



Australia
23 January 2019

42% INCREASE IN MT CATTLIN RESOURCE TO 16.7Mt

Highlights

- A 42% increase in total Measured, Indicated & Inferred Resource tonnes to 16.7Mt, at 1.28% Li₂O grade containing 214,400t of lithium (Li₂O).
- A 16% increase in total Measured & Indicated resource tonnes to 12.1Mt, at 1.27% Li₂O (lithia) grade.
- A 40% increase in proven & probable reserve tonnes to 10.7Mt at 1.15% Li₂O grade and 137 ppm Ta₂O₅ (tantalum oxide).
- A 53% increase in contained lithia metal tonnes.
- Further resource definition drilling to target "inferred" resource has now commenced following the success of the latest drilling campaign.
- All approvals in place from the Department of Mines to mine east of and on Floater Road and State approval received to increase the process plant annual throughput to 2.0Mtpa.

Galaxy Resources Limited ("Galaxy" or the "Company") (ASX: GXY) is pleased to announce a Mineral Resource and Ore Reserve update following drilling activities undertaken during the second half of 2018 at the Mt Cattlin Project in Ravensthorpe, Western Australia. There has been a 42% increase in classified Resources (Table 1) compared with the equivalent position as at June 2018 (Table 2).

Ore Reserves continued to be modeled using a US\$650 per tonne revenue factor and have increased 40% overall to **10.7Mt (Proven and Probable) @ 1.15% Li₂O and 137 ppm (parts per million) Ta₂O₅** (Table3). Ore Reserves were last updated in December 2017.

These increases take into account the additional drilling completed in the second half of the year (as announced 28 November 2018) and also reflect an increase in measured resources (with grade control drilling), as well as an increase in inferred resources (given deeper extensional and development drilling) completed during that period. A 17% dilution at zero grade and 93% mining recovery have been applied to the Ore Reserve.

During the second half of 2018, Galaxy received all necessary approvals from the West Australian Department of Mines, Industry Regulation and Safety (DMIRS) to transition mining away from the Dowling and 2SW pits, which had been the focus of mining since the recommencement of production at Mt Cattlin, to begin mining east of and on Floater Road. State approval was also received to increase the process plant throughput to 2.0Mtpa (million tonnes per annum). The yield optimization program, which included the installation of an ultrafines DMS (dense media separation) circuit, ore optical sorting circuits, and a WHIMS (Wet High Intensity Magnetic Separation) circuit has now reached practical completion.

RESOURCE

The Mineral Resource estimate was completed by independent consultant Mining Plus. Galaxy was responsible for the logging, sampling, analytical and QA/QC protocols. Mining Plus was responsible for the interpretation and modeling of the geology and lithia (Li₂O), as well as related mineralisation, geostatistical analysis, block modeling, resource and ore reserve classification.

The spodumene mineralisation at Mt Cattlin is entirely hosted within numerous flat-lying pegmatite intrusions, with these pegmatites cross-cut and offset by many late stage faults. Those faults have been used to differentiate the pegmatites into six different areas for interpretation and modeling, with the geological modeling completed in Surpac 3D modeling software. In order to minimize the mafic host rock dilution within the resource and to improve ore processing performance, also as a result of RC drilling being the predominant drilling used to define the deposit, Mining Plus has modeled the pegmatite boundaries using a combination of logged lithology, Li₂O%, Fe₂O₃% and MgO% grade fields. Mining Plus has also modeled internal rafts of mafic host rock intersected in drill holes. The same process of using a combination of assays and logged lithology has been used to



define the boundaries of the internal waste domains. The Li₂O estimation has been undertaken using ordinary kriging into both the mineralised and unmineralised pegmatite domains, with some sub-divided further into oxidised and transitional/fresh domains.

Galaxy collected 1,076 bulk density measurements throughout the mineralised and un-mineralised pegmatite within the waste lithologies at Mt Cattlin. Average values were calculated from the complete dataset and coded to the block model based on the oxidation state and nature of the mineralisation.

The drill hole database for the Mt Cattlin deposit comprised of 3,956 drill holes for a total of 177,268.6 metres of combined reverse circulation (RC), diamond drilling (DD), percussion and grade control drill holes.

After consultation with Galaxy personnel, Mining Plus adopted a 0.3% Li₂O grade cut-off as the basis to differentiate these mineralised and unmineralised portions of the pegmatites. The modeling of these zones has been completed utilising Leapfrog Geo v4.2 indicator modeling process with a 0.3% Li₂O cut-off and a 0.35 iso value used within the constraints of the pegmatites. The Mineral Resource has been reported inside a pit shell at a cut-off of 0.6% Li₂O in the transitional material and at a cut-off of 0.4% Li₂O in the fresh material. The Mineral Resource database has been flagged with the lithological, mineralisation and weathering codes to create unique estimation domains and then composited into one-meter lengths which have been used to estimate the Mineral Resource. The Li₂O, Fe₂O₃ and Ta₂O₅ composites have been analysed in Snowden Supervisor v8.9 to ensure that the internal grade distribution is representative of single populations, with no need for additional sub-domaining and for the existence of extreme values, which if present, have had top-cuts applied. Variographic analyses for all three elements have been undertaken on the top-cut composited data on either individual estimation domains or combined estimation domains of similar grades and orientations. The orientation of the variograms have been checked to ensure that they are geologically consistent. A block model has been created with a parent block size of 20 m (X) by 20 m (Y) by 5 m (Z) and sub-blocks down to 2.5 m (X) by 2.5 m (Y) by 0.6325 m (Z), with the sub-blocks estimated at the scale of the parent block. The block size is considered appropriate for the drill hole spacing throughout most of the deposit.

