



# ASX ANNOUNCEMENT

ASX: CXO

2<sup>nd</sup> March 2016

## Core to add 25 historic pegmatite mines to Finniss Lithium Project

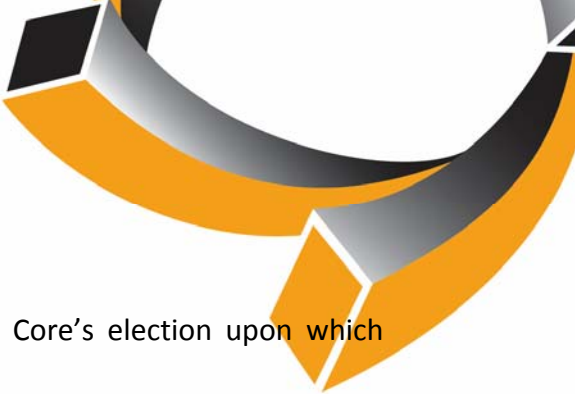
### HIGHLIGHTS

- **Core has expanded its Finniss Lithium Project by securing the right to purchase exploration licence 29698**
- **EL 29698 covers 25 historic tin tantalum pegmatite hosted mines in the lithium rich Bynoe pegmatite field**
- **Lithium mineralisation has been previously identified in the Bynoe pegmatites but historical mining and exploration focussed on the associated tin-tantalum mineralisation**
- **Core's Finniss Lithium Project includes the Mount Finniss Tin Tantalum Mine – the largest historically producing tin and tantalum pegmatite mine in the NT**
- **With ~\$1 million cash at hand, Core is well placed to commence evaluating and testing the lithium potential of numerous historic mine workings and tailings at the Finniss Lithium Project**

---

Core Exploration Ltd (ASX: CXO) (“Core” or the “Company”) has entered into an agreement with AU Exploration Pty Ltd (“AUE”) which grants Core an option to purchase exploration licence EL 29698 covering 25 historically producing tin tantalum mines in the lithium rich Bynoe pegmatite field south of Darwin in the NT. The consideration payable by Core for the grant of the option is \$80,000 with \$50,000 payable in cash and the balance payable in either cash or shares at Core’s election.

Under the agreement Core has been granted an exclusive right to access and conduct exploration on EL 29698 for a period of up to 12 months. At any time during this period Core may exercise its option to acquire EL 29698 by paying AUE \$80,000 with \$40,000 payable in



cash and the other half payable in either cash or shares at Core’s election upon which ownership of EL 29698 will be transferred to Core.

The acquisition of EL 29698 will add to Core’s Finnis Lithium Project which includes the Mount Finnis Tin Tantalum Mine – the largest historically producing tin and tantalum pegmatite mine in NT.

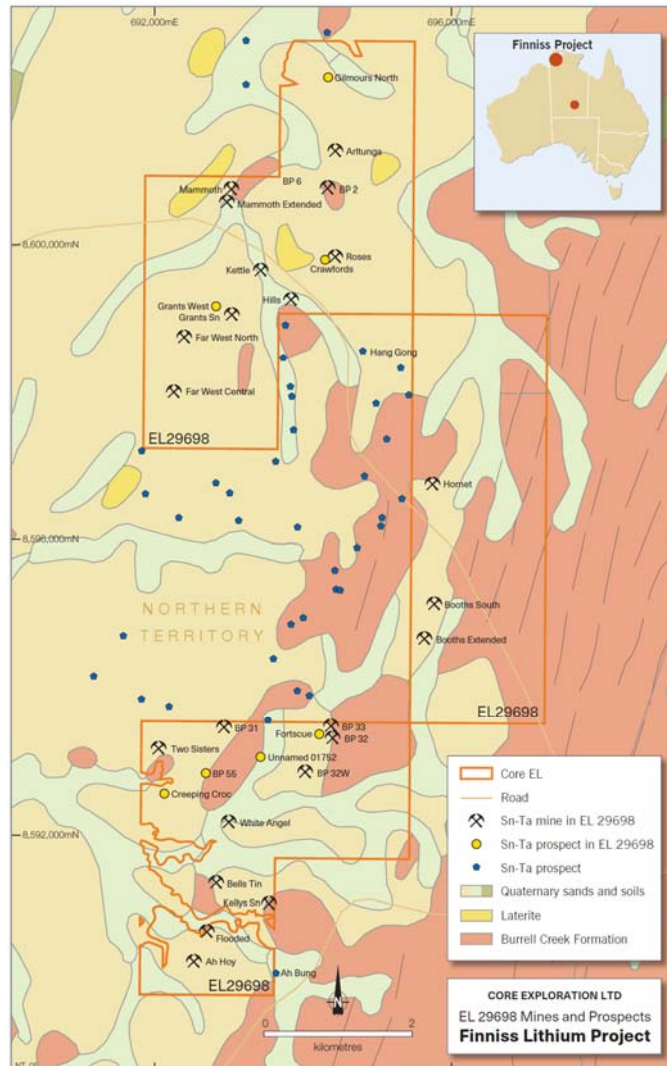


Figure 1. EL 29698 tin tantalum mines and prospects, Finnis Lithium Project, NT.

