

# GALAXY RESOURCES LIMITED

## QUARTERLY ACTIVITIES REPORT

THREE MONTHS ENDED 30 JUNE 2018

Galaxy Resources Limited (ASX: GXY, "Galaxy" or "Company") is pleased to report to shareholders its activities for the quarter ended 30 June 2018.

## HIGHLIGHTS

### Mt Cattlin Operations

- Production of 47,901 dry metric tonnes ("dmt") of spodumene concentrate
- Sales of 45,761 dmt of spodumene concentrate
- Average cash margin of US\$534 per dmt sold (including royalties and marketing fees)
- Construction of Yield Optimisation Project commenced
- New storage facility at Esperance with increased capacity completed

### Sal de Vida Project

- Sale of northern tenements to POSCO for cash consideration of US\$280 million
- Updated feasibility study economics validate a highly profitable, long life (40 years), low-cost lithium project
- JP Morgan Australia appointed financial advisor to assist in evaluating potential strategic partnerships for the development of Sal de Vida
- Infrastructure facilities on site enhanced

### James Bay Project

- Feasibility work for upstream mine and concentrator continued
- Hydro-Quebec scoping study report completed for power supply arrangements
- Upstream feasibility metallurgical test work started, base line downstream test work conducted
- Ongoing engagement with local Cree community

### Corporate

- Closing cash and liquid assets of US\$84.8 million
- Zero debt



## PROJECTS

### MT CATTLIN – OPERATIONS

#### Safety Performance

Operations at Mt Cattlin have continued without any Lost Time Injuries.

#### Production & Sales Statistics

	Units	Q1 2018	Q2 2018	YTD 2018	QoQ
Mined Volume	<i>bcm</i>	843,308	846,830	<b>1,690,138</b>	n/a
Ore Mined	<i>wmt</i>	528,977	419,314	<b>948,291</b>	↓ 21%
Ore Mined - Grade	%	1.01	1.11	<b>1.06</b>	↑ 0.10
Ore Treated	<i>wmt</i>	430,398	435,296	<b>865,694</b>	↑ 1%
Ore Treated - Grade	%	1.11	1.17	<b>1.14</b>	↑ 0.06
Recovery	%	52	56	<b>54</b>	↑ 4
Concentrate Produced	<i>dmt</i>	43,852	47,901	<b>91,753</b>	↑ 9%
Concentrate Sold	<i>dmt</i>	44,258	45,761	<b>90,019</b>	↑ 3%
Concentrate Sold - Grade	%	5.70	5.83	<b>5.77</b>	↑ 0.13
Cash margin per tonne Concentrate Sold #	<i>US\$/dmt</i>	439	534	<b>488</b>	↑ 22%

# after including royalties and marketing fees

Total mining volumes remained constant compared with the previous quarter with ore volumes mined reducing by 21% due to the processing of re-crushed secondary floats surface stocks.

Ore volume treated increased by 1% to 435,296 wmt, with a higher ore feed grade of 1.17% achieved compared with the previous quarter primarily due to higher grade mined during the quarter.

Spodumene concentrate produced of 47,901 dmt was 9% higher than the previous quarter primarily due to higher grade treated and an increase in recovery.

Mt Cattlin reported average cash margin per dmt sold (including royalties and marketing fees) of US\$534 for the quarter, an increase compared with the previous quarter primarily due to lower costs of production and increased realised price.

A total of 3 shipments of lithium concentrate were completed during the quarter for an aggregate 45,761 dmt of product sold, with all shipments at grade levels and specifications easily meeting contract requirements.

Construction of the yield optimization circuits at the Mt Cattlin Plant has commenced. These include an ultra fines DMS circuit, a secondary float re-crush circuit and a final product optical sorter. These productivity improvement projects have been implemented with the objective to increase overall recovery to a range of 70-75%, which in turn will result in an increase in annual production volumes to between 220,000 and 240,000 dmtpa. Construction and commissioning of these new

