



ASX ANNOUNCEMENT

ASX: CXO

8th May 2017

Core Defines First Lithium Resource in the NT

HIGHLIGHTS

- Core has established its first JORC 2012 Lithium Resource at the Grants Prospect at the Finniss Lithium Project, near Darwin in the NT
- Grants Lithium Resource is one of the highest grade undeveloped lithium deposits in Australia
- Significant potential to grow Finniss Project Resources as Grants is only one of many lithium rich pegmatites identified within Core's large 400km² of tenure at Finniss
- Preliminary Mining Study shows strongly positive outcomes for potential development of DSO Spodumene Operations from Grants Resource
- Project supported by arguably the best logistics chain to China of any Australian lithium project
- Core has HOA with Darwin Port for the export of DSO Spodumene
- Metallurgical test work demonstrates a high quality 6% Li₂O spodumene concentrate can be produced from Grants at 80% recoveries or higher
- Discussions advancing with potential Spodumene DSO and Concentrate offtake partners
- Core's 2017 lithium exploration programs are underway in the NT
- Upcoming aggressive drilling campaigns to target substantial resource growth at Finniss in 2017 from multiple large-scale targets including Ringwood and Zola



Core Exploration Ltd (ASX: CXO) (“Core” or the “Company”) is pleased to announce Grants Lithium Deposit as the first Lithium Resource defined at its Finnis Lithium Project in the Northern Territory, with a maiden resource of 1.8Mt at 1.5% Li₂O.

The Grants Lithium Deposit is one of the highest grade spodumene resources in Australia, and only one of several high grade prospects already drilled by Core within its Finnis Project, which is ideally located near Darwin Port, Australia’s closest port to China.

Core has also received results from a preliminary mining study at Grants. The study suggests positive outcomes from mining Grants as a DSO spodumene project.

Initial metallurgical test work results for the Grant’s Pegmatite results are very encouraging, with a number of standard processing routes identified to produce a spodumene concentrate product of 6% Li₂O at recoveries of 80% or better.

The Finnis Lithium Project has substantial infrastructure advantages; being close to grid power, gas and rail and within easy trucking distance by sealed road to Darwin Port - Australia’s nearest port to Asia.

Core also has a signed Heads of Agreement (HOA) signed with Darwin Port to support Core’s potential future use of the nearby East Arm Wharf to export lithium products from Finnis.

As a result of these strong project factors, Core is now advancing its discussions with potential spodumene DSO and concentrate offtake partners to support an early development at the Finnis Project.

Core’s 2017 lithium exploration programs have now recommenced in the NT and aggressive drilling campaigns at Finnis are aimed to add to Grants and substantially grow the resource base for the Finnis Lithium Project.

Grants Lithium Resource

Core’s first drilling discovered a number of high grade spodumene pegmatites within Finnis Lithium Project in late 2016 including BP33, Far West, Ahoy and Grants.

As a result of good access to Grants (located 500m from a sealed highway), Core’s focus has been on the Grants prospect initially, where it was able to complete enough drilling before the 2017 wet season to convert some of the spodumene mineralised Grants Pegmatite into JORC Resources.

The results of the Mineral Resource Estimate are provided in the table below. The Mineral Resources are reported at a high cut-off of 1.0% Li₂O.



Mineral Resource Estimate for Grants Deposit, Finniss Lithium Project							
Domain	Cut-Off	Indicated			Inferred		
All	%	Tonnes	% Li ₂ O	Li ₂ CO ₃ Eq	Tonnes	% Li ₂ O	Li ₂ CO ₃ Eq
Grants	1.0	492,000	1.5	19,000	1,312,000	1.5	49,000
Total		492,000	1.5	19,000	1,312,000	1.5	49,000

Table 1. Mineral Resource Estimate for Grants Lithium Deposit

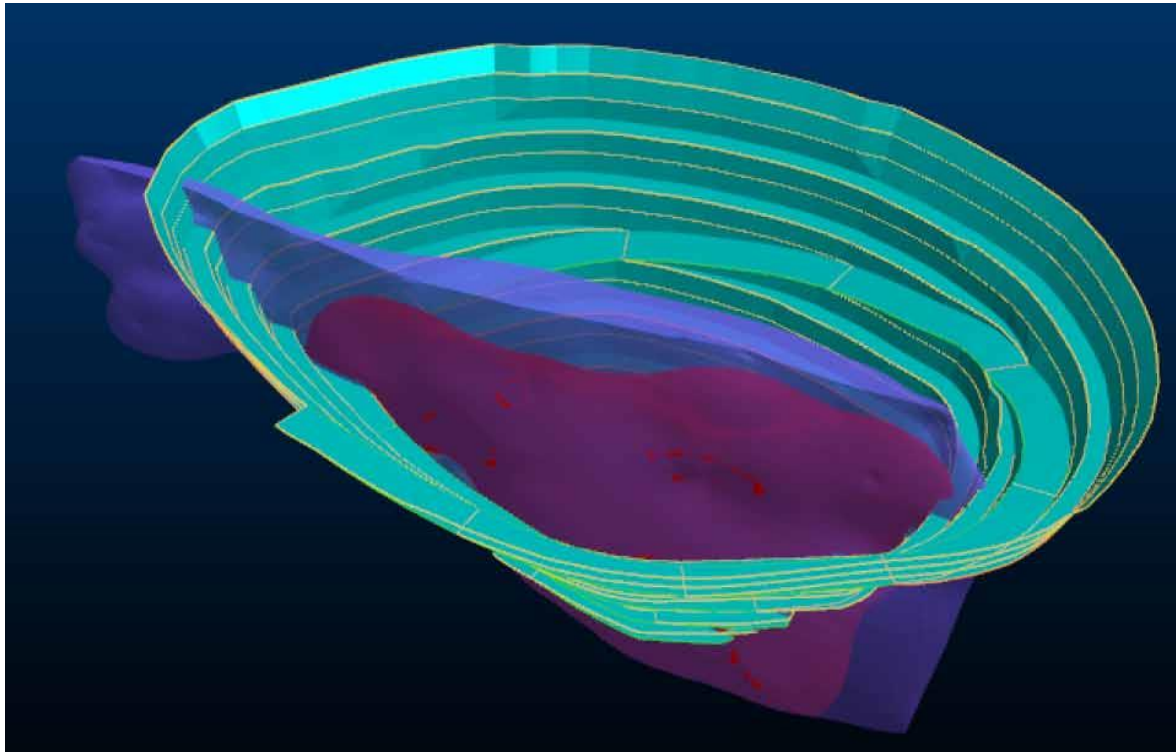


Figure 1. Grants Pegmatite (blue) and Resource (Purple) (as defined by drilling to date) and potential Pit Shell, Finniss Lithium Project.

Mining Plus (MP) was contracted by Core to undertake the Mineral Resource Estimate for the Grants deposit, which forms part of the Finniss Lithium Project. The scope of work comprised data collation and review, interpretation and modelling, geostatistical analysis, Mineral Resource estimation and reporting to JORC 2012 standard. In order to complete the scope of work, MP have been provided with a topographic surface, assay certificates, raw survey data, and database containing drillhole data and bulk density measurements and a QAQC report undertaken by Core.

Portions of the model that have drill spacing less than 50 m (X) and 50 m (Y), have scissor drilling and where the confidence in the estimation is considered high have been classified as Indicated Mineral Resources. Areas which have drill spacing of greater than 50 m (X) and 50 m (Y) have been classified as Inferred Mineral Resources (Figure 2).

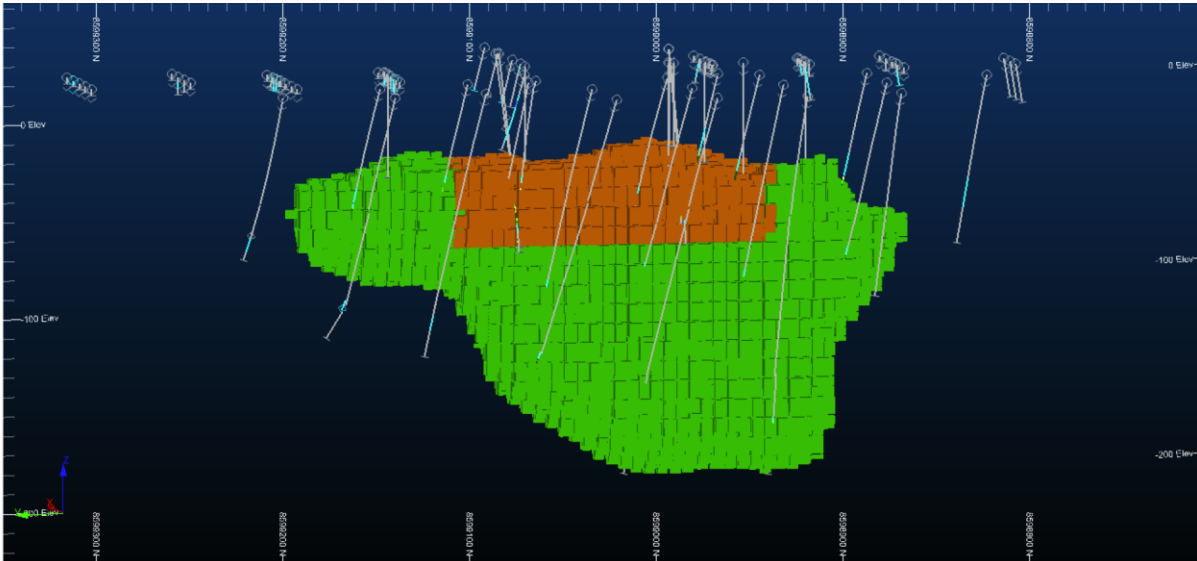


Figure 2. Indicated (orange) and Inferred (green) Resource classification at Grants.

