TECHNICAL REPORT

ON THE

MINERAL RESOURCE ESTIMATE ON THE J ZONE URANIUM DEPOSIT, WATERBURY LAKE PROPERTY

Located in the
ATHABASCA BASIN, NORTHERN SASKATCHEWAN

Claims: S-107359, S-107361, S-107362, S-107363, S-107364, S-107365, S-107366, S-107367, S-107368, S-107370, S-107373, S-111276 and S-111278

NTS MAP SHEETS: 64L/05, 74I/01 & 74I/08

for

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GeoVector Management Inc.

TABLE OF CONTENTS PAGE

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

1 SUMMARY

The Waterbury Lake property is located in northern Saskatchewan, Canada, and is the site of an active uranium exploration project being jointly developed by Denison Mines Corp. (“Denison”) (60 %) and Korea Waterbury Uranium Limited Partnership (“KWULP”) (40 %). The Limited Partnership between Denison and KWULP is referred to as the Waterbury Lake Uranium Limited Partnership (“WLULP”). The project is targeting unconformity associated uranium deposits.

Denison recently acquired a 60% interest in the Property through a plan of arrangement (the "Arrangement") with Fission Energy Corp. (“Fission”). As part of the Arrangement, Denison acquired a portfolio of uranium exploration projects held by Fission; including Fission's 60% interest in the Waterbury Lake uranium project. After obtaining the approvals of Fission shareholders and the British Columbia Supreme Court, the Arrangement was completed on April 26, 2013.

The Waterbury Lake property is a 40,256 hectare collection of 13 irregularly shaped contiguous claims and one separate claim in the eastern Athabasca Basin of northern Saskatchewan, Canada. The property is located approximately 12 km north of Points North Landing and 700 km northeast of Saskatoon, Saskatchewan. There is a gently rolling relief throughout the project area averaging 400 to 500 masl. Vegetation is dominantly thinly distributed black spruce, alder and jack pine while ground cover is dominantly reindeer lichen, blueberries and Labrador tea.

The project can be accessed year round by taking Saskatchewan provincial Highway 102 to Southend from La Ronge, then Highway 905 to Points North Landing. Transwest Airways and Pronto Airways provide daily flights to Points North as well as the surrounding communities from the airport in Saskatoon. The core logging camp and core storage area can be accessed from Points North by truck in the winter along provincial Highway 905 and by helicopter or float plane in the summer.

A provincial power station located 4 km to the west of Points North supplies power to the surrounding communities and mines. Several advanced mining operations are present within 20 km of the project, including Midwest, McClean Lake and Dawn Lake. Skilled labourers are sourced from the local communities of Wollaston Lake or Stony Rapids, both of which have a long history with uranium exploration in the region.

The Waterbury property is located in the eastern portion of the Proterozoic Athabasca Basin. The Athabasca sediments unconformably overlie older crystalline basement complexes and in the project area specifically, the highly prospective Mudjatik – Wollaston Transition Zone (MWTZ). The MWTZ marks a gradational contact between bands of Paleoproterozoic metasediments and Archean granitic gneisses of the Mudjatik domain to the west and variably graphitic Paleoproterozoic metasediments and Archean granitic gneisses of the Wollaston domain to the east. The MWTZ currently hosts all producing uranium deposits in the Athabasca Basin including McArthur River and Cigar Lake.

The J Zone uranium deposit of the Waterbury Lake project is currently classified as an unconformity associated uranium deposit.

The Athabasca basin in the project area is comprised of several hundred meters of Manitou Falls Formation fluvial, quartz rich conglomeratic sandstone. Basement rocks in the area are dominated by Archean orthogneisses, occurring as large domes, and steeply dipping, locally graphitic, Paleoproterozoic metasedimentary paragneisses to granofels. Directly below the Athabasca/basement unconformity is a zone of paleoregolith which commonly extends for many meters into the basement. The paleoweathered zone typically grades with depth from pervasive hematization into pervasive chloritization and finally into fresh rock. The unconformity surface is relatively flat on a large scale but in the Discovery Bay area local reverse faulting down drops the unconformity to the south-east.

The Athabasca Basin sedimentary rocks which overlie the Waterbury Lake project area typically range in thickness from 195 to 300m. The upper portion of the sedimentary package is comprised of the Manitou Falls Collins (MFc) Formation pebbly quartz arenite which grades into Manitou Falls Bird (MFb) Formation pebble bedded quartz arenite at approximately 80m depth. An easily recognizable 5 to 7m marker conglomerate exists in the MFb sandstone, and a basal conglomerate unit is almost always present directly above the unconformity. In the deposit area, the underlying basement geology is interpreted to be a steeply north-northwest dipping, east-west trending corridor of variably graphitic Wollaston Group metasedimentary gneisses, bounded to the north and south by thick zones of predominantly granitic Archean orthogneiss. The Archean orthogneisses apparently define two large dome structures identified as the north and south side orthogneiss domes. The stratigraphy of the metasedimentary corridor is dominantly comprised of: weakly graphitic cordierite-almandine pelitic gneiss, informally termed the “typical J Zone pelitic gneiss”, graphite-sulphide rich pelitic gneiss; cordierite-almandine augen gneiss; and thin lenses of garnetite which appear to be more abundant along the southern edge of the corridor. A thick unit of strongly graphitic cataclasite exists within the graphite-sulphide pelitic gneiss.

Uranium exploration has been undertaken on the Waterbury Lake property for over 40 years. Numerous and varied programs have been carried out on different portions of the property, including diamond drill campaigns, airborne and ground geophysics, boulder sampling and prospecting since 1969.

Strathmore Minerals Corp (Strathmore) originally obtained the Waterbury Lake mineral claims by staking in 2004. Fission was spun out from Strathmore in 2007 and the Waterbury Lake mineral claims were transferred to Fission. Exploration activities on the property began in 2006 targeting high-grade / high-tonnage unconformity hosted uranium deposits. These deposits commonly straddle the unconformity with a core of high-grade uranium mantled by weak to moderate uranium mineralization and are associated with large scale plumes of clay alteration and pathfinder element enrichment which can extend well away from the deposit. Mineralization can also occur within the basement at variable depths below the unconformity, in which case it is typically more discontinuous than that occurring at or above the unconformity. Because of the depth to mineralization away from the edge of the Athabasca Basin, surface geochemical surveys are of limited effectiveness as a primary exploration tool. Surface geochemical surveys aim to identify broad zones of weakly elevated uranium, pathfinder element concentrations or illitic clay alteration in outcrop which are interpreted to be associated with significant hydrothermal alteration and fault zones hosting remobilized uranium mineralization. Geophysical surveys, primarily magnetic, resistivity and electromagnetic are key exploration tools in identifying prospective basement rock types, interpreted graphitic structures and anomalous zones in the sub-surface.

Surface geochemical exploration on the Waterbury Lake property has consisted mainly of mobile metal ion (MMI) surveys and boulder sampling programs. Drill testing of MMI anomalies along with coincident resistivity and magnetic lows along strike of the Midwest deposit in 2009 intersected pelitic basement rocks but no significant uranium mineralization. Property wide boulder sampling programs during the summer of 2009 and 2010 followed up on radiometric anomalies from a detailed airborne survey. The radiometric anomalies investigated dominantly consisted of moderately elevated radioactivity hosted in coarse grained pebbly sandstone or felsic basement boulders and no significant uranium mineralization was discovered.

Down hole geochemical sampling has been undertaken in order to identify anomalous ranges and spatial distribution of uranium and typical pathfinder elements for unconformity hosted uranium deposits, including nickel, arsenic, copper and vanadium. Systematic analysis of clay in core samples using a Portable Infrared Mineral Analyser (PIMA) spectrometer has been performed in order to identify illitic clay plumes in the sandstone column. Mineralized intervals of core are sent for uranium assay analysis at SRC Geoanalytical Laboratories in Saskatoon, Saskatchewan which provides an ISO/IEC 17025:2005 accredited method for the determination of % U_3O_8 in geological samples.

Geophysical surveys have been the primary method of identifying potential drill targets at Waterbury Lake as the unconformity in the project area is typically 200m below the surface. Resistivity and electromagnetic surveys have aimed to identify areas of low resistivity due to intense clay alteration and quartz corrosion associated with mineralization, as well as identifying conductive (generally graphitic) structures in the basement, possibly representing the conduits for mineralising and / or reducing fluids. Airborne magnetic surveys have been used property wide as a means to trace out large scale structures and map basement geology. Gravity surveys have had limited use due to the generally small, pod like shape of the ore deposits which limit the magnitude of gravity anomalies, although negative gravity anomalies can provide an indication of quartz dissolution associated with mineralization.

From spring 2006 to spring 2008, 21 drill holes were completed over three drill programs totalling 6,191m of core. Each program focused on testing geophysical and structural targets property wide. A thin zone of moderate uranium mineralization was intersected in the final drill hole of the 2007 program, WAT07-008. The mineralization is hosted in graphitic metasedimentary basement rocks to the east of the Midwest uranium deposit. No other uranium mineralization was discovered during this period.

From summer 2008 to summer 2009, three drill programs were completed for a total of 49 drill holes and 18,078 m of core. All three programs primarily focused on testing for a possible extension of Rio Tinto plc’s (formerly Hathor Exploration Ltd’s) newly discovered Roughrider deposit. Four drill holes from the 2008 summer program intersected elevated radioactivity and strong alteration in metasedimentary basement rocks but no significant uranium mineralization was discovered.

During the winter 2010 drill program high-grade uranium mineralization was intersected in Discovery Bay which led to the delineation of the J Zone uranium deposit. The J Zone ore body trends roughly east-west in line with the metasedimentary corridor and cataclastic graphitic fault zone. Uranium mineralization occurs at approximately 280 masl (approximately 200 to 230m below surface) and can be hosted in the Athabasca sediments, Wollaston group metasediments or both. The J Zone deposit was initially defined by 73 drill holes with a total east-west strike length of ~578 m, average north-south lateral width of 40m and a vertical thickness of up to 22m. A 45m wide east-west zone of low grade, intermittent uranium mineralization occurs around the historic Highland target zone in the approximate centre of the J Zone. The discontinuous nature of the uranium mineralization in the Highland area effectively separates the J Zone into the eastern, mid (Highland area) and western lenses, with east-west strike lengths of approximately 260m, 20m and 240m, respectively.

After the discovery of the J Zone uranium deposit at the beginning of the 2010 winter program, drilling on the Waterbury Lake property focused primarily on delineating mineralization and establishing possible extensions along strike. Additional drill holes targeted new geophysical and geochemical targets in the Highland and Talisker areas which returned indications of additional mineralized zones. During the winter and summer 2010 drill programs a total of 60 drill holes were completed yielding 16,422m of core.

2011 saw an extensive drill program with 82 holes drilled over the winter program and another 21 holes drilled over the summer program totalling 33,301m of core. Winter drilling within the J Zone area focused on testing the extent of the resource defined during the 2010 drill programs. Exploration drill holes targeting the Discovery Bay EM conductor and coincident resistivity lows 220 and 1,500m to the west along strike of the J Zone led to the discovery of the PKB and Summit mineralized zones, respectively. Additional drilling in the Oban target area over 3 km to the north-east of the J Zone identified intermittent uranium mineralization associated with significant EM conductors, sandstone resistivity lows and strongly graphitic metasediments. The summer 2011 drill program successfully delineated a mineralized corridor between the western extent of the J Zone and the PKB zone, linking the eastern most mineralization in the J Zone western lens with PKB and doubling the overall strike length of the J Zone deposit. Significant uranium mineralization was also intersected in follow up holes at the Summit showing, with over 13.5m of uranium mineralization grading 0.16 % U_3O_8 intersected in strongly altered metasediments in drill hole WAT11-199.

Preliminary metallurgical test work began on the J Zone deposit during the summer 2011 drill program. A total of 48 mineralized, half split core samples 0.5m in length were re-sampled from 32 holes drilled between 2010 and 2011. The metallurgical samples were chosen to fully represent variations in ore host lithology and grade within the J Zone, J-East and PKB (now the J Zone western lens) mineralized areas. Each metallurgical sample was analysed for wt% U_3O_8 by XRF and semi-quantitative mineralogy by Rietveld XRD. Select samples were also analysed for quantitative mineralogy (QMin), mineral chemistry (EPMA), scanning electron microscopy (SEM-EDS) as well as thin section petrography to determine the dominant uranium phases present. The results of this work were used together with the spatial distribution of the samples to identify five subsets of samples to be composited for acid leach testing. The results of the atmospheric acid leach testing identified that uranium extractions of 97.6 % or better can be achieved within an eight hour period in metallurgical composite samples which range in grade from 0.07 % U_3O_8 to 3.23 % U_3O_8.

GeoVector Management Inc. ("GeoVector") was contracted in 2011 by Fission to complete an initial mineral resource estimate for the J Zone and to prepare a technical report on the same in compliance with the requirements of NI 43-101. The J Zone deposit was estimated to contain an Indicated resource totalling 7,367,000 lbs. based on 168,000 tonnes at an average grade of 2.00% U_3O_8. An additional 1,511,000 lbs. based on 150,000 tonnes averaging 0.50% U_3O_8 was classified as an Inferred mineral resource.

The mineral resource was determined from the 7,377 assay results in 142 drill holes totalling 43,900m of drilling completed by Fission between January, 2010 and August, 2011. General spacing of the drill holes is 10m-50m. The resource estimate was categorized as Indicated and Inferred as defined by the Canadian Institute of Mining and Metallurgy guidelines for resource reporting. Mineral resources do not demonstrate economic viability, and there is no certainty that these mineral resources will be converted into mineable reserves once economic considerations are applied.

Subsequent to the release of the first estimate Fission completed additional drilling on the Property, including step-out and infill drill holes on the J-Zone, which were completed during a winter (January to April, 2012) and a summer (June to August, 2012) drill program.

A total of 86 holes (32,770) were drilled during the winter program including 49 holes in and around the J Zone. The main objectives of the drill program in the J Zone area were to infill around the mineralization defined during 2010-2011 drilling and expand the deposit along strike to the west. During the winter program, 36 of the 49 step-out and infill holes intersected mineralization returning assay grades >0.05% U_3O_8. Twenty-six drill holes totaling 8,316m were completed in the J Zone during the 2012 summer drill program, with fifteen holes intersecting uranium mineralization grading >0.05% U_3O_8.

GeoVector was contracted by Fission in 2012 to complete an updated resource estimate for the J Zone and to prepare a technical report on the updated resource estimate in compliance with the requirements of NI 43-101. Based on the results of the 2012 drill programs, GeoVector estimated a range of Indicated and Inferred resources at various U_3O_8 cut-off grades (COG) for the J Zone. The updated Indicated and inferred resources were stated using a grade cut-off of 0.10% U_3O_8. The previous resource statement was reported above a cut-off grade of 0.05% U_3O_8. A cut-off grade of 0.10% is considered a reasonable economic cut-off grade for the J Zone to maximize the grade of the resource while maintaining a coherent model of the resource.

In late 2012, using a base case COG of 0.10% U_3O_8 the J Zone deposit was estimated to contain an Indicated resource totaling 10,284,000 lbs. based on 307,000 tonnes at an average grade of 1.52% U_3O_8. An additional 2,747,000 lbs. based on 138,000 tonnes averaging 0.90% U_3O_8 was classified as an Inferred mineral resource.

The resource was defined by 10,567 assay samples collected from 200 drill holes totaling 62,416 m completed by Fission between January, 2010 and August, 2012. General spacing of the drill holes is 5m-20m.

Fission completed additional drilling on the Property, including step-out and infill drill holes on the J-Zone during a 2013 winter (08 January to 17 March, 2013) drill program. A total of 68 drill holes were completed totalling 21,012.9 meters (including failed holes). Mineralization was found in 35 holes or 51% of the holes in the program. All holes were targeted to further delineate and expand the mineralized area of the J Zone.

GeoVector was contracted by Denison to complete a mineral resource estimate for the J Zone and to prepare a technical report in compliance with the requirements of NI 43-101, based on the results of the 2013 drill program. GeoVector estimated a range of Indicated resources at various U_3O_8 cut-off grades for the J Zone. As with the previous estimate, the mineral resource is reported above a cut-off grade of 0.10% U_3O_8. A cut-off grade of 0.10% is considered a reasonable economic cut-off grade for the J Zone.

Using a base case COG of 0.10% U_3O_8 the J Zone deposit is currently estimated to contain:

- An Indicated mineral resource totaling 12,810,000 lbs. based on 291,000 tonnes at an average grade of 2.00% U_3O_8.

The resource is defined by 12,551 assay samples collected from 268 drill holes totaling 88,770m completed by Fission between January, 2010 and April, 2013.

All geological data has been reviewed and verified by the Authors as being accurate to the extent possible. The Authors did not conduct check sampling of the core. The Authors are confident in the integrity of the samples collected by Fission and believe the sample preparation, analysis and security for the J Zone to have been done within the CIM Definition Standards guidelines as required by NI 43-101.

Continued drilling is recommended for the Waterbury Lake property with priorities as follows:

- Winter 2013 drilling was designed to test for additional associated mineralization westward along trend to assess the potential for mineralization beyond the previously defined western boundary. Two westward step-out drill holes (WAT13-380 and 383) extended the J Zone mineralized boundary an additional 20m west to line 560W (WAT13-380). This area is a target for further drilling.

- 2012 winter and summer drilling identified new zones of intermittent weak to moderate mineralization west of the J Zone, including Oban, Talisker, Summit and Murphy Lake. The drill results suggest that there are areas within the Discovery Bay corridor area which are still open for expansion and can potentially host significant uranium grade. These areas are targets for further drilling.

- The J Zone deposit should be examined at a conceptual level to determine the viability of a uranium deposit in this area. This examination should lead to the preparation of a preliminary economic assessment. In preparation for this study, Denison should initiate environmental studies as well as additional metallurgical testing.

The total cost for the recommended work is estimated at approximately CDN$4.0 million and includes a provision for contingencies and administrative cost.

2 INTRODUCTION

GeoVector Management Inc. (ñGeoVectorò) was contracted by Denison Mines Corp. (ñDenisonò) to complete a mineral resource estimate for the J Zone Uranium Deposit (ñJ Zoneò) at its 40,256 hectare Waterbury Lake Property (ñPropertyò), and to prepare a technical report on it in compliance with the requirements of NI 43-101. Alan Sexton, M.Sc., P.Geol., (Sexton) and Allan Armitage, Ph.D., P.Geol. (ñArmitageò) of GeoVector are independent Qualified Persons. Sexton and Armitage are responsible for the preparation of this report (Sexton and Armitage are collectively referred to as the ñAuthorsò). The effective date of the resource estimate is September 6th, 2013.

The Property is comprised of 13 claims covering an area of 40,256.0 hectares (99,471.2 acres). Denison is a 60% owner in the property with the remaining 40% owned by the Waterbury Lake Uranium Limited Partnership. This technical report will be used by Denison in fulfillment of their continuing disclosure requirements under Canadian securities laws, including National Instrument 43-101 ï *Standards of Disclosure for Mineral Projects* (ñNI 43-101ò).

Denison acquired Fissionôs interest in the Property pursuant to the Arrangement under the Business Corporations Act (Canada). After obtaining the approvals of Fission shareholders and the British Columbia Supreme Court, the Arrangement was completed on April 26, 2013. As part of the Arrangement, Denison acquired a portfolio of uranium exploration projects held by Fission, including Fission's 60% interest in the Waterbury Lake uranium project.

This report is based upon unpublished reports and property data provided by Denison and Fission, as supplemented by publicly-available government maps and publications. Parts of Sections 4 to 16 in this report have been copied or summarized from property reports which are referenced throughout the text. These sections have been updated to include information on the 2013 drill campaign. The Property has been subject to numerous exploration programs, most recently (2004 to 2013) by Strathmore and Fission. Details of historical exploration activities on the property are outlined in many exploration reports by Strathmore and Fission. References to these activities are provided in the historical section below and summarized in previous reports on the property.

Information concerning the geology and exploration results for the Property that is reported here was collected, interpreted, or compiled directly by the Fission geologists during ongoing exploration.

Armitage personally inspected the Property and drill core on October 6 to 8, 2010. During the visit Armitage reviewed drill core from the winter and summer 2010 drill programs, as well as core logging and sampling procedures. In addition, Armitage reviewed a representative selection of drill intersections of the J Zone and associated mineralization using a scintillometer. Sexton personally inspected the Property and drill core on August 1st, 2012. During the visit Sexton reviewed the progress of the drill program and drill core from the winter and summer 2012 drill program, as well as core logging and sampling procedures. In addition, Sexton reviewed a representative selection of drill intersections of the J Zone and associated mineralization using a scintillometer.

3 RELIANCE ON OTHER EXPERTS

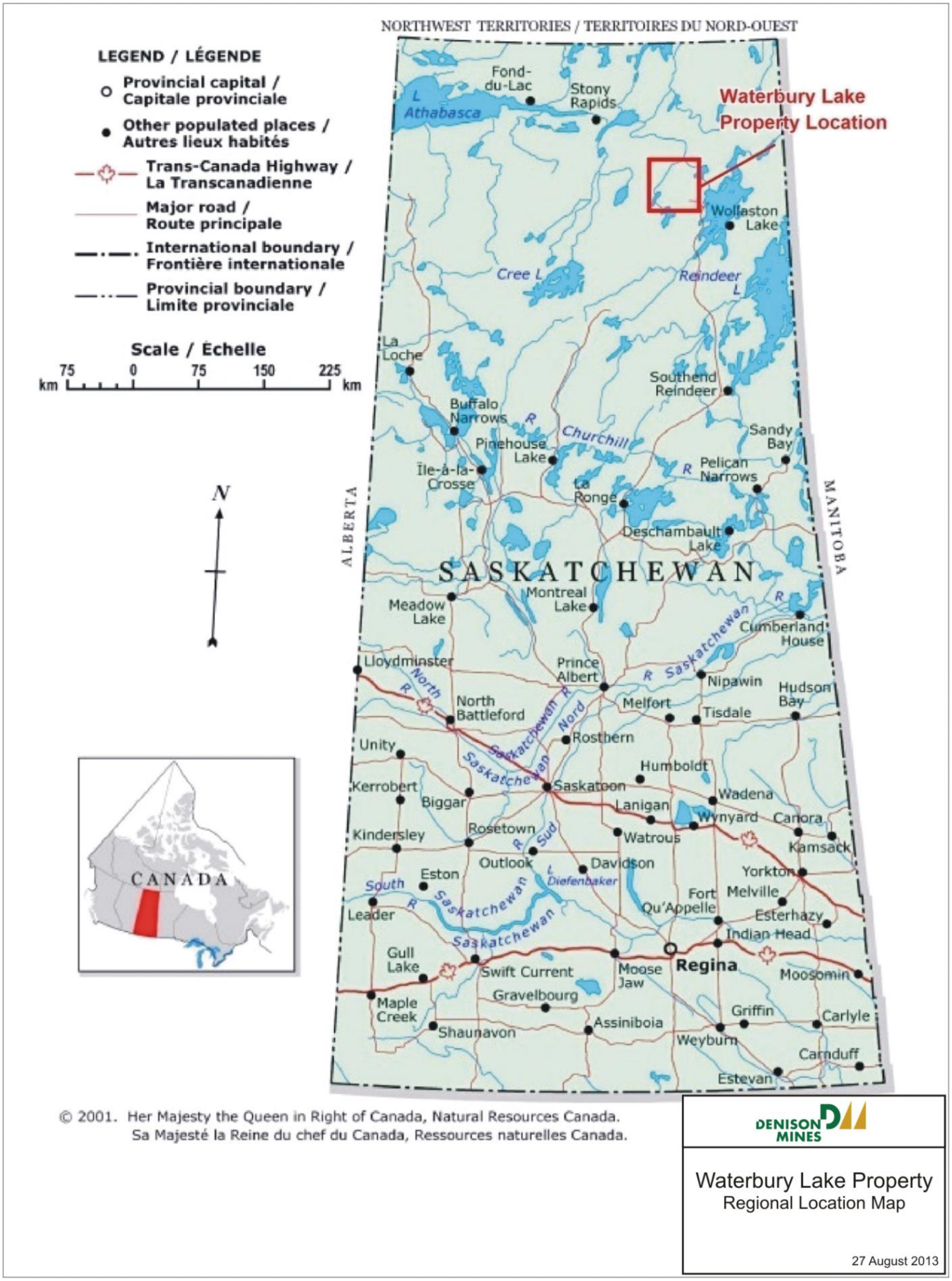
Information concerning claim status, ownership, and assessment requirements which are presented in Section 4 below have been provided to the authors by Denison, by way of e-mail on August 27th, 2013, and have not been independently verified by the Authors. However, the Authors have no reason to doubt that the title situation is other than what is presented here.

4 PROPERTY DESCRIPTION AND LOCATION

4.1 Property Location

The Property is located on the eastern side of the Proterozoic Athabasca Basin in northern Saskatchewan, Canada (Figures 1 and 2). The Property lies approximately 8 km north east of the Points North Landing airstrip, 370 km north east of La Ronge and 700 km north east of Saskatoon, Saskatchewan. On a 1:50,000 NTS map sheet the Property can be found in blocks 74I/08, 74I/01, 64L/05. The Property is irregularly shaped with a maximum north-south length of 33 km and a maximum east-west length of 25 km. The core logging camp and core storage area are located in claim S-107370, UTM 555515E, 6466940N, Zone 13 (NAD83), or 58° 20' 23" N / 104° 03' 07" W (WGS84).

Figure 1 Property Location Map



4.2 Property Description

The Waterbury Lake Property (the "Property") is comprised of 13 claims covering an area of 40,256.0 hectares (99,471.2 acres) (Table 1; Figure 2). Twelve of these claims are contiguous, and claim S-107367 is located approximately two kilometres east of the main claim group. Denison is a 60% owner in the property with the remaining 40% owned by the Waterbury Lake Uranium Limited Partnership (see below).

The Property status shown in Table 1 below includes the dates in which the mineral claims were recorded and the Anniversary Date. The Anniversary Date is not an expiry date. A company has 90 days from a claim's Anniversary Date to file work and for the government to perform an auto renewal for an additional year should the claim have sufficient excess work credits. All claims are contiguous and groupings can be made on an annual basis if the claims are in good standing. There are no surface rights to any portions of the property.

Prior to December 6, 2012, mineral dispositions were located in the field by corner and boundary claim posts which lie along blazed and cut boundary lines. The entire length of the Property boundary has not been surveyed. A legal survey is not required under the provisions of the Saskatchewan Mineral Disposition Regulations of 1986. The property location is defined on the government claim map.

As of December 6, 2012, all property and component claim locations are defined as electronic mineral claims disposition parcels within the Mineral Administration Registry of Saskatchewan (MARS), as per the Mineral Tenure Registry Regulations (formerly The Mineral Disposition Regulations, 1986). MARS is a web-based e-Tenure system for issuing and administering mineral permits, claims and leases.

MARS allows registered users to:

- Acquire mineral dispositions over the internet using a GIS map of Crown mineral ownership
- Transfer dispositions to other registered users
- Divide dispositions using GIS tools
- Submit records of work expenditures using a web form
- Search dispositions and obtain copies of search abstracts
- Group work expenditures among adjoining dispositions
- Convert dispositions from permits to claims
- Access an electronic re-opening board showing Crown minerals coming available for new acquisition

Strathmore Minerals Corp. (Strathmore) acquired a 100% interest in the 13 mineral claims located in Saskatchewan in 2004. During 2007, Strathmore spun out all of their Canadian assets, including the aforementioned 13 mineral claims into a new company called Fission Energy Corp. ("Fission"). On January 30, 2008, an earn-in agreement was signed on the property with the Korea Waterbury Uranium Limited Partnership ("KWULP"). Under the agreement, Fission granted KWULP the exclusive rights to earn up to a 50% interest in the Waterbury Lake property by funding $14,000,000 of expenditures on or before January 30, 2011. Additionally, Fission retained an overriding royalty interest in the property of 2% of net smelter returns. On April 29, 2010, KWULP had fully funded its $14 million of expenditures and consequently earned a 50% interest in the property.

The earn-in agreement required that on completion of the earn-in period, the joint venture parties agree to form a joint control Limited Partnership to hold the property and on August 16, 2010 the Waterbury Lake Uranium Limited Partnership (“WLULP”) agreement was signed, and now supersedes the original earn-in agreement. WLULP was officially formed December 30, 2010. Fission had 12 months from the completion of the earn-in agreement during which time it could acquire an additional 10% interest in WLULP for $6,000,000. On April 12, 2011, Fission exercised its back-in option by paying KWULP $6,000,000 and now holds a 60% interest in WLULP. An additional $2,000,000 was recorded as a future income tax liability related to the fair value of assets acquired that do not have an income tax basis. The WLULP agreement required that Fission and its partners spend a total of $30 million for exploration and evaluation costs over the next three years in proportion to their interest in WLULP. The winter 2013 program completed the budgeted three year, C$30 million exploration program begun by Fission and the Waterbury Consortium in 2010. Fission was appointed operator for WLULP and is entitled to a management fee equal to 10% of expenditures for operator services.

Denison acquired Fission’s interest in the Property through a plan of arrangement (the "Arrangement") with Fission, completed pursuant to the Business Corporations Act (Canada). After obtaining the approvals of Fission shareholders and the British Columbia Supreme Court, the Arrangement was completed on April 26, 2013.

As part of the Arrangement, Denison acquired a portfolio of uranium exploration projects held by Fission, including Fission's 60% interest in the Waterbury Lake uranium project, as well as Fission's exploration interests in all other properties in the eastern part of the Athabasca Basin, Quebec and Nunavut, plus its interest in two joint ventures in Namibia.

As a result of the Arrangement, Denison acquired all of the outstanding common shares of Fission with Fission spinning out certain assets into a newly-incorporated exploration company, Fission Uranium Corp. Under the Arrangement, each Fission Share was exchanged for 0.355 of a common share of Denison, a nominal cash payment of $0.0001 and one (1) common share of Fission Uranium.

Surrounding claims are held by Cameco Corp., Denison, Areva Resources, Rio Tinto plc (Rio), CanAlaska Uranium and Forum Uranium. The Denison/Areva Midwest Lake deposits and Rio’s Roughrider Zone lie along the eastern flank of the Property. Major regional deposits and mines are shown in Figure 3.

There are no known environmental liabilities associated with the Property and there are no other significant factors and risks that may affect access, title, or the right or ability to perform work on the property.

All the necessary permits for surface exploration on the property are in place and current. Activities on the project property to date have been limited to resource delineation and gathering of environmental baseline data. The environmental liabilities associated with these activities are consistent with low impact exploration activities. The mitigation measures associated with these impacts are accounted for within the current surface exploration permits and authorizations.

Exploration and mining in Saskatchewan is governed by the Mineral Disposition Regulations 1986, and administered by the Mines Branch of the Saskatchewan Ministry of Energy and Resources. There are two key land tenure milestones that must be met in order for commercial production to occur in Saskatchewan: (1) conversion of a mineral claim to mineral lease, and (2) granting of a Surface Lease to cover the specific surface area within a mineral lease where mining is to occur.

A mineral claim does not grant the holder the right to mine minerals except for exploration purposes. Subject to completing necessary expenditure requirements, mineral claims can be renewed for a maximum of twenty-one years. Beginning in the second year, and continuing to the tenth anniversary of staking a claim, the annual expenditure required to maintain claim ownership is twelve dollars per hectare.

A mineral claim in good standing can be converted to a mineral lease by applying to the mining recorder and have a boundary survey completed. In contrast to a mineral claim, the acquisition of a mineral lease grants the holder the exclusive right to explore for, mine, recover, and dispose of any minerals within the mineral lease. Mineral leases are valid for ten years and are renewable.

Land within the mineral lease, surface facilities and mine workings is considered to be located on Provincial lands and therefore owned by the Province. Hence, the right to use and occupy those lands is acquired under a surface lease from the Province of Saskatchewan. A surface lease is issued for a maximum of 33 years, and may be extended as necessary to allow the lessee to operate a mine and/or plant and undertake reclamation of disturbed ground.

Table 1 Property Claim Information.

Claim Number	NTS Map Sheet	NTS Map Sheet	Area (Hectares)	Record Date	Anniversary Date	Total Annual Req'd Work	Excess Credit ($)
S-107359	074I01	074I08	4,750.00	06-Apr-04	05-Apr-14	$57,000.00	$2,308,750
S-107361	074I08		1,627.00	12-Apr-04	11-Apr-14	$19,524.00	$792,349
S-107362	074I08		5,903.00	16-Apr-04	15-Apr-14	$70,836.00	$2,798,022
S-107363	074I08		4,530.00	12-Apr-04	11-Apr-14	$54,360.00	$2,206,110
S-107364	074I08		5,295.00	16-Apr-04	15-Apr-14	$63,540.00	$2,509,830
S-107365	074I08		5,916.00	16-Apr-04	15-Apr-14	$70,992.00	$2,881,092
S-107366	074I08		1,986.00	16-Apr-04	15-Apr-14	$23,832.00	$941,364
S-107367	074I08		469.00	03-May-04	02-May-14	$5,628.00	$208,785
S-107368	074I08		4,440.00	16-Apr-04	15-Apr-14	$53,280.00	$2,104,560
S-107370	064L05	074I08	906.00	03-May-04	02-May-14	$10,872.00	$441,222
S-107373	064L05	074I08	1,068.00	03-May-04	02-May-14	$12,816.00	$506,232
S-111276	074I08		5.00	07-Jul-08	06-Jul-13	$192.00	$6,992
S-111278	074I08		3,361.00	24-Nov-08	23-Nov-13	$40,332.00	$1,468,757
TOTALS			**40,256.00**			**$483,204.00**	**$19,174,065**

Figure 2 Property Claim Map.

