

# The Drive Beyond Diamonds

WHATI ROAD COULD  
DELIVER POLYMETALLIC  
NICO MINE AND MORE

By John Curran



The NICO mine would yield cobalt, gold, bismuth and copper should it eventually achieve production. Photo courtesy of Fortune Minerals

There's no denying the importance of the mining sector for the NWT's economy, but at the same time this key industry has become completely dependent on a single commodity in recent times: Diamonds.

Over the years, gold, lead, zinc, silver, tungsten, radium and many other minerals have been mined around the territory, but those days are currently in the rearview mirror. As the recent downturn has shown us, economic dependence on a single item plucked from the ground is never good – even something as lucrative as diamonds. When prices for rough gems dropped a couple of years back and NWT mines were forced to trim operating costs, the territory has been suffering through the miners' belt-tightening ever since. Despite the decline, diamond mining remains the dominant industry in the NWT.

"Resource projects, such as the diamond mines, provide the GNWT with a significant portion of corporate income tax, fuel tax, and property tax revenues and the projects' employees provide payroll tax and personal income tax revenues," said Andrew Livingstone, Senior GNWT Cabinet Communications Advisor. "Over the past three years, diamond mines contributed 41 per cent of the GNWT's corporate income, fuel, property and payroll tax revenue."

With plenty of known mineral deposits of varying types and sizes scattered around the territory you'd think breaking this dependence on diamonds would be simple enough, unfortunately the dearth of infrastructure throughout the NWT makes developing new mines extremely challenging due to exceedingly high costs and logistical barriers.

One proposed highway project on the verge of becoming a reality, however, has the potential to open up a new mining district that would help drive the territorial economy for years to come. If built, the Tłı̄ch̄o All-Season Road (TASR) would be a 97-km two-lane gravel highway running from Behchoko to Whati and it would likely trigger the construction of Fortune Minerals' polymetallic NICO mine, which is located about 50 km east of the proposed route.

## STRONG SUPPORT

"The Tłı̄ch̄o Government and the community of Whati are fully supportive of this project," said Nancy Zimmerman, GNWT Infrastructure Communications Manager. In fact the Tłı̄ch̄o are full partners with the GNWT in the TASR and given the anticipated economic impact it's easy to see why.

The Community Government of Whati's Micro-Economic Analysis of the TASR anticipates 10 new jobs in Whati after construction in order to perform the daily

maintenance and safety requirements on the road. During construction, the Department of Transportation thinks it will take up to 300 employees working in two-week rotations to build the road as well as another 100 during the development of the required 50-km access road linking the NICO mine with the TASR.

Direct employment from the mine once operational would range from 188 to 269 as it works through the open pit and underground stages of mining. Fortune anticipates that indirect and induced employment during the 21-year life of the mine will be 1,335 and 2,026 person years, respectively, and through all stages the company has committed to maximize Tłı̄ch̄o employment in all employment areas.

"Tłı̄ch̄o communities and Tłı̄ch̄o Citizens will see tremendous benefits from the development of key infrastructure in our region," said Tłı̄ch̄o Grand Chief Eddie Erasmus. "Tłı̄ch̄o people are ready to be a part of the construction of this project, and the realization of its benefits."

The NICO project is also expected to generate approximately \$40 million in government royalties while additionally providing contract opportunities worth roughly \$650 million over the life of mine.

The road will replace the southern section of the existing winter road providing uninterrupted access to Whati and increasing the window of access to Gameti and Wekweeti, explained Zimmerman.

"This is particularly important as warmer winters caused by climate change have increased challenges for constructing building and operating winter roads in the region in recent years," she said. "Resulting reductions in the cost of freight will improve the standard of life in these communities by making it more affordable to deliver a diverse range of essential goods, from food and fuel to building materials for houses and construction projects."

An all-weather access road will also help attract further interest from resource explorers in the region and provide increased access for other business opportunities, such as those in the tourism sector, she added.

The construction of the road is being proposed as a Public-Private Partnership (P3) with the federal government already pledging to contribute 25 per cent of the route's anticipated \$150 million price tag through the P3 Canada Fund. The procurement process has already seen the co-proponents issue a Request for Qualifications for potential private partners interested in handling the construction and operations, which closed in early June. The actual Request of Proposals was expected to come out as ABQ

was going to press. The TASR is currently in the Environmental Assessment process with the Mackenzie Valley Environmental Impact Review Board estimating it will take roughly 7.5 months – not including any time required by the developer to respond to requests and questions – to arrive at a decision.

