

# BRINGING HOME CRITICAL MINERALS SUPPLY CHAINS



The F-35 Lightning II aircraft utilizes all of the critical minerals NioCorp plans to produce in America's heartland.

# Disclaimers & Technical Disclosures

## Forward-Looking Statements

This Presentation of NioCorp Developments Ltd. ("NioCorp") contains forward-looking statements within the meaning of the United States Private Securities Litigation Reform Act of 1995 and forward-looking information within the meaning of applicable Canadian securities laws. Forward-looking statements may include, but are not limited to, NioCorp's ability to receive a final commitment of financing from the Export-Import Bank of the United States ("EXIM"), including the timing and process of the review and diligence of NioCorp's application for debt financing from EXIM; NioCorp and Stellantis N.V. ("Stellantis") entering into binding agreements with respect to the proposed offtake transaction and potential strategic investment, if at all; anticipated benefits of the listing of NioCorp's common shares on Nasdaq; the financial and business performance of NioCorp; NioCorp's anticipated results and developments in the operations of NioCorp in future periods; NioCorp's planned exploration activities; the adequacy of NioCorp's financial resources; NioCorp's ability to secure sufficient project financing to complete construction and commence operation of the Elk Creek Project; NioCorp's expectation and ability to produce niobium, scandium, and titanium and the potential to produce rare earth elements at the Elk Creek Project; the technical and economic feasibility of separating rare earth oxides; NioCorp's plans to produce and supply specific products and market demand for those products; the outcome of current recovery process improvement testing, and NioCorp's expectation that such process and design improvements could lead to greater efficiencies and cost savings in the Elk Creek Project; 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; the completion of the demonstration plant and technical and economic analyses on the potential addition of magnetic rare earth oxides to NioCorp's planned product suite; NioCorp updating its feasibility study for the Elk Creek Project; statements with respect to the estimation of mineral resources and mineral reserves; the exercise of options to purchase additional land parcels; the execution of contracts with engineering, procurement and construction companies; NioCorp's ongoing evaluation of the impact of inflation, supply chain issues and geopolitical unrest on the Elk Creek Project's economic model; and the creation of full time and contract construction jobs over the construction period of the Elk Creek Project. In addition, any statements that refer to projections, forecasts or other characterizations of future events or circumstances, including any underlying assumptions, are forward-looking statements. Forward-looking statements are typically identified by words such as "plan," "believe," "expect," "anticipate," "intend," "outlook," "estimate," "forecast," "project," "continue," "could," "may," "might," "possible," "potential," "predict," "should," "would" and other similar words and expressions, but the absence of these words does not mean that a statement is not forward-looking.

The forward-looking statements are based on the current expectations of the management of NioCorp and are inherently subject to uncertainties and changes in circumstances and their potential effects and speak only as of the date of such statement. There can be no assurance that future developments will be those that have been anticipated. Forward-looking statements reflect material expectations and assumptions, including, without limitation, expectations and assumptions relating to: NioCorp's ability to receive sufficient project financing for the construction of the Elk Creek Project on acceptable terms or at all; NioCorp's ability to service its existing debt and meet the payment obligations thereunder; the future price of metals; the stability of the financial and capital markets; and current estimates, assumptions and benefits regarding NioCorp's business combination (the "Business Combination") with GX Acquisition Corp. II and NioCorp's previously announced standby equity purchase facility (the "Yorkville Equity Facility Financing" and, together with the Business Combination, the "2023 Transactions") with YA II PN, Ltd., an investment fund managed by Yorkville Advisors Global, LP, including the ability to access the full amount of the expected net proceeds of the Yorkville

Equity Facility Financing over the next three years. Such expectations and assumptions are inherently subject to uncertainties and contingencies regarding future events and, as such, are subject to change. Forward-looking statements involve a number of risks, uncertainties or other factors that may cause actual results or performance to be materially different from those expressed or implied by these forward-looking statements. These risks and uncertainties include, but are not limited to, those discussed and identified in public filings made by NioCorp with the Securities and Exchange Commission (the "SEC") and with the applicable Canadian securities regulatory authorities and the following: NioCorp's ability to operate as a going concern; NioCorp's requirement of significant additional capital; NioCorp's ability to receive sufficient project financing for the construction of the Elk Creek Project on acceptable terms or at all; NioCorp's ability to receive a final commitment of financing from EXIM on an acceptable timeline, on acceptable terms, or at all; NioCorp's ability to recognize the anticipated benefits of the 2023 Transactions, including NioCorp's ability to access the full amount of the expected net proceeds under the Yorkville Equity Facility Financing Agreement over the next 18 months; NioCorp's ability to continue to meet Nasdaq listing standards; risks relating to the Common Shares, including price volatility, lack of dividend payments and dilution or the perception of the likelihood of any of the foregoing; the extent to which NioCorp's level of indebtedness and/or the terms contained in agreements governing NioCorp's indebtedness or the Yorkville Equity Facility Financing Agreement may impair NioCorp's ability to obtain additional financing; covenants contained in agreements with NioCorp's secured creditors that may affect its assets; NioCorp's limited operating history; NioCorp's history of losses; the material weaknesses in NioCorp's internal control over financial reporting, NioCorp's efforts to remediate such material weaknesses and the timing of remediation; the possibility that NioCorp may qualify as a PFIC under the Code; the potential that the 2023 Transactions could result in NioCorp becoming subject to materially adverse U.S. federal income tax consequences as a result of the application of Section 7874 and related sections of the Code; cost increases for NioCorp's exploration and, if warranted, development projects; a disruption in, or failure of, NioCorp's information technology systems, including those related to cybersecurity; equipment and supply shortages; variations in the market demand for, and prices of, niobium, scandium, titanium and rare earth products; current and future offtake agreements, joint ventures, and partnerships; NioCorp's ability to attract qualified management; estimates of mineral resources and reserves; mineral exploration and production activities; feasibility study results; the results of metallurgical testing; the results of technological research; changes in demand for and price of commodities (such as fuel and electricity) and currencies; competition in the mining industry; changes or disruptions in the securities markets; legislative, political or economic developments, including changes in federal and/or state laws that may significantly affect the mining industry; the impacts of climate change, as well as actions taken or required by governments related to strengthening resilience in the face of potential impacts from climate change; the need to obtain permits and comply with laws and regulations and other regulatory requirements; the timing and reliability of sampling and assay data; 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; management of the water balance at the Elk Creek Project site; land reclamation requirements related to the Elk Creek Project; the speculative nature of mineral exploration and development, including the risks of diminishing quantities of grades of reserves and resources; claims on the title to NioCorp's properties; potential future litigation; and NioCorp's lack of insurance covering all of NioCorp's operations.

Should one or more of these risks or uncertainties materialize, or should any of the assumptions made by the management of NioCorp prove incorrect, actual results may vary in material respects from those projected in these forward-looking statements.

All subsequent written and oral forward-looking statements concerning the 2023 Transactions or other matters addressed in this communication and attributable to NioCorp or any person acting on its behalf are expressly qualified in their entirety by the cautionary statements contained or referred to in this communication. Except to the extent required by applicable law or regulation, NioCorp undertakes no obligation to update these forward-looking statements to reflect events or circumstances after the date of this communication to reflect the occurrence of unanticipated events.

## Qualified Persons

All technical and scientific information included in this Presentation derived from NioCorp's 2022 NI 43-101 Elk Creek Technical Report with respect to mineral resources has been reviewed and approved by Matthew Batty, P.Geo., Owner, Understood Mineral Resources Ltd., and all such information respecting NioCorp's mineral reserves has been reviewed and approved by Gavin Clow, P. Eng., Mining Manager, Optimize Group. Each of Messrs. Batty and Clow is a "Qualified Person" as such term is defined in NI 43-101. Each of Mr. Batty and Mr. Clow and their respective firms are independent consultants who provide consulting services to NioCorp. All technical and scientific information included in this Presentation derived from NioCorp's S-K 1300 Elk Creek Technical Report Summary with respect to mineral resources has been reviewed and approved by Understood Mineral Resources Ltd., and all such information respecting NioCorp's mineral reserves has been reviewed and approved by Optimize Group. Understood Mineral Resources Ltd. and Optimize Group are "Qualified Persons" as such term is defined in S-K 1300. All other technical and scientific information included in this Presentation has been reviewed, approved and verified by Scott Honan, M.Sc., SME-RM, NioCorp's Chief Operating Officer. Mr. Honan is a "Qualified Person" as such term is defined in both NI 43-101 and S-K 1300.

# Disclaimers & Technical Disclosures

## Financial Information

Certain financial information and data included in this Presentation is unaudited and may not conform to Regulation S-X. This Presentation may contain financial forecasts and projections (collectively, “prospective financial information”) of NioCorp. Neither the independent registered public accounting firm of NioCorp audited, reviewed, compiled or performed any procedures with respect to the prospective financial information for the purpose of their inclusion in this Presentation, and accordingly, neither of them expressed an opinion or provided any other form of assurance with respect thereto for the purpose of this Presentation. This prospective financial information constitutes forward-looking statements and should not be relied upon as being guarantees or necessarily indicative of future results. The assumptions and estimates underlying such prospective financial information are inherently uncertain and are subject to a wide variety of significant business, economic, competitive and other risks and uncertainties that could cause actual results to differ materially from those contained in the prospective financial information. See “Forward-Looking Statements.” Accordingly, there can be no assurance that the prospective financial information is indicative of future performance of NioCorp or that actual results will not differ materially from the results presented in the prospective financial information included in this Presentation. Actual results may differ materially from the results contemplated by the prospective financial information included in this Presentation. The inclusion of such prospective financial information herein should not be regarded as a representation by any person that the results reflected in such projections will be achieved. The purpose of the prospective financial information is to assist investors, shareholders and others in evaluating the performance of NioCorp’s business. The prospective financial information may not be appropriate for other purposes. Information about NioCorp’s guidance, including the various assumptions underlying it, is forward-looking and should be read in conjunction with “Forward-Looking Statements” in this Presentation, and the related disclosure and information about various economic, competitive, and regulatory assumptions, factors, and risks that may cause NioCorp’s actual future financial and operating results to differ from what NioCorp currently expects. All amounts in this Presentation are expressed in U.S. dollars unless otherwise indicated.

## Mineral Reserves and Resources

Unless otherwise indicated, information concerning NioCorp’s mining property included in this Presentation, including mineral resource and reserve estimates, has been prepared in accordance with the requirements of National Instrument 43-101– Standards of Disclosure for Mineral Projects (“NI 43-101”) and the Canadian Institute of Mining and Metallurgy (“CIM”) “Definition Standards – For Mineral Resources and Mineral Reserves, May 10, 2014” (the “CIM Definition Standards”). Beginning with NioCorp’s Annual Report on Form 10-K for the fiscal year ended June 30, 2022 (the “NioCorp 2022 Form 10-K”), NioCorp’s mining property disclosures included or incorporated by reference in its SEC filings, including mineral resource and reserve estimates, are required to be prepared in accordance with the requirements of subpart 1300 of Regulation S-K (“S-K 1300”). Previously, NioCorp prepared its estimates of mineral resources and mineral reserves following only NI 43-101 and the CIM Definition Standards. On June 28, 2022, NioCorp issued a CIM-compliant NI 43-101 technical report (the “2022 NI 43-101 Elk Creek Technical Report”) for the Elk Creek Project, which is available through the website maintained by the Canadian Securities Administrators at [www.sedarplus.ca](http://www.sedarplus.ca). On September 6, 2022, the Company filed a technical report summary for the Elk Creek Project that conforms to S-K 1300 reporting standards (the “S-K 1300 Elk Creek Technical Report Summary”) as Exhibit 96.1 to the NioCorp 2022 Form 10-K, which is available through the website maintained by the SEC at [www.sec.gov](http://www.sec.gov). The 2022 NI 43-101 Elk Creek Technical Report and S-K 1300 Elk Creek Technical Report Summary are based on a feasibility study (the “June 2022 Feasibility Study”) prepared by qualified persons (within the meaning of both NI 43-101 and S-K 1300, as applicable) and are substantively identical to one another except for internal references to the regulations under which the report is made, and certain organizational differences. The requirements and standards under Canadian securities laws, however, differ from those under S-K 1300. The terms “mineral resource,” “inferred mineral resource,” “indicated mineral resource,” “mineral reserve,” “probable mineral reserve,” and “proven mineral reserve” included herein are used as defined in accordance with NI 43-101 under the CIM Definition Standards. 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 resource or mineral reserve estimates that the Company may report under NI 43-101 will be the same as the mineral resource or mineral reserve estimates that the Company may report under S-K 1300.

NioCorp discloses estimates of both mineral resources and mineral reserves. This Presentation also includes disclosure on inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves. You are cautioned that mineral resources are subject to further exploration and development and are subject to additional risks and no assurance can be given that they will eventually convert to future mineral reserves. Under both regimes, inferred resources, in particular, have a great amount of uncertainty as to their existence and their economic and legal feasibility. Investors are cautioned not to assume that any part or all of the inferred resource exists or is economically or legally mineable. See Item 1A, Risk Factors in NioCorp’s Annual Report on Form 10-K for the fiscal year ended June 30, 2024. Reference should be made to the full text of the 2022 NI 43-101 Elk Creek Technical Report and the S-K 1300 Elk Creek Technical Report Summary for further information regarding the assumptions, qualifications and procedures relating to the estimates of mineral reserves and mineral resources as defined under NI 43-101 and S-K 1300, respectively. All technical and scientific information included in this Presentation has been reviewed, approved and verified by Scott Honan, M.Sc., SME-RM, NioCorp’s Chief Operating Officer. Mr. Honan is a “Qualified Person” as such term is defined in both NI 43-101 and S-K 1300.

## No Offer or Solicitation

This Presentation shall not constitute or form part of an offer to sell or the solicitation of an offer to buy any securities of NioCorp, nor shall there be any sale of such securities in any state or jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such state or jurisdiction. NioCorp has filed a registration statement (including a base prospectus) with the SEC and will file a preliminary and final prospectus supplement thereunder in connection with the offering contemplated hereby. Before you invest in such offering, you should read the base prospectus in that registration statement, the applicable prospectus supplement and the other documents NioCorp has filed with the SEC for more complete information about NioCorp and such offering. You may get these documents for free, as well as any final term sheet relating to any such offering, by visiting EDGAR on the SEC website at [www.sec.gov](http://www.sec.gov), by contacting NioCorp or from the underwriter participating in any such offering by calling Maxim Group LLC toll free at (212) 895-3500.

# Investment Highlights

Mega-  
Infrastructure



Potential pure play exposure to critical mineral mega trends<sup>1</sup>

Defense and  
Aerospace



Significant, rapidly growing total available markets



Unique competitive position with large barriers to entry



Key customer relationships and offtake agreements

Advanced  
Technologies



Government permits in hand for construction start



EXIM bank processing application for up to \$800M in debt finance

<sup>1</sup> Subject to receipt of necessary project financing and commencement of operations at the Elk Creek Project.

# Wider Adoption of Critical Materials is Supply Constrained

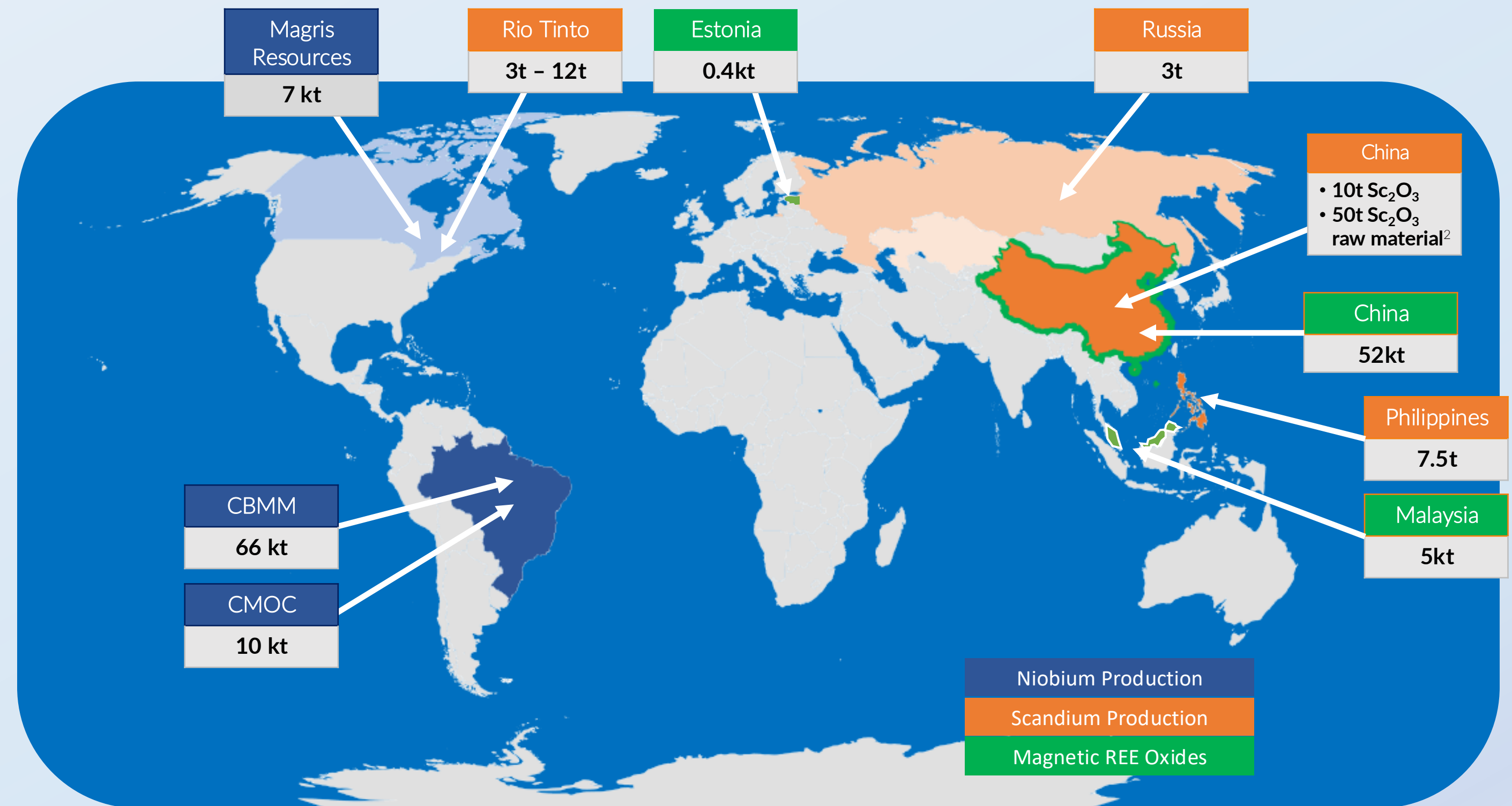
## The Problem

Lack of secure and reliable long-term supply is preventing fulfilment of latent market demand and realization of environmental benefits resulting from existing applications and from significant new technologies.

## This is due to:

- Concentrated sources of supply for Niobium, Scandium, and separated magnetic rare earth oxides.
- Extremely scarce and limited Scandium supply.
- Some supply chains have politically sensitive and unreliable supply locations, particularly for rare earths.
- Environmental impacts from many of these sources are greater than in the U.S.