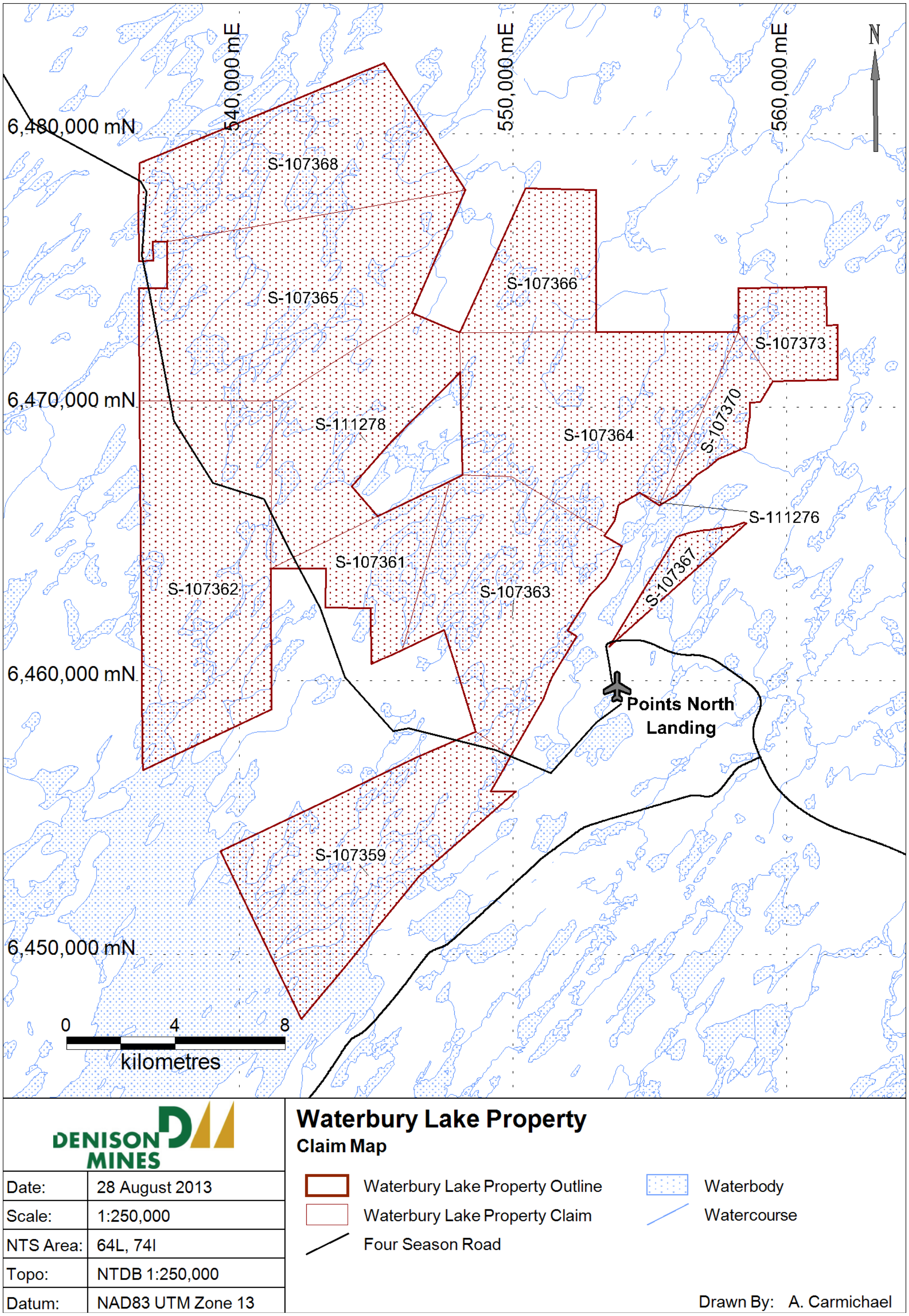
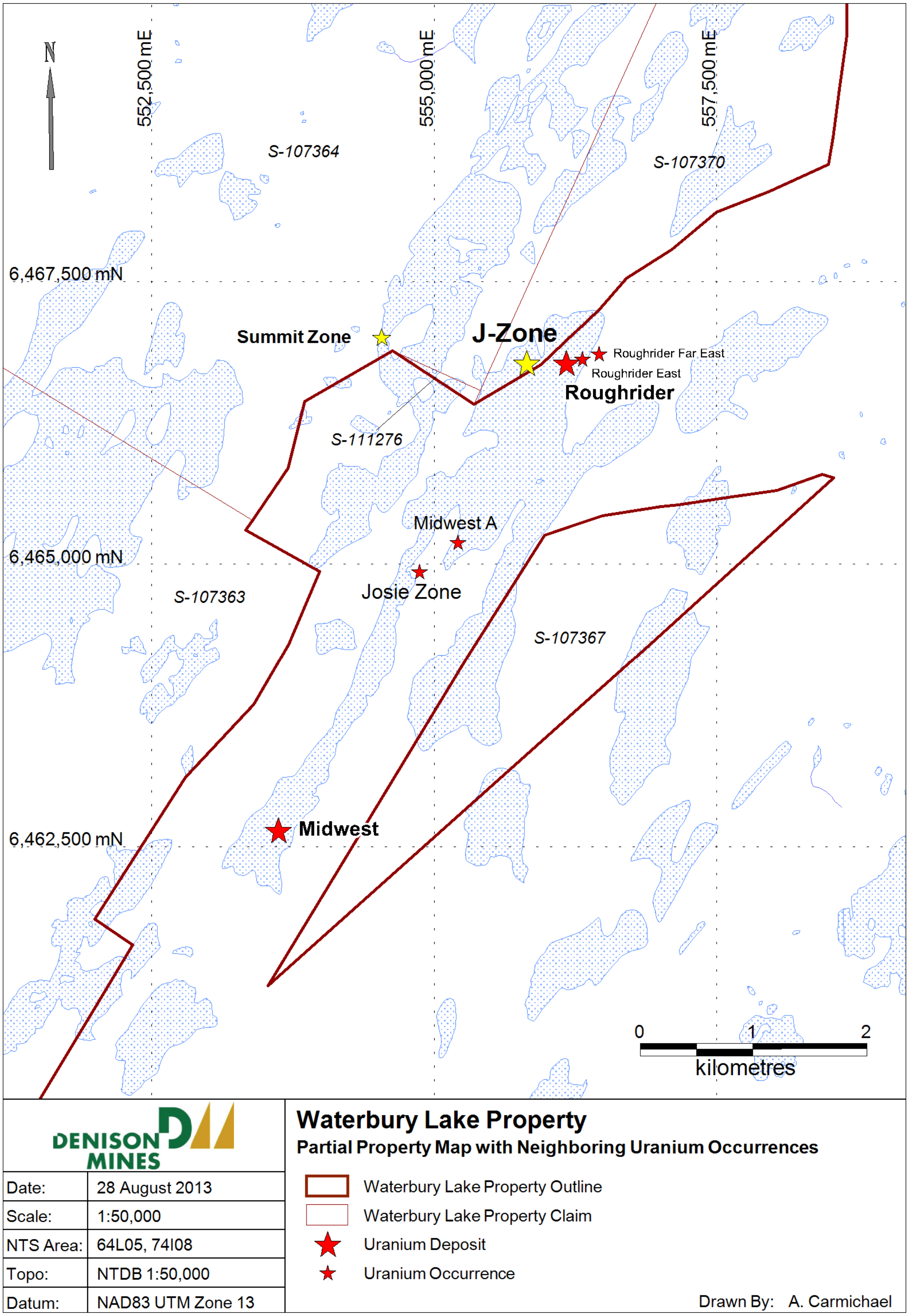


Figure 3 Partial Property Map Showing Neighboring Uranium Deposits.



5 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

The following description of the accessibility, climate, local resources, infrastructure and physiography for the Property was extracted from the 2012 Technical Report for Fission titled ñTechnical Report on the Waterbury Lake Uranium Project Including Resource Estimate on the J Zone Uranium Deposit, Waterbury Lake Property, Athabasca Basin, Northern Saskatchewanò, dated February 29th, 2012 and revised on May 29th, 2012 which is filed on SEDAR under Fissionõs profile.

5.1 Accessibility

The Waterbury Lake project can be accessed year round by taking Saskatchewan provincial Highway 102 to Southend from La Ronge, then Highway 905 to Points North (Figure 1). Transwest Airways and Pronto Airways provide daily flights to Points North as well as the surrounding communities from the airport in Saskatoon. The nearest community is Wollaston Lake, 57 km directly south east of Points North. During summer drilling campaigns the core camp is most commonly accessed by helicopter based out of Points North. An all season secondary road exists from Highway 905 to the Midwest deposit dam from which a motor boat can be used to access the camp. During the winter months the core camp can be easily reached by 4x4 truck using a secondary road that runs north east along Fission claim S-107367 to an ice road (maintained by Rio and Fission) which crosses McMahon Lake.

5.2 Climate

The Waterbury Lake project area lies in a sub-arctic climate region. Winters are generally extremely cold and dry with temperatures regularly dropping below -30° C. The cold temperatures allow for a sufficient ice thickness to support a drill rig generally from mid-January to mid-April. Temperatures in the summer can vary widely with yearly maxima of around 30° C often recorded in late July.

5.3 Local Resources

Points North provides the field staff with all of the amenities needed while working in the field. It also provides general mechanical services, equipment storage and a source of limited camp supplies. General drill program supplies and equipment for the project are provided by a mining and exploration expediting service based out of La Ronge, Saskatchewan. Core camp helpers are sourced from the local communities of Wollaston Lake or Stony Rapids.

5.4 Infrastructure

At present there are no facilities or infrastructure on the Waterbury Lake property. A provincial power station located 3.5 km to the west of Points North supplies power to the surrounding communities and mines. Fresh water can be readily supplied from the numerous surrounding lakes. There are several advanced development and mining operations within 20 km of the project, including Midwest (Figure 3), McClean Lake and Dawn Lake.

5.5 Physiography

The project area is characterized by gently rolling relief covered by thinly wooded boreal forest. Numerous lakes and ponds generally show a north-easterly elongation imparted by the last glaciation. Broad zones of muskeg are present at low elevations around many of the local lakes. McMahon Lake is one of the largest lakes in the immediate project area and it overlies the J Zone deposit as well as the Midwest and Roughrider deposits (Figure 3). The core camp lies at approximately 480 masl and the surface elevation used for McMahon Lake is 478.29 masl. Vegetation is predominantly thinly distributed black spruce, alder and jack pine with lesser birch, while ground cover comprises mostly reindeer lichen and Labrador tea (Figure 4).

Figure 4 **Physiography of the Waterbury Lake property. Top: Typical light boreal forest with sparse ground cover of reindeer lichen. Bottom: Muskeg and light forest around McMahon Lake.**

6 HISTORY

The following description of the Property history was extracted from the 2012 Technical Report for Fission titled ñTechnical Report on the Waterbury Lake Uranium Project Including Resource Estimate on the J Zone Uranium Deposit, Waterbury Lake Property, Athabasca Basin, Northern Saskatchewanò dated February 29th, 2012 and Revised on May 29th, 2012 by Armitage and Nowicki, which is filed on SEDAR under Fissionôs profile.

Uranium exploration has been undertaken on the Waterbury Lake property for over 40 years. Numerous and varied programs have been carried out on different portions of the property, including diamond drill campaigns, airborne and ground geophysics, boulder sampling and prospecting. A short summary of previous work (Dahrouge, 2006) and more recent work (Mineral Services Canada Inc., 2012) is presented below. A more detailed description of work completed by Fission is presented in Section 10 EXPLORATION. The report by Dahrouge Geological Consulting (2006) summarizes the exploration work on the Waterbury Lake property undertaken by Strathmore.

1969:
King Resources conducted an extensive exploration program in the Waterbury Lake area including airborne radiometric, magnetic and electromagnetic (EM) surveys as well as a hydrogeochemical survey.

1976:
Asamera Oil Corp initiated the Dawn Lake project with the Waterbury Lake property being part of the ñEsso North Gridò. The Dawn Lake deposit was discovered by Asamera in 1978 approximately 7 km east of the Waterbury Lake property. Additional airborne radiometric, magnetic, EM and VLF-EM surveys were conducted across the property as well as radon surveys. Asamera conducted mapping and sampling programs throughout the early 1980s. A drill program of 21 holes completed on the Esso North Grid in 1982 identified encouraging geology with respect to lithology, alteration and structure, but no uranium mineralization. Several holes were drilled in close proximity to the J Zone and Roughrider deposits.

Late 1980's:
Cogema acquired properties in the Waterbury and Henday Lake areas during the late eighties and carried out an extensive exploration program involving geological mapping, sampling, drilling and geophysical surveys. The latter included airborne EM and magnetic surveys, and ground VLF-EM and gravity surveys.

1990's:
Following-up on work done by Cogema up until the early nineties, Cameco acquired properties in the Waterbury and McMahon Lakes area and initially completed geological mapping and sampling programs. This was followed by more geophysical surveys including ground time domain electromagnetic (TDEM), magnetic, gravity and induced polarization (IP) over select targets and drilling throughout the decade.

2004:
Strathmore acquired the Waterbury Lake Property through the staking of 13 mineral claims during March and April.

2005:
Between March 26 and April 4, Fugro Airborne Surveys Corp. conducted an airborne high power time domain electromagnetic (MEGATEM II) survey over the entire property for Strathmore. A total of 1,749 line kilometres were flown at a line spacing of 400 metres. Other work funded by Strathmore during 2005 included an AeroTEM III heli-borne EM survey flown in the spring over claim S-107372 (26 line kms @ a 200m line spacing) and a boulder sampling program carried out in the fall by Dahrouge Geological in which 77 samples were collected.

2006:
Strathmore continued work on the Property during 2006 by funding a UTEM-3 ground geophysical survey carried out by SJ Geophysics between March 16 and April 9. Eleven lines spaced 200metres apart were surveyed approximately eight kilometres north of Points North Landing. During May and June, Canadian

Mine Services were contracted to drill eight NQ core holes totaling 2865.85 metres. Finally, in December, a 12.6 kilometre ground IP-resistivity survey was competed over claim S-107367.

2007:
Strathmore started off the exploration season in 2007 by carrying out three ground IP-resistivity surveys in April over claim S-107359 (8.6 line kms @ a line spacing of 200m), and over the Discovery Bay and EN grids.

In June 2007 all of Strathmore's Canadian and Peruvian uranium assets, including the Waterbury Lake Property, were spun out of Strathmore and into Fission.

Late in 2007 Fission funded the drilling of eight diamond drill holes totaling 2,222.0 metres, all within claim S-107367.

2008:
In early 2008, Fission finalized an earn-in agreement with a Korean Consortium led by the Korean Electric Power Corporation. Between March and April, River Valley Energy Services Ltd. was contracted to conduct a small drill program, consisting of five holes totaling 1303.0 metres, all within claim S-107367. In April, a 594 line-kilometre versatile time domain electromagnetic (VTEM) airborne magnetic and EM survey was flown by Geotech Ltd. Following this work, soil sampling, ground and airborne geophysical surveys and a 19-hole drill program (7995.92m) were completed between May and August.

2009:
Between mid-January and mid-March, Bryson Drilling Ltd. from Archerwill, Saskatchewan was contracted to conduct a 22-hole diamond drill program totaling 7356.0 metres. This was followed by a number of small ground geophysical programs over areas deemed prospective due to the presence of one or more of airborne magnetic and/or EM anomalies, namely areas believed to be underlain by sediments or major structures. This work was completed by spring ice break-up.

A smaller diamond drill program was carried out during the summer beginning in late July and ending in late August 2009. A total of seven holes were drilled for an accumulated length of 2725.8 metres. Also completed during the summer was a low level, detailed, fixed wing, airborne radiometric and magnetic survey over the entire property by Special Projects Inc.

2010:
Two diamond drill programs were completed on the property during 2010. The first was carried out between mid-January and end of March, 2010. During this period 35 diamond drill holes were completed for a total accumulated length (including restarts) of 11250.0 metres. Initially one drill was utilized however on March 1st a second rig was added which significantly decreased the overall duration of the program. Bryson Drilling was once again the contractor for this drill program. Several geophysical surveys were also completed during the first three months of the year including 23.6 line-kilometres of DC resistivity on the Discovery Bay Extension grid, 65.3 line-kilometres of DC resistivity on the Oban infill and Oban Extension grids, and 15.6 line-kilometres of time domain electromagnetic on claim S-107367.

A second diamond drill program utilizing one drill was conducted between mid-July to early September. During this period, 16 holes were completed (WAT10-097 to WAT10-112) for a total accumulated length (including restarts) of 5172.0 metres. Bryson Drilling was the contractor, and a B3 helicopter and support was provided by Guardian Helicopters of Calgary, Alberta, Canada. Base camp for the drill program was located at Points North Landing. Airborne radiometric anomalies delineated from the previous summer were checked in the field during August and early September, and a bathymetry survey of the Discovery Bay/Talisker area was carried out in early October.

2011:
A winter 2011 drilling program was carried out between early January and mid-April, 2011, based out of Points North Landing. Three diamond drill rigs provided by Bryson Drilling completed a total of 82 holes (WAT11-113 to WAT11-195) for a total accumulated length (including restarts) of 26,300 metres.

Between January and June 2011, Patterson Geophysics was contracted to conduct several geophysical surveys on the Waterbury and Murphy Lake Properties. 26.4 kilometres of time domain EM survey at Discovery Bay Extension, 25.6 kilometres of time domain EM at Oban and Oban North grids, and 64 kilometres of IP Resistivity and 32.15 kilometres of time domain EM surveys at Murphy-Glen grid were completed, and results provided by David Bingham of Living Sky Geophysics Inc.

2012:
Two drill programs were completed on the Property in 2012 totalling ~39,526 m of core, including 75 holes on the J Zone. The winter 2012 drill program began on January 8 and ended on April 6. A total of 86 holes (32,770) were drilled during the program including 49 holes in and around the J Zone. The summer 2012 drill program at Waterbury Lake began on June 21st and finished on August 1st. Twenty-six drill holes totaling 8,316 metres were completed in the J Zone area.

2013:
A drill program on the Property was completed between January 8 and March 17, 2013. A total of 68 drill holes and 11 restarts were completed comprising 21,012.9 meters. All of the winter 2013 drilling was completed in the immediate area of the J-Zone deposit to extend the boundaries of the mineralization and infill gaps in the drill pattern.

7 GEOLOGICAL SETTING AND MINERALIZATION

The following description of the Property Geological Setting was extracted from the 2012 Technical Report for Fission titled "Technical Report on the Waterbury Lake Uranium Project Including Resource Estimate on the J Zone Uranium Deposit, Waterbury Lake Property, Athabasca Basin, Northern Saskatchewan", dated February 29th, 2012 and Revised on May 29th, 2012 by Armitage and Nowicki, which is filed on SEDAR under Fission's profile.

7.1 Regional Bedrock Geology

7.1.1 Athabasca Basin

The Athabasca Basin covers approximately 85,000 square km of northern Saskatchewan and a small portion of eastern Alberta. Detrital zircon geochronology constrains the age of the basin to between 1,760 and 1,500 Ma (Helikian stage; Ramaekers et al., 2007). A maximum depth of 1,500m has been established through diamond drilling, whereas seismic surveying indicates a maximum depth of approximately 1,700m (Hobson and MacAuley, 1969). Based on isopachs and paleocurrent directions the Athabasca Basin is interpreted to have been filled over a 200 Ma period in four major depositional sequences which coalesced into a single basin (Ramaekers et al., 2007). The sediments are dominated by unmetamorphosed, variably hematized, siliciclastic, conglomeratic sandstone. A thin quartz pebble basal conglomerate is intermittently present along the lower margin of the basin. Around the Carswell meteorite impact structure in the western centre of the basin a sequence of dolostones and basement granitoids to granitoid gneisses are exposed.

The Manitou Falls (MF) Formation comprises a significant portion of the Athabasca sedimentary package and is present throughout the entire basin. Four distinct members make up the Manitou Falls Formation: the MFa, a sandy and conglomeratic quartz arenite; MFb, a quartz arenite with > 2 % conglomerate beds; MFc, a pebbly quartz arenite and MFd, a quartz arenite interbedded with numerous clay pebbles. The sediments are dominantly flat lying throughout the basin except near significant fault zones or the Carswell impact structure (Ramaekers et al., 2007). Faults are generally oriented north to northeast, roughly parallel to the underlying crystalline basement geology, suggesting reactivation from major basement structures.

The Athabasca Basin unconformably overlies northeast trending Archean to Paleoproterozoic crystalline basement rocks (Figure 5). Over a large scale the unconformity is relatively flat lying with a gentle dip towards the centre of the basin in the east and a steeper dip in the north, south and west portions of the basin.

7.1.2 Crystalline Basement

The Archean to Paleoproterozoic crystalline basement underlying the Athabasca Basin forms part of the Churchill craton and comprises three major lithotectonic zones; the Talston Magmatic Zone, the Rae Province and the Hearne Province (Figure 5). The basement underlying the Athabasca Basin is interpreted to consist dominantly of rocks of the Rae and Hearne provinces. In the east, Archean orthogneiss equivalents to orthogneiss in the Wollaston and Mudjatik domains, Wollaston Domain paragneiss and younger anatectic granite are commonly identified in drill core (Card, et al., 2007).

The Talston Magmatic Zone underlies the Athabasca Basin on the far west side. The Talston Magmatic Zone extends from northern Alberta to Great Slave Lake in the Northwest Territories and is dominated by a variety of plutonic rocks and an older basement complex (McNicoll et al., 2000). The basement complex varies widely in composition from amphibolites to granitic gneiss to high-grade pelitic gneiss.

The Rae Province is comprised of five domains as well as a column of material comprising the core of the Carswell meteorite impact structure. The Zemlack Domain is dominantly comprised of highly deformed and metamorphosed magmatic gneisses. The Beaverlodge Domain consists mainly of greenschist to amphibolite facies supracrustal rocks with lesser meta-igneous rocks. The Uranium City ore deposits are found in the Beaverlodge Domain. The Tantato Domain is separated into two structural packages termed the lower and upper decks (Hanmer et al., 1994). The upper deck, in the south of the domain, is dominated by psammitic to pelitic migmatite with lesser mafic granulite (Hanmer, 1997). The lower deck is dominated by a tonalite batholith to the east and granitoid orthogneiss to the west (Hanmer, 1997; Williams et al., 2000). The Lloyd Domain consists dominantly of granodioritic orthogneiss with lesser psammo-pelite to pelite, intercalated psammite, quartzite, amphibolites and ultramafics (Lewry and Sibbald, 1977; Card, 2002). Rocks of the Clearwater Domain are largely unexposed but are presumed to be K-feldspar rich granite and granitoid gneiss based on drill core and limited exposure (Sibbald, 1974; Card, 2002). The Carswell impact structure is characterized by a core of granitoid gneiss, pelitic diatexite, pegmatite and mafic gneiss.

The Hearne Province is made up of the Wollaston, Mudjatik and Virgin River domains, including the prospective Mudjatik-Wollaston Transition zone. The Hearne and Rae provinces are separated by the northeast trending Virgin River shear zone. The Virgin River and Mudjatik domains comprise similar rock types but are separated based on differing structural styles (Wallis, 1970; Lewry and Sibbald, 1977). Linear structures are typical in the Virgin River Domain whereas dome and basin structures are more typical in the Mudjatik Domain. The rock types making up both domains are interbedded psammitic to pelitic gneisses and granitoid gneiss with lesser mafic granulite, quartzite, calc silicate and iron formation (Lewry and Sibbald, 1980). The Wollaston Domain is separated from the Mudjatik Domain based on an increased proportion of metasedimentary rocks (Yeo and Delaney, 2007) and a change from dome and basin style structures to linear style structures (Lewry and Sibbald, 1977). The rock types making up the Wollaston Domain are typically variably graphitic Paleoproterozoic metasedimentary gneiss and Archean granitoid gneiss.

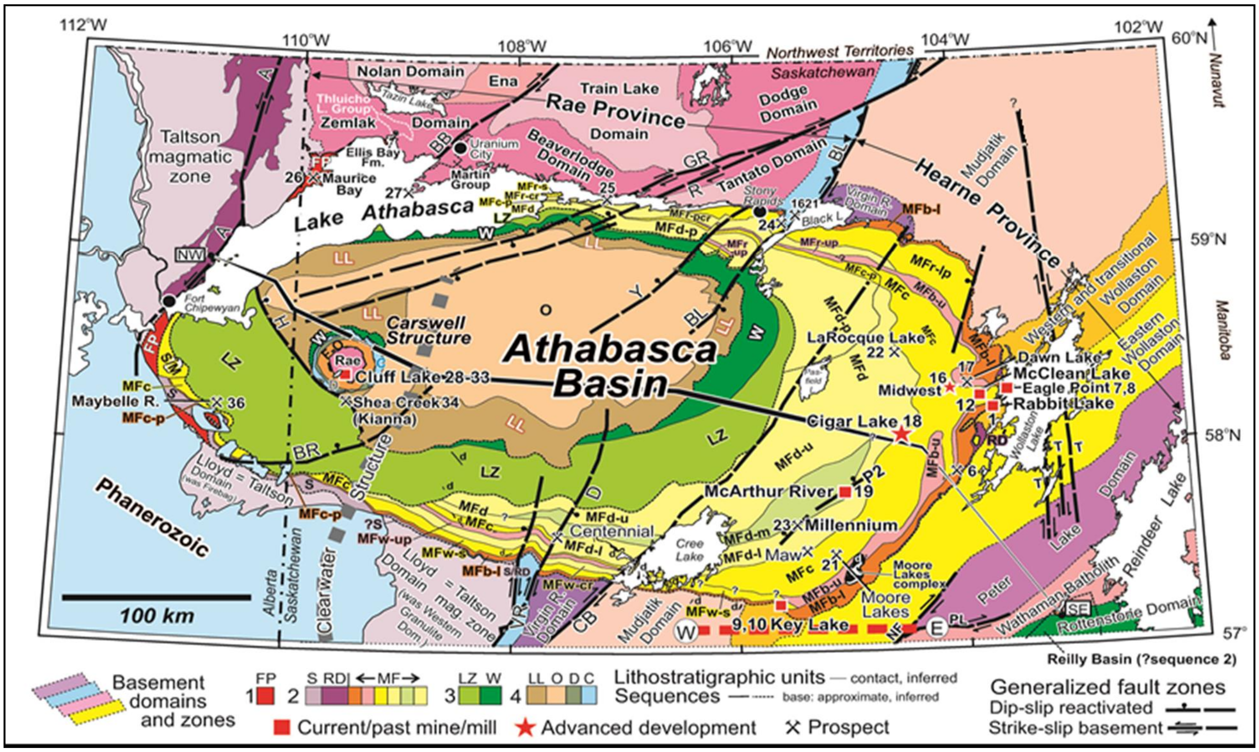
Major fault zones in the basement are generally northeast to east trending and include the Snowbird tectonic zone, Grease River shear zone, Black Bay fault, Cable Bay shear zone, Beatty River shear zone and Tabbernor fault zone (Figure 5).

A paleoweathered zone exists at the basal unconformity between the Helikian sandstone and the crystalline basement. The zone extends from a few centimetres to over 220m into the basement particularly in faulted zones (Macdonald, 1980). The paleoweathering displays a gradational sequence with depth of pervasive hematization to chloritization to fresh basement. A thin zone of late stage bleaching occurs locally directly below the unconformity.

7.1.3 Quaternary Geology

The thickness of Quaternary sediments throughout the Athabasca Basin is highly variable, ranging from 0m around Key Lake to over 100m at McArthur River (Campbell, 2007). Bedrock is rarely exposed throughout the Athabasca Basin with Quaternary material covering almost the entire land surface. Drumlins, eskers and other glacial landforms dominate the landscape and generally show a north-easterly orientation.

Figure 5 Regional geology of northern Saskatchewan (from Jefferson et al., 2007).



7.2 Property Geology

7.2.1 Athabasca sandstone

The Athabasca Basin sedimentary rocks in the Waterbury Lake project area (Figure 6) typically range in thickness from 195 to 300m (Figure 7). The upper portion of the sedimentary package is comprised of the Manitou Falls Collins (MFc) Formation pebbly quartz arenite which is typically around 80m thick in the Discovery Bay area. The quartz arenite is generally coarse grained throughout with small, disseminated quartz pebbles up to 10mm in size. Below approximately 80m depth, the MFc quartz arenite grades into the Manitou Falls Bird (MFb) Formation pebble bedded quartz arenite which is typically 115m thick. The MFb quartz arenite is coarse grained with medium sized pebbles occurring in beds greater than 2 cm thick. Thin lenses of greyish mudstone are commonly observed throughout both the MFc and MFb. An easily recognizable conglomerate marker unit 5 to 7 m in thickness is present throughout the project area at a typical depth of 150 to 165m. Conglomerate clasts are typically sub-rounded quartz with minor mudstone and mafic fragments. The marker conglomerate often grades in and out of coarse grained quartz arenite. A basal conglomerate unit is almost always present at the base of the Athabasca sediments except in intensely altered zones around mineralization. This basal unit ranges in thickness across the property from less than one meter to several meters. The pebbles are dominated by rounded buff-grey quartz with minor mafics and mudstone locally observed. Occasionally the basal conglomerate hosts quartz pebbles larger than the diameter of the NQ sized core being drilled. Elevated radioactivity is commonly recorded in the coarse pebble beds of the MFb Formation as well as the conglomerate units. This is interpreted by Mwenifumbo and Bernius (2007) to be caused by a thorium rich aluminophosphate of the crandallite group.

Based on drill core measurements the strata are flat lying throughout the project area although locally rotated bedding occurs in heavily faulted zones above mineralization. Typically the marker conglomerate is flat lying but it is down dropped due to fault displacement and possible quartz dissolution above the mineralized zone (Figure 7). Structural measurements from vertical drill holes indicate most faulting within the Athabasca dips at a low angle to the core axis ranging from 20-35 degrees. These faults are interpreted to strike approximately east-west, parallel to the local basement geology.

The upper sandstone throughout the Waterbury Lake property typically displays mottled patchy-pervasive pinkish hematization and yellowish-brown fracture hosted to leisengang banded limonite stain. Bleaching may occur as pitted, patchy bone white zones with minor interstitial clay alteration. A zone of pervasive moderate to strong hematite alteration is always intersected from 30 to 50m down hole throughout Discovery Bay. Away from mineralization, below approximately 100m depth, the sandstone column is dominated by dark purple-red hematite banding tens of centimetres thick with alternating rusty yellow limonitic zones. Thin veinlets of specular hematite are often associated with the purple hematite banding. Near the J Zone deposit however, an alteration chimney of moderate to strong bleaching and clay alteration with quartz dissolution tens of meters wide is present and overprints the regional alteration profile. Below approximately 110m vertical depth from surface, the sandstone becomes increasingly clay altered and bleached with essentially no primary hematite stain remaining. Roughly 20m above mineralization, clay alteration and quartz dissolution locally intensifies and can completely alter the sandstone to soft purple-red-yellow clay. Rarely, dark green chlorite is present in the lower sandstone and is interpreted to be a thin intermittent halo adjacent to the mineralized zone. Illite is the predominant clay in the sandstone column near mineralization (determined through PIMA analysis) while away from mineralization dickite is the predominant (background) clay mineral.

7.2.2 Crystalline basement

The Waterbury Lake project is located over the Mudjatik-Wollaston Transition Zone (MWTZ). This zone is currently host to all of the producing uranium deposits in the Athabasca Basin. The basement beneath the Waterbury Lake project is comprised of approximately northeast trending corridors of metasediments wrapping around orthogneissic domes and locally in the Discovery Bay trend an east-west trending corridor of metasediments bounded to the north and south by thick zones of orthogneiss (Figure 7) that, based on interpretation of aeromagnetic images, may represent two large dome structures (Figure 8). Based on a review of the Wollaston Supergroup by Yeo and Delaney (2007), the metasediments and the orthogneiss domes are interpreted to be Paleoproterozoic and Archean in age, respectively.

The Discovery Bay metasedimentary corridor appears to comprise a systematic sequence of steeply dipping, east-west striking units including: medium to fine grained, weakly graphitic cordierite-almandine pelitic gneiss, informally termed the "typical J Zone pelitic gneiss", graphite-sulphide rich pelitic gneiss; cordierite-almandine augen gneiss; and thin lenses of garnetite which appear to be more abundant along the southern edge of the corridor (Figure 9). Intercalated, lenses of semi-pelite, quartzite and psammitic gneiss are also occasionally present throughout the corridor. The metasediment stratigraphy in the northern portion of the corridor is poorly understood as J Zone mineralization dominantly occurs to the south of the corridor which is where drilling has been concentrated since the initial discovery. The northern portion of the metasedimentary corridor is interpreted to be made up primarily of the typical J Zone pelitic gneiss with an intermittent lens of steeply dipping quartzo-feldspathic, possibly psammitic, gneiss present locally. South of the typical J Zone pelitic gneiss is a package of graphite-sulphide rich pelite which appears to be flanked by, or hosts internally, intermittent zones of garnet-cordierite augen gneiss. In the approximate centre of the graphite-sulphide gneiss is a steeply dipping, strongly graphitic cataclastic fault zone that is closely associated with uranium mineralization. This fault zone is commonly enriched in classic Proterozoic basin uranium pathfinder elements such as arsenic, cobalt, copper, nickel, vanadium and lead, suggesting a possible pathway for a mineralizing and/or reducing fluid. The southern portion of the metasedimentary corridor is a continuation of the typical J Zone cordierite-garnet pelitic gneiss, in this area characterized by an increased proportion of felsic banding and commonly intercalated lenses of almandine-magnetite-pyrite rich garnetite. A thin band of strongly altered calc-silicate material or pegmatite is commonly intersected along the southern contact between the metasediments and the southern orthogneiss.

