

## MATERIAL LCE EXPLORATION TARGET FOR THE SUPERBIRD LITHIUM BRINE SMACKOVER PROJECT

### **HIGHLIGHTS**

- Material Exploration Target<sup>1</sup> confirmed between 436,000 to 2,966,000 tonnes Lithium Carbonate Equivalent (LCE) for the 50,000 acre exclusive abstract area encompassing\_the Superbird Lithium Brine Project, located in Arkansas, USA within the Company's Exclusive Abstract Area<sup>2</sup>
- <u>A lithium grade range of between 225 to 450 mg/L<sup>3</sup> with a median value of 338 mg/L</u> and 'upper and lower' volume of between 364 million -1.23 billion tonnes of brine underpins the Exploration Target
- 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
- Pantera to acquire existing 2D seismic, commercial gravity and magnetic data which will improve the understanding of the distribution and extent of the brine reservoir substantially de-risking the project
- Binding Implementation Agreement to acquire 100% of the issued share capital in Daytona Lithium, expected to be completed in the coming weeks<sup>4</sup>
- Pantera continues to aggressively lease acreage in the Smackover, underpinned by its 50,000-acred Exclusive Abstract Agreement, it is systematically leasing across the Southwest Arkansas Smackover play with over 12,500 acres now under lease
- Immediately to the east and abutting PFE, Exxon Mobil recently drilled multiple lithium brine wells on their leased acres and intend to build a large lithium brine processing facility to bring their project into production<sup>5</sup>
- Further east in Southwest Arkansas, Standard Lithium has recently completed a PFS and have been running a pilot plant for over 12 months to validate the play and now have construction scheduled for 2025 and production expected in 2027<sup>6</sup>

<sup>&</sup>lt;sup>1</sup> The Exploration Target figure is conceptual in nature as there has been insufficient exploration undertaken on the Project to define a lithium mineral resource for the Smackover Formation. It is uncertain that future exploration will result in a mineral resource.

<sup>&</sup>lt;sup>2</sup> The Superbird Project's Exclusive Abstract Area is a basket of leased and to-be-leased acreage the Company is systematically leasing through its exclusive abstract area agreement.

<sup>&</sup>lt;sup>3</sup> Mg/L is equivalent to ppm (parts per million).

<sup>&</sup>lt;sup>4</sup> PFE Announcement: Pantera Acquires 100% Of Daytona Lithium In Arkansas' Smackover Lithium Field, 11 December 2023.

<sup>&</sup>lt;sup>5</sup> Exxon Mobil 'Our First Lithium Well - But "Not Our First Rodeo, 18 January 2024.

<sup>&</sup>lt;sup>6</sup> Standard Lithium 'Standard Lithium Files Technical Report For the South West Arkansas Project, 18 September 2023.



 Exploration Target was completed by Matrix Solutions, a North American-based industry-leading reservoir consultant, providing Geological, Geophysical and Geochemical Assessment, and Modelling

#### **Commenting on the Exploration Target, CEO Matt Hansen:**

"The independently estimated Exploration Target, ranging from 364 Mt to 1,238 Mt of brine with a grade between 225 to 450 mg/L Li within the Exclusive Abstract Area, underscores the Superbird Lithium Brine Project's potential scale and promising grade, affirming the need to progress the project quickly.

Pantera intends to re-enter a previously drilled Smackover well and will prioritise the extraction of brine samples and testing of the formation in order to further validate our Exploration Target and contribute to the delineation of a robust JORC resource.

With well funded and credentialed neighbours directly abutting our Project, the Smackover is now being recognised as the best location in North America to develop a DLE Project, with renowned lithium expert Mr Joe Lowry quoted as saying 'the Smackover is where the US will have brine and DLE success'".

