ASX Announcement
28 August 2024

COMPANY TO PRODUCE LITHIUM BRINE FROM SMACKOVER FORMATION, USA

HIGHLIGHTS

- **PFE to access a Smackover production well and a disposal well allowing for potential DLE pilot plant location.**
- **Work expected to begin imminently. Re-entry well will provide brine samples for Lithium grade analysis and Direct Lithium Extraction (DLE) process testing.**
- **SLB model providing an advanced 3D static model of the Lithium and Bromine potential of the Pantera Smackover due imminently.**
- **SLB report will detail brine specific zones in the upper and middle Smackover for first well re-entry test.**
- **Pantera is largest listed acreage holder outside of the majors (Exxon, Albemarle, Tetra, Standard Lithium, Equinor ASA).**
- **Exxon Mobil (US$514 billion market cap) has concluded its first round of drilling at its Arkansas Smackover Lithium Brine project with 8 wells completed including one on the east border of PFE's acreage position. Their strategic plan includes the construction of a sizable lithium brine processing facility, aimed at advancing their project into full-scale production.[1]**
- **Norway's AU$125 billion state-owned energy company Equinor (NYSE: EQNR) recently entered the Smackover with an investment of up to US$160 million in Standard Lithium's Brine projects across the Smackover.[2]**

[1]Exxon Mobil 'Our First Lithium Well – But "Not Our First Rodeo, 18 January 2024.
[2] https://www.equinor.com/news/20240508-partnership-standard-lithium

Commenting on the progress to the first well, Executive Chairman Barnaby Egerton-Warburton said:

"Our exclusive abstract agreement has continued to deliver for the Company, and we now have over 26,000 acres under lease in America's new "Lithium Capital "as other groups in the play now surround us to the east, north, northwest and west of our acreage position but remain outside of our exclusive abstract agreement area. Our leased position is significant, and our focus has now changed to the rapid commencement of exploration and evaluation. Our initial re-entry well will enable the collection of Lithium brine samples for grade analysis and DLE process testing by various technology providers."

"The re-entry well location provides two wells as a future site for a direct lithium extraction (DLE) pilot plant where we can produce and dispose in a live pilot plant test"

"Our engagement of global technology company, SLB (NYSE: SLB) will lead to the imminent arrival of the advanced subsurface modelling later this month which will accelerate Pantera's progress as we prepare for the first re-entry test well."