Current Annual Niobium, Scandium, and Magnetic REE Oxide Production<sup>1</sup>



**The U.S. is dependent on foreign suppliers for most of NioCorp's critical minerals.**

<sup>1</sup> Corporate reports and company information, ONG Commodities, USGS, Adamas Intelligence  
<sup>2</sup> Reported by USGS as production capacity, not necessarily production.

# Reliable, Low-Risk U.S. Supply is Key to Securing Energy Transition

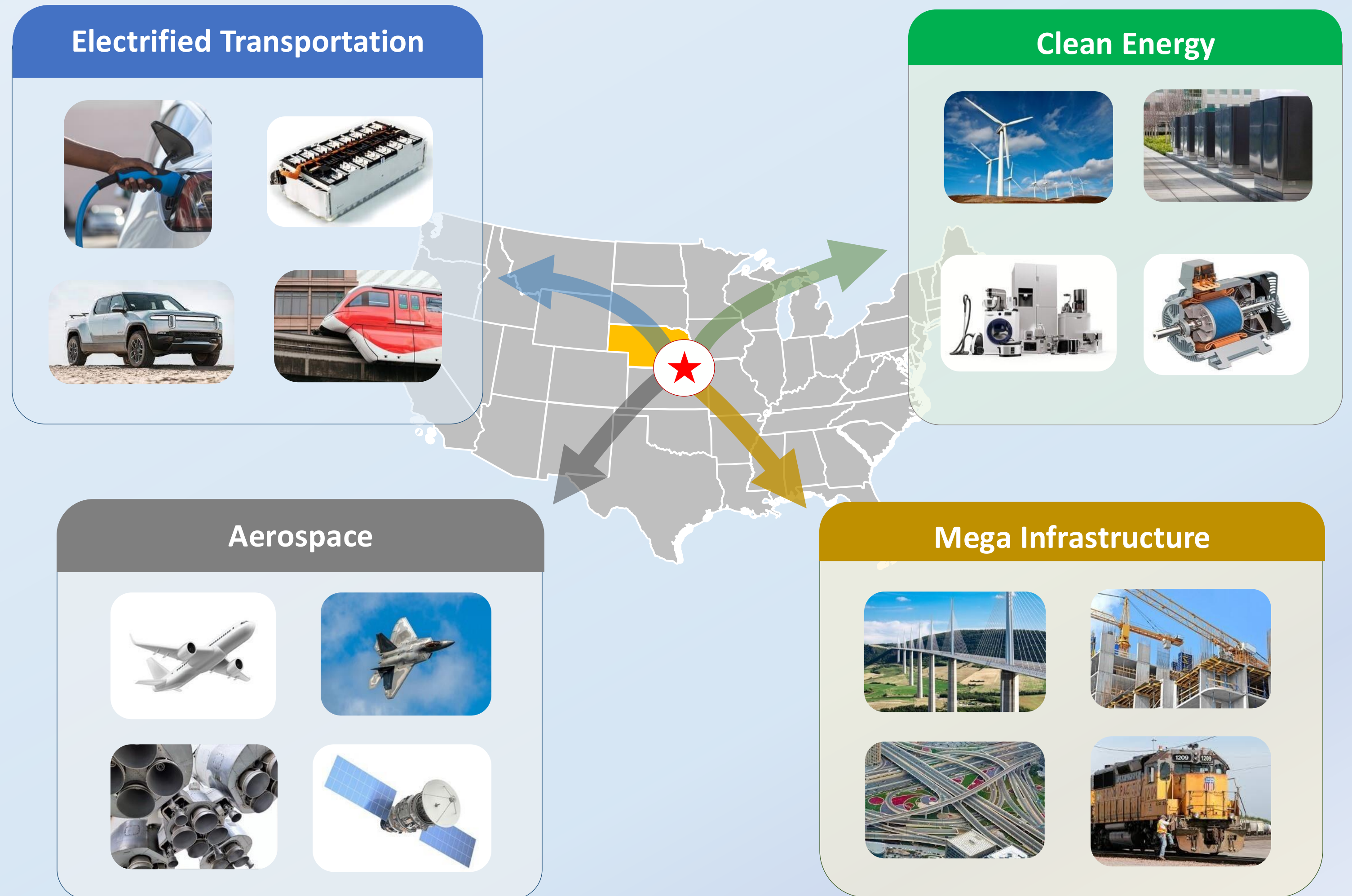
The Elk Creek Project is anticipated to be able to supply some of the world's largest industries and sustainable technologies with Made-in-USA critical minerals produced in a low-impact, sustainable manner.<sup>1</sup>

## The Solution



Illustration of NioCorp's planned Elk Creek Facility

- Significant production volumes planned for Niobium, Scandium, Titanium from a low-risk jurisdiction.<sup>1</sup>
- Underground mineral resource and environmentally responsible processing creates sustainable production solution.<sup>1</sup>



<sup>1</sup> Subject to receipt of necessary project financing and commencement of operations at the Elk Creek Project.

# US Export-Import Bank Now Processing Debt Financing Application of up to \$800M<sup>1</sup> for NioCorp

- ✓ NioCorp's application has cleared EXIM's first formal review (TRC-1)
- ✓ EXIM has provided a Preliminary Project Letter (the "PPL") and preliminary indicative term sheet to NioCorp
- ✓ Ongoing work in respect of additional detailed commercial and financial due diligence<sup>2</sup>
- ✓ Independent consultants chosen by EXIM now conducting due diligence reviews
- ✓ NioCorp has engaged JPMorgan to help lead the EXIM debt package structuring

<sup>1</sup> Amount based on initial indication of interest in Letter of Interest from EXIM, dated March 6, 2023.

<sup>2</sup> The PPL summarized EXIM's initial due diligence findings and identified additional project activities to be undertaken by the Company in conjunction with the EXIM evaluation process, including an updated mine plan and updated Elk Creek Project capital costs on a final or close-to-final basis reflecting updated process flows. Management is working with EXIM to continue to advance the project through the next stages of EXIM's due diligence and loan application process. NioCorp is currently unable to estimate how long the application process, including the additional project activities identified in the PPL, may take, and there can be no assurances that NioCorp will be able to successfully negotiate a final commitment of debt financing from EXIM, on acceptable terms or at all.

# Stellantis and NioCorp Sign Non-Binding Rare Earth<sup>1</sup> Offtake Term Sheet

Term Sheet Also Envisions a Possible Strategic Investment by Stellantis in NioCorp's Elk Creek Critical Minerals Project



- Working toward a definitive agreement for a 10-year offtake contract for high-purity, separated rare earth oxides: NdPr, Dysprosium, and Terbium.<sup>1,2</sup>
- Final volumes to be determined.
- NioCorp and Stellantis collaborating on the larger permanent RE magnet supply chain.

<sup>1</sup> NioCorp is currently conducting technical and economic analyses on the potential addition of magnetic rare earth oxides to its planned product suite. Final determination of possible rare earth production can be made only after work related to a mineral reserve update, additional engineering, updated project capital and operating cost estimates, and other required information is produced for publication in a new Feasibility Study.

<sup>2</sup> Subject to receipt of necessary project financing and commencement of operations at the Elk Creek Project.



# Planned Production<sup>1</sup>

## Critical Minerals

## Magnetic Rare Earths



**Ferroniobium**  
7,819 tpy

No production in the U.S.

Highest grade Niobium project under development in N.A.<sup>1</sup>



**Scandium Oxide**  
102 tpy

No production in the U.S.

Largest planned producer in N.A.



**Titanium (TiCl<sub>4</sub>)<sup>2</sup>**  
60,067 tpy

High import reliance for U.S.

Is expected to be produced by NioCorp as a co-product.



**Neodymium-Praseodymium Oxide<sup>3</sup>**  
~649 tpy

Small domestic production from US ore

Co-product production. Project contains the 2nd largest indicated NdPr Mineral Resource in the U.S.<sup>4</sup>



**Dysprosium Oxide<sup>3</sup>**  
~57 tpy

No domestic production from US ore

Co-product production. Project contains the 2nd largest indicated Dysprosium Mineral Resource in the U.S.<sup>4</sup>



**Terbium Oxide<sup>3</sup>**  
~15 tpy

No domestic production from US ore

Co-product production. Project contains the largest indicated Terbium Mineral Resource in the U.S.<sup>4</sup>

<sup>1</sup> Based on the 2022 Elk Creek Technical Report. See “Mineral Reserves and Resources” in the Disclaimers & Technical Disclosures at the beginning of this presentation.

<sup>2</sup> NioCorp is currently assessing the feasibility of producing Titanium Tetrachloride in addition to, or in lieu of, Titanium Dioxide. Final determination of possible rare earth production can be made only after work related to a mineral reserve update, additional engineering, updated project capital and operating cost estimates, and other required information is produced for publication in a new Feasibility Study.

<sup>3</sup> NioCorp is currently conducting technical and economic analyses on the potential addition of magnetic rare earth oxides to its planned product suite.

<sup>4</sup> Indicated 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, and from company-issued reports.

# Offtake Agreements for Products NioCorp Intends to Produce<sup>1</sup>

## Niobium



**75%**

of NioCorp's planned Ferroniobium production already contracted for the first 10 years of operation

**ThyssenKrupp Metallurgical Products<sup>2</sup>**

50% of NioCorp's planned ferroniobium production for first 10 yrs.<sup>1</sup>

Pricing set at 3.75% discount to Argus Metals index pricing for ferroniobium

**CMC Cometals<sup>3</sup>**

25% of NioCorp's planned ferroniobium production for first 10 yrs.<sup>1</sup>

Pricing set at 3.75% discount to Argus Metals index pricing for ferroniobium

## Scandium



**~12%**

of NioCorp's planned production already contracted for the first 10 years of operation

**Traxys North America LLC<sup>4</sup>**

Up to 12 tonnes per year of NioCorp's planned scandium production over 10 yrs.<sup>1</sup>

Largest commercial sales agreement for Scandium known to have been executed.

## Titanium



NioCorp is in discussions with multiple potential customers for the titanium it intends to make, in the form of titanium tetrachloride and/or titanium dioxide.

## Rare Earths<sup>5</sup>



Stellantis, 3rd largest global automaker, and NioCorp executed a non-binding term sheet in July 2023 on the prospective sale of NioCorp's magnetic rare earth oxides.

<sup>1</sup> Subject to receipt of necessary project financing and commencement of operations at the Elk Creek Project.

<sup>2</sup> Contract with Thyssen Metallurgical Products GmbH, dated November 10, 2014.

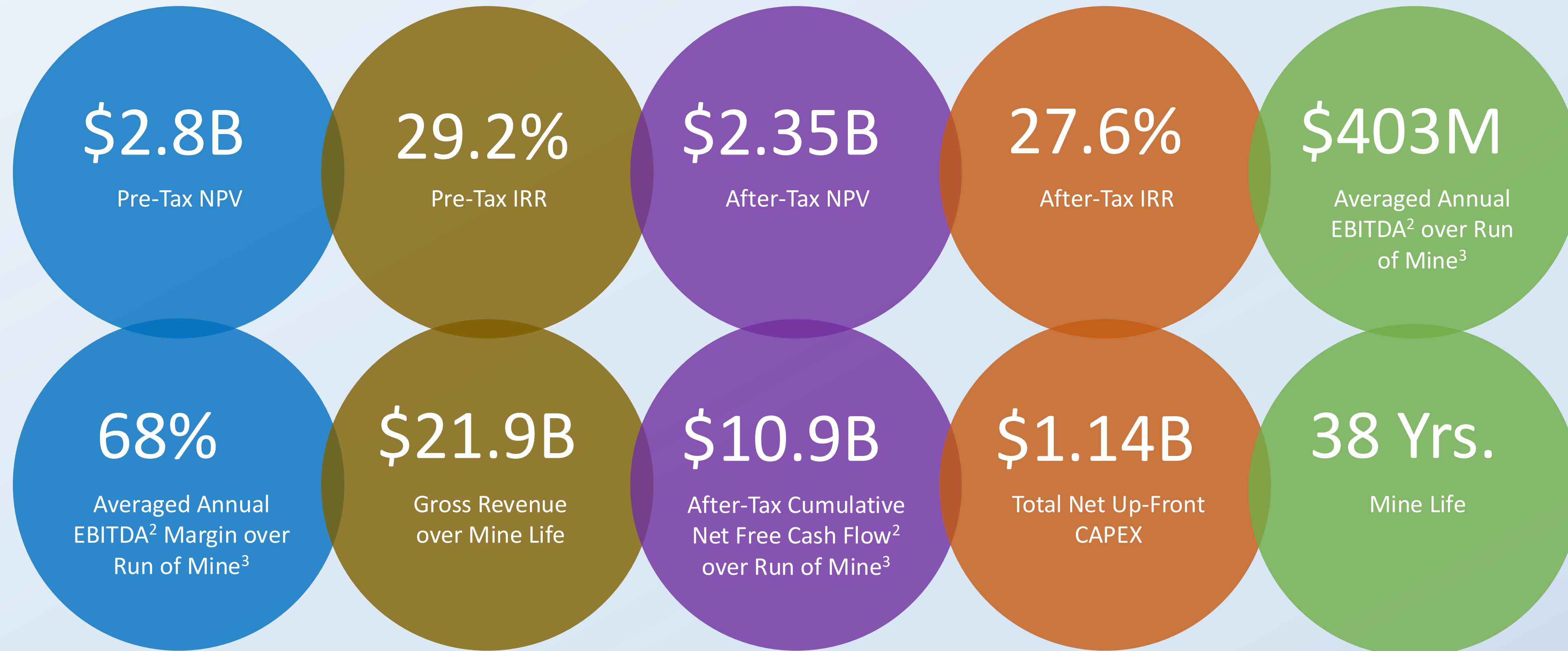
<sup>3</sup> Contract with CMC Cometals, dated June 13, 2016, which was subsequently assigned to Traxys Cometals USA, LLC.

<sup>4</sup> Contract with Traxys North America LLC, dated October 3, 2018.

<sup>5</sup> NioCorp is currently conducting technical and economic analyses on the potential addition of magnetic rare earth oxides to its planned product suite. Final determination of possible rare earth production can be made only after work related to a mineral reserve update, additional engineering, updated project capital and operating cost estimates, and other required information is produced for publication in a new Feasibility Study.

# Elk Creek Feasibility Study<sup>1</sup> Highlights

(not including REE production)

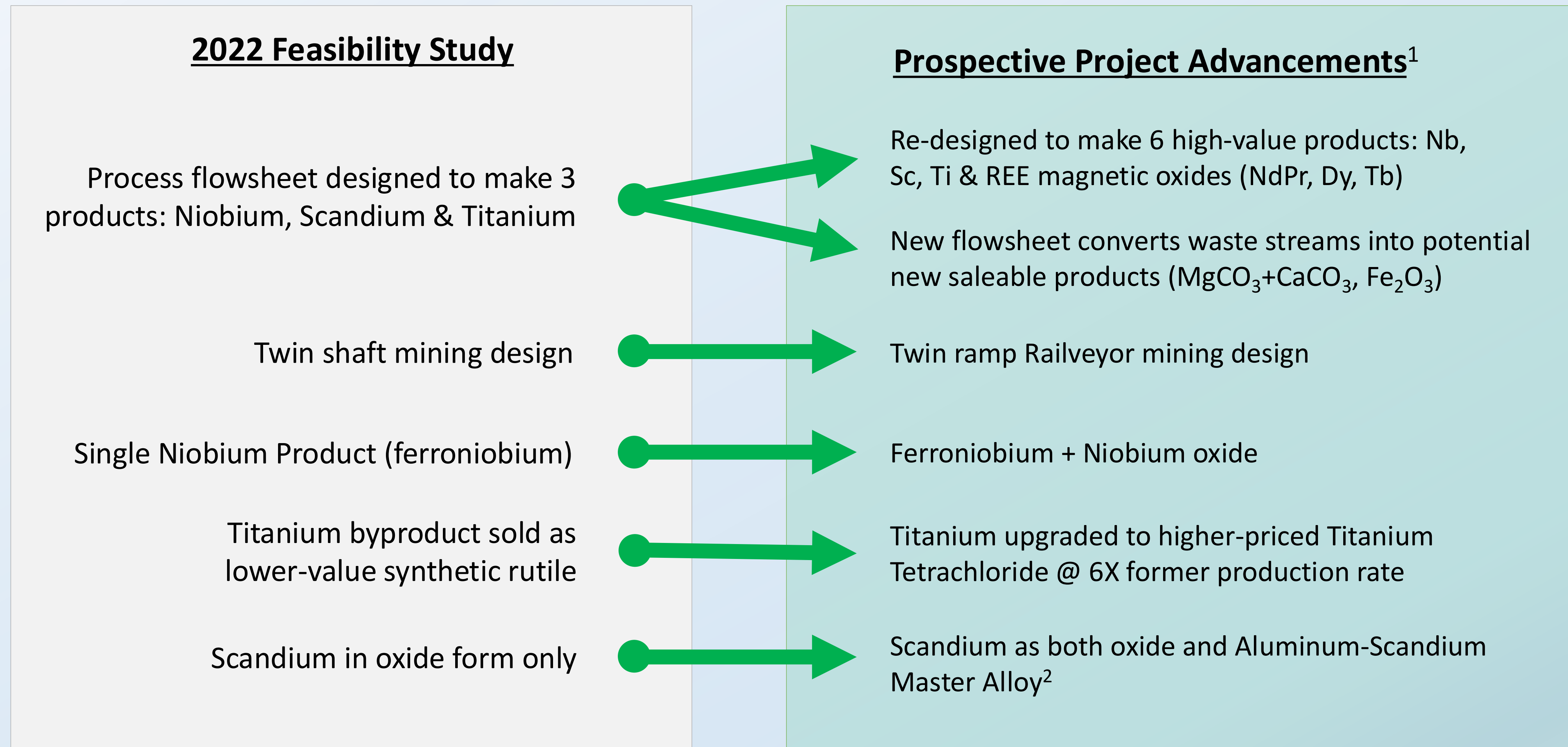


<sup>1</sup> Based on the 2022 NI 43-101 Elk Creek Technical Report. See “Mineral Reserves and Resources” in the Disclaimers & Technical Disclosures at the beginning of this presentation.

<sup>2</sup> See “Financial Information; Non-GAAP Measures” in the Disclaimers & Technical Disclosures at the beginning of this presentation.

<sup>3</sup> “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.

