



ASX ANNOUNCEMENT

ASX: CXO

3rd October 2016

Highest Grade Spodumene Intersections Ever Drilled in the NT Discovered in Second Pegmatite at Finniss Lithium Project

HIGHLIGHTS

- The highest lithium grade intersections ever drilled in the NT at the Grants Prospect which is only the second pegmatite drilled in Core's maiden drilling program at the Finniss Lithium Project
- Results from assay to date from the Grants Prospect include:
 - **49m @ 1.78% Li₂O from 71m (FRC007)** including:
 - 6m @ 2.26% Li₂O from 97m
 - 9m @ 2.05% Li₂O from 110m
- This follows reporting of a high grade lithium discovery last week at BP33 which is located only ~5km away from Grants. BP33 included:
 - **34m @ 1.60% Li₂O from 71m (FRC003)**, including:
 - 7m @ 2.02 % Li₂O from 79m
 - 4m @ 2.00% Li₂O from 93m
 - 3m @ 2.00% Li₂O from 101m
- Significant spodumene mineralisation has been observed in two further drillholes at Grants for which assay results are awaited as well as at other prospects recently drilled by Core in its first RC drilling campaign at Finniss
- The high grade spodumene intersection at Grants, together with the previous high grade results from the BP33 prospect, confirm Core's Finniss Lithium Project as a major new lithium discovery
- Further lithium assays will be reported in the coming weeks



Core Exploration Ltd (ASX: CXO) (“Core” or the “Company”) is pleased to announce the highest ever lithium drill intersection in the Northern Territory from the Grants Prospect at the Company’s Finniss Lithium Project (“Finniss”), including **49m @ 1.78% Li₂O** from 71m. The Grants Prospect is the second pegmatite drilled during the Company’s maiden lithium drilling program at Finniss which is testing a number of pegmatite drill targets.

The high grade spodumene intersections at the Grants prospect, together with the previously announced high grade intersections from the BP33 prospect, confirms Finniss as a major new discovery of high grade lithium.

Core holds the largest lithium tenure position in the NT, including the highest grade lithium drill intersections, the largest historic pegmatite mine and at least another 25 other recorded pegmatites mines in the Northern territory.

The scale of some Finniss pegmatites are comparable to the scale of pegmatites hosting large lithium resources in the Pilbara region of Western Australia.

Grants Prospect Results

The second prospect drilled by Core in its maiden drilling program at the Finniss Lithium Project was the Grants prospect, where six holes were drilled. Assays have been received from the first four holes drilled at Grants.

The best result was **1.78% Li₂O over 49m**, containing zones of high grade spodumene mineralisation of up to **9m @ 2.05% Li₂O** (drill hole FRC007). Other holes at Grants also returned zones of high grade lithium as listed in Table 1 below.

All holes hit pegmatite intersections over broad intervals of 30 – 50 metre widths (approximately 20-30m true width), containing high grades of lithium as spodumene mineralisation (Table 1 and Figures 1-3).

Results are pending from drillholes FRC0017 and FRC0018 at the Grants Prospect in which substantial intersections of spodumene mineralisation were also observed.

The Grants Pegmatite outcrops for over 350m at surface and is consistently intersected in all drill sections and is open to the north and south.

Grants is ideally located less than 1km from Highway 34 which connects the Finniss Lithium Project by high quality sealed road to the Port of Darwin. Core’s high grade drill intersections at Grants are located less than 25km from the Port of Darwin.

BP33 Prospect Results

As recently announced, the first prospect drilled by Core at Finniss was the BP33 prospect, where four holes were drilled with all holes hitting pegmatite intersections over broad 40 –



60 metres (approximately 30-35m true width), containing high grades of lithium as spodumene mineralisation (ASX: 23/09/2016).

The best result was **1.60% Li₂O over 34m**, containing zones of high grade spodumene mineralisation of up to **7m @ 2.02% Li₂O** (drill hole FRC003). The other three holes at BP33 each returned zones of high grade lithium.

Other Prospects Drilled

Core has recently completed its initial 2,000m RC drilling program which, in addition to testing BP33 and Grants, also tested a number of initial pegmatite drill targets at Finniss (Figure 3).

