

CriticalElements  
Lithium Corporation



# INVESTOR PRESENTATION

High Purity Lithium Spodumene Project

May 4, 2023

# DISCLAIMERS

**Forward-Looking Information:** This presentation contains "forward-looking information" within the meaning of Canadian securities legislation. All information contained herein that is not clearly historical in nature may constitute forward-looking information. Forward-looking information includes, without limitation, statements regarding the results of the Company's Feasibility Study dated November 29, 2017 including statements about the projected IRR, NPV, payback period and future capital and operating costs, the availability and access to hydroelectric power, projected annual rate of lithium and tantalum production, the estimation of mineral resources, the market and future price of lithium and tantalum, permitting and the ability to finance the project, statements relating to the Phase II engineering study, the results of such study and lithium hydroxide plant feed, capacity and production. Generally, such forward-looking information can be identified by the use of forward-looking terminology such as "plans", "expects" or "does not expect", "is expected", "budget", "scheduled", "estimates", "forecasts", "intends", "anticipates" or "does not anticipate", or "believes", or variations of such words and phrases or state that certain actions, events or results "may", "could", "would", "might" or "will be taken", "occur" or "be achieved". Forward-looking information is based on certain factors and assumptions management believes to be reasonable at the time such statements are made, including but not limited to, continued exploration activities, lithium, tantalum and other commodity prices, the estimation of initial and sustaining capital requirements, the estimation of labour and operating costs, the estimation of mineral resources, the assumption with respect to currency fluctuations, the timing and amount of future exploration and development expenditures, receipt of required regulatory approvals, the availability of necessary financing for the project, the completion of the environment assessment process, permitting and such other assumptions and factors as set out herein. Forward-looking information is subject to known and unknown risks, uncertainties and other factors that may cause the actual results, level of activity, performance or achievements of the Company to be materially different from those expressed or implied by such forward-looking information, including but not limited to: volatile stock price; risks related to changes in lithium and tantalum prices; sources and cost of power facilities; the estimation of initial and sustaining capital requirements; the estimation of labour and operating costs; the general global markets and economic conditions; the risk associated with exploration, development and operations of mineral deposits; the estimation of mineral resources; the risks associated with uninsurable risks arising during the course of exploration, development and production; risks associated with currency fluctuations; environmental risks; competition faced in securing experienced personnel; access to adequate infrastructure to support mining, processing, development and exploration activities; the risks associated with changes in the mining regulatory regime governing the Company; completion of the environmental assessment process; risks related to regulatory and permitting delays; risks related to potential conflicts of interest; the reliance on key personnel; the risks related to the Phase II engineering study and additional pilot studies not producing the results anticipated by the Company; financing, capitalization and liquidity risks including the risk that the financing necessary to fund continued exploration and development activities at the Rose Lithium-Tantalum Project may not be available on satisfactory terms, or at all; the risk of potential dilution through the issue of common shares; the risk of litigation. Although the Company has attempted to identify important factors that could cause actual results to differ materially from those contained in the forward-looking information, there may be other factors that cause results not to be as anticipated, estimated or intended. There can be no assurance that such forward-looking information will prove to be accurate, as actual results and future events could differ materially from those anticipated in such forward-looking information. Accordingly, readers should not place undue reliance on forward-looking information. Forward-looking information is made as of the date of this presentation, and the Company does not undertake to update such forward-looking information except in accordance with applicable securities laws.

**Currency Presentation:** Unless indicated otherwise, all dollar figures are in Canadian dollars.

**Cautionary Statements Regarding Mineral Resource Estimates:** Mineral resources, which are not mineral reserves, do not have demonstrated economic viability. Environmental, permitting, legal, title, taxation, sociopolitical, marketing, or other relevant issues may materially affect the estimate of Mineral Resources. In addition, there can be no assurance that Mineral Resources in a lower category may be converted to a higher category, or that Mineral Resources may be converted to Mineral Reserves.

**Quality Control and Assurance:** The scientific and technical content of this presentation was reviewed and approved by the Company's Project Manager, Paul Bonneville, Mining Eng. who is a Qualified Person within the meaning of National Instrument 43-101.

# DISCLAIMERS

**MARKET AND INDUSTRY DATA:** Market and industry data presented throughout this presentation was obtained from third party sources and industry reports, publications, websites and other publicly available information. The Company believes that the market and industry data presented throughout this presentation is accurate as of the date of publication, but there can be no assurance as to the accuracy or completeness thereof. The accuracy and completeness of the market and industry data presented throughout this presentation are not guaranteed and the Company does not make any representation as to the accuracy of such data. Actual outcomes may vary materially from those forecast in such reports or publications, and the prospect for material variation can be expected to increase as the length of the forecast period increases. Although the Company believes it to be reliable as of the date of publication, the Company has not independently verified any of the data from third-party sources referred to in this presentation, analyzed or verified the underlying studies or surveys relied upon or referred to by such sources, or ascertained the underlying market, economic and other assumptions relied upon by such sources. Market and industry data are subject to variations and cannot be verified due to limits on the availability and reliability of data inputs, the voluntary nature of the data gathering process and other limitations and uncertainties inherent in any statistical survey. In addition, certain of these publications, studies and reports were published before COVID-19 and therefore do not reflect any impact of COVID -19 on any specific market of globally.

**CAUTIONARY NOTE TO UNITED STATES INVESTORS:** Disclosure regarding Mineral Reserve and Mineral Resource estimates included in this presentation were prepared in accordance with Regulation 43-101 respecting Standards of Disclosure for Mineral Projects (“NI 43-101”). This presentation use the terms “Pre-Feasibility Study,” “Feasibility Study,” “Mineral Resource,” “Inferred Mineral Resource,” “Indicated Mineral Resource,” “Measured Mineral Resource,” “Mineral Reserve,” “Probable Mineral Reserve,” and “Proven Mineral Reserve” in connection with the presentation of resources, as each of these terms is defined in accordance with the CIM Definition Standards on Mineral Resources and Reserves adopted by the Canadian Institute of Mining, Metallurgy and Petroleum (“CIM”) Council (the “CIM Definition Standards”), as required by NI 43-101. Unless otherwise indicated, all reserve and resource estimates contained in this presentation have been prepared in accordance with the CIM Definition Standards, as required by NI 43-101. 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. NI 43-101 differs significantly from the disclosure requirements of the U.S. Securities and Exchange Commission (the “SEC”) generally applicable to U.S. companies. For example, the terms “mineral reserve”, “proven mineral reserve”, “probable mineral reserve”, “mineral resource”, “measured mineral resource”, “indicated mineral resource” and “inferred mineral resource” are defined in NI 43-101. These definitions differ from the definitions in the disclosure requirements promulgated by the SEC. Accordingly, information contained in this presentation will not be comparable to similar information made public by U.S. companies reporting pursuant to SEC disclosure requirements.

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# CRITICAL ELEMENTS LITHIUM CORPORATION



## *Our Vision*



### **Our Vision**

- It is Critical Elements Lithium Corporation's vision to become a large, responsible supplier of lithium to the flourishing electric vehicle and energy storage systems industries



### **The Opportunity**

- Our first project, Rose, features high purity spodumene



- Quebec is strategically well-positioned regarding the critical transitioning energy and e-mobility markets in Europe and the United States and boasts excellent infrastructure including low cost and low carbon electricity



- Our cooperative relationship with the Cree Nation of Eastmain, the Grand Council of the Crees (Eeyou Istchee), and the Cree Nation Government has been formalized through the Pikhuutaau Agreement signed in July 2019



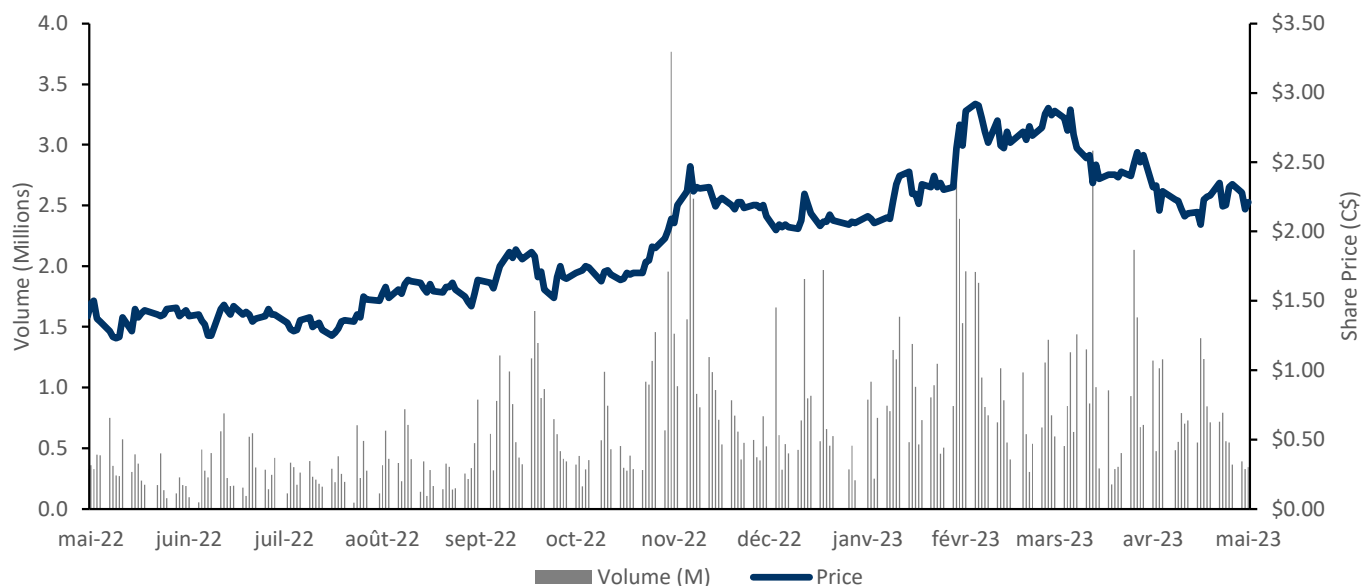
- Provincial Certificate of Authorization approval received November 1<sup>st</sup>, 2022, Federal approval received August 10, 2021, advancing detailed engineering and financing for the construction of the Rose mine and concentrator, and the engineering studies for a chemical plant for conversion of spodumene concentrate to high quality lithium hydroxide for use in lithium-ion batteries



# CORPORATE SNAPSHOT

## Critical Elements Lithium's capital structure

Basic Shares	217.8M
Options	3.3M (C\$0.24 - C\$2.29)
Warrants	9.5M (C\$1.75 - C\$2.50)
FD Shares	230.6M
Share Price	C\$2.16
Basic Market Cap	C\$470.4M
Management / Directors	4.36% ownership



Exchange: Trading Symbol

**TSX-V: CRE**

**Frankfurt: F12**

**OTCQX: CRECF**

Research Coverage



Source: S&P Capital IQ.

Market data presented as of the May 3, 2023, market close in Canadian dollars; stock chart data sourced from Refinitiv Eikon.

TSX-V:CRE

# INVESTMENT HIGHLIGHTS

*Permitted, construction-ready North American source of lithium and tantalum*

1

## High Purity Spodumene Hard Rock Project

- Lithium hydroxide demand is expected to dominate the lithium market
- Rose is one of the highest purity hard rock spodumene deposits with low iron and mica content, and is expected to produce battery-quality lithium hydroxide

2

## Government & First Nations Support

- Rose, the Company's flagship feasibility-stage lithium spodumene project, is located in Québec – a top-tier, strategically located, and supportive mining jurisdiction
- Good relations with Québec government, First Nations and local communities

3

## Management Team with Relevant Experience

- Developers/operators experienced in de-risking large-scale projects
- Key members include the former Rockwood Lithium CEO and CFO, which sold Rockwood to Albemarle for US\$6.2 billion in January 2015

4

## Availability for Strategic Partners

- End users in the EV sector are actively seeking sustainable lithium hydroxide supply; Quebec's grid is low carbon, 93% hydroelectric
- Rose is potentially the only new source of technical grade lithium spodumene
- Evaluating continued interest from blue-chip strategic partners

5

## Re-rating Opportunity with Project Advancement

- Mine and spodumene concentrate plant with a robust after-tax NPV8% of \$1.9B, IRR of 82.4% and payback period of 1.4 years
- Meaningful re-rating opportunity based on current market cap to Feasibility Study NPV
- Fundamental upside potential with new discoveries and large exploration mining claim landscape

# EXPERIENCED LEADERSHIP TEAM



*Proven track record in successfully executing value-added growth opportunities*

**Former Rockwood Lithium CEO and CFO possess strong lithium development and operational knowledge**

- Steffen Haber, President
  - Former CEO and President of Rockwood Lithium
  - Instrumental in the sale of Rockwood to Albemarle for US\$6.2 billion in January 2015
- Marcus Brune, Director and VP, Finance
  - Previously served as CFO of Rockwood Lithium from 2011 up until its acquisition
  - Worked in different executive positions in corporate finance and M&A for Rockwood Holdings and its predecessor companies since 2004

**Seasoned developers and mine operators with experience in de-risking large-scale projects from the point of discovery to production**

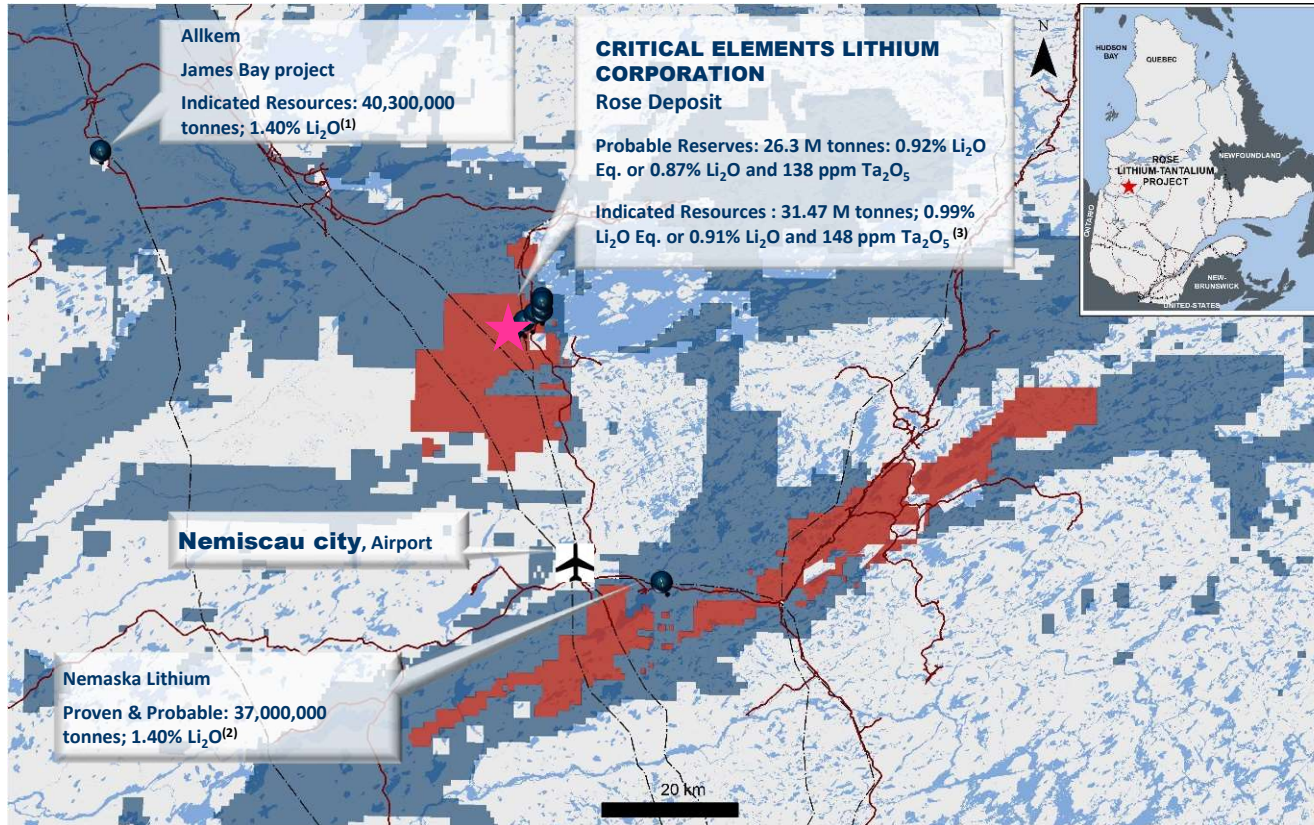
- **Jean-Sébastien Lavallée, CEO**
  - Over 26 years of experience in mining exploration
  - Has served as the CEO of Critical Elements Lithium since 2009
- **Yves Perron, VP Engineering, Construction and reliability**
  - Over 25 years of experience in project management in the industrial sector within major international firms
  - Former VP Engineering and Construction for Stornoway Diamond, VP Engineering and Construction for Mason Graphite VP Engineering and Construction for Loop Industries
- **Hughes Périgny, Senior Project Director**
  - Over 29 years of experience in engineering, construction and project management in the industrial and mining sectors
- **Michel Clément, Senior Project Control Director**
  - Over 25 years years of experience in engineering, construction, project management and control, as well as project risk analysis in the industrial and mining sectors
- **Andy Fortin, Senior Process and Commissioning Director**
  - Over 25 years years of experience in leading continuous improvement of metallurgical processes, asset management, health and safety culture and risk management



