ARGOSY MINERALS
LIMITED

ASX ANNOUNCEMENT

13 January 2025

UPDATED DYNAMIC MODELLING WORKS PRODUCE OUTSTANDING RESULTS FOR RINCON LITHIUM PROJECT

HIGHLIGHTS

- **Recent upgraded Total Mineral Resource Estimate used to update hydrogeological dynamic model – to increase mine-life/brine abstraction capacity**
- **Updated hydrogeological dynamic modelling results indicate:**
  - **Lithium brine can be pumped for an increased period of up to 45 years to operate at up to 12,000tpa of lithium carbonate, or**
  - **Lithium brine can be pumped for an increased period of up to 23 years to operate at up to 24,000tpa of lithium carbonate**

Argosy Minerals Limited (ASX: **AGY**) ("**Argosy**" or "**Company**") is pleased to advise it has updated its hydrogeological dynamic model following the Company's 12 November 2024 announcement of an upgraded JORC Code (2012) compliant Total Mineral Resource Estimate (MRE) at the Rincon Lithium Project, located in Salta Province, Argentina.

The upgraded MRE comprises 731,801 tonnes of lithium carbonate with a weighted mean average lithium concentration of 329mg/L and 412Mm^3 of potentially recoverable brine, including;

- an Indicated MRE of 640,330 tonnes of Li_2CO_3 with a weighted mean average lithium concentration of 327mg/L (contained in 367Mm^3 of potentially recoverable brine), and
- an Inferred MRE of 91,471 tonnes of Li_2CO_3 with a weighted mean average lithium concentration of 352mg/L (contained in 49Mm^3 of potentially recoverable brine).

The dynamic modelling works were conducted by AQ2 Pty Ltd to consider various brine abstraction scenarios for the MRE based on sustainable lithium brine pumping rates.

The brine abstraction scenarios have been completed and allow for limits imposed by the upgraded MRE (ie. 731,801 tonnes of lithium carbonate and 412Mm^3 of drainable brine at a weighted mean average lithium grade of 329 mg/L). The modelled brine abstraction scenarios suggest that:

- lithium brine to operate at 12,000tpa of lithium carbonate can be pumped for an increased period of up to 45 years (based on an extracted total brine volume estimate of 412Mm^3) with pumping from the fractured halite and black sand aquifers (this scenario is considered the "base-case").
- Lithium brine to operate at 24,000tpa of lithium carbonate can be pumped for an increased period of up to 23 years (based on an extracted total brine volume estimate of 412Mm^3) with pumping from the fractured halite and black sand aquifers. This

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scenario represents an expanded operation (and it is assumed the capex and opex estimates related to processing are proportionally scalable from the base case).

The updated hydrogeological dynamic modelling works (numerical groundwater flow and transport model) have been developed to simulate production/abstraction of lithium brine from the Rincon Project. The objective was to confirm the duration for which sufficient lithium brine can be pumped to operate at 12,000tpa of lithium carbonate and assess expanded pumping operations for 24,000tpa of lithium carbonate. As saturated aquifer conditions are preserved throughout the mine life, the modelling indicates a very high proportion of the drainable brine can be recovered.

Argosy Managing Director, Jerko Zuvela said "***We are very pleased with our updated hydrogeological dynamic modelling results, which have further increased our Rincon Project's mine-life/brine abstraction capacity, providing further evidence of the substantial upside potential of our project.***

These results will contribute to the engineering/feasibility works currently being conducted to align with our granted regulatory approval to develop a 12,000tpa lithium carbonate operation and provide stronger support for the increased development potential of our Rincon Lithium Project."

Summary of Dynamic Modelling Works

Following the upgraded MRE works completed in November 2024, the increased resource supported developing an updated hydrogeological dynamic model (numerical groundwater flow and transport model) to simulate a longer period of production/abstraction and/or production/abstraction at expanded rates of lithium brine from the Rincon Project.

The groundwater model that supported the previous dynamic modelling results (Argosy ASX announcement dated 12th April 2024) (that referenced the Preliminary Economic Assessment (PEA) (Argosy ASX announcement dated 28 November 2018) and Environmental Impact Assessment (EIA)) was updated to include aquifer geometry from the November 2024 upgraded MRE. The groundwater flow and transport modelling approach uses Modflow USG. The flexible grid and block size allows a more efficient resolution of groundwater gradients and aquifer geometry in the project area and coverage of the salar and the upstream groundwater catchments. A minimum model grid size of 50m is included in the project area. A total of 16 model layers are used to define the brine held in aquifer and aquitard units. The modelling includes solute transport to simulate produced/abstracted lithium grade.

