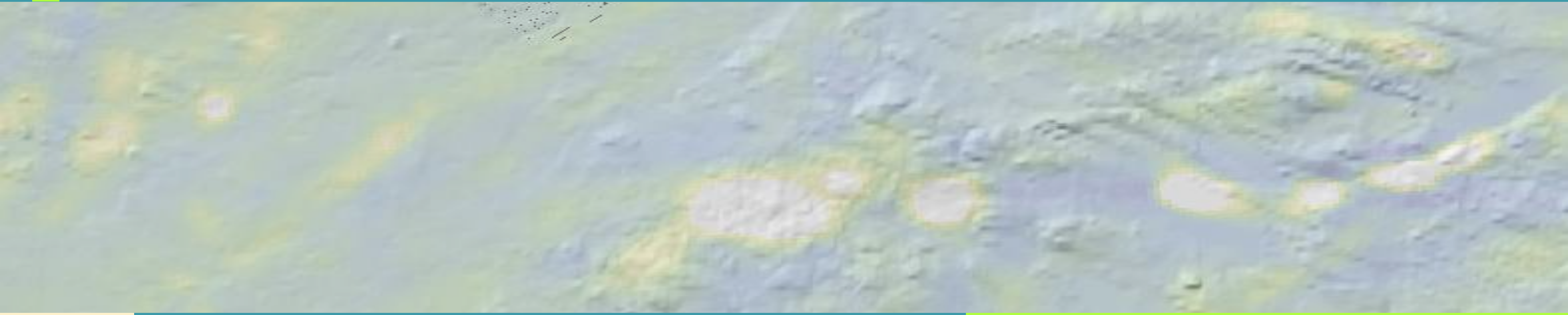
Project 176
Thelon Basin, Nunavut

Applying a proven geological framework

to a basin ripe for discovery



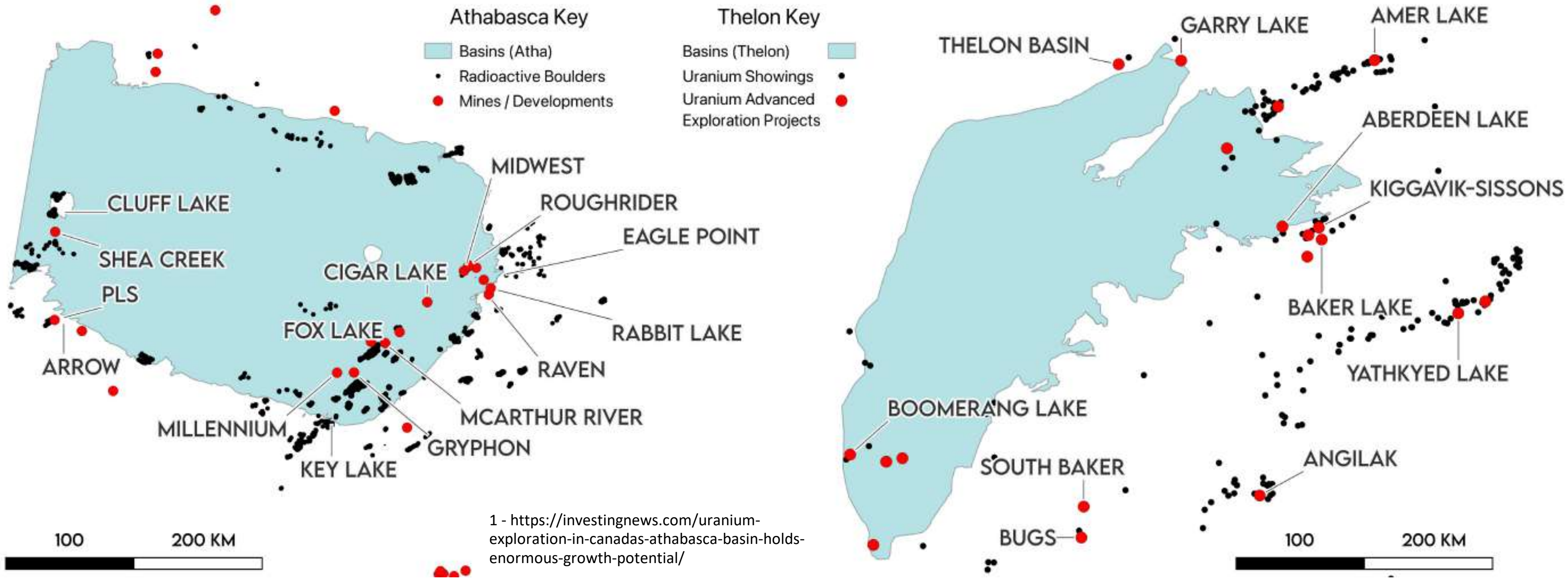
Tale of two Basins

The Athabasca:

- Athabasca’s Uranium potential was identified in the early 1950s
- 1968 saw the discovery of uranium at Rabbit Lake in the Athabasca Basin
- 1970-2020 more than **500mlbs of uranium** has been produced from this prolific region[1]
- **40 uranium deposits** have been discovered, defining **2.6 billion pounds of uranium**

The Thelon:

- Urangesellschaft Canada Limited (UG) discovered the first uranium showing in the Baker Lake area of the Thelon Basin in 1974
- 1970s-1980s saw a flurry of exploration activity
- A secondary rush in the 2000s to 2011 saw regional work hunting for unconformity-type uranium
- Around **160 million pounds of Uranium** has been defined to date



1 - https://investingnews.com/uranium-exploration-in-canadas-athabasca-basin-holds-enormous-growth-potential/

A Compelling Opportunity

1. Same size as Athabasca
2. Extensive uranium showings
3. Similar Basin ages
4. Athabasca discoveries are still being made

