



# T92 TERRA URANIUM

High-Quality Uranium Assets in the Athabasca Basin

Exploration Update 20 April 2023

ASX: **T92**

TERRA URANIUM PASFIELD LAKE CAMP

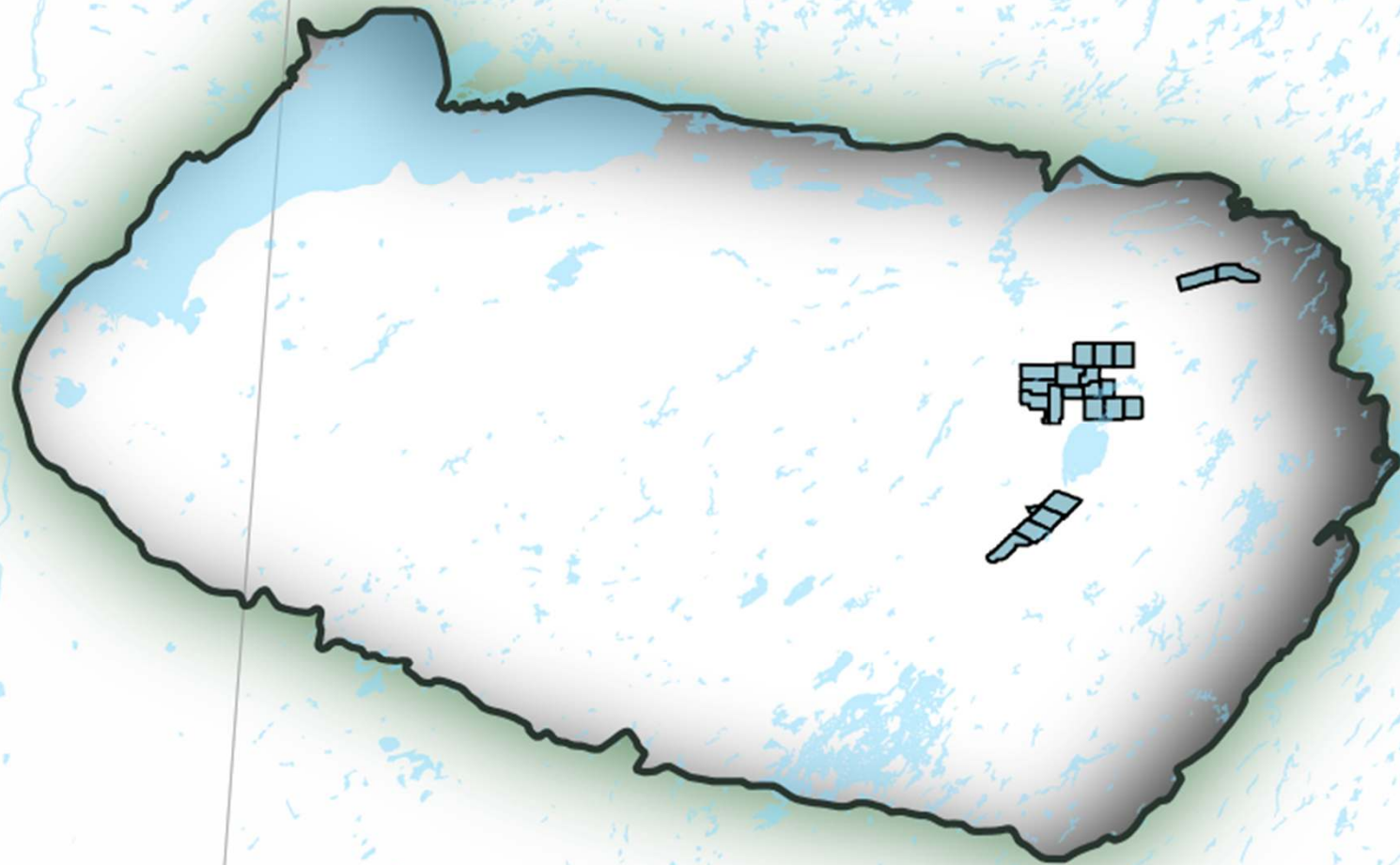


# STRATEGICALLY POSITIONED IN THE ATHABASCA BASIN

**World's largest and highest-grade  
uranium deposits**

**Experienced team, in-depth  
knowledge, modern tools and  
techniques**

**Targeting major discoveries under  
cover near existing production  
infrastructure**



DECADES OF  
SUCCESS  
EXPLORING FOR  
WORLD CLASS  
DEPOSITS

The Company is led by a Board and Management with considerable experience in Uranium exploration, development and production.

Past success are used to guide and build the company with our dedicated exploration team based locally in Saskatoon, Canada.

BOARD



Andrew J Vigar  
Executive Chairman



Troy Boisjoli  
Non-Executive Director



Doug Engdahl  
Non-Executive Director



Dr. Kylie Prendergast  
Non-Executive Director

MANAGEMENT



Mike McClelland  
President Terra Canada



Nova Taylor  
Company Secretary



Jules Grove  
Chief Financial Officer



Jennifer Burgess  
Exploration Manager



Kyle Patterson  
Geophysics Manager



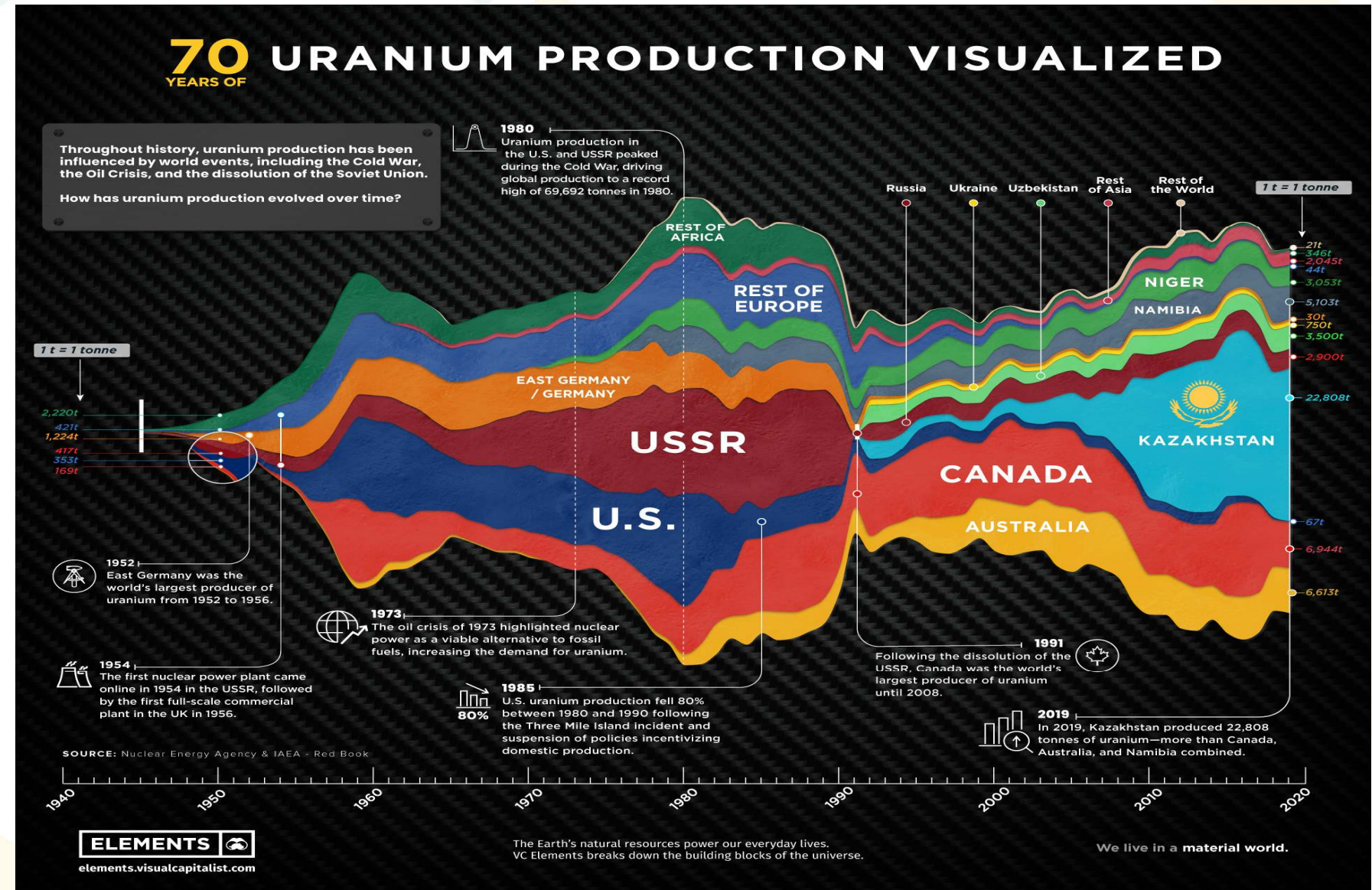
Dr. Tom Kotzer  
Geochemistry Manager



# 70 YEARS OF GLOBAL URANIUM PRODUCTION BY COUNTRY

Canada is the world's second-largest producer of uranium, putting Terra Uranium in a favourable macro environment

Largest producer Kazakhstan impacted by Russian sanctions



Source – <https://elements.visualcapitalist.com/70-years-of-global-uranium-production-by-country/>



