

Sal de Vida to adopt production of battery grade

Galaxy Resources Limited (ASX: GXY, "Galaxy" or the "Company") is leveraging its portfolio of world-class assets to create a sustainable, large scale, global lithium chemicals business. The Company is pleased to confirm the achievement of battery grade lithium carbonate at its wholly owned brine project, Sal de Vida.

Highlights

- ◆ Galaxy has been internally developing a simplified evaporation flowsheet for the Sal de Vida Project
- ◆ Test work and piloting over the previous 12 months has steadily improved product quality and project metrics
- ◆ Recent test results demonstrate that battery grade lithium carbonate can be achieved through a simple, bolt-on process
- ◆ This addition can be seamlessly incorporated into the Stage 1 project development schedule without any delay
- ◆ Galaxy will adopt battery grade quality as the design basis for Stage 1 and following stages
- ◆ Further project details will be outlined in Sal de Vida's feasibility update release in early April

Summary

Over the past 12 months test work and piloting on site has steadily improved product quality and project metrics and this has continued with recent test results. Technical analysis of recently completed piloting runs has been verified by independent metallurgical consultants. These results have revealed that battery grade quality product can be achieved and seamlessly incorporated into the Stage 1 project schedule. Galaxy will adopt battery grade quality as the design basis for Stage 1 through the addition of simple bolt-on process steps to the flowsheet with no interruption to project schedule.

Piloting and Test work

Previous piloting and test-work results announced on 28 January 2021 showed that lithium carbonate quality was approaching battery grade specifications and that battery grade development activities would continue. All product from piloting was shipped to the Minerals business unit of the Australian Nuclear Science and Technology Organisation's ("ANSTO") facility in Sydney for analysis and verification. ANSTO has significant experience in lithium process development for brine projects and Galaxy has been working with them on its technical development program for over two years. In addition to test work to support this program, ANSTO has provided independent verification of product quality. ANSTO's results have continuously mirrored the outcomes of piloting, further increasing confidence in Galaxy's flowsheet and onsite initiatives.

A recent continuous pilot run, incorporating minor enhancements to the flowsheet, has been completed with over 100kg of product shipped to ANSTO for assaying. Product assay results from this run are shown in Table 1 and results were in line with Galaxy's own laboratory analysis. The results clearly show that apart from Ca and Mg, all specifications for battery grade were met.

Table 1: Battery grade specification and piloting results

Detail	Lithium carbonate purity	Impurity species (ppm)					
		Ca	Mg	K	B	SO ₄	Na
Product from pilot run	99.83%	125	165	26	36	135	103
Typical battery grade specification	> 99.5%	< 50	< 50	< 30	< 50	< 375	< 180

This pilot run specifically targeted the lowering of K, Na and B and did not focus on the reduction of Ca and Mg. Galaxy has previously conducted test work on Ca and Mg removal using conventional ion exchange ("IX") technology. Results clearly demonstrated that these two impurity elements can be easily rejected to the levels required for battery grade purity. Test work performed at ANSTO, using the site prepared feed used in piloting, has been processed via Galaxy's simplified flowsheet and IX. Lithium carbonate product was successfully produced containing <50 ppm of both Ca and Mg.

Assessment of IX technology by the project team has revealed that suitable IX equipment can be purchased off-the-shelf and seamlessly incorporated into the Stage 1 project schedule without any interruption. As this process step is at the end of the flowsheet,

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volumes to be treated by IX are low, which will result in a moderate capital requirement for IX. No other significant capital changes are envisaged for the upgrade to battery grade product quality and therefore Galaxy will adopt battery grade quality as the design basis for Stage 1.

CEO, Simon Hay said

"Our technical development and Argentinian site teams have progressively improved product quality over the course of piloting and test work. This strategy has now achieved a major milestone with Galaxy adopting battery grade quality as the design basis for Stage 1.

Successful production of battery grade increases Galaxy's revenue generating potential and widens the customer base. Offtake discussions will now be advanced with interested customers.

This technological breakthrough is unique to conventional evaporation processes and is an outstanding development achievement for the Sal de Vida team. Galaxy remains on track to execute and deliver a highly competitive, low-cost project to the market in time for the forecast lithium demand surge."

ENDS

This release was authorised by Mr. Simon Hay, Chief Executive Officer of Galaxy Resources Limited.

