

ASX ANNOUNCEMENT

 4th September 2018

Maiden 21.2 million tonne Lithium-Tantalum Mineral Resource sets strong growth foundation for Liontown at Kathleen Valley

Kathleen Valley confirmed as a significant new, high-grade lithium discovery located on granted Mining Leases in a Tier-1 mining jurisdiction

Highlights

- Maiden Measured, Indicated and Inferred Mineral Resource estimate for the Kathleen's Corner and Mt Mann deposits at its 100%-owned Kathleen Valley Lithium Project in WA:
 - **21.2Mt @ 1.4% Li₂O and 170ppm Ta₂O₅ at a 0.5% Li₂O cut-off grade**
- 75% of the Mineral Resource is classified as Measured or Indicated.
- Lithium mineralisation is fresh from surface and hosted by spodumene-bearing pegmatites.
- The Mineral Resource is located on granted Mining Leases close to existing transport, energy and camp infrastructure.
- The Mineral Resource remains open along strike and at depth and offers outstanding potential for further growth with additional drilling.
- Metallurgical test work on diamond core samples is ongoing and will pave the way for a Scoping Study and preliminary discussions with off-take and other strategic partners.

Liontown Resources Limited (ASX: LTR – “Liontown” or “the Company”) is pleased to advise that its strategy to build a high-quality portfolio of Australian battery metal assets has taken a major step forward with the announcement of a maiden lithium-tantalum Mineral Resource for its 100%-owned **Kathleen Valley Lithium Project**, located 670km north-east of Perth, Western Australia (*Figure 1*).

The Measured, Indicated and Inferred Mineral Resource, which was prepared by independent specialist resource and mining consulting group Optiro Pty Ltd (“Optiro”), encompasses the Kathleen's Corner and Mt Mann deposits and comprises **21.2Mt @ 1.4% Li₂O and 170ppm Ta₂O₅**. 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 ₂ O %	Ta ₂ O ₅ ppm
Measured	3.2	1.3	190
Indicated	12.7	1.4	160
Inferred	5.3	1.3	150
Total	21.2	1.4	170

- Notes:
- Reported above a Li₂O cut-off grade of 0.5%
 - Tonnages and grades have been rounded to reflect the relative uncertainty of the estimate



The Mineral Resource estimate is reported and classified in accordance with the guidelines of the 2012 Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code; 2012).

Liontown Managing Director, Mr David Richards, said “the delivery of a maiden Mineral Resource for Kathleen Valley is a major milestone for the Company and provides a strong foundation for its aspiration to develop a suite of Australian battery metal assets.”

“The key features of the deposit are its high grade, at 1.4% Li₂O, the significant tantalum component, the fact that the mineralisation starts fresh from surface and will likely be amenable to open pit mining, and its location on granted Mining Leases close to established, high quality infrastructure.”

“The other encouraging feature of the project is that, based on the preliminary metallurgical results, the deposit comprises predominantly spodumene-hosted lithium mineralisation which is likely to be amenable to conventional processing.”

“All of these positive characteristics, combined with the fact that we are confident the resource will continue to grow with further drilling, make Kathleen Valley a significant asset for Liontown – which we believe will become the cornerstone of our strategy to develop a high-quality battery metals business.”

“We will also now start the process of engaging with parties potentially interested in off-take agreements, customers and other strategic partners as we progress to the next stage of unlocking the value of our emerging strategic metals portfolio for the benefit of our shareholders.”

“With follow-up drilling also well advanced at our Buldania Project near Norseman – and first assays expected soon – we see a great opportunity to build high-quality hard rock lithium resource base that is likely to grow significantly over the coming months.”

“From a news-flow perspective, investors can look forward to metallurgical results and the start of a Scoping Study at Kathleen Valley and initial assay results from the drilling at Buldania. Beyond that, Liontown expects to undertake further drilling at Kathleen Valley and Buldania and commence drilling at the Toolebuc Vanadium Project in Queensland.

Kathleen Valley Overview

The 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 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 (**Figure 2**).

