



BATTERY MINERALS CANADA 2026
Toronto, Ontario
September 28-29, 2026

Forward-looking statements and disclaimer



FORWARD-LOOKING STATEMENTS

The reader is advised that the information summarized in this presentation is preliminary in nature and is intended to provide an initial, high-level review of the project's economic potential and design options. The PEA mine plan and economic model includes numerous assumptions and the use of Inferred Resources. Inferred Resources are considered to be too speculative geologically to have economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the PEA will be realized.

Certain statements contained in this presentation may constitute "forward-looking statements". All statements in this presentation, other than statements of historical fact, that address events or developments that the Company expects to occur are forward-looking statements. Forward-looking statements are statements that are not historical facts and are generally, but not always, identified by the words "expects", "plans", "anticipates", "believes", "intends", "estimates", "projects", "potential", "scheduled" and similar expressions, or that events or conditions "will", "would", "may", "could" or "should" occur including, but not limited to, the statements regarding the Company's strategic plans, its anticipated benefits and the use of proceeds resulting thereof, in particular, future financial results, production targets and timetables, the evolution of mineral reserves and resources, mine operating costs, capital expenditures, work programs, development plans, exploration programs, objectives and budgets, the possible determination of additional reserves, and the Company's eventual success to execute its strategy to focus on building its portfolio of properties. Forward looking statements express, at this date, the Company's plans, estimates, forecasts, projections, expectations or beliefs as to future events and results. Forward-looking statements involve a number of risks and uncertainties, and there can be no assurance that such statements will prove to be accurate. Therefore, actual results and future events could differ materially from those anticipated in such statements. Risks and uncertainties that could cause results or future events to differ materially from current expectations expressed or implied by the forward-looking statements include, but are not limited to, factors associated with fluctuations in the market price of metals, mining industry risks, exploration risks, risks associated with foreign operations, environmental risks and hazards, uncertainty as to calculation of mineral reserves, requirement of additional financing or additional permits, authorizations or licenses, risks of delays in construction and production and other risks referred to in the Company's filings on SEDAR.

Although the Company believes the expectations expressed in such forward-looking statements are based on reasonable assumptions, including, without limitation, that all technical, economical and financial conditions will be met to achieve such events qualified by the foregoing cautionary note regarding forward-looking statements, such statements are not guarantees of future performance and actual results may differ materially from those in forward-looking statements. Factors that could cause the actual results to differ materially from those in forward-looking statements include, but are not limited to: niobium prices; access to skilled workers and consultants; mining development and construction personnel; results of exploration and development activities; uninsured risks; regulatory framework and changes; defects in title; availability of personnel; materials and equipment; timeliness of government approvals; actual performance of facilities; equipment and processes relative to specifications and expectations; unanticipated environmental impacts on operations market prices; continued availability of capital and financing; general economic, market and business conditions; and the availability of alternative transactions. Many of these factors are discussed in greater detail in the Company's most recent Management Discussion & Analysis dated November 27, 2025, and Management Discussion & Analysis for the year ended December 2024 dated April 17, 2025, which are available on the Company's profile on SEDAR+ at www.sedar.com. The Company cautions that the foregoing list of important factors is not exhaustive. Investors and others who base themselves on forward-looking statements should carefully consider the above factors as well as the uncertainties they represent and the risk they entail. The Company believes that the expectations reflected in those forward-looking statements are reasonable, but no assurance can be given that these expectations will prove to be correct and such forward-looking statements included in this presentation should not be unduly relied upon. These statements speak only as of the date of this presentation.

DISCLAIMER

NI 43-101 is a rule developed by the Canadian Securities Administrators that establishes standards for all public disclosure an issuer makes of scientific and technical information concerning mineral projects. Unless otherwise indicated, all reserve and resource estimates referred to or contained in this Slide Deck have been prepared in accordance with NI 43-101. These NI 43-101 standards differ significantly from the requirements of the SEC, and such resource information may not be comparable to similar information disclosed by U.S. companies. For example, while the terms "mineral resource", "measured resource", "indicated resource" and "inferred resource" are recognized and required by Canadian regulations, they are not recognized by the SEC. It cannot be assumed that any part of the mineral deposits in these categories will ever be upgraded to a higher category. These terms have a great amount of uncertainty as to their existence, and great uncertainty as to their economic and legal feasibility. In particular, it cannot be assumed that any part of an inferred resource exists. In accordance with Canadian rules, estimates of "inferred resources" cannot form the basis of feasibility or other economic studies. In addition, under the requirements of the SEC, mineralization may not be classified as a "reserve" unless the determination has been made that the mineralization could be economically and legally produced or extracted at the time the reserve determination is made. Certain of the technical reports referenced in this Slide Deck use the terms "mineral resource," "measured mineral resource," "indicated mineral resource" and "inferred mineral resource". We advise investors that these terms are defined in and required to be disclosed in accordance with Canadian NI 43-101 and the Canadian Institute of Mining, Metallurgy and Petroleum (the "CIM") – CIM Definition Standards on Mineral Resources and Mineral Reserves, adopted by the CIM Council, as amended. "Inferred mineral resources" have a great amount of uncertainty as to their existence, and great uncertainty as to their economic and legal feasibility. It cannot be assumed that all or any part of an inferred mineral resource will ever be upgraded to a higher category. Under Canadian rules, estimates of Inferred mineral resources may not form the basis of feasibility or pre-feasibility studies, except in rare cases. Investors are cautioned not to assume that all or any part of an inferred mineral resource exists or is economically or legally mineable. As a reporting issuer in Canada, we are required to prepare reports on our mineral properties in accordance with NI 43-101. We reference those technical reports in this Slide Deck for informational purposes only, and such reports are not incorporated herein by reference.

Under the United States Securities and Exchange Commission's (the "SEC") Industry Guide 7 as currently in effect ("Guide 7"), the terms "indicated mineral resource" and "inferred mineral resource" are normally not permitted to be used in reports and registration statements filed with the SEC. Under current Guide 7 standards, a "final" or "bankable" feasibility study is required to report reserves, the three-year historical average price is used in any reserve or cash flow analysis to designate reserves, and the primary environmental analysis or report must be filed with the appropriate governmental authority. Disclosure of "contained ounces" in a resource is permitted disclosure under Canadian regulations; however, the SEC normally only permits issuers to report mineralization that does not constitute "reserves" by Guide 7 standards as in place tonnage and grade without reference to unit measures.