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About Galaxy (ASX: GXY)

Galaxy Resources Limited is an international company with lithium production facilities, hard rock mines and brine assets in Australia, Canada and Argentina. It wholly owns and operates the Mt Cattlin mine in Ravensthorpe Western Australia, which is currently producing spodumene and tantalum concentrate.

Galaxy is advancing development of the wholly owned Sal de Vida lithium brine project in Argentina situated in the lithium triangle (where Chile, Argentina and Bolivia meet), which is currently the source of more than 40% of global lithium production. Sal de Vida has excellent potential as a low-cost brine-based lithium carbonate production facility.

Galaxy's diversified project portfolio also includes the wholly owned James Bay lithium pegmatite project in Quebec, Canada. James Bay will provide additional expansion capacity to capitalise on future lithium demand growth.

Lithium compounds are used in the manufacture of ceramics, glass, pharmaceuticals and are an essential cathode material for long life lithium-ion batteries used in hybrid and electric vehicles, as well as mass energy storage systems and consumer electronics. Galaxy is bullish about the global lithium demand outlook and is aiming to become a major producer of lithium products.

Caution Regarding Forward Looking Information

This document contains forward looking statements concerning Galaxy. Statements concerning mining reserves and resources may also be deemed to be forward looking statements in that they involve estimates based on specific assumptions.

Forward-looking statements are not statements of historical fact and actual events and results may differ materially from those described in the forward-looking statements as a result of a variety of risks, uncertainties and other factors. Forward-looking statements are inherently subject to business, economic, competitive, political and social uncertainties and contingencies. Many factors could cause the Company's actual results to differ materially from those expressed or implied in any forward-looking information provided by the Company, or on behalf of the Company. Such factors include, among other things, risks relating to additional funding requirements, metal prices, exploration, development and operating risks, competition, production risks, regulatory restrictions, including environmental regulation and liability and potential title disputes.

Forward looking statements in this document are based on Galaxy's beliefs, opinions and estimates of Galaxy as of the dates the forward-looking statements are made and no obligation is assumed to update forward looking statements if these beliefs, opinions and estimates should change or to reflect other future developments. There can be no assurance that Galaxy's plans for development of its mineral properties will proceed as currently expected. There can also be no assurance that Galaxy will be able to confirm the presence of additional mineral deposits, that any mineralization will prove to be economic or that a mine will successfully be developed on any of Galaxy's mineral properties. Circumstances or management's estimates or opinions could change. The reader is cautioned not to place undue reliance on forward-looking statements. Data and amounts shown in this document relating to capital costs, operating costs, potential or estimated cashflow and project timelines are internally generated best estimates only. All such information and data is currently under review as part of Galaxy's ongoing operational, development and feasibility studies. Accordingly, Galaxy makes no representation as to the accuracy and/or completeness of the figures or data included in the document.

Competent Person

Any information in this announcement that relates to Sal de Vida Project Mineral Resources is extracted from the report entitled "Sale of Northern Tenements at Sal de Vida to POSCO Completed" created on 26 November 2018 and the Sal de Vida Project Ore Reserves is extracted from the report entitled "Sal De Vida: Revised Definitive Feasibility Study Confirms Low Cost, Long Life and Economically Robust Operation" created on 22 August 2016 both of which are available to view on www.gxy.com and www.asx.com.au. 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 underpinning the Mineral Resources and Ore Reserves estimates in the relevant market announcement continue to apply and have not materially changed. The Company 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.

The information in this report that relates to the adoption of battery grade production at the Sal de Vida project is based on information compiled by John Riordan BSc, CEng, FAusIMM, MIChemE, RPEQ, a Competent Person who is a Fellow of the Australasian Institute of Mining and Metallurgy. John Riordan 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'. John Riordan consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

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This announcement has been prepared for publication in Australia and may not be released in the United States. This announcement does not constitute an offer of securities for sale in any jurisdiction, including the United States and any securities described in this announcement may not be offered or sold in the United States absent registration or an exemption from registration under the United States Securities Act of 1933, as amended. Any public offering of securities to be made in the United States will be made by means of a prospectus that may be obtained from the issuer and that will contain detailed information about the company and management, as well as financial statements.

