Lithology: Biotite-quartz-feldspar gneiss, 60-70% feldspar (mostly K-feldspar?), 25-30% quartz, and 5% bioite. Fine to medium to locally coarse grained (2-8 mm) with porphyroclasts of feldspar and quartz up to 20 mm. Typical felsic gneiss texture with foliation moderately developed.

Alteration: Overall very weak alteration, patches of hematite (limonite) replacement common. Weakly silicification common with mm-scale quartz veinlets parallel or sub-parallel to foliation. Localized bleaching (<1 cm) and clay replacement occur along fractures. Biotite is locally replaced by mica and chlorite.

Structure:

> Foliation: Moderately developed; strikes 35-45, dips 0-20 to the south east.
>
> Fractures: 3 sets of fractures observed; all three sets of fractures crosscut foliation. F1 fractures strike 128-152 (average about 138) and dip 75-85 to the northeast. F2 fractures strike 68-84 (average about 78) and dip steeply (either to the northwest or southeast). F2 and F1 fractures are interpreted to be conjugate fractures. F3 fractures strike 24 -40 and dip near vertically. F2 are relatively weakly developed.
>
> Quartz veins: A set of quartz veins (0.3 to 2.0 m long, up to 12 cm wide) are observed, especially on the southwest portion of the outcrop. The quartz vein appears crosscutting foliations but are locally folded. Quartz veins strike 110 -115 and dip moderately to steeply

to the southwest (50-80). Quartz veins are commonly crosscut by F1, F2, and F3 fractures. Late stage quartz veining is also observed: these quartz veins are narrow (<0.5 cm wide) and generally filling along F1 and F2 fractures.

Mineralization: the background radioactively is relatively high (200 cps). Weak to moderate mineralization generally occur at the intersection fractures (700-8000 cps). Three significant mineralized zones occur on the outcrop.

Spot A: South corner of outcrop. This significant mineralization (up to 62,006 cps) occurs at the triangle shape brecciated zone bounded by F1, F2 and F3 fracture. The mineralized zone is about 15x15 cm. Bright yellow to yellowish brown secondary uranium mineralization (Carnotite? Tyuyamunite? Autunite ?) fills in between breccia, along fractures and along foliation planes. Mineralization is associated with moderate hematite/limonite, clay and chlorite alteration (Photo 3). Three samples were collected here, and one of them was sent for XRD analysis.

Spot B: Southeast edge of the outcrop. The moderately mineralized zone (8000 cps) occurs at an intersection between F1 and F2 fracture. Weak hematite and limonite replacement noticed associated with the mineralization.

Spot C: Near the north west edge. Similar to spot B, this moderately mineralized zone (9000 cps) occurs at an intersection between F1 and F2 fracture. Weak hematite and limonite replacement was also noticed associated with the mineralization at this spot.

Table 2. Sample Locations and U Content

Sample Number	UTM Zone 13_X	UTM Zone 13_Y	Geology	U (ppm)
155701	476024	6330593	biotite schist with pegmatite veins	1.39
155702	475657	6330696	gneiss	1.55
155703	475694	6330638	fracture in gneiss	4440
155704	475496	6330442	jointed fracture in C granite	6.50
155705	475879	6328440	pegmatite	20.30
155706	475001	6331052	pegmatite	3.76
155707	474870	6330945	pegmatite	3.99
155708	474371	6330030	pegmatite	3.07
155709	473794	6330002	pegmatite	23.40
155710	502094	6358609	medium grained gabbro	0.33
155711	467545	6329771	pegmatite	4.40
155612	475694	6330638	fracture in gneiss	15300
155613	475691	6330639	fracture in gneiss	17500

Note: only total digestion results are listed in the table.