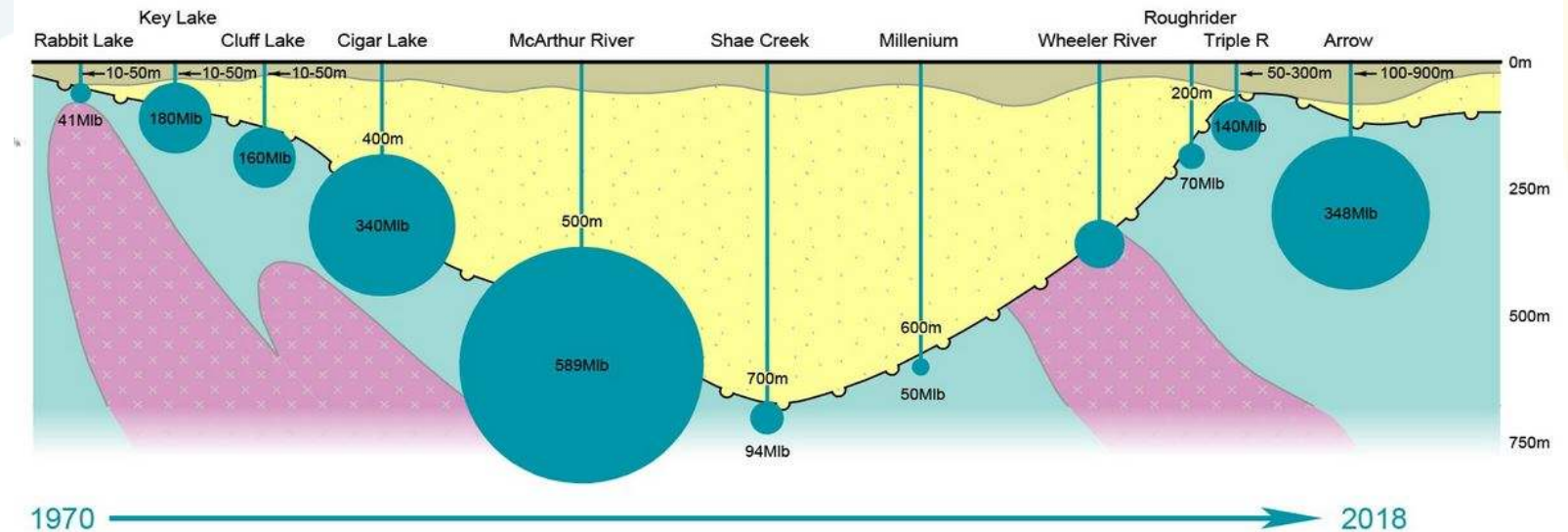
# DEPOSITS

## ATHABASCA BASIN URANIUM

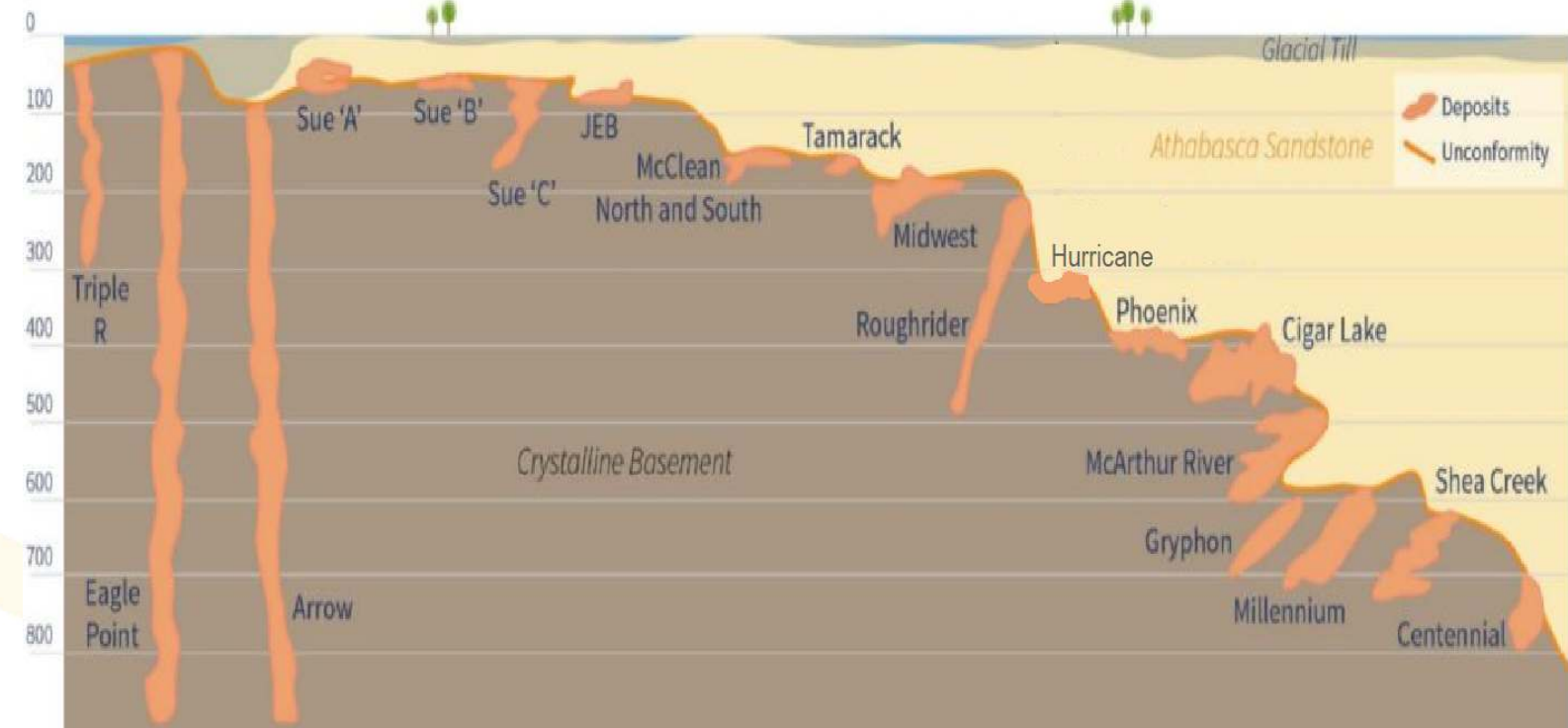
# BIG THINGS HAPPEN AT DEPTH WITHIN STRUCTURAL DOMAINS

The largest and highest grade uranium deposits in the world are at the Athabasca Basin unconformity.

These deposits have distinctive geochemical and mineralogical signatures extending vertically hundreds of metres to surface.



Source – Alligator Energy



Source – Isoenergy

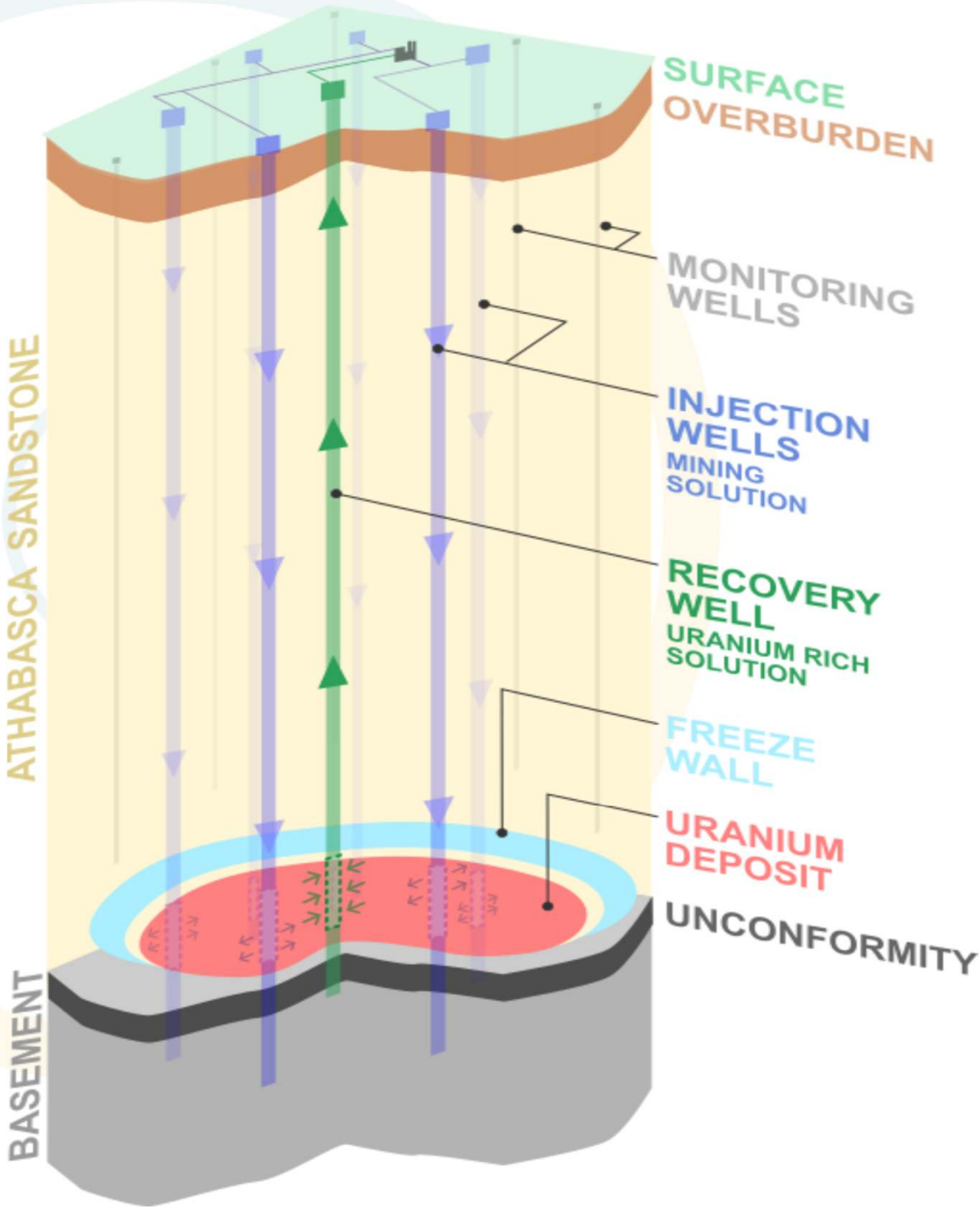


# IN SITU RECOVERY CHANGES THE GAME

ISR makes high grade deposits at depth  
economically viable  
ISR meets the highest standards for  
environmental and social impact

