

TECHNICAL REPORT

on the

UMFREVILLE URANIUM PROJECT

NORTHERN SASKATCHEWAN, CANADA

National Instrument 43-101

NTS Map Area 74P/02

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1. SUMMARY

The Umfreville uranium property is situated within the northern portion of the Athabasca Basin in northern Saskatchewan, Canada and includes two claims having a total area of 4,383 hectares. The Nisto Uranium Mine Adit is located roughly 30 km west of the Umfreville project and reportedly produced 106 tons of ore grading $1.6\% U_3O_8$ before suspending mining in 1959. The original Umfreville claim group was staked by Purepoint in 2005 and covered 45,600 ha. Airborne survey results were then used to select the current claim group that represents the priority exploration target. The mineral claims are 100% owned by Purepoint Uranium Group Inc., a public Company listed on the TSX Venture Exchange.

The Athabasca Basin is host to the world's largest high-grade uranium deposits. The sedimentary basin is filled by relatively undeformed and flat-lying quartz sandstone of the late Proterozoic Athabasca Group. In the Umfreville project area, the Athabasca sandstone unconformably overlies crystalline basement rocks of the Rae Province in the northwest and the Hearne Province to the east. Based on historic drill results from the surrounding area, the unconformity is assumed to lie approximately 150 metres below the surface.

To date, no drilling has occurred on the Umfreville property.

Uranium exploration on the Umfreville project is targeting areas proximal to graphitic basement rocks, possible structures (especially where cross-cutting structures are indicated), extensive alteration envelopes within basement or sandstone rocks, low grades of uranium, complex mineralogy and geochemistry (U, Ni, As, Co, B, Cu, Mo, Pb, Zn and V), areas proximal to the Athabasca basement unconformity, and areas of highly fractured sandstone that may be associated with underlying uraniferous zones.

The northeast portion of the Athabasca Basin has seen exploration for uranium for the past 50 years in two significant pulses. The Saskatchewan Geological Survey (SGS) and the Geological Survey of Canada (GSC) has conducted geological surveys since the early 1960s and several exploration companies have carried out uranium exploration at the northeastern margin of the Athabasca Basin since the late 1960s. A 1976 GSC geochemical survey identified geochemical patterns in the Black Lake/Newnham Lake region that suggested uranium may be associated with the north-trending faults. One of the lake bottom sediment anomalies appeared to show glacial smearing from a source near the Fond de Lac Fault on the present Umfreville claims.

Saskatchewan Mining Development Corporation (SMDC) conducted work on their permit 3 that covers the current Umfreville claims in a joint venture with Eldorado Nuclear, from 1976 to 1982. In 1976, a radiometric, magnetic and VLF electromagnetic airborne survey was followed up with a helicopter-borne GAD-4 radiometric survey. SMDC then conducted prospecting and ground checking of airborne anomalies, trenching and lake sediment and overburden sampling. In 1980, SMDC completed a 35 diamond drill hole program with three of those holes, DDH-123, DDH-124 and DDH-

125, being drilled just north of the Umfreville claims. The three vertically drilled holes were designed to investigate resistivity lows. The depth to the unconformity was shallow at approximately 45 metres and hole depths ranged from 60 to 71 metres. Basement rocks consisted of deeply paleoweathered granitoids (quartz monzonite, granitic gneiss) and pelitic gneiss. The radiometric logs showed small spikes that were related to small pegmatitic segregations and no significant assay results were returned.

Exploration conducted by Purepoint on the Umfreville project since 2005 has consisted of an airborne Megatem electromagnetic (EM) and magnetics survey, an airborne VLF-electromagnetic survey, an airborne gravity gradiometry survey, soil geochemical sampling and radon-in-soil sampling.

During 2006, airborne MEGATEM data covering the original Umfreville Lake project was processed using a layered-earth inversion program. A conductive layer is now believed to exist within the Athabasca sandstone and to be responsible for the broad conductive zones. The thin conductive layer within the sandstone is thought to be preventing the EM survey from properly reaching the basement rocks and identifying graphitic conductors. Reconstruction of the conductivity depth sections highlighted deep narrow conductors that are considered to show areas where the conductive layer is absent from the sandstone, the sandstone has been structurally disrupted, or very strong basement conductors are present.

The airborne gravity survey provided a response considered to reflect basement geology. The results also indicated the presence of fault systems not previously seen and supported fault systems previously interpreted from magnetic features. A strong gravity low response within the northern portion of the survey area is coincident with a magnetic low, an interpreted structural disruption from the resistivity LEI sections, and the interpreted source area of a GSC geochemical anomaly. The Umfreville claim group was subsequently reduced in size to cover the gravity low / magnetic low anomaly.

During three soil geochemical surveys, a total of the 383 organic A1 soil horizon samples were collected over the prospective gravity low / magnetic low response. Each year, the soil surveys succeeded in extending the uranium anomalies towards the west. Assay results for vanadium, and to a lesser degree boron, showed anomalous trends similar to the uranium anomalies but the trends are parallel rather than coincident. The results for nickel, molybdenum and cobalt appear to have anomalous north-south trends that may be influenced by an underlying structure as suggested by the airborne magnetic results.

A total of 30 radon in soil measurements were collected however sampling sites with peat (>90% Loss on Ignition (LOI)) all returned radon readings of less than 5 counts per minute (cpm). Of the 15 sample sites where radon was collected from soil having less than 90% LOI, 3 sites returned values greater than 15 cpm. The anomalous radon in soil sample sites correlate well with uranium soil anomalies but may be influenced by topography.

The Umfreville property has a favorable geologic setting based on airborne geophysical results and warrants further exploration. An exploration program and budget is recommended.

Stage 1: Summer/Fall 2016:

A gravity survey and a stepwise moving loop EM survey over the area where favourable geochemistry coincides with an airborne low magnetic response and an airborne low gravity response. The purpose of the gravity survey will be to provide details of the low gravitational response area to aid in the drill target selection. The stepwise moving loop EM survey will ideally identify EM conductors within the target area, however, a large transmitter loop will be required to get current to the basement rocks.

Stage 2 is not contingent on positive results from Stage 1.

