

## ASX / TSX ANNOUNCEMENT

7 March 2019

### Cauchari JORC Resource increases to 4.8 million tonnes Measured + Indicated and 1.5 million tonnes Inferred LCE

Orocobre Limited (**ASX: ORE, TSX: ORL**) ("**Orocobre**" or "**the Company**") is pleased to announce that the updated resource estimate for the Cauchari JV property located in Jujuy Province, Argentina, has more than doubled from the previous resource announced in May 2018.

The exploration program is being managed by JV partner **Advantage Lithium Corp. ("Advantage Lithium")** (**TSX Venture: AAL**) (**OTCQX: AVLIF**) who hold 75% of Cauchari. Orocobre owns 33.5% of Advantage Lithium's issued capital and 25% directly in the joint venture.

#### Highlights

- Lithium Carbonate Equivalent (LCE) JORC Resources more than doubled, with 4.8 million tonnes (Mt) of Measured and Indicated and 1.5 Mt Inferred
- The Archibarca Area (NW Sector) is contiguous with the southern boundary of the Olaroz tenements and contains just above 1 Mt Measured Resources at an average lithium concentration of 564 mg/l; the Clay and Halite units (in the SE Sector) contain 2.3 Mt of Measured and Indicated Resources with an average Li concentration of 481 mg/l and the Deep Sand (SE Sector) with 0.4 Mt of Indicated resources at 500 mg/l lithium
- The result of the extended pumping tests on CAU07 in the Archibarca area and CAU11 in the SE Sector demonstrate favourable brine extractability characteristics
- The Phase III program has confirmed that Salar de Cauchari is a major brine basin with the resource open at depth below 600 m and to the south
- The brine exhibits excellent chemistry for conventional processing with the Mg/Li ratio averaging ~2.5, very similar to Orocobre's Olaroz project.

The new resource is based on the results of the Phase II and Phase III drilling programs. The update, prepared by FloSolutions SpA, has increased the resource to a volume of approximately 1,800 million cubic metres of brine at an average concentration of 476 mg/l lithium, for 4.8 Mt of LCE in the Measured and Indicated categories and approximately 600 million cubic metres of brine at an average grade of 473 mg/l lithium for 1.5 Mt of LCE in the Inferred category.

Orocobre Managing Director and CEO Mr. Martín Pérez de Solay commented, "Our Joint Venture partners, Advantage Lithium have delivered a well designed and executed resource definition program that has more than doubled the total Cauchari resource. This result provides an opportunity to reassess future development options to maximise value for shareholders".

The Joint Venture intends to submit a full technical report within 45 days of this announcement, in accordance with Canadian reporting requirements and the requirements of National Instrument 43-101 (NI 43-101) to support the conclusions presented here.

### Updated Cauchari Resource

The drilling program has expanded the resource at the Cauchari Project to 4.8 Mt of LCE of Measured and Indicated Resources contained in 1.8 km<sup>3</sup> of brine and 1.5 Mt of Inferred Resources contained in 0.6 km<sup>3</sup> of brine. The resources have been broken into six different geological units which are classified between Measured, Indicated and Inferred resources, with the classification reflecting differences in the level of available sample information. The resource estimate is presented in Table 1 below.

The key areas of the resource for future brine production are the Archibarca Fan and the SE Sector of the Project. The Archibarca Fan resource consists of 1.0 Mt of LCE as Measured Resources at 564 mg/l lithium. The Measured and Indicated Resources in the SE Sector, mostly contained in the Clay and Halite units, amount to approximately 2.3 Mt of LCE at 481 mg/l lithium. The extraction characteristics of the Archibarca Fan and SE Sector have been confirmed by the 30 day pumping tests in each area during the Phase III Program in 2018.

The brine resource is calculated over the western and eastern properties of the Cauchari project and covers an area of 117.7 km<sup>2</sup>. The brine resource in the west extends from the brine level below the surficial gravels to a depth of over 400 m and is classified as Measured in the north in the Archibarca area and Indicated further south in the West Fan, with small volumes of Inferred resources in these areas. The Measured and Indicated Resources in the east extend from the phreatic brine level to a constant depth of 400 m in the Halite and Clay units. Indicated Resources in the Deep Sand unit extend to 500 m depth. Below these depths the resource is classified as Inferred, reaching a depth of up to 619 m. The Deep Sand unit remains open at depth. None of the drill holes completed to date have intercepted bedrock (basement) and the resource remains open at depth.

**Table 1: Cauchari Project Lithium Resource Estimate; March 2019**

	Measured (M)	Indicated (I)	M+I	Inferred
<b>Aquifer volume (km<sup>3</sup>)</b>	9.7	20.9	30.7	10.7
<b>Mean specific yield</b>	6%	6%	6%	6%
<b>Brine volume (km<sup>3</sup>)</b>	0.6	1.2	1.9	0.6
<b>Li mean grade (g/m<sup>3</sup>)</b>	35	26	29	27
<b>Li mean concentration (mg/l)</b>	527	452	476	473
<b>Resource (tonnes)</b>	<b>345,000</b>	<b>550,000</b>	<b>900,000</b>	<b>290,000</b>
<b>Lithium Carbonate Equivalent</b>	<b>1,850,000</b>	<b>2,950,000</b>	<b>4,800,000</b>	<b>1,500,000</b>

Notes:

1. JORC and CIM definitions were followed for mineral resources.
2. The Qualified Person for this Mineral Resource estimate is Murray Brooker, RPGeo, MAIG.
3. Lithium is converted to lithium carbonate (Li<sub>2</sub>CO<sub>3</sub>) with a conversion factor of 5.32.
4. Numbers may not add due to rounding.

