

# **CORPORATE PRESENTATION**

Deutsche Bank Lithium & Battery Supply Chain Conference Simon Hay - CEO

November 2020

ASX: GXY www.gxy.com

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

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**Clear Growth Strategy** 

Galaxy is steadily advancing its world class growth assets towards production



**Proven Operator** Mt Cattlin is a stable and mature operation producing high quality spodumene concentrate



Sal de Vida a Tier 1 asset

Sal de Vida has the potential to become one of the lowest cost lithium producers globally



#### James Bay strategically located

James Bay is well positioned to supply into the emerging European and North American EV growth surge



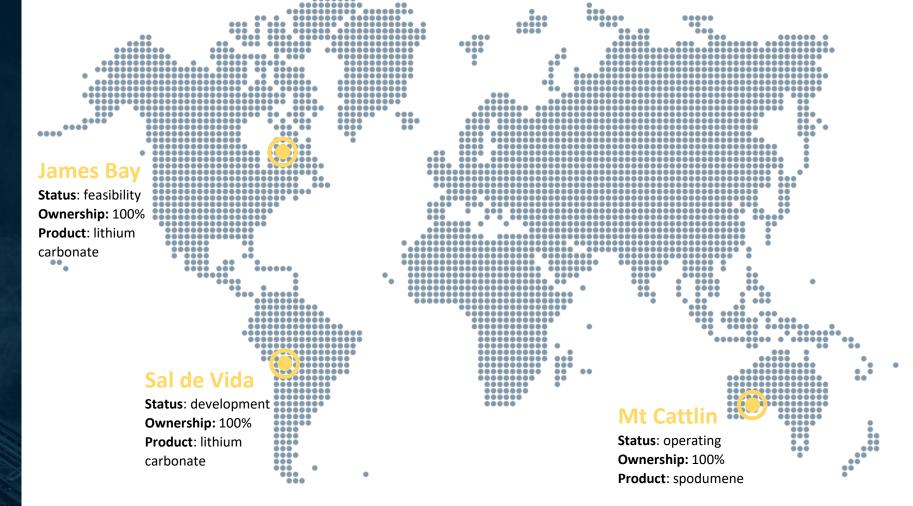
#### **Strong Balance Sheet**

Provides flexibility to invest in growth at the cycle trough



Successful board and management

**team** Proven track record in developing and operating minerals assets



# Creating a sustainable, large scale, global lithium chemicals business to power the future

# Corporate Snapshot

Galaxy is well positioned to accelerate its development plans for two world-class lithium assets

### Financial Information (30 Sep 20)

# US\$105 million

### **Cash and Financial assets**

Share Holders (30 Sep 20)	
Ausbil Investment Mgt	7.5%
Directors	2.8%
Тор 10	25%

Nil				
Debt				
Share Information (17 Nov 20)				
Share price	A\$	1.7		
No. Shares	Million	409		
Market Cap	A\$ million	708		

#### **Share Price Performance (YTD)**





#### All development stages



#### 1. Refer to Appendix for Resource & Reserves Table

# Promoting Sustainable development

Work programs underway to align Galaxy's sustainability practices with global standards



is available <u>here</u>





Galaxy prioritises the health & safety of its workforce and surrounding communities

- COVID-19 mitigation practices implemented company-wide. No Galaxy COVID cases so far
- Enhanced health & safety practices actioned across all sites in 2020
- 10.5 TRIFR for the rolling 12 months ended 30 September 2020
- Significant reduction in injuries evident in 2020

# Environmental Stewardship

#### Sal de Vida

- Targeting a local solar farm to provide a large proportion of the energy demand for Stage 2 and implement earlier if possible
- Independent projections of potential climate change impacts being incorporated into project design to ensure a resilient operation
- Completion of 11 Environmental Standards in Q1 2021 covering topics including final landform, soil, water, tailings and biodiversity management

