

Australian Government extends a \$2 Billion loan facility for the critical materials industry

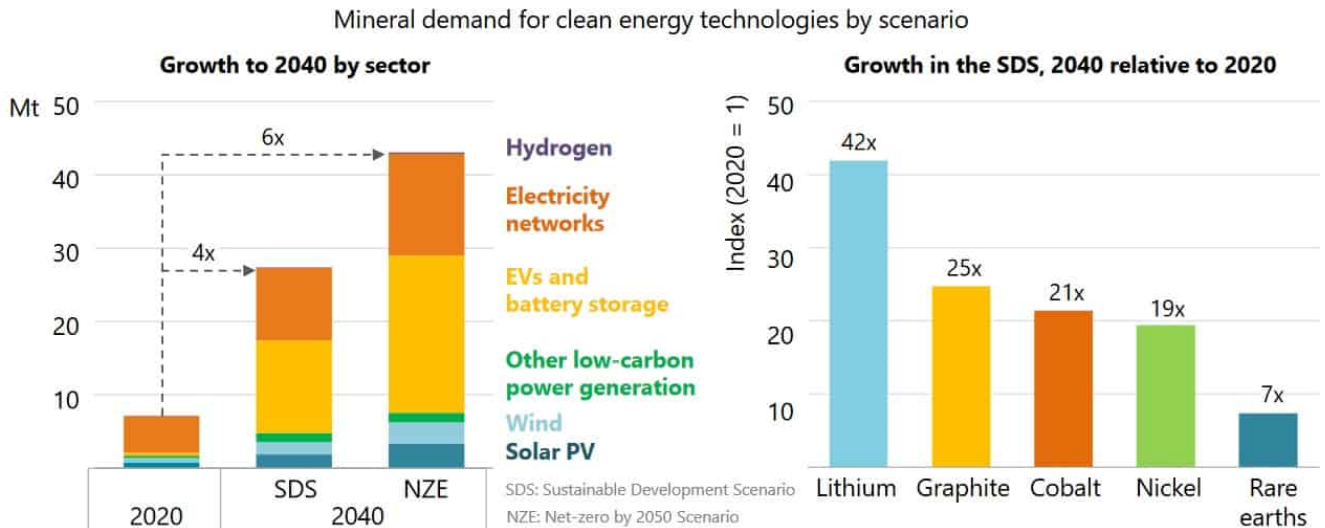
Australia might be a laggard in supporting electric vehicles and reducing greenhouse gases; but the Australian Government is stepping up to support the mining industry via a new policy for 'Australian critical minerals projects'. This is good news for critical mineral junior miners with Australian projects.

You can review the U.S list of 35 critical minerals here. Those of most interest would include lithium, graphite, cobalt, nickel, rare earths, vanadium, tin, manganese, aluminum, uranium, and scandium; as they play a role in the new energy economy of EVs, energy storage, nuclear energy, solar and wind turbine electricity generation.

According to the International Energy Agency (IEA): "A typical electric car requires six times the mineral inputs of a conventional car, and an offshore wind plant requires thirteen times more mineral resources than a similarly sized gas-fired power plant."

IEA forecast demand increase from 2020 to 2040 to reach a sustainable development scenario

Meeting climate goals will turbo-charge demand for minerals



Demand for critical minerals is set to soar over the next two decades as the world pursues net zero goals; overall requirements rise by as much as 6 times, but individual minerals, led by lithium, rise even faster

Source: IEA: The Role of Critical Minerals in Clean Energy Transitions – May 2021

Australian critical minerals projects to receive a A\$2 billion boost

On September 28, 2021 the Australian Government announced:

“(it) will establish a \$2 billion loan facility for Australian critical minerals projects to help secure the vital supplies of resources needed to drive the new energy economy and support the resources jobs of the future.....Australia has among the world’s largest recoverable reserves of the critical minerals used in advanced technologies, such as renewable energy, aerospace, defence, automotive and electric vehicles in particular, telecommunications and agri-tech.....Prime Minister Scott Morrison said the fund would effectively help fill finance gaps in critical minerals resources developments to get them off the ground.....Global demand for critical minerals needed for clean technology applications, like high powered magnets and batteries, are expected to grow exponentially over the coming decades.”

It is probably no coincidence that the Australian Prime

Minister has just returned from a USA trip to secure military defense and other support from the 'Quad alliance' (Quadrilateral Security Dialogue), involving USA, Japan, India and Australia. Whilst in the USA, President Biden would possibly have been pushing for better critical raw materials supply chain from Australia. And voila!

The Australian Government's announcement was rather short on details, but did state:

"The \$2 billion Critical Minerals Facility will be managed by Export Finance Australia and report to the Minister for Trade, Tourism and Investment Dan Tehan. It will operate on the National Interest Account for 10 years or until finance equivalent to \$2 billion has been provided."

Some junior critical miners with Australian projects that could stand to potentially benefit (in alphabetical order)

- Ardea Resources Limited (ASX: ARL) – Kalgoorlie nickel-cobalt project in Western Australia (WA).
- Australian Strategic Materials Limited (ASX: ASM) – The Dubbo rare earths project in NSW, Australia.
- Australian Vanadium Limited (ASX: AVL) – The Australian Vanadium Project in WA, which has Federal Major Project Status.
- Cobalt Blue Holdings Limited (ASX: COB) – Broken Hill Cobalt Project in NSW, Australia.
- Global Energy Metals Corporation (TSXV: GEMC) – Millennial & Mt Isa cobalt-copper-gold Projects in Qld, Australia.
- Havilah Resources Limited (ASX: HAV) – Mutooroo copper-cobalt project and Kalkaroo copper-gold-cobalt project in SA.
- Liontown Resources Limited (ASX: LTR) – Kathleen Valley Lithium Project in WA.
- Magnis Energy Technologies Ltd. (ASX: MNS) – Imperium3 JV lithium-ion battery cell manufacturing project in

Townsville, Qld, Australia.

