

## 1.0 INTRODUCTION

Fortune Minerals Limited (Fortune) is proposing to develop the NICO Cobalt-Gold-Bismuth-Copper Project (NICO Project) 160 kilometres northwest of Yellowknife and 50 kilometres northeast of Whati in the Northwest Territories. Other nearby communities include Gamètì, Behchokò, and Wekweètì. The NICO Project is located 10 kilometres east of Hislop Lake (K'ìàgotì).

The NICO Project is surrounded by Tìjchq Lands; however, the land that the NICO Project is on is not part of the Tìjchq Lands as defined in the Tìjchq Land Claims and Self-Government Agreement.

### 1.1 Plain Language Summary

This Plain Language Summary focuses on topics that were identified as being the most important by the Tìjchq people and the Review Board. Readers are encouraged to review the full Developer's Assessment Report if they would like a more complete description of the NICO Project and its potential effects. It can be accessed at the Mackenzie Valley Environmental Impact Review Board web page (<http://www.reviewboard.ca>) by searching the public registry.

### 1.2 Fortune Minerals Limited

Fortune became a public company in 1989 with shares on the stock exchange. The focus of the company was to look for metal deposits (like gold and other metals) in the Northwest Territories. Fortune holds a 100% interest in the mining leases at the NICO site. In 1992, Fortune also began to look for industrial minerals (like limestone) in other parts of Canada. In 2002, Fortune took over a project in northwest British Columbia that is developing a high quality coal deposit.

### 1.3 NICO Project

The NICO Project will take 12 to 18 months to build which includes time for building an access road into the site. Construction of the Tìjchq road must be confirmed before Fortune will move ahead with development of the NICO Project. The mine will operate for approximately 18 years as an open pit mine; however, in the first two years underground mining will also occur. The rock from the mine and the tailings from the processing of the mineral containing rock (ore) will be placed in a valley beside the mine (called the co-disposal facility). Water from this valley and the co-disposal facility will be collected for use in the process plant, or treated for safe release.

When the mine closes, the buildings, piping, and other things built for the mine will be taken down within approximately two years. Useful parts may be taken away for recycling or re-use, and unusable, but non-hazardous parts, like concrete, will be disposed in the co-disposal facility. Anything potentially hazardous will be taken away for proper waste handling. The co-disposal facility will be covered with layers of soil to keep as much water as possible from getting into it. The open pit will slowly fill with water from rain and snow, and water seeping out of the rocks. Water from the mine areas will be tested regularly after the mine closes to assess whether the water is acceptable to flow into the nearby lakes. Water from the mine area will be treated through a series of wetlands. However, the effluent treatment facility will be maintained and operated for several years after closure to treat water before it is released to the nearby lakes if water quality is not acceptable.

## 2.0 ENVIRONMENTAL, SOCIAL AND ECONOMIC CONTEXT

People in the surrounding communities were asked about the NICO Project and what was important to them. Using these comments from the people, the potential effects from the NICO Project for these issues and others were looked at.

The NICO Project is located within the Marian River (Gòlotì Deè) drainage basin, approximately 10 kilometres east of Hislop Lake (K'ìàgotì). It is located in the northern part of the boreal forest. Because water from the project area will drain into the Marian River (Gòlotì Deè) downstream of Hislop Lake (K'ìàgotì), the water environment is very important to the people living in communities in the area. The people want to be sure the water will be safe to drink and that people in the communities will be able to continue fishing near the NICO Project site. Water and fish are summarized in Sections 2.1, 3.9, and 5.2, below.

Caribou are of special concern to northern people, so it is also important to understand how caribou use the area. Caribou are summarized in Sections 2.2 and 5.1, below.

In the past, there have been other mines that may not have been closed the way people expected; therefore, the closure and reclamation of the NICO Project is a high priority for the people. Closure and reclamation is summarized in Sections 3.13 and 5.4, below.

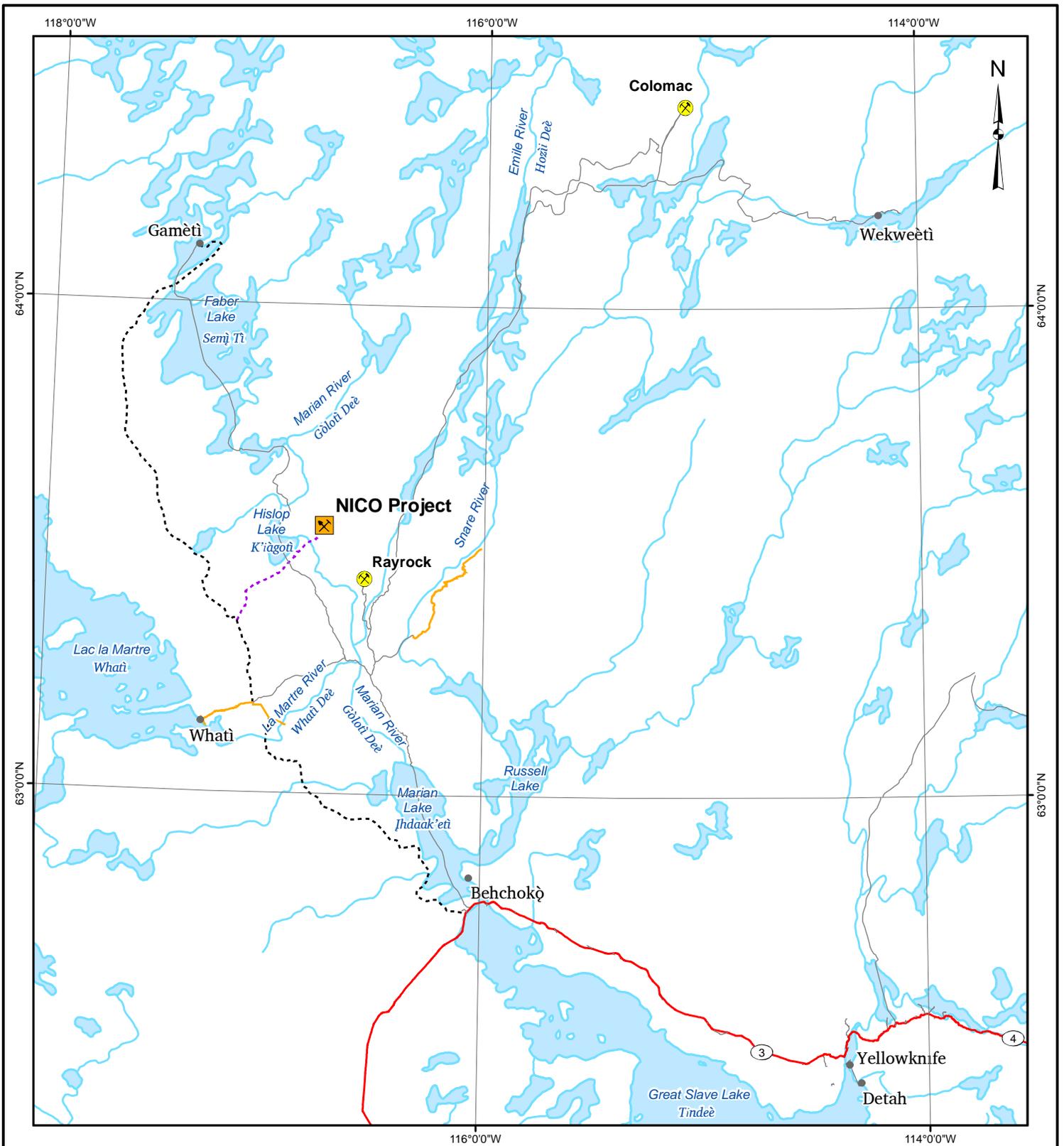
### 2.1 Water and Fish

#### 2.1.1 Lakes, Ponds, and Streams

The NICO Project is located on land beside lakes and streams whose water flows into the Marian River (Gòlotì Deè) downstream of Hislop Lake (K'ìàgotì). This is part of the Marian River (Gòlotì Deè) drainage basin. Most of the NICO Project is on land beside lakes and streams whose water flows first through Burke Lake (Burke Lake drainage system). A small part of the NICO Project is on land beside Lou Lake (Lou Lake drainage system). The Marian River (Gòlotì Deè) flows southward joining with the Emile River (Hozì Deè) then with the La Martre River (Whatì Deè), before flowing into Marian Lake (Jhdaak'etì), which drains to the North Arm of Great Slave Lake (Tindeè). Figure 1 shows the NICO Project in relation to these lakes and rivers.

