STANDARD LITHIUM LTD.

ANNUAL INFORMATION FORM
for the Fiscal Year ended June 30, 2022

Dated September 19, 2022

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PRELIMINARY NOTES AND CAUTIONARY STATEMENT

Date of Information

All information in this Annual Information Form ("**AIF**") is as of June 30, 2022, unless otherwise indicated.

Cautionary Notes to U.S. Investors Concerning Resource Estimates

This AIF has been prepared in accordance with the requirements of the securities laws in effect in Canada, which differ from the requirements of the U.S. securities laws. In particular, and without limiting the generality of the foregoing, the terms "mineral reserve", "proven mineral reserve", "probable mineral reserve", "inferred mineral resources," "indicated mineral resources," "measured mineral resources" and "mineral resources" used or referenced in this AIF are Canadian mineral disclosure terms as defined in accordance with National Instrument 43-101 – *Standards of Disclosure for Mineral Projects* ("**NI 43-101**") under the guidelines set out in the 2014 Canadian Institute of Mining, Metallurgy and Petroleum Standards for Mineral Resources and Mineral Reserves, Definitions and Guidelines, May 2014 (the "**CIM Standards**"). The CIM Standards differ significantly from the mineral property disclosure requirements of the U.S. Securities and Exchange Commission (the "**SEC**") in Regulation S-K Subpart 1300 (the "**SEC Modernization Rules**") under the U.S. Securities Act of 1933, as amended (the "**Securities Act**").

As a foreign private issuer that is eligible to file reports with the SEC pursuant to the multi-jurisdictional disclosure system, the Company is not required to provide disclosure on its mineral properties under the SEC Modernization Rules and will continue to provide disclosure under NI 43-101 and the CIM Standards. Accordingly, the Company's disclosure of mineralization and other technical information may differ significantly from the information that would be disclosed had the Company prepared the information under the standards adopted under the SEC Modernization Rules.

Non-GAAP Measures

This AIF includes certain performance measures ("**non-GAAP measures**") which are not specified, defined, or determined under generally accepted accounting principles (in the Company's case, International Financial Reporting Standards, or "IFRS").

These are common performance measures in the lithium mining industry, but because they do not have any mandated standardized definitions, they may not be comparable to similar measures presented by other issuers. Accordingly, the Company uses such measures to provide additional information and readers should not consider them in isolation or as a substitute for measures of performance prepared in accordance with generally accepted accounting principles ("**GAAP**").

All-In Operating Costs

The Company has provided an all-in operating cost performance measure for the LANXESS Property Project and South West Arkansas Project that reflects both direct costs and indirect costs, as well as allowances for mine closure. The majority of the all-in operating cost comprises

reagent usage required to extract lithium from the brine, as well as conversion to battery quality lithium carbonate and LHM (as defined below) and electricity consumption. While there is no standardized meaning of the measure across the industry, the Company believes that this measure is useful to external users in assessing operating performance. Upon commencing commercial production and reporting all-in operating costs, the Company will provide a reconciliation to IFRS figures then presented.

Currency

Except where otherwise indicated, all references to currency in this AIF are to Canadian Dollars ("$").

Forward-Looking Information

Except for statements of historical fact, this AIF contains certain "forward-looking information" within the meaning of applicable Canadian securities legislation and "forward-looking statements" within the meaning of the United States Private Securities Litigation Reform Act of 1995 (collectively referred to herein as "forward-looking information"). The statements relate to future events or the Company's future performance. All statements, other than statements of historical fact, may be forward-looking information. Information concerning mineral resource and mineral reserve estimates also may be deemed to be forward-looking information in that it reflects a prediction of mineralization that would be encountered if a mineral deposit were developed and mined. Forward-looking information generally can be identified by the use of words such as "seek", "anticipate", "plan", "continue", "estimate", "expect", "may", "will", "project", "predict", "propose", "potential", "target", "intend", "could", "might", "should", "believe", "scheduled", "implement" and similar words or expressions. These statements involve known and unknown risks, uncertainties and other factors that may cause actual results or events to differ materially from those anticipated in such forward-looking information.

In particular, this AIF contains forward-looking information, including, without limitation, with respect to the following matters or the Company's expectations relating to such matters: the Company's planned exploration and development programs (including, but not limited to, plans and expectations regarding advancement, testing and operation of the lithium extraction pilot plant); commercial opportunities for lithium products; delivery of studies; filing of technical reports; expected results of exploration; accuracy of mineral or resource exploration activity; accuracy of mineral reserves or mineral resources estimates, including the ability to develop and realize on such estimates; whether mineral resources will ever be developed into mineral reserves, and information and underlying assumptions related thereto; budget estimates and expected expenditures by the Company on its properties; regulatory or government requirements or approvals; the reliability of third party information; continued access to mineral properties or infrastructure; payments and share issuances pursuant to property agreements; fluctuations in the market for lithium and its derivatives; expected timing of the expenditures; performance of the Company's business and operations; changes in exploration costs and government regulation in Canada and the United States; competition for, among other things, capital, acquisitions, undeveloped lands and skilled personnel; changes in commodity prices and exchange rates; currency and interest rate fluctuations; the Company's funding requirements and ability to raise capital; geopolitical instability; war (such as Russia's invasion of Ukraine); the continued impact of the COVID-19 outbreak, including with regard to the health and safety of the Company's

workforce; COVID-19 protocols and their efficacy and impacts on timelines and budgets; and other factors or information.

Forward-looking information does not take into account the effect of transactions or other items announced or occurring after the statements are made. Forward-looking information is based upon a number of expectations and assumptions and is subject to a number of risks and uncertainties, many of which are beyond the Company's control, that could cause actual results to differ materially from those that are disclosed in or implied by such forward-looking information. With respect to forward-looking information listed above, the Company has made assumptions regarding, among other things: current technological trends; ability to fund, advance and develop the Company's properties; the Company's ability to operate in a safe and effective manner; uncertainties with respect to receiving, and maintaining, mining, exploration, environmental and other permits; pricing and demand for lithium, including that such demand is supported by growth in the electric vehicle market; impact of increasing competition; commodity prices, currency rates, interest rates and general economic conditions; the legislative, regulatory and community environments in the jurisdictions where the Company operates; impact of unknown financial contingencies; market prices for lithium products; budgets and estimates of capital and operating costs; estimates of mineral resources and mineral reserves; reliability of technical data; anticipated timing and results of operation and development; inflation; war (such as Russia's invasion of Ukraine); and the impact of COVID-19 on the Company and its business. Although the Company believes that the assumptions and expectations reflected in such forward-looking information are reasonable, the Company can give no assurance that these assumptions and expectations will prove to be correct. Since forward-looking information inherently involves risks and uncertainties, undue reliance should not be placed on such information.

Forward-looking information involves known and unknown risks, uncertainties and other factors that may cause the actual results, performance or achievements of the Company to be materially different from any future results, performance or achievements expressed or implied by the forward-looking information. Such factors include, but are not limited to: general economic conditions in Canada, the United States and globally; industry conditions, including the state of the electric vehicle market; governmental regulation of the mining industry, including environmental regulation; geological, technical and drilling problems; unanticipated operating events; competition for and/or inability to retain drilling rigs and other services and to obtain capital, undeveloped lands, skilled personnel, equipment and inputs; the availability of capital on acceptable terms; the need to obtain required approvals from regulatory authorities; uncertainties associated with estimating mineral resources and mineral reserves, including uncertainties relating to the assumptions underlying mineral resource and mineral reserve estimates; whether mineral resources will ever be converted into mineral reserves; uncertainties in estimating capital and operating costs, cash flows and other project economics; liabilities and risks, including environmental liabilities and risks inherent in mineral extraction operations; health and safety risks; risks related to unknown financial contingencies, including litigation costs, on the Company's operations; unanticipated results of exploration activities; unpredictable weather conditions; unanticipated delays in preparing technical studies; inability to generate profitable operations; restrictive covenants in debt instruments; lack of availability of additional financing on terms acceptable to the Company; intellectual property ("**IP**") risk; stock market volatility; volatility in market prices for commodities; liabilities inherent in the mining industry; inflation risks; risks related to war (such as Russia's invasion of Ukraine); the development of the COVID-19 global pandemic; changes in tax laws and incentive programs relating to the mining industry; other risks pertaining to the mining industry; conflicts of interest; dependency on key personnel; and

fluctuations in currency and interest rates, as well as those factors discussed in the section entitled "Risk Factors" in this AIF.

Although the Company has attempted to identify important factors that could cause actual actions, events or results to differ materially from those described in forward-looking information, there may be other factors that cause actions, events or results to differ from those anticipated, estimated or intended.

Readers are cautioned that the foregoing lists of factors are not exhaustive. All forward-looking information in this this AIF speaks as of the date of this AIF. The Company does not undertake any obligation to update or revise any forward-looking information, whether as a result of new information, future events or otherwise, except as required by law. All forward-looking information contained in this AIF is expressly qualified in its entirety by this cautionary statement. Additional information about these assumptions and risks and uncertainties is contained in the Company's filings with securities regulators, including the Company's most recent management's discussion and analysis for our most recently completed financial year and, if applicable, interim financial period, which are available on SEDAR at www.sedar.com and EDGAR at www.sec.gov.

Certain Other Information

The Company's filings under the Company's profile on SEDAR are not incorporated by reference in this AIF unless specifically stated. Information contained on the Company's website is also not incorporated by referenced in this AIF.

Certain information in this AIF is obtained from third party sources, including public sources, and there can be no assurance as to the accuracy or completeness of such information. Although believed to be reliable, management of the Company has not independently verified any of the data from third party sources nor ascertained the validity or accuracy of the underlying economic assumptions relied upon therein, and the Company does not make any representation as to the accuracy of such information.

The preliminary economic assessments (each, a "**PEA**") included herein are preliminary in nature and include inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the PEAs will be realized. Additional work is required to upgrade the mineral resources to mineral reserves. In addition, the mineral resource estimates could be materially affected by environmental, geotechnical, permitting, legal, title, taxation, socio-political, marketing or other relevant factors.

CORPORATE STRUCTURE

Name, Address and Incorporation

Standard Lithium Ltd. ("**Standard**" or the "**Company**") was incorporated under the laws of the Province of British Columbia on August 14, 1998 under the name "Tango Capital Corp." Effective April 7, 1999, Tango Capital Corp. changed its name to "Patriot Capital Corp." Effective March 5, 2002, Patriot Capital Corp. changed its name to "Patriot Petroleum Corp." At its annual general and special meeting of shareholders held on November 3, 2016, the shareholders of the Company

approved a change of name of the Company to "Standard Lithium Ltd." and to the continuance of the Company from the *Business Corporations Act* (British Columbia) to the *Canada Business Corporations Act.* On December 1, 2016, the Company completed the name change and continuation.

Standard is an innovative technology and lithium development company focused on the sustainable development of a portfolio of lithium-brine bearing properties in the United States utilizing proprietary Direct Lithium Extraction ("**DLE**") and purification technologies.

The Company's flagship project is located in southern Arkansas, where it is engaged in the testing and proving of commercial viability of lithium extraction from over 150,000 acres of permitted brine operations (the "**LANXESS Property**") in an effort to bring the first new U.S. based lithium project in six decades into commercial production. The Company operates its first-of-a-kind industrial-scale DLE demonstration plant (the "**Demonstration Plant**") at global specialty chemicals company, Lanxess Corporation's ("**LANXESS**") south plant facility in southern Arkansas (collectively, the "**LANXESS Property Project**"). The Demonstration Plant utilizes the Company's proprietary LiSTR technology to selectively extract lithium from brine that is a byproduct of existing bromine production facilities run by LANXESS. The Demonstration Plant is being used for proof-of-concept and commercial feasibility studies. The Company is also pursuing the resource development of over 27,000 acres of separate brine leases located in southwest Arkansas (the "**South West Arkansas Project**" (formerly known as the "TETRA Project"), and together with the LANXESS Property Project, the "**Arkansas Lithium Project**"). In addition, the Company has an interest in certain mineral leases located in the Mojave Desert in San Bernardino County, California.

Standard is listed on the TSX Venture Exchange ("**TSXV**") and trades under the symbol "SLI", on the NYSE American, LLC (the "**NYSE American**") under the symbol "SLI" and on the Frankfurt Stock Exchange ("**FRA**") under the symbol "S5L". The Company is a reporting issuer in British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, New Brunswick, Nova Scotia, Prince Edward Island and Newfoundland and files its continuous disclosure documents with the Canadian Securities Authorities in such provinces. Such documents are available on SEDAR at www.sedar.com.

The Company's corporate office is located at Suite 110, 375 Water Street, Vancouver, British Columbia, V6B 5C6 and its registered office is located at Suite 2200, 885 West Georgia Street, Vancouver, British Columbia, V6C 3E8.

Intercorporate Relationships

Standard currently has the following principal directly or indirectly wholly-owned subsidiaries being:

- Arkansas Lithium Corp. (which operates the Demonstration Plant), California Lithium Ltd. and Texas Lithium Corp., all of which were incorporated under the laws of Nevada;
- SLL El Dorado Parent LLC, SLL El Dorado South Holdco LLC and SLL El Dorado South LLC, all of which were incorporated under the laws of Delaware; and
- Texas Lithium Holdings Corp., which was incorporated under the laws of British Columbia.

GENERAL DEVELOPMENT OF THE BUSINESS

Three Year History

2019 – 2020 Developments

On October 15, 2019, the Company announced that the final modules of the Company's "LiSTR" direct lithium extraction Demonstration Plant had been transported to and were currently being installed at the Arkansas Lithium Project.

On October 28, 2019, the Company agreed to accelerate the timeframe of completion of the payments and Share issuances detailed under the Brown SPA (as defined below). The Company previously had entered into a share purchase agreement on November 27, 2018 (the "**Brown SPA**") with Craig Johnstone Brown ("**Brown**") pursuant to which the Company agreed to acquire all of the issued and outstanding share capital of 2661881 Ontario Limited, a company then-owned by Brown, which held the IP rights to a process for the selective extraction of lithium from brine solutions. As consideration for the transaction, the Company completed a series of cash payments and Share issuances to Brown totaling $1,050,000 and 1,000,000 Shares; the acquisition completed on December 13, 2019. Under the revised agreement, the Company will make (a) a cash payment of $250,000 on or before November 15, 2019 (paid); and (b) a further $250,000 (paid) and the issuance of 500,000 Shares (issued) on or before December 31, 2019. The Company completed the acquisition on December 13, 2019.

On December 2, 2019, the Company announced the successful installation of the Demonstration Plant at LANXESS' south plant facility in southern Arkansas and that the Company's project team had also installed the site office/control room, the lithium-specific analytical laboratory, and a steel-framed, all-weather structure that allows year-round operation.

On March 9, 2020, the Company announced that it had produced its first >99.9% purity (also known as 'three-nines') battery quality lithium carbonate using the Company's proprietary SiFT ("**SiFT**") crystallization technology.

On May 19, 2020, the Company announced the successful start-up of the Demonstration Plant, extracting lithium directly from brine ("**tail brine**") at LANXESS' south plant facility in southern Arkansas.

On June 9, 2020, the Company reported that it had completed the construction of its SiFT crystallization pilot plant.

On July 15, 2020, the Company announced that its SiFT crystallization pilot plant was beginning initial lithium carbonate crystallization work and that the commissioning phase of the plant had been successfully completed.

On September 9, 2020, the Company announced it had shipped its first large volume of lithium chloride product from the Demonstration Plant for conversion to lithium carbonate.

2021 Developments

On January 18, 2021, the Company announced that its board of directors (the "**Board**" or "**Board of Directors**") had developed a new long-term incentive plan (the "**LTIP**") intended to enhance shareholder value and align management compensation with performance and the achievement of milestones in the development of the Company. Under the terms of the LTIP, the Board of Directors has granted an aggregate of 960,000 performance share units to certain officers and directors of the Company. Each restricted share unit represents the right to receive, once vested upon the achievement of performance milestones, one common share in the capital of the Company.

On March 1, 2021, the Company announced that it successfully completed the conversion of its Arkansas-produced lithium chloride into 99.985% pure lithium carbonate using Original Equipment Manufacturers ("**OEM**") technology. The Company also announced that it commenced work to assess the feasibility of directly converting lithium chloride produced by the Demonstration Plant into battery quality lithium hydroxide.

On April 5, 2021, the Company announced that the Honorable Francis R. Fannon has joined the company in the role of Strategic Advisor.

On May 17, 2021, the Company commenced work on a PEA on its South West Arkansas Project. The Company engaged NORAM Engineering and Constructors Ltd. ("**NORAM**") as the lead consultant, to prepare and coordinate the PEA. In carrying out the PEA, NORAM will be supported by Hunt, Guillot & Associates from Ruston, Louisiana in key areas such as brine supply, injection well and pipeline design and construction costs.

On June 14, 2021, the Company announced that LANXESS elected for the early conversion in full of the Loan (as defined herein).

In June 2021, the Company reorganized certain of its Canadian subsidiaries such that: 2661881 Ontario Limited ("**2661881**"), Moab Minerals Corp. and Vernal Minerals Corp. were continued under the *Canada Business Corporations Act* (resulting in 2661881 changing its name to 13075931 Canada Inc. ("**13075931**")); these entities were combined into one entity, being 13075931, pursuant to a horizontal short-form amalgamation; and thereafter, the Company and 13075931 amalgamated pursuant to a vertical short-form amalgamation. The Company also incorporated a new direct wholly-owned subsidiary, Texas Lithium Holdings Corp. under the laws of British Columbia, and two indirect wholly-owned subsidiaries, Texas Lithium Corp. under the laws of Nevada, and 1093905 LLC under the laws of Delaware, and transferred ownership of 1093905 LLC to Texas Lithium Corp.

On July 13, 2021, the Company commenced trading of its Shares under the ticker symbol "SLI" on the NYSE American.

On July 15, 2021, the Company announced delivery of its SiFT lithium carbonate plant to the El Dorado Arkansas project site located at the LANXESS south plant facility.

On July 20, 2021, the Company appointed Dr. Volker Berl as an independent director of the Company.

On November 25, 2021, the Company filed a PEA and updated inferred mineral resource for its South West Arkansas Project. See "Mineral Properties – South West Arkansas Project" below for more information with respect to the PEA on the South West Arkansas Project.

On December 15, 2021, the Company announced that it signed a letter of intent with Koch Engineered Solutions ("**KES**") for support with pre-front end engineering design at the Company's proposed first commercial plant located at the LANXESS facility in southern Arkansas.

2022 Developments

On January 18, 2022, the Company announced that all matters presented to shareholders at its annual general and special meeting held on January 14, 2022 were approved.

On January 20, 2022, the Company provided an update with respect to project and other related developments including, but not limited to, the announcement that the SiFT lithium carbonate plant, previously installed in Q3 2021, had been successfully commissioned and used to produce battery quality lithium carbonate at plant.

On January 25, 2022, the Company announced that it had signed of letter of intent with Koch Minerals & Trading LLC ("**KMT**") for the purchase of lithium chemical offtake and the procurement of key raw materials.

On February 24, 2022, the Company announced that it had entered into an amended and restated memorandum of understanding dated February 23, 2022 (the "**Amended and Restated MOU**") with LANXESS to streamline and expedite the development of the first commercial lithium project in Arkansas to be constructed at the LANXESS Property Project. See "Description of the Business – Arkansas Lithium Project" below.

On March 9, 2022, the Company announced that in connection with advisory services with respect to the Amended and Restated MOU, the Company had agreed to pay and issue to Stifel Nicolas Canada Inc. $250,000 and issue Shares with a value of $1,000,000, of which the Company had agreed to pay $125,000 and issue 60,235 Shares immediately with the remainder due and payable when a final definitive agreement(s) for the first commercial project with LANXESS are completed at the LANXESS Property Project.

On May 2, 2022, the Company announced the commencement of a pre-feasibility study ("**PFS**") at the South West Arkansas Project.

On May 12, 2022, the Company announced an equity investment of US$2,500,000 into Aqualung Carbon Capture AS ("**Aqualung**"), a leader in carbon capture technology.

On June 17, 2022, the Company entered into a Master Services Agreement (the "**MSA**") with Telescope Innovations Corp. ("**Telescope**"). Under the MSA, Telescope will provide various research and development ("**R&D**") services for the purpose of developing new technologies. The Company will fund an initial project for one year under the MSA, which will aim to evaluate the use of captured CO_2 in the Company's various chemical processes, as well as investigating the potential for permanent geological sequestration of CO_2 within the lithium brine extraction and reinjection processes contemplated by the Company. Other R&D projects may be performed for

the Company by Telescope as required. The Company incurred $755,533 of costs related to the MSA during the year ended June 30, 2022. Dr. Andrew Robinson, President and COO of the Company and Robert Mintak, CEO of the Company are also independent directors of Telescope. However, the MSA is not considered a related party transaction within the meaning of Multilateral Instrument 61-101 – *Protection of Minority Security Holders in Special Transactions*, and the MSA has been reviewed and approved by the independent directors of the Company.