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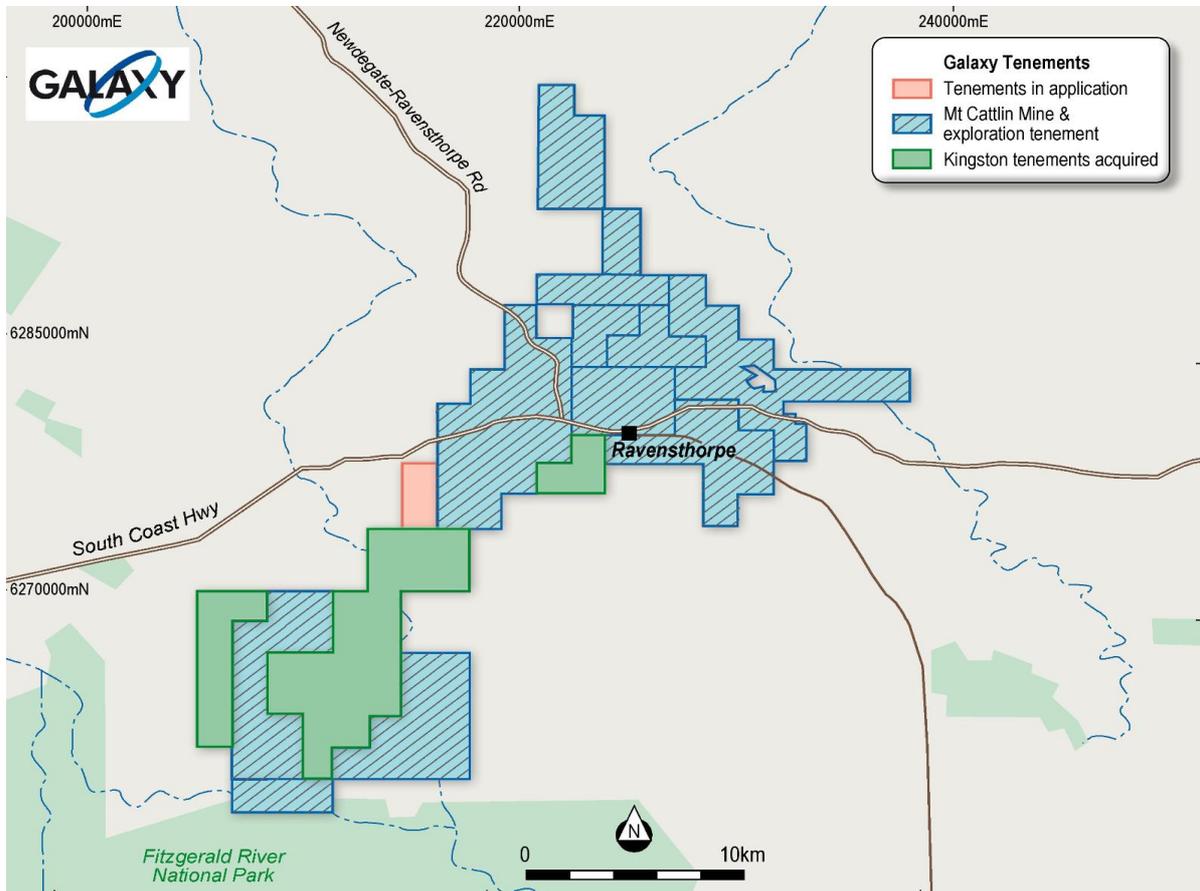
additions to the process plant are scheduled to be completed during Q3, with the resulting improvements in production rates expected in Q4 2018.

Qube Bulk handle the transport, storage and shiploading of Mt Cattlin's lithium concentrate through the Port of Esperance. During the quarter, Qube Bulk completed and commissioned a new purpose built storage facility at Esperance that has now doubled the storage capacity for Mt Cattlin product to 30,000 tonnes. This new storage facility (see below) will allow for more efficient shiploading and logistics.



## MT CATTLIN – RESOURCE AND RESERVE AND EXPLORATION

During the quarter, the Company completed the acquisition of 3 exploration licenses (E74/571, E74/570 and E74/589) from Kingston Resources Limited that surround the existing Mt Cattlin operations for A\$300,000 in cash plus the issue of 93,168 shares in Galaxy. As a result, the Company now owns approximately 460km<sup>2</sup> of mining and exploration licences, an increase from 154km<sup>2</sup> at the end of 2017, including the existing Mt Cattlin operations as set out below:



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## SAL DE VIDA PROJECT

### Updated Feasibility Study

During the quarter, Galaxy announced that it had completed an update of the Definitive Feasibility Study (“DFS”) for the Sal de Vida lithium project (“Sal de Vida” or “Project”) located on the Salar del Hombre Muerto in northwest Argentina.

