

**Our Future is Green** 

AGM | June 2025

TSXV: NBY | OTCQB: NBYCF

### 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, 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 in success to differ materially from those anticipated in such statements. Risks and uncertainties, and there events could differ materially from current events could differ materially from current events could differ materially form current in success, repressed 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, referred to in the Company's flings 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. 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; 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 May 16, 2023, and Management Discussion & Analysis for the year ended December 2022 dated April 19, 2023, which are available on the Company's profile on SEDAR+ at www.sedar.com. The Company believes that the foregoing 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 resources" have a great amount of uncertainty as to their existence, and great uncertainty and the Canadian INI 43-101 and the ca

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.

**NíoBa** 



#### Who are we?



NioBay is a Canadian junior explorer, with a small market cap, which

- is a **critical minerals** and **green** play (lowering carbon emissions worldwide)
- has **completed successful exploration programs** resulting in NI 43-101 resources and PEAs
- has critical minerals properties where it owns the right to mine niobium, tantalum, and titanium in Quebec and Ontario, Canada
- has access to end markets: mostly steel, EV batteries and electronics (100,000 mt for steel and 20,000 mt for others)
- is in **discussion with medium and large steel and battery customers** to supply materials
- has support from the Quebec government (subsidy and capital for plant construction) and a major mining group (Osisko – shareholder and board)

OUR GOAL: unlock value by creating a vertically integrated supply chain for our critical minerals. Once we have signed contracts, we'll build a processing plant and deliver a finished product to our customers.

## Corporate profile

- Founded in 1954, NioBay is a public company developing the James Bay Niobium Project, the Crevier Niobium and Tantalum Project, and the Foothills Titanium Project
- Our vision is to become a critical minerals producer that applies best practice ESG principles to every stage of mine development
- The NioBay leadership team has extensive experience developing and managing mines
- Niobium is classified as a critical mineral in Canada, the United States, and the European Union, as well as in many other jurisdictions
- The demand for niobium is rising due to an increase in decarbonization applications for critical minerals

<b>Corporate structure</b> (March 31, 2025)	
Stock price	C\$0.06
Shares outstanding	103M
Fully diluted	107M
Capitalization	C\$6.2M
Cash Excluding subsidies received	<b>C\$2.2M</b> C\$750K
Major shareholders Osisko group and management	21%
TSXV: NBY   OTCQB: NBYCF	



### Our ESG commitment





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#### **INCLUSION AND TRANSPARENCY**

We are actively involved with local and Indigenous communities on every project, ensuring that their voices are not only heard, but actively influence our decisions and actions.

- discussions with Moose Cree First Nation (MCFN)
- signing of a collaboration agreement with the Mashteuiatsh
- seats on the Economic Committee of the Maria-Chapdelaine MRC and the Mine Committee of the Charlevoix Region
- ongoing dialogue with the Municipality of Girardville

#### **ENVIRONMENTAL BEST PRACTICES**

Our commitment to sustainable development goes beyond compliance, as we actively seek innovative solutions to further reduce our environmental impact.

• We offset the carbon footprint of our drilling and exploration activities (GHG emissions) by contributing to Carbone Boréal, which finances tree planting in Quebec.

### **Board of Directors**





Jean-Sebastien David, P. Geo President, CEO, and Director Arianne Phosphate, Osisko, lamgold, Cambior



Laurence Farmer Director President, Electric Elements, Osisko Development, RBC



**Serge Savard** Chairman of the Board NHL veteran, Business Executive, Real Estate Developer



Dawn Madahbee Leach Director Director General, Waubetek Business Development / First Nations



Josianne Beaudry Director Partner at Lavery, de Billy LLP TSXV Quebec Advisory Committee Member



**Raymond Legault** Director Retired Financial Advisor

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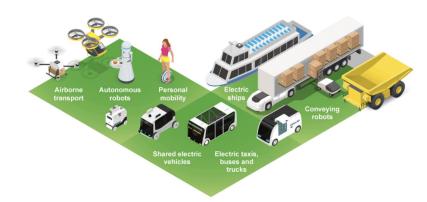
#### Niobium: A green metal

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





Adding niobium to the steel used to build a car reduces the overall weight of the finished car and increases fuel efficiency



Niobium was added to the steel used to build Øresund Bridge, reducing weight, and leading to significant cost savings.

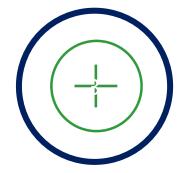
Adding Niobium to steel increases the overall strength of steel and reduces the amount of material required.