<u>Stage 2: Winter 2016 / 2017:</u>

Three geologic drill fences comprised of two holes each on the highest priority geophysical targets. A six hole, 3,000 meter drill program is recommended.

2. INTRODUCTION

The Umfreville technical report was prepared for Purepoint Uranium Group Inc. in compliance with National Instrument 43-101 following the guidelines specified by National Instrument 43-101F. The purpose of this report is to evaluate the potential of the property to host uranium mineralization.

Scott Frostad, P.Geo., Vice President of Purepoint Uranium Group Inc., is the qualified person responsible for the content of this report. Mr. Frostad has been involved with the Umfreville Project since December, 2005. His most recent visit to the site was during a soil geochemical survey between July 13th and 17th, 2013.

The report includes opinions on the geophysical data by Roger K. Watson, P.Eng., Purepoint's Chief Geophysicist.

The available assessment data on the property that has been previously filed with Saskatchewan Ministry of Economy has been reviewed as well as the recent results from airborne magnetic, electromagnetic, VLF-electromagnetics, and gravity gradiometry surveys, as well as soil geochemical surveys and a radon-in-soil survey.

The author has not verified the technical information in the past technical reports, but has formed opinions on the potential for the uranium mineralization in the project area primarily on the basis of the technical information and preliminary results of the current exploration programs.

3. PROPERTY DESCRIPTION AND LOCATION

The Umfreville Property is on the north margin of the Athabasca Basin in Saskatchewan, Canada. It is located within the 1:50,000 scale National Topographic System (NTS) map area 74-P-02 with its center at about 104° 52' longitude and 59° 07' latitude (Figure 1). The Umfreville Property covers approximately 4,383 ha and consists of two mineral claims, S-112338 and S-112339 (Figure 2). A summary of the land status is provided in Table 1.

The mineral claims are held in the name of Purepoint Uranium Corporation and are 100% owned by Purepoint Uranium Group Inc., a public Company listed on the TSX Venture Exchange. A summary of the land status for the Umfreville and claims is found in Table 1.

Disposition	Area (ha)	NTS	Recording Date	Next Work Due
S-112338	1373	74-P-02	14-Aug-12	13-Aug-16
S-112339	3010	74-P-02	15-Aug-08	14-Aug-16

Table 1.	Umfreville Lake	Project -	Land Status	Summarv
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Figure 1: Location Map of the Umfreville Project



Figure 2: Disposition Map of the Umfreville Project

In order to conduct work at the property, the operator must be registered with the Saskatchewan government and comply with the Saskatchewan Environment's Exploration Guidelines and hold the appropriate Temporary Work Camp Permit, Timber Permit and Aquatic Habitat Alteration Permit. As well, the operator must comply with the Federal Department of Fisheries and Oceans that administers its own Guidelines for the Mineral Exploration Industry.

A mineral disposition in good standing gives the owner mineral rights only; Saskatchewan Environment controls surface rights. The two mineral claims are in good standing until 2016 and require work commitments of \$15.00/ha/annum until the first 10 years of assessment credit has been accepted (Table 1). After 10 years, the work commitments increase to \$25.00/ha/annum.

4. ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

The Umfreville property is south east of Black Lake (277 m above sea level (masl)) and the Fond Du Lac River winds through the property. Outcrop exposure is sparse (less than 3%) because of a blanket of glacial overburden. The property is part of a large moraine plain with varied topography from 300 masl to 365 masl. Dominant Quaternary landforms include drumlins, eskers, ground moraine and hummocky moraine. Locally, lacustrine sands have been reworked into eolian deposits and marshes occur. The area is mainly covered in jackpine.

The property is accessible by float or ski equipped aircraft and are 765 km and 775 km northeast of Saskatoon, 85 km northwest of Points North Landing, and 45 km east of Stony Rapids. Transwest Air and West Wind Aviation provide scheduled aircraft service from Saskatoon to Points North Landing and Stony Rapids year round. All weather highways 102 and 905 reach Points North Landing from La Ronge. An extension of highway 905 connects Points North landing to Stony Rapids. This extension is not maintained after March 31st but after the thaw is passable again in May.

The climate is typical of the northern Saskatchewan, being cold in the winter (-20 to -40 degrees celsius) and hot in the summer (15 to 35 degrees Celsius). Precipitation is moderate.

Some services are available in Stony Rapids including a hospital, freighting companies, groceries and two hotels. Services available in Points North Landing include a freighting company and a motel. There is no infrastructure at or near the property and the property has not been legally surveyed.

5. HISTORY

The northeast portion of the Athabasca Basin has seen exploration for uranium for the past 50 years in two significant pulses. The Saskatchewan Geological Survey (SGS) and the Geological Survey of Canada (GSC) has conducted geological surveys since the early 1960s and several exploration companies have carried out uranium exploration at the northeastern margin of the Athabasca Basin since the late 1960s.

Saskatchewan Geological Survey conducted AEROMAG surveys in 1962 over the Stony Rapids, Pasfield Lake and Fond du Lac Area (NTS 74I, 74P, 74O). In the late 70's, the Saskatchewan Geological Survey conducted work on the northeast edge (64L, 74I, 74P) of the Athabasca Formation conducting preliminary reconnaissance geology (Gilboy, 1978; 1979; Ramaekers, 1976; 1990) seismic refraction surveys (Suryam, 1977), and a 1:250,000 scale map of regional seismic coverage (Suryam, 1978).

A GSC geochemical survey (Dunn, 1976; Dunn and Ramaekers, 1979) found geochemical patterns in the Black Lake/Newham Lake region that suggested uranium may be associated with the north-trending faults. One of the lake bottom sediment anomalies (sample sites with U values 3 to 4 times greater than the median) appeared to show glacial smearing from a source near the Fond de Lac Fault on the present Umfreville claims (Figure 3).

Geological Mapping of the Bedrock (Gilboy, 1980; 1983; Gilboy and Ramaekers, 1981; Slimmon, 1989) and Quaternary Geology (Schreiner et al., 1982; Schreiner, 1984a, 1984b, 1984c) in the Stony Rapids, Pasfield Lake and Fond du Lac Areas were conducted in the early 80's by the Saskatchewan Geological Survey. Gravity surveys were conducted in the Stony Rapids Area (74P) by the Saskatchewan Geological Survey in the late 60's (Agarwal and Kanasewich, 1968). Airborne magnetic and radiometric surveys have now been performed over the eastern Athabasca Basin by the GSC (Buckle et al., 2010).

