NICO COBALT-GOLD-BISMUTH-COPPER PROJECT

Community Scoping Session




FORTUNE MINERALS LIMITED

Environmental Overview

INTRODUCTION

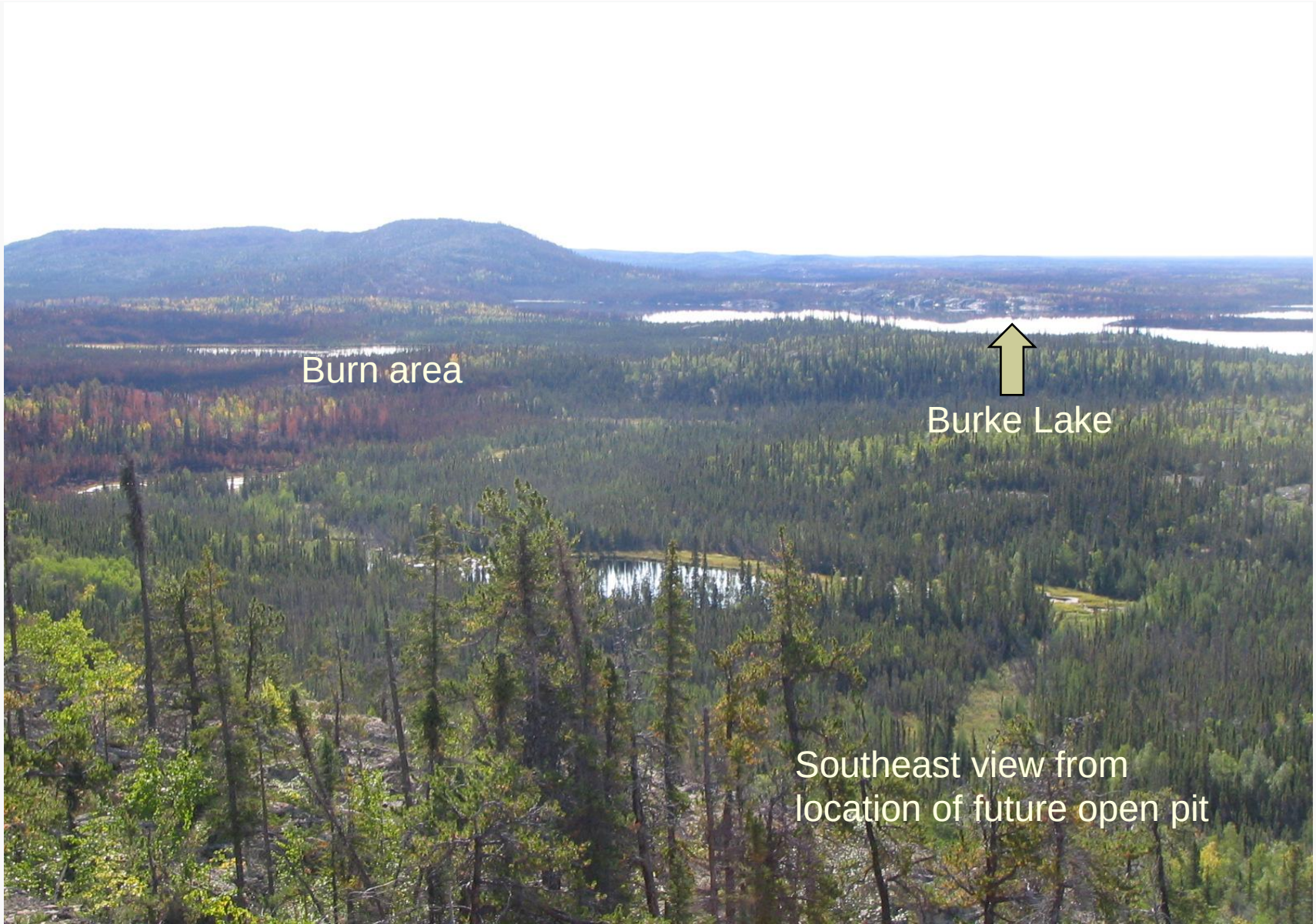
- Screening level environmental impact assessment provided in application package
- Many of the potential impacts of the mine can be assessed and mitigated through existing methods
- NICO project has many unique features not seen in previous environmental assessments
- This presentation will focus on the key features of this project that should be considered during the environmental assessment process

