Dessert Lake Uranium Project

An Eastern Athabasca Basin Target in the Northwest Territories?

► XTM – TSXV Project Presentation

Q1 2025

Overview
Dessert Lake Basin Opportunity

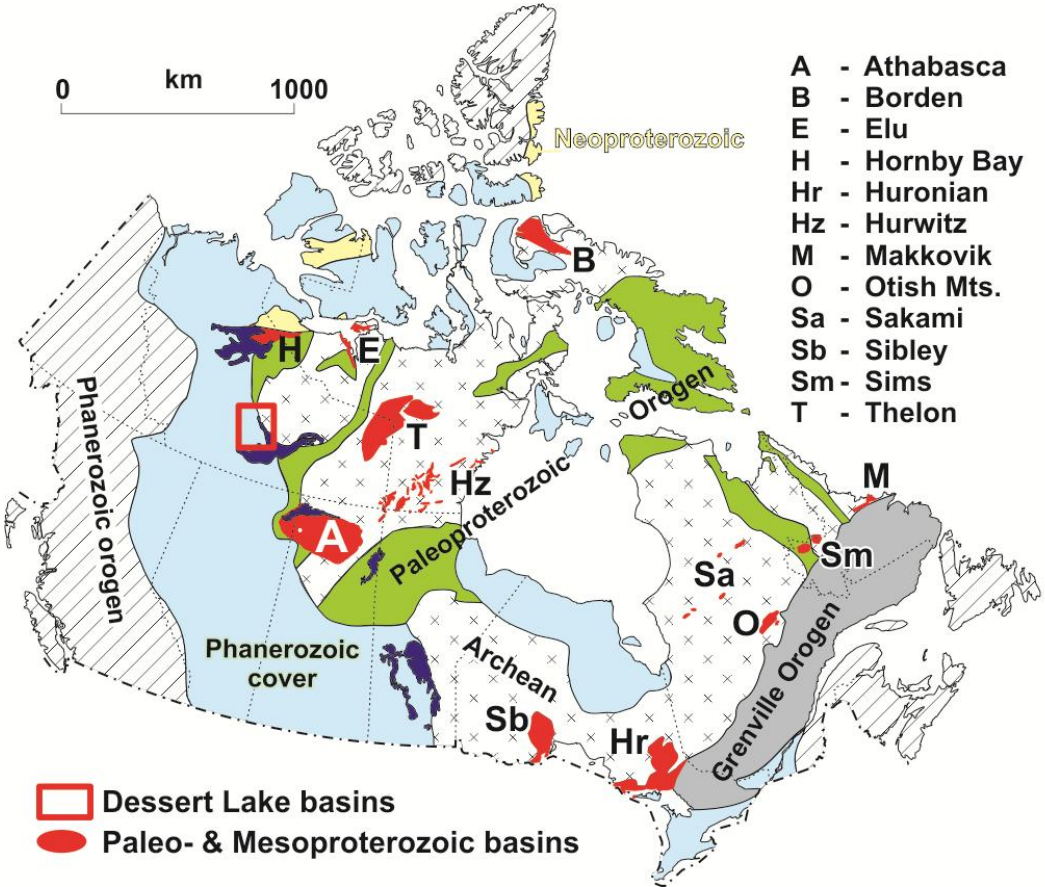
Transition Metals

- Dessert Lake is a newly recognized (GSC-2007), **Mesoproterozoic red bed sandstone basin**.
- The basin is cut by the Wopmay Fault – a **crustal structure** that hosts **numerous root uranium vein deposits** along its length.
- The basin features support an environment that is **analogous to the "P-2 Fault" part of the Athabasca Basin**.
- Transition Metals holds Prospector's Licenses covering the area prospective for unconformity/fault-related uranium deposits.
- **Potential exists for redox sensitive and unconformity-type mineralization** along the basal unconformity and in proximity to crustal faults (magnetic lows) intersecting the basement and overlying cover.
- **Field work and core logging** (Anglo American) have **confirmed the existence of Proterozoic red beds at shallow, drill accessible depths** below thin Phanerozoic cover.
- **Geophysics and drilling are required to advance the project**.

New Mesoproterozoic Basin

Possible New Athabasca Basin?