The model has been used to replicate the groundwater monitoring response to Argosy's long-term pumping works. The model replicated:

- the measured groundwater response to pumping for the pilot and demonstration process plants, from January 2020 to mid-February 2024.
- the measured response to pumping tests at production bores PRP3 and PRP4.

Simulations (for tonnes of lithium carbonate produced) have been completed and allow for limits imposed by the updated MRE (ie. 731,801 tonnes of lithium carbonate and 412Mm^3 of drainable brine). Model simulations suggest that:

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- Operating at up to 12,000tpa of lithium carbonate can be achieved for a period of 45 years (based on the MRE/drainable volume estimate) with pumping from the fracture halite and black sand aquifers. This scenario is considered the "base-case".

- Operating at up to 24,000tpa of lithium carbonate can be achieved for a period of 23 years (based on the MRE/drainable volume estimate) with pumping from the fractured halite and black sand aquifers. This scenario represents an expanded operation (and it is assumed the capex and opex estimates for the base case are proportionally scalable).

These base case and expanded base-case predictions assume:

- Lithium mass recovered is multiplied by 5.347 to estimate lithium carbonate recovery.

- System losses of 20% (pumped LCE multiplied by 80% to achieve produced lithium carbonate). The losses reflect process efficiency factors.

- No limits of brine abstraction per aquifer (ie. the total volume of drainable brine within the project area can be abstracted in any proportion, from any of the aquifers in the project area. This is consistent with the high degree of hydraulic connection between units that has been demonstrated by operational pumping and pumping tests to date).

- No pumping from third party projects (though considered in sensitivity analysis).

- No optimisation of pumping (trade-off between number of bores in the fractured halite and black sand versus total drawdown and pumping costs/pipeline lengths).

High transmissivity and hydraulic connection through the fractured halite aquifer will mean that long term production forecasts will need to consider other brine operations in the groundwater catchment (ie. the potential interference effects of third-party operations). Production simulations, to assess sensitivity have also been completed to estimate the impact of third-party operations. The sensitivity assessment/analysis is based on assuming Rio Tinto's Rincon Project producing up to 50,000tpa of lithium carbonate.

These sensitivity predictions suggest there will be groundwater level interference between Argosy's forecast operation schedules of up to 12,000tpa and 24,000tpa of lithium carbonate (based on the MRE/drainable volume estimate and pumping from the fracture halite and black sand aquifers) and Rio Tinto's adjacent project. Consequently, additional production bores and/or deeper production bores will need to be included to achieve Argosy's production targets in the long term.

However, with the additional abstraction potential of these modifications, the project can still achieve the same production/abstraction rates and duration.

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Argosy LCE Production	Third Party Estimated LCE Production	Rincon Project Mine Life	Argosy LCE Removed (Unfactored/ Total)	Argosy Effective Volume of Brine in Processing	Notional Number of Halite Bores	Notional Number of Black Sand Bores
TPA	TPA	Years	Tonnes	m^3		
12,000	NA	45, target LCE (12,000 TPA) achieved over life of mine	712,833	343,034,320	4	2
24,000	NA	23, target LCE (24,000 TPA) achieved over life of mine	706,401	339,623,157	7	12
Sensitivity Assessment (Impact of Third Party Pumping)						
12,000	Up to 50,000	43, target LCE (12,000 TPA) achieved over life of mine. .	726,888	336,231,683	7	12
24,000	Up to 50,000	23, target LCE (24,0000 TPA) achieved over life of mine.	721,186	345,775,383	7	26

Argosy Production / tonnages: unfactored is total brine or contained Li extracted from the Salar aquifers.
Argosy Production / tonnages: effective is brine from which production is ultimately recovered, based on a factor of 80% for efficiency.
Total Argosy MRE 731,801 tonnes LCE and drainable brine volume of 412,000,000m^3 of brine (comprising Inferred and Indicated MRE).
Notional no. of bores does not consider seasonal variation in feed-brine demand and numbers may increase on optimisation.

Figure1. Rincon Lithium Project – Summary of Modelling Simulations

The modelling works were undertaken to simulate brine abstraction for lithium carbonate operations at the Rincon Project. The assessment has considered 12,000tpa and 24,000tpa lithium carbonate operations. The simulation does not support a Mineral Reserve Estimate as no modifying factors have been considered nor has a full economic analysis been completed for the two operation scenarios. Moreover, the portions of the modelling simulation works that are underpinned by Inferred MRE cannot be used in a Mineral Reserve.