### Bynoe Tin Tantalum-Lithium Field

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.

As with Greenbushes, before economic lithium was recognised, Bynoe also has a 100 year history of tin and tantalum mining. It is also evident that the lithium enriched pegmatites in the Bynoe region are zoned with the economic minerals of tin and tantalum and potentially lithium associated within fractionated quartz and albite zones in pegmatites.

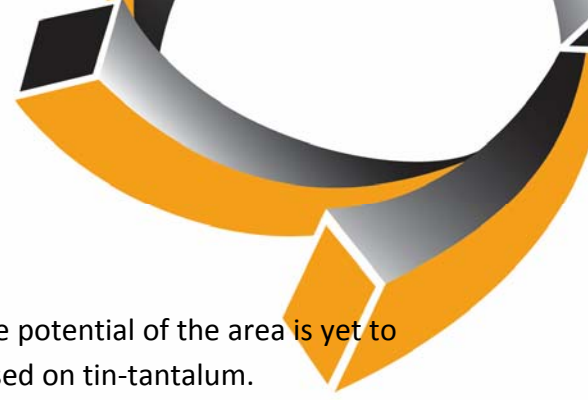
EL 29698 covers 33km<sup>2</sup> of the Observation Hill Area in the northern part of the Bynoe Tin Tantalum-Lithium Field. The economic geology of the area is dominated by tin-tantalum-niobium pegmatites considered to be LCT-type (lithium-caesium-tantalum) which are associated with the fractionated Two Sisters Granite.

There are reported 75 tin tantalum mineral occurrences and historic mines in the Observation Hill Group which have historically been exploited for tin-tantalum-niobium of which 25 historic mines are located within EL 29698 (Table 1, Figures 1-3).



*Figure 2: Booths South Pegmatite (North-western Pit). Dotted line indicates hanging-wall contact (source NTGS Report 16).*

The majority of the known deposits and associated pegmatites were discovered by prospectors in the early 1900's or during an extensive exploration phase for tin and tantalum by Greenbushes Ltd in the 1980's. Since the work done by Greenbushes some 30 years ago very little work has been undertaken.



To date lithium has not been explored for on EL 29698 and the potential of the area is yet to be properly assessed given all of the historical work only focused on tin-tantalum.

The pegmatites that have been recognised and exploited in the Bynoe Field to date are only the near surface expression (Figure 1) and there is high potential for larger mineralised bodies at depth including the potential for greisen-style mineralisation associated with the pegmatite's parent Two Sisters Granite.

The historic Mount Finniss Mine is within the area of Core's tenure and is listed by the Northern Territory Geological Survey 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 surrounding Observation Hill area suggest high potential for lithium grades.

The Bynoe region has substantial infrastructure advantages being close to grid power, gas and rail and within trucking distance to Darwin Port - Australia's nearest port to Asia.

### **Next Steps**

The Company's cash position of ~\$1 million after the recently completed capital raising places the Company in a strong position to undertake exploration and evaluation work across its portfolio of lithium projects in the Northern Territory, and also provides the financial capacity to act upon and execute additional complementary lithium project opportunities being assessed by the Company in the NT where the Company has developed expertise and experience through its exploration activities in recent years.

Core is planning to commence evaluation and testing of the lithium potential of the historic mine workings and tailings dumps within the Finniss Lithium Project in March 2016.

### **Background**

Core Exploration Ltd (ASX: CXO) is an ASX-listed diversified metal exploration company 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.