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JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information. 	<ul style="list-style-type: none"> To assess the quality of the lithium carbonate product during pilot plant operations, alternative centrifuge products were sampled for diagnostic analysis. A 200 g grab sample was collected from each 3-5 kg centrifuge cycle, representing 1 hour of production. A total of 12 samples were collected each day of operation. Physical characterisation - assessment of moisture content using analytical balances and drying ovens. Chemical characterisation – gravimetric titrations, atomic absorption spectroscopy (AAS), inductively coupled plasma optical emission spectrometry (ICPOES) and ion selective electrode (ISE) (external laboratory only). Bulk samples for characterisation were collected directly from the pilot centrifuge. Each bulk sample consisted of two successive centrifuge cycles. The entirety of the pilot plant output was collected in this manner, with bulk samples encompassing the total pilot production. Each bulk sample consisted of 6 - 10 kg, representing 2 hours of production.
Drilling techniques	<ul style="list-style-type: none"> Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc). 	<ul style="list-style-type: none"> N/A
Drill sample recovery	<ul style="list-style-type: none"> Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material. 	<ul style="list-style-type: none"> N/A

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Criteria	JORC Code explanation	Commentary
Logging	<ul style="list-style-type: none"> Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. The total length and percentage of the relevant intersections logged. 	<ul style="list-style-type: none"> N/A
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparation technique. Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling. Whether sample sizes are appropriate to the grain size of the material being sampled. 	<ul style="list-style-type: none"> Collected samples were stored in separate containers and delivered to the on-site laboratory by Galaxy staff. The plant collected diagnostic samples of 300 g were dried at 60 °C and hand mixed in the laboratory. Samples were homogenized and separated into 3 equal 100 g batches: one for retention on-site and two for off-site laboratories. Each subsample was digested in nitric acid for chemical analysis. The bulk product samples of 5-10 kg each were dried at 60 °C overnight, rotary split and then riffled to obtain a 100 g subsample for assay. Each subsample was digested in nitric acid for chemical analysis
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established. 	<ul style="list-style-type: none"> The on-site laboratory was used as the primary laboratory to conduct analysis during pilot operations. Analysis by gravimetric titrations, AAS, ICPOES. Alex Stewart International in Jujuy Province, Argentina was used for external laboratory duplicate analysis to validate on-site results. Completed during operational periods. Analysis by ICPOES. The Minerals business unit of the Australian Science and Technology Organisation (ANSTO) in Sydney, Australia was used for external laboratory duplicate analysis, and bulk product characterisation. Performed post-pilot operations. Analysis by AAS, ICPOES and CI-ISE. All equipment was calibrated with externally certified standards. Quality control procedures (as per laboratory specific operational procedures) include the use of multiple certified standards (i.e. up to 5 standards for ANSTO) and blank analysis in conjunction with primary sample analysis, in addition to multiple dilution stages throughout analysis

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Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	<ul style="list-style-type: none"> The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data. 	<ul style="list-style-type: none"> The samples were received in the laboratory by Galaxy staff. Sample identification and assays are electronically recorded on an access-controlled database managed by Galaxy. External laboratory analysis is stored electronically on internally managed databases, with results supplied via secured email communication.
Location of data points	<ul style="list-style-type: none"> Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. Specification of the grid system used. Quality and adequacy of topographic control. 	<ul style="list-style-type: none"> Batch identification and time stamp at time of production used as single object identifier throughout sample collection, preparation, analysis and reporting.
Data spacing and distribution	<ul style="list-style-type: none"> Data spacing for reporting of Exploration Results. Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. Whether sample compositing has been applied. 	<ul style="list-style-type: none"> N/A
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material. 	<ul style="list-style-type: none"> N/A
Sample security	<ul style="list-style-type: none"> The measures taken to ensure sample security. 	<ul style="list-style-type: none"> Samples packaged on-site by Galaxy staff. The samples were collected and delivered to Australia under chain of custody controls by ProGlobal Logistics and DHL International, via road transport from Sal de Vida to Buenos Aires, Argentina and by sea transport to Sydney, Australia
Audits or reviews	<ul style="list-style-type: none"> The results of any audits or reviews of sampling techniques and data. 	<ul style="list-style-type: none"> Sampling techniques and data review was performed by competent external technical consultants (ANSTO). ANSTO operates a quality management system in accordance with ISO 9001 2015 (Cert. FS613302)

For sections 2-4 refer to the report entitled "Sale of Northern Tenements at Sal de Vida to POSCO Completed" created on 26 November 2018 and the Sal de Vida Project Ore Reserves extracted from the report entitled "Sal De Vida: Revised Definitive Feasibility Study Confirms Low Cost, Long Life and Economically Robust Operation" created on 22 August 2016 both of which are available to view on www.gxy.com and www.asx.com.au.

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