Subsequent Events to June 30, 2022

On July 13, 2022, the Company provided an update with respect to several corporate and project initiatives.

On September 7, 2022, the Company announced that it had completed a competitive selection process for the Front-End Engineering Design ("**FEED**") and definitive feasibility study ("**DFS**") for the first commercial lithium project being developed at the LANXESS Property Project, and awarded the contract to OPD LLC, a Koch-owned business based in Katy, Texas.

Selected Financings

The Company has completed the following financings over the last three completed financial years:

On October 30, 2019, the Company announced it had entered into a $5,000,000 loan and guarantee agreement with LANXESS (the "**Loan**"). The Loan has been fully advanced to Standard as US$3,750,000, based on an agreed exchange rate, and has been used in the ongoing LANXESS Property Project development.

The outstanding principal amount of the Loan beared interest at an annual rate of 3.0%, subject to adjustments. In the event that the Company had a positive consolidated operating cash flow, as shown on its financial statements, the Company was to pay a fee to the Lender of 4.5% per annum on the average daily outstanding principal amount of the Loan from the issuance date to the date that the consolidated operating cash flow of the Company was positive. From and after the date on which the consolidated operating cash flow of the Company was positive, the annual interest rate increased to 7.5%. Pre-payments were permitted with the prior written approval of LANXESS and were subject to a prepayment fee of 3.0% on the portion of the Loan being prepaid.

The principal amount of the Loan was convertible at the option of LANXESS and on June 14, 2021, LANXESS elected for the early conversion in full of the Loan. The Company issued 6,251,250 Shares, and 3,125,625 Share purchase warrants to LANXESS in connection with the conversion of the outstanding Loan and has retired the principal of the Loan in the amount of US$3,750,000. Each Share purchase warrant is exercisable to acquire one additional Share at a price of $1.20 until June 10, 2024.

On February 20, 2020, the Company closed a non-brokered offering of special warrants (each, a "**Special Warrant**") by way of private placement, comprising 16,140,220 Special Warrants at a price of $0.75 per Special Warrant for gross proceeds of $12,105,165. Each Special Warrant entitled the holder to receive, upon voluntary or deemed exercise, and without payment of additional consideration, one unit of the Company (each, a "**Conversion Unit**"). Each Conversion

Unit consisted of one Share and one-half of one Share purchase warrant (each, a "**Unit Warrant**"). Each Unit Warrant was exercisable to acquire one Share at an exercise price of $1.00 per Share, subject to adjustment in certain events, until February 20, 2022, subject to accelerated expiry in certain circumstances. Each Special Warrant would be deemed exercised on the date that is two business days following the earlier of: (i) the date that is four months and one day from issuance of the Special Warrants; or (ii) the date on which the Company obtained a receipt from the applicable securities regulatory authorities for a final prospectus qualifying distribution of the Conversion Units. All Special Warrants converted to Conversion Units on June 21, 2020.

On December 18, 2020, the Company closed a best-efforts offering of Shares by way of short form prospectus, comprising 15,697,500 Shares at a price of $2.20 per Share for aggregate gross proceeds of $34,534,500 (the "**December 2020 Public Offering**"). In connection with the December 2020 Public Offering, the Company paid aggregate cash commission of $2,267,815.

On September 10, 2021, the Company filed a final base shelf prospectus relating to the offering for sale from time to time up to US$250,000,000 Shares, Preferred Shares, debt securities, subscription receipts, warrants or units.

On December 1, 2021, the Company closed on a direct private placement by Koch Strategic Platforms ("**KSP**"), a subsidiary of Koch Investments Group, comprising 13,480,083 Shares at price of $9.4265 (approximately US$7.42) for aggregate gross proceeds of approximately $127,070,000 (approximately US$100,000,000) (the "**Direct Investment**"). In connection with the Direct Investment, the parties entered into a subscription agreement dated November 23, 2021 (the "**Subscription Agreement**") pursuant to which Standard granted KSP the right of first offer to participate in future equity financings for a period of sixty months and certain registration rights. In connection with the Direct Investment, the Company paid a cash commission of US$5,000,000 and issued 336,877 Share purchase warrants (each, a "**Warrant**"). Each Warrant is exercisable to acquire one Share at an exercise price of $11.09 per Share until November 30, 2023. See "Material Contracts" below.

Trends and Outlook

In September 2022, the Company announced that it had completed a competitive selection process for the FEED and DFS for the first commercial lithium project being developed at the LANXESS Property Project and awarded the contract to OPD LLC, a Koch-owned business based in Katy, Texas. This first project at LANXESS South, designated as Phase 1A, contemplates processing the brine that is currently being handled by LANXESS at its south facility, where the Company's Demonstration Plant is located. The FEED and DFS are expected to be completed in H1 2023. A final investment decision is expected to follow, and construction on the first commercial plant would begin soon after.

In May 2022, the Company commenced PFS work at the South West Arkansas Project. The Company anticipates elevating the South West Arkansas Project to a higher level of mineral resource classification and project definition. The Company will be collecting additional brine samples and conducting additional testing, modeling and analysis. Following the completion of the PFS (which is expected in early 2023), a DFS will commence.

DESCRIPTION OF THE BUSINESS

Background

Standard is an innovative technology and lithium development company focused on the sustainable development of a portfolio of lithium-brine bearing properties in the United States utilizing proprietary DLE and purification technologies.

The Company's flagship project is the Arkansas Lithium Project. In addition, the Company has an interest in certain mineral leases located in the Mojave Desert in San Bernardino County, California. These projects are summarized below.

Standard owns no producing properties and, consequently, has no current operating income or cash flow from the properties it holds, nor has it had any income from operations in the past three financial years. As a consequence, operations of the Company are primarily funded by equity financings.

Please see "General Development of the Business – Three Year History" and "General Development of the Business – Trends and Outlook" above and "Mineral Properties" below for further details on the Arkansas Lithium Project and development thereof.

Arkansas Lithium Project

The Arkansas Lithium Project consists of two main areas of interest. The first is pursuant to the TETRA 1st Option Agreement (as defined below) to acquire certain rights to conduct brine exploration and production and lithium extraction activities on approximately 27,262 net acres of brine leases and deeds located in Columbia and Lafayette Counties, Arkansas. The terms and conditions of the TETRA 1st Option Agreement are set forth below. The second is pursuant to the Amended and Restated MOU with LANXESS to streamline and expedite the development of the first commercial lithium project in Arkansas to be constructed at a LANXESS property. The Amended and Restated MOU replaces the previous memorandum of understanding dated May 9, 2018 (the "**LANXESS MOU**"), and subsequent term sheet dated November 9, 2018 (the "**LANXESS JV Term Sheet**").

TETRA 1st Option Agreement

The Company entered into an option agreement on December 29, 2017 (the "**TETRA 1st Option Agreement**") with Tetra Technologies Inc. ("**TETRA**") to acquire certain rights to conduct brine exploration and production and lithium extraction activities on approximately 27,262 net acres located in Columbia and Lafayette Counties, Arkansas. Thereunder, the Company is required to: pay TETRA US$500,00 by January 28, 2018 (paid), US$600,000 by December 29, 2018 (paid), US$700,000 by January 31, 2020 (paid) and US$750,000 by December 29, 2020 (paid); and pay additional annual payments of US$1,000,000 by each annual anniversary date beginning on the date that is 48 months following the date of the TETRA 1st Option Agreement, until the earlier of the expiration of the Exploratory Period (as defined therein) or, if the Company exercises the option, the Company beginning payment of the Royalty (as defined therein). During the Lease Period (as defined therein), at any time following the commencement of Commercial Production

(as defined therein), the Company agreed to pay a royalty of 2.5% (minimum royalty US$1,000,000) to TETRA.

Amended and Restated MOU

The Company entered into the Amended and Restated MOU on February 23, 2022, with LANXESS to streamline and expedite the development of the first commercial lithium project in Arkansas to be constructed at the LANXESS Property.

Key Highlights:

- Standard will form an initially wholly-owned company ("**Project Company**") that owns 100% of the project during pre-FEED and FEED engineering studies. The FEED engineering will be used to produce a DFS in Q4 2022;
- LANXESS will, via a series of commercial agreements, provide the brine supply for the project, the project site lease, and rights of way, infrastructure and other services for the project;
- Standard will provide a market fee-based license to the Project Company of its suite of intellectual property;
- Standard is able to utilize its IP, extraction technology and know-how at its 100% owned South West Arkansas Project, certain other sites in Arkansas and at all project sites outside of Arkansas, and will maintain control and ownership over the future development of its IP portfolio; and
- LANXESS is obliged to support development of the project and upon completion of a DFS, has the option to acquire an equity interest in the Project Company of up to 49% and not less than 30%, at a price equal to a ratable share of Standard's aggregate investment in the Project Company.

If LANXESS acquires an ownership interest:

- The parties will share the costs of financing construction of the project on a ratable basis; and
- LANXESS will have the right to acquire some, or all of the lithium carbonate off-take produced at the commercial plant at market-based terms less a handling fee.

If LANXESS does not acquire an ownership interest:

- Standard will own 100% of the project including customary dividends, distribution or similar rights;
- Standard can elicit bids from other interested parties to buy up to 49% of the Project Company; and
- LANXESS will have the right to acquire some, or all of the lithium carbonate off-take produced at the commercial plant at a price of market minus up to 20%, to be agreed by LANXESS and Standard and taking into consideration several key commercial agreements (including the costs of brine supply and disposal for the project, the project site lease cost and rights of way, infrastructure and other services for the project).

The parties have also agreed that development of the second and third projects on the LANXESS properties will be on a joint basis and that the parties will perform the same roles using similar contractual structures as the first project. LANXESS will also have the right to purchase the lithium carbonate off-take from the additional projects upon market-based terms to be agreed by LANXESS and Standard, taking into consideration other commercial agreements required for their development (e.g. site leases, brine supply/disposal etc.).

The Amended and Restated MOU replaces the LANXESS MOU and LANXESS JV Term Sheet, which previously set out the basis on which the parties had agreed to cooperate in a phased process towards developing commercial opportunities related to the production, marketing and sale of battery grade lithium products that may be extracted from tail brine and brine produced from the Smackover Formation. In particular, the Amended and Restated MOU expressly acknowledges execution of certain agreements with respect to the Demonstration Plant and payment of the reservation of rights fee, paid by Standard to LANXESS in two (2) equal installments of US$3,000,000.

Arkansas Lithium Project Background

The Arkansas Lithium Project consists of two main areas of interest: the LANXESS Property Project and the South West Arkansas Project. All of the Company's activities in southern Arkansas relate to brine leases that overlie the Smackover Formation in a region with a long history of commercial scale brine processing. Historical published brine data and current unpublished brine data from within and adjacent to the Company's two areas of interest lead the Company to believe that lithium-bearing brines are present.

The South West Arkansas Project brine lease area has been historically drilled for oil and gas exploration, and approximately 2,041 exploration and production wells have been completed in the Smackover Formation in or immediately adjacent to Company's lease area. A portion of these wells had available petro-physical logs of the Smackover Formation brine-bearing zone. Around 14 additional wells have core reports that provide detailed data with porosity and permeability data. On January 28, 2019, the Company announced a maiden inferred mineral resource of 802,000 tonnes lithium carbonate equivalent ("**LCE**") at the South West Arkansas Project[1]. The South West Arkansas Project is comprised of 802 individual brine leases and eight salt water (brine) deeds that covers 27,262 net mineral acres.

Brine has been continuously produced for bromine production since 1957 on the LANXESS Property. LANXESS operates three brine processing facilities, South, Central and West on the LANXESS Property. On November 14, 2018, the Company announced a maiden inferred mineral resource of 3,086,000 tonnes LCE at the LANXESS Property[2]. The mineral resource is defined across a total footprint of approximately 150,000 acres, which is comprised over 10,000 separate

[1] See NI 43-101 technical report titled "Amended Geological Introduction and Maiden Inferred Resource Estimate for Standard Lithium Ltd.'s TETRA Smackover Lithium-Brine Property in Arkansas, United States" with an effective date of February 28, 2019 and available under the Company's SEDAR profile at www.sedar.com.

[2] See NI 43-101 technical report titled "Amended Geological Introduction and Maiden Inferred Resource Estimate for Standard Lithium Ltd.'s LANXESS Smackover Lithium-Brine Property in Arkansas, United States" with an effective date of November 19, 2018 and available under the Company's SEDAR profile at www.sedar.com.

brine leases. On June 19, 2019, the Company announce the results of a preliminary economic assessment of the LANXESS Project with an indicated resource of 3,140,000 tonnes LCE as well as preliminary capital and operation costing and project economics for the proposed commercial plants. See "Mineral Properties – LANXESS Property Project" below.

In Q1 2019 the Company undertook mini-pilot scale process work, using tail brine collected from operating facilities in southern Arkansas. This work provided the engineering data for the design of a full-scale, continuously operated Demonstration Plant. The Company contracted Zeton Inc. ("**Zeton**") to build the Demonstration Plant. The Demonstration Plant was constructed by Zeton in three phases and the final modules were transported to and installed at LANXESS' south plant facility in southern Arkansas. The Demonstration Plant is based on the Company's proprietary LiSTR technology, that uses a solid sorbent material to selectively extract lithium from LANXESS' tail brine. The Company and their contractors completed initial installation of the Demonstration Plant at LANXESS' south plant facility in southern Arkansas. This installation was completed in mid-October 2019. During November and December 2019, a semi-permanent all-weather structure was installed to enclose the demonstration plant, and an office/control room and an analytical laboratory were also installed.

On May 19, 2020, the Company announced full-time operation of the Demonstration Plant. The plant is designed to process up to 50 USGPM of tail brine, extract the lithium, with the aim of producing a high quality, concentrated lithium chloride intermediate product. This product can then be converted into battery quality lithium carbonate, either via conventional OEM processes, or via the proprietary SiFT technology the Company is developing. As of July 15, 2020, the Company's SiFT pilot plant was operational and represents the next generation of lithium carbonate crystallization, promising higher purities and more consistent product specifications, all requirements of the next generations of lithium-ion batteries.

On September 1, 2021, the Company announced completion of the installation of the SiFT lithium carbonate plant, with all major connections made to the existing plant and the installation of a new weatherproof enclosure.

On October 12, 2021, the Company announced the results of a preliminary economic assessment and updated inferred mineral resource estimate on its South West Arkansas Project[3]. See "Mineral Properties – South West Arkansas Project" below.

California Lithium Project

The Company's California lithium property (the "**California Lithium Project**") is located in San Bernardino County, California approximately 150 miles east-northeast of Los Angeles. The California Lithium Project comprises approximately 48,000 acres of mixed private, patented and placer claim land in the Bristol Dry Lake and Cadiz Dry Lake basins in the Mojave Desert adjacent to Amboy, California. The Company acquired its interests in the overall land package through a series of commercial agreements.

[3] See NI 43-101 technical report titled "Preliminary Economic Assessment of SW Arkansas Lithium Project" with an effective date of November 20, 2021 and available under the Company's SEDAR profile at www.sedar.com.

The California Lithium Project is subject to a technical report titled "Technical Report on the Mojave Lithium Property, San Bernardino County, California, USA" dated September 13, 2016 with an effective date of September 13, 2016 (the "**California Technical Report**") and is available under the Company's SEDAR profile. The California Technical Report covers a parcel of approximately 4,020 acres on federal lands controlled by the Bureau of Land Management. As public lands, there is free right of access within the restrictions of special land designations. Both surface and mineral rights are held by the Federal government.

Following the initial California Technical Report for the California Lithium Project, and subsequent to the various commercial agreements that allowed the Company to access and explore most parts of the Bristol and Cadiz Dry Lake Playas, the Company has completed several phases of exploration and process testing work. These have consisted of the following:

- Gravity geophysical surveys of both Bristol Dry Lake and Cadiz Dry Lake (see news releases filed on Company's SEDAR profile dated June 05, 2017 and April 19, 2018). These surveys have highlighted the presence of two deep, infilled basins at the two project sites. At Bristol Dry Lake, the survey showed that the basin was up to two times deeper than previously understood, with a maximum depth of up to 1.2 km beneath the California Lithium Project area. At Cadiz Dry Lake, the survey showed a maximum depth of just over 0.7 km beneath the California Lithium Project area.
- CSAMT/MT geophysical surveys of Bristol Dry Lake (see news release filed on Company's SEDAR profile dated August 08, 2017). This survey highlighted the presence of extensive low resistivity zones beneath the Bristol Dry Lake project, suggesting that lithium brines are present beneath almost all of Standard's claims. In addition, the survey showed extremely low resistivity values (less than 1 ohm-metre), likely correlating with high concentration brines, and also that brines extend south and eastwards across the basin, into areas that are not currently used for brine harvesting activities.
- Excavation of surface pits across the property with a backhoe, combined with initial evaporation pond work (see news release filed on Company's SEDAR profile dated October 10, 2017 and December 11, 2017). Initial grab sampling of very shallow (1.5 to 6m depth) brines across the property showed an average lithium concentration of 146 mg/L. These brines were pumped into shallow, plastic-lined ponds, were concentrated via passive solar evaporation for a period of four weeks, and yielded final brines with an average lithium concentration of 686 mg/L.
- Sampling of production wells from Cadiz Dry Lake (see news release filed on Company's SEDAR profile dated October 30, 2017). Grab samples taken from active brine production wells on the Cadiz Dry Lake project yielded lithium concentrations between 112 to 139 mg/L.
- Initial sampling and exploratory drilling work at Bristol Dry Lake and Cadiz Dry Lake (see news release filed on Company's SEDAR profile dated December 11, 2017 and June 20, 2018). Four exploration boreholes were drilled at Bristol Dry Lake in Q4 of 2017, and reached a maximum depth of 1,195 ft (364m). Two additional exploratory boreholes were drilled at Bristol in the first half of 2018 (making six in total), and a seventh well was commenced and then subsequently completed in such a manner that it can be re-entered easily.
- Numerous brine samples have been collected across the two properties, and elevated lithium concentrations have been noted in all samples collected from exploration boreholes in Bristol Dry Lake, and from production wells in Cadiz Dry Lake. These data

have not been published to date but will be released in a technical report for the Property(ies) in the future. Lithium concentrations are consistent with historical data (see California Technical Report) and with grab samples as described above. Additional rounds of evaporation pond process testing work have also been completed and these are similarly consistent with the initial data as described above.

Lithium Brine Processing R&D Project

The Company has a technical group that is engaged in continuously improving the Company's core lithium extraction and refining technologies. Work has been completed on five main fronts: (i) pre-treating the Company's brines using modern filtration technologies; (ii) selectively extracting lithium from pre-treated brine(s) to produce a concentrated lithium salt solution; (iii) purifying and crystallization of concentrated lithium solutions to produce battery-grade lithium products; (iv) de-risking the technology by designing, building and operating progressively larger pilot and pre-commercial plants; and (v) assisting in developing, refining and submitting patent applications and other IP protections. The Company currently holds substantial IP and has filed full, non-provisional patent applications in several jurisdictions for its LiSTR (selective lithium extraction) technology, as well as full, non-provisional patent applications for its SiFT lithium carbonate crystallization technology. This work is ongoing at the project site(s) and at various other locations in the United States and Canada.

Carbon Capture Project

On September 14, 2021, the Company announced that it was undertaking and funding a pilot project in southern Arkansas to test a novel carbon capture technology. The pilot project is being conducted with the owner of the technology Aqualung and will have a pilot carbon capture unit installed at a natural gas processing site in southern Arkansas owned and operated by Mission Creek Resources LLC. The pilot project will take a slipstream of flue gas for processing through the Aqualung pilot unit. The resulting concentrated CO_2 stream will then be used in Standard's ongoing R&D program to understand how CO_2 may be permanently sequestered by the Company as part of normal brine reinjection activities. This R&D program will then expand to consider how CO_2 may also be used as an alternative reagent at several points in the Company's process flowsheet.

The Company believes the patent-protected Aqualung CCS technology, developed by the Norwegian University of Science and Technology ("**NTNU**"), is an innovative approach with the ability to deliver a cost effective, scalable, modular decarbonization solution.