Results of the brine chemistry analysis carried out confirm the Cauchari brine is similar in composition to the brine in the adjacent Olaroz Salar from which Orocobre is successfully producing lithium carbonate using conventional lithium processing technology. Table 2 provides a summary of the Cauchari brine characteristics. There is a reasonable prospect that the Cauchari brine could be successfully processed using technology similar to the Olaroz Lithium Facility.

**Table 2: Cauchari brine chemistry characteristics**

Samples Ratio	Archibarca Fan	Clay	East Fan	Halite	Deep Sand	West Fan
Mg/Li	2.3	2.5	1.6	2.7	2.5	3.2
SO <sub>4</sub> /Li	26.2	39.7	88.7	44.3	38.1	38.4

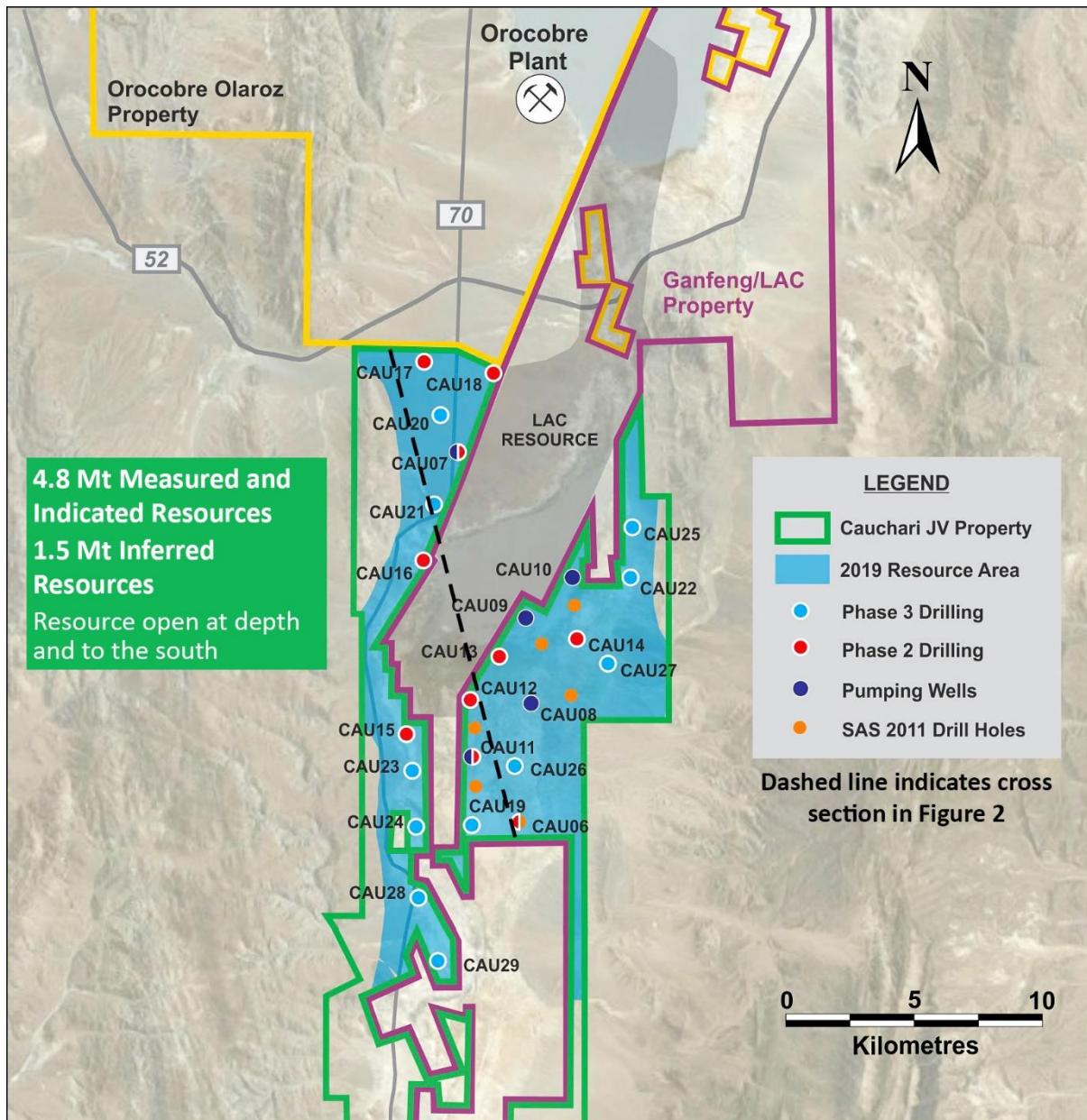
**Resource Estimation Methodology**

The updated lithium resource estimate for the Cauchari Project is based on the results of 26 diamond holes and five rotary holes drilled between 2011 and the end of 2018. Figure 1 shows a location map of the drill holes completed during the 2011 and 2017/8 drilling campaigns and Figure 2 shows a cut-away diagram of the resource area and concentrations. Brine sample collection consisted of bailed and packer samples in the diamond holes, and packer and pumped samples in the rotary holes. More than 2,000 brine samples (including more than 300 QA/QC samples) were analyzed by Norlabs (Jujuy, Argentina) as the primary laboratory and by Alex Steward Assayers (Mendoza, Argentina) and the University of Antofagasta (Chile) as secondary QA/QC laboratories. Brine was also extracted from diamond cores (centrifuge methodology) in an independent laboratory in the USA and analysed in the Norlabs laboratory to further verify and validate brine chemistry results.

