

**ASX ANNOUNCEMENT**

30 July 2019

## QUARTERLY ACTIVITIES REPORT – JUNE 2019

### HIGHLIGHTS

- ✦ Lithium carbonate production operations from industrial scale pilot plant commenced to supply high-value product into executed Sales Agreement
- ✦ Argosy joins the exclusive list of international lithium carbonate producers – chemical process tested and proven to produce  $\geq 99.5\%$   $\text{Li}_2\text{CO}_3$  product
- ✦ Awaiting regulatory approvals for the construction of an initial ~2,000tpa commercial lithium carbonate processing plant – as part of staged scale-up development of the Rincon Lithium Project
  - Permitting applications submitted to Salta Province Mines Department during previous Quarter
- ✦ Works continuing for preparation of applications for full scale (~10,000tpa) project development approvals/permits
- ✦ Total of ~\$9.1 million raised from oversubscribed entitlement offer, shortfall shares and oversubscriptions
- ✦ High purity lithium hydroxide (LiOH) processing works conducted at pilot plant and in-house laboratory for customer sample testing
  - Laboratory analysis results confirm 56.84% LiOH content value (note: standard battery grade LiOH is 56.5%) that corresponds to a purity of 99.61% lithium hydroxide monohydrate
- ✦ Argosy has the lithium processing expertise and knowledge to pursue a complementary commercial lithium carbonate and/or hydroxide production strategy
- ✦ Continued progress with Asian based LCE end-users for potential commercial scale off-take and investment

### KEY OBJECTIVES FOR SEPTEMBER 2019 QUARTER

- ✦ Continue lithium processing operations for production of LCE product for delivery into executed Sales Agreement
- ✦ Obtain regulatory approval/permit to commence works for construction of the commercial 2,000tpa lithium carbonate processing plant operation
- ✦ Secure arrangement for 2,000tpa lithium carbonate product off-take with potential strategic partner



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### EXECUTIVE SUMMARY

Argosy Minerals Limited (“Argosy” or the “Company”) continued its fast-track development strategy at the Rincon Lithium Project in Argentina, achieving significant milestones during the Quarter, including commencing lithium carbonate ( $\text{Li}_2\text{CO}_3$ ) production operations from the industrial scale pilot plant – thus joining the exclusive list of international lithium carbonate producers – with all product sales being delivered into the Sales Agreement executed in March 2019, the Company raised a total of ~\$9.1 million (from a significantly oversubscribed entitlement offer, shortfall shares and oversubscriptions), prepared battery quality lithium hydroxide customer samples with 56.84% LiOH content value (standard battery grade LiOH is 56.5%), and held its Annual General Meeting in front of a very large number of content shareholders.

In addition, Argosy is awaiting permitting/application approval for the development of an initial ~2,000tpa commercial operation module lithium carbonate processing plant and associated operations at the Rincon project site.

Furthermore, the Company is progressing works to prepare applications for the full scale 10,000tpa operation project development approvals/permits.

Argosy continued to progress its strategic investor and off-take process, with Company executives attending strategic meetings in Japan and Chile with battery industry participants, to further advance interest from such strategic parties for the potential full or modular scale project development and associated capex funding/investment.

The milestones achieved this Quarter reinforces the Company is genuinely and continues delivering on its ‘fast-track’ lithium development strategy, providing additional options to consider accelerating the scale-up development timeframe of the project. Argosy remains confident that key upcoming milestones and achievements will prove successful to demonstrate the long-term sustainability and progress toward commercial scale development at the Rincon Lithium Project.

Following the Company’s successful progress to date at the Rincon Lithium Project, and noting its exclusive and proprietary chemical process technology being developed to produce 99.5% lithium carbonate product, the Company is also proactively working to review and consider new projects in the lithium sector to utilise its established lithium experience and expertise. The evaluation process and associated discussions are ongoing, and the market will be updated in due course.

### **Rincon Lithium Project – Argentina** (77.5% JV interest, earning up to 90%)

The Rincon Lithium Project is the flagship asset in Argosy’s lithium development strategy, located within the Salar del Rincon in Salta Province, Argentina, in the world renowned “lithium triangle”. The Project is a JV partnership with pre-eminent lithium processing expert Pablo Alurralde. His extensive historical works within the Project area and the Salar, together with successful works completed to date have established a well-defined pathway to target commercial production of battery grade LCE product.