However, the simulations are underpinned by reasonable assumptions that include: key characteristics of previous studies (PEA for 10,000tpa lithium carbonate) are scalable, that the project can retain an effective operating cost (as indicated in the PEA, with cost escalation factors to reflect present operating costs of current similar operations), and that the project is not sensitive to uncertainties related to capital cost in brine operations (for example the number of pumping bores that are ultimately required form a relatively small component of the overall project cost).

The simulations show brine abstraction for 12,000tpa lithium carbonate operations can be sustained for 45 years and brine abstraction for 24,000tpa lithium carbonate operations can be sustained for 23 years. The development of third-party projects on the Salar del Rincon may affect both the number of bores required and the pumping water levels (and thus depth of bores) to maintain a specific operations rate. Regardless, it is simulated that in the cases referenced in this announcement, between 705,000 tonnes lithium carbonate and 725,000 tonnes lithium carbonate (as part of the total MRE volume) can ultimately be recovered as part of the total brine removed (ie. over 95% of the contained brine can ultimately be recovered).

The Company accounts for losses of 20% due to process efficiency factors, thus defining the brine production/abstraction pumping period and achieving the set amount of lithium carbonate outlined in this announcement (ie. the total MRE multiplied by 80% provides the amount of lithium carbonate achieved for each operation scenario outlined in this announcement).

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Key Assumptions

The dynamic modelling works have simulated lithium brine abstraction (not lithium carbonate production) to assess the hydrogeological nature for the expanded or prolonged operation rates. The modelling has not considered other modifying factors or a detailed economic analysis, which would be required to support a Mineral Reserve determination. However, the scenarios considered in the modelling are underpinned by reasonable assumptions derived from an extension of the PEA, providing the basis for the abstraction rates to consider Inferred Resources also. Key assumptions are:

- The PEA showed robust project economics and a positive NPV for a wide range in lithium carbonate pricing and it is assumed costs can retain an effective operating cost (as indicated in the PEA, with cost escalation factors to reflect present operating costs of current similar operations) such that future economic development may be possible#. Refer to below section on *Additional Information*. #Argosy will endeavour to conduct a more detailed financial analysis to accurately ascertain the impacts on the project economics pursuant to Rincon's updated production targets. Investors should do their due diligence before making investment decisions.

- The increase in capital expenditure related to upscaled production (to 12,000 TPA and 24,000 TPA) is either more efficient or proportional such that, when combined with an extended mine life, it is does not materially change project economics (or capital intensity)#. Refer to below section on *Additional Information*. #Argosy will endeavour to conduct a more detailed financial analysis to accurately ascertain the impacts on the project economics pursuant to Rincon's updated production targets. Investors should do their due diligence before making investment decisions.

- Regulatory approval and/or permits for an expanded operation are obtained.

- Available tenure is sufficient to allow the installation of the required number of bores and the construction of processing facilities and evaporation ponds. Currently evaporation ponds for 12,000tpa operations will occupy less than 50% of the associated tenure and so upscaling on a proportionate basis appears feasible.

- The dynamic model is a 3D flow and solute transport model that simulates fluid flow (ie. the model simulates lithium concentrations produced/abstracted from brine over the life of the project). The model is calibrated against four years of operational data from the pilot/demonstration plant facilities and long term pumping tests, and it is assumed the calibrated model provides a realistic forecast of long-term grade.

No detailed modelling works have been conducted for the development of other (third-party) projects on the Salar del Rincon (other commercial scale projects are not yet approved). In the current modelling, some sensitivity analysis has been undertaken to determine impacts (if any) on project life or production rate.

The modelling has simulated an operational borefield that achieves the required operation scenarios of up to12,000tpa and 24,000tpa of lithium carbonate. The borefields are of reasonable proportions and operating criteria, and fall within the scale of the development considered during the PEA. However, no detailed borefield optimisation has been undertaken during the current modelling works. Such optimisation would include seasonal

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variation in abstraction rates and other factors determined during more detailed assessment of modifying factors.

The Company provides the following additional information relating to ASX Listing Rule 5.16, which requires all material assumptions to be included. Please note, no forecast financial information, per ASX Listing Rule 5.17.1, has been updated or revised from the PEA announcement.

Additional Information *(details per Argosy ASX announcement on 12 November 2024 - Rincon Lithium Project JORC Mineral Resource Upgrade & Exploration Target)*

Mineral Resource Estimate

The Total Mineral Resource Estimate comprises 731,801 tonnes of lithium carbonate with a weighted mean average lithium concentration of 329mg/L and 412Mm^3 of potentially recoverable brine, including;

- an Indicated MRE of 640,330 tonnes of Li_2CO_3 with a weighted mean average lithium concentration of 327mg/L (contained in 367Mm^3 of potentially recoverable brine), and
- an Inferred MRE of 91,471 tonnes of Li_2CO_3 with a weighted mean average lithium concentration of 352mg/L (contained in 49Mm^3 of potentially recoverable brine).