Grants has a flat Grade-Tonnage curve at the 1.5% Li₂O “sweetspot” for spodumene production (Figure 3). A competitor-leading 1% cut-off grade results in no significant reduction in the contained tonnes, demonstrating the consistent high grade nature of the resource and its amenity to DSO and simple mining methods. Core believes this may be an inherent trait in not only Grants, but also in other pegmatites in the Finnis Pegmatite Field.

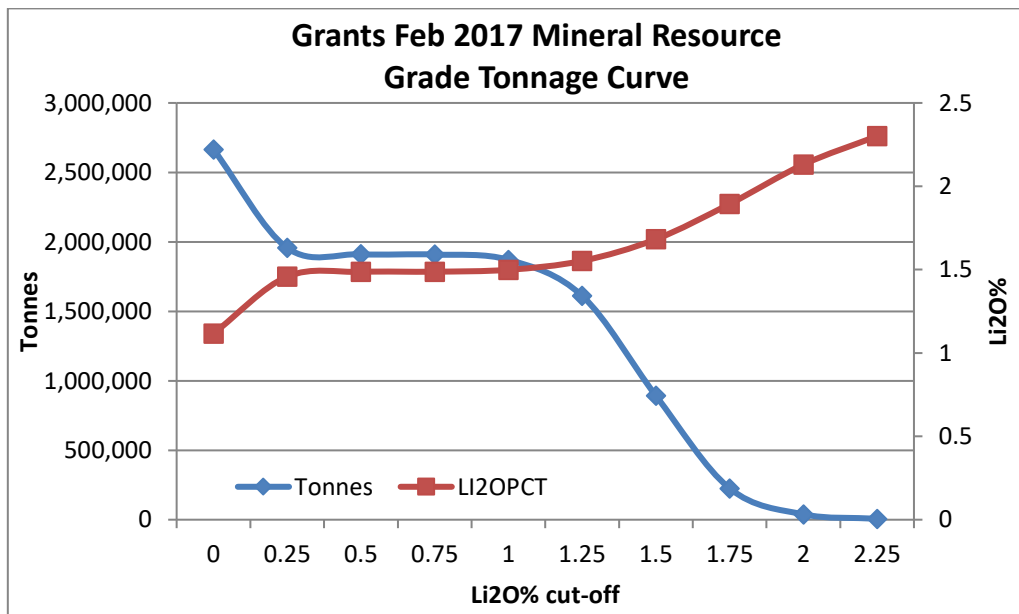


Figure 3. Grade Tonnage Curve, Grants Resource.

The actual iron content of the Grants ore-body is considered to be much lower than that stated in the Resource estimate (Table 2).



At this time the iron content of the reported resource is likely to be artificially elevated by iron contamination caused by wear on drill bits, rod strings and steel containers used to pulverise samples.

As noted with other spodumene resources some degree of iron contamination is to be expected when drilling and processing highly abrasive pegmatite material, and further work is being undertaken to determine what allowance factor should be applied for iron contamination in subsequent Resource estimates.

Mineral Resource Estimate for Grants Deposit, Finniss Lithium Project									
Domain	Cut-Off	Indicated				Inferred			
All	%	Tonnes	% Li ₂ O	% Fe ₂ O ₃	Li ₂ CO ₃ Eq	Tonnes	% Li ₂ O	% Fe ₂ O ₃	Li ₂ CO ₃ Eq
Grants	1.0	492,000	1.5	1.9	19,000	1,312,000	1.5	2.2	49,000
Total		492,000	1.5	1.9	19,000	1,312,000	1.5	2.2	49,000

Table 2. Mineral Resource Estimate for Grants Lithium Deposit with iron content (not corrected for Fe contamination)

Check assays commissioned by Core at an independent laboratory (Nagrom) using Fe-free tungsten mills for QAQC of the assay database illustrate this contamination unambiguously (Table 3).

Type of sample	Lab Original (Fe ₂ O ₃)	Nagrom (Fe ₂ O ₃)	% Diff from Original
RC	2.16%	0.64%	-70%
DDH	2.29%	0.34%	-85%
Met. Bulk Sample	2.34%	0.85%	-64%

Table 3. Comparison of routine drill assays vs check analysis and metallurgical testing by Nagrom.

The Nagrom sample set includes a representative subset of the drill core (DDH) and RC materials collected at Grants, which Core provided for the Mineral Resource Estimate and also the metallurgical testwork.

Diamond core samples from Grants analysed at Nagrom average 0.34% Fe₂O₃. This figure is well constrained, with little variability. The Nagrom bulk metallurgical sample has an average of 0.85% Fe₂O₃ (“head grade”). This higher content is reconciled by the fact that Nagrom processed drill core using steel mills at least in part for their work, sufficiently to impart some Fe contamination.



Figure 4. High-grade coarse grained spodumene (green) in drill core (FRDD01) from Grants.

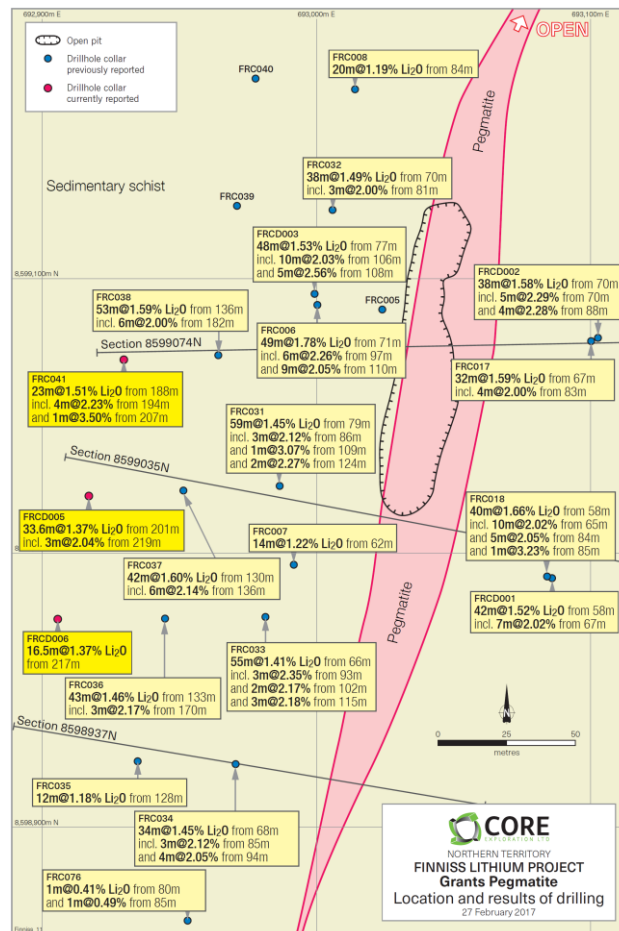


Figure 5. RC and Diamond drilling plan Grants Lithium Deposit, Finniss Lithium Project, NT.



Finniss Lithium Project : Potential Development Options and Resource Growth

Potential Development Options

Core has a potential high grade, commercial quality spodumene deposit at Finniss supported by arguably the best logistics chain to China of any Australian lithium project.

Focussed drilling and metallurgical studies at the Grants Deposit, one of the first pegmatites drilled by Core, have defined an orebody with the potential to produce high grade lithium products that suit commercial end users.

Results from the initial high-grade Resource and preliminary mining study have highlighted the strong positive outcomes for the potential development of Grants, suggesting a strong case for a standalone DSO project.

Core is advancing discussions with potential offtake and project partners to advance early development of Grants and the Finniss Lithium Project

Resource Growth

Core's drilling in late 2016 discovered and has now proven a new high grade spodumene pegmatite field at Finniss. Most pegmatites drilled by Core are mineralised with spodumene.

Core is in an enviable position, as in addition to Grants, the large Finniss Lithium Project area contains many other pegmatite targets including Ringwood and Zola that are much larger scale than Grants (refer ASX 04/04/17 & 23/06/16).

Now with 400km² of new tenements granted, all approvals in place for drilling and the 2017 field season commencing, Core is aiming to substantially grow the resource base for the Finniss Lithium Project.

Core's drilling in 2017 is targeting to deliver resources to support more than 10-20 years potential production at Finniss.

Core expects the strongly positive economic outcomes from the preliminary mining study on the current modest Resource at Grants to be magnified as more resources are discovered and defined at Finniss.

