

PRESS RELEASE

CRITICAL ELEMENTS FILES NI-43-101 TECHNICAL REPORT FOR THE ROSE LITHIUM-TANTALUM FEASIBILITY STUDY

October 11th, 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 filing on SEDAR+ of a National Instrument 43-101 - *Standards of Disclosure for Mineral Projects* ("**NI 43-101**") compliant technical report representing the qualifying report for the recently-announced Feasibility Study at the Rose Lithium-Tantalum Project located in James Bay, Québec. For more information, please refer to Critical Elements' press release dated August 29, 2023. Highlights of the Feasibility Study are as follows:

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 (Ta₂O₅)

A copy of the technical report, which was filed on SEDAR on October 11, 2023, will be available on the Critical Elements' website at <https://www.cecorp.ca/en/rose-43-101/>.

Qualified Persons for NI 43-101 compliant report

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-Tantalum project in Québec, the Corporation's first lithium project to be advanced within a land portfolio of over 1,050 km². 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 65.7%, 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, 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, and the project mining lease from the Québec Minister of Natural Resources and Forests under the Québec *Mining Act*.

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

Neither the TSX Venture Exchange nor its Regulation Services Provider (as that term is described in the policies of the TSX Venture Exchange) accepts responsibility for the adequacy or accuracy of this release.

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 the completion of the 2023 exploration program and its related objectives, the completion of the provincial permitting process and its potential positive effects on the Corporation and the Project, the completion of engineering study for a chemical plant to produce high quality lithium hydroxide monohydrate, the preparation of the front-end engineering design work for the process plant and related infrastructure, the announce, on August 29th, 2023, of results of a feasibility study on Rose for the production of spodumene concentrate, off-take agreements and purchasers for the Corporation's products, securing sufficient financing on acceptable terms 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. There can be no assurance that such statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Accordingly, readers should not place undue reliance on forward-looking information.

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: results of the Corporation's 2023 exploration program and effects on the Corporation's stated objectives, results of the engineering study for a chemical plant to produce high quality lithium hydroxide monohydrate, issues encountered in connection with the front-end engineering work, impact of the Updated Feasibility Study on the Project, 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, 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 dated 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 and Critical Elements disclaims any obligation to update any forward-looking information, whether as a result of new information, future events or results or otherwise, except as required by applicable securities laws.