



**ASX: CXO** 

# **ASX ANNOUNCEMENT**

11th April 2018

# Outstanding wide and high-grade lithium intersection from BP33 prospect at Finniss Lithium Project

#### **HIGHLIGHTS**

- Wide and high-grade lithium assays returned from drilling at BP33 prospect delivers spodumene intersection amongst the best in Australia:
  - 75m @ 1.68% Li₂O from 210m; including:
    - 55m @ 1.97% Li<sub>2</sub>O from 230;
    - 23m @ 2.07% Li<sub>2</sub>O from 262m.
- Drill hole still in high-grade spodumene pegmatite at end of hole, with last metre grading 2.41% Li<sub>2</sub>O
- This 75m intersection is the widest interval of spodumene pegmatite ever drilled in the NT and one of the best lithium exploration drilling results in Australia
- High-grade spodumene pegmatite body at BP33 open along strike to the south from this drillhole toward BP32 Prospect
- Drilling at BP33 aimed at establishing a maiden Resource estimate in May, to add to the Company's lithium resource inventory at the Finniss Project
- Drilling to re-commence to test BP33 and adjacent BP32 and BP32W prospects upon commencement of the dry season in Q2 2018





Emerging Australian lithium developer Core Exploration Ltd (ASX: CXO) ("Core" or the "Company") is pleased to announce that assays results have been returned for the 86m continuous intersection of spodumene pegmatite that was drilled at the BP33 Prospect in February (refer ASX Announcement 19/02/2018). The BP33 Prospect lies within Core's 100%-owned Finniss Lithium Project near Darwin in the Northern Territory, and importantly, is only 5kms away from the high-grade Grants deposit which Core expects to become its first lithium production asset.

The gross continuous mineralised interval at 0.4% Li<sub>2</sub>O cut-off and 3m dilution is 75m @ 1.68% Li<sub>2</sub>O from 210m, including:

- 55m @ 1.97 Li<sub>2</sub>O from 230; and
- 23m @ 2.07% Li<sub>2</sub>O from 262m.

Core's Managing Director, Stephen Biggins said:

"We continue to be very encouraged with how BP33 is evolving, and expect it has potential to add considerable mine life to our Finniss Project. The results reported today are amongst the best spodumene intersections in Australia, and greatly increase our confidence that Core's Finniss Project near Darwin has potential to become a long life and high margin lithium operation".

This 75m mineralised lithium intersection is the widest interval of spodumene pegmatite ever drilled in the NT and the last metre of the drillhole was still in very high grade spodumene and assayed 2.41% Li<sub>2</sub>O.

These new results from BP33 are among the best spodumene intersections ever recorded in Australia, and significantly upgrade the BP33 prospect.

Pegmatite was intersected from 199m downhole in drill hole FRCD007 and contained high average concentrations of spodumene from 210m to the end of hole at 285m. The new assays align well with visual estimates of between 15%-20% spodumene.

Some intervals contain significantly higher levels of spodumene, comprising a very high proportion of the whole rock composition of the pegmatite (Photo 1). Assay results for these intervals include  $55m @ 2.0\% Li_2O$  from 230m.







Photo 1. Coarse green spodumene comprising up to 30%-40% of the pegmatite.

Drilling of FRCD007 was terminated because of the slow rate of penetration in the hard pegmatite and deteriorating vehicle access conditions as the wet season peaked. There are no visual signs in the lower part of the drill core to suggest the hole is close to the margin of the pegmatite-wallrock contact. The bottom 55m of the drillhole assayed 2.0% Li<sub>2</sub>O and the last metre interval is mineralised with very high grade spodumene and assayed 2.41% Li<sub>2</sub>O.

The pegmatite body is therefore open to the east by an unknown distance. The minimum true width is at least 40m, based on the assumption that the pegmatite dips at 80° to the east (Figures 1-2), which is considered reasonable given the vertical continuity demonstrated by other drilling at BP33.

Results from the recent diamond and RC drilling highlight that the BP33 pegmatite is open at depth along strike to the south under cover (Figure 1 and Figure 3).

As the drill hole ended within the spodumene pegmatite body, further drilling collared to the east at BP33 will be required to define the geometry of this pegmatite body. Core is currently planning an extension drill program (to be followed by infill drilling) aimed at increasing the size of the resource that is currently being estimated for BP33.

