ASX ANNOUNCEMENT

ASX: CXO

28th September 2017

Lithium Potential of the Barrow Creek Project Confirmed

HIGHLIGHTS

- **Rockchip and soil sampling programmes completed at Core's Barrow Creek Project in the NT confirm the pegmatite field to be highly prospective for LCT type lithium mineralisation**
- **Core holds 2,500km^2 of recently granted tenements in the Barrow Creek and Anningie Pegmatite Fields**
- **Barrow Creek has a long history of tin and tantalum production, similar to Core's Finniss Lithium Project (and Greenbushes)**
- **Core's soil sampling suggest a substantially larger footprint of lithium anomalism than depicted by historic pegmatite workings**
- **13 potential pegmatite targets identified to date at Barrow Creek**
- **3 targets rank as high priority for follow up drilling based on surface geochemistry and mapped scale**
- **Newly-defined Tesla lithium soil anomaly has 5 km of strike potential for pegmatites**
- **Barrow Creek is close to rail connection that links direct to Darwin Port**
- **Expands potential for Darwin to become long-term, central processing and transport hub for NT spodumene production for Core**

Core Exploration Ltd (ASX: CXO) ("Core" or the "Company") is pleased to announce that it has received all outstanding assays relating to soil and rockchip sampling at the Barrow Creek Lithium Project in the Northern Territory. Regional-spaced soil samples (over 2,000 samples collected) indicate a substantially larger footprint of lithium anomalism than depicted by historic pegmatite workings.

Core's baseline exploration highlighted a new large prospect area called Tesla, where elevated lithium in soils form a 5 km long arcuate trend highlighting previously unmapped pegmatites.

At the Ringing Rocks Prospect a distinct lithium-in-soils anomaly is coincident with the outcrop position of two large pegmatite bodies, with surface expressions measuring 700m x 220m and 360m x 150m that may represent a single pegmatite body of approximately 1200m x 300m with surface rock chips assaying up to 0.6% Li_2O.

On a local scale, rockchips and detailed mapping have confirmed the lithium potential of a number of historic prospects, including Jump Up, Ballace's Claim 1 & 2, Tabby Cat, Hugo Jack's, Boyce's Corner, Johannson's, Jody's, Slippery and Krakatoa.

Many other pegmatite occurrences were identified and investigated during the conduct of regional reconnaissance work.