The Aqualung CCS technology results from over 20 years of research at NTNU and is based on a membrane system that selectively extracts CO_2 from a wide range of CO_2 sources emitted by hydrocarbon-burning energy sources. It produces a high purity CO_2 gas stream that can either be sequestered or reused.

Standard has invested US$2,500,000 in Aqualung as part of a US$10,000,000 strategic equity round that included Nasdaq listed, Golar LNG and London-based shipowner, Global Ship Lease and Geneva-based metals trading services group, MKS Pamp. Dr. Andrew Robinson, President and COO of the Company also joined the board of Aqualung.

Other

The Company is continuing to review its options with respect to the current and other prospective properties.

Specialized Skills and Knowledge

Successful exploration, development and operation of the Company's lithium projects will require access to personnel in a wide variety of disciplines, including geologists, geophysicists, engineers, drillers, managers, project managers, accounting, financial and administrative staff, and others. Since the project locations are also in jurisdictions familiar with and friendly to resource extraction, management believes that the Company's access to the skills and experience needed for success is sufficient.

Competitive Conditions

The Company's activities are directed towards the exploration, evaluation and development of mineral deposits. There is no certainty that the expenditures to be made by the Company will result in discoveries of commercial quantities of mineral deposits. There is aggressive competition within the mining industry for the discovery and acquisition of properties considered to have commercial potential. The Company will compete with other interests, many of which have greater financial resources than it will have, for the opportunity to participate in promising projects. Significant capital investment is required to achieve commercial production from successful exploration efforts, and the Company may not be able to successfully raise funds required for any such capital investment. See "Risk Factors – Competition" below.

Components

The Company is focused on the sustainable development of a portfolio of lithium-brine bearing properties in the United States utilizing proprietary DLE and purification technologies. The Company has either directly secured brine leases from public lands or private landowners, or has partnered, in a variety of commercial relationships, with existing brine resource holders in Arkansas and California, and continues to explore other jurisdictions. Under the terms of the Amended and Restated MOU, LANXESS is obliged to support development of the LANXESS Property Project and via a series of agreements that are being negotiated, will provide the brine supply for the LANXESS Property Project, the LANXESS Property site lease, and rights of way, infrastructure, and other services to the LANXESS Property Project. The Company has also entered into a letter of intent with KMT with respect to the purchase of lithium chemical offtake and the procurement of key raw materials.

Intangible Properties

The Company has developed a suite of IP related to novel technologies that can be deployed to either selectively extract lithium from brine or convert and purify intermediate lithium chemicals to higher purity materials. This IP suite is protected by a series of patent applications, and where the underlying inventor is an associate of, consultant or third party to Standard, exclusive rights or sole-licensing agreements are in place to allow Standard unfettered access to the patent(s) and associated know-how.

Business Cycles

Mining is a cyclical industry and commodity prices fluctuate according to global economic trends and conditions. See “Risk Factors – Risk Related to the Cyclical Nature of the Mining Business” below.

Economic Dependence

Development of the LANXESS Property Project is substantially dependent on the Amended and Restated MOU. Under the terms of that agreement, the Company has committed to selling the bulk of its product offtake, lithium carbonate at the LANXESS Property to LANXESS, pursuant to an offtake agreement to be entered into.

LANXESS and the Company have also agreed that development of the second and third projects on the LANXESS Property will be on a joint basis and that the parties will perform the same roles using similar contractual structures as the first LANXESS Property Project. LANXESS will also have the right to purchase the lithium carbonate offtake from the additional projects upon market-based terms to be agreed by LANXESS and Standard, taking into consideration other commercial agreements required for their development (e.g., site leases, brine supply/disposal etc.). See “Description of the Business – Arkansas Lithium Project – Amended and Restated MOU” above.

The Company has also signed of letter of intent with KMT for the purchase of lithium chemical offtake and the procurement of key raw materials.

Changes to Contracts

As the Company advances the LANXESS Property Project, and in accordance with the Amended and Restated MOU, the Company and LANXESS will be working towards entering certain agreements with respect to the development of the LANXESS Property Project including, but not limited to, with respect to tail brine supply and disposal, offtake, site lease at the LANXESS Property, service agreements, development agreements, license agreements and, if agreed to by the parties, an operations and maintenance agreement. These agreements though on conditional on Standard having obtained commercial plant financing.

Environmental Protection

Our exploration and development activities, as applicable, are subject to various levels of federal, state and local laws and regulations relating to the protection of the environment, including requirements for closure and reclamation of mining properties.

Employees

As of the date of this AIF, the Company has nil employees. The services of CEO, CFO and President and COO are provided by contractors.

Foreign Operations

The Company's property interests are all located outside of Canada, with the projects being in the United States. The lithium business in which the Company operates is increasingly affected by political factors, including geopolitical tensions among major world powers and industrial policy promoting the development of domestic electric vehicle and battery production infrastructure. These factors are relevant in the United States.

Reorganizations

Except as set forth above in "*General Development of the Business – Three Year History*", there have been no corporate reorganizations within the three most recently completed financial years of the Company and there is no corporate reorganization completed during or proposed for the current financial year.

Social or Environmental Policies

The Company holds itself to a standard of integrity, professional conduct and environmentally responsible business practices, and is committed to responsibly producing sustainable lithium chemicals that support the transition to a lower carbon economy.

The Company believes the communities in and around the Arkansas Lithium Project are supportive of the brine extraction industry, with a regional workforce that is highly skilled and qualified for the jobs needed at the Arkansas Lithium Project. The Company currently employs (through various commercial agreements) approximately 30 engineers, operators, technicians and administrative staff who live in the nearby communities.

Community Engagement

Standard strives to build strong relationships with its stakeholders and believes that the participation of and related benefits to the communities we operate in are key to the Company's success as we move the Arkansas Lithium Project forward. Standard is proud to have sponsored numerous community social events over the past year, including but not limited to, the El Dorado MusicFest, the Holiday Lighting Ceremony, Independence Day Celebration, the Mayhaw Festival and in May 2022, Standard partnered with Entergy, Adopt-a-Charger, and South Arkansas Community College on the installation of the six Level 2 – 240 volt EVCS charging stations, free for public use, located near the Murphy Arts District in downtown El Dorado, Arkansas.

MINERAL PROPERTIES

The Company has one material mineral property: the Arkansas Lithium Project. The Arkansas Lithium Project consists of two main areas of interest: the LANXESS Property Project and the South West Arkansas Project. Each property will be discussed below separately.

LANXESS Property Project

Please refer to the technical report titled "Preliminary Economic Assessment of LANXESS

Smackover Project" dated August 1, 2019 (the "**LANXESS PEA**"), as filed on the Company's SEDAR profile, for detailed disclosure relating to:

- Project Description and Location;
- Accessibility, Climate, Local Resources, Infrastructure and Physiography;
- History;
- Geological Setting and Mineralization;
- Deposit Types;
- Exploration;
- Drilling;
- Sample Preparation, Analyses and Security;
- Data Verification;
- Mineral Processing and Metallurgical Testing;
- Mineral Resource Estimates;
- Mineral Reserves;
- Mining Methods;
- Recovery Methods;
- Infrastructure;
- Market Studies and Contracts;
- Environmental Studies, Permitting and Social or Community Impact;
- Capital and Operating Costs;
- Economic Analysis;
- Adjacent Properties;
- Other Relevant Data and Information;
- Interpretation and Conclusions; and
- Recommendations.

The following is a summary of the LANXESS PEA, prepared by a multi-disciplinary team of qualified persons ("**QPs**") that include geologists, hydrogeologists and chemical engineers with relevant experience in brine geology, brine resource modelling and estimation, and lithium-brine processing. The authors include Marek Dworzanowski, P.Eng., B.Sc. (Hons), FSAIMM, Roy Eccles M.Sc. P. Geol. of APEX Geoscience Ltd. ("**APEX**"), Stanislaw Kotowski, P.Eng, M.Sc. of Worley Parsons Canada Services Ltd. ("**Worley**") and Dr. Ron Molnar Ph.D. P. Eng. of METNETH2O.

The LANXESS PEA is incorporated by reference herein and for full technical details, the complete text of the LANXESS PEA should be consulted.

The following summary does not purport to be a complete summary of the LANXESS Property Project and is subject to all the assumptions, qualifications and procedures set out in the LANXESS PEA and is qualified in its entirety with reference to the full text of the LANXESS PEA. Readers should read this summary in conjunction with the LANXESS PEA. The following summary is subject to any updated information contained elsewhere in this AIF.

Property Location and Description

The LANXESS Property is located south and west of the City of El Dorado in Union County,

Arkansas, United States. The southern and western edges of the LANXESS Property border the State of Louisiana (LA) and Columbia County, respectively. The LANXESS Property encompasses Townships 16-19 South, and Ranges 15-18, West of the 5th Meridian (W5M). The LANXESS Property centre is at UTM 520600 Easting, 3670000 Northing, Zone 15N, NAD83.

Ownership and History

The LANXESS Property is presently owned by LANXESS, a specialty chemicals company based in Cologne, Germany. Presently, LANXESS is listed in the Dow Jones Sustainability Index and FTSE4Good Index.

LANXESS owns 100% of the brine leases and brine rights on their properties, either by an executed brine lease or by operation of law, as a result of unitization by the Arkansas Oil and Gas Commission. The land package, which is indicated on Figure 4-2 of the LANXESS PEA, consists of 150,081.81 acres that cover over 607 km^2. Of the total land package, 142,881.81 acres are 'Unitized' and approximately 7,200 acres occur outside the Unit boundaries (Non-Unitized).

Each Unit (South, Central and West) has their own brine supply wells, pipeline network and bromine processing (separation) infrastructure. The facilities and their locations, which are 100% owned and operated by Great Lakes Chemical Corporation, a wholly-owned subsidiary of LANXESS, are as follows:

- South Unit (South Plant): 324 Southfield Cutoff, El Dorado, AR 71730;
- Central Unit (Central Plant): 2226 Haynesville Highway (HWY 15S), El Dorado, AR 71731; and
- West Unit (West Plant): 5821 Shuler Road, Magnolia, AR 71731.

Geology and Mineralization

The authors of the LANXESS PEA reclassified the LANXESS lithium-brine ("**Li-Brine**") Resource from an Inferred Mineral Resource to an Indicated Mineral Resource in the LANXESS PEA.

The average lithium concentration used in the resource calculation is 168 mg/L lithium ("**Li**"). Resources have been estimated using a cut-off grade of 100 mg/L lithium.

The total Indicated LANXESS Li-Brine Resource for the South, Central and West brine units is estimated at 590,000 tonnes of elemental Li. The total LCE for the main resource is 3,140,000 tonnes LCE (see Table 1). With a planned level of production of 20,900 tonnes per year (tpy) of LCE, the resources will exceed the planned 25 years of operation by a significant margin. Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no guarantee that all, or any part, of the mineral resource will be converted into a mineral reserve.

Table 1 Indicated LANXESS Lithium-Brine Resource Estimate

Reporting Parameter	South Unit	Central Unit	West Unit	Total (and main resource)
Aquifer volume (km^3)	5.828	8.289	16.310	30.427
Brine volume (km^3)	0.689	0.995	1.835	3.515
Average lithium concentration (mg/L)	168	168	168	168
Average Porosity	11.8%	12.0%	11.2%	11.6%
Total elemental Li resources (tonnes)	116,000	167,000	308,000	590,000
Total LCE (tonnes)	615,000	889,000	1,639,000	3,140,000

Notes:

1. Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no guarantee that all or any part of the mineral resource will be converted into a mineral reserve. The estimate of mineral resources may be materially affected by geology, environment, permitting, legal, title, taxation, socio-political, marketing or other relevant issues.
2. The weights are reported in tonnes (1,000 kg).
3. Numbers may not add up due to rounding of the resource values percentages (rounded to the nearest 1,000 unit).
4. In a 'confined' aquifer (as reported herein), porosity is a proxy for specific yield; especially given the number of effective porosity measurements evaluated in this report and their positive correlation with LAS log total porosity.
5. The grey-shaded 'Total' volume and weights are estimated at volume-weighted average porosities of the block-model (i.e. calculated by using the porosity of the brine units and their respective unit areas). It is assumed that all pore space is occupied by brine.
6. The LANXESS estimation was completed and reported using a cutoff of 100 mg/L Li.
7. To describe the resource in terms of industry standard, a conversion factor of 5.323 is used to convert elemental Li to lithium carbonate, or Lithium Carbonate Equivalent (LCE).

Recovery Method and Mineral Processing

The Company's objective is to produce battery-grade lithium carbonate from the tail-brine that exits the LANXESS bromine extraction operations. There are three (3) bromine extraction operations that will be used for lithium extraction (South, Central and West). Each facility will have its own primary lithium chloride extraction plant, which will produce purified and concentrated lithium chloride solutions. These solutions will be conveyed, via pipelines, to one location (Central Plant) for further processing to the final product - lithium carbonate. The total lithium carbonate production is 20,900 tpy. The final product lithium recovery is about 90%.

The production process parameters are supported by bench scale metallurgical testing and mini-pilot plant testing program results. Readers are cautioned that statements relating to the production process and recovery are based on using a processing technology that has not yet been commercially proven and there is a risk that actual results, performance, prospects and opportunities could differ materially from those expressed or implied by such forward-looking information.

Mineral Processing and Metallurgical Testing

The Company is continuing the development of a processing route to produce battery-quality lithium chemicals from brine at the Company's LANXESS Property. The immediate goal of the past and ongoing work is to define the process and engineering parameters required to design and operate a demonstration-scale integrated plant at the LANXESS Property. The objective of the Demonstration Plant is to further confirm the operating conditions and design criteria for the full-scale commercial plant, which will be operated at the same site using the same tail-brine feed. It will also enable the examination of some processing options and the optimization of key processing parameters.

Lithium Extraction Mini-Pilot Testing

The bench-scale lithium extraction process equipment, as discussed in the LANXESS PEA, was scaled up by a suitable scaling factor, and was reconstructed at SGS Canada Inc's Lakefield Ontario laboratory. The principal purpose of the mini-pilot plant work was to better understand the continuous solid/liquid handling aspects of the process in order to complete the design of the Demonstration Plant. The brine was used in the mini-pilot plant at ambient temperature, without any prior filtration or pre-treatment. The mini-pilot plant campaign operated during March 2019, and ran continuously for three weeks, 299 hours on a 24/5 basis, with only short stoppages to address mechanical issues and to change operating conditions. For the first two weeks, one sorbent sample was used and it circulated through the plant circuit from loading to elution and back again. This sorbent was replaced with a second sample that was tested in the third campaign week. The continuous circuit operated at a feed brine flowrate of 240 L per hour. This would have required a very large volume of brine to be transported and then disposed of; therefore, initially, lithium chloride, via a master solution, was added to the produced barren brine, which was then recirculated to the loading reactor. For the final shifts in the campaign, fresh feed brine was processed on a once-through basis, as would be the case in the on-site operations. Both sodium hydroxide and aqueous ammonia were successfully tested as pH control reagents. An upgraded and purified lithium chloride solution was produced and ultimately used in the development of the novel crystallization technology known as SiFT.

Lithium Chloride Conversion Testing

The concentrated lithium chloride solution, from the stripping stage, undergoes removal of residual hardness (low levels of residual alkali and alkaline earth metals) using industry standard purification methods to produce a high-purity lithium chloride solution. The purified lithium chloride solution produced by polishing is suitable for application of the industry-standard carbonation process. Typically, this involves adding soda-ash (sodium carbonate) to the lithium chloride solution. Heating reduces the solubility of the precipitated lithium carbonate, which is subsequently removed by filtration. The lithium carbonate is further purified through several stages, including further carbonation, bicarbonation and hot washing, followed by sizing, drying and packing, to produce a saleable lithium carbonate product meeting the offtake partner's specifications. These final product preparation steps are analogous to those currently used in operating lithium brine projects and are typically carried out using equipment and processes provided by vendors/OEMs familiar with the application.

The batch crystallization and purification process was developed by the lithium industry in the

1960s, and was designed for end-uses that did not require very high purities. The global growth in use of lithium chemicals is based predominantly on the adoption of lithium ion batteries, and these end-uses typically have more exacting purity targets.

In order to assess whether alternative crystallization techniques may be helpful in reaching higher levels of purity, the Company is also in the process of examining an alternative precipitation technology with fewer purification steps. As previously announced, the Company has been involved in testing a novel continuous crystallization process. This work has been completed in collaboration with researchers from the University of British Columbia ("**UBC**"), specifically Professor Jason Hein. This new process, which has been dubbed 'SiFT', has the advantage over the conventional purification route that it can start off with a contaminated (with elements like calcium and magnesium) lithium chloride solution and produce high grade lithium carbonate in fewer process steps and with reduced chemical requirements.

Conclusions

The purpose of the continuously-operating Demonstration Plant will be to establish process robustness and to evaluate long-term sorbent life, while further optimizing operating conditions. Most of the design parameters for the Demonstration Plant have been developed from the bench and mini-pilot plant testing and the Demonstration Plant will further define the design parameters and expected capital and operating costs for the commercial operation.

Capital and Operating Cost Estimate

CAPEX

Capital expenditures ("**CAPEX**") are based on an operating capacity of 20,900 tpy of battery grade lithium carbonate. Capital equipment costs have been obtained from in-house data and solicited budget price information. The estimate is compliant to the AACE International Class 5 standard (see Table 2). The accuracy of this estimate is expected to be within a -30%/+50% range.

The production process parameters are supported by bench scale metallurgical testing and mini-pilot plant testing program results.

Table 2 CAPEX Summary

Stage of Development	Description	Cost (US$)
Phase 1	South Lithium Chloride Plant	106,886,000
	Central Lithium Carbonate Plant – Train № 1	27,711,000
	Pipelines	2,340,000
	Contingency 25%	34,234,000
	Phase 1 Subtotal	171,171,000
Phase 2	West Lithium Chloride Plant	99,393,000
	Central Lithium Carbonate Plant – Train № 2	25,769,000
	Pipelines	3,780,000
	Contingency 25%	32,236,000
	Phase 2 Subtotal	161,178,000
Phase 3	Central Lithium Chloride Plant	66,589,000
	Central Lithium Carbonate Plant – Train № 3	17,261,000
	Contingency 25%	20,963,000
	Phase 3 Subtotal	104,813,000
	CAPEX TOTAL	**437,162,000**

OPEX

Operating expenditures ("**OPEX"**) are based on a phased development with an increasing lithium carbonate production capacity: Phase 1: 9,700 tpy, Phase 2: 8,200 tpy and Phase 3: 3,000 tpy. The OPEX summary (rounded to '000) is presented in Table 3.

Table 3 Annual Operating Cost Summary

Description	Phase 1 US$	Phase 2 US$	Phase 3 US$
Direct Operational Expenditures			
Manpower	3,745,000	5,680,000	6,710,000
Electrical Power	4,040,000	7,306,000	9,097,000
Reagents & Consumables	30,138,000	55,615,000	64,936,000
Water	496,000	916,000	1,070,000
Natural Gas	582,000	1,074,000	1,254,000
Miscellaneous Direct Expenditures	605,000	1,098,000	1,299,000
Sustaining Capital Cost	1,199,000	2,314,000	3,061,000
Brine Transportation	48,000	123,000	123,000
Land lease	100,000	200,000	300,000
Subtotal	**40,953,000**	**74,326,000**	**87,849,000**
Indirect Operational Expenditures	1,009,000	1,901,000	2,410,000
TOTAL	**41,962,000**	**76,227,000**	**90,259,000**

Note: OPEX per one metric tonne of production is US$4,319.

Economic Analysis

The project economics assumed a three-year rolling average price of US$13,550/t for the lithium carbonate product. The results for IRR and NPV from the assumed CAPEX, OPEX and price scenario at full production, are presented in Table 4.

Table 4 Economic Evaluation – Case 1 (Base Case) Summary

Overview	Units	Values	Comments
Production	tpy	20,900	At completion of Phase 3 production
Plant Operation	years	25	From the start of Phase 1 production
Capital Cost (CAPEX)	US$	437,162,000	
Annual Operating Cost (OPEX)	US$	90,259,000	
Average Selling Price	US$/t	13,550	

Annual Revenue	US$	283,195,000
Discount Rate	%	8
Net Present Value (NPV) Post-Tax	US$	989,432,000
Net Present Value (NPV) Pre-Tax	US$	1,304,766,000
Internal Rate of Return (IRR) Post-Tax	%	36.0
Internal Rate of Return (IRR) Pre-Tax %	%	41.8

Post-Tax Sensitivity Analysis

The sensitivity analysis at discount rate of 8% indicates that the project is economically viable under the base case conditions where the NPV and IRR are very positive.

