



**TECHNICAL REPORT**  
**on the**  
**RED WILLOW URANIUM PROJECT**  
**NORTHERN SASKATCHEWAN, CANADA**

National Instrument 43-101

NTS Map Area 64L/05, 06 and 12

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October 16, 2015

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## 1. SUMMARY

The Red Willow property is situated on the eastern edge of the Athabasca Basin in Northern Saskatchewan, Canada and consists of seventeen mineral claims having a total area of 41,119 hectares. 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 Red Willow property area, the Athabasca sandstone unconformably overlies crystalline basement rocks that are within the boundary area of the Mudjatic and Wollaston Domains. The Proterozoic Athabasca Group sandstone is found to cover the Archean and Aphebian basement rocks on the western side of the property at depths of 0 to 120 metres. The basement rock trends NE to SW and is composed of orthogneiss and paragneiss. Six major uranium deposits, JEB, Midwest, Roughrider, Cigar Lake, McArthur River and Millennium, are located along a NE to SW mine trend that extends through the Red Willow Project.

Uranium exploration on the Red Willow 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.

Extensive airborne and ground geophysics has been conducted over the property starting in 2005. Geophysical surveys have included airborne magnetic and electromagnetic (VTEM) surveys, an airborne radiometric survey, ground gradient array IP, pole-dipole array IP, fixed-loop and moving-loop transient electromagnetics, and gravity. The detailed airborne VTEM survey provided magnetic results that are an excellent base on which to interpret structures while the EM results outlined over 70 kilometers of conductors that in most instances represent favourable graphitic lithology. A total of twenty-one conductive zones have been identified as priority exploration targets of which only seven have been subject to first pass drilling. Ground geophysical surveys that are particularly useful for drill targeting include resistivity and gravity. The resistivity results appear to have mapped out barren zones of silicification and granitic rocks allowing for improved drill hole target selection while gravity results have outlined gravity low anomalies that are coincident with historic strong basement alteration.

Drilling on the Red Willow property has discovered uranium mineralization associated with the Osprey conductor returning up to 0.20% eU<sub>3</sub>O<sub>8</sub> over 5.8 metres from a shallow (70 metres depth) flat-lying tensional fracture. The Osprey conductor has been shown from drilling to be a vertical to sub-vertical, weak to moderately sheared, dark green to black chlorite altered pyritic graphitic pelitic gneiss bounded by strongly silicified, moderately hematized pelitic gneiss. Uranium occurs within flat tension fracture zones

and steep narrow gouges within, and running parallel to, the shear zone. Mineralization has been traced along a strike length of approximately 250 metres.

The 6-kilometer long “S”-shaped Osprey conductor, host to significant uranium intercepts, has excellent exploration potential at depth below the known mineralized zone and towards the west. The main mineralized zone has only been drill tested at shallow depths (average hole length < 160 metres) and is open at depth for further stacked, parallel lenses of mineralization. Based on the resistivity results, favourable pelitic rocks are located west of the Osprey conductor that may also host mineralization within sub-vertical structures and as sub-horizontal stacked lenses.

The fold hinge of the Osprey conductor is considered to require further drilling after a fence of three holes drilled in 2008 intersected a vertical, weakly radioactive fault zone (Hinge Fault) associated with strong chlorite and hematite alteration and sections of lost core. The fault zone returned 250 ppm eU over 1.6 metres between 74.7 and 76.3 metres from hole RW-29 and 358 ppm U over 0.4 metres between 159.1 and 159.5 metres from hole RW-41. Alteration of the basement rocks increases along the northern fold limb towards the fold nose where one of the three holes drilled, RW-28, encountered strong clay alteration.

The Geneva area has a compelling target area based on recently completed ground geophysics and drilling. A Pole-dipole array IP survey by Purepoint in 2007 outlined low apparent resistivity “chimneys” (LARCs) in the sandstone that coincided with the termination of two VTEM conductors in the basement rocks. LARCs within the sandstone may represent “chimneys” of hydrothermal alteration associated with structures that control uranium mineralization at depth. The two LARCs were also seen to correspond with two subtle gravity depressions identified by a limited gravity survey in 2007. A gravity survey by Rio Tinto in 2012 supported the presence of the two gravity anomalies and extended the gravity depressions to where Eldorado Resources Ltd intersected very strong basement alteration and 0.22% U<sub>3</sub>O<sub>8</sub> over 1.0 metres within a graphitic fault zone (hole RAD-27). A 3-hole fence was drilled just north of RAD-27 and intersected uranium mineralization in hole 14RDW008 that was related to the graphitic shear returning 0.68% U<sub>3</sub>O<sub>8</sub> over 0.3 metres between 89.1 to 89.4m. The Geneva conductor has been shown from drilling to be dark green to black chlorite altered pyritic graphitic pelitic gneiss that is approximately 5 metres thick, steeply dipping, and weak to moderately sheared.

Immediately east of the Geneva area are VTEM conductors with a relatively short strike length that are considered to be priority exploration targets. The prospective target area containing the conductors is roughly outlined by three points: the 14RDW008 mineralization, to the northeast where high concentrations of radon (a product of the decay of uranium) were first detected in Radon Lake in 1971, and to the southeast where hole RAD08-09 returned 283 ppm U over 1.1 metres from sandstone just above the unconformity. The offset conductors are suggestive of structural complexity within the area and they appear to be bounded by bands of granitic rocks (magnetic highs). The highly competent granitic rocks would provide a contrast in competency favourable

for zones of dilatancy and mineral deposition. Additionally, the presence of swamp in the area may be due to slumping of the underlying sandstone following hydrothermal alteration.

The Topping Island area was explored during the early 1980's after a pitchstone cobble was discovered down-ice of the arcuate shaped EM conductor. Purepoint flew a VTEM<sup>plus</sup> over Topping Island in two different directions using a close line spacing of 125 metres to provide detail of the arcuate, 6-kilometer long, EM anomaly. The survey outlined numerous lateral displacements in the conductor that can be confidently interpreted as faults, representing high priority drill targets. The Topping Island conductor is the eastern terminus of the Crooked-Richardson Lakes conductive belt that is currently being explored by the Denison Mines/ Eros Resources Joint Venture that intersected mineralization in drill hole RL-13-16 returning 0.45% U<sub>3</sub>O<sub>8</sub> over 2.3 metres.

The 333 area has been prepared for initial drill testing by 3D resistivity and gradient array IP surveys. The 333 area is named after a historic overburden drill hole (hole #333) that intersected values up to 0.31% U<sub>3</sub>O<sub>8</sub> in glacial till. Based on the recent geophysical results, the source of the anomalous till may be a recently outlined EM conductor that lies only 200 metres northeast of drill hole #333. The strong conductor trends north-south, is 1.1 kilometers in length and, based on the geophysical results, is intersected by a northeast trending fault.

At Dancing Lake, favourable EM conductors have now been covered by a gradient array IP survey and pole-dipole array IP and are considered drill ready. Follow-up drilling is also warranted within the Long Lake area where hole LL08-05 intersected a 1.6 metre wide radioactive structure within hematite altered pelitic gneiss returning 269 ppm U over 0.5 metres. The area is host to the historic Long Lake Boulder Train discovered in 1975 by Gulf Minerals. The northeast trending boulder train was found to be 2 km long, 300 to 400 meters wide and contained a number of radioactive biotite schist boulders returning up to 0.80% U<sub>3</sub>O<sub>8</sub>.

The Golden Eye Shear Zone is located in the northern portion of the claim group and joins two historic uranium occurrences, the FDL and AJ showings. At the FDL showing, uranium mineralization (1.43% U<sub>3</sub>O<sub>8</sub>.grab sample) is associated with the 1 metre wide, northeast trending Golden Eye shear zone that crosscuts an outcrop of graphitic biotite-rich pelitic gneiss. The AJ showing is a radioactive molybdenite-garnet-biotite schist subcrop that returned an assay of 0.46% U<sub>3</sub>O<sub>8</sub>. Historic data indicates the Golden Eye Shear hosts favourable mineralization and is a priority target.

Additional EM targets that are considered worthy of ground geophysics include the Ghost Lake and Horse Lake conductors. Follow-up work is also warranted at the Cross Lake, CBA and Mustang areas. Cross Lake is a structurally complex area located near the historic Scrimmes Lake uranium showings that returned anomalous soil geochemistry during 1972 by Gulf Minerals. Within the CBA area, located at a the fold nose of a granitic dome, the last hole of a twenty hole program (CBA-20) intersected anomalous uranium, 0.17% U<sub>3</sub>O<sub>8</sub> over 0.8m, within a pegmatite dyke before being lost at a depth of

20m. Initial drilling in the Mustang area returned 639 ppm U over 30 cm from a fracture, however, the mineralization was not intersected in the follow-up drill holes.

Based on the uranium mineralization discovered to date on the Red Willow property and its favorable geologic setting, further exploration is warranted. A multi-staged exploration program and budget is recommended.

Stage 1: Fall 2016 and Winter 2016/2017:

Drill testing of the geophysical targets previously identified within the Osprey, Geneva, 333 and Dancing Lake areas. Fourteen diamond drill holes for a total of 5,600 meters are recommended.

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

Stage 2: Summer 2017 and Winter 2017 / 2018:

Ground DC resistivity and gravity surveying should be conducted over the Osprey Hinge, Topping Island, Golden Eye, Ghost Lake and Horse Lake conductors. Linecutting will be required at all target areas with the exception of the Horse Lake grid where the existing grid will need refurbishing.

Follow-up of favourable Stage 1 drill program results and drill testing of the high priority geophysical targets. A sixteen hole, 6,400 meter drill program is recommended.

## **2. INTRODUCTION**

The Red Willow 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 Red Willow Project since January, 2006. His most recent visit to the site was on February 25<sup>th</sup>, 2014 during the last drill program.

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 have been filed with Saskatchewan Industry and Resources has been reviewed, including geological mapping, boulder sampling, soil and water geochemical surveys, ground EM surveys, and drill log results from within, and proximal to, the property.

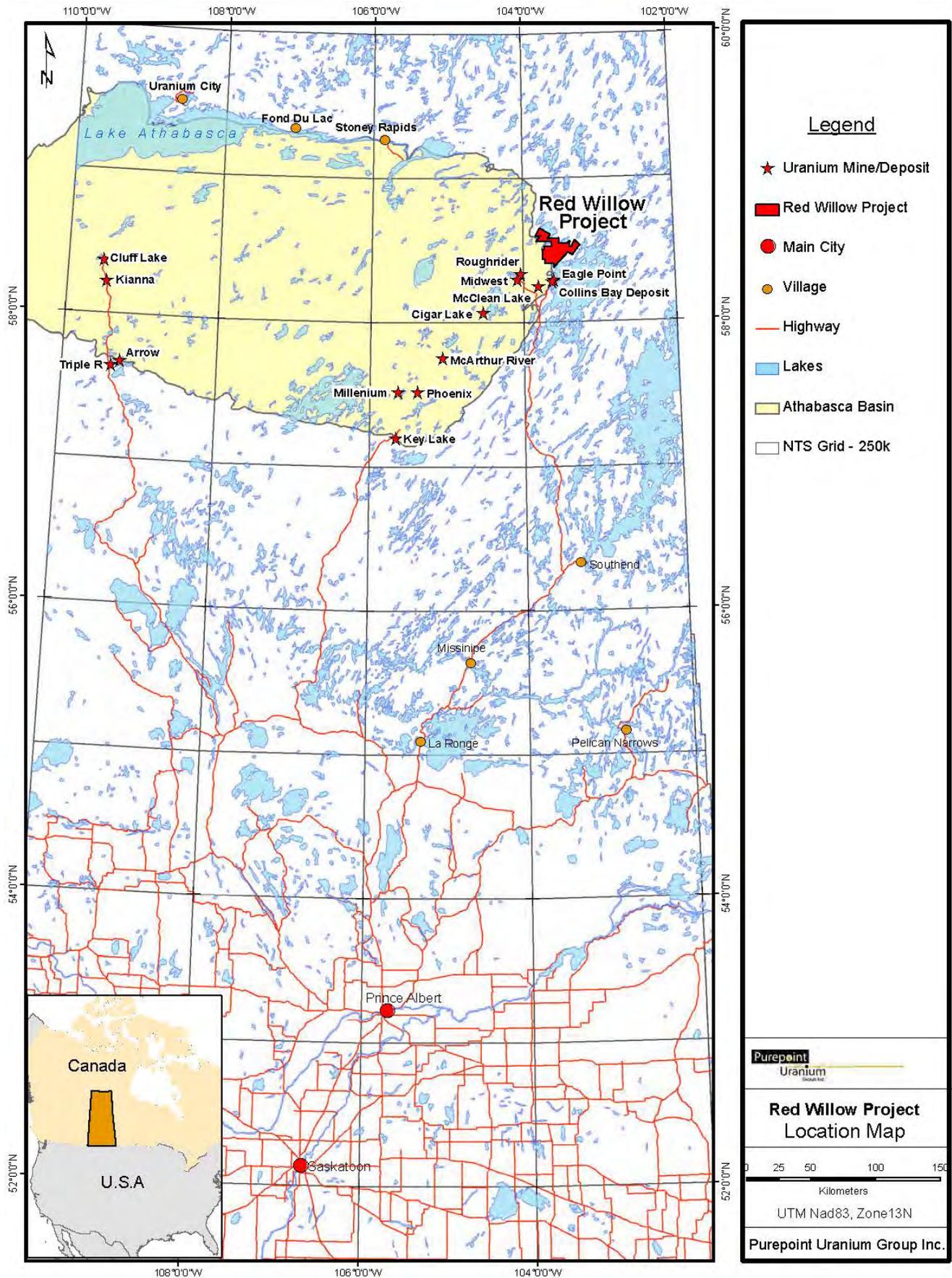
The author has not verified the technical information in the past technical reports, but has formed opinions on the potential for the uranium mineralization in the project area primarily on the basis of the technical information and preliminary results of the current exploration programs.

## **3. PROPERTY DESCRIPTION AND LOCATION**

The Red Willow property is situated on the eastern edge of the Athabasca Basin in Saskatchewan, Canada (Figure 1) close to several uranium deposits including AREVA Resources Canada Inc.'s mined-out JEB deposit, located approximately 10 kilometers to the southwest, and Cameco's Eagle Point deposit that is approximately 10 kilometers due south. It is located within the NTS map area 64-L-05, 64-L-06, 64-L-11 and 64-L-12, with its centre at about 103° 38' west longitude and 58° 18' north latitude. The property covers approximately 40,119 hectares (ha) and consists of seventeen mineral claims (Figure 2) S-107399, S-107400, S-107409, S-107410, S-108613, S110271, S110272, S-110273, S-112036, S-112026, S-112021, S-112029, S-112022, S-112023, S-112024, S-112027 and S-111155.

The mineral claims are currently held in the name of Purepoint Uranium Corporation and are 100% owned by Purepoint Uranium Corporation. Purepoint Uranium Corporation is a 100% owned subsidiary of the Purepoint Uranium Group Inc., a public Company listed on the TSX Venture Exchange.

In order to conduct work at the property, the operator must be registered with the Saskatchewan government and comply with the Saskatchewan Environment's



**Figure 1: Location Map of the Red Willow Project**

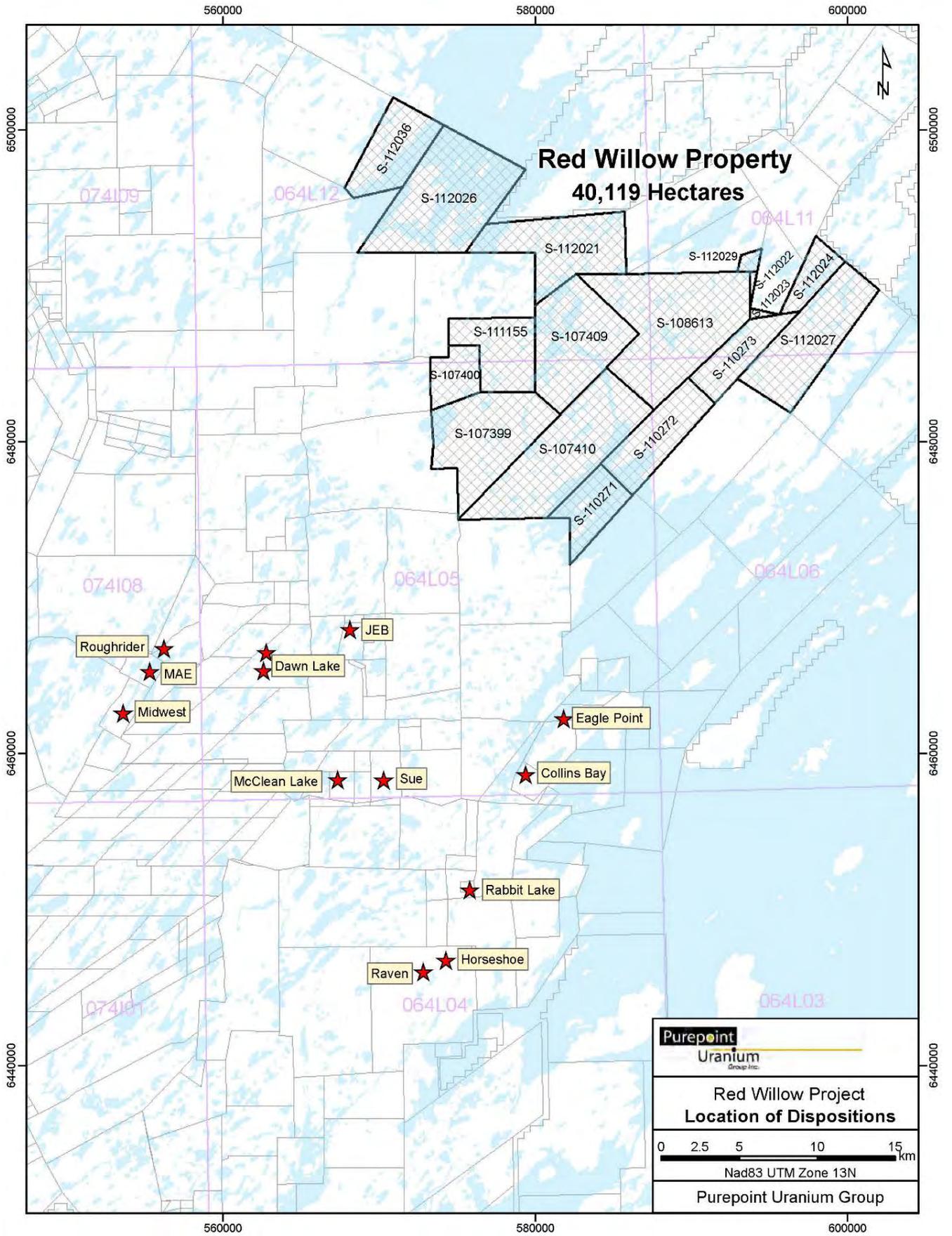


Figure 2: Disposition Map of the Red Willow Project

**Table 1. Red Willow Project – Land Status Summary**

Disposition	Area (ha)	NTS	Recording Date	Next Work Due
S-107399	3676	64-L-05	1-Jun-04	31-May-35
S-107400	1042	64-L-05 & 64-L-12	1-Jun-04	31-May-35
S-107409	3525	64-L-05 & 64-L-12	1-Jun-04	31-May-28
S-107410	4751	64-L-05 & 64-L-05	1-Jun-04	31-May-23
S-108613	5828	64-L-05, 64-L-12, 64L-11 & 64-L-06	2-Mar-06	1-Mar-23
S-110271	1413	64-L-05 & 64-L-12	12-Dec-06	11-Dec-23
S-110272	2099	64-L-05 & 64-L-06	12-Dec-06	11-Dec-23
S-110273	1443	64-L-06 & 64-L-11	12-Dec-06	11-Dec-23
S-111155	2035	64-L-05 & 64-L-12	12-Dec-07	5-Dec-23
S-112021	3166	64-L-12	7-Dec-10	6-Dec-23
S-112026	4773	64-L-12	7-Dec-10	6-Dec-23
S-112036	2057	64-L-12	2-Jun-11	1-Jun-24
S-112029	157	64-L-11	7-Dec-10	6-Dec-26
S-112022	53	64-L-11	7-Dec-10	6-Dec-26
S-112023	68	64-L-11	7-Dec-10	6-Dec-26
S-112024	849	64-L-11	7-Dec-10	6-Dec-26
S-112027	3381	64-L-06 & 64-L-11	7-Dec-10	6-Dec-26

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. All seventeen mineral claims are in good standing until 2023 and require work commitments of \$25.00/ha/annum since the first 10 years of assessment credit has been accepted (Table 1).

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

The Red Willow property is accessible by vehicles as well as float or ski equipped aircraft. The property is 730 km northeast of Saskatoon and 35 km northeast of Points North Landing. Transwest Air and Pronto Airways provides scheduled aircraft service from Saskatoon to Points North Landing year round. All weather highways 102 and 905 reach Points North Landing from La Ronge. The Lasby Lake camp is accessible by driving the Hatchet Lake trail that heads north-northeast from the McClean Lake Minesite

The climate is typical of 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. Freeze up begins in late October and break up occurs in late May. During the period of freeze up, from December to April, accessibility in the area is enhanced by frozen muskegs and lakes.

Three temporary work camps were constructed during 2006, 2007 and 2013. The Lasby Lake camp is located 100 metres from the north shore of Lasby Lake and is directly accessed by the Hatchet Lake seasonal road. The Cunning Bay camp and East Lasby camp were both decommissioned in 2014.

The property has varied topography due to Quaternary landforms that include drumlins, eskers, ground moraine and hummocky moraine. Outcrop exposure is sparse due to a blanket of glacial till. The forest cover is comprised of mainly jack pine and spruce. The elevation of Hatchet Lake is 395 metres above sea level (masl) while Cunning Bay is at 425 masl.

## **5. HISTORY**

Gulf Minerals Canada Ltd. (Gulf) was one of the first uranium explorers in the area conducting an airborne radiometric survey in 1968 followed up by a reconnaissance geochemical soil survey, radon-in-water survey and prospecting during 1971 and 1972. High concentrations of radon were found in the surface water just west of a waterbody that Gulf named "Radon Lake" (Figure 3). The geochemical soil anomalies (Figure 4) and radon-in-water anomalies were followed up with ground geophysics that included electromagnetics (EM), magnetics and radiometrics.

In 1974 Gulf conducted geological mapping and conducted a four hole diamond drill program (GL-1 to GL-4) on the Ghost Lake grid to test two linear electromagnetic (EM) conductors. The north part of the Ghost West conductor was found to be caused by a pyritic and graphitic paragneiss, while the south part of this conductor appears to be related to a fault/fracture zone. The only significant assay from the drilling was a 116 ppm U value returned from a clay layer just below the Athabasca Group unconformity in hole GW-85-02.

In 1975, Gulf carried out an airborne magnetic, EM and gamma ray spectrometer survey that was followed by a regional, reverse circulation (RC) overburden drilling program. Over 350 overburden holes were drilled with the most anomalous hole being located on the Red Willow property, with hole #333 returning an assay of 0.31%  $U_3O_8$ . Since the radioactive zone was quite thick and not found in the neighbouring holes, the source was implied to be relatively local. Gulf had recommended that additional RC drilling be conducted to trace the uranium-rich overburden to its source but follow-up work was not done.

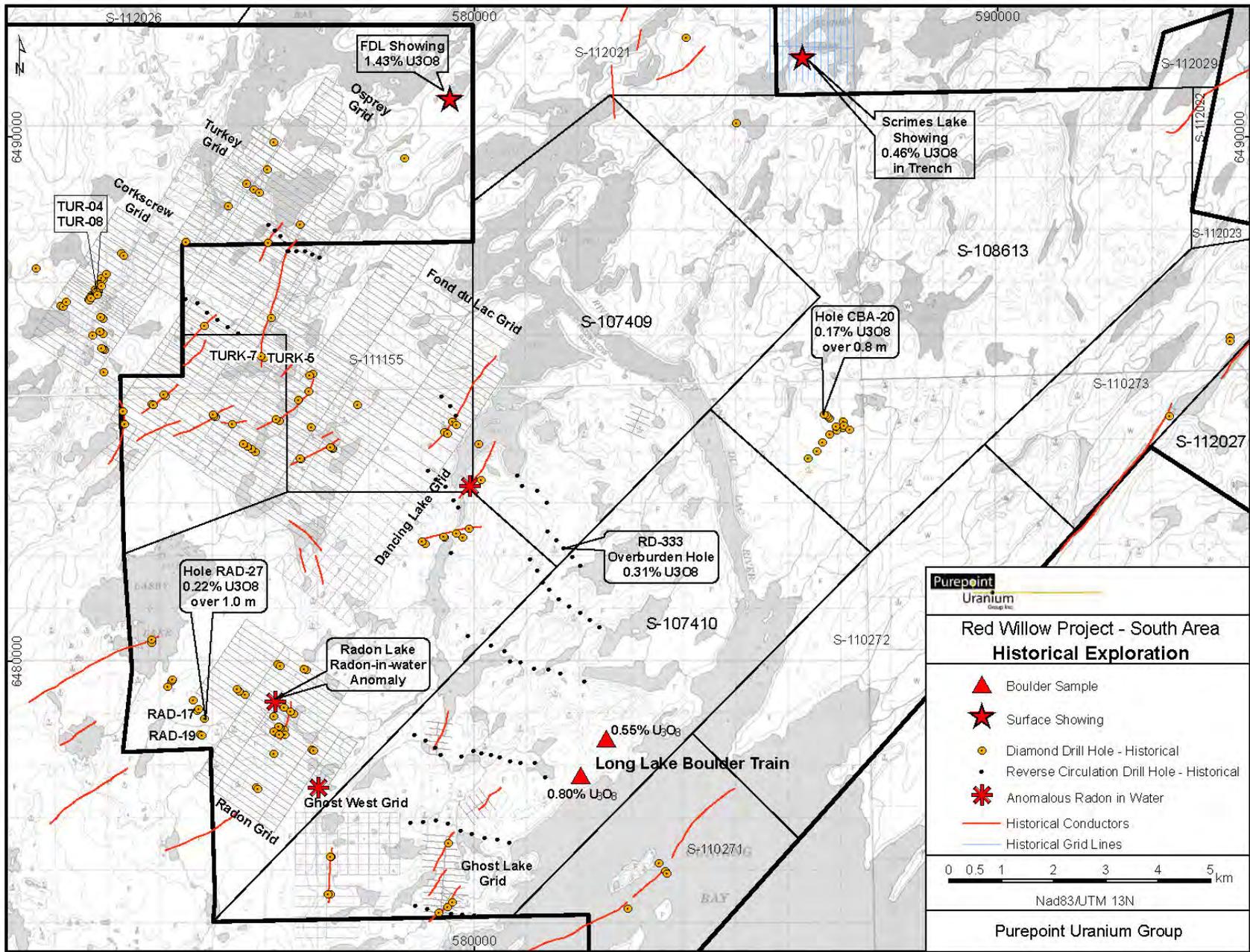


Figure 3: Historical Ground Work on the Red Willow Project (South)

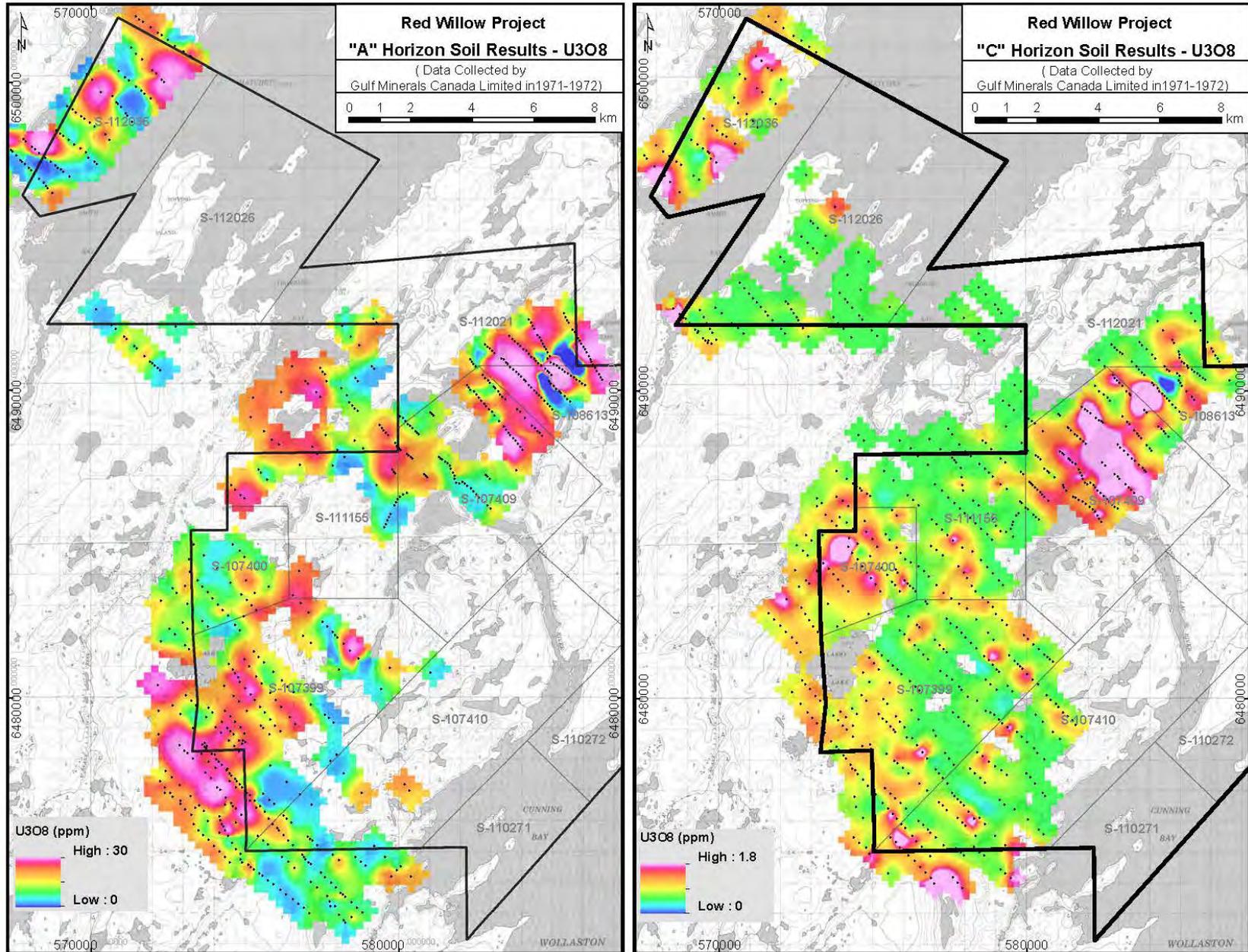


Figure 4: Soil Geochemical Results for U3O8 – Gulf Minerals, 1972

In 1985, the Dancing Lake grid was surveyed with ground geophysical surveys including magnetic, VLF-EM and HLEM. The short strike-length, shallow conductors were considered to not have bedrock sources and not tested by drilling.

Prospecting by Gulf in 1975 discovered the Long Lake boulder field near Cuning Bay that was comprised of radioactive biotite schist boulders (Figure 5). The Fond du Lac and Osprey grids were established and utilized for ground geophysics that included VLF, Horizontal Loop and Vertical Loop EM surveys. The geophysics defined targets for 5 diamond drill holes, OS-1 and OS-3 to OS-6, that were completed in 1977.

In 1978, Gulf conducted additional VLF and Horizontal Loop EM surveys on the Osprey grid along with follow up diamond drilling, holes OS-7 to OS-24, in 1979. The conductors tested were explained by either a retrograded altered paragneiss (OS-7, 8, 13 to 19, 23 and 24), an east dipping clay-filled shear zone (OS-9, 10, 20 to 22), or a graphitic pyritic paragneiss (OS-11 and 12).

Gulf drilled on the Radon grid in 1979 testing a resistivity low and a VLF-EM conductor that was best explained by the hematite alteration of basement rock just below the unconformity. Drill holes RAD-1 and RAD-2 intersected an aquifer at the base of the sandstone that contains anomalous radon values up to 521 cpm. In 1980, holes RAD-7 to 9 tested an EM conductor and intersected a highly altered zone at the Athabasca Group unconformity, while RAD-12 failed to explain its targeted conductor. A third conductor was tested by holes RAD-10 to 13 and they intersected graphitic quartz-feldspar gneiss with an assay highlight of 0.01%  $U_3O_8$  over 1.0 meter.

In 1977, Canadian Superior Explorations conducted reconnaissance, ground VLF and electromagnetic surveys, geological mapping, lake water and lake-bottom sediment sampling. The following year included an airborne radiometric, magnetic and electromagnetic survey, geological mapping, prospecting, trenching and boulder sampling on previously uncovered ground and radon gas-in-soil and soil sampling on selected areas from earlier work. Ground proofing airborne radiometric anomalies led to the discovery of a radioactive boulder occurrence consisting of approximately 125 radioactive boulders and one radioactive outcrop (FDL showing) within an area of 1.5 kilometres by 240 metres. The FDL showing is located approximately 1 kilometre to the southwest (down-ice direction) of the Red Willow disposition S-112021 (Figure 6), is associated with sheared and fractured biotite quartzite, pegmatite and graphitic gneisses, and returned an assay highlight of 1.43%  $U_3O_8$ . The nearby AJ showing, also discovered by Canadian Superior, is located on the Red Willow disposition S-112012 and has an assay highlight of 0.46%  $U_3O_8$ .

In 1980, Getty Minerals Ltd. discovered a pitchstone cobble (>99,999 cpm) down-ice of an EM conductor on Topping Island that lies within the current disposition S-112026 (Figure 6). Four drill holes in 1981 tested the 6-kilometre long conductor, which was explained by pyritic / graphitic pelitic rocks, but the source of the pitchstone cobble was not identified. No drilling has been conducted on the island since the initial Getty

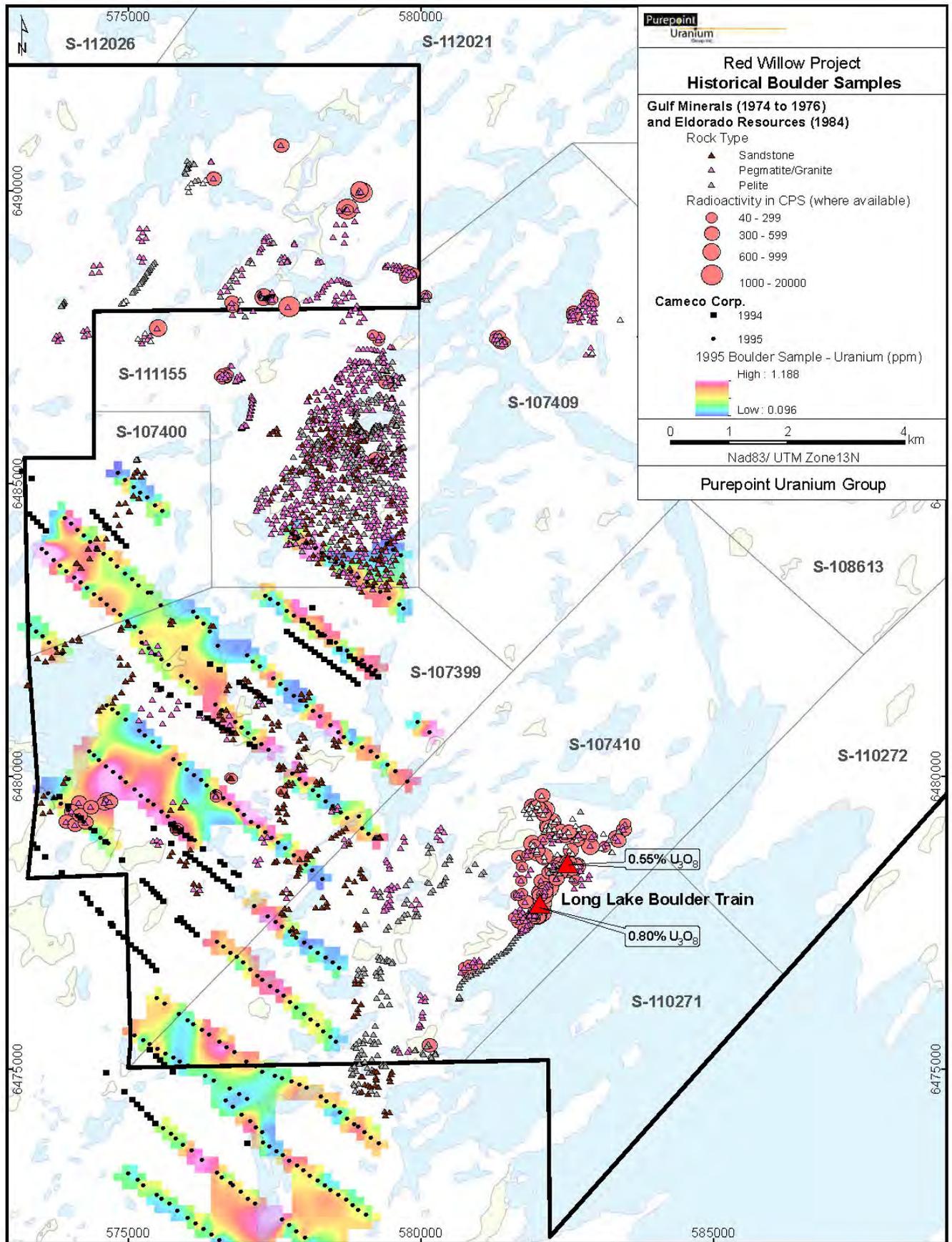


Figure 5: Historical Boulder Samples

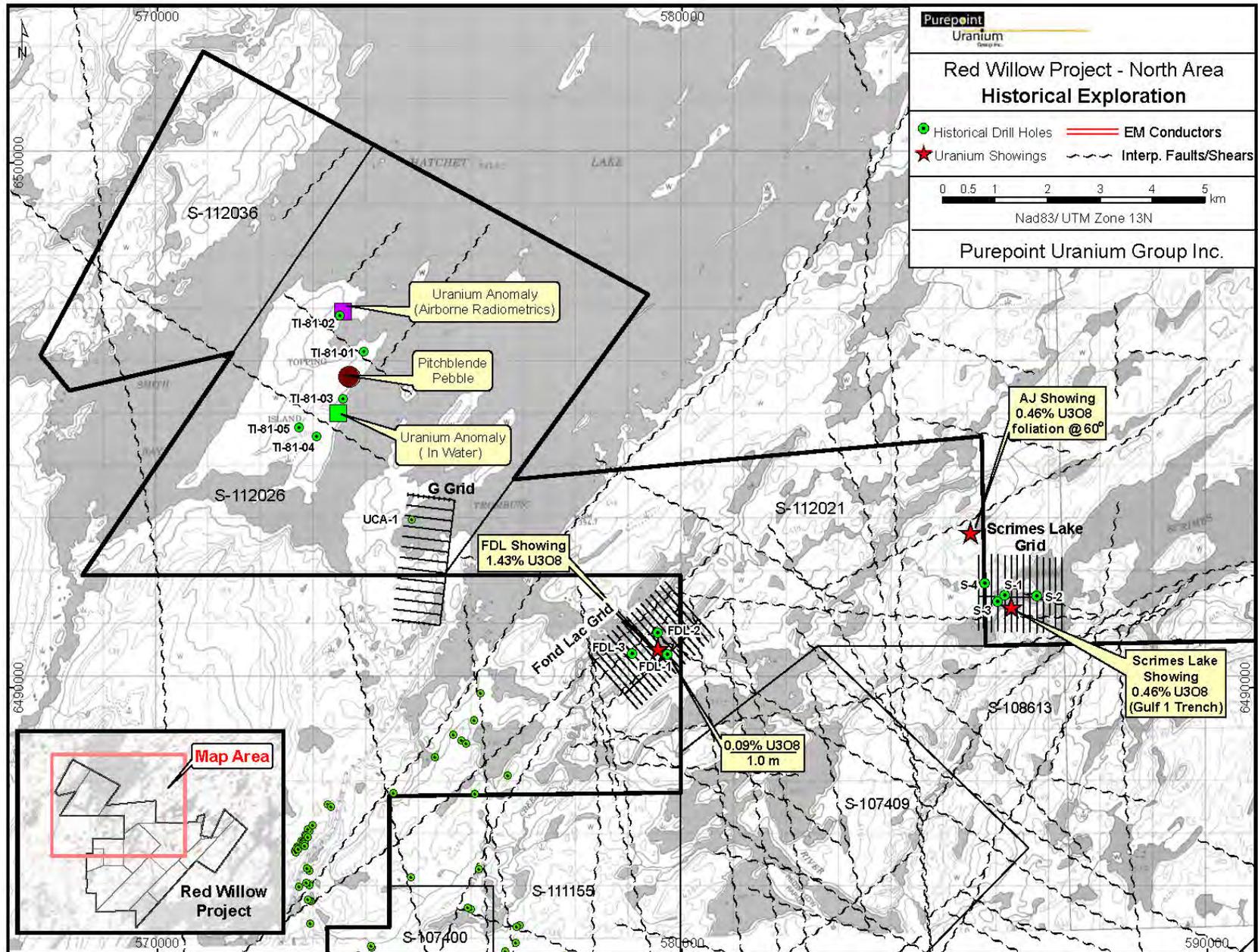


Figure 6: Historical Ground Work on the Red Willow Project (North)

Minerals drill program. Overburden is shallow on the island at 0 to 20 metres in thickness.

