Imperial Mining Provides 2022 Corporate Update

written by Raj Shah | March 15, 2022

March 15, 2022 (Source) – **Imperial Mining Group Ltd. ("Imperial")** (**TSX VENTURE: IPG; OTCQB: IMPNF**) is pleased to provide investors with a corporate update and provide plans for the Crater Lake project throughout 2022.

CRATER LAKE PEA – DELAY OF WORK

Work on a 43-101 Preliminary Economic Assessment (PEA) on the TG Zone scandium-rare earth zone resource (see Imperial Mining Press Release – SEP 23, 2021, Table 1) has progressed. Delays are anticipated to address certain challenges arising from various tradeoff studies aimed at assessing the project CAPEX, OPEX and, ultimately, producing the optimal operational and financial model for the project.

Table 1 – 43-101 COMPLIANT RESOURCE ESTIMATE TABLE

Category	Cut-off NSR ($/t)	Tonnage (Mt)	NSR total ($/t)	Sc_2O_3 (g/t)	Dy_2O_3 (g/t)	La_2O_3 (g/t)	Nd_2O_3 (g/t)	Pr_2O_3 (g/t)	Tb_4O_7 (g/t)
Indicated	110.8	7.3	413	282	66	606	596	160	12
Inferred	110.8	13.2	386	264	62	569	573	154	11

STRATEGIC METALS MARKETING

Imperial marketing staff have been advancing numerous R&D initiative with corporate and university partners to develop new, innovative scandium-modified aluminum alloys (AlSc) for use in manufactured application in the automotive, aerospace, off-

shore wind power and defense industries. As a testament of it's efforts, Imperial has recently been awarded a total of $3.0 million in program funding and R&D grants from Canadian and Quebec provincial government entities in support of this effort.

Research emphasis has been applied towards EV and Hybrid automobile battery boxes, automotive and aerospace structural elements, AlSc use in traditional heat exchangers, as electric wire to replace copper in electric traction motors, off-shore wind turbine blades and nacelles and for AlSc powder use for 3-D printed parts. The work currently being undertaken with partner Eck Industries (see Imperial Mining Press Release – SEP 28, 2021) is central to this effort. Imperial's work with Eck in developing new, innovative scandium-aluminum alloys is the beginning of creating a critical value-added supply chain for scandium (Sc). The end users, who issue the material off-take contracts, are the automotive, aerospace, off-shore wind turbine and defense manufacturers.

In addition, Imperial has been researching the market potential of scandium oxide input Solid Oxide Fuel Cells (SOFCs), currently patented by Bloom Energy (https://www.bloomenergy.com/). This market is poised to show significant growth due to the shift towards Carbon Neutral alternative energy platforms. As Bloom Energy's patent expires soon, other potential manufacturers may consider expanding the market especially given that the Crater Lake development will provide geopolitically stable source of Sc for this application.

The objective of our marketing efforts is to secure one or several off-take agreements for our scandium with strategic partners prior to completing more advanced studies on Crater Lake mineralization.

EXPLORATION AND DEVELOPMENT ACTIVITY

A definition diamond drill program on the TG Zone (Northern Lobe and Southern Lobe) will commence in late June with the objective of completing up to 22 diamond drillholes for approximately 2,500 m. A drill hole spacing pattern of 50 m will be completed with the objective of converting the previously Inferred Resource into the Indicated Resource category. This revised resource will allow Imperial to move forward with a Pre-Feasibility (PFS) or Feasibility (FS) Study. In addition, there is excellent potential to expand the mineral resources with further drilling on the Southern Lobe **where a previous drillhole intersected 113.9 m grading 310 g/t Sc_2O_3** (see Imperial Mining Press Release – JUN 18, 2019).

The exploration drilling will include surface evaluation of high-priority scandium-rare-earth exploration targets outside of the drilled TG mineralized Deposit. The targets were identified during evaluation of Imperial's Winter and Summer drill program results as well as prior geophysical and mapping survey results over the property.

Drilling will also occur North of the Crater Lake Complex where **grab and channels samples returned up to 9.28% niobium oxide (Nb2O5), 13.4% zirconium (Zr), 2.4% total rare earths oxides plus yttrium (TREO+Y) and 3,020 ppm tantalum (Ta)**. This area coincides with extensive TREO+Y, Nb and Ta till geochemical and radiometric anomalies over the area of the occurrences.

During Summer 2021, Imperial collected a 50-tonnes bulk sample from the known surface scandium mineralization at the STG Zone for use in a pilot plant study. During Fall 2021, up to 18-tonnes was shipped to Sept-Iles, QC. It is expected that the remaining 32-tonnes will be shipped to Sept-Iles, QC by the end of July 2022. This material will be used in a pilot plant study to further test and optimize Imperial's patent-pending metallurgical process method.

In late Fall 2022, the new drillhole data from the summer program will be forwarded to a consultant to revise and update the previous 43-101 Resource Estimate of the TG Zone. The mineral resource update will convert all currently known inferred mineral resources to the indicated mineral resource category. It is also expected that further Inferred Mineral Resources will have been added at the Southern Lobe of the TG Zone deposit area.

METALLURGICAL PROCESS DEVELOPMENT UPDATE

IPG has commissioned a hydrometallurgical flowsheet development program based on its patent-pending (US Patent and Trademark Office provisional application #63/265,176) two-stage hydrometallurgical method for the extraction of scandium and rare earth elements with SGS Canada. The program, which started on January 31, 2022, is partially financed from a $245,355 grant from the Quebec Ministry of Energy and Natural Resources (see Imperial Mining Press Release – FEB 8, 2022).

The flowsheet development program is focused on the following key objectives:

- Further optimization of the mineral processing flowsheet by rejecting olivine, a non- scandium/REE-bearing mineral.
- Bulk processing of olivine-depleted Sc/REE mineral concentrate through the patent-pending high-pressure hydrometallurgical process to generate sufficient primary leach solution (PLS), to optimize the scandium / REE recovery circuits of the flowsheet.

The optimization work is intended to improve the scandium recovery, lower mine operating costs and reduce carbon footprint of Imperial’s metallurgical process. The optimization study that commenced on January 31st is being undertaken by SGS Canada with expected completion at the end of Q3 2022. Results from the work

will aid in the engineering design of Imperial's pilot program for the Crater Lake project for later in 2022.

QUALIFIED PERSONS

The technical content in this press release was reviewed and certified by Dr. Yemi Oyediran, an Ontario-registered P. Eng., Manager of Metallurgical Development and Pierre Guay, P.Geo., Vice-President, Exploration.

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.

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