- Project economics are sensitive to the variations in the product selling price. A change in the selling price by +/- 20% changes the value of net present value ("**NPV**") by +/- 43% and value of IRR by +/- 32%.
- The project is moderately sensitive to variations in the OPEX. A change in the OPEX by +/- 20% changes the value of NPV by +/- 14% and value of internal rate of return ("**IRR**") by +/-10%.
- The project economics are relatively insensitive to the increase or decrease of CAPEX. A change in the CAPEX by +/- 20% changes the value of NPV by +/- 1% and value of IRR of less than +/- 1%.
- The cost of reagents is approximately 72% of the OPEX. The remaining components of the operating cost have significantly lower impact on the overall economics.

Conclusions and Recommendations

Key Study Conclusions

- The total Indicated LANXESS Li-Brine mineral resource is estimated at 3,140,000 tonnes of LCE. The volume of mineral resources will allow the lithium bearing brine extraction operations to continue well beyond the currently assumed 25 years.
- The results of the geological evaluation and mineral resource estimates for the preliminary economic assessment of the LANXESS Property justifies development of the project to further evaluate the feasibility of production of lithium carbonate.
- The experience gained from the long-term operations of the brine extraction and processing facilities on the LANXESS controlled properties decreases the risk related to sustainability of the brine extraction from the LANXESS Property.
- The well-developed infrastructure and availability of a qualified work force will decrease the risks related to construction, and commissioning and operating of the lithium extraction and lithium carbonate processing plants.
- The results of the bench scale testing and mini-plant process testing program increase the level of confidence in the key parameters for the operating cost estimate.

- Improvements made to process efficiency, particularly the reduction of reagents and chemicals consumption, will improve the economics of the project.
- The discounted cash flow economic analysis, at a discount rate of 8%, indicates that the project is economically viable under the base case conditions. The key economic indicators, NPV = US$989,432,000 (post-tax) and IRR = 36% (post-tax), are very positive.

Key Study Recommendations

- The LANXESS Li-brine mineral resource estimate should be upgraded from the current classification of “indicated” to “measured”, as classified according to CIM (2014) definition standards.
- The sampling and testing program should be continued to allow for the most updated calculation of the lithium concentration to be used in the mineral resource estimate calculation.
- The testing program should address the opportunities to reduce the usage of reagents for production of lithium chloride to lower the operating cost.
- The large Demonstration Plant scheduled for deployment in late-2019 at LANXESS’ south plant facility in southern Arkansas should be used to collect as much data as possible to inform the next phases of study.
- Complete an evaluation of the SiFT process to produce battery quality lithium carbonate vs. the traditional OEM process used in this PEA.
- On completion of the PEA, the project should progress to a NI 43-101 compliant PFS.

South West Arkansas Project

Please refer to the technical report titled “Standard Lithium Ltd. Preliminary Economic Assessment of SW Arkansas Lithium Project” dated November 20, 2021 (the “**South West Arkansas PEA**”), as filed on the Company’s SEDAR profile, for detailed disclosure relating to:

- Project Description and Location;
- Accessibility, Climate, Local Resources, Infrastructure and Physiography;
- History;
- Geological Setting and Mineralization;
- Deposit Types;
- Exploration;
- Drilling;
- Sample Preparation, Analyses and Security;
- Data Verification;
- Mineral Processing and Metallurgical Testing;
- Mineral Resource Estimates;
- Mineral Reserve Estimates;
- Mining Methods;
- Recovery Methods;
- Project Infrastructure;
- Market Studies and Contracts;
- Environmental Studies, Permitting and Social or Community Impact;
- Capital and Operating Expenditure Costs;

- Economic Analysis;
- Adjacent Properties;
- Other Relevant Data and Information;
- Interpretation and Conclusions; and
- Recommendation.

The following is a summary of the South West Arkansas PEA, prepared by a multi-disciplinary team of QPs that includes geologists, hydrogeologists, chemical, process and civil engineers with relevant experience in the lithium-brine confined aquifer type deposits, Smackover Formation geology and brine processing. The authors include Rodney Breur, P.E. of Engineering, Compliance and Construction, Inc., Roy Eccles, M.Sc. P. Geol. of APEX Geoscience Ltd., Trotter Hunt, P.E. of Hunt, Guillot & Associates LLC, Eric Mielke, M.A.Sc., P.Eng. of NORAM Engineering and Constructors Ltd., Dr. Ronald Molnar, Ph.D. P. Eng. of METNETH$_2$O Inc. and Steve Shikaze of Matrix Solutions Inc.

The South West Arkansas PEA is incorporated by reference herein and for full technical details, the complete text of the South West Arkansas PEA should be consulted.

The following summary does not purport to be a complete summary of the South West Arkansas Project and is subject to all the assumptions, qualifications and procedures set out in the South West Arkansas PEA and is qualified in its entirety with reference to the full text of the South West Arkansas PEA. The following summary is subject to any updated information contained elsewhere in this AIF.

Property Location and Ownership

The centre of the South West Arkansas Project is located approximately 24km (15 miles) west of the City of Magnolia in Lafayette County, south western Arkansas, United States. The South West Arkansas property encompasses Townships 16-17 South and Ranges 22-24 West of the 5th Meridian and lies wholly within Lafayette and Columbia counties.

The South West Arkansas Project property is comprised of 489 land tracts containing 802 individual leases and eight salt water (brine) deeds that covers 11,033 net mineral hectares (27,262 net mineral acres). The proposed unitised South West Arkansas Project property encompasses 14,638 gross mineral hectares (36,172 gross mineral acres) and forms the updated 2021 mineral resource and project area.

The leases and deeds are held by TETRA. Standard acquired the South West Arkansas Project brine production rights to lithium directly from TETRA through an option agreement providing that Standard makes annual payments. TETRA began acquiring brine deeds and/or brine leases in 1992 and added additional brine leases in 1994, 2006 and 2017. The South West Arkansas Project brine leases and deeds have yet to be developed for production of brine minerals.

Geology and Inferred Mineral Resource Estimation

The lithium brine inferred mineral resource, as reported, is contained within the Upper and Middle Members of the Smackover Formation, a late Jurassic oolitic limestone aquifer that underlies the entire project area. The Upper and Middle Smackover formations aquifer is situated at a depth of

approximately 2,700m (or about 8,800 feet) beneath ground level. This brine mineral resource is in an area where there is localized oil and gas production, and where brine is produced as a by-product of hydrocarbon extraction. The data used to estimate and model the mineral resource were gathered from existing and suspended oil and gas production wells on or adjacent to the project and surface seismic information.

The resource present in the Smackover Formation below the project was updated based on the proposed unitized area encompassing 36,172 gross mineral acres (14,638 gross mineral hectares. Using a cut-off criteria of 50 mg/L lithium, the South West Arkansas Project mineral resource estimate is classified as “inferred” according to the CIM Standards. The total (global) in-situ “inferred” lithium brine resource is estimated at 225,000 tonnes of elemental lithium, or 1,195,000 tonnes LCE; see Table 5 below for more detail.

Table 5 South West Arkansas Project Inferred Mineral Resources Estimation

	Upper Formation	Smackover	Middle Formation	Smackover	Total (and main resource)[1,2]
Parameter	**South Resource Area**	**North Resource Area**	**South Resource Area**	**North Resource Area**	
Aquifer Volume (km^3)	2.852	4.226	0.704	1.080	8.862
Brine Volume (km^3)	0.281	0.416	0.071	0.110	0.878
Average Lithium concentration (mg/L)	399	160	399	160	255
Average Porosity	10.1 %	10.1 %	10.3 %	10.3 %	10.1 %
Total Li inferred resource (as metal) metric tonnes[4][5]	112,000	67,000	28,000	18,000	225,000
Total LCE inferred resource (metric tonnes)[4][5]	596,000	354,000	152,000	93,000	1,195,000

Notes:

1. Mineral resources are not mineral reserves and do not have demonstrated economic viability. There is no guarantee that all or any part of the mineral resource will be converted into a mineral reserve. The estimate of mineral resources may be materially affected by geology, environment, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.
2. Numbers may not add up due to rounding to the nearest 1,000 unit.
3. The mineral resource estimate was completed and reported using a cut-off of 50 mg/L lithium.
4. The mineral resource estimate was developed and classified in accordance with guidelines established by the CIM Standards. The associated technical report was completed in accordance with NI 43-101 and all associated documents and amendments. As per these guidelines, the mineral resource was estimated in terms of metallic (or elemental) lithium.

5. In order to describe the resource in terms of 'industry standard' LCE, a conversion factor of 5.323 was used to convert elemental lithium to LCE.

The average lithium concentrations used in the resource calculation are 399 mg/L and 160 mg/L, for the South and North mineral resource areas, respectively. Mineral resources have been estimated using a cut-off grade of 50 mg/L lithium.

With respect to reconciliation of mineral resources, the updated 2021 South West Arkansas Project mineral resource is 49% larger than the 2019 mineral resource estimate[4]. This difference is directly related to proposed future unitization of the resource area. More specifically, the total aquifer volume has increased from 7.66 km^3 in 2019 to 8.86 km^3 (1.84 mi^3 to 2.13 mi^3) in the PEA.

Recovery Method and Mineral Processing

Standard's objective is to produce battery-grade lithium hydroxide monohydrate ("**LHM**") from the brine produced from the Smackover Formation. A network of 23 brine supply wells would produce from the Smackover Formation in the higher-grade South mineral resource area averaging about 1,715 m^3/day per well for an aggregated total production of 39,452 m^3/day (1,644 m^3/hr or 7,238 US gallons per minute). Brine from the supply wells would be conveyed to a single combined lithium extraction and lithium hydroxide production facility by a network of underground fibreglass pipelines totalling approximately 18.3km (11.4 miles) in length. The brine entering the processing facility would be pre-treated to remove hydrogen sulphide gas (H_2S), suspended solids and hydrocarbons, prior to processing by the Company's proprietary LiSTR technology. After lithium extraction, the lithium depleted brine is returned to the lower lithium-grade North mineral resource area by a pipeline system 20.3km (12.6 miles) in length to a network of 24 brine reinjection wells completed in the Smackover Formation. The project as proposed would produce, on average, 30,000 tonnes of battery-quality LHM per year, over a 20-year timeframe. The final product lithium recovery is about 90%.

The production process parameters are supported by bench scale metallurgical testing, mini-pilot plant testing and Demonstration Plant program results. It is the Company's plan to take largescale brine samples from the project property, and test using the LiSTR proprietary technology, at the Demonstration Plant located at the LANXESS Property south plant. The Demonstration Plant is located about 40km (25 miles) east of the project. It is the Company's intent to use the information obtained from the large-scale brine samples to gather specific data related to lithium extraction scalability and economics.

Readers are cautioned that statements relating to the production process and recovery are based on using a processing technology that has not yet been commercially proven and there is a risk that actual results, performance, prospects and opportunities could differ materially from those expressed or implied by such forward-looking information.

[4] See NI 43-101 technical report titled "Amended Geological Introduction and Maiden Inferred Resource Estimate for Standard Lithium Ltd.'s TETRA Smackover Lithium-Brine Property in Arkansas, United States" with an effective date of February 28, 2019 and available under the Company's SEDAR profile at www.sedar.com.

Capital and Operating Cost Estimates

Capital Expenditure Costs

At full build-out, with estimated average production over 20 years of 30,000 tonnes per annum of LHM, the direct capital costs are estimated to be US$532 million, with indirect costs of US$205 million. A contingency of 25% was applied to direct costs (US$133 million) to yield an estimated all-in capital cost of US$870 million. A summary of the capital costs is provided in Table 6.

Table 6 Capital Cost Summary

Description	Direct Costs Million US#[1]	Indirect Costs Million US$[2]
Extraction and Reinjection Wellfield[3]	204.9	2.3
Pipelines[3]	38.7	2.5
Receiving/Pre-Treatment	35.4	28.1
Lithium Extraction (LiSTR)	135.0	103.8
Lithium Hydroxide Conversion	90.9	39.9
Utilities/Infrastructure	26.9	28.5
Contingency	133.0[4]	-
Total	664.8	205.1
CAPEX TOTAL	US$869.9 million	

Notes:

1. Direct costs were estimated using either vendor-supplied quotes, and/or engineer estimated pricing (based on recent experience) for all major equipment. Major equipment prices were scaled using appropriate AACE Class 5 Direct Cost Factors (provided by the relevant QP) to derive all direct equipment costs.
2. Indirect costs were estimated using AACE Class 5 Indirect Cost Factors multiplied by the direct costs. Indirect costs include all contractor costs (including engineering); indirect labor costs and owner's engineer costs.
3. Exceptions to above costing estimate methodology were the wellfield and pipelines, which were based on HGA's recent project experience in the local area.
4. AACE Class 5 estimate includes 25% contingency on direct capital costs.

Operating Expenditure Costs

The operating cost estimate includes both direct costs and indirect costs, as well as allowances for mine closure (see Table 7). The majority of the operating cost comprises reagent usage required to extract the lithium from the brine, as well as conversion to LHM and electricity consumption. Out of this, the greatest amount is related to acid and base consumption (hydrochloric acid and ammonium hydroxide) and was estimated using information from the operating Demonstration Plant located in Union County, Arkansas. The all-in operating cost of US$2,599 per tonne of LHM is one of the lowest reported in the industry owing to two key factors which are location-specific. The DLE processes are reagent intensive; in the case of the LiSTR process, the principal reagent is hydrochloric acid. A large portion (approximately 50%) of the acid required is produced on-site as a by-product of the electrochemical conversion of lithium

chloride to lithium hydroxide. This results in significant cost savings during the DLE step. The electrochemical conversion uses a large quantity of electricity, which would normally (in most jurisdictions around the world) result in a cost disbenefit; however, bulk electricity pricing in southern Arkansas is favorable (<6 cents/kWh), and hence results in overall lower-than-normal operating costs.

Table 7 Operating Cost Summary

Description	Operating Cost US$/tonne LHM[1]
Workforce[2]	190
Electrical Power[3]	378
Reagents and Consumables[4]	836
Natural Gas[5]	39
Maintenance/Waste Disposal/Misc[6]	563
Indirect Operational Costs[7]	110
Royalties and Land/Lease Costs[8]	482
OPEX Total	2,599

Notes:

1. Operating costs are calculated based on average annual production of 30,000 tonnes of LHM.
2. Approximately 75 full time equivalent ("**FTE**") positions.
3. Approximately 40% of electrical energy consumed by wellfield and pipelines; 60% by the processing facilities.
4. Majority of reagent costs are comprised of hydrochloric acid and ammonium hydroxide consumption. As discussed above, approximately 50% of the required hydrochloric acid is produced on-site as a by-product of the electrochemical conversion of lithium chloride solution to lithium hydroxide solution, resulting in a significant cost saving. Additional cost savings can be attributed to the on-site production of concentrated sodium chloride solution, resulting from pre- concentration of the lithium chloride ahead of conversion. This sodium chloride solution is used as a regenerant in some of the polishing ion exchange (IX) processes. Other reagents and consumables are air, lithium titanate make-up (owing to small losses in the process), membrane replacement, nitrogen and scale inhibitors for pumps/wellheads.
5. Assumes that all natural gas is purchased from open market and none is co-produced at the wellheads.
6. Includes all maintenance and workover costs and is based on experience in similar-sized electrochemical facilities, brine processing facilities and Smackover Formation brine production wellfields.
7. Indirect costs (insurance, environmental monitoring, community benefits etc.) are factored from other capital and operational costs, except for mine closure, which is based on known well-abandonment costs.
8. Based on agreed royalties and expected future lease costs. Does not include future lease-fees-in-lieu-of-royalties which are still to be determined and subject to regulatory approval (lease-fees-in-lieu-of-royalties have been determined for bromine and certain other minerals in the State of Arkansas, but have not yet been determined for lithium extraction).

Economic Analysis

The South West Arkansas Project economics assumed a selling price of battery quality LHM based on an initial price of US$14,500/tonne in 2021, adjusted for inflation at 2% per annum. The results for IRR and NPV from the assumed CAPEX, OPEX and price scenario at full production, are presented in Table 8.

Table 8 Economic Evaluation Summary

Description	Units	Values
Average Annual Production (as $LiOH•H_2O$)	tpa[1]	30,000[2]
Plant Operation	years	20
Total Capital Cost (CAPEX)	US$	869,868,000[3]
Operating Cost (OPEX) per year	US$/yr	77,972,000[4]
OPEX per tonne	US$/t	2,599
Initial Selling Price	US$/t	14,500[5]
Average Annual Revenue	US$	570,076,000[6]
Discount Rate	%	8.0
Net Present Value (NPV) Pre-Tax	US$	2,830,190,000
Net Present Value (NPV) Post-Tax	US$	1,965,427,000
Internal Rate of Return (IRR) Pre-Tax	%	40.5
Internal Rate of Return (IRR) Post-Tax	%	32.1

Notes:
All model outputs are expressed on a 100% project ownership basis with no adjustments for project financing assumptions.

1. Metric tonnes (1,000 kg) per annum.
2. Total production for years 1 to 15 is 30,666 tpa LHM and 28,000 tpa LHM for years 16 to 20.
3. AACE Class 5 estimate includes 25% contingency on direct capital costs.
4. Includes all operating expenditures, ongoing land costs, established royalties, sustaining capital and allowance for mine closure. All costs are escalated at 2% per annum.
5. Selling price of battery quality LHM based on an initial price of US$14,500/t in 2021, adjusted for inflation at 2% per annum. Sensitivity analysis modelled the starting price between US$12,500-US$16,500/t.
6. Average annual revenue over projected 20 year mine-life

LHM battery quality pricing sensitivity assessment was completed. LHM pricing was based upon a current price of US$14,500/tonne adjusted for inflation to the start of production in 2025. The sensitivity analysis is provided in Table 9 below.

Table 9 Lithium Hydroxide Monohydrate sale rice post-tax sensitivity analysis

LHM Price in 2021[1] (US$/t)	Post-Tax NPV (US$ Million)	Post-Tax IRR
12,500	1,544.7	27.6%
13,500	1,755.1	29.9%
14,500	1,965.4	32.1%

15,500	2,175.8	34.2%
16,500	2,386.1	36.3%

Note:

1. 2% annual LHM price escalation from 2021 to the start of production in 2025 was applied.

South West Arkansas Project Related Risks and Uncertainties

As with any development project there exists potential risks and uncertainties. The Company will attempt to reduce risk/uncertainty through effective project management, engaging technical experts and developing contingency plans. With respect to access, title, or the right or ability to perform work on the property, Table 10 highlights some risks and uncertainties which have been identified at this stage of project development.

Table 10 Risk Assessment Matrix

Risk No.	Risk Description	Existing Controls	Initial Risk (after Existing Controls)	Risk Treatment Plan	Residual Risk
1	Brine production of 1,800 m^3/h and/or lithium concentration of 399 mg/L not available. Includes associated drilling risk.	A geological assessment, in addition to testing existing brine supply wells.	Medium	Additional testing of existing and new brine supply wells is planned.	Low
2	If innovative lithium extraction process does not perform as expected, could result in higher OPEX and CAPEX.	Extended pilot tests completed.	Low	Continued operation and process optimization of Demonstration Plant operation. This will also not be the first commercial plant of this type.	Low
3	If electrochemical and associated Lithium Hydroxide conversion process does not perform as expected, it could result in higher OPEX and CAPEX.	Based on existing chloralkali industry technology and specific experience with Lithium solutions.	Medium	Long-term membrane testing with representative enriched LiCl solution planned, as well as pilot testing of commercial-scale electrochemical cells.	Low
4	If market price of LHM drops, project economics will be negatively affected.	Demand is increasing faster than supply is coming to the market. Sensitivity analysis shows favourable economics even for significantly lower Lithium Hydroxide price.	High	To evaluate alternate contracts with vendors to mitigate short term price decline.	High

5	Global supply chain shortages / delays could influence schedule and CAPEX.	Understanding long-lead items that would be impacted by supply chain constraints.	Medium	A mitigating action plan will be put in place to minimize supply chain risk.	Low
6	If natural disaster occurs (e.g., tornado, earthquake), could result in loss of production.	Understanding of current risks at plant location.	Medium	Engineering of the plant will take into account weather risks. Provide shelter for personnel. Design critical facilities to withstand moderate tornados and earthquakes. Carry special insurance.	Low
7	If unknown infringement of sorbent and process patents occurs, could result in licensing claims.	Conducted freedom to operate searches.	Medium	Continue patent research. Ensure contingency funds in place to cover licensing fees.	Low
8	Construction cost/schedule overruns	25% contingency included in current economics. Sensitivity analysis shows favourable economics even for higher CAPEX.	Medium	Work with experienced EPC contractor; lump-sum turnkey where possible. PFS will provide improved cost confidence.	Low
9	Lithium brine royalty assessment by the Arkansas Oil and Gas Commission is not completed in a timely manner and/or the royalty rates overly impact project economics.	Established process completed for bromine and most recently for calcium chloride and magnesium chloride.	Medium	Work with experienced and qualified team and engage stakeholders early in the process.	Low

Conclusions and Recommendations

Key Study Conclusions

- The total South West Arkansas Project Inferred Li-brine mineral resource estimate is 1,195,000 tonnes of LCE. The volume of mineral resources will allow the lithium bearing brine extraction operations to continue well beyond the currently assumed 20 years.
- The results of the geological evaluation and resource estimates for the PEA of the project justifies development of the project to further evaluate the feasibility of production of LHM.
- The experience gained from the long-term operations of the brine extraction and processing facilities on the LANXESS controlled properties decreases the risk related to sustainability of the brine extraction from the Smackover Formation.
- Available infrastructure (roads, rail, power, etc.), qualified work force and access to Gulf Coast reagent supply will decrease the risks related to construction, and commissioning and operating of the lithium extraction and LHM processing facilities.