HQ core was retrieved during the diamond core drilling from which more than 300 primary undisturbed samples were prepared for laboratory drainable porosity and other physical parameter determinations by Geo Systems Analysis (GSA) in Tucson, AZ. Laboratory QA/QC porosity analyses were undertaken by the DBS&A Laboratory, Core Laboratories and the British Geological Survey.

The lithium resource was estimated using SGEMs software applying ordinary kriging. The resource estimate was prepared in accordance with the guidelines of JORC and Canadian National Instrument 43-101 and uses best practice methods specific to brine resources, including a reliance on core drilling and sampling methods that yield depth-specific chemistry and drainable porosity measurements. The resource estimation was completed by independent qualified person Mr. Frits Reidel of Santiago based hydrogeology firm FloSolutions with extensive experience in the estimation of lithium brine resources in Argentina. Competent Person (CP) Mr. Murray Brooker reviewed advances during the drilling programs and during the resource estimation.

Figure 1: Location of Cauchari properties, drill holes and the resource area – dashed line indicates the cross section in Figure 2



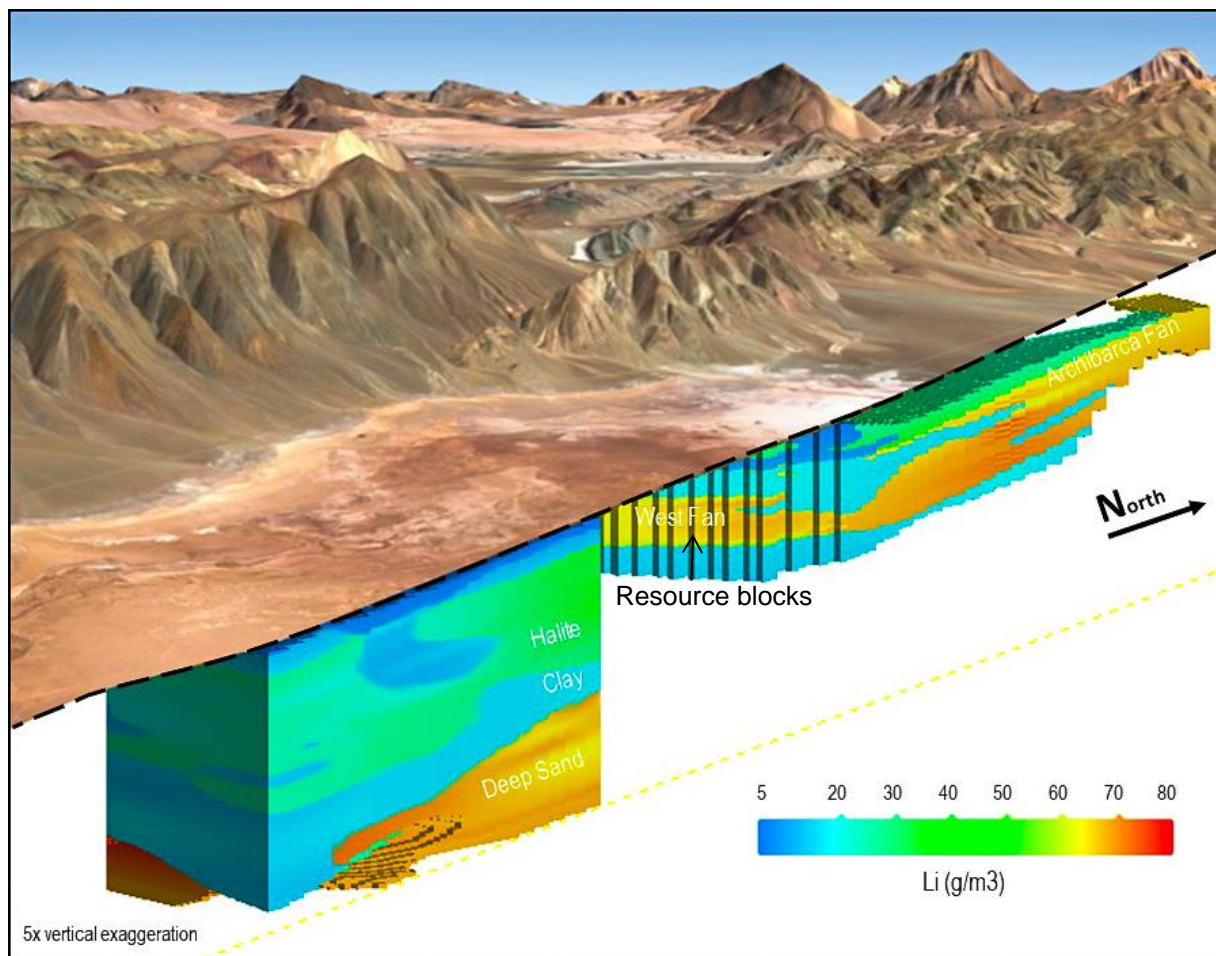
**Table 3: Location of Cauchari drill holes**