Photo 1. Historically Sluiced Outcrop of the Roberts' Showing

Photo 2. Spectrometer Reading at the Roberts' Showing (in cps)

Photo 3. Yellow Staining and Hematization at the Roberts' Showing

Photo 4. Clay and Chloride Alteration of Granitic Gneiss to the South of Highrock Lake

6.1.2 Uranium Assay Results

Thirteen rock samples were collected for uranium and multi-elements assays (Appendix 1). Assay results are listed in the Table 2. The highest uranium content of 17500 ppm was obtained from fracture-filling materials at the Roberts' Showing, which is an equivalent to 2.06 *wt%* U_3O_8. However, Samples from other locations generally gave uranium content lower than 30 ppm.

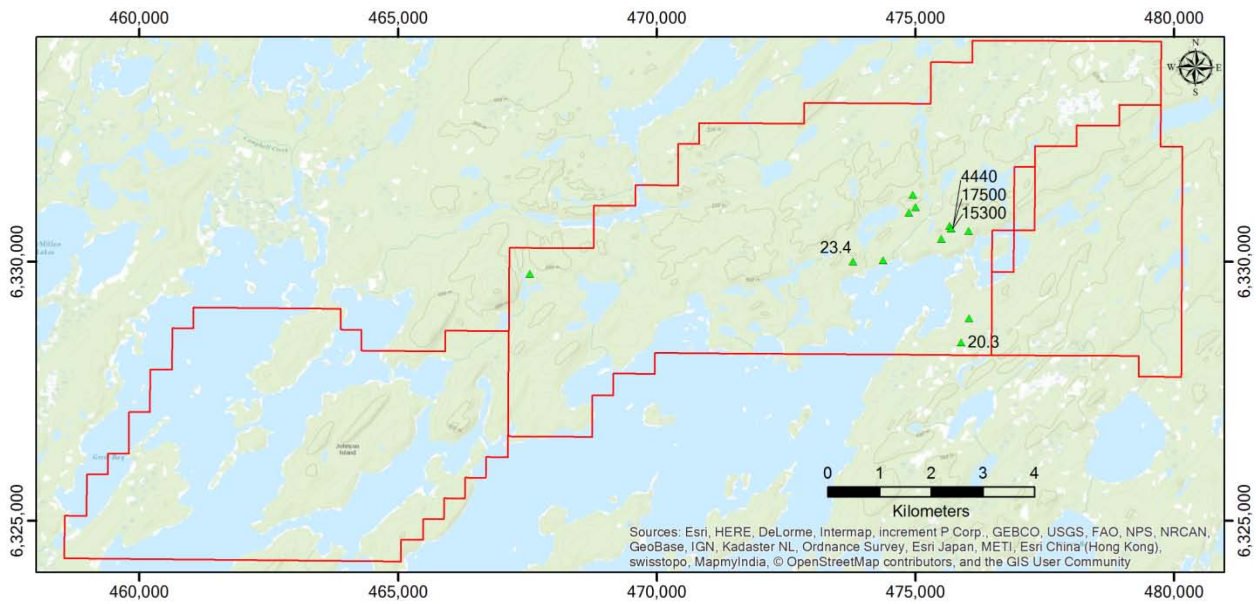

Figure 7. Assay Results of Rock Sampling

Only samples with >20 ppm U are labeled on the map.

6.1.3 XRD Analysis

One sample of fracture-filling materials at the Roberts' Showing was analyzed with XRD, on the purpose of investigating mineral assemblages of the radioactive material. The XRD analysis result is listed in the Table 3.

Table 3. XRD analysis of the Sample 155713

Quartz *wt%*	Muscovite *wt%*	Microcline *wt%*	Hematite *wt%*	Chlorite *wt%*	Biotite *wt%*	Total
37.8	3.9	9.9	3.3	33.4	11.7	100.0

6.2 Radon Flux Survey

The radon flux survey results are shown on Figure 7. Two areas with radon anomalies are recognized within the survey area. The strongest one is to the south of the Roberts' showing and possibly extends to the south under the lake; whereas the Roberts' showing locates at the low radon flux area.

