

# Project CLEANS Public Meeting Ben McIntyre School, Uranium City April 29, 2010 1:00 pm

#### Agenda:

- Brief Project Background
- Update on Satellite Site remediation 2009
- Satellite Site Remediation Proposed for 2010
- Discussion

### PROJECT CLEANS:



Satellite Remediation Completed in 2009

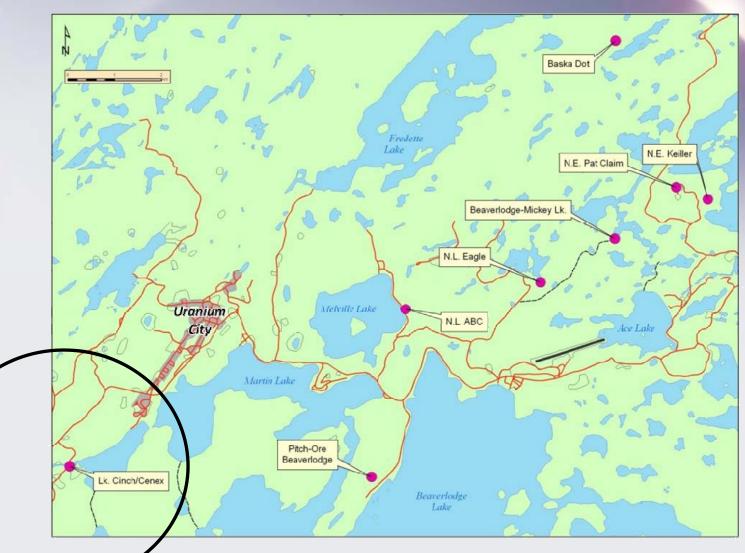


## **Objectives:**



- Discuss the 8 sites that were cleaned up
  - » Cinch/Cenex
  - » Nesbitt LaBine ABC
  - » Pitch Ore
  - » Nesbitt LaBine Eagle
  - » Mickey Lake
  - » National Exploration- Pat Claim
  - » National Exploration- Keiller
  - » Baska Dot- Virgin Lake
- Highlight outstanding items that still require immediate attention







- Pre-cleanup condition:
  - 3 Shaft related openings
  - 4 raises
  - 1 adit
  - 11 concrete foundations
  - 1 large water tank
  - An extensive amount of waste rock
  - Miscellaneous debris (drill rods, steel casings, 45 gallon barrels, ventilation pipe, etc)

Before 2009





3 stainless steel caps were installed over the shaft openings

1 bulk water tank was dismantled



May 2009





(Left) Backfilling of the adit

(Right) Backfilling of raise #1. A second raise north of the Crackingstone river was also backfilled.



May 2009





(left) Raise #3 was sealed using polyurethane foam (PUF)

(right) Non hazardous material was buried onsite at the base of the waste rock pile





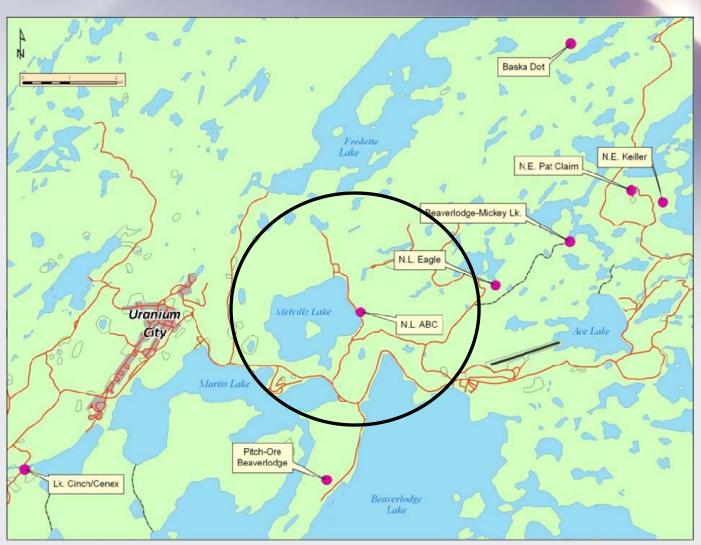
#### Outstanding items that require immediate attention:

- The fourth raise, located on the north side of the Crackingstone river, could not be backfilled properly in 2009
- The area was fenced and temporary closure was put in place until a stainless steel cap could be fabricated.