Exploration Hole Number	Coordinates Gauss Kruger Argentine*		Elevation Mean Sea Level (m) <sup>+</sup>	Total Depth (m)	Sector	Year / Phase of work	Drilling Method	Azimuth	Dip
	Easting	Northing							
CAU01D	3,425,589	7,378,259	3906	249	SE	2011	Diamond	0	-90
CAU02D	3,424,385	7,376,814	3907	189	SE	2011	Diamond	0	-90
CAU03D	3,421,874	7,373,649	3910	71.5	SE	2011	Diamond	0	-90
CAU04D	3,421,903	7,371,452	3909	46.5	SE	2011	Diamond	0	-90
CAU05D	3,425,500	7,374,882	3907	168	SE	2011	Diamond	0	-90
CAU06D	3,423,534	7,370,146	3909	506	SE	Phase II	Diamond	0	-90
CAU07R	3,421,199	7,383,985	3929	343	NW	Phase II	Rotary	0	-90
CAU08R	3,423,939	7,374,503	3908	400	SE	Phase II	Rotary	0	-90
CAU09R	3,423,783	7,377,788	3906	400	SE	Phase II	Rotary	0	-90
CAU10R	3,425,532	7,379,306	3906	429	SE	Phase II	Rotary	0	-90
CAU11R	3,421,752	7,372,569	3910	480	SE	Phase II	Rotary	0	-90
CAU12D	3,421,710	7,374,690	3908	413	SE	Phase II	Diamond	0	-90
CAU12DA	3,421,679	7,374,669	3909	609	SE	Phase III	Diamond	0	-90
CAU13D	3,422,774	7,376,298	3908	449	SE	Phase II	Diamond	0	-90
CAU13DA	3,422,747	7,376,293	3909	497	SE	Phase III	Diamond	0	-90
CAU14D	3,425,669	7,377,021	3908	600	SE	Phase II	Diamond	0	-90
CAU15D	3,419,293	7,373,397	3906	243.5	NW	Phase II	Diamond	0	-90
CAU16D	3,419,925	7,379,893	3905	321.5	NW	Phase II	Diamond	0	-90
CAU17D	3,419,965	7,387,434	3958	237.5	NW	Phase II	Diamond	0	-90
CAU18D	3,422,571	7,386,976	3925	359	NW	Phase II	Diamond	0	-90
CAU19D	3,421,819	7,369,848	3910	519.5	SE	Phase III	Diamond	0	-90
CAU20D	3,420,554	7,385,410	3945	390	NW	Phase III	Diamond	0	-90
CAU21D	3,420,311	7,382,080	3915	283	NW	Phase III	Diamond	0	-90
CAU22D	3,427,715	7,379,299	3913	418	SE	Phase III	Diamond	0	-90
CAU23D	3,419,547	7,372,053	3907	319	NW	Phase III	Diamond	0	-90
CAU24D	3,419,626	7,369,898	3905	352.5	NW	Phase III	Diamond	0	-90
CAU25D	3,427,793	7,381,272	3912	427	SE	Phase III	Diamond	0	-90
CAU26D	3,423,384	7,372,185	3910	617.2	SE	Phase III	Diamond	0	-90
CAU27D	3,426,942	7,376,023	3919	473	SE	Phase III	Diamond	0	-90
CAU28D	3,419,760	7,367,258	3918	303.5	NW	Phase III	Diamond	0	-90
CAU29D	3,420,463	7,364,858	3916	404	NW	Phase III	Diamond	0	-90

\* Coordinates are in Zone 3 of the Argentine Gauss Kruger grid system.

+ Elevation determined by surveying with DGPS equipment.

**Figure 2: Resource model looking northwest through the SE Sector and the Archibarca area (the serrated pattern represents resource blocks along the property boundary)**



**For more information please contact:**

**Andrew Barber**

Investor Relations Manager

Orocobre Limited

T: +61 7 3871 3985

M: +61 418 783 701

E: [abarber@orocobre.com](mailto:abarber@orocobre.com)

W: [www.orocobre.com.au](http://www.orocobre.com.au)



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**Qualified Person's/Competent Person's Statement**

The information in this report that relates to exploration reporting at the Cauchari JV project has been prepared by Mr. Murray Brooker. Mr. Brooker is a geologist and hydrogeologist and is a Member of the Australian Institute of Geoscientists. Mr. Brooker is an employee of Hydrominex Geoscience Pty Ltd and is independent of Orocobre. Mr. Brooker has sufficient relevant experience 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. He is also a "Qualified Person" as defined in NI 43-101. Mr. Brooker consents to the inclusion in this announcement of this information in the form and context in which it appears.

**About Orocobre Limited**

Orocobre Limited (Orocobre) is a dynamic global lithium carbonate supplier and an established producer of boron. Orocobre is dual listed on the Australia and Toronto Stock Exchanges (ASX: ORE), (TSE: ORL). Orocobre's operations include its Olaroz Lithium Facility in Northern Argentina, Borax Argentina, an established Argentine boron minerals and refined chemicals producer and a 33.5% interest in Advantage Lithium. For further information, please visit [www.orocobre.com](http://www.orocobre.com).

