



## Standard Lithium Files Definitive Feasibility Study for its First Commercial Lithium Extraction Plant – Phase 1A

EL DORADO, Ark., Oct. 18, 2023 -- **Standard Lithium Ltd.** (“Standard Lithium” or the “Company”) (TSXV:SLI) (NYSE American:SLI) (FRA:S5L), a leading near-commercial lithium company, today announced that the Definitive Feasibility Study (the “Report”) for its first commercial lithium project (“Phase 1A”) proposed to be located at the LANXESS South Plant has been filed.

With expected first production in 2026, Phase 1A is anticipated to be the first US-based lithium production project built in six decades, and the first commercial direct lithium extraction facility in North America with potential to double current United States lithium production from current levels.

Phase 1A will process lithium-rich brine currently flowing through existing infrastructure and represents production of only five percent of the total Measured and Indicated Resource of 2.8 Mt lithium carbonate equivalent (“LCE”)<sup>1</sup>. The Definitive Feasibility Study demonstrates strong economics, assuming initial annual production of 5,700 tonnes, and an average annual production of 5,400 tonnes of battery-quality lithium carbonate over a 25-year operating life based on Proven and Probable Reserves of 208 Kt LCE at an average concentration of 217 mg/L. Phase 1A represents a modest 60-times scale up from the operational Demonstration Plant, which over a three-and-a-half-year period of effective and efficient lithium extraction, has used the same brine that will feed the proposed commercial plant. The Company expects to make a final investment decision for Phase 1A in the first half of 2024.

Standard Lithium intends to scale and replicate the development model for the Phase 1A project across its portfolio of projects in the Smackover Formation, including the South West Arkansas Project and highly prospective East Texas landholdings. The lithium concentrations of the Company’s projects tend to improve from east to west across the Smackover Formation. Most recently, [East Texas drilling results](#) delivered the new, highest grade lithium brine concentrations in North America that the Company is aware of, at 663 mg/L. Higher lithium concentrations paired with economies of scale through the advancement of multiple projects is expected to afford the Company a competitive advantage as it expands its footprint through the Smackover Formation.

Standard Lithium’s filing of the Definitive Feasibility Study highlights its commitment to commercialize direct lithium extraction technology, starting with Phase 1A. This approach aims to unlock the resource potential of the Smackover Formation and address critical mineral needs in the U.S. sustainably and responsibly.

The Report is available for review under the Company’s profile on SEDAR+ at [www.sedar.com](http://www.sedar.com) and on the Company’s website at [www.standardlithium.com/projects/arkansas-smackover](http://www.standardlithium.com/projects/arkansas-smackover). For highlights of this Report, please refer to the Company’s press release dated [6 September 2023](#).

### About Standard Lithium Ltd.

Standard Lithium is a leading near-commercial lithium development company focused on the sustainable development of a portfolio of lithium-brine bearing properties in the United States. The Company prioritizes brine projects characterized by high-grade resources, robust infrastructure, skilled labor, and streamlined permitting. The Company aims to achieve sustainable, commercial-scale lithium production via the application of a scalable and fully-integrated Direct Lithium Extraction (“DLE”) and purification process. The Company’s signature projects, the Phase 1A Project and the South West Arkansas Project, are located on the Smackover Formation in southern Arkansas near the Louisiana state line, a region with a long-standing and established brine processing industry. The Company has also identified a number of highly prospective lithium brine project areas in the Smackover Formation in East Texas and began an extensive brine leasing program in the key project areas. In addition, the Company has an interest in certain mineral leases located in the Mojave Desert in San Bernardino County, California.

Standard Lithium trades on both the TSX Venture Exchange and the NYSE American under the symbol “SLI”; and on the Frankfurt Stock Exchange under the symbol “S5L”. Please visit the Company’s website at [www.standardlithium.com](http://www.standardlithium.com).

### Qualified Person

Steve Ross, P.Geol., a qualified person as defined by National Instrument 43-101, and Vice President Resource Development for the Company, has reviewed and approved the relevant scientific and technical information in this news release.

### Investor and Media Inquiries

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<sup>1</sup> Total Measured and Indicated Resource of 2.8 Mt LCE at average concentration of 148 mg/L for the combined LANXESS South, Central and West Brine Units; Phase 1A represents production of approximately 135,000 tonnes LCE or 5% of the total Measured and Indicated Resources.