

PRESS RELEASE

CORPORATE UPDATE

February 17th, 2022 - MONTRÉAL, QUÉBEC – Critical Elements Lithium Corporation (TSX-V: CRE) (US OTCQX: CRECF) (FSE: F12) ("**Critical Elements**" or the "**Corporation**") is pleased to announce it has retained the services of Bumigeme Inc. ("Bumigeme"), WSP in Canada ("WSP"), and Golder Associates Ltd ("Golder") to prepare front-end engineering design work for the process plant and related infrastructure and the detailed design of the co-disposal facility for the waste rock and filtered tailings at the Rose Lithium-Tantalum project (the "Rose Project").

Process plant and related infrastructure

Bumigeme will conduct a gap analysis on the process plant which will focus on design review, optimization, and mitigation of potential risks related to the flowsheet developed during the feasibility study released by the Corporation in 2017 (the "2017 Feasibility Study") a copy of which is available on the Corporation website and on SEDAR under its issuer profile. Bumigeme will then conduct the front-end engineering design ("FEED") which will optimize and freeze the design of the process plant and produce an updated capital cost estimate. The work will deliver a comprehensive package of documents which will become the basis for the detailed engineering and for the procurement of long lead equipment.

WSP will conduct the FEED of process and non-process infrastructure such as the main electrical station and 25 kV distribution, utilities, final effluent facility, and mining support facilities. The FEED will advance the engineering to 30% to 40% completion, develop engineering documents to proceed with execution of the earthworks, develop engineering and commercial documents to proceed with the procurement of long-lead items, and produce an updated construction cost estimate for the areas concerned.

Golder will complete the detailed engineering design of the stack tailings facility ("STF") for filtered mill tailings in co-disposal with a pit waste rock disposal facility ("WRF"). The engineering work will include STF and WRF hazard classification, tailings laboratory testing, staging and placement, water management design, hydrogeological modelling and seepage collection, stability assessment, and an instrumented monitoring plan.

Bumigeme is a Montréal based multidisciplinary engineering firm offering services in geotechnical, mining operations, ore processing, mechanical, civil and electrical engineering. Bumigeme has executed several prefeasibility and feasibility studies as well as detailed engineering and construction activities on mining projects in Canada, South America and West Africa. The company conducted the original mineral processing portion of the 2017 Feasibility Study for the Rose Project.

As one of the world's leading professional services firms, WSP provides engineering, design, and strategic advisory services in Transportation & Infrastructure, Property & Buildings, Environment, Power & Energy, Resources and Industry sectors. The company has previously conducted the infrastructure portion of the 2017 Feasibility Study and environmental impact assessment for the Rose Project.

Golder is a global organization which offers construction, design, and consulting services in their specialist areas of earth, environment, and energy characterized by technical excellence, innovative solutions, and award-winning customer service. Their clients work in key sectors, namely mining, oil and gas, manufacturing, and the energy and infrastructure sectors. Golder is a member of the WSP family of companies.

Updated Feasibility Study for the spodumene process plant, infrastructure, and mine

The Corporation is also planning to prepare an update of the 2017 Feasibility Study (the “Updated Feasibility Study”) on the Rose Project. The Updated Feasibility Study will include a review of pricing for spodumene concentrates, and a review of the capital and operating costs.

Patiently awaiting the conclusion of the permitting process

The Province of Québec is considered one of the top mining jurisdictions globally by the Fraser Institute in its annual survey of mining companies. Permitting transparency is one of the key factors in the institute’s considerations and certainty of land tenure is an essential driver of mining investment.

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.

The final remaining step in the Rose Project’s approval process is the completion of the provincial permitting process, which runs parallel to the federal process. Pursuant to the James Bay and Northern Quebec Agreement (JBNQA), the provincial environmental assessment is conducted jointly by the Cree Nation Government and the Government of Quebec under the Environmental and Social Impact Review Committee (“COMEX”). The provincial assessment is already well advanced and has undergone several rounds of questions from COMEX and answered by Critical Elements in the normal course of the assessment process. At this time, Critical Elements has received no further questions from COMEX and remains confident in a positive outcome given the stated support for lithium project development in the Province of Québec.

Designing exploration program

The Corporation is currently planning the details for a 2022 exploration program. The program’s objectives will include:

1. Expand the Rose deposit, following the primary deposit down dip to the north and testing nearby satellite deposits.
2. Confirm and expand the known Lemare zone identified by drilling in 2016-2017.
3. Demonstrate the potential of the project portfolio by surface exploration focusing on priority targets identified by Goldspot Discoveries.

Details on the exploration program will be provided in an upcoming news release.

Qualified persons

Paul Bonneville, Eng., is the qualified person that has reviewed and approved the technical contents of this news release on behalf of the Corporation.

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 Quebec. Rose is the Corporation’s first lithium project to be advanced within a land portfolio of over 700 square kilometers. In 2017, the Corporation completed a feasibility study on Rose for the production of spodumene concentrate. The internal rate of return for the Project is estimated at 34.9% after tax, with a net present value estimated at C\$726 million at an 8% discount rate. In the Corporation’s view, Quebec 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

Quebec 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 Project’s approval process, the completion of the provincial permitting process, capital and operating costs estimates, 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 Rose 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. 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: 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.