- Pre-cleanup condition:
  - 1 shaft related opening
  - 2 adits
  - 1 raise
  - 2 concrete pads
  - 1 collapse wooden structure
  - 1 boiler encased in asbestos insulation
  - Waste rock
  - Miscellaneous debris

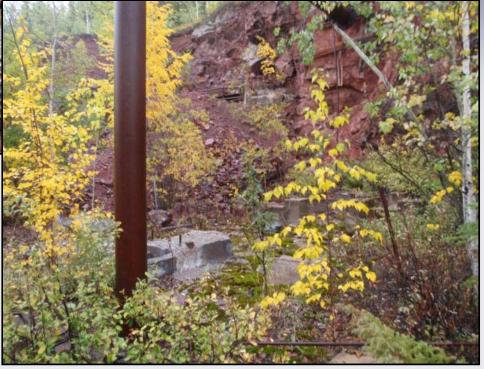
September 2008





(left) Backfilling of the 1st adit

(right) Concrete pads and debris prior to removal



June 2009





(left) Removal of the boiler with asbestos insulation

(right) Temporary special disposal area at the Lorado mill site.



June 2009





(left) Installation of a stainless steel cap on the shaft opening

(right) raise foamed with PUF.





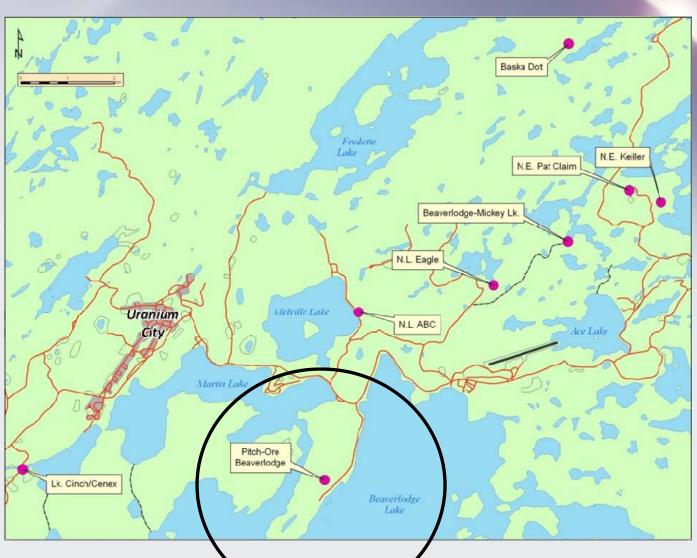
#### Outstanding items that require immediate attention:

- A build up of ice in the second adit prevented a proper backfill from being completed in 2009
- A temporary jail cage was installed and the adit will be further assessed early in the 2010 field season











- Pre-cleanup condition:
  - 2 adits
  - 2 raises
  - 1 hunting/fishing camp
  - Moderate amount of waste rock
  - Small amount of miscellaneous debris (2 vehicle chassis, drill rods, casings, 45 gallon barrels, etc)

June 2009





(left) backfilling of adit #1.