The Li₂O estimation has been undertaken using ordinary kriging into both the mineralised and unmineralised pegmatite domains, with some sub-divided further into oxidised and transitional/fresh domains. The grade estimation was completed in three passes, although some of the more sparsely drilled domains required a fourth interpolation pass to populate grade. The search ellipse ranges selected have been based on the modeled continuity within each domain or grouped domains.

The classified and depleted for mining, insitu resource and on-surface stockpiles, as at closing on 31 December 2018 are:

Table 1 Depleted JORC 2012 Mineral Resource as at 31 December 2018

Total classified Mineral Resource as at 31 December 2018

	Tonnes	Li ₂ O %	Ta ₂ O ₅ ppm	Li ₂ O Tonnes
Measured	2,200,000	1.32	208	29,800
Indicated	9,900,000	1.26	150	124,900
Inferred	4,600,000	1.30	156	59,700
Total	16,700,000	1.28	159	214,400

Surface Stockpiles as at 31 December 2018

	Tonnes	Li ₂ O %	Ta ₂ O ₅ ppm	Fe ₂ O ₃ %	Li ₂ O Tonnes
Indicated	2,700,000	0.82	110	NA	22,000
Total	2,700,000	0.82	110	-	22,000

Minor discrepancies may occur due to rounding to appropriate significant figures



Classified In-situ Mineral Resource, Depleted for Mining at 31 December 2018

Class and Type	Tonnes	Li ₂ O %	Ta ₂ O ₅ ppm	Fe ₂ O ₃ %	Li ₂ O tonnes
Measured (transitional)	300,000	1.07	182	1.23	3,200
Measured (fresh)	1,900,000	1.40	211	1.16	26,600
Indicated (transitional)	100,000	1.43	171	1.31	1,400
Indicated (fresh)	7,100,000	1.43	165	1.48	101,500
Inferred (transitional)	100,000	1.19	264	1.55	1,200
Inferred (fresh)	4,500,000	1.30	154	1.67	58,500
Total	14,000,000	1.37	169	1.49	192,400

Minor discrepancies may occur due to rounding to appropriate significant figures

Notes: Reported at cut-off grade of 0.4% Li₂O. 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. Transitional mineralisation included at cut-off grade 0.6% Li₂O. Minor discrepancies may occur due to rounding.

The following parameters have been adopted in the Whittle optimisation software to determine a pit shell that demonstrates reasonable prospects of eventual economic extraction for the resource:

- Mining Recovery – 93%
- Mining Dilution – 17%
- Li₂O% Price/tonne 6% concentrate – US\$900 (FX USD:AUD 0.75)
- Li₂O% recovery – 75%
- Ta₂O₅ppm Price/pound concentrate – US\$40
- Ta₂O₅ppm recovery – 25%
- Transport and Port Cost/tonne – AU\$49.68
- WA State Royalty – 5%
- Processing Cost/tonne – AU\$33.16
- Mining Cost/tonne – AU\$4.29

The previous Mineral Resource Estimate released was:

Table 2: Depleted JORC 2012 Mineral Resource as at June 2018

Total Classified Mineral Resource June 2018

	Tonnes	Li ₂ O %	Ta ₂ O ₅ ppm	Li ₂ O Tonnes
Measured	1,500,000	1.22	226	18,200
Indicated	8,900,000	1.23	151	109,200
Inferred	1,400,000	1.44	264	20,200
Total	11,800,000	1.25	174	147,600



Mt Cattlin Surface Stockpiles June 2018

	Tonnes	Li ₂ O %	Fe ₂ O ₃ %	Ta ₂ O ₅ ppm	Li ₂ O Tonnes
Measured	200,000	0.78	-	131	1,600
Indicated	1,900,000	0.81	-	54	15,400
Inferred	-	-	-	-	-
Total	2,100,000	0.81	-	61	17,000

Mt Cattlin Classified Mineral Resource Depleted for Mining as at June 2018

	Tonnes	Li ₂ O %	Fe ₂ O ₃ %	Ta ₂ O ₅ ppm	Li ₂ O Tonnes
Measured	1,300,000	1.28	1.32	241	16,600
Indicated	7,000,000	1.34	1.4	177	93,800
Inferred	1,400,000	1.44	1.27	264	20,200
Total	9,700,000	1.35	1.37	198	130,600

Notes: Reported at cut-off grade of 0.4% Li₂O. 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. Minor discrepancies may occur due to rounding.

Please refer to Section 3 of the JORC table provided below for additional detail on the current resource estimate.

