CORE EXPLORATION LTD

ASX ANNOUNCEMENT

ASX: CXO

4th April 2017

New Magnetic Survey Adds Sizeable Targets to Large Scale Lithium Rich Ringwood Pegmatite Swarm

HIGHLIGHTS

- **New magnetic survey has identified potential extensions to known pegmatites and new pegmatite targets at the large scale Ringwood Prospect**
- **Individual pegmatite targets at Ringwood potentially up to 1.5 km long and 100 m wide**
- **Lithium potential of Ringwood confirmed by geochemical surveys which have found lithium in soil anomalies that correlate with pegmatite outcrops mapped by Core, along with rock chip samples assaying up to 3.1% Li_2O**
- **A predictive model for finding pegmatites has now been developed by Core from the integration of the new magnetic survey data at the Finniss Lithium Project and will be utilised for the 2017 drilling program**
- **Drilling to re-commence at Finniss Lithium Project during the current quarter as the wet season comes to an end**

Core Exploration Ltd (ASX: CXO) ("Core" or the "Company") is pleased to announce that further pegmatite targets have been generated, and some previously identified pegmatite targets upgraded, following interpretation of recently acquired airborne magnetics at the large-scale Ringwood Pegmatite Prospect at the Finniss Lithium Project near Darwin in the NT ("**Finniss Project**").

Recently acquired aeromagnetic data over the Ringwood Pegmatite Swarm, which was identified by Core late in the 2016 field season, has substantially increased its potential scale with geochemical surveys and rock samples confirming Ringwood's high-grade lithium potential. Some of these new and existing targets are of sufficient scale that if they are determined by drilling to be mineralised with spodumene, they would be substantial discoveries in their own right.

The Ringwood Pegmatite Swarm presents as a series of highly-weathered pegmatite and quartz outcrop and float zones that combined extend at least 4 km long and 2 km wide (Figures 1-3), which is more than double the 2km x 0.8km originally estimated size of

Ringwood when it was identified during Core's regional geological mapping completed during the 2016 field season.

Interpretation of the aeromagnetic data suggests that individual pegmatites at Ringwood may be significantly larger than their surface expression, with some individual targets being potentially up to 1.5 km long and 100 m wide (Figures 2-3).

When viewed from a more regional standpoint the magnetic data appears to show that the Ringwood area is underlain by a circular magnetic feature (Figure 3). This is interpreted as a granite body at a depth of 1-2 km, which is postulated to have fed pegmatites into the overlying Burrell Creek Formation.

Geochemical and Rock Chip Sampling at Ringwood

Geochemical sampling over the Ringwood prospect has generated anomalies of key pegmatite LCT indicator elements like Cs, Rb, Sn and Ta which appear to correspond to pegmatite outcrop and possible shallow buried pegmatites.

Rockchip sampling at Ringwood, undertaken by Core during 2016, has returned numerous assays from weathered pegmatite between 120-1550 ppm lithium, similar to that observed at Grants and BP33 Prospects. Peak values up to 3.1% Li_2O have been returned (Figure 1).

Generally subdued lithium grades near surface are likely to be a function of the weathered nature of the rock and a bias towards sampling of more resistant quartz-mica-feldspar lithologies, which typically represent the pegmatite-margin rock types. Supporting this interpretation is the reasonably large number (100) of samples with elevated Ta (24 samples >50 ppm; max 2821 ppm Ta) and Sn (38 samples >50 ppm; max 447 ppm Sn).

Predictive Model and 2017 Drilling Program

Based on this work a predictive model has been developed by Core from the integration of the new magnetic survey data with current geological and geochemical data to enable Core to extend and find new pegmatites within the Company's large 400km^2 area of granted tenements at Finniss (Figures 2-4).

A substantial number of large lithium pegmatite drill targets have been generated (blue ellipses in Figure 2). Core plans to re-commence drilling on the Finniss Lithium Project as soon as the wet season ends during the current quarter.