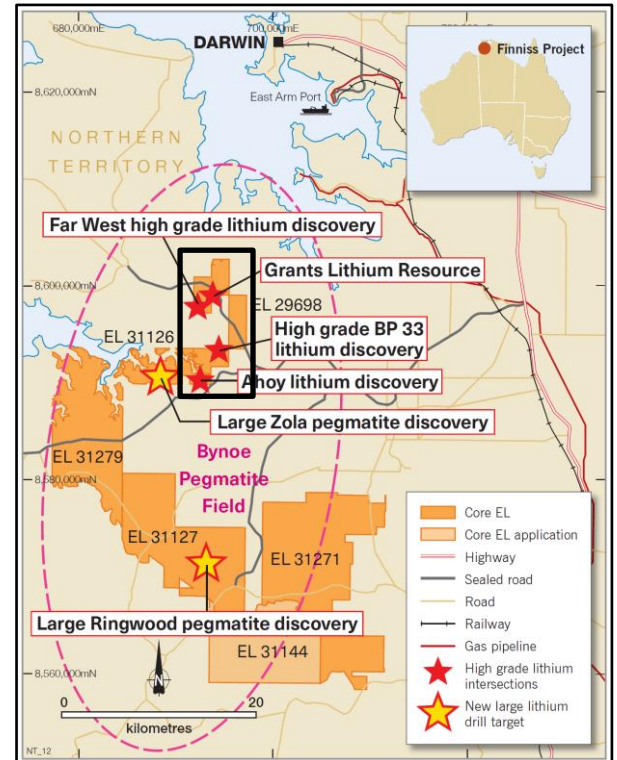
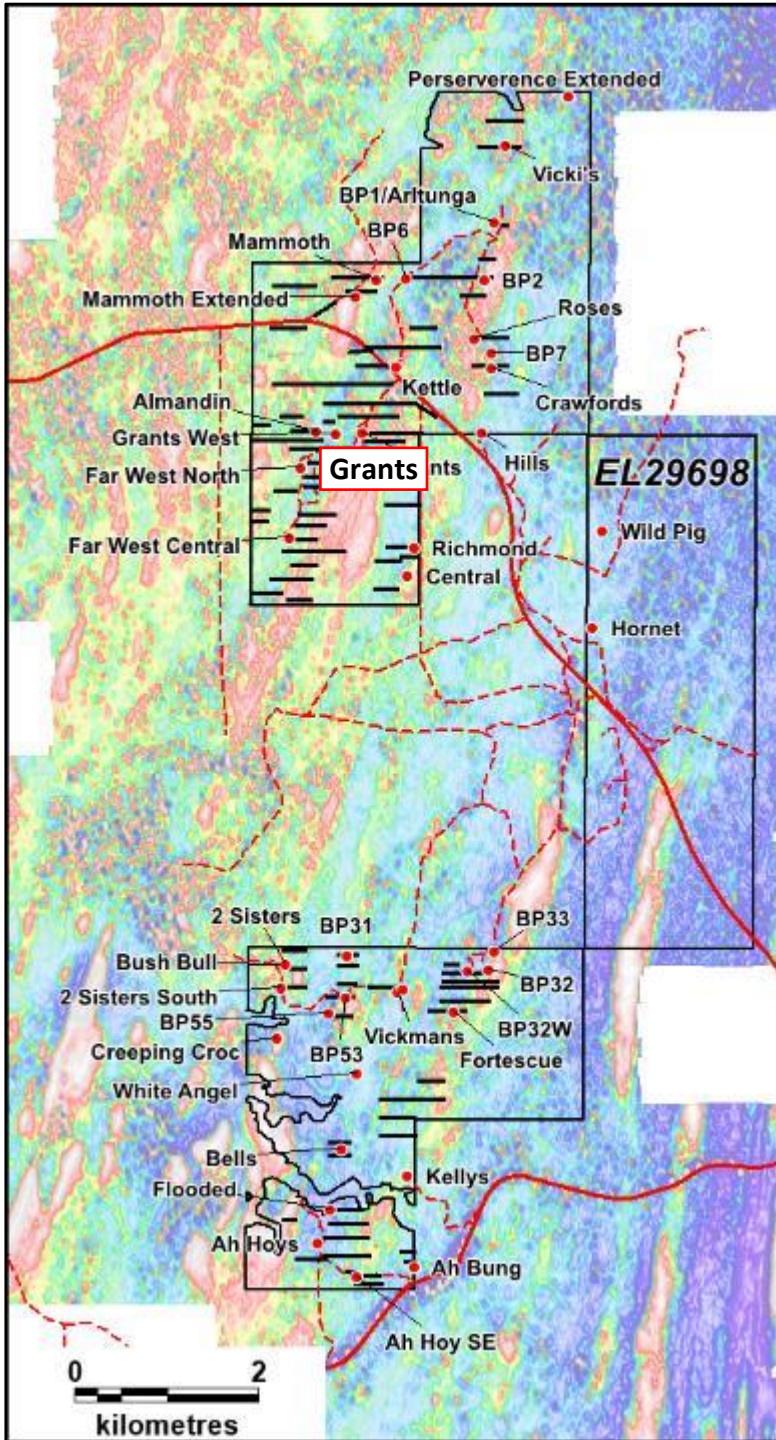


Figure 6. Pegmatite drill targets proximal to Grants overlain on new magnetics (left) and large-scale regional pegmatite drill targets (right), Finniss Lithium Project NT.



For further information please contact:

Stephen Biggins
Managing Director
Core Exploration Ltd
08 7324 2987
info@coreexploration.com.au

Summary of Resource Estimate and Reporting Criteria

Geology and geological interpretation

The Grants Prospect occurs in the northern portion of a rare element pegmatite field, which comprises the 55km long by 10km wide West Arm–Mt Finniss pegmatite belt (Bynoe Pegmatite Field; NTGS Report 16). The main pegmatites in this belt include Mt Finniss, Grants, BP33, Hang Gong and Sandras.

The Finniss pegmatites have intruded early Proterozoic shales, siltstones and schists of the Burrell Creek Formation which lies on the northwest margin of the Pine Creek Geosyncline. To the south and west are the granitoid plutons and pegmatitic granite stocks of the Litchfield Complex. The source of the fluids that have formed the intruding pegmatites is generally accepted as being the Two Sisters Granite to the west of the belt, and which probably underlies the entire area at depths of 5-10 km.

Lithium mineralisation has been identified as occurring at Bilato's (Picketts), Saffums 1 (amblygonite) and more recently at Grants, BP33 and Sandras. Historically, Sn and Ta have been mined from these pegmatites since 1900, generally at a small scale.

Drilling techniques and hole spacing

The Grants drillhole dataset considered for the Resource Estimate contains a total of 83 drillholes for 4,318 m, comprising 18 Reverse Circulation (RC) drillholes (2,616 m), 5 RCD drillholes (RC with a Diamond tail) (865 m), 4 Metallurgical DD drillholes (216 m), 4 Aircore drillholes (203 m) and 52 RAB drillholes (418 m). The RAB and Aircore holes were excluded from the Resource Estimation because they merely establish the surface footprint of the pegmatite and do not intersect lithium mineralisation. The metallurgical drillholes have not been assayed as they have been set aside for detailed geotechnical and metallurgical studies that require full core. Therefore, they have been excluded from the Resource Estimation.

Sufficient compressed air was available to obtain dry samples over most of the drill length. Sample recoveries were excellent (>95%) and no pathways for loss of fines or any other component were present. Any evidence of contamination was identified and its potential impact nullified.



Holes are spaced roughly every 50m along the strike of Grants (NNE) and between 25-50m downdip. Holes have been drilled perpendicular to the strike of the body at angles between 55 and 60 degrees. The dedicated metallurgical, RAB and Aircore holes are vertical. Hole collars were located with differential GPS and azimuth determined by north-seeking instrument (AziAligner). Downhole surveys employed both industry standard DH camera and a more sophisticated gyrometric tool (iSGyro). Hole deviation was minimised using various routine techniques.

Sampling and sub-sampling

Samples were collected from RC and DDH core and when submitted for assay typically weigh 2-3kg over an average 1m interval. 1m-sampling continued into the barren wall-zone of the pegmatite and then a 3m composite was collected from the immediately surrounding barren phyllite host rock. RC samples are homogenised and subsampled by cone splitting at the drill rig so as to retain approximately 15% of the of cuttings. Drill core was cut into quarter core then collected on a metre basis (where possible). Samples were then sent to the North Australian Laboratory in Pine Creek, NT, for analysis. Half core from the 3 twinned holes was provided to Nagrom laboratory in Perth for metallurgical testwork. The remaining quarter core is retained at Core's storage shed in Berry Springs. Chip trays were collected for all RC holes, both in powder form and sieved chips to estimate spodumene grade prior to analysis. These trays are also retained at Berry Springs.

Sample analysis method

DDH core and RC chips were primary crushed then pulverised in a Keegormill to 90% passing -100 um. A 0.3 g sub-sample was fused with a Sodium Peroxide then dissolved in HCl and various elements read by ICP-MS and ICP-OES methods, including Li, Cs, Rb, Sr, Nb, Sn, Ta, U, As, K, P and Fe. Selected core was analysed for a broader element suite and density determined. Various duplicates, blanks, standards and umpire checks were utilised at ratios appropriate for QAQC in Resource Estimation. The QAQC data has been assessed and demonstrated that sampling and analytical methods are appropriate.