In the area of the proposed mine, water flows through a series of small ponds, lakes (including Burke Lake), and streams into the Marian River (Gòlotì Deè). Figure 2 shows the main parts of the mine in relation to the nearby lakes, streams, and rivers. Mine construction and operations have the potential to affect these ponds and creeks. The following things are of particular note for water around the mine area.

- The tailings and mine rock co-disposal facility will be located in a small valley beside the mine that includes a few small ponds (called the Grid Ponds) that will be covered.
- The Grid Ponds contain no fish.
- The water from the co-disposal facility will be collected and treated.
- Treated water will be discharged through a diffuser into Peanut Lake during operations.
- Water from Peanut Lake flows into Burke Lake, which flows through a small creek into the Marian River (Gòlotì Deè).

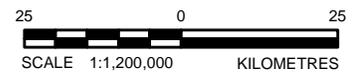


**LEGEND**

-  NICO PROJECT
-  POPULATED PLACE
-  HIGHWAY
-  EXISTING ROAD
-  EXISTING WINTER ROAD
-  PROPOSED ACCESS ROAD
-  PROPOSED Tłı̄chǰ ROAD
-  RIVER
-  LAKE

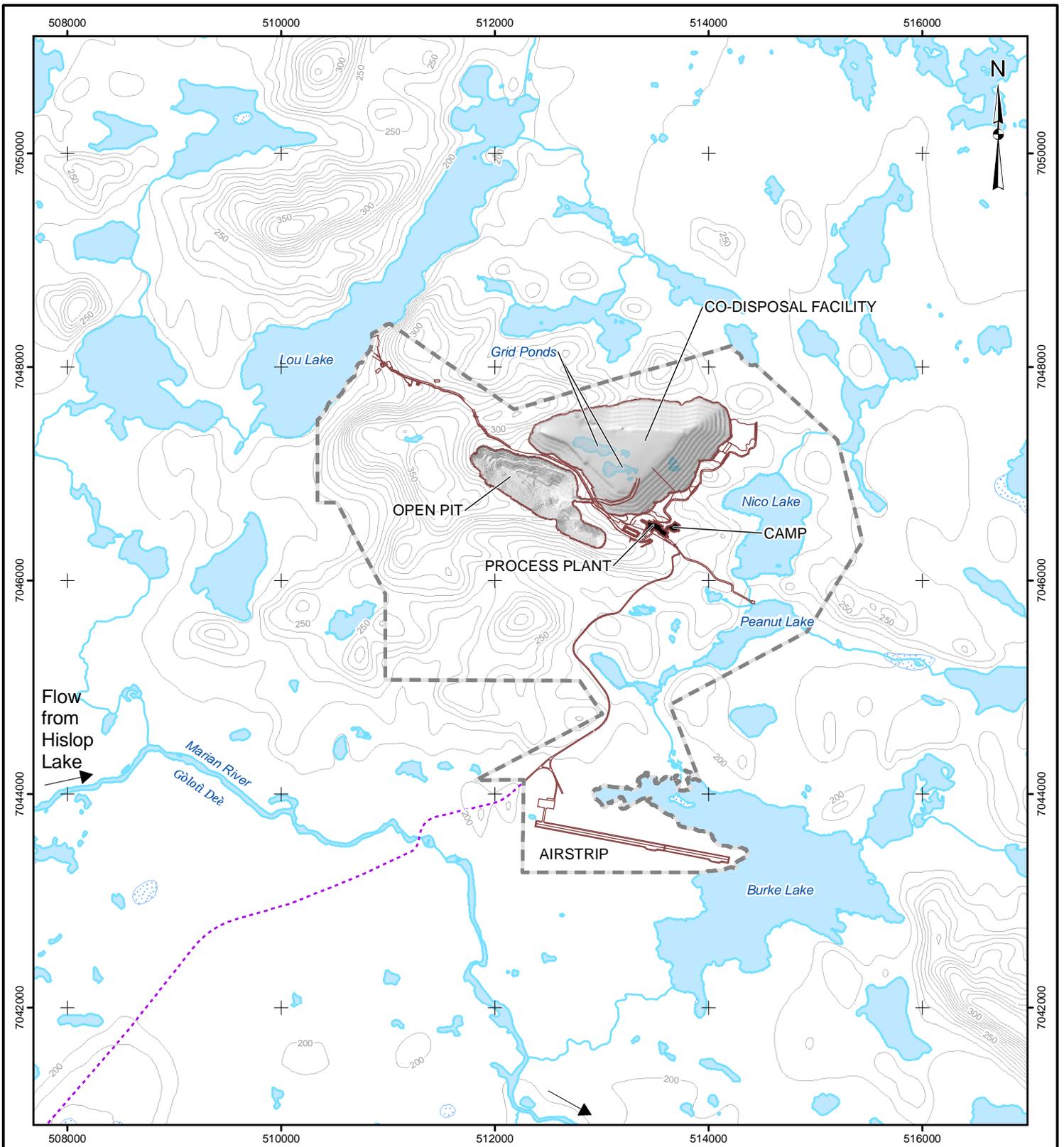
**REFERENCE**

Base data obtained from Atlas of Canada, DMTI, and ESRI.  
 Projection: Canada Lambert Conformal Conic



	<b>FORTUNE MINERALS LIMITED</b> <b>NICO DEVELOPER'S ASSESSMENT REPORT</b>		
	<b>LOCATION OF THE NICO PROJECT</b>		
FILE No. E-PLS-001-GIS			
DESIGN	JG	17 Jan. 2011	SCALE AS SHOWN
GIS	CW	10 May. 2011	REV. 0
CHECK	JG	13 May. 2011	<b>FIGURE: 1</b>
REVIEW	JG	13 May. 2011	

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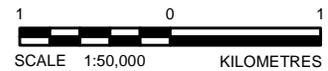


**LEGEND**

- PROPOSED NICO PROJECT FACILITY
- PROJECT LEASE BOUNDARY
- CONTOUR (10 METRE INTERVAL)
- - - PROPOSED ACCESS ROAD
- RIVER OR STREAM
- ⊙ HILL
- LAKE OR POND
- ▨ WETLAND

**REFERENCE**

Base data obtained from GeoGratis.  
 Projection: UTM Zone 11 Datum: NAD 83



<b>FORTUNE MINERALS LIMITED</b> NICO DEVELOPER'S ASSESSMENT REPORT	
<b>MAJOR FEATURES OF THE NICO PROJECT</b>	
File No. E-PLS-002-GIS	
PROJECT No. 09-1373-1004	SCALE AS SHOWN
DESIGN JG 17 Jan. 2011	REV. 0
GIS CW 02 May 2011	<b>FIGURE: 2</b>
CHECK JG 13 May 2011	
REVIEW JG 13 May 2011	
<b>Golder Associates</b> Edmonton, Alberta	

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- At closure, water from the co-disposal facility is proposed to be discharged through wetlands designed to treat the water to be acceptable before flowing into Nico Lake.
- The open pit will slowly fill with water over about 120 years and may eventually overflow. If necessary, the water that overflows from the open pit will be treated in a wetland so that the water is acceptable to flow into Peanut Lake.
- Drinking water and water for mine processing will be pumped from Lou Lake. The drinking water will be treated for safe drinking purposes.