Results from the updated feasibility study economics for the Sal de Vida Project validate a technically superior, highly profitable, long life (40 years) and low-cost lithium and potash project with:

- Annual production of 25,000 tonnes of lithium carbonate and 94,000 tonnes of potash;
- An operation with an initial 3-year ramp up to full planned lithium carbonate production. Potash production is deferred for two years after the commencement of lithium carbonate production;
- Post-tax Net Present Value (“NPV”) of US\$1.48 billion at an 8% discount rate (real);
- Post-tax Internal Rate of Return (“IRR”) of 26.9%, with post-tax payback period of approximately 3 years from first production;
- Capital cost estimate of US\$474 million, including US\$31 million for an optional potash production circuit;
- Operating costs at full production of US\$3,144 per tonne of lithium carbonate after potash credits;
- Average annual revenues of US\$360 million and EBITDA of US\$270 million; and
- JORC-compliant reserve estimate of 1.14 million tonnes of recoverable lithium carbonate equivalent (“LCE”), with significant potential for future upside from further resource definition and subsequent reserve upgrade.

### Sale of Northern Tenements

During the quarter, Galaxy announced that it had entered into a non-binding agreement with POSCO to sell a package of tenements located on the northern area of the Salar del Hombre Muerto in Argentina, for a cash consideration of US\$280 million.

Other key elements of the transaction are:

- Galaxy retains 100% ownership of all tenements in the southern basin that constitutes the Sal de Vida Project containing 100% of the previously announced reserves of 1.14 million tonnes LCE; and
- Funds available to Galaxy to progress Sal de Vida development in Catamarca Province.

Subsequent to the end of the quarter, Galaxy advised that the agreed timetable for completion of this transaction continues to be met, with notice received from POSCO on 6 July 2018 that their investment review had been completed satisfactorily. The transaction remains conditional on execution of definitive documentation and final POSCO Board approval which is still expected during the third quarter of 2018.

Galaxy and POSCO are also discussing potential development, operational, infrastructure and logistical synergies for their respective projects.

### Appointment of Financial Advisor

During the quarter, Galaxy appointed JP Morgan Australia as financial advisor to assist in evaluating potential strategic partnership opportunities for the development of Sal de Vida.

### Geology & Hydrogeology

A new production well (SVWW18\_24) was completed during Q2, increasing knowledge both of the geology and hydrogeology related to the northern basin tenements. This new well was terminated at a depth of 351 metres and was developed to provide hydraulic parameters. Both step and continuous pumping tests were successfully performed during a 48 hour period. A second production well will be drilled during Q3 in the southern tenement area.

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## Site Improvements

Further works were completed at the TANGO-01 camp, preparing this new location to consolidate all Sal de Vida activities in a single site. New heavy equipment purchased in Q1 has been used to improve the quality of the existing roads and reduce maintenance costs. Civil works were completed to accommodate pumping, power and gauging equipment required to support an application with provincial authorities for a new fresh water source.

In addition, more civil infrastructure is being set up for the new on-site powerhouse that will provide room to locate extra diesel gen-set units, allowing for an optimized power generation strategy while a renewable energy study is undertaken.

## Test Plant & Laboratory

The evaporation test pans were filled and continue an expected evaporation profile, aligned with weather patterns. In parallel, small quantities of lithium carbonate produced in batches from existing brine inventories, were analyzed at the project lab to determine impurity levels and to identify potential improvements to the current planned process route. A number of other process optimization related initiatives were reviewed and evaluated.

## Tenement Management & Environmental Permitting

All Sal de Vida Project tenements remain in good standing, with mining licenses fees paid up to date. The Company continued the process of updating its current permit with the Catamarca province as part of its regular bi-annual permit renewal process expected to be completed during Q3.