Cut-off grades

For the reporting of the Mineral Resource Estimate, a 1.0 Li₂O% cut-off has been used. This was driven by the shape of the Grade-Tonnage curve, which showed that very little resource tonnes are diminished by raising it above a more conservative 0.5%, which is more common in the lithium resource space.

Estimation methodology

Grade estimation of lithium has been completed using Ordinary Kriging (OK) into 2 mineralisation domains using Datamine Studio RM software. Variography has been undertaken on the top-cut grade domain composites. Variogram orientations are largely controlled by the strike and dip of the mineralisation. No assumptions have been made regarding recovery of any by-products.



Fe ppm has been estimated; however, it is known that an Fe contamination issue exists due to the use of steel drill rods and steel sample preparation machinery. No other deleterious elements have been considered and therefore estimated for this deposit.

The data spacing varies considerably within the deposit ranging from surface drillholes at an approximate spacing of 50 m by 50 m, to deep exploration drillholes at spacings greater than 80 m by 80 m. A parent block size of 5 m (X) by 25 m (Y) by 10 m (Z) with a sub-block size of 1.25 m (X) by 6.25 m (Y) by 2.5 m (Z) has been used to define the mineralisation, with the lithium estimated at the parent block scale. No selective mining units are assumed in this estimate.

Tantalum, tin and iron have been estimated within the lithium mineralised domain, however, no correlation between variables has been assumed. The mineralisation and geological wireframes have been used to flag the drillhole intercepts in the drillhole file. The flagged intercepts have then been used to create composites in Datamine Studio RM. The composite length is 1 m in all data.

The influence of extreme sample distribution outliers in the composited data has been reduced by top-cutting where required. The top-cut levels have been determined using a combination of histograms, log probability and mean variance plots. Top-cuts have been reviewed and applied for the grouped estimation domains. The application of the top-cuts has not resulted in a significant decrease in the mean grade from the un-cut to top-cut data. Model validation has been carried out, including visual comparison between declustered composites and estimated blocks; check for negative or absent grades; statistical comparison against the input drillhole data and graphical plots.

Classification criteria

The resource classification has been applied to the Mineral Resource Estimate based on the drilling data spacing, grade and geological continuity, and data integrity. The classification takes into account the relative contributions of geological and data quality and confidence, as well as grade confidence and continuity. The classification reflects the view of the Competent Person.

Mining and metallurgical methods and parameters

Based on the orientation, width and depth of the modelled pegmatite at Grants, an open pit mining method is the most likely scenario. A whittle pit optimisation has been run in order to generate a pit shell wireframe for reporting purposes. The mining assumptions/parameters applied to the optimisation are:

- Mining Recovery – 95%
- Mining Dilution – 5%
- Mining Cost/tonne – AUD\$3.95
- Processing Cost/tonne – AUD\$34.61
- Li₂O% Price/tonne – AUD\$200



No metallurgical recoveries have been applied since the material is expected to be shipped as DSO. However, Core has undertaken scoping level metallurgical testwork under the guidance of Como Engineering Pty Ltd (refer ASX 30/3/2017).

Competent Persons Statements

The information in this report that relates to Exploration Results and Mineral Resources is based on information compiled by Stephen Biggins (BSc(Hons)Geol, MBA) an employee of Core Exploration Ltd who is a member of the Australasian Institute of Mining and Metallurgy and is bound by and follows the Institute’s codes and recommended practices. He has sufficient experience which is relevant to the styles of mineralisation and types of deposits under consideration and to the activities 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”. Mr Biggins consents to the inclusion in the report of the matters based on his information in the form and context in which it appears. This report includes results that have previously been released under JORC 2012 by Core.

The information in this report that relates to Exploration Results is based on information compiled by Dr David Rawlings (BSc(Hons)Geol, PhD) an employee of Core Exploration Ltd who is a member of the Australasian Institute of Mining and Metallurgy and is bound by and follows the Institute’s codes and recommended practices. He has sufficient experience which is relevant to the styles of mineralisation and types of deposits under consideration and to the activities 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”. Dr Rawlings consents to the inclusion in the report of the matters based on his information in the form and context in which it appears. This report includes results that have previously been released under JORC 2012 by Core.

The information in this report that relates to Estimating and Reporting of Mineral Resources is based on information compiled by David Billington (BE), a full time consultant with Mining Plus Ltd, who is a member of the Australasian Institute of Mining and Metallurgy and is bound by and follows the Institute’s codes and recommended practices. He has sufficient experience which is relevant to the styles of mineralisation and types of deposits under consideration and to the activities 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”. Mr. Billington consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The report includes results that have previously recently been released under JORC 2012 by Core as listed in the table below. The Company is not aware of any new information that materially affects the information included in this announcement.

30/3/2017	Test work Produces High Quality 6% Spodumene Concentrate
3/3/2017	Final Drilling Assays Deliver Outstanding High Grade Lithium
21/2/2017	Wide High Grade Spodumene Intersections at Finniss
30/01/2017	Continuous High Grade Spodumene in Phase 2 RC Drilling
7/12/2016	High Grade Lithium Assays from Maiden Diamond Drilling
20/10/2016	Further High Grade Lithium Intersections at Finniss
3/10/2016	Highest Grade Spodumene Intersections Ever Drilled in the NT
23/09/2016	High Grade Spodumene Confirms Significant Lithium Discovery



Appendix 1 – Drill hole summary for Grants

Hole No.	Grid Co-ordinates		Survey Data				Significant intercepts					
	GDA94 Grid Easting	GDA94 Grid Northing	RL (m)	Azimuth (°)	Dip (°)	Depth (m)	From (m)	To (m)	Interval (m)	Grade (Li2O %)	Sample Type	
RC												
FRC005	693024.0	8599088.7	21.9	90.0	-55.0	66.0	No Significant Intercepts					
FRC006	693000.3	8599090.5	22.2	92.5	-54.7	131.0		71.0	120.0	49.0	1.78	RC Cyclone Split
							Including	97.0	103.0	6.0	2.26	RC Cyclone Split
							Including	110.0	119.0	9.0	2.05	RC Cyclone Split
FRC007	692991.7	8598995.7	22.5	90.0	-55.0	76.0		62.0	76.0	14.0	1.22	RC Cyclone Split
FRC008	693014.1	8599169.2	19.9	89.4	-54.7	118.0		80.0	81.0	1.0	0.52	RC Cyclone Split
							and	84.0	104.0	20.0	1.19	RC Cyclone Split
							Including	96.0	98.0	2.0	2.14	RC Cyclone Split
FRC017	693100.3	8599077.3	20.3	277.2	-54.1	112.0		67.0	99.0	32.0	1.59	RC Cyclone Split
							including	83.0	87.0	4.0	2.00	RC Cyclone Split
FRC018	693084.2	8598991.5	21.0	278.4	-54.8	112.0		58.0	98.0	40.0	1.66	RC Cyclone Split
							including	65.0	75.0	10.0	2.02	RC Cyclone Split
							including	84.0	89.0	5.0	2.05	RC Cyclone Split
							including	85.0	86.0	1.0	3.23	RC Cyclone Split
FRC031	692986.5	8599024.5	22.5	85.6	-54.5	146.0		79.0	138.0	59.0	1.45	RC Cyclone Split
							including	86.0	89.0	3.0	2.12	RC Cyclone Split
							including	109.0	110.0	1.0	3.07	RC Cyclone Split
							including	124.0	126.0	2.0	2.27	RC Cyclone Split
FRC032	693005.9	8599125.1	21.3	90.7	-55.2	120.0		70.0	108.0	38.0	1.49	RC Cyclone Split
							including	81.0	84.0	3.0	2.00	RC Cyclone Split
FRC033	692981.5	8598976.8	22.4	89.5	-55.2	138.0		66.0	121.0	55.0	1.41	RC Cyclone Split
							including	93.0	96.0	3.0	2.35	RC Cyclone Split
							including	102.0	104.0	2.0	2.17	RC Cyclone Split
							including	115.0	118.0	3.0	2.18	RC Cyclone Split
FRC034	692970.5	8598922.9	22.3	90.1	-55.1	114.0		68.0	102.0	34.0	1.45	RC Cyclone Split
							including	85.0	88.0	3.0	2.12	RC Cyclone Split
							including	94.0	98.0	4.0	2.05	RC Cyclone Split
							and	104.0	105.0	1.0	0.42	RC Cyclone Split
FRC035	692935.1	8598924.0	22.9	90.7	-54.7	154.0		128.0	140.0	12.0	1.18	RC Cyclone Split
FRC036	692944.7	8598976.1	22.8	92.2	-55.3	196.0		133.0	176.0	43.0	1.46	RC Cyclone Split
							including	170.0	173.0	3.0	2.17	RC Cyclone Split
FRC037	692951.5	8599022.7	22.7	88.7	-55.2	190.0		130.0	172.0	42.0	1.60	RC Cyclone Split
							including	136.0	142.0	6.0	2.14	RC Cyclone Split
FRC038	692964.2	8599072.2	22.4	90.8	-55.2	202.0		136.0	189.0	53.0	1.59	RC Cyclone Split
							including	182.0	188.0	6.0	2.00	RC Cyclone Split
FRC039	692971.0	8599126.7	21.8	89.2	-55.4	186.0	No Significant Intercepts					
FRC040	692977.9	8599173.1	20.8	90.5	-55.6	202.0	No Significant Intercepts					
FRC041	692929.7	8599070.4	22.2	86.9	-55.0	226.0		188.0	211.0	23.0	1.51	RC Cyclone Split
							including	194.0	198.0	4.0	2.23	RC Cyclone Split
							including	207.0	208.0	1.0	3.50	RC Cyclone Split
FRC042	692916.9	8599020.7	22.6	88.3	-55.0	201.0	DDH PreCollar					
FRC043	692905.6	8598976.0	22.9	90.5	-60.0	181.0	DDH PreCollar					
FRC044	692898.7	8598928.0	23.2	89.5	-60.0	127.0	DDH PreCollar					
DDH												
FRC001	693086.1	8598991.2	20.9	279.0	-55.0	103.7		57.75	99.90	42.15	1.52	1/4 core
							including	64.00	71.00	7.00	2.02	1/4 core
FRC002	693102.5	8599078.5	20.3	274.2	-56.0	112.7		70.00	108.00	38.00	1.58	1/4 core
							including	70.00	75.00	5.00	2.29	1/4 core
							including	88.00	92.00	4.00	2.28	1/4 core
FRC003	692999.3	8599094.6	22.0	92.5	-56.0	124.6		70.20	118.00	47.80	1.53	1/4 core
							including	106.00	116.00	10.00	2.03	1/4 core
							including	108.00	113.00	5.00	2.56	1/4 core
FRC005	692916.9	8599020.7	22.6	308.0	-55.0	266.3		200.70	234.30	33.60	1.37	1/4 core
							including	219.00	222.00	3.00	2.04	1/4 core
FRC006	692905.6	8598976.0	22.9	308.0	-63.0	257.5		217.30	233.80	16.50	1.37	1/4 core
FRDD001	693025.5	8598971.0	21.9	308.0	90.0	42.30	Metallurgical core					
FRDD002	693030.3	8599006.7	22.5	308.0	90.0	65.60	Metallurgical core					
FRDD003	693033.6	8599008.4	22.5	308.0	90.0	42.60	Metallurgical core					
FMRD001	693061.5	8599078.4	21.1	308.0	90.0	65.90	Metallurgical core					

