

# Reed Copper Project

Project Information Session

April 4, 2013





# Forward Looking Information

- This presentation contains “forward-looking statements” and “forward-looking information” (collectively, “forward-looking information”) within the meaning of applicable Canadian and United States securities legislation, including, but not limited to, Hudbay’s plans with respect to the development of its Lalor and Reed projects. All information contained in this presentation, other than statements of current and historical fact, is forward-looking information. Often, but not always, forward-looking information can be identified by the use of words such as “plans”, “expects”, “budget”, “guidance”, “scheduled”, “estimates”, “forecasts”, “strategy”, “target”, “intends”, “objective”, “goal”, “understands”, “anticipates” and “believes” (and variations of these or similar words) and statements that certain actions, events or results “may”, “could”, “would”, “should”, “might” “occur” or “be achieved” or “will be taken” (and variations of these or similar expressions). All of the forward-looking information in this presentation is qualified by this cautionary statement.
- Forward-looking information is not, and cannot be, a guarantee of future results or events. Forward-looking information is based on, among other things, opinions, assumptions, estimates and analyses that, while considered reasonable by Hudbay at the date the forward-looking information is provided, inherently are subject to significant risks, uncertainties, contingencies and other factors that may cause actual results and events to be materially different from those expressed or implied by the forward-looking information.
- The material factors or assumptions that were applied in drawing conclusions or making forecasts or projections set out in the forward looking information include, but are not limited to:
  - the accuracy of geological, mining and metallurgical estimates;
  - the costs of development;
  - no significant unanticipated operational or technical difficulties;
  - no significant unanticipated events relating to regulatory, environmental, health and safety matters; and
  - no significant and continuing adverse changes in general economic conditions.
- The risks, uncertainties, contingencies and other factors that may cause actual results to differ materially from those expressed or implied by the forward-looking information may include, but are not limited to, risks generally associated with the mining industry, such as economic factors (including future commodity prices, currency fluctuations and energy prices), operational risks and hazards, including unanticipated environmental, industrial and geological events and developments and the inability to insure against all risks, failure of plant, equipment, processes, transportation and other infrastructure to operate as anticipated, compliance with government and environmental regulations, dependence on key personnel and employee relations, uncertainties related to the geology, continuity, grade and estimates of mineral reserves and resources and the potential for variations in grade and recovery rates, uncertain costs of reclamation activities, as well as the risks discussed under the heading “Risk Factors” in our most recent Annual Information Form, Form 40-F and Management’s Discussion and Analysis for the three and six months ended June 30, 2012.
- Should one or more risk, uncertainty, contingency or other factor materialize or should any factor or assumption prove incorrect, actual results could vary materially from those expressed or implied in the forward-looking information. Accordingly, you should not place undue reliance on forward-looking information. Hudbay does not assume any obligation to update or revise any forward-looking information after the date of this presentation or to explain any material difference between subsequent actual events and any forward-looking information, except as required by applicable law.



# History of Hudbay in the Area

- Flin Flon mining camp started in 1915
- Operating in the Flin Flon area since the 1920's
- Operating in the Snow Lake area since the late 1950's





# Project Overview

- Area in and around the Reed deposit has been under exploration in some form since 1974
- VMS Ventures discovered the Reed Copper deposit in 2007
- At full production mining rate is anticipated to be 1,300 tonnes/day
- All ore will be trucked and processed in Flin Flon
- Approximate 5 year mine life
- \$71.9 million CAPEX (2012-2013)
- Will provide 88 jobs at full production

# Project Location

- The site is between Snow Lake and Flin Flon
- The site lies just south of PTH #39 and is accessed via a 1.4 km access road, previously developed as a logging road.
- Site located on the southern edge of the Grass River Provincial Park.
- Grass River Provincial Park
  - Classified as a “natural park” that will accommodate commercial resources, including mining, where such activities do not compromise other park purposes.
  - The Reed Property is categorized for “resource management” under the Provincial Parks Designation Regulation (Manitoba Regulation 37/97)).