Unit	Description	Aquifer Characteristics			Drainable Porosity (%)	Drainable Brine Volume (Mm³)	Numeric Interpolant		
		Aquifer Volume	Porosity	In-Situ Brine Volume			Li	Li_2CO_3	Li_2CO_3
		(Mm³)	(%)	(Mm³)			(mg/L)	(mg/L)	T
Indicated Resource									
S1A (South)	Alluvium	33	21%	7	10%	3.3	232	1238	4133
S1F	Fractured Halite	163	21%	34	10%	16.9	337	1799	30456
S2	Clay	398	48%	191	3%	11.9	322	1720	20548
S3A	Mixed Clastics	542	42%	228	12%	62.9	318	1701	106939
S3B	Clay	76	41%	32	1%	0.8	340	1819	1391
S3C	Black Sand	867	38%	332	13%	114.8	324	1730	198642
S3F	Competent Halite	789	13%	106	3%	23.7	374	2000	47362
S4A	Mixed Clastics	159	24%	37	12%	19.1	387	2071	39515
S4B	Clay Dominant	243	23%	49	5%	12.6	348	1862	23519
S4C	Sand Dominant	217	20%	37	12%	26.1	378	2019	52660
S5B	Clay Dominant	149	23%	30	3%	3.7	371	1986	7409
S5A	Mixed Clastics	147	21%	27	10%	14.7	392	2094	30691
SV	Volcanics	1125	17%	153	5%	56.3	256	1370	77065
Inferred Resource									
S1A (North)	Alluvium	54	21%	11.1	10%	5.4	358	1913	10244
S2	Clay	0.9	48%	0.4	3%	0.0	322	1720	47
S3A	Mixed Clastics	2.8	42%	1.2	12%	0.3	318	1701	558
S3B	Clay	0.3	41%	0.1	1%	0.0	340	1819	5
S3C	Black Sand	0.2	38%	0.1	13%	0.0	324	1730	55
S5A	Mixed Clastics	270	21%	52	10%	30	392	2094	62778
S6B	Clay Dominant	37	20%	5.2	3%	0.7	283	1515	1016
SV	Volcanics	249	17%	41	5%	12	256	1370	16767
Total		5489		1368		412	329		731801
Total Indicated Resource									640330
Total Inferred Resource									91471
Toal Mineral Resource Estimate									731801

Figure 2. Rincon Lithium Project – Upgraded Total Mineral Resource Estimate (Li_2CO_3 potential has been estimated from the observed Li concentrations using a conversion factor of 5.347 (i.e. Li (mg/L) x 5.347 = Li_2CO_3 (mg/L)))

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The Indicated and Inferred MRE are static estimates; they represent the volume of potentially recoverable brine that is contained within the defined aquifer. They take no account of modifying factors such as the design of a borefield (or other pumping scheme), which will affect both the proportion of the Resource that is ultimately recovered and changes in grade associated with mixing between each aquifer unit and the surrounding geology, which will occur once pumping starts. The Indicated and Inferred MRE also take no account of recharge to the upper-most aquifer, which is a modifying factor that may increase brine-recovery from this unit and may affect long-term grade.

Test Production Bores

Two deep test production bores (PRP3 and PRP4) were drilled to confirm the feasibility of abstracting brine from the deep clastic sediments. Both production bores were drilled to a depth of 350m and completed at 220m and 270m depth respectively. Pumping tests were carried out on the test production bores to confirm the feasibility of brine abstraction from the deep sand/clastic aquifer with average hydraulic conductivity determined to be in the range 0.5m/d to 1m/d. The pumping tests imply the deep aquifers are semi-confined and leaky; leakage is posited to be supported by drainage from the finer grained clay-rich facies as the sand facies depressurise during pumping. The pumping tests and previous dynamic modelling suggest this deep aquifer will remain saturated (and therefore under semi-confined conditions) during operations.

Pumping Tests (details per Argosy ASX announcement on 3 August 2023)

A pumping test program was undertaken between September and October 2022, which involved a step-rate test (SRT) and constant-rate test (CRT) on productions bores PRP3 and PRP4. At each bore, pumping tests comprised a SRT (3 steps of 120-minute duration), a 3 to 7-day CRT, and recovery measurements following the cessation of pumping. During both tests, measurements were taken from the pumping bore and an observation bore. Pumping rates were measured using an in-line flow meter and water levels were measured with pressure transducers and manual dips. Drawdown and recovery data collected during the pumping tests were analysed using standard curve-fitting methods.