1998-2009 ENVIRONMENTAL STUDIES

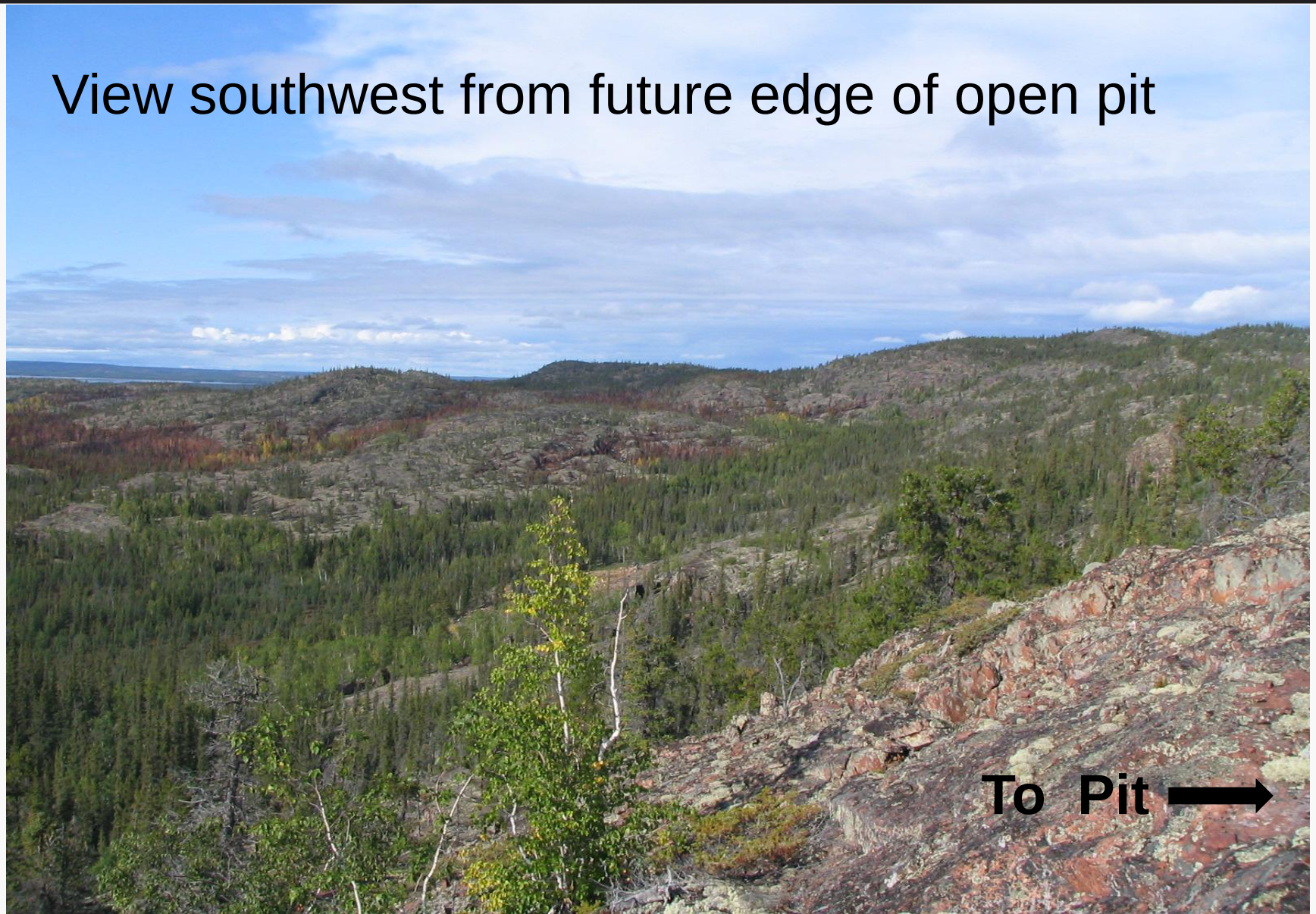
- Environmental baseline studies have been conducted in the region of the mine & along the proposed access road corridor including:
- Fish & fish habitat
- Wildlife biology
- Water quality
- Sediment quality & aquatic insects
- Soils & vegetation mapping
- Groundwater & rock geochemistry
- Hydrology & wetlands assessments
- Meteorology & air quality
- Noise
- Archaeology
- Community consultation

TERRAIN

- NICO site is located in hilly terrain that has influenced mine design
- The tailings and mine rock management located in a natural valley
- Open pit is located on top of large hill which limits amount of ground water
- Terrain features will influence how air circulates around the mine