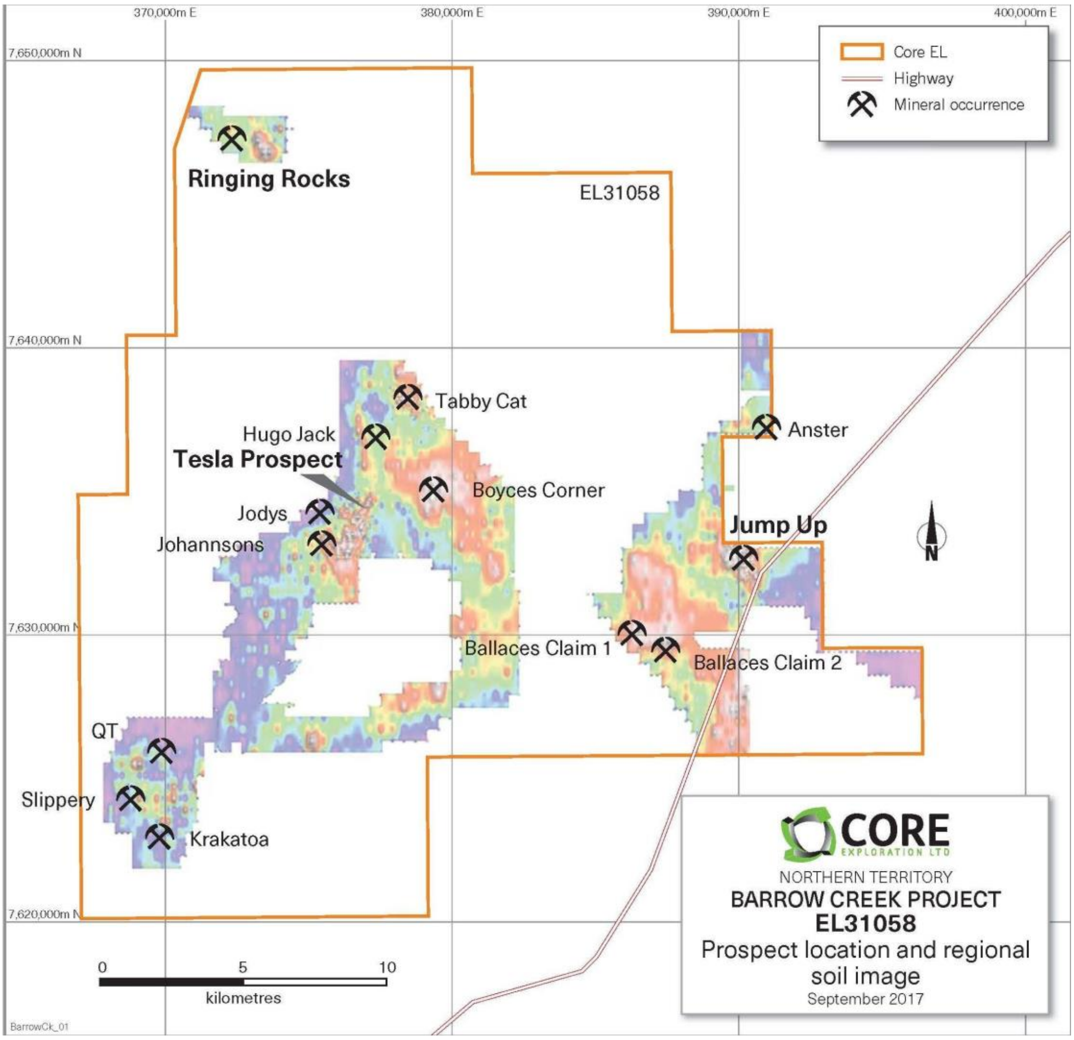

Figure 1. Main prospects within Core's EL31058, Barrow Creek Pegmatite Field, NT. Gridded Lithium in soils base.

Ringing Rocks Prospect

Ringing Rocks is characterised by significant coincident Li-Cs-Sn-Rb anomalism and moderate coincident Li-Ta-W anomalism in pegmatite rockchips and soil geochemistry (Figure 2). A distinct lithium-in-soils anomaly is coincident with the outcrop position of two large pegmatite bodies, with surface expressions measuring 700m x 220m and 360m x 150m. These can be interpolated under cover to be a single body of approximately 1200m x 300m (orange dashed line in Figure 2).

Peak rock chip results include 0.6% and 0.2% Li_2O, while the average content is 151 ppm Li (or 324 ppm Li_2O). This grade at surface is consistent with surface-weathered material observed by Core at the Finniss Project prior to discovery of the high grade Grants, BP33 and Far West lithium deposits with drilling. This result is a strong indication of lithium anomalism associated with the large pegmatite body.

