

Fortune Minerals Provides Nico Project Technical Report Update

06.06.2019 | [CNW](#)

Four development scenarios being assessed with a new mine plan and expanded mill throughput rate and improvements to the cobalt and bismuth downstream process

Issued Capital: 347,303,220

LONDON, June 6, 2019 - [Fortune Minerals Ltd.](#) (TSX: FT) (OTCQX: FTMDF) ("Fortune" or the "Company") (www.fortuneminerals.com) is pleased to provide a progress report on the study nearing completion by Hatch Ltd. ("Hatch"), P&E Mining Consultants Inc. ("P&E") and Micon International Limited ("Micon") updating the 2014 National Instrument 43-101 Technical Report on the NICO Project Feasibility Study ("Technical Report"). The updated Technical Report is assessing the economics of four different development scenarios for the Company's 100% owned NICO Cobalt-Gold-Bismuth-Copper Project ("NICO Project"), including a vertically integrated project with a refinery in southern Canada as originally contemplated as well as lower capital cost options that involve selling gold and concentrates from the mine site in the Northwest Territories. The study will be based on current capital and operating costs and currency exchange rates at a 30% expanded throughput rate of 6,000 tonnes of ore processed in the mill per day and longer term commodity prices reflecting metal market dynamics. Hatch has also completed value improvement studies for a number of unit operations that are being engineered for inclusion in the updated Technical Report. In particular, changes to the cobalt and bismuth downstream process, together with the higher throughput rate, will help mitigate increases in capital costs from escalation and reduce commissioning and operational risks. They will also result in the production of a superior cobalt sulphate product to the one produced in Fortune's earlier pilot plants.

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Cobalt Market:

The NICO deposit is a Canadian primary cobalt deposit, which also contains more than one million ounces of gold and approximately 12% of global bismuth in the current Mineral Reserves (see Fortune news release, dated April 2, 2014). It is one of the few advanced projects in the world to support near-term accelerating demand for cobalt in new technologies. Cobalt is an essential ingredient in most lithium-ion batteries used to power portable electronic devices, transformative automotive electrification, and to store energy from renewable sources and off-peak charging to make electricity use more efficient. As a Canadian vertically integrated development, the NICO Project will also reduce the risks of geographic concentration of supply in the politically unstable Democratic Republic of the Congo (73% of 2018 mine production), and similar to the policy risks associated with rare earth metals, China's dominance of refined cobalt products (64% of 2018 refinery production and 85% of cobalt chemicals). Bismuth is an eco-metal used primarily in the automotive and pharmaceutical industries and has growing demand as a non-toxic and environmentally safe replacement for lead.

Development Scenario Options:

Fortune has executed Confidentiality Agreements with more than 45 companies interested in participating in the development of the NICO Project and/or securing a reliable Canadian and ethical supply of cobalt. These companies are from diverse business sectors and have different objectives with respect to the types of products they require and their expectations for financial return versus supply chain transparency and security of supply for raw material procurement. Fortune is assessing the following different development scenarios for the Technical Report to support project finance and strategic partnership negotiations:

Scenario 1)

Produce cobalt and bismuth concentrates at the mine site and ship these to the Company's proposed refinery in southern Canada for downstream processing to gold doré, cobalt sulphate, bismuth ingot and copper cement

Scenario 2)

Only the mine site facilities are constructed with cobalt and bismuth concentrates produced in the concentrator and gold recovered by cyanide leaching of the concentrates to produce gold doré, and cobalt and bismuth concentrates, then sold to third party processors.

Scenario 3)

Gold doré and cobalt and bismuth concentrates are produced at the mine site with gold and bismuth concentrate sold to third party processors and the cobalt concentrate shipped to a lower capital cost refinery in southern Canada for processing to cobalt sulphate.

Scenario 4)

Cobalt and bismuth concentrates are produced at the mine site and shipped to the refinery in southern Canada for downstream processing to gold doré, a cobalt carbonate intermediate product, bismuth ingot and copper cement.

In order to provide the Company with the flexibility to pursue Scenarios 2) and 3), and/or if construction of the downstream refinery in southern Canada is deferred, gold would need to be recovered from the cobalt and bismuth concentrates at the mine site instead of from the combined autoclave leach residue at the refinery. Additional test work was completed over the past few months in Lakefield, Ontario at SGS Canada Ltd. ("SGS Lakefield"), which confirmed that good recoveries for gold can be achieved from a combination of gravity and flotation concentration and subsequent cyanide leaching of each of the cobalt and bismuth concentrates (see Fortune news release, dated May 3, 2019).