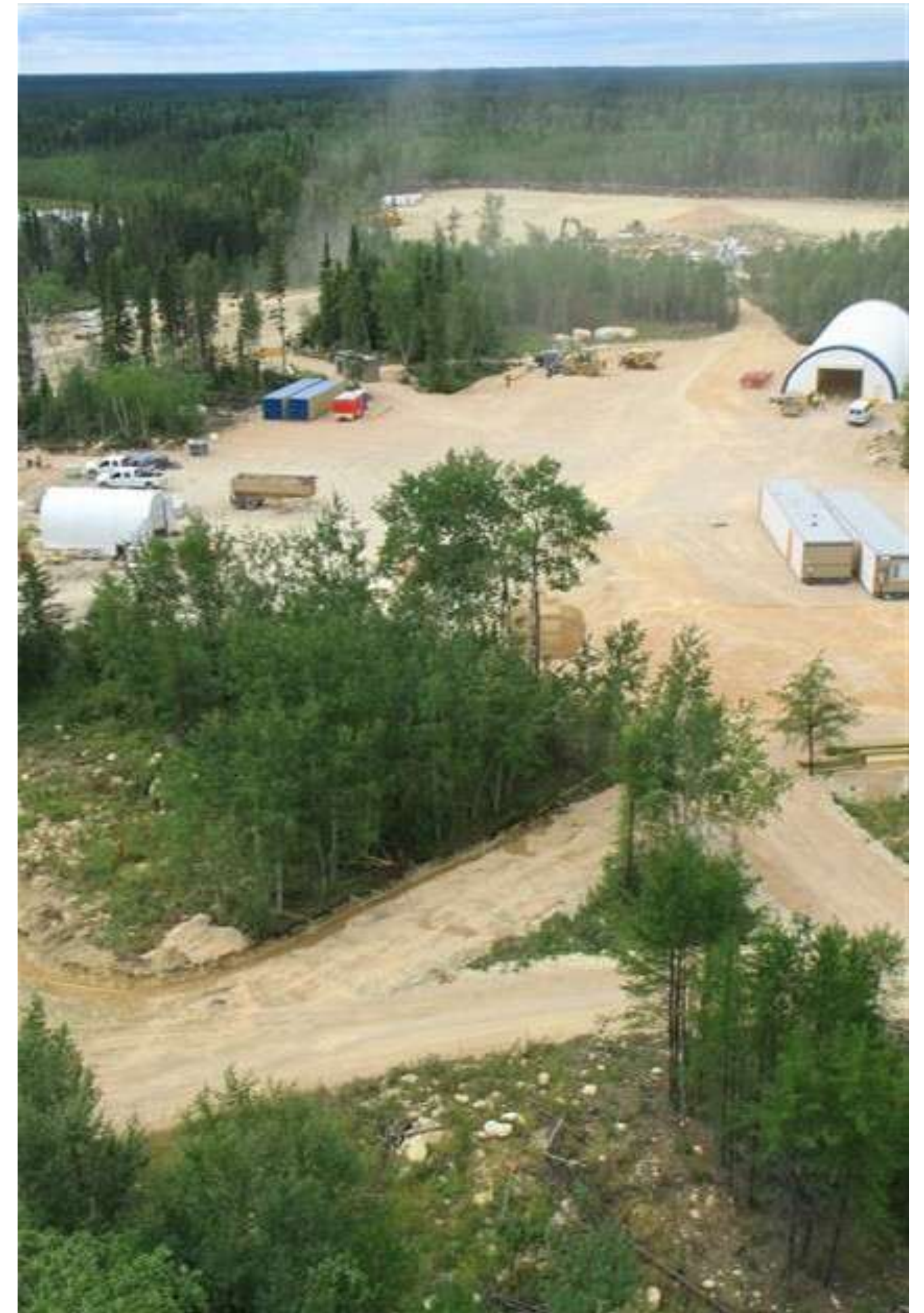
Reed AEP Site looking north, southern reach of Reed Lake approximately 3km in background  
(August 2012)





# Existing Advanced Exploration Project (AEP) Site

- The AEP Closure Plan was accepted by the Mines Branch on October 31, 2011, and development is currently ongoing.
- The AEP was planned to encompass a site of approximately 14 hectares, but only 7 hectares have been cleared to support AEP activities.



AEP Site – Looking West



Reed AEP Site under Development, looking east (August 2012)