(right) debris cleanup at the hunting/fishing camp

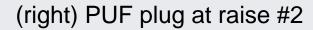


June 2009





(left) PUF plug at raise #1



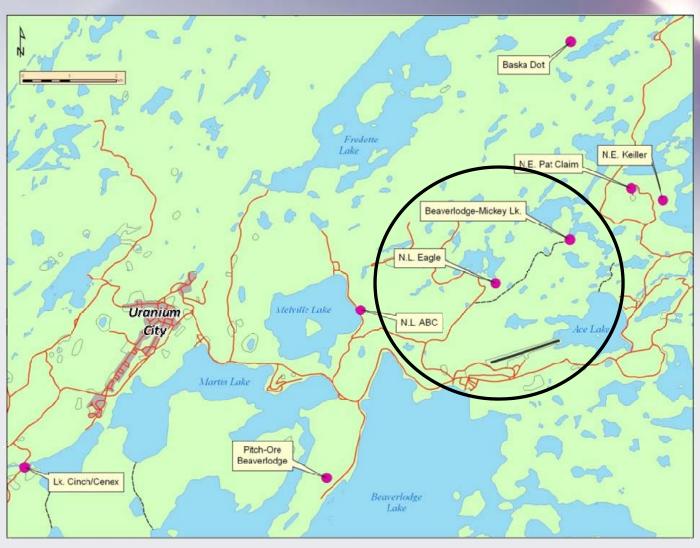




#### Outstanding items that require immediate attention:

• The 2<sup>nd</sup> adit located adjacent to Martin Lake will be further inspected during the 2010 field season. Some touch-ups to the blast closure will likely be completed.







- Pre-cleanup condition:
  - 1 shaft opening
  - 2 raises
  - A loading adit and ore storage area
  - A pumphouse structure
  - Core racks
  - Water tank remnants
  - A two storey concrete structure
  - 3 concrete cisterns
  - 3 concrete building foundations
  - Miscellaneous debris (mining and non mining related)

June 2009





(left) debris disposal area

(right) demolition of 2 storey concrete structure



June 2009





(left) Backfilling of raise #1.
Raise #2 was also backfilled.

(right) debris removed from shaft opening.



June 2009





(left) Sand covered ore pad with slash placement

(right) landscaped terrain where concrete foundations existed



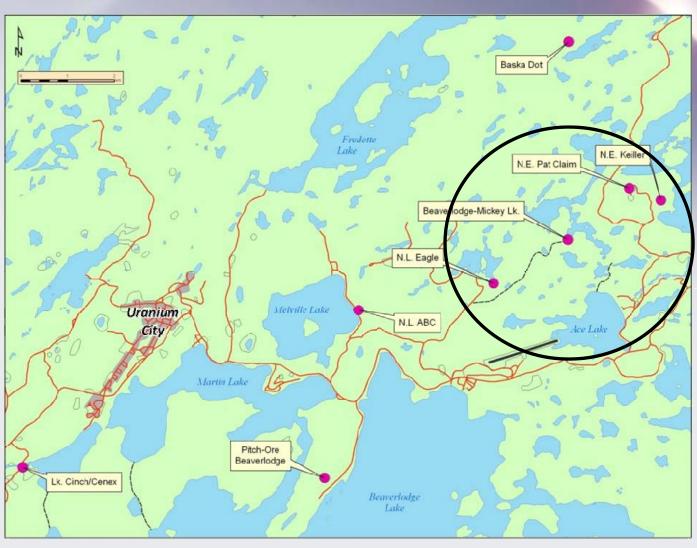


#### Outstanding items that require immediate attention:

- The shaft opening still needs to be sealed properly
- The temporary closure will be removed and a stainless steel cap will be installed early in the 2010 field season.









- Pre-cleanup condition:
  - 1 adit
  - 1 trench
  - A wood framed mine structure
  - 3 small piles of waste rock
  - Miscellaneous debris (ore cart, rails, steel pipe, etc)

June 2009





June 2009





(left) dismantling of the tin shed

(right) contouring of the remaining waste rock





#### Outstanding items that require immediate attention:

None









- Pre-cleanup condition:
  - 1 production shaft
  - 1 raise
  - 1 inclined shaft/adit
  - 5 concrete building foundations
  - A concrete cistern
  - 1 inclined trench
  - A large pile of waste rock
  - A small amount of miscellaneous debris

July 2009





(left) Exposed shaft opening after failing concrete cap was removed

(right) The shaft once backfilling was completed.