# EXTENSIVE PORTFOLIO OF TARGETS

## *A dominant land package with exploration upside*

- Located in a premier mining jurisdiction in Québec, Canada
- Excellent access to infrastructure including roads, low-cost power and skilled labor
  - Camp, Airport
  - Power line on site tapping into Quebec's low carbon (93% hydroelectricity), low-cost grid
  - Exploration program underway, including up to 25,000 m of drilling with aim to expand resource at Rose, test priority targets and delineate an initial resource at Lemare
- Good relations with First Nations communities and local and provincial governments

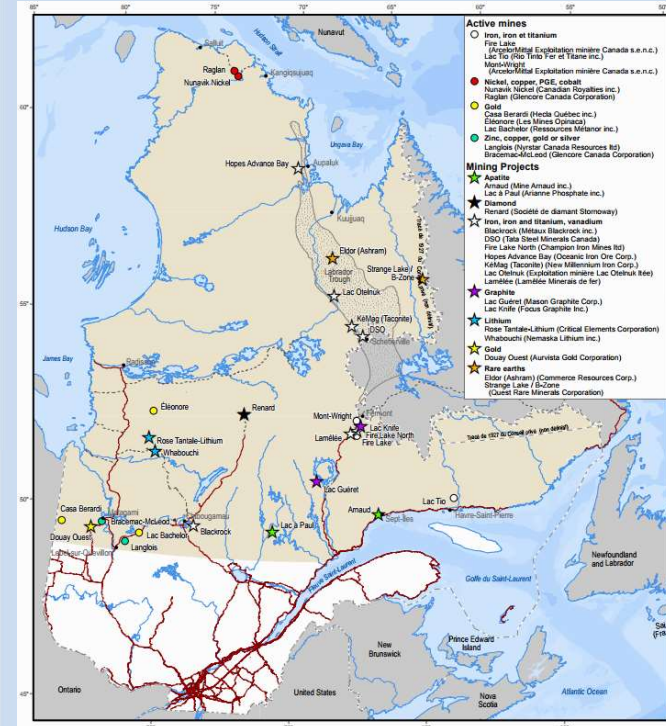


# GOOD RELATIONS WITH FIRST NATIONS

## Mining in Québec

- The Pikhuutaau Agreement, signed July 2019, formalized the relationship between the Cree Nation of Eastmain, the Grand Council of the Crees (Eeyou Istchee) and the Cree Nation Government, and Critical Elements Lithium
- Québec is a vast province, covering 1.7 million km<sup>2</sup>, of which only 5% is covered by mining exploration rights
  - As of December 2015, there were over 130k active mining titles in Québec, covering 6.1 million hectares, (only 3.7% of the province)
- Québec is Canada's largest producer of iron concentrate and zinc, the country's second-largest producer of gold, is the dominant source of lithium in Canada, and accounts for 20% of Canada's total mining output
- Consistently ranked in the top quartile by the Fraser Institute for most attractive jurisdictions for mining investment

## Map of Québec and Plan du Nord



## Mining Projects in Québec (1)(2)(3)

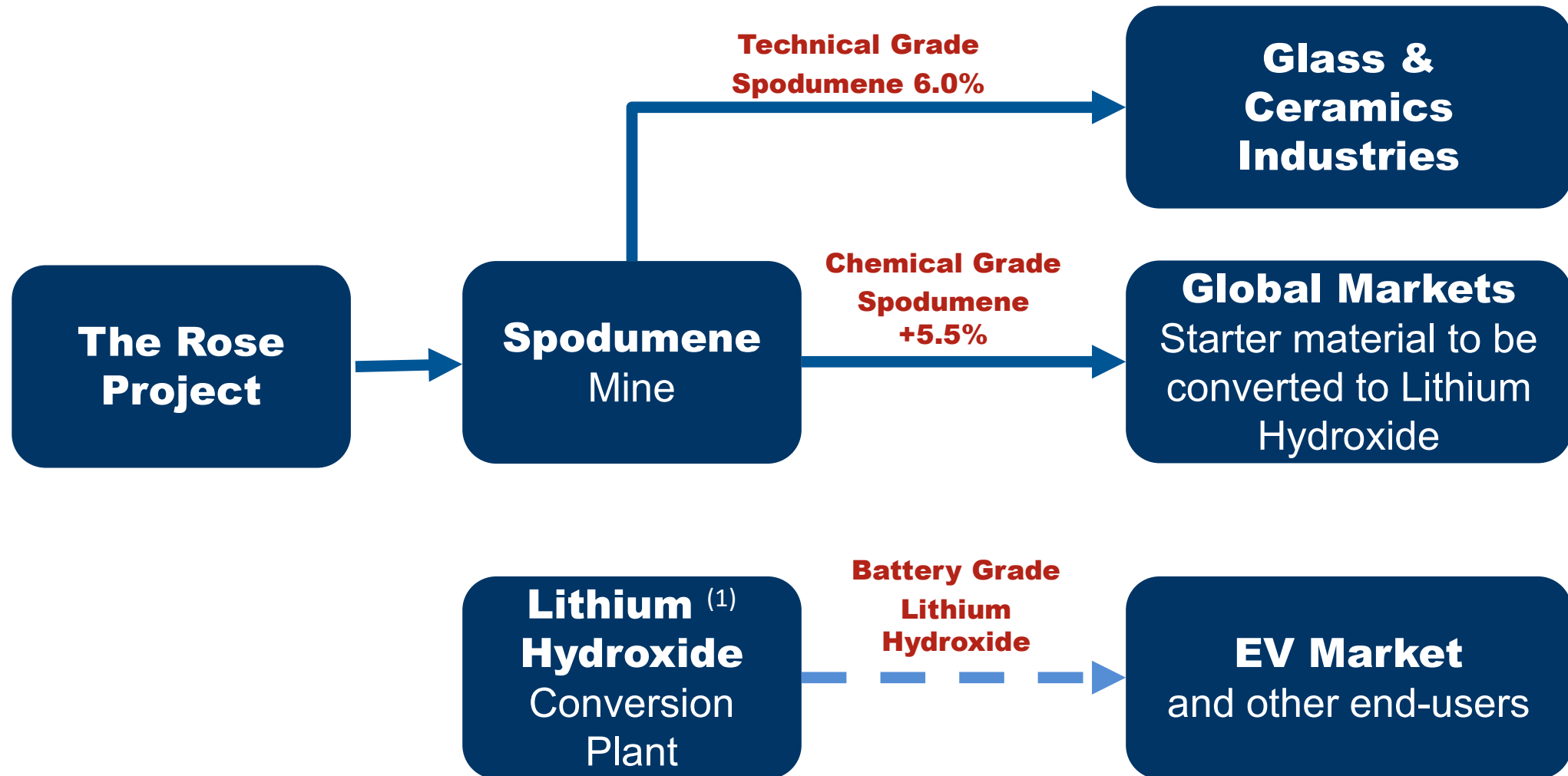
Stage	Base	Precious	Specialty	Total
Producing	8	14	2	24
Development	9	15	12	36
Exploration	98	286	86	470
<b>Total</b>	<b>115</b>	<b>315</b>	<b>100</b>	<b>530</b>

(1) Base metals include Fe, Zn, Ni, Cu and Pb; precious metals include Au, Ag, Pt, Pd; specialty products are all other mined products  
 (2) Exploration projects are mining projects at various stages with or without a resource estimate that do not yet have a published economic study  
 (3) Development projects are classified as mining projects with a published economic study



# THE ROSE PROJECT

*A phased approach to supplying the EV market*



→ Planned progression of Rose Project development

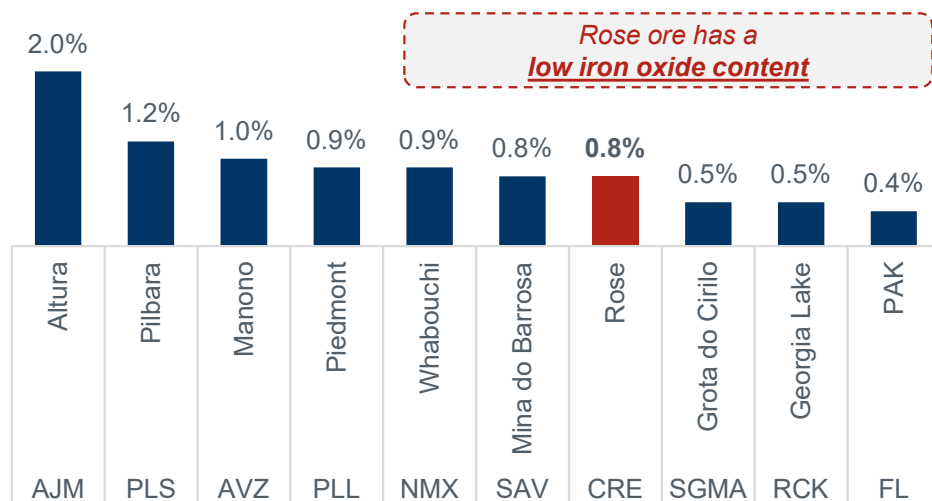
- - - → Optional opportunity, dependant on market conditions

(1) On August 11<sup>th</sup>, 2022, the Corporation announced that it had complete an engineering study for a chemical plant to produce high quality lithium hydroxide monohydrate for the electric vehicle and energy storage system battery industries. The study was prepared by Metso Outotec and WSP in Canada (WSP). The Company is not in a position to confirm as of the date hereof if the hydroxide chemical plant will ever be implemented or that it will form part of the Rose Lithium-Tantalum project

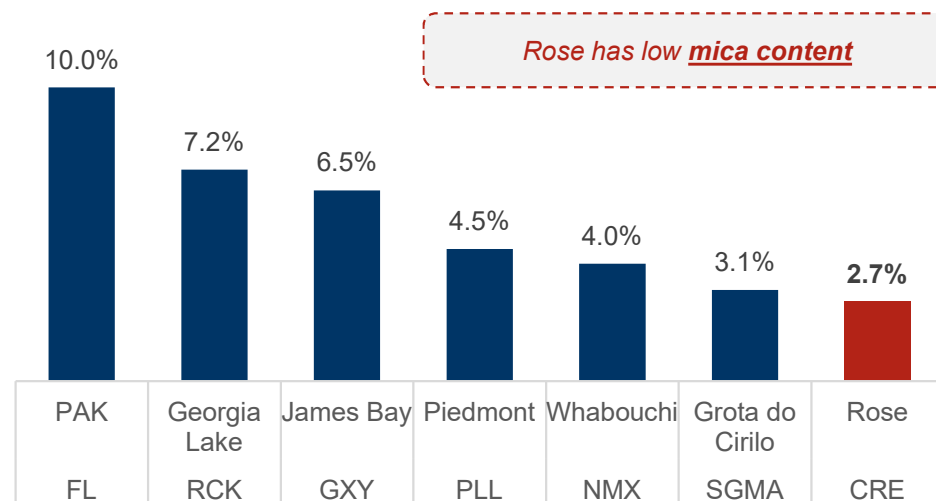
# HARD ROCK BENCHMARKING

*The Rose Project is notable for its low iron oxide and mica contents*

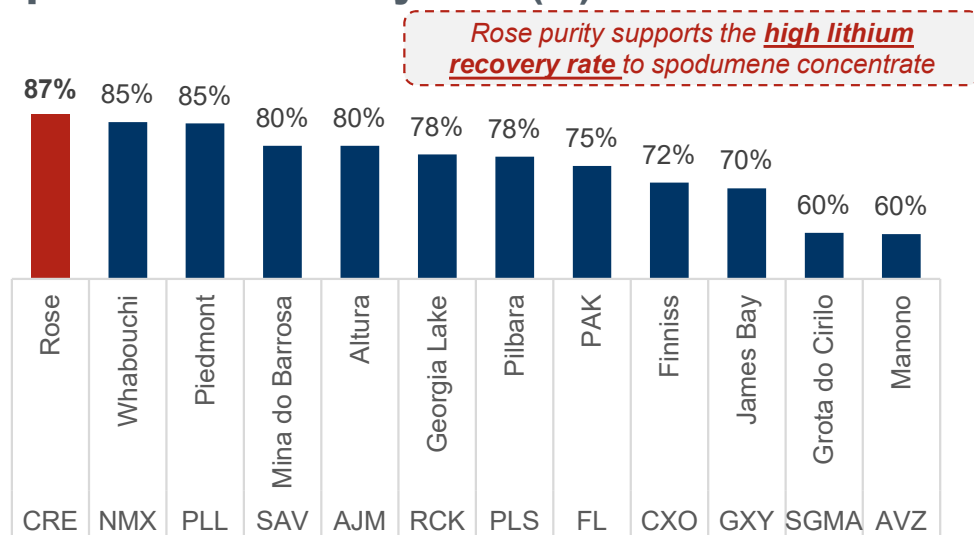
**Iron Oxide Content (%) – Ore**



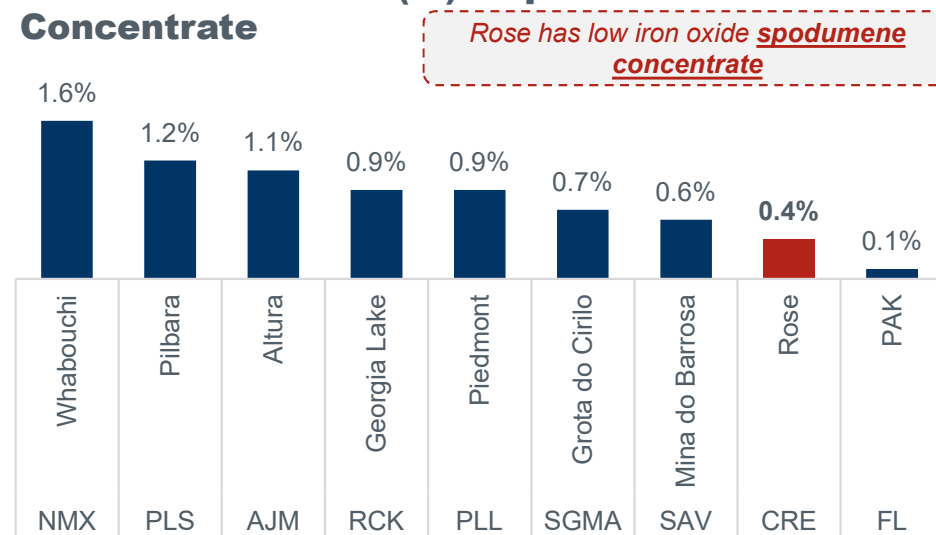
**Mica Content (%) – Ore**



**Spodumene Recovery Rate (%)**



**Iron Oxide Content (%) – Spodumene Concentrate**



Source: Publicly disclosed technical reports

# THE ROSE PROJECT: MINE & CONCENTRATOR



## Mine and concentrator 2022 feasibility study results

### Financial Highlights<sup>(1)</sup>

### OPEX Details<sup>(2) (3)</sup>

**17 Year**  
Project Life

**US\$379M**  
Average Annual  
EBITDA

**US\$540 / C\$701**  
Operating Cost (\$/t Li<sub>2</sub>O Conc.)

**US\$1.915B**  
After-Tax NPV<sub>8%</sub>

**82.4%**  
After-Tax IRR

**US\$590 / C\$766**  
Total Operating Cost (\$/t Li<sub>2</sub>O Conc.)  
(Incl. SG&A, Royalties)

**1.4 Year**  
After-Tax  
Payback Period

**US\$357M**  
Initial CAPEX

**US\$550 / C\$714**  
Total Operating Cost (\$/t Li<sub>2</sub>O Conc.)  
(Net Tantalite Credit)

Source: Critical Elements Lithium Corporation – NI 43-101 Technical Report on Rose Lithium-Tantalum project feasibility study dated July 26, 2022