Transition Metals



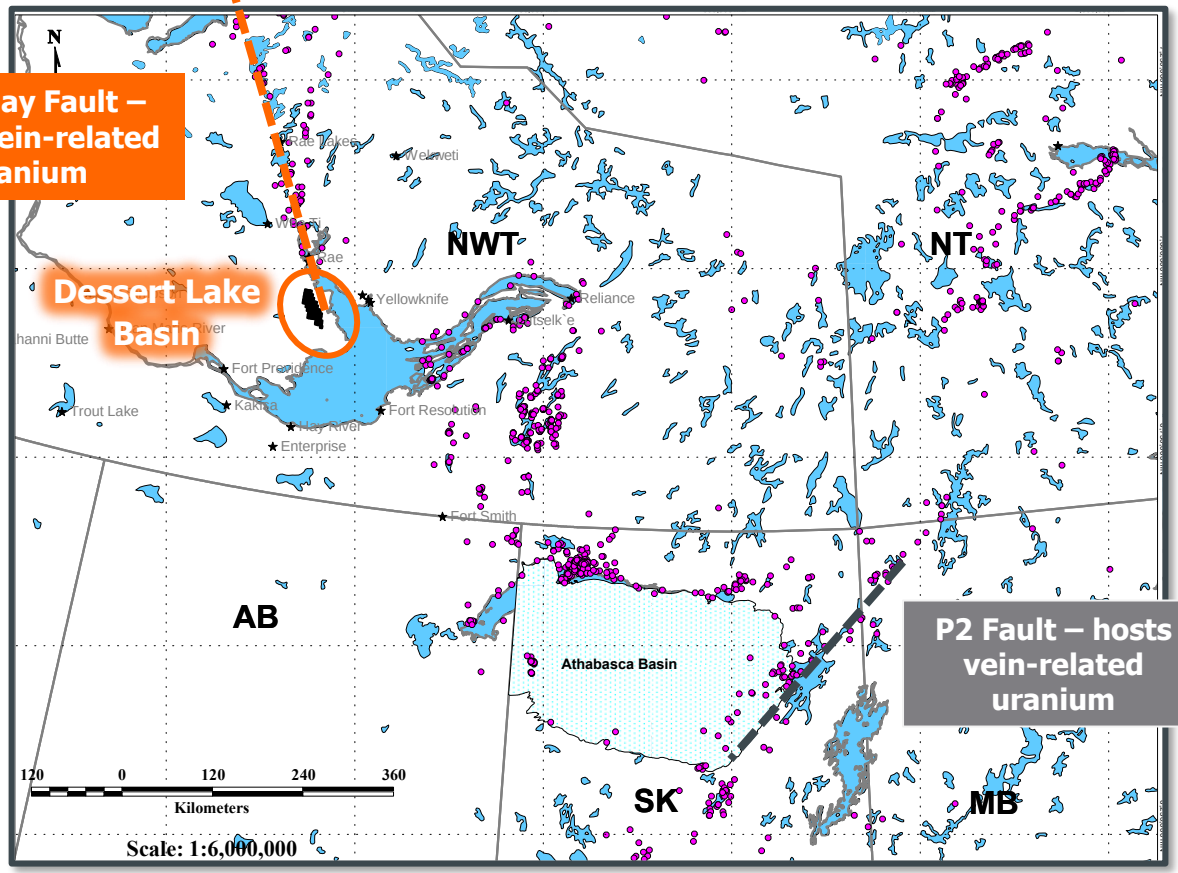
Newly recognized Mesoproterozoic basin hidden under a thin Phanerozoic cover

- Red bed sandstone basin discovered by the Geological Survey of Canada in 2007
- Located just west of the Great Slave Lake and about 20 km south of the Yellowknife Highway

Uranium Occurrences

Structural Similarities to Major Athabasca Structures

Transition Metals

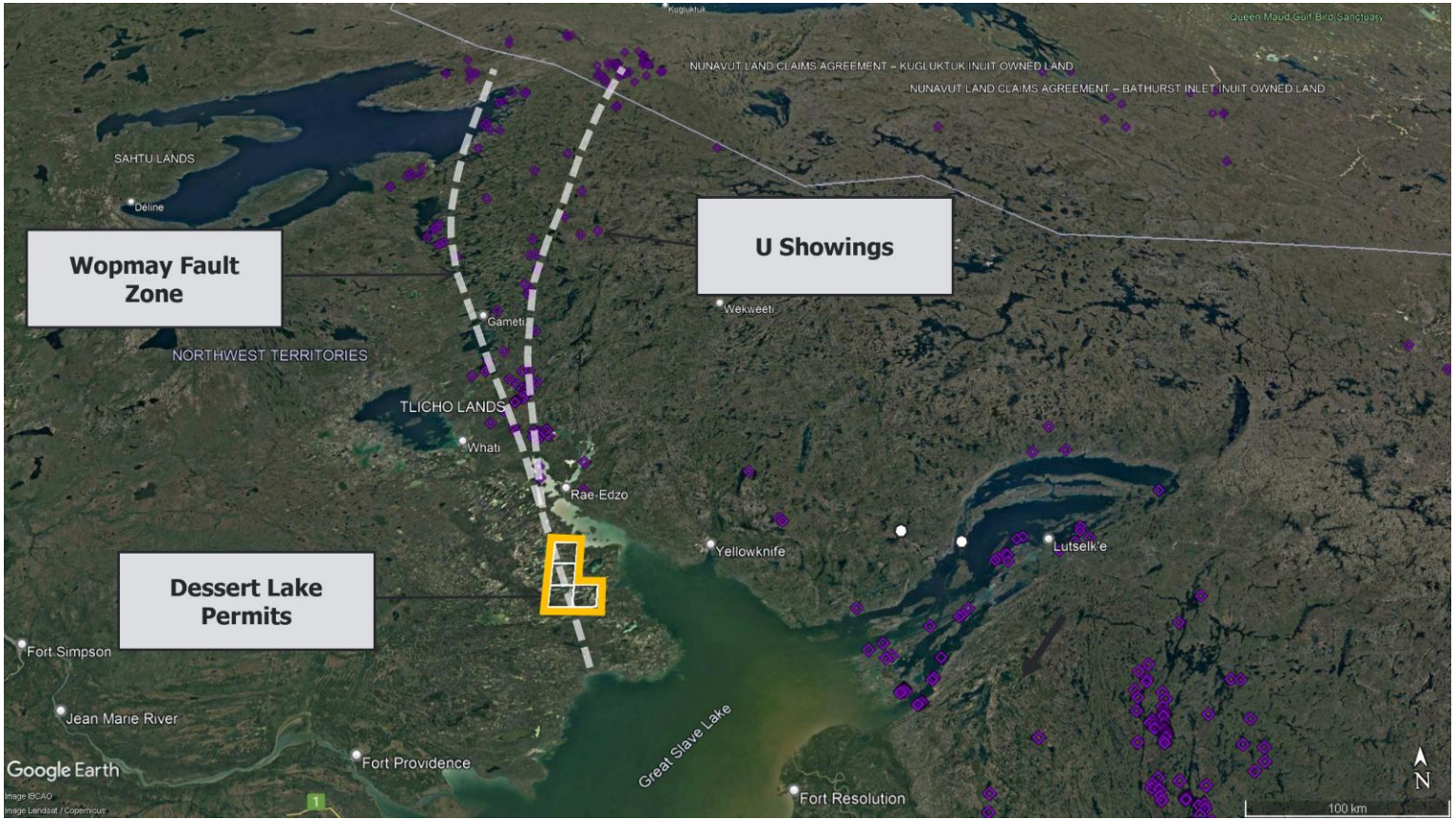


The Athabasca Basin is believed to contain roughly 1/3 of the world's known uranium resources.