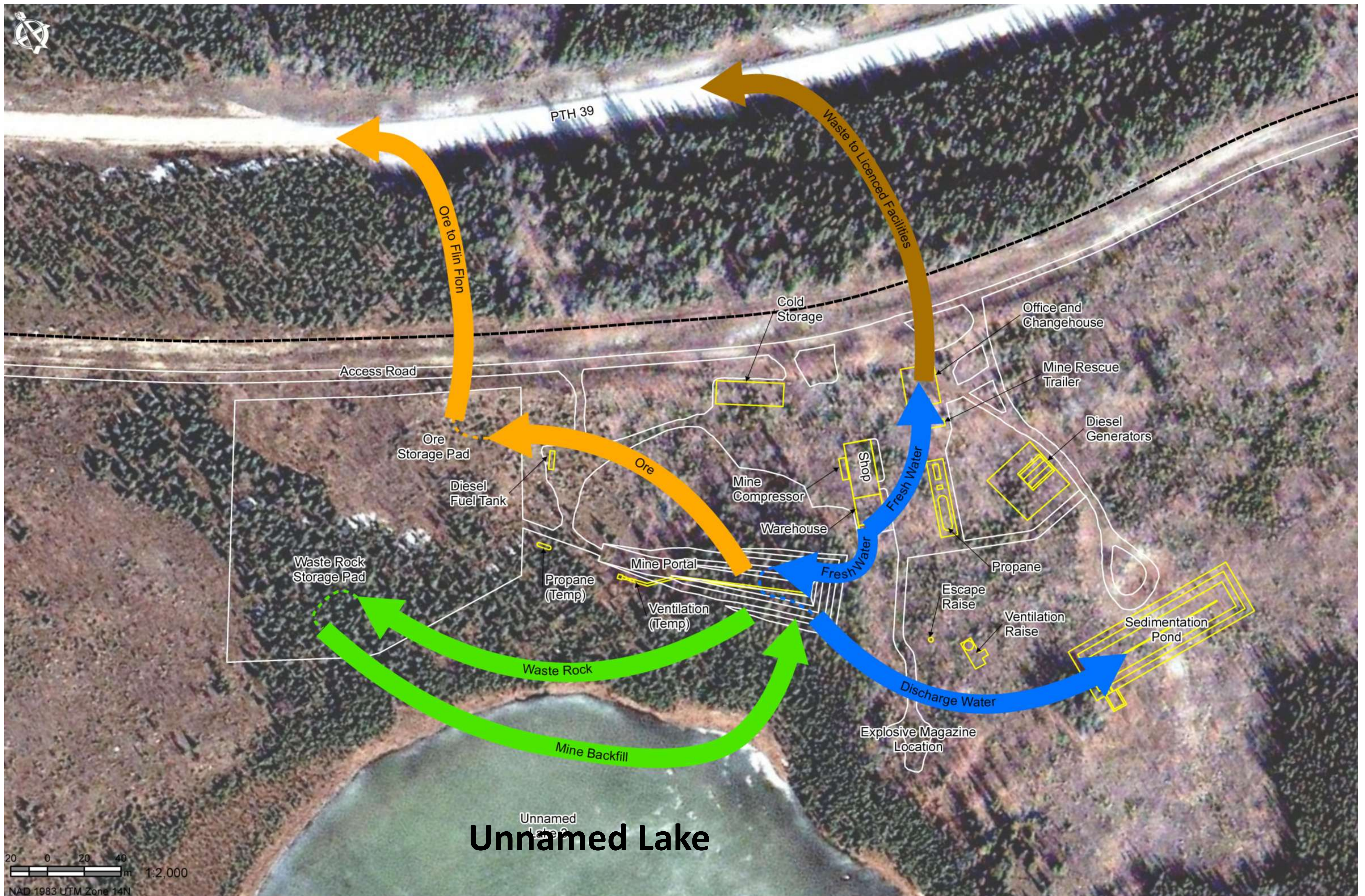


# Additional Development Needed for Reed Mine

- Underground Backfill Raise
- Deeper underground ramp and level development
- Campsite (increases from 42 to 50 person camp)



# Operations on Site





# Special Considerations During Site Development

- Kept tree clearing to a minimum by using existing roads and clearings
- Maintained tree buffer with the highway and around site
- Used local limestone for fill
- Designed surface facilities to fit a small area
- No crushing on site to minimize noise and dust
- No overhead power line on site
- Special signpost and limestone barricades



# Use of Existing Access Road

- The existing 1.4 km access road, formerly developed as a logging road, has been upgraded and slightly widened in some areas to enable handling of the trucking and hauling needs of the AEP and potential mining.
- The connection to PTH#39 has been restored.
- The straightening avoided stream crossings and lake shores, and is the shortest route that disturbs the least amount of environment.
- Crushed limestone was used for the upgrades





Looking East Toward AEP Site Along Existing Access Road  
(2011)



# Freshwater Supply

- There is no use of surface water at the site.
- Water for domestic use (except drinking water) is derived from groundwater wells developed at the site (License 2012-025).
- Bottled water from a local supplier is provided as the drinking water source.



Groundwater Wells



# Water Management

- Process water is pumped from a groundwater well located on the site to supply office, dry, shop, and underground operations.
- Discharge process water is retained in an on-site polishing pond.
- Sewage is collected in sewage holding tanks and trucked to a licensed facility off site.



Polishing Pond



# Groundwater Management

- High pressure grouting practice will minimize groundwater seepage during underground activities.
- Groundwater encountered during underground operations will be discharged to the polishing pond.
- Water from the polishing pond may be used as a water supply source for fire suppression.



# Electrical Power

- Provided by diesel generators on site.
- Fuel for generators is stored in SCAT tanks located at the site.
- Generators are enclosed and equipped with engineered controls to minimize noise to the maximum extent possible.



Generators and Power Lines





# Domestic Waste and Hazardous Materials Management

- Garbage collection bins have been established on site. Will be sent for recycling and/or disposal at local approved facilities.
- Hazardous materials, waste oil, lubricants and other petroleum products are appropriately stored on-site until disposed of or recycled by a petroleum supplier.



# Waste Rock Management

- All waste rock is transported to 20,000 m<sup>2</sup> waste rock storage pad for stockpiling.
- An ore storage pad capable of holding 5,000 tonnes will also be developed on-site.
- Storage pads will be lined where required.
- Waste rock (NAG and PAG) will be placed back underground as backfill.



# Environmental Setting

- Three distinct floral communities:
  - Clear-Cut Area (re-growth, immature trees)
  - Mature Mixed Forest (high diversity and productivity)
  - Wet Fen (sphagnum mats, pitcher plants, low wildlife value)
- Several bird and mammal species (including Woodland Caribou) in the project region (within 10 km of Reed site).
- Water bodies in the region include Whitehouse Creek, Grass River and Reed Lake and several unnamed lakes and creeks.









