THE ELK CREEK CRITICAL MINERALS PROJECT

Enabling the green economy through secure, environmentally responsible supply of Critical Minerals

July 2022

Cautionary Notes & Technical Disclosures

Certain statements contained in this document may constitute forward-looking statements, including but not limited to statements regarding the Company's ability to secure sufficient project financing to complete construction and commence operation of the Project; the Company's expectation and ability to produce niobium, scandium, titanium and rare earth products at the Project; the outcome of current recovery process improvement testing, and the Company's expectation that such process improvements could lead to greater efficiencies and cost savings in the Project; the Company's expectation to emerge as a producer of magnetic rare earth metals; the potential for the Company's REEs to be mined; the Company's expectation to produce a fuller technical report assessing the feasibility of REE production; the Elk Creek Project's ability to produce multiple critical metals; the Elk Creek Project's projected ore production and mining operations over its expected mine life; and the Company's ongoing evaluation of the impact of inflation, supply chain issues and geopolitical unrest on the Elk Creek Project's economic model. Such forward-looking statements are based on estimates and assumptions made by the Company in light of its experience and its perception of historical trends, current conditions and expected future developments, as well as other factors that the Company believes are appropriate in the circumstances. Readers are cautioned that such forward-looking statements involve known and unknown risks, uncertainties, and other factors that may cause a change in such forward-looking statements and the actual outcomes and estimates to be materially different from those estimated or anticipated future results, achievements, or position expressed or implied by those forward-looking statements. Risks, uncertainties, and other factors that could cause NioCorp's plans or prospects to change include risks related to NioCorp's ability to operate as a going concern; risks related to NioCorp's requirement of significant additional capital; risks related to feasibility study results; changes in demand for and price of commodities (such as fuel and electricity) and currencies; changes or disruptions in the securities markets; legislative, political or economic developments; the need to obtain permits and comply with laws and regulations and other regulatory requirements; the possibility that actual results of work may differ from projections/expectations or may not realize the perceived potential of NioCorp's projects; risks of accidents, equipment breakdowns, and labor disputes or other unanticipated difficulties or interruptions; the possibility of cost overruns or unanticipated expenses in development programs; operating or technical difficulties in connection with exploration, mining, or development activities; the speculative nature of mineral exploration and development, including the risks of diminishing quantities of grades of reserves and resources; the risks involved in the exploration, development, and mining business, and the risks set forth in the Company's filings with Canadian securities regulators at www.sedar.com and the SEC at www.sec.gov. NioCorp disclaims any intention or obligation to update or revise any forward-looking statements whether as a result of new information, future events or otherwise.

Qualified Persons: The following Qualified Persons as defined by National Instrument 43-101, have reviewed, and approved the technical information and verified the data contained in this presentation, which are derived from NioCorp's 2022 Feasibility Study: Mineral Resource: Matthew Batty, P.Geo, Owner, Understood Mineral Resources Ltd.; Mineral Reserve: Richard Jundis, P. Eng, Director of Mining, Optimize Group; all other technical information: Scott Honan, M.Sc., SME-RM, of NioCorp Developments Ltd.

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U.S. Energy Transition Questions

1. Can the U.S. transition to a new energy economy without increased domestic mining?

2. Can new mining projects be designed to have truly minimal environmental impacts?

3. Can a greenfield mine result in negative net GHG emissions?

4. What can government do to facilitate the above three outcomes?

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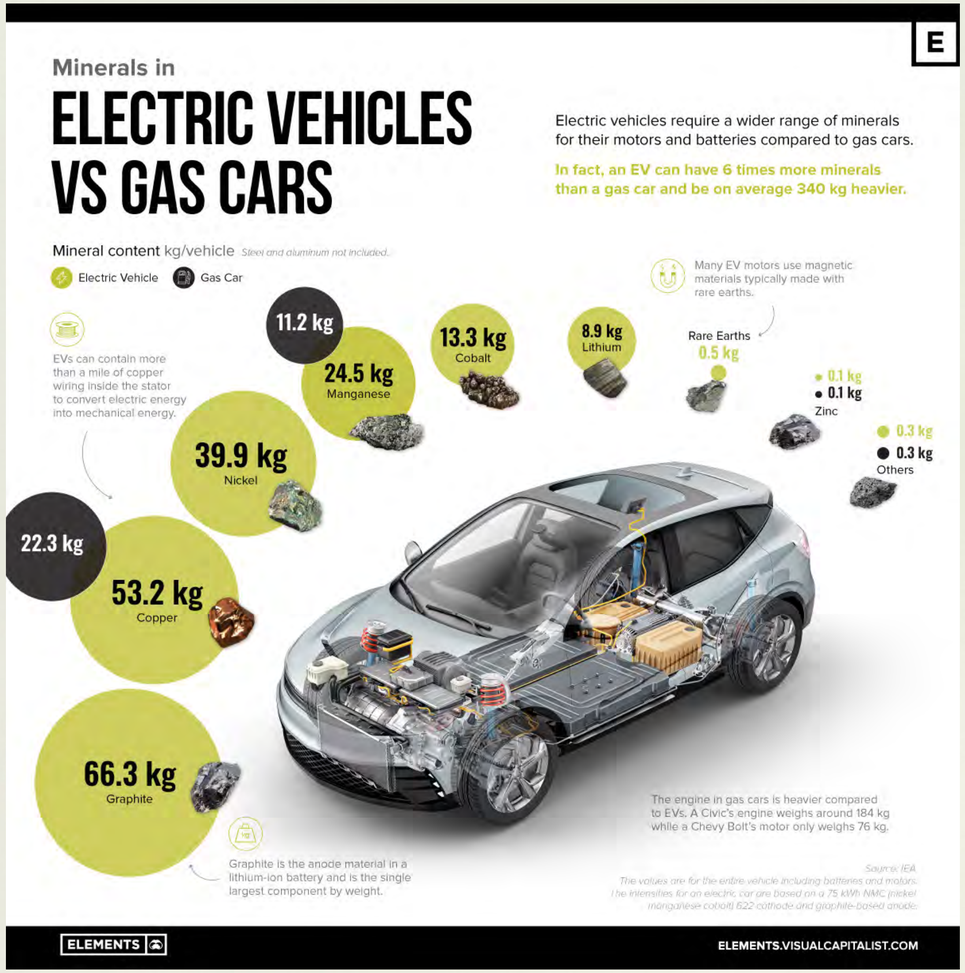
Critical Metals Needed for America's Energy Transition



Source: Elements

Commodity	Net Import Reliance (%)
ARSENIC (AsO_3)	100
CESIUM	100
FLUORSPAR	100
GALLIUM	100
GRAPHITE (natural)	100
INDIUM	100
MANGANESE	100
NIOBIUM	100
RARE EARTHS	100
RUBIDIUM	100
SCANDIUM	100
STRONTIUM	100
TANTALUM	100
VANADIUM	100
BISMUTH	96
URANIUM (U_3O_8 equivalent)[e, 2]	93
POTASH (K_2O equivalent)	92
TITANIUM MINERAL CONCENTRATES (TiO_2 content)[3]	91
ANTIMONY	85
RHENIUM	80
BARITE	>75
BAUXITE	>75
TELLURIUM	>75
TIN	75
COBALT	72
CHROMIUM	69
PLATINUM-GROUP METALS	57
TITANIUM (sponge metal)[3]	53
GERMANIUM	>50
HAFNIUM	>50
LITHIUM	>50
TUNGSTEN	>50
ZIRCONIUM MINERAL CONCENTRATES (ZrO_2 content)[3]	<50
ZIRCONIUM[4]	<50
MAGNESIUM METAL	<25
BERYLLIUM	14
HELIUM (reported in million cubic meters of He)[4]	Net exporter

[e]Estimated. NA Not available. Source: U.S. Geological Survey, Minerals Commodity Summaries 2018 and imports combined data from other countries that are not listed. [2]Source: U.S. Energy Information Administration, Uranium September 11, 2018, via https://www.eia.gov/uranium/marketing/ and https://www.eia.gov/uranium/production/anr import sources. [4]The United States exports more helium than it imports. 95% of U.S. imports are from Qatar. Heli

