PRESS RELEASE

CRITICAL ELEMENTS LITHIUM INTERCEPTS 1.04% Li_2O OVER 33.85 METERS IN DRILLING AT LEMARE

June 20th, 2023 - MONTRÉAL, QUÉBEC – Critical Elements Lithium Corporation (TSX-V: CRE) (US OTCQX: CRECF) (FSE: F12) ("**Critical Elements**" or the "**Corporation**") is pleased to report results from the winter drill program completed on the Lemare Project in the James Bay region, Eeyou Istchee, Québec. During winter 2023, the Corporation completed a 5,554-meter drill program, encompassing thirty-one drillholes to test the known lithium bearing zone on the East-West extension, as well at depth. The best intercepts are presented in Table 1 and Figure 2.

Selected drill intersection highlights include:

- LE-23-32: 1.04% Li_2O and 67.91 ppm Ta_2O_5 over 33.85 m, including
  - 1.42% Li_2O and 74.24 ppm Ta_2O_5 over 18.8 m
- LE-23-33: 0.88% Li_2O and 113.92 ppm Ta_2O_5 over 12.90 m
- LE-23-35: 1.63% Li_2O and 104.30 ppm Ta_2O_5 over 5.25 m
- LE-23-44: 1.51% Li_2O and 54.15 ppm Ta_2O_5 over 4.95 m
- LE-23-48: 0.89% Li_2O and 48.89 ppm Ta_2O_5 over 7.10 m
- LE-23-49: 0.97% Li_2O and 64.43 ppm Ta_2O_5 over 8.85 m, including
  - 1.59% Li_2O and 61.34 ppm Ta_2O_5 over 2.40 m.

Critical Elements controls one of the largest hard rock lithium exploration land positions in North America, totalling 1,050 square kilometres specifically assembled for their geological setting and proximity to roads and Québec's 100% renewable energy grid. For example, its land position includes the Corporation's advanced Rose lithium-tantalum project ("Rose") and covers the extrapolated northeast and southwest structural extensions of the Nemaska Belt, which hosts the Whabouchi mine being developed by Nemaska Lithium.

Critical Elements has outlined its exploration plans in several news releases, most recently on February 1, May 16, and May 31. In addition to demonstrating the value inherent in the Corporation's exploration land package, there are three goals:

1. Extend the life of the primary Rose project;
2. Advance the Lemare project toward an initial resource estimate and technical studies if warranted; and
3. Demonstrate the potential of new targets highlighted via machine learning, or artificial intelligence.

Table 1: Lemare project – Summary of the significant lithium results from the winter drilling program

Hole #	UTM NAD 83 ZN18		Length	Azimuth	Dip	Number of samples	From	To	Interval*	Li_2O	Ta_2O_5
	Easting	Northing	(m)	(°)	(°)		(m)	(m)	(m)	(%)	(ppm)
LE-23-32	471182	5734263	150.00	155	-70	32	25.10	58.95	33.85	1.04	67.91
including							30.30	58.15	27.85	1.23	70.99