# Environmental Assessment Process

- Define project components (including support infrastructure and facilities)
- Define existing environment
- Identify potential environmental inputs/outputs required for project
- Evaluate interactions between the project and existing environment
- Develop management and mitigation measures to reduce or eliminate potential environmental effects
- Determine residual impact remaining after mitigation



# Environmental Components Examined

## Physical

- Topography
- Geology
- Soil
- Air
- Noise and Vibration
- Climate
- Groundwater



## Aquatic

- Surface Water Hydrology
- Bathymetry
- Surface Water Quality
- Sediment Quality
- Aquatic Invertebrates
- Fish and Fish Habitat



## Terrestrial

- Flora and Fauna



## Socio-Economic

- Heritage Resources
- Economy
- Recreation
- Resource Use
- Aesthetics
- Accidents and Malfunctions





# Scope of the Assessment

## Temporal Boundaries

- **Pre-Production Phase** – Upgrades to existing AEP infrastructure in 2012 to enable ore extraction.
- **Production Phase** – production mining from 2013 to 2018.
- **Closure Phase** – anticipated to occur from 2018 into the future.

## Geographic Boundaries

- **Project Site** - Includes the Reed Mine site
- **Project Area** - includes any area, up to 2,000 m beyond the Project Site
- **Project Region** includes an area up to 10 km beyond the Project Site that may be affected by project activities.



# Environmental Effects Assessment

## Soil and Geology

- Since the site has been previously cleared as part of the AEP, no additional impact to soils and geology is expected during pre-production.
- During production, any impacts due to ARD will be mitigated by lining storage pads.
- The closure phase will involve the reapplication of appropriate soils to the site, to return the site to native conditions to the extent practical.
- Remediation of contaminated soil will be conducted, if required.



# Environmental Effects Assessment

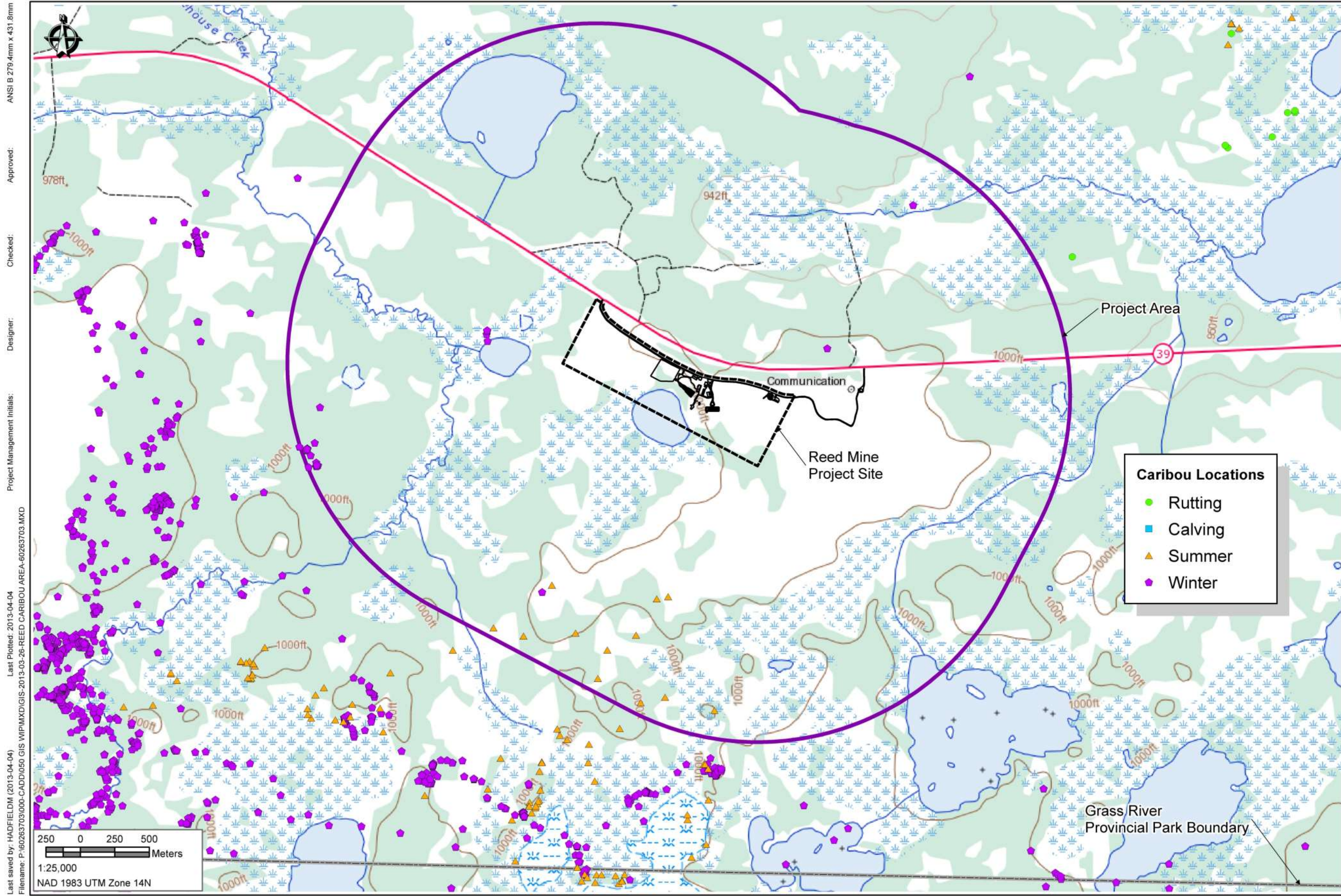
## Vegetation and Wildlife

- Habitat within the Project Site is not considered unique to the area, as such no critical wildlife habitat is expected to be disturbed.
- Habitat disturbance limited to the project site and kept to a minimum.
- Mitigation measures will be implemented to minimize impacts to vegetation and wildlife (eg. participation in regional caribou-related initiatives).





