

May 2, 2022



Standard Lithium Advances Project Pipeline as It Commences Preliminary Feasibility Study at Its South West Arkansas Lithium Project

EL DORADO, Ark., May 02, 2022 (GLOBE NEWSWIRE) -- **Standard Lithium Ltd.** ("Standard Lithium" or the "Company") (TSXV: SLI) (NYSE American: SLI) (FRA: S5L), an innovative technology and lithium project development company, today announced the commencement of a Preliminary Feasibility Study (PFS) at its South West Arkansas Lithium Project (the "Project"), which is located approximately 35 miles west of the Company's Lanxess project.

Standard Lithium recently completed a Preliminary Economic Assessment at the Project ([see Company news release Nov 26, 2021](#)), and on the basis of positive project economics and favorable project fundamentals, the Company has commissioned a team of technical experts to complete a NI43-101 compliant PFS for the Project. The PFS will consider an integrated project including; brine supply and injection wells, pipelines and brine treatment infrastructure, a Direct Lithium Extraction ("DLE") plant using the Company's proprietary LiSTR technology, and a lithium chloride to lithium hydroxide conversion plant.

Dr. Andy Robinson, President and COO of Standard Lithium commented *"following the key investment from Koch Strategic Platforms in Q4 2021, we've been able to grow our team with additional technical and management strength. Now we can manage and drive multiple projects in parallel. The commencement of this comprehensive PFS is a testament to the Company's ambition to not only bring the first new commercial lithium project into production in the United States in six decades, but also to have a robust pipeline of subsequent projects that will serve the future demand for lithium chemicals in North America. We have assembled a broad team of consultants, technical advisors and subject matter experts to complete all the necessary work for this PFS, and we will also be working hand in hand with our strategic and project partners to ensure successful execution. We expect to complete the bulk of the work through the balance of 2022, with completion and reporting of the results of the PFS in Q1 2023."*

Standard Lithium has engaged Hunt, Guillot & Associates from Ruston, Louisiana ("HGA") as the lead consultant, to prepare and coordinate the PFS with support of a multi-disciplinary technical team. The work program to support the PFS will consist of the following:

- Reentry of existing wells across Standard Lithium's brine lease area to obtain new representative brine samples from the Smackover Formation;
- Reperforation of existing wells, where feasible, to obtain discrete depth-specific brine samples from previously unsampled zones of the Smackover;

- Drilling of a new well in a key location to complete data coverage across the Company's brine lease area;
- Long duration pumping tests from selected wells to test hydrogeological and reservoir conditions for brine extraction and reinjection;
- Collection of large volume brine samples during pumping tests to allow the South West Project brine to be processed through Standard Lithium's proprietary LiSTR DLE process;
- Acquisition and reprocessing of additional 2D seismic data across and adjacent to the Company's brine leases;
- Generation of a new 3D reservoir model to determine an updated in-situ lithium resource, and extraction/reinjection production plans for the commercial facility;
- Completion of several Pilot Studies with technology partners to test the lithium chloride to lithium hydroxide conversion process at sufficient scale and duration. These studies will be completed using LiCl produced by the Company's operating LiSTR Demonstration Plant;
- Updated capital costs (AACE Class 4 estimate +45/-25%) for a similar 30,000 tonnes per annum lithium hydroxide facility as previously contemplated by the PEA;
- Operating costs updated and benefited by the data gathered during 2+ years of continuous operation of the LiSTR Demonstration Plant in Union County, Arkansas; and,
- Fully updated project economics using revised future pricing for lithium hydroxide produced and delivered in North America.

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 an innovative technology and lithium development company. The Company's flagship project is located in southern Arkansas, where it is engaged in the testing and proving of the commercial viability of lithium extraction from over 150,000 acres of permitted brine operations. The Company operates its first-of-a-kind industrial-scale Direct Lithium Extraction (DLE) demonstration plant at Lanxess's south plant facility in southern Arkansas. The demonstration plant utilizes the Company's proprietary LiSTR technology to selectively extract lithium from Lanxess's tail brine. The demonstration plant is being used for proof-of-concept and commercial feasibility studies. 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. The Company is also pursuing the resource development of over 30,000 acres of separate brine leases located in southwest Arkansas, referred to as the South West Arkansas Lithium Project, and 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>.

On behalf of the Board of Standard Lithium Ltd.
Robert Mintak, CEO & Director

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For further information contact:

LHA Investor Relations
David Barnard
+1 415-433-3777
standardlithium@lhai.com
info@standardlithium.com
Twitter: @standardlithium
LinkedIn: <https://www.linkedin.com/company/standard-lithium/>



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