

Tuesday, 1 November 2022 ASX Code: LEL

### MARKET ANNOUNCEMENT

# Further Significant Lithium Concentrations Encountered in Maiden Drillhole at Solaroz Lithium Brine Project

#### **SUMMARY**

- Maiden drillhole (SOZDD001) at Solaroz Lithium Brine Project in Argentina has now extended into the primary target deep sandstone lower aquifer to a depth of ~335m with drilling ongoing.
- Further assay results from packer sampling of conductive brines has returned highly encouraging lithium concentrations of up to 555 mg/L.
- Significant concentrations of Lithium-bearing brines now encountered in both the upper and lower aquifers with the lower aquifer yet to be fully tested.
- Second drill rig has now been secured for mobilisation in November 2022 to accelerate completion of the 10 hole (5,000 metre) drilling programme.
- Core samples to be sent to US laboratory for centrifuge brine extraction, chemical analysis and porosity and specific yield testwork, which are necessary for the delineation of a maiden JORC Mineral Resource.

Lithium Energy Limited (ASX:LEL) (**Lithium Energy** or **Company**) is pleased to confirm that the first drill hole at Solaroz has extended to a depth of ~335 metres and penetrated the primary target "Deep Sandstone" lower aquifer, with drilling yet to close out the basement of the lower aquifer.

Assay results continue to be received as drilling progresses with further results of Packer Samples returning significant lithium concentrations of up to **555 mg/L Lithium**.

Lithium Energy is encouraged that the first drillhole has now penetrated into the primary target zone contained in the previously interpreted deep sandstone lower aquifer with significant lithium grades now having been encountered in both the upper and lower aquifers. Assay results to date confirm that lithium concentrations are generally increasing at depth indicating a hydraulically linked system with heavier lithium rich brines settling lower into the aquifer.

William Johnson, Executive Chairman:

Encountering the target deep sand unit in our maiden drill hole at Solaroz is another very positive milestone for the Company, further increasing confidence in our geological model for the Solaroz Project. With sampled lithium grades up to 555 mg/l lithium and generally continuing to increase with depth, the Company remains highly encouraged by these early results for our first drillhole.

We are also very pleased to have secured a second drilling rig, which will allow us to accelerate the drilling programme and move more quickly towards establishing a maiden JORC Resource of lithium at Solaroz.



www.lithiumenergy.com.au

LITHIUM ENERGY LIMITED

A.B.N. 94 647 135 108

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#### **Drilling Progress**

Drilling at the first diamond drill hole (borehole SOZDD001) within the Mario Angel concession at Solaroz (refer Figure 2) has currently reached a depth of approximately ~335 metres, with significant levels of Lithium brine concentrations (hosted in porous sandstones) now having been encountered in both an upper and lower (deep sandstone) aquifer, as follows:

- Up to 555 mg/l Lithium sampled in the upper aquifer, at between ~55 to 230 metres depth; and
- Up to 517 mg/l Lithium sampled in the lower aquifer, from ~265 to at least ~325 metres depth.

Drilling is progressing to basement depth in the lower aquifer.

These lithium rich brines are contained mostly in sandstones and fine gravels, which have porosity and permeability levels that are typically favourable for brine extraction.

Lithium Energy is highly encouraged by the generally increasing Lithium concentrations at depth and the low Mg/Li ratios, which are positive in relation to future potential processing options.

Lithium Energy is also pleased to confirm it has secured a second drill rig, which is scheduled to mobilise to site during November 2022 to accelerate the drilling programme. The next 2 drill holes will be located to the north of SOZDD001, to test deeper conductive targets interpreted to contain lithium rich brines within the Chico 1 and Chico 5 concessions (refer Figure 2).

#### **Assay Results**

Lithium Energy continues to receive progressive assay results as drilling continues in the maiden drill hole, with new assay results now having been received from Packer Samples 7, 8 and 9 (refer Table 1).

These assay results show **Lithium concentrations of up to 555 mg/l**. The increase in Lithium concentration, conductivity and density generally at depth is encouraging as it indicates a hydraulically linked system with heavier brines (with higher concentrations of lithium) sinking to the bottom of the aquifer.