ORE RESERVE

Ore Reserves include both sub-surface mineralised lithia bearing ore and surface stockpiles. Ore Reserves are quoted at US\$650 per tonne for 6% Li₂O concentrate and 17% mining dilution and 93% mining recovery. Changes in ore reserve tonnes are as a result of an increase in Proven tonnes and of surface stocks. Please refer to Section 4 of the JORC table provided below for additional detail on the depleted ore reserve update.

Table 3: Depleted JORC 2012 Ore Reserve – 31 December 2018

Classification	Source	Dry Metric Tonnes	Li ₂ O (%)	Ta ₂ O ₅ (ppm)	Li ₂ O metal (tonnes)
Proven	Pit	6,100,000	1.28	137	78,080
	Total	6,100,000	1.28	137	78,080
Probable	Stocks	2,700,000	0.82	110	22,140
	Pit	1,900,000	1.20	175	22,800
	Total	4,700,000	0.98	137	46,060
Combined	TOTAL	10,700,000	1.15	137	123,050

Notes: Reported at cut-off grade of 0.4 % Li₂O. 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% Li₂O. Reported with 17% dilution and 93% mining recovery. Revenue factor of US\$650/tonne applied. Minor discrepancies may occur due to rounding to appropriate significant figures.

Table 4: Depleted JORC 2012 Ore Reserve – 31 December 2017

Classification	Source	Dry Metric Tonnes	Li ₂ O (%)	Ta ₂ O ₅ (ppm)	Li ₂ O metal (tonnes)
Proven	Total	1,950,000	1.03	158	20,400
Probable	Total	5,690,000	1.06	89	60,100
Combined	TOTAL	7,640,000	1.05	107	80,500

Notes: Reported at cut-off grade of 0.4% Li₂O. 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. Ore Reserves are reported with 17% dilution and 93% mining recovery. Minor discrepancies may occur due to rounding.

The following parameters have been adopted in the optimisation runs in the Whittle optimisation software to determine pit shells for Life of Mine design (Figure 1, below) and ex-pit material scheduling:

- Mining Recovery – 93%
- Mining Dilution – 17%
- Li₂O% Price/tonne 6% concentrate – US\$650, Fx USD:AUD 0.75
- Li₂O% recovery – 75%
- Ta₂O₅ppm Price/pound concentrate – US\$40
- Ta₂O₅ppm recovery – 25%
- Transport and Port Cost/tonne – AU\$49.68
- WA State Royalty – 5%
- Processing Cost/tonne – AU\$33.16
- Mining Cost/BCM – AU\$11.59

Following this update, Galaxy commenced a resource infill drilling program on 8 January 2019, comprising 10,000m RC drilling with 20% of the metres completed as diamond core tails. In addition, a new near-mine ground geophysical program using ground penetrating radar was also initiated and to date, over 50km of traverses on previously untested parts of the mining lease and surrounding exploration leases have been completed.

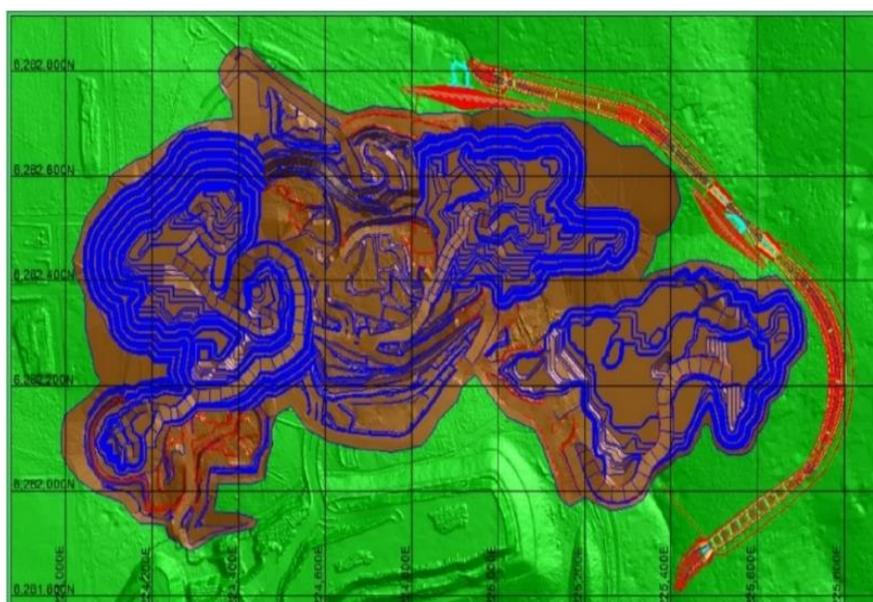


Figure 1. Life of Mine planning, with limit to mining east of Floater road. Current locus of mining is to the east of and on Floater Road, on the right-hand side.

ENDS



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About Galaxy (ASX: GXY)

Galaxy Resources Limited ("**Galaxy**") is an international S&P / ASX 200 Index 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 and the James Bay lithium pegmatite project in Quebec, Canada.

Galaxy is advancing plans to develop the Sal de Vida lithium and potash brine project in Argentina situated in the lithium triangle (where Chile, Argentina and Bolivia meet), which is currently the source of 60% of global lithium production. Sal de Vida has excellent potential as a low-cost brine-based lithium carbonate production facility.

