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# CleanTech Lithium PLC ("CleanTech Lithium" or the "Company") Resource Upgrade at Laguna Verde Project to 1.51 Million Tonnes of Lithium

CleanTech Lithium PLC (AIM:CTL), an exploration and development company advancing the next generation of sustainable lithium projects in Chile, announces an upgraded JORC resource estimate of 1.51 million tonnes of lithium carbonate equivalent ("LCE") at a grade of 206mg/L lithium at its Laguna Verde project, with the majority of the resource upgraded from Inferred to the higher confidence categories of Measured and Indicated.

The upgraded resource estimate provides the basis for undertaking a Pre-feasibility Study ("PFS") at Laguna Verde, planned to commence 4Q 2022, as the Company continues to develop its projects towards producing carbon neutral lithium for the EV market. The PFS is expected to evaluate a base case production rate of 20,000 tonnes per annum of battery grade lithium, with the resource of 1.51 million tonnes LCE providing the basis for a >30-year operation.

# Highlights:

- Resource drill programme, comprising four holes, was completed 1H 2022 with the resource upgrade based on three of the four holes sampled prior to the Chilean winter break
- JORC compliant resource estimate increased by 22% to 1.51 million tonnes LCE at a grade of 206mg/L with 53% of the resource now in the Measured and Indicated category (0.803 million tonnes LCE)
- On track to be further upgraded as follows:
  - in Q4 2022 based on data from all four holes which is expected to increase both resource size and grade, and
  - $\circ$  in 1H 2023 from an infill drill programme planned to commence in the next few weeks
- The deepest hole in the programme recorded lithium grades up to 409mg/L at the bottom of the hole indicating drilling to depth provides further upside
- Laguna Verde is globally the shallowest lithium resource with a geothermal heat source with brine temperatures of 20°C 30°C starting within 65m of the surface
- This is in the optimal temperature range for the direct lithium extraction ("DLE") adsorption process based on test-work by key technical partners SunResin and Beyond Lithium
- Heating brine can be a significant component of a DLE plant's energy consumption and operating costs
- Feasibility studies will evaluate the impact of this geothermal influence on reducing operating costs and the environmental footprint of the project
- A Scoping Study for the project is expected to be completed in October/November 2022
- For the Company's second project, Francisco Basin, a maiden Inferred resource estimate is expected in the coming weeks, based on the results of the first drill hole completed at the project, which had an average lithium grade of 305mg/L



**Commenting, Aldo Boitano, Chief Executive Officer, of Cleantech Lithium PLC, said:** *"We are very pleased with this upgrade in the Laguna Verde resource estimate to 1.51 million tonnes of LCE with more than half of the resource now in the Measured + Indicated category, providing much higher confidence in the resource potential of the asset. The resource estimate now provides the basis for a Pre-feasibility Study with a base case production rate of 20,000 tonnes LCE per annum, expected to utilise 100% renewable energy for process power providing green lithium to the EV industry. Laguna Verde is unique in being a geothermal influenced brine resource starting from near surface, which we think will positively impact operating costs and reduce the environmental footprint.* 

*"Further upgrades are planned in 4Q 2022 and 1H 2023 based on fieldwork to commence in the next few weeks. We look forward to continuing to update the market on our progress."* 

#### **Further Information**

#### Project Background

The Laguna Verde Project is located in Chile and has a licence area of  $67 \text{km}^2$  covering a steep valley shaped basin which at its low point features a hypersaline lake ('Laguna') covering 15.2km<sup>2</sup>. A thick sub surface aquifer starts from shallow depths covering an area of approximately 55 km<sup>2</sup> and features a strong geothermal influence. Temperatures are in the range of  $20 - 30^{\circ}$ C starting from within 65m of the surface, whereas the Laguna has an annual temperature range of  $3 - 6^{\circ}$ C.

In July 2021 a maiden resource estimate was reported for the Laguna Verde project. This was based on the small volume of the Laguna, which was measured using a bathymetric survey and sampling of the Laguna brine, and a much larger volume of the sub-surface aquifer, which was interpreted using a geophysics-based model. The result was a surface resource of 77,834 tonnes LCE in the Measured category, and a sub-surface resource of 1.16 million tonnes LCE in the Inferred category. The brine sampling of the surface Laguna produced an average lithium grade of 246mg/L which was applied to both the surface Measured resource and the geophysics based sub-surface Inferred resource.

To upgrade the resource estimate to a higher confidence level, a drill programme based on four cased holes was undertaken in the first half of 2022. The drill programme was completed but the final hole was unable to be sampled due to the onset of winter. As a result, this resource upgrade is based on results from three of the four holes, and a further upgrade is planned in the fourth quarter of 2022 when the final hole has been sampled.



#### Resource Summary

The previous resource estimate and the upgraded resource estimate are published below in Table 1 and Table 2 respectively, with numbers rounded to the nearest thousand. The upgraded resource estimate represents an increase in the total resource of 22% to 1.51 million tonnes LCE and a large increase in the Measured and Indicated category which was previously just under 78,000 tonnes and is now above 800,000 tonnes. This represents a large increase in the confidence level of the resource estimate and provides the basis for undertaking a pre-feasibility study on the project.

Tuble 1. The vious hesource Estimate (Tublished Suly 2021)					
	Aquifer Volume (million m3)	Specific Yield (%)	Effective Volume (million m3)	Grade (mg/L Li)	Resources (´000t LCE)
Measured	59		59	246	78
Inferred	8,100	11%	891	246	1,166
Total Measured + Indicated Resource				246	78
Total				246	1,244

# Table 1: Previous Resource Estimate (Published July 2021)

#### Table 2: Upgraded Resource Estimate (Published September 2022)

	Aquifer Volume (million m3)	Specific Yield (%)	Effective Volume (million m3)	Grade (mg/L Li)	Resources (´000t LCE)
Measured (Surface lake + Sub-surface)	59 + 782	11.4% (sub-surface)	149	211	167
Indicated	5,790	10.1%	583	205	635
Inferred	6,340	10.2%	650	205	709
Total Measured + Indicated Resource				206	803
Total Resource				206	1,512

The increase in resource size was largely the result of the drilling campaign encountering greater aquifer thickness with a 43% increase over the four wells compared to the geophysics-based model used for the 2021 resource estimate. This was partially offset by the lower average grade on the first three wells. The first three drill holes intercepted a brine aquifer with significantly greater thickness than expected as shown in Table 3. LV04 was stopped at a drill depth of 320m before reaching basement and is considered open at depth.