The Umfreville property has a history of being a segment of larger exploration properties.

Saskatchewan Mining Development Corporation (SMDC) conducted work on their permit 3 that covers the current Umfreville claims in a joint venture with Eldorado Nuclear, from 1976 to 1982. In 1976, Questor Survey's Ltd. (Questor) flew a radiometric, magnetic and VLF electromagnetic airborne survey over SMDC's permits 3 and 4 and was followed up with a helicopter-borne GAD-4 radiometric survey. A series of northerly trending lineaments were found throughout the area and are interpreted as major faults. As well, SMDC conducted prospecting and ground checking of airborne anomalies, trenching and lake sediment and overburden sampling. High U and U:Th ratios were identified from Questor's airborne radiometric survey in outcrop areas south of



Figure 3: Previous Exploration - Umfreville Project

the Fond du Lac River and prospecting that showed the airborne U highs were related to pegmatite veins running 1,000 cps. In 1978, another airborne INPUT electromagnetic and magnetic survey was flown by Questor over permits 3 and 4 where multiple conductors were identified. Air photo interpretation of permit 3 was followed up by quaternary mapping in 1978 which revealed the dominant regional ice flow direction trended towards the west-southwest.

In 1979, SMDC established grids over major northeast trending lineaments which intersect north trending faults or dykes found through previous airborne surveys. Geological mapping and prospecting was conducted on the Fond du Lac fault – Fond du Lac lineament grid and no significant alteration or radioactivity was found associated with the grid. Following this, detailed prospecting and sampling were conducted on these three grids in 1980. Samples collected from radioactive boulders from the three grids were sent for analysis and no significant results were obtained.

In 1980, SMDC completed a 35 diamond drill hole program with three of those holes, DDH-123, DDH-124 and DDH-125, being drilled just north of the Umfreville claims (Figure 3). These vertically drilled holes were designed to investigate resistivity lows. Sandstone depths increased slightly west to east from 40 m to 48 metres and hole depths ranged from 60 to 71 metres. Basement rocks consisted of deeply paleoweathered granitoids (quartz monzonite, granitic gneiss) and pelitic gneiss. Faulting was noted in holes 124 and 125. The radiometric logs showed small spikes that were related to small pegmatitic segregations and no significant assay results were returned.

6. GEOLOGICAL SETTING AND MINERALIZATION

The Umfreville property lies on the northern margin of the Athabasca Basin, Saskatchewan. The Athabasca Basin is filled by the Athabasca Group of relatively undeformed and flat-lying, mainly fluviatile clastic strata. The Athabasca Group unconformably overlies crystalline basement rocks of the Rae Province in the northwest and the Hearne Province to the east (Hoffman, 1990; Figure 4). Diabase dykes from a few to a hundred meters in width have intruded into both the Athabasca rocks and the underlying basement. Extensive areas are covered by Quaternary glacial drift and outwash, forming an undulating, lake-covered plain.

6.1.1 Basement Geology

The oldest rocks underlying the Umfreville property are situated in the Archean Hearne Province in the northern Mudjatik Domain (Figure 4). The Hearne province is bounded along its southeast margin by the Trans Hudson Orogeny



Figure 4: Regional Geology – Athabasca Basin

and to the northwest by the Snowbird Tectonic Zone (Hoffman, 1988), which subdivides the Churchill Structural Province into the Rae and Hearne provinces. The northern Mudjatic Domain is bounded to the northeast by the Tantato and Dodge domains of the Rae Province and to the southeast by the Wollaston Domain of the Hearne Province (Hoffman, 1990).

North of the Umfreville property, at the edge of the Basin (Figure 4), the exposed basement consist of the Mudjatic Domain which is comprised of intensely deformed and metamorphosed Archean granitic gneisses and numerous small remnants of Aphebian metasedimentary rocks and pelitic gneisses (Gilboy, 1983). The basal units consist mostly of tonalitic gneiss and granitic augen gneiss, which intrudes the tonalitic gneiss and are deformed and metamorphosed during the Hudsonian Orogoney. Supracrustal rocks overlying these basement gneisses included pelitic and psammitic gneisses, quartzites, quartzo-feldspathic gneisses, and mafic to intermediate metavolcanic rocks. Later intrusive units are mainly weakly foliated to undeformed granites and pegmatites (Orrell et al., 1999). Following the Trans-Hudson orogeny, the Archean basement and Paleoproterozoic metasedimentary rocks were uplifted and subjected to erosion (Ramaekers, 1990, 2003a, 2003b) leaving a weathered profile or regolith with a 1.75 to 1.78 Ga retrograde metamorphic age (Annesley et al., 1997). The regolith consists of a few meters of a hematized red zone, grading into a buff, white to light green weathered basement which grades downwards over a few meters into unweathered basement (Ramaekers, 1990).

6.1.2 Athabasca Group Geology

The Athabasca Group geology has been recently updated by Ramaekers et al, (2007) but was built on the framework set out by Raemaekers (1990). Four regional sequences of fluviatile sands and gravels filled five sub-basins within the Athabasca Basin from different directions. Sequence 1 is the Fair Point Formation, Sequence 2 begins with the sandy Smart Formation in the west and is overlain by the Manitou Falls Formation, Sequence 3 includes the Lazenby Lake and Wolverine Point Formations while Sequence 4 comprises the Locker Lake, Otherside, Douglas and Carswell Formations. The Manitou Falls Formation is the only formation of the Athabasca Group that occurs on the Umfreville property (Figure 5).

A maximum age constraint for the Athabasca Group is approximately 1.66 Ga provided by a detrital ziron suite collected from the Wolverine Point Formation (Rainbird et al., 2002). The thickness of the Athabasca Group sediments is presently estimated to be a maximum of 2200 m (Sibbald and Quirt, 1987). The overlying MFc is characterized as a moderately sorted, medium- to coarse-grained, granule rich, ripple-cross-laminated sandstone with 1% intraclasts-rich layers and one-grain-thick pebble or granule layers at the base (Ramaekers et al., 2001), deposited in a distal alluvial braid-plain lacking well-developed channels, in a humid climate (Yeo et al., 2000; Jefferson et al., 2001).



