NioCorp: Critical minerals for U.S. supply chain security

OUR MISSION:

To accelerate the transition to a lower carbon economy by serving as a reliable U.S. supplier of sustainably produced critical minerals.

SCOTT HONAN, COO
NioCorp Developments Ltd.
Metal-Events REE Conference
San Antonio, Texas
October 19, 2023

NioCorp
Critical Mineral Security

Disclaimers & Technical Disclosures

Forward-Looking Statements

This Presentation 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, the anticipated benefits of NioCorp's business combination (the "Business Combination") with GX Acquisition Corp. II ("GXII") and NioCorp's previously announced standby equity purchase facility (the "Yorkville Equity Facility Financing" and, together with the Business Combination, the "Transactions") with YA II PN, Ltd., an investment fund managed by Yorkville Advisors Global, LP (together with YA II PN, Ltd., "Yorkville"), including the ability to access the full amount of the expected net proceeds of the Yorkville Equity Facility Financing over the next three years; NioCorp's ability to receive a final commitment of financing from the Export-Import Bank of the United States ("EXIM"); 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 at the Elk Creek Project; 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 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; 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 (including Averaged EBITDA, Averaged EBITDA Margin, and After-Tax Cumulative Net Free Cash Flow), 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 the future price of metals, the stability of the financial and capital markets and other current estimates and assumptions regarding the Transactions and their benefits. 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 recognize the anticipated benefits of the 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 three years; unexpected costs related to the Transactions; the outcome of any legal proceedings that may be instituted against NioCorp following closing of the Transactions; NioCorp's ability to receive a final commitment of financing from EXIM on the anticipated timeline, on acceptable terms, or at all; NioCorp's ability to continue to meet Nasdaq and TSX listing standards; NioCorp's ability to operate as a going concern; risks relating to the Common Shares, including price volatility, lack of dividend payments and dilution or the perception of the likelihood any of the foregoing; NioCorp's requirement of significant additional capital; 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 restatement of NioCorp's consolidated financial statements as of and for the fiscal years ended June 30, 2022 and 2021 and the interim periods ended September 30, 2021, December 31, 2021, March 31, 2022, September 30, 2022 and December 31, 2022 and the impact of such restatement on NioCorp's future financial statements and other financial measures; 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 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; the effects of the COVID-19 pandemic or other global health crises on NioCorp's business plans, financial condition and liquidity; estimates of mineral resources and reserves; mineral exploration and production activities; feasibility study results; the results of metallurgical testing; 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; the 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 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 Richard Jundis, P. Eng., Director of Mining, Optimize Group. Each of Messrs. Batty and Jundis is a "Qualified Person" as such term is defined in NI 43-101. Each of Mr. Batty and Mr. Jundis 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 and approved 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; Non-GAAP Measures

Certain financial information and data included in this Presentation is unaudited and may not conform to Regulation S-X. This Presentation also includes certain financial measures not presented in accordance with generally accepted accounting principles ("GAAP"), including, but not limited to, "Averaged EBITDA," "Averaged EBITDA Margin," and "After-Tax Cumulative Net Free Cash Flow." 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 companies. These non-GAAP financial measures, and other measures that are calculated using these non-GAAP measures, are not measures of financial performance in accordance with GAAP and may exclude items that are significant in understanding and assessing NioCorp's financial results. Therefore, these measures should not be considered in isolation or as an alternative to net income, cash flows from operations or other measures of profitability, liquidity or performance under GAAP. These non-GAAP financial measures are included in this Presentation because they are key performance measures used in the June 2022 Feasibility Study for purposes of projecting the economic results of the Elk Creek Project, and NioCorp believes that these non-GAAP measures provide useful information to management and investors regarding certain financial and business trends relating to NioCorp's financial condition and results of operations. NioCorp believes that the use of these non-GAAP financial measures provides an additional tool for investors to use in evaluating ongoing operating results and trends and in comparing NioCorp's financial measures with other similar companies, many of which present similar non-GAAP financial measures to investors. These non-GAAP financial measures are subject to inherent limitations as they reflect the exercise of judgments by management about which expense and income are excluded or included in determining these non-GAAP financial measures.

The non-GAAP financial measures included in this Presentation are projections. Reconciliations of these forward-looking non-GAAP financial measures to the most directly comparable GAAP financial measures are not provided because NioCorp 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. See "Forward-Looking Statements."

In addition to the non-GAAP financial measures, 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 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.sedar.com. 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 Form 10-K, which is available through the website maintained by the SEC at 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 is mineral resources and 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 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 the NioCorp Form 10-K. 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.

Stellantis and NioCorp Sign Non-Binding Rare Earth[1] 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.[1,2]
- Final volumes to be determined.
- NioCorp and Stellantis collaborating on the larger permanent RE magnet supply chain.

NioCorp
Critical Mineral Security

[1] 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.
[2] Subject to receipt of necessary project financing and commencement of operations at the Elk Creek Project.