Adjacent pegmatites at the BP32 and BP32W prospects, in the direction of the southerly extension from BP33, have been identified in historic trenching and verified more recently in





shallow RAB drilling by Core. However, no RC or diamond drilling has been conducted yet at the nearby BP32 and BP32W Prospects.

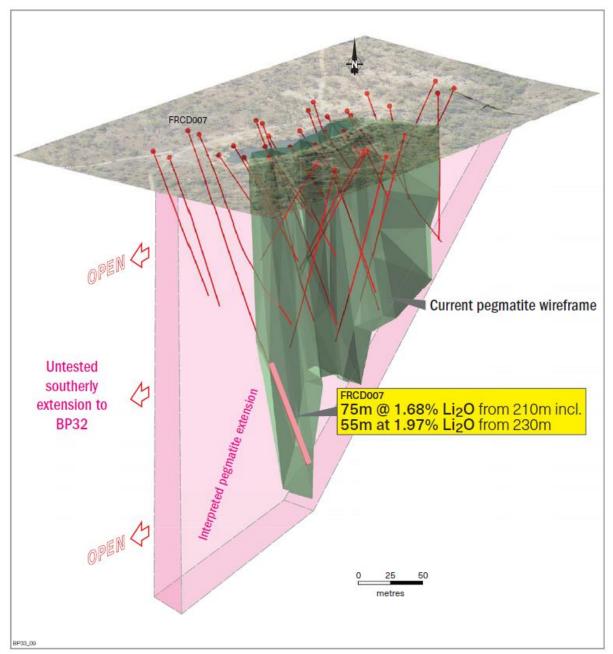


Figure 1. Three-dimensional model showing the existing mineralised pegmatite wireframe defined from drill intersections and the down-plunge and along-strike projections at southern BP33.





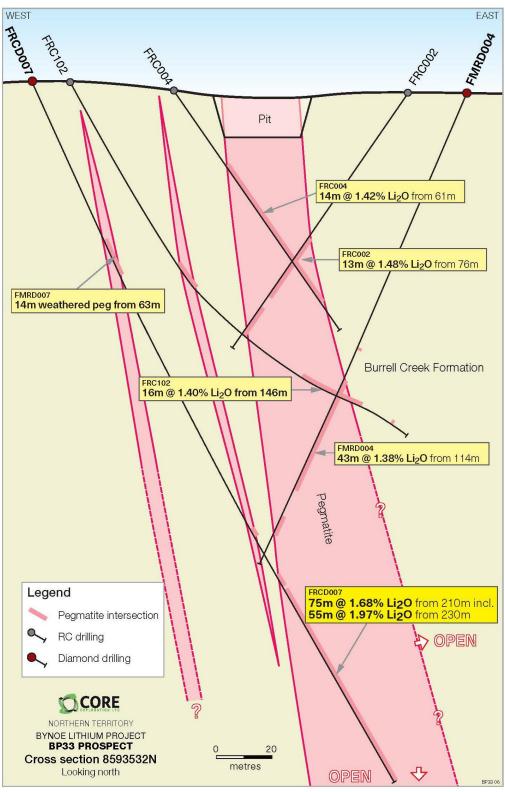


Figure 2. Drill cross-section at southern BP33.