- Social Responsibility
- Development of social standards for investment, engagement and grievance mechanisms to ensure neighbouring communities are informed and connected
- Programs in place to ensure all Sal de Vida contractors engage local suppliers and procure and recruit locally where possible
- Progressed a Human Rights Policy and a Modern Slavery framework to support current procurement activities



#### **People Focus**

- Continue to maximise local employment current workforce is 100% local in both Canada and Argentina
- Capacity building programs in Catamarca targeting critical construction, operating and maintenance activities
- Developing strategies to launch and nurture local commercial enterprises for the provision of support services to our projects and operations

# Lithium Market Overview

- Robust demand for lithium in the mid-long term
- Strong recovery in EV sales and chemicals industry utilisation rates in Sept-Oct
- Major automakers bringing 400+
  EV models to market in the next
  5 years
- Supply-side interruptions occurring due to COVID, market conditions or financials
  - Looming structural deficit as current pricing insufficient to incentivise new projects

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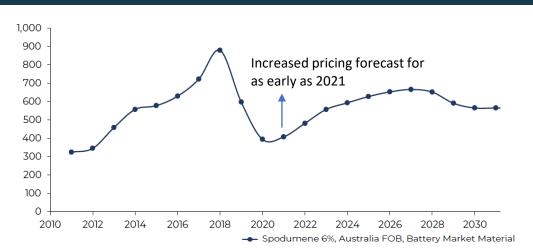


# Global EV adoption to drive a lithium demand surge

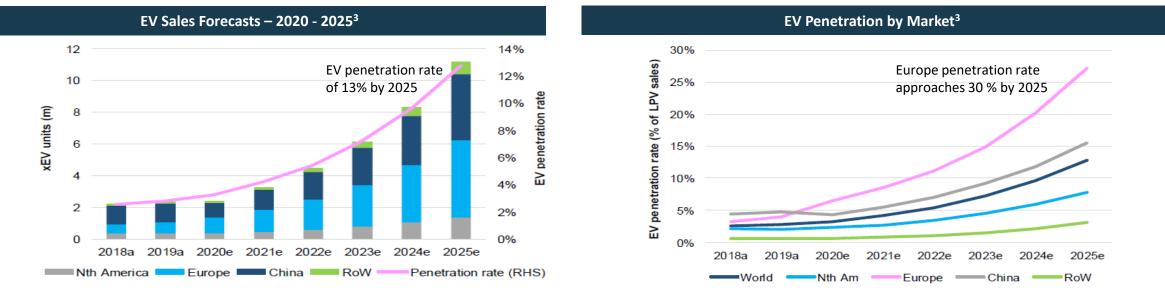


### Europe is set to become the largest EV market and surpass China

- Global EV sales forecast to grow as high as 30%<sup>1</sup> CAGR in the next decade
- Europe, China and other major countries are mandating lower CO<sub>2</sub> emissions
- Significant government stimulus and country-level subsidies implemented as a result
- More competitive EV pricing and performance from technological battery advancements
- Positive growth in EV sales continue in 2020
  - Europe reported 99% yoy growth in September 2020
  - China NEV sales increased by 113% yoy and 16% mom in Oct 2020<sup>2</sup>



#### Spodumene Price Forecast, Real 2020 (US\$/MT)<sup>2</sup>



1. Benchmark Minerals Intelligence - Lithium Forecast Report, Q3 2020 2. Morgan Stanley: China EV – The Sprint to the end of 2020 3. Canaccord Genuity: Lithium 2020 recharge

# Mt Cattlin

A mature and stable operation

- An established spodumene producer
- Product qualified in global
  lithium-ion battery value chain
- ✓ Offtake contracted for the life of mine



## Mt Cattlin - Proven hard-rock operation

### Mt Cattlin on track to deliver full year guidance

#### 2019

Mt Cattlin achieved record performance with 192kt (dmt) of spodumene produced at higher grade (5.9%  $Li_2O$ )