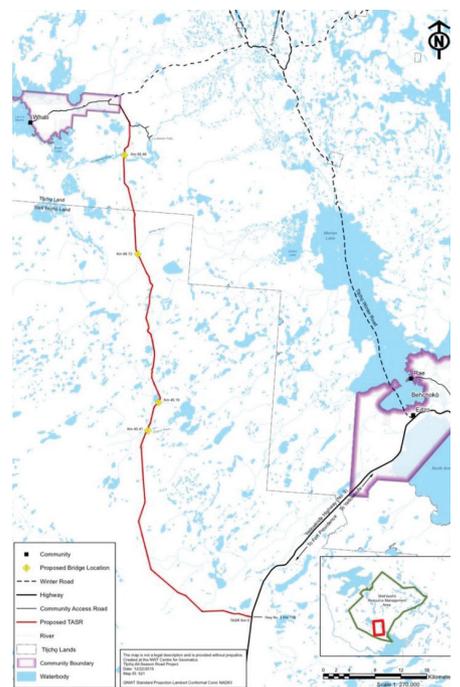
## PROPOSED MINE ALREADY APPROVED

The NICO mine was approved through its own Environmental Assessment in fiscal year 2012-13 and now strong gold prices and the surging cobalt market have it well positioned to become a reality if the road advances.

"The TASR is a critical enabler for Fortune Minerals' NICO mine operations and will allow the company to truck metal concentrates south to the rail head at Hay River for railway delivery to its proposed refinery in Saskatchewan for downstream processing to value added products," said Troy Nazarewicz, Investor Relations Manager for Fortune Minerals.

Of course it'll take money to build the mine, about \$600 million to be precise. Fortune recently engaged PricewaterhouseCoopers Corporate Finance to help secure financing for construction of the NICO Project.

"Fortune plans to secure these funds through a combination of strategic partnerships, conventional and supplier debt,



The proposed route of the Tłı̄ch̄o All-Season Road includes just four bridges and one large culvert. Map courtesy of the Tłı̄ch̄o Government



product off-take and/or forward sales of a portion of the contained gold,” he said.

The company is also in the process of updating the capital and operating costs for the development with a refreshed feasibility study report and has engaged Hatch Ltd. and Micon International Ltd. to assist with this critical task.

With development of the NICO project, Fortune would become an important supplier of cobalt chemicals needed to manufacture lithium-ion batteries used in portable electronic devices, electric vehicles and stationary storage cells.

“The next phase of battery commercialization is underway with transformative evolution of the automobile from internal combustion engines to electric drivetrains,” he said. “Significant demand is also projected to come from stationary cells used to store electricity from intermittent wind and solar generators and off-peak charging from the electrical grid.”

Recently, Southern California Edison opened the world’s largest lithium-ion energy storage facility (80 MW) at the Mira Loma Substation to reduce its reliance on natural gas. At least 15 battery mega-factories have also either been announced or are under construction to meet the expected increase in demand, including the US\$5 billion Tesla Gigafactory in Nevada that recently commenced production. By 2018, the Gigafactory is expected to produce 35 GWh per year of lithium-ion battery cells, nearly as much as the rest of the entire world’s combined production.

As demand skyrockets, the future supply of cobalt is also at risk due to various factors, including geographic concentration of supply. The Democratic Republic of the Congo is responsible for more than 60 per cent of cobalt mine supply and is a politically unstable country. China controls more than 52 per cent of cobalt refinery production and 85 per cent of refined cobalt chemical supply.

“Ethical sourcing of raw materials has become an issue for the electronics industry because of the use of child labour in some Congolese artisanal mines and concerns about metals being used to finance conflicts under U.S. Dodd-Frank and European Ethical Sourcing legislation,” said Nazarewicz, adding that Fortune’s NICO deposit also contains 12 per cent of known global bismuth reserves. “Bismuth is also a critical metal that has supply chain concerns from its dominant Chinese production – about 80 per cent of refined supply – and consumption is growing for its unique physical properties and as an environmentally friendly and non-toxic replacement for lead.” **ABQ**



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