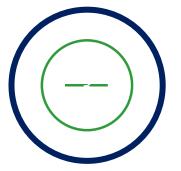
Next-generation SCiB™, made of Niobium Titanium Oxide anode, supporting smart mobility in the age of MaaS

### An essential battery metal





Niobium is being used to develop cobalt-reduced or cobalt-free, lithiumrich and manganesebased new cathode materials with higher energy density and longer-term stability



Fast charging, safer and higher energy capacity batteries are being made possible by the use of niobium in the formulation of new anode materials under current industrial trials

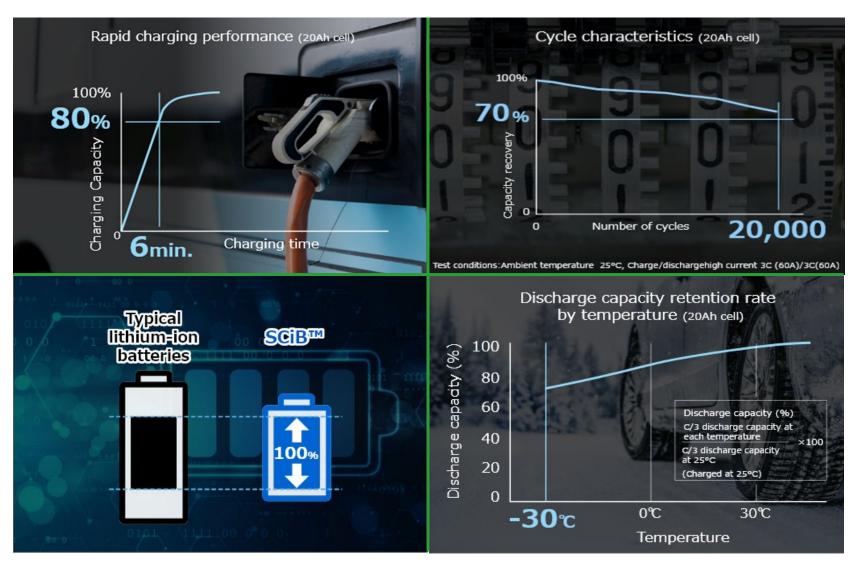


Niobium is becoming an essential element to further the development of all solid-state batteries, the ultimate solution in battery technology

Source: CBMM

#### Niobium-based anode advantages





Source: Toshiba

Niobium battery technology: current players NíoBay

BATTERY STREAK CHARGE LIGHTNING FAST

47 CBMM









TOSHIBA

# Battery industry structure



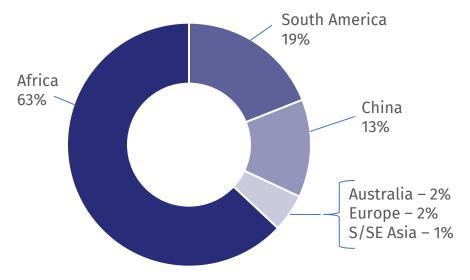
NíoBa∳ RAW **ELECTRODES + MODULES +** VEHICLE **SECOND LIFE CELLS MATERIALS** PRECURSORS **COMPONENTS APPLICATIONS** PACKS + RECYCLING Lithium, nickel. Lithium Active material. Cylindrical. Pack design Load profile Residual **CONSIDERATIONS** carbonate vs conductive pouch, prismatic cobalt. capacity hydroxide additive, binders Thermal Environmental manganese, conditions Size, capacity management Safety copper, aluminum, Cobalt, nickel, Mixing, coating, system graphite Electrolyte filling Servicing Logistics drving. manganese calendaring sulphates **Batterv** Supply chain Formation **Residual value** Policy management price volatility Processing, Separators, system KEY single crystal vs current Lifetime Real world **Economics** Purity polycrystalline collectors. Lifetime performance electrolytes Consistency **Ethics** Chemicals Industrial chemists Tier 1 Low volume OEM Second user Mining and refining Cell suppliers Material suppliers High volume OEM Recycler

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#### Tantalum: Procurement



- Tantalum comes mainly from Rwanda and the Democratic Republic of Congo (DRC).
- In 2008, the Obama administration passed the Dodd-Frank Act, which included a section sanctioning companies consuming raw materials from the DRC or nearby areas that benefit armed groups.
- Forecast of a 6% CAGR for 2022-2027 on a market of 2,200 mt.
- A Canadian source of tantalum would be welcome and supported by users.



