Fortune Minerals – NICO Project

#### **Closure and Reclamation**







The Plan will be a living document which will evolve over time

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**Objective:** 

To release the property in a manner that is safe for wildlife, aquatic, and human health







**Closure Covers** 

**Runoff Water** 

Collection and Management of Seepage Water













**Phase I: Indoor Pilot CWST** - Build to test various methods of metals removal from water and associated sedimentation rates using influent water made to simulate the runoff expected at the NICO mine site after closure

**Phase II: Outdoor Pilot CWTS** - Build to validate the designs optimized indoors. The outdoor pilot CWTS will be located adjacent to CSL's laboratory and greenhouse facilities in Saskatoon, Saskatchewan

**Phase III: Demonstration-scale CWTS**: Design, build, and monitor at the NICO mine site at the beginning of operations.

**Phase IV**: **Full-scale CWTS**: Design, build, and monitor early in the operations period as feasible to demonstrate the effectiveness of the CWTS at the NICO Project site.







## Early Operations

Initiate the indoor and outdoor pilot scale CWTS during the construction phase.

The demonstration CWTS would be built in the first or second year of operations and would use waters taken directly from the SCPs at the base of the CDF.

Once performance of the demonstration scale CWTS has been verified over a number of years, plans would be made to build the full-scale version.







Initial Closure Plan:

- Open pit would passively fill in 120 years

## **Current Proposed Closure Plan**

 Actively fill the open pit with water from Marian River in approximately 12 years according to DFO Guidelines







## Early Closure

 12 years of active pumping (during the summer) would be required to achieve overflow

**Open Pit Flooding** 

Pump for ~10 summers (over a 12 year period) and then pause to allow time for the water to settle and to test the water quality



In-pit treatment is a contingency that will be examined if water in the open pit requires treatment If in-pit treatment works, a second CWTS will not be required. If water quality is unsuitable for direct discharge, a second CWTS will be built







#### Likelihood of Risks



Fortune is confident that the CDF:

- seepage/runoff water quality will be in the range predicted.
- cover will perform as expected based on detailed design and case histories.

Contango and Fortune are confident that the Constructed Wetland Treatment System will be effective for meeting Site-specific Water Quality Objectives, based on past experience and proposed methods.

Fortune is confident that adverse effects on receptors are not likely to occur in Nico, Peanut, and Burke lakes and the Marian River with the current closure plan. The inclusion of CWTS provides an added measure of assurance that adverse effects on surface waters from the open pit will not occur during closure and post-closure.







### General Demolition and Disposal Procedures:

# Site Infrastructure will be removed

NICO Project Access Road



#### **Closure and Reclamation Monitoring**

FORTUNE

Involve Tłįchǫ People Fortune will involve Tłįchǫ people in the determination of vegetation cover for the CDF

Incorporate Traditional Knowledge Traditional knowledge will be incorporated into the closure planning as the NICO Project moves into operations

Monitoring of Progressive Reclamation Progressive reclamation will be carried out. This will form an important part of the development and refinement of reclamation techniques







The Conceptual Closure
and Reclamation Plan will:
be a living document
evolve over time
align with the local

cultural and traditional values