Kathleen’s Corner and Mt Mann Mineral Resources

The drilling database used to define the lithium mineralisation at Kathleen’s Corner and Mt Mann comprises 147 Reverse Circulation drill holes for a total of 18,671m and 8,111 assays; and nine diamond drill holes for a total of 1,610m and 582 assays. The drill section spacing ranges from 40m to 100m with drill holes spaced 30m to 60m on section.

A full listing of drill-hole statistics is provided in Liontown’s ASX release dated 6th August 2018, which is available on the Company’s website.



The resource model for the Kathleen’s Corner and Mt Mann deposits was constructed using a parent block size of 10mE by 15mN on 1.0m benches, and the parent blocks were allowed to sub-cell down to 2mE by 2.5mN by 0.5mRL to more accurately represent the geometry and volumes of the mineralised pegmatites.

Lithium oxide (Li₂O) % and tantalum pentoxide (Ta₂O₅) ppm block grades were estimated using ordinary kriging techniques, with appropriate top-cuts applied to the Li₂O and Ta₂O₅ data. Bulk densities were measured from HQ diamond core with 2.69t/m³ applied to the oxide and transition material and 2.74t/m³ applied to the fresh material.

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 the estimation of Li₂O and Ta₂O₅ content (from the kriging metrics).

In general, the pegmatites at Kathleen’s Corner that have been tested by the 50m by 50m spaced drill holes justify high confidence in the geological interpretation and, having higher estimation quality, were classified as Measured. Areas with poorer estimation quality were classified as Indicated, and areas where the drill spacing is up to 60m by 100m have been classified as Inferred.

The Mineral Resource has been classified by Optiro in accordance with the guidelines of the JORC Code (2012) and has been reported above a cut-off grade of 0.5% Li₂O (**Table 2**). A cut-off grade of 0.5% Li₂O has been chosen to represent the portion of the resource that may be considered for eventual economic extraction.

The cut-off grade of 0.5% Li₂O, which was selected by Liontown in consultation with Optiro, is based on current experience and is commensurate with cut-off grades applied for reporting of lithium Mineral Resources elsewhere in Australia.

Table 2: Mineral resource reported by Li₂O % cut-off grades

Cut-off Li ₂ O %	Million tonnes	Li ₂ O %	Ta ₂ O ₅ ppm
0.3	21.2	1.37	166
0.4	21.2	1.37	166
0.5	21.2	1.37	166
0.6	21.2	1.37	166
0.7	21.0	1.37	166
0.8	20.7	1.38	166
0.9	20.1	1.40	167
1.0	18.9	1.43	167
1.1	17.3	1.46	167
1.2	15.1	1.51	168
1.3	12.3	1.56	170
1.4	9.3	1.63	174
1.5	6.6	1.71	177

The mineralisation at Kathleen’s Corner and Mt Mann is such that open pit mining methods can be appropriately considered. The deposit is located in a well-established mining region and in close proximity to existing transport, energy and camp infrastructure. It is considered that the classified portion of the deposit has reasonable prospects for eventual economic extraction.

Summary of JORC 2012 Table 1

A summary of JORC Table 1 (included as Appendix 1) is provided below for compliance with the Mineral Resource and in-line with requirements of ASX listing rule 5.8.1.

Geology and Mineralisation Interpretation

At Kathleen's Corner, eleven sub-horizontal pegmatites (dip of 0° to -10° to west) have been drilled over an area of 1,000m by 600m. These pegmatites outcrop at Kathleen's Corner, extend down dip to Mt Mann and are up to 20m thick with an average thickness of 5m. In addition, there are four moderately dipping (-15° to -45° to the west) pegmatites up to 9m thick with an average thickness of 3m. A sub-horizontal pegmatite, which is obscured by shallow cover, has also been drilled within the north-western area of Kathleen's Corner with a strike length of 400m, a maximum thickness of 8m and an average thickness of 7m.

At Mt Mann, two steeply dipping (-70° west) pegmatites have been drilled over a strike length of 900m and to a vertical depth of 180m. The pegmatites are up to 12m thick with an average thickness of between 8m and 10m.

Mineralisation interpretation was based on a combination of geology logging (identification of pegmatite with spodumene) and assay data. A nominal grade of 0.4% Li₂O was used for definition of the mineralised pegmatites.