# Environmental Effects Assessment



AECOM

Manitoba Conservation  
Caribou Tracking Data (2009 - 2012)

Reed Mine  
Environment Act Proposal  
Hudson Bay Mining and Smelting Co., Limited

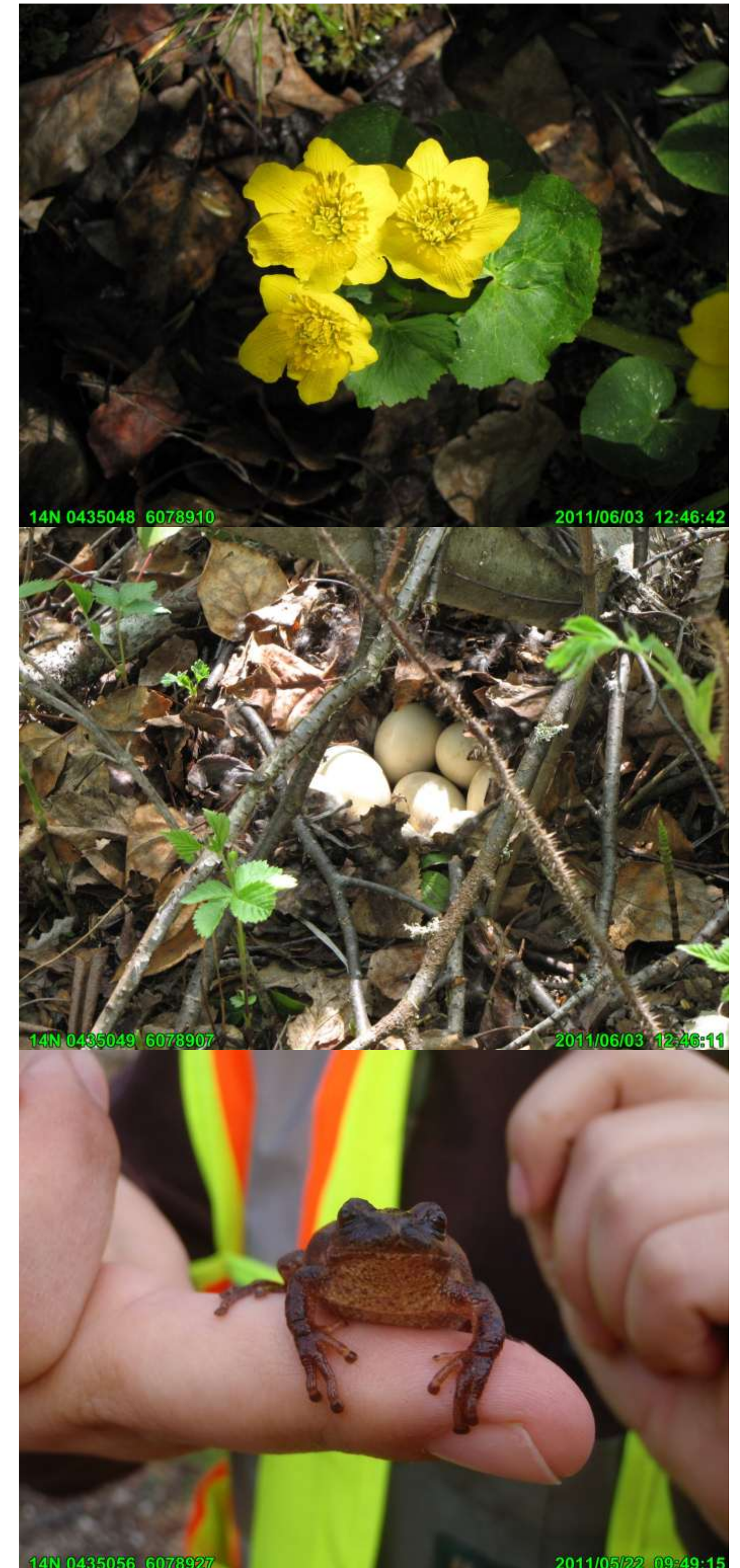
Figure: C7



# Environmental Effects Assessment

## Vegetation and Wildlife

- As part of the closure phase, the site will be re-vegetated with appropriate vegetation species.
- At closure, the access road will be scarified to prevent access to the site and promote growth of natural vegetation in the area.
- There will be negligible impact on vegetation and wildlife habitat.

