

ASX ANNOUNCEMENT

12 NOVEMBER 2018

**Liontown Resources Limited (ASX:LTR) ("Liontown" or the "Company")** lodged an ASX announcement on 12 November 2018 in relation to the Metallurgical Testwork at the Kathleen Valley Lithium-Tantalum Project in WA.

The company has lodged an amended announcement, attached herewith, which now includes the JORC Code 2012 Table 1.

A handwritten signature in black ink, appearing to read "K Verheyen".

Kym Verheyen  
Company Secretary

### Highly Encouraging Results From Initial Metallurgical Testwork at the Kathleen Valley Lithium-Tantalum Project, WA

#### HIGHLIGHTS

- **Results confirm that a saleable Li<sub>2</sub>O concentrate can be produced from the Kathleen Valley Project.**
- **Preliminary metallurgical test work delivers:**
  - **5.9% Li<sub>2</sub>O from dense media separation concentrate;**
  - **36% mass rejection with two-stage dense media separation;**
  - **5.5% Li<sub>2</sub>O from flotation concentrate;**
  - **Low iron (Fe<sub>2</sub>O<sub>3</sub>) content of <0.5%;**
  - **Predicted recovery of 79% Li<sub>2</sub>O; and**
  - **Preliminary Ta<sub>2</sub>O<sub>5</sub> concentrate.**
- **Planned optimisation of the process conditions provides significant potential to achieve a chemical grade product – large scale test work and optimisation scheduled for Q1 2019.**
- **Results provide a strong foundation for the recently commenced Scoping Study.**

Liontown Resources Ltd (ASX:LTR) (“Liontown” or the “Company”) is pleased to report highly encouraging results from an initial metallurgical test work program conducted on composite diamond drill core samples from its 100%-owned Kathleen Valley Lithium-Tantalum Project in Western Australia.

Lithium oxide (“Li<sub>2</sub>O”) grades of 5.9% from two-stage dense media separation (“DMS”) test work and 5.5% from flotation test work resulted in a combined concentrate product of 5.6% Li<sub>2</sub>O at a predicted recovery of 79% and with a low iron content (<0.5% Fe<sub>2</sub>O<sub>3</sub>).

The test work programme was conducted at Nagrom’s metallurgical laboratory in Perth, Western Australia and supervised by Lycopodium Minerals Pty Ltd (“Lycopodium”), a well-established and highly credentialed engineering and project delivery company.

Given that the individual process units have not yet been optimised for recovery or grade, the results provide strong support for the ability to achieve a saleable Li<sub>2</sub>O concentrate and increased confidence that a Ta<sub>2</sub>O<sub>5</sub> concentrate can be produced from the Kathleen Valley Project. Further diamond core drilling is planned to provide material for this optimisation work.

Commenting on the results, Liontown’s Managing Director, Mr David Richards, said *“This is a very exciting time for the Kathleen Valley Project, as we take the next important steps to advance this high quality lithium-tantalum deposit from discovery and resource drill out towards commercial development.”*

*“As stated in September, we have a Mineral Resource of ~21Mt @1.4% Li<sub>2</sub>O and 170ppm Ta<sub>2</sub>O<sub>5</sub>, with over 75% in the Measured and Indicated category, located on granted Mining Leases. We are in an established mining jurisdiction close to the sealed Goldfields Highway and adjacent to a powerline running west of the property. These preliminary test work results support our confidence in the project and form a solid base for our recently commissioned Scoping Study”.*