Sources: Roskill; https://www.novethic.fr/actualite/social/droits-humains/isr-rse/afrique-des-grands-lacs-la-quete-du-mineral-sans-conflit-144047.html

# Tantalum is a critical mineral with many hi-tech applications



Product	Application
Oxide (Ta <sub>2</sub> O <sub>5</sub> )	Camera lenses X-Ray film
Carbide (TaC)	Cutting tools
Metal (Ta)	Cathode pulverization (semi-conductors) Superalloys for turbines
Salt (K <sub>2</sub> TaF <sub>7</sub> )	Capacitors for electronics



# Crevier Project

## **Crevier Overview**



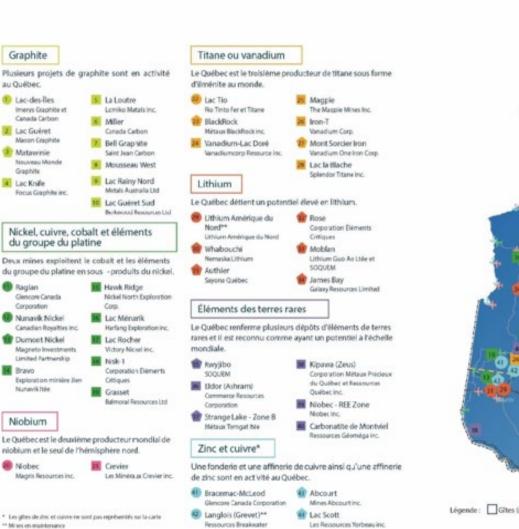


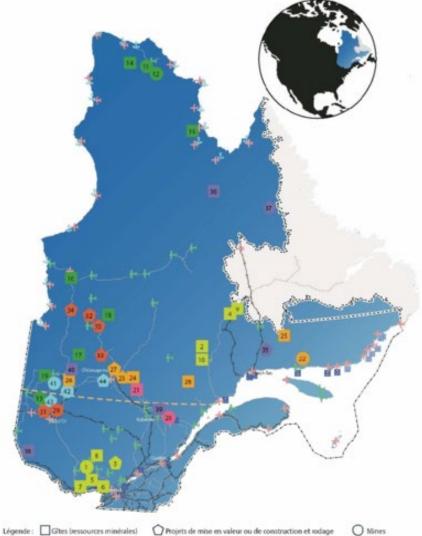
• Located 50 km north of Girardville in the Lac

Saint-Jean Region, Quebec, Canada

- Leading mining jurisdiction
- Access to high quality infrastructure
- Near a producing niobium mine
- Mineral Resource Estimate  $\rightarrow$  NSR US\$100/t
  - M&I: 25.4 Mt at 0.20% Nb<sub>2</sub>O<sub>5</sub> for 49.7 Mkg and 234 ppm Ta<sub>2</sub>O<sub>5</sub> for 5.9 Mkg
  - Inf: 15.4 Mt at 0.17%  $Nb_2O_5$  for 26.2 Mkg and 252 ppm  $Ta_2O_5$  for 3.9 Mkg
- 2019 PEA update demonstrates a strong project subject to niobium price

