

## ASX ANNOUNCEMENT

21 December 2020

# Compelling Preliminary Economic Assessment Results for 100% owned Hombre Muerto West (HMW) Project in Catamarca, Argentina

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### Highlights:

- Tier 1, world class lithium brine asset now also in the first quartile of global lithium cost production curve
- Long life production (40 years+) of 20,000tpa of battery grade lithium carbonate equivalent (LCE)
- Robust economic results, with unlevered pre-tax NPV of US\$1,011m (8% discount rate) and IRR of 22.8% with a 4.3 year payback period
- Cash cost of production for Li<sub>2</sub>CO<sub>3</sub> of US\$3,518/t positions Galan as one of the lowest in the industry
- Initial capital cost of US\$439m (US\$338m without 30% contingency)
- Average life-of-mine annual pre-tax EBITDA of US\$174m (full production period)
- Roskill average real long term LCE price (2020-2040) of US\$11,687/t LCE used as the basis for the economic assessment
- Scoping Study/PEA completed with assistance of highly regarded, professional services engineering consultants
- PEA only utilises ~60% of the current HME Mineral Resource providing significant flexibility to increase future lithium carbonate production rates
- Completion of Del Condor acquisition provides potential financial upside to optimise the Project layout in next study phase, with ability to reduce Opex and Capex estimates further

Galan Lithium Limited (ASX: GLN) (**Galan or the Company**) is very pleased to announce the results of a Preliminary Economic Assessment (**PEA**) for its 100% owned Hombre Muerto West Project in Catamarca Province, Argentina. The PEA, at a minimum, complies with the Canadian NI 43-101 regulation known as a PEA and is equivalent to a JORC Scoping Study.

The PEA process has provided significant economic outcomes for the HMW Project which Galan believes can be finessed and enhanced further to optimise the Project's obvious potential.

The Study estimated a production profile of 20,000 tonnes per annum of battery grade lithium carbonate product. The analysis provides outcomes that are considered very competitive with compelling results for the lithium industry.

The preparation of the Project’s PEA was carried out by several well regarded consultants. The mineral resource estimate was prepared by SRK, the lithium recovery method was designed by Ad-Infinitem, while Worley Chile reviewed the potential recovery method, the project’s potential layout and infrastructure, capital and operating cost estimates and preliminary economic evaluation. The other sections of the study were managed by employees of Galan Lithium Limited.

Key financial highlights are presented in Table 1.

*Table 1: Preliminary Economic Assessment Results*

Parameters	Units	Values
<b>Lithium Carbonate Production</b>	Tonnes/year	20,000
<b>Project Life Estimate</b>	Years	40
<b>Capital Cost (CAPEX)</b>	US\$ m	439
<b>Capital Cost (ex-contingency)</b>	US\$ m	338
<b>Average Annual Operating Cost (OPEX)</b>	US\$/tonne	3,518
<b>Average Li<sub>2</sub>CO<sub>3</sub> Selling Price (2020-2040)</b>	US\$/tonne	11,687
<b>Average Annual EBITDA (NPV)</b>	US\$m	174
<b>Pre-Tax Net Present Value (NPV)</b>	US\$m	1,011
<b>After-Tax Net Present Value (NPV)</b>	US\$m	684
<b>Pre-Tax Internal Rate of Return (IRR)</b>	%	22.8
<b>After-Tax Internal Rate of Return (IRR)</b>	%	19.1
<b>Payback Period (After-Tax)</b>	Years	4.3

Galan’s Managing Director Juan Pablo (JP) Vargas de la Vega said:

“We are delighted by the compelling and more than competitive results of the HMW Project PEA. Our beliefs are continually being confirmed by reputable companies from exploration to initial engineering. We have proven high grade, low impurities, a considerable resource size and now being potentially among the lowest cost of future producers in the lithium industry, especially with a low carbon footprint. I would like to thank everyone in Galan’s teams in Argentina, Chile and Australia, and the strong Board support that was shown to take this study forward. Special thanks to the engineering team in Chile who understood our challenge and worked with us to deliver the study on time and on budget.

Galan now has a solid commercial base to move forward with a clean, proven, low tech and low energy solution with no JV or non-statutory royalties involved. We have now a strong base to review and reduce Opex and Capex including the substantial US\$101m of contingency (30%). We have learnt enormously about HMW on this journey and will continue to apply our findings in optimising our next steps at the Pre-Feasibility and Feasibility studies. We remain with the conviction to bring the HMW Project to market in the shortest possible time to hopefully be supplying lithium for the future lithium requirements needed for batteries in electric vehicles.”

### **Cautionary Statement**

The Preliminary Economic Assessment (PEA) is a preliminary technical and economic study (equivalent to a JORC Scoping Study) of the potential viability of the HMW Lithium Brine Project required to reach a decision to proceed with more definitive studies. It is based on preliminary/low-level technical and economic assessments that are not sufficient to support the estimation of Ore Reserves or provide certainty that the conclusions/results of the PEA will be realised. Further exploration and evaluation work and appropriate studies are required before Galan will be in a position to estimate any Ore Reserves or to provide any assurance of an economic development case.

The economic analysis results should be treated as preliminary in nature and caution should be exercised in their use as a basis for assessing project feasibility. The PEA was based on material assumptions including assumptions about the availability of funding. While Galan considers all of the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the range of outcomes indicated by the PEA will be achieved.

To achieve the range of proposed feasibility studies and potential mine development outcomes indicated in the PEA, additional funding will be required. Investors should note that there is no certainty that Galan will be able to raise funding when needed. It is also possible that such funding may only be available on terms that may be dilutive to or otherwise affect the value of Galan's existing shares. It is also possible that Galan could pursue other 'value realisation' strategies such as a sale, partial sale or joint venture of the project. If it does, this could materially reduce Galan's proportionate ownership of the project.

All of the material included in the mining schedules used in the PEA are within Galan's Indicated Mineral Resources.

Process and engineering works for the PEA were developed to support capital and operating estimates (and following AUSIMM Guidelines for this study level), and given the preliminary and confidential nature of the plant information, the capital cost margin of error is  $\pm 30\%$  on the 'factored cases' estimated figures and operating cost is  $\pm 30\%$ . Key assumptions used in the PEA are outlined in the body of this announcement. Galan has concluded it has a reasonable basis for providing the forward-looking statements in this announcement.

The Mineral Resources information in this report is extracted from the ASX announcement entitled "Huge Increase in Hombre Muerto West (HMW) Indicated Resource – Now Over 2 Million Tonnes" dated 17 November 2020 available at [www.galanlithium.com.au](http://www.galanlithium.com.au) and [www.asx.com](http://www.asx.com). Galan confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and, in the case of Mineral Resources or Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. Galan confirms that the form and context in which the Competent Person's findings are presented have not been materially modified.

Given the uncertainties involved, all figures, costs and estimates quoted are approximate values and within the margin of error range expressed in the relevant sections throughout this announcement. Investors should not make any investment decisions based solely on the results of the PEA.

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## **Project Background**

### **Location**

The Hombre Muerto West (HMW) Project is part of the Hombre Muerto basin, one of the most globally prolific salt flats, located in the Argentinean Puna plateau of the high Andes mountains at an elevation of approximately 4,000 m above sea level (asl). The project is in the geological province of Puna, 90 km north of the town of Antofagasta de la Sierra, province of Catamarca, Argentina as shown in Figure 1. The HMW Project is located to the West and South of the Salar del Hombre Muerto.

The HMW Project is in close proximity to other world class lithium projects owned by Galaxy Resources, Posco and Livent. It is around 1,400 km northwest of the capital of Buenos Aires and 170 km west-southwest of the city of Salta (in a straight line).

### **Tenements**

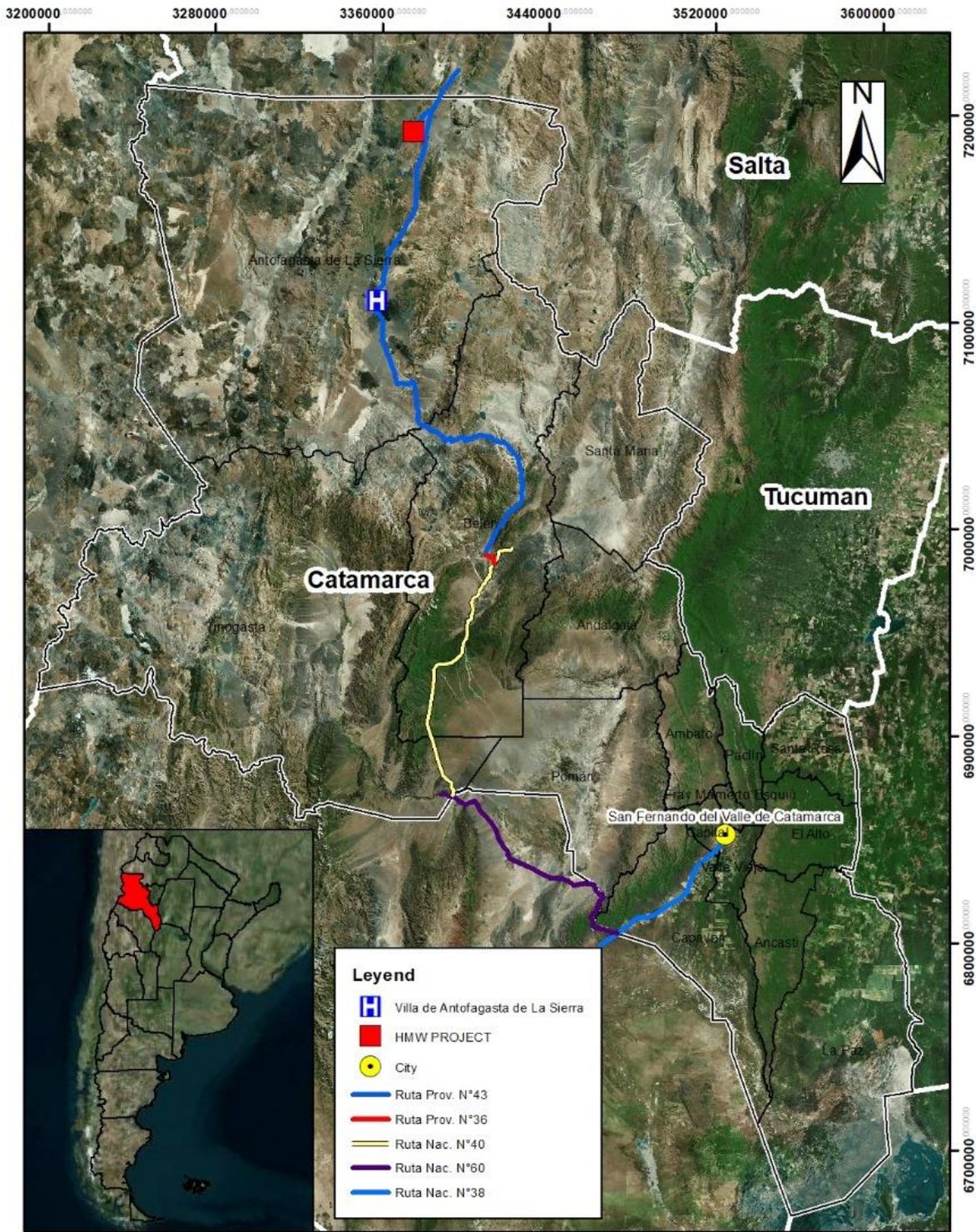
The HMW Project originally comprised six exploration permits Rana de Sal (I,II and III), Pata Pila, Catalina and Deceo III (Figure 2), covering an area of ~9,493 hectares. It also includes the Santa Barbara suite of concessions. The Company also recently completed the purchase of a 100% interest in the Del Condor and Pucara lithium brine salar projects that abut Galan's original HMW tenure in Argentina (ASX:GLN 4 November 2020). The Del Condor and Pucara concessions comprise two claim blocks totalling 1,804 hectares, included in Figure 2. These two concessions have not been used for the development of this study because at the completion of engineering design, the acquisition of these tenements was not completed.