Preliminary observations indicate substantial spodumene mineralisation has also been intersected in other drillholes in this first drill program. The remaining assays from this RC drilling campaign are expected from the laboratory over coming weeks, and will be released to the market in due course.

Significance of Grants and BP33 Discoveries

The discovery of high grade zones of lithium with this current drill program is very significant for Core given the scale of some of the new pegmatites identified by the Company's current field programs are directly comparable to the scale of pegmatites hosting large lithium resources in Western Australia.

Core's Finniss Lithium Project comprises a large tenement position of 480km², has substantial infrastructure advantages being close to grid power, gas and rail infrastructure and within easy trucking distance by sealed road to the multi-user port facility at Darwin Port - Australia's nearest port to Asia.

Hole No.	E	N	Depth(m)		From(m)	To(m)	Interval (m)	Li ₂ O(%)
FRC005	693024	8599087	66		Hole abandoned - no significant assays			
FRC006	693002	8599086	131		71.0	120.0	49.0	1.78
				Inc.	97.0	103.0	6.0	2.26
				Inc.	110.0	119.0	9.0	2.05
FRC007	692996	8598992	76		62.0	76.0	14.0	1.22
FRC008	693016	8599170	118		84.0	104.0	20.0	1.19
				Inc.	96.0	98.0	2.0	2.14

Table 1. Lithium assay grades in all RC drillholes at Grants Prospect, Finniss Lithium Project NT. All holes drilled at 55 dip toward 90 azimuth and 30m RL. 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 2.0 metres.



Commenting on commencement of drilling, Core’s Managing Director, Stephen Biggins said:

“While we were extremely pleased with the results from BP33, the results from the Grants Prospect were even better, returning the highest grade spodumene intersections ever drilled in the NT confirming Finnis as a significant new lithium discovery.

The presence of high grade lithium over wide zones on multiple pegmatites located in close proximity to one another, combined with Core’s large tenement holding and the projects close proximity to key infrastructure such as the Port of Darwin provide Core with a significant advantage when considering the potential development of Finnis.”