Table 3: Aquifer Thickness Encountered by Drilling Versus Geophysics Model

Geophysics Model			Drilling	Difference in Aquifer			
	From m((m)	То	Thickness (m)	From	То	Thickness (m)	Thickness
LV01	110	280	170	126	463	337	98%
LV02	30	200	170	55	290	235	38%
LV03*	30	260	230	117	431	314	37%
LV04	100	320	220	100	320	220	0%
Total							43%

\*Drilling meters adjusted to true depth based on incline of well



#### Further Upgrade Expected in 4Q 2022

The 2022 resource estimate is based on the results of a resource drill programme completed in the first half of 2022. A total of four cased holes were drilled around the perimeter of the Laguna with the location and hole ID (LV01 - 04) is shown in Fig. 1. Brine and sediment samples were collected at regular intervals. Due to the onset of the Chilean winter, no brine samples were collected for LV04. As a result, this resource upgrade is based on results from three of the four holes. A further upgrade is planned in the fourth quarter of 2022 when sampling of hole LV04 is completed.



Fig. 1: Laguna Verde Drill Hole Map

## Lithium Grade - Upside Potential

The average lithium grade of the 2022 resource estimate is 206mg/L compared to the 2021 estimate of 246mg/L. The 2021 estimate was based on a sampling programme completed for the Laguna (the 'surface brine resource'), with the same lithium grade applied to the subsurface aquifer. For the 2022 resource estimate, holes LV01 and LV02 were located on the southern perimeter of the Laguna. The stratigraphy of the southern margin of the basin, which is enclosed by a steep mountain, is characterised by fracture zones with freshwater input resulting in relatively diluted intervals lowering the average grade.

Hole LV03, which is in a central area of the basin, did not intersect the extent of fracturing resulting in a higher average grade. LV03 was also the deepest hole in the programme, reaching 360m below the Laguna surface. The deepest four samples from LV03 measured grades from 349 to 409mg/L Lithium. These samples provide a strong indication that higher lithium grades are present at depth, an important target for additional drilling and future development planning.



In the near term, further resource sampling work is planned for the existing wells including LV04, for which brine samples were unable to be collected prior to the winter break. This is planned to be completed in October 2022, which will feed into an upgraded resource estimate late in Q4, 2022. Being in a central area of the basin similar to LV03, sampling of LV04 is expected to contribute to an increase in the resource size and grade, while increased data density will result in a further upgrade in the Measured + Indicated component of the total resource. Further drilling to extend the resource at depth, planned for Q4 2022 and early 2023, has strong potential to add resources and increase the average lithium grade at the Laguna Verde project.

## Geothermal Influence from Near Surface

The Laguna Verde basin is classified by Chile's Ministry of Energy as a site of geothermal energy potential and the temperature of brine samples collected during the drilling programme showed a geothermal influence starting from very shallow depths. Samples from hole LV02 are shown in Fig. 2, with temperatures in the range of  $20 - 30^{\circ}$ C starting from within 65m of the Laguna surface. This compares to the temperatures of the surface Laguna which varies from  $3 - 6^{\circ}$ C over an annual period. There are several prominent geothermal lithium projects at the Salton Sea in the U.S. and in Germany aiming to integrate geothermal energy and lithium production utilising aquifers with very high temperatures which start at depths exceeding 1,000m and 2,000m respectively. This makes Laguna Verde globally the shallowest lithium resource with a geothermal heat source.

The average temperature of Laguna Verde brine is in the optimal temperature range for the direct lithium extraction ("DLE") adsorption process based on test-work by key technical partners SunResin and Beyond Lithium. Heating of brine can be a significant component of a DLE plant's energy consumption and operating costs, which is the case at the world's largest DLE operation the Hombre Muerto project in Argentina. CleanTech Lithium's feasibility studies will evaluate the impact of this geothermal influence on reducing operating costs and the environmental footprint of the project.





*Fig. 2: LV02 Brine Temperature* 

Fig. 3: Geothermal Activity at Laguna Verde



## **Geological Setting**

The Laguna Verde basin is an elongated shaped basin aligned on a NW-SE axis bounded on all sides by volcanic mountain ranges that rises to elevations above 6,000m. The topographical low point of the basin features a hypersaline surface lake or Laguna which has an area of 15.2km<sup>2</sup> and an average depth of approximately 4m. The surface or margin of the Laguna is at an elevation of approximately 4,332m. The presence of the Laguna leads to the classification of Laguna Verde as an immature salar basin. A geological profile of the basin is presented in Fig. 4 which was built from surface geology mapping, a gravimetric survey in the basin completed for the Cerro Casale mine environmental impact assessment as reported by SRK in 2011, and from geological information provided by the 2022 drill programme.



Fig. 4: Laguna Verde Geological Profile A – A'

An interpretation of the general stratigraphic column based on stratigraphy of the four competed drill holes, which aligns with the geological profile, is shown in Fig. 5. Laguna Verde general stratigraphy is characterized by a band of approximately 200m thick ash tuffs with intercalations of volcanic sedimentary deposits that are dominant in the southern area of the graben. The tuffs overlie volcanic sedimentary deposits with fine gravels intercalations, that extend for approximately 180m, until the andesitic basement at 3,965m above sea level (a.s.l). The volcanic sedimentary deposits are dominant in the northern area of the Laguna Verde graben. The brine aquifer was sampled in the drillholes for more than 300m, from approximately 4,309m a.s.l. to the basement level.