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**Figure 1. Rincon Lithium Project – Pilot Plant Lithium Carbonate Production Operations**

A brief summary of works conducted during the Quarter is noted below.

*Lithium Carbonate Production Operations*

The Company recently commenced lithium carbonate production operations from the Company's industrial scale pilot plant using the Company's proprietary and exclusive successful chemical process to produce 99.5% lithium carbonate product. The production operations comprise the continuous processing of concentrated lithium brine, sourced from the operational evaporation ponds at the Project area, within the industrial scale pilot plant.

The processing and production operations are progressing toward efficient product output, given the batch-scale and manual nature of the industrial scale pilot plant, to then target ongoing, steady-state operations and production from the pilot plant for LCE product supply.

The Company will produce and store the  $\text{Li}_2\text{CO}_3$  product until ready for shipment, then arrange the transport of product parcels for sale under the Sales Agreement executed in March 2019.

The strategic arrangement will enable Argosy to utilise the industrial scale pilot plant for small-scale commercial lithium carbonate production and product sales to a major international conglomerate, whilst reinforcing the long-standing customer relationship for future larger product sales and off-take arrangements from the planned commercial scale production operations and future potential commercial associations.

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The industrial scale pilot plant was first commissioned in April 2018, with first battery grade 99.5% lithium carbonate confirmed in August 2018, and commencement of continuous production operations in July 2019.



Figure 2. Rincon Lithium Project – Industrial Scale Pilot Plant Operations Staff

### 2,000tpa Commercial Project Development Works & Approvals/Permitting Process

During the Quarter, the Company continued working towards the ~2,000tpa modular commercial lithium carbonate processing plant operation as the next step in the scale-up development of the Project.

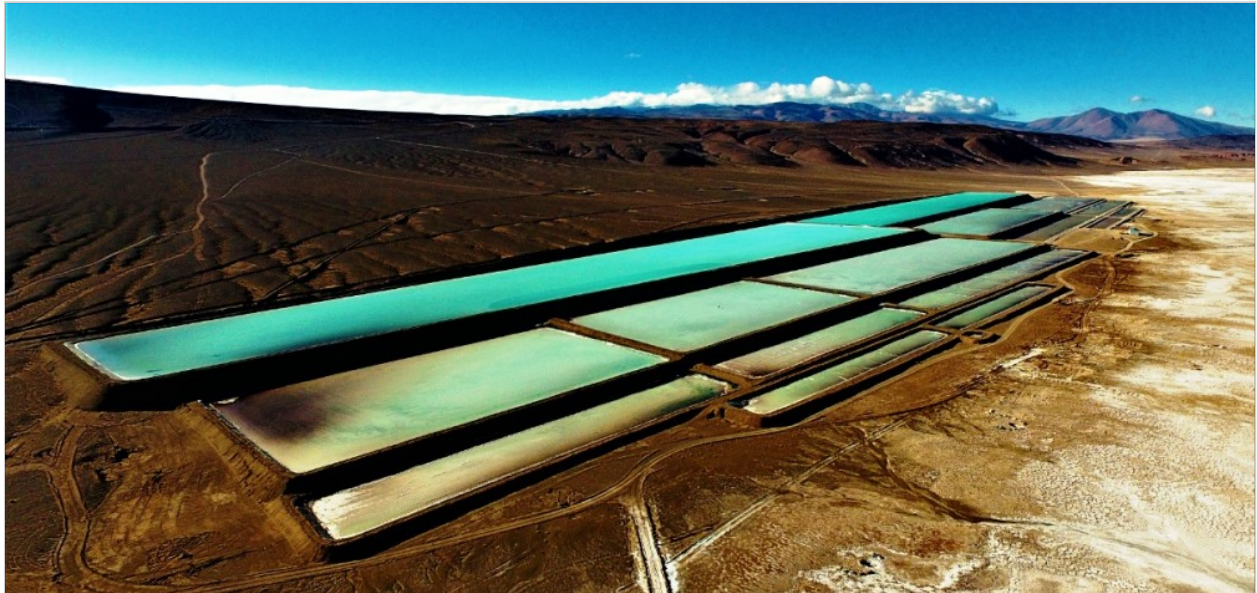
As part of this stage of works, the Company is awaiting permitting/application approval from the regulatory authority to construct and develop the 2,000tpa plant operation. The Company submitted the necessary regulatory documents and permitting applications during the previous Quarter. Company executives in Salta have been advised of current status of the approval process, and the Company is confident that all necessary regulatory approvals will be granted during the September Quarter.

