ASX ANNOUNCEMENT

ASX: CXO

30th August 2017

Drilling of New Targets Near High Grade Grants Lithium Resource Commences

HIGHLIGHTS

- **Drilling programs have commenced on new pegmatite targets close to the high-grade Grants Lithium Resource within Core's Finniss Lithium Project near Darwin, NT**
- **Multiple new pegmatite targets in the Grants area identified from a combination of ground penetrating radar technology and RAB/Aircore drilling**
- **Additional shallow RAB drilling to refine pegmatite geometry has commenced this week**
- **RC drilling of priority pegmatite targets around Grants to commence immediately following RAB drilling**
- **RC drill assays expected 4-weeks after completion of drilling**

Core Exploration Ltd (**ASX: CXO**) ("**Core**" or the "**Company**") is pleased to announce that drilling of new pegmatite targets close to the high-grade Grants lithium resource has commenced, within the Company's 100% owned Finniss Lithium Project near Darwin in the NT ("**Finniss**").

The drilling program will consist of approximately 2,500m of RAB drilling and will immediately be followed by RC drilling of priority pegmatite targets identified from the RAB program.

The pegmatite targets for this program were identified from a combination of ground penetrating radar technology and shallow RAB/Aircore drilling.

Core initiated a trial of the innovative Ground Penetrating Radar (GPR) system at Finniss during July and August. Trial results were deemed sufficiently encouraging to pursue a small roll-out in several areas around Grants.

A series of NS-trending sub-vertical features similar to the Grants Pegmatite have been identified in the GPR data to the west of Grants (Figure 1). These features correlate well with previous RAB drilling that has picked up near-surface pegmatites at Grants West (Figure 2).

Core is commencing RAB drilling this week to test these targets and RC drilling of priority pegmatite targets is planned to commence immediately after completion of RAB.

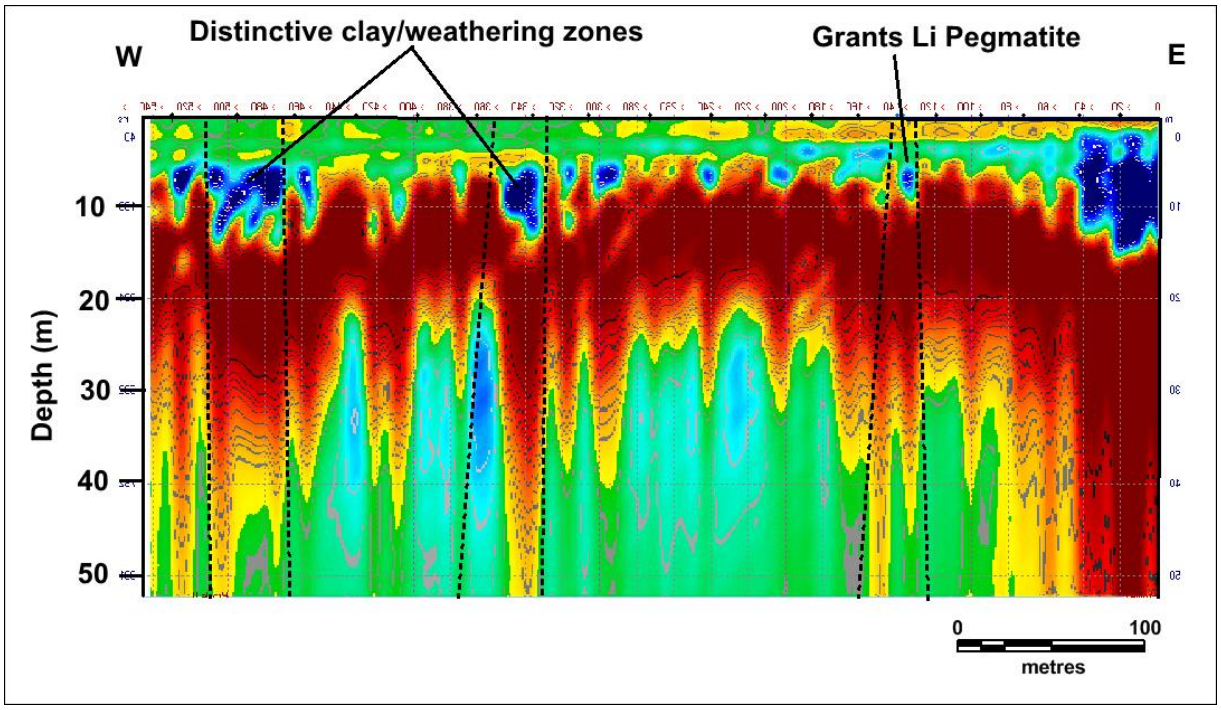


Figure 1. Ground Penetrating Radar (GPR) section showing location of Grants Pegmatite and similar features to the west of Grants - Radar Section 6. Vertical exaggeration 4 to 1.