- The results of the bench scale testing, mini-plant and operating Demonstration Plant at LANXESS Property south plant, increase the level of confidence in the key parameters for the operating cost estimate.
- Improvements made to process efficiency, particularly the reduction of reagents and chemicals consumption, will improve the economics of the project.
- The discounted cash flow economic analysis, at a discount rate of 8%, indicates that the project is economically viable. The key economic indicators, NPV = US$1,965,000 (post-tax) and IRR = 32.1% (post-tax), are very positive.

Key Study Recommendations

As per the CIM Standards for lithium-brine, and when reporting higher level of mineral resource classification than reported in this PEA (i.e. indicated and measured brine mineral resources), the QP's must consider only those mineral resources that are, or may become, recoverable under reasonably assumed technical and economic conditions. The logical next steps and work recommendations for the Company to elevate the project to a higher level of resource classification and project definition is to:

- Collect additional brine samples from the Upper and Middle Smackover Formations either from existing wells on the project property, or recomplete existing/abandoned wells or install new wells (US$1.5 million);
- Analyze available Smackover Formation core at several locations from the Arkansas Geological Survey at 0.3m intervals throughout the Upper and Middle Smackover Formations to assess porosity and permeability (US$0.1 million);
- Perform long-duration pumping tests to confirm aquifer properties (US$0.9 million);
- Complete reservoir and resource modelling (US$0.75 million);
- Continue with ongoing direct lithium extraction pre-commercial demonstration using brines from the project (US$0.75 million);
- Conduct lithium chloride to lithium hydroxide conversion at suitable scale (US$1.0 million);
- Complete additional permitting and environmental studies where appropriate (US$0.5 million); and,
- Conduct all additional necessary engineering and pre-feasibility studies to integrate the project development findings into an updated mineral resource classification and prefeasibility study (US$1.5 million).

The authors of the South West Arkansas PEA recommend that the Company aims at accomplishing these key recommendations over a two-year period. The total estimated cost of the recommended work including contingency is US$7 million.

RISK FACTORS

There are a number of risks that may have a material and adverse impact on the future operating and financial performance of the Company and could cause the Company's operating and financial performance to differ materially from the estimates described in forward-looking information relating to the Company. These include widespread risks associated with any form of business and specific risks associated with the Company's business and its involvement in the lithium exploration and development industry.

This section describes risk factors identified as being potentially significant to the Company and its material property, the Arkansas Lithium Project. Additional risk factors may be included in the LANXESS PEA and the South West Arkansas PEA or other documents previously disclosed by the Company. In addition, other risks and uncertainties not discussed to date or not known to management could have material and adverse effects on the valuation of our securities, existing business activities, financial condition, results of operations, plans and prospects.

An investment in the Company's securities should be considered as highly speculative given the current stage of the Company's business and development. Such an investment is subject to a number of risks at any given time. The risk factors set out below are not exhaustive and do not include risks the Company deems to be immaterial; however, even an immaterial risk has the potential to have a material adverse effect on the Company's financial condition, operating results, business or future prospects. Investors should carefully consider these risk factors, many of which are beyond the Company's control, together with other information set out in this AIF before investing in the Company's securities.

Reliance on Key Personnel

The senior officers of the Company are critical to its success. In the event of the departure of a senior officer, the Company believes that it will be successful in attracting and retaining qualified successors, but there can be no assurance of such success. Recruiting qualified personnel as the Company grows is critical to its success. The number of persons skilled in the acquisition, exploration and development of mining properties is limited, and competition for such persons is intense. As the Company's business activity grows, it will require additional key financial, administrative, engineering, geological and other personnel. If the Company is not successful in attracting and training qualified personnel, the efficiency of its operations could be affected, which could have an adverse impact on future cash flows, earnings, results of operations and the financial condition of the Company. The Company is particularly at risk at this state of its development as it relies on a small management team, the loss of any member of which could cause severe adverse consequences.

Substantial Capital Requirements and Liquidity

As at March 31, 2022, the Company had a cash balance of approximately $136,913,330, a working capital surplus of approximately $134,622,212 and current obligations of approximately $4,516,883. As at June 30, 2022, the Company had a cash balance of approximately $129,065,348, a working capital surplus of approximately $125,024,698 and current obligations of $6,779,742.

The Company anticipates that it will incur substantial capital expenditures for the continued exploration and development of its projects in the future. The Company currently has no revenue and may have limited ability to undertake or complete future drilling or exploration programs and process studies. There can be no assurance that debt or equity financing, or cash generated by operations will be available or sufficient to meet these requirements or for other corporate purposes or, if debt or equity financing is available, that it will be on terms acceptable to the Company. Moreover, future activities may require the Company to alter its capitalization significantly.

The inability of the Company to access sufficient capital for its operations could have a material and adverse effect on the Company's financial condition, results of operations or prospects. Sales of substantial amounts of securities may have a highly dilutive effect on the ownership or share structure of the Company. Sales of a large number of Shares in the public markets, or the potential for such sales, could decrease the trading price of the Shares and could impair the Company's ability to raise capital through future sales of Shares.

The Company has not yet commenced commercial production at any of its properties and as such, it has not generated positive cash flows to date and has no reasonable prospects of doing so unless successful commercial production can be achieved at the Company's projects. The Company expects to continue to incur negative investing and operating cash flows until such time as it enters into commercial production. This will require the Company to deploy its working capital to fund such negative cash flow and to seek additional sources of financing.

Historically, capital requirements have been primarily funded through the sale of Shares. Factors that could affect the availability of financing include the progress and results of ongoing exploration at the Company's mineral properties, the state of international debt and equity markets and investor perceptions and expectations of the global market for lithium and its derivatives. There is no assurance that any such financing sources will be available or sufficient to meet the Company's requirements. There is no assurance that the Company will be able to continue to raise equity capital or that the Company will not continue to incur losses.

Development of the Arkansas Lithium Project

The Company's business strategy depends in large part on developing the Arkansas Lithium Project into a commercially viable mine and processing facility, as applicable. Whether a mineral deposit will be commercially viable depends on numerous factors, including: (i) the particular attributes of the deposit, such as size, grade and proximity to infrastructure; (ii) commodity prices, which are highly volatile; and (iii) government regulations, including regulations relating to prices, taxes, royalties, land tenure, land use, importing and exporting of mineral resources and mineral reserves, environmental protection and capital and operating cost requirements. The capital expenditures and time required to develop the Arkansas Lithium Project are significant and the Company has not yet secured funding that it believes will be sufficient to cover its share of capital expenditure obligations for development of the Arkansas Lithium Project. Accordingly, there can be no assurance that the Company will ever develop this project. If the Company is unable to develop all or any of its projects into a commercial operating mine or processing facility, as applicable, its business and financial condition will be materially adversely affected.

Preliminary Economic Assessment

The LANXESS PEA and the South West Arkansas PEA are early stage estimates that do not have sufficient certainty to constitute a PFS or a feasibility study. The Company cannot give assurance that it will ever be in a position to declare a proven or probable mineral reserves at either LANXESS Property Project or the South West Arkansas Project. In particular, the PEAs for the LANXESS Property Project and the South West Arkansas Project contain estimated capital costs and operating costs which are based on anticipated tonnage and grades of lithium to be mined and processed, the expected recovery rates and other factors, none of which have been completed to date to a PFS or a feasibility study level. Whether the Company completes a

feasibility study on these projects, and thereby delineates proven or probable mineral reserves, depends on a number of factors, including:

- the particular attributes of the deposit (including its size, grade, geological formation and proximity to infrastructure);
- lithium prices, which are highly cyclical;
- government regulations (including regulations relating to taxes, royalties, land tenure, land use and permitting); and
- environmental protection considerations.

We cannot determine at this time whether any of the estimates will ultimately be correct.

Property Commitments

The Company's mining properties may be subject to various land payments, royalties and/or work commitments. Failure by the Company to meet its payment obligations or otherwise fulfill its commitments under these agreements could result in the loss of related property interests.

Title

The acquisition of title to resource properties is a detailed and time-consuming process. The Company may acquire an interest in its properties through land use permits. Title to, and the area of, the properties may be disputed. There is no guarantee that such title will not be challenged or impaired. There may be challenges to the title of the property in which the Company may have an interest, including concessions which, if successful, could result in the loss or reduction of the Company's interest in the property.

Although the Company has taken steps to verify the title to the resource properties in which it has or has a right to acquire an interest in accordance with industry standards for the current stage of exploration and development of such properties, these procedures do not guarantee title (whether of the Company or of any underlying vendor(s) from whom the Company may be acquiring its interest).

Exploration and Development

Exploring and developing natural resource projects bears a high potential for all manner of risks. Additionally, few exploration projects successfully achieve development due to factors that cannot be predicted or foreseen. Moreover, even one such factor may result in the economic viability of a project being detrimentally impacted, such that it is neither feasible nor practical to proceed. Natural resource exploration involves many risks, which even a combination of experience, knowledge and careful evaluation may not be able to overcome. Operations in which the Company has a direct or indirect interest will be subject to all the hazards and risks normally incidental to exploration, development and production of natural resources, any of which could result in work stoppages, damage to property, and possible environmental damage. If any of the Company's exploration programs are successful, there is a degree of uncertainty attributable to the calculation of resources and corresponding grades and in the analysis of the economic viability of future mine development and mineral extraction. Until actually extracted and processed, the quantity of lithium resources, reserves and grade must be considered as estimates

only. In addition, the quantity of resources and reserves may vary depending on commodity prices and various technical and economic assumptions. Any material change in quantity of resources, reserves, grade or recovery ratio, may affect the economic viability of the Company's properties. In addition, there can be no assurance that results obtained in small-scale laboratory tests, pilot plants or the Demonstration Plant will be duplicated in larger scale tests under on-site conditions or during production. The Company closely monitors its activities and those factors which could impact them, and employs experienced consulting, engineering, and legal advisors to assist in its risk management reviews where it is deemed necessary.

Operational Risks

The Company will be subject to a number of operational risks and may not be adequately insured for certain risks, including: environmental contamination, liabilities arising from historic operations, accidents or spills, industrial and transportation accidents, which may involve hazardous materials, labor disputes, catastrophic accidents, fires, blockades or other acts of social activism, changes in the regulatory environment, impact of non-compliance with laws and regulations, natural phenomena such as inclement weather conditions, floods, earthquakes, ground movements, cave-ins, and encountering unusual or unexpected geological conditions and technological failure of exploration methods.

There is no assurance that the foregoing risks and hazards will not result in damage to, or destruction of, the property of the Company, personal injury or death, environmental damage or, regarding the exploration or development activities of the Company, increased costs, monetary losses and potential legal liability and adverse governmental action. These factors could all have an adverse impact on the Company's future cash flows, earnings, results of operations and financial condition.

Additionally, the Company may be subject to liability or sustain loss for certain risks and hazards against which the Company cannot insure or which the Company may elect not to insure because of the cost. This lack of insurance coverage could have an adverse impact on the Company's future cash flows, earnings, results of operations and financial condition.

Construction Risks

As a result of the substantial expenditures involved in development projects, developments are prone to material cost overruns versus budget. The capital expenditures and time required to develop new mines are considerable and changes in cost or construction schedules can significantly increase both the time and capital required to build the project.

Construction costs and timelines can be impacted by a wide variety of factors, many of which are beyond the control of the Company. These include, but are not limited to, weather conditions, ground conditions, performance of the mining fleet and availability of appropriate rock and other material required for construction, availability and performance of contractors and suppliers, inflation, delivery and installation of equipment, design changes, accuracy of estimates and availability of accommodations for the workforce.

Project development schedules are also dependent on obtaining the governmental approvals necessary for the operation of a project. The timeline to obtain these government approvals is

often beyond the control of the Company. A delay in start-up or commercial production would increase capital costs and delay receipt of revenues. Each of these risks could materially impact the Company's financial position.

Environmental Risks

All phases of mineral exploration and development businesses present environmental risks and hazards and are subject to environmental regulations. Environmental legislation provides for, among other things, restrictions and prohibitions on spills, releases or emissions of various substances used and or produced in association with natural resource exploration and production operations. The legislation also requires that facility sites be operated, maintained, abandoned and reclaimed to the satisfaction of applicable regulatory authorities. Compliance with such legislation can require significant expenditures, and a breach may result in the imposition of fines and penalties, some of which may be material.

If the Company uses federal funding on the Arkansas Lithium Project, an Environmental Assessment ("**EA**"), wetland delineation, floodplain study and a cultural resource study will be required. Irrespective of whether federal funding is used or not, the Company's projects will require multiple permits for air, water, hazardous waste, resource extraction, and underground injection, as applicable. Permit application approvals in some cases will take more than a year from submission dates. Planning for the permits will need to take place with this long approval time in mind. Detailed plans will be needed so that the permit application process can be completed in a timely fashion. If the Company receives unfavourable results from any of these studies or assessments, it could materially and adversely impact the Company's ability to complete its planned development.

Environmental legislation is evolving in a manner expected to result in stricter standards and enforcement, larger fines and liability and potentially increased capital expenditures and operating costs. The discharge of pollutants into the air, soil or water may give rise to liabilities to foreign governments and third parties and may require the Company to incur costs to remedy such discharge.

No assurance can be given that the application of environmental laws to the business and operations of the Company will not result in a curtailment of production or a material increase in the costs of production, development or exploration activities or otherwise adversely affect the Company's financial condition, results of operations or prospects.

Commodity Price Fluctuations

The prices of commodities vary on a daily basis. Price volatility could have dramatic effects on the results of operations and the ability of the Company to execute its business plan. The price of lithium materials may also be reduced by the discovery of new lithium deposits, which could not only increase the overall supply of lithium (causing downward pressure on its price), but could draw new firms into the lithium industry which would compete with the Company. Even if commercial quantities of mineral deposits are discovered by the Company, there is no guarantee that a profitable market will exist for the sale of the lithium produced. The development of the Company's projects will be significantly affected by changes in the market price of lithium-based end products, such as lithium carbonate and lithium hydroxide. Factors beyond the control of the

Company may affect the marketability of any substances discovered. The prices of various metals have experienced significant movement over short periods of time and are affected by numerous factors beyond the control of the Company, including international economic and political trends, expectations of inflation, currency exchange fluctuations, interest rates and global or regional consumption patterns, speculative activities and increased production due to improved mining and production methods. The supply of and demand for lithium is affected by various factors, including political events, economic conditions and production costs in major producing regions. Furthermore, the price of lithium products is significantly affected by their purity and performance, and by the specifications of end-user battery manufacturers. If the products produced from the Company's projects do not meet battery-grade quality and/or do not meet customer specifications, pricing will be reduced from that expected for battery-grade product. In turn, the availability of customers may also decrease. The Company may not be able to effectively mitigate against pricing risks for its products. Depressed pricing for the Company's products will affect the level of revenues expected to be generated by the Company, which in turn could affect the value of the Company, its Share price and the potential value of its properties. There can be no assurance that the price of any mineral deposit will be such that any of its resource properties could be mined at a profit.

Joint Venture Risks

The Company holds a 100% interest in the Project Company with respect to the development of the LANXESS Property Project. Under the Amended and Restated MOU, upon a feasibility study being furnished to LANXESS and a schedule for a commercial plant financing, Standard will offer to LANXESS an election to acquire up to a 49% and not less than 30% equity interest in the Project Company at a price equal to a ratable share of Standard's aggregate investment in the Project Company. If LANXESS acquires an ownership interest in the Project Company, LANXESS will be responsible for a ratable portion of funding obligations of the Project Company relating to the commercial plant and the right to purchase and take from the commercial plant up to 100% of the lithium output at market-based terms less a handling fee.

If LANXESS acquires an ownership interest in the Project Company, this arrangement will likely be subject to the risks normally associated with the conduct of joint ownership structures. These include the following: disagreements between the parties as to project development and operating matters; the inability of any or both parties to meet contractual obligations under the relevant agreements, such as funding requirements, or to third parties; and disputes or litigation between the parties regarding budgets, development activities, reporting requirements and other matters. The occurrence of any such matters could have a material adverse impact on the Company and the viability of its interests in the Arkansas Lithium Project. This in turn could have a material adverse impact on the Company's business prospects, results of operations and financial condition.

Lithium Market Growth Risks

The development of lithium operations at the Company's projects is highly dependent upon the currently projected demand for and uses of lithium-based end products. This includes lithium-ion batteries for electric vehicles and other large format batteries that currently have limited market share and whose projected adoption rates are not assured. To the extent that such markets do not develop in the manner contemplated by the Company, then the long-term growth in the market

for lithium products will be adversely affected, which would inhibit the potential for development of the projects, their potential commercial viability and would otherwise have a negative effect on the business and financial condition of the Company. In addition, as a commodity, lithium market demand is subject to the substitution effect in which end-users adopt an alternate commodity as a response to supply constraints or increases in market pricing. To the extent that these factors arise in the market for lithium, it could have a negative impact on overall prospects for growth of the lithium market and pricing, which in turn could have a negative effect on the Company and its projects.

EV Credit Risk

Demand for lithium-based end products, such as lithium-ion batteries for use in electric vehicles ("**EV**"), may be impacted by changes to government regulation and economic incentives. Government and economic incentives that support the development and adoption of EVs in the U.S. and abroad, including certain tax exemptions, tax credits and rebates, may be reduced, eliminated or exhausted from time to time. For example, previously available incentives favoring EVs in areas including Ontario, Canada, Germany, Hong Kong, Denmark and California have expired or were cancelled or made temporarily unavailable, and in some cases were not eventually replaced or reinstituted. Any similar developments could have a negative impact on overall prospects for growth of the lithium market and pricing, which in turn could have a negative effect on the Company and its projects.

Novel Technology Risks

The Company's proprietary technologies (SiFT and LiSTR) have not yet been demonstrated at commercial scale. To mitigate this risk, the Company has constructed the Demonstration Plant to utilize the Company's proprietary LiSTR technology to selectively extract lithium from brine that is a byproduct of existing bromine production facilities run by LANXESS. The Demonstration Plant is being used for proof-of-concept and commercial feasibility studies. However, there are risks that the Demonstration Plant and related technologies (proprietary or otherwise) will not demonstrate the requisite process chemistry or if it is demonstrated that it will not be demonstrated at scale, efficiencies of recovery and throughout capacity will not be met, or that scaled production will not be cost effective. In addition, the novel nature of the Company's business and technologies could result in unforeseen costs, additional changes to the process chemistry and engineering, and other unforeseen circumstances that could result in additional delays to develop the Arkansas Lithium Project and, in particular, the LANXESS Property Project, or increased capital or operating costs from those estimated in the applicable technical reports, which could have a material adverse effect on the development of the Arkansas Lithium Project or the individual projects.

Geopolitical Risks

The Company's business is international in scope, with its incorporating jurisdiction and head office located in Canada and its projects located in the United States. In recent years there has been a substantial increase in political tensions among many jurisdictions, including between the United States and China. This political tension is particularly acute in respect of lithium, which has been identified as a 'critical mineral' in these jurisdictions and is the subject of increasingly active industrial policy. There is a risk that the Company's connection to conflicting jurisdictions will have a negative impact on its ability to advance its business, including becoming subject to

restrictions arising from industrial policies, a reduced ability to obtain financing and impediments to obtaining government approvals, all of which could have a material adverse impact on the Company.