Next Steps

Core's 2017 drilling and exploration program is planned to commence as the wet season ends at the Finniss Lithium Project near Darwin including:

- Mapping and prospecting of new targets generated by the new magnetic survey and extrapolation of current geological and geochemical anomalism.
- Soils surveys to extend current anomaly trends and to test new targets.
- Collect wider-spread rockchips to better understand the variety of pegmatites present in the area.
- Shallow RAB/AC drilling to define pegmatite geometry to prioritise subsequent deeper drilling programs.
- RC drilling of current “walk-up” targets and other priority targets as soon as all-weather access is established.

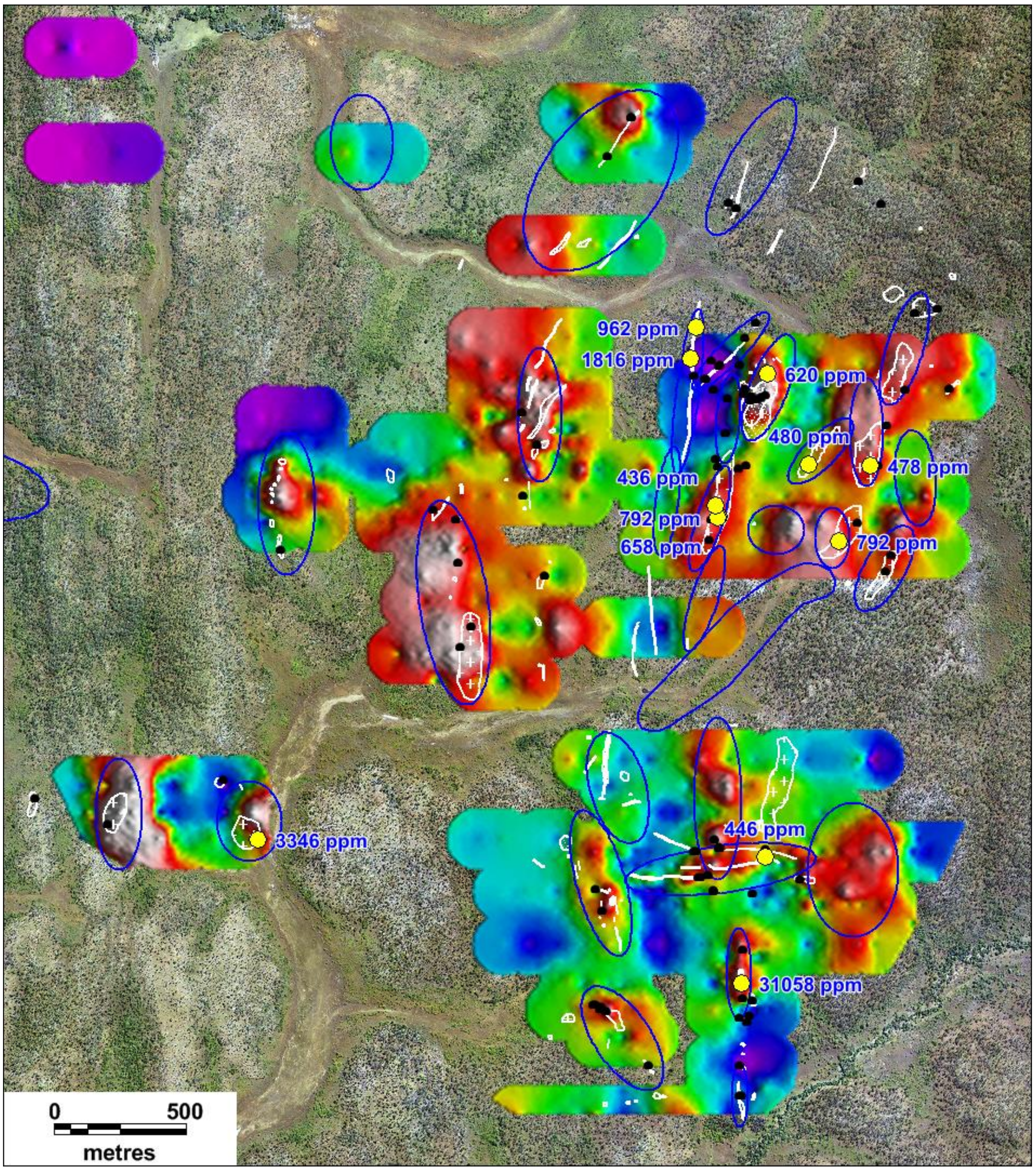

Figure 1. Ringwood Pegmatite Swarm: lithium in soil grid, rock-chip samples (labelled if >400 ppm Li_2O), and Pegmatite Targets (blue) overlain on remote sensed image, Finniss Lithium Project, NT.

A 26 Gray Court, Adelaide SA 5000 | T (08) 7324 2987 | E info@coreexploration.com.au
www.coreexploration.com.au

