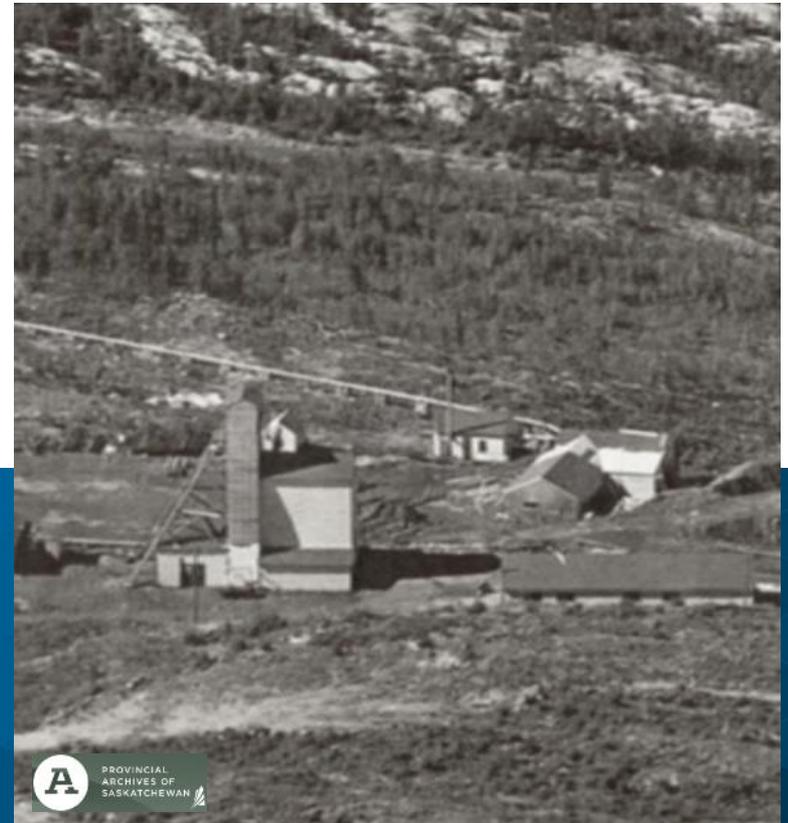


Project CLEANS Satellite Sites 2017 Update

David Sanscartier, Ph.D., P.Eng.,
Project Manager, Satellite Sites



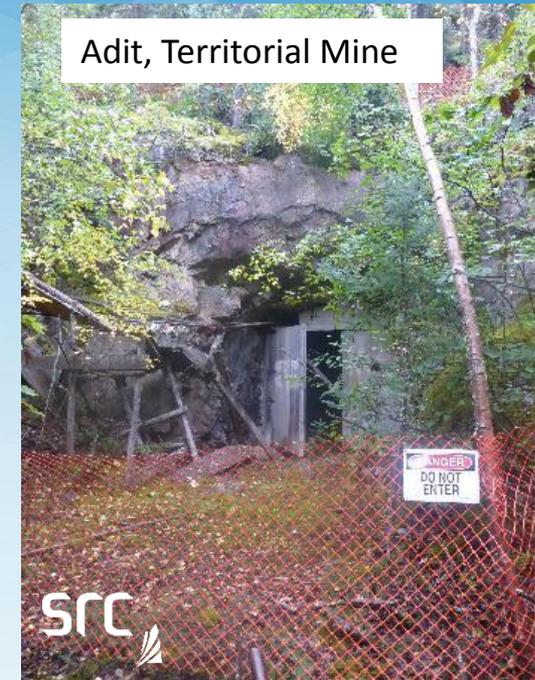
Status	No. of sites
Remediation completed and applied for transfer to ICP	6
Remediation completed	4
Remediation in progress	8
Assessments underway	17



Cinch Mine, 1957

2017 Main Accomplishments

- Field work at 27 of the 35 sites
- Permanent closure of 7 openings
- Historical debris and hazardous waste removal at 11 sites
- Desktop assessments of 8 sites
- Visit of 5 remote sites
- Wildlife and archeological surveys
- Environmental monitoring and radiation surveys
- Survey for design of permanent closure of openings
- Repair to Goldfields Road
- Application for transfer of 6 sites to Institutional Control Program (ICP)