### 2.1.2 Surface Water Quality

The quality of water in the ponds, lakes, and streams near the proposed mine and processing plant is similar to the quality of water in other ponds, lakes and streams farther away. The exception to this is the quality of water in the Grid Ponds which is much different, as described below. Minerals concentrations in the small lakes near the proposed mine site are higher than would normally be expected in northern subarctic lakes.

The minerals in the water of the lakes and streams near the proposed mine site come from natural sources in the nearby rocks and soils and were in the water before any mining took place. Some of these natural metals levels are higher than government water quality guidelines. These metals include aluminum, arsenic, cadmium, chromium, copper, iron, mercury, lead, and zinc. The government water quality guidelines are meant to identify levels of metals that may be a concern for aquatic life; however, they are very protective, which means that levels even higher than the guidelines do not necessarily indicate a problem. Local plants and animals can adapt to these naturally occurring high levels.

Arsenic concentrations are naturally very high in the Grid Ponds, but as the water flows from them through some wetlands into Nico Lake, the arsenic levels become much lower. As the water moves from Nico Lake to Peanut Lake then Burke Lake, the arsenic levels decrease until in the water of Burke Lake they are below water quality guidelines. What this shows is that the natural environment of these small lakes naturally improves the water quality.

### 2.1.3 Fish

Eight species of fish were captured in the lakes and ponds near the proposed mine site, but the mix of fish in each lake or pond was different. Northern pike and lake whitefish were the only species of fish that appear to be in most of the lakes and ponds in the area. Walleye were only found in Lou Lake, slimy sculpin were only captured in Burke Lake, and ninespine stickleback were only captured in Peanut and Burke lakes. Other fish species captured in the area of the NICO Project were cisco, longnose sucker, and white sucker. No fish were captured or seen in the Grid Ponds.

## 2.2 Caribou and Other Wildlife

The Bathurst, Ahiak, and Bluenose barren-ground caribou herds have the potential to use the NICO Project area during the winter months. The home ranges of these herds are 236,000 to 443,000 square kilometres in area. Boreal woodland caribou could be present in the NICO Project area year round because the habitat is suitable for them. Since caribou were only observed in the area a few times and only in winter, these caribou are probably barren-ground caribou. Traditional knowledge indicates that woodland caribou tend to be more common west of the NICO Project, in fact, more likely west of the community of Whati.

The potential for developments in the area to affect caribou is one of the main concerns of the people. People are especially concerned because studies of several herds of barren-ground caribou in the Northwest Territories and Nunavut have reported lower numbers of caribou over the past five to ten years. The surveys completed for this project have shown that caribou are not frequent visitors to the NICO Project site.

Other wildlife species occur in the region, including black bear, wolf, Canada lynx, marten, wolverine, moose, beaver, muskrat, 42 species of upland breeding birds (e.g. American robin), as well as ducks, geese, eagles, and hawks. Baseline data indicates that 38 bird species were identified during upland breeding bird surveys, 25 water bird species or species groups were identified during water bird surveys, and three species of raptors (bald eagle, peregrine falcon and red-tailed hawk) had nests within the NICO Project area.

## 2.3 People

### 2.3.1 Population

About 43,500 people live in the Northwest Territories. Half of these people are aboriginal, with about 80% of aboriginals living in small communities. Over 70% of non-aboriginal people in the Northwest Territories live in Yellowknife, which has a population of almost 20,000.

More people tend to leave the Northwest Territories than migrate into the Northwest Territories. Those who leave are generally in search of economic opportunities and lower living costs. Most people who move to the Northwest Territories come for economic opportunities and they are likely to be young, in their 20s and 30s, and slightly more likely to be male rather than female. Within the Northwest Territories, people tend to move from smaller communities to larger communities, in particular Yellowknife, in search of jobs, opportunities, better access to education, lower costs of living, and less isolation.

The Tłı̨ch̨ communities have been growing. Behchokò is the largest of the Tłı̨ch̨ communities, with just over 2000 people, or about 69% of the entire Tłı̨ch̨ population. The Tłı̨ch̨ Government was established in Behchokò. As a result, more Tłı̨ch̨ families have been choosing to live in Behchokò, in conjunction with increasing mine-related employment with Tłı̨ch̨ companies.

### 2.3.2 Culture

Concerns for changes to the traditional way of life have been identified since environmental assessment processes were introduced in the 1970s. The use of aboriginal languages is declining in the Northwest Territories, but aboriginal language loss is slowing and in certain regions their use may actually be increasing, at least as a second language. Most kindergarten through grade 9 students in the Northwest Territories have access to aboriginal language programs.

While over 90% of Tłı̨ch̨ and Yellowknives Dene people speak an aboriginal language, the number of speakers is decreasing. Detah and N'Dilo have seen the largest decrease in aboriginal language use and knowledge. This is probably because these communities are so close to the mostly English-speaking city of Yellowknife.

## 3.0 PROJECT DESCRIPTION

The photographs below show the major features of the proposed mine site as Fortune expects it to look during mining. The pictures are of a scale model described in Section 4.0, below.



**Photograph 3-1** shows the proposed mine site during operations like looking straight down from an airplane.



**Photograph 3-2** is the same scale model showing the proposed mine site like looking sideways from an airplane.

### 3.1 Project Schedule

Once Fortune has obtained the necessary environmental assessment approval, permits, and licences, construction will take 12 to 18 months to complete. There are two possible construction schedules that depend on the timing of the construction of the proposed Tìjchq̄ road between Behchok̄, Whatì, and Gamèti, although both will depend on a firm commitment to construct this road. The most likely sequence would be to construct the access road at the same time as the mine. The alternative schedule would see the access road being built first, followed by construction of the mine. Both construction schedules would use winter roads to bring equipment and supplies to the site. Fortune will not initiate construction of the access road into the NICO Project until there is a firm commitment for construction of the proposed Tìjchq̄ road and an access agreement between Fortune and the Tìjchq̄ Government has been signed.

Construction of the access road at the same time as the Tıçhç road is expected to take approximately one year. At the NICO Project site, the initial construction work will include preparation of the tailings and mine rock co-disposal facility and its perimeter dam at the same time as building construction. This is necessary so that the co-disposal facility is ready for mine rock and tailings placement when the mining begins and the processing plant starts up.

The construction period will be followed by 18 years of mining and processing. Where possible during the mining period, disturbed areas and mine features that are no longer needed or have reached their designed limits will be reclaimed. For instance, once the design height of the co-disposal facility has been reached, that area of the facility can begin to be closed, long before the mine reaches the end of its life.

Closure will occur within two years after mining has been completed. Most of the buildings, piping and other things will be removed during that time.

Monitoring of the NICO Project will continue until it is shown that it meets all agreed closure objectives.

### 3.2 The Mineral Deposit

The NICO mineral deposit is located on a rock hill that slopes into a bowl-shaped valley. The part of the mineral deposit that can be mined is called the ore zone.

The main metals in the NICO mineral deposit that will be mined are cobalt, gold, bismuth and copper. These metals occur as parts of small mineral grains dispersed in the rocks and make up 3 to 10% of the rock. The common minerals seen in the rocks of the proposed NICO mine are chalcopyrite, pyrrhotite, and pyrite filling fractures or as small grains.

### 3.3 Mining

In order to mine most of the ore zone, an open pit mine has been proposed that will be 1450 metres long, 500 metres wide and 230 metres deep. Mining will also be underground, but only for the first two years as the open pit is developed. After two years, the NICO Project will only be an open pit mine. The open pit will be excavated from the surface by blasting and with rock-moving machines. The rock excavated from the mine that does not contain valuable minerals will be hauled by truck to the co-disposal facility, described below.