Source: USGS

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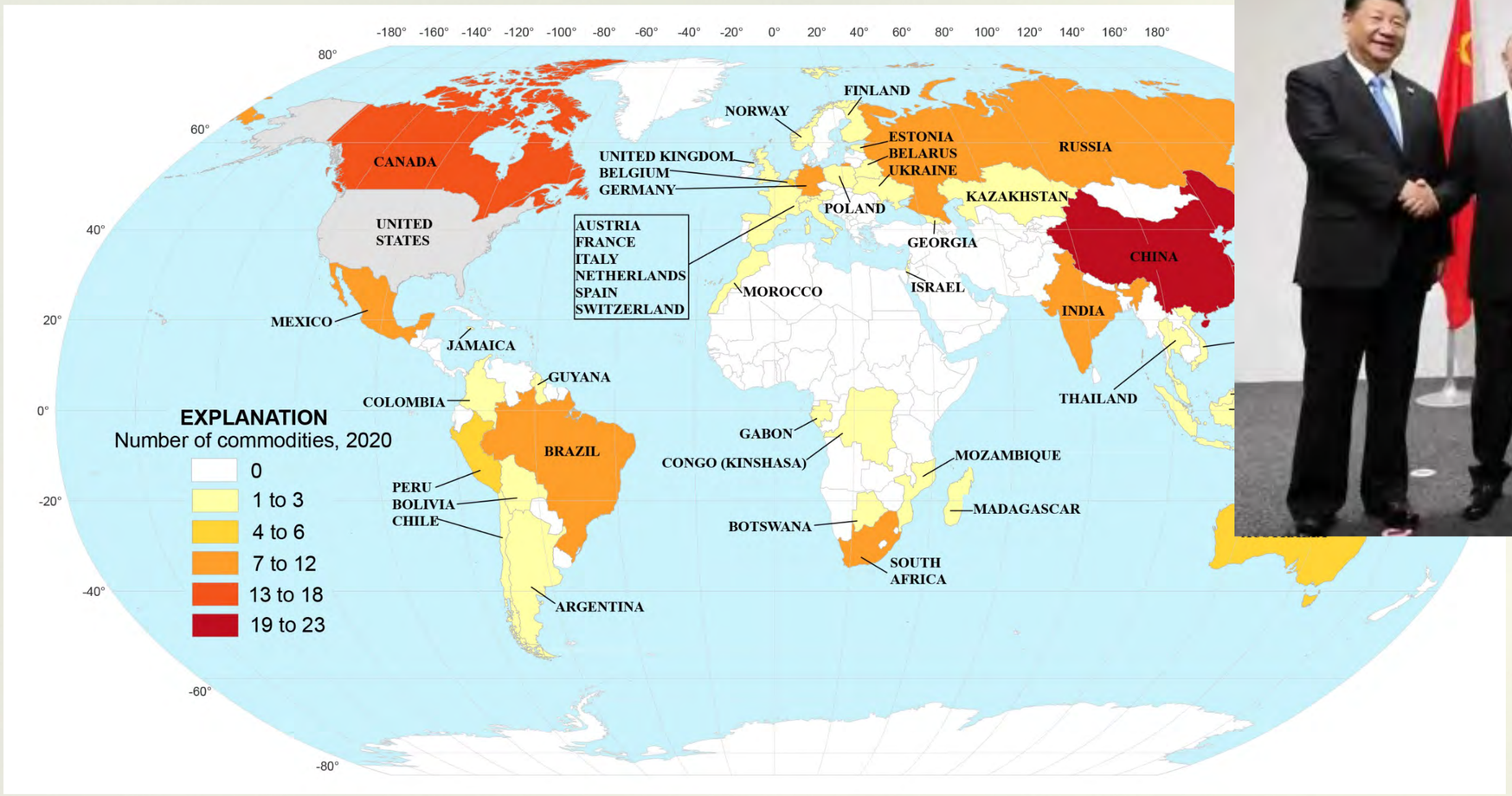
Critical Metals Needed for America's Energy Transition



Dominance of BRICS nations:
Brazil, Russia, India, China, South Africa

Source: USGS

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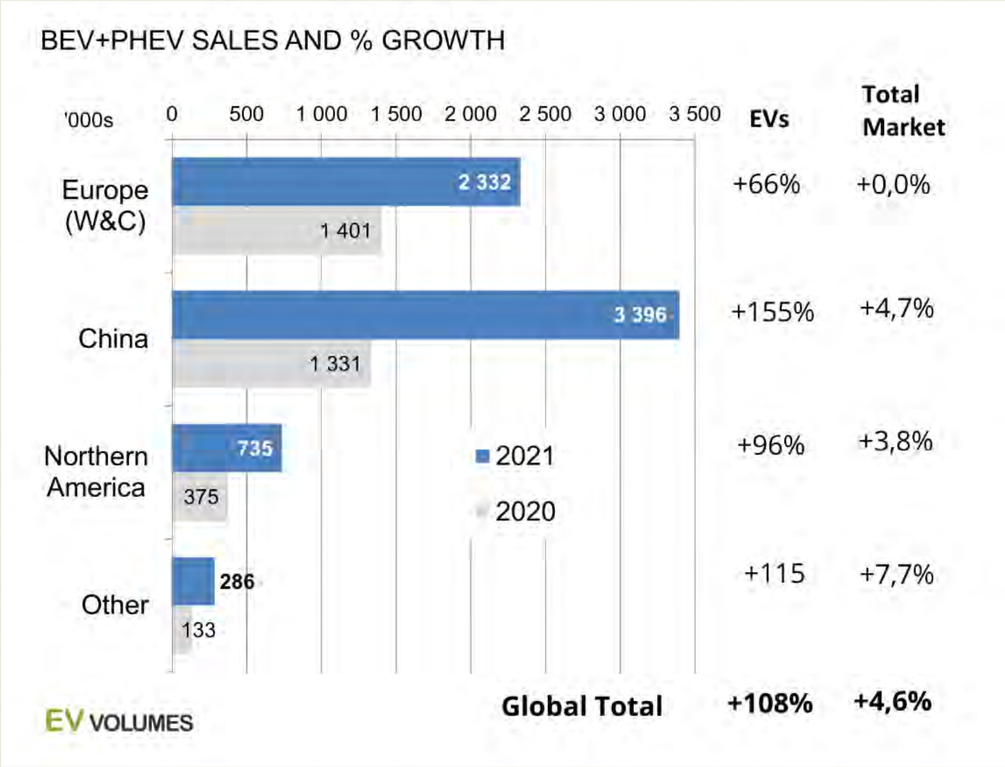
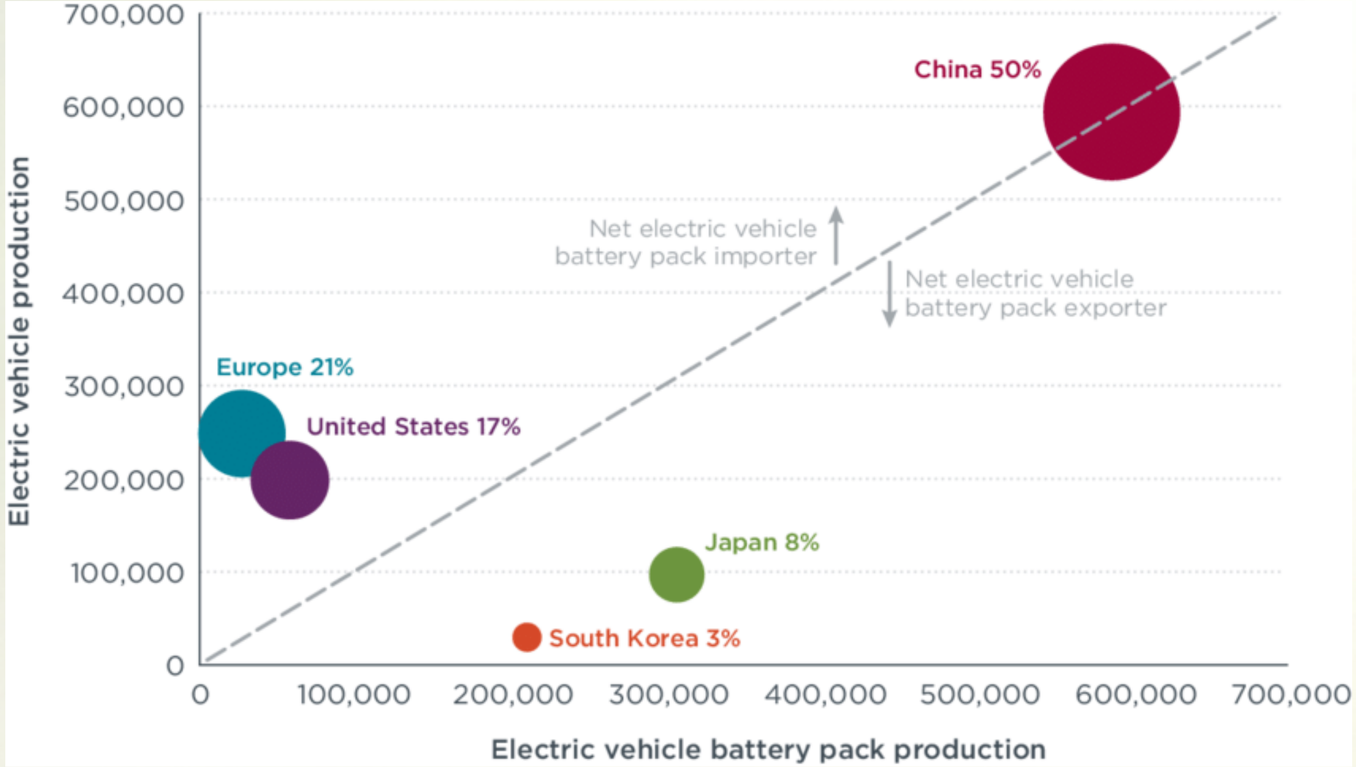
U.S. Goal: 50% EV Market Share by 2030



Source: EV Volumes



Source: Research Gate

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A Pure-Play Critical Minerals Project and the Second-Largest Rare Earth Resource in the U.S.[1]

A pure-play critical minerals project with the highest-grade Niobium deposit under development in N.A., large-scale production of Scandium, and the second-largest indicated-or-better rare earth resource in the U.S.[1]

A feasibility-level NI-43-101 Technical Report completed with attractive economic returns.[2]

Large resource with a 38-year mine life.[2] 75% of planned Niobium production in the 1st 10 years has been pre-sold, and 12% of planned Scandium production in the 1st 10 years has been pre-sold.

