



# GALAXY RESOURCES LIMITED

Corporate Presentation

July 2019

ASX:GXY



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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.

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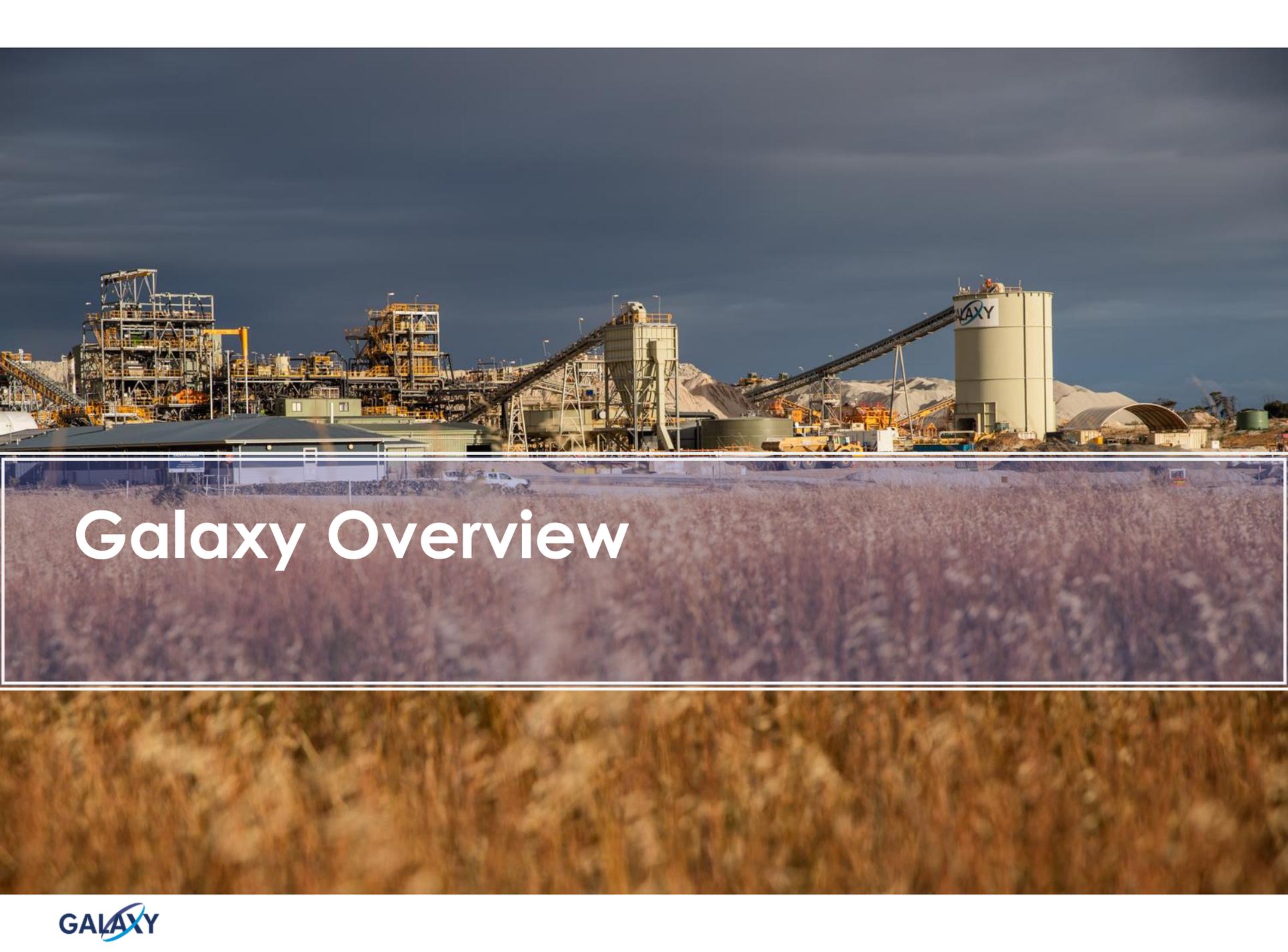
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# Galaxy Overview

# Company Highlights



- One of the premier **global lithium opportunities** with existing production and a world class asset development pipeline
- Mt Cattlin is one of the **lowest cost** spodumene operations, producing a **high quality lithium concentrate and positive cash margins**
- Multi-project portfolio provides diversified exposure across **hard rock and brine lithium assets** in Australia, Argentina and Canada
- Strong balance sheet with **cash of US\$176.3mm and no debt** (as at 30 June 2019)
- **Revised feasibility study at Sal de Vida Project in Argentina** supports low cost, long life project with robust economics
- **James Bay feasibility advancing**, outlining a high quality development asset in the emerging high growth market of North America
- Highly credentialed Management and Board with a **deep industry knowledge** and a history of building **successful mining companies**
- **Existing relationships with customers** in key markets through Galaxy's position as a major global supplier of high quality lithium

*Mt Cattlin Operations – Australia*



*En route to Sal de Vida lithium project – Argentina*



## A leading global pure play lithium company with diversified asset base, strong institutional support and a diversified global investor base