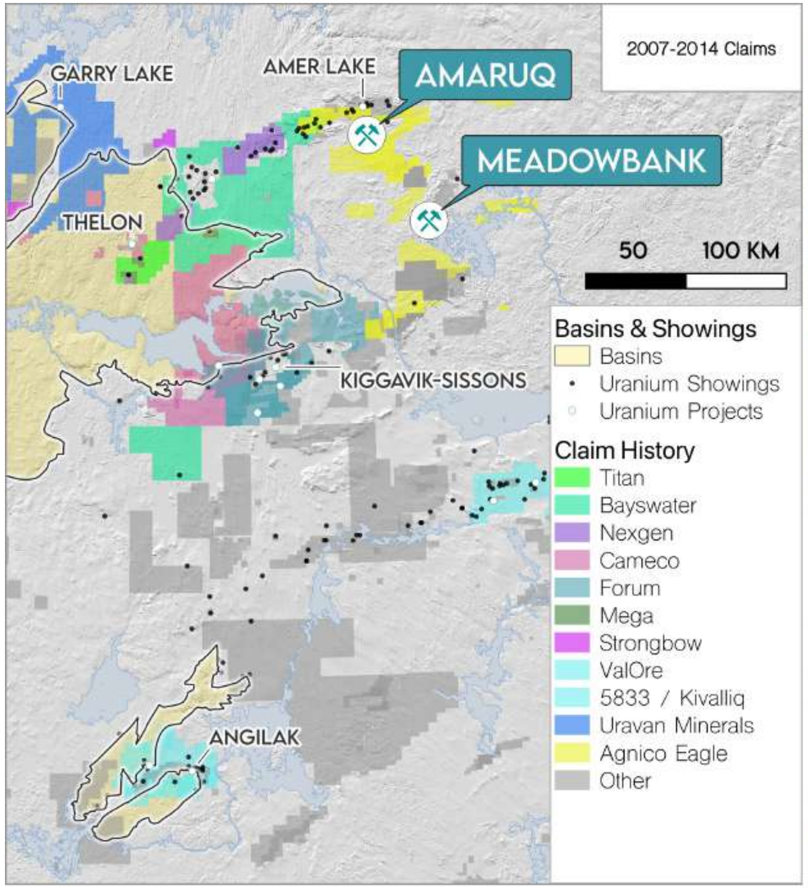
Thelon discoveries are yet to be made

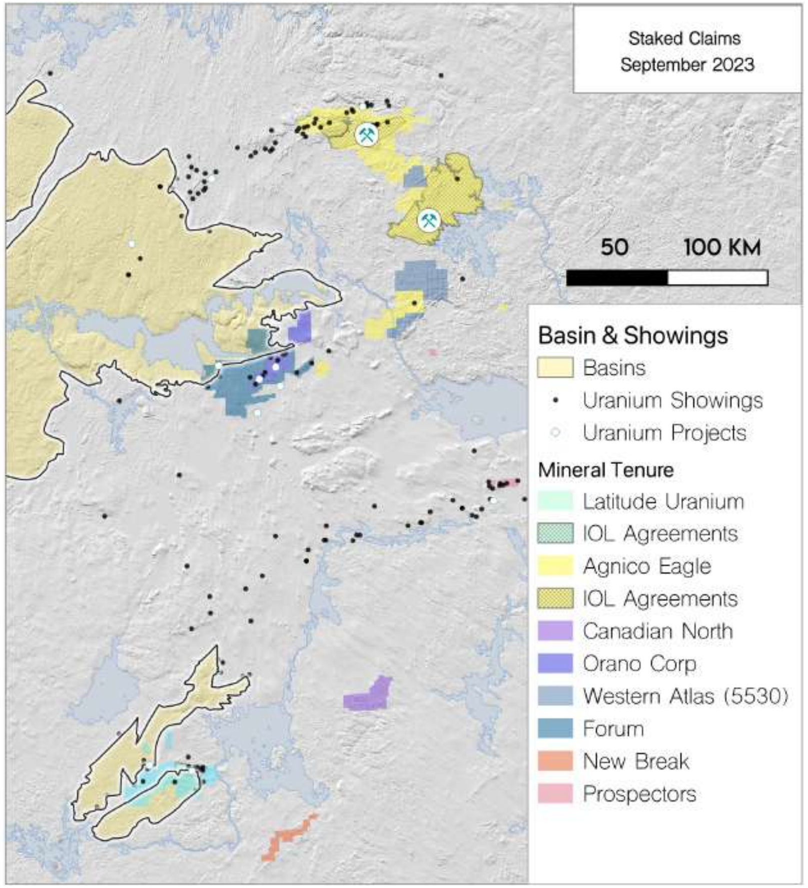
Two gold mines have been put into production, a new tenure system implemented, and a refreshed perception of Uranium

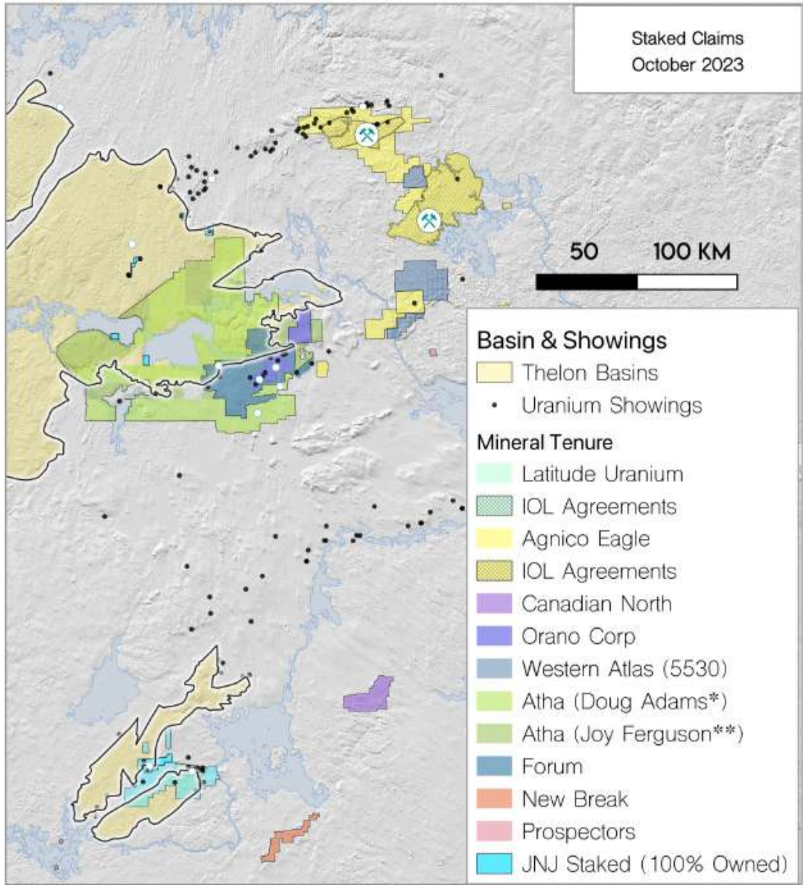
Resurgence in the Thelon?

Staking Rushes in the Thelon Basin

Exploration Started in the 1970s → **2007** *(1.5m Ha staked)* → **2015** *(1.6m Ha staked)* → **Sept 2023** *(0.3m Ha staked for U)* → **October saw the start of a staking rush** / **VP Ex for Atha Energy staked 300k Ha** → **Today** *(0.8m Ha staked for U)* → Thelon Basin is reemerging as a significant district for Uranium Exploration







What has Changed?