## JORC Table 1 – Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections)

Criteria	JORC Code explanation	Commentary
<p><i>Sampling techniques</i></p>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li>• <i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Drill core in diamond holes was recovered in 1.5 m length core runs in polycarbonate tubes where these were available to minimize sample disturbance. Where these tubes were not available standard core split triple tubes were used with core samples wrapped in cling-film and duct tape following recovery to prevent moisture loss from the core before storage in core boxes.</li> <li>• Drill core was collected to obtain representative samples of the sediments that host brine to evaluate the porosity and permeability of these host sediments.</li> <li>• Brine samples were collected from open holes at discrete depths during the diamond drilling using a bailer device. The bailer device was also used for purging brine from the holes prior to sampling. Initially in the program double (straddle) packer sampling equipment was used to take samples over 3 m intervals in holes</li> <li>• The brine samples were collected in clean plastic bottles and filled to the top to minimize air space within the bottle. Each bottle was marked with the time and relabeled with a sample number before sending the sample to the laboratory.</li> </ul>
<p><i>Drilling techniques</i></p>	<ul style="list-style-type: none"> <li>• <i>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).</i></li> </ul>	<ul style="list-style-type: none"> <li>• Diamond drilling with an internal (triple) tube was used during the drilling program. Core recovery was variable and sometimes poor when associated with extensive unconsolidated sandy material. Recovery of these more friable sediments is more difficult with diamond drilling, as this material can be washed from the core barrel during drilling.</li> <li>• Brackish water was used as drilling fluid for lubrication during drilling of diamond holes to minimize the possibility of contamination of natural formation brine with lithium-bearing fluids. Biodegradable additives are used to</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>minimize the development of thick wall cake in the holes that could reduce the inflow of brine to the hole and affect brine quality.</p> <ul style="list-style-type: none"> <li>• Rotary drilling was undertaken to install pre-collars for holes drilled in the NW Sector. This was done to isolate fresh to brackish water in the upper part of the sediments above 100 m from underlying brine and to prevent any contamination/dilution of the brine samples.</li> <li>• Conventional rotary drill holes were also used to install 5 test production wells in the SE and NW Sectors, which were subject to initial pumping tests.</li> </ul>
<p><i>Drill sample recovery</i></p>	<ul style="list-style-type: none"> <li>• <i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></li> <li>• <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Diamond drill core was recovered in 1.5m length intervals in triple (polycarbonate or split) tubes. Appropriate additives were used for hole stability and to maximize core recovery. The retrieved core was measured for each run to calculate the percentage core recovery.</li> <li>• Brine samples were collected at discrete depths using a bailer (sampling the brine at the base of the hole while the drill rods were slightly raised to allow brine inflow after adequately purging the hole) .</li> <li>• As the lithium brine (mineralisation) samples are taken from brine inflows into the bottom of the hole (and not from the drill core – which has variable recovery) they are largely independent of the quality (recovery) of the core samples. Fluorescein tracer dye is used as an additive to the drilling fluid to distinguish drilling fluid from natural formation brine during the brine sampling.</li> <li>• Rotary holes were completed as test production wells by installing alternating blank and screened stainless steel casing sections and then gravel pack (CAU07, 08, 09, 10, 11). Brine samples were collected during 48 hr pumping tests in these test production wells (and subsequently in 30 day tests from CAU07 and CAU11). Additional brine sampling was carried out in the test production</li> </ul>



Criteria	JORC Code explanation	Commentary
		wells using a double packer sampling system. The packer sampling took place from the (isolated) screened sections of the wells at low flow rates (< 0.5 l/s). Interval sampling was conducted in the upper levels of the holes to the depth that sampling equipment allowed.
Logging	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></li> <li>• <i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Diamond holes are logged by geologists who also supervise taking of undisturbed samples from the core for laboratory porosity analysis.</li> <li>• Logging is both qualitative and quantitative in nature. The relative proportions of different lithologies which have a direct bearing on the overall porosity, contained and potentially extractable brine are noted, as are more qualitative characteristics such as the sedimentary facies and their relationships. When cores are split for sampling they are photographed.</li> <li>• Core recoveries are measured for the entire core interval recovered.</li> <li>• Rotary wells and diamond hole pre-collars were logged by experienced geologists. However, interpretation of the drill cutting is more qualitative due to the rotary drilling method.</li> </ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> <li>• <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li>• <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li>• <i>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.</i></li> <li>• <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Core is systematically sub-sampled for the preparation of laboratory samples by cutting the lower 10-15 cm of the core either in the polycarbonate tubes or preserving the sample in cling wrap, tape and plastic tubing for transportation in the limited instances when polycarbonate tubes were not available.</li> <li>• Sub-samples were sent to the GSA laboratory in the USA for drainable porosity testing.</li> <li>• Core sampling is systematic with samples taken at the base of core runs every 3 m (subject to core recovery) to minimize sampling bias. This is considered to be an appropriate technique to obtain representative samples, although core recovery is noted to be variable.</li> <li>• Duplicate samples for porosity testing are prepared in the laboratory for analysis by a secondary QA/QC</li> </ul>