### Financial Information (2019.07.15)

Share price	A\$1.31
Number of shares (undiluted) <sup>1</sup>	409.3mm
<b>Market Capitalization</b>	<b>A\$536.2mm</b>
Cash and investments (30-Jun-19) <sup>2</sup>	A\$290.4mm
Debt (30-Jun-19)	-
<b>Enterprise Value</b>	<b>A\$245.8mm</b>

Source: Company filings and IRESS as at 15 July 2019

Notes:

- 1 Excludes 14.4m unlisted options on issue at various vesting and expiry dates with exercise prices between A\$2.78 and A\$3.66; Excludes 0.9m share appreciation rights
- 2 Converted using AUDUSD exchange rate as at 30 Jun 2019

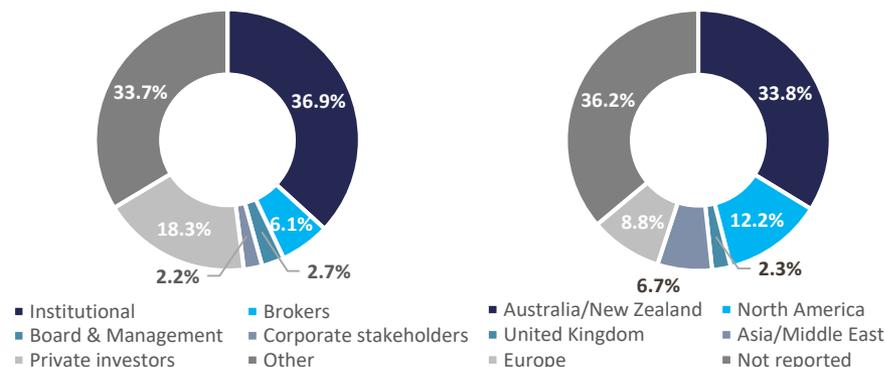
### Top Shareholders (Jun 2019)

Investor	%
Ausbil IM	7.4%
Board and Management	2.8%
Top 20 shareholders	36.7%

### Share Price Performance (1 year)



### Shareholder Type and Geographical Breakdown (Jun 2019)



Project portfolio is distinguished by diversified exposure to both hard rock and brine based lithium assets, and a **top-tier development pipeline to underpin future growth**

## James Bay, Quebec, Canada – Hard Rock

- 100% owned
- Lithium hard rock development
- Indicated Mineral Resource: 40.3Mt at 1.4% Li<sub>2</sub>O
- Feasibility underway for integrated upstream and downstream operation

## Sal de Vida, Catamarca province, Argentina – Brine

- 100% owned
- Lithium and potash brine project with a reserve of 1.1mt LCE, 4.2mt KCl
- Optimization works and engineering underway
- Investigating potential opportunities de-risk project development and rationalize the development timeline

## Mt Cattlin, WA, Australia – Hard Rock

- 100% owned
- Throughput capacity licenced to 2.0mt p.a.
- c.157kt of lithium concentrate (19.6kt LCE) produced in 2018
- Guided production of c.180 - 210kt (22.5-26kt LCE) for 2019

Lithium value-adding production heavily concentrated in Asia – current and future capacity anticipated to continue to be dominated by China

- Current commissioned and planned capacity – 85% still expected to be in Asia
- China produces >50% of global lithium cathodes
- Galaxy uniquely positioned, having historically served major customers in the battery materials as a result of its former Jiangsu operations

Source: BNEF



# Projects Update

## Record quarter of production at Mt Cattlin in Q2 2019

### Mt Cattlin Production & Sales Statistics

	Units	Q1 2019	Q2 2019	YTD 2019
<b>Mining</b>				
Total material mined	bcm	1,168,120	<b>1,178,925</b>	2,347,046
Ore mined	wmt	437,932	<b>379,187</b>	817,119
Grade of ore mined	% Li <sub>2</sub> O	1.03	<b>1.39</b>	1.20
<b>Processing and Sales</b>				
Ore processed	wmt	409,849	<b>426,846</b>	836,695
Grade of ore processed	% Li <sub>2</sub> O	1.15	<b>1.40</b>	1.28
Mass yield	%	10.5	<b>13.5</b>	12.0
Recovery	%	51	<b>58</b>	55
Concentrate produced	dmt	41,874	<b>56,460</b>	98,334
Grade of concentrate produced	% Li <sub>2</sub> O	5.7	<b>6.0</b>	5.9
Concentrate sold	dmt	15,192	<b>29,439</b>	44,630
Grade of concentrate sold	% Li <sub>2</sub> O	5.6	<b>5.9</b>	5.8
<b>Production Costs</b>				
Cash cost per tonne produced <sup>1</sup>	US\$/t FOB	453	<b>337</b>	387