Recent Milestones Achieved

US Export-Import Bank considering a loan for the Project's debt component

Launched phased commercialization effort on Aluminum-Scandium master alloy

> 92% rare earth recovery rates achieved at demonstration plant [1,2]

Higher niobium recovery rates achieved at demonstration plant [1,2]

2x titanium recovery rates achieved at demonstration plant [1,2]

NioCorp
Critical Mineral Security

[1] NioCorp is currently conducting technical and economic analyses on the potential addition of magnetic rare earth oxides to its planned product suite.
[2] Final determination of niobium and titanium production levels and possible rare earth production can be made only after work on 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.

Critical Minerals in the Elk Creek Resource[1]

Critical Minerals

Ferroniobium

970,300 tonnes

No production in the U.S.

Highest grade Niobium project under development in N.A.[1]

Scandium Oxide

11,337 tonnes

No production in the U.S.

Largest planned producer in N.A.

Titanium Dioxide (or TiCl4)[2]

4,221,000 tonnes

High import reliance for U.S.

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

Magnetic Rare Earths

Neodymium-Praseodymium Oxide[3]

125,800 tonnes

No production in the U.S.

Elk Creek Project contains the 2nd largest indicated NdPr Mineral Resource in the U.S.[4]

Dysprosium Oxide[3]

9,100 tonnes

No production in the U.S.

Elk Creek Project contains the 2nd largest indicated Dysprosium Mineral Resource in the U.S.[4]

Terbium Oxide[3]

2,300 tonnes

No production in the U.S.

Elk Creek Project contains the largest indicated Terbium Mineral Resource in the U.S.[4]

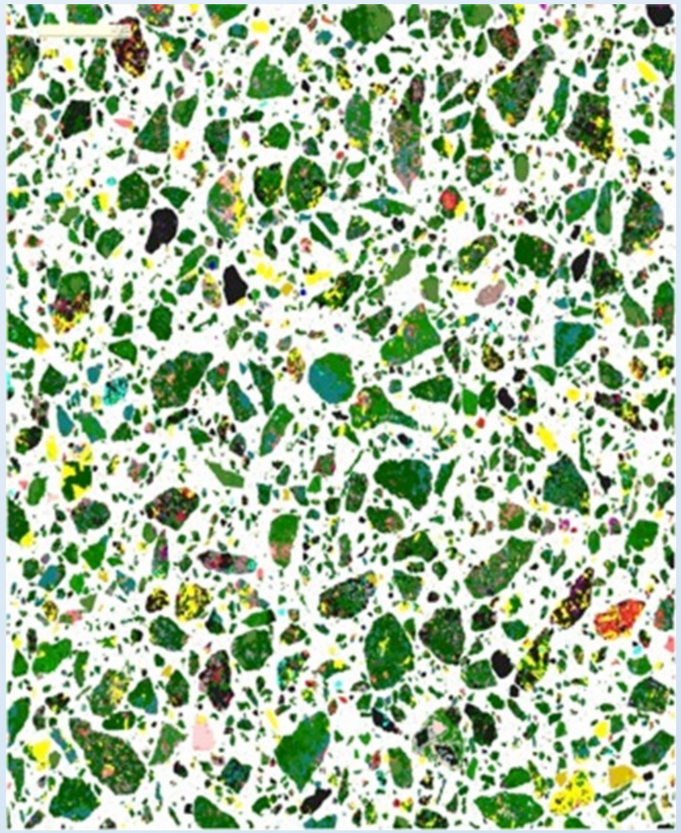
NioCorp
Critical Mineral Security

[1] Based on the 2022 Elk Creek Technical Report. See "Mineral Reserves and Resources" in the Disclaimers & Technical Disclosures at the beginning of this presentation.
[2] 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.
[3] NioCorp is currently conducting technical and economic analyses on the potential addition of magnetic rare earth oxides to its planned product suite.
[4] 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.

Resource Mineralogy

Mineral Species	Color (at right)	Composition
Carbonates	Green	57%
Iron Oxides	Black	9%
Quartz	Light Pink	3%
Silicates	Various	16%
Barite	Yellow	7%
Apatite	Dark Pink	3%

- Nb bearing mineral grains are colored blue and red in the image.
- Nb is found Pyrochlore $(Na,Ca)_2Nb_2O_6(OH,F)$ [80%] and Rutile/Ilmenorutile $Ti_XNb_YFe_ZO_2$ [20%].
- Sc is found in the Carbonates [65%] with the balance in Silicates and Pyrochlore.
- Rare earth minerals are Bastnasite $(REE)FCO_3$ and other carbonates, along with Monazite $(REE)PO_4$
- The Mineral Resource is very fine grained, and the minerals are intergrown, which results in a hydrometallurgical approach to pay metal recovery.



