



ASX ANNOUNCEMENT

ASX : CXO

8th February 2016

New Lithium Project includes largest tin tantalum mine in NT

HIGHLIGHTS

- **Core has extended its lithium focus in the NT into the highly prospective Bynoe pegmatite field**
- **Core's Finniss Lithium Project includes the Mount Finniss Tin Tantalum Mine – the largest historically producing tin and tantalum pegmatite mine in the NT**
- **Large project tenure covers 200km² in the lithium rich Bynoe pegmatite field**
- **Lithium mineralisation has been previously identified in the Bynoe pegmatites but historically mining and exploration has been focused on the associated tin-tantalum mineralisation**
- **Further updates will be provided to the market over coming weeks**

Core Exploration Ltd's (ASX:CXO) has added the largest historically producing tin pegmatite mine in the Northern Territory to its portfolio of lithium projects in the NT.

Core's new Finniss Lithium Project covers a prospective lithium rich Bynoe pegmatite field south of Darwin in the NT. The Bynoe tin tantalum-lithium field is one of the most prospective areas for lithium in the NT and has many similarities to Greenbushes in WA, one of the world's largest spodumene deposits.

The historic Mount Finniss Mine is within the area of Core's tenure is listed by NTGS as the largest overall single producer of tin and tantalum in the Northern Territory. The strong endowment of tin and tantalum in pegmatites at the Mount Finniss Mine and in the surrounding area suggest high potential for lithium grades.

As with Greenbushes, before economic lithium was recognised, Bynoe also has a 100 year history of tin and tantalum mining. It is also evident the pegmatites in the Bynoe region are zoned with the economic minerals of tin and tantalum and potentially lithium associated with more kaolin-rich, albite zones accompanied by beryl often at pegmatite core margins.

Mining in the Bynoe Field commenced in 1880's from alluvial deposits of cassiterite (tin) derived from weathered pegmatites. The industrial demand for tantalum during the mid-1900's saw the mining of a number of tin-tantalum pegmatites in the region.

Core has lodged 3 Exploration Licences applications covering 200km² in the Bynoe pegmatite field in the Northern Territory (Figures 1 & 2). The historic Mount Finniss Mine is located at the boundary of Core's EL31127 and EL31144. EL 31144 covers ALRA freehold land and a small 0.2km² area near the mine on EL 31127 a separate party has overlapping EMP rights to extractive minerals only (e.g. sand/gravel).

Exploration for lithium in the Bynoe Field is still in its infancy with much of the earlier work not recognising the presence of lithium, although spodumene and amblygonite have been reported on LTRs' adjacent tenure at Picketts Prospect (Figure 2). Little modern systematic exploration for lithium has been conducted on Core's new Bynoe tenure applications, but recent results and research indicates strong prospectivity for lithium grades.

The extensive Bynoe pegmatite swarms, which are structurally controlled, sub-crop across the region and Core' tenure, likely extend under cover. Associated with the highly fractionated and zoned lithium-endowed "Two Sisters Granite", the coarse grained pegmatites comprise quartz, potassium feldspar, albite and muscovite with common accessory garnet, tourmaline and apatite (Figure 2).

Core is focused on discovering and developing high grade lithium deposits and is currently reviewing and prioritising the prospectivity of a number of lithium rich pegmatite provinces in the NT.

Next Steps

The Company expects to update the market regarding forward steps on the lithium potential and Core's tenure holdings in the NT over coming weeks.

Background

Core Exploration Ltd is an ASX-listed diversified metal exploration company with a number of advanced exploration projects in the Northern Territory and South Australia. Core's Executives and Directors have been successful in identifying, acquiring and making significant exploration discoveries that have evolved into mining operations.