#### YTD 2020

- To adapt to market conditions, production settings moderated to 50-55% of nameplate capacity
- Front-end optical ore sorter circuit introduced to upgrade stockpiled, lower-grade ore and to control operating costs
- Successfully operating the DMS plant in campaign mode
- Achieved market guidance targets for all 3 quarters in 2020
- Set to achieve the forecast production metrics for 2020 (see table)
- Q4 to be best quarter for 2020 sales due to recovering demand and some supply-side interruptions

#### 2021

- Offtake agreement commences with new major customer
- Galaxy is examining the potential to ramp up Mt Cattlin to full rate
  - Dependent on product inventory reducing to normal levels
  - Price recovery also required

2020 PRODUCTION METRICS							
Mining	Units	YTD 2020	2020 Forecast Production Metrics				
Total material mined	bcm	1,113,934	1.6m-1.8m				
Ore mined	dmt	240,151	-				
Processing							
Ore processed	wmt	770,690	900,000 -1.0m				
Grade of ore processed	% Li2O	1.06	1.0 - 1.2				
Recovery	%	56	58 – 62				
Concentrate produced	dmt	75,315	90,000-105,000				
Grade of concentrate produced	% Li <sub>2</sub> O	5.95	6.0				
Sales			-				
Concentrate shipped	dmt	75,294	-				
Grade of concentrate shipped	% Li <sub>2</sub> 0	5.81	-				
Production Costs			-				
Cash cost per tonne produced	US\$/t FOB	444	-				

<sup>1.</sup> Includes Q3 shipment of lower grade material from inventory accumulated in prior periods.





# Sal de Vida

A tier 1 asset

V

- ✓ Superior brine chemistry
- ✓ Simple process flowsheet
- ✓ Long project life of 40+ years
- ✓ Mining friendly location
  - Majority of permits in place
- ✓ De-risked development plan
- ✓ **FEED & early site work underway**



# Sal de Vida – De-risked development approach



### Staged, scalable approach to smooth capital expenditure and accelerate earnings realisation

Galaxy has progressively de-risked the project through the following key initiatives:

- Smaller scale initially to prove the flowsheet and product quality before later expansion(s)
- Simplified the flowsheet by removing potash and bi-carbonation steps reducing complexity and capital expenditure
- Adopting proven technology which lowers ramp-up risk

### Stage One

#### Production of technical grade Li<sub>2</sub>CO<sub>3</sub>

- Initial development is a brine evaporation and processing operation at Salar del Hombre Muerto producing technical grade lithium carbonate
- Flowsheet is locked, key engineering contractors appointed
  - Technical grade product to be sold to purification industry for upgrading to battery grade
- Offtake discussions underway

### **Stage Two**

#### **Expansion at the Salar**

#### Duplication of Stage 1 after:

- Demonstrating successful ramp up and achievement of nameplate production
- Product on specification and accepted into the market
- Stage 1 project financials meet target and cashflow generation
- Market demand in place

### **Stage Three**

#### Purification into battery grade

Current plans are for Galaxy to develop its own purification facility at a location yet to be decided

Attractive margins for the conversion of technical grade to battery grade

However test work may render this step unnecessary

- If Stage 1 or 2 can produce battery grade, no purification facility required
- Achieving a very high-grade technical specification may enable sales direct to cathode makers for specific battery chemistries

Priority is to finalise Stage 1 & 2 product quality before examining Stage 3

# Technical breakthrough achieved



### Technical grade lithium carbonate produced at site pilot plant and in test facility

Test work results and piloting onsite confirm that Sal de Vida can achieve technical grade product quality:

- Site pilot plant commissioned and two trial runs successfully completed
- Plant running at above forecast availability and utilisation
- Final product meets technical grade specification, with quality well in excess of primary grade (the previous assumption)
- Product samples assay 99.5-99.7% Li<sub>2</sub>CO<sub>3</sub> purity combined with low levels of impurities
- Lithium recoveries validate process models & the simplified process flowsheet
- Test work conducted in an Australian metallurgical testing and piloting facility produced very similar results
- Technical grade adopted as Stage 1 product significantly improving project financials and expanding the addressable market

