

## PRESS RELEASE

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### Critical Elements Lithium samples up to 2.22% Li<sub>2</sub>O at Duval and 2.44% Li<sub>2</sub>O in the southwestern extension of Lemare

**September 5<sup>th</sup>, 2023** - MONTRÉAL, QUÉBEC – Critical Elements Lithium Corporation (TSX-V: CRE) (US OTCQX: CRECF) (FSE: F12) ("**Critical Elements**" or the "**Corporation**") is pleased to report the results of exploration of multiple lithium-tantalum pegmatite ("**LCT pegmatite**") trends with positive prospecting sampling results on the Duval (**Table 1**) and Lemare (**Table 2**) sites.

Progression of the wholly owned Rose lithium-tantalum deposit toward a final investment decision is Critical Elements' primary goal. Rose is one of the most advanced hardrock lithium development projects in North America (see updated feasibility study results in the [news release](#) dated August 29, 2023), with key environmental permits and crucial Impact and Benefits Agreement in place. However, the Corporation also owns over 1,050 square kilometres of concessions that are highly prospective in the Eeyou Istchee region of Québec and management intends to catalyze the value inherent in this asset. To this end, Critical Elements launched a surface exploration program as announced in the [news release](#) dated May 31, 2023.

During June 2023, Critical Elements conducted a prospecting program over several areas of the Corporation's Nemaska belt property portfolio using ground-based and helicopter-borne teams of geologists. The program was interrupted for several weeks due to the unprecedented wildfire situation in the region. The Corporation is deeply concerned by the damage caused to the environment, as well as the negative impact on the people of Eeyou Istchee. Our teams have now returned to the field to continue with the planned program. The program's objective is to identify new pegmatite bodies using systematic rock geochemical sampling of ranked LCT-pegmatite targets as defined by ALS Goldspot "SmartTarget" methodology, which combines both expert-driven and machine-learning data-driven targeting approaches to refine the geological interpretation of the properties for further exploration work.

A total of 108 rock samples were collected during the short exploration campaign of June 2023. Prospecting confirms the discovery of the new two-kilometre-long trend of white pegmatite on the Corporation's 100% owned Duval property that hosts several lithium, cesium, and tantalum anomalies. Individual results include 2.22% Li<sub>2</sub>O, 1.54% Li<sub>2</sub>O and 0.54% Li<sub>2</sub>O in an angular pegmatite boulder field that may have been transported one kilometre from the main discovery outcrops during glaciation (**Table 1** and **Figure 1**). These mineralized pegmatites are spatially associated with mafic volcanics along an interpreted regional-scale shear zone that borders the Nemiscau Belt, in a similar geological setting that extends to the Whabouchi lithium deposit, three kilometres off the claims to the northeast (**Figure 3**). These results begin to show the potential of the Corporation's Nemaska trend properties.

In addition, the Corporation has received sample results confirming the summer 2022 discovery of the extension of the LCT pegmatite trend on the Lemare property marked by a sample grading 0.38% Li<sub>2</sub>O. Recent high-grade results include up to 2.44% Li<sub>2</sub>O and 1.60% Li<sub>2</sub>O (**Table 2** and **Figure 2**) in *in situ* pegmatite outcrop. This highlights the potential for future drilling to extend the LCT pegmatite trend to over 5 kilometres on the Lemare property.