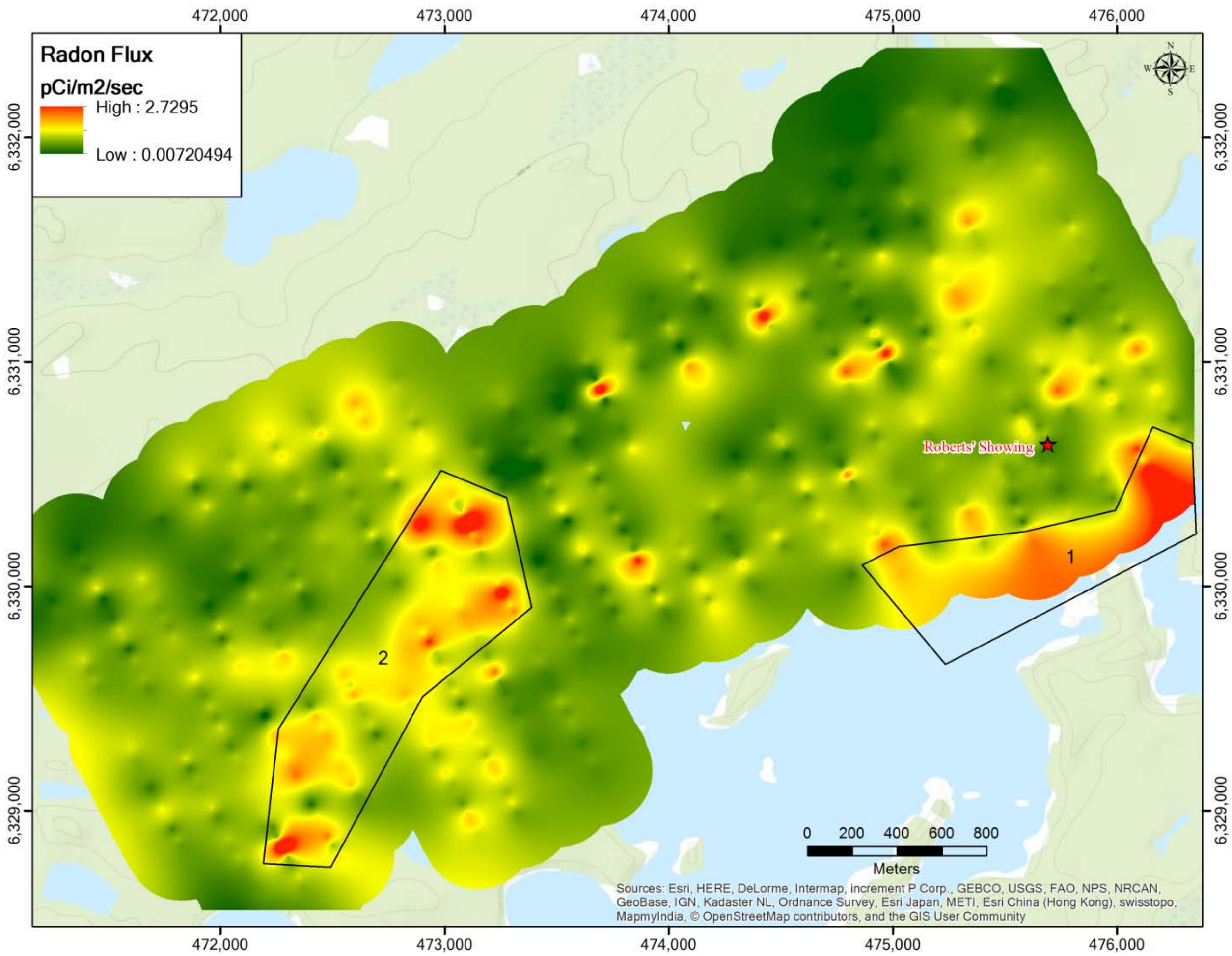

Figure 8. Radon Flux Survey Results

5.3 Ground Geophysics

This chapter is cited from the Interpretation Report by David Bingham (2018). Figures are in Appendix 5.