Design work shows the HMW brine wells will be located in the Rana de Sal and Pata Pila areas. The main objective of these wells is the extraction of brine, rich in lithium, from the Salar which is then pumped to the first preconcentration solar evaporation ponds.

### **Climate**

The climate in the HMW Project area is classified as cold, high altitude desert with sparse vegetation. Solar radiation is intense (especially during the summer months of October to March) resulting in high evaporation rates. Very strong winds are also typical, reaching speeds up to 80 km/h during the dry season. However, in summer, warm to cool winds normally develop after midday and reduce in strength during the evening hours.

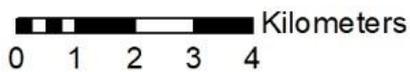
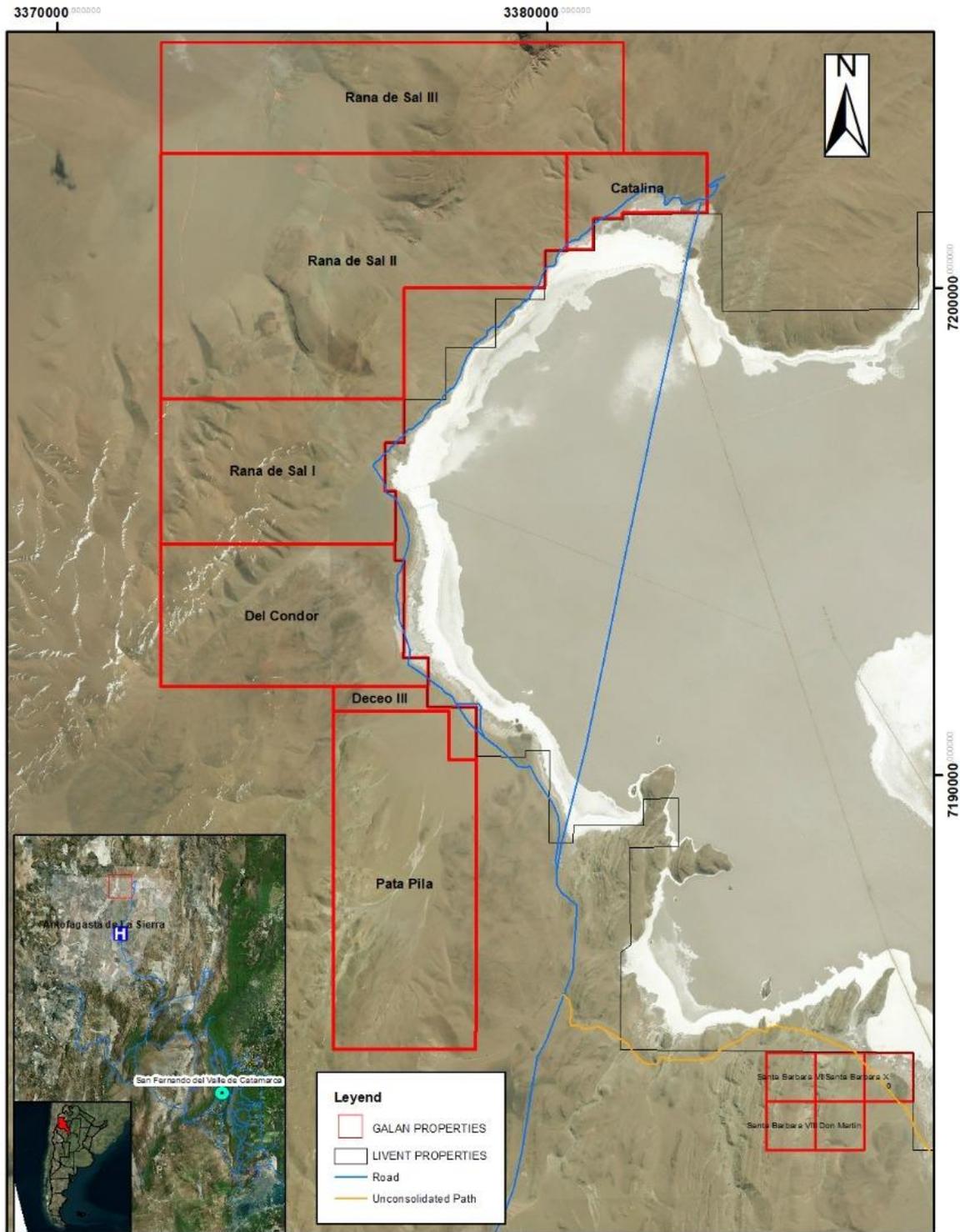
Precipitation data from meteorological sources showed a mean annual precipitation of around 86.4 mm. Precipitation typically occurs between the months of December and March, during which about 82% of annual rain fall occurs. From April to November, it is typically dry with average daily mean temperatures of approximately 5.3°C



0 12,525 50 75 100 Kilometers

	<b>HOMBRE MUERTO WEST PROJECT CATAMARCA - ARGENTINA</b>	
	<b>LOCATION MAP</b>	
Projection: Gauss Kruger - Faja 2 POSGAR 94	Date: September 20	

Figure 1: HMW Project, Hombre Muerto Salar, Catamarca Argentina



	<b>HOMBRE MUERTO WEST PROJECT CATAMARCA - ARGENTINA</b>	
	<b>MINING PROPERTIES MAP</b>	
	Projection: Gauss Kruger - Faja 3 POSGAR 94	Date: September 20

Figure 2: Hombre Muerto West Properties Map

## Resource Estimate

The mineral resource estimation was undertaken by SRK Consulting (Australasia) Pty Ltd (SRK) and was based upon results from drill holes within the Pata Pila and Rana de Sal tenement holding at Hombre Muerto West for a total of 1,054 metres (see ASX: GLN 17 November 2020 for a summary of drill data). The mineral resource estimates undertaken by SRK were determined for lithium and potassium. Lithium is reported as lithium carbonate (Li<sub>2</sub>CO<sub>3</sub>) equivalent, and potassium as potassium chloride (KCl). Table 2 below provides a summary of the resource reported in accordance with the JORC Code guidelines. According to SRK, the Hombre Muerto West Mineral Resource represents geologically well-defined zones of high-grade lithium mineralisation. It is comprised of significant mineralised hydrogeologic domains. The units within the domains show some variation in thickness along strike and depth.

The Mineral Resource estimate (see ASX: GLN 17<sup>th</sup> November 2020) displayed in Table 2 was used for the preparation of the PEA of HMW Project. The total mine of life production is 40 years to produce around 800kt LCE. The Study assumes a Li recovery of 58.5%, hence the total initial resource to feed the project is estimated at 1.37Mt LCE. This presents around 60% of the total resource of HMW. As a result, the Project has the potential to increase its production while maintaining a long mine life.

*Table 2: Mineral Resource Statement for Hombre Muerto West (November 2020)*

Resource Category	Brine Vol. (Mm <sup>3</sup> )	In situ Li (Kt)	Avg. Li (mg/l)	LCE (Kt)	Avg. K (mg/l)	In situ K (Kt)	KCl Equiv. (Kt)
<b>Hombre Muerto West: Sand Domain</b>							
Indicated	430	407	945	2,166	8,720	3,753	7,157
<b>Hombre Muerto West: Gravel Domain</b>							
Indicated	12	12	947	61	8,804	107	204
<b>Hombre Muerto West: Halite Domain</b>							
Indicated	8	8	946	40	8,846	70	134
<b>HMW Total</b>	<b>450</b>	<b>426</b>	<b>946</b>	<b>2,267</b>	<b>8,725</b>	<b>3,931</b>	<b>7,496</b>

NB.; no cut-off grade for HMW. These results refer to the drainable porosity, the specific yield (SY) values used are as follows: Sand – 12.5%, Gravel – 6% and Halite – 4%. There may be minor discrepancies in the above table due to rounding. The conversion for LCE = Li x 5.3228, KCl = K x 1.907.

The above resource does not include the Catalina and Santa Barbara concessions.

## MINING AND PROCESS METHODOLOGY

### Brine Extraction

The brine extraction will be conducted through seven production wells. The raw brine will be pumped directly to the first pond of the evaporation ponds system. The total average raw brine flow required to feed the evaporation ponds system is 203 l/s.

### Recovery Method

The process defined and designed for the Hombre Muerto West Project is mainly based on conventional evaporation ponds and a lithium carbonate plant, all defined to produce 20,000 tpa of battery grade Li<sub>2</sub>CO<sub>3</sub>.

The process considers obtaining brine from wells located both in the Rana de Sal and Pata Pila areas, within the properties of the HMW Project. This brine will be pumped to the pre-concentration ponds, from where the first pond will be fed. Through the action of solar radiation, wind and other environmental conditions, water will evaporate from the brine, generating a change in the equilibrium point of this liquid, which will prompt the precipitation of salts and the concentration of lithium present in this brine. The addition of reagents was designed to facilitate the precipitation of impurities but not the lithium present in the brine. The overall Li recovery of the process design is 58.5%.

After the mixing with the reagent, the brine will feed into the last pre-concentration ponds, and then transferred to the concentration ponds, for more lithium concentration of the brine. Once this brine reaches a lithium concentration suitable for the treatment in the lithium carbonate plant, it will be stored in reservoir ponds to be available to feed the  $\text{Li}_2\text{CO}_3$  Plant.

The  $\text{Li}_2\text{CO}_3$  Plant in its first stages removes all remaining contaminants in the brine, such as Ca and Mg. When all contaminants are removed, brine will feed a lithium precipitation stage, through the use of soda ash ( $\text{Na}_2\text{CO}_3$ ). Since the aim of this plant is the production of battery grade  $\text{Li}_2\text{CO}_3$ , purification is carried out through stages of bicarbonation and crystallisation.

Finally, the battery grade  $\text{Li}_2\text{CO}_3$  is dried, reduced in size and packed, according to clients/market's requirement, and stored in a purposely built warehouse to be transported to the final client. Figure 3 presents a simplified Process Diagram of the of the HMW Project, showing the main two (2) areas of the process, these are the evaporation ponds system and the lithium carbonate plant, as well as the main inlet and outlet flows of the process.

The summary of the main areas of the process design criteria are described as follows:

#### Preconcentration Ponds

Ponds that are at the beginning of the evaporation process of the brine, and where the main salts that precipitate in them are mainly halite ( $\text{NaCl}$ ) salts. These ponds have a larger area than subsequent ponds. From one of the preconcentration ponds, a reagent plant will be fed with brine to allow the reaction between ions of elements present in the brine and reagent to facilitate the precipitation of impurities. The reagent plant will then on feed the last of the preconcentration ponds, where halite and gypsum salts will precipitate. The brine route continues through the evaporation system feeding the next type of ponds, defined as concentration ponds.

The preconcentration ponds will be arranged in one-string, passing brine from one pond to the next consequently through both pumping and gravitational flow. The total number of preconcentration ponds to be considered by the process design is nineteen (19).