Fig. 5: Laguna Verde General Stratigraphy Column Interpretation

# Drilling Method

Four drill holes were completed at the Laguna Verde project from January to the end of May 2022, completing total drilling of 1,672m. A Diamond Drilling ("DDH") system was used, with PQ3 diameter (122mm) from 0m to a maximum depth of 320m. Below the 320m depth, the drilling diameter was changed to HQ3 (95.7mm). PVC casing with 3-inch diameter was installed on drillholes LV01, LV02 and LV04. Casing was not possible to install on well LV03 because the drilling HWT rods and tools got stuck inside the well during the drilling operation.



Fig. 6: Drill Rig and Auxiliary Equipment at LV01, 1Q 2022



#### Brine Sampling Collection and Analysis

Brine was sampled with three methods. Packer samples were obtained during drilling using a packer tool that seals the hole allowing for purging of drilling mud and injected fresh water, before collecting samples of brine that entered through slots in the packer tool using a double valve bailer. After a hole was completed and PVC casing installed, suction and bailer samples were collected from the cased well after hole development.

Samples were sealed in clean polyethylene bottles, labelled and package on site for shipment to ALS Life Science Chile laboratory in Santiago. The suite of element analysis covered B, Ca, Cu, Li, Mg, K, Na, CACO<sub>3</sub>, CL, SO4, TDS and Density. A detailed QA/QC procedure was applied for sample collection and analysis.

#### Sediment Sampling and Specific Yield Calculation

Core samples were obtained every 10m from all drill holes. Undisturbed diamond drillhole core samples with 3 to 5-inch length in both PQ and HQ diameter were obtained for testing (Fig. 7). Samples were prepared and sent to Daniel B. Stephens & Associated, Inc. laboratory (DBS&A) in New Mexico, USA.



Fig. 7: Core Samples for Porosity Laboratory Tests

Samples underwent Relative Brine Release Capacity laboratory tests, which predict the volume of solution that can be readily extracted from an unstressed geological sample. This method by itself is insufficient for calculating an effective porosity (specific yield) value for resource estimation as the laboratory test is performed on an unstressed core sample and doesn't account for the host lithology geotechnical condition. To attain a more realistic specific yield value, the rock quality designator ("RQD") logged during the drilling was used with a regression analysis. This provided specific yield values that are consistent with the basin lithology.



#### Resource Model

The sub-surface resource block model was constructed using the drill holes interceptions and the Transient Electro-Magnetic ("TEM") geophysics modelling based on surveys completed in May 2021 and March 2022, as shown in Fig. 8.



Fig. 8: Sub-Surface 3D Geological Model Construction

The 3D model was constrained vertically at the ceiling by the brine intervals intercepted in each of the four completed drill holes, and at the bottom by the basement intercepted in drill holes LV01 and LV02, with this model output shown in Fig. 9.





Fig. 9: 3D Geological Model Clipped to Drilling Intercept Derived Ceiling/Basement

## **Resource Categorization**

Sub-surface resource criteria was based on the recommended sampling grid distances of the complementary guide to the CH 20235 code to report resources and reserves in brine deposits. A factor in resource categorization is density of samples. Considering a higher density of samples above 4,112m a.s.l., the sub surface resource categorisation was split for above and below 4,112m a.s.l. The block model output for the above and below 4,112m a.s.l. level is shown in Figures 10 and 11.





Fig. 10: Resource Category Block Mode Output for Above A.S.L. 4,112m a.s.l.



Fig. 11: Resource Category Block Mode Output for Below A.S.L. 4,112m a.s.l.



#### **Resource Calculation**

The following tables summarize the Laguna Verde Resources calculation separated by resource category with the total resources presented in the final table 8. For the calculation of resources in Lithium Carbonate, an industry standard **5.323** factor was applied over the Li mass.

Total Resource Measured		
Surface Lagoon Volume	m³	59,490,027
Sub Surface Volume	m³	782,160,000
Sub Surface Porosity	%	11.4%
Total Effective Volume	m <sup>3</sup>	148,664,089
Average Grade Li	mg/l	211
Li Mass	tonne	31,432
Measured Resource (Lithium Carbonate) tonne 167,312		

 Table 4: Laguna Verde Total Measured Resources

Total Resource Indicated		
Volume	m³	5,789,760,000
Porosity	%	10.1%
Effective Volume	m³	582,991,075
Average Grade Li	mg/l	205
Li Mass	tonne	119,348
Indicated Resource (Lithium Carbonate)	tonne	635,290

 Table 5: Laguna Verde Total Inferred Resources

Total Resource Measured + Indicated		
Total Effective Volume	m <sup>3</sup>	731,655,164
Average Grade Li	mg/l	206
Li Mass	tonne	150,780
Measured + Indicated (Lithium Carbonate)	tonne	802,602

Table 6: Laguna Verde Total Measured + Indicated

Total Resource Inferred		
Volume	m³	6,340,080,000
Porosity	%	10.2%
Effective Volume	m <sup>3</sup>	649,676,630
Average Grade Li	mg/l	205
Inferred Resource (Lithium Carbonate)		709,278

Table 7: Laguna Verde Total Inferred Resources

Total Resource Measured + Indicated + Inferred		
Total Effective Volume	m <sup>3</sup>	1,381,331,794
Average Grade Li	mg/l	206
Li Mass	tonne	284,028
Measured + Indicated + Inferred Resource (Lithium Carbonate)	tonne	1,511,880

Table 8: Laguna Verde Total Measured + Indicated + Inferred Resources



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#### **Competent Person**

The information in this release relates to drilling results, geology, brine assays reports, sediment sampling / specific yield calculation and resource calculation are based on information compiled by Christian Gert Feddersen Welkner, who is an independent Qualified Person to the Company and is a Member of Comision Calificadora de Competencias en Recursos y Reservas Mineras Chile that is a 'Recognised Professional Organisation' (RPO). Mr Feddersen has sufficient experience that is relevant to the style of mineralization and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Feddersen consents to the inclusion in the press release of the matters based on his information in the form and context in which it appears.