Lithium compounds are used in the manufacture of ceramics, glass, and consumer electronics 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. Galaxy is bullish about the global lithium demand outlook and is aiming to become a major producer of lithium products.

Competent Persons Statement

Any information in this report that relates to the reporting of the Mt Cattlin exploration results is extracted from the report entitled "Re-Release Mt Cattlin Update – Exploration Drilling Hits Thick High-Grade Intersections Outside Known Resource" created on 11 December 2018, which is available to view on www.galaxylithium.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, in the case of estimates of Mineral Resources and Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. 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 announcement that relates to Mineral Resources and Ore Reserves is based on information compiled by David Billington, B. Eng. (Mining), a Competent Person who is a Member of the Australasian Institute of Mining and Metallurgy. David Billington is a full-time employee of Mining Plus Pty Ltd. David Billington has sufficient experience that is relevant to the style of mineralization 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'. David Billington consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.

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 because 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.

Not for Release in the US

This announcement has been prepared for publication in Australia and may not be released in the United States of America. 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.

Sections 1 and 2 do not apply to this announcement

JORC 2012 Section 3 Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
Database Integrity	<ul style="list-style-type: none"> Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. Data validation procedures used. 	<p>Pre-2017</p> <p>At the time of the 2012 Mineral Resource estimates, Galaxy had appointed a data administrator to manage and host the Mt Catlin database in a GBIS SQL database.</p> <p>Field data was entered as project-specific password-protected spread sheets with in-built auto-validation settings. The spread sheets were emailed to head office on a weekly basis and then passed on to the data administrator where all data was subject to validation procedures and checks before being imported into the central database. Invalid data has not been imported into the central data-base but has been quarantined until corrected. Data exports have been routinely sent from head office to site for visual validation using MapInfo and Surpac.</p> <p>2017 Onwards</p> <p>Database and data QAQC processes was re-established after review in 2016. The Dashed database is managed/maintained by Maxwell Geoservices, and is validated externally to GXY and aggregates meta-data from site and the sample laboratory. The assay laboratory reports sample validation and checks on arrival. Database managers' report both QAQC and validation checks monthly and upon request.</p> <p>All logging is undertaken on a Toughbook using the dedicated LogChief logging system matched to the Dashed database.</p> <p>Visual validation of drilling data versus the wireframes in Surpac and Leapfrog software is undertaken routinely by Mine Geology and Exploration personnel.</p>
Site Visits	<ul style="list-style-type: none"> Comment on any site visits undertaken by the Competent Person and the outcome of those visits. If no site visits have been undertaken indicate why this 	Both reporting CP's have completed site visits.



	is the case.	
Geological Interpretation	<ul style="list-style-type: none"> Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit. Nature of the data used and of any assumptions made. The effect, if any, of alternative interpretations on Mineral Resource estimation. The use of geology in guiding and controlling Mineral Resource estimation. The factors affecting continuity both of grade and geology. 	<p>The geological interpretation is considered robust due to the nature of the geology and mineralisation.</p> <p>Surface diamond and reverse circulation (RC) drillholes have been logged for lithology, structure, and alteration and mineralisation data.</p> <p>The lithological logging of pegmatite in combination with the Li₂O, Fe₂O₃ and MgO assays, including grainsize and mineralogical differentiation, have been used to guide the sectional interpretation of the pegmatites in Surpac 3-D modelling software. Internal waste domains, where intersected in drilling, have been interpreted and modelled individually.</p> <p>The geological wireframes have then been used as a boundary within which Li₂O% grade shells have been generated in LeapFrog software using a 0.3% Li₂O indicator and iso value of 0.35 for the pegmatites. The primary assumption is that the mineralisation is hosted within structurally controlled pegmatite sills, which is considered robust.</p> <p>Wireframes have been extrapolated approximately half section spacing between mineralised and unmineralised intercepts.</p> <p>Weathering surfaces have been provided by Galaxy Resources.</p> <p>Due to the consistent nature of the pegmatite identified in the area, no alternative interpretations have been considered. The pegmatites are found to be continuous over the length of the deposit.</p> <p>The Li₂O% mineralisation interpretation is contained wholly within the pegmatite geological unit. Evidence of late stage faulting is present and has, where appropriate been incorporated into the geological model.</p> <p>Zones of fine grained pegmatite and lepidolite have been identified, delineated and coded into the estimation in order to aid the differentiation of coarse grained spodumene bearing pegmatites for mining.</p>
Dimensions	<ul style="list-style-type: none"> The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource. 	<p>The Mt Cattlin pegmatites strike north-south and are typically between 10 m and 30 m wide, and are typically flat lying or with a subtle dip east of around 5 to 10 degrees.</p> <p>Several different pegmatites have been identified, either as separate intrusions or due to fault offset over a strike length of 1,300 m, an across strike extent of 1,700 m and down to a depth of greater than 300 m below surface.</p>