Burn area
Burke Lake
Southeast view from
location of future open pit

View southwest from future edge of open pit



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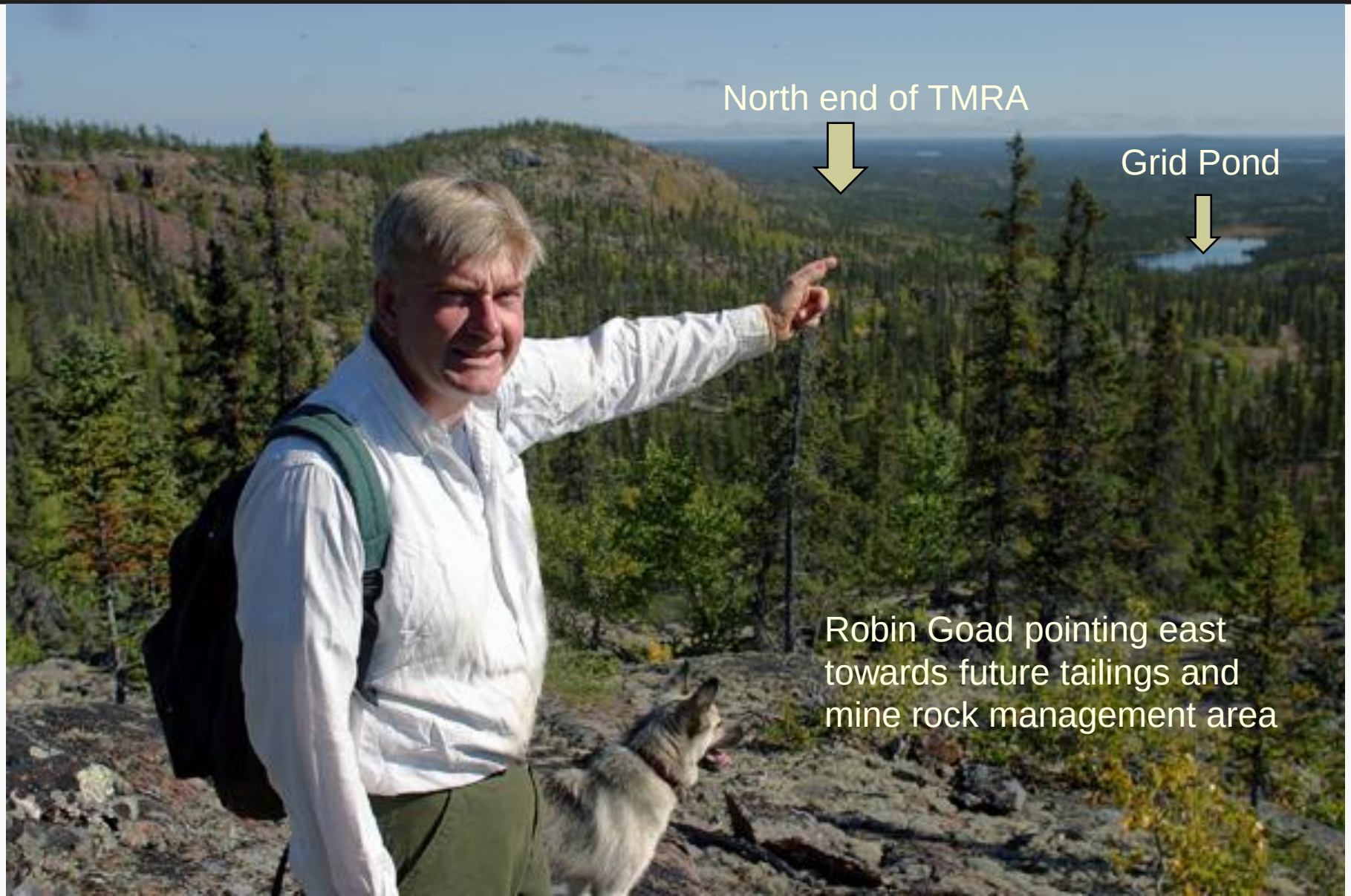

