



## ASX ANNOUNCEMENT

8 August 2023

# FULL HMW PHASE 1 CONSTRUCTION PERMITS GRANTED

### Highlights:

- **Initial Phase 1 Hombre Muerto West (HMW) construction permits granted late yesterday, Argentina time**
- **Permits include ponds, plant, onsite laboratory, 200-man camp, power and other required infrastructure**
- **Six (6) additional production wells also approved**
- **HMW is the highest grade, lowest impurity lithium brine deposit in Argentina**
- **Phase 1 preparation works, engineering and long lead orders are on track for delivering lithium chloride production of 5.4ktpa LCE in H1 2025**
- **Appointment of main contractor imminent; full phase 1 pond construction to commence with 2 weeks**
- **Phase 2 DFS progressing well; results on track for September 2023**

Galan Lithium Limited (**ASX:GLN**) (**Galan** or the **Company**) is very pleased to announce that late yesterday, Argentina time, the Catamarca Ministro – Ministerio de Minería (Mines Department Minister) granted Galan the full Phase 1 construction permits for 5.4ktpa LCE production at the Hombre Muerto West (**HMW**) lithium brine project. The granting of the permits means full construction can commence with the aim of delivering lithium chloride production in H1 2025.

As previously announced, the HMW DFS was separated into two phases. This initial Phase 1 of the DFS focuses on the production of a lithium chloride concentrate, as governed by the production permits just approved. The optimisation work continues and will culminate in the release of a Phase 2 DFS in September 2023, addressing a full 20ktpa LCE production rate.

Galan's Managing Director, Juan Pablo (**JP**) Vargas de la Vega, commented: "This is a major development in the history of Galan and we are proud to be sharing this moment with the Government of the Catamarca Province in Argentina in a major step towards the production of a premium quality lithium chloride product from the HMW Project. The Government and its officials have been on the journey from the start and have always acted very professionally through the whole approval process.

The permits cover the full Phase 1 DFS production rate of 5.4ktpa LCE including full spec ponds design and size plus the carbonate plant using the lithium concentration feed from the existing ponds already built. All required infrastructure is also approved, which means it is all systems go to we meet our production target in H1 2025. The Galan team, from top to bottom, has been simply outstanding and this is the most significant milestone in the relatively short history of the HMW Project."

The Chairman of Galan, Richard Homsany also said “We are excited not only about the robust financial outcomes that HMW has for the benefit of our shareholders and personnel, who we sincerely thank for their support to date, but also for the Catamarca community and stakeholders in the region who will benefit economically and socially through the education, training and employment opportunities which Galan will offer, including diversity objectives, and prioritise our investment in. We look forward to continuing to work in co-operation with the Catamarca Government to maximise the positive impact of Galan’s mining and processing operations in the community, and ensure it is sustainable and will endure over the longer term.

We also look forward to rapidly advancing the development and construction of HMW and providing updates on our progress.

Galan is well poised to achieve its purpose of economically producing valuable products from the highest grade and lowest impurity lithium brine deposit in Argentina.”



From L to R - Francisco Lopez (Manager Community and Government relations), Teresita Regalado (Catamarca's Mining Development Secretary), Marcelo Murua (Catamarca's Mines Minister), Richard Homsany (Chairman) and JP Vargas de la Vega (Managing Director) at meeting held last Thursday.

### **Cautionary Statements**

The Definitive Feasibility Study (DFS) referred to in this announcement is based upon a JORC Code Compliant Mineral Resource Estimate (ASX: HMW Project Resource Increases to 6.6Mt LCE @ 880mg/l Li: 1 May 2023) (inclusive of the updated Proven and Probable Ore Reserve referred to in this announcement). Galan confirms that there are no Inferred Resources included in the DFS production schedule and that the schedule is comprised 100% of Ore Reserves.