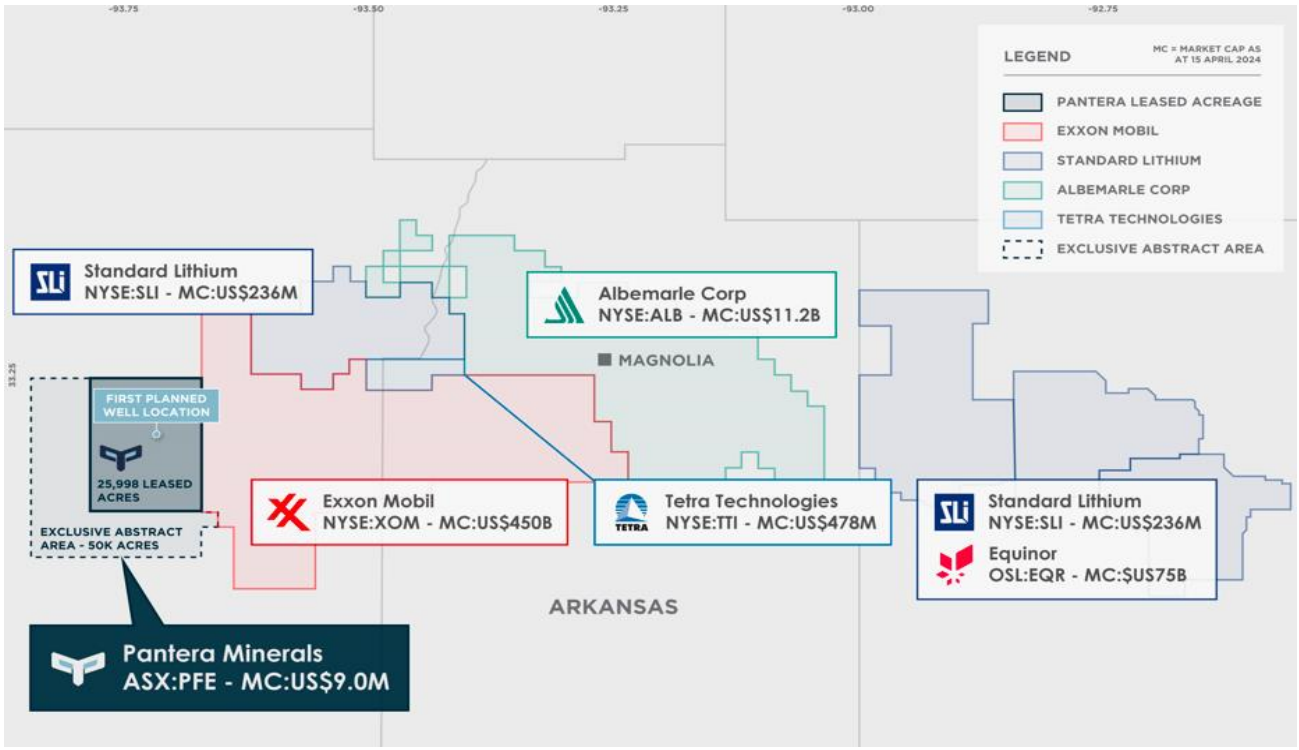

Figure 1- Pantera Arkansas Lithium Brine Project location showing approximate location of first re-entry test well. Map indicates approximate outlines of Pantera and other acreage positions in the play which are constantly changing and as such may not be 100% accurate. Once leasing by the Company is complete it will publish a detailed acreage map.

Forward Focus

- **Sub-surface study by SLB - this modelling will provide Pantera with a detailed sub-surface model of the Smackover Formation with the Lithium and Bromine Brine potential. This model can be used to plan the optimal locations for future wells as well as the specific formation intervals to test via our imminent initial re-entry well.**
- **Re-entry of well on leased acreage position to test lithium and bromine grades at the Pantera Smackover Lithium project.**
- **DLE test of re-entry well samples by multiple DLE technology providers.**
- **Continued Smackover Project growth through the acquisition of additional acreage.**
- **Discussions with DLE technology providers for a pilot plant test on site in early 2025**

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Pantera Minerals Limited (ASX: PFE) ("Pantera" or the "Company") is pleased to announce that the company has reached an agreement with the owner of a well that has been drilled and cased to the Smackover. The well, currently used as a saltwater disposal well into a shallower zone, provides Pantera with an economic means to test the lithium brine grade in a central location on its leased acres. Pantera will also convert a current water supply well that is on the same pad to a disposal well. This conversion will allow Pantera to operate a continuous flowing DLE pilot plant in the first half of 2025 at the site.

About The Pantera Lithium Brine Project

The Project now covers a land position of +26,000 net leased acres of lithium brine prospective ground in the Smackover Formation Arkansas, a known high grade lithium brine formation.

Exploration Target

The Project has established a conceptual Exploration Target[3] ranging from 436,000 to 2,966,000 tonnes of contained LCE within the project's 50,000-acre Exclusive Abstract Area,[4] which houses the

Project. The estimate is based on lithium concentrations ranging between 225 mg/L and 450 mg/L with a median value of 338mg/L, showcasing the potential world-class scale of the Project.

The Exploration Target's potential quantity and grade is conceptual in nature, there has been insufficient exploration to estimate a JORC compliant Mineral Resource, and it is uncertain if further exploration will result in the estimation of a such a resource. The Company is planning additional exploration work in the coming year to advance the definition of a resource.

Exclusive Abstract Agreement

The project benefits from a crucial partnership with a commercial abstract company, underpinned by a 50,000-acre Exclusive Abstract Agreement. This agreement, formed with the sole commercial provider of mineral ownership abstract information for the project area, holds immense strategic significance. Understanding mineral ownership is paramount in securing lithium brine leases, offering a substantial commercial edge to the Project.

This Exclusive Abstract Agreement facilitates access to comprehensive mineral ownership records, ensuring precise identification of owners and facilitating accurate execution of leases with the rightful mineral rights holders. In the United States, the separation of mineral rights from surface rights underscores the importance of examining records dating back to the 1800s for precise ownership confirmation.

The Exclusive Abstract Agreement confers a pivotal advantage, enabling the Project to efficiently obtain accurate mineral ownership information for the project area, setting it apart from competitors. While such information is theoretically accessible from public records, the process is undeniably time-consuming and labour-intensive.