July 2009





(left) Exposed inclined adit after blast debris was removed

(right) Inclined adit once backfill was completed



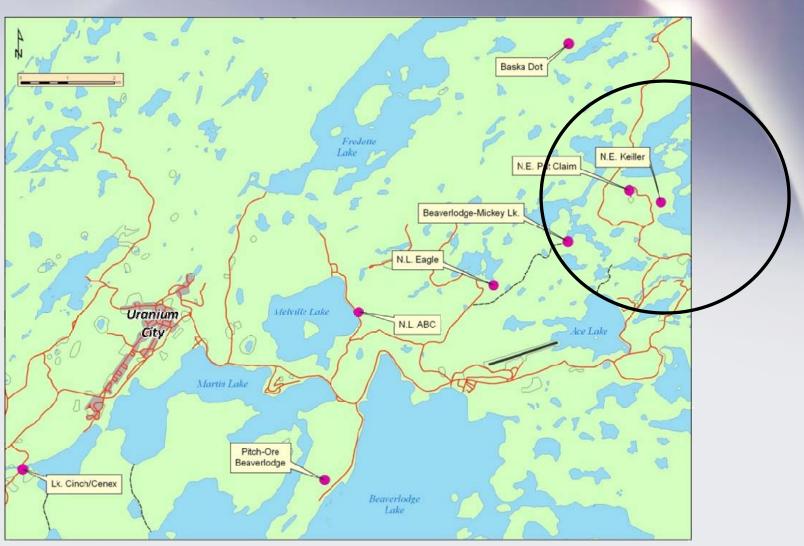


#### Outstanding items that require immediate attention:

None









- Pre-cleanup condition:
  - 1 adit
  - A small amount of waste rock
  - A small amount of miscellaneous debris (steel pipe, wire, rails, 1 ore cart, etc)

July 2009





(left) Adit opening after failing steel grate was removed

(right) completed backfill of the adit





#### Outstanding items that require immediate attention:

None







- Pre-cleanup condition:
  - 1 adit
  - 1 raise
  - 2 core shacks
  - A moderate amount of waste rock
  - Miscellaneous debris (drill rods, hoses, 1000 gallon fuel tanks, ore carts, steel casing, etc)

August 2009





(left) adit opening prior to backfilling

(right) completed backfill of adit

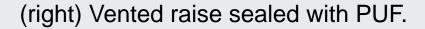


August 2009





(left) Exposed opening of raise







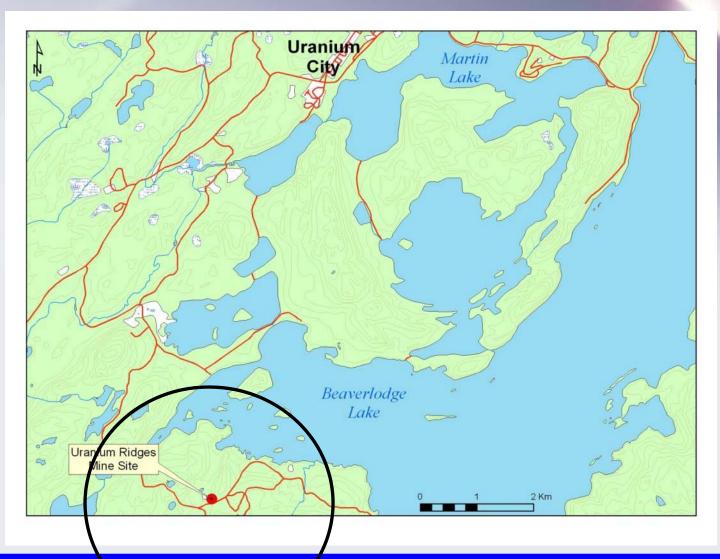
#### Outstanding items that require immediate attention:

None



# **Uranium Ridge:**





#### **Uranium Ridge:**



#### Results of 2009 monitoring:

- A small amount of slumping in the backfill was recognized during scheduled inspections
- More fill was put in place
- The area was fenced as an extra precaution