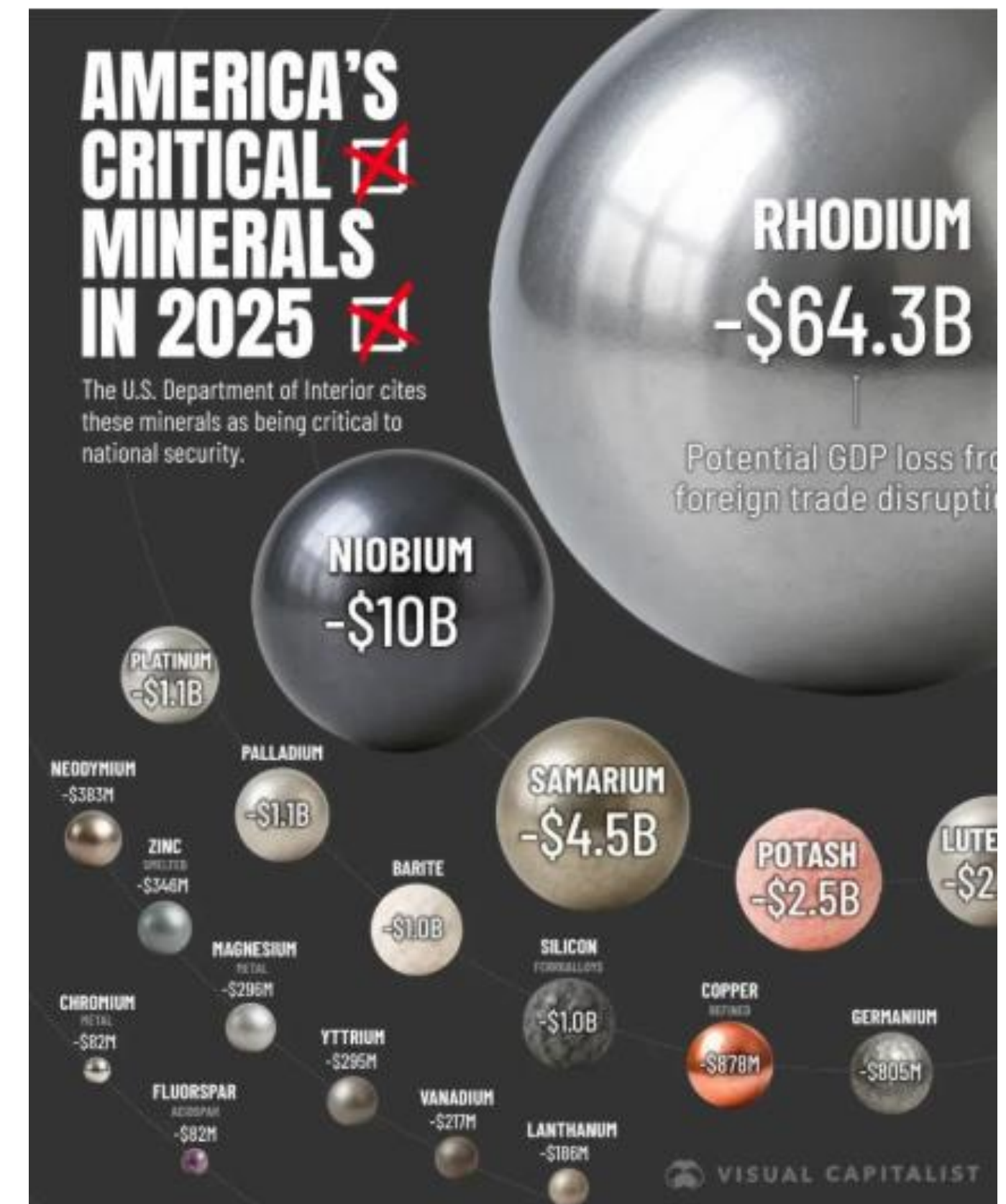
Accordingly, information contained in this Slide Deck contain descriptions of the Company's mineral deposits that may not be comparable to similar information made public by United States companies subject to the reporting and disclosure requirements under the United States federal securities laws and the rules and regulations thereunder, included Industry Guide 7.



Who We Are

About NioBay

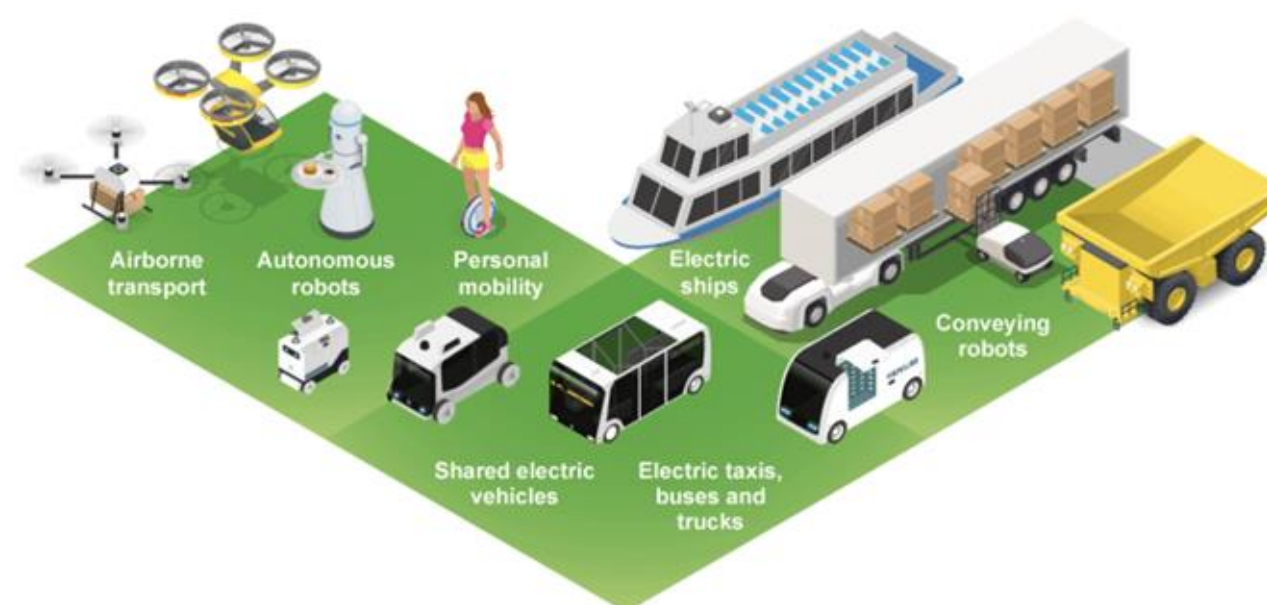
- A critical minerals exploration and development company founded in **1954**
- Advancing niobium-focused assets in Québec and Ontario
- Positioned to become the only producer of high-purity (HP) Nb_2O_5 outside China and Brazil
- Two NI 43-101 compliant mineral resources supported by positive Preliminary Economic Assessments (PEAs)
- Exposure to steel, defence, electric vehicle (EV), and advanced technology markets
- Collaborating with universities to advance niobium research and end-product development
- Supported by the Québec government and counts on Osisko Development as a major shareholder



Niobium transforms materials, enabling greener structures, cleaner energy, and sustainable mobility



Adding niobium to the steel used in automobile manufacturing **reduces the total weight** of the finished vehicle and **improves its fuel efficiency**.



Niobium was incorporated into the steel used in the **Øresund Bridge**, reducing its weight and **resulting in significant cost savings**.

A small amount of niobium makes the entire system stronger, lighter, faster, and greener



Next-generation SCiB™, featuring a niobium–titanium oxide anode, supports smart mobility in the era of MaaS.

The battery industry is no longer focused on a single chemistry

First and foremost, batteries are classified according to the type of charge transported.

Therefore the so-called niobium-based battery is really an advanced lithium-ion battery made with engineered niobium components, some of which are:

ANODES

Niobium Titanium Oxide (NTO)
Echion's Mixed Niobium Oxide (XNO™)
Niobium Tungsten Oxide (NWO)
Niobia (Nanostructured Niobium)
MNb₃O₈ (M=H, Li, Na, K) layered polyniobate

CATHODES

Niobium doping/coating for Co-reduced or Co-free, Li-rich and Mn-based cathodes
Lithium-rich Niobium based cation-disordered rock-salt structure (Li₃NbO₄)

SOLID ELECTROLYTE

Niobium layers on LiLaZrOx composite; Nb-S glass.