- Neometals Ltd. (ASX: NMT) – Barrambie titanium and vanadium project in Western Australia. Plus battery recycling technology and lithium extraction technology.
- Sayona Mining Limited (ASX: SYA) – Pilbara lithium assets and the East Kimberley Graphite Project.
- Scandium International Mining Corp. (TSX: SCY) – Nyngan Scandium Project in NSW, Australia. Also, its ion exchange (IX) technology to extract critical materials and its High Purity Alumina, HPA , processing technology.

Closing remarks

With the UN Climate Change Conference (COP26) in Glasgow only a month away (Nov. 1-12, 2021) expect to hear a lot more countries announce progress towards, and updated, emissions targets.

The Australian Government A\$2 billion (~US\$1.44 billion) critical minerals projects' loan facility is a good start but much more will be needed if we are to move to a fully sustainable future and reduce emissions to hit our global emission reduction targets.

At least for now the junior critical miners (Australia based projects) have had a substantial boost and let's hope there is more to come from Australia and other countries to help support the cause.

Disclosure: The author is long ASX: ARL, ASX: AVL, ASX: COB, TSXV: GEMC, ASX: HAV, ASX: MNS, ASX: NMT, TSX: SCY.

Imperial Mining is set to announce a Resource Estimate that will Highlight Significant Grades of Scandium and Related Technology Metals

Imperial Mining Group Ltd. (TSXV: IPG | OTCQB: IMPNF) ("Imperial") is due to shortly release a 43-101 preliminary Resource Estimate for their 100% owned Crater Lake Scandium-Rare Earth Project in northeastern Quebec, Canada. What can investors expect?

The Crater Lake Project consists of 57 contiguous claims covering 27.8km². The Project has ~14 km of potential mineralized horizon (only 1/4 drill tested) spread over several zones, some of which have drill tested high-grade scandium and some rare earths deposits, including and yttrium. There is also potential for niobium and tantalum.

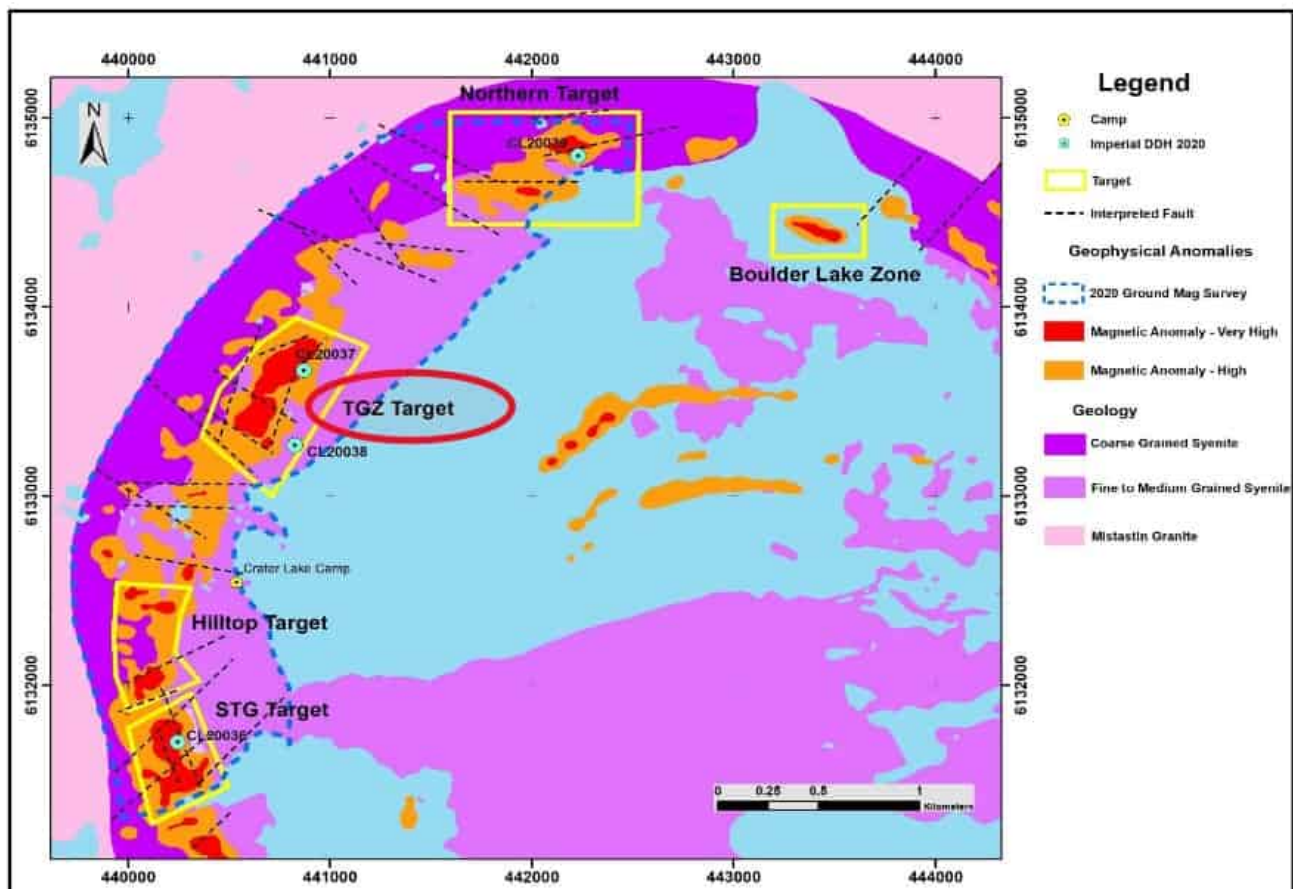
Imperial Mining's Crater Lake location showing excellent infrastructure nearby



- 🏆 Large surface scandium resource inventory
- 🏆 Near Quebec's aluminum metal production/value-add product
- 🏆 Good road, rail, air and hydroelectric capacity
- 🏆 Supported by Plan Nord infrastructure program
- 🏆 New QC critical mineral development fund (\$90M)

Drilling has defined several mineralized zones of over 600m in total strike length and from surface to a vertical depth of up to 200m.

