

PRESS RELEASE

Critical Elements Lithium commences summer exploration program

July 19, 2022 - Montréal, Québec — Critical Elements Lithium Corporation (TSX-V: CRE) (US OTCQX: CRECF) (FSE: F12) ("Critical Elements" or the "Corporation") is pleased to announce that a summer exploration program is underway on its highly prospective, 700 square kilometre land portfolio, including resource expansion drilling on the advanced Rose Lithium-Tantalum Project ("Rose" or "Rose Project").

The Corporation commenced a surface exploration program on the Nemaska belt portion of the portfolio in early June and plans to pursue a prospecting, mapping, and sampling program until late August. Goldspot Discoveries Corp. ("Goldpspot") has been mandated to complete the targeting work that was initiated in 2021, to extend coverage to the entire 100%-owned portfolio using Artificial Intelligence ("AI") to assess potential target areas.

In addition to the AI program, Goldspot has also been mandated to conduct the ground-truthing surface exploration program. This program will include prospecting and sampling of previously identified targets from the 2021 program (see press release dated September 7, 2021), as well as systematic prospecting and sampling of the remaining properties.

In addition to the commencement of surface exploration programs, Critical Elements is pleased to announce it has received drilling permits for the Rose projects. A diamond drill rig has already been mobilized to the Rose project and drilling is underway. The Corporation plans to drill up to 25,000 metres (see press release dated April 6, 2022) in total. The main objectives of the drilling program are:

- Expand the current 17-year mine life of the Rose project, targeting the northern extension of the Rose deposit
- Test several satellite showings proximal to the Rose deposit
- Expand the known Lemare lithium zone, aiming to delineate an initial mineral resource estimate in early 2023

The planned program of up to 25,000 metres will be divided between the Corporation's projects as to approximately:

- 10,000 metres for the expansion of the Rose deposit
- 7,000 metres to delineate an initial mineral resource estimate of the Lemare zone
- 8,000 metres for exploration and test newly identified targets

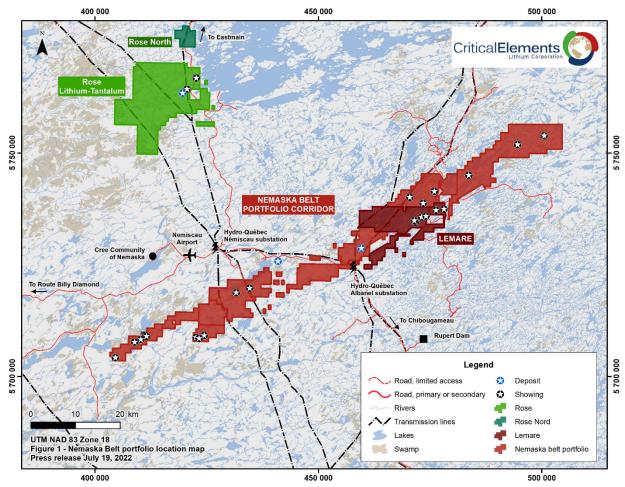


Figure 1: James Bay projects location map

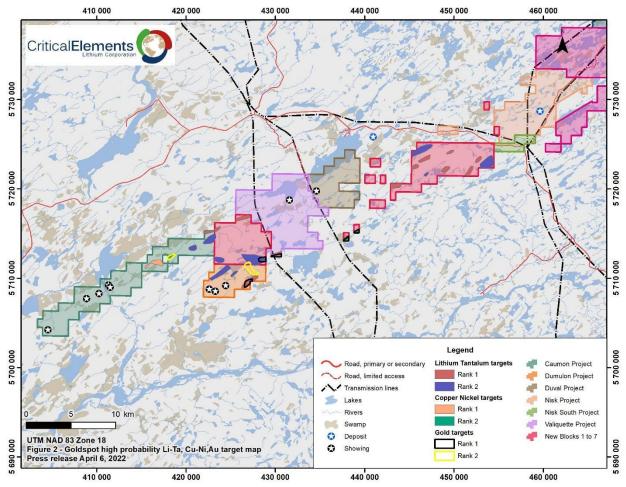


Figure 2: Goldspot probability Li-Ta, Cu-Ni, Au target map

Jean-Sébastien Lavallée, CEO of Critical Elements commented: "We are very excited to resume exploration on our extensive land portfolio, and in particular drilling on the Rose and Lemare projects. In the past, we have been able to demonstrate how quickly and efficiently we can define resources. We are very enthused about the exploration potential of our portfolio and the ability to delineate more resources."

Qualified persons

François Gagnon, P. Geo., Senior Exploration Geologist of the Corporation, and Qualified Person under NI 43-101 on standards of disclosure for mineral projects, has prepared and reviewed the content of this press release.

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. Rose is the Corporation's first lithium project to be advanced within a land portfolio of over 700 square kilometers. On June 13th, 2022, the Corporation announced results of a feasibility study on Rose for the production of spodumene concentrate. The after-tax internal rate of return for the Project is estimated at 82.4%, with an estimated after-tax net present value of US\$1.9 B 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 93% 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; The Corporation is working to obtain similar approval under the Québec environmental assessment process. The Corporation also has a good, formalized relationship with the Cree Nation.

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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 2022 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 June 13th, 2022, 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 2022 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 August 31, 2021 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.