Modern Battery Technology



Lithium Carbon Oxide
(LCO- LiCoO_2)

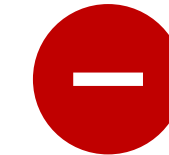
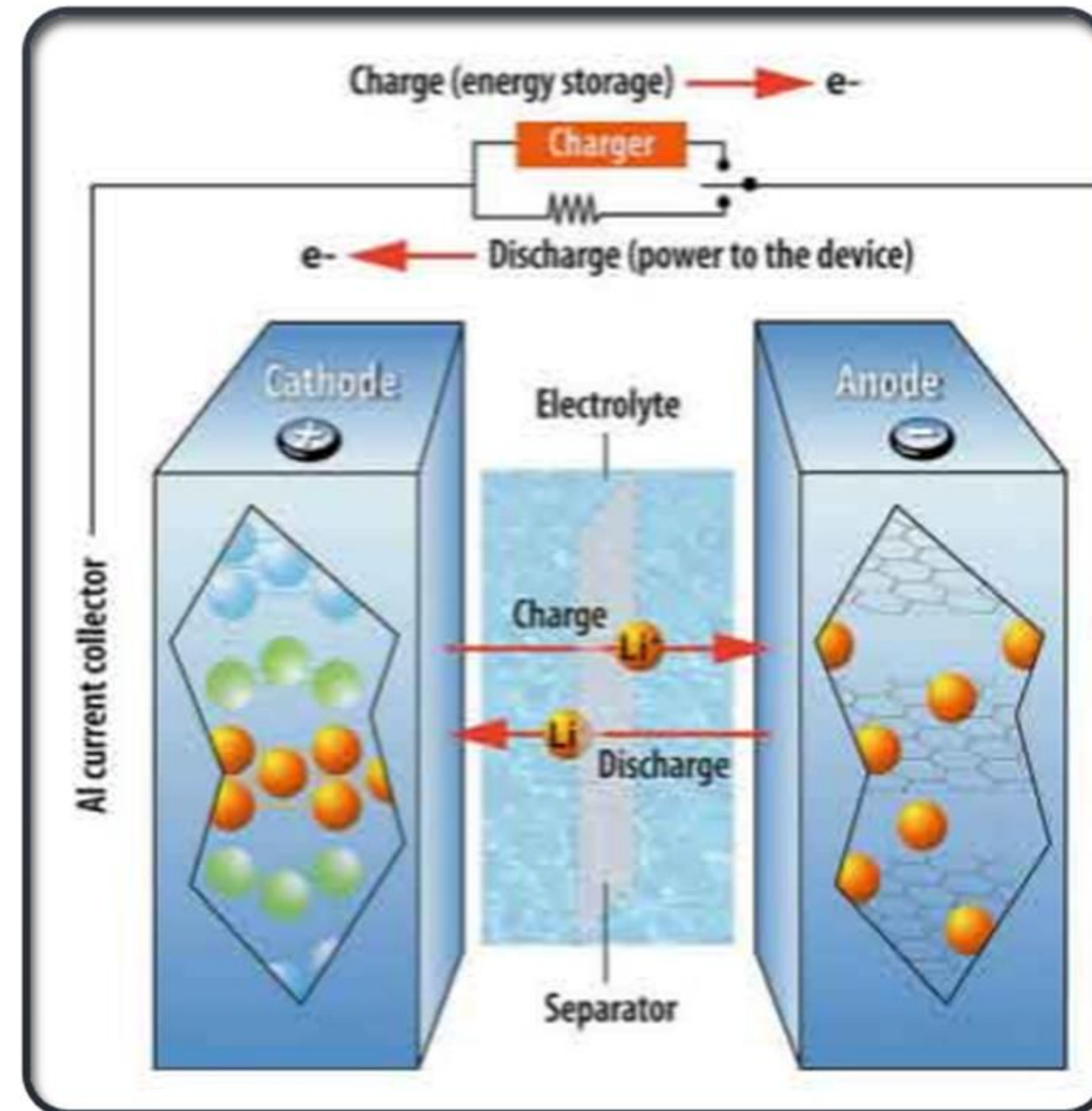
Lithium Niobium Oxide
(Li_3NbO_4)

Lithium Manganese Oxide
(LMO- LiMn_2O_4)

Lithium Iron Phosphate
(LFP- LiFePO_4)

Lithium Nickel Manganese Oxide
(NMC- LiNiMnCoO_2)

Lithium Nickel Cobalt Aluminum
(NCA- LiNiMnAlO_2)



Lithium Carbon Oxide
(LCO- LiCoO_2)

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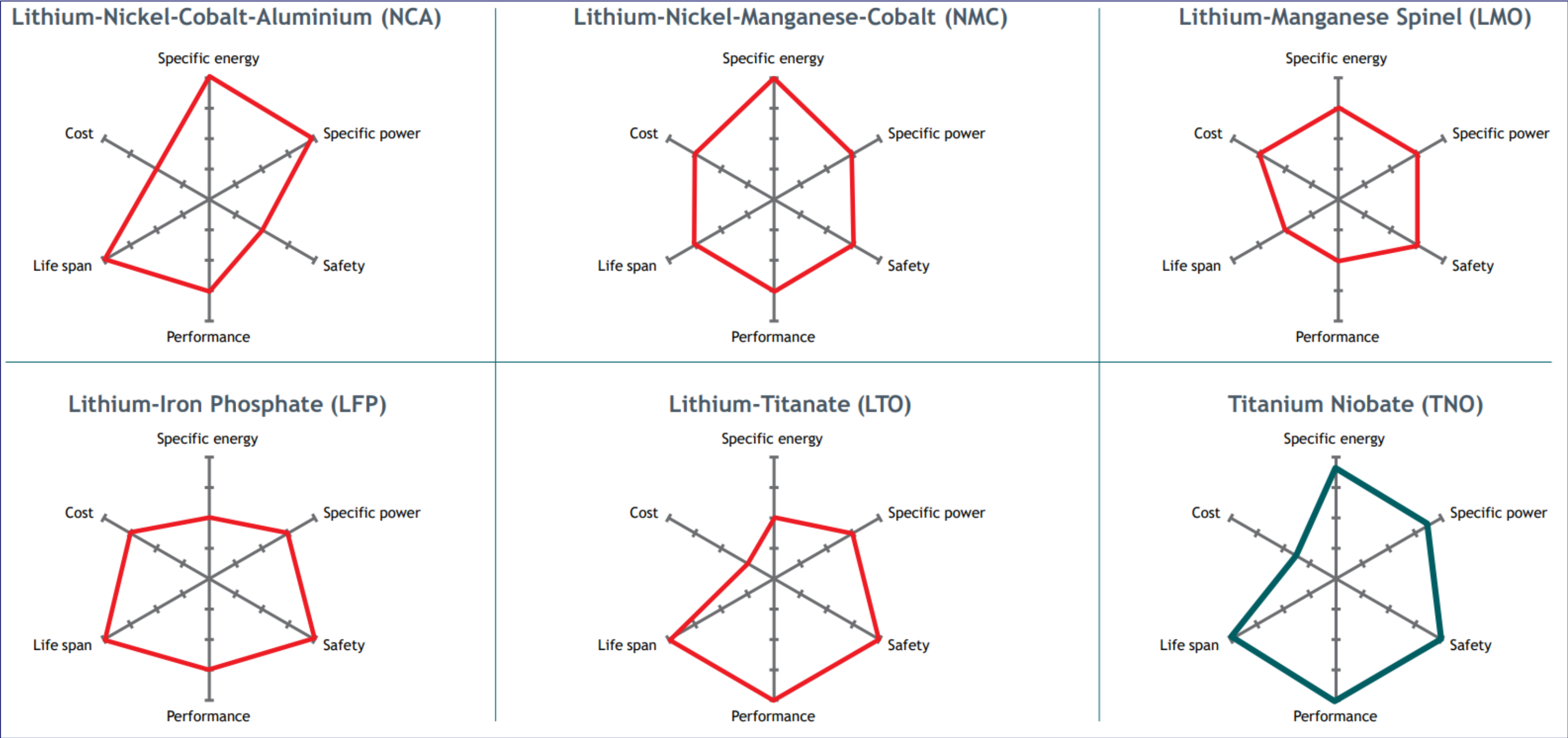
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(NCA- LiNiMnAlO_2)

Battery Comparison

Considering the characteristics listed below,
the TNO anode is clearly the best choice.