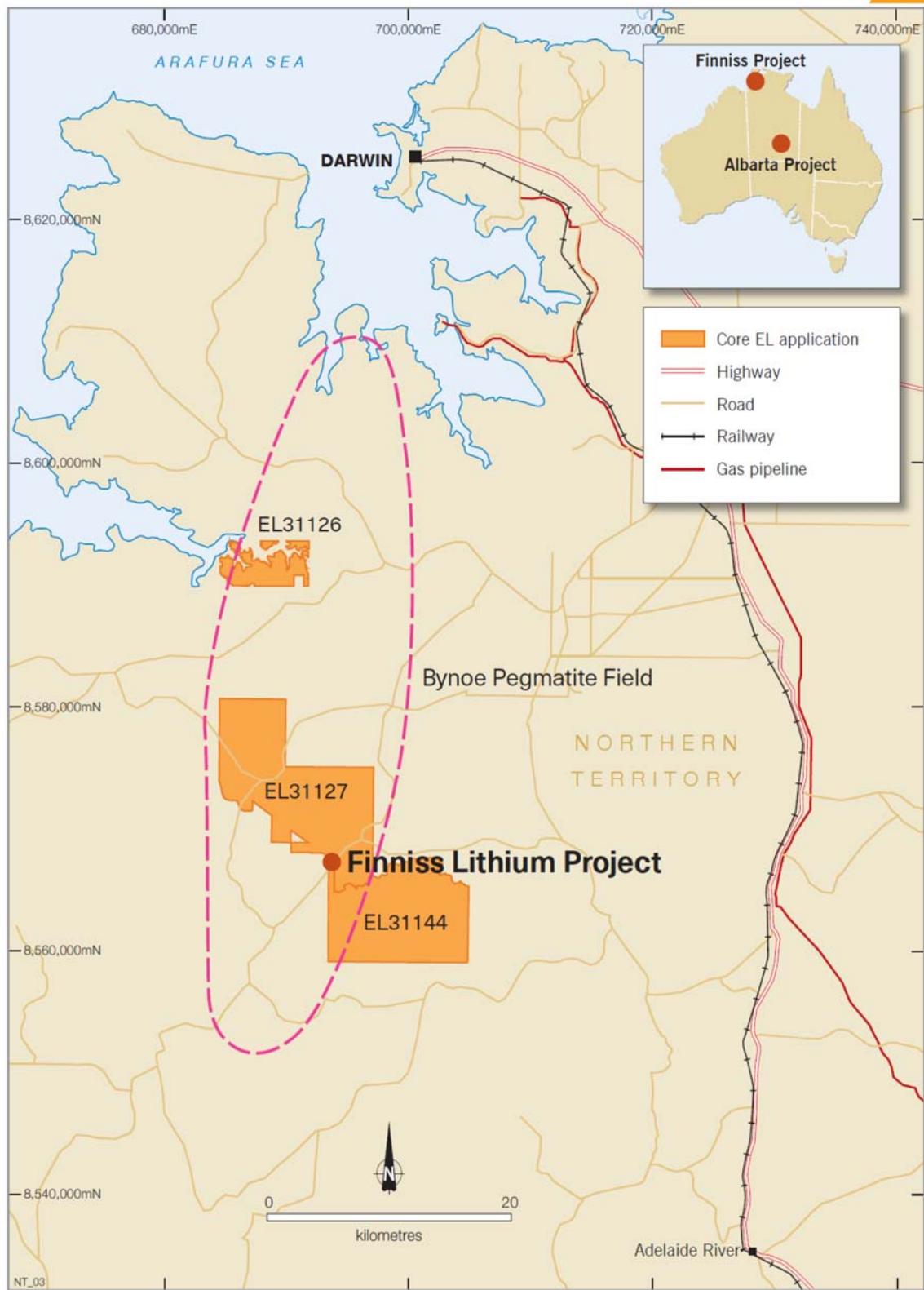


Figure 1. Core's Finniss Lithium Project tenements in the Bynoe pegmatite field, NT.