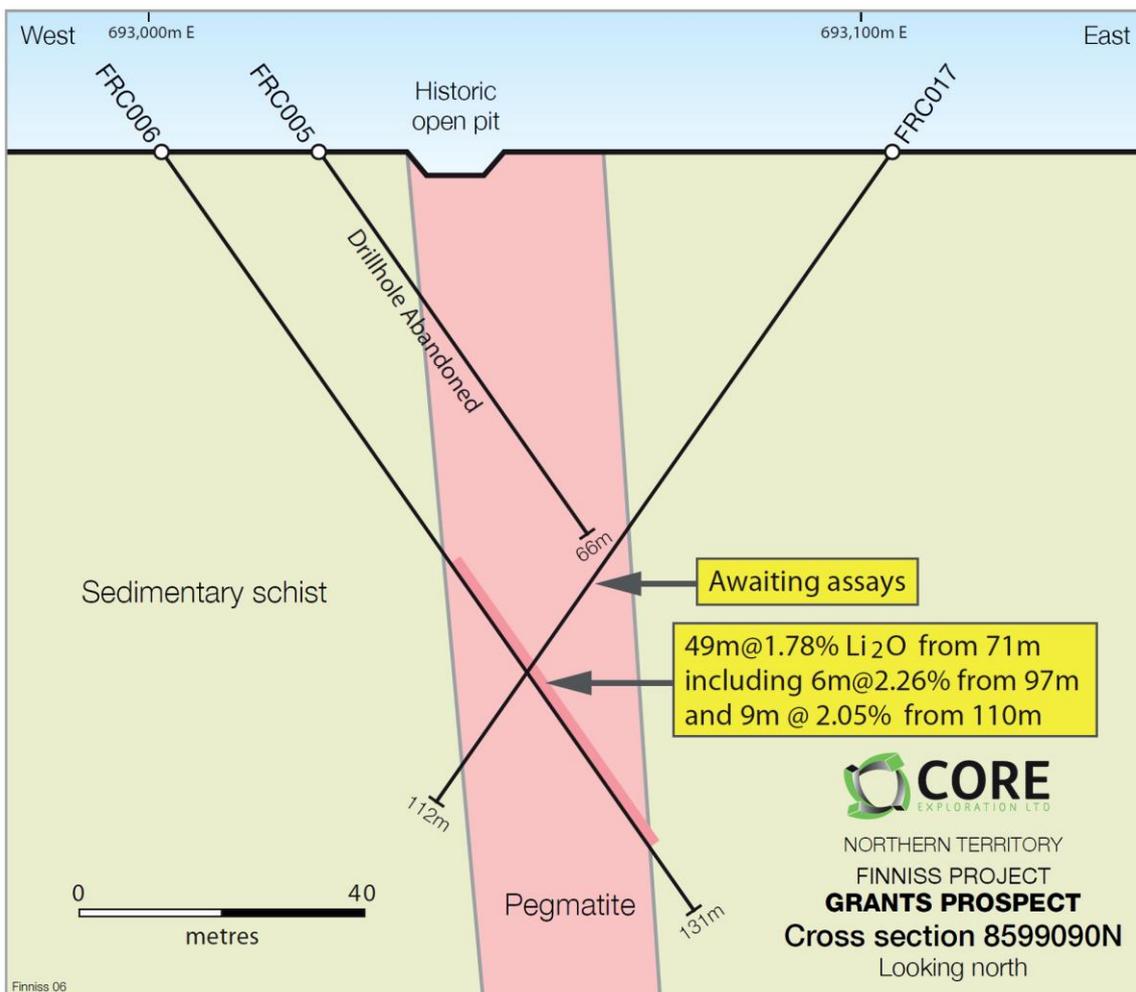


Figure 1. Cross section looking NE of Grants Pegmatite with recent RC drilling.