Could the Dessert Lake Basin be another Athabasca Basin?

Regional Uranium Showings

Associated with the Wopmay Fault Zone



Historic Uranium Production

Within the Wopmay Fault Area

Eldorado Mine, NWT

Along the eastern shore of Great Bear Lake on May 16, 1930, Gilbert Labine discovered an ore vein containing silver and pitchblende. This discovery led to the development of the Eldorado Mine and the town of Port Radium. Radium was in high demand for use in medical treatment. After the war the mine was reopened as a federal crown company when it was discovered that the ore was rich in uranium.

Rayrock Mine, NWT

Rayrock was an underground uranium mine that operated for two years, from 1957 to 1959. It is located 145 kms northwest of Yellowknife and 74 kms northwest of Behchok'o.

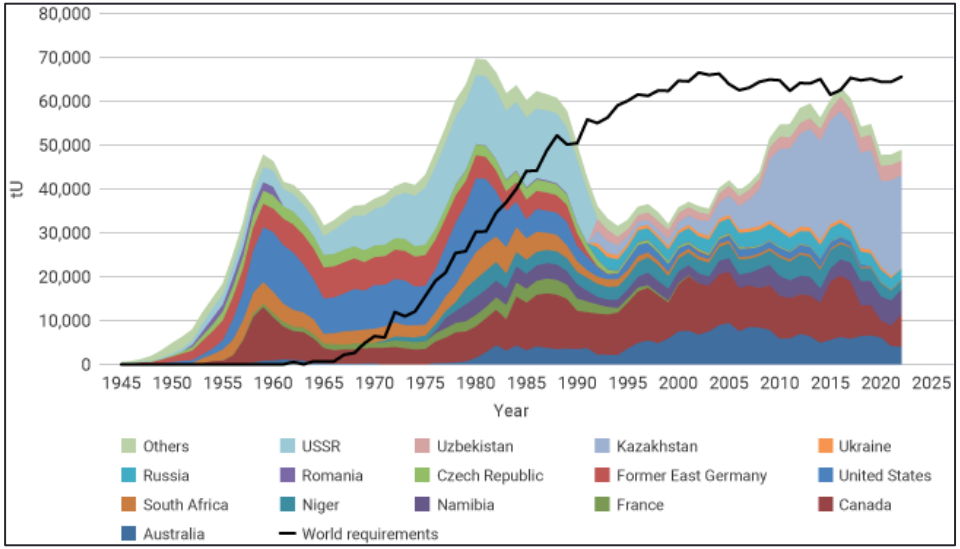
- Historic uranium production from vein deposits along the Wopmay Fault are interpreted to be the eroded roots of unconformity related deposits.
- **Opportunity exists for world-class deposits where the Dessert Lake sandstone basin has not been eroded.**

Global Demand for Uranium
Increases with Demand for Clean Energy

Transition Metals

- World Nuclear Association projects a **28% increase for uranium** between 2023-2030.
- Nuclear has key role to play in achieving global decarbonization goals as the **"cleanest & greenest"** source of reliable baseload power with the **lowest CO_2 emission** per energy unit generated.
- Demand also grows as **construction and planning of new reactors** around the world continues.
- At the 2024 COP29 conference, **31 countries** signed on to **triple nuclear energy capacity** out through 2050.

World uranium production and reactor requirements from 1945-2022

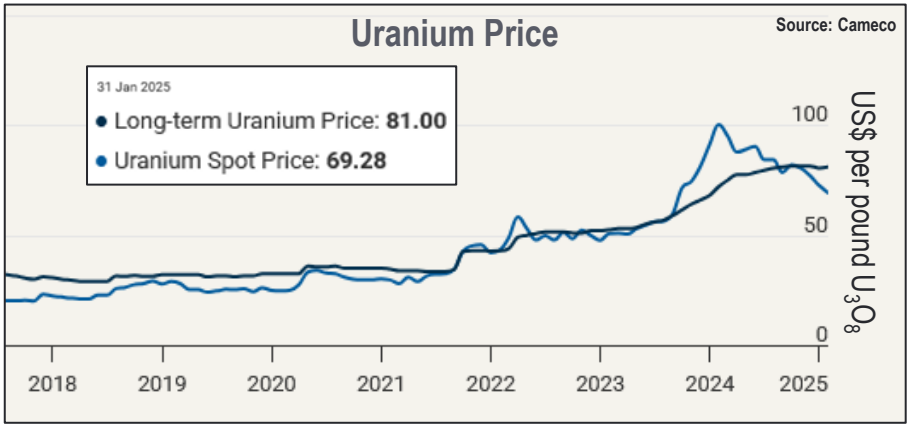


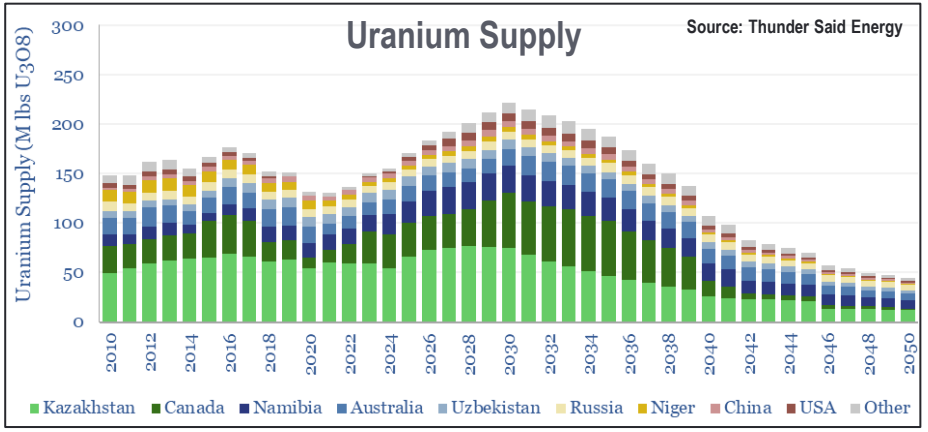
Source: OECD-NEA, IAEA, World Nuclear Association

Uranium Supplies
Not Enough to Meet Demand

Transition Metals

- However, current supplies are **not currently enough** to meet the global demand.
- By 2040, there could be a cumulative **1.1-billion-pound deficit in uranium**.
- Prices within the next few years are predicted to jump between **US$150-200** per pound.
- Globalization is increasingly being re-evaluated, and national security and environmental concerns drive a shift towards **regional supply chains and localized production**.