5.3.1 3D Resistivity

"The inverted results are displayed in the following figures. The sections and plans are extracted from the 3D voxel of the 3D inverted resistivity. Areas beyond measured results have been masked out in the inverted resistivity to remove edge effects from extrapolated results. The color bar is based on M.H. Loke's RES2DINV software display to highlight significant resistivity anomalies, with low resistivity as blue (cooler colors) and high resistivity as magenta (warm colors) at a logarithmic scale ranging from 200 ohm-meters to 20,000 ohm-meters.

Three (3) resistivity benches are extracted from the RES3DINV Inversion (surface, basement and deep basement).

- The surface bench is from surface to 50m deep.
- The basement bench is from 150 to 200 m deep.
- The deep basement bench is from 350 t0 400m deep. "

5.3.2 Gravity

"There are a number of techniques used for interpret Bouguer Gravity. The area of the survey is rather small for full potential field analysis using Euler deconvolution and source edge detection methods. Instead, a regional –residual separation was done as well as a 3D inversion with the UBC GRAV3D software. A number of lake observations were manually edited on line 300E as they appear to be solely from incorrect corrections (probably due to low density lake bottom). To create a smoother map and suppress very shallow till features, the gravity was upward continued 25 m before applying a 2km wavelength Gaussian Residual filter. The residual gravity was used for a UBC GRAC3D inversion.

As in the 3D Resistivity, three (3) density benches are extracted from the GRAV3D Inversion (surface, basement and deep basement).

- The surface bench is from surface to 50m deep.
- The basement bench is from 150 to 200 m deep.
- The deep basement bench is from 350 t0 400m deep. "

7.0 DISCUSSION

7.1 Uranium Mineralization

The Roberts' showing was considered as pegmatite-hosted uranium mineralization in the report of Saskatchewan Mineral Deposit Index (SMDI # 2022). "A pegmatite lens at this outcrop returned 2.8% U over a 10 cm diameter" was stated in the report. However, the geological investigation at the historical sluiced outcrop of Roberts' showing revealed that the uranium mineralization appears as fracture-filling materials filling a joint conjunction of pinkish grey coarse-grained muscovite-biotite-gneiss.

XRD analysis of the radioactive material, where it returned 2.06 *wt*% U_3O_8, shows the main composition of quartz, microcline, muscovite, biotite, chlorite and hematite, where quartz, microcline, muscovite and biotite are primary minerals of the host rock (muscovite-biotite-gneiss), but chlorite and hematite are secondary minerals of alteration.

Outcrop investigation and mineralogical study indicates that the Roberts' showing is mineralized from uranium-rich fluids of alteration and is structure-hosted but not pegmatite-hosted. Therefore, uranium exploration should target for potential areas of trapping uranium-rich fluids, which should have features of alteration and uranium(or radon) anomalies.

7.2 Radon Survey

There are no radon flex anomalies at the Roberts' showing, which is possibly caused by lacking of radon survey sites to the east and the southeast of the showing, due to swamp cover. Approximately 400 meters to the southeast and southwest of the showing, radon anomalies are significant; however, the survey was stopped by the lake to the south. Radon surveys of the swamp area to the southeast of the Roberts' showing and the lake bottom to the south are recommended for future exploration

7.3 Ground Geophysics

The discussion of ground geophysics is cited from the Interpretation Report by David Bingham (2018) (Appendix 5).

"There are a number of resistivity anomalies labeled on the interpretation maps and listed below in order of priority

Anomaly A - (High Priority): this is a well-defined sub-vertical basement anomaly which increases in amplitude at depth. This anomaly trend is parallel to the Key Lake Trend conductors. This anomaly is also co-incident with a gravity anomaly and is proximal to the Roberts Uranium showing at surface. This trend is strongest on line 900E through 1100E and can be weakly traced to anomaly B and maybe anomaly G.

Anomaly B - (High Priority): This is a strong basement resistivity anomaly associated with interpreted N trending structure. This appears to be a widening where the N trending structure is offset. This is a strong surface anomaly at the lake, but extends well below the lake bottom. L200E shows some separation of the surficial lake anomaly and the deeper basement anomaly. The core of the anomaly is located in the basement. There is also a coincident weak basement gravity anomaly. This anomaly attenuates at depth.

