

PRESS RELEASE

Critical Elements Lithium Announces appointment of Mr. Hughes Périgny as Senior Project Manager

October 24, 2022 - Montréal, Québec - Critical Elements Lithium Corporation (TSX-V: CRE) (US OTCQX: CRECF) (FSE: F12) ("Critical Elements" or the "Corporation") is pleased to announce the appointment of Mr. Hughes Périgny as Senior Project Manager.

Mr. Hughes Périgny, P.Eng. brings to the Corporation a vast experience in engineering and construction acquired in Quebec and internationally. Mr. Périgny 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.

Jean-Sébastien Lavallée, Chief Executive Officer of Critical Elements commented: "We are very pleased to welcome Hughes Périgny as Senior Project Manager in our Corporation. Hughes will be part of the team of Yves Perron, our Vice President Engineering, Construction and Reliability. Both have been key players in the success of several projects, including the construction of the Renard mine, a project in the James Bay territory. We are confident that we will make the most of his experience in the mining industry to make our project a success."

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.

For further information, please contact:

Patrick Laperrière
Director of Investor Relations and Corporate Development
514-817-1119
plaperrière@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.