PRESS RELEASE

Critical Elements Lithium Announces New Positive Feasibility Study for the Rose Lithium Project Generating an After-Tax $NPV_{8\%}$ of US$2.2B and an After-Tax IRR of 65.7%

August 29th, 2023 - MONTRÉAL, QUÉBEC – Critical Elements Lithium Corporation (TSX-V: CRE) (US OTCQX: CRECF) (FSE: F12) ("**Critical Elements**" or the "**Corporation**") is pleased to announce the results of a new Feasibility Study on the Rose Lithium-Tantalum project ("Rose" or the "Project") in Eeyou Istchee James Bay, Québec.

The management of Critical Elements, with its new highly qualified technical team led by Yves Perron as Vice President of Engineering, Construction and Operations, brings a deep level of knowledge and expertise to the engineering process (particularly in mining operations, process, environment, design, estimation and project control). This new study replaces the Feasibility Study announced by the Corporation on June 13, 2022. Noteworthy changes include: (i) the increased indexation of industrial construction prices, (ii) the addition of certain process equipment to increase operational reliability and (iii) the addition of the scope change of the Project by incorporating the construction of our own 500-worker camp 4 km from the mine site. The new camp has been added to reduce the execution risk and timeline as this is vital to having the workers' accommodation ready in time as we increase the speed of the construction phase. The new 500-room camp includes both temporary and permanent sections (approximately 250 rooms for each section).

Jean-Sébastien Lavallée, Chief Executive Officer of the Corporation, said: "We are very pleased to announce the results of the new Definitive Feasibility Study at Rose to provide the updated economics of the Project. The study reaffirms the substantial value of Rose – amongst the backdrop of higher input costs and the decision to build our own 500-worker camp – to establish Critical Elements as a reliable, high-quality supplier of lithium. Thank you to our engineers, management team and local stakeholders for their diligent efforts and our shareholders for their continuous support."

Highlights

- Expected 17-year mine life
- Average production Year 2-17: 157,706 tonnes of chemical grade 5.56% spodumene concentrate
- Average production Year 2-17: 46,059 tonnes of technical grade 6.16% spodumene concentrate
- Average production Year 2-17: 580 tonnes of tantalum concentrate
- Average operating costs: US$81,30 per tonne milled, US$587 per tonne of concentrate (all concentrate production combined)
- Estimated initial capital cost: US$471 million (before working capital)
- Average gross margin: 78.8%
- After-tax $NPV_{8\%}$ of US$2,195 million, after-tax IRR of 65.7%
- Anticipated construction time: 21 months to start of production
- Average price assumptions of US$4,699 per tonne technical grade lithium concentrate, US$2,162 per tonne chemical grade lithium concentrate and US$150 per kg tantalum pentoxide (Ta_2O_5)

The Rose Lithium-Tantalum Project is 100%-owned by Critical Elements. The Corporation's market strategy is to enter the lithium market with a low-risk approach. The completion of the Feasibility Study on the spodumene plant is the first step to entering the market and establish the Corporation as a reliable high-quality lithium supplier. The low-risk approach is characterized by simple open-pit mining and conventional lithium processing technologies.

Critical Elements has consistently sought to advance the wholly-owned Rose Lithium-Tantalum Project in a low-risk manner. To this end, the Corporation has completed a new Feasibility Study with a conservative spodumene concentrate price deck, as well as capital and operating cost estimates reflective of current market conditions. The new Feasibility Study incorporates a standard truck and shovel open-pit mining operation and conventional lithium processing technologies. The Project will produce technical grade spodumene concentrate for the glass and ceramics industry and chemical grade spodumene concentrate for conversion for use in batteries for e-mobility, as well as a tantalite concentrate.

The mine will excavate a total of 26.3M tonnes ore grading an average of 0.87% Li_2O and 138 ppm Ta_2O_5 after dilution. The mill will process 1.61M tonnes of ore per year to produce an annual average of 203,765 tonnes of technical and chemical grade spodumene concentrates and 580 tonnes of tantalite concentrates. The ore is contained in several parallel and continuous shallow dipping pegmatite dykes outcropping on surface. The ore zones are open at depth and a future underground operation is possible.

Over the life of mine, the open pit will excavate a total of 182.4M tonnes of waste rock and 10.9 M tonnes of overburden. The average strip ratio is 7.3 tonnes of waste per tonne of ore.

Table 1 Rose Key FS Results

Item	Units	Value
Production		
Project Life (from start of construction to closure)	years	19
Mine Life	years	17
Total Mill Feed tonnage	M t	26.3
Average Mill Feed grade		
Li_2O	% Li_2O	0.87
Ta_2O_5	ppm Ta_2O_5	138
Lithium Concentrate Production		
% of Production, Chemical Grade	%	75
% of Production, Technical Grade	%	25
Mill Recoveries		
Li_2O, Chemical Grade	%	87.4
Li_2O, Technical Grade	%	84.8
Ta_2O_5	%	54.4
Concentrate grade		
Li_2O, Chemical Grade	%	5.56
Li_2O, Technical Grade	%	6.16
Ta_2O_5 Grade	%	20.00
Payable		
5.56% Li_2O Concentrate, Chemical Grade	t	2,681,000
6.16% Li_2O Concentrate, Technical Grade	t	783,000
Ta_2O_5 Contained in Concentrate	kg	1,971,000
Commodity Prices		
5.5% Li_2O Concentrate, Chemical Grade	US$/$t_{conc.}$	2,162
6% Li_2O Concentrate, Technical Grade	US$/$t_{conc.}$	4,699
Ta_2O_5 Contained in Concentrate	US$/$kg_{contained}$	150
Exchange rate 1.00 US$: 1.30 CAN$		
0.77 US$: 1.00 CAN$		

Item	Units	Value	Value
Project Costs		**CA$**	**US$**
Average Mining Cost	$/t milled	35.13	27.05
Average Milling Cost	$/t milled	27.00	20.79
Average General & Administrative Cost	$/t milled	20.70	15.94
Average Concentrate Transport Costs	$/t milled	22.76	17.52
Project Economics		**CA$**	**US$**
Gross Revenue	$M	12,692	9,772
Total Selling Cost Estimate	$M	161	124
Total Operating Cost Estimate	$M	2,776	2,137
Total Sustaining Capital Cost Estimate	$M	310	239
Total Capital Cost Estimate	$M	611	471
Duties and Taxes	$M	3,688	2,840
Average Annual EBITDA	$M	599	461
Average Gross Profit Margin	%	78.8%	
Pre-Tax Cash Flow	$M	8,835	6,803
After-Tax Cash Flow	$M	5,147	3,963
Effective Tax Rate	%	41.7%	
Discount Rate	%	8.0%	
Pre-Tax Net Present Value @ 8%	$M	5,048	3,847
Pre-Tax Internal Rate of Return	%	95.9%	
Pre-Tax Payback Period	years	1.3	
After-Tax Net Present Value @ 8%	$M	2,851	2,195
After-Tax Internal Rate of Return	%	65.7%	
After-Tax payback Period	years	1.8	

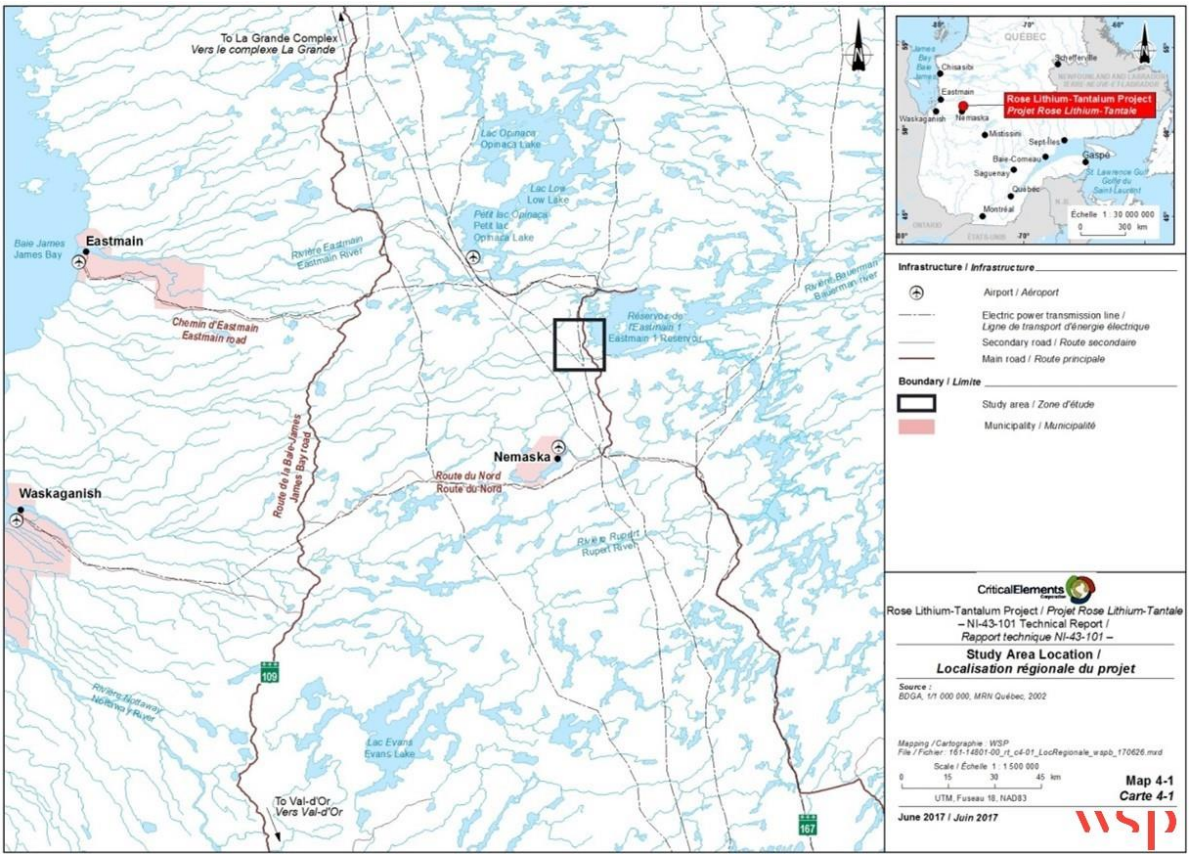
Property

The Rose property is located in northern Québec's administrative region, on the territory of Eeyou Istchee James Bay. It is located on Category III land, on the Traditional Lands of the Eastmain Community, approximately 40 km north of the Cree village of Nemaska. The latter is located approximately 300 km north-west of Chibougamau.