Boulder closure, NE Pat Claims Mine



Stainless steel cap, NL Eagle Mine

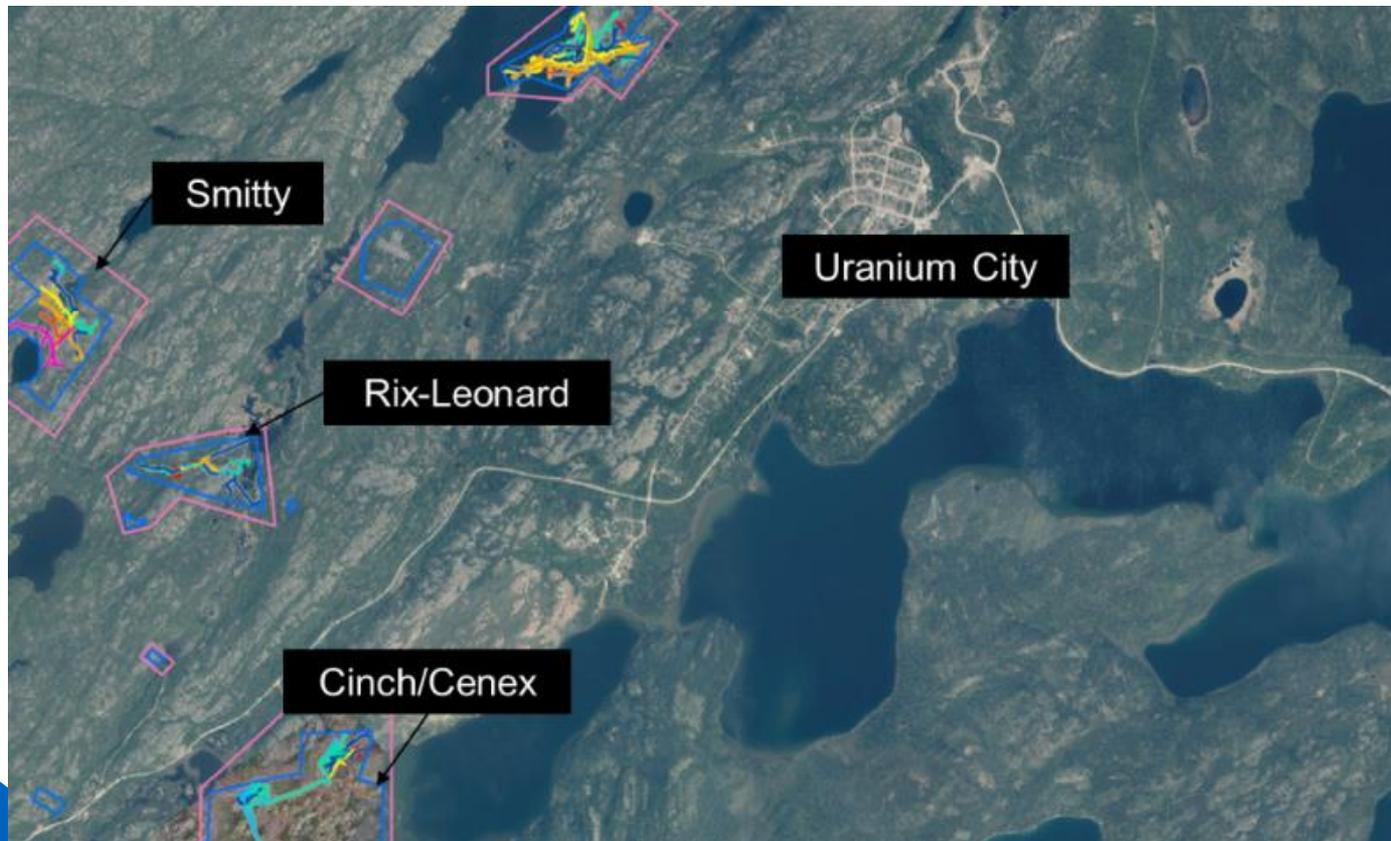


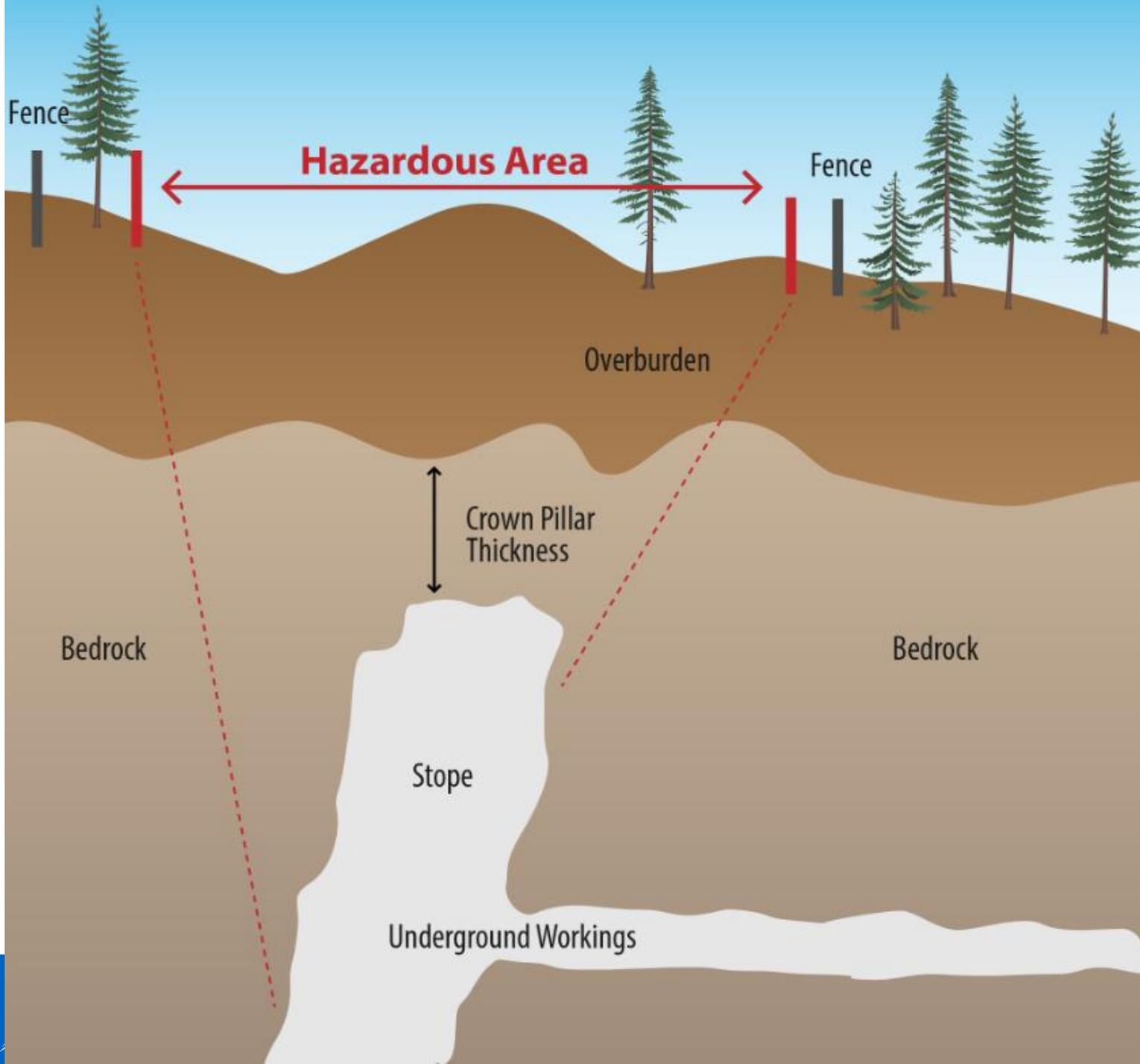