Based on the Company's plans, and pending all necessary approvals being received, development of the 2,000tpa processing plant is estimated for a 12-15 month construction timeframe, with an ~3-4 month commissioning period. The budgeted capital expenditure is estimated at US\$14.3 million (plus contingency & VAT).

The 38 hectares of evaporation ponds constructed to supply concentrated lithium brine to the planned 2,000tpa processing plant are currently in operation concentrating lithium brine. These evaporation ponds were completed in 2018, with final lining installation works on three smaller evaporation ponds recently completed.

The Company is also in ongoing discussions with a number of potential capital providers for the 2,000tpa processing plant capital requirements.

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**Figures 3 - 4. Rincon Lithium Project – Current Operational 38Ha Evaporation Ponds**

*10,000tpa Commercial Project Development Works & Approvals/Permitting Process*

Argosy's Managing Director recently met with the Salta Province Mining Secretary regarding the strategy to ultimately advance to the full 10,000tpa scale development and the associated approvals and permitting requirements. Noting this, the Company is progressing works to prepare the necessary applications for the approvals/permits for the 10,000tpa operation.

As noted in the previous Quarterly Report, the Company engaged its evaporation pond construction contractor (who constructed the existing 38 hectares of evaporation ponds) to conduct evaporation pond design plans and cost estimation works for the 10,000tpa scale operation requirements. These plans will be part of the applications process submission documents.

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These design plans estimate a total of ~300 hectares of evaporation ponds located within Mina Romulo, with 21 ponds planned. Ponds 1 – 9 are designed to receive the raw lithium brine via pumping operations from the production wells, where the lithium brine then becomes further concentrated via several concentration stages in the remaining evaporation ponds.

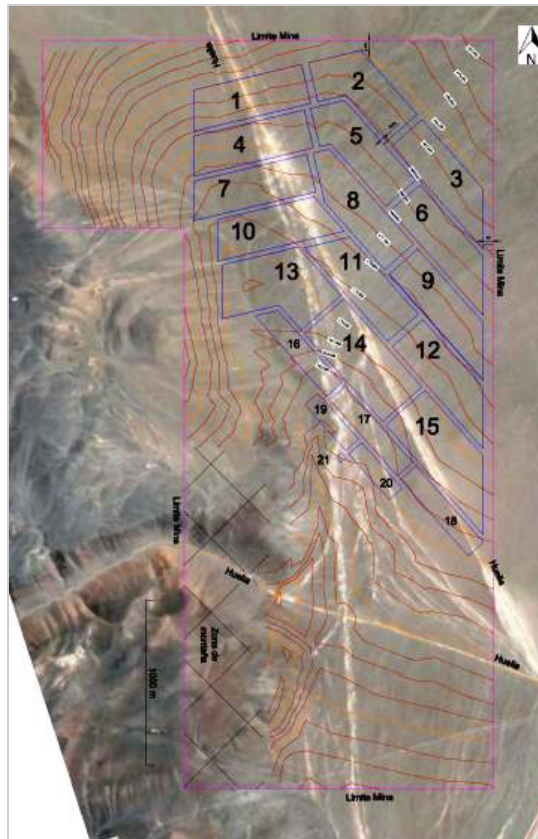


Figure 5. Rincon Lithium Project – Commercial Scale (~300Ha) Evaporation Pond Design Plan

### Strategic Investment & Commercial Off-take Arrangements

With the major 2018 project milestones accomplished – these being:

- constructing and commissioning the industrial scale pilot plant and associated site works;
- developing an exclusive and proprietary successful industrial scale chemical process solution to produce  $\geq 99.5\%$   $\text{Li}_2\text{CO}_3$  product using the industrial scale pilot plant; and
- the PEA (and associated Indicated Mineral Resource estimate) completed,

the Company has continued to focus on securing a strategic relationship/partnership(s) to ensure the successful commercial development of the Rincon Lithium Project.