The Rose property is accessible by road via the Route du Nord, usable all year round from Chibougamau. The mine site can also be reached by Matagami, via Route 109 and Route du Nord. Figure 1 displays the regional location of the project. The project is located 80 km south of Goldcorp's Éléonore gold mine and 45 km north-west of Nemaska's Whabouchi lithium project and 20 km south of Hydro Québec's Eastmain-1 hydroelectricity generating plant. The Nemiscau airport services the region's air travel needs. The Rose property site is located 50 km by road from the Nemiscau airport.

The Rose property comprises 473 claims spread over a 24,654-ha area. Geologically, the Rose property is located at the north-east end of the Archean Lake Superior Province of the Canadian Shield.

Figure 1 Rose Property Location



Reserve Estimate

A Mineral Reserve Estimate for 17 mineralized zones was prepared during this study. The estimation assumed the production of a chemical grade spodumene concentrate with a price of US$20 per kg Li_2O and a tantalite concentrate with a price of US$130 per Kg of Ta_2O_5. The recoveries were fixed at 85% and 64% for lithium and tantalum, respectively. The grade-recovery curve used for resource estimate, which became available after the mineral reserves were evaluated, was verified and found to have little influence on the reserve estimate. The production of a higher value technical grade spodumene concentrate was not assumed in the reserve estimate.

Based on compilation status, metal price parameters, and metallurgical recovery inputs, the effective date of the estimate is August 1st, 2023.

The estimate was prepared in accordance with CIM's standards and guidelines for reporting mineral resources and reserves.

Table 2 displays the results of the Mineral Reserve Estimate for the Rose Project at the CA$44.80 NSR per tonne cut-off for the open-pit scenario.

Table 2 Mineral Reserve Estimate

	Tonnage	NSR	Li_2O_eq	Li_2O	Li_2O	Ta_2O_5	Ta_2O_5
Category	**(Mt)**	**(CA$)**	**(%)**	**(%)**	**(000 t)**	**(ppm)**	**(000 t)**
Probable	26.3	165	0.92	0.87	193,8	138	2,3
Total	**26.3**	**165**	**0.92**	**0.87**	**193,8**	**138**	**2,3**

- The Independent and Qualified Person for the Mineral Reserve Estimate, as defined by National Instrument 43-101 – Standards of Disclosure for Mineral Project ("NI 43-101"), is Simon Boudreau, P.Eng, of InnovExplo Inc. The effective date of the estimate is August 1st, 2023.
- The model includes 17 mineralized zones.
- Calculations used metric units (metres, tonnes and ppm).
- The number of metric tons was rounded to the nearest thousand. Any discrepancies in the totals are due to rounding effects. Rounding followed the recommendations in NI43-101.
- InnovExplo is not aware of any known environmental, permitting, legal, title-related, taxation, socio-political, marketing or other relevant issue that could materially affect the Mineral Reserve Estimate.

Resource Estimate

The current Mineral Resource Estimate ("MRE") is primarily based on changes made to the net smelter return ("NSR") parameters, supported by new assumptions concerning metal prices and the creation of potentially mineable shape to constrain the MRE for the potential underground extraction scenario. No changes to the interpretation and interpolation parameters were deemed necessary. The mineral resource model for the current MRE is based largely upon the model generated for the 2011 PEA.

The effective date of the estimate is August 1st, 2023, based on compilation status, metal price parameters, metallurgical recovery inputs and creation of the constraining volume.

Given the density of the processed data, the search ellipse criteria, the drill hole density and the specific interpolation parameters, the Qualified Persons is of the opinion that the current MRE can be classified as Indicated and Inferred resources. The estimate was prepared in accordance with CIM's standards and guidelines for reporting mineral resources and reserves.

Table 3 displays the results of the MRE for the Rose Project using CA$31.40 NSR/t cut-off for the open-pit potential extraction scenario and CA$121.12 NSR cut-off for the underground potential extraction scenario.

Table 3 Mineral Resource Estimate

Category		Tonnage	NSR	Li_2O_Eq	Li_2O	Ta_2O_5
			(CA$)	(%)	(%)	(ppm)
Indicated	Pit	29,922,000	185	1.03	0.93	145
	Underground	624,000	177	0.96	0.91	82
	Total Indicated	30,561,000	185	1.03	0.93	118
Inferred	Pit	1,787,000	149	0.86	0.77	138
	Underground	597,000	150	0.87	0.80	101
	Total Inferred	2,384,000	149	0.86	0.78	129

- The Independent and Qualified Person for the Mineral Resource Estimate, as defined by NI 43-101, is Carl Pelletier, P.Geo., of InnovExplo Inc. The effective date of the estimate is August 1st, 2023. The MRE follow 2014 CIM Definition Standards and the 2019 CIM MRMR Best Practice Guidelines.
- These Mineral Resources are not Mineral Reserves as they do not have demonstrated economic viability.
- The model includes 24 mineralized zones.
- The reasonable prospect for eventual economic extraction is met by having constraining volumes applied to any blocks (potential open -pit or underground extraction scenario) using Whittle and the Deswik Stope Optimizer (DSO) and by the application of cut-off grades. The mineral resource is reported at a cut-off of CA$31.40 NSR for the open-pit potential; and of US$121.12 NSR for the underground potential based on market conditions (metal price, exchange rate and production cost).
- A range of densities was used on a per-zone basis based on statistical analysis of all available data.
- A minimum true thickness of 2.0 m was applied, using the grade of the adjacent material when assayed or a value of zero when not assayed.

- High grade capping was done on raw assay data based on the statistical analyses of individual mineralized zones.
- Compositing was done on drill hole intercepts falling within mineralized zones (composite lengths vary from 1.5 m to 3 m to distribute the tails adequately).
- Resources were evaluated from drill holes using a 2-pass OK interpolation method in a block model (block size = 5 m x 5 m x 5 m).
- The inferred category is only defined within the areas where blocks were interpolated during pass 1 or pass 2 where continuity is sufficient to avoid isolated blocks being interpolated by only one drill hole. The indicated category is only defined by blocks interpolated by a minimum of two drill holes in areas where the maximum distance to the closest drill hole composite is less than 40 m for blocks interpolated in pass 1.
- Results are presented in-situ. The number of metric tons was rounded to the nearest thousand. Any discrepancies in the totals are due to rounding effects. Rounding followed the recommendations in NI 43-101.
- The qualified persons are not aware of any known environmental, permitting, legal, title-related, taxation, socio-political or marketing issues, or any other relevant issue, that could materially affect the potential development of mineral resources other than those discussed in the MRE.

Feasibility Study

The parameters used for the Feasibility Study are the following:

- Open pit mining rate of 1,610,000 tpy of ore
- Spodumene process plant with a 4,600 tpd capacity

Mining Operation

The mineralization is hosted within outcropping pegmatite dykes subparallel to surface. The ore body is relatively flat, close to surface and comprised of north oriented stacked lenses. Mineralization recognized to date on the Rose property includes rare elements of Lithium-Cesium-Tantalum or LCT-type pegmatites and molybdenum occurrences.

A conventional truck and shovel open-pit approach was considered to mine the Rose Lithium-Tantalum Project's Probable Mineral Reserves. The dimensions of the engineered pit design are approximately 1,620 m long x 900 m wide x 220 m deep.

The life of mine plan (LOM) proposes to mine 26.3 Mt of ore, 182.4 Mt of waste, and 10.9 Mt of overburden for a total of 219.6 Mt of material. The average stripping ratio is 7.3 tonnes of waste per tonne of ore. The nominal production rate is estimated at 4,600 tonnes per day and 350 operating days per year.

The mining operation production rate is set to approximately 15 Mt of material per year. An open pit mining schedule was planned and resulted in a mine life of 17 years.

Contract mining will be used for the removal of the overburden while Critical Elements will undertake the mining of all hard rock material with its own equipment fleet and operators.

The main production fleet will consist of one (1) backhoe excavator, one (1) electric front shovel, one (1) wheel loader, eight (8) haul trucks (65t each), seven (7) haul trucks (135t each), two (2) rotary drills, one (1) DTH drill, two (2) bulldozers, one (1) wheel dozer, two (2) graders, one (1) auxiliary excavator, one (1) auxiliary wheel loader, and two (2) water trucks.

The Rose project pit was designed with a 10 m single benching arrangement. A 57° inter-ramp angle and an overall pit slope angle of 55° were utilized for the ultimate pit design. A berm width of 7.0 m corresponding to the recommended overall slope angle was used. The pit slopes in overburden have a face ratio of 2.5:1 with a 10 m berm width.