#### Next steps:

- Incorporate technical grade product quality into Stage 1 designs minimal impact to flowsheet and equipment requirements
- Next piloting runs to focus on a continuous operating regime and to produce bulk samples for customer testing
- Test work program to be expanded in 2021 to examine the potential for producing battery grade final product
  - Targeting minimal capital equipment, via a bolt-on process and no disruption to Stage 1 design programs



# Design phase & early development underway

- Design works advancing with minimal delays from COVID-19 to date
- Drilling of production wells to commence in current quarter

### Front-end Engineering Design

- Wellfield, brine distribution and ponds FEED package is 65% complete
  - Wellfield & pond locations selected
  - Ponds to be built in strings to fit construction within seasonal windows
  - Process plant and infrastructure FEED package awarded to a tier 1 engineering company
  - 7-month works program underway
  - Completion in Q1 2021

### Hydrogeology

- 30 day pump test completed
  - Achieved continuous flow at expected rate
  - Results validate previous studies & modelling of aquifer performance including recharge
- Drilling of operational wells to commence this quarter (COVID-19 dependent)
- Drilling results, hydrogeological modelling and production criteria to be factored into any restatement of Resources and Reserves in 2021



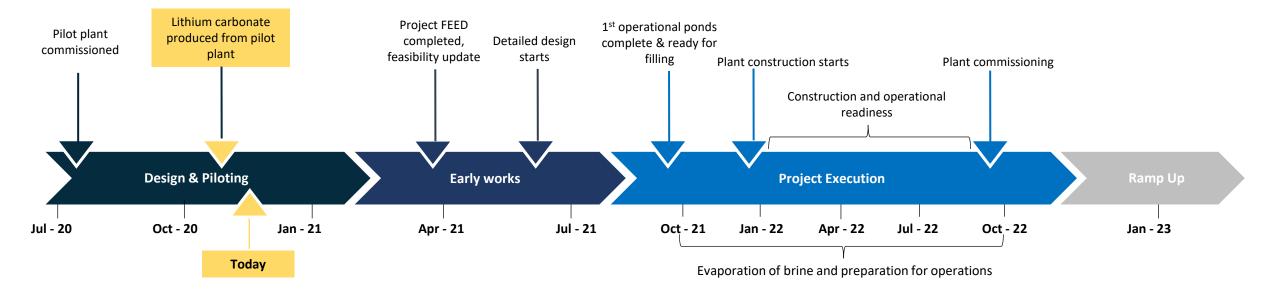
### **Other work Programs**

- Energy strategy:
  - Likely to adopt LPG initially and both LPG and / or photovoltaic in Stage 2
  - Assessment of trial photovoltaic arrangement prior to initial production is being planned
  - Natural gas remains an option
- Logistics and transport solution being finalised for reagents, supplies and outgoing product
- Quarry studies completed
- Airborne detailed topography at final stage
- Environmental baseline completed and updated for permitting requirements



# Sal de Vida – Execution Plan





### FEED and piloting phase

- FEED on wellfield & ponds well advanced
- FEED on plant and infrastructure underway
- Piloting to prove technology and generate samples for customer testing
- Drilling of production well field commences
- Phase concludes with updated cost estimate and project financials

#### Early Works Phase

- Final definition of this phase in Q1 2021
- Construction of first pond string
- Procure long lead items
- Detailed design and early site works commence
- Binding offtake agreements with customers

#### **Project Execution**

- Fill first string of ponds with brine in late 2021
- Plant construction & commissioning
- Operational readiness
- First production and ramp up

