

### Major new resource expansion drilling program to commence at Kathleen Valley as Liontown sets key strategic objectives for 2019/20

Following \$18M raising, Liontown now fully-funded to expand Kathleen Valley Mineral Resource and complete feasibility studies within next 12-18 months

#### HIGHLIGHTS

- New 15,000m Reverse Circulation (RC)/diamond core drilling program to commence at Kathleen Valley, aimed at expanding the current Mineral Resource Estimate (MRE) and defining potential underground Resources and Reserves.
- Kathleen Valley is Australia's 5<sup>th</sup> largest lithium deposit with an MRE of 74.9Mt @ 1.3% Li<sub>2</sub>O and 140ppm Ta<sub>2</sub>O<sub>5</sub>, 83% of which is in the higher-confidence Measured and Indicated categories.
- Thick, high grade mineralisation has been defined over 1km and remains open along strike and at depth.
- The Company's primary objectives in advancing Kathleen Valley are the:
  - Completion of a Pre-Feasibility Study (PFS) by end of 2019 and immediate transition to a Definitive Feasibility Study (DFS); and
  - Planning and execution of the transition from an exploration to a mineral development company.
- The DFS will incorporate data from the new drilling program, the results of which will be reported over next few months.
- A Scoping Study released in early 2019 based on the maiden 21.2Mt MRE confirmed the potential to develop a commercially viable, standalone mining operation.

Liontown Resources (ASX: LTR; "Liontown") is pleased to advise that it will undertake a new resource expansion drilling program at its 100%-owned **Kathleen Valley Lithium-Tantalum Project** in WA (**Figure 1**) as part of its strategy to fast-track the development of a significant new standalone lithium mining operation over the next 12-18 months.

The new drilling program follows the announcement of a 353% increase in the Kathleen Valley Mineral Resource Estimate (MRE) to 74.9Mt at 1.3% Li<sub>2</sub>O and 140ppm Ta<sub>2</sub>O<sub>5</sub> (ASX release dated 9<sup>th</sup> July 2019) and a landmark \$18 million capital raising (see ASX release dated 2<sup>nd</sup> August 2019).

The Company has reviewed its corporate strategies and objectives and confirmed that its immediate focus will be on the completion of a Pre-Feasibility Study (PFS) for Kathleen Valley by the end of 2019.

The PFS is already well-advanced and will include results from:

- Comprehensive metallurgical test work;
- Pit optimisation and scheduling;
- Review of infrastructure requirements;
- Financial analyses of open pit mining; and
- A Scoping Study on potential additional underground Resources.

Based on the positive results from the Scoping Study completed earlier this year on the smaller, maiden MRE (see ASX release dated 29<sup>th</sup> January 2019), Liontown envisages transitioning into a Definitive Feasibility Study (DFS) immediately following the PFS.

Given the grade, thickness, continuity and orientation of the mineralisation at Kathleen Valley, the new drilling program has been designed to delineate potential open pit and underground resources, in addition to those already defined, which will be included in the DFS.

The drilling program will comprise up to 31 RC/diamond core holes for a total of 15,000m.

Previous drilling at Kathleen Valley defined a thick (35 – 75m), high grade pegmatite body which is interpreted to be the feeder zone for the outcropping Mt Mann and Kathleen Corner pegmatite swarms (**Figures 2 and 3**).

This body remains open both along strike and at depth, has been intersected over a strike length of at least 600m, and is part of larger high-grade mineralised system which has now been defined over a strike length of at least 1,000m.

A resource extension Exploration Target of **25 – 50Mt @ 1.2 – 1.5% Li<sub>2</sub>O** has been defined based on testing for extensions of the current Mineral Resource estimate from the limits of existing drill data to a vertical depth of ~500m below surface (**Figure 4**) with holes 100m apart on 100m spaced lines. This Exploration Target is in addition the current 74.9Mt MRE.

The potential grade and tonnage of the Exploration Target is conceptual in nature and there has been insufficient exploration to estimate an expanded Mineral Resource. It is uncertain if further exploration will result in the estimation of an expanded Mineral Resource. See Table 1 for full explanation of assumptions used to estimate ranges.

Drilling will be staged to take into account ongoing results and, subject to the timely receipt of all statutory clearances, is estimated to take 2-3 months to complete.

Liontown's Managing Director, David Richards, said the new drilling program formed part of a clear corporate strategy aimed at advancing the Kathleen Valley Project rapidly towards development as a significant new high-quality Australian lithium-tantalum mining and processing operation.

*"We want to maintain the growth momentum that we have built up through the course of this year, which culminated in the recent MRE upgrade and successful \$18 million capital raising. The next round of drilling at Kathleen Valley is aimed at expanding the scale of this already very significant high-grade mineralised system. Drilling will continue for the next 2-3 months and should generate consistent news-flow, laying the foundations for a further resource upgrade. In the meantime, we will focus on delivering a Pre-Feasibility Study, based on the current MRE, by the end of 2019 as the foundation for a DFS commencing in early 2020."*

### **Buldanía Drilling Update**

Resource definition drilling has finished at the Buldanía Lithium Project located near Norseman in southern Western Australia with the rig relocating to Kathleen Valley. Since drilling recommenced in May 2019, 72 additional RC holes have been drilled for 12,613m with drilling at the Project since it was acquired totalling 168 RC holes for 23,622m and 3 diamond core holes for 548.5m.

Mineralised pegmatites have been intersected over 1.4km strike at the Anna prospect with system remaining open. A further market update will be provided once all outstanding assays have been received after which a maiden MRE will be prepared by an independent resource consultant. The maiden MRE is scheduled for release in November 2019.



DAVID RICHARDS

Managing Director

27<sup>th</sup> August 2019

*The Information in this report that relates to Mineral Resources for the Kathleen Valley Project is extracted from the ASX announcement "Kathleen Valley Lithium Resource jumps 353% to 74.9Mt @ 1.3% Li<sub>2</sub>O" released on the 9<sup>th</sup> July 2019 which is available on [www.ltresources.com.au](http://www.ltresources.com.au).*

*The Information in this report that relates to the Scoping Study for the Kathleen Valley Project is extracted from the ASX announcement "Kathleen Valley Scoping Study confirms potential for robust new WA lithium mine development" released on the 29<sup>th</sup> January 2019 which is available on [www.ltresources.com.au](http://www.ltresources.com.au).*

*The Information in this report that relates to Exploration Results for the Kathleen Valley Project is extracted from the ASX announcements "Latest drilling extends thick, high-grade zone at Kathleen Valley further north as strong assay results continue", "Spectacular intercept of 90m @ 1.3% Li<sub>2</sub>O at Kathleen Valley" and "Work commences on Kathleen Valley Resource update as drilling continues to deliver wide, high grade lithium results" and "Further spectacular drill intercepts returned from Kathleen Valley" released on the 9<sup>th</sup> May 2019, 20<sup>th</sup> May 2019, 3<sup>rd</sup> June 2019 and 24<sup>th</sup> June 2019 respectively which are available on [www.ltresources.com.au](http://www.ltresources.com.au).*

