

17 June 2019

#### **ASX ANNOUNCEMENT**

**ASX: ASN** 

#### **Anson Estimates Maiden JORC Mineral Resource**

### **Highlights:**

- Maiden Mineral Resource in Inferred and Indicated Categories:
  - o 118,000t of contained Lithium Carbonate (Li<sub>2</sub>CO<sub>3</sub>)
  - 427,000t of contained Bromine
  - 21,400t of contained lodine
  - 304,000t of contained Boric Acid (H₃BO₃)
- Scope for Resource upgrade with additional drilling in the project claims:
  - Plan of Operation (POO) being completed
- Resource takes no account of re-charge to the Clastic Zone 31
- Resource takes no account of additional Clastic Zones 17, 19, 29 & 33
- Resource estimate forms a solid platform to advance a Scoping Study and to highlight mine-life estimates

Anson Resources Limited (Anson) is pleased to announce the maiden JORC Code (2012) compliant Mineral Resource estimate for its Paradox Brine Project, located in Utah, USA.

The Mineral Resource indicates 118,264 tonnes of contained lithium carbonate and has been calculated solely within the brine aquifer of Clastic Zone 31 from the Project area.

A summary table of JORC Compliant Mineral Resource Estimate is presented below in Table 1. Significant amounts of other minerals including Bromine (Br<sub>2</sub>), Boron (Boric Acid, H<sub>3</sub>BO<sub>3</sub>) and Iodine (I<sub>2</sub>) have also been estimated.

Category	Brine	Li	В	Br	I	Porosity		Contair	ned (t) <sup>1</sup>	
	Tonnes	(ppm)	(ppm)	(ppm)	(ppm)	(%)	Li <sub>2</sub> CO <sub>3</sub>	H <sub>3</sub> BO <sub>3</sub>	Br <sub>2</sub>	l <sub>2</sub>
Indicated	13,872,000	217	178	4,551	154	21.0	15,968	14,110	63,095	2,138
Inferred	114,696,000	168	443	3,172	168	20.8	102,296	290,333	363,757	19,262
TOTAL	128,568,000	173	414	3,321	166.5	20.8	118,264	304,443	426,852	21,400

Table 1: Paradox Brine Project maiden JORC Resource.

<sup>&</sup>lt;sup>1</sup> Lithium is converted to lithium carbonate (Li<sub>2</sub>CO<sub>3</sub>) using a conversion factor of 5.32 and boron is converted to boric acid (H<sub>3</sub>BO<sub>3</sub>) using a conversion factor of 5.72.



Figure 1 shows the Resource classification over the Project area.

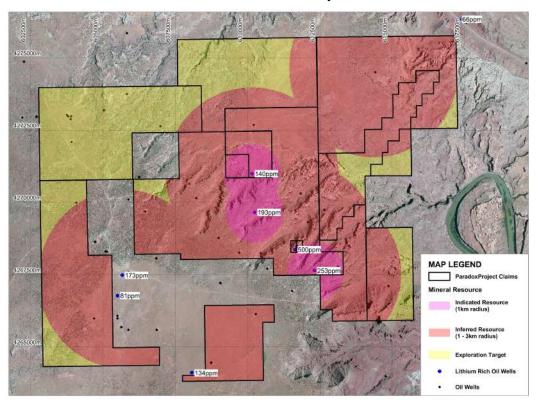


Figure 1: Plan showing the Resource classification.

Figure 2 shows the Project area and recorded lithium grades.

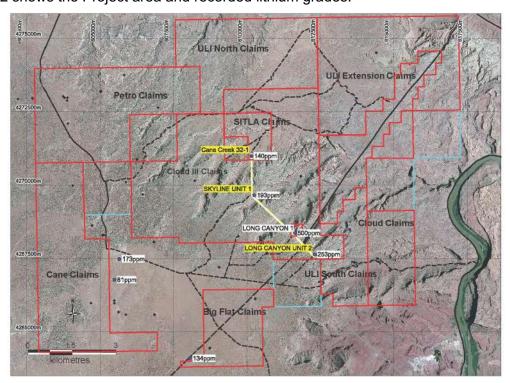


Figure 2: Plan showing the Project Claims and nearby lithium rich wells.



#### **Exploration Target for Clastic Zone 31:**

In addition to the maiden Mineral Resource, an exploration target of a further 30 - 46 million tonnes of brine grading in the range of 150 mg/L to 300 mg/L lithium has been estimated for Clastic Zone 31. The Exploration Target occurs within the project's placer claims totalling 11,373 hectares, see Figure 1.

Clarification Statement: An Exploration Target is not a Mineral Resource. The potential quantity and grade of an Exploration Target is conceptual in nature. A Mineral Resource has been identified in the centre of the Exploration Target, but there has been insufficient exploration to estimate any extension to the Mineral Resource and it is uncertain if further exploration will result in the estimation of an additional Mineral Resource.