In 1980, CanLake Explorations Ltd. drilled 14 holes (CBA-03 to 10 and CBA-15 to 20), Favourable mineralization was intersected in the last two holes of the program. Hole CBA-19 intersected 0.03%  $U_3O_8$  over 0.5 metres between 36.3 and 36.8 metre depth within pegmatitic rock. CBA-20 intersected 0.17%  $U_3O_8$  over 0.8 metres within a pegmatite dyke before being lost at a depth of 20m.

In 1982, Saskatchewan Mining and Development Corp. (SMDC) conducted prospecting, mapping and scintillometer surveys. Several radioactive basement boulders with values up to 0.35%  $U_3O_8$  were found along a pegmatite/calc-silicate contact. Banded calc-silicates with trace to 1% disseminated graphite were also found along the north shore of Scrim Lake.

By 1984, Eldorado Resources had extended the northeast trending Long Lake Boulder Train to an area two km long and 300 to 400 meters wide (Figure 5). A number of radioactive biotite schist boulders were discovered with an assay highlight of 0.80%  $U_3O_8$  while pegmatite boulders returned an assay highlight of 0.55%  $U_3O_8$ .

Drilling by Eldorado Resources Ltd in 1984 intersected very strong basement alteration and anomalous radioactivity in the Geneva Zone with RAD-27, returning 0.22%  $U_3O_8$  over 1.0 metres within a graphitic fault zone. Cameco later ranked drill holes on their Rabbit Lake project for basement alteration and one of Eldorado's holes from the Geneva Zone, RAD-17, returned the highest alteration score of the 366 drill holes ranked. Cameco's rating for basement rock alteration used the concentrations of pathfinding elements (Pb, Ni, Cu, U, total clay and chlorite). Although Eldorado completed a total of 32 drill holes (RAD-01 to 32) within the Radon Lake area, most were stopped at less than 100 metres into basement rock.

In 1985, Eldorado followed up HLEM and VLF-EM surveys over Lasby Lake with two diamond holes (RAD85-33 and RAD85-34. The conductor on the extended Radon grid was determined to be a faulted graphitic and pyritic paragneiss with no significant radioactivity. Four drill holes (GW85-1 to GW85-4) also tested HLEM targets on the Ghost West grid.

In 1993, Cameco Corp. tested the central Osprey grid conductor (TURK-5 and 7) and intersected anomalous radioactivity ranging from 450 cps to 1660 cps. The radioactivity was intersected at less than 90 metres depth within one of two vertically dipping, faulted graphitic, pyritic pelitic gneiss units. Cameco's geophysical survey results suggested the conductors terminated a short distance (200 m) south of their drill holes and did not conduct follow-up drilling.

In 2005 United Carina carried out a program on the northwest Red Willow claims (S-111155 and S-112026) that included boulder sampling, prospecting, examination of old core, line cutting (41.3 km) and 36.7 km of Horizontal Loop EM surveys. The ground

geophysics was conducted on the “G” Grid over known airborne conductors located up-ice from anomalous boulder geochemistry. In 2006, United Carina tested some of the drill targets including UCA-1 that intersected Athabasca sandstone underlain by faulted basement rocks but did not encounter anomalous radioactivity.

During 2006 to 2008, ESO Uranium Corporation worked the area that is now the northwest Red Willow claim S-112036. ESO performed geophysical airborne MegaTEM electromagnetic and magnetic surveying, airborne gamma spectrometric and magnetic surveying, geochemical sandstone boulder surveying, and regional geochemical soil surveying and radon in soil gas surveying.

During 2007 and 2008, Hathor Exploration Limited conducted a lake bottom sediment survey and an airborne electromagnetic survey (VTEM) over their Hatchet Lake property that included the current Red Willow North claim S-112021.

During 2009, the Geological Survey of Canada flew a radiometric/magnetic survey over the northern portion of the Red Willow project (Figure 7). The objective of the airborne survey was to provide detailed geophysical coverage of the entire Athabasca Basin in support of geological mapping and to increase geo-scientific knowledge of the region.

## **6. GEOLOGICAL SETTING AND MINERALIZATION**

### **6.1 Geological Setting**

The Red Willow Property lies on the eastern margin of the Athabasca Basin, Saskatchewan. The Athabasca Basin is filled by the Athabasca Group of relatively undeformed and flat-lying, mainly fluvial 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 8). 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.

The oldest rocks underlying the Red Willow Property are situated in the Archean Hearne Province at the boundary between the northern Mudjatik and Wollaston Domains (Figure 8). The Hearne province is bounded along its southeast margin by the Trans Hudson Orogen 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 Mudjatik Domain is bounded to the northeast by the Tantal and Dodge domains of the Rae Province and to the southeast by the Wollaston Domain of the Hearne Province (Hoffman, 1990). The Wollaston Domain is bounded to the southeast by the Peter Lake Domain of the Hearne Province and the Wathaman Batholith of the Trans Hudson Orogen (Hoffman, 1990).

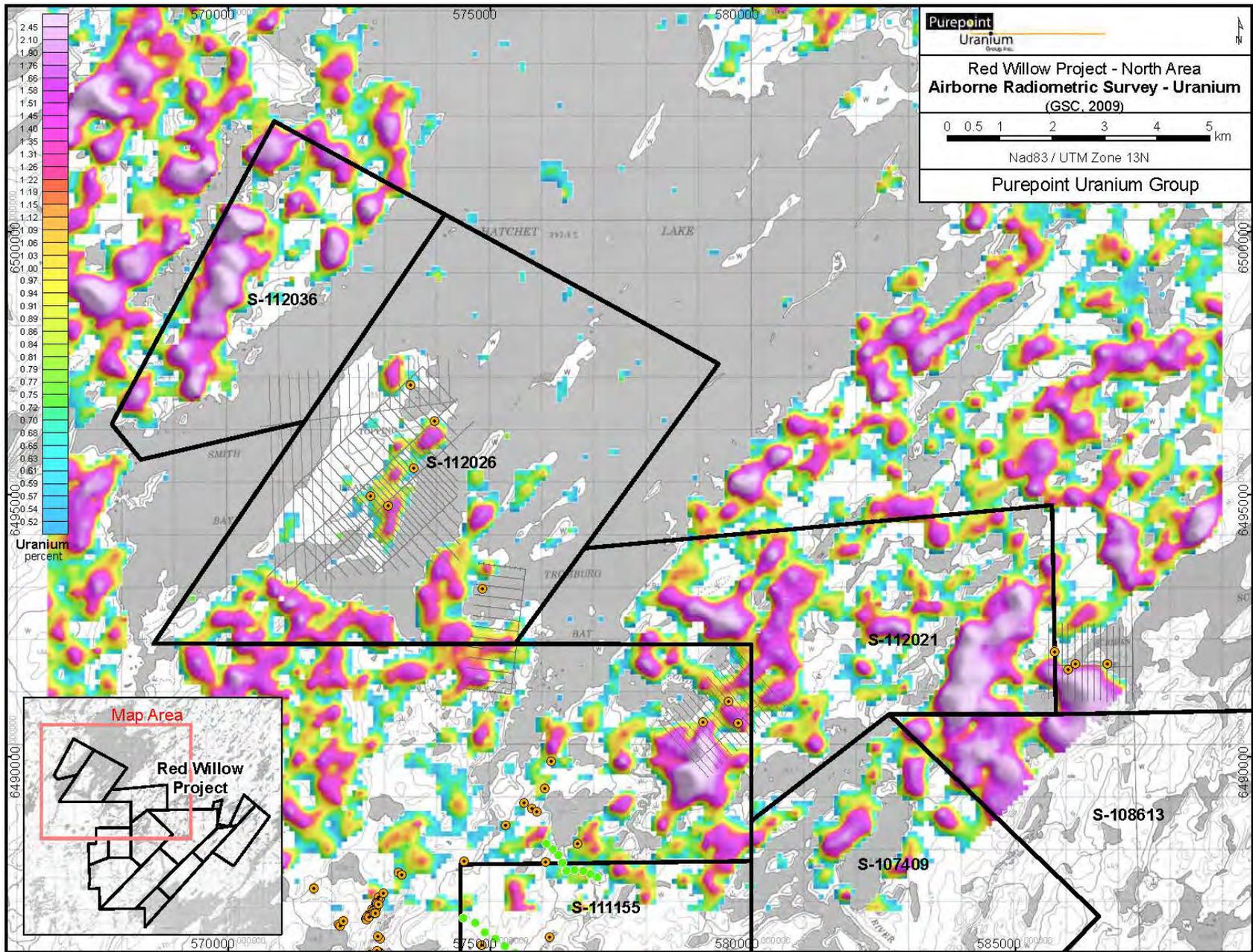


Figure 7: Airborne Radiometric Survey Results (GSC, 2009) – Uranium Channel

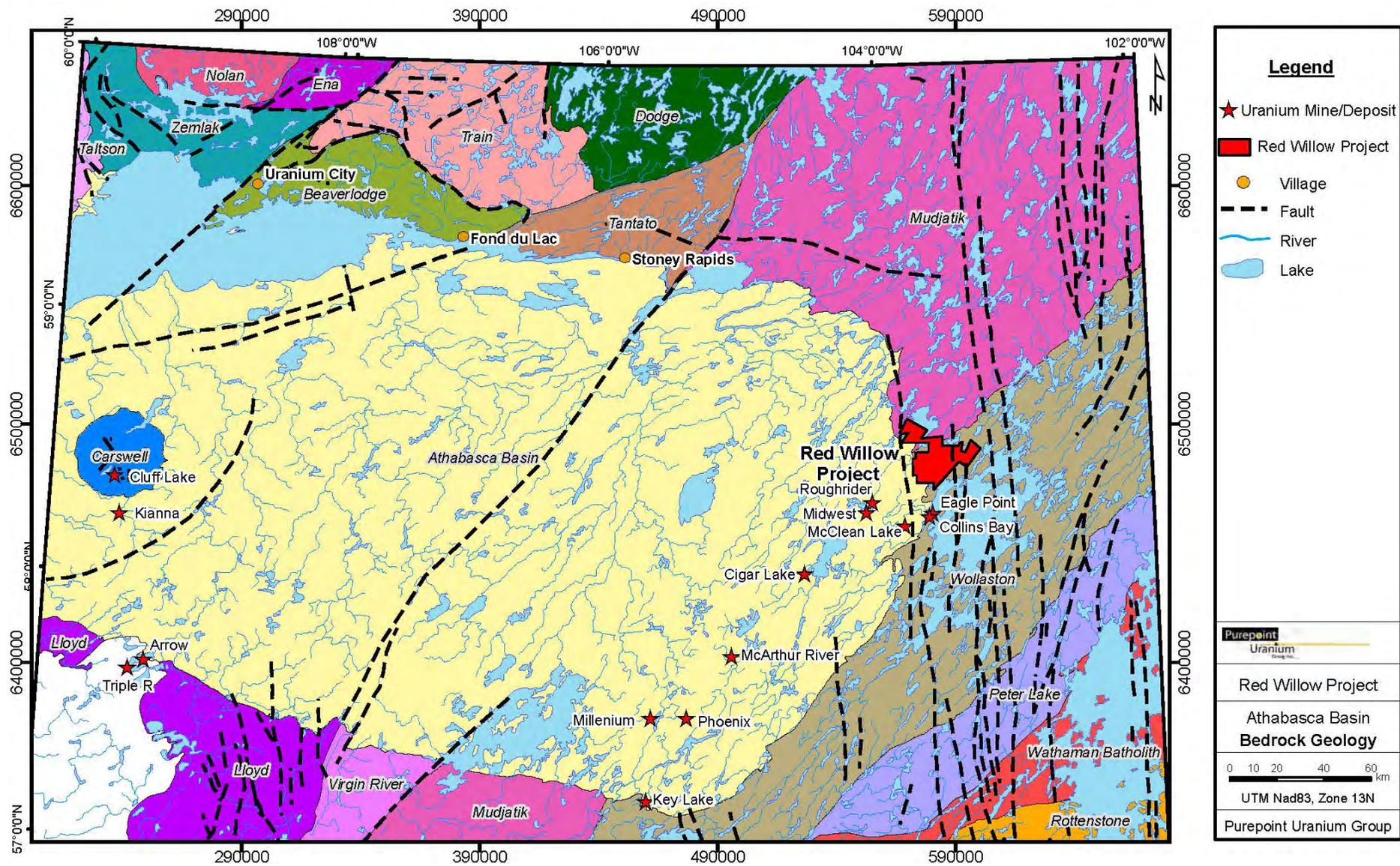


Figure 8: Bedrock Geology of Northern Saskatchewan

North and east of the property, at the edge of the Basin, 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) (Figure 9). To the east, metasedimentary rocks of the Wollaston Group rest unconformably on Archean granitoid gneisses (Lewry and Sibbald, 1980; Lewry et al., 1985; Lewry and Collerson, 1990). The Wollaston Group consists of shelf to miogeosynclinal sediments that were deformed and metamorphosed (together with the adjacent gneisses) during the Hudsonian Orogony. The basal units consist mostly of pelitic and semi-pelitic gneisses with graphitic pelitic gneiss and subordinate quartzite and ironstone. These pass upward into calc-silicate gneisses and psammopelitic and psammitic gneisses (Eriks and Chiron, 1994).

Following the Trans-Hudson orogeny (ca. 1860-1770 Ma, Saskatchewan Geological Survey, 2003), the Archean basement and Paleoproterozoic metasedimentary rocks were uplifted and subjected to erosion (Ramaekers, 1990, 2003a, b) 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).

The fluvial sands and gravels of the Athabasca Group were deposited in the intracratonic Athabasca Basin that formed through extensional tectonics (Ramaekers and Hartling, 1979). A maximum age constraint for the Athabasca Group is approximately 1.66 Ga provided by a detrital zircon suite collected from the Wolverine Point Formation (Rainbird *et al.*, 2002). The thickness of the Athabasca Group sediments was originally up to 5 km (Pagel et al., 1980), but presently it is estimated to be a maximum of 2200 m (Sibbald and Quirt, 1987).

The Athabasca Basin was divided into three northeast trending sub-basins separated by northeast trending highs, shown by stratigraphic (Ramaekers, 1979, 1980) and seismic work (Hobson and MacAuley, 1969). The three northeasterly trending fault bound sub-basins coalesced to form the Athabasca Basin with seven deposystems recognized (Ramaekers, 1976, 1978a, 1978b; Ramaekers *et al.*, 2001; Yeo *et al.*, 2002).

The Athabasca Group was divided into two subgroups: the William River Subgroup and the overlying Points Lake Subgroup (Ramaekers, 1980, 1990). The William River Subgroup now comprises the Fair Point, Manitou Falls, Lazenby Lake, Wolverine Point, Locker Lake and Otherside Formations (Ramaekers *et al.*, 2001). The Points Lake Subgroup consists of the Douglas and Carswell formations that are present only in the Carswell structure. Most formations can be further subdivided into members (e.g. Yeo *et al.*, 2002).

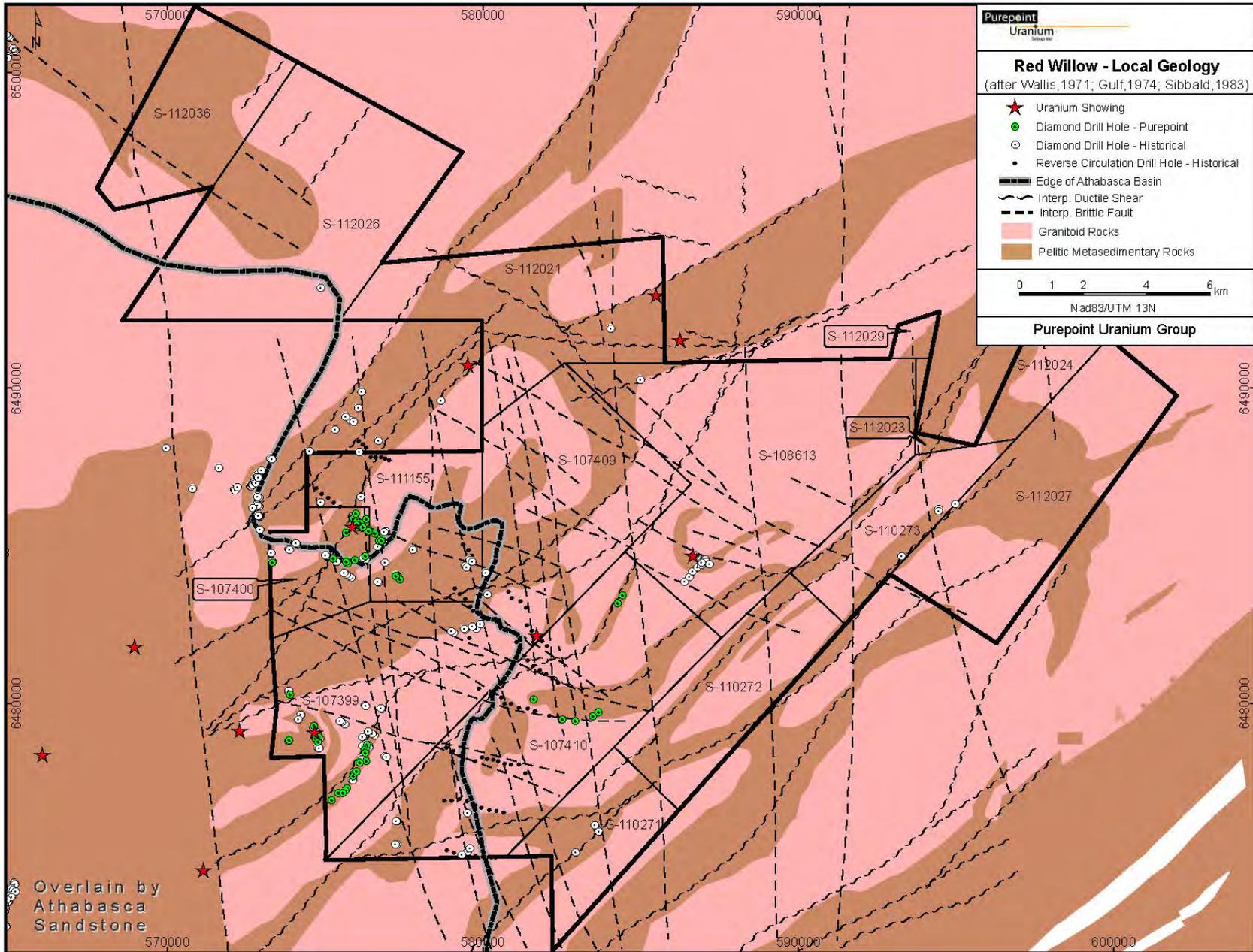


Figure 9: Local Geology of the Red Willow Project

The Manitou Falls Formation is the only formation of the Athabasca Group that occurs underlying the Red Willow Property and is composed of the lower member Manitou Falls b (MFb) and upper member Manitou Falls c (MFc) (Slimmon, 2004). The MFb is characterized as a poorly sorted, medium- to coarse-grained, pebbly sandstone with conglomerate beds over 2 cm thick (Ramaekers *et al.*, 2001), deposited in an alluvial braid-plain characterized by broad channels in a relatively humid climate (Long *et al.*, 2000; Jefferson *et al.*, 2001). 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).

## 6.2 Property Mineralization

The strongest uranium mineralization encountered within the Osprey area was hole RW-07 returned 0.20%  $eU_3O_8$  over 6 metres (from 71.6 and 77.6 m) from a fracture zone having a distinct geochemical signature that includes anomalous partial digestion results for As (94.1 ppm), Cu (7,660 ppm), Pb (2,280 ppm), and Zn (33,000 ppm). A follow-up drill hole along the Osprey conductor (RW-19), collared 80 metres north of hole RW-07, intercepted 0.58%  $U_3O_8$  over 1.0 metre (from 93.3 to 94.3 m) within graphitic pelite and included a 10 cm interval assaying 3.03%  $U_3O_8$ .

Drilling results have shown the Osprey conductor to be a vertical to sub-vertical, weak to moderately sheared, dark green to black chlorite altered pyritic graphitic pelitic gneiss bounded by strongly silicified, moderately hematized pelitic gneiss. The pyritic/graphitic unit is typically 40 to 60 metres wide, hosts 5 to 8% pyrite as fine disseminations, medium to coarse subhedral crystals and rare semi-massive bands and trace to 1% fine graphite needles. Uranium mineralization discovered to date in the Osprey zone is confined to flat tension fracture zones and steep narrow gouges within, and running parallel to, the shear zone.

A weakly radioactive fault zone (Hinge Fault) associated with strong chlorite and hematite alteration was intersected by a fence of three holes designed to test a fold nose of the Osprey conductor. RW-29 intersected the vertical radioactive fault zone between 72.5 and 77.5 metres returning 288 ppm U over 1.6 metres while RW-41 intersected the fault between 157.7 and 161.0 metres that returned 358 ppm U over 0.4 metres. All three holes encountered zones of strong clay alteration and silicification.

Drilling discovered uranium mineralization associated with the Geneva conductor with hole 14RDW008 returning 0.68%  $U_3O_8$  over 0.3m from 89.1 to 89.4 metres. The radioactivity and associated graphitic shear can be followed down dip into hole 14RDW009 where assays returned 322 ppm U over 1.0 metre (from 193 to 194m).

## 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 uranium 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 uraniumiferous zones.

## **8. EXPLORATION PROGRAMS**

From 2005 to 2014, exploration at the Red Willow property has consisted of airborne magnetic and electromagnetic surveys (VTEM), an airborne radiometric survey, line cutting, boulder prospecting, geochemical surveys, ground 3D resistivity, gradient array induced polarization (IP), pole-dipole IP, fixed-loop transient EM, gravity and diamond drilling.

Purepoint Uranium Group Inc. entered into an agreement with Rio Tinto in 2011 allowing an earn-in of 51% of the Red Willow Project by spending \$5 million on exploration by December 31, 2015. Rio Tinto became the project operator in 2011 but ceased exploration work in 2014 before reaching their initial earn-in expenditure requirement.

### **8.1 Airborne Magnetic and Electromagnetic Surveys**

During November 2006 and June 2007, Geotech Ltd. carried out a helicopter-borne, magnetic and versatile time domain electromagnetic (VTEM) survey. The 3,316 line-kilometre survey covered the Red Willow claims held by Purepoint at that time (Figure 10). The flight line direction was northwest over all of the block and northeast over the southwest half. Flight line separation was 200 metres in the northeast half and 100 metres over the rest.

During May 2012, a helicopter-borne electromagnetic (EM) and magnetic (VTEM<sup>plus</sup>) survey was completed over the Topping Island area within the northwest portion of Red Willow (Figure 11). The 245 line-kilometer VTEM<sup>plus</sup> survey was conducted with a close line spacing of 125 metres and flown in two different directions to provide detail of the arcuate, 6-kilometer long, EM anomaly within the Topping Island target area.

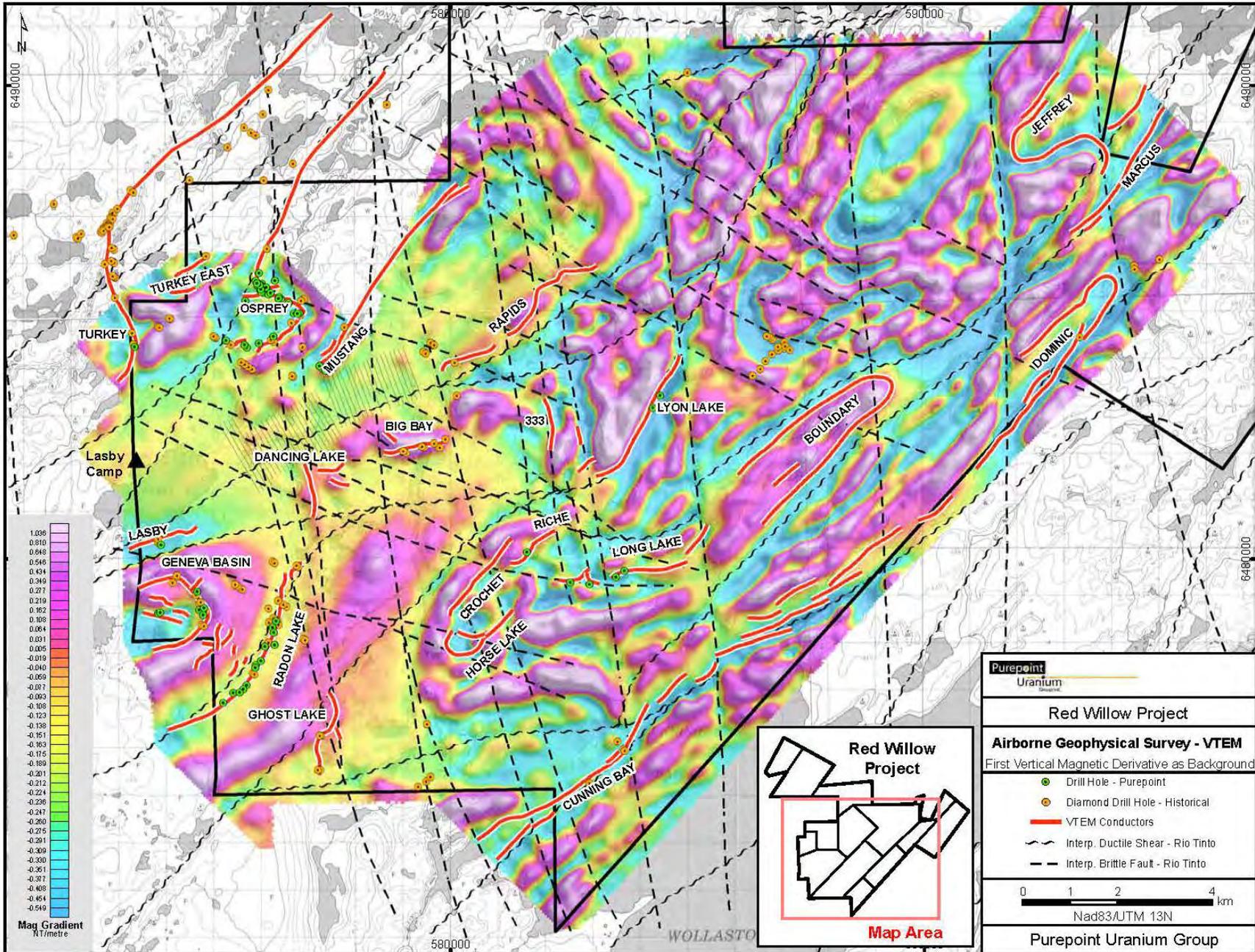


Figure 10: Red Willow Property VTEM Survey – Tilt Magnetic Derivative (South Red Willow)

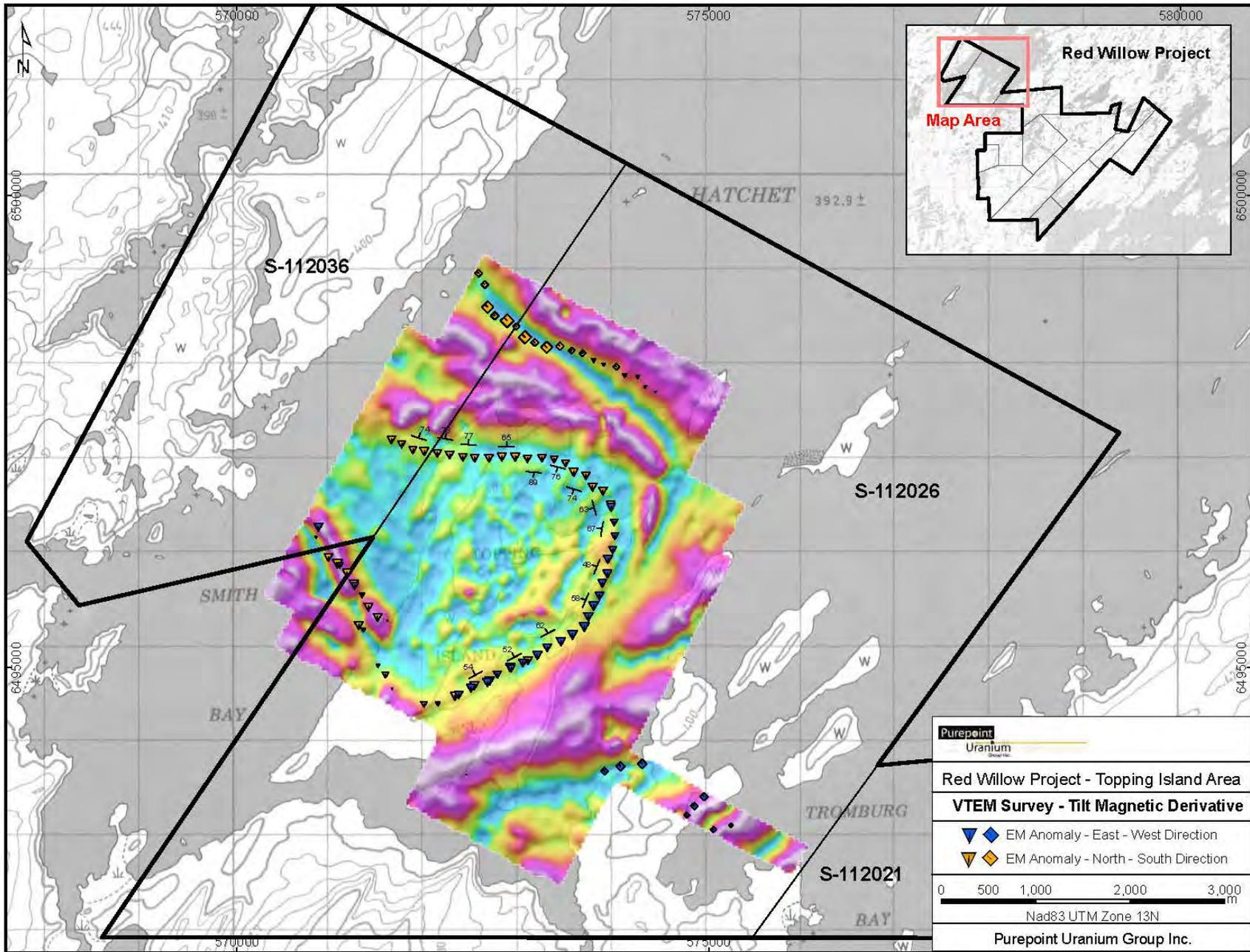


Figure 11: Red Willow Property VTEM Survey – Tilt Magnetic Derivative (Topping Island Area)

### *8.1.1 Quality Control*

Quality control of airborne magnetic and electromagnetic surveys include in-field data processing involved and compilation of data collected during the acquisition stage, using the in-field processing centre established at Points North, northern Saskatchewan. Preliminary and final data processing, including generation of final digital data products were done at the office of Geotech Ltd. in Aurora, Ontario.

### *8.1.2 Methodology of Interpreting VTEM Results*

The VTEM instrument is a pulse type or time domain transmitter with horizontal concentric receiver/transmitter coil configuration. The anomaly that the instrument provides is different for each type of conductor shape. Purepoint has defined four types of EM anomalies that include:

Type 1 - the response from a thin plate and will show two peaks on either side of the center of the plate. "Thin" means less than about 30 metres. A dipping plate will change the symmetry of the anomaly. The ratio of the amplitudes of the two peaks is used to calculate the dip;

Type 2 - a "wide" plate response that could represent a number of closely spaced bands of graphitic sediments or alternatively a broad deep area of very conductive overburden;

Type 3 – that typically represents conductive overburden; and

Type 4 - characterized by a positive single anomaly on the very early channels but which switch to negative readings in later channels. The type 4 anomaly has not been modeled adequately yet and the negative readings are believed to be an induced polarization effect. The current practice is to interpret these anomalies as a body of disseminated conductive particles.

### *8.1.3 Interpretation of VTEM Results*

The various conductive areas that were identified have been named (Figure 10) and individually reviewed, interpreted and described by Purepoint's Chief Geophysicist, Roger K. Watson, B.A.Sc., P.Eng. as follows:

#### **Geneva Basin**

The term Geneva Basin refers to two concentric U-shaped anomaly clusters lying in the western part of the block and beneath the Athabasca sandstone. The outer ring includes the Radon Lake and Lasby Lake anomalies. The inner ring is seen on both the NE and NW sets of flight lines and in fact would probably not have been recognized as a single ring had the two sets of lines not been flown. All of the profiles indicate a plate

source dipping at a shallow angle (30 to 45 degrees) inward to suggest a basin structure. All are of medium to high conductance, ranging from 15 to 23 channel anomalies.

The outer ring consists of the Lasby Lake and the Radon Lake anomalies, joined by a line that is seen in the pattern of the channel 13 field and which continues their arcuate shape. This outer ring also dips inward to but at a steeper angle, estimated from the VTEM profiles at 80 to 88 degrees, thus supporting the interpretation of a basin structure. The conductance at the Lasby Lake and Radon Lake is medium to high with a range of 13 to 25 channel anomalies. The Radon Lake anomaly extends southwest to the edge of the survey area in more or less a straight line and with lower conductance.

Both conductor axes conform to basement geology as shown in the pattern of the magnetic maps. None, except for a short part of the Radon Lake anomaly, have a direct magnetic expression. The magnetic anomaly referred to above also coincides directly with a topographic high ridge that is likely a glacial remnant and is the cause of the magnetic anomaly.

### ***Radon Lake***

The Radon Lake conductor forms part of the outer ring of the Geneva Basin, is uniformly strong (24 channels) and traverses eleven or so flight lines. It dips very slightly to the northwest (88 degrees) and lies in an area of radon gas anomalies found by earlier investigators.

Some inversion modeling was done on Lines 3110 and 3130 and produced conductive plates dipping as expected, steeply to the west. But they forecast depths of 250 to 300 metres which is believed to be erroneous. These are more likely to be at basement surface which is found at 10 to 26 metres from earlier drilling.

### ***Lasby Lake***

The VTEM anomaly over Lasby Lake is of high quality, similar to that on Radon Lake. Drilling on this conductor has shown it to be a thick package of graphitic-pyritic pelitic gneiss.

### ***Osprey***

The Osprey conductor is a strong type 1 anomaly seen on both the NW and NE trending survey lines. It forms an "S" shape and is shows a high conductance of 20 channel response or more on nearly all profiles. There is a general steep dip to the west of 85 to 75 degrees. It matches the bedrock structure as shown by the magnetic pattern,

although it does not have a direct magnetic anomaly itself. Maxwell inversions on the data from two flight lines indicate a shallow plate dipping steeply to the SW

### ***Dancing Lake***

The Dancing Lake area consists of a complex of three moderately to good conductive type 1 anomalies. It is in fact very complex, with the three main anomalies folded considerably and connected to each other. The principal anomaly is a 15 channel response, has a north-south trend and is dipping to the east at 70 degrees. A short three line cluster of 25 channel anomalies lies to the east of this and has a very steep dip, +/- 2 degrees to vertical. A third conductor axis of 22 channel anomalies may intersect this one to form tight fold.

Two of the three axes have a coincident magnetic anomaly. The north-south principal conductor axis lies on a longer narrow magnetic anomaly that resembles a thin dyke. The impression is that of a suite of a number of parallel, heavily folded conductive bands. The presence of the magnetic signature suggests sulphides while the multiple parallel conductors suggest graphite. It is difficult to measure the dip of a number of closely spaced anomalies and they should probably be treated as very steeply dipping.

### **333 Area**

The 333 conductor is a short but well-formed type 1 conductor, striking north-south and well defined on both the NW and NE aligned flight lines. But there is uncertainty in regard to the dip between the two sets of flight line data, one the NE lines showing a west dip and the other an east dip direction.

The anomaly conforms somewhat to the bedrock structure as shown by the magnetic field map. It would appear to be a short but massive bed plane of graphitic sediments.

### ***Topping Island***

The curved, horseshoe shaped conductor seen in fragments on previous EM surveys was clearly displayed in the results of the 2013 EM survey (Figure 11). The survey also identified several small but definite lateral displacements of the conductor axis which can be confidently interpreted as faults. Most of these offsets in the conductors are well supported by lateral displacements in linear magnetic features.

The shape of a VTEM anomaly provides a good indication of the dip angle of a plate-like conductor and has been calculated on a number of the lines. For the eastern two-thirds of the primary conductor axis length, the dips are inward, suggesting a basin structure. But halfway along the north arm the dip rather suddenly changes from into the curve to outward suggesting a complex structure, possibly a syncline plunging to the west with some other movement on the north flank.

Weak anomalies at the very south part of the survey area look as though they might join the two EM axes, but close inspection of the profiles in this area rules this out. The three flight lines that extend to cover part of the United Carina HLEM grid to the east confirm the existence of weak type 5 conductors.

### ***Lyon Lake***

A very well defined type 1 anomaly crossing 18 flight lines with a consistent 16 to 18 channel response, dipping vertical, lying along the contact between magnetic and non-magnetic rock type. The anomaly is typical of massive graphite beds.

### ***Riche Lake***

A very low amplitude conductor of moderate (14 channels) conductance that was attractive due to the presence of some radioactive boulders in the vicinity. The anomalies have been classified as type 1 although some could just as easily be type 4 because of the negative part in the later channels. There is no magnetic signature other than a general conformation to the strike direction of the bedrock shown by the magnetic field pattern. The anomaly is interpreted as minor graphitic bedding, probably somewhat disseminated.

### ***Long Lake***

A linear east-west anomaly, 16 to 21 channels, unbroken for  $\frac{3}{4}$  of its length and then broken into two parts at the east end. The anomaly dips to the north from 46 to 75 degrees. The central broken part is oriented NW-SE and is slightly less conductive. The west part resumes the E-W orientation and shows about 24 channels.

Most of the conductor axis does not have any magnetic expression other than conforming to the general strike direction of the bedrock pattern as seen in the magnetic field map. A short part of the main anomaly shows correlation with a 25 NT magnetic anomaly which may indicate pyrrhotite as part of the conductive material. The anomaly is considered characteristic of graphite sediments.

### ***Big Bay***

The Big Bay conductors are a cluster of three conductors dominated by one strong (23 channels) axis that has a 350 NT coincident magnetic anomaly. At least two other weaker and less well defined conductor axes make up the complex. The main anomaly strikes east-west and dips noticeably to the north, 66 degrees at the west end, 50 degrees at the east. This conductor is similar to the Dancing Lake in that there are

several conductors running parallel and close together. Again the magnetic signature indicates sulphides while the banded nature perhaps more likely graphite.

### ***Cunning Bay***

The Cunning Bay anomaly is a twelve kilometre long linear conductor axis that breaks into a small number of parallel axes toward the northeast end. Conductance is high and fairly uniform along its length and it lies in a mainly negative magnetic anomaly trough. Most of it lies under Wollaston Lake. The dip of the conductor was calculated from the VTEM profiles as being towards the southeast at 85 to 60 degrees.