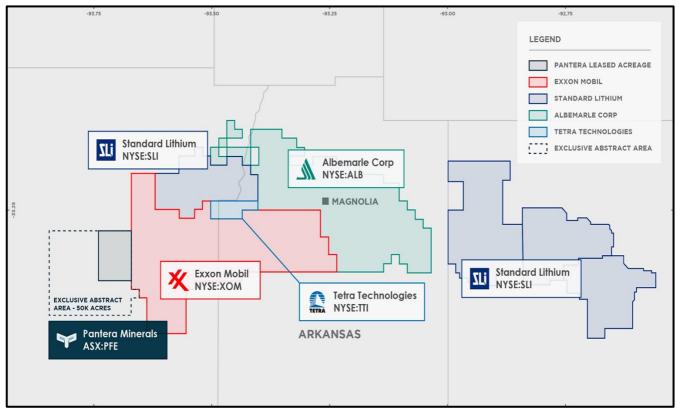


Figure 1- Superbird Project location showing proximity to adjacent lithium brine projects

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Pantera Minerals Limited (ASX:PFE) ("**Pantera**" or the "**Company**") is pleased to announce the establishment of a conceptual Exploration Target at the Superbird Lithium Brine Project. The Exploration Target ranges from 0.436 to 2.96 Mt (million tonnes) of contained Lithium Carbonate Equivalent ("**LCE**") within the project's Exclusive Abstract Area.<sup>7</sup> 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.

Pantera has formally entered into a Binding Implementation Agreement with Daytona Lithium Pty Ltd ("**Daytona Lithium**") to acquire 100% of the issued share capital in Daytona Lithium, the holder of the Superbird Lithium Project.<sup>8</sup> The Company currently holds the right to acquire up to a 35% interest in the issued share capital of Daytona Lithium, through a \$2 million Convertible Note Facility.<sup>9</sup>

The strategically positioned Superbird Lithium Project is situated in the Smackover Formation in South-West Arkansas, a renowned high-grade brine formation. This area is home to various lithium brine explores and producers, including industry leaders such as Exxon Mobil (NYSE:XOM), Standard Lithium (NYSE:SLI), Tetra Technologies' (NYSE:TTI) and Albemarle Corporation (NYSE:ALB). Since Pantera's initial investment, the Superbird Lithium Project has increased materially to now cover a land position of over 12,500 leased acres.

## **Lithium Brine Exploration Target**

Independent geological consultants, Mr Eric Pelletier, M.Sc., P.Geo., Mr Alexander Haluszka, M.Sc., P.Geo., and Mr Jason Clarke, B.Sc., P.Geo., of Matrix Solutions Inc. ("**Matrix**") prepared the Exploration Target assessment report. Mr Eric Pelletier, as the Competent Person on record, has assessed data supplied by Pantera, along with publicly available data, and compiled the Exploration Target as well as the associated JORC Code information table. The Company has not yet initiated exploration activities at the Superbird Lithium Project.

The lithium Exploration Target for the Superbird Lithium Project, is situated within the project's Exclusive Abstract Area and falls within the range of:

#### 436,214 tonnes to 2,966,253 tonnes of LCE (refer to Table 1)

This suggests the presence of a resource that merits additional exploration within the project's footprint.

<sup>7</sup> The Exclusive Abstract Area covers 50,000 acres with the Exploration Target being calculated as being contained within this area.

<sup>8</sup> PFE Announcement: 'Pantera Acquires 100% Of Daytona Lithium In Arkansas' Smackover Lithium Field (11 December 2023).

<sup>9</sup> PFE Announcement: 'Pantera Enters Fast Emerging US Lithium Brine Play' (24 August 2023).



The volume and lithium concentrations presented here are conceptual in nature and derived from the analysis of available data sources. Consequently, there has been insufficient exploration to establish a JORC compliant Mineral Resource at this time.

# Methodology To Determine the Grade and Tonnage Range For the Exploration Target

The Exploration Target within the Exclusive Abstract Area was estimated using the following methodology:

- A Project Area, spanning 54km by 37km, centred on the Exclusive Abstract Area of 50,000 acres, was defined. All available geological, geochemical and well data within the Project Area was collected to inform the assessment of the Exploration Target within the Exclusive Abstract Area. A total of 121 wells penetrated the Smackover Formation within the Project Area, as illustrated in Figure 2. Out of these wells, 45 wells have raster image logs and LAS data logs, which were utilised for picking the contacts of the Upper Smackover Formation Member. Among the 45 wells, 10 are situated within the Exclusive Abstract Area, is a complete penetration of the Smackover Formation (refer to Figure 3). The available well data was used to calculate the extent of the Upper Smackover Formation Member, identified as the brine reservoir
- The volume of the Upper Smackover Formation Member is determined by multiplying the area (50,000 acres or 202,342,821 m<sup>2</sup>) by an average thickness of 36m (118 ft), derived from data obtained from 10 wells within the Exclusive Abstract Area. Notably, the reservoir exhibits its maximum thickness of 79m (260 f) in the south-eastern corner of the Exclusive Abstract Area. This thickness gradually reduces to approximately 18m (60 ft) on the southern edge, and then increases again to around 46m (150 ft) at the central portion of the Exclusive Abstract Area, as depicted in Figure 4
- As direct core measurements are not readily available in the Exclusive Abstract Area preliminary reservoir parameters for porosity are relying on previously established, peerreviewed academic studies to inform and constrain anticipated porosity values in the area. Indications are that these values range from 5% - 17% porosity within the reservoir facies<sup>10</sup>
- A lithium concentration range spanning from 225 and 450 mg/L, with a mean of 338mg/L, was employed and is based on modelling known lithium concentrations within the Project Area. This modelling draws from data reported by the United States Geological Survey (USGS) National Produced Waters Geochemical Database and Standard Lithium, as illustrated in Figure 5. The database encompasses a total of 1,179 water chemistry entries for the Smackover Formation in Arkansas, with 14 of these records located in the Project Area. Within this dataset, there are



records for lithium concentrations in 211 wells in the Smackover Formation, of which 4 valid samples are in the Project Area. Additionally, Matrix has integrated 7 supplementary lithium concentration sample points obtained from a corporate presentation by Standard Lithium Ltd from within or proximal to the Project Area (refer to Table 2)<sup>11</sup>

• The contained lithium estimate is conducted using the relation: Lithium Exploration Targets = Total Volume of the Brine-Bearing Aquifer X Porosity X Concentration of Lithium in the Brine for each range of porosity and lithium concentration

## **SMACKOVER FORMATION STRUCTURE**

The Smackover Formation was deposited in the late Jurassic period within incipient rift structures of the Gulf of Mexico Basin with the accumulation of sediments in a carbonate ramp wedge within shallow marine environment with varying degrees of energy conditions.

The Smackover Formation sits conformably above the clastic sandstone Norphlet Formation, and conformably below the Buckner Formation anhydrite, which acts as a seal to the upper Smackover Formation reservoirs. The Smackover Formation can reach up to 366m (1,200 ft) in thickness and can be subdivided into a lower, middle, and upper member based on lithology and depositional setting.

The Upper Smackover Member is widely acknowledged as a reservoir interval, comprising of highenergy ooid grainstone shoals.

The orientation of the Smackover Formation within the Exclusive Abstract Area generally displays an east-west strike with a southward dip. Within the Exclusive Abstract Area, the depth to the top of the Smackover Formation range between 2,804m (9,200 ft) and 3,277m (10,750 ft) with Matrix calculating an average thickness of 36m for the Upper Smackover Formation Member across the Exclusive Abstract Area. The conceptual Exploration Target range is detailed in Table 1.



Thickness (m)	Area (m²)	Rock volume (m³)	Porosity (%)	Pore Volume (m³)	Brine Volume (L)	Lithium Concentration (mg/L)	Lithium Quantity (tonnes)	Lithium Carbonate Equivalent (tonnes)
36	202,342,821	7,284,341,556	5	364,217,078	364,217,077,800	225	81,949	436,214
36	202,342,821	7,284,341,556	10	728,434,156	728,434,155,600	225	163,898	872,427
36	202,342,821	7,284,341,556	17	1,238,338,065	1,238,338,064,520	225	278,626	1,483,127
36	202,342,821	7,284,341,556	5	364,217,078	364,217,077,800	338	123,105	655,290
36	202,342,821	7,284,341,556	10	728,434,156	728,434,155,600	338	246,211	1,310,580
36	202,342,821	7,284,341,556	17	1,238,338,065	1,238,338,064,520	338	418,558	2,227,986
36	202,342,821	7,284,341,556	5	364,217,078	364,217,077,800	450	163,898	872,427
36	202,342,821	7,284,341,556	10	728,434,156	728,434,155,600	450	327,795	1,744,855
36	202,342,821	7,284,341,556	17	1,238,338,065	1,238,338,064,520	450	557,252	2,966,253