## James Bay

A strategically located deposit

- Large, high-grade, hard-rock spodumene deposit located in Quebec, Canada
- ✓ Similar flowsheet to Mt Cattlin
- Large crystal size so DMS-centric processing
- Proximity to key infrastructure
- ✓ Strong stakeholder relations
- Ideal location to supply into emerging EV growth regions in Europe & North America

Mineral Resource<sup>1</sup>: 40.3Mt @ 1.40% Li<sub>2</sub>O

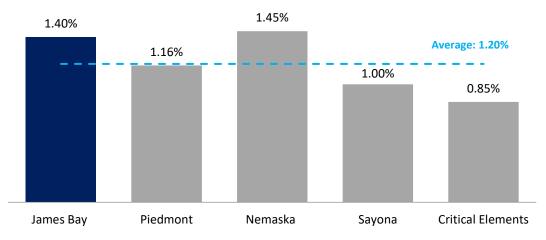
1. Refer to Appendix for Resource & Reserves Table



## James Bay is a high quality Canadian hard-rock lithium project



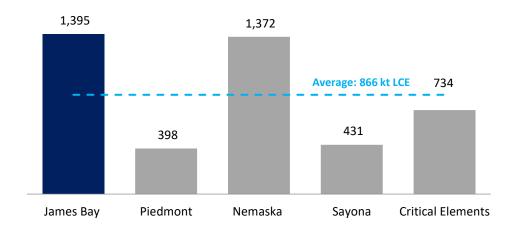
Benchmarks favorably to its local peers on key metrics



Resource Grade (% Li<sub>2</sub>O)<sup>1</sup>

• James Bay is a relatively high grade deposit and large resource

### Lithium resource (kt LCE)<sup>1</sup>



- James Bay cut-off grade of 0.62%  $Li_2O$ , Nemaska cut-off grade of 0.3%  $Li_2O$ 

# James Bay - Definition work progressing steadily



### YTD 2020

- Value engineering work resulted in:
  - A significant reduction in the estimated capital and operating costs of the project
  - Optimised material management and design layout
  - Minor changes to flowsheet
- Technical assessments underway confirming critical assumptions across geology, mining, processing and the execution strategy
- Results from the value engineering and site investigation are being integrated into the Environmental and Social Impact Assessment
- Positive engagement with the Cree Nation and respective stakeholders also continues

### 2021

- Progress to be reported in a Preliminary Economic Assessment in Q1. Targeting opportunities to:
  - Optimise the resource through mining and exploration initiatives
  - Further reduce capital intensity and unit mining and processing costs
  - Smaller footprint of disturbance area
- Expecting to progress the project into next phase of engineering
- In parallel, examine downstream offtake opportunities in North America and Europe

### James Bay - Close to key infrastructure and low-cost energy source



- ✓ Power Supply: Substantial Hydro-Quebec hydro powered infrastructure surrounding the project
- Process plant and supporting infrastructure proposed to be powered by Hydro-Québec's 69kV overhead transmission system
- Hydro-Quebec have completed a pre-project study for the design and construction of a 10-kilometre 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 highway, which allows oversized haul trucking
- Spodumene will be trucked to a railhead and then transferred onto rail for delivery to the conversion facility
- Final arrangements subject to location of customers and therefore offtake agreements



- ✓ 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 Project activities.



- ✓ Airport: Close proximity to project site
- The Eastmain Airport (ZEM) is the closest operating airport, c. 130km west of the project site and is accessible by road
- Discussions continue with Government and stakeholders regarding upgrades to the Eastmain airport