Anomaly C & D - (Medium Priority): These are moderate basement sub-vertical resistivity anomalies showing some strike extent. These anomalies also trend parallel to the Key Lake Trend conductors. Anomaly D is contiguous with a weak gravity low anomaly. These are open to the SW of the survey area.

Anomaly E, F, G: weak resistivity anomalies observed in the L1500E section. These are open to the NE of the survey area. Anomaly G is associated with a weak basement gravity anomaly.

The sub-vertical character and trends of anomalies A, C, D & G suggest there is a possibility these may be basement conductors. A work search indicates no recent high power EM surveys, just an historical INPUT survey. The INPUT system is limited to fairly shallow depths of investigation and very well could have missed deeper basement conductors."

7.4 Relation of the Roberts' Showing to Radon, Resistivity, and Gravity Anomalies

Ground geophysics anomaly A and B are well-defined with both resistivity and gravity lows. Together with the weak anomaly G, they delineate a trend parallel to the Key Lake Trend conductors (Figure 8). Significant radon flux anomalies exist between these three ground geophysics anomalies, which shows great possibility of uranium enrichment around and between alteration zones.

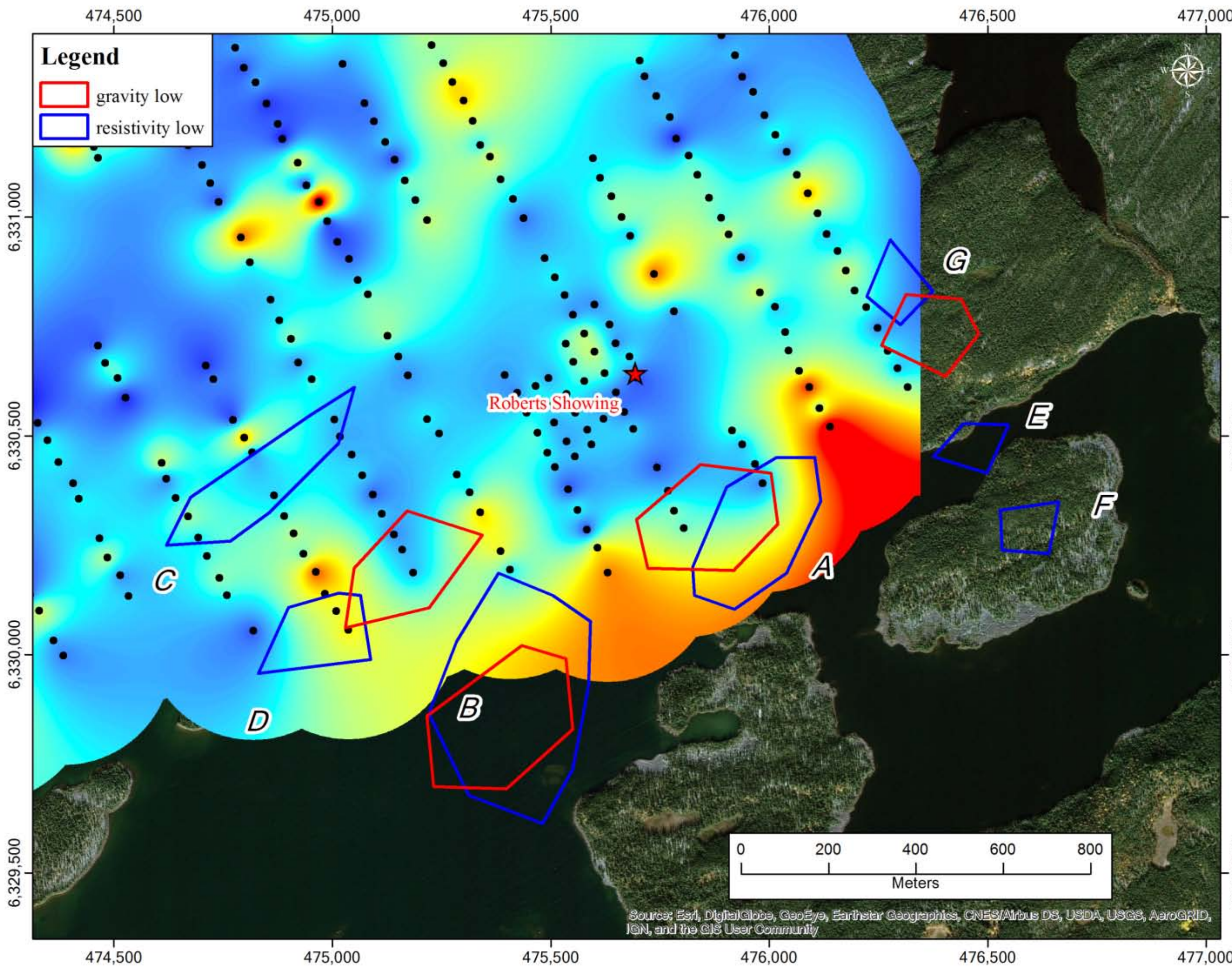

Figure 9. Radon, Resistivity and Gravity Anomalies

Projection System: UTM NAD 83 Zone 13.

8.0 CONCLUSIONS AND RECOMMENDATION

The significant uranium mineralization with 2.06 *wt*% U_3O_8 in rock sampling at the historical Roberts' showing is structure-hosted but not pegmatite-hosted, which is also accompanied with strong chlorite and hematite alteration.

Along the north shore of the Highrock Lake, approximately 400 meters to the south of the Roberts' showing, ground geophysical anomalies with both resistivity low and gravity low exist with significant radon flux anomalies between them, which shows great uranium exploration potentials of the project area.

