



# Woomera Mining Limited

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4 July 2018

ASX Announcement

## **STRONG LITHIUM-BERYLLIUM ANOMALY AT LAKE DUNDAS**

Woomera Mining Limited (ASX:WML) is pleased to provide additional information in the form of JORC Table 1 to the ASX announcement released to the market on the 2<sup>nd</sup> July 2018.

Woomera Mining Limited's EL63/1804 is located approximately 160 km south-south-east of Kalgoorlie in the Dundas Mineral Field in Western Australia. The tenement covers the north-eastern portion of Lake Dundas and is underlain by Archean granite, granitic gneiss and minor mafic intrusive rocks.

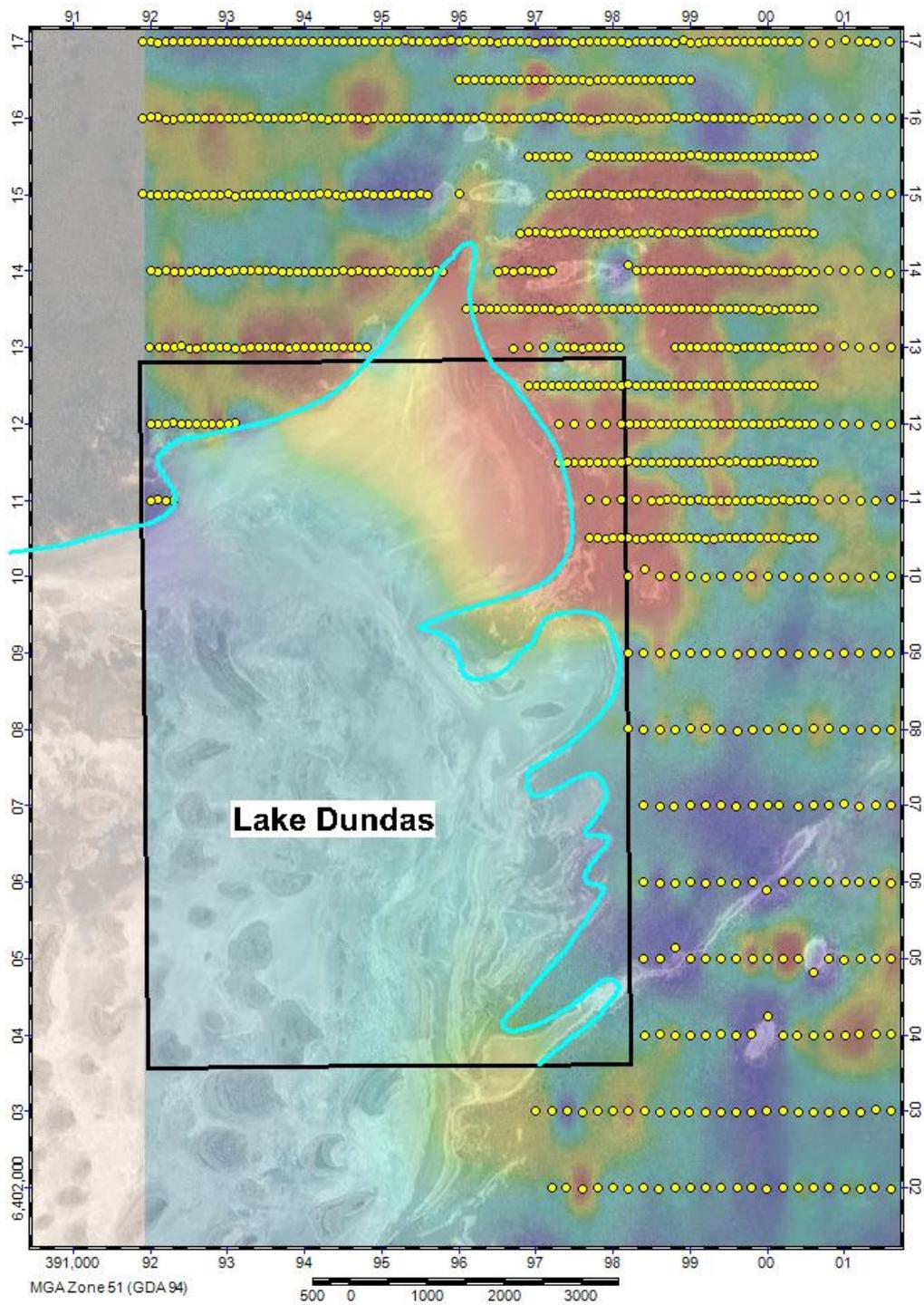
The Lake Dundas tenement was first applied for by Liquid Lithium Pty Ltd because of its potential for lithium brines. Liquid Lithium Pty Ltd based the potential for lithium brines on work conducted by Geoscience Australia that highlighted Lake Dundas as having one of the highest lithium concentrations (93-149ppm) in Australia.

