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## Pantera Lithium Brine Project Highlights





100% owned Lithium Brine Project in the 'Smackover Formation' in Southwest Arkansas, provides exciting lithium exposure

Pantera completed 100% acquisition of the Daytona Lithium Arkansas Smackover Project in Feb 2024



A significant and rapidly increasing total landholding of 17,000 acres with a further 9,400 acres under negotiation<sup>1</sup>

• Acreage rapidly increased by 219% from 5,325 to 17,000 acres in just 6 months following Pantera's initial investment.



Material Exploration Target of 436,000 to 2,966,000 tonnes of contained LCE, within the project's 50,000-acre exclusive abstract agreement area, which houses the Pantera Lithium Brine Project, announced in January 2024<sup>2</sup>

- Estimate is based on lithium concentrations ranging between 225 450 mg/L, with a median value of 338 mg/L
- Showcasing the potential world-class scale of the project.
- The Exploration Target figure is conceptual in nature as there has been insufficient exploration undertaken on the project to define a mineral resource for the Pantera Lithium Brine Project. It is uncertain that future exploration will result in a mineral resource.



#### Drilling program expected in Q2 2024 to validate the Exploration Target and assist in the generation of a maiden JORC resource

• Well re-entry and sampling program in Q2 2024 to validate the Exploration Target with acquisition of existing 2D seismic data to increase geological understanding.



#### Bolstered Board with significant lithium brine experience

- Barnaby Egerton-Warburton Non-Executive Chairman of Arizona Lithium (ASX:AZL), oversaw acquisition of the \$A70 million Prairie Project.
- Tim Goldsmith Former CEO of Rincon Mining Pty Limited until the asset was sold to Rio Tinto for US\$825m in March 2023.3



#### Major players rapidly advancing lithium brine projects in the region

• Exxon Mobil (NYSE: XOM), Standard Lithium (NYSE: SLI) and Albemarle Corporation (NYSE: ALB) holding projects in very close proximity.



Strategically located close to end users in the North American Lithium Industry including giga factories and car manufacturers

- GM, Ford and Stellantis have also recently committed >\$50 billion to electrify their fleets.
- Lithium demand and supply shortage expected to drive long term lithium prices higher as electric vehicle adoption accelerates.

# **Corporate Overview**



#### Capital Structure

4.2c Share Price<sup>1</sup>

256m Shares On Issue

88m Options On Issue<sup>2</sup>

> \$1.88m Cash<sup>3</sup>

\$11.2m Market Cap<sup>1</sup>

#### **Board & Management**

Barnaby Egerton-Warburton Executive Chairman / CEO

- 30+ years of investment banking, international investment & market experience with positions at JP Morgan (New York, Sydney, Hong Kong), BNP Equities (New York) and Prudential Securities (New York).
- Chairman of Arizona Lithium (ASX: AZL).

#### Matt Hansen

**Non-Executive Director** 

- 12+ years' broad legal experience.
- Specialised in advising large & mid-cap companies on energy, resources and regulatory matters providing advice to resources companies, including Rio Tinto Exploration, Northern Star Resources, Billabong Gold, Western Areas and De Grey Mining.

#### **Tim Goldsmith**

**Non-Executive Director** 

- CEO of Rincon Mining Pty Limited until the asset was sold to Rio Tinto for US\$825m in March 2022.<sup>4</sup>
- During his tenure, Rincon significantly increased its resource to over 11Mt of LCE, changed its DLE process, constructed & operated a DLE pilot plan on site, prepared a PFS study and concluded a sale process.
- Pantera will leverage his experience to assist in developing its lithium brine potential.

#### **Nick Payne**

**Head of Exploration** 

- 25+ years as a geologist with extensive exploration and mining experience in Australia, Canada and the USA.
- Experienced in drilling technology, downhole sensor technology and geological software development.
- Member of the AICD, Australian Institute of Mining and Metallurgy and a Member of the Society of Economic Geologists.

<sup>1</sup> As at 25 March 2024.

<sup>2</sup> Various exercise prices & expiry dates, includes 20m options to be added in relation to Dec placement. 3 As at 31 December 2023.

<sup>4</sup> Source: Rio Tinto completes acquisition of Rincon Lithium Project, 29 March 2022.

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# Pantera Lithium Brine Project – 100% Ownership

# PANTERA MINERALS

#### A significant project in America's new lithium super-highway

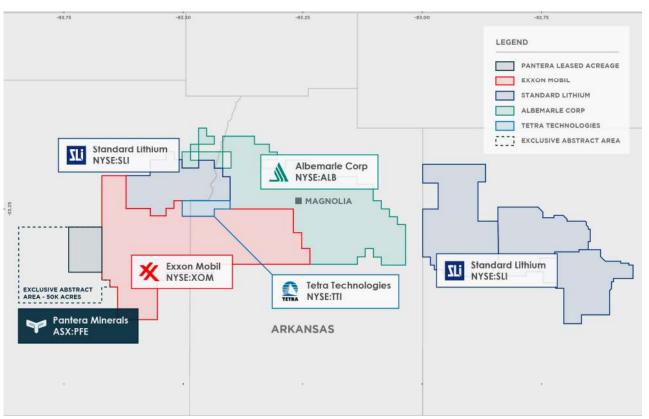


- In February 2024 Pantera acquired 100% of the Lithium Brine Project<sup>1</sup> in the 'Smackover Formation' in Southwest Arkansas.
- Directly abuts Exxon Mobil's (NYSE: XOM) Lithium Brine Project.
- Other major lithium brine players in the region include Standard Lithium (NYSE: SLI) & Albemarle Corporation (NYSE: ALB) holding projects adjacent to Pantera.
- Supported by 100 years of energy production, expertise, and infrastructure in Arkansas.
- Targeting an O&G-style Direct Lithium Extraction (DLE)
   Project with Arkansas Smackover Brine containing elevated lithium concentrations (150-600+mg/L).
- Close proximity to end users including major Gigafactories.