including							30.30	49.10	18.80	1.42	74.24
LE-23-33	471143	5734249	150.00	160	-70	56	41.40	54.30	12.90	0.88	113.92
including							50.60	53.80	3.20	1.65	186.93
							56.10	60.15	4.05	0.18	135.91
							75.70	77.20	1.50	0.56	71.43
							89.95	90.45	0.50	0.43	48.60
							91.95	93.20	1.25	0.21	192.32
							102.05	102.55	0.50	0.14	100.86
							106.00	106.70	0.70	0.14	129.44
							139.10	139.60	0.50	0.11	131.88
LE-23-34	471103	5734237	150	155	-60	64	46.00	60.15	14.15	1.12	78.80
including							48.25	52.25	4.00	1.99	63.53
							68.00	69.50	1.50	0.39	727.78
							69.80	70.35	0.55	1.97	4249.43
							77.50	79.00	1.50	0.85	159.96
							83.00	83.40	0.40	0.71	74.61
							116.20	118.30	2.10	0.23	74.58
LE-23-35	471063	5734209	150	155	-70	54	70.10	71.85	1.75	1.09	38.70
							91.00	92.20	1.20	0.46	192.32
							93.65	98.90	5.25	1.63	104.30
LE-23-36	470993	5734175	253	155	-50	122	63.40	67.95	4.55	0.44	138.38
							85.50	86.05	0.55	0.27	111.85
							103.85	104.70	0.85	0.12	120.89
							214.15	219.80	5.65	0.16	66.00
LE-23-37	470972	5734101	222	155	-50	88	2.10	2.65	0.55	0.10	337.02
							35.30	35.85	0.55	0.12	307.72
							53.10	56.40	3.30	0.83	141.66
							144.9	149.50	4.60	0.11	83.60
LE-23-38	470923	5734095	286	155	-60	139	89.00	90.40	1.40	0.18	250.33
							102.75	103.05	0.30	0.14	145.31
LE-23-39	470937	5733931	186	155	-50	68	No significant value				
LE-23-40	470942	5733934	147	335	-50	33	81.45	81.90	0.45	0.11	119.42
LE-23-41	471062	5734018	150	155	-50	60	No significant value				
LE-23-42	471490	5734606	300	155	-50	64	No significant value				
LE-23-43	471412	5734532	276	155	-50	110	173.95	175.20	1.25	0.13	42.13
LE-23-44A	471344	5734464	18	155	-50	0	Abandoned hole				
LE-23-44	471344	5734464	282	155	-50	72	113.50	136.25	22.75	0.44	87.41
including							130.50	135.45	4.95	1.51	54.15
LE-23-45	471344	5734464	234	155	-65	57	No significant value				
LE-23-46	471339	5734460	207	200	-50	51	No significant value				
LE-23-47	471263	5734428	201	155	-50	16	No significant value				
LE-23-48	471177	5734368	225	155	-50	47	144.80	147.00	2.20	0.23	133.66
							161.00	165.50	4.50	0.47	68.02
							172.10	179.20	7.10	0.89	48.89
							186.90	188.00	1.10	0.11	172.79
LE-23-49	471129	5734342	203.2	155	-50	51	181.75	190.60	8.85	0.97	64.43
including							181.75	184.15	2.40	1.59	61.34
including							187.50	190.60	3.10	1.13	79.87
LE-23-50A	471085	5734320	30	155	-55	0	Abandoned hole				
LE-23-50	471085	5734320	213	155	-55	28	185.60	188.10	2.50	1.08	51.01

LE-23-51	470558	5733806	207	155	-50	45		No significant value			
LE-23-52	470377	5733697	204	155	-50	124		No significant value			
LE-23-53	471905	5734613	168	150	-50	41	37.20	45.00	7.80	0.13	35.24
							77.20	88.35	11.15	0.12	37.47
LE-23-54	471947	5734638	165	155	-50	34	38.15	42.80	4.65	0.10	51.95
							49.10	57.40	8.30	0.11	28.51
LE-23-55	472144	5734688	171	150	-50	9		No significant value			
LE-23-56	472144	5734688	84	330	-45	47		No significant value			
LE-23-57	472200	5734777	105	155	-50	28		No significant value			
LE-23-58	472200	5734777	102	330	-45	78		No significant value			
LE-23-59	472305	5734821	135	330	-50	75		No significant value			
LE-23-60	472305	5734821	180	330	-63	123		No significant value			

***Length along drill core. The Corporation does not have enough information at this stage to estimate the true width.**

Figure 1: Location of the Lemare spodumene project in the James Bay region in Québec