Ground Penetrating Radar (GPR) survey

Loza Radar Australia was contracted to undertake a trial of its innovative GPR system at Finniss in two stages over July and August. In all, 69 lines of 100-500m length (25 km total) were rolled out at various prospects at Finniss, including Grants and Grants West. Various configurations were trialed to establish the optimal outcome. Only the data from July has been processed and interpreted and is presented in this announcement. Results of the August survey are expected in the coming week.

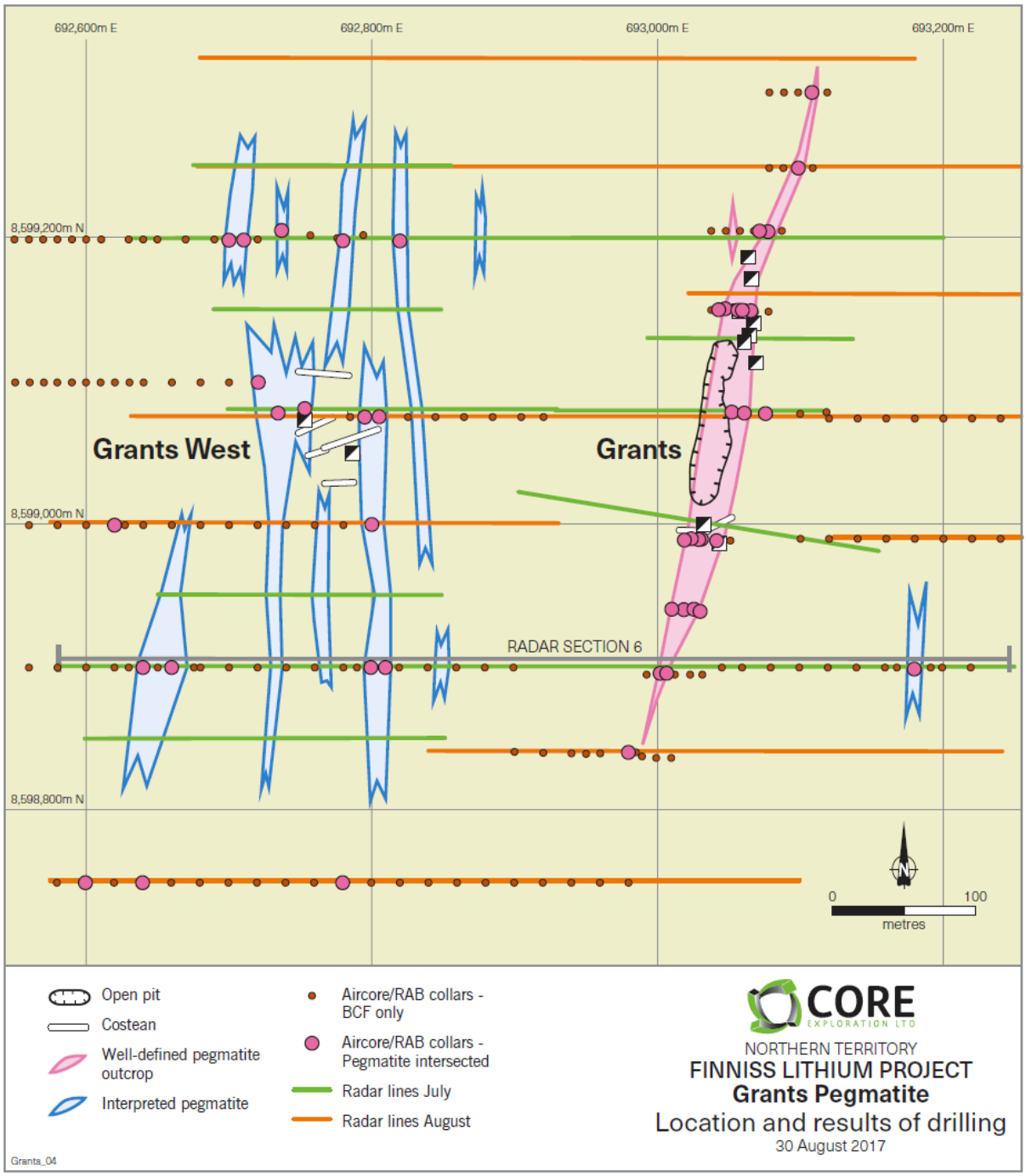


Figure 2. Simplified geological map for the Grants area, showing the well-defined surface projection for the Grants Pegmatite and interpreted outlines of pegmatite targets to the west. Also shows the GPR lines acquired and section in Figure 1.

The GPR is able to detect the near surface features of Grants Pegmatite and in some cases, is also able to penetrate down to 200m to image the lithified pegmatite body in contact with sediment host rocks. The data has been validated with the previous RC drilling at Grants.