- Mt Cattlin operations have continued without any Lost Time Injuries since restart
- Record quarterly production volume in Q2 2019 of 56,460 dmt
  - Production guidance of 45,000 – 55,000 dmt for Q3 2019; 180,000 – 210,000 dmt for the full year
- Reliable and consistent production, with a high quality final product
  - Targeting 5.9-6.0%+ Li<sub>2</sub>O; <1.2% Fe<sub>2</sub>O<sub>3</sub>
- One of the lowest cost spodumene operations, globally
  - Unit cash cost of US\$337/ dmt in Q2 2019
- Two shipments completed in Q2 2019 for total sales of 29,439 dmt
  - A planned 3<sup>rd</sup> shipment of 15,000 dmt was delayed into Q3 2019
  - Targeted shipment volume of 60,000 – 70,000 dmt in Q3 2019

Notes:

1. Excluding royalties and marketing costs

## Improved mine planning and process optimizations allowing for greater synchronization of operations

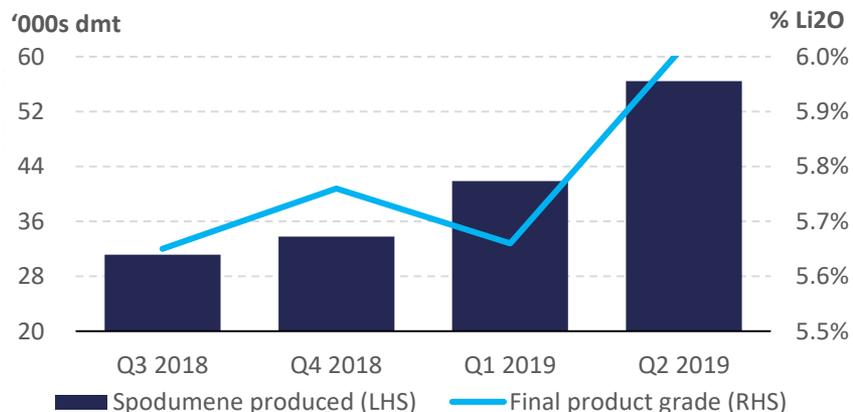
### Mining Operations

- Two open mining faces within the 2 South East (“2SE”) and 2 North East (“2NE”) pits allowing for improved mining flexibility
- Several high-grade sections were mined in Q2 2019
  - Expected average grade of ore mined for the full year of 1.15% Li<sub>2</sub>O
- Tonnes of ore mined down 13% quarter-on-quarter, primarily due to lower ore recovery from the pit
  - Caused by a section in 2NE containing increased basalt
  - Process plant optimizations being made to allow greater treatment of sections of contaminated ore such as this

### Mining Volumes & Grade of Ore Mined (LTM)



### Production Volumes & Grade of Final Product (LTM)



### Processing Operations

- Improved plant throughput in Q2 2019 with 426,846 wmt of ore treated
  - Greater availability and utilization of the ultra-fines Dense Medium Separation (“DMS”) circuit
  - Improved performance of the primary cyclones of coarse DMS
- Increased mass yield in Q2 2019 of 13.5% given higher head-grade
- Overall lithium recovery achieved in Q2 2019 of 58%, a 13% improvement on Q1 2019

## Various operational productivity initiatives underway

### Optimization Focus

#### Product Quality

- In pit ore sorting to ensure contamination of ore reporting to ROM is minimized
- Increasing availability and utilization of the final product optical sorter
- Improving efficiency of waste rejection in the re-liberation circuit

#### Operational Efficiency

- Improved mine scheduling to better match processing plant throughput
- Increasing utilization of yield optimization circuits
- Equipment additions to allow the treatment of contaminated ore stockpiled at site

#### Operating Costs

- Reduced haul distances for mining waste
- Review of haulage and port costs
- Optimized maintenance