Figure 5: Local Geology Umfreville

6.1.3 Mineralization

No drilling has occurred on the property to date.

7. DEPOSIT TYPES

The Athabasca Basin hosts some of the world's largest and richest known uranium deposits. The Cigar lake deposits grade ~15% uranium while McArthur River grades ~22% uranium and the average grade of 30 deposits for 30 unconformity-associated deposits in the Athabasca Basin is ~2% uranium, approximately four times the average grade of Australian unconformity-associated deposits (Jefferson et al., 2007). The deposits are located at the sub-Athabasca unconformity, and are hosted in both the Athabasca Group sandstones above the unconformity, and in the Paleoproterozoic metamorphed supracrustal rocks and intrusives of the Archean Hearne Craton basement. Most of the known important deposits occur within a few tens to a few hundred metres of the unconformity and within 500 m of the present-surface, thus making them accessible and attractive exploration targets.

The initial discoveries were found through surficial indicators, such as radioactive boulders, strong geochemical anomalies in the surrounding lakes and swamps, and geophysical signatures (Wheatley et al., 1996). After these initial discoveries, an exploration model was developed that targeted electromagnetic conductors based on the associated underlying graphitic schists with strong electromagnetic signatures (Kirchner and Tan, 1977; Matthews et. al., 1997).

The uraniferous zones are structurally controlled both with relation to the sub-Athabasca unconformity, and the basement fault and fracture-zones. They are commonly localized above and along or in graphitic pelitic gneiss that generally flank structurally competent Archean granitoid domes (Quirt, 1989). Although electromagnetic conductors are typical exploration targets, the Kiggavik deposit in the Thelon Basin, Nunavut (Fuchs and Hilger, 1989) is an example of a significant uranium deposit forming without graphitic units. Uranium deposits within the Athabasca Basin that are associated with little or no graphite include Rabbit Lake, Eagle Point, Raven, Horseshoe, Cluff Lake, and Centennial (Rhys et al., 2010; Yeo and Potter, 2010).

Uranium deposits in the Athabasca Basin that occur in proximity to the Athabasca unconformity can be characterized as polymetallic (U-Ni-Co-Cu, Pb, Zn and Mo) or monometallic (Ruzicka, 1997, Thomas et al., 2000, Jefferson et al., 2007). Examples of polymetallic deposits include the Key Lake, Cigar Lake, Collins Bay 'A', Collins Bay 'B', McClean, Midwest, Sue and Cluff Lake 'D' deposits. Polymetallic deposits have high-grade ore at or just below the unconformity, and a lower grade envelope that extends into the sandstone or

downwards into the basement. The lower grade envelope exhibits a distinct zonation marked by predominance of base metal sulphides (Ruzicka, 1997).

Monometallic deposits are completely or partially basement hosted deposits localized in, or adjacent to, faults in graphitic gneiss and calc-silicate units. Monometallic deposits contain traces of metals besides uranium and include completely basement-hosted deposits developed for up to 500 m below the unconformity (e.g. Eagle Point deposit, Thomas et al., (2000)), or deposits that may extend from the unconformity downward along faults in, or adjacent to, graphitic gneiss and/or calc-silicate units such as the McArthur River deposit (Thomas et al., 2000; Jefferson et al., 2007).

Based on the general geological model for unconformity-type uranium deposits, the exploration for uranium on the Red Willow property will target:

- 1. Areas proximal to graphitic basement rocks;
- 2. Possible structures, especially where cross-cutting structures are indicated;
- 3. Extensive alteration envelopes within basement or sandstone rocks,
- 4. Low grades of uranium;
- 5. Complex mineralogy and geochemistry (U, Ni, As, Co, B, Cu, Mo, Pb, Zn and V);
- 6. Areas proximal to the Athabasca basement unconformity, either above or below it; and
- 7. Zones of highly fractured sandstone that may be coincident with and overlying uraniferous zones.

8. EXPLORATION PROGRAMS

From 2005, exploration at the Umfreville property by Purepoint Uranium Group Inc. has consisted of an airborne Megatem electromagnetic (EM) and magnetics survey, an airborne VLF-electromagnetic survey, an airborne gravity gradiometry survey, soil geochemical sampling and radon-in-soil sampling.

8.1 Airborne Electromagnetic and Magnetic Survey

Fugro Airborne Surveys conducted a MEGATEM electromagnetic and magnetic survey of the Umfreville Lake area during November, 2005. Using Stony Rapids, Saskatchewan as the base of operations, a total of 2,945 line kilometres of data were collected using a Dash 7 modified aircraft. The original Umfreville project area was originally 45,800 ha (Figure 6) and has been since been reduced to the current target area of 4,383 ha.



Figure 6: Megatem Survey – Total Magnetic Intensity

8.1.1 Quality Control

In the field after each flight, all analogue records were examined as a preliminary assessment of the noise level of the recorded data. Altimeter deviations from the prescribed flying altitudes were also closely examined as well as the diurnal activity, as recorded on the base station.

All digital data were verified for validity and continuity. Basic statistics were generated for each parameter recorded, these included: the minimum, maximum, and mean values; the standard deviation; and any null values located. All recorded parameters were edited for spikes or datum shifts, followed by final data verification via an interactive graphics screen with on-screen editing and interpolation routines. Checking all data for adherence to specifications was carried out in the field by the Fugro field geophysicist.

8.1.2 Discussion of EM and Magnetic Results

The first vertical magnetic derivative (Figure 7) displayed numerous strong NNE trending glacial features that have been removed using a low-pass filter. Many of these magnetic surficial features also display conductive properties that are seen within the apparent conductivity grids. The Fond du Lac Fault is readily apparent within the results as is a north-northwest trending dyke on the western side of the area flown.

The survey area displayed several broad conductive zones with early to mid-time profile responses and are attributed to surficial conductivity. No conductor axes or linear zones displaying strong B-field enhancement were seen within the survey area. The electromagnetic data shows a weak correlation to the magnetic field data and the topography suggesting that there is a structural relationship to the broad conductive zones.