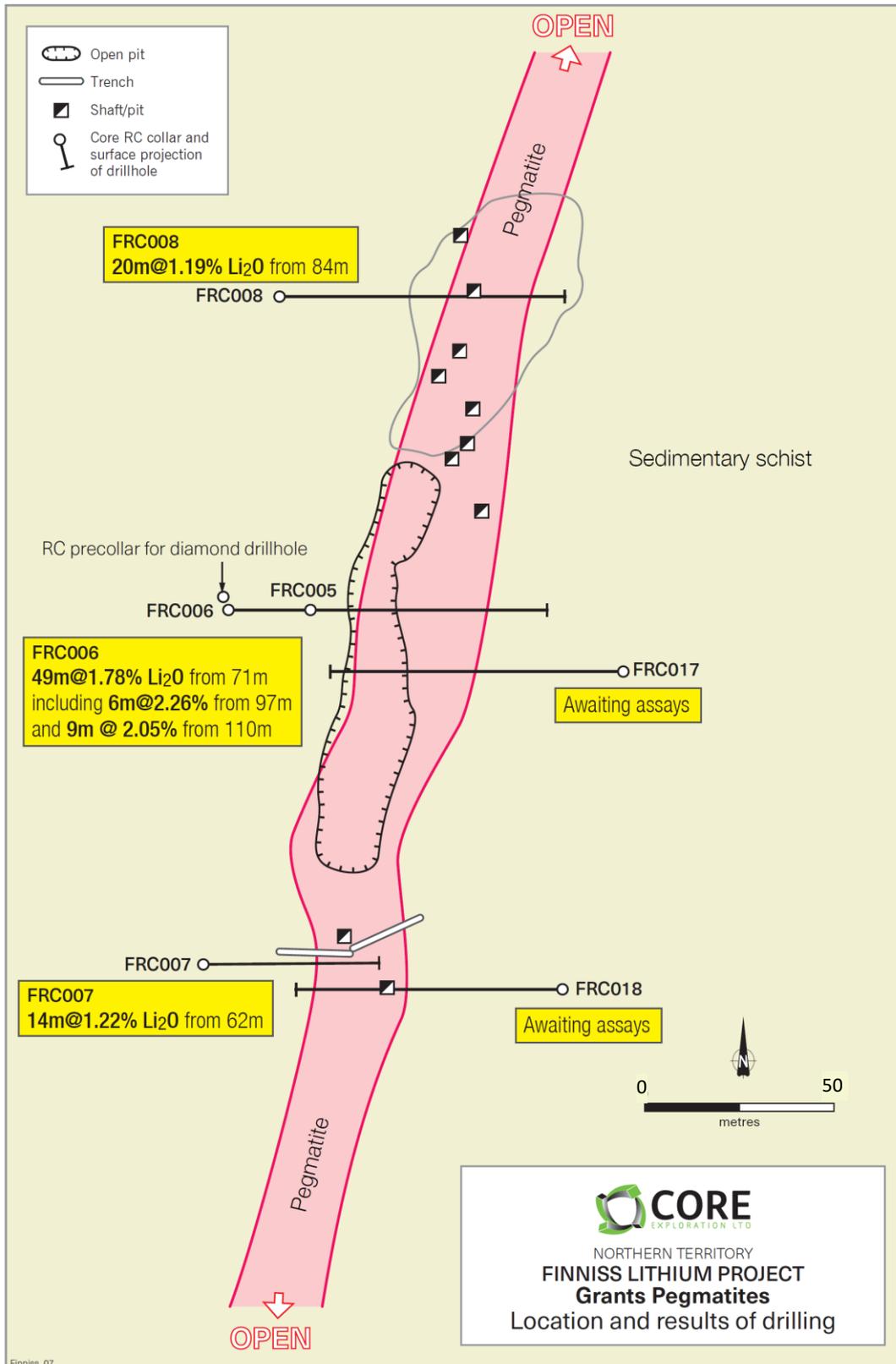


Figure 2. Grants Pegmatite showing Core's RC drilling and historic mining and trenching, Finnis Lithium Project, NT.