Drilling techniques

Drill holes within the resource model were Reverse Circulation (RC) drill holes drilled with a 5.5" diameter face sampling hammer and HQ, standard tube, diamond core holes.

Sampling techniques

RC samples were collected by the metre from the cyclone as two 1m split samples in calico bags and a bulk sample in plastic mining bags.

Diamond core samples have been typically collected in intervals of 1m where possible, otherwise as intervals as close as possible to 1m based on geological boundaries.

Sampling Analyses

All samples were analysed for rare metals including Li and Ta by standard industry techniques at ALS and Nagrom laboratory in Perth, WA. Analytical techniques are total.

Mineral Resource Classification

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 the estimation of Li₂O and Ta₂O₅ content (from the kriging metrics).

In general, the pegmatites at Kathleen's Corner that have been tested by the 50m by 50m spaced drill holes have high confidence in the geological interpretation and, having higher estimation quality, were classified as Measured. Areas tested by the 50m by 50m spaced drill holes with poorer estimation quality were classified as Indicated, and areas where the drill spacing is up to 60m by 100m have been classified as Inferred.

Estimation methodology

Block grades for Li₂O% and Ta₂O₅ ppm were estimated using ordinary kriging (OK) with an appropriate top-cuts applied. Variogram analyses were undertaken to determine the grade continuity and the kriging estimation parameters used for the OK.

Cut-off grade

Reporting of the Mineral Resource used a cut-off grade of 0.5% Li₂O, which was selected by Liantown in consultation with Optiro, and is based on current experience and is commensurate with cut-off grades applied for reporting of lithium Mineral Resources elsewhere in Australia.

Mining Factors

The mineralisation at Kathleen's Corner and Mt Mann extends from surface, is largely shallowly dipping and would be suitable for open-pit mining.

Metallurgical Factors

Preliminary metallurgical test work completed on RC chips in January 2018 indicated the dominant lithium mineral is spodumene and probably suitable for conventional processing techniques.

Metallurgical test work on diamond core samples, which is in progress, will assess processing options, the purity of the concentrate and concentrations of any potentially deleterious components. Results are expected in mid-late September 2018.



DAVID RICHARDS

Managing Director

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For More Information:

David Richards
Managing Director
T: +61 8 9322 7431

Investor Relations:

Nicholas Read
Read Corporate
T: +61 8 9388 1474

The information in this report which relates to Mineral Resources for the Kathleen Corner's and Mt Mann deposits is based upon information compiled by Mrs Christine Standing who is a Member of the Australasian Institute of Mining and a Member of the Australian Institute of Geoscientists. Mrs Standing is an employee of Optiro Pty Ltd and has sufficient experience relevant to the style of mineralisation, the type of deposit under consideration and to the activity 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'. Mrs Standing consents to the inclusion in the report of a summary based upon her information in the form and context in which it appears.

The Information in this report that relates to the Exploration Results for the Kathleen Valley Project is extracted from ASX announcements entitled "Shallow high-grade lithium mineralisation intersected in initial Phase 2 drill program at Kathleen Valley, WA", "Latest assays confirm continuity of shallow high-grade lithium mineralisation at Kathleen Valley, WA", "Growing resource potential confirmed at Kathleen Valley", "Kathleen Valley emerging as a significant WA lithium discovery with multiple high-grade pegmatites intersected over an extensive area", "Liantown on track for maiden lithium Resource at Kathleen Valley as latest assays confirm continuity and strike extensions of high-grade mineralisation" and "Final assays expand Kathleen Valley lithium deposit ahead of maiden Resource" released on the 5th, 19th, 26th February and 7th and 24th May and 2nd July and 6th August 2018 respectively which are available on www.ltresources.com.au.

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.