The information communicated within this announcement is deemed to constitute inside information as stipulated under the Market Abuse Regulations (EU) No 596/2014 which is part of UK law by virtue



of the European Union (Withdrawal) Act 2018. Upon publication of this announcement, this inside information is now considered to be in the public domain. The person who arranged for the release of this announcement on behalf of the Company was Gordon Stein, Director and CFO.

#### Notes

CleanTech Lithium (AIM:CTL) is an exploration and development company, advancing the next generation of sustainable lithium projects in Chile. The Company's mission is to produce material quantities of battery grade lithium by 2024/2025, with near zero carbon emissions and low environmental impact, offering the EU EV market a green lithium supply solution.

CleanTech Lithium has two prospective lithium projects - Laguna Verde and Francisco Basin projects located in the lithium triangle, the world's centre for battery grade lithium production. They are situated within basins entirely controlled by the Company, which affords significant potential development and operational advantages. The projects have direct access to excellent infrastructure and renewable power. The Company has also further applied for an additional 119 exploration licences at Llamara, as a low cost and commitment greenfield project to complement the existing more advanced projects.

CleanTech Lithium is committed to using renewable power for processing and reducing the environmental impact of its lithium production by utilising Direct Lithium Extraction. Direct Lithium Extraction is a transformative technology which only removes lithium from brine, with higher recoveries and purities. The method offers short development lead times, low upfront capex, with no extensive site construction and no evaporation pond development so there is no water depletion from the aquifer or harm to the local environment.

\*\*ENDS\*\*



# JORC Code, 2012 Edition – Table 1 report template

# **Section 1 Sampling Techniques and Data**

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

Criteria	JORC Code explanation	Commentary
Criteria Sampling techniques	<ul> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or</li> </ul>	<ul> <li>Commentary</li> <li>Lagoon samples correspond to water brine samples from the surface lagoon, in an 800 m sampling grid, including eight (08) sampling duplicates in random positions. The samples were taken from 0.5 m depth and, for positions with above 5 m depth a bottom sample were also obtained.</li> <li>For every sample, two (02) liters of brine were obtained with a one-liter double valve bailer, using a new bailer for each sampling position. All materials and sampling bottles were first flushed with 100 cc of brine water before receiving the final sample.</li> <li>Sub surface brine samples were obtained with three methods: Packer sampling, PVC Casing Suction sampling and PVC Casing Bailer sampling.</li> <li>For the Packer sampling, a packer bit tool provided by the drilling company (Big Bear) was used. Once the sampling support was sealed, a purging operation took place until no drilling mud was detected After the purging operation, half an hour waiting took place to let brine enter to the drilling rods thru the slots in the packer tool before sampling with double valve bailer.</li> <li>Successive one-liter samples with half an hour separation were taken with a steel made double valve bailer. Conductivity-based TDS was measured in every sample with a Hanna Multiparameter model H198192. The last two samples that measure stable similar TDS values were considered as non-contaminated and identified as the Original and Reject samples.</li> </ul>
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	<ul> <li>Ine isst two samples that measure stable similar TDS values were considered as non-contaminated and identified as the Original and Reject samples.</li> <li>Packer samples were obtained every 18 m support due the tools movement involved to take every</li> </ul>	
	information.	sample.
		<ul> <li>PVC Casing Suction brine samples were extracted after the well casing with 3-inch PVC and silica gravel and the well development (cleaning) process. The well development includes an injection of a hypochlorite solution to break the drilling additives, enough solution actuation waiting time and then, purging of three well volumes operation to clean the cased well from drilling mud and injected fresh water.</li> </ul>



Criteria	JORC Code explanation	Commentary
		• The developing process was made by OSMAR drilling company using a small rig, a high-pressure compressor and 2-inch threaded PVC that can be coupled to reach any depth. The purging/cleaning operation is made from top to bottom, injecting air with a hose inside the 2-inch PVC and "suctioning" the water, emulating a Reverse Circulation system.
		• Once the well is clean and enough water is purged (at least three times the well volume) and also, is verified that the purged water is brine came from the aquifer, the PVC Casing Suction samples are taken from bottom to top, while the 2-inch PVC is extracte from the well. A 20-liter bucket is filled with brine an the brine sample is obtained from the bucket once the remaining fine sediments that could appear in th sample decant.
		<ul> <li>PVC casing Suction samples were taken every 6 m support due the disturbing and mixing provoked by the suction process. Conductivity-based TDS (Mul TDS) and Temperature °C are measured for every sample with the Hanna Multiparameter.</li> </ul>
		<ul> <li>After the development process and PVC Casing Suction sampling, a stabilization period of minimum 5 days take place before this sampling to let the we match the aquifer hydro-chemical stratigraphy.</li> </ul>
		• Sampling process was made by JCP Ltda. specialists in water sampling. Samples were taken from the interest depths with a double valve discardable bailer. The bailer is lowered and raised with an electric cable winch, to maintain a constant velocity and avoid bailer valves opening after taking the sample from the desire support. A new bailer was used for each well
		<ul> <li>Bailer samples were obtained every 6 m support to avoid disturbing the entire column during the sampling process. Conductivity-based TDS (Multi- TDS) and Temperature °C were measured for ever sample with the Hanna Multiparameter</li> </ul>
		<ul> <li>On all sampling procedures the materials and sampling bottles were first flushed with 100 cc of brine water before receiving the final sample</li> </ul>
		<ul> <li>Packer samples are available in LV01, LV02 and LV03. PVC Casing Suction samples are available in LV01. PVC Casing Bailer samples are available in LV01 and LV02. In LV04 there no brine samples available due operational timing and, to the onset of the Chilean winter</li> </ul>