Criteria	JORC Code explanation	Commentary
		laboratory (Corelabs, Houston and DB Stephens in the USA).
<i>Quality of assay data and laboratory tests</i>	<ul style="list-style-type: none"> <li>• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li>• <i>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.</i></li> <li>• <i>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The Norlab/Alex Stuart laboratory in Jujuy, Argentina is used as the primary laboratory to conduct the assaying of the brine samples collected as part of the drilling program. They also analyzed duplicates and standards, with blind control samples in the analysis chain. The laboratory is a commercially accredited laboratory specialized in the chemical analysis of brines and inorganic salts. QA/QC check samples have been sent to another independent laboratory.</li> <li>• The quality control and analytical procedures used at the Norlab laboratory are considered to be of high quality and the laboratory is affiliated with the Alex Stuart international group of laboratories.</li> <li>• Duplicate and standard analyses are considered to be of acceptable quality.</li> <li>• Limited downhole geophysical tools were provided by the drilling contractor and these are believed to be calibrated periodically to produce consistent results.</li> </ul>
<i>Verification of sampling and assaying</i>	<ul style="list-style-type: none"> <li>• <i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li>• <i>The use of twinned holes.</i></li> <li>• <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li>• <i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Accuracy, the closeness of measurements to the “true” or accepted value, was monitored by the insertion of laboratory certified standards.</li> <li>• Duplicate samples in the analysis chain were submitted as part of the laboratory batch and results are considered acceptable.</li> <li>• Laboratory data (from spreadsheets) is loaded directly into the project database and was verified periodically by the independent CP.</li> </ul>
<i>Location of data points</i>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Specification of the grid system used.</i></li> <li>• <i>Quality and adequacy of topographic control.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The holes were located initially with a hand held GPS and were subsequently surveyed by a surveyor on completion of the Phase III drilling program. The Project location is in zone 3 of the Gauss Kruger coordinate system using the Argentine POSGAR datum.</li> </ul>

Criteria	JORC Code explanation	Commentary
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <li>• <i>Data spacing for reporting of Exploration Results.</i></li> <li>• <i>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.</i></li> <li>• <i>Whether sample compositing has been applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Lithological data was collected throughout the drilling.</li> <li>• The nominal 6 m vertical spacing of brine samples (subject to hole conditions and permeability) is considered sufficient to establish the degree of lithium grade continuity. In intervals with low permeability sediments such as clays, brine samples are not always obtained. Brine samples with Fluorocin dye were rejected as contaminated samples and were not considered for resource estimation purposes.</li> <li>• Compositing of samples has not been applied to diamond hole samples prior to analysis.</li> </ul>
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <li>• <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The salar deposits that host lithium-bearing brines consist of sub-horizontal beds and lenses of sand, silt, halite, clay and minor gravel, depending on the location within the salar. The vertical holes are essentially perpendicular to these units intersecting their true thickness.</li> </ul>
<i>Sample security</i>	<ul style="list-style-type: none"> <li>• <i>The measures taken to ensure sample security.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The samples were moved from the drill site to secure storage at the camp on a daily basis. All brine sample bottles are marked with a unique label.</li> <li>• Samples were transported from the camp to the laboratory (primary, duplicate and QA/QC samples) for chemical analysis in sealed rigid plastic bottles with sample numbers clearly identified.</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No audits or reviews have been conducted at this point in time. However, the CP has reviewed information and the project database throughout the project.</li> </ul>

## Section 2 – Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section)

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <li>• <i>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures,</i></li> </ul>	<ul style="list-style-type: none"> <li>• The Cauchari JV properties are located approximately 20 km south of the Olaroz lithium project (operated by Orocobre/Sales de Jujuy) in the province</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</i></p> <ul style="list-style-type: none"> <li>• <i>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.</i></li> </ul>	<p>of Jujuy in northern Argentina at an elevation of approximately 3,900 masl.</p> <ul style="list-style-type: none"> <li>• The property comprises 28,000 ha in 22 mineral properties in Jujuy province in Argentina. Exploration activities are currently focused in the northern properties within the larger property package. The properties consist of a combination of exploration properties (Cateos) and exploitation properties (minas).</li> <li>• The tenements/properties are believed to be in good standing, with payments made to relevant government departments.</li> </ul>
<p><i>Exploration done by other parties</i></p>	<ul style="list-style-type: none"> <li>• <i>Acknowledgment and appraisal of exploration by other parties.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Exploration was previously carried out in the SE Sector properties by Orocobre subsidiary SAS in 2011. This program consisted of 6 holes (5 diamond, 1 rotary), several of which were abandoned well short of the target depth due to problems with the drilling equipment. An initial resource was defined in accordance with the JORC code at the time of exploration (this was announced as an NI43-101 compliant resource in December 2016).</li> <li>• Immediately to the north of the Cauchari project, Orocobre Limited has developed the Olaroz lithium project which is the first new lithium brine project to go into production within the last 20 years.</li> <li>• Significant exploration has been conducted immediately to the east and west of the Cauchari properties by Lithium Americas Corp (LAC). LAC has defined a large resource and related reserve and has completed a DFS – with the project currently in the construction phase.</li> </ul>
<p><i>Geology</i></p>	<ul style="list-style-type: none"> <li>• <i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The sediments within the salar consist of halite, clay, silt, sand and gravel which have accumulated in the salar from terrestrial sedimentation and evaporation of brines within the salar. These units are interpreted to be essentially flat lying with unconfined aquifer conditions close to surface and semi-confined to confined conditions at</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>depth</p> <ul style="list-style-type: none"> <li>• Brine within the salar is formed by solar concentration with brine hosted within the different sedimentary units</li> <li>• Geology was recorded during drilling of all the holes.</li> </ul>
Drill hole Information	<ul style="list-style-type: none"> <li>• <i>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:</i> <ul style="list-style-type: none"> <li>○ <i>easting and northing of the drill hole collar</i></li> <li>○ <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></li> <li>○ <i>dip and azimuth of the hole</i></li> <li>○ <i>down hole length and interception depth</i></li> <li>○ <i>hole length.</i></li> </ul> </li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Lithological data was collected from the holes as they were drilled and cores were retrieved. Detailed geological logging of cores has also been completed, with cores split to facilitate this.</li> <li>• Brine samples were collected and sent for analysis to the Norlab laboratory, together with quality control/quality assurance samples</li> <li>• All drill holes are vertical, (dip -90, azimuth 0 degrees). Holes are located at approximately 3910 m above sea level, with elevations in the alluvial fans varying more from this elevation.</li> </ul>
Data aggregation methods	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>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.</i></li> <li>• <i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Brine samples taken in holes were averaged (arithmetic average) without weighting across the number of samples in each hole in the lithium brine zone and in what are interpreted as different brine zones.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> <li>• <i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li>• <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li>• <i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this</i></li> </ul>	<ul style="list-style-type: none"> <li>• In the NW Sector brine is interpreted to underlie an upper zone of less concentrated brine which was not sampled, as the upper parts of these holes were cased off. The sediments hosting brine are interpreted to be essentially perpendicular to the vertical drill holes.</li> <li>• The lengths reported for mineralisation</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>effect (eg ‘down hole length, true width not known’).</i>	(brine) intervals are from systematic sampling and definition of the actual extent of the brine. <ul style="list-style-type: none"> <li>The brine samples are considered to represent true widths of brine.</li> </ul>
<i>Diagrams</i>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>A diagram is provided in the text showing the location of the properties and drill holes. A table is provided in this announcement showing the location of the drill holes.</li> </ul>
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>Representative data from drilling and sampling in the Cauchari project has been provided throughout the drilling program, such as lithological descriptions, brine concentrations and information on the thickness of mineralisation. Additional information will be provided as it comes to hand.</li> </ul>
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>Refer to the information provided in the Technical report on the Lithium and Potassium Resources Cauchari Project, Jujuy Province, Argentina, dated effective 27th June 2018 for previous geophysical and geochemical data from drilling in 2017/18 and from 2011 by the Orocobre subsidiary SAS.</li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li><i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li><i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<ul style="list-style-type: none"> <li>The company is currently undertaking planning feasibility study engineering for the project. No further work is planned to test for further extensions of mineralisation at this stage.</li> </ul>