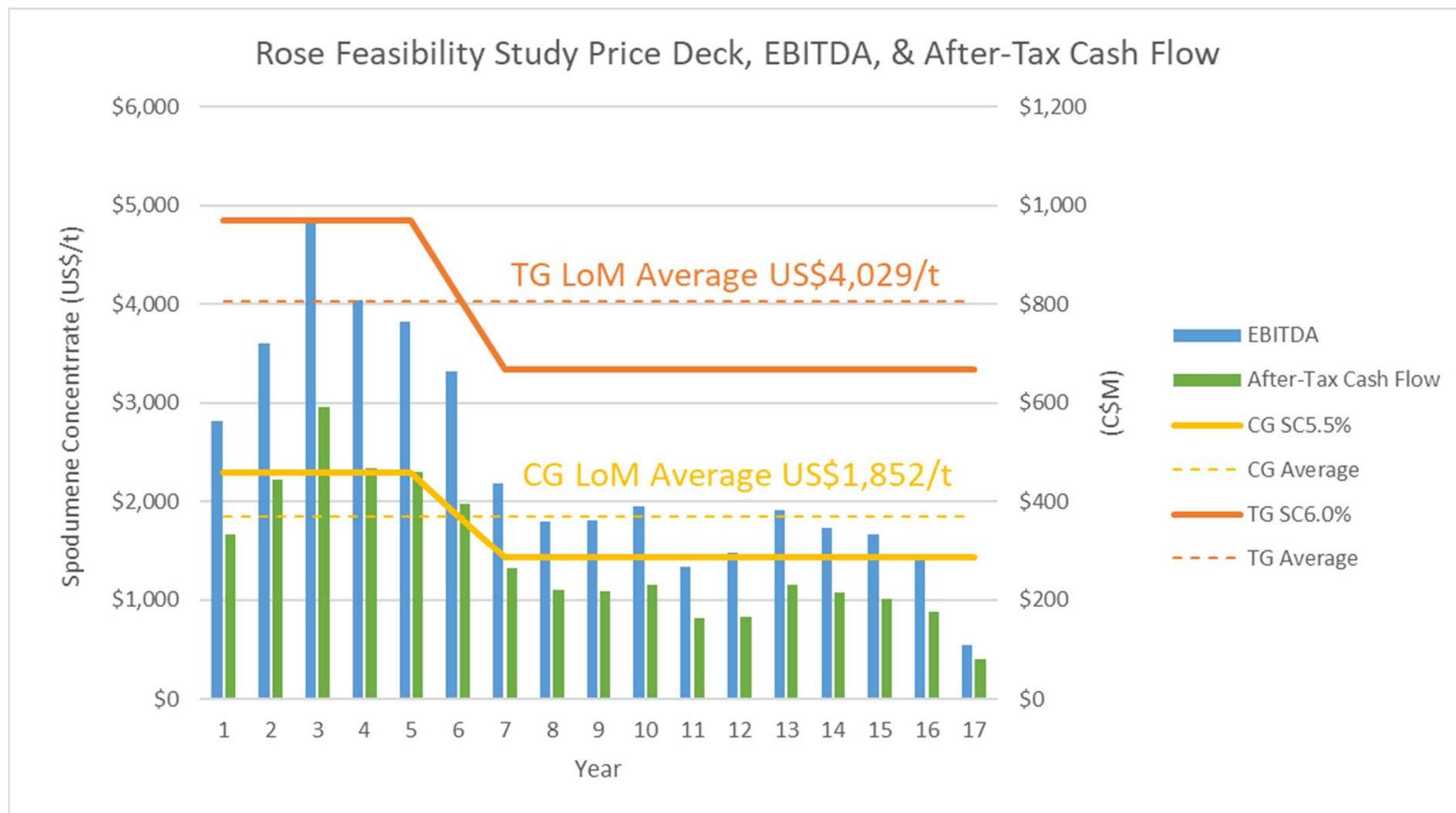
(1) Commodity prices (FOB Port Trois-Rivieres): Technical grade spodumene 6.0% of US\$4,039/t Conc.; chemical grade spodumene 5.5% of US\$1,852/t conc.; tantalum concentrate 20.0% of US\$130/kg contained;

(2) Operating cost includes mining, processing, general & administrative, and transportation costs

(3) Feasibility study assumes exchange rate of US\$0.77/C\$

# ROSE PROJECT FEASIBILITY METRICS

*Conservative price deck, robust EBITDA and After-Tax Cash Flow*



# THE ROSE PROJECT: MINE & CONCENTRATOR

## Mine and concentrator 2022 feasibility study results (cont'd)

### LOM Average Annual Production Volumes

**Technical Grade  
Spodumene 6.0%**

51,369 t

**Chemical Grade  
Spodumene 5.5%**

173,317 t

**Tantalum  
Concentrate 20.0%**

441 t

### LOM Average Recoveries

**Technical Grade  
Spodumene 6.0%**

87%

**Chemical Grade  
Spodumene 5.5%**

90%

**Tantalum  
Concentrate 20.0%**

40%

**0.87% Li<sub>2</sub>O**  
**138 ppm Ta<sub>2</sub>O<sub>5</sub>**  
Average Feed Grade

**4,600 t/d (1.6 M t/y)**  
Mill Throughput

### Pilot Plant & Metallurgical Results

- 50 tonne pilot program confirmed feasibility recovery rates and concentrate grade with 6.41% Li<sub>2</sub>O for Rose, and 6.56% Li<sub>2</sub>O for Rose South
- Variability testing from 0.50% to 1.60% Li<sub>2</sub>O through the deposit to test recovery consistency
- Tantalum recoveries average 69.1% in pilot testing



# THE ROSE PROJECT: MINE & CONCENTRATOR

## CAPEX details <sup>(1)</sup>

Item	Initial Capital M CA\$	Sustaining Capital M CA\$	Initial Capital M US\$	Sustaining Capital M US\$
<b>Direct Capital Estimate</b>	<b>312.7</b>	<b>118.0</b>	<b>240.8</b>	<b>90.9</b>
Mining	62.8	110.3	48.3	85.0
Power & Electrical	39.3	0.8	30.3	0.6
Infrastructure	40.2	0.0	30.9	0.0
Process plant	153.3	0.0	118.0	0.0
TSF and Water management	17.2	6.9	13.3	5.3
<b>Indirect Capital Estimate</b>	<b>108.6</b>	<b>0.5</b>	<b>83.6</b>	<b>0.4</b>
Administration & Overhead	57.2	0.0	44.1	0.0
Project Development (Studies)	0.4	0.0	0.3	0.0
PCM, Other indirects & Other costs	50.9	0.5	39.2	0.4
Contingency	42.1	11.8	32.4	9.1
Mine Rehabilitation (incl. contingency)	0.0	21.7	0.0	16.7
Mine Rehabilitation Bond & Costs	0.2	8.0	0.2	6.2
<b>Total Capital Estimate</b>	<b>463.7</b>	<b>160.0</b>	<b>357.0</b>	<b>123.2</b>

Source Critical Elements Lithium Corporation – NI 43-101 Technical Report on Rose Lithium-Tantalum project feasibility study dated July 26, 2022

(1) Dollar figures in Canadian dollars unless otherwise stated

# THE ROSE PROJECT: MINE & CONCENTRATOR

## OPEX details <sup>(1)</sup>

### Operating costs per tonne processed

Mining (\$4.56 per tonne)  
Processing  
G&A  
Transportation (FOB Port)

**C\$96.73**

\$37.89  
\$19.88  
\$20.30  
\$18.66

### Operating costs per tonne of concentrate

Mining  
Processing  
General & Administration  
Transportation

### Total Operating Costs

SG&A

Royalties

### Total Operating Costs (w. SG&A & Royalties)

Less Tantalite Credit

### Total Operating Costs (after tantalite credit)

**C\$/t Li<sub>2</sub>O  
Concentrate**

**701**

274

144

147

135

**701**

35

30

**766**

52

**714**

**US\$/t Li<sub>2</sub>O  
Concentrate**

**540**

211

111

113

104

**540**

27

23

**590**

40

**550**

# UPCOMING CATALYSTS

## *Gaining project momentum to drive shareholder value*



### **Experienced Operational Team**

- Expanded operational team with talented members that will advance Rose through construction



### **Environmental Impact Study Filing**

- Submitted the Rose EIS in August 2017, which was approved by the Federal Minister on August 2021



### **Feasibility Study**

- Positive feasibility study results in June 2022 with an after-tax 8% NPV of US\$1.915B and an IRR of 82.4%



### **Lithium Carbonate & Hydroxide Pilot Plants <sup>(1)</sup>**

- Successfully completed lithium carbonate pilot plant in May 2017 and lithium hydroxide pilot plant in October 2018



### **Building Good Relationships with First Nations**

- Signed an Impact and Benefit Agreement with the Cree Nation of Eastmain and Cree Nation Government in July 2019



### **Expansive 25,000 Metre Exploration Drilling Campaign**

- Initiated to expand main Rose deposit and delineate an initial Mineral Resource Estimate at the Lemare Lithium project



### **Approval of Rehabilitation and Restoration Plan for Rose**

- Received from Québec Minister of Energy and Natural Resources – a prerequisite to the granting of the mining lease



### **Completion of a positive engineering study for Lithium Hydroxide monohydrate plant**

- Critical Elements aims to maintain its flexibility until strategic partner is in place



### **Rose Quebec Certificate of Authorization received - Projected start construction at Rose 2023**

- Certificate of Authorization approval received from Provincial Minister of Environment of Quebec on November 1<sup>st</sup> 2022



### **Evaluating Potential Strategic Partners**

- Continues to evaluate ongoing interest from global strategic partners that seek to accelerate Rose into production



### **Final Investment and Construction Decision**

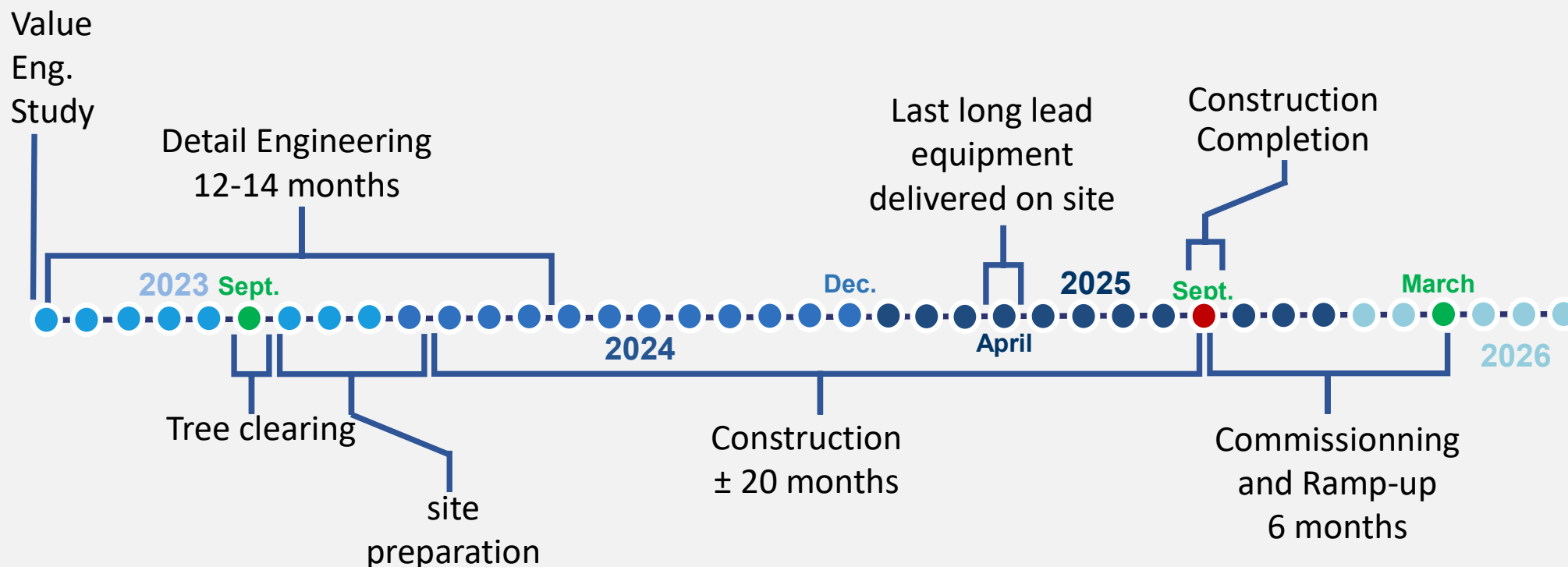
- Critical Elements Lithium is aiming to achieve first production of spodumene at Rose in 2025

(1) On August 11<sup>th</sup>, 2022, the Corporation announced that it had complete an engineering study for a chemical plant to produce high quality lithium hydroxide monohydrate for the electric vehicle and energy storage system battery industries. The study was prepared by Metso Outotec and WSP in Canada (WSP). The Company is not in a position to confirm as of the date hereof if the hydroxide chemical plant will ever be implemented or that it will form part of the Rose Lithium-Tantalum project

# CONSERVATIVE TIMELINE TO PRODUCTION (1)

*Project Schedule, clear path to construction and commissioning*

*Assumption : Financing Completed by Sept. 2023*



(1) Completion of the activities on the timeline herein are estimates made by management based upon their current assumptions. This page contains “forward-looking information” and readers are referred to the “Disclosure” statement in this Presentation. Risks include, but are not limited to, receipt of necessary permits, successful results from earlier activities, the availability of the necessary financing, etc.