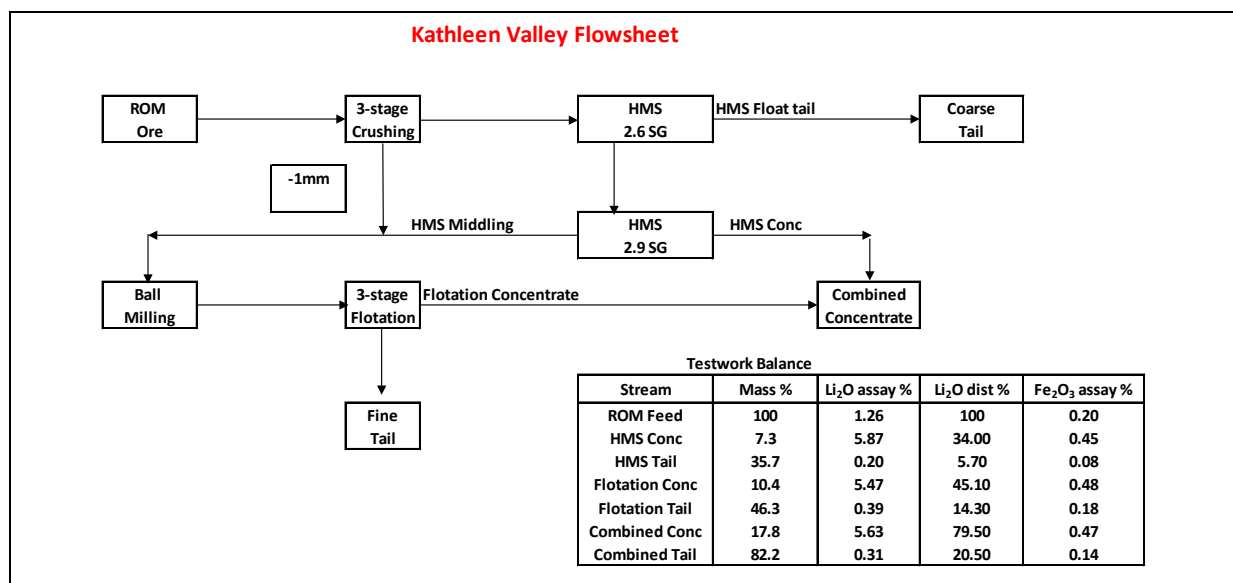
**Details of Metallurgical Test Work**

The test work was commissioned on a 300kg composite sample, created from six diamond drill core holes which were sited to ensure collection of material representative of the Mineral Resource.

The test work flowsheet included the following:

- 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;
- Pre-concentration of the middlings and -1mm fines to produce a tantalum concentrate; and
- 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> <0.50%)

The test work results are illustrated in **Figure 1** below.



**Figure 1: Kathleen Valley metallurgical test work flowsheet and results**

While a tantalum concentrate was produced during the metallurgical test work programme, the low mass recovery precluded the implementation of subsequent upgrade process stages. However, the results support the inclusion of a tantalum concentrate recovery in the large scale test work programme scheduled for Q1 2019.

**Kathleen Valley Overview**

Liontown’s 100%-owned Kathleen Valley Lithium Project is located on the western edge of the Norseman-Wiluna Belt within the Archaean Yilgarn Craton approximately 400km north of Kalgoorlie. The lithium mineralisation is hosted within spodumene-bearing pegmatites, which are part of a series of Lithium-Caesium-Tantalum (LCT)-type rare metal pegmatites that intrude mafic and sedimentary rocks in the region.

Eighteen mineralised pegmatites have been identified at the Kathleen Valley Project hosted by two pegmatite swarms – Kathleen’s Corner and Mt Mann.

On September 4<sup>th</sup> 2018, Liontown announced a maiden Measured, Indicated and Inferred Mineral Resource, for the Kathleen Valley Project comprising **21.2Mt @ 1.4% Li<sub>2</sub>O and 170ppm Ta<sub>2</sub>O<sub>5</sub>**. The Mineral Resource is set out in **Table 1**:

**Table 1: Kathleen's Corner and Mt Mann Mineral Resource as at September 2018**

Resource category	Million tonnes	Li <sub>2</sub> O %	Ta <sub>2</sub> O <sub>5</sub> ppm
Measured	3.2	1.3	190
Indicated	12.7	1.4	160
Inferred	5.3	1.3	150
<b>Total</b>	<b>21.2</b>	<b>1.4</b>	<b>170</b>

- Notes
- Reported above a Li<sub>2</sub>O cut-off grade of 0.5%
  - Tonnages and grades have been rounded to reflect the relative uncertainty of the estimate

Following release of the Mineral Resource estimate, Liontown commissioned a Scoping Study based on annual ore production of 1.5 – 2 Mtpa. The Study is being overseen by Lycopodium and, in addition to metallurgy, will also incorporate optimisation, engineering, hydrological, environmental and financial studies.

