Nordmin Proposes Innovative Design That Minimizes Environmental Impacts of NioCorp's Elk Creek Critical Minerals Mine

written by Raj Shah | August 27, 2018

August 27, 2018 (Source) – *Recommendations Confirm Technical Feasibility of Removing a Proposed Waterline to the Missouri River and Employing Artificial Ground Freezing Technology, Which can Accelerate the Sinking of the Elk Creek Mine's Main Shafts*

NioCorp Developments Ltd. **("NioCorp"** or the **"Company") (TSX: NB, OTCQX: NIOBF, FSE: BR3)** is pleased to announce receipt of a new proposed design for the underground portion of its Elk Creek Critical Minerals Project (the "**Project**") by the Nordmin Group of Companies ("**Nordmin**"). The new mine design confirms the technical feasibility of several innovative approaches to mining Elk Creek's critical minerals which, if accepted by NioCorp, could further streamline the process of moving the Project to initial construction.

"Completing this phase of the design engineering for the Elk Creek underground mine marks a major milestone for the Project," said Mark A. Smith, CEO and Executive Chairman of NioCorp. "I was especially pleased to see that Nordmin clearly focused its efforts on proposing a mine design that maximizes value and minimizes environmental impacts. As a result, this design approach should result in a significant reduction in the government permits that the Elk Creek Project will need to secure while also potentially improving key aspects of the

Project.”

The mine design recommendations submitted to NioCorp by Nordmin are now being analyzed by NioCorp. If approved, they will then be integrated into the Elk Creek Project plan and overall impacts to the economics of the Project can be assessed.

In its mine design, Nordmin’s top-level recommendations to NioCorp include the following:

- Artificial ground freezing is technically feasible for use when the Company sinks the production and ventilation shafts for the mine. Such technology can assist in controlling the inflow of water encountered during shaft sinking operations. The technology may also improve productivity during shaft sinking operations, and eliminate the need for substantial dewatering operations prior to the onset of shaft sinking.
- Bedrock water encountered during mining operations can be handled without the 33-mile waterline to the Missouri River that was included in the Project’s 2017 Feasibility Study.
- NioCorp has already secured a 404 permit from the U.S. Army Corps of Engineers (“USACE”) under Nationwide Permit 12 for the Elk Creek Project. Removing the Project’s plans for a waterline to the Missouri River eliminates the Project’s need for an additional Section 404 permit from USACE, as well as a Section 408 permit from the USACE. The 408 permit 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.
- Additionally, removing the waterline eliminates the need for the Project to secure a National Pollutant Discharge Elimination Permit from the Nebraska Department of

Environmental Quality.

As NioCorp has previously announced, the total upfront capital costs (CAPEX) of the waterline and the mine dewatering infrastructure, including contingency costs, were $127.1 million in the 2017 Revised Project Feasibility Study. However, NioCorp and Nordmin cautioned that a variety of factors beyond underground mining operations may impact the overall economics of the Elk Creek Project, and these factors may involve higher or lower upfront CAPEX than was previously estimated in the 2017 Revised Elk Creek Feasibility Study. Nordmin's proposal for the development of an underground mine at Elk Creek includes additional incremental project capital, such as the artificial ground freezing technology, that were not included in previous capital cost estimates for the project. Therefore, no final conclusions can yet be drawn about possible material changes, if any, that Nordmin's mine plan may make to the top-level economics of the Project.

NioCorp's immediate plans involve fully evaluating Nordmin's designs for the underground mine, and initiating detailed engineering for the surface portions of the project as funds become available.

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.

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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