*The Information in this report that relates to Exploration Targets is based on and fairly represents information and supporting documentation prepared by Mr David Richards, who is a Competent Person and a member of the Australasian Institute of Geoscientists (AIG). Mr Richards is a full-time employee of the company. The potential tonnage and grade ranges are conceptual in nature and there has been insufficient exploration to estimate a Mineral Resource. It is uncertain if further exploration will result in the estimation of a Mineral Resource.*

*The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.*

*This announcement contains forward-looking statements which involve a number of risks and uncertainties. These forward-looking statements are expressed in good faith and believed to have a reasonable basis. These statements reflect current expectations, intentions or strategies regarding the future and assumptions based on currently available information. Should one or more of the risks or uncertainties materialise, or should underlying assumptions prove incorrect, actual results may vary from the expectations, intentions and strategies described in this announcement. No obligation is assumed to update forward looking statements if these beliefs, opinions and estimates should change or to reflect other future developments.*

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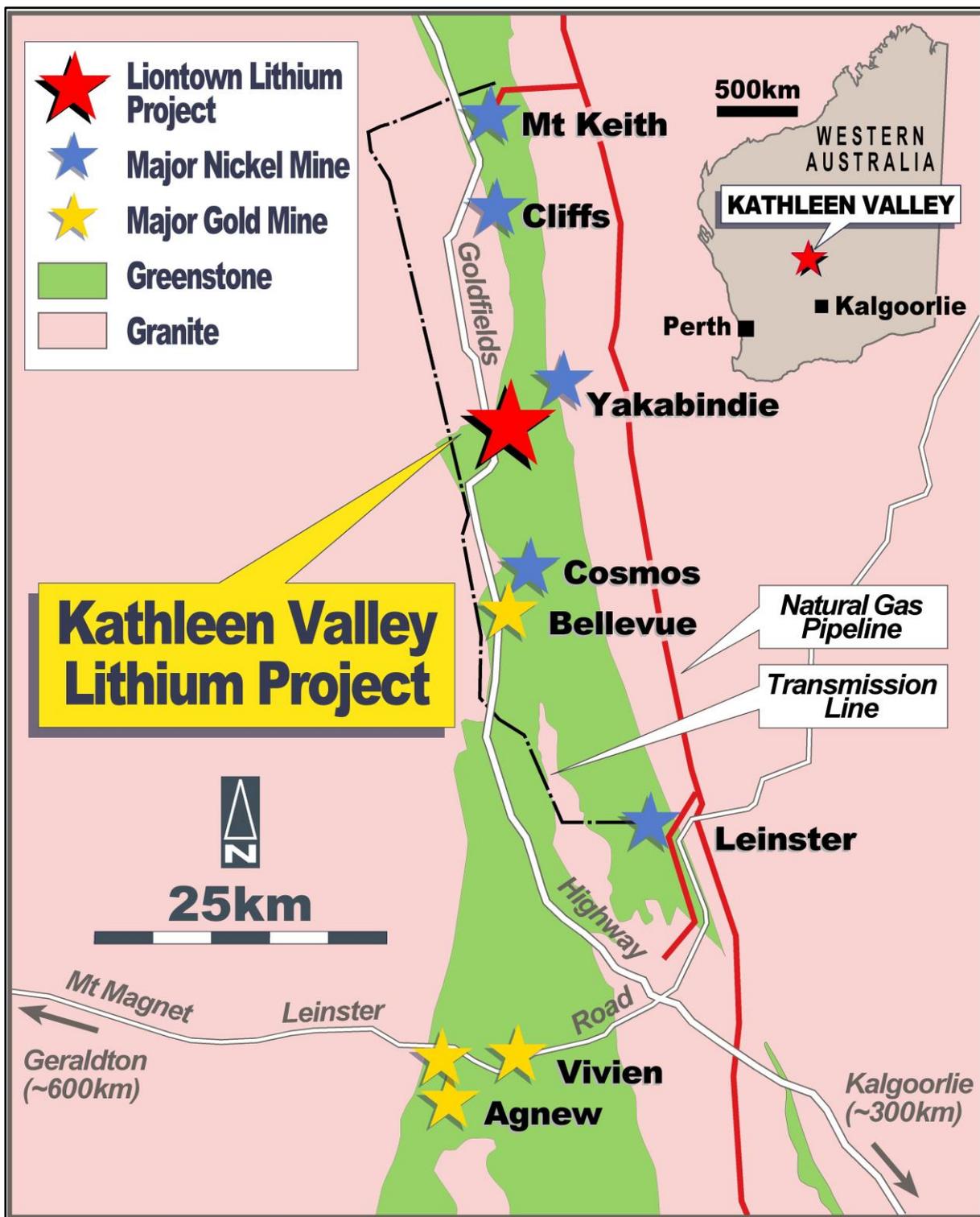


Figure 1: Kathleen Valley Lithium-Tantalum Project – Location and Regional Geology Plan.