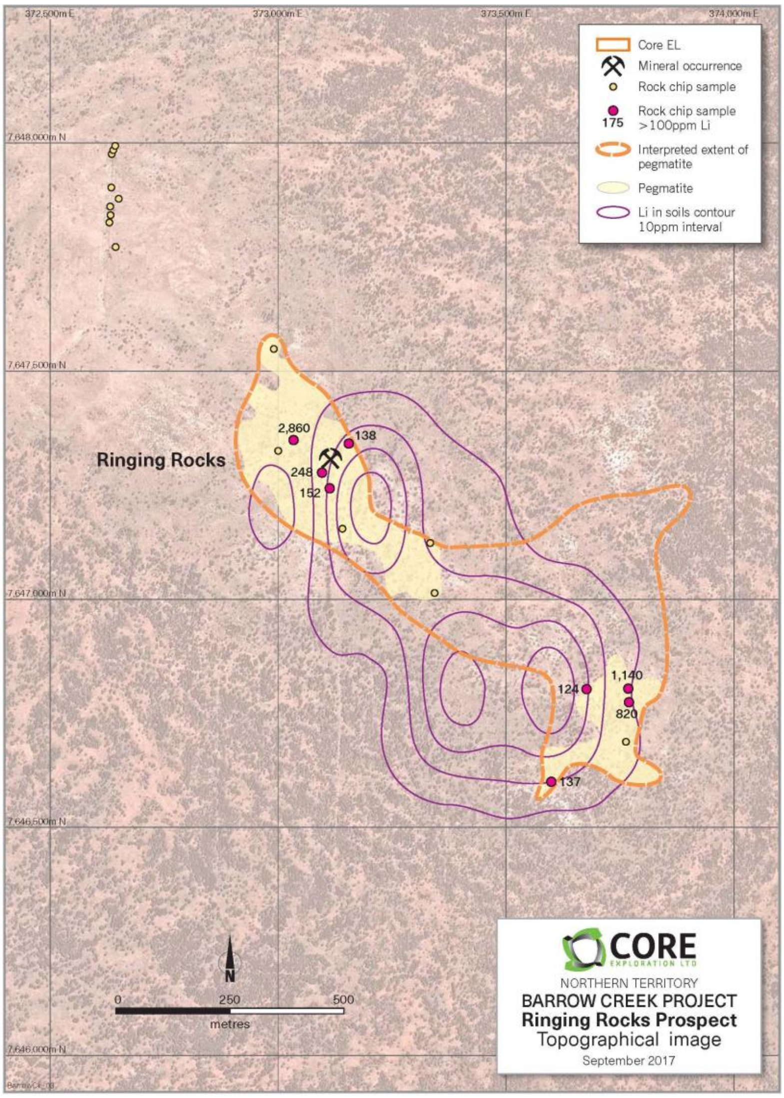

Figure 2. Ringing Rocks Prospect, showing mapped pegmatite and contoured Li in soils results.

Tesla Prospect

Tesla is defined by a large (5km long, 1km wide), crescent shaped ENE to N trending Li-Cs-W-Sn-Rb (+Au-Ag-As-Cu-Pb) multi-element soil anomaly (Figure 1 and Figure 3). In particular, peak Li anomalism and coincident Cs-Sn-Rb anomalism defines a number of high priority target areas.

The largest of these targets is approximately 800m east of the Johannsons prospect, where pegmatite rock chips contain up to 362 ppm Li. The Tesla anomaly lies within or adjacent to the regional contact aureole of a large granite body. Early mapping shows that there is a pegmatite dyke swarm in the area.