Step rate test analysis data indicates that both pumping bores are highly efficient when pumped at the discharge rates of the step test. PRP-3 had an apparent efficiency of 96.5% during the final step (22 L/s), while PRP-4 had an apparent efficiency of 94.5% during the final step (22.6 L/s). This provides confidence in the adopted drilling and bore-construction methods during future expansion of the brine-borefield.

Constant rate test analysis data indicates:

- For PRP-3, hydraulic conductivity (K) ranges from 0.6 – 2.5m/day, with an average K of 1m/day. Transmissivity estimates range from 130 – 550m^2/day, with an average of 260m^2/day.

- For PRP-4, hydraulic conductivity ranges from 0.2 – 2.4m/day, with an average K of 1.2m/day. Transmissivity estimates range from 34 – 420m^2/day, with an average of 270m^2/day.

- Hydraulically, the deep sand aquifer shows a semi-confined leaky response.

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The two pumping tests completed indicate that compared with the Company's previous modelling works:

- Hydraulic conductivity values for the deeper sand aquifer may be greater than those previously adopted, as high as 1m/d.

- The monitored response of the aquifer during pumping confirms key elements of the conceptual hydrogeological model that underpinned the current Mineral Resource estimate and PEA. Namely, that the deep sediments function as a semi-confined, transmissive aquifer and that depressurisation of the deep sand by pumping will induce leakage of brine from overlying and interbedded less-transmissive units, increasing overall brine recovery.

Pumping tests are not directly relevant to the estimation of brine mineral resources. However, it is imperative the brine resources are hosted in aquifers that can support pumping to comply with the requirement to determine the likelihood of future economic extraction. Pumping tests also provide information on hydraulic boundaries that may limit the brine resource. The pumping tests to date do not show hydraulic boundaries that may affect the brine aquifer. The pumping tests also confirm leakage during pumping, likely to show the lower permeability units draining as the aquifer is depressurised.

Hydrogeology - Aquifer Parameters

Based on previous pumping tests and BMR-derived estimates of hydraulic conductivity:

- There is an extensive fractured halite aquifer over the surface of the salar to depths of between 1.5m and 36.6m. This aquifer is highly permeable and has an estimated hydraulic conductivity of 125m/d and an average transmissivity of 1,200m^2/d. The specific yield of the fractured halite aquifer is estimated to be 10%.
- There is a lower-productivity aquifer comprising sand interbedded with clay underlying the fractured halite to depths of over 300m in parts of the project area. The hydraulic conductivity of this aquifer is estimated to range between 0.5m/d and 1m/d the cumulative transmissivity across all productive units is around 300m^2/d. The drainable porosity is estimated to be between 10% and 12% for the main aquifer units and 2% and 5% for the units with lower hydraulic conductivity.

On this basis, the design of a borefield to abstract brine is feasible.

The drainable porosity is the key measure to determine the volume of contained brine.

Hydrogeological Model

The hydrogeological model is based on 29 drill holes and a total of 4459m of drilling through the brine resource. Drilling has been a combination of mud rotary and diamond drilling. The mean spacing between drill holes is:

- ~950m for the MRE component to a depth of 102.5mbgl.
- ~1800m for the MRE between 102.5mbgl and 350mbgl
- >2000m for the MRE between 350mbgl and 400mbgl.

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Samples for assay have been collected from discrete intervals using a packer mechanism in diamond holes and as bulk-samples during pumping tests on test-production bores. A total of 232 assays have been completed (excluding additional QA/QC assays).

The conceptual hydrogeological model is summarised as follows:

- An aquifer is hosted in sediments that infill the Salar del Rincon and comprises an interbedded mix of sand, clay and evaporite. The sediments are flanked by a sub-cropping, steeply dipping volcanic unit on the southern end of the salar.

- There is an extensive fractured halite aquifer over the surface of the salar to depths of between 1.5m and 36.6m. This aquifer is highly permeable and has an estimated hydraulic conductivity of 125m/d and an average transmissivity of 1,200m^2/d. The specific yield of the fractured halite aquifer is estimated to be 10%.

- There is a lower-productivity aquifer comprising sand interbedded with clay underlying the fractured halite to depths of over 100m in parts of the project area. The hydraulic conductivity of this aquifer is estimated to range between 0.5m/d and 1m/d the cumulative transmissivity across all productive units is around 300m^2/d. The drainable porosity is estimated to be between 10% and 12% for the main aquifer units and 2% and 5% for the units with lower hydraulic conductivity.

- The brine aquifer is bounded by colluvial and alluvial deposits in the east and south and continuous with the broader salar to the west and north.