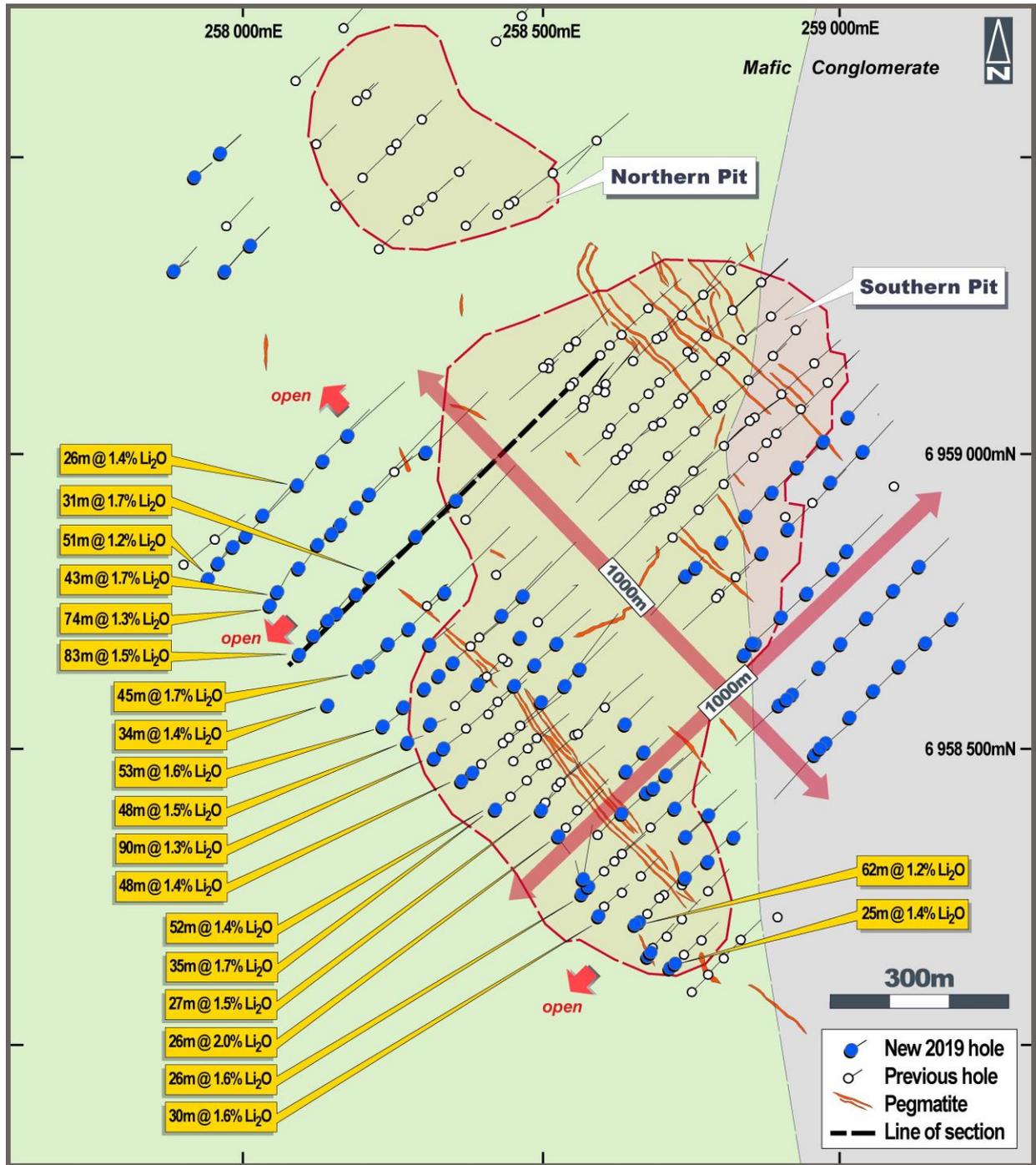


Figure 2: Kathleen Valley Lithium-Tantalum Project – Drill hole plan showing better intersections from latest drilling and outcropping pegmatite swarms.

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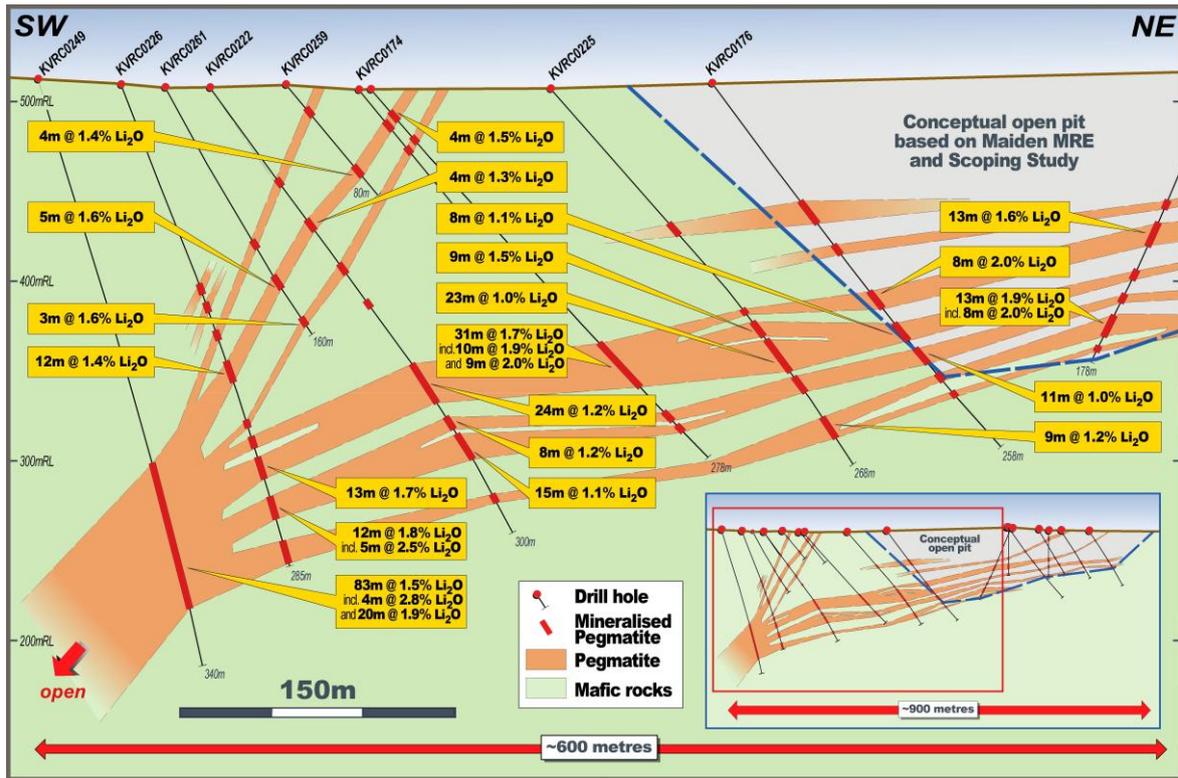


Figure 3: Kathleen Valley Lithium-Tantalum Project – Drill section (see Figure 2 for location).