The results of the Scoping Study are scheduled for release in early Q1 2019.



DAVID RICHARDS

Managing Director

12<sup>th</sup> November 2018

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The Information in this report that relates to Mineral Resources for the Kathleen Valley Project is extracted from the ASX announcement "Maiden 21 million tonne Lithium-Tantalum Mineral Resource sets strong growth foundation for Liontown at Kathleen Valley" released on the 4<sup>th</sup> September 2018 which is available on [www.ltresources.com.au](http://www.ltresources.com.au).

The Information in this report that relates to metallurgical test work for the Kathleen Valley Project has been reviewed by Mr Aidan Ryan who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Ryan is an employee of Lycopodium Minerals Pty Ltd and has sufficient experience relevant to the style of processing response and type of deposit under consideration, and to the activities 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 Ryan consents to the inclusion in the report of a summary based upon his information in the form and context in which it appears.

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.

## APPENDIX 1 – JORC Code 2012 Table 1 Criteria

The table below summaries the assessment and reporting criteria used for the Kathleen’s Corner and Mt Mann deposits, 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>Drillholes are oriented perpendicular to the interpreted strike of the mineralised trend except in rare occasions where limited access necessitates otherwise.</li> </ul>
	<i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i>	<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>HQ diamond core has been sampled in intervals of ~ 1 m (up to 1.18 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>
	<i>Aspects of the determination of mineralisation that are Material to the Public Report.</i>  <i>In cases where ‘industry standard’ work has been done this would be relatively simple (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>	
<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>HQ core was drilled directly from surface for all holes. Core orientation was provided by an ACT REFLEX (ACT II RD) tool.</li> </ul>
<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 green mining 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</li> </ul>

Criteria	JORC Code explanation	Commentary
		variation.
<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 drillholes 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>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 has been retained and the second quarter will be used for metallurgical studies.</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 been used at a rate of 5%.</li> </ul>
	<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>	<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 representatively.</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>
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	<ul style="list-style-type: none"> <li>Sample size is considered appropriate for the stage of exploration</li> </ul>
	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	<ul style="list-style-type: none"> <li>Initial assaying (2017) completed by ALS Perth. Subsequent assaying (2018) completed by Nagrom laboratories Perth.</li> <li>Both laboratories use industry standard procedures for rare metals such as Li and Ta.</li> </ul>
<b>Quality of assay data and</b>		

Criteria	JORC Code explanation	Commentary
<b>laboratory tests</b>	<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>Analytical techniques are total.</p> <ul style="list-style-type: none"> <li>None used.</li> </ul>
	<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>	<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>
<b>Verification of sampling and assaying</b>	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	<ul style="list-style-type: none"> <li>Internal review by alternate company personnel.</li> </ul>
	<i>The use of twinned holes.</i>	<ul style="list-style-type: none"> <li>Six diamond holes are twins of existing RC drillholes. Results compare well with the original RC drillholes.</li> </ul>
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	<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>
	<i>Discuss any adjustment to assay data.</i>	<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>
<b>Location of data points</b>	<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>	<ul style="list-style-type: none"> <li>All drillholes and geochemical samples are initially located using a handheld GPS and subsequently surveyed with DGPS.</li> <li>All RC drillholes have been surveyed by a multi-shot digital downhole camera provided by the drilling contractor.</li> <li>All diamond drillholes 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 and GPS.</li> <li>Drillhole collars are surveyed post drilling with DGPS.</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>
	<i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the</i>	<ul style="list-style-type: none"> <li>Drilling is typically oriented perpendicular to the interpreted strike of mineralisation.</li> </ul>