- Groundwater levels are essentially at the salar-surface and brine aquifer water levels are sustained by a combination of groundwater inflow from the surrounding geology and recharge from surface water runoff; the latter is likely to be small. In the north-east in the new tenement area, the depth to brine increases as the terrane elevates onto the colluvial fan.

- Brine mineralisation and groundwater discharge occurs through evaporation over the surface of the salar. The brine is hyper-saline with TDS in the order of 310,000 to 350,000mg/L. The brine is enriched with respect to Li, with concentrations in the range 226mg/L to 487mg/L.

- Based on pumping tests and estimated aquifer parameters, the aquifer sequence has the potential to support brine-abstraction from a series of bores. Total abstraction will be mediated by a combination of direct abstraction from zones of high hydraulic conductivity and slower drainage from zones of low hydraulic conductivity. The upper 70 m of the aquifer may be dewatered over the life of the project. Operational water levels are unlikely to fall below this, and the deep aquifers will remain saturated and semi-confined (ie. under piezometric conditions) with abstraction sustained by flushing of mobile brine contained in the effective porosity.

Individual stratigraphic units within the hydrogeological model are described below.

Hydrostratigraphic Unit 1 contains sub-units S1A (mixed clastics), being a surficial alluvial/colluvial unit; and S1F (Halite) - being a fractured halite with dissolution-voids.

Hydrostratigraphic Unit 2 comprises S2 (Clay), being a green-grey clay with some minor fine-grained sand throughout and competent halite (interbedded) at the base of the unit.

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Hydrostratigraphic Unit 3 comprises S3A (Sand and Clay), being an interbedded sequence of fine-grained black sand and clay; S3B (Clay), being a red-brown clay; S3C (Black Sand), being a fine grained, black volcanic sand, with some interbedded red clay and competent halite; and S3F (Competent Halite), being a massive competent halite.

Hydrostratigraphic Unit 4 contains S4A (Sand and Clay), being an Interbedded sequence of sand, clay and evaporitic material; S4B (Clay), being a red-brown clay; and S4C (Sand), being a sand with clay, silt and halite.

Hydrostratigraphic Unit 5 contains S5B (Clay), being a red-brown clay comprised predominantly of laminated clay-rich material, with minor interbeds of sand and evaporitic material; and S5A (Sand Clay), being an interbedded sequence of red laminated/plastic clays and black sand, with inclusions of carbonate material.

Hydrostratigraphic Unit 6 comprises S6B (Clay), being a red plastic clay.

Hydrostratigraphic Unit 7 contains SV (Volcanics), being a volcanic unit of massive andesite with varying degrees of fracturing and conglomerates/breccias with blocks of andesite/dacite.

In developing the hydrostratigraphic framework, Rincon drill holes were used for geological control. Qualitative QA/QC has been undertaken by comparing logged lithology with down-hole geophysical logging results. Drill holes were surveyed with hand-held GPS.

A 3D geological model of the host aquifers was prepared to estimate the volumes of each hydrogeological unit within the project area. Modelling was undertaken with ARANZ Leapfrog Geo software that uses the "Fast Radial Basis Function" interpolation method. The modelling was based on all the hydrostratigraphic units. In the model, interpolation between drill holes has a 75m resolution to ensure appropriate modelling of observed variations in relatively thin units.

Contained Brine Resources

Estimates of aquifer properties are derived from pumping tests, RBRC laboratory analysis of core and BMR logging. The adopted measures of drainable porosity are a combination of the lowest measured value of specific yield (across all methods of estimation) for the poorly draining sediments (clay rich and massive halite), and the average of BMR-derived Sy and RBRC-derived Sy, with the proviso that no estimates will be higher than those previously adopted for the same unit (during Argosy's original resource evaluation). The RBRC estimates of Sy were generally higher than the BMR estimates and so an additional constraint was used, that no adopted drainable porosity would exceed the BMR-derived estimated of interconnected or effective porosity (Pe).

The concepts of drainable porosity have been applied. None of the resource estimates are based on total porosity or total in-situ brine because a portion of this is irrecoverable.

Spatial Extent

For the MRE, the brine aquifer extent has been defined by the edge of the salar (ie. edge of evaporitic sediments) and/or the edge of Argosy's tenements (where the aquifer continues beyond tenement boundaries). The Resource has been calculated to a maximum depth of

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400mbgl. This depth is based on the density and depth of current drilling and the Resource remains open over much of the RLBP area.

