Imperial Mining Group's Scandium-REE Preliminary Economic Assessment by the numbers

written by InvestorNews | June 22, 2022

Last week Imperial Mining Group Ltd. (TSXV: IPG | OTCQB: IMPNF) released the results of a Preliminary Economic Assessment (PEA). The results are impressive with a projected 25-year mine life for its Crater Lake TG Zone Scandium-Rare Earth Element (Sc-REE) deposit 200 km NE of Schefferville, Quebec. Of particular note is Imperial Mining's CEO Peter Cashin, who has been in mining for decades and has been involved in rare earths and scandium for over a decade which puts him in a strong position to understand the idiosyncrasies of these critical materials.

Scandium is an element that has huge potential in automotive, aerospace, military, and applications where weight is critical without sacrificing other properties. Scandium has the ability, when added in < 1% levels to aluminum, to produce a metal that is one-third the weight of steel but has the strength of steel. The main scandium production is in China and Russia, and major companies are looking for a reliable, long-term supply from a favorable jurisdiction before committing to a design using scandium-aluminum alloy. Scandium can be welded which is of interest to aircraft companies as it has been said that eliminating the rivets which is the current practice would reduce the weight of a plane by as much as 20%. The challenge is designing a new airframe can take up to a decade. Therefore other applications are needed near term to generate cash flow in the early stages of a project. A new car can take 2-3 years to

produce from scratch but with the drive to EV vehicles where weight is a major consideration, this is a key area for product development. Being in Quebec, Imperial is well situated to work with the aluminum smelters in the province.

According to Imperial Mining's PEA, gross revenues projected are CA$15.2 billion with gross earnings about 50% at CA$6.25 billion. The NPV is just under CA$3 billion at a 10% discount rate and an IRR (after-tax) of 32.8%. The initial CAPEX is projected at CA$870.9 million with a payback of 2.5 years. Impressive numbers.

Regarding the scandium itself, the drill results have shown grades that rate among the highest globally, if not the highest. The mine is an open-pit design, which will minimize costs, and the concentration phase would be done on-site with final processing being planned to take place in Sept-Iles. The strategy is to produce a master Sc-Al alloy in Sept-Iles along with a REE concentrate. The other notable calculation is Imperial Mining uses US$1,500/kg for Sc2O3 which is significantly lower than other PEAs for scandium in the marketplace. In addition, the Sc(2%)-Al alloy is discounted by 40% from the US Geological Survey 5-year trailing average, which is another conservative approach and refreshing to see instead of reporting extreme numbers which would be difficult to defend.

As noted earlier, Imperial Mining plans to produce a rare earth concentrate. This is priced at a 70% discount to market prices in March 2022, which is realistic as the main target customer would be China, which is currently buying concentrate from MP Materials out of California. This discount is in keeping with how the Chinese would calculate the value, and even then the lanthanum would not be a significant contributor. The other key point of this revenue calculation was that it is based only on the 4 key magnetic elements plus lanthanum, which is realistic

as the magnetic elements are where the main value is in all REE deposits globally. It is nice to see a company not running economics on separated REEs and saying it can sell everything it produces, which is not possible. This concentrate would help defray the scandium OPEX to a certain degree.

Overall, scandium is a situation of build it and they will come. The full report should be available by end of July.