

March 20, 2023



Standard Lithium Commences Drilling Program at South West Arkansas Lithium Project to Support Upcoming Preliminary Feasibility Study

EL DORADO, Ark., March 20, 2023 (GLOBE NEWSWIRE) -- **Standard Lithium Ltd.** ("**Standard Lithium**" or the "**Company**") (TSXV: SLI) (NYSE American: SLI) (FRA: S5L), a leading near-commercial lithium company, announced today the commencement of a drilling program at its South West Arkansas Lithium Project (the "**Project**") to support the forthcoming Preliminary Feasibility Study ("**PFS**" [see news release dated May 02nd 2022](#)). The drilling program will inform the resource definition and de-risk the resource estimate, provide additional porosity and permeability data through the entire thickness of the productive zones in the Smackover Formation, and optimize production-wellfield design.

Dr. Andy Robinson, President and COO of Standard Lithium commented, *"Since beginning the PFS work at our South West Arkansas Lithium Project last year, the team has been advancing numerous engineering and process studies, while simultaneously completing all the leases and permits required to start the drilling program. This systematic drilling program for both new wells and re-entries into pre-existing, plugged and abandoned wells will collect all necessary resource data for the forthcoming PFS as well as the majority of resource data for the subsequent Definitive Feasibility Study ("DFS" aka Bankable Feasibility). Our ongoing engineering and costing work at Phase 1A of our nearby LANXESS Property Project will also help inform the PFS. When complete, the PFS will provide an updated view of project feasibility and economics."*

The drilling program covers two new locations and three re-entries of plugged and abandoned (pre-existing) oil and gas wells. Typically, when a pre-existing well is being re-entered, it will be deepened to gather more data from the entire Smackover Formation thickness underlying the Project area.

The first re-entry into a pre-existing oil and gas well, the Beulah-Taylor #1 has been completed. Refer to Figures 1 and 2 below for images of the drill site. The original well was a dry hole (from an oil/gas point of view) drilled for hydrocarbon in July 1982 and subsequently decommissioned in August 1982, and the drill pad had been unused since then. The drill rig commenced drilling on 21st February, 2023. The drill string reached the base of the previous bore on 03rd March, 2023 (measured well depth was 8,690 ft), which penetrated into the upper Smackover Formation by 183 ft. The rig then continued to deepen the hole and drill new core in the upper and mid Smackover Formation limestones to a total measured depth of 8,940 ft on 8th March, 2023. The new core has been sent for logging and porosity and permeability analysis, as have additional side-wall cores. Perforation of key production zones is currently being completed by a workover rig, while the drill rig has moved to the

next location. Brine will be sampled from key productive zones in the Smackover Formation over the coming weeks, and permeability tests and other in-situ testing will also be completed.



Figure 1: Drill rig at the Beulah-Taylor #1 well re-entry site in Lafayette County, Arkansas. This reused a pre-existing drill pad (note existing powerline running through the wellpad area). The drill rig has since demobilized from this location after reaching a total measured depth of 8,940 ft, and has been replaced by a workover rig to complete perforations, final testwork and sampling.



Figure 2: Close-up of the drill rig used to re-enter and deepen the pre-existing Beulah-Taylor #1 well.

The drilling program will continue through Q2 until completed, though not all the data collected will be required for the forthcoming PFS. Some key data from the drilling program (e.g., lithium concentrations in brine) will be made available as independent third-party verified data becomes available.

Quality Assurance

Steve Ross, P.Geol., a Qualified Person as defined by NI 43-101, has reviewed and approved the relevant scientific and technical information that forms the basis for this news release. Mr. Ross is a consultant to the Company.

About Standard Lithium Ltd.

Standard Lithium is a leading near-commercial lithium development company with a portfolio of projects in process. The Company's flagship projects, the LANXESS Property Project and the South West Arkansas Project, are located in southern Arkansas near the Louisiana stateline. The Company is focused on the evaluation and testing of commercial lithium extraction and purification from brine sourced from approximately 180,000 acres of leases across these two projects. The Company operates a first-of-a-kind industrial-scale Direct Lithium Extraction (DLE) Demonstration Plant at the LANXESS Property Project. The scalable, environmentally friendly process eliminates the use of evaporation ponds, reduces processing time from months to hours and greatly increases the effective recovery of lithium. A Definitive Feasibility Study (DFS) and Front-End Engineering Study (FEED) for Phase 1A of the LANXESS Property Project commenced in September 2022. A Preliminary Feasibility Study (PFS) of the South West Arkansas Project commenced in May 2022. The Company is also pursuing the resource development of other projects in the Smackover Formation, as well as approximately 45,000 acres of mineral leases located in the Mojave Desert in San Bernardino County, California.

Standard Lithium is jointly listed on the TSX Venture Exchange and the NYSE American under the trading symbol "SLI"; and on the Frankfurt Stock Exchange under the symbol "S5L". Please visit the Company's website at <https://www.standardlithium.com>.

Neither the TSX Venture Exchange nor its Regulation Services Provider (as that term is defined in policies of the TSX Venture Exchange) accepts responsibility for the adequacy or accuracy of this release.

This news release may contain certain "Forward-Looking Statements" within the meaning of the United States Private Securities Litigation Reform Act of 1995 and applicable Canadian securities laws. When used in this news release, the words "anticipate", "believe", "estimate", "expect", "target", "plan", "forecast", "may", "schedule" and other similar words or expressions identify forward-looking statements or information. These forward-looking statements or information may relate to development of a commercial lithium plant, completion of definitive feasibility study, future prices of commodities, accuracy of mineral or resource exploration and drilling activity, reserves or resources, regulatory or government requirements or approvals, the reliability of third party information, continued access to mineral properties or infrastructure, fluctuations in the market for lithium and its derivatives, changes in exploration costs and government regulation in Canada and the United States, and other factors or information. Such statements represent the Company's current views with respect to future events and are necessarily based upon a number of assumptions and estimates that, while considered reasonable by the Company, are inherently subject to significant business, economic, competitive, political and social risks, contingencies and uncertainties. Many factors, both known and unknown, could cause results, performance or achievements to be materially different from the results, performance or achievements that are or may be expressed or implied by such forward-looking statements. The Company does not intend, and does not assume any obligation, to update these forward-looking statements or information to reflect changes in assumptions or changes in circumstances or any other events affecting such statements and information other than as required by applicable laws, rules and regulations.

Photos accompanying this announcement are available at
<https://www.globenewswire.com/NewsRoom/AttachmentNg/584e8e53-acf2-4b31-b65e-05a31023a123>

<https://www.globenewswire.com/NewsRoom/AttachmentNg/58b3f77e-edd4-498c-84ea-04f8e6b5f753>

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Figure 1:



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Figure 2:



Close-up of the drill rig used to re-enter and deepen the pre-existing Beulah-Taylor #1 well.

Source: Standard Lithium