Furthermore, measured flow test rates of up to approximately 17 litres/minute through a restricted hose are a positive indicator for potential future brine extraction.

Core logging (refer Figure 1) has confirmed:

- a total ~175 metres of sandstones and fine gravels between ~55 to 230 metres in an upper aquifer, with the majority of the units being uniform lithium brine hosting sandstone units, with localised banding of thin mudstones and carbonate layering;
- a ~35 metre mudstone (seal) unit between ~230 to 265 metres, which separates the lower and upper aquifers; and
- the primary target lithium brine hosting Deep Sandstone unit extending from ~265 to at least 325 metres in the lower aquifer.

Lithium Energy is continuing to drill into the lower aquifer and will progressively assay for lithium concentrations down hole as drilling progresses.



The results of the packer sampling to date are shown in Table 1 (which includes previously announced results<sup>1</sup>)

Intersection	Hole Deptl	n Range	Li	К	Mg	Mg/Li	Conductivity	Flow Rate	Density
Samples <sup>(A)</sup>	From (m)	To (m)	(mg/l)	(mg/l)	(mg/l)	Ratio	(mS/cm)	(I/min)	(g/ml)
1 <sup>(B)</sup>	72.6	74.1	158	1359	363	2.30	199	14.3	1.132
2 <sup>(B)</sup>	75.6	79.4	101	844	226	2.24	215	15.4	1.156
3	93.6	97.1	399	3121	931	2.33	215	13.1	1.158
4	111.6	115.1	414	3249	968	2.34	216.1	7.36	1.166
5	129.6	133.1	416	3232	962	2.31	230.2	17.2	1.17
6 <sup>(C)</sup>	147.6	153.3	270	2178	650	2.41	208.3	11.5	1.141
7	227	229	555	4277	1201	2.16	224.4	9.6	1.196
8	268	274	517	4012	1074	2.08	224.5	4.7	1.193
9 <sup>(D)</sup>	275	293	485	3581	739	1.52	218.1	8.3	1.193

Table 1: Results of Packer Sampling at Drillhole SOZDD001

#### Notes:

- (A) A pre-collar has been cemented in place at a drill hole depth of ~50 to 60 metres, to isolate the fresh/brackish water and to prevent dilution with the sampling and assaying of the deeper brines.<sup>2</sup>
- (B) Sampling affected by dilution due to packer leakage allowing fresh water to penetrate. The lithium concentration for this section is still to be properly determined.
- (C) Sampling for this intersection was for approximately half the time of the other intersections and accordingly, the well fluids may not have flushed out fully prior to sampling. The lithium concentration for this section is still to be properly determined.
- (D) Sampling likely affected by dilution due to use of modified single packer (as opposed to double packers used for sample of all other intersections). The lithium concentration for this section is still to be properly determined.

Sampling of encountered brines is being conducted by the use of double packers and single packers, depending on the condition of the drill hole.

Testing of brines for conductivity, flow rates and density are being undertaken in the field. Testing of the chemical composition (particularly Lithium, Potassium, Magnesium concentrations) of brines are being undertaken at a local laboratory.

Lithium Energy is also routinely (approximately every 8 metres) preparing core samples for brine extraction and chemical analysis and specific yield and porosity testwork. Core samples are encased to prevent fluid loss to ensure the brine material can be extracted by centrifugal measures. The core samples will be sent to a US-based laboratory for specific analysis/testwork that is currently unable to be performed in Argentina.

The core sample analysis/testwork results and packer readings will form the basis, when compiled with the geological logging and the geophysical borehole logging, for a characterisation of the drilled aquifers in terms of grade distribution and porosity/specific yield. These testwork will provide the detailed information which are necessary for the delineation of the maiden JORC Mineral Resource for Solaroz.

<sup>1</sup> Refer LEL ASX Announcements dated 5 October 2022: Significant Intersection of Highly Conductive Brines in Maiden Drillhole at Solaroz Lithium Brine Project and 19 October 2022: Major Lithium Discovery Confirmed In First Drillhole of Maiden Programme at the Solaroz Lithium Brine Project

<sup>2</sup> Refer LEL ASX Announcement dated 21 September 2022: Drilling of First Hole Advancing on Schedule at Solaroz Lithium Brine Project in Argentina

### **Drill Hole Stratigraphy**

The lithology stratigraphy of the maiden drill hole is illustrated in Figure 1 below with the drill hole currently at a depth of ~335 metres and drilling continuing to the basement of the lower aquifer.