Stainless steel cap, Rix-Leonard Mine



Hazardous Underground Areas

- Assessments of 28 underground areas at 3 mines near Uranium City
 - 15 assessed as hazardous and require remediation





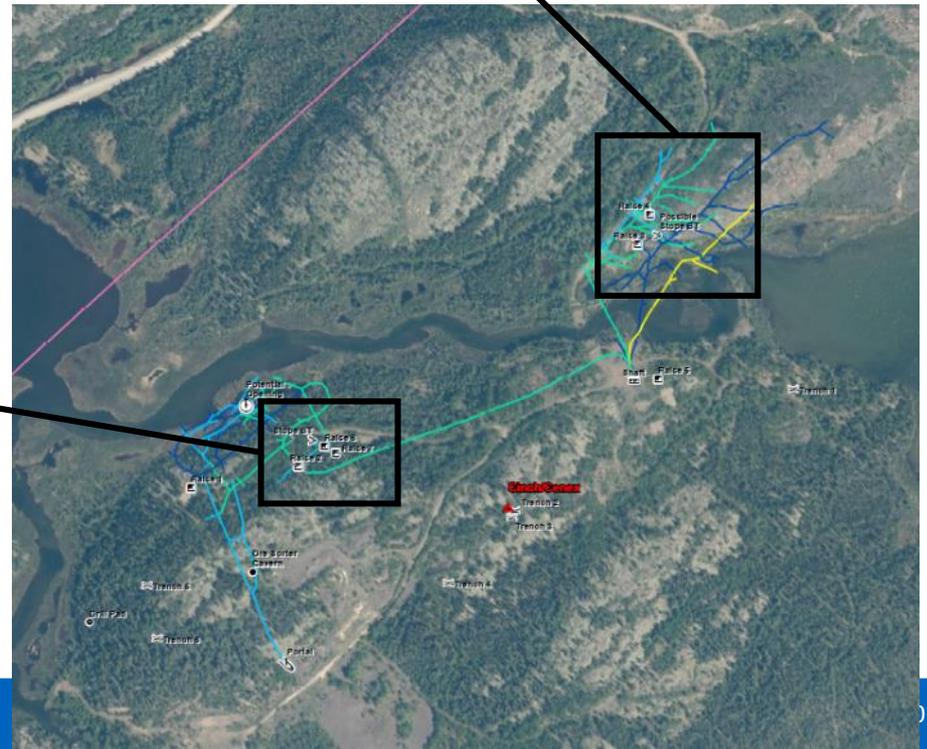
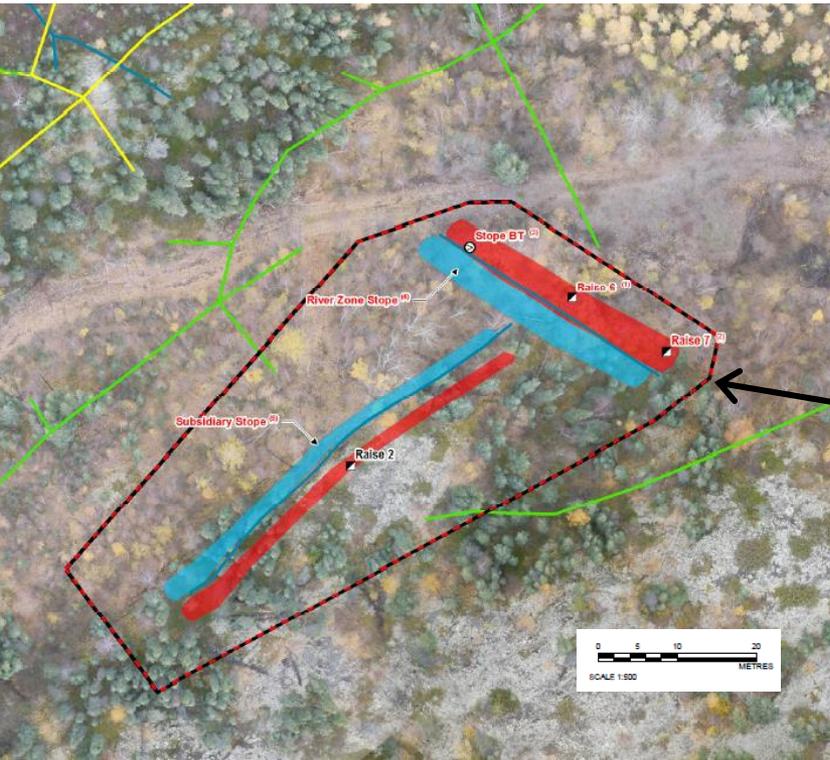
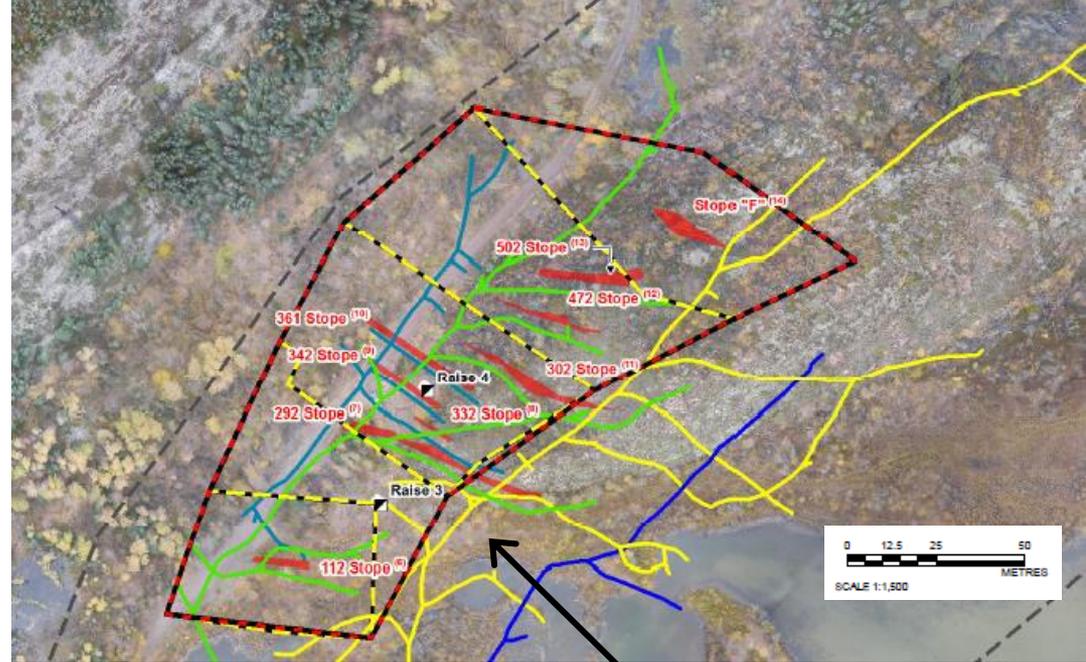
Options to Address Hazards