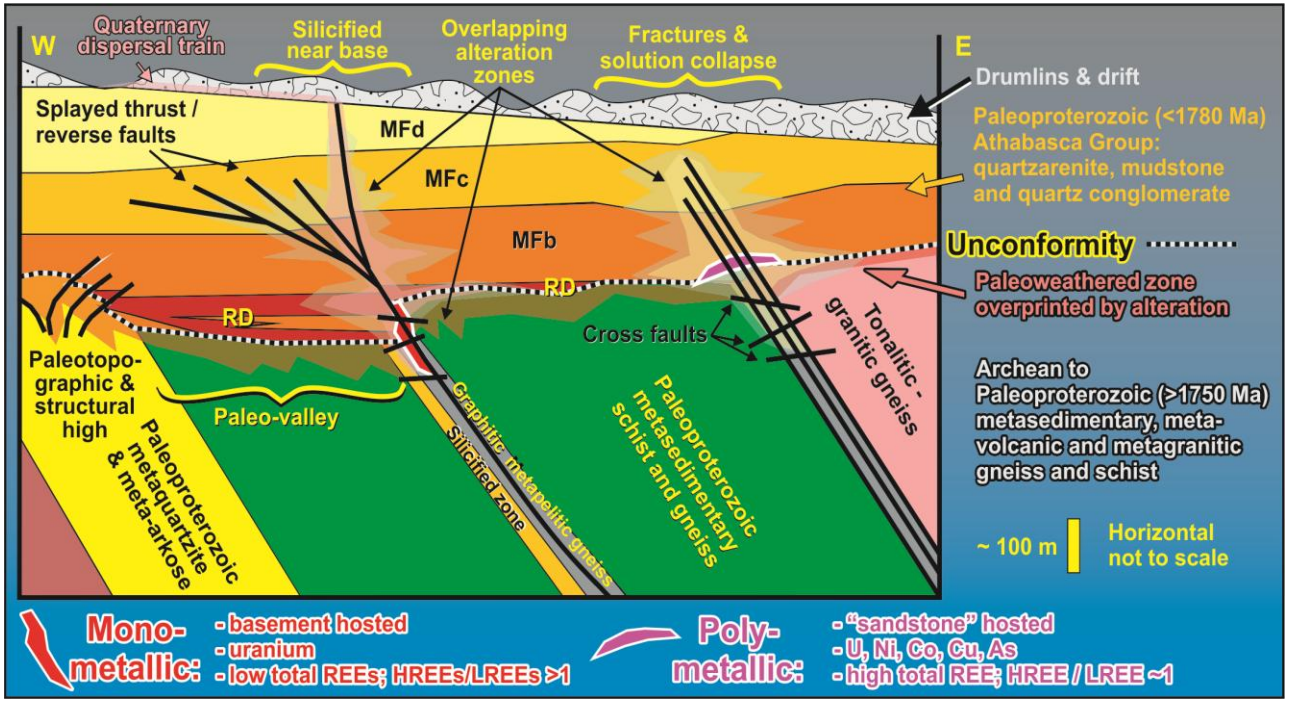


Exploration Criteria

For a World-Class Uranium Deposit

Transition Metals

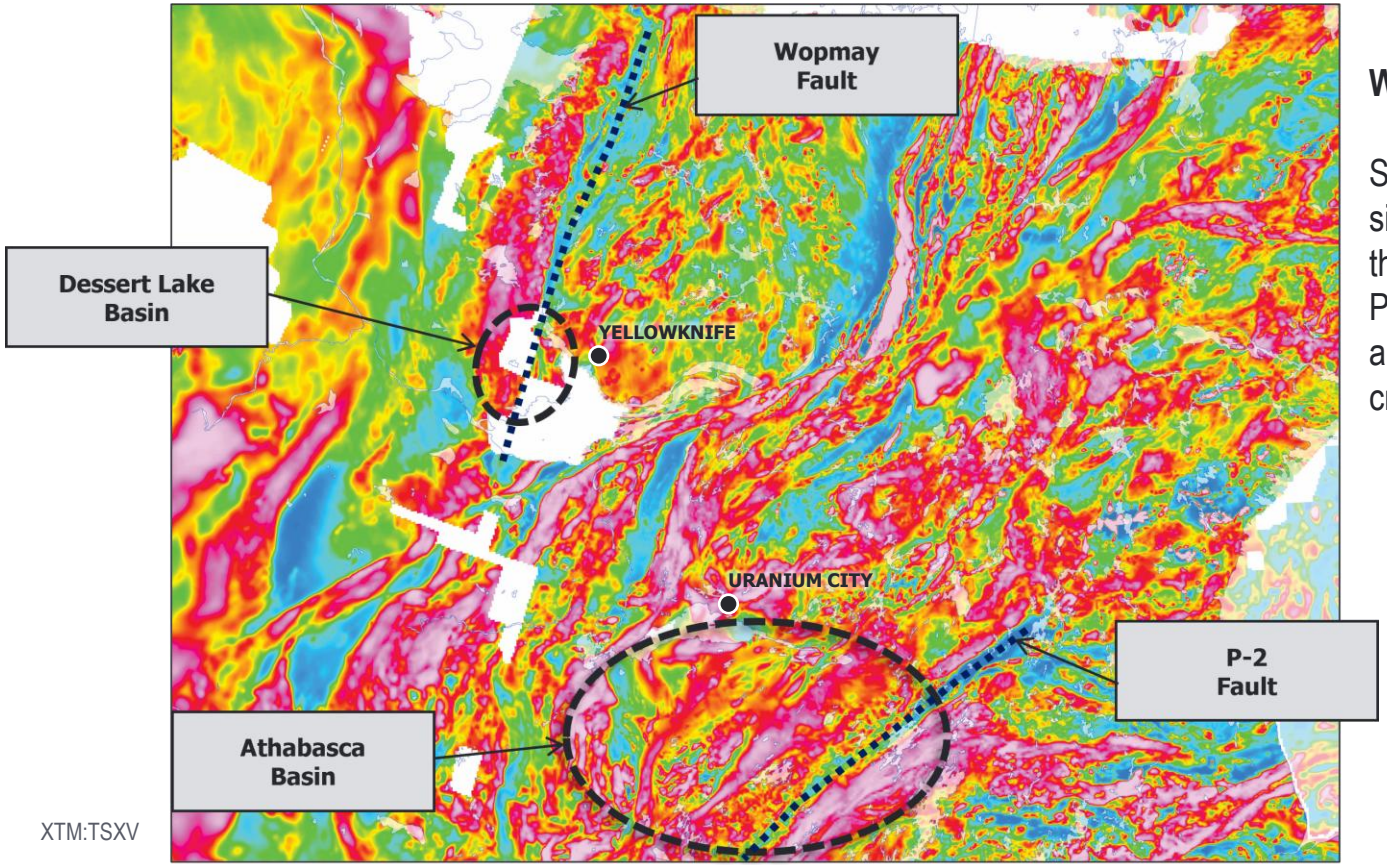
- Large regional sedimentary basin containing **red bed sandstone**
- **Unconformity** between the Archean and Mesoproterozoic
- Large, significant, re-activated **crustal structures** in the basement
- Footwall **graphitic meta-pelites** (reducing agent)
- Significant **alteration zones** along faults and unconformity