Name	Commodity	Easting	Northing
Ah Hoy	Ta-Sn	692530	8590305
Arltunga	Sn-Nb-Ta	694429	8601261
Bells Tin	Sn-Ta	692829	8591361
Booths Extended	Sn-Ta	695633	8594659
Booths South	Sn-Ta	695770	8595134
BP 2	Sn-Nb-Ta	694329	8600761
BP 31	Sn-Ta	692930	8593465
BP 32	Sn-Ta	694400	8593305
BP 32W	Sn-Ta	694029	8592861
BP 33	Sn-Ta	694380	8593485
BP 55	Sn-Ta	692680	8592840
BP 6	Sn-Nb-Ta	693629	8600861
Crawfords	Sn-Nb-Ta	694300	8599800
Creeping Croc	Sn-Ta	692129	8592561
Far West Central	Sn-Nb-Ta	692260	8597995
Far West North	Sn-Nb-Ta	692390	8598755
Flooded	Sn-Ta	692708	8590712
Fortscue	Sn-Ta	694229	8593361
Gilmours North	Sn-Nb-Ta	694329	8602261
Grants	Sn-Nb-Ta	693030	8599055
Grants West (Lama)	Sn-Nb-Ta	692829	8599161
Hills	Sn-Nb-Ta	693829	8599261
Hornet	Sn-Nb-Ta	695729	8596761
Kellys Sn	Sn-Ta	693540	8591075
Kettle	Sn-Nb-Ta	693429	8599661
Mammoth	Sn-Nb-Ta	693029	8600761
Mammoth Extended	Sn-Nb-Ta	692970	8600575
Roses	Sn-Nb-Ta	694430	8599835
Two Sisters	Sn-Ta	692061	8593175
Unnamed 01752	Sn-Ta	693429	8593061
Vickmans	Sn-Ta	693430	8593065
White Angel	Sn-Ta	692990	8592185

Table 1: Listed historic mines and mineral occurrences on EL 29698

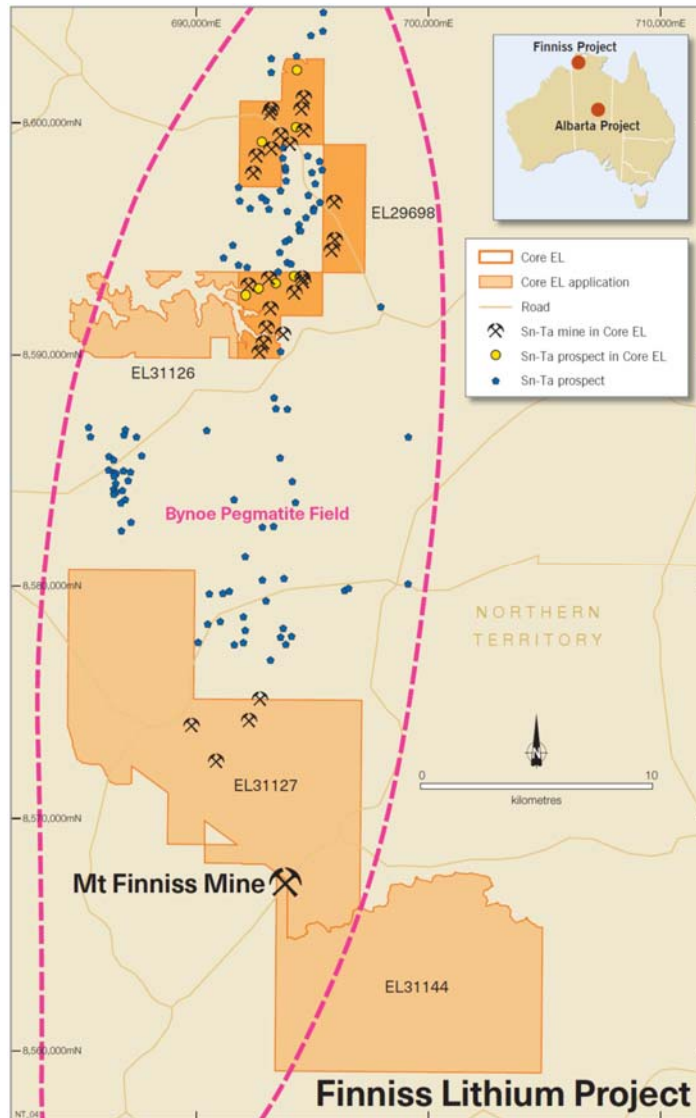


Figure 3. Core's Finnis Lithium Project tenements in the Bynoe pegmatite field, NT.

For further information please contact:

Stephen Biggins  
Managing Director  
Core Exploration Ltd  
08 7324 2987

[info@coreexploration.com.au](mailto: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.*



## Finniss Lithium Project – March 2016– JORC 2012

### Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li><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></li> <li><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li><i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></li> <li><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></li> </ul>	<ul style="list-style-type: none"> <li>No sampling conducted by Core Exploration to date</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li><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></li> </ul>	<ul style="list-style-type: none"> <li>No drilling undertaken</li> </ul>
<b>Drill sample</b>	<ul style="list-style-type: none"> <li><i>Method of recording and assessing core and chip sample recoveries</i></li> </ul>	<ul style="list-style-type: none"> <li>No drilling undertaken</li> </ul>