IP Risks

The Company relies on the ability to protect its intellectual property rights and depends on patent, trademark and trade secret legislation to protect its proprietary know-how. There is no assurance that the Company has adequately protected or will be able to adequately protect its valuable intellectual property rights, or will at all times have access to all intellectual property rights that are required to conduct its business or pursue its strategies, or that the Company will be able to adequately protect itself against any intellectual property infringement claims. There is also a risk that the Company's competitors could independently develop similar technology, processes or know-how; that the Company's trade secrets could be revealed to third parties; that any current or future patents, pending or granted, will be broad enough to protect the Company's intellectual property rights; or, that foreign intellectual property laws will adequately protect such rights. The inability to protect the Company's intellectual property could have a material adverse effect on the Company's business, results of operations and financial condition.

Volatility of the Market Price of the Shares

Securities of junior companies have experienced substantial volatility in the past, often based on factors unrelated to the financial performance or prospects of the companies involved. These factors include macroeconomic developments in North America and globally and market perceptions of the attractiveness of particular industries. The Share price is also likely to be significantly affected by delays experienced in progressing with development plans, a decrease in investor appetite for junior stocks, or adverse changes in our financial condition or results of operations as reflected in the Company's quarterly and annual financial statements. Other factors unrelated to performance that could have an effect on the price of the Shares include the following:

(a) the trading volume and general market interest in the Shares could affect a shareholder's ability to trade significant numbers of common shares; and
(b) the size of the public float in the Shares may limit the ability of some institutions to invest in the Company's securities.

As a result of any of these or other factors, the market price of the Shares at any given point in time might not accurately reflect the Company's long-term value. Securities class action litigation has been brought against companies following years of volatility in the market price of their securities. The Company could in the future be the target of similar litigation. Securities litigation could result in substantial costs and damages and divert management's attention and resources. Further, there is no guarantee that an active trading market for the Shares will be maintained on the TSXV and/or the NYSE American.

Cost Estimates

The Company prepares estimates of operating costs and/or capital costs for each operation and project. The Company's actual costs are dependent on several factors, including royalties, the price of lithium and by-product metals and the cost of inputs used in exploration activities.

The Company's actual costs may vary from estimates for a variety of reasons, including labour and other input costs, commodity prices, general inflationary pressures and currency exchange rates. Failure to achieve cost estimates or material increases in costs could have an adverse impact on the Company's future cash flows, profitability, results of operations and financial condition.

Future Share Issuances May Affect the Market Price of the Shares

In order to finance future operations, the Company may raise funds through the issuance of additional Shares or the issuance of debt instruments or other securities convertible into Shares. The Company cannot predict the size of future issuances of Shares or the issuance of debt instruments or other securities convertible into Shares or the dilutive effect, if any, that future issuances and sales of the Company's securities will have on the market price of the Shares.

Economic and Financial Market Instability

Global financial markets have been volatile and unstable at times since the global financial crisis, which began in 2007. Bank failures, the risk of sovereign defaults, other economic conditions and intervention measures have caused significant uncertainties in the markets. The resulting disruptions in credit and capital markets have negatively impacted the availability and terms of credit and capital. High levels of volatility and market turmoil could also adversely impact commodity prices, exchange rates and interest rates. In the short term, these factors, combined with the Company's financial position, may impact the Company's ability to obtain equity or debt financing in the future and, if obtained, the terms that are available to the Company. In the longer term, these factors, combined with the Company's financial position could have important consequences, including the following:

(a) increasing the Company's vulnerability to general adverse economic and industry conditions;
(b) limiting the Company's ability to obtain additional financing to fund future working capital, capital expenditures, operating and exploration costs and other general corporate requirements;
(c) limiting the Company's flexibility in planning for, or reacting to, changes in the Company's business and the industry; and
(d) placing the Company at a disadvantage when compared to competitors that have less debt relative to their market capitalization.

Issuance of Debt

From time to time, the Company may enter into transactions to acquire assets or the shares of other companies. These transactions may be financed partially or wholly with debt, which may increase the Company's debt levels above industry standards. The Company's articles and by-laws do not limit the amount of indebtedness that the Company may incur. The level of the Company's indebtedness from time to time could impair the Company's ability to obtain additional financing in the future on a timely basis to take advantage of business opportunities that may arise. The Company's ability to service any future debt obligations will depend on the Company's future operations, which are subject to prevailing industry conditions and other factors, many of which are beyond the control of the Company.

Financing Risks

The Company's development and exploration activities may require additional external financing. There can be no assurance that additional capital or other types of financing will be available when needed or that, if available, the terms of such financing will be acceptable to the Company. Furthermore, if the Company raises additional capital by offering equity securities or securities convertible into equity securities, any additional financing may involve substantial dilution to existing shareholders. Failure to obtain sufficient financing could result in the delay or indefinite postponement of exploration, development, construction or production of any or all of the Company's mineral properties. The cost and terms of such financing may significantly reduce the expected benefits from new developments or render such developments uneconomic.

Industry Competition and International Trade Restrictions

The international resource industries are highly competitive. The value of any future resources and reserves discovered and developed by the Company may be limited by competition from other world resource mining companies, or from excess inventories. Existing international trade agreements and policies and any similar future agreements, governmental policies or trade restrictions are beyond the control of the Company and may affect the supply of and demand for minerals, including lithium, around the world.

Compliance with Regulations and Laws

Mining operations and exploration activities are subject to extensive laws and regulations. Such regulations relate to production, development, exploration, exports, imports, taxes and royalties, labor standards, occupational health, waste disposal, protection and remediation of the environment, mine decommissioning and reclamation, mine safety, toxic and radioactive substances, transportation safety and emergency response, and other matters. Compliance with such laws and regulations increases the costs of exploring, drilling, developing, constructing, operating and closing mines and refining and other facilities. It is possible that in the future the costs, delays and other effects associated with such laws and regulations may impact decisions of the Company with respect to the exploration and development of properties, such as the properties in which the Company has an interest. The Company will be required to expend significant financial and managerial resources to comply with such laws and regulations. Since legal requirements change frequently, are subject to interpretation and may be enforced in varying degrees in practice, the Company is unable to predict the ultimate cost of compliance with these requirements or their effect on operations. Furthermore, future changes in governments, regulations and policies and practices, such as those affecting exploration and development of the Company's properties could materially and adversely affect the results of operations and financial condition of the Company in a particular year or in its long-term business prospects.

The development of mines and related facilities is contingent upon governmental approvals, licenses and permits which are complex and time consuming to obtain and which, depending upon the location of the project, involve multiple governmental agencies. The receipt, duration and renewal of such approvals, licenses and permits are subject to many variables outside the control of the Company, including potential legal challenges from various stakeholders such as environmental groups or non-government organizations. Any significant delays in obtaining or renewing such approvals, licenses or permits could have a material adverse effect on the

Company, including delays and cost increases in the advancement of the Company's projects.

Permitting

The Company's operations, development projects and exploration activities are subject to receiving and maintaining licenses, permits and approvals, including regulatory relief or amendments, (collectively, "**permits**") from appropriate governmental authorities. Before any development on any of its properties the Company must receive numerous permits, and continued operations at the Company's mines and development properties are also dependent on maintaining, complying with and renewing required permits or obtaining additional permits.

The Company may be unable to obtain on a timely basis or in the future maintain all necessary permits required to explore and develop its properties, commence construction or operation of mining and processing facilities and properties or maintain continued operations. Delays may occur in connection with obtaining necessary renewals of permits for the Company's existing operations and activities, additional permits for existing or future operations or activities, or additional permits associated with new legislation. It is possible that previously issued permits may become suspended or revoked for a variety of reasons, including through government or court action.

Surface Rights and Access

Although the Company acquires the rights to some or all of the minerals in the ground subject to the tenures that it acquires, or has a right to acquire, in most cases it does not thereby acquire any rights to, or ownership of, the surface to the areas covered by its mineral tenures. In such cases, applicable mining laws usually provide for rights of access to the surface for the purpose of carrying on mining activities, however, the enforcement of such rights can be costly and time consuming. In areas where there are no existing surface rights holders, this does not usually cause a problem, as there are no impediments to surface access. However, in areas where there are local populations or landowners, it is necessary, as a practical matter, to negotiate surface access. There can be no guarantee that, despite having the right at law to access the surface and carry on mining activities, the Company will be able to negotiate a satisfactory agreement with any such existing landowners/occupiers for such access, and therefore it may be unable to carry out mining activities. In addition, in circumstances where such access is denied, or no agreement can be reached, the Company may need to rely on the assistance of local officials or the courts in such jurisdictions.

Cyclical Nature of the Mining Business

The mining business and the marketability of the products it produces are affected by worldwide economic cycles. At the present time, the significant demand for lithium and other commodities in many countries is driving increased prices, but it is difficult to assess how long such demand may continue. Fluctuations in supply and demand of mined resources in various regions throughout the world are common.

As the Company's mining and exploration business is in the exploration stage and as the Company does not carry on production activities, its ability to fund ongoing exploration is affected by the availability of financing which is, in turn, affected by the strength of the economy and other

general economic factors.

Title Claims and Indigenous Land Rights

The Company has investigated its rights to explore and exploit its projects and, to the best of its knowledge, its rights in relation to lands covering the projects are in good standing. Nevertheless, no assurance can be given that such rights will not be revoked, or significantly altered, to the Company's detriment. There can also be no assurance that the Company's rights will not be challenged or impugned by third parties.

Although the Company is not aware of any existing title uncertainties with respect to lands covering material portions of its projects, there is no assurance that such uncertainties will not result in future losses or additional expenditures, which could have an adverse impact on the Company's future cash flows, earnings, results of operations and financial condition.

Certain of the Company's properties may be subject to the rights or the asserted rights of various community stakeholders, including Indigenous peoples. The presence of community stakeholders may impact the Company's ability to develop or operate its mining properties and its projects or to conduct exploration activities. Accordingly, the Company is subject to the risk that one or more groups may oppose the continued operation, further development or new development or exploration of the Company's current or future mining properties and projects.

Such opposition may be directed through legal or administrative proceedings, or through protests or other campaigns against the Company's activities.

Governments in many jurisdictions must consult with, or require the Company to consult with, Indigenous peoples with respect to grants of mineral rights and the issuance or amendment of project authorizations. Consultation and other rights of Indigenous peoples may require accommodation including undertakings regarding employment, royalty payments and other matters. This may affect the Company's ability to acquire within a reasonable time frame effective mineral titles, permits or licenses in any jurisdictions in which title or other rights are claimed by Indigenous peoples, and may affect the timetable and costs of development and operation of mineral properties in these jurisdictions. The risk of unforeseen title claims by Indigenous peoples also could affect existing operations as well as development projects. These legal requirements may also affect the Company's ability to expand or transfer existing operations or to develop new projects.

Community Relations and License to Operate

The Company's relationship with the host communities where it operates is critical to ensure the future success of its existing operations and the construction and development of its projects. There is an increasing level of public concern relating to the perceived effect of mining activities on the environment and on communities impacted by such activities. Certain non-governmental organizations ("**NGOs**"), some of which oppose globalization and resource development, are often vocal critics of the mining industry and its practices, including the use of cyanide and other hazardous substances in processing activities. Adverse publicity generated by such NGOs or others related to extractive industries generally, or the Company's exploration or development activities specifically, could have an adverse effect on the Company's reputation. Reputation loss

may result in decreased investor confidence, increased challenges in developing and maintaining community relations and an impediment to the Company's overall ability to advance its projects, which could have a material adverse impact on the Company's results of operations, financial condition and prospects. While the Company is committed to operating in a socially responsible manner, there is no guarantee that the Company's efforts in this respect will mitigate this potential risk.

Acquisition and Integration Risks

As part of its business strategy, the Company has sought and will continue to seek new operating, development and exploration opportunities in the mining industry. In pursuit of such opportunities, the Company may fail to select appropriate acquisition candidates or negotiate acceptable arrangements, including arrangements to finance acquisitions or integrate the acquired businesses and their personnel into the Company. The Company cannot assure that it can complete any acquisition or business arrangement that it pursues, or is pursuing, on favourable terms, if at all, or that any acquisition or business arrangement completed will ultimately benefit its business. Such acquisitions may be significant in size, may change the scale of the Company's business and may expose the Company to new geographic, political, operating, financial or geological risks. Further, any acquisition the Company makes will require a significant amount of time and attention of the Company's management, as well as resources that otherwise could be spent on the operation and development of the Company's existing business.

Any future acquisitions would be accompanied by risks, such as a significant decline in the relevant metal price after the Company commits to complete an acquisition on certain terms; the quality of the mineral deposit acquired proving to be lower than expected; the difficulty of assimilating the operations and personnel of any acquired companies; the potential disruption of the Company's ongoing business; the inability of management to realize anticipated synergies and maximize the Company's financial and strategic position; the failure to maintain uniform standards, controls, procedures and policies; the impairment of relationships with employees, customers and contractors as a result of any integration of new management personnel; and the potential for unknown or unanticipated liabilities associated with acquired assets and businesses, including tax, environmental or other liabilities. In addition, the Company may need additional capital to finance an acquisition. Debt financing related to any acquisition may expose the Company to the risks related to increased leverage, while equity financing may cause existing shareholders to suffer dilution. There can be no assurance that any business or assets acquired in the future will prove to be profitable, that the Company will be able to integrate the acquired businesses or assets successfully or that it will identify all potential liabilities during the course of due diligence. Any of these factors could have a material adverse effect on the Company's business, prospects, results of operations and financial condition.

No Revenue and Negative Cash Flow

The Company has negative cash flow from operating activities and does not currently generate any revenue. Lack of cash flow from the Company's operating activities could impede its ability to raise capital through debt or equity financing to the extent required to fund its business operations. In addition, working capital deficiencies could negatively impact the Company's ability to satisfy its obligations promptly as they become due. If the Company does not generate sufficient cash flow from operating activities, it will remain dependent upon external financing sources.

There can be no assurance that such sources of financing will be available on acceptable terms or at all.

Legal and Litigation

In the ordinary course of the Company's business, it may become party to new litigation or other proceedings in local or international jurisdictions in respect of any aspect of its business, whether under criminal law, contract or otherwise. The causes of potential litigation cannot be known and may arise from, among other things, business activities, employment matters, including compensation issues, environmental, health and safety laws and regulations, tax matters, volatility in the Company's stock price, failure to comply with disclosure obligations or labour disruptions at its project sites. Regulatory and government agencies may initiate investigations relating to the enforcement of applicable laws or regulations and the Company may incur expenses in defending them and be subject to fines or penalties in case of any violation and could face damage to its reputation. The Company may attempt to resolve disputes involving foreign contractors/suppliers through arbitration in another county and such arbitration proceedings may be costly and protracted, which may have an adverse effect on the Company's financial condition. Litigation may be costly and time-consuming and can divert the attention of management and key personnel from the Company's operations and, if adjudged adversely to the Company, may have a material and adverse effect on the Company's cash flows, results of operations and financial condition.

In particular, on January 27, 2022, a putative securities class action lawsuit was filed against the Company, Robert Mintak, and Kara Norman in the United States District Court for the Eastern District of New York, captioned Gloster v. Standard Lithium Ltd., et al., 22-cv-0507 (E.D.N.Y.) (the "**Action**"). The complaint seeks to certify a class of investors who purchased or otherwise acquired the Company's publicly traded securities between May 19, 2020 and November 17, 2021, and asserts violations of Section 10(b) of the U.S. Securities Exchange Act of 1934, as amended (the "**Exchange Act**") against all defendants and Section 20(a) of the Exchange Act against the individually-named defendants. The complaint alleges, among other things, that during the proposed class period, defendants misrepresented and/or failed to disclose certain material facts regarding the Company's LiSTR DLE technology and "final product lithium recovery percentage" at its DLE Demonstration Plant in southern Arkansas. Plaintiff seeks various forms of relief, including monetary damages in an unspecified amount. The Company intends to vigorously defend against the Action.

Enforcing U.S. Judgements

The Company is a Canadian company, organized under the laws of Canada and headquartered in British Columbia. A majority of the Company's directors, officers and experts named in this AIF are not citizens or residents of the United States. In addition, a portion of the assets of the Company are located outside the United States. As a result, it may be difficult or impossible for an investor to (i) enforce in courts outside the United States any judgments against the Company and its directors and officers and the experts named in this AIF, which are obtained in U.S. courts based upon the civil liability provisions of U.S. federal securities laws, or (ii) bring in courts outside the United States an original action against the Company and its directors and officers and the experts named in this AIF to enforce liabilities based upon such U.S. securities laws.

Insurance

The Company is also subject to a number of operational risks and may not be adequately insured for certain risks, including: accidents or spills, industrial and transportation accidents, which may involve hazardous materials, labor disputes, catastrophic accidents, fires, blockades or other acts of social activism, changes in the regulatory environment, impact of non-compliance with laws and regulations, natural phenomena such as inclement weather conditions, floods, earthquakes, tornados, thunderstorms, ground movements, cave-ins, and encountering unusual or unexpected geological conditions and technological failure of exploration methods.

There is no assurance that the foregoing risks and hazards will not result in damage to, or destruction of, the properties of the Company, personal injury or death, environmental damage or, regarding the exploration or development activities of the Company, increased costs, monetary losses and potential legal liability and adverse governmental action, all of which could have an adverse impact on the Company's future cash flows, earnings, results of operations and financial condition. The payment of any such liabilities would reduce the funds available to the Company. If the Company is unable to fully fund the cost of remedying an environmental problem, it might be required to suspend operations or enter into costly interim compliance measures pending completion of a permanent remedy.

No assurance can be given that insurance to cover the risks to which the Company's activities are subject will be available at all or at commercially reasonable premiums. The Company is not currently covered by any form of environmental liability insurance, since insurance against environmental risks (including liability for pollution) or other hazards resulting from exploration and development activities is unavailable or prohibitively expensive. This lack of environmental liability insurance coverage could have an adverse impact on the Company's future cash flows, earnings, results of operations and financial condition.

Conflicts of Interest

The Company's directors and officers are or may become directors or officers of other mineral resource companies or reporting issuers or may acquire or have significant shareholdings in other mineral resource companies. To the extent that such other companies may participate in ventures in which the Company may participate or wish to participate, the directors and officers of the Company may have a conflict of interest with respect to such opportunities or in negotiating and concluding terms respecting the extent of such participation.

The Company and its directors and officers will attempt to minimize such conflicts. If such a conflict of interest arises at a meeting of the directors of the Company, a director who has such a conflict will abstain from voting for or against the approval of such participation or such terms. In appropriate cases, the Company will establish a special committee of independent directors to review a matter in which several directors, or officers, may have a conflict. In determining whether or not the Company will participate in a particular program and the interest to be acquired by it, the directors will primarily consider the potential benefits to the Company, the degree of risk to which the Company may be exposed and its financial position at that time. Other than as indicated, the Company has no other procedures or mechanisms to deal with conflicts of interest.

Decommissioning and Reclamation

Environmental regulators are increasingly requiring financial assurances to ensure that the cost of decommissioning and reclaiming sites is borne by the parties involved, and not by government. It is not possible to predict what level of decommissioning and reclamation (and financial assurances relating thereto) may be required in the future by regulators. The Company's ability to advance its projects could be adversely affected by any inability on its part to obtain or maintain the required financial assurances.

Climate Change

The Company acknowledges climate change as an international and community concern and it supports and endorses various initiatives for voluntary actions consistent with international initiatives on climate change. However, in addition to voluntary actions, governments are moving to introduce climate change legislation and treaties at the international, national, state/provincial and local levels. Where legislation already exists, regulation relating to emission levels and energy efficiency is becoming more stringent. Some of the costs associated with reducing emissions can be offset by increased energy efficiency and technological innovation. However, if the current regulatory trend continues, the Company expects that this could result in increased costs at its operations in the future.

Dividends

The Company has never paid cash dividends on our Shares and does not expect to pay any cash dividends in the future in favor of utilizing cash to support the development of our business. Any future determination relating to the Company's dividend policy will be made at the discretion of the Board of Directors and will depend on a number of factors, including future operating results, capital requirements, financial condition and the terms of any credit facility or other financing arrangements the Company may obtain or enter into, future prospects and other factors the Company's Board of Directors may deem relevant at the time such payment is considered. As a result, shareholders will have to rely on capital appreciation, if any, to earn a return on their investment in the Shares for the foreseeable future.