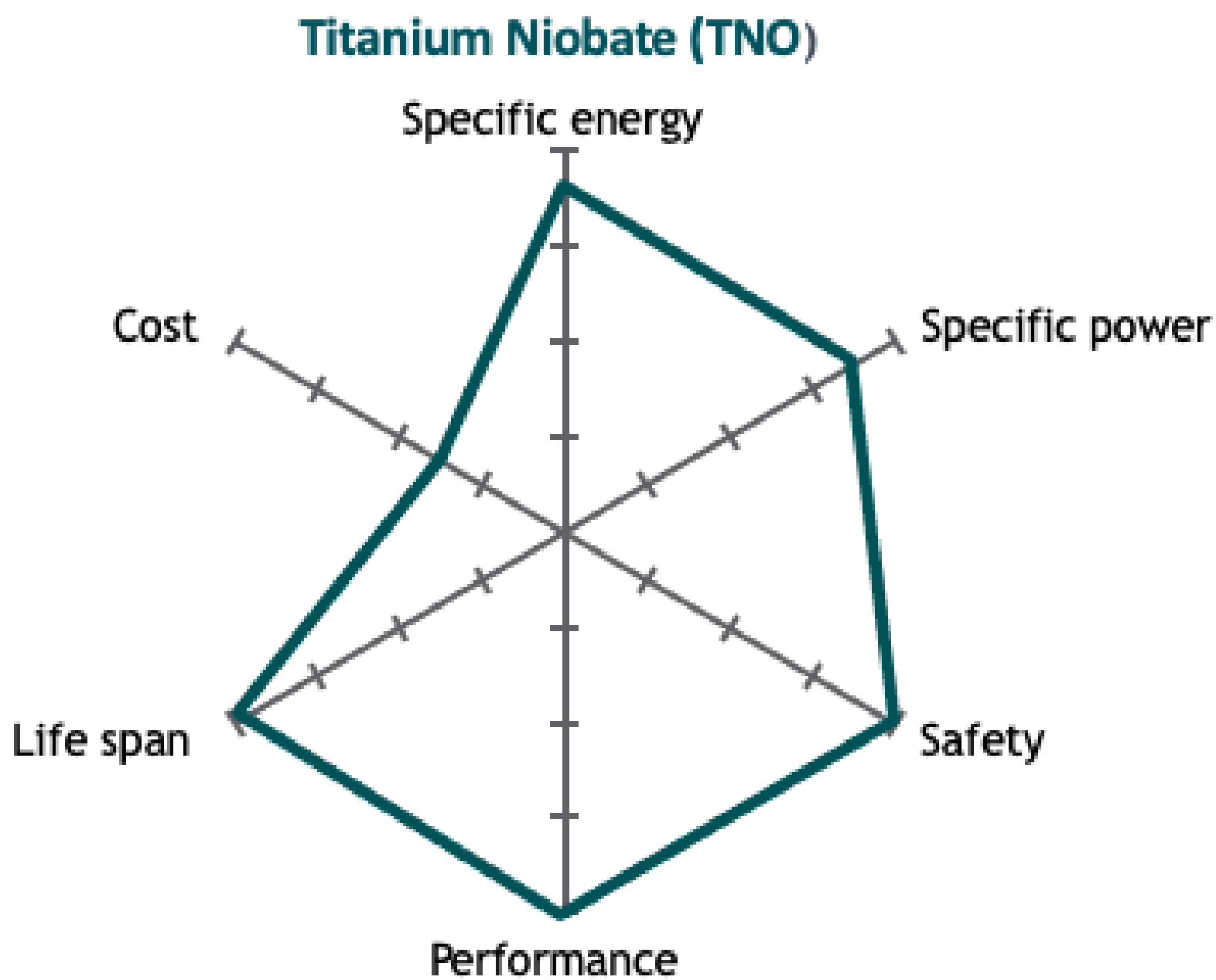
Source: The Boston Consulting Group, CBMM internal records for TNO.



Why Niobium in Batteries?

Why Niobium in Batteries

Case Study: TNO Batteries

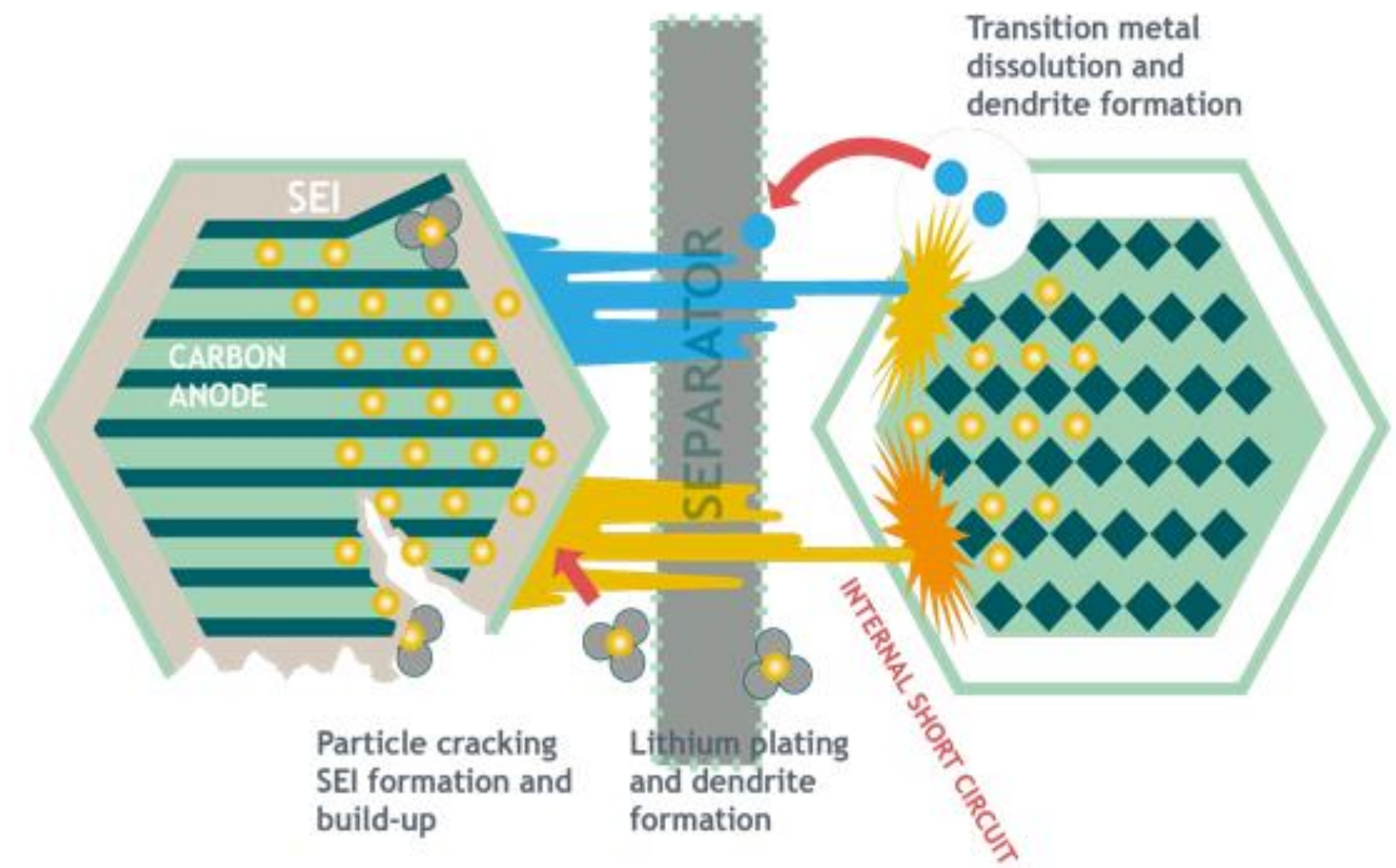


Anode Comparison	Graphite	LTO~LLTO	TNO (Nb anode)
Capacity (mA/g)	372	175	388
Voltage (V)	0.1	1.5	1.6
Density (g/cm3)	2.3	3.5	4.3
Safety	--	++	++
Charging rate	--	++	++