8.1.3 Layered-Earth Inversion of Airborne EM Data – Condor Consulting Inc.

Condor Consulting Inc. processed the airborne MEGATEM 90 Hz EM data from the Umfreville Lake property using two software codes; a layered-earth inversion program and a decay analysis program.

The layered-earth inversion (LEI) algorithm models the EM data with a 28-layered earth model (Farquharson and Oldenburg, 1993, Ellis 1998) increasing in thickness from the surface to depth in an approximately logarithmic fashion. The first layer was 5 m thick while the deepest was 232 m thick. A starting model of 5,000 ohm-m (0.2 mS/m) was used, with a reference model of 5,000 ohm-m (0.2 m S/m). The reference model resistivity is what the program defaults to at depth when there is no longer enough information to further refine the inversion outcome.



Figure 7: Megatem Survey – First Vertical Magnetic Derivative

8.1.4 Discussion of Layered-Earth Inversion Results

The resistivity LEI for the 100 metre depth (Figure 8) shows significant variations in resistivity both laterally and with depth across the survey area. Since the depth slice is relatively shallow, a good proportion of the conductivity is coming from flat-lying near-surface beds, either overburden or layers in the sandstone. The current Umfreville claims are seen to have a high surficial conductivity response with the exception of the central portion of claim S-112338.

A resistivity LEI section for an area that was previously drill tested towards the west is provided in Figure 9. DDH HR01 entered into basement at 372 metres whereas HR02 and HR03A were lost in Athabasca sandstone at depths of 407 and 406 metres, respectively. The resistivity LEI section shows a weak and undulating band of conductivity through what is deemed to be sandstone well above the unconformity.

Three resistivity LEI sections through the current Umfreville claims are provided in Figure 10. Again, a weak band of conductivity is seen within what is deemed to be sandstone with the unconformity estimated at a depth of 150 metres. The resistivity sections show a shallow, highly resistive layer (yellow to red in colour) within the sandstone towards the south. The thin conductive layer within the sandstone is thought to be preventing the EM survey from properly reaching the basement rocks and identifying defining graphitic conductors. However, within the current Umfreville claims, an interpreted disruption of the sandstone appears to be letting the EM survey current penetrate to depth (green columns, Figure 10) and is considered a structural exploration target.

The review of the resistivity LEI results suggested that the Umfreville project area was not necessarily devoid of linear conductors due to the lack of graphitic rocks but that a thin conductive layer within the sandstone was preventing the EM survey from reaching the basement rock. All the resistivity LEI sections provided by Condor were then reviewed by Purepoint with the intent to identify areas where the survey was providing results below the sandstone conductive layer. The deep LEI conductors are considered to show areas where the conductive layer is absent from the sandstone, sandstone has been structurally disrupted, or very strong basement conductors are present. Deep LEI conductor axes interpreted from the individual inversion sections have been plotted as blue diamonds on Figures 7, 8 and 11.

8.2 Airborne Gravity Gradiometry Survey

During June, 2007, Bell Geospace of Houston, Texas, conducted an airborne full tensor gravity gradiometry (Air-FTG) survey over a large portion of the Umfreville property. A total of 1,383 line kilometers of Air-FTG acquisition was completed for this survey.



Figure 8: Resistivity Layered Earth Image - 100 Metre Depth





Figure 10: Example of REI Resistivity Section showing Umfreville Target Area

The survey lines were flown in northwest- southeast direction at 321° with 300 m spacing. The tie lines were flown perpendicular to survey lines at a line spacing of 3,000m. The survey was designed as an 80 m altitude standard tie drape. A total of 84 survey lines corresponding to 1382 line km were acquired.

The surface topography of this area is dominated by glacial features, probably drumlins that form rounded and elongated hills some 20 metres in height and trending in an ENE direction. Bell has provided maps of the data both as free air gravity and as terrain corrected data. The free air maps are clearly dominated by these features, but the Terrain Correction (TC) maps show that their effect has been successfully removed by the terrain correction process and reveal considerable detail that can be attributed to geology.

8.2.1 Quality Control

Accelerations measured by the instrument during data acquisition were closely monitored along with many other indicators of instrument performance. On the main FTG screen, the operators visually inspect the inline sums and cross gradients, position and temperature of the gyros, GGI case and block temperatures and the north, east, and vertical accelerations. Any variances beyond the norm are closely watched and if an error is detected the acquisition is interrupted and appropriate action is taken. Duplicate sets of spares are available in case of suspected hardware failure. Many other factors are also monitored that will help alert the operator to any unusual performance of the FTG. These include strip charts, coefficient tables and onsite offline analysis of the data. In addition to the onboard QC checks, final survey data is sent to a Bell Geospace processing office electronically for preliminary processing. Any substandard data will be identified by cross tie analysis and other methods. As soon as the source of the data degradation is identified and corrected, the suspect line(s) are re-acquired and again transmitted into the office for approval before the aircraft leaves the survey area.

8.2.2 Discussion of Results

The airborne gravity survey provided a response considered to reflect basement geology. The results indicated the presence of fault systems not previously seen and supported fault systems previously interpreted from magnetic features (Figure 11). The gravity low response within the northern portion of the survey area corresponded to a magnetic low, an interpreted structural disruption from the resistivity LEI sections, and the interpreted source area of a historical lake bottom sediment uranium anomaly.



Figure 11: Airborne Vertical Gradient Gravity

8.3 Aeromagnetic Gradient & VLF-Electromagnetics Survey

During July, 2010, Terraquest Ltd. of Markham, Ontario, conducted the airborne geophysical survey utilizing the XDS/VLF - EM System and three high sensitivity cesium vapour magnetometers. The XDS VLF-EM is a proprietary electromagnetic measurement system developed by Terraquest Ltd. that typically responds to large faults or shear zones, and to graphitic formational conductors.

The survey totalled 767 line-kilometers and was flown in two directions (bidirectional) with each direction being processed separately. The north-south lines were flown at 100 metre intervals while the east-west tie lines were flown at 250 metre intervals.

