Ongoing Engineering Determines That a Waterline to the Missouri River is no Longer Needed for the Elk Creek Critical Minerals Mine, Further Limiting the Project's Environmental Footprint

written by Raj Shah | July 10, 2018

July 10, 2018 (Source) – *Removal of the Planned Waterline Also Means That Two Federal Permits From the U.S. Army Corps of Engineers, and an Environmental Assessment Under NEPA, Will No Longer be Needed, Further De-Risking the Project for Financing*

NioCorp Developments Ltd. **("NioCorp"** or the **"Company")** (TSX:NB) (OTCQX:NIOBF) (FSE: BR3) is pleased to announce that ongoing work on detailed engineering being conducted by the Nordmin Group of Companies ("**Nordmin**") on NioCorp's proposed Elk Creek Nebraska, Critical Minerals Mine (the **"Project"**) shows that a proposed waterline to the Missouri River is no longer needed by the Project.

Nordmin's ongoing design engineering of the Project's underground mine, and recently updated hydrogeological findings, show that significantly less bedrock water may be encountered during mining operations than was estimated in the Project's 2017 Revised Feasibility Study ("2017 Project FS"). This has allowed removal of the waterline, proposed in the 2017 Project

FS, from the new mine plan.

Removing the proposed waterline will eliminate the Project's need for Section 404 and Section 408 federal permits from the U.S. Army Corps of Engineers (USACE), which would have been required for the waterline's outfall in the Missouri River. NioCorp had previously secured authorization under Section 404 to build the remainder of the waterline. The Section 408 permit also would have triggered the need for an Environmental Assessment under the National Environmental Policy Act ("NEPA"), a process that can take months or more to complete. These permits, and the Environmental Assessment, are no longer necessary for the Project.

While a number of state and local government permits are still needed by the Project, the removal of the requirement to obtain Section 404 and 408 permits from the USACE, and a subsequent National Pollutant Discharge Elimination Permit from the Nebraska Department of Environmental Quality, for the waterline further de-risks the Project from the perspective of project financing and the permitting timeline.

"I am very pleased with the speed and positive direction in which Nordmin is proceeding as they work to complete the detailed engineering of the underground portion of the Elk Creek critical minerals mine," said Mark A. Smith, CEO and Executive Chairman of NioCorp. "The design improvements being developed by Nordmin promise to further reduce the environmental footprint of this project. They also continue to de-risk a Project that is already one of the most highly de-risked greenfield mining projects I have seen in my 37 years in this business."

Mr. Smith added: "These improvements are in no way slowing our project finance discussions and negotiations with the multiple entities with whom we are currently working. But they are

helping to reinforce the global uniqueness of this project and increase its already attractive prospective economics to potential investors."

Scott Honan, President of Elk Creek Resources Corporation, NioCorp's operating subsidiary overseeing the Project's development, said: "Building the Elk Creek critical minerals mine and processing facility in a manner that minimizes potential impacts to the environment has been one of the core values we have sought to integrate into this Project from day one. Not only do we plan to make commercial products that deliver powerful lightweighting, fuel economy, and energy efficiency benefits to a wide variety of products and markets, but we want to make these environmentally beneficial products in an environmentally sound manner. We want the Elk Creek Project to demonstrate that critical minerals can be developed in the U.S. in a manner that respects the environment, creates new jobs, fuels economic growth, and catapults the U.S and the State of Nebraska into positions of global leadership in the production of these critical and strategic minerals."

The total upfront capital costs (CAPEX) of the waterline and the mine dewatering infrastructure, including contingency costs, were $127.1 million in the 2017 Project FS. However, NioCorp and Nordmin cautioned that other aspects of the mine design being developed by Nordmin may involve higher or lower upfront CAPEX than was estimated in the 2017 Project FS. Therefore, final changes to upfront CAPEX for the Project cannot be determined until final design engineering for both the underground mine and and surface processing facilities is completed.

The 2017 Project FS outlined the removal of approximately 12,000 US gallons per minute (USGPM) of bedrock water during operations in order to achieve a drawdown of the bedrock water level around

the orebody. Nordmin's recently proposed approach of using industry standard ground freezing technology during shaft sinking (**see the June 28, 2018 news release here**) is expected to significantly reduce the quantity of bedrock water to be pumped from underground workings, which in turn may open up additional opportunities for water management that were previously thought to be not practical or feasible. These additional options include treating produced mine water in order to remove the salt it contains and to produce water of sufficient quality for use in the production of the Project's superalloy products. Brine produced from bedrock water treatment operations could either be reinjected back into the bedrock or further refined into a solid form of salt.

As the Company announced on June 28, 2018, Nordmin's design engineering work also points to other potential improvements in the Project that can be expected to positively impact the overall Project schedule, mitigate risks, and potentially improve project economics and margins in the early years of the mine's estimated 32-year operational life. **That news release can be seen here.** However, NioCorp and Nordmin noted that a variety of factors beyond mining operations can impact time to market and the associated economics of a project like this.

Qualified Persons: Scott Honan, M.Sc., SME-RM, of NioCorp Developments Ltd., a Qualified Person as defined by National Instrument 43-101, has read and approved the technical information contained in this news release.

Source: NioCorp Developments Ltd.
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About NioCorp
NioCorp is developing a superalloy materials project in Southeast Nebraska that will produce Niobium, Scandium, and

Titanium. Niobium is used to produce superalloys as well as High Strength, Low Alloy (“HSLA”) steel, which is a lighter, stronger steel used in automotive, structural, and pipeline applications. Scandium is a superalloy material that can be combined with Aluminum to make alloys with increased strength and improved corrosion resistance. Scandium also is a critical component of advanced solid oxide fuel cells. Titanium is used in various superalloys and is a key component of pigments used in paper, paint and plastics and is also used for aerospace applications, armor and medical implants.

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