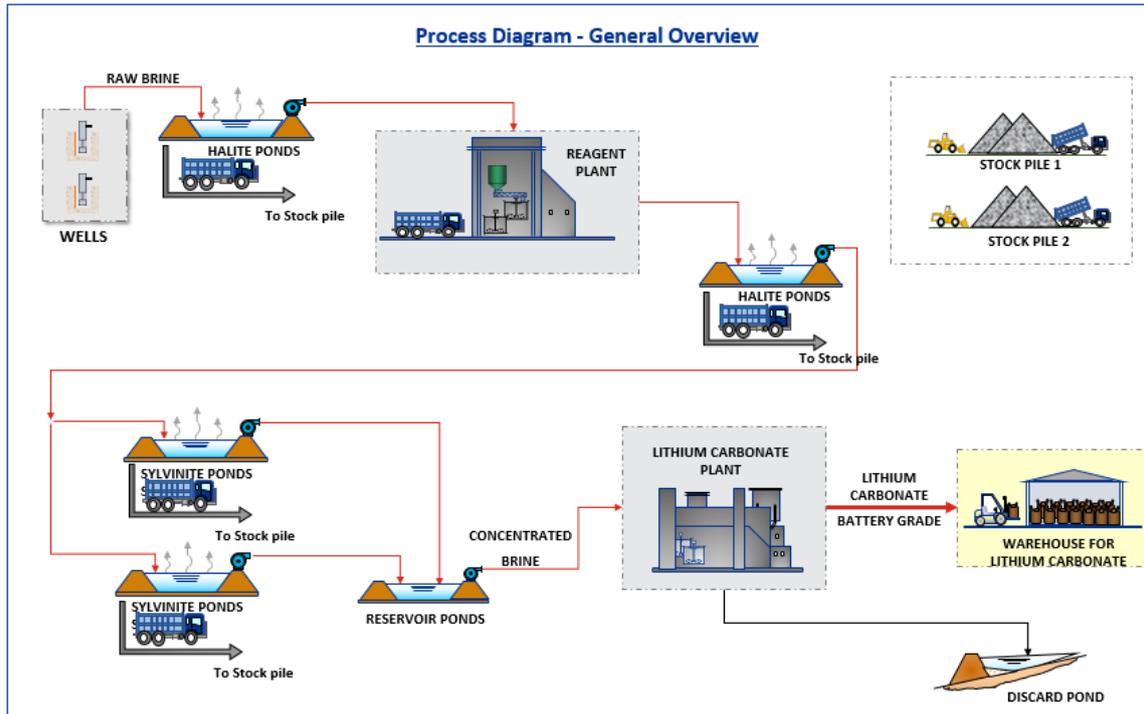


Figure 3: Process Diagram Hombre Muerto West Project

### Concentration Ponds

Ponds that are further down the evaporation process of the brine and are fed with concentrated brine coming from the preconcentration ponds, to continue the evaporation process. These ponds are smaller in size and are fed with lower flow values than the preconcentration ponds. In these ponds, halite (NaCl), sylvite (KCl) and other salts precipitate. When the brine reaches a lithium concentration suitable for the lithium carbonate plant, it is pumped to reservoir ponds, which will be used as a buffer pond to feed the  $\text{Li}_2\text{CO}_3$  Plant.

Concentration ponds will be arranged in two parallel strings, dividing the inlet flow from the preconcentration ponds equally and feeding both strings simultaneously. This will allow a more detailed control of the flow between the concentration ponds, as well as a specific chemical control between the ponds. The total number of concentration ponds to be considered by the process design is six (three ponds per string).

Figure 4 displays the brine flow diagram of the evaporation ponds system.

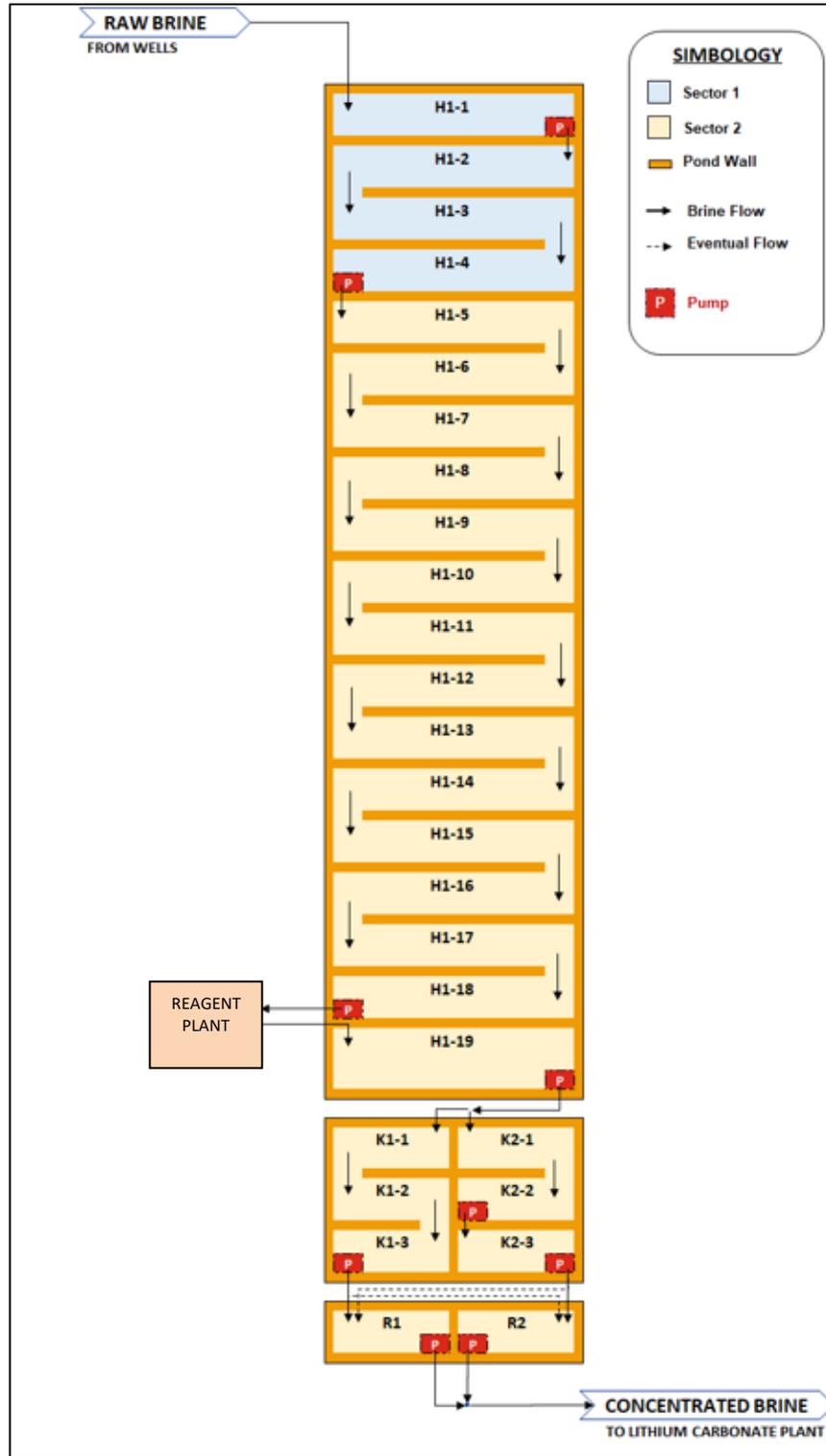


Figure 4: Brine Flow Diagram of the Evaporation Ponds System

### Lithium Carbonate Plant

The concentrated brine will feed the  $\text{Li}_2\text{CO}_3$  plant from the reservoir ponds. This brine still contains some contaminants, which must first be removed, to then precipitate and purify the lithium carbonate, to obtain battery grade quality of  $\text{Li}_2\text{CO}_3$  product.

Concentrated brine feeds the first stage of the  $\text{Li}_2\text{CO}_3$  Plant, where the brine is mixed in an agitated reactor with a solution of soda ash ( $\text{Na}_2\text{CO}_3$ ), which will react with the magnesium and calcium still present in the brine, generating a solid of magnesium carbonate ( $\text{MgCO}_3$ ) and calcium carbonate ( $\text{CaCO}_3$ ). Mother liquor is also recirculated to this stage (specifically to the reactor), since its high content of carbonates ( $\text{CO}_3^{2-}$ ) will reduce the consumption of soda ash. The main objective of this stage is to precipitate as much magnesium as possible. This reaction occurs at  $60^\circ\text{C}$ .

Outlet brine from the 1st purification stage, is fed to the 2nd purification stage to remove remaining magnesium and calcium. The brine is fed into an agitated reactor, together with a solution of soda ash and lime slurry, reagents which will react with the contaminants in the brine and precipitate as magnesium hydroxide ( $\text{Mg}(\text{OH})_2$ ) and calcium carbonate ( $\text{CaCO}_3$ ). This reaction also occurs at  $60^\circ\text{C}$ . A polishing filter removes the fine solids.

After the two stages of impurities removal, the polished, concentrated lithium brine is fed to agitated reactors that operate at  $85^\circ\text{C}$  with the addition of a soda ash solution, to precipitate the lithium present in the brine as lithium carbonate. The high temperatures favor the precipitation of  $\text{Li}_2\text{CO}_3$ , and the agitation in these reactors is key for the formation of adequate  $\text{Li}_2\text{CO}_3$  crystals. From the outlet flow of the reactors, a pulp that contains precipitated solid  $\text{Li}_2\text{CO}_3$  as well as liquid solution is sent to a solid/liquid separation step, the solid  $\text{Li}_2\text{CO}_3$  is also washed on this stage.

The washed  $\text{Li}_2\text{CO}_3$  is sent to the next and final lithium carbonate purification stage, and all liquids generated in this stage are returned to the 1st purification stage as mother liquor 1.

To guarantee the production of lithium carbonate that is within the battery grade specs, it is necessary to eliminate some contaminants that are left in the precipitated  $\text{Li}_2\text{CO}_3$ . To achieve this target, a final  $\text{Li}_2\text{CO}_3$  Purification stage is defined for the process, which is divided into the following two (2) sub-stages:

#### Bicarbonation

In this sub-stage, the solid  $\text{Li}_2\text{CO}_3$  is re-dissolved in water, and fed to a pressurised agitated reactor, with the addition of  $\text{CO}_2$ . The specific temperature and pressure conditions within the reactor ensure that the  $\text{CO}_2$  dissolves easily in the solution and reacts with the lithium carbonate, forming dissolved lithium bicarbonate. The solution with soluble lithium bicarbonate is then fed to a solid/liquid removal stage, to remove solid impurities, and then fed to an ion exchange stage, which will remove any contaminating ions still left in the solution. The outlet of the ion exchange stage is a contaminant free solution containing dissolved lithium bicarbonate, which will feed the final crystallisation stage.

#### Crystallisation

The lithium bicarbonate solution is fed to an agitated reactor that operates at  $90^\circ\text{C}$  and at an atmospheric pressure. Both conditions ensure that the dissolved  $\text{CO}_2$  will volatilise and separate from the lithium bicarbonate producing the precipitation of solid  $\text{Li}_2\text{CO}_3$  which has now achieved the battery grade quality. The outlet pulp from the crystallisation reactor, has solid precipitated  $\text{Li}_2\text{CO}_3$ , is then transferred to solid/liquid separation step when the liquids generated are returned to the process (mother liquor 2) and the solids in the outlet are transferred to the final stage of drying, size reduction and packing.

Finally, battery grade lithium carbonate is fed to a drying plant, which will remove all remaining water in the solid product. The outlet of the dryer will feed size reduction equipment, and the final solids will be packed and stored in a warehouse, to be sent to customers.

Figure 5 displays the process block diagram of the lithium carbonate plant.