Three high-resolution cesium vapour magnetometers, manufactured by Scintrex, were mounted in a tail stinger and two wing tips extensions; the transverse separation was 13.5 metres and the longitudinal separation was 7.2 metres. A fluxgate tri-axial magnetometer was mounted in the rear of the aircraft cabin to monitor aircraft maneuver and magnetic interference.

The XDS VLF-EM uses 3 orthogonal coils mounted in the pod of the tail stinger, and coupled with a receiver-console, tuned to a half power bandwidth of 22-26 kHz which includes Cutler Maine NAA frequency 24 kHz, Lamour North Dakota NML frequency 25.2 kHz and Seattle, WA NLK frequency 24.8 kHz. Recorded parameters are the separate X, Y and Z coils.

8.3.1 Quality Control

In the field after each flight, all analogue records were examined as a preliminary assessment of the noise level of the recorded data. Altimeter deviations from the prescribed flying altitudes were also closely examined as well as the diurnal activity, as recorded on the base station.

All digital data were verified for validity and continuity. The data from the aircraft and base station were transferred to the PC's hard disk. Basic statistics were generated for each parameter recorded, these included: the minimum, maximum, and mean values; the standard deviation; and any null values located. All recorded parameters were edited for spikes or datum shifts, followed by final data verification via an interactive graphics screen with on-screen editing and interpolation routines.

The quality of the GPS navigation was controlled on a daily basis by recovering the flight path of the aircraft. The correction procedure employs the raw ranges from the base station to create improved models of clock error, atmospheric error, satellite orbit, and selective availability. These models are used to improve the conversion of aircraft raw ranges to aircraft position.

8.3.2 Discussion of Results

Most of the two Umfreville claims are covered by glacial drumlins that are somewhat conductive at the VLF frequencies (Figure 12). The surficial conductivity obscured the response expected from the fault system in the basement rocks and most of the VLF anomalies seen in this survey can be related directly to drumlins. The Fond du Lac fault has been resolved into two separate faults to account for the broad magnetic low that occurs in the middle of the claim.

8.4 Geochemical Survey

Three separate soil geochemical surveys were conducted by Purepoint between 2011 and 2014 with 383 soil samples collected (Figure 13). Areas were chosen for sampling based on the results of previous airborne EM, magnetic and gravity surveys. Sample sites were accessed by helicopter.

8.4.1 Soil Sampling Method, Preparation and Analysis

The soil sampling surveys involved the collection the A1 horizon. After the sample was collected a detailed descriptions of each sample were recorded that included the percentages of peat material and charcoal from recent forest fires. For quality assurance, one large sample was collected and split for duplicate analysis for approximately every 30 samples collected.

A sampling grid was designed and downloaded into GPSs prior to going into the field. The GPSs were then used to guide the sampling teams to each preselected and pre-named sample site. After choosing a suitable sample location close to the GPS sample coordinate, the black A1 organic soil layer was collected either by hand or with a spade. The A1 horizon was occasionally just below the litter and could be easily scrapped up and at other times, the A1 horizon was most easily accessed by pulling up the surface vegetation by hand and collecting the black soil at the root base. At lower elevations, peat samples were taken in lieu of soil where a distinct A1 soil horizon could not be identified. Where identifiable, the A1 horizon proved to vary in thickness from 1cm to about 6cm. The samples were collected in Kraft paper sample bags and labeled with the pre-determined sample ID. All samples were described for colour, sand content and the percent peat.

All samples were sent to Saskatchewan Research Council (SRC) in Saskatoon, SK for ICP-MS analysis. Samples were air dried, mortared then sieved to 180 microns. Initial samples were analysed after both partial and total digestion. Partial digestion was suggested as a means of avoiding interference that arise from conducting ICP-MS on totally digested samples. For partial digestion, a



Figure 12: East- West VLF – Along Line Coil



Figure 13: Location Map of Soil Geochemical Samples

0.250 g pulp was digested with 2.25 ml of 8:1 ultrapure HNO3:HCl for 1 hour at 95 C. For total digestion, a 0.125 g pulp was gently heated in a mixture of ultrapure HF/HNO3/HClO4 until dry and the residue dissolved in dilute ultrapure HNO3.

8.4.2 Discussion of Results

The geochemical samples containing peat were seen to have a high Loss on Ignition. The concentrations of the elements of interest have been plotted against LOI in each sample. The plots of uranium and molybdenum versus LOI suggest that a high LOI (i.e. high % of peat in sample) has a weak influence on the element concentrations. For the remaining elements, it is readily apparent that the samples with a high LOI have lower concentrations. Based on a review of the plots for each element, it was decided to treat the geochemistry results as two groups; those samples with less than 84% LOI and samples with greater than and equal to 84% LOI.

Elevated soil uranium concentrations occur within the centre of a coincident gravity low and magnetic low as well as being favourably located along the southern edge of the gravity low. The results for vanadium and to a lesser degree boron, show anomalous trends that are similar to the uranium anomalies but the trends are parallel rather than coincident. The results for molybdenum, nickel and cobalt appear to have anomalous north-south trends that may be influenced by an underlying structure as suggested by the airborne magnetic and gravity results for this area. The zinc results appear to be anomalous along the bottom of slopes leading to the conclusion that the high mobility of zinc within neutral pH waters is having a strong influence on the anomalies seen.

A compilation of the anomalous uranium and nickel results for the three sampling years are provided in Figures 14 to 17. Although geochemical anomalies for these two elements appear to track quite well between survey lines, the distribution is considered too wide spread to provide a specific drill target.

8.5 Radon Survey

A radon-in-soil sampling survey was conducted on claim S-112339 to test its usefulness as a uranium exploration tool in this area.

The radon sampling survey involved the collection of 30 samples from disposition S-112339. The Pylon AB6A Monitor with Lucas style scintillation cells were used to retrieve radon from the soil. Each sample collected had the background, the radon and a scintillometer measurement of total gamma recorded.



