

# Imperial Plans \$2M Program For Crater Lake Scandium Project

written by Raj Shah | February 11, 2021  
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## Work Program Highlights:

- Definition diamond drilling on the TG Zone deposit
- Completion of the metallurgical process flowsheet for known mineralization
- Delivery of a 43-101 compliant Resource Estimate
- Completion of a 43-101 Preliminary Economic Assessment (PEA) for the TG Zone Resource.

**Imperial Mining Group Ltd. (“Imperial”) (TSX VENTURE: IPG)** is pleased to announce 2021 work program plans for advancing its 100% owned Crater Lake Scandium-Rare Earth Project in northeastern Québec (Figure 1). Work activities will include definition diamond drilling on the TG Zone deposit area (Figure 2), completion of the metallurgical process flowsheet for known mineralization, delivery of a 43-101 compliant Resource Estimate and completion of a 43-101 Preliminary Economic Assessment (PEA) for the TG Zone Resource. Total budget for this work is estimated at \$2.0 million. In addition, our scandium market development work will continue to identify new applications and consumers for scandium-modified aluminum alloys. These are now in growing demand within the transportation, aerospace, manufacturing, defense and alternative energy sectors.

“With our recent successful capital raise, we are well-funded to move forward with advancing our flagship Crater Lake Scandium Project exploration and development plans,” said Peter Cashin, Imperial’s President & Chief Executive Officer. “Our exploration

team has finalized the drilling plans for the TG Zone and anticipate mobilizing crews later this month. Imperial's financial position is the strongest it has ever been with the recent closing of two successful private placements. We will be providing the investment community with regular updates as our plans progress throughout the winter, spring and summer."

### **WINTER DEFINITION DRILLING AND RESOURCE ESTIMATION PROGRAM**

A definition diamond drill program on the TG Zone will commence in late February with 17 to 22 diamond drillholes currently planned totalling approximately 2,500 m (figure 3). A drill hole spacing pattern of 50-100 m will be completed with the objective of outlining a minimum Inferred Mineral Resource of at least 10 million tonnes. This size of resource should satisfy a minimum 20–25-year operation depending on the rate of demand growth. There is good potential to expand resources with further drilling on other similar scandium occurrences on the property.

The drilling is anticipated to be completed by the end of April. Once all the lab analyses are received and the drilling data is compiled it will be moved on to an independent engineering group to undertake and deliver an NI 43-101 compliant Resource Estimate for the TG Zone. We would expect results from this work to be delivered in May.

### **PHASE 3 METALLURGICAL PROCESS DEVELOPMENT**

Imperial is making significant progress on the Phase 3 hydrometallurgical development program of its flagship Crater Lake Scandium Project. The program commenced with M.Plan International, based in Toronto, in the Q4 2020. The test work is currently being conducted by M.Plan's partner, Dorfner ANZAPLAN GmbH, Hirschau, Germany. The budget for this work was estimated at \$175,000 but has been fully capitalized.

The hydrometallurgical development program is being conducted on two, 100 kg bulk samples representing different mineralization types. This bench scale program is expected to produce a simple, cost-effective hydrometallurgical flowsheet for the extraction of scandium (Sc) as 99.5%-purity scandium oxide ( $\text{Sc}_2\text{O}_3$ ) and recovery of by-product Total Rare Earth Oxides plus Yttrium (TREO+Y) as a bulk concentrate.

The Phase 3 program has confirmed that the magnetic separation flowsheet developed in Imperial's Phase 2 Mineral Processing program was highly effective at recovering the scandium-bearing minerals. The magnetic separation flowsheet produced two mineral concentrates as feeds for the Phase 3 hydrometallurgical program and achieved the following results from MET01 and MET02 samples:

- MET01 – 55% mass pull to concentrate with 98% Sc and 79% TREO+Y recovery.
- MET02 – 69% mass pull to mineral concentrate with 97% Sc and 79% TREO+Y recovery.

Several different digestion methods for bringing scandium and rare earth elements into solution are currently being evaluated and tested.

Imperial Mining Group continues to work with its partners at Dorfner ANZAPLAN to optimize the hydrometallurgical flowsheet to achieve target process recoveries for scandium and rare earth elements of at least 85%.

The hydrometallurgical flowsheet development program is expected to be completed in Q2 2021.