Crater Lake Exploration Targets



Source: Company presentation

Excellent drill results at Crater Lake continue in 2021

Past drilling has shown some excellent long length, high-grade, scandium oxide results ranging from 0.0235% to 0.056% (235-506 g/t).

For example, in April 2021 the Company announced excellent drill results at Crater Lake that included **92.5 m @ 291g/t scandium oxide (Sc_2O_3)**. Elevated levels of total rare earth oxides plus yttrium of up to 0.42% were also found. There is also a parallel niobium target showing grab assay results of between 0.20% and 1.42% Nb₂O₅ which sits 250m west of the scandium target.

Then in May 2021, Imperial announced:

- **“Assay results from the first four drill hole continue to return impressive intercepts of **111.9 m (367.0’)** grading **298 g/t scandium oxide (Sc₂O₃)**, including 40.5 m (132.8’) grading 336 g/t Sc₂O₃ and 34.77 m (114.0’) grading 321 g/t Sc₂O₃.**
- **Elevated levels of total rare earth oxides plus yttrium (TREO+Y) of up to 0.38 %.”**

More recent drill results announced in June 2021 included:

- **“99.8 m (327.3’) grading 299 g/t scandium oxide (Sc₂O₃)**, including 24.2 m (79.4’) grading 331 g/t Sc₂O₃ and 77.3 m (253.5’) grading 313 g/t Sc₂O₃.
- **Elevated levels of total rare earth oxides plus yttrium (TREO+Y) of up to 0.46%** characterize the scandium-bearing intercepts.”

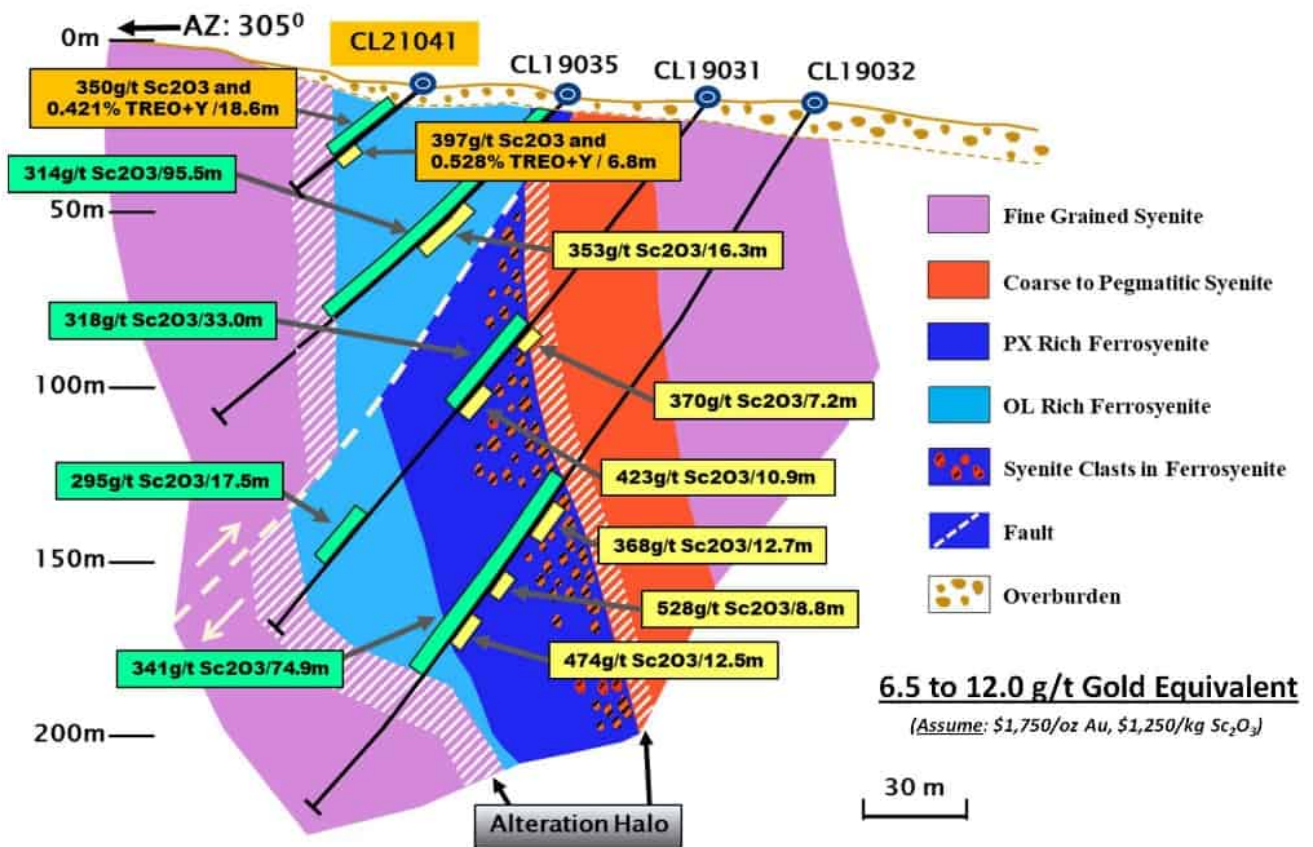
Crater Lakes’ critical minerals mean a 10MT resource can potentially be very valuable

Imperial’s ‘target’ at Crater Lake is to define a scandium-REE mineral resource of a minimum of 10 Mt, sufficient for a 25-year operating model. What some investors miss is that a small relatively shallow resource-rich in valuable metals such as scandium, niobium, and rare earths can be highly valuable. The chart below highlights this by expressing the results as 6.5 to 12.0 g/t ‘gold equivalent’. If Imperial Mining was able to achieve 10MT of ore at say 6.5 g/t Au equivalent (lower range) that would be equivalent to 65 million grams (2.1 million troy ounces) of gold in terms of value. If the grade was in the higher range then the gold equivalent would be almost double. Of course, the 10MT is a ‘target’ and not yet a reality, as we will have to wait to see what the upcoming resource estimate is.