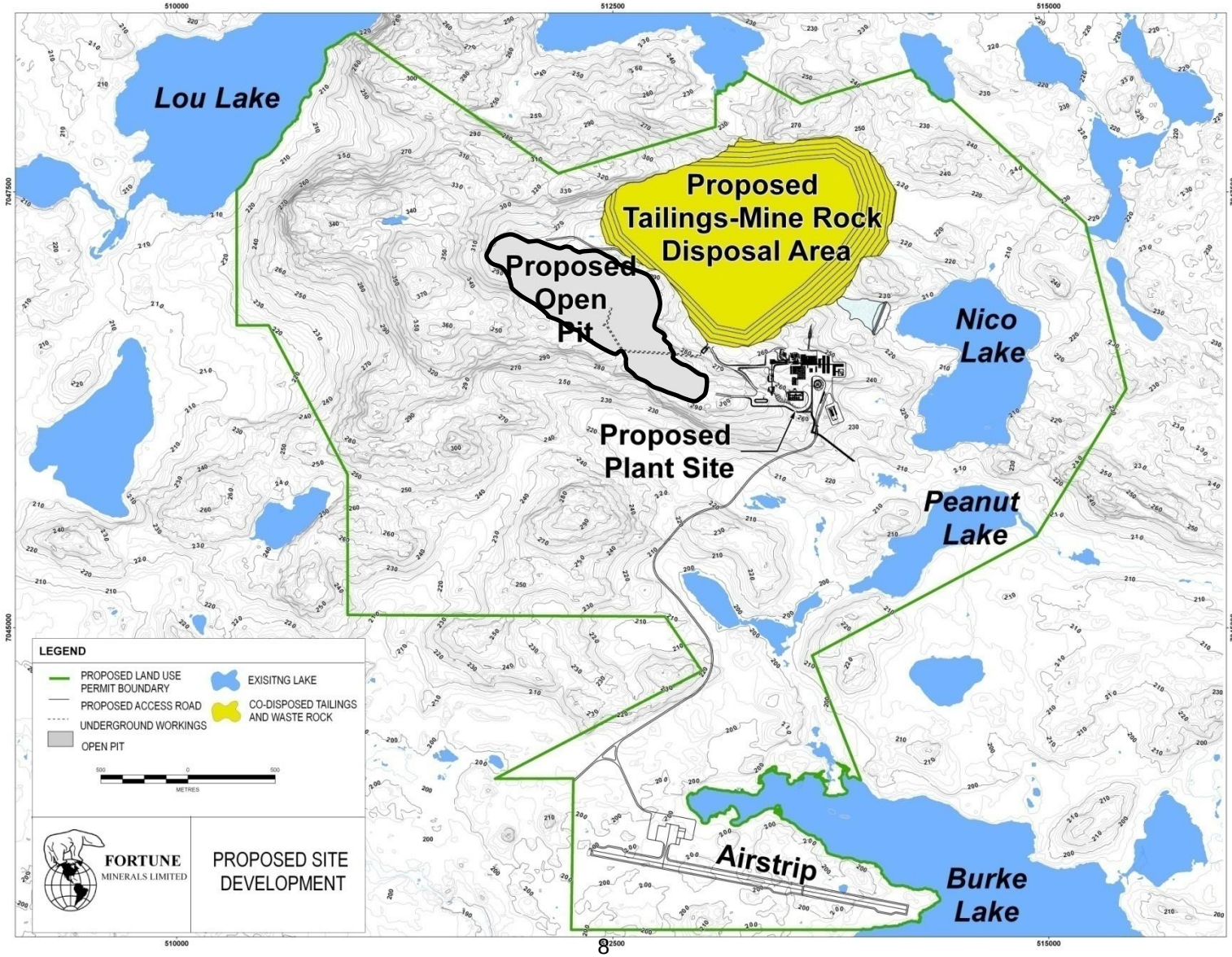
Lou Lake
Proposed Tailings-Mine Rock Disposal Area
Proposed Open Pit
Nico Lake
Proposed Plant Site
Peanut Lake
Airstrip
Burke Lake
LEGEND
PROPOSED LAND USE PERMIT BOUNDARY