## Corporate Social Responsibility

All CSR programs covering education, health, gender equality as main sustainable principles to the Sal de Vida operation remain active and continue to grow in importance, along with participation from new stakeholders. During Q2 all existing agreements with educational institutions like Universidad de Catamarca, as well as national investigation institutions like CONICET were reviewed and key initiatives identified to expand existing scope.

## JAMES BAY PROJECT

### Exploration & Development

During the quarter, information collected during the Q1 drilling campaign (geotechnical, hydrogeological, etc.) was used to advance the engineering supporting the feasibility work and Environmental and Social Impact Assessment (“ESIA”) for the upstream mine and concentrate production facility. This included developing the mining plan, designing the processing plant and site infrastructure, which includes waste rock pile and tailings facility. Commencement of the phase 2 test work program during the quarter confirmed the performance in relation to the proposed mine plan and other parameters.

Hydro-Quebec completed their analysis and scoping study report for the construction of the power line for the project through a 7-km spur connection to be made from the James Bay project site to their existing power line. The next phase to be undertaken by Hydro-Quebec involves preparation of the initial design, costing and schedule for the electricity infrastructure needed. The proposed timeline to connect the power is in-line with the overall James Bay development schedule.

Engagement with the Cree Nation of Eastmain continued during the quarter including meetings with the Band Council of Eastmain and various stakeholders in the community. Additional consultation meetings are planned, including a third party Technical Course, outlining all aspects of a mining project from exploration to operation.

Base line metallurgical test work adopting a conventional processing approach was conducted during the quarter for the proposed downstream conversion facility, with results in-line with expectations. In parallel, location studies continue with site visits and preliminary discussion undertaken with related local Economic Development Organizations.

Information gathered to date including permitting, metallurgical test work and location will form the basis of the feasibility work for the proposed downstream conversion facility.

## CORPORATE

### Cash and Debt

Galaxy had US\$68.3 million in cash and liquid securities at 30 June 2018 and zero debt. In addition, the US\$16.5 million payment for the shipment completed in late June, secured by L/C, was received in early July.

## INDUSTRY & MARKET UPDATE

Market indicators observed throughout Q2 2018 continue to demonstrate robust growth within the lithium market and associated end-uses. China continues to reaffirm its position as the global leader in the adoption of New Energy Vehicles (“NEV”) and deliver on targeted production growth having achieved a 4.1% penetration rate of all newly manufactured vehicles in May. Production growth within the rest of the world also remained strong. Q2 2018 was also characterized by the announcement of further supply and technology partnerships between leading global OEMs and battery manufacturers, as well as encouraging and unexpected production achievements in the installation of industrial energy storage systems (“ESS”).

The New Energy Vehicle (“NEV”) sector in China once again recorded significant growth in production volumes for the first five months of 2018. The China Association of Automobile Manufacturers reported total NEV production of c.325,000 vehicles from January through May, representing a 121% YoY increase compared to the first five months of 2017. To be specific, it is estimated that the total number of Battery Electric Vehicles (“BEV”) produced throughout these months was c.249,000 vehicles, representing growth of 104% YoY, whilst total production of Plug-in Hybrid Electric Vehicles (“PHEV”) was c.76,000 vehicles, representing growth of 203% YoY. BEVs continue to represent approximately 75-80% of all NEVs produced in China.

The Chinese central government transitioned to the new NEV subsidy policy in June, rewarding longer range and higher energy density vehicles. A summary of the new subsidies and associated vehicle driving ranges for NEVs are highlighted in Table 1. Under this new policy scheme manufacturers are also rewarded for producing vehicles with increased energy density with a further subsidy multiplier applied to the rebate associated with vehicle range. Such multipliers are illustrated in Table 2.