The Mineral Resources underpinning the Ore Reserve and production target in the DFS have been prepared by a competent person in accordance with the requirements of the JORC Code (2012). The Competent Person's Statement(s) are found in the section of this ASX release titled "*Competent Person's Statement(s)*". For full details of the Mineral Resources estimate, please refer to the body of this announcement. Galan confirms that it is not aware of any new information or data that materially affects the information included in this release. All material assumptions and technical parameters underpinning the estimates in the ASX release continue to apply and have not materially changed.

Process and engineering designs for the DFS were developed to support capital and operating estimates to an accuracy of -10% to +15%. Key assumptions that the DFS was based on (including those defined as Material Assumptions under ASX Listing Rule 5.9.1) are outlined in the body of this announcement and Appendix 1. Galan believes the production target, forecast financial information derived from that target and other forward-looking statements included in this announcement are based on reasonable grounds.

Several key steps need to be completed in order to bring the Hombre Muerto West Project into production. Many of these steps are referred to in this announcement. Investors should note that if there are delays associated with completion of those steps, outcomes may not yield the expected results (including the timing and quantum of estimated revenues and cash flows). The economic outcomes associated with the DFS are based on certain assumptions made for commodity prices, exchange rates and other economic variables, which are not within the Company's control and subject to change. Changes in such assumptions may have a material impact on the economic outcomes.

To achieve the range of outcomes indicated in the DFS, funding will likely be required. There is no certainty that Galan will be able to source the amount of funding when required. 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 shares. It is also possible that Galan could pursue other value realisation strategies such as an off-take with prepayment, sale, partial sale or joint venture of the Hombre Muerto West Project.

Some of the statements appearing in this announcement may be in the nature of forward-looking statements. Such statements are only predictions and are subject to inherent risks and uncertainties. Those risks and uncertainties include factors and risks specific to the industries in which Galan Lithium Limited operates and proposes to operate, as well as general economic conditions, prevailing exchange rates and interest rates and conditions in the financial markets, among other things. Actual events or results may differ materially from the events or results expressed or implied in any forward-looking statement. No forward-looking statement is a guarantee or representation as to future performance or any other future matters, which will be influenced by several factors and subject to various uncertainties and contingencies, many of which will be outside Galan Lithium Limited's control. Galan Lithium Limited does not undertake any obligation to update publicly or release any revisions to these forward-looking statements to reflect events or circumstances after today's date or to reflect the occurrence of unanticipated events. No representation or warranty, express or implied, is made as to the fairness, accuracy, completeness or correctness of the information, opinions or conclusions contained in this announcement. To the maximum extent permitted by law, none of Galan Lithium Limited, its directors, employees, advisors, or agents, nor any other person, accepts any liability for any loss arising from the use of the information contained in this announcement. You are cautioned not to place undue reliance on any forward-looking statement. The forward-looking statements in this announcement reflect views held only as at the date of this announcement.

## **OPERATIONS**

### **Hombre Muerto West**

#### **Definitive Feasibility Study (DFS)**

The HMW DFS Phase 1 delivered an annual production rate of 5,367 recoverable tonnes of lithium carbonate equivalent (LCE) contained in a concentrated lithium chloride product for a period of 40 years. The Phase 1 DFS results and analysis provided solid outcomes that showed the HMW Project was a very competitive and highly compelling project in the lithium brine industry.

As previously announced, the DFS was separated into two phases. This initial Phase 1 of the DFS focuses on the production of a lithium chloride concentrate, as governed by the production permits. The DFS optimisation work continues and will culminate in the release of a Phase 2 DFS in September 2023, addressing full 20ktpa LCE production rate.

The preparation of the Phase 1 DFS was carried out by several consultants. The Mineral Resource and Ore Reserve estimates were prepared by SRK Consulting (SRK), the lithium recovery method was designed by Ad-Infinitum and the pond designs and water contour channels were developed by AIA Engineering and Consulting Services International (AIA) and EIC Engineering (EIC) respectively. Both are specialised engineering firms with sound previous experience with similar projects. M3 Engineering and Technology Corporation (M3) was responsible for reviewing and documenting the recovery method and the civil material take-off quantities for ponds and water contour channels, as well as developing the engineering design of the reagents and filtering plant. M3 also developed the Project's layout, infrastructure designs, capital cost and operating costs estimates and economic evaluation. The price estimates of the lithium carbonate and lithium chloride concentrate were developed by Wood Mackenzie and iLiMarkets, respectively. Key financial highlights are presented in Table 1.