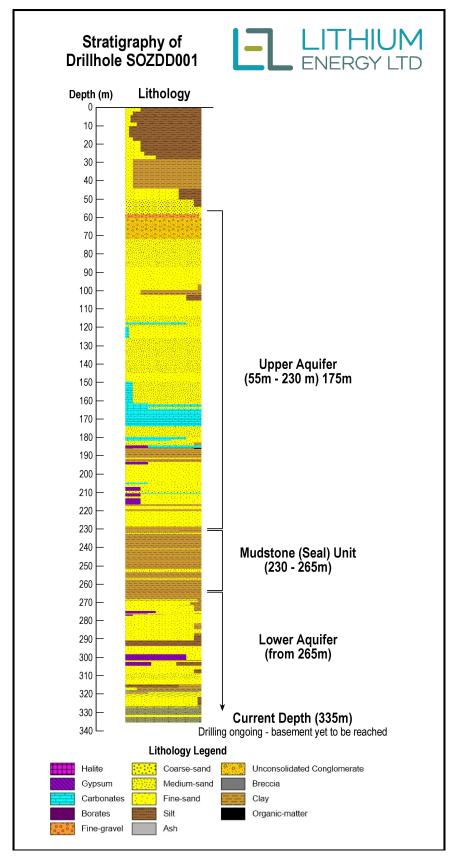


Figure 1: Drillhole (SOZDD001) Stratigraphy showing Upper and Lower Aquifers to Current Depth

#### **Solaroz Project Location**

Lithium Energy's flagship Solaroz Lithium Brine Project is located in Argentina in the heart of South America's world renowned Lithium Triangle (Solaroz). Solaroz is located directly adjacent to or principally surrounded by lithium majors Allkem Limited (ASX/TSX:AKE) and Lithium Americas Corporation (TSX/NYSE:LAC) on the Salar de Olaroz basin (Olaroz Salar) (refer Figure 2).

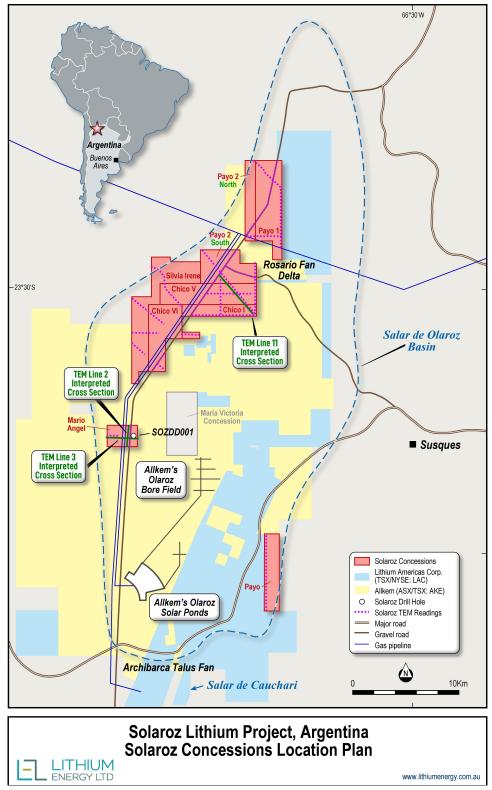


Figure 1: Maiden Drillhole SOZDD001 Location and TEM Survey Lines at Solaroz (Solaroz Concession Locations Adjacent to Allkem and Lithium Americas Concessions in Olaroz Salar)

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#### **AUTHORISED FOR RELEASE - FOR FURTHER INFORMATION:**

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#### **ABOUT LITHIUM ENERGY LIMITED (ASX:LEL)**

Lithium Energy Limited is an ASX listed battery minerals company which is developing its flagship Solaroz Lithium Brine Project in Argentina and the Burke Graphite Project in Queensland. The Solaroz Lithium Project (LEL:90%) comprises 12,000 hectares of highly prospective lithium mineral concessions located strategically within the Salar de Olaroz Basin in South America's "Lithium Triangle" in north-west Argentina. The Solaroz Lithium Project is directly adjacent to or principally surrounded by mineral concessions being developed into production by Allkem Limited (ASX/TSX:AKE) and Lithium Americas Corporation (TSX/NYSE:LAC). The Burke Graphite Project (LEL:100%) contains a high grade graphite deposit and presents an opportunity to participate in the anticipated growth in demand for graphite and graphite related products.