Criteria	JORC Code explanation	Commentary
Drilling techniques	• 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).	<ul> <li>In Laguna Verde, diamond drilling with PQ3 diameter were used up to 320 m depth. Below that depth the drilling diameter was reduced to HQ3</li> <li>In both diameters a triple tube was used for the core recovery.</li> <li>Packer bit provided by Big Bear was used to obtain the brine sample (Except in drillhole LV04).</li> <li>Drillholes LV01, LV02 and LV04 were cased and habilitated with 3" PVC and silica gravel. LV03 was not possible to case due well collapse and tools entrapment</li> </ul>
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	Core recovery were assured by direct supervision and continuous geotechnical logging.
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>	<ul> <li>Continue geological and geotechnical logging took place during drilling</li> <li>For the surface lagoon brine samples, Ph and Temperature °C parameters were measured during the sampling.</li> <li>For the sub surface brine packer samples conductivity-based TDS and Temperature °C parameters were measured during the sampling</li> </ul>
Sub- sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures</li> </ul>	<ul> <li>During the brine samples batch preparation process, the samples were transferred to new sampling bottles. Standard (internal standard composed by known stable brine), Duplicates and Blank samples (distilled water) were randomly included in the batch in the rate of one every twenty original samples. After check samples insertion, all samples were re- numbered before submitted to laboratory. Before transferring each sample, the materials used for the transfer were flushed with distilled water and then shacked to remove water excess avoiding</li> </ul>



Criteria	JORC Code explanation	Commentary
	<ul> <li>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>	contamination. The author personally supervised the laboratory batch preparation process.
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 (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul> <li>Brine samples were assayed on ALS Life Science Chile laboratory, by Li, K, B, Mg, Ca, Cu and Na by ICP-OES, method described on QWI-IO-ICP-OES- 01 Edisión A, Modification 0 EPA 3005A; EPA 200.2.</li> <li>Total Density use the method described on THOMPSON Y, TROEH DE. Los suelos y su fertilidad.2002. Editorial Reverté S.A. Cuarta Edición. Págs.75-85.</li> <li>Chlorine detemination described on QWI-IO-CI-01 Emisión B mod. 1 Método basado en Standard Methods for the Examination of Water and Wastewater, 23st Edition 2017. Método 4500-CI-B QWI-IO-CI-01 Emisión B, mod. 1. SM 4500-CI- B, 22nd Edition 2012.</li> <li>Total Disolved Solids (TDS) with method describe on INN/SMA SM 2540 C Ed 22, 2012</li> <li>Sulfate according method described on INN/SMA SM 4500 SO4-D Ed 22, 2012</li> <li>Duplicates were obtained randomly during the brine sampling. Also, Blanks (distilled water) and Standards were randomly inserted during the laboratory batch preparation.</li> <li>The standards were prepared on the installations of Universidad Católica del Norte using a known stable brine according procedure prepared by Ad Infinitum. Standard nominal grade was calculated in a round robin process that include 04 laboratories. ALS life Sciences Chile laboratory was validated during the round robin process.</li> <li>All check samples were inserted in a rate of one each twenty original samples</li> <li>For the bathymetry a Garmin Echomap CV44 and the Eco Probe CV20-TM Garmin were used. The equipment has a resolution of 0.3 ft and max depth measure of 2,900 ft.</li> </ul>



Criteria	JORC Code explanation	Commentary
		• The bathymetry data was calibrated by density, using 1.14 g/cm3, modifying the propagation velocity from the nominal value 1,403 m/s (1 g/cm3 density at 0°C) to a corrected value of 1,660 m/s (1.14 g/cm3 density at 0°C), reducing the original bathymetry depth data in 15%
		<ul> <li>For the TEM Geophysical survey a Zonge Engineering and Research Organization, USA equipment was used, composed by a multipurpose digital receiver model GDP-32 and a transmitter TEM model ZT-30, with batteries as power source.</li> </ul>
		• For the first survey campaign, made in May, 2021 a coincident transmission / reception loop was used, were 167 stations use 100x100 m2 loop and 4 stations use 200x200 m2 loop, reaching a survey depth of 300 m and 400 m respectively, arranged in 11 lines with 400 m of separation.
		• For the second TEM geophysical survey made in March 2022, 32 TEM stations, arranged in 6 lines, with 400 m separation were surveyed. A coincident Loop Tx=Rx of 200 x 200 m2 that can reach investigation depth of 400 m were used for this survey
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>The assay data was verified by the author against the assay certificate.</li> <li>Data from bathymetry and geophysics were used as delivered by Servicios Geológicos GEODATOS SAIC</li> <li>Geological and geotechnical logs were managed by geology contractor GEOMIN and checked by the competent person</li> <li>Brine samples batches were prepared personally by the competent person. All data are in EXCEL files</li> </ul>
Location of data points	<ul> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>Samples coordinates were captured with non-differential hand held GPS</li> <li>The bathymetry coordinates were captured by differential Thales Navigation differential GPS system, consisting in two GPS model Promark_3, designed to work in geodesic, cinematic and static modes of high precision, where one of the instruments is installed in a base station and the other was on board the craft.</li> <li>The TEM geophysical survey coordinates were captured with non-differential hand held GPS.</li> </ul>