Time and Cost Estimates

Actual time and costs may vary significantly from estimates for a variety of reasons, both within and beyond the control of the Company. Failure to achieve time estimates and significant increases in costs may adversely affect the Company's ability to continue exploration, develop the Company's projects and ultimately generate sufficient cash flows. There is no assurance that the Company's estimates of time and costs will be achievable.

Consumables Availability and Costs

The Company's planned exploration, development and operating activities, including the profitability thereof, will continue to be affected by the availability and costs of consumables used in connection with the Company's activities. Of significance, this may include concrete, steel, copper, piping, diesel fuel and electricity. Other inputs such as labor, consultant fees and equipment components are also subject to availability and cost volatility. If inputs are unavailable

at reasonable costs, this may delay or indefinitely postpone planned activities. Furthermore, many of the consumables and specialized equipment used in exploration, development and operating activities are subject to significant volatility and inflation. There is no assurance that consumables will be available at all or at reasonable costs.

Mineral Resource Uncertainties

Calculations of mineral resources, mineral reserves and metal recovery are estimates only, and there can be no assurance about the quantity and grade of minerals until reserves or resources are actually mined. Until mineral reserves or mineral resources are actually mined and processed, the quantity of mineral reserves or mineral resources and grades must be considered as estimates only. In addition, the quantity of mineral reserves or mineral resources may vary depending on commodity prices. Any material change in the quantity of mineral resources, grade or stripping ratio or recovery rates may adversely affect the economic viability of the Company's projects and the Company's financial condition and prospects.

Mineral resources that are not mineral reserves do not have demonstrated economic viability. Due to the uncertainty which may attach to mineral resources, there can be no assurances that mineral resources will be upgraded to mineral reserves as a result of continued exploration or during the course of operations. There can be no assurances that any of the mineral resources stated in this AIF or published technical reports of the Company will be realized. Until a deposit is actually extracted and processed, the quantity of mineral resources or mineral reserves, grades, recoveries and costs must be considered as estimates only. In addition, the quantity of mineral resources or mineral reserves may vary depending on, among other things, product prices. Any material change in the quantity of mineral resources or mineral reserves, grades, dilution occurring during mining operations, recoveries, costs or other factors may affect the economic viability of stated mineral resources or mineral reserves. In addition, there is no assurance that mineral recoveries in limited, small scale laboratory tests or pilot plants will be duplicated by larger scale tests or during production. Fluctuations in lithium prices, results of future drilling, metallurgical testing, actual mining and operating results, and other events subsequent to the date of stated mineral resources and mineral reserves estimates may require revision of such estimates. Any material reductions in estimates of mineral resources or mineral reserves could have a material adverse effect on the Company.

Despite exploration work on the Company's mineral property interests, to date no mineral reserves have been established thereon. In addition, the Company is still engaged in exploration on all of its material properties in order to determine if any economic deposits exist thereon. The Company may expend substantial funds in exploring some of its properties only to abandon them and lose its entire expenditure on the properties if no commercial or economic quantities of minerals are found. Even if commercial quantities of minerals are discovered, the exploration properties might not be brought into a state of commercial production. Finding mineral deposits is dependent on a number of factors, including the technical skill of exploration personnel involved.

The commercial viability of a mineral deposit once discovered is also dependent on a number of factors, some of which are the particular attributes of the deposit, such as content of the deposit including harmful substances, size, grade and proximity to infrastructure, as well as metal prices and the availability of power and water in sufficient supply to permit development. Most of these

factors are beyond the control of the entity conducting such mineral exploration. The Company is an exploration and development stage company with no history of pre-tax profit and no income from its operations. There can be no assurance that the Company's operations will be profitable in the future. There is no certainty that the expenditures to be made by the Company in the exploration and development of its properties will result in discoveries of mineralized material in commercial quantities. Most exploration projects do not result in the discovery of commercially mineable deposits and no assurance can be given that any particular level of recovery of mineral reserves will in fact be realized or that any identified mineral deposit will ever qualify as a commercially mineable (or viable) mineral deposit which can be legally and economically exploited. There can be no assurance that minerals recovered in small scale tests will be duplicated in large scale tests under on-site conditions or in production. If the Company is unsuccessful in its exploration and development efforts, it may be forced to acquire additional projects or cease operations.

Lithium Supply and Demand

Lithium is considered an industrial mineral and the sales prices for the different lithium compounds are not public. Lithium is not a traded commodity like base and precious metals. Sales agreements are negotiated on an individual and private basis with each separate end-user. Therefore, it is possible that the sales prices used in the LANXESS PEA or South West Arkansas PEA will be different than the actual prices at which the Company is able to sell its lithium compounds. In addition, there are a limited number of producers of lithium compounds and it is possible that these existing producers will try to prevent newcomers from entering the chain of supply by increasing their production capacity and lowering sales prices. Factors such as foreign currency fluctuation, supply and demand, industrial disruption and actual lithium market sale prices could have an adverse impact on operating costs and stock market prices and on the Company's ability to fund its activities. In each case, the economics of the Arkansas Lithium Project could be materially adversely affected, even to the point of being rendered uneconomic.

Global Financial Conditions

Global financial conditions have been subject to continued volatility. Government debt, the risk of sovereign defaults, political instability and wider economic concerns in many countries have been causing significant uncertainties in the markets. Disruptions in the credit and capital markets can have a negative impact on the availability and terms of credit and capital. Uncertainties in these markets could have a material adverse effect on the Company's liquidity, ability to raise capital and cost of capital. High levels of volatility and market turmoil could also adversely impact commodity prices, exchange rates and interest rates and have a detrimental effect on the Company's business.

The recent global economic and geopolitical events, such as the war in Ukraine and sanctions imposed on Russia and higher energy costs coupled with supply concerns have been extremely disruptive to the world economy, with increased volatility in commodity markets, international trade and financial markets and oil and gasoline prices, all of which have a trickle-down effect on supply chains, equipment and construction. There is substantial uncertainty about the extent to which each of these events will continue to impact economic and financial affairs, as the numerous issues arising from each event are in flux and there is the potential for escalation of conflict both within Europe and globally. There is a risk of substantial market and financial turmoil arising from

further conflict which could have a material adverse effect on the economics of the Company's projects and the Company's ability to operate its business and advance project development. There is also a risk of recession, which may cause decreases in asset values and may result in impairment losses which could adversely impact the Company's operations and the trading price of the Company's Shares.

COVID-19

The Company's business, operations, and financial condition, and the market price of the Shares, could be materially and adversely affected by the outbreak of epidemics or pandemics or other health crises, including the outbreak of COVID-19. To date, there have been a large number of temporary business closures, quarantines, and a general reduction in consumer activity in a number of countries. The outbreak has caused companies and various international jurisdictions to impose travel, gathering and other public health restrictions. While these effects have been temporary, the duration of the various disruptions to businesses locally and internationally and the related financial impact cannot be reasonably estimated at this time. Similarly, the Company cannot estimate whether or to what extent this outbreak and the potential financial impact may extend to countries outside of those currently impacted. Such public health crises can result in volatility and disruptions in the supply and demand for lithium and other minerals, global supply chains and financial markets, as well as declining trade and market sentiment and reduced mobility of people, all of which could affect commodity prices, interest rates, credit ratings, credit risk, share prices and inflation. The risks to the Company of such public health crises also include risks to employee health and safety, a slowdown or temporary suspension of operations in geographic locations impacted by an outbreak, increased labour and fuel costs, regulatory changes, political or economic instabilities or civil unrest. At this point, the extent to which COVID-19 has impacted the Company has been relatively insignificant; however, it is possible that COVID-19 may yet have a material adverse effect on the Company's business, results of operations and financial condition and the market price of the Shares.

Travel restrictions, border closures and quarantine procedures associated with the COVID-19 pandemic have previously limited the ability of management based in Canada to travel to project sites in the United States. Ongoing travel restrictions and border closures could result in delays in the execution of the business objectives of the Company, and ultimately the timeline for reaching a commercialization decision in respect of the Company's projects.

Infrastructure

Mining, processing, development and exploration activities depend on adequate infrastructure. Reliable roads, bridges, power sources and water supply are important determinants which affect capital and operating costs. Unusual or infrequent weather phenomena, sabotage, or community, government or other interference in the maintenance or provision of such infrastructure could adversely affect the Company's operations, financial condition and results of operations.

Foreign Currency Risk

The Company and its subsidiaries incur significant purchases denominated in currencies other than the presentation currency, the Canadian dollar, and are subject to foreign currency risk on assets and liabilities denominated in currencies other than the Canadian dollar. Expenditures are

transacted in United States Dollars and the Company is exposed to risk of exchange rate fluctuation between the Canadian dollar and this currency. The Company does not hedge the foreign currency balances.

Corruption and Bribery Laws

The Company's operations are governed by, and involve interactions with, many levels of government in other countries. The Company is required to comply with anti-corruption and anti-bribery laws, including the Criminal Code, and the Corruption of Foreign Public Officials Act (Canada), as well as similar laws in the countries in which the Company conducts its business. In recent years, there has been a general increase in both the frequency of enforcement and the severity of penalties under such laws, resulting in greater scrutiny and punishment to companies convicted of violating anti-corruption and anti-bribery laws. Measures that the Company has adopted to mitigate these risks are not always effective in ensuring that the Company, its employees or third-party agents will comply strictly with such laws. Furthermore, a company may be found liable for violations by not only its employees, but also by its contractors and third-party agents. If the Company finds itself subject to an enforcement action or is found to be in violation of such laws, this may result in significant penalties, fines and/or sanctions imposed on the Company resulting in a material adverse effect on the Company's reputation and results of its operations.

Competition

The Company faces strong competition from other mining companies in connection with the identification and acquisition of properties producing, or capable of producing, lithium. Many of these companies have greater financial resources, operational experience and technical capabilities than the Company. As a result of this competition, the Company may be unable to identify, maintain or acquire attractive mining properties on acceptable terms or at all. Consequently, the Company's prospects, revenues, operations and financial condition could be materially adversely affected.

Use of Consultants

The Company has relied on, and may continue to rely on, consultants and others for mineral exploration, development and exploitation expertise. The Company believes that those consultants are competent and that they have carried out their work in accordance with internationally recognized industry standards. However, if the work conducted by those consultants is ultimately found to be incorrect or inadequate in any material respect, the Company may experience delays or increased costs in developing its properties and projects.

Taxation

The Company is affected by the tax regimes of various local, regional and national authorities. Revenues, expenditures, income, investments, land use, intercompany transactions and all other business conditions can be taxed. Tax regulations, interpretations and enforcement policies may differ from the Company's applied methods and may change over time due to circumstances beyond the Company's control. The effect of such events could have material adverse effects on the Company's anticipated tax consequences. There is no assurance regarding the nature or rate

of taxation, assessments and penalties that may be imposed.

Previous operations may have caused environmental damage at certain of the Company's properties. It may be difficult or impossible to assess the extent to which such damage was caused by the Company or by the activities of previous operators, in which case, any indemnities and exemptions from liability may be ineffective and the Company may be responsible for the costs of reclamation. If any of the Company's properties move to a production stage, the Company would be subject to additional risks respecting any production activities.

Disclosure Controls and Procedures

Disclosure controls and procedures are designed to provide reasonable assurance that material information is gathered and reported to management, as appropriate to allow for timely decisions about public disclosure. The Company has disclosure controls and procedures in place to provide reasonable assurance that any information required to be disclosed by the Company under securities legislation is recorded, processed, summarized, and reported within the applicable time periods and that required information is accumulated and communicated to the Company's management, so that decisions can be made about the timely disclosure of that information.

Management has evaluated the effectiveness of the design and operation of the Company's disclosure controls as of June 30, 2022 and concluded that the disclosure controls and procedures were effective.

Internal Controls over Financial Reporting

Management is responsible for establishing and maintaining adequate internal controls over financial reporting as such term is defined in the rules of the National Instrument 52-109 – *Certification of Disclosure in Issuers' Annual and Interim Filings* ("**NI 52-109**") in Canada and Rules 13a-15(f) and 15d-15(f) of the Exchange Act in the United States. The Company's internal controls over financial reporting is designed to provide reasonable assurance regarding the reliability of the Company's financial reporting for external purposes in accordance with IFRS as issued by the International Accounting Standards Board ("**IASB**").

Based on the criteria set forth in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission, the Company's internal controls over financial reporting include:

(a) Maintaining records, that in reasonable detail, accurately and fairly reflect our transactions and dispositions of the assets of the Company;
(b) Providing reasonable assurance that transactions are recorded as necessary for preparation of the consolidated financial statements in accordance with IFRS as issued by the IASB;
(c) Providing reasonable assurance that receipts and expenditures are made in accordance with authorizations of management and the directors of the Company; and
(d) Providing reasonable assurance that unauthorized acquisition, use or disposition of Company assets that could have a material effect on the Company's consolidated financial statements would be prevented or detected on a timely basis.

Management has evaluated the effectiveness of the internal controls over financial reporting as of June 30, 2022 and concluded that those controls were effective.

Though the Company believes its internal safeguards over financial reporting are effective, the Company cannot provide absolute assurance.

Limitation of Controls and Procedures

Management believes that any disclosure controls and procedures or internal control over financial reporting, no matter how well designed and operated, have their inherent limitations. Due to those limitations (resulting from unrealistic or unsuitable objectives, human judgment in decision making, human errors, management overriding internal control, circumventing controls by the individual acts of some persons, by collusion of two or more people, external events beyond the entity's control), internal control can only provide reasonable assurance that the objectives of the control system are met.

The design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Due to the inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

There were no changes in internal controls of the Company during the year ended June 30, 2022 that have materially affected, or are likely to materially affect, the Company's internal control over financial reporting.

Cybersecurity and Information Systems

The Company's operations depend, in part, on how well it and the entities that it conducts business with protect networks, technology systems and software against damage from a number of threats, including viruses, security breaches and cyber-attacks. Cybersecurity threats include attempts to gain unauthorized access to data or automated network systems and the manipulation or improper use of information technology systems. A failure of the Company's information technology systems could, depending on the nature of such failure, materially adversely impact the Company's reputation, financial condition and results of operations. Although to date the Company has not experienced any material losses relating to cyber-attacks or other information security breaches, there can be no assurance that it will not incur such losses in the future. The risk and exposure to these matters cannot be fully mitigated because of, among other things, the evolving nature of these threats.

In addition, as the regulatory environment related to information security, data collection and use, and privacy becomes increasingly rigorous, with new and constantly changing requirements applicable to our business, compliance with those requirements could also result in additional costs. As cyber threats continue to evolve, the Company may be required to expend additional resources to continue to modify or enhance protective measures or to investigate and remediate any cybersecurity or system vulnerabilities.

Risks Related to our Status as a Foreign Private Issuer

We are a "foreign private issuer" as such term is defined in Rule 405 under the Securities Act, and are permitted, under a multijurisdictional disclosure system adopted by the United States and Canada, to prepare our disclosure documents filed under the Exchange Act, in accordance with Canadian disclosure requirements. Under the Exchange Act, we are subject to reporting obligations that, in certain respects, are less detailed and less frequent than those of U.S. domestic reporting companies. As a result, we do not file the same reports that a U.S. domestic issuer would file with the SEC, although we are required to file or furnish to the SEC the continuous disclosure documents that we are required to file in Canada under Canadian securities laws. In addition, our officers, directors, and principal shareholders are exempt from the reporting and "short swing" profit recovery provisions of Section 16 of the Exchange Act. Therefore, our shareholders may not know on as timely a basis when our officers, directors and principal shareholders purchase or sell shares, as the reporting deadlines under the corresponding Canadian insider reporting requirements are longer.

As a foreign private issuer, we are exempt from the rules and regulations under the Exchange Act related to the furnishing and content of proxy statements. We are also exempt from Regulation FD, which prohibits issuers from making selective disclosures of material non-public information. While we expect to comply with the corresponding requirements relating to proxy statements and disclosure of material non-public information under Canadian securities laws, these requirements differ from those under the Exchange Act and Regulation FD and shareholders should not expect to receive in every case the same information at the same time as such information is provided by U.S. domestic companies.

In addition, as a foreign private issuer, we have the option to follow certain Canadian corporate governance practices, except to the extent that such laws would be contrary to U.S. securities laws, and provided that we disclose the requirements we are not following and describe the Canadian practices we follow instead. As a result, our shareholders may not have the same protections afforded to shareholders of U.S. domestic companies that are subject to all U.S. corporate governance requirements.

As we continue to increase our presence in the United States, we may cease to qualify as a foreign private issuer. Although we have elected to comply with certain U.S. regulatory provisions, our loss of foreign private issuer status would make such compliance mandatory. The regulatory and compliance costs to us under securities laws as a U.S. domestic issuer will be significantly more than the costs incurred as a Canadian foreign private issuer. If we were not a foreign private issuer, we would not be eligible to use foreign issuer forms and would be required to file periodic and current reports and registration statements on U.S. domestic issuer forms with the SEC, which are generally more detailed and extensive than the forms available to a foreign private issuer. In addition, we may lose our ability to rely upon exemptions from certain corporate governance requirements on U.S. stock exchanges that are available to foreign private issuers.

Risks Relating to the Company's Status as an "Emerging Growth Company" Under U.S. Securities Laws

The Company is an "emerging growth company" as defined in section 3(a) of the Exchange Act (as amended by the JOBS Act, enacted on April 5, 2012), and the Company will continue to qualify

as an emerging growth company until the earliest to occur of: (a) the last day of the fiscal year during which the Company has total annual gross revenues of US$1,070,000,000 (as such amount is indexed for inflation every five years by the SEC) or more; (b) the last day of the fiscal year of the Company following the fifth anniversary of the date of the first sale of common equity securities of the Company pursuant to an effective registration statement under the Securities Act; (c) the date on which the Company has, during the previous three year period, issued more than US$1,000,000,000 in non-convertible debt; and (d) the date on which the Company is deemed to be a "large accelerated filer", as defined in Rule 12b–2 under the Exchange Act. The Company will qualify as a large accelerated filer (and would cease to be an emerging growth company) at such time when on the last business day of its second fiscal quarter of such year the aggregate worldwide market value of its common equity held by non-affiliates will be $700,000,000 or more.

For so long as the Company remains an emerging growth company, it is permitted to and intends to rely upon exemptions from certain disclosure requirements that are applicable to other public companies that are not emerging growth companies. These exemptions include not being required to comply with the auditor attestation requirements of Section 404 of the JOBS Act. The Company takes advantage of some, but not all, of the available exemptions available to emerging growth companies. The Company cannot predict whether investors will find the Shares less attractive because the Company relies upon certain of these exemptions. If some investors find the Shares less attractive as a result, there may be a less active trading market for the Shares and the Share price may be more volatile. On the other hand, if the Company no longer qualifies as an emerging growth company, the Company would be required to divert additional management time and attention from the Company's development and other business activities and incur increased legal and financial costs to comply with the additional associated reporting requirements, which could negatively impact the Company's business, financial condition, results of operations, cash flows or prospects.

Project Management

The Company is concurrently overseeing the advancement of the LANXESS Property Project and the South West Arkansas Project. Work to advance these projects requires the dedication of considerable time and resources by the Company and its management team. The advancement of multiple major resource projects concurrently brings with it the associated risk of strains arising on managerial, human and other resources. The Company's ability to successfully manage each of these projects will depend on a number of factors, including its ability to manage competing demands on time and other resources, financial or otherwise, and successfully retain personnel and recruit new personnel to support its growth and the advancement of its projects.

DIVIDENDS AND DISTRIBUTIONS

The Company has not, for any of the three most recently completed financial years or its current financial year, declared or paid any dividends on our Shares, and does not currently have a policy with respect to the payment of dividends. For the foreseeable future, we anticipate that we will not pay dividends but will retain future earnings and other cash resources for the operation and development of our business. The payment of dividends in the future will depend on our earnings, if any, our financial condition and such other factors as our directors consider appropriate.

CAPITAL STRUCTURE

The authorized share capital of the Company consists of an unlimited number of Shares and an unlimited number of preferred shares ("**Preferred Shares**"), without par value. As of the date of this AIF, 165,552,197 Shares were issued and outstanding and there were no Preferred Shares issued and outstanding. In addition, as of the date of this AIF, there were 10,020,000 incentive stock options ("**Options**"), nil restricted share units, nil performance share units and 3,462,502 Warrants outstanding.

Holders of Shares are entitled to receive notice of any meeting of shareholders of the Company, to attend and to cast one vote per Share at such meetings. Holders of Shares are also entitled to receive on a pro-rata basis such dividends, if any, as and when declared by the Board at its discretion from funds legally available therefor and upon the liquidation, dissolution or winding up of the Company are entitled to receive on a pro-rata basis, the net assets of the Company after payment of debts and other liabilities, in each case subject to the rights, privileges, restrictions and conditions attaching to any other series or class of shares ranking senior in priority. The Shares do not carry any pre-emptive, subscription, redemption or conversion rights.

