Imperial Mining Sets Comprehensive 2021 Plan at Crater Lake after $2.6M Financing

After a positive summer drill program at its flagship **scandium-rare earth** Crater Lake Property in northeastern Quebec, Imperial Mining Group Ltd. (TSXV: IPG) successfully closed a $2.6 million financing in December to accelerate the project forward in 2021.

Imperial Mining plans to use the proceeds to complete definition drilling at Crater Lake's "TG Zone", and to deliver both a 43-101 Resource Report and a Preliminary Economic Assessment (PEA) by the end of June 2021.

Last trading at $0.16, Imperial Mining Group has a market cap of $20 million and a PEA could re-rate the company, shifting it closer to the $175 million market cap of NioCorp Developments Ltd. (TSX: NB | OTCQX: NIOBF) that has a Feasibility Study at its Elk Creek niobium-scandium project in Nebraska, United States.

Peter Cashin, President & CEO of Imperial Mining Group, recently commented, "I am very pleased of the positive response that the market has shown for our private placement. The financing was oversubscribed, and we believe that it was motivated by the recent significant announcements in the critical metal space, in particular for scandium and the rare earths."

Scandium Alloys at Home and in Space

Manufacturers in many industries, including automotive, aerospace, and defense, recognize that scandium-modified

aluminum alloy materials could become a critical input into their production processes.

With the push for lighter and stronger materials to make vehicles more fuel-efficient and the need for tough and durable metal alloys for the resurgence in space activity, scandium-aluminum “superalloys” have been already used by NASA and the European Space Agency (ESA).

In a March 2020 speech at the Satellite 2020 Conference, Elon Musk, founder of Tesla (NASDAQ: TSLA) and SpaceX stated that the aerospace engineers at SpaceX were going to switch to a different alloy “pretty soon” to replace the current stainless-steel alloy, known as 301.

Scandium-aluminium alloys are highly valued as an important lightweight material and are one-third the weight of steel and 60 % of the weight of titanium alloys.

Scandium-aluminium alloys are also corrosion-resistant and can be used in a variety of industries, including aerospace, automotive, and consumer products, such as baseball bats, bicycle frames, and golf clubs.

A small percentage of scandium alloyed with aluminum enables aluminum to be effectively welded to another piece of scandium-aluminum alloy, without the need for heavy hardware to join the pieces together.

Scandium-aluminium alloys are currently being used by California-based Relativity Space, a private aerospace manufacturing company. Relativity Space’s massive 3D printer can create a rocket from raw material to flight in 60 days.

The automotive industry could be a large market opportunity for scandium. With scandium-aluminum’s self-welding abilities, engine blocks could be constructed using 3D printers.

In addition, according to a recent report, the average

passenger vehicle contains over 150 kilograms of aluminum and the average light truck contains over 230 kilograms of aluminum. If only 1% of the traditional aluminum used in the approximately 17 million light vehicles (cars and light trucks) produced in the United States each year, switched to scandium-aluminum, that impact would create a demand for 35 tonnes of scandium each year.

With current scandium production estimated between 25-35 tonnes per year as such, this type of demand would immediately double the current supply requirement.

Scandium

Scandium is an element, sometimes classified as a rare earth metal, and currently, there are no primary scandium mines. Supply comes from the by-product of other mineral extractions from deposits in China, Russia, and more and recently, Australia.

Scandium is not traded on any metal exchange and the price is negotiated between buyer and seller. According to the most recent USGS data sheet on scandium, over the past five years, the price for scandium-oxide has averaged $4,560 per kilogram.

Scandium and other “critical metals” were thrust into the spotlight last year when President Trump signed an Executive Order addressing the threat to the United States’ supply chain from relying on “critical minerals” from “foreign adversaries”, specifically identifying China. The 35 mineral commodities deemed critical under the definition included aluminum, gallium, graphite, lithium, manganese, niobium, the rare earth elements group, and scandium.

Crater Lake Property – Scandium & Rare Earth Metals

The 100%-owned Crater Lake Project is located 200 kilometres northeast of Schefferville, Quebec, and covers 2,780 hectares (approximately 6,900 acres). The project hosts three zones of

mineralization (Boulder, TG Zone (TGZ), and STG), determined by scandium-rich outcrops, boulders, and recent drilling.

