

Imperial Mining Increases Scandium and Rare Earth Recoveries on Its Crater Lake Development Project, Quebec

written by Raj Shah | July 12, 2022

July 12, 2022 ([Source](#)) – Imperial Mining Group Ltd. (“Imperial”) (TSX VENTURE: IPG; OTCQB: IMPNF) is pleased to announce that early results from the previously-announce process flowsheet optimization work show significantly improved scandium and rare earth recoveries relative to previous reported results. In addition, exploration crews have now mobilized to the Crater Lake property to commence planned summer work.

METALLURGICAL PROCESS DEVELOPMENT UPDATE

Imperial is currently undertaking a hydrometallurgical flowsheet optimization development program. The optimization work is 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 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.

To-date, the optimization work to date has shown an **11% improvement in scandium recovery (96% vs 85%)** at the leaching stage relative to the initial lab results ([see Imperial Mining Press Release JUN 9, 2021](#)). Recovery of the rare earths also **increased 10% from 84% to 94%**. The greatly improved metal recoveries will positively impact the financial model presented in Imperial's recent PEA announcement ([see Imperial Mining Press Release – JUN 13-22](#)). In addition to the improved scandium and rare earth recoveries, the program's objectives are to lower project operating and capital costs and reduce carbon footprint of the metallurgical process. The optimization study that commenced on January 31st is expected to be completed by the end of Q3 2022. Results from the work will be used for a formal US Patent application and aid in the engineering design of Imperial's pilot program for the Crater Lake project to commence in 2023.

“The much-improved recoveries reported from the current optimization work will significantly impact the financial model reported in our PEA announcement last month,” stated Peter J Cashin, Imperial Mining's President & CEO. “Even more encouraging is the fact that the recovery improvements were obtained from scale-up of our metallurgical process when compared to our initial lab-scale test results reported in 2020. We continue our optimization work further reduce the operating risk presented by our PEA last month.”

2022 CRATER LAKE EXPLORATION PROGRAM

Imperial Mining work will be geared towards work required to

move the Crater Lake scandium-rare earth project towards Definitive Feasibility Study activities. For this to be accomplished, a 2,500m in-fill diamond drill program will be required for the current resource at the TG Zone Northern Lobe. The objective of this work is to convert all previously-defined inferred resources (**13.2 Mt at 264 g/t Sc₂O₃**, [see Imperial Mining Press Release, September 23, 2021](#)), to indicated and measured mineral resource category. As well, the company intends to drill test extensions of scandium mineralized intersections returned in 2019 (**310 g/t Sc₂O₃ over 113.9m**, [see Imperial Mining Press Release – JUN 18. 2019](#)) at the Southern Lobe of the TG Zone mineralized horizon. This Zone shows excellent potential to increase the known tonnage and grade of the scandium and rare-earths mineralization relative to the Northern Lobe, which are interpreted to constitute a continuous, 800-m long mineralized system.

In addition, detailed assessment of historical high-grade rare earth-niobium-tantalum occurrences, north and northwest of the Crater Lake Complex, known as the Crater Lake Extension property area, was undertaken during the winter and previous summer programs. In this area, 2010 grab sampling results of 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)** were returned requiring further investigation. The area coincides with extensive TREO+Y-Nb-Ta till geochemical and radiometric anomalies over the areas of the occurrences. Plans are for drilling a short, vertical diamond drillhole into the core of the occurrence area to test the vertical extent of the sub-horizontal mineralized system.

The drilling is expected to commence soon. Results from the drill core sampling program will be reported throughout the current summer and fall period.

Imperial also plans to ship the remaining 32-tonne bulk sample prepared over the STG Zone from the project site to its storage facility located in Sept-Iles, QC. This material will be used in a pilot plant study to further test and optimize Imperial's metallurgical process method ([see Imperial Mining Press Release – JUN 9, 2021](#)).

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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