### Section 3 – Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
<i>Database integrity</i>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>Data validation procedures used.</i></li> </ul>	<ul style="list-style-type: none"> <li>Laboratory brine chemistry and porosity analyses were received from the service providers (laboratories) in digital format. Significant data verification and QA/QC measures were carried out to validate these results, including spot checks, ion</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>balance calculations, and analyses of duplicates, standards, and blanks. The results of the geological core logging was verified and validated by an independent FloSolutions geologist.</p>
<p><i>Site visits</i></p>	<ul style="list-style-type: none"> <li>• <i>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</i></li> <li>• <i>If no site visits have been undertaken indicate why this is the case.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Personnel from Flosolutions and the Competent Person visited the project site multiple times during the drilling programs.</li> </ul>
<p><i>Geological interpretation</i></p>	<ul style="list-style-type: none"> <li>• <i>Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</i></li> <li>• <i>Nature of the data used and of any assumptions made.</i></li> <li>• <i>The effect, if any, of alternative interpretations on Mineral Resource estimation.</i></li> <li>• <i>The use of geology in guiding and controlling Mineral Resource estimation.</i></li> <li>• <i>The factors affecting continuity both of grade and geology.</i></li> </ul>	<ul style="list-style-type: none"> <li>• There is a high level of confidence in the geological model for the Project. The geology is essentially flat lying, with brine-hosted in lakebed to alluvial sediments that surround the core of halite and clay sediments.</li> <li>• Alternative interpretations are restricted to smaller scale variations in sedimentology, principally in the marginal parts of the basin, where coarser grained sediments are present.</li> <li>• Similar sediments are reported in adjoining properties.</li> <li>• Geology has been used to separate the deposit into different layers for the resource estimate. The NW Sector sandy units are more porous, as is the Deep Sand unit. In the centre and east of the salar there is a less porous unit of halite and clay. Basement has not been identified in drill holes.</li> <li>• Sedimentary processes affect the continuity of geology, whereas the concentration of lithium and other elements in the brine is related to water inflows, evaporation and brine evolution in the salt lake</li> </ul>
<p><i>Dimensions</i></p>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The lateral extent of the resource has been defined by electrical geophysics used to map the boundaries of the brine body, and where relevant by the boundary of the Company's tenements,</li> <li>• The top of the resource is defined by the water table elevation. The base of the resource is defined by the depth of the drilling, based on available sample information to a depth of 619 m.</li> </ul>