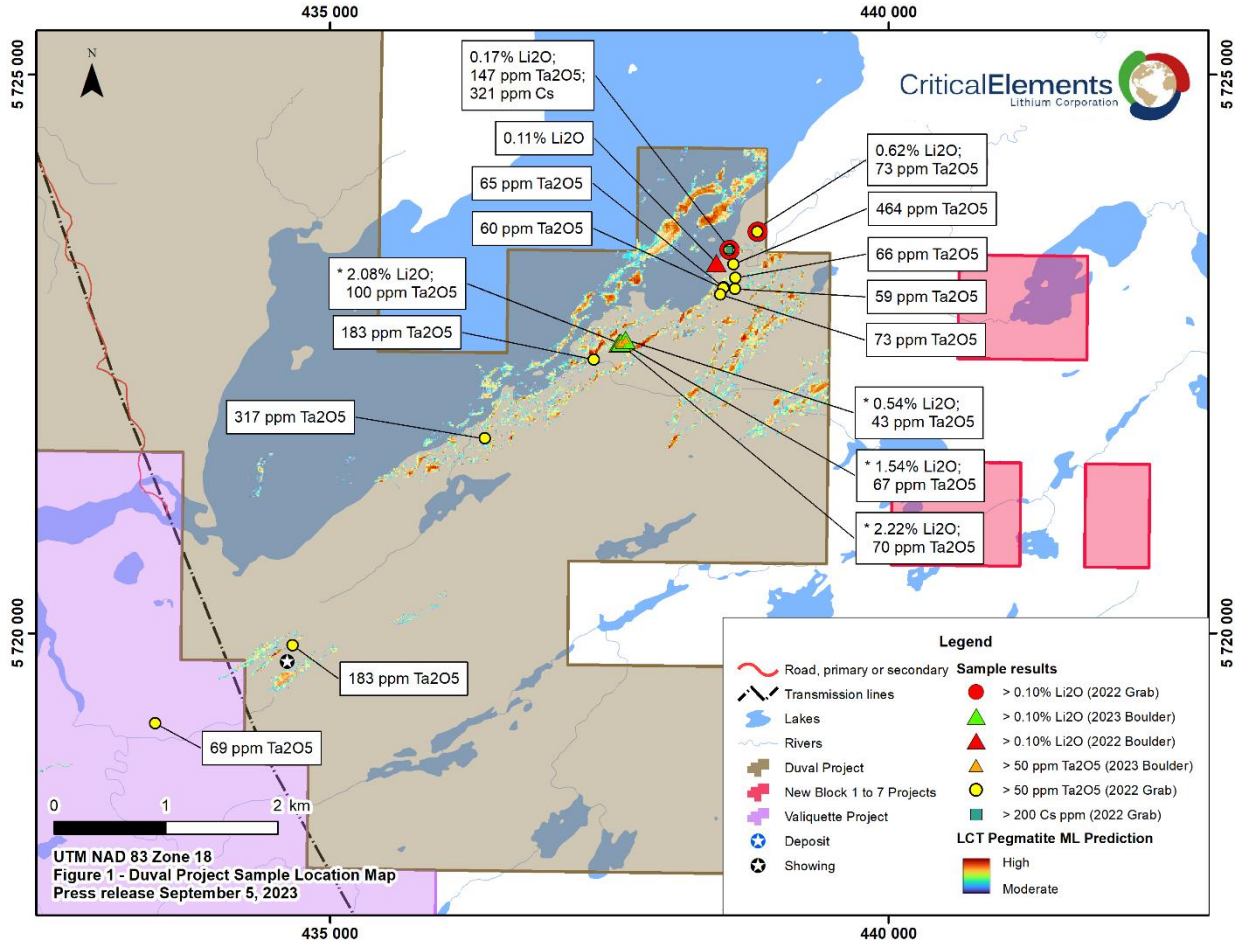
The reader is cautioned that grab samples are selective by nature and may not represent average grades of the mineralization in the pegmatites.

**Table 1: Selected Duval Sample results**

Property	Sample number	UTM NAD 83 ZN18 Easting	UTM NAD 83 ZN18 Northing	Li <sub>2</sub> O (%)	Ta <sub>2</sub> O <sub>5</sub> (ppm)	Cs (ppm)
Duval	H874004	437589	5722597	2.22	70	42
Duval	H874005	437605	5722603	1.54	67	12
Duval	H874006	437645	5722627	0.54	43	14

Note: Grab samples are selective by nature and may not to represent average grades of the pegmatite.  
 All samples are angular boulder.