Lake Dundas has many of the elements that producing lithium brine deposits share, namely:

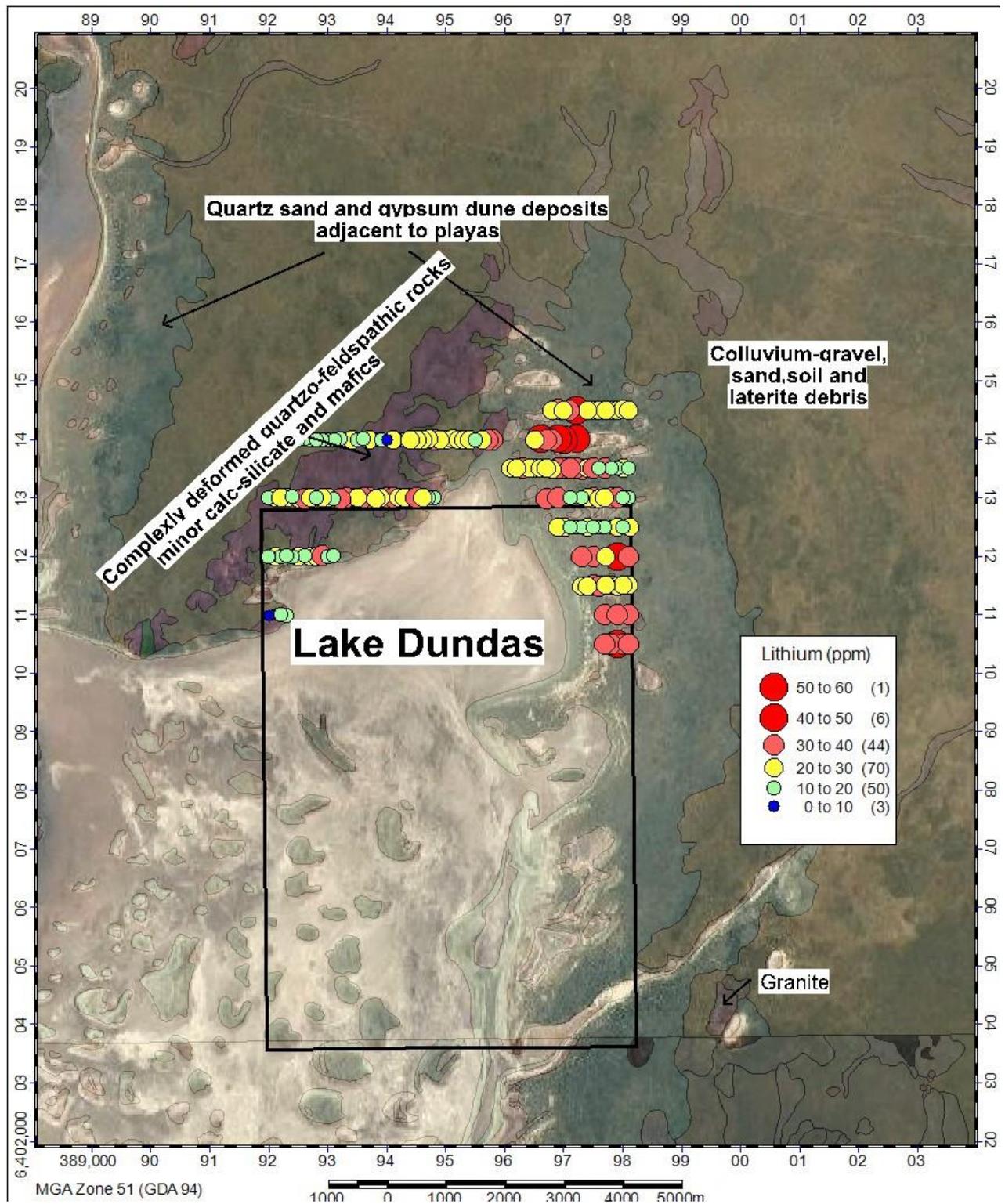
- Occurs in an arid climate;
- Is part of a closed basin;
- Has experienced tectonically driven subsidence;
- Has associated igneous or geothermal activity;
- Has suitable lithium source rocks;
- Has one or more aquifers; and
- Sufficient time to concentrate a brine.

