NioCorp and IBC Advanced Alloys Announce Successful Production of Aluminum-Scandium Master Alloy

written by Raj Shah | October 9, 2018

October 8, 2018 (Source) – NioCorp Developments Ltd. ("**NioCorp**" or the "**Company**") (**TSX: NB**; **OTCQX: NIOBF**; and **FSE: BR3)** and **IBC Advanced Alloys (TSX-V: IB; OTCQB: IAALF**) **("IBC")** are pleased to announce the successful production of aluminum-scandium master alloy. The master alloy was produced at the Ames Laboratory, a U.S. government-owned, contractor-operated national laboratory of the U.S. Department of Energy (DOE), located in Ames Iowa.

NioCorp and IBC intend to utilize the master alloy from this program to further the companies' ongoing efforts to develop specialty scandium-containing alloys and/or prototype products for potential commercial use. The two companies are operating under a joint development agreement to investigate and develop applications for scandium-containing materials for a range of downstream markets. NioCorp commercially purchased the scandium used to create the master alloy at the Ames Lab's Materials Preparation Center.

"Both IBC and NioCorp wish to thank the great team at the Ames Laboratory, and the U.S. Department of Energy, for their assistance to our teams in successfully producing this master alloy," said Mark A. Smith, CEO and Executive Chair of NioCorp and Chairman of the Board of IBC. "This is almost certainly the first aluminum-scandium master alloy made in the United States in some years. We look forward to the possibilities presented

by the establishment of a domestic U.S. production capacity for aluminum-scandium master alloys that utilize scandium mined and purified in the U.S.”

NioCorp is currently developing the Elk Creek Critical Minerals Mine and processing facility in southeast Nebraska, which is expected to produce more than 100 tonnes per year of scandium oxide when fully operational.

“This is a significant milestone in our continuing R&D effort with NioCorp to develop scandium materials for potential commercial applications,” said General David Heinz (USMC, ret.), CEO of IBC. “In many ways, scandium-containing alloys promise to deliver significant step changes in the capabilities and performance of platforms across the national defense and commercial sectors. We are excited about the commercial prospects presented in this effort, and to the launch of commercial scandium oxide production in the U.S. by NioCorp.”

Aluminum-scandium master alloys are used to introduce scandium into casting and wrought aluminum-based alloys. These master alloys traditionally contain about two percent scandium by weight, while finished aluminum-scandium alloy products generally contain fractions of a percent of Scandium by weight. Even this small amount of scandium can provide the following benefits to aluminum alloys:

- Fine grain refinement during casting and solidification;
- Enhanced ability to commercial weld aluminum alloys by minimizing weld cracks and failures; and
- Improved mechanical performance of the alloy, which in turn can reduce the mass (weight) of platforms such as cars, trucks, buses and aerospace systems, helping to enable improved fuel economy and reducing emissions.

Despite these well-understood benefits, widespread global use of

scandium has been limited, primarily due to a lack of reliable scandium supplies. No single dedicated mine in the world today currently produces scandium, and only 10-15 tonnes of scandium oxide material is estimated to be produced globally, according to the U.S. Geological Survey. OnG Commodities LLC has estimated latent demand for scandium at several hundred tonnes per year in the aerospace sector alone.[1]

Source: NioCorp Developments, Ltd.
@NioCorp $NB $NIOBF #Niobium #Scandium #ElkCreek

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.

About IBC

IBC is a leading beryllium and copper advanced alloys company serving a variety of industries such as defense, aerospace, automotive, telecommunications, precision manufacturing, and others. IBC’s Copper Division manufactures and distributes a variety of copper alloys as castings and forgings, including beryllium copper, chrome copper, and aluminum bronze. IBC’s Engineered Materials Division makes the Beralcast® family of

alloys, which can be precision cast and are used in an increasing number of defense, aerospace, and other systems, including the F-35 Joint Strike Fighter. IBC's has production facilities in Indiana, Massachusetts, Pennsylvania, and Missouri.

About Ames Laboratory

Ames Laboratory is a U.S. Department of Energy Office of Science national laboratory operated by Iowa State University. Ames Laboratory creates innovative materials, technologies and energy solutions. We use our expertise, unique capabilities and interdisciplinary collaborations to solve global problems.

NioCorp Cautionary Note Regarding Forward-Looking Statements

Neither TSX nor its Regulation Services Provider (as that term is defined in the policies of the TSX) accepts responsibility for the adequacy or accuracy of this document. Certain statements contained in this document may constitute forward-looking statements, including but not limited to statements regarding the Company's plans to potentially produce and/or commercialize scandium-contained alloys. Such forward-looking statements are based upon NioCorp's reasonable expectations and business plan at the date hereof, which are subject to change depending on economic, political and competitive circumstances and contingencies. 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 changes in demand for and price of commodities (such as

fuel and electricity) and currencies; 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 under the heading "Risk Factors" in the Company's S-1 registration statement and other filings with 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.

IBC Cautionary Note Regarding Forward-Looking Statements

Neither TSX Venture Exchange nor its Regulation Services Provider (as that term is defined in the policies of the TSX Venture Exchange) accepts responsibility for the adequacy or accuracy of this release. This disclosure contains certain forward-looking statements that involve substantial known and unknown risks and uncertainties, certain of which are beyond the Company's control including: the Company's plans to potentially produce and/or commercialize scandium-contained alloys; the impact of general economic conditions in the areas in which the Company operates, industry conditions, changes in laws and regulations including the adoption of new environmental laws and

regulations and changes in how they are interpreted and enforced, increased competition, the lack of availability of qualified personnel or management, limited availability of raw materials, fluctuations in commodity prices, foreign exchange or interest rates, stock market volatility and obtaining required approvals of regulatory authorities. In addition there are risks and uncertainties associated with manufacturing activities therefore the Company's future results, performance or achievements could differ materially from those expressed in these forward-looking statements. All statements included in this press release that address activities, events or developments that the Company expects, believes or anticipates will or may occur in the future are forward-looking statements. These statements are based on assumptions made by the Company based on its experience, perception of historical trends, current conditions, expected future developments and other factors it believes are appropriate in the circumstances.

---

[1] This data is part of a scandium market assessment prepared for NioCorp by OnG Commodities LLC in April 2017. The data is incorporated in NioCorp's December 2017 Revised Elk Creek Project Feasibility Study and is available for download on www.SEDAR.ca