Highlights from the summer drill program included Hole #CL20037 from the TGZ that returned intervals grading up to 253 grams per tonne (g/t) Scandium Oxide (Sc_2O_3) over 29.14 metres (m), including 9.3 m grading 299 g/t Sc_2O_3 and 21.69 m grading 271 g/t $Sc_2O_3$3 including 9.16 m grading 299 g/t Sc_2O_3.

Importantly, the true thickness of the scandium mineralized zone is estimated to be up to 110 m and is open at depth and along strike.

The company sees major positive factors with the project, including:

- The resource is exposed at the surface, so it is amenable to a low-cost open-pit operation.
- The deposit is high grade relative to its peers and could reduce the CapEx to develop the mine and the OpEx to run the mine.
- The preliminary metallurgy showed strong scandium mineral recoveries.
- The project is in the mining-friendly jurisdiction of Quebec and supported by Quebec’s recently launched $90 million “critical minerals” development fund and Plan Nord, Quebec’s economic development strategy to develop natural resource extraction in northern Quebec.
- The deposit is located in close proximity to the 9 aluminum smelters and one alumina refinery in Quebec.

Final Comment

Look for the definition drill results, 43-101 Resource Report, and the PEA to potentially lift the stock price higher this year.

Kozak on Imperial Mining's proximity to Quebec's aluminum production corridor

Just six months ago, the share price of Imperial Mining Group Ltd. (TSXV: IPG) was range-bound between CAD$0.05 and CAD$0.06/share. This was a good thing, because only a month before, the company was trading at $0.04 or less! The company closed 2020 at approximately $0.09/share but currently trades around $0.16/share with a market capitalization of approximately CAD$20 million.

What happened? As followers of the rare earth space know, the market is catching on to the notable rare earths companies and the need to recreate a domestic US/non-China based supply. In addition to the company's gold and base metal assets, Imperial's Quebec hardrock property has excellent exposure to scandium. This was highlighted on December 31, 2020 in a year-end interview, where scandium and Imperial Mining were mentioned by name. On January 4, 2021, the stock soared to $0.16 and continues to trade at that level.

As you probably know, scandium is an additive to aluminum alloys that hardens and strengthens the end product, (not unlike titanium alloys) and allows for lighter weight but equivalent (or better) strength components. Notably, two Russian jet fighters (MiG-21 and MiG-29) use scandium alloys in their construction. Other uses for scandium alloys include (but not exclusive to) automobiles, fuel cells and other defense products.

Peter Cashin, President and CEO, recently explained how

Imperial Mining's 100%-owned Crater Lake Project "provides a strategic opportunity for an exciting new line of lightweighting [sic] products." The project contains rare earths but is highly leveraged to scandium.

"How it (Crater Lake Project) stands out is that it is a primary bedrock opportunity in Quebec," said Mr. Cashin. "The grades are exceptionally high relative to our peers for a bedrock deposit. It is exposed at surface so it would be amenable to an open pit operation. Our preliminary metallurgy shows that we have very strong recoveries and high rejection rates of the gangue minerals from our metallurgical work so far. We are ideally located very close to the aluminum capital of Canada."

In other words, a potential source of a critical metal element for the aluminum industry right on its doorstep in Canada!

After an active 2020 field program, which included 130-line kilometers of detailed ground magnetic surveys, in August the company announced the discovery of several new areas of scandium mineralization on the Crater Lake Project. These new areas lie within the same 14-km magnetic trend hosting the three previously defined mineralized zones on the property (Boulder, TGZ and STG). Subsequent 2020 drilling confirmed strong scandium resource potential on the property, which was announced last November.

The market clearly liked those results. Imperial went on to successfully raise CAD$2.6 million on closing of an oversubscribed, non-brokered private placement of flow-through shares and units in early December 2020.