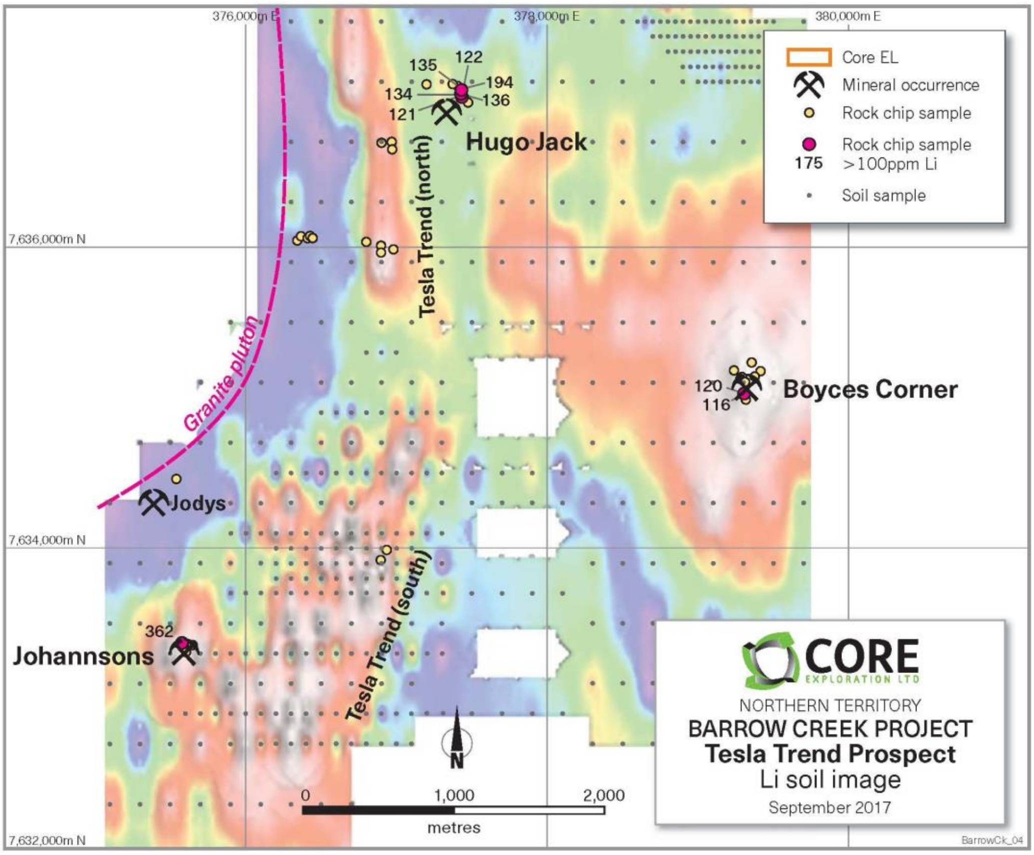

Figure 3. Tesla Prospect area on gridded Li in soils results. Note that sample density varies throughout area and influences the Li grid image.

Jump Up Prospect

A highly weathered NW-to NNW striking 500m-wide swarm of pegmatite dykes at the Jump Up prospect is anomalous in lithium with a maximum Li rock chip content of 312 ppm (Figure 4). Anomalous lithium in pegmatite rock chips is also coincident with a high lithium soil anomaly. Coincident multi-element anomalism includes good correlation of Li with Sn, Cs and Rb anomalism. This prospect has been worked historically for Sn and Ta, and the pegmatites disappear under cover in all directions.

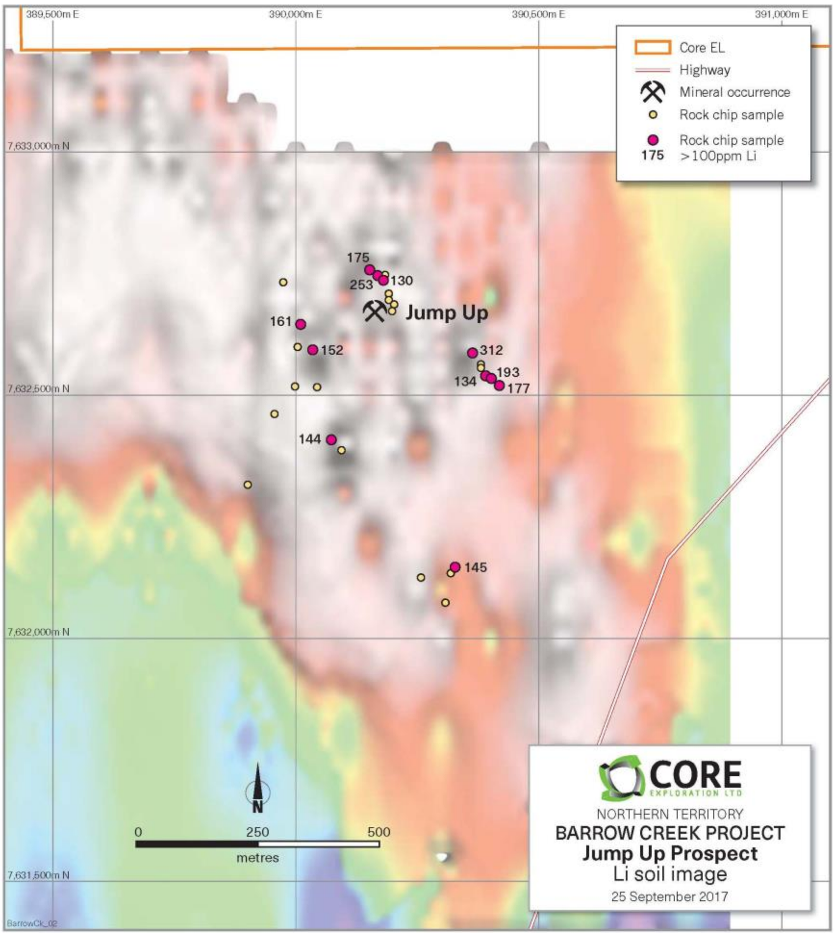

Figure 4. Jump-up Prospect area on gridded Li in soils results.