The Crater Lake TG Zone drill results are equivalent to 6.5 to 12.0 g/t gold equivalent



Crater Lake Property - TG Zone Drilling – 500N



Source: Company presentation

Once a resource is grown the other important issue is the extraction method and recovery rates. In June 2021 news Imperial announced that they had developed a “high-recovery extraction process for scandium and rare earth elements for Crater Lake mineralization...as part of its current Phase 3 Hydrometallurgical Development Program.” Scandium extraction was at **84-87%**, and total rare earth elements, including yttrium (TREE+Y) was **84%**. This is excellent news.

Near term stock catalysts

Imperial President & CEO, Peter Cashin, stated in August: “We are now in the final stages of the surface evaluation of our Crater Lake property. In addition to delivering the inaugural 43-101 resource estimation on our TG Zone later this month, we look forward to delivering on the results of the remainder of the targets present on the Crater Lake property. We clearly

believe that much additional critical metal potential remains to be evaluated on our property as we have only drill-tested one-quarter of the favourable 14-km-long mineralized horizon. We also intend to assess a high-grade niobium-tantalum mineralized area identified in 2010, north and northwest of the scandium-bearing Crater Lake Complex.”

Imperial will now embark on a Summer 2021 campaign that will include surface evaluation of additional high priority scandium rare earth exploration targets outside of the drilled TG Zone mineralized area. 50-tonne bulk samples at the STG mineralized Zone will be used in a pilot plant study to further test and optimize Imperial’s metallurgical process method. Next, a detailed assessment of historical high grade rare earth, niobium, tantalum occurrences at the Crater Lake Extension property area will be undertaken. Following this will be a pilot plant study and a Preliminary Economic Assessment.

Closing remarks

Imperial Mining trades on a market cap of a mere C\$20 million. Considering the outstanding drill results over the past year, outstanding hydromet recovery rates achieved to date, and the impending 43-101 preliminary Resource Estimate due out any day now the stock looks likely to be potentially re-rated higher soon. Don’t wait too long!

Jack Lifton with Vital Metals’ Geoff Atkinson on the

commencement of rare earths production in NA

In a recent InvestorIntel interview, Jack Lifton speaks with Geoff Atkins, Managing Director of Vital Metals Limited (ASX: VML) about Vital's recent milestones including the commencement of rare earths production and acquisition of two heavy rare earths projects in Canada.

In this InvestorIntel interview, which may also be viewed on YouTube (click here to subscribe to the InvestorIntel Channel), Geoff went on to say that the heavy rare earths projects will complement Vital's light rare earths operations at Nechalacho making them "one-stop-shop for rare earths." As Canada's first producer of rare earths, Geoff told InvestorIntel that Vital Metals is fully funded and discussed how it is well-positioned to be a strategic player in the North American rare earths supply chain at a time when demand continues to grow.

To watch the full interview, click here

About Vital Metals Limited

Vital Metals Limited is an explorer and developer focussing on rare earths, technology metals, and gold projects. Their projects are located across a range of jurisdictions in Canada, Africa and Germany.

Nechalacho Rare Earth Project – Canada

The Nechalacho project is a high-grade, light rare earth (bastnaesite) project located at Nechalacho in the Northwest Territories of Canada and has potential for a start-up operation exploiting high-grade, easily accessible near-surface mineralization. The Nechalacho Rare Earth Project hosts within the Upper Zone, a measured, indicated, and

inferred JORC Resource of 94MT at 1.46% TREO.

To learn more about Vital Metals Limited, [click here](#)

Disclaimer: *Vital Metals Limited is an advertorial member of InvestorIntel Corp.*

This interview, which was produced by InvestorIntel Corp. (IIC) does not contain, nor does it purport to contain, a summary of all the material information concerning the "Company" being interviewed. IIC offers no representations or warranties that any of the information contained in this interview is accurate or complete.

This presentation may contain "forward-looking statements" within the meaning of applicable Canadian securities legislation. Forward-looking statements are based on the opinions and assumptions of management of the Company as of the date made. They are inherently susceptible to uncertainty and other factors that could cause actual events/results to differ materially from these forward-looking statements. Additional risks and uncertainties, including those that the Company does not know about now or that it currently deems immaterial, may also adversely affect the Company's business or any investment therein.

Any projections given are principally intended for use as objectives and are not intended, and should not be taken, as assurances that the projected results will be obtained by the Company. The assumptions used may not prove to be accurate and a potential decline in the Company's financial condition or results of operations may negatively impact the value of its securities. Prospective investors are urged to review the Company's profile on Sedar.com and to carry out independent investigations in order to determine their interest in investing in the Company.

If you have any questions surrounding the content of this interview, please email info@investorintel.com.

With recent moves in the USA towards supporting key critical mining projects, will NioCorp Developments make the list?

Critical metals scandium, titanium, and niobium are all doing well as global demand for metals remains robust in 2021. In May 2018, the U.S Interior Department moved to include niobium, scandium, and titanium onto its list of critical minerals. These three critical metals have targeted applications in clean energy, aerospace/commercial aviation, defense, and automotive. Generally speaking, they are used to lighten and strengthen alloys. For example, scandium is a key lightweighting metal used in aluminum alloys as well as in fuel cells. Niobium is used to strengthen stainless steel. Titanium is very well known for its strength-to-weight ratio, as it is as strong as steel but weighs about half as much.