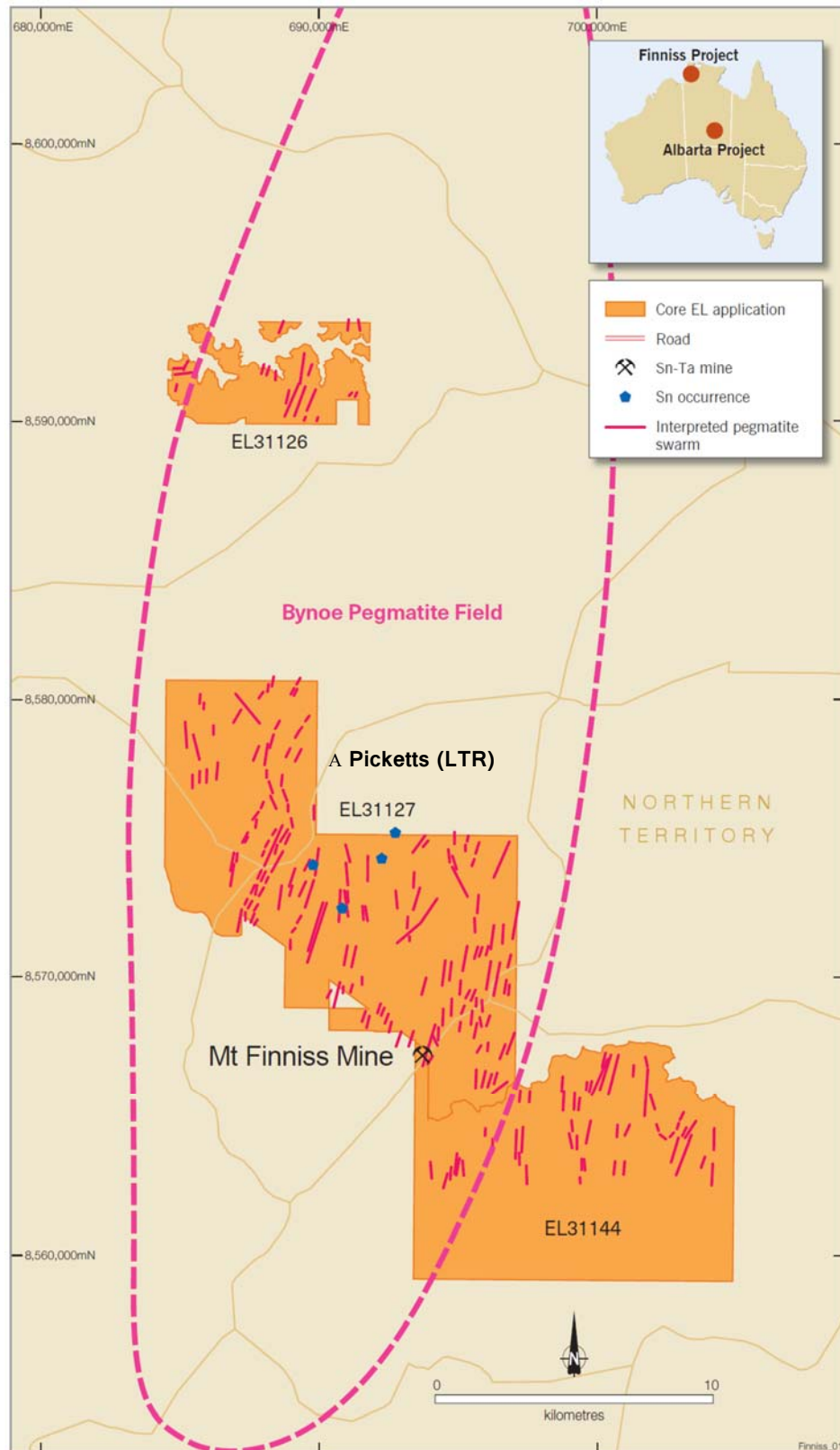


Figure 2. Mt Finniss Mine, Finniss Lithium Project tenure and other tin (Sn) and tantalum (Ta) workings and pegmatite geology in the Bynoe region, NT.



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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.



Bynoe Field Project – February 2016– JORC 2012

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<i>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.</i> <i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i> <i>Aspects of the determination of mineralisation that are Material to the Public Report.</i> <i>In cases where 'industry standard' work has been done this would be relatively simple (egg 'RC 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.</i>	- No sampling conducted by Core Exploration to date
Drilling techniques	<i>Drill type (egg core, RC, 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).</i>	No drilling undertaken
Drill sample	<i>Method of recording and assessing core and chip sample recoveries</i>	No drilling undertaken



Criteria	JORC Code explanation	Commentary
recovery	<i>and results assessed.</i> <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>	
Logging	<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>	No drilling undertaken
Sub-sampling techniques and sample preparation	<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</i>	No sampling undertaken.