Table 1- Lithium Volumetric Calculations and Ranges for the Exclusive Abstract Area

Note 1: The Exploration Target's potential quantity and grade is conceptual in nature and there has been insufficient exploration to establish a Mineral Resource, and it is uncertain if further exploration will result in the estimation of a Mineral Resource

Note 2: The Exploration volume has been calculated from the Exclusive Abstract Area x the average thickness of 36m for the Upper Smackover Formation Member

Note 3: Porosity has not yet been established for the Exclusive Abstract Area but has been taken from peer reviewed studies of Upper Smackover Formation Member porosity from within the Project Area

Note 4: The lithium concentration is based on 4 historic water samples from the United States Geological Survey (USGS) National Produced Waters Geochemical Database from within the Project Area along with 7 reported lithium concentration reported recently by Standard Lithium from within the Project Area

Note 5: Only Lithium concentrations in brines that exceeded 150,000 mg/L Total Dissolved Solids (TDS) were used in the estimation of Lithium concentration. Brine values below 150,000 mg/TDS were considered to be contaminated

Note 6: A conversion factor of 5.323 is used to convert elemental Li to Li<sub>2</sub>CO<sub>3</sub> or Lithium Carbonate Equivalent

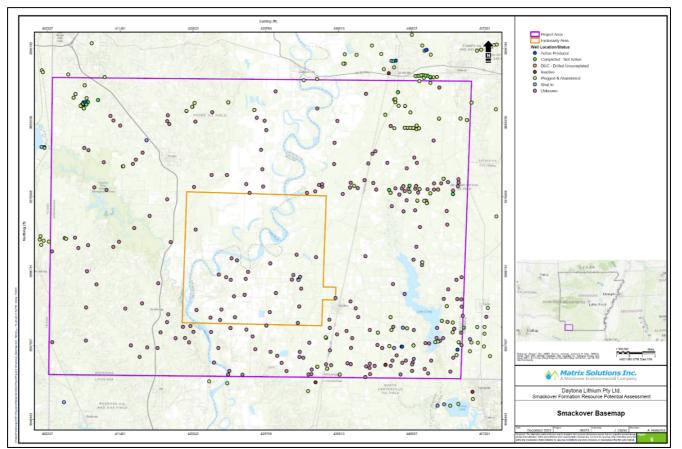


Figure 2 - Historical well locations within the Project Area and Exclusive Abstract Area