These anomalies are completely characteristic of graphitic sediments. The VTEM profiles are well formed, free of noise and the anomalies are clearly defined and could be used to position drill hole targets if follow up drilling is planned.

### ***Boundary***

A very well defined VTEM anomaly crossing about nine flight lines with a strong amplitude, and then continuing southwest for another 2 kilometers with reduced intensity. To the northeast it continues for a few lines and then turns southwest to form a very clear U-shaped fold. The arms of the fold are about 900 metres apart and both dip to the southeast, ranging in dip from 60 to 75 degrees. The conductor axis conforms exactly to the basement geology as outlined in the magnetic maps, particularly the vertical gradient, which shows a magnetic core on the inside of the fold.

### ***Dominic***

The Dominic anomaly appears to be a continuation of the Cunning Bay anomaly to the northeast. It continues to lie in a magnetic low and like the Boundary conductor forms a U-shaped fold. The dip of both arms of the fold is to the southeast, at about 70 degrees. The shape of the conductor conforms well to the bedrock geology as seen in the magnetic patterns.

### ***Horse Lake***

The Horse Lake conductor is a good quality type 1 anomaly crossing 17 flight lines with a high conductance ranging from 16 to 23 channels. The main part strikes northeast but a splay section cuts off part way down to the west. The splay is less conductive, showing on about 15 channels. There is no real magnetic signature; it does not really conform to the bedrock structure displayed by the magnetics nor does it have a directly coincident magnetic anomaly. The main part of the conductor dips at 90 degrees on average, although this varies from 80 degrees SE to NW along its full length. The splay dips at about 70 degrees to the south.

The conductor is somewhat different from those discussed up to now because of its non-conformity to the basement geology as shown in the magnetic pattern. This would suggest that perhaps it is controlled by faulting than by stratification. The conductor is considered to be characteristic of massive graphite.

### ***Jeffrey and Marcus***

These two conductor axes are very similar in character to the Dominic and Cunning Bay conductors in that they are composed of moderate to good conductance anomalies, lie entirely within non-magnetic rock, and conform to the bedrock structure as seen in the magnetic maps. The Jeffrey conductor forms an S-shaped pattern, again conforming well to the magnetic pattern in the vertical gradient map.

### ***Crochet***

The Crochet conductor axis is a combination of type 1 and type 4 anomalies and as such is interpreted as a conductor that is composed of disseminated particles at each end and is more massive in the middle. It lies along a contact between rock types of high and low magnetic susceptibility as seen in the magnetic pattern. The dip is relatively shallow, 47 degrees to the southeast. As with the Horse Lake conductor, it is most likely to be at bedrock surface, some 30 metres depth at most.

### ***Rapids***

The Rapids conductor is a trend of long (3+ km) type 4 anomalies that has a partial correlation to a linear magnetic anomaly. At present it is mainly of academic interest and until more is understood about the type 4 anomaly, this is not given a priority for further investigation.

### ***Turkey***

The Turkey anomaly is a high quality conductor axis that is seen on both sets of flight lines (NE and NW trending). Its conductivity is high with the anomalies on the southern lines being seen on all 26 channels. It has high amplitude and exhibits virtually no noise. The dip is to the east, 78 to 85 degrees. It lies in a magnetic low, conforms reasonably well to the bedrock structure as outlined by the magnetic maps and has all of the characteristics of massive graphite.

### ***Ghost Lake***

Ghost Lake is a moderate conductor ranging from 12 to 17 channel activity with an S shape and a small spur leading off to the southeast. It conforms reasonably well to the contact between rock types of differing magnetic susceptibility. It is interpreted as a plate dipping to the east, 86 degrees at the north end and more like 70 degrees toward the south, and has the characteristics of graphitic sediments.

### ***Turkey East***

The Turkey East is a short axis of rather minor type 4 anomalies that normally would be disregarded, except that it leads directly to a uranium channel radiometric anomaly. There is some conformation to a magnetic anomaly seen on the vertical magnetic gradient map. The EM anomaly is interpreted as caused by disseminated graphite sediments.

### ***Mustang***

The Mustang is a conductor group composed of two parallel axes of type 1 and type 4 anomalies. The type 4 anomaly is thick massive clay alteration at the unconformity proven from diamond drilling. The conductor may also connect across the unsurveyed portion of the property to a similar group some 2 km to the northeast.

#### ***8.1.4 Enhancement of Total Magnetic Field***

The airborne survey also measured the total magnetic field and produced a map and a database channel of total magnetic intensity. The magnetic field has been enhanced by computing the Tilt Magnetic Derivative (Figures 10 and 11), which assists in mapping bedrock geology, and in understanding the host rocks for the E.M. conductors.

## **8.2 Airborne Radiometric Survey**

During the period of July 8<sup>th</sup> to 14<sup>th</sup>, 2007, an airborne high resolution radiometric survey was flown over all the Red Willow claims. A total of 2,636 line-kilometres of data were acquired by the survey. The specifications of the survey were designed to provide better than average sensitivity by using large crystals in a helicopter flying at low speed and low ground clearance. Calculations from the final database show the speed was 99 +/- 10 kph and the ground clearance was 36 +/- 9 metres. The total crystal size (downward) was 33.6 litres or 2215 cubic inches.

### *8.2.1 Quality Control*

Daily quality control, post-processing of GPS positions and archiving of the data were completed by MPX at the Richmond Hill, Ontario office using Geosoft's OASIS Montaj software and a PC computer.

All data were verified upon receipt, and checked against the flight logs. Images of the collected data were forwarded to the client daily.

The final data processing, map and report preparation was completed by MPX at the Richmond Hill, Ontario office.

### *8.2.2 Corrections of Airborne Radiometric Data*

Gamma-ray spectrometer surveys are utilized for mapping the concentration and distribution of naturally occurring radioelements. The use of an airborne gamma-ray spectrometer allows for the in-situ analysis of radioelement concentrations of naturally occurring Potassium (K), Uranium (U) and Thorium (Th) in the field.

Radioactivity measurements from an airborne platform are dependent upon the detection of gamma rays produced through radioactive decay of the nuclide to be detected. Only three radioactive elements emit sufficient gamma radiation to be measured by airborne methods.

The three major sources are:

- Potassium-40 ( $^{40}\text{K}$ ) which comprises 0.011% of all potassium
- Daughter products from the  $^{214}\text{Bi}$  ( $^{238}\text{U}$ ) decay series,
- Daughter products from the  $^{208}\text{Tl}$  ( $^{232}\text{Th}$ ) decay series.

High energy cosmic rays of non-terrestrial origin can be detected by airborne gamma-ray spectrometer surveys. This cosmic radiation interacts with molecules in the atmosphere, the aircraft, and the NaI detectors resulting in the production of high energy radiation. This radiation is detectable and increases exponentially with height above sea level and must be compensated for to obtain reliable and repeatable measurements and detection of terrestrial radiation sources.

Care must be taken during the acquisition of gamma-ray spectrometer data as the contribution from radon gas and related decay products in the atmosphere can result in misleading count rates. Radon gas can also diffuse from the ground, but only one radon nuclide is directly related to the Uranium decay series. In order to minimize the impact of radon "contamination", radiometric surveys are not completed during rain (since it "washes" radon from the air and increases ground concentrations) or fog conditions and for a period of not less than 2 hours after precipitation has finished in order to allow for dispersion of radon gas to normal background levels.

Radiometric surveys have limited depth penetration; most radioactive sources being within the upper 1.5 metres of the ground. Radiometric surveys are therefore not effective over water bodies or snow covered areas, the presence of water (in either liquid or solid state) effectively masking radiometric sources.

### *8.2.3 Discussion of Radiometric Survey Results*

Some forms of data enhancement were carried out by the Toronto office of Purepoint Uranium Group for this interpretation. To emphasize uranium anomalies, the data is presented as a coloured grid with a lower limit that has been clipped at about the lower background level so as to obtain a more useful spread of colours in the color table. Values below 1.2 equivalent uranium were removed and this had the effect of removing most values over water and some swamp areas. The grid is displayed using a linear scale to emphasize maximum peak values. The resulting uranium channel map was overlaid with the location of VTEM anomalies axes (Figure 12).

Five anomalous areas were selected that warrant follow up field inspections.

Anomaly A is clearly on an extension of a small VTEM anomaly axis.

The B anomaly is seen on five flight lines with a peak value at 8 ppm over the average background of 1.5 ppm. It has a strike length of 600 metres and may be connected to a VTEM EM anomaly.

Anomalies C and D are of similar strength but are connected to a strong regional anomalous areas (Scrim Lake) explored earlier by Gulf Minerals.

Anomaly E is of lower intensity (4.5 ppm) but lies on a conductor axis.

The ternary map shows the potassium rich Archean rocks contrasted to the Proterozoic sediments by the increase in the potassium channel. The contrast is reasonably well defined and has been used to map the eastern contact of the Athabasca basin in the claim block (Figure 9).

## **8.3 Boulder Prospecting**

A boulder sampling survey was conducted during July 2006 to definitively map out the historic Long Lake radioactive boulder train and attempt to follow it to its source (Figure 13). The survey also attempted to discover new occurrences of radioactive boulders to focus exploration efforts on. A total of 84 boulder samples were submitted to SRC for analysis of major and trace elements using two different digestions, partial and total, similar to the till samples.

In 2011, a boulder prospecting program covered areas north of the Lasby Lake camp, and those within the Dancing Lake and Big Bay targets (Figure 14). Targets were

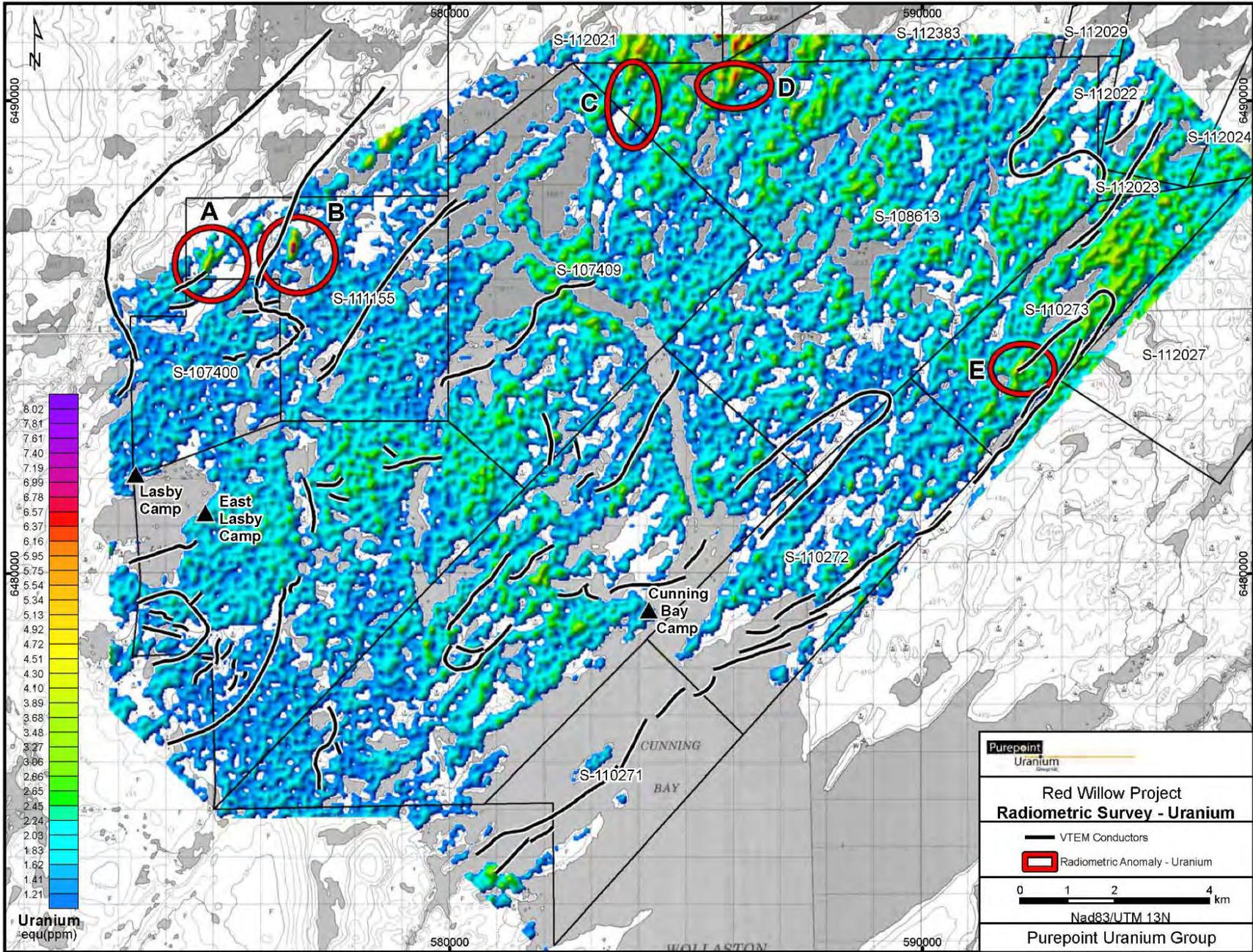


Figure 12: Airborne Radiometric Survey Results – Uranium Channel (South Red Willow)

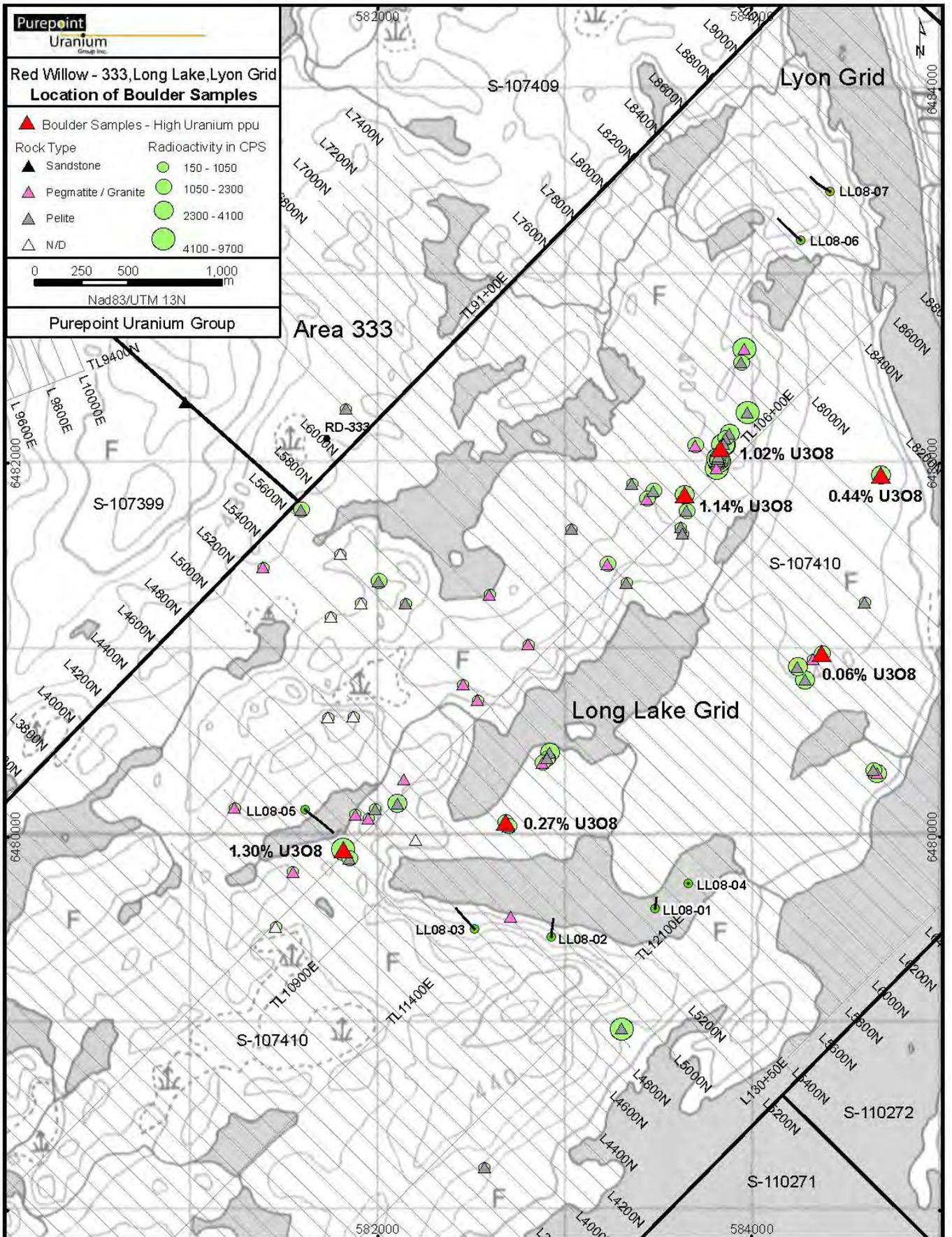


Figure 13: Boulder Sample Location Map – Long Lake Area (2006)

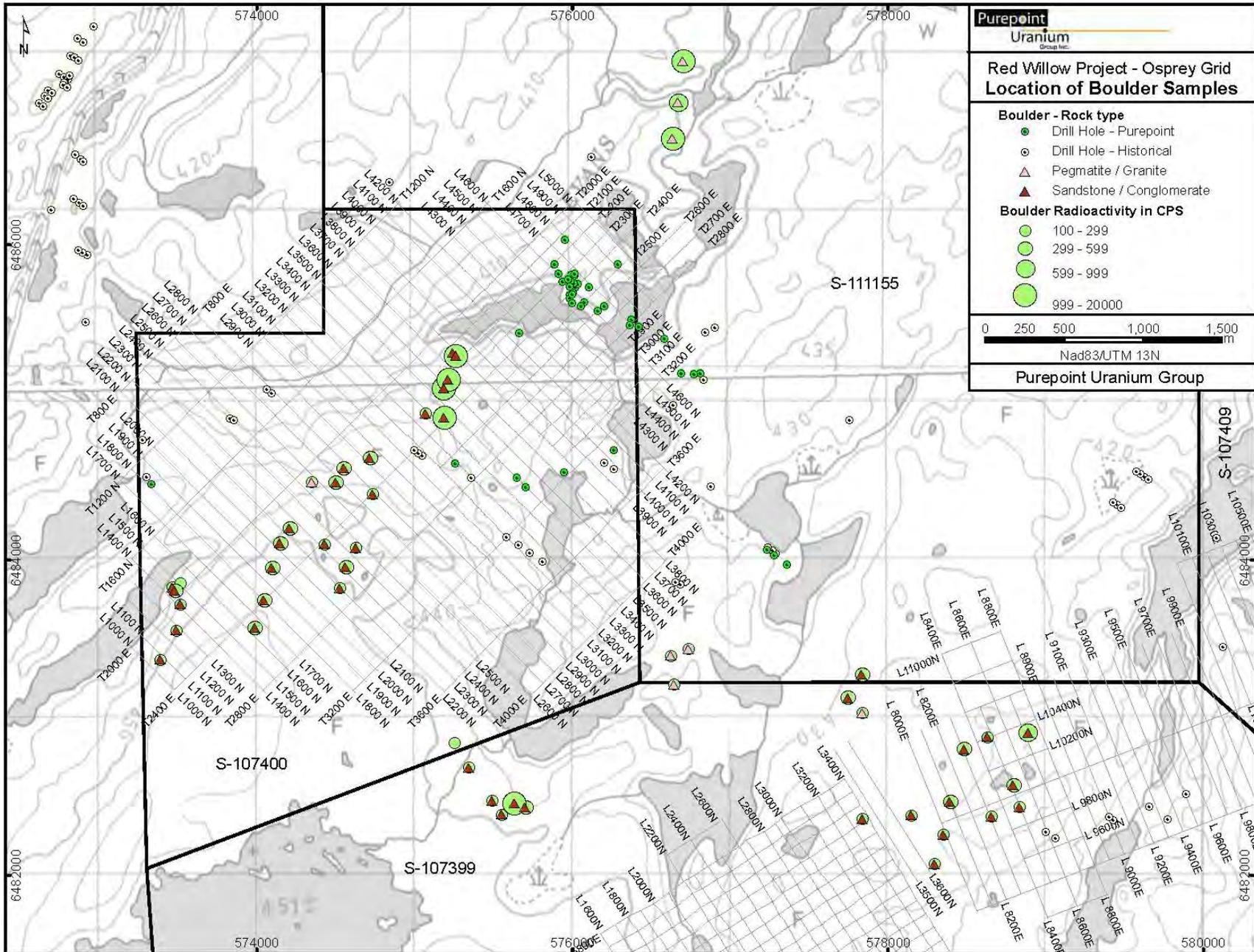


Figure 14: Boulder Sample Location Map – Osprey and Big Bay Areas (2011)

prospected for uranium anomalies, generated by reprocessing the airborne radiometrics data. Samples comprised 44 sandstones with conglomerate, 7 granitic gneisses, and one granite boulder. A total of 6 sandstone boulder samples were collected for assay where CPS readings were found to be particularly high.

### *8.3.1 Sampling Method, Preparation and Analysis*

During the two prospecting programs, CPS readings were taken using a GR110 Scintillometer.

Samples for assay were sent to, and analysed by, Saskatchewan Research Council Geoanalytical Laboratories of Saskatoon, Saskatchewan. The samples were analysed by method of fluorimetry and Inductively Coupled Plasma with Optical Emission Spectroscopy (ICP-OES) for partial digestion values of Ag, As, Bi, Co, Cu, Mo, Ni, Pb, Sb, Se, U, V, and Zn as well as total digestion values of Ag, Al<sub>2</sub>O<sub>3</sub>, Ba, Be, CaO, Cd, Co, Cr, Cu, Fe<sub>2</sub>O<sub>3</sub>, K<sub>2</sub>O, Li, MgO, MnO, Mo, Na<sub>2</sub>O, Nb, Ni, P<sub>2</sub>O<sub>5</sub>, Pb, Th, TiO<sub>2</sub>, U, V, Zn, Zr, and B.

### *8.3.2 Discussion of Results*

The 2006 Long Lake survey documented boulders of granite, biotite schist, pegmatite, meta-sediment and amphibolite. A highlight of the boulder sampling was 1.30% U<sub>3</sub>O<sub>8</sub> returned from an autunite and biotite bearing quartz vein hosted in a biotite gneiss (metasediment) boulder located west of Long Lake (Figure 13).

The 2011 survey mapped sandstone boulders that were sub-rounded to angular, while the granitic gneisses and granite boulders were both sub-rounded. Conglomerate boulders with anomalous radioactivity were mapped at the locations of airborne uranium anomalies and were interpreted to be either in-situ or close to their source based on their angularity and location.

## **8.4 Geochemical Surveys**

Geochemical surveys including soil, vegetation and tree core sampling were completed during 2012 with the objective of confirming historic anomalous geochemical occurrences and to identify new exploration target areas. Soil sampling covered the Osprey, Geneva, Cross and Recon areas while the vegetation and tree core sampling only covered the Cross and Recon areas.

### *8.4.1 Sampling Method, Preparation and Analysis*

All soil and vegetation samples were analysed by Acme Analytical Laboratories (ACME) in Vancouver, British Columbia. Tree core samples were analysed by Queen's Facility for Isotope Research (QFIR) in Kingston, Ontario.

The soil samples consisted of an average 1kg sample collected using a stainless-steel serrated soil scoop; the material then transferred into a large Ziploc-brand freezer bag for storage and transportation. Samples targeted the clay-rich “B” and “C” horizons; however “A” horizons were collected in boggy and peat-rich areas where the development of B and/or C horizons were lacking. Each vegetation site consisted of two sample types: a cuttings sample of twigs and needles, referenced as vegetation, and a tree core sample. Both vegetation and tree core samples were collected preferentially from black spruce (*Picea mariana*) or jack pine (*Pinus banksiana*) when black spruce was not available at a sample site and were recovered using a pruning tool and a tree corer respectively. Preparation methods for all three media types are detailed below.

Clay separations for soil samples involved ~500g of sample being loaded into a 2L nalgene bottle with 1L of de-ionized (DI) water and 1 tsp of Calgon and sonicated for two minutes. The solution is then decanted into 4x 250ml centrifuge bottles and spun at 2500rpm to pull out coarse material. The solution is decanted into a second set of centrifuge bottles and spun at 8000rpm to pull the less than 2  $\mu\text{m}$  fraction out. The remaining solution is discarded and the clay on the bottom of the bottle is suspended in a small amount of DI before final drying to recover the clay. Once the clay fractions are separated from the soil, the samples were sent to the lab to undergo the Acme’s 1F aqua regia analysis package.

Each vegetation sample consisted of two types of material; needles and twigs. The needles were chosen as the preferred material for analysis. In order to prepare the needles, they were first separated from the twigs before undergoing Acme’s ashing procedure. This involves ~100-200g of dry needle material being weighed in 200-400ml beakers (rough pre-milling is required for some types of samples). The beakers are placed in the oven with a temperature profile of 4 hour ramp up to 475C, followed by 16 hours held at 475C, followed by a 4 hour cool down. Ash product is weighed and transferred to plastic bags and sent for Acme’s 1F analysis.

For both soil and vegetation samples, the 1F analysis involves an aqua regia digestion designed for low to ultra-determinations. Samples are analysed by ICP-MS and ICP-OES for 68 elements, including lead isotope analysis and REE analysis.

#### *8.4.2 Quality Control*

The SRC laboratory ran multiple standards and repeats when analysing the geochemical data. The results for each standard were averaged for the 10 elements of interest, namely U, Mo, V, Pb206, Pb207, Ni, Co, Zn, B and LOI, and visually inspected against the average to estimate the variance. The repeatability of the standards is shown to quite good with minimal variation. The SRC lab duplicates provided good repeatable results.

### 8.4.3 Discussion of Results

The geochemical sampling at Red Willow produced several areas of interest. After analyzing the geochemical samples results from all three surveys, eight areas of interest were chosen. Anomalies 1 to 4 are located in the Geneva Area (Figure 15), anomalies 5 to 7 are located in the Cross and Recon Areas (Figure 16) while anomalies 8 and 9 are located in the Osprey area (Figure 17). The location of vegetation and tree core anomalies are circled in blue and red (Figure 16).

Anomaly 1 is a multi-element anomaly that appears within the main Geneva area at the nose of two VTEM conductors and is coincident with a gravity low. The anomaly includes 4.2ppm U, 87 ppm V, 44.6 ppm La, 100.8 ppm Ce, 7.65 ppm Cu, 10.2 ppm Ni, 26.9 ppm Li and a radiogenic  $^{207}\text{Pb}/^{206}\text{Pb}$  value of 0.56. It is still considered significant given its coincidence with the gravity low, interpreted structure and VTEM conductors. No vegetation sampling was done over the Geneva area.

Anomaly 2 is a multi-element anomaly that appears within the main Geneva area. This area is anomalous in U and elevated in Ce, La, Zn, and a radiogenic Pb isotopic signature. Although the target is anomalous in pathfinders, it is located in a resistivity and electromagnetic high.

Anomaly 3 is in the Geneva zone has been interpreted outside the Geneva conductor which extends from the end of a VTEM conductor to the SE of the main Geneva conductor through holes RAD-07, 08 and 09. This arcuate feature is also characterized by elevated Ni, Cu, Ce, La, Li, and a radiogenic Pb isotopic signature. This anomaly is located over a granite confirmed by drill hole 12RDW003.

Anomaly 4 is elevated U, Ni, Cu, Zn, Ce, La, Li and a radiogenic Pb signature and is coincident with an area of low gravity along the northern portion of the Geneva conductor. This anomaly occurs along the curved Geneva conductor in a gravity low and magnetic high.

Anomaly 5 is located in the Cross area (Figure 16) and contains a moderate uranium anomaly with three samples returning uranium between 3.2 ppm and 3.7 ppm. This same area also shows elevated Cu, Ni, Mo, As, Li, La, Ce and a radiogenic Pb signature.

Anomaly 6 is located in the Recon Area and returned a uranium value returned of 10.6 ppm located along a northeast trending lineament extending from the area surrounding the CBA series of DDH's, approximately along the hinge line of prominent magnetic low features. Several other elements appear to highlight this trend, including La, Ce, Cu, Ni and radiogenic Pb isotopes. The area surrounding the CBA series DDHs that is at the southern extent of the anomaly which is also a highlighted with a vegetation anomaly in blue (Figure 16).

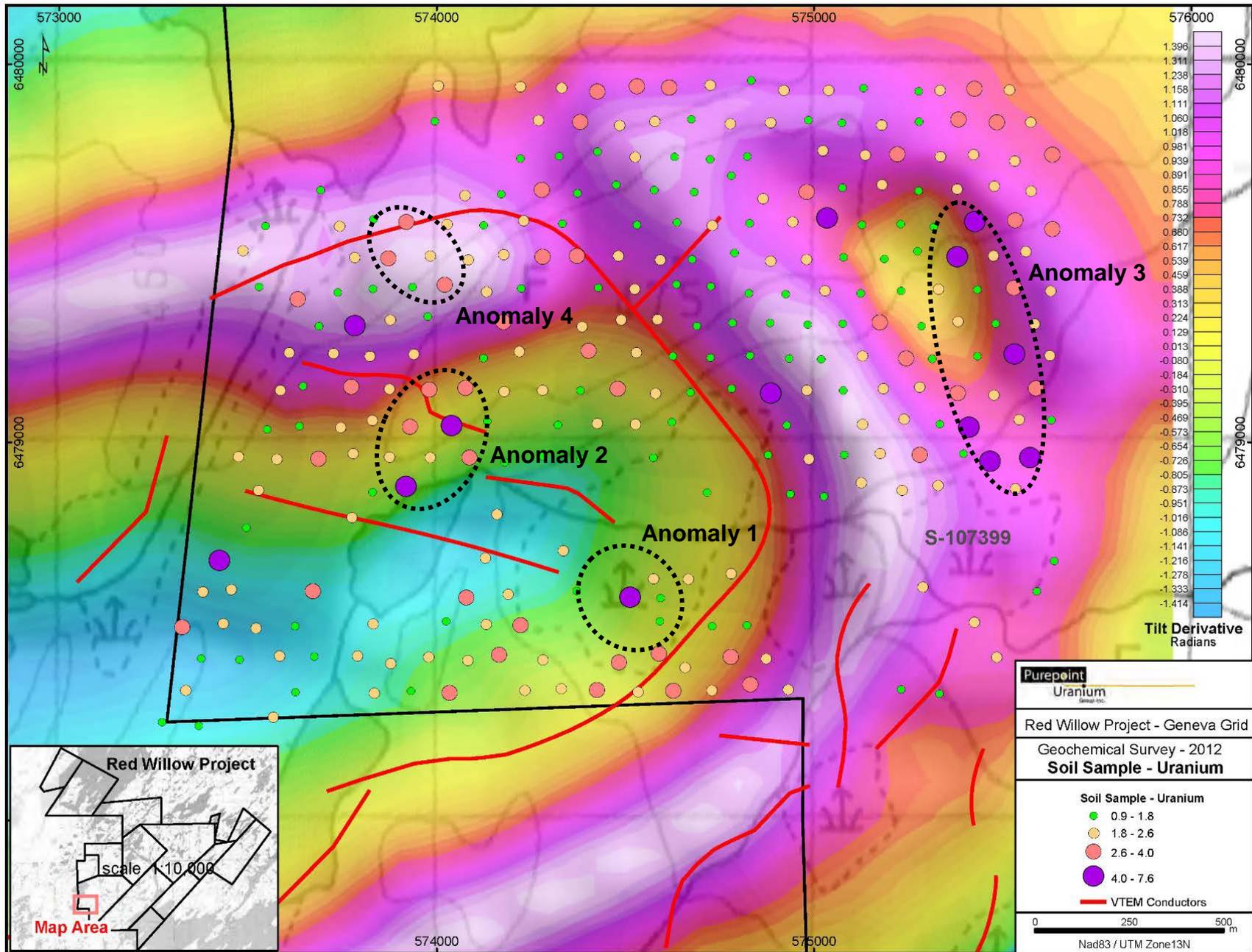
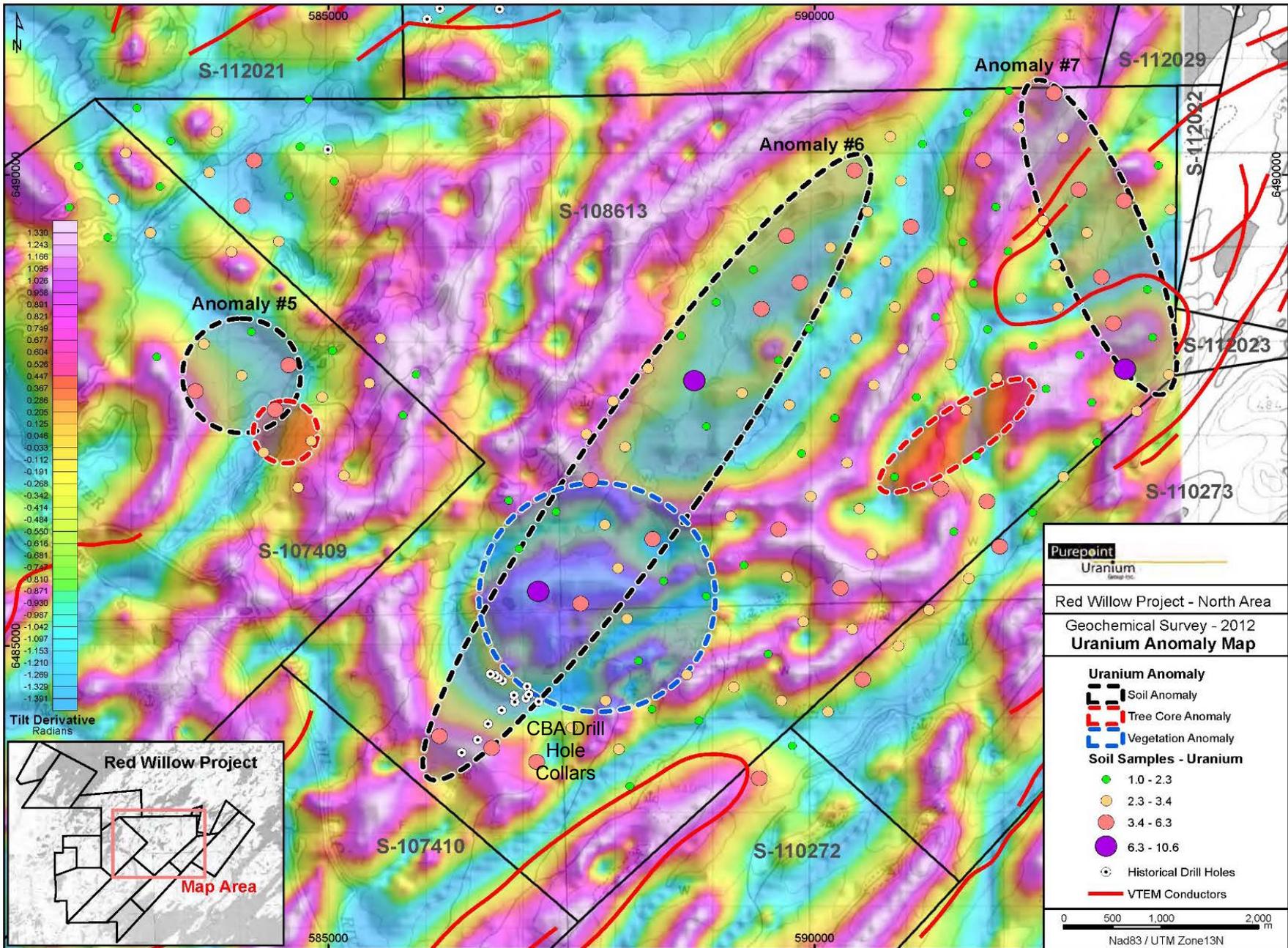


Figure 15: Soil Sample Uranium Results – Geneva Area



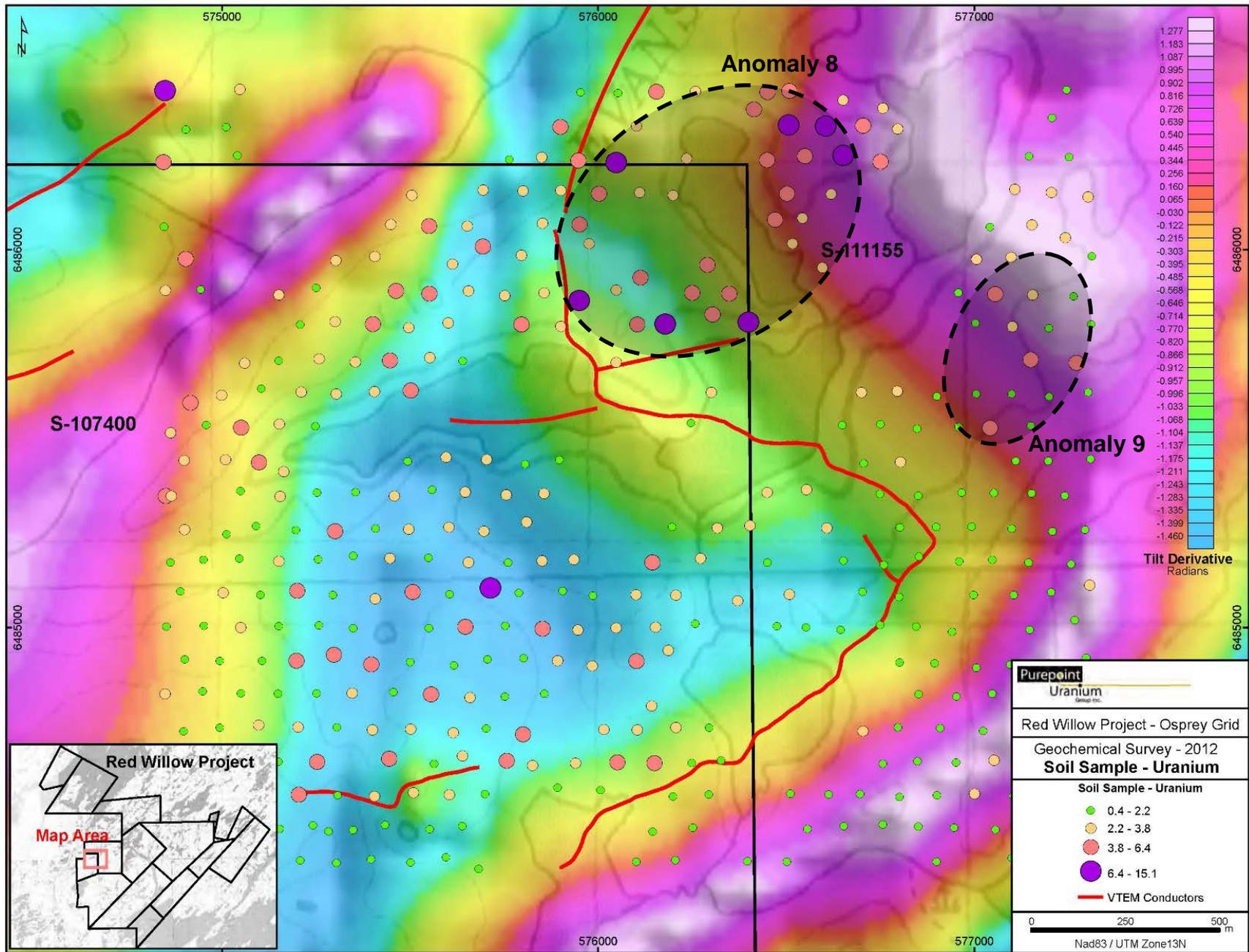


Figure 17: Soil Sample Uranium Results – Osprey Area

Anomaly 7 trends approximately north-south and is located at the northeast corner of the Recon grid as is also associated with elevated Cu, Ni, Ce, La, Li and radiogenic Pb isotopes. This area also appears to have both northeast trending and east-west trending fault systems as interpreted from magnetics along with an arcuate VTEM conductor.

Anomaly 8 is located in the Osprey area (Figure 17) that located a multi-element anomaly in the vicinity of known mineralization within the Osprey conductor and extends approximately 1km to the northeast away from the conductor. The anomaly includes elevated U (max 12.8ppm), base metals such as Ni (81.1ppm), Cu (101.87ppm), and Zn (343.2ppm), REE's La (90.8ppm), and Ce (255.4ppm), as well as other trace elements such As (14.6ppm) and V (339ppm).