<p>Estimation and Modelling Techniques</p>	<ul style="list-style-type: none"> The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used. The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data. The assumptions made regarding recovery of by-products. Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation). In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed. Any assumptions behind modelling of selective mining units. Any assumptions about correlation between variables. Description of how the geological interpretation was used to control the resource estimates. Discussion of basis for using or not using grade cutting or capping. The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available. 	<p>Grade estimation for Li2O%, Fe2O3% and Ta2O5 ppm has been completed using Ordinary Kriging (OK) into 33 pegmatite domains using Maptek Vulcan 11.0.1 software. Grade estimation of Fe2O3% has been completed using Ordinary Kriging (OK) into the encapsulating mafic waste and inside the internal rafts of basalt within the pegmatites.</p> <p>The geological, mineralisation and weathering wireframes generated have been used to define the domain codes by concatenating the three codes into one. The drill holes have been flagged with the domain code and composited using the domain code to segregate the data. Hard boundaries have been used at all domain boundaries for the grade estimation.</p> <p>The domains have been assessed to identify which ones require separate analysis and estimation of the different oxidation states as defined by the weathering wireframes.</p> <p>Compositing has been undertaken within domain boundaries at 1m with a merge tolerance of 0.1 m.</p> <p>Top-cuts for Li2O% and Ta2O5 have been assessed for all mineralised and un-mineralised pegmatite domains as well as for the internal and external waste domains with only those domains with extreme values having been top-cut. The top-cut levels have been determined using a combination of histograms, log probability and mean variance plots.</p> <table border="1" data-bbox="890 1160 1425 1525"> <thead> <tr> <th rowspan="2">Domain</th> <th colspan="2">Number of Samples</th> <th colspan="2">Mean Grade</th> <th>Top-Cut Value</th> </tr> <tr> <th>Un-Cut</th> <th>Top-Cut</th> <th>Un-Cut</th> <th>Top-Cut</th> <th>% Diff Top-Cut</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>20490</td> <td>3170</td> <td>0.21</td> <td>0.14</td> <td>-33%</td> </tr> <tr> <td></td> <td>0.3</td> <td>0.34</td> <td>0.09</td> <td>1.6</td> <td>0.67</td> </tr> <tr> <td>98</td> <td>73</td> <td>2</td> <td>0.07</td> <td>0.07</td> <td>0%</td> </tr> <tr> <td></td> <td>0.3</td> <td>0.08</td> <td>0.08</td> <td>1.16</td> <td>1.09</td> </tr> <tr> <td>99</td> <td>222</td> <td>62</td> <td>0.31</td> <td>0.19</td> <td>-39%</td> </tr> <tr> <td></td> <td>0.3</td> <td>0.37</td> <td>0.09</td> <td>1.19</td> <td>0.48</td> </tr> <tr> <td>4703</td> <td>14</td> <td>1</td> <td>0.3</td> <td>0.26</td> <td>-13%</td> </tr> <tr> <td></td> <td>1.5</td> <td>0.58</td> <td>0.46</td> <td>1.95</td> <td>1.78</td> </tr> <tr> <td>6303</td> <td>23</td> <td>1</td> <td>0.23</td> <td>0.17</td> <td>-26%</td> </tr> <tr> <td></td> <td>1.2</td> <td>0.49</td> <td>0.24</td> <td>2.17</td> <td>1.39</td> </tr> <tr> <td>43014303</td> <td>43</td> <td>2</td> <td>0.3</td> <td>0.26</td> <td>-13%</td> </tr> <tr> <td></td> <td>1.8</td> <td>0.65</td> <td>0.46</td> <td>2.14</td> <td>1.8</td> </tr> </tbody> </table> <p>Variography has been completed in Supervisor 8.9 software on a grouped domain basis to ensure that enough data is present. Domains with too few samples have borrowed variography.</p> <p>No assumptions have been made regarding recovery of any by-products.</p> <p>The drill hole data spacing ranges from 10 m by 10 m in grade control drilling, to a 40 m by 40 m resource definition drill hole spacing out to an 80 m by 80 m exploration spacing.</p> <p>The block model parent block size is 20 m (X) by 20 m (Y) by 5 m (Z), which is considered appropriate for the dominant drill hole spacing used to define the deposit. A sub-block</p>	Domain	Number of Samples		Mean Grade		Top-Cut Value	Un-Cut	Top-Cut	Un-Cut	Top-Cut	% Diff Top-Cut	0	20490	3170	0.21	0.14	-33%		0.3	0.34	0.09	1.6	0.67	98	73	2	0.07	0.07	0%		0.3	0.08	0.08	1.16	1.09	99	222	62	0.31	0.19	-39%		0.3	0.37	0.09	1.19	0.48	4703	14	1	0.3	0.26	-13%		1.5	0.58	0.46	1.95	1.78	6303	23	1	0.23	0.17	-26%		1.2	0.49	0.24	2.17	1.39	43014303	43	2	0.3	0.26	-13%		1.8	0.65	0.46	2.14	1.8
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	0.3	0.08	0.08	1.16	1.09																																																																																
99	222	62	0.31	0.19	-39%																																																																																
	0.3	0.37	0.09	1.19	0.48																																																																																
4703	14	1	0.3	0.26	-13%																																																																																
	1.5	0.58	0.46	1.95	1.78																																																																																
6303	23	1	0.23	0.17	-26%																																																																																
	1.2	0.49	0.24	2.17	1.39																																																																																
43014303	43	2	0.3	0.26	-13%																																																																																
	1.8	0.65	0.46	2.14	1.8																																																																																