Before drilling test of geophysical anomaly A and B, radon survey of the lake bottom to the south of the current survey area and the swamp area next to the southeast of the Roberts' showing, as well as VLF EM survey between the Roberts' showing and the lake shore, are recommended.

9.0 REFENRENCE

Portella, P. and Annesley, I.R. (2000): Paleoproterozoic thermotectonic evolution of the eastern sub-Athabasca basement, northern Saskatchewan: Integrated geophysical and geological data; in Summary of Investigations 2000, Volume 2, Saskatchewan Geological Survey, Sask. Energy Mines, Misc. Rep. 2000-4.2.

Yeo, G.M. and Savage, D.A. (1999): Geology of the Highrock Lake area, Wollaston Domain (NTS 74H-3 and -4); in Summary of Investigations 1999, Volume 2, Saskatchewan Geological Survey, Sask. Energy Mines, Misc. Rep. 99-4.2.

10.0 LIST OF FIGURES

Figure 1. Location Map 2

Figure 2. Disposition Location Map 3

Figure 3. Regional Geology 5

Figure 4. Property Geology 7

Figure 5. Prospecting Traverses and Sampling Locations 10

Figure 6. Radon Flux Survey Grid 11

Figure 7. Assay Results of Rock Sampling 18

Figure 8. Radon Flux Survey Results 19

Figure 9. Radon, Resistivity and Gravity Anomalies 23

11.0 LIST OF TABLES

Table 1. Mineral Dispositions 3

Table 2. Sample Locations and U Content 15

Table 3. XRD analysis of the Sample 155713 18

12.0 LIST OF PHOTOS

Photo 1. Historically Sluiced Outcrop of the Roberts' Showing 16

Photo 2. Spectrometer Reading at the Roberts' Showing (in cps) 16

Photo 3. Yellow Staining and Hematization at the Roberts' Showing 17

Photo 4. Clay and Chloride Alteration of Granitic Gneiss to the South of Highrock Lake 17

13.0 APPENDICIES

Appendix 1. Rock Sampling Assay Results, 2017

Appendix 2. Radon Survey Report, 2017

Appendix 3. Ground Gravity Logistics Report, 2018

Appendix 4. Ground Resistivity Logistics Report, 2018

Appendix 5. Ground Geophysics Interpretation Report, 2018

Appendix 6. XRD Analysis Report, 2017