Criteria	JORC Code explanation	Commentary
	<i>duplicate/second-half sampling.</i> <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	
Quality of assay data and laboratory tests	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i> <i>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.</i> <i>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.</i>	No sampling undertaken
Verification of sampling and assaying	<i>The verification of significant intersections by either independent or alternative company personnel.</i> <i>the use of twinned holes.</i> <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i> <i>Discuss any adjustment to assay data.</i>	No sampling undertaken
Location of data points	<i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations</i>	No drilling or sampling undertaken



Criteria	JORC Code explanation	Commentary
	- used in Mineral Resource estimation. - Specification of the grid system used. - 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.	No drilling or sampling undertaken
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.	No drilling or sampling undertaken.
Sample security	The measures taken to ensure sample security.	No sampling undertaken
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No audits or reviews have been undertaken

Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral	Type, reference name/number, location and ownership including	DBL Blues Pty Ltd a wholly owned subsidiary of Core Exploration Ltd



Criteria	JORC Code explanation	Commentary
tenement and land tenure status	<i>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.</i> <i>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.</i>	• (CXO) has applied for three exploration tenements (EL's 31126, 31127 and 31144) in the Bynoe Field • CXO manages the tenure. All tenure applications are outside of registered Heritage, Conservation or National Parks. • A separate party also has EMP rights to a small 0.2km² area extractive minerals only (e.g. sand/gravel) near Mt Finniss • EL 31144 overlaps with ALRA freehold land • CXO may face a range of land owner access issues typical to the exploration industry in the NT
Exploration done by other parties	<i>Acknowledgment and appraisal of exploration by other parties.</i>	• There has been multiple, sporadic but intensive periods of prospecting, exploration and small scale mining within the Bynoe Project area since the late 1880s. All known previous work has focussed on 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.
Geology	<i>Deposit type, geological setting and style of mineralisation.</i>	• The Bynoe Project is located in the western part of the early Proterozoic Pine Creek Geosyncline where it comprises a sequence of greenschist metamorphic grade sandstones and siltstones with occasional lenses of conglomerate. Multiple tin and tantalum-bearing pegmatites have been emplaced into the sediments within the contact aureole of the Two Sisters Granite (located to the south and west), a Paleoproterozoic intrusion which is interpreted to be the source of the rare metals.



Criteria	JORC Code explanation	Commentary
		- The pegmatites typically comprise a border zone of fine grained muscovite and quartz followed inward by a wall zone of coarse grained muscovite and quartz which is in turn followed by an intermediate zone of quartz-feldspar-muscovite. A core zone of massive quartz occurs locally. The intermediate zone contains the bulk of the tin and tantalite mineralisation and is also where the lithium is expected to be hosted. - The pegmatites are located in a north trending, 15km wide belt. - The pegmatites are strongly weathered to 10-20m depth and often poorly exposed with feldspar completely altered to kaolinite. - Dimensions of the pegmatites vary in scale from narrow fracture fillings to massive bodies up to 50m wide and >200m long.
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.	No drilling undertaken
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	Not applicable



Criteria	JORC Code explanation	Commentary
	<i>such aggregations should be shown in detail.</i> <i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i>	
Relationship between mineralisation widths and intercept lengths	<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>	Not applicable
Diagrams	<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>	See attached plans in body of report.
Balanced reporting	<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>	Not applicable
Other substantive exploration data	<i>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.</i>	All meaningful and material data reported
Further work	<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>	- Capture and compilation of historic data into a digital database; - Ranking of pegmatites according to size potential; - Geological mapping and prospect assessment; - Trenching (if feasible); and



Criteria	JORC Code explanation	Commentary
		• RC drilling to test fresh bedrock for spodumene mineralisation