Soil Surveys and Reconnaissance Mapping, EL 31058 Barrow Creek

Regional and prospect scale exploration over EL 31058 has included 2,342 soil samples, 404 rock chip samples and prospect mapping by Core's geologists. The Company has focussed its mapping and rock chip sampling efforts on historic pegmatite workings within the Barrow Creek Tin-Tantalum-Tungsten Field, but soil samples were collected over a much broader portion of the Project area (Figure 1).

Historical pegmatite prospects and mine areas considered prospective for Lithium-Caesium-Tantalum (L-C-T) Type pegmatite were geologically appraised and mapped, then sampled to determine representative whole rock geochemistry.

The main prospects targeted were Ringing Rocks, Jump Up, Ballace's Claim 1 & 2, Tabby Cat, Hugo Jack's, Boyce's Corner, Johannson's, Jody's, Slippery and Krakatoa (Figure 1). Many other pegmatite occurrences were also opportunistically investigated during the course of regional soil sampling.

Pegmatite from many of these prospects appear to be highly weathered, and it is likely that the pegmatites may be more widespread than currently revealed, under thin cover.

Soil sample grids generally utilised 200m x 400m or 400m x 400m spacing to establish regional coverage. Two historical prospects (Tabby Cat and Jump Up) were subject to more detailed 50m x 100m spaced grids (Figure 1).

Analysis of assay results from the current program suggests coincident soil/rockchip lithium anomalism and pathfinder element associations (Cs-Ta-W-Sn-Rb) at a number of prospects. Combined with mapping data, Core has prioritised the targets.

The most notable are Ringing Rocks, Jump Up and the newly discovered Tesla Prospects.

Background

As with Greenbushes in WA and Core's Finniss Project in the Bynoe Pegmatite Field in the NT, the Barrow Creek Pegmatite Field has also had a long history of tin and tantalum mining prior to lithium mineralisation being recognised.

Core's Anningie and Barrow Creek Lithium Projects encompass five Exploration Licences covering over 2,500 square kilometres in and around the Anningie and Barrow Creek Tin Tantalum Pegmatite fields in the north Arunta Region of the NT, which are considered highly prospective for lithium (Figure 6).

Core believes there is an excellent fit between the lithium potential of Barrow Creek Pegmatite Field, direct rail link to Darwin Port and Core's objectives to make Darwin and Core's Finniss Lithium Project near Darwin a central processing and global transport hub for

NT lithium and spodumene production as forecast lithium demand keeps growing (Figure 5 and Figure 6).

Next Steps

Core has the opportunity to commence drilling at the Barrow Creek Project in February-March 2018 once the current field season is completed at the Finniss Lithium Project.

With this in mind, Core has initiated a heritage clearance with the Aboriginal Areas Protection Authority (AAPA) to enable ground disturbing works at a number of the key prospects. Core would then expect to undertake RAB and RC drilling to test the highest priority targets, as outlined above.

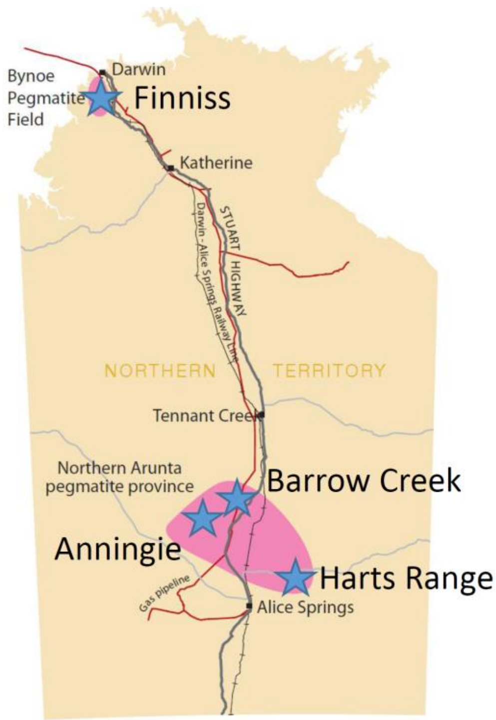

Figure 5. Tin-tantalum pegmatite provinces of the Northern Territory (from NTGS Report 16 – 2004).