Anomaly 9 is a northeast-southwest trending lineament of elevated U extending from the Osprey hinge area.

When comparing tree core results with vegetation and soils in the Cross and Recon grids it appears there is little correlation (Figure 16). For example the uranium anomaly seen in both soil and vegetation samples NE of the CBA series of drill holes is not evident in the tree core samples. The anomalies identified in the tree core samples are not evident in soil or vegetation samples which can possibly be explained by biological filtering of elements by the trees, which could affect relative concentrations of those elements in different parts of the plant (i.e. needles vs. cored trunk wood).

#### *8.4.4 Conclusions*

The soil and vegetation sampling programs is considered to be a low-cost exploration technique that is useful in delineating targets over a large area relatively quickly. The results of the vegetation and soil anomalies are comparable and occasionally overlap.

### **8.5 Ground Geophysical Surveys**

The grids established on the Red Willow project during 2007 were utilized for several types of geophysical surveying including Induced Polarization (IP), electromagnetics (EM) and gravity (Table 2).

Gradient and pole-dipole IP surveys were carried out on several parts of the Red Willow claim block by Peter E. Walcott and Associates Ltd. of Vancouver, B.C. during the period August to October, 2007. A three dimensional resistivity survey was also carried out over several areas by SJV Geophysics Ltd. of Vancouver, B.C. during the period January to March, 2007.

**Table 2. Summary of Ground Geophysical Surveys**

Grid	Induced Polarization			Electromagnetics (EM)		Gravity (line/km)
	Line-cutting (line/km)	Gradient (line/km)	Pole-dipole (line/km)	Fixed-loop (line/km)	Moving-loop (line/km)	
Geneva	34	29				31
Radon	32	31				14
Osprey	112	19	26	115	33	25
Long Lake / 333	174	31	60		75	
Dancing Lake	67	60				
Big Bay	63	22				

Gradient array resistivity was conducted by Patterson Geophysics Inc. (PGI) of La Ronge, Saskatchewan surveying over the Osprey West grid, and recent extensions of the Dancing Lake and Big Bay grids during the period August to September, 2011.

A gravity survey was carried out over portions of the Osprey and the Geneva grids in February 2007 by Excel Geophysics Inc. of High River, Alberta. A second gravity survey was also conducted over the Geneva and Radon grids between January and February, 2012 by Eastern Geophysics Ltd. of West Pubnico, N.S.

#### *8.5.1 Induced Polarization – Gradient Array Methodology*

The gradient array IP/resistivity surveys were designed to confirm and evaluate airborne EM anomalies, and to investigate whether the measurement of chargeability and resistivity would be useful in locating the alteration halo minerals that are associated with uranium deposits. The gradient array is more of a mapping tool and displays the chargeability and resistivity as surface maps much like a magnetic survey.

The IP/resistivity survey was carried out using and IRIS Instruments ELREC Pro time domain IP-Resistivity receiver, a Walcer TX 9000, 9+ KW IP transmitter, and a Walcer MX6 or MG-12 motor generator. Stainless steel rods were used for the current and potential electrodes.

The gradient electrode array involves establishing 2 infinite current electrodes approximately a distance equal to the survey line length, parallel to and off both ends of a line in the center of the survey area. The two current electrodes remain fixed for a number of survey lines in both directions until the primary voltage signal becomes too weak to obtain a reliable reading. The two fixed current electrodes are hooked to a transmitter via #14 gauge wires and a “Square Wave”, 2 second on 2 seconds off pulse is applied across the 2 electrodes. This creates a relatively deep current path between the two current electrodes. A pair of potential electrodes, attached to a Time Domain IP Receiver is moved up and down the survey lines, recording the “IP” effect (chargeability) and apparent resistivity values. An apparent resistivity reading, and on some grids a chargeability reading, were recorded at each 25 meter station along the grid lines using a potential dipole spacing of 50 meters, moving every 25 meters. When the primary voltage signal recorded across the receiver potential dipole became too

weak on lines further away from the current dipole, the two current electrodes were moved to the approximate center of the next survey rectangular area.

Parameters digitally recorded in the ELREC Pro receivers for each potential dipole location included:

- decimal chargeability for 20 separate window widths
- cumulative average of the total chargeability and its standard deviation
- type of decay curve measured
- primary voltage
- current intensity
- self-potential
- apparent resistivity
- contact resistance for each electrode
- grid co-ordinates for each electrode

The gradient resistivity and chargeability results are plotted as coloured contour plan maps using Geosoft Inc.'s data processing software.

### *8.5.2 Induced Polarization – Pole-dipole Array Methodology*

The 3D-IP technique is a modified pole-dipole configuration that uses current electrodes and receiver electrodes located on adjacent lines. Under these conditions, multiple current locations can be applied to a single receiver electrode array. The system of electrode emplacement enables inversion software to calculate the resistivity in volume pixels (voxels). Vertical sections in any direction and plan maps of any layer can then be drawn showing contoured images of calculated resistivity.

In a common 3D-IP configuration, a receiver array is established, end-to-end along a survey line while current electrodes are located on two adjacent lines. The survey typically starts at one end of the line and proceeds to the other end. A typical 12 dipole array normally consists of one 300m dipole, followed by one 200m dipole and then nine 100m dipoles, and a 200m dipole at the end of the array. In some areas these spacings are modified to compensate for local conditions such as inaccessible sites, streams, and overall conductivity of ground. Current electrodes are advanced along the adjacent lines, starting at approximately 1000m from the center of the array and advancing approximately 1000m through the array at 100m increments. At this point, the receiver array is advanced 600m and the process is repeated down the line. Receiver arrays are typically established on every second line (400m apart) thereby providing subsurface coverage at 200m increments.

The typical pole-dipole array was also conducted using a 100-meter dipole spacing with six "n's" or dipoles. Because of the extremely high impedance of the ground contacts, water and salt were applied to the moving current electrode to increase the output current with mixed results.

The same parameters as the gradient pole-dipole array surveys were recorded by the ELREC Pro time domain receiver for each potential dipole location:

The Inversion Program (DCINV3D), developed by the UBC-Geophysical Inversion Facility was used by the SJ Geophysical Group to invert the 3D-IP resistivity data. Purepoint also used the UBC inversion code as well as the RES2DINV software to invert the pole-dipole IP results. Geosoft's data processing software is used to slice the 3D-IP inversion results at various orientations.

### *8.5.3 Transient Electromagnetic Survey Methodology*

Purepoint's Chief Geophysicist, Roger K. Watson, P.Eng. has reviewed and interpreted the results of the TEM surveys. The anomalies were evaluated with respect to their quality as electromagnetic conductors and in relation to other geophysical data. Quality control was ensured by repeating 5 to 10 Read Stations per day. The average repeatability was 1% in early channels and the worst result being 2%.

The TEM survey was designed to inspect and confirm airborne E.M. anomalies, and it utilized the stepwise moving loop (SWML) array with transmitter coil movements of 200 metres. The size of the transmitter coil on all lines was 200 x 400 metres. The anomalies are 'picked' from profiles displayed on a Geosoft database format.

Modeling shows that conductor axes are located under local maxima and minima on the x channel and at points of inflection on the z channel. The y channel shows a 'cross-over' for conductors crossing the traverse line at an angle, and which disappears when the conductor crosses the traverse line at exactly 90 degrees.

To help find points of inflection and local maxima and minima the profiles are smoothed using a low pass filter where needed, and the first difference is calculated for the last five channels. Some points of inflection are difficult to pick but will show a maximum or minimum on the first difference. An x channel maximum or minimum will show a profile passing through zero on the first difference.

The anomaly picks are assembled on a spreadsheet and plotted as in Figure 18. There is always some variation in the location of the conductor from loop to loop but this can be resolved by grouping them, assigning a letter, and then calculating the average location in local co-ordinates. The average value is the most probable location and should be used to position a vertical drill hole. The standard deviation is the uncertainty that can be expected in the positioning.

### 8.5.4 Gravity Survey Methodology

The purpose of the gravity surveying was to see if the gravity field would supply additional information about the geological structure in the vicinity of VTEM conductor axes. Gravity and elevation readings were typically obtained at 50m intervals along cut lines spaced at 100 metres. Some readings were at 25 meters for infill stations. The survey was conducted with a LaCoste & Romberg model G gravity meters, Leica - model 1230 Dual Frequency RTK, DGPS Base Station and Rovers, and an Alegro CX dataloggers. The data was manipulated using Geosoft geophysical software and Leica Geo-Office GPS software

All the gravity data has been calculated or reduced to Bouguer mgal. values. These calculations correct for the following parameters (1) elevation, free- air correction, instrument height; (2) latitude correction; (3) tide correction on a daily basis; (4) instrument drift; and, when required; (5) water depth & ice thickness; and (6) terrain corrections. In order to verify the accuracy of these corrections, 5.26% of the readings were observed again as random repeat readings. Repeat readings were to be no greater than 0.05 mgal.

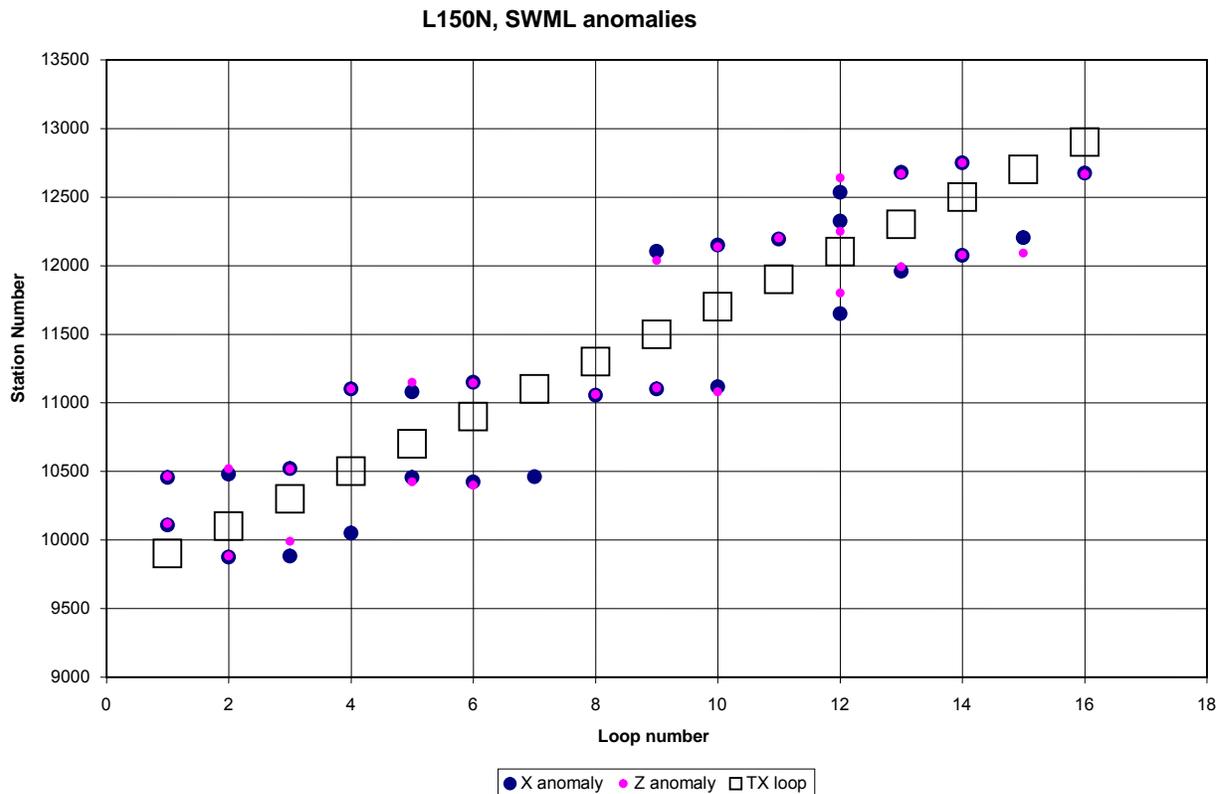


Figure 18: Example of TEM Spreadsheet Diagram

### 8.5.5 Osprey Area - Results and Conclusions

The ground geophysical surveys conducted at the Osprey area of Red Willow are summarized within an index map (see in Figure 19).

The Osprey conductor, the S-shaped conductor that cuts through the area, is a strong, noise free VTEM anomaly, and its path can be seen clearly in the resistivity pattern (Figure 20). Values as low as <30 ohm metres are seen along the length of this conductor which would be interpreted as indicating massive conductive material such as graphitic sediments. At the SW end of the Osprey conductor, the VTEM axis has been interpreted as having a lateral displacement to the south and this is supported by the resistivity contours. The Osprey area was surveyed with 3D-IP over two overlapping grids, with the 100 metre depth slice being used for comparison with the VTEM anomalies.

Whether the VTEM is associated with basement clay alteration cannot be directly determined since the conductivity of the graphitic pelites is assumed to overshadow the conductive effect of the alteration minerals. However, as discussed in detail in Section 9, areas of high resistivity appears to be mapping out strong silicification and felsic rocks including granites and granitized pelites.

The 3D-IP resistivity anomalies correlate well with airborne and ground EM anomalies in most places, particularly at medium depths. They show increased widths with an increase in depth which departs from the usual geological model and may be an 'artifact' of the inversion process. But it may also be the correct picture and so should be borne in mind for verification during subsequent drilling programs.

A gradient resistivity survey on the western portion of the Osprey grid has a small overlap with the 3D-IP results at the SW end of the Osprey conductor (Figure 21). The gradient results correlate quite well with the ground EM anomalies outlined within this area.

The EM anomalies found in the 2006 fixed loop survey are mainly confirmed by the VTEM survey results. The circular flat lying conductor located just south of drill hole RW-07 (Figure 20) remains unexplained. It can be seen in the VTEM results but it does not look like the model of graphitic beds in the basement. It has been postulated that wide-spread clay alteration may be responsible or a conductive material in the overburden.

The gravity survey revealed a positive gravity anomaly of 2.5 milligals centered at the southwest side of the grid (Figure 22). It is approximately 600 metres wide and its edge, to some extent, conforms to the shape of the EM conductor axis. Modeling the anomaly to a geometrical shape showed a relatively poor fit to a 550 metre wide cylinder, 150 below ground surface and 71 metres thick. An asymmetrical polygon was found to be a better fit with a density contrast of 0.44 gms/cc, a reasonable contrast between high and low density units of the Athabasca sandstone. It may represent a dome structure with the more dense members in the center.

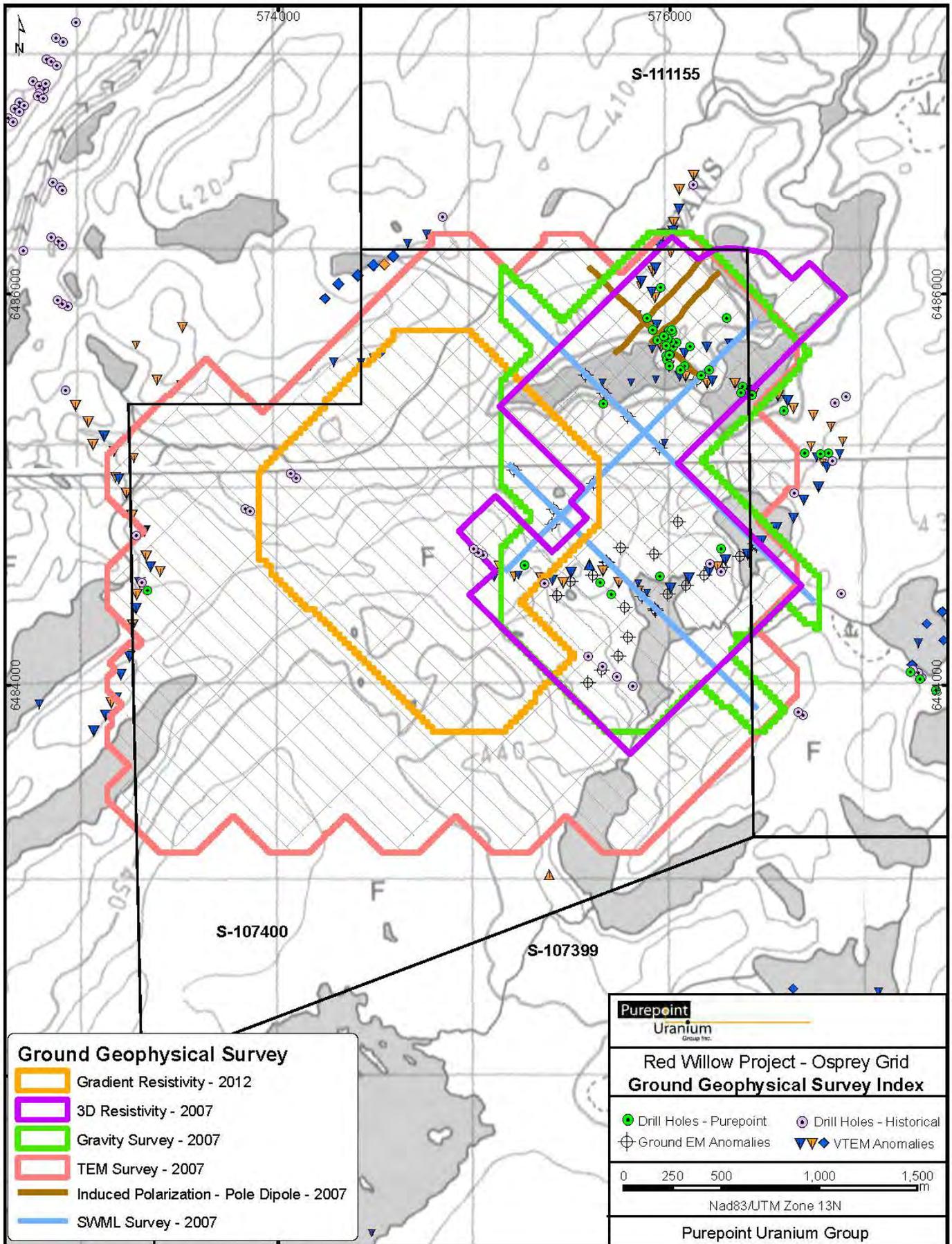


Figure 19: Osprey Grid – Ground Geophysical Survey Index Map

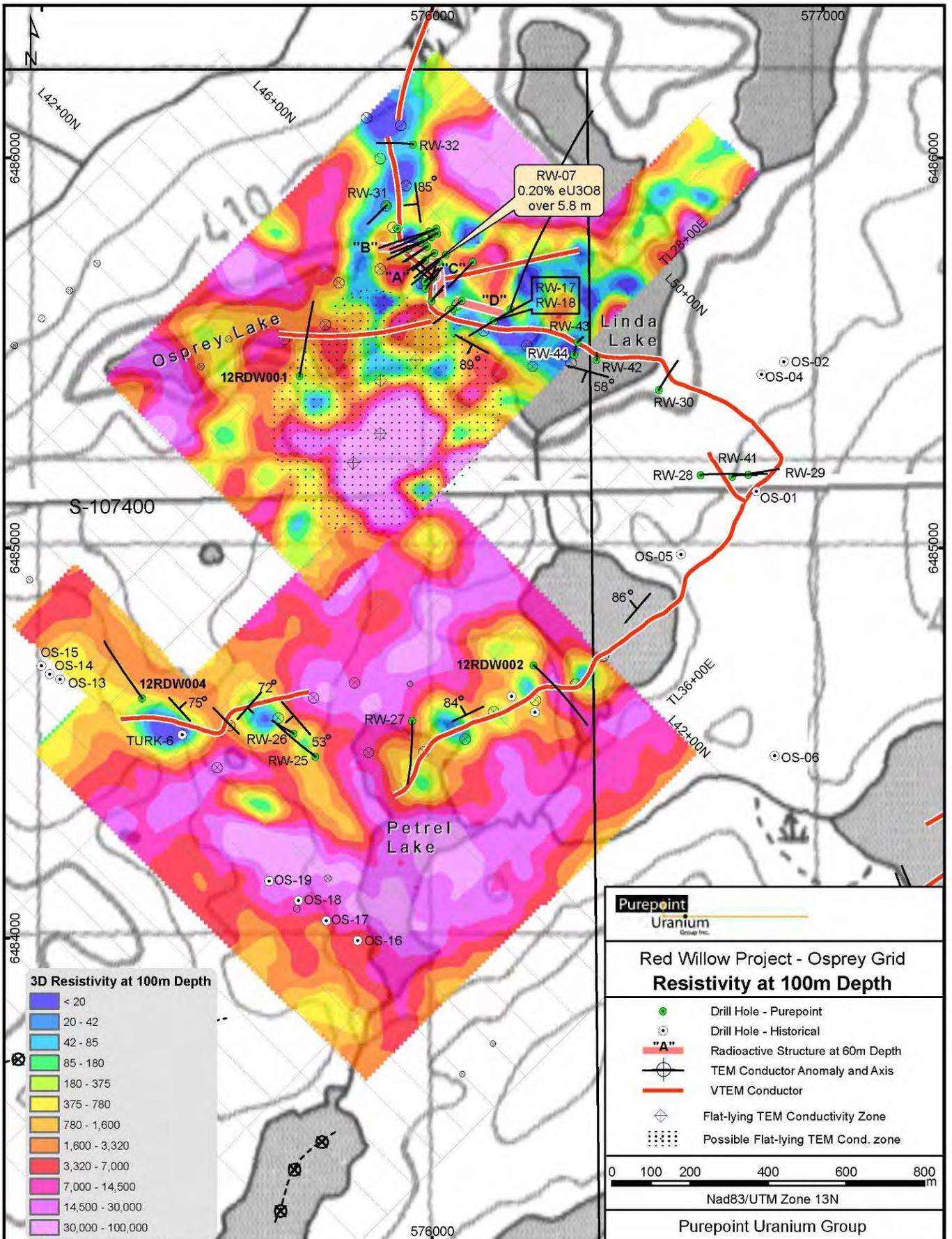


Figure 20: Osprey Grid – 3D Resistivity Results for 100m Depth

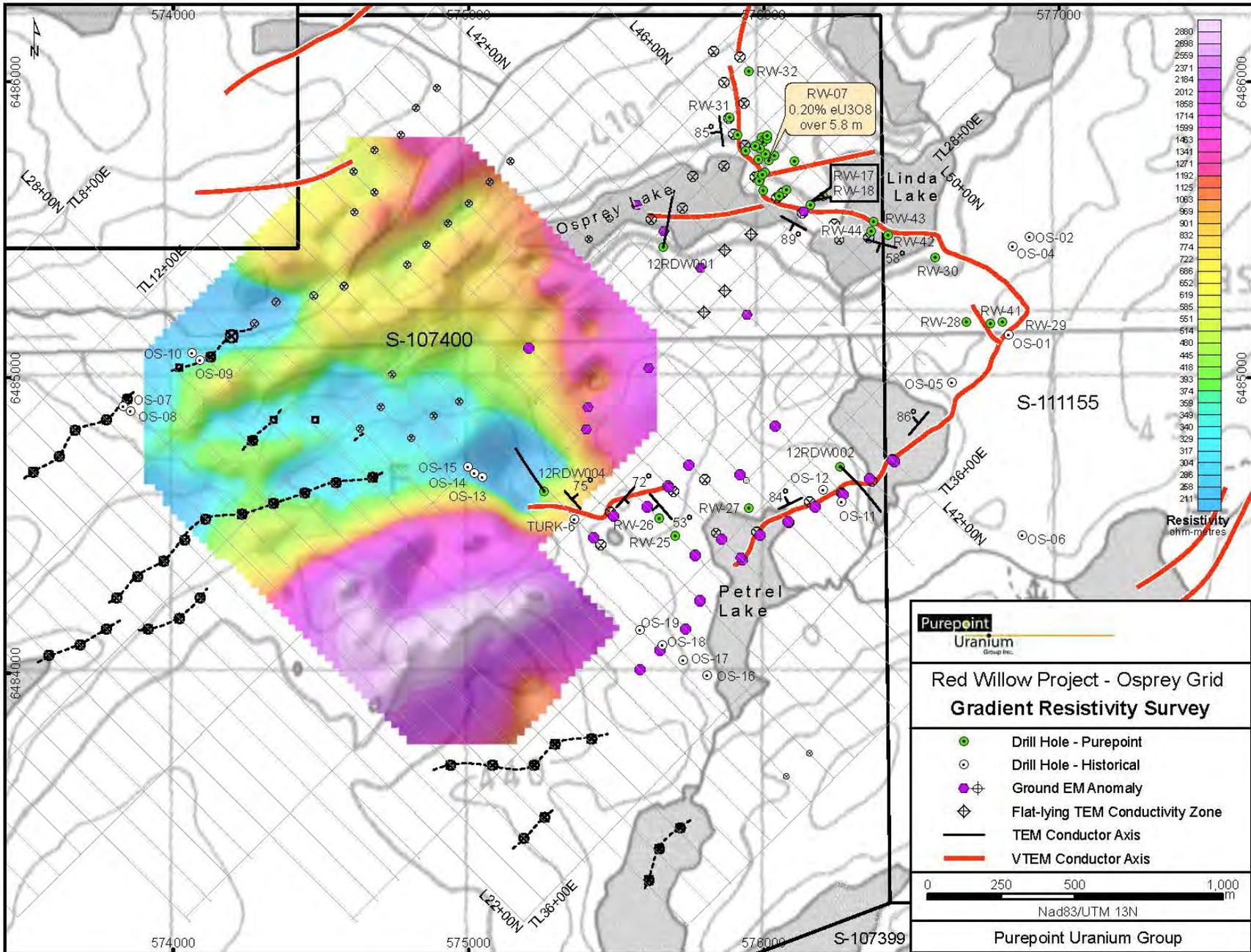


Figure 21: Western Osprey Grid – Gradient Array Resistivity Results

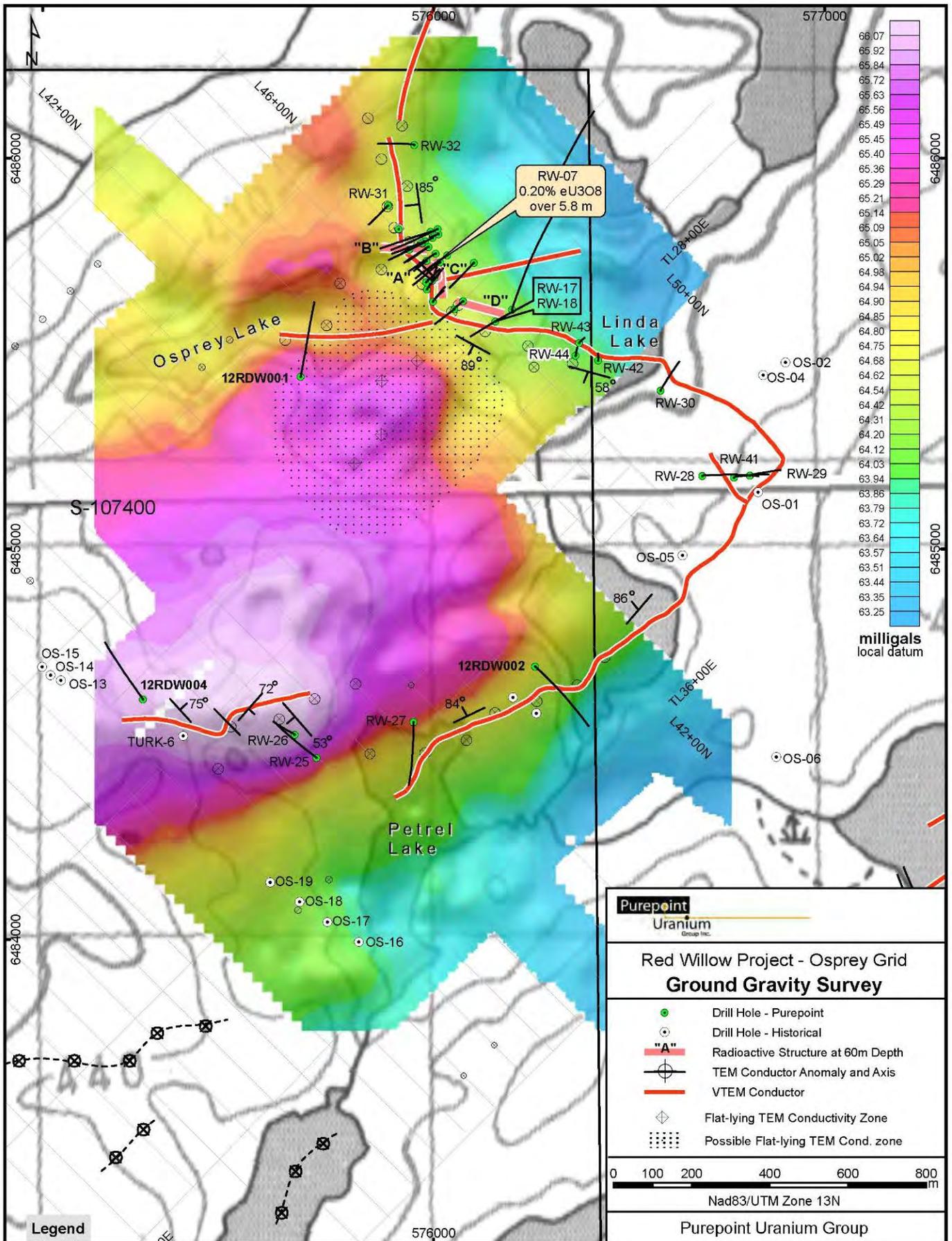


Figure 22: Osprey Grid – Bouguer Gravity Results

### 8.5.6 Geneva and Radon Lake Area - Results and Conclusions

The ground geophysical surveys conducted within the Geneva and Radon Lake areas of Red Willow are summarized within an index map that is provided in Figure 23.

The Geneva grid was surveyed with a block of sixteen gradient array lines followed by four pole-dipole lines. The gradient array resistivity map shows a well-defined resistivity low anomaly occupying the center of the survey grid (Figure 24). Its relationship to the VTEM anomalies is remarkable in that the VTEM anomalies define almost exactly the northern edge, and to a lesser extent the eastern edge of the conductive basin. The interpretation of the VTEM anomalies is that they represent a shallow dipping oval shaped basin dipping into the center at about 30 to 45 degrees. The gradient array resistivity clearly supports this interpretation. The chargeability results are less definitive since they show chargeable material within the basin although not at the edges where the VTEM anomaly is interpreted to lie (Figure 25). Within the centre of the grid, an anomalous chargeability low coincides with a VTEM conductor and an interpreted low apparent resistivity “chimney” in the sandstone (interpreted from inverted pole-dipole IP data)

The gradient resistivity pattern at Radon Lake shows a direct correlation to the VTEM anomaly that cuts through the grid in a NNE strike direction (Figure 24). It is most intense at the southern part where the VTEM anomaly is also at a maximum intensity. A resistivity high on the east side of the anomaly and low to the west with the VTEM conductor axis apparently forms a divide or a contact between them. To the south where the VTEM anomaly is strongest, the resistivity shows a clear anomaly low. The chargeability shows the same effect with the chargeability high being on the west side of the contact (Figure 25). It is clear that the conductor axis is part of a geological contact of some type.

The location of the four pole-dipole lines at Geneva are shown in Figure 23 and the inversion results are provided as stacked sections in Figure 26. The resistivity anomaly defining the basin in the gradient array results is clearly seen in the later n values on all four lines, and it increases in amplitude with depth.

The pole-dipole resistivity anomaly at Geneva supports the gradient resistivity array anomaly and is interpreted as a broad conductive and chargeable mass occurring below the sandstone. Zones of low resistivity within the sandstone may represent “chimneys” of hydrothermal alteration associated with structures controlling uranium mineralization at the unconformity or within the basement rocks (LARC Principal, R. Koch; PDAC Convention 2007). Drill hole GEN11-01 intercepted alteration and a minor structure in the sandstone that coincides with a possible LARC (Low Apparent Resistivity Chimney). Zones interpreted to be possible LARCs on Lines 60 and 61E (Figure 26) coincide with where two short VTEM conductors terminate (Figure 24).

A limited gravity survey was conducted over the Geneva grid in 2007 (Figure 27). Two subtle gravity depressions on L62E were found to correlate with the LARCs and the

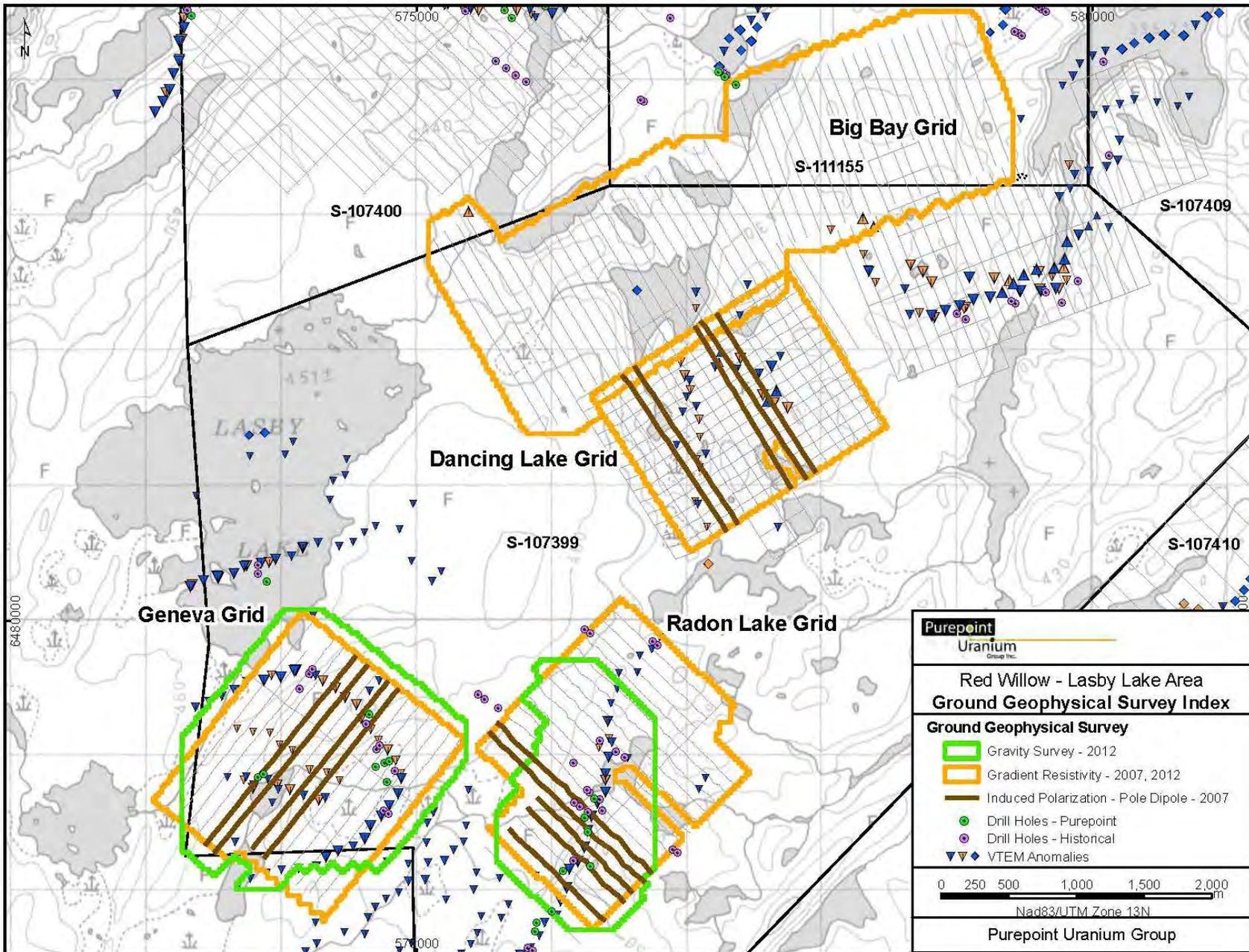


Figure 23: Geneva, Radon, Dancing Lake and Big Bay – Ground Geophysical Survey Index Map