# PROJECT CAPEX FUNDING SOLUTIONS

## *Targeting strategic partnerships and low-cost financing packages*

- With the Rose Certificate of Authorization now in place, the Company's near-term focus is on ordering long-lead items and securing financing with first production targeted for 2025
- Critical Elements Lithium is contemplating various project capex funding solutions for the development and construction of Rose
- The funding solutions being considered by the Company include:

Strategic  
Partnership

Offtake

Joint  
Venture

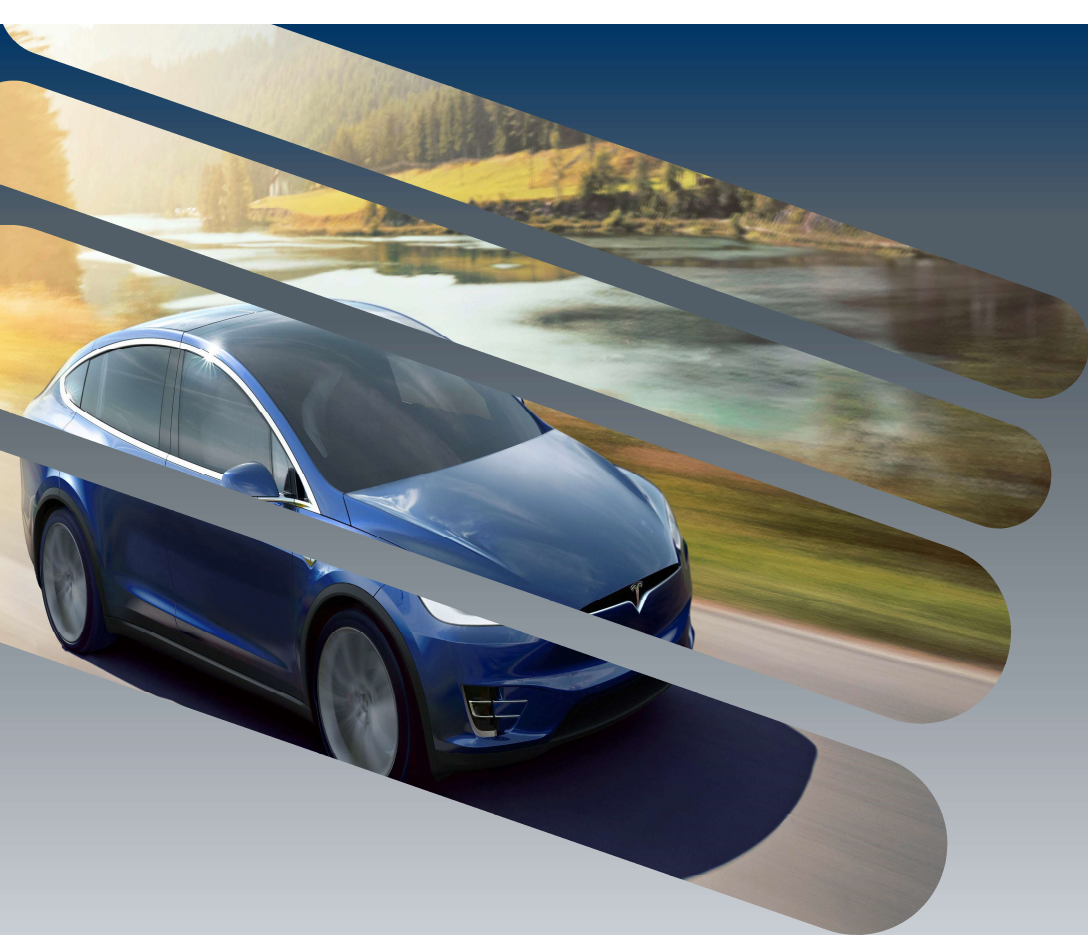
Debt

Equity

- Critical Elements Lithium continues to work closely with its financial advisor, Cantor Fitzgerald, to evaluate ongoing interest from potential capital providers and strategic partners



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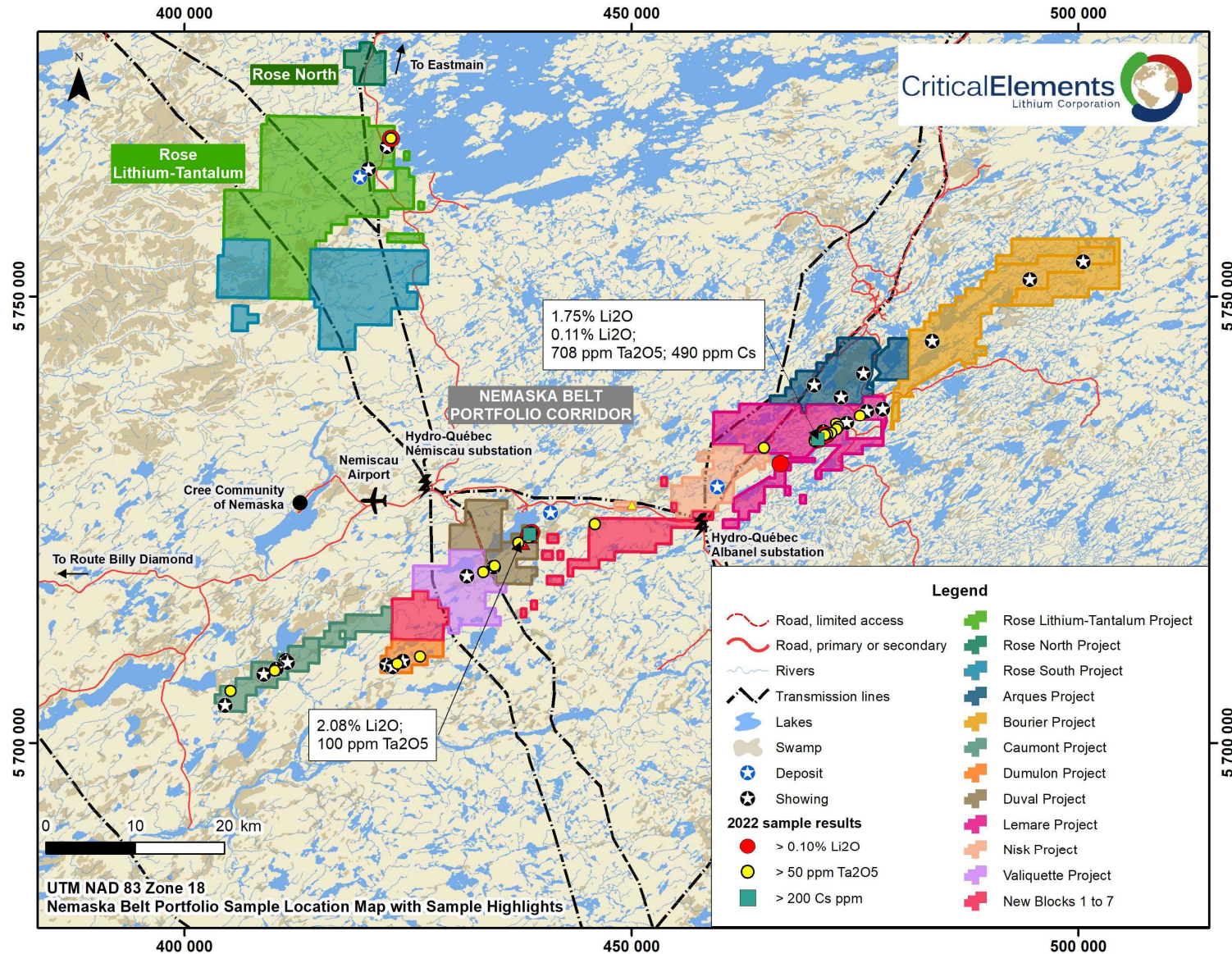


## EXPLORATION

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# EXTENSIVE PORTFOLIO OF TARGETS

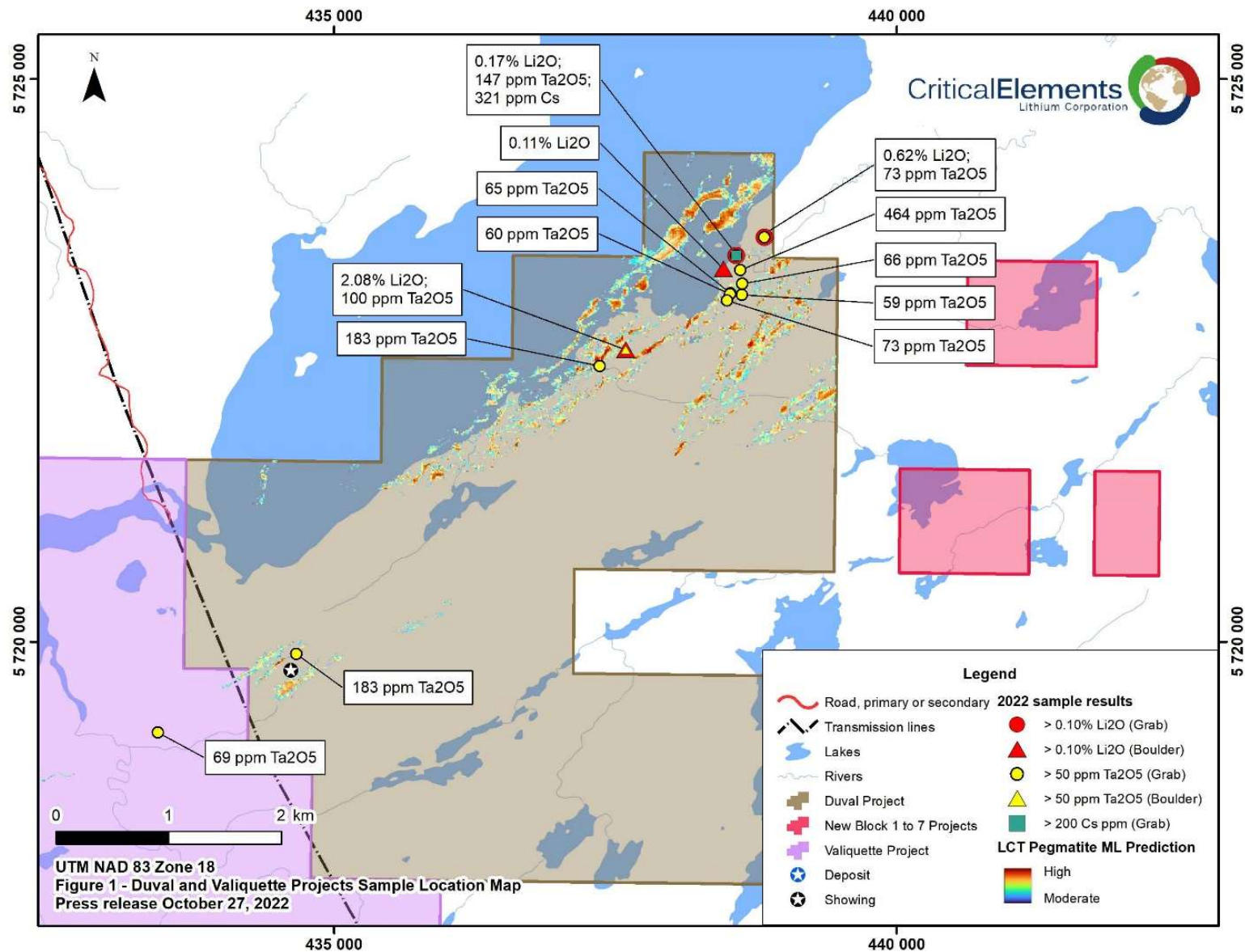
## Nemaska Belt Portfolio Sample Location Map with Sample Highlights





# EXTENSIVE PORTFOLIO OF TARGETS

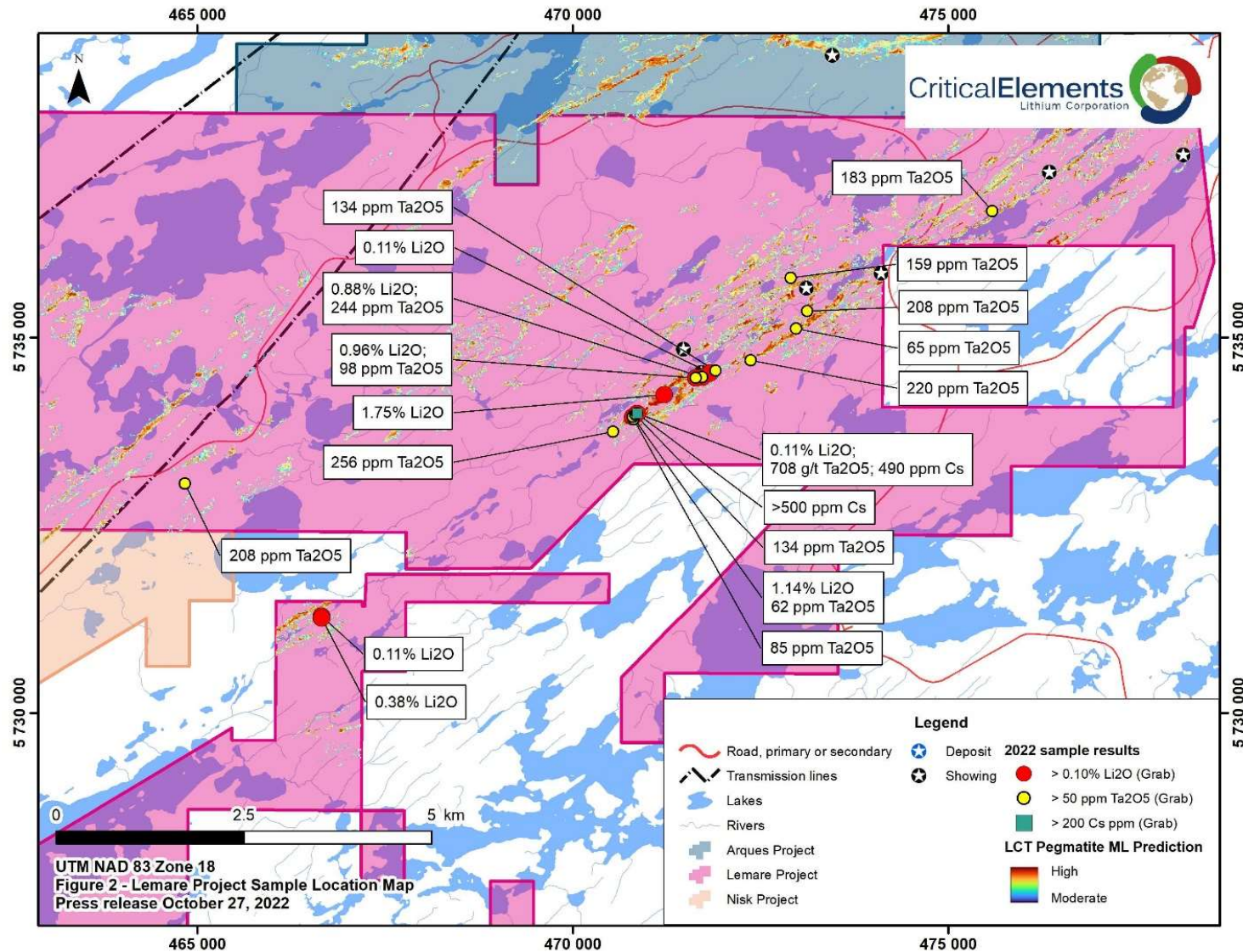
## Duval and Valiquette Projects Sample location map



Sources:

# EXTENSIVE PORTFOLIO OF TARGETS

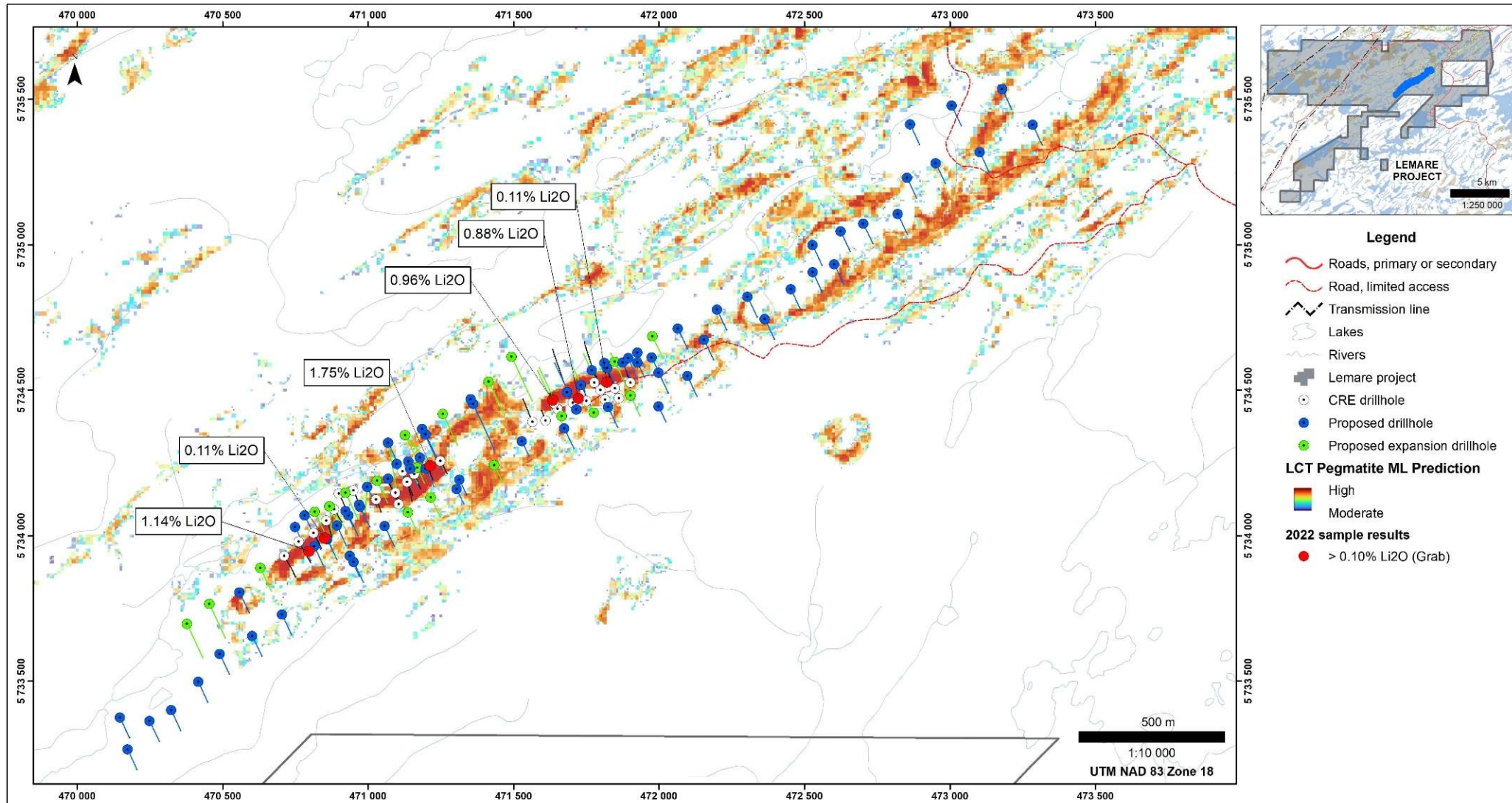
## Lemare Project Sample location map





# GOLDSPOT TARGETING

## Plan View – LCT Pegmatite ML Prediction

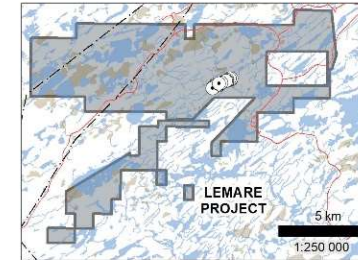
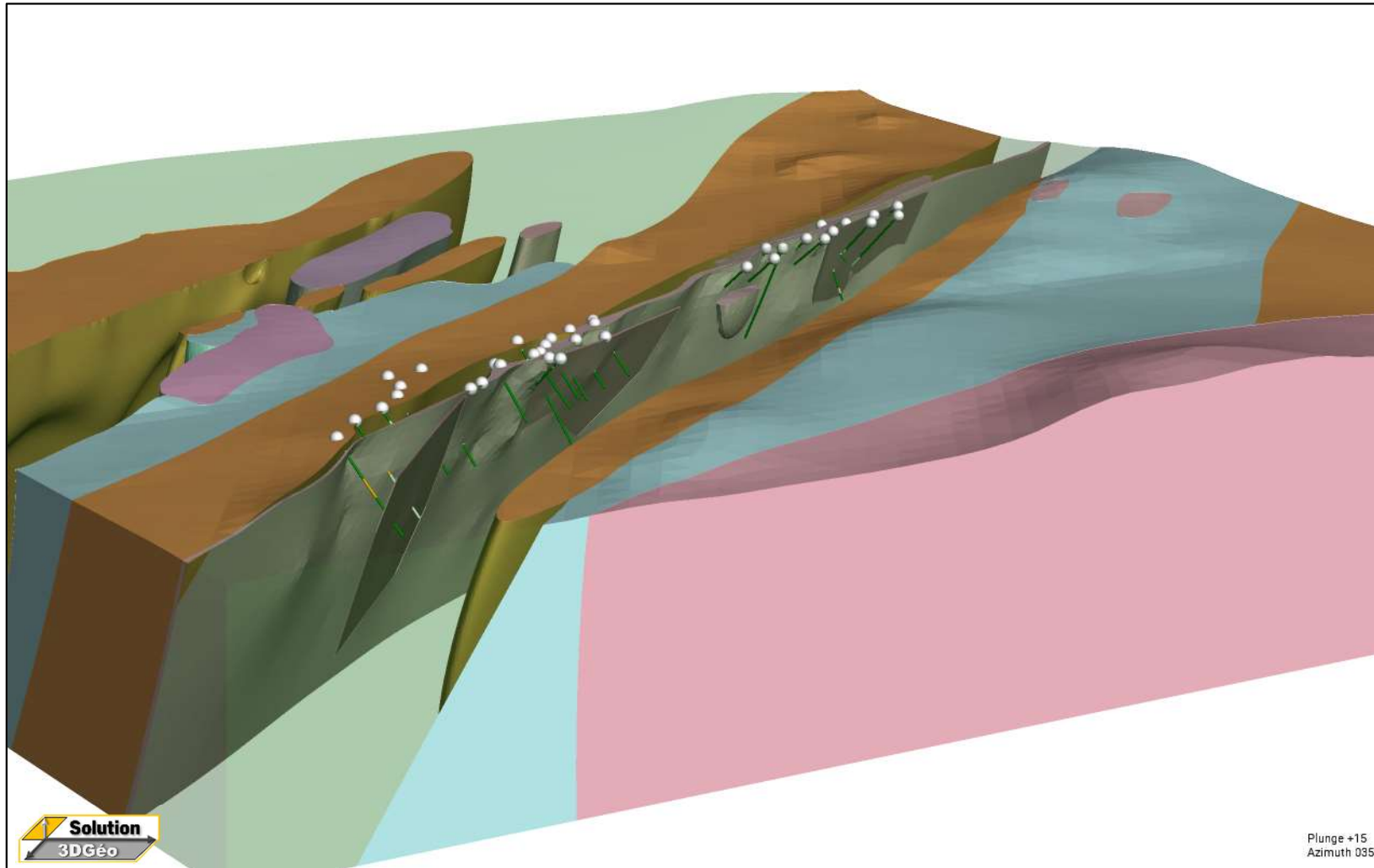


(1) Grab samples results, Press release october 27th 2022



# 2016 – 2017 DRILLING PROGRAMS

## *Isometric View – Looking NNE – Geological Interpretation*



### Legend

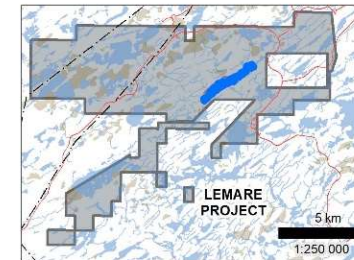
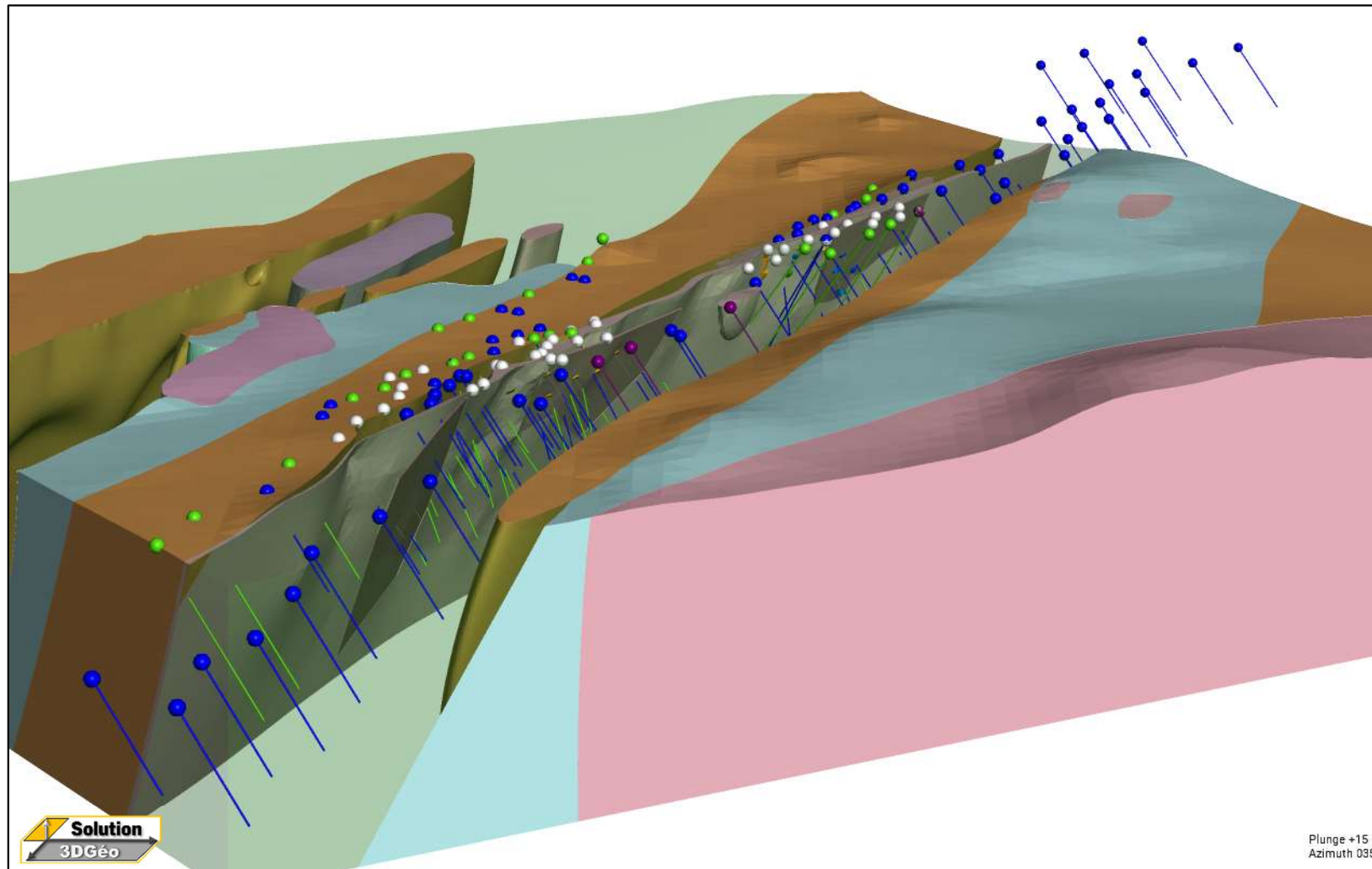
- Roads, primary or secondary
- Road, limited access
- Transmission line
- Lakes
- Rivers
- Lemare project
- CRE drillhole

### Geological Interpretation

- Granodiorite
- Pegmatite
- Tonalite
- Hornblende
- Peridotite
- Paragneiss
- Quartzite
- Wacke
- Iron formation
- Basalt

# 2023 DRILLING PROGRAM

## *Isometric View – Looking NNE – Pegmatite Zones Model*



### Legend

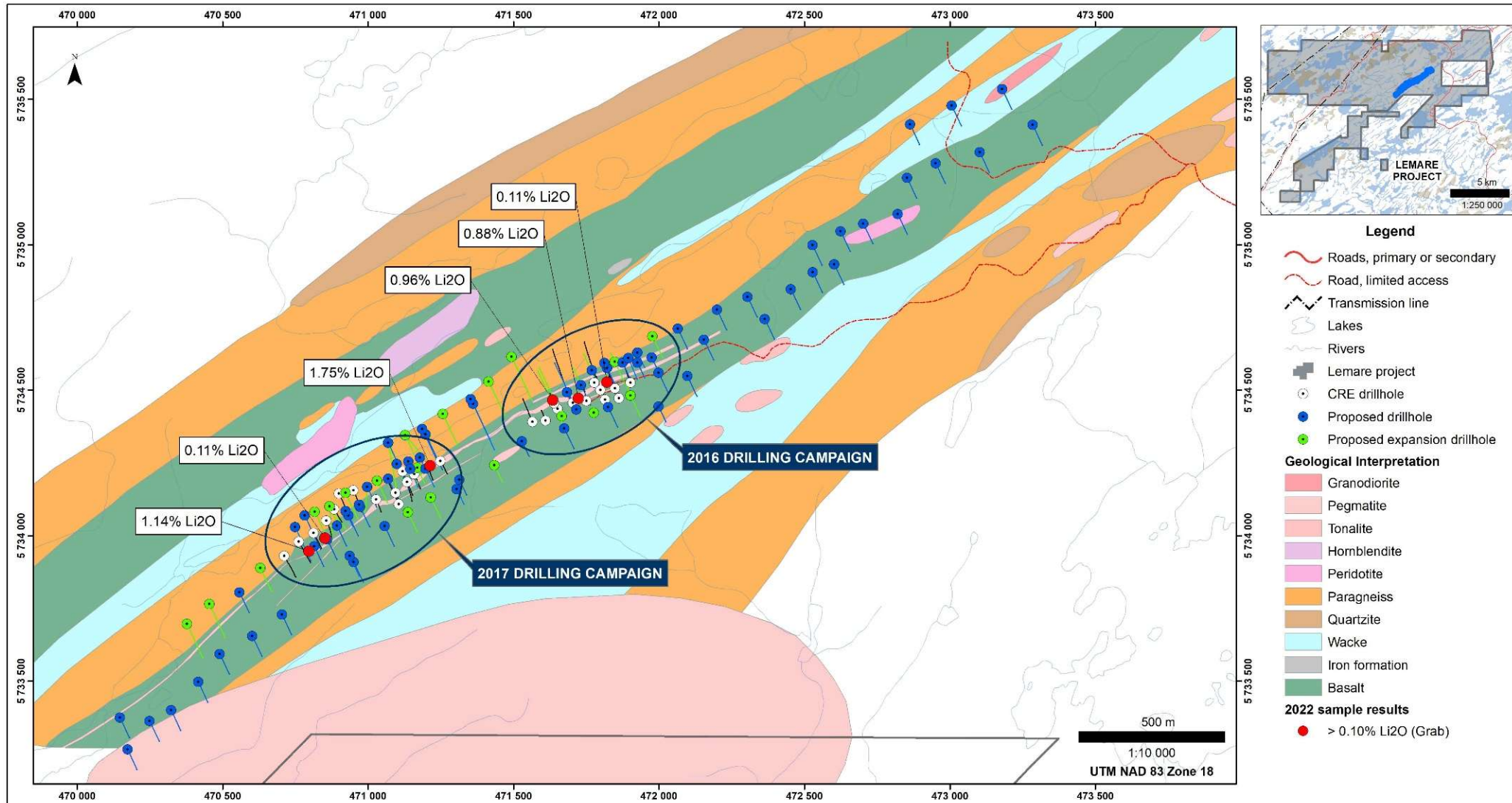
- Roads, primary or secondary
- Road, limited access
- Transmission line
- Lakes
- Rivers
- Lemare project
- CRE drillhole
- Proposed drillhole
- Proposed expansion drillhole
- Proposed expansion drillhole