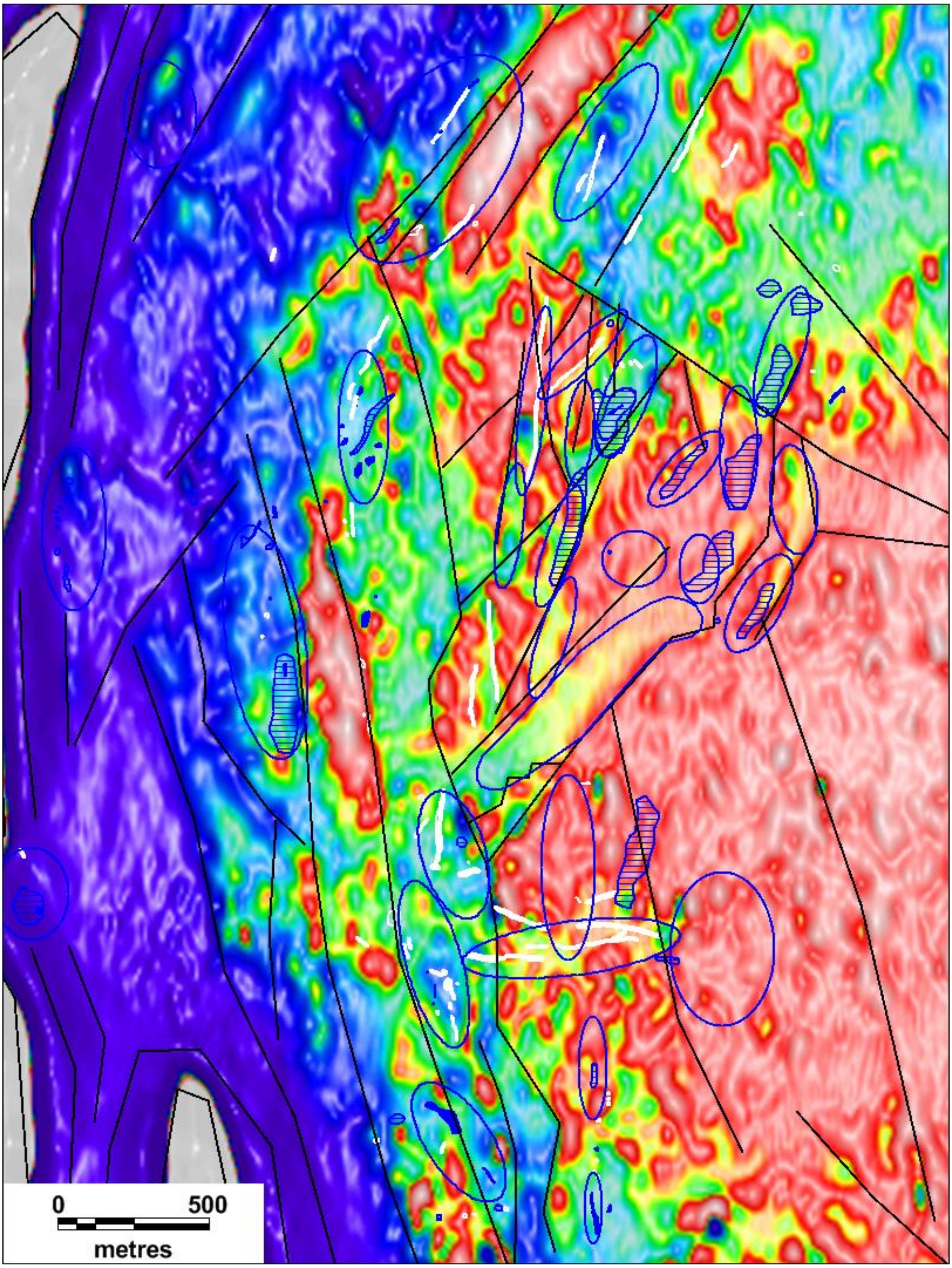

Figure 2. Ringwood Pegmatite Swarm: interpreted pegmatite targets (blue polygons) from airborne magnetics, soils and geological mapping overlain on airborne magnetics image, Finniss Lithium Project, NT.