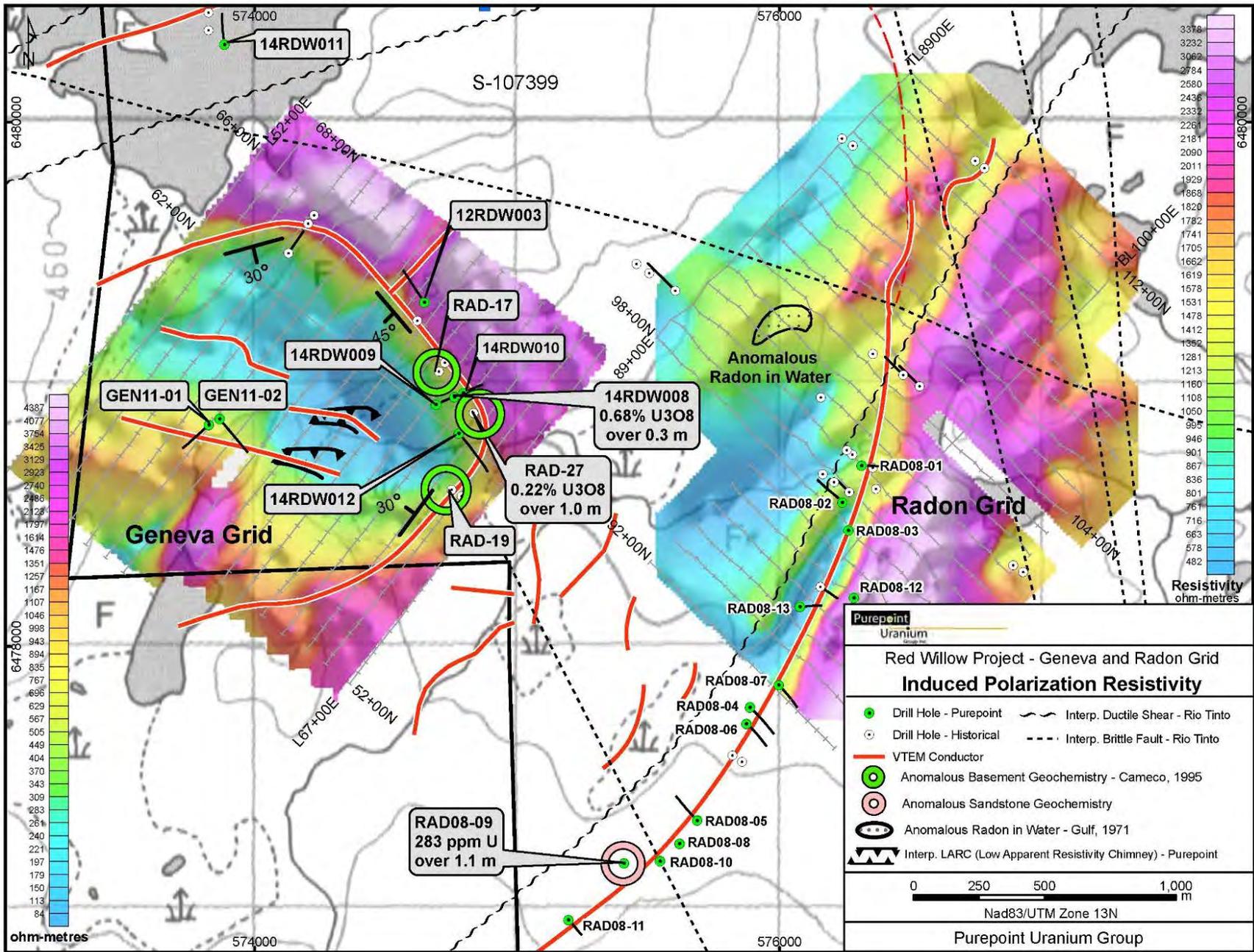


Figure 24: Geneva and Radon Grids – Gradient Array IP Resistivity Results

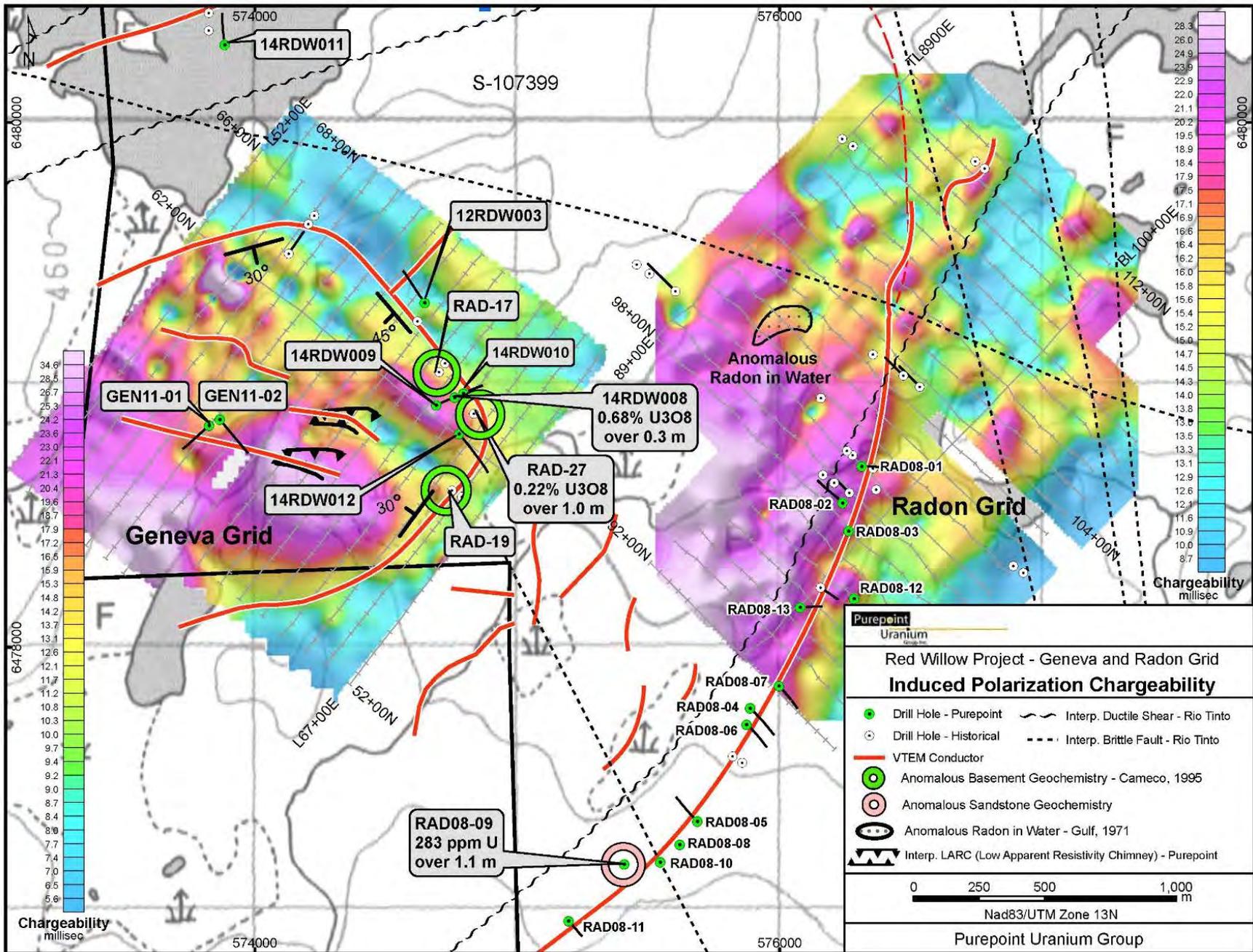


Figure 25: Geneva and Radon Grids – Gradient Array IP Chargeability Results

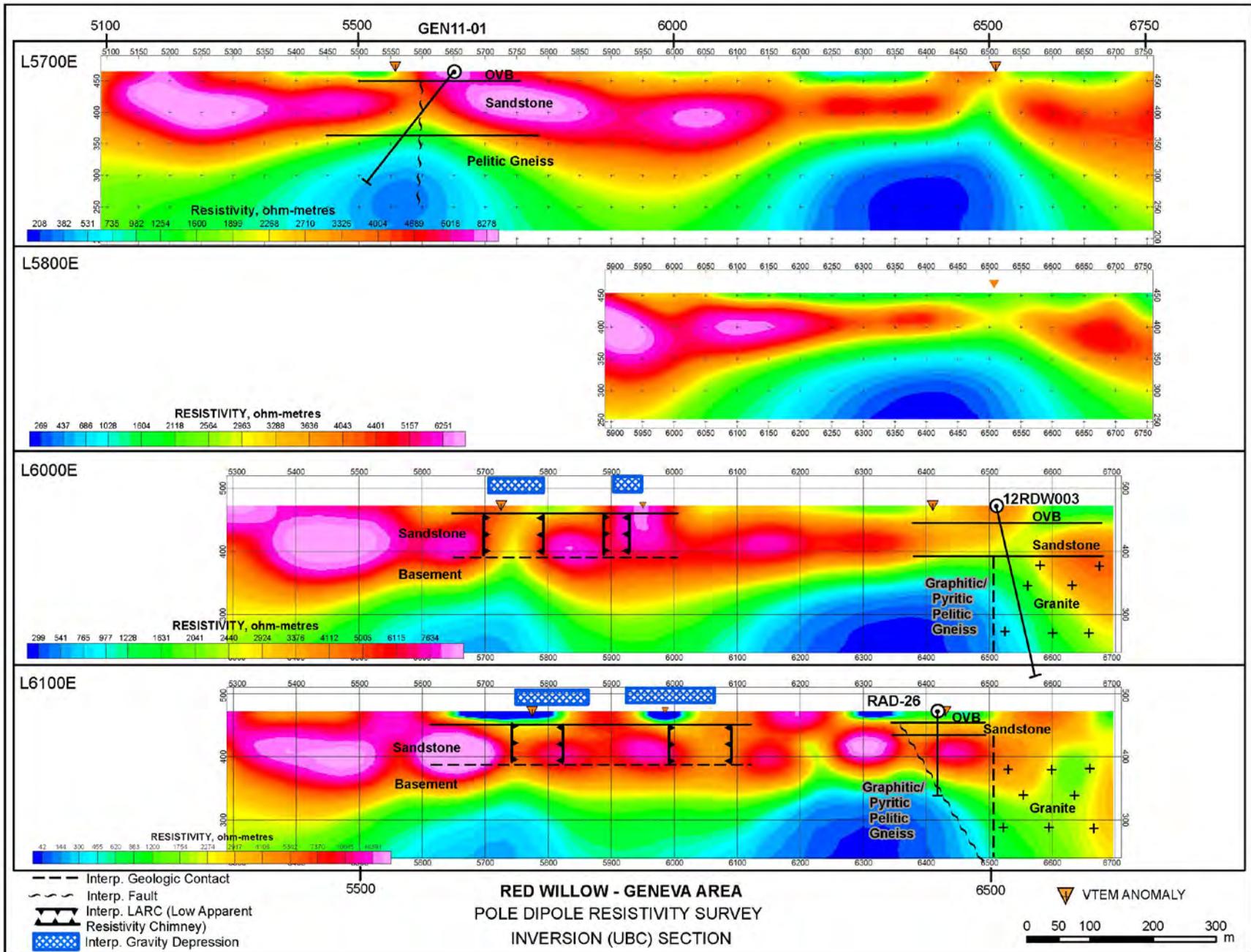


Figure 26: Geneva Grid – Pole-dipole Induced Polarization Inversion Sections

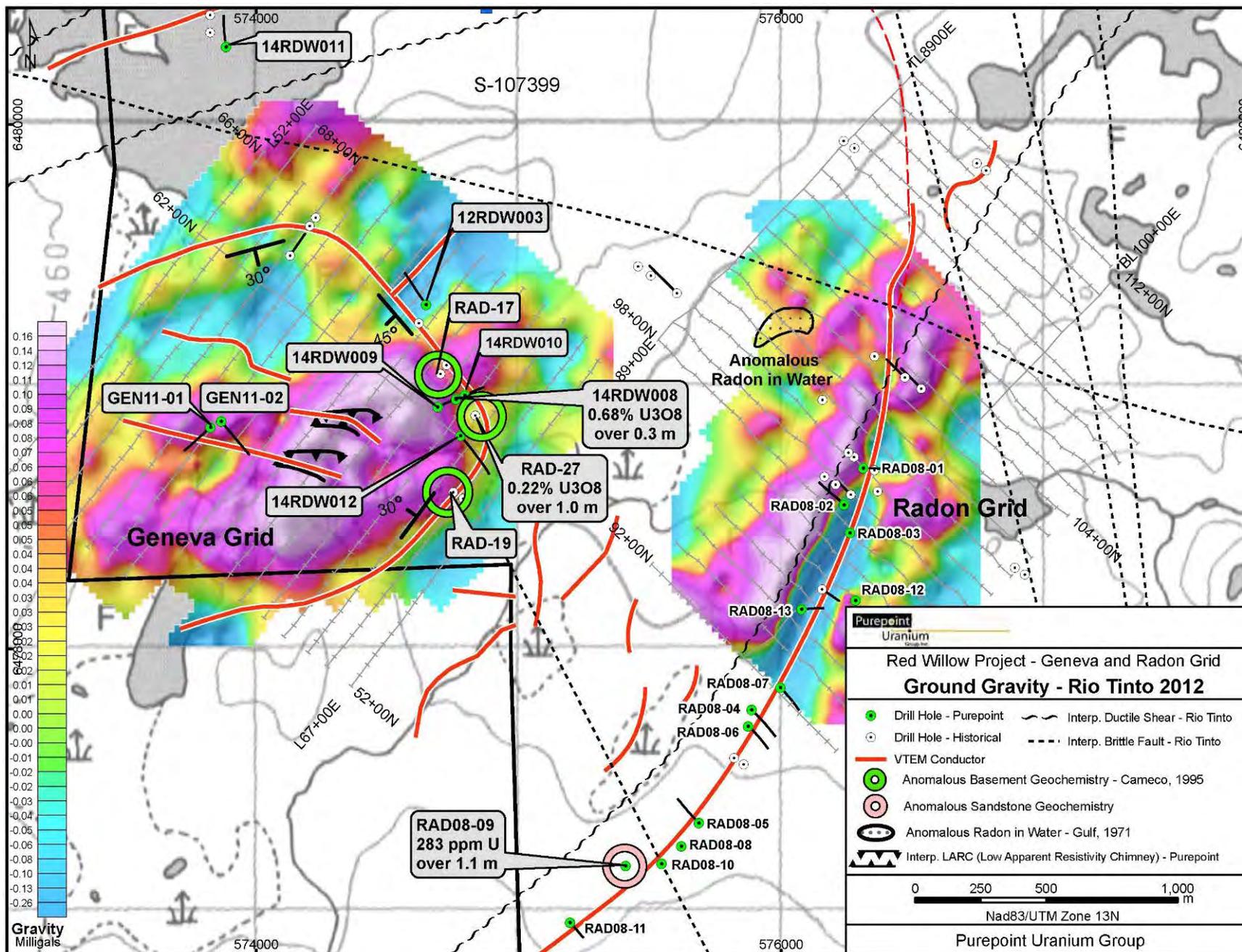


Figure 27: Geneva and Radon Grids – Bouguer Gravity Results

termination of the two VTEM conductors. A gravity survey conducted in 2012 was designed to support the initial results and provide more extensive coverage. The gravity depressions were supported by the new data and are now interpreted to be related to the strong basement alteration reported by Cameco in holes RAD-17, 19 and 27 and with follow up holes drilled in 2014 (Figure 27). The eastern gravity low anomaly is interpreted to be open to the east. A gravity low in the vicinity of drill holes GEN11-01 and 2 where clay alteration was seen locally in both holes and numerous faults were encountered by GEN11-02 may be reflecting alteration in the area. The gravity low in the vicinity of hole 12RDW003 was not explained by the drilling and is possibly an overburden artifact.

On the Radon grid, the elongate gravity low that correlates with the VTEM conductor is a response to thick overburden material. Due to the extreme thickness of the esker, attempts to filter off the surficial material returned inconclusive results. A gravity low located at the north end of the esker may have a bedrock source.

#### *8.5.7 Long Lake, Lyon and 333 Areas – Results and Conclusions*

The ground geophysical surveys conducted within the Long Lake, Lyon and 333 areas of Red Willow are summarized within an index map that is provided in Figure 28.

The 3D IP interpretation map of the Long Lake area (Figure 29) shows the calculated inverted resistivity at a depth slice of approximately 200 metres below ground surface. VTEM and TEM anomalies are superimposed as symbols and a conductor axis.

There is a very close correlation with low resistivity measurements and high conductance airborne anomalies. In area 333, anomaly A, which is the strongest VTEM, also shows the lowest resistivity in the inversion slice. Furthermore, the small break in the linearity of the conductor is reflected in the resistivity contours. The same is observed for anomaly E in the Long Lake area where the conductor axis is broken in the centre of the resistivity grid, and is again reflected in the resistivity pattern. This is excellent confirmation of the ability of both methods to accurately represent the ground resistivity.

Anomaly A has been analyzed in the VTEM interpretation and is interpreted as being caused by steeply dipping massive conductive material such as graphitic sediments. By scrolling through the range of depth slices and the cross sections in SJV's report, the anomaly is seen to increase in width as depth increases. This implies that the graphite bands are increasing in number and/or width with depth. This could be just an artifact or peculiarity of the inversion process but it could also be true representation of the geometry of the conductor. The dip is calculated from the VTEM profiles to be 85 degrees east.

Anomaly B is composed of type 4 anomalies and is well supported by three definite but weak TEM anomalies. It is also seen in the resistivity contours, which show a good

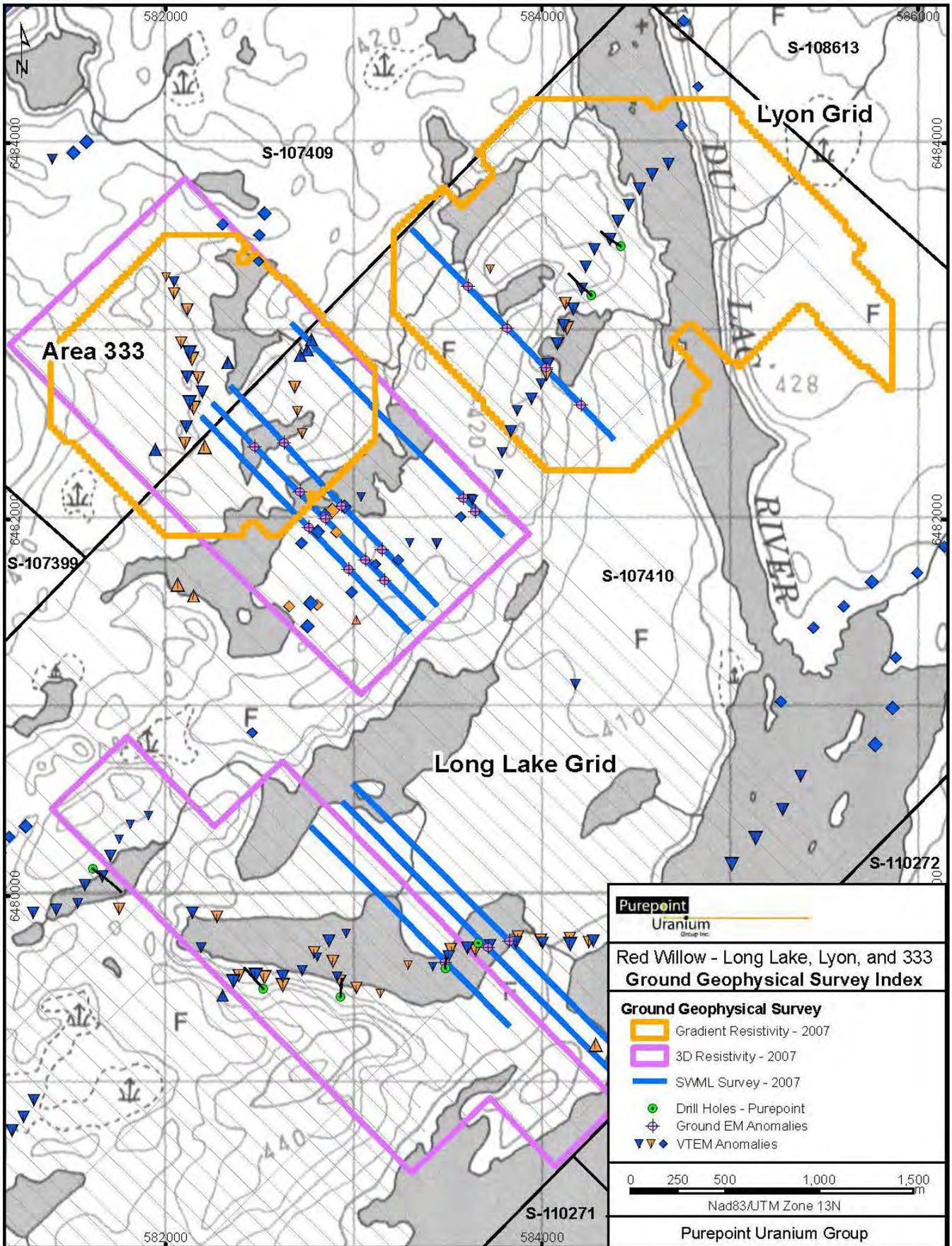


Figure 28: Long Lake, Lyon and 333 Grids – Ground Geophysical Survey Index Map

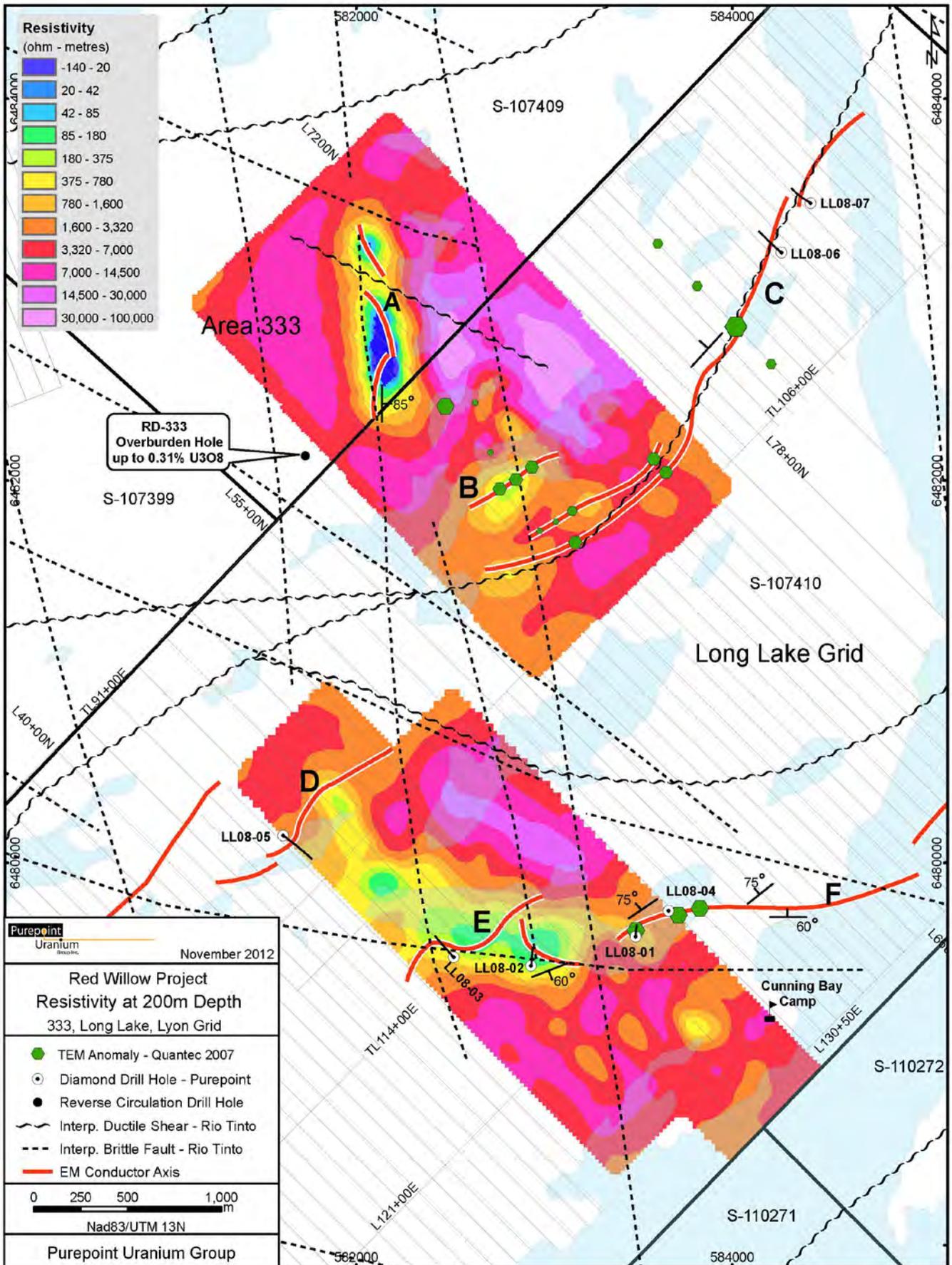


Figure 29: Long Lake and 333 Grids – 3D Resistivity Results for 200m Depth

correlation with the distribution of airborne anomaly symbols. This anomaly is interpreted to be caused by less conductive graphitic sediments, possibly because they are more disseminated than massive.

Anomaly C is the tail end of the strong Lyon Lake conductor and is clearly reduced in conductance.

Anomaly D is a low conductance extension of the Riche Lake anomaly. It is partially confirmed by the resistivity but in general is very weak.

Anomaly E is confirmation of a strong VTEM conductor and the resistivity pattern conforms well to the discontinuity in the linearity of the conductor axis. It is interpreted as graphitic sediments.

Anomaly F is the continuation of Anomaly E to the east where it has been confirmed by ground transient E.M. methods. It can be drilled from the existing E.M. information and does not require more resistivity survey data.

Gradient data over the 333 Area (Figures 30 and 31) covers a strong well-defined VTEM anomaly striking north south through the middle of the grid, plus a few minor scattered E.M. anomalies to the south. The resistivity supports the airborne data, showing a clear resistivity low correlating with the airborne anomaly (Figure 30). The chargeability also supports it although not quite as well defined as the resistivity (Figure 31). The interpretation is that the VTEM conductor represents massive conductive material for all of its length, probably graphite or sulphide minerals.

The gradient array resistivity and chargeability data at Lyon Lake show low resistivity and high chargeability anomalies that correlate well with airborne and ground E.M. anomalies (Figures 30 and 31). A strong Type 1 VTEM anomaly strikes NNE in the center of the grid and is interpreted as a band of steeply dipping graphitic sediments. The I.P. data supports this interpretation completely showing high chargeability and low resistivity exactly where it would be expected.

Conductors interpreted from the Step-wise Moving Loop EM survey results are provided in Figures 28 to 31 with the symbol-sized according to the strength of the anomaly.

#### *8.5.8 Dancing Lake and Big Bay Area - Results and Conclusions*

An index map for the ground geophysical surveys conducted on the Dancing Lake and Big Bay grids is provided in Figure 23 along with the Geneva and Radon Lake surveys.

The gradient resistivity survey over the southern portion of the Dancing Lake grid covered three type 1 VTEM conductor axes of moderate conductivity that are relatively short in dimension and do not conform to regional geological trends. The resistivity shows a broad low that includes the VEM conductor axes but does not correlate to it

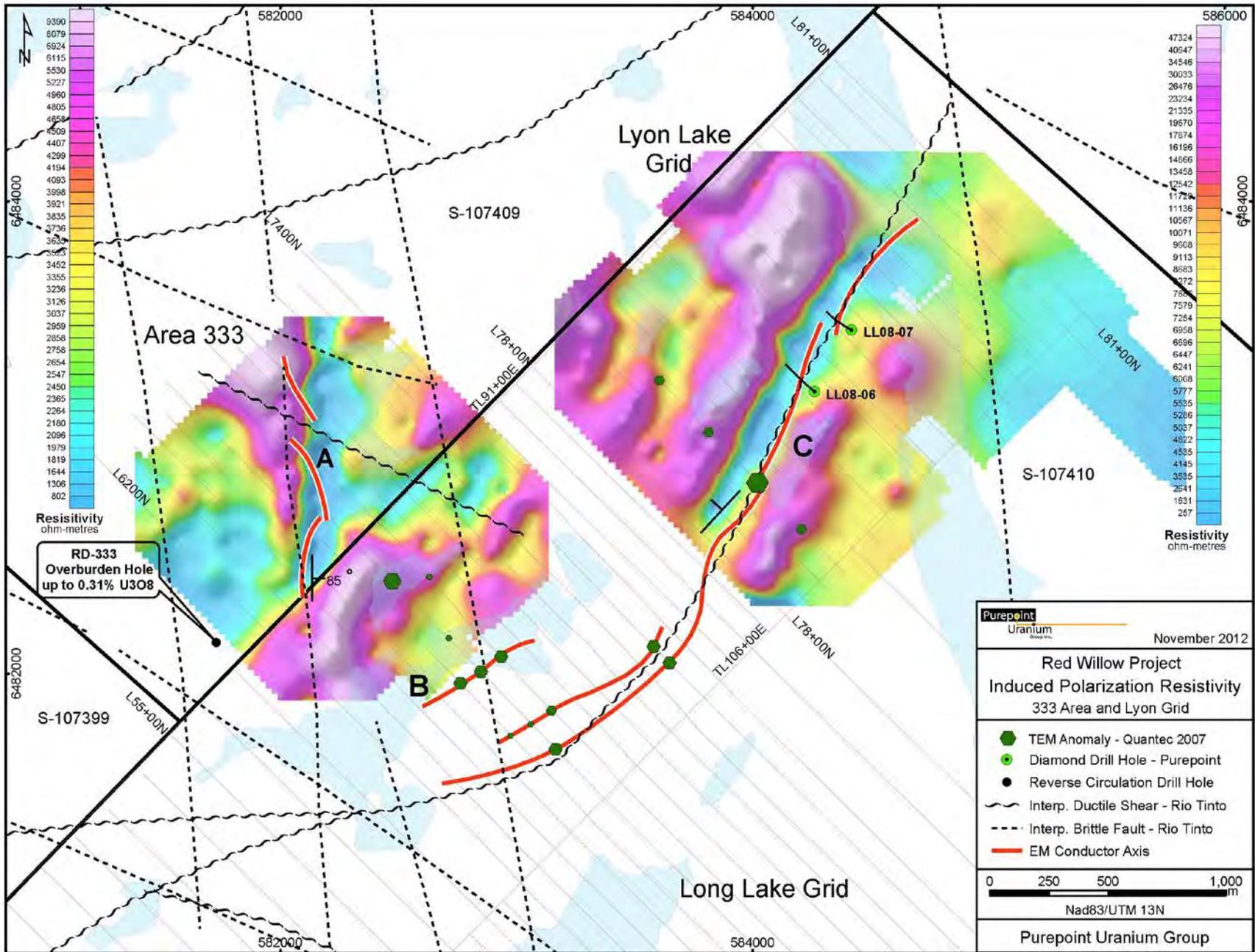


Figure 30: Long Lake and 333 Grids – Gradient IP Resistivity Results

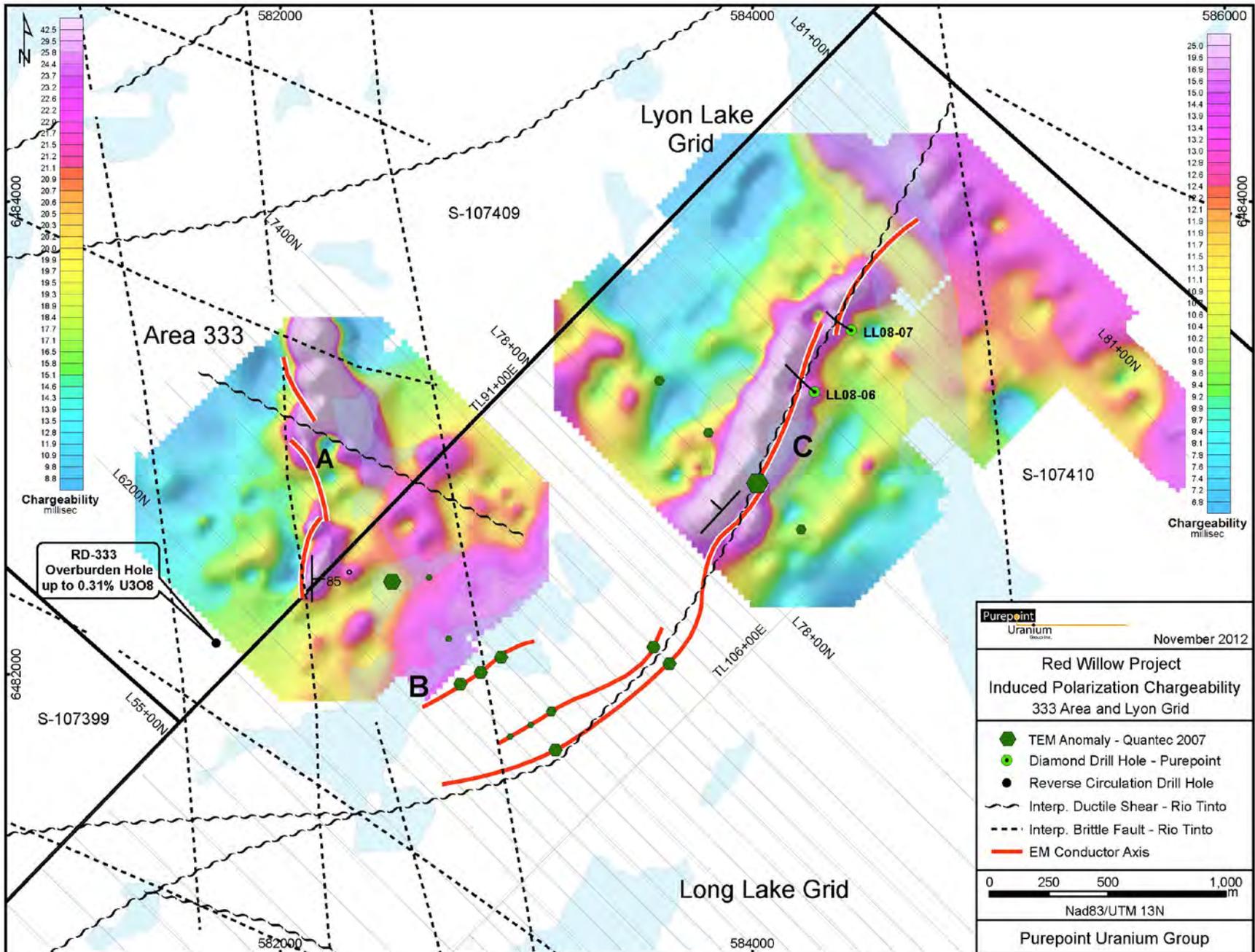


Figure 31: Long Lake and 333 Grids – Gradient IP Chargeability Results

(Figure 32). The shapes and widths are quite different and one conductor crosses over into highly resistive ground to its east.

The gradient resistivity survey over the Dancing Lake and Big Bay grid extensions to the north was conducted along an interpreted strong northeast trending ductile shear zone (Figure 32). The purpose of the survey was to map out possible brittle north-south faults where they crosscut the major shear zone. The resistivity results support the interpreted structure and suggest crosscutting faults may be present.

The results of pole-dipole array IP over 5 lines (Figure 32) are considered to agree with the gradient array results. Two possible LARCs underlain by VTEM conductors have been interpreted on Lines 21 and 28N.

Of the two east-west trending EM conductors found on the Dancing Lake grid, the most northerly of the two is on trend with the conductor tested by the historic holes Dan-1 to 7 (Figure 32). The historic holes intersected pyritic graphitic pelitic gneiss suggesting that at least this one EM conductor, if not all three, are responding to graphitic basement rock.

## **9. DIAMOND DRILLING**

On the Red Willow property, a total of 16,546 metres have been drilled with 64 NQ diamond drill holes being completed by Purepoint and 15 holes by Rio Tinto. The 2007 diamond drill program was conducted by Denair Beach Drilling of Denair Beach, SK; the 2008, 2010 and 2011 programs by Aggressive Drilling of Prince Albert, SK; and the 2012 and 2014 programs by Bryson Drilling Ltd. of Archerwill, SK.

Purepoint drilled seven drill holes in 2007 totaling 1,303 metres on the Osprey grid while the 2008 drill program consisted of 17 drill holes in the Osprey area, 13 holes in the Radon Lake area and 7 on the Long Lake grid for a total of 7,160 metres. During 2010, a 20-hole diamond drill program totaling 3,292 metres again concentrated on the Osprey grid.

Rio Tinto drilled two holes on the Geneva grid in 2011 for a total of 591 metres. In 2012 three holes in the Osprey area and one hole in the Geneva area were completed for a total of 1,466 metres. A ten hole, 2,734 metre diamond drill program was completed in 2014 with two holes drilled in the Osprey area, three holes within the Mustang area, four within the Geneva area and one in the Lasby Lake area.

A summary of the drill hole collars are provided in Table 3.

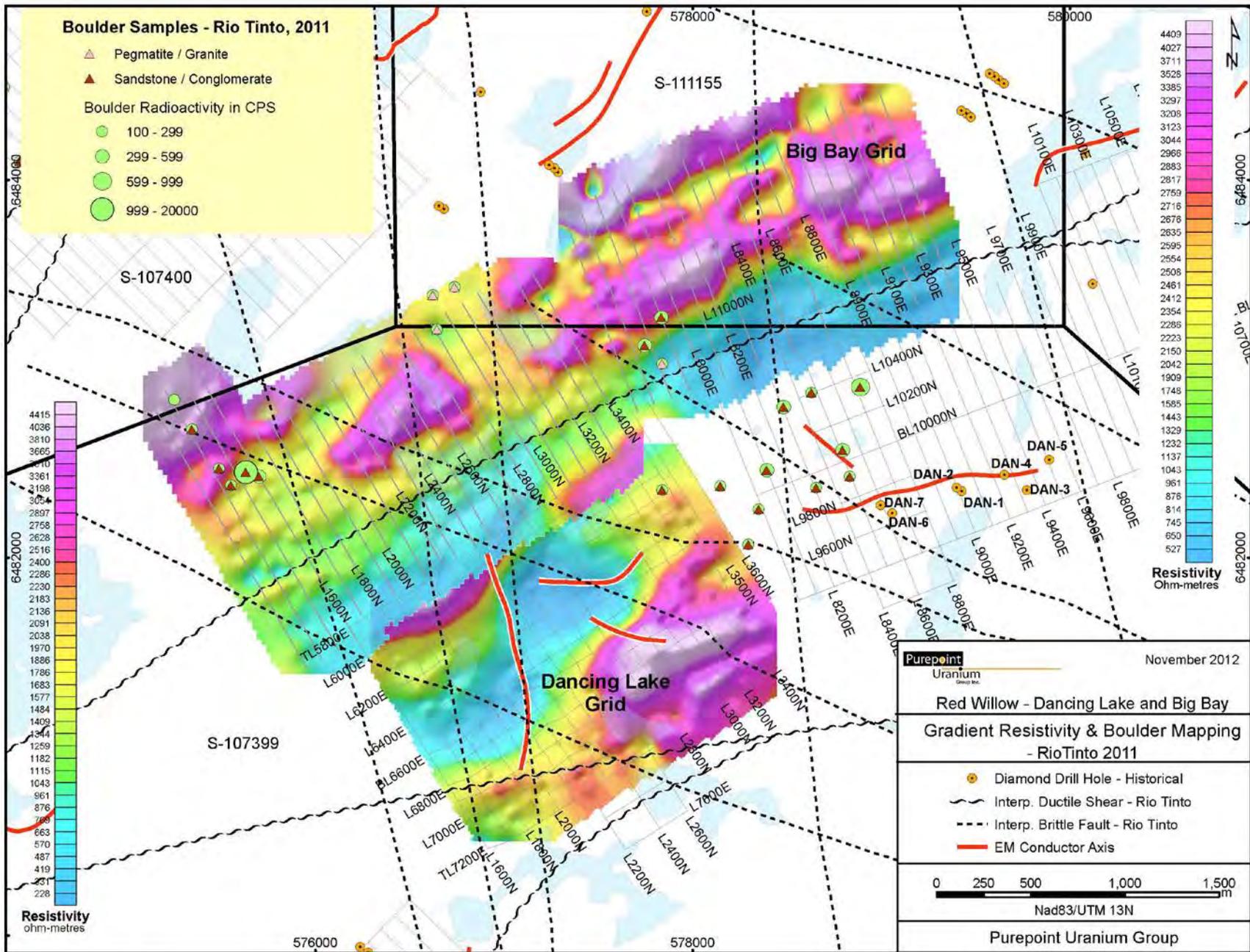


Figure 32: Dancing Lake and Big Bay Grids – Gradient Resistivity IP Results

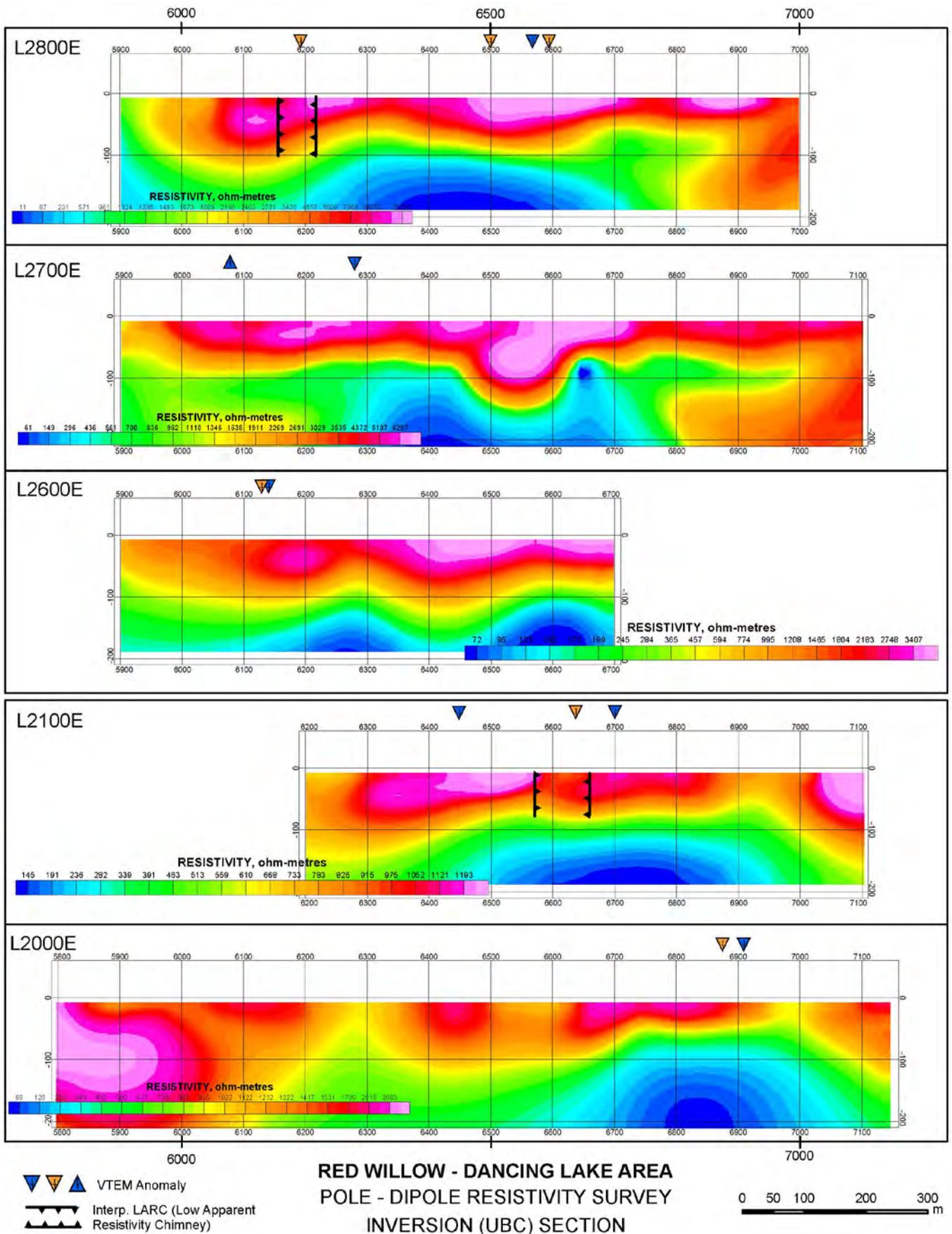


Figure 33: Dancing Lake Grid – Pole-dipole Array IP Inversion Sections

**Table 3: Drill Hole Collar Summary**

Hole ID	Grid	Grid Co-ordinates		UTM Co-ordinates		Elev.	Azi.	Dip	Depth (m)
		North	East	UTM_N	UTM_E	(m)			
RW-01	Osprey	1822	1352	6484483	5733330	420	359	-50	164
RW-02	Osprey	1822	1352	6484483	5733330	420	257	-65	144
RW-03	Osprey	4660	2323	6485812	575992	399	252	-56	258
RW-04	Osprey	4653	2338	6485797	575997	399	239	-60	231
RW-05	Osprey	4671	2341	6485806	576012	401	247	-60	51
RW-06	Osprey	4678	2331	6485819	576010	400	244	-60	272
RW-07	Osprey	4622	2396	6485734	576016	401	229	-60	182
RW-08	Osprey	4648	2396	6485752	576035	404	236	-60	196
RW-09	Osprey	4648	2396	6485752	576035	404	237	-75	243
RW-10	Osprey	4561	2407	6485683	575981	397	46	-67	129
RW-11	Osprey	4561	2407	6485683	575981	397	0	-90	96
RW-12	Osprey	4561	2407	6485683	575981	397	46	-79	105
RW-13	Osprey	4561	2407	6485683	575981	397	45	-60	81
RW-14	Osprey	4594	2507	6485635	576075	396	225	-75	138
RW-15	Osprey	4563	2507	6485614	576053	396	232	-70	186
RW-16	Osprey	4563	2507	6485614	576053	396	233	-86	145
RW-17	Osprey	4616	2603	6485583	576158	396	239	-66	182
RW-18	Osprey	4616	2603	6485583	576158	396	0	-90	96
RW-19	Osprey	4634	2331	6485788	575979	399	249	-60	189
RW-20	Osprey	4590	2316	6485767	575937	397	240	-71	132
RW-21	Osprey	4631	2372	6485757	576005	400	237	-58	162
RW-22	Osprey	4630	2347	6485774	575987	399	234	-60	132
RW-23	Osprey	4630	2347	6485774	575987	399	237	-52	123
RW-24	Osprey	4601	2369	6485738	575982	397	229	-64	102
RW-25	Osprey	3500	3060	6484466	575700	410	307	-65	285
RW-26	Osprey	3500	2960	6484525	575645	415	299	-63	141
RW-27	Osprey	3737	3172	6484558	575948	405	179	-61	328
RW-28	Osprey	4710	3260	6485188	576687	410	88	-59	263
RW-29	Osprey	4795	3350	6485189	576809	407	79	-65	184
RW-30	Osprey	4785	3010	6485406	576580	398	31	-66	207
RW-31	Osprey	4630	2200	6485879	575883	399	225	-65	162
RW-32	Osprey	4785	2140	6486035	575950	401	266	-64	213
RW-33	Osprey	4683	2458	6485733	576103	401	223	-65	210
RW-34	Osprey	4550	2421	6485665	575983	397	35	-65	114
RW-35	Osprey	4550	2421	6485665	575983	397	35	-55	114