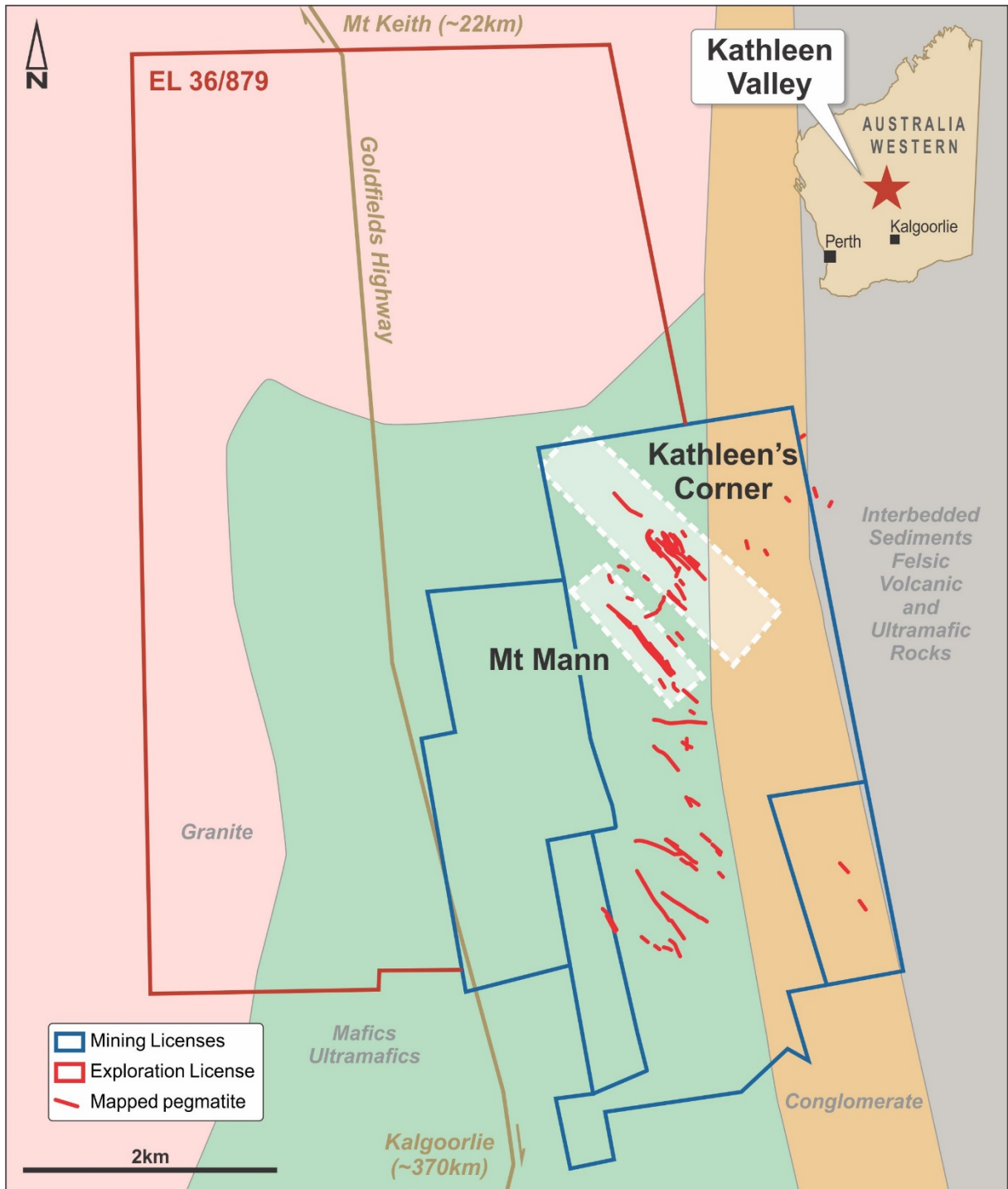


Figure 1: Kathleen Valley Project – Location plan, interpreted bedrock geology, tenure and mapped pegmatite swarms