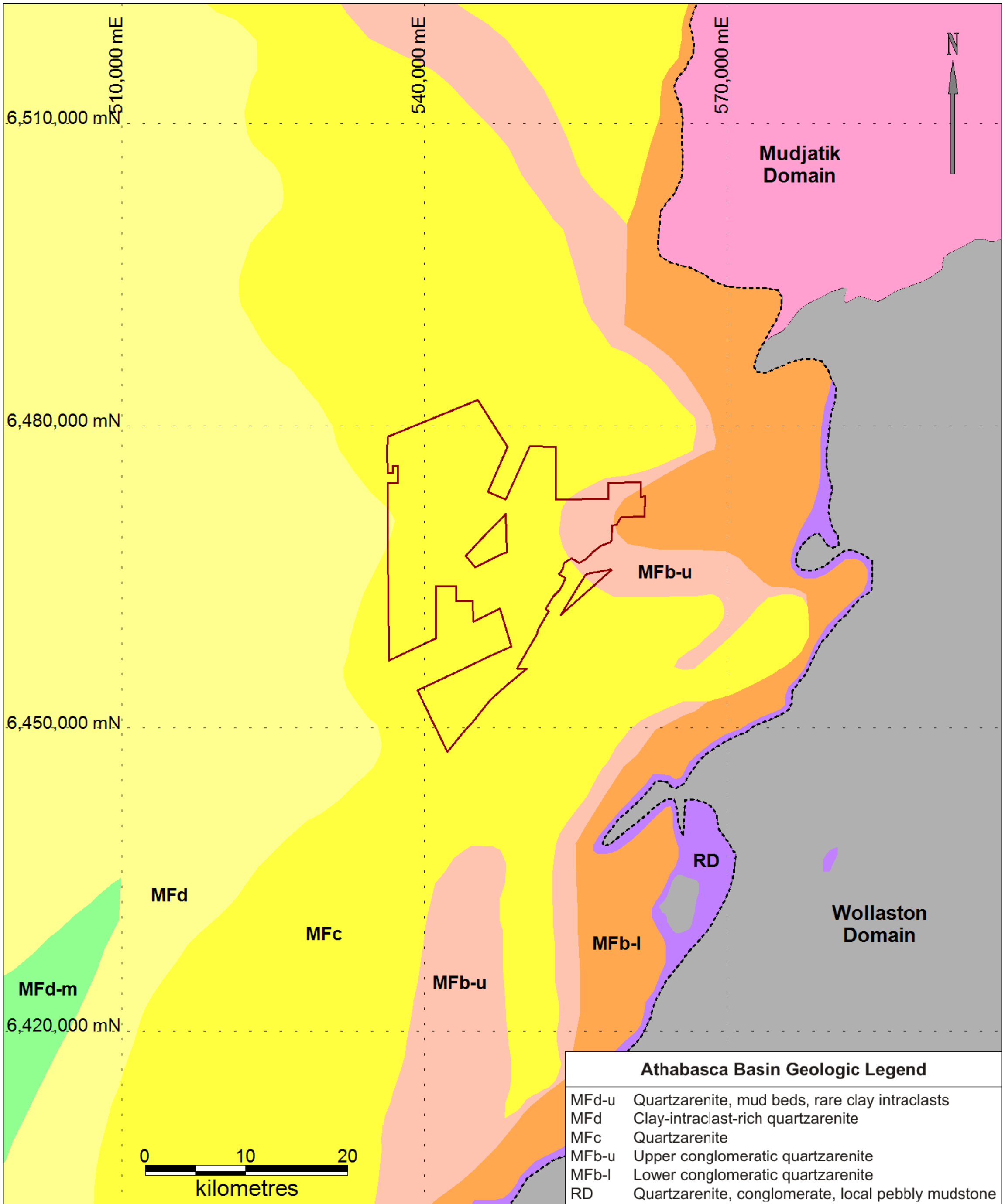
The metasedimentary corridor is interpreted as the steeply north-northwest dipping limb of an antiformal fold structure wrapping around the southern orthogneiss dome.

The north and south Archean orthogneiss bodies are typically composed of 25 % quartz, 65 % plagioclase and alkali feldspar combined and approximately 10 % biotite with trace garnet. The orthogneiss commonly contains thin pegmatite intrusions and lenses of non-foliated quartz-feldspar granofels. No significant structures or fault zones have been intersected in the orthogneiss bodies.

Away from mineralization the basement rocks display a typical paleoweathering profile of rusty patchy to pervasive hematization which grades into dark green chloritization with depth. Throughout the paleoweathered zone primary minerals have been completely altered to clay pseudomorphs and this alteration can extend for tens of meters below the unconformity. Clay mineralogy in the paleoweathering profile typically shows a downward progression from illite-kaolinite to chlorite. Orthogneiss commonly shows pervasive clay alteration near the unconformity that has resulted in pseudomorphing of feldspar by chalky whitish-green illite and/or kaolinite. Primary textures are often destroyed and all that remains are quartz crystals in a clay-dominated matrix. Due to the higher proportion of garnet, biotite and other Al-silicates, the pelitic units tend to be significantly darker and more chloritic near the unconformity. Their ribbony texture is usually preserved despite the intense alteration. Zones of later-stage hydrothermal alteration are common throughout the basement beyond the paleoweathered zone. Patchy red hematization is common, along with dark green, preferentially pervasive chlorite alteration of biotite and Al-silicates, and illitic-kaolinitic clay as pale yellow-green alteration of feldspar adjacent to fractures.

On a regional scale, the paleotopography of the unconformity at the Waterbury Lake property is interpreted to be generally flat lying. In the vicinity of the J Zone however, interpreted stacked east-west striking sub vertical reverse faults have resulted in basement offsets of up to several meters which gradually down drop the unconformity towards the south. The most significant basement offset is associated with the thick graphitic cataclasite fault zone proximal to the J Zone mineralization. In zones of particularly thick or intense uranium mineralization the unconformity can be completely overprinted by massive hematite, clay and uranium, making it difficult to identify.

Figure 6 Waterbury Lake property geology.



DENISON MINES

Date:	27 August 2013
Scale:	1:750,000
NTS Area:	64E, L, 74I, H
Topo:	N/A
Datum:	NAD83 UTM Zone 13

Waterbury Lake Property

Property Geology

Waterbury Lake Property Outline

Athabasca Basin Outline

Drawn By: A. Carmichael

Figure 7 **Interpreted simplified geology section through the J Zone deposit looking east. Expected depths or depth ranges of units noted in brackets (from Armitage and Nowicki, 2012).**

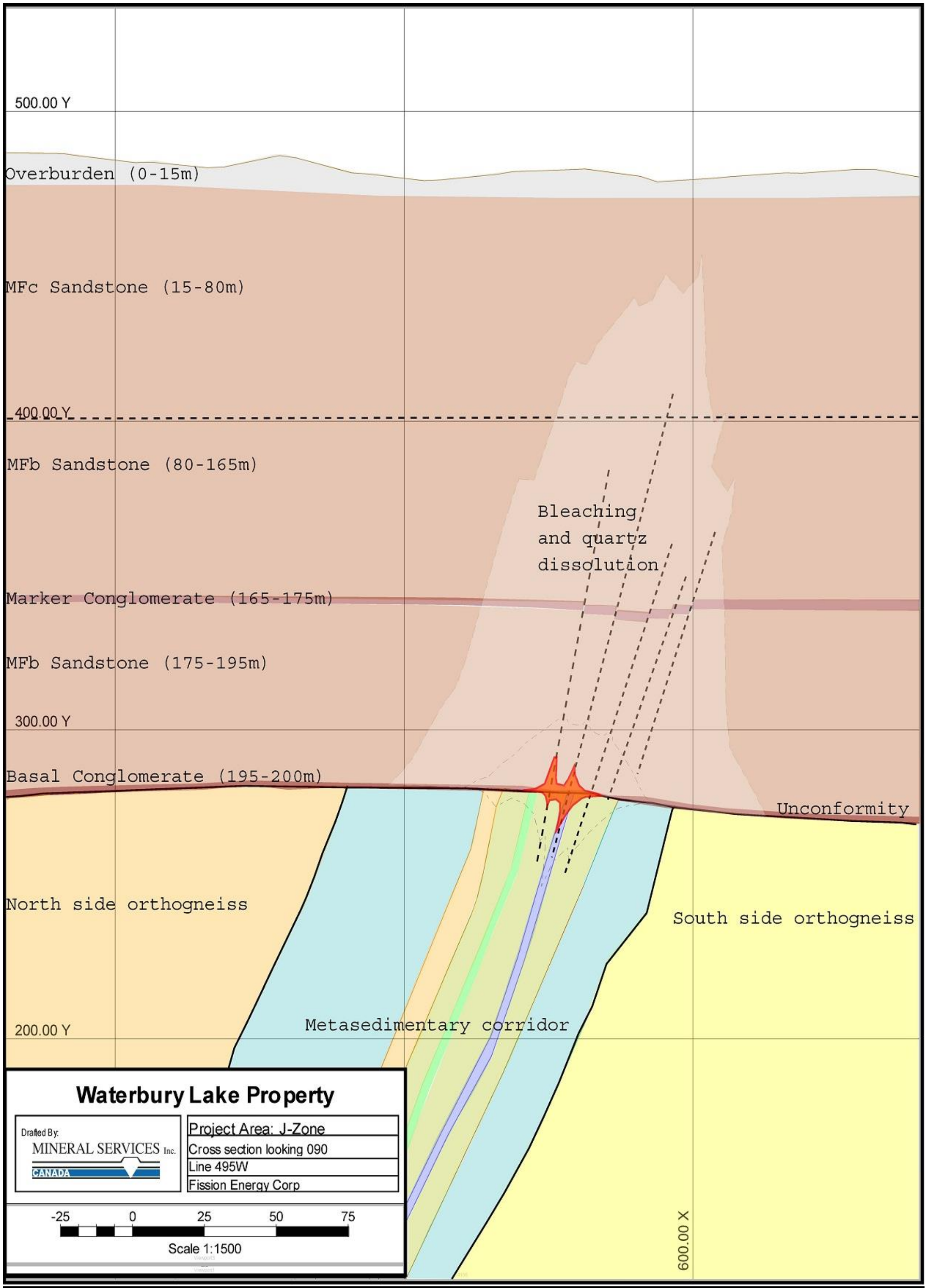
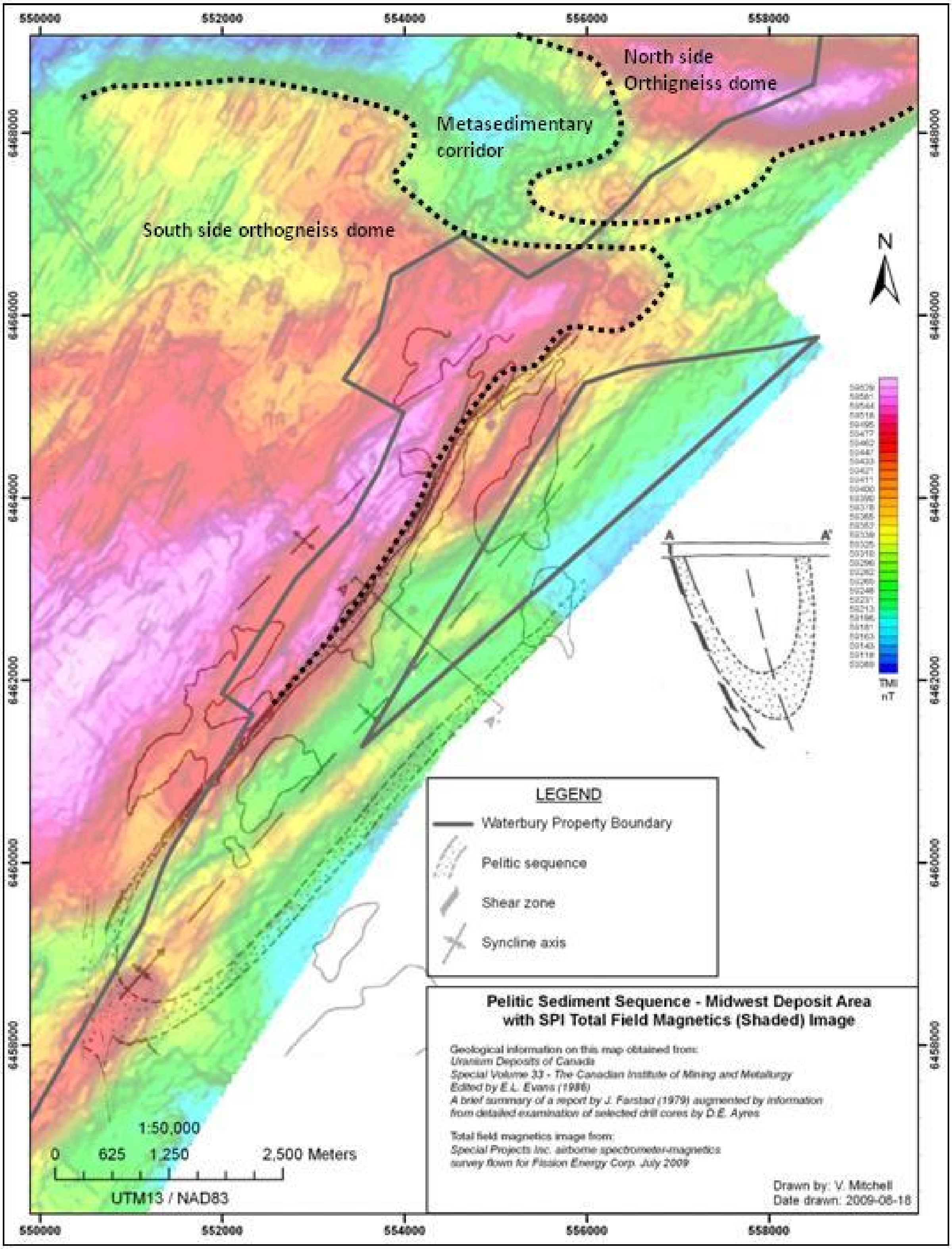


Figure 8 **Total field magnetic map of the Discovery Bay area showing the geophysical response of the south and north side orthogneiss domes (from Armitage and Nowicki, 2012).**



7.2.3 Quaternary

Much of the Waterbury Lake project area is covered by a thick layer of sandy Quaternary material. Virtually no outcrop is present anywhere on the property. Rare, weakly radioactive basement boulders are found in places around the edge of McMahon Lake. Quaternary sediments generally range in thickness from 10-20m. Eskers and drumlins show a northeast-southwest trend imparted by the last glaciation.

7.3 Mineralization

7.3.1 J Zone

The J Zone uranium deposit was discovered during the winter 2010 drill program at Waterbury Lake. The second drill hole of the campaign, WAT10-063A, was an angled hole drilled from a peninsula extending into McMahon Lake. It intersected 10.5m of uranium mineralization grading 1.91 % U_3O_8 including 1.0m grading 13.87 % U_3O_8 as well as an additional four meters grading at 0.16 % U_3O_8.

The J Zone deposit is currently defined by 268 drill holes intersecting uranium mineralization over a combined east-west strike length of up to 700m and a maximum north-south lateral width of 70m. The deposit trends roughly east-west (80°) in line with the metasedimentary corridor and cataclastic graphitic fault zone (Figure 9). A 45m east-west intermittently mineralized zone occurs in the target area formerly known as Highland roughly separating the J Zone into two segments referred to as the eastern and western lenses which are defined over east-west strike lengths of 260 and 318m, respectively. A thin zone of unconformity uranium mineralization occurs to the north of intermittently mineralized zone which is interpreted to represent a mineralized block that has been displaced northwards by faulting and is referred to as the mid lens. Three representative cross sections of the J Zone showing the geology and mineralization in the eastern lens on line 000W (the discovery line) and central and western lenses on lines 270W and 360W are presented in Figures 10 and 11.

Mineralization thickness varies widely throughout the J Zone and can range from tens of cm to over 19.5m in vertical thickness. In cross section J Zone mineralization is roughly trough shaped with a relatively thick central zone that corresponds with the interpreted location of the cataclasite and rapidly tapers out to the north and south. Locally, a particularly high-grade (upwards of 40 % U_3O_8) but often thin lens of mineralization is present along the southern boundary of the metasedimentary corridor, as seen in holes WAT10-066, WAT10-071, WAT10-091, and WAT10-103. Ten meter step out drill holes to the south from these high-grade holes have failed to intersect any mineralization, demonstrating the extremely discreet nature of mineralization.

Uranium mineralization is generally found within several metres of the unconformity at depth ranges of 195 to 230m below surface. It variably occurs entirely hosted within the Athabasca sediments, entirely within the metasedimentary gneisses or straddling the boundary between them. A semi-continuous, thin zone of uranium mineralization has been intersected in occasional southern J Zone drill holes well below the main mineralized zone, separated by several meters of barren metasedimentary gneiss. This mineralized zone is informally termed the south-side lens and can host grades up to 3.70 % U_3O_8 as seen in drill hole WAT11-142.

The J Zone deposit is generally flat lying (located roughly 200m below the surface of McMahon Lake) and therefore whenever possible holes have been drilled vertically in order to intersect the ore lenses perpendicularly, thereby giving an approximate true thickness.

Figure 9 Plan view at 280 masl (roughly at the unconformity) showing the approximate J Zone deposit outline and unconformity drill hole pierce points.

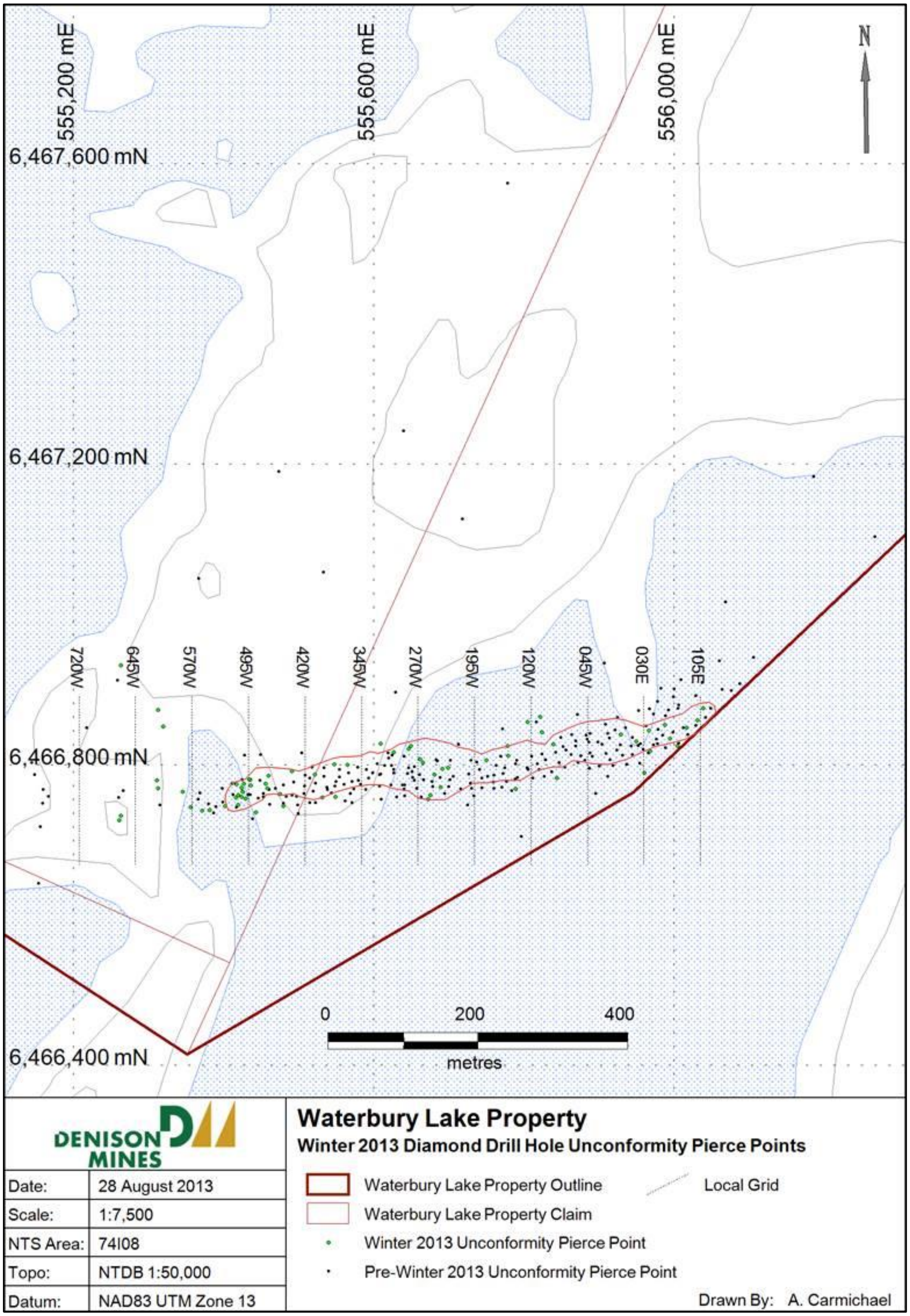


Figure 10 **Cross section view through the J Zone (looking east) showing the interpreted geology and location of mineralization on line 270W. See figure 9 for location of line 270W.**

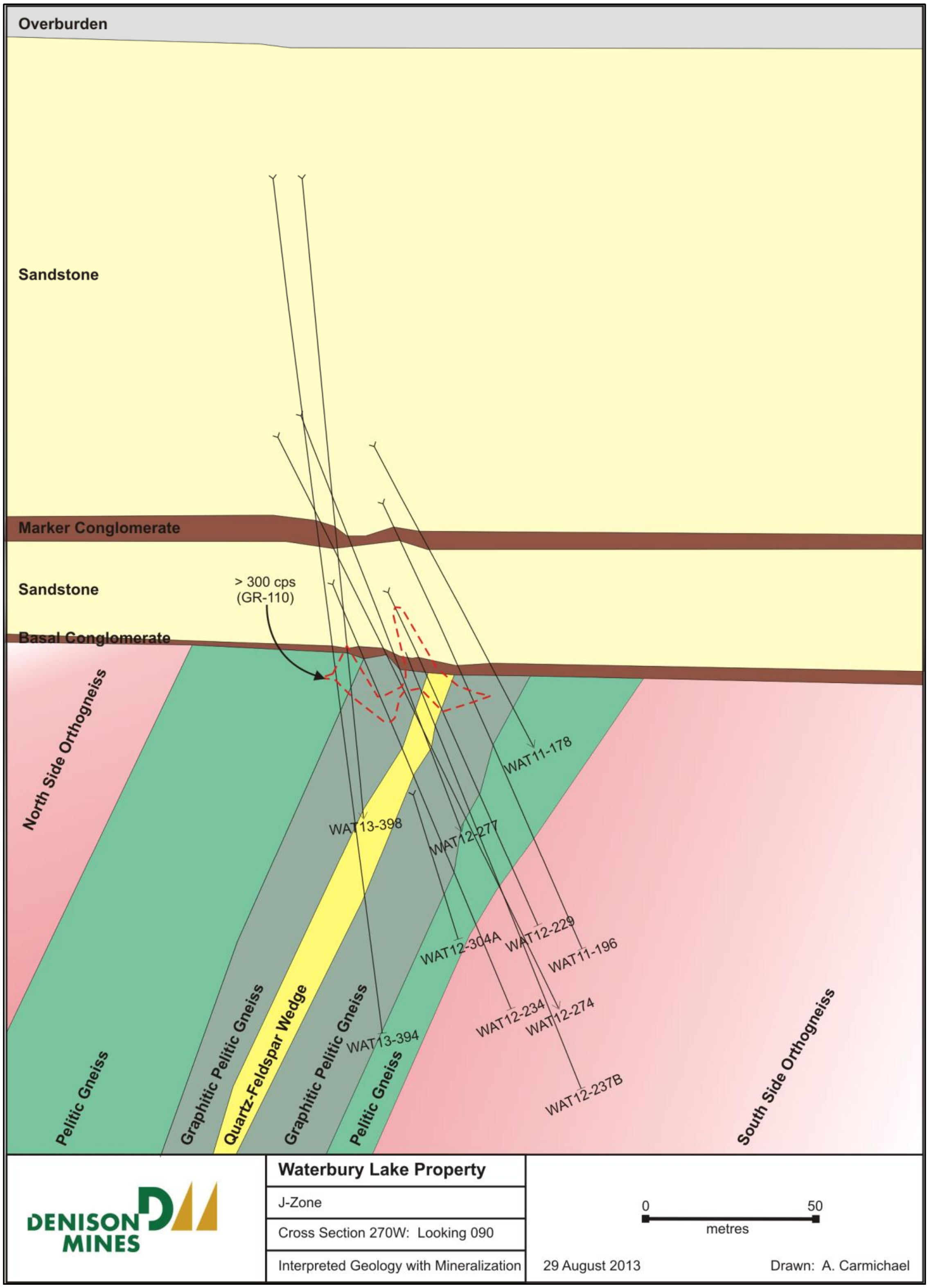
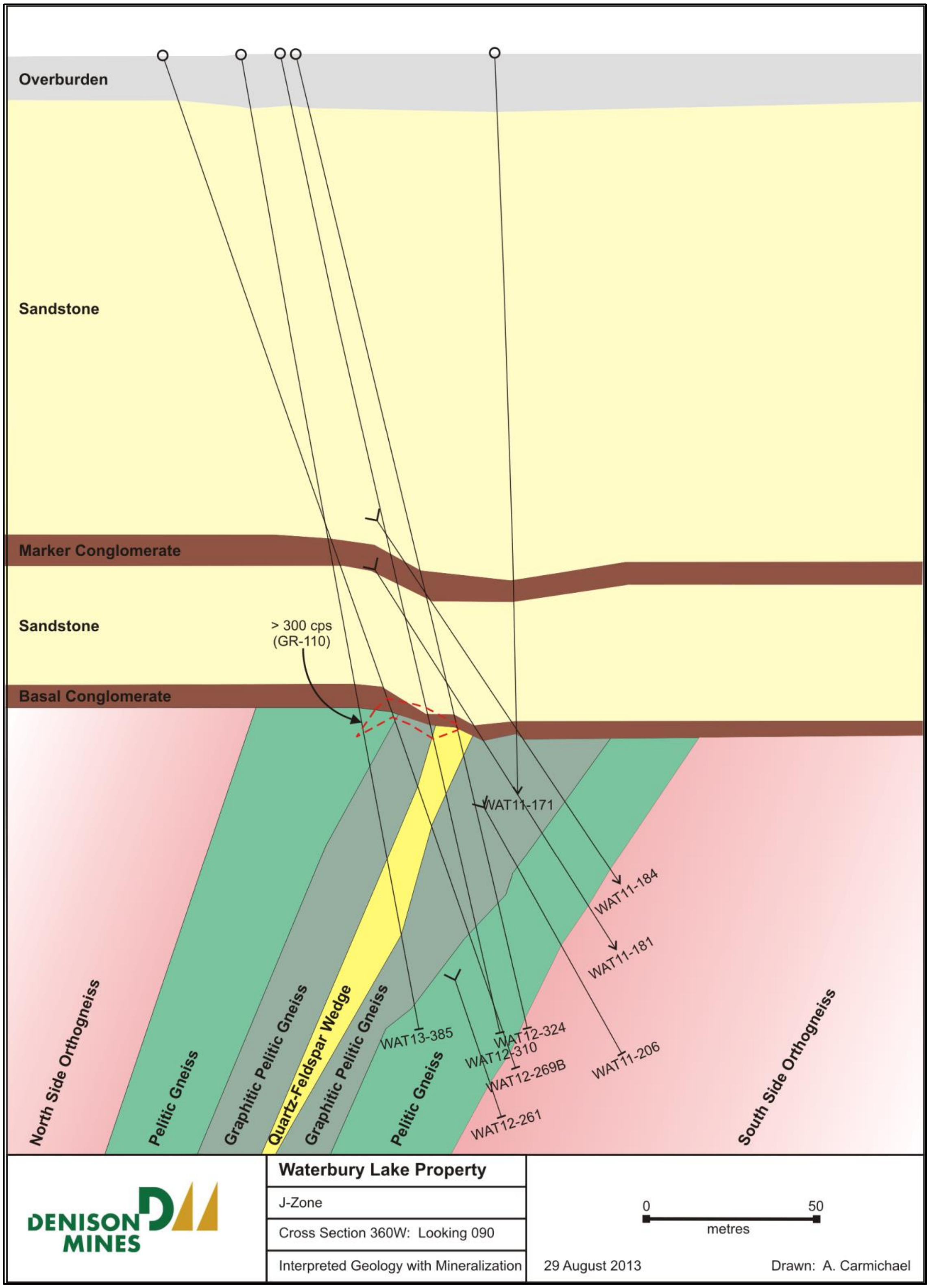


Figure 11 Cross section view through the J Zone (looking east) showing the interpreted geology and location of mineralization on line 360W. See figure 9 for location of line 360W.



7.3.2 Macroscopic Features

Several different styles of uranium mineralization are evident in drill intersections at Waterbury. Occasionally graphitic, black pyrite bearing and intensely clay altered greasy fault zones are present in the lower sandstone with elevated radioactivity several times that of background. These are interpreted as originating from stacked steeply northwest dipping graphitic fault zones present throughout the metasedimentary corridor.

High-grade uranium mineralization is hosted in the basal conglomerate and lower sandstone as sooty to massive semi-metallic uraninite and pitchblende. The basal conglomerate is often absent in thickly mineralized zones possibly due to a topographical offset in the basement or intense quartz dissolution associated with a mineralizing fluid. Intense pervasive clay alteration associated with mineralization is texturally and mineralogically destructive and obscures the exact location of the unconformity. Along the flanks of the J Zone deposit the sandstone is occasionally chloritized black to green.

Basement hosted high-grade uranium mineralization commonly occurs as pod like black uraninite cubes in ớrottenô textured massive hematitic clay or occasionally as limonite-hematite stained fracture hosted remobilized uranium silicates (Figure 12). Alteration associated with mineralization is often texturally and mineralogically destructive but thin section analysis has determined the host rock to be typically semi-pelite, pelite and locally quartz-feldspar rich granofels, possibly psammite.

7.3.3 Microscopic Features

During the 2010 winter drill program a suite of mineralized core samples was collected from the J Zone for petrographic and scanning electron microscope (SEM) analysis. The detailed thin section descriptions and SEM results are available in MSC report number MSC10/045R. The report concluded that uranium in lower grade zones occurs as a variety of interstitial uranyl oxides, silicates, vanadates and arsenates. High-grade samples are dominated by massive to semi-massive uraninite and / or uranyl-silicate with secondary uranyl oxides occurring as rims or fracture fillings. The uranium mineralization is locally associated with lead and nickel sulphides, lead and molybdenum oxides and cobalt-nickel arsenides. Uranium mineralization is strongly associated with elevated concentrations of cobalt, boron, copper, nickel, lead, vanadium and zinc.

Figure 12 **Examples of high-grade uranium mineralization from drill hole WAT10-070B (47.6 mm NQ core).Top: Rusty iron-oxides and pervasive, intense clay alteration with black semi-massive uranium mineralization (uraninite) and bright yellow secondary uranium oxide staining (left). Bottom: 'Rotten' textured, pervasively clay altered and hematized core with black poddy uranium mineralization.**

7.3.4 J-East

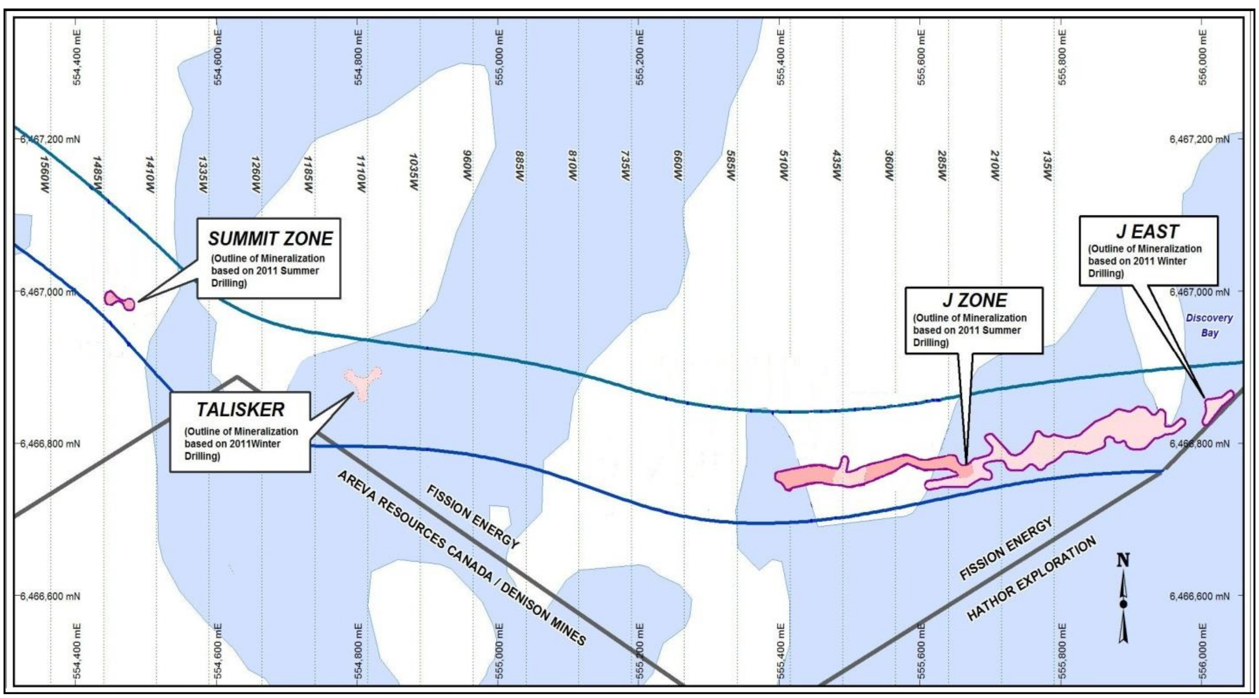
Mineralization in the J-East area (Figure 13) occurs tens of meters below the unconformity in pervasively hematite, chlorite and clay altered pelitic gneiss along the north side orthogneiss dome - metasediment corridor contact. The location with respect to the unconformity appears to be more comparable to that of the primarily basement hosted Roughrider deposit than the J Zone. Follow up drilling during the summer 2010 and winter 2011 drill programs has failed to identify significant uranium mineralization in J-East.