**Table 3 (cont'd): Drill Hole Collar Summary**

Hole ID	Grid	Grid Co-ordinates		UTM Co-ordinates		Elev. (m)	Azi.	Dip	Depth (m)
		North	East	UTM_N	UTM_E				
RW-36	Osprey	4539	2454	6485634	575998	396	44	-70	114
RW-37	Osprey	4539	2454	6485634	575998	396	39	-55	87
RW-38	Osprey	4585	2413	6485695	576002	398	314	-65	132
RW-39	Osprey	4575	2415	6485687	575996	398	308	-60	105
RW-40	Osprey	4575	2415	6485687	575996	398	18	-65	93
RW-41	Osprey	4760	3320	6485184	576768	407	81	-65	201
RW-42	Osprey	4730	2840	6485483	576421	395	0	-80	114
RW-43	Osprey	4725	2780	6485528	576372	395	45	-80	108
RW-44	Osprey	4695	2800	6485495	576363	395	10	-80	117
LL08-01	Long Lk	5500	12000	6479615	583485	400	0	-75	244
LL08-02	Long Lk	4955	11700	6479464	582930	407	4	-60	201
LL08-03	Long Lk	4700	11365	6479507	582518	416	316	-53	249
LL08-04	Long Lk	5700	11990	6479750	583661	400	311	-90	180
LL08-05	Long Lk	4500	10275	6480144	581611	419	128	-54	291
LL08-06	Long Lk	8580	10020	6483194	584262	409	309	-55	252
LL08-07	Long Lk	8850	9890	6483454	584418	410	300	-55	207
RAD08-01	Radon	10032	9812	6478690	576313	438	88	-65	237
RAD08-02	Radon	9882	9859	6478550	576240	444	315	-65	280
RAD08-03	Radon	9821	9950	6478443	576262	456	0	-90	171
RAD08-04	Radon	9081	10162	6477768	575887	455	135	-60	256
RAD08-05	Radon	8638	10324	6477337	575686	464	314	-61	237
RAD08-06	Radon	9028	10198	6477705	575874	458	130	-65	246
RAD08-07	Radon	9218	10180	6477853	575997	458	136	-64	258
RAD08-08	Radon	8523	10341	6477248	575619	465	0	-90	176
RAD08-09	Radon	8320	10244	6477172	575407	465	161	-88	159
RAD08-10	Radon	8424	10333	6477181	575544	466	128	-88	171
RAD08-11	Radon	8018	10246	6476957	575195	468	136	-64	186
RAD08-12	Radon	9655	10147	6478185	576283	443	22	-88	150
RAD08-13	Radon	9486	10026	6478151	576078	462	86	-65	198
GEN11-01	Geneva	5645	5700	6478845	573825	465	227	-60	255
GEN11-02	Geneva	5690	5700	6478868	573866	465	140	-60	336
12RDW001	Osprey	4165	2345	6485442	575660	401	10	-60	396
12RDW002	Osprey	4055	3290	6484700	576259	409	134	-60	401
12RDW003	Geneva	6515	6040	6479312	574647	463	325	-60	302
12RDW004	Osprey	3290	2650	6484616	575256	419	324	-60	365

**Table 3 (cont'd): Drill Hole Collar Summary**

Hole ID	Grid	UTM Co-ordinates		Elev. (m)	Azi.	Dip	Depth (m)
		UTM_N	UTM_E				
14RDW005	Mustang	6484483	5733330	416	329	-60	309.58
14RDW006	Mustang	6484483	5733330	417	329	-57	265.8
14RDW007	Mustang	6485812	575992	416	332	-54	177
14RDW008	Geneva	6485797	575997	451	65	-65	262
14RDW009	Geneva	6485806	576012	451	65	-65	338
14RDW010	Geneva	6485819	576010	451	65	-65	174
14RDW011	Lasby Lk	6485734	576016	448	350	-60	240
14RDW012	Geneva	6485752	576035	451	137	-50	267
14RDW013	Osprey	6485752	576035	398	18	-45	348
14RDW014	Osprey	6485683	575981	400	18	-45	353

## 9.1 Downhole and Core Logging Procedures

Downhole procedures included oriented core readings and radiometric logging. Oriented drill core markings were made on the drill core for each drill run using an ACE orientating tool. The radiometric logging was conducted using a 2PGA-1000 Poly-Gamma Probe and a MGX II Logger. The gamma probe was calibrated against a set of known standards in test pits located at the Saskatchewan Research Council's facilities in Saskatoon.

Data collected from the drill core included geologic descriptions, core recovery, rock quality determination (RQD), fracture count, magnetic susceptibility and radioactivity using a handheld scintillometer. Oriented drill core measurements, recorded using a goniometer, included shearing, foliation, slips, gouge, fractures and veins.

Samples were collected for analysis using a portable short-wave infrared mineral analyzer (PIMA) for the determination of the spatial distribution of clay minerals. The geologist collected PIMA samples where clay alteration was prominent and where clay coatings were seen on fracture surfaces within the basement rock. A 2 to 4 cm long piece of drill core was collected where required and placed in a sample bag marked with the hole number and sample depth. All Purepoint PIMA samples were forwarded to Ken Wasyliuk, M.Sc., P.Geol. of Northwind Resources, Saskatoon, Saskatchewan for analysis.

Sampling procedures for samples submitted for analysis using partial and total digestion inductively coupled plasma methods, for boron by Na<sub>2</sub>O<sub>2</sub> fusion, and for uranium by NHO<sub>3</sub>/HCl and fluorimetry at the Saskatchewan Research Council Geoanalytical Laboratories in Saskatoon are described in detail in Section 10.

## 9.2 Diamond Drill Hole Results

Diamond drilling to date on the Red Willow project has been conducted on six grids that include Osprey, Geneva, Radon, Lasby Lake, Mustang and Long Lake.

### 9.2.1 Osprey Grid Drill Results

The first drill program on the Red Willow project in 2007 targeted the six-kilometer long, “S”-shaped Osprey conductor on the Osprey grid (Figure 34). Hole RW-07 of that program intersected 0.20% eU<sub>3</sub>O<sub>8</sub> over 5.8 metres at the shallow depth of 70 metres just north of Osprey Lake. Due to lost core within the mineralized interval of RW-07, an eU<sub>3</sub>O<sub>8</sub> is used which is a radiometric equivalent calculated from the calibrated natural gamma geophysical log. Since that time, numerous geophysical surveys have been conducted over the grid to help target the drilling of this priority target. Target areas are discussed separately below and include the area around Osprey Lake (location of hole RW-07), Osprey Hinge, Central Osprey, Osprey South, Osprey North and Osprey West.

### Osprey Lake

The area immediately surrounding Osprey Lake has now been tested by 33 holes totaling 4,796 metres (Figures 34 and 35). Weakly anomalous uranium mineralization at Osprey Lake was intercepted over a 250 metre strike length but the RW-07 mineralization remains the highlight intercept to date (Table 4). The holes drilled were kept relatively short (average depth of only 160m) in an effort to understand the structural controls of the mineralization before attempting more costly deeper drilling. The location of Osprey Lake in relation to the mineralization has been a hindrance to drilling since angled holes to properly cut the lithology is difficult from lake ice and poor ice conditions have prevented drilling even a vertical hole on the lake.

Drilling results have shown the Osprey conductor to be a vertical to sub-vertical, weak to moderately sheared, dark green to black chlorite altered pyritic graphitic pelitic gneiss bounded by moderate to strongly silicified and moderately hematized pelitic gneiss (Figure 36). The pyritic/graphitic unit is typically 40 to 60 metres wide, hosts 5 to 8% pyrite as fine disseminations, medium to coarse subhedral crystals and rare semi-massive bands and trace to 1% fine graphite needles. The most significant uranium mineralization discovered to date in the Osprey Lake area is confined to a flat tension fracture (“A” zone) but also occurs within steep narrow gouges within, and running parallel to, the shear zone. The radioactive “B” gouge has been interpreted to have a west-northwest trend while the radioactive “C” structure trends north-northwest (Figure 35). The “A” fracture zone has a distinct geochemical signature that includes anomalous partial digestion results for As (up to 94.1 ppm), Cu (up to 7,660 ppm), Pb (up to 2,280 ppm), and Zn (up to 33,000 ppm).

**Table 4: Summary of Significant Uranium Intercepts – Osprey Lake Area**

Hole	From (m)	To (m)	Width (m)	U (ppm)	U3O8 (wt %)
RW-03	124.91	125.11	0.2	5682	0.67
	127.4	127.47	0.07	4200	0.50
	163.28	163.32	0.04	1770	0.21
RW-04	89.21	89.31	0.1	752	0.09
	97.6	98.3	0.7		lost core
RW-06	156.4	157.0	0.6	137	0.02
	158.3	158.35	0.05	623	0.07
	174.55	174.6	0.05	2700	0.32
RW-07	68.6	68.7	0.1	1100	0.13
	72.1	75.7	3.6	1398	0.17
	includes	74.6	75.0	0.38	4810
RW-08	72.3	72.7	0.4	988	0.12
	159.2	159.9	0.2	451	0.05
RW-09	No Significant Values				
RW-10	58.2	64.2	6.0	424	0.05
includes	58.6	58.7	0.1	4220	0.50
RW-11	No Significant Values				
RW-12	59.9	60.0	0.1	172	0.02
RW-13	62.8	66.2	3.4	991	0.12
	includes	65.0	66.2	1.2	2288
RW-14	No Significant Values				
RW-15	No Significant Values				
RW-16	24.9	25.0	0.1	298	0.03
RW-17	No Significant Values				
RW-18	25.0	25.5	0.5	161	0.02
RW-19	93.3	97.3	4.0	1615	0.19
	includes	94.1	94.2	0.1	25700
RW-20	26.0	28.7	2.7	431	0.05
	includes	26.8	27.1	0.3	1277
RW-21	No Significant Values				
RW-22	No Significant Values				
RW-23	No Significant Values				
RW-24	No Significant Values				
RW-34	57.8	58.6	0.8	340	0.04
	80.2	80.6	0.4	1300	0.15
RW-35	64.8	65.6	0.8	5350	0.63
	83.8	84.0	0.2	921	0.11
RW-36	No Significant Values				
RW-37	54.8	55.4	0.6	499	0.06
RW-38	66.5	71.3	4.8	1160	0.14
	includes	66.5	67.3	0.8	5420
RW-39	78.4	79.8	1.4	360	0.04
RW-40	60.2	61.7	1.5	3970	0.47
12RDW001	No Significant Values				
14RDW013	252	253	1.0	132	0.02
14RDW014	177.6	178.5	0.9	141	0.02

Note: Due to lost core, Hole RW-07 reported as 0.2% eU3O8 over 5.8m from 71.4 to 77.2m.

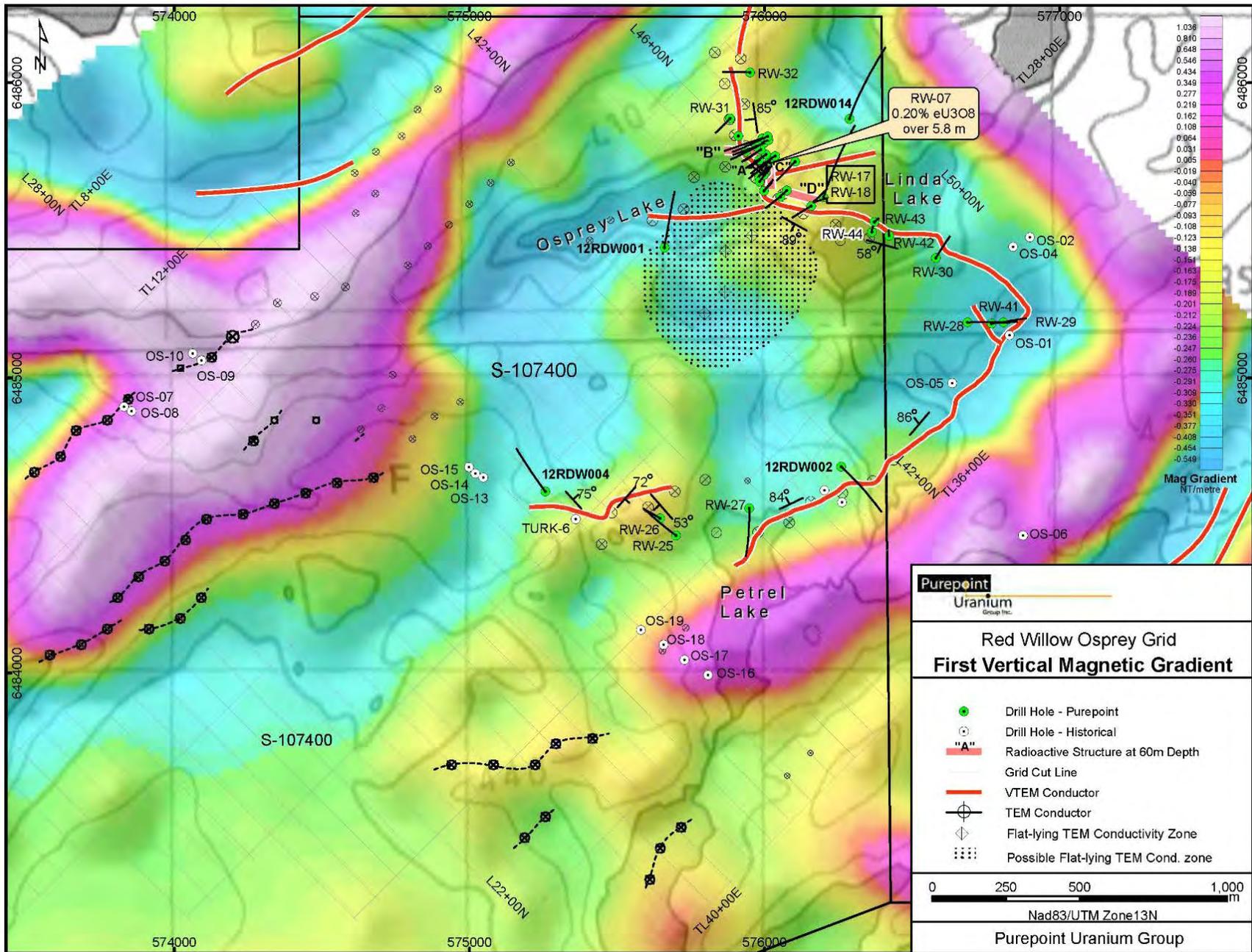


Figure 34: Diamond Drill Hole Location Map – Osprey Grid

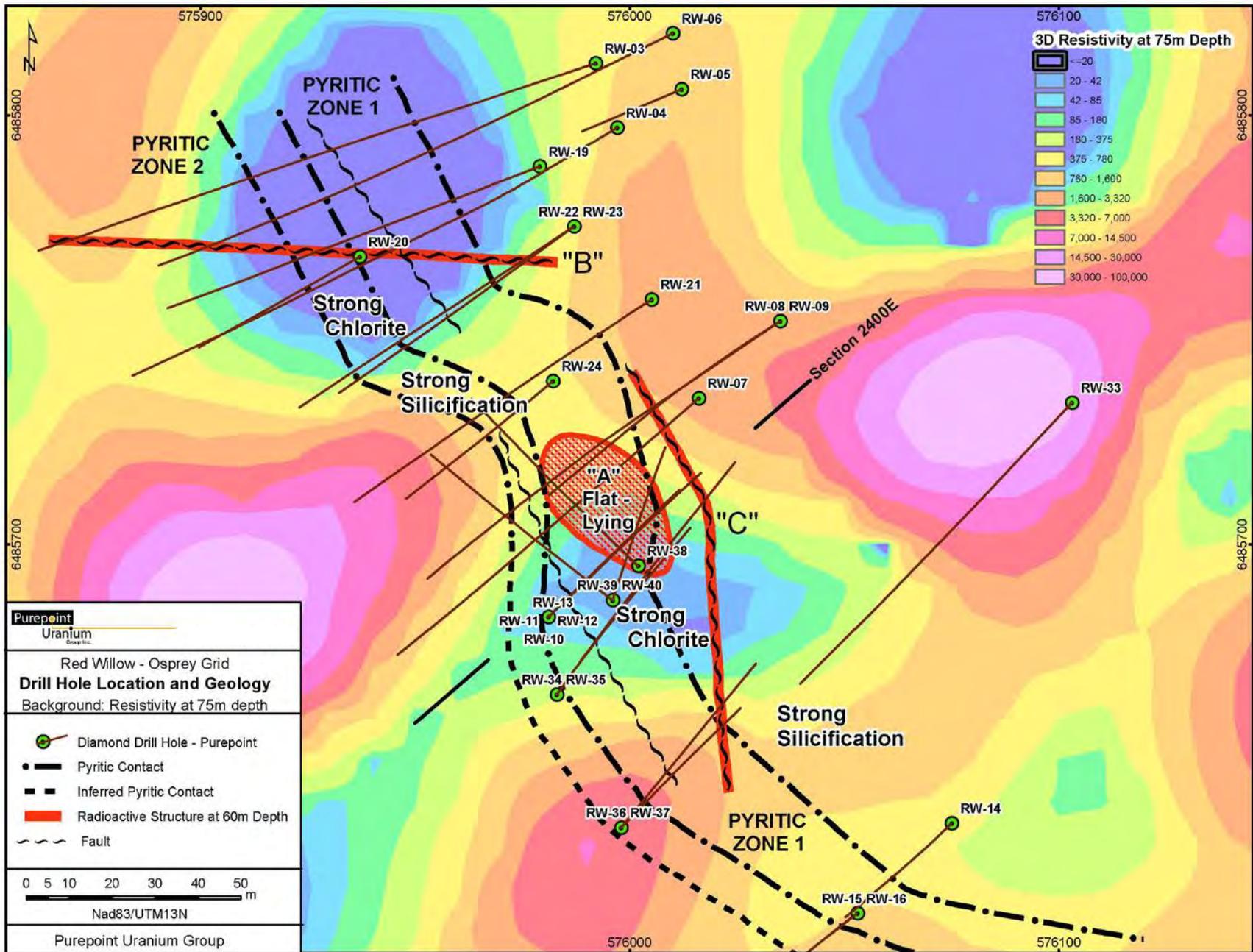


Figure 35: Geologic Interpretation of Osprey Lake Area

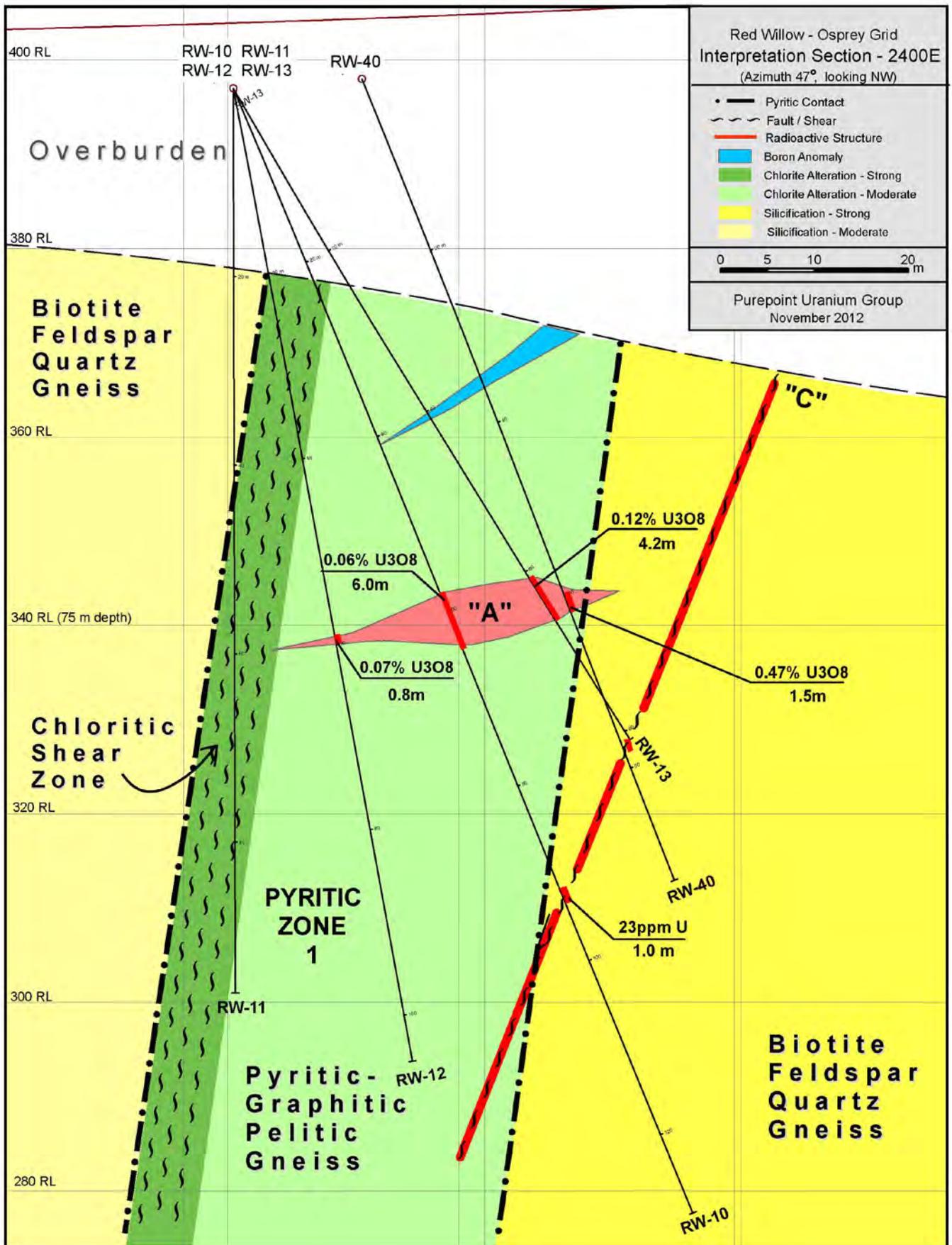


Figure 36: Geologic Interpretation of Section 2400E – Osprey Lake Area

The geophysical results of the Osprey Lake area were initially interpreted as showing a northwest trending fault crosscutting the Osprey conductor in the vicinity of hole RW-07. Subsequent drilling has failed to intercept a significant crosscutting structure but has outlined a silicified flexure in the conductor that appears to be reflected in the 3D resistivity results. Drill holes RW-21 and 24 both encountered the pyritic graphitic pelitic gneiss in the vicinity of the flexure, however, the unit was strongly silicified and devoid of any radioactivity effectively separating the vertical mineralized structure into two separate zones (“B” and “C”). Two additional holes (RW-38 and 39) were drilled into the flexure beneath, and perpendicular to, the RW-21 and 22 holes and intersected strongly silicified pelitic gneiss. Based on this evidence, areas of high resistivity are considered to reflect siliceous barren lithologies.

Three holes were drilled by Rio Tinto in the area including **12RDW001** that encountered barren granitized pelite throughout its length and holes **14RDW013** and **14RDW014** that encountered relatively unaltered quartz-rich semi-pelite and psammitic gneiss.

A resistivity section through the Osprey conductor is compared to the Eagle Point deposits at a similar scale in Figure 37. The comparison suggests that there is potential to discover a large-scale basement hosted uranium deposit in the area.

## Osprey Hinge

Encouraging results were also returned from the Osprey conductor at a fold hinge located approximately 800 metres east-southeast of Osprey Lake and the RW-07 intercept. A three hole geologic fence totaling 648.1 metres of drilling tested the Hinge area and encountered strong clay, hematite and chlorite alteration and a weakly radioactive fault zone (Figure 38).

Drill hole **RW-28** intersected two intervals of moderately chloritized pyritic-graphitic gneiss. A 2 mm wide fracture hosting massive galena was seen cross-cutting foliation between the two graphitic units returning 1.0% Pb over 1.0 m between 166.8 and 167.8 m. Moderately clay altered biotite-feldspar-quartz gneiss hosting clay-filled fractures was encountered between 191.8 and 204.3m then moderate hematite alteration was present to the completion depth of 263.3m. The presence of hematite alteration at a depth greater than 250m was considered encouraging and was followed by the second hole of the geologic drill fence (RW-29).

Drill hole **RW-29** was collared 120m east of RW-28 and did not encounter pyritic or graphitic rock. The biotite-feldspar-quartz gneiss was moderately clay altered to 56.0m, strongly hematite and chlorite altered to 83.7 m, intensely silicified to 96.7 m, then weak hematite alteration to the end of hole. Numerous intervals of strongly broken core and lost core were encountered throughout the hole. The radioactivity highlight of hole RW-29 was from a zone of lost core intersected between 74.7 to 76.3m that returned downhole gamma results up to 1,892 cps (estimated as an eU value of 250 ppm). The anomalous radioactivity is assumed to be related to a vertical fault, named the “Hinge

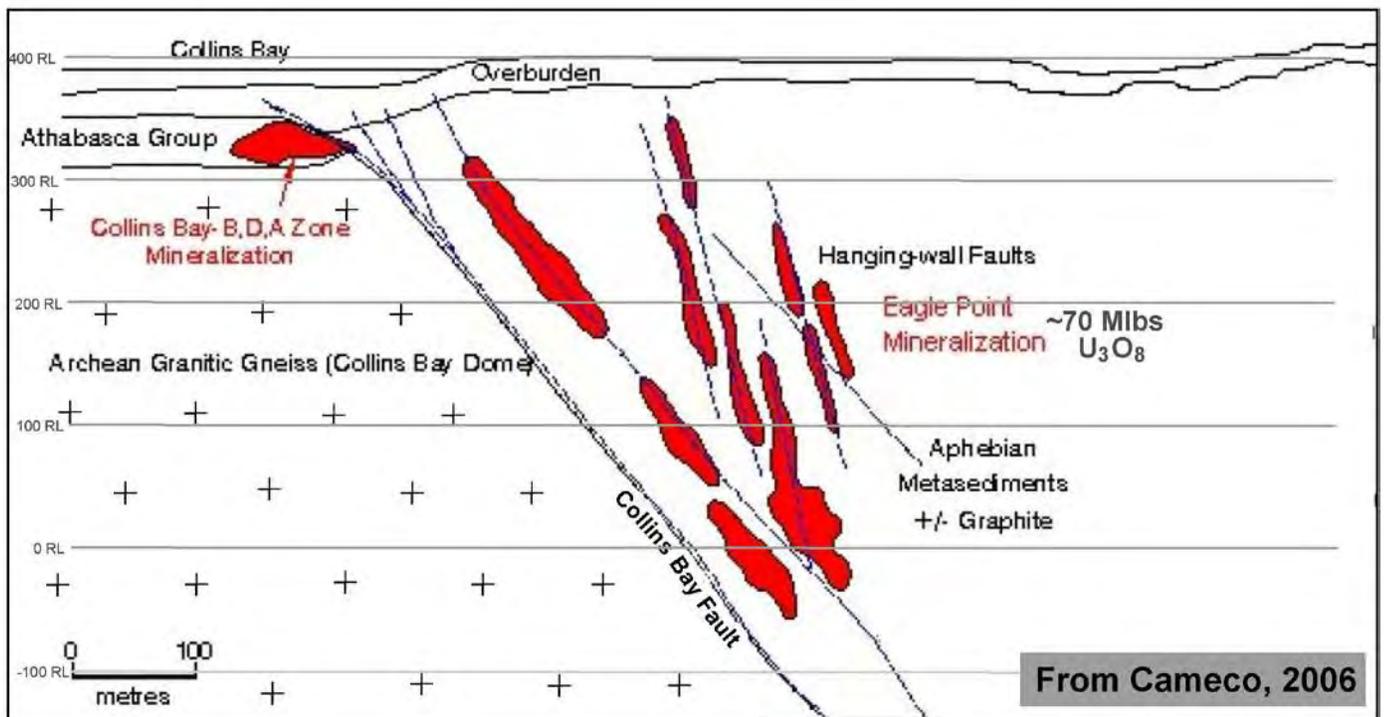
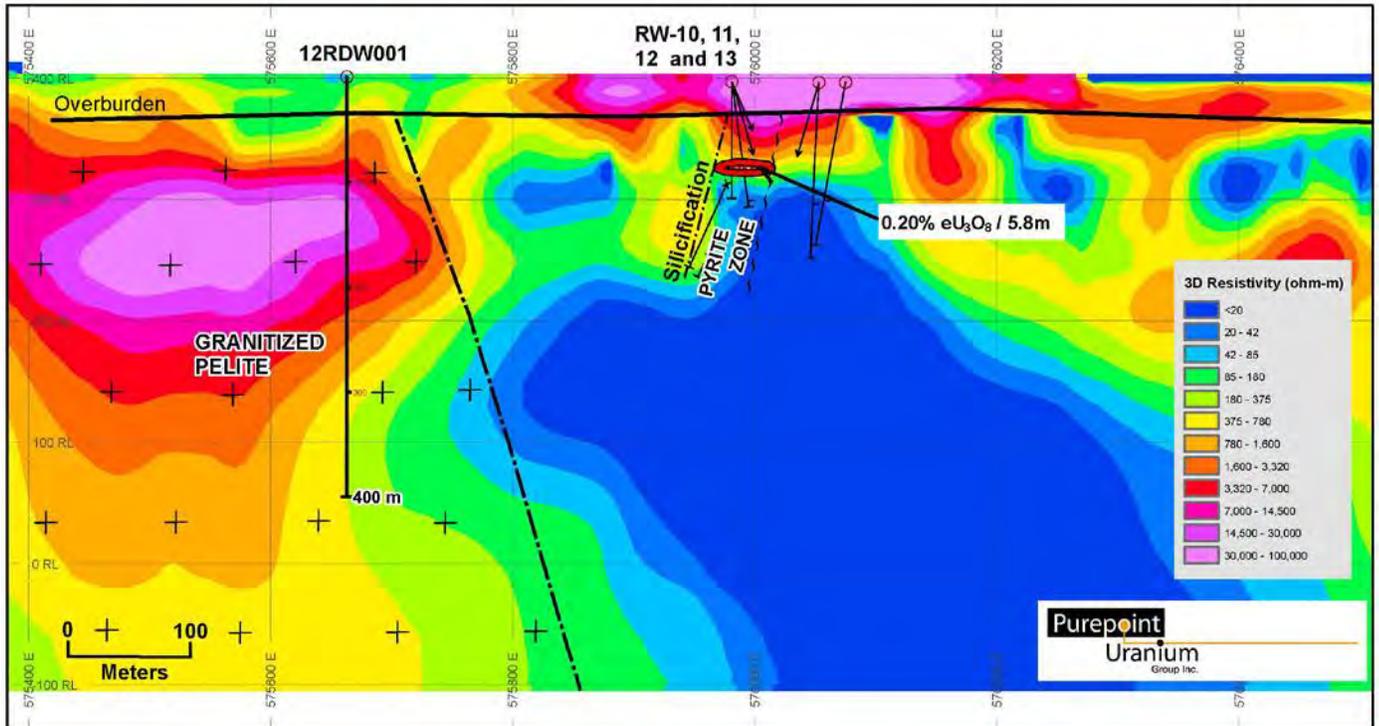


Figure 37: Sections of Osprey Conductor and Eagle Point Deposit at Similar Scales

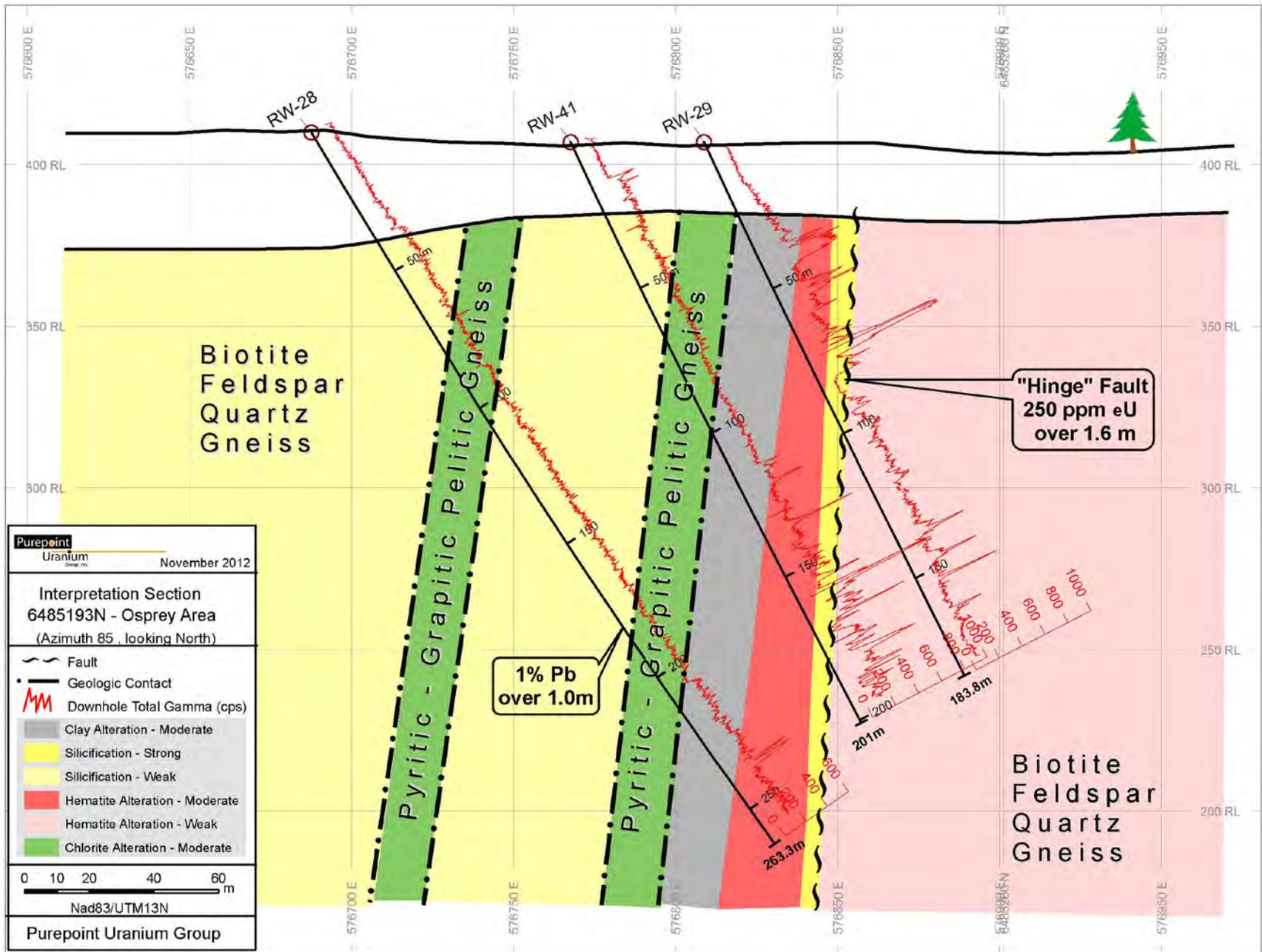


Figure 38: Geologic Interpretation of Drill Section – Osprey Hinge

Fault”, which was intersected between 91.0 and 100.7 m and resulted in 7.5 m of lost core. The Hinge Fault is associated with strong chlorite / hematite alteration and to the east, a zone of intense silicification.

Drill hole **RW-41** was collared 40 m behind RW-29 to follow-up the “Hinge Fault” and its related alteration and radioactivity. Pyritic-graphitic (pelitic) gneiss was intersected in this hole between 68.7 and 90.4 m and displayed moderate, pervasive, dark green chlorite alteration. The Hinge Fault was intersected between 171.5 and 178.1 m showing strong dark red hematite alteration and having a core loss of 3.2 m. Again, intense silicification occurred to the immediate west of the Hinge Fault between 155.0 m and 171.5 m and included an interval of moderate hematite alteration between 158.3 and 161.2 m. A radioactive zone is hosted within the interval of hematite alteration returning 358 ppm U over 0.4m from 159.1 to 159.5m

### **Central Osprey**

The Central Osprey area includes the northern fold limb between Osprey Lake and the Osprey Hinge area and was tested by four holes for a total of 546 metres. Weakly elevated uranium mineralization was intersected in all holes and hydrothermal alteration was seen as progressively increasing towards the Osprey Hinge area.

Drill hole **RW-30** intersected graphitic pyritic pelitic gneiss with weak to moderate pervasive chlorite alteration between 70.6 and 110.6m before being completed in strong to intensely silicified feldspar-quartz gneiss at a depth of 207.0m. No significant radioactivity was encountered.