The main in-pit haulage ramp is designed at 30.9 m wide to allow a double-lane traffic, except for the last benches at the pit bottom that are designed at 20.4 m wide for single lane traffic. A 2 m drainage ditch is included to allow for water drainage and pipe installation. The maximum gradient of the inner curvature of all ramp segments is 10%.

Figure 2 Rose Pit Plan View

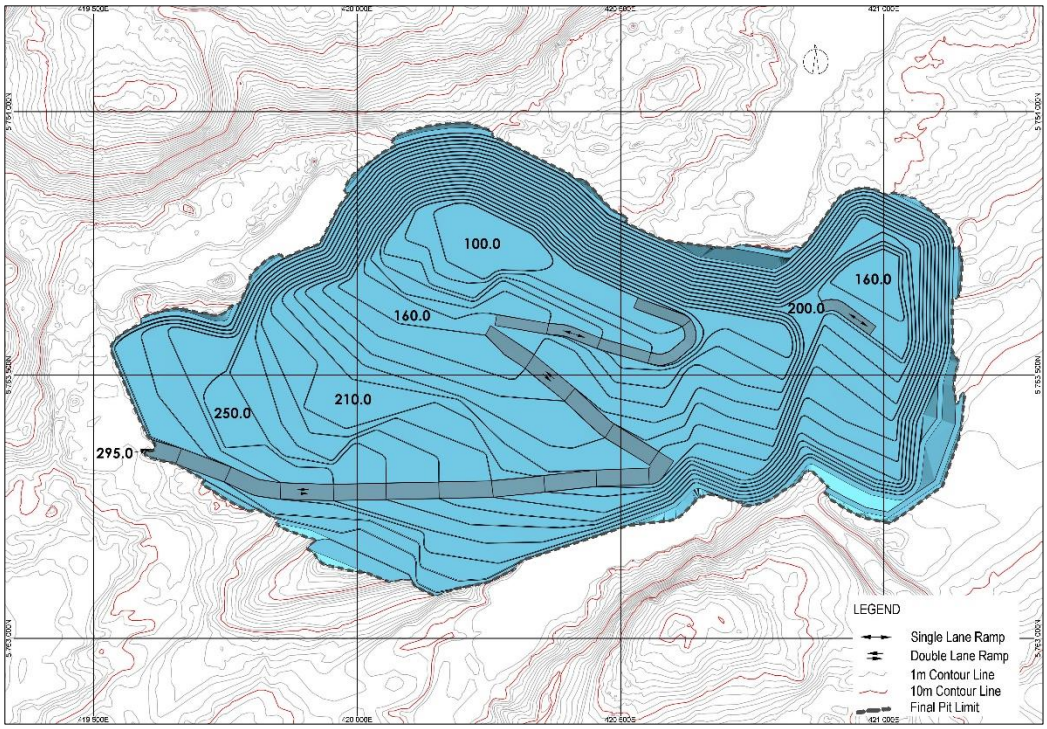
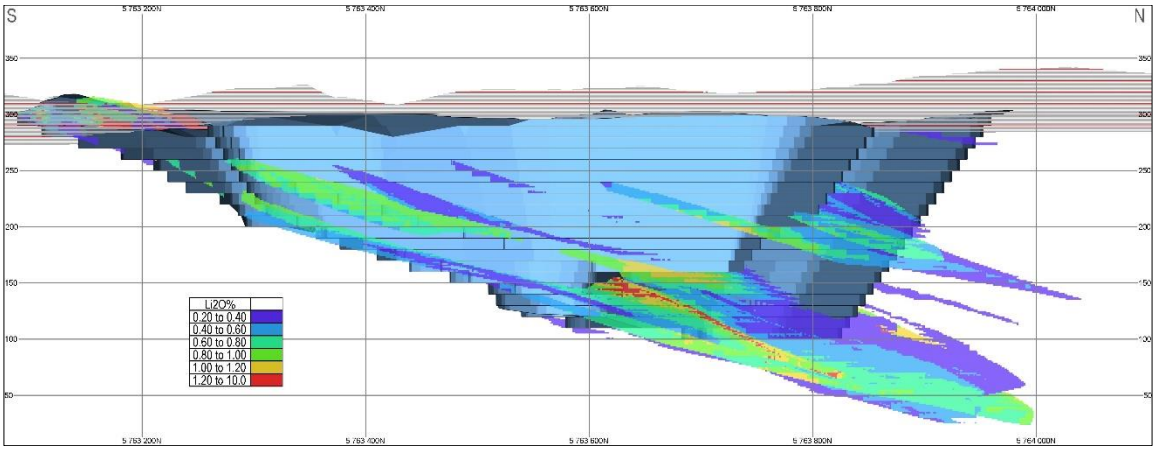


Figure 3 Rose Pit Side View Looking West



Mineral Processing

A standard froth flotation process will be utilized to produce technical grade and chemical grade lithium concentrates and a tantalum concentrate. The mineral process plant will consist of crushing, beneficiation, and dewatering areas. The technical grade lithium concentrate will grade 6.16% Li_2O while the chemical grade lithium concentrate will grade 5.56% Li_2O. The tantalum concentrate will grade 20% Ta_2O_5.

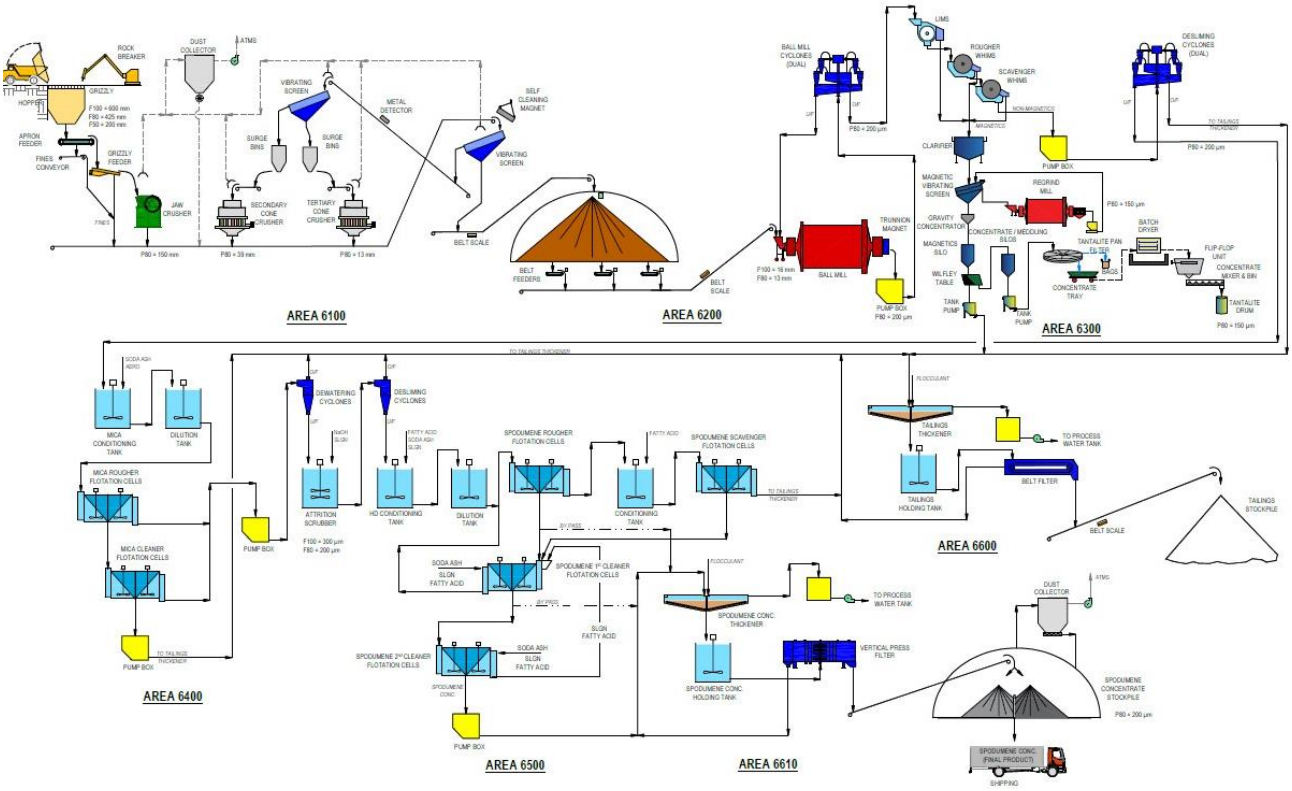
The beneficiation process includes crushing, grinding, magnetic separation and flotation. The crushing circuit will consist of a jaw crusher and two (secondary and tertiary) cone crushers, and screens. The crushed ore will have a P80 of 13 mm and will be stockpiled in a 24-hour live capacity dome. The grinding circuit will consist of a ball mill operating in a closed circuit with a set of cyclones. The tantalum will first be recovered at a grade of 2.0% Ta_2O_5 by high intensity magnetic separation then upgraded further to 20.0% Ta_2O_5 by gravity separation. Tantalum concentrate will be thickened, filtered, dried to 1% moisture, and bagged for shipment. The lithium flotation circuit will include removal of slimes (particles less than 20 um)

after magnetic separation followed by mica flotation, scrubbing, and spodumene flotation to the required grades. The spodumene concentrate will then be thickened, pressure filtered with a 5% moisture content, and stored in a dome with a capacity of 24 hours and then be transported by trucks and trains to the port. The flotation tailings will be thickened, vacuum filtered to 15% moisture or less, and trucked to the waste rock / tailings piles where it will be dry stacked.

