

Project Description: Rock Lake Mine North Rehabilitation Project

BACKGROUND

The Rock Lake Mine (AMIS #07781) is a former gold, silver and copper mine that operated from 1899 to 1903. The mine is located off Highway 638, in the Township of Plummer Additional, approximately 16 km north of Bruce Mines, Ontario. The mine property can be divided into a northern area accessed by a private trail and a southern area accessed via a residential driveway. The Rock Lake cemetery is located between the two accessways. The location of the site is provided below on Figure 1.

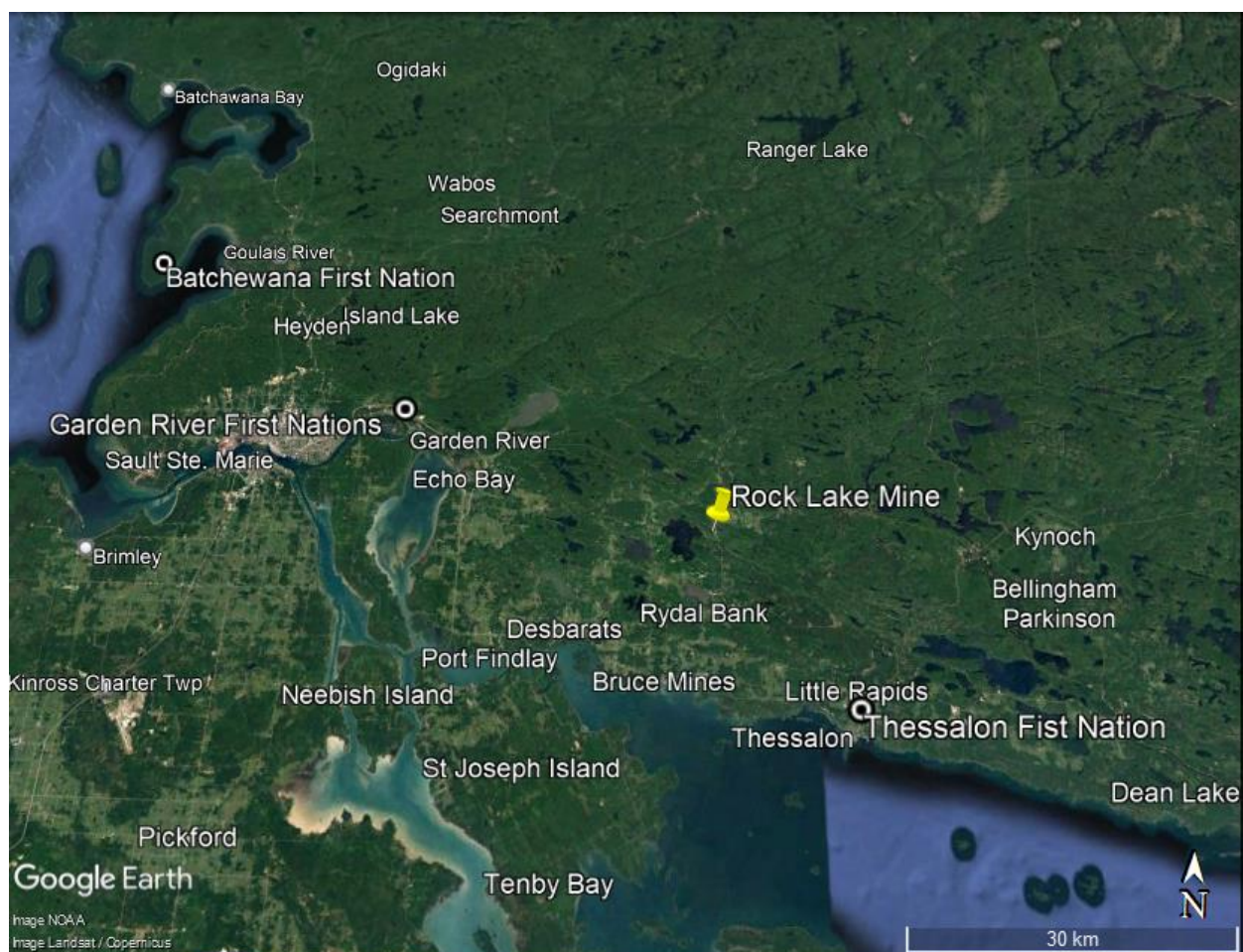


Figure 1 – Site Location Plan.