7.3.5 Other mineralized zones

Uranium mineralization ranging from 0.05 % U_3O_8 to over 1.43 % U_3O_8 has been intersected in exploration drill holes along the pelitic corridor in the Talisker zone (1 km west of the J Zone) and the Summit zone (1.5 km west of the J Zone), respectively (Figure 13). Drill hole WAT11-191 in the Talisker zone intersected strongly graphitic pelitic gneiss and returned 0.06 % U_3O_8 at the unconformity along with elevated pathfinder element concentrations.

Drill hole WAT10-086 (50m north-west of WAT11-191) intersected 0.5m of strongly hematite and limonite altered pelite grading over 0.10 % U_3O_8. Drill hole WAT11-153A was collared in the Summit target area during the winter 2011 drill program and targeted the unconformity 40m north of a newly defined EM conductor. The drill hole intersected 1.5m of 0.22 % U_3O_8 directly below the unconformity with another 1.0m of 0.09 % U_3O_8 further down hole hosted in graphitic metasediments similar to those seen in the J Zone. This hole was followed up during the subsequent summer program with hole WAT11-199 that intersected 13.5m of mineralization averaging 0.16 % U_3O_8.

Figure 13 Location of mineralized ore lenses within the Discovery Bay Corridor (blue lines) (from Armitage and Nowicki, 2012).



8 DEPOSIT TYPE

The following description of the Deposit Type was extracted from the 2012 Technical Report for Fission titled "Technical Report on the Waterbury Lake Uranium Project Including Resource Estimate on the J Zone Uranium Deposit, Waterbury Lake Property, Athabasca Basin, Northern Saskatchewan", dated February 29th, 2012 and Revised on May 29th, 2012 by Armitage and Nowicki, which is filed on SEDAR under Fission's profile. There has been no change to the deposit type being explored for on the Property.

Proterozoic unconformity-associated uranium deposits host over 33% of the world's known uranium resources. The Athabasca Basin of Saskatchewan, Canada, is renowned for its high-grade deposits and currently supplies approximately 20 % of the world's uranium. Other notable unconformity associated uranium districts occur in the Thelon Basin (Nunavut, Canada) and the Alligator River District (Northern Territory, Australia). These unconformity associated deposits differ from the Athabasca Basin deposits in that they contain lower grade ore and are entirely basement hosted. The average grade of 30 deposits in the Athabasca Basin is 1.97 % U_3O_8, four times the average grade of the Australian unconformity associated uranium deposits (Jefferson et al., 2007).

Unconformity associated uranium deposits in the Athabasca Basin are characterized by elongate, pod shaped uranium mineralization at the unconformity between the Proterozoic fluvial, conglomeratic sedimentary basin and favourable graphitic metasedimentary basement rocks. The sedimentary strata are relatively flat lying and unmetamorphosed while the basement rocks often show signs of multiple stages of deformation. A clay rich paleoregolith occurs at the surface of the metamorphic rocks. The paleoweathering profile commonly consists of a red hematite rich zone which grades with depth into a greenish chloritic zone and then into fresh rock which can be hydrothermally altered. Later diagenetic bleaching is often observed directly below the unconformity within mineralization districts (Jefferson et al., 2007). In zones of intense uranium mineralization, the extreme alteration completely overprints the regional paleoweathering profile. The basement lithologies are dominated by Archean granitic gneiss and Paleoproterozoic metasedimentary gneiss. The latter is the common basement host of uranium deposits.

Two end member models of unconformity associated ore deposits have been identified; mono-metallic and poly-metallic (Figure 14). Mono-metallic deposits occur dominantly as basement hosted uranium mineralization within fault zones or veins below chloritic or silicified Athabasca sediments. The MacArthur River deposit is a typical example of a mono-metallic uranium deposit. Poly-metallic deposits dominantly straddle the unconformity as subhorizontal clay bounded lenses below quartz corroded sediments. Several poly-metallic deposits occur within 20 km of the Waterbury Lake project including Midwest Lake (Denison/Areva) and Cigar Lake (Cameco).

The uranium mineralization of poly-metallic deposits is commonly associated with variable amounts of nickel, gold, cobalt and arsenic. High-grade uranium ore (> 1.00 % U_3O_8) in poly-metallic deposits is mantled by a medium to low grade zone (< 1.00 % U_3O_8). These deposits have mineralized roots extending downwards into major graphitic basement structures and upwards into the sandstone column. Typically poly-metallic deposits are associated with plume shaped halos of illite-kaolinite-chlorite alteration in the sediments. This surrounds the major ore controlling structures and can extend for several hundred metres above the deposit (Figure 15). Poly-metallic deposits are hosted by sandstone and conglomerate and occur within 25 to 50m of the unconformity (Jefferson et al., 2007). The Waterbury Lake project J Zone uranium deposit as it is currently understood shares many similar characteristics with the poly-metallic deposit model as detailed below.

The Roughrider uranium deposit directly adjacent to the J Zone is dominantly basement hosted but is known to contain significant amounts of additional metals including copper, nickel and zinc.

Figure 14 **Cartoon showing the end member models of mono-metallic (left, e.g. McArthur River) and poly-metallic (right, e.g. Midwest) unconformity associated uranium deposits (from Jefferson et al., 2007).**

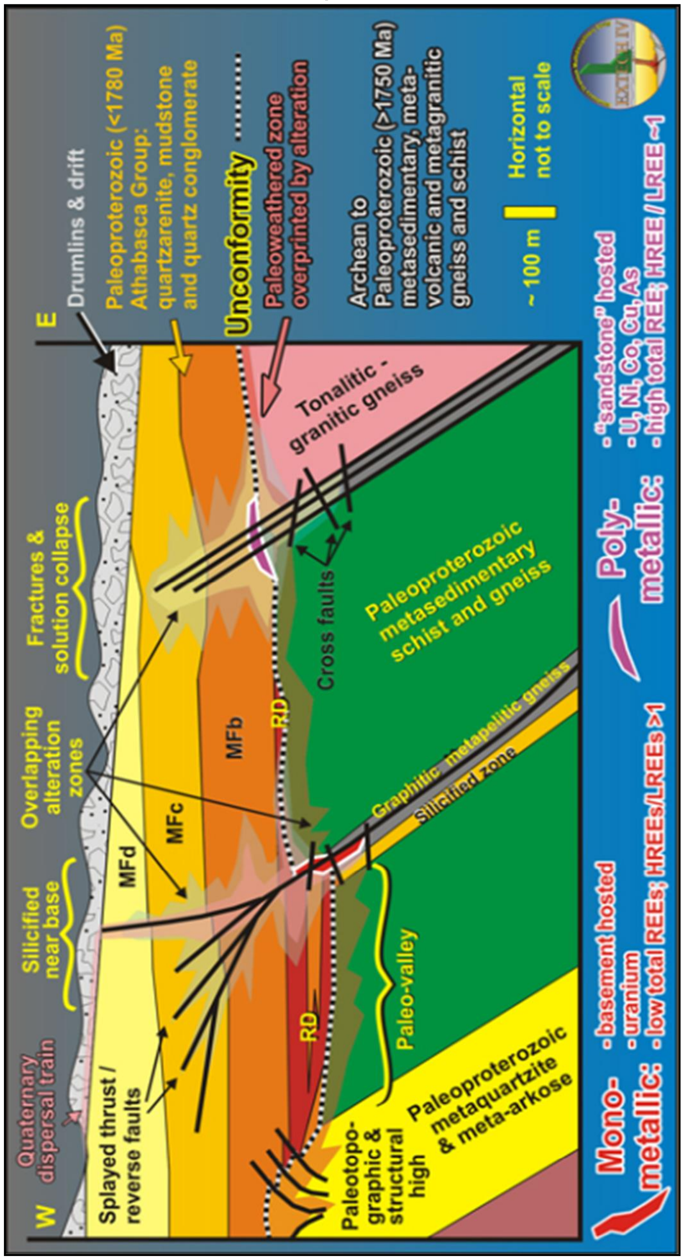
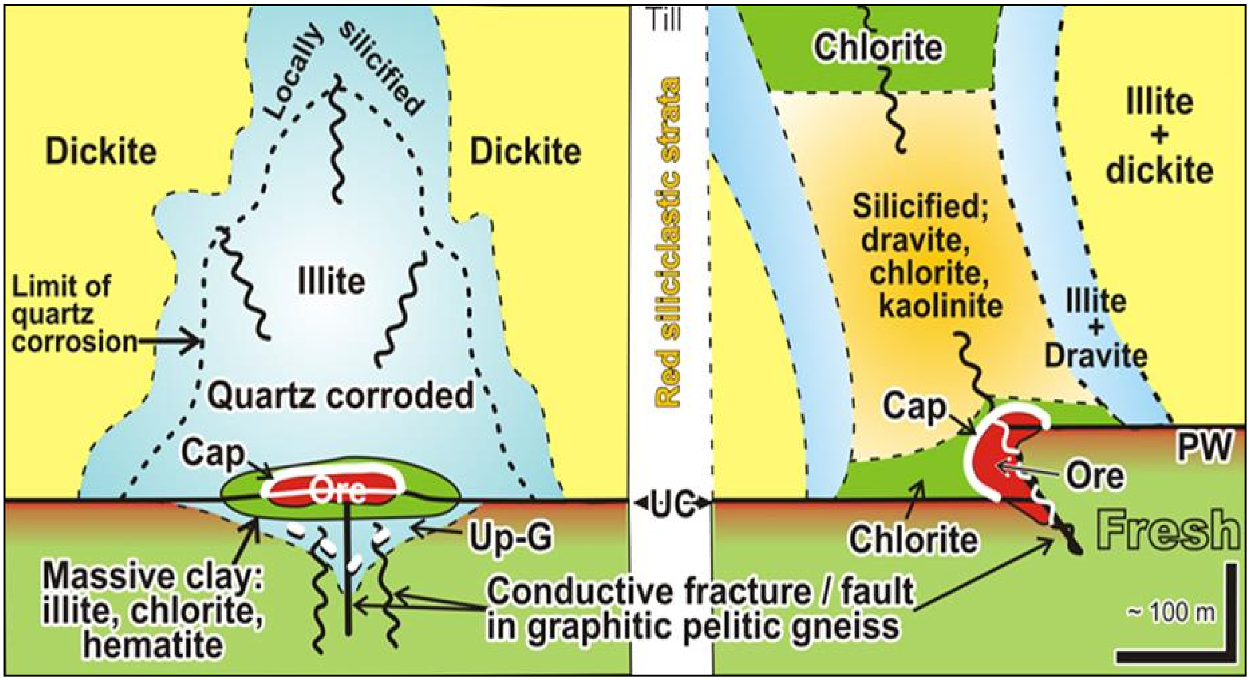


Figure 15 End member diagram showing the different alteration halos and clay mineralogy associated with quartz corroded and silicified unconformity hosted uranium deposits. Left: quartz corrosion (dissolution) and illite alteration overprinting regional dickite alteration as seen at Midwest and Cigar Lake. Right: silicification and chlorite-kaolinite rich halos overprinting regional illite and dickite alteration as seen at McArthur River (from Jefferson et al., 2007).



9 EXPLORATION

Exploration conducted on the Property prior to 2013 is described in the 2012 technical report for Fission titled "Technical Report on the Waterbury Lake Uranium Project Including Resource Estimate on the J Zone Uranium Deposit, Waterbury Lake Property, Athabasca Basin, Northern Saskatchewan", dated February 29th, 2012 and Revised on May 29th, 2012 by Armitage and Nowicki, and the 2013 technical report for Fission titled "Technical Report on the Updated Resource Estimate on the J Zone Uranium Deposit, Waterbury Lake Property" located in the Athabasca Basin, Northern Saskatchewan, dated January 18th, 2013 both of which are filed on SEDAR under Fission's profile.

Recent exploration on the property is restricted to diamond drilling. Drilling completed on the Property by Fission in 2013 is described in Section 10 below. Denison has just recently begun a small geophysical and drilling program on the Property but will not be included in this Report.

10 DRILLING

The following is a description of drilling completed on the Property during the winter 2013 drill program. To the Authors knowledge, there are no known drilling, sampling, or recovery factors that could materially impact the accuracy and reliability of the results.

10.1 2013 Drill Program

Fission completed drilling on the Property (Figure 9), including step-out and infill drill holes on the J-Zone during a 2013 winter (08 January to 17 March, 2013) drill program. A total of 68 drill holes were completed totalling 21,012.9 meters (total metres include failed holes). Mineralization was found in 35 holes or 51% of the holes in the program. All holes were targeted to further delineate and expand the mineralized area of the J Zone.

10.2 Drilling Contractors

Bryson Drilling of Archerwill, Saskatchewan was contracted for drilling. Bryson utilizes Zinex Mining Corp A5 diamond drill rigs which have a maximum depth capacity of approximately 800m drilling NQ sized core. All holes drilled on the Waterbury Lake project during these programs recovered standard 47.6 mm NQ core for the entire length.

10.3 Drill Hole Spotting

All drill holes were spotted using a high accuracy Trimble GeoX GPS system. The GeoX GPS provides easting and northing coordinates with accuracy of up to ± 50 cm without post processing or the use of a base station. Each hole was surveyed again at the exact collar location once the drill was moved from the setup in order to provide a more precise coordinate. All drill hole locations were planned and recorded using the UTM NAD 83 coordinate system.

Drill holes were named in sequence starting with the project name WAT (Waterbury), then the year, followed by sequential drill hole number. For example, WAT13-340 was the three hundred and fortieth hole drilled on the Property (post 2006), and was drilled in 2013. Holes requiring a restart were assigned letters after the drill hole number to indicate the number of restarts, with A being one restart, B being two and so on. Hole restarts are a function of either a. exceeded desired maximum deviation tolerances (measured from down hole orientation surveys) or b. abandoning due to set-up or rock conditions encountered.

10.4 Down Hole Orientation Surveys

For all drill programs contracted to Bryson Drilling, a Reflex EZ-Shot orientation tool was used for down hole surveying in single shot mode. The EZ-Shot has a typical error of ± 0.5 degrees for azimuth readings and ± 0.2 degrees for dip readings. Holes were surveyed initially at roughly 20m depth using the Reflex EZ-Shot to verify that the azimuth and dip were correct before proceeding and then a reading was taken every 50m from surface using the same EZ-Shot tool. Because the EZ-Shot azimuth accuracy is affected by any nearby steel or magnetic rock, six meters of steel drill rods were pulled back for each reading to allow the tool to hang into the open bore hole. Appropriate declination corrections provided by the Natural Resources Canada website were then applied to the raw EZ-Shot azimuths to give true azimuths.

A Reflex EZ-Trac tool was also used. The EZ-Trac is essentially the same tool as EZ-Shot but allows for multiple consecutive readings to be wirelessly recorded with a handheld device. The majority of the completed drill holes were surveyed using the EZ-Trac as the rods were being removed with one reading taken every 9 meters. The EZ-Trac has a typical error of ± 0.35 degrees for azimuth readings and ± 0.25 degrees for dip readings.

10.5 Geological Logging

New logging sheets and protocols came into effect during the winter 2010 program and were carried forward into the 2012 and 2013 drill programs. Individual logging sheets specifically designed for capturing lithology, alteration, structure and geotechnical data are now used instead of a single comprehensive sheet. All drill cores have been logged by a geologist onsite at the Fission core camp.

10.6 Geotechnical Logging

Like the geological logging protocols, geotechnical protocols used on the Waterbury Lake project have changed several times. The geotechnical logging protocol was updated for the 2010 drill programs and onward. Individual sheets were used to record core recovery per run, fractures per meter and the number of core breaks per run where core could not be pieced back together, as well as the depths of core breaks. The updated logging sheets were designed to allow for importing of the data into computer modelling and database software.

10.7 Geophysical Logging

10.7.1 Hand-held scintillometer

Radioactivity from core was measured with a hand held Exploranium GR-110 total count gamma ray scintillometer or a hand held Terraplus RS-125 total count Super Gamma-Ray Scintillometer. The scintillometers read up to a maximum of 9,999 cps.

For core with background levels of radiation, the maximum reading was recorded every two meters over the entire length. In mineralized zones (above 300 cps) drill core was removed sequentially in 50cm sections and measured away from the core shack to ensure high-grade material did not influence readings from lower grade material. Scintillometer readings from mineralized core were recorded as maximum and minimum values over each 50cm core length and were recorded on the core boxes as well as the geotechnical logging sheets. Intervals of core that gave scintillometer readings of over 9,999 cps (off scale) were separated out as detailed high-grade zones for the full extent of the off-scale radioactive zone. Scintillometer readings were recorded in the technical logging sheet for each drill hole.

10.7.2 Down hole radiometric surveys

Drill holes were surveyed with a 2GHF-1000 triple gamma probe instead of the 2PGA-1000 (used during previous drill programs prior to 2010). Additional logging equipment including the Mount Sopris winch(s), Matrix logging system and computer software remained the same. The 2GHF-1000 specialized probe uses two ZP1320 Geiger Mueller tubes which have approximately 1 % the count rate of a NaI crystal. This allows for accurate measurements in high-grade ore that would otherwise saturate the NaI crystal. The 2GHF-1000 gamma probe has an accuracy of ± 0.5 % of full scale and a range from 1-100,000 cps. All surveying was performed while the drill rods were still in the hole. No calibration of down hole gamma probes to allow for the conversion of cps to estimated U_3O_8 content has been undertaken at the Waterbury Lake property to date.

Before the winter 2012 drill program Alpha Nuclear was contracted by Fission to calibrate a 2PGA-1000 single gamma and 2GHF-1000 triple gamma probe at the SRC test pit calibration facility in Saskatoon, Saskatchewan. The calibration facility is comprised of four test pits, three of which contain 1.4 - 1.6m thick intervals of uranium mineralisation grading 0.06, 0.30 and 1.35 % U_3O_8 and one pit containing 21 cm of 4.15 % U_3O_8. The maximum cps recorded in each test pit was used to develop a calibration curve for the probe allowing for the conversion from cps to eU_3O_8 grade. The eU_3O_8 grades were calculated for all holes probed but the results were kept internal to Fission and only used to give a rough indication of the intensity of uranium mineralization.

10.8 Drill Core Photography

Core photos were taken after the geological logging, geotechnical logging and sample mark-up were completed. Sets of three core boxes were placed on a stand in order from top to bottom and photographed together. Details of the core included in each photo (drill hole number, from ï to depths and box numbers) were clearly marked on a whiteboard. The core was wet before being photographed as this generally allows subtle geological features or colours to be more easily discerned.

10.9 Drill Core Storage and Drill Hole Closure

Once core photos and sample splitting were completed, metal tags inscribed with the drill hole number, box number and from / to meterage were stapled on the front of each core box. Typically the last 50 boxes of each hole were placed into core racks to allow for easy access while the remaining boxes were cross stacked on levelled ground.

Upon completion, each drill hole was cemented at 30m depth to the top of bedrock regardless of whether or not it was mineralized. Drill holes with readings greater than 13,000 cps on the NaI gamma probe counter were cemented completely from 10m below the mineralized zone to 10m above the mineralized zone. All drill holes had the casing removed once drilling was complete.

10.10 2013 Drilling Results

A total of 68 drill holes and 11 restarts were completed during the 2013 winter drill program (Figure 9), which totaled 21,012.9 meters. The location and orientation of the 2013 drill holes used to estimate the 2013 mineral resource are included with the list of drill holes presented in Appendix 1.

The 2013 program focused on the delineation and growth of the J Zone. Drilling was segregated into areas A, B and C (J Zone East, Central and West) within the J Zone and the primary objective was expansion of the zone both west and north of the known mineralized area.

The following is a description of the results from the winter drill program. Results include radioactive readings. Natural gamma radiation in drill core that is reported were measured in counts per second (cps) using a hand held Exploranium GR-110G total count gamma-ray scintillometer. The Author cautions that scintillometer readings are not directly or uniformly related to uranium grades of the rock sample measured, and should be used only as a preliminary indication of the presence of radioactive materials. The degree of radioactivity within the mineralized intervals is highly variable and associated with visible pitchblende mineralization. All intersections are down-hole, core interval measurements and true thickness is yet to be determined.

J Zone Area A drill hole highlights:

Area A is the eastern most section of the J Zone located between lines L120E and L210W. A total of 20 holes were drilled in this region of which 4 were mineralized (Table X), intersecting weak to off-scale radioactivity. Drilling in Area A focused on testing for the extension of basement hosted mineralization adjacent to Rio Tintoõs Roughrider deposit and further delineating the northern boundary of the J Zone for unconformity associated mineralization.

- WAT13-359 (line 070E) was drilled along the eastern boundary of the J Zone and intersected a 4.0m wide zone (209.5 ï 213.5m) of weak to off-scale basement hosted radioactivity, including a 0.1m interval of off-scale (>9999 cps) radioactivity. Two subordinate zones of weak to moderate basement hosted radioactivity occurred to a depth of 226.5m. Hole WAT13-359 intersected 4.0m (209.5 - 213.5m) grading 0.443% U_3O_8 including 0.5m of 2.14% U_3O_8.

- WAT13-345 (line 150W) intersected a 12.0m wide zone (184.5 ï 196.5m) of weak to moderate uranium mineralization straddling the unconformity (190.0m). This intersection extends the J Zone boundary approximately 10m to the north on line 150W. Hole WAT13-345 intersected 7.5m (185.5m - 193m) grading 0.108% U_3O_8.

- WAT13-373 (line 120W) intersected a 3.0m interval of weak to moderately radioactive basement mineralization 45m to the north of the current delineated boundary. This intersection represents the northernmost mineralized intersection of the J Zone. Hole WAT13-373 intersected 2.5m (213.5m - 216m) grading 0.088% U_3O_8.

J Zone Area B drill hole highlights:

Area B is the central section of the J Zone located between lines 210W and 435W. A total of 18 holes were drilled in this region of which 11 were mineralized (Table X). Drilling in Area B focused on drill testing open areas to the north and south of the J Zone Deposit delineated boundary.

- WAT13-338 (line 405W) intersected a 5.0m wide interval (199.5 ï 204.5m) of weak to strongly radioactive unconformity associated mineralization, including a 0.1m wide interval of off-scale (>9999 cps) radioactivity. Hole WAT13-338 intersected 1.5m (203.5m - 204.5m) grading 0.859% U_3O_8.

- WAT13-352A (line 250W) intersected a 19.0m wide zone (204.5 ï 223.5m) of weak to moderate radioactivity straddling the unconformity (206.0m). This intersection fills in a gap to the south on line 255W. Hole WAT13-352A intersected 15m (204m - 219m) grading 0.174% U_3O_8.

- WAT13-398 (line 260W) intersected a 15.0m wide zone (195.5 ï 210.5m) of weak to moderate radioactivity straddling the unconformity (197.0m). This intersection extends the J Zone boundary to the north on line 255W. Hole WAT13-398 intersected 10m (198m - 208m) grading 0.132% U_3O_8.

J Zone Area C drill hole highlights:

Area C is the western most section of the J Zone and is located west of (and including) line 435W. The J Zone had previously been delineated westward to line 540W (hole WAT12-289). Winter 2013 drilling in Area C was designed to test for additional associated mineralization between line 435W and line 540W as well as test westward to line 660W along trend to assess the potential for mineralization beyond the currently defined western boundary.

A total of 30 holes were drilled in Area C. Fifteen holes were mineralized (Table X) including 2 westward step-out drill holes (WAT13-380 and 383) which extended the J Zone mineralized boundary an additional 20m west to line 560W (WAT13-380). Several holes in Area C intersected wide zones of mineralization, confirming the potential of Area C as a significant part of the J Zone Deposit.

Nine holes between lines 495W to 510W (WAT13-346, 350, 354, 357A, 361A, 364, 368, 371 and 374) were drilled with a collar azimuth of approximately 275°, in order to optimally intersect mineralization where a complex north-south fault was interpreted to off-set mineralization. Several of these holes intersected significant widths of mineralization higher up in the sandstone above the unconformity than previous proximal north-south oriented holes had encountered.

- WAT13-346 (line 500W) intersected a 22.5m wide interval (196.0 ï 218.5m) of weak to strong radioactive mineralization, including a 0.1m interval of off-scale (>9999 cps) radioactivity, that straddles the unconformity (209.5m). Hole WAT13-346 intersected 7.0m (197 - 204m) grading 0.599% U_3O_8 and 5.0m (206.5 ï 211.5m) grading 0.178% U_3O_8.

- WAT13-368 (line 500W) intersected an 18.0m wide interval (188.5 ï 206.5m) of weak to strong radioactive mineralization, including a 0.1m interval of off-scale (>9999 cps) radioactivity, occurring dominantly in the sandstone directly above the unconformity (203.9m). This intersection is approximately 10m north of the currently defined boundary of the J Zone. Hole WAT13-368 intersected 17m (189.0 ï 206m) grading 0.360% U_3O_8 including 0.5m (203.5 - 204m) grading 2.0% U_3O_8.

- WAT13-366 (line 490W) intersected a 12.5m wide interval (187.0 ï 199.5m) of weak to strong radioactive mineralization, including a 0.2m interval of off-scale (>9999 cps) radioactivity, primarily hosted in the lower sandstone directly above the unconformity (198.4m). Hole WAT13-366 intersected 10.5m (189 ï 199.5m) grading 0.640% U_3O_8 including 4.0m (190.5 ï 194.5m) grading 1.252% U_3O_8.

- WAT13-377 (line 525W) intersected a 12.0m wide interval (218.5 ï 230.5m) of weak to strong radioactive basement mineralization, including several narrow intervals totaling 0.31m of off-scale (>9999 cps) radioactivity. Hole WAT13-377 intersected 17m (219.0 ï 236.0m) grading 0.374% U_3O_8 including 3.0m (219.5 ï 222.5m) grading 1.252% U_3O_8.

Table 2 J Zone Winter 2013 Assay Results (>0.05% U_3O_8 cut-off).

AREA	Hole ID	Grid Line	From (m)	To (m)	Interval (m)	U_3O_8 (%)	Unconformity Depth (m)
A	WAT13-343	135W	No significant mineralization				210.3
A	WAT13-345	150W	185.5	193.0	7.5	0.108	190.0
			196.0	196.5	0.5	0.077	
A	WAT13-348	105E	302.0	306.0	4.0	0.080	197.1
A	WAT13-351	090E	No significant mineralization				199.9
A	WAT13-353A	105E	No significant mineralization				198.4
A	WAT13-356	075E	No significant mineralization				200.9
A	WAT13-359	070E	209.5	213.5	4.0	0.443	203.2
			219.5	220.0	0.5	0.060	
			225.0	226.0	1.0	0.097	
A	WAT13-362	060E	No significant mineralization				204.1
A	WAT13-365	045E	No significant mineralization				199.7
A	WAT13-367	045E	No significant mineralization				209.7
A	WAT13-370	035E	No significant mineralization				213.9
A	WAT13-372	025E	No significant mineralization				209.0
A	WAT13-373	120W	213.5	216.0	2.5	0.088	203.9
A	WAT13-375	105W	No significant mineralization				201.5
A	WAT13-376	0	No significant mineralization				203.5
A	WAT13-379	085W	No significant mineralization				198.9
A	WAT13-381	080W	No significant mineralization				208.5
A	WAT13-384	105W	No significant mineralization				198.8
A	WAT13-387	150W	No significant mineralization				195.3
A	WAT13-389B	175W	No significant mineralization				194.0
B	WAT13-331	275W	229.5	231.5	2.0	0.157	206.9
B	WAT13-333	375W	213.5	214.0	0.5	0.074	209.9
B	WAT13-336	390W	No significant mineralization				215.0
B	WAT13-338	405W	199.5	200.0	0.5	0.238	203.5
			203.0	204.5	1.5	0.859	
B	WAT13-347A	225W	206.5	210.5	4.0	0.051	197.1
B	WAT13-349A	235W	No significant mineralization				197.3
B	WAT13-352A	250W	204.0	219.0	15.0	0.174	206.0
			221.5	223.5	2.0	0.069	
B	WAT13-355	235W	226.0	232.5	6.5	0.111	206.0
B	WAT13-382	380W	No significant mineralization				201.0

AREA	Hole ID	Grid Line	From (m)	To (m)	Interval (m)	U_3O_8 (%)	Unconformity Depth (m)
B	WAT13-385	360W	No significant mineralization				20.7
B	WAT13-388	315W	No significant mineralization				200.0
B	WAT13-390	435W	No significant mineralization				202.2
B	WAT13-391	300W	No significant mineralization				205.9
B	WAT13-393	255W	No significant mineralization				199.2
B	WAT13-394	265W	No significant mineralization				197.4
B	WAT13-395	245W	No significant mineralization				203.0
B	WAT13-397	280W	224.0	226.5	2.5	0.087	203.5
B	WAT13-398	260W	198.0	208.0	10.0	0.132	197.0
C	WAT13-332	605W	No significant mineralization				210.1
C	WAT13-334	615W	No significant mineralization				206.3
C	WAT13-335	615W	No significant mineralization				210.2
C	WAT13-337	660W	No significant mineralization				217.9
C	WAT13-339	445W	No significant mineralization				211.0
C	WAT13-340A	660W	No significant mineralization				215.8
C	WAT13-341	450W	205.0	215.5	10.5	0.152	204.9
C	WAT13-342	660W	No significant mineralization				200.3
C	WAT13-344A	615W	No significant mineralization				209.1
C	WAT13-346	500W	197.0	204.0	7.0	0.599	209.5
			206.5	211.5	5.0	0.178	
			225.0	225.5	0.5	0.155	
C	WAT13-350	500W	202.5	207.5	5.0	0.245	207.1
			211.0	211.5	0.5	0.139	
			215.0	224.5	9.5	0.239	
C	WAT13-354	495W	194.5	203.0	8.5	0.700	206.1
C	WAT13-357A	510W	No significant mineralization				207.2
C	WAT13-358	470W	198.5	203.0	4.5	0.079	203.0
C	WAT13-360	465W	190.0	201.0	11.0	0.147	198.0
C	WAT13-361A	505W	215.5	216.5	1.0	0.142	210.0
C	WAT13-363	480W	No significant mineralization				220.9
C	WAT13-364	505W	198.0	198.5	0.5	0.170	206.8
			201.0	203.0	2.0	0.088	
			206.5	209.5	3.0	0.241	
C	WAT13-366	490W	189.0	199.5	10.5	0.640	198.4
			208.0	208.5	0.5	0.095	
C	WAT13-368	500W	189.0	206.0	17.0	0.360	203.9

AREA	Hole ID	Grid Line	From (m)	To (m)	Interval (m)	U_3O_8 (%)	Unconformity Depth (m)
C	WAT13-369	495W	191.0	192.5	1.5	0.335	201.8
			195.5	202.5	7.0	0.364	
C	WAT13-371	505W	194.5	197.5	3.0	0.078	204.1
C	WAT13-374	490W	No significant mineralization				203.0
C	WAT13-377	525W	219.0	236.0	17.0	0.374	212.0
			239.0	239.5	0.5	0.094	
C	WAT13-378A	580W	No significant mineralization				205.7
C	WAT13-380	560W	246.5	248.0	1.5	0.047	220.3
C	WAT13-383	540W	214.0	220.0	6.0	0.304	207.5
C	WAT13-386	570W	No significant mineralization				206.8
C	WAT13-392	465W	No significant mineralization				206.4
C	WAT13-396	490W	No significant mineralization				197.2

10.11 Drill Core Sampling for Geochemistry and U_3O_8 Assay.

For the 2013 drill program, 10m composite samples were collected continuously throughout each intersection of the Athabasca sediments. Small subsamples were taken from the top of each row of core in each core box and combined over 10m intervals to make up each composite sample. In zones of strong to intense alteration, the composite sample intervals were shortened to 5m to provide tighter resolution. The final composite sample was ended at the last recognizable Athabasca material to ensure there was no chance of including basement rock in the sample. The proportion of shale and conglomerate and the alteration style and intensity were recorded for each composite sample.