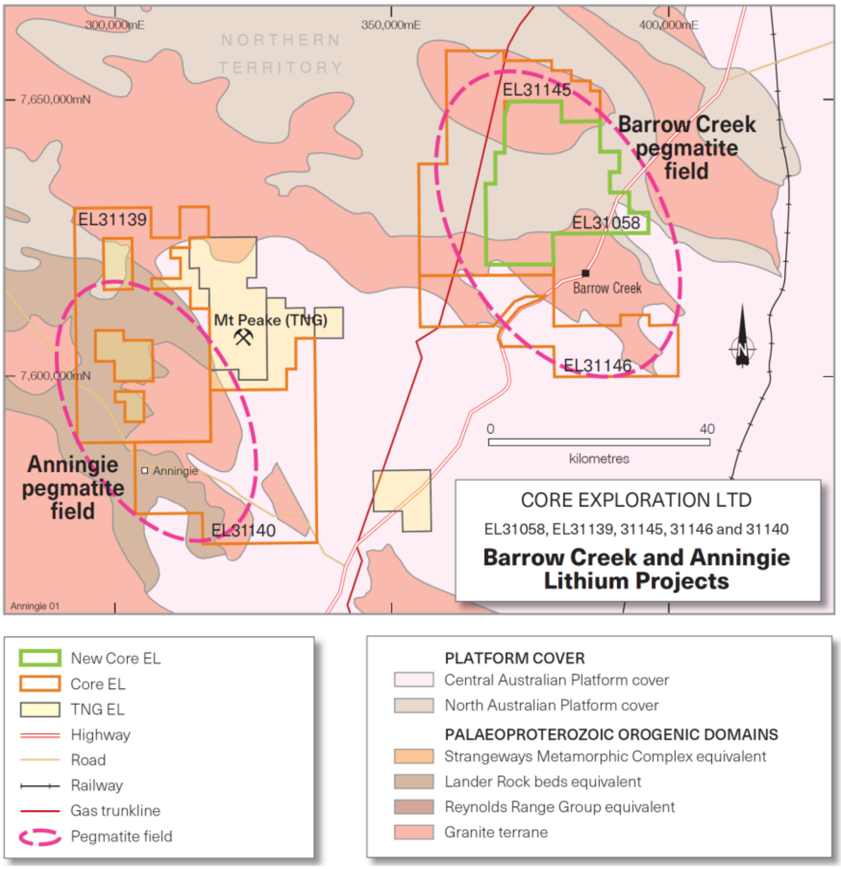

Figure 6. Core's tenements within the Anningie and Barrow Creek Pegmatite Fields, NT.

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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	• *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.*	• **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. • Samples were collected during two campaigns, in May-June 2017 and August 2017. Data has been gridded collectively for various elements. • **Rockchip** sampling was undertaken as part of reconnaissance mapping and prospecting of established pegmatite prospects and historic workings/mines in CXO's tenure. Samples were taken from pegmatitic lithologies suspected of comprising either fresh lepidolite/amblygonite or weathered spodumene. Some samples were collected from waste dumps or loose materials emanating from historic workings and costeans. Some in situ material was also sampled. • Rockchip samples were collected throughout the project area on an ad hoc basis, but were designed to be representative of the variety of rocktypes present in any given area or prospect. They were large enough to be representative of the coarse pegmatite lithology, generally in the range 3-6 kg.
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).*	• Drilling not used.

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.*	• Drilling not used.
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.*	• Standard sample logging procedures are utilised by the company, including logging codes for lithology, minerals, weathering etc.
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.*	• **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 geochemical system present. • No other quality control procedures were considered necessary for this reconnaissance style sampling program, in respect of both soils and rocks.
Quality of assay data and laboratory	• *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*	• **Rock** samples were prepared by coarse crushing to obtain a homogeneous crushed mass for the whole sample (two stage, -6mm followed by -2 mm). This is sub-sampled to <1 kg via a splitter at the laboratory. • The sub-sample is pulverised in LM5 mill to >85% passing 75 um. • **Soil** samples are simply pulverised in LM5 to 85% passing 75 um.