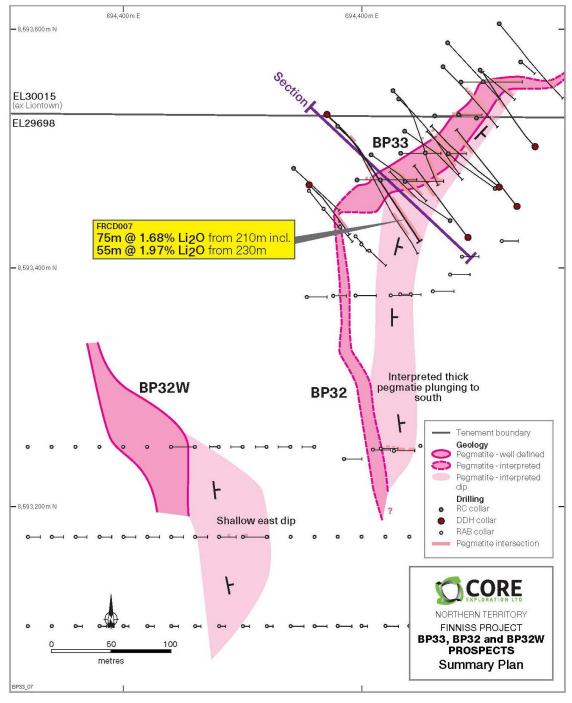


Figure 3. BP33, BP32 and BP32W prospects, interpreted geology and location plan of Core's drilling.





#### **Next Steps at BP33**

Core will process the various data from BP33 and estimate a resource, which is expected to be released in May.

The recently completed diamond drill program at BP33 will also provide valuable information that may be used for metallurgical testwork at BP33.

Core is planning further drilling at BP33, as well exploratory holes at both the BP32 and BP32W prospects, as soon as the 2018 dry season commences (expected Q2 2018). The drilling is designed to test the continuity and grade of these pegmatites adjacent to and along strike from the high-grade BP33 and add to the initial resource estimate at BP33.

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Hole No.	Grid Co-ord	linates GDA94	Survey Data		Significant intercepts					
	East	North	RL (m)	Azi. (°)	Dip (°)	Depth (m)	From (m)	To (m)	Interval (m)	Grade (Li₂O %)
FRCD007	694369.3	8593528.3	17.2	135	-65	285	210	285	75	1.68%
							Inc. 230 Inc.	285	55	1.97%
							262	285	23	2.07%

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

Table 1. Drill hole data for the diamond core drilling at BP33 referred to in this report.

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) as Managing Director 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. The report includes results that have previously recently been released under JORC 2012 by Core on 23/09/2016 as "High Grade Spodumene Confirms Significant





Lithium Discovery", 16/11/2017 as "Widest Spodumene Pegmatite Intersections at BP33", 27/11/2017 as "Wide High-Grade Lithium Drill Intersections at BP33", 13/12/2017 as "New Assays Extend Intersection to  $62m \ @ \ 1.24\% \ \text{Li}_2\text{O}"$  and 14/02/2018 as "BP33 Extended by High Grade Lithium Intersections".

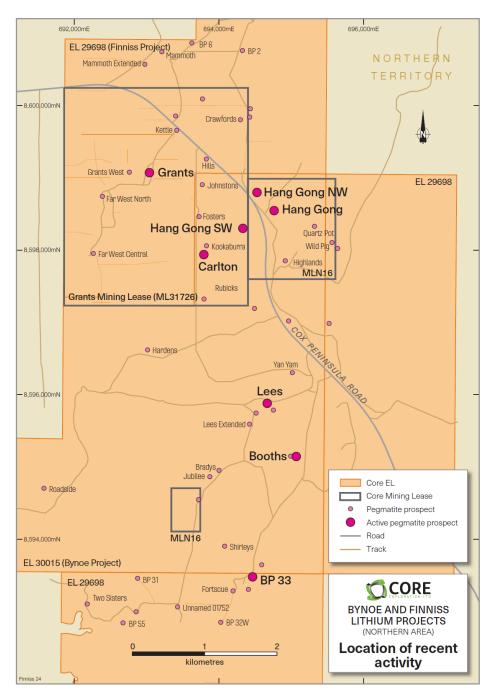


Figure 4. Recent exploration and drilling at pegmatite prospects within Bynoe and Finniss Lithium Projects, near Darwin in the NT.





## JORC Code, 2012 Edition –

## **Table 1 Report Template**

## **Section 1 Sampling Techniques and Data**

(Criteria in this section apply to all succeeding sections)

Criteria	JORC Code Explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (e.g. 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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (e.g. '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 (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>Drilling geology and assay results reported herein relate to diamond drill hole FRCD007 at the BP33 Prospect on EL29698.</li> <li>FRCD007 was drilled during January and February 2018</li> <li>The azimuth of Core's drill holes is oriented approximately perpendicular to the interpreted strike of the mineralised trend. Holes are oblique in a dip sense (see Section).</li> <li>The companies DDH core samples are quarter core, cut longitudinally along a consistent line between 0.3m and 1m in length.</li> </ul>
Drilling techniques	• Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).	<ul> <li>Drilling technique used by Core and reported herein comprises a standard track-mounted DDH rig using HQ core assembly (triple tube), drilling muds or water as required, wireline setup. The rig is operated by WDA Drilling Services, Humpty Doo NT.</li> </ul>
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> </ul>	Sample recoveries are visually estimated and recorded by Core for each metre.