Hazen Research QEMSCAN Image, Sample 53878-1. Approx. 6 mm x 6 mm

NioCorp
Critical Mineral Security

Mineral Reserves and Mineral Resources[1]

Mineral Resource and Reserves[1]

Mineral Resource Class	Cut-off NSR (US$/t)	Tonnage (000's Mt)	Grade (Nb_2O_5%)	Grade (TiO_2%)	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 Class	Tonnage (000's t)	Grade (Nb_2O_5%)	Grade (TiO_2%)	Grade (Sc g/t)
Probable	36,656	0.811	2.92	70.2

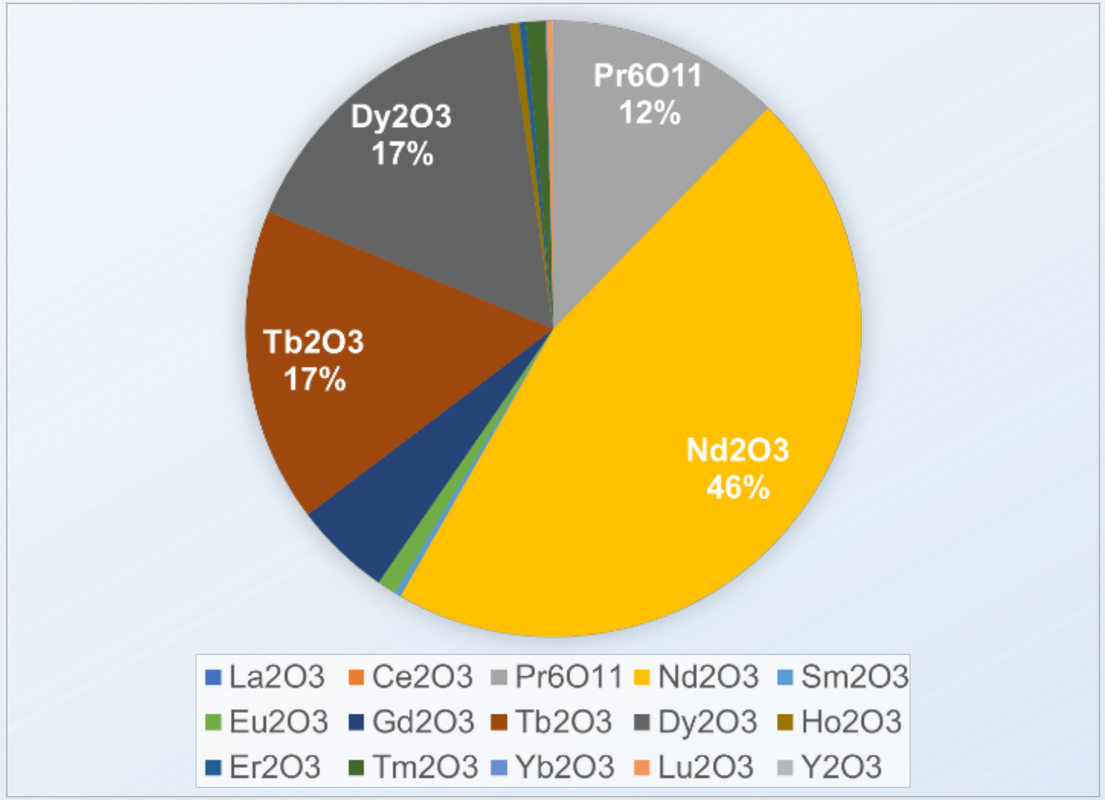
NOTE: For a complete description of the Elk Creek Project's Mineral Resources and Mineral Reserves, please refer to NioCorp's website at www.niocorp.com.

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

NioCorp
Critical Mineral Security

[1] 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.