Highly experienced Board of Directors and management team, with >200 years of collective experience in minerals development, including commercial-scale production of separated rare earths.

Project is guided by the Equator Principles ESG framework and incorporates recycling, water conservation, and many other sustainability strategies. It also presents a large Scope 3 GHG reductions potential.

All key federal, state, and local permits secured to allow start of construction. Project is sited on private land with agreements in place with local landowners. NioCorp owns the primary land parcel.

Strong support from local communities and state and local government, including state tax relief valued as much as $200 million over 10 years.

A secure critical minerals project that is shovel-ready.

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[1] *Indicated or better mineral resource. Based on data from the "Critical Mineral Resources of the United States—Economic and Environmental Geology and Prospects for Future Supply," U.S. Geological Survey, 2017.*
[2] *Based on Feasibility Study Update first announced on May 18, 2022.*

Niobium, Scandium and Rare Earths are Key to Infrastructure & NextGen Transportation

Growing demand for lighter-weight and more fuel efficient cars, trucks, and buses

$9 of Niobium added to a mid-sized car reduces weight by 100kg, increasing fuel efficiency by 5%.[1]

Increasing focus on lighter-weight and more fuel efficient commercial jetliners

$1-1.5 million of scandium in a single airliner offers approximately $21-$27 million of net present value in fuel savings.[2]

Stronger and lighter steels for buildings and infrastructure mega-projects

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]

Global adoption of increasingly tighter air quality and GHG standards

Niobium, Scandium, and REEs increase fuel economy in vehicles and aerospace. Nb, Ti, and Sc also have large potential uses in solid-state Lithium-ion batteries.

Higher spending on defense systems that use NioCorp's critical minerals

Niobium, Scandium, Titanium and REEs are all vital to the performance of a variety of high-performance defense systems.

Growing demand for EVs and other tech that use REE magnets to reduce GHG emissions.

Demand for magnetic rare earths is expected to grow by more than 150% from 2020 to 2030[4]

The global green economy will require these critical minerals.

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[1] *Source: World Steel Assn.*
[2] *Based on a B737NG flying 3000-4000 hours per year, and a long-term jet fuel price of $3.91/gallon.*
[3] *Source: CBMM.*
[4] *Source: Adamas Intelligence.*

NioCorp's Planned Products Have The **Highest-Ranked Criticality**

The highly regarded U.S. Business Executives for National Defense (BENS) ranked all critical minerals in terms of their criticality to vital U.S. industries.[1]

NioCorp will make the TOP 3 MOST CRITICAL MINERALS.

	Mineral	Criticality Score	U.S. Net Import Reliance (and Score)	Major Import Sources and % of Import (and Score)	Primary U.S. Industry End Uses (and Score)	Mitigation Opportunities (and Score)
1	Rare Earths	10	100% (3)	China (80%), Estonia (6%), France (3%), Japan (3%) – (3)	Batteries and electronics – (2)	Substitutes are available for many applications but are generally less effective. (2)
2	Scandium	10	100% (3)	no percentages available - majority from China (3)	Alloys and fuel cells – (2)	Titanium and aluminum high-strength alloys and carbon-fiber (2)
3	Niobium	9	100% (2)	Brazil (72%), Canada (18%), Russia (3%), Germany (2%) – (2)	Steel alloys, jet engines – (2)	Ceramic matrix composites, molybdenum, tantalum, tungsten, titanium, vanadium (2)
24	Titanium (sponge metal)	6	75% (2)	Japan (81%), Kazakhstan (7%), Ukraine (7%), China (3%) – (1)	White pigment or metal alloys, jet engines, artillery, airframes – (2)	Aluminum, intermetallics, steel, super-alloys, nickel, zirconium (1)

No other proposed project in the world will make these 3 most critical mineral groups.

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[1] *Business Executives for National Security, 2020, https://www.bens.org/file/councils/Criticality-Ranking.pdf*

Elk Creek: 2nd Largest Rare Earth Indicated Resource in the U.S.[1]

America's Newest Rare Earth Resource

According to NioCorp's May 2022 Feasibility Study update,[2] the Elk Creek indicated resource contains 632.9 kilotonnes ("kt") of Total Rare Earth Oxide ("TREO"), including the following magnetic rare earth oxides:

- 26.9 kt of praseodymium
- 98.9 kt of neodymium
- 2.3 kt of terbium
- 9.1 kt of dysprosium

Separated & Purified Rare Earth Oxides NioCorp is Likely to Produce[3]

Neodymium-Praseodymium Oxide

Dysprosium Oxide

Terbium Oxide

There currently is no commercial-scale production in North America of any of these separated rare earth products from ore mined in the U.S.

There currently is no production of separated rare earth oxides in North America.

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[1] *Based on data from the "Critical Mineral Resources of the United States—Economic and Environmental Geology and Prospects for Future Supply," U.S. Geological Survey, 2017.*
[2] *Based on Feasibility Study Update first announced on May 18, 2022.*
[3] *NioCorp is currently undertaking technical and economic evaluations around adding rare earths to the planned product suite.*

NioCorp ‘Walks the Talk’ of ESG Principles & Practices

- Zero process water discharge facility
- Additional protection of groundwater resources through artificial ground freezing
- Avoidance of permanent impacts to Federally Jurisdictional Waters
- Recycling of reagents
- Utilizing tailings as underground mine backfill
- Local Employment
- Fully aligned with Equator Principles
- All federal, state, and local environmental permits needed for construction are in hand.

The Elk Creek Project stands out for its environmental innovation.

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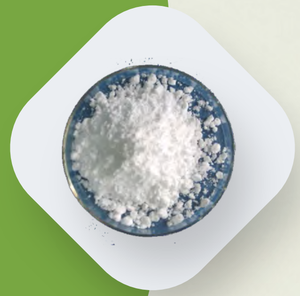
NioCorp's Products Reduce Costs and CO_2 Emissions

Niobium

Scandium



Magnetic Rare Earths

All of NioCorp's primary products enable major environmental benefits in downstream applications

12

Significant GHG Reductions Potential

Use of NioCorp's planned products in applications such as electric vehicles and commercial aviation could help avoid greenhouse gas emissions because of the higher efficiency these technologies can achieve with critical minerals such as NioCorp plans to produce.

Calculating **ONLY ONE YEAR** of Potential Emissions Reductions

Ferroniobium
7,450 tpa

300 grams Nb reduces weight by 200 kg and increases fuel efficiency 5%[3]

GHG Benefit
~ 4,000 kt/year

Scandium Trioxide
104 tpa

0.7% Sc in Al alloy reduces jet weight by 20% [5]

GHG Benefit
~ 1,100 kt/year

Titanium Dioxide
12,063 tpa

Niobium Titanium Oxide (NTO) as a next-generation anode in Li-ion solid state battery [6]

GHG Benefit
TBD

Potential GHG Reductions:
~ 5,100 kt CO_2/y

If NioCorp Produces Rare Earths

Magnetic Rare Earth Oxides[1]
765 tpa [Nd/Pr, Tb, Dy] [2]

Each BEV requires 1 kg REE in magnets, improving GHG performance by 147 gCO2/km [4]

Potential GHG Reductions:
~ 2,100 kt CO_2/y

TOTAL:
~ 7,200 kt CO_2/y

CONCLUSIONS

- **895 kt CO_2/year:** What NioCorp will emit in producing its critical minerals.
- **8-to-1 Reduction Factor:** Use of NioCorp's products in EVs and airplanes could reduce annual GHG emissions by approximately 8 tonnes CO_2 / year for every 1 tonne of CO_2 / year created in their production by NioCorp.
- **GHG Reductions Likely Higher:** These calculations are based on only one year of operation of vehicles and airplanes. Because both can operate for multiple years, total GHG reductions resulting from NioCorp's products could be much higher than estimated here.

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[1] NioCorp is currently evaluating the technical and economic feasibility of adding REEs to its planned product suite.
[2] REE production numbers cited as an example only.
[3] Source: Niobium.Tech (CBMM)
[4] Arnold Magnetics 2012, Bunting 2022
[5] OnG Commodities 2019.
[6] Source: CBMM.