**Figure 1: Duval Project Sample Location Map**



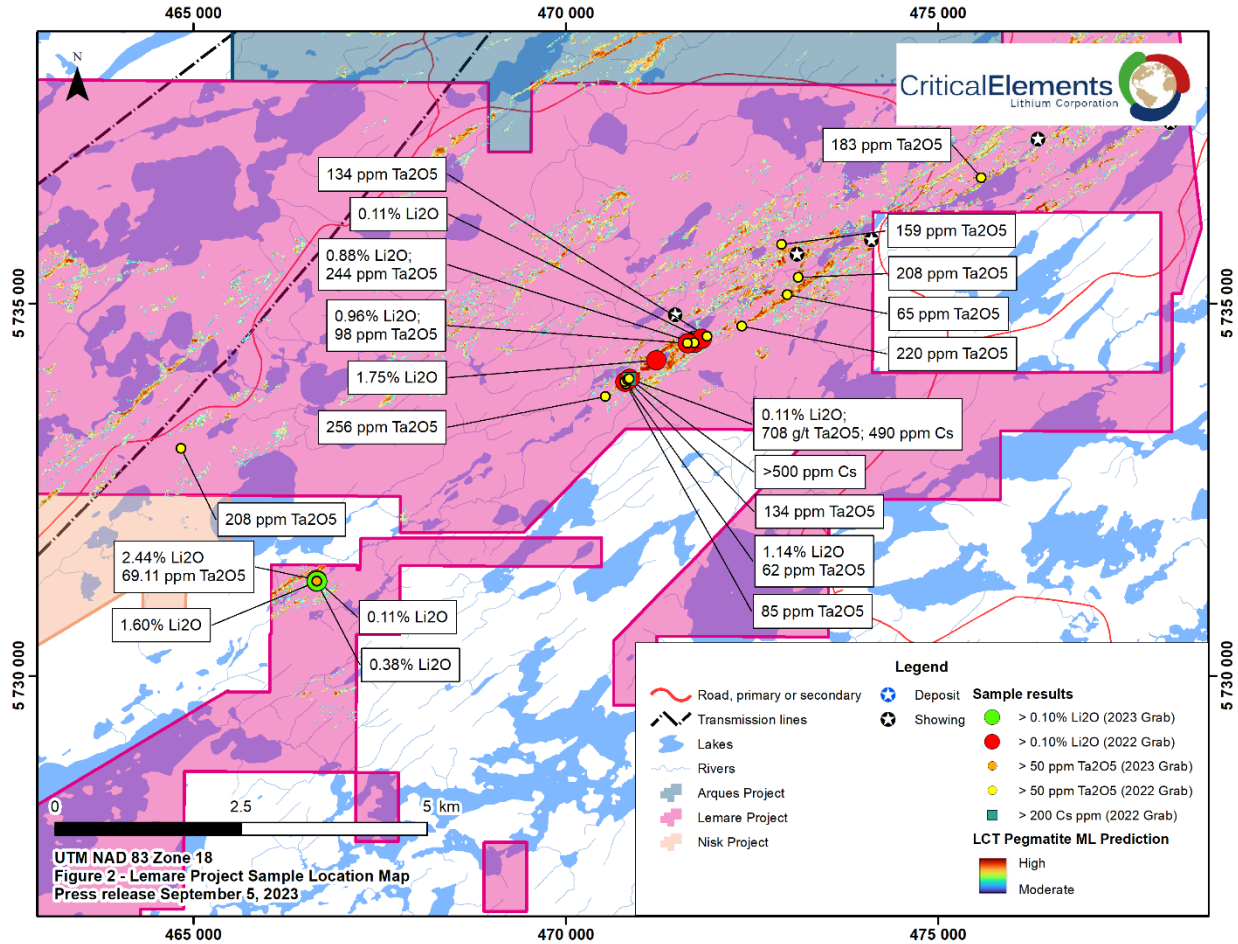
\*2.08% Li<sub>2</sub>O, 2.22% Li<sub>2</sub>O 1.54% Li<sub>2</sub>O, 0.54% Li<sub>2</sub>O (Table 1) in an angular pegmatite boulder field.