Looking into 2021, Imperial is in an enviable position in the scandium industry owing to their close proximity to Quebec's aluminum production corridor, where 90% of Canada's aluminum is produced. While there is already competition from the recently announced scandium plant by $100 billion market

capitalization Rio Tinto, the Crater Lake Project appears to have all of the traits of a high-quality, low cost project which is getting better delineated with every drilling program. Still a competitive advantage, the project has easy egress to the aluminum smelters plus low-cost electricity and a supportive political environment.

While it is too early to say that the Crater Lake Project will be the next (hardrock or otherwise) scandium supply source for Quebec aluminum, the project is getting ever closer to the decision to proceed with a new mining development. There are still a significant number of steps to go before that decision, but the company appears to have a promising future ahead.

Lifton, Clausi, Cashin and Putnam on how the time for scandium is now

The Technology Metals Show hosts Jack Lifton and Peter Clausi talk to Peter Cashin, President and CEO of Imperial Mining Group Ltd. (TSXV: IPG) and George Putnam, President, CEO and Director of Scandium International Mining Corp. (TSX: SCY), about scandium, which is a critical material and the scandium market overall.

The full interview available exclusively to subscribers of the **Technology Metals Show**, this a promo clip from the panel's discussion on the overall scandium market, commercial uses of scandium and the latest research and development that has been done in this area. George said, "Scandium has some unique aspects to it that make it well suited as an aluminum alloy

along with some exciting uses in a number of areas specifically in battery technology.”

In the interview, Peter Cashin provided an update on the Imperial Mining’s Crater Lake Scandium-Rare Earth property located in the Canada’s aluminum capital – Quebec.

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How to evaluate a rare earths opportunity

The race is on for rare earths investment, but what should you look for?

So where do we go from here? That is, what are the criteria investors should consider when they are looking for rare earth/zirconium investment opportunities?

At this early stage of developing a domestic critical minerals supply chain, and as mentioned previously, one of the most important criteria for investors to consider with rare earths is whether the resource offers potential to recover other

commonly associated critical minerals such as zirconium/hafnium and scandium, that are also largely controlled by China. These may offer better opportunities than rare earths for quickly finding domestic market outlets for the processed forms of these elements.

The rare earth elements neodymium, praseodymium and dysprosium are well known for application in high strength permanent magnets, now in increasing demand for electronics, wind turbines and electric vehicle motors. There are also opportunities in aircraft construction, where aluminum and titanium have been the traditional metals of choice. Zirconium and hafnium can be used in various combinations to make certain titanium and aluminum alloys that are perfectly suited for the high-temperature regions of jet engines. Similarly, scandium is in increasing demand as an additive to aluminum alloys to increase their strength and reduce their weight. When all of these elements are recoverable from the same resource, it becomes a much more attractive investment opportunity.

A couple of North American rare earth projects that meet most of these criteria, are Avalon Advanced Materials' Nechalacho Basal Zone Heavy Rare Earth project in the Northwest Territories and Imperial Mining's Crater Lake Scandium project in northern Quebec. The Nechalacho resource contains the critical elements zirconium/hafnium as well as both the light and heavy rare earth elements. The Crater Lake Project is a rare earth resource with exceptional scandium enrichment and is now being looked at mainly as a scandium project. It also contains concentrations of zircon as well as the rare earths.

Another factor to keep in mind is the balance between the Light Rare Earths (Lanthanum through Samarium) and the Heavy Rare Earths (Gadolinium through Lutetium), plus Yttrium. Most rare earth resources are dominated by the light rare earths, but having recoverable heavy rare earths as well can further enhance the overall value proposition as demand for these will

grow as new supply becomes available.

Once the investor has identified a rare earth project that also contains other critical elements like zirconium and scandium, the next step is to assess whether they occur in minerals that are amenable to economic processing and recovery. The feasibility study (FS), Pre-feasibility Study (PFS) or Preliminary Economic Assessment (PEA) are the best sources of this type of information. Many early stage projects are focused on defining the largest potential size and grade of resource without focusing on whether the elements of interest occur in minerals that are amenable to economic recovery. These projects should not be considered as attractive investment opportunities until an appropriate economic extraction process has been identified. The next step is to be certain that the recovered products will meet the specifications required by the consumer.