The spodumene plant will operate 24 hours per day, 7 days per week, and 52 weeks per year. The process plant was designed with an operating availability of 90%. The crushing circuit was designed using an operating availability of 50%. The plant has a capacity of 1,610,000 tonnes per year or 4,900 dry tonnes per day including availability.

The process plant flowsheet developed by Bumigeme Inc. is presented in Figure 4.

Figure 4 Rose Process Flowsheet



Metallurgy

Bench scale metallurgical testing was performed at ACME Metallurgical Limited in Vancouver in 2011. The results from these tests were used for the PEA study. Three composites: the Rose (main structure), the Rose Sud-Est (Southeast structure), and Tantalum (secondary structure with higher tantalum and lower lithium content) were subjected to various metallurgical tests.

SGS Canada Inc. in Lakefield conducted tests from 2013 to 2015 to improve lithium and tantalum recoveries. In 2015 SGS Canada Inc. developed a conceptual flowsheet based on a series of bench scale tests on various samples from the Rose deposit. The proposed flowsheet consists of conventional three-stage crushing and single stage grinding followed by magnetic separation for the recovery of tantalum, mica flotation, and spodumene flotation. This flowsheet was the basis of the process plant design.

SGS Canada also conducted a pilot plant program in early 2017 on two samples from the Rose project (Rose and Rose South). The main objective of the pilot plant program was to generate spodumene concentrate for testing in a lithium carbonate pilot plant which was conducted by Outotec in Germany and Finland. Secondary objectives were to prove metallurgical performance on a continuous pilot scale and to

generate metallurgical and operating data for further studies. The spodumene pilot plant demonstrated the robustness of the design process.

The Feasibility Study assumes 84.8% and 87.4% recovery for technical and chemical grade lithium concentrates respectively and 54.4% minimum recovery for the tantalum concentrate.

Process water will be recycled releasing minimal amounts to the retention pond and final effluent treatment plant.

Environmental and Social Impact Assessment

The final environmental impact assessment (EIA) was submitted to the governments of Canada and Quebec in February 2019. In August 2021, Critical Elements announced that the Federal Minister of Environment and Climate Change had rendered a favorable decision in respect of the proposed Rose Project. In a Decision Statement, which included the conditions to be complied with by the Corporation, the Minister confirmed that the Project is not likely to cause significant adverse environmental effects when mitigation measures are taken into account.

In September 2022, the Environmental and Social Impact Review Committee, an independent body composed of members appointed by the governments of Quebec and the Cree Nation responsible for the assessment and review of the environmental and social Impacts of the Project, recommended that the Project be authorized. Consequently, the Corporation received the Certificate of Authorization pursuant to section 164 of Quebec's *Environment Quality Act* for the Project from the Quebec Minister of the Environment, the Fight against Climate Change, Wildlife and Parcs. Now that the Project has been approved by government authorities, the Corporation must obtain the various permits required to build and operate the mine. In addition, a new development has been added to the project: the workers' camp, previously planned 25 km to the north, is expected to be set up some 4 km south of the mine site, under CELC's responsibility.

Critical Elements has been working since the beginning with the Eastmain Community, on whose Traditional Lands the Project lies. The Corporation has also maintained good relations with the Grand Council of the Cree and with the neighbouring Nation of Nemaska. Consultations have been ongoing and are planned throughout the life of the Project. In 2019, Critical Elements entered into an impact and benefits agreement with the Cree Nation of Eastmain, the Grand Council of the Cree (Eeyou Istchee), and the Cree Nation Government called the Pihkuutaau Agreement.

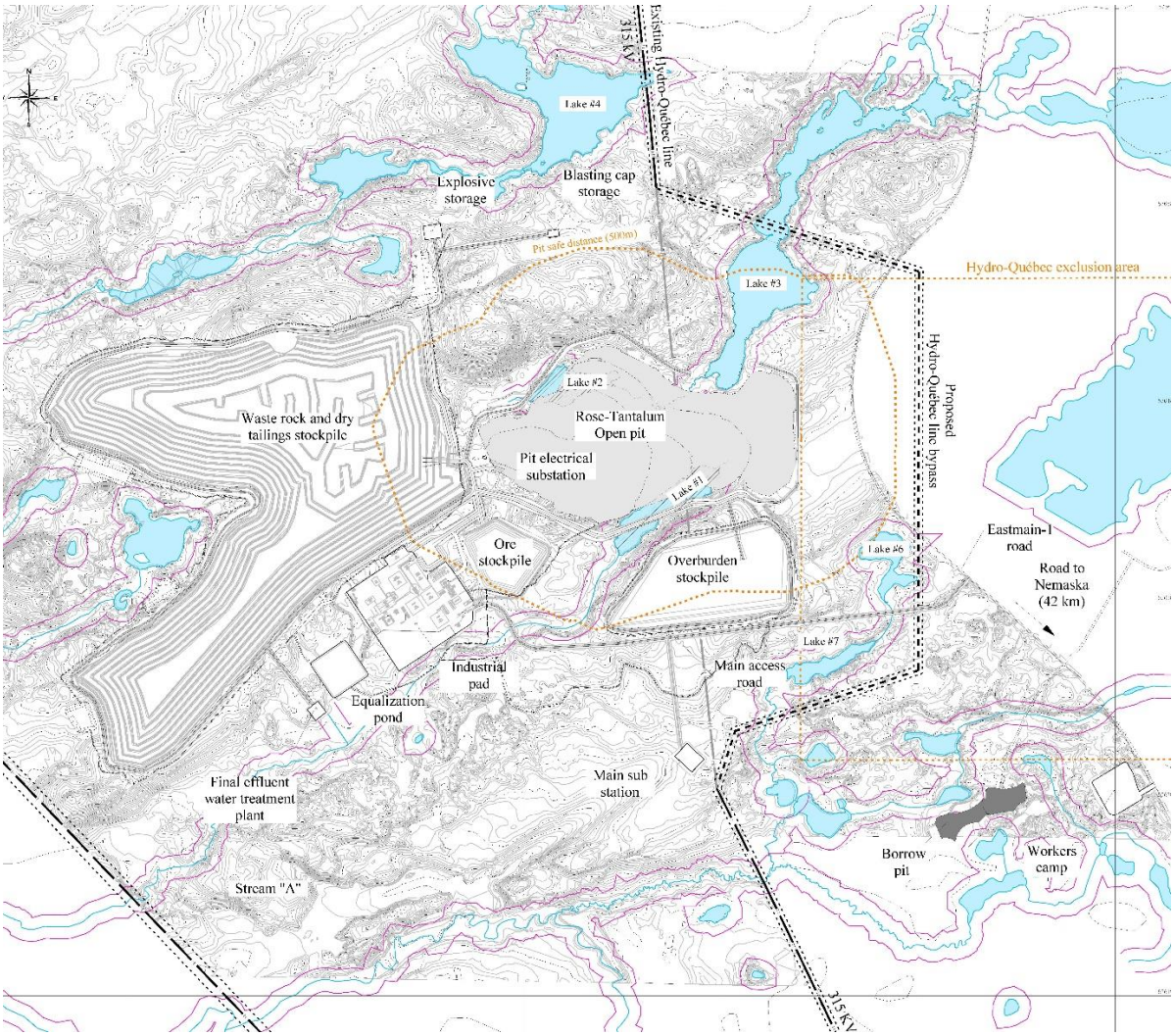
The Corporation's mine closure and restoration plan was accepted by the Ministry of Energy and Natural Resources of the Province of Québec (MERN) in April 2022.

Infrastructure

The Project infrastructure includes site main access, services and haulage roads, explosive and detonator storage, a spodumene processing plant, a maintenance facility, a warehouse, diesel and gasoline storage, ore stockpile, waste rock and dry tailings co-disposal stockpile, overburden stockpile, main electrical substation and distribution, fresh and potable water supply, sewage, surface water management, final effluent treatment, communication system, gate house, and an administrative building. A camp complex will be built near the junction between the site access and Eastmain 1 road.

The mine site layout is shown in Figure 5.

Figure 5 Rose Site Layout



Waste rock and tailings samples were analyzed, and both were considered to be non-potentially acid generating. The dry tailings and the waste rock will be stored in the same facility which has sufficient capacity for the life of mine. Rain and snow melt water will be collected in ditches and pumped to the water treatment plant.

The industrial pad has an area of 254,000 m^2 and will contain the process plant, the maintenance facility, warehouse, administration building, diesel and gasoline storage tanks, and all associated services. The ore pad will have an area of 105,000 m^2 where low-grade material may be stored.

The hydrology study has suggested that water inflow to the open pit is to be expected. To maximize pit slopes, water wells will be constructed around the pit periphery to lower the water table below the pit floor. One of these wells will be used to supply the site with fresh water. Water from the other wells will be directed to sedimentation ponds and treated, if necessary, before being released to the effluent.

Water from the waste rock / dry tailings stockpile, the open pit, the industrial pad, the overburden stockpile, and the roads will be collected in an equalization pond and treated before being released as final effluent.

The mine site will have a 2.7 km main access road from the Eastmain 1 road to the industrial pad. Including the service roads, the site will total 16 km of roads.

A 315 kV electrical transport line (L3176), owned by Hydro-Québec, runs North-South over the eastern side of the Rose Property. It runs over the planned open pit. The portion running over the open pit representing 4.2 km will be rerouted to allow open pit operation.