***Table 1: Phase 1 Definitive Feasibility Study Results – HMW Project***

Parameters	Units	Values
<b>Lithium Carbonate Equivalent Production (after ramp-up)</b>	tonnes/year	5,367
<b>Project Life Estimate</b>	Years	40
<b>Capital Cost (CAPEX)</b>	US\$m	118.4
<b>Capital Cost (ex-contingency)</b>	US\$m	103.6
<b>Average Annual Operating Cost (OPEX)</b>	US\$/tonne	3,963
<b>Average Lithium Chloride Selling Price (2025-2064)</b>	US\$/tonne	20,252
<b>Average Annual EBITDA</b>	US\$m	83
<b>Average Annual Free Cash Flow</b>	US\$m	54
<b>Pre-Tax Net Present Value (NPV<sub>8%</sub>)</b>	US\$m	736
<b>After-Tax Net Present Value (NPV<sub>8%</sub>)</b>	US\$m	460
<b>Pre-Tax Internal Rate of Return (IRR)</b>	%	48
<b>After-Tax Internal Rate of Return (IRR)</b>	%	36
<b>Payback Period (After-Tax, from start of production)</b>	Years	2.2

For more Detailed information on the HMW DFS please refer to the ASX Announcement dated 3 July 2023 entitled "Phase 1 of Hombre Muerto West (HMW) DFS Delivers Compelling Economic Results for Accelerated Production."

#### **Mineral Resource Estimate**

The most recent HMW Mineral Resource estimate was announced to the market on 1 May 2023 (Refer ASX Announcement entitled "Galan's 100% Owned HMW Project Resource Increases to 6.6MT LCE @ 880 mg/l Li (72% in Measured Category)"). It incorporated geological and geochemical information obtained from nineteen (19) drillholes totalling 5,918 metres within the Pata Pila, Rana de Sal, Casa del Inca, Del Condor, Pucara del

Salar, Delmira, Don Martin and Santa Barbara tenements (see figure 1). A total of 610 brine assays were used as a foundation of the estimation, all of which were analysed at Alex Stewart International (**Alex Stewart**) laboratory in Jujuy. The QA/QC program includes duplicates, triplicates, and standards. In total, 325 QA/QC samples were considered using Alex Stewart (duplicates) and SGS in Argentina (triplicates) as the umpired laboratory.

The updated HMW Mineral Resource was supported by new core porosity data. Also endorsing the directly obtained brine samples and core recovery was approximately 51 km of additional surface resistivity (CSAMT and TEM), which was completed in the 2021 and 2022 campaigns at the HMW Project.

The HMW Mineral Resource was reclassified based on the new data, resulting in a Measured Resource exceeding 4.7Mt of contained lithium carbonate equivalent (LCE) product grading 873 mg/L Li. In accordance with JORC Code Guidelines, the total HMW Mineral Resource (Measured + Indicated + Inferred) increased by approximately 14% to just over 6.6Mt of contained LCE grading at 880 mg/L Li. A summary of the updated HMW Mineral Resource is provided in the Mineral Resource Statement (Table 2). No cut-off grade was applied to the updated Mineral Resource estimate as minimum block grades of 805 mg/L Li exceeded the anticipated economic threshold. This exceptional characteristic of the HMW reservoir reflects the highly homogenous brine quality throughout the tenements, which permits the aggregation of the complete ore body and simplifies future operational and process constraints.