As we move to a world of electric vehicles (EVs), lightweighting is a key component to improve performance and range. For example, \$9 of niobium added to a mid-sized car reduces weight by 100kg, increasing fuel efficiency by 5%. \$1-1.5 million of scandium in a single airliner offers >\$9 million of net present value in fuel savings. (source)

Niobium and scandium uses

Niobium and Scandium are Key Enablers of Sustainability

 <p>Growing demand for lighter-weight and more fuel efficient cars, trucks, and buses</p>	 <p>Increasing focus on lighter-weight and more fuel efficient commercial jetliners</p>	 <p>Emphasis on stronger and lighter steels for buildings and infrastructure mega-projects</p>	 <p>Global adoption of increasingly tighter air quality and greenhouse gas standards</p>	 <p>Higher spending on defense systems that use NioCorp's superalloy materials</p>	 <p>Ever-growing deployment of clean energy systems such as Solid Oxide Fuel Cells</p>
 <p>\$9 of Niobium added to a mid-sized car reduces weight by 100kg, increasing fuel efficiency by 5%.¹</p>	 <p>\$1-1.5 million of scandium in a single airliner offers >\$9 million of net present value in fuel savings.²</p>	 <p>0.025% Niobium in the steel of the Millau Viaduct bridge reduced the weight of steel and concrete by 60% in the overall project.³</p>	 <p>Both Niobium and Scandium increase fuel economy in surface transportation and in aerospace, reducing air emissions.</p>	 <p>Niobium, Scandium, and Titanium are all vital to the performance of a variety of high-performance defense systems.</p>	 <p>Scandium helps solid oxide fuel cells achieve unmatched reliability in mission-critical power supply markets.⁴</p>

Today we take a look at a USA based junior miner that has all three of these valuable critical elements.

NioCorp Developments Ltd (TSX: NB | OTCQX: NIOBF) (“NioCorp”) is developing North America’s only niobium, scandium, titanium, rare earths elements project, located near Elk Creek, Nebraska, USA. The Elk Creek Superalloy Materials Project is the highest grade niobium project in North America, as well as the largest prospective producer of scandium in the world. The Project is a large underground hard-rock deposit containing an estimated 250,000 tons of niobium pentoxide, 2,300 tons of scandium, and 891,000 tons of titanium dioxide. There are also some rare earths, as discussed later.

Some reasons why NioCorp’s Elk Creek Superalloy Materials Project is unique:

- A pure-play critical minerals and rare earths element company.
- All of NioCorp’s planned products have been designated as “critical minerals” by the U.S. government.
- Tier one project location in Nebraska, USA.
- The Project enjoys strong community, as well as state and local government support.

- Strong focus on sustainability and ESG principles.
- Large resource with a 36-year long mine life.
- Feasibility Study – Post-tax NPV of US\$1.7 billion, post-tax IRR of 21.7%, initial CapEx US\$1 billion.
- Much of the planned production in the first 10 years is pre-sold.
- 100% of the Project's projected FeNb production in the first 10 years is under sales contract or Letter of Intent, and 12% of its projected scandium is under sales contract.
- All permits needed to start construction have been secured.
- The NioCorp Board and management team have more than 200 years of collective experience in minerals development.

All that is left to do is for NioCorp to raise the project funding. Given the recent moves in the USA towards supporting key critical mining projects, it is hoped that soon NioCorp can be a beneficiary.

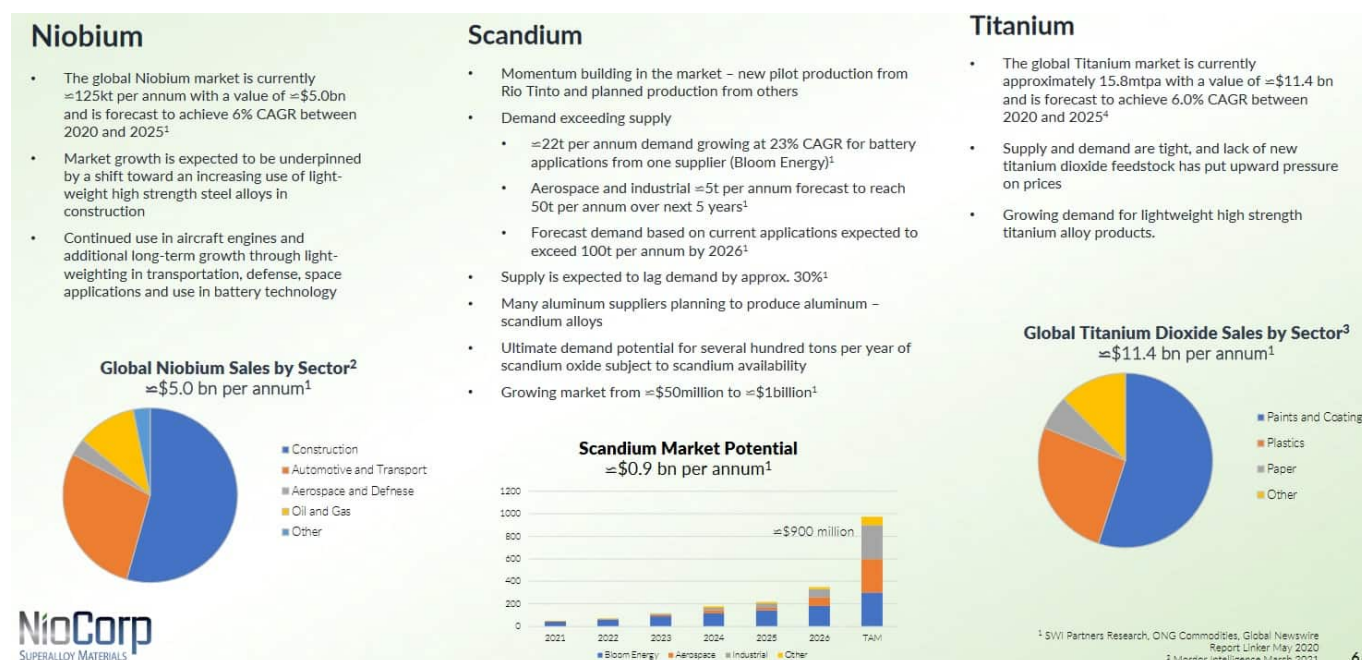
NioCorp recently raised C\$6.2 million, extended their land at Elk Creek, and works on recovering rare earths

Regarding the C\$6.2 million raise, NioCorp stated: "Proceeds of the private placement will be used for continued advancement of the Company's Elk Creek Superalloy Materials Project, including ongoing detailed engineering efforts, conducting technical assessments of potentially adding rare earth products to the planned product offering, and for working capital and general corporate purposes."