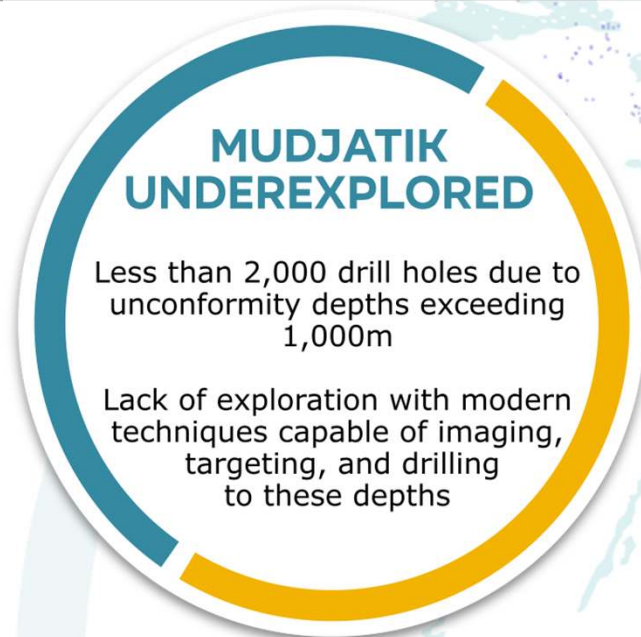
Phoenix PFS Financial Results (100% Basis)	
Mine life	10 years (6.0 million lbs U <sub>3</sub> O <sub>8</sub> per year on average)
Probable reserves <sup>(1)</sup>	59.7 million lbs U <sub>3</sub> O <sub>8</sub> (141,000 tonnes at 19.1% U <sub>3</sub> O <sub>8</sub> )
Average cash operating costs	\$4.33 (US\$3.33) per lb U <sub>3</sub> O <sub>8</sub>
Initial capital costs	\$322.5 million
Base case pre-tax IRR <sup>(2)</sup>	43.3%
Base case pre-tax NPV <sub>8%</sub> <sup>(2)</sup>	\$930.4 million
Base case price assumption	UxC spot price <sup>(3)</sup> (from ~US\$29 to US\$45/lb U <sub>3</sub> O <sub>8</sub> )
Operating profit margin <sup>(4)</sup>	89.0% at US\$29/lb U <sub>3</sub> O <sub>8</sub>
All-in cost <sup>(5)</sup>	\$11.57 (US\$8.90) per lb U <sub>3</sub> O <sub>8</sub>

Source Dennison Mines PFS September 2018, updated 2021





# BIG TARGETS EXPLORATION STRATEGY

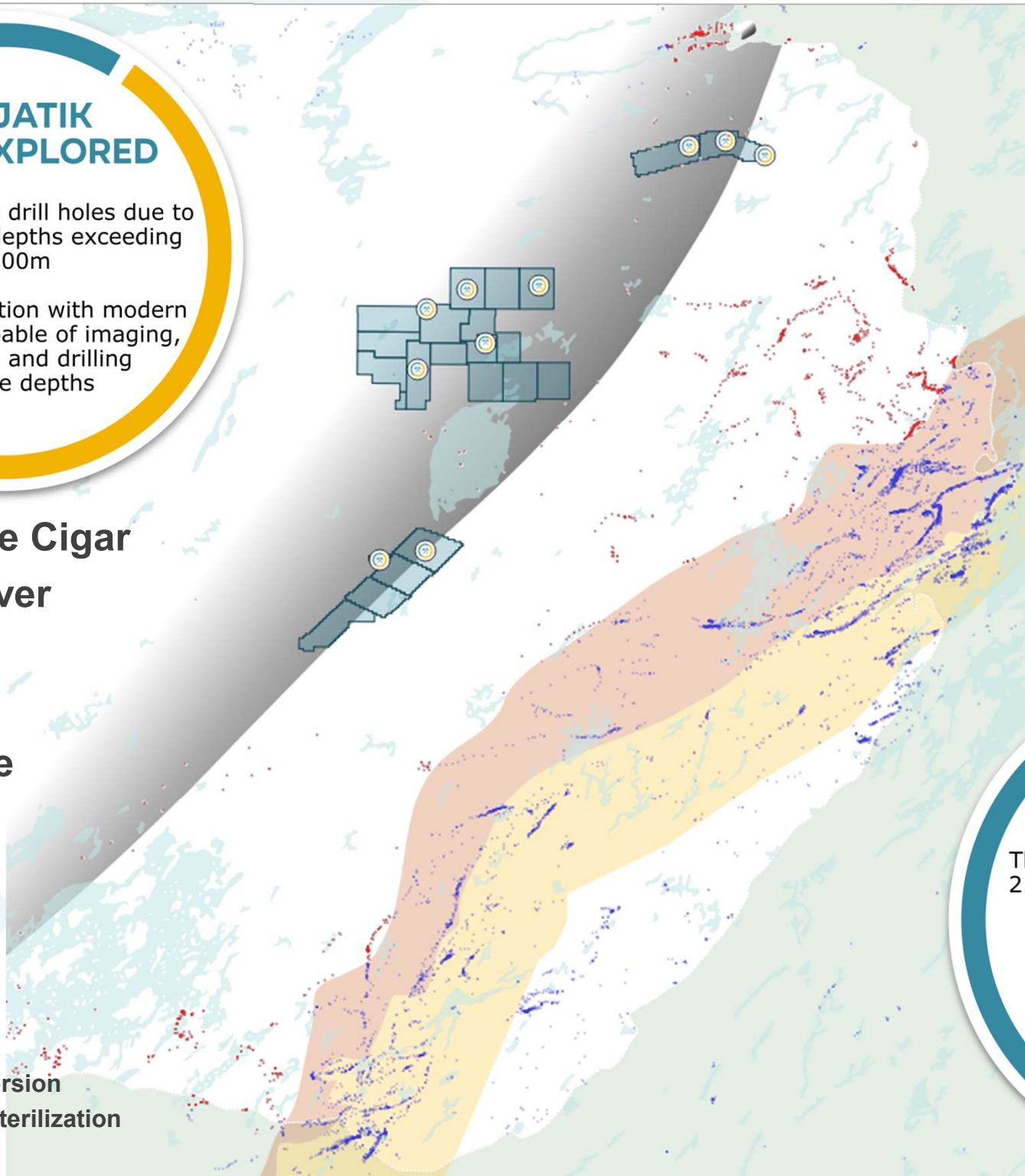


There have been no major discoveries of the Cigar Lake or McArthur River type deep under cover since the 1980's

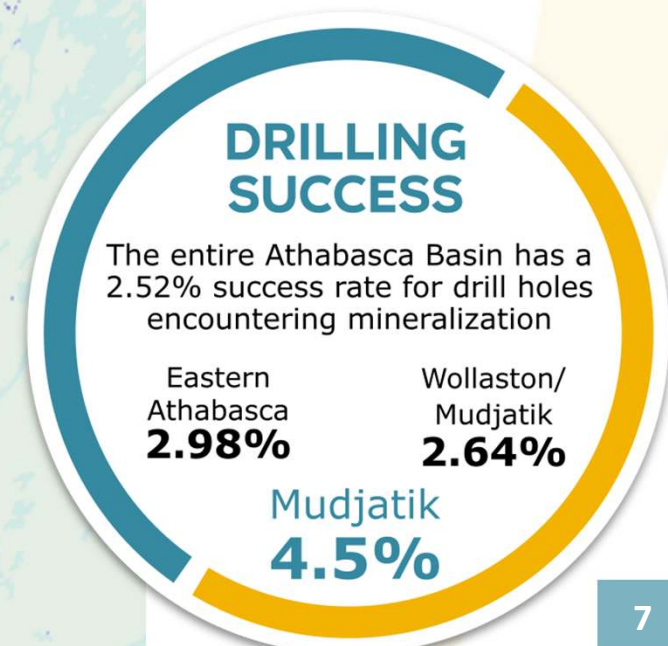
Explore for Tier 1 (140+ M lb) deposits in the Athabasca Basin

### Focus on the unexplored Mudjatik

- Mudjatik Cable Bay Shear Zone target
- 250 – 950m sandstone cover
- Higher perspectivity
- Less exploration due to depth, technical limits, and risk aversion
- Super-deposit opportunity due to exploration density and sterilization



- URANIUM MINES PAST AND PRESENT
- URANIUM MILL
- URANIUM RESERVES
- MUDJATIK DRILL HOLE
- NON-MUDJATIK DRILL HOLE
- CABLE BAY SHEAR ZONE
- WOLLASTON
- WOLLASTON / MUDJATIK
- ATHABASCA BASIN OUTLINE
- TERRA URANIUM CLAIMS





# PROJECTS

## TIER ONE TARGETS

### TECHNICAL FRAMEWORK

When exploring at these depths your technical framework must be modern, tactical, successive and strategically results driven to ensure the highest probability of encountering uranium