#### **JORC CODE COMPETENT PERSON'S STATEMENTS**

The information in this document that relates to Exploration Results (field analysis and assays of brine samples taken from drillhole SOZDD001) in relation to the Solaroz Lithium Project are based on, and fairly represents, information and supporting documentation prepared by Mr Peter Smith, BSc (Geophysics) (Sydney) AIG ASEG. Mr Smith is a Member of the Australian Institute of Geoscientists (AIG) and an Executive Director of the Company. Mr Smith has the requisite experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking 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' (the JORC Code). Mr Smith consents to the inclusion in this document of the matters based on his information in the form and context in which it appears.

The information in this document that relates to Exploration Targets and other Exploration Results in relation to the Solaroz Lithium Project is extracted from the following ASX market announcements made by Lithium Energy dated:

- 19 October 2022 entitled "Major Lithium Discovery Confirmed In First Drillhole of Maiden Programme at the Solaroz Lithium Brine Project"
- 5 October 2022 entitled "Significant Intersection of Highly Conductive Brines in Maiden Drillhole at Solaroz Lithium Brine Project"
- 18 August 2022 entitled "Highly Encouraging Geophysics Paves Way for Commencement of Drill Testing of Brines at Solaroz"
- 9 May 2022 entitled "Geophysics Expanded Across all Concessions to Refine Drill Targets at Solaroz Lithium Project"
- 8 June 2021 entitled "Substantial Lithium Exploration Target Identified at the Solaroz Project in Argentina"
- 26 May 2021 entitled "Geophysical Data Supports Highly Encouraging Exploration Potential for Solaroz"

The information in the original announcements is based on, and fairly represents, information and supporting documentation prepared and compiled by Mr Peter Smith (BSc (Geophysics) (Sydney) AIG ASEG). Mr Smith is a Member of AIG and a Director of the Company. Mr Smith has the requisite experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the JORC Code. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements (referred to above). The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements (referred to above).



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MARKET ANNOUNCEMENT
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### **JORC CODE (2012 EDITION) CHECKLIST OF ASSESSMENT AND REPORTING CRITERIA FOR EXPLORATION RESULTS**

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

(Criteria in this section apply to all succeeding sections)

Criteria	Explanation	Comments
Sampling techniques	<ul> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or 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. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1m samples from which 3kg was pulverised to produce a 30g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	The Precollar from surface was drilled using Tricone drilling method, and chips were logged as collected, to a depth of 60m, this being the pre-collar depth. The pre-collar was then cemented in and HQ Core drilled.  Core recovery from the HQ was carefully measured by comparing the measured core to the core runs, and then a total recovery per section determined. HQ Drill core sampling was undertaken along the entire length of the hole to obtain representative samples of the stratigraphy and sediments that host brine.  Representative samples of the core will be sent to a US-based laboratory for porosity and centrifuge extractions of brine held within the core, to cross check against Packer derived samples.  Water/brine samples were taken from target intervals, using Double and Single Packer sampling (depending on the condition of the drillhole) where brine is collected by purging isolated sections of the hole of all fluid for a total of ~1500L to minimize the possibility of contamination by drilling fluid. The hole was then allowed time to re-fill with ground water, where a sample for laboratory analysis is collected (~1.5L).  The casing lining the hole ensures contamination with water from higher levels in the borehole is likely prevented. Samples were taken from the relevant section based upon geological logging and conductivity testing of water.  At the time of writing, nine (9) water/brine samples have been collected in total from the following intervals: 71-75m, 75-79m, 93-97m, 111-115m, 129-133m, 148-152m, 227-229m, 268-274m and 275 293m (refer Table 1 for the results of this packer sampling).  Conductivity, and Density tests are taken with a field
Drilling	Drill type (e.g. core, reverse circulation,	portable High Range Hanna multi parameter meter.  The Precollar from surface was drilled using Tricone
techniques	open-hole hammer, rotary air blast, auger, Bangka, sonic etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method etc.).	drilling method, and chips were logged as collected, to a depth of 60m, this being the pre-collar depth. The pre-collar was then cemented in and HQ Core drilled.  Core recovery from the HQ was carefully measured by comparing the measured core to the core runs, and then a total recovery per section determined.  HQ Drill core sampling was undertaken along the
		entire length of the hole to obtain representative samples of the stratigraphy and sediments that host brine.