## **STRATEGIC MARKETING ACTIVITIES**

Strategic marketing activities have been on-going since Imperial was established in 2018. The focus has been to communicate: 1)

the critical importance of scandium as an aluminum alloy strengthener and, 2) scandium–aluminum alloy’s importance as a light-weighting material. Just as critical, especially considering Rio Tinto’s recent announcement to commercialize the recovery of by-product scandium from its Quebec titanium operation, is to show that sustainable sources of scandium are currently in the development pipeline. Increased availability will mitigate manufacturer’s concerns of supply disruptions, particularly for the automotive, aerospace, defense and alternative energy sectors.

Imperial’s long-term strategic goals are:

- To build a robust demand funnel that would be in excess of Imperial’s projected yearly production.
- To grow margins by exploring new disruptive technologies that will need to utilize scandium- aluminum alloys while concurrently driving growth in traditional markets areas.

The execution of these goals has been accomplished in recent months by focusing on three main areas: Government Relations, interested Industrial End Users and Academic centers of excellence. Imperial has signed Non-Disclosure Agreements (NDAs) with various entities and is actively engaged with appropriate government agencies. Imperial’s focus is on involvement with one or more critical material development programs with Defense contractors. This would result in non-dilutive funding for Imperial.

Specifically, there are several initiatives underway involving scandium-aluminum material and platform development in the following sectors: Transportation/Automotive, Aerospace, Defense, Space and Renewable Energy (Offshore Wind). Imperial is actively pursuing involvement with these applications in conjunction with the three main areas outlined above. Of particular interest are high margin, disruptive and emerging

technologies incorporating laser-melt 3-D printing of Scandium-Aluminum powders

## **PRELIMINARY ECONOMIC ASSESSMENT (PEA)**

With the results from our program activities in hand, Imperial intends to complete an NI 43-101 Preliminary Economic Assessment (PEA) for a scandium production complex at Crater Lake. The PEA will produce an order-of-magnitude ( $\pm 50\%$ ) financial model for the envisaged operation. This work has been budgeted at \$125,000.

Results from this work are expected to be delivered sometime in Q3 2021.

## **QUALIFIED PERSON**

The technical content in this press release was reviewed and certified by Dr. Yemi Oyediran, an Ontario-registered P. Eng., Imperial's Manager of Metallurgical Development and by Pierre Guay, P. Geo., Imperial's Vice-President, Exploration, both Qualified Persons as defined by National Instrument 43-101.

## **ABOUT IMPERIAL MINING GROUP LTD.**

*Imperial is a Canadian mineral exploration and development company focussed on the advancement of its technology metals opportunities in Québec. Imperial is publicly listed on the TSX Venture Exchange as "IPG" 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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Images accompanying this announcement are available at

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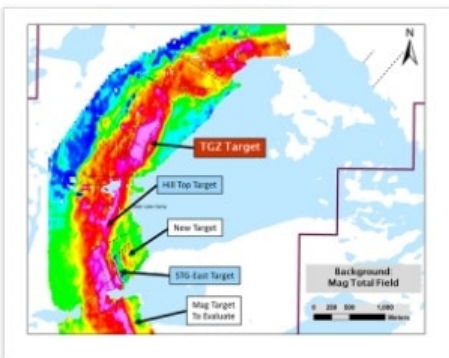
<https://www.globenewswire.com/NewsRoom/AttachmentNg/349d4024-cbc4-4a61-adfe-4884c0bad889>

Figure 1



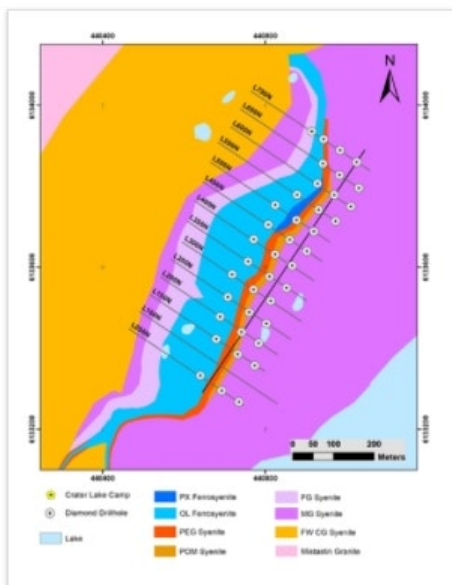
Location Map, Crater Lake Project, Quebec

Figure 2



Scandium Target Location Map, Crater Lake Project, Quebec

Figure 3



Diamond Drill Location Plan, TG Zone, Crater Lake Project, Quebec