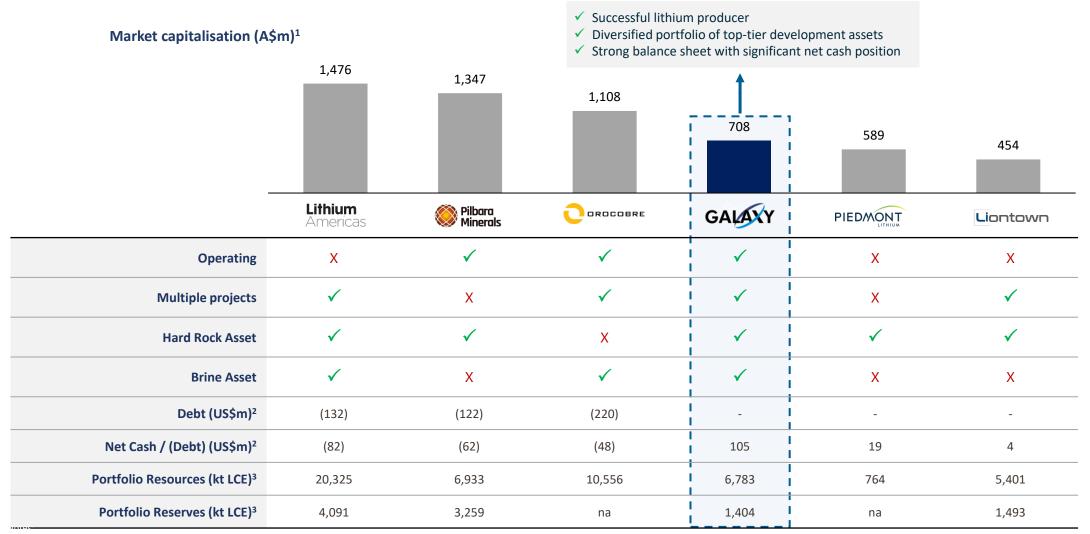


- Grand Alliance Program: Quebec Government and the Cree Nation signed an agreement for collaborative, long-term, economic development
- The Grand Alliance could benefit the project and its surrounding communities in terms of off-site infrastructure including power, rail and logistics.

# Galaxy, an attractive investment opportunity



Current equity valuation attributes little value to Galaxy's unique position



1. Market capitalisation as at close of business 17 November 2020; 2. Cash and debt figures as per 30-Jun-20 for all companies except Galaxy (30-Sep-20); 3. Shown on an attributable basis (Resource inclusive of Reserve)



# Galaxy's Plans for 2021

### **Optimise Operations**

Build & Execute

# Mt Cattlin

 Potential ramp up to full rate to meet market recovery – price dependent Sal de Vida

- Completion of FEED programs
- Delivery of project financials
- Complete piloting and test-work
- Binding agreements with offtake partners
- Commence early works program



**Accelerate Growth** 

- Preliminary Economic Assessment
- Continued pursuit of other opportunities that support growth objective

# Well positioned to accelerate the development plans of two world-class lithium assets



#### Table 1: Sal de Vida Mineral Resource

Category	Brine Volume (m³)	Avg. Li (mg/L)	In-situ Li (Tonnes)	Li <sub>2</sub> CO <sub>3</sub> Equivalent (Tonnes)	Avg. K (mg/L)	In-situ K (Tonnes)	KCI Equivalent (Tonnes)
Measured	490,000,000	759	369,000	1,964,000	8,126	3,952,000	7,536,000
Indicated	680,000,000	717	485,000	2,583,000	8,051	5,446,000	10,385,000
Inferred	100,000,000	706	71,000	376,000	6,747	676,000	1,289,000
Total	1,300,000,000	732	925,000	4,923,000	7,976	10,073,000	19,210,000

Note: Assumes 500mg/L Li cut off

#### Table 2: Sal de Vida Ore Reserve

Category	Time Period	Li Total Mass (Tonnes)	Equivalent Li <sub>2</sub> CO <sub>3</sub> (Tonnes)	K Total Mass (Tonnes)	Equivalent KCI (Tonnes)
Proven	1-6	34,000	181,000	332,000	633,000
Probable	7 - 40	180,000	958,000	1,869,000	3,564,000
Total	40 years total	214,000	1,139,000	2,201,000	4,197,000

Note: Assumes 500 mg/L Li cut off. Total tonnages for the economic Ore Reserve values above account for anticipated leakage and process losses of lithium and potassium. The results above are Proven and Probable Reserves from the Southwest and East well-fields when these percent estimated processing losses are factored in, assuming a continuous average brine extraction rate of 30,000 m<sup>3</sup>/d. The conversion factor for Lithium to Lithium Carbonate is: x 5.3228. The conversion factor for Potassium Chloride is: x 1.907. Minor discrepancies may occur due to rounding to appropriate significant figures.