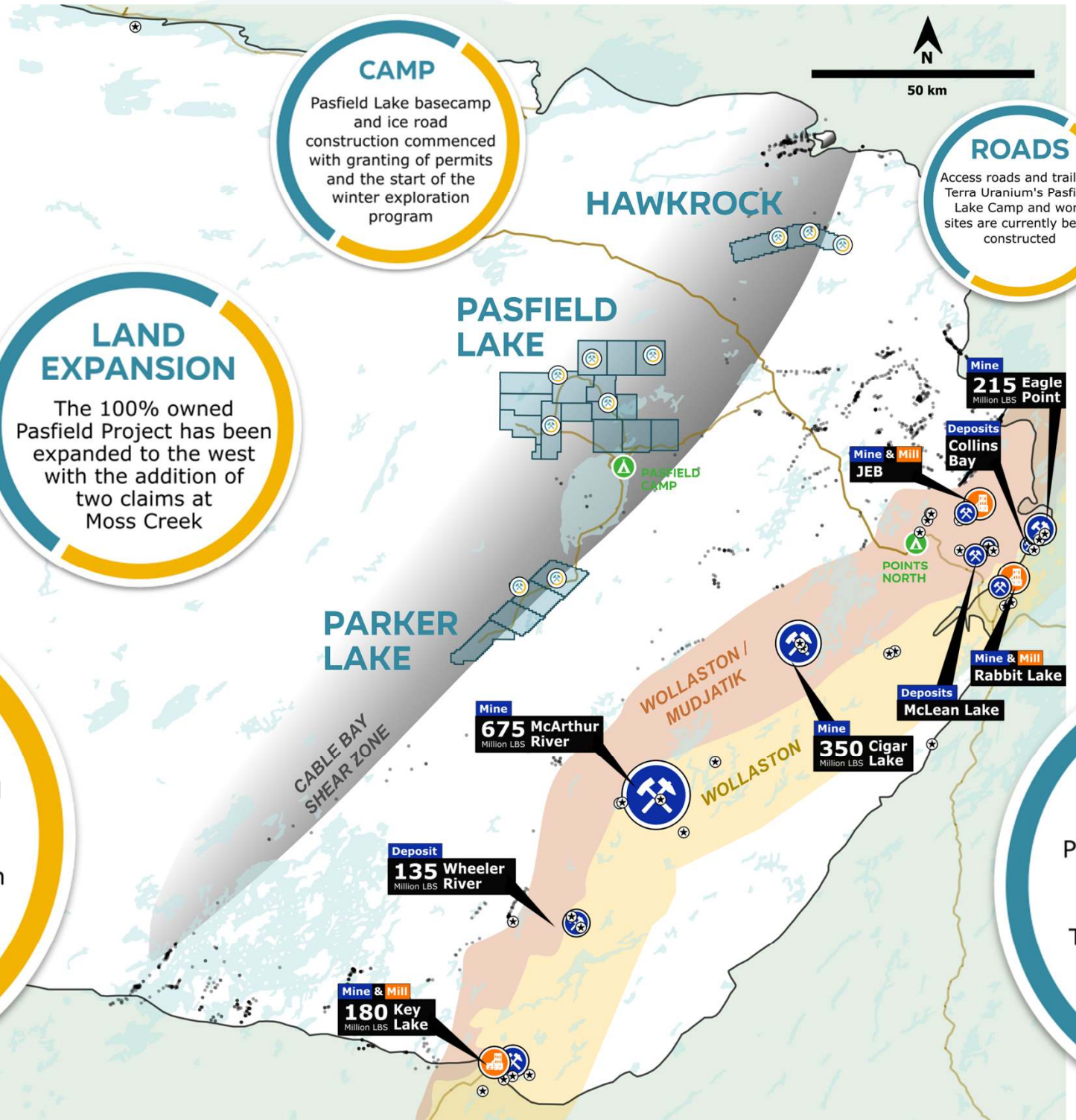
Confident valuable resources are expending on programs that advance targeting toward defining diamond drill core drilling

### LAND EXPANSION

The 100% owned Pasfield Project has been expanded to the west with the addition of two claims at Moss Creek

### CABLE BAY SHEAR ZONE

The CBSZ is a major structural zone with known uranium mineralisation but has seen limited exploration as the basin sediment cover is thicker than for known deposits immediately to east



### EXPLORATION PERMITS

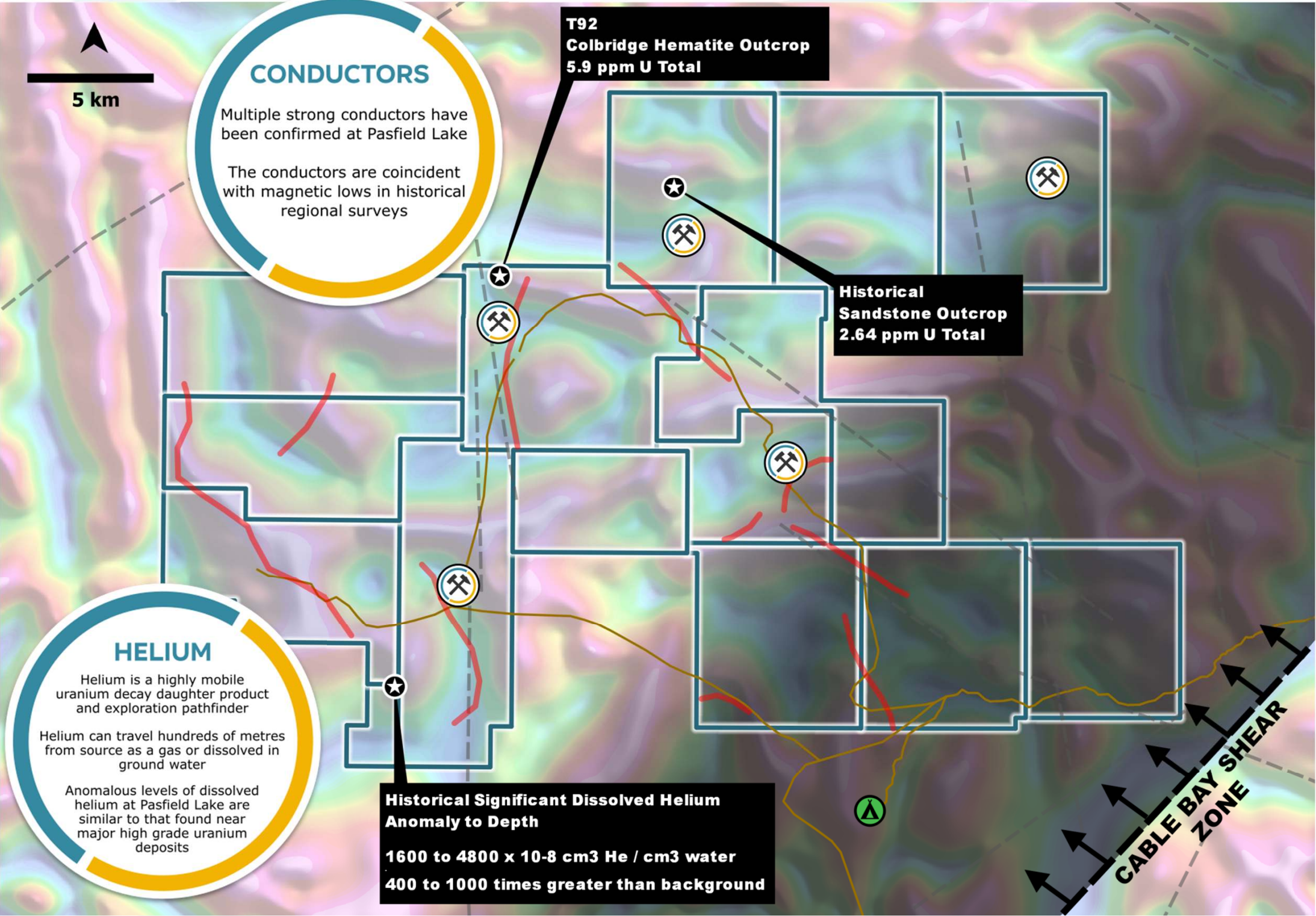
Permits on all projects have been granted for 3 years

This includes trail building, base camp construction, ground geophysics, and drilling