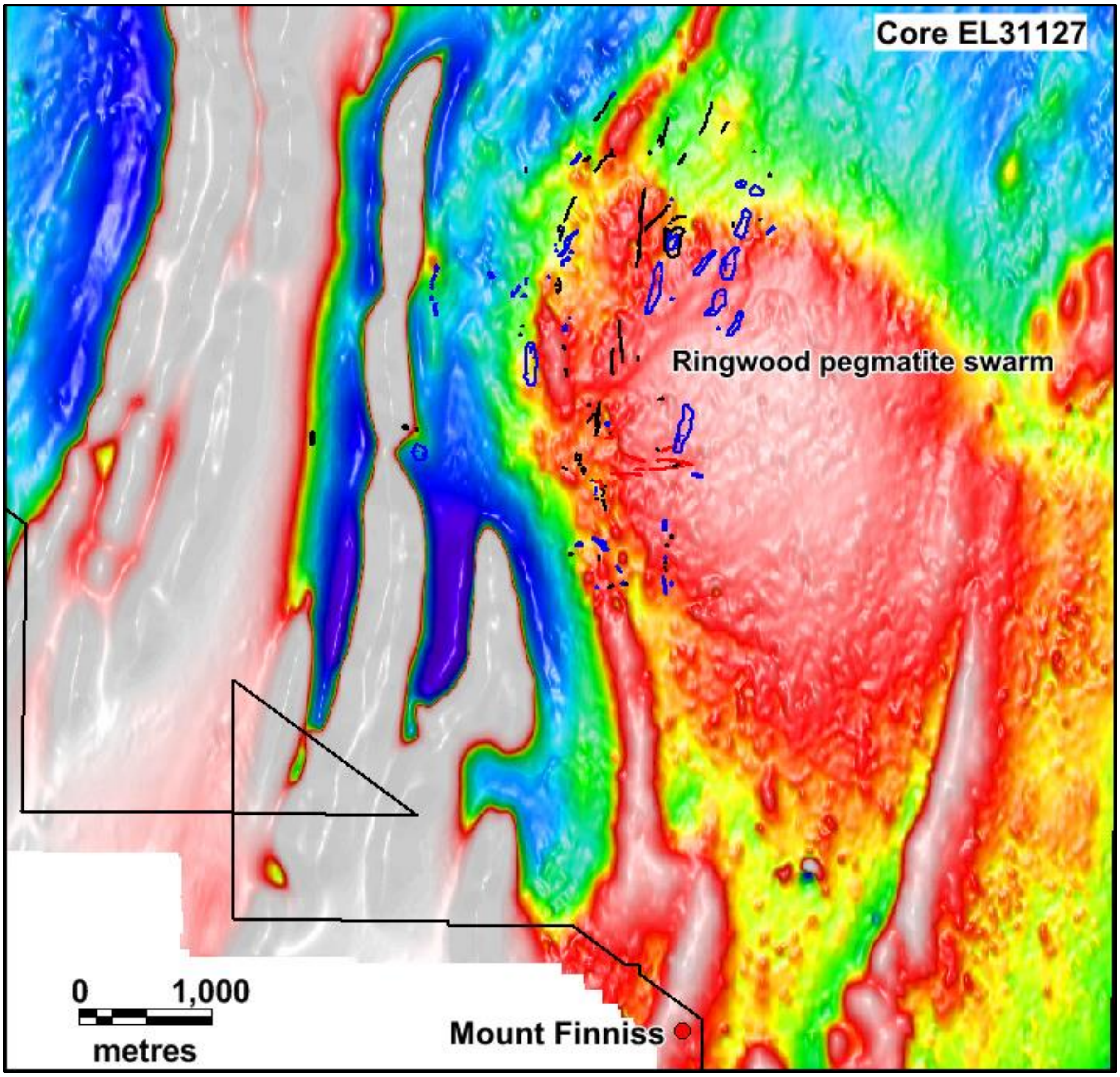

Figure 3. Regional magnetic image showing the deep circular feature underpinning Ringwood Pegmatite