#### The Australians Are Here

#### A rapidly growing land position in America's most sought after lithium address



### Sharp elbows in "Shale 2.0"

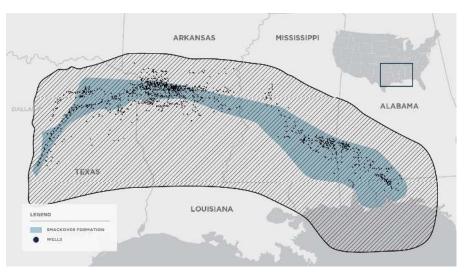
- Since Pantera's investment, the Project has expanded by 219% and now comprises 17,000 acres, with a further 9,400 acres under negotiation.<sup>1</sup>
- Effective brine leasing growth strategy:
  - ✓ Led by Country Manager, Cleve Thomas
  - Driven by a proprietary data base
  - Supported by exclusive agreement with prominent commercial leasing abstract company to deliver 50,000 acres of lease abstract, exclusively to Pantera Lithium Brine Project
  - Continuing with ongoing negotiations for material increases in landholding

1 Formal mineral lease offers have been sent to mineral owners or have signed commitments by mineral owners to lease their minerals.

#### The Smackover Formation

#### Ideal concentrations with significant brine capacity

- For 100+ years, the Smackover Formation in southern USA has played a central role in America's conventional energy economy.
- High confidence geological model based on 1000's of wells, demonstrates uniform thickness and continuity.
- Smackover has highest recorded concentrations of Lithium in Brines, ranging from 150 800+ mg/L.



if Direct Lithium Extraction (DLE) is going to work at scale "it is going to be in the Smackover".

- Joe Lowry, Lithium Expert

"Exxon Mobil can produce lithium at much lower cost"

Darren Woods, CEO Exxon Mobil

Source: Arkansas Oil & Gas Commission data USGS, 2006.

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# Pantera Lithium Brine Project – Rapid Progress to Date



#### Significant increases in landholding

August 2023 September 2023 October 2023 December 2023 February 2024 February 2024 March 2024

#### **Pantera Acquires** 35% Interest

Acquired by Pantera through a \$2m convertible note

#### 58% Increase in Landholding

Total landholding of 8,416 acres in under four weeks after the initial investment

#### 12% Increase in Landholding

Total landholdina of 9,440 acres

#### 17% Increase in Landholding

Total landholding of 13,457 acres, with 9,400 acres under negotiation<sup>1</sup>

100% Ownership

Completed 100% acquisition of DaytonaFormation



#### **Exploration** Target<sup>2</sup>

Target of 436,000 to 2,966,000 tonnes of contained LCE

#### 26% Increase in Landholding

Total landholding of 17,000 acres with 9,400 acres under negotiation1

Landholding Increased by 219% Since Pantera's Initial investment Total landholding of 17,000 acres with a further 9,400 acres under negotiation<sup>1</sup>

The Exploration Target figure is conceptual in nature as there has been insufficient exploration undertaken on the project to define a mineral resource for the Pantera Lithium Brine Project. It is uncertain that future exploration will result in a mineral resource.

# **Material Lithium Exploration Target Confirmed**



- Exploration Target of 436,000 to 2,966,000 tonnes of contained LCE, within the project's 50,000 acre exclusive abstract agreement area, which houses the Pantera Lithium Brine Project.
- The Exploration Target figure is conceptual in nature as there has been insufficient exploration undertaken on the
  project to define a mineral resource for the Pantera Lithium Brine Project. It is uncertain that future exploration will
  result in a mineral resource.
- Estimate is based on lithium concentrations ranging between 225 450 mg/L, with a median value of 338 mg/L
- Showcasing the potential world-class scale of the project.
- Multiple re-entry wells identified within project footprint and negotiations with various well owners commenced, potentially allowing
  for a well re-entry & sampling program to commence Q2 2024, to validate the Exploration Target and assist in the generation of a
  maiden JORC resource.

"The next 6-8 months will deliver significant positive news flow on the back of the kick off of resource definition drilling at our Smackover Li Brine project."

Barnaby Egerton-Warburton Pantera CEO

# What is Direct Lithium Extraction (DLE)





Wells are drilled to the brine formation depth in the exact same way a normal oil well would be drilled.

The DLE process selectively separates lithium from brine using various technologies such as adsorption, ion exchange, membranes, or solvent extraction.

Battery grade lithium can then be produced from the lithium chloride or sulphate solution produced.

Once the lithium has been extracted the waste brine is disposed of via re-injection into the same or a different formation.

LITHIUM BRINE PROCESSING

DIE Facility

Conversion

Conversion

Concentration

Concentration

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# **Next Steps and Milestones**

#### Exciting upcoming milestones for the company



Q2 2024 Q3-Q4 2024 Q4 2024



#### Continued acquisition of additional project acreage



#### Re-entry of an identified well

To test brine grade, permeability, and porosity from the Smackover Formation



#### Drilling of two further sample wells

To test brine sample, with the aim of advancing towards a JORC Resource and the creation of a unit



#### **Announcement of JORC Resource**

Maiden JORC Resource



#### **Testing of Lithium Grade**

From the re-well sub subsequent to successful re-entry



#### **Direct Lithium Extraction Testing**

Of re-entry well sample by two highly regarded DLE technology providers



# Acquisition of existing 2D Seismic data

To facilitate subsurface modelling of area of interest, to provide clear drilling locations for the first resource definition wells





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