

SMACKOVER LITHIUM FILES DEFINITIVE FEASIBILITY STUDY FOR ITS SOUTH WEST ARKANSAS PROJECT, NORTH AMERICA'S HIGHEST-GRADE REPORTED LITHIUM BRINE RESERVE

October 14th, 2025 Lewisville, AR – Smackover Lithium, a 55:45 owned Joint Venture (“JV”) between Standard Lithium Ltd. (“Standard Lithium” or the “Company”) (TSXV: SLI) (NYSE.A: SLI) and Equinor (“Equinor”), announced today that the Definitive Feasibility Study (“DFS” or the “Report”) for its South West Arkansas (“SWA”) project (the “Project” or “SWA Project”) has been filed.

All figures are in US dollars unless otherwise stated. All terms not otherwise defined have the meaning given to them under the CIM Definition Standards for mineral resources and mineral reserves.

The DFS contemplates production capacity of 22,500 tonnes per annum of battery-quality lithium carbonate over a 20-year modeled operating life, producing 447,000 tonnes (Proven Reserves) of lithium carbonate equivalent (“LCE”), or 38% of the in-situ Measured and Indicated Resources of 1,177,000 tonnes LCE. The Project will begin production at an average lithium concentration of 549 mg/L, and will process 0.50 km³ of brine over its modelled 20-year life at an average lithium concentration of 442 mg/L.

The Report is highlighted by a 20.2% unlevered pre-tax internal rate of return (“IRR”), with competitive average cash operating costs of \$4,516/t and all-in costs of \$5,924/t over the operating life, and an all-in Class III capex estimate of \$1.45 billion, which includes a 12.3% Monte Carlo risked contingency.

The Project maintains strong support from the local community, the state of Arkansas and the U.S. government. The Project would mark the first commercial Direct Lithium Extraction (“DLE”) operation in the United States and the first lithium production in the Smackover Formation. It is intended as the first of several projects to be developed by the JV throughout the Smackover Formation, and it is envisaged that the major design decisions and learnings from this first greenfield facility will form the basis for future expansion phases or projects, including in East Texas.

The development schedule for the Project is estimated at 34 months from start of construction to the commercial operation date. The principal recommendation from the DFS is that the Project is ready to progress to a final investment decision (“FID”). Construction is expected to commence in 2026 shortly after FID, with first production targeted in 2028.

The Report is available for review under the Company’s profile on SEDAR+ at www.sedarplus.ca and on the Company’s website at <https://www.standardlithium.com/projects/smackover/>. For highlights of this Report, please refer to the Company’s press release dated [3 September 2025](#).

Qualified Person

All scientific and technical disclosure in this news release was reviewed and approved by Mr. Stephen Ross, P.Geo., British Columbia, Vice President of Resource Development for Standard Lithium and a Qualified Person for purposes of, and as that term is defined in, National Instrument 43-101 – *Standards of Disclosure for Mineral Projects* (“NI 43-101”). Mr. Ross is not independent of the Company.

About Smackover Lithium

Smackover Lithium is a joint venture between Standard Lithium and Equinor. Formed in May 2024, Smackover Lithium is developing two DLE projects in Southwest Arkansas and East Texas (the “JV Projects”). Standard Lithium owns a 55% interest and Equinor holds the remaining 45% interest in the two JV Projects, with Standard Lithium maintaining operatorship.

About Standard Lithium

Standard Lithium is a leading near-commercial lithium development company focused on the sustainable development of a portfolio of large, high-grade lithium-brine properties in the United States. The Company prioritizes projects characterized by high-grade resources, robust infrastructure, skilled labor, and streamlined permitting. Standard Lithium aims to achieve sustainable, commercial-scale lithium production via the application of a scalable and fully integrated DLE and purification process. The Company’s flagship projects are located in the Smackover Formation, a world-class lithium brine asset, focused in Arkansas and Texas. In partnership with global energy leader Equinor, Standard Lithium is advancing the SWA Project, a greenfield project located in southern Arkansas, and actively advancing a promising lithium brine resource position in East Texas.

Standard Lithium trades on both the TSX Venture Exchange (the “TSXV”) and the NYSE American under the symbol “SLI”. Please visit the Company’s website at www.standardlithium.com.

About Equinor

Equinor is an international energy company committed to long-term value creation in a low-carbon future. Equinor’s portfolio of projects encompasses oil and gas, renewables and low-carbon

solutions, with an ambition of becoming a net-zero energy company by 2050. Headquartered in Norway, Equinor is the leading operator on the Norwegian continental shelf and has offices in more than 20 countries worldwide. Equinor's partnership with Standard Lithium to mature DLE projects builds on its broad US energy portfolio of oil and gas, offshore wind, low carbon solutions and battery storage projects.

For more information on Equinor in the US, please visit: [Equinor in the US - Equinor](#).

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Use of Non-GAAP Measures

Certain financial measures referred to in this news release are not measures recognized under International Financial Reporting Standards (“**IFRS**”) and are referred to as non-GAAP financial measures or ratios. These measures have no standardized meaning under IFRS and may not be comparable to similar measures presented by other companies. The definitions established and calculations performed by Smackover Lithium are based on management's reasonable judgement and are consistently applied. These measures are intended to provide additional information and should not be considered in isolation or as a substitute for measures prepared in accordance with IFRS.

The non-GAAP financial measures used in this news release are common to the mining industry. All-in operating cost per tonne is a non-GAAP financial measure or ratio and has no standardized meaning under IFRS Accounting Standards and may not be comparable to similar measures used by other issuers. As the SWA Project is not in production, the Company does not have historical non-GAAP financial measures nor historical comparable measures under IFRS, and therefore the foregoing prospective non-GAAP financial measures may not be reconciled to the nearest comparable measures under IFRS.

Neither the TSXV nor its Regulation Services Provider (as that term is defined in policies of the TSXV) 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”, “could”, “should”, “schedule”, “predict”, “budget”, “project”, “potential” and other similar words or expressions identify forward-looking statements or information. These forward-looking statements or information may relate to the cost and timing of any development of SWA, mining recoveries, processing method and rates, production rates, capital and operating cost estimates, the projected life of mine and other expected attributes of SWA, the IRR, regulatory or government requirements or approvals the use of non-GAAP measures in financial performance assessments, changes in exploration costs and government regulation in Canada and the United States, future expansion phases 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.