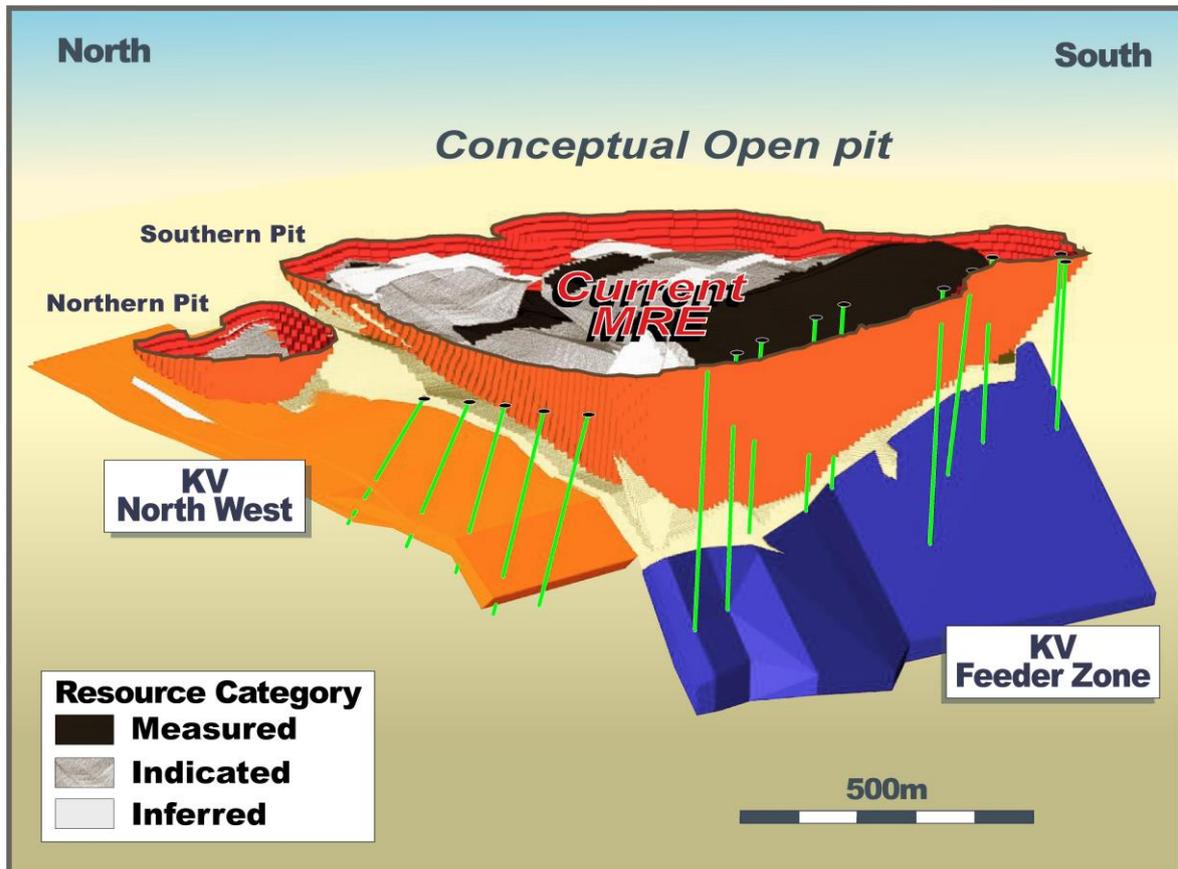


Figure 4: Kathleen Valley Lithium-Tantalum Project – 3D image showing current MRE, conceptual open pits and KV North West and KV Feeder Exploration Targets.

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Table 1: Kathleen Valley Project – Exploration Target parameters and assumptions

Parameter	KV Feeder Zone	KV North West	Rationale
Combined strike length of pegmatites	1100m	400	Based on previous drilling and extrapolation of block model used in preparation of Mineral Resource Estimate (released 4 <sup>th</sup> September 2018)
Average cumulative true width	>18m	>20m	
Down Dip extent	230 - 500m	600 - 1,100m	
Specific gravity	2.75	2.75	Measured from diamond core drilling
Total tonnage	12.5 - 27Mt	13 - 24Mt	Strike x width x dip x S.G
Average grade	1.2 – 1.5%	1.2 – 1.5%	Based on latest Mineral Resource Estimate

### Kathleen Valley – JORC Code 2012 Table 1 Criteria (8<sup>th</sup> July 2019)

The table below summaries the assessment and reporting criteria used for the Kathleen Valley Lithium Project Mineral Resource estimate and reflects the guidelines in Table 1 of *The Australasian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves* (the JORC Code, 2012).

#### Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<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>	<ul style="list-style-type: none"> <li>Sub-surface samples have been collected by reverse circulation (RC) and diamond core drilling techniques (see below).</li> <li>Drill holes are oriented perpendicular to the interpreted strike of the mineralised trend except in rare occasions where limited access necessitates otherwise.</li> </ul>
	<p><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></p> <p><i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></p> <p><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></p>	<ul style="list-style-type: none"> <li>RC samples are collected by the metre from the drill rig cyclone as two 1 m cone split samples in calico bags and a bulk sample in plastic mining bags.</li> <li>The 1 m samples from the cyclone are retained for check analysis. Only samples of pegmatite and adjacent wall rock (~4 m) are collected for assay.</li> <li>Diamond core has been sampled in intervals of ~1 m (up to 1.35 m) where possible, otherwise intervals less than 1 m have been selected based on geological boundaries. Geological boundaries have not been crossed by sample intervals.</li> </ul>
<b>Drilling techniques</b>	<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>	<p>Drilling techniques used at Kathleen Valley comprise:</p> <ul style="list-style-type: none"> <li>Reverse circulation (RC/5.5”) with a face sampling hammer</li> <li>HQ diamond core, standard tube to a depth of ~200-250 m.</li> <li>PQ diamond core, standard tube to a depth of ~200 m.</li> <li>Diamond core holes drilled directly from surface or</li> </ul>