REHABILITATION ACTIVITIES

The objective of the project is to rehabilitate the mine hazards located in the northern portion of the Rock Lake Mine property, referred to as Rock Lake Mine North. The mine features include a

shaft, an adit, multiple raises, a stope to the surface, and crown pillars. All features are located on private land owned by the surface rights holder, while the ministry holds the mining rights. The location of the mine hazards is shown in Figure 2 below.

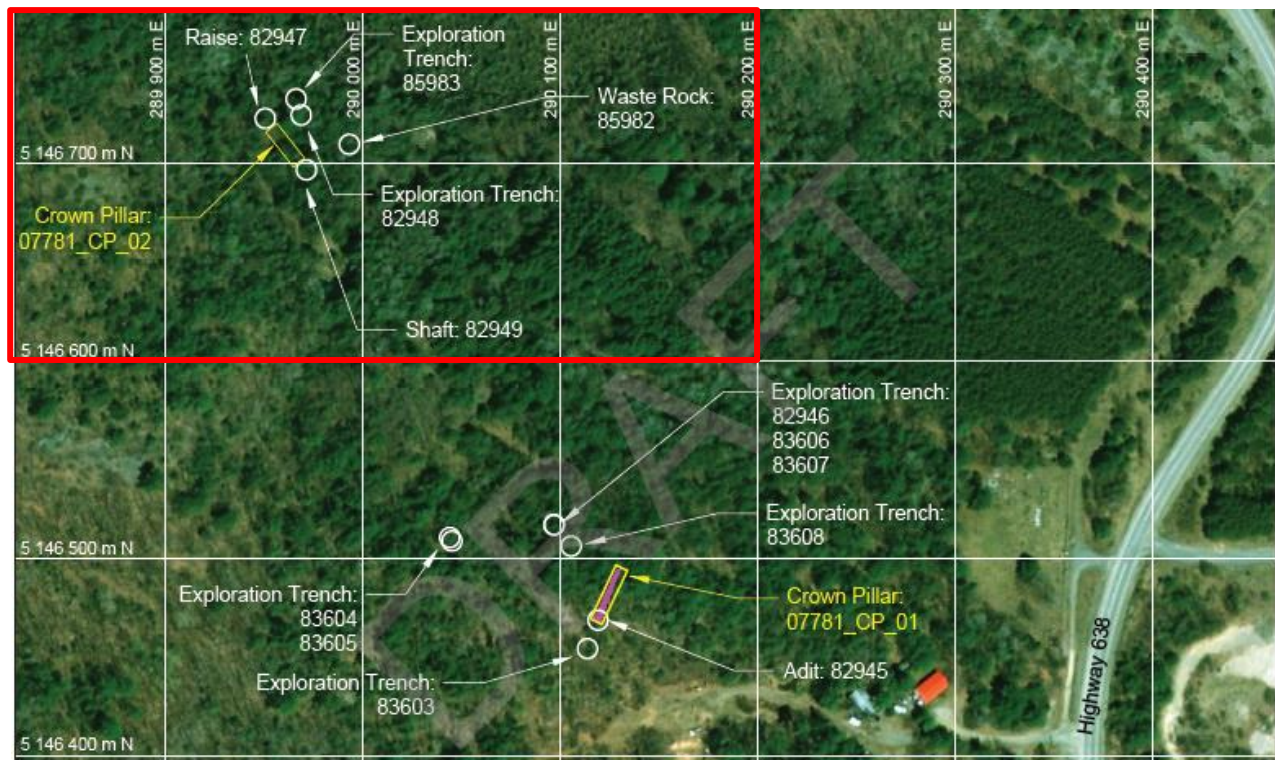


Figure 2- Location of mine hazards at the Rock Lake Mine property. The proposed rehabilitation activities will occur in the north portion of the property, as shown by the red box.

The proposed rehabilitation activities will consist of the placement of backfill to eliminate the safety concerns associated with mine openings to surface. Drilling and some minor tree removal will be needed to facilitate the placement of the backfill. The use of backfill fulfills the requirements of the Mine Rehabilitation Code as referenced in O.Reg 35/24 under the Mining Act for the closure of the hazards. The underground workings are flooded and do not provide habitat to bats or other wildlife. The work is expected to occur in the fall of 2025.