**Table 2: Mineral Resource Statement for Hombre Muerto West and Candelas (effective date 31 May 2023) (Inclusive of Ore Reserves)**

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:</b>							
Measured	1,020	890	873	4,737	7,638	7,782	14,841
Indicated	205	185	904	986	7,733	1,585	3,022
Inferred	182	161	887	859	7,644	1,391	2,653
HMW Total	1,407	1,237	880	6,582	7,653	10,758	20,516
<b>Candelas North (*)</b>							
Indicated	196	129	672	685	5,193	1,734	3,307
<b>Galan's Total Resource Inventory</b>							
<b>Grand Total</b>	<b>1,603</b>	<b>1,366</b>	<b>852</b>	<b>7,267</b>	<b>7,793</b>	<b>12,492</b>	<b>23,823</b>

**Notes:**

1. No cut-off grade applied to the updated Mineral Resource Estimate as minimum assays values are above expected economic concentrations (Li 620 mg/L).
2. Specific yield (SY) values used are as follows: Sand – 23.9%, Gravel – 21.7%, Breccia – 8%, Debris – 12%, Fractured rock – 6%, and Halite – 3%.
3. The conversion for LCE = Li x 5.3228, and KCl = K x 1.907.
4. There may be minor discrepancies in the above table due to rounding.
5. (\*) The Candelas North Mineral Resource Statement was originally announced by Galan on 1 October 2019.
6. There may be minor discrepancies in the above table due to rounding.

## Ore Reserve Estimate

The HMW Project Phase 1 DFS reports an initial Ore Reserve estimate of 212Kt of recoverable LCE (Table 3). The Ore Reserve estimate was signed off by Dr Brian Luinstra, who is a Competent Person as it is described in the competent person statement.

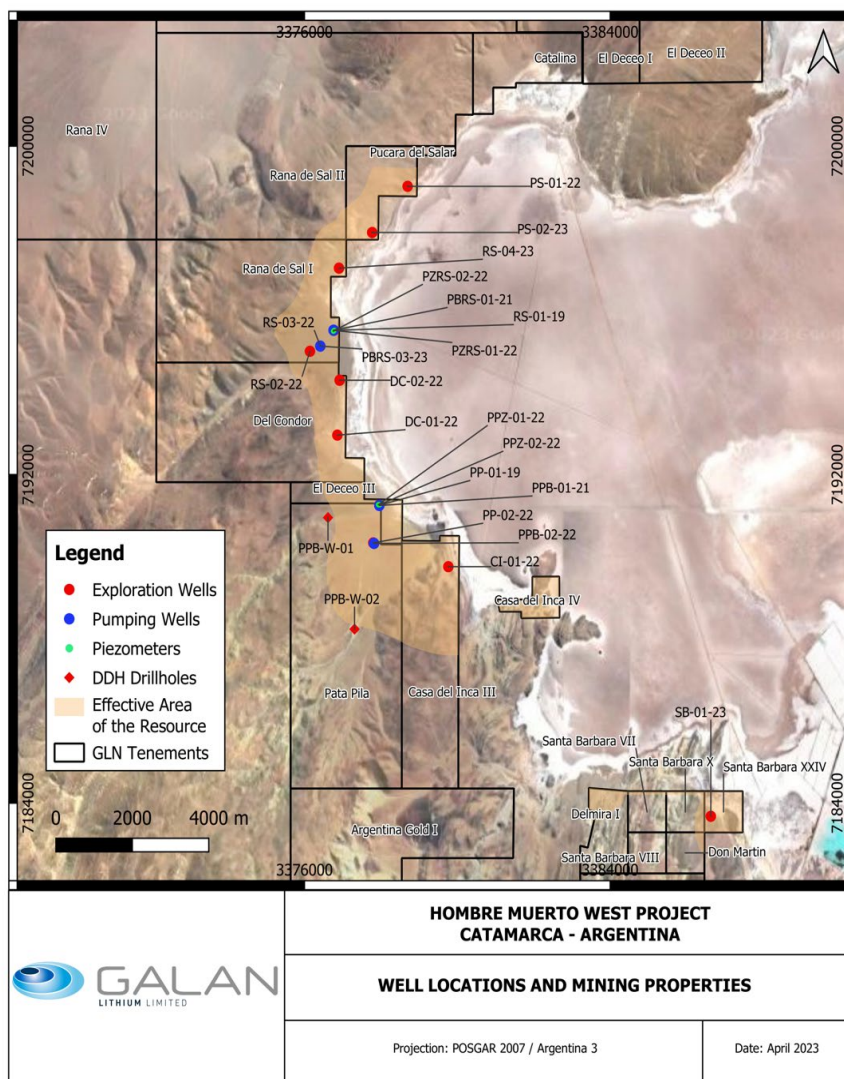
**Table 3: Ore Reserve Statement for HMW Project Phase 1 DFS (effective date 31 May 2023)**