	<ul> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	
Logging	<ul> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>Standard sample logging procedures are utilised by Core, including logging codes for lithology, minerals, weathering etc.</li> <li>Geology of the drill core is logged on a geological basis with attention to main rock forming minerals and textures within the pegmatite intersections.</li> <li>Pegmatite sections are also checked under a single-beam UV light for spodumene identification on an ad hoc basis. These only provide indicative qualitative information.</li> <li>Estimation of mineral modal composition, including spodumene, is done visually. This will then be correlated to assay data when they are available.</li> </ul>
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/secondhalf sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	Quarter Drill Core sample intervals were constrained by geology, alteration or structural boundaries, intervals varied between a minimum of 0.3 metres to a maximum of 1 m.
Quality of assay data and laboratory	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc., the</li> </ul>	<ul> <li>Sample prep occurs at North Australian Laboratories, Pine Creek, NT.</li> <li>DDH samples are crushed to a nominal size to fit into mills.</li> <li>DDH crushed material is then prepared by pulverising in Steel Ring Mill to</li> </ul>





tests	parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.  Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	<ul> <li>95% passing -100 um.</li> <li>A 0.3 g sub-sample is then digested in a standard 4 acid mixture and analysed via ICP-MS and ICP-OES methods for the following elements: Li, Cs, Rb, Sr, Nb, Sn, Ta, U, As, K, P and Fe. The lower and upper detection range for Li by this method are 1 ppm and 5000 ppm respectively.</li> <li>For any sample reporting above 3000 ppm Li, a trigger is set to process that sample via a fusion method. For this, a 0.3 g sub-sample is fused with a Sodium Peroxide Fusion flux and then digested in 10% hydrochloric acid. ICP-OES is used for the following elements: Li, P and Fe. The lower and upper detection range for Li by this method are 10 ppm and 20,000 ppm respectively.</li> <li>A barren flush is inserted between samples at the laboratory.</li> <li>The laboratory has a regime of 1 in 8 control subsamples.</li> <li>NAL utilise standard internal quality control measures including the use of Certified Lithium Standards and duplicates/repeats.</li> <li>CXO-implemented quality control procedures include: <ul> <li>One in 20 certified Lithium ore standards are used for this drilling.</li> <li>Owing to the coarse nature of the spodumene and limited mass of drill core available, no duplicates are taken for this hole.</li> <li>One in 20 Blanks were used in this program.</li> </ul> </li> <li>External laboratory checks will be completed in due course.</li> </ul>
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>Core's experienced project geologists are supervised by Core's Exploration Manager.</li> <li>All field data is entered into excel spreadsheets (supported by look-up tables) at site and subsequently validated as it is imported into the centralized CXO Access database.</li> <li>Hard copies of survey and sampling data are stored in the local office and electronic data is stored on the Core server.</li> <li>Metallic Lithium percent was multiplied by a conversion factor of 2.15283/10000 to report Li ppm as Li<sub>2</sub>O%</li> </ul>





Location of data points	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	Core's Drilling: All coordinate information was collected using hand held GPS utilizing GDA 94, Zone 52. RC hole traces were surveyed by north seeking Champ gyro tool (multishot mode at 5m and 10m intervals) operated by the drillers and the collar is oriented by a line of sight compass and a clinometer. Downhole Camera shots are also taken on an ad hoc basis during drilling to ensure the holes are kept relatively straight. Drill hole deviation has been excellent for DDH holes, and is acceptable for resource drilling.
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>Drill collars are spaced approximately 50m apart along the northeasterly trending pegmatite body of BP33.</li> <li>This data may be used to support a resource.</li> <li>Refer to figures in report.</li> <li>Sample compositing reported here are calculated length weighted averages of the assays. Length weighted averages are acceptable method because the density of the rock (pegmatite) is constant.</li> </ul>
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	Core's drilling is oriented perpendicular to the interpreted strike of mineralization (pegmatite body) as mapped or predicted by the geological model. In some areas the rocks may trend at an angle to the drill traverse. Because of the dip of the hole, drill intersections are apparent thicknesses and overall geological context is needed to estimate true thicknesses.
Sample security	The measures taken to ensure sample security.	Company geologist supervises all sampling and subsequent storage in field and transport to point of dispatch to assay laboratories.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	Audits or reviews of the sampling techniques were not undertaken





