NioCorp Scores Initial Success in Metallurgical Testing of Elk Creek Ore Samples to Optimize Process and Demonstrate Potential Extraction of Rare Earth Elements

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CENTENNIAL, Aug. 11, 2021 - NioCorp Developments Ltd. ("NioCorp" or the "Company") (TSX:NB) (OTCQX:NIOBF) is pleased to announce success in the first stage of metallurgical testing that is designed to optimize the Elk Creek flowsheet and evaluate the potential integration of rare earth recovery to the Elk Creek Project ("Project").

The metallurgical work is being conducted by Salt Lake City-based L3 Process Development ("L3"), which has worked with NioCorp over the past several years on the development and optimization of NioCorp's planned metallurgical processing facility for the Project.

The new metallurgical testing program is the next step in NioCorp's goal of implementing the optimization recommendations in the Company's 2019 Elk Creek Project Feasibility Study for the production of niobium, scandium, and titanium, as well as to demonstrate the potential extraction and recovery of rare earth elements from the ore that NioCorp expects to mine from the Project site, subject to receipt of necessary project funding.

L3's testing recently achieved success by demonstrating, at the bench scale, (1) process alternatives to hydrochloric acid ("HCl") leach in NioCorp's planned hydrometallurgical plant, and (2) the ability to selectively reject non-pay metals in the ore samples, including calcium, magnesium, and iron. This selective rejection would facilitate efficient extraction of all pay metals, including the rare earths.

L3's process optimization work also includes extensive efforts to re-use and recycle key reagents from NioCorp's planned hydrometallurgical plant, which further NioCorp's goal of maximizing the environmentally efficient operation of the Elk Creek mine and processing facility, following the receipt of necessary project funding and construction of the mine and processing facility.

"The results of these bench scale tests were very encouraging and are showing that carbonization and other processing techniques may be able to be incorporated into our process flow sheet and could deliver substantial results," said Scott Honan, Chief Operating Officer of NioCorp. "As a result of this success, we are now proceeding to additional bench scale as well as pilot-scale metallurgical testing."

"Our technical team's job is to continue to seek improvements in the efficiency and environmental performance of the Project even as we work toward project financing and the eventual launch of construction," Mr. Honan added.

Commercial rare earth products currently being examined for potential production by NioCorp include neodymium-praseodymium oxide ("NdPr"), dysprosium oxide ("Dy_2O_3"), and terbium oxide ("Tb_4O_7"). These are the primary rare earth elements used to manufacture the world's most powerful permanent magnets, known as neodymium-iron-boron ("NdFeB") magnets.

Demand for NdFeB magnets is increasing globally because of their use in conventional and electrified vehicles, factory automation systems, home appliances, 5G networks, computers and electronics, and many other applications. Demand for the rare earths used in NdFeB magnets is forecast by Adamas Intelligence, in its August 2020 report entitled "Rare Earth Magnet Market Outlook for 2030," to expand far beyond current global production levels by 2030, largely driven by the increasing use of electrified vehicles and the need for

more efficient electric motors that, in turn, reduce harmful air emissions.

For example, global demand for NdPr is expected to increase by about 150% by 2030, with demand for Dy_2O_3 and Tb_4O_7 increasing by more than 185%. This increased demand is expected to result in severe shortages of these materials, Adamas has projected.

Qualified Persons: Eric Larochelle, B.Eng., Hydrometallurgy Specialist for L3 Process Development and a Qualified Person as defined by National Instrument 43-101, has reviewed and approved the technical information contained in the news release.

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For More Information:

Contact Jim Sims, VP of External Affairs, NioCorp Developments Ltd., 720-639-4650, jim.sims@niocorp.com

About NioCorp

NioCorp is developing a superalloy materials project in Southeast Nebraska that will produce Niobium, Scandium, and Titanium. Also under consideration by the Company is the production of several magnetic rare earth products. 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 is also 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. Magnetic rare earths, such as Neodymium, Praseodymium, Terbium, and Dysprosium are critical to the making of Neodymium-Iron-Boron ("NdFeB") magnets, which are used across a wide variety of defense and civilian applications.

Forward-Looking Statements Disclaimers

Certain statements contained in this news release and referenced video may constitute forward-looking statements, including statements regarding the results of preliminary metallurgical testing of Elk Creek ore samples, NioCorp's ability to produce commercial rare earth products, the Company's expectations that the Project will reach production stage if it is able to secure project financing, its plans to proceed to pilot-scale metallurgical testing, and its ability to produce its planned products commercially. Readers are cautioned that such forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause a change in such assumptions and the actual outcomes and estimates to be materially different from those estimated or anticipated future results, achievements or position expressed or implied by those forward-looking statements. Risks, uncertainties and other factors that could cause NioCorp's plans or prospects to change include risks related to the Company's ability to operate as a going concern; risks related to the Company's requirement of significant additional capital; changes in demand for and price of commodities (such as fuel and electricity) and currencies; changes in economic valuations of the Project, such as Net Present Value calculations, changes or disruptions in the securities markets; legislative, political or economic developments; the need to obtain permits and comply with laws and regulations and other regulatory requirements; the possibility that actual results of work may differ from projections/expectations or may not realize the perceived potential of NioCorp's projects; risks of accidents, equipment breakdowns and labor disputes or other unanticipated difficulties or interruptions; the possibility of cost overruns or unanticipated expenses in development programs; operating or technical difficulties in connection with exploration, mining or development activities; the speculative nature of mineral exploration and development, including the risks of diminishing quantities of grades of reserves and resources; and the risks involved in the exploration, development and mining business and the risks set forth in the Company's filings with Canadian securities regulators at www.sedar.com and the SEC at www.sec.gov. NioCorp disclaims any intention or obligation to update or revise any forward-looking statements whether as a result of new information, future events, or otherwise.

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