# PROJECTS – PASFIELD LAKE

## ATHABASCA BASIN



### LOCATION



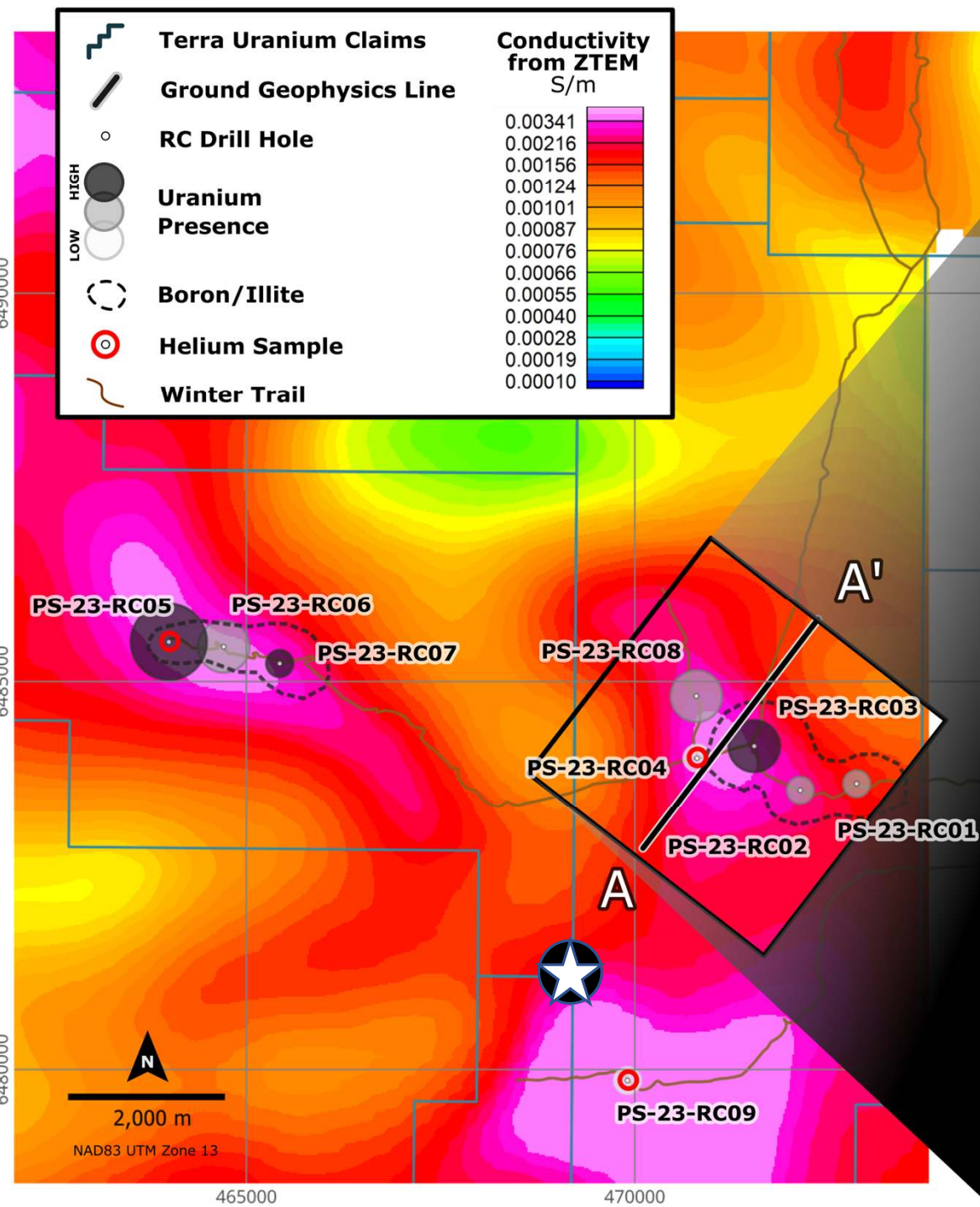
### MAP LEGEND

- TERRA CLAIMS
- PRIORITY GEOSCIENCE TARGET AREA
- GEOCHEMICAL ANOMALY
- CABLE BAY SHEAR ZONE
- CONDUCTORS
- RESIDUAL TOTAL FIELD TILT
- FAULTS
- ROADS AND TRAILS



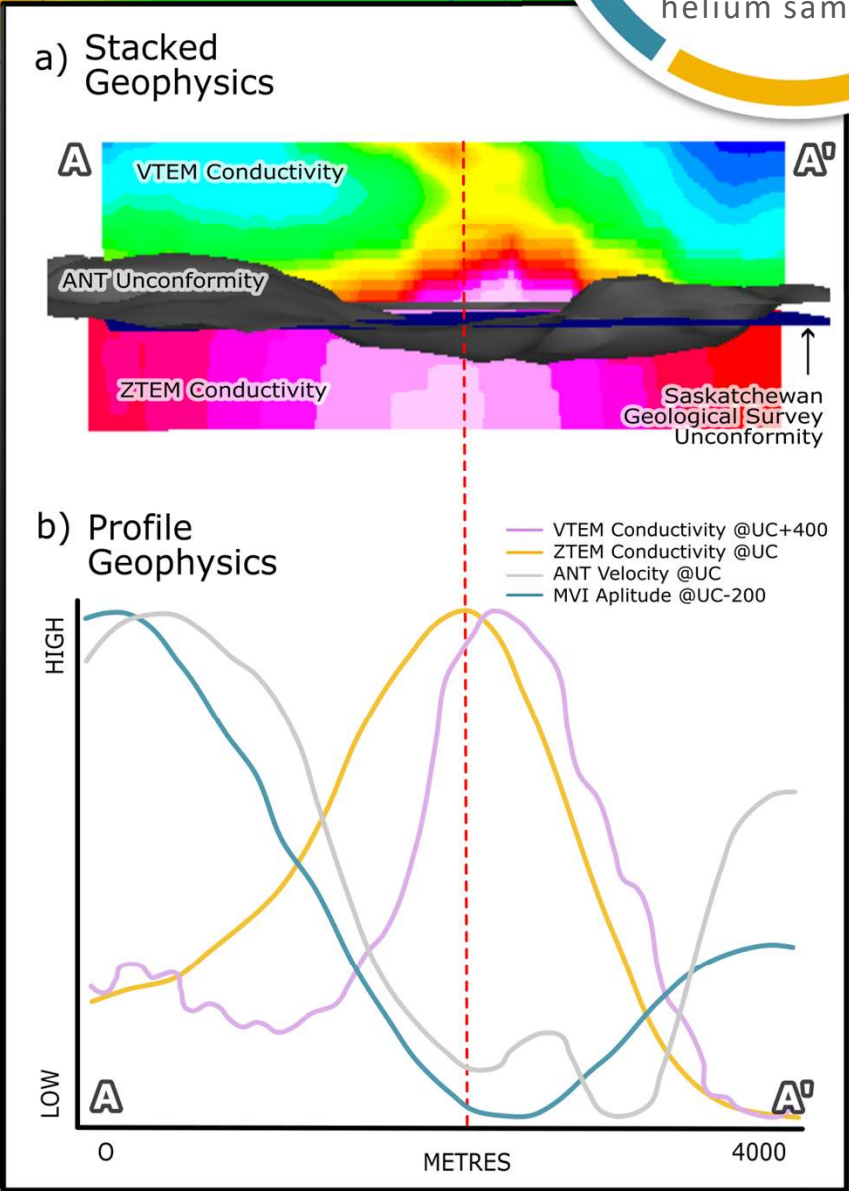
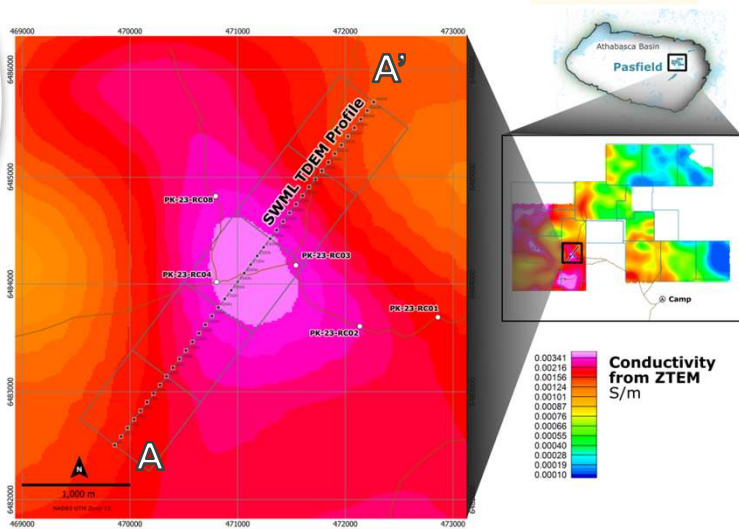
# PROJECTS – PASFIELD LAKE – TARGETING

## ATHABASCA BASIN



**RC DRILLING**  
RC drill holes and associated uranium values (ppm, 50<sup>th</sup> percentile), anomalous boron and illite clay alteration haloes and helium samples.

### LOCATION

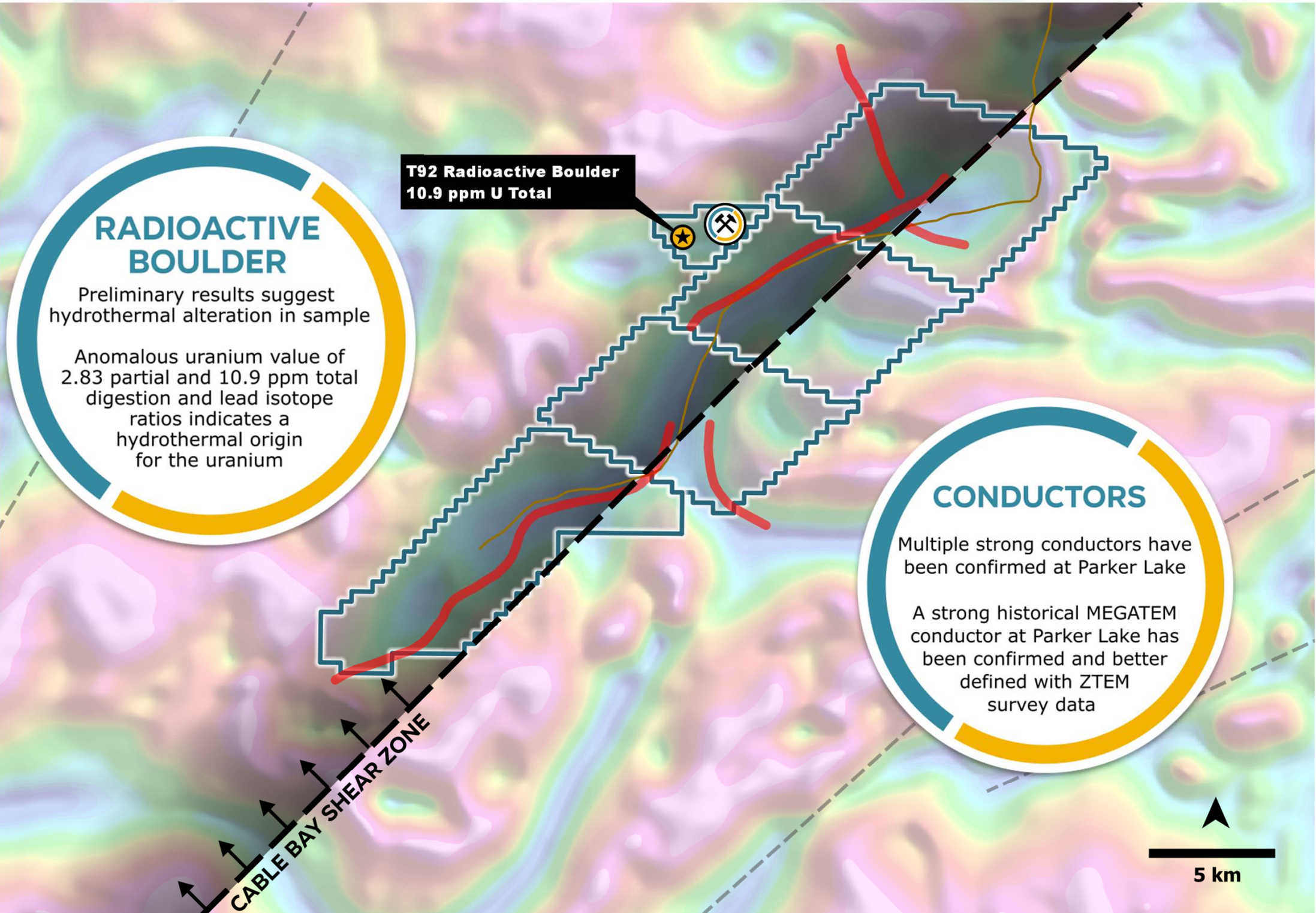


**LINE A-A'**  
Section line on inset images showing  
(a) stacked VTEM/ZTEM inversions, with ANT map of UC surface  
(b) Profiles of VTEM/ZTEM inversion data, magnetic vector amplitude below UC, and ANT velocity at UC