- Options discussed with Ministry of Environment, Ministry of Economy and Ministry of Labour Relations and Workplace Safety (Mines Branch):
 - Close access roads
 - Berms (soil mounds)
 - Fence

- Preferred option: Fence
 - Advantages:
 - Prevent access to hazardous areas
 - Reduce hazards adequately
 - Reasonable cost
 - Balance cost and reduction of risks
 - Relatively easy to install
 - Disadvantages:
 - Susceptible to damage by vegetation, vandalism, etc.
 - Regular maintenance

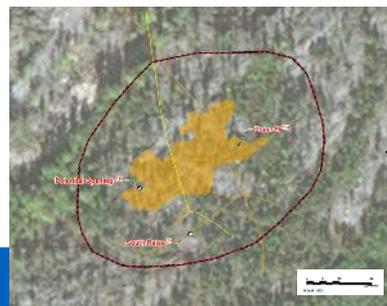
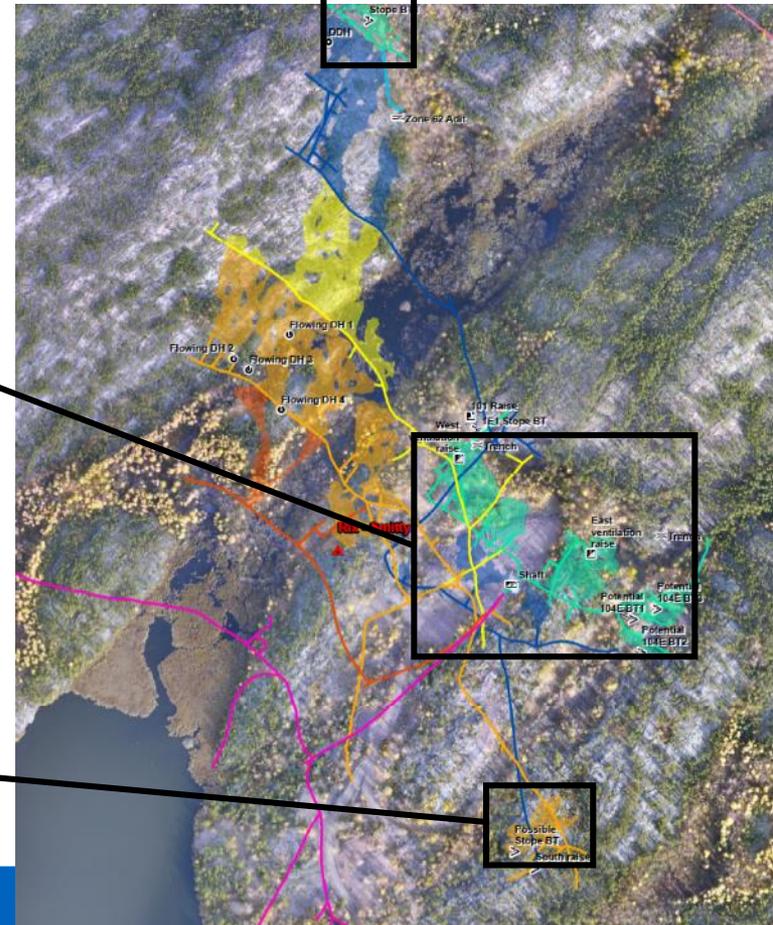
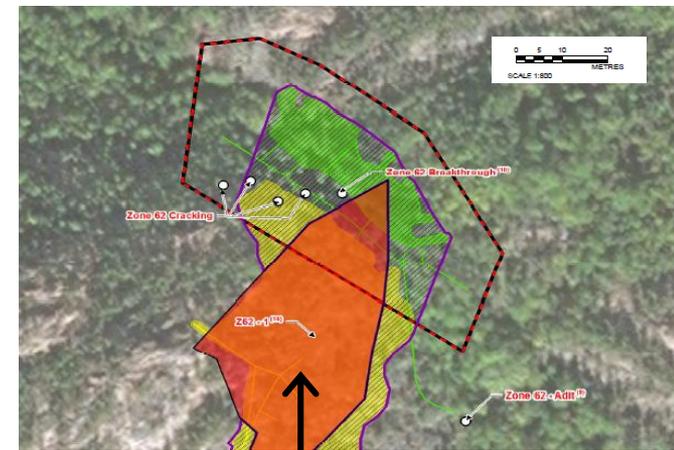
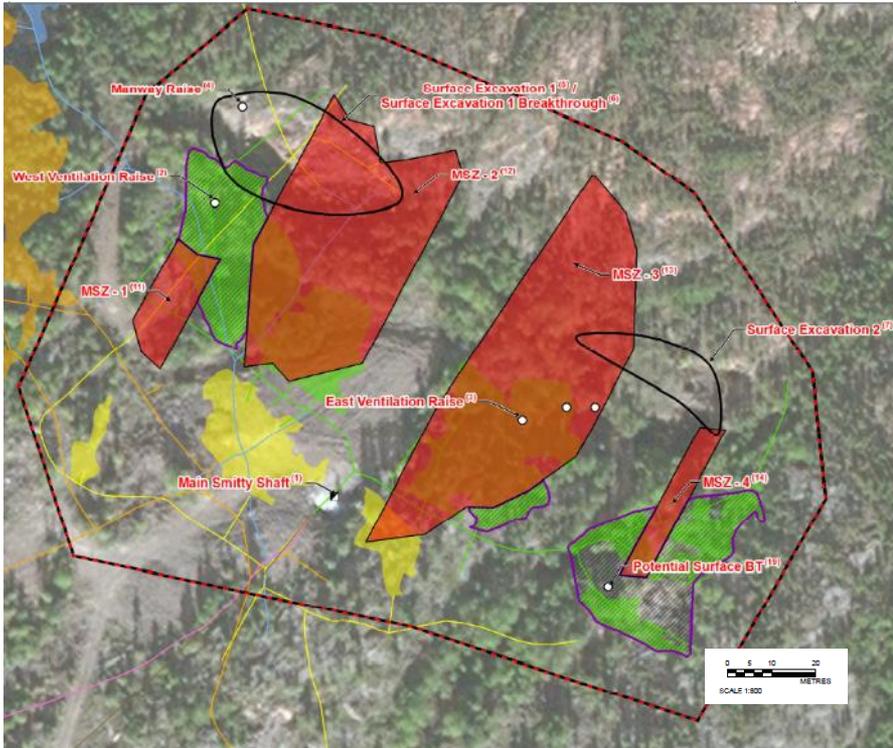
Fenced Areas Cinch/Cenex

- Total perimeter: 700 m (2,400 ft),
- Total area: 17 ha (42 acres)