#### **Next Steps:**

The following hydrogeological works are planned with respect to brine aguifer investigations:

- Well pumping tests to determine the dynamic hydrogeological properties of the brine aquifer; and
- Monitoring aquifer characteristics and drawdown to provide more information on geological and hydrogeological properties of the clastic zone aquifer.

#### **Project Background:**

The Paradox Brine Project is located within a mature oil and gas district with brines with historically high published concentrations of lithium. The Paradox Formation, host to these brines, is a Pennsylvanian aged evaporite sequence deposited during multiple transgressive/regressive cycles. Following deposition, the basin was subject to structural alteration due to the further basin development. Deep structures which developed in this time, such as the Roberts Rupture which strikes to the north-east through the claims, potentially create a conduit for rising heated fluids. The Paradox Formation presents the factors required for genesis of a brine hosted lithium deposit.

The geologic model for the Paradox Basin brine aquifers has similar affinities to brine concentrations in Tertiary aged closed evaporative basins, as well as those associated with brine aquifer hosted in older Carboniferous and Palaeozoic sediments and commonly associated with hydrocarbon deposits.

Regardless of deposit age and other mineral associations, the formation of lithium rich bearing saline brines have several common primary characteristics (Bradley et al., 2013):

- An arid climate;
- A closed basin with an evaporative centre (playa/salar);
- Tectonically driven subsidence;
- Heat flow, generally associated with igneous or geothermal activity;
- Contact with lithium source rocks:
- Presence of one or more groundwater aquifers through which fluid can circulate; and
- Sufficient time to concentrate salt minerals within the groundwater for creation of a brine fluid.

Historical data for the Paradox Brine Project area is more robust than many lithium exploration targets due to the Paradox Basin's long history of oil and gas production. Numerous well records and geophysical logs are readily available for the Project area. Furthermore, there is published historical data on the chemistry of brine fluids from a variety of horizons within the Paradox Formation, allowing for more precise targeting of prospective geologic horizons.



However, historical assay data must be treated with caution as no original data records are available, and the first publication of this data is generally second hand.

Anson has re-entered 4 historic oil wells to depths of up to 6,500 feet in the Paradox Brine Project area. The wells have an average spacing of 1.6km (ranging between 1.3km and 3.0km). The bores have delineated an aquifer containing hyper-saline brine with total dissolved salts (TDS) ranging between 350,000 mg/L and 410,000 mg/L; the brine is enriched with respect to lithium. Weighted mean average lithium concentrations range between 100 mg/L and 250 mg/L, with a maximum (recent) recorded concentration of 253 mg/L.

The sampling of the supersaturated brines from the clastic zones of the Paradox Formation yielded concentrations up to 253 ppm lithium and 5,041 ppm bromine.

The Mineral Resource is a static estimate; it represents the volume of potentially recoverable brine that is contained within the defined aquifer. It takes no account of modifying factors such as the design of a borefield (or other pumping scheme), which will affect both the proportion of the Mineral Resource that is ultimately recovered and changes in grade associated with mixing between aquifer units and the surrounding geology, which will occur once pumping starts. The Mineral Resource also takes no account of recharge to the aquifer, which is a modifying factor that may increase brine-recovery from this unit and may affect long-term grade.

#### Appendix A:

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The following information and tables are provided to ensure compliance with the JORC Code (2012) requirements for the reporting of Exploration Results and Mineral Resources for the Paradox Brine Project. Please also refer to JORC Tables 1, 2 and 3 below.

#### **Geology and geological interpretation**

The brine bearing unit, clastic zone 31 (CZ31), has been interpreted from more than 100 oil and gas wells drilled throughout the Anson claims and the greater Paradox Basin. The lithological units have been correlated within the basin based on the drilling and are predictable over the whole basin. Twenty-eight wells (refer table 4) were used to interpret the depth and thickness of CZ31 within the Anson claims.

The main brine zone (Clastic Zone 31) in the project area has not been cored, but it has been adequately sampled and logged. There are four inter-bedded hydrogeological units within the clastic horizon from top to bottom:

- Anhydite;
- Black Shale;
- Dolomite; and
- Anhydrite.

The dolomite is quite porous and permeable, whereas the anhydrite and black shale is crushed and broken. Usually the fractures are filled with salt, but where brine is present no salt filling occurs. The high flow rates from the two tested wells confirm this theory.

In the White Cloud No. 2 well, which offsets the Long Canyon No. 1 well, brine started to flow when the top anhydrite was penetrated, and rapidly increased by the time the underlying black shale was penetrated, so that no further drilling was done. The dolomite zone was not drilled. Vertical porosity, permeability, and communication are indicated. Brine flows have been encountered in Clastic Zone 31 over a distance of six miles north-south and eight miles eastwest.



Previously the brine aquifer had been interpreted/limited to the dolomitic sands with known porosity and excluded the potential for brine fluids within the anhydrite and shale lithologies. Spinner-flowmeter logging completed in Long Canyon Unit 2 and Skyline Unit 1 suggests that these units produce brine fluids from secondary porosity, and that the brine aquifer within Clastic Zone 31 has dual porosity based on both lithology and secondary porosity from fracture flow. Therefore, the extent of the brine aquifer has been extended to include the entirety of the clastic zone for the purposes of exploration targeting and resource estimation.