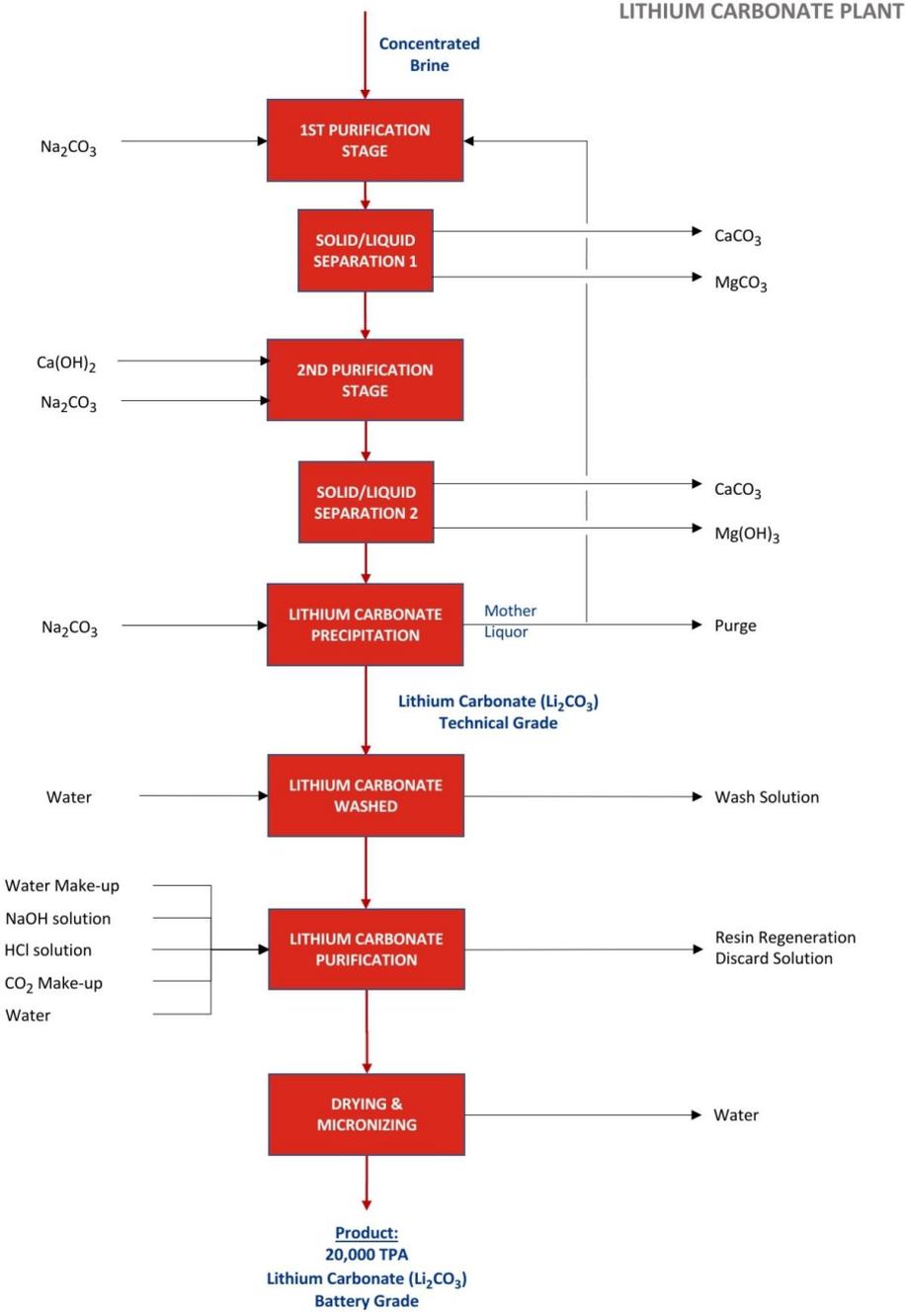
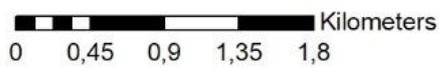
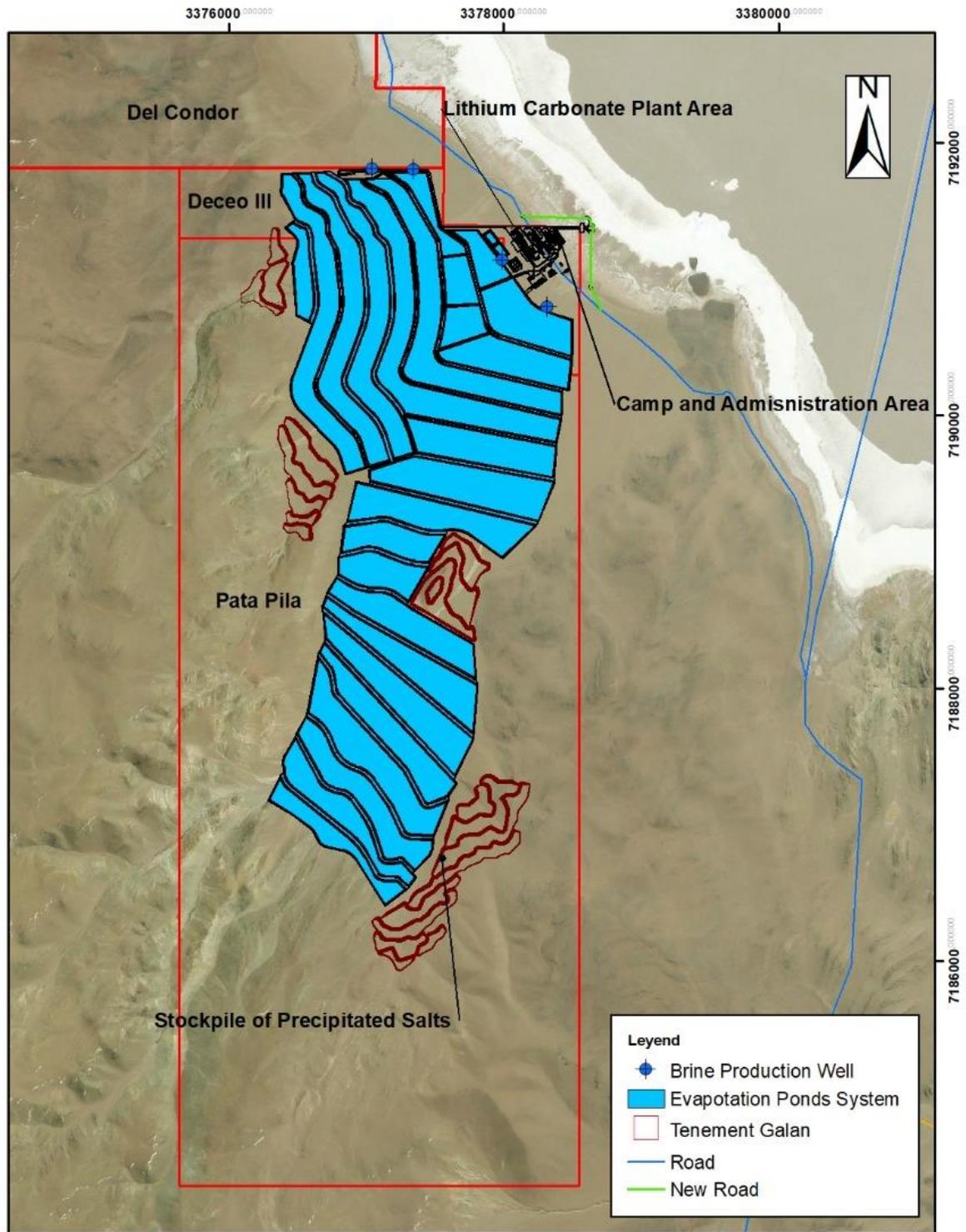


Figure 5: Process Block Diagram of HMW Project

**Project Layout & Infrastructure**

HMW Project has developed a layout allowing the closer location of the totality of the main project areas. The brine wells field, evaporation ponds system, lithium carbonate plant, water wells, camp, etc. are located within a radius of around 6km. These facilities are also located next to the Hombre Muerto Salar.

Figure 6 shows HMW Project Layout describing the major infrastructure items.



	<b>HOMBRE MUERTO WEST PROJECT CATAMARCA - ARGENTINA</b>	
	<b>PROJECT LAYOUT</b>	
	Projection: Gauss Kruger - Faja 3 POSGAR 94	Date: November 20

Figure 6: HMW Project Layout

The project layout prioritised the usage of the Pata Pila and Deceo III tenements because at the time of the completion of the engineering design of the HMW Project, the acquisition of Del Condor tenement was not fully completed. The study team of Galan has the opinion that the next study phase should consider the relocation of several infrastructure items, especially some evaporation pond units, to the Del Condor's area mainly due to the favourable topography. This engineering design change may have a positive impact in decreasing the Project's capital costs.

The evaporation ponds system has an effective evaporation area of 550 Ha. The system has been designed to take advantage of the topography to operate the majority of the brine transfer activities using the gravity.

The brine flow between ponds will be mainly carried out through gravity, and the pumping between ponds will be minimised, only used when required. For the design of the flow direction between evaporation ponds, one of the main objectives was reducing brine pumping, allowing the reduction of energy consumption and the use of mechanical equipment.

### **Lithium Carbonate Plant**

The lithium carbonate plant was located next to the ponds reservoir and close to the main access to the project. The totality of the utilities (water, power, reagent plants, etc.) are located in the same area.

The administration area including the camp, mess, offices, warehouse, etc. is also located within walking distance of the lithium carbonate plant.

### **Water Supply**

The industrial water source to serve the HMW Project should come from the nearby area of Rana de Sal. The water flow is 25 l/s which is considered as competitive within the industry.

The preliminary information of the water quality suggests that reverse osmosis treatment will ensure the water quality requirements of the lithium carbonate plant.

### **Power Supply**

Galan has defined that for this Project, diesel generators will provide the electrical energy required for all areas.

The installed electric power capacity is 4.57 MW. This value has considered the efficiency losses of the diesel generators caused by the altitude above the sea level. For the estimate of the installed electric power capacity and the electric power consumption, the equipment list was utilised.

Galan is also investigating and analysing the usage of renewable, green power in the next step of the study development of HMW Project. This alternative, including the use of natural gas, would have the potential to decrease the operating cost of the Project.

### **Diesel Storage**

The Project design has included a dedicated area to accommodate the reception and storage of diesel. This facility is conveniently located close to the electric power plant. The supply of diesel for the salt harvest mobile equipment will be executed through the usage of diesel supply trucks which should be filled also at the dedicated diesel storage and distribution facility.

### **Workshop**

The HMW Project considers the construction of a workshop facility to serve the salt harvest mobile equipment fleet. This workshop is conveniently located close to the ponds and salt harvest stockpile.

### **Reception, Handling, Storage and Distribution of the Main Supplies**

The infrastructure facilities of the HMW Project have included all the items for the reception, handling, storage and distribution of the main supplies, including reagents and diesel. The design of these facilities is based on proven technology used for similar projects and operations within the industry.

### **Camp and Administration Area**

The Project infrastructure considers the camp to accommodate 200 people. The administration area also includes the access gate, office, mess, crib room, nursery, entertainment and warehouse.

### **Sewage and Waste management**

The Project infrastructure considers the appropriate facilities to treat the domestic and industrial waste.

### **Project Access and Product Transport**

There are existing roads allowing an easy access to the Project for personnel, equipment and supplies. The Incoming freight will consist of equipment, spares, reagents, consumables, and construction merchandise. Some inbound goods will be in break bulk, however others will be in sea containers. Road transport of diesel fuel will be in conventional tanker trucks.

The import of reagent, equipment and other supplies will be shipped via the Antofagasta port in Chile. The export of the lithium carbonate product will also use the same route. There are two existing border crossings close to the Project, "Paso de Jama" and "Paso de Sico". A rail facility also exists for the transport of equipment and supplies from Pucitoc to Antofagasta. Pucitoc is located only 130 km north of the HMW Project.