## **Uranium Ridge:**

Summer 2009





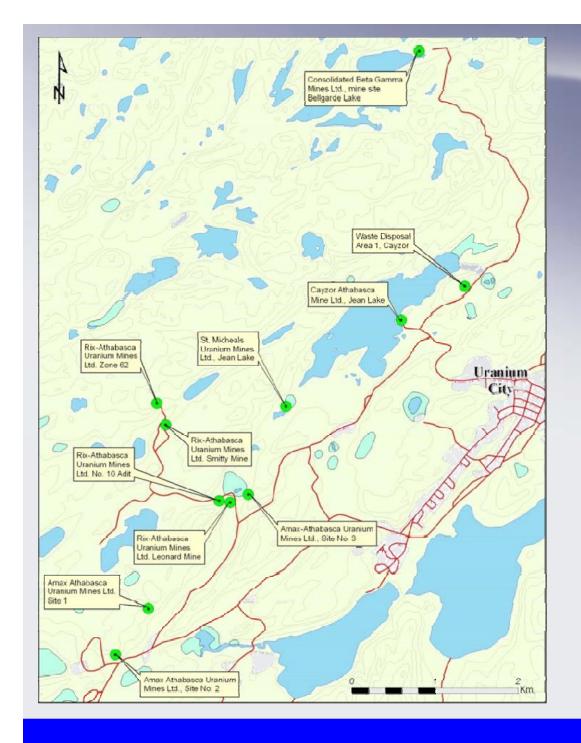
(left) A burm was constructed to direct surface runoff away from the backfill area.

(right) fencing around slump



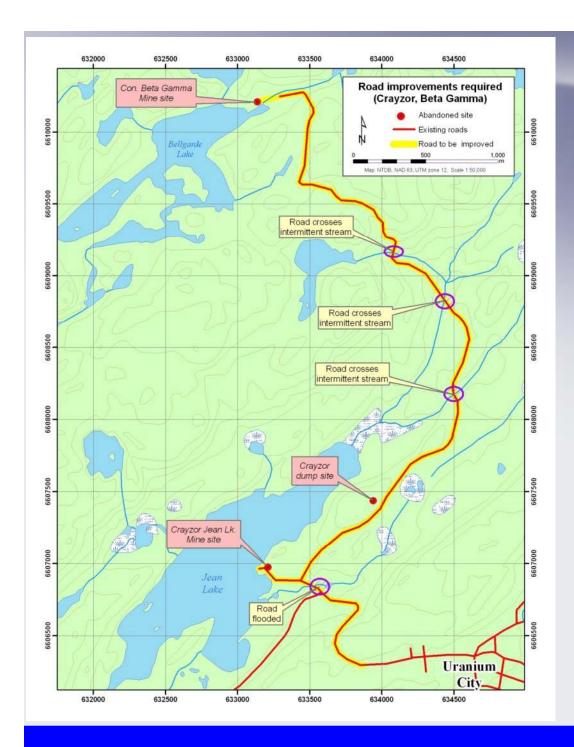


# **Questions?**





# Project **CLEANS** Group 3 Satellite site Remediation Proposed for 2010



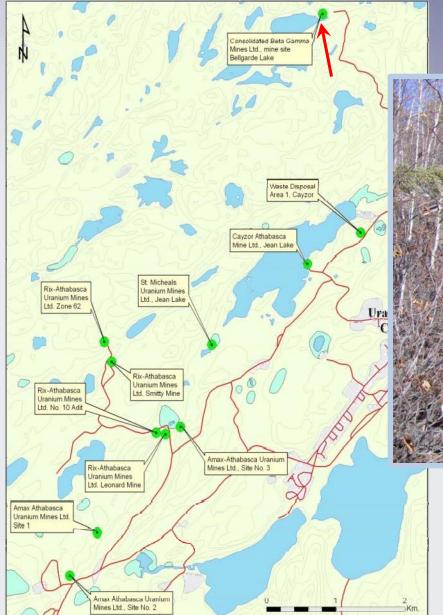


Two sites planned for remediation are located just northwest of Uranium City: Beta Gamma mine & Crayzor mine and dump site

To access these sites some road improvements will be required to get equipment to the sites.