(i) Mean grades have been calculated on a 0.4% Li2O lower cut-off grade with no upper cut-off grade applied, and maximum internal waste of 3.0 metres.



Appendix 2

JORC Code, 2012 Edition – Table 1 report

Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <i>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</i> <i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i> <i>Aspects of the determination of mineralisation that are Material to the Public Report.</i> <i>In cases where ‘industry standard’ work has been done this would be relatively simple (eg ‘reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay’). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</i> 	<ul style="list-style-type: none"> Sub surface chip samples have been collected by reverse circulation (RC) drilling techniques, totaling 18 holes for 2,616m. Core material derived by diamond core drilling (DDH) techniques totaling 5 holes for 865 m (including RC precollars through barren host). Of these, 3 holes were designed to twin RC holes and provide metallurgical testwork material. 4 additional short PQ-size DDHs were also drilled for the purpose of full-core geotechnical and metallurgical testwork. To maintain its integrity, it has not been assayed. 52 RAB and 4 Aircore holes have also been completed at Grants to assist in defining the surface expression and geometry of the pegmatite. Drill holes are oriented approximately perpendicular to the interpreted strike of the mineralised trend. Samples submitted for assay typically weigh 2-3kg and average 1m interval. 1m-sampling continued into the barren wall-zone of the pegmatite and then a 3m composite was collected from the immediately surrounding barren phyllite host rock. RC samples are homogenised by cone splitting at rig prior to sampling and are then submitted to the laboratory for assay. The splitter was configured to retain approximately 15% of the of cuttings into a 12x18 inch calico bag. The remaining 85% is split to larger 600x900 mm green plastic bags. This “waste” material is available



Criteria	JORC Code explanation	Commentary
		<p>for QAQC procedures such as duplicates.</p> <ul style="list-style-type: none"> • Drill core was collected directly into trays, marked up by metre marks and secured as the drilling progressed. Geological logging and sample interval selection took place soon after. • Core was transported to a local core preparation facility and cut firstly into half, ensuring no bias in the cutting plane. Again, without bias, half core was then cut into two further segments. A quarter was then collected on a metre basis (where possible), bagged and sent to the North Australian Laboratory in Pine Creek, NT, for analysis. Half core from the 3 twinned holes was provided to Nagrom laboratory in Perth for metallurgical testwork. The remaining quarter core is retained at Core's storage shed in Berry Springs. • DDH and RC samples prepared and analysed at North Australian Laboratories (NAL), Pine Creek, NT. • DDH core and RC chips are crushed in a primary crusher to approximately -2mm size. RC material does not require much crushing as most is already below the 2mm size. • DDH and RC samples then pulverised in Vertical Spindle Pulveriser (Keegormill) to 90% passing -100 um. • A 0.3 g sub-sample is fused with a Sodium Peroxide Fusion flux and then digested in 10% hydrochloric acid. • A barren flush is inserted between samples. • The laboratory has a regime of 1 in 8 control subsamples. • ICP-MS and ICP-OES methods are used for the following elements: Li, Cs, Rb, Sr, Nb, Sn, Ta, U, As, K, P and Fe. • Selected drill core samples were also run for the following additional elements to provide a broader suite: Al, Ca, Mg, Mn, Si, LOI, SG (immersion), SG (pycnometer) and various trace elements. Na was also analysed using a 4 acid digest and ICP-OES method.
Drilling techniques	<ul style="list-style-type: none"> • <i>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other</i> 	<ul style="list-style-type: none"> • RC drilling technique used at Grants comprises standard Reverse Circulation (RC) 4 and 3/4 inch face sampling hammer (5.5 inch diameter bit). Two different rigs were utilised:



Criteria	JORC Code explanation	Commentary
	<p><i>type, whether core is oriented and if so, by what method, etc).</i></p>	<ul style="list-style-type: none"> ○ Sandvik DE811 multi-purpose rig with a trailer-mounted cyclone operated by WDA Drilling, Kalgoorlie. This rig was used during the early exploration stage of the program. ○ Evolution 3000 mutli-purpose rig with trailer-mounted cyclone operated by Grid Drilling, Qld. A compressor and booster/auxiliary used where sample quality begins to wane. This rig was used for all deep RC drilling at Grants. ● Diamond core drilling technique utilised a conventional wireline HQ coring using a rubber track (Marooka) mounted Alton MD 600 rig under contract with WDA Drilling, Kalgoorlie. The top 180-200 m of these DDH holes were precollared using RC techniques described above. No mineralized pegmatite was encountered in the precollars.
<p>Drill sample recovery</p>	<ul style="list-style-type: none"> ● <i>Method of recording and assessing core and chip sample recoveries and results assessed.</i> ● <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i> ● <i>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i> 	<ul style="list-style-type: none"> ● Once the drilling at Grants was advanced enough to suggest resource definition would be carried out (FRC031 onwards), the geologist noted and documented the recovery (0-100%) and sample quality (Wet, Moist, Dry) for each metre, according to a SoP. Prior to this, poor recovery and potential contamination were only documented when it was apparent by inspection of the sample bags. This procedure was sufficient to recognise a contamination issue in FRC017 and FRC018 (see below). Apart from that, recovery was generally >95% and samples were dry apart from certain drillholes, and then only the first sample after a rod change. The drilling contractors took great care to maintain a dry sample, even if this meant long periods of airlifting water at the start of a rod. ● Contamination was monitored regularly. If evidence of contamination was noted in the calico sub-sample, the procedure was to visually compare to the green RC bag. This contamination would normally take the form of a brown dis-colouration (due to barren phyllite host rock) to what is normally bright white pulverized pegmatite. This contamination was noted in two of the early exploration-stage holes



Criteria	JORC Code explanation	Commentary
		<p>drilled at Grants, FRC017 and FRC018. Brown ferruginous-micaceous discolouration in the calico bags alerted the site geologist of an issue. The issue stemmed from leaking compressor seals and an inadequate drill pressure, which allowed infiltration of host phyllite into the splitter. This issue could not be resolved until the rig left the site. The green bags appeared to be free of this discolouration and therefore were not subject to contamination. As a result, the primary sampling of these holes took place by spearing the green bags. Intense QA-QC was initiated to ensure this was the correct course of action.</p> <ul style="list-style-type: none"> No other drilling related contamination issues have been encountered in the program. The rigs splitter is emptied between 1m samples by hammering the cyclone bin with a mallet. The set-up of the cyclone varied between rigs, but a gate mechanism was used to prevent inter-mingling between metre intervals. The cyclone and splitter were also regularly cleaned by opening the doors, visually checking, and if build-up of material is noted, the equipment cleaned with either compressed air or high pressure water. This process was in all cases undertaken when the drilling first penetrated the pegmatite mineralization, to ensure no host rock contamination took place. Drill collars are sealed to prevent sample loss and holes are normally drilled dry to prevent poor recoveries and contamination caused by water ingress. Wet intervals are noted in case of unusual results. No material bias has been recognised.
<p>Logging</p>	<ul style="list-style-type: none"> <i>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i> <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i> 	<ul style="list-style-type: none"> Standard sample logging procedures are utilised by the company, including logging codes for lithology, minerals, weathering etc. A powder chip tray for the entire hole is completed. A separate sub-sample is sieved from the large RC bags at site into chip trays over the pegmatite interval to assist in geological logging. These are photographed and stored on the Core server.



Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <i>The total length and percentage of the relevant intersections logged.</i> 	<ul style="list-style-type: none"> Geology of the RC drill chips is logged on a metre basis with attention to main rock forming minerals within the pegmatite intersections. Geology of the DDH drill core is logged on a geological basis down to 10 cm scale, with attention to main rock forming minerals within the pegmatite intersections, the fabric of the rock, grain size and alteration/weathering. Pegmatite sections in core are also checked under UV light for spodumene identification on a semi-quantitative basis.
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i> <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i> <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i> <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i> <i>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</i> <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i> 	<ul style="list-style-type: none"> RC samples are collected as 1 metre samples, cone split at the cyclone and then calico-bagged. Usually these weight 2-3 kg. A 30-40 kg primary sample is collected in green bags and retained until assays have been returned and deemed reliable for reporting purposes. Most samples are dry, but wet or damp samples are recorded. A field duplicate sample regime is used to monitor sampling methodology and homogeneity of RC drilling. At Grants, 52 duplicates out of the 821 original RC samples equates to roughly 1 in 20. The typical procedure was to collect Duplicates via a spear of the green RC bag, having collected the Original in a calico bag via a rotary split. Trying to split the 2-3kg calico bag into an Original and a Duplicate has inherent dangers, least of all reducing the sample mass. However, comparing rotary split sample with a spear sample also has some element of incompatibility. The expectation would be a high degree of variability in the spear sample, because of the heterogenous and stratified RC bag, but overall it should statistically match the split original sample. Results of duplicate analysis show an acceptable degree of correlation given the heterogeneous nature of the pegmatite. A series of duplicates were also selected to test on a “like for like” basis. A Spear sample was used for the Original and the Duplicate, to test for heterogeneity in the RC bag. Data show a remarkably good correlation.



Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> • Visible brown micaceous contamination was recognised in the split calico bags for FRC017 and RFC018 by the site geologist – likely to be a component of the barren host phyllite. By contrast, the green RC bags contained typical white pegmatite. The calico bags were not used for the Original samples in these two holes. Instead, spear samples were used as the Original. 17 of the calico bags were submitted as Duplicates to confirm the contamination. Data show that there is indeed 20% lower Li in the duplicates, vindicating that decision. It is speculated that a loss of drill-rig compressor pressure due to seals leaking caused the build-up of wet barren clays in the sample return system near the splitter box. Water washed this material into the calico bags due to the rotating action of the splitter. • Quarter core is cut as described above, bagged and sent to the laboratory for analysis. As discussed, the heterogeneity of pegmatite core material means it is not suitable for “second-half” or “second-quarter” duplicate analysis. • Core trays and RC chip trays are photographed and stored on the Core server.
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> • <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i> • <i>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i> • <i>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i> 	<ul style="list-style-type: none"> • One in 20 certified Lithium reference standards were used for Grants drilling program. Core uses two standards of roughly 1700 ppm and 7000 ppm Li ppm, covering the range of expected Li values in the mineralized pegmatite. • Early in the program, there was a noted variability of the assayed standards from the expected range, both higher and lower. However, this improved for the bulk of the program and standards reported back with an excellent correlation, especially for the higher concentration standard. Overall the standards average within 1% of the expected value for Li. • Blanks were inserted on a 1 in 20 basis, once resource definition drilling was initiated. • The data from the 30 routine blanks pulverised and assayed at NAL indicate that the Li content averages 85 ppm (0.02% Li₂O) and the

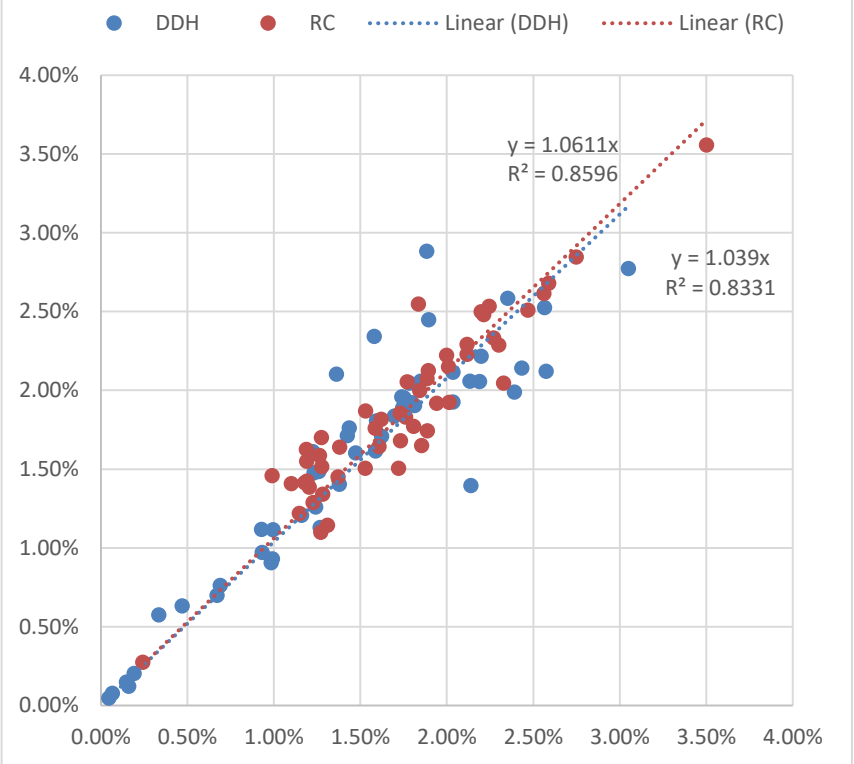


Criteria	JORC Code explanation	Commentary
		<p>highest is 196 ppm Li. This is reasonable given the aggressive (hard) nature of the coarse quartz blanks, effectively scouring the crusher and mill. This value is well below the effective cut-off grade used for the significant intercepts.</p> <ul style="list-style-type: none"> • The baseline Fe₂O₃ content of Blanks is ~0.01%, whereas the average run-of-sample value of 3.68%. This is indicative of substantial Fe being stripped from the steel pulverising equipment at the NAL laboratory. This stripping of metal obviously has an effect on the Fe content of the Lithium bearing samples as well, especially the core, which are equally as hard as the quartz blanks. This is discussed further below. • One in 20 field duplicates are used for Grants RC drilling, as discussed above. • Duplicates were not collected for the DDH core drilling, as discussed above. • The Laboratory indicated that physical wear on milling equipment was high and that contamination with Fe and the steel hardening components, such as Mn, would predictably be high. This is borne out in the assay data (see below)
<p>Verification of sampling and assaying</p>	<ul style="list-style-type: none"> • <i>The verification of significant intersections by either independent or alternative company personnel.</i> • <i>The use of twinned holes.</i> • <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i> • <i>Discuss any adjustment to assay data.</i> 	<ul style="list-style-type: none"> • Core's experienced project geologists are supervised by Core's Exploration Manager. • All field data was manually collected, entered into excel spreadsheets and validated. It was then entered into an Access database and underwent further validation. • Hard copies are stored in the local office and electronic data is stored on the Core server. • Three diamond core holes were drilled as twins to RC holes and used to check the difference between RC and DDH assays across a similar part of the mineralized pegmatite. The data indicate variability on a metre-by-metre basis, related to the heterogeneity of the pegmatite, but overall the +30m intercepts are proportionate. • One in twenty external laboratory checks ("umpire checks") were



Criteria	JORC Code explanation	Commentary
		<p>submitted to an independent laboratory (Nagrom in Perth) for final verification of results. The material used is the residue of coarse primary crushed archive material from original RC samples provided to NAL. This serves to check laboratory Li assay repeatability and to investigate the Fe contamination caused by milling equipment at NAL.</p> <ul style="list-style-type: none"> • A further sample set of ¼ core was processed at Nagrom to compare with NAL drill core data (“umpire checks”). 20 of these samples were in-tact quarter core cut from HQ drillcore from Grants, while the remaining 31 were coarse rejects of quarter core that were crushed at NAL. • The in-tact core was first prepared via primary crushing. • All samples then underwent pulverising in a tungsten carbide mill to minimise or eliminate Fe contamination. NAL and Nagrom both used Fusion ICP-OES/MS for Li. • From this “umpire” exercise, the Lithium check values correlate well with the original NAL values, but are by average 3-6% higher at Nagrom (see chart below). It could be argued that they are under-reported at NAL, where Li is diluted by the introduction of Fe from the mill.