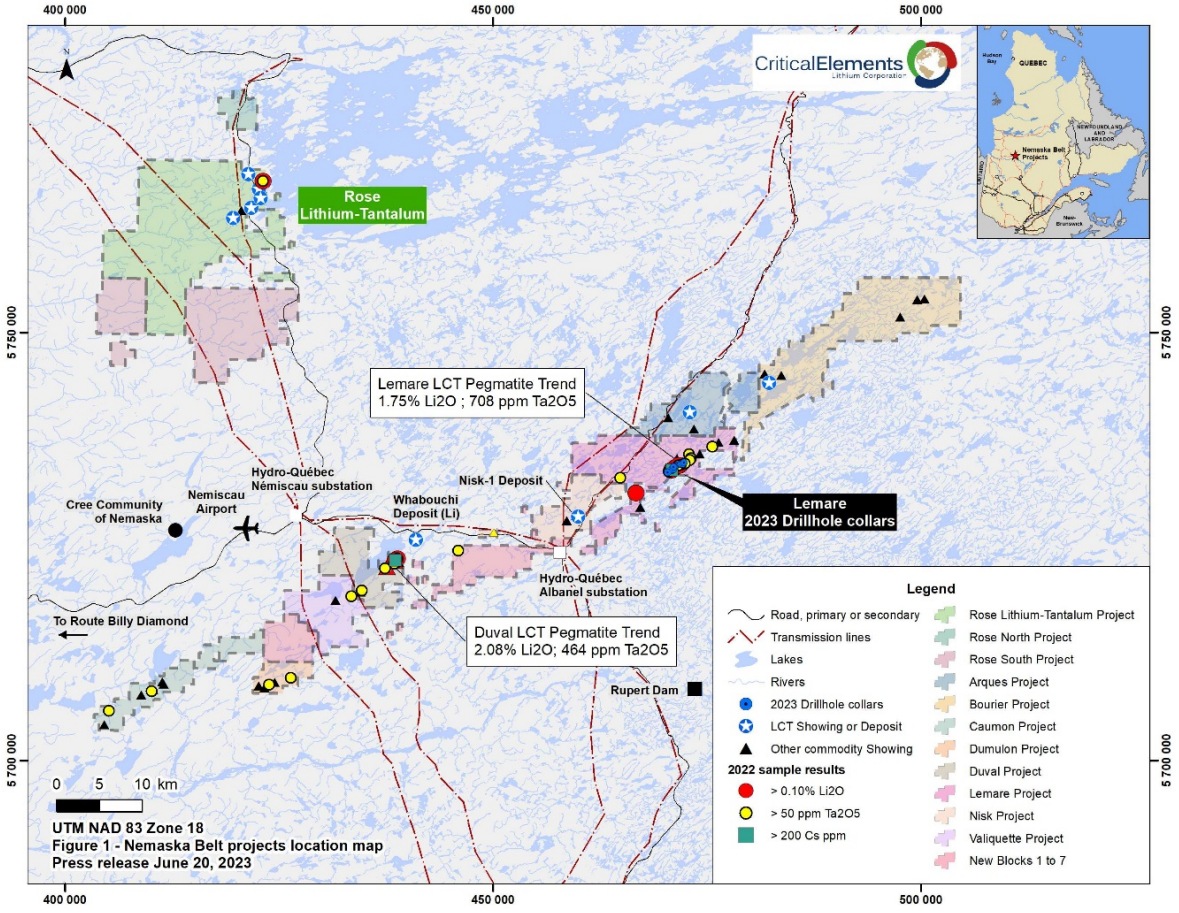
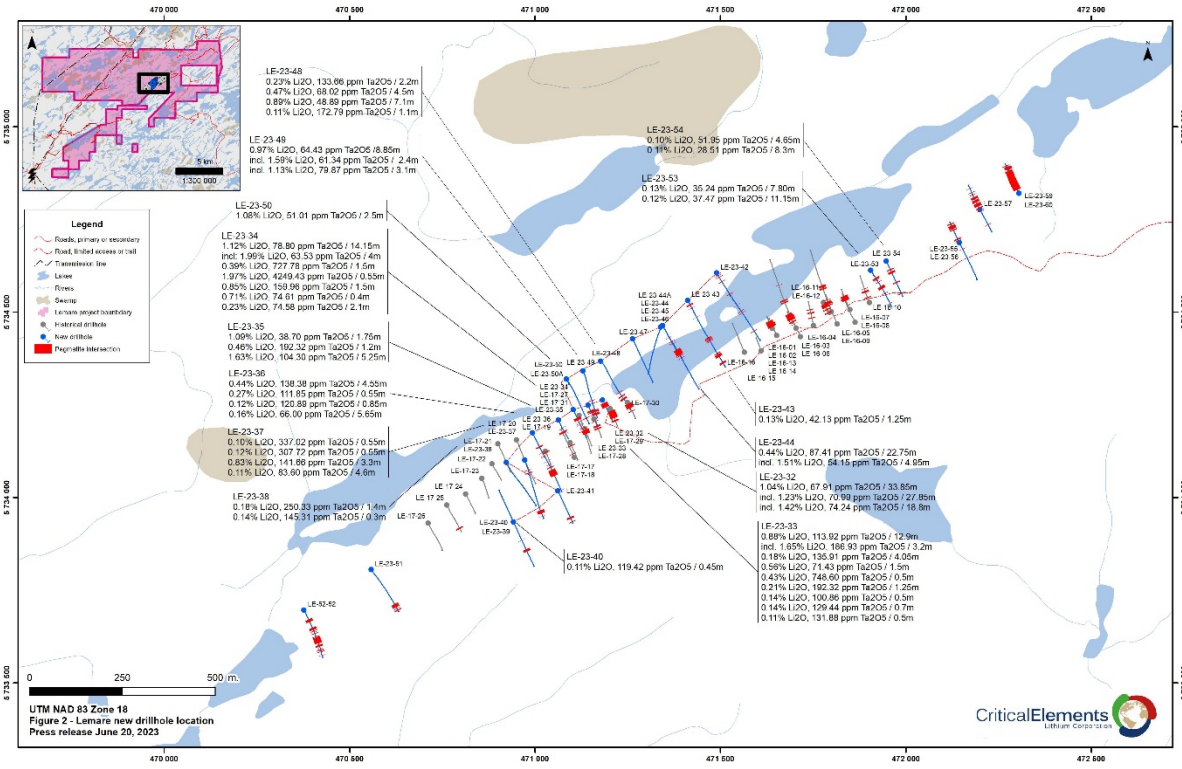