PROPOSED ACCESS ROAD
UNDERGROUND WORKINGS
OPEN PIT
EXISITNG LAKE
CO-DISPOSED TAILINGS AND WASTE ROCK
METRES
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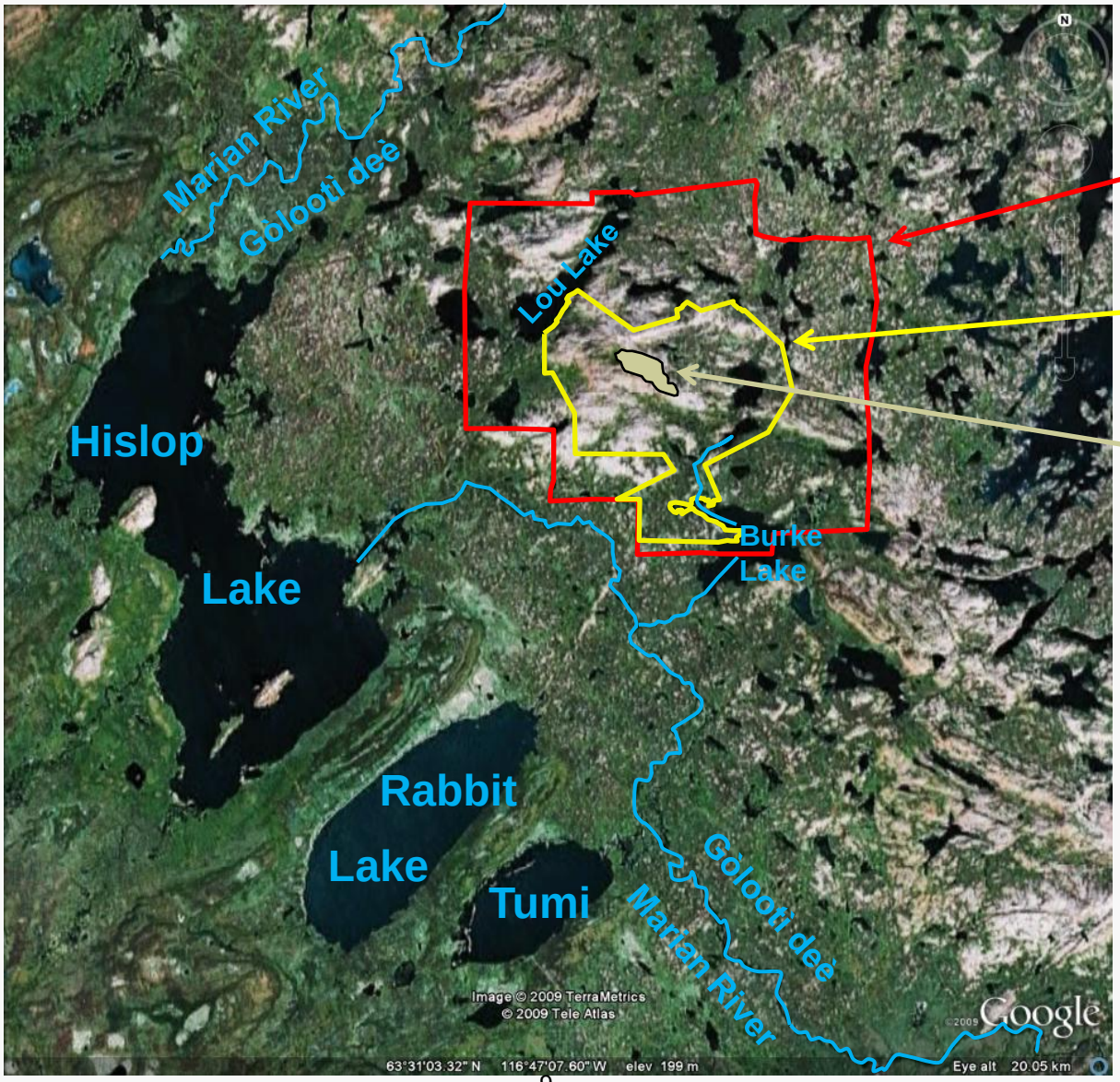
PROPOSED SITE DEVELOPMENT