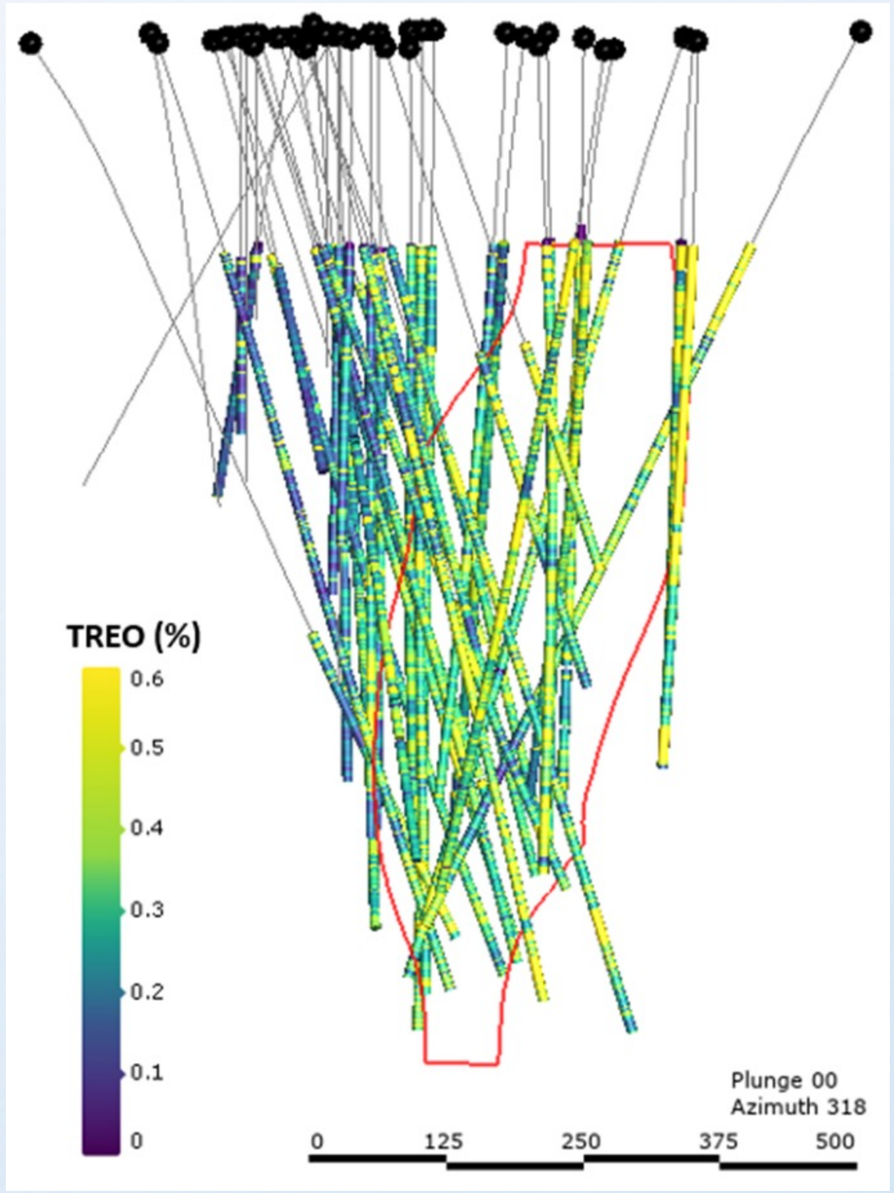
Rare Earths – Prospective Value

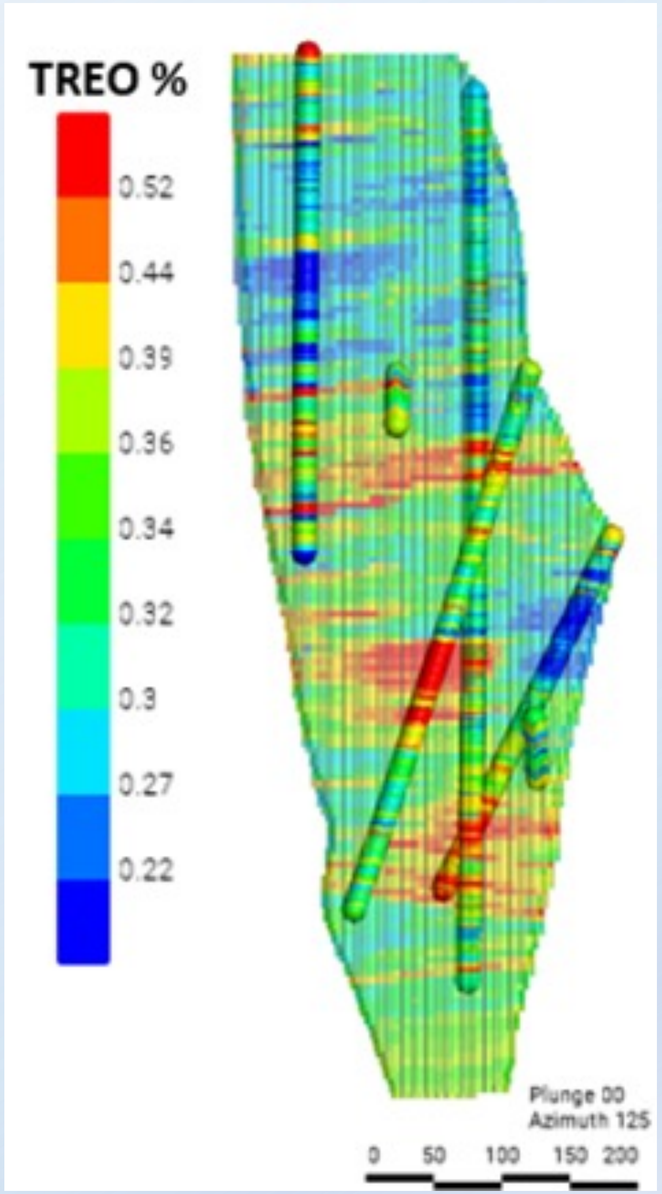


Constituent	Grade, ppm
La2O3	751
Ce2O3	1311
Pr2O3	144
Nd2O3	542
Sm2O3	170
Eu2O3	67
Gd2O3	159
Tb2O3	16
Dy2O3	60
Ho2O3	8
Er2O3	17
Tm2O3	2
Yb2O3	10
Lu2O3	1
Y2O3	233
TREO	3,495