### Geological Interpretation

- Granodiorite
- Pegmatite
- Tonalite
- Hornblende
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- Quartzite
- Wacke
- Iron formation
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# 2023 DRILLING PROGRAM

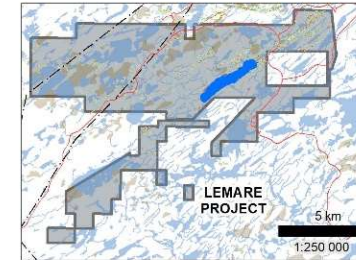
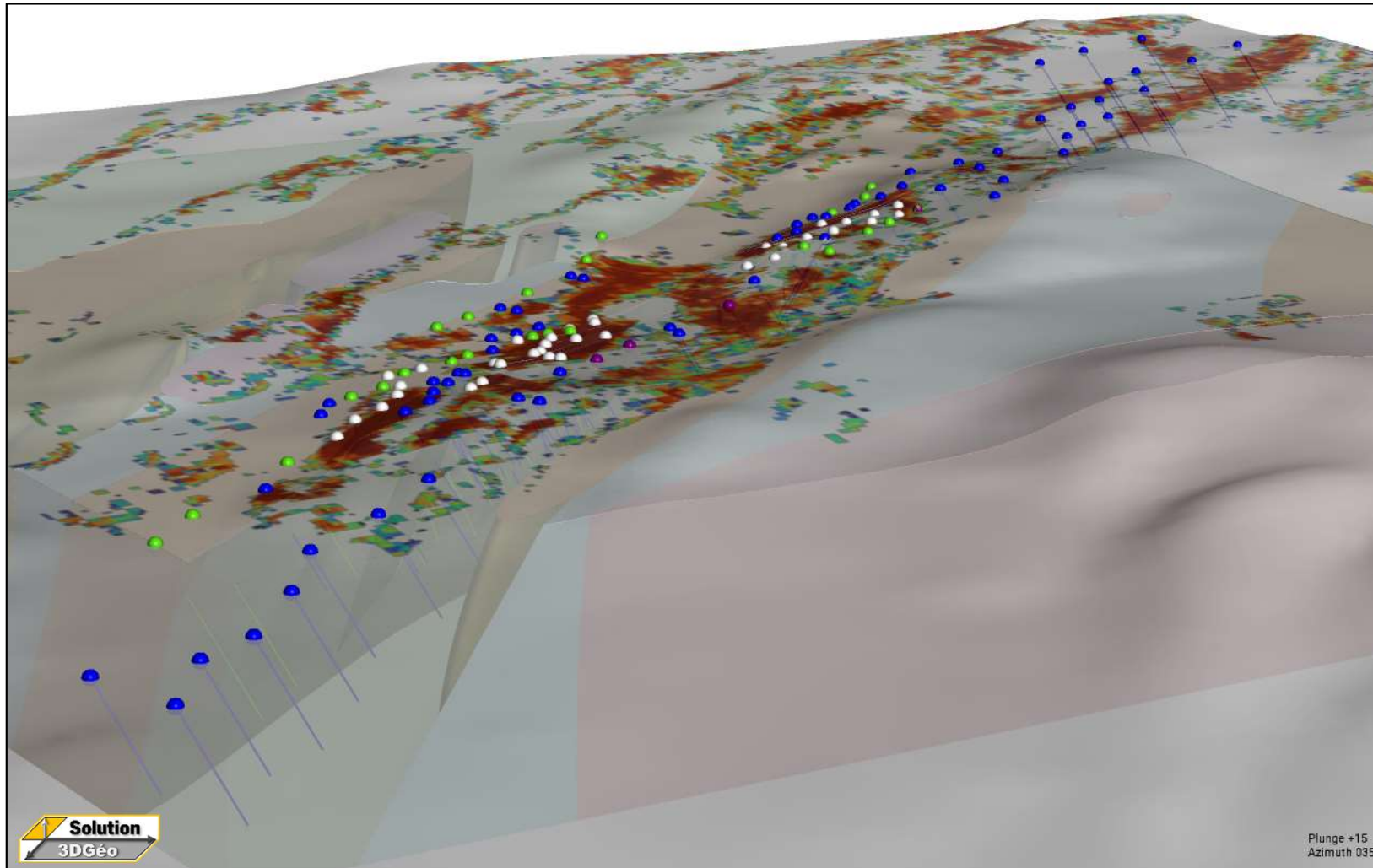
## Plan View – Project Scale Geology





# 2023 DRILLING PROGRAM

*Isometric View – Looking NNE*



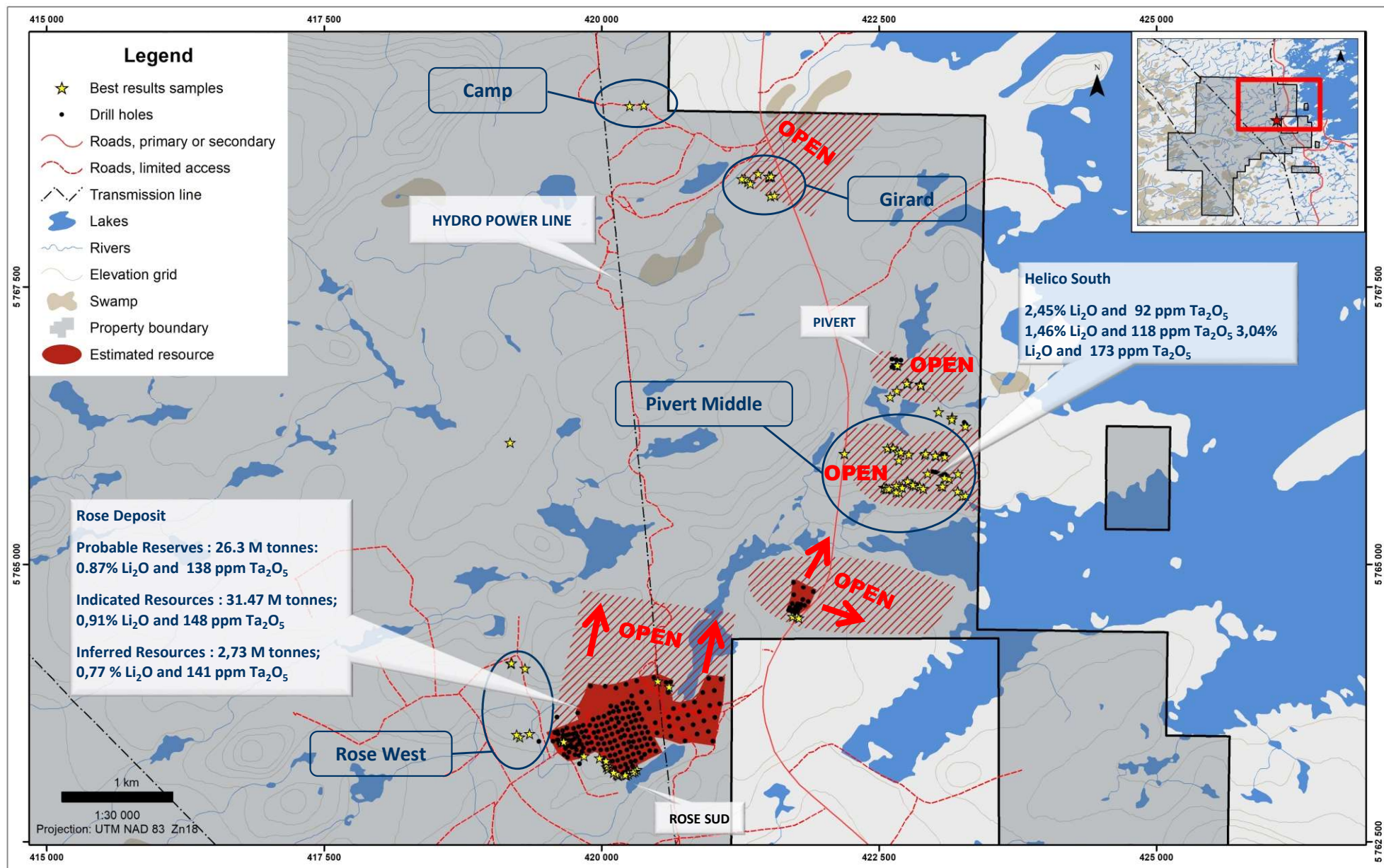
## Legend

- Roads, primary or secondary
- Road, limited access
- Transmission line
- Lakes
- Rivers
- Lemare project
- CRE drillhole
- Proposed drillhole
- Proposed expansion drillhole
- Proposed expansion drillhole