Criteria	JORC Code explanation	Commentary
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>Drillhole collars were captured with non-differential hand held GPS. Position was verified by the mining concessions field markings. Total station topographic capture of the drillhole collars is pending</li> <li>The coordinate system is UTM, Datum WGS84 Zone 19J</li> <li>Topographic control is not considered critical as the lagoon and its surroundings are generally flat lying and the samples were definitively obtained from the lagoon</li> <li>Geochemical lagoon samples spacing is approximately 800 m, covering the entire lagoon area</li> <li>Packer brine samples were taken every 18 m</li> <li>PVC Casing Suction samples were taken every 6 m</li> <li>For bathymetry two grids were used, one of 400 m and the other of 200 m in areas were the perimeter have more curves</li> <li>For TEM geophysical survey a 400 m stations distance was used</li> <li>The author believes that the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Resource Estimation</li> </ul>
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	The lagoon is a free water body and no mineralized structures are expected in the sub surface deposits
Sample security	The measures taken to ensure sample security.	<ul> <li>All brine samples were marked and keep on site before transporting them to Copiapó city warehouse</li> </ul>



Criteria	JORC Code explanation	Commentary
		<ul> <li>The brine water samples were transported without any perturbation directly to a warehouse in Copiapó city, were laboratory samples batch was prepared and stored in sealed plastic boxes, then sent via currier to ALS laboratory Antofagasta. All the process was made under the Competent Person direct supervision.</li> <li>ALS personnel report that the samples were received without any problem or disturbance</li> </ul>
Audits or reviews	<ul> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul> <li>The assay data was verified by the Competent Person against the assay certificate.</li> <li>The July 2021 JORC technical report were reviewed by Michael Rosko, MS PG SME Registered Member #4064687 from MONTGOMERY &amp; ASSOCIATES CONSULTORES LIMITADA</li> <li>In the report he concludes that "The bulk of the information for the Laguna Verde exploration work and resulting initial lithium resource estimate was summarized Feddersen (2021). Overall, the CP agrees that industry-standard methods were used, and that the initial lithium resource estimate is reasonable based on the information available".</li> </ul>
		<ul> <li>The September 2022 JORC Report LAGUNA VERDE UPDATED RESOURCE ESTIMATION REPORT hasn't been reviewed or audited.</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> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul> <li>CleanTech Lithium holds in Laguna Verde 2,437 hectares of Exploitation Mining Concessions that cover the entire lagoon area under an Option Agreement and 4,235 hectares of Exploration Mining Concessions outside the lagoon area.</li> <li>All prohibition certificates in favour of Atacama Salt Lakes SpA were reviewed by the Competent Person. The Competent Person relies in the Mining Expert Surveyor Mr, Juan Bedmar.</li> <li>All concession acquisition costs and taxes have been fully paid and that there are no claims or liens against them</li> <li>There are no known impediments to obtain the licence to operate in the area</li> </ul>
Exploration done by other parties	<ul> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul> <li>Exploration works has been done by Pan American Lithium and Wealth Minerals Ltda.</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	• Laguna Verde is a hyper saline lagoon that is classified as an immature clastic salar. The deposit is composed of a Surface Brine Resource, formed by the brine water volume of the surface lagoon and the Sub-Surface Resource, formed by brine water hosted in volcano-clastic sediments that lies beneath the lagoon
Drill hole Information	<ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:         <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <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</li> </ul>	<ul> <li>The following drillhole coordinates are in WGS84 zone 19 J Datum</li> <li>LV01 E549,432 N7,027,088 ELEV 4,429 m a.s.l.</li> <li>LV02 E553,992 N7,024,396 ELEV 4,358 m a.s.l.</li> <li>LV03 E549,980 N7,028,434 ELEV 4,402 m a.s.l.</li> <li>LV04 E556,826 N7024,390 ELEV 4,350 m.a.s.l.</li> </ul>



Criteria	C Code explanation Commentary	
	Competent Person should learly explain why this is the ase.	
Data aggregation methods	<ul> <li>For the Surface Brine Resource no low-grade or high-grade capping has been implemented to consistent nature of the brine assay data or high-grades are usually material nd should be stated.</li> <li>For the Sub Surface Resource a cut-off of 15 was applied in the above 4,112 m Block Mode resource reporting.</li> <li>For the Sub Surface Resource a cut-off of 15 was applied in the above 4,112 m Block Mode resource reporting.</li> <li>Only one auxiliary average composite sample deepest seven (07) PVC Casing Bailer sample well LV02 were used to calculate resources (from 4,074 m a.s.l. to the basement level at 3 a.s.l. in the LV02 drillhole near area</li> </ul>	e cut-off d due to 50 mg/l Li del for le from oles from (Inferred) 3,955 m
Relationship between mineralisatio n widths and intercept lengths	<ul> <li>The relationship between aquifer widths and lengths are direct, except in LV03 were a dip should be applied</li> <li>The geometry of the nineralisation with respect to the drill hole angle is known, its ature should be reported.</li> <li>it is not known and only the lown hole lengths are eported, there should be a lear statement to this effect ag 'down hole length, true width not known').</li> </ul>	intercept o of -60°
Diagrams	<ul> <li>Addressed in the report</li> <li>Addressed in the report</li> <li>with scales) and tabulations of intercepts should be included or any significant discovery eing reported These should include, but not be limited to a lan view of drill hole collar ocations and appropriate ectional views.</li> </ul>	
Balanced reporting Other	<ul> <li>All results have been included.</li> </ul>	abeen
substantive	neaningful and material, in a construction data and results have	



Criteria	JORC Code explanation	Commentary
exploration data	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.	
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale stepout drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>Once the access to Laguna Verde and to the wells LV02 and LV04 is open, re-take the development (cleaning) process and PVC Casing sampling in both wells.</li> <li>Build a new set of brine Standards from Laguna Verde lagoon or other known brine source and calculate their Standard Nominal Grades with a Round Robin process. Check the primary laboratory ALS accuracy in the process</li> <li>Once the LV02 and LV04 PVC Casing Suction and Bailer Sampling is complete send this samples to laboratory for assaying, including QA/QC check samples insertion. With the laboratory results, re calculate the Laguna Verde resources including all up to date assays information and report them in an update JORC Technical report.</li> <li>Drilling to be undertaken upgrade Inferred Resources to Measured + Indicated and Indicated Resources to Measured strom wells to determine, aquifer properties, expected production rates, upgrade Resources to Reserves and infrastructure design</li> <li>Lagoon recharge dynamics be studied to determine the water balance and subsequent production water balance. For instance, simultaneous data recording of rainfall and subsurface brine level fluctuations to understand the relationship between rainfall and lagoon recharge, and hence the brine recharge dynamics of the Lagoon</li> </ul>