## Continuous Improvement: Prospective Project Advancements

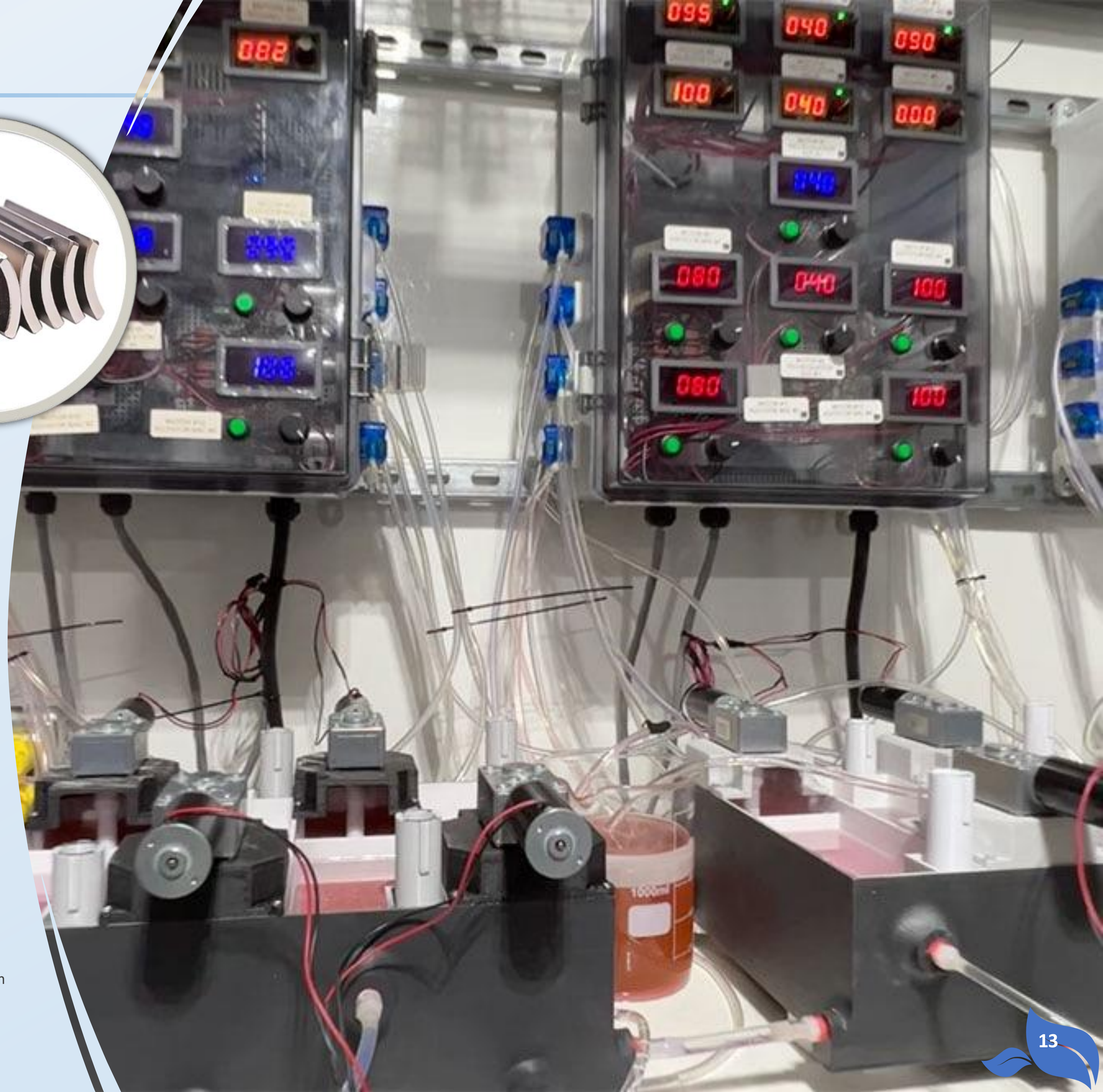
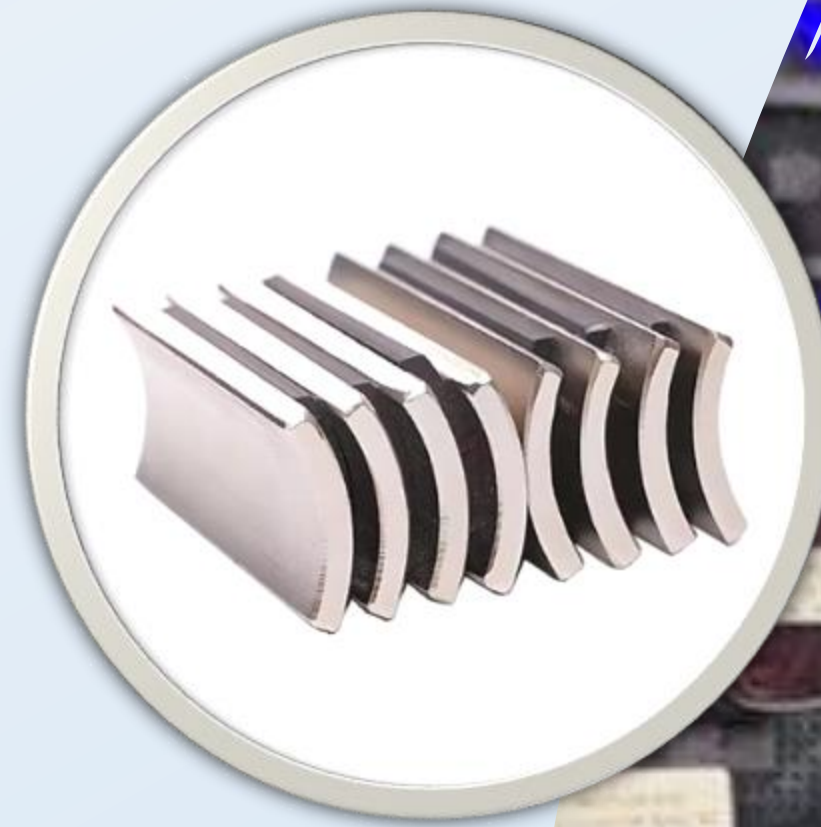


<sup>1</sup> Planned advancements and project impacts are subject to confirmation through the new Feasibility Study NioCorp is currently working on.

<sup>2</sup> NioCorp's proposed AlSc Master Alloy business is not required for inclusion in NioCorp's ongoing updated Feasibility Study.

# Successful Testing of NdFeB Magnet Recycling

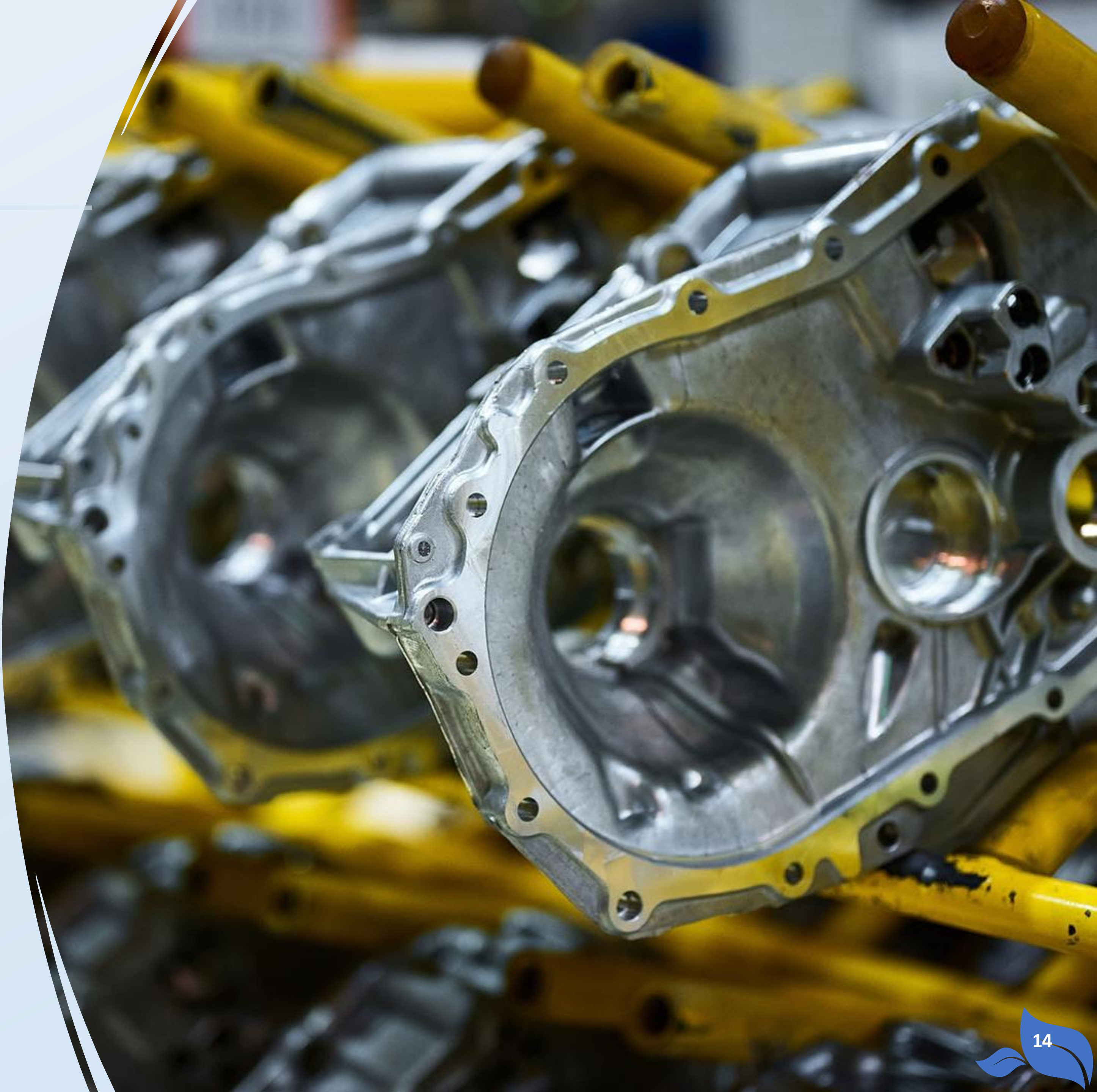
- Recent bench-scale testing was successful in showing our planned hydromet process flow sheet can extract REEs from post-consumer NdFeB magnets.
- Recycling NdFeB magnets can increase the Project's production of separated REE oxides, including HREEs, beyond extraction from Elk Creek ore.<sup>1</sup>
- Our rate of recovery is 92% or better; our flowsheet delivers high purity, fully separated oxides that can support the full range of Nd/Pr magnet grades.



<sup>2</sup> NioCorp is currently assessing the feasibility of producing Titanium Tetrachloride in addition to, or in lieu of, Titanium Dioxide. Final determination of possible rare earth production can be made only after work related to a mineral reserve update, additional engineering, updated project capital and operating cost estimates, and other required information is produced for publication in a new Feasibility Study.

## Automotive Consortium Wins UK Gov't Funding to Investigate Recycled Aluminum Casting with Scandium

- Project PIVOT (“Performance Integrated Vehicle Optimization Technology”), includes such companies as Aston Martin, Sarginsons, NioCorp, Altair, GESCRAP, Brunel University London and others. Steering Committee includes Jaguar Land Rover, Alcon Industries, Linamar, Shell Re-Charge, and others.
- \$7.8M program (\$3.8M UK Gov't funding) investigating how to increase use of recycled aluminum, strengthened with Scandium, to enable net-zero carbon emission vehicles.
- **Goals:**
  - 30% mass reduction in future designs
  - 100% recycled content with no loss of mechanical properties
  - A new approach to aluminum recycling for manufacturing circularity



# The Strategic Imperative of the Elk Creek Project

- All of NioCorp’s planned products have been designated as “critical minerals” by the U.S. Government.<sup>1</sup>
- The products NioCorp intends to focus on – including potentially rare earths<sup>2</sup> – include the top 3 most critical minerals to U.S. national security, according to defense experts.<sup>1,3</sup>
- Billions of dollars now available for investments in critical minerals processing from U.S. Government agencies.<sup>5</sup>
- New federal law provides a 10% production tax credit applicable to all of NioCorp’s planned critical minerals.<sup>4</sup>
- U.S. electric vehicle tax credit now contingent on increasing content of U.S.-produced critical minerals.<sup>4</sup>



**NioCorp intends to focus on the TOP 3 MOST CRITICAL MINERALS<sup>1,2</sup>**



	Mineral	Criticality Score	U.S. Net Import Reliance
1	Rare Earths <sup>2</sup>	10	100%
2	Scandium	10	100%
3	Niobium	9	100%
24	Titanium (sponge metal)	6	75%

<sup>1</sup> Subject to receipt of necessary project financing and commencement of operations at the Elk Creek Project.

<sup>2</sup> NioCorp is currently conducting technical and economic analyses on the potential addition of magnetic rare earth oxides to its planned product suite. No economic analysis has been completed on the rare earth mineral resource. Final determination of possible rare earth production can be made only after work related to a mineral reserve update, additional engineering, updated project capital and operating cost estimates, and other required information is produced for publication in a new Feasibility Study.

<sup>3</sup> Business Executives for National Security, 2020.

<sup>4</sup> Inflation Reduction Act of 2022, signed into law by President Biden on August 16, 2022.

<sup>5</sup> <https://www.whitehouse.gov/briefing-room/statements-releases/2024/09/20/fact-sheet-biden-harris-administration-takes-further-action-to-strengthen-and-secure-critical-mineral-supply-chains/>

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# APPENDIX

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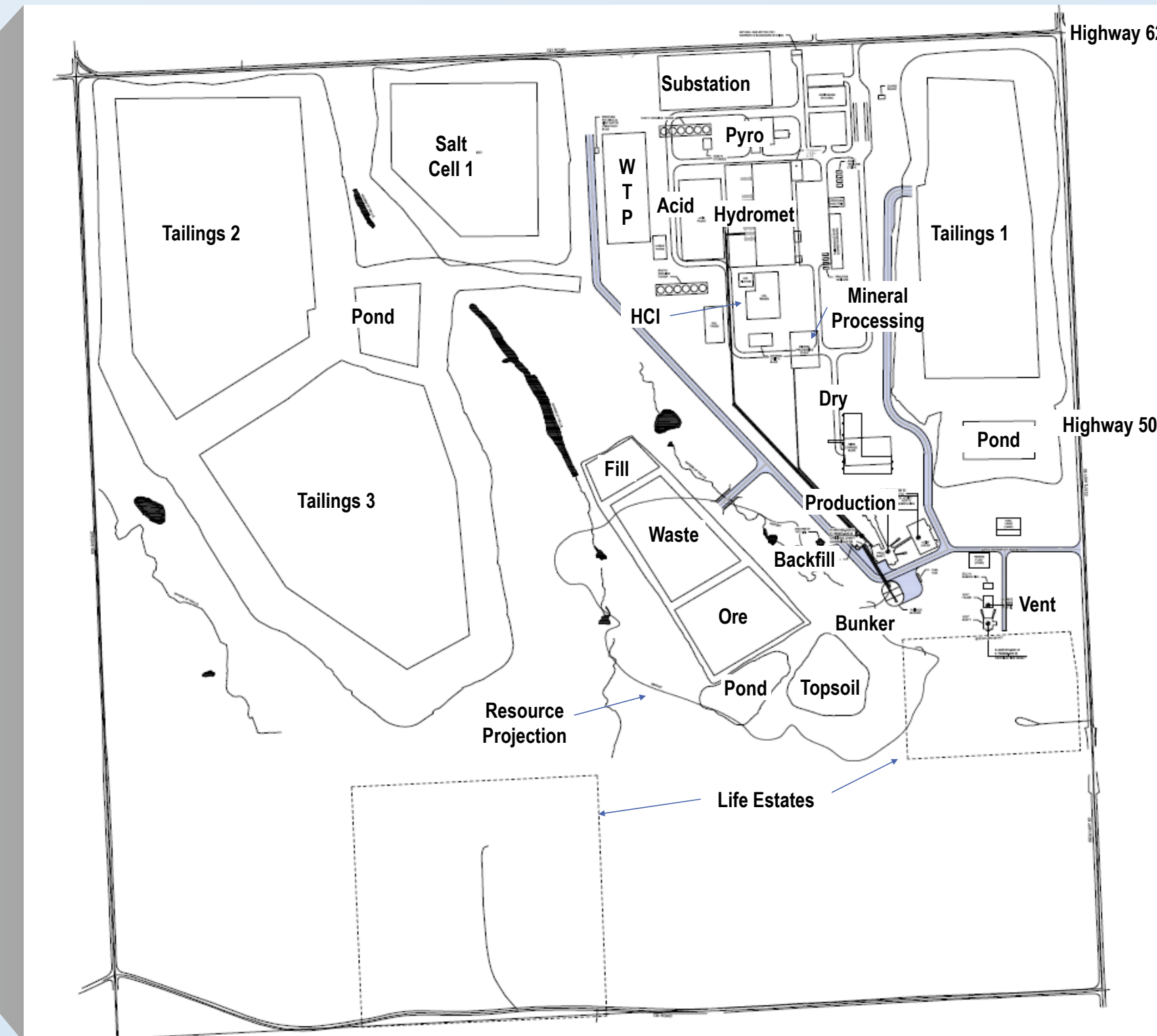
# Elk Creek Project Location & Layout<sup>1</sup>

The Elk Creek 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, utilities, and supporting infrastructure.

# Mineral Reserves and Mineral Resources<sup>1</sup>

**Initial Operational Footprint (640 acres)**

**Carbonatite Boundary (~7,800 acres)**

## Mineral Resource and Reserves<sup>1</sup>

Mineral Resource Classification	Cut-off NSR (US\$/t)	Tonnage (000's Mt)	Grade (Nb <sub>2</sub> O <sub>5</sub> %)	Grade (TiO <sub>2</sub> %)	Grade (Sc g/t)	Grade (TREO%)
Indicated	180	188.8	0.51	2.24	60.06	0.34
Inferred	180	108.3	0.39	1.92	52.28	0.38

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

Mineral Reserve Classification	Tonnage (000's t)	Grade (Nb <sub>2</sub> O <sub>5</sub> %)	Grade (TiO <sub>2</sub> %)	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 carbonatite footprint.**

<sup>1</sup> Based on the 2022 Elk Creek Technical Report. See "Mineral Reserves and Resources" in the Disclaimers & Technical Disclosures at the beginning of this presentation.

## Key Permits Obtained

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

- Construction Air Permit secured from the State of Nebraska.
- A Special Use Permit secured from Johnson County, Nebraska, the key local land use permit for the Elk Creek Project.



