

# RAGLAN MINE

A GLENCORE COMPANY

## Sivumut PROJECT

THE RAGLAN MINE  
PROPERTY BEYOND 2020  
(PHASES II AND III):

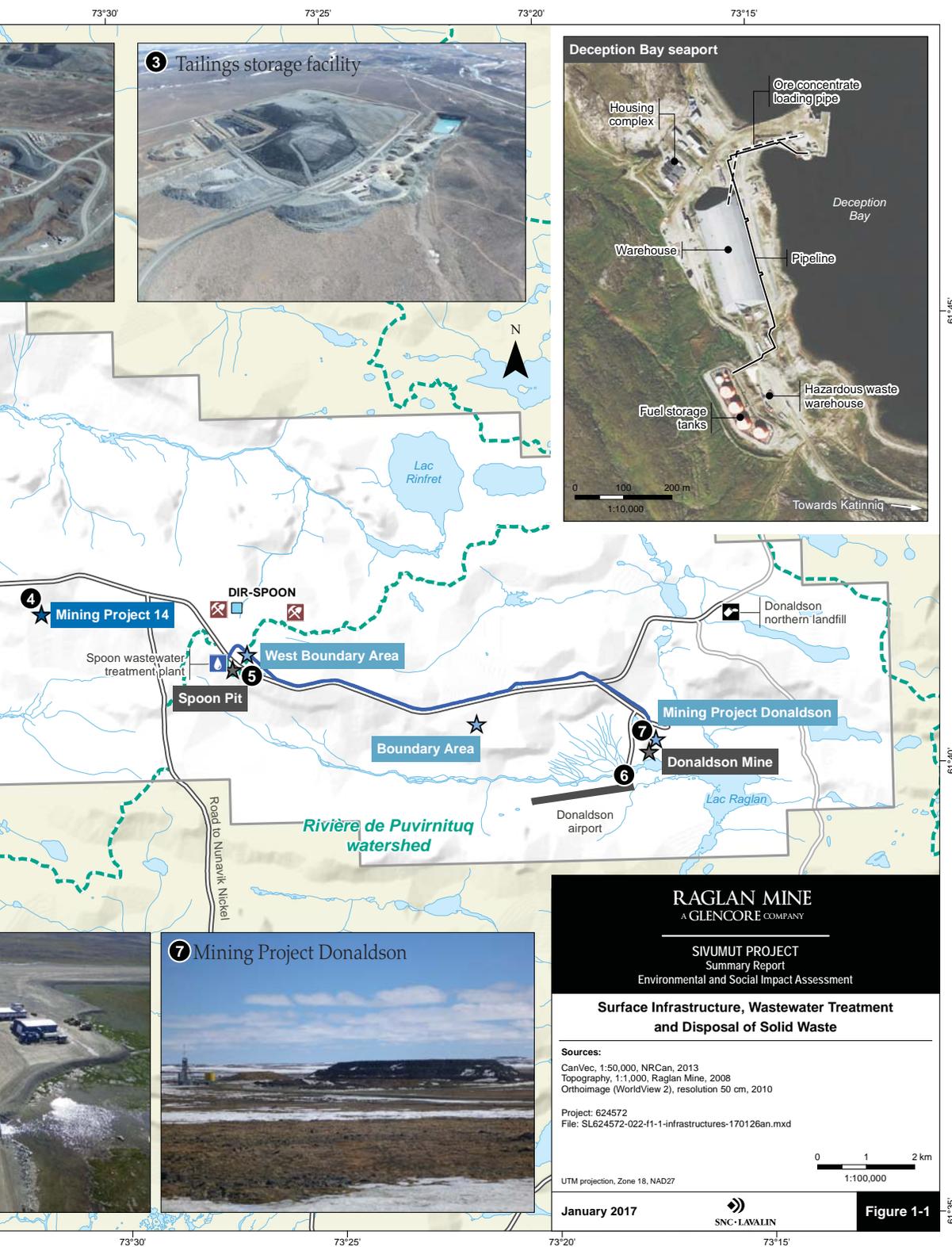
CONTINUATION OF  
MINING OPERATIONS EAST  
OF KATINNIQ



Raglan Mine's current operations (Phase I), which began in 1997, are expected to gradually cease from 2020 onwards.

In order to ensure the continuation of Raglan Mine's operations to 2040 and beyond, we launched the Sivumut Project.

We consider the Sivumut Project as an opportunity to maintain and increase partnerships with Nunavimmiut and, more specifically, with Salluit and Kangiqsujuaq. This project will contribute to providing economic benefits for Nunavik through profit sharing, jobs and contracts. The experience gained and the various studies and improvements achieved during Phase I have allowed Raglan Mine to minimize the environmental impacts of its operations while maximizing benefits for the local communities.



# The Sivumut Project will...

- Remain on Raglan Mine's property (business as usual);
- Occupy a small surface area (underground mines), which will limit environmental disturbance;
- Use current facilities (i.e. ore processing plant, accommodation complex, Deception Bay installations, airport, roads, etc.);
- Continue to treat waste water with the same proven system;
- Maintain the same location for water effluent;
- Not affect other permanent water courses.