Other important points to consider when considering new rare earth project investment opportunities is the content of radioactive elements uranium and thorium which often occur with rare earths. High levels of uranium and thorium can be problematic from an environmental regulatory standpoint. Some jurisdictions are more challenging than others. Personal experience has shown that regulations in Canada are better than in the U.S. by providing an appropriate level of environmental regulation while not causing any unnecessary burden on industry.

Rare Earths

Finally, regardless of the balance of critical elements contained in a rare earth resource, the operation will need a well-qualified team to perform the development and product marketing work. So, the most important requirement at this early stage of creating a new supply chain is finding the people with both the appropriate skill sets and experience. Companies with these assets will have a greater chance of success.

In summary, an investor looking for a rare earth project with the best prospects of success should be one that has the following attributes:

1) a resource that also contains significant recoverable quantities of zirconium/hafnium, scandium or heavy rare earth;

2) contains low level of radioactive elements or is located in a region that has less-burdensome environmental regulations;

3) has a defined a viable extraction process flowsheet; and,

4) has the appropriate, key people available for the early stage of development.

Now the trick is to find them.

Jack Lifton and Peter Cashin talk about the scandium market and Imperial's strategic opportunity in the vital lightweighting space

In an interview with Technology Metals Show host Jack Lifton, President and CEO of Imperial Mining Group Ltd. (TSXV: IPG) Peter Cashin discusses the scandium market and the economics of the Crater Lake Project. Peter explains how Imperial Mining's Crater Lake Project provides a strategic opportunity for an exciting new line of lightweighting products. The project also contains rare earths.

"How it (Crater Lake Project) stands out is that it is a primary bedrock opportunity in Quebec," said Mr. Cashin, Imperial's President and CEO. "The grades are exceptionally high relative to our peers for a bedrock deposit. It is exposed at surface so it would be amenable to an open pit operation. Our preliminary metallurgy shows that we have very strong recoveries and high rejection rates of the gangue minerals from our metallurgical work so far. We are ideally located very close to the aluminum capital of Canada."

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Demand for scandium set to rise and Imperial Mining offers an early stage high grade project

Scandium is the key to lightweight electric vehicle boom

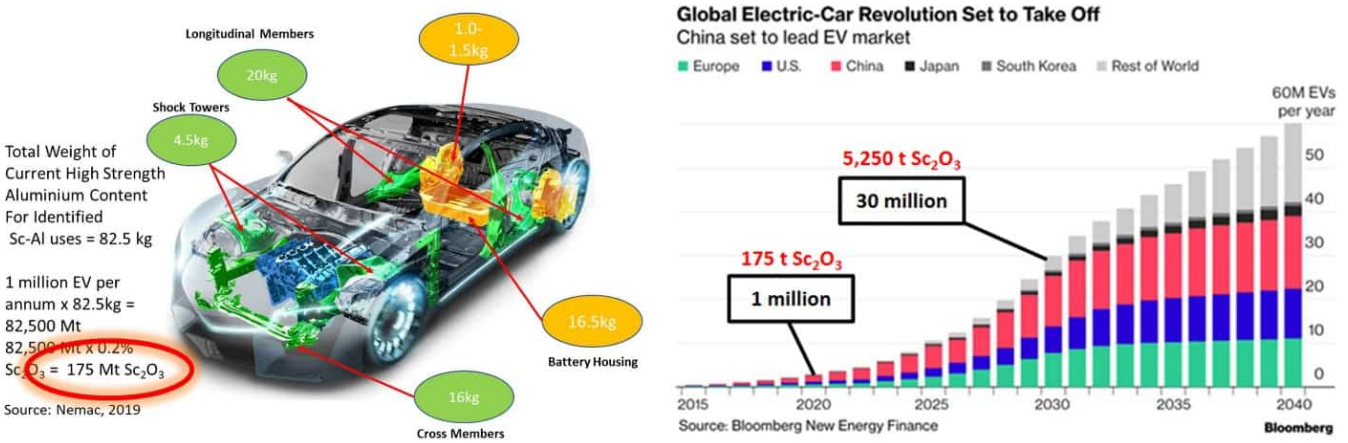
With the electric vehicle boom set to take off this decade, expect a surge in demand for the 'lightweighting' of key materials. An essential part of reducing the weight of electric vehicles (EVs) is scandium, which mixed with aluminum creates lighter and stronger alloys for EVs. Lighter weight means extending battery range in EVs and improving fuel efficiency and reducing greenhouse gases in combustion engines.