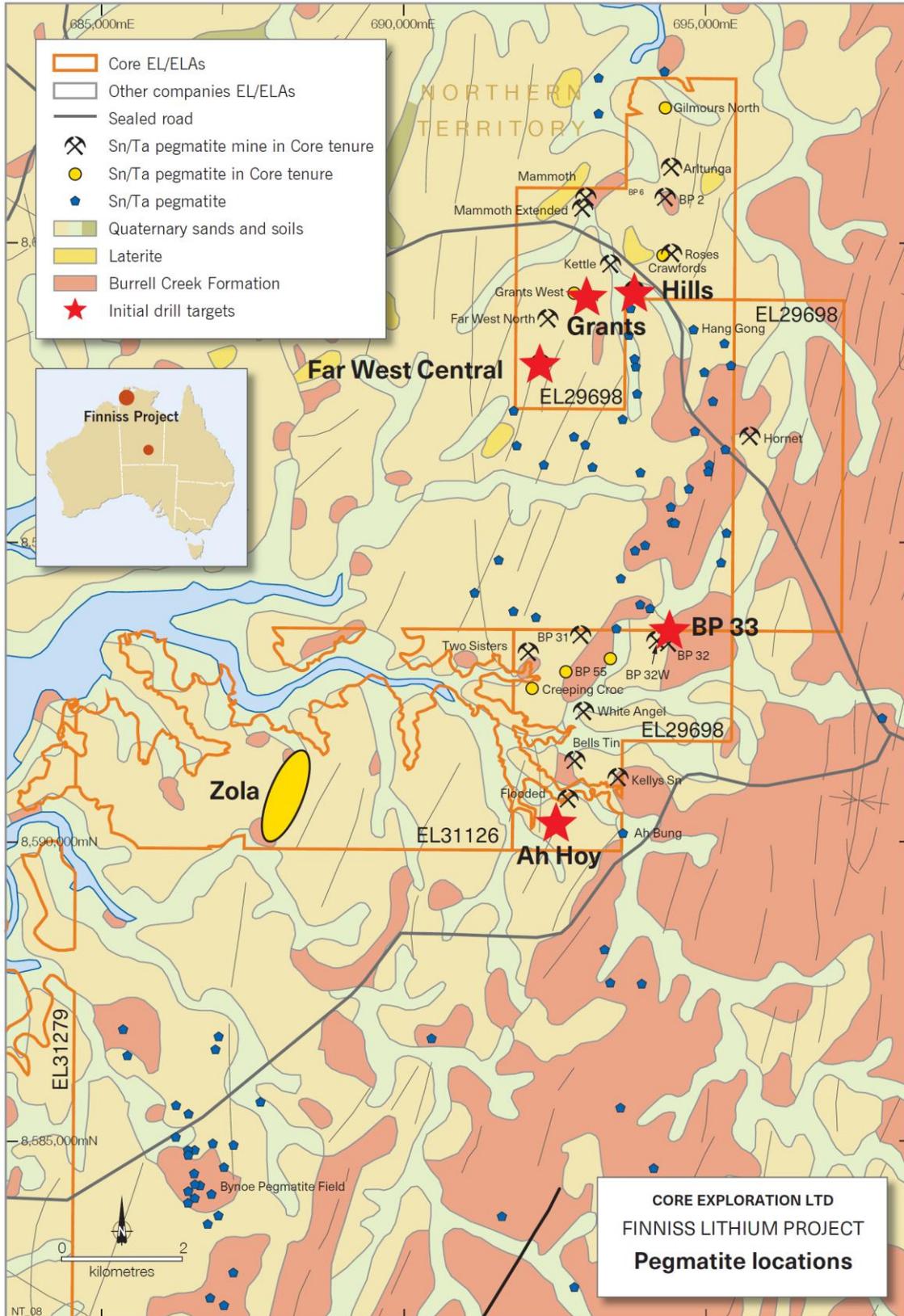


Figure 3. Initial drill target locations, Finniss Lithium Project, NT.



Finniss Lithium Project Background

Core's Finniss Lithium Project covers a large portion of the Bynoe Lithium-Tantalum-Tin Pegmatite field.

Core's drilling at Finniss has intersected high lithium grades and spodumene mineralisation within a number of pegmatites at Finniss.

The Bynoe Field is a 15-20 kilometre wide belt of more than 90 tin and tantalum prospects and mines and lithium rich pegmatites which stretches over a distance of 75 kilometres south from Port Darwin and is one of the most prospective areas for lithium in the NT.

Core's Finniss Lithium Project has substantial infrastructure advantages being close to grid power, gas, and rail and services infrastructure and within easy trucking distance by sealed road to the multi-user port facility at Darwin Port - Australia's nearest port to Asia.

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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.



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 style="list-style-type: none"> 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. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. 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. 	<ul style="list-style-type: none"> Sub surface chip samples have been collected by reverse circulation drilling techniques (see below). Drill holes are oriented approximately perpendicular to the interpreted strike of the mineralised trend. Rock samples comprise multiple chips considered to be representative of the horizon or outcrop being sampled. Samples submitted for assay typically weigh 2-3kg. Historic sampling and drilling techniques not described in detail. RC samples are homogenised by cone splitting prior to sampling and are then to be submitted for assay
Drilling techniques	<ul style="list-style-type: none"> 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 type, whether core is oriented and if so, by what method, etc). 	<ul style="list-style-type: none"> Drilling techniques used at Finniss comprises: Reverse Circulation (RC) 4 and 7/8 face sampling hammer RC drilling techniques completed by Greenbushes in 1995 not documented in historic reports.
Drill sample	<ul style="list-style-type: none"> Method of recording and assessing core and chip sample recoveries 	<ul style="list-style-type: none"> Sample recoveries are visually estimated and recorded for each



Criteria	JORC Code explanation	Commentary
recovery	<p><i>and results assessed.</i></p> <ul style="list-style-type: none"> <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> 	<p>metre. To date sample recoveries have averaged >95%.</p> <ul style="list-style-type: none"> 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 result
Logging	<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> <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 Pegmatite sections are also checked under UV light for spodumene identification on a metre by metre 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> 	<ul style="list-style-type: none"> Non core samples are collected as 1 metre samples, cone split and then sieved for geological logging. Assays only for the 1st four drill holes have been received or reported to date.



Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> Whether sample sizes are appropriate to the grain size of the material being sampled. 	
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. 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. 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. 	<ul style="list-style-type: none"> One in twenty Lithium ore standards are used One in twenty duplicates are used One in twenty external laboratory checks have not been sent to date.
Verification of sampling and assaying	<ul style="list-style-type: none"> The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data. 	<ul style="list-style-type: none"> Core's experienced project geologists are supervised by Core's Exploration Manager. All field data is manually collected, entered into excel spreadsheets and validated Hard copies are stored in the local office and electronic data is stored on the server
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"> All coordinate information was collected using hand held GPS utilizing GDA 94, Zone 52. RC holes are to be surveyed by a down hole camera
Data spacing	<ul style="list-style-type: none"> Data spacing for reporting of Exploration Results. 	<ul style="list-style-type: none"> Varies from prospect to prospect – initial program comprised 1-4



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and distribution	<ul style="list-style-type: none"> 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. Whether sample compositing has been applied. 	<ul style="list-style-type: none"> holes into each prospect No compositing has been applied in 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 mineralisation
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"> None completed

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 	<ul style="list-style-type: none"> Drilling is being conducted on EL 29698 that is currently held by Au Exploration Pty Ltd. Core has recently completed a purchase transaction for EL 29698 (ASX 29/08/2016). Transfer documents have been executed and lodged and registered ownership of EL 29698 is currently being transferred 100% to Core. The area being drilled comprises Vacant Crown land



Criteria	JORC Code explanation	Commentary
	<p><i>known impediments to obtaining a licence to operate in the area.</i></p>	<ul style="list-style-type: none"> • There are no registered heritage sites covering the areas being drilled. • EL 29698 is in good standing with the NT DME Titles Division.
<p>Exploration done by other parties</p>	<ul style="list-style-type: none"> • <i>Acknowledgment and appraisal of exploration by other parties.</i> 	<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 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. • 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. • 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).



Criteria	JORC Code explanation	Commentary
Geology	<ul style="list-style-type: none"> • <i>Deposit type, geological setting and style of mineralisation.</i> 	<ul style="list-style-type: none"> • The tenements sampled cover the northern and southern portions 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 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. •
Drill hole Information	<ul style="list-style-type: none"> • <i>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:</i> <ul style="list-style-type: none"> ○ <i>easting and northing of the drill hole collar</i> ○ <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i> ○ <i>dip and azimuth of the hole</i> ○ <i>down hole length and interception depth</i> ○ <i>hole length.</i> • <i>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</i> 	<ul style="list-style-type: none"> • Refer Table and Figures in report.



Criteria	JORC Code explanation	Commentary
	<i>explain why this is the case.</i>	
Data aggregation methods	<ul style="list-style-type: none"> <i>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.</i> <i>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.</i> <i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i> 	<ul style="list-style-type: none"> Mean grades have been calculated on a 0.4% Li₂O lower cut-off grade with 3% upper cut-off grade applied, and maximum internal waste of 2.0 metres
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> <i>These relationships are particularly important in the reporting of Exploration Results.</i> <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i> <i>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').</i> 	<ul style="list-style-type: none"> The true width is approximately 60- 70% of the reported intersection based on the early interpretation of these being steeply dipping pegmatites
Diagrams	<ul style="list-style-type: none"> <i>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.</i> 	<ul style="list-style-type: none"> See figures in release
Balanced reporting	<ul style="list-style-type: none"> <i>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.</i> 	<ul style="list-style-type: none"> All intersections have been reported and are considered representative. Refer table of drill hole collars in report. No assays have yet been received from the laboratory
Other substantive	<ul style="list-style-type: none"> <i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical</i> 	<ul style="list-style-type: none"> See release details



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exploration data	<i>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.</i>	<ul style="list-style-type: none"> All meaningful and material data reported
Further work	<ul style="list-style-type: none"> <i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i> <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i> 	<ul style="list-style-type: none"> RC drill samples are to be submitted to laboratory for chemical assay Assay results are expected during October 2016