During the interpretation process, the data for the Grants prospect, extending to Grants West, was integrated with RAB data so as to map possible subsurface pegmatite targets outside of the current resource.

The GPR data correlates well with the known high-grade ore body at Grants, and although not always consistent, the data often supports surface showings of weathered pegmatite encountered in Aircore/RAB drilling (Figures 1 and 2).

GPR data also support the theory that the Grants pegmatite plunges to the south and may have a subjacent feeder body to the SE. This concept will also be drill tested in due course.

Core expects that further new targets will be generated once the August GPR data has been processed and interpreted, including north and south of Grants.

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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. The Company is not aware of any new information that materially affects the information included in this announcement.

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 (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.* • *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 (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.*	• **Drilling** geology data reported herein relate to various campaigns of aircore and RAB drilling in the Grants area of EL29698. • Sub surface chip samples have been collected by Rotary Air Blast (RAB) drilling and Aircore (AC) drilling techniques. • Drill holes, if inclined, are oriented approximately perpendicular to the interpreted strike of the mineralised trend. • AC/RAB drill spoils are not split from the cyclone and only a primary sample is collected in green bags, and these weigh 10-15 kg. Lab samples are speared directly from the spoils bags.
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.).*	• **Drilling** techniques used at EL29698 and reported herein are industry standard. • AC drilling technique utilises a 3 and ¼ inch bit and NQ2 rods. The AC rig is a Wallis Mantis mounted on a Marooka all-terrain base. It utilises a low pressure compressor of maximum 150 psi. • RAB drilling technique utilises a 3 and ¼ inch bit and NQ2 rods. The RAB rig is a Hydco A30 mounted on a 4x4 base. It utilises a low

Criteria	JORC Code explanation	Commentary
		pressure compressor of maximum 250 psi.
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.*	• **Drill sample** recoveries are visually estimated and recorded for each metre. To date sample recoveries have averaged >95%. • Contamination is monitored regularly. No issues have been encountered in this program. • The cyclone is regularly cleaned, especially in wet intervals. • Drill collars are sealed to prevent sample loss and holes are normally drilled dry to prevent poor recoveries and contamination caused by water ingress. Wet intervals are noted in case of unusual results.
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. • Geology of the RAB/AC drill chips is logged on a metre basis with attention to main rock forming minerals within the pegmatite intersections, although on most occasions the drilling takes place in the weathered zone where the pegmatite mineralogy is not able to be determined.
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.*	• AC/RAB samples are collected exclusively via a spear and weight 3-5 kg. No assay data is reported here, as it weathered and therefore does not provide any direct indicator of the grade of fresh material at depth. It is useful only for mapping and confirming the presence of pegmatite. • Most samples are dry, but wet or damp samples are recorded. • Duplicate sample regime is used to monitor sampling methodology and homogeneity. • A powder and/or sieved chip tray for the entire hole is completed for both RAB and AC.

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	• *Whether sample sizes are appropriate to the grain size of the material being sampled.*	
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 (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	• No assay data reported herein.
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 entered into excel spreadsheets (supported by look-up tables) at site and subsequently validated as it is imported into the centralized CXO Access database. • Hard copies of survey and sampling data are stored in the local office and electronic data is stored on the Core server.
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. • AC holes are all vertical, owing to the configuration of the rig. • RAB holes are both inclined and vertical. • Radar data are collected along lines oriented east-west, approximately perpendicular to strike. Their position is tagged very 25 m and at ground control points (e.g., drill collars) by handheld GPS, which is sufficient for this level of detail.

Criteria	JORC Code explanation	Commentary
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.*	• Drill hole spacing varies from prospect to prospect, but generally of the order 50-100m along strike and typically 20m across strike. Limited down-dip information is determined, because the drilling technique is shallow. • Radar data was recorded every linear 0.5m and/or 1.0m on each east-west oriented survey line, which range between 50 and 100m apart north-south. Depending on the system setup, the vertical depth of recording information ranges between: 0 and 50m, 0 and 100m, and 0 and up to 250m. All three setups were trialed at Finniss, with the setup at each specific target during the production phase determined according to the prevailing cover type (e.g., blacksoil, bedrock, laterite) present in that area and how the GPR responded to these during the trails. • This data is not being used to support a resource. • Refer to map in report for position of Radar lines and drillhole collars.
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.*	• Drilling and Radar lines are typically oriented perpendicular to the interpreted strike of mineralisation as mapped or predicted by the geological model, which in this case is NS.
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.*	• No audits were necessary for regional scale exploration drilling and acquisition of radar data.