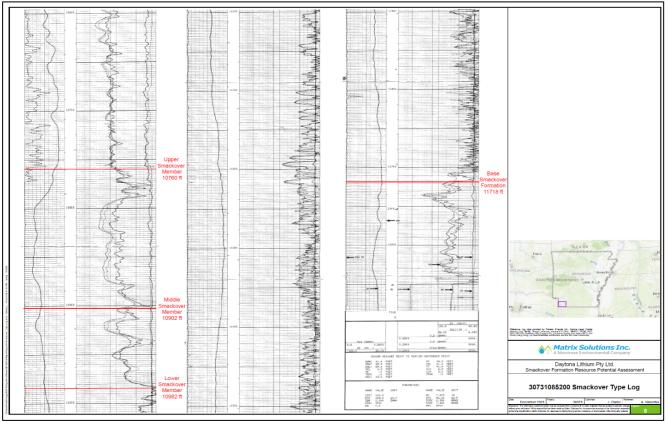


Figure 3 - Well 30731085200 Smackover Type Log



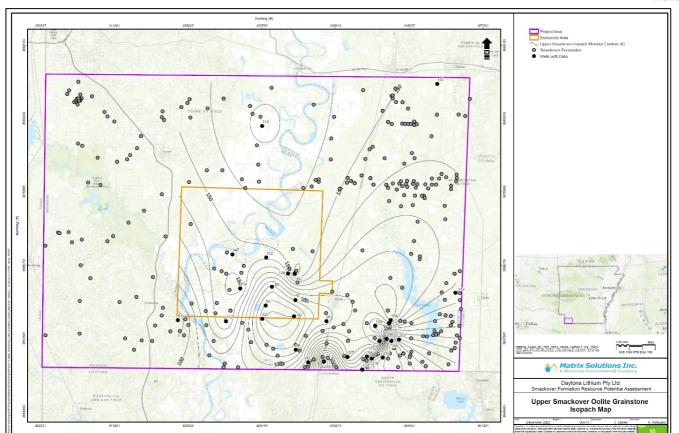


Figure 4- Upper Smackover Member Isopach Map (modelled thickness)

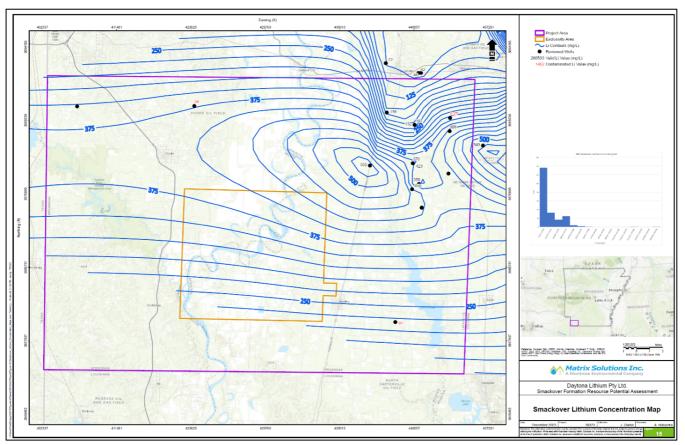


Figure 5 - Upper Smackover Member Lithium Concentration Map





## **Lithium Brine Volumetric Assessment**

It is the opinion of the Competent Person that sufficient information exists to define an Exploration Target. At this development stage, the project exhibits generally favourable prospects within the ooidal grainstone facies of the Upper Smackover Formation Member in the Exclusive Abstract Area, with thickness ranging from 18m (60 ft) to 79m (260 ft). Given the absence of direct core measurements in this area, preliminary reservoir parameters for porosity rely on insights from established, peer-reviewed academic studies. These studies suggest anticipated porosity values ranging from 5% - 17% porosity within the reservoir facies.<sup>12</sup>

Preliminary volumetrics were conducted to assess the bulk rock volume of the ooidal grainstone within the Exclusive Abstract Area. The average thickness of the nine Upper Smackover Isopach values in the Exclusive Abstract Area (36 m) was multiplied by the area to provide a preliminary rock volume of Upper Smackover Formation Member. Utilising porosity values analogous to those found in other grainstone reservoir facies, proposed scenarios for a low (5%), medium (10%), and high (17%) porosity cases are presented. The calculated rock volume was then multiplied by the three porosity estimates to yield a total pore volume range for the ooidal grainstone reservoir facies of 364,217,078 m<sup>3</sup> – 1,238,338,065 m<sup>3</sup>.

In this approach, low, medium, high-case scenarios are outlined for lithium concentrations and brine volumes in the Exclusive Abstract Area. For lithium concentrations, 225 mg/L represents the low value, 338 mg/L the medium value, and 450 mg/L the high value. These three concentrations, combined with the three ranges of porosity outcomes, yield nine unique volumetric results.

As a result of this analysis, a lithium in-place range of 436,214 tonnes to 2,966,253 tonnes of LCE within the Exclusive Abstract Area is presented. The conversion from tonnes of lithium to tonnes of LCE involved a 5.323 multiplier, as outlined from in Table 1.