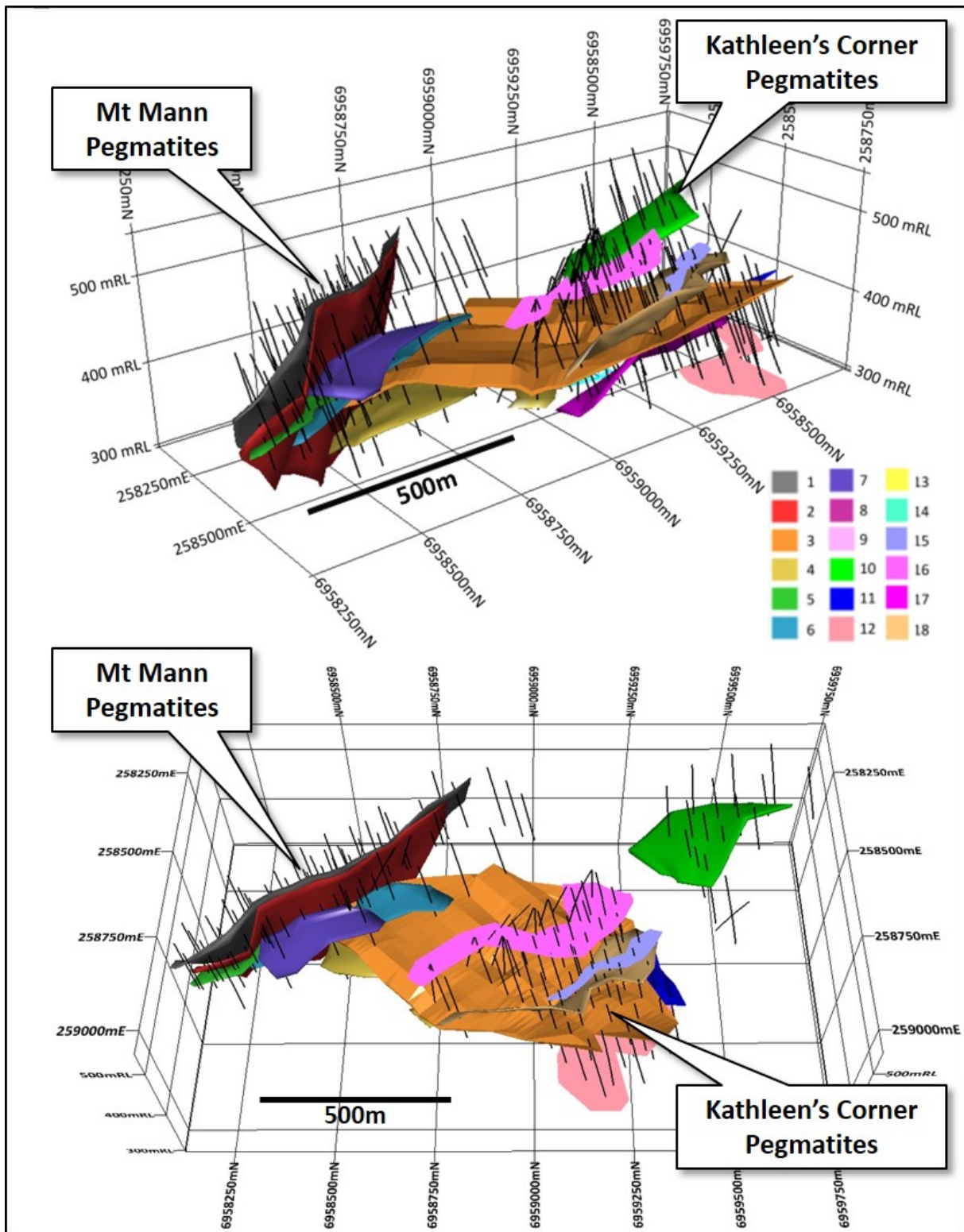


Figure 2: Kathleen Valley– 3D views of the drill holes and mineralised pegmatites coloured by domain code (top - side view, looking north-west, bottom - looking west) 2x vertical exaggeration