Why Niobium in Batteries

Safety

- As LIBs age there is a risk of short circuits occurring that result in fires
- Caused by formation of lithium metal, which comes into contact with the cathode, creating heat
- Has caused some significant product recalls for major manufacturers
- Niobium prevents the lithium metal from forming, removing the risk of short circuits

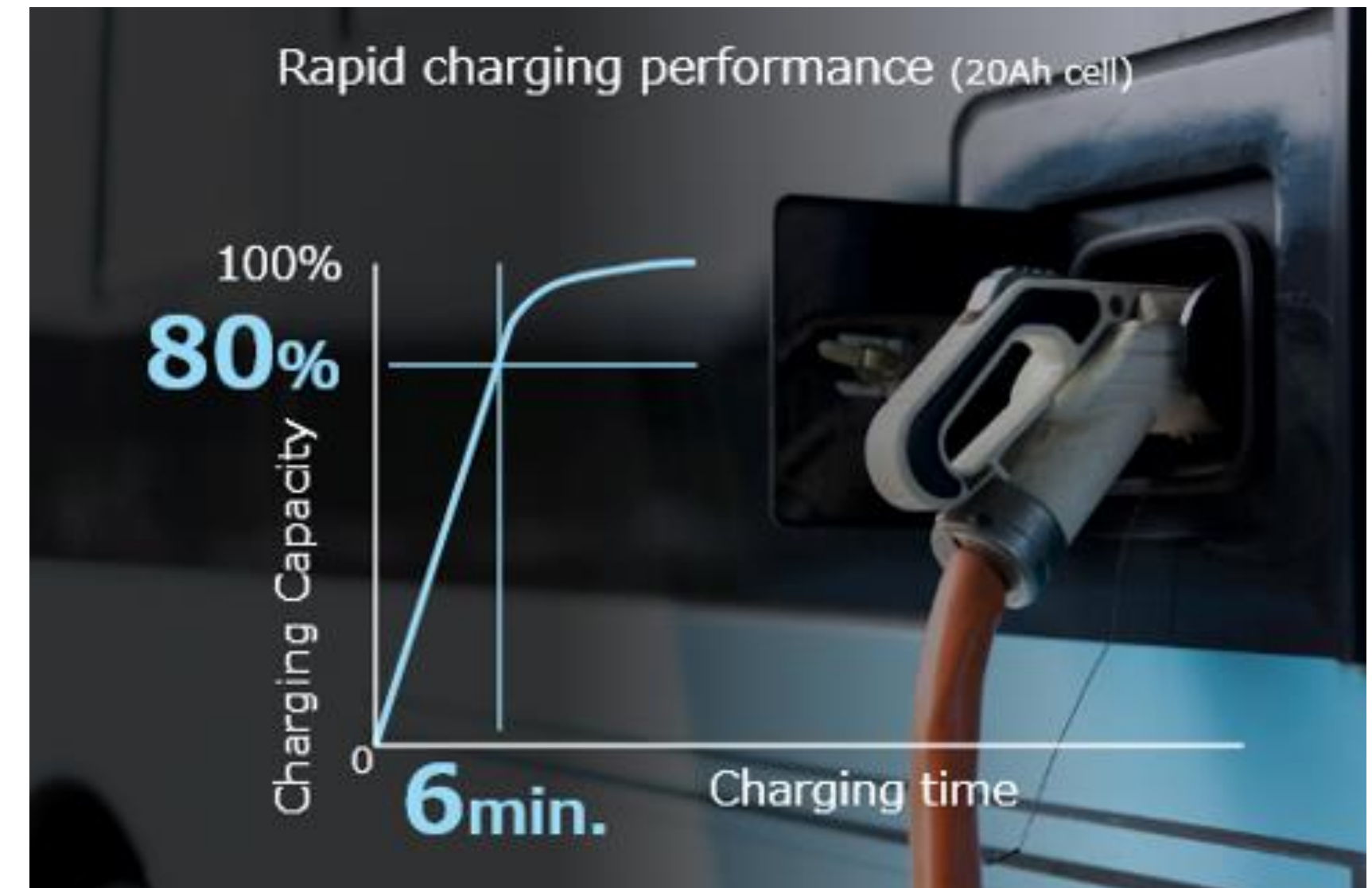


University of Oxford Energy and Power Group
<http://epg.eng.ox.ac.uk/content/degradation-lithium-ion-batteries>

Why Niobium in Batteries

Super-fast Charging

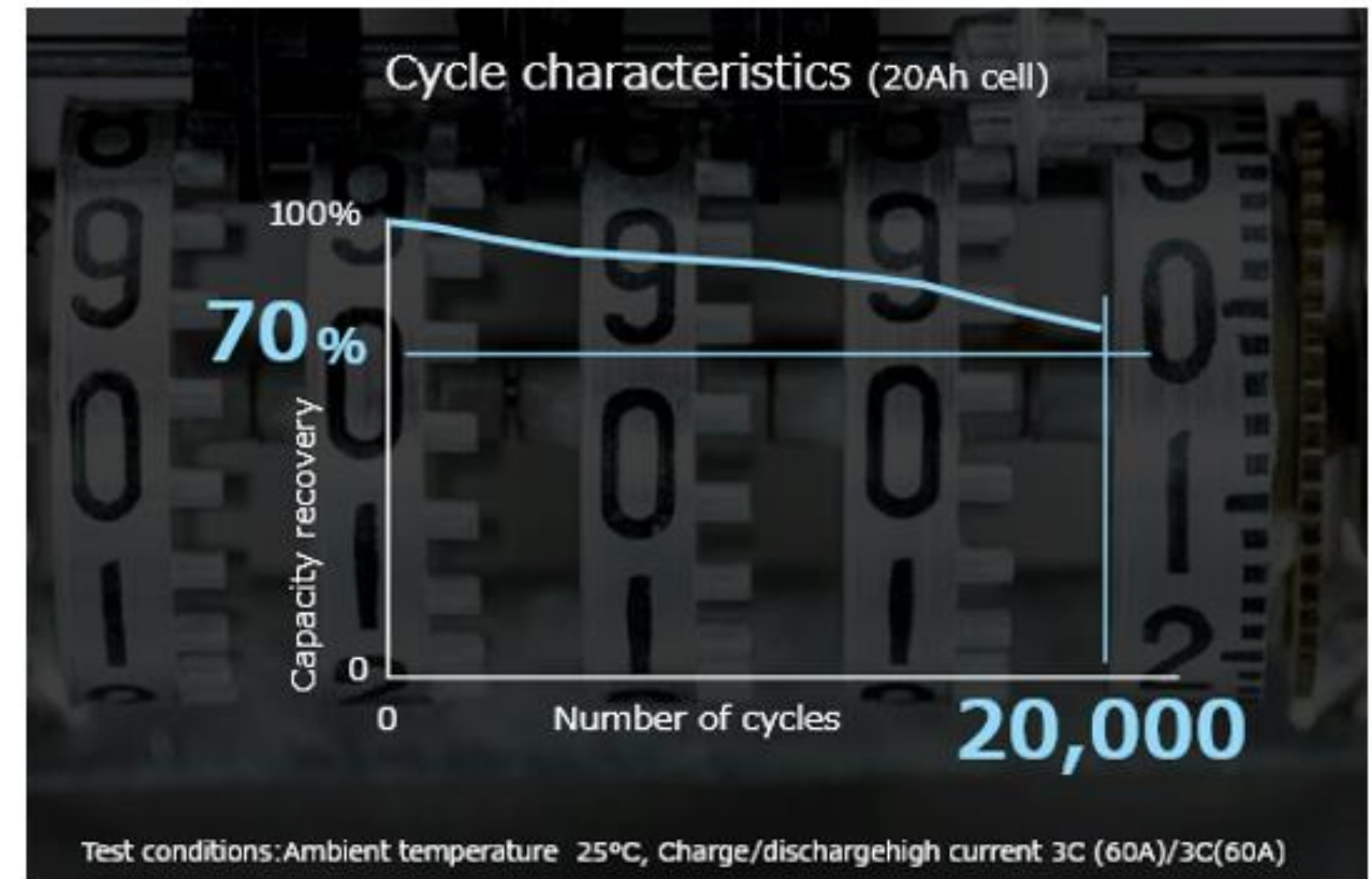
- New niobium materials being developed for battery anodes that improve the mobility of lithium ions
- By creating “spaces” in the anode material, lithium ions can easily move in and out of the anode
- Creates a very high charge/discharge rate
- Used with titanium to create titanium niobium oxides (TNO)
 - a new class of anode materials with approximately 3x the amount of energy storage as traditional lithium-ion batteries
- This technology could **significantly reduce charging times**