NioCorp now owns the surface land on which the Elk Creek Project's mine infrastructure and support operations will be located. Ownership of the land also gives NioCorp ownership of the mineral rights to more than 90% of the Project's Mineral Resource and Mineral Reserve. The purchase price was approximately \$6.2 million.

In other recent news, NioCorp is working on enhancing their metallurgical processes to potentially also recover rare earth oxides. NoCorp stated: “The Company is currently evaluating next steps in its overall metallurgical test work program, which will focus on optimizing and streamlining the existing processing flowsheet as well as establishing process routes for the potential recovery of rare earth products. The rare earth products that are of most interest to the Company at present are Neodymium-Praseodymium (“NdPr”) oxide, Terbium oxide and Dysprosium oxide.”

The niobium, scandium, and titanium markets summary



Source: NioCorp company presentation

Closing remarks

NioCorp is now an advanced stage critical metals developer, located in Nebraska USA. Their Elk Creek Superalloy Materials Project contains economically viable niobium, scandium, titanium, and potentially some rare earths.

A strong Feasibility Study has been produced, all permits to construction are in place, and the project now awaits funding. As a sign of support for the project, Nebraska Governor Pete

Ricketts nominated the Project as a “National High-Priority Infrastructure” Project to the White House.

NioCorp Developments trades on a market cap of C\$333 million (US\$269 million) and is well worth following.

Jack Lifton with JC Potvin of Murchison Minerals on the green energy revolution

In a recent InvestorIntel interview, Jack Lifton speaks with Jean-Charles (“JC”) Potvin, President, CEO, and Chairman of Murchison Minerals Ltd. (TSXV: MUR) about Murchison’s latest news about locating a large and highly prospective geophysical anomaly near its high-grade Brabant-McKenzie Zinc-Copper-Silver deposit.

In this InvestorIntel interview, which may also be viewed on YouTube (click here to subscribe to the InvestorIntel Channel), JC provides an update on Murchison’s portfolio of high-grade zinc-copper-silver-cobalt deposits located in the top-ranked mining jurisdictions in the world. With experienced management and board with a proven success record, Murchison has positioned itself as a key mining player in the green energy revolution with advanced projects that provide exposure to critical minerals including Cobalt, Copper, Nickel, Graphite, and Zinc. In the interview, Jack highlighted the deficit in the copper supply driven by its demand in alternate energy, electric vehicles, and China which now consumes 60% of the world’s copper.

To watch the full interview, click here

About Murchison Minerals Ltd.

Murchison is a Canadian-based exploration company focused on the exploration and development of the 100% owned Brabant Lake zinc-copper-silver project in north-central Saskatchewan. The Company also own 100% of the HPM nickel-copper-cobalt project in Quebec and holds an option to earn 100% interest in the Barraute VMS exploration project also located in Quebec, north of Val d'Or. Murchison currently has 108.9 million shares issued and outstanding.

To learn more about Murchison Minerals Ltd. [click here](#)

Disclaimer: Murchison Minerals Ltd. is an advertorial member of InvestorIntel Corp.

This interview, which was produced by InvestorIntel Corp. (IIC) does not contain, nor does it purport to contain, a summary of all the material information concerning the "Company" being interviewed. IIC offers no representations or warranties that any of the information contained in this interview is accurate or complete.

This presentation may contain "forward-looking statements" within the meaning of applicable Canadian securities legislation. Forward-looking statements are based on the opinions and assumptions of management of the Company as of the date made. They are inherently susceptible to uncertainty and other factors that could cause actual events/results to differ materially from these forward-looking statements. Additional risks and uncertainties, including those that the Company does not know about now or that it currently deems immaterial, may also adversely affect the Company's business or any investment therein.

Any projections given are principally intended for use as objectives and are not intended, and should not be taken, as assurances that the projected results will be obtained by the Company. The assumptions used may not prove to be

accurate and a potential decline in the Company's financial condition or results of operations may negatively impact the value of its securities. Prospective investors are urged to review the Company's profile on www.Sedar.com and to carry out independent investigations in order to determine their interest in investing in the Company.

If you have any questions surrounding the content of this interview, please email info@investorintel.com.

Pini Althaus on USA Rare Earth's \$50M Series C Funding to acquire rare earths and lithium project in Texas

In a recent InvestorIntel interview, Jack Lifton speaks with Pini Althaus, CEO and Director of USA Rare Earth, LLC about USA Rare Earth's progress towards production at its Round Top heavy rare earths, lithium and critical minerals project in Texas.

In this InvestorIntel interview, which may also be viewed on YouTube ([click here to subscribe to the InvestorIntel Channel](#)), Jack pointed out that the markets for lithium and rare earths are entering a bull market because of the lack of supply to satisfy demand. Pini went on to say that with the ever-increasing demand for rare earths in the US, "USA Rare Earths is in discussion with a number of companies around the world to source feedstock to separate rare earths and then provide those materials into the US supply chain." USA Rare Earth recently exercised options to acquire 80% of Round Top

Project and completed Series C Funding round of \$50 million making it fully funded through the completion of the Definitive Feasibility Study. The company expects to produce separated materials at the demonstration plant at its Round Top Project later this year leading to full-scale commercial production in 2023.

