



## LIFT REPORTS PRELIMINARY LITHIUM CONVERSION TESTWORK RESULTS FOR THE YELLOWKNIFE LITHIUM PROJECT

April 24, 2025 – Vancouver, B.C., Li-FT Power Ltd. (“LIFT” or the “Company”) (TSXV: LIFT) (OTCQX: LIFFF) (Frankfurt: WS0) is pleased to report results from preliminary laboratory lithium conversion testwork completed in 2025 on a spodumene concentrate sample from material from the Yellowknife Lithium Project, Northwest Territories, Canada. Metallurgical testwork comprised the calcination, sulphuric acid mixing and roasting, and water leaching tests which were undertaken at SGS Canada Inc. (“SGS”) in Lakefield, Ontario. Testing was completed on a DMS concentrate sample produced from pegmatite material from the Big East (BigE) deposit ([see press release dated September 23, 2024](#)). The conversion test work showed excellent results with up to 98% lithium extraction under typical operating conditions.

### Summary of Results

Francis MacDonald, CEO of LIFT comments, “We are very pleased with the results of this preliminary lithium conversion test work, which demonstrated lithium extraction rates of up to 98%, a strong validation of the spodumene concentrate quality from our Yellowknife Lithium Project. These findings mark a significant technical milestone as we continue to advance the project towards becoming a future source of high-quality lithium for the North American battery supply chain.”

### Details of the Metallurgical Program

Preliminary lithium conversion testing was completed on a DMS concentrate sample produced from pegmatite material from the Big East deposit ([see press release dated September 23, 2024](#)). Lithium chemical analysis of the concentrate sample was performed by sodium peroxide fusion digestion followed by inductively coupled plasma optical spectroscopy (ICP-OES). Whole rock analysis (WRA) was performed by borate fusion and X-ray Fluorescence (XRF). Elemental composition of the DMS spodumene concentrate sample tested is presented in Table 1. The spodumene concentrate sample graded 5.60% Li<sub>2</sub>O and contained 0.65% Fe<sub>2</sub>O<sub>3</sub>.

Table 1: Chemical analysis of the spodumene concentrate sample

Component	Composition (%)
Li	2.60
Li <sub>2</sub> O	5.60
Fe <sub>2</sub> O <sub>3</sub>	0.65
SiO <sub>2</sub>	67.1
Al <sub>2</sub> O <sub>3</sub>	23.8
MgO	0.11
CaO	0.12
Na <sub>2</sub> O	1.02
K <sub>2</sub> O	0.74
MnO	0.10

The mineralogical composition of the spodumene concentrate sample was determined using the semi-quantitative Rietveld refinement method based on X-Ray Diffraction (XRD) results and are shown in Table 2. The spodumene concentrate sample contained 70% spodumene, 15.4% quartz, 8.7% albite, 3.9% muscovite, 1.2% orthoclase, and minor quantities (<1%) of biotite and magnetite.

Table 2: Spodumene concentrate sample mineralogy

Mineral	Composition (%)
Spodumene	70.0
Quartz	15.4
Albite	8.7
Muscovite	3.9
Orthoclase	1.2
Biotite	0.7
Magnetite	0.1
Total	100

### Testwork Scope

The conversion testwork program included:

- 1) Calcination;
- 2) Sulphuric acid mixing and Roasting;
- 3) Water leaching.

The objective of calcination is to convert alpha-spodumene into the leachable beta- and/or gamma-phases. The conversion process increases the volume and the surface area of the material, weakening its crystal structure allowing for subsequent lithium extraction (leaching). For calcination, roughly 400 g of spodumene concentrate was placed in a crucible and heated to temperatures ranging from 1000°C to 1100°C in a laboratory furnace (Figure 1).

Calcined samples were ground to roughly 150 µm. In order to confirm conversion and quantify metal extractions, calcined samples underwent acid mixing followed by roasting in laboratory furnace, at 250°C. The objective of acid mixing and roasting is to convert the lithium in the spodumene to lithium sulphate. Water leaching tests were then completed on the lithium sulphate samples at 60°C for 60 minutes, with results reported in Table 3. The water leaching setup is shown in Figure 1.



Figure 1: Muffle furnace used for calcination (left) and the water leaching laboratory setup.

## Test work Results

Figure 2 shows an example image of the spodumene concentrate before and after calcination.



Figure 2: Example images of spodumene concentrate (left) and calcination product (right).