Structural Similarities

Between Dessert Lake Basin & Athabasca Basin

Transition Metals



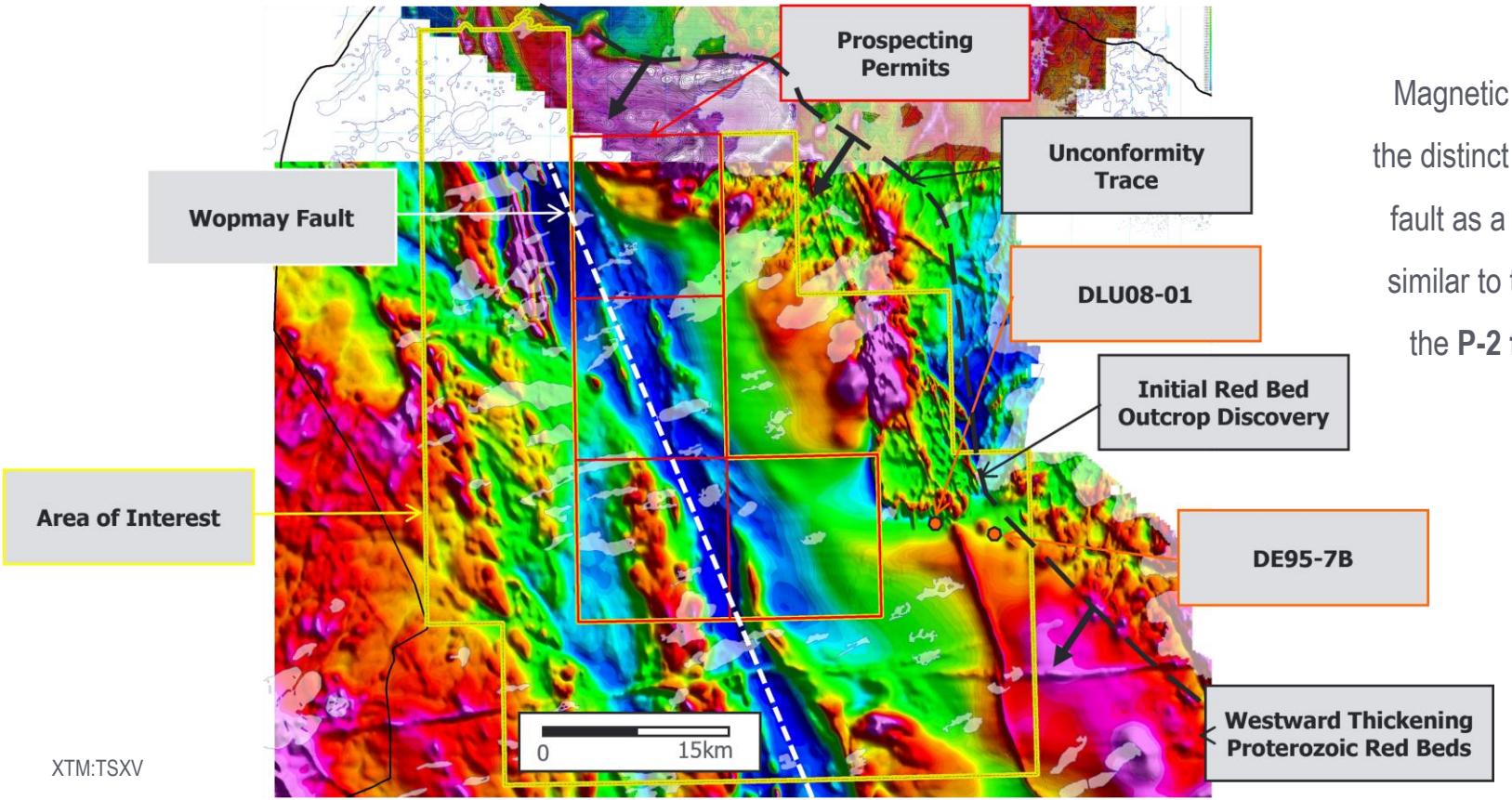
Wopmay Fault vs. P-2 Fault

Similar aeromagnetic low signatures (dark blue) due to the underlying Archean-Proterozoic metamorphism and alteration along regional crustal scale structures.