Representative sampling of the basement was in the form of 50cm samples of split (half) core taken every 10m throughout each intersection, starting immediately below the last recognizable Athabasca sediments. Where necessary, the sample positions were adjusted to ensure there were no overlaps with lithological boundaries. Representative samples were not taken where the interval in question was covered by mineralization, fault, pegmatite or alteration samples as described below. The rock type, alteration type and alteration intensity was recorded for each representative basement sample.

Significant faults were sampled as 50cm split core intervals directly over the fault and/or any associated intense alteration. Zones of strong to intense alteration that were not already covered by mineralization (see below) or fault samples were sampled as 50cm split core intervals. Basement alteration samples were collected from the beginning of the alteration zone and their spacing varied with the width of the alteration zone as follows: 1m spacing for alteration zones Ò5m long; 2m spacing for alteration zones between 5 and 30m long; 5m spacing for alteration zones > 30m long. Lithological contacts were avoided by shifting the sample positions slightly and when necessary reducing the sample interval width as low as 30cm. Alteration zones less than 50cm long that were not covered by mineralization or fault samples were not sampled. Representative samples of pegmatites were taken in zones not already covered by any of the other sample types.

10.12 Mineralized zones

Mineralized zones in drill core were identified using a hand held Exploranium GR-110 total count gamma ray scintillometer. Drill core that gave readings of greater than or equal to 300 cps was considered mineralized and was therefore sampled for uranium assay (as well as multi-element geochemistry). Sampling protocol applied through mineralized zones was the same in both the Athabasca sediments and basement rocks. In zones of elevated radioactivity greater than 300 cps, continuous 50 cm samples were taken over the entire interval. A series of continuous 50cm shoulder samples of non-radioactive rock were also taken above and below each mineralized zone. Typically four 50 cm shoulder samples were taken on each side of the mineralized zone; however in zones of particularly weak mineralization (> 300 cps, < 500 cps) the number of shoulder samples taken was typically reduced.

The mineralized rock of the J Zone is altered sandstone and basement gneisses. Locally, the core can be broken and blocky, but recovery was generally good averaging approximately 90% overall recovery. Core recovery was recorded for all drill holes in 3m intervals. Intervals where core loss was greater than 50% over 3m runs were rare forming approximately 2% of total assay database.

The split sample material sent for assay was regarded to accurately represent the entire core and should be free of bias because of the relatively competent nature of the core recovered.

Due to the high rate of core recovery within the mineralized zone, chemical assays are considered reliable. In rare cases, some mineralization may have washed out during the drilling process. In these instances, close correlation of the down hole gamma probe and the observed chemical analyses can be undertaken. In such instances, a more accurate measurement of the pitchblende content should be determined by the gamma logging probe which was run in every hole.

10.13 Drill core sampling for PIMA

Samples for PIMA clay analysis were taken at regular intervals throughout the entire length of each drill core. A small chip was cut from the first piece of core in each box and placed into a sealable plastic sample bag with the appropriate sequential sample number. One PIMA sample per core box roughly corresponds to one sample every 4.5m.

10.14 Drill core sampling for bulk density

For the majority of drill holes designed to test and delineate the J Zone, bulk density samples were taken at 40m intervals throughout the entire length of the Athabasca sediments in each drill core. Approximately 10 cm of core was split (halved) and placed into a sequentially numbered sample bag and then submitted for bulk density measurements.

Bulk density samples were taken at 20m intervals throughout the basement intersection in each drill core. Because the bulk density samples in the basement occurred within the same depth intervals as the representative, fault, pegmatite or alteration samples, a 10 cm subsample of core was split and placed in a secondary sample bag inside the primary sample bag with the rest of the sample. The subsample was removed first at the laboratory and measured for bulk density, after which it was returned to the primary sample bag for geochemical analysis along with the remainder of the core sample.

Bulk density samples were taken at 2.5m intervals through any mineralized zones giving scintillometer readings of greater than or equal to 300 cps. The sampling procedure was the same as for regular basement bulk density samples, whereby a 10 cm subsample was placed into a smaller secondary bag inside the larger primary sample bag and returned to the primary bag for analysis once the bulk density measurement was complete.

11 SAMPLE PREPARATION, ANALYSES AND SECURITY

Sample preparation, analyses and security for the 2013 drilling is presented below. Sample preparation, analyses and security for work prior to the 2013 drilling is presented in the Technical Report for Fission titled ñTechnical Report on the Waterbury Lake Uranium Project Including Resource Estimate on the J Zone Uranium Deposit, Waterbury Lake Property, Athabasca Basin, Northern Saskatchewanò, dated February 29th, 2012 and Revised on May 29th, 2012 by Armitage and Nowicki, and the 2013 technical report for Fission titled ñTechnical Report on the Updated Resource Estimate on the J Zone Uranium Deposit, Waterbury Lake Propertyò located in the Athabasca Basin, Northern Saskatchewan, dated January 18th, 2013 both of which are filed on SEDAR under Fissionôs profile.

There were no changes to the sample preparation, analyses and security for drilling completed on the Property by Fission in 2013. It is in the opinion of the Author that adequate sample preparation, analysis and security for the Property were implemented.

11.1 Sample Preparation

The field program is supervised on-site by an experienced geologist with the role of Project Manager. The Project Manager oversees all quality control aspects from logging, to sampling to shipment of the samples. Drill core was split once geological logging, sample mark up and photographing were completed. All drill core samples were marked out and split at the Fission splitting shack by Fission employees, put into 5-gallon sample pails and sealed and transported to Points North, Saskatchewan only prior to shipment. The samples were then transported directly to SRC Geoanalytical Laboratories (ñSRCò) located in Saskatoon Saskatchewan by Marsh Expediting. Samples were prepared for analysis by SRC upon arrival. Beyond the marking, splitting and bagging conducted at the project site, Fission employees were not involved in sample preparation. No special security measures are enforced during the transport of core samples apart from those set out by Transport Canada regarding the transport of dangerous goods. Mineralized pulp material sent back to the Waterbury Lake Project from SRC Laboratories that is used as reference material follows a strict chain of custody.

Sample data were recorded in typical three tag sample booklets provided by Alltech Mining Solutions. One tag was stapled into the core box at the start of the appropriate sample interval, one tag was placed into the sample bag and the final tag was retained in the sample booklet for future reference. For each sample, the date, drill hole number, project name and sample interval depths were noted in the sample booklet. The data were transcribed to excel spread sheet and stored on the Fission data server. Sample summary files were checked for accuracy against the original sample booklets after the completion of each drill program. The digital sample files also contain alteration and lithology information.

All geochemical, assay and bulk density samples were split using a manual core splitter over the intervals noted in the sample booklet. Half of the core was placed in a plastic sample bag with the sample tag and taped closed with fibre tape. The other half of the core was returned to the core box in its original orientation for future reference. After the completion of each sample, the core splitter, catchment trays and table were cleaned of any dust or rock debris to avoid contamination. Samples were placed in sequentially numbered 5 gallon plastic pails. Higher grade samples were generally packed into the centre of each pail and surrounded by lower grade or unmineralized core in order to shield the radioactivity emitted.

All drill core samples were evenly and symmetrically split in half in order to try and obtain the most representative sample possible. Mineralized core samples which occur in drill runs with less than 80% core recovery are flagged for review prior to the resource estimation process. Core photos of the flagged samples are examined and individual samples showing a significant amount of core loss within the interval are removed from the resource estimate in order to avoid including samples which may have assay grades artificially increased through the removal of lower-grade matrix material. Recovery through the mineralized zone is generally good however and assay samples are assumed to adequately represent in situ uranium content.

All geochemical, assay and bulk density core samples were submitted to SRC. Samples are first dried and then sorted according to matrix (sandstone / basement) and then radioactivity level. Red line and ‘1 dot’ samples are sent to the geoanalytical laboratory for processing while samples ‘2 dot’ or higher (> 2,000 cps) are sent to a secure radioactive sample facility for preparation.

SRC is licensed by the Canadian Nuclear Safety Commission (CNSC) to safely receive process and archive radioactive samples. The facility is ISO/IEC 17025:2005 accredited by the Standards Council of Canada. Core sample residues are retained at the SRC sample storage facility after being analysed. Samples taken for short wave infrared spectroscopy” (SWIR) analysis using a Portable Infrared Mineral Analyser (PIMA) analyzer for clay analysis were sent to Ken Wasyliuk of Northwind Resources Ltd. (Northwind) of Saskatoon, an independent geological consultant with significant SWIR analytical experience. SRC is independent of Fission.

A series of blank and reference pulp samples were included with the samples from each drill hole for ICP-OES and uranium assay analysis. Duplicate samples of Athabasca, mineralized and basement rocks were also submitted as part of the project’s quality assurance / quality control (QA/QC) program (see Section 12.2 below). Results obtained for the QA/QC samples are compared with the original sample results to monitor data quality (Section 12.3).

11.2 Drill Core Geochemistry Analysis

All geochemistry core samples have been analysed by the ICP1 package offered by SRC, which includes 62 elements determined by Inductively Coupled Plasma Optical Emission Spectroscopy (ICP-OES), as shown in Tables 5 and 6. Boron analysis and uranium by fluorimetry (partial digestion) have also been conducted on all samples.

For partial digestion analysis, rock samples are crushed to 60 % at -2mm and a 100-200 g sub sample is split out using a riffler. The sub sample is further crushed to 90 % at -106 microns using a standard puck and ring grinding mill. The sample is then transferred to a plastic snap top vial. An aliquot of pulp is digested in a mixture of HNO_3:HCl in a hot water bath for an hour before being diluted by 15 ml of deionised water. The samples are then analysed using a Perkin Elmer ICP-OES instrument (models DV4300 or DV5300). For total digestion analysis an aliquot of pulp is digested to dryness in a hot block digester system using a mixture of concentrated HF:HNO_3:$HCLO_4$. The residue is then dissolved in 15 ml of dilute HNO_3 and analysed using the same instrument(s) as above.

Samples with low concentrations of uranium (<100 ppm) identified by the partial and/or total ICP analysis are also analysed by fluorimetry. After being analysed by ICP-OES an aliquot of digested solution is pipetted into a 90 % Pt 10 % Rh dish and evaporated. A NaF/LiF pellet is placed on the dish and fused on a special propane rotary burner then cooled to room temperature. The uranium concentration of the sample is then read using a Spectrofluorimeter. Uranium by fluorimetry has a detection limit of 0.1 ppm (total) or 0.02 ppm (partial).

For boron analysis an aliquot of pulp is fused in a mixture of NaO_2/$NaCO_3$ in a muffle oven. The fused melt is dissolved in de-ionized water and analysed by ICP-OES.

11.3 Drill Core Assay Analysis

Drill core samples from mineralized zones were sent to SRC for uranium assay. The laboratory offers an ISO/IEC 17025:2005 accredited method for the determination of U_3O_8 % in geological samples. The detection limit is 0.001 % U_3O_8. Rock samples are crushed to 60 % at -2 mm and a 100-200g sub sample is split out using a riffler. The sub sample is further crushed to 90% at -106 microns using a standard puck and ring grinding mill. An aliquot of pulp is digested in a concentrated mixture of HNO_3:HCl in a hot water bath for an hour before being diluted by deionised water. Samples are then analysed by a Perkin Elmer ICP-OES instrument (models DV4300 or DV5300).

From 2009 onwards, in addition to uranium assay, mineralized zones were also assayed by SRC for gold, and during the winter 2010 drill program platinum group elements as well (Pt, Pd). Rock samples are first dried at 80°C overnight then jaw crushed to 60 % -2 mm and a 100-200 g subsample is split out using a riffler. The sub sample is pulverized to 90 % -106 microns using a puck and ring grinding mill. An aliquot of sample pulp is mixed with fire assay flux in a clay crucible and a silver inquart is added prior to fusion. The mixture is fused at 1,200°C for 90 minutes. After the mixture has fused, the slag is poured into a form which is cooled. The lead bead is recovered and chipped until only the precious metal bead remains. The bead is then parted in diluted HNO3. The precious metals are dissolved in aqua regia and then diluted for analysis by ICP-OES and / or Atomic Absorption Spectrometry (AAS). The analysis has a detection limit of 2 ppb for all three elements. SRC participates in CANMET (CCRMP/PTP-MAL) proficiency testing for elements assayed using this method.

11.4 Drill Core PIMA Analysis

Core chip samples for clay analysis were sent to Northwind, a private facility in Saskatoon, for analysis on a PIMA spectrometer using short wave infrared spectroscopy. Samples are air or oven dried prior to analysis in order to remove any excess moisture. Reflective spectra for the various clay minerals present in the sample are compared to the spectral results from Athabasca samples for which the clay mineral proportions have been determined in order to obtain a semi-quantitative clay estimate for each sample.

11.5 Drill Core Petrographic Analysis

Samples collected for petrography were sent to Vancouver Petrographics Ltd for the preparation of thin sections and polished slabs. Petrographic analysis was performed in the office of MSC using a Nikon Eclipse E400 microscope equipped with transmitted and reflected light. The results of the petrographic analysis are documented in MSC10/014R and MSC10/045R.

11.6 Drill Core Bulk Density Analysis

Drill core samples collected for bulk density measurements were sent to SRC. Samples are first weighed as they are received and then submerged in deionised water and re-weighed. The samples are then dried until a constant weight is obtained. The sample is then coated with an impermeable layer of wax and weighed again while submersed in deionized water. Weights are entered into a database and the bulk density of the core waxed and un-waxed (immersion method) is calculated and recorded. Not all density samples had both density measurements recorded. Water temperature at the time of weighing is also recorded and used in the bulk density calculation. The detection limit for bulk density measurements by this method is 0.01 g/cm3.

11.7 Down Hole Surveys

Holes were first surveyed every 50m with the Reflex EZ-Shot tool and upon completion surveyed over its entire length using a Reflex EZ-Trac (2012) effectively surveying the drill hole a second time. Records of the EZ-Shot are retained after drilling however when possible only the Gyro/EZ-Trac data are used for geological modelling. Gamma probe surveys are recorded while going down hole and up hole resulting in two survey files for each hole. The overall gamma probe up and down results can be compared to ensure that no spurious readings were recorded.

11.8 QA/QC of Geochemistry and Assay Samples

Prior to the summer 2010 drill program, the only QA/QC procedures implemented on drill core samples from the Project were those performed internally by SRC. The in-house SRC QA/QC procedures involve inserting one to two quality control samples of known value with each new batch of 40 geochemical samples. All of the reference materials used by SRC on the Waterbury project are certified and provided by CANMET Mining and Mineral Services. The SRC internal QA/QC program continued through the 2013 drill program.

Starting in the summer of 2010 and continuing into the 2013 drill program (discontinued after DDH WAT13-350), an internal QA/QC program was designed by Fission to independently provide confidence in the core sample geochemical results provided by the SRC. Since the U_3O_8 assay values returned from SRC may be used in resource estimation the data requires a high degree of accuracy and precision. The internal QA/QC sampling program determines analytical precision through the insertion of sample duplicates, accuracy through the insertion of materials of ñknownò composition (reference material) and checks for contamination by insertion of blanks. Blanks, reference standards and duplicates are inserted into the sample sequence as they were collected in the field as follows:

- Field duplicates: these were taken by splitting a geochemistry or assay sample in half (i.e. quartering) in the field. For Athabasca composite samples, each subsample was split and each half put in separate bags, one original and one duplicate. One field duplicate was inserted for every 20 composite samples and for every 20 point samples. For each drill hole, at least one field duplicate of an Athabasca composite sample and one field duplicate of a basement point sample were taken. For mineralized drill holes, at least two field duplicate point samples were taken, one from the mineralized zone and one from unmineralized ñbackgroundò basement.

- Prep and pulp duplicates: these were taken by the laboratory (SRC) for each field duplicate submitted. Prep duplicates were split from the initial -2mm crushed sample and pulp duplicates were split off the -106 micron pulp material (i.e. post-grinding). All duplicates are weighed and analysed separately. Empty sample bags marked with sequential Fission Energy sample numbers and tags were included in sample shipments to facilitate the duplicate sampling by SRC.

- Blank samples: Twenty pulps from the winter 2010 drill program were requested from SRC for use as blanks. These samples were selected to satisfy the criteria of having ñU; ICP ICP1 Totalò < 2 ppm and ñU; Fl. ICP1 Partialò < 1 ppm. One blank pulp was inserted for each drill hole that intersected mineralization and from which samples were sent for U_3O_8 assay. The blanks were re-packaged, assigned a new sample number and inserted in sequence within the mineralized interval. The entire blank pulp sample was submitted for analysis. Blank samples were analysed by ICP-OES (ICP1 package) and assayed for U_3O_8 % and Au by fire assay. Blank samples were not inserted with samples from unmineralized holes.

Beginning in 2012 certified, internal reference standards were used in all holes drilled at Waterbury Lake, replacing the re-analysed low, medium and high grade reference samples. A description of the procedures used to generate the standards and the certification process is presented below.

11.8.1 Certified Reference Materials (CRM)

Certified reference materials are generally used to monitor that the laboratories are reporting analyses to an acceptable degree of accuracy and to identify problems with specific sample batches and long-term biases associated with the regular assay lab (SRC). For the results to be reliable it is important that the uranium grade of the CRM is representative of the grade range and mineralogy of the unknown samples. For most commodities, CRM can be purchased and used as-is. However, in the case of uranium appropriate CRM are difficult to find and MSC was tasked with generating its own CRM for U_3O_8 assays.

Composite preparation

Low grade (LG), medium grade (MG) and high grade (HG) CRM samples were each developed from samples previously assayed for % U_3O_8 by SRC with assay values of 0.049-0.052 % U_3O_8, 1.80-2.17 % U_3O_8 and 14.2-30.3 % U_3O_8, respectively. Each CRM sample was prepared by SRC by combining 300 g of the coarse-rejects fraction of 10 basement samples falling within the required grade range into a 3 kg composite sample. Each of the three composite samples (i.e. LG, MG and HG) were blended, ground, dried and sieved at 106 microns. Sample homogeneity was tested by U_3O_8 assays on 7 subsamples and the relative standard deviations were < 1.0 %.

Round Robin

Five laboratories were involved in the inter-laboratory program. Each lab received 4 separate vials of samples for each of the LG, MG and HG standards, and therefore had 12 different samples to analyse. Certification was performed by Smee & Associated Consulting Ltd by calculating the means and standard deviations from the data supplied by the five laboratories. The certification cautioned that each lab had only performed four assays, and with different methods. One laboratory averaged two analyses to produce a final result. Results for the LG sample from one lab deviated significantly from the others. The results from this lab were therefore excluded from the calculations for the LG samples and included with some reservations for the MG and HG samples. The certified values of U3O8 for the LG, MG and HG reference samples are listed in Table 5.

Table 3 Certified assay values of U_3O_8 for the LG, MG and HG reference samples.

Sample name	Element	Certified Mean (Expected Value)	Two Standard Deviations
WAT-LG	U_3O_8	540 ppm	28 ppm
WAT-MG	U_3O_8	2.05%	0.09%
WAT-HG	U_3O_8	20.96%	0.87%

The bulk standards were packaged by SRC in sealed plastic bags of 10 g each. One entire pulp sample of each reference sample type was inserted into the sample batch for each drill hole that intersected mineralisation (i.e. for which samples were submitted for U_3O_8 assay). As with the blanks, these samples were re-packaged and assigned a new sample number in sequence with the sample numbers for the drill hole, and were inserted within the mineralised interval. Reference samples were analysed using the ICP1 package, U3O8 assay and Au fire assay. For holes that did not intersect mineralisation, only the low grade reference sample was inserted.

11.8.2 QA/QC Results

The results of the QA/QC programs prior to the 2013 drill program are described in the 2012 technical report for Fission titled ñTechnical Report on the Waterbury Lake Uranium Project Including Resource Estimate on the J Zone Uranium Deposit, Waterbury Lake Property, Athabasca Basin, Northern Saskatchewanò, dated February 29th, 2012 and Revised on May 29th, 2012 by Armitage and Nowicki, and the 2013 technical report for Fission titled ñTechnical Report on the Updated Resource Estimate on the J Zone Uranium Deposit, Waterbury Lake Propertyò located in the Athabasca Basin, Northern Saskatchewan, dated January 18th, 2013 both of which are filed on SEDAR under Fissionôs profile.

For the 2013 drill program, the QA/QC included blanks, and low, medium, and high grade reference material samples for samples from holes WAT13-331 to WAT13-351.

During the 2013 drill program, blank samples totaled 17 (Figure 17). Blank assays of U_3O_8 were found to be acceptable. A blank failure is defined as any assay value greater than two times the elements detection limit.

Figures 18 to 20 show the results of the low (32 samples), medium (16 samples) and high grade (16 samples) certified reference material used in 2013 drilling. The analysis of the reference samples returned U_3O_8 values within the acceptable limits and no significant accuracy issues were noted.

The results of the QA/QC programs indicate there are no issues with the drill core assay data. The data verification programs undertaken on the data collected from the Project support the geological interpretations, and the analytical and database quality, and therefore the data can support mineral resource estimation.

Figure 16 **Results of the 2013 blank reference samples for U_3O_8.**

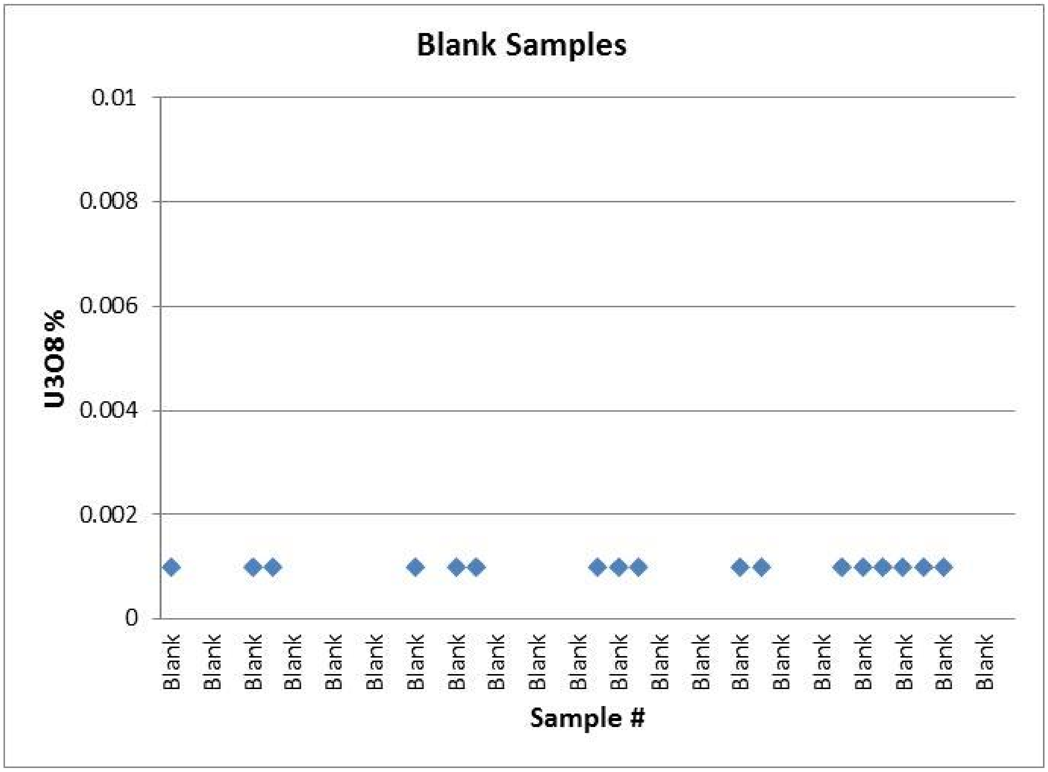
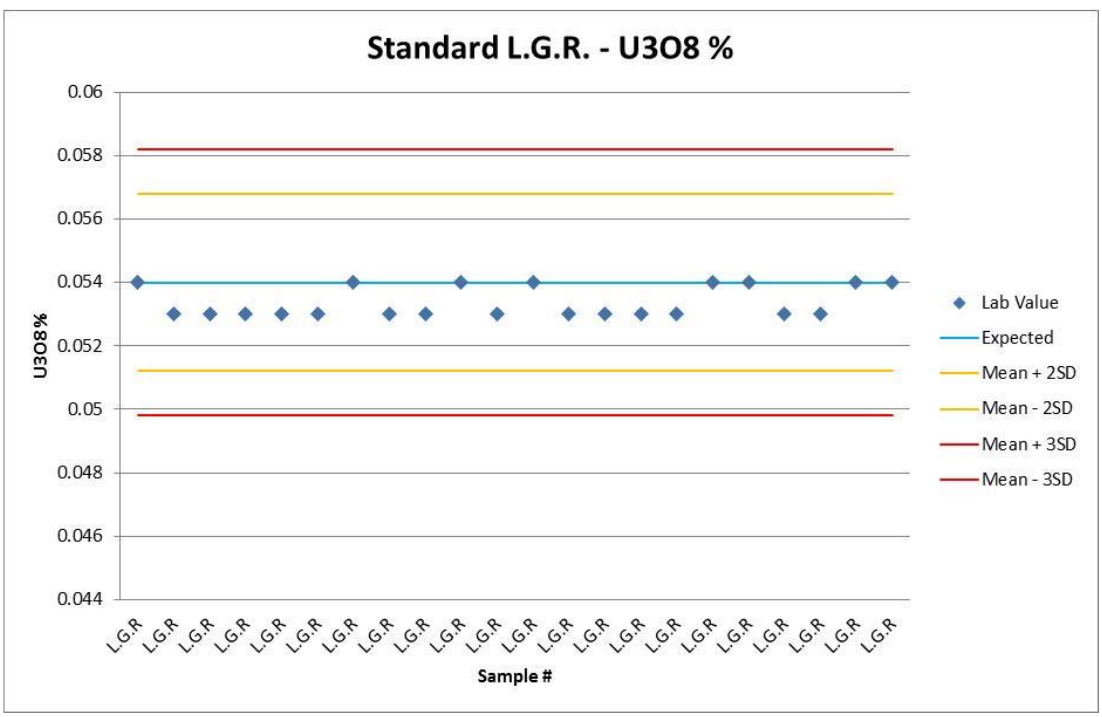


Figure 17 **Results for analyses of 2013 certified high grade reference samples.**

Figure 18 Results for analyses of 2013 certified medium grade reference samples.

Figure 19 Results for analyses of 2013 certified low grade reference samples.



12 DATA VERIFICATION

All geological data has been reviewed and verified by the Authors as being accurate to the extent possible and to the extent possible all geologic information was reviewed and confirmed. The Authors did not conduct check sampling of the core. The Authors did visually inspect the core and the majority of the significant uranium intercepts from the 2010 to 2012 drill programs. The Authors also inspected the majority of the significant uranium intercepts with a hand held Exploranium GR-110G total count gamma-ray scintillometer and confirmed the presence of uranium mineralization. The Authors caution that scintillometer readings are not directly or uniformly related to uranium grades of the rock sample measured, and should be used only as a preliminary indication of the presence of radioactive materials.

The Authors are confident in the integrity of the samples collected by Fission and believe the sample preparation, analysis and security for the J Zone to have been done within the CIM Definition Standards guidelines as required by NI 43-101.

13 MINERAL PROCESSING AND METALLURGICAL TESTING

The following description of the mineral processing and metallurgical testing completed in 2011 was extracted from the 2012 Technical Report for Fission titled "Technical Report on the Waterbury Lake Uranium Project Including Resource Estimate on the J Zone Uranium Deposit, Waterbury Lake Property, Athabasca Basin, Northern Saskatchewan", dated February 29th, 2012 and revised on May 29th, 2012 by Armitage and Nowicki, which is filed on SEDAR under Fission's profile. No additional testing has been completed in 2012 or 2013.

In order to provide a preliminary assessment of the metallurgical characteristics of the J Zone mineralization, an assessment of the mineralogical and leaching characteristics of a representative selection of drill core samples was undertaken between July and December 2011.

The study is based on a suite of 48 samples of mineralized material collected from thirty-two drill holes (2010 and 2011 programs). These were chosen to provide good spatial representation of the J Zone (and J-East) mineralization as well as representing a wide range of uranium content and covering a range of different settings (i.e. sandstone / conglomerate hosted, basement hosted, south-side lens, J-East). The samples were derived from the half split core remaining after the initial geochemical / assay sampling process. The radioactivity, measured in cps, was recorded for each piece of core and a flagging tape label was stapled into the core box to mark the sample location.

All samples were submitted to the SRC for comprehensive mineralogical analysis and preparation of thin sections for petrographic analysis by MSC. The results of mineralogical work were used, in conjunction with spatial considerations, to define suitable composite samples for preliminary leaching test work undertaken by the SRC Mining and Minerals Division. Results of this work are summarised below with details provided in unpublished reports MSC11/043 and Zhang (2011).

13.1 Mineralogical Analysis

The principal objective of this study was to determine the overall mineral assemblage of the J Zone ore and to provide a better understanding of the mineralogy and texture of the uranium-bearing phases.

Semi-quantitative Rietveld XRD analysis was undertaken on all 48 samples and, in addition, SRC determined the uranium content (in ppm U) of each sample by XRF analysis. Based on the XRD, a subset of 24 samples was selected for quantitative mineralogical analysis (Q-Min) by the SRC. This involved high-resolution compositional scanning of the sample pulps (-106 micron powder, as used for XRD and XRF analysis) by electron microprobe followed by image analysis to determine the proportion of mineral phases identified and quantitative EPMA analysis of all identified minerals. In addition to the analytical work undertaken at the SRC, MSC undertook petrographic and detailed SEM-EDS analysis of small subsamples from 30 of the mineralized samples. The results of this work are described in detail in MSC report MSC11/043.

The mineralogical analyses determined that the most abundant uranium-bearing minerals in the J Zone are uraninite and/or pitchblende, and coffinite. The gangue mineralogy is essentially comprised of various amounts of quartz, phyllosilicates (illite-sericite, chlorite, biotite, kaolinite) and (Fe, Ti)-oxides (hematite, goethite and anatase recognized by XRD analyses). Feldspars also occur in most samples and carbonates as well as a variety of sulphides are locally present. Ni-arsenides are recognized throughout the samples as well.

Uranium-bearing phases vary in size from microcrystalline to coarse-grained. Finer-grained phases occur as fracture infill or interstitial to quartz and /or phyllosilicates and are commonly associated with Ni-arsenides. Coarser-grained uranium phases form polycrystalline aggregates, variably associated with Fe-oxides (hematite and/or goethite) and microcrystalline copper-bearing sulphides. Uranium zoning is observed in some samples, in which aggregates and fractures of lead-poor uraninite are lined by lead-rich uraninite.

The results of the mineralogical analyses identified five groupings of samples with ore mineralogies typically dominated by either uranium oxide or uranium silicate phases. Samples taken from the PKB area (portion of J Zone western lens) were found to dominantly contain a high proportion of uranium silicate minerals with minor amounts of uranium oxides. Samples taken from the central and western portions of the J Zone eastern lens were dominated by uranium oxides with only minor amounts of uranium silicates. The central uranium oxide zone appears to be flanked to the east and west by two regions dominated by uranium silicates or a roughly even mixture of silicate and oxide phases.

13.2 Acid Leaching Tests

Leaching tests were undertaken by SRC Mining and Minerals Division on composite samples prepared from the sample set discussed in the previous section. The primary objective of the leaching test work was to provide an initial assessment of the amenability of J Zone ore to acid leaching methods and to use the extraction rate of uranium as an indicator of the acid leaching efficiency. Only the leaching time and rate of acid addition were considered in the tests while the other parameters (e.g. solid percentage in the slurry, temperature, pressure and agitation conditions) remained fixed. The results of the leaching test work are presented in Zhang (2011) and are summarised below.

13.2.1 Composite preparation

Composite ore samples were prepared from 47 of the samples included in the mineralogical analysis discussed above. A total of five composite samples were defined based on the location to provide spatially representative coverage of the J Zone as well as J-East and PKB. In addition, the results of mineralogical work (in particular variations in the proportion of U-silicates vs U-oxides) were considered in defining the composite samples. The composites each include samples originating from 3 to 7 different drill holes, and representing different lithologies, uranium grades and mineralogy. The uranium grade in the composite samples varies from a low of 0.71 % U_3O_8 in Composite 1 to a high of 3.23 % U_3O_8 in Composite 3. A summary of the composite sample features is presented in Table 6, and the assays of uranium, gold, and other significant constituents for the five composites are provided in Table 7.

Table 4 Summary of composite sample features.

Composite Sample #	Number of Samples Included	Total weight (kg)	Sample Source Area	Host Lithologies	Dominant Uranium Phase (from QMin)
1	7	2.65	PKB (Western lens)	Basal conglomerate, metasediments	Silicates >> oxides
2	7	2.11	West edge of the J Zone eastern lens	Metasediments, unknown gneisses	Oxides > silicates
3	11	3.65	Center of the J Zone eastern lens	Sandstone, basal conglomerate, metasediments	Oxides >> silicates
4	5	1.79	East edge of the J Zone eastern lens	Sandstone, metasediments	Silicates > oxides
5	5	2.05	Mid lens	Metasediments	Oxides å silicates

Table 5 Assays for uranium, gold and other constituents for the five studied composites used for leaching tests.

