Cobalt demand accelerating in batteries for automotive electrification and stationary storage

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LONDON, ON, April 25, 2017 /CNW/ - Fortune Minerals Ltd. (TSX: FT) (OTCQX: FTMDF) ("Fortune" or the "Company") (www.fortuneminerals.com) announces that Hatch Ltd. ("Hatch") and Micon International Limited ("Micon") have been engaged to update the Feasibility Study for the NICO Cobalt-Gold-Bismuth-Copper Project. Hatch has also been retained to conduct additional engineering work. The vertically integrated NICO Project consists of a planned mine and concentrator in the Northwest Territories and refinery near Saskatoon where concentrates from the mine will be processed to battery grade cobalt sulphate, gold, bismuth metal and oxide, and copper. NICO has already been assessed in a positive Feasibility Study in 2014 but requires an update to reflect current costs, commodity prices and currency exchange rates to support efforts to arrange project financing in progress. The Feasibility Study update is expected to be completed in early summer. Fortune is working with PricewaterhouseCoopers Corporate Finance Inc. ("PwC") to arrange the project financing.

NICO is a primary cobalt deposit with more than 50% of projected revenues at current commodity prices coming from cobalt, now quoted at more than US$26 per pound for metal cathodes. The cobalt market has transitioned into a supply deficit and demand is accelerating primarily due to consumption in lithium-ion batteries used in portable electronic devices, electric vehicles ("EV's") and stationary storage cells used to store energy from the electrical grid. The NICO deposit co-products include more than 1.1 million ounces of gold as well as 12% of global bismuth reserves.

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Robin Goad, President and CEO of Fortune, commented, "We are pleased to be working again with both Hatch and Micon as we advance towards arranging project financing for our NICO development and prepare for construction. NICO is positioned to become a unique North American vertically integrated producer of cobalt chemicals for the lithium-ion battery industry with a highly liquid gold co-product."

Glen Koropchuk, Director of Fortune and former COO of De Beers Canada Inc., said, Hatch was the primary Engineering Procurement Construction partner for De Beers' recently commissioned Gahcho Kué diamond mine in the Northwest Territories. With considerable Arctic construction and logistics experience, Hatch is eminently suitable to assist the Fortune team in updating the NICO Feasibility Study and completing detailed engineering to support project financing."

The 2014 Feasibility Study for the NICO Project was prepared by Micon based on a previous financing proposal from China CAMC Engineering Co., Ltd. and Procon Group, and comprehensive Front-End Engineering and Design ("FEED") studies by Jacobs Engineering and other consultants. Following completion of the 2014 Feasibility Study, Hatch reviewed FEED and optimized the layout for the NICO concentrator and related facilities. Hatch also completed a Procurement Study for the Saskatchewan refinery that identified potential material savings for some equipment purchases. Hatch will apply similar strategies to identify opportunities for capital cost savings for the NICO concentrator and related facilities in the Feasibility Study update. Hatch has also been contracted to complete the engineering for the cobalt sulphate circuit based on the flowsheet identified by SGS Lakefield Research Ltd. in a pilot plant completed in 2012. Micon will be responsible for reviewing the Mineral Resources and Reserves for the NICO deposit, mining methods and schedules, and will lead the drafting of the Feasibility Study technical report.

Cobalt Market

The cobalt market has had a 20-year compounded annual growth rate ("CAGR") of approximately 6% and is now greater than 100,000 metric tonnes per annum. Growth has been primarily due to the demand for cobalt in high performance rechargeable batteries which now accounts for more than 50% of consumption, up from 1% of a smaller market in the mid 1990's. Cobalt delivers superior energy density for power, performance and charge life in lithium-ion batteries and is therefore a key ingredient in most cathode chemistries, including Lithium-Cobalt Oxide ("LCO"), Nickel-Cobalt-Aluminum ("NCA") and Nickel-Manganese-Cobalt ("NMC"). Cobalt is also used in superalloys for aerospace applications, high strength alloys for cutting tools, cemented carbides, permanent magnets and surgical implants, pigments, catalysts, and additives in agricultural products.

The cobalt market has transitioned into a supply deficit that is expected to continue as demand growth continues to outpace supply. Darton Commodities Limited is forecasting an approximately 11% CAGR of battery demand for cobalt to 2022 - noting the impact of transformative automotive electrification. And whereas a typical smart phone battery contains between 5 and 20 grams of cobalt, EV batteries usually contain between 4,000 and 14,000 grams. Additionally, Tesla's Gigafactory in Nevada started commercial production earlier this year and will require more than 7000 tonnes of cobalt per annum when it reaches full production in 2018. Notably, more than 15 battery mega-factories have either been announced or are under construction globally to meet the future demand for EV's and stationary storage cells.