Criteria	Explanation	Comments
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed</li> <li>Measurements taken to maximise sample recovery and ensure representative nature of the samples.</li> </ul>	Core recovery from the HQ was carefully measured by comparing the measured core to the core runs, and then a total recovery per section determined.
	<ul> <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>	
Logging	<ul> <li>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.</li> <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>	Lithium Energy has Geologists on site logging the drill core 24/7.  The core is logged by a senior geologist and contract geologists (who are overseen by the senior geologist). The senior geologist also supervises the taking of samples for laboratory analysis.  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. Cores are photographed.  All core is logged by a geologist
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 riffles, tube sampled, rotary split, etc. and whether sampled wet or dry.</li> <li>For all sample types, 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>	Water/brine samples were collected by purging isolated sections of the hole of all fluid in the hole, to minimize the possibility of contamination by drilling fluid, then allowing the hole to re-fill with ground water. Samples were then taken from the relevant section.  Core samples for brine extraction and specific yield and porosity determination by centrifugal measures are encased to prevent loss of fluid.
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</li> </ul>	Samples are (to be, where applicable) transported to reputable industry standard laboratories both in country (Argentina) and in the USA for various test work.  Brine samples were sent to the Alex Stewart International Laboratory in Argentina, where detailed chemistry is being processed. The laboratory is ISO 9001 and ISO 14001 certified and specialises in the chemical analysis of brines and inorganic salts, with considerable experience in this field.  Table 1 contains the field brine sampling results and the analytical results from the Alex Stewart International Laboratory.





Criteria	Explanation	Comments
	acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	Duplicate samples returned comparable values, well within acceptable limits.
		Core samples will also be sent to a laboratory (expected to be in the USA) for brine extraction and chemical analysis and specific yield and porosity test work.
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> </ul>	Field duplicates, standards and blanks will be used to monitor potential contamination of samples and the repeatability of analyses.
	<ul> <li>The use of twinned holes</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physically and electronic) protocols.</li> </ul>	Duplicate and blank samples are planned to be sent to the laboratories in due course as unique samples (blind duplicates)
	Discuss any adjustment to assay data.	
Location of data points	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole</li> </ul>	Locations are positioned using modern Garmin handheld GPS units with an accuracy of +/- 5m.
	surveys), trenches, mine workings and other locations used in Mineral Resources	The grid system used is : POSGAR 94, Argentina Zone 3.
	<ul> <li>estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	Topographic control was obtained by handheld GPS units and the topography is mostly flat with very little relief.
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 Reserve and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	Water/brine samples were collected within isolated sections of the hole based upon the results of geological logging.
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>	The brine concentrations being explored for generally occur as sub-horizontal layers and lenses hosted by conglomerate, gravel, sand, salt, silt and/or clay. Vertical diamond drilling is ideal for understanding this horizontal stratigraphy and the nature of the sub-surface brine bearing aquifers
Sample security	The measures taken to ensure sample security.	Data was recorded and processed by trusted employees and contractors and overseen by senior management ensuring the data was not manipulated or altered.
		Samples are transported from the drill site to secure storage at the camp on a daily basis
Audits or reviews	The results of and audits or reviews of sampling techniques and data.	No audits or reviews have been conducted to date. The drilling is at a very early stage, however, the Company's independent Competent Person (in respect of the potential delineation of a JORC Mineral Resource in the future) has approved the procedures to date and visited the site to review first-hand the drilling practice and all logging, sampling, QA/QC controls and data management.