### **Environmental and Social Studies**

The HMW Project has an existing permit to run exploration and project studies related activities. Galan is advancing with the development of activities to have a better definition of the environmental and social base lines.

In addition, the Company is also collecting valuable information for the coming development of the environmental and social impact assessment study of the HMW Project.

### **Market and Contracts**

The battery grade lithium carbonate price forecast (for the period 2020-2040) utilised to run the economic evaluation of the HMW Project was taken from the 17<sup>th</sup> Edition of the Lithium Market developed by Roskill (\*).

Roskill expects contract prices for lithium carbonate and hydroxide to remain near to or above US\$10,000/t on a long-term real (inflation adjusted) basis. After softening in 2019 and 2020, prices on a nominal basis are projected to rise to around US\$13,500-15,000/t (carbonate) and US\$14,500-16,500/t (hydroxide) in 2025 (around US\$12,000-15,000/t in real terms, adjusting for inflation).

Strong demand growth for refined lithium products is forecast to be sustained by expanding production, new market entrants and the draw-down of stockpiled material through to 2026, though a fundamental supply deficit is expected to form in the late 2020s. Significant further investment in expanding production capacity at existing operations, in addition to new projects and secondary lithium sources will be necessary to meet projected demand growth through to 2030.

Figure 7 displays the forecast of the lithium carbonate price.



**Figure 7: Long Term estimate of the Contracted Price of Battery Grade  $\text{Li}_2\text{CO}_3$  developed by Roskill**

The average lithium carbonate price for the period 2020-2040 is US\$11,678/t. This price is estimated on a real base, excluding the impact of the inflation.

(\*) Roskill is an independent, private company that has nearly 50 years' experience of research and consulting in metals, minerals and chemical industries, and their end-use industries. The company was founded in 1930 as one of the UK's first management consultancies. Today the Group is headquartered in the UK and consists of five companies, Roskill Holdings, Roskill Information Services, Roskill Consulting Group, Roskill Germany and Roskill China. The company has additional representation in Africa, Japan, Oceania the Middle East and the Americas.

### **Capital (CAPEX) Estimate**

#### **Scope of the Capital Cost Estimate**

The estimation includes direct and indirect project costs, owner costs and contingency. Direct costs include equipment and materials supplied by Galan, labour, construction equipment, materials supplied by the construction contractor, indirect costs and construction contractor profits.

#### **Technical Scope**

The present study addresses the design at a PEA level for the construction of a battery-grade Lithium Carbonate Production Plant, which mainly considers brine extraction wells, solar evaporation ponds, brine treatment plant, purification plant for magnesium, calcium and boron, lithium carbonate plant, drying, micronizing, packing and storage of lithium carbonate for an annual production of 20,000 tonnes.

The CAPEX developed in this document includes the evaluation of all the equipment involved in the plant described in the previous paragraph.

#### **General**

To estimate the CAPEX of all items included in Worley's scope, the following calculation base has been used:

- **Direct Construction and Assembly Costs:** considers procurement or supply, assembly labour, construction equipment, permanent construction materials and consumables, as well as Indirect Contractor costs such as mobilization and demobilization of construction equipment and temporary facilities, administration and supervision, transportation and feeding of personnel, general expenses and contractor profits.

- Indirect Project Costs: consider freight and insurance, capital spare parts, entry rights, supplier representatives, first filling, engineering and studies, services and EPCM, start-up and owner costs.
- Contingency: estimate based on a percentage of the total cost, according to cost engineering standards.

All the costs of the estimate are expressed in US dollars (US\$). The US\$-Argentinian Peso exchange rate used in the PEA was 1 US \$ = 77.5 ARS (16 October 2020).

This rate was taken from the official website of the Banco de la Nación de la República Argentina.

The contingency was calculated as a percentage of the total cost according to engineering standards. Due to the level of engineering development, a contingency of 30% is defined for this project.

The following items were excluded from the CAPEX estimate:

- Depreciation and amortisation.
- Financial costs.
- Costs or provisions for escalation.
- Costs for processing permits.
- Working capital, except for first fills which are included.
- Costs for closure of works.

The capex estimate should cover the precision range established for a PEA study (profile), as defined by NI43-101, the main scopes of which are indicated below:

- Typical range of precision for PEA studies (profile):  $\pm 30 - 50\%$ . For this study an accuracy of +30%, -15% is considered.
- Origin of prices: costs of equipment, materials and third-party subcontracts have been obtained from reference data taken from similar projects or from representative database information from consultants.
- Origin of quantities: they obtained from similar engineering designs carried out for other projects and referential estimates/factorisations.
- The CAPEX is based on information available on 9 November 2020.

The following information is used to estimate CAPEX:

- Worley methodologies and procedures.
- Equipment List.
- Preliminary construction program.
- Estimates of materials and works carried out for the project and other reference projects.
- Benchmark database.
- Other background and definitions of Galan.

The estimate of quantities was obtained through the following inputs:

- Conceptual layouts for the location of brine extraction wells, solar evaporation ponds and the Lithium Carbonate Plant to be built on the properties of the Salar.
- Preliminary list of mechanical equipment.

- Project execution program.
- Estimates and factorisations of disciplines: piping, electricity, instrumentation and control, developed based on the experience of Worley specialists and information from other similar projects.
- Study-level estimates and factorizations of PEA determined by Worley for facilities related to the services that feed the process, roads, platforms and construction camp.

For the development of CAPEX, Galan provided the following information:

- Property of the land.
- Location of brine well area and total flow.
- Number of production wells.
- Basic meteorological data.
- Location of the fresh water well.

### Capex Estimate Results

The total investment cost of the project is estimated at US\$ 439m which is broken down into direct, indirect and contingency costs. This value includes the following estimates:

- Direct project costs equal to US\$ 299m, equivalent to 68.4 % of the total CAPEX value.
- Indirect project costs equal to US\$ 38m, equivalent to 8.5 % of the total value of CAPEX.
- Project contingency equal to US\$ 102m, equivalent to 23.1% of the total value of CAPEX.

Table 3 presents a summary of the capital cost estimate (CAPEX) required for the implementation of the HMW Project in accordance with the scope developed and all the information available in this stage.

**Table 3: Capital Cost Estimate of HMW Project**

Area	US\$ M
Brine Wells and Brine Transport	12.7
Evaporation Ponds System	146.8
Ponds Reagent Plant	4.2
Lithium Carbonate Plant	55.6
Lithium Carbonate Reagent plants	11.3
Utilities	36.9
Infrastructure	31.8
Total Direct Cost	299.3
Total Indirect Cost	38.3
<b>Total Capex without contingency</b>	<b>337.7</b>
Contingency (30%)	101.3
<b>Total Capex</b>	<b>438.9</b>

## Operating Cost (OPEX) Estimate

The scope for the HMW Project considers the development of the necessary engineering documents that are necessary for the elaboration of a study at the PEA level, specifically for a Lithium Carbonate Plant, which will produce 20,000 tpa of battery grade  $\text{Li}_2\text{CO}_3$ .

For this study, an accuracy of +30%, -15% is considered for OPEX costs.

The battery limits to be considered for the development of the operating cost estimate are:

From : Brine feed from Rana de Sal and Pata Pila brine wells.  
To : Final product of Lithium Carbonate, battery grade CIF to China

The following general definitions are to be considered in this announcement:

- Direct operational costs: expenses associated with the project that are directly associated with the main production of the process. These expenses include supply and consumption, mainly related to reagents and energy, as well as workforce, personnel costs (salary), food services, lodging for personnel, among others.
- Indirect operational costs: all general business and administrations associated expenses that support the operation of the plant. Among these are the rental of offices, administration personnel costs (overhead salary) and personnel transport.

Based on all information developed, an OPEX estimation was calculated for the project. Two scenarios are defined, where a different cost is predicted of salt harvesting, due to the change in the haul distance to the salt stockpiles. All other items in the OPEX are assumed as remaining constant through the years of the Project.

The OPEX for both scenarios are presented in Table 4.

**Table 4: Operating Cost Estimate of HMW Project**

Operational Expenditure	Scenario 1: Stockpiles near ponds		Scenario 2: Stockpiles far from ponds	
	US\$ / Tonne $\text{Li}_2\text{CO}_3$	Total 000 US\$	US\$ / Tonne $\text{Li}_2\text{CO}_3$	Total 000 US\$
<b>DIRECT COSTS</b>				
Chemical Reactives and Reagents	1,659	33,188	1,659	33,188
Salt Removal and Transport	264	5,277	434	8,671
Energy	375	7,492	375	7,492
Manpower	241	4,821	241	4,821
Transport	181	3,613	181	3,613
Catering & Camp Services	142	2,830	142	2,830
Maintenance	316	6,323	316	6,323
<b>DIRECT COSTS SUBTOTAL</b>	<b>3,177</b>	<b>63,544</b>	<b>3,347</b>	<b>66,939</b>
<b>INDIRECT COSTS</b>				
General & Administration - Local	171	3,416	171	3,416
<b>INDIRECT COSTS SUBTOTAL</b>	<b>171</b>	<b>3,416</b>	<b>171</b>	<b>3,416</b>
<b>TOTAL PRODUCTION COSTS</b>	<b>3,348</b>	<b>66,961</b>	<b>3,518</b>	<b>70,355</b>

Scenario 2 is the most representative operating cost of the project, with OPEX at US\$3,518 /t Li<sub>2</sub>CO<sub>3</sub> and it is the cost for around 37 years of operation after the ramp up is completed. Scenario 1 only lasts for the first three year operation when the production rate does not reach the full annual capacity.

A brief explanation of the operating cost items is described below:

#### Chemical Reactive and Reagents

This cost item contains the totality of the chemical reactive and reagents require for the operation of both the evaporation ponds system and lithium carbonate plant.

#### Salt Removal and Transport

This cost item includes the extraction of the precipitated salts from the ponds and the subsequent transport of this material to the designated stockpiles.

The salt stockpiles are located in different areas of the Project properties, it is estimated that two scenarios will occur during the complete life of the project:

- Scenario 1: The nearest stockpile locations will be used during the first years of production. An average distance of 5 km is assumed for this scenario, as a one-way trip for the salt transport trucks.
- Scenario 2: The nearest stockpile locations will be used during the following years of production. An average distance of 15 km is assumed for this scenario, as a one-way trip for the salt transport trucks. This will require more trucks to be purchased for salt transport, since a longer distance will have to be covered by each transport truck.

#### Energy

The energy consumption is associated with all electrical consumption required for the Project.

#### Manpower

Both the number of personnel or manpower considered for the project but excluding the salt harvesting personnel which is included in the salt removal and transport cost item and the G&A personnel which is included in the general & administration item.

#### Transport

The transport costs consider the transport of the final product from the warehouse located on site to the shipping location.

#### Catering and camp services

This item includes all costs related to catering for personnel located on site, as well as the camp services that must be considered for the workforce that works in shifts.

#### Maintenance

The maintenance costs calculated for the Project are related to a relative annual maintenance cost associated with each area.

### **HMW Project Within the Lithium Cost Curve**

The lithium carbonate equivalent cost curve was prepared by Roskill based on the information updated to September 2020.

The All-in Production cost includes the cash operating cost plus the sustaining capex and royalty cost adjusted to a lithium carbonate price of US\$12,500 / t

Figure 8 displays the lithium carbonate equivalent cost curve and the location of the HMW Project within the industry cost curve.