Composite Sample	U_3O_8	Au	Ni	As	Mo	Fe_2O_3
	(%)	(g/ton)	(ppm)	(ppm)	(ppm)	(%)
Composite 1	0.71	0.17	2,982	2,560	72	6.03
Composite 2	1.33	0.08	2,704	3,495	371	5.12
Composite 3	3.23	N/A	3,145	8,218	744	15.8
Composite 4	1.39	0.5	834	1,567	498	17.1
Composite 5	1.14	0.37	4,762	3,850	122	9.8

13.2.2 Leaching Test Methods

Acid leaching was performed on each of the composite samples for 12 hours under atmospheric pressure and at a temperature of 55-65°C. The atmospheric leach represents the circuit at the Rabbit Lake mill, one of the local area mills which could be considered for processing the J Zone ore. Agitation was used to create adequate turbulence. Sodium Chlorate was used as the oxidant. The tests were undertaken on the assay lab rejects from XRD analyses that were ground to 90% passing 106 microns. The percentage of solids in the slurry was set at 50%. The only variables were the acid addition and leaching residence time. Two different H_2SO_4 dosages were used to create an initial leaching environment with 25 mSc/cm and 55 mSc/cm, respectively. Each composite sample was split into two subsamples labelled A and B. The A sample was used to test high acid addition with high initial conductivity and the B sample was used to test low acid addition with low initial conductivity.

13.2.3 Leaching Test results

The results of the preliminary acid leaching tests are presented in Table 8 and show that maximum extraction rates of 97.6 % to 98.5 % U_3O_8 can be obtained (depending on the acid addition) within 4 to 8 hours of leaching time, and that the leaching efficiency was variably affected by acid addition and leaching time.

Composite 1 has a U_3O_8 grade of 0.71 % U_3O_8. The maximum extraction rate of 98.5% was reached within an eight hours leach time. There were no appreciable effects on extraction rate when acid addition was increased from 6.69 kg to 9.31 kg H2SO4 / kg U_3O_8. An acid consumption rate of 6.69 kg to 9.31 kg is in the normal consumption range for the northern Saskatchewan uranium mines.

Composite 2 and 4 have similar U_3O_8 grades of 1.33 % U_3O_8 and 1.39 % U_3O_8. Within six hours of leaching, the maximum extraction rate of 98.5% was achieved with an acid addition rate of 5.43 kg H2SO4/kg U_3O_8 for Composite 2 and 6.22 kg H2SO4 / kg U_3O_8 for Composite 4. For both samples, the leaching efficiency is only slightly improved with increased acid addition.

Composite 3 is the highest grade sample (3.23 % U_3O_8). The maximum U_3O_8 leaching efficiency was 97.1% and 95.6% in a 10 hour leach for 3A and 3B. One of the reasons for the low extraction rate was considered to be the relatively coarse grain size of the composite sample. Therefore, a third split, Composite 3C was re-ground to reduce grain size and subjected to leach testing. A maximum of 98.4% leaching efficiency was achieved in eight hours for this sample. The acid addition rate for this test was 2.51 kg H2SO4 / kg U_3O_8 indicating that proper grinding plays a significant role for effective leaching.
Composite 5 has a U_3O_8 grade of 1.14 % U_3O_8. The maximum extract rate of 97.6% was reached within 4 hours of leaching at an acid addition rate of 8.09 kg H2SO4 / kg U_3O_8. The leaching of Composite 5 could be optimized to achieve high leaching efficiency while minimizing the acid consumption rate.

Fire assay was performed on the leaching residues. The gold concentrations in the Composite 1 to 5 leaching residues were 0.176 g/ton, 0.291 g/tonne, 0.569 g/tonne, 0.869 g/tonne, and 0.634 g/tonne, respectively.

Table 6 Summary of uranium leach test results. Results are provided for extraction times at which maximum extraction rates were achieved.

Sample	Extraction Time (hours)	Acid kg / kg U_3O_8	Maximum Extraction Rate U_3O_8 (%)	Ni (%)	As (%)	Mo (%)	Fe_2O_3 (%)	Au in residue (g/tonne)
1A	8	9.31	98.5	86.4	87.8	72.2	38.1	0.176
1B	8	6.69	98.5	87.4	89.5	77.8	37.5	
2A	6	5.43	98.5	88.7	84.6	68.4	34.9	0.291
2B	4	2.72	96.1	81.2	74.7	52.5	21.5	
3A	10	2.37	97.1	90.5	82.7	73.9	37.7	0.569
3B	10	1.63	95.6	85.9	79.1	72.6	37.8	
3C	8	2.52	98.4	87.8	87.4	78.1	51.6	NA
4A	6	6.22	98.5	83.8	69.8	56.8	27.2	0.869
4B	6	3.89	98.2	84.7	69.9	56.2	25.2	
5A	4	8.09	97.6	75.5	78.4	74.6	32	0.634
5B	4	4.27	96.2	77.9	79.3	77	35.4	

13.3 Further Work

A more comprehensive phase of metallurgical test work has previously been recommended to optimize the leaching efficiency as well as to evaluate other parameters of the leaching process (grinding size of the ore, solid percentage in the slurry, temperature, pressure, and residence time and agitation conditions).

14 MINERAL RESOURCE ESTIMATES

Subsequent to the release of the previous mineral resource estimate in December, 2012, Fission completed additional drilling on the Property, including step-out and infill drill holes on the J-Zone, which were completed during a 2013 winter (08 January to 17 March, 2013) drill program. A total of 68 drill holes were completed, in a total of 20,590.20 meters. Mineralization was found in 35 holes or 51% of the holes in the program. All holes were targeted to further delineate and expand the mineralized area of the J Zone. This report discloses a new mineral resource estimate utilizing the information from the winter 2013 drill program.

The mineral resource estimate that is the subject of this report was prepared by Allan Armitage, Ph.D., P. Geol, of GeoVector Management Inc. Dr. Armitage is an independent Qualified Persons as defined by NI 43-101. Practices consistent with CIM (2005) were applied to the generation of the mineral resource estimate. There are no mineral reserves estimated for the Property at this time.

Inverse distance squared interpolation restricted to a mineralized domain was used to estimate tonnes, density and U_3O_8 grades as well as gold, arsenic, cobalt, copper, molybdenum and nickel grades into the block model. Indicated mineral resources are reported in summary tables in Section 14.12 below, consistent with CIM definitions required by NI 43-101 (CIM, 2005).

14.1 Drill File Preparation

Preparation of the drill database prior to the 2013 drill program is described in the 2012 Technical Report titled "Technical Report on the Revised Resource Estimate on the J Zone Uranium Deposit, Waterbury Lake Property, Athabasca Basin, Northern Saskatchewan", dated January 18th, 2013 by Sexton and Armitage, which is filed on SEDAR. The 2013 drill database was added to the database that was used for the previous resource number.

To complete the update resource estimate on the J Zone, GeoVector assessed the raw drill core database that was available from the drill program completed between January and March, 2013 on the Property. GeoVector was provided with an updated drill hole database which included collar locations, down hole survey data, assay data, lithology data, down hole radioactive data, core recovery data and specific gravity ("SG") data.

The database was checked for typographical errors in assay values and supporting information on source of assay values was completed. Sample overlaps and gapping in intervals were also checked. Verifications were also carried out on drill hole locations, down hole surveys, and lithologic information. Generally the 2013 database was in good shape and was accepted by GeoVector as is. The 2013 data was added to the database used for the previous resource estimate.

A summary of the 2013 and complete drill hole database used for the current resource estimate is presented in Table 7. A statistical analysis of the U_3O_8 database is presented in Table 8. Note that the U_3O_8 values are predominantly based on assay values. Where an assay value was not available, the uranium value determined by fluorimetry (converted to U_3O_8) was used in the resource estimate. Approximately 88% of the U_3O_8 values used to define the J Zone were determined by assay. All samples > 0.01% U_3O_8 were determined by assay.

Table 7 **Summary of the drill hole data used in the resource modeling.**

2013 Resource Drill Database	
Total Number of drill holes	68
Total meters of drilling	20,590
Total number of assay samples	2,055
Total number of specific gravity samples (WW/WA)	319
Complete Resource Drill Database	
Total Number of drill holes	268
Total meters of drilling	88,770
Total number of assay samples	12,551
Total number of specific gravity samples (WW/WA)	2,649

Table 8 **Summary of all drill hole U_3O_8 data from the J Zone drilling.**

J Zone Sample Data	U_3O_8 (%)
Number of samples	12,551
Minimum value	0.001
Maximum value	62.90
Mean	0.19
Median	0.001
Variance	3.33
Standard Deviation	1.83
Coefficient of variation	9.74
99 Percentile	3.19

14.2 Resource Modelling and Wireframing

For the 2013 mineral resource estimate, a grade control model or wireframe (Figure 20) was based generally on a cut-off grade of 0.03 to 0.05 % U_3O_8 which involved visually interpreting mineralized zones from cross sections using histograms of U_3O_8. 3D rings of mineralized intersections were made on each cross section and these were tied together to create a continuous wireframe resource model in Gemcom GEMS 6.5 software. The modeling exercise provided broad controls on the size and shape of the mineralized volume.

The morphology of the wireframe was influenced by the following:

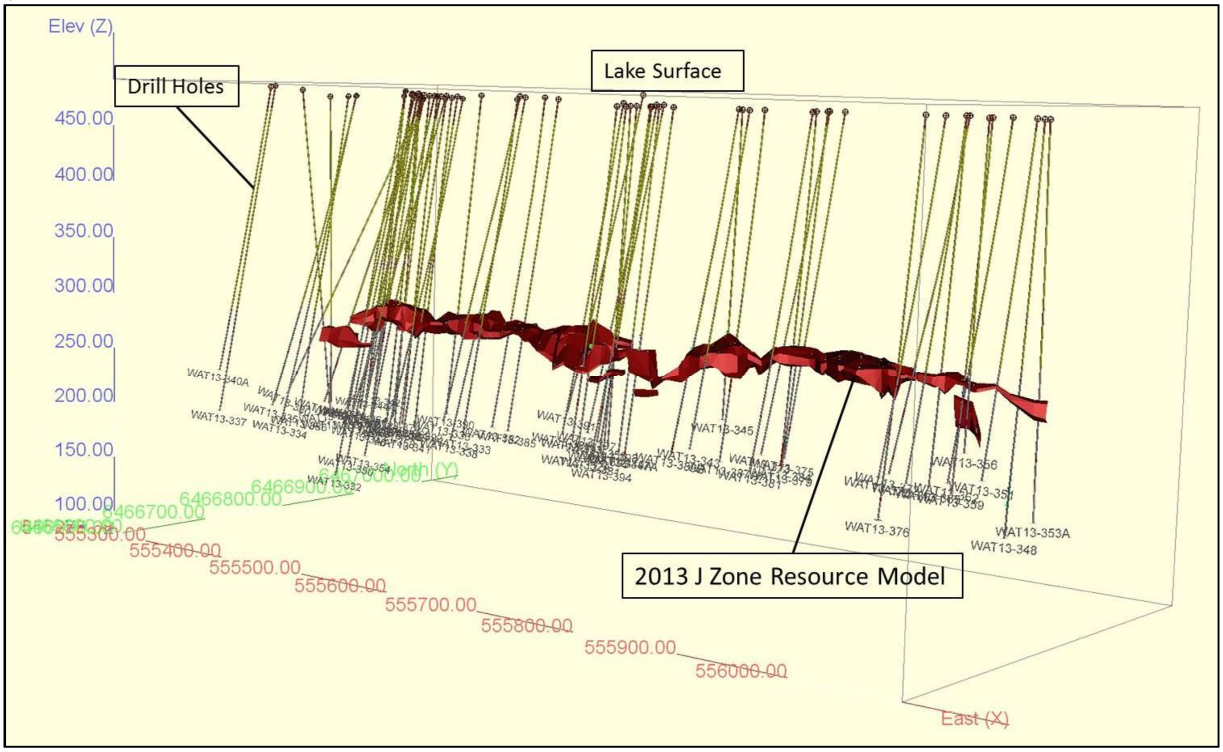
1. The J Zone deposit is currently defined by 268 drill holes (83,005.92 metres) (Appendix 1) including 68 holes (20,590 metres) completed in 2013. Uranium mineralization has been intersected over a combined east-west strike length of ~690m and a maximum north-south lateral width of 40m. The ore body trends roughly east-west (080°) in line with the metasedimentary corridor and cataclastic graphitic fault zone. Mineralization thickness varies widely throughout the J Zone and can range from tens of cm to over 19.5m in vertical thickness. In cross section J Zone mineralization is roughly trough shaped with a relatively thick central zone that corresponds with

the interpreted location of the cataclasite and rapidly tapers out to the north and south. A particularly high-grade (upwards of 40 % U_3O_8) but often thin lens of mineralization is present along the southern boundary of the metasedimentary corridor, as seen in holes WAT10-066, WAT10-071, WAT10-091, and WAT10-103. Ten meter step out drill holes to the south from these high-grade holes have failed to intersect any mineralization, demonstrating the extremely discreet nature of mineralization.

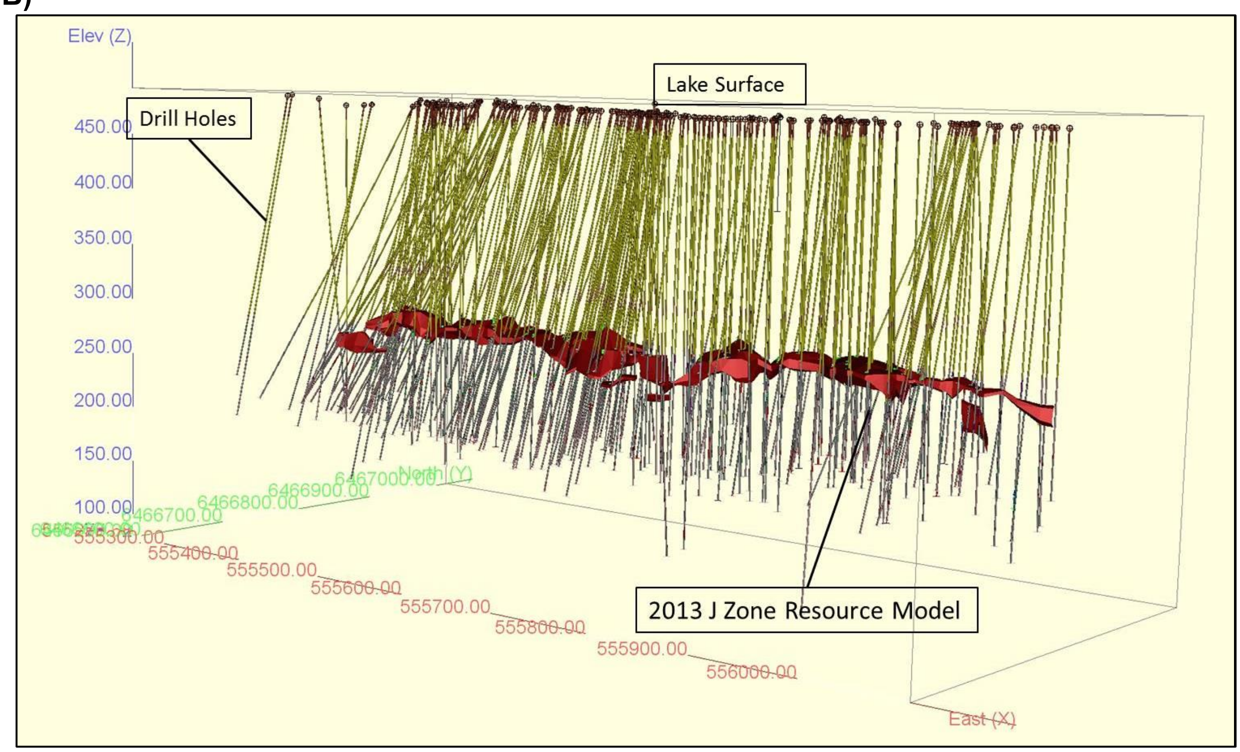
2. Uranium mineralization is generally found within several metres of the unconformity at depth ranges of 195 to 230m below surface. It variably occurs entirely hosted within the Athabasca sediments, entirely within the metasedimentary gneisses or straddling the boundary between them. A semi-continuous, thin zone of uranium mineralization has been intersected in occasional southern J Zone drill holes well below the main mineralized zone, separated by several meters of barren metasedimentary gneiss. This mineralized zone is informally termed the south-side lens and can host grades up to 3.70 % U_3O_8 as seen in drill hole WAT11-142.

Figure 20 Isometric view looking northwest shows the revised J Zone resource model (red solid), 2013 drill hole locations (A) and drill hole locations of all holes used to define the J Zone (B).

A)



B)



14.3 Composites

The average width of drill core samples is 0.50 metres, within a range of 0.10 metres up to 4.0 metres. Of the total assay population 98% were 0.5metres or less. As a result, 0.5metre composites were used for the resource.

Composites for drill holes were generated starting from the collar of each hole. For the resource, a composite population was generated for the mineralized domain and totalled 2,335 (Table 9) from 121 drill holes which intersect the resource model. These composite values were used to interpolate grade into the resource model.

Table 9 Summary of the drill hole composite data from within the J Zone resource model.

J Zone Composite Values (all drill holes which intersect the resource model)	U_3O_8 (%)
Number of drill holes	149
Number of samples	2,854
Minimum value	0.000
Maximum value	62.9
Mean	0.80
Median	0.09
Variance	14.12
Standard Deviation	3.76
Coefficient of variation	4.69
99 Percentile	16.9

14.4 Grade Capping

Based on a statistical analysis of the composite database from the resource model (Table 9), it was decided that no capping was required on the composite populations to limit high values for uranium. A histogram of the data indicates a log normal distribution of the metals with very few outliers within the database. Analysis of the spatial location of outlier samples and the sample values proximal to them led GeoVector to believe that the high values were legitimate parts of the population and that the impact of including these high composite values uncut would be negligible to the overall resource estimate.

14.5 Specific Gravity

Drill core samples collected for bulk density measurements were completed at SRC. Samples are first weighed as they are received and then submerged in deionised water and re-weighed. The samples are then dried until a constant weight is obtained. The sample is then coated with an impermeable layer of wax and weighed again while submersed in deionized water. Weights are entered into a database and the bulk density of the core waxed and un-waxed (emersion method) is calculated and recorded. Not all density samples had both density measurements recorded. Water temperature at the time of weighing is also recorded and used in the bulk density calculation. The detection limit for bulk density measurements by this method is 0.01 g/cm3.

A total of 2,584 SG measurements were recorded for un-waxed core samples (average density of 2.57) and 2,381 SG measurements of waxed core (average density of 2.45) were recorded, including samples collected in 2013. A total of 90% of the samples tested were tested by both methods and only 10% of the samples were tested by only one method.

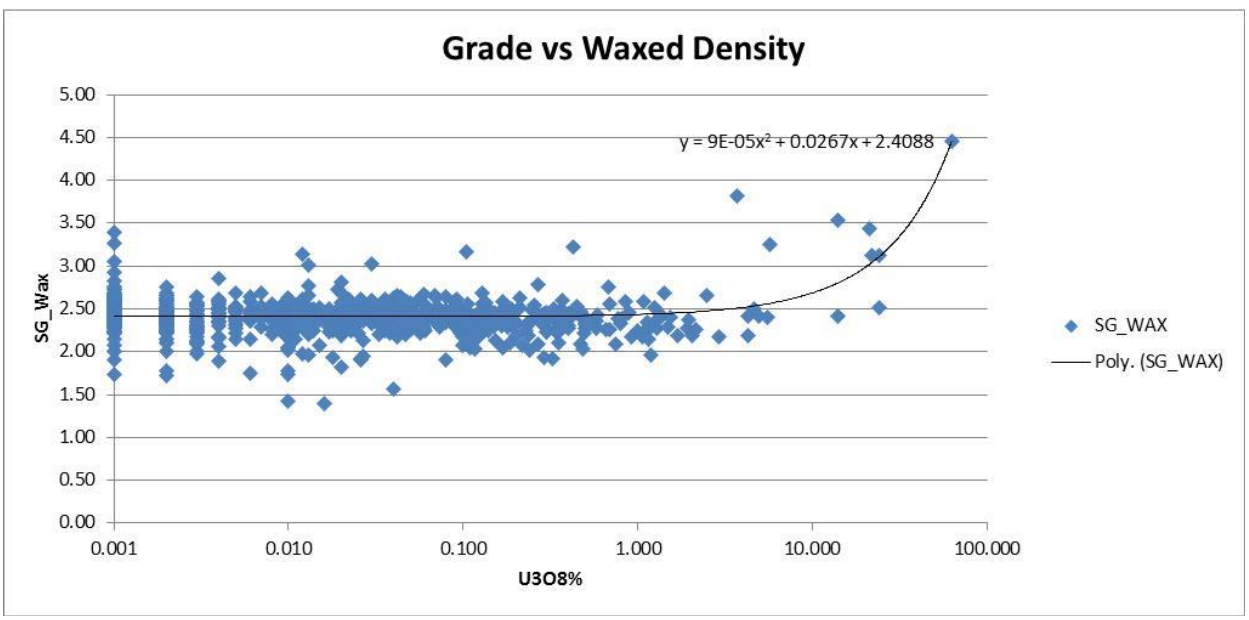
For previous resource estimates on the J Zone, the density measurements for the un-waxed samples were used to determine an average density for the resource model. Based on an analysis of the SG values of samples from within the mineralized domain it was decided that an average SG value of 2.61 t/m^3 be used for the original J Zone resource estimate. For the update resource in 2012, an additional 947 SG samples were collected from the drill core in 2012. The 2012 data included 162 samples from within the J Zone resource model. Based on an analysis of the SG data of samples from within the mineralized domains it was decided that an average SG value of 2.56 t/m^3 be used for the updated J Zone resource estimate.

An additional 313 un-waxed core samples (average SG of 2.53) and 192 SG measurements of waxed core samples (average SG of 2.49) were added to the database in 2013. As SG values from waxed samples should be more robust than those on unwaxed samples, the waxed core measurements were used for the 2013 resource estimate.

For uranium deposits increasing alteration is typically associated with lower SG as the original minerals are altered to clay minerals. Increasing amounts of uranium mineralization increase SG as more of the massive metal is present. A scatter plot of uranium assays and SG measurements (waxed core) shows a flat trend for U_3O_8 grades below 3-4% (Figure 21). The slope of the relationship increases sharply above grades of about 4.0 percent indicating a change in the relationship between higher grade uranium mineralization and specific gravity.

Although a relationship appears to exist between U_3O_8 grades and SG there is only a small population of data points at the higher grades to provide back-up for this assessment. Therefore some uncertainty remains as to the scale and consistency of the relationship between U_3O_8 grades and SG. Despite the uncertainty, SG values were calculated for untested assay samples using the relationship observed with the U_3O_8 grades and the measured samples. This approach is a common practice for uranium resource estimation, and this methodology was followed for the current resource estimate (Figure 21).

Figure 21 Scatter Plot Showing the Relationship between U_3O_8 and Specific Gravity (waxed core) for samples from the Project.



14.6 Block Model Parameters

A block model was created for the J Zone within UTM NAD83 Zone 13N space (Figure 22; Table 10) and an elevation of 300 metres above mean sea level. The block model was constructed using 2m x 1m x 1m blocks in the x, y, and z direction respectively. Criteria used in the selection of block size include the borehole spacing, composite assay length, and the geometry of the modelled zones.

14.7 Grade Estimation

For the previous resource estimates on the J Zone, U_3O_8 grade was interpolated into the blocks by the inverse distance squared (ID2) method to generate block grades in the Indicated and Inferred category. In addition to U_3O_8, grades for gold, arsenic, cobalt, copper, molybdenum and nickel were interpolated into the blocks.

The methodology for grade estimation of U_3O_8 for the current resource was changed. The following procedure is common industry practise by uranium companies on uranium projects within the Athabasca Basin.

1. Use the regression formula ($SG = 0.00009\ U_3O_8^2 + 0.0267\ U_3O_8 + 2.4088$) to calculate an SG for every uranium composite grade that does not have a measured SG value,
2. Multiply SG x by the U_3O_8 assay value to get a Grade-SG (GD) value for each composite,
3. Interpolate GD and SG values into each block,
4. Calculate the block grade by dividing the interpolated GD values by interpolated SG value.

The SG and GD values were interpolated into the blocks by the inverse distance squared (ID2) interpolation method to generate block grades in the Indicated and Inferred category. Analysis for gold, arsenic, cobalt, copper, molybdenum and nickel were limited in the 2013 assay database. As a result, grades for gold, arsenic, cobalt, copper, molybdenum and nickel were not interpolated into the blocks and will not be reported for the current resource estimate.

Two passes were used to interpolate all of the blocks in the wireframe, but 99% of the blocks were filled by the first pass. The size of the search ellipse, in the X, Y, and Z direction, used to interpolate grade into the resource blocks is based on 3D semi-variography analysis (completed in GEMS) of mineralized points within the resource model. For the first pass, the search ellipse was set at 25 x 15 x 15 in the X, Y, Z direction respectively. The Principal azimuth is oriented at 075º, the Principal dip is oriented at 0° and the Intermediate azimuth is oriented at 0° (Table 10). For the second pass, the search ellipse was set at 50 x 30 x 30 in the X, Y, Z direction respectively. The Principal azimuth is oriented at 075º, the Principal dip is oriented at 0° and the Intermediate azimuth is oriented at 0°.

Figure 22 Isometric view looking northwest shows the J Zone resource block model, resource model, drill holes and search ellipse.

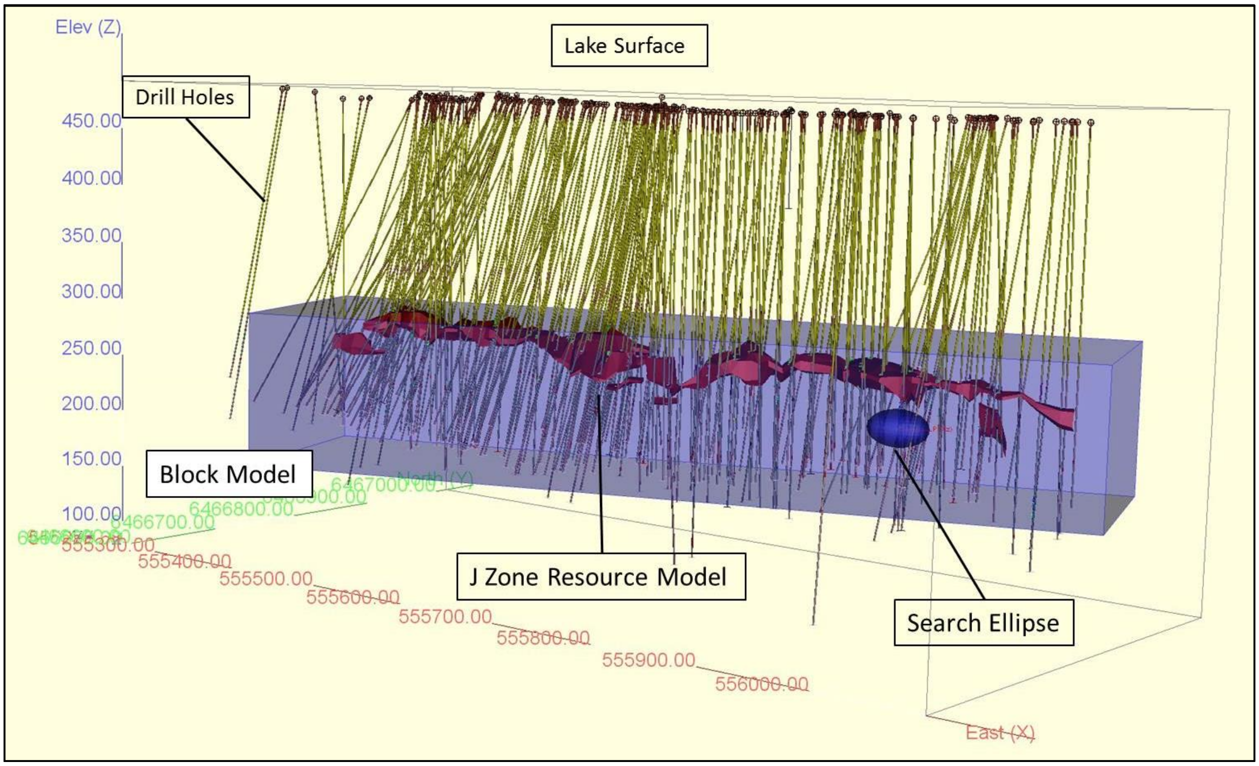


Table 10 Block model geometry and search ellipse orientation.

Block Model	Main Zone		
	X	Y	Z
Origin (NAD83, Zone 13N)	555420	6466590	300
# of Blocks	360	190	130
Block Size	2	1	1
Rotation	20°		
Search Type	Ellipsoid		
	Indicated	Inferred	
Principle Az.	75°	75°	
Principle Dip	0°	0°	
Intermediate Az.	0°	0°	
Anisotropy X	25	50	
Anisotropy Y	15	30	
Anisotropy Z	15	30	
Min. Samples	4	2	
Max. Samples	6	6	

14.8 Model Validation

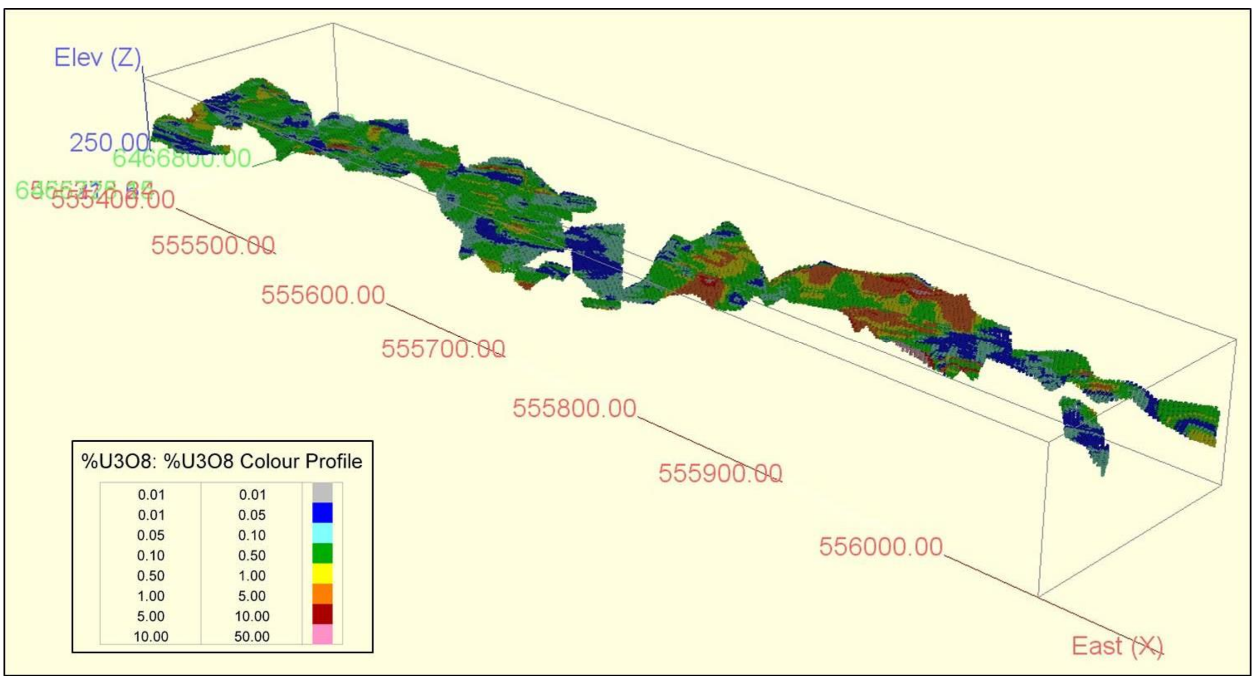
The total volume of the blocks in the resource model, at a 0 cut-off grade value compared to the volume of the resource model was essentially identical. The size of the search ellipse and the number of samples used to interpolate grade achieved the desired effect of filling the resource models and very few blocks were left un-interpolated after the first pass. All were interpolated with a final pass that doubled the search radii.

Because ID^2 interpolation was used, the drill hole intersection grades would be expected to show good correlation with the modelled block grades. A visual check of block grades of uranium against the composite data in 3D (Figures 23) and on vertical section showed excellent correlation between block grades and drill intersections. The resource model is considered valid.

14.9 Block Model Classification

The Mineral Resource estimate is classified in accordance with the CIM Definition Standards (2005). The confidence classification is based on an understanding of geological controls of the mineralization, and the drill hole pierce point spacing in the resource area. The resource estimate in areas with drill spacing of ~25m or less is classified as Indicated and in areas with drill densities of greater than 25 metres is classified as Inferred. The vast majority (99%) of the total resource in the J Zone deposit was interpolated with the first pass, so the entire mineral resource is being classified as Indicated.

Figure 23 Isometric view looking northwest shows the J Zone uranium resource blocks.



14.10 Resource Reporting

The grade and tonnage estimates contained herein are classified as Indicated given CIM definition Standards for Mineral Resources and Mineral Reserves (2005). As such, it is understood that:

Indicated Mineral Resource

An ôIndicated Mineral Resourceôis that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics can be estimated with a level of confidence sufficient to allow the appropriate application of technical and economic parameters, to support mine planning and evaluation of the economic viability of the deposit. The estimate is based on detailed and reliable exploration and testing information gathered through appropriate techniques from locations such as outcrops, trenches, pits, workings and drill holes that are spaced closely enough for geological and grade continuity to be reasonably assumed.