# PROJECTS – PARKER LAKE

## ATHABASCA BASIN



### LOCATION



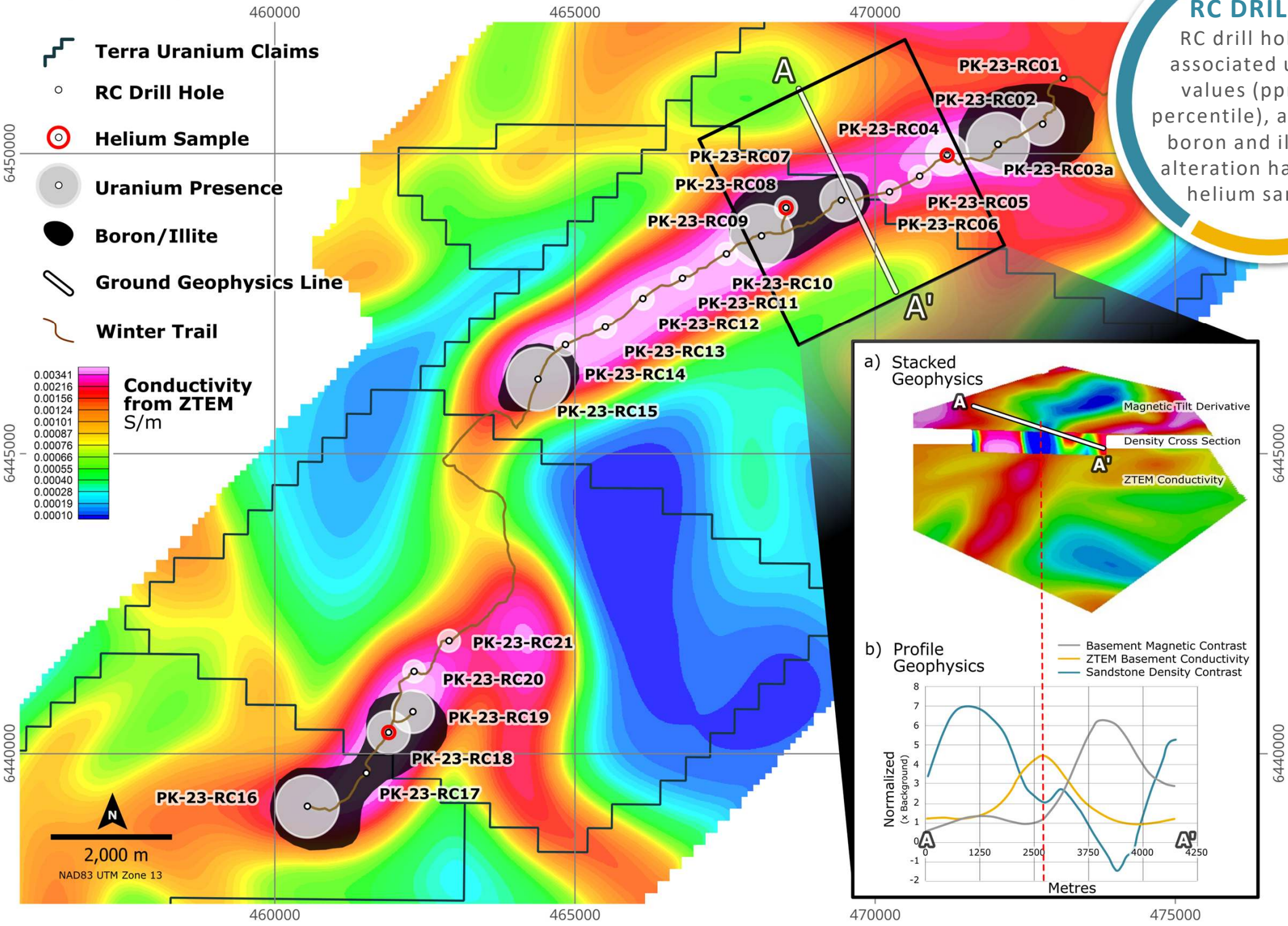
### MAP LEGEND

- TERRA CLAIMS**
- PIORITY GEOSCIENCE TARGET AREA**
- GEOCHEMICAL ANOMALY**
- CABLE BAY SHEAR ZONE**
- CONDUCTORS**
- RESIDUAL TOTAL FIELD TILT**
- FAULTS**
- ROADS AND TRAILS**



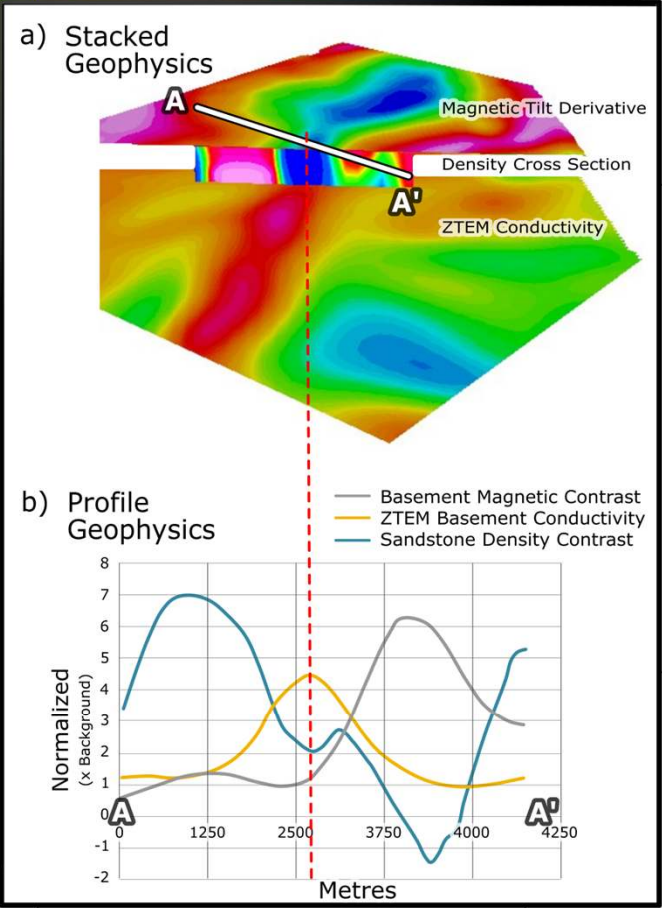
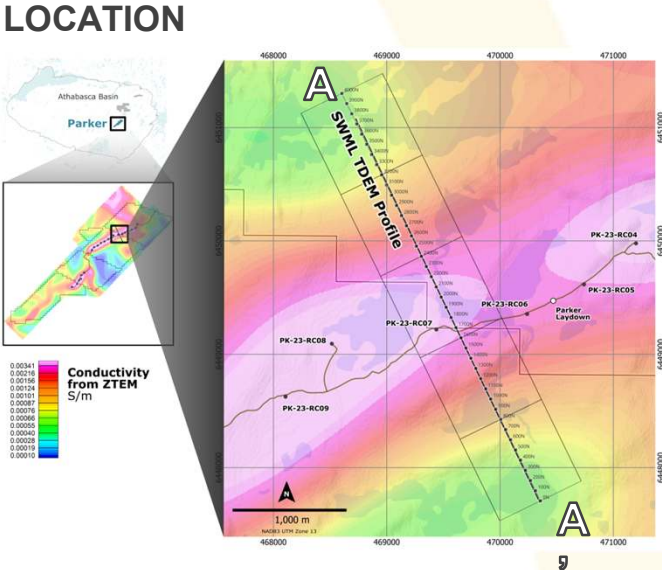
# PROJECTS – PARKER LAKE – TARGETING

ATHABASCA BASIN



**RC DRILLING**

RC drill holes and associated uranium values (ppm, 50<sup>th</sup> percentile), anomalous boron and illite clay alteration haloes and helium samples.