## LCT Pegmatite ML Prediction

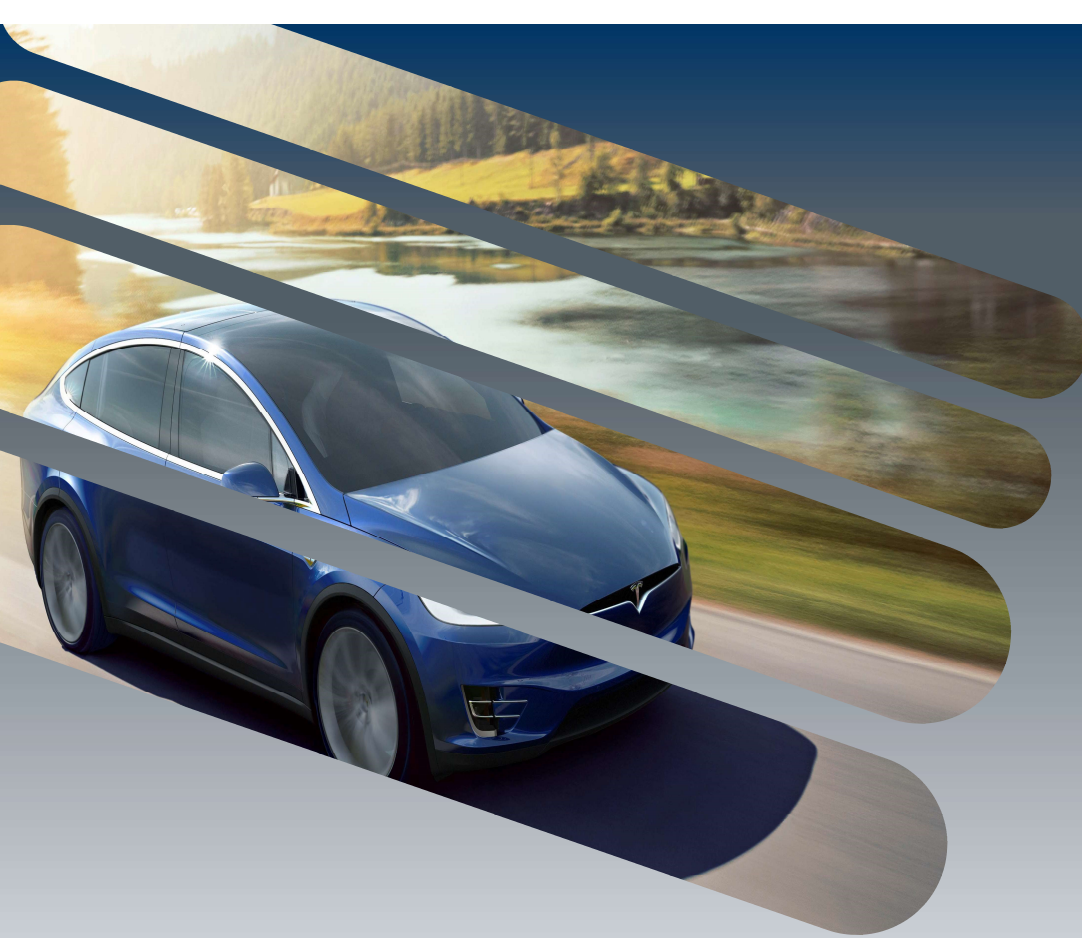
- High
- Moderate

# ROSE EXPANSION POTENTIAL





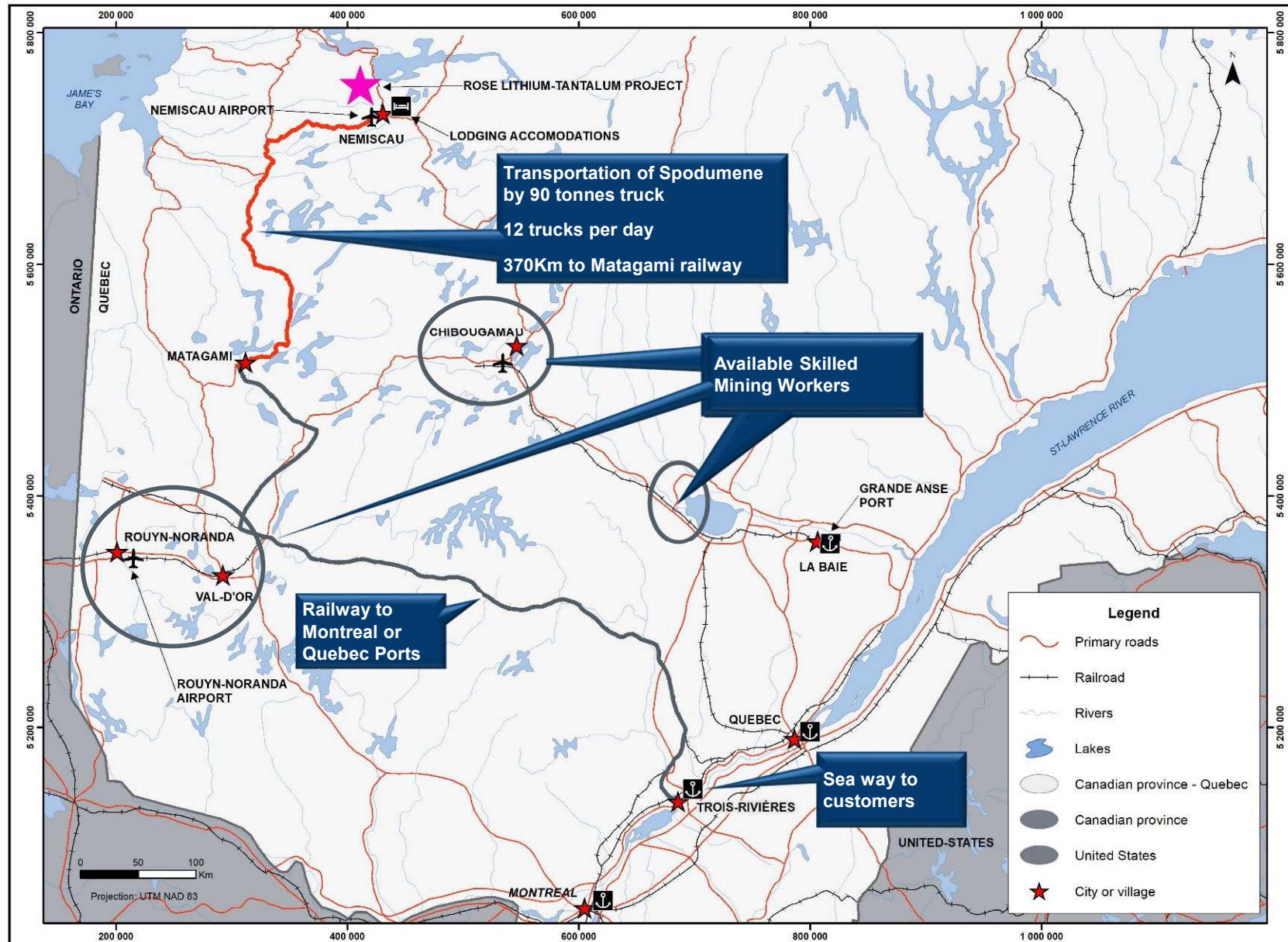
CriticalElements  
Lithium Corporation



## APPENDIX

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# PROJECT LOGISTICS



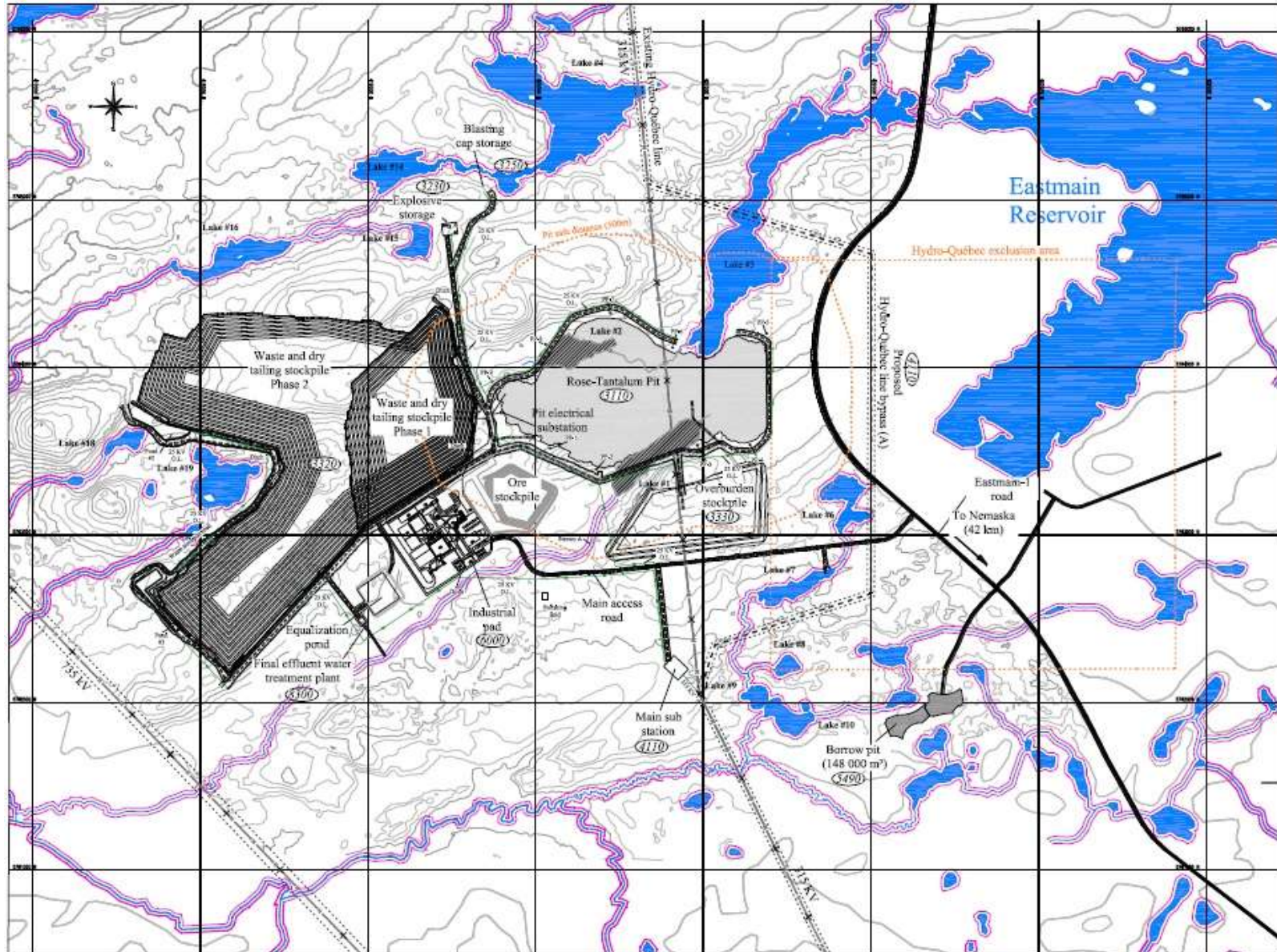
# MINERAL RESERVES AND RESOURCES (1)

Category	Tonnage (Mt)	NSR (\$)	Li2O_eq (%)	Li2O (%)	Ta2O5 (ppm)
Probable	26.3	204.00	0.92	0.87	138
<b>Total</b>	<b>26.3</b>	<b>204.00</b>	<b>0.92</b>	<b>0.87</b>	<b>138</b>

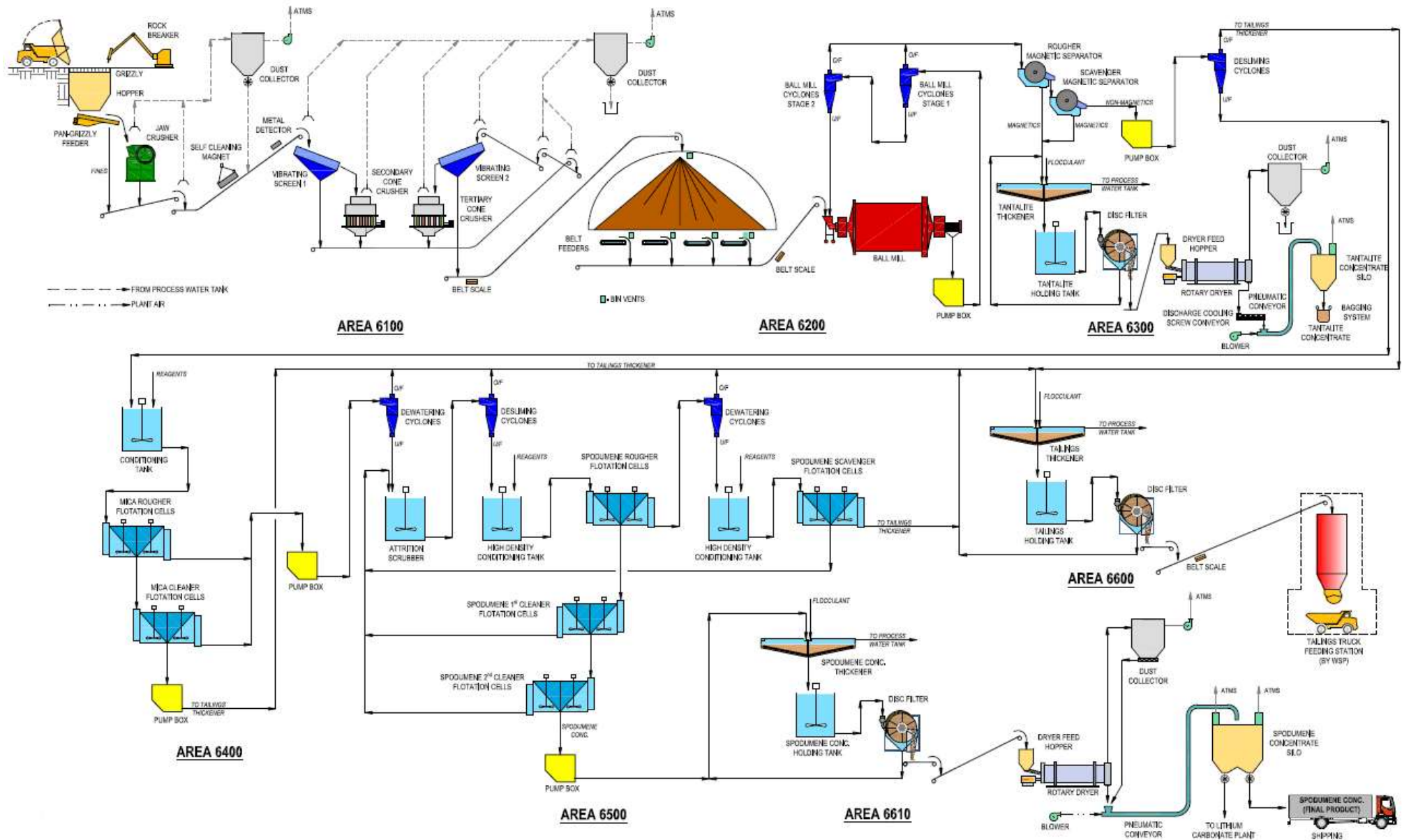
	Category	Tonnage (Mt)	NSR (\$)	Li2O_eq (%)	Li2O (%)	Ta2O5 (ppm)
Indicated	Pit-constrained	30.38	216	0.99	0.91	150
	Underground	1.09	200	0.92	0.86	100
	<b>Total Indicated</b>	<b>31.47</b>	<b>215</b>	<b>0.99</b>	<b>0.91</b>	<b>148</b>
Inferred	Pit-constrained	2.0	191	0.85	0.76	153
	Underground	0.7	179	0.83	0.78	126
	<b>Total Inferred</b>	<b>2.7</b>	<b>180</b>	<b>0.85</b>	<b>0.77</b>	<b>141</b>



# MINE INFRASTRUCTURE LAYOUT



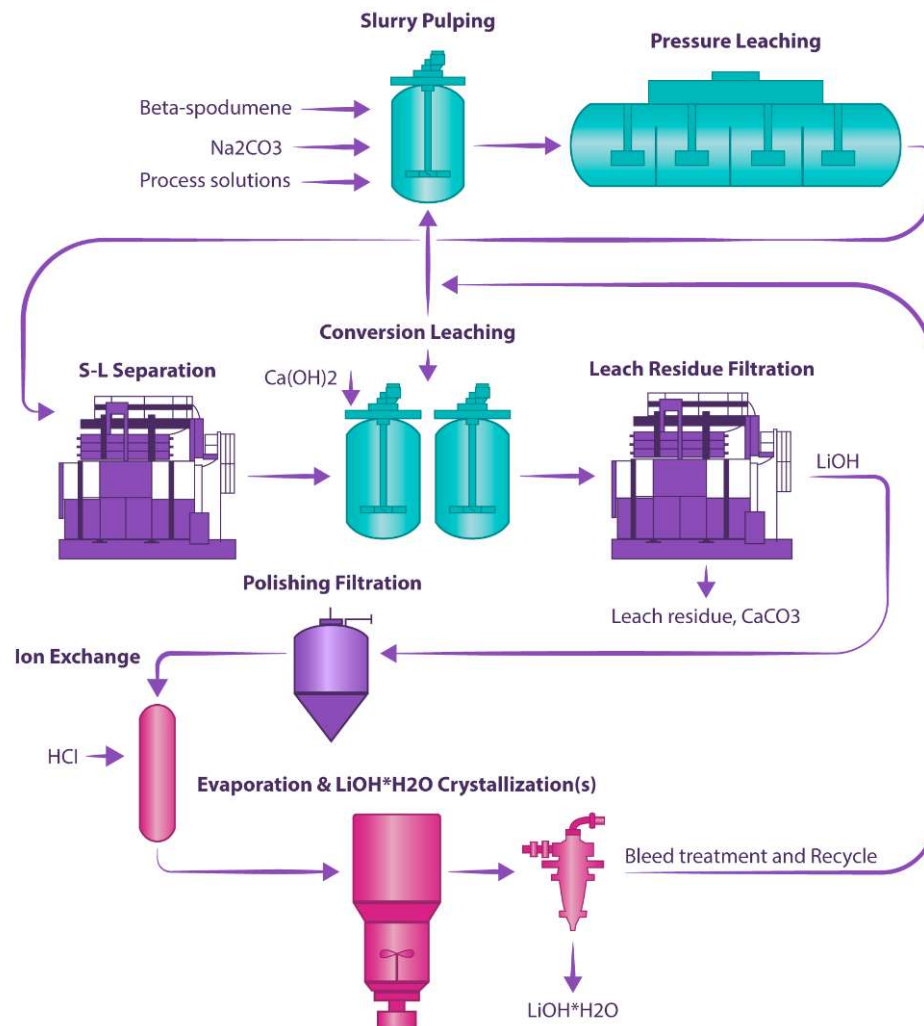
# CONCENTRATOR DETAILED FLOWSHEET



Source: Critical Elements Lithium Corporation – NI 43-101 Technical Report on Rose Lithium-Tantalum project feasibility study dated July 26, 2022



# LITHIUM HYDROXIDE PILOT PLANT FLOWSHEET<sup>(1)</sup>



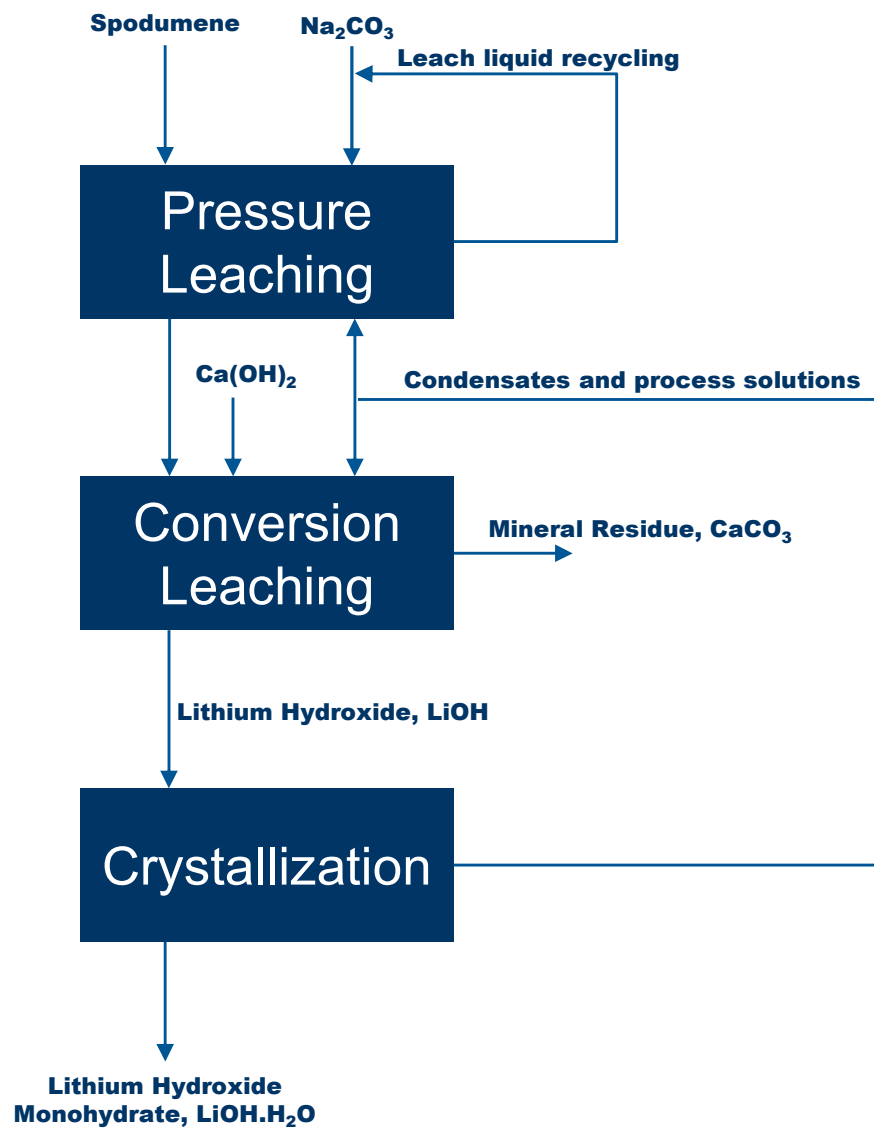
## About Metso Outotec

- Metso Outotec is a leading technology company in multiple mining and extraction industries, including the lithium industry, with a global presence and owned R&D facilities in Frankfurt, Germany and Pori, Finland, as well as other locations
- Metso Outotec offers competent knowledge of the various processing options for both beneficiating spodumene, as well as converting spodumene into saleable lithium salts