The amount of ore (rock containing valuable minerals) totals 31 million tonnes, of which 2.2 million tonnes will be mined underground and 28.9 million tonnes will be mined in an open pit. This is called the ore reserve.

The walls of the pit will be steep but sloped to prevent the pit walls from collapsing. A road into the pit will allow heavy equipment (mostly haul trucks) to get to the bottom of the pit and back up to the surface loaded with the broken rock.

### 3.4 Processing

Rock from the mine containing minerals (the ore) will be crushed in three stages to very fine sand sized grains. This fine ore will be fed to the mineral processing plant where it will be ground up even finer, then the valuable minerals will be separated from the fine rock in a three stage process (called flotation) to produce a concentrate. The fine rock material left over that does not contain valuable minerals is called tailings. The tailings will be prepared for piping to the co-disposal facility by removing as much water from it as possible for recycling in the process.

Chemicals will not be used at the NICO Project site to process the concentrate into metals that can be sold. This means that most of the chemicals that are usually needed at most mine sites will not be used at the NICO Project site and will not have to be transported into the site along the Tłıchq Road. Cyanide will also not be used at NICO for the processing of gold.

### 3.5 Concentrate Transportation

The concentrate (65,000 tonnes per year) will be put into large flexible containers, placed on trucks and hauled from the mine site to Hay River. During mine operations, five trucks of concentrate will be hauled each day. This is the main reason why the NICO Project requires the Tłıchq Road. At Hay River, the containers of concentrate will be put onto railway cars to be transported to the Saskatchewan Metals Processing Plant near Saskatoon. In addition to shipping concentrate out from the mine, about four supply trucks will come to the mine site each day. The trucks will access the mine site along the access road and the Tłıchq road, from the Northwest Territories highway system. Transportation contractors with proven safety records will be used.

### 3.6 Mine Rock

The NICO Project is expected to generate approximately 96.9 million tonnes of mine rock that does not contain valuable minerals, which will not be processed through the plant during the predicted mine life. Most of this mine rock will be placed in the co-disposal facility.

All mine rock that is considered to have a high potential to form acid with exposure to air and water, and rock that contains metals that can dissolve in water will be contained within the co-disposal facility. The results of the rock testing program show that most of the mine rock has a low potential for forming acid.

Some of the mine rock with a low potential for acid generation and metal leaching will be used for the purpose of site construction outside of the co-disposal facility (for example in dams, roads, rock pads, and lay down areas).

### 3.7 Tailings

In addition to the mine rock described above, the processing plant is expected to generate approximately 30.8 million tonnes of tailings that will be placed in the co-disposal facility. More than one third of the tailings are expected to fill spaces between pieces of mine rock. The remaining tailings will be thin layers in cells between rock layers. As much water as possible will be removed from the tailings for re-use in the plant before the tailings are put in the co-disposal facility.

Testing shows that the tailings have a low potential to form acids, but they do have some potential for metals to dissolve out of them. The co-disposal facility, described below has been designed to manage this.

### 3.8 Tailings and Mine Rock Co-Disposal Facility

Community feedback and considerations of traditional knowledge contributed to Fortune's decision to have a co-disposal facility for both mine rock and tailings. This approach results in the smallest area of land required compared to the other alternatives considered. The facility will be entirely contained in the Grid Ponds valley, and it will not be visible from the Jdaà Trail (Jdaà Tłı).

Because of the possibility of metals dissolving from the tailings and some of the rock, the co-disposal facility will be constructed from east to west keeping a slope on the surface toward the west. This will force run-off water to flow away from Nico Lake and allow it to be collected for re-use in the plant or to be treated.

Some seepage will come out the bottom of the co-disposal facility on the east side. This seepage will be captured in three seepage collection ponds. All the water collecting around the co-disposal facility will be pumped to a holding pond (called the surge pond) for re-use in the plant. Any water not recycled will be treated in the effluent treatment facility. The tailings and mine rock will be contained in the co-disposal facility by a perimeter dyke made of mine rock.

Benefits of co-disposal of tailings and mine rock include the following:

- **Smallest possible area:** Over one-third of the tailings should fill spaces between pieces of mine rock, so less space will be required compared to putting the tailings in a separate area.
- **Faster water draining from tailings:** The coarse mine rock will allow water contained in the tailings to drain quickly.
- **More stable tailings:** The mine rock will provide support for the tailings that will reduce risks of collapse.
- **Lower potential for acid to form and metals to dissolve from the mine rock:** Filling of spaces between the chunks of mine rock with tailings will reduce exposing the rock to air, which causes acid to form in water. The very fine grained tailings also reduce water flow through the mine rock that could dissolve metals from the rock.
- **Dust and erosion control:** The surface of tailings exposed to wind and rain will be reduced by placing tailings in cells that are covered with new layers of mine rock shortly after they are filled.

When mining ends, the co-disposal facility will be covered with layers of soil selected to both limit water from seeping into it and allow plants to grow on it. The cover will also minimize wind and water erosion. The bottom layer of soil will be sand to prevent minerals from being able to reach the top surface of the co-disposal facility. The top layer will be fine grained soil with a slope on the top surface to force rain and snowmelt water to flow toward the open pit.

Some water will seep into the co-disposal facility after closure. This water will seep out from the bottom of the co-disposal facility and into seepage collection ponds along the east side of the co-disposal facility. This water will be released gradually into a wetland that Fortune will design and construct using local plants so that it treats the water just like the natural environment is doing now with water from the Grid Ponds. The treated seepage water will flow into Nico Lake.

### 3.9 Site Water Management

#### 3.9.1 Fresh Water Intake

During mining, water for the plant, for dust control, and for drinking water and camp use will be pumped from Lou Lake. This pumping of water from Lou Lake will only have a small effect on its water level because the amount of water required is small. A water treatment plant will treat the water to be safe for drinking.

#### 3.9.2 Dewatering of the Mine

About 50,000 cubic metres of water will have to be pumped from the underground tunnels (that resulted from the exploration of the mineral deposit) before underground mining can start because they have filled with water. Dewatering will begin about two months before the start of underground mining. If the quality of this water is acceptable compared to the site-specific water quality objectives, it may be pumped out without treating it. If the

quality of this water is not acceptable compared to the site specific water quality objectives, it will be pumped into the co-disposal facility valley. The valley will already have dams around it so the water can be held for use in the plant or treated for release. Fortune expects that some of the water will be acceptable for release at the beginning of dewatering, but that much of the deeper water in the tunnels will have to be held for plant use or treatment. This process will be closely monitored.

Water will also be pumped from the open pit during mining. As the open pit gets larger, more water will have to be pumped. This water will be pumped to a holding pond (called the surge pond) for use in the plant.

### 3.9.3 Sewage Water Treatment

Water used at the camp will result in grey water (mostly water from washing and showering) plus black water (mostly from toilets) that will be treated in a sewage treatment plant using a rotary biological contactor. The treated sewage water will be pumped into Peanut Lake through a diffuser once testing shows it is acceptable.

### 3.9.4 Effluent Water Treatment

Under normal conditions, treated water from the effluent treatment facility will be pumped through a diffuser directly into Peanut Lake. Water will be treated using a proven technology called ion exchange. Treated water from the effluent treatment facility may be pumped into the surge pond if it requires additional settling, polishing, or treatment before it is pumped into Peanut Lake.

### 3.9.5 Water Balance

#### 3.9.5.1 Operations

During the operation of the mine, the following things can be said about water use on site.

- The amount of water that will be discharged to Peanut Lake will range from 115,500 to 291,000 cubic metres per year under average conditions. The average daily discharge at the start of operations will be 315 cubic metres per day (3.6 litres per second) and the average daily discharge at the end of operations will be 796 cubic metres per day (9.2 litres per second).
- These predicted discharges to Peanut Lake are relatively small, because the project has been designed to recycle as much used water back into the plant as possible.
- Every year under normal climate conditions, enough water will collect in the surge pond to supply the plant needs, keeping the need for fresh water from Lou Lake to a minimum.