Figure 14: Uranium Soil Anomalies with Magnetic Tilt Derivative



Figure 15: Uranium Soil Anomalies with Gravity Background



Figure 16: Nickel Soil Anomalies with Magnetic Tilt Derivative



Figure 17: Nickel Soil Anomalies with Gravity Background

8.5.1 Radon Sampling Method and Analysis

The Pylon AB6A Monitor measures radon and thoron by detecting the alpha particles from the gases as they decay. The gas in the soil was drawn into the Lucas style scintillation cell located in the detector by a hand vacuum pump. The alpha particles from the gas strike the scintillation material which emits photons of light. The photons are detected and converted to Counts per Minute (CPM) by the AB6A. The AB6A takes six readings for one minute intervals at each sample location. The first interval is discarded, and the next two intervals are used to measure the background value in the cell. The radon is only measured for intervals four, five and six when the gas from the soil is drawn into the cell.

Suitable sample locations were chosen close to the GPS sample coordinate then a battery powered drill with a ³/₄ inch auger bit was used to drill a hole 18 inches deep. The radon probe was then placed in the hole and connected to the scintillation cell with a vacuum hose. A 15 inHg vacuum is created in the cell using a hand held vacuum pump with the valve on the vacuum hose closed. The first three intervals are recorded with the cell under vacuum. When the third interval is complete, the flow valve is opened until the vacuum pressure in the cell reaches zero inHg. This draws the gases from the soil into the cell. Intervals four, five and six then measures the decay of the gas in the cell. The measurements are saved internally in the AB6A. When the measurements are complete, the cell is then flushed for 25 seconds using the vacuum pump.

8.5.2 Quality Assurance

The detector is very sensitive to sunlight which may influence the radon results. Garbage bags and jackets were used to minimize the AB6A's exposure to sunlight and to maintain confidence in the results. Background measurements with values over 10 CPM were re-run with a spare Lucas cell. After each sample was measured, the cell was flushed to remove radioactive radon daughters which may attach to surfaces and release decay products.

8.5.3 Discussion of Results

The radon samples were collected at sites that were previously used during the 2013 soil sampling program. The sample sites containing high percentages of peat were also seen to have a high percentage of Loss on Ignition from the 2013 soil sample results. The results of the radon in soil are plotted against LOI for each sample in Figure 18. The plot suggests that peat-rich areas (i.e. LOI > 90%) are not allowing for a proper radon measurement. Due to this observation, only the results of 15 of the 30 radon sampling done within soils are considered valid.



The results of the radon-in-soil survey are provided in Figure 19. Although some anomalous radon results coincided with soil samples that returned anomalous uranium results, topography does appear to be having an influence. Since the project has large areas covered by peat and poorly developed soils, further surveys to measure radon-in-soil are considered to have limited usefulness for identifying exploration targets.

9. DATA VERIFICATION

Data verification utilized at the Umfreville project during the geochemical surveys included internal SRC laboratory quality assurance and quality control (QA/QC), comparison of results of the duplicate samples and variance of standard samples. Purepoint produced field duplicate samples that were analysed and reviewed for quality control.

9.1 Quality Assurance / Quality Control (QA/QC)

The SRC Geoanalytical Laboratory uses a Laboratory Management System (LMS) for Quality Assurance. The Quality Control measures applied to all methods within the laboratory include insertion of analytical replicates and certified rock standards which are systematically inserted in each group of samples and results reported. Laboratory Quality Control results are checked and if results are found to be outside Quality Control Limits actions are taken to ensure that the samples are reprocessed within the quality limits.



Figure 19: Radon in Soil Survey Results

9.2 Comparison of Results

The SRC laboratory ran four different standards during sample analyses, ASR109, ASR209, DCB01/BL/CAR110 and DCB01/BM/CAR110. A total of 48 standards were run that included 16 ASR109, 21 ASR206, 6 DCB01/BL/CAR110 standards and 5 DCB01/BM/CAR110 standards. The results for each standard were averaged for the 10 elements of interest, namely U, Mo, V, Pb206, Pb207, Ni, Co and Zn and plotted against the average to estimate the variance (Figures 20 and 21). The repeatability of the standards is shown to quite good with minimal variation. The results were typically one to two orders of magnitude greater than the average Umfreville sample results, with the exception of B and LOI, and therefore too high to validate the trace metal concentrations. The SRC lab duplicates provided good repeatable results.

10. ADJACENT PROPERTIES

Mineral dispositions immediately surrounding Umfreville property are owned by Aurgent Resource Corp. and KALT Resources. Aurgent Resource Corp. is the 100% owner of the Fond Du Lac Uranium property located SW on the SW edged of the Umfreville property (Figure 15). KALT Industries holds the remaining five claims adjacent to the Umfreville property.

Some uranium occurrences occur east and west of the Umfreville property. The Nisto Uranium Mine Adit located roughly 30 km west of Umfreville reportedly produced 106 tons of ore grading $1.6\% U_3O_8$ before suspending mining in 1959. Lakeland Resources holds the Newnham Lake project that lies approximately 20 km east of Umfreville. Historic drilling on the Newnham Lake property encountered mineralized intercepts along an east-west trending EM conductor including $0.20\% U_3O_8$ over 0.3 metres in DDH-66.

11. INTERPRETATIONS AND CONCLUSIONS

During 2006, airborne MEGATEM data covering the original 45,800 ha Umfreville Lake project was processed using a layered-earth inversion program. A conductive layer is now believed to exist within the Athabasca sandstone and to be responsible for the broad conductive zones. The thin conductive layer within the sandstone is thought to be preventing the EM survey from properly reaching the basement rocks and identifying graphitic conductors. Reconstruction of the conductivity depth sections highlighted deep narrow conductors that are considered to show areas where the conductive layer is absent from the sandstone, the sandstone has been structurally disrupted, or very strong basement conductors are present.



Figure 20: Quality Assurance Plots for U, Mo, V and Pb 206



Figure 21: Quality Assurance Plots for Pb 207, Ni, Co and Zn



Figure 22: Adjacent Properties with Airborne Magnetics - Tilt Derivative

The vertical gradient of the magnetic field was used to interpret faults and lithologic contacts. The Fond du Lac fault was resolved into two separate faults to account for the broad magnetic low that occurs in the middle of the claim.