### Re-liberation Circuit



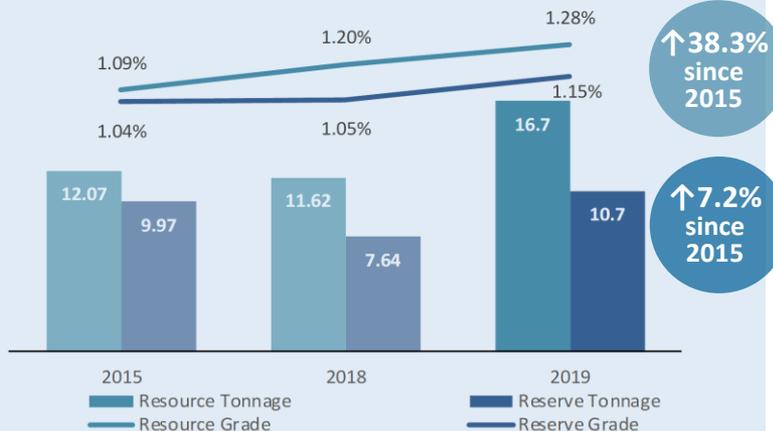
### Ultra-fine DMS Circuit



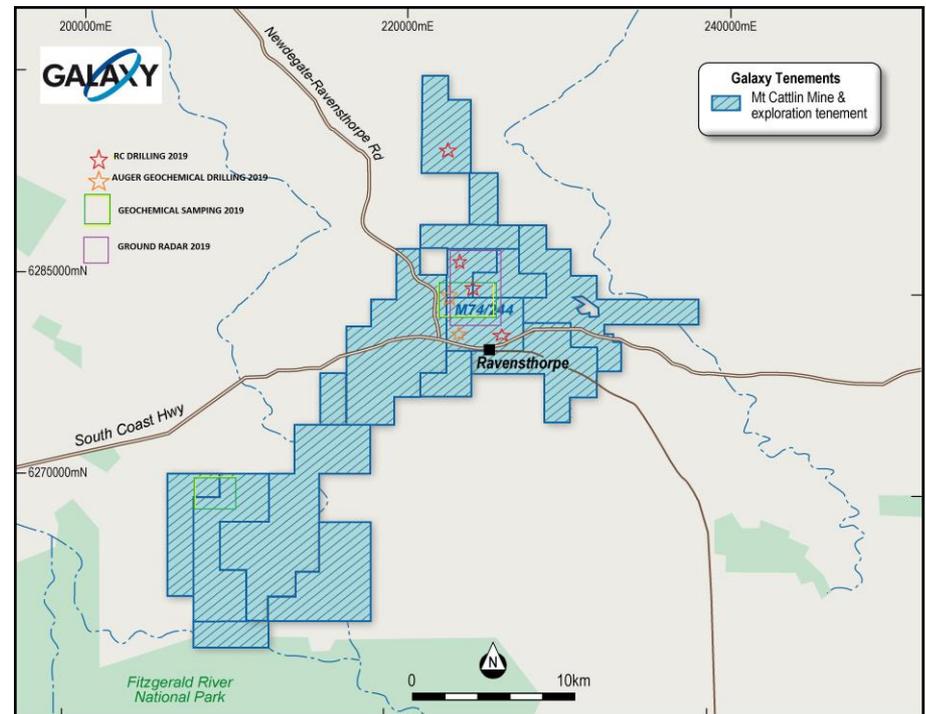
## Mineral Resource & Ore Reserve estimations increased 42% and 40%, respectively as at 31 December 2018

### Exploration

- Substantial brownfields and greenfields drilling to continue throughout 2019
- Ground penetrating radar program completed to define targets in early 2019
- Regional geochemical sampling program to define new targets ongoing
- Auger geochemical program on surrounding farmland imminent



### Mt Cattlin Tenements and Exploration Targets



Sources: Galaxy announcements titled, "42% Increase in Mt Cattlin Resource to 16.7Mt," dated 23 January 2019, "Mt Cattlin Mineral Resource & Ore Reserve And Exploration Update," dated 23 March 2018, and "Independent Review Supports Near Term Production At Mt Cattlin," relayed by General Mining Ltd. (formerly ASX:GMM) on 12 October 2015



- Operational for over 2.5 years since restart
- Record production recorded in Q2 2019
- Substantial plant upgrades made in 2018 underpinning continued optimization

- Unit cash cost of US\$337/dmt (FOB) in Q2 2019
- One of the lowest cost producers of lithium concentrate, globally

- High grade – now consistently producing +6.0% Li<sub>2</sub>O
- Low impurity levels – targeting < 1.2% Fe<sub>2</sub>O<sub>3</sub>
- Highly competitive product quality

- Product qualified with sticky customers linked into top-tier supply chains
- Strong H2 2019 shipment volumes expected, providing some insulation from market conditions

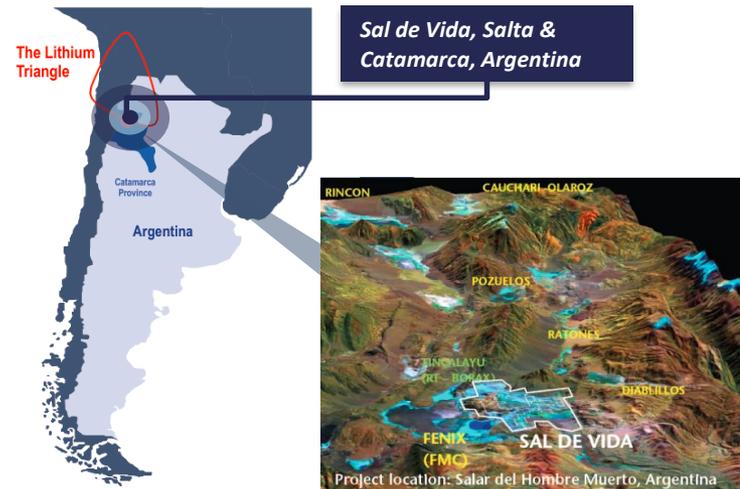
# Sal de Vida – Overview



## One of the world’s largest and highest quality undeveloped brine deposits with significant expansion potential

- Located c.4,000 metres above sea level in the Puna region of northwest Argentina, in the province of Catamarca
  - Adjacent to Livent’s Fenix operations which has been producing for over 20 years
- Considered a premier lithium and potash brine development project globally
  - Exhibits superior resource chemistry
  - Demonstrated extractability and the large stored volume of brine
- Updated feasibility (completed May 2018), reaffirmed Sal de Vida’s technical superiority and potential as a highly profitable operation<sup>1</sup>
  - 40+ year initial life
  - Lowest quartile operating costs of US\$3,144/t LCE (after potash credits)
  - Pre-production capital costs of US\$474mm<sup>2</sup>
  - **Post-tax NPV<sub>8% real</sub> of US\$1.48bn**