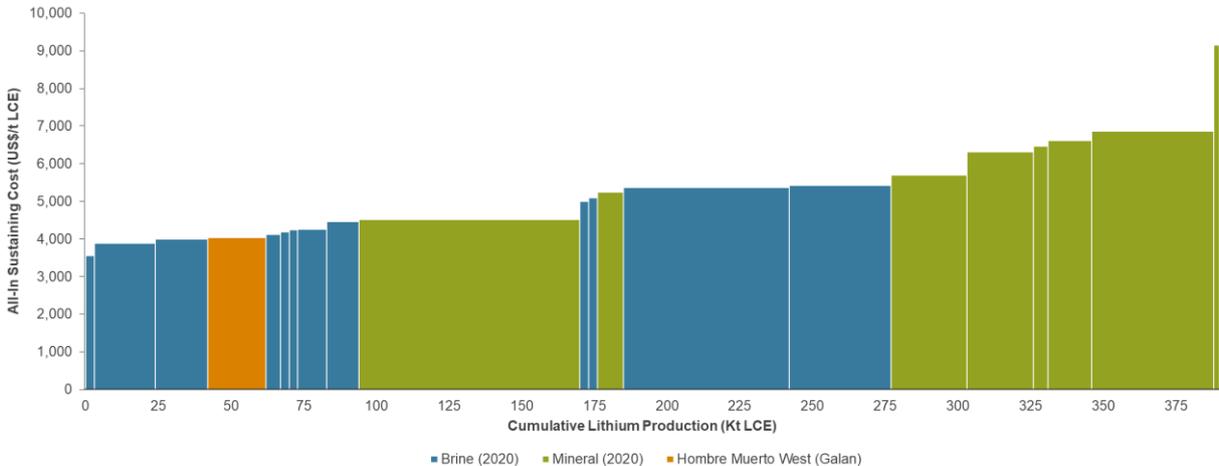


Figure 8: Lithium Production Cost Curve (source: Roskill – Lithium Cost Model Service)

Note: 2020 costs have been adjusted to reflect a royalty rate for a lithium carbonate price of US\$12,500/t

**Project Timetable**

Galan is planning, in the coming 18 months, to perform additional HMW Project studies that will be required prior to making any investment decision. These studies may involve a PFS and FS stages. In parallel, the completion of the EIA study and subsequent application for the exploitation permit will be conducted.

The commencement of the construction is planned for Q4 of 2022 subject to the approval of the exploitation permit and successful completion of the financing activities. The construction and commissioning should take two years to allow the project the start of production early 2025 and achieving the production ramp up in Q3 2026.

Table 5 shows the most important milestones for the development of HMW Project.

Table 5: HMW Project Development Milestones

Milestone	Completion Timeframe
PFS and FS	Q3 2022
EIA Approval	Q4 2022
Start Construction	Q4 2022
Start Ponds Filling	Q3 2023
Mechanical Completion	Q3 2024
First Lithium Carbonate (Commissioning complete)	Q4 2024
Plant Ramp Up Period	Q1 2025 to Q3 2026

## **Economic Evaluation**

The economic evaluation of the HMW Project was conducted following the industry standards for this project stage. A discount rate of 8% was utilised for present value calculations.

Forecasted lithium carbonate prices for the period 2020-2040, utilised for the economic evaluation, were provided by Roskill. The lithium carbonate price for the period from 2041 onwards was left constant, at the 2040 value, as indicated by Galan.

The tax and royalty assumptions were provided by Galan.

No potential potassium credits were included in the economic evaluation.

The key assumptions and results of the economic evaluation are displayed in Tables 6 and 7 respectively.

**Table 6: Key Assumptions Utilized for the Economic Evaluation**

<b>Assumption</b>	<b>Units</b>	<b>Values</b>
Lithium Carbonate Production	Tonnes/year	20,000
Project Life Estimate	Years	40
Discount Rate	%	8
Royalty	%	3
Corporate Tax	%	25
Dividend Payment Withholding Tax	%	10
Capital Cost (CAPEX)	US\$m	439
Sustaining Capital	US\$m	116
Average Annual Operating Cost (OPEX)	US\$/tonne	3,518
Average Li <sub>2</sub> CO <sub>3</sub> Selling Price (2020-2040)	US\$/tonne	11,687

**Table 7: Economic Evaluation Results of HMW Project**

<b>Parameters</b>	<b>Units</b>	<b>Values <sup>(1)</sup></b>
Average Income	US\$m	258
Average Provincial Royalty	US\$m	6
Average Operating Expenses	US\$m	70
Average Corporate and Withholding Taxes	US\$m	55
Average Annual EBITDA	US\$m	174
Average Annual Operational Free Cash Flow	US\$m	117
Pre-Tax Net Present Value (NPV)	US\$m	1,011
After-Tax Net Present Value (NPV)	US\$m	684
Pre-Tax Internal Rate of Return (IRR)	%	22.8
After-Tax Internal Rate of Return (IRR)	%	19.1
Payback Period (After-Tax) <sup>(2)</sup>	Years	4.3

(1): the Average figures for the income, Provincial Royalty, Operating Expenses, Corporate and Withholding Taxes, EBITDA and Operational Free Cash Flow has been estimated only considering the full production time of the operating period.

(2) Payback years after the end of the investment period.

## Sensitivity Analysis

The sensitivity of the economic evaluation of HMW Project was analysed for the most important parameters. Tables 8 and 9 display the variation of the NPV and IRR respectively when the most important parameters fluctuate within the range of -25% and +25%.

**Table 8: Sensitivity of the NPV After Tax**

Driver Variable	Base Case Value		NPV After Tax				
			Percentage of Base Case Value				
			75%	90%	100%	110%	125%
CAPEX	US\$ m	439	768	718	684	649	597
Li <sub>2</sub> CO <sub>3</sub> Price	US\$/tonne	12,857	326	541	684	826	1038
Li <sub>2</sub> CO <sub>3</sub> Production	Tonnes/annum	20,000	404	572	684	795	961
OPEX	US\$/tonne	3,518	802	731	684	637	565

**Table 9: Sensitivity of the IRR**

Driver Variable	Base Case Value		IRR				
			Percentage of Base Case Value				
			75%	90%	100%	110%	125%
CAPEX	US\$ m	439	23.4%	20.6%	19.1%	17.8%	16.2%
Li <sub>2</sub> CO <sub>3</sub> Price	US\$/tonne	12,857	14.0%	17.2%	19.1%	20.8%	23.2%
Li <sub>2</sub> CO <sub>3</sub> Production	Tonnes/annum	20,000	15.1%	17.6%	19.1%	20.5%	23.2%
OPEX	US\$/tonne	3,518	20.9%	19.8%	19.1%	18.3%	17.2%

## Corporate

Galan is also pleased to announce it has agreed to extend the Controlled Placement Agreement (“CPA”) with Acuity Capital to 31 January 2023. See GLN ASX announcement dated 31 January 2019 for more information on the CPA.

### The Galan Board has authorised this release.

For further information contact:

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### About Galan

*Galan is an ASX listed company exploring for lithium brines within South America’s Lithium Triangle on the Hombre Muerto salar in Argentina. Hombre Muerto is proven to host the highest grade and lowest impurity levels within Argentina and is home to Livent Corporation’s El Fenix operation and Galaxy Resources and POSCO’s Sal de Vida projects.*

*Galan has two projects:*

*Candelas: a ~15km long by 3-5km wide valley filled channel which project geophysics and drilling have indicated the potential to host a substantial volume of brine and over which a maiden resource estimated 685kt LCE (Oct 2019). Furthermore, Candelas has the potential to provide a substantial amount of processing water by treating its low-grade brines with reverse osmosis, this is without using surface river water from Los Patos River.*

*Hombre Muerto West (HMW): a ~14km by 1-5km region on the west coast of Hombre Muerto salar neighbouring Livent Corp to the east. HMW is currently comprised of seven concessions – Pata Pila, Rana de Sal, Deceo III, Del Condor, Pucara, Catalina and Santa Barbara. Geophysics and drilling at HMW demonstrated a significant potential of a deep basin. In March 2020, a maiden resource estimate delivered 1.1Mt of LCE for two of the largest concessions (Pata Pila and Rana de Sal). That resource now sits at 2.3Mt of LCE with exploration upside remaining for the rest of the HMW concessions not included in the current indicated resource.*



**Figure 9: HMW Project looking north from Pata Pila**

## **Competent Persons Statements**

### **Competent Persons Statement 1**

*The information contained herein that relates to exploration results and geology is based on information compiled or reviewed by Dr Luke Milan, who has consulted to the Company. Dr Milan is a Member of the Australasian Institute of Mining and Metallurgy and has sufficient experience which is relevant to the style of mineralisation and types of deposit under consideration and to the activity which they are undertaking to qualify as a Competent Persons as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Dr Milan consents to the inclusion of his name in the matters based on the information in the form and context in which it appears.*

### **Competent Persons Statement 2**

*The information contained herein that relates to project background, brine extraction method, recovery method, project layout and infrastructure, capex estimate, opex estimate and economic evaluation have been directed by Mr. Marcelo Bravo. Mr. Bravo is Chemical Engineer and managing partner of Ad-Infinitum Spa. with over 25 years of working experience and he is a Member of the Chilean Mining Commission and has sufficient experience which is relevant to the activity which they are undertaking to qualify as a Competent Persons as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Bravo consents to the inclusion of his name in the matters based on the information in the form and context in which it appears.*

### **Competent Persons Statement 3**

*The information in this report that relates to the Mineral Resources estimation approach at Candelas and Hombre Muerto West was compiled by Dr Cunningham. Dr Cunningham is an Associate Principal Consultant of SRK Consulting (Australasia) Pty Ltd. He has sufficient experience relevant to the assessment and of this style of mineralisation to qualify as a Competent Person as defined by the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves – The JORC Code (2012)". Dr Cunningham consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.*

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, and that all material assumptions and technical parameters have not materially changed. The Company also 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.

**JORC Code, 2012 Edition – Table 1**  
**Section 1 Sampling Techniques and Data**  
**(Criteria in this section apply to all succeeding sections.)**

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <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 downhole 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 (e.g. ‘reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay’). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>• Drill core was recovered in 1.5 m length core runs in core split tubes to minimise sample disturbance. Core recovery was carefully measured by comparing the measured core to the core runs.</li> <li>• Drill core was undertaken along the entire length of the holes to obtain representative samples of the stratigraphy and sediments that host brine.</li> <li>• Water/brine samples from target intervals were collected by either the Packer or Bailer tests. Bailer tests; purge isolated sections of the hole of all fluid a total of five times to minimise the possibility of contamination by drilling fluid (fresh water), although some contamination (5-15%) may occur. The hole is then allowed time to refill with ground water. On the fifth purge the sample for lab analysis is collected. The casing lining the hole ensures contamination with water from higher levels in the borehole is likely prevented. Packer tests utilise a straddle packer device which isolates a discrete interval and allows for sampling purely from this interval. Samples were taken from the relevant section based upon geological logging and conductivity testing of water.</li> <li>• Water/brine samples were collected from multiple intervals as listed in tables 1 and 2.</li> <li>• Conductivity tests are taken on site with a field portable Hanna Ph/EC/DO multiparameter.</li> <li>• Density measurements were undertaken on site with a field portable Atmospheric Mud Balance, made by OFI testing equipment.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>• Downhole geophysical profiling was conducted using a Ponti Electronics MPX-14 Multiplex Well Logger.</li> <li>• Downhole Borehole Magnetic Resonance (BMR) profiling, adapted to high salinity, was conducted by Zelandez to log continuous specific yield. This is a common geophysical method for continuous measurements of porosity downhole. The geophysical method is based on the ability of water to absorb and emit electromagnetic energy of a certain frequency, and provides a lithology independent measurement of the porosity. Total porosity is then split into its fractional components by applying cut-offs within the pore size distribution. The specific retention and specific yield can then be calculated.</li> <li>• Specific yield logs obtained by this method were then compared and validated with similar projects of the Punta region i.e. Sulfa Mina on Salar de Pular (PNN's ASX release on 04/01/2019). Hombre Muerto Norte project, NRG Metals Inc. (07/08/2019). MSB Blanco Lithium Carbonate project, Salar Blanco (17/01/2019). Sal de Vida project, Lithium One Inc. (07/03/2012). Candelas (East) project (GLN's ASX release on 01/10/2019). Rincon Lithium project (AGY's ASX release on 13/11/2018). 3Q Project (NEO Lithium Corp, NI 43-101 dated 07/05/2019).</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>• Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).</li> </ul>	<ul style="list-style-type: none"> <li>• Diamond drilling with internal (triple) tube was used for drilling. The drilling produced core with variable core recovery, associated with unconsolidated material. Recovery of the more friable sediments was difficult, however core recovery by industry standards was very good.</li> </ul>