Criteria	JORC Code explanation	Commentary
		from bottom of RC precollars. Core orientation was provided by an ACT REFLEX (ACT II RD) tool.
<b>Drill sample recovery</b>	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	<ul style="list-style-type: none"> <li>Sample recoveries are estimated for RC by correlating sample heights in the plastic bag to estimate a recovery for each metre.</li> <li>For diamond core the recovery is measured and recorded for every metre.</li> </ul>
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	<ul style="list-style-type: none"> <li>RC 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.</li> <li>For diamond core loss, core blocks have been inserted in sections where core loss has occurred. This has then been written on the block and recorded during the logging process and with detailed photography of dry and wet core.</li> </ul>
	<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>	<ul style="list-style-type: none"> <li>It has been demonstrated that no relationship exists between sample recovery and grade. No grade bias was observed with sample size variation.</li> </ul>
<b>Logging</b>	<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>	<ul style="list-style-type: none"> <li>All RC drill holes are logged on 1 m intervals and the following observations recorded: <ul style="list-style-type: none"> <li>Recovery, quality (i.e. degree of contamination), wet/dry, hardness, colour, grainsize, texture, mineralogy, lithology, structure type and intensity, pegmatite and vein type and %, lithium mineralogy and %, alteration assemblage, UV fluorescence.</li> </ul> </li> <li>Diamond core is logged in its entirety as per detailed geological description listed above. Geotechnical logging has been completed for the entire hole.</li> </ul>
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i>	<ul style="list-style-type: none"> <li>Logging is quantitative, based on visual field estimates.</li> <li>Diamond core is photographed post metre marking, for the entire length of the hole, two trays at a time, wet and dry.</li> </ul>
	<i>The total length and percentage of the relevant intersections logged.</i>	<ul style="list-style-type: none"> <li>Drill holes are logged in their entirety.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	<ul style="list-style-type: none"> <li>The core has been cut in half and then quartered for sample purposes. Half core used for metallurgical studies with the remaining quarter stored as a library sample.</li> <li>Density measurements have been taken on all quarter core samples using the Archimedes method.</li> </ul>
	<i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i>	<ul style="list-style-type: none"> <li>RC samples are collected as rotary split samples. Samples are typically dry.</li> </ul>
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	<ul style="list-style-type: none"> <li>Sample preparation follows industry best practice standards and is conducted by internationally recognised laboratories; i.e. <ul style="list-style-type: none"> <li>Oven drying, jaw crushing and pulverising so that 80% passes -75 microns.</li> </ul> </li> </ul>
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	<ul style="list-style-type: none"> <li>Duplicates and blanks submitted approximately every 1/20 samples.</li> <li>Standards are submitted every 20 samples or at least once per hole.</li> <li>Cross laboratory checks and blind checks have</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>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.</i></p>	<p>been used at a rate of 5%.</p> <ul style="list-style-type: none"> <li>Measures taken include:                             <ul style="list-style-type: none"> <li>regular cleaning of cyclones and sampling equipment to prevent contamination</li> <li>industry standard insertion of standards, blanks and duplicate samples.</li> </ul> </li> <li>Analysis of duplicates (field, laboratory and umpire) was completed and no issues identified with sampling representivity.</li> <li>Analysis of results from blanks and standards indicates no issues with contamination (or sample mix-ups) and a high level of accuracy.</li> </ul>
	<p><i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></p>	<ul style="list-style-type: none"> <li>Sample size is considered appropriate and is in-line with industry standards.</li> </ul>
<p><b>Quality of assay data and laboratory tests</b></p>	<p><i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></p>	<ul style="list-style-type: none"> <li>Initial assaying (2017) completed by ALS Perth. Subsequent assaying (2018 onwards) completed by Nagrom laboratories Perth.</li> <li>Both laboratories use industry standard procedures for rare metals such as Li and Ta. Analytical techniques are total.</li> </ul>
	<p><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></p>	<ul style="list-style-type: none"> <li>None used.</li> </ul>
	<p><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></p>	<ul style="list-style-type: none"> <li>Duplicates and blanks submitted approximately every 20 samples.</li> <li>Standards are submitted every 20 samples or at least once per hole.</li> <li>Cross laboratory checks and blind checks have been used at a rate of 5%.</li> <li>Analysis of reference blanks, standards and duplicate samples show the data to be of acceptable accuracy and precision for the Mineral Resource estimation and classification applied.</li> </ul>
<p><b>Verification of sampling and assaying</b></p>	<p><i>The verification of significant intersections by either independent or alternative company personnel.</i></p>	<ul style="list-style-type: none"> <li>Internal review by alternate company personnel.</li> </ul>
	<p><i>The use of twinned holes.</i></p>	<ul style="list-style-type: none"> <li>11 diamond holes have been drilled as twins or in close proximity to existing RC drill holes. Results compare well with the original RC drill holes.</li> </ul>
	<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>Drilling and logging data is entered directly into Microsoft Excel spreadsheets onsite while drilling is ongoing. Data is then entered into Access Database and validated before being processed by industry standard software packages such as MapInfo and Micromine.</li> <li>Representative chip samples are collected for later reference.</li> </ul>
	<p><i>Discuss any adjustment to assay data.</i></p>	<ul style="list-style-type: none"> <li>Li% is converted to Li<sub>2</sub>O% by multiplying by 2.15, Ta ppm is converted to Ta<sub>2</sub>O<sub>5</sub> ppm by multiplying by 1.22.</li> </ul>
<p><b>Location of data points</b></p>	<p><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></p>	<ul style="list-style-type: none"> <li>All drill collars and geochemical samples are initially located using a handheld GPS.</li> <li>Drill collars are subsequently surveyed accurately by a licensed surveyor using DGPS techniques. Eastings and northings are measured to within +/- 2 cm while elevations are measured to within +/- 10 cm.</li> <li>All RC drill holes have been surveyed by a multi-shot digital downhole camera provided by the</li> </ul>

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Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>drilling contractor.</li> <li>All diamond drill holes have been surveyed with a REFLEX EZI-SHOT (1001) magnetic single shot camera.</li> </ul>
	<i>Specification of the grid system used.</i>	<ul style="list-style-type: none"> <li>GDA 94 Zone 51</li> </ul>
	<i>Quality and adequacy of topographic control.</i>	<ul style="list-style-type: none"> <li>Initial collar elevations are based on regional topographic dataset.</li> <li>Drill hole collars are surveyed post drilling with DGPS (see above).</li> <li>Further topographic data (20 cm contours) has been provided for the Project by a LIDAR flown by Fugro.</li> </ul>
<b>Data spacing and distribution</b>	<i>Data spacing for reporting of Exploration Results.</i>	<ul style="list-style-type: none"> <li>Varies due to initial drill programmes largely designed to test the down-dip potential of mineralised outcrops. The drill section spacing is 40 m to 100 m and on-section spacing is generally 30 m to 60 m.</li> </ul>
	<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>	<ul style="list-style-type: none"> <li>The data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource estimation and classification applied.</li> </ul>
	<i>Whether sample compositing has been applied.</i>	<ul style="list-style-type: none"> <li>None undertaken.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<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>	<ul style="list-style-type: none"> <li>Drilling is typically oriented perpendicular to the interpreted strike of mineralisation.</li> <li>KVRC0015 was oriented at 45° to strike due to access issues and the need to test the main outcrop zone.</li> </ul>
	<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>	<ul style="list-style-type: none"> <li>Drilling orientation intersects the mineralisation at appropriate angles so as to be mostly unbiased and suitable for resource estimation of the major pegmatite bodies.</li> </ul>
<b>Sample security</b>	<i>The measures taken to ensure sample security.</i>	<ul style="list-style-type: none"> <li>Sample security is not considered to be a significant risk given the location of the deposit and bulk-nature of mineralisation.</li> <li>Nevertheless, the use of recognised transport providers, sample dispatch procedures directly from the field to the laboratory, and the large number of samples are considered sufficient to ensure appropriate sample security.</li> <li>Company geologist supervises all sampling and subsequent storage in field. The same geologist arranges delivery of samples to Nagrom laboratories in Perth via courier.</li> </ul>
<b>Audits or reviews</b>	<i>The results of any audits or reviews of sampling techniques and data.</i>	<ul style="list-style-type: none"> <li>Independent, expert competent person reviews have been completed by Ms. Wild of Wildfire Resources Pty Ltd and Mrs. Standing of Optiro Limited on the resource drilling, sampling protocols and data.</li> <li>This included a laboratory visit to Nagrom by Ms. Wild.</li> <li>Results indicate sampling and QAQC procedures are in-line with industry standards.</li> </ul>

### Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and</b>	<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</i>	<ul style="list-style-type: none"> <li>The Kathleen Valley Project is located ~670 km NE of Perth and ~45 km NNW of Leinster in Western Australia. The Project comprises four granted mining leases - MLs 36/264, 265, 459, 460 and one</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>land tenure status</b>	<i>sites, wilderness or national park and environmental settings.</i>	<p>Exploration License - E36/879.</p> <ul style="list-style-type: none"> <li>The mining leases (MLs) and rights to pegmatite hosted rare-metal mineralisation were acquired from Ramelius Resources Limited via a Sales Agreement completed in 2016. The MLs have been transferred to LRL (Aust) Pty Ltd, a wholly owned subsidiary of Liontown Resources Limited (Liontown).</li> <li>Ramelius acquired 100% of the Kathleen Valley Project MLs in June 2014 from Xstrata Nickel Operations Pty Ltd (Xstrata). Xstrata retains rights to any nickel discovered over the land package via an Offtake and Clawback Agreement.</li> <li>The Gold Rights were acquired from Ramelius via a Sales Agreement completed in June 2019.</li> <li>LRL (Aust) Pty Ltd has assumed the following Agreement: <ul style="list-style-type: none"> <li>Bullion and Non-Bullion Royalty Agreement of a 2% Gross Production Royalty affecting M36/264-265 and 459-460.</li> </ul> </li> <li>The EL is in the name of Liontown Resources Limited with no third-party obligations apart from statutory requirements.</li> <li>The tenements are covered by the Tjiwarl Determined Native Title Claim (WC11/7). Liontown has signed an Access Agreement with the NT group which largely applies to E36/879.</li> <li>LRL (Aust) Pty Ltd has received Section 18 consent to drill on certain areas with M36/459 and M36/460.</li> </ul>
	<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>	<ul style="list-style-type: none"> <li>All tenements are in good standing.</li> </ul>
<b>Exploration done by other parties</b>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	<ul style="list-style-type: none"> <li>Multiple phases of exploration have previously been completed for gold and nickel. This has not been reviewed in detail due to Liontown's focus on rare metal pegmatites.</li> <li>There has been limited sporadic prospecting for Li, Ta and Sn, principally by Jubilee Mines (subsequently taken over by Xstrata). Work comprised geological mapping, broad spaced soil sample lines and rock chip sampling of the pegmatites. Details of the methods and procedures used have not been documented.</li> <li>There has been no previous drill testing of the Li and Ta prospective pegmatites prior to Liontown acquiring the Project.</li> </ul>
<b>Geology</b>	<i>Deposit type, geological setting and style of mineralisation.</i>	<ul style="list-style-type: none"> <li>The Project is located on the western edge of the Norseman- Wiluna Belt within the Archaean Yilgarn Craton.</li> <li>The Kathleen Valley Project contains a series of quartz-feldspar-muscovite-spodumene pegmatites hosted in mafic rocks related to the Kathleen Valley Gabbro or the Mt Goode Basalts.</li> <li>The pegmatites are LCT type lithium bearing-pegmatites.</li> </ul>
<b>Drillhole Information</b>	<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>Exploration results are not being reported for the Mineral Resources area.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>easting and northing of the drillhole collar</li> <li>elevation or RL (elevation above sea level in metres) of the drillhole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul>	
<b>Data aggregation methods</b>	<i>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.</i>	<ul style="list-style-type: none"> <li>Exploration results are not being reported for the Mineral Resources area.</li> <li>Metal equivalents have not been used.</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<p><i>If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.</i></p> <p><i>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').</i></p>	<ul style="list-style-type: none"> <li>Drill holes intersected mineralisation at near perpendicular to the dip orientation of the host lithologies and mineralisation.</li> <li>Exploration results are not being reported for the Mineral Resources area.</li> </ul>
<b>Diagrams</b>	<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>	<ul style="list-style-type: none"> <li>Relevant diagrams have been included within the body of the announcement.</li> </ul>
<b>Balanced reporting</b>	<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>	<ul style="list-style-type: none"> <li>Exploration results are not being reported for the Mineral Resources area.</li> </ul>
<b>Other substantive exploration data</b>	<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>	<ul style="list-style-type: none"> <li>Where relevant, this information has been included or referred to elsewhere in this Table.</li> </ul>
<b>Further work</b>	<i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</i>	<ul style="list-style-type: none"> <li>Further studies including additional metallurgical test work, hydrology, environmental surveys, pit optimisations, geotechnical analysis of drill core, review of infrastructure requirements and financial analyses.</li> <li>Results of above to be incorporated into a PFS report due Q4 2019.</li> </ul>

### Section 3 Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
<b>Database integrity</b>	<i>Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.</i>	<ul style="list-style-type: none"> <li>Drill hole data was extracted directly from the Company's drill hole database, which includes internal data validation protocols.</li> <li>Data was further validated by Optiro upon receipt, and prior to use in the estimation.</li> </ul>
	<i>Data validation procedures used.</i>	<ul style="list-style-type: none"> <li>Validation of the data was confirmed using mining software (Datamine) validation protocols, and visually in plan and section views.</li> </ul>
<b>Site visits</b>	<i>Comment on any site visits undertaken by the Competent Persons and the outcome of those visits.</i>	<ul style="list-style-type: none"> <li>Liontown personnel Mr. Richards and Mr. Day have visited the site on numerous occasions to supervise the drilling programmes.</li> <li>Ms. Wild (Principal Geologist and Director of Wildfire Resources Pty Ltd) and Mrs. Standing (Optiro Pty Ltd) have visited the site on separate occasions during resource definition drilling programmes to review sampling procedures.</li> </ul>

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> <li>Ms. Wild reported that, in general, site practices were quite good, core quality was excellent and RC sample quality was moderate.</li> <li>Mrs. Standing has confirmed site practices are appropriate and satisfactory for the preparation of a Mineral Resource estimate.</li> </ul>
<b>Geological interpretation</b>	<i>Confidence in (or conversely, the uncertainty of the geological interpretation of the mineral deposit.</i>	<ul style="list-style-type: none"> <li>The confidence in the geological interpretation is reflected by the assigned resource classification.</li> </ul>
	<i>Nature of the data used and of any assumptions made.</i>	<ul style="list-style-type: none"> <li>Both assay and geological data were used for the mineralisation interpretation.</li> <li>The lithium mineralisation is defined by a nominal 0.4% Li<sub>2</sub>O cut-off grade.</li> <li>Continuity between drill holes and sections is good.</li> </ul>
	<i>The effect, if any, of alternative interpretations on Mineral Resource estimation.</i>	<ul style="list-style-type: none"> <li>No alternative interpretations were considered.</li> <li>Any alternative interpretations are unlikely to significantly affect the Mineral Resource estimate.</li> </ul>
	<i>The use of geology in guiding and controlling Mineral Resource estimation.</i>	<ul style="list-style-type: none"> <li>Geological logging (including spodumene crystal orientation from the diamond core) has been used for interpretation of the pegmatites.</li> </ul>
	<i>The factors affecting continuity both of grade and geology.</i>	<ul style="list-style-type: none"> <li>The mineralisation is contained within pegmatite veins that are readily distinguished from the surrounding rocks.</li> <li>Sectional interpretation and wireframing indicates good continuity of the interpreted pegmatite veins both on-section and between sections.</li> <li>The confidence in the grade and geological continuity is reflected by the assigned resource classification.</li> </ul>
<b>Dimensions</b>	<i>The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.</i>	<ul style="list-style-type: none"> <li>Seventeen mineralised pegmatites have been identified at the Kathleen Valley Project which extend from surface to a depth of 460 m.</li> <li>Eleven sub-horizontal pegmatites (dip of 0° to -10° to west) have been drilled over an area of 1,100 m by 1,000 m at Kathleen's Corner. These pegmatites outcrop at Kathleen's Corner, extend down dip to Mt Mann. They are up to 40 m thick and have an average thickness of 5 m. Three of these pegmatites have been interpreted to extend under cover to the north-west of Kathleen's Corner.</li> <li>In addition, there are four moderately dipping (-15° to -45° to the west) pegmatites at Kathleen's Corner with an average thickness of 3 m.</li> <li>At Mt Mann two steeply dipping (-70° west) pegmatites have been drilled over a strike length of 1,000 m and to a vertical depth of 390 m, where they coalesce with the pegmatite sequence interpreted from Kathleen's Corner. The pegmatites at Mt Mann are up to 35 m thick each have an average thickness of 13.5 m and 11 m.</li> </ul>
<b>Estimation and modelling techniques</b>	<i>The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.</i>	<ul style="list-style-type: none"> <li>Data analysis and estimation was undertaken using Snowden Supervisor and Datamine software.</li> <li>Lithium oxide (Li<sub>2</sub>O) % and tantalum pentoxide (Ta<sub>2</sub>O<sub>5</sub>) ppm block grades were estimated using ordinary kriging (OK). Optiro considers OK to be an appropriate estimation technique for this type of mineralisation.</li> <li>The nominal spacing of the drill holes is 50 m by</li> </ul>