**Table 2: Lemare best results**

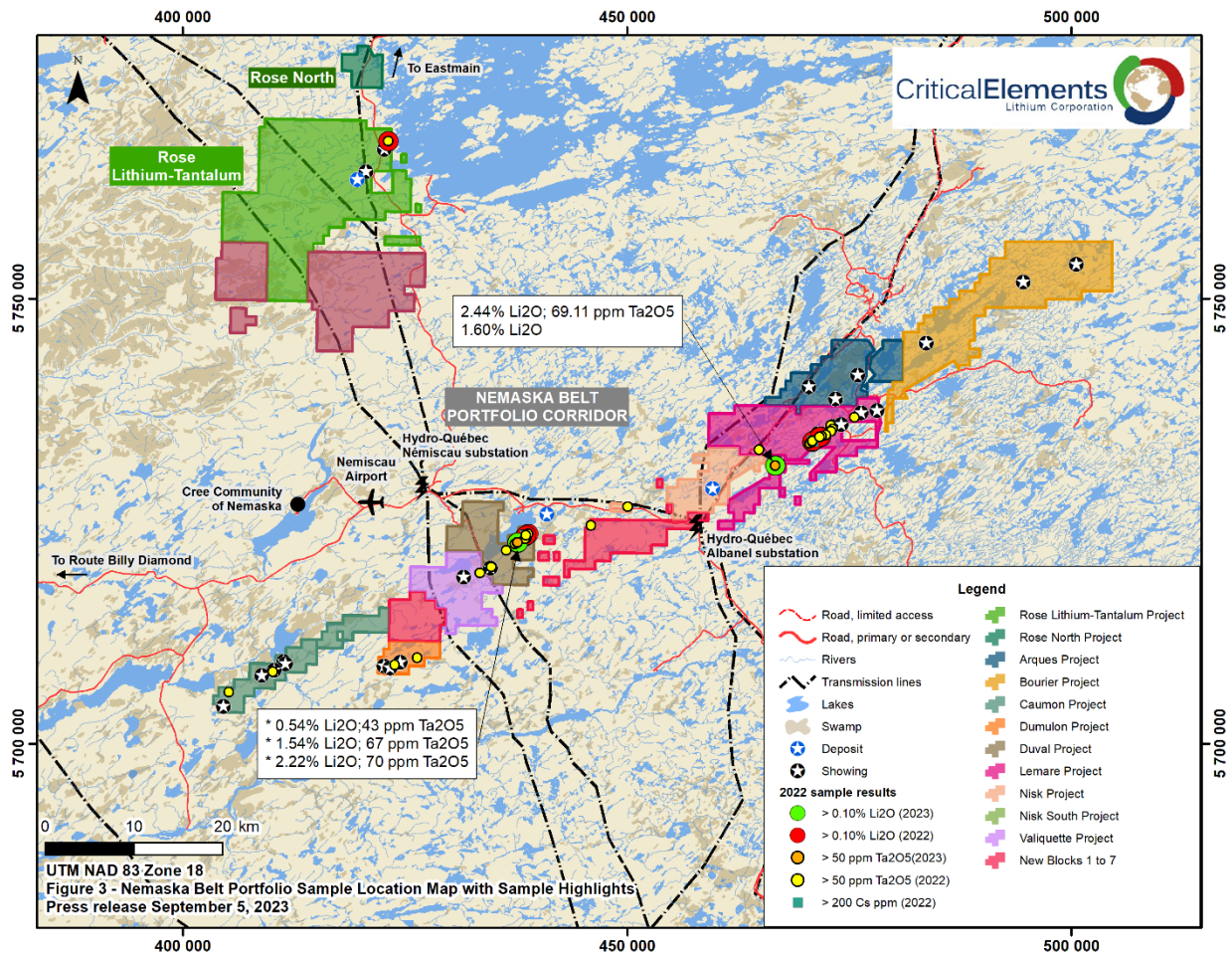
Property	Sample number	UTM NAD 83 ZN18		Li <sub>2</sub> O (%)	Ta <sub>2</sub> O <sub>5</sub> (g/t)	Cs (ppm)
		Easting	Northing			
Lemare	H873901	466653	5731271	<b>2.44</b>	<b>57</b>	117
Lemare	H873902	466654	5731272	<b>1.60</b>	32	72

(Grab samples are selective by nature and are unlikely to represent average grades of the deposits).

**Figure 2: Lemare Project Sample Location Map**



**Figure 3: Nemaska Belt Portfolio Sample Location Map with Sample Highlights**



\*2.08% Li<sub>2</sub>O, 2.22% Li<sub>2</sub>O 1.54% Li<sub>2</sub>O, 0.54% Li<sub>2</sub>O (Table 1) in an angular pegmatite boulder field.

The surface exploration program with five crews continues to ground-truth several LCT-pegmatite targets. Results will be released in context as the program progresses. Management is currently engaged in designing a significant fall and winter drill program with multiple rigs to drill-test new targets including the Duval discovery, advance the Lemare deposit, and expand the Rose project resource inventory including potential proximal satellite mineralization. Details of this extensive program will be forthcoming near-term.

### Quality assurance/quality control

Quality assurance and quality control procedures have been implemented to ensure best practices in sampling and analysis of the core samples. The drill core was logged and then split, with one-half sent for assay and the other retained in the core box as a witness sample. Duplicates, standards and blanks were regularly inserted into the sample stream. The core samples were delivered, in secure tagged bags, directly to the ALS Minerals laboratory facility in Val-d'Or, Quebec. The samples are weighed and identified prior to sample preparation. The samples are crushed to 70% minus 2 mm, then separated and pulverized to 85% passing 75 µm. All samples are analyzed using sodium peroxide fusion ME-MS-89L, with full analysis for 52 elements. Value over 25,000 ppm Li were re-assays using Li-ICP-82b and value over 2,500 ppm Ta<sub>2</sub>O<sub>5</sub> were re-assays using Ta-XRF10.

The Corporation has resumed its mineral exploration and development programs as of early August 2023, as the wildfires in the region gradually abate. This includes surface exploration program over the Rose, Rose North and South and Nemaska Belt properties with five crew support by helicopter. Additionally, the corporation is conducting environmental baseline fieldwork, lidar survey and geotechnical work on Rose site to support the advancement of the details engineering work.

## Qualified persons

Paul Bonneville, Eng, is the qualified persons that have 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 Québec, the Corporation's first lithium project to be advanced within a land portfolio of over 1,050 km<sup>2</sup>. 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 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.

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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 results and completion of the 2023 exploration program (including the potential of the Corporation's Nemaska trend properties) and its related objectives. 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: final and complete results of the Corporation's 2023 exploration program and effects on the Corporation's stated objectives, as well as those risk factors set out in the Corporation's 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 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.