Sources: Metso Outotec pilot work, Company news release dated 29 October 2018

(1) On August 11<sup>th</sup>, 2022, the Corporation announced that it had complete an engineering study for a chemical plant to produce high quality lithium hydroxide monohydrate for the electric vehicle and energy storage system battery industries. The study was prepared by Metso Outotec and WSP in Canada (WSP). The Company is not in a position to confirm as of the date hereof if the hydroxide chemical plant will ever be implemented or that it will form part of the Rose Lithium-Tantalum project

# SIMPLIFIED METSO OUTOTEC PROCESS<sup>(1)</sup>



## The Metso Outotec alkaline leach process<sup>(1)</sup> benefits from:

- Acid and sulphate-free process
- Inert and neutral mineral residue
- Produces battery-grade lithium hydroxide monohydrate
- Simple process with fast throughput

## Several comparable projects have recently announced plans to incorporate the Metso Outotec process, including:

- “Metso Outotec and Halmek Lithium to construct the battery-grade lithium hydroxide process using soda leaching”, [www.mining.com](http://www.mining.com), 30 June 2021
- “Kokkola lithium hydroxide plant hydrometallurgical process with Metso Outotec proceeds”, Keliber Oy Progress Report Q1 2021
- “Metso Outotec alkaline pressure leach replaces acid roasting lithium conversion process”, Piedmont Lithium Scoping Update news release, 9 June 2021

Source: Metso Outotec

(1) On August 11<sup>th</sup>, 2022, the Corporation announced that it had complete an engineering study for a chemical plant to produce high quality lithium hydroxide monohydrate for the electric vehicle and energy storage system battery industries. The study was prepared by Metso Outotec and WSP in Canada (WSP). The Company is not in a position to confirm as of the date hereof if the hydroxide chemical plant will ever be implemented or that it will form part of the Rose Lithium-Tantalum project

# MANAGEMENT & BOARD OF DIRECTORS



## **JEAN-SÉBASTIEN LAVALLÉE**

### *CEO and Director*

Jean-Sébastien Lavallée, P. Geo, has been the Chief Executive Officer of the Company since 2009. From 2009 to 2017, he also served as President. Mr. Lavallée was President and Chief Executive Officer of Quebec Precious Metals Corporation (TSX-V : QPM) from 2012 to May 2017. He also served as Director and Vice President Exploration in this Company from June 2017 to May 2021. Mr. Lavallée has been active in mining exploration since 1994. Mr. Lavallée has been on the Board of Directors of the Quebec Mineral Exploration Association “AEMQ” from 2017 to 2019. He is also working with Consul-Teck Exploration Minière Inc., a Val-d’Or based consulting firm. Most of the firm’s mandates involve the generation and execution of projects in remote areas. Mr. Lavallée has acted as a geologist for many companies, including Eloro Resources Ltd., Agnico-Eagle Mines Ltd., Noranda Minerals Inc. and, Champion Minerals Inc. Having been responsible for the planning and execution of many exploration programs in recent years, Mr. Lavallée has acquired solid experience in exploration project development.

## **STEFFEN HABER**

### *President and Director*

Dr. Haber was appointed President of the Company in January 2017. He was President and Chief Executive Officer of Rockwood Lithium GmbH when Chemetall GmbH was legally split off in 2012. From 2011 to 2012, he was Managing Director of Chemetall GmbH and since 2007 President of Chemetall’s Lithium business. Prior to joining Chemetall GmbH, Dr. Haber worked in different executive positions for Sanofi-Aventis SA and its predecessor companies, in France. Dr. Haber completed his doctorate in organic chemistry at the University of Kaiserslautern, Germany, in 1991 and added one year as a Post-Doctorate at Ecole Polytechnique in Paris. In 1997, Dr. Haber earned his Bachelor of Science in Management from the International School of Management in San Diego, in the United States. Dr. Haber is a fellow of the International Directors Program of INSEAD.

## **MARCUS BRUNE**

### *Vice President Finance and Director*

Dr. Brune was Chief Financial Officer of Rockwood Lithium from 2011 until the acquisition of Albemarle in 2015. He left Albemarle in 2016 once the lithium business was successfully integrated into Albemarle’s organizational structure. Prior to joining Rockwood Lithium, Dr. Brune had worked in different executive positions in corporate finance and M&A for Rockwood Holdings and its predecessor companies since 2004. Prior to that, he was with McKinsey as a strategy consultant for organizational development and management. Dr. Brune completed his doctorate in material sciences at the Technical University of Dortmund, Germany, after earning a physics degree.

# MANAGEMENT



## **NATHALIE LAURIN**

### *Secretary & CFO*

Nathalie Laurin has over 30 years of experience in administration and accounting. The experience gained through working in various roles with increasing responsibilities, primarily in the natural resources sector, has given her a solid mastery of finance and project management. Since 2006, she has acted as corporate secretary and/or chief financial officer for several companies, most notably mineral exploration companies, including Critical Elements Lithium Corporation, Delta Resources Limited, MPV Exploration Inc., Quebec Precious Metals Corp. and BlackRock Metals.

## **YVES PERRON**

### *Vice-President Engineering, Construction, and Reliability*

Mr. Yves Perron, Eng., MBA brings extensive experience in mining sector, engineering and construction in Québec to the Corporation. He was appointed Vice-President, Engineering and Construction by Stornoway Diamond in June 2012 and Vice-President, Engineering and Construction for Mason Graphite in August 2018. Mr. Perron served as Vice-President Engineering and Construction for Loop Industries since January 2021. Mr. Perron has over 25 years of experience in project management in the industrial sector within major international firms. Prior to joining Stornoway, Mr. Perron was Vice-President, Business Development and Project Manager at Delsaer and Seneca. He also held several management positions in areas of production, operation start-ups, maintenance, engineering and project management with ArcelorMittal and Xstrata. Mr. Perron holds a Bachelor Degree in Mechanical Engineering from Université du Québec – École de Technologie Supérieure in Montréal and a DEC in Civil Engineering Technology. In addition, he holds an MBA from Université du Québec in Montréal as well as an Executive MBA from Université Paris Dauphine.

# BOARD OF DIRECTORS



## **ERIC ZAUNSCHERB**

### *Chairman*

Mr. Zaunscherb is a Canadian mining executive focused on building strong management teams for the responsible exploration and development of quality mineral assets. He is the Chair of the Board of Directors of Critical Elements Lithium Corp. since 2020 and the Chief Executive Officer and Chair of GR Silver Mining Ltd. since March 2022. He is an independent director of TriStar Gold Inc. and Outback Goldfields Corp. Originally an exploration geologist, Mr. Zaunscherb spent 34 years as a mining analyst, most recently serving as Managing Director, Research - Metals and Mining Analyst at a leading investment bank where he coordinated the global mining equity research team. He welcomes new technologies and industry initiatives in diversity and socially responsible investing, ensuring that local communities receive sustainable benefits from mineral resource development.

## **MARC SIMPSON**

### *Director*

Mr. Marc Simpson is President and Chief Executive Officer of Vanadian Energy Corporation. Mr. Simpson has worked in the mining and exploration industry for over 23 years. He has worked for junior, mid-tier and senior mining companies on projects both in Canada and worldwide, including Bema Gold (sold to Kinross for CDN\$3.5 billion in 2007), B2Gold, and Echo Bay Mines. Mr. Simpson has been involved in exploration and mining projects from grass roots exploration through to mine development and production. Mr. Simpson obtained his B.Sc. in Geology from the University of Manitoba and is a member of Association of Professional Engineers and Geoscientists of British Columbia and Association of Professional Engineers and Geoscientists of the Province of Manitoba.

## **MATTHEW LAURISTON STARNES**

### *Director*

Mr. Starnes is a lawyer with over 22 years of experience and the capacity to work in all areas of law, including civil law, common law, contract negotiation and drafting, arbitration, taxes and permits and government relations. Mr. Starnes is currently legal counsel for Sumitomo Corporation's Mineral Resources Division in Tokyo, Japan. Among other things, he was responsible for negotiating the joint venture agreement with a Canadian partner, the financing agreement with Japanese lenders and off take and distribution agreements with Japanese and other worldwide buyers for the Sierra Gorda project in Chile. He was also responsible for negotiating power, railway, port and transportation infrastructure agreements and helping the proponents establish good governance procedures for the project. He is also part of the team for the Ambatovy project in Madagascar, where he participated in preparing for completion, settlement negotiation with Korean contractors and sits on a number of committees. Prior to joining Sumitomo, he also was the General Counsel and Deputy CEO for the Ambatovy project. Mr. Starnes has also practiced as a corporate lawyer with major law firms in Montreal.

## **MAYSA HABELRIH**

### *Director*

Ms. Maysa Habelrih is a result-oriented executive and board director leveraging global experience and a track record of delivering operational excellence and transforming business objectives into bottom line growth within complex environments. She has expertise in international joint ventures management and board oversight with solid knowledge of environmental, social, and corporate governance (ESG) business practices. Over the past year, Maysa has been the CEO of Mouvement Québécois de la Qualité, a non-profit focused on increasing the competitiveness and productivity of Quebec organizations. From 1989 to 2019, she worked for Alcan, which company became Rio Tinto Aluminium in 2007. Maysa ending as General Manager / Vice-President Joint Ventures with full governance and fiscal accountability for nine joint venture operations globally, featuring \$2 billion in revenues, \$400 million in EBITDA and 1,900 direct and indirect employees. This included the oversight of the successful design and implementation of an \$850 million mine expansion project in Guinea. Maysa holds Bachelor and Master degrees in Chemical Engineering from McGill University in Montréal, as well as an International Masters Program in Practicing Management (IMPM) which is offered in partnership by INSEAD, McGill University, and 3 others universities.

# BOARD OF DIRECTORS



## **ANI MARKOVA**

### *Director*

Mrs. Markova is an award-winning portfolio manager with more than 15 years of experience investing in the mining and metals sector, currently an officer and director of SilverCrest Mining. She is Chair of the Safety, Social and Environmental Responsibility Committee and a member of the Audit and Compensation Committees of SilverCrest. She is the founder and CEO of Investor View Advisory engaged with public companies on environmental, social and governance (ESG) reporting and integration. Ms. Markova holds an MBA from George Washington University in Washington DC, a Chartered Financial Analyst (CFA) designation, an Investment Manager (ICM) designation and a Corporate Board International (CDI.D) designation.

## **VANESSA LAPLANTE**

### *Director*

Ms. Vanessa Laplante has more than 30 years of experience in finance and taxation, including 16 years in the mining industry. She is a leader in her field of specialization, mining taxation, which has allowed her to be recognized as Chair of the Tax Committee of the Association Minière du Québec since 2011, and Chair of the Board of Directors of the Association Minière du Québec since June 2021. Since 2014, Vanessa is the Tax and Montreal office Director, as well as treasurer, for Canadian Malartic Partnership, a joint venture between Agnico Eagle Mines Limited and Yamana Gold Inc., which operates Canada's largest open pit gold mine. From 2019 to 2020, she was a board member and Chair of the Audit and Risk Management Committee of Nemaska Lithium Inc. As part of her functions at Osisko Mining Corporation from 2010 to 2014 she was a member of the Audit Committee. From 2015 to 2019 Vanessa was a member of the advisory committee on the simplification of the mining royalty regime, formed by the Ministry of Natural Resources of Québec. Vanessa holds a Bachelor of Business Administration from the University of Sherbrooke (1991) and is a Member of the Order of Chartered Professional Accountants of Quebec (CPA).



# OPERATIONS TEAM



## **HUGHES PÉRIGNY, P.ENG**

### *Senior Project Director*

Mr. Hughes Périgny, P.Eng. has over 29 years of experience in engineering, construction and project management in the industrial and mining sectors. He has participated in several industrial and mining projects with IAMGOLD (Boto project, Senegal), Mason Graphite (Lac Guéret, Quebec) as well as several projects with the Rio Tinto group (QMM Madagascar, QMP Metal Powders Suzhou, China and QMP, Sorel-Tracy). He also participated in the construction of the Renard mine with Stornoway from 2014 to 2019. He held the position of France & Asia Project Director for Loop Industries from 2021 to present. Mr. Périgny holds a Bachelor's degree in Mechanical Engineering from École Polytechnique de Montréal.

## **MICHEL CLÉMENT, P.ENG., PMP**

### *Senior Project Control Director*

Mr. Michel Clément, P.Eng., PMP has a vast experience in project control and risk analysis acquired in Québec and internationally. Mr. Clément has also more than 25 years of experience in engineering, construction, project management and control, as well as project risk analysis in the industrial and mining sectors. He has been involved in numerous projects, notably with Stornoway Diamonds, Rio Tinto Alcan, the Iron Ore Company of Canada, and Mason Graphite (Lac Guéret, Québec). He also held different engineering positions, including Project Leader, with Rolls-Royce. Mr. Clément holds a bachelor's degree in Mechanical Engineering from the Université de Sherbrooke and also holds the Project Management Professional certification from the Project Management Institute.

## **ANDY FORTIN**

### *Senior Process and Commissioning Director*

Mr. Andy Fortin holds a bachelor's degree in Metallurgical Engineering from Laval University in Québec City. Mr. Fortin brings to the Company a solid operational experience acquired in Northern Québec and Nunavut. He has over 25 years of experience in leading continuous improvement of metallurgical processes, asset management, health and safety culture and risk management. He has been involved in numerous projects in process design, commissioning to achieve production capacity and operational improvement, notably with Québec Iron Ore, Newmont / Goldcorp, Agnico-Eagle Mines and Inmet Mining Corporation.

## **PAUL BONNEVILLE**

### *Project Manager*

Mr. Bonneville has over 30 years of experience in the mining industry in Canada. He is a graduate of Queen's University in Mining Engineering. He was Vice President Operations for Scorpio Mining and Vice President Mines for Cadiscor Resources. He worked for Dumas Contracting as Project Manager at the Lapa and Goldex shaft projects and for Ross-Finlay Ltd., where he held a range of positions, including Project Manager at the Bell-Allard shaft project and the Silidor project, and at Pan American Silver Corp. He has also managed a number of overseas operations.

# OPERATIONS TEAM



## **LLOYD MAYAPPO**

### *Cree Relation Coordinator*

Mr. Lloyd Mayappo has more than 30 years of experience as a foreman, project manager and contact person within the Eastmain Cree Nation. He has served 12 years in the political field as Councillor and Chief for Cree Nation of Eastmain with an excellent knowledge of the New Relationship Agreement with the Government of Quebec and Canada. Worked for Hydro-Québec/Société d'énergie de la Baie-James as an advisor of Cree Relations on the EM-1 A/Sarcelle/Rupert diversion project. Recently, was the Director of construction operations in civil works for Wechidodao a Cree company in partnership with Excavation Michel Paradis Inc. in Eastmain. Mr. Mayappo speaks fluently in French, English and Cree.

## **PATRICK LAPERRIÈRE, CFA**

### *Director of Investor Relations and Corporate Development*

Mr. Laperrière is an investment professional with over twenty years of experience in portfolio management and capital markets. Prior to joining Critical Elements Lithium Corporation, he was responsible for portfolios specializing in natural resources as well as Canadian and American small-cap public shares at la Caisse de dépôt et placement du Québec from 1998 to 2003. He then held roles at major brokerage firms, such as Canaccord, RBC, Industrial Alliance and Macquarie, where he developed close relationships with institutional asset managers. These experiences allowed him to acquire excellent knowledge of company analysis and investment portfolio structure. He graduated from the University of Montreal with a Bachelor's degree in Mathematics and a Certificate in Economics. He is also a CFA charter holder (Chartered Financial Analyst) from the CFA Institute.

# CORPORATE CONTACTS



*North American sourced lithium and tantalum to power a clean energy future*

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