MARKET FOR SECURITIES

Trading Price and Volume

The Shares are listed for trading on the TSXV under the trading symbol "SLI".

The following table sets forth the high and low prices and total monthly volume of the Shares as traded on the TSXV for the periods indicated. All share prices are shown in Canadian dollars.

Period	High ($)	Low ($)	Total Volume
July 2021	$8.860	$6.000	5,400,659
August 2021	$11.350	$6.400	8,075,185
September 2021	$11.900	$7.160	6,239,757
October 2021	$15.920	$8,560	10,510,611
November 2021	$15.800	$8,530	9,247,830
December 2021	$14.440	$10.260	5,774,320
January 2022	$12.060	$6.980	7,527,077
February 2022	$9.915	$6.650	6,102,461
March 2022	$11.130	$6.310	7,084,746
April 2022	$11.580	$7.650	3,271,182
May 2022	$8.580	$6.200	2,506,501
June 2022	$7.700	$4.920	2,335,102

Prior Sales

The Company issued the following securities during the most recently completed financial year:

Date	Class of Security	Amount Issued	Issue Price
July 20, 2021	Options	200,000(1)	$6.08(3)
November 30, 2021	Shares	13,480,083(2)	$9.4265
November 30, 2021	Warrants	336,877(2)	$11.09(3)
February 14, 2022	Options	500,000(4)	$7.55(3)
March 7, 2022	Options	200,000(5)	$6.31(3)
March 17, 2022	Options	170,000(6)	$8.25(3)
March 29, 2022	Shares	60,235(7)	$8.30(10)
July 1, 2021 – June 30, 2022	Shares	4,410,784(8)	$1.93(11)
July 1, 2021 – June 30, 2022	Shares	6,684,892(9)	$1.11(11)

Notes:

1. Issued to a director of the Company.
2. Issued in connection with the Direct Investment.
3. Exercise price.
4. Issued to consultants of the Company.
5. Issued to a consultant of the Company.
6. Issued to a consultant of the Company.
7. Issued to Stifel Nicolas Canada Inc. in connection with advisory services with respect to the Amended and Restated MOU with a fair value of $500,000.
8. Issued upon the exercise of Options for gross proceeds of $8,517,711.
9. Issued upon the exercise of Warrants for gross proceeds of $7,389,127.
10. Deemed issue price.
11. Weighted average exercise price.

Subsequent to June 30, 2022, the Company issued the following securities:

Date	Class of Security	Amount Issued	Issue Price
August 18, 2022	Shares	150,000(1)	$0.75(2)

Notes:

1. Issued upon the exercise of Options for gross proceeds of $112,500.
2. Exercise price.

ESCROWED SECURITIES AND SECURITIES SUBJECT TO CONTRACTUAL RESTRICTIONS ON TRANSFER

As at the date of this AIF, no Shares are held in escrow or subject to a contractual restriction on transfer.

DIRECTORS AND OFFICERS

Name, Province or State, Country of Residence and Offices Held

The following table sets forth the name of each of our directors and executive officers, their province or state and country of residence, their position(s) with the Company, their principal occupation during the preceding five years and the date they first became a director of the

Company. Each director's term will expire immediately prior to the following annual meeting of shareholders.

Name and Residence	Position(s) with the Company	Principal Occupation During Past Five Years	Director Since
Anthony Alvaro British Columbia, Canada	Director	Current principal occupation is Corporate Advisor and Director of the Company.	January 23, 2017
Jeffrey Barber(1) Alberta, Canada	Director	Current principal occupation is Chief Financial Officer of DOJA Cannabis Company Limited, a cannabis company.	January 23, 2017
Robert Cross(1) British Columbia, Canada	Director and Non-Executive Chairman	Current principal occupation is Corporate Board Member; Chairman of B2Gold Corp., a senior mining company.	September 4, 2018
Robert Mintak British Columbia, Canada	CEO and Director	Current principal occupation is Chief Executive Officer of the Company and Board member of Telescope Innovation Corp.	March 21, 2017
Dr. Andrew Robinson British Columbia, Canada	President, COO and Director	Current principal occupation is Chief Operating Officer of the Company; and Board member of Telescope Innovation Corp. and Aqualung Carbon Capture AS.	June 5, 2017
Dr. Volker Berl(1) New York, USA	Director	Current principal occupation is Managing Partner of New Age Ventures, a venture capital company.	July 20, 2021
Kara Norman British Columbia, Canada	CFO and Corporate Secretary	Current principal occupation is Chief Financial Officer of the Company.	n/a

Note:

1. Member of Audit Committee.

Shareholdings of Directors and Officers

As of the date of this AIF, the Company's directors and executive officers beneficially own, control or direct, directly or indirectly, 8,861,244 Shares.

Cease Trade Orders, Bankruptcies, Penalties or Sanctions

None of our directors or executive officers is, as at the date hereof, or was within 10 years before the date hereof, a director, chief executive officer or chief financial officer of any company (including the Company) that (a) was subject to a cease trade order, an order similar to a cease trade order or an order that denied the relevant issuer access to any exemption under securities legislation, that was in effect for a period or more than 30 consecutive days (a "**Cease Trade Order**") that was issued while the director or executive officer was acting in the capacity as director, chief executive officer or chief financial officer of such issuer, or (b) was subject to a

Cease Trade Order that was issued after the director or executive officer ceased to be a director, chief executive officer or chief financial officer and which resulted from an event that occurred while that person was acting in the capacity as director, chief executive officer or chief financial officer.

None of our directors or executive officers, nor, to our knowledge, any shareholder holding a sufficient number of our securities to affect materially the control of the Company (a) is, as at the date hereof, or has been within the 10 years before the date hereof, a director or executive officer of any company (including ours) that, while that person was acting in that capacity, or within a year of that person ceasing to act in that capacity, became bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency or was subject to or instituted any proceedings, arrangement or compromise with creditors or had a receiver, receiver manager or trustee appointed to hold its assets, or (b) has, within the 10 years before the date hereof, become bankrupt, made a proposal under any legislation relating to bankruptcy or insolvency, or become subject to or instituted any proceedings, arrangement or compromise with creditors, or had a receiver, receiver manager or trustee appointed to hold the assets of such director, executive officer or shareholder.

None of our directors or executive officers, nor, to our knowledge, any shareholder holding a sufficient number of our securities to affect materially the control of the Company, has been subject to (a) any penalties or sanctions imposed by a court relating to securities legislation or by a securities regulatory authority or has entered into a settlement agreement with a securities regulatory authority, or (b) any other penalties or sanctions imposed by a court or regulatory body that would likely be considered important to a reasonable investor in making an investment decision.

Conflicts of Interest

To the best of the Company's knowledge, and other than as disclosed in this AIF, there are no known existing or potential conflicts of interest between the Company and any of the Company's directors or officers. However, certain of the directors and officers of the Company are directors, officers and/or shareholders of other private and publicly listed companies, including companies that engage in mineral exploration and development and therefore it is possible that a conflict may arise between their duties to the Company and their duties to such other companies. All such conflicts will be dealt with pursuant to the provisions of the applicable corporate legislation and the Company's Code of Business Conduct and Ethics. In the event that such a conflict of interest arises at a meeting of the directors, a director affected by the conflict must disclose the nature and extent of his interest and abstain from voting for or against matters concerning the matter in respect of which the conflict arises. Directors and executive officers are required to disclose any conflicts or potential conflicts to the Board as soon as they become aware of them. See "Risk Factors – Conflicts of Interest".

PROMOTERS

During the previous two most recently completed financial years or during the current financial year, no person or company has been a promoter of the Company or any subsidiary of the Company.

AUDIT COMMITTEE

Composition of the Audit Committee

The current members of the Audit Committee are Robert Cross, Volker Berl and Jeffrey Barber, all three of whom are independent and all of whom are financially literate as defined by National Instrument 52-110 – *Audit Committees* ("**NI 52-110**").

Relevant Education and Experience

All members of the Audit Committee hold professional accounting designations and been involved in enterprises which public report financial results, each of which requires a working understanding of, and ability to analyze and assess, financial information (including financial statements).

Reliance on Certain Exemptions

During the most recently completed financial year, the Company has not relied on certain exemptions set out in NI 52-110, namely section 2.4 (De Minimus Non-audit Services), section 3.2 (Initial Public Offerings), section 3.4 (Events Outside Control of Members), section 3.5 (Death, Disability or Resignation of Audit Committee Member) or an exemption, in whole or in part, in Part 8 (Exemptions).

Audit Committee Oversight

At no time since the commencement of the Company's most recently completed financial period was a recommendation of the Audit Committee to nominate or compensate an external auditor not adopted by the Board.

Pre-approval Policies and Procedures

The Audit Committee charter, attached as Schedule "A", provides for the Audit Committee to establish the auditors' fees. Such fees have been based upon the complexity of the matters in question and the time incurred by the auditors. Management of the Company believes that the fees negotiated in the past with the auditors of the Company were reasonable in the circumstances and would be comparable to fees charged by other auditors providing similar services.

External Auditor Service Fees

The aggregate fees billed by the Company's external auditors in each of the last two fiscal years for audit fees are as follows:

Financial Year Ended	Audit Fees[1]	Audit-Related Fees[2]	Tax Fees[3]	All Other Fees[4]
June 30, 2022	$50,000	$38,500	$25,000	$20,250
June 30, 2021	$42,500	$17,000	$15,500	$36,820

Notes:

1. "Audit fees" include aggregate fees billed by the Company's external auditor in each of the last two fiscal years for audit fees.
2. "Audited related fees" include the aggregate fees billed in each of the last two fiscal years for assurance and related services by the Company's external auditor that are reasonably related to the performance of the audit or review of the Company's financial statements and are not reported under "Audit fees" above. The services provided include employee benefit audits, due diligence assistance, accounting consultations on proposed transactions, internal control reviews and audit or attest services not required by legislation or regulation.
3. "Tax fees" include the aggregate fees billed in each of the last two fiscal years for professional services rendered by the Company's external auditor for tax compliance, tax advice and tax planning. The services provided include tax planning and tax advice includes assistance with tax audits and appeals, tax advice related to mergers and acquisitions, and requests for rulings or technical advice from tax authorities.
4. "All other fees" include the aggregate fees billed in each of the last two fiscal years for products and services provided by the Company's external auditor, other than "Audit fees", "Audit related fees" and "Tax fees" above.

LEGAL PROCEEDINGS AND REGULATORY ACTIONS

Other than disclosed elsewhere in this AIF, there are no legal proceedings or regulatory actions material to us to which we are a party, or to which we have been a party since our incorporation, or of which any property of the Company is or has been the subject matter of, since the beginning of the financial year ended June 30, 2022, and no such proceedings are known by us to be contemplated. There have been no penalties or sanctions imposed against us by a court relating to provincial or territorial securities legislation or by any securities regulatory authority, there have been no penalties or sanctions imposed by a court or regulatory body against us, and we have not entered into any settlement agreements before a court relating to provincial or territorial securities legislation or with any securities regulatory authority since our incorporation. See "Risk Factors – Legal and Litigation".

INTEREST OF MANAGEMENT AND OTHERS IN MATERIAL TRANSACTIONS

Other than disclosed elsewhere in this AIF, no director, senior officer or principal shareholder of the Company and no associate or affiliate of the foregoing have had a material interest, direct or indirect, in any transaction in which the Company has participated within the three-year period prior to the date of this AIF, or will have any material interest in any proposed transaction, which has materially affected or will materially affect the Company.

AUDITORS, TRANSFER AGENT AND REGISTRAR

Auditors

The Company's auditors are Manning Elliott LLP, Chartered Professional Accountants having an address at 17th Floor, 1030 West Georgia Street, Vancouver, British Columbia, V6E 3S7.

Transfer Agents, Registrars or Other Agents

The transfer agent and registrar for the Shares in Canada is AST Trust Company (Canada), at its principal office in Vancouver, British Columbia.

MATERIAL CONTRACTS

As of the date of this AIF, the following agreements and contracts are reasonably regarded as being material to Standard:

- Subscription Agreement. See "General Development of the Business – Selected Financings".

A copy of the Subscription Agreement is available under the Company's SEDAR profile at www.sedar.com.

INTEREST OF EXPERTS

The independent auditors of Standard are Manning Elliott LLP, Chartered Professional Accountants ("**Manning Elliott**"). Manning Elliott has informed Standard that it is independent with respect to Standard within the meaning of the Code of Professional Conduct of the Chartered Professional Accountants of British Columbia.

Interest of Qualified Person and Technical Reports

Certain scientific and technical information with respect to the LANXESS Property Project contained in this AIF has been taken from LANXESS Report, a copy of which is available on the Company's SEDAR profile at www.sedar.com. Marek Dworzanowski, P.Eng., B.Sc. (Hons), FSAIMM, Roy Eccles M.Sc. P. Geol. of APEX, Stanislaw Kotowski, P.Eng, M.Sc. of Worley and Dr. Ron Molnar Ph.D. P. Eng. of METNETH2O have acted as qualified persons under NI 43-101 in connection with the LANXESS PEA. Stanislaw Kotowski, P.Eng, M.Sc. of Worley has retired from Worley and Reza Ehsani, P.Eng. has reviewed and approved the scientific and technical information on behalf of Worley. All such qualified persons have reviewed and approved the information related to the LANXESS Property Project contained in this AIF.

Certain scientific and technical information with respect to the South West Arkansas Project contained in this AIF has been taken from the South West Arkansas PEA, a copy of which is available on the Company's SEDAR profile at www.sedar.com. Rodney Breur, P.E. of Engineering, Compliance and Construction, Inc., Roy Eccles, M.Sc. P. Geol. of APEX, Trotter Hunt, P.E. of Hunt, Guillot & Associates LLC, Eric Mielke, M.A.Sc., P.Eng. of NORAM Engineering and Constructors Ltd., Dr. Ronald Molnar, Ph.D. P. Eng. of METNETH$_2$O Inc. and Steve Shikaze of Matrix Solutions Inc. have acted as qualified persons under NI 43-101 in connection with the South West Arkansas PEA. All such qualified persons have reviewed and approved the information related to the South West Arkansas Project contained in this AIF.

Certain scientific and technical information with respect to the California Lithium Project contained in this AIF has been taken from the California Technical Report, a copy of which is available on the Company's SEDAR profile at www.sedar.com. William Feyeraband has acted as a qualified

person under NI 43-101 in connection with the California Technical Report and has reviewed and approved the information related to the California Lithium Project contained in this AIF.

All other scientific and technical information contained in this AIF has been reviewed and approved by Steve Ross, P. Geol., Vice President, Resource Development.

None of the above-mentioned experts nor any director, officer, partner, or employee thereof, as applicable, received or has received a direct or indirect interest in our property or of any of our associates or affiliates. As at the date hereof, such persons, and the directors, officers, partners and employees, as applicable, of each of the experts beneficially own, directly or indirectly, in the aggregate, less than one percent (1%) of the securities of the Company and they did not receive any direct or indirect interest in any securities of the Company or of any associate or affiliate of the Company in connection with the preparation of such report. None of such persons, or any director, officer or employee, as applicable, of any such companies or partnerships, is currently expected to be elected, appointed or employed as a director, officer or employee of the Company or of any associate or affiliate of the Company.

All other scientific and technical information in this AIF has been reviewed and approved by Steve Ross, P. Geol., Vice President, Resource Development of the Company, who is a QP under NI 43-101. Mr. Ross is not independent of the Company as he is the Vice President, Resource Development of the Company. As of the date hereof, Mr. Ross holds 210,500 Shares and 250,000 Options.

ADDITIONAL INFORMATION

Additional information relating to the Company may be found on SEDAR at www.sedar.com. Additional information including directors' and officers' remuneration and indebtedness, principal holders of our securities, securities authorized for issuance under equity compensation plans and a statement as to the interest of insiders in material transactions, was contained in the management proxy circular for the annual general and special meeting of shareholders held on January 14, 2022. Additional financial information is provided in the audited financial statements and management discussion and analysis for the most recent year-end. The foregoing additional information is available on SEDAR at www.sedar.com the Company's profile.

SCHEDULE "A"
AUDIT COMMITTEE MANDATE

Purpose of the Audit Committee

The purpose of the Audit Committee (the "**Committee**") of the Board of Directors (the "**Board**") of Company is to provide an open avenue of communication between management, the Company's independent auditor and the Board and to assist the Board in its oversight of:

- the integrity, adequacy and timeliness of the Company's financial reporting and disclosure practices;
- the Company's compliance with legal and regulatory requirements related to financial reporting; and
- the independence and performance of the Company's independent auditor. The Committee shall also perform any other activities consistent with this Charter, the Company's articles and governing laws as the Committee or Board deems necessary or appropriate.

The Committee shall consist of at least three directors. Members of the Committee shall be appointed by the Board and may be removed by the Board in its discretion. The members of the Committee shall elect a Chairman from among their number. A majority of the members of the Committee must not be officers or employees of the Company or of an affiliate of the Company. The quorum for a meeting of the Committee is a majority of the members who are not officers or employees of the Company or of an affiliate of the Company. With the exception of the foregoing quorum requirement, the Committee may determine its own procedures.

The Committee's role is one of oversight. Management is responsible for preparing the Company's financial statements and other financial information and for the fair presentation of the information set forth in the financial statements in accordance with Generally Accepted Accounting Principles ("**GAAP**"). Management is also responsible for establishing internal controls and procedures and for maintaining the appropriate accounting and financial reporting principles and policies designed to assure compliance with accounting standards and all applicable laws and regulations.

The independent auditor's responsibility is to audit the Company's financial statements and provide its opinion, based on its audit conducted in accordance with generally accepted auditing standards, that the financial statements present fairly, in all material respects, the financial position, results of operations and cash flows of the Company in accordance with GAAP.

The Committee is responsible for recommending to the Board the independent auditor to be nominated for the purpose of auditing the Company's financial statements, preparing or issuing an auditor's report or performing other audit, review or attest services for the Company, and for reviewing and recommending the compensation of the independent auditor. The Committee is also directly responsible for the evaluation of and oversight of the work of the independent auditor. The independent auditor shall report directly to the Committee.

Authority and Responsibilities

In addition to the foregoing, in performing its oversight responsibilities, the Committee shall:

1. Monitor the adequacy of this Charter and recommend any proposed changes to the Board.
2. Review the appointments of the Company's Chief Financial Officer and any other key financial executives involved in the financial reporting process.

3. Review with management and the independent auditor the adequacy and effectiveness of the Company's accounting and financial controls and the adequacy and timeliness of its financial reporting processes.

4. Review with management and the independent auditor the annual financial statements and related documents and review with management the unaudited quarterly financial statements and related documents, prior to filing or distribution, including matters required to be reviewed under applicable legal or regulatory requirements.

5. Where appropriate and prior to release, review with management any news releases that disclose annual or interim financial results or contain other significant financial information that has not previously been released to the public.

6. Review the Company's financial reporting and accounting standards and principles and significant changes in such standards or principles or in their application, including key accounting decisions affecting the financial statements, alternatives thereto and the rationale for decisions made.

7. Review the quality and appropriateness of the accounting policies and the clarity of financial information and disclosure practices adopted by the Company, including consideration of the independent auditor's judgment about the quality and appropriateness of the Company's accounting policies. This review may include discussions with the independent auditor without the presence of management.

8. Review with management and the independent auditor significant related party transactions and potential conflicts of interest.

9. Pre-approve all non-audit services to be provided to the Company by the independent auditor.

10. Monitor the independence of the independent auditor by reviewing all relationships between the independent auditor and the Company and all non-audit work performed for the Company by the independent auditor.

11. Establish and review the Company's procedures for the:

    - receipt, retention and treatment of complaints regarding accounting, financial disclosure, internal controls or auditing matters; and

    - confidential and anonymous submissions by employees regarding questionable accounting, auditing and financial reporting and disclosure matters.

12. Conduct or authorize investigations into any matters that the Committee believes is within the scope of its responsibilities. The Committee has the authority to retain independent counsel, accountants or other advisors to assist it, as it considers necessary, to carry out its duties, and to set and pay the compensation of such advisors at the expense of the Company.

13. Perform such other functions and exercise such other powers as are prescribed from time to time for the audit committee of a reporting company in Parts 2 and 4 of Multilateral Instrument 52-110 of the Canadian Securities Administrators, the Business Corporations Act (*Canada*) and the articles of the Company.