It's been over a decade since the Thelon area saw basin-wide exploration, changes include:

1) Geological Understanding in the Basin

The stratigraphy of the Western Churchill Structural Province and Amer Belt was revised as part of a multi-disciplinary GSC GEM (Geo-mapping for Energy and Minerals) project led by Charlie Jefferson starting in 2012

No systematic, basin-wide exploration has occurred with this new geological insight

2) Exploration Techniques

Far more advanced exploration techniques, such as passive seismic and ultrasensitive mobile metal ion geochemistry, are available to see through sediments. Multiplatform geophysics, remote sensing and big data analytics are prime for district exploration opportunities

3) Demand for Clean Energy

Nuclear is the cleanest and greenest source of baseload power with the lowest CO_2 emission per energy unit generated

4) Uranium Price

The 10-year bear market has begun to shift and Uranium is now at a decadal high

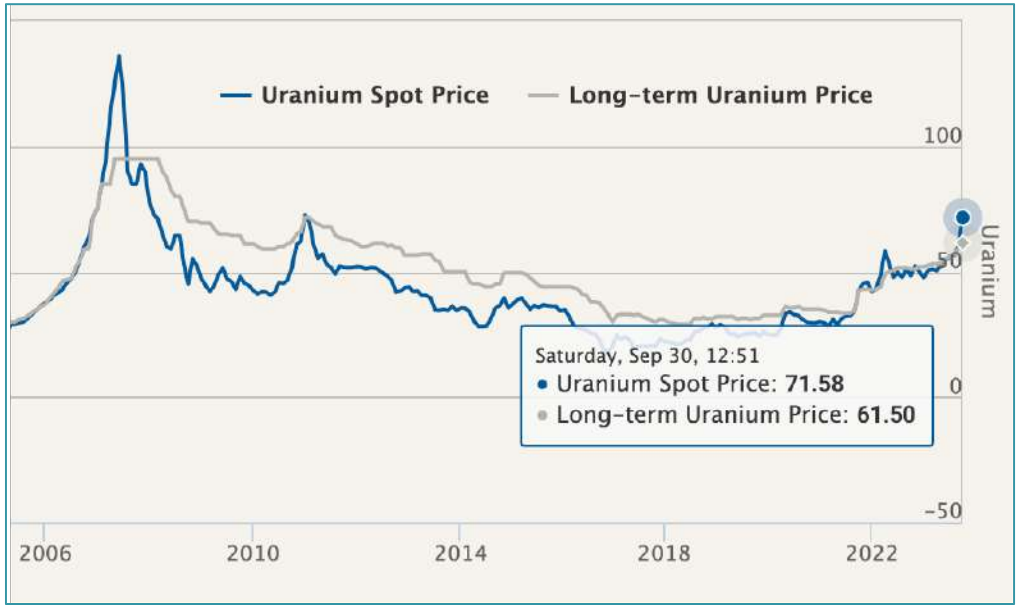
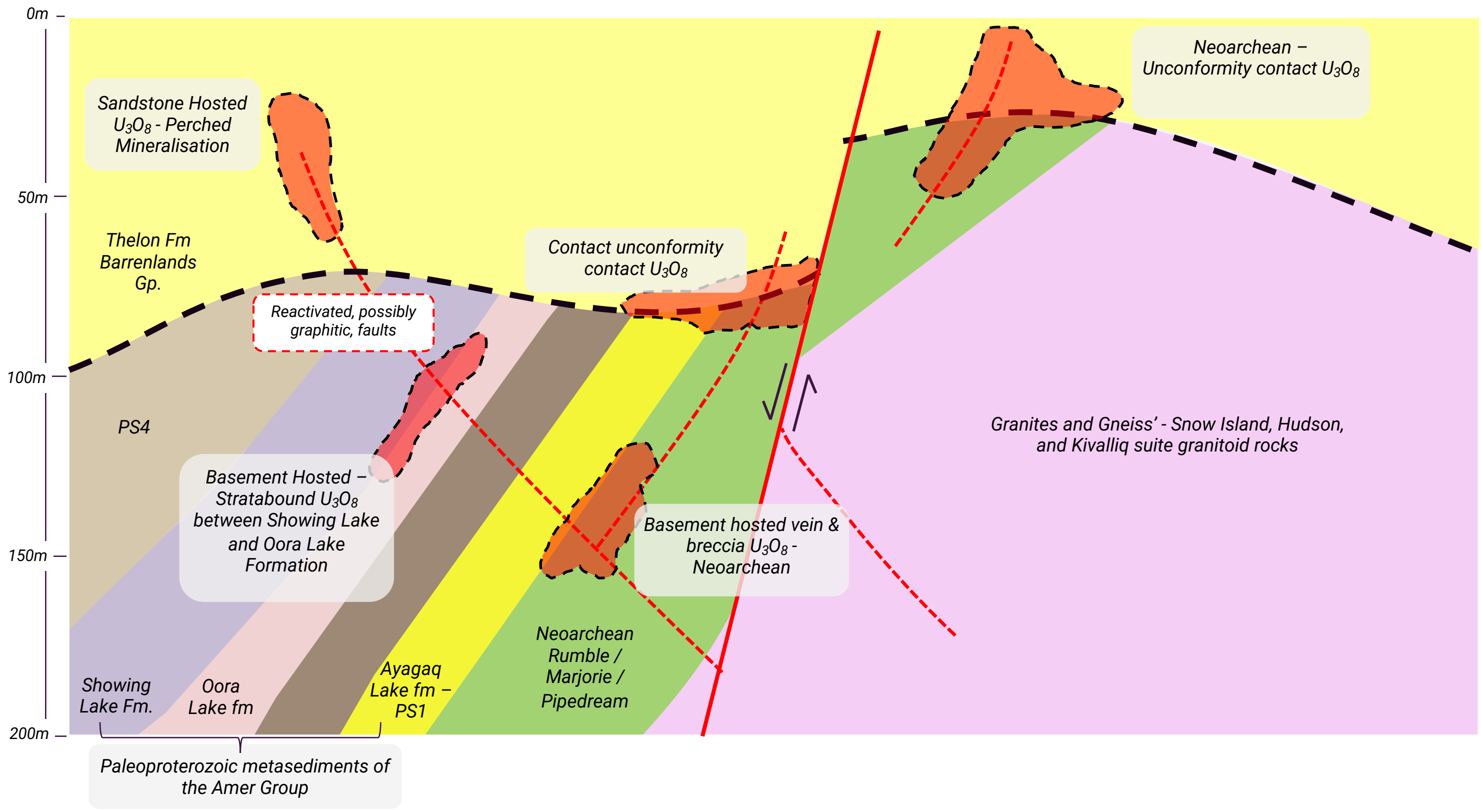


Image source: https://www.cameco.com/invest/markets/uranium-price

Thelon U_3O_8 Model – Similar to Athabasca

Basin fill sediments between Athabasca and Thelon are similar	Athabasca	Thelon
	Athabasca supergroup	Barrenlands Group (Thelon formation)



	Athabasca	Thelon
Uranium Host Rocks	Wollaston Supergroup	Amer Group & Woodburn Lake Group
Uranium bearing basement rocks	Snow Island, Hudsonian and Kivalliq Granitoids	

Comparable to Athabasca there are multiple uranium deposit styles

1. Unconformity Vein & Breccia Type:
   - Cross-cutting basement rocks (Amer and Woodburn Lake Groups)
   - Associated with Illite, Chlorite Hematite alteration
   - Reactivated basement faults intersecting unconformity and overlying sediments

2. Syngenetic Mineralisation:
   - Contact between Showing Lake and Oora Lake Formations
   - Pore-filling Pitchblende or finely disseminated Uranite
   - Associated with chalcopyrite, magnetite and calcite in sandy layers of siltstone

3. Sandstone-hosted phosphatic–breccia and sandstone matrix
   - Non-Phosphatic – limonitic, vuggy and bearing secondary uranium minerals; torbernite & autunite