The current scandium market size is estimated to be about 35 tonnes per year, however Bloomberg forecasts this could grow to reach 1,800 tonnes pa by 2035 – a 51 times increase in

demand. However, if the sales of electric vehicles surge as some forecast and reach 30 million by 2030, the demand for scandium would jump to a staggering 5,250 tonnes pa – a 150-fold increase on today's demand based on just a 0.2% scandium oxide-aluminum alloy in each EV.

This exponential increase in demand for scandium does not include its additional consumption by key industries such as solid oxide fuel cells, aerospace & defense, aviation, electronics, sporting goods, and ceramics.

Building 30 million new electric cars a year by 2030 will require an additional 5,250 tonnes of scandium oxide every year to achieve 100% lightweighting



Source: Imperial Mining Group investor presentation

Imperial Mining Group Ltd. (TSXV: IPG) owns a diverse portfolio of high-grade assets including gold, base metals and scandium-rare earth projects. The company's focus is on development of its high-quality scandium-rare earth Crater Lake property in northeastern Quebec, Canada. The property has a large 6km diameter complex that is host to high-grade scandium and niobium deposits.

The Crater Lake scandium rare earth project

The 100% owned Crater Lake Project is located 200km northeast

of Schefferville, Québec, 95 km from the end of the Trans-Labrador Highway. The property consists of 57 contiguous claims covering 27.8km^2.

Crater Lake location map

Source: Imperial Mining Group investor presentation

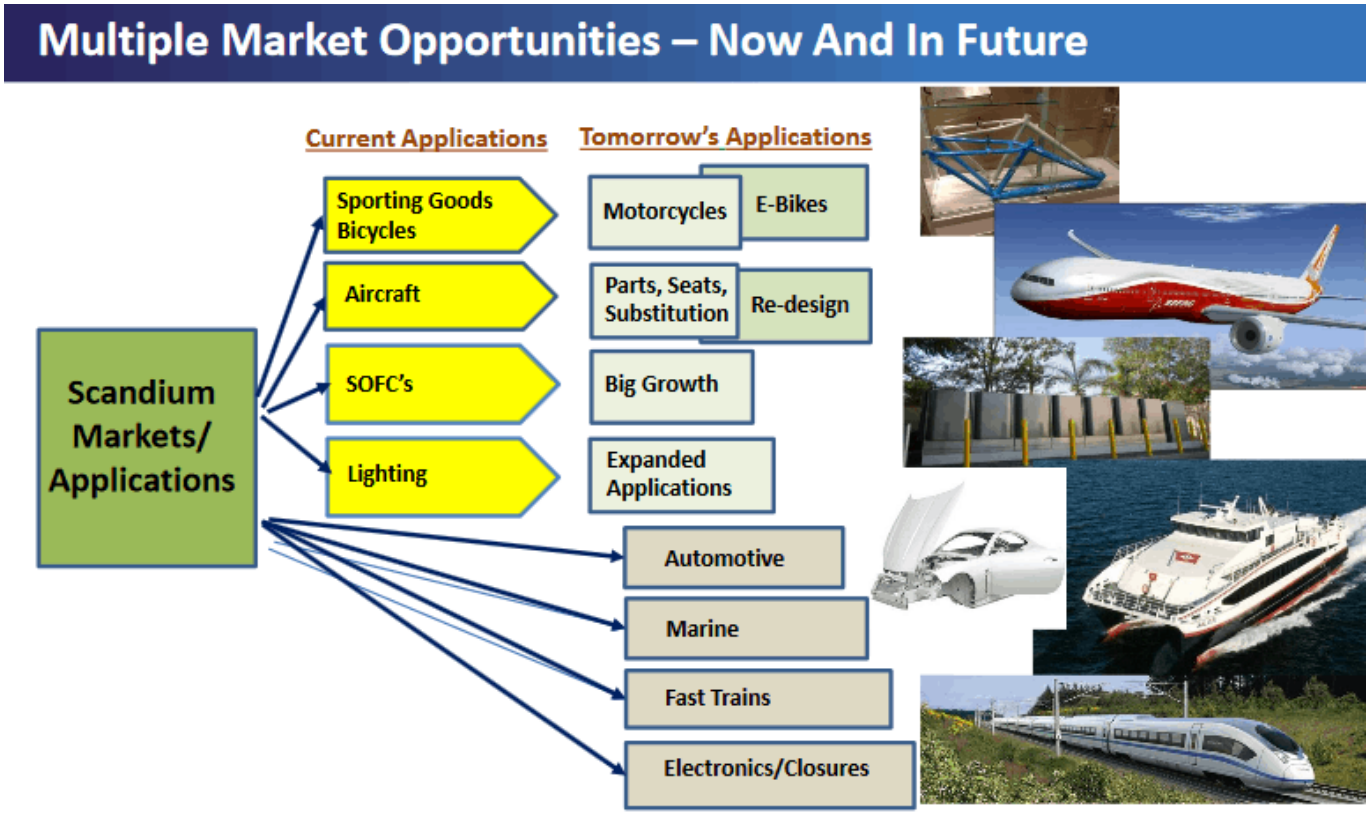
Imperial Mining Group is currently working to expand the resource. Previous drilling has defined a mineralised zone over 250 meters in strike and 170 meters in depth. Scandium oxide grades ranged from 0.0235% to 0.0319% (235-319g/t), which is pretty good. Scandium is not rare, however finding commercially viable grades (>200-300g/t) of scandium is very rare. More recent drill results have included 528g/t scandium oxide over 8.8 meters, showing the high grade potential of the