Within the alluvial fan tenements area, the upper limit of the Inferred Resource has been defined by the brine/freshwater interface. The depth of the interface was estimated using the Ghyben-Herzberg relationship, which uses the relative density and elevation of both interacting groundwater bodies (i.e. freshwater and hypersaline brine). The elevation of the top of the competent halite proximal to the alluvial tenements has been assigned as the base of the Inferred Resource within the alluvial fan area.

In the north of the project area (north of drill hole PR00B), the resource extends to 102.5mbgl and no exploration has been completed beyond this depth. This is because massive halite was previously encountered at depth in this area which was thought to be extensive and continuous. However, this massive halite unit in drill hole PR00B was only present between 176mbgl and 199mbgl and the unit is underlain by clastic deposits, implying the massive halite may be underlain by clastic sediments further north.

The resource includes the southernmost tenement on the basis of drill results from hole PR00F. Drill holes PR00D, PR00E, PR00F and PR00G all encountered volcanic basement at varying depths. On the flanks of the salar, this was encountered from near surface in drill holes PR00F and PR00G. Further north into the salar, it was encountered from around 310mbgl in drill hole PR00D. The volcanic basement is characterised by relatively low recoverable porosity (5%). Permeability may be limited to fractured and brecciated horizons resulting in lower long-term pumping rates from this unit compared with the clastic sediments (although it is noted that no pumping tests have been completed in the volcanic basement to date). Thus, the volcanic unit is likely to form a base to the Mineral Resource in the south of the area.

In the southernmost tenement, drill hole PR00F was drilled to 217m depth and the MRE in this tenement has been constrained to this depth.

Elsewhere, the MRE has been extended to a depth of 400m over the southern portion of the project area. However, only three of the six drill holes reach this depth. Therefore:

- An Indicated Resource has been determined to a depth of 350mbgl (the depth to which all drill holes reached).
- An Inferred Resource has been determined for the interval between 350mbgl and 400mbgl (the depth with reduced drill density).

Lithium Distribution

The distribution of lithium concentration within the aquifer has also been estimated using 3D modelling software – ARANZ Leapfrog Geo. The interpolation used the sampled intervals from all drill holes. 3D brine concentrations have been interpolated for each hydrostratigraphic unit. However, as groundwater exists in a continuum between geological formations, during the modelling process, data points outside of each specific unit (ie. in overlying or underlying units) were also used in determining the likely distribution of lithium within that unit. The modelling provides both an interpolated model of lithium concentrations (mg/L) through the unit and the total mass of lithium contained within the unit (kg). The model assumes the aquifer is completely saturated with brine to within 1m of the salar surface.

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Spacing between drill holes ranges between 400m to 3000m with an average of around 2000m (albeit to varying depths). A spacing of 2000m falls within the spacing that is suggested Houston et al (2011) for Indicated Resource determination. Variograms were developed for the available data and show that there is correlation between existing bores (ie. lithium brine distribution is interpolated rather than extrapolated).

The reduced drilling density and increase in effective spacing for the aquifer below 350m supports the reduced confidence in this horizon and the adoption of an Inferred classification.

Li_2CO_3 potential has been estimated from the observed Li concentrations using a conversion factor of 5.347 (i.e. Li (mg/L) x 5.347 = Li_2CO_3 (mg/L)).

The entire salar contains mineralised brine and pumping tests have shown there are no hydraulic boundaries that will restrict brine accessibility. On this basis, no cut-off grade has been applied to the MRE. The lowest grade observed within the model domain is 169mg/L (in the area of drill hole PR00G on the eastern margins of the model, in volcanics).