Why Niobium in Batteries

Long life

- Over 20,000 cycles
- Only a small degree of capacity degradation occurs even after more than 20,000 cycles* of charging and discharging
- The low maintenance requirement makes it easy on the environment, especially when it is used in applications that require frequent charging/discharging, such as large-scale storage battery systems

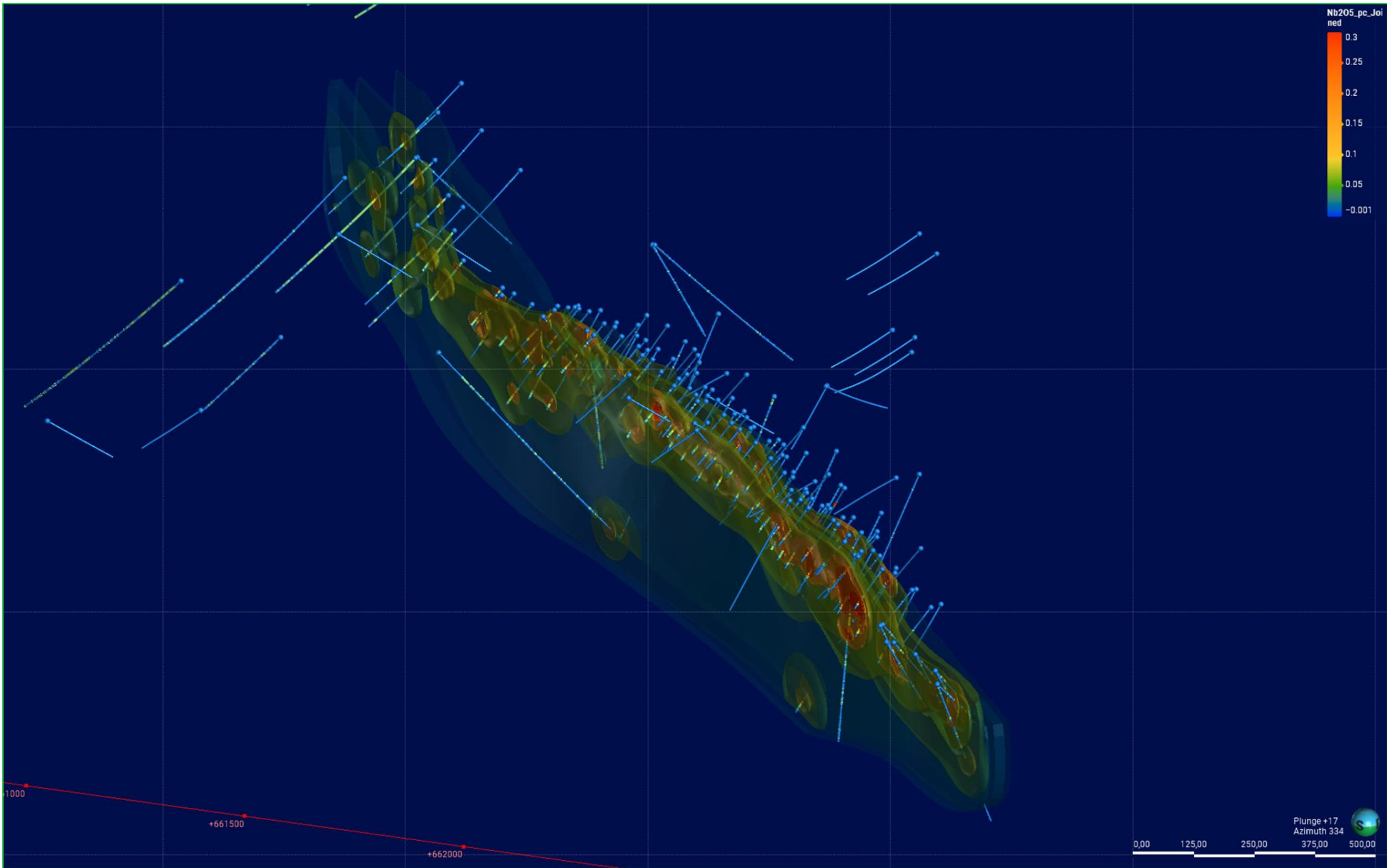




Crevier Project

How we created HP oxides in NioBay

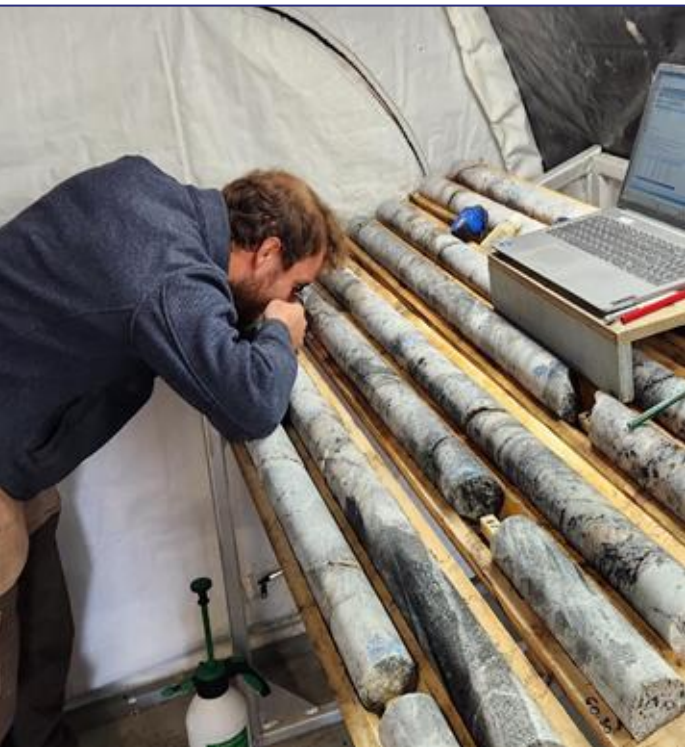
Crevier Deposit



Resources

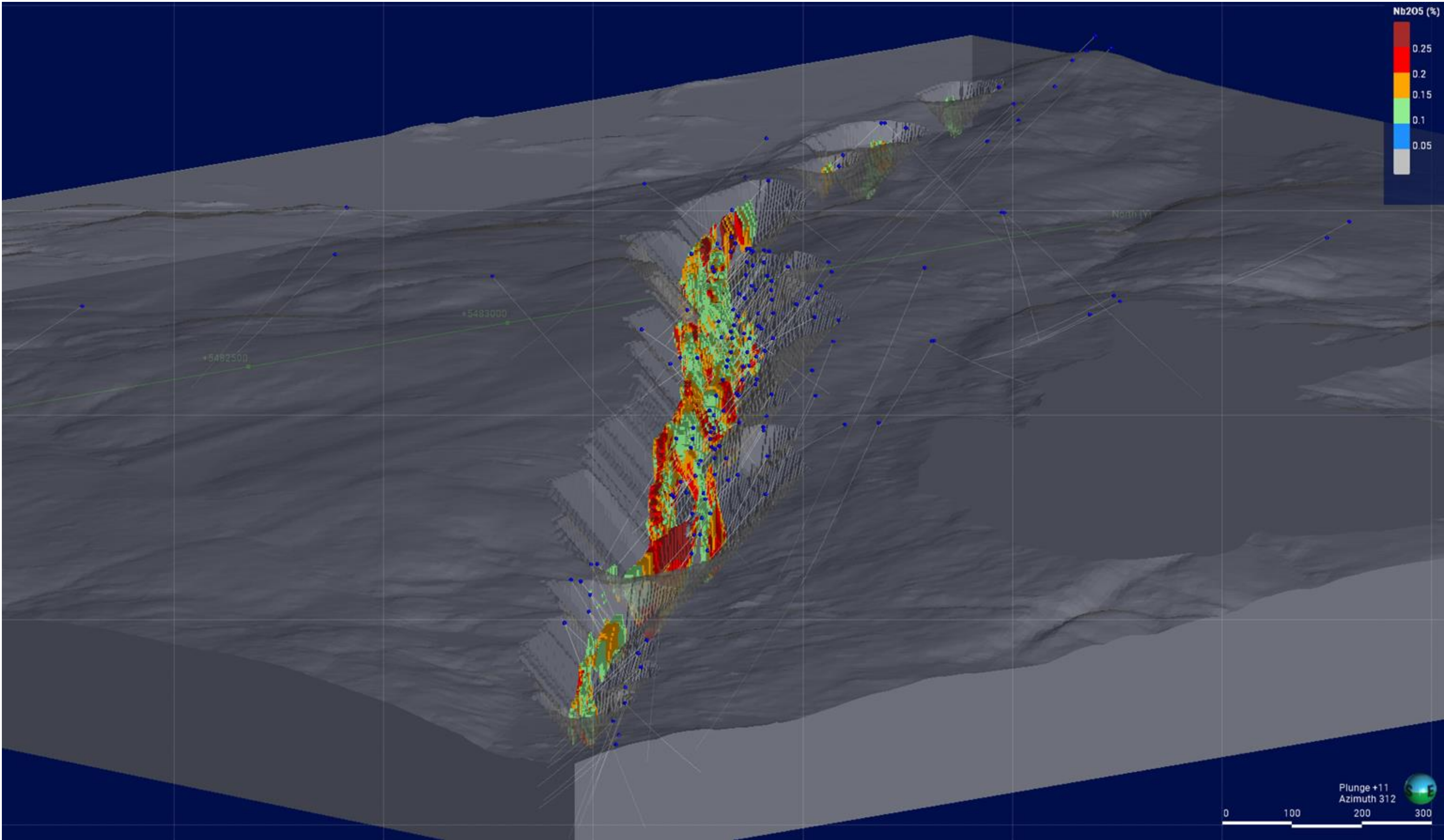


Collaboration agreement signed with Pekuakamiulnuatsh Takuhikan (Mashteuiatsh).



Category	Tonnage (t)	Nb ₂ O ₅ (%)	Ta ₂ O ₅ (ppm)
Measured	16,257,098	0.17	201
Indicated	4,475,931	0.17	208
M&I	20,733,030	0.17	202
Inferred	12,766,595	0.12	131