Drill hole **RW-42** was drilled to the north on Linda Lake and required a steep drilling angle of -80 degrees because of the lake setup. Pyritic-graphitic (pelitic) gneiss with moderate to strong chlorite alteration was intersected from 20.4 to 81.4m and hosted a fault zone between 41.3 and 45.2m that was very soft, strongly sheared and had a 2m core loss. The fault zone returned 20 ppm U over 1.9m from 41.3 to 43.2m. The highest downhole gamma results were returned from the overburden at the bottom of the lake, which averaged 2270 cps over 0.4 m from 13.6 to 14.0m.

Drill hole **RW-43**, drilled 75m west of RW-42 on Linda Lake, failed to explain the conductor and was completed at a depth of 108m. No significant radioactivity was encountered.

Drill hole **RW-44** was then drilled 35m behind RW-43 on Linda Lake in a second attempt to explain the conductor in this area. Pyritic-graphitic gneiss with strong pervasive chlorite alteration was intersected between 30.1 and 76.4 metres. Biotite-feldspar-quartz gneiss with moderate to strong pervasive silicification overprinting weak to moderate patchy dark red hematite alteration was then present to end of the hole at 117.0m. No significant radioactivity was encountered.

## Osprey South

The Osprey South area covers the southern fold limb of the Osprey conductor which is approximately 1.0 kilometers in length. Within this area the conductor is associated with a narrow resistivity low that lies within rocks returning both gravity high and magnetic high responses. Three holes were drilled in the area by Purepoint during their 2010 program and two additional holes were drilled by Rio Tinto in 2012 for a total of 1,520 metres of drilling.

Drill hole **RW-25** was collared outside of the gravity high and magnetic high to allow determination of the lithology and/or alteration responsible for this geophysical response. A minor amount (2.7m) of Athabasca Sandstone was intersected before encountering basement rock that was approximately 65% biotite-feldspar-quartz (pelitic) gneiss and 35% pegmatite / granitic gneiss to a depth of 265.5m. Unaltered pyritic-graphitic (pelitic) gneiss was encountered from 265.5m to the end of hole at 285.0m.

Drill hole **RW-26** was collared 100m in front of RW-25 and intersected Athabasca sandstone over 5.2m. Weakly chlorite altered, locally graphitic, pyrite-biotite-feldspar-quartz (pelitic) gneiss was intersected between 67.3m and 99.1m and the hole was completed within weakly chlorite altered magnetite-pyrrhotite-biotite-feldspar-quartz gneiss at a depth of 141.0m.

Drill hole **RW-27** did not encounter Athabasca sandstone before intersecting pelitic gneiss at 136.5m followed by pyritic pelitic gneiss with minor graphite and moderate chlorite alteration to 165.7m. Biotite-feldspar-quartz gneiss having weak to moderate silicification was then encountered to the hole's completion depth of 327.7m. No anomalous radioactivity and only minor structures and minor intervals of pegmatite were intersected.

Based on the 2010 drilling, the gravity high and magnetic high in the Osprey South area is considered to be related to the magnetite/pyrrhotite-rich gneiss encountered at the bottom of RW-26. The overall resistivity response of the area is quite high compared to other areas along the Osprey conductor and is thought to be related to a high percentage of pegmatites, granitic gneisses and "granitized" (i.e. silicified) pelites such as encountered by holes 25 and 27 as well as historic holes OS-16 to 19 and Turk-6 (Figure 34).

Drill hole **12RDW002** targeted the Osprey conductor and did not encounter sandstone before intersecting zones of sericite and hematite alteration and a weakly radioactive fault zone within graphitic pyritic pelitic gneiss that returned 58 ppm U over 2.0 metres. A talc/serpentine altered calc-silicate unit was encountered by the hole before being completed at 401m.

Drill hole **12RDW004** targeted a resistivity low and encountered 21m of sandstone with illitic alteration before intersecting the unconformity that was associated with hematite and clay alteration. The unconformity returned up to 9 ppm U while the basement rocks,

which contained two wide zones of sericite, hematite and chlorite alteration, returned up to 11 ppm U. Weakly graphitic and pyritic pelitic gneiss was then encountered before the hole was completed at 365m. The 3D resistivity data for this area suggests the hole may have stopped short of testing a sandstone LARC that was associated with a fault zone (hole OS-14) and alteration (hole OS-15) approximately 150 metres to the south (Figure 39).

### **Osprey North**

Two holes, RW-31 and 32, targeted the Osprey conductor north of the previous drilling where the conductor has a north-south trend. The two holes totaled 375 metres of drilling and did not intersect anomalous radioactivity.

Drill hole **RW-31** was drilled towards the south-west at -65 degrees however, the rocks were not dipping as steeply in this area as previously experienced resulting in the hole being essentially drilled down-dip and the conductor not being explained.

Drill hole **RW-32** encountered a wide zone of moderately chloritized pyritic-graphitic pelite. Unlike holes in the Osprey Lake area, the graphite in RW-32 was present as semi-massive bands as well as fine disseminations.

### **Osprey West**

Drill holes RW-01 and RW-02 targeted a break on the West Zone conductor located 100 metres from the Wolly property, an Areva/Denison joint venture. These holes intersected bleached sandstone before reaching the unconformity at a depth of approximately 30 metres. Graphitic pelites and favourable structures were encountered, however, neither hole intersected anomalous radioactivity.

#### *9.2.2 Geneva Drill Results*

Seven drill holes were completed at the Geneva area by Rio Tinto between 2012 and 2014 (Figure 40) and a summary of anomalous uranium intercepts is provided in Table 5.

Drill hole **GEN11-01** tested a 900 metre long EM conductor located within the centre of the Geneva grid where it appeared to be structurally offset. The EM target also coincided with a LARC in the sandstone interpreted as a possible zone of hydrothermal alteration. The hole encountered Athabasca sandstone to a depth of 113.0m and displayed moderate to strong clay alteration between 82.4 and 107.8m that correlates with the resistivity low (Figure 24). Biotite-feldspar-quartz gneiss was moderately chlorite altered due to paleoweathering to a depth of 169.7m then was silicified with trace graphite and pyrite to the completion depth of 255.0m. No anomalous radioactivity was intersected by this hole.

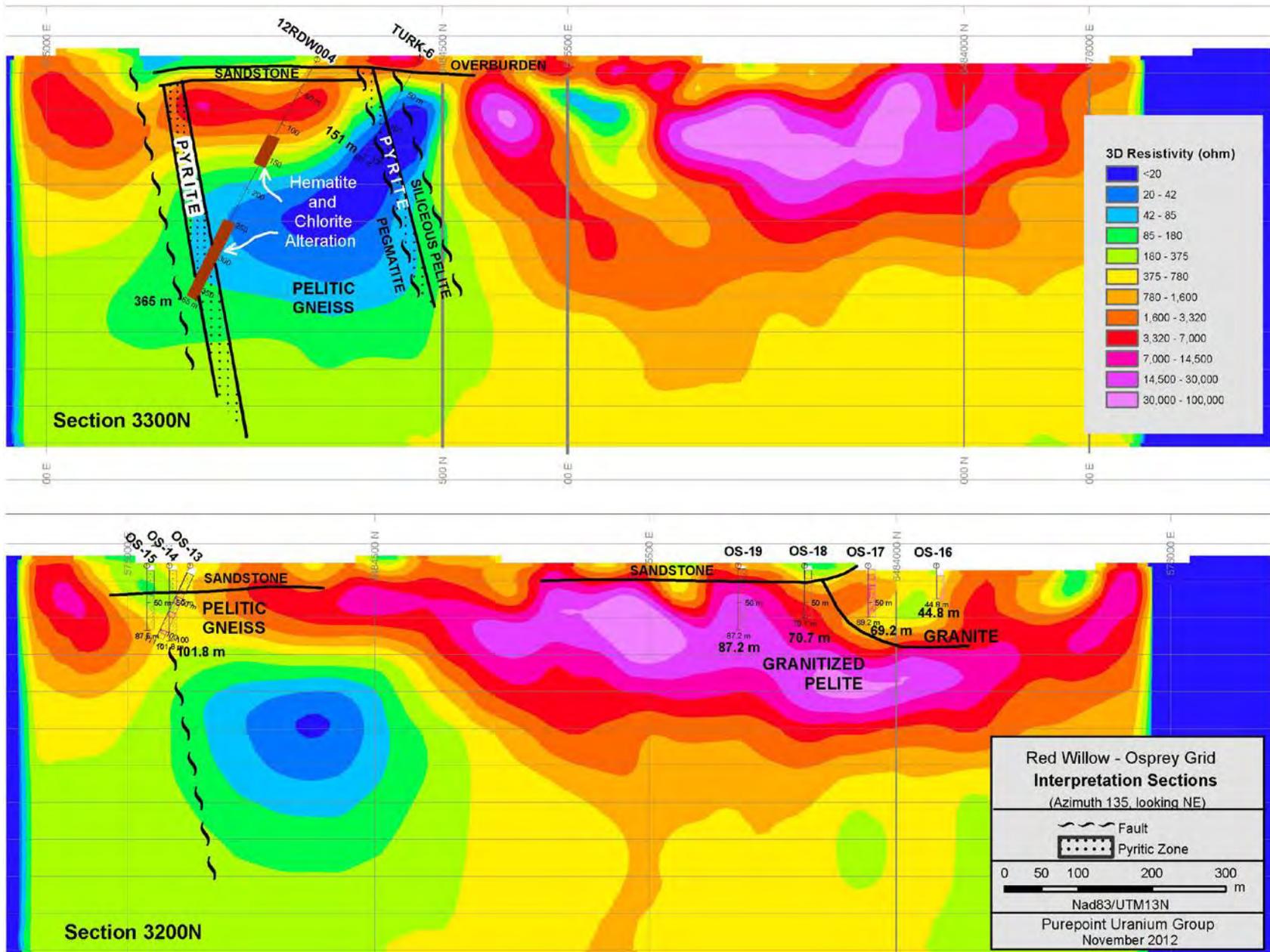


Figure 39: Geologic Interpretation of Sections 32N and 33N – Osprey South

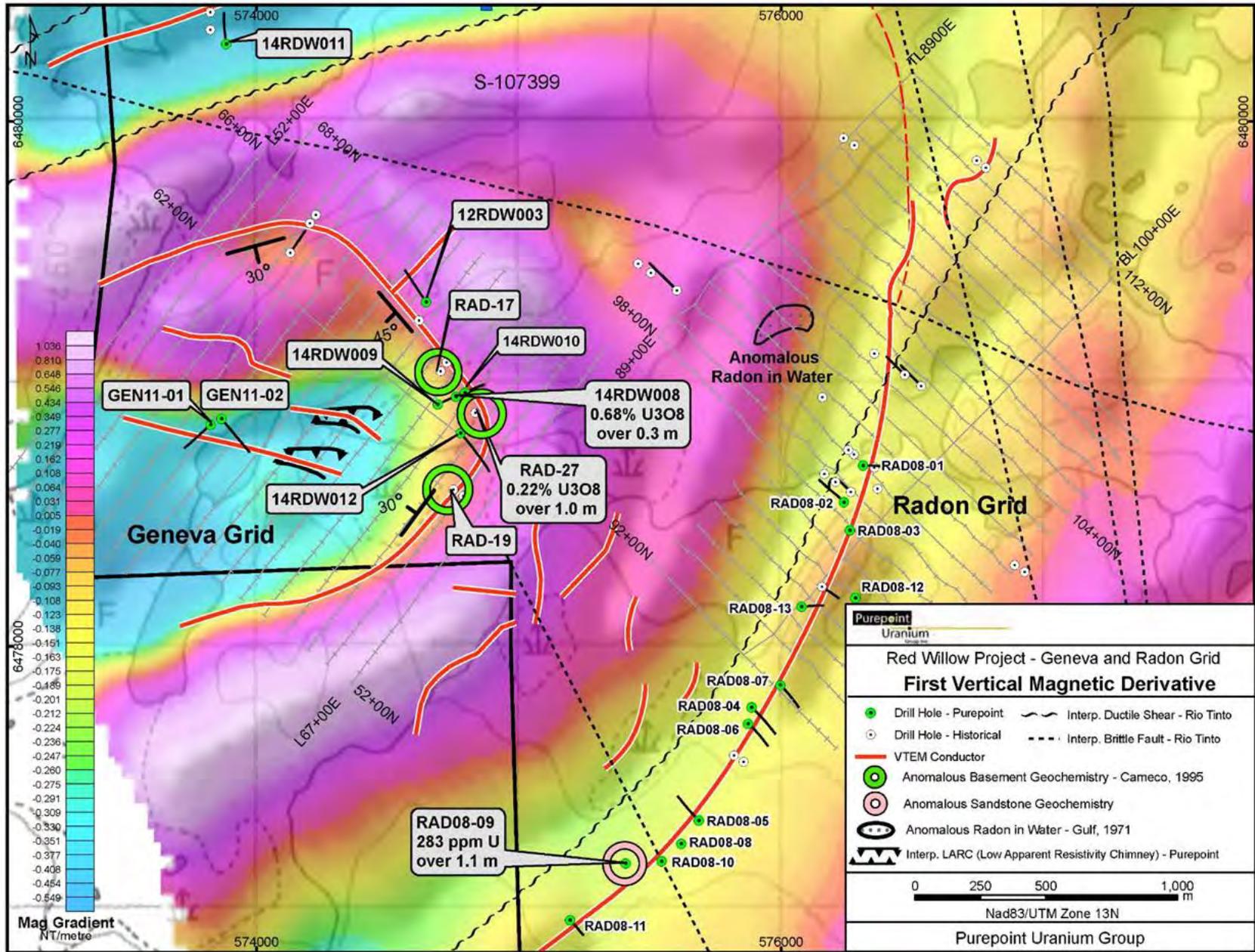


Figure 40: Diamond Drill Hole Location Map – Geneva and Radon Grids

**Table 5: Summary of Significant Uranium Intercepts – Geneva Area**

Hole No.	From (m)	To (m)	Width (m)	U (ppm)
14RDW008	88.3	94.7	6.4	434
<i>Includes</i>	<b>89.1</b>	<b>89.4</b>	<b>0.3</b>	<b>5780</b>
14RDW008	185.3	185.6	0.3	1500
14RDW008	193.1	194.2	1.1	500
14RDW009	193	194	1	322
14RDW009	286.3	289.0	2.7	169
14RDW009	291.0	291.5	0.5	188
14RDW010	139	141.3	2.3	314
14RDW012	217.5	219	1.5	190

Drill hole **GEN11-02** was collared 45m south of GEN11-01 and was designed to test an interpreted structure beneath a small lake. Athabasca sandstone displaying moderate clay alteration was encountered between 102.0 to 109.1m before a 2.7 metre fault zone, containing semi-massive clay, chloritic fragments and evidence of shearing, was intersected immediately above the unconformity at 111.8m. Another five fault zones, 1.1 to 5.2m in width, were then intersected with biotite-feldspar-quartz gneiss to a depth of 178.7m. The biotite-feldspar-quartz gneiss then displayed patchy hydrothermal hematite alteration to 222.5m before becoming silicified with localized concentrations of graphite and pyrite to the completion depth of 336.0m. The alteration zone encountered by GEN11-01 within the sandstone correlated with the resistivity low anomaly and GEN11-02 intersected significant structures in the basement rocks as were interpreted. The presence of pyrrhotite in the bottom of both holes may help explain the presence of the gravity high anomaly in this area (Figure 27).

Drill hole **12RDW003** targeted a gravity low that was coincident with a VTEM conductor within a magnetic high. The hole did not intersect Athabasca sandstone before encountering hematite and magnetite rich granite to the hole's completion depth of 302.0m. The VTEM conductor was not explained by the hole and the gravity low signature is now considered to be an overburden response. The presence of granitic rock in this hole is supported by the high gradient resistivity response (Figure 27) and the high magnetic response (Figure 40).

Drill hole **14RDW008** was to follow-up the on-strike potential of mineralization and alteration encountered historically. Athabasca sandstone with local desilicified intervals was encountered between 7.3 to the unconformity at 78.5m. From the unconformity a pelitic gneiss was encountered between 78.5 and 90.0m. The pelite gneiss is strongly altered to clay and chlorite obliterating most of the fabric. The VTEM conductor is considered to be 4.7m of sheared graphitic pelitic gneiss that was encountered from 90.0 to 94.7m. The pelitic gneiss continues to 199.2m where granitic gneiss extents until the end of hole.

Results show two main zones of radioactivity. One zone is associated with the conductor and the other is related with the contact between pelite gneiss and granitic units. The radioactive peak of 1561 cps occurs at a depth of 89.2m and corresponds with an assay of 0.68%  $U_3O_8$  over 0.3m from 89.1 to 89.4m related to the graphitic shear (Figure 41).

Drill hole **14RDW009** was a 70m step-back west to test the down-dip potential of basement mineralization found in 14RDW008. Athabasca sandstone begins at 3.7m and continues to 83.1m where the first basement is encountered. Pelitic gneiss began at the unconformity until the VTEM conductor, a graphitic gneiss is intersected from 177.8 to 182.0m. After the graphitic interval the hole returns to pelitic gneiss until 293.1m where granitic gneiss is intersected and continued until the end of hole.

There is a radioactive peak of 978 cps that corresponds with an assay of 322 ppm U over 1.0 m from 193.0 to 194.0m which is associated a brittle shear zone. This slightly radioactive graphitic pelitic gneiss is metal enriched (116 ppm Zn, 72 ppm V, 298 ppm Cu, 72 ppm Ni) confirming the presence of a fluid pathway that is interpreted to be connected to 14RDW008.

Drill hole **14RDW010** stepped 40 m in front of 14RDW008 to test for the up-dip extension of the mineralization and alteration in the sandstone. Bleached Athabasca sandstone is encountered from 6.4 to 81.7m when the unconformity is encountered. Pelitic gneiss begins at the unconformity to 150.1m when a granitic gneiss is encountered until the end of hole. There was no mineralization encountered in the sandstone. Only a small radioactive peak of 2637 cps was intersected near the pelite/granite contact.

Drill hole **14RDW012** stepped 270m to the south targeting on-strike mineralization and an interpreted cross-cutting E-W structure at the unconformity. Bleached Athabasca sandstone is encountered from 5.3 to 130.7m where the unconformity is intersected. After the unconformity a paleo-weathering zone of moderate clay and hematite altered pelitic gneiss is encountered until 156m. The pelite continues until granitic gneiss is intersected at 221.1m that continues until the end of hole.

The EM conductor was not intersected explained by hole 14RDW012, however, based on the location of the VTEM conductor pick in relationship to the intersected graphitic unit for the section showing holes 14RDW008, 9 and 10, it is considered that the hole overshot its intended target.

### *9.2.3 Mustang Drill Results*

The 2014 drilling program on the Mustang conductor systematically drilled a three hole fence targeting historically logged “hydrothermal” alteration that was previously logged as ‘plastic, deformable clay’ in basement rocks.

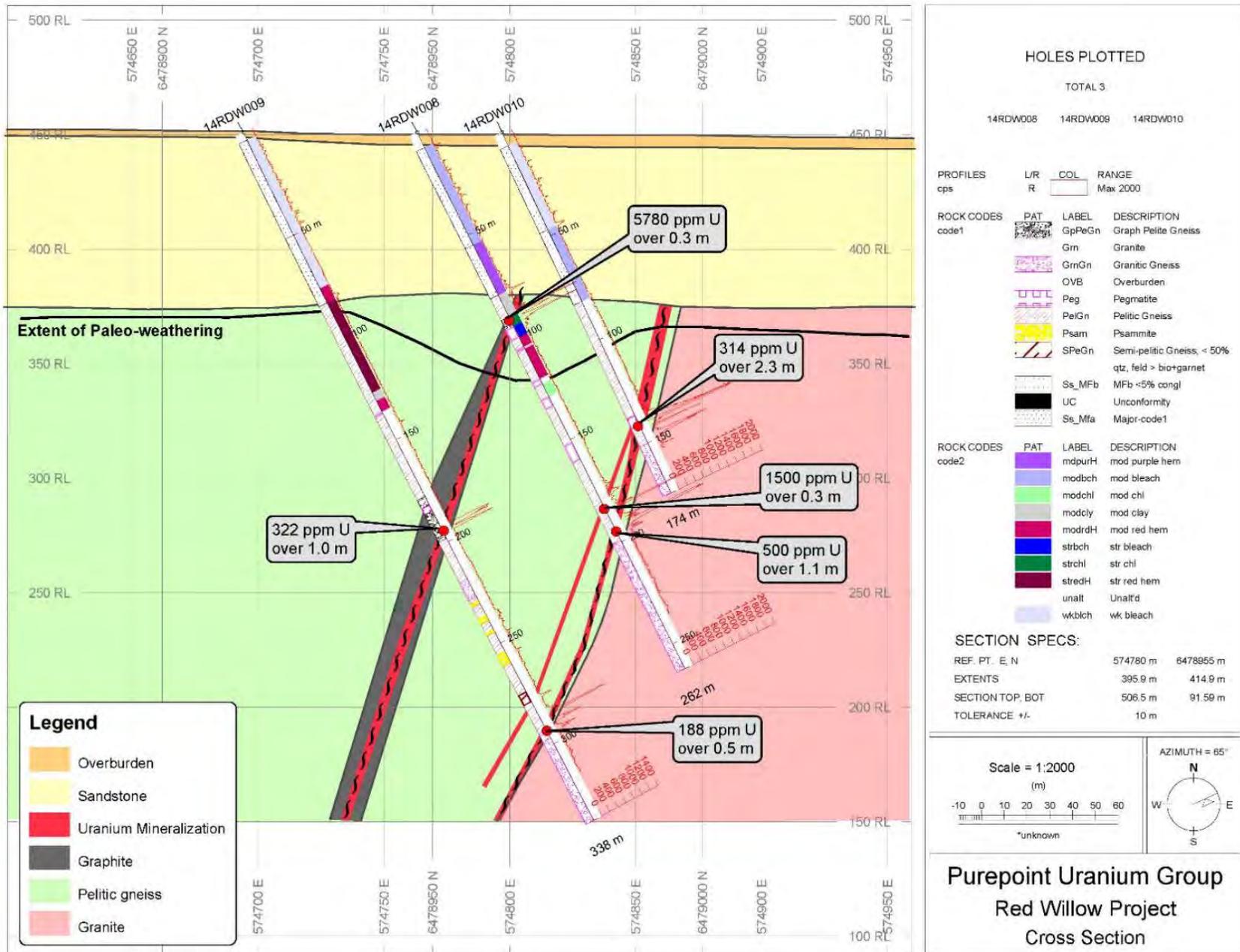


Figure 41: Geologic Interpretation of Drill Section – Geneva Area

The 2006 VTEM survey shows a sub vertical dipping, weak conductor in the channel 6, and a negative “IP response” seen in channel 4 of the survey. The negative “IP response” was attributed to either near-surface weathering or a possible clay-rich zone.

The three drill holes were completed in a staggered fence across the south end of the conductor and along the same transect as the previous holes (OS-20 and -21) (Fig. 42). The three hole fence confirmed a near surface 50m thick zone of weak to very strong clay alteration, dominantly consisting of phengitic-illite clays, montmorillonite clay, and hematite in pelitic and granitic rocks. A narrow, sub-horizontal uranophane-filled fracture was intercepted in **14RDW005** below the clay alteration envelope (89 m) and returned 639 ppm uranium over 30 cm from 88.9 to 89.32 metres. Graphite was only encountered in hole 14RDW005 and appeared as trace amounts within the last 3 metres of the hole. Follow-up hole **14RDW006** encountered unmineralized granite beneath 2 meters of sandstone which implies that the start of bedrock in the drill holes in the Mustang Area are proximal to the unconformity.

Drill hole **14RDW007** was drilled 60m NW of 14RDW005 to follow up the anomalous radioactivity. No Athabasca sandstone was encountered before intersecting semi-pelitic gneiss at 12.9m. The semi-pelitic gneiss continues until 148.2m where it transitions to pelitic gneiss until the end of hole (Figure 43). No significant structure, alteration or radioactivity was encountered within the hole.

The near surface alteration halo is depleted in Cu, Mo and Bi and is elevated in B. The alteration package is not depleted in other pathfinder metals (Co, Ni, As, Zn). The observed pattern of trace metal depletion and elevated boron also occurs at and below the unconformity in several other holes across the property, suggesting the clay alteration intercepted at Mustang represents paleo-weathering rather than hydrothermal alteration.

#### *9.2.4 Radon Lake Drill Results*

The drilling program at Radon Lake systematically explored the VTEM conductor southwest of the lake with 13 drill holes for a total of 2,726 metres. The drill hole locations are provided with a geologic interpretation in Figure 44 and a summary of anomalous uranium intercepts are provided in Table 6.

The rocks were interpreted to be dipping steeply towards the west at approximately 70 degrees. Holes testing the VTEM conductor were typically drilled to a depth where they encountered strongly silicified pelitic gneiss before being stopped. The interpreted contact of the silicification matches well with the gradient IP resistivity high seen in Figure 24. The K-spar rich quartzite logged towards the west does not appear to be readily apparent in any of the geophysical results. Graphitic pyritic pelitic gneiss explained the conductor was encountered six of the

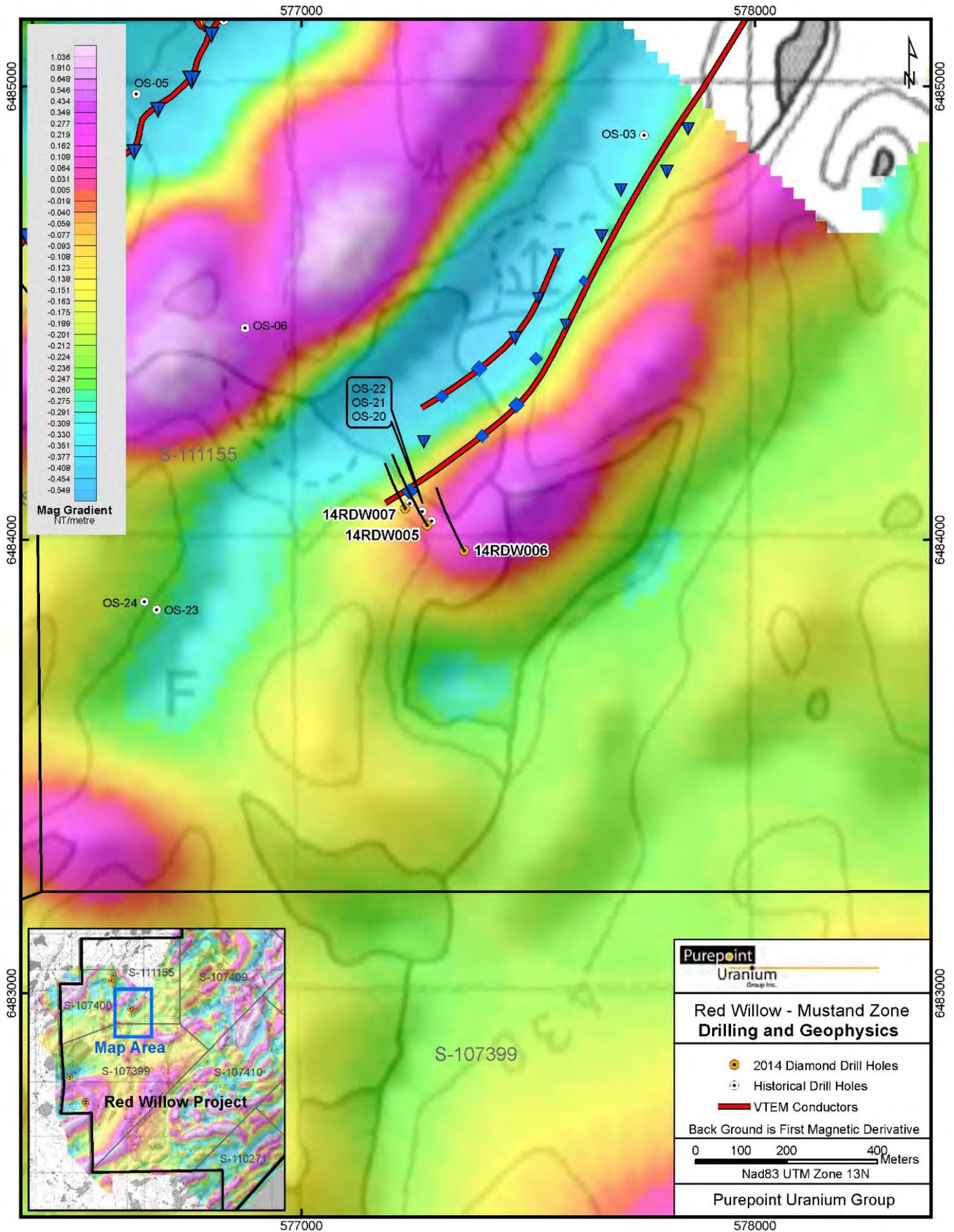


Figure 42: Diamond Drill Hole Location Map – Mustang Area

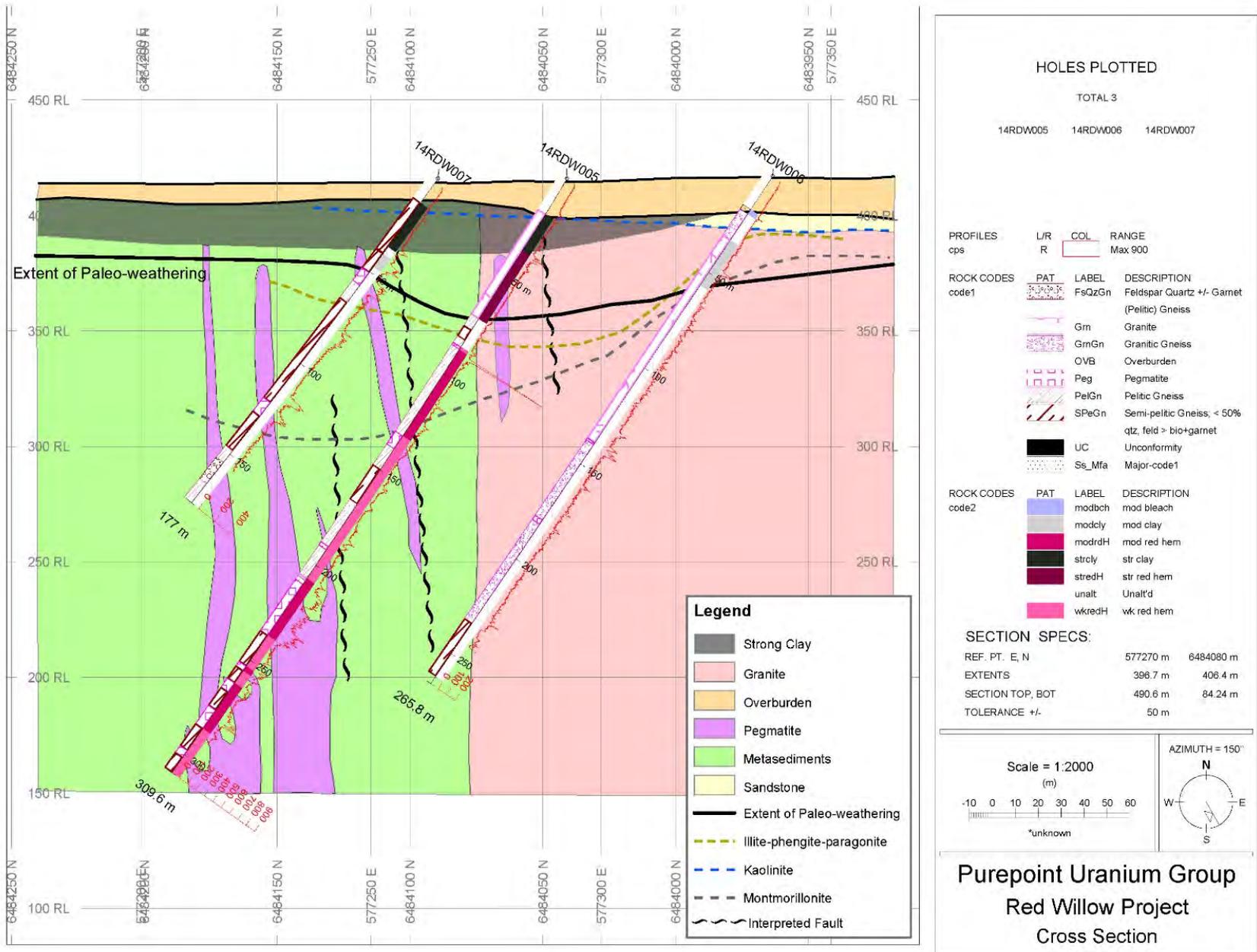


Figure 43: Geologic Interpretation of Drill Section – Mustang Area

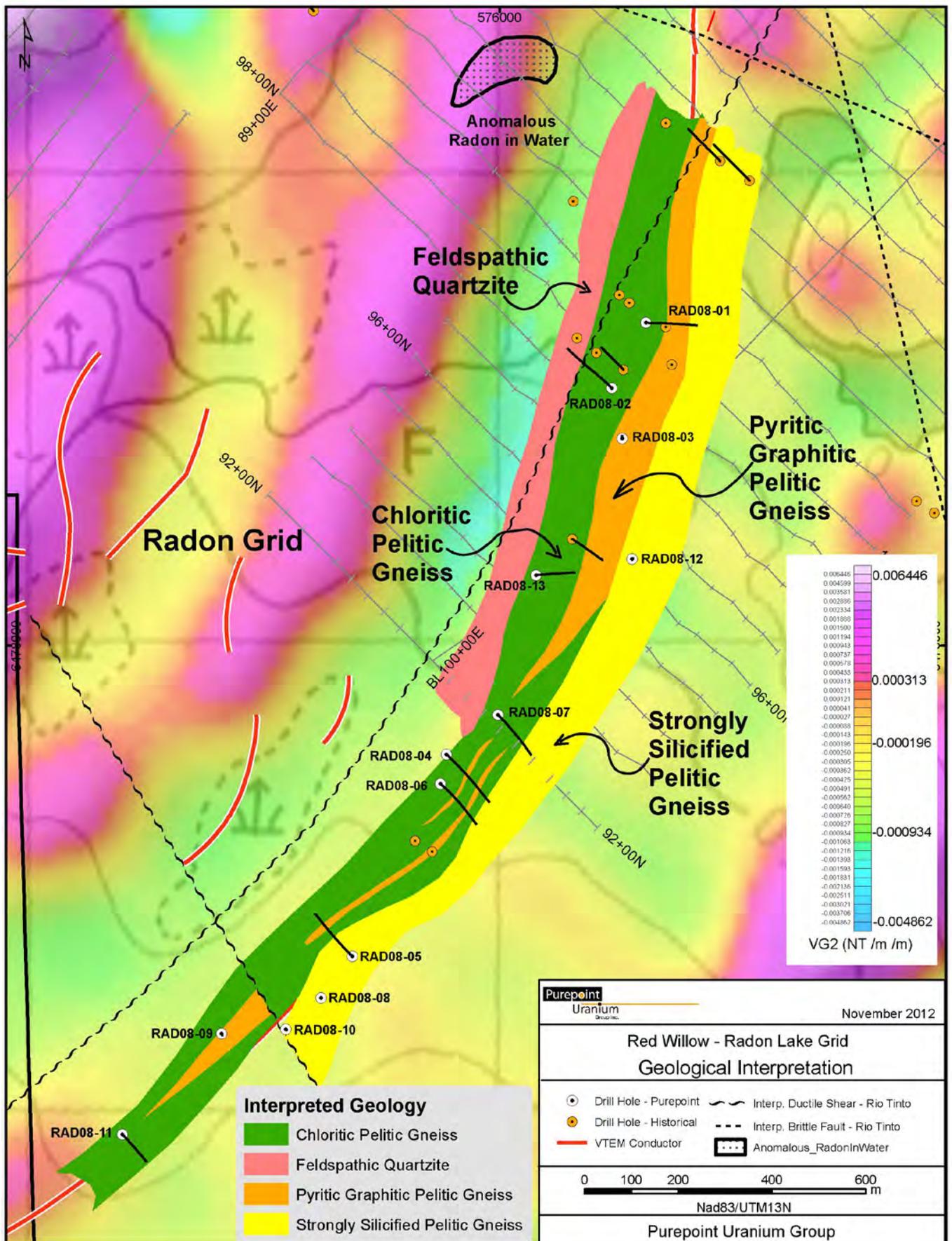


Figure 44: Geologic Interpretation – Radon Lake Area

**Table 6: Summary of Significant Uranium Intercepts – Radon Lake Area**

Hole No.	From (m)	To (m)	Width (m)	U (ppm)
RAD08-01	127.0	128.0	1.0	115
RAD08-02	118.0	119.0	1.0	180
RAD08-05	117.7	118.0	0.3	189
	166.1	166.3	0.2	148
RAD08-06	150.0	150.2	0.2	102
RAD08-09 includes	106.1	107.2	1.1	283
	106.9	107.2	0.3	656

holes (RAD08-01, 03, 04, 05, 06 and 13) while RAD08-09 encountered a pyritic mineralization not associated with graphite. Favourable brick red hematite alteration and strong bleaching was encountered near the unconformity in holes RAD08-04 and 09.

The mineralization highlight was from hole RAD08-09 with sandstone at the unconformity returning 283 ppm U over 1.1 metres between 106.1 and 107.2 metres. The nearby hole RAD08-05 (located 300m NW) returned 189 ppm U over 0.3 metres between 117.7 and 118.0 metres also in sandstone just above the unconformity. Hole RAD-10 was drilled between RAD-09 and 05 and encountered zones of lost core and strong faulting throughout its length.

#### 9.2.5 Lasby Lake Drill Results

In 2014 Rio Tinto conducted a one hole drill program on the Lasby Lake grid. The drill hole was designed to test alteration along strike (50m) of two historical holes (RAD-85-33 & 34) that intersected a thick graphitic unit associated with clay alteration interpreted as being hydrothermal in origin.

Drill hole **14RDW011** (Figure 40) first reached Athabasca sandstone from 5.4 to 82.4m when the unconformity was encountered. From the unconformity psammitic gneiss with moderate clay alteration continued until 176.5m when chlorite altered quartz-rich semi-pelitic gneiss is intersected. From 207 to 207.9m a massive graphitic fault zone is intersected which can be considered the VTEM conductor. Between 220.9 and 221.4 meters, an assay of 396 ppm U over 0.5 metres was returned from a dark grey, quartz flooded interval. The core returns to quartz-rich semi-pelitic gneiss to 222.5m and then transitions to a psammite to the end of hole.

**Table 7: Summary of Significant Uranium Intercepts – Long Lake Area**

Hole No.	From (m)	To (m)	Width (m)	U (ppm)
LL08-04	117.8	118	0.2	160
LL08-05	40.6	41.1	0.5	269
LL08-07	31.6	31.7	0.1	611
	33.2	33.4	0.2	237

### 9.2.6 Long Lake and 333 Grid Drill Results

The Long Lake / 333 grid area was drilled by Purepoint in 2008 with seven holes totaling 1,623 meters. The work done on the Long Lake area was a “first pass” program designed to test multiple targets at different localities.

Two of three EM conductors drill-tested in the Long Lake area are now known to reflect altered, graphitic rocks. These two target areas represent 8.7 kilometers of prospective EM conductors (Figure 45). A summary of the anomalous radioactivity intersected during the Long Lake area drilling is provided in Table 7.

Four holes, **LL08-01 to 04**, tested the 4.5 kilometer electromagnetic (EM) conductor that partially runs beneath Long Lake. Three of the four holes intersected graphitic rocks that explained the conductor and all holes encountered strong silicification and/or strong chlorite alteration associated with fault zones.

Significant radioactivity was not encountered during the Long Lake drilling and the source of the historic Long Lake boulder train, located due north of Long Lake, remains unknown. Less than a kilometer of the 4.5 km Long Lake conductor was drill-tested, and it is now thought that the source of the radioactive boulders remains further up-ice from the recent drill program.

One hole, **LL08-05**, tested the 1.0 kilometer EM conductor that partially runs beneath Riche Lake (located 500 m west of Long Lake). LL08-05 encountered a 1.6 metre radioactive fault zone with the downhole gamma probe returning 269 ppm U over 0.5 metres from 40.6 to 41.1 metres. Prospecting by Purepoint during the summer of 2006 discovered two radioactive boulders approximately 200 metres due south of Riche lake that returned uranium values up to 1.30% U<sub>3</sub>O<sub>8</sub>.