Figure 6 Power Line at Rose Site

Capital Costs

The capital and operating costs were estimated in Canadian dollars. An economic analysis was conducted with a discounted cash-flow before and after tax. The initial capital cost is estimated at US$471including all infrastructures described earlier with a 10% contingency. The sustaining capital is estimated at US$238M over the life of mine.

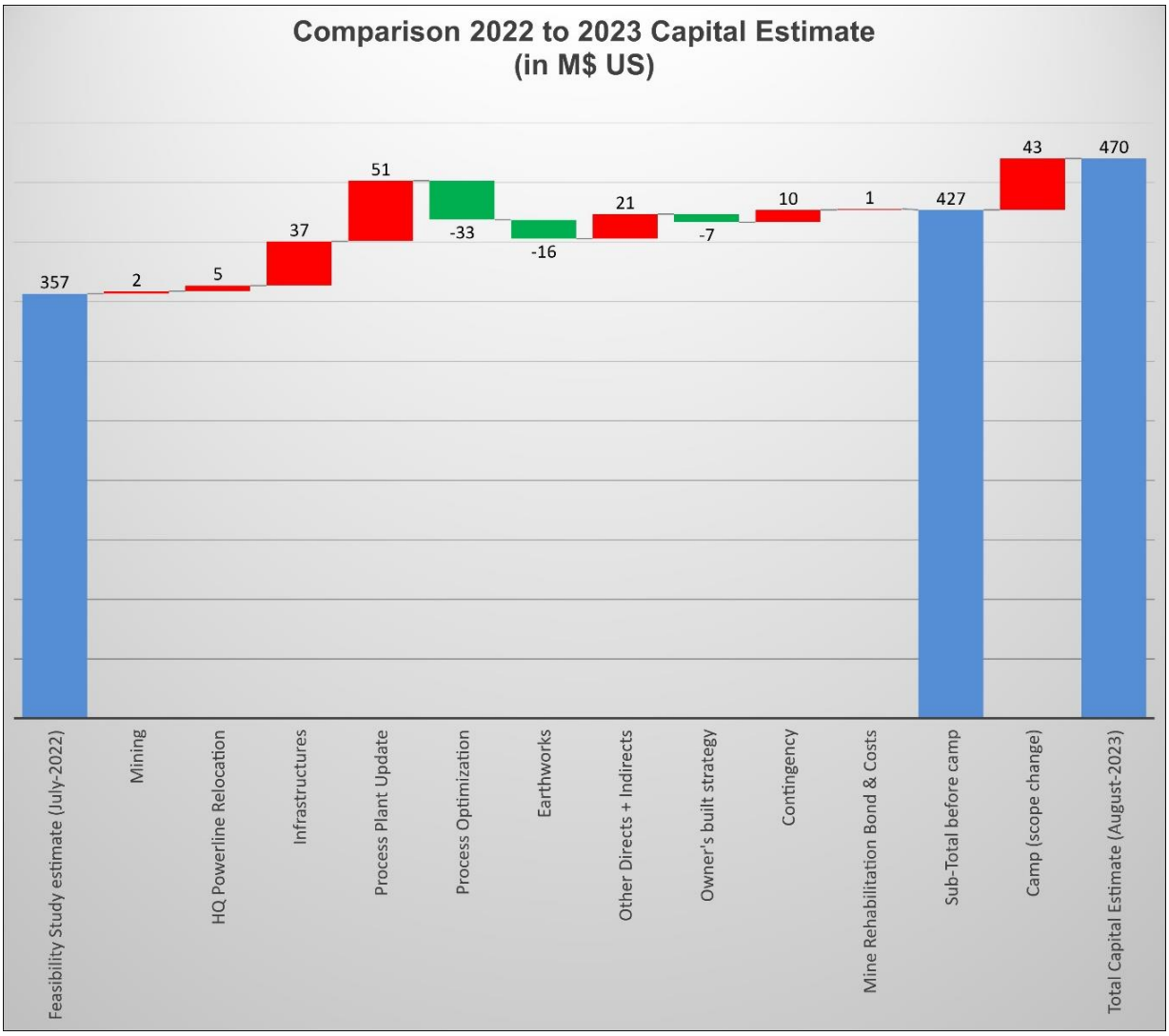
The total payable products are estimated at 2,681,000 tonnes of chemical grade 5.56% Li_2O concentrate, 783,000 tonnes of technical grade 6.16% Li_2O concentrate, and 1,971 tonnes of 20% Ta_2O_5 concentrate.

Table 4 Initial Capital and Sustaining Capital Costs

Item	Initial Capital (C$M)	Sustaining Capital (C$M)	Initial Capital (US$M)	Sustaining Capital (US$M)
Direct Capital Estimate	**365.4**	**254.0**	**281.4**	**195.6**
Mine Open Pit	7.6	207.5	5.8	159.8
Stockpiles	7.0	19.2	5.4	14.8
Infrastructure	108.9	14.2	83.8	10.9
Process Plant	166.8	10.4	128.4	8.0
Auxiliary Buildings & Equipment	75.2	2.7	57.9	2.1
Indirect Capital Estimate	**189.1**	**0.5**	**145.6**	**0.4**
Owner's Costs	77.7	-	59.9	-
Indirect Costs	111.4	0.5	85.8	0.4
Contingency	55.5	25.4	42.7	19.6
Mine Rehabilitation (Incl. Contingency)	-	21.7	-	16.7
Mine Rehabilitation Bond & Costs	1.2	7.2	0.9	5.6
Total Capital Estimate	**611.2**	**308.9**	**470.6**	**237.8**

The waterfall chart of figure 7 illustrates the capital costs differences between 2022 and 2023 feasibility studies in US$.

Figure 7 Waterfall Chart Capital Costs 2022 vs 2023



Operating Costs

The operating costs are estimated at US$81.30 per tonne of ore processed which include:

- Mining: US$27.05 per tonne processed
- Processing: US$20.79 per tonne processed
- G&A: US$15.94 per tonne processed
- Concentrate transportation: US$17.52 per tonne processed

The total operating costs are estimated at US$587/tonne of concentrate after Tantalite Credit, as summarized in Table 5.

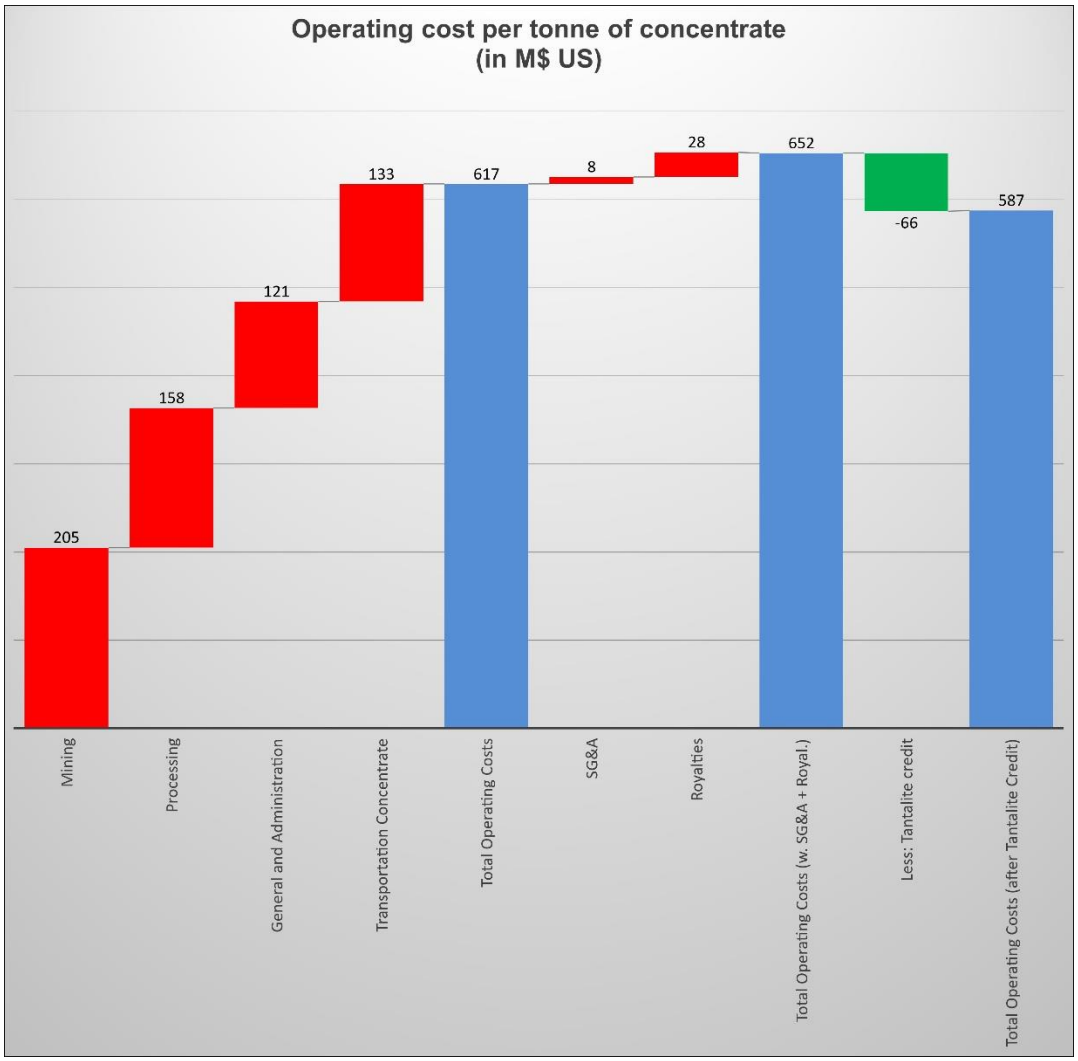
Table 5 Operating Costs per Tonne of Concentrate

Item	C$/t All Concentrate	US$/t All Concentrate
Mining	266	205
Processing	205	158
General and Administrative	157	121
Transportation Concentrate	173	133
Total Operating Costs	**801**	**617**
SG&A	10	8
Royalties	37	28
Total Operating Costs (Incl. SG&A and Royalties)	**847**	**652**
Less: Tantalite Credit	85	66
Total Operating Costs (After Tantalite Credit)	**762**	**587**

Energy unit costs are estimated to CA$0.055 per kWh for electricity and CA$1.35 per litre for diesel.