## **2024 PLANNED EXPLORATION**

- Acquisition of 2D seismic data to refine and model Upper Smackover Formation Member thickness and continuity within the Exclusive Abstract Area
- Well re-entry and brine sampling program to obtain brine lithium grade and water chemistry as well as core samples for porosity assessment
- New well drilling and brine sampling to assist in defining a JORC compliant resource

- END -



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

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## **COMPETENT PERSON'S STATEMENT**

The information in this announcement that relates to geology and exploration results and target was compiled by Mr. Eric Pelletier, a Competent Person whom holds an M.Sc in Geology specialising in Carbonate Sedimentology and is a Registered Professional Geologist (Alberta) and a consulting geologist to Matrix Solutions Inc. Mr Pelletier has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the "Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Pelletier consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

All parties have consented to the inclusion of their work for the purposes of this announcement. The interpretations and conclusions reached in this announcement are based on current geological theory and the best evidence available to the author at the time of writing. It is the nature of all scientific conclusions that they are founded on an assessment of probabilities and, however might be, they make no claim for absolute certainty. Any economic decisions which might be taken on the basis of interpretations or conclusions contained in this presentation will therefore carry an element of risk.



## **ABOUT THE SUPERBIRD LITHIUM PROJECT**

Since Pantera's initial investment, the Superbird Project has increased materially to now cover a land position of 12,500 leased acres in the Smackover Formation, a known high grade brine formation with a further 9,000 acres under negotiation.

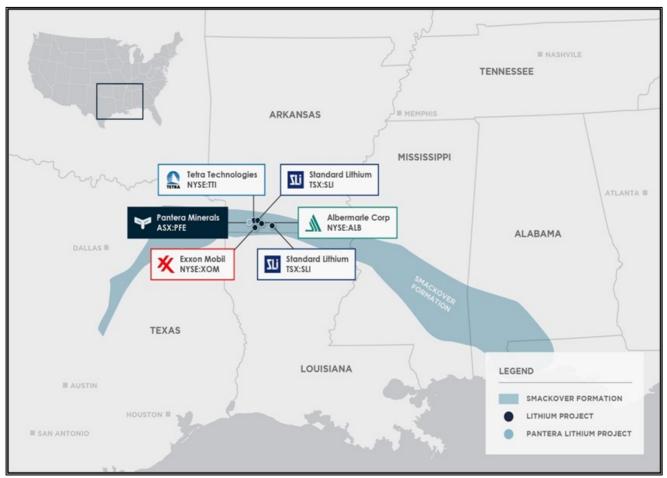


Figure 6 - Superbird Lithium Project location within the Smackover Formation

Well Name	Latitude	Longitude	Formation	TDS (mg/L)	Li (mg/L)	K (mg/L)	Br (mg/L)	Mg (mg/L)	Source
Habelyan 1	33.298	-93.557	Smackover	341953	187	2928	6856	4538	USGS
Purser 2	33.298	-93.557	Smackover	288472	132	2285	5746	3798	USGS
Cornelius 1	33.255	-93.559	Smackover	296891	423	7100	4276	2243	USGS
Cornelius 2	33.255	-93.559	Smackover	260593	370	6150	3752	1902	USGS
Taylor, Beulah et al 1	33.2752	-93.4665	Smackover	-	549	-	-	-	Standard Lithium
Mckamie Patton A No 20	33.2318	-93.5507	Smackover	-	350	-	-	-	Standard Lithium
Mckamie Patton A No 21	33.2257	-93.5597	Smackover	-	450	-	-	-	Standard Lithium
Speer 1	33.2551	-93.4266	Smackover	-	589	-	-	-	Standard Lithium
Montague 1	33.252	-93.6155	Smackover	-	555	-	-	-	Standard Lithium
Carter-Moore 1	33.3117	-93.5937	Smackover	-	156	-	-	-	Standard Lithium
International Paper Company 1	33.2912	-93.5106	Smackover	-	408	-	-	-	Standard Lithium

Table 2 - Superbird Lithium Project Area Water Geochemistry Table - used for modelling