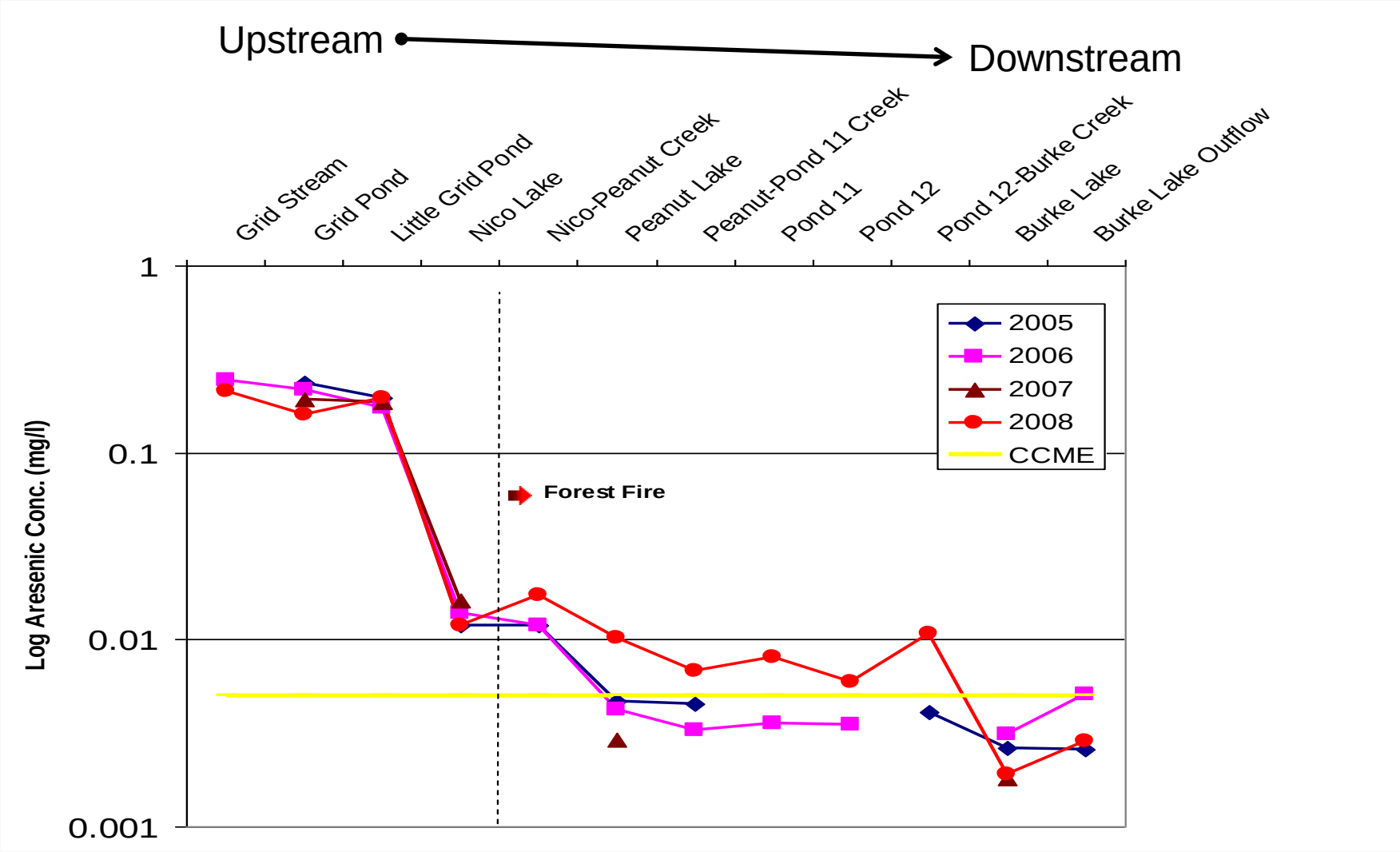


NICO Claim Boundary

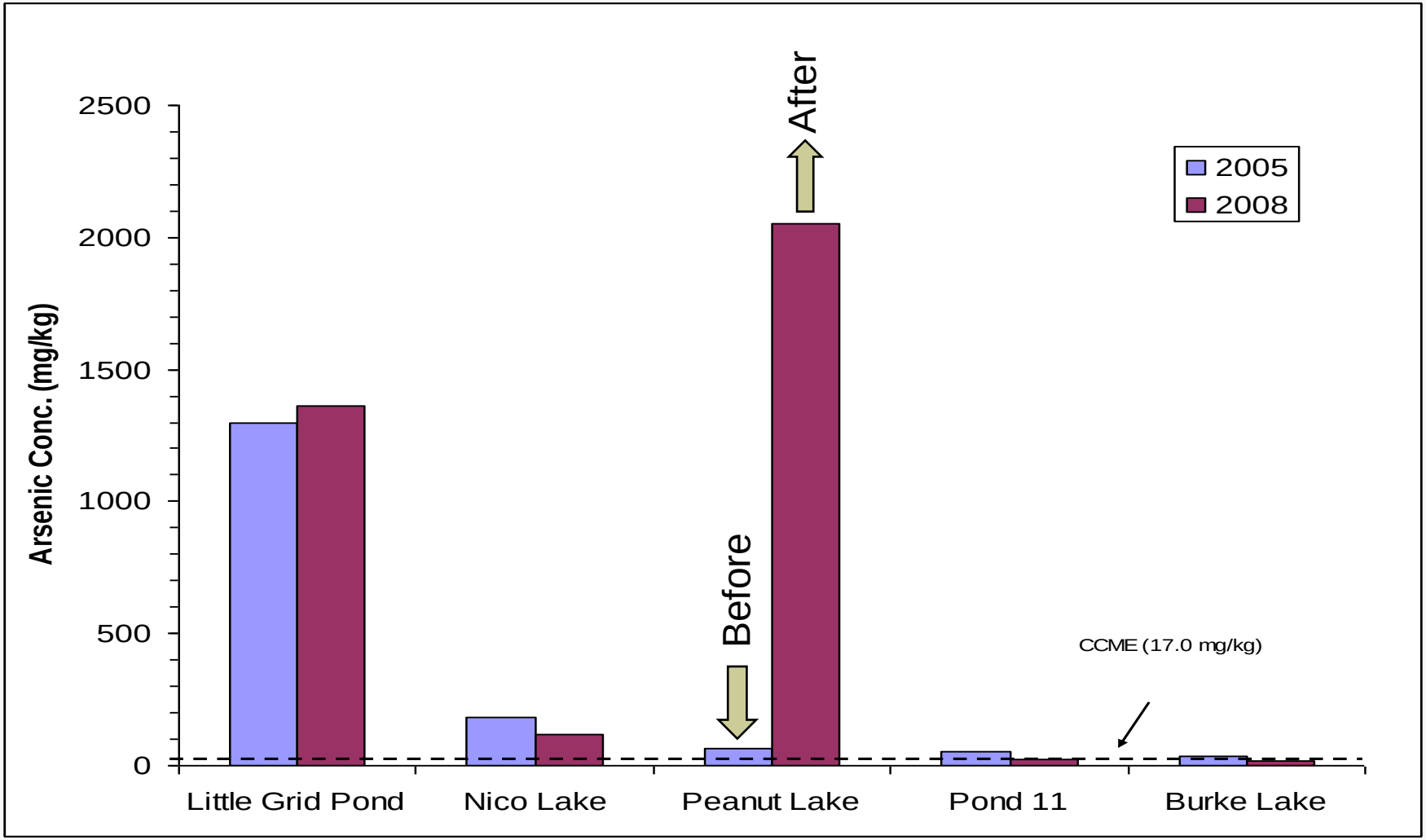
Proposed Lease Area

Proposed Mine Pit

WATER ARSENIC LEVELS IN BURKE LAKE WATERSHED

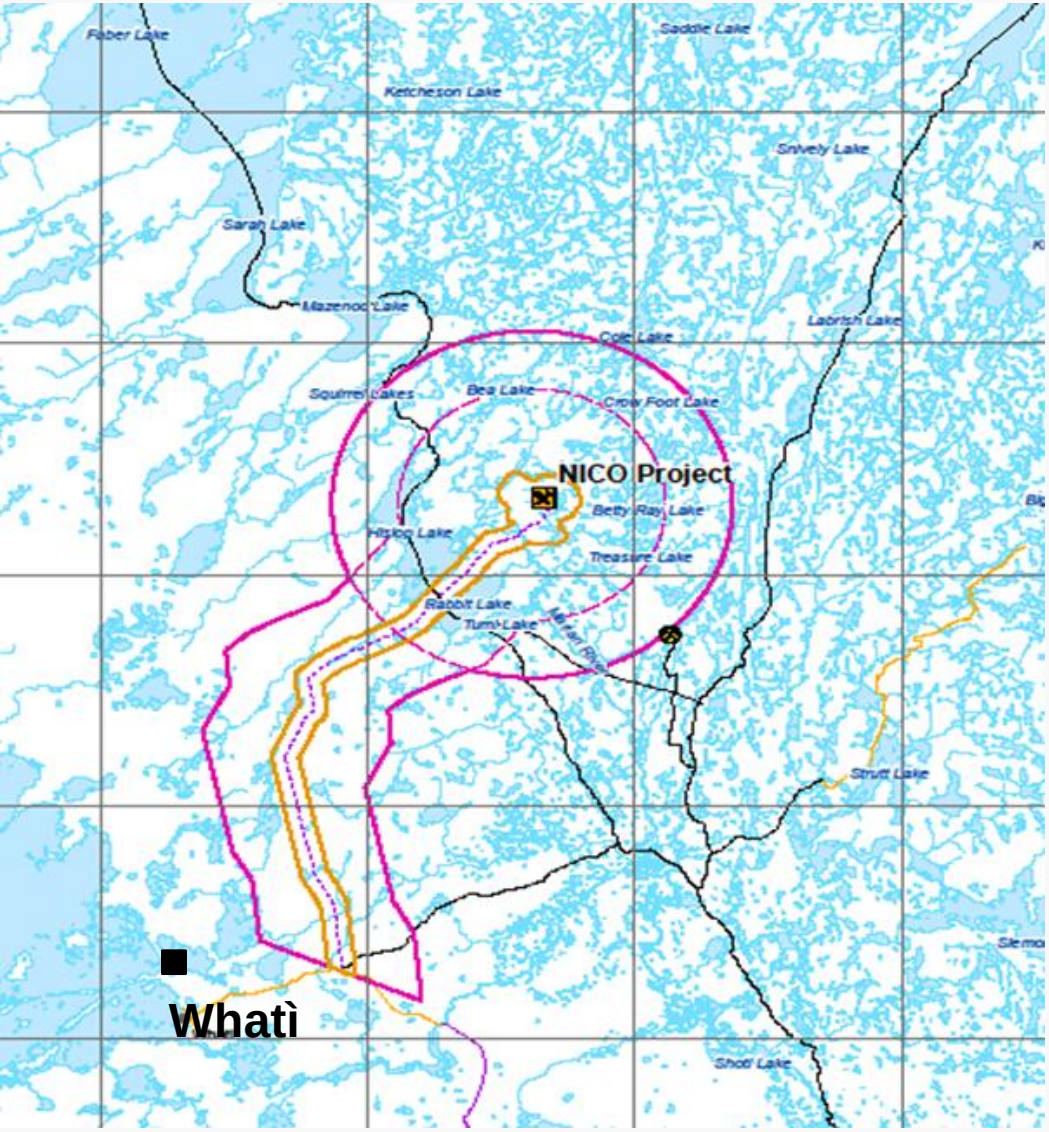


SEDIMENT ARSENIC LEVELS BEFORE/AFTER FOREST FIRE



FISH AND FISH HABITAT

- Only the two Grid Ponds will be filled
- Both have high levels of natural arsenic (~200 µg/L)
- Neither have fish in them
- First lake downstream, Nico Lake, has few small fish
- Oxygen levels in Nico, Peanut & Burke Lakes are low
- Peanut Lake (proposed effluent discharge point) traditionally has had a good pike/lake whitefish community
- Catches of fish dropped after 2008 forest fire
- Fortune found that the fish community in 2009 was again poor



WILDLIFE STUDIES

- Collared caribou data was used with other techniques to monitor caribou movements
- Collared caribou cows from the Bathurst herd were in the study area in two winters & within 50 km in seven years
- Winter track count survey results were similar to the results from collared caribou
- Other species (*e.g.* moose) within study area were typical of the northern boreal forest