### Location



### Sal de Vida Reserve Estimates

Reserve category	Time period	Tonnes Li total mass	Tonnes equivalent Li <sub>2</sub> CO <sub>3</sub>	Tonnes K total mass	Tonnes equivalent KCl
Proven	1-6	34,000	181,000	332,000	633,000
Probable	7-40	180,000	958,000	1,869,000	3,564,000
<b>Total</b>	<b>40 years</b>	<b>214,000</b>	<b>1,139,000</b>	<b>2,201,000</b>	<b>4,197,000</b>

Source: Revised Sal de Vida DFS – August 2016. Assumes 500mg/L Li cut off

Source: Sal de Vida – Updated Feasibility Study – May 2018

Notes:

1. After potash credits
2. Includes capital cost of the potash production facility, associate infrastructure and contingency of US\$31mm

## Key focus of development work is process optimization and value engineering studies

### Project Development

- Earthworks of 15Ha pilot evaporation ponds complete
- Pond lining to commence in Q3 2019
- Detailed geotechnical survey of operational site complete – key input into detailed design of commercial ponds and project civil works
- Engineering and estimation of key onsite and offsite non-process infrastructure
- Contract award for the construction of first production wells expected in Q3 2019

### Value Engineering

- Energy generation options – mix of energy sources and capital efficiencies in required infrastructure
- Other trade-off studies including water and offsite fabrication
- Potential for shared infrastructure being explored with regional developers

### Operational Readiness

- Management team bolstered with three senior appointment in Q2 2019 (General Manager – Argentina, Legal Manager, Human Resources Manager)
- New headquarters for Sal de Vida established in Catamarca city

### Government and Community Relations

- Training and upskilling of local workforce – Pond liner training in Q2 2019
- Laboratory operations training established with the University of Catamarca

### Well Drilling



### Pilot Pond Earthworks Complete

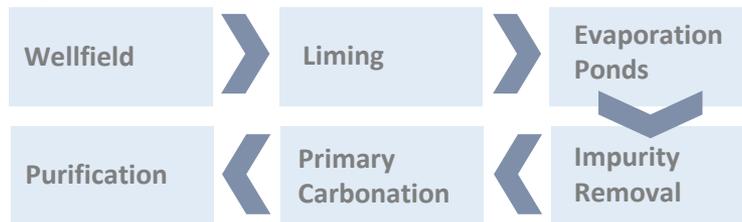


**Galaxy is targeting to confirm a process flow sheet for development and an updated execution schedule in H2 2019**

## Dual stream test work program

### *Base Case Test Work Program*

#### High Level Flowsheet:



#### Purpose

- Optimization of each individual stage of the flowsheet, to:
  - Ensure consistency and quality of final product
  - Enhance confidence in operating cost estimates
- Potential opportunities to de-risk project development and rationalize the development timeline identified
  - These will be explored in greater detail in 2H 2019
- Considering merit of offsite product purification

### *Alternative Technology Test Work Program*

#### Technology:

- Two solvent extraction and two ion exchange process technology providers engaged to conduct test work
- Technologies would be used to supplement the front end of the process flow sheet

#### Purpose:

- Potential to improve overall lithium recovery from brine
  - Preliminary results have been encouraging, coming in higher than base case flow sheet
- Potential capital cost efficiencies, such as reduced evaporation pond sizing required for expansion
- This test work program can be run in parallel with project development

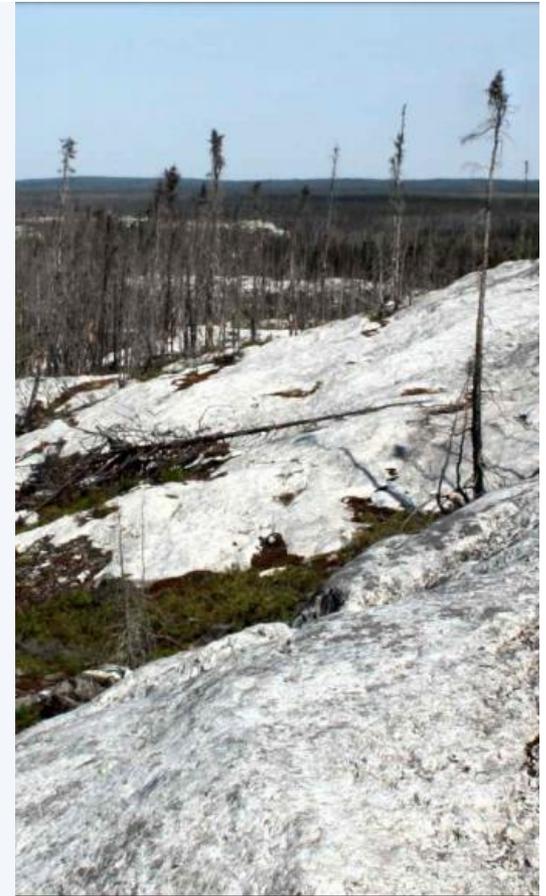
Provides additional **expansion capacity to capitalise on future lithium demand growth**, with the potential to supply the **North American and European markets**