CLASS EA SCREENING

The proposed rehabilitation activities are subject to The Ministry of Mines Class Environmental Assessment (EA) Process. The undertaking has been screened as a Category B with low potential for environmental effects, in accordance with the requirements of the *Class Environmental Assessment for Activities of the Ministry of Northern Development and Mines under the Mining Act* (amended 2018).

ENVIRONMENTAL EFFECTS AND PROPOSED MITIGATION MEASURES

Several environmental effects associated with the undertaking have been identified during the Class EA screening process. A summary of negative environmental effects and proposed mitigation measures that would negate or reduce the significance of the environmental effects are provided below in Table 1.

| Environmental Effect | Description | Proposed Mitigation Measure |
|---|---|---|
| Noise and Vibration | Short term noise and vibration impacts associated with vehicles and use of equipment may occur. | All rehabilitation work and mobilization of equipment will be limited to the daytime hours and will comply with applicable noise by-laws and guidelines. |
| Migratory Birds/Terrestrial Species or Habitat | <p>Some tree and vegetation clearing activities may be required to facilitate the work.</p> <p>Wildlife may be temporarily displaced due to increased noise levels, vibrations and vehicular traffic associated with the rehabilitation work.</p> <p>Wildlife-vehicle collisions may cause injury/mortality to individual animals. Domestic waste generated may unintentionally attract wildlife to the work area.</p> | <p>All tree removal activities will be completed outside of the migratory bird active period.</p> <p>Any disturbances to wildlife will be short-term and limited to the footprint of the hazards. Disturbed wildlife is expected to recolonize the area quickly upon project completion.</p> <p>The risk of mortality and injury to wildlife will be reduced by enforcing speed limits on access roads. The work area will remain free of litter and all waste disposed of in accordance O.Reg 347.</p> |
| Endangered Species / Species at risk or habitat | <p>A species at risk assessment was completed in 2024 by WSP. The report concluded that the mine is not suitable for bat hibernation in its current condition due to flooding and backfill. The treed habitat surrounding the mine may provide suitable maternity roosting habitat to bats.</p> <p>The Ontario Reptile and Amphibian Atlas does not identify any previous occurrences of SAR on or adjacent to the mine. The NHIC Map identified a previous occurrence of Arrowhead Spiketail (<i>Cordulegaster obliqua</i>), a dragonfly species considered vulnerable in Ontario.</p> | <p>If any SAR are encountered during the rehabilitation activities, work must immediately stop and the MECP consulted as to how to proceed. Applicable regulatory requirements will be adhered to, and mitigation measures implemented to avoid impacting SAR.</p> <p>Any tree removal activities will be completed outside of the bat roosting period.</p> <p>Project activities are not expected to impact habitat of Arrowhead Spiketail.</p> |
| Groundwater quality/quantity | The mine workings are currently flooded. Dewatering of the workings will be needed to facilitate the placement of the backfill. The | If required, an Environmental Compliance Approval will be obtained, and any water discharged into the environment will meet approval |

| Environmental Effect | Description | Proposed Mitigation Measure |
|---|---|--|
| | dewatering has the potential to release new contaminants into the environment that may impact groundwater quality. | conditions. |
| Soils - contaminants, sedimentation, erosion. | There is the potential to negatively impact soil quality through spills and sedimentation. | An emergency spill kit will be readily available at all times during construction activities and all workers trained on proper use. Should a spill occur, regardless of its severity, the Ministry of Environment, Conservation and Parks will be immediately notified through the Ontario Spill Action Centre (1-800-268-6060). |
| Air Quality | <p>The placement of backfill has the potential to generate dust. The dust is expected to be minimal and limited to the location of the mine hazards.</p> <p>Heavy equipment will be utilized to haul aggregate to the mine. The emissions associated with the vehicles is expected to be minimal.</p> | If required, water or a dust suppression system will be utilized to reduce dust emissions as needed. |
| Seasonal or Permanent Residence | Project activities occur adjacent to a residential property. Temporary disturbances associated with noise, vibrations and dust may occur over the five-day duration of the work. | <p>Mitigation measures for noise, vibration and dust have been detailed above.</p> <p>Communication with the property owner will be maintained and, if required, fencing established to secure the work area.</p> |

NEXT STEPS

The Ministry of Mines is seeking input on the undertaking and proposed mitigation measures as part of the Class EA process. The rehabilitation work is expected to occur in the fall of 2025 and continue into 2026.