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

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

Criteria	JORC Code explanation	Commentary
Database integrity	<ul> <li>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</li> <li>Data validation procedures used.</li> </ul>	<ul> <li>Cross-check of laboratory assay reports and Database</li> <li>QA/QC as described in Section 4.7</li> <li>All databases were built from original data by the Competent Person</li> </ul>
Site visits	<ul> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul> <li>A site visit was undertaken by the Competent Person from June 2nd to June 4th, 2021. The outcome of the visit was a general geological review and the lagoon water brine geochemical sampling that lead to the July 2021 JORC Technical Report</li> <li>The January to May 2022 drilling campaign was continually supervised by the Competent Person.</li> </ul>
Geological interpretatio n	<ul> <li>Confidence in (or conversely, the uncertainty of ) the geological interpretation of the mineral deposit.</li> <li>Nature of the data used and of any assumptions made.</li> <li>The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> <li>The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>The factors affecting continuity both of grade and geology.</li> </ul>	<ul> <li>For the Surface Brine Resource, the interpretation is direct and there is no uncertainty.</li> <li>For the Sub-Surface Resource, the geological interpretation was made based in the TEM study and gravimetry (SRK, 2011). The lithological interpretation was confirmed by hydrogeological drilling made outside the concessions area.</li> <li>Low resistivities are associated with sediments saturated in brines, but also with very fine sediments or clays. The direct relationship of the low resistivity layer with the above hypersaline lagoon raise the confidence that the low resistivities are associated with brines.</li> </ul>
Dimensions	• The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	<ul> <li>Drillholes confirm the geological interpretations</li> <li>For the Surface Brine Resouce the lagoon dimensions are 14,682,408 m<sup>2</sup> of area with depths ranging from 0 m to 7.18m with an average depth of 4.05 m</li> <li>The Sub-Surface Brine Resource is a horizontal lens closely restricted to the lagoon perimeter with an area of approximately 55 km<sup>2</sup> and depths for more than 300 m, from approximately 4,309 m a.s.l. to the basement level.</li> </ul>
Estimation and modelling techniques	The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and	• For the Surface Brine resource, the surface lake brine water volume is directly obtained by the bathymetry study detailed on Section 4.2.



#### Criteria JORC Code explanation

maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.

- The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.
- The assumptions made regarding recovery of byproducts.
- Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).
- In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.
- Any assumptions behind modelling of selective mining units.
- Any assumptions about correlation between variables.
- Description of how the geological interpretation was used to control the resource estimates.
- Discussion of basis for using or not using grade cutting or capping.
- The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.

#### Commentary

- Lithium (mg/l) samples values are in general homogeneously distributed along the lagoon with a narrow value distribution. the lagoon is a free water body where the ionic content is dynamic for every specific position, there is no point in estimate the lake lithium content via Kriging or other geostatistical method. The use of the total samples average value 245.794 mg/l was used for the Surface Brine Resource Estimation.
- The Sub-Surface geological 3D model was built modifying the 50 m plans constructed for the July 2021 Inferred resource, considering the drillholes interceptions and the TEM geophysics continuity from all the available geophysical sections (in general < 4 Ohm-m zones). The constructed 3D model was clipped above the brine aquifer ceiling surface, formed by the first brine intercepts on the drillholes and also, below the basement surface that was constructed using the basement intercepts on drillholes LV01 and LV02 and structural geological information. This geological 3D model corresponds to the Sub-Surface Brine Ore Volume
- Two block models were constructed for resource calculation due the different type of brine samples used for resource estimation, one above the 4,112 m a.s.l. and the other, below 4,112 ma.s.l.
- The block model above level 4,112 m a.s.l. properties are:
  Block size: 200 m x 200 m x 6 m.
  Block Model Origin: 547,000 East, 7,026,000 North, Level 4,328 m a.s.l.
  N° Columns: 72
  N° Rows: 40
  N° Levels: 36
  Rotation: 20° Clockwise
- The block model below level 4,112 m a.s.l. properties are: Block size: 200 m x 200 m x 6 m. Block Model Origin: 547,000 East, 7,026,000 North, Level 4,112 m a.s.l. N° Columns: 72 N° Rows: 40 N° Levels: 35 Rotation: 20° Clockwise



Criteria	JORC Code explanation	Commentary
		<ul> <li>On both block models the individual block variables are:</li> </ul>
		Rock Type: 0=No Ore, 1= Brine Ore Density Percent Economic Material Li (Lithium) Mg (Magnesium) K (Potash) B (Boron) SO4 Ca (Calcium) Category: 1=Measured, 2=Indicated and 3=Inferred Porosity Elevation
		• The traditional Inverse to the Square Distance method to estimate the block variables was used. To accomplish this, the samples from the Sub-Surface Assay Resource Database were manually assigned to their correspondent block levels on both block models. Once assigned, the block variable values were calculated by levels with the correspondent assigned samples and their horizontal distances from the individual block to estimate. All calculations were performed in EXCEL files.
		<ul> <li>The Sub-Surface Assay Resource Database was constructed according the following considerations:</li> </ul>
		<ul> <li>PVC casing Bailer samples from drillholes LV01 and LV02 were used from level 4,309 m a.s.l., down to 4,112 m a.s.l.</li> </ul>
		<ul> <li>Samples evidently contaminated with drilling water were extracted from LV02 preliminary PVC Casing Bailer samples and the gaps were replaced with the correspondent LV02 Packer sample.</li> </ul>
		• Packer samples from LV01 and LV03 drillholes plus the deepest seven (07) PVC Casing Bailer samples from well LV02 and, a final auxiliary average composite sample from the seven before mentioned samples were used to calculate resources below level 4,112 m a.s.l. to the basement level at 3,955 m a.s.l.
		• The validation process was mainly visual check in plans along block model levels and, on the estimation EXCEL files