Criteria	JORC Code explanation	Commentary
<b>Orientation of data in relation to geological structure</b>	<i>extent to which this is known, considering the deposit type.</i>	<ul style="list-style-type: none"> <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>An expert competent person review has been completed by Michelle Wild of Wildfire Resources Pty Ltd on the resource drilling, sampling protocols and data.</li> <li>This included a laboratory visit to Nagrom.</li> <li>Results have not indicated any significant discrepancies.</li> </ul>

### Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</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 sites, wilderness or national park and environmental settings.</i>	<ul style="list-style-type: none"> <li>The Kathleen Valley Project is located ~680 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 Exploration License - E36/879.</li> <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>Ramelius retains the rights to gold on the MLs.</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</li> </ul>



Criteria	JORC Code explanation	Commentary
		<p>group which largely applies to E36/879.</p> <ul style="list-style-type: none"> <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 other companies retaining the rights to these commodities and 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>	<p><i>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes:</i></p> <ul style="list-style-type: none"> <li><i>easting and northing of the drillhole collar</i></li> <li><i>elevation or RL (elevation above sea level in metres) of the drillhole 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>	<ul style="list-style-type: none"> <li>Diagrams in the announcement show the location of and distribution of drillholes in relation to the Mineral Resource.</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>Not relevant – Exploration results are not being reported; a Mineral Resource has been defined.</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>Not relevant – Exploration results are not being reported; a Mineral Resource has been defined.</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>Not relevant – Exploration results are not being reported; a Mineral Resource has been defined.</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</i>	<ul style="list-style-type: none"> <li>Not relevant – Exploration results are not being reported; a Mineral Resource has been defined.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>practiced to avoid misleading reporting of Exploration Results.</i>	
<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>Scoping study – due for release Q1 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>Drillhole data was extracted directly from the Company's drillhole 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) visited the site during the resource definition drilling programme to review sampling procedures. 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 (Optiro) has not visited the site.</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 drillholes 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</i>	<ul style="list-style-type: none"> <li>Eighteen mineralised pegmatites have been identified at the Kathleen Valley Project which</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>width, and depth below surface to the upper and lower limits of the Mineral Resource.</i></p>	<p>extend from surface to a depth of 220 m.</p> <ul style="list-style-type: none"> <li>• Eleven sub-horizontal pegmatites (dip of 0° to -10° to west) have been drilled over an area of 1,100 m by 600 m at Kathleen’s Corner. These pegmatites outcrop at Kathleen’s Corner, extend down dip to Mt Mann and have an average thickness of 5 m.</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>• An additional sub-horizontal pegmatite, which is obscured by shallow cover, has been drilled within the north-western area of Kathleen’s Corner with a strike length of 400 m and an average thickness of 7 m.</li> <li>• At Mt Mann two steeply dipping (-70° west) pegmatites have been drilled over a strike length of 900 m and to a vertical depth of 180 m. The pegmatites have an average thickness of 8 m and 10 m.</li> </ul>
<p><b>Estimation and modelling techniques</b></p>	<p><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></p>	<ul style="list-style-type: none"> <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 drillholes is 50 m by 50 m. The along section spacing ranges from 40 m to 100 m and on-section spacing ranges from generally 30 m to 60 m.</li> <li>• A maximum extrapolation distance of 50 m was applied along and across strike and the steeply dipping pegmatites at Mt Mann were extrapolated to a maximum of 100 m down-dip.</li> <li>• Data analysis and estimation was undertaken using Snowden Supervisor and Datamine software.</li> <li>• Over 93% of the assay data is from samples of 1 m intervals, 0.3% is from sample of &gt;1 m (to a maximum of 1.18 m) and 6% is from intervals of less than 1 m. The data was composited to 1 m 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 110 m to 140 m and a down-dip (or across strike) range of 32 m to 112 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 110 m to 130 m and a down-dip (or across strike) range of 35 m to 93 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</li> </ul>