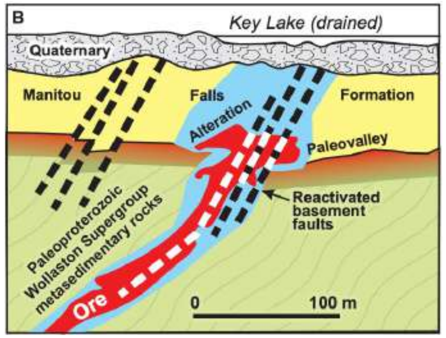
Athabasca Deposit Models

- The unconformity-associated deposits in the Athabasca Basin are typically 100-500m deep
- The Thelon Basin historical work was generally limited to shallow depths (<100m), yet the deposit models across both basins are somewhat similar

Applying exploration and deposit discovery techniques employed in the Athabasca basin to the Thelon area has high potential

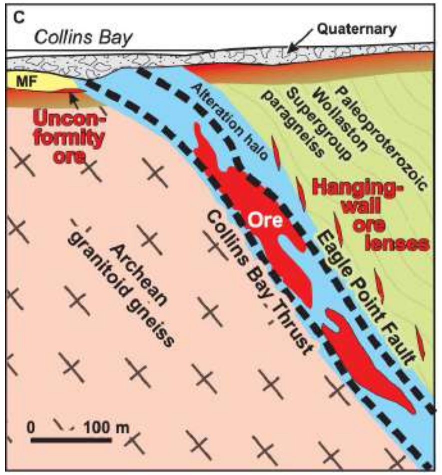
Key Lake – 100m Deep

- Unconformity ore - at contact
- Basement-hosted lenses – Wollaston metasediments



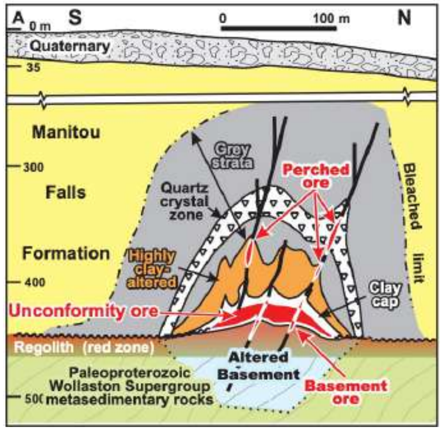
Eagle Point – 400m Deep

- Basement-hosted lenses – Wollaston metasediments



Cigar Lake – 450m Deep

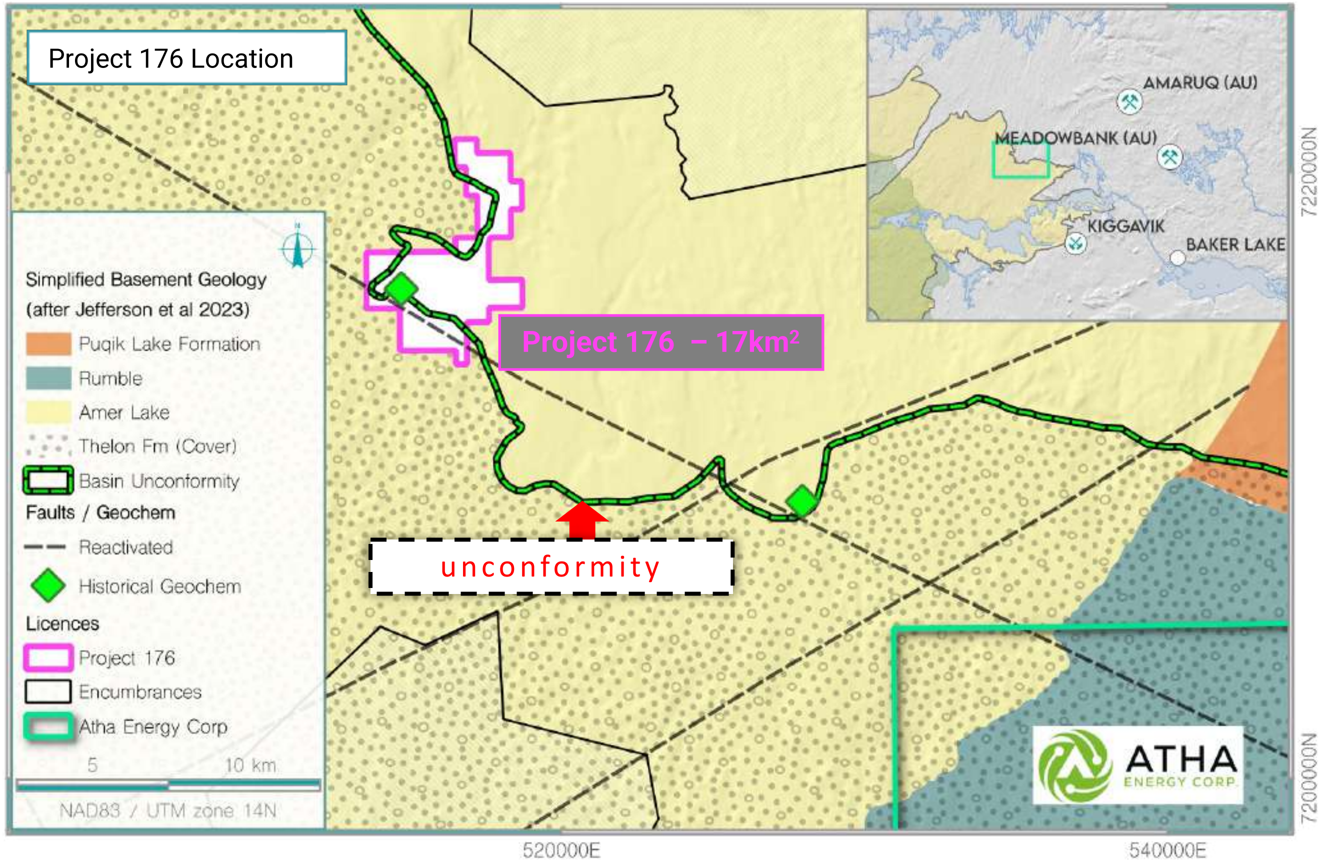
- Minor Perched Ore – Manitou Falls
- Dominantly Unconformity ore - at contact
- Minor basement hosted lenses – Wollaston metasediments



Jefferson, C.W., Thomas, D.J., Gandhi, S.S., Ramaekers, P., Delaney, G., Brisbin, D., Cutts, C., Quirt, D., Portella, P., and Olson, R.A., 2007, Unconformity associated uranium deposits of the Athabasca Basin, Saskatchewan and Alberta, in Goodfellow, W.D., ed., Mineral Deposits of Canada: A Synthesis of Major Deposit-Types, District Metallogeny, the Evolution of Geological Provinces, and Exploration Methods: Geological Association of Canada, Mineral Deposits Division, Special Publication No. 5, p. 273-305.5

Project 176

Project 176 is located in the Northeastern portion of the Thelon Basin - Project 176 was identified before the staking rush took place and is within the most prospective region of the Thelon Basin that contains the highest-grade Uranium sample – 380,000ppm U



Project 176 – 1708Ha / 17km²

- **Extremely high-grade boulders discovered:** Boulders up to **38% Uranium** have been found within the project and previous explorers never identified the source
- Sits at the mapped unconformity between the Thelon Formation and the underlying Amer Lake Metasediments
- Contains reactivated faults identified in 2013[1] - these structure had not been identified when the properties were last explored (2012)