# Consolidated Beta Gamma









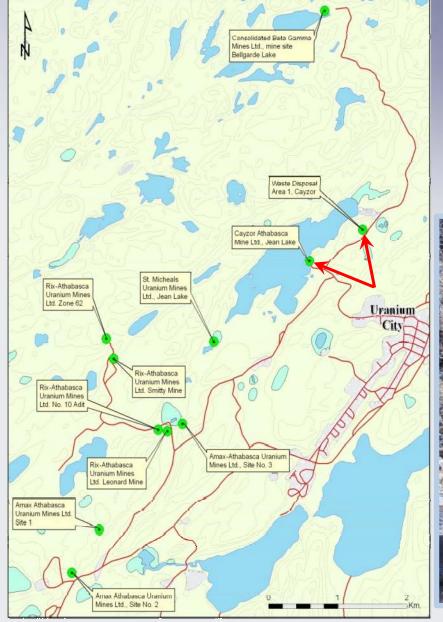
Collect steel debris

Stockpile lumber for burn in fall

Waste rock pile
flatten slopes and bury steel on
site

Open adit
Backfill with waste
rock
Gamma survey of
mine site area

#### Cayzor mine and dump Jean Lake





Head frame shaft area, expose and assess original concrete shaft cap







Cayzor Athabaska Mines Ltd., on Jean Lake, northwest of Uranium City.





Concrete foundations break up and/or bury

Steel debris collect and bury on site in waste rock



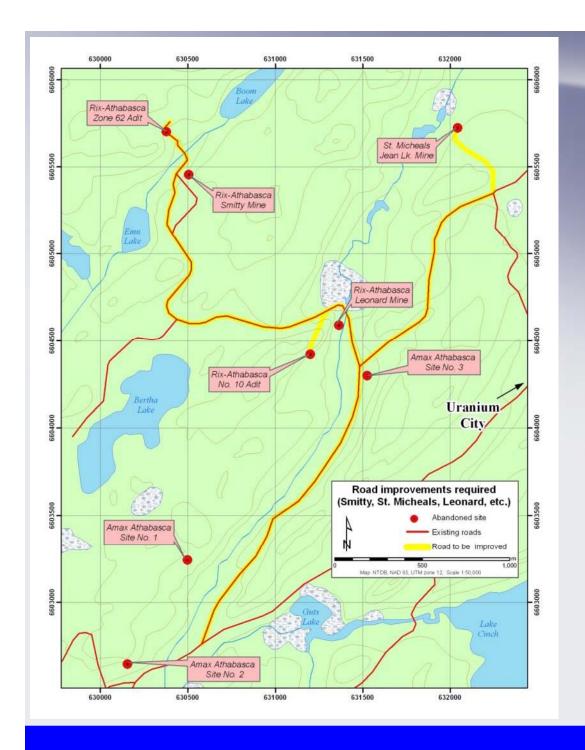




Cayzor dump site located few hundred metres north of mine site

Steel debris, tires, 45 gal. drums, lead from batteries, bury steel in Cayzor waste rock Remove batteries to waste storage site at Lorado Gamma survey of site



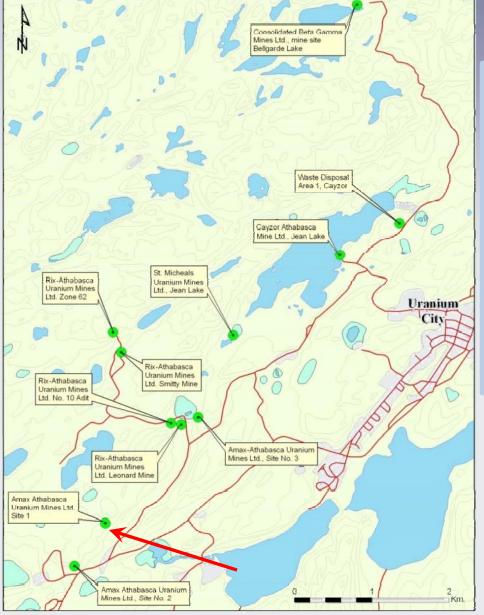




Remediation is also planned for eight other sites located just west of Uranium City along Rix road.

