

Penobsquis Mine Decommissioning

February 2017 Update

Introduction

With provincial approval now in hand, PotashCorp is beginning the process of decommissioning the Penobsquis mine, which closed in January of 2016.

This marks the final stage in a long, successful operation that provided a lot of good-paying jobs and community support.

PotashCorp began operating the Penobsquis mine and milling facility in 1993, after the Potash Company of America initially developed the deposit in 1981. Located near the farming community of Sussex, the Penobsquis mine employed between 300-450 people while in operation. In addition to providing hundreds of well-paying jobs, PotashCorp was a visible, supportive presence in the community.

In 1998, after a water inflow was discovered, PotashCorp continued to mine at the site. The inflow was managed at increasing expense, by grouting “cracks” in the mine, hauling brine pumped to surface to Cassidy Lake and the Port of Saint John, and eventually by transporting the brine through a 30-kilometre pipeline to Cassidy Lake and then into the Bay of Fundy.

In 2007, PotashCorp announced it would develop the Picadilly potash deposit, which is located across the



highway from the Penobsquis site. Construction began in 2008 and Picadilly began production in 2014.

In November 2015, PotashCorp permanently stopped potash mining at Penobsquis and salt mining ended in January 2016. Sadly, that same month, the company announced it was also indefinitely suspending production at Picadilly due to weak potash prices.

In May 2016, PotashCorp applied to the New Brunswick provincial government for permission to allow the Penobsquis mine to flood. That request was granted on Jan. 11, 2017.

As we decommission the mine, we will keep you informed on our progress and answer any questions you may have.

Overview of Decommissioning

The key components of decommissioning the Penobsquis mine include: removing materials and equipment from underground, shaft capping and plugging, and removing surface infrastructure that will not be required for future operation of the Picadilly mine. Grouting operations ended in May 2016 and pumping brine from underground ended in January 2017.

Decommissioning Activities

Underground Equipment Inventory

Salvageable equipment has been brought to the surface to be sold or recycled. When it was neither feasible nor necessary to bring equipment to surface, batteries were removed, petroleum, oil and lubricant products were drained, and the final location of the machine was catalogued. The fluids drained from the equipment were brought to surface and disposed of according to regulatory requirements. A hazardous materials survey was conducted on the remaining underground components. Any materials of concern were tested and disposed of through certified waste handlers and documented in a report submitted to the New Brunswick

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Department of Environment and Local Government.

Mine Flooding and Cessation of Brine Management

Now that all underground activities at the Penobsquis mine have ended, inflow water is being allowed to accumulate in the mine. The water is being directed to the lower salt stopes within the underground mine workings. The lower levels of the mine workings are beginning to fill, from the bottom up.

As the mine fills, salt and potash will dissolve until physical and chemical equilibrium is achieved between the inflow water and the brine/water accumulating within the mine workings. The brine/water will also eventually reach equilibrium with the hydraulic pressure of the inflow.

We estimate it will take approximately two years for the mine to fill.

Shaft Plugging and Capping

To properly decommission the production and service shafts, they will be filled with gravel and subsequently capped with concrete. The engineered design for the final concrete cap and plug will be reviewed and approved by New Brunswick Energy and Resource Development prior to installation.

Before filling the shafts with gravel, hoisting equipment will be decommissioned and berms will be positioned at the base of the shafts to keep the gravel from spreading. During the preparatory activities, gravel will be trucked to site and stockpiled. Shaft filling is expected to take approximately three to four weeks per shaft.

Monitoring Activities

Baseline data has been collected, pairing existing information with sampling done in 2016 for the following:

- Groundwater
- Surface Water
- Subsidence (ground settling)
- Microseismic (measurement of ground settling)

The baseline monitoring report will be sent to the New Brunswick Department of Environment and Local

Government and will serve as the basis for developing a long-term monitoring plan that will be submitted to the department for its approval.

Removal of Non-Essential Surface Infrastructure

All buildings and other resources related to above-ground operations at the Penobsquis site that are not essential to Picadilly operations will be decommissioned. This includes utilities, ponds and buildings. Demolition activities will take place over the next several years. In 2017-2018, we plan to remove the salt domes and associated infrastructure.

Schedule and Next Steps

Decommissioning work is officially under way. In February, we will focus mainly on preparing to decommission the shafts, which is expected to be complete by June 2017. The first phase of surface infrastructure demolition is planned to begin mid-2017 (subject to approvals) and take approximately one year to complete. Further updates will be provided annually as plans are finalized for further surface demolition.



Contacting PotashCorp

Your comments and questions are important to us. You may call the Penobsquis office at 1-506-432-8400, or email Penobsquiscomments@potashcorp.com

In-person comments or inquiries can be left in writing with security personnel at the main desk at the Picadilly entrance. We ask that you please provide the following information:

- Your full name
- Your company name (if applicable)
- Contact information and preferred method of contact
- Details of your comment/question