The intersection of reactivated faults and unconformities is highly prospective for uranium deposits. e.g. Cigar Lake, key Lake

Unconformity Uranium deposits require reactivated faults (**black dashed lines**) intersecting the unconformity between the Paleoproperozoic (**Yellow unit**) or Neoarchean basement (**Green unit**) and the overlying Sediments

[1] *Geophysical And Geological Integration And Interpretation Of The Northeast Thelon Basin, Nunavut, 2013 Ph.D. Thesis – V. Tschirhart; McMaster*

Project 176 1708Ha / 17km²

Historical assessment reports show expenditures > $10m in the area

Project 176 was previously owned and explored by NexGen Energy who purchased the project from Mega Uranium in 2012 – following the uranium price collapse, NexGen let the licenses lapse **without drill testing any anomalies defined in the 2012 regional work program**

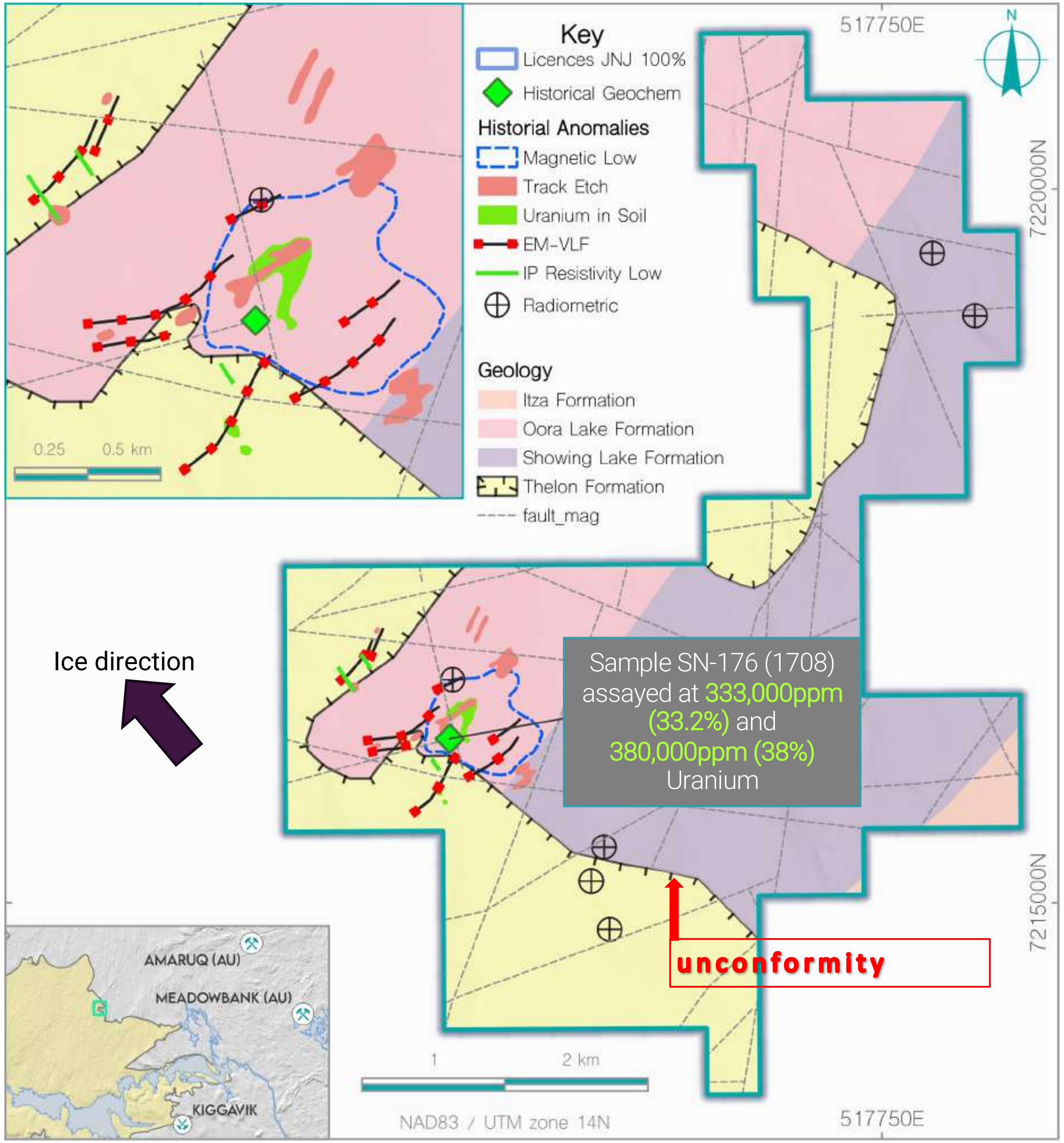
The project contains very high-grade boulders with assays up to **38% Uranium***

Multiple coincident anomalies:

- Magnetic Low
- VLF Electromagnetic
- Gravity Low
- Radiometric
- Uranium in Soil
- Track-etch Anomalies

The combination of historically defined anomalies and modern exploration techniques provides prime ingredients for discovering a high-grade uranium deposit within the project area

*Original Assay Certificates in Report 81300 show sample SN176 was retested: 380,000 ppm and 332,000ppm Uranium



Project 176 – Geology & Historical Work

Geological Overview

- Western Churchill Structural Province of the Canadian Shield
- Paleoproterozoic Amer Basement Rocks (Itza, Oora Lake, Showing Lake formation)
  - Subject to folding faulting, deformation and low-grade metamorphism during the Hudsonian Orogeny
- Overlain by Thelon sediments and unconformity mapped within the licence

Project History (previously called the TUE project)

1976 – 1979 Westmin Resources conducted regional exploration

- Airborne magnetic and radiometric surveys
- Prospecting of the Amer Metasediments,
- Lake water and lake sediment geochemical surveys

1980-1998 Westmin property scale Exploration – **$3.12m**

- Defined radioactive boulder trains
- **A 38% U boulder was discovered**
- **Coincident geophysical and geochemical anomalies**
- Diamond Drilling to define stratigraphy