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Criteria	JORC Code explanation	Commentary
		<p>50 m. The along section spacing ranges from 30 m to 100 m and on-section spacing ranges from generally 30 m to 60 m.</p> <ul style="list-style-type: none"> <li>• At Kathleen’s Corner a maximum extrapolation distance of 50 m was applied along strike (where pegmatites are interpreted to extend to the north-west) and 15 m along strike to the south-east and across strike. The steeply dipping pegmatites at Mt Mann were extrapolated to a maximum of 15 m along strike and 70 m down-dip.</li> <li>• 96% of the assay data is from samples of 1 m intervals, 1% is from sample of &gt;1 m (to a maximum of 1.35 m) and 3% is from intervals of less than 1 m (to a minimum of 0.5 m). The data was composited to 1 m downhole intervals for analysis and grade estimation.</li> <li>• Variogram analysis was undertaken to determine the kriging estimation parameters used for OK estimation of Li<sub>2</sub>O and Ta<sub>2</sub>O<sub>5</sub>.</li> <li>• Li<sub>2</sub>O mineralisation continuity was interpreted from variogram analyses to have an along strike range of 50 m to 140 m and a down-dip (or across strike) range of 69 m to 101 m.</li> <li>• Ta<sub>2</sub>O<sub>5</sub> mineralisation continuity was interpreted from variogram analyses to have an along strike range of 105 m to 155 m and a down-dip (or across strike) range of 92 m to 131 m.</li> <li>• Kriging neighbourhood analysis was performed in order to determine the block size, sample numbers and discretisation levels.</li> <li>• Three estimation passes were used for Li<sub>2</sub>O and Ta<sub>2</sub>O<sub>5</sub>; the first search was based upon the variogram ranges; the second search was two times the initial search and the third search was up to seven times the second search and second and third searches had reduced sample numbers required for estimation. The majority of Li<sub>2</sub>O block grades (almost 78%) were estimated in the first pass, 20% in the second pass and the remaining 2% in the third pass. The majority of Ta<sub>2</sub>O<sub>5</sub> block grades (almost 89%) were estimated in the first pass, 11% in the second pass and 0.1% in the third pass.</li> <li>• The Li<sub>2</sub>O and Ta<sub>2</sub>O<sub>5</sub> estimated block model grades were visually validated against the input drill hole data and comparisons were carried out against the declustered drill hole data and by northing, easting and elevation slice.</li> </ul>
	<p><i>Description of how the geological interpretation was used to control the resource estimates.</i></p>	<ul style="list-style-type: none"> <li>• Geological interpretations were completed on sections which were wireframed to create a 3D interpretation of the mineralised pegmatites.</li> <li>• The interpretation of mineralisation was by Liontown based on geological logging and Li<sub>2</sub>O content. A nominal grade of 0.4% Li<sub>2</sub>O was used to define the mineralisation within the interpreted pegmatites.</li> <li>• The mineralised domain is considered geologically robust in the context of the resource classification applied to the estimate.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>Discussion of basis for using or not using grade cutting or capping.</i>	<ul style="list-style-type: none"> <li>Li<sub>2</sub>O and Ta<sub>2</sub>O<sub>5</sub> have low coefficients of variation (CV). Some higher-grade outliers were noted and both the Li<sub>2</sub>O and Ta<sub>2</sub>O<sub>5</sub> grades were capped (top-cut). The top-cut levels were determined using a combination of top-cut analysis tools, including grade histograms, log probability plots and the CV.</li> </ul>
	<i>The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</i>	<ul style="list-style-type: none"> <li>A maiden Mineral Resource estimate comprising 21.2Mt at an average grade of 1.4% Li<sub>2</sub>O and 170 ppm Ta<sub>2</sub>O<sub>5</sub> was prepared and released in September 2018. Data used for this resource was incorporated into the updated Mineral Resource estimate.</li> <li>Since then additional drilling of 148 RC drill holes (for 29,150 m) and 33 diamond drill holes (for 3,182 m) has infilled and extended the resource to the north-west, south-east and at depth. The resource tonnage has increased from 21.2 Mt to 74.9 Mt and the average grade of the resource has decreased from 1.4% Li<sub>2</sub>O and 170 ppm Ta<sub>2</sub>O<sub>5</sub> to 1.3% Li<sub>2</sub>O and 140 ppm Ta<sub>2</sub>O<sub>5</sub>.</li> <li>In addition, the cut-off grades used for Mineral Resource reporting have been changed to reflect potential mining methods.</li> <li>No production has occurred.</li> </ul>
	<i>The assumptions made regarding recovery of by-products.</i>	<ul style="list-style-type: none"> <li>No assumptions have been applied for the recovery of by-products.</li> <li>Metallurgical test work is ongoing to determine the recoveries that could be expected.</li> </ul>
	<i>Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).</i>	<ul style="list-style-type: none"> <li>Deleterious elements were not considered for the Mineral Resource estimate.</li> <li>Metallurgical test work is in progress. Results to date indicate low levels of Fe within the interpreted mineralised pegmatite domains.</li> <li>Sulphur assays have been determined for more than 27,000 host rock samples – results indicate that acid mine drainage will not be a significant environmental factor.</li> </ul>
	<i>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</i>	<ul style="list-style-type: none"> <li>Grade estimation was into parent blocks of 10 mE by 10 mN by 3.0 mRL.</li> <li>Sub-cells to a minimum dimension of 2.5 mE by 2.5 mN by 0.5 mRL were used to represent volume.</li> <li>Block dimensions were selected from kriging neighbourhood analysis and reflect the variability of the deposit as defined by the current drill spacing.</li> <li>The nominal spacing of the drill holes is 50 m by 50 m. The along section spacing ranges from 30 m to 100 m and on-section spacing ranges from generally 30 m to 60 m.</li> </ul>
	<i>Any assumptions behind modelling of selective mining units.</i>	<ul style="list-style-type: none"> <li>Selective mining units were not modelled.</li> </ul>
	<i>Any assumptions about correlation between variables.</i>	<ul style="list-style-type: none"> <li>Li<sub>2</sub>O and Ta<sub>2</sub>O<sub>5</sub> are not correlated. Both Li<sub>2</sub>O and Ta<sub>2</sub>O<sub>5</sub> were estimated independently.</li> </ul>
	<i>The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</i>	<ul style="list-style-type: none"> <li>No production has taken place and thus no reconciliation data is available.</li> </ul>