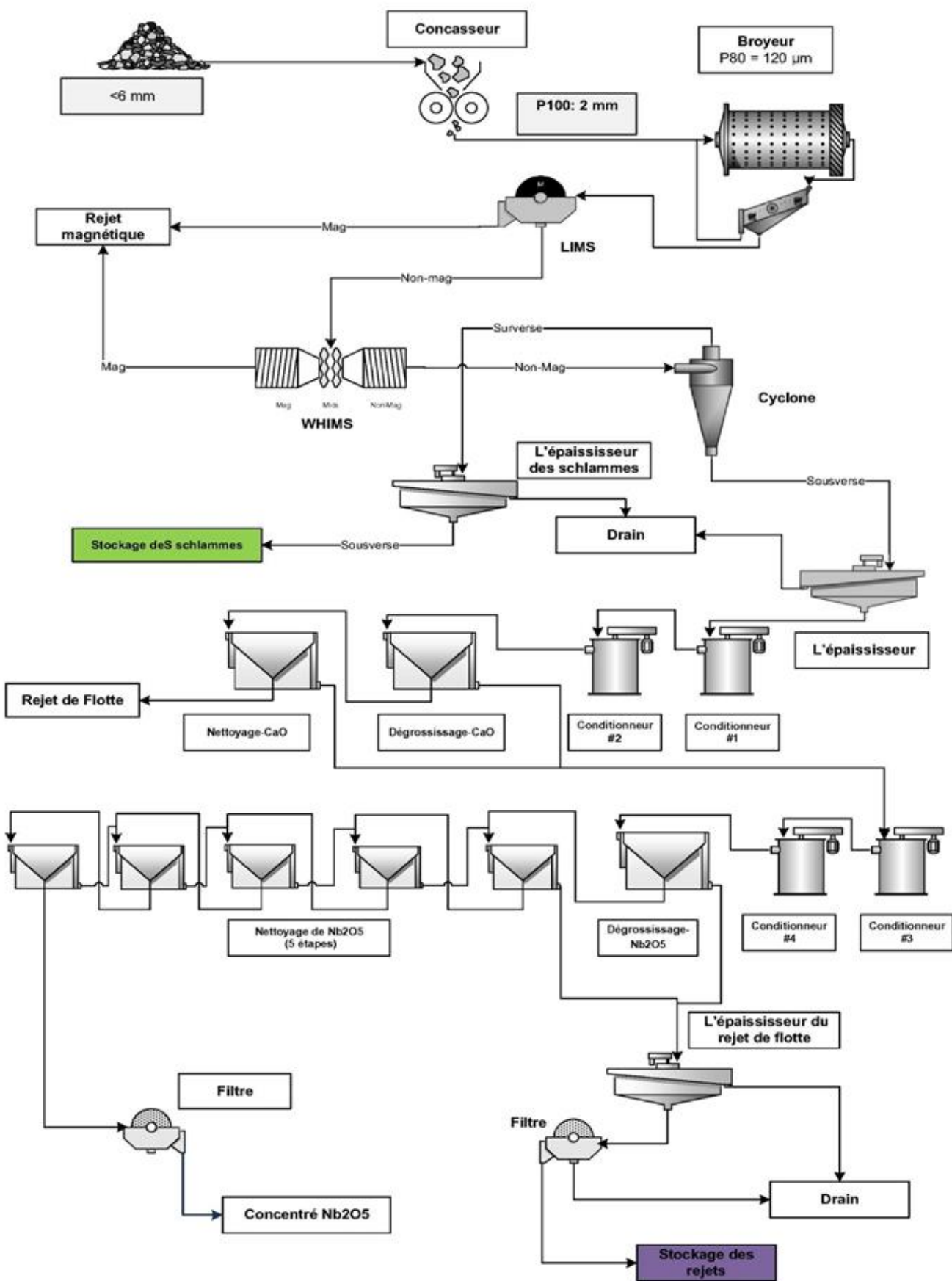
Crevier Resources 2025



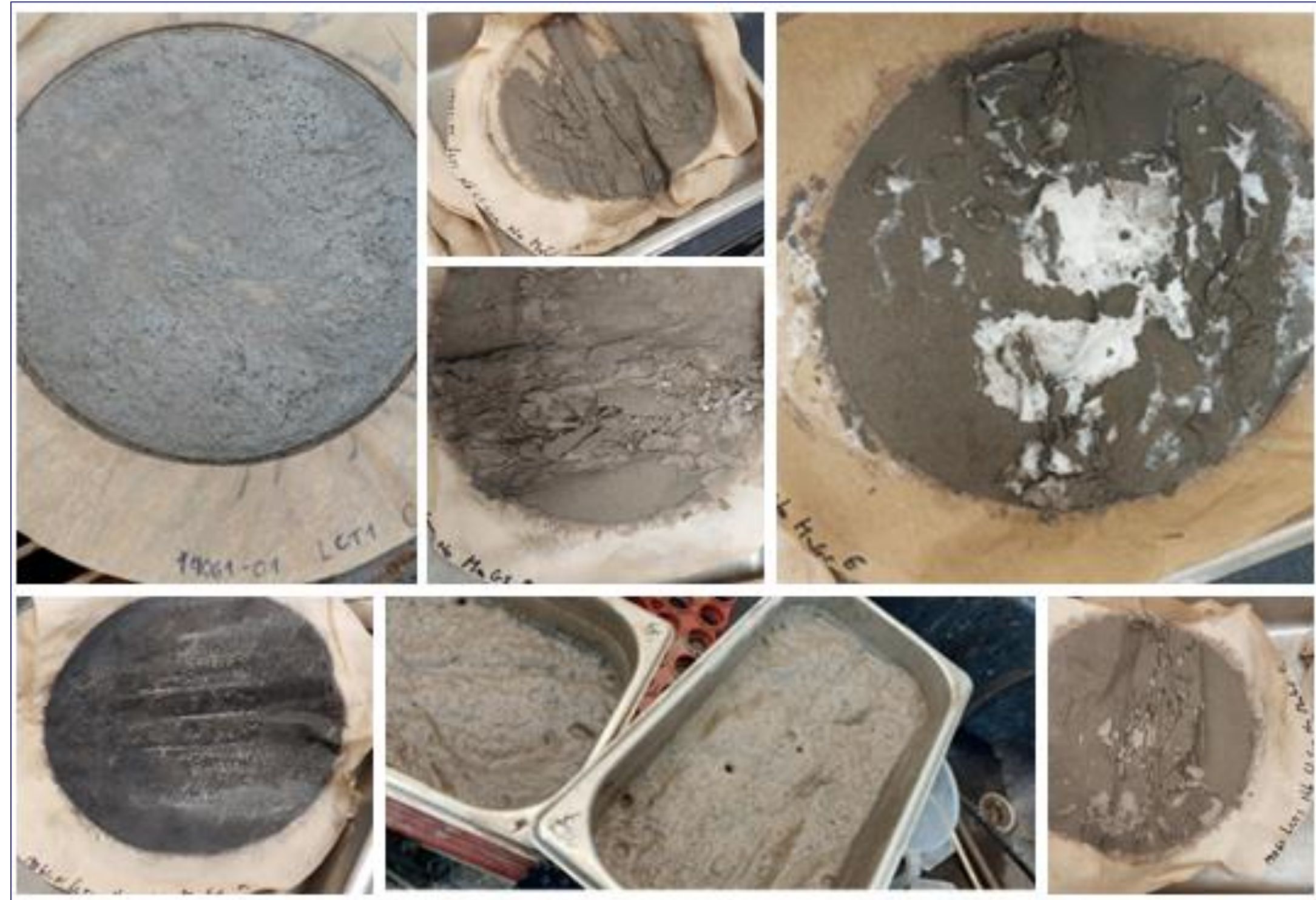
Metallurgical testing and production of samples



Currently, niobium oxalate is sourced from China or CBMM (Brazil).



Photos of
LCT
concentrate
flotation
tests



Highlights of our product

- Improved the grade of its concentrate by **56%** compared with historical metallurgical results
- Announced a new resource estimate for its Crevier Project
- Final metallurgical report on concentrate demonstrates a **70% recovery** of Nb_2O_5 and the achievement of target grades ranging from **17%** Nb_2O_5 to **40%** Nb_2O_5 across the different concentration stages
- Hydrometallurgical report demonstrates high extraction efficiency and strong selectivity. Overall recovery (conventional process) reached average extraction rates of **92.3%** for niobium and **95.8%** for tantalum
- Purity of the final product (obtained through direct precipitation and calcination) is niobium pentoxide (Nb_2O_5), grading **75.8%**
- Preliminary fluoride-free extraction work for niobium and tantalum via alkali fusion and water leaching achieved high extraction yields of **86.4%** for niobium and **91.4%** for tantalum by using a low-grade concentrate containing 13% Nb_2O_5 (U Laval and CNETE)
- After purification final analytical results demonstrate very high levels of purity:
 - Niobium oxide (Nb_2O_5): ~99.6%
 - Tantalum oxide (Ta_2O_5): 99.98%

* In terms of by-product valorization, the leach residue contains between 19% and 32% zirconium

Alkali Process

Development of an eco-responsible process for the extraction of niobium and tantalum from primary resources for the Crevier Project



THE TWO-STEP EXTRACTION PROCESS

High-Temperature Alkali Fusion



Potassium hydroxide (KOH) converts refractory minerals into water-soluble potassium hexantallate and hexaniobate phases.

Optimized Water Leaching



Stirred at 600 rpm with a 100 g/L solid-to-liquid ratio for rapid extraction.

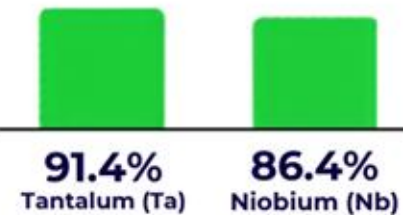
Solid-Liquid Separation



A 5-minute separation process isolates the metal-rich liquid from the insoluble residues.

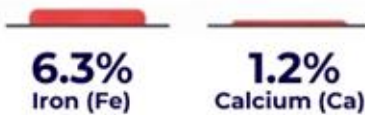
PERFORMANCE AND SELECTIVITY

Exceptional Recovery Yields



The alkaline route matches or exceeds efficiency and it is a more responsible process compared to our competitors.

Superior Impurity Rejection