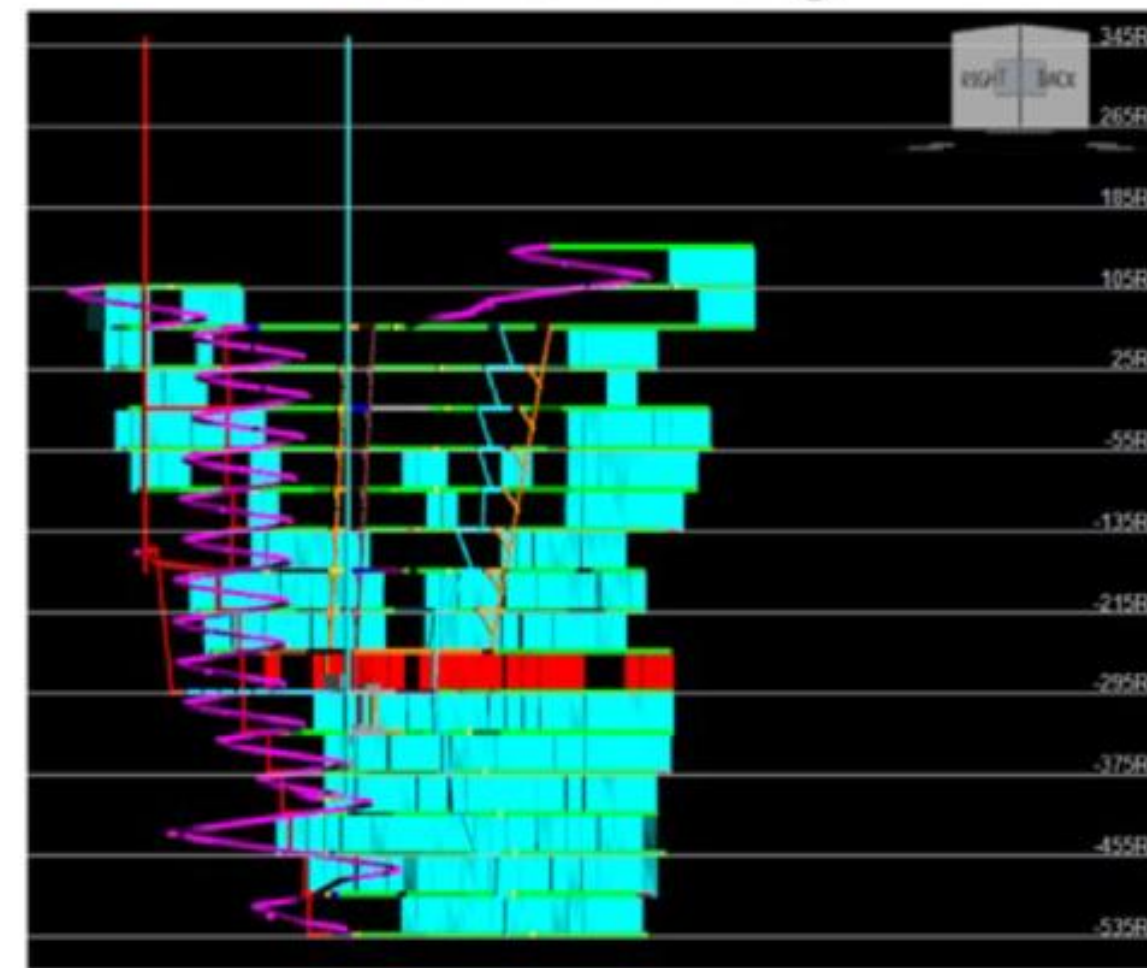
# Railveyor System to Potentially Shave ~\$189M from Project CAPEX<sup>1</sup>

- Recent study: NioCorp can potentially cut CAPEX by **~\$189M** by implementing a twin ramp Railveyor system in lieu of two mining shafts in the mine's underground workings.
- OPEX / tonne also potentially reduced
- NioCorp now examining Railveyor option as part of its updated Feasibility Study.
- Electrifying the mine with Railveyor expected to reduce the mine's carbon footprint.

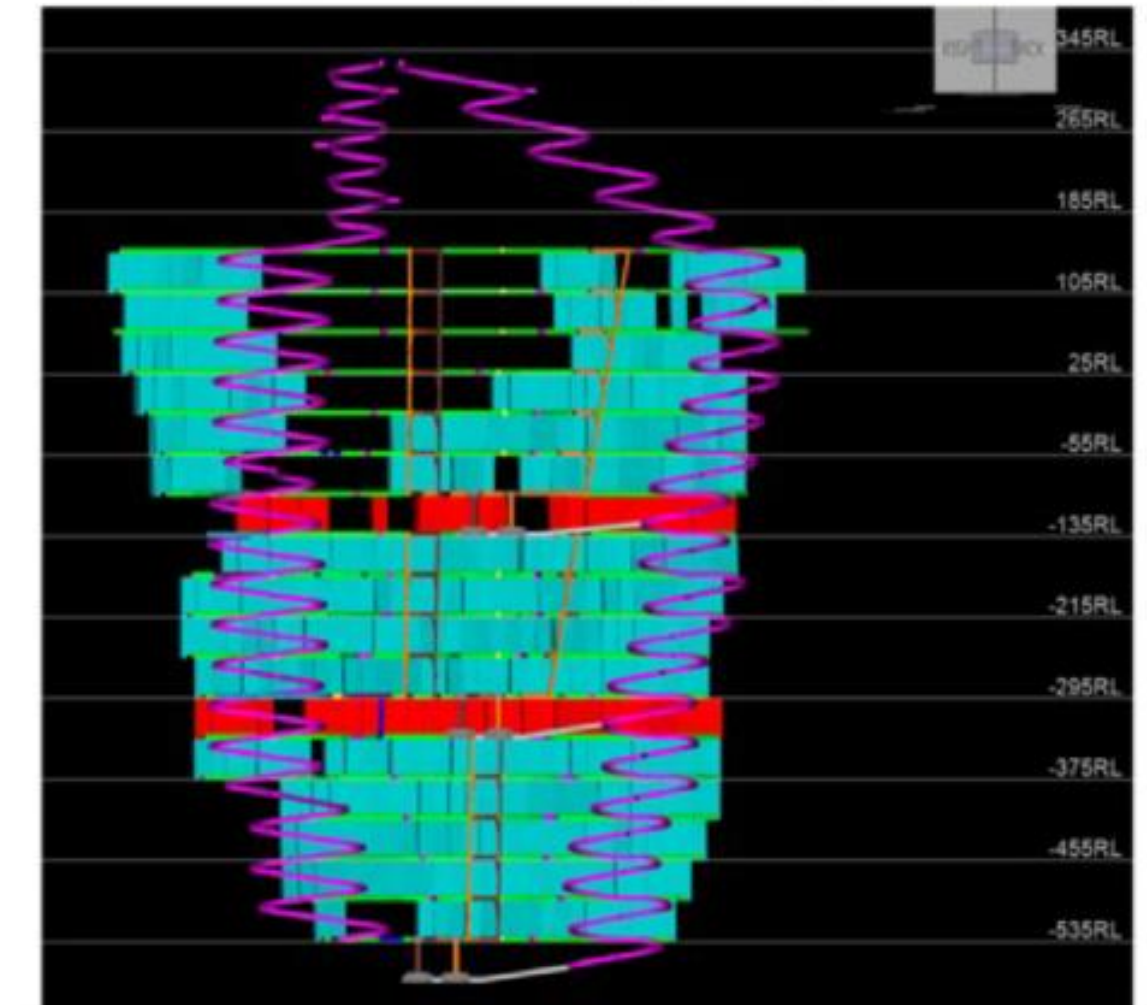


Project Outcomes Summary				
Item	2022 Shaft Scenario	2024 Twin Ramp Scenario	Difference with Twin Ramp System	% Difference
Initial CAPEX (US\$000s)	\$356,000	\$167,100	-\$188,900	<b>-53.1%</b>
Sustaining CAPEX (US\$000s)	\$198,400	\$214,700	\$16,300	<b>8.2%</b>
TOTAL CAPEX (US\$000s)	\$554,400	\$381,800	-\$172,600	<b>-31.1%</b>
OPEX/tonne	\$42.32	\$41.68	-\$0.63	<b>-1.5%</b>

2022 Shaft Design



2024 Twin Ramp Design



<sup>1</sup> The study, conducted by Optimize, reflects 2024 dollars, whereas NioCorp's existing Feasibility Study utilized cost estimates that are in the process of being updated. The scoping study by Optimize did not assess the geotechnical or hydrogeologic implications of accessing the Elk Creek Mine via a twin ramp system. The Company expects to assess the geotechnical and hydrogeologic implications of accessing the mine via a twin ramp study in the updated Feasibility Study if it chooses to pursue this option.

## 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 Elk Creek Project enjoys strong community support as well as state and local government support.
- 3 Nebraska Governor Pete Ricketts nominated the Elk Creek Project as a “National High-Priority Infrastructure” Project to the White House.<sup>1</sup>
- 4 Elk Creek Project is slated to receive approximately \$200 million in tax benefits from the State of Nebraska over its first 10 years of operation.<sup>2</sup>
- 5 Nebraska is reducing its state corporate income tax over time from 7.5% in 2022 to 3.99% in 2027<sup>3</sup>

### Estimated Economic Benefits and New Tax Revenue Generated by the Elk Creek Project <sup>4</sup>

Direct full-time, permanent jobs created <sup>5</sup>	~450
Indirect jobs created or supported <sup>6</sup>	~2,117
Peak construction-related jobs <sup>5</sup>	1,232
Cumulative operating expenses over project life <sup>5</sup>	\$6.59 billion
Employee payroll over project life (included in cumulative operating expenses above) <sup>5</sup>	\$1.1 billion
New tax revenue to state and local government over project life <sup>5</sup>	\$608 million
Royalties paid to Nebraska landowners over project life <sup>5</sup>	\$300 million

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

<sup>1</sup> <https://www.mining.com/nebraska-governor-says-niocorps-elk-creek-high-priority-project/>

<sup>2</sup> Contract signed July 23, 2021 with the State of Nebraska under the Nebraska Advantage Act.

<sup>3</sup> <https://governor.nebraska.gov/press/governor-pillen-signs-historic-tax-cuts-package#:~:text=Reduces%20the%20top%20individual%20and,care%2C%20for%20families%20and%20providers>

<sup>4</sup> 2022 NI 43-101 Elk Creek Technical Report. See “Mineral Reserves and Resources” in the Disclaimers & Technical Disclosures at the beginning of this presentation.

<sup>5</sup> 2022 Elk Creek Technical Report. Estimates account for tax benefits NioCorp expected to receive from the Nebraska Advantage program.

<sup>6</sup> Additional jobs created or supported was estimated using the Economic Policy Institute’s Employment Multiplier for Metal Ore Mining, <https://www.epi.org/publication/updated-employment-multipliers-for-the-u-s-economy/>

# NioCorp's Expected Mining Operations Designed from the Start with Sustainability in Mind

Underground mining operations to be electrified, avoiding emissions



Recycling of reagents



Fully aligned with Equator Principles, an auditable ESG framework



Avoidance of permanent impacts to Federally Jurisdictional Waters



Zero process water discharge facility



Utilizing tailings as underground mine backfill

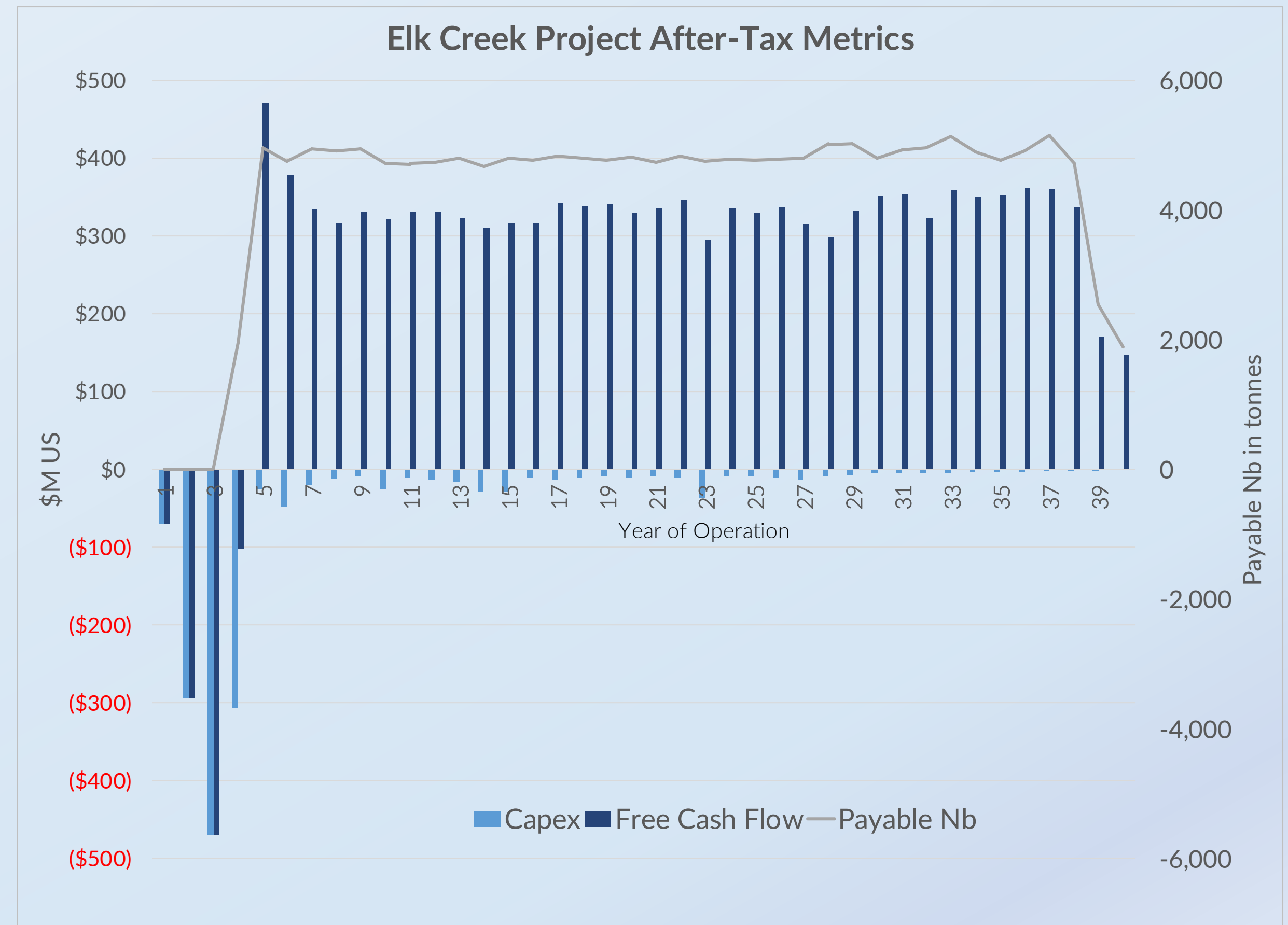


Local employment and an emphasis on the use of local businesses for project advancement

# Elk Creek Project Expected to Deliver Significant Cash Flow Over 38-Year Life

## Elk Creek Project Metrics Summary<sup>1</sup>

2022 Elk Creek Feasibility Study Economic Results	
<i>(not including REE production)</i>	
	<i>(US\$ Millions)</i>
Pre-Tax Net Present Value (NPV) (8% discount)	\$2,819
Pre-Tax Internal Rate of Return (IRR)	29.2%
After-Tax NPV	\$2,350
After-Tax IRR	27.6%
After-Tax Payback Period from Production Onset (years)	2.69
Total Upfront CAPEX	\$1,141
Mine Life (years)	38
Life of Mine ("LoM") Gross Revenue (\$M)	\$21,900
<i>Niobium</i>	\$7,968
<i>Scandium</i>	\$13,504
<i>Titanium</i>	\$427
Averaged Annual EBITDA over LoM <sup>2</sup>	\$397.5
Averaged EBITDA Margin over LoM (EBITDA as % of total revenue) <sup>2</sup>	69%
Averaged Annual Operating Cash Flow over LoM <sup>2</sup>	\$337
Average Annual Operating Cost, LoM (OPEX) (US\$/t)	(\$195.9)
Averaged Annual EBITDA over Run of Mine ("RoM") <sup>2</sup>	\$403
Averaged EBITDA Margin over RoM (EBITDA as % of total revenue) <sup>2</sup>	68%
Averaged Annual Operating Cash Flow over RoM <sup>2</sup>	\$340
Effective Tax Rate	16.4%



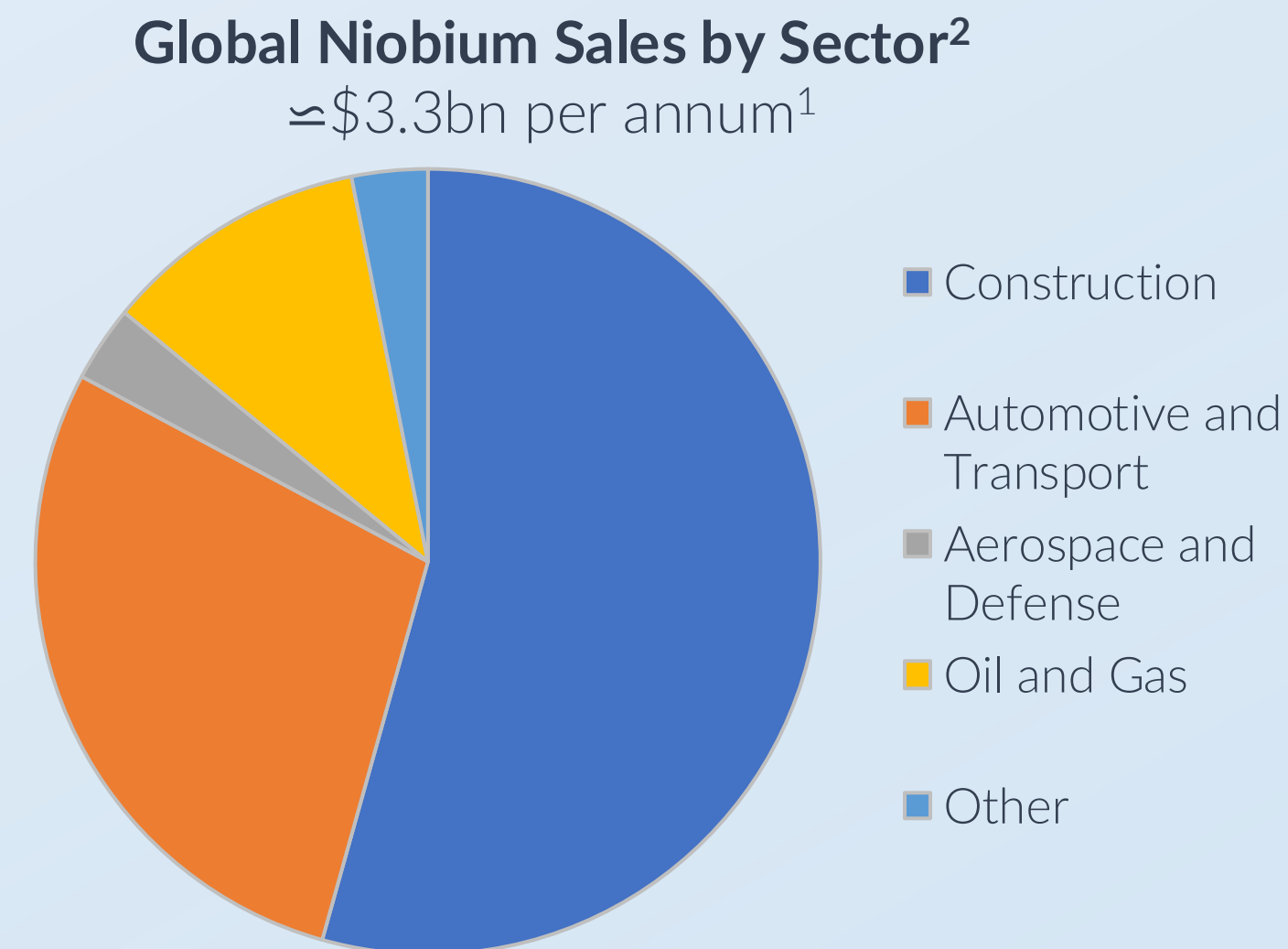
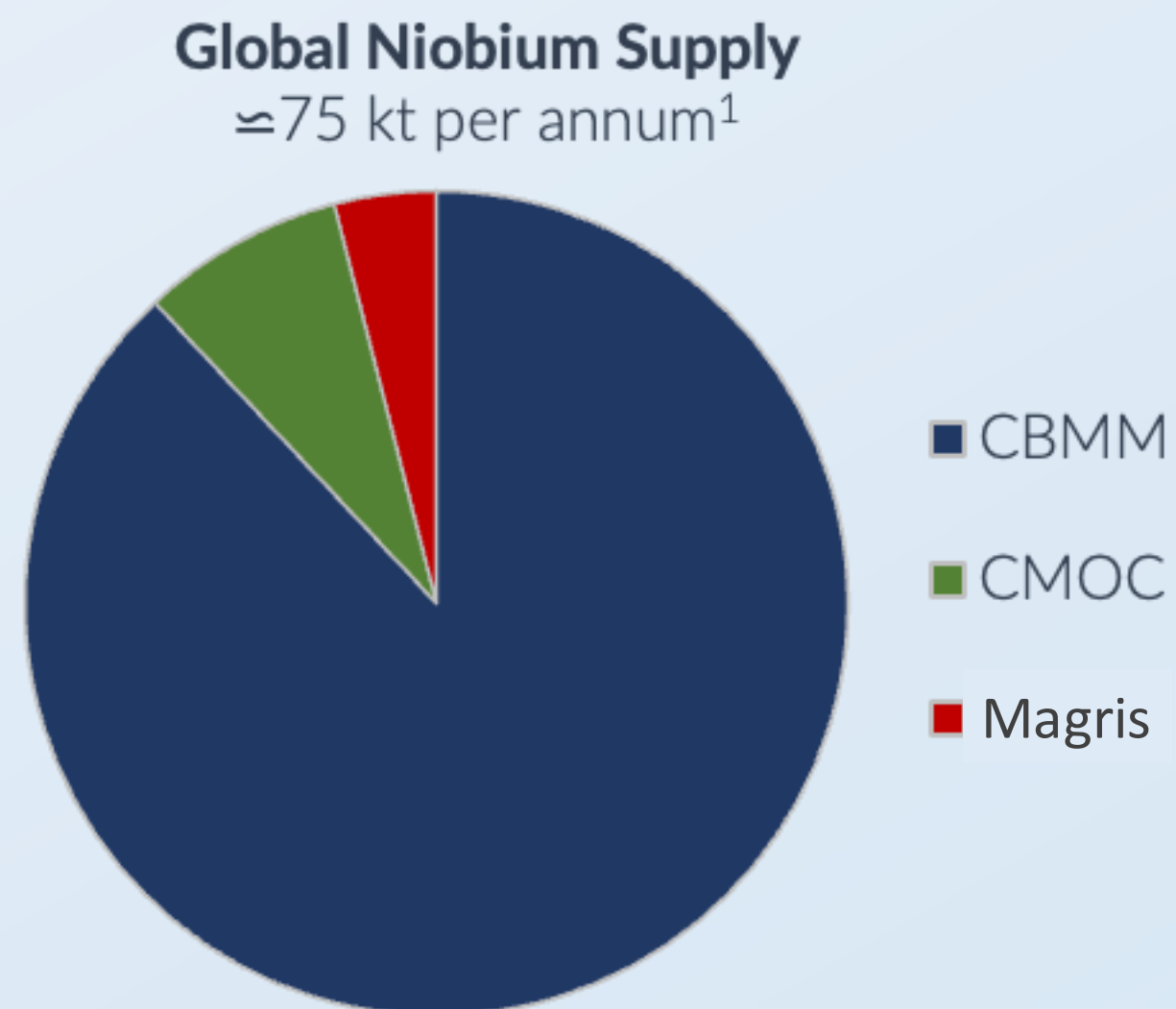
<sup>1</sup> Based on the 2022 Elk Creek Technical Report. See "Mineral Reserves and Resources" in the Disclaimers & Technical Disclosures at the beginning of this presentation.