Cobalt Process Improvements:

Hatch conducted a value improvement assessment of the cobalt process that was previously contemplated in the 2014 Micon Feasibility Study (see Fortune news release, dated April 2, 2014) and 2012 Front End Engineering and Design ("FEED") study by Aker Solutions Canada Inc. (now Jacobs Minerals Canada Inc.) (See Fortune news release, dated July 2, 2012). A number of improvements were identified that could reduce the capital cost of the refinery by up to \$200 million. These are being incorporated into the updated Technical Report and will mitigate some of the increase in capital costs that have resulted from escalation, other improvements and the increase in throughput rate.

A summary of the improvements in the cobalt process includes:

- 1) increasing the temperature and pressure in the autoclave to 215 °C and 2,795 kPa, respectively, to reduce downstream process equipment;
- 2) Recirculation of autoclave leach liquor and higher metal ion concentrations to reduce equipment sizes;
- 3) Test work was also conducted at SGS Lakefield to validate the re-design of the copper cementation circuit and recycling of bleed streams to mitigate cobalt recovery losses;
- 4) Sequential neutralization of the autoclave discharge will now also remove manganese in addition to iron and arsenic, eliminating a previously contemplated manganese removal step;
- 5) Addition of cobalt carbonate precipitation and dissolution (previously piloted by Fortune) and ion exchange purification circuits replacing solvent extraction to improve cobalt purity and reduce costs;
- 6) As a lower capital cost option, the process can terminate with the production of a cobalt carbonate intermediate product for sale; and
- 7) Cobalt sulphate is otherwise then crystallized as before.

In addition to mitigating increases in capital costs, the value improvements by Hatch are expected to produce

a superior cobalt sulphate product from that produced in earlier pilot plant tests at SGS Lakefield. The changes also enable Fortune to produce a cobalt carbonate intermediate product if a phased development for the refinery has strategic or economic advantage. The Hatch Metsim modelled product specifications for both cobalt sulphate and carbonate are shown below.

Hatch Metsim Modelled Product Specifications

Element	Cobalt Sulphate Heptahydrate (dry)	Cobalt Carbonate (dry)
Cobalt	20.94%	49.12 %
Bismuth		0 ppm
Silicon	0 ppm	2 ppm
Sodium	8 ppm	344 ppm
Potassium	0 ppm	0 ppm
Calcium	2 ppm	535 ppm
Magnesium	2 ppm	141 ppm
Iron	0.4 ppm	99 ppm
Aluminum	0.1 ppm	8 ppm
Manganese	0.5 ppm	31 ppm
Nickel	7 ppm	2354 ppm
Copper	0 ppm	38 ppm
Zinc	0.3 ppm	23 ppm
Arsenic	0 ppm	1 ppm
Cadmium	0.4 ppm	0 ppm
Lead	0.3 ppm	1 ppm
Chlorine	0.2 ppm	20 ppm
Sulphur		582 ppm

Bismuth Process Improvements:

Hatch has also made improvements to the bismuth process flow sheet from the 2014 Micon Feasibility Study and 2012 FEED study that are expected to reduce process and commissioning risks. Bismuth concentrate would be subjected to ferric chloride leach as previously contemplated. However, instead of counter current electro-winning of an impure cathode, a bismuth oxychloride is precipitated, which is then smelted in a rotary furnace to pour 99.995% (4N) bismuth ingots.

Other Project Improvements:

The updated Technical Report will be based only on open pit mining. A production scale underground ramp and two mining levels have already been developed for potential underground mining of gold-rich deeper

ores in the deposit. However, selective underground mining will only be pursued as an opportunity option if conditions warrant. Other changes to the mine plan and schedule include a grade control and stockpiling strategy to optimize the mining sequence and defer the processing of lower grade ores (see Fortune News Release, dated March 27, 2018).

An airstrip has now been included in the mine site facilities to enable construction from the existing winter ice road and allow the project schedule to be aligned with the availability of the Tlicho Road that will allow year-round access to the NICO Project. Construction of the Tlicho Road is expected to commence later this year for completion in 2022. This road is being developed under a P3 financing, construction and operation structure between the Northwest Territories government and North Star Infrastructure GP, a syndicate including the Tlicho Government, Kiewit Canada Development Corp., Hatch Corporation and Thurber Engineering Ltd. (see Fortune news release, dated February 14, 2019). The federal government is contributing 25% of the construction costs. Mine site power supply and heat will be supplied by liquid natural gas ("LNG") generators. LNG is a lower cost fuel than diesel and will also reduce the carbon foot print for the mine. While the NICO mine site is located only 25 km from the Snare Hydro complex, an expansion would be required to supply all of the power demands of the mine site.

The bulk concentrate regrind and secondary flotation circuits that separate bismuth and cobalt from the bulk rougher concentrate have also been moved from the refinery to the mine site in order to enable the sale of concentrates as a development option.