### **Section 2 Reporting of Exploration Results**

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

Criteria	Explanation	Comments
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 interest, 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>	The Solaroz Lithium Brine Project comprises 8 concessions totalling approximately 12,000 hectares ( <b>Solaroz Concessions</b> ) located in the Jujuy Province in northern Argentina:  (1) Mario Angel – File N°1707-S-2011 (542.92ha)  (2) Payo – File N°1514-M-2010 (987.62ha)  (3) Payo 1 – File N°1516-M-2010 (1973.24ha)  (4) Payo 2 – File N°1515-M-2010 (2192.63ha)  (5) Chico I – File N°1229-M-2009 (835.24ha)  (6) Chico V – File N°1312-M-2009 (1800ha)  (7) Chico VI – File N°1313-M-2009 (1400.18ha)  (8) Silvia Irene, File N°1706-S-2011 (2348.13ha)  The Company has a 90% shareholding in Solaroz S.A. (formerly Hananta S.A.), an Argentine company which, in turn, had an option to acquire the Solaroz Concessions from the local owner – refer to Sections 8.1, 15.3 and 15.4 of the Company's Prospectus (dated 30 March 2021) for further details.  On 31 October 2022, the Company announced that Solaroz S.A. had exercised its option to acquire the Solaroz Concessions – refer to the ASX announcement entitled "Early Exercise of Option to Acquire Solaroz Lithium Brine Project Concessions".
Exploration done by other parties	Acknowledgement and appraisal of exploration by other parties.	Extensive open file drilling, geochemistry, geophysical and development work from exploration to development, and operating mine have been carried out by Allkem Limited (ASX/TSX:AKE) (formerly Orocobre Limited) (Allkem or Orocobre) and Lithium Americas Corporation (TSX/NYSE:LAC) (Lithium Americas).  The Company has reviewed the relevant open file published documents and images relating to the Salara de Olaroz and from this review made its interpretations relating to the Company's
		Solaroz Concessions.  The published data upon which the geological model for the Company's Solaroz Project has been developed includes the following works:
		<ul> <li>Houston, J., Gunn, M., Technical Report on the Salar De Olaroz Lithium-Potash Project, Jujuy Province, Argentina. NI 43-101 report prepared for Orocobre Limited, 13 May 2011</li> </ul>
		<ul> <li>Orocobre Limited ASX/TSX Announcement dated 23     October 2014 entitled "Olaroz Project - Large Exploration     Target Defined Beneath Current Resource"</li> </ul>
		<ul> <li>Reidel, F., Technical Report on Cauchari JV Project – Updated Mineral Resource Estimate, prepared for Advantage Lithium Corporation, 19 April 2019</li> </ul>
		<ul> <li>Orocobre Limited ASX/TSX Announcement dated 10 January 2019 entitled "Cauchari Drilling Update – Phase III Drilling Complete"</li> </ul>
		<ul> <li>Burga, E. et al, Technical Report - Updated Feasibility Study and Mineral Reserve Estimation to support 40,000 tpa Lithium Carbonate Production at the Cauchari-Olaroz Salars, Jujuy Province, Argentina, prepared for Lithium Americas Corporation, 30 September 2020</li> </ul>
		Salfity Geological Consultants Map for Salar de Olaroz





