

# Imperial Mining Files for US and Canadian Patents for Its Scandium and Rare Earth Metallurgical Extraction Process

written by Raj Shah | February 2, 2023

February 2, 2023 ([Source](#)) – Imperial Mining Group Ltd. (“Imperial”) (TSX VENTURE: IPG) (OTCQB: IMPNF) is pleased to announce the filing of patent applications for its two-stage hydrometallurgical methods and processes for the extraction of scandium (Sc) and rare earth elements (REE) from Crater Lake project mineralization.

The patent titled “*HIGH PRESSURE CAUSTIC LEACH METHODS AND PROCESSES FOR RECOVERY OF SCANDIUM AND RARE-EARTH OXIDES*” was filed on December 6, 2022, with the United States Patent and Trademark Office (USPTO, Application Number: 18/062,318), and Canada Intellectual Property Office (CIP0, Application Number 3,183,459). The US patent application has been assigned to an Examiner, who will conduct a search for relevant references to the invention and will examine the application according to its filing date. IPG will file a Request for Examination with the CIP0 after the successful examination by USPTO and within four years of the filing date.

IPG is also pleased to provide an update on the Crater Lake Scandium Project flowsheet development program which commenced in early 2022 at SGS Canada, Quebec City and Peterborough and 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 was focused on further optimization of the mineral processing flowsheet by rejecting olivine, a non-Sc-REE-bearing mineral from the mineral concentrate and processing of the olivine-depleted mineral concentrate through the patent-pending high-pressure caustic leach process for recovery of Sc and REE. During the flowsheet development program, IPG invented a patentable process for rejecting olivine from the scandium-bearing mineral concentrate. Olivine response to conventional mineral processing techniques (magnetic separation, flotation, electrostatic, and density) is like those of the scandium-bearing pyroxene and amphibole minerals, making it difficult to separate and diluting the Sc-REE grade of the concentrate. In addition, the solvent extraction (SX) circuit for the recovery of Sc and REE from leach solution has also been defined and successfully tested.

The development program that commenced on January 31<sup>st</sup>, 2022, is being undertaken by SGS Canada with expected completion by the end of March 2023. Results from the work will aid in the engineering design of Imperial's Pilot Plant program for Crater Lake, set to commence later in 2023.

## **QUALIFIED PERSON**

The technical content in this press release was reviewed and certified by Dr. Yemi Oyediran, an Ontario-registered P. Eng., Imperial's Vice President, Metallurgical Development.

## **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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