		<p>size of 2.5 m (X) by 2.5 m (Y) by 0.625 m (Z) has been used to define the mineralisation edges, with the estimation undertaken at the parent block scale.</p> <ul style="list-style-type: none"> • Pass 1 estimations have been undertaken using a minimum of 6 and a maximum of 24 samples into a search set at approximately half of the variogram range. A 4 sample per drill hole limit has been applied in all pegmatite domains. • Pass 2 estimations have been undertaken using a minimum of 6 and a maximum of 24 samples into a search ellipse set at approximately the variogram range. A 4 sample per drill hole limit has been applied in all pegmatite domains • Pass 3 estimations have been undertaken using a minimum of 2 and a maximum of 24 samples into a search ellipse set at twice the Search 2 range. No drill hole limit has been applied to the third pass. • A fourth interpolation pass has been employed for a small number of domains in order to adequately fill the mineralisation volume with estimated grades. The search ellipse employed is twice the Search 3 size with the same minimum and maximum number of samples used. <p>The Mineral Resource estimate has been validated using visual validation tools combined with volume comparisons with the input wireframes, mean grade comparisons between the block model and composite grade means and swath plots comparing the composite grades and block model grades by Northing, Easting and RL.</p> <p>As Mt Cattlin is a producing operation, there exists reconciliation data with which to validate the existing estimation.</p> <p>No selective mining units are assumed in this estimate.</p> <p>No correlation between variables has been assumed.</p>
Moisture	<ul style="list-style-type: none"> • Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content. 	Tonnes have been estimated on a dry basis.
Cut-off Parameters	<ul style="list-style-type: none"> • The basis of the adopted cut-off grade(s) or quality parameters applied. 	For the reporting of the Mineral Resource Estimate a 0.4 Li2O% cut-off within a Whittle pit shell has been used.



Mining Factors or Assumptions	<ul style="list-style-type: none"> Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made. 	<p>A Whittle pit optimisation has been run to generate a pit shell wireframe for reporting purposes. The mining assumptions/parameters applied to the optimisation are:</p> <ul style="list-style-type: none"> Mining Recovery – 93% Mining Dilution – 17% Li2O Price/tonne 6% concentrate – USD\$900 Li2O recovery – 75% Ta2O5 Price/pound concentrate – USD\$40 Ta2O5 recovery – 25% Transport and port Cost/tonne – AUD\$49.68 State Royalty – 5% Processing Cost/tonne – AUD\$33.16 Mining Cost/tonne – AUD\$4.29 <p>A Li2O cut-off of 0.4% has been applied in the Whittle optimisation.</p> <p>The area beneath the southern waste dump has been excluded from the MRE pit shell due to the cost of moving the waste material.</p>
Metallurgical Factors or Assumptions	<p>The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.</p>	<p>A Li2O% metallurgical recovery of 75% and Ta2O5 ppm recovery of 25% has been applied during the pit optimisation and generation of the pit shell.</p>
Environmental Factors or Assumptions	<ul style="list-style-type: none"> Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made. 	<p>No environmental factors or assumptions have been incorporated into this Mineral Resource Estimate as Mt Cattlin is a producing operation with Environmental approvals and an Environmental Management Plan in place.</p>



<p>Bulk Density</p>	<ul style="list-style-type: none"> Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples. The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit. Discuss assumptions for bulk density estimates used in the evaluation process of the different materials. 	<p>Bulk density values have been calculated from 1,076 measurements collected on site using the water immersion method. Data has been separated into lithological and weathering datasets and mean bulk density values derived.</p> <p>The selection of bulk density samples is determined by the logging geologist and is undertaken in a manner to determine the bulk density of all material types. The diamond drill core is competent and does not display evidence of voids or vugs. The bulk densities which have been applied to the Mineral Resource block model are:</p> <table border="1" data-bbox="895 629 1430 947"> <thead> <tr> <th>Domain / Lithology Type</th> <th>Weathering</th> <th>Bulk Density Assigned</th> </tr> </thead> <tbody> <tr> <td rowspan="3">Waste</td> <td>Oxide</td> <td>2.5</td> </tr> <tr> <td>Transitional</td> <td>2.7</td> </tr> <tr> <td>Fresh</td> <td>2.86</td> </tr> <tr> <td rowspan="3">Unmineralised Pegmatite</td> <td>Oxide</td> <td>2.42</td> </tr> <tr> <td>Transitional</td> <td>2.62</td> </tr> <tr> <td>Fresh</td> <td>2.78</td> </tr> <tr> <td rowspan="3">Mineralised Pegmatite</td> <td>Oxide</td> <td>2.47</td> </tr> <tr> <td>Transitional</td> <td>2.71</td> </tr> <tr> <td>Fresh</td> <td>2.72</td> </tr> </tbody> </table>	Domain / Lithology Type	Weathering	Bulk Density Assigned	Waste	Oxide	2.5	Transitional	2.7	Fresh	2.86	Unmineralised Pegmatite	Oxide	2.42	Transitional	2.62	Fresh	2.78	Mineralised Pegmatite	Oxide	2.47	Transitional	2.71	Fresh	2.72
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<p>Classification</p>	<ul style="list-style-type: none"> The basis for the classification of the Mineral Resources into varying confidence categories. Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data). Whether the result appropriately reflects the Competent Person's view of the deposit. 	<p>The resource classification has been applied to the MR estimate based on the drilling data spacing, grade and geological continuity, quality of the estimation and data integrity.</p> <p>The classification considers the relative contributions of geological and data quality and confidence, as well as grade confidence and continuity.</p> <p>The areas defined by grade control drilling which have been estimated on the first estimation pass and have resulted in a suitable quality of estimation have been classified as Measured Mineral Resources.</p> <p>Portions of the deposit which have been estimated in the first two estimation passes and which have been estimated with a high degree of confidence have been classified as Indicated Mineral Resources.</p> <p>Portions of the deposit which have been estimated and have a suitable level of drilling to assume geological continuity of the pegmatite have been classified as Inferred Mineral Resources.</p> <p>The classification reflects the view of the Competent Person.</p>																								
<p>Audits or Reviews</p>	<ul style="list-style-type: none"> The results of any audits or reviews of Mineral Resource estimates. 	<p>This Mineral Resource estimate for Mt Cattlin has not been audited by an external party.</p>																								