**LINE A-A'**

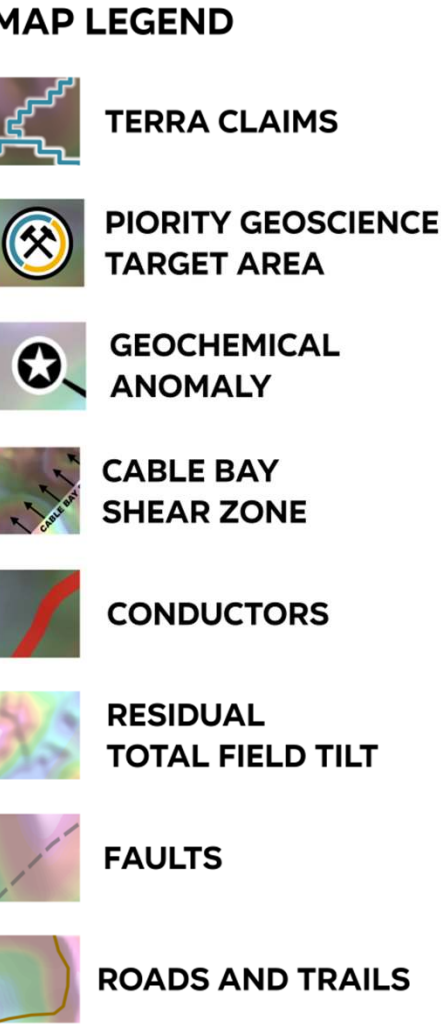
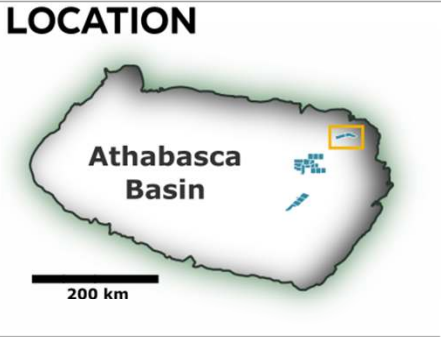
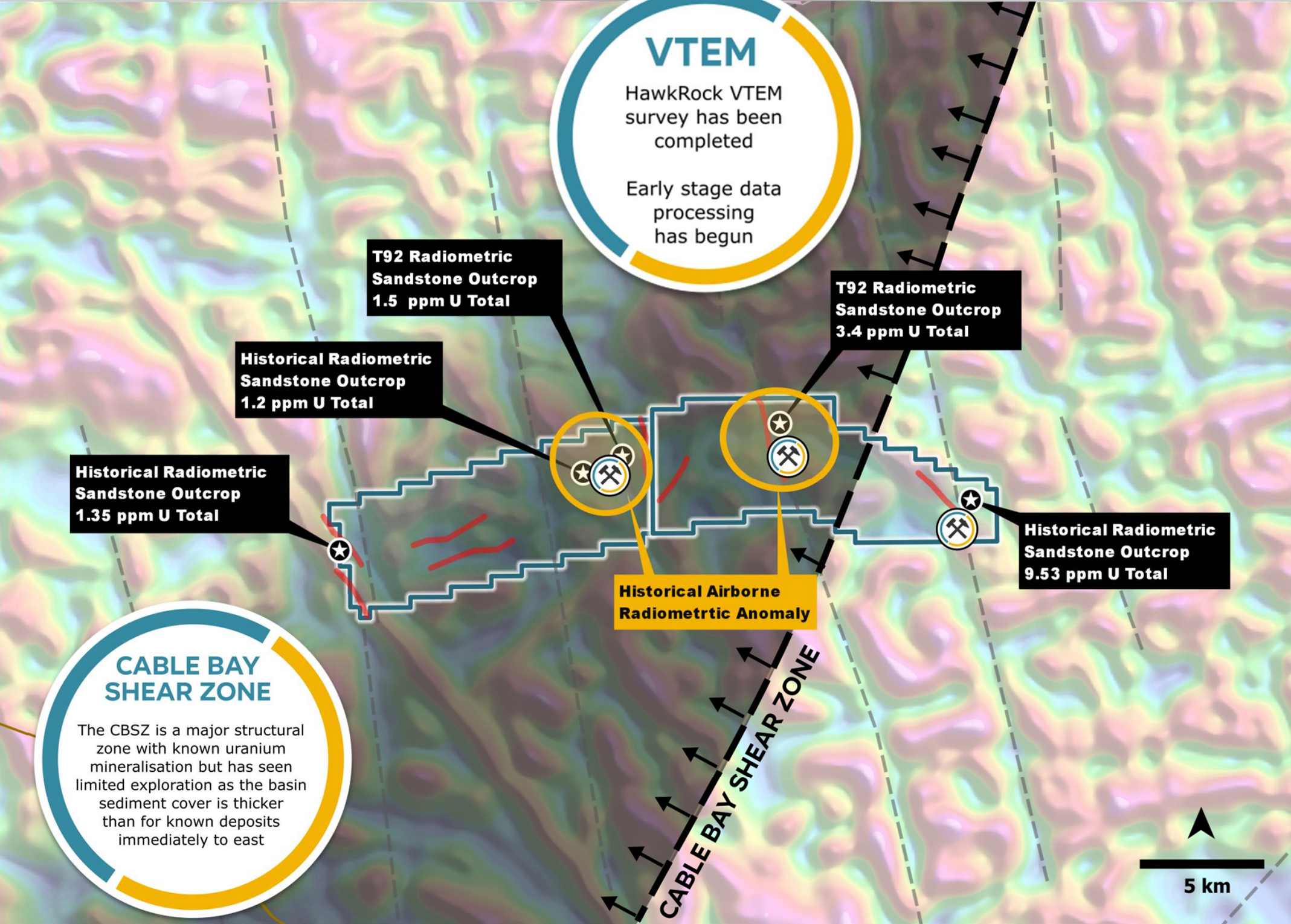
Section line on inset images showing

- (a) Stacked ZTEM inversions and magnetics, with density profile
- (b) Profiles of ZTEM inversion data at 100m below UC, magnetic vector amplitude at UC, and density at UC +150m



# PROJECTS - HAWKROCK

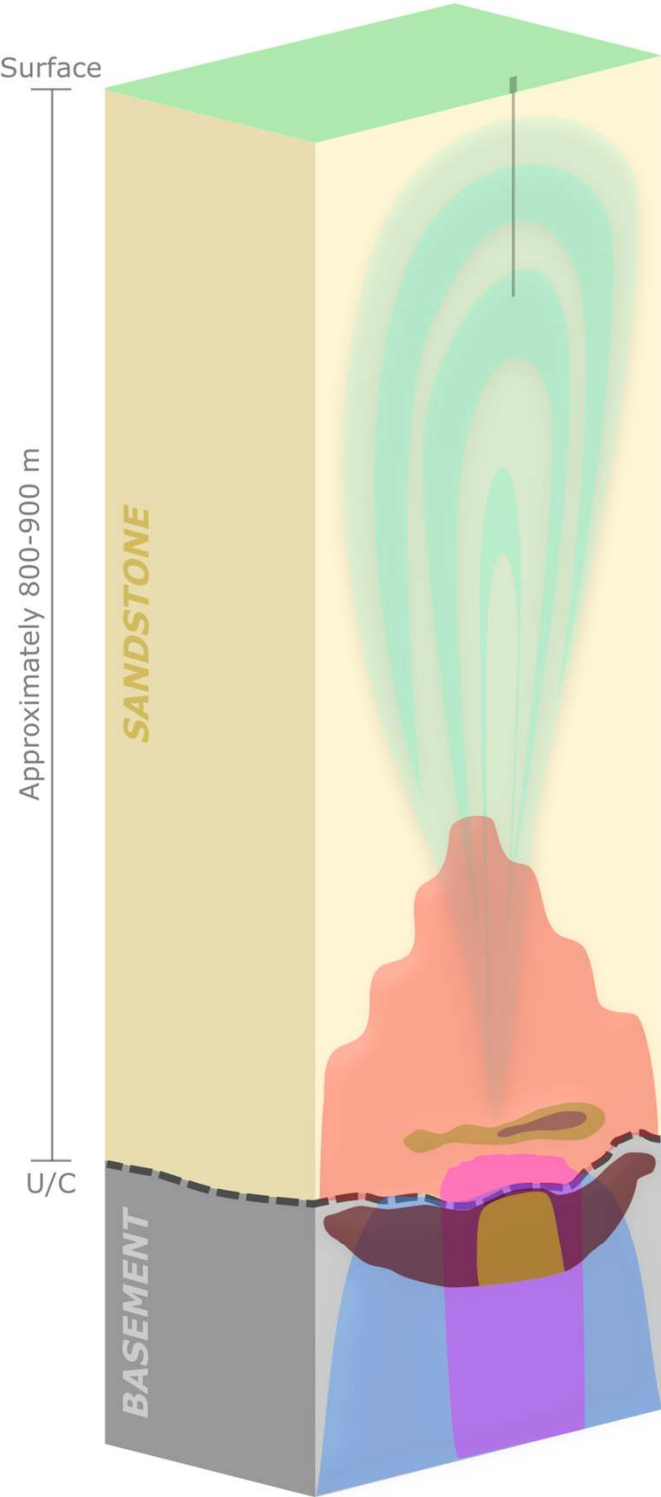
## ATHABASCA BASIN



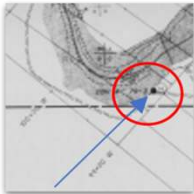


# THE DATA

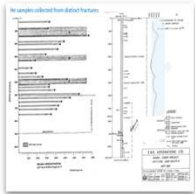
## HISTORICAL, MODERN, AND NEWLY COLLECTED DATA



### HISTORICAL GEOCHEMISTRY



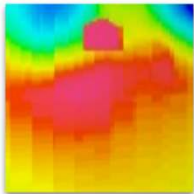
Significant Helium Anomaly



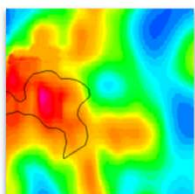
Historical Drilling Data

- **Historical Significant Dissolved Helium Anomaly to Depth**  
*Location is coincident with Pasfield geophysical anomalies*
- **Anomalous helium levels are similar to values found near major high grade uranium deposits**  
*1600 to 4800 x 10<sup>-8</sup> cm<sup>3</sup> He / cm<sup>3</sup> water*  
*400 to 1000 times greater than background*