High-Resolution Magnetics

Continue to Support Structural Similarities

Transition Metals

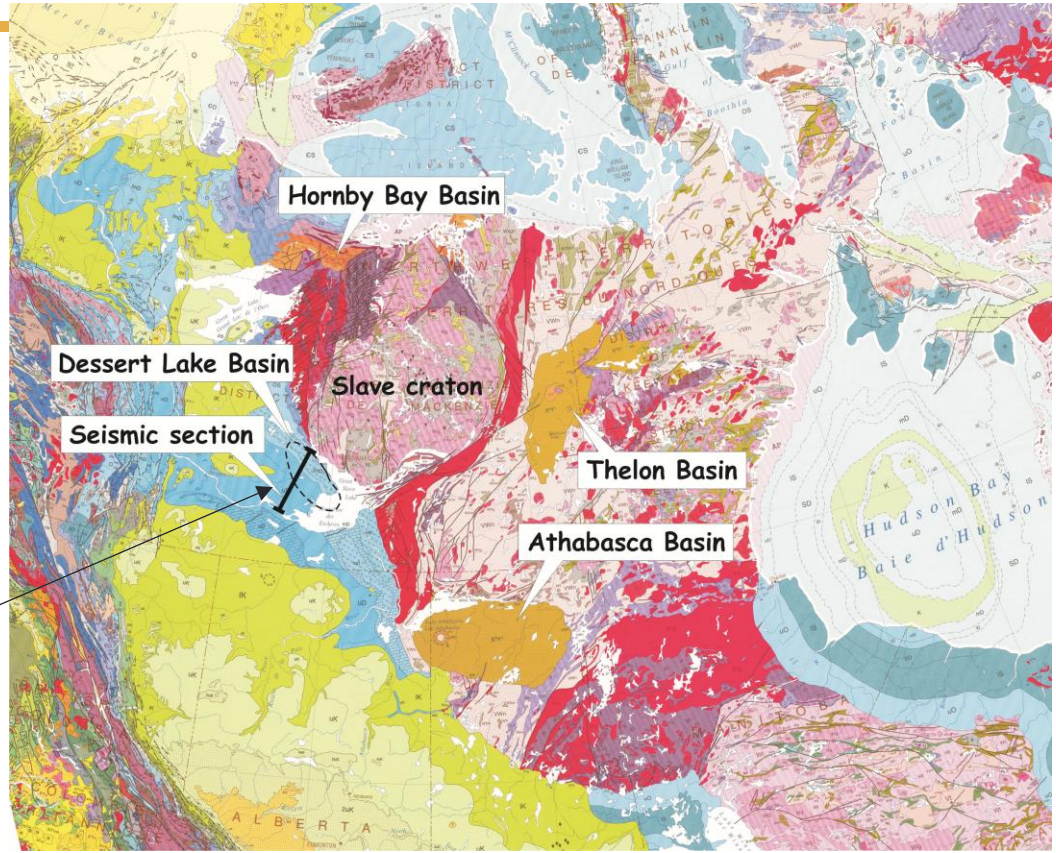


Magnetic survey defines the distinct Wopmay crustal fault as a **magnetic low**, similar to the signature of the **P-2 fault system**.

Regional Basins

Within the Northern Canadian Shield

- Map of the northwestern Canadian Shield (from Wheeler et al., 1996), showing the Slave craton and platformal cover to the southwest.
- Proterozoic sedimentary basins, and the relevant part of the SNORCLE seismic profile (Cook et al., 1999) are highlighted on next slide.
- Thin dashed line outlines approximate extent of the Dessert Lake Basin.



SNORCLE Reflection Seismic

Section Across the Dessert Lake Basin

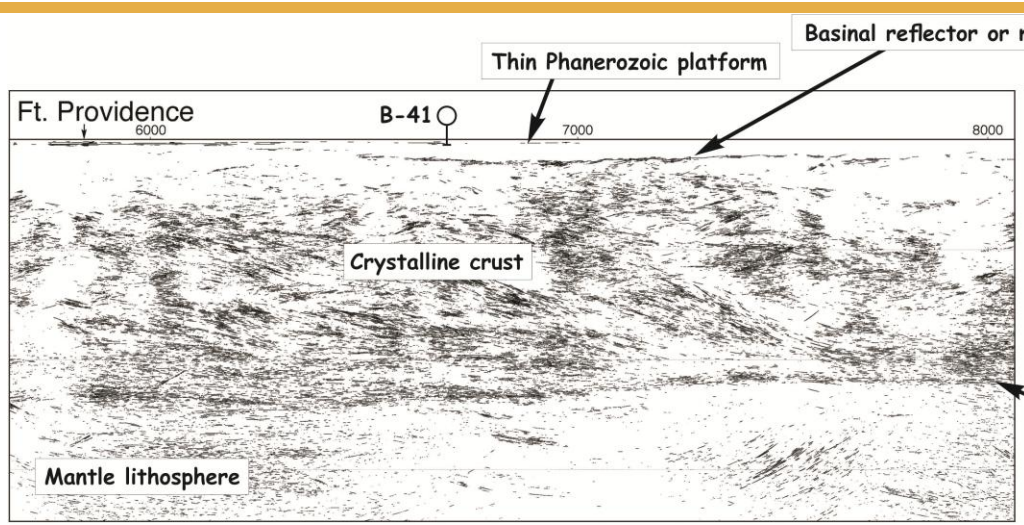


Figure 4: Relevant part of the SNORCLE reflection profile (Cook et al., 1999), between Rae-Edzo and Fort Providence, with our interpretation of the basinal reflector as as a shallow sedimentary basin remnant.