To watch the full interview, [click here](#)

About USA Rare Earth, LLC

USA Rare Earth, LLC owns an 80% operating joint venture interest in the Round Top Heavy Rare Earth and Critical Minerals Project located in Hudspeth County, West Texas. Round Top hosts a wide range of critical heavy rare earth elements, high-tech metals, including lithium, gallium, zirconium, hafnium and beryllium. Based on the Preliminary Economic Assessment (dated August 16, 2019) projects a pre-tax net present value using a 10% discount rate of \$1.56 billion based on a 20-year mine plan that is only 13% of the identified measured, indicated and inferred resources. The PEA estimates an internal rate of return of 70% and average annual net revenues of \$395 million a year after average royalties of \$26 million a year payable to the State of Texas. Based on the cost estimates set forth in the PEA, Round Top would be one of the lowest-cost rare earth producers, and one of the lowest cost lithium producers in the world. The Round Top Deposit hosts 16 of the 17 rare earth elements, plus other high-value tech minerals (including lithium), including 13 of the 35 minerals deemed "critical" by the Department of the Interior and contains critical elements required by the United States, both for national defense and industry. Round Top is well located to serve the US internal demand. In excess of 60% of materials at Round Top are expected to be used directly in green or renewable energy technologies. In 2020 USA Rare Earth opened a rare earth and critical minerals processing facility in Wheat Ridge, Colorado and in April 2020 USA Rare Earth acquired the neodymium iron boron (NdFeB) permanent magnet

manufacturing system formerly owned and operated in North Carolina by Hitachi Metals America, Ltd.

To know more about USA Rare Earth, LLC [click here](#)

Disclaimer: USA Rare Earth, LLC is an advertorial member of InvestorIntel Corp.

This interview, which was produced by InvestorIntel Corp. (IIC) does not contain, nor does it purport to contain, a summary of all the material information concerning the "Company" being interviewed. IIC offers no representations or warranties that any of the information contained in this interview is accurate or complete.

This presentation may contain "forward-looking statements" within the meaning of applicable Canadian securities legislation. Forward-looking statements are based on the opinions and assumptions of management of the Company as of the date made. They are inherently susceptible to uncertainty and other factors that could cause actual events/results to differ materially from these forward-looking statements. Additional risks and uncertainties, including those that the Company does not know about now or that it currently deems immaterial, may also adversely affect the Company's business or any investment therein.

Any projections given are principally intended for use as objectives and are not intended, and should not be taken, as assurances that the projected results will be obtained by the Company. The assumptions used may not prove to be accurate and a potential decline in the Company's financial condition or results of operations may negatively impact the value of its securities. Prospective investors are urged to review the Company's profile on www.Sedar.com and to carry out independent investigations in order to determine their interest in investing in the Company.

If you have any questions surrounding the content of this

interview, please email info@investorintel.com.

Appia Increases Bought Deal Financing as it Ramps Up Rare Earths Drill Program

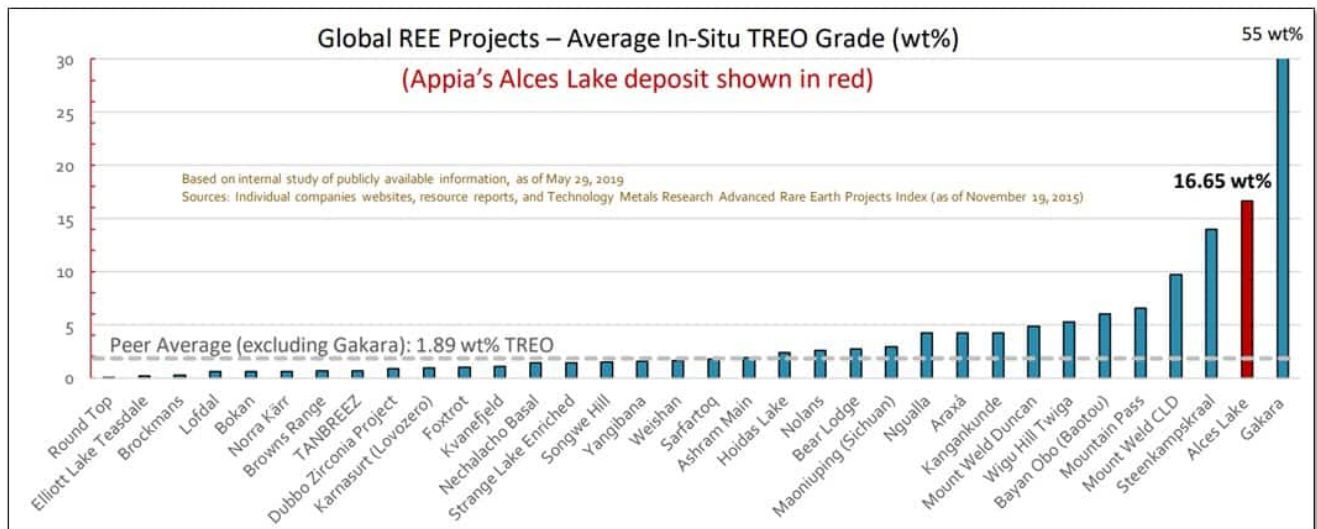
Appia Energy Corp. (CSE: API | OTCQB: APAAF) announced upsizing its previously announced bought-deal financing to \$5 million that it expects to close later this month.

Appia plans to use part of the proceeds on a multi-million dollar summer exploration program on its Alces Lake property, which includes at least 5,000 meters of drilling and property-wide geophysical work. It also aims to upgrade the camp for winter use and access to extend the drilling season.

Appia is a Canadian-based mineral exploration company targeting the rare earth element (REE) and uranium sectors. The Company is currently focusing on delineating REE and uranium targets on its Alces Lake property, and plans to change its name to Appia Rare Earths & Uranium Corp.

The Alces Lake property is located in the Athabasca Basin of northern Saskatchewan, almost 30 kilometers northeast of Uranium City, which is a major centre in the area with good infrastructure including hydroelectric power, an airstrip, and an ice road connection.