Criteria	JORC Code explanation	Commentary
Drill sample recovery	<ul style="list-style-type: none"> <li>• Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>• Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>• Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul style="list-style-type: none"> <li>• Fresh water is used as drilling fluid for lubrication during drilling.</li> <li>• Diamond drill core was recovered in 1.5m length intervals in triple (split) tubes. Appropriate additives were used for hole stability to maximise core recovery. The core recoveries were measured from the core and compared to the length of each run to calculate the recovery.</li> <li>• Brine samples were collected over relevant sections based upon the geology encountered and ground water representation.</li> <li>• Brine quality is not directly related to core recovery and is largely independent of the quality of core samples. However, the porosity and permeability of the lithologies where samples are taken is related to the rate of brine inflow.</li> </ul>
Logging	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>• The core is logged by a senior geologist and contract geologists who are overseen by the senior geologist who also supervised the taking of samples for laboratory analysis.</li> <li>• Logging is both qualitative and quantitative in nature. The relative proportions of different lithologies which have a direct bearing on the overall porosity, contained and potentially extractable brine are noted, as are more qualitative characteristics such as the sedimentary facies. Cores are split for sampling and are photographed.</li> <li>• All core was logged by a geologist</li> </ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <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> </ul>	<p>Bailer sampling:</p> <ul style="list-style-type: none"> <li>• Utilises a stainless steel hollow 3m-long tube with a check valve at the bottom. The hole was first purged by extracting a calculated volume of liquid (brine and drilling mud) to ensure that sampled brine corresponds to the sampled depth. Once the calculated volume was extracted and brine was clear, samples were collected in plastic</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <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>	<p>bottles and delivered to the laboratories. The lower part of the sampling hole section was temporarily sealed during purging and sampling. A total of 1 Bailer samples were obtained.</p> <p>Simple packer sampling:</p> <ul style="list-style-type: none"> <li>• Packer sampling was performed during drilling of each hole and after well casing and development using both simple and double packer system. Water/brine samples were collected by purging isolated sections of the hole of all fluid in the hole, to minimise the possibility of contamination by drilling fluid, then allowing the hole to re-fill with ground waters. Samples were then taken from the relevant section. A total of 10 samples were obtained and an additional 5 duplicate samples were obtained for quality control purposes.</li> </ul> <p>Airlift sampling:</p> <ul style="list-style-type: none"> <li>• Utilises an airline that delivers compressed air to the end of the drill string (drill bit) within the drill hole. The compressed air is pumped into the air line and this lifts the water/brine sample up the rod string and is subsequently captured at the surface.</li> <li>• Airlift sampling was carried out at each drill hole with 72-hour pumping. For Pata Pila/Deceo III (PP-01-19), a total of 5 samples were taken at 2, 24, 36, 44 and 64 hours. For Rana de Sal, a total of 4 samples were taken at 5, 30, 54 and 74 hours. For every sample sent to the primary laboratory, a duplicate was sent to a second laboratory for check analysis.</li> </ul>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li>• The nature, quality and appropriateness of the assaying and laboratory procedures used and</li> </ul>	<ul style="list-style-type: none"> <li>• The Alex Stewart International laboratory located in Jujuy, Argentina, is used as the primary</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p>whether the technique is considered partial or total.</p> <ul style="list-style-type: none"> <li>• For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>• Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	<p>laboratory to conduct the assaying of the brine samples collected.</p> <ul style="list-style-type: none"> <li>• The Alex Stewart International laboratory is ISO 9001 and ISO 14001 certified and is specialised in the chemical analysis of brines and inorganic salts, with considerable experience in this field.</li> <li>• The SGS laboratory was used for secondary check analyses and is also certified for ISO 14001. In most case, SGS results returned slightly higher values than Alex Stewart International</li> <li>• 39 brine samples (including replicates) were sent to the Alex Stewart International and SGS laboratories, respectively.</li> <li>• Based on ion balance, all results from Alex Stewart International plotted within the <math>\pm 10\%</math> acceptance envelope, indicating high analytical data acceptability.</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>• Field duplicates, standards (synthetic brines) and blanks are used to monitor potential contamination of samples and the repeatability of analyses.</li> <li>• Standards consisted in one high-grade and one medium-grade synthetic brine prepared at the Alex Stewart International laboratory in Mendoza (Argentina). Synthetic standards were sent to both in-country laboratories to monitor accuracy of the latest batch of samples (long-term airlift sampling).</li> <li>• One blank was analysed at Rana De Sal.</li> <li>• Reproducibility between Alex Stewart International and SGS was displayed acceptable, though SGS showed a slightly higher bias for all analytes</li> <li>• The Alex Stewart QA/QC standards are underestimating the synthetic brine certified values, with the largest difference being with the lower grade (550 Li mg/l) standard.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>Therefore, more samples need to be submitted for future work, and investigation is required to better understand why the values are being underestimated. However, the brine occurrence and chemistry, the relative consistency of the data and confidence in the drilling and sampling results is reasonable for Indicated resource</p> <ul style="list-style-type: none"> <li>• Accuracy of both laboratories was displayed acceptable for the latest sample batch as indicated by RPD values smaller than <math>\pm 10\%</math>.</li> <li>• Overall, QC assessment results support acceptability for both laboratories.</li> <li>• The slightly higher bias with SGS needs further investigation. Therefore, the Alex Stewart International results were preferred for resource estimation.</li> <li>• Specific yields from Zelandez logging were checked. The CP is of the opinion that the values underestimate porosity (based on similar settings in the region), and adjustments were therefore made to the specific yields for resource estimation.</li> </ul>
Location of data points	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>• The survey locations were located using modern Garmin handheld GPS with an accuracy of <math>\pm 5m</math>.</li> <li>• For accuracy and certainty drill holes are located with two GPS devices one using latitude and longitude and the other map coordinates.</li> <li>• The grid System used by Quantec: POSGAR 94, Argentina Zone 3</li> <li>• Topographic control was obtained by handheld GPS, and the topography is mostly flat with very little relief. SRTM was used for modelling purposes.</li> </ul>
Data spacing and distribution	<ul style="list-style-type: none"> <li>• Data spacing for reporting of Exploration Results.</li> <li>• Whether the data spacing and distribution is sufficient to establish</li> </ul>	<ul style="list-style-type: none"> <li>• Water/brine samples were collected within isolated sections of the hole based upon the results of geological logging.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p>the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</p> <ul style="list-style-type: none"> <li>• Whether sample compositing has been applied.</li> </ul>	
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> <li>• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>• If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul style="list-style-type: none"> <li>• The brine concentrations being explored for generally occur as sub-horizontal layers and lenses hosted by sand, silt, clay, gravels and some conglomerate. Vertical diamond drilling is ideal for understanding this horizontal stratigraphy and the nature of the sub-surface brine bearing aquifers.</li> </ul>
Sample security	<ul style="list-style-type: none"> <li>• The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>• Data was recorded and processed by trusted employees, consultants and contractors to the Company and overseen by senior management ensuring the data was not manipulated or altered.</li> <li>• Samples are transported from the drill site to secure storage at the camp on a daily basis.</li> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li>• The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>• No audits or reviews have been conducted to date. The drilling is at a very early stage however the Company's independent consultants and CP have approved the procedures to date.</li> </ul>

## Section 2 Reporting of Exploration Results

(Criteria listed in section 1 also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> <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</li> </ul>	<ul style="list-style-type: none"> <li>• The Hombre Muerto West Lithium Project consists of numerous licences located in Catamarca Province, Argentina. The tenements are owned by Blue Sky Lithium Pty Ltd ('Blue Sky'). Galan and Blue Sky executed a Share Sale Agreement whereby Galan purchased 100% of the issued share capital of Blue Sky.</li> <li>• The Del Condor tenement lies between Pata Pila/Deceo III and</li> </ul>

Criteria	JORC Code explanation	Commentary
	obtaining a licence to operate in the area.	Rana de Sal I tenements, and Pucara del Salar to the northeast. The Del Condor and Pucara tenements are 100% owned (as per ASX announcement dated 4 Nov'20)
Exploration done by other parties	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>No historical exploration has been undertaken on these licence areas. Both PP-01-19 and RS- 01-19 are west of the adjacent licence area held by Livent Corporations (NYSE:LVHM).</li> </ul>
Geology	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>Del Condor, Pucara, Pata Pila/Deceo III and Rana De Sal licence areas cover sections of alluvial fans located on the western shore of the Hombre Muerto salar proper. The salar hosts a world- renowned lithium brine deposit. The lithium is sourced locally from weathered and altered felsic ignimbrites and is concentrated in brines hosted within basin fill alluvial sediments and evaporites.</li> </ul>
Drill hole Information	<ul style="list-style-type: none"> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes: <ul style="list-style-type: none"> <li>easting and northing of the drillhole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drillhole collar</li> <li>dip and azimuth of the hole</li> <li>downhole 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> </li> </ul>	<ul style="list-style-type: none"> <li>Drillhole ID: PP-01-19 Easting: 3,377,958 E Northing: 7,191,256 N Elevation: 4,007 m Vertical hole Hole Depth 719 m</li> <li>Drillhole ID: RS-01-19 Easting: 3,376,769 E Northing: 7,195,513 N Elevation: 3,944 m Vertical hole Hole Depth 474 m</li> </ul>
Data aggregation methods	<ul style="list-style-type: none"> <li>In reporting Exploration Results, weighting averaging techniques,</li> </ul>	<ul style="list-style-type: none"> <li>No weighting or cut off grades have been applied</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p>maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</p> <ul style="list-style-type: none"> <li>• Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>• The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>• Pumping tests continue to be carried out at Candelas West to ensure quality control</li> <li>• All new assay results received to date are included in this report.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> <li>• These relationships are particularly important in the reporting of Exploration Results.</li> <li>• If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.</li> <li>• If it is not known and only the downhole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>• It is fairly assumed that the brine layers lie sub horizontal and, given that drillholes are vertical, the intercepted thicknesses of brine layers would be of true thickness.</li> </ul>
Diagrams	<ul style="list-style-type: none"> <li>• Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drillhole collar locations and appropriate sectional views.</li> </ul>	<ul style="list-style-type: none"> <li>• Refer to maps, figures and tables in the Report</li> </ul>
Balanced reporting	<ul style="list-style-type: none"> <li>• Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced in order to avoid misleading reporting of Exploration Results.</li> </ul>	<ul style="list-style-type: none"> <li>• These results are from one drillhole at Rana de Sal and one drillhole from Pata Pila/Deceo III</li> </ul>
Other substantive exploration data	<ul style="list-style-type: none"> <li>• Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk</li> </ul>	<ul style="list-style-type: none"> <li>• All meaningful and material information is reported</li> <li>• Refer to previous ASX Company releases:</li> </ul> <p>ASX:GLN - 11 September, 2019</p>