Mineralization may be classified as an Indicated Mineral Resource by the Qualified Person when the nature, quality, quantity and distribution of data are such as to allow confident interpretation of the geological framework and to reasonably assume the continuity of mineralization. The Qualified Person must recognize the importance of the Indicated Mineral Resource category to the advancement of the feasibility of the project. An Indicated Mineral Resource estimate is of sufficient quality to support a Preliminary Feasibility Study which can serve as the basis for major development decisions.

The mineral resource, at various U_3O_8 cut-off grades (COG) is presented in Table 11. Tonnage and grade at variable cut-off values are included to highlight the sensitivity of changes in cut-off to tonnage and grade. Mineral resource tonnage and contained metal in the table has been rounded to reflect the accuracy of the estimate, and numbers may not add due to rounding.

14.11 Mineral Resource Statement

GeoVector has estimated a range of Indicated resources at various U_3O_8 cut-off grades (COG) for the J Zone (Tables 11). The current indicated resource is stated using a grade cut-off of 0.10% U_3O_8.
Using a base case COG of 0.10% U_3O_8 the J Zone deposit is currently estimated to contain:

- An Indicated resource totaling 12,810,000 lbs. based on 291,000 tonnes at an average grade of 2.00% U_3O_8.

Table 11 Resource estimate for the J Zone.

Cut-off Grade (U_3O_8 %)	Tonnes	Specific Gravity	U_3O_8 (%)	
			Grade	Lbs
Indicated				
0.01 %	432,000	2.40	1.40	12,985,000
0.05 %	370,000	2.41	1.60	12,939,000
0.10 %	**291,000**	**2.42**	**2.00**	**12,810,000**
0.50 %	123,000	2.49	4.40	11,923,000
1.0 %	76,000	2.54	6.70	11,171,000
5.0 %	24,000	2.77	16.00	8,446,000
10 %	12,000	2.97	24.00	6,183,000
20 %	5,000	3.25	33.00	3,492,000

14.12 Disclosure

All relevant data and information regarding the Property is included in other sections of this Technical Report. There is no other relevant data or information available that is necessary to make the technical report understandable and not misleading.

14.13 Previous Mineral Resource Estimates

GeoVector Management Inc. (ñGeoVectorò) was contracted in 2011 by Fission to complete an initial resource estimates for the J Zone. The J Zone deposit was estimated to contain an Indicated resource totalling 7,367,000 lbs. based on 168,000 tonnes at an average grade of 2.00% U_3O_8. An additional 1,511,000 lbs. based on 150,000 tonnes averaging 0.50% U_3O_8 is classified as an Inferred mineral resource.

The resource was determined from the 7,377 assay results in 142 drill holes totalling 43,900 m of drilling completed by Fission between January, 2010 and August, 2011. General spacing of the drill holes is 10m-50m. The resource estimate is categorized as Indicated and Inferred as defined by the Canadian Institute of Mining and Metallurgy guidelines for resource reporting. Mineral resources do not demonstrate economic viability, and there is no certainty that these mineral resources will be converted into mineable reserves once economic considerations are applied.

Subsequent to the release of the first resource Fission completed additional drilling on the Property, including step-out and infill drill holes on the J-Zone, which were completed during a winter (January to April, 2012) and a summer (June to August, 2012) drill program.

GeoVector was contracted by Fission in 2012 to complete an updated resource estimates for the J Zone and to prepare a technical report on the updated resource estimate in compliance with the requirements of NI 43-101, based on the results of the 2012 drill programs, GeoVector estimated a range of Indicated and Inferred resources at various U_3O_8 cut-off grades (COG) for the J Zone. The updated Indicated and inferred resources are stated using a grade cut-off of 0.10% U_3O_8. The previous resource statement was made using a grade cut-off of 0.05% U_3O_8. A cut-off grade of 0.10% is considered a reasonable economic cut-off grade for the J Zone to maximize the grade of the resource while maintaining a coherent model of the resource.

Using a base case COG of 0.10% U_3O_8 the J Zone deposit was estimated to contain an Indicated resource totaling 10,284,000 lbs. based on 307,000 tonnes at an average grade of 1.50% U_3O_8. An additional 2,747,000 lbs. based on 138,000 tonnes averaging 0.90% U_3O_8 is classified as an Inferred mineral resource.

The resource was defined by 10,567 assay samples collected from 200 drill holes totaling 62,416 m completed by Fission between January, 2010 and August, 2012. General spacing of the drill holes is 5m-20m.

Fission completed drilling on the Property, including step-out and infill drill holes on the J-Zone during a 2013 winter (08 January to 17 March, 2013) drill program. A total of 68 drill holes were completed totalling 21,012.9 meters (including failed holes). Mineralization was found in 35 holes or 51% of the holes in the program. All holes were targeted to further delineate and expand the mineralized area of the J Zone.

GeoVector was contracted by Denison to complete a new resource estimate for the J Zone based on all drilling completed on the property to date. However, during a review of the previous resource GeoVector identified a significant error in that previous resource estimate. After an in depth evaluation of resource model, interpolation parameters and estimation parameters the error was identified. Essentially all partial resource blocks which intersected the resource model were treated as 100% blocks. This led to an overestimation of the resource volume, tonnes and ultimately the U_3O_8 lbs. Table 12 shows the magnitude of the error by comparing the incorrect results with a corrected re-run of the data at that time.

Table 12 Review of the 2012 resource estimate.

	Cut-off Grade (U_3O_8 %)	Tonnes	U_3O_8 (%)	
			Grade	Lbs
	Indicated			
2012 Reported Resource	0.10%	307,000	1.50	10,284,000
2012 Corrected Resource	0.10%	221,000	1.70	8,239,000
Correction Factor		-28%	11%	-20%
	Inferred			
2012 Reported Resource	0.10%	138,000	0.90	2,747,000
2012 Corrected Resource	0.10%	69,000	0.80	1,276,000
Correction Factor		-50%	-7%	-53%

Differences between the GeoVector corrected 2012 resource model and the 2013 resource model prepared by GeoVector and reported herein are largely due to the following:

- Additional drilling completed by Fission in 2013
- Changes in the specific gravity values used for grade estimation
- Changes in the block model parameters

- Changes in the grade estimation procedures
- Changes in the interpolation parameters

15 ADJACENT PROPERTIES

Adjacent to the east end of J-East, and on trend with the J-Zone deposit, is the Roughrider uranium deposit consisting of 3 contiguous mineral leases (598 ha) that was registered to Hathor Exploration Limited (90%) and Terra Ventures Inc. (10%) and now under the sole ownership of Rio Tinto plc.

Crown mineral lease ML-5544 hosts the East Zone, West Zone, and Far East Zone. A N.I. 43-101-compliant technical report is available for the East and West Zones (Doerksen et al., 2011). The Far East zone is currently undergoing a mineral resource study.

The Roughrider West Zone was discovered during the winter drilling program of February 2008. A hydrothermal clay alteration system was intersected in drillhole MWNE-08-10, while high-grade uranium mineralization (5.29% uranium oxide ("U_3O_8") over a core length interval of 11.9 m) was intersected in drillhole MWNE-08-12. The Roughrider West Zone is defined by approximately 149 diamond drillholes, and has been intersected along a northeast-southwest strike length of approximately 200m with an across-strike extent of 100m. Uranium mineralization occurs at depths of 190m to 290m below surface and is hosted predominantly within basement rocks. Only minor amounts of uranium occur at or above the unconformity.

The Roughrider East Zone was discovered during the summer drilling program in September 2009. Hydrothermal alteration was intersected in a number of earlier drillholes during the summer program. High-grade uranium mineralization (12.71% U_3O_8 over a core length interval of twenty-eight metres) was intersected subsequently in drillhole MWNE-10-170. This zone was delineated by drilling during the winter and summer of 2010. The best intersection to date was obtained in drillhole MWNE-10-648, which intersected 7.75% U_3O_8 over a core length interval of 63.5m. The Roughrider East Zone is currently defined by approximately 88 diamond drillholes (21 of which were used to evaluate the mineral resource), and has a surface projection of approximately 120m long in a north-easterly direction, which corresponds to a down-dip length of approximately 125m, and an across-strike extent of up to 70m. Uranium mineralization has a vertical extent of up to eighty to 100m, starting at depth approximately 250m from surface, and some 30m to 50m below the unconformity. This is slightly deeper than the Roughrider West Zone. Mineralization forms moderately dipping, cigar-shaped shoots along the intersection of these two controlling structures.

A third zone, the Roughrider Far East Zone, was discovered during the winter drilling program in February 2011. The discovery drillhole intersected 1.57 % U_3O_8 over core length of 37.5m. The current outline of the Far East Zone is defined by mineralization in 28 of 40 drillholes completed in the immediate vicinity of Roughrider Far East Zone; weak mineralization in other drillholes is not included in the current outline of the Far East Zone. The best intersection to date is drillhole MWNE-11-715, which intersected 7.91% U_3O_8 over a core length interval of 27.0m.

The Midwest and Midwest A uranium deposits of the Midwest project are two high-grade deposits in the Athabasca Basin owned by Denison (25.17%) and its joint venture partners, AREVA Resources Canada Inc. (ARC) (69.16%) and OURD (Canada) Co., Ltd. (OURD) (5.67%). ARC is the operator/manager. The Midwest project is located adjacent to the main claim group of Fission Energy's Waterbury Lake property and non-contiguous Fission Energy Waterbury Lake property claim S-107367 (near South McMahon Lake) approximately 15 kilometres from the McClean Lake mill, where the Midwest ore is planned to be milled. A N.I. 43-101-compliant technical report is available for the Midwest deposit (Hendry et al., 2006) and for the Midwest A deposit (Dagbert, 2008).

At a 0.3% U_3O_8 cut-off grade for open pit resources, it is estimated that the Indicated Mineral Resources of the Midwest deposit total some 354,000 tonnes at an average grade of 5.50% U_3O_8, and that the Inferred Mineral Resources total some 25,000 tonnes at an average grade of 0.80% U_3O_8. The Authors have been unable to verify this information and this information is not necessarily indicative of the mineralization on the Property that is the subject of the technical report.

At a 0.5% U_3O_8 cut-off grade, it is estimated that the Indicated Mineral Resources of the Midwest A deposit total some 2,200 tonnes at an average grade of 0.48% U_3O_8, and that the Inferred Mineral Resources total some 1,700 tonnes at an average grade of 18.0% U_3O_8. The Authors have been unable to verify this information and this information is not necessarily indicative of the mineralization on the Property that is the subject of the technical report.

16 OTHER RELEVANT DATA AND INFORMATION

There is no other relevant data or information available that is necessary to make the technical report understandable and not misleading. To the Authors knowledge, there are no significant risks and uncertainties that could reasonably be expected to affect the reliability or confidence in the exploration information or mineral resource.

17 INTERPRETATION AND CONCLUSIONS

Fission has been exploring the Waterbury Lake property since 2007 (and as Strathmore since 2004), targeting a high-grade / high-tonnage unconformity style uranium deposit. Exploration undertaken on the Waterbury Lake property has mostly involved airborne and ground geophysics, multi-phase diamond drill campaigns; detailed geochemical sampling of drill core, and ground based geochemical sampling. Approximately 89,000m of core in 268 drill holes have been completed on the property over eleven drill programs and with each subsequent drill program an increasingly detailed understanding of the property geology has developed. The 3D modelling, geological and geophysical interpretation of available data led to the discovery and delineation of the J Zone uranium deposit.

Denison recently acquired a 60% interest in the Property through a plan of arrangement with Fission. As part of the Arrangement, Denison acquired a portfolio of uranium exploration projects held by Fission; including Fission's 60% interest in the Waterbury Lake uranium project. The Arrangement received final approval of the British Columbia Supreme Court and TSX Venture Exchange on April 25, 2013.

GeoVector was contracted by Denison to complete a new resource estimate for the J Zone and to prepare a technical report in compliance with the requirements of NI 43-101, based on the results of the 2013 drill program. GeoVector estimated a range of Indicated resources at various U_3O_8 cut-off grades for the J Zone. The Indicated resource is stated above a grade cut-off grade of 0.10% U_3O_8. A cut-off grade of 0.10% is considered a reasonable economic cut-off grade for the J Zone to maximize the grade of the resource while maintaining a coherent model of the resource.

Using a base case COG of 0.10% U_3O_8 the J Zone deposit is currently estimated to contain:

- An Indicated resource totaling 12,810,000 lbs. based on 291,000 tonnes at an average grade of 2.00% U_3O_8.

The resource is defined by 12,551 assay samples collected from 268 drill holes totaling 88,770m completed by Fission between January, 2010 and April, 2013.

It is in the Authorõs opinion that the exploration work by Fission was professionally managed and uses procedures meeting or exceeding generally accepted industry best practices. After review, the Authors are of the opinion that the exploration data collected by Fission are sufficiently reliable to interpret with confidence the boundaries of the uranium mineralization for the J Zone and support evaluation and classification of mineral resources in accordance with generally accepted CIM ñEstimation of Mineral

Resource and Mineral Reserve Best Practicesò and CIM ñDefinition Standards for Mineral Resources and Mineral Reservesò guidelines.

18 RECOMMENDATIONS

Continued drilling is recommended for the Waterbury Lake property with priorities as follows:

- Winter 2013 drilling was designed to test for additional associated mineralization westward along trend to assess the potential for mineralization beyond the previously defined western boundary. Two westward step-out drill holes (WAT13-380 and 383) extended the J Zone mineralized boundary an additional 20m west to line 560W (WAT13-380). This area is a target for further drilling.

- 2012 winter and summer drilling identified new zones of intermittent weak to moderate mineralization west of the J Zone, including Oban, Talisker, Summit and Murphy Lake. The drill results suggest that there are areas within the J Zone area which are still open for expansion and can potentially host significant uranium grade. These areas are targets for further drilling.

- The J Zone deposit should be examined at a conceptual level to determine the viability of a uranium deposit in this area. This examination should lead to the preparation of a preliminary economic assessment. In preparation for this study, Denison should initiate environmental studies as well as additional metallurgical testing.

Exploration procedures and protocols used by Fission meet or generally exceed accepted industry best practices. These procedures and protocols should be continued in any future exploration work by Denison. In reviewing the geological and block models constructed for the J Zone, it is evident that density variability is a significant characteristic of the uranium mineralization. It is strongly recommended that the specific gravity database be augmented to better define the spatial variability of the specific gravity in the J Zone resource domain. The ratio of specific gravity to assays for the current estimate is in the order of 1:8. This ratio should be increased to 1:4 to 1:5 or better.

The total cost for the recommended work is estimated at approximately CN$4.0 million and includes a provision of contingencies and administrative cost (Table 13).

Table 13 Recommended Work Program.

Activity	Estimated Cost (CDN$)
Diamond Drilling (Winter)	$3,500,000
Scoping Study/PEA	$250,000
Baseline Environmental Studies	$200,000
Total	$3,950,000

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DATE AND SIGNATURE PAGE

This report titled ñMINERAL RESOURCE ESTIMATE FOR DENISON MINES CORP. ON THE J ZONE URANIUM DEPOSIT, WATERBURY LAKE PROPERTYò located in the Athabasca Basin, Northern Saskatchewan; dated September 6th, 2013 (the ñTechnical Reportò) for Denison Mines Corp. was prepared and signed by the following authors:

The effective date of the updated resource is September 6th, 2013.
The report is dated effective September 6th, 2013.

Signed by:

Alan Sexton, M.Sc., P.Geo., GeoVector Management Inc.
Allan Armitage, Ph. D., P. Geol., GeoVector Management Inc.

CERTIFICATES OF AUTHORS

QP CERTIFICATE – ALAN SEXTON

To Accompany the report titled "MINERAL RESOURCE ESTIMATE FOR DENISON MINES CORP. ON THE J ZONE URANIUM DEPOSIT, WATERBURY LAKE PROPERTY" located in the Athabasca Basin, northern Saskatchewan; dated September 6th, 2013 (the "Technical Report").

I, Alan J. Sexton, M. Sc., P. Geo. of 41 Barrhaven Crescent, Nepean, Ontario, hereby certify that:

1. I am currently a consulting geologist with GeoVector Management Inc., 10 Green Street Suite 312 Ottawa, Ontario, Canada K2J 3Z6

2. I am a graduate of Saint Mary's University having obtained the degree of Bachelor of Science – Honours in Geology in 1982.

3. I am a graduate of Acadia University having obtained the degree of Masters of Science in Geology in 1988.

4. I have been employed as a geologist for every field season (May – October) from 1979 to 1984. I have been continuously employed as a geologist since May of 1985.

5. I have been involved in mineral exploration for gold, silver, copper, lead, zinc, nickel, uranium and diamonds in Canada and the United States at the grass roots to advanced exploration stage, including resource estimation since 1979.

6. I am a member of the Association of Professional Geoscientists of Ontario (APGO) and use the title of Professional Geologist (P.Geo.).

7. I have read the definition of "Qualified Person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation of my professional association and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101.

8. I am responsible for all sections of the Technical Report, which is written for Denison Mines Corp.

9. I personally inspected the Property and drill core on August 1st, 2012.

10. I have had prior involvement with the property that is the subject of the Technical Report, which included completion of a Technical Report on the Revised Resource Estimate on the J Zone Uranium Deposit Uranium Deposit for Fission Energy Corp. dated January 18th, 2013.

11. I am independent of Denison Mines Corp. as defined by Section 1.5 of NI 43-101.

12. 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.

13. I have read NI 43-101 and Form 43-101F1 (the "Form"), and the Technical Report has been prepared in compliance with NI 43-101 and the Form.

14. Signed and dated this 6h day of September, 2013 at Nepean, Ontario.

Alan J. Sexton, , M. Sc., P. Geo.

PROFESSIONAL GEOSCIENTISTS
ALAN J. SEXTON
PRACTISING MEMBER
0563
ONTARIO

QP CERTIFICATE – ALLAN ARMITAGE

To Accompany the report titled "MINERAL RESOURCE ESTIMATE FOR DENISON MINES CORP. ON THE J ZONE URANIUM DEPOSIT, WATERBURY LAKE PROPERTY" located in the Athabasca Basin, Northern Saskatchewan; dated September 6th, 2013 (the "Technical Report")

I, Allan E. Armitage, Ph. D., P. Geol. of 62 Riverfront Way, Fredericton, New Brunswick, hereby certify that:

1. I am a consulting geologist with GeoVector Management Inc., 10 Green Street Suite 312 Ottawa, Ontario, Canada K2J 3Z6

2. I am a graduate of Acadia University having obtained the degree of Bachelor of Science – Honours in Geology in 1989, a graduate of Laurentian University having obtained the degree of Masters of Science in Geology in 1992 and a graduate of the University of Western Ontario having obtained a Doctor of Philosophy in Geology in 1998.

3. I have been employed as a geologist for every field season (May – October) from 1987 to 1996. I have been continuously employed as a geologist since March of 1997.

4. I have been involved in mineral exploration and resource modeling for gold, silver, copper, lead, zinc, nickel, uranium and diamonds in Canada, Mexico, Honduras, Bolivia, Chili, and the Philippines at the grass roots to advanced exploration stage, including resource estimation since 1991.

5. I am a member of the Association of Professional Engineers, Geologists and Geophysicists of Alberta and use the title of Professional Geologist (P.Geol.) (License No.64456; 1999).

6. I am a member of the Association of Professional Engineers and Geoscientists of British Columbia and use the designation (P.Geo.) (Licence No. 38144; 2012).

7. I have read the definition of "Qualified Person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation of my professional association and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101.

8. I am responsible for all sections of the Technical Report which is written for Denison Mines Corp.

9. I personally inspected the Property and drill core on October 6 to 8, 2010.

10. I have had prior involvement with the property that is the subject of the Technical Report, which included completion of the Technical Report on the Waterbury Lake Uranium Project Including Resource Estimate on the J Zone Uranium Deposit for Fission Energy Corp. dated February 29th, 2012 and completion of a Technical Report on the Revised Resource Estimate on the J Zone Uranium Deposit for Fission Energy Corp. dated January 18th, 2013.

11. I am independent of Denison Mines Corp. as defined by Section 1.5 of NI 43-101.

12. 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.

13. I have read NI 43-101 and Form 43-101F1 (the "Form"), and the Technical Report has been prepared in compliance with NI 43-101 and the Form.

14. Signed and dated this 6th day of September, 2013 at Vancouver, British Columbia.

Allan Armitage, Ph.D., P.Geol.

PROFESSIONAL GEOLOGIST ALLAN ARMITAGE ALBERTA

APPENDIX 1

Listing of Drill Holes Completed on the J-Zone and used for the Resource Estimate

HOLE-ID	Year	Easting	Northing	Elevation	Length (m)	Azimuth	Dip
WAT10-062	2010	555900.94	6466767.50	481.20	401.00	227.60	-88.00
WAT10-063	2010	555938.81	6466878.00	479.60	137.00	201.20	-75.10
WAT10-063A	2010	555938.56	6466878.50	479.60	344.00	188.70	-75.50
WAT10-064D	2010	555964.56	6466895.00	479.70	341.00	196.20	-73.00
WAT10-065A	2010	555946.44	6466783.50	479.00	334.00	327.40	-77.80
WAT10-066	2010	555946.44	6466783.50	479.00	320.00	331.20	-80.70
WAT10-067	2010	555946.44	6466784.00	479.00	326.00	333.00	-84.30
WAT10-068	2010	555946.44	6466783.50	479.00	254.00	329.70	-71.30
WAT10-069A	2010	555938.75	6466796.00	479.00	269.00	330.50	-71.40
WAT10-070B	2010	555909.50	6466816.50	479.00	282.00	148.20	-89.40
WAT10-071	2010	555915.13	6466807.50	479.00	275.00	159.60	-89.90
WAT10-072C	2010	555904.44	6466825.00	479.00	278.00	340.80	-89.40
WAT10-073	2010	555895.50	6466810.00	479.00	287.00	283.60	-89.20
WAT10-074	2010	555891.94	6466817.50	479.00	281.00	253.00	-89.20
WAT10-075	2010	555900.81	6466801.00	479.00	275.00	186.00	-89.30
WAT10-076A	2010	555868.38	6466803.50	479.00	275.00	108.10	-89.00
WAT10-077	2010	555874.94	6466814.50	479.00	275.00	178.50	-89.30
WAT10-078	2010	555501.19	6466951.00	479.52	353.00	177.70	-56.40
WAT10-079	2010	555872.31	6466824.50	479.00	305.00	0.00	-90.00
WAT10-080	2010	555425.25	6466920.50	485.55	350.00	176.30	-63.20
WAT10-081	2010	555882.75	6466807.50	479.00	275.00	218.30	-89.40
WAT10-083B	2010	555887.19	6466827.50	479.00	296.00	4.90	-88.90
WAT10-085	2010	555863.19	6466812.00	479.00	284.00	61.80	-89.90
WAT10-087	2010	555857.75	6466818.50	479.00	275.00	236.80	-89.80
WAT10-089	2010	555853.00	6466828.00	479.00	300.00	178.60	-89.10
WAT10-090A	2010	555780.00	6466760.00	479.00	401.00	313.20	-71.00
WAT10-091	2010	555920.75	6466800.00	479.00	275.00	243.10	-89.30
WAT10-092A	2010	555587.00	6466910.00	479.60	455.00	130.50	-52.30
WAT10-093	2010	555843.44	6466813.50	479.00	291.00	342.20	-89.20
WAT10-094A	2010	556007.75	6466828.00	479.00	310.00	225.40	-89.90
WAT10-095	2010	555992.31	6466824.00	479.00	296.00	246.70	-89.20
WAT10-096	2010	555959.19	6466796.00	479.00	311.00	329.80	-80.30
WAT10-097	2010	555797.63	6466984.00	479.50	293.00	150.25	-57.00
WAT10-098A	2010	555883.56	6466837.00	479.00	299.00	149.75	-90.00

HOLE-ID	Year	Easting	Northing	Elevation	Length (m)	Azimuth	Dip
WAT10-099	2010	555868.50	6466835.00	479.00	305.00	0.00	-90.00
WAT10-100	2010	556032.00	6466851.00	479.00	350.00	9.75	-90.00
WAT10-101B	2010	555750.13	6466973.00	480.00	365.00	150.75	-57.00
WAT10-102	2010	556040.19	6466863.00	479.00	323.00	0.00	-90.00
WAT10-103	2010	555848.00	6466804.00	479.00	275.00	0.00	-90.00
WAT10-104	2010	555853.63	6466795.00	479.00	275.00	0.00	-90.00
WAT10-105	2010	555827.38	6466807.00	479.00	302.00	0.00	-90.00
WAT10-106	2010	555705.00	6466967.00	480.00	383.00	150.75	-55.00
WAT10-107A	2010	555742.00	6466781.00	479.00	287.00	0.00	-90.00
WAT10-108	2010	555726.63	6466776.00	479.00	302.00	9.75	-90.00
WAT10-109	2010	555900.50	6466835.00	479.00	302.00	0.00	-90.00
WAT10-110A	2010	556050.19	6466872.00	479.00	299.00	0.00	-90.00
WAT10-111D	2010	555945.88	6466876.00	479.00	284.00	182.75	-75.00
WAT10-112	2010	555568.69	6466900.00	480.00	344.00	131.75	-52.30
WAT11-113	2011	555864.37	6466839.33	478.29	290.00	27.15	-89.18
WAT11-114	2011	555887.89	6466798.42	478.29	290.00	61.07	-89.57
WAT11-115A	2011	555896.70	6466782.80	478.29	290.00	82.20	-86.00
WAT11-116	2011	555879.18	6466842.98	478.29	299.00	99.42	-89.55
WAT11-117A	2011	555816.75	6466800.47	478.29	320.00	30.34	-89.25
WAT11-118	2011	555713.44	6466827.54	478.29	305.00	267.24	-89.59
WAT11-119	2011	555821.13	6466792.87	478.29	296.00	174.76	-89.56
WAT11-120	2011	555754.28	6466788.05	478.29	290.00	278.45	-88.96
WAT11-121A	2011	555826.21	6466783.93	478.29	293.00	305.21	-89.94
WAT11-122	2011	555495.20	6466745.50	480.93	323.00	118.38	-88.41
WAT11-123	2011	555704.70	6466783.59	478.29	299.00	86.68	-89.06
WAT11-124	2011	555810.90	6466809.00	478.29	323.00	37.06	-89.28
WAT11-125	2011	555947.90	6466888.30	478.90	293.00	196.80	-79.30
WAT11-127	2011	555789.46	6466786.53	478.29	302.00	225.97	-89.27
WAT11-129	2011	556017.97	6466841.31	478.89	296.00	227.34	-89.58
WAT11-131	2011	555789.46	6466776.57	478.27	302.00	90.56	-89.43
WAT11-132	2011	555975.96	6466795.05	478.29	290.00	322.80	-81.10
WAT11-133	2011	555495.13	6466755.29	480.97	305.00	9.41	-89.67
WAT11-134	2011	555789.42	6466767.16	478.29	293.00	226.31	-89.85
WAT11-135	2011	555494.67	6466735.95	479.77	299.00	101.28	-88.47
WAT11-136	2011	555975.96	6466795.05	478.27	332.00	327.65	-78.62
WAT11-137B	2011	555789.30	6466797.01	478.29	317.00	11.32	-89.38
WAT11-138E	2011	555975.96	6466795.05	478.27	290.00	324.75	-83.69
WAT11-139	2011	555495.18	6466764.76	480.40	299.00	209.19	-89.28
WAT11-140	2011	555790.07	6466805.89	478.29	302.00	334.32	-89.67

HOLE-ID	Year	Easting	Northing	Elevation	Length (m)	Azimuth	Dip
WAT11-141	2011	555495.22	6466774.98	481.57	323.00	313.23	-89.18
WAT11-142A	2011	555836.90	6466795.27	478.29	294.00	0.27	-89.78
WAT11-143	2011	555760.54	6466777.88	478.24	302.00	38.41	-89.39
WAT11-144	2011	555480.57	6466745.50	481.96	301.00	333.11	-88.40
WAT11-145	2011	555805.96	6466790.92	478.29	311.00	220.21	-89.54
WAT11-146	2011	555774.90	6466790.01	478.37	293.00	327.69	-89.89
WAT11-148B	2011	556017.94	6466841.18	478.29	338.00	330.00	-86.70
WAT11-149	2011	555774.94	6466779.92	478.29	302.00	342.79	-89.40
WAT11-151	2011	555775.16	6466770.93	478.29	299.00	326.20	-89.81
WAT11-152A	2011	555806.32	6466801.33	478.29	299.00	205.73	-88.92
WAT11-154	2011	555774.98	6466799.65	478.29	299.00	178.02	-89.52
WAT11-155	2011	555805.84	6466780.83	478.29	317.00	192.93	-89.59
WAT11-157	2011	555985.94	6466807.04	478.29	302.00	326.23	-82.91
WAT11-158A	2011	555760.62	6466766.45	478.29	302.00	24.08	-89.71
WAT11-160	2011	555480.30	6466756.04	484.94	305.00	36.63	-89.45
WAT11-162	2011	555512.33	6466751.14	481.69	311.00	74.96	-88.80
WAT11-163	2011	555825.17	6466815.73	478.29	329.00	253.16	-89.18
WAT11-164	2011	555775.04	6466809.96	478.29	327.00	321.25	-89.38
WAT11-165	2011	555480.41	6466847.33	480.60	305.00	178.97	-69.80
WAT11-167	2011	555729.88	6466766.63	478.29	311.00	38.79	-89.47
WAT11-168	2011	555519.40	6466764.00	483.84	299.00	50.92	-89.59
WAT11-170	2011	555760.24	6466786.81	478.29	320.00	311.42	-89.63
WAT11-171	2011	555565.65	6466758.35	482.51	302.00	189.24	-88.44
WAT11-173	2011	555745.17	6466770.52	478.29	320.00	213.24	-89.11
WAT11-174	2011	555583.30	6466840.30	480.94	326.00	158.00	-66.20
WAT11-175C	2011	555760.22	6466798.79	478.29	299.00	64.40	-89.33
WAT11-177	2011	555745.35	6466792.24	478.29	314.00	289.05	-89.30
WAT11-178	2011	555625.16	6466864.01	479.18	314.00	155.75	-61.80
WAT11-180	2011	555715.76	6466767.70	478.29	299.00	301.09	-89.37
WAT11-181	2011	555539.41	6466885.39	479.52	320.00	164.55	-59.93
WAT11-183	2011	555699.79	6466769.88	478.29	317.00	127.86	-89.13
WAT11-184A	2011	555539.34	6466885.64	480.42	344.00	163.85	-55.82
WAT11-185	2011	555700.03	6466779.96	478.29	305.00	63.44	-89.19
WAT11-186	2011	555625.07	6466863.74	479.18	302.00	174.25	-62.25
WAT11-187	2011	555728.09	6466788.97	478.29	308.00	313.54	-89.92
WAT11-188	2011	555625.11	6466863.93	479.22	320.00	152.00	-61.00
WAT11-189	2011	555729.97	6466756.93	478.29	302.00	340.12	-89.72
WAT11-190	2011	555623.72	6466890.15	481.49	341.00	150.00	-56.81
WAT11-192A	2011	555626.61	6466863.48	479.38	308.00	167.00	-63.87

HOLE-ID	Year	Easting	Northing	Elevation	Length (m)	Azimuth	Dip
WAT11-194	2011	555626.76	6466863.11	479.13	320.00	147.00	-64.96
WAT11-195A	2011	555390.46	6466909.68	485.27	350.00	181.00	-53.53
WAT11-196	2011	555626.59	6466862.68	479.06	317.00	157.60	-63.60
WAT11-198C	2011	555604.83	6466863.38	479.77	335.00	156.70	-64.80
WAT11-200	2011	555615.03	6466863.49	479.35	326.00	161.30	-65.30
WAT11-202	2011	555583.16	6466839.84	480.57	311.00	158.40	-70.30
WAT11-204A	2011	555562.37	6466840.03	481.70	331.00	161.70	-72.50
WAT11-206	2011	555539.17	6466885.47	478.07	341.00	167.70	-61.80
WAT11-208	2011	555446.08	6466894.82	481.76	350.00	175.80	-60.80
WAT11-209	2011	555446.08	6466894.65	481.59	350.00	173.50	-57.10
WAT11-210A	2011	555415.37	6466908.59	485.16	350.00	178.10	-54.60
WAT11-212	2011	555415.39	6466908.40	485.40	359.00	176.30	-51.10
WAT11-214A	2011	555391.10	6466909.21	485.14	350.00	176.90	-56.50
WAT11-216A	2011	555625.50	6466889.41	479.63	320.00	144.80	-58.80
WAT12-218A	2012	555594.90	6466791.10	481.80	299.00	302.90	-88.90
WAT12-219	2012	555458.80	6466748.90	482.50	311.00	91.20	-89.00
WAT12-220	2012	555593.20	6466768.40	482.00	320.00	273.60	-89.00
WAT12-221	2012	555462.10	6466897.50	480.70	308.90	176.90	-56.50
WAT12-222	2012	555595.50	6466860.20	480.40	332.00	178.80	-69.00
WAT12-225B	2012	555614.30	6466864.00	479.70	317.00	152.90	-65.00
WAT12-226	2012	555446.50	6466894.70	481.80	320.00	175.20	-57.00
WAT12-228	2012	555446.40	6466894.70	481.80	320.00	178.30	-55.90
WAT12-229	2012	555630.10	6466871.20	479.30	308.00	163.00	-65.20
WAT12-230B	2012	555446.50	6466888.80	481.70	343.22	179.60	-54.90
WAT12-231	2012	555630.20	6466862.50	479.20	320.00	162.20	-67.90
WAT12-232	2012	555415.30	6466917.90	485.30	347.00	178.40	-55.10
WAT12-234	2012	555630.30	6466881.50	479.30	332.00	160.90	-66.80
WAT12-236	2012	555421.20	6466898.90	486.30	341.00	177.20	-60.60
WAT12-237B	2012	555621.50	6466872.80	479.10	359.00	162.00	-67.50
WAT12-238	2012	555440.60	6466884.90	482.20	341.00	180.80	-59.60
WAT12-240A	2012	555445.40	6466886.10	481.60	338.00	188.50	-62.70
WAT12-242	2012	555623.30	6466864.60	478.90	323.00	177.20	-69.60
WAT12-244	2012	555615.00	6466846.70	480.00	311.00	166.50	-73.30
WAT12-247	2012	555615.00	6466837.00	480.50	326.00	169.70	-72.90
WAT12-249A	2012	555610.20	6466850.80	480.30	320.00	180.60	-72.70
WAT12-253B	2012	555609.80	6466861.00	479.80	332.00	178.30	-70.40
WAT12-257A	2012	555603.90	6466850.20	480.70	347.00	177.30	-75.90
WAT12-261	2012	555579.90	6466860.30	480.30	335.00	178.50	-72.80
WAT12-265B	2012	555580.00	6466849.20	480.60	329.00	175.30	-69.30