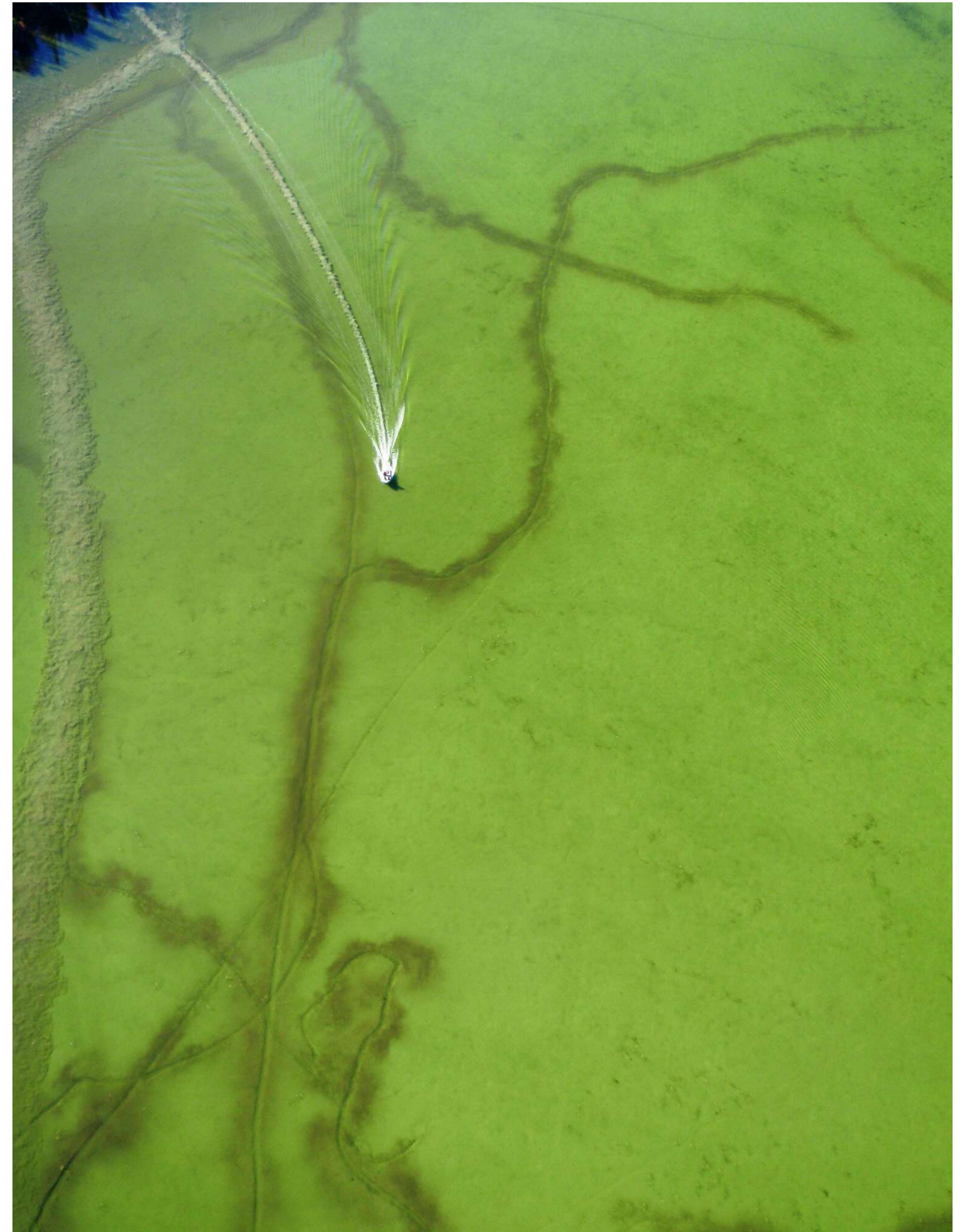




# Environmental Effects Assessment

## Aquatic Resources

- No impacts on aquatic resources from pre production activities.
- Overflow from polishing pond will be discharged through an adjacent marsh, which flows into Unnamed Lake 3.
- Unnamed Lake 3 is a shallow waterbody, with limited connectivity and an average depth of 1.1 m. It contains no large-bodied fish, and has no recreation or commercial fishing value.



Looking Down on Unnamed Lake 1



# Environmental Effects Assessment

## Aquatic Resources

- Re-vegetation during closure will reduce the amount of surface runoff to surrounding waterbodies
- Negligible impacts to aquatic resources and no impacts to fish are expected in the surrounding waterbodies.



# Environmental Effects Assessment

## Groundwater

- Storage of explosives will include spill containment measures.
- Charges will be designed to be as small as possible to minimize blast residues.
- Emulsion type explosives will be used in wet areas to minimize the potential for ammonium nitrate to dissolve in groundwater.
- Potential effects from ARD during surface storage will be mitigated by lining waste pads with limestone and a sand filter, and ore pad with a geosynthetic liner and limestone.