The future supply of cobalt is at risk due to geographic concentration of supply and the predominance of production as a by-product of either copper or nickel mining (98% of non-artisanal cobalt mine supply). In order to meet the forecast future cobalt demand, current copper-cobalt and nickel-cobalt mines would need to more than triple their production and effectively

cannibalize the markets for their primary metals. The Democratic Republic of the Congo ("Congo") is responsible for more than 60% of current cobalt mine supply and is a politically unstable country. There has never been a regime change in the Congo without violence or civil war and political tensions were recently exacerbated when President Joseph Kabila defied the Constitution by refusing to cede power in 2016. China controls 52% of cobalt refinery production and 84% of refined cobalt chemical supply following China Molybdenum's purchase of the controlling interest in the Tenke-Fungurume Copper-Cobalt Mine. Near surface oxide deposits in the Congo are also transitioning into deeper sulphide ores that require more expensive downstream processing to recover the cobalt. 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 Union Ethical Sourcing legislation. Some analysts project these issues leading to a premium being paid for non-Congolese cobalt production.

About NICO

NICO is a planned Canadian, vertically integrated, primary producer of cobalt with supply chain transparency and uninterrupted custody of metal from ore through to the production of battery chemicals. The gold contained in the NICO deposit is also a highly liquid co-product whose price is commonly countercyclical to cobalt and bismuth prices. NICO also contains approximately 12% of global bismuth reserves, a critical metal used in the automotive and pharmaceutical industries and with consumption growing as an environmentally friendly and non-toxic replacement for lead. Bismuth also has supply chain concerns from dominant Chinese production.

NICO has Proven and Probable Mineral Reserves totaling more than 33 million tonnes containing 82 million pounds (37,205 mT) of cobalt, 1.11 million ounces of gold, 102 million pounds (46,279 mT) of bismuth and 27 million pounds (12,250 mT) of copper that will support a 21-year mine life at the planned 4,650 tonnes per day mill throughput rate (see News Release, dated April 2, 2014). NICO will be mined primarily by conventional truck and shovel open pit mining methods. Approximately one third of the mill feed during the first two years of operations will also be mined using underground blasthole open stoping methods in order to process higher margin, gold-rich ores from deeper in the deposit and improve project economics in early years of the mine life. Notably, most of the preproduction underground development work has already been established from previous test mining operations.

Ores will be processed in the mill using simple flotation to produce 180 tonnes per day of concentrate containing the recoverable metals. This concentrate will be filtered, bagged and trucked to the rail head at Hay River for railway delivery to the Company's planned refinery straddling the Canadian National Railway near Saskatoon. The refinery will recover metals from concentrate using a combination of secondary flotation, followed by pressure and atmospheric acid leaching, electro-winning and precipitation of value-add metals and chemicals. Life of mine average annual production is projected to be 1,615 tonnes of cobalt contained in a battery grade cobalt sulphate, 41,300 ounces of gold, 1,750 tonnes of bismuth contained in ingots, needles and bismuth oxide, and a copper precipitate. Fortune has already received Environmental Assessment approvals for the mine and concentrator in the Northwest Territories and refinery in Saskatchewan, and the major mine permits.

The previous Feasibility Study for NICO determined capital costs for the development of C$589 million excluding working capital and demonstrated an attractive rate of return at base case commodity price assumptions. The Feasibility Study is being updated to determine capital and operating costs for the development at current costs, commodity prices, and currency exchange rates.

NICO Project Finance Update

Fortune is working with PwC to arrange project financing for NICO's construction (see Fortune's January 18, 2017 News Release). The current and forecast demand and price for cobalt, together with the recent announcement of government funding for a public all-weather road to the nearby community of Whati, are critical enablers for successful mine operations. The Company intends to secure the capital for development through a combination of strategic partnerships, conventional and supplier debt, product off-take and/or forward sales of a portion of the contained gold.

The disclosure of scientific and technical information contained in this news release has been approved by Robin Goad, M.Sc., P.Geo., President and Chief Executive Officer of Fortune, who is a "Qualified Person" 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 Hatch

Hatch has over six decades of business and technical experience in the mining, energy, and infrastructure sectors. The firm has 9,000 staff with experience in over 150 countries and is well known for the design and construction of mineral beneficiation process plants and supporting infrastructure, including projects in remote and cold climate regions and Arctic regions of Canada.

About Micon

Micon is a mining consultancy providing independent professional advice to mining companies and their providers of capital, law firms and government agencies. Staffed by senior mineral industry consultants with extensive international experience in the fields of geology, mining engineering, metallurgy, processing, environmental management, market analysis and mineral economics.

About Fortune Minerals

Fortune is a Canadian development stage mining company focused on advancing the vertically integrated NICO cobalt-gold-bismuth-copper project in the Northwest Territories and a related refinery the Company plans to construct in Saskatchewan. Fortune also owns the Sue-Dianne copper-silver-gold deposit located 25 km north of NICO and a potential future source of incremental mill feed to extend the life of the NICO mill. The Company also maintains the right to repurchase the Arctos anthracite coal deposits in northwest British Columbia that have been purchased by a provincial Crown corporation.

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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 (including the Company's plans to secure project financing to start construction), the anticipated timing for the updated feasibility study for the NICO Project, the estimated capital costs for the construction of the NICO Project estimated future production, anticipated growth in the demand for cobalt, anticipated constraints on the supply of cobalt and plans for the construction of an all-season road needed for operations at the NICO Project. 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, growth in the demand for cobalt, restrictions on the supply of cobalt and the proposed construction of the all-season road, 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, the updated feasibility study may take longer than anticipated, the capital costs for the construction of the NICO Project may be greater than anticipated, 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 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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