# Project Description

The Sivumut Project aims to continue Raglan Mine's day-to-day operations until 2040 and beyond. This Project was designed in a way to continue using existing infrastructure, including the housing complexes in Katinniq and Deception Bay, the ore processing plant, power plants, workshops, water treatment plants, tailings storage facility (TSF), waste rock piles, road network, port, airport and warehouses.



## PHASE II

Phase II of the Project will see the opening of two new underground mines, namely Mining Project 14 (MP 14) and Mining Project 8 (MP 8), both of which are expected to be in operation from approximately 2020 to 2035.

### Mining Project 14

MP 14 will operate at a yearly production rate in excess of 850,000 tonnes per year of ore, for an assumed 8-10 year period. The temporary surface infrastructure will include pads for various buildings such as shelters, garages and warehouses, ore and waste rock storage pads, and an access road to connect the mine site's facilities to the main road. Water in contact with the ore and waste rock pads will be routed to a collection basin, via a network of ditches, and pumped to the Spoon pit for water treatment prior to being released into the environment. All waste rock extracted during the operations of MP 14 will be returned underground at the closure of the Raglan site.

### Mining Project 8

MP 8 will operate at a yearly production rate in excess of 500,000 tonnes per year of ore, for an assumed 10-15 year period. The extraction of the ore production from this mine will partially use the same underground workings as the current mining operation, Qakimajurq. Surface infrastructures will be limited to ventilation raises (plus access routes) and a waste rock pad at Qakimajurq (if required).

## PHASE III

Phase III of the Sivumut Project, whose total ore production will be similar to that of Phase II, will include three new underground mines (Mining Project Donaldson, Boundary Area and West Boundary Area).

Mining Project Donaldson, with a five year production life, will allow for an extraction rate of 450,000 tonnes of ore per year. Donaldson's current infrastructure will be reused to limit the project's environmental footprint. All waste rock to be extracted from the underground mine

will be deposited in the current pit, constituting the first step towards this pit's restoration. Water in contact with ore and waste rock will be routed to the existing catch basin through the existing ditch system and pumped to the Spoon pit for water treatment prior to being released into the environment.

The Boundary and West Boundary Areas will operate in a similar way to the Phase II mines and will therefore require comparable surface infrastructure.

### TAILINGS STORAGE FACILITY (TSF)

To meet the needs for Phases II and III, the surface area of the TSF will be increased from 93 to 133 hectares. The water treatment capacity at Katinniq will need to be increased to allow for the treatment of additional runoff from the extension of the TSF.

### SITE RESTORATION AND REHABILITATION

Raglan Mine will continue to conduct progressive reclamation activities during the course of Phases II and III, whereby waste rock will be returned to exhausted open pits or underground. At the end of Raglan Mine's activities, the final reclamation of the accumulation areas (TSF and waste rock piles) will begin. The site rehabilitation will take place over an estimated five year period. The financial guarantees for the final restoration work will be paid according to the requirements of the Mining Act.



# Consultations in Nunavik

**W**e understand that working in close partnership with Nunavimmiut is key for Raglan Mine's future. In order to ensure that the beneficiaries of the Raglan Agreement and regional stakeholders were properly consulted, and to respond to regulatory requirements pertaining to public consultation, a participatory consultation approach was implemented as part of the Sivumut Project ESIA.



## ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT (ESIA)

The Sivumut Project is subject to an environmental impact assessment under the Environment Quality Act (EQA) of Québec and Chapter 23 of the James Bay and Northern Québec Agreement (JBNQA). As part of the planning process for the Sivumut Project, Raglan Mine is required to present the project and assess how it might impact communities and the environment in Nunavik. The Environmental and Social Impact Assessment (ESIA) report is publicly available online at: [www.keqc-cqek.ca](http://www.keqc-cqek.ca)

The Kativik Environmental Quality Commission (KEQC) is the body responsible for reviewing projects located north of the 55<sup>th</sup> parallel. The KEQC has the mandate to analyze the ESIA submitted for its consideration, to hold public consultations, if required, with communities affected by the projects being assessed, and to make a determination about whether or not to approve these projects.

### OPEN DIALOGUE PRE-CONSULTATIONS

Raglan Mine site

**NOVEMBER 2014**

### CONSULTATIONS

Presentations of the Sivumut Project were given to the communities of Salluit and Kangiqsujuaq, as well as to regional organizations;  
**MARCH – JULY 2015**

Two extra meetings of the Raglan Committee in  
**APRIL & JULY 2015**

Nunavimmiut employees were consulted on the impacts of employment at the mine site in **JUNE 2015**

### SIVUMUT SUB-COMMITTEE

The Sivumut Sub-Committee was formed by the Raglan Committee in **APRIL 2016** to ensure that Inuit parties and Raglan Mine could work together on reviewing the Sivumut Project. The Sub-Committee is composed of representatives from Salluit, Kangiqsujuaq, Makivik Corporation and Raglan Mine.