Woomera Mining Limited acquired the assets of Liquid Lithium Pty Ltd (and another company - Volt Lithium Pty Ltd) on 5<sup>th</sup> March 2018 and in doing so acquired 10 tenements and tenement applications in Western Australia that are prospective for hard-rock lithium and lithium brines.

A review of Open File information identified a significant lithium-beryllium anomaly (peak values of 71.4 ppm lithium and 4.4 ppm beryllium) adjacent to and within Woomera's EL63/1804. The lithium-beryllium anomaly was identified from a comprehensive soil auger sampling program conducted by AngloGold Ashanti Australia in 2000 consisting of over 7,212 samples.



**Figure 1. Location of Woomera Mining's EL63/1804 relative to comprehensive historic auger soil sampling**



**Figure 2. Historic auger soil sample lithium values in ppm**

The presence of such a pronounced lithium and beryllium anomaly in the north-eastern portion of the tenement suggests that hard-rock lithium-pegmatites might be present on the edge and potentially under the lake.

## COMPETENT PERSONS STATEMENT

*The exploration results reported herein, insofar as they relate to mineralisation, are based on information compiled by Mr Gerard Anderson, Managing Director of Woomera Mining Limited. Mr Anderson is a Member of the Australasian Institute of Mining and Metallurgy who has over forty-two years of experience in the field of activity being reported. Mr Anderson has sufficient experience which is relevant to the styles of mineralisation and types of deposit under consideration and to the activity that he is undertaking 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' relating to the reporting of Exploration Results. Mr Anderson consents to the inclusion in the report of matters based on his information in the form and context in which it appears.*

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### **About Woomera Mining Limited**

Woomera Mining Limited (Woomera) is an ASX listed exploration company based in Adelaide, South Australia with an extensive minerals tenement portfolio prospective for Copper, Lithium, Gold, Uranium, Iron Ore, Nickel and Cobalt. The Woomera tenement package includes four tenements in the Musgrave Province of South Australia with several drill ready targets (**Musgrave Project**) which is the subject of a binding Heads of Agreement with Oz Minerals (ASX: OZL) where Oz Minerals can elect to expend up to \$7.5m in exploration to gain up to 75% of the Joint Venture in the Musgrave Province with Woomera. Five tenements make up the Gawler Craton package (**Gawler Craton Project**) which are prospective for IOCGU deposits, Cu-Ni-Co deposits, RE and Precious Metals. Woomera's tenement portfolio also includes 8 granted tenements and two tenement applications including 3 tenements in the Pilbara region of WA (**Pilgangoora Lithium Project**), 2 lithium tenements near Ravensthorpe (**Mt Cattlin Lithium Project**) and several WA lithium brine prospects over Lakes Tay, Sharpe, Dundas, Cowan and Dumbleyung (**Lakes Lithium Projects**).



## JORC Code, 2012 Edition – Table 1

### Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<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 (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.</i></li> </ul>	<ul style="list-style-type: none"> <li>Auger drilling was undertaken on E63/1804 and adjacent areas by AngloGold Ashanti between 2009 and 2010. A total of 7212 holes were drilled, 51 of which were on E63/1804. Maximum depth was 2 metres. Details of the survey were reported by AngloGold Ashanti in their annual technical report to the WA Department of Mines and Petroleum for the period 1 October 2009 to 30 September 2010.</li> <li>These details were not reported in the AngloGold Ashanti historical report and consequently are unknown.</li> <li>Auger sampling was conducted on lines which were 1km to 2kms apart and the sample spacing along each line was 100m to 200m. Some infill sampling was conducted down to 500m by 100m. Samples of between 300 grams and 500 grams were taken from each auger hole from the zone that showed greatest carbonate reactivity. Samples were not sieved.</li> <li>Analysis was performed by Genalysis Laboratory Services. Samples were dried in an oven at 100 degrees and then pulverised in an LM2 mill to a nominal size of –75 microns. The milled pulps were weighed out (25 grams) and underwent stepwise, aqua regia digestion in a temperature-controlled laboratory. The analyte was then presented to a graphite-furnace AAS (Au), followed by ICP mass spectrometry and optical emission spectrometry (GLS method code B25/EETA/MS/OES).</li> </ul>