NioCorp
Critical Mineral Security

Rare Earths – An Ideal Byproduct at Elk Creek

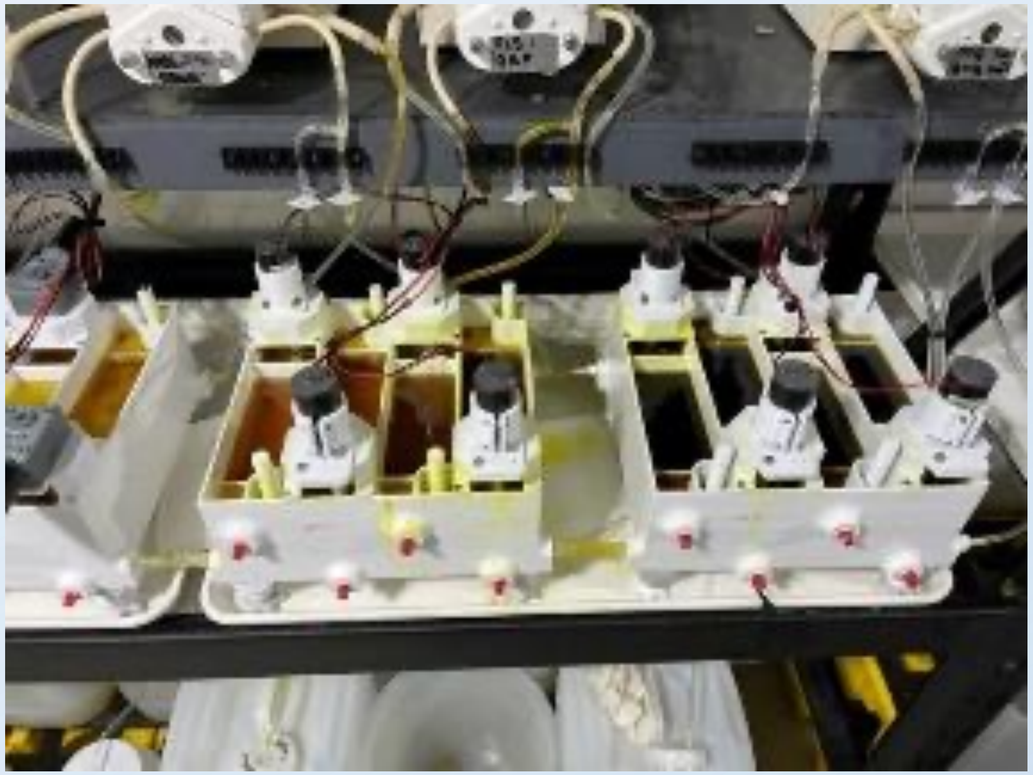




NioCorp
Critical Mineral Security

Demonstration Plant and Rare Earths

- Small scale version of the commercial plant designed around a run rate of 10 kg/h or ore (commercial plant will be 115 tonnes/h)
- Plant was designed to address potential improvements to the overall flowsheet and establish rare earth metallurgical performance.
- Innovative approach to whole ore processing has resulted in very high rare earth extractions to leach liquor – on the order of 95%
- REE extraction from both carbonate and phosphate mineral species is evident
- Plant has demonstrated overall recoveries for magnetic rare earth (Nd/Pr, Tb, Dy) of at least 92%