#### Brine Aquifer Hydraulic Properties

Porosity (or total porosity) is the amount of open space between mineral grains and/or fractures. Certain geophysical logs can be utilized to estimate total porosity with significant accuracy. Anson had previously analysed a small subset of these logs from wells within the project area to estimate porosity of the dolomite in Clastic Zone 31. Utilizing a combination of neutron density logs and sonic logs total porosity was estimated for three wells as shown in Table 2. This estimate of total porosity matches well with published general ranges for this type of sedimentary rock (Manger, 1963).

Well ID	CZ 31 Thickness	Log Type	Total Porosity Measurement
Long Canyon No. 1	1.5	Sonic	24.2%
Matthew Fed-1	0.9	Neutron density	20.0%
Matthew Fed-2	1.1	Neutron density	18.5%
Average Total Porc	osity	20.9%	

Table 2: The interpreted porosities from down hole logs for Clastic Zone 31 within the Project area.

Spinner-flowmeter logging completed in Skyline Unit 1 and Long Canyon Unit 2 suggest that these units also produce brine fluids from a secondary porosity, and that the brine aquifer within Clastic Zone 31 has dual porosity based on both lithology and secondary porosity from fracture flow. Figure 3 shows the interpretation of a spinner flowmeter test completed across Clastic Zone 31 in Long Canyon Unit 2.

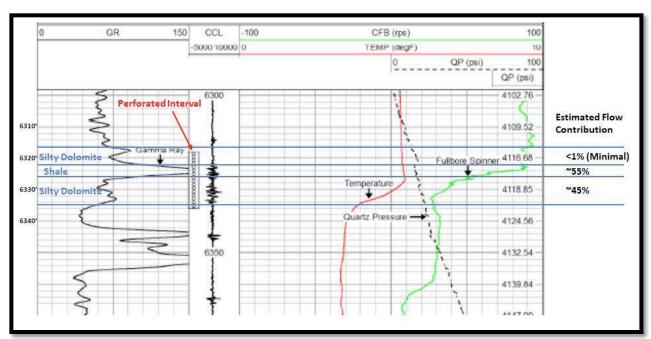


Figure 3: Spinner flowmeter log across perforated CZ 31 in Long Canyon Unit 2, with interpretations

The spinner-flowmeter log indicates there is significant brine production from both the silty dolomite and shale lithologies in Clastic Zone 31 of Long Canyon Unit 2. Lithological thickness



vs. flow contribution suggests that the shale has a higher transmissivity than the silty dolomite, which based on known textural differences, suggests significant secondary porosity (fracturing) within the shale. Without secondary porosity from fracturing, the common range of effective porosity for shale ranges from 0.5 to 5% (Driscoll 1986), which would have a corresponding limit on the transmissivity of the lithology. The lack of brine production contribution in the upper silty dolomite is likely due to poorly developed perforations or backpressure on the system limiting the brine flow discharge rate within upper zones of lower transmissivity.

During the re-entry and the development of the perforated intervals within Skyline Unit 1 and Long Canyon Unit 2 wells, Anson completed build-up tests to estimate production interval permeability. Build-up tests consisted of a short period of measured flow, followed by an immediate shut-in of flow at the well head and measurement of the pressure recovery. See Table 3. The data was analysed to determine the permeability of the formation (Horner plot, see Figure 4).

Well ID	Initial Bottom Hole Pressure (psi)	Period of Flow (min)	Flow Rate (BWPD)	Flow Rate (gpm)	Permeability (md)
Long Canyon Unit 2	5,209.5	70	2,201	64.2	1,698
Skyline Unit 2	5,240.0	45	4,096	119.5	6,543

Table 3: Permeabilities determined from build-up testing from CZ 31 production.

In general, permeability increases with increasing effective porosity and decreases with increasing pressure. However, secondary porosity in the form of fracturing increases the bulk permeability of a geologic unit, as well as increasing its sensitivity to effective pressure.

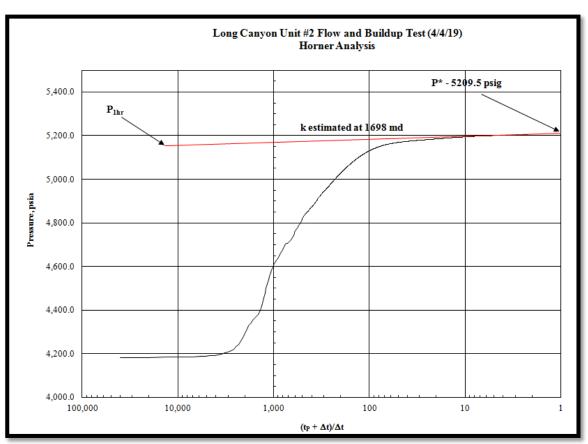


Figure 4: A plot of the Horner Analysis of the flow and build up test for Long Canyon No 2 well.