# Environmental Effects Assessment

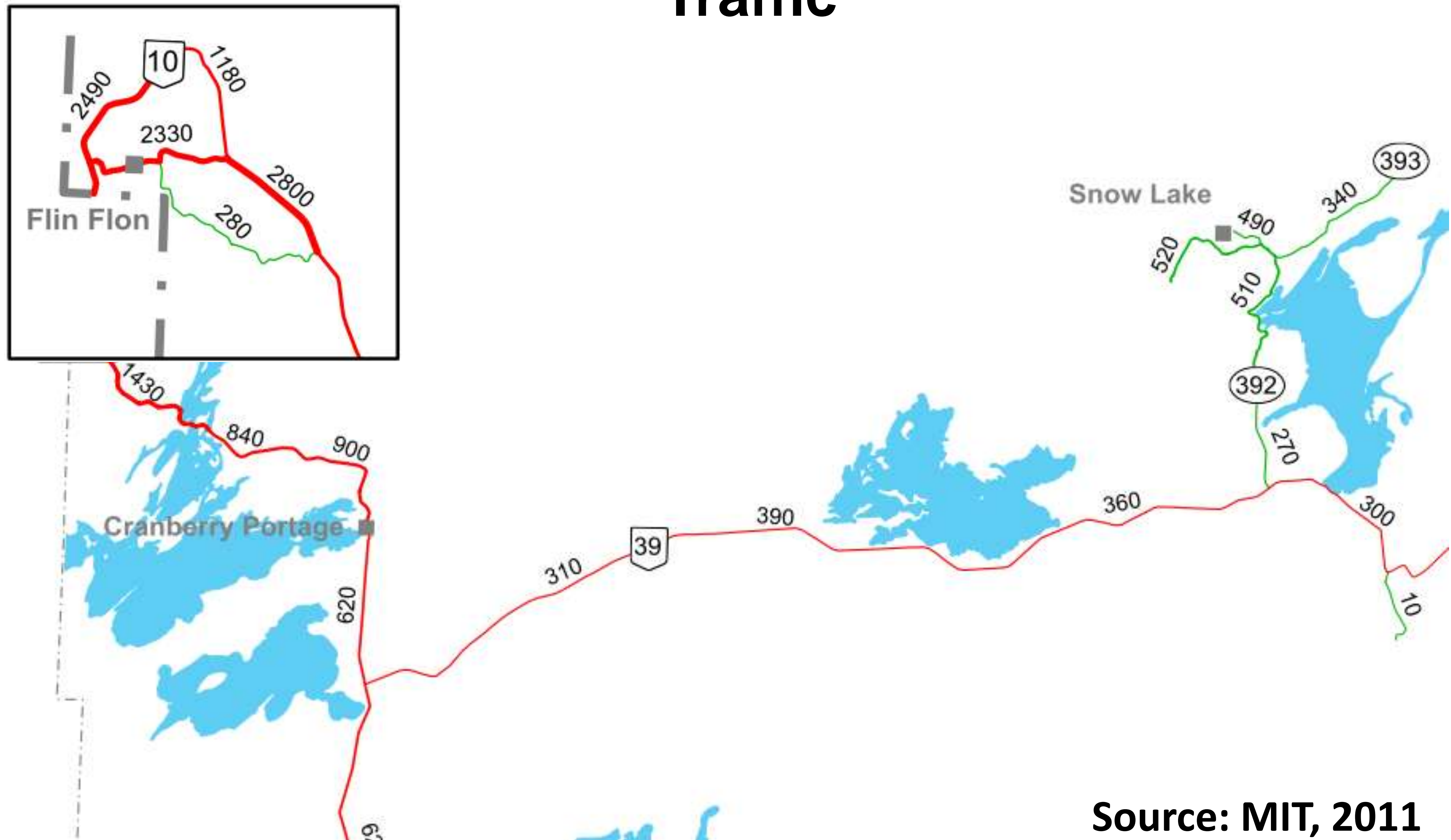
## Air Quality and Noise

- Mature tree buffer maintained with the highway and around site.
- No crushing on site will minimize noise and dust.
- Ventilation fan will be installed underground, resulting in reduced noise.
- Speed limit of 40 km/hr on access road and 20 km/hr on site will minimize dust generation
- Due to the isolated nature of site and surrounding vegetation, negligible noise effects to wildlife and human receptors expected.
- Engineered controls will be installed at potential noise-producing structures, and operational controls will be implemented as a mitigation measure if required.



# Environmental Effects Assessment

## Traffic



Source: MIT, 2011

It is expected that the project will result in an increase of 45 vehicles per day on PTH 39.



# Environmental Effects Assessment

## Heritage Resources

- Reed Property lies within the Grass River Provincial Park.
- No heritage resources located at the Reed site.
- Nearest known heritage resources are pictographs at Tramping Lake, located 30 km east of the Reed site.
- No impact to heritage resources is anticipated.