Rare Earth Extraction Circuit 25Jan23

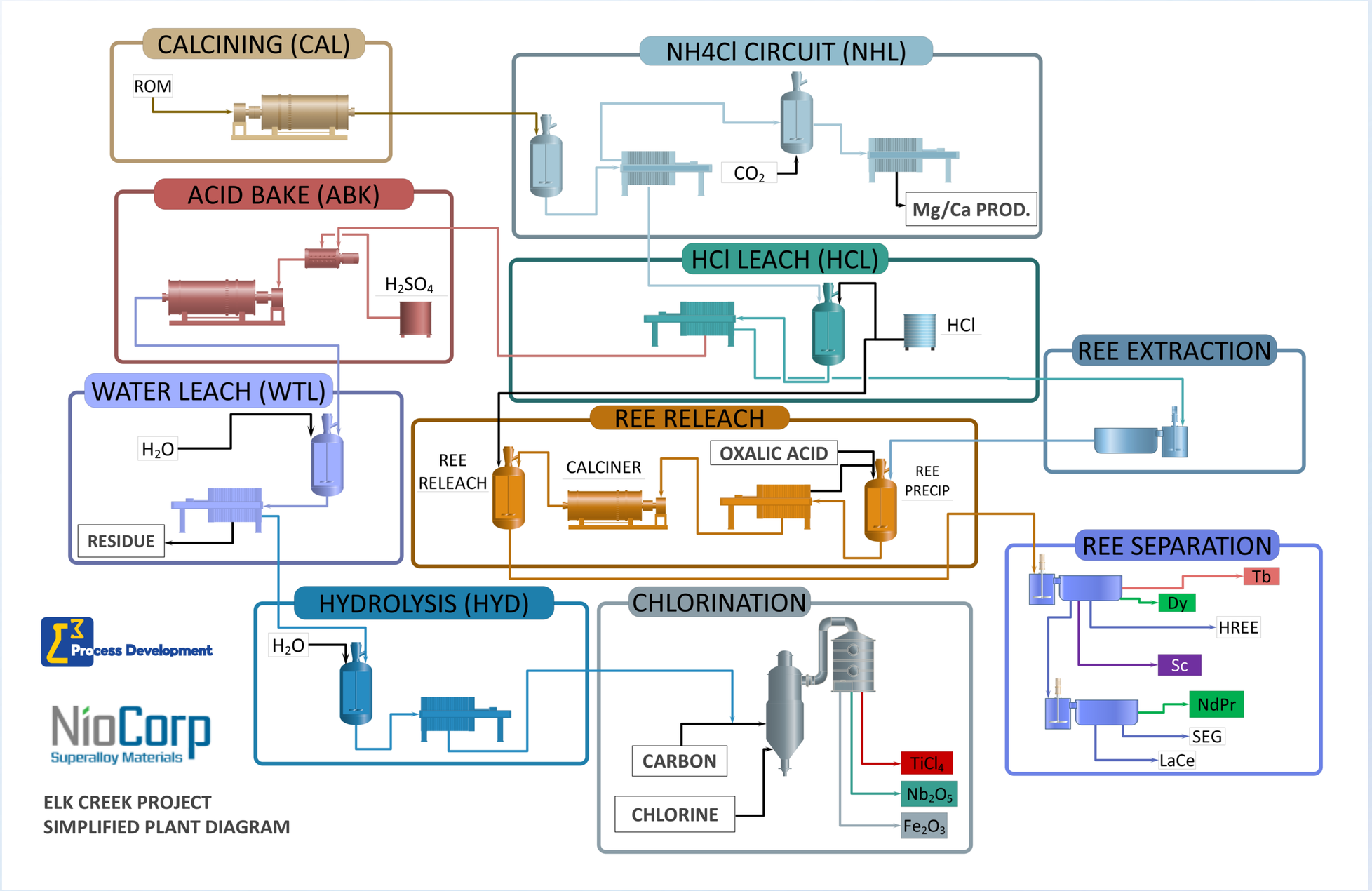
NioCorp
Critical Mineral Security

Demonstration Plant Outcomes

Feasibility Study 2022			Demonstration Plant		
Product	***Form***	***Recovery***	***Product***	***Form***	***Recovery***
Niobium	Ferroniobium	82.4%	Niobium	Ferroniobium Nb_2O_5	86.72% 90.72%
Titanium	TiO_2 (Synthetic Rutile)	40%	Titanium	$TiCl_4$ (“Tickle”)	83.65%
Scandium	Sc_2O_3	93.1%	Scandium	Sc_2O_3	92%
			Neodymium / Praseodymium Oxide	$(NdPr)_2O_3$	92%
			Dysprosium Oxide	Dy_2O_3	92%
			Terbium Oxide	Tb_2O_3	92%

NioCorp
Critical Mineral Security

Elk Creek Flowsheet



NioCorp
Critical Mineral Security

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

Fully aligned with Equator Principles, an auditable ESG framework

Zero process water discharge facility

Additional protection of groundwater resources through artificial ground freezing and grouting