Criteria	Explanation	Comments
Geology	Deposit type, geological settings and style of mineralisation.	The Salar de Olaroz originated as a structurally bounded, closed basin during the late Paleogene-Early Neogene. During much of the Miocene it appears to have slowly filled with medium to coarse grained alluvial fans and talus slopes eroded from the surrounding mountain ranges. As accommodation space was filled the sediments became progressively finer grained, braidplain, sandflat, playa and fluvial architectures are noted in the Upper Miocene and Pliocene. As the climate became more arid during the Pliocene evaporitic deposits first appeared. Normal faulting created additional accommodation space probably initiated at this time too. The lowest drilled sediments indicate an arid climate with abundant halite. These Units are probably Pleistocene in age and are likely contiguous with the lowest drilled and reported sediments in the Salar de Olaroz originated as a structurally bounded, closed basin during the late Paleogene-Early Neogene.  During much of the Miocene it appears to have slowly filled with medium to coarse grained alluvial fans and talus slopes eroded
		from the surrounding mountain ranges. As accommodation space was filled the sediments became progressively finer grained, braidplain, sandflat, playa and fluvial architectures are noted in the Upper Miocene and Pliocene. As the climate became more arid during the Pliocene evaporitic deposits first appeared. Normal faulting created additional accommodation space probably initiated at this time too.
		The lowest drilled sediments indicate an arid climate with abundant halite. These Units are probably Pleistocene in age and are likely contiguous with the lowest drilled and reported sediments in the Salar de Cauchari to the south, suggesting the two basins operated as a continuous hydrologic entity at that stage. Succeeding Units suggest continued subsidence in the center of the basin, with a climate that was variable, but never as arid as during period dominated by the 'Deep Sand Unit' and abundant Halite development. Influx of water and sediment is primarily from the Rosario catchment at the north of Salar de Olaroz.
		At depth a thick highly porous sandstone aquifer has been intersected in both the Salar de Cauchari (by Lithium Americas) and the Salar de Olaroz (by Orocobre). Due to its depth the aquifer has only been intersected in a few holes, as of the 23 October 2014 Orocobre announcement.
		The significance of the 'Deep Sand Unit' is that "Sands of this type have free draining porosity of between 20 and 25% based on previous testwork, and the sand unit could hold significant volumes of lithium-bearing brine which could be added to the resource base by future drilling" (per Orocobre's 23 October 2014 announcement).
Drill hole Information	A summary of all information material for the understanding of the exploration results including a tabulation of the following information for all Material drill holes:      Easting and porthing of	<ul> <li>Drillhole ID: SOZDD001:</li> <li>Easting: 3422471 E (POSGAR Zone 3 East)</li> <li>Northing: 7409972 N (POSGAR Zone 3 North)</li> <li>Vertical hole</li> <li>Progress hole length is ~335m, with drilling on-going.</li> </ul>
	<ul> <li>Easting and northing of the drill hole collar</li> <li>Elevation or RL (Reduced level-elevation above sea level in metres) and the drill hole collar</li> </ul>	





Criteria	Explanation	Comments
	<ul> <li>Dip and azimuth of the hole</li> <li>Down hole length and interception depth</li> <li>Hole length</li> <li>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.</li> </ul>	
Data aggregation methods	<ul> <li>In reporting Exploration results, weighing averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually material and should be stated.</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</li> </ul>	The Company has not undertaken data aggregation and hence no aggregation methods have been carried out.  Mg/Li Ratio's have been reported which is a standard representation.  Elemental lithium has been converted to Lithium Carbonate Equivalent (LCE) using a conversion factor of 5.323 to convert Li to Li <sub>2</sub> CO <sub>3</sub> ); reporting lithium values in LCE units is a standard industry practice.
Relationship between mineralisation widths and intercept lengths	<ul> <li>Stated.</li> <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>	It is assumed that the brine layers lie sub-horizontal and, given that the drillhole is vertical, that any intercepted thicknesses of brine layers would be of true thickness.
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts would be included for any significant discovery being reported. These should include, but not be limited too plan view of drill hole collar locations and appropriate sectional views.	The stratigraphy (of Drillhole SOZDD001) to a current depth of ~335 metres is presented in Figure 1.  The results of Packer Sampling at Drillhole SOZDD001 (to date) is presented in Table 1.  The TEM survey lines undertaken across the Solaroz concessions (also identified) are shown in Figure 2.  Interpreted cross-sections of TEM Survey Lines 2 and 3 (across the Mario Angel concession, where Drillhole SOZDD001 is located) are presented in Figures 3 and 4 respectively (with appropriate scale bars). Drillhole SOZDD001 is also shown in