Ore Reserve Category	Production Period (years)	Pumped Brine Vol. (Mm <sup>3</sup> )	Recovered Li Metal (Kt)	Avg. Li Grade (mg/l)	LCE (Kt)
Proven	1-10	19.7	17.8	901.6	53.7
Probable	11-40	59.1	52.4	886.9	158.7
<b>HMW Total</b>	<b>1-40</b>	<b>78.8</b>	<b>70.2</b>	<b>890.6</b>	<b>212.5</b>

**Notes:**

1. Ore Reserves are included in the Mineral Resources
2. No cut-off grade applied for HMW Ore Reserve.
3. A combined recovery factor of 57% applied accounting for: ponds and processing (66%); 90% efficiency assumed for lithium chloride to LCE process conversion. Additional 4% allowance applied for transport and operational losses.
4. "Li Metal" and "LCE" are expressed as total contained metals.
5. Lithium carbonate equivalent ("LCE") calculated using mass of LCE = 5.3228 multiplied by the mass of lithium metal.
6. There may be minor discrepancies in the above table due to rounding

For more detailed technical information (including relevant JORC Code Tables) surrounding the latest HMW Mineral Resource and the HMW Ore Reserve Statement, please refer to the ASX Announcement dated 1 May 2023 entitled "Galan's 100% Owned HMW Project Resource Increases to 6.6MT LCE @ 880 mg/l Li (72% in Measured Category)" and the ASX Announcement dated 3 July 2023 entitled "Phase 1 of Hombre Muerto West (HMW) DFS Delivers Compelling Economic Results for Accelerated Production."



**Figure 1: Hombre Muerto West Resource limits and drilling locations**

Monthly production rates were simulated from year 1 to year 40 according to seasonal brine demand. Abstraction rates and concentrations have been modelled iteratively to manage grade and optimise pumping to meet pond requirements. The Ore Reserve estimate is based on the nominal Phase 1 mine production plan of 40 years. A global recovery factor of 57% was used to derive the LCE production rates from the abstracted brine volume and Li content. This factor considers the chemical process evaporation ponds recovery and purification plant (approx. 66%) and LCE conversion recovery (90%). Additionally, a 4% allowance was applied for transport and operational losses.

Abstraction capture zone analysis was used to determine the origin of brine from each production well throughout the life of mine and Ore Reserve volumes were all derived from capture zones contained from within the Measured Resource blocks.

At the time of the release of the Ore Reserve estimate, Galan had fully tested three pumping wells, all of which form part of the project infrastructure, with measured flow yields ranging between 18 and 25 L/s. Two additional wells are now completed and are undergoing hydraulic testing. For the modelled wells, a 20 L/s projected maximum flow has been assumed for the balance of the wells to complete the six required wells infrastructure. Under this scenario and considering the seasonal variability of the brine demand program, efficiencies for the wellfield are assumed to range between 30% (winter) and 75% (summer), averaging 52% on a yearly basis. This indicates that there will be sufficient installed well capacity to accomplish the abstraction scheme.