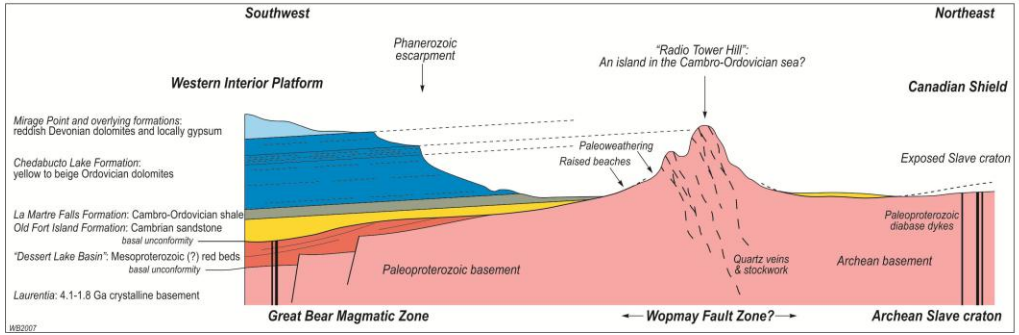
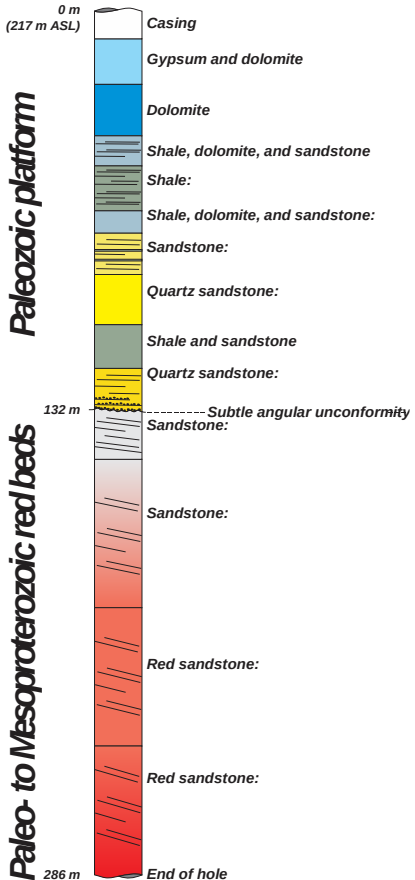
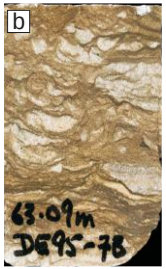


Figure 5: Schematic section from craton to platform (after Bleeker et al., 2007), illustrating the stratigraphic relationships, with an Athabasca-type basin outlier immediately underneath thin platformal cover.

Stratigraphic Column
Within the Dessert Lake Basin



Cambrian sandstone

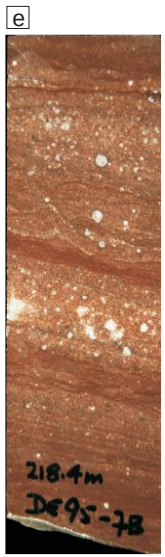


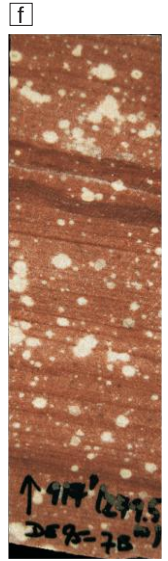
Unconformity

Proterozoic sandstone (bleached)