Table 3 summarizes the water leaching test results and shows lithium extractions and compositions of the pregnant leach solution (PLS). Lithium concentrations in solutions were up to 19,600 mg/L with typical impurities present (e.g., aluminium, iron, calcium, sodium).

Table 3: Summary of Water leaching test results

Parameter	Units	Test			
		1	2	3	4
Calcination Temp.	°C	1000	1050	1050	1100
Residence Time	min.	30	30	15	30
Lithium Extraction	%	79	98	96	98
PLS Concentrations					
Li	mg/L	15,900	19,100	19,600	19,600
Al		4,000	3590	4200	3750
Fe		845	535	622	514
Mg		78	42	55	37
Ca		385	326	363	322
Na		1340	1640	1530	1860
K		565	484	534	528
Mn		275	163	180	145

Figure 3 shows the effect of calcination time and temperature on water leaching lithium extraction. At calcination temperatures above 1050°C (typical industrial conversion conditions) and residence time of 30 minutes, lithium extraction reached 98%. There was only a slight decrease in lithium extraction (96%) when the residence time was decreased to 15 minutes.

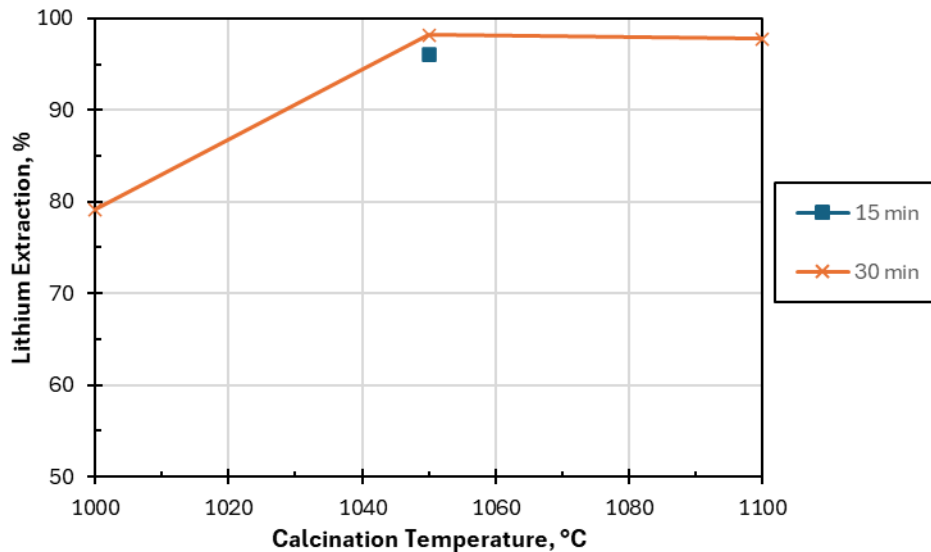


Figure 3: Impact of calcination time and temperature and leach extraction.

The preliminary testwork results show that spodumene concentrate produced from the Yellowknife Lithium project is amenable to conversion under typical operating parameters.

### **Qualified Person**

The disclosure in this news release of scientific and technical information regarding LIFT's mineral properties has been reviewed and approved by Jarrett Quinn, Ph.D., P.Eng, Process Director, Synectiq Inc., and a Qualified Person as defined by National Instrument 43-101 Standards of Disclosure for Mineral Projects (NI 43-101) and member in good standing of the Ordre des Ingénieurs du Québec (OIQ) (Registration number: 5018119).

### **About LIFT**

LIFT is a mineral exploration company engaged in the acquisition, exploration, and development of lithium pegmatite projects located in Canada. The Company's flagship project is the Yellowknife Lithium Project located in Northwest Territories, Canada. LIFT also holds three early-stage exploration properties in Quebec, Canada with excellent potential for the discovery of buried lithium pegmatites, as well as the Cali Project in Northwest Territories within the Little Nahanni Pegmatite Group.

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*Certain statements included in this press release constitute forward-looking information or statements (collectively, "forward-looking statements"), including those identified by the expressions "anticipate", "believe", "plan", "estimate", "expect", "intend", "may", "should" and similar expressions to the extent they relate to the Company or its management. The forward-looking statements are not historical facts but reflect current expectations regarding future results or events. This press release contains forward looking statements. These forward-looking statements and information reflect management's current beliefs and are based on assumptions made by and information currently available to the company with respect to the matter described in this new release.*

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