Figure 8 displays the waterfall chart of the operating cost details.

Figure 8 Waterfall Chart Operating Costs

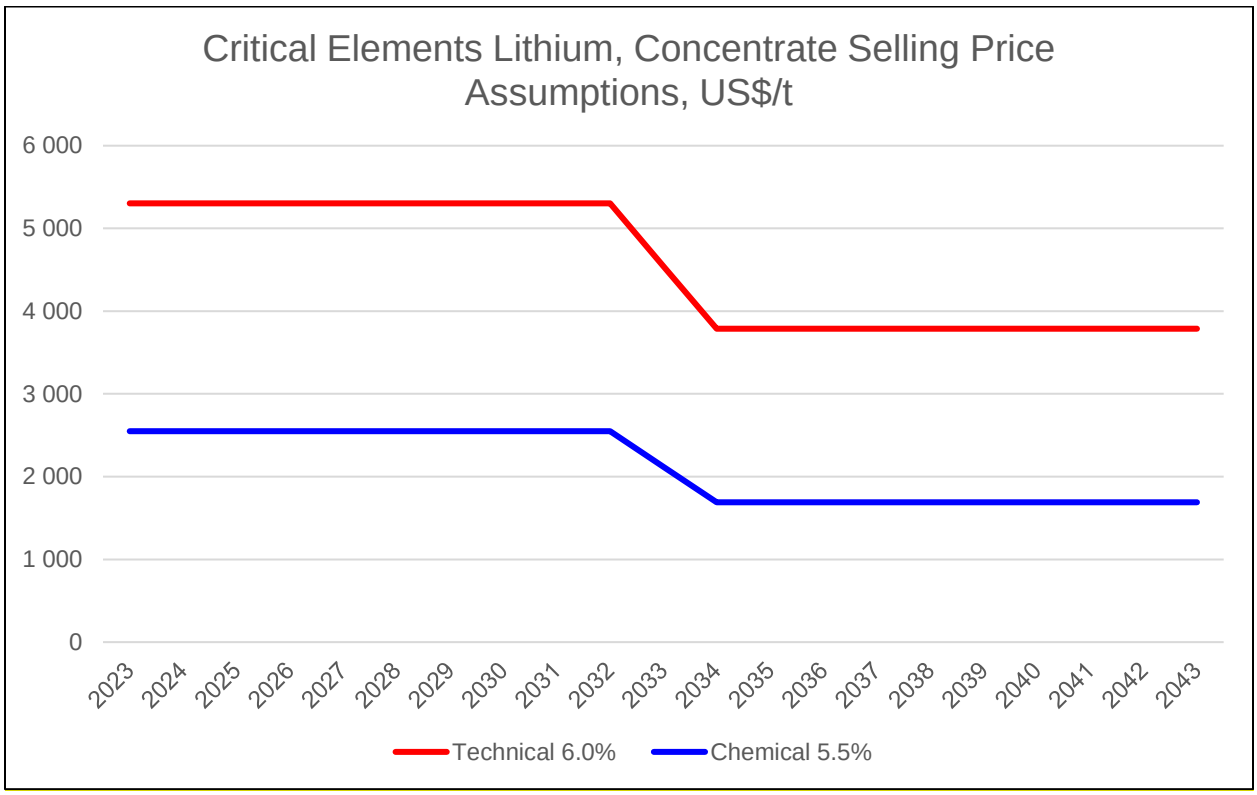


Project Economics

The mine will process 1,610,000 tonnes ore per year grading an average of 0.87% Li2O and 138 ppm Ta_2O_5 over a period of 17 years. Over the Life of Mine (LOM), the averages for the price assumptions are US$2,162 per tonne and US$4,699 per tonne of chemical grade and technical grade lithium concentrates respectively (FOB port) and US$150 per kg Ta_2O_5 contained in the tantalum concentrate (FOB mine site).

Figure 9 displays the prices per year for the lithium concentrate products.

Figure 9 Concentrate Selling Price Per Year



The price deck applied to the current feasibility study is as conservative or more so than the price deck applied to the previous feasibility study. For example, the LOM average chemical grade lithium concentrate price in the previous feasibility study (US$1,852/t) sat at a 47% discount relative to the trailing twelve months' average of US$3,525/t. This compares to the current feasibility study in which the LOM average chemical grade lithium concentrate price sits at US$2,162/t, which is a 65% discount relative to the trailing twelve months' average of US$6,107/t.

The pre-tax and after-tax NPV at various discount rates are presented in Table 6.

Table 6 Pre-Tax and After-Tax NPV

Discount Rate	Pre-Tax (C$M)	After-Tax (C$M)	Pre-Tax (US$M)	After-Tax (US$M)
NPV @ 0%	8,835	5,147	6,803	3,963
NPV @ 5%	6,137	3,511	4,726	2,704
NPV @ 8%	5,048	2,851	3,887	2,195
NPV @ 10%	4,467	2,499	3,439	1,924
NPV @ 12%	3,975	2,201	3,061	1,695

The after-tax internal rate of return is 65.7%.

Sensitivity Analysis

The sensitivity of the NPV to exchange rate and chemical grade lithium concentrate price is presented in Table 7.

Table 7 After-Tax NPV Sensitivity to Exchange Rate and Chemical Grade Lithium Concentrate

Exchange Rate	After-Tax $NPV_{8\%}$ Discount Rate (C$M)				
	Li_2O Price – Chemical Grade				
	-40%	-20%	Base Case	5%	10%
-10%	710M	1,415M	2,105M	2,278M	2,450M
Base Case	1,144M	1,978M	2,806M	3,012M	3,218M
10%	1,206M	2,052M	2,892M	3,101M	3,311M

Figures 10 to 12 present the sensitivity of the NPV at 8% discount rate, the waterfall chart for NPV comparison between 2022 and 2023 studies, and IRR to prices, Li_2O recovery, exchange rate, operating costs, and capital cost. The economics are most sensitive to Li_2O price, exchange rate, and Li recovery.