**Table 1: China NEV subsidy regime for vehicle range (RMB)**

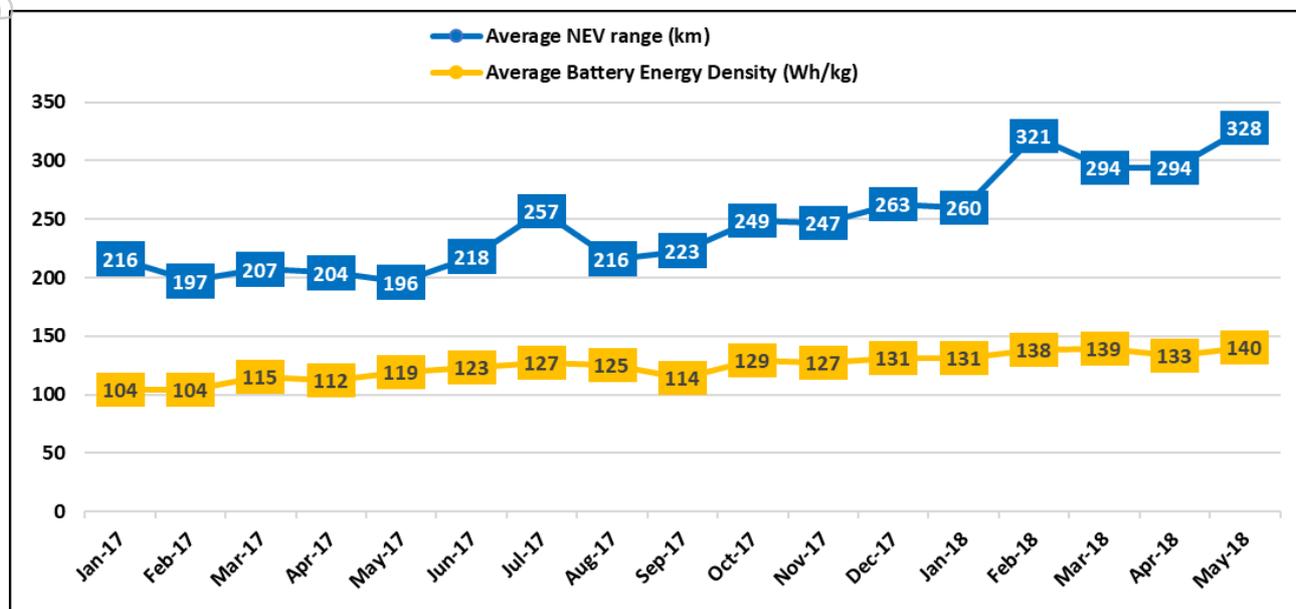
Vehicle Range (km)	2018 Vehicle Subsidy
>80km	0
100-150km	0
150-200km	15,000
200-250km	24,000
250-300km	34,000
300-350km	45,000
400km+	50,000

**Table 2: China NEV subsidy multiplier based on and battery specific energy (x)**

Battery Specific Energy	2018 Subsidy Multiplier
90 -105 wh/kg	0.0
105 -120 wh/kg	0.6
120 -140 wh/kg	1.0
140 -160 wh/kg	1.1
160 wh/kg +	1.2

Generally, greater vehicle range is associated with an increase in the size of the battery being deployed within the vehicle, hence being associated with increased demand for lithium raw materials. Such growth in average lithium-ion battery sizes is clearly demonstrated by the data associated with batch approved vehicles in China. Across the 18 batches approved since the beginning of 2017, the driving range of approved vehicles has increased from an average of 216km to 328km. Concurrently the average energy density of approved vehicles has also increased from 104Wh/kg to 140Wh/kg in this timeframe.

**Table 3: NEV Specification Changes since 2017**



Source: Ministry for Industry, Guangfa Securities Development Research

Outside of China, electric vehicle consumption experienced its 33<sup>rd</sup> consecutive monthly YoY sales gain in the United States. *InsideEVs* reported plug-in vehicle deliveries of c. 71,000 vehicles throughout Q2 of 2018, representing 50% growth YoY. Year to date sales are estimated to be c. 126,000 vehicles. Within Europe, plug in electric car sales from January through May 2018 were estimated to be c.146,000 vehicles, representing 44% growth YoY and market penetration of approximately 2.1%.

Chinese battery manufacturing leader Contemporary Amperex Technology (“**CATL**”) completed their initial public offering of shares on the Shenzhen Stock Exchange in June, with proceeds targeted at expanding the company’s battery manufacturing capacity to more than 50GWh by 2020. Further to this, global auto manufacturing company, BMW, announced a US\$1.2 billion lithium-ion battery supply contract with CATL. The agreement provides BMW with an initial stream of battery supply as they target 15-20% electric vehicle sales penetration by 2025 and will facilitate CATL’s construction of a lithium-ion battery manufacturing plant in Europe. CATL is thought to be favouring a site near Erfurt, Thuringia in eastern Germany for such a facility.