## Appendix A JORC Code Table 1 - Superbird Project

## Section 1 Sampling Techniques and Data

Criteria in this section apply to all succeeding sections

Criteria	JORC Code explanation	Commentary
Sampling techniques	Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down-hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.	The brine grade data came from a government public database of oilfield produced water analyses. It is assumed that these analyses were collected using standard oilfield methods for water sampling but this can't be verified by the CP.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	Details of the measures taken to ensure sample representivity are not reported.
	Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	Details of the sampling procedure and laboratory techniques are not reported.
Drilling techniques	Drill type (e.g. core, reverse circulation, open- hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).	Drilling has not been undertaken by the project proponent and the exploration target relied on data collected from drill holes completed by others. The drilling method used for these existing, predominantly oil and gas exploration wells, is unknown.
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	No core or chip samples were analysed.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	Details of the measures taken to maximise sample recovery and ensure sample representivity are not reported.
	Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	Brine resources do not rely on rock sample recovery to evaluate grade. Sampling bias may exist if water samples were preferentially collected from zones of higher permeability in the reservoir, but this is not reported in the public database.
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	No core or chip samples were analysed.



Criteria	JORC Code explanation	Commentary
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	No core or chip samples were analysed.
	The total length and percentage of the relevant intersections logged.	No core or chip samples were analysed.
Sub-sampling techniques and	If core, whether cut or sawn and whether quarter, half or all core taken.	No core samples were analysed.
sample preparation	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	Water samples were taken using standard oilfield methods (drill stem tests, production samples from flow lines or surface tanks)
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Details of the nature, quality, and appropriateness of the samples is unknown.
	Quality control procedures adopted for all sub- sampling stages to maximise representivity of samples.	Details of the quality control to maximise representivity of the samples is unknown.
	Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.	Details of the measures taken to ensure analysis of the representative samples is unknown.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Details of the sample size are not reported, but mineralisation in formation waters volumes is not correlated to grain size.
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	Details of the laboratory procedures are not reported. Samples range in completeness from incomplete analysis data to total analysis data.
	For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	Downhole geophysical logging was conducted in the existing historical oil and gas exploration wells. Logs included spontaneous potential, natural gamma, resistivity, sonic and bulk density measurements. Geophysical logging conducted in the oilfield is typically conducted using equipment that has been calibrated to a standard, but this has not been verified in the historical logs by the CP.
	Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	Multiple samples were collected for some wells to ensure the sample was representative of the in-situ material. Details on external laboratory checks and levels of accuracy are not reported.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	Assay results have been reviewed by multiple staff at Matrix Solutions Inc. and by Pantera Minerals Ltd.
	The use of twinned holes.	Some wells in the water analysis database have been twinned and show similar assay results.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Water analysis data compiled by the USGS are an amalgamation of data from 40 individual databases, publications or reports from 1905 to 2014. The amalgamated database is provided in .csv, .xls, and .Rdata versions.
		Geophysical well logs range in vintage from 1960's era to



Criteria	JORC Code explanation	Commentary
		1980's era. Log file types are mostly raster .tif images with occasional .las digital curves.
	Discuss any adjustment to assay data.	Assay data has not been adjusted.
Location of data points	Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	The accuracy of drill hole locations is unknown.
	Specification of the grid system used.	Locations of water analysis sample data and well locations used in mapping are all given in Latitude and Longitude coordinates.
	Quality and adequacy of topographic control.	The quality and adequacy of topographic control is unknown.
Data spacing and distribution	Data spacing for reporting of Exploration Results.	Data spacing is dense in portions of the map area, and non existent in other portions, but is suitable for reconnaissance programmes.
	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied	Data spacing is not appropriate for the Mineral Resource and Ore Reserve estimation procedure but is suitable to establish an early stage Exploration Target.
	Whether sample compositing has been applied.	Details of sample compositing are not reported, but it is assumed this was applied as it is common practice to report brine chemistry as an average value from multiple tests.
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	It is assumed that sample intervals were targeting permeable and porous zones in the reservoir that host the brine. Permeability and porosity trends were considered as part of the definition of the Exploration Target.
	If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	The brine resources hosted in the Smackover Formation are not interpreted to be influenced by structural trends in the reservoir and therefore standard vertical drill holes are deemed appropriate to evaluate the resource.
Sample security	The measures taken to ensure sample security.	All samples are historical, and details of the measures to ensure sample security are not reported.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	Details of any audits or reviews of sample techniques and are not reported. Sampling techniques are not reported so no new audits could be performed.