Figure 2: Drill results from the Lemare Property



The winter 2023 drilling program on the Lemare spodumene project confirmed the 400-metre extension to the southwest and the 500-metre extension to the northeast of the main known spodumene-bearing pegmatite with variable width and spodumene content. At least two different types of sub-parallel pegmatites were intersected by the drilling. The main spodumene-bearing pegmatite features coarse quartz-feldspar-muscovite, while the second pegmatite is aphanitic quartzo-feldspathic, is generally lower grade, and is only sporadically mineralized. The main spodumene-bearing pegmatite is controlled by a northeast-southwest structure that is recut by at least two north-south oriented faults. The information collected during the winter drilling program will be useful to better define the 3D model and better understand the pinch-and-swell character of the pegmatites at Lemare. The confirmed spodumene-prospective pegmatite strike length at Lemare now exceeds 2.2 kilometres. However, based on Goldspot Discoveries' machine learning methodology and surface sampling results, the LCT pegmatite trend on the Lemare property has been estimated to extend for over 5 kilometres.

Critical Elements intends to pursue further work on Lemare over the summer with surface mapping and a sampling program followed by incremental drilling. Lemare is well-situated within 3 kilometres of road access and is an excellent candidate for initial technical studies. At the moment, the Corporation has temporarily suspended exploration activities on the Nemaska Belt projects in the Eeyou Istchee-James Bay region of Québec in accordance with a directive from the Ministère des Ressources Naturelles et des Forêts, which has banned forest access on Crown land and closed roads to help combat forest fires across the province.

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 wereregularly 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_2O_5 were re-assays using Ta-XRF10.

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 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 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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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 results and completion of the 2023 exploration program, the permitting process, the results and outcome of the Front-End Engineering Design Study, eligibility of equipment required for the Rose Project to the 30% investment tax credit (ITC) announced by the Federal government in its last budget, as well as the outcome of the formal process launched by the Corporation in connection with the Project financing. 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, the final outcome of the permitting process and the Corporation’s ability to meet all conditions imposed thereunder, the final results of the Front-End Engineering Design Study and its effects on the development of the Rose Project, the formal process launched in connection with the Project financing not producing the anticipated and expected results, the criteria for eligibility to the 30% investment tax credit (ITC) announced in the last federal budget not being those expected, as well as those risk factors set out in the Corporation’s Management Discussion and Analysis for its most recent quarter ended February 28, 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