Swarm, Finniss Lithium Project, NT.

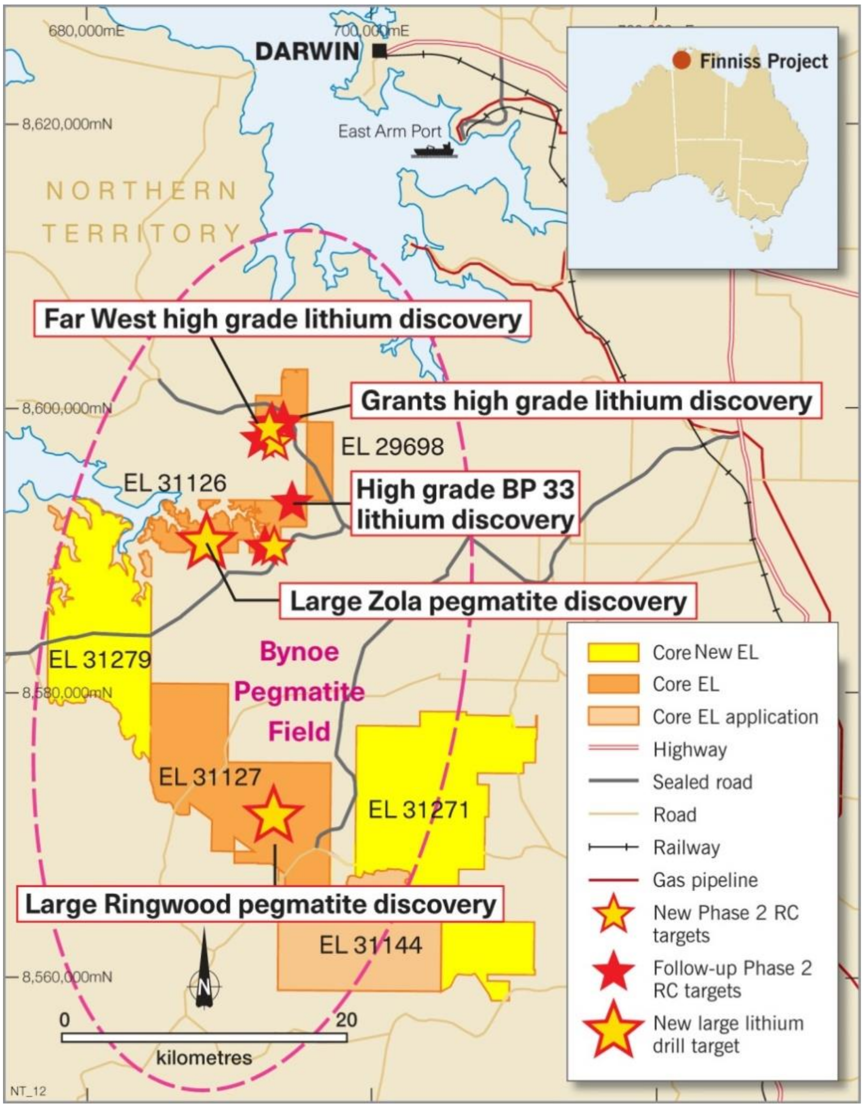

Figure 4. Finniss Lithium Project near Darwin in the NT.