#### MCS Projects, In Québec ?

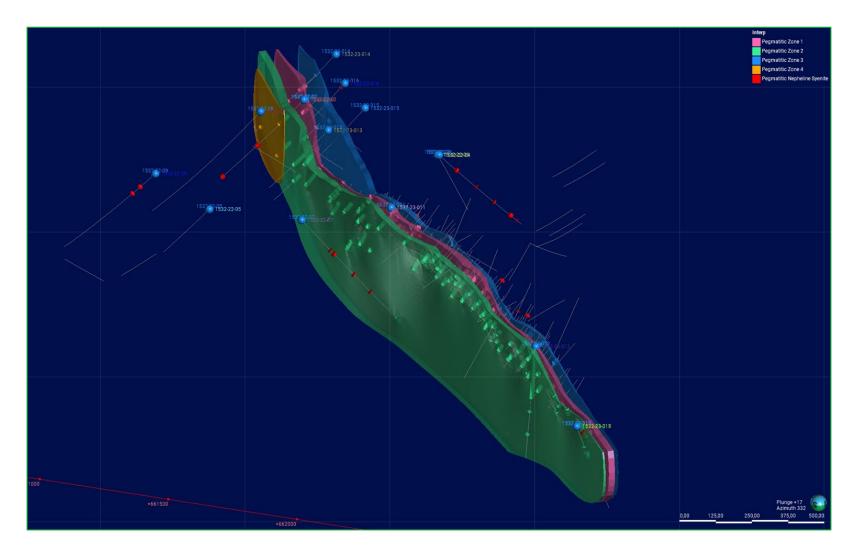




NioBay

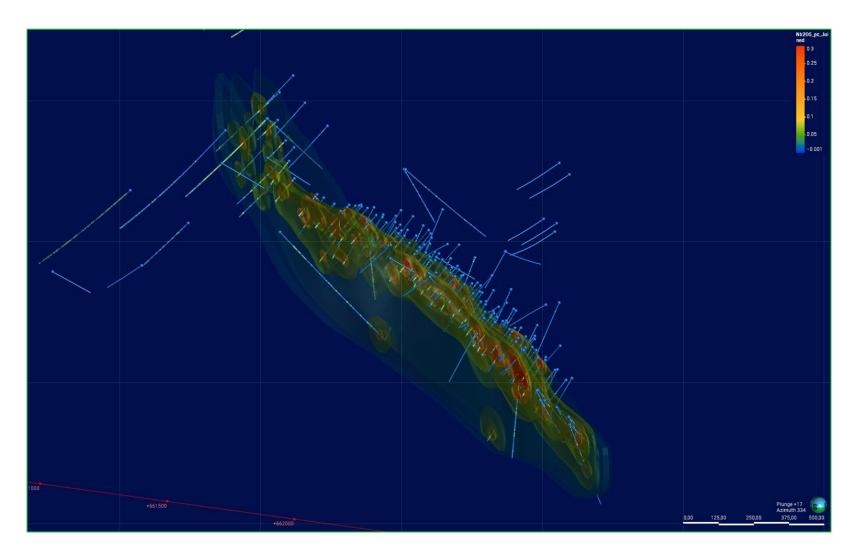
#### Crevier Deposit: Exploration 1957 - 2023





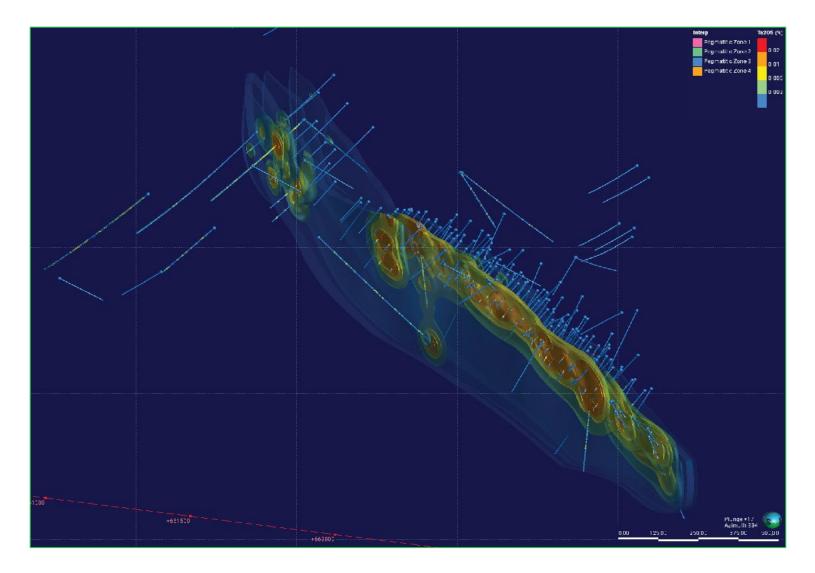
### Crevier Deposit (Nb): 1957 - 2023





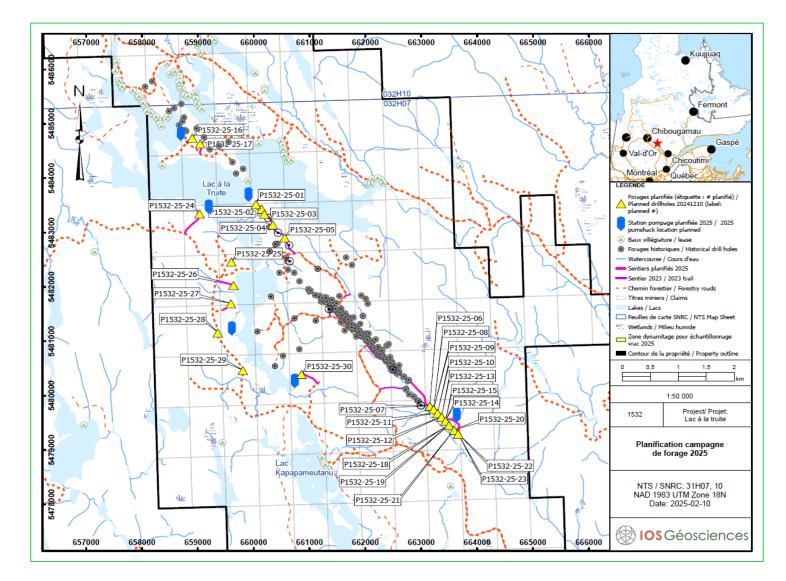
### **Crevier Deposit (Ta): 1957 - 2023**