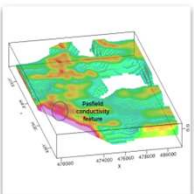
### VTEM



Presense of strong conductors



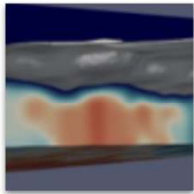
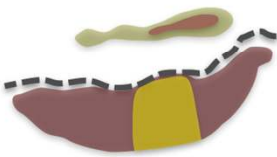
Conductivity in the sandstone



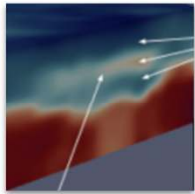
Pasfield conductivity feature

- **Identify and confirm sandstone/basement conductivity structures**
- **Graphitic basement faults**  
*Transport/trap*
- **Conductive hydrothermal clay alteration**  
*Fluid-rock interaction*

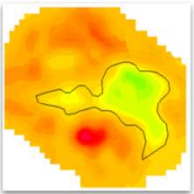
### ANT



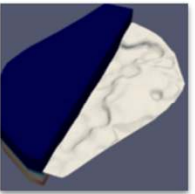
Undulations in cover layers



Cover has at least 3 layers



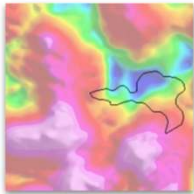
Velocity low at unconformity



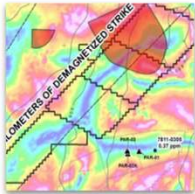
Basement valley at the anomaly

- **Sandstone and basement architecture**
- **Basement-sandstone unconformity is key to deep play exploration**

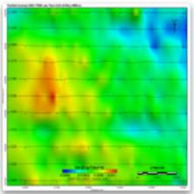
### HISTORICAL GEOPHYSICS



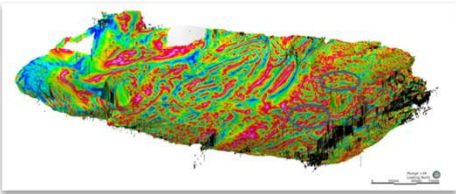
Low magnetic susceptibility



Historical Magnetics and MEGATEM



TMI with interpreted fault & alteration low



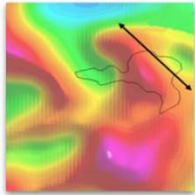
Saskatchewan Geological Survey 3D model of the Athabasca Basin

- **Open Data**  
*Historical data sets provide valuable inputs to all stages of exploration planning and project modelling*

### ZTEM



ZTEM Anomaly



4 km conductor strike length

- **Resolve basement conductivity structures**
- **Greater than 1000m depth of investigation**
- **ZTEM Airborne Geophysics Results/Update**  
*Historic MEGATEM conductive anomaly confirmed at Parker*  
*Multiple strong conductors confirmed at Parker and Pasfield*



# THE TIMELINE

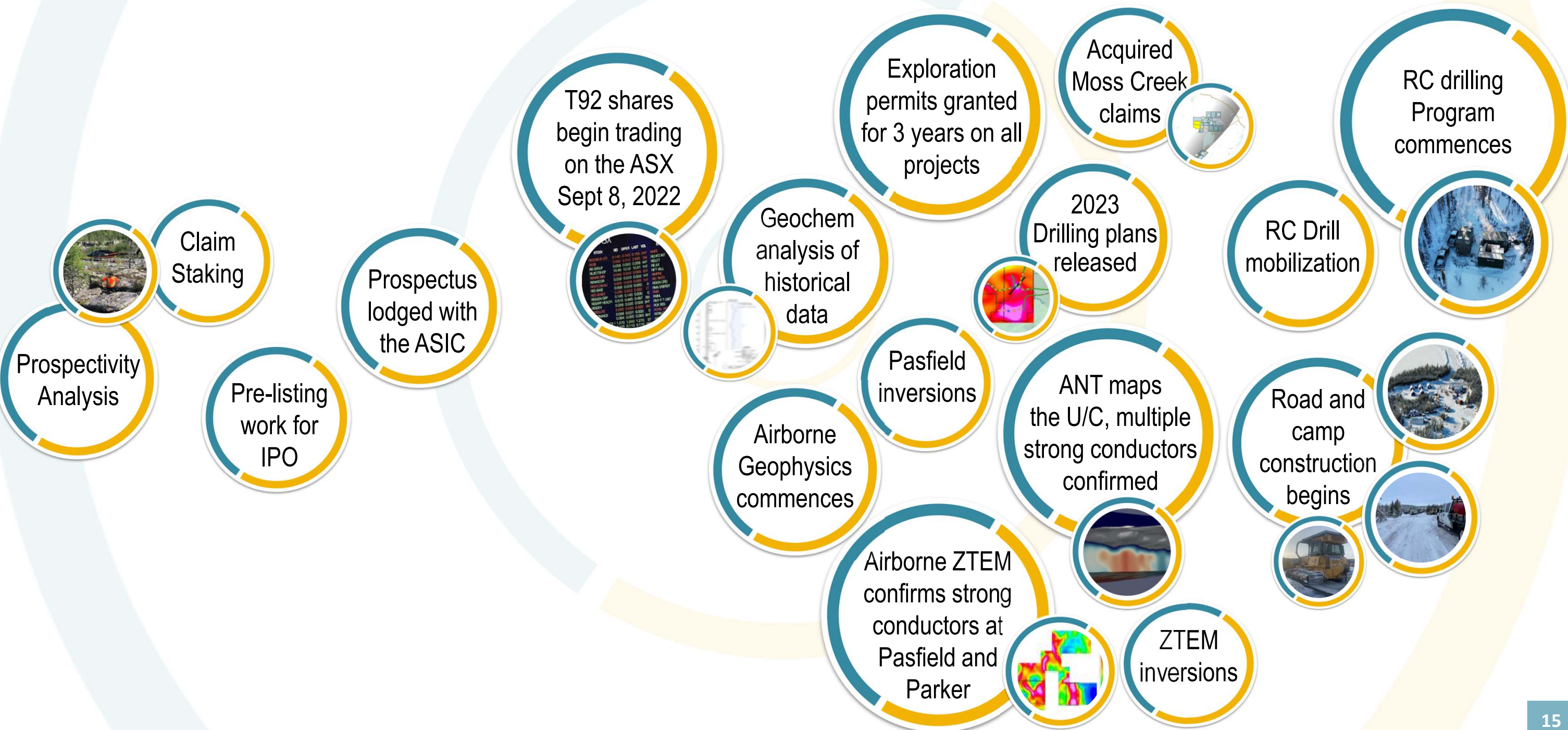
## A STEADY STREAM OF NEWS AND ACTIVITY

Pre-Listing

Q3 2022

Q4 2022

Q1 2023





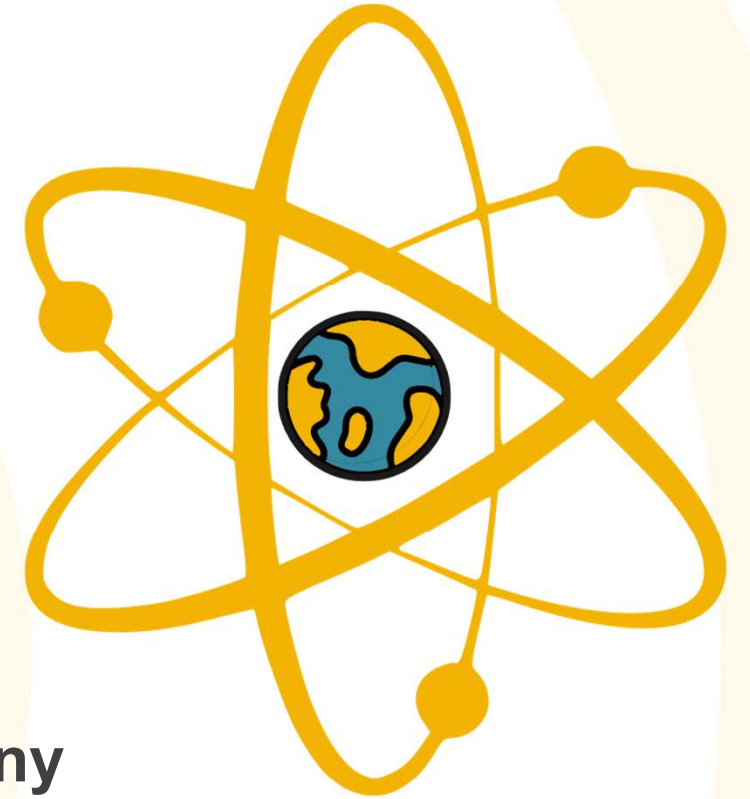
## NUCLEAR POWER FOR CLEAN ENERGY AND DECARBONIZATION

**We believe that nuclear has a major role to play in clean energy and the decarbonization of the world electrical power system.**

**The Board is responsible for the corporate governance of the Company and protecting the rights and interests of Shareholders to whom it is accountable.**

**In developing its approach to corporate governance, the Company has considered the ASX Corporate Governance Council's 10 principles of good corporate governance and best practice recommendations.**

**The company will achieve its objectives with minimal environmental and social impact.**





## ON THE GROUND, WE WORK CLOSELY WITH THOSE WHO HAVE TRADITIONAL RIGHTS

Terra Uranium Canada Limited projects are situated on Treaty 10 Territory and the Homeland of the Métis. We honor the terms of Treaty 10, and the ongoing legal and socioeconomic impacts on Indigenous communities. We respect indigenous history, and the First Nations and Métis ancestors of this place and reaffirm our respectful relationship with one another.

Terra Uranium will take steps to ensure Indigenous communities and businesses participate fruitfully in our business and pursue a participation model that reflects our ideals as partners.





# THANK YOU

## **Andrew J Vigar**

Executive Chairman

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P: +61 402 912 198

This announcement has been authorised by Andrew J Vigar, Chairman, on behalf of the Board of Directors