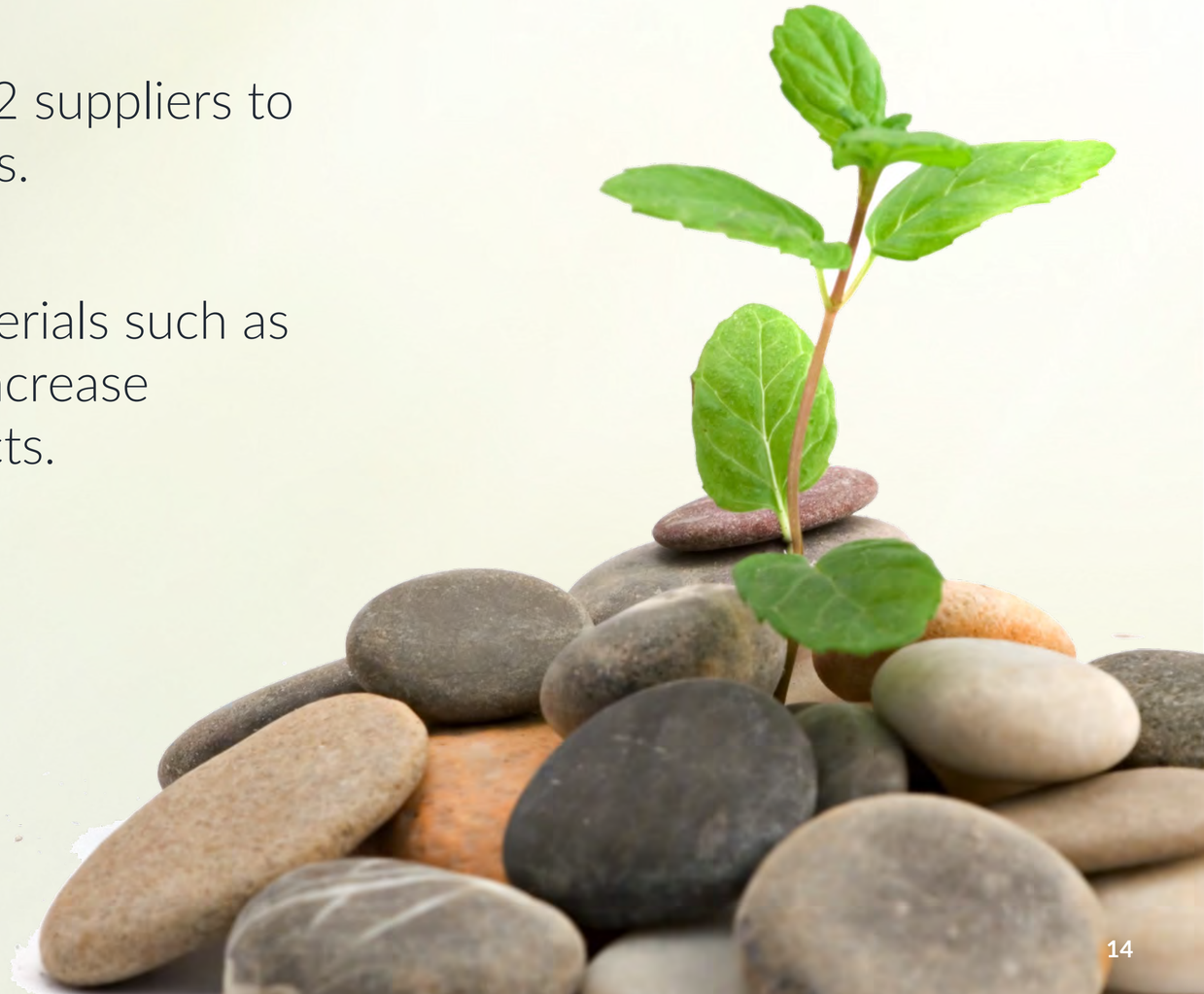
What Can Government Do?

1. Help industry with the #1 impediment to new mines: **capital**

2. Continue to encourage OEMs and Tier 1/2 suppliers to invest upstream in critical minerals projects.

3. Financially encourage States to utilize materials such as HSLA steels in infrastructure projects to increase longevity and reduce environmental impacts.

4. More aggressively communicate the need for greater U.S. independence in critical mineral production.



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QUESTIONS

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APPENDIX

Elk Creek Feasibility Study[1] Highlights
(excluding impact of REE production)

$2.8B Pre-Tax NPV	29.2% Pre-Tax IRR	$2.35B After-Tax NPV	27.6% After-Tax IRR	$403M Averaged EBITDA[2] over Run of Mine[3]
68% Averaged EBITDA[2] Margin over Run of Mine[3]	$21.9B Gross Revenue over Mine Life	$10.9B After-Tax Cumulative Net Free Cash Flow[2] over Run of Mine[3]	$1.14B Total Net Up-Front CAPEX	38 Yrs. Mine Life

These robust results do not include the impacts of adding rare earth products.

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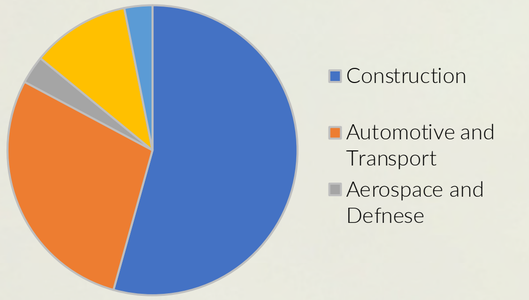
[1] *Based on Feasibility Study Update first announced on May 18, 2022.*
[2] *See endnotes at end of presentation regarding non-GAAP financial measures.*
[3] *"Run of Mine" is defined as the period of time during which the mine is fully operational and excludes the periods of time when the mine is conducting its initial production ramp or is ramping down to closure.*

Critical Minerals with Significant Market Potential

Niobium

- The global Niobium market is currently ≃125kt per annum with a value of ≃$5.0bn and is forecast to achieve 6% CAGR between 2020 and 2025[1]
- Market growth is expected to be underpinned by a shift toward an increasing use of light-weight high strength steel alloys in construction
- Continued use in aircraft engines and additional long-term growth through light-weighting in transportation, defense, space applications and use in battery technology.

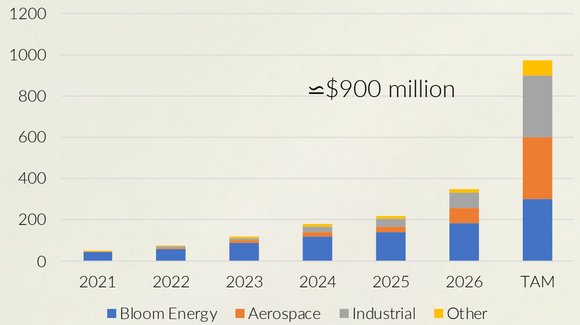
Global Niobium Sales by Sector[2]
≃$5.0 bn per annum[1]



Scandium

- Momentum is building in the market, with new pilot production from Rio Tinto and planned production from others
- Demand exceeds supply for solid oxide fuel cells (≃22t per annum demand growing at 23% CAGR)[1]; and aerospace / industrial (≃5t per annum forecast to reach 50t per annum over next 5 years[1])
- Forecast demand based on current applications expected to exceed 100t per annum by 2026[1]
- Supply is expected to lag demand by approx. 30%[1]
- Ultimate demand potential for several hundred tons per year of scandium oxide subject to scandium availability
- Growing market from ≃$50million to ≃$1billion[1]

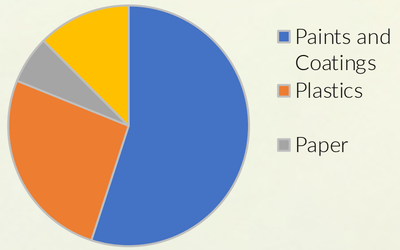
Scandium Market Potential
≃$0.9 bn per annum[1]



Titanium

- The global Titanium market is currently approximately 15.8mtpa with a value of ≃$11.4 bn and is forecast to achieve 6.0% CAGR between 2020 and 2025[4]
- Supply and demand are tight, and lack of new titanium dioxide feedstock has put upward pressure on prices
- Growing demand for lightweight high strength titanium alloy products.

Global Titanium Dioxide Sales by Sector[3]
≃$11.4 bn per annum[1]



Magnetic Rare Earths

- NioCorp is now developing plans to produce three magnetic REE oxides: NdPr, Dy, and Tb.
- Global magnetic REE oxide consumption value is forecast to increase 5X by 2030, from US$ 2.98 billion in 2021 to US$ 15.65 billion by 2030.[4]
- Demand for magnetic REE oxides expected to grow at a 9.7% CAGR through 2030.[4]
- Global REE markets are forecast to under-produce NdPr, Dy, and Tb oxides from 2022 onward unless significant new supplies are brought online.[4]

Figure 205: Forecasted value of global magnet rare earth oxide consumption from 2020 through 2030

Source: Adamas Intelligence

[1] SWI Partners Research, ONG Commodities, Global Newswire Report Linker May 2020
[2] Mordor Intelligence March 2021
[3] SWI Partners Research, Venator, European Coatings
[4] Adamas Intelligence reports, 2021.