The locations of the historical oil wells from which the geophysical logs were obtained to calculate the volume of the Clastic Zone 31 brine horizons are shown in Figure 2 and the coordinates of the wells located within the project area are shown in Table 4.

Well Name	Co-Ordina	tes (UTM)	Depth	Company Name	Well
	Northing	Easting	(ft)		Status
Skyline Unit 1	4269654	610245	7670	Davis Oil Company	P&A
Long Canyon Unit 2	4267637	612308	7691	Southern Natural Gas Co.	P&A
Cane Creek 32-1-25-20	4270986	610154	11405	WESCO	Р
Gold Bar Unit 2	4274508	614414	9682	Davis Oil Company	P&A
Long Canyon No. 1	4268364	611636	8132	WESCO	Р
Big Flat No 2	4267478	605659	8061	King Oil	P&A
Big Flat No 2 (Pure Oil)	4266772	605490	7810	Pure Oil	P&A
Hobson USA 1	4264099	608069	6674	Pure Oil	P&A
Utah 2	4276336	617325	9424	Delhi-Taylor Oil Corp.	P&A
Matthew Federal 1	4269310	612087	6946	Davis Oil Company	P&A
Matthew Federal 2	4270303	611836	7253	Davis Oil Company	P&A
Coors USA 1-10LC	4267776	613129	8550	Coors Energy	P&A
Big Flat Unit 7	4270148	608230	7796	Calvert Exploration Co.	P&A
Sunburst 1	4,265,978	604,689	8242	Energy Reserves	P&A
Mineral Canyon Fed 1-3	4,269,985	604,073	8190	EP Operating	P&A
Big Rock Fed 1	4,273,747	605,821	8875	General Crude	P&A
Fed Bartlett Flat 10-27	4,273,027	603,745			P&A
Big Flat Unit 5	4,272,980	603,792	7230	Union Oil	P&A
Big Flat Unit 6	4,272,980	603,893	7315	Calvert Expl	P&A
White Cloud 1	4267097	614879	5637	Moab Oil Co.	P&A
Gold Bar Unit 1	4272680	610212	8082	Davis Oil Company	P&A
Cane Creek Unit 17-1	4266120	610287	11602	WESCO	Р
Cane Creek Unit 18-1	4267203	609052	9272	WESCO	Р
Cane Creek Unit 17-2	4,266,132	610,287	11620	WESCO	Р
Kane Springs 19-1A	4,264,451	608,734	6674	WESCO	Р
ane Springs Fed 25-19-34-1	4,272,091	603,907	7988	WESCO	Р
Kane Springs Fed 27-1	4,272,879	603,878	7374	WESCO	Р
Cane Creek Unit #26-2	4,273,183	605,024	8685	WESCO	Р

Table 4: Historic drill holes within or close to the Paradox Brine Project area.



The super-saturated brines, typically with a high density (1.25 - 1.30 g/cm<sup>3</sup>) have been intersected throughout the clastic zones of the Paradox Basin. Analytical results for lithium to date have been highest (up to 253ppm lithium) in the central to southern area of the project. The chemistry of the brines sampled in the exploration programs are shown in Table 5 and lithium concentrations of adjacent wells are shown in Table 6.

#### Sampling and sub-sampling techniques

#### **Drilling techniques**

#### Criteria used for classification

	<u>Sampling</u>	and s	ub-san	npling	tech	niques								
	assay res naturally. logs. Follo the interval intervals v produced totes. San	Anson has re-entered and sampled four wells within the claim area. Table 5 summarises the assay results from the brine analysis. The brine is under pressure so flows to the surface naturally. The Clastic Zone 31 interval was located through previous down hole geophysical logs. Following perforation of the interval to be sampled, a mechanical packer was set below the interval to isolate the brine produced and prevent comingling of a sample. The open intervals were then developed by swabbing resulting in a free flowing brine. The brine produced was collected in approximately 1,000 litre (L) clean, high density polyethylene (HDP) totes. Samples were collected into clean polyethylene bottles, labelled and packaged on site for shipment to analytical laboratories.												
	Drilling te		•	11 1000	ratori									
	No drilling	No drilling was conducted as part of the sample collection. Previously drilled holes targeting different oil and gas producing horizons were utilised to access and sample Clastic Zone 31.												
	<u>Criteria u</u>	sed fo	r class	ificati	<u>on</u>									
	flowing br resources extend to within the the US Ge lack of sa higher co	Anson has re-entered four holes (table 5) and collected samples for analytical test-work. These holes were used as the basis for indicated resources. The wells have produced free flowing brine and the samples have been analysed for elements of interest. The indicated resources were estimated within a 1km radius of the re-entered holes. Inferred resources extend to a 3km radius. In addition to the four holes (table 6) intersecting Clastic Zone 31 within the Anson claims there have also been other wells sampled by previous operators and the US Geological Survey. The samples have been used to estimate Inferred resources. The lack of sample and assay information precludes them being used to estimate resources of higher confidence. They have been used to estimate inferred resources based on the continuity of brine mineralisation with Clastic Zone 31 backed up by Anson's well re-entry test-work							ed es 31 nd ne of ne					
	Well	Li	Br	В	ı	Mg	Ca	K	Na	Fe	CI	SO <sub>4</sub>	TDS	рН
<u>a</u> 5	Gold Bar Unit 2	21	680	96		22,800	29,000	19,000	13,000		211,073	384	370,099	
	Cane Creek 32-1	102	5,041	65.3	97	27,900	37,300	23,400	9,810	140	260,000	113	364,500	4.96
	Skyline Unit 1	179	3,273	1,926	NA	31,810	39,577	24,861	20,402	205	232,063	115	356,303	4.81
	Long Canyon No. 2	200.2	3,978	1,387	NA	41,625	50,300	27,906	17,509	248	257,186	61.7	403,246	4.64
Table 5: The brine chemistry of the samples collected during the Re-entry drill programs.														
Sample analysis method														
Samples taken by Anson from the four re-entry wells were assayed for a series of elements utilising different methodologies at different laboratories. SGS utilized EPA 6010B (ICP-AES)														