Two holes, **LL08-06 and 07**, were drilled along the 4.2 kilometer Lyon Lake EM conductor. Both holes encountered graphitic rocks associated with strongly chloritic fault zones and strong silicification. LL08-06 did not intersect anomalous radioactivity but the second hole in the conductor, LL08-07, intersected three distinct radioactive zones. The LL08-07 zones of radioactivity were associated with small chloritic gouges (<20 cm) at 31.1m and 33.2m that returned 611ppm U over 0.1m and 237ppm U over 0.2m, respectively.

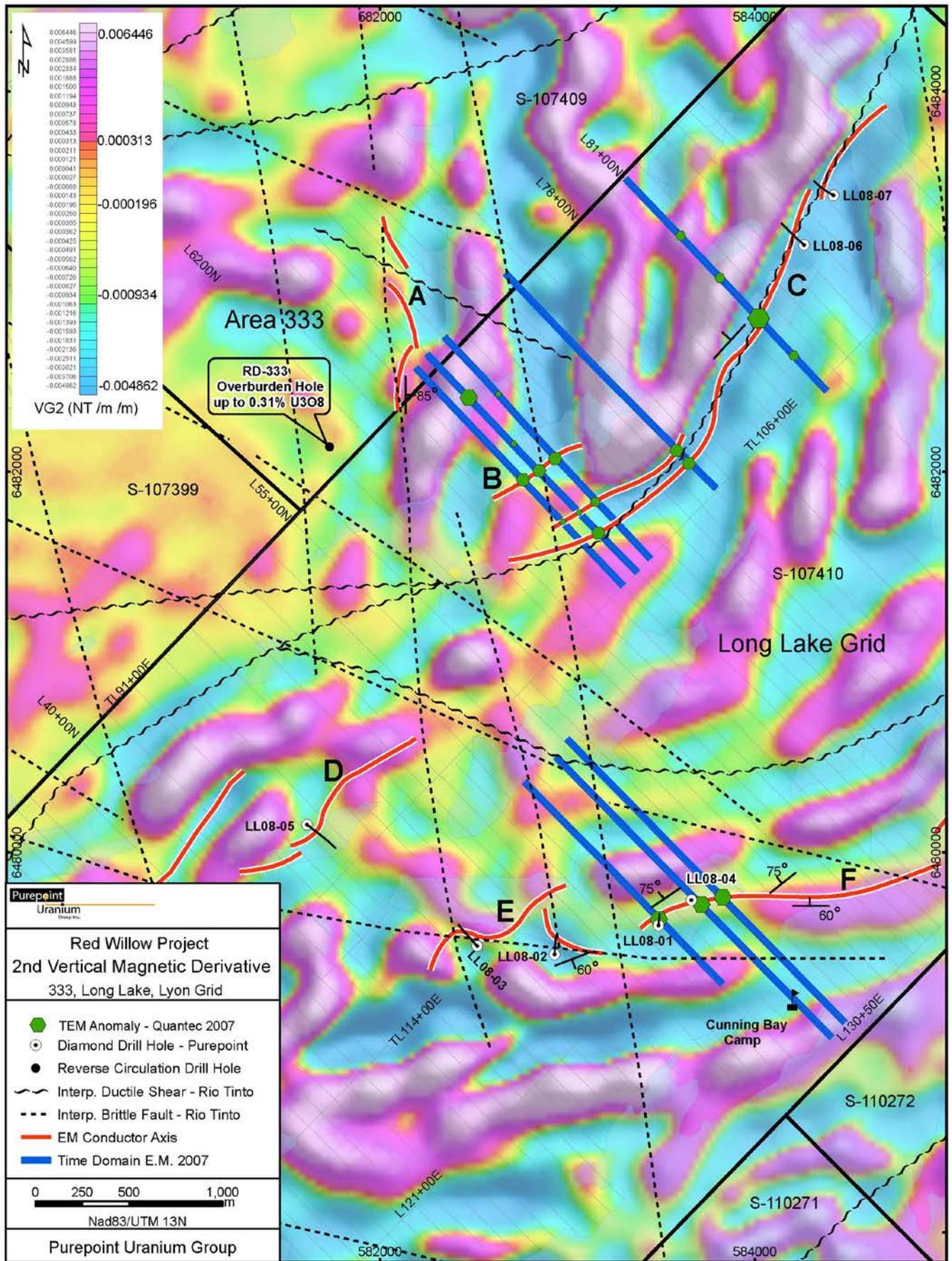


Figure 45: Diamond Drill Hole Location Map –Long Lake and 333 Grids

### 9.2.7 Interpretation and Conclusions

The current drilling in the area of Osprey Lake has shown that the RW-07 uranium mineralization is a flat-lying zone associated with a steep weakly radioactive chloritic gouge structure. The area is open at depth for further stacked lenses of mineralization parallel to the RW-07 mineralization. Favourable pelitic rocks are thought to be located west of the Osprey conductor that may also host mineralization within vertical structures and as sub-horizontal stacked lenses.

The fold hinge of the Osprey conductor is considered to require further drilling after a fence of three holes intersected a vertical, weakly radioactive fault zone (Hinge Fault) associated with strong chlorite and hematite alteration. Alteration of the basement rocks within drill holes located along the northern limb is seen as increasing towards the fold nose where one of the holes, RW-28, encountered the strongest clay alteration seen on the property to date. The strike of the Hinge Fault is currently unknown and untested. Where the fault intersects the central portion of the Osprey Conductor is considered to represent an important uranium exploration target.

Geneva intersected elevated uranium levels in the 2014 drilling program, mainly in drill hole 14RDW008, and the associated structure was followed to depth in 14RDW009. The structures hosting anomalous uranium concentrations need to be followed up along strike and at depth. Geophysical data shows that excellent exploration targets remain within Geneva, namely the eastern terminus of two short VTEM conductors and the area proximal to RAD-27 and 14RDW008. The short VTEM conductors coincide with low apparent resistivity chimneys in the sandstone and may represent zones of hydrothermal alteration and should be tested.

Drilling in the Radon Lake did not discover the source of the historic radon-in-water anomaly but did encounter anomalous sandstone geochemistry in hole RAD08-09 that returned uranium values ranging from 46 to 656 ppm. A significant structure was intersected by RAD08-10 (140 metres east of RW-09) and may be associated with the anomalous radioactivity making the area still attractive for follow-up.

First pass drilling within the Mustang area intersected a weakly anomalous uranophane fracture in drill hole 14RDW005, however, the radioactive fracture was not intersected in the two follow-up holes. Strong, clay alteration was encountered in the paleo-weathering zone in hole 14RDW005 and 14RDW007. The Mustang EM conductor remains an exploration target since the most recent holes only tested the weakly conductive south end of the main conductor.

Lasby Lake drill hole 14RDW011 intersected a small radioactive interval of 369 ppm U over 0.5m below the conductor. Only 3 drill holes have been drilled into the 3.5km Lasby Lake EM conductor and is considered to still be an exploration target.

First pass drilling within the Long Lake area intersected a 1.6 metre radioactive structure in LL08-05 (including 269 ppm U over 0.5 m) and two narrow mineralized

structures in LL08-07 (611 ppm U and 237 ppm U over 0.1 and 0.2 m, respectively). Two of three eastern electromagnetic conductors drill-tested in 2008 at Long Lake are now known to reflect altered, graphitic rocks. Over 7 kilometers of favourable EM conductors remain to be drill tested in the Long Lake area.

## **10. SAMPLE PREPARATION, ANALYSES AND SECURITY**

### **10.1 Sample Preparation**

The sample preparation on site is limited to splitting the core. All other sample preparation is performed by the independent laboratory, SRC. The core splitting is done under the supervision of the site geologist by the company's geological technician.

Diamond drill core was placed in core boxes and transported to the core logging building at the temporary work camp by the drilling company. The project geologists log the core for lithologic characteristics and the geological technicians log the core for core recovery, rock quality determination (RQD), fracture count, magnetic susceptibility and radioactivity.

Samples of drill core are typically chosen for analysis based on the radioactivity recorded by the geological technician using a handheld scintillometer. Additional "shoulder" samples are also taken above and below the radioactive zone. Also, non-radioactive structures, alteration and lithologies were sampled to possibly identify processes related to the mineral deposit model and background geological and geochemical processes. Attempts were made by the geologist to avoid having more than one lithology in any given sample.

Samples were collected by both a composite method (only for sandstone) and by splitting. For composite samples of sandstone, the geologist collects a 2 to 4 cm long piece of core every metre and places these in a marked plastic sample bag along with a sample number tag from the sample ticket book. The geologist records the sample intervals within the sample ticket book, and then staples a sample number tag from the sample ticket book to the core box where the interval begins.

For core to be sampled by splitting, the geologist marks the sample intervals on the core, records sample intervals within the sample ticket book, then staples sample number tags from the sample ticket book to the core box where the interval begins.

After the core has been marked for sampling, it is photographed both wet and dry. The core requiring splitting is then split lengthwise using a mechanical knife-type core splitting tool and every attempt was made to ensure an even split. Intervals of poorly lithified core (i.e. clay altered) were split using stainless steel kitchen utensils. One half of the core is placed in plastic sample bags pre-marked with the sample number along with a sample number tag from the sample ticket book. The other half is returned to the core box and stored at the core storage area located near the Cuning Bay camp for

the Long Lake holes and near the Osprey Lake camp for the remaining holes. The core splitter and sample collection pans are cleaned thoroughly with a brush before the next sample is split. The bags containing split samples are then placed in buckets with lids for transport to Saskatchewan Research Council (SRC) in Saskatoon, Saskatchewan.

The Red Willow database contains 271 composite samples of the Athabasca sediments, typically 10 metres in length, which were collected and analyzed. The database contains the results of ICP analysis from 1542 split samples and the length of these samples, which range from 0.04 to 3.0 metres, is considered appropriate for the current stage of exploration. Recovery is not believed to be a factor that could materially impact the accuracy and reliability of the results since sample intervals are broken where the core has been lost. A total of 158 samples were collected for PIMA analysis.

## **10.2 Sample Analysis**

The SRC facility in Saskatoon crushes each sample to 60% -10 mesh and then riffle split to a 200g sample with the remainder retained as coarse reject. The 200 g sample is then ground to 90% -140 mesh. Replicates are chosen at random and an additional 200 g sample is riffle split and ground to 90% -140 mesh. For total digestion analysis, a 0.125 g pulp is gently heated in a mixture of ultrapure HF/HNO<sub>3</sub>/HClO<sub>4</sub> until dry and the residue dissolved in dilute ultrapure HNO<sub>3</sub>. For the partial digestion analysis, a 0.500 g pulp is digested with 2.25 ml of 8:1 ultrapure HNO<sub>3</sub>/HCl for 1 hour at 95 C. The solutions are then analyzed by ICP (Inductively Coupled Plasma) analysis. For boron, a 0.1 g pulp is fused at 650 C in a mixture of Na<sub>2</sub>O<sub>2</sub>/Na<sub>2</sub>CO<sub>3</sub>.

The SRC facility is licensed by the Canadian Nuclear Safety Commission (CNSC) to receive, process, and archive radioactive samples. The facility is ISO/IEC 17025:2005 accredited by the Standards Council of Canada (scope of accreditation #537) and also participates in regular interlaboratory tests for many of their package elements.

## **10.3 Sample Security**

Core samples are transported to the SRC laboratory by Purepoint employees. Results from the analyses are transmitted by email directly to Purepoint's exploration office in Saskatoon and the signed paper assay certificates are mailed.

## **11. DATA VERIFICATION**

Data verification utilized at Red Willow includes internal SRC laboratory quality assurance and quality control (QA/QC), comparison of results of the duplicate samples and variance of standard samples.

### **11.1 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 blacks, replicates and certified rock standards which are systematically inserted in each group of samples and results reported (SRC, 2007). Laboratory Quality Control results applied 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.

The drilling database is compiled directly from Excel spreadsheets sent from SRC to Purepoint's Saskatoon office, thus eliminating the errors associated with manual data input. The results from individual Excel spreadsheets received for each certificate is then moved into a single Access database. Values below the detection limit are given a value that is one-half of the detection limits. Results provided in the PDF versions of the assay certificates that are received from SRC by email were randomly checked against the values in the Access database by the author at the end of all drill programs. All anomalous intercepts used in this report were recalculated using original Excel assay datasheets from SRC and compared to previous weighted average calculations.

## **11.2 Comparison of Analytical Techniques**

The SRC laboratory ran multiple different standards during sample analyses. The results for each standard were averaged for the 16 elements of interest, namely  $\text{Al}_2\text{O}_3$ ,  $\text{K}_2\text{O}$ ,  $\text{CaO}$ ,  $\text{Na}_2\text{O}$ ,  $\text{MgO}$ ,  $\text{Fe}_2\text{O}_3$ , B, U, As, Bi, Co, Cu, Mo, Ni, Pb and V, and plotted against the average to visually show the variance at the end of each program.

Comparisons of six analytical methods that have occurred on Red Willow are presented as scatter plots in Figure 46. The methods include ICP1-OES\_DL, ICP1-OES\_DL\_2, ICP-MS/OES\_High CR, ICP-MS/OES\_Low CR and two historical methods with details included in Table 8. While the specifics of the analytical method used for Hist\_Method\_2 (green category) are not known, the method produces comparable analyses to the current methods (light blue for sandstone and orange for basement samples) with better precision at low U levels and lower detection limits for U. Historic analyses in Hist\_Method\_2 category have no response for U or Ni (brown dots on the probability plots in Figure 26). Hist\_Method\_2 produces unacceptably high detection limits and therefore, these samples have been treated as "not analysed."

## **12. ADJACENT PROPERTIES**

Some occurrences of unconformity-type uranium showings surround the Red Willow claims (Figure 47). The Midwest Mine, owned by COGEMA Resources Inc. (69.16%), Denison Mines Ltd. (25.17%), and OURD (Canada) Co. Ltd. (5.6%), is located 28 km southwest of the Red Willow claims. It has 35 million pounds of  $\text{U}_3\text{O}_8$  with an average

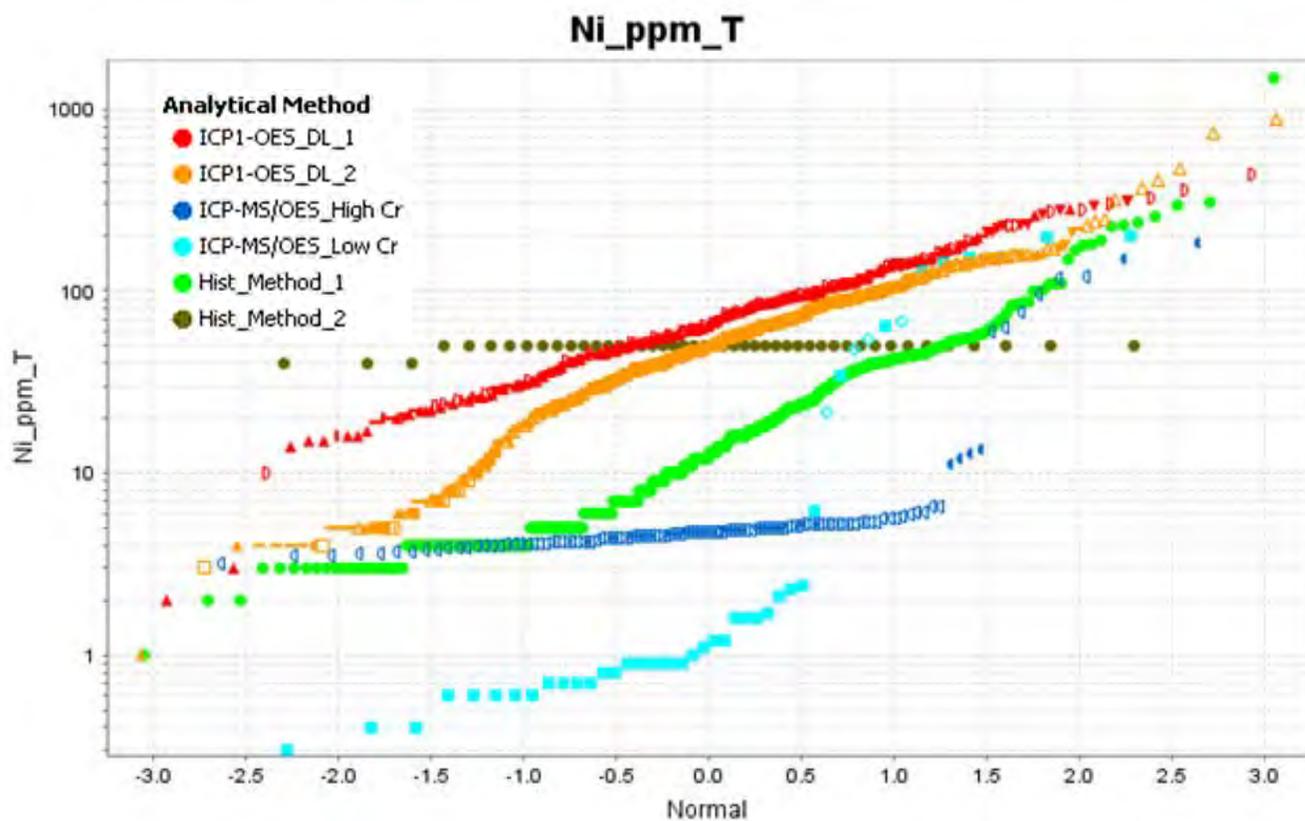
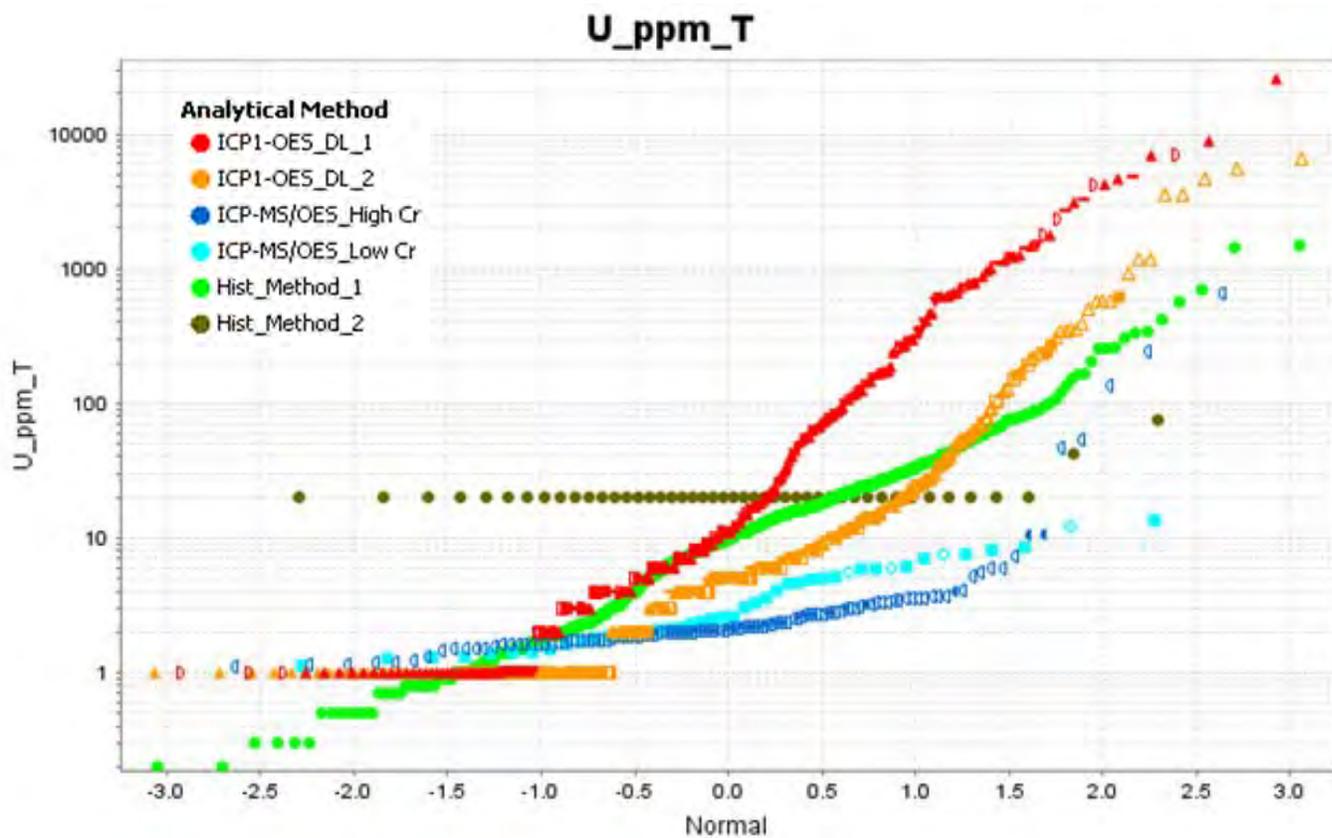


Figure 46: Red Willow Geochemistry (U and Ni)

**Table 8: Analytical Methods**

Method	Comments
<b>ICP1-OES DL_1</b>	SRC Geoanalytical Laboratories, Saskatoon. Partial digest (16 elements): 1g pulp digested with 8:1 HNO <sub>3</sub> :HCl for 1 hour at 95°C, analysed by ICP-OES. Total digest (46 elements): 0.125g pulp heated in HF/HNO <sub>3</sub> /HClO <sub>4</sub> until dry and residue dissolved in HNO <sub>3</sub> , analysed by ICP-OES. Boron: 0.1g pulp fused at 650°C in a mixture of Na <sub>2</sub> O <sub>2</sub> /Na <sub>2</sub> CO <sub>3</sub> , dissolved in deionized water, analysed by ICP-OES.
<b>ICP1-OES DL_2</b>	<b>Current analysis method.</b> As for ICP1-OES_DL_1 except order of magnitude higher detection limits for Ag_P, As_P, Bi_P, Cu_P, Ge_P, Hg_P, Mo_P, Sb_P, Se_P, Te_P, Cd_T, Gd_T, Hf_T, Ho_T, Sm_T, Tb_T. This difference will not affect the geochemical interpretation.
<b>ICP-MS/OES High Cr</b>	SRC Geoanalytical Laboratories, Saskatoon. Partial digest (44 elements): 2g pulp digested with 8:1 ultrapure HNO <sub>3</sub> :HCl for 1 hour at 95°C, analysed by ICP-MS. Total digest (49 elements & 4 Pb isotopes): 0.250g pulp heated in ultrapure HF/HNO <sub>3</sub> /HClO <sub>4</sub> until dry and residue dissolved in ultrapure HNO <sub>3</sub> , major and minor elements analysed by ICP-OES and trace elements analysed by ICP-MS. Boron: 0.1g pulp fused at 650°C in a mixture of Na <sub>2</sub> O <sub>2</sub> /Na <sub>2</sub> CO <sub>3</sub> , dissolved in deionized water, analysed by ICP-OES.
<b>ICP-MS/OES Low Cr</b>	<b>Current analysis method.</b> As for ICP-MS/OES_High Cr but batches post-date July 2008 (see next slide for further information).
<b>Hist_Method_1</b>	Loring Laboratories, Calgary, data from 1979 and 1980. Assayed for U, Mo, Cu, Ni Co, +/-Ag, As. No method information available.
<b>Hist_Method_2</b>	Data from 1977 assayed for U, Ni, Au. No method information available. Inadequate method as no response for any element in any sample.

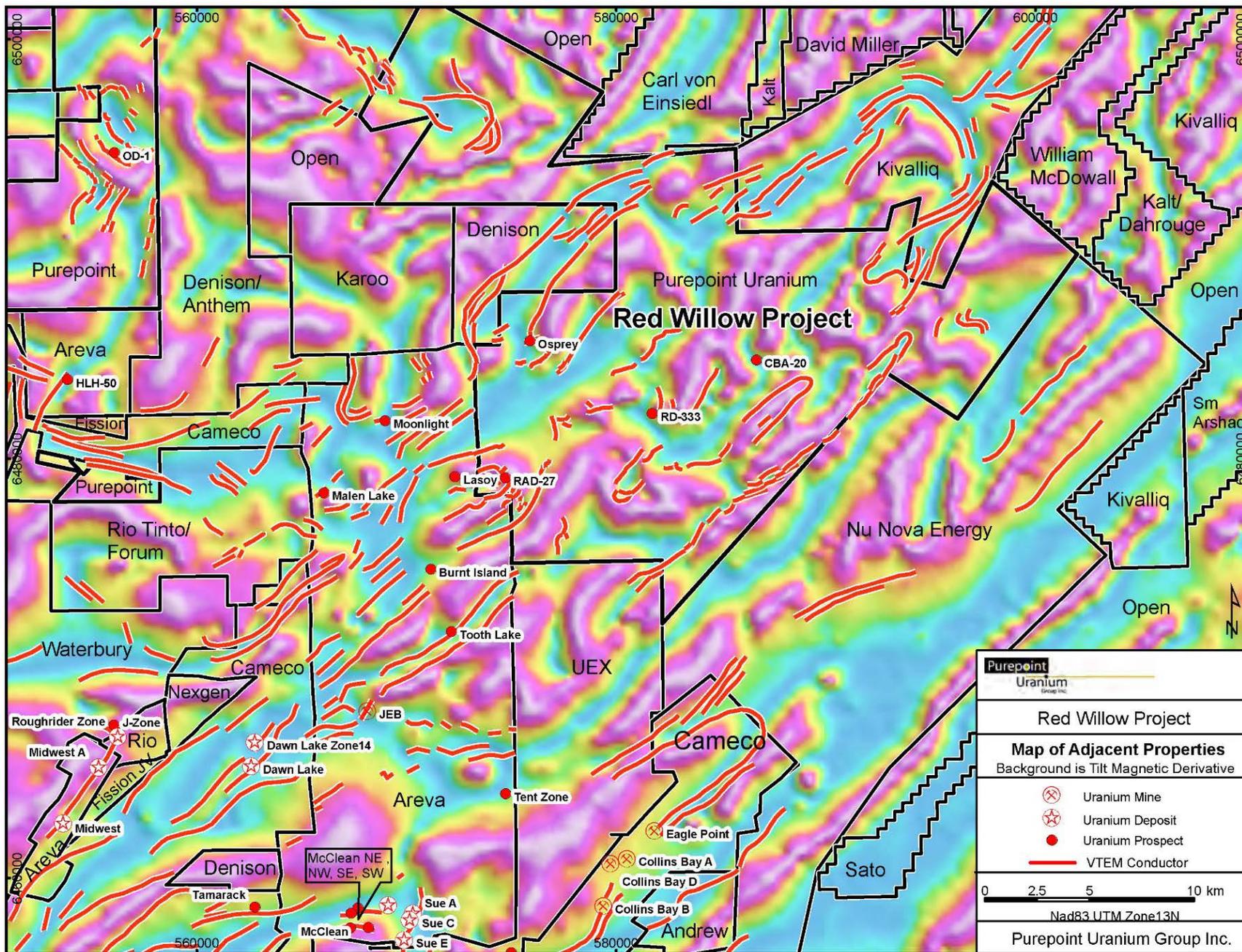


Figure 47: Adjacent Properties with Airborne Magnetics – Tilt Derivative

grade of 5.5% (Denison website). Cameco Corporation has two deposits in NTS 64L, and is currently beginning production out of their Eagle Point Uranium deposit, located 14 km south of the Red Willow claims, which has estimated reserves of approximately 24.0 million pounds of  $U_3O_8$  (Cameco website). The Rabbit Lake open pit, Collins Bay A-, B- and D-zones as well as Eagle Point underground mine, located 18 km south of the Red Willow claims, have been mined out with a total production of 186.3 million pounds of  $U_3O_8$ .

Areva Resources Canada Inc. currently holds three mineral permits contiguous with the south-western property boundary of Red Willow property and were staked in 1974. The McClean Lake mine is located 20 km southwest of the Red Willow claims and is owned by Areva Resources Canada Inc. (70%), Denison Energy Inc. (22.5%) and OURD Canada Co.Ltd. (7.5%). Open pit mining at McClean Lake began with the JEB orebody in 1995 and was followed by mining of the Sue C, A, E and B orebodies. To date almost 50 million pounds of  $U_3O_8$  have been produced at McClean Lake. (Areva website). Exploration drilling by Areva and Denison has produced mineralized intercepts close to the Red Willow property boundary including Moonlight (2.1%  $U_3O_8$  over 1.5 m), Lasoy (0.23%  $eU_3O_8$  over 2.0 m), Burnt Island (0.38%  $eU_3O_8$  over 2.0 m within basement rocks) and Tooth Lake (0.22%  $eU_3O_8$  over 0.1m).

The west border of Red Willow is adjacent to Denison Mines' Turkey Lake property. Thirteen diamond drill holes were drilled into the conductor with holes returning 0.065% and 0.16%  $U_3O_8$ .

UEX Corporation's Hidden Bay project is contiguous with the southern boundary of Red Willow. The Hidden Bay property is: 57,321 hectares in size (42 claims) and hosts three uranium deposits, Horseshoe, Raven, and West Bear, all located southwest of the Rabbit Lake mine.

Denison Mines owns 58.3% and Eros Resources Corp. (previously Anthem Resources) owns 41.7% of their Hatchet Lake property that is comprised of 11 claims (33,930 hectares) that is contiguous with the northwest side of the Red Willow property. The Smith Bay conductor appears to be the eastern terminus of the Crooked-Richardson Lakes conductive belt that is currently being explored by the Denison Mines/ Anthem Resources Joint Venture. During a 2013 drill program along the Crooked-Richardson Lakes trend, uranium mineralization was intersected in two drill holes. The highlight assay result was in drill hole RL-13-16, which intersected 0.45%  $U_3O_8$  over 2.3 metres beginning at 124.0 metres down the drill hole. (Anthem Press Release, April 24, 2013).

The Collins Bay Extension project is held by Nu Nova Energy purchased through Baywater on June 12, 2015. The property covers 38,672 hectares in 14 mineral claims contiguous to southeast side of Red Willow property.

There are multiple small claims staked adjacent to the north edge of the Red Willow property. Two of the claims are held by individuals and two claims are held by KALT

Industries. To the northeast of Red Willow, Kivalliq Energy Corp. owns 6 claims totalling 13, 741 hectares.

### **13. INTERPRETATIONS AND CONCLUSIONS**

The 6-kilometer long “S”-shaped Osprey conductor, host to significant uranium intercepts, has excellent exploration potential at depth below the known mineralized zone and towards the west. The main mineralized zone has only been drill tested at shallow depths (average hole length < 160 metres) and is open at depth for further stacked, parallel lenses of mineralization. Based on the resistivity results, favourable pelitic rocks are located west of the Osprey conductor that may also host mineralization within sub-vertical structures and as sub-horizontal stacked lenses.

The fold hinge of the Osprey conductor is considered to require further drilling after a fence of three holes drilled in 2008 intersected a vertical, weakly radioactive fault zone (Hinge Fault) associated with strong chlorite and hematite alteration. Alteration of the basement rocks increases along the northern fold limb towards the fold nose where one of the three holes drilled, RW-28, encountered very strong clay alteration.

The Geneva area has a compelling target area based on recently completed ground geophysics and drilling. A Pole-dipole array IP survey by Purepoint in 2007 outlined low apparent resistivity “chimneys” (LARCs) in the sandstone that coincided with the termination of two VTEM conductors in the basement rocks. LARCs within the sandstone may represent “chimneys” of hydrothermal alteration associated with structures that control uranium mineralization at depth. The two LARCs were also seen to correspond with two subtle gravity depressions identified by a limited gravity survey in 2007. A gravity survey by Rio Tinto in 2012 supported the presence of the two gravity anomalies and extended the gravity depressions to where Eldorado Resources Ltd intersected very strong basement alteration and 0.22%  $U_3O_8$  over 1.0 metres within a graphitic fault zone (hole RAD-27). A 3-hole fence was drilled just north of RAD-27 and intersected uranium mineralization in hole 14RDW008 that was related to the graphitic shear returning 0.68%  $U_3O_8$  over 0.3 metres between 89.1 to 89.4m. The Geneva conductor has been shown from drilling to be dark green to black chlorite altered pyritic graphitic pelitic gneiss that is approximately 5 metres thick, steeply dipping, and weak to moderately sheared.

Immediately east of the Geneva area are VTEM conductors with a relatively short strike length that are considered to be priority exploration targets. The prospective target area containing the conductors is roughly outlined by three points: the 14RDW008 mineralization, to the northeast where high concentrations of radon (a product of the decay of uranium) were first detected in Radon Lake in 1971, and to the southeast where hole RAD08-09 returned 283 ppm U over 1.1 metres from sandstone just above the unconformity. The offset conductors are suggestive of structural complexity within the area and they appear to be bounded by bands of granitic rocks (magnetic highs). The highly competent granitic rocks would provide a contrast in competency favourable for zones of dilatancy and mineral deposition. Additionally, the presence of swamp in

the area may be due to slumping of the underlying sandstone following hydrothermal alteration.

Drilling in the Radon Lake area encountered anomalous sandstone geochemistry in hole RAD08-09 and intersected a significant structure in RAD08-10 (140 metres east of RW-09). The Radon Lake Grid maybe an extension of Areva's Burnt Island showing making the area still attractive for follow-up.

The Topping Island area was explored during the early 1980's after a pitchstone cobble was discovered down-ice of the arcuate shaped EM conductor. Purepoint flew a VTEM<sup>plus</sup> over Topping Island in two different directions using a close line spacing of 125 metres to provide detail of the arcuate, 6-kilometer long, EM anomaly. The survey outlined numerous lateral displacements in the conductor that can be confidently interpreted as faults, representing high priority drill targets. The Topping Island conductor is the eastern terminus of the Crooked-Richardson Lakes conductive belt that is currently being explored by the Denison Mines/ Eros Resources Joint Venture that intersected mineralization in drill hole RL-13-16 returning 0.45% U<sub>3</sub>O<sub>8</sub> over 2.3 metres.

The 333 area has been prepared for initial drill testing by 3D resistivity and gradient array IP surveys. The 333 area is named after a historic overburden drill hole (hole #333) that intersected values up to 0.31% U<sub>3</sub>O<sub>8</sub> in glacial till. Based on the recent geophysical results, the source of the anomalous till may be a recently outlined EM conductor that lies only 200 metres northeast of drill hole #333. The strong conductor trends north-south, is 1.1 kilometers in length and, based on the geophysical results, is intersected by a northeast trending fault.

At Dancing Lake, favourable EM conductors have now been covered by a gradient array IP survey and pole-dipole array IP and are considered drill ready. Follow-up drilling is also warranted within the Long Lake area where hole LL08-05 intersected a 1.6 metre wide radioactive structure within hematite altered pelitic gneiss returning 269 ppm U over 0.5 metres. The area is host to the historic Long Lake Boulder Train discovered in 1975 by Gulf Minerals. The northeast trending boulder train was found to be 2 km long, 300 to 400 meters wide and contained a number of radioactive biotite schist boulders with the highlight being 0.80% U<sub>3</sub>O<sub>8</sub>.

The Golden Eye Shear Zone is located in the northern portion of the claim group and joins two historic uranium occurrences, the FDL and AJ showings. At the FDL showing, uranium mineralization (1.43% U<sub>3</sub>O<sub>8</sub>.grab sample) is associated with the 1 metre wide, northeast trending Golden Eye shear zone that crosscuts an outcrop of graphitic biotite-rich pelitic gneiss. The AJ showing is a radioactive molybdenite-garnet-biotite schist subcrop that returned an assay of 0.46% U<sub>3</sub>O<sub>8</sub>. Historic data indicates the Golden Eye Shear hosts favourable mineralization and is a priority target.

Additional EM targets that are considered worthy of ground geophysics include the Ghost Lake and Horse Lake conductors. Follow-up work is also warranted at the Cross Lake and CBA areas. Cross Lake is a structurally complex area located near the historic

Scrim Lake uranium showings that returned anomalous soil geochemistry during 1972 by Gulf Minerals. Within the CBA area, located at the fold nose of a granitic dome, the last hole of a twenty hole program (CBA-20) intersected anomalous uranium, 0.17% U<sub>3</sub>O<sub>8</sub> over 0.8m, within a pegmatite dyke before being lost at a depth of 20m.

The Turkey North conductor is considered to be the northern extension of the Turkey conductor where historic drilling has returned intercepts of up to 0.16% U<sub>3</sub>O<sub>8</sub> over 1.0 meter. The conductor has a strike length of over 5 kilometers and has not been drill tested. A primary target area is an interpreted structural break with a related offset of approximately 250 meters.

#### **14. RECOMMENDATIONS**

Based on the uranium mineralization discovered to date on the Red Willow property and its favorable geologic setting, further exploration is warranted. A multi-staged exploration program and budget is recommended (Table 10).

##### Stage 1: Fall 2016 and Winter 2016/2017:

Drill testing of the geophysical targets previously identified within the Osprey, Geneva, 333 and Dancing Lake areas. Fourteen diamond drill holes for a total of 5,600 meters are recommended.

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

##### Stage 2: Summer 2017 and Winter 2017 / 2018:

Ground DC resistivity and gravity surveying should be conducted over the Osprey Hinge, Topping Island, Golden Eye, Ghost Lake and Horse Lake conductors. Linecutting will be required at all target areas with the exception of the Horse Lake grid where the existing grid will need refurbishing.

Follow-up of favourable Stage 1 drill program results and drill testing of the high priority geophysical targets. A sixteen hole, 6,400 meter drill program is recommended.

**Table 9: Proposed Red Willow Exploration Budget**

**Stage 1**

**Fall 2016 and Winter 2016/17**

Mob/Demob of Drill/Drillers/Staff		60,000
Diamond Drilling	14 holes, 5,600 m @ \$150/m	840,000
Technical Staff	Geologist & Technician	73,000
Camp Costs	65 days @ \$3,000/day	195,000
Analytical Costs	1700 samples @ \$70/sample	119,000
Report - Drilling		25,000
	Subtotal	<u>1,312,000</u>
	Contingency (5%)	66,000
	Management Fees (10%)	<u>131,000</u>
	<b>Total Stage 1 =</b>	<b>1,509,000</b>

**Stage 2**

**Summer 2017 and Winter 2017/18**

Mob/Demob of Drill/Field Crews		70,000
Linecutting	140 line/kms @ \$800/km	112,000
Refurbishing of Cut Lines	20 line/kms @ \$400/km	8,000
DC Resistivity Survey	145 line/kms @ \$3,300/day	479,000
Ground Gravity Survey	2900 stations @ \$75/station	218,000
Diamond Drilling	16 holes, 6,400 m @ \$150/m	960,000
Technical Staff	Geologist & Technician	101,000
Camp Costs	90 days @ \$3,000/day	270,000
Analytical Costs	1900 samples @ \$80/sample	152,000
Report - Geophysics & Drilling		40,000
	Subtotal	<u>2,410,000</u>
	Contingency (5%)	120,000
	Management Fees (10%)	<u>241,000</u>
	<b>Total Stage 2 =</b>	<b>2,771,000</b>

**Estimate for Total Stages 1 And 2 = \$4,280,000**

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## **16. DATE AND SIGNATURE**

This NI 43-101 technical report titled “Red Willow Uranium Project, Northern Saskatchewan, Canada” and dated October 16, 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 16, 2015

APPENDIX 1

STATEMENT BY QUALIFIED PERSON

## CERTIFICATE OF QUALIFIED PERSON

I, Scott R. Frostad, of 362 Thode Avenue, Saskatoon, Saskatchewan, Canada S7W 1B9 do hereby certify that:

1. 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)
2. 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.
6. That I am responsible for the preparation of the technical report dated October 16, 2015 entitled "Technical Report on the Red Willow Uranium Project, Northern Saskatchewan, Canada"
7. That I have been involved with the Red Willow Project since January, 2006. His most recent visit to the site was during the last drill program on February 25th, 2015.
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.
10. 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 16<sup>th</sup> day of October, 2015.

**(Signed and sealed) "Scott Frostad"**

Scott Frostad, BSc, MAsc, P.Geo