Four of the sites will require road improvements where beaver activity has resulted in the flooding of the original access road (near Leonard mine).

Access to St. Michaels, and the Amax-Athabasca sites will require road clearing only. Rix Athabasca Site #1

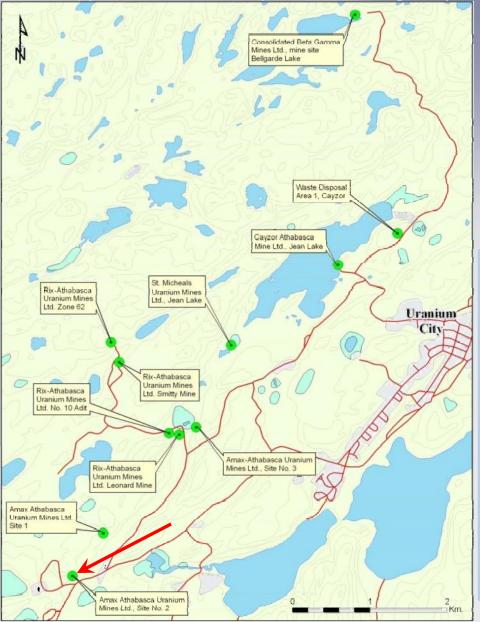






- •Adit backfilled at closure, may require repacking
- •Steel debris (pipe, drill rod, rails) will be collected and taken to a nearby waste rock site for burial if onsite disposal is not possible
- Gamma survey of site

#### **Amax Athabasca Site #2**

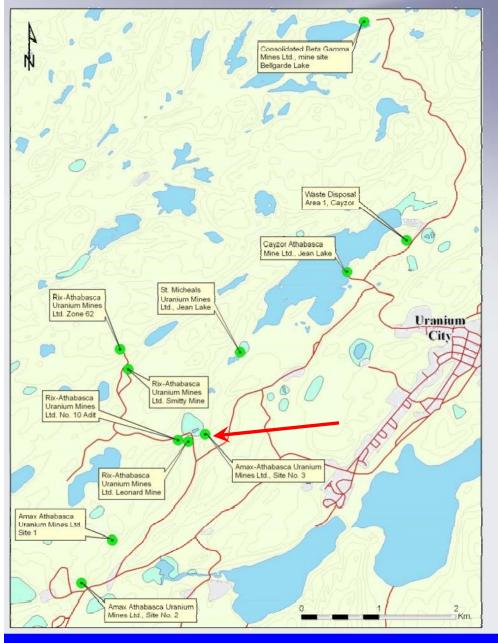




- •Scattered metal debris, 45 gal. drums, drill rods etc. collect and bury at St. Michaels
- •No underground workings
- •Gamma survey



#### **Amax Athabasca Site #3**





- •Scattered metal debris, drums, drill rods, rails etc. collect and bury in nearby waste rock pile
- No underground workings
- Some concrete building foundations to break up
- Gamma survey

#### St. Michaels mine, Jean Lake onsolidated Beta Gamma Bellgarde Lake smart science solutions Waste Disposa Area 1, Cayzor Cayzor Athabasca St. Micheals Rix-Athabasca Uranium Mines Uranium Mines Ltd., Jean Lake Ltd. Zone 62 Rix-Athabasca Uranium Mines Rix-Athabasca Ltd. Smitty Mine Uranium Mines Ltd. No. 10 Adit Amax-Athabasca Uraniun Rix-Athabasca Mines Ltd., Site No. 3 Uranium Mines Amax Athabasca Some steel waste to be collected and buried in waste rock on site Amax Athabasca Uranium Mines Ltd., Site No. 2





Partially vegetated waste rock pile with scrap steel, pipes and other mining steel debris to be collected and buried on site

Collapsed building debris lumber to be separated from other waste and stockpiled for later burn