Table 5: The brine chemistry of the samples collected during the Re-entry drill programs.

#### Sample analysis method

Samples taken by Anson from the four re-entry wells were assayed for a series of elements utilising different methodologies at different laboratories. SGS utilized EPA 6010B (ICP-AES) for analysis of cations, and a variety of standard methods for analysis of anions. completed density analysis and anions by ion chromatography (EPA Method 300.0) for bromide, chloride, fluoride, and sulphate. WETLAB then subcontracted out the analysis for bromine (via Schoniger Combustion) to Midwest Microlab of Indianapolis, Indiana, and total metals by inductively coupled plasma - atomic emission spectrometry (ICP-AES) (EPA



Method 200.7) for lithium, boron, and magnesium were subcontracted to Asset Laboratories of Las Vegas, Nevada.

Well	Clastic Zone	Li	Br	В	I	Mg		
ong Canyon Unit 2	31	200.2	3,978	1,387	NA	41,625		
Skyline Unit 1	31	179	3,273	1,926	NA	31,810		
ong Canyon No. 1	31	500	6,100	N/A	300	21,000		
Cane Creek 32-1	31	102	5,041	65.3	97	27,900		
Gold Bar Unit 2	31	21	680	96		22,800		
Big Flat No 2	31	173	1,150	2,922	NA	47,789		
Hobsons USA 1	31	134	1,612	1,260	NA	31,350		
Big Flat Unit 2	31	81	2,041	780	NA	33,100		
	Table 6: Lithium cond	entrations of c	drill holes in t	he Project are	a.			
Additionally, so that the c	to the analysis and can further work is required hemistry effects of chang	to characteri	ze the in-sit	u paramete	rs of the bri	ne fluids		
	<u>methodology</u>							
and maximuestimation. A were inform	Grades were estimated by inverse distance squared grade interpolation. A minimum of one and maximum of three wells were used for the estimation. No top cuts were applied to the estimation. A maximum search distance of 11km was used to ensure all blocks in the model were informed with grades, porosity and brine density. A search box was used to eliminate the edge effects of using a search ellipse.							
Cut-off grad	Cut-off grade							
No cut-off g	rades have been applied	to the resour	rce reporting	g.				
Mining and	metallurgical methods	ı						
The resourc	Mining and metallurgical methods  No mining of metallurgical assumptions or factors have been used in estimating the resource. The resource is reported as an in-situ, contained metal resource. No assumptions have been made regarding effective or drainable porosity. While high permeabilities were recorded during well testing addition test-work is required to establish effective yield of the Clastic Zone 31 unit.							

Table 6: Lithium concentrations of drill holes in the Project area.

#### **Estimation methodology**

#### **Cut-off grade**

#### Mining and metallurgical methods



#### References

Mayhew, E., Heylman, E., <u>Concentrated Sub-surface Brines in the Moab Region</u>, Utah Geol. and Min. Survey, Special Study no. 13, 1965

Massoth, T., Well Database and Maps of Salt Cycles and Potash Zones of the Paradox Basin, Utah, Utah Geological Survey, Open File Report 600, 2012

Manger, G.E., <u>Porosity and Bulk Density of Sedimentary Rocks</u>, USGC Bulletin 1144-E, 1963

#### **ENDS**

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**Forward Looking Statements:** Statements regarding plans with respect to Anson's mineral projects are forward looking statements. There can be no assurance that Anson's plans for development of its projects will proceed as expected and there can be no assurance that Anson will be able to confirm the presence of mineral deposits, that mineralisation may prove to be economic or that a project will be developed.

Competent Person's Statement 1: The information in this announcement that relates to exploration results and geology is based on information compiled and/or reviewed by Mr Greg Knox, a member in good standing of the Australasian Institute of Mining and Metallurgy. Mr Knox is a geologist who has sufficient experience which is relevant to the style of mineralisation under consideration and to the activity being undertaken to qualify as a "Competent Person", as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves and consents to the inclusion in this report of the matters based on information in the form and context in which they appear. Mr Knox is a director of Anson and a consultant to Anson.