#### 3.9.5.2 Closure

Following closing of the mine and the restoration of the site, the following things can be said about the water at site.

While the pit fills with water:

- Run-off water from the top of the co-disposal facility will flow into the open pit.
- The open pit is expected to take about 120 years to fill with water.

- While the pit fills with water, the only discharge to the environment will be about 152,000 cubic metres per year of seepage from east side of the co-disposal facility through wetland treatment systems into Nico Lake.
- Water flow into Peanut Lake will only be from the natural local run-off.
- No treated process or other water will discharge to Peanut Lake.

If the pit overflows:

- The seepage water discharge into Nico Lake through the wetland treatment systems will be about the same as before the pit overflows.
- Water flowing from the filled open pit will pass through another wetland treatment system then into Peanut Lake.

### 3.10 Site Buildings and Other Construction

The following buildings, material storage facilities, pipes and other things will be constructed before the start of mining:

- construction camp, then permanent camp;
- maintenance workshop and warehouse;
- electrical power and heating;
- storage for oil, fuel, glycol and other materials;
- production and storage facility for explosives;
- processing plant and crushing equipment;
- site roads;
- airstrip;
- water pumps and piping;
- tailings lines;
- co-disposal facility and seepage collection ponds; and
- sewage treatment.

The general layout of the plant site is based on the following criteria:

- small footprint for minimal land disturbance and maximum site operations efficiency;
- small building sizes and a layout designed for maximum energy efficiency;
- efficient facility access for personnel and vehicles during construction and operations; and
- minimal impact of winter road truck traffic around the site.

### 3.11 Waste Management

Wastes generated on site will be managed to avoid excessive amounts and to reuse and recycle as much as possible. A detailed waste management plan has been developed as part of this project.

Only solid non-hazardous waste materials will be allowed to be disposed in the co-disposal facility in carefully managed areas. However, Fortune intends to collect and remove most of this waste from site for recycling, including paper, plastics, metals and glass. Food wastes will be incinerated, along with sewage sludge and other things that are safe to burn. The ashes will be placed in the co-disposal facility. Potentially hazardous materials will be collected and shipped off-site for recycling or proper disposal, including electronics, used or unusable petroleum (especially used oil), lead-acid batteries, paints, and other things.

### 3.12 Human Resources

#### 3.12.1 Employment and Benefits

The NICO Project is expected to employ the equivalent of about 231 people during construction who will come into site at different times to work on specific jobs. The greatest number of work opportunities, about 233 jobs, will be during the first two years of operation when the underground and open pit will be operating. After the underground is finished there will be about 127 jobs available during the last 16 years of operations. Employment during closure and reclamation is expected to be fewer than 100 jobs. The main workforce rotation will consist of four crews working 12-hour shifts, rotating two weeks on and two weeks off. During operations there may be jobs that can accommodate a different work rotation allowing people to work at NICO who cannot balance the two weeks in and two weeks out with their home life.

Fortune will provide employees with a comprehensive benefits package that is competitively balanced in the Northwest Territories with the following included:

- health care;
- group registered retirement savings plan;
- group life insurance;
- medical travel assistance;
- education assistance program;
- site allowance;
- northern travel allowance; and
- employee assistance program.

Hiring preference will be given to local aboriginal and northern residents as part of Fortune Minerals Limited's commitment to provide employment and business opportunities to northerners which also includes support of apprentices at the mine.

### 3.12.2 Camp Facilities

During all phases of the NICO Project, a contracted service will manage the camp, including catering, housekeeping, and laundry services. Food services will include meals prepared daily including occasional 'country foods' selections, if available.

Indoor and outdoor recreational facilities will be available in the camp and the ability to communicate with home will be available (internet and telephone).

During mine operations, each room is planned to be for one worker at a time, although it might be shared with another worker on a different work shift rotation. Rooms will contain a single bed, a desk and chair, closet space, television and internet access. Washrooms will be shared dormitory style. During construction, the rooms will have two beds and be used by two workers at a time due to the larger number of people on site.

Fortune will provide scheduled return bus transportation, at its expense, to employees travelling from designated pick-up locations in the three Tłıchq communities (Behchokǝ, Whati, and Gamètı). A bus will travel between the Tłıchq communities bringing workers in and out of camp at rotation. If required, a bus may go to Whati every day to bring people and/or food in and bring people out. Small aircraft could be used to transport employees to and from Wekweeti. Transportation will also be provided for Yellowknife residents. Fortune may re-evaluate the logistics to make adjustments to best suit the workforce during construction and operations of the NICO Project.

### 3.12.3 Employee Training

Fortune will develop training programs to cover all phases of the NICO Project for employees and provide opportunities for career advancement. Orientation will be provided for all new workers that includes details of the job, what is expected of them, camp rules and facilities. Fortune is committed to providing opportunities for career advancement for all employees hired for the NICO Project. Fortune recognizes that additional effort may be required to help aboriginal workers with career advancement.

### 3.12.4 Camp Security

- All areas of the camp will be a 'dry camp'; alcohol will not be permitted or tolerated on site.
- Fortune is committed to maintaining a drug-free workplace and promoting high standards of health and safety.
- Fortune may conduct alcohol or drug testing if an employee appears to be under the influence of drugs or alcohol, or if the employee has been involved in an accident or injury on site.
- Employees will not be permitted to carry or bring weapons to the work site or to any other location that the employee may be required to be during the work day.
- The NICO mine site will be under security watch 24 hours per day. The mine's security team will clear anyone coming into the mine.

## 3.13 Closure and Reclamation

The conditions that will be left after the mine closes were identified as very important. Fortune plans to close and restore the site to conditions suitable for nature to reuse it. Throughout the mine planning process, the mine has been designed with final closure in mind and options for different parts of the mine site have usually been

selected for the best closure conditions. Where possible, the designs of mine rock and tailings disposal areas, dams, and mine water management have been chosen or modified to reduce the overall impact of the development.

The photographs below show the major features of the proposed mine site as Fortune expects it to look after closure. These photographs are of a scale model, described in Section 4.0 below.



**Photograph 3-3** shows the proposed mine closure like looking straight down from an airplane.



**Photograph 3-4** is the same scale model showing the proposed mine closure like looking sideways from an airplane.

### 3.13.1 Conceptual Closure Planning

#### 3.13.1.1 *Schedule of Key Activities*

Disturbed areas that are no longer in use will be reclaimed as soon as practical. For example, stockpiled soils will be spread over reclaimed areas that would benefit from additional soil to encourage plants to grow. In other words, closure and reclamation activities will occur throughout the operational life of the NICO Project.

### Covering of the Co-Disposal Facility

Closure of the co-disposal facility is designed to minimize wind and water erosion, and to keep water off the cover and from seeping into it. The designed cover for the top surface of the co-disposal facility will have two layers of soil. The bottom layer of soil will be coarse grained sand to prevent arsenic and other metals from the mine rock and tailings from being able to migrate upward so that plants growing on the surface cannot absorb them. The top layer will be fine grained and sloped to the west to allow the water to run off the surface to prevent most rain water and snow melt from getting into the tailings and mine rock. To prevent erosion, water flow channels will be constructed, as necessary, and plants will be encouraged to grow on the surface.

### Mine Closure

Once underground mining is completed, which is approximately two years after the start of mining, the underground trucks and equipment will be shipped off site. The opening to the underground mine tunnels will be sealed and filled with mine rock.