Figure 10 Sensitivity on After-Tax NPV 8%

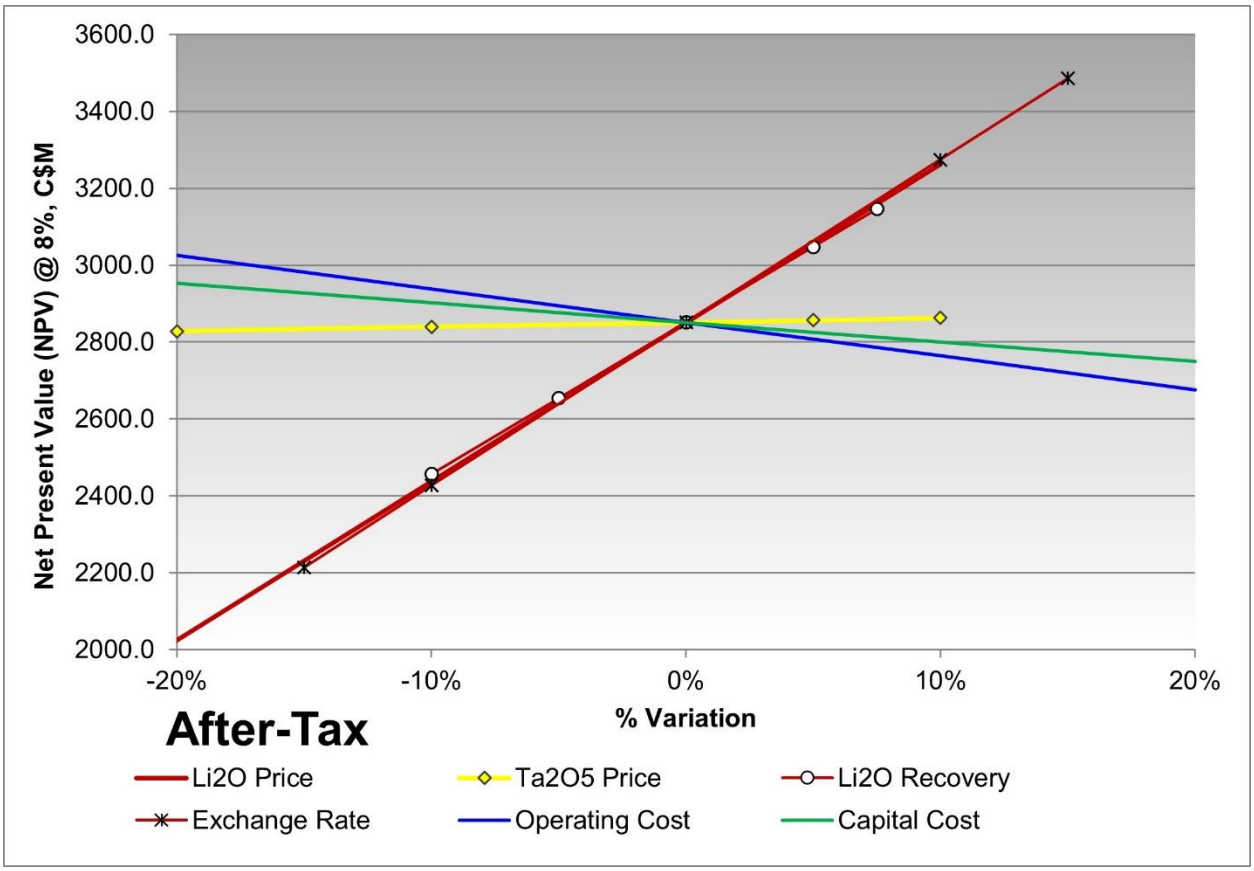


Figure 11 Sensitivity on After-Tax IRR

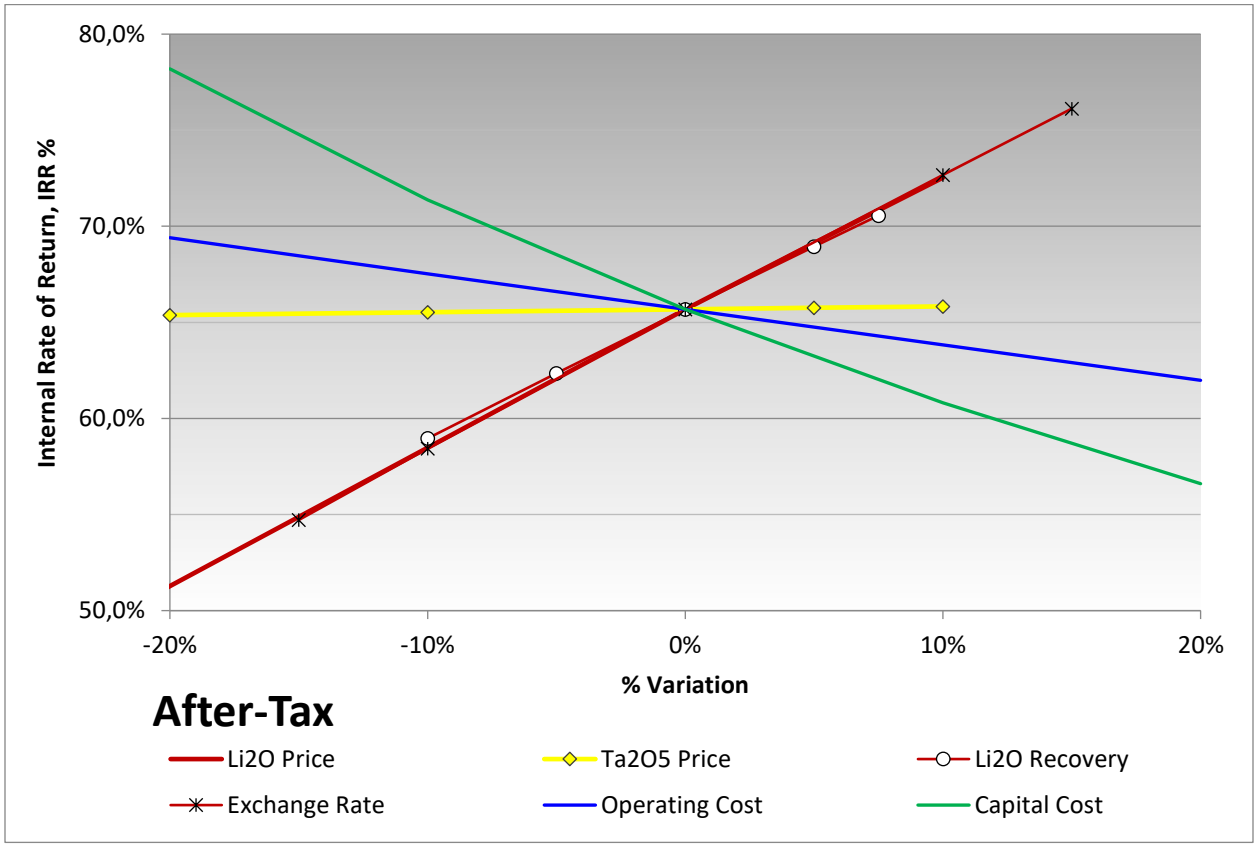
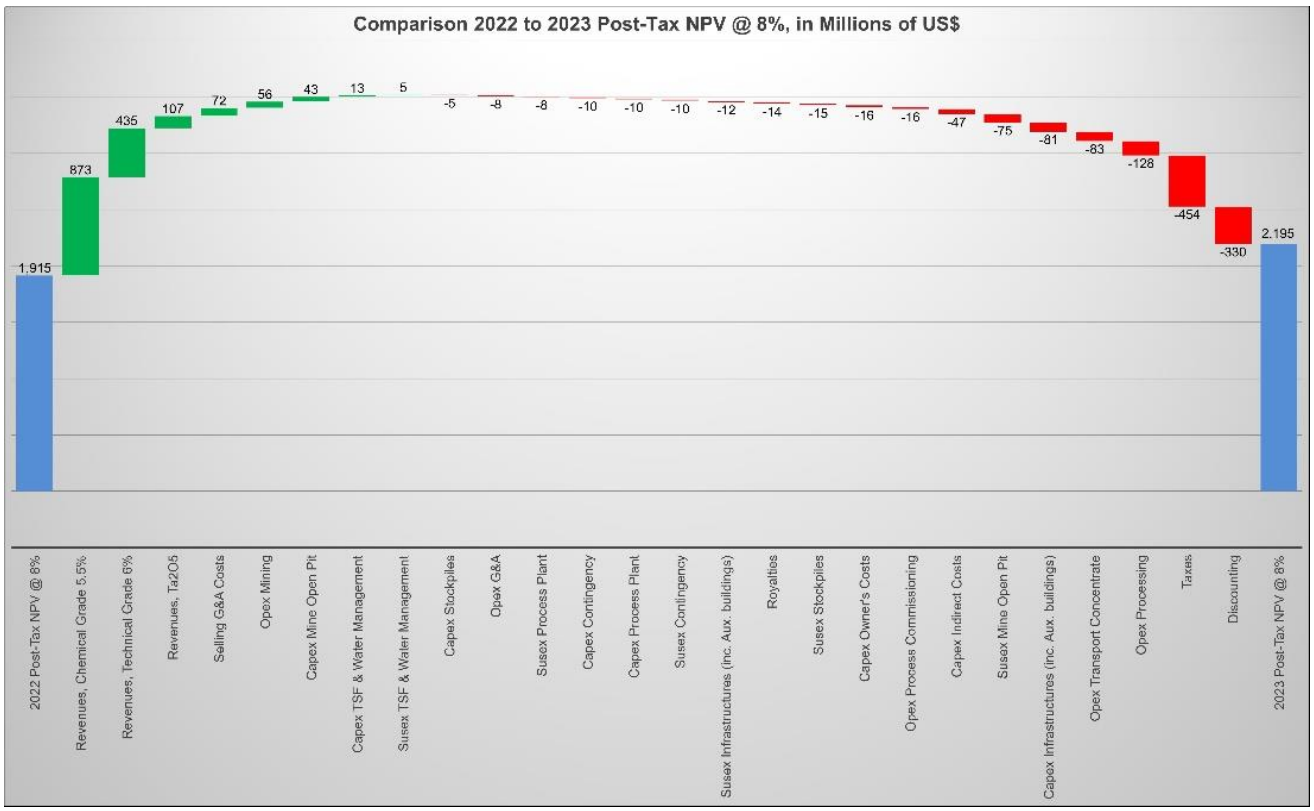