<sup>2</sup> See "Financial Information; Non-GAAP Measures" in the Disclaimers & Technical Disclosures at the beginning of this presentation.

# NIOBIUM: A Critical Supply Risk To The U.S.

## Niobium

- 88% of the world’s Niobium is produced in only one country<sup>1</sup> – Brazil – which increases supply chain risk and **has forced the U.S. Government to stockpile Niobium.**
- Market growth is expected to rise sharply with the expected use of niobium in next-generation Lithium-Ion batteries, which enables faster battery charging.<sup>2</sup>
- Light-weighting** of transportation systems and strengthening of bridges and mega-infrastructure projects are expected to drive additional long-term growth.
- Highly liquid global market** with many users and a growing number of applications.



### Global Niobium Demand Drivers

 <p><b>Stronger and lighter steels for buildings &amp; infrastructure mega-projects</b></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.<sup>3</sup></p>	 <p><b>Growing demand for lighter weight and more fuel-efficient cars, trucks, and buses</b></p> <p>300 grams Nb reduces the weight of mid-size car by 200 kg and increases fuel efficiency by 5%.<sup>3</sup></p>	 <p><b>Next Generation Niobium-Lithium-Ion Batteries</b></p> <p>Significant potential demand. CBMM expects nearly 50 ktpa Nb Oxide sales by 2030.<sup>3</sup></p>
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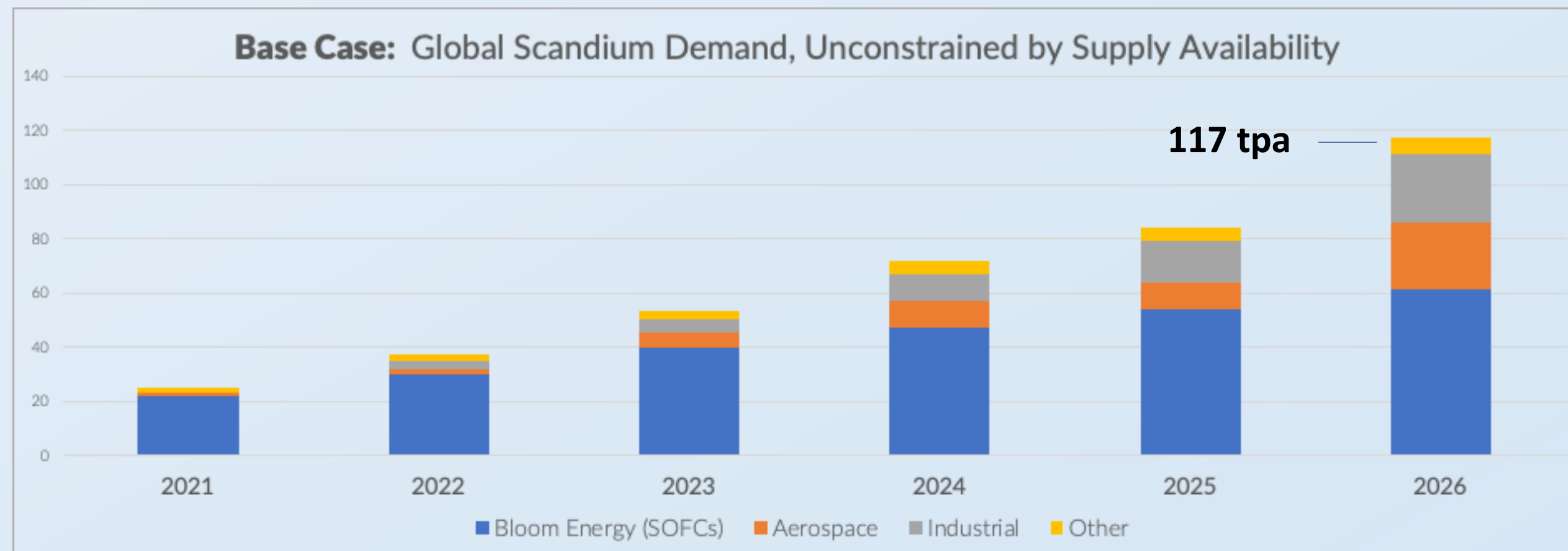
<sup>1</sup> "Niobium Outlook to 2030," Roskill, 2020.  
<sup>2</sup> Source: CBMM.  
<sup>3</sup> Source: Niobium.Tech (CBMM).



# SCANDIUM: Limited Current Supply But Very Large Latent Demand

## Scandium

- Forecast demand (117 tonnes/year by 2026) greatly exceeds current supply (25 tonnes/year)<sup>1</sup> and exceeds NioCorp’s potential annual scandium production.
  - Solid oxide fuel cell use of Scandium (≈22 tonnes/year) forecast to grow at 23% CAGR<sup>1</sup>
  - Aerospace + industrial use in 2022 (≈5 tonnes/year) forecast to reach 50tpy over next 5 years<sup>1</sup>
- Momentum building in the market, with new pilot production from Rio Tinto<sup>2</sup> and planned production from others.
- Potential in EV/Automotive:** Net pounds of aluminum per light duty vehicle is forecast to increase from 459 lbs. in 2020 to 570 lbs. in 2030,<sup>3</sup> representing a large potential for scandium use in aluminum-scandium alloys, even at low overall penetration; just 10% of this volume using 0.1% scandium would mean 700 tonnes/year scandium demand.<sup>1</sup>



Source: ONG Commodities Ltd., 2021

## Global Scandium Demand Drivers



**Increasing focus on lighter-weight and more fuel efficient commercial jets**

Approximately \$2M of scandium in a single airliner offers an estimated \$27M million of net present value in fuel savings.<sup>4</sup>



**Development of lighter-weight and more fuel efficient railway cars and large transport**

One of the world’s largest aluminum companies has already produced Al-Sc alloy rail hopper cars.<sup>5</sup>



**Weight reduction in EV components is a high priority for automakers.**

IEA forecast 25% CAGR growth in demand for EVs to 2030.<sup>6</sup>

<sup>1</sup> ONG Commodities Ltd.

<sup>2</sup> Rio Tinto.

<sup>3</sup> Advanced Casting Research Center.

<sup>4</sup> Company estimate.

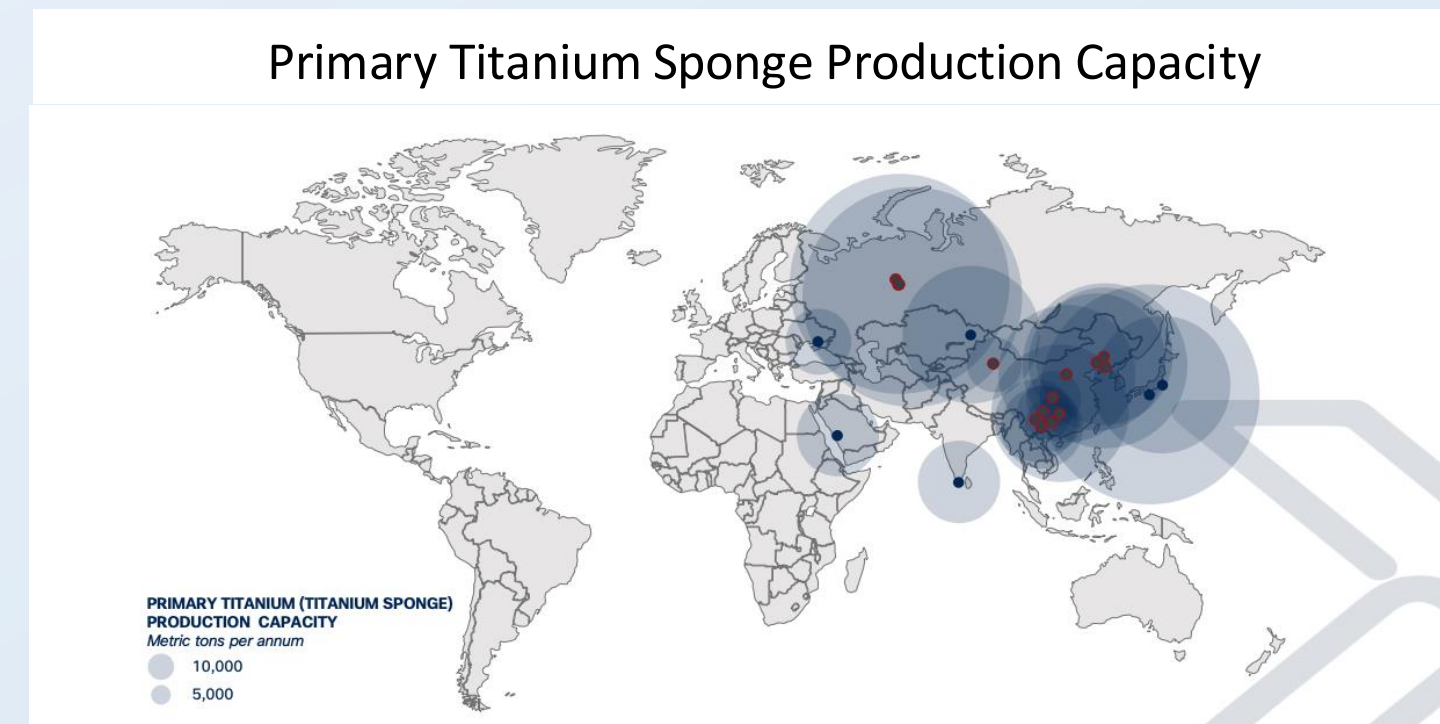
<sup>5</sup> Aluminum International Today, Jan. 25, 2022.

<sup>6</sup> EA Global EV Outlook 2022.

# TITANIUM: Tight Global Supply With Rising Demand + War in Europe

## Titanium

- Demand for titanium metal is forecast to grow by a 6.8% CAGR between 2022 and 2030, driven primarily by increasing demand in defense and industrial segments.<sup>1</sup>
- Global markets for aerospace-grade titanium metal have tightened in recent years because of increased demand and supply chain pressures resulting from the Ukraine conflict with Russia, the world's largest supplier. The last titanium sponge plant in the US closed in 2020.
- NioCorp plans to make titanium dioxide and/or TiO<sub>2</sub>, a high-purity product used in the two largest titanium market segments: titanium dioxide pigments and titanium metal.



Credit: IperionX, 2023, based on USGS Survey. Locations approximate.

## Global Titanium Demand Drivers



### Demand in commercial aviation

Production backlogs at Boeing underpin a significant portion of US demand for titanium metal and therefore titanium sponge.<sup>1</sup>



### Increased use in advanced military fighter jets

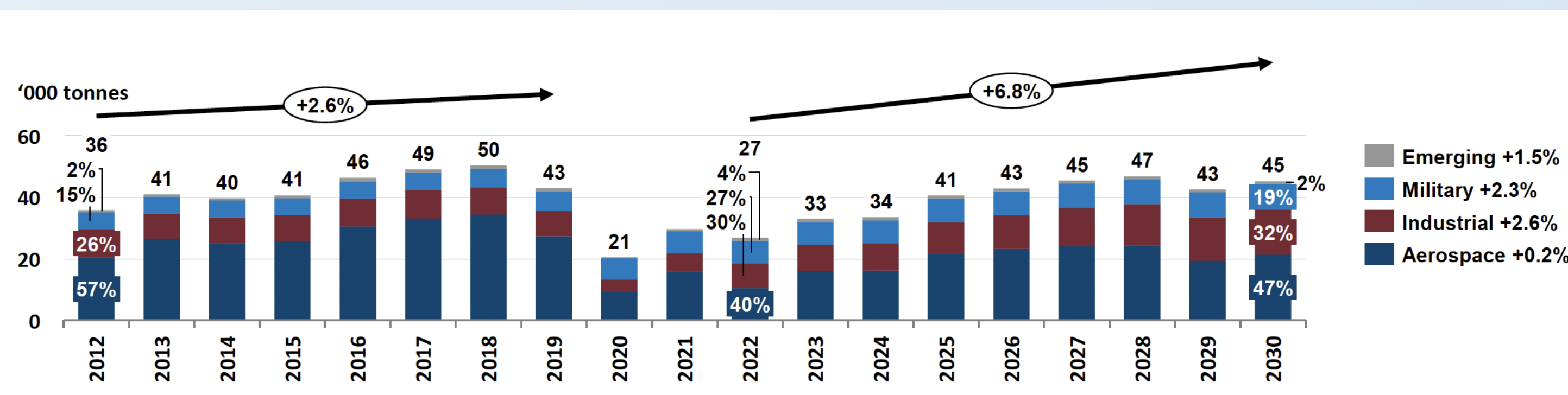
For example, the F-22 utilizes 9,000+ lbs. of titanium, comprising approximately 42% of the aircraft's weight.<sup>2</sup>



### Extensive consumption of TiO<sub>2</sub> across multiple markets

Titanium dioxide demand is expected to grow at 6.3% CAGR from 2023 to 2030.<sup>3</sup>

## Historic and Forecast Demand for Titanium Metal



Source: TiCl<sub>4</sub> Market Analysis, conducted for NioCorp by TZMI, 2023.

<sup>1</sup> TiO<sub>2</sub> Market Analysis for NioCorp, performance by TZMI, 2023.

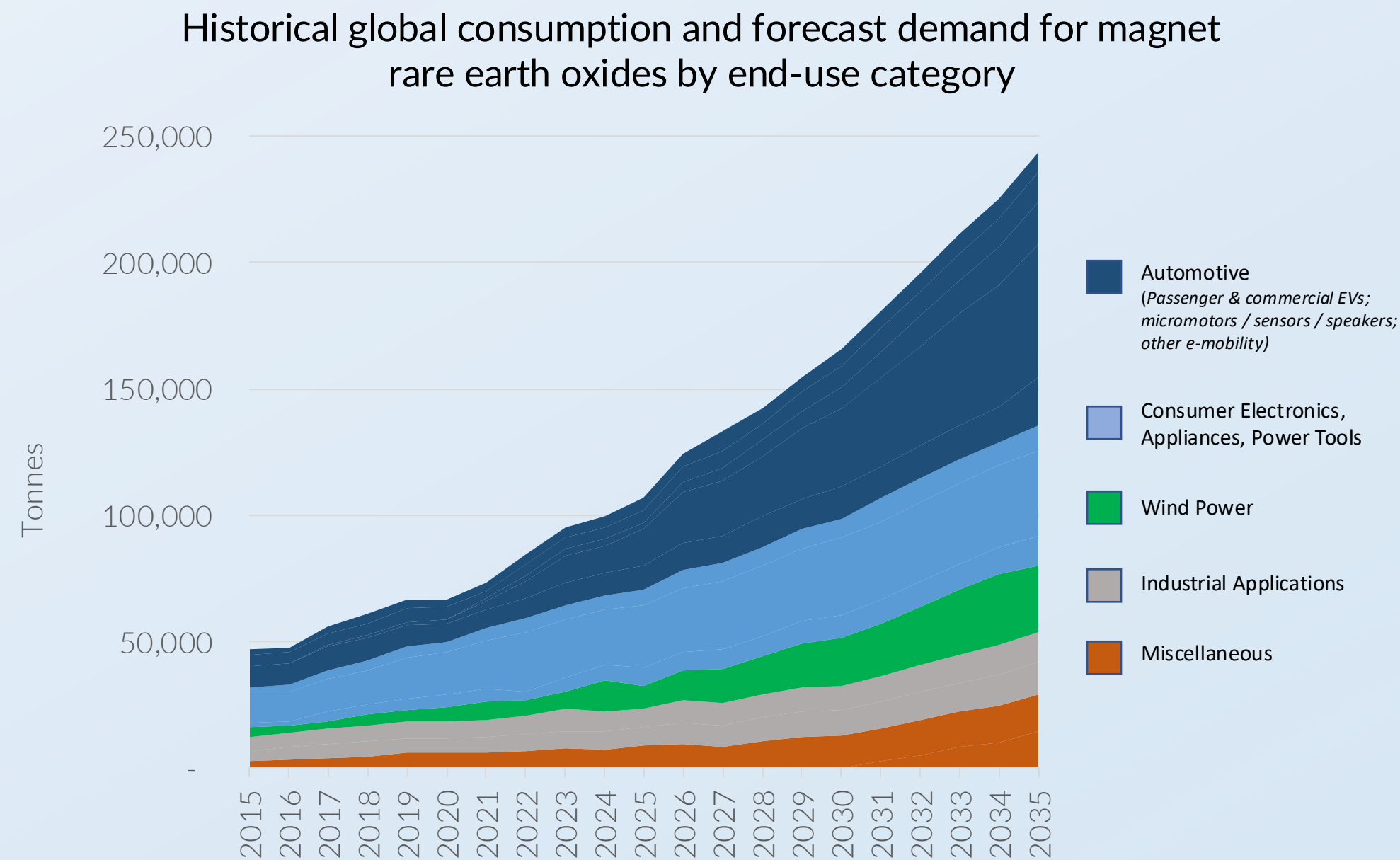
<sup>2</sup> Cotton, James D., et al. "Titanium Alloys on the F-22 fighter airframe." Advanced Materials & Processes, vol. 160, no. 5, May 2002.