2007-9 Titanium and Mega Uranium **- $5.4m**

- Prospecting, radon surveying and Drilling
- >800 anomalous boulders

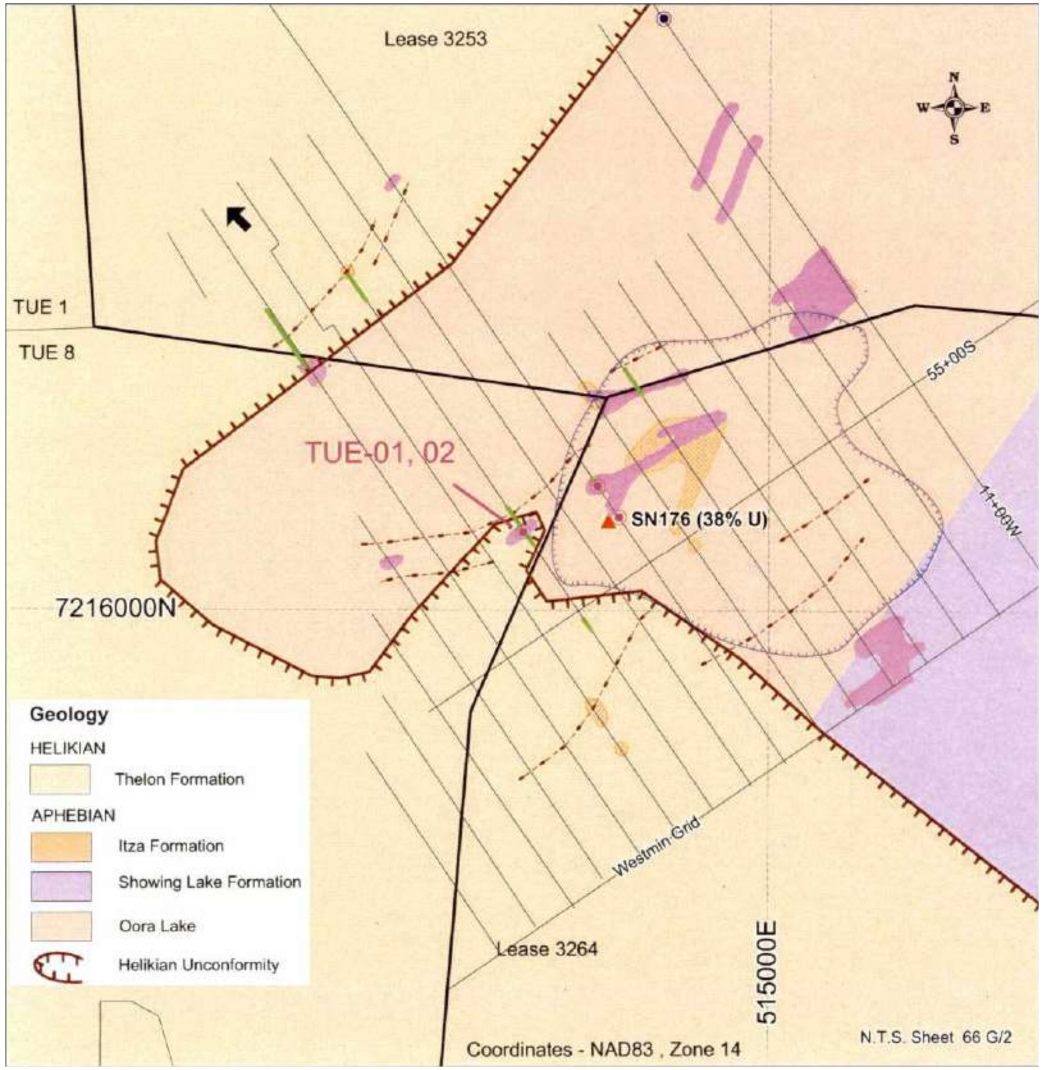
2012 Titan, Nexgen, Mega Uranium – **$1.7m**

- Large geophysical program

Historic Expenditure

At least $10,000,000 has been spent on the project area over the past 40 years

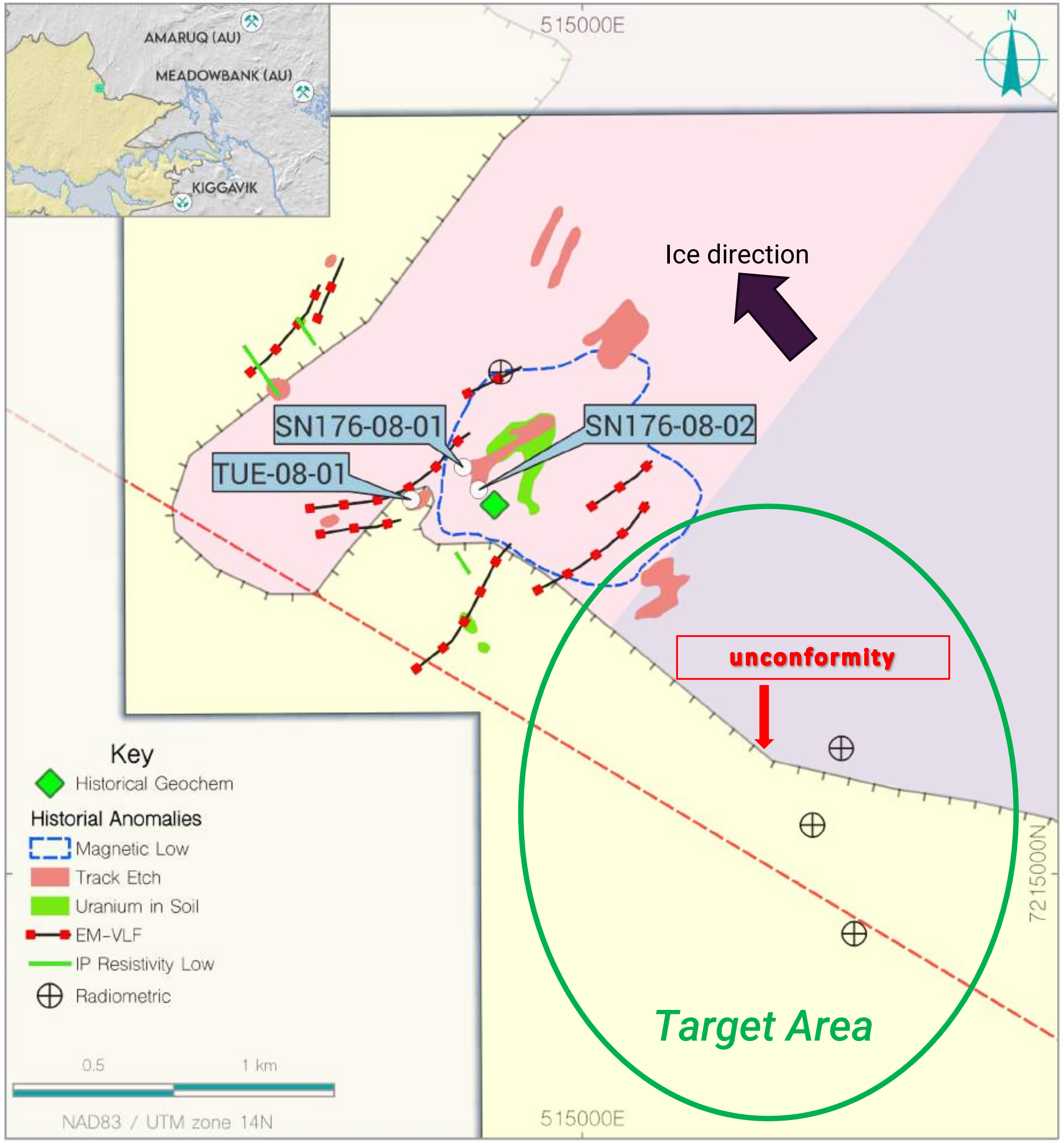
At least $3m on the current Project 176 boundary



Map Source: 2007 Report by Nicholls for Titan Uranium compiling Historical Work, Report number, 085140