The REE assays are reported as Total Rare Earth Oxides (TREO) and the Alces Lake property hosts some of the highest REE grades in the world and the second-highest average grade at 16.65% TREO.



SOURCE:

Re-analyzing Previous Samples Confirm Gallium Mineralization

Since 2016, Appia has been working on the Alces Lake project and focused on uranium and the critical rare earth elements (CREE) including neodymium (Nd), praseodymium (Pr), dysprosium (Dy), and terbium (Tb).

Recently, Appia re-analyzed some historical samples with high-grade rare earth oxide (REO) results to determine the extent of gallium mineralization over the property and the correlation between REO and gallium.

The results returned gallium concentrations ranging from 0.01% to 0.104% Ga_2O_3 and a positive linear correlation between gallium and REO.

According to the Company, gallium is considered high-grade when the weight percentage Ga_2O_3 is greater than 0.010% and the combination of the high-grade REO system and gallium gives it the potential of becoming a world-class asset for critical metals.

Frederick Kozak, Appia's President, commented, "The gallium concentrations on the Property are remarkable. Gallium was found in naturally occurring high-concentrations on the

Property that far exceed current concentrations required for global production of gallium.”

Gallium is primarily used in electronics, semiconductors, and light-emitting diodes (LEDs) as it is able to turn electricity into light.

In March, the current price of high-grade gallium metal (99.99%) was US\$376.71/kg compared to Nd at US\$105/kg, Pr at US\$74.95/kg, Dy at US\$424.95/kg, and Tb at US\$1,468.02/kg. Being able to recover gallium would increase the ore value to Appia.

Targeting Ore from Deposit in Next 24 Months

Appia’s Alces Lake property has the REE hosted in coarse-grained monazite that is exposed at the surface in high-grade outcrops, making it economic to extract.

Monazite processing for REE extraction has a long history of economic viability and was started in the 1950s at the Steenkampskraal Mine in South Africa.

The company is following a low capital pathway to initial production by focusing on the potential of bulk mining the surface mineralization akin to a gravel pit operation and believes it could start production as early as 2023.

Appia would then use gravity and magnetic separation to create a concentrate to ship to a third-party plant and extraction facility for further processing.



SOURCE:

Leveraging SRC's Rare Earth Facility

In August 2020, the Saskatchewan government announced C\$31 million in funding for a Rare Earths processing facility in Saskatoon that will be owned and operated by the Saskatchewan Research Council (SRC).

The SRC facility will be the first-of-its-kind in Canada and will establish an REE supply chain in Saskatchewan.

In February, Appia announced that bench-scale monazite processing and metallurgical testing had started at the SRC facility using sample materials from Appia's Alces Lake property and SRC's current Separation Pilot Plant.

The goal of the test is to process monazite-bearing rocks from the property to determine the ease of metallurgical processing and recovery of REE end products.

The testing results will be a factor in determining the economic viability of the project and are expected to take at least three months before a report is issued by SRC to Appia.

REE Solvent Extraction Process at the SRC Facility in Saskatoon, Saskatchewan



SOURCE:

Shifting Towards a Green Economy

North American and European economies are focused on developing more environmentally friendly (“green”) economies by shifting to low-carbon power generation and renewable energy, including solar and wind, as well as the swing from fossil fuel to electric vehicles. REE play a critical role in these industries.

Last year, the governments of Ontario and Canada announced plans to each spend C\$295 million to help Ford upgrade its assembly plant in Oakville, Ontario to start making electric vehicles.

But it is not just the green economy that requires these metals, they are critical in specialized alloys and magnets

for airplanes, computer and military systems, high-speed transit, and satellites. A secure supply chain has become of strategic importance.

Governments Focusing on Critical Metals that Include REE

According to the Center for Strategic and International Studies, China produced approximately 85% of the world's rare earth oxides and 90% of rare earth metals, alloys, and permanent magnets in 2019. This dominance is a concern for other governments and businesses that want to ensure a stable supply of critical metals.

In 2018, the U.S. Secretary of the Interior published a list of 35 critical minerals or mineral material groups and voiced their concerns about their dependence on imports to meet the demand and supply chain risk due to the source concentration of just one or two countries.

The U.S. Defense Logistics Agency, a combat support agency in the U.S. Department of Defense that manages the global supply chain, currently stores 42 commodities, including chromium, cobalt, iridium, palladium, platinum, and zinc, with a current market value of over \$1.1 billion.

In March, the rare earth's and critical minerals sectors received another boost as the Canadian government unveiled its "Critical Minerals" list that included 31 minerals the government considers *"essential to Canada's economic security, required for Canada's transition to a low-carbon economy, and a sustainable source of critical minerals for our partners."*

The mineral list was comprised of base metals, battery metals, energy metals, and other elements, including aluminum, cobalt, copper, gallium, lithium, nickel, niobium, REE, uranium, and zinc.

The government of Canada wants Canadian mining to become a global leader and supplier of choice and plans to support

Canadian critical mineral projects with policy development, coordinate international engagements, and strengthen research & development in the sector.

Canada's list reaffirms its alignment with the U.S. on its list of "Minerals Deemed Critical to U.S. National Security and the Economy" and Canada's commitment to a "critical minerals" cooperation agreement that was initiated in 2019 and currently in the working-group phase.

Final thoughts

Appia's planned financing should strengthen its Balance Sheet and fund its exploration plans for 2021.

In addition, Appia is not a one-trick pony as it holds exploration rights to 656 square km (162,104 acres) in Saskatchewan, including the Alces Lake, Eastside, Loranger, and North Wollaston properties, and over 125 square km (31,000 acres) of prospective REE and uranium deposits in the Elliot Lake area of Ontario.

If you think it's time to add some REE exposure to your portfolio, Appia might be a candidate to add to your watchlist.

Appia closed yesterday at C\$0.65 with a Market Cap of C\$63.4 million.