<p>Discussion of Relative Accuracy/ Confidence</p>	<ul style="list-style-type: none"> Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate. The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available. 	<p>The relative accuracy of the Mineral Resource estimate is reflected in the reporting of the Mineral Resource as per the guidelines of the 2012 JORC Code.</p> <p>The statement relates to a local estimate of tonnes and grade within the pit shell at a cut-off of 0.4 Li2O%. Transitional material has COG 0.6 % lithia applied. In addition, material in stockpiles as of the record date have been classified as Mineral Resources for reporting with the following breakdown:</p>
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Material	Cut Off	Measured				Indicated				Inferred				TOTAL			
		Tonnes (M)	Li2O% (g/t)	Sp4% (g/t)	Fe2O3% (g/t)	Tonnes (M)	Li2O% (g/t)	Sp4% (g/t)	Fe2O3% (g/t)	Tonnes (M)	Li2O% (g/t)	Sp4% (g/t)	Fe2O3% (g/t)	Tonnes (M)	Li2O% (g/t)	Sp4% (g/t)	Fe2O3% (g/t)
Transitional In-situ Resource	0.6%	302	1.07	192	1.52	107	1.43	171	1.32	100	1.13	264	1.55	302	1.17	192	1.52
Proven In-situ Resource	0.4%	1,982	1.42	211	1.16	7,707	1.42	95	1.48	4,302	1.26	94	1.57	15,000	1.38	95	1.57
Typical In-situ Resource		2,284	1.32	208	1.37	2,200	1.42	187	1.48	4,604	1.28	198	1.67	16,900	1.37	189	1.48
Stockpiles						2,790	0.82	110	NA					2,790	0.82	110	NA
Total		2,286	1.32	208		9,900	1.28	190		4,606	1.30	198		16,700	1.28	199	

The preceding statements of Mineral Resources conform to the Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code 2012 Edition). All tonnages reported are dry metric tonnes. Mineral Reserves reported may occur due to rounding to appropriate significant figures.

JORC 2012 Section 4 Estimation and Reporting of Ore Reserves

(Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral Resource Estimate for Conversion to Ore Reserves	<ul style="list-style-type: none"> Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve. Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves. 	<ul style="list-style-type: none"> An updated classified resource estimate (January 2019) formed the basis of the reserve estimate. Modifying factors are determined from an independently commissioned reconciliation study Mineral Resources are NOT additional to Mining Reserves
Site Visits	<ul style="list-style-type: none"> Comment on any site visits undertaken by the Competent Person and the outcome of those visits. If no site visits have been undertaken indicate why this is the case. 	<ul style="list-style-type: none"> All the CP's have undertaken site visits.



Study Status	<ul style="list-style-type: none"> • The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves. • The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered. 	<ul style="list-style-type: none"> • Mt Cattlin is an operating mine • Reserve studies have been supported by feasibility studies from 2009 onwards. • Reserve is supported by operational results • The material modifying factors have been considered and applied.
Cut-off Parameters	<ul style="list-style-type: none"> • The basis of the cut-off grade(s) or quality parameters applied. 	<ul style="list-style-type: none"> • Cut-off grade calculation was based on inputs used in the reconciliation study. Further robust geological domaining and wireframing was based on a 0.3 % Li₂O cut-off. • Oxide pegmatite has been excluded • Transitional pegmatite has 0.6% Li₂O cut-off • Fresh pegmatite has a 0.4%Li₂O cut-ff
Mining factors or Assumptions	<ul style="list-style-type: none"> • The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design). • The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc. • The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling. • The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate). • The mining dilution factors used. • The mining recovery factors used. • Any minimum mining widths used. • The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion. • The infrastructure requirements of the selected mining methods. 	<ul style="list-style-type: none"> • The deployed mining method is conventional open pit, drill blast, truck and shovel and selective mining. • Mining tonnage recovery is estimated 93% and mining dilution is estimated at 17%, from the July 2017-December 2017 reconciliation study. • Mining tonnage recovery and mining dilution factors are in line with 2.5 and 5m regularisation • Geotechnical specifications are provided in the text above • Mining widths reflect 100t equipment. • Mining infrastructure is established and operating.