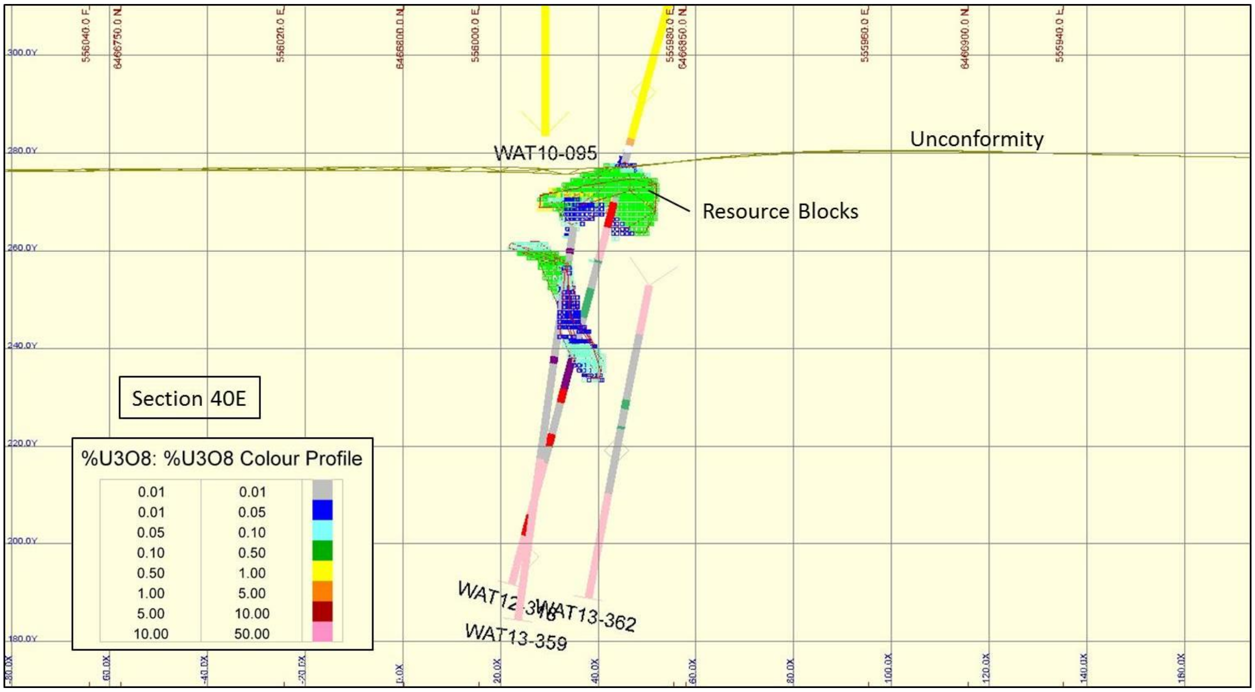
HOLE-ID	Year	Easting	Northing	Elevation	Length (m)	Azimuth	Dip
WAT12-269B	2012	555566.90	6466858.50	481.50	323.00	176.90	-70.40
WAT12-274	2012	555621.10	6466880.90	479.90	353.00	159.50	-66.50
WAT12-275	2012	555439.80	6466877.30	482.50	320.00	176.60	-59.60
WAT12-277	2012	555635.40	6466861.20	479.20	302.00	157.50	-69.80
WAT12-278	2012	555473.10	6466848.10	480.90	305.00	180.20	-68.40
WAT12-280	2012	555625.30	6466876.00	480.00	332.00	172.90	-68.80
WAT12-281	2012	555399.60	6466893.30	485.20	342.50	179.70	-54.40
WAT12-283	2012	555625.00	6466880.90	480.00	320.00	179.30	-70.80
WAT12-284C	2012	555399.80	6466897.60	485.50	332.00	177.40	-55.00
WAT12-286	2012	555518.60	6466861.10	480.90	315.00	175.70	-61.60
WAT12-288	2012	555535.00	6466860.20	480.70	320.00	178.80	-69.50
WAT12-289	2012	555390.40	6466908.90	485.40	323.00	176.40	-50.90
WAT12-290	2012	555534.50	6466870.00	480.70	323.00	179.10	-71.10
WAT12-293	2012	555535.00	6466864.70	480.50	323.00	176.50	-66.00
WAT12-295	2012	555534.80	6466842.90	480.70	320.00	175.30	-69.70
WAT12-298	2012	555527.90	6466863.10	481.20	325.00	169.20	-64.10
WAT12-299	2012	555344.00	6466911.50	484.70	356.00	168.30	-55.30
WAT12-300	2012	555549.70	6466869.50	480.50	329.00	174.80	-67.10
WAT12-301	2012	555330.20	6466877.80	478.20	329.00	159.70	-59.60
WAT12-302	2012	555549.80	6466850.50	480.90	314.00	179.60	-69.10
WAT12-303	2012	555329.60	6466878.90	478.10	329.00	181.00	-56.00
WAT12-304A	2012	555620.80	6466856.50	479.60	299.00	156.80	-72.40
WAT12-305	2012	555549.02	6466838.04	482.70	311.00	177.80	-74.10
WAT12-306	2012	555948.00	6466896.00	479.00	206.00	195.00	-72.00
WAT12-306A	2012	555942.72	6466899.28	478.96	305.00	200.30	-73.70
WAT12-307	2012	555519.61	6466842.47	480.55	317.00	181.30	-73.10
WAT12-308A	2012	555519.70	6466844.36	480.28	311.00	179.60	-76.00
WAT12-309	2012	555935.21	6466901.06	478.98	299.00	197.00	-72.10
WAT12-310	2012	555507.26	6466830.37	481.37	311.00	177.00	-71.00
WAT12-311	2012	555934.74	6466901.00	478.58	341.00	215.90	-71.10
WAT12-312	2012	555507.14	6466835.18	481.22	311.00	177.50	-73.00
WAT12-313B	2012	555953.94	6466872.55	479.10	284.00	179.90	-76.70
WAT12-314	2012	555946.14	6466899.99	479.69	286.60	152.10	-70.20
WAT12-316	2012	555614.14	6466847.72	479.40	320.00	176.40	-76.40
WAT12-317	2012	555598.85	6466840.92	480.57	308.00	178.50	-76.80
WAT12-318	2012	555955.14	6466889.85	479.20	299.00	145.60	-73.80
WAT12-319	2012	555568.82	6466822.86	482.50	302.00	174.60	-78.20
WAT12-320	2012	555955.33	6466890.04	479.08	272.00	132.60	-72.70
WAT12-321	2012	555625.50	6466888.03	480.21	310.00	155.00	-62.50

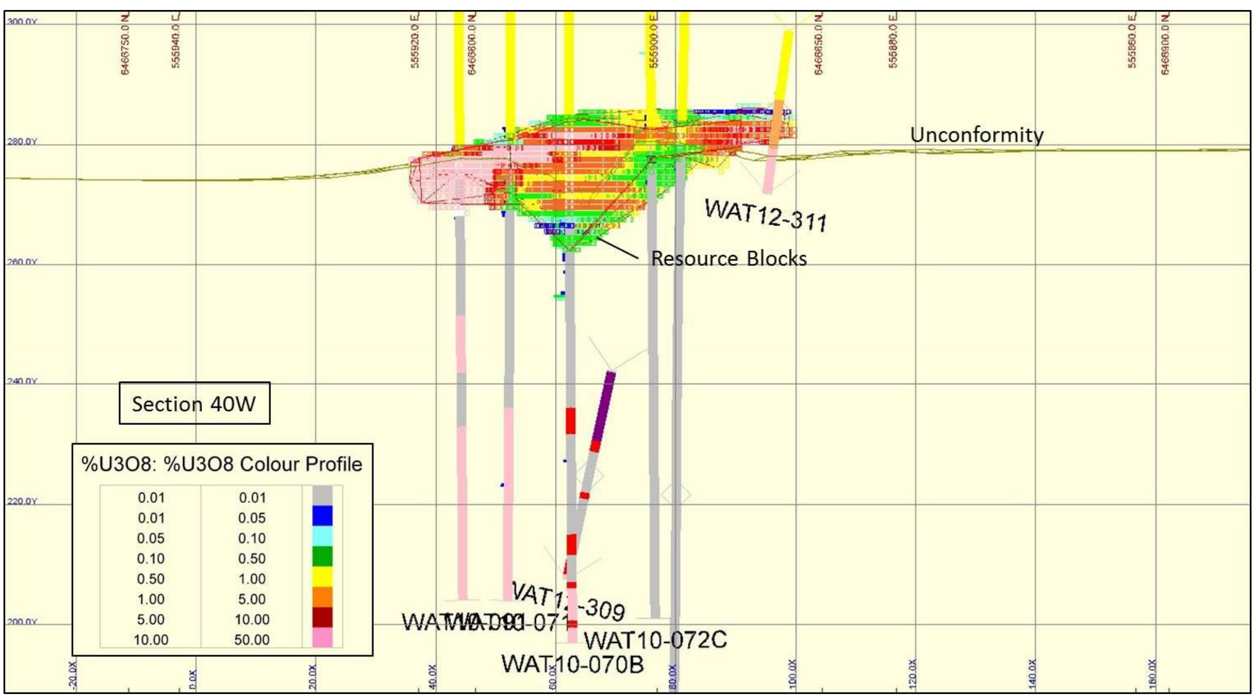
HOLE-ID	Year	Easting	Northing	Elevation	Length (m)	Azimuth	Dip
WAT12-322	2012	555773.43	6466964.33	480.11	347.00	146.50	-52.50
WAT12-323	2012	555630.22	6466895.93	480.13	332.00	146.80	-62.80
WAT12-324	2012	555569.04	6466818.36	482.43	302.00	171.30	-76.60
WAT12-325	2012	555619.04	6466885.55	480.21	307.00	159.30	-68.80
WAT12-326	2012	555505.04	6466833.48	481.06	302.00	174.30	-77.40
WAT12-327	2012	555613.97	6466857.87	479.92	317.00	175.80	-76.70
WAT12-328	2012	555524.13	6466836.06	480.82	309.50	178.90	-73.50
WAT12-329	2012	555553.78	6466846.20	481.75	308.00	177.20	-75.20
WAT12-330	2012	555614.48	6466866.85	479.65	302.00	174.40	-75.80
WAT13-331	2013	555643.69	6466891.63	479.81	323.00	172.80	-71.20
WAT13-332	2013	555310.80	6466908.79	484.11	383.00	169.20	-74.10
WAT13-333	2013	555553.96	6466796.05	481.77	302.00	179.30	-80.20
WAT13-334	2013	555314.00	6466837.00	479.00	320.00	180.90	-73.50
WAT13-335	2013	555314.10	6466837.42	479.29	308.00	178.90	-71.50
WAT13-336	2013	555539.30	6466816.35	484.27	299.00	182.70	-73.90
WAT13-337	2013	555260.67	6466782.28	487.05	314.00	176.50	-76.30
WAT13-338	2013	555526.11	6466839.09	483.04	317.00	181.30	-76.20
WAT13-339	2013	555479.36	6466784.99	482.77	299.00	179.00	-78.80
WAT13-340A	2013	555270.53	6466767.31	486.13	272.00	189.40	-79.10
WAT13-341	2013	555479.07	6466799.85	482.24	311.00	183.40	-78.80
WAT13-342	2013	555262.88	6466957.38	478.89	302.00	177.00	-83.00
WAT13-343	2013	555793.65	6466812.07	478.98	284.00	185.30	-78.10
WAT13-344A	2013	555310.88	6466909.12	484.16	302.00	173.50	-80.50
WAT13-345	2013	555779.00	6466822.44	478.98	260.00	173.90	-87.00
WAT13-346	2013	555482.90	6466765.27	482.53	320.30	271.80	-74.50
WAT13-347A	2013	555704.01	6466826.45	478.97	299.00	187.10	-81.30
WAT13-348	2013	556032.91	6466874.15	478.96	332.00	181.20	-85.70
WAT13-349A	2013	555688.98	6466825.77	478.96	299.00	176.70	-81.10
WAT13-350	2013	555479.43	6466756.11	483.17	350.00	272.20	-74.00
WAT13-351	2013	556018.90	6466887.80	478.99	290.00	180.90	-79.10
WAT13-352A	2013	555675.41	6466797.36	478.70	299.00	174.80	-79.70
WAT13-353A	2013	556034.05	6466880.80	478.93	320.00	17.00	-89.00
WAT13-354	2013	555483.39	6466773.00	482.44	350.00	266.90	-73.50
WAT13-355	2013	555688.98	6466813.47	478.95	290.00	176.90	-78.80
WAT13-356	2013	556004.18	6466837.68	478.96	263.00	175.10	-86.00
WAT13-357A	2013	555466.70	6466761.88	484.28	299.00	264.90	-75.30
WAT13-358	2013	555463.60	6466824.14	480.12	311.00	186.10	-76.70
WAT13-359	2013	555988.44	6466870.53	478.96	299.00	164.70	-79.50
WAT13-360	2013	555464.15	6466789.05	482.02	299.00	190.60	-83.30

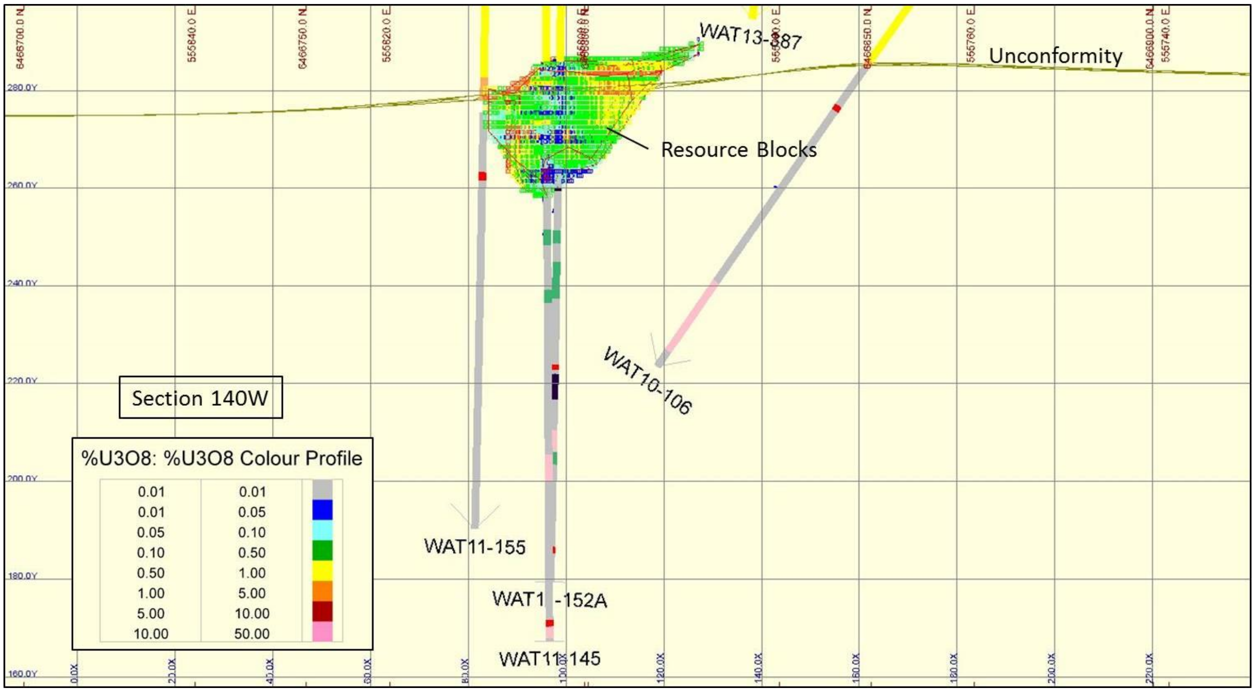
HOLE-ID	Year	Easting	Northing	Elevation	Length (m)	Azimuth	Dip
WAT13-361A	2013	555474.54	6466748.24	483.01	299.00	269.10	-74.20
WAT13-362	2013	555988.91	6466902.36	479.03	299.00	173.30	-76.00
WAT13-363	2013	555449.32	6466815.94	479.82	299.00	182.70	-69.60
WAT13-364	2013	555464.41	6466756.13	484.12	297.50	275.00	-77.40
WAT13-365	2013	555963.75	6466872.02	479.64	299.00	166.50	-82.80
WAT13-366	2013	555433.71	6466798.07	479.57	299.00	170.50	-83.30
WAT13-367	2013	555963.75	6466872.02	479.64	299.00	171.00	-75.70
WAT13-368	2013	555459.12	6466772.08	483.30	302.00	269.00	-80.40
WAT13-369	2013	555433.62	6466794.85	479.74	299.00	187.60	-78.90
WAT13-370	2013	555958.94	6466847.91	479.63	293.00	174.90	-74.70
WAT13-371	2013	555450.03	6466770.96	482.82	302.00	277.60	-81.00
WAT13-372	2013	555954.24	6466893.78	479.50	299.00	180.70	-73.30
WAT13-373	2013	555808.87	6466908.41	478.97	299.00	182.60	-77.60
WAT13-374	2013	555462.05	6466781.28	482.32	299.00	268.70	-82.50
WAT13-375	2013	555824.07	6466909.28	478.94	299.00	182.50	-77.40
WAT13-376	2013	555929.03	6466866.84	479.34	330.00	174.60	-81.10
WAT13-377	2013	555428.75	6466808.54	479.39	293.00	200.40	-70.90
WAT13-378A	2013	555314.87	6466765.82	484.26	299.00	95.80	-81.50
WAT13-379	2013	555838.94	6466860.11	479.22	299.00	175.20	-80.10
WAT13-380	2013	555423.77	6466813.54	478.71	299.00	216.70	-65.70
WAT13-381	2013	555839.23	6466837.21	478.95	299.00	173.80	-75.20
WAT13-382	2013	555553.35	6466834.58	483.54	299.00	186.20	-81.90
WAT13-383	2013	555343.71	6466773.23	478.76	299.00	130.00	-76.50
WAT13-384	2013	555817.81	6466874.83	478.92	299.00	163.30	-81.30
WAT13-385	2013	555568.24	6466835.29	482.37	299.00	183.20	-79.80
WAT13-386	2013	555348.72	6466792.08	479.28	302.00	168.20	-76.00
WAT13-387	2013	555779.11	6466854.68	478.98	299.00	177.30	-82.80
WAT13-388	2013	555614.40	6466870.40	480.52	299.00	185.50	-78.10
WAT13-389B	2013	555752.25	6466854.64	478.94	299.00	176.60	-75.10
WAT13-390	2013	555493.74	6466815.89	483.62	290.00	181.70	-82.80
WAT13-391	2013	555629.95	6466878.96	488.11	291.00	179.20	-72.40
WAT13-392	2013	555463.57	6466809.26	480.70	302.00	186.70	-82.30
WAT13-393	2013	555673.91	6466786.47	478.74	283.40	176.20	-81.20
WAT13-394	2013	555660.52	6466830.73	478.95	314.00	176.90	-84.10
WAT13-395	2013	555680.95	6466825.68	478.95	299.00	177.10	-79.60
WAT13-396	2013	555433.44	6466799.60	479.51	302.00	175.80	-84.70
WAT13-397	2013	555642.84	6466882.09	479.77	299.00	175.50	-75.20
WAT13-398	2013	555661.44	6466821.00	478.96	296.00	163.60	-85.10

APPENDIX 2

Representative Drill Sections of the J Zone Showing Drill Hole Locations, J Zone Resource Model and Resource Blocks and the Unconformity







WAT13-387
Unconformity
Resource Blocks
WAT10-106
Section 140W
%U3O8: %U3O8 Colour Profile
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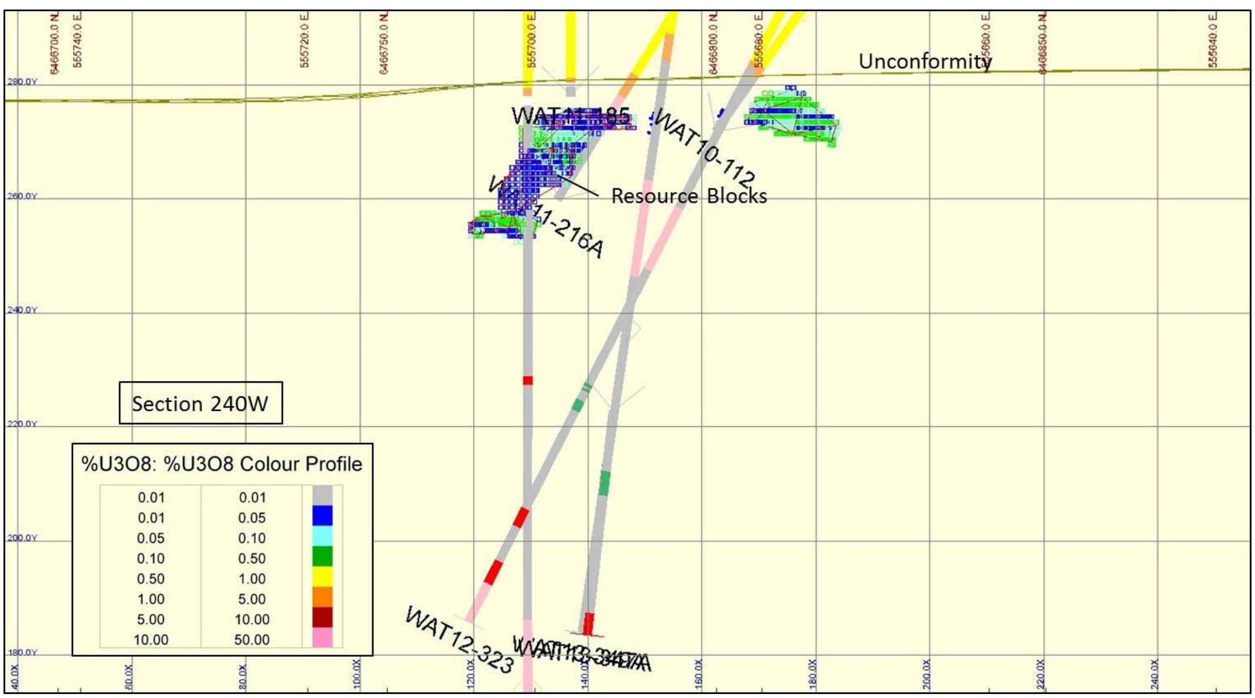
0.01 0.05
0.05 0.10
0.10 0.50
0.50 1.00
1.00 5.00
5.00 10.00
10.00 50.00
WAT11-155
WAT1 -152A
WAT11-145



Unconformity
WAT10-112
Resource Blocks
Section 240W
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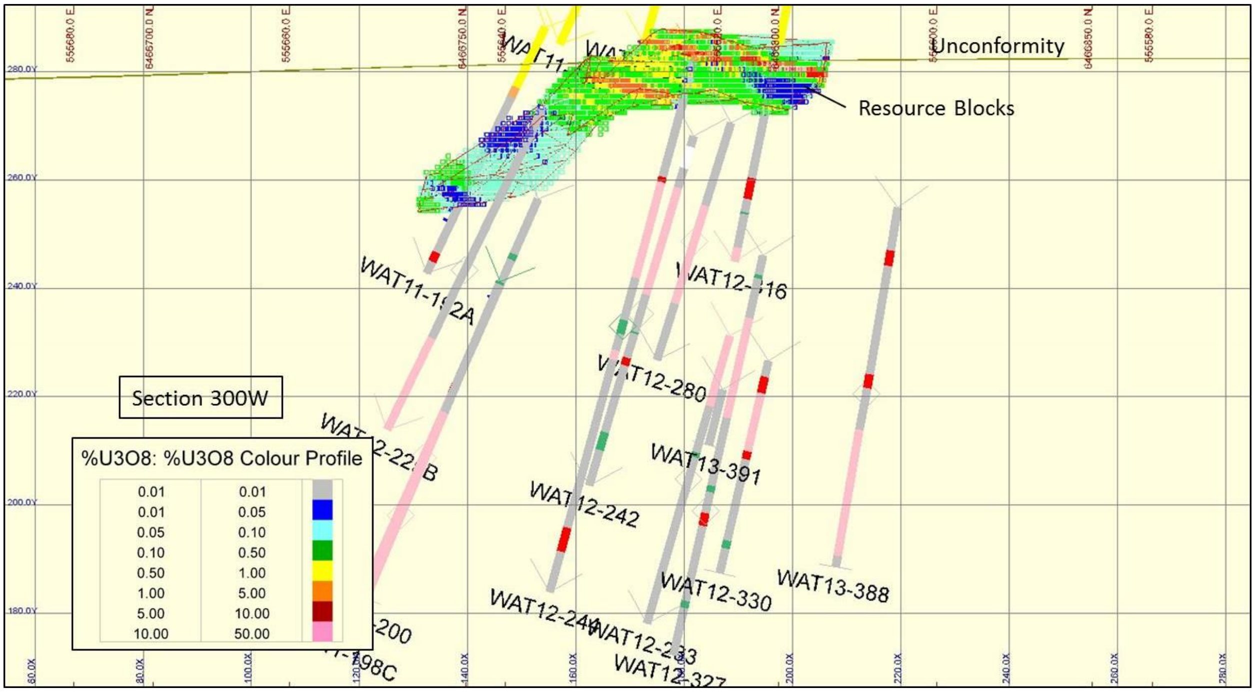
0.01 0.05
0.05 0.10
0.10 0.50
0.50 1.00
1.00 5.00
5.00 10.00
10.00 50.00
WAT12-323


Unconformity
Resource Blocks
Section 300W
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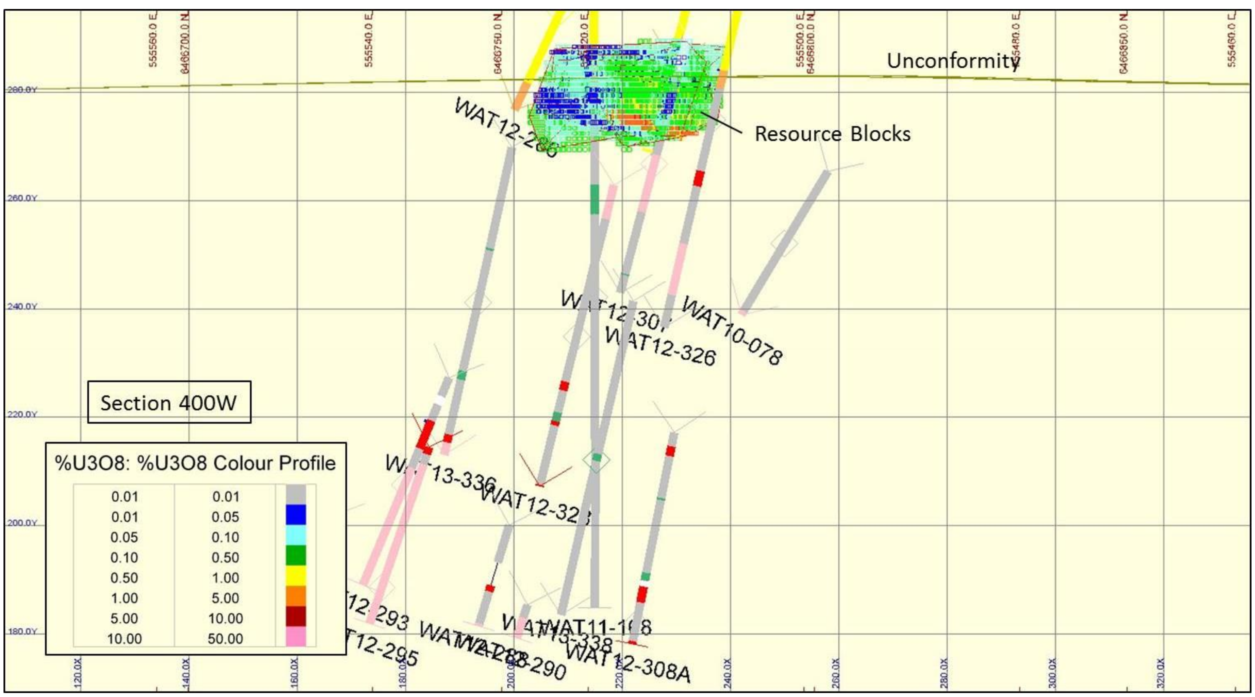
0.01 0.05
0.05 0.10
0.10 0.50
0.50 1.00
1.00 5.00
5.00 10.00
10.00 50.00
WAT12-242
WAT12-280
WAT13-391
WAT12-330
WAT13-388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Resource Blocks
Section 400W
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0.01 0.05
0.05 0.10
0.10 0.50
0.50 1.00
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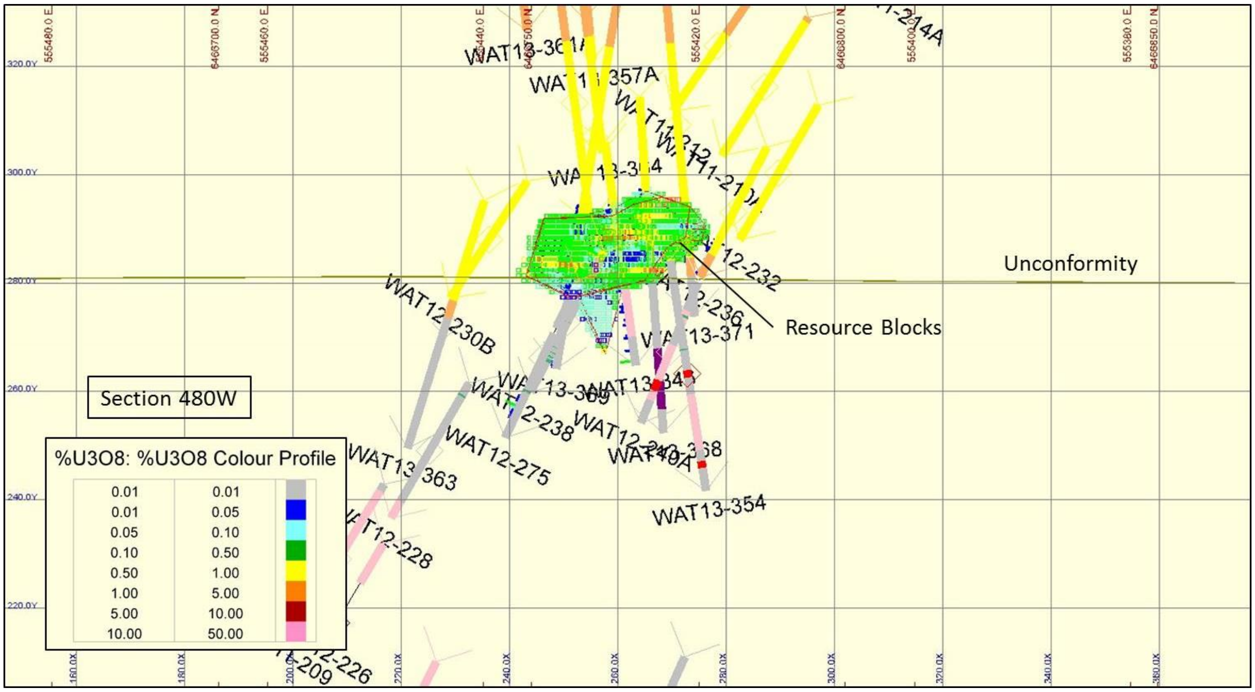
5.00 10.00
10.00 50.00
WAT12-326
WAT10-078
WAT12-295
WAT12-308A


Unconformity
Resource Blocks
Section 480W
%U3O8: %U3O8 Colour Profile
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0.01 0.05
0.05 0.10
0.10 0.50
0.50 1.00
1.00 5.00
5.00 10.00
10.00 50.00
WAT12-230B
WAT13-363
WAT12-228
WAT12-275
WAT13-371
WAT13-354
WAT13-357A
WAT12-232