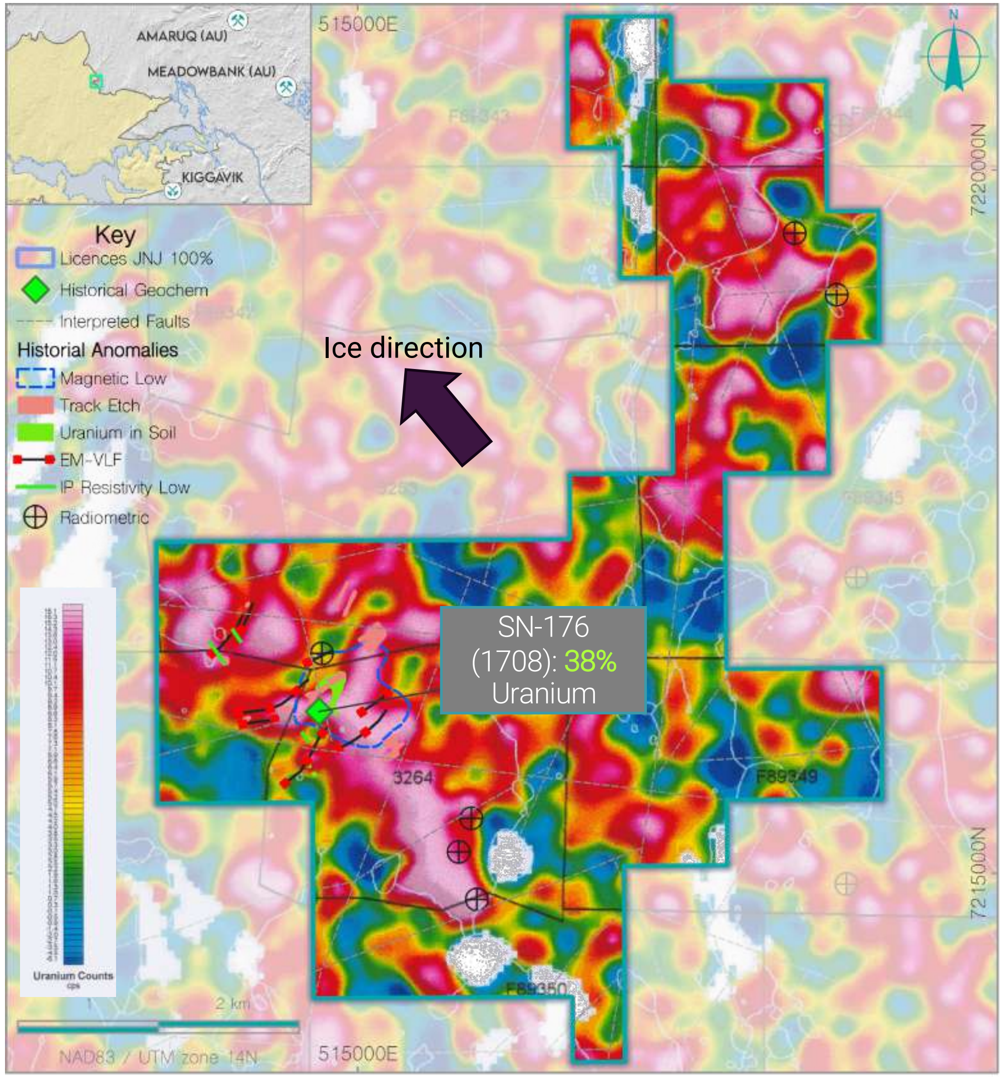
Project 176 Drilling

- **3 holes were drilled in 2007 at the project by Titan Uranium**
- **All holes were drilled North-West of the 38% U boulder and directly above surficial anomalies**
- **Ice direction in the area is to the North-West – Therefore these holes were positioned poorly**
- **The target area should be South-East of the surficial anomalies**
- **Target area coincides with 2007 and 2012 radiometric and conductivity anomalies and a 2013 reactivated fault**
- **No drilling on the project has been completed since 2007**

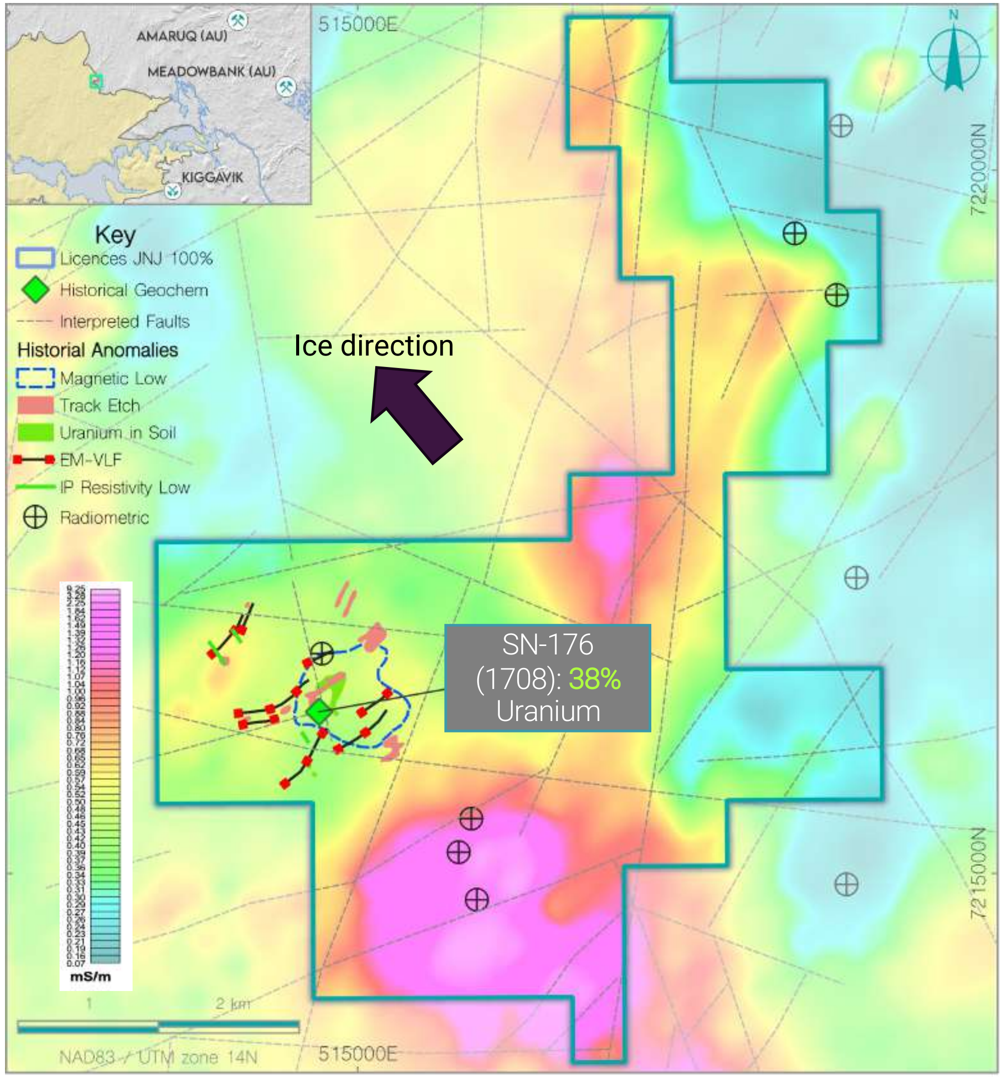


Project 176 - Geophysics

2007 – Uranium Total Count (Titan Uranium Inc)