<sup>3</sup> Research and Markets, 2023.

# MAGNETIC RARE EARTHS: Global Demand to Grow 3X by 2035<sup>1</sup>

## Magnetic Rare Earth Elements

- NioCorp has signed a non-binding term sheet with Stellantis NV for possible sale of these magnetic rare earth oxides: NdPr, Dy, and Tb.<sup>2</sup>
- Global magnetic REE oxide consumption value is forecast to increase 3x by 2035, from US\$15.1 billion in 2022 to US\$46.2 billion by 2035.<sup>1</sup>
- Global REE markets are forecast to under-produce NdPr, Dy, and Tb oxides from 2022 onward unless significant new supplies are brought online.<sup>1</sup>



Growth Rates for Magnetic REE Consumption by Sector from 2022 → 2035 <sup>1</sup>	
Sector	CAGR
Retail and Commercial EV Traction Motors	14.0%
Direct drive and hybrid drive wind power generators	13.0%
Automotive micromotors, sensors, and car speakers	4.9%
Industrial motors, pumps, generators, robotics	4.2%
Electronics, appliances, power tools	4.1%
All other uses	12.6%

**Automotive market requires significant REEs with EV traction expected to drive a 14.1% CAGR<sup>1</sup>**

## Global Magnetic REE Demand Drivers



**GHG reductions driven by greater use of electric vehicles and other tech**

Demand for magnetic rare earths is expected to grow by more than 150% from 2020 to 2030.<sup>1</sup>



**Demand for direct drive and hybrid drive wind turbines requires significant REE volumes**

Demand expected to grow at 13.0% CAGR by 2035.<sup>1</sup>



**Acute global supply shortages of magnetic REEs are forecast**

Shortages of rare earth alloys for magnets forecast to be equal to one-third of the total market by 2035.<sup>1</sup>

<sup>1</sup>"Rare Earth Magnet Market Outlook to 2035," Adamas Intelligence, 2022. All REE calculations carried on an elemental basis.

<sup>2</sup> NioCorp is currently conducting technical and economic analyses on the potential addition of magnetic rare earth oxides to its planned product suite. Final determination of possible rare earth production can be made only after work related to a mineral reserve update, additional engineering, updated project capital and operating cost estimates, and other required information is produced for publication in a new Feasibility Study.

## Management Team



**Mark A. Smith, P.E.**

Executive Chairman, President and  
Chief Executive Officer

Mr. Smith joined NioCorp as CEO and Chairman in 2013. He has 40+ years of experience in the mining and mineral processing industries. Formerly, he was President, CEO & Director of MolyCorp; CEO and Director of Largo Resources; CEO and President of Chevron Mining; and Director of Companhia Brasileira de Metalurgia e Mineracao Ltd. ("CBMM"), the largest niobium producer in the world. Mr. Smith also serves as CEO and Chairman of IBC Advanced Alloys and US Vanadium LLC. He holds a B.Sc. degree in engineering from Colorado State University and a J.D. (cum laude) from Western State University, College of Law.



**Scott Honan, MSc, SME-RM**

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

Mr. Honan joined NioCorp in 2014. He has 30+ 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

Mr. Shah has been with NioCorp since 2014. With 25 years of experience in various industries as diverse as high-tech to rare earths, Neal's past experience includes finance, business development, and engineering positions with MolyCorp, Intel, IBM, Boeing, and Covidien. During his time at MolyCorp, he was instrumental in realizing the company's Mines-to-Magnets vertical integration strategy, and served as a Director on Intermetallics, Inc., which was the MolyCorp/Mitsubishi/Daido Steel joint venture formed to build magnets outside of China. He is a graduate of the University of Colorado's Mechanical Engineering program (BSME) and Purdue University's Krannert School of Management (MBA).



**Jim Sims**

Chief Communications  
Officer

Mr. Sims joined NioCorp in 2015 and has 30+ years of experience representing companies in mining, chemical, manufacturing, utility, and renewable energy sectors, including Dow Chemical, Calpine, FMC, MidAmerican Energy, Danaher, and others. He was VP of Corporate Communications for MolyCorp and is the former head of the U.S. Geothermal Energy Association, the 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.

## Board of Directors *(slide 1 of 2)*



**Mark A. Smith, P.E.**

*Executive Chairman,  
President and CEO*

Mr. Smith has over 40 years of experience in operating, developing, and financing mining and strategic materials projects in the Americas and abroad. In September 2013, he was appointed CEO and a Director of NioCorp. From April 2015 to September 2019, Mr. Smith served as the President and Director, and later as CEO, for Largo Resources Ltd. Mr. Smith has also served on the board of directors of IBC Advanced Alloys Corp., a leading beryllium and copper advanced alloys company, since May 2016, and as CEO of IBC since July 2020.

From October 2008 through December 2012, Mr. Smith served as President, CEO and Director of Molycorp, Inc., a rare earths producer, where he was instrumentally involved in taking it from a private company to a publicly traded company with a producing mine. Prior to Molycorp, Mr. Smith was the President and CEO of Chevron Mining

Inc. He also served for over seven years as the shareholder representative of Companhia Brasileira Metalúrgica e Mineração, a private company that currently produces approximately 85% of the world supply of niobium. Mr. Smith is a Registered Professional Engineer and serves as an active member of the State Bars of California and Colorado. He received his Bachelor of Science degree in Agricultural Engineering from Colorado State University in 1981 and his Juris Doctor, cum laude, from Western State University, College of Law, in 1990.



**Nilsa Guerrero-Mahon**

*Audit Committee Chair*

A former CFO and Controller for global corporations 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. In addition, Ms. Guerrero-Mahon was appointed to the Board of FinGoal Inc. in April 2022, a finance technology company building artificial intelligence tools for the financial services industry and other financial technology developers. She also serves on the Board of the State of Colorado Division of Securities. From 2016 to August 2019, she served on the board of directors of Centura Health Mountains & North Denver Operating Group, the largest division in the Centura Health Care System. From 2014 to 2016, she served as the Vice Chair of the board of directors and Chaired the Strategy Committee at St. Anthony Hospital. From 2009 to 2017, Ms. Guerrero-Mahon served as a gubernatorial appointed Board Member of the State of Colorado Financial Services Commission.

Among other prior positions, from 2004 to 2007, she was the Global Services Controller at Microsoft Corporation, overseeing internal controls and corporate finance activities.



**Michael J. Morris**

*Lead Director*

Mr. Morris was formerly the Chairman of the board of directors of Heritage Oaks Bankcorp, the holding company of Heritage Oaks Bank. When Heritage Oaks Bank merged with Pacific Premier Bancorp on April 1, 2017, Mr. Morris became a member of the Pacific Premier Bancorp's board of directors, a position he held until May 31, 2020. He joined Heritage Oaks' board of directors in January 2001 and assumed the board's chairmanship in 2007. In addition,

Mr. Morris has worked since 1972 at Andre, Morris & Buttery, a professional law corporation, where he serves as Senior Principal and has served as Chairman of the board since 2005. From 2000 to late 2006, Mr. Morris served on the board of Molycorp, a rare earths producer, which at the time was a wholly owned subsidiary of Unocal and then

Chevron Mining. Mr. Morris was the only independent director of Molycorp at that time. Mr. Morris is a graduate of Georgetown University and received his law degree from the University of San Francisco School of Law. He has practiced business and environmental law for over 40 years. Mr. Morris served as a member of the Board of Governors and Vice President of the State Bar of California. He served as a 1st Lieutenant in the U.S. Army from 1970 to 1972.



**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, which 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+ U.S. and Canadian junior mining companies. 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.

## Board of Directors *(slide 2 of 2)*



**Peter Oliver**

With a background in chemistry, Mr. Oliver began working at Greenbushes, Western Australia, for Sons of Gwalia, a mining company, in May 2003. After Sons of Gwalia went into administration in 2004, Mr. Oliver was hired by Talison Lithium Limited, a mining company, where he served as General Manager of Talison's Greenbushes and Wodgina Mines and as Talison's Chief Operating Officer, until Mr. Oliver was appointed as the CEO/Managing director. As Talison's CEO/Managing director, Mr. Oliver led the listing of Talison on the Australian Stock Exchange in September 2010. Mr. Oliver guided Talison through its acquisition in 2013 by Tianqi Lithium Corporation. He then served as a corporate adviser to Tianqi, focusing on M&A opportunities and global expansion, including advising on the sale of 49% of Talison to Albemarle Corp. and the acquisition of 24% of Sociedad Quimica y Minera de Chile S.A., as well as significant expansions of Talison's Greenbushes lithium concentrate production. Mr. Oliver also was a founding member of Tianqi Lithium Energy Australia Pty Ltd, a wholly owned subsidiary of Tianqi, which was established to build a major Lithium Hydroxide manufacturing facility in Western Australia. Until June 2021, Mr. Oliver remained as a director of Talison, a joint venture between Tianqi and Albemarle Corp. In September 2022, Mr. Oliver was appointed to the Board of Latin Resources, a lithium exploration company in Australia.



**Dean C. Kehler**

Mr. Kehler is Managing Partner of Trimaran Capital Partners, a private equity firm that he co-founded in 1998. Prior to Trimaran, Mr. Kehler was a Managing Director and Vice Chairman of CIBC World Markets, where he was responsible for CIBC's United States and European Merchant Banking activities, which were conducted through the CIBC Funds. In addition, Mr. Kehler was responsible for overseeing CIBC's United States and European Leveraged Finance businesses, which included financial sponsor coverage; acquisition finance; high yield origination, underwriting, sales and trading; private placements; and financial restructuring advisory services. Prior to CIBC, Mr. Kehler was a co-founder of The Argosy Group LP. Prior to Argosy, Mr. Kehler was a Managing Director of Drexel Burnham Lambert Inc., and before that he was an investment banker at Lehman Brothers. Mr. Kehler serves on the Boards of Directors of Celularity, Inc. (biotech; NASDAQ: CELU); and Portman Ridge Finance Corp., (fixed income investments/asset management; NASDAQ: PTMN). Mr. Kehler previously served as a Director, Treasurer and Chair of the Finance Committee of CARE USA, one of the world's largest private humanitarian organizations; and as Chair of the Board of Overseers of the University of Pennsylvania School of Nursing. Mr. Kehler graduated from the Wharton School of the University of Pennsylvania.



**Michael G. Maselli**

Mr. Maselli joined the NioCorp board in 2023 and has guided companies and their boards as a director, advisor, or principal for over 30 years. He has been a Managing Director of Trimaran Fund Management, L.L.C. since 2006 and served as President of GXII (NASDAQ: GXII) until its merger with NioCorp. Before joining Trimaran, Mr. Maselli worked in the Corporate and Leverage Finance Groups of CIBC and prior to joining CIBC in 1997, Mr. Maselli served as a Managing Director in Bear Stearns' corporate finance group and as a Vice President at Kidder Peabody & Co. Incorporated. Mr. Maselli served on the board of directors of El Pollo Loco Holdings from 2010 until 2024, and he served as the Company's Chairman of the Board from 2011 to 2023. From 2013 to 2015, he served on the board of directors of Norcraft Companies, Inc. (NYSE: NCFT) and served on the board of managers of its predecessor company beginning in 2003. Additionally, Mr. Maselli served on the board of directors of ChanceLight, Inc. (f/k/a Educational Services of America, Inc.) and Standard Steel, LLC, and was Chairman of the Board of CB Holding Corp. Mr. Maselli received an MBA with distinction from The A.B. Freeman School at Tulane University and a bachelor's degree in economics from the University of Colorado.

## The Power of Aluminum-Scandium Master Alloy

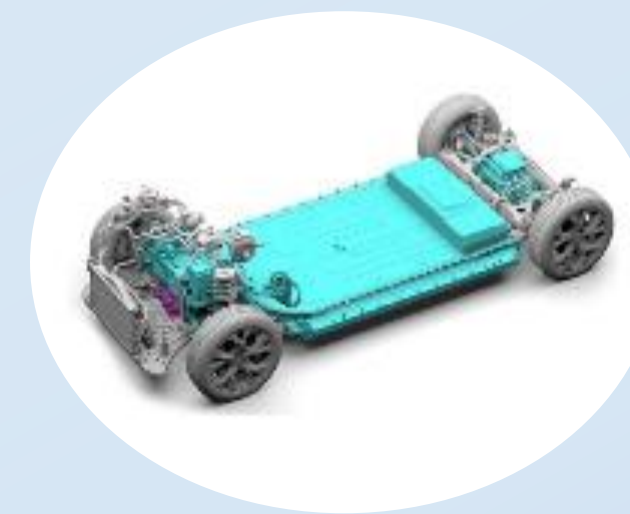
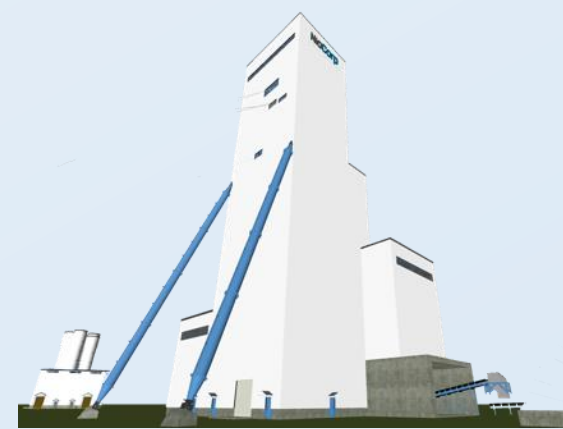
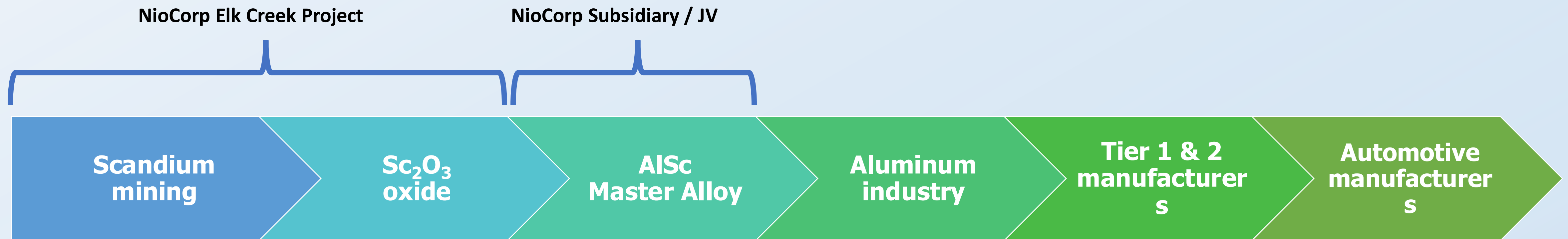
- No need to quench cast parts
- High specific strengthening effect
- Inhibition of recrystallization
- Grain size refinement
- Better fatigue life
- Improved resistance to hot cracking and improved corrosion resistance
- Enables better parts recycling and circular economics for manufacturers



**Superior Grain Refinement:**  
Aluminum Alloy without scandium (left) and Al-Sc (right)<sup>1</sup>

# Downstream Integration: Aluminum-Scandium Master Alloy

NioCorp has launched a phased commercialization effort aimed at also producing value-added aluminum-scandium master alloy, which opens up new potential markets for NioCorp's planned scandium production at the Elk Creek Project.



↑  
Higher margin capture



# Scandium Market Development Initiative

- Recently established NioCorp Technologies Ltd in the UK
- Effort focused on developing Al-Sc mass market applications for light-weighting and recycling of automotive components
- Partnering with a leading UK university to undertake advanced Al-Sc research
- Working closely with leading automotive OEMs, Tier 1 suppliers and specialist manufactures
- Undertaking rapid prototyping to build early track record and accelerated market adoption



**EXAMPLE: Cast Node on Battery Box requires strength, corrosion resistance, weldability**

# Project PIVOT

## Project PIVOT “Performance Integrated Vehicle Optimization Technology”

Three objectives:

1. Digital Twin & Advanced Simulation in Casting Development
2. Secondary Al Alloy Use in Automotive Chassis Castings (Sc)
3. UK hub for industrialized casting design and development

## Project Consortium includes such companies as Aston Martin, Sarginsons, Altair, GESCRAP, and Brunel University London

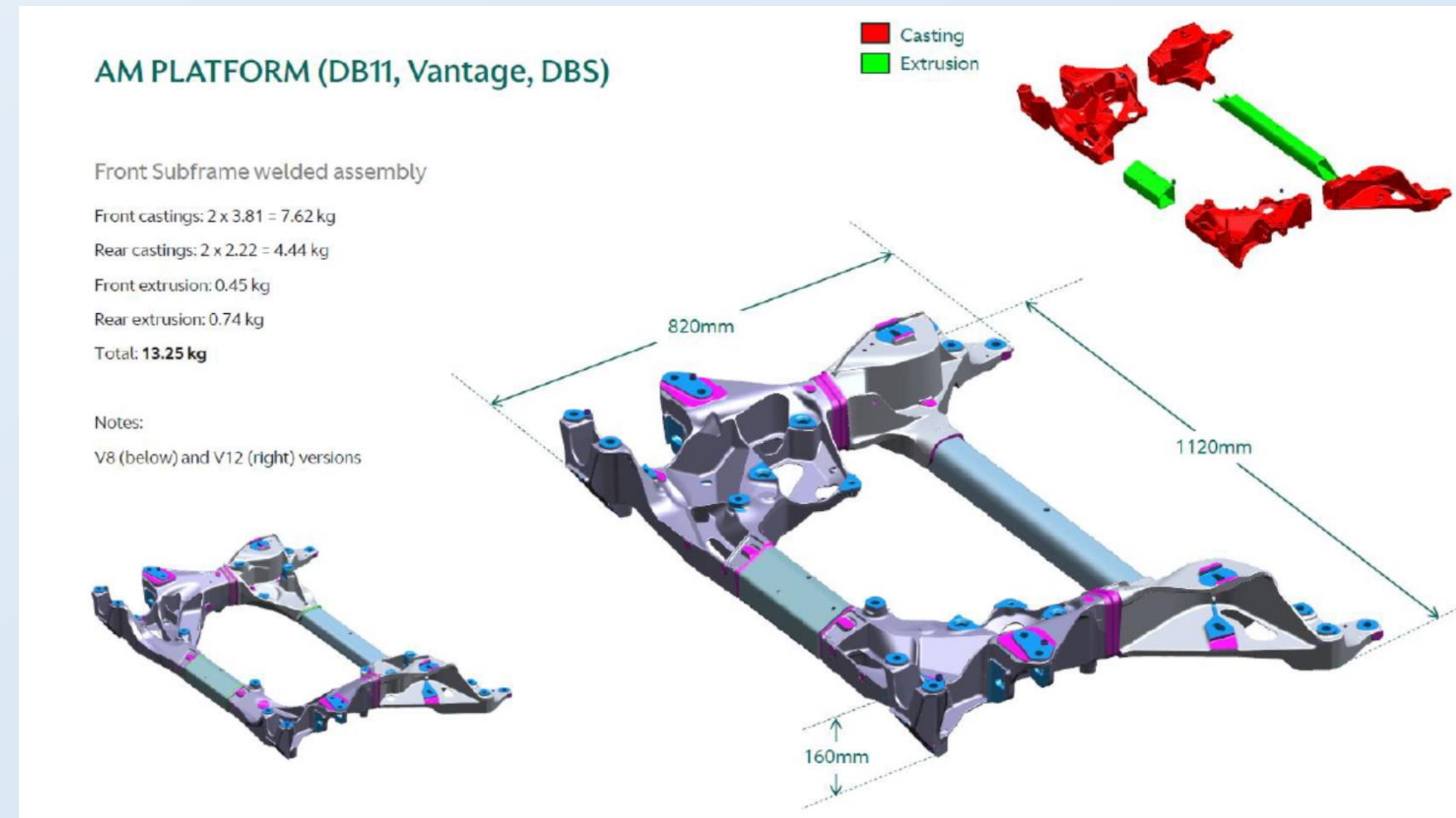
- The Project’s Steering Committee includes Jaguar Land Rover, Boeing UK, Alcon Industries, Linamar, Char.gy

## UK Government Funding Awarded in September 2024

- Total project investment: £5,808,892, government grant of: £2,903,977

## NioCorp’s Role:

- 1) Supply AlSc master alloy
- 2) Support Brunel/Sarginsons with materials development to:
  - a. Provide base line materials properties for AlSc alloys
  - b. Provide materials properties for AlSc using secondary Al.
  - c. Provide materials test results for rapid prototyping using sand castings.