The NICO Project is a development stage asset consisting of a planned mine, mill and concentrator in the Northwest Territories and an option for the construction of a cyanide leach and Merrill-Crowe facility to recover gold as doré at the mine site. The vertically integrated base case development scenario contemplates a hydrometallurgical refinery in southern Canada to process concentrates from the mine to value added products. Fortune has an option to purchase lands in Saskatchewan for this refinery and is also evaluating other greenfield and brownfield sites to build this facility to accelerate development.

The updated Technical Report is nearing completion with the aforementioned refinements and optimizations. Fortune and its consultants are currently finalizing capital and operating cost estimates for inclusion in the report and financial model. The engineering for the Technical Report is otherwise essentially complete subject to minor refinements. The Company is also updating its electronic data room to enable companies under confidentiality agreement to evaluate the new process changes and developments, operational and product optionality, and current and future economic potential in a market of accelerating cobalt demand and supply chain concerns.

The disclosure of scientific and technical information contained in this news release has been approved by Sam Roshdi, M.A.Sc., P.Eng., Process Engineer at Hatch, and Robin Goad, M.Sc., P.Geo., President and Chief Executive Officer of Fortune, who are "Qualified Persons" under National Instrument 43-101. The Technical Report on the Feasibility Study referred to above, entitled "Technical Report on the Feasibility Study for the NICO-Gold-Cobalt-Bismuth-Copper Project, Northwest Territories, Canada", dated April 2, 2014 and prepared by Micon, from which certain information in this press release has been extracted, has been filed on SEDAR and is available under the Company's profile at www.sedar.com.

About Fortune Minerals

Fortune is a Canadian mining company focused on developing the NICO Cobalt-Gold-Bismuth-Copper Project in the Northwest Territories. The Company has an option to purchase lands in Saskatchewan where it may build the hydrometallurgical plant to process NICO metal concentrates. Fortune owns the Sue-Dianne Copper-Silver-Gold Deposit located 25 km north of the NICO Project, which is a potential future source of incremental mill feed to extend the life of the NICO Project mill.

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This press release contains forward-looking information and forward-looking statements within the meaning of applicable securities legislation. This forward-looking information includes statements with respect to, among other things, the Company's plans to develop the NICO Project and build a hydrometallurgical refinery, the preparation of an updated technical report for the NICO Project and the construction of the Tlichó Road. Forward-looking information is based on the opinions and estimates of management as well as certain assumptions at the date the information is given (including, in respect of the forward-looking information contained in this press release, assumptions regarding: the Company's ability to arrange the necessary financing to continue operations and develop the NICO Project; the receipt of all necessary regulatory approvals for the construction and operation of the NICO Project and the related hydrometallurgical refinery and the timing thereof; the timing of the updated technical report for the NICO Project and the results thereof; the timing of completion of the Tlichó Road; growth in the demand for cobalt; the time required to construct the NICO Project; and the economic environment in which the Company will operate in the future, including the price of gold, cobalt and other by-product metals, anticipated costs and the volumes of metals to be produced at the NICO Project). However, such forward-looking information is subject to a variety of risks and uncertainties and other factors that could cause actual events or results to differ materially from those projected in the forward-looking information. These factors include the risks that the Company may not be able to finance and develop NICO on favourable terms or at all, uncertainties with respect to the receipt of timing of required permits, approvals and agreements for the development of the NICO Project, including the related hydrometallurgical refinery, the construction of the NICO Project may take longer than anticipated, the Company may not be able to secure offtake agreements for the metals to be produced at the NICO Project, the updated technical report for the NICO Project may take longer than anticipated and the results thereof may not be as positive as anticipated, the Tlichó Road may not be completed in the anticipated time frame or at all, the inherent risks involved in the exploration and development of mineral properties and in the mining industry in general; the market for rechargeable batteries and the use of stationary storage cells may not grow to the extent anticipated; the future supply of cobalt may not be as limited as anticipated; the risk of decreases in the market prices of cobalt and other metals to be produced by the NICO Project; discrepancies between actual and estimated Mineral Resources or between actual and estimated metallurgical recoveries, uncertainties associated with estimating Mineral Resources Ltd. and reserves and the risk that even if such resources prove accurate the risk that such resources may not be converted into mineral reserves once economic conditions are applied. Such resources may not be converted into mineral reserves once economic conditions are applied. The Company's production of cobalt and other metals may be less than anticipated and other operational and development risks, market risks and regulatory risks. Readers are cautioned to not place undue reliance on forward-looking information because it is possible that predictions, forecasts, projections and other forms of forward-looking information will not be achieved by the Company. The forward-looking information contained herein is made as of the date hereof and the Company assumes no responsibility to update or revise it to reflect new events or circumstances, except as required by law.

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