### **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> <li>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.</li> <li>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.</li> </ul>	<ul> <li>Drilling by Core at BP33 on what is now ELs 29698 and 30015 that are 100% owned by Core, the latter via a recent sale agreement (ASX Release 14 Sept 2017).</li> <li>The area being drilled comprises Vacant Crown land</li> <li>There are no registered heritage sites covering the areas being drilled.</li> <li>The tenements are in good standing with the NT DPIR Titles Division.</li> </ul>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>The history of mining in the Bynoe Harbour – Middle Arm area dates back to 1886 when tin was discovered by Mr. C Clark.</li> <li>By 1890 the Leviathan Mine and the Annie Mine were discovered and worked discontinuously until 1902.</li> <li>In 1903 the Hang Gong Wheel of Fortune was found and 109 tons of tin concentrates were produced in 1905. In 1906, the mine produced 80 tons of concentrates, but it was exhausted and closed down the following year after a total of 189 tons of concentrates had been won.</li> <li>By 1909 activity was limited to Leviathan and Bells Mona mines in the area with little activity in the period 1907 to 1909.</li> <li>Renewed activities in 1925 coincided with the granting of exclusive prospecting licences over an area of 26 square miles in the Bynoe Harbour – West Arm section but once again nothing eventuated.</li> <li>The records of production for many mines are not complete, and in 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.</li> </ul>





		<ul> <li>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.</li> <li>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. An abandoned open cut to 10m depth remains at BP33.</li> <li>They then tributed the project out to a company named Fieldcorp Pty Ltd who operated it between 1991 and 1995.</li> <li>In 1996, Julia Corp drilled RC holes into representative pegmatites in the field, but like all of their predecessors, did not assay for Li.</li> <li>Since 1996 the field has been defunct until recently when exploration has begun on ascertaining the lithium prospectivity of the Bynoe pegmatites.</li> <li>The NT geological Survey undertook a regional appraisal of the field, which was published in 2004 (NTGS Report 16, Frater 2004).</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>The tenements cover the northern portion of a swarm of complex zoned 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</li> <li>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.</li> <li>Lithium mineralisation has been identified as occurring at Bilato's (Picketts),</li> </ul>





		Saffums 1 (amblygonite) and more recently at Grants, BP33 and Sandras.		
Drill hole Information	<ul> <li>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> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>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.</li> </ul>	Refer Figures and Tables in Report.		
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>Sample compositing reported here are calculated length weighted average of the assays. Length weighted averages are acceptable method because the density of the rock (pegmatite) is constant.</li> <li>0.3% Li<sub>2</sub>O was used as lower cut off grades for compositing with allowance for including up to 3 m of consecutive drill material of below cut-off grade (internal dilution).</li> </ul>		
Relationship between mineralisation widths and intercept	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not</li> </ul>	The oblique nature of drillholes with respect to geology is discussed above.  Because of the dip of the hole, drill intersections are apparent thicknesses and overall geological context is needed to estimate true thicknesses. Referigures in report		





lengths	known').	
Diagrams	<ul> <li>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.</li> </ul>	See figures in release
Balanced reporting	<ul> <li>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.</li> </ul>	Exploration results are discussed in the report and shown in figures.
Other substantive exploration data	<ul> <li>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.</li> </ul>	<ul> <li>See release details.</li> <li>All meaningful and material data reported.</li> </ul>
Further work	<ul> <li>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>Core has completed a Diamond core drilling program at BP33 in February, as outlined in this report.</li> <li>In the coming dry season, further RAB drilling, RC and Diamond core drilling is on-going or planned in this area to define additional targets at BP33 and extensions to the north and south.</li> </ul>