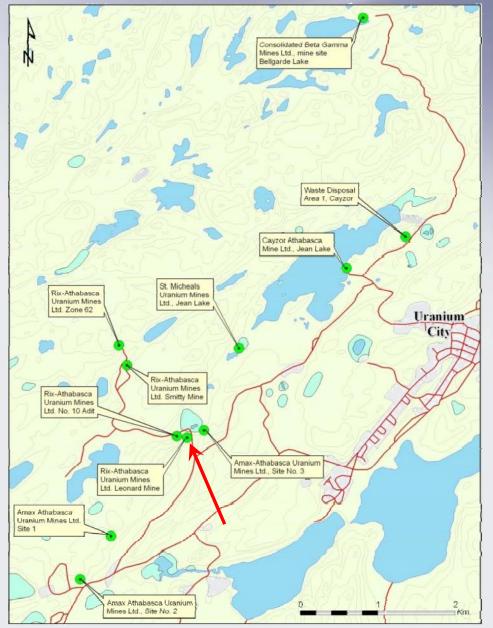






Concrete shaft at St Michaels, to be exposed, inspected and assessed for competence, may need replacement

#### **Rix-Athabasca Leonard mine**





- Break up concrete slabs,
- •Collect debris from site,
- •Bury steel & concrete in waste rock on site.
- •Gamma survey



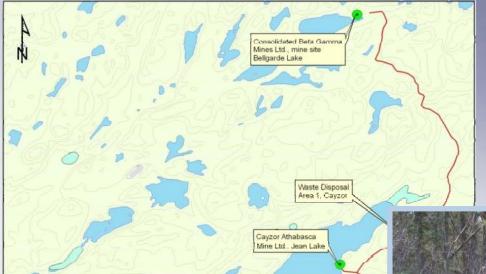




Adit showing signs of slumping, reopen and place backfill into adit as well as in front

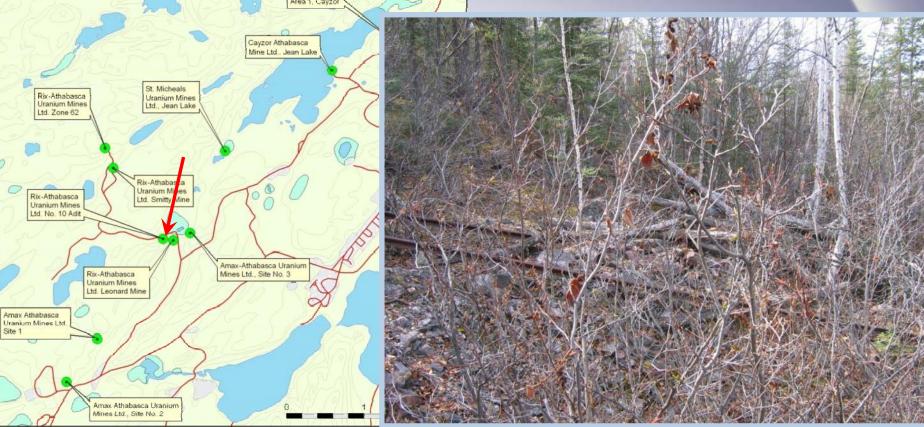
Large poorly covered raise at Leonard site, assess for alternative closure options Gamma survey mine area

#### Rix-Athabasca Adit #10



- •Collect steel and other debris found on site,
- Bury steel in waste rock
- Backfill adit with local waste rock
- •Gamma survey





## **Rix-Athabasca Smitty Mine site**

Consolidated Beta Gamm Mines Ltd., mine site

Bellgarde Lake



One of several openings in need of closure at Smitty mine







Rix-Athabasca Uranium Mines Ltd., west of Uranium City.





Large steel tank and steel debris scattered all over the Smitty site will be collected and buried in waste rock on site

Open raise requires proper cover or plug to prevent entry There are at least 3 similar openings on site that must be sealed Complete gamma survey of mine site







Concrete building foundations to be broken up and covered with waste rock

Steel boiler with asbestos wrapped pipes, asbestos to be removed, contained, and taken to the SRC fenced temporary waste storage site at Lorado pending final disposal







Unstable bedrock caused by underground mining near surface

Concrete walls of adit covered by falling bedrock, the adit is still partially open and may require backfilling



Questions about proposed work?