<u>For further information please contact:</u>

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

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. This report includes results that have previously been released under JORC 2012 by Core.

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	• *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.*	• Surface **Rockchip** sampling was undertaken as part of reconnaissance mapping and prospecting of established pegmatite prospects and historic workings/mines in CXO's tenure. Sampling also took place in areas where pegmatites have been newly defined from reconnaissance mapping and prospecting programs. Some of these were identified from satellite imagery or from interpretation of existing geological maps. • Samples were taken from pegmatitic lithologies (or metasomatised wallrock). Some were collected from waste dumps or loose materials emanating from historic workings and costeans. Some in situ material was also sampled where available. • The sampling program was reconnaissance in nature, rockchips were taken at the discretion of a geologist according to visual inspection of suitably mineralised and/or unmineralised rock units. • **Soil** samples were collected on grids on a regional basis via the digging of a hole to >30 cm to retrieve B horizon soil (or A horizon in the absence of B). This was sieved on site to -5mm and put into a kraft pack weighing approx. 150 g. • Sample locations were determined with a hand held GPS, coordinates and geological descriptions were noted for each sample.
Drilling techniques	• *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).*	• N/A

Criteria	JORC Code explanation	Commentary
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *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.*	• N/A
Logging	• *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.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• N/A
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *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.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• Samples were sent to North Australian Laboratories in NT where the entire sample was dried, crushed, then pulverised to 85% passing 75 microns or better. • **Rockchip** samples are greater than 1 kg in most cases, which is sufficient for the grain size of the material being analysed. No selective hand picking took place. • In some cases where rock had weathered to gravelly material, multiple pieces of representative rock were required to create a composite sample. • **Soil** samples are approx. 150 g in size and orientation programs have determined that the size, seive size fraction and depth collected are sufficient to discern trends for regional assessment purposes. • Duplicates were collected at roughly 1 in 20 sites to monitor sampling variability. No discernable variations have been noted in the data. • Replicates of soil samples are also collected on a 1 in 20 basis to determine local variability and to modify grid size if needed. Replicates are behaving in a manner that is expected for the

Criteria	JORC Code explanation	Commentary
		geochemical system present. • No other quality control procedures were considered necessary for this reconnaissance style sampling program.
Quality of assay data and laboratory tests	• *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.*	• After sample preparation (see above), **rockchip** samples underwent a sodium-peroxide fusion in a zirconium crucible for Li, Cs, Rb, Sr, Nb, Sn, Ta, U, Sb, As, K, P and Fe via Inductively Coupled Plasma Mass Spectrometry (ICP-MS) and Inductively Coupled Plasma Optical Emission Spectrometry (ICP-OES). The lower and upper detection range for Li by this method are 10 ppm and 10,000 ppm respectively. • Samples collected in early campaigns were analysed for a much broader suite of elements (plus SG by immersion and pychnometer methods, and LOI by standard method) until such time as the appropriate indicator elements/parameters were determined. At this point the analyte suite was reduced to that outlined above. • After sample preparation (see above), **soil** sample pulps were then analysed via 4A/MS 4 Acid Digest ICP-MS: and 4A/OE 4 Acid Digest ICP-OES for a broad element suite including Li. The lower and upper detection range for Li by this method are 1 ppm and 5000 ppm respectively. • Other elements beyond Li that are routinely analysed are: Cs, Rb, Sr, Nb, Sn, Ta, Bi, Mo, U, Sb and As. • Samples collected in early campaigns were also analysed for Al, K, P, Cu, Pb, Zn, Ag and Be. These were eliminated subsequently as they did not prove to add sufficiently to the exploration effort for the extra costs incurred. • **Gold** was analysed in soils and rockchips only in selected areas, such as Ringwood, where there is geological evidence to suggest this analysis was required. • NAL utilised standard internal quality control measures including the use of Certified Lithium Standards and duplicates.