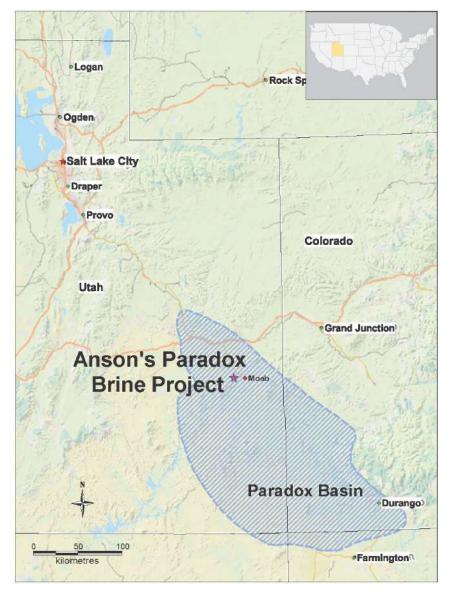
Competent Person's Statement 2: The information contained in this ASX release relating to Exploration Results and Mineral Resource Estimates has been prepared by Mr Richard Maddocks, MSc in Mineral Economics, BSc in Geology and Grad Dip in Applied Finance. Mr Maddocks is a Fellow of the Australasian Institute of Mining and Metallurgy with over 30 years of experience. Mr Maddocks 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 Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.

Mr Maddocks is an independent consultant to Auralia Mining Consulting Pty Ltd. Mr Maddocks consents to the inclusion in this announcement of this information in the form and context in which it appears. The information in this announcement is an accurate representation of the available data from exploration at the Paradox Brine Project.



#### **About the Utah Lithium Project**

Anson is targeting lithium rich brines in the deepest part of the Paradox Basin in close proximity to Moab, Utah. The location of Anson's claims within the Paradox Basin is shown below:





### **Section 1 Sampling Techniques and Data**

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (eg 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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg '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 (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>Long Canyon Historic Wells (mentioned in report)</li> <li>Mud Rotary (historic oil well).</li> <li>Chip cuttings were collected on continuous 10 feet intervals. and cuttings were stored at the USGS Core Research facility.</li> <li>Historically, brines were sampled only when flowed to surface.</li> <li>Samples were collected in a professional manner.</li> <li>Re-Entries</li> <li>Mud Rotary (historic oil well).</li> <li>On re-entry, sampling of the supersaturated brines has been carried out.</li> <li>Samples were collected in IBC containers from which samples for assay (500ml) were collected.</li> <li>Brine from flow resting stored in 400 barrel tanks for future use.</li> </ul>
Drilling techniques	<ul> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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).</li> </ul>	<ul> <li>Mud Rotary Drilling (18 ½" roller bit).</li> <li>4-5/8" 3 Way drag bit used for re-entry.</li> <li>Brine was used as a drilling fluid.</li> </ul>
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	<ul> <li>Long Canyon Historic Wells</li> <li>Not all wells were cored, but cuttings were collected.</li> <li>Cuttings were recovered from mud returns.</li> <li>Re-Entries</li> <li>Sampling of the targeted horizons was carried out at the depths interpreted from the newly completed geophysical logs.</li> <li>Clastic Zones 17, 19, 29, 31 and 33 sampled.</li> </ul>



Criteria	JORC Code Explanation	Commentary
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.	<ul> <li>Long Canyon Historic Wells</li> <li>All cuttings from the historic oil wells were geologically logged in the field.</li> </ul>
	<ul> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>Geological logging is qualitative in nature.</li> <li>All the drillhole were logged.</li> </ul>
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled,</li> </ul>	<ul> <li>Long Canyon Historic Wells</li> <li>Sample size and quality were considered appropriate by operators/labs.</li> <li>Re-Entries</li> <li>Sampling followed the protocols produced by SRK for lithium brine sampling.</li> <li>Samples were collected in IBC containers and samples taken from them.</li> <li>Duplicate samples kept Storage samples were also collected and securely stored.</li> <li>Bulk samples were also collected for future use.</li> <li>Sample sizes were appropriate for the program being completed.</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>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.</li> </ul>	<ul> <li>Long Canyon Historic Wells</li> <li>Assaying was carried out by US laboratories.</li> <li>Quality and assay procedures are considered appropriate.</li> <li>Re-Entries</li> <li>The assays were carried out in certified laboratories in the USA which have experience in oil field brines.</li> <li>Geophysical surveys carried out by Production Logging Services</li> <li>Geophysical data interpretation carried out by HPE.</li> <li>A series of static and flowing spinner/pressure/temperature/gammaray/CCL/pseudo density logs were run.</li> </ul>



Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.         Discuss any adjustment to assay data.     </li> </ul>	<ul> <li>Long Canyon Historic Wells</li> <li>Assays are recorded in Concentrated Subsurface Brines UGS Special Publication 13, printed in 1965.</li> <li>Re-Entries</li> <li>Documentation has been recorded and sampling protocols followed.</li> </ul>
Location of data points	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>Long Canyon Wells and Re-Entry wells</li> <li>Locations surveyed using hand held GPS.</li> <li>The grid system is NAD 83, UTM Zone 12.</li> <li>The project is at an early stage and information is insufficient at this stage in regards to sample spacing and distribution.</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>Data spacing is considered acceptable for a brine sample but has not been used in any Resource calculations.</li> <li>No sample compositing has occurred.</li> </ul>
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	<ul> <li>All drill holes were drilled vertically (dip -90).</li> <li>The lithium bearing brines are sub-horizontal</li> <li>Orientation has not biased the sampling.</li> </ul>



Criteria	JORC Code explanation	Commentary
Sample security	The measures taken to ensure sample security.	<ul> <li>Re-Entries</li> <li>Cuttings were obtained from USGS Core Research facility.</li> <li>Sampling protocols were followed and chain of custody recorded.</li> <li>Samples were transported to the laboratory in sealed rigid plastic bottles with sample numbers clearly identified. Each sample interval was sealed in a plastic bag and they were shipped in a sealed cooler.</li> <li>All samples were moved from the drill site to secure storage on a daily basis.</li> </ul>
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	<ul> <li>Long Canyon Wells</li> <li>No audits or reviews of the data have been conducted at this stage.</li> </ul>

### **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	<ul> <li>Type, reference name/number, location and ownership including agreements 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.</li> <li>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.</li> </ul>	<ul> <li>Long Canyon Wells</li> <li>The wells were located on oil and gas leases, held by multiple oil companies.</li> <li>The project consists of 1317 placer claims in Utah.</li> <li>All claims are in good standing.</li> </ul>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>Past exploration in the region was for oil exploration.</li> <li>Brine analysis only carried out where flowed to surface during oil drilling.</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>Oil was targeted within clastic layers (mainly Clastic Zone 43)</li> <li>Lithium is being targeted within the clastic layers in the Paradox Formation.</li> </ul>



Criteria	JORC Code explanation	Commentary
Drill hole Information	<ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:         <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> </ul>	See Table 4, 5 and 6 in text.
	• If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	No weighting or cut-off grades have been applied.
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>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').</li> </ul>	<ul> <li>Brines are collected and sampled over the entire perforated width of Clastic Zone 31.</li> <li>Drill hole angle (-90) does not affect the true width of the brine.</li> </ul>



Criteria	JORC Code explanation	Commentary
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.	<ul> <li>No new discoveries have occurred, all are historic results from the 1960's.</li> <li>Plans are shown in the text.</li> </ul>
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.	<ul> <li>Reporting of additional results, which are all historic, in the area is not practical as the claims are owned by numerous companies.</li> <li>Exploration is at an early stage.</li> </ul>
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.	<ul> <li>Metallurgical testwork on the brine is continuing to better understand the brine geochemistry.</li> <li>Additional test-work is required to establish additional resources through well re-entry and production capacity.</li> </ul>
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>Historic oil wells and no future work is to be carried out as claim owned by multiple oil companies.</li> <li>Further work is required which includes exploration programs such as further core drilling and hydrogeological studies.</li> </ul>
Audits or reviews	The results of any audits or reviews of exploration results.	•



### **Section 3 Estimation and Reporting of Mineral Resource**

(Criteria listed in section 1 and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	<ul> <li>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</li> <li>Data validation procedures used</li> </ul>	Data has been verified by company personnel.  Historic data used in the estimation has been sourced from Utah Geological Survey publications.
Site visits	<ul> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	The competent person has not visited site.  Other consultants who have provided data and information for the estimate were on-site to supervise the well re-entry, sampling and assaying procedures.
Geological interpretation	<ul> <li>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both of grade and geology.</li> </ul>	<ul> <li>The geological interpretation, location and depth of the brine bearing unit is very well known and documented through the drilling of hundreds of oil and gas wells over the past century.</li> <li>The Paradox Basin is a large, deep basin containing thousands of metres of sediments containing various levels of oil, gas and brine. The sedimentary layers have been correlated over most, if not all, of the basin. This enables an accurate assessment of the position of the brine unit Clastic Zone 31.</li> </ul>
Dimensions	The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	<ul> <li>The brine bearing unit is encountered at depth over the entire Anson claim area.</li> <li>Available data indicates that the unit contains brine throughout its extent within the Anson claims.</li> <li>The Anson claims cover an area of about 10km x 10km and this entire area has been covered by the estimation.</li> <li>Within the claim area the brine unit (Clastic Zone 31) is found at vertical depths of between 1550m to 2166m below surface.</li> <li>The producing unit averages 6m in thickness.</li> </ul>