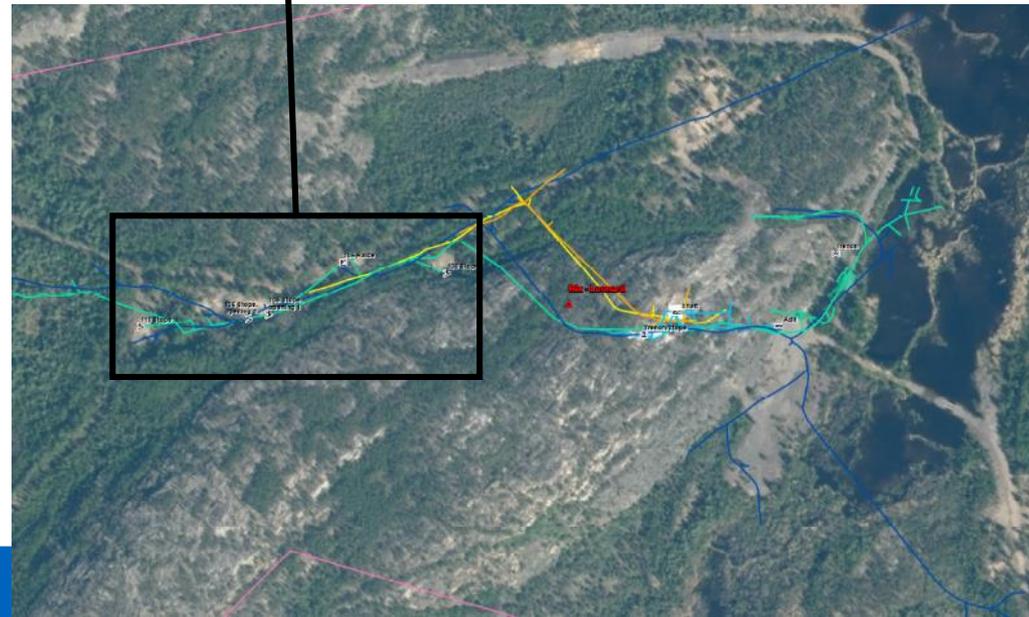
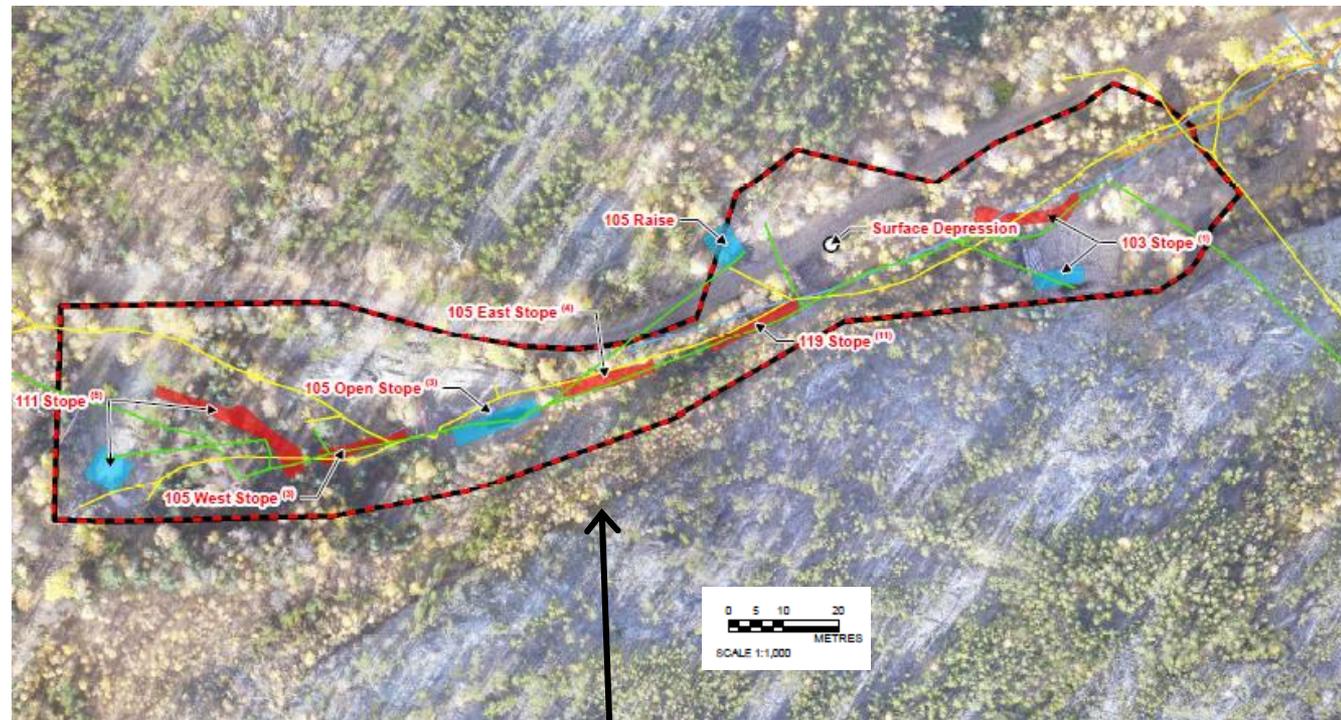


Fenced Areas Rix-Smitty

- Total perimeter: 1.1 km (3,600 ft)
- Total area: 32 hectares (79 acres)



Fenced Area Rix-Leonard



- Perimeter: 530 m (1,700 ft)
- Area: 0.7 hectares (1.7 acres)

Options of Fences



<http://cornerstonefencingohio.com/farm-fences-newark-ohio/>

Agricultural (1.2 m)



<http://easternfence.ca/en/industrial/highway/>

Highway (1.8 m)