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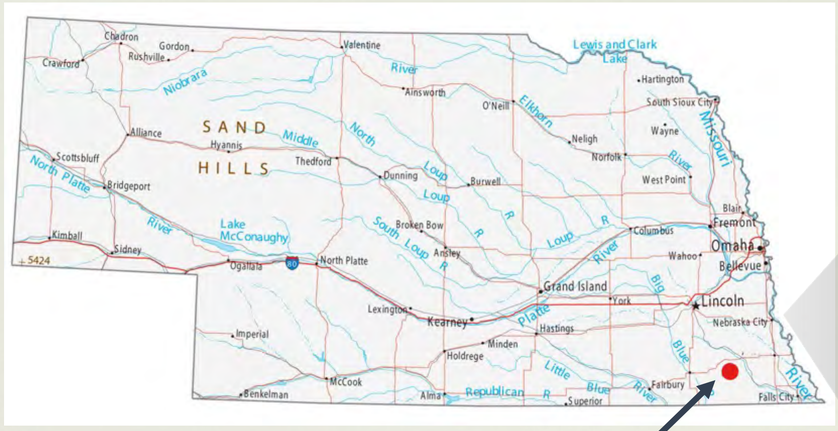
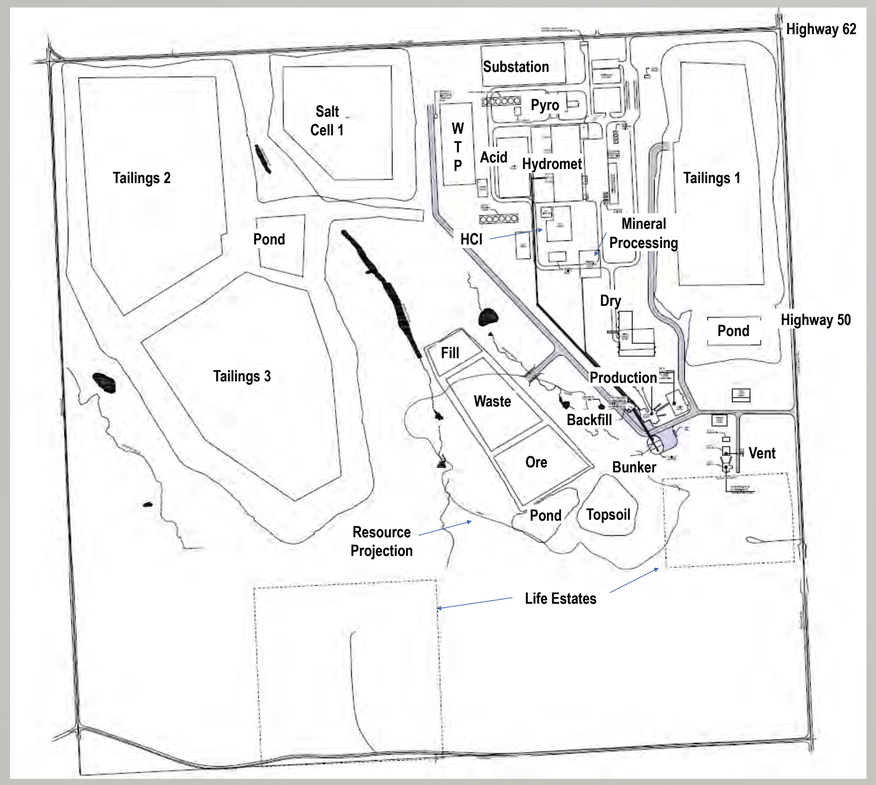
Elk Creek Project Location & Layout

The Project is centered within one 640-acre section of all private land.



Elk Creek Project Location



- 105 km (65 miles) southeast of Lincoln, Nebraska (the state capital)
- 129 km (80 miles) south of Omaha, Nebraska.
- 3 miles west of Elk Creek, Nebraska and 6 miles south of Tecumseh, Nebraska.

Excellent location near highways and supporting infrastructure.

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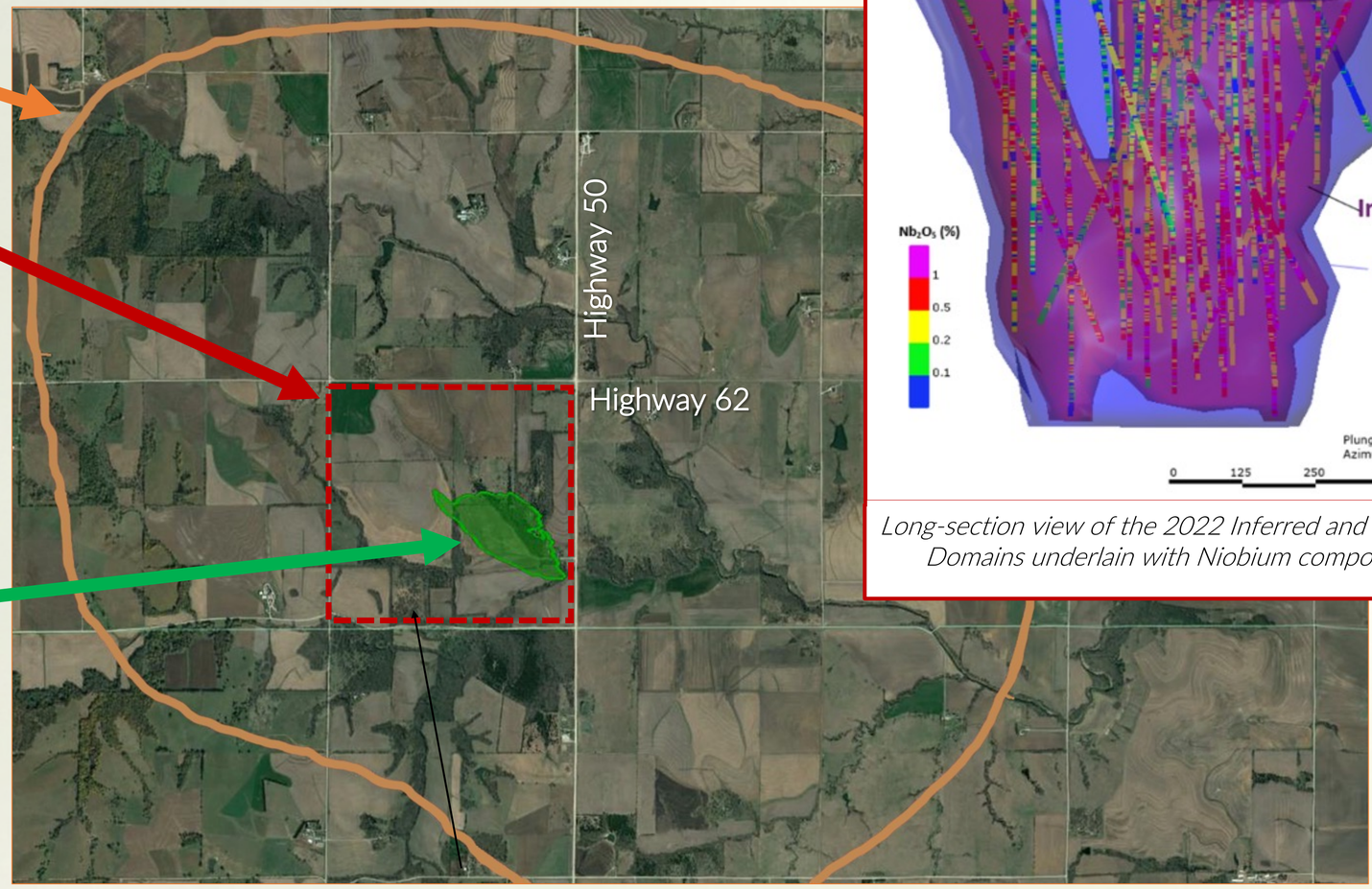
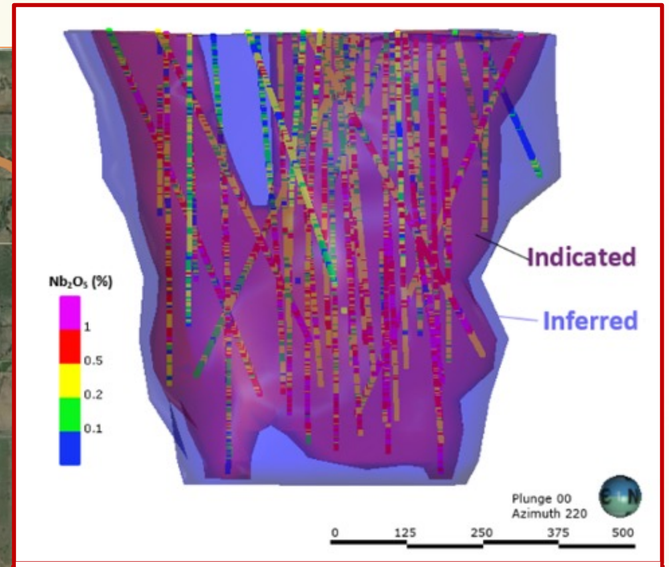
Mineral Reserves and Mineral Resources

Carbonatite Boundary

Initial Operational Footprint





Long-section view of the 2022 Inferred and Indicated Domains underlain with Niobium composites.

Mineral Resource Classification	Cut-off NSR (US$/t)	Tonnage (000's Mt)	Grade (Nb_2O_5%)	Grade (TiO_2%)	Grade (Sc g/t)
Indicated	180	188.8	0.51	2.24	60.06
Inferred	180	108.3	0.39	1.92	52.28

NOTE: Mineral Resources shown above are reported inclusive of the Mineral Reserve.

Mineral Reserve Classification	Tonnage (000's t)	Grade (Nb_2O_5%)	Grade (TiO_2%)	Grade (Sc g/t)
Probable	36,656	0.811	2.92	70.2

NOTE: For a complete description of the Elk Creek Project's Mineral Resources and Mineral Reserves, please refer to the Mineral Reserve and Mineral Resource slides in the Appendix of this presentation.

NioCorp's mineral reserve lies within a much larger carbonite footprint.

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World Class Development Partners

ZACHRY
Cementation
VEOLIA
DUPONT
thyssenkrupp
TRAXYS
Rockwell Automation
olsson
TETRA TECH
corem
Innovation en traitement de minerais
Innovation in mineral processing
SGS
OPTIMIZE GROUP
COMMUNICATE | COLLABORATE | INNOVATE
PROCESS ENGINEERING ASSOCIATES, LLC
Excellence In Applied Chemical Engineering®
TALLGRASS ENERGY
HAZEN
srk consulting
ANDRITZ
Ong Commodities
OPPD
Omaha Public Power District
Roskill
ACT Laboratories
Metallurgy Concept Solutions
DAHROUGE GEOLOGICAL CONSULTING LTD.
KPM
Kingston Process Metallurgy Inc.
UNDERSTOOD MINERAL RESOURCES LTD.
Process Development

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NioCorp's global team includes some of the world's best in their field.