Criteria	JORC Code explanation	Commentary
	<p>samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</p>	<p>ASX:GLN - 9 October, 2019  ASX:GLN - 19 December, 2019  ASX:GLN - 13 January, 2020  ASX:GLN - 15 January, 2020  ASX:GLN - 12 March, 2020  ASX:GLN – 17 November, 2020</p>
Further work	<ul style="list-style-type: none"> <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, provided this information is not commercially sensitive.</li> </ul>	<ul style="list-style-type: none"> <li>• Geophysical surveys are planned for Q1 2021 for further exploration to potential upsides</li> <li>• As announced on 24 July 2020 and 24 August 2020, a PEA and Scoping/Pre-Feasibility study commenced and is focused on the HMW project.</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 style="list-style-type: none"> <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 style="list-style-type: none"> <li>• All logs provided to SRK were imported and validated in Postgres SQL database server.</li> <li>• Boreholes are plotted in ArcGIS for plan generation.</li> <li>• All data is checked for accuracy.</li> </ul>
Site visits	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>• The CP visited the site from 22 to 26 July 2019 which included Hombre Muerto West.</li> <li>• The CP reviewed core and cuttings for Candelas. The CP consulted with exploration manager regarding details of the descriptions and lithologies, and the same methods and procedures have been applied to Hombre Muerto West.</li> <li>• The CP reviewed locations and drilling and sampling practices whilst at site for Candelas and visited the sites to be drilled for Hombre Muerto West (i.e. PP-01-19 and RS-01-19).</li> </ul>

Criteria	JORC Code explanation	Commentary
Geological interpretation	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>• The spacing of both drill holes (~4.5 km) coupled with extensive coverage of conductivity surveys, gives a moderate degree of confidence in the geological model.</li> <li>• The brine level is horizontal and physical parameters of density, temperature and pH along with time and depth were recorded during drilling to identify any variation and assist in sampling.</li> <li>• No samples were obtained from basement or alluvials, and therefore only the Sand, Gravels and Halite are estimated as potential economic resources.</li> </ul>
Dimensions	<ul style="list-style-type: none"> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• The extents of the resource are approximately 2.75 km (easting) by 7.750 km (northing) by 1.2 m (vertical), giving a total volume of interest of ~25.5 km<sup>3</sup>.</li> <li>• Downhole geophysics and depth-specific data (i.e. specific yield and brine chemistry) were used to estimate the resource. Priority was given to 72 hour airlift samples.</li> <li>• Grades are relatively uniform with depth and lateral extent.</li> </ul>
Estimation and modelling techniques	<ul style="list-style-type: none"> <li>• The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen, include a description of computer software and parameters used.</li> <li>• The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li> <li>• The assumptions made regarding recovery of by-products.</li> <li>• Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur</li> </ul>	<ul style="list-style-type: none"> <li>• Due to the nature of the mineralisation style, the long sample intervals, and the need for some averaging of overlapping samples, an Inverse Distance interpolation (using power 2) was deemed most appropriate at this stage.</li> <li>• The search ellipse was spheroidal. The search distances were at a distance to ensure all blocks within the hydrogeologic domains were estimated, up to a maximum of 2.7 km.</li> <li>• Downhole measurements of specific yield (SY) (drainable porosity) were obtained by Zelandez using Borehole Magnetic Resonance technology. The technique uses a unique measurement that responds to</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p>for acid mine drainage characterisation).</p> <ul style="list-style-type: none"> <li>• In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li> <li>• Any assumptions behind modelling of selective mining units.</li> <li>• Any assumptions about correlation between variables.</li> <li>• Description of how the geological interpretation was used to control the resource estimates.</li> <li>• Discussion of basis for using or not using grade cutting or capping.</li> <li>• The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.</li> </ul>	<p>volumes of fluids present in the sequences and the distribution of those fluids as a function of pore geometry. Thus, the technique is used to measure pore network fluids allowing determination of Specific Yield (SY), Specific Retention and permeability i.e. hydraulic conductivity.</p> <ul style="list-style-type: none"> <li>• Given no other independent method was used for measuring SY, the CP did a comparison of SY for other similar deposits and used conservative values for SY. The values assigned to each hydrogeologic unit (which includes both Pata Pila and Rana de Sal) are as follows: <ul style="list-style-type: none"> <li>○ Sand – 12.5%</li> <li>○ Gravel – 6%</li> <li>○ Halite – 4%</li> </ul> </li> <li>• Total volumes of the hydrogeologic domains used for flagging the resource model are: <ul style="list-style-type: none"> <li>○ Sand – 3.44 km<sup>3</sup></li> <li>○ Gravel – 0.20 km<sup>3</sup></li> <li>○ Halite – 0.19 km<sup>3</sup></li> </ul> </li> <li>• Lithium and potassium content were estimated into a proportional block model based on 5m composites for each domain using soft boundaries. The composite length was chosen to account for the lenses of halite and gravel.</li> <li>• The block model dimensions are: <ul style="list-style-type: none"> <li>○ Easting (250 m)</li> <li>○ Northing (250 m)</li> <li>○ Elevation (5 m).</li> </ul> </li> </ul>
Moisture	<ul style="list-style-type: none"> <li>• Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li> </ul>	<ul style="list-style-type: none"> <li>• Lithium brine is a liquid resource, moisture content is not relevant to resource calculations</li> </ul>
Cut-off parameters	<ul style="list-style-type: none"> <li>• The basis of the adopted cut-off grade(s) or quality parameters applied.</li> </ul>	<ul style="list-style-type: none"> <li>• The minimum interpolated grade is around 950 mg/l Li, which is very high grade, and above what has been deemed in similar projects as an economic cut-off grade. For example, a 500 mg/l Li cut-off was</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>used for NRG Metals' Hombre Muerto North project, a combined Measured/Indicated resource. Hence, no cut-off grade was applied but the upper fresh and brackish water units are assumed to be zero.</p> <ul style="list-style-type: none"> <li>Based on observations that the brine density and chemistry is relatively consistent below a depth of about 80 metres, it was assumed that with depth, all parts of the salar between this depth and base of RS-01-19 at 713 m, will have saturated brine. The geophysics has shown that the basement topography is irregular and may result in some parts of the system being shallower than this depth, particularly towards the western margins of the resource. This has been taken into account in Resource classification.</li> </ul>
Mining factors or assumptions	<ul style="list-style-type: none"> <li>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It 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 style="list-style-type: none"> <li>Potential brine abstraction is considered to involve pumping via a series of production wells.</li> <li>The thick and mostly unconsolidated sand units dominate the drainable brine resource. The CP believes that the transmissivity of future wells completed in these units would be favourable for extracting brine because of the assumed favourable aquifer conditions associated with these clastic units.</li> <li>The raw brine extraction wells are to be located in Pata Pila and Rana de Sal. This brine will be transferred to the evaporation ponds system for the concentration of the lithium contents.</li> </ul>
Metallurgical factors or assumptions	<ul style="list-style-type: none"> <li>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</li> </ul>	<ul style="list-style-type: none"> <li>The production of lithium carbonate (<math>\text{Li}_2\text{CO}_3</math>) from lithium brine has been demonstrated by a number of companies with projects in Argentina in close proximity to Hombre Muerto, for example Livent Corporation's El Fenix, and Galaxy's Hombre de Muerto. It is</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p>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.</p>	<p>assumed Galan would use similar methods to enrich brine to 99.6% lithium and produce lithium carbonate (Li<sub>2</sub>CO<sub>3</sub>).</p> <ul style="list-style-type: none"> <li>• The proposed metallurgical process has two main stages; the first stage is the evaporation ponds system and the second is the lithium carbonate plant. The first stage allows the concentration of the lithium in the brine and the precipitation of impurities. The second stage is pursuing the removal of remaining impurities and the precipitation of the lithium carbonate product. The overall recovery of Li of the proposed process design is 58.5%.</li> <li>• As announced on 10 Sep 2020, Galan has commenced lab test production of battery grade lithium carbonate.</li> </ul>
<p>Environmental factors or assumptions</p>	<ul style="list-style-type: none"> <li>• Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.</li> </ul>	<ul style="list-style-type: none"> <li>• No factors or assumptions are made at this time. However, an environmental report has been accepted by the mining court for the tenement grant.</li> <li>• Environmental monitoring and reporting are ongoing</li> </ul>
<p>Bulk density</p>	<ul style="list-style-type: none"> <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> </ul>	<ul style="list-style-type: none"> <li>• Bulk density determination is not relevant for brine resource calculations as the drainable porosity or specific yield of the hydrogeologic units is the relevant factor for brine resource calculations.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <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>	<ul style="list-style-type: none"> <li>• Synthetic values of drainable porosity and specific yield values are obtained from downhole geophysics downhole geophysics (Zelandez) and includes all aquifer material. The CP did a comparison of similar aquifer material from other nearby projects as a check on the results, and where necessary modified accordingly.</li> <li>• A summary of samples including specific yield and modifications to the synthetic measurements per hydrogeological domain is provided in the main body of the report.</li> <li>• Specific yields for each domain are: <ul style="list-style-type: none"> <li>• Sand 12.5%</li> <li>• Gravel 6%</li> <li>• Halite 4%</li> </ul> </li> </ul>
Classification	<ul style="list-style-type: none"> <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 (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</li> <li>• Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul style="list-style-type: none"> <li>• All the estimated Resource is assigned as Indicated. This is consistent with recommendations by Houston et al., (2011) where they suggest that well spacing required to estimate a Measured Resource be no farther than 3-4 kilometres apart from each other. The high quality of geophysical survey data also demonstrates the continuity, and geometry of the brine acquirers at depth.</li> <li>• Numerous factors were taken into consideration when assigning the classification applied to the Mineral Resource estimate. Of these factors, it is considered that the classification has been primarily influenced by the drill coverage, geological complexity and data quality as described in the main announcement above. When assessing these criteria, SRK considers the greatest source of uncertainty to be the large sample intervals, which have resulted in data aggregation. The large intervals have also resulted in some degree of smearing of high grades within the modelled</li> </ul>

Criteria	JORC Code explanation	Commentary
		domains. Also, the specific yields may be underestimated and provide potential upside.
Audits or reviews	<ul style="list-style-type: none"> <li>The results of any audits or reviews of Mineral Resource estimates.</li> </ul>	<ul style="list-style-type: none"> <li>The Resource estimate was subject to internal peer review by SRK Consulting (Australasia) and Galan.</li> </ul>
Discussion of relative accuracy/ confidence	<ul style="list-style-type: none"> <li>Where appropriate, a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.</li> <li>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</li> <li>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</li> </ul>	<ul style="list-style-type: none"> <li>Samples were analysed by two separate laboratories and included duplicate brine samples submitted to both laboratories to confirm repeatability as part of the Quality Assurance/ Quality Control (QA/QC) procedure.</li> <li>To date, a total of 11 bailer/packer tests (including 5 duplicate samples) and a total of 15 airlift samples (including 8 duplicates, 2 blanks and 4 synthetic brines) were submitted were submitted to Alex Stewart and SGS. A high and a low certified synthetic brine were also used to check accuracy. Based on the results of the duplicate and standard samples, the CP concluded that the laboratory results are reliable.</li> <li>The Mineral Resource estimate statement is based on two drill holes, given the relatively small size of the project and the domains, the uniformity of the brine chemistry, the extensive coverage of conductivity profiles and the relatively good stratigraphic understanding of the hydrogeologic units, the CP believes that an Indicated category is justified.</li> <li>The sandy units that dominate the drainable brine resource are believed by the CP to suggest that the transmissivity of future wells completed in these units would be favourable for extracting brine because of the assumed favourable aquifer conditions associated with these clastic units.</li> </ul>