### 2025 Drill Campaign





#### Cooperation Agreement with Pekuakamiulnuatsh First Nation - Crevier



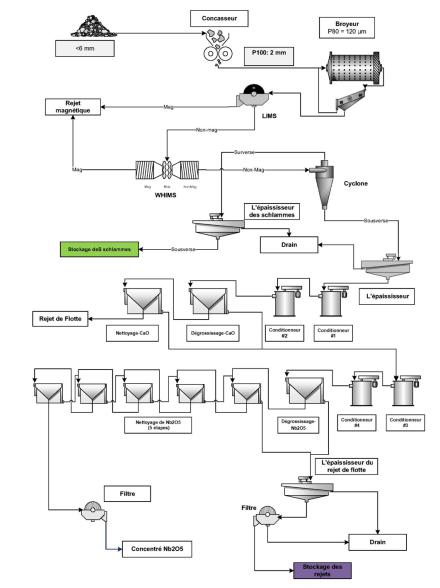


# Metallurgical Testing and Creation of Samples for Customers





At present, niobium oxalate is obtained from China or CBMM in Brazil.







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James Bay Niobium Project

## James Bay Niobium Overview





- Located 42 km south of Moosonee in the James Bay Lowlands, Ontario, Canada
  - Leading mining jurisdiction
  - Access to high quality infrastructure
- Protection agreement in place with Moose Cree First Nation
- Mineral Resource Estimate  $\rightarrow$  NSR US\$184/t
  - Ind: 29.7 Mt at 0.53%  $Nb_2O_5$  for 158 Mkg
  - Inf: 33.8 Mt at 0.52% Nb<sub>2</sub>O<sub>5</sub> for 177 Mkg
- Positive PEA highlights robust project
- Targeting less than 5% world market
- Exploration upsides as deposit is underexplored at depth – no drill hole below 330 m

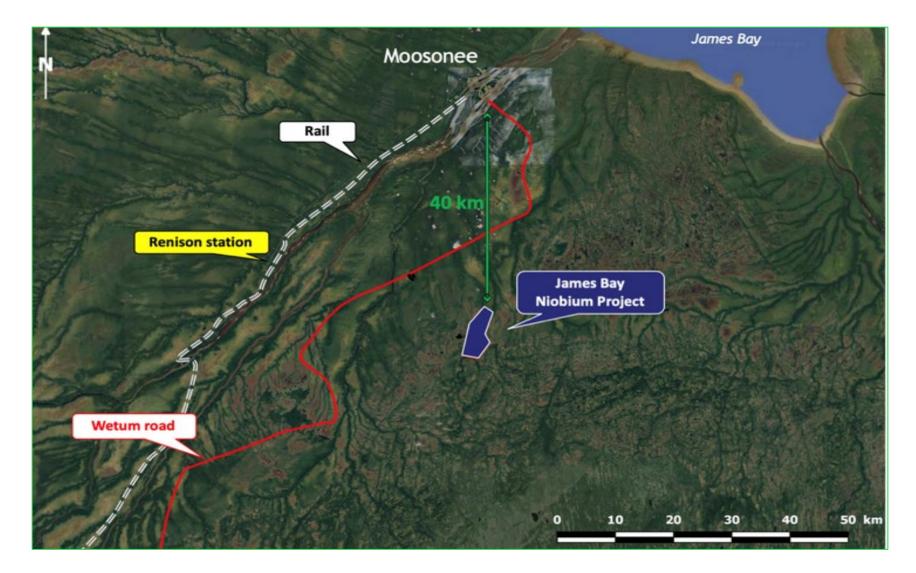
### Exploration Activities at James Bay Niobium