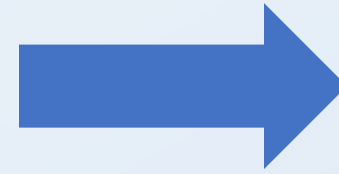
Collaborative	Supporting	Steering Committee

# New Value Chain for End-of-Life Recycling

## Current State



Dismantling



Shredding

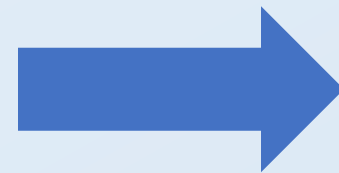


Disposal or  
low-grade reuse

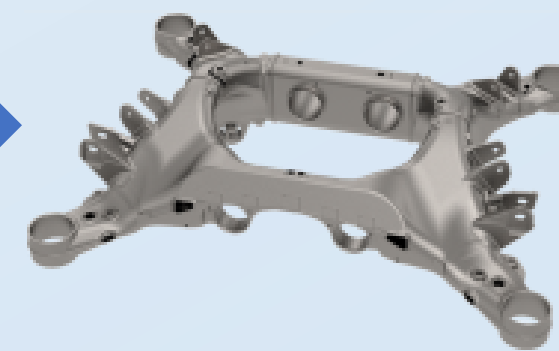
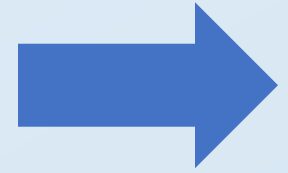
## After Project PIVOT



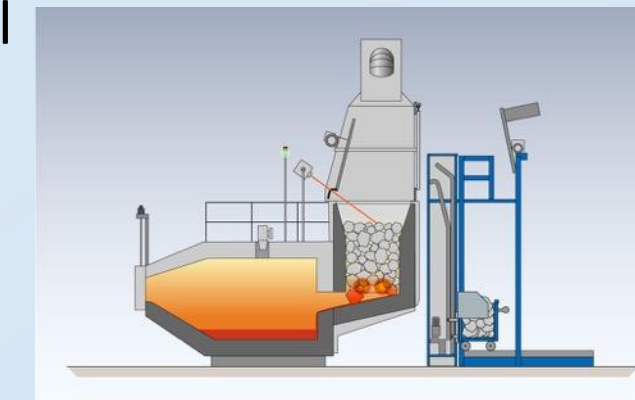
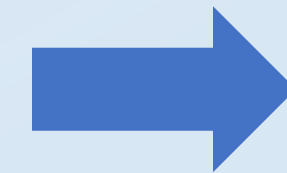
Dismantling



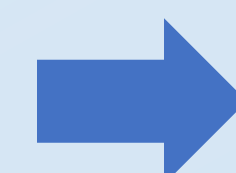
Dismantling



Remelting high-  
graded material



Scandium



High-grade,  
stronger Aluminum



## RESULTS

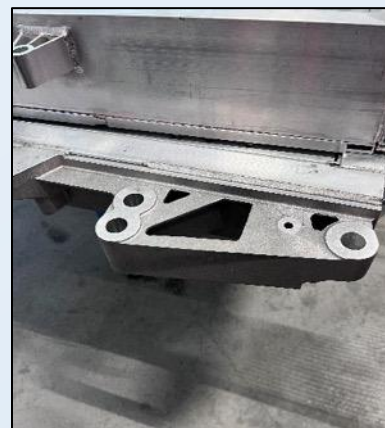
- Greater use of high-strength (and recycled) aluminum to lightweight vehicles
- Reduced CO2 emissions from use of recycled aluminum
- Lower manufacturing costs

# Industrial Sectors Seeking Greater Access to Scandium Alloys

## Automotive

NioCorp is now working with automotive manufacturers to explore different aluminum-scandium alloy chemistries to be used for prototype parts for EV and ICE vehicles.

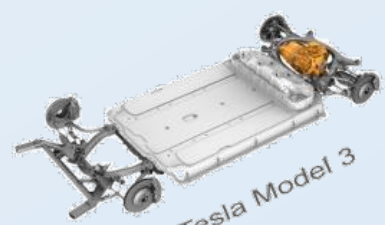
### Application Examples



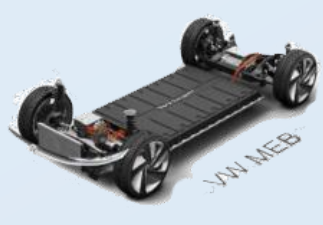
Cast Node on Battery Box



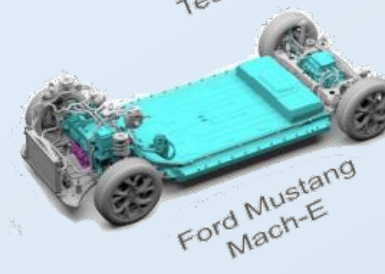
Extruded Bumpers



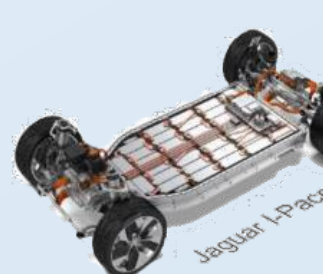
Tesla Model 3



VW MEB



Ford Mustang Mach-E



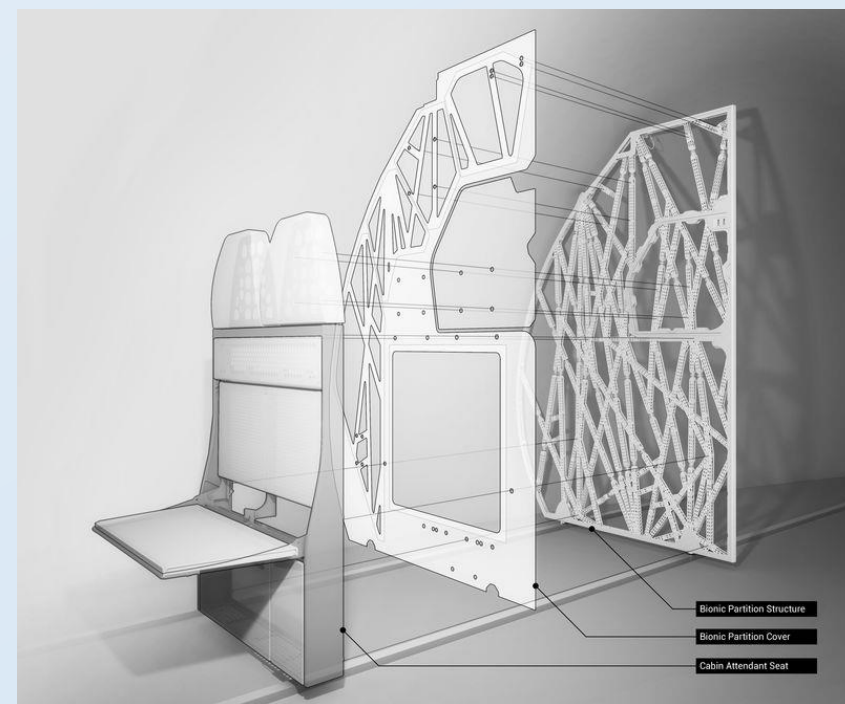
Jaguar I-Pace

Battery Enclosures

## Commercial Aviation

Commercial airlines intensely interested in light-weighting jets to reduce emissions. Al-Sc alloy parts have already been developed that can be swapped out with current alloy parts to reduce weight.

### Application Examples



APWorks, and Airbus subsidiary, developed a lightweight aircraft bulkhead partition using Scalmalloy®, an aluminum-magnesium-scandium alloy.

## Defense/Space

DoD interested in aluminum-scandium alloys in land-, air-, sea-, and space systems. NioCorp, DoD, and Congress working to potentially accelerate our current Al-Sc master alloy commercialization effort.

### Application Examples



## 5G / Communications

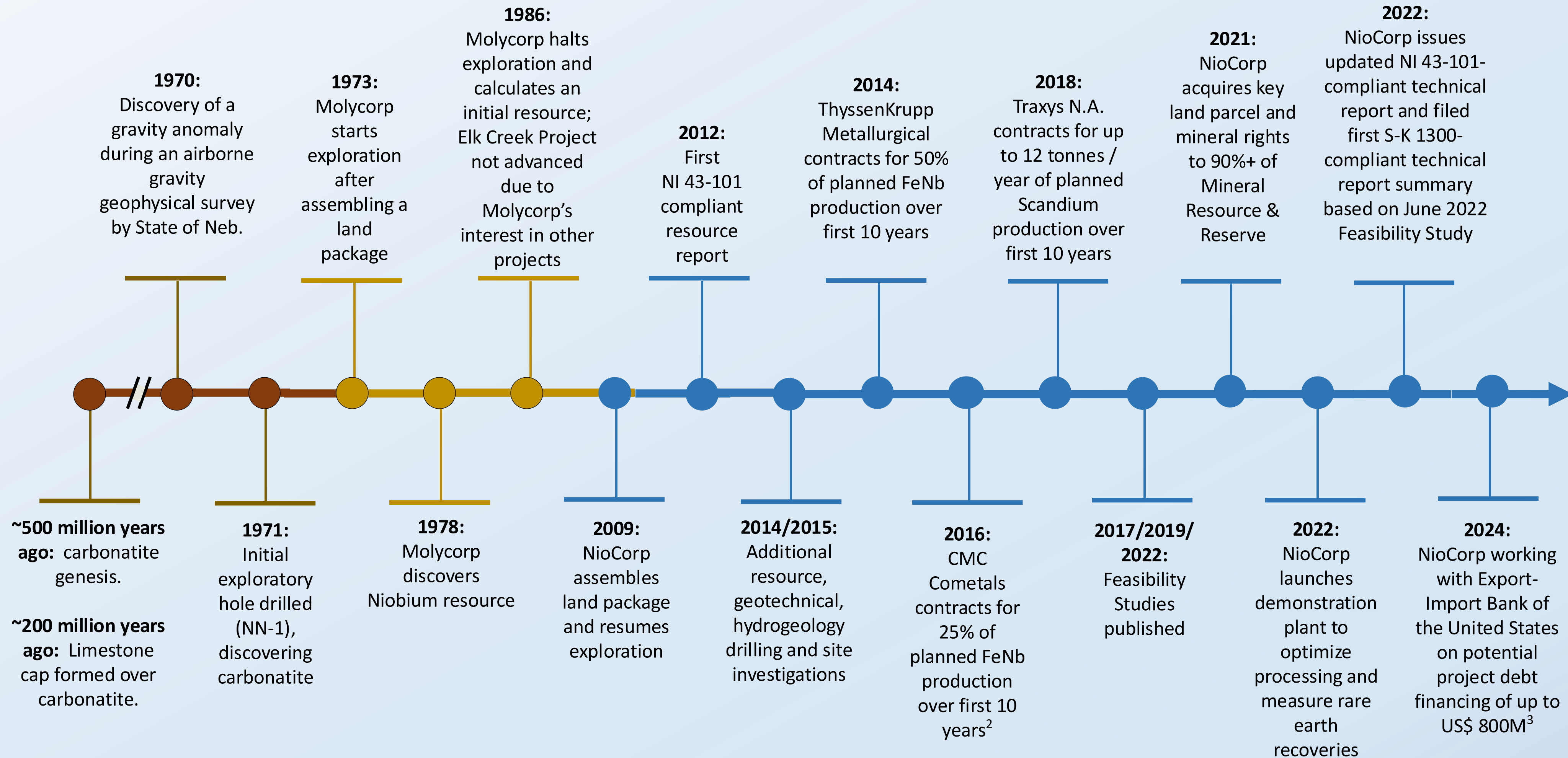
5G networks require improved RF filtering. Designs incorporating scandium-aluminum-nitride are much more efficient. This requires high-purity scandium metal for production.

### Application Examples

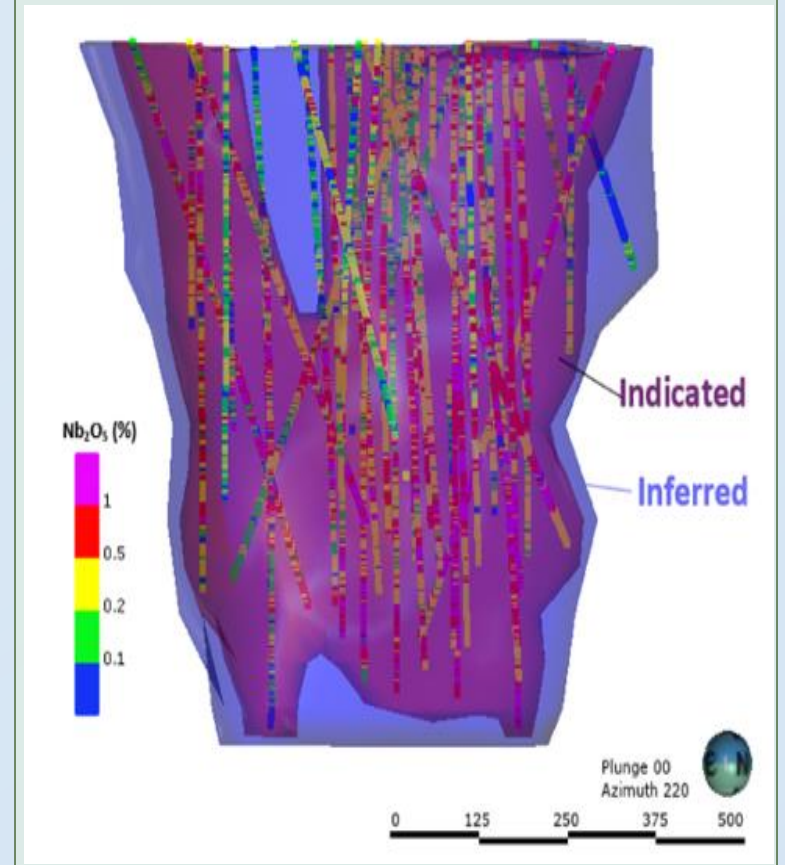


Scandium Sputtering Target

# Progression to a Highly De-Risked Critical Minerals Project



## The Elk Creek Resource<sup>1</sup>



- Total drilling: 68,334 meters (42 miles)
- Resource dimensions: 830 meters strike, 500 meters wide, 850 meters dip
- Majority (~90%) of resource is under NioCorp-owned property; the remainder is under optioned property to the West
- Potential expansion of the deposit to the NW, to the SE, at depth, and in the center.

1 Based on the June 2022 Feasibility Study. See "Mineral Reserves and Resources" in the Disclaimers & Technical Disclosures at the beginning of this presentation.  
 2 Contract subsequently assigned by CMC Comets to Traxys Comets USA, LLC.  
 3 Amount based on initial indication of interest in Letter of Interest from EXIM, dated March 6, 2023. The Preliminary Project Letter from EXIM, dated April 15, 2024 (the "PPL"), which summarizes EXIM's initial due diligence findings and also includes a preliminary Indicative Term Sheet, identified additional project activities to be undertaken by the Company in conjunction with the EXIM evaluation process, including an updated mine plan and updated Elk Creek Project capital costs on a final or close-to-final basis reflecting updated process flows. Management is working with EXIM to continue to advance the project through the next stages of EXIM's due diligence and loan application process. NioCorp is currently unable to estimate how long the application process, including the additional project activities identified in the PPL, may take, and there can be no assurances that NioCorp will be able to successfully negotiate a final commitment of debt financing from EXIM, on acceptable terms or at all.

# Elk Creek S-K 1300 Mineral Resource<sup>1</sup>

(MINERAL RESOURCE AS OF June 30, 2022)

Elk Creek 2022 In Situ Mineral Resource Estimate (niobium, titanium, and scandium) excluding reserves				
Classification	NSR Cutoff (US\$/tonne)	Tonnage (Mt)	Grades	Tonnages
Indicated	180	151.7	Nb2O5 (%)	Nb2O5 (kt)
			0.43	649.8
			TiO2 (%)	TiO2 (kt)
			2.02	3,067
			Sc (ppm)	Sc (t)
Inferred	180	108.3	Nb2O5 (%)	Nb2O5 (kt)
			0.39	426.6
			TiO2 (%)	TiO2 (kt)
			1.92	2,082
			Sc (ppm)	Sc (t)
			52.28	5,660

NOTE: The Qualified Person for the Mineral Resource estimate is Understood Mineral Resources Ltd. The estimate has an effective date of June 30, 2022.