#### Table 1: Mt Cattlin Mineral Resource as at 31 December 2019

					Contained Metal ('000) t	Contained Metal lbs
Category		Tonnage Mt	Grade % Li <sub>2</sub> O	Grade ppm Ta <sub>2</sub> O <sub>5</sub>	Li <sub>2</sub> 0	Ta <sub>2</sub> O <sub>5</sub>
Measured	In-situ	1.0	1.36	210	13.6	463,000
Indicated	In-situ	6.2	1.44	167	90.0	2,296,000
	Stockpiles	3.0	0.93	121	27.9	800,000
Inferred	In-situ	4.4	1.30	156	57.2	1,484,000
Total		14.6	1.29	157	188.0	5,043,000

Notes to Table 1: Depleted Mineral Resource – December 2019. Fresh reported at cut-off grade of 0.4% Li<sub>2</sub>O. Transitional reported at cut-off grade of 0.6% Li<sub>2</sub>O. The preceding statements of Mineral Resources conforms to the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore reserves (JORC Code) 2012 edition. All tonnages reported are dry metric tonnes. Excludes mineralisation classified as oxide. Minor discrepancies may occur due to rounding to appropriate significant figures.

#### Table 2: Mt Cattlin Ore Reserve as at 31 December 2019

					Contained Metal ('000) t	Contained Metal lbs
Category		Tonnage Mt	Grade % Li <sub>2</sub> O	Grade ppm Ta <sub>2</sub> O <sub>5</sub>	Li <sub>2</sub> 0	Ta <sub>2</sub> O <sub>5</sub>
Proven	In-situ	6.10	1.28	137	78	1,842,000
Probable	In-situ	1.90	1.20	175	22.8	733,000
	Stockpiles	2.70	0.82	110	22.1	655,000
Total		10.70	1.15	137	123.0	3,230,000

Notes to Table 2: Reported at cut-off grade of 0.4 % Li<sub>2</sub>O. The preceding statements of Ore Reserves conforms to the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code) 2012 edition. All tonnages reported are dry metric tonnes. Excludes oxide. Transitional mineralisation included at cut-off grade 0.6 % Li<sub>2</sub>O. Reported with 0% dilution and 92.5% mining recovery. Revenue factor US\$650/tonne applied. Minor discrepancies may occur due to rounding to appropriate significant figures.

Source: Galaxy ASX Announcement titled "2019 Mt Cattlin Resource & Reserve Update", 11 March 2020. See <u>www.asx.com.au</u>



#### Table 1: James Bay Mineral Resource

Category	Tonnage Mt	Grade % Li <sub>2</sub> O	Contained Metal ('000) t Li <sub>2</sub> O
Indicated	40.30	1.40	564.2
Total	40.30	1.40	564.2

Notes to Table 1: Reported at a cut-off grade of 0.62 percent  $Li_2O$  inside conceptual pit shells optimised using spodumene concentrate price of US\$905 per tonne containing 6.0%  $Li_2O$ , metallurgical and process recovery of 70%, overall mining and processing costs of US\$55 per tonne milled and overall pit slope of 50 degrees. All figures rounded to reflect the relative accuracy of the estimates.

#### **Competent Persons Statement**

Any information in this Presentation that relates to Mt Cattlin Mineral Resources and Ore Reserves is extracted from the report entitled "2019 Resource and Reserve Update" created on 11 March 2020 which is 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 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.

Any information in this Presentation 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.

Any information in this Presentation 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 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 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.