As part of this process, Company executives recently attended strategic meetings in Chile (at the Lithium Supply & Markets Conference) and Japan to further advance interest from



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such strategic parties for product off-take and the potential modular scale and/or full commercial scale project development with associated capex funding/investment.

The meetings were focussed on procuring off-take arrangements for the 2,000tpa lithium carbonate product planned for the next stage of development at the Rincon Lithium Project. The Company's strategy and production plans were well received, and the Company is confident of progressing toward an agreement based on the discussions held.

In addition, several Japanese and European battery industry groups have expressed interest in further reviewing the potential for full 10,000tpa scale strategic arrangements. This may focus on confirming the viability of an economic pathway for long-term commercial scale production of LCE product, supported via the independent validation of estimated project capital expenditure items and steady-state production operation costs.

Current factors under consideration with these groups involves off-take product pricing particulars, terms and related arrangements, LCE product specification requirements, scale of initial and longer-term commercial operations and associated funding requirements, and structure and framework of the strategic relationship.

### Lithium Hydroxide Processing and Testing Works

During meetings in South Korea during the previous Quarter, the Company received interest to prepare high purity lithium hydroxide samples for a large Korean battery industry participant.

From LCE product chemical processing works and generating a build-up of lithium carbonate product at the industrial scale pilot plant, the Company prepared lithium hydroxide customer samples from its in-house laboratory.

The first test sample confirmed a laboratory analysis result of 56.84% LiOH content value, using an industry standard indirect calculation method (determined by ICP, gravimetric and titration analysis), and confirms a purity of 99.61% lithium hydroxide monohydrate {Li(OH).H<sub>2</sub>O}. These results compare favourably to the industry standard of 56.5% for battery grade LiOH.

This may provide the Company with a potential complementary lithium hydroxide production pathway, in addition to the lithium carbonate strategy and successful chemical process solution achieved to date.

This further reinforces the Company's lithium processing expertise and forms a strong position to establish its credentials well before many other lithium companies, given the successful development milestones achieved to-date by Argosy at the Rincon Lithium Project.

### Lithium Product Market Update

The lithium product market experienced less price volatility during the Quarter, with lithium carbonate prices recently tracking sideways, although other lithium products moved downwards, led by decreases across spodumene and lithium hydroxide sales.



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Battery grade lithium carbonate prices for the Quarter saw a modest pullback from US\$13,000/t to US\$11,500/t for FOB South America\*. This was largely a result of the continued sustained lower priced carbonate production out of China, with the EXW price for the quarter reducing to US\$11,125/t. However, lithium carbonate inventory levels appear to be low and this is supporting prices at current levels.

This is compared to lithium hydroxide (EXW China) prices reducing from US\$15,512/t to US\$13,025/t during the June quarter. Spodumene (FOB Australia) prices decreased to a June mid-price of US\$615/t and a low of US\$585/t. There is an oversupply of spodumene in the Chinese markets due to heavy stockpiling (also at Australian mine-sites) and insufficient processing/conversion capacity, which is causing delays downstream. The spodumene oversupply, of which is more frequently converted into lithium hydroxide, will continue to weigh on lithium hydroxide prices, especially in the near term. This is also affected by delays, due to limited technical expertise and environmental/waste management issues, in constructing new lithium hydroxide processing facilities in Western Australia.

Overall demand in the sector has been subdued for most of the past year, predominantly as a result of destocking of all upstream and downstream players within China, resulting in lower cathode inventory. This has also been compounded by the impact of trade tensions, which has created uncertainty for manufacturers and resulted in further destocking across the supply chain.

However, end-user demand remains strong, with established European automotive manufacturers such as BMW and VW announcing large numbers of new EV model launches. This is likely to be the main driver for increased production from original equipment manufacturers (OEM's) and a positive demand driver over the coming years.

The market also appears to be favouring LFP (Lithium Iron Phosphate) cathodes over the 811 NMC (Nickel Manganese Cobalt) cathode, with new production of the 811 NMC being pushed out again. The LFP cathode has a lower cost of production and is suited to smaller, cheaper, less advanced vehicles and thus, more suited to the mass market. Whereas, demand for the 811 NMC cathode, which is largely linked to lithium hydroxide, is being pushed out as a result of increased complexity and cost. This is proving positive for lithium carbonate prices in the short to medium term. This is also supported by the Chinese subsidy cuts, as manufacturers are being forced to reduce costs and are favouring the LFP cathode over the more expensive 811 NMC cathode.