Criteria	JORC Code explanation	Commentary
		<ul> <li>For both block models, the blocks inside the Sub- Surface Brine Ore Volume have variable Rock Type = 1 (Brine Ore). Only blocks with Rock Type = 1 were reported as resource</li> </ul>
Moisture	• Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	Not applicable for brine resources
Cut-off parameters	<ul> <li>The basis of the adopted cut- off grade(s) or quality parameters applied.</li> </ul>	<ul> <li>A cut-off of 150 mg/l Li was used to report resources in the Above 4,112 m block model, mainly to discount blocks estimated with low grade samples located in the fresh water / brine transition zone</li> </ul>
<i>Mining factors or assumptions</i>	<ul> <li>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.</li> </ul>	<ul> <li>Mining will be undertaken by pumping brine from production wells and re-injection</li> <li>Pumping tests should be undertaken to ascertain hydraulic properties of the host aquifer</li> </ul>
Metallurgical factors or assumptions	The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	<ul> <li>Direct Lithium Extraction technology (DLE) with spent brine reinjection is planned for Laguna Verde. Only production/reinjection wells and brine mixing ponds are planned to install on the near lagoon area. The main plant installations are planned to be located at approximately 8 km to the south west</li> </ul>



Criteria	JORC Code explanation	Commentary
Environmen- tal factors or assumptions	<ul> <li>Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.</li> </ul>	<ul> <li>The main environmental impacts expected is the main plant installations, estimated to be located at 8 km to the south west of the lagoon edge. In the near lagoon area, the impact is the surface disturbance associated with production wells and brine mixing ponds. These impacts are not expected to prevent project development</li> </ul>
Bulk density	<ul> <li>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</li> <li>The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.</li> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	• Undisturbed diamond drillhole core samples with 3 to 5-inch length in both PQ and HQ diameter were obtained every 10 m from all drillholes for porosity testing. Samples were prepared and sent to Daniel B. Stephens & Associated, Inc. laboratory (DBS&A) in New Mexico, USA. Samples underwent Relative Brine Release Capacity laboratory tests, which predict the volume of solution that can be readily extracted from an unstressed geological sample. This method by itself is insufficient for calculating an effective porosity (specific yield) value for resource estimation as the laboratory test is performed on an unstressed core sample and doesn't account for the host lithology geotechnical condition. To attain a more realistic specific yield value, the rock quality designator ("RQD") logged during the drilling was used with a regression analysis. This provided specific yield values that are consistent with the basin lithology.
Classificatio n	<ul> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution</li> </ul>	<ul> <li>For the Surface Brine Resource, the data is considered sufficient to assign a Measured Resource classification</li> <li>For the Sub-Surface Resources classification, the considered criteria were based on the recommended sampling grid distances of the complementary guide to CH 20235 code to report resources and reserves in brine deposits from the Comision Calificadora en Competencias en Recursos y Reservas Mineras, Chile.</li> </ul>



Criteria	JORC Code explanation	Commentary
	of the data). • Whether the result appropriately reflects the Competent Person's view of the deposit.	• Besides that, the Sub-Surface Resources categorization is dependent of the brine samples availability and their quality in terms of confidence. Considering the above, the Sub-Surface resources categorization conditions are:
		<ul> <li>For the Above 4,112 m a.s.l. block model. Blocks estimated at 1,250 m around LV01 PVC Casing Bailer samples were considered as MEASURED Blocks estimated between 1,250 m to 3,000 m around LV01 PVC Casing Bailer samples were considered as INDICATED Blocks estimated at 3,000 m around the LV02 PVC Bailer samples were considered as INDICATED The rest of the blocks that don't match the above conditions were considered as INFERRED</li> </ul>
		<ul> <li>For the Below 4,112 m a.s.l. block model. Blocks estimated at 3,000 m around LV01 and LV03 Packer samples were considered as INDICATED Blocks estimated at 3,000 m around the available LV02 PVC Bailer samples (discounting the AVERAGE auxiliary sample) were considered as INDICATED. The rest of the blocks that don't match the above conditions were considered as INFERRED</li> </ul>
Audits or reviews	• The results of any audits or reviews of Mineral Resource estimates.	<ul> <li>The result reflects the view of the Competent Person</li> <li>The July 2021 JORC technical report were reviewed by Michael Rosko, MS PG SME Registered Member #4064687 from MONTGOMERY &amp; ASSOCIATES CONSULTORES LIMITADA</li> </ul>
		• In the report he concludes that "The bulk of the information for the Laguna Verde exploration work and resulting initial lithium resource estimate was summarized Feddersen (2021). Overall, the CP agrees that industry-standard methods were used, and that the initial lithium resource estimate is reasonable based on the information available".
		<ul> <li>The September 2022 JORC Report LAGUNA VERDE UPDATED RESOURCE ESTIMATION REPORT hasn't been reviewed or audited.</li> </ul>
Discussion of relative accuracy/ confidence	• Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an	• The estimated tonnage represents the in-situ brine with no recovery factor applied. It will not be possible to extract all of the contained brine by pumping from production wells. The amount which can be extracted



Criteria	JORC Code explanation	Commentary
	<ul> <li>approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.</li> <li>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</li> <li>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</li> </ul>	<ul> <li>depends on many factors including the permeability of the sediments, the drainable porosity, and the recharge dynamics of the aquifers.</li> <li>No production data are available for comparison</li> </ul>