The open pit will be approximately 185 metres deep, measured from the entrance to the pit. At closure, pumping of water out of the open pit will stop. Since water will continue to enter the pit, because of rain, snow and water seeping out of the rock, the pit will slowly fill with water. Fortune expects that the water may eventually rise to the top of the pit in about 120 years and overflow where the former haul road enters the pit. Water in the pit will be tested as it gets closer to the top and before it overflows. If the water quality is not acceptable and if it will overflow, the water will be directed through a wetland treatment system similar to the ones for the seepage collection ponds. A security bond will be posted so that money is available to take care of potential water quality issues, should it be required.

The open pit will require a safety barrier and warning signs around the perimeter. The barrier will be constructed approximately 50 metres from the edge of the open pit, beyond of the limit of potential pit instability.

### **3.13.1.2 Buildings, Equipment, and Other Structures**

After mining has stopped, mining vehicles will be shipped off site. Some construction equipment will remain on site for up to 10 years to assist in closure. During the active closure period, some site services, including drinking water treatment, sewage treatment and communications will be maintained. Once they are no longer needed, they too will be removed. Where appropriate, smaller temporary facilities may be set up to support monitoring activities after the site is closed.

Processing equipment, generators, camp trailers, pumps, valves, and other equipment that can be reused will be shipped off-site. Materials with scrap value (steel, copper, aluminum) will be removed from site and sold as scrap. Unused materials like fuel or processing materials will be shipped off site as well. Non-recyclable materials from building demolition that are not hazardous (such as concrete or embedded steel) will be placed in the co-disposal facility. Building foundations and slabs on grade will be left in place, punctured to allow drainage and covered with local soil to promote plant growth.

Most of the mine closure activities will be completed in the two years after mining and processing stops. This will be followed by monitoring of closed parts of the mine site and of water quality, as well as maintenance. Fortune expects this to continue for 10 years after mine closure. This may include maintaining the effluent treatment facility, if required to achieve acceptable water quality. Once it can be shown that it is no longer needed, the effluent treatment facility, including the pumps, pipelines and the Peanut Lake diffuser, will be removed.

### 3.13.1.3 *Transportation Corridors and Airstrip*

Ten years after closing the mine, the access road and airstrip will no longer be required. Fortune will offer the road and airstrip to the Tłıchq Government. If the Tłıchq Government does not want them, these facilities will be closed and reclaimed.

### 3.13.1.4 *Erosion Control*

The co-disposal facility will be shaped to promote water run-off and covered, and native plants will be allowed to grow naturally. The water management systems, including the wetland treatment systems, will continue to operate since they will rely on free flow through a natural system. The surfaces of other disturbed areas will be broken up to encourage natural plants to take over. Culverts will be removed and natural water flow zones will be restored to flow as they did before mining. Overburden that had been stockpiled will either be used in the areas being restored or spread out to allow plants to grow naturally on it.

Erosion will be controlled by constructing low slopes or by placing large rocks on them, as appropriate, and encouraging plant life. The top surface of the co-disposal facility will be allowed to re-vegetate naturally.

### 3.13.1.5 *Revegetation*

Revegetation in northern areas is challenging, because of the cool short summers, low rainfall, cold winters, permafrost, limited organic soils, and other influences that are not always easy to identify or control. Other challenges include a poor understanding of local plants and natural processes, and a lack of local plant seeds for use in large-scale planting or seeding. As a result, growth and establishment of vegetation in northern areas is often slow.

Fortune will study the various plant species and the planting or site preparation techniques for potential active revegetation. Local Tłıchq knowledge is expected to be a great assistance in this regard. However, the current plan is to create stable and favourable surfaces that will allow native plants to slowly take over the areas naturally. If suitable plants can be identified and enough seeds are available, some active planting may also occur.

## 4.0 VISUAL EFFECTS ASSESSMENT

During scoping sessions with interested parties, concern was expressed about what the NICO Project would look like from the Įdaà Trail (Įdaà Tłı), as well as Hislop Lake (K'ìàgoti) and the Marian River (Gòloti Deè). With that in mind, the NICO Project was designed to have little or no visibility from these areas, as shown in the photographs below.

Fortune built two detailed and precise models to help show people how the NICO Project fits into the area. The models were shown to the elders and others who visited the NICO Project site in 2010 and they will be used for community engagement and review of the Developer's Assessment Report with regulatory authorities. The models show the NICO Project area as it exists today, as well as at a late stage of mining, and after the site is closed. The models also show Hislop Lake (K'ìàgoti), the Marian River (Gòloti Deè) and the Įdaà Trail (Įdaà Tłı) near the NICO Project. The models and actual photographs from locations along the Įdaà Trail (Įdaà Tłı) show that the NICO Project will be almost invisible from the trail. The co-disposal facility, which is the largest and highest part of the mine was purposely designed to be lower than the surrounding hills so it would not be visible from the Įdaà Trail (Įdaà Tłı), as well as from Hislop Lake (K'ìàgoti) and the Marian River (Gòloti Deè). Only the

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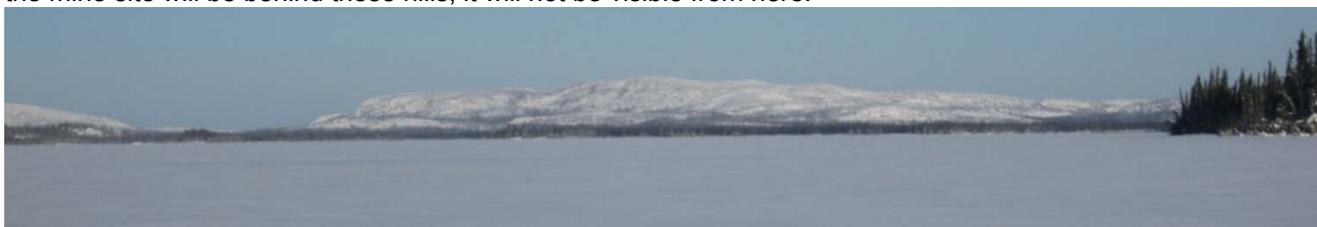
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one bridge that will cross the Marian River (Gòlotì Deè) for the NICO Project Access Road will be visible, but only from very close to it.



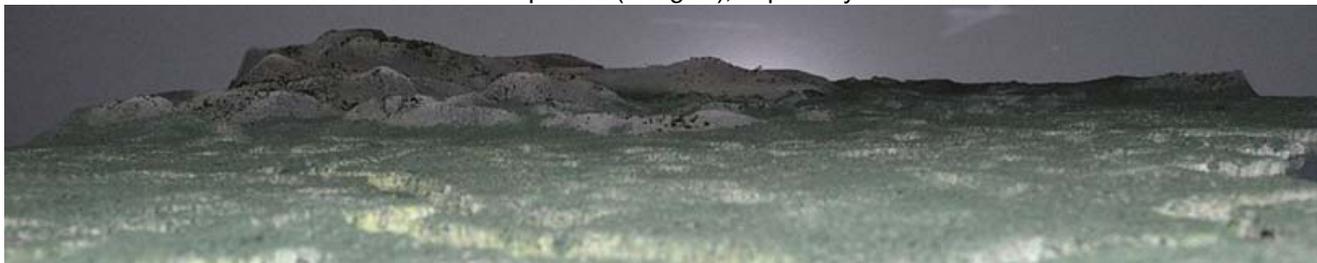
**Photograph 4-1** is from the ice road on the northern part of Hislop Lake (K'ìàgotì) looking east toward the NICO Project site. The hills near the NICO Project are barely visible from here due to the distance and trees. Because the mine site will be behind these hills, it will not be visible from here.



**Photograph 4-2** is from the ice road at the south end of Hislop Lake (K'ìàgotì) looking northeast toward the NICO Project site. The hills in front of the NICO Project can be seen, but because the mine site will be behind these hills, it will not be visible from here.