Criteria	JORC Code explanation	Commentary
		<p data-bbox="1332 375 1915 414">Li₂O% - NAL vs Nagrom (RC and DDH)</p>  <ul data-bbox="1198 1204 2072 1364" style="list-style-type: none"> • A substantial and highly variable iron contamination issue has been recognised at Grants from analysis of routine pegmatite samples, check assays and blanks (see summary Table below). It is also recognised in the metallurgical bulk sample that was prepared at Nagrom where they minimised the use of steel mills, but is of a lower



Criteria	JORC Code explanation	Commentary																							
		<p data-bbox="1243 355 2038 598">magnitude. A large proportion of the contamination demonstrably relates to the processing of material through the steel-based pulverising equipment at the NAL laboratory. A second smaller source of contamination is from the RC drilling equipment (drill bit, rods, cyclone). The same issue has been recognised at other hard-rock lithium projects, such as Pilgangoora, where Pilbara Minerals now routinely adjust Fe for contamination, albeit at a lower magnitude (PLS ASX Release 25/1/2017).</p> <table border="1" data-bbox="1198 598 2049 906"> <thead> <tr> <th data-bbox="1198 598 1444 702">Type of sample</th> <th data-bbox="1444 598 1668 702">Lab Original (Fe₂O₃)</th> <th data-bbox="1668 598 1870 702">Nagrom (Fe₂O₃)</th> <th data-bbox="1870 598 2049 702">% Diff from Original</th> </tr> </thead> <tbody> <tr> <td data-bbox="1198 702 1444 750">RC</td> <td data-bbox="1444 702 1668 750">2.16%</td> <td data-bbox="1668 702 1870 750">0.64%</td> <td data-bbox="1870 702 2049 750">-70%</td> </tr> <tr> <td data-bbox="1198 750 1444 798">DDH</td> <td data-bbox="1444 750 1668 798">2.29%</td> <td data-bbox="1668 750 1870 798">0.34%</td> <td data-bbox="1870 750 2049 798">-85%</td> </tr> <tr> <td data-bbox="1198 798 1444 861">Metallurgical Bulk Sample</td> <td data-bbox="1444 798 1668 861">2.34%</td> <td data-bbox="1668 798 1870 861">0.85%</td> <td data-bbox="1870 798 2049 861">-64%</td> </tr> <tr> <td data-bbox="1198 861 1444 906">Blanks</td> <td data-bbox="1444 861 1668 906">3.68%</td> <td data-bbox="1668 861 1870 906">0.01%</td> <td data-bbox="1870 861 2049 906">-99%</td> </tr> </tbody> </table>				Type of sample	Lab Original (Fe ₂ O ₃)	Nagrom (Fe ₂ O ₃)	% Diff from Original	RC	2.16%	0.64%	-70%	DDH	2.29%	0.34%	-85%	Metallurgical Bulk Sample	2.34%	0.85%	-64%	Blanks	3.68%	0.01%	-99%
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Criteria	JORC Code explanation	Commentary
		<p data-bbox="1232 359 1993 391">FE2O3% FOR RC & DDH ORIGINAL (NAL) VS CHECKS (NAGROM)</p> <p data-bbox="1198 1189 1937 1324"> <ul style="list-style-type: none"> From this data, Core has derived two contamination factors: <ul style="list-style-type: none"> “RC Factor”: 0.3% for RC drill rods/equipment “Prep Factor” that is different for RC and DDH: <ul style="list-style-type: none"> 1.5% for RC prepped at NAL </p>



Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> ▪ 1.7% for DDH prepped at NAL • The high degree of variability of the Fe contamination, as illustrated on the Box/Whisker plot above, makes application of the “Prep Factor” difficult, except at a gross level. This variability stems from differences in sample hardness and the mill operator’s decisions in regard to extending milling time to attain the desired fine pulp size. Many laboratories utilize a standard milling time, irrespective of the hardness of the material. This can lead to digestion problems if the material isn’t sufficiently pulverised.
Location of data points	<ul style="list-style-type: none"> • Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. • Specification of the grid system used. • Quality and adequacy of topographic control. 	<ul style="list-style-type: none"> • Coordinate information for the Grants drillholes was collected by Differential GPS (DGPS), by Land Surveys Australia Pty Ltd. This data is accurate to 10 cm in all three dimensions. • All are GDA94 Zone 52. • Roughly half of the Grants RC and DDH holes were surveyed by a isGyro down hole tool and the collar is oriented using the Azi Aligner tool, both from Downhole Surveys, Perth. A QA-QC procedure is applied to the azimuth data. Spurious data are excluded. • The remaining holes were surveyed by downhole camera tool and the collar is oriented using the Azi Aligner tool. • Core works with the drilling company to minimize drill hole deviation via the use of various drilling techniques such as the use of stabilisers in certain circumstances. Core believes the deviation experienced by the drill rods in the current program is within expectations of the rocktype and is acceptable for the target style. • Drill holes tend to collapse soon after drilling, so no post-drilling surveys are practical. In addition, several drill strings have become bogged and deemed lost due to the presence of clays in the upper weathered portion of the pegmatites, so stabilisers are only used if this risk is deemed minimal.
Data spacing and	<ul style="list-style-type: none"> • Data spacing for reporting of Exploration Results. • Whether the data spacing and distribution is sufficient to establish the 	<ul style="list-style-type: none"> • Of the order 50m along strike and 25-50m down dip. • Refer to figures in previous ASX releases.



Criteria	JORC Code explanation	Commentary
distribution	<p>degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</p> <ul style="list-style-type: none"> Whether sample compositing has been applied. 	<ul style="list-style-type: none"> No compositing has been applied to exploration information in this report.
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material. 	<ul style="list-style-type: none"> Drilling is typically oriented perpendicular to the interpreted strike of mineralization as mapped or predicted by the geological model.
Sample security	<ul style="list-style-type: none"> The measures taken to ensure sample security. 	<ul style="list-style-type: none"> Company geologist supervises all sampling and subsequent storage in field.
Audits or reviews	<ul style="list-style-type: none"> The results of any audits or reviews of sampling techniques and data. 	<ul style="list-style-type: none"> MP undertook an audit of a selection of data used for the Resource Estimate (see below). Minor validation issues were found but these are not material to the Resource Estimate.

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area. 	<ul style="list-style-type: none"> Drilling is being conducted on EL 29698 that is 100% owned by Core. The area being drilled comprises Vacant Crown land There are no registered heritage sites covering the areas being drilled. EL 29698 is in good standing with the NT DME Titles Division.
Exploration done by other parties	<ul style="list-style-type: none"> Acknowledgment and appraisal of exploration by other parties. 	<ul style="list-style-type: none"> The history of mining in the Bynoe Harbour – Middle Arm area dates back to 1886 when tin was discovered by Mr C Clark. The records of production for many mines are not complete, and in



Criteria	JORC Code explanation	Commentary
		<p>numerous cases changes have been made to the names of the mines and prospects which tend to confuse the records still further. In many cases the published names of mines cannot be linked to field occurrences.</p> <ul style="list-style-type: none"> • In the early 1980s the Bynoe Pegmatite field was reactivated during a period of high tantalum prices by Greenbushes Tin which owned and operated the Greenbushes Tin and Tantalite (and later spodumene) Mine in WA. Greenbushes Tin Ltd entered into a JV named the Bynoe Joint Venture with Barbara Mining Corporation, a subsidiary of Bayer AG of Germany. • Greenex (the exploration arm of Greenbushes Tin Ltd) explored the Bynoe pegmatite field between 1980 and 1990 and produced tin and tantalite from its Observation Hill Treatment Plant between 1986 and 1988. • They then tributed the project out to a company named Fieldcorp Pty Ltd who operated it between 1991 and 1995. • In 1996, Julia Corp drilled RC holes into representative pegmatites in the field, but like all of their predecessors, did not assay for Li. • Since 1996 the field has been defunct until recently when exploration has begun on ascertaining the lithium prospectivity of the Bynoe pegmatites. • The NT geological Survey undertook a regional appraisal of the field, which was published in 2004 (NTGS Report 16, Frater 2004).
Geology	<ul style="list-style-type: none"> • <i>Deposit type, geological setting and style of mineralisation.</i> 	<ul style="list-style-type: none"> • The tenement sampled covers the northern portion of a swarm of complex zoned rare element pegmatite field, which comprises the 55km long by 10km wide West Arm – Mt Finnis pegmatite belt (Bynoe Pegmatite Field; NTGS Report 16). The main pegmatites in this belt include Mt Finnis, Grants, BP33, Hang Gong and Sandras • The Finnis pegmatites have intruded early Proterozoic shales, siltstones and schists of the Burrell Creek Formation which lies on the northwest margin of the Pine Creek Geosyncline. To the south and west are the granitoid plutons and pegmatitic granite stocks of the



Criteria	JORC Code explanation	Commentary
		<p>Litchfield Complex. The source of the fluids that have formed the intruding pegmatites is generally accepted as being the Two Sisters Granite to the west of the belt, and which probably underlies the entire area at depths of 5-10 km.</p> <ul style="list-style-type: none"> Lithium mineralisation has been identified as occurring at Bilato's (Picketts), Saffums 1 (amblygonite) and more recently at Grants, BP33 and Sandras.
<p>Drill hole Information</p>	<ul style="list-style-type: none"> A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length. If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case. 	<ul style="list-style-type: none"> Refer Drilling Summary Table (Appendix 1) and Figures in Report and previous ASX releases.
<p>Data aggregation methods</p>	<ul style="list-style-type: none"> In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated. Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated. 	<ul style="list-style-type: none"> Mean grades for intercepts in Appendix 1 have been calculated on a 0.4% Li₂O lower cut-off grade with no upper cut-off grade applied. A 3m dilution is allowed.
<p>Relationship between</p>	<ul style="list-style-type: none"> These relationships are particularly important in the reporting of Exploration Results. 	<ul style="list-style-type: none"> The true width is roughly 70% of the intercept width based on hole dip and the sub-vertical nature of the pegmatite body.