Key Permits Obtained

The Elk Creek Project has secured key federal and state permits required to proceed to the start of construction once project financing is obtained.

- Construction Air Permit from the State of Nebraska.
- The major federal permit required, a 404 permit from the U.S. Army Corps of Engineers (Nationwide Permit #12).
- A Special Use Permit from Johnson County, Nebraska, the key local land use permit for the Project.

NioCorp's has in hand all of the permits required to begin construction.

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Strong State & Local Support

1. The Elk Creek Project is located exclusively on private land with extensive nearby infrastructure (roads, rail, water, and utilities).

2. The Project enjoys strong community support as well as state and local government support.

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

4. Project is slated to receive approximately $200 million in tax benefits from the State of Nebraska over its first 10 years of operation.

5. Nebraska recently cut its state corporate income tax rate from 7.81% to 7.5%, and this will further reduce to 7.25% beginning in tax year 2023.

Estimated Economic Benefits and New Tax Revenue Generated by the Elk Creek Project [1]	
Direct Full-Time, Permanent Jobs Created	436
Indirect Jobs Created	~1,000
Peak Construction-Related Jobs	1,200
Total Investment over 36-Year Project Life	$7.8 billion
Cumulative Operating Expenses over Project Life	$6.6 billion
Employee Payroll over Project Life (included in cumulative operating expenses above)	$882 million
New Tax Revenue to State and Local Government over Project Life	$742 million
Royalties Paid to Nebraska Landowners over Project Life	$279 million

[1] *Based on Feasibility Study Update first announced on May 18, 2022.*

The Project enjoys strong and broad-based state and local support.

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Environmental, Social & Governance Principles

NioCorp intends to integrate key ESG principles, such as those outlined below, into our business and the Elk Creek Project as we proceed toward its development and commercial operation.

Environmental

Seek improvement in environmental performance, such as water stewardship, energy use, and air quality where technically and economically feasible.

Sustainability

Integrate sustainable development principles into Company policies and practices where technically and economically feasible.

Governance

Apply ethical business practices and sound systems of corporate governance and transparency. Equator Principles ESMS program has been deployed by the Company.

Risk Management

Identify, assess, and seek to address significant social, health, safety, environmental and economic impacts.

Health & Safety

Develop systems that seek to protect the health and safety of employees, contractors and people in the communities where we operate.

Engagement

Proactively engage key stakeholders on sustainable development challenges and opportunities in an open and transparent manner.

NioCorp 'walks the talk' of ESG practices and principles.

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Independent Board Members

Nilsa Guerrero-Mahon
Audit Committee Chair

A former Chief Financial Officer and Controller for global corpozrations in the technology, energy, and government sectors, Ms. Guerrero-Mahon provides consulting services to domestic and international corporations as the principal at NG Mahon Business Consulting, LLC, a business consulting service, a position she has held since 2008. Ms. Guerrero-Mahon currently serves on the Board of the State of Colorado Division of Securities.

David C. Beling, P.E.

Mr. Beling is a Registered Professional Mining Engineer with 58 years of project and corporate experience. He has served as a director on the boards of 14 mining companies starting in 1981, including NioCorp since 2011. Mr. Beling is the owner of D.C. Beling & Assoc., LLC who provides strategic advisory, project and corporate development services to the mining industry. His previous employment and consulting included 14 years with five major mining companies and then 44 years with 30+ US and Canadian juniors. He was the President, CEO, and Director of Bullfrog Gold Corp. from 2011 until October 2020; and the Executive Vice President and COO of Geovic Mining Corp. from 2004 through 2010. Mr. Beling has examined, significantly reviewed, or been directly involved with 90 underground mines, 136 open pit mines and 174 process plants in the global metal, energy, and industrial mineral sectors.

Fernanda Fenga

A former senior executive at the world's largest producer of niobium, Companhia Brasileira Metalúrgica e Mineração ("CBMM"), Ms. Fenga currently serves as a senior advisor to mining companies in Brazil and in the U.S. Prior to CBMM, she was Senior Manager at PriceWaterhouse- Coopers. A Certified Compliance & Ethic Professional – International Exam ("CCEP-I"), Ms. Fenga is a Brazilian lawyer and received her Master's Degree in Law at Fundação Getúlio Vargas – FGV and her LLM in Corporate Law at IBMEC. She also conducted post-graduate studies in tax law at IBET and completed the Harvard Business School's program for Risk Management for Corporate Leaders.

Michael J. Morris
Lead Director

Mr. Morris served as a director from 2001 to 2007 and as Chairman of the Board of Heritage Oaks Bancorp from 2007 to 2017 when it merged into Pacific Premier Bancorp. Mr. Morris currently serves on the Board of Directors of Pacific Premier Bancorp, an $11.5 billion regional bank. Mr. Morris is the senior principal and chairman of the board of Andre, Morris & Buttery, a professional law corporation.

Anna Castner Wightman

A sixth generation Nebraskan and a graduate of Nebraska Wesleyan University, Ms. Wightman currently serves as Vice President of Government Relations for First National Bank in Omaha, Nebraska. Anna serves on the Board of Directors for the Nebraska Chamber of Commerce, Nebraska 4H Foundation Board of Trustees, and has served on other numerous nonprofit boards in Nebraska.

Peter Oliver

Mr. Oliver is the former Managing Director of Talison Lithium and a 30+ year veteran of the mining and critical minerals processing industries, With a background in chemistry, Mr. Oliver served for 18 years at Talison Lithium, including 12 years as CEO/Managing Director and then as Non-Executive Director. Prior to that, Mr. Oliver was General Manager of Talison's Greenbushes and Wodgina Mines and served as Talison's Chief Operating Officer. Prior to his work at Talison, Mr. Oliver worked in Rio Tinto's Salt and Iron Ore divisions. He obtained his Bachelor of Applied Science in Chemistry from Curtin University (Western Australia), and he resides in Perth, Australia.

A highly experienced and diverse Board of Directors.

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Management Team

Mark A. Smith, P.E.

Executive Chairman, President and Chief Executive Officer

Mr. Smith has more than 40 years of experience in the mining and mineral processing industries. He is the former President / CEO of Molycorp, Chevron Mining, and Largo Resources. He served on the board of Companhia Brasileira de Metalurgia e Mineracao Ltd. ("CBMM"), the largest niobium producer in the world, and led efforts that raised more than $3 billion for previous mining and manufacturing projects. He holds a Bachelor of Science degree in engineering from Colorado State University and a Juris Doctor cum laude from Western State University, College of Law.

Scott Honan, MSc, SME-RM

Chief Operating Officer, NioCorp
President, Elk Creek Resources Corp.

With 25+ years of experience in the niobium, base metals, gold and rare earth industries. He served as General Manager and Environmental Manager and Vice President Health, Environment, Safety and Sustainability at Molycorp. Scott is a graduate of Queen's University in Mining Engineering in both Mineral Processing (B.Sc. Honors) and Environmental Management (M.Sc.) disciplines. He is a registered member (No. 04231597) of the Society for Mining, Metallurgy & Exploration (SME).

Neal Shah, BSME, MBA

Chief Financial Officer & Corporate Secretary

With nearly 20 years of experience in various industries as diverse as high-tech to rare earths, Neal's past experience includes senior positions with Molycorp, Intel, IBM, Boeing, and Covidien. He a graduate of the University of Colorado's Mechanical Engineering program (BSME) and Purdue University's Krannert School of Management (MBA).

John A. Ashburn

Legal Consultant

John has 35+ years of experience as an attorney, including 25 years in extractive industries. Until retiring in 2021, he was General Counsel and Corporate Secretary for NioCorp. Formerly, he served as Vice President, Chief Legal Officer and Director of Simbol; Executive Vice President and General Counsel of Molycorp, Inc.; and held senior legal positions with Chevron and Unocal Corporation. Mr. Ashburn holds a Juris Doctorate from Northern Illinois University, School of Law.

Jim Sims

Chief Communications Officer

Jim has 25+ years of experience in the mining, chemical, manufacturing, utility, and renewable energy sectors. He was VP Corporate Communications for Molycorp and the former head of the U.S. Geothermal Energy Association, Western Business Roundtable, and the Rare Earth Technology Alliance. A former White House staffer, Jim served for 11 years in the U.S. Senate, including as a Chief of Staff, and held a top-secret security clearance. He is an honors graduate of Georgetown University.

A management team with decades of combined experience in mineral production.