**Photograph 4-3** is a view from the centre of Hislop Lake (K'ìàgotì) facing east using the same model as Photographs 3-1 and 3-2 that has all the mine components on it including the co-disposal facility. Even though the view like looking from an airplane above Hislop Lake (K'ìàgotì), none of the mine components can be seen. So the mine site will not be visible from Hislop Lake (K'ìàgotì), especially from a canoe on the lake.



**Photograph 4-4** is a view from the Įdaà Trail (Įdaà TĮlĮ) facing north downstream from where the creek from Burke Lake flows into the Marian River (Gòlotì Deè). This is the same model as Photographs 3-1, 3-2 and 4-3 that has all the mine components on it. Even though the view is like looking from an airplane above the Įdaà Trail (Įdaà TĮlĮ), only the very top of the co-disposal facility is visible. From the ground on the Įdaà Trail (Įdaà TĮlĮ) or a canoe in the Marian River (Gòlotì Deè), the hills and trees will hide the mine components.

### 5.0 ENVIRONMENTAL EFFECTS

The active mine area will be small (approximately 485 hectares), with limited changes made to the natural flow of water. As a result, the project will have small effects on water quantity, air, soils, vegetation, and wildlife and fish health. Caribou and water quality have been identified as the most important concern related to the environment by the communities. Because there will be some changes in the water quality of small lakes closest to the mine, the effects on fish and fish habitat are also summarized here. Effects to traditional and non-traditional use of caribou and fish are also discussed because many people in the communities hunt and fish in nearby areas.

People should not be able to observe a change in the availability of wildlife due to effects of the NICO Project, relative to current natural changes in population size. Changes in water, soils, and plants caused by the NICO Project in the small area at and near the mine site will not affect the health of wildlife, or the health of people that eat wildlife.

#### 5.1 Caribou

Caribou are important to the culture of aboriginal people and other residents of the Northwest Territories. They are a critical component of the diet of many northerners, and they are the most important resource harvested by aboriginal groups with traditional lands around the NICO Project.

##### 5.1.1 Factors Influencing Caribou

Caribou migrate each year from the wintering grounds in the boreal forest northward to calving grounds near the Arctic coast, returning to the wintering grounds in the fall. They use different areas for a variety of reasons, such as where food can be found, where it is easiest for them to travel, where they can get away from insects, and where they can escape predators.

Because caribou move long distances each year between wintering areas and calving grounds, they can encounter a number of human developments such as communities, outfitter camps and lodges, operating mines, and exploration camps. These developments can be in areas that the caribou would use to forage, rest or travel through. Caribou might not want to be near a development, and might be nervous and not feed normally when close to human activity. They might use up energy if disturbed and run away from a project area.

Other factors that affect caribou include the following.

- The amount and quality of food that is available on both summer and winter ranges can affect caribou survival, as well as the number and health of calves that are born.
- Snow conditions, such as depth and hardness, can affect how much energy it takes caribou to move, and how easy it is for them to get to food.
- Weather such as late spring snowfall or late snowmelt can affect access to food. This can influence how big calves are when they are born, and how much milk a cow can produce to nurse her calf.
- The number of animals that are taken in the traditional harvest, as well as from hunting by non-aboriginal residents and non-residents.

### 5.1.2 Caribou and the NICO Project

Caribou may be in the area near the NICO Project during winter. Because of noise during operations, caribou might not use the area within about 15 kilometres of the NICO Project as much as they would if the NICO Project were not there. This will be a temporary effect and the caribou may become used to the noise.

The possible direct habitat loss associated with the NICO Project combined with previous, existing and predicted future developments (such as other mines in the area) is expected to be about 0.2% of the winter range. Approximately 85 hectares will be permanently altered by the NICO Project. This is mainly the open pit and the co-disposal facility that will fill the valley beside it which will remain as local features on the landscape. The habitat lost will be very small compared to the amount of existing caribou habitat.

Traffic associated with the proposed all-season Tłjchq road and the access road into the NICO Project could affect behaviour and movement. There will be more traffic during the construction period than during later operations. During mining, noise from vehicles along the access road and the Tłjchq road will occur year round; however, barren-ground caribou are only in the area in the winter. Although trucks might affect caribou movement and behaviour, the effects will be similar to what already exists when the winter roads are used. With the development of the all season roads, hunters would be able to make more use of vehicles (including snowmobiles) to access areas in the region, and for longer periods of time compared to the winter roads. Harvesting will affect the caribou population only during winter when caribou are on their winter range. Should harvesting on the all-season roads become a concern, the Tłjchq Government or the Wek'èezhii Renewable Resources Board could enact restrictions to control the harvest. So increased harvesting pressures can be controlled and the development of the NICO Project should not change the amount of harvesting in the area.

The NICO Project is not expected to cause enough disturbance to caribou to make a noticeable difference to a female's ability to produce a healthy calf. Effects from the mine will be limited to a very small area and unlikely to be a major contributing factor to changes in the abundance and distribution of the caribou herds. Changes in water, soils and plants will also be so limited that the NICO Project will not affect the health of caribou, or the health of people that eat caribou. People should not observe a change in the availability of caribou due to effects from the NICO Project, relative to current natural changes in population size.

## 5.2 Water Quality

The people and communities are concerned about the water quality from the NICO Project while the mine is operating and after it closes. People want to know whether the water will be safe for fish, wildlife and human health.

The NICO Project will release substances into the air from the plant, power generation, vehicle exhausts, road dust, and blasting. Substances in the air, which include mainly nitrogen and sulphur oxides, fumes from fuels, and dust can settle into the water and onto land where they may be washed into the lakes and streams by run-off. The amount of some metals in water resulting from mine dust was identified as potentially being above water quality guidelines in some small lakes and ponds immediately adjacent to the area of the mine and processing plant. The effects from dusts are expected only close to the mine and processing plant and only during and after freshet (snowmelt) flows. The potential effects on fish, wildlife and human health from the dust reaching the lakes and ponds beside the mine site, and the potential for the lakes to become more acidic is low.

Computer models were used to predict the quality of waters that would flow from mining, processing and co-disposal areas. Activities, such as mining, processing the mined ore, depositing mine rock and tailings in the co-disposal facility, site water drainage, and the filling of the open pit with water after closure were considered in the assessment of site water quality predictions. The results of these predictions were used to evaluate the need for, and the type of, treatment options that might be required to make sure the water would be safe to flow into Peanut Lake. These predictions will be tested by monitoring the waters in and around the project during construction and operations.

These water quality predictions were combined with the effects of dust discussed above to predict the total effects on water quality in the nearby lakes (Nico Lake, Peanut Lake, Burke Lake) and the Marian River (Gòloti Deè) during operations and after closure, both before and after possible overflow from the open pit. Overflow from the open pit, if it occurs, is not expected to have a large impact on the water quality of Peanut Lake and its aquatic life because this water will be managed so that it is acceptable before it reaches the lake.

The water quality prediction considered the natural water quality conditions before mining, such as the natural levels of minerals, then added the effects from the mining operations. The predicted water quality was also used to assess the combined effects to see if they might be harmful to aquatic life, wildlife and drinking water in the nearby lakes and the Marian River (Gòloti Deè) by comparing them to site specific water quality objectives that were developed to be protective of the environment as a whole.

The results of these predictions for Nico and Peanut lakes and comparisons to the site specific water quality objectives indicated the following.

- Some substances (including aluminum, arsenic, cadmium, cobalt, iron, and selenium) were predicted to increase above background levels during operations then decline after closure.
- Levels of other substances (including barium, chromium, and vanadium) were predicted to increase during operations and remain above background levels after closure.
- Levels of some other substances (including antimony, lead, manganese, mercury, molybdenum, thallium, uranium, and zinc) were predicted to increase during operations and early stages of closure.
- For most of these substances, the increased levels predicted were *lower* than the water quality guidelines or site-specific water quality objectives, which indicates that the water quality will be safe for the environment.