- Lithium pegmatite project (100% owned) located in northwestern Québec, Canada,
- Mineral resource<sup>1,2</sup> of 40.3Mt @ 1.40% Li<sub>2</sub>O (100% indicated)

#### Feasibility Study

- Feasibility study advancing to plan
- Study work considers an integrated upstream and downstream operation
  - Feasibility work to draw synergies from Mt Cattlin and Jiangsu<sup>3</sup> for engineering and process flow sheet design
- Stage 2 upstream test work nearing completion
  - Results validating process design criteria for the 2.0Mtpa concentrator
- Stage 2 downstream test work underway
  - Expected to be sufficient to underpin feasibility



Source: Announcement titled, "James Bay Resource Update" dated 4 December 2017

1. Reported at a cut-off grade of 0.62% Li<sub>2</sub>O; 2. Defined by SRK Consulting (Canada) Inc.; 3. Previously owned 17ktpa lithium carbonate processing plant in China, sold to Tianqi in 2015

## Specialist team assembled and tasked with James Bay permitting given criticality to project development timeline

### Environmental and Social Impact Assessment (“ESIA”)

- ESIA submitted in October 2018, considering a 2.0Mtpa concentrator facility
- First round of clarifications from COMEX, the ESIA review committee, received in Q2 2019
  - Response to be delivered in Q3 2019
- Final recommendation expected with 12-18 months

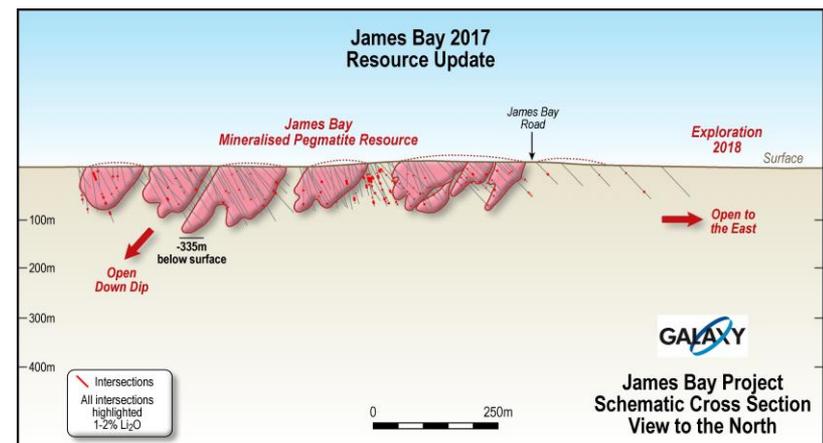
### Impact and Benefit Agreement (“IBA”)

- The IBA is a binding agreement with the Cree Nation of Eastmain that details the Company’s financial, social and environmental commitments to the community as part of project operations
  - Binding extension of the Pre-Development Agreement (“PDA”) signed in Q1 2019
  - Social license to operate
- Specialist team assembled in Q2 2019 to work with the Cree nation on completing this agreement

### Ariel View of Outcropping Pegmatite Dykes / Long Section



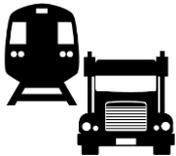
### Cross Section of James Bay Pegmatite Swarm



## Proximity to key existing infrastructure and a low cost of energy are key natural advantages of the James Bay Project



- ✓ **Power Supply: Substantial Hydro-Quebec hydro powered infrastructure surrounding the project**
  - Process plant and supporting infrastructures proposed to be powered Hydro-Québec’s 69kV overhead transmission system
  - Hydro-Quebec have commenced feasibility engineering on the design and construction of a spur line and connection infrastructure to tie the James Bay Project into their existing power infrastructure within the region



- ✓ **Transport: Project is located adjacent to the James Bay Road, which is a major paved highway**
  - Spodumene likely to be trucked to a nearby railhead and then transferred onto rail for delivery to the conversion facility