Due to the high and consistent grades of lithium within brines derived from Hombre Muerto West, no cut-off grade has been applied to the Ore Reserve (this means if a cut-off grade of 500mg/l was applied, the resource estimate would be the same ie. same tonnage and grade). The impact of density-driven flow was accounted for in the modelling, however, is not considered to be material to the Ore Reserve estimate, given the low-density gradients that have been mapped across the deposit.

The Ore Reserve estimate is considered to be a conservative representation of the aquifer systems with very high confidence in modelled outputs during the early to mid-life of the mine production plan and reducing confidence during later production. Brine derived in years 1-10 of the Phase 1 mine plan is predominantly from areas with high confidence levels with good geological and test pumping control and has therefore been categorised as Proven Ore Reserves. Brine derived in years 11-40 of the Phase 1 mine plan tends to be derived from areas with lower confidence and has therefore been categorised as Probable Ore Reserves.

It is important to note that hydrogeological numerical models have significant areas of uncertainty and that the mine plan developed over a 40-year period is not definitive; as declared by Galan, the Project intends to upscale production in additional sequential stages, which are not part of this Ore Reserve declaration. Model sensitivity, predictive uncertainty analysis and professional judgement have been incorporated into the numerical model development to determine the most sensitive parameters. A conservative approach to these parameters has been adopted to ensure the model is representative of the level of understanding of the hydrogeology.

**The Galan Board has authorised this release.**

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## **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-Infinitem 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.*

### **Competent Persons Statement 4**

*The information in this report that relates to the Ore Reserves estimation approach at Hombre Muerto West was compiled by Dr Brian Luinstra. Dr Luinstra is a 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 Luinstra consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.*

### **Competent Persons Statement 5**

*The information in this report that relates to the project infrastructure was reviewed by John Woodson, PE SME-RM as senior vice president of M3 Engineering and Technology Corporation. He has sufficient experience relevant to the activity which they are undertaking to qualify as a Competent Persons as defined by the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves – The JORC Code (2012)". Mr Woodson 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.

## About Galan

Galan Lithium Limited (ASX:GLN) is an ASX-listed lithium exploration and development business. Galan's flagship assets comprise two world-class lithium brine projects, HMW and Candelas, located on the Hombre Muerto salar in Argentina, within South America's 'lithium triangle'. Hombre Muerto is proven to host lithium brine deposition of the highest grade and lowest impurity levels within Argentina. It is home to the established El Fenix lithium operation (Livent Corporation) and the Sal de Vida (Allkem) and Sal de Oro (POSCO) lithium projects. Galan is also exploring at Greenbushes South in Western Australia, approximately 3km south of the Tier 1 Greenbushes Lithium Mine.

**Hombre Muerto West (HMW):** A ~16km 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 significant potential of a deep basin. In May 2023 an updated Mineral Resource estimate was delivered totalling 6.6Mt of LCE. There still exploration upside for the recently consolidated tenure at Catalina that has not previously been included in the resource estimate. The Catalina tenure overlaps 5,954 hectares of existing HMW tenements in Catamarca and is adjacent to the existing HMW Resource. Galan is now targeting an exploration target<sup>(1)</sup> in the area hoping to add to the HME Resource base.

**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.

**Greenbushes South Lithium Project:** Galan now owns 100% of the tenement package that makes up the Greenbushes South Project that covers a total area of approximately 315 km<sup>2</sup>. The project is located ~250 km south of Perth in Western Australia. These tenements are located along the trace of the geologic structure, the Donnybrook-Bridgetown Shear Zone, that hosts the emplacement of the lithium-bearing pegmatite at Greenbushes. In March 2022 airborne geophysics was flown to develop pegmatite targets for all of Galan's tenements. Following on, in August 2022, a pegmatite associated with spodumene-bearing rocks was discovered at E70/4790. This tenement is approximately 3 km to the south of the Greenbushes mine. In early March 2023, drilling commenced within E70/4790.

- (1) An exploration target is not a Mineral Resource. The potential quantity and grade of the exploration target is conceptual in nature. A potential Mineral Resource has been identified within the exploration target but there has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.