Criteria	JORC Code explanation	Commentary
<b>recovery</b>	<p><i>and results assessed.</i></p> <ul style="list-style-type: none"> <li>• <i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></li> <li>• <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></li> </ul>	
<b>Logging</b>	<ul style="list-style-type: none"> <li>• <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></li> <li>• <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></li> <li>• <i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No drilling undertaken</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> </ul> <p><i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></p> <p><i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></p> <p><i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></p> <ul style="list-style-type: none"> <li>• <i>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field</i></li> </ul>	<ul style="list-style-type: none"> <li>• No sampling undertaken.</li> </ul>





Criteria	JORC Code explanation	Commentary
	<p><i>duplicate/second-half sampling.</i></p> <ul style="list-style-type: none"> <li><i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li><i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li><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></li> <li><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></li> </ul>	<ul style="list-style-type: none"> <li>No sampling undertaken</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li><i>The verification of significant intersections by either independent or alternative company personnel.</i></li> </ul> <p><i>the use of twinned holes.</i></p> <p><i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></p> <ul style="list-style-type: none"> <li><i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>No sampling undertaken</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li><i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations</i></li> </ul>	<ul style="list-style-type: none"> <li>No drilling or sampling undertaken</li> </ul>



Criteria	JORC Code explanation	Commentary
	<p><i>used in Mineral Resource estimation.</i></p> <ul style="list-style-type: none"> <li>• <i>Specification of the grid system used.</i></li> <li>• <i>Quality and adequacy of topographic control.</i></li> </ul>	
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>• <i>Data spacing for reporting of Exploration Results.</i></li> <li>• <i>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.</i></li> <li>• <i>Whether sample compositing has been applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No drilling or sampling undertaken</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>• <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No drilling or sampling undertaken.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>• <i>The measures taken to ensure sample security.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No sampling undertaken</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No audits or reviews have been undertaken</li> </ul>

## Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<b>Mineral</b>	<ul style="list-style-type: none"> <li>• <i>Type, reference name/number, location and ownership including</i></li> </ul>	<ul style="list-style-type: none"> <li>• DBL Blues Pty Ltd a wholly owned subsidiary of Core Exploration Ltd</li> </ul>



Criteria	JORC Code explanation	Commentary
<b>tenement and land tenure status</b>	<p><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></p> <ul style="list-style-type: none"> <li><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></li> </ul>	<ul style="list-style-type: none"> <li>CXO has recently entered option agreement to purchase granted EL 29698 (refer body of announcement)</li> <li>(CXO) has applied for three exploration tenements (EL's 31126, 31127 and 31144) in the Bynoe Field</li> <li>CXO manages the tenure. All tenure applications are outside of registered Heritage, Conservation or National Parks.</li> <li>A separate party also has EMP rights to a small 0.2km<sup>2</sup> area extractive minerals only (e.g. sand/gravel) near Mt Finnis</li> <li>EL 31144 overlaps with ALRA freehold land</li> <li>CXO may face a range of land owner access issues typical to the exploration industry in the NT</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li><i>Acknowledgment and appraisal of exploration by other parties.</i></li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> <li>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.</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li><i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<ul style="list-style-type: none"> <li>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</li> </ul>



Criteria	JORC Code explanation	Commentary
		<p>Paleoproterozoic intrusion which is interpreted to be the source of the rare metals.</p> <ul style="list-style-type: none"> <li>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.</li> <li>The pegmatites are located in a north trending, 15km wide belt.</li> <li>The pegmatites are strongly weathered to 10-20m depth and often poorly exposed with feldspar completely altered to kaolinite.</li> <li>Dimensions of the pegmatites vary in scale from narrow fracture fillings to massive bodies up to 50m wide and &gt;200m long.</li> </ul>
<p><b>Drill hole Information</b></p>	<ul style="list-style-type: none"> <li>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: <ul style="list-style-type: none"> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>No drilling undertaken</li> </ul>
<p><b>Data aggregation methods</b></p>	<ul style="list-style-type: none"> <li>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.</li> <li>Where aggregate intercepts incorporate short lengths of high grade</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>



Criteria	JORC Code explanation	Commentary
	<p>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.</p> <ul style="list-style-type: none"> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>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').</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>See attached plans in body of report.</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>All meaningful and material data reported</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas,</li> </ul>	<ul style="list-style-type: none"> <li>Capture and compilation of historic data into a digital database;</li> <li>Ranking of pegmatites according to size potential;</li> <li>Geological mapping and prospect assessment;</li> </ul>





Criteria	JORC Code explanation	Commentary
	<i>provided this information is not commercially sensitive.</i>	<ul style="list-style-type: none"><li>• Trenching (if feasible); and</li><li>• RC drilling to test fresh bedrock for spodumene mineralisation</li></ul>