<http://www.fencingindia.co.in/>

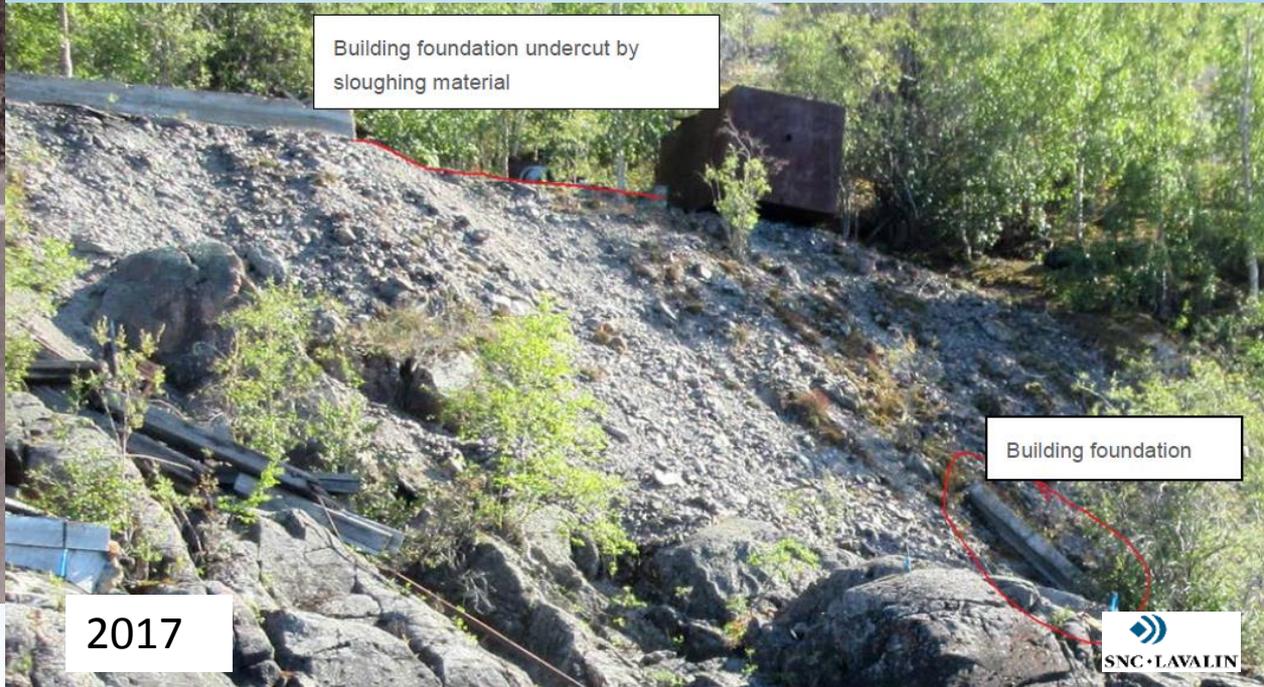
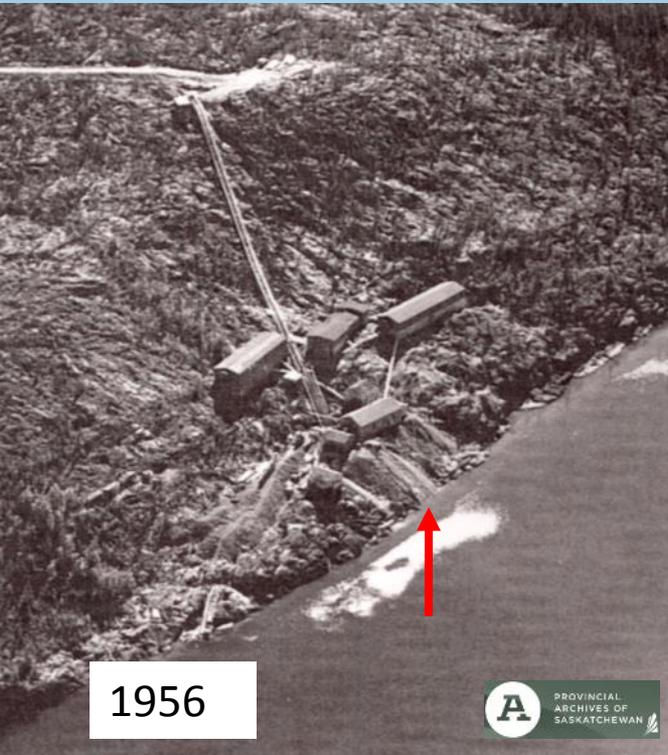
Chain-link with barbed wire (2 m)