Criteria	JORC Code explanation	Commentary
<p><i>Estimation and modelling techniques</i></p>	<ul style="list-style-type: none"> <li>• <i>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters, maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</i></li> <li>• <i>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</i></li> <li>• <i>The assumptions made regarding recovery of by-products.</i></li> <li>• <i>Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).</i></li> <li>• <i>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</i></li> <li>• <i>Any assumptions behind modelling of selective mining units.</i></li> <li>• <i>Any assumptions about correlation between variables.</i></li> <li>• <i>Description of how the geological interpretation was used to control the resource estimates.</i></li> <li>• <i>Discussion of basis for using or not using grade cutting or capping.</i></li> <li>• <i>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The following steps were carried out for the resource estimation:</li> <li>• Calculation of the experimental variograms for Li and K on the dataset in x, y and z directions, then adjust the variograms to a variogram model.</li> <li>• The SGEMS software was used for the resource estimation. The resource model domain was defined by 19,947,657 blocks with a block size of: x=100 m, y=100 m, z=1 m covering dimensions of 129 x 239 x 647 blocks. This is the entire area of the model, with 4,138,515 blocks in the volume classified as resources.</li> <li>• The resource has the following dimensions - minimum centroid: 3416340.0, 7363938.0, 3323.5; maximum centroid: 3429140.0, 7387738.0, 3969.5; minimum corner: 3416290.0, 7363888.0, 3323.0; maximum corner: 3429190.0, 7387788.0, 3970.0.</li> <li>• Interpolation of the Li and K concentrations for each block in mg/L using ordinary kriging with the calculated variogram models. The presence of brine is not necessary followed by the lithologies. Therefore, there are no hard boundaries inside the geological units for the estimation.</li> <li>• Validation of the block model was carried out using a series of checks including comparison of univariate statistics for global estimation bias, independent nearest neighbor model, visual inspection against samples on plans and sections, swath plots in the north, south and horizontal directions to detect spatial bias.</li> <li>• Calculation of the total resource was done using the average porosity value for each geological unit, based on the boreholes data. Each geological unit has an assigned drainable porosity value according to the results of the GSA and other laboratory analyses.</li> <li>• No lithium cut-off grade was applied, as this will be reviewed as part of the planned project engineering.</li> </ul>



Criteria	JORC Code explanation	Commentary
Moisture	<ul style="list-style-type: none"> <li>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li> </ul>	<ul style="list-style-type: none"> <li>Moisture content is not relevant for the estimate, which is undertaken on a volumetric basis</li> </ul>
Cut-off parameters	<ul style="list-style-type: none"> <li>The basis of the adopted cut-off grade(s) or quality parameters applied.</li> </ul>	<ul style="list-style-type: none"> <li>No cut-off grade was applied, as this will be reviewed as part of the planned project engineering .</li> </ul>
Mining factors or assumptions	<ul style="list-style-type: none"> <li>Assumptions made regarding possible mining methods, minimum mining dimensions and. internal (or, if applicable, external) mining dilution. It may not always be possible to make assumptions regarding mining methods and parameters when estimating Mineral Resources. Where no assumptions have been made, this should be reported.</li> </ul>	<ul style="list-style-type: none"> <li>The resource has been quoted in terms of brine volume and grade.</li> <li>No mining or recovery factors have been applied.</li> <li>The conceptual mining method is recovering brine from the salt lake via a series of wells.</li> <li>Detailed hydrologic studies of the lake are being undertaken with the development of a 3 dimensional numerical model in the FeFlow modelling software to define the extractable resources and extraction rates possible for the Project.</li> </ul>
Metallurgical factors or assumptions	<ul style="list-style-type: none"> <li>The basis for assumptions or predictions regarding metallurgical amenability. It may not always be possible to make assumptions regarding metallurgical treatment processes and parameters when reporting Mineral Resources. Where no assumptions have been made, this should be reported.</li> </ul>	<ul style="list-style-type: none"> <li>Brine is very similar chemically to that in the Olaroz project operated by Orocobre, which is currently producing lithium carbonate. Brine processing evaluation takes into account the brine chemistry at Cauchari and the similarities with Olaroz. Processing would utilize a conventional processing route, utilised at existing operations elsewhere in the world.</li> </ul>
Environmental factors or assumptions	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Impacts of lithium production at the Cauchari JV would include; surface disturbance from the creation of extraction/processing facilities and associated infrastructure, accumulation of various low height salt tailings impoundments and extraction from saline and fresh water aquifers regionally.</li> </ul>

Criteria	JORC Code explanation	Commentary
<i>Bulk density</i>	<ul style="list-style-type: none"> <li>• <i>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Density measurements were taken as part of the drill core assessment process described in section 1. This included wet core density, brine density and dry solids density.</li> <li>• However, no bulk density was applied to the estimates because resources are defined by volume, rather than by tonnage.</li> </ul>
<i>Classification</i>	<ul style="list-style-type: none"> <li>• <i>The basis for the classification of the Mineral Resources into varying confidence categories.</i></li> <li>• <i>Whether appropriate account has been taken of all relevant factors (i.e., relative confidence in tonnage/grade estimations, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</i></li> <li>• <i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The classifications considered to take appropriate account of all relevant factors, including the relative confidence in the volume and grade estimates, confidence in the continuity of geology and brine concentrations values, and the quality, quantity and distribution of the data.</li> <li>• The classification appropriately reflects the Competent Person's current view of the deposit.</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of Mineral Resource estimates.</i></li> </ul>	<ul style="list-style-type: none"> <li>• This Mineral Resource were estimated by independent resource consultants FloSolutions of Santiago, Chile</li> </ul>
<i>Discussion of relative accuracy/ confidence</i>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>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.</i></li> <li>• <i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The relative accuracy of the Mineral Resource is reflected in the reporting of the Mineral Resource as per the guidelines of the 2012 JORC Code.</li> <li>• The statement relates to global estimates of volume, tonnages and grades.</li> <li>• No production data is available for this resource, although Orocobre is producing lithium from brine extracted 20 km to the north of the Cauchari brine resource.</li> </ul>