Crater Lake Project.

The company expects the Crater Lake Project to be a small open-pit operation with an on-site magnetic concentrator and/or sensor-based sorting. This should reject 50-60% of mined material, resulting in high scandium recoveries and lessening transportation risks and costs. It is anticipated that the project will be low CapEx, OpEx due to the higher grades and expected simple process recovery methods.

Future catalysts will include planned further metallurgical work, a PEA expected by Q1 2021, permitting, and an anticipated FS by Q3 2023, subject to financing.

Multiple market opportunities ahead as the demand for scandium increases dramatically



Source

Closing remarks

I have no doubt that the EV boom will take off, which means

lightweighting will become essential for electric cars to boost performance, especially range. In the meantime there are plenty of other areas that demand scandium, so I expect the scandium sector to perform well this decade.

Imperial Mining Group has an exciting early stage high grade scandium-niobium project in northeastern Quebec. Also of interest is their 100%-owned Opawica Gold Project in the Abitibi region of northwestern Québec where recent drilling discovered 1.21 g/t gold (Au) over a 13.3 meter length.

Risks are always high with junior mining stocks at the early stages and in this case the scandium market is another risk as it is yet to be fully developed. Of course with high risk comes the chance for high reward. Imperial Mining Group trades on a current market cap of just C$9 million. One to follow closely, especially since securing a source of North American scandium could soon be very much in demand.

Drolet Stock Note: Imperial Mining Group Ltd. – Advancing one of the only sources of Scandium in North America

Mario Drolet President of MI3 Communications Financières Inc. (MI3) released his Stock Notes on Imperial Mining Group Ltd. (TSXV: IPG) for exclusive distribution on InvestorIntel. In this note, MI3 highlighted the following points on Imperial Mining Group Ltd.:

- Imperial’s focus is on development of its high-quality

Scandium-Rare Earth property in northeastern Quebec

- Specific focus on Critical Metal (scandium, rare earths) projects showing low CapEx, OpEx and simple process recovery methods
- Management & Insiders hold 21% of the shareholding
- IPG surge recently on good volume and price… US-CHINA trade war is the loop… stay tuned for more volatility in the strategic metals sector!!!
- MI3 target in 2020: $0.25 – $0.50
- Support: S2; $0.06 S1; $ 0.085 Resistance: R1; $0.095 R2; $0.12

About Imperial Mining Group Ltd.

Imperial is a Canadian mineral exploration and development company focused on the advancement of its copper-zinc, gold and technology metals properties 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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