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Elk Creek REE Mineral Resource Update

(Mineral Resource as of Dec. 8, 2021)

Class	NSR Cut-off	Tonnage (Mt)	La_2O_3 (%)	La_2O_3 (kt)	Ce_2O_3 (%)	Ce_2O_3 (kt)	Pr_2O_3 (%)	Pr_2O_3 (kt)
Indicated	180	188.8	0.0773	145.8	0.1335	251.9	0.0143	26.9
			Nd_2O_3 (%)	Nd_2O_3 (kt)	Sm_2O_3 (%)	Sm_2O_3 (kt)	Eu_2O_3 (%)	Eu_2O_3 (kt)
			0.0524	98.9	0.0129	24.3	0.0046	8.6
			Gd_2O_3 (%)	Gd_2O_3 (kt)	Tb_2O_3 (%)	Tb_2O_3 (kt)	Dy_2O_3 (%)	Dy_2O_3 (kt)
			0.011	20.8	0.0012	2.3	0.0048	9.1
			Ho_2O_3 (%)	Ho_2O_3 (kt)	Er_2O_3 (%)	Er_2O_3 (kt)	Tm_2O_3 (%)	Tm_2O_3 (kt)
			0.0007	1.3	0.0015	2.9	0.0002	0.3
			Yb_2O_3 (%)	Yb_2O_3 (kt)	Lu_2O_3 (%)	Lu_2O_3 (kt)	Y_2O_3 (%)	Y_2O_3 (kt)
			0.001	1.9	0.0001	0.3	0.0199	37.6
			LREO (%)	LREO (kt)	HREO (%)	HREO (kt)	TREO (%)	TREO (kt)
			0.2774	523.6	0.0579	109.3	0.3353	632.9

Class	NSR Cut-off	Tonnage (Mt)	La_2O_3 (%)	La_2O_3 (kt)	Ce_2O_3 (%)	Ce_2O_3 (kt)	Pr_2O_3 (%)	Pr_2O_3 (kt)
Inferred	180	108.3	0.0943	102.1	0.1576	170.6	0.0163	17.7
			Nd_2O_3 (%)	Nd_2O_3 (kt)	Sm_2O_3 (%)	Sm_2O_3 (kt)	Eu_2O_3 (%)	Eu_2O_3 (kt)
			0.0575	62.2	0.0116	12.6	0.0038	4.1
			Gd_2O_3 (%)	Gd_2O_3 (kt)	Tb_2O_3 (%)	Tb_2O_3 (kt)	Dy_2O_3 (%)	Dy_2O_3 (kt)
			0.009	9.8	0.001	1.1	0.0042	4.6
			Ho_2O_3 (%)	Ho_2O_3 (kt)	Er_2O_3 (%)	Er_2O_3 (kt)	Tm_2O_3 (%)	Tm_2O_3 (kt)
			0.0006	0.7	0.0014	1.5	0.0002	0.2
			Yb_2O_3 (%)	Yb_2O_3 (kt)	Lu_2O_3 (%)	Lu_2O_3 (kt)	Y_2O_3 (%)	Y_2O_3 (kt)
			0.001	1.1	0.0001	0.1	0.0182	19.7
			LREO (%)	LREO (kt)	HREO (%)	HREO (kt)	TREO (%)	TREO (kt)
			0.3257	**352.6**	**0.0512**	**55.5**	**0.3769**	**408.1**

Notes:

a. The Qualified Person for the Mineral Resource estimate is Matthew Batty, P.Geo, Owner, Understood Mineral Resources Ltd.
b. The reporting standard for the Mineral Resource Estimate uses the terminology, definitions, and guidelines given in the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Standards on Mineral Resources and Mineral Reserves (May 10, 2014) as required by NI 43-101.
c. Mineral Resources are inclusive of Mineral Reserves. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
d. The Mineral Resources are reported at a Diluted Net Smelter Return (NSR) Cut-off of US $180/tonne.
e. The diluted NSR is defined as:
    a. Diluted NSR (US $)=
    $$\frac{\text{Revenue per block } Nb_2O_5 \text{ (diluted)} + \text{Revenue per block } TiO_2 \text{ (diluted)} + \text{Revenue per block Sc (diluted)}}{\text{Diluted tonnes per block}}$$
    b. The diluted revenue from Nb_2O_5, TiO_2, and Sc per block used the following factors:
        i. Nb_2O_5 Revenue: a 94% grade recovery, a 0.696 factor to convert Nb_2O_5 to Nb, 82.36% assumption for plant recovery, and a US$ 39.60 kg selling price per kg of ferroniobium.
        ii. TiO_2 Revenue: a 94% grade recovery, a 40.31% assumption for plant recovery, and an US$ 0.88 kg selling price per kg of titanium oxide.
        iii. Sc Revenue: a 94% grade recovery, a 1.534 factor to convert Sc to Sc_2O_3, 93.14% assumption for plant recovery, and a US$ 3,675 kg is selling price per kg of scandium oxide.
    c. The diluted tonnes are a 6% increase in the total tonnes of the block.
f. Price assumptions for FeNb, Sc_2O_3, and TiO_2 are based upon independent market analyses for each product.
g. Numbers may not sum due to rounding. The rounding is not considered to be material.
h. Rare Earth Oxides (REO) were evaluated as a potential by-product to the mining of niobium, titanium, and scandium; thus, the estimated values of the REOs are reported using the previously determined diluted NSR as derived from the Nb_2O_5, TiO_2, and Sc Mineral Resources.
i. The stated Light Rare Earth Oxides (LREO) grade (%) is the summation of La_2O_3 (%), Ce_2O_3 (%), Pr_2O_3 (%), and Nd_2O_3 (%) estimates.
j. The stated Heavy Rare Earth Oxides (HREO) grade (%) is the summation of Sm_2O_3 (%), Eu_2O_3 (%), Gd_2O_3 (%), Tb_2O_3 (%), Dy_2O_3 (%), Ho_2O_3 (%), Er_2O_3 (%), Tm_2O_3 (%), Yb_2O_3 (%), Lu_2O_3 (%), and Y_2O_3 (%) estimates.
k. The stated Total Rare Earth Oxide (TREO) grade (%) is the summation of LREO (%) and HREO (%).
l. The effective date of the Mineral Resource, including by-products, is December 8th, 2021 (date of last assay received).

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Elk Creek Mineral Resource Update

(Mineral Resource as of Dec. 8, 2021)

Elk Creek Project Mineral Resource				
Classification	NSR Cutoff (US$/tonne)	Tonnage (Mt)	Grades	Tonnages
Indicated	180	188.8	Nb_2O_5 (%)	Nb_2O_5 (kt)
			0.51	970.3
			TiO_2 (%)	TiO_2 (kt)
			2.24	4,221
			Sc (ppm)	Sc (t)
			60.06	11,337
Inferred	180	108.3	Nb_2O_5 (%)	Nb_2O_5 (kt)
			0.39	426.6
			TiO_2 (%)	TiO_2 (kt)
			1.92	2,082
			Sc (ppm)	Sc (t)
			52.28	5,660.2

See notes to this Mineral Resource table on the preceding slide

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Elk Creek Mineral Reserve
(does not include rare earths)

(Mineral Resource as of May 10, 2022)

2022 Elk Creek Project Mineral Reserve										
Classification	Tonnage (x1000 t)	Nb_2O_5 Grade (%)	Contained Nb_2O_5 (t)	Payable Nb (t)	TiO_2 Grade (%)	Contained TiO_2 (t)	Payable TiO_2 (t)	Sc Grade (ppm)	Contained Sc (t)	Payable Sc_2O_3 (t)
Proven		-	-	-	-	-	-	-	-	-
Probable	36,656	0.811	297,278	170,409	2.92	1,071,182	431,793	70.2	2,573	3,677
TOTAL	36,656	0.811	297,278	170,409	2.92	1,071,182	431,793	70.2	2,573	3,677

NOTES
- The Qualified Person for the Mineral Reserve estimate is Richard Jundis, P.Eng., of Optimize Group Inc. The estimate has an effective date of May 10th, 2022.
- The Mineral Reserve is based on the mine design and mine plan, utilizing an average cut-off grade of 0.68% Nb2O5 with an NSR cut-off of US$ 180/mt.
- The estimate of Mineral Reserves may be materially affected by metal prices, environmental, permitting, legal, title, taxation, socio-political, marketing, infrastructure development, or other relevant issues.
- The economic assumptions used to define Mineral Reserve cut-off grade are as follows:
  - Annual life of mine (LOM) average production rate of ~7,450 tonnes of FeNb/annum during the years of full production.
  - Mining dilution of ~6% was applied to all stopes and development, based on 3% for the primary stopes, 9% for the secondary stopes, and 5% for ore development.
  - Mining recoveries of 95% were applied in longhole stopes and 62.5% in sill pillar stopes.
  - Price assumptions for FeNb, Sc2O3, and TiO2 are based upon independent market analyses for each product.
  - Price and cost assumptions are based on the pricing of products at the "mine-gate," with no additional downstream costs required. The assumed products are a ferroniobium product (metallic alloy shots consisting of 65%Nb and 35% Fe), a titanium dioxide product in powder form, and scandium trioxide in powder form.
- The Mineral Reserve has an average LOM NSR of US$ 563 /tonne.