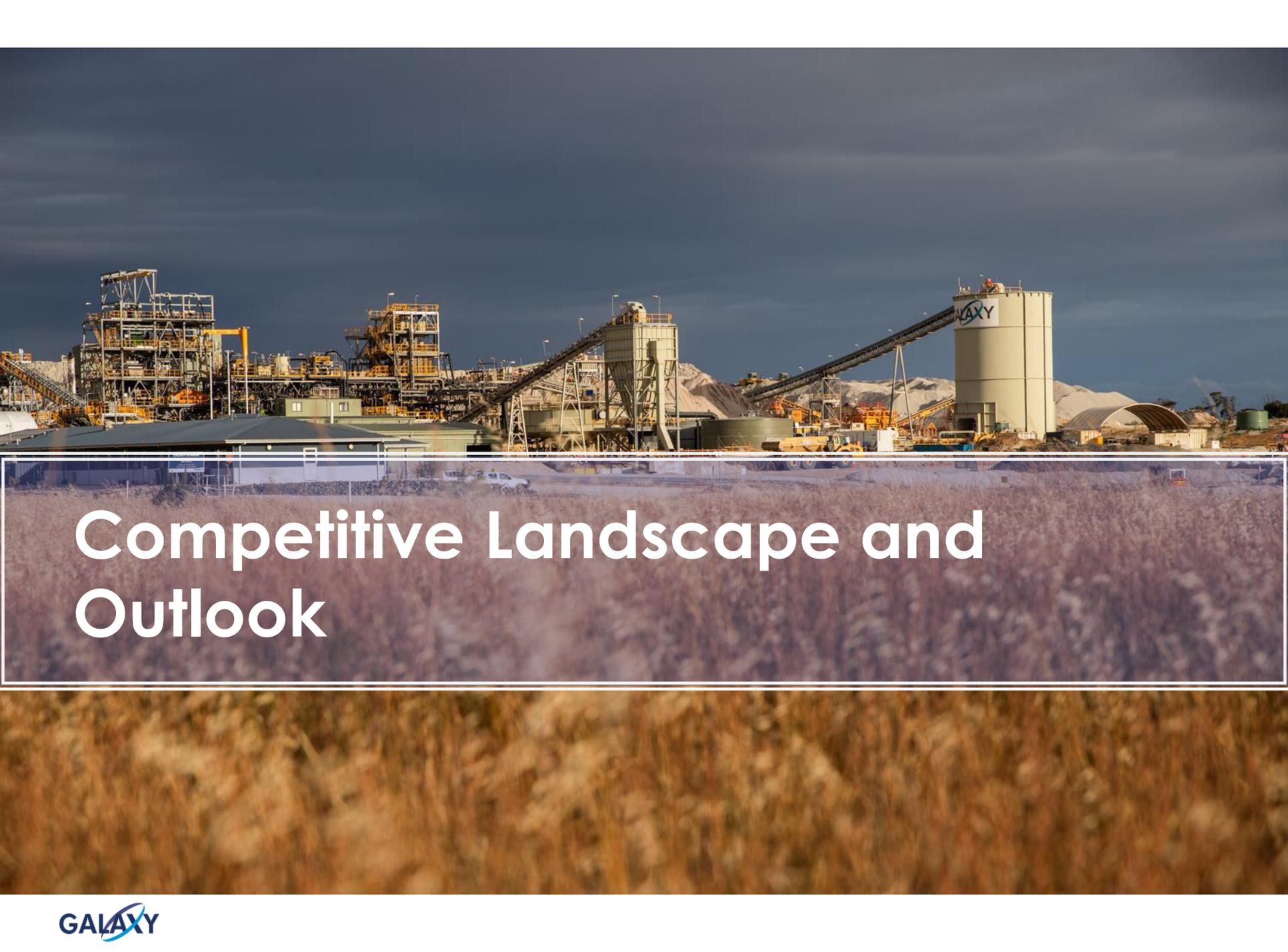
- ✓ **Fuel / Accommodation: “Relais Routier Km 381” Truck Stop located adjacent to Project site**
  - Equipped with gas station, general store, messing facilities and accommodation suitable to support current operations
  - Discussion is in progress with Société de développement de la Baie James regarding evaluation of expansion to 150 rooms



- ✓ **Airports: Two airports in the vicinity of the project**
  - The Eastmain Airport (ZEM) is the closest operating airport, c. 140km west of the project site
  - Opinaca Airport, located c. 35km east of the project which would require recommissioning