Another factor supporting the long term fundamentals is the strong growth in lithium battery megafactories being built or committed. Benchmark Minerals Intelligence currently forecasts 1,189.4GWh of total megafactory capacity in the pipeline to 2023. More recently, Northvolt secured US\$1 billion in financing for Europe's first lithium-ion battery megafactory in Sweden, whilst CATL plans to invest US\$2 billion in its electric-vehicle battery factory in Germany. Despite the current subdued sentiment in the lithium sector, the strong forecast growth in megafactories is a leading indicator to strong lithium demand in the medium to long-term.

On the supply front, Australian spodumene production is being aggressively pared back, as new production has outstripped current conversion plant capacity. This is likely to impede any new spodumene production or expansion in the medium term. Lithium carbonate





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production has remained steady and with SQM's planned 120,000tpa expansion encountering further delays and likely to be pushed out to second half 2021 (and their stage 3 expansion of up to 180,000tpa currently under review), the lithium carbonate market is forecast to rebound in the short-medium term.

As a backdrop to this, M&A activity within the lithium sector was exceptionally high during the Quarter, with Gangfeng Lithium buying a 30% stake in Bacanora Minerals Ltd (May 2019), Galaxy Resources Limited and Jiangxi Special Electric Motor Co., Ltd group's A\$32.5m strategic placement in Alita Resources Ltd (formerly Alliance Minerals Assets Ltd) May 2019, Wesfarmers (A\$776m) takeover offer for Kidman Resources Ltd (May 2019)) and Ganfeng's US\$160m investment in Lithium Americas (April 2019). All of which is evidence that key players within the sector are continuing with their first mover status to secure a foothold in future supply, whilst the industry is relatively still in its infancy. This activity is likely to increase in the sector as we see a growing appetite for brine producers wanting to diversify, oil and gas sector interest, large miners also diversifying and vertical integration from battery manufacturers.

The key takeaway that the Company has formed in the medium term is that 'battery quality' lithium products sourced from reputable international suppliers (outside China) via longer term contracts will not enter into an over-supply position, given the projected rising demand for such product by Asian and European end-users (and this being the window within which Argosy aims to enter full commercial production). In addition, new LCE product supply (not spodumene) is not entering the market as quickly as predicted or estimated. It is also worth noting the major production issues at several Australian based spodumene operations during the current year.

Given Argosy is working on and achieving battery quality product specification, the Company is confident in the longer term market fundamentals and sustainable lithium price forecasts, to continue its fast-track development of the Rincon Lithium Project.

\* All lithium price references in this section are sourced from Benchmark Mineral Intelligence.

### Corporate

The Company raised a total of ~\$9.1 million from a significantly oversubscribed entitlement offer, shortfall shares and oversubscriptions.

The proceeds will be used to progress next stage development works at Rincon and put the Company in a strong financial position to finalise a strategic relationship/partnership for the commercial development of the Rincon Lithium Project.

The Company held its Annual General Meeting on 29 May 2019.

### Schedule of Tenements

The schedule of tenements held by the Company at the end of the Quarter is shown below.

Tenement	Location	Beneficial Percentage held
File 7272 (Telita) <sup>1</sup>	Salta, Argentina	77.5% (JV, earning up to 90%)
File 14342 (Chiquita 2) <sup>1</sup>	Salta, Argentina	77.5% (JV, earning up to 90%)