Your Input on Fencing

- Type of fence
- Barbed-wire at the top
- Signs
- Other concerns



New hazard identified: Unstable waste rock slope at Gulch Mine KEEP OUT



Access Trails Closures

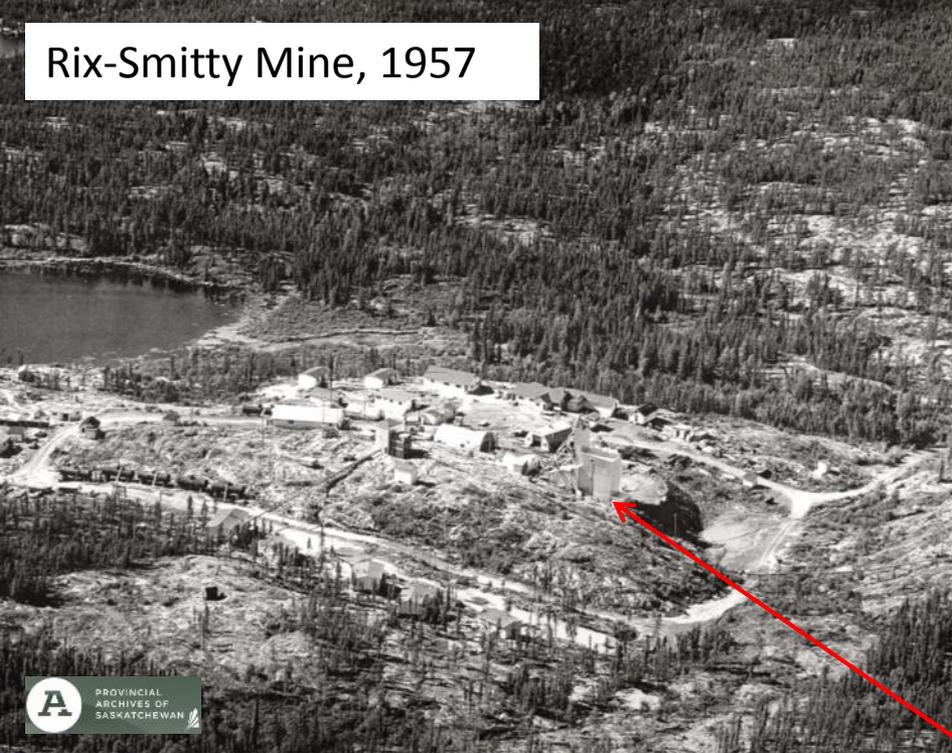
- Permanent closure of access trails: St-Michael, Cayzor, Rix-Leonard/Smitty, Cinch-Cenex, Pitch Ore – Beaverlodge, NL Pat Claims
- Temporary closure of Goldfields Road in the spring to prevent damage



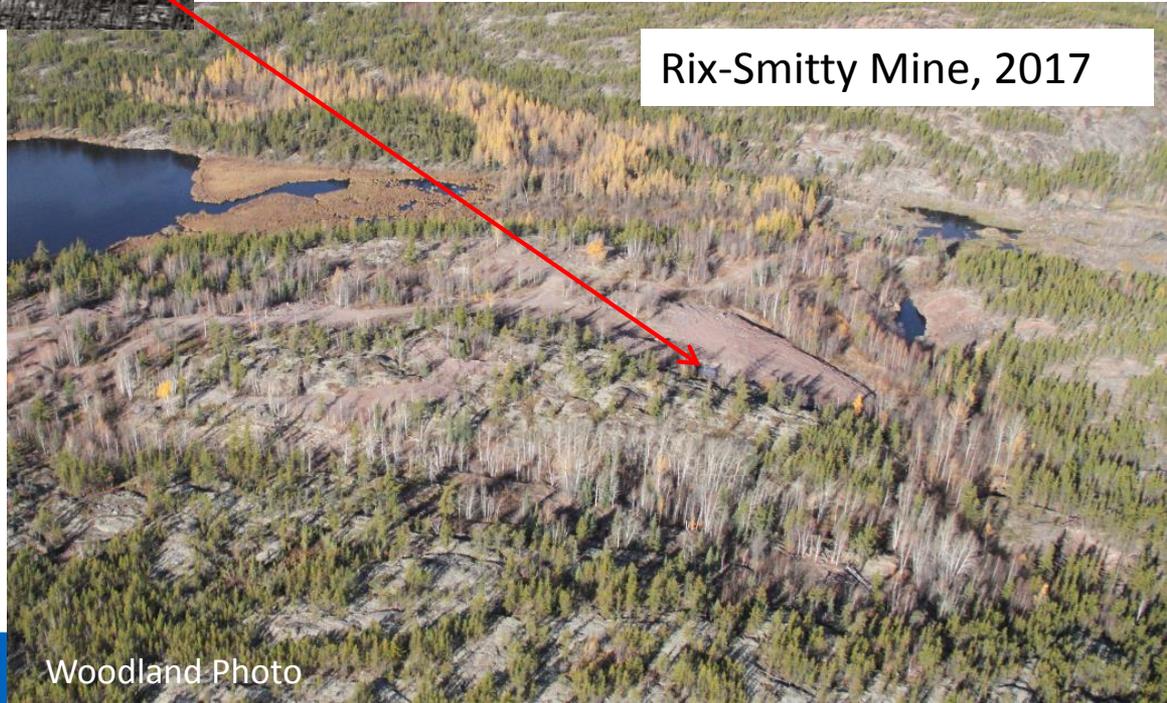
2018 Preliminary Plan

- Continued site assessment, environmental monitoring and radiation surveys
- Design, fabricate and transport of 8-12 caps to be installed in 2019
- Planning and field preparation for installation of fences around hazardous underground areas in 2019
- Variety of minor remediation work
- Reporting of 2 completed sites

Rix-Smitty Mine, 1957



Rix-Smitty Mine, 2017



Woodland Photo