Substances that were notable in the assessment included the following.

- Total dissolved solids and associated minerals such as chloride, potassium and sulphate in the nearby lakes are expected to be higher after closure than before mining due to seepage into the wetland treatment system that flows into Nico Lake. These dissolved minerals are not expected to impact aquatic life.
- Dissolved nutrients, such as nitrate and ammonia (from explosives residue, from treated effluent discharged to Peanut Lake and from the seepage through the passive wetland treatment system into Nico Lake) are not expected to be above water quality guidelines in these lakes during operations and after closure. Phosphorus is not expected to increase significantly. These substances are not expected to impact aquatic life.

- Metals, such as arsenic and iron, have naturally high levels in the lakes and ponds near the mine and plant site. Although levels of chromium, mercury, silver, and thallium in Nico Lake may be higher than the water quality guidelines or site-specific water quality objectives after the mine has closed, and levels of chromium may also occasionally be higher than water quality guidelines in Peanut Lake following closure, no metals are expected to be at levels above water quality guidelines or site specific water quality objectives in Burke Lake or the Marian River (Gòlotì Deè). These metals concentrations are not expected to impact aquatic life.

While there may be some changes to the water quality in Nico, Peanut, and Burke Lakes during construction and operations, none of these changes are expected to result in significant negative effects to water quality in these lakes after closure. Aquatic health will not be at risk during construction and operations due to predicted metals concentrations, since the metals predicted to exceed water quality guidelines will mostly be in small particles (not dissolved). Particles are not easy for fish and other life in the water to absorb. Also the predicted amounts will only be in the water for short periods of time. The Marian River (Gòlotì Deè) will not be affected during construction and operations, or after closure.

### 5.3 Fish and Aquatic Habitat

The NICO Project will not have a significant negative impact on the fish and the condition of their habitats. As a result, impacts from the project are not predicted to have a negative effect on of the ability of people to fish for food or as part of their culture and livelihood.

The number of fish and the general condition of lakes should remain similar to existing conditions. Small changes might occur in Nico Lake because the water quality will change during mining and active closure. Once the mine closes, the conditions in Nico Lake will improve. The condition of Burke Lake and the Marian River (Gòlotì Deè) should remain similar to current conditions. Changes in water from the NICO Project will not affect the health of fish, or the health of people that eat fish.

Particular concern has been expressed by the Tìjchq Government and people for the potential cumulative effects of the NICO Project with the closed Rayrock and Colomac mines. Because the condition of the water in Burke Lake and the Marian River (Gòlotì Deè) will remain similar to the current conditions, the additional effect of the NICO Project on any other effects downstream is negligible. The creek from Burke Lake flows into the Marian River (Gòlotì Deè) at least 21 kilometres upstream from the nearest location that water from the Rayrock area could enter the Marian River (Gòlotì Deè). Water from the former Colomac Mine site eventually flows into the Snare River system which does not combine with water from the Marian River (Gòlotì Deè) system until Russell Lake meets Marian Lake (Jhdaak'eti). The effects from the NICO Project will not add to any effects from Rayrock or Colomac.

The NICO Project access road would provide easier access to Hislop Lake (K'ìàgotì) and the Marian River (Gòlotì Deè), which could result in increased fishing that could affect fish numbers, especially lake whitefish and northern pike. However, because Lac la Martre (Whatì) is a popular fishing destination, and is so close for access by traditional and non-traditional users for fishing, Hislop Lake (K'ìàgotì) and the Marian River (Gòlotì Deè) the number of fish should not be affected. Only a few fishermen are predicted to take advantage of the road access to Hislop Lake (K'ìàgotì). Access onto the NICO Project access road will be subject to negotiations with the Tìjchq Government.

In summary, some small changes for people are expected, although changes to fish fish numbers and opportunities for fishing should remain similar to existing conditions.

### 5.4 Effects from Closure and Reclamation

The effects from closure and reclamation on the important environment and socio-economic components, discussed below, that were assessed will be limited. Most of the mine will be closed and reclaimed within two years leaving only a few things remaining for potential use. The largest parts of the NICO Project are the open pit and co-disposal facility and these parts will remain on site in the closed state. The open pit will gradually fill with water over about 120 years and the co-disposal facility is expected to become fully revegetated during this time. As the water fills the open pit, it will be tested to make sure it is acceptable to be released or if it will require wetland treatment.

## 6.0 SOCIO-ECONOMIC EFFECTS

The NICO Project is a small development compared to other mines in the Northwest Territories, but it will contribute to the overall labour, financial, physical, human, and social resources of both the Northwest Territories and the nearby communities. Benefits will result despite some employment challenges, which include previous experience, employability and availability in light of minimum education and skill requirements, advancement opportunities, employee retention, criminal records, and drug and alcohol use. Overall, the NICO Project is expected to have few negative effects on people, business capacity, or public infrastructure and services. Most negative effects can be overcome with plans that Fortune has developed.

Because the NICO Project is a small development, it will have limited effects on society and culture. The NICO Project is not expected to either substantially increase or decrease education levels or health and wellness indicators.

In general, this project will increase the amount of money in the area through additional wages and business activities, with secondary benefits such as improved roads and spending. Money will be made through employment and in contracts to provide supplies and services. Increased spending of money earned by the NICO Project employees and contractors will spread the benefits. Much of the additional spending is expected to be in Yellowknife, unless the mine is used as an opportunity to open business with a greater variety goods or services in the smaller communities. The presence of an all-season road would make it easier to supply businesses in these communities.

There may be a need to hire workers from outside the Northwest Territories due to a shortage of trained mine workers, but as some of the existing mines begin to wind down over the next few years, some experienced workers will be able to shift to the NICO Project.

The NICO Project is expected to contribute social benefits with increased labour force participation, especially for the potentially-affected communities closest to the mine site. The location of the NICO Project is a substantial benefit to the Tłı̄chq communities since flexibility with shift rotation and time for cultural traditions will be more easily accommodated. More women may be able to participate in the NICO Project due to its closeness to their home communities.

Improved and new road access in the area will give residents better access to services and goods that previously were difficult to obtain and goods brought into the communities should be less costly due to lower cost transportation. Workers will have the ability to purchase vehicles and recreational vehicles for pursuing

traditional cultural activities, such as trapping and hunting. They may make improvements to their houses and the quality of food and clothing. Additional income and time off during the two-week rest periods will also allow some workers from the communities to engage more in traditional activities, including hunting, fishing and trapping.

In summary, impacts to economics in the area are expected to be positive and to last until the mine is closed. The positive and negative impacts to health and wellness and public safety are expected to be small and similar to existing conditions. Impacts to employment are expected to be positive and last until after the mine is closed. Impacts on infrastructure are expected to be positive and negative and are expected to last through the life of the mine.

### 7.0 MONITORING AND FOLLOW-UP

Once the necessary permits and licences are issued and construction of the NICO Project begins, several inspection and monitoring programs will be implemented.

**Compliance inspection** will check that project components are built to approved design standards that include the required environmental controls. Compliance monitoring will be repeated throughout the life of the NICO Project.

**Follow-up monitoring** activities are expected to include water sampling in and around the NICO Project site to make sure that the predictions used to assess the effects were accurate. Follow-up monitoring will also assess the potential for success of the proposed closure and reclamation plan.

**Environmental monitoring** programs will include a Surveillance Network Program primarily around the active mine area, as well as Aquatic Effects Monitoring Program and Wildlife Effects Monitoring Program that will monitor effects long distances away from the project as well as close to it. Additional environmental monitoring will include plant and wildlife monitoring and management, as well as air quality monitoring. The scope of these programs will be developed in consultation with regulators and the Tłjchq people.

Fortune anticipates that the Tłjchq Government or an agency of Tłjchq people will be involved with the monitoring programs.