Metallurgical Factors or Assumptions	<ul style="list-style-type: none"> • The metallurgical process proposed and the appropriateness of that process to the style of mineralisation. • Whether the metallurgical process is well-tested technology or novel in nature. • The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied. • Any assumptions or allowances made for deleterious elements. • The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole. • For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications? 	<ul style="list-style-type: none"> • Mt Cattlin is an operating mine site using crush, classifying, desliming, dense media separation and reflux classifiers to produce a mineral concentrate. • Metallurgical processes are operational at >1Mtpa and approvals for 2.0 Mtpa nameplate are subject to statutory approvals (20 June 2018). • Process recovery is estimated at 75% for Lithium and Tantalum recovery is estimated at 25%. • Mineral concentrate has a mica and moisture specification is has been achieved in every export to date.
Environment	<ul style="list-style-type: none"> • The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported. 	<ul style="list-style-type: none"> • Mt Cattlin is an operational mine site, subject to Mining Approvals, Work Approvals and Project Management Plan regulation by the WA Department of Mines and Industry Regulation and Safety. These are updated from time to time and documented on the tenement conditions.
Infrastructure	<ul style="list-style-type: none"> • The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed. 	<ul style="list-style-type: none"> • The Mt Cattlin Mine site is an operating mine with established, built and approved infrastructure.
Costs	<ul style="list-style-type: none"> • The derivation of, or assumptions made, regarding projected capital costs in the study. • The methodology used to estimate operating costs. • Allowances made for the content of deleterious elements. • The source of exchange rates used in the study. • Derivation of transportation charges. • The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc. 	<ul style="list-style-type: none"> • Operation costs and the reconciliation study were provided by Galaxy and reflect mine site actuals. • Mining \$12/bcm • Processing \$34/t • Royalty 5% • Concentrate transport and port costs \$50/t



	<ul style="list-style-type: none"> The allowances made for royalties payable, both Government and private. 	
Revenue Factors	<ul style="list-style-type: none"> The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc. The derivation of assumptions made of metal or Commodity price(s), for the principal metals, minerals and co-products. 	<ul style="list-style-type: none"> Revenue factors are provided in the body of the text above. 6% Li₂O Spodumene concentrate USD\$650/t. 2% Ta₂O₅ concentrate at USD40/lb
Market Assessment	<ul style="list-style-type: none"> The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future. A customer and competitor analysis along with the identification of likely market windows for the product. Price and volume forecasts and the basis for these forecasts. For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract. 	<ul style="list-style-type: none"> Current market demand exceeds current production supporting higher prices than price used for estimation. Current sales price exceeds price in estimation
Economic	<ul style="list-style-type: none"> The inputs to the economic analysis to produce then net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc. NPV ranges and sensitivity to variations in the significant assumptions and inputs. 	<ul style="list-style-type: none"> Performance is sufficient to support continued operation
Social	<ul style="list-style-type: none"> The status of agreements with key stakeholders and matters leading to social licence to operate. 	<ul style="list-style-type: none"> Other regulators (water, conservation) have impact on mining approvals. A companywide heritage agreement was settled with WA Noongar people in February 2018. The surrounding land is a mix on freehold tenure and Vacant Crown Land.
Other	<ul style="list-style-type: none"> To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves: Any identified material naturally occurring risks. The status of material legal agreements and marketing arrangements. The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and 	<ul style="list-style-type: none"> Current stakeholder engagement indicates no reasonable objections with the continued mine operation



	<p>government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.</p>	
Classification	<ul style="list-style-type: none"> • The basis for the classification of the Ore Reserves into varying confidence categories. • Whether the result appropriately reflects the Competent Person's view of the deposit. • The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any). 	<ul style="list-style-type: none"> • Ore reserves are directly classified from Mineral resources, Measured to Proven, Indicated to Probable. • The Ore Reserve result reflects the Competent Persons view of the deposit. • No measured mineral resource has been classified as probable • 315kt of Inferred Mineral Resource within the pit design has not been included in the Ore Reserve
Audits or Reviews	<ul style="list-style-type: none"> • The results of any audits or reviews of Ore Reserve estimates. 	<ul style="list-style-type: none"> • No external audits and reviews have been conducted on the Ore Reserves.
Discussion of Relative Accuracy/ Confidence	<ul style="list-style-type: none"> • Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate. • The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. • Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage. • It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available. 	<ul style="list-style-type: none"> • Modifying factors have been applied reflecting current practice, costs and metallurgical recovery • Ongoing improvement of mining and grade control practices to reflect changes in metallurgical processing • Stockpiles have included based on their tonnes and grades, physical properties and metallurgical test work subject to recovery with the improved metallurgical process