Encompassing an extensive area of 50,000 acres, the Exploration Target identified pertains specifically to these 50,000 acres, reinforcing the project's focus and potential within this defined scope.

Strategically Positioned

The strategically positioned Project is situated in the Smackover Formation in South-West Arkansas, a renowned high-grade lithium brine formation. This area is home to various lithium brine explorers and producers, including industry leaders such as Exxon Mobil (NYSE: XOM), Standard Lithium (NYSE: SLI), Equinor (NYSE: EQNR) Tetra Technologies' (NYSE: TTI) and Albemarle Corporation (NYSE: ALB).

Arkansas offers an ideal jurisdiction for the development of brine projects, situated strategically in the heart of the United States. With exceptional logistics and transportation links, a skilled labor force, and a proactive and supportive state government, it provides all the necessary ingredients for successful project development.

[3] PFE Announcement: 'Material LCE Exploration Target For The Superbird Lithium Brine Smackover Project', 29 January 2024.
[4] The Exclusive Abstract Area covers 50,000 acres with the Exploration Target being calculated as being contained within this area.

Figure 2 – Pantera Lithium Brine Project location within the Smackover Formation.

The Smackover Formation is host to several lithium brine explorers and producers, with the Pantera Project in proximity to the following lithium projects:

EXXON LITHIUM BRINE PROJECT (NYSE: XOM)

- Project (120k acres) acquired in May 2023 reportedly for >US$100m[5]
- Targeting Production of 75,000 -100,000 tonnes per annum ("tpa") of LCE[6] by 2027[7]

STANDARD LITHIUM (TSXV: SLI)

- Lanxess (Southern Arkansas) Project - 150k acres across southern Arkansas. A recently released Definitive Feasibility Study[8] has first production expected in 2026 with an initial average annual production of 5,700 tonnes, and an average annual production of 5,400 tonnes over a 25-year minimum operating life.
- Lanxess has proven and probable Reserves of 208 Kt LCE at an average concentration of 217 mg/L supporting up to 40 years of operations.

[5] Source: Wall Street Journal 'Exxon Joins Hunt for Lithium in Bet on EV Boom' 21 May 2023.
[6] Source: Wall Street Journal 'This Arkansas Town Could Become the Epicentre of a U.S. Lithium Boom', 20 July 2023.
[7] Source: Exxon Mobil Drilling First Lithium Well in Arkansas, Aims to be a Leasing Supplier for Electric Vehicles by 2030, November 2023.
[8] Source: Standard Lithium Files Definitive Study for its First Commercial Lithium Extraction Plant – Phase 1A, 18 October 2023.

- Strong project economics. After-tax NPV US$550 million and IRR of 24% assuming discount rate of 8% and a long-term price of US$30,000/t for battery-quality Li_2CO_3

- Operating costs reflect first step to commercial production. Average annual operating costs of US$6,810/t over the 25-year operating life, with a CAPEX of US$365 million including a 15% contingency.

- SLI also has its South-West Arkansas Project, 36k acres across southern Arkansas.

- Exercised Option Agreement for lithium rights over 27,000 net acres of brine leases with Tetra Technologies'[9].

TETRA TECHNOLOGIES' (NYSE: TTI)

- 5,100 acres

- Option Agreement (now exercised) with SLI for lithium rights within Standard Lithium's South-West Arkansas Project

ALBERMARLE CORPORATION (NYSE: ALB)

- Magnolia Project, building a DLE test facility in Magnolia, Arkansas[10]

- Produces Bromine currently from Smackover brines at its Magnolia Arkansas Bromine facility

EQUINOR ASA (NYSE: EQNR)

Equinor (listed on both the Oslo Stock Exchange/Euronext and the New York Stock Exchanges) is an international energy company committed to long-term value creation in a low-carbon future. Equinor's portfolio of projects encompasses oil and gas, renewables and low-carbon solutions, with an ambition of becoming a net-zero energy company by 2050. Headquartered in Stavanger (Norway) Equinor has a presence in 30 countries world-wide.

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This release is authorised by the Board of Directors of Pantera Minerals Limited.

[9] Source: Standard Lithium Exercises Option Agreement on South West Arkansas Project, Solidifying Path Forward Following Positive Feasibility Study and Rising Regional Interest, 31 October 2023.
[10] Source: Reuters 'Albemarle jumps into global race reinvent lithium products', 3 August 2023.