Minimal Co-extraction of Fe and Ca simplifies downstream purification.



Low-grade concentrate potential

The tests were performed with low-grade concentrate (13% Nb2O5) showing the potential of this technology.

Why making high purity oxide is important

In advanced battery manufacturing, **consistency** is often as important as performance.

Trace levels of **unwanted impurities** can affect electrochemical behavior, yield rates, safety performance, and long-term reliability.

Three critical advantages:

**PREDICTABLE
PERFORMANCE**

**REDUCED RISK OF
SIDE REACTIONS**

**FASTER
QUALIFICATION AND
COMMERCIALIZATION**

Summary

- High-purity niobium oxide is emerging as a strategic battery material because it improves performance, durability, safety, and fast-charging capability **across multiple battery chemistries**
- Consistent battery-grade purity is essential for manufacturer qualification, product reliability
- A secure North American source of battery-grade niobium oxide represents both a commercial opportunity and a supply-chain advantage for the growing regional battery ecosystem

R&D projects in place

UQTR

Dr. Samaneh Shahgaldi PhD

Development of Novel Niobium Based Porous Transport Layer for Proton Exchange Membrane Water Electrolysis

INRS

Dr. Ana Tavares PhD (INRS-EMT)

Valorization of Niobium and Tantalum for the Production of Low Carbon Intensity Fuels: Water Electrolysis and CO₂ Conversion into Value Added Products

University of Waterloo

Dr. Xianguo Li PhD

Development of Niobium-based Bipolar Plates for PEM Fuel Cells



Questions?

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- This map of Eastern Canada displays the provinces and territories of Nunavut, Quebec, Ontario, New Brunswick, Prince Edward Island, Nova Scotia, and Newfoundland and Labrador. Major cities are marked with black dots, including Iqaluit, Inukjuak, Kuujuaq, Kuujuaq, Schefferville, Labrador City, St-Augustin, Chevery, Natashquan, Port-Menier, Corner Brook, Gaspé, Cap-Chat, Rimouski, Rivière-du-Loup, Edmundston, Saint-Georges, Bangor, Saint John, New Glasgow, Sydney, Charlottetown, Fredericton, Moncton, Miramichi, and Toronto. Water bodies shown include Hudson Bay, Hudson Strait, Labrador Sea, Gulf of St. Lawrence, and North Atlantic Ocean. The St. Lawrence River is also labeled. The map uses a color-coded system to distinguish between the different provinces and territories.