DDH: DE95-7B
Drilled by: Gerle Gold Ltd
Date: March 1995
Depth: 295.6m

Proterozoic red-beds

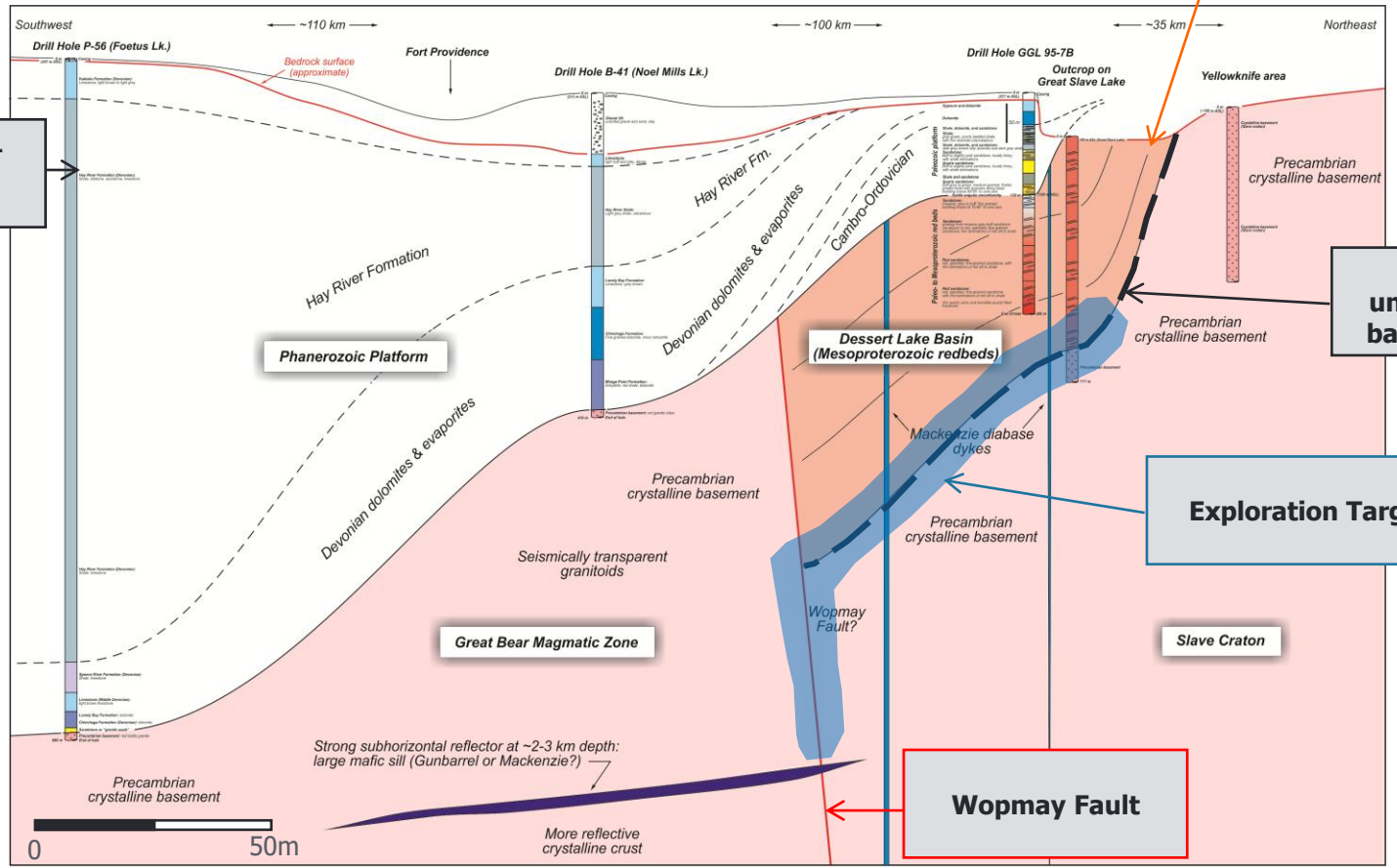




Schematic Cross Section

Section Within the Dessert Lake Basin

Transition Metals



Westward thickening Proterozoic red beds

P-56 & B-41 Oil and Gas DDHs

Trace of unconformity at base of red beds

Exploration Target

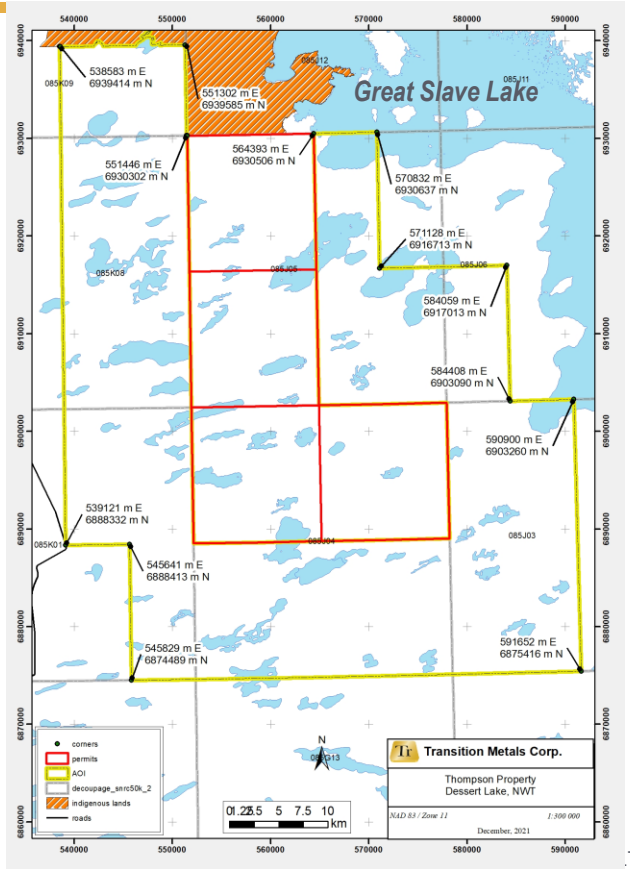
Wopmay Fault

Note: Significant vertical exaggeration.

Prospector's Licenses

Exclusive Rights to Stake Claims

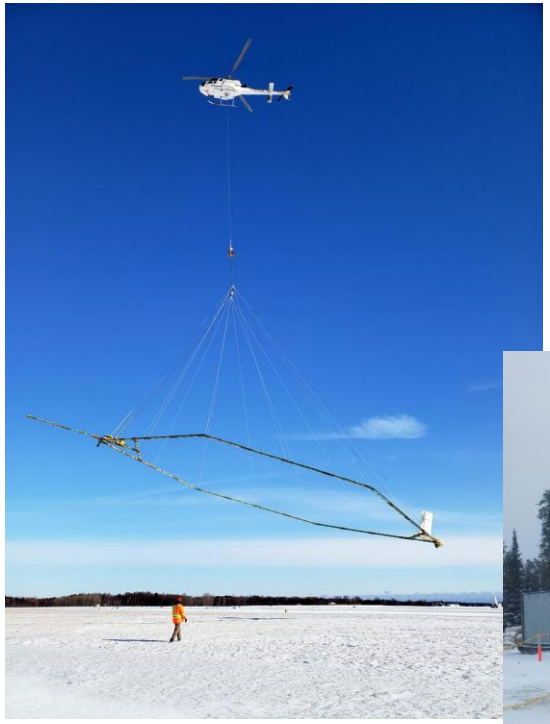
- Transition Metals holds the permits applications for **four NTS ¼ sheets** totaling **75,000 Ha**.
- Under the permits, Transition Metals has the **exclusive right to stake** claims within the area of the permits for a period of four years.
- Claim staking in the Northwest Territories is completed by **physically staking claims on the ground**.



Exploration Plans

Evaluating the Dessert Lake Opportunity

Transition Metals



Transition Metals is seeking a partner to jointly advance this district play.

Basin Architecture

- Detailed inversion of existing magnetic data
- Airborne MT survey
- Potential follow-up ground MT

Targeting

- Compilation and interpretation of data
- 3D Modeling
- Target Generation

Testing

- Diamond Drilling

Mitigating Risk. Multiplying Opportunities.

Scott McLean HBSc., P.Geo.
CEO & Co-founder

smclean@transitionmetalscorp.com
9C – 1351 Kelly Lake Road
Sudbury ON P3E 5P5
Telephone: 705-669-1777