2012 – Apparent Conductivity (Mega Uranium/Nexgen)



- ✓ **Uranium Total Count Anomaly**
- ✓ **Radiometric Anomaly**
- ✓ **High-Grade Boulder (38% Uranium) NW of Radiometric Anomaly**
- ✓ **Magnetic Low**
- ✓ **EM-VLF Conductors**
- ✓ **U in Soil Anomalies**

Project 176 – The Opportunity

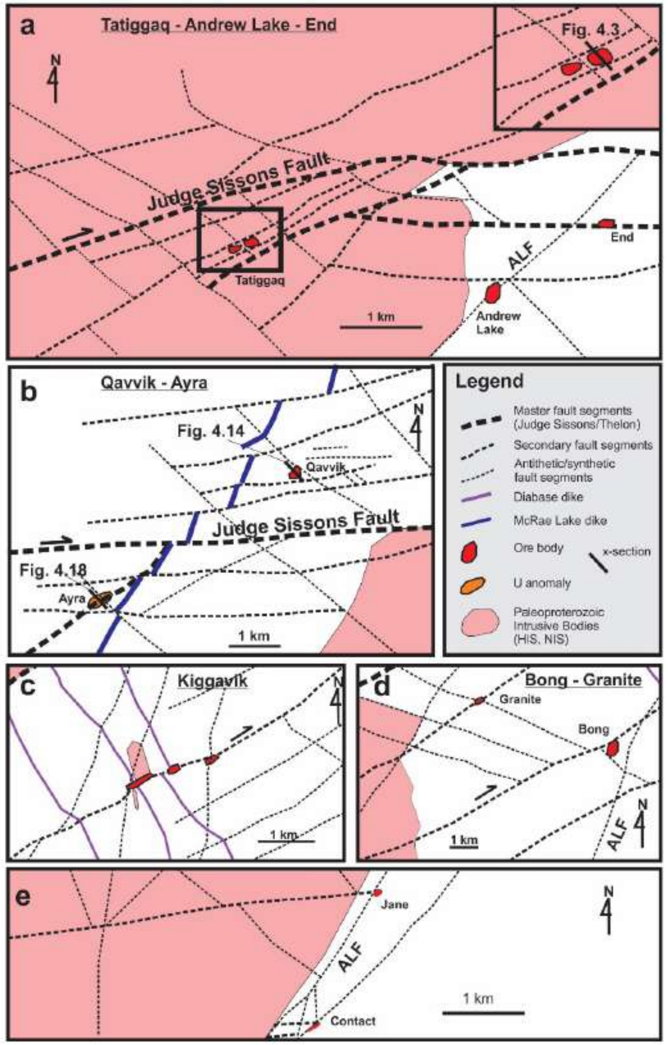


Image Source: Hunter, Rebecca Corrine. *Structural geology, tectonostratigraphy, and unconformity-related uranium mineralisation of the Aberdeen Lake area, northeast Thelon Basin, Nunavut, Canada*. Diss. Laurentian University of Sudbury, 2021.

The significant deposits currently being discovered by Forum Energy Metals are located at the junction of reactivated faults and favourable geology *(image to the left)*

“FORUM INTERSECTS 2.25% U_3O_8 OVER 11.1 METRES ON THE THELON BASIN URANIUM PROJECT” – September 12, 2023

Geophysical work in 2012 defined similar fault arrays in the 176 project area but market conditions prevented detailed follow-up

Proposed Work:

- Re-process geophysical data and evaluate with the new geological theory proposed by Jefferson et al (2013)
- Complete high-resolution VTEM to add resolution to the basement conductors and anomalies identified in 2012
- Complete high-resolution Gravity surveys to apply the Forum Exploration model to the central Thelon area

Appendix – Uranium Deposits & Comparison

Table 1. Summary of uranium resources in major Paleo- and Mesoproterozoic districts of northwestern Canada (shaded) and Australia; data from Appendix 1.

District	Kt Ore[1]	% U[2]	Tonnes U
Athabasca Basin	29,811	1.97	587,063
Beaverlodge District[3]	15,717	0.165	25,939
Thelon Basin	11,989	0.405	48,510
Hornby Bay Basin	900	0.3	2,700
Kombolgie Basin	87,815	0.323	283,304
Paterson Terrane	12,200	0.25	30.5
Olympic Dam[4]	2,877,610	0.03	863,283

1. Includes past production.
2. Calculated from Kt ore and tonnes uranium, rounded to significant digits.
3. Past production from two "classic vein-type" (Eldorado and Lorado Mills) and one episyenite-type (Gunnar) deposits.
4. Genetically linked with the 1850 Ma Gawler Range volcano-plutonic complex. Olympic Dam is breccia hosted, not unconformity-associated, but is included here for comparison because it is such a vast individual resource of uranium, of approximately the same age as the unconformity-associated deposits listed here (references in Gandhi, 2007).

Table 2. Comparison of Athabasca and Thelon basins (after Miller and LeCheminant, 1985; Gandhi, 1989; Kyser et al., 2000).

Attribute	Athabasca	Thelon
Graphitic metasedimentary rocks beneath ore	Distinct	Locally
Paleoweathering profile below basal unconformity	Shallow to deep	Shallow to deep
Subbasins developed via reactivated faults	Yes	Yes
Maximum age of sedimentation (Ma)	ca. 1720-1750	ca.1720
Fluorapatite	Yes	Yes
Aeolian sandstone	Possible	Yes
Arkosic sandstone regionally clay altered	Minor	Yes
Quartz overgrowths preserve hematite rims	Yes	Yes
Early detrital kaolin in matrix	Yes	No?
Peak diagenetic clay minerals	Dickite + illite	Illite
Peak diagenetic / hydrothermal temperatures	~240º	~200º
Illite incorporates Mg and Fe	in regolith only	Variable
Corroded zircon grains near ore zones	Local	No?
Regional fresh zircon	Yes	Yes
Extensive aluminum phosphate ± sulphate	Yes	Yes
potassium-feldspar + chlorite at 1 Ga	No	Yes
Late vein carbonate from meteoric water	Yes	Yes
Bleaching and clay alteration halos	Yes	Yes
Sandstone / unconformity-hosted uranium	Yes	One example
Basement-hosted uranium	Yes	Yes
Significant deposits	Yes	One

Jefferson, C.W., Thomas, D.J., Gandhi, S.S., Ramaekers, P., Delaney, G., Brisbin, D., Cutts, C., Quirt, D., Portella, P., and Olson, R.A., 2007, Unconformity-associated uranium deposits of the Athabasca Basin, Saskatchewan and Alberta, in Goodfellow, W.D., ed., Mineral Deposits of Canada: A Synthesis of Major Deposit-Types, District Metallogeny, the Evolution of Geological Provinces, and Exploration Methods: Geological Association of Canada, Mineral Deposits Division, Special Publication No. 5, p. 273-305.