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
Sampling techniques	<i>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</i>	<ul style="list-style-type: none"> Sub-surface samples have been collected by reverse circulation (RC) and diamond core drilling techniques (see below). Drillholes are oriented perpendicular to the interpreted strike of the mineralised trend except in rare occasions where limited access necessitates otherwise.
	<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"> 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.
	<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>	<ul style="list-style-type: none"> 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. 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.
Drilling techniques	<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"> Reverse Circulation (RC/5.5”) with a face sampling hammer HQ Diamond Core, standard tube to a depth of ~200-250 m. HQ core was drilled directly from surface for all holes. Core orientation was provided by an ACT REFLEX (ACT II RD) tool.
Drill sample recovery	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	<ul style="list-style-type: none"> Sample recoveries are estimated for RC by correlating sample heights in the green mining bag to estimate a recovery for each metre. For diamond core the recovery is measured and recorded for every metre.
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	<ul style="list-style-type: none"> 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. 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.
	<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"> It has been demonstrated that no relationship exists between sample recovery and grade. No grade bias was observed with sample size variation.
Logging	<i>Whether core and chip samples have been geologically and geotechnically logged to a level of</i>	<ul style="list-style-type: none"> All RC drillholes are logged on 1 m intervals and the

Criteria	JORC Code explanation	Commentary
	<i>detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</i>	<ul style="list-style-type: none"> following observations recorded: <ul style="list-style-type: none"> ○ 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. ● Diamond core is logged in its entirety as per detailed geological description listed above. Geotechnical logging has been completed for the entire hole.
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i>	<ul style="list-style-type: none"> ● Logging is quantitative, based on visual field estimates. ● Diamond core is photographed post metre marking, for the entire length of the hole, two trays at a time, wet and dry.
	<i>The total length and percentage of the relevant intersections logged.</i>	<ul style="list-style-type: none"> ● Holes are logged in their entirety.
Sub-sampling techniques and sample preparation	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	<ul style="list-style-type: none"> ● 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. ● Density measurements have been taken on all quarter core samples using the Archimedes method.
	<i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i>	<ul style="list-style-type: none"> ● RC samples are collected as rotary split samples. Samples are typically dry.
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	<ul style="list-style-type: none"> ● Sample preparation follows industry best practice standards and is conducted by internationally recognised laboratories; i.e. <ul style="list-style-type: none"> ○ Oven drying, jaw crushing and pulverising so that 80% passes -75 microns.
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	<ul style="list-style-type: none"> ● Duplicates and blanks submitted approximately every 1/20 samples. ● Standards are submitted every 20 samples or at least once per hole. ● Cross laboratory checks and blind checks have been used at a rate of 5%.
	<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"> ● Measures taken include: <ul style="list-style-type: none"> ○ regular cleaning of cyclones and sampling equipment to prevent contamination ○ industry standard insertion of standards, blanks and duplicate samples ● Analysis of duplicates (field, laboratory and umpire) was completed and no issues identified with sampling representatively. ● Analysis of results from blanks and standards indicates no issues with contamination (or sample mix-ups) and a high level of accuracy.
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	<ul style="list-style-type: none"> ● Sample size is considered appropriate for the stage of exploration
Quality of assay data and laboratory tests	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	<ul style="list-style-type: none"> ● Initial assaying (2017) completed by ALS Perth. Subsequent assaying (2018) completed by Nagrom laboratories Perth. ● Both laboratories use industry standard procedures for rare metals such as Li and Ta. Analytical techniques are total.
	<i>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining</i>	<ul style="list-style-type: none"> ● None used.

Criteria	JORC Code explanation	Commentary
	<i>the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i>	
	<i>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i>	<ul style="list-style-type: none"> • Duplicates and blanks submitted approximately every 20 samples. • Standards are submitted every 20 samples or at least once per hole. • Cross laboratory checks and blind checks have been used at a rate of 5%. • 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.
Verification of sampling and assaying	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	<ul style="list-style-type: none"> • Internal review by alternate company personnel.
	<i>The use of twinned holes.</i>	<ul style="list-style-type: none"> • Six diamond holes are twins of existing RC drillholes. Results compare well with the original RC drillholes.
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	<ul style="list-style-type: none"> • 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. • Representative chip samples are collected for later reference.
	<i>Discuss any adjustment to assay data.</i>	<ul style="list-style-type: none"> • Li% is converted to Li₂O% by multiplying by 2.15, Ta ppm is converted to Ta₂O₅ ppm by multiplying by 1.22.
Location of data points	<i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i>	<ul style="list-style-type: none"> • All drillholes and geochemical samples are initially located using a handheld GPS and subsequently surveyed with DGPS. • All RC drillholes have been surveyed by a multi-shot digital downhole camera provided by the drilling contractor. • All diamond drillholes have been surveyed with a REFLEX EZI-SHOT (1001) magnetic single shot camera.
	<i>Specification of the grid system used.</i>	<ul style="list-style-type: none"> • GDA 94 Zone 51
	<i>Quality and adequacy of topographic control.</i>	<ul style="list-style-type: none"> • Initial collar elevations are based on regional topographic dataset and GPS. • Drillhole collars are surveyed post drilling with DGPS.
Data spacing and distribution	<i>Data spacing for reporting of Exploration Results.</i>	<ul style="list-style-type: none"> • 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.
	<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"> • 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.
	<i>Whether sample compositing has been applied.</i>	<ul style="list-style-type: none"> • None undertaken.
Orientation of data in relation to	<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"> • Drilling is typically oriented perpendicular to the interpreted strike of mineralisation. • KVRC0015 was oriented at 45° to strike due to access issues and the need to test the main outcrop zone.