Criteria	JORC Code explanation	Commentary
		• Repeats of gold analysis were run on anomalous samples at the laboratory routinely, given the low level of detection required. • CXO-implemented quality control procedures are outlined above and include duplicates and replicates.
Verification of sampling and assaying	• *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.*	• For **rockchips**, the Sample ID, location (east/north), position (in situ vs loose), rocktype and detailed description were entered into a spreadsheet. • For **soils**, additional information to the above is collected, including depth collected, soil colour and soil type. • Metallic Lithium percent was multiplied by a conversion factor of 2.15283 to report Li2O%
Location of data points	• *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.*	• All coordinate information was collected using hand held GPS utilizing GDA 94, Zone 52. • Rockchip sample location also marked on the ground with a semi-permanent sample tag.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *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.*	• Rockchip samples collected at random positions at the discretion of the geologist. • Soil samples collected on regular grids, ranging from 400x200m to 50x25m. Several programs of infill took place where anomalous results could be followed up.
Orientation of data in relation to geological structure	• *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.*	• N/A
Sample	• *The measures taken to ensure sample security.*	• N/A

Criteria	JORC Code explanation	Commentary
security		
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• N/A

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	• *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.*	• Samples were collected in three tenements (see below). • EL29698 is currently held by Lithium Developments Pty Ltd, a fully owned subsidiary of Core Exploration. The tenement lies exclusively within Vacant Crown Land. Core is the nominated Operator in respect of the NT Government. • ELA31127 and EL31126, including Mt Finniss Mine, are held by Core Exploration via it's 100% owned subsidiary Lithium Developments Pty Ltd. These tenements comprise Vacant Crown land, NT Government owned land and private freehold. • There are no registered heritage sites covering the areas sampled. • All tenements are in good standing with the NT DME Titles Division.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• The history of mining in the Bynoe Harbour – Middle Arm area dates back to 1886 when tin was discovered by Mr C Clark. • By 1890 the Leviathan Mine and the Annie Mine were discovered and worked discontinuously until 1902. • 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.

Criteria	JORC Code explanation	Commentary
		• By 1909 activity was limited to Leviathan and Bells Mona mines in the area with little activity in the period 1907 to 1909. • 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. • 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. • 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	• *Deposit type, geological setting and style of mineralisation.*	• The tenements sampled cover the northern and southern portions of a swarm of complex zoned rare element pegmatite field, which

Criteria	JORC Code explanation	Commentary
		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 are: Mt Finniss, Grants, BP33, Bilato's (Picketts) and Hang Gong. • 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 Hang Gong (spodumene). • The Burrell Creek Formation increases in metamorphic grade westward from sub-greenschist facies siltstone, phyllite and siltstone, to upper greenschist facies gneiss and schist. Sedimentary features and lithologies, typical of the lower grade units of the Burrell Creek Formation, can be recognised until the sillimanite isograd is approached, whereafter these features are obliterated by recrystallisation.
Drill hole Information	• *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:* ○ *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.*	• N/A

Criteria	JORC Code explanation	Commentary
	• *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.*	
Data aggregation methods	• *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.*	• N/A
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *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').*	• As the geochemical results reported here that were collected by Core Exploration are from surface, any potential depths of mineralisation or orientations can only be inferred from geological observations on the surface and hence are speculative in nature.
Diagrams	• *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.*	• See figures in release
Balanced reporting	• *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.*	• NA
Other substantive	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical*	• See release details

Criteria	JORC Code explanation	Commentary
exploration data	*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.*	
Further work	• *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.*	• Core plans to undertake a reconnaissance first pass reverse circulation drill program on EL31127 and EL31126 to test the collected surface geochemical results during the 2nd Quarter of 2017.