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Criteria	JORC Code explanation	Commentary
Estimation and modelling techniques	<ul> <li>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</li> <li>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li> <li>The assumptions made regarding recovery of by-products. Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).</li> <li>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li> <li>Any assumptions behind modelling of selective mining units.</li> <li>Any assumptions about correlation between variables.</li> <li>Description of how the geological interpretation was used to control the resource estimates.</li> <li>Discussion of basis for using or not using grade cutting or capping.</li> <li>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</li> </ul>	<ul> <li>The brine grades were modelled using inverse distance squared grade interpolation.</li> <li>A single composite for the producing unit in each well was used to estimate grades.</li> <li>Lithium, Bromine, lodine, porosity and brine density were all modelled.</li> <li>A search box was used to eliminate the edge effect of using a search ellipse. The search box was 8000m x 8000m to ensure all the project area was covered.</li> <li>Minimum samples used in the estimation was 1 and the maximum was 3.</li> <li>A total of 202 wells were used to determine the depth and thickness of the brine producing unit. Lithium grades are available for a total of 8 wells, some of which are outside the Anson claims; their grades were interpolated into the Anson claims.</li> <li>Bromine data was from 7 wells and lodine from 4. There were 4 density and 3 porosity measurements.</li> <li>The parent block size used was 500m x 500m with sub blocks to 20m x 20m to enable adequate definition of the brine unit.</li> <li>There is correlation between variables based on the total dissolved solid (TDS) content of the brine.</li> <li>Cutting of assays was not appropriate as grade is based on the TDS levels. Mapping of brine saturation levels indicates that the Paradox Basin does contain higher levels of saturation at its deeper centre.</li> <li>One well with a high historic lithium grade of 1,700ppm was not included in the estimation as it is considered a potential outlier.</li> <li>The brine is contained within the producing unit (Clastic Zone 31). The contained brine is estimated by multiplying the volume by the porosity and then by the brine density.</li> </ul>



Criteria	JORC Code explanation	Commentary
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	<ul> <li>Tonnages are reported as in-situ, super saturated brine in liquid form.</li> <li>Density of the brine is approximately 1.2t/m³.</li> <li>Tonnages of product equivalent eg lithium carbonate are reported as dry tonnes.</li> </ul>
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	No cut-off grades were applied.
Mining factors or	Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining	Testwork on re-entering historic wells has indicated that brine can be recovered from the producing unit.
assumptions	dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	<ul> <li>To date four drill wells have been re-entered successfully with pumping tests producing mineral bearing brine.</li> <li>This resource estimate represents a contained brine figure.</li> <li>Brine production will have a yield factor applied as not all of the brine will able to be extracted from the clastic zone.</li> </ul>
Metallurgical factors or assumptions	The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	<ul> <li>No assumptions regarding the metallurgical or recoverability characteristics of the brine have been assumed in the estimation.</li> <li>However, lithium carbonate has been produced from bench top test-work from recently collected brine samples.</li> </ul>



Criteria	JORC Code explanation	Commentary
Environmental factors or assumptions	<ul> <li>Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.</li> </ul>	<ul> <li>The brine was produced from historic wells with no new drilling taking place.</li> <li>No waste products are left on site.</li> <li>No environmental assumptions were used in this estimation.</li> </ul>
Bulk density	<ul> <li>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the</li> <li>frequency of the measurements, the nature, size and representativeness of the samples.         The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.     </li> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	<ul> <li>Brine density measurements were based on samples from the pump tests carried out by Anson in 2018 and 2019.</li> <li>Data was measured in commercial laboratories.</li> <li>Total Porosity measurements were taken utilising a combination of neutron density logs and sonic logs for the three re-entry holes.</li> <li>Permeability was measured during the well re-entry. Skyline returned 6,543 md (milli darcys) and Long Canyon 1,698 md. These indicate high levels of permeability.</li> <li>Additional testwork is required to enable accurate estimates of effective or drainable porosity. This will allow for estimates of recoverable brine volumes.</li> </ul>



Criteria	JORC Code explanation	Commentary
Classification	<ul> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul> <li>The Mineral Resource estimate is reported here in compliance with the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' by the Joint Ore Reserves Committee (JORC). The resource was classified as an Indicated and Inferred Mineral Resource based on data quality, sample spacing, and lode continuity.</li> <li>The recent pump tests carried out by Anson have provided samples with a known provenance and assaying technique.</li> <li>These assays were used as the basis for the indicated resources.</li> <li>Indicated Resources are within 1km of the well.</li> <li>From 1 to 3km the resource is categorised as Inferred.</li> <li>Outside 3km the brine mineralisation is encompassed in the Exploration Target.</li> <li>The classification appropriately represents the level of confidence in the contained mineralisation and it reflects the competent persons view of the deposit.</li> </ul>
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	No audits or review of the Mineral Resource estimate has been conducted.



Criteria	JORC Code explanation	Commentary
Discussion of relative accuracy/confidence	<ul> <li>Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.</li> <li>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</li> <li>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</li> </ul>	<ul> <li>The geology and stratigraphy of the Paradox Basin is very well known.</li> <li>The brine unit the subject of this resource estimation is known to contain super saturated brine at pressure from the drilling of many oil and gas wells.</li> <li>The resource is reported as in-situ tonnes of mineralisation.</li> <li>Further testwork is required to enable recoverable volumes of brine to be estimated.</li> </ul>