## Notes:

- Classification of Mineral Resources in the above tables is in accordance with the S-K 1300 classification system. Mineral Resources in this table are reported exclusive of Mineral Reserves
- Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
- The Mineral Resources are reported at a Diluted Net Smelter Return (NSR) Cut-off of US \$180/tonne.
- The diluted NSR is defined as:
  - Diluted NSR (U.S. \$) = 
$$\frac{\text{Revenue per block Nb}_2\text{O}_5 \text{ (diluted)} + \text{Revenue per block TiO}_2 \text{ (diluted)} + \text{Revenue per block Sc (diluted)}}{\text{Diluted tonnes per block}}$$
  - The diluted revenue from Nb<sub>2</sub>O<sub>5</sub>, TiO<sub>2</sub>, and Sc per block used the following factors:
    - Nb<sub>2</sub>O<sub>5</sub> Revenue: a 94% grade recovery, a 0.696 factor to convert Nb<sub>2</sub>O<sub>5</sub> to Nb, 82.36% assumption for plant recovery, and a US\$ 39.60 selling price per kg of ferroniobium as of June 30, 2022.
    - TiO<sub>2</sub> Revenue: a 94% grade recovery, a 40.31% assumption for plant recovery, and a US\$ 0.88 selling price per kg of titanium oxide as of June 30, 2022.
    - Sc Revenue: a 94% grade recovery, a 1.534 factor to convert Sc to Sc<sub>2</sub>O<sub>3</sub>, 93.14% assumption for plant recovery, and a US\$ 3,675 kg selling price per kg of scandium oxide as of June 30, 2022.
    - The diluted tonnes are a 6% increase in the total tonnes of the block.
- Price assumptions for FeNb, Sc<sub>2</sub>O<sub>3</sub>, and TiO<sub>2</sub> are based upon independent market analyses for each product.
- Numbers may not sum due to rounding. The rounding is not considered to be material.
- 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<sub>2</sub>O<sub>5</sub>, TiO<sub>2</sub>, and Sc Mineral Resources and are assigned a price of \$0.
- The stated Light Rare Earth Oxides (LREO) grade (%) is the summation of La<sub>2</sub>O<sub>3</sub> (%), Ce<sub>2</sub>O<sub>3</sub> (%), Pr<sub>2</sub>O<sub>3</sub> (%), and Nd<sub>2</sub>O<sub>3</sub> (%) estimates.
- The stated Heavy Rare Earth Oxides (HREO) grade (%) is the summation of Sm<sub>2</sub>O<sub>3</sub> (%), Eu<sub>2</sub>O<sub>3</sub> (%), Gd<sub>2</sub>O<sub>3</sub> (%), Tb<sub>2</sub>O<sub>3</sub> (%), Dy<sub>2</sub>O<sub>3</sub> (%), Ho<sub>2</sub>O<sub>3</sub> (%), Er<sub>2</sub>O<sub>3</sub> (%), Tm<sub>2</sub>O<sub>3</sub> (%), Yb<sub>2</sub>O<sub>3</sub> (%), Lu<sub>2</sub>O<sub>3</sub> (%), and Y<sub>2</sub>O<sub>3</sub> (%) estimates.
- The stated Total Rare Earth Oxide (TREO) grade (%) is the summation of LREO (%) and HREO (%).

<sup>1</sup> Based on the S-K 1300 Elk Creek Technical Report Summary. See "Mineral Reserves and Resources" in the Disclaimers & Technical Disclosures at the beginning of this presentation.

# Elk Creek S-K 1300 REE Mineral Resource<sup>1</sup>

(MINERAL RESOURCE AS OF JUNE 30, 2022)

Elk Creek 2022 In Situ Mineral Resource Estimate (rare earth oxides) excluding reserves								
Class	NSR Cut-off	Tonnage (Mt)	La2O3 (%)	La2O3 (kt)	Ce2O3 (%)	Ce2O3 (kt)	Pr2O3 (%)	Pr2O3 (kt)
Indicated	180	151.7	0.0766	116.2	0.1320	200.2	0.0140	21.3
			Nd <sub>2</sub> O <sub>3</sub> (%)	Nd <sub>2</sub> O <sub>3</sub> (kt)	Sm <sub>2</sub> O <sub>3</sub> (%)	Sm <sub>2</sub> O <sub>3</sub> (kt)	Eu <sub>2</sub> O <sub>3</sub> (%)	Eu <sub>2</sub> O <sub>3</sub> (kt)
			0.0511	77.5	0.0116	17.6	0.0040	6.0
			Gd2O3 (%)	Gd2O3 (kt)	Tb2O3 (%)	Tb2O3 (kt)	Dy2O3 (%)	Dy2O3 (kt)
			0.0096	14.6	0.0011	1.6	0.0044	6.7
			Ho2O3 (%)	Ho2O3 (kt)	Er2O3 (%)	Er2O3 (kt)	Tm2O3 (%)	Tm2O3 (kt)
			0.0006	1.0	0.0015	2.2	0.0002	0.3
			Yb2O3 (%)	Yb2O3 (kt)	Lu2O3 (%)	Lu2O3 (kt)	Y2O3 (%)	Y2O3 (kt)
			0.0010	1.5	0.0001	0.2	0.0187	28.4
			LREO (%)	LREO (kt)	HREO (%)	HREO (kt)	TREO (%)	TREO (kt)
0.2737	415.2	0.0528	80.0	0.3265	495.2			
Class	NSR Cut-off	Tonnage (Mt)	La2O3 (%)	La2O3 (kt)	Ce2O3 (%)	Ce2O3 (kt)	Pr2O3 (%)	Pr2O3 (kt)
Inferred	180	108.3	0.0943	102.1	0.1576	170.6	0.0163	17.7
			Nd <sub>2</sub> O <sub>3</sub> (%)	Nd <sub>2</sub> O <sub>3</sub> (kt)	Sm <sub>2</sub> O <sub>3</sub> (%)	Sm <sub>2</sub> O <sub>3</sub> (kt)	Eu <sub>2</sub> O <sub>3</sub> (%)	Eu <sub>2</sub> O <sub>3</sub> (kt)
			0.0575	62.2	0.0116	12.6	0.0038	4.1
			Gd2O3 (%)	Gd2O3 (kt)	Tb2O3 (%)	Tb2O3 (kt)	Dy2O3 (%)	Dy2O3 (kt)
			0.0090	9.8	0.0010	1.1	0.0042	4.6
			Ho2O3 (%)	Ho2O3 (kt)	Er2O3 (%)	Er2O3 (kt)	Tm2O3 (%)	Tm2O3 (kt)
			0.0006	0.7	0.0014	1.5	0.0002	0.2
			Yb2O3 (%)	Yb2O3 (kt)	Lu2O3 (%)	Lu2O3 (kt)	Y2O3 (%)	Y2O3 (kt)
			0.0010	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			

NOTE: The Qualified Person for the Mineral Resource estimate is Understood Mineral Resources Ltd. The estimate has an effective date of June 30, 2022.

## Notes:

- Classification of Mineral Resources in the above tables is in accordance with the S-K 1300 classification system. Mineral Resources in this table are reported exclusive of Mineral Reserves
- Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
- The Mineral Resources are reported at a Diluted Net Smelter Return (NSR) Cut-off of US \$180/tonne.
- The diluted NSR is defined as:
  - Diluted NSR (U.S. \$) = 
$$\frac{\text{Revenue per block Nb}_2\text{O}_5 \text{ (diluted)} + \text{Revenue per block TiO}_2 \text{ (diluted)} + \text{Revenue per block Sc (diluted)}}{\text{Diluted tonnes per block}}$$
  - The diluted revenue from Nb<sub>2</sub>O<sub>5</sub>, TiO<sub>2</sub>, and Sc per block used the following factors:
    - Nb<sub>2</sub>O<sub>5</sub> Revenue: a 94% grade recovery, a 0.696 factor to convert Nb<sub>2</sub>O<sub>5</sub> to Nb, 82.36% assumption for plant recovery, and a US\$ 39.60 selling price per kg of ferroniobium as of June 30, 2022.
    - TiO<sub>2</sub> Revenue: a 94% grade recovery, a 40.31% assumption for plant recovery, and a US\$ 0.88 selling price per kg of titanium oxide as of June 30, 2022.
    - Sc Revenue: a 94% grade recovery, a 1.534 factor to convert Sc to Sc<sub>2</sub>O<sub>3</sub>, 93.14% assumption for plant recovery, and a US\$ 3,675 kg selling price per kg of scandium oxide as of June 30, 2022.
    - The diluted tonnes are a 6% increase in the total tonnes of the block.
- Price assumptions for FeNb, Sc<sub>2</sub>O<sub>3</sub>, and TiO<sub>2</sub> are based upon independent market analyses for each product.
- Numbers may not sum due to rounding. The rounding is not considered to be material.
- 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<sub>2</sub>O<sub>5</sub>, TiO<sub>2</sub>, and Sc Mineral Resources and are assigned a price of \$0.
- The stated Light Rare Earth Oxides (LREO) grade (%) is the summation of La<sub>2</sub>O<sub>3</sub> (%), Ce<sub>2</sub>O<sub>3</sub> (%), Pr<sub>2</sub>O<sub>3</sub> (%), and Nd<sub>2</sub>O<sub>3</sub> (%) estimates.
- The stated Heavy Rare Earth Oxides (HREO) grade (%) is the summation of Sm<sub>2</sub>O<sub>3</sub> (%), Eu<sub>2</sub>O<sub>3</sub> (%), Gd<sub>2</sub>O<sub>3</sub> (%), Tb<sub>2</sub>O<sub>3</sub> (%), Dy<sub>2</sub>O<sub>3</sub> (%), Ho<sub>2</sub>O<sub>3</sub> (%), Er<sub>2</sub>O<sub>3</sub> (%), Tm<sub>2</sub>O<sub>3</sub> (%), Yb<sub>2</sub>O<sub>3</sub> (%), Lu<sub>2</sub>O<sub>3</sub> (%), and Y<sub>2</sub>O<sub>3</sub> (%) estimates.
- The stated Total Rare Earth Oxide (TREO) grade (%) is the summation of LREO (%) and HREO (%)
- The effective date of the Mineral Resource, including by-products, is June 30, 2022

# Elk Creek S-K 1300 Mineral Reserve<sup>1</sup>

(not including REE production)

(MINERAL RESERVE AS OF May 10, 2022)

Underground In Situ Mineral Reserves Estimate for Elk Creek										
Classification	Tonnage (Kt)	Nb <sub>2</sub> O <sub>5</sub> Grade (%)	Contained Nb <sub>2</sub> O <sub>5</sub> (t)	Payable Nb (t)	TiO <sub>2</sub> Grade (%)	Contained TiO <sub>2</sub> (t)	Payable TiO <sub>2</sub> (t)	Sc Grade (ppm)	Contained Sc (t)	Payable Sc <sub>2</sub> O <sub>3</sub> (t)
Proven	-	-	-	-	-	-	-	-	-	-
Probable	36,656	0.81	297,278	170,409	2.92	1,071,182	431,793	70.2	2,573	3,677
<b>TOTAL</b>	<b>36,656</b>	<b>0.81</b>	<b>297,278</b>	<b>170,409</b>	<b>2.92</b>	<b>1,071,182</b>	<b>431,793</b>	<b>70.2</b>	<b>2,573</b>	<b>3,677</b>

#### 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 3rd, 2022.
- The Mineral Reserve is based on the mine design and mine plan, utilizing an average cut-off grade of 0.679% Nb<sub>2</sub>O<sub>5</sub> with an NSR 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 in 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.

Parameter	Value	Unit
Mining Cost	42.38	US\$/t mined
Processing	106.70	US\$/t mined
Water Management and Infrastructure	16.62	US\$/t mined
Tailings Management	2.01	US\$/t mined
Other Infrastructure	5.47	US\$/t mined
General and Administrative	8.91	US\$/t mined
Royalties/Annual Bond Premium	8.34	US\$/t mined
Other Costs	6.29	US\$/t mined
<b>Total Cost</b>	<b>196.72</b>	<b>US\$/t mined</b>
Nb <sub>2</sub> O <sub>5</sub> to Niobium conversion	69.60	%
Niobium Process Recovery	82.36	%
Niobium Price	39.60	US\$/kg
TiO <sub>2</sub> Process Recovery	40.31	%
TiO <sub>2</sub> Price	0.88	US\$/kg
Sc Process Recovery	93.14	%
Sc to Sc <sub>2</sub> O <sub>3</sub> conversion	153.40	%

- Price assumptions for FeNb, Sc<sub>2</sub>O<sub>3</sub>, and TiO<sub>2</sub> 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 down-stream 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\$ 563.06/tonne.
- Richard Jundis has provided detailed estimates of the expected costs based on the knowledge of the style of mining (underground) and potential processing methods (by 3rd party Qualified Persons).
- Mineral reserve effective date May 10th, 2022. The financial model was run post-February 2019, which reflects a total cost per tonne of US\$ 196.72 versus US\$ 189.91 (May 20, 2022 Mineral Reserve Details Table above). This is not considered a material change.
- Price variances for commodities are based on updated independent market studies versus earlier projected pricing. The updated independent market studies do not have a negative effect on the reserve.



# Elk Creek S-K 1300 Mineral Reserve<sup>1</sup>

(not including REE production)

(MINERAL RESERVE AS OF June 30, 2022)

Underground In Situ Mineral Reserves Estimate for Elk Creek										
Classification	Tonnage (Kt)	Nb <sub>2</sub> O <sub>5</sub> Grade (%)	Contained Nb <sub>2</sub> O <sub>5</sub> (t)	Payable Nb (t)	TiO <sub>2</sub> Grade (%)	Contained TiO <sub>2</sub> (t)	Payable TiO <sub>2</sub> (t)	Sc Grade (ppm)	Contained Sc (t)	Payable Sc <sub>2</sub> O <sub>3</sub> (t)
Proven	-	-	-	-	-	-	-	-	-	-
Probable	36,656	0.81	297,278	170,409	2.92	1,071,182	431,793	70.2	2,573	3,677
<b>TOTAL</b>	<b>36,656</b>	<b>0.81</b>	<b>297,278</b>	<b>170,409</b>	<b>2.92</b>	<b>1,071,182</b>	<b>431,793</b>	<b>70.2</b>	<b>2,573</b>	<b>3,677</b>

#### NOTES

- The Qualified Person for the Mineral Reserve estimate is Optimize Group Inc. The estimate has an effective date of June 30, 2022.
- The Mineral Reserve is based on the mine design, mine plan, and cash-flow model utilizing an average cut-off grade of 0.679% Nb<sub>2</sub>O<sub>5</sub> with an NSR of US\$ 180/t.
- 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) production rate of ~7,450 tonnes of FeNb/annum during the years of full production.
  - Initial elevated five-year production rate ~ 7,500 tonnes of FeNb/annum when full production is reached.
  - 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.

Parameter	Value	Unit
Mining Cost	42.38	US\$/t mined
Processing	106.70	US\$/t mined
Water Management and Infrastructure	16.62	US\$/t mined
Tailings Management	2.01	US\$/t mined
Other Infrastructure	5.47	US\$/t mined
General and Administrative	8.91	US\$/t mined
Royalties/Annual Bond Premium	8.34	US\$/t mined
Other Costs	6.29	US\$/t mined
<b>Total Cost</b>	<b>196.72</b>	<b>US\$/t mined</b>
Nb <sub>2</sub> O <sub>5</sub> to Niobium conversion	69.60	%
Niobium Process Recovery	82.36	%
Niobium Price	39.60	US\$/kg
TiO <sub>2</sub> Process Recovery	40.31	%
TiO <sub>2</sub> Price	0.88	US\$/kg
Sc Process Recovery	93.14	%
Sc to Sc <sub>2</sub> O <sub>3</sub> conversion	153.40	%
Sc Price	3,675.00	US\$/kg

- Price assumptions are as follows: FeNb US\$ 39.60/kg Nb, Sc<sub>2</sub>O<sub>3</sub> US \$3,675/kg, and TiO<sub>2</sub> US \$0.88/kg. Price assumptions are based upon independent market analyses for each product as of June 30, 2022
- 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 ferroniobium (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\$ 563.06/tonne.
- Optimize Group has provided detailed estimates of the expected costs based on the knowledge of the style of mining (underground) and potential processing methods (by 3rd party Qualified Persons).
- Mineral reserve effective date is June 30, 2022. The financial model was run after the estimate of the NSR above, which reflects a total cost per tonne of US\$ 196.72 versus US\$ 189.91. This is not considered a material change.
- Price variances for commodities are based on independent market studies versus earlier projected pricing. The independent market studies do not have a negative effect on the reserve.

<sup>1</sup> Based on the S-K 1300 Elk Creek Technical Report Summary. See "Mineral Reserves and Resources" in the Disclaimers & Technical Disclosures at the beginning of this presentation.

# Feasibility Study: Indicated Economic Results<sup>1</sup>

Operating Year		1	2	3	4	5	6	7	8	9	10	20	30
Production													
Niobium	t-Nb	4,960	4,742	4,949	4,903	4,949	4,716	4,715	4,733	4,799	4,672	4,772	4,773
Scandium	t-Sc <sub>2</sub> O <sub>3</sub>	116	114	113	109	112	109	105	102	101	101	102	107
Titanium	t-TiO <sub>2</sub>	13,063	12,120	12,747	12,605	12,606	12,114	11,846	12,167	11,926	11,544	12,365	12,527
Realized Pricing													
Niobium	\$/kg	\$45.46	\$45.46	\$45.46	\$45.46	\$45.46	\$45.46	\$45.46	\$45.46	\$45.46	\$45.84	\$47.00	\$47.00
Scandium	\$/kg	\$3,986	\$3,487	\$2,989	\$3,088	\$3,188	\$3,387	\$3,586	\$3,735	\$3,734	\$3,750	\$3,750	\$3,750
Titanium	\$/kg	\$0.99	\$0.99	\$0.99	\$0.99	\$0.99	\$0.99	\$0.99	\$0.99	\$0.99	\$0.99	\$0.99	\$0.99
Gross Revenues (\$M)													
		\$701	\$626	\$575	\$573	\$596	\$594	\$602	\$608	\$608	\$606	\$617	\$637
Total Opex (\$M)													
		(\$205)	(\$200)	(\$201)	(\$207)	(\$210)	(\$196)	(\$201)	(\$202)	(\$210)	(\$211)	(\$207)	(\$200)
EBITDA (\$M) <sup>2</sup>													
		\$496	\$426	\$374	\$366	\$386	\$398	\$401	\$406	\$398	\$395	\$411	\$436
EBITDA Margin <sup>2</sup>													
		71%	68%	65%	64%	65%	67%	67%	67%	65%	65%	67%	69%
Operating CF (\$M) <sup>2</sup>													
		\$496	\$426	\$353	\$328	\$341	\$346	\$342	\$345	\$339	\$339	\$339	\$356
EBT (\$M) <sup>2</sup>													
		\$227	\$202	\$181	\$188	\$222	\$259	\$284	\$295	\$287	\$283	\$293	\$326
Net Income (\$M)													
		\$227	\$202	\$161	\$150	\$176	\$207	\$225	\$234	\$228	\$226	\$221	\$245
Income Margin													
		32%	32%	28%	26%	30%	35%	37%	39%	38%	37%	36%	39%

<sup>1</sup> Based on Table 19-12 "Indicative Economic Results" from the S-K 1300 Elk Creek Technical Report Summary. See "Mineral Reserves and Resources" in the Disclaimers & Technical Disclosures at the beginning of this presentation.

<sup>2</sup> See "Financial Information; Non-GAAP Measures" in the Disclaimers & Technical Disclosures at the beginning of this presentation.

# For More Information

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