Criteria	JORC Code explanation	Commentary
tests	*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, soil and rock 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 ALS method is ME-MS61, comprising a standard suite of 48 elements. The lower and upper detection range for Li by this method are 0.2 ppm and 10,000 ppm respectively. • Other elements beyond Li that are routinely analysed are: Cs, Rb, Sr, Nb, Sn, Ta, Bi, Mo, U, Sb and As. • **Gold** was analysed in soils and rock chips. • The ALS method for gold is 30 g fire assays, code AU-ICP21. • ALS utilised standard internal quality control measures including the use of Certified Lithium Standards and duplicates. • 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.*	• 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 Core server. • For **soils**, the Sample ID, location (east/north), position (in situ vs transported), rocktype and detailed description were entered into a spreadsheet. 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 Li_2O%
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.*	• All coordinate information was collected using hand held GPS utilizing GDA 94, Zone 53.

Criteria	JORC Code explanation	Commentary
	• *Quality and adequacy of topographic control.*	
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.*	• Soil samples collected on regular grids, ranging from 400x200m to 100x50m. 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.*	• The short axis of soil sampling grids is typically oriented perpendicular to the interpreted strike of mineralisation as mapped or predicted by the geological model.
Sample security	• *The measures taken to ensure sample security.*	• Company geologist supervises all sampling and subsequent storage in field.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• There have not been any audits.

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.*	• **Soil** samples were collected in EL31058. • EL31058 is currently held by Lithium Developments Pty Ltd, a fully owned subsidiary of Core Exploration. The tenement lies on two pastoral properties, Neutral Junction and Stirling. Core is the nominated Operator in respect of the NT Government. • There are no registered heritage sites covering the areas sampled.

Criteria	JORC Code explanation	Commentary
		• CXO has four other exploration tenements in the project: ELs 31139 and 31140 in the Anningie and ELs 31145 and EL 31146 in the Barrow Creek Pegmatite Fields. • CXO manages the tenure. • All tenements in the Anningie and Barrow Ck projects are in good standing with the NT DME Titles Division.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• There has been multiple, sporadic but intensive periods of prospecting, exploration and small scale mining within the Barrow Creek Project area since the 1940s. All known previous work has focused on tungsten, tin and tantalum with no systematic assaying for lithium. • All previous work has focussed on either alluvial/eluvial material or the upper, weathered portion of the bedrock which would be suitable for free digging. Depth of weathering is approximately 20m depth and any spodumene would be totally altered to kaolinite with the lithium completely depleted. • Historic exploration reports is currently been reviewed and results summarised; however, CXO has not yet completed digital capture and compilation of data collected by previous explorers and miners. • 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 Project is located in the western part of the Proterozoic north Arunta where it comprises a sequence of metamorphosed greenstones and sediments. Multiple tin and tantalum-bearing pegmatites have been emplaced into the sediments within the contact aureole of the Barrow Creek Suite Granite a Paleoproterozoic intrusion which is interpreted to be the source of the rare metals. • Dimensions of the pegmatites vary in scale from narrow fracture fillings to massive bodies up to 30m wide and >200m long.
Drill hole	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information*	• No drilling undertaken.

Criteria	JORC Code explanation	Commentary
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.* • *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.*	• No data aggregation done.
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 soil 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 Report maps.
Balanced	• *Where comprehensive reporting of all Exploration Results is not*	• Core consider reporting herein to be balanced.

Criteria	JORC Code explanation	Commentary
reporting	*practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	
Other substantive exploration data	• *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.*	• See release details
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 has commissioned an AAPA heritage clearance, which may take 3-4 months to complete. • Following this, Core will plan a drilling program and submit an Mine Management Plan application with the NT DPIR. • Drilling is expected to take place in Q1 or Q2 2018, weather permitting. • Minor rock and soil sampling, mapping and reconnaissance may take place in advance to assist in sighting drill holes.