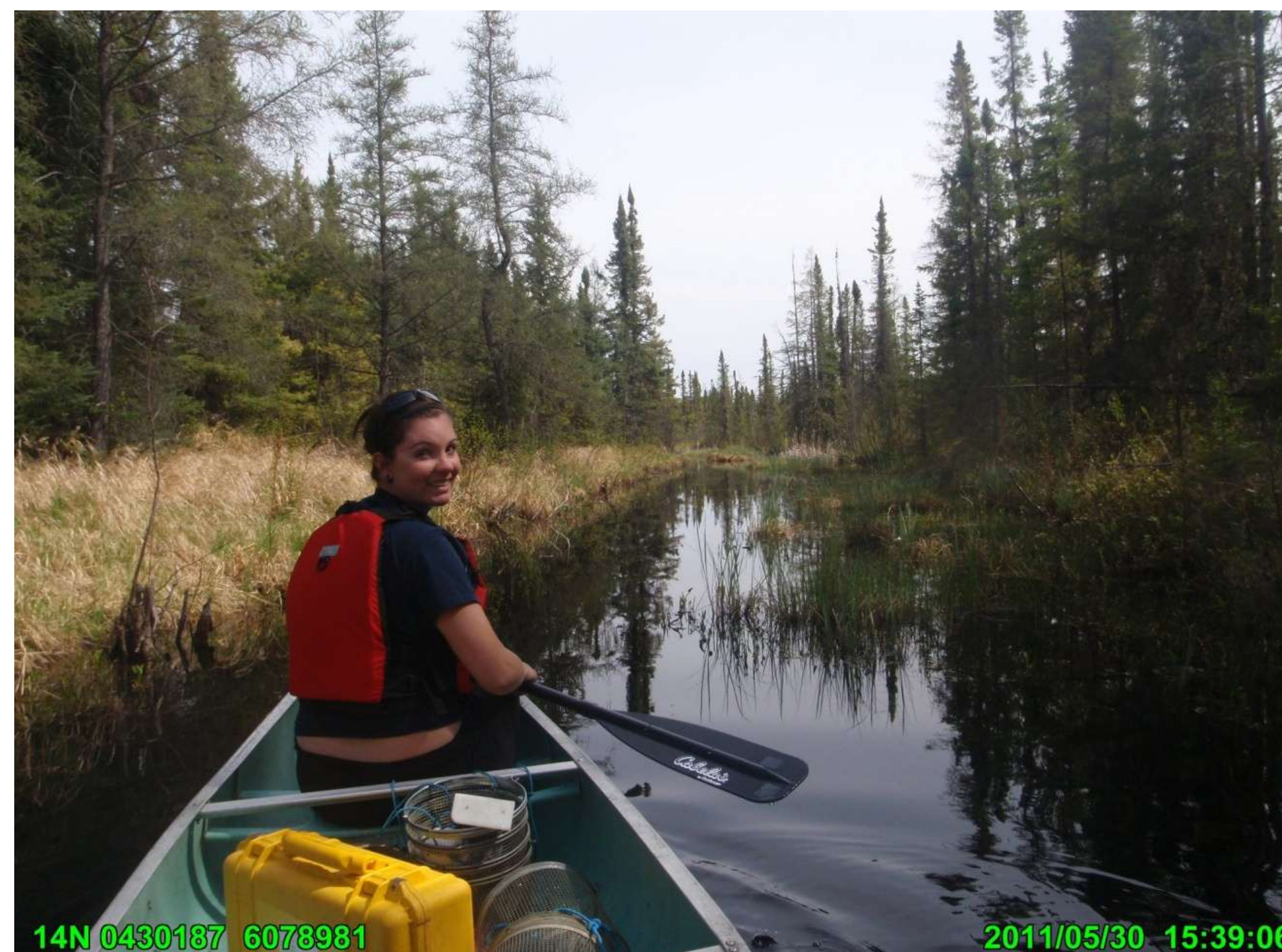
Pictographs at Tramping Lake



# Environmental Effects Assessment

## Recreational Use

- No cottages, lodges or campgrounds located within the Project Area.
- No water bodies of recreation or commercial value located within the Project Area.
- Hunting is not permitted within 300 m of roadways located in Provincial Parks (Manitoba Conservation). This buffer zone would include the Reed Mine site and access road.





# Environmental Effects Assessment

## Economic Benefits

- A number of employment opportunities are associated with the pre-production, production and closure phases of the Reed Mine.
- Local contractors, supply services and other businesses in Snow Lake, Flin Flon and Cranberry Portage would also benefit from the Reed Mine and associated activities.





# Environmental Effects Assessment

## Community Support

- Closure of the Trout Lake Mine in Flin Flon has resulted in the displacement of 145 employees.
- Development of the Reed Mine will provide employment for approximately 88 people.
- Without ore from the Reed Mine, the Flin Flon Metallurgical Complex will be short of the feed required to operate at full capacity.
- As a result, development of the Reed Mine has received positive support from residents in and around Snow Lake and Flin Flon.



# Closure Planning

- Hudbay has successfully completed reclamation on many mining operations across Canada, with several of these sites located in the Flin Flon and Snow Lake region
- The area will be returned, to the extent possible, to its natural state following the procedures outlined in Manitoba *Mine Closure Regulation 67/99*
  - Requires detailed assessment of tasks and costs .
  - Manitoba Mines has received financial security for full cost of closure.



Konuto Lake Mine  
(Post Closure)



# Conclusion

- Development of the Reed Mine would be a significant economic benefit to Northern Manitoba.
- Project will have minor, mitigable and reversible impacts to the surrounding environment, including vegetation, wildlife and aquatic resources.
- Continued operation of the Flin Flon Metallurgical Complex provides additional socio-economic benefit to the City of Flin Flon, Town of Snow Lake and the Province of Manitoba.





# Comments and Questions

AECOM: Clifton Samoiloff

Phone: 204-477-5381

email: [Cliff.Samoiloff@aecom.com](mailto:Cliff.Samoiloff@aecom.com)

AECOM: Somia Sadiq

Phone: 204-928-8494

email: [Somia.Sadiq@aecom.com](mailto:Somia.Sadiq@aecom.com)

Hudbay: Stephen West

Phone: 204-687-2229

email: [steph.west@hudbayminerals.com](mailto:steph.west@hudbayminerals.com)

Hudbay: Jay Cooper

Phone: 204-687-2667

email: [jay.cooper@hudbayminerals.com](mailto:jay.cooper@hudbayminerals.com)

Manitoba Conservation:  
Jennifer Winsor

Phone: 204-945-7012

email: [jennifer.winsor@gov.mb.ca](mailto:jennifer.winsor@gov.mb.ca)