## Section 2 Reporting of Exploration Results

Criteria in this section apply to all succeeding sections

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including <b>agreements</b> or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	The Superbird Lithium Project is located approx. 48km west of Magnolia, Arkansas within Lafayette and Miller Counties. The land position consists of 12,103 acres of mineral claims for brine with a further 9,000 acres of mineral claims for brine currently in negotiation. The mineral claims sit within a 50,000 acre Exclusive Abstract Area in which Pantera Minerals Ltd. has sole rights to negotiate acquisition of brine mineral claims.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Surface land rights are still held by the land-owners. Previous exploration in the project area was mostly for oil and gas. Exploration started in May 1957 by J W Operating Company Gas and has continued until recently in 2011. There are three active oil/condensate producers in the northwest and southwest corners of the map area operated by Days Creek Operating Company, Lorentz Oil and Gas, and Sabre Operating.
		ExxonMobil/Saltwerx LLC and Standard Lithium Ltd. have lithium lease areas just to the east and northeast of the Pantera Minerals Ltd. Exclusive Abstract Area. Exxon/Saltwerx recently drilled 3 lithium brine wells on their lease and intend to build a large lithium brine processing facility to put these wells on production. Standard Lithium has seven lithium brine tested wells on their leases and just completed a Preliminary Feasibility Study in the third quarter of 2023. They intend to begin construction in 2025 and start production in 2027.
Geology	Deposit type, geological setting and style of mineralisation.	The carbonate dominated Smackover Formation was deposited in the Late Jurassic period within incipient rift structures of the Gulf of Mexico Basin. The varied subsidence history of the basin along with halokinetic deformation of the underlying Louann Salt Formation has produced a variety of structural reservoir traps historically exploited for oil and gas resources. Brine saturation in the reservoir is not interpreted to be sensitive to structural variability in the reservoir, unlike oil and gas. The depositional history of the Smackover Formation in East Texas involved the accumulation of sediments in a carbonate ramp wedge within shallow marine environment with varying degrees of energy conditions. Historically, oil and gas reservoirs have been targeted out of the Upper Smackover Formation within ooid grainstones of the higher energy ramp shoal facies particularly where pervasive dolomitization has enhanced porosity and permeabilities in these units. The mineralisation is a lithium rich brine contained within the porous Smackover Formation ooid grainstones.
Drillhole Information	A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes:	The document is only intended to provide a summary of past exploration activity and identify principal targets. Locations of key water analysis wells are highlighted on various maps. Locations and details of Smackover Formation penetration and completion wells come from



Criteria	JORC Code explanation	Commentary
	easting and northing of the drillhole collar elevation or RL (elevation above sea level in metres) of the drillhole collar dip and azimuth of the hole down hole length and interception depth hole length.	the online Well Finder   Well Database public database.
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.	No maximum and/or minimum grade truncations have been used. Based on professional judgement, some samples within the project area were omitted from the water sample database because it was interpreted that they were cross contaminated with sources of fresh water and not representative of the true brine grade.
Relationship between mineralisation widths and intercept lengths	If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').	The Smackover Formation gently dips southward in the project area at 1.8 degrees. The historical wells intersecting the formation are predominantly vertical which is deemed appropriate for a deposit of this nature.
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	Diagrams are supplied in the main report.
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	This report relied on historical data collected by others. All data provided and available to the CP's for this work is reported in the main report.
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples - size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	Daytona Lithium Ltd. has not completed any on-ground exploration work on the Exclusive Abstract Area and is relying on exploration data completed by previous lease holders within the area. Exploration work done to date has largely been of a preliminary or reconnaissance nature. Further work to define the reservoir and brine concentration on the lease area is suggested to establish a Mineral Resource estimate.
Further work	The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).	Seismic data acquisition is recommended to fill in and confirm and define reservoir depth and thickness values over the lands and remaining project area. Additional water sampling is also recommended to confirm Lithium concentrations on lands. Additional geophysical logging, coring and/or production testing should be undertaken to confirm the porosity and permeability of the reservoir.