NíoBay

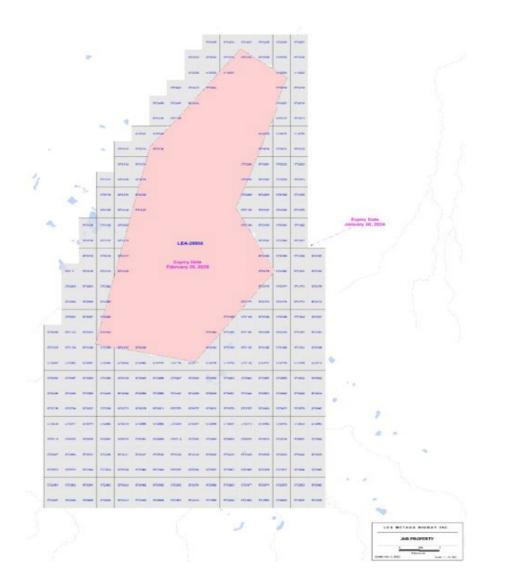
#### James Bay Niobium Project





#### Claims and Mining Leases at James Bay Niobium





## James Bay Niobium PEA highlights



Scenario	Mine life	Production	Post-tax NPV <sub>8%</sub>	Post-tax IRR
Open pit	30 years	5,470 tpa	C\$1,008M	27.5%
Open pit and underground	23 years	6,213 tpa	C\$865M	27.0%
Underground	23 years	6,283 tpa	C\$733M	21.6%

#### Production limited to less than five per cent of global demand

#### **PEA Summary**



	Underground
Pre-tax internal rate of return	26.0%
Pre-tax net present value (NPV) 8%	\$1,104M
Pre-tax payback (years)	3.8 years
After-tax internal rate of return	21.6%
After-tax NPV 8%	\$733M
After-tax payback (years)	4.3 years
<b>Pre-production CAPEX</b> (Incl. 25% contingency)	\$579M
Average annual LOM Nb production	6,283 t
Mine life	23 years
Total mineral resources mined	53.6 Mt
Average grade mined (Nb <sub>2</sub> O <sub>5</sub> )	0.51%
Gross revenue after royalties (LOM)	\$8,454 M
After-tax operating cash flow (LOM)	US\$19.11/kg Nb
C1 costs over LOM*	\$66.94
All-in costs (Sustaining CAPEX+closure+OPEX)	US\$21.43/kg Nb \$78.08/t

#### **ECONOMIC IMPACT**

- \$500 million Construction
- \$3.8 billion in OPEX
- \$300-\$400 million sustaining
- Provincial Tax: \$479 million
- Mining Tax: \$226 million
- MCFN receive: \$100 million of Mining Tax
- Federal Tax: \$718 million
- \$7 billion GDP impact
- 400 highly paid jobs
- 23-30 years mine life
- High potential to extend mine life

### An active partner in the local community





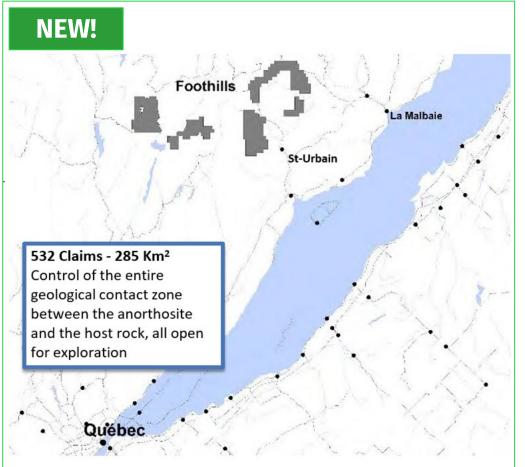
Source: Toshiba



# Foothills Project (2024 Acquisition)

## Foothills Titanium and Phosphate Project





#### **PROPERTY STATUS**

- Exploration stage to local drilling stage
- Ilmenite-bearing anorthosite intrusions containing:
  - Rutile-Ilmenite minerals (up to 57.6% TiO<sub>2</sub>)
  - Apatite minerals (up to  $12.1\% P_2O_5$ )
- Excellent location near St. Urbain, Quebec (100 km NE of Quebec City)
- Good road infrastructure and easy access to deep water port
- Potential district-scale project

### Over 300 of mining history in Saint-Urbain

#### 1665

Jean Talon, Intendant of New France, commissioned a certain Callhaut de la Tesserie (later Seigneur de la Chevrotière, aka Deschambault) to explore the Vallée du Gouffre.