Recycling of reagents

Avoidance of permanent impacts to Federally Jurisdictional Waters

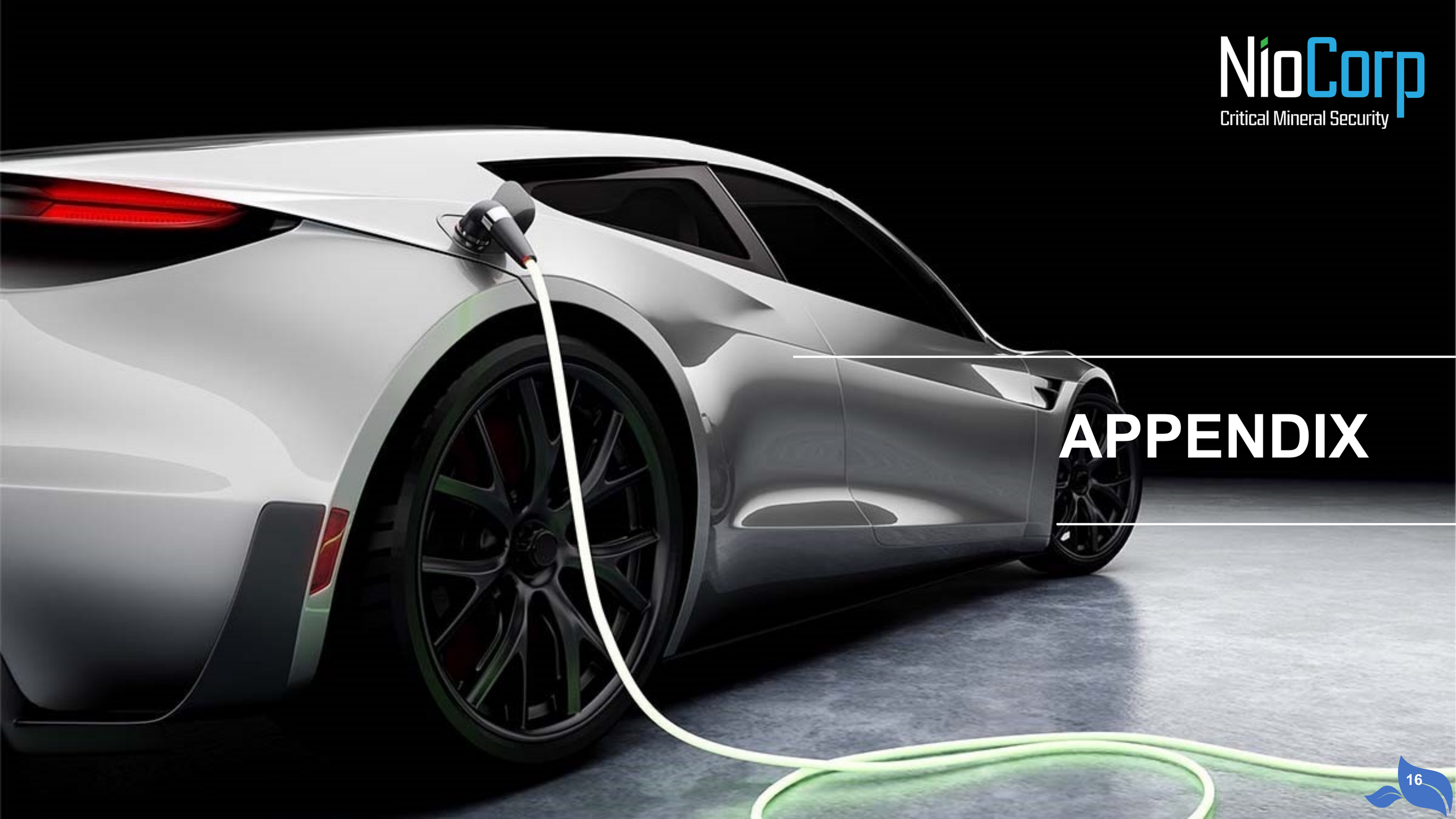
Utilizing tailings as underground mine backfill

Local employment and support local businesses

NioCorp
Critical Mineral Security


QUESTIONS?

NioCorp
Critical Mineral Security



APPENDIX

Feasibility Study: Indicated Economic Results[1]

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_2O_3	116	114	113	109	112	109	105	102	101	101	102	107
Titanium	t-TiO_2	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)[2]		$496	$426	$374	$366	$386	$398	$401	$406	$398	$395	$411	$436
EBITDA Margin[2]		71%	68%	65%	64%	65%	67%	67%	67%	65%	65%	67%	69%
Operating CF ($M)[2]		$496	$426	$353	$328	$341	$346	$342	$345	$339	$339	$339	$356
EBT ($M)[2]		$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%

NioCorp
Critical Mineral Security

[1] 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.
[2] See “Financial Information; Non-GAAP Measures" in the Disclaimers & Technical Disclosures at the beginning of this presentation.

Elk Creek S-K 1300 Mineral Resource[1]

(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)
			56.42	8,558
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:

a. 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
b. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
c. The Mineral Resources are reported at a Diluted Net Smelter Return (NSR) Cut-off of US $180/tonne.
d. The diluted NSR is defined as:

- Diluted NSR (U.S. $) = $\frac{\text{Revenue per block } Nb_2O_5 \text{ (diluted)} + \text{Revenue per block } TiO_2 \text{ (diluted)} + \text{Revenue per block Sc (diluted)}}{\text{Diluted tonnes per block}}$

  - The diluted revenue from Nb_2O_5, TiO_2, and Sc per block used the following factors:
    - 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 selling price per kg of ferroniobium as of June 30, 2022.
    - TiO_2 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_2O_3, 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.

e. Price assumptions for FeNb, Sc_2O_3, and TiO_2 are based upon independent market analyses for each product.
f. Numbers may not sum due to rounding. The rounding is not considered to be material.
g. 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 and are assigned a price of $0.
h. 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.
i. 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.
j. The stated Total Rare Earth Oxide (TREO) grade (%) is the summation of LREO (%) and HREO (%).

