



Steep Rock Iron Mine Construction, Operation and Decommission

Geographical location

Atikokan, Ontario

When it began or was completed

The hematite iron ore deposit was discovered in the 1880s. It was not until 1944, after much effort (described below) that iron ore was first shipped. Mining operations ceased in 1979 and reclamation of the site is currently in progress and continues to have a long term effect on the region.

Why a Canadian geotechnical achievement?

To access the ore body, the Seine River was diverted to drain the middle and east arms of Steep Rock Lake. This allowed for the removal of up to 100 m of glacial sediment from the drained lake bottom. In total, ~260 million m³ of sediment was dredged. By comparison, this volume of material is greater than that moved during the construction of the original Panama Canal.

During the mine's open pit operation, production peaked in 1956 at 3.4 million tons. Although the mine later added underground mining operations, yearly production declined until the mine closed in 1979.

The mining lands around Steep Rock Lake were surrendered to the crown in 1988 and the Ontario Ministry of Natural Resources and Forestry has taken the lead regarding remediating the site. To ensure public safety, reclamation efforts and environmental monitoring studies continue to clean up the site as well as maintain and improve dam safety.

Steep Rock Mine was influential in the development of the Town of Atikokan and the expansion of Port Arthur's (now Thunder Bay's) port handling capabilities. Experience gained from the mine's construction, operation and decommissioning is helping to shape future sustainable mining developments in the region.

Submitted by

Wesley Saunders (GKM Consultants and Chair CGS Northwest Ontario (Thunder Bay) Section)

Key References

Steep Rock Mine - Conceptual Rehabilitation Approaches. Ontario Ministry of Natural Resources and Forestry, February 2016

(<http://apps.mnr.gov.on.ca/public/files/er/final-steep-rock-mine-fact-sheet.pdf>)

See also:

(<http://www.thunderbaymuseum.com/wp-content/uploads/2012/07/Steep-Rock-Iron-Mines-fonds.pdf>)

Photographs



GENERAL VIEW OF STEEP ROCK OPEN PIT

A historical postcard of the Steep Rock Mine (date unknown).



An aerial view of Steep Rock Mine in 1974.