As further industry validation of the demand growth expected within the EV supply chain, China’s largest NEV manufacturer, BYD, announced the construction of a new electric vehicle lithium-ion battery factory with an expected annual capacity of 24GWh when the plant is fully operational (end of 2019). BYD is said to have invested US\$1.5bn into the new plant, to be located in Xining, China, with capacity large enough to power 1.2 million BYD Tang NEVs. Furthermore, BYD also agreed with the local Xining government to construct another US\$1.35bn battery factory with targeted capacity of 2GWh. BYD expects its total battery manufacturing capacity to reach 28GWh by the end of 2018, sharply rising to 48GWh and 60GWh in 2019 and 2020, respectively.

Significant developments in relation to the accelerating penetration of lithium-ion battery technology within the energy storage market were announced throughout Q2 of 2018, the most substantial of which was a partnership between Tesla and The Pacific Gas and Electric Company (“**PG&E**”), one of the largest electric energy companies in the United States, to produce a lithium-ion battery storage system with a capacity of up to 1.1 GWh in California. For relativity, this project is approximately 9 times size of the storage battery installed at Hornsdale, Australia, in late 2017 (129MWh) and equates to more than 18,000 Tesla Model 3s.

Moreover, PG&E also have submitted project requests for a further 3 lithium-ion battery storage projects to the California Public Utilities Commission. One of the projects to be commissioned by energy company *Visra* could become one of the world’s first grid scale battery installations at 1.2GWh, with projected installation to be completed by the end of 2020. The

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other 2 projects include a 300MWh battery installation by Hummingbird Energy Storage LLC and the aggregation of 40MWh of batteries by Micronoc Inc.

As a result of the impending changes to the Chinese NEV subsidies described above, Q2 of 2018 was characterized by destocking activities along the various stages of the lithium-ion battery value chain within China in order to free up capacity to shift production to higher energy density technologies in the future. Combined with maturing seasonality this resulted in a retraction of lithium carbonate and lithium hydroxide prices within China throughout the period (c.-18% for lithium carbonate, c.-4% for lithium hydroxide in China). However, the key pricing trend observed throughout the quarter was the convergence of the Chinese price for battery grade lithium salts and the rest of the world ("ROW") price observed for the equivalent products. ROW pricing (c.US\$16,000 – US\$17,000/t for lithium carbonate, c.US\$18,000 - US\$19,000/t for lithium hydroxide) continued to grow to record levels throughout the quarter demonstrating the robust and maturing nature of the current market for lithium products.

As was observed in both 2016 and 2017 pricing is expected to recover strongly in H2 2018 in line with targeted NEV production volumes across the globe and a continued lag in the supply side response. Continued demand growth and the processing lag between new spodumene production, its conversion into chemicals and ultimate consumption within an end use application is expected to ensure the market balance remains tight within the foreseeable future, supporting a recovered pricing environment.

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## Competent Person Statement

### MT CATTLIN

Any information in this report that relates to the estimation and reporting of the Mt Cattlin Mineral Resources and Ore Reserves is extracted from the report entitled “*Mt Cattlin Mineral Resource & Ore Reserve and Exploration Update*” created on 22 March 2018 which is available to view on [www.galaxylithium.com](http://www.galaxylithium.com) and [www.asx.com.au](http://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 announcement 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.

### SAL DE VIDA

Any information in this report that relates to the estimation and reporting of the Sal de Vida Project Mineral Resources and 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 which is available to view on [www.galaxylithium.com](http://www.galaxylithium.com) and [www.asx.com.au](http://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 announcement 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.

### JAMES BAY

Any information in this report that relates to the estimation and reporting of the James Bay Mineral Resources is extracted from the ASX announcement dated 4 December 2017 which is available to view on [www.galaxylithium.com](http://www.galaxylithium.com) and [www.asx.com.au](http://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 announcement and that all material assumptions and technical parameters underpinning the Mineral Resources 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.

## Caution Regarding Forward Looking Information

This document contains forward looking statements concerning Galaxy.

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.

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