Criteria	JORC Code explanation	Commentary
geological structure	<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"> • Drilling orientation intersects the mineralisation at appropriate angles so as to be mostly unbiased and suitable for resource estimation of the major pegmatite bodies.
Sample security	<i>The measures taken to ensure sample security.</i>	<ul style="list-style-type: none"> • Sample security is not considered to be a significant risk given the location of the deposit and bulk-nature of mineralisation. • 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. • Company geologist supervises all sampling and subsequent storage in field. The same geologist arranges delivery of samples to Nagrom laboratories in Perth via courier.
Audits or reviews	<i>The results of any audits or reviews of sampling techniques and data.</i>	<ul style="list-style-type: none"> • An expert competent person review has been completed by Michelle Wild of Wildfire Resources Pty Ltd on the resource drilling, sampling protocols and data. • This included a laboratory visit to Nagrom. • Results have not indicated any significant discrepancies.

Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<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"> • 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. • 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). • 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. • Ramelius retains the rights to gold on the MLs. • LRL (Aust) Pty Ltd has assumed the following Agreement: <ul style="list-style-type: none"> • Bullion and Non-Bullion Royalty Agreement of a 2% Gross Production Royalty affecting M36/264-265 and 459-460. • The EL is in the name of Liontown Resources Limited with no third-party obligations apart from statutory requirements. • 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. • LRL (Aust) Pty Ltd has received Section 18 consent to drill on certain areas with M36/459 and M36/460

Criteria	JORC Code explanation	Commentary
	<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"> All tenements are in good standing.
Exploration done by other parties	<i>Acknowledgment and appraisal of exploration by other parties.</i>	<ul style="list-style-type: none"> 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. 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. There has been no previous drill testing of the Li and Ta prospective pegmatites prior to Liontown acquiring the Project.
Geology	<i>Deposit type, geological setting and style of mineralisation.</i>	<ul style="list-style-type: none"> The Project is located on the western edge of the Norseman- Wiluna Belt within the Archaean Yilgarn Craton. 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. The pegmatites are LCT type lithium bearing-pegmatites.
Drillhole Information	<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"> <i>easting and northing of the drillhole collar</i> <i>elevation or RL (elevation above sea level in metres) of the drillhole collar</i> <i>dip and azimuth of the hole</i> <i>down hole length and interception depth</i> <i>hole length.</i> 	<ul style="list-style-type: none"> Diagrams in the announcement show the location of and distribution of drillholes in relation to the Mineral Resource.
Data aggregation methods	<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"> Not relevant – Exploration results are not being reported; a Mineral Resource has been defined.
Relationship between mineralisation widths and intercept lengths	<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"> Not relevant – Exploration results are not being reported; a Mineral Resource has been defined.
Diagrams	<i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i>	<ul style="list-style-type: none"> Not relevant – Exploration results are not being reported; a Mineral Resource has been defined.
Balanced reporting	<i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i>	<ul style="list-style-type: none"> Not relevant – Exploration results are not being reported; a Mineral Resource has been defined.
Other substantive	<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</i>	<ul style="list-style-type: none"> Where relevant, this information has been included or