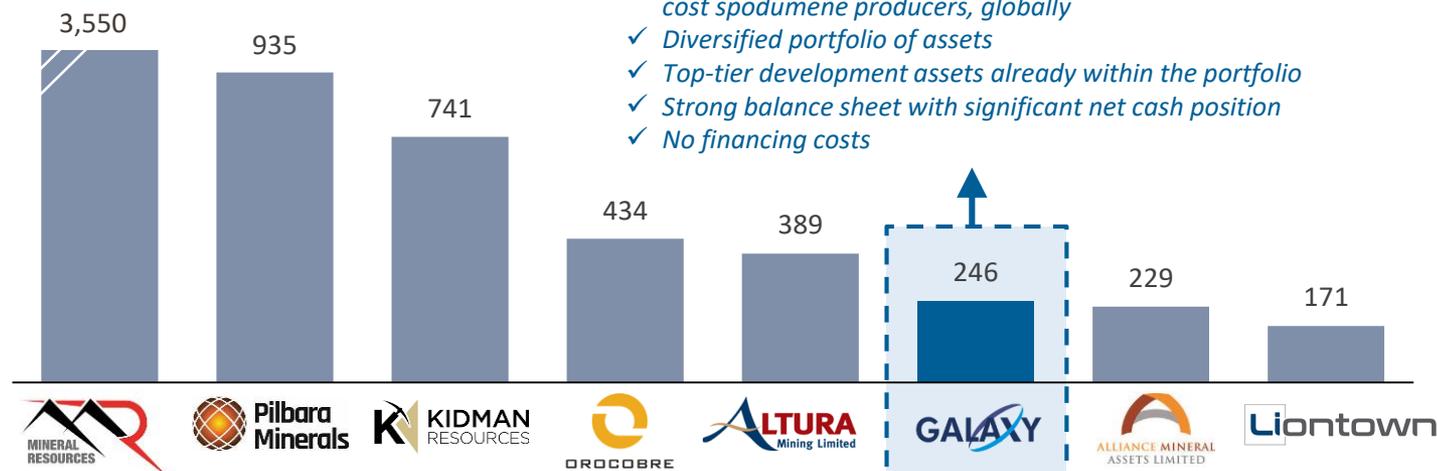
- ✓ **Water: Project located in the Eastmain River watershed with numerous sources of fresh water**
  - Bore wells have been used as a source of fresh water for Truck Stop Km 381 for decades
  - Storm water runoff water, which falls on areas impacted by mining activities to be collected and treated within a Tailing and Waste Rock Storage Facility (TWRSF) – potential primary raw water source for operations



# Competitive Landscape and Outlook

## Current equity valuation attributes little value Galaxy's unique, diversified portfolio of assets at all stage of the development spectrum

### Enterprise Value (A\$mm)



- ✓ Mt Cattlin is cash flow generative and one of the lowest cost spodumene producers, globally
- ✓ Diversified portfolio of assets
- ✓ Top-tier development assets already within the portfolio
- ✓ Strong balance sheet with significant net cash position
- ✓ No financing costs

### Multiple Projects

✓ ✗ ✗ ✗ ✗ ✓ ✗ ✗

### Hard Rock Asset

✓ ✓ ✓ ✗ ✓ ✓ ✓ ✓

### Brine Asset

✗ ✗ ✗ ✓ ✗ ✓ ✗ ✗

### Net Cash (A\$m)<sup>1</sup>

(653) (37) 26 276 (155) 290<sup>2</sup> (36)<sup>5</sup> 6

### Portfolio Resource (kt LCE)<sup>3,4</sup>

5,068 7,098 3,505 5,831 1,261 6,847 629 2,408

### Portfolio Reserve (kt LCE)<sup>3,4</sup>

2,198 3,345 1,747 - 1,067 1,536 282 -

#### Notes:

1. Cash and debt figures as per 31-Mar-19 for all companies, except Galaxy (30-Jun-19) and Mineral Resources (31-Dec-18); 2. Includes cash and strategic investments; 3. Li2O to LCE conversion factor of 2.473;

4. Adjusted for project ownership; 5. Debt assumption includes outstanding offtake prepayment

## Operational optimization at Mt Cattlin and a strong balance sheet underpin Galaxy's continued commitment to the development of Sal de Vida and James Bay

### MT CATTLIN

*Production & optimization*

- Targeting 45-55kt spodumene production in Q3 2019 (180-210kt for CY2019)
- Dedicated focus on productivity improvements and further rationalizing cash costs
- Exploring potential downstream opportunities with existing customers
- Exploration work to facilitate further extension and maximization of mine life

### SAL DE VIDA

*Field work, offtake & project financing*

- Optimisation and early development works, including demonstration pond construction
- Dual stream test work program seeking to optimize the process flow sheet
- Confirmation of process flowsheet and updated execution plan targeted for H2 2019
- Resourcing up for project development through key team appointments

### JAMES BAY

*Project development*

- Feasibility study work for integrated upstream and downstream operation
- Comprehensive test work program for the upstream operation nearing completion
- Phase 2 test work for downstream operation underway, with results expected in H2 2019
- Dedicated team formed to progress ESIA and IBA processes

### MACRO

*Robust lithium demand*

- China targeting 1.7 million NEVs in 2019 continuing strong growth trajectory
- Rest of the world will begin to see the launch of mainstream EV models from global OEMs
- Increasing number of energy storage system deployments now adopting the lithium ion battery platform as the technology of choice

# Competent & Qualified Persons' Statement



## Competent Person Statements

### **Mt Cattlin**

Any information in this report that relates to Mt Cattlin Mineral Resources and Ore Reserves is extracted from the report entitled "42% increase in Mt Cattlin resource to 16.7Mt" created on 23 January 2019 which is available to view on [www.gxy.com](http://www.gxy.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 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](http://www.gxy.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 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.

### **James Bay**

Any information in this report that relates to James Bay Mineral Resources is extracted from the ASX announcement, entitled "James Bay Resource Update" dated 4 December 2017 which is available to view on [www.gxy.com](http://www.gxy.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.