

Imperial Mining and Eck Industries Execute a Letter of Intent for Collaborative Scandium Material R&D

written by Igor Makarov | May 18, 2021

May 18, 2021 ([Source](#)) – Imperial Mining Group Ltd. (“Imperial”) (TSX VENTURE: IPG; OTCQB: IMPNF) is pleased to announce that it has executed a letter of intent (LOI) with Eck Industries (“Eck”) to develop scandium-modified aluminum alloys for Transportation, Defence and Aerospace markets.

The LOI will focus on alloy commercialization and direct platform applications. The research work will be directed towards developing a novel scandium-enhanced version of the currently commercially available 535 Aluminum which Eck uses for a wide array of applications. The initial scope of work will include casting and testing of various compositions as well as characterization of the finished alloys. It is also aimed at working towards the goals of the newly signed Canada/US Joint Action Plan on Critical Minerals Collaboration (January 2020) as well as the existing US National Technology and Industrial Base directive (*Please see the “About Section” for further details on these two initiatives*).

“Imperial looks forward to working with Eck as we jointly move towards creation of a vertically-integrated North American supply chain for critical mineral and material production using scandium from our Crater Lake deposit,” said Imperial’s President & CEO, Peter Cashin. “By collaborating with a leading entity such as Eck, we strive to collectively provide an enhanced array of ultra high-performance alloys at a time when

continental defense and supply chains are under pressure to deliver. We look forward to the successful completion of this project.”

“Scandium is an alloying element that has great potential to continue to drive better performance in aluminum alloys,” commented David Weiss, VP Research and Development of Eck Industries, Inc. “The commercial reality requires us to find the most cost-effective solution to the customer’s requirements and to give them assurances that a reliable supply chain is in place. Imperial Mining is moving towards creating a sustainable scandium supply solution. We plan to demonstrate that scandium offers value in cast alloys for components as diverse as battery boxes, gearcases and aerostructures. That value will likely be driven by better mechanical properties and lower post casting costs.”

By combining Eck’s industrial strength and production expertise with a potentially multidecade, price disruptive North American centric supply of Imperial’s Crater Lake property, the parties look to provide the market with a sought-after scandium-aluminum material solution. Historically this solution, although highly valued by material engineers, has not been utilized due to low supply availability, high spot prices (\$3,800.00USD/kg, USGS 2020) and production domination by China and Russia.

ABOUT IMPERIAL MINING GROUP LTD.

Imperial is a Canadian mineral exploration and development company focused on the advancement of its technology metals projects in Québec. Imperial is publicly listed on the TSX Venture Exchange as “IPG” and on the OTCQB Exchange as “IMPNF” and is led by an experienced team of mineral exploration and development professionals with a strong track record of mineral deposit discovery in numerous metal commodities.

ABOUT ECK INDUSTRIES

Eck was founded in 1948 and has since been a mainstay of the American supply chain, servicing several clients and industries. Eck has specialized in high performance aluminum since the mid-1980s, with a particular focus on Defense and Aerospace. Eck's production facility in Manitowoc, WI consists of 210,000 square feet with over 250 staff that supply components to over 110 customers. Eck has a long history of aluminum alloy design, leadership, and innovation, exemplified by the custom heat resistant aluminum- cerium alloy that was co-developed with Oak Ridge National Laboratory and the Critical Materials Institute.

ABOUT CANADA/US JOINT ACTION PLAN ON CRITICAL MINERALS

The Action Plan will guide cooperation in areas such as industry engagement; efforts to secure critical minerals supply chains for strategic industries and defense; improving information sharing on mineral resources and potential; and cooperation in multilateral fora and with other countries. This Action Plan will promote joint initiatives, including research and development cooperation, supply-chain modelling and increased support for industry.

ABOUT US NATIONAL TECHNOLOGY AND INDUSTRIAL BASE DIRECTIVE

The National Technology and Industrial Base (NTIB) consists of the people and organizations engaged in national security and dual-use research and development (R&D), production, maintenance, and related activities within the United States, Canada, the United Kingdom, and Australia. The NTIB, as established by 10 U.S.C. §2500, is intended to support national security objectives of the United States, including supplying military operations; conducting advanced R&D and systems development to ensure technological superiority of the U.S. Armed Forces; securing reliable sources of critical materials;

and developing industrial preparedness to support operations in wartime or during a national emergency.

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