The airborne gravity survey provided a response considered to reflect basement geology. The results also indicated the presence of fault systems not previously seen and supported fault systems previously interpreted from magnetic features. A strong gravity low response within the northern portion of the survey area is coincident with a magnetic low, an interpreted structural disruption from the resistivity LEI sections, and the interpreted source area of a GSC geochemical anomaly. The Umfreville claim group was subsequently reduced in size to cover the gravity low / magnetic low anomaly.

The airborne VLF survey returned anomalies that can be mostly related to drumlins. Glacial drumlins that are somewhat conductive at the VLF frequencies cover are present throughout the Umfreville project area and this conductivity obscured the response expected from basement faults.

Three soil geochemical surveys, conducted over four years, collected 383 organic A1 soil horizon samples over the prospective gravity low / magnetic low response associated with the Fond du Lac Fault. The geochemical surveys succeeded in duplicating and extending the uranium anomalies in successive years. A broad uranium anomaly outlined within the southern portion of the grid in 2011 was repeated in 2013 but had apparently shifted towards the east, possibly due to different field conditions. The outlined uranium anomalies are favourably coincident with the magnetic low and gravity high. The nickel results for the separate sampling years did not correlate as well as the uranium results, however, this element may be present as a halo to the uranium anomalies. Anomalous vanadium and, to a lesser degree, molybdenum results correlated with the uranium anomalies.

A ridge located in the southwest corner of the 2013 sampling grid was thought to represent an outcrop in the field. The ridge was comprised of unconsolidated rusty coloured sand with a white clay matrix and several white bull quartz boulders were located nearby.

A total of 30 radon in soil measurements were collected however sampling sites with peat (>90% LOI) all returned radon readings of less than 5 cpm. Of the 15 sample sites where radon was collected from soil having less than 90% LOI, 3 sites returned values greater than 15 cpm. The anomalous radon in soil sample sites correlate well with uranium soil anomalies but may be influenced by topography.

12. RECOMMENDATIONS

The Umfreville property has a favorable geologic setting based on airborne geophysical results and warrants further exploration. An exploration program and budget is recommended (Table 2).

Stage 1: Summer/Fall 2016:

A gravity survey and a stepwise moving loop EM survey over the area where favourable geochemistry coincides with an airborne low magnetic response and an airborne low gravity response. The purpose of the gravity survey will be to provide details of the low gravitational response area to aid in the drill target selection. The stepwise moving loop EM survey will ideally identify EM conductors within the target area, however, a large transmitter loop will be required to get current to the basement rocks.

Stage 2 is not contingent on positive results from Stage 1.

Stage 2: Winter 2016 / 2017:

Three geologic drill fences comprised of two holes each on the highest priority geophysical targets. A six hole, 3,000 meter drill program is recommended.

Table 2: Proposed Umfreville Exploration Budget

Stage 1 Summer/Fall 2016

Mob/Demob of Camp/Field Crews		60,000
Linecutting	58 line/kms @ 600/km	35,000
Ground Gravity Survey	2,000 stations @ \$75/station	150,000
Ground Electromagnetic Survey	12 line/kms @ \$5,800/km	70,000
Camp Costs	25 days @ \$3000/day	75,000
Report - Geophysics		25,000
	Subtotal	415,000
	Contingency (5%)	21,000
	Management Fees (10%)	42,000
	Total Stage 1 =	478,000
<u>Stage 2</u> Winter 2016/17		
Mob/Demob of Camp/Drill/Field Crews		120,000
Diamond Drilling	6 holes, 3000 m @ \$150/m	450,000
Helicopter-assisted Drill Moves		70,000
Technical Staff	Geologist & Technician	45,000
Camp Costs	35 days @ \$4000/day	140,000
Analytical Costs	900 samples @ \$80/sample	72,000
Report - Drilling		25,000
	Subtotal	922,000
	Contingency (5%)	46,000
	Management Fees (10%)	92,000
	Total Stage 2 =	1,060,000
Estimate for Total Stages 1 And 2 =	\$1,538,000	

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14. DATE AND SIGNATURE

This NI 43-101 technical report titled "Umfreville Uranium Project, Northern Saskatchewan, Canada" and dated October 21, 2015, was prepared and signed by the following author:

"Scott Frostad" (Signed and sealed)

Scott Frostad, BSc, MASc, P.Geo.

Dated at Saskatoon, SK October 21, 2015

APPENDIX 1

STATEMENT BY QUALIFIED PERSON

I, Scott R. Frostad, of 362 Thode Avenue, Saskatoon, Saskatchewan, Canada S7W 3B9 do hereby certify that:

- I am a registered as a Professional Geologist with the Association of Professional Engineers and Geoscientists of Saskatchewan (Member Number 12878) and the Association of Professional Engineers and Geoscientists of British Columbia (Member Number 25020)
- I am a graduate of the University of Western Ontario with a Bachelor of Science Degree in Geology (1984) and of the University of British Columbia with a Master of Applied Science Degree in Mining and Mineral Process Engineering (1999).
- 3. I have practiced my profession continuously since 1984 and have experience in the search for uranium, gold, and base metals in Canada.
- 4. I am currently employed as the Vice President of Exploration for Purepoint Uranium Group Inc. and am also a director and shareholder of the company.
- 5. That I have read National Instrument 43-101 and Form 43-101F1 and consider myself a "qualified person" for the purpose of the Instrument.
- That I am responsible for the preparation of the technical report dated October 21, 2015 entitled "Technical Report on the Umfreville Uranium Project, Northern Saskatchewan, Canada"
- 7. That I have been involved with the Umfreville Project since December, 2005. His most recent visit to the site was during a soil geochemical survey between July 13th and 17th, 2013.
- 8. For this report, I have relied on assessment reports currently on file with Saskatchewan Industry and Resources and recent exploration reports of Purepoint Uranium Group Inc.
- 9. That, as of the date of this certificate, to the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make the technical report not misleading.
- That I consent to the public filing of the Technical Report with any stock exchange and other regulatory authority and any publication by them for regulatory purposes. I also consent to an extraction from, or a summary of, the Technical Report.

Dated at Saskatoon, Saskatchewan, this 21st day of October, 2015.

(Signed and sealed) "Scott Frostad"

Scott Frostad, BSc, MASc, P.Geo