<b>Moisture</b>	<i>Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</i>	<ul style="list-style-type: none"> <li>Tonnages have been estimated on a dry basis.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Cut-off parameters</b>	<i>The basis of the adopted cut-off grade(s) or quality parameters applied.</i>	<ul style="list-style-type: none"> <li>A cut-off grade of 0.5% Li<sub>2</sub>O has been selected to represent the portion of the resource that is above 200 mRL and may be considered for eventual economic extraction by open pit mining methods and a cut-off grade of 0.7% Li<sub>2</sub>O has been selected to represent the portion of the resource that is below 200 mRL and may be considered for eventual economic extraction by underground mining methods.</li> <li>These cut-off grades were selected by Liontown and are commensurate with cut-off grades applied for reporting of lithium Mineral Resources hosted in spodumene-rich pegmatites elsewhere in Australia.</li> </ul>
<b>Mining factors or assumptions</b>	<i>Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous.</i>	<ul style="list-style-type: none"> <li>The mineralisation at Kathleen Valley extends from surface and would be suitable for open pit mining.</li> <li>The Kathleen Valley Lithium Project is located in a well-established mining region and in close proximity to existing transport, energy and camp infrastructure.</li> <li>On the basis of these assumptions, it is considered that there are no mining factors which are likely to affect the assumption that the deposit has reasonable prospects for eventual economic extraction.</li> </ul>
<b>Metallurgical factors or assumptions</b>	<i>The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous.</i>	<ul style="list-style-type: none"> <li>Preliminary metallurgical test work was conducted in mid-2018 at Nagrom's metallurgical laboratory in Perth, Western Australia and supervised by Lycopodium Minerals Pty Ltd. Test work was completed on a 300kg composite sample created from 6 diamond core holes that were sited to ensure collection of material representative of the Mineral Resource. The test work flow sheet included: <ul style="list-style-type: none"> <li>Crushing and screening to -6.3/+1mm followed by 2-stage heavy media separation to produce a 5.9% Li<sub>2</sub>O grade concentrate and a throwaway tail;</li> <li>Pre-concentration of the middlings and -1mm fines to produce a tantalum concentrate; and</li> <li>Grinding of the tantalum tails to 150µm and de-sliming prior to froth flotation to produce a flotation concentrate containing 5.5% Li<sub>2</sub>O with low levels of iron (Fe<sub>2</sub>O<sub>3</sub> &lt;0.50%).</li> </ul> </li> <li>A tantalum concentrate was produced during the 2018 test work program; however, the low mass recovery precluded the implementation of a subsequent upgrade process.</li> <li>Further metallurgical test work is ongoing at ALS laboratories in Perth. Data from this work will be incorporated into a PFS study due for release in Q4 2019. Results to date support the process flowsheet development in the previous scoping study.</li> <li>A large drill core sample (~4t) has been collected to conduct a larger scale test work programme on tantalum recovery once the PFS metallurgical test work has been completed.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Environmental factors or assumptions</b>	<i>Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation.</i>	<ul style="list-style-type: none"> <li>Baseline flora and fauna studies have been completed and it is considered unlikely, given current knowledge that impacts on conservation significant flora, fauna and ecological communities will result from development of the project.</li> <li>Further baseline studies are scheduled during the PFS and DFS.</li> </ul>
<b>Bulk density</b>	<i>Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples. Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</i>	<ul style="list-style-type: none"> <li>Bulk density was measured for 1,821 core samples (including 1,125 samples of pegmatite) from diamond holes using Archimedes measurements.</li> <li>The density data for the pegmatites has a range of 2.32 to 3.46 t/m<sup>3</sup>.</li> <li>A bulk density of 2.70 t/m<sup>3</sup> was assigned to the oxide and transitional pegmatite and 2.73 t/m<sup>3</sup> was assigned to the fresh pegmatite.</li> </ul>
<b>Classification</b>	<i>The basis for the classification of the Mineral Resources into varying confidence categories.</i>	<ul style="list-style-type: none"> <li>Mineral Resources have been classified as Measured, Indicated or Inferred.</li> <li>In general, the pegmatites that have been tested by the 50 m by 50 m spaced drill holes have high confidence in the geological interpretation and, having higher estimation quality, were classified as Measured.</li> <li>Areas where the drill spacing is up to 60 m by 100 m that have good confidence in the geological interpretation and where the majority of block grades were estimated within the first search (but where the estimation quality is lower than the Measured areas) were classified as Indicated.</li> <li>Areas where the drill spacing is up to 60 m by 100 m, that have good confidence in the geological interpretation and where the majority of block grades were estimated in the second and third search passes or in areas of grade extrapolation (up 70 m) have been classified as Inferred.</li> </ul>
	<i>Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).</i>	<ul style="list-style-type: none"> <li>The Mineral Resource has been classified on the basis of confidence in geological and grade continuity and taking into account the quality of the sampling and assay data, data density and confidence in estimation of Li<sub>2</sub>O and Ta<sub>2</sub>O<sub>5</sub> content (from the kriging metrics).</li> </ul>
	<i>Whether the result appropriately reflects the Competent Person's view of the deposit</i>	<ul style="list-style-type: none"> <li>The assigned classification of Measured, Indicated and Inferred reflects the Competent Persons' assessment of the accuracy and confidence levels in the Mineral Resource estimate.</li> </ul>
<b>Audits or reviews</b>	<i>The results of any audits or reviews of Mineral Resource estimates.</i>	<ul style="list-style-type: none"> <li>The Mineral Resource has been reviewed internally as part of normal validation processes by Optiro.</li> <li>No external audit or review of the current Mineral Resource has been conducted.</li> </ul>
<b>Discussion of relative accuracy/ confidence</b>	<i>Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person.</i>	<ul style="list-style-type: none"> <li>The assigned classification of Measured, Indicated and Inferred reflects the Competent Persons' assessment of the accuracy and confidence levels in the Mineral Resource estimate.</li> </ul>
	<i>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.</i>	<ul style="list-style-type: none"> <li>The confidence levels reflect potential production tonnages on a quarterly basis, assuming open pit mining.</li> </ul>

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Criteria	JORC Code explanation	Commentary
	<i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i>	<ul style="list-style-type: none"><li data-bbox="890 275 1385 304">• No production has occurred from the deposit.</li></ul>

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