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File 22850 (Romulo) <sup>1</sup>	Salta, Argentina	77.5% (JV, earning up to 90%)
File 22955 (Frodo) <sup>1</sup>	Salta, Argentina	77.5% (JV, earning up to 90%)
File 1414 (Talisman) <sup>1</sup>	Salta, Argentina	77.5% (JV, earning up to 90%)
File 1904 (Nelly) <sup>1</sup>	Salta, Argentina	77.5% (JV, earning up to 90%)
File 1905 (Angelica) <sup>1</sup>	Salta, Argentina	77.5% (JV, earning up to 90%)
File 2889 (Maria) <sup>1</sup>	Salta, Argentina	77.5% (JV, earning up to 90%)
File 2890 (Irene) <sup>1</sup>	Salta, Argentina	77.5% (JV, earning up to 90%)
File 6343 (Tigre) <sup>1</sup>	Salta, Argentina	77.5% (JV, earning up to 90%)
File 6345 (Puma) <sup>1</sup>	Salta, Argentina	77.5% (JV, earning up to 90%)
File 100561 (Praga I) <sup>1</sup>	Salta, Argentina	77.5% (JV, earning up to 90%)
File 100562 (Praga II) <sup>1</sup>	Salta, Argentina	77.5% (JV, earning up to 90%)
File 100625 (Praga III) <sup>1</sup>	Salta, Argentina	77.5% (JV, earning up to 90%)
File 10626 (Praga IV) <sup>1</sup>	Salta, Argentina	77.5% (JV, earning up to 90%)
File 17902 (Reyna) <sup>1</sup>	Salta, Argentina	77.5% (JV, earning up to 90%)
File 62308 (Tincal) <sup>1</sup>	Salta, Argentina	77.5% (JV, earning up to 90%)
File 6681 (San Marcos) <sup>1</sup>	Salta, Argentina	77.5% (JV, earning up to 90%)
File 7215 (Jujuy) <sup>1</sup>	Salta, Argentina	77.5% (JV, earning up to 90%)
File 14970 (San Jose) <sup>1</sup>	Salta, Argentina	77.5% (JV, earning up to 90%)
Mining easement right (File 4128) <sup>1</sup>	Salta, Argentina	77.5% (JV, earning up to 90%)
Mining easement right (File 15698) <sup>1</sup>	Salta, Argentina	77.5% (JV, earning up to 90%)

<sup>1</sup> Interest in mining tenement held 100% by Puna Mining S.A.

## ENDS

For more information on Argosy Minerals Limited and to subscribe for regular updates, please visit our website at [www.argosyminerals.com.au](http://www.argosyminerals.com.au) or contact us via [admin@argosyminerals.com.au](mailto:admin@argosyminerals.com.au) or Twitter @ArgosyMinerals.

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**Forward Looking Statements:** Statements regarding plans with respect to the Company's mineral properties are forward looking statements. There can be no assurance that the Company's plans for development of its mineral properties will proceed as expected. There can be no assurance that the Company will be able to confirm the presence of mineral deposits, that any mineralisation will prove to be economic or that a mine will successfully be developed on any of the Company's mineral properties.

Argosy 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. Argosy

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confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

### Competent Person's Statement – Rincon Lithium Project

The information contained in this ASX release relating to Mineral Resource Estimates has been prepared by Mr Duncan Storey. Mr Storey is a Hydrogeologist, a Chartered Geologist and Fellow of the Geological Society of London (an RPO under JORC 2012). Mr Storey has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a competent person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves.

Duncan Storey is an employee of AQ2 Pty Ltd and an independent consultant to Argosy Minerals Ltd. Mr Storey consents to the inclusion in this announcement of this information in the form and context in which it appears. The information in this announcement is an accurate representation of the available data from exploration at the Rincon Lithium Project.

Chemical Engineer's Statement: The information in this announcement that relates to lithium carbonate processing and test-works is based on information compiled and/or reviewed by Mr Pablo Alurralde. Mr Alurralde is a chemical engineer with a degree in Chemical Engineering from Salta National University in Argentina. Mr Alurralde has sufficient experience which is relevant to the lithium carbonate and lithium hydroxide processing and testing undertaken to evaluate the data presented.

### ABOUT ARGOSY MINERALS LIMITED

Argosy Minerals Limited (ASX: AGY) is an Australian company with a current 77.5% (and ultimate 90%) interest in the Rincon Lithium Project in Salta Province, Argentina.

The Company is focused on its flagship Rincon Lithium Project – potentially a game-changing proposition given its location within the world renowned "Lithium Triangle" – host to the world's largest lithium resources, and its fast-track development strategy toward production of LCE product.

Argosy is committed to building a sustainable lithium production company, highly leveraged to the forecast growth in the lithium-ion battery sector.

#### Appendix 1: AGY's Argentina Project Location Map