CARIBOU

- Caribou habitat models have been not been developed for the winter season.
- Because the NICO Project is within the winter range of the Bathurst herd, Fortune is developing a habitat model for the winter range to predict the cumulative & project effects on caribou.
- Project specific & cumulative effects analyses will be completed on both direct & indirect habitat changes

WILDLIFE-ASSESSMENT CONSIDERATIONS

- Potential impacts include habitat loss, direct mortality & exposure to mine activities and processes
- Approximately 400 hectares of wildlife habitat of varying quality will be lost during operations for the mine site and access roads
- No unique or rare habitats included
- 2008 forest fire will affect habitat quality near the project for a long time
- Effects of road traffic through the movement of staff & materials will be assessed
- Risk assessment for potential wildlife exposure to dust and chemicals is being completed

DEVELOPMENT OF MANAGEMENT PLANS

- Management plans are being developed & will benefit from feedback obtained through the environmental assessment & consultation processes
- Fortune is reviewing management plans from current & past NWT/Nunavut mining operations to determine accepted/anticipated standards
- Fortune will continue to update its plans for mine development as the project proceeds through the environmental assessment & water licensing processes

MANAGEMENT PLANS IN PROGRESS

Fortune is currently developing the following plans:

- Tailings and mine rock management
- Site water & effluent management (includes ammonia)
- Waste management (includes hazardous waste & food)
- Air quality management
- Conceptual closure & reclamation
- Aquatic Effects Monitoring Plan (AEMP)
- Wildlife monitoring plan
- Human resources & consultation plan

WATER USAGE

- The water requirement for the mill will average 13,900 m^3/day of which 7,800 m^3/day will be reused
- This represents an internal recycle rate of approximately 56%
- As a result, the amount of water taken & then released from the lakes would be approximately 6,100 m^3/day
- Discharge will only occur during the open water season (spring, summer & fall ~ 6 months)
- The camp will need approximately 1,100 m^3/day of water
- Drinking water will be drawn from Lou Lake
- Water used in the mill will be from either Lou & Burke Lakes
- The intakes will meet DFO specifications

EFFLUENT TREATMENT FACILITY

- Cyanide (if used) will be destroyed in the process plant prior to discharge to the Tailings/Mine Rock Management Area (TMRA)
- The ETF will add ferric sulphate & lime to the effluent to remove arsenic & other metals, & control pH
- Effluent from the ETF will pass through a polishing pond from which it will discharge into Peanut Lake.
- NICO will process domestic sewage produced from the camp & mine site, discharging the effluent to the TMRA
- Effluent discharge criteria from recent water licenses issued in the NWT & Nunavut are being used for the preliminary design of the ETF

MINE ROCK MANAGEMENT

- Tests show that most mine rock will not generate acid and has low potential to release metals like arsenic and copper
- Tests show that arsenic levels from mine rock runoff may require treatment
- Rock with high metal levels will be put in a safe place and not used for construction materials

MINE ROCK MANAGEMENT

- During the construction phase, 10 Million tonnes of rock will be pre-stripped from the upper portion of the open pit
- Some of this rock, with suitable characteristics, will be used to construct site roads and buildings areas
- A quarry would be used if this rock is not suitable
- Approximately 81 million tonnes of mine rock will be produced during the 15 years of operation
- This rock will be placed in a combined tailings and mine rock management area

TAILINGS & MINE ROCK MANAGEMENT

- The TMRA has the capacity to store the anticipated 22 million tonnes of tailings and 81 million tonnes of mine rock
- Because the concentrate will be shipped out of the site, almost all of the natural arsenic from the processed material will also go off site
- Because the tailings will have low levels of metals, mixing them with the mine rock will help reduce the ability of metals to come off of the mine rock
- Test tailings from the pilot plants are being tested on site to assess the quality of the water that will flows off the tailings
- These results will be used to develop the management plans

Traditional Ecological Knowledge

TEK is an important part of the information needed to understand the potential effects of a project on the environment

The TEK study involves:

- Interview sessions with elders and others about the land, wildlife, vegetation and culturally important sites
- Site visits have been conducted to collect site specific information
- Community will review information collected during the study for validation
- TEK studies are on-going & this information will be considered during the assessment process

SOCIO-ECONOMIC

- A portion of the socio-economic impact assessment will be completed through an interview process including Tłı̨chǫ, North Slave Métis Alliance & Yellowknife Dene representatives
- Road access to the mine will allow for shorter work rotations
- This will decrease potential changes to family life & traditional land use practices

Benefits of the project will include:

- Direct and indirect employment & income for local residents
- Opportunities for local businesses
- Opportunities for increased education & training
- Improved infrastructure & residency in nearby communities (*e.g.* Whatì)

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MASÌ CHO – THANK YOU