Parameter	Value	Unit
Mining Cost	43.55	US$/t mined
Processing	108.16	US$/t mined
Water Management and Infrastructure	13.71	US$/t mined
Tailings Management	1.35	US$/t mined
Other Infrastructure	6.96	US$/t mined
General and Administrative	8.65	US$/t mined
Royalties/Annual Bond Premium	7.53	US$/t mined
Total Cost	189.91	US$/t mined
Nb_2O_5 to Niobium conversion	69.60	%
Niobium Process Recovery	82.36	%
Niobium Price	39.60	US$/kg
TiO_2 Process Recovery	40.31	%
TiO_2 Price	0.88	US$/kg
Sc Process Recovery	93.14	%
Sc to Sc_2O_3 conversion	1.53	%
Sc Price	3,675.00	US$/kg

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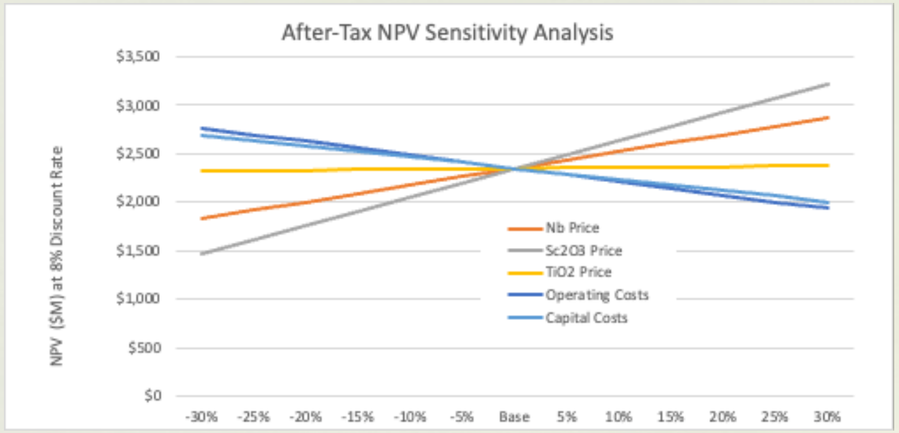
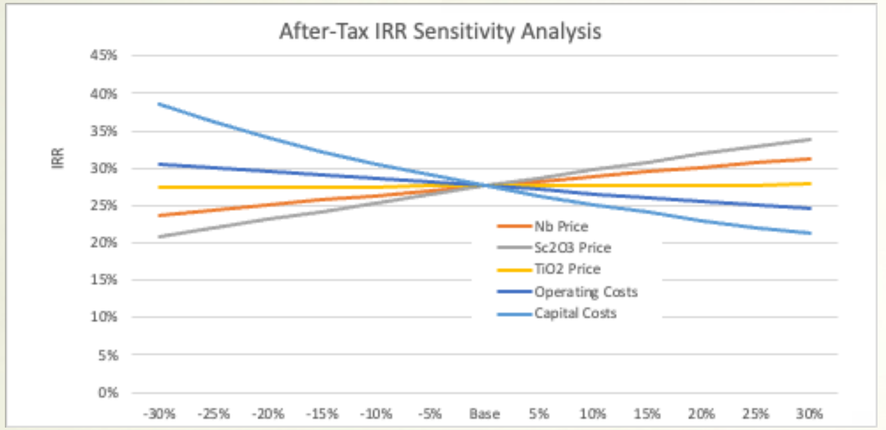
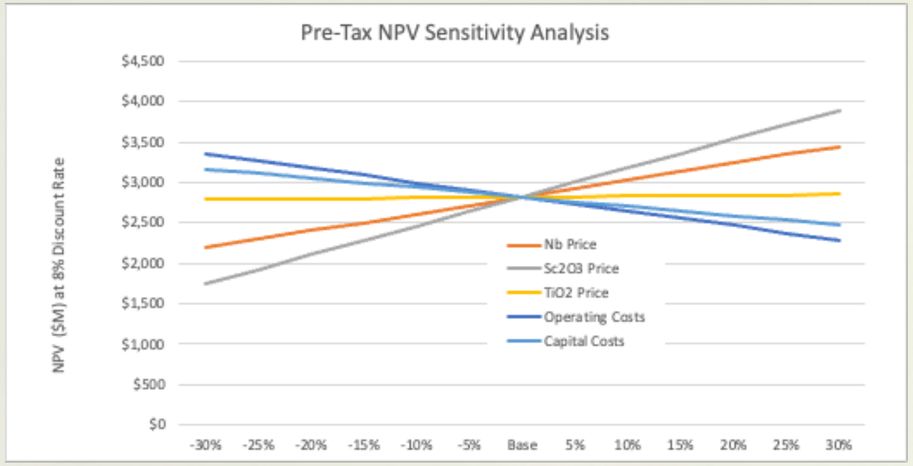
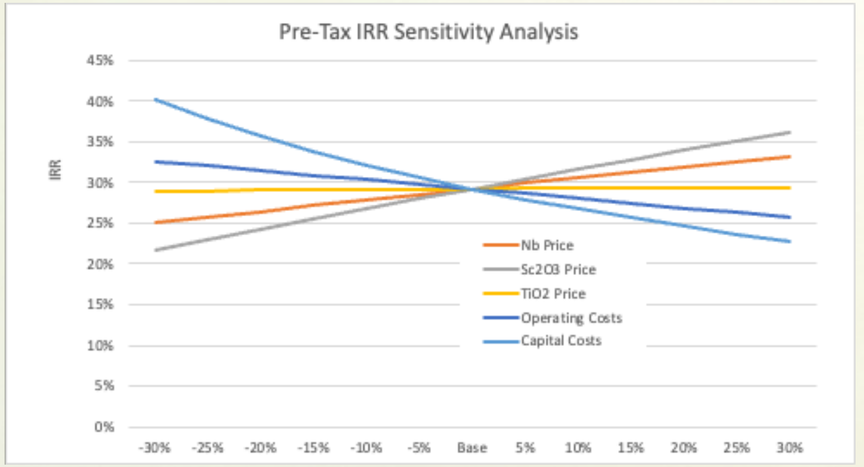
Elk Creek Project: Sensitivity Analyses
(excluding impact of REE production)

(BASED ON FEASIBILITY STUDY UPDATE FIRST ANNOUNCED ON MAY 18, 2022)









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Endnotes

Non-GAAP Financial Measures: This presentation includes certain forward-looking non-GAAP financial measures, including EBITDA and Net Free Cash Flow. These non-GAAP financial measures are included in this presentation because these statistics are key performance measures that management uses to monitor performance, to assess how the Company is performing, to plan and to assess the overall effectiveness and efficiency of operations. These performance measures do not have a standard meaning within GAAP and, therefore, amounts presented may not be comparable to similar data presented by other mining companies. These performance measures should not be considered in isolation as a substitute for measures of performance in accordance with GAAP. Reconciliations of these forward-looking non-GAAP financial measures to the most directly comparable GAAP financial measures are not provided because the Company is unable to provide such reconciliations without unreasonable effort, due to the uncertainty and inherent difficulty of predicting the occurrence and the financial impact of such items impacting comparability and the periods in which such items may be recognized. For the same reasons, the Company is unable to address the probable significance of the unavailable information, which could be material to future results.

SEC Standards Regarding Mineral Resources and Reserves. Estimates of mineralization and other technical information included or referenced in this news release have been prepared in accordance with NI 43-101. The definitions of proven and probable mineral reserves used in NI 43-101 differ from the definitions in U.S. Securities and Exchange Commission ("SEC") Industry Guide 7. Under SEC Industry Guide 7 standards, a "final" or "bankable" feasibility study is required to report reserves, the three-year historical average price is used in any reserve or cash flow analysis to designate reserves and the primary environmental analysis or report must be filed with the appropriate governmental authority. As a result, the reserves reported by the Company in accordance with NI 43-101 may not qualify as "reserves" under SEC Industry Guide 7 standards. In addition, the terms "mineral resource," "measured mineral resource," "indicated mineral resource," and "inferred mineral resource" are defined in and required to be disclosed by NI 43-101; however, these terms are not defined terms under SEC Industry Guide 7 and normally are not permitted to be used in reports and registration statements filed with the SEC. Mineral resources that are not mineral reserves do not have demonstrated economic viability. Investors are cautioned not to assume that any part or all of the mineral deposits in these categories will ever be converted into reserves. "Inferred mineral resources" have a great amount of uncertainty as to their existence, and great uncertainty as to their economic and legal feasibility. It cannot be assumed that all or any part of an inferred mineral resource will ever be upgraded to a higher category. Under Canadian securities laws, estimates of inferred mineral resources may not form the basis of feasibility or pre-feasibility studies, except in rare cases. Additionally, the disclosure of "contained pounds" in a resource is permitted disclosure under Canadian securities laws; however, the SEC normally only permits issuers to report mineralization that does not constitute "reserves" by SEC standards as in place tonnage and grade without reference to unit measurements. Accordingly, information contained or referenced in this news release containing descriptions of the Company's mineral deposits may not be comparable to similar information made public by U.S. companies subject to the reporting and disclosure requirements of United States federal securities laws and the rules and regulations thereunder.

Additionally, in October 2018, the SEC approved final rules requiring comprehensive and detailed disclosure requirements for issuers with material mining operations. The provisions in Industry Guide 7 and Item 102 of Regulation S-K have been replaced with a new subpart 1300 of Regulation S-K ("S-K 1300")under the Securities Act of 1933. The Company will be required to comply with these new rules in its disclosures for the fiscal year ending June 30, 2022, and thereafter. The requirements and standards under S-K 1300 differ from those under Canadian securities laws. The terms "mineral resource," "inferred mineral resource," "indicated mineral resource," "mineral reserve," "probable mineral reserve," and "proven mineral reserve" used in this news release are mining terms as defined in accordance with NI 43-101 under guidelines set out in the Definition Standards for Mineral Resources and Mineral Reserves adopted by the Canadian Institute of Mining, Metallurgy and Petroleum Council. While the terms are substantially similar to the same terms defined under S-K 1300 there are differences in the definitions. Accordingly, there is no assurance any mineral resources or mineral reserves that the Company may report under NI 43-101 will be the same as resource or reserve estimates prepared under the standards adopted under S-K 1300.