Figure 12 Waterfall chart Post-Tax NPV 2022 versus 2023



Lithium Demand Outlook

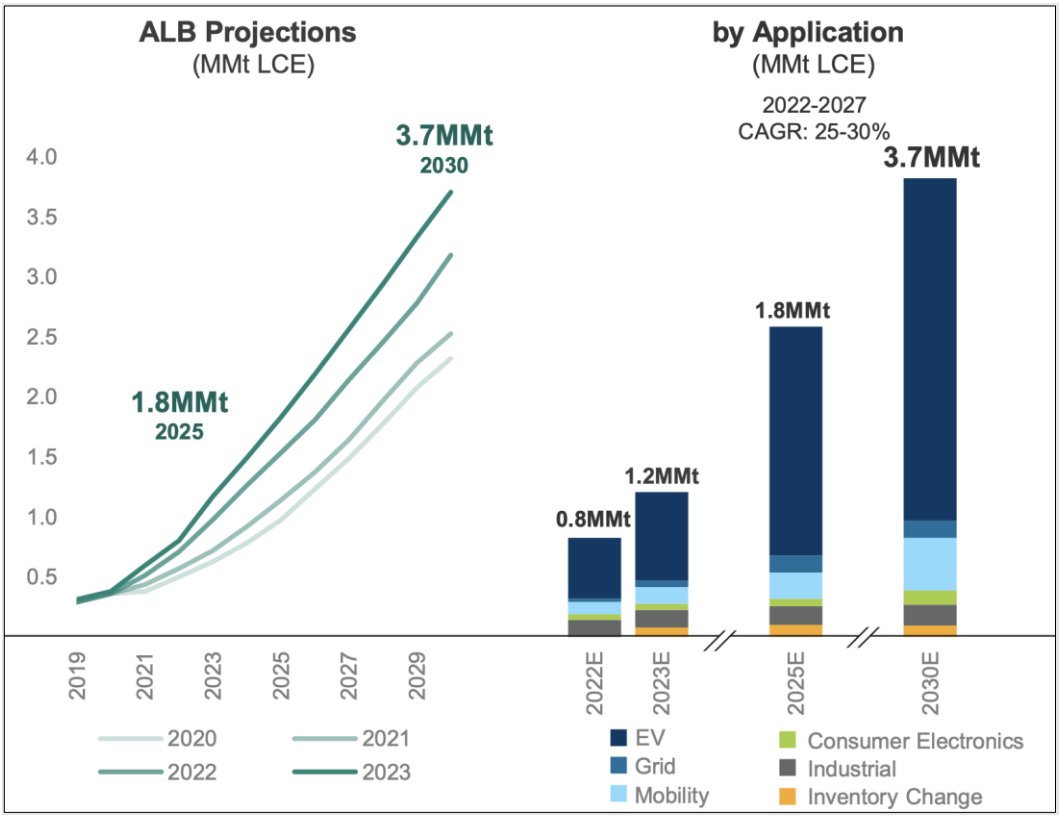
The future growth of the lithium market will clearly be dominated by e-mobility powered by Li-ion batteries but also increasingly energy storage systems (ESS). With the declining cost of Li-cells, targets for 1 kWh being now very close to US$150, they are also becoming attractive for use in private installations combined with increasing use of photovoltaic ("PV") roof-top electricity generation. For example, in Germany a new regulation demands that for all PV projects exceeding 1MW power generation an energy storage system has to be installed by 2025. This is intended to avoid peak energy stressing the electricity distribution systems, a phenomenon which already pushes European systems to their limits during the summer months and increasingly so with the ongoing addition of new PV systems, be they commercial or private.

In the coming years the major driver of the lithium demand growth continues to be the e-mobility. The IHS Markit Global Production Forecasts from December 2021 assumes an electric vehicle penetration rate of 22% in 2025 and 39% in 2030. This mainly in combination with the expected growth of average battery size will result in a strong increase in lithium demand.

Considering about 100 million new cars per year by 2030, and assuming that 40% of them are battery electric vehicle equipped with an average 55-kWh battery, this market segment alone will require in excess of 1.5 million metric tons of LCE. In addition, this does not include other transport segments such as two/three-wheelers, light duty trucks, heavy duty trucks, electric stationary storage (ESS), etc.

In the last year the lithium market has seen some developments, in particular, related to pricing, though neither the overall market development did change nor the global forecasts indicating that demand continues to outpace the development of raw material supply capacity. Several lithium producers as well as the leading market analysts have increased their forecasts. Figure 13 displays the actual demand forecast as well as previous projections from Albemarle.

Figure 13 Lithium Demand Forecast for 2025 and 2030



Spodumene Pricing

Based on the actual demand forecast, significant capacity expansions from incumbents as well as newcomers are needed. More stringent sustainability requirements and especially the rising quality requirements, a prerequisite to achieve a high yield in the conversion process, will result in increasing capital expenditures and production costs. Therefore, the spodumene price needed to put new projects into production will continue to rise.

As the market faces a structural supply deficit for the remainder of this decade, prices are expected to exceed minimum price requirements. Benchmark Minerals and Fastmarkets both reported in Q2 2023 contractual prices exceeding US$45/kg for lithium hydroxide as well as about US$4,000/mt for spodumene 6%. Also, suppliers who are able to provide a higher quality chemical grade spodumene yielding lower conversion cost will also be able to achieve higher prices.

The market for technical grade spodumene is a specialty chemicals market, which addresses the specific needs for customers in the glass and ceramics industry. Historically, prices have been reflecting the higher value of iron free spodumene like in lithium carbonate and specific properties of the crystalline material.

Therefore, pricing for technical grade spodumene is directly linked to the lithium oxide content in lithium carbonate.

Ongoing Work

Highlights include:

- The new geotechnical program is being completed.
- Front-End Engineering is being conducted and detailed engineering phase for infrastructure, crushing plant, concentrator, service buildings and power station is underway.
- The detailed design of the co-disposal facility for the stacked tailings and pit waste rock is under way.
- Detailed engineering for the waste rock piles (tailings and waste rock co-disposal, ore and overburden) is progressing well.
- Long-lead equipment is out to tender.
- Production of Global CA conditions is nearing completion.

Report Filing

The Corporation plans to file an NI 43-101 technical report that summarizes the Rose Lithium-Tantalum project on SEDAR (http://www.sedar.com) and on the Corporation's website (http://www.cecorp.ca/en/) within 45 days.

Qualified Persons

The Feasibility Study was prepared in accordance to NI 43-101 by WSP Canada Inc (WSP), Bumigeme inc, and InnovExplo Inc. InnovExplo was responsible for the resource estimate and the mine plan, Bumigeme was responsible for the mineral processing, WSP was responsible for environmental study, project infrastructure, financial modelling, and report integration. Information regarding the outlook for lithium comes from a market study prepared by Mr. Gerrit Fuelling on behalf of the Corporation. Mr. Fuelling is an independent consultant specializing in the lithium market.

The qualified persons for the study are:

InnoExplo Inc.

- Carl Pelletier, P.Geo, Geologist
- Simon Boudreau, P.Eng, Mining Engineer

Bumigeme

- Florent Baril, P.Eng, Metallurgical Engineer

WSP

- Eric Poirier, P.Eng, PMP, Project Manager
- Paul Gauthier, P.Eng., Mining Engineer
- Olivier Joyal, P.Geo, Geologist

About Critical Elements Lithium Corporation

Critical Elements aspires to become a large, responsible supplier of lithium to the flourishing electric vehicle and energy storage system industries. To this end, Critical Elements is advancing the wholly-owned, high-purity Rose lithium project in Québec, the Corporation's first lithium project to be advanced within a land portfolio of over 1,050 km^2. On August 29, 2023, the Corporation announced results of a new Feasibility Study on Rose for the production of spodumene concentrate. The after-tax internal rate of return for the Project is estimated at 64.8%, with an estimated after-tax net present value of US$2.2B at an 8% discount rate. In the Corporation's view, Québec is strategically well-positioned for US and EU markets and boasts good infrastructure including a low-cost, low-carbon power grid featuring 94% hydroelectricity. The project has received approval from the Federal Minister of Environment and Climate Change on the recommendation of the Joint Assessment Committee, comprised of representatives from the Impact Assessment Agency of Canada and the Cree Nation Government and also received the Certificate of Authorization pursuant to section 164 of Québec's *Environment Quality Act* from the Québec Minister of the Environment, the Fight against Climate Change, Wildlife and Parks.

For further information, please contact:

Patrick Laperrière
Director of Investor Relations and Corporate Development
514-817-1119
plaperriere@cecorp.ca
www.cecorp.ca

Jean-Sébastien Lavallée, P. Géo.
Chief Executive Officer
819-354-5146
jslavallee@cecorp.ca
www.cecorp.ca

Cautionary statement concerning forward-looking statements

This news release contains "forward-looking information" within the meaning of Canadian Securities legislation. Generally, forward-looking information can be identified by the use of forward-looking terminology such as "scheduled", "anticipates", "expects" or "does not expect", "is expected", "scheduled", "targeted", or "believes", or variations of such words and phrases or statements that certain actions, events or results "may", "could", "would", "might" or "will be taken", "occur" or "be achieved". Forward-looking information contained herein include, without limitation, statements relating to mineral reserve estimates, mineral resource estimates, realization of mineral reserve and resource estimates, capital and operating costs estimates, the timing and amount of future production, costs of production, success of mining operations, the ranking of the project in terms of cash cost and production, permitting, economic return estimates, power and storage facilities, life of mine, social, community and environmental impacts, lithium and tantalum markets and sales prices, off-take agreements and purchasers for the Corporation's products, environmental assessment and permitting, securing sufficient financing on acceptable terms, opportunities for short and long term optimization of the Project, and continued positive discussions and relationships with local communities and stakeholders. Forward-looking information is based on assumptions management believes to be reasonable at the time such statements are made.

Although Critical Elements has attempted to identify important factors that could cause actual results to differ materially from those contained in forward-looking information, there may be other factors that cause results not to be as anticipated, estimated or intended. Factors that may cause actual results to differ materially from expected results described in forward-looking information include, but are not limited to: Critical Elements' ability to secure sufficient financing to advance and complete the Project, uncertainties associated with the Corporation's resource and reserve estimates, uncertainties regarding global supply and demand for lithium and tantalum and market and sales prices,

inflation and its impact on the Project's capital and operating costs estimates, uncertainties associated with securing off-take agreements and customer contracts, uncertainties with respect to social, community and environmental impacts, uncertainties with respect to optimization opportunities for the Project, as well as those risk factors set out in the Corporation's year-end Management Discussion and Analysis for its most recent quarter ended May 31, 2023 and other disclosure documents available under the Corporation's SEDAR profile.

Forward-looking information contained herein is made as of the date of this news release Although the Corporation has attempted to identify important factors that could cause actual results to differ materially from those contained in the forward-looking information or implied by 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 forward-looking information and statements will prove to be accurate, as actual results and future events could differ materially from those anticipated, estimated or intended. Accordingly, readers should not place undue reliance on forward-looking statements or information. The Company undertakes no obligation to update or reissue forward-looking information as a result of new information or events except as required by applicable securities laws.