Criteria	JORC Code explanation	Commentary
Drilling techniques	<ul style="list-style-type: none"> <li>• <i>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).</i></li> </ul>	<ul style="list-style-type: none"> <li>• Shallow (&lt;2m depth) auger drilling.</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li>• <i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></li> <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>	<ul style="list-style-type: none"> <li>• These details were not reported in the AngloGold Ashanti historical report and consequently are unknown.</li> </ul>
Logging	<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>• There are no details of logging reported in the AngloGold Ashanti historical report.</li> </ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> <li>• <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li>• <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li>• <i>Measures taken to ensure that the sampling is representative of the in</i></li> </ul>	<ul style="list-style-type: none"> <li>• No diamond coring was undertaken</li> <li>• Samples were not sieved</li> <li>• Samples were dried in an oven at 100 degrees and then pulverised in an LM2 mill to a nominal size of –75 microns. The milled pulps were weighed out (25 grams) and underwent stepwise, aqua regia digestion in a temperature-controlled laboratory. The analyte was then presented to a graphite-furnace AAS (Au), followed by ICP mass spectrometry and optical emission spectrometry (GLS method code B25/EETA/MS/OES). Auger sampling is an appropriate method</li> <li>• Standards and blanks were each routinely submitted approximately every hundred samples as part of quality control.</li> <li>• Samples were taken from the zone downhole with the greatest</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>situ material collected, including for instance results for field 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>	<p>carbonate reactivity</p> <ul style="list-style-type: none"> <li>Sample sizes are appropriate for shallow auger sampling</li> </ul>
<p>Quality of assay data and laboratory tests</p>	<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>Assaying conducted by Genalysis (GLS method code B25/EETA/MS/OES) provides a full suite of element assays, appropriate for auger geochemical reconnaissance.</li> <li>The AngloGold report did not comment on specific instrumentation, however, the GLS method code B25/EETA/MS/OES is industry best practice.</li> <li>Standards and blanks were each routinely submitted approximately every 100 samples and there is no evidence of bias in the geochemical data set.</li> </ul>
<p>Verification of sampling and assaying</p>	<ul style="list-style-type: none"> <li><i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li><i>The use of twinned holes.</i></li> <li><i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li><i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>AngloGold Ashanti report makes no reference to verification of intersections by either independent or alternative company personnel.</li> <li>No twinned holes were reported.</li> <li>Data entry procedures were not reported. Located geochemical data from the auger survey is published via the WAMEX online system of the DMIRS portal. The data is published in industry standard Mineral Exploration Reporting standard.</li> <li>No adjustments to assay data was reported.</li> </ul>
<p>Location of data points</p>	<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 used in Mineral Resource estimation.</i></li> <li><i>Specification of the grid system used.</i></li> <li><i>Quality and adequacy of topographic control.</i></li> </ul>	<ul style="list-style-type: none"> <li>The AngloGold Ashanti report does not comment on spatial accuracy. There is no evidence of spatial deviation in the geochemical data set.</li> <li>Collar coordinates have been reported in GDA94 Zone 51 units.</li> <li>Topographic control is not necessary for locating auger samples</li> </ul>
<p>Data spacing and distribution</p>	<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</i></li> </ul>	<ul style="list-style-type: none"> <li>Samples were collected dominantly on wide-spaced uncleared grids (1 or 2km line spacings) with samples spaced at 100-200m. Some infill sampling was conducted down to 500m x 50m spacings.</li> <li>Spacing of auger geochemical data is sufficient to enable the</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i></p> <ul style="list-style-type: none"> <li><i>Whether sample compositing has been applied.</i></li> </ul>	<p>identification of a cluster of elevated Lithium assays trending N-S.</p> <ul style="list-style-type: none"> <li>No sample compositing has been applied.</li> </ul>
<i>Orientation of data in relation to geological structure</i>	<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>Lines were oriented in an east-west direction roughly orthogonal to the geological trends in the area. This is unlikely to produce bias.</li> <li>No relationships between the drilling and the orientation of key mineralized structures could be determined apart from an overall N-S orientation to a broad zone of elevated lithium and beryllium assays.</li> </ul>
<i>Sample security</i>	<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 mention was made in the AngloGold Ashanti report concerning the chain of custody for the samples.</li> </ul>
<i>Audits or reviews</i>	<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>The primary focus of the auger program was exploration for gold. There is no evidence of reviews being undertaken on the significance of the lithium anomalism.</li> </ul>

## Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <li><i>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.</i></li> <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>E63/1804 Lake Dundas is a granted exploration licence located approximately 160 km SSE of Kalgoorlie within the Dundas Mineral Field, WA. E63/1804 is 100% owned by Liquid Lithium Pty Ltd, a wholly owned subsidiary of Woomera Mining Limited.</li> <li>E63/1804 is covered by the Native Title Determined Area NGADJU Native Title Aboriginal Corporation (WC1999/002). The eastern boundary of the tenement overlies the Dundas Nature Reserve R36957 (Flora and Fauna Conservation area).</li> </ul>
<i>Exploration done by other parties</i>	<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>No lithium brine exploration undertaken to date. The AngloGold Ashanti auger program collected 51 samples on E63/1804.</li> </ul>
<i>Geology</i>	<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>Lake Dundas is a large non-perennial salt lake located within Cenozoic palaeovalleys. Woomera Mining Limited is targeting both</li> </ul>

Criteria	JORC Code explanation	Commentary
		lithium-brine style mineralization and hard rock lithium mineralization.
<i>Drill hole Information</i>	<ul style="list-style-type: none"> <li>• <i>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:</i> <ul style="list-style-type: none"> <li>○ <i>easting and northing of the drill hole collar</i></li> <li>○ <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></li> <li>○ <i>dip and azimuth of the hole</i></li> <li>○ <i>down hole length and interception depth</i></li> <li>○ <i>hole length.</i></li> </ul> </li> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Woomera Mining Limited has relied on the data collected by AngloGold Ashanti and published on the DMIRS online system, WAMEX.</li> <li>• Elevation, dip and azimuth details are not material for the 7,212 auger holes of the AngloGold Ashanti survey. The auger survey results have been displayed in the form of a thematic diagram that and a gridded image that demonstrates spatial trends of elevated assays.</li> </ul>
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>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.</i></li> <li>• <i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul>	<ul style="list-style-type: none"> <li>• A total of 174 auger samples were taken within and immediately north of E63/1804 as shown in Figure 2. Lithium assays are presented as actual assays in ppm with no maximum and/or minimum grade truncations applied. There was no cutting of assays and no cut-off grades applied. The average of all the lithium in soils assays was 18.15ppm. The Company for the purpose of defining anomalous lithium values and the trend of anomalous lithium in soil results used assays twice the average or 36 ppm.</li> <li>• The auger samples were taken one per hole and as such no aggregate intercepts were calculated</li> <li>• No metal equivalent values were used.</li> </ul>
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> <li>• <i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li>• <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li>• <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></li> </ul>	<ul style="list-style-type: none"> <li>• Each auger hole provided one sample taken of the most carbonate reactive zone in each drill hole. Each auger hole was vertical.</li> <li>• The geometry of the mineralisation is not known nor is it known if the soil samples reflect mineralisation in the underlying basement rocks. The Li and Be anomalism identified in the soil samples may indicate a basement source and future work would need drilling to test if a basement source is present.</li> </ul>
<i>Diagrams</i>	<ul style="list-style-type: none"> <li>• <i>Appropriate maps and sections (with scales) and tabulations of</i></li> </ul>	<ul style="list-style-type: none"> <li>• Refer to Figures 1 and 2 in the body of the text.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>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></p>	
<p><i>Balanced reporting</i></p>	<ul style="list-style-type: none"> <li>• <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></li> </ul>	<ul style="list-style-type: none"> <li>• Refer to the text and Figures 1 and 2 that show the assay results.</li> </ul>
<p><i>Other substantive exploration data</i></p>	<ul style="list-style-type: none"> <li>• <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></li> </ul>	<ul style="list-style-type: none"> <li>• Lake Dundas EL63/1804 was first applied for by Liquid Lithium Pty Ltd because of its potential for lithium brines. Liquid Lithium Pty Ltd based the potential for lithium brines on work conducted by Geoscience Australia that highlighted Lake Dundas as having one of the highest lithium concentrations (93-149ppm) in Australia. Geoscience Australia also noted that Lake Dundas had many of the attributes that lithium brine deposits share.</li> <li>• The tenement is underlain mostly by Archean granite and granite gneiss which are potential source rocks for the formation of lithium brines.</li> </ul>
<p><i>Further work</i></p>	<ul style="list-style-type: none"> <li>• <i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li>• <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></li> </ul>	<ul style="list-style-type: none"> <li>• The primary target at Lake Dundas is lithium brine potential and the results of the auger sampling reinforce the understanding that the basement rocks could act as source rocks for the formation of lithium brines. Geophysical techniques will be used to locate the palaeochannel aquifers which will then be subjected to testing for lithium content.</li> </ul>