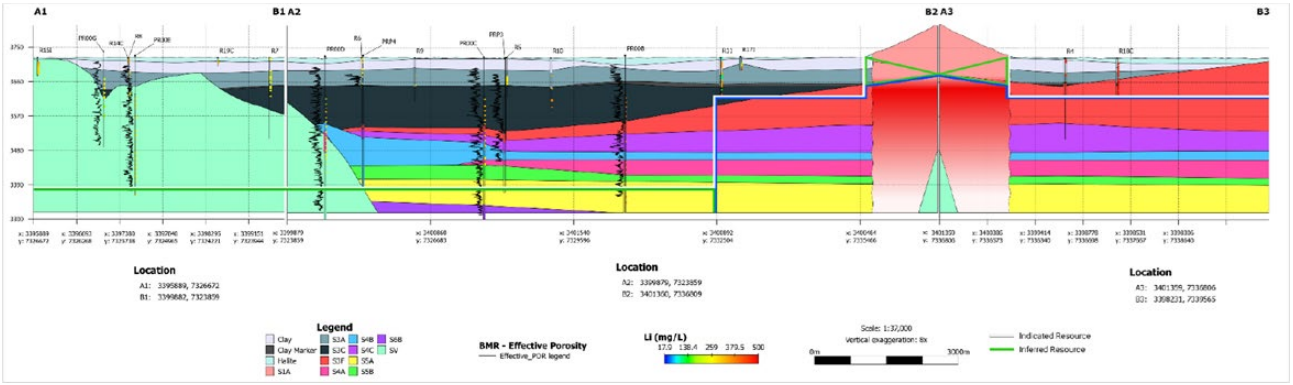

Figure 3. Rincon Lithium Project – Vertical Extent of MRE

Cautionary Note: A Production Target is a projected estimate of potentially mineable mineralised material based on the application of modifying factors. The process and assumptions used to establish the Production Targets for Argosy's operations and development project are those used to prepare the Mineral Resource Estimate announced on 12 November 2024 (which is available at www.argosyminerals.com.au and www.asx.com.au). Production Targets are derived from Measured, Indicated and Inferred Mineral Resource classifications. The Company has been guided by ASX Listing Rules Chapter 5.16 to 5.19 for the preparation of Production Targets.

The Company highlights the following cautionary note in relation to confidence in the estimation of Production Targets that incorporate Mineral Resources from the Inferred classification:

There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources or that the Production Target itself will be realised. The stated Production Targets are based on the Company's current expectations of future results and events and should not be solely relied upon by investors when making investment decisions.

The estimated Mineral Resource Estimate that underpins the Production Targets have been prepared by Competent Persons in accordance with ASX Listing Rules Appendix 5A. The

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Inferred portion of the Production Targets is not the determining factor in each mine's viability and does not feature as a significant proportion early in the mine plan.

Argosy has independently engaged the services of AQ2 Pty Ltd to conduct the mineral resource estimation works, hydrogeological modelling and associated brine analysis works for the potential development of a lithium carbonate production operation at the Rincon Lithium Project. Argosy has previously engaged Primero Group to assess the technical and economic viability to a Preliminary Economic Assessment level with regards to producing lithium carbonate at the Project. Whilst the current modelling works have yielded robust outcomes and provided independent perspective on the opportunity to produce lithium carbonate, there is no guarantee that Argosy will choose to adopt the outcomes of the works conducted.

ENDS

This announcement has been authorised by Jerko Zuvela, the Company's Managing Director

For more information on Argosy Minerals Limited and to subscribe for regular updates, please visit our website at www.argosyminerals.com.au or contact us via 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.

Cautionary Statements: 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 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.

ASX Listing Rules Compliance
Argosy advises references to the Company's current target of producing 2,000tpa of battery quality lithium carbonate product at the Rincon Lithium Project should be read subject to and clarified by the Company's current intention that, subject to feasibility, finance, market conditions and completion of development works at the Rincon Lithium Project, the 2,000tpa production target is intended to form a modular part of the 10,000tpa operation from its commencement.

Argosy further advises that references in this ASX release in relation to the 10,000tpa production target are extracted from the report entitled "Argosy delivers exceptional PEA results for Rincon Project" dated 28 November 2018, available at www.argosyminerals.com.au and www.asx.com. Argosy confirms that it is not aware of any new information or data that materially affects the information included in the Announcement and, in the case of the Production Target, Mineral Resources or Ore Reserves contained in the Announcement, that all material assumptions and technical parameters underpinning the estimates in the PEA announcement continue to apply and have not materially changed. Argosy confirms that the form and

context in which the Competent Person's findings are presented have not been materially modified from the PEA announcement.

Competent Person's Statement – Rincon Lithium Project

The information contained in this ASX release relating to Exploration Targets, Exploration Results and 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 is based on information compiled and/or reviewed by Mr Pablo Alurralde. Mr Alurralde is the President of Puna Mining S.A. and consents to the inclusion in this announcement of this information in the form and context in which it appears. 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.

Reference to Previous ASX Releases:
This document refers to the following previous ASX releases:
12th November 2024 – Updated: Rincon Lithium Project JORC Mineral Resource Upgrade & Exploration Target
12th April 2024 – Updated: Dynamic Modelling Produces Outstanding Results for Rincon Lithium Project
15th January 2024 – JORC Resource Upgrade for Rincon Lithium Project - Substantial 180% Increase
3rd August 2023 – Rincon Test Pumping Results
10th Feb 2021 – Clarifying Announcement
8th Feb 2021 – $30M Placement to Fund 2,000tpa Production
28th Nov 2018 – Argosy delivers exceptional PEA results for Rincon Project

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 and a 100% interest in the Tonopah Lithium Project in Nevada, USA.

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.

Rincon Lithium Project Location Map

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