### PRESENTATION OF THE FINDINGS OF THE SIVUMUT SUB-COMMITTEE

Presentation to the Raglan Committee members and elected officials from Salluit and Kangiqsujuaq (**DECEMBER 2016**)

# Sivumut PROJECT

## MAIN FEATURES

### OPERATIONAL FACILITIES

- Mine 3
- Tailings storage facility
- Donaldson Airport
- Accomodation Complex
- Ore Processing Plant

### PHASE II (2020 TO 2035)

- Two new underground mines (Mining Projects 8 and 14)
- Use of current facilities (surface and underground) & road network
- Same tailings storage facility as Phase I

### PHASE III (2032 TO 2038)

- Three new underground mines (Mining Project Donaldson, and Areas Boundary and West Boundary)
- Use of current facilities & road network
- Extension of the current tailings storage facility

### CURRENT MINES (PHASE I)

- Kikialik
- Mine 2
- Katinniq
- Qakimajurq

## HIGHLIGHTS OF FUTURE MITIGATION MEASURES

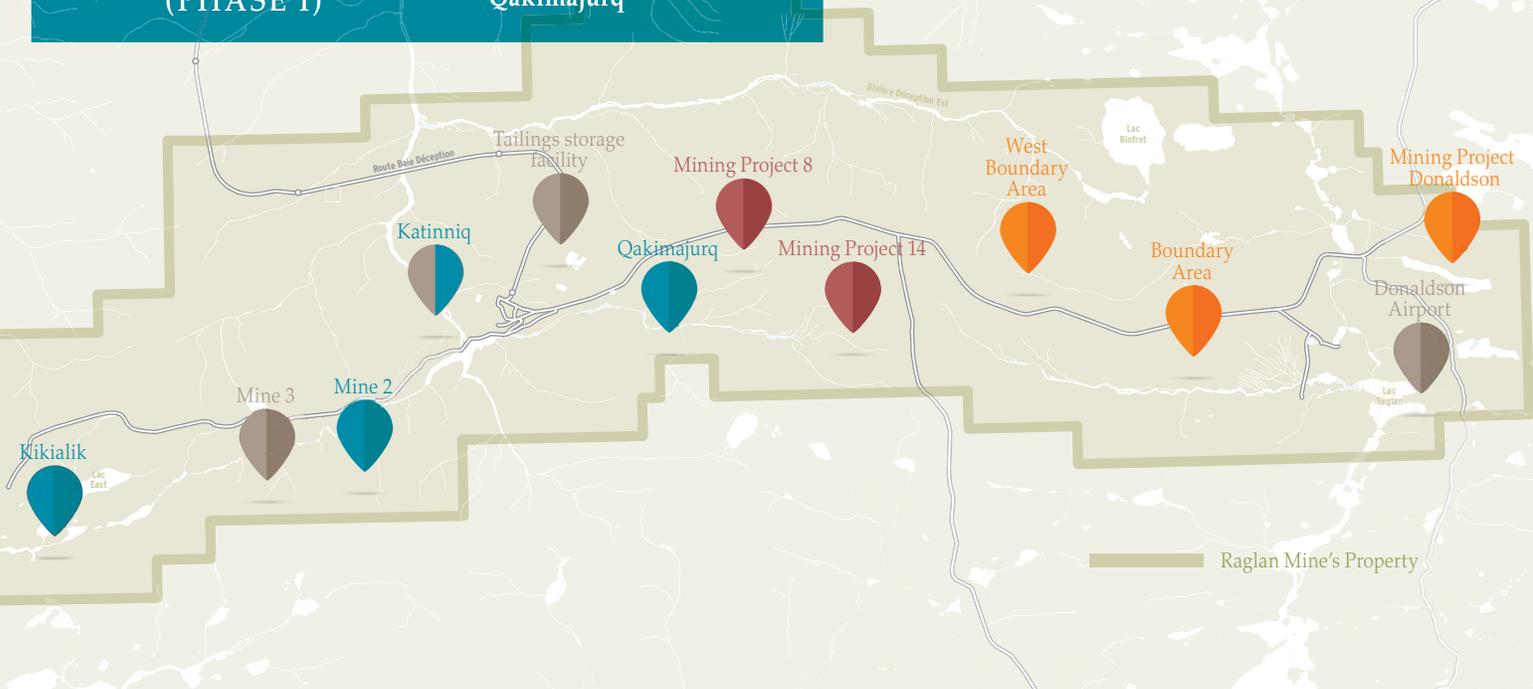
**Increase** involvement of Sallumiut and Kangirsujuammiut in environmental monitoring.

**General improvement** in collaboration / relations with Sallumiut, Kangirsujuammiut, and Nunavimmiut regarding issues including land use, family support, employment and training and contracts to Inuit businesses.

**Pursue** the dust control program – through the use of dust abatement on roads – and optimize it near Pangaligiak and Tasialurjuaq lakes, a measure that will help protect the air and water quality in the Deception Bay area.

**Optimize** environmental monitoring and put in place a social monitoring program.

**Continue** to apply mitigation measures, which have been developed during the past 20 years of operational experience.



## Contact us

We welcome your questions and comments about our activities.

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