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.*	• Drilling took place in EL29698, held by Core Exploration via its 100% owned subsidiary Lithium Developments Pty Ltd. • The work area in which drilling took place is Vacant Crown land. Other land status exists in this tenement, including NT Government owned land (Crown Lease Term) and private freehold. • There are no registered heritage sites covering the areas drilled. • The tenement is in good standing with the NT DPIR 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. • 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

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		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 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 are: Mt Finniss, Grants, BP33, Bilato's (Pickett's) 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

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		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 (Pickett's), Saffum's 1 (amblygonite), and more recently at Grants, BP33, Ah Hoy, Far West and 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, thereafter 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.* • *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.*	• Drill hole collars are depicted on the map figure in this report. The precise coordinates and downhole data (via a Table) are not deemed necessary because the drill hole geology is quite simple, containing pegmatite or not. This level of detail is sufficient for the regional interpretation of pegmatite surface footprint outlined in this report, including on the map. No down-dip information has been established at this stage. Infill RAB is currently underway to establish this and help plan RC drilling to test targets at depth. • Previous CXO deep drilling at Grants has been reported in earlier ASX announcements, but there are no deep holes in the focus area of this announcement, Grants West.

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Data aggregation methods	• *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.* • *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 has been used.
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 (e.g. 'down hole length, true width not known').*	• No attempt has been made to indicate true width. No assumptions have been made in relation to pegmatite dip.
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.*	• Data presented herein are relevant to the specific target area and do not involve misleading conclusions.
Other substantive	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical*	• Loza Radar Australia ("LRA") visited the Finniss Project in July 2017 to carry out ground penetrating radar ("GPR") trials designed to apply

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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.*	new radar technology to assist in assessing the geophysical nature of known pegmatite bodies. They returned in August 2017 to undertake production-scale data acquisition, over a broader set of targets generated from other datasets. • Loza Radar has processed the data using their own software (Krot), to apply filters that best pick out the features of interest. • The Loza Radar system is a 4th generation enhanced Ground Penetrating Radar. Loza Radar uses GPRplus, a ground scanning device designed for studying subsurface structure at depths from a few metres to hundreds of metres. Data collection is based on radiation of ultra-wideband electromagnetic pulses penetrating into the subsurface medium and registration of the reflected signals born at the medium interfaces or buried objects. Reflections are the primary result of a change in density and/or a change in electromagnetic permeability. • The transmitter uses a high-pressure hydrogen discharge, which operates in standalone mode without synchronization. Traditional ground penetration radar's mechanics have been completely revised: pulse transmitter power has been increased by a minimum of 100,000 times, and the stroboscopic transformation replaced to direct detection of signal. The antennas use RC-Loaded dipoles. This ensures the exclusion of interference in the received signal that suppresses weak signals, whilst also permitting the reception of strong signals and avoids the requirement for connecting lines (which also introduce strong interference from the transmitter). Only the Low Frequency Systems were applied at the Finniss Project where the 6 metre antenna was used with the low frequency. • The horizontal resolution, i.e. the spacing of the 'radar-shots' taken along a profile is chosen according to the required scale of the target

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		objects and in discussion with the client. In this case, the shot spacing was 0.5m and/or 1.0m depending on the depth range intended, with varied lengths of survey lines due to the uncertainty of the dimensions of the targets on the first passes. The system identifies structures at all angles, including the vertical structure as well as voids, changes in rock density caused by fracturing, geological changes or water. This system shows any structure as the signal array returns from both the vertical and horizontal structures. Additionally, the Radar operator can either manually operate the 'firing switch' or it can be set to automatic. The 'shot' spacing is determined by the client's objective; and also by the speed of the traverse. • At each measurement point, the arrival time of the signal is recorded from the geological boundaries or structure/feature of interest. The profile 'Radargram' is formed in real time on the operator's console LCD screen in the form of a binary plot depicting radar return time of the subsurface reflections. Travel time of the EM wave depends on the reflector depth and propagation velocity, this varies along the profile giving a picture of subsurface layered structures. Results of the survey are stored in the console memory which can be instantly downloaded into a normal laptop computer for immediate review of data quality and points of interest whilst still in the field. This real-time capability means that the operator can mark features of interest as the profile is taken. The downloaded data is analysed on the laptop using proprietary software. • The profile lines are georeferenced and displayed as Radargrams with filters applied in the Loza Radar software (Krot).
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions,*	• The Grants West pegmatite bodies will be drill tested in the near future, firstly via a short RAB program to determine geometrical information, then by deep RC drilling into the fresh zone. The

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	including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	positions of these have not been determined as yet, and the RAB drill positioning tends to be led by results “on the fly”. • Core is continuing exploration on EL29698 to test the regional AC/RAB drilling and soil geochemical results from 2016 and 2017 exploration campaigns, and various Radar and magnetic targets. • Further infill soil sampling, rockchips follow-up and general prospecting are on-going.