[1] 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.

NioCorp Critical Mineral Security

Elk Creek S-K 1300 REE Mineral Resource[1]

(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)	La_2O_3 (%)	La_2O_3 (kt)	Ce_2O_3 (%)	Ce_2O_3 (kt)	Pr_2O_3 (%)	Pr_2O_3 (kt)
Indicated	180	151.7	0.0766	116.2	0.1320	200.2	0.0140	21.3
			Nd_2O_3 (%)	Nd_2O_3 (kt)	Sm_2O_3 (%)	Sm_2O_3 (kt)	Eu_2O_3 (%)	Eu_2O_3 (kt)
			0.0511	77.5	0.0116	17.6	0.0040	6.0
			Gd_2O_3 (%)	Gd_2O_3 (kt)	Tb_2O_3 (%)	Tb_2O_3 (kt)	Dy_2O_3 (%)	Dy_2O_3 (kt)
			0.0096	14.6	0.0011	1.6	0.0044	6.7
			Ho_2O_3 (%)	Ho_2O_3 (kt)	Er_2O_3 (%)	Er_2O_3 (kt)	Tm_2O_3(%)	Tm_2O_3 (kt)
			0.0006	1.0	0.0015	2.2	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)
			0.0010	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)	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)
			0.0090	9.8	0.0010	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)
			0.0010	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:

a. 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
b. Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability.
c. The Mineral Resources are reported at a Diluted Net Smelter Return (NSR) Cut-off of US $180/tonne.
d. The diluted NSR is defined as:

- Diluted NSR (U.S. $) =
$$\frac{\text{Revenue per block } Nb_2O_5 \text{ (diluted)} + \text{Revenue per block } TiO_2 \text{ (diluted)} + \text{Revenue per block Sc (diluted)}}{\text{Diluted tonnes per block}}$$

  - The diluted revenue from Nb_2O_5, TiO_2, and Sc per block used the following factors:
    - 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 selling price per kg of ferroniobium as of June 30, 2022.
    - TiO_2 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_2O_3, 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.

e. Price assumptions for FeNb, Sc_2O_3, and TiO_2 are based upon independent market analyses for each product.
f. Numbers may not sum due to rounding. The rounding is not considered to be material.
g. 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 and are assigned a price of $0.
h. 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.
i. 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.
j. The stated Total Rare Earth Oxide (TREO) grade (%) is the summation of LREO (%) and HREO (%)
k. The effective date of the Mineral Resource, including by-products, is June 30, 2022

NioCorp Critical Mineral Security

[1] 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 Mineral Reserve[1]

(not including REE production)

(MINERAL RESERVE AS OF May 10, 2022)

Underground In Situ Mineral Reserves Estimate for Elk Creek										
Classification	Tonnage (Kt)	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	0.81	297,278	170,409	2.92	1,071,182	431,793	70.2	2,573	3,677
TOTAL	36,656	0.81	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 3rd, 2022.
- The Mineral Reserve is based on the mine design and mine plan, utilizing an average cut-off grade of 0.679% Nb2O5 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
Total Cost	196.72	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	153.40	%

- 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 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.

NioCorp
Critical Mineral Security

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

Elk Creek S-K 1300 Mineral Reserve[1]

(not including REE production)

(MINERAL RESERVE AS OF June 30, 2022)

Underground In Situ Mineral Reserves Estimate for Elk Creek										
Classification	Tonnage (Kt)	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	0.81	297,278	170,409	2.92	1,071,182	431,793	70.2	2,573	3,677
TOTAL	36,656	0.81	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 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_2O_5 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
Total Cost	196.72	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$/kg
Sc Process Recovery	93.14	%
Sc to Sc_2O_3 conversion	153.40	%
Sc Price	3,675.00	US$/kg

- Price assumptions are as follows: FeNb US$ 39.60/kg Nb, Sc_2O_3 US $3,675/kg, and TiO_2 US $0.88/kg. Price assumptions are based upon independent market analyses for each product as of June 30, 2022
- Price and cost assumptions are based on the pricing of products at the “mine-gate,” with no additional down-stream costs required. The assumed products are ferroniobium (metallic alloy shots consisting of 65%Nb and 35% Fe), a titanium dioxide product in powder form, and scandium trioxide in powder form.
- The Mineral Reserve has an average LOM NSR of US$ 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.

NioCorp
Critical Mineral Security

[1] 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.

For More Information

www.NioCorp.com

Scott Honan
Chief Operating Officer
+1(702)604-0042
shonan@niocorp.com