#### 1906-1914

St. Urbain mines revived: Baie St. Paul Titanic Iron founded in 1908. The J. Bouchard and General Electric mines came on stream around 1911.

#### 1957-1965

The Continental Titanium Corporation operated the mine, building an onsite lab to ensure quality control.

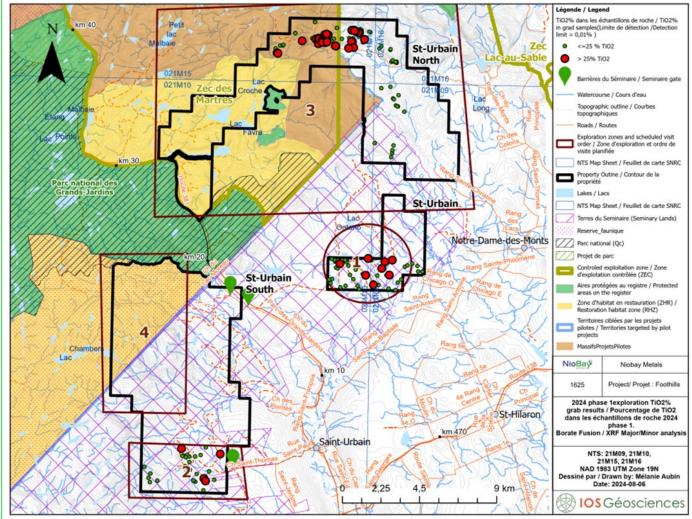
**2015** Vior geophysical prospecting campaign.

**1872-1874** Canadian Titanic Iron Company began mining the Furnace mine. **1920-1945** Mining activity: Baie St. Paul Titanic Iron was still active, shipping ore to the Titanium Alleys Co. in Niagara Falls **1970** SOQUEM exploration work.

**FEBRUARY 2024** NioBay signed an option agreement to acquire the Foothills project.

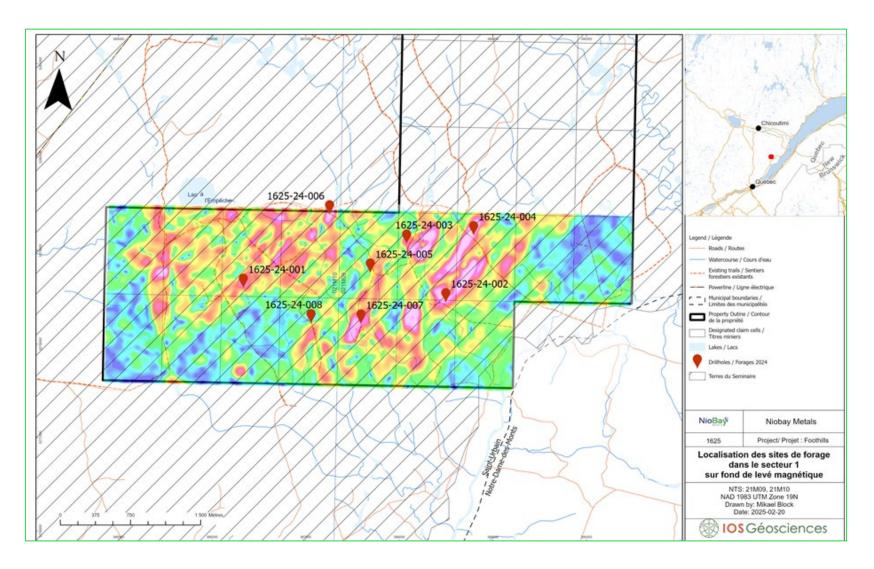
# Foothills –prospecting area and sample locations (June 2024)





#### Foothills – Location of Drill Sites





### **Intercepted Mineralization**

Sample number	Area	Туре	TiO2 (%)	Sample number	Ar
162590024	2	boulder	44.2%	162590082	:
162590171	2	boulder	41.0%	162590083	:
162590172	2	boulder	40.0%	162590084	
162590319	2	boulder	42.5%	162590085	:
162590034	3	boulder	34.6%	162590086	:
162590035	3	bedrock	37.9%	162590104	
162590329	3	bedrock	37.9%	162590106	:
162590330	3	bedrock	38.2%	162590107	
162590331	3	bedrock	38.5%	162590110	
162590332	3	bedrock	37.7%	162590112	
162590333	3	bedrock	38.0%	162590113	
162590037	3	bedrock	36.3%	162590192	
162590064	3	bedrock	30.6%	162590193	
162590065	3	bedrock	37.5%	162590200	
162590069	3	bedrock	35.5%	162590201	
162590070	3	bedrock	34.7%	162590203	:
162590075	3	bedrock	39.8%	162590204	:
162590076	3	bedrock	38.0%	162590210	:
162590077	3	bedrock	38.7%	162590212	
162590079	3	bedrock	39.5%	162590213	
162590080	3	bedrock	38.1%	162590215	