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		<p>and third searches had reduced sample numbers required for estimation. The majority of Li<sub>2</sub>O block grades (almost 63%) were estimated in the first pass, 22% in the second pass and the remaining 5% in the third pass.</p> <ul style="list-style-type: none"> <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 drillhole data and comparisons were carried out against the declustered drillhole 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>
	<p><i>Discussion of basis for using or not using grade cutting or capping.</i></p>	<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>
	<p><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></p>	<ul style="list-style-type: none"> <li>Mineral Resources have not previously been reported for this deposit area and no production has occurred.</li> </ul>
	<p><i>The assumptions made regarding recovery of by-products.</i></p>	<ul style="list-style-type: none"> <li>No assumptions have been applied for the recovery of by-products.</li> <li>Metallurgical testwork samples have been submitted by Liontown to determine the recoveries that could be expected.</li> </ul>
	<p><i>Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).</i></p>	<ul style="list-style-type: none"> <li>Deleterious elements were not considered for the Mineral Resource estimate.</li> <li>Metallurgical testwork is in progress. Results to date indicate very low levels of Fe within the interpreted mineralised pegmatite domains.</li> </ul>
	<p><i>In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</i></p>	<ul style="list-style-type: none"> <li>Grade estimation was into parent blocks of 10 mE by 15 mN by 1.0 mRL.</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>Sub-cells to a minimum dimension of 2 mE by 2.5 mN by 0.5 mRL were used to represent volume.</li> </ul>
	<p><i>Any assumptions behind modelling of selective mining units.</i></p>	<p>Selective mining units were not modelled.</p>
	<p><i>Any assumptions about correlation between variables.</i></p>	<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>
	<p><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></p>	<ul style="list-style-type: none"> <li>No production has taken place and thus no reconciliation data is available.</li> </ul>

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<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>
<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>The Mineral Resource estimate for the Kathleen's Corner and Mt Mann deposits has been reported above a cut-off grade of 0.5 % Li<sub>2</sub>O to represent the portion of the resource that may be considered for eventual economic extraction.</li> <li>This cut-off grade has been selected by Liontown Resources in consultation with Optiro based on current experience and in-line with cut-off grades applied for reporting of Mineral Resources of lithium hosted in spodumene bearing 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's Corner and Mt Mann 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 close 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>Metallurgical testwork was conducted at Nagrom's metallurgical laboratory in Perth, Western Australia and supervised by Lycopodium Minerals Pty Ltd.</li> <li>Testwork was completed on a 300kg composite sample created from 6 diamond core holes that were sited to endure collection of material representative of the Mineral Resource.</li> <li>The testwork 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 testwork program; however, the low mass recovery precluded the implementation of a subsequent upgrade process. Further sample will be collected in Q1 2019 for a larger scale testwork program.</li> </ul>
<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>No environmental impact assessments have been conducted. It is assumed that any remedial action to limit the environmental impacts of mining and processing will not significantly affect the economic viability of the project.</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</i>	<ul style="list-style-type: none"> <li>Bulk density was measured for 575 core samples from diamond holes using Archimedes measurements.</li> </ul>

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	<i>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>The density data has a range of 2.08 to 3.34 t/m<sup>3</sup>.</li> <li>A bulk density of 2.69 t/m<sup>3</sup> was assigned to the oxide and transitional material and 2.74 t/m<sup>3</sup> was assigned to the fresh material.</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 at Kathleen's Corner that have been tested by the 50 m by 50 m spaced drill holes, have high confidence in the geological interpretation and have higher estimation quality have been classified as Measured. Areas tested by the 50 m by 50 m spaced drill and with poorer estimation quality were classified as Indicated, and areas where the drill spacing is up to 60 m by 100 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>
	<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>No production has occurred from the deposit.</li> </ul>