Criteria	Explanation	Comments
Palancod	a Mhara a '	Figures 3 and 4.
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.	Historical and open file reports have been collated and are consistent across numerous companies and the Company has no reason to doubt the balanced reporting of the various technical open file reports.  The results are from the initial stages of the first and only drillhole to be drilled at Solaroz to date.
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 containing substances.	As part of the review of exploration results in the Olaroz Salar the Company has analysed a number of Gravity and AMT surveys conducted by Orocobre, some of which were undertaken over or closely adjacent to the Solaroz Concessions. The proximity of these surveys has been very useful and highly encouraging for the Company to develop in greater detail ar exploration outline for the Solaroz Concessions.  The Gravity Line surveys undertaken by Orocobre were conducted principally to determine the depth below surface to the basement rock in the Olaroz Salar, which practically sets the lowest depth limit to which lithium-rich brines could be encountered in the basin.  The AMT Line surveys (which measure resistivity) were conducted to identify the interfaces between fresh water and the more conductive brines, facilitating the identification of the location and extent of potentially lithium-rich brines occurring above the basement rock.  The Company has undertaken its own geophysics programme across all the Solaroz Concessions, comprising:  Passive seismic surveys, to determine the depth of the underlying basement rock (i.e. the theoretical limit or potential lithium mineralisation) underneath the concessions; and  Transient Electromagnetic geophysics (TEM), to identify the location and thickness of potential lithium-hosting conductive brines underneath the Solaroz Concessions.
Further work	<ul> <li>The nature and scale of planned further work (e.g. 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, providing this information is not</li> </ul>	The TEM survey lines undertaken across the Solaron Concessions (also identified) are shown in Figure 2.  A major exploration programme is underway comprising the comprehensive interpretation and modelling of results from recently completed geophysical surveys (passive seismic and TEM surveys) and a significant (rotary and diamond) drilling programme, aimed at locating potentially lithium bearing brines of economic interest, obtaining preliminary information related to the hydrogeological and geochemical characteristics of the brine rich aquifer that comprises the Olaroz Salar underneath the Solaroz Concessions, and delineating a maiden JORG Mineral Resource.  The current drillhole (SOZDD001 on the Mario Angel
	this information is not commercially sensitive.	concession) is the first in a planned 10 drillhole drilling campaign to assess the distribution and geochemistry of the brine and to obtain data related to basic physical parameters of the differen hydrogeological units underneath the Solaroz Concessions.  In addition to the above works, the Company will be undertaking an assessment of relevant mine economic criteria to assist in developing a pathway to the completion of feasibility study(s), including the delineation of a maiden JORC Minera Resource.

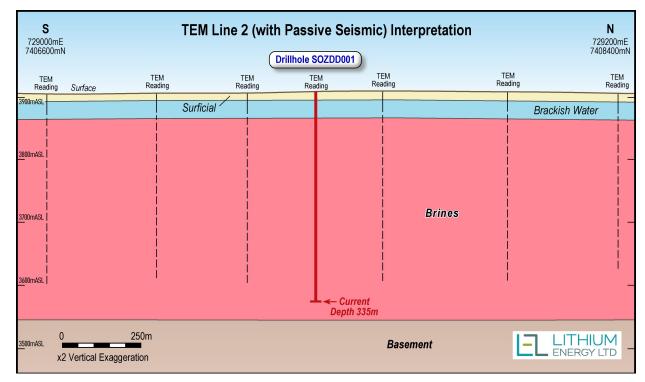


Figure 2: Drillhole SOZDD001 shown on cross-section along (North-South) TEM Survey Line 2 across Mario Angel concession, interpreted from Passive Seismic and TEM Survey data

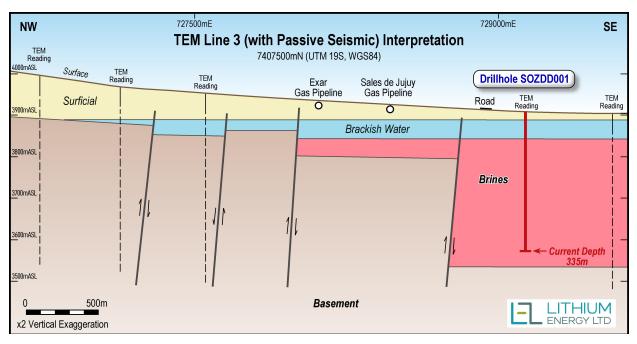


Figure 3: Drillhole SOZDD001 shown on cross-section along (West-East) TEM Survey Line 3 across Mario Angel concession, interpreted from Passive Seismic and TEM Survey data