Sample number	Area	Туре	<b>TiO2 (%)</b>
162590082	3	boulder	37.5%
162590083	3	boulder	40.2%
162590084	3	boulder	39.6%
162590085	3	boulder	37.8%
162590086	3	boulder	37.8%
162590104	3	bedrock	36.6%
162590106	3	bedrock	32.9%
162590107	3	bedrock	32.1%
162590110	3	sub-bedrock	32.9%
162590112	3	bedrock	37.7%
162590113	3	bedrock	35.8%
162590192	3	bedrock	38.0%
162590193	3	bedrock	35.9%
162590200	3	bedrock	36.4%
162590201	3	bedrock	40.3%
162590203	3	bedrock	36.1%
162590204	3	bedrock	36.1%
162590210	3	bedrock	37.8%
162590212	3	bedrock	34.6%
162590213	3	bedrock	38.3%
162590215	3	bedrock	38.4%

Sample number	Area	Туре	TiO2 (%)
162590335	3 New showing discovered north of Brassard showing	bedrock	38.0%
162590336	3 New showing discovered north of Brassard showing	bedrock	38.0%
162590337	3 New showing discovered north of Brassard showing	bedrock	32.5%
162590338	3 New showing discovered north of Brassard showing	bedrock	35.8%
162590339	3 New showing discovered north of Brassard showing	bedrock	38.0%
162590340	3	bedrock	37.7%
162590341	3	bedrock	38.2%
162590342	3	bedrock	39.9%
162590346	3	bedrock	39.9%

NioBay



### Price of our Metals Today

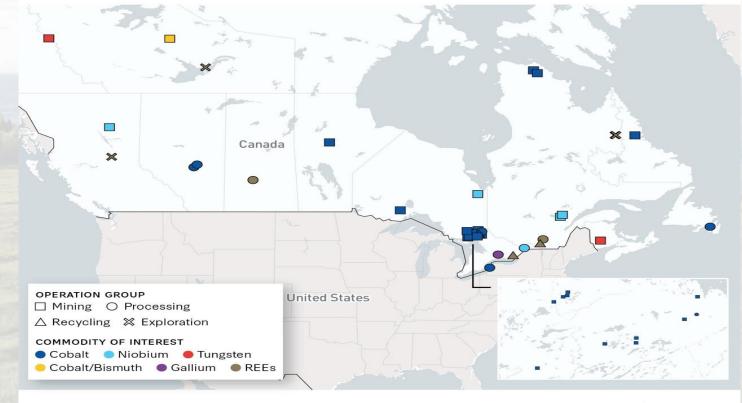


Ferro niobium	US\$45,000/mt
Niobium oxide	US\$100,000-US\$350,000/mt <sup>1</sup>
Tantalum oxide	US\$140,000-US\$220,000/mt <sup>1</sup>
Strontium oxide	US\$6,000/mt <sup>2</sup>
Titanium	US\$US51,000/mt
Crevier and James Bay niobium price in our last model	US\$44,000/mt
Crevier tantalum price in our last model	US\$150,000/mt

<sup>1</sup>Depending on purity and customer <sup>2</sup>Source: SDM Magnetics and Bunting Berkhamsted

#### NíoBay CSIS Center for Strategic and International Studies Critical Minerals Security Program | Defense and Security

Locations of Selected Critical Mineral Projects



Source: "Canada's Minerals and Mining Map," Natural Resources Canada, https://atlas.gc.ca/mins/en/index.html. Elaborated with data from authors' research based on multiple sources cited throughout this report. CSIS AMERICAS PROGRAM

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## Priorities for 2025



- **CREVIER:** Production of customer samples and search for partners
- **JAMES BAY:** Discussions with MCFN and the Ontario government to return to the field and complete the #2 drilling program and obtain three-year permits
- FOOTHILLS: Continue exploration work on the Foothills property initiated by Vior, and find ilmenite/rutile zones, mainly on Zone 3
- **OPEN TO OPPORTUNITIES** : Priority given to projects located in Québec





**Our Future is Green** 

#### **CONTACT US**

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