Criteria	JORC Code explanation	Commentary
mineralisation widths and intercept lengths	<ul style="list-style-type: none"> If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known'). 	
Diagrams	<ul style="list-style-type: none"> Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views. 	<ul style="list-style-type: none"> See figures in report
Balanced reporting	<ul style="list-style-type: none"> Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results. 	<ul style="list-style-type: none"> All intersections have been reported and are considered representative. Refer table of drill hole collars in report.
Other substantive exploration data	<ul style="list-style-type: none"> Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances. 	<ul style="list-style-type: none"> All meaningful and material data reported.
Further work	<ul style="list-style-type: none"> The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive. 	<ul style="list-style-type: none"> Petrological samples have been submitted for geological assessment. Data will be populated into a centralized database. An independent QAQC review of the database will be carried out. Core will commission a study into the relationship between milling time, Li grade and Fe contamination to establish if appropriate procedures can be introduced at the laboratory for future programs where Fe correction will be necessary. This may also allow Core to retrospectively correct existing Fe data from Grants that was used in this Resource Estimate.



Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in the preceding sections also apply to this section.)

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. 	<ul style="list-style-type: none"> A data check of source assay data and survey data has been undertaken and compared to the database. No translation issues have been identified although some absent values have been stored in the database as zeros. MP personnel have validated the database during the interpretation of the mineralisation, with any drillholes containing dubious data excluded from the MRE. All RAB and AC holes have been excluded from the MRE. Data validation processes are in place and run upon import into the database to be used for the MRE in Datamine by Mining Plus. A topography to collar check has been completed alongside standard duplicate intervals and overlapping interval checks.
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"> Jason McNamara of MP undertook a site visit on 18 December 2016. A review of the drilling, logging, sampling and QAQC procedures has been undertaken. The implementation of a referential SQL database is highly recommended.
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. 	<ul style="list-style-type: none"> The geological interpretation is considered robust due to the nature of the mineralisation. The mineralisation is hosted within the pegmatite. The locations of the hangingwall and footwall of the pegmatite intrusion are well understood with drilling which penetrates both contacts. Diamond drill core and reverse circulation drillholes have been used in the MRE. Lithology, structure, alteration and mineralisation data has been used to generate the mineralisation model. The primary assumption is that the mineralisation is hosted within structurally controlled pegmatite, which is considered robust.



Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> • Due to the close spaced nature of the drilling data and the consistency of the structure conveyed by this dataset, no alternative interpretations have been considered. • The mineralisation interpretation is based on a lithium cut-off grade of 2300 Li ppm, hosted within the pegmatite. • The pegmatite structure is considered to be continuous over the length of the deposit. The mineralisation terminates approximately 100 m from the northern extent of the modelled pegmatite. A single grade domain has been identified and estimated using a hard boundary.
Dimensions	<ul style="list-style-type: none"> • <i>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</i> 	<ul style="list-style-type: none"> • The lithium is hosted within a mineralised pegmatite structure which strikes NNE over a length of approximately 250 to 300m and averages 30m in width. • The pegmatite is sub-vertical and has been intersected at depth to approximately 200m below surface. • Whilst continuous, the pegmatite body does appear to narrow to the north, south and at depth.
Estimation and Modelling techniques	<ul style="list-style-type: none"> • <i>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.</i> • <i>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</i> • <i>The assumptions made regarding recovery of by-products.</i> • <i>Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).</i> • <i>In the case of block model interpolation, the block size in relation to</i> 	<ul style="list-style-type: none"> • Grade estimation of lithium has been completed using Ordinary Kriging (OK) into 2 mineralisation domains using Datamine Studio RM software. Variography has been undertaken on the top-cut grade domain composites. Variogram orientations are largely controlled by the strike and dip of the mineralisation. • No check estimates or previous estimates are available for comparative analysis. • No assumptions have been made regarding recovery of any by-products. • Fe ppm has been estimated; however it is known that an Fe contamination issue exists due to the use of steel drill rods and steel sample preparation machinery. No other deleterious elements have been considered and therefore estimated for this deposit. • The data spacing varies considerably within the deposit ranging from



Criteria	JORC Code explanation	Commentary
	<p><i>the average sample spacing and the search employed.</i></p> <ul style="list-style-type: none"> • <i>Any assumptions behind modelling of selective mining units.</i> • <i>Any assumptions about correlation between variables.</i> • <i>Description of how the geological interpretation was used to control the resource estimates.</i> • <i>Discussion of basis for using or not using grade cutting or capping.</i> • <i>The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.</i> 	<p>surface drillholes at an approximate spacing of 50 m by 50 m, to deep exploration drillholes at spacings greater than 80 m by 80 m. A parent block size of 5 m (X) by 25 m (Y) by 10 m (Z) with a sub-block size of 1.25 m (X) by 6.25 m (Y) by 2.5 m (Z) has been used to define the mineralisation, with the lithium estimated at the parent block scale.</p> <ul style="list-style-type: none"> ○ Pass 1 estimation has been undertaken using a minimum of 6 and a maximum of 35 samples into a search ellipse set at the half the variogram range, with a maximum of two samples from each drillhole allowed. ○ Pass 2 estimation has been undertaken using a minimum of 6 and a maximum of 35 samples into a search ellipse at the variogram range, with a maximum of two samples from each drillhole allowed. ○ Pass 3 estimation has been undertaken using a minimum of 2 and a maximum of 35 samples into a search ellipse one and a half times the variogram range. <ul style="list-style-type: none"> • No selective mining units are assumed in this estimate. • Tantalum, tin and iron have been estimated within the lithium mineralised domain however, no correlation between variables has been assumed. • The mineralisation and geological wireframes have been used to flag the drillhole intercepts in the drillhole file. The flagged intercepts have then been used to create composites in Datamine Studio RM. The composite length is 1 m in all data. • The influence of extreme sample distribution outliers in the composited data has been reduced by top-cutting where required. The top-cut levels have been determined using a combination of histograms, log probability and mean variance plots. Top-cuts have been reviewed and applied for the grouped estimation domains. The application of the top-cuts has not resulted in a significant decrease in the mean grade from the un-cut to top-cut data.



Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> Model validation has been carried out, including visual comparison between declustered composites and estimated blocks; check for negative or absent grades; statistical comparison against the input drillhole data and graphical plots.
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. 	<ul style="list-style-type: none"> The 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. 	<ul style="list-style-type: none"> For the reporting of the Mineral Resource Estimate, a 1.0 Li₂O% cut-off has been used after consultation with Core Exploration.
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. 	<ul style="list-style-type: none"> A whittle pit optimisation has been run in order to generate a pit shell wireframe for reporting purposes. The mining assumptions/parameters applied to the optimisation are <ul style="list-style-type: none"> Mining Recovery – 95% Mining Dilution – 5% Mining Cost/tonne – AUD\$3.95 Processing Cost/tonne – AUD\$34.61 Li₂O% Price/tonne – AUD\$200
Metallurgical factors or assumptions	<ul style="list-style-type: none"> 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. 	<ul style="list-style-type: none"> No metallurgical recoveries have been applied since the material is expected to be shipped as DSO.
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, 	<ul style="list-style-type: none"> No environmental assumptions have been made during the MRE.



Criteria	JORC Code explanation	Commentary
	<p><i>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.</i></p>	
Bulk density	<ul style="list-style-type: none"> <i>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.</i> <i>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.</i> <i>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</i> 	<ul style="list-style-type: none"> Bulk density values have been applied based on the degree of oxidation and rocktype which have both been coded into the model. Water immersion and pycnometer density determinations have been undertaken by NAL on samples within 4 diamond core drillholes. Analysis of this data was used in the determination of the fresh pegmatite density for assignment in the Mineral Resource estimate.
Classification	<ul style="list-style-type: none"> <i>The basis for the classification of the Mineral Resources into varying confidence categories.</i> <i>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).</i> <i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i> 	<ul style="list-style-type: none"> The resource classification has been applied to the MR estimate based on the drilling data spacing, grade and geological continuity, and data integrity. The classification takes into account the relative contributions of geological and data quality and confidence, as well as grade confidence and continuity. The classification reflects the view of the Competent Person.
Audits or reviews	<ul style="list-style-type: none"> <i>The results of any audits or reviews of Mineral Resource estimates.</i> 	<ul style="list-style-type: none"> This Mineral Resource estimate has not been audited by an external party.
Discussion of relative accuracy/confidence	<ul style="list-style-type: none"> <i>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</i> 	<ul style="list-style-type: none"> 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. The statement relates to a local estimate of tonnes and grade within the pit shell at a cut-off of 1.0 Li₂O%. The statement relates to global estimates of tonnes and grade. No production records have been supplied as part of the scope of



Criteria	JORC Code explanation	Commentary
	<p><i>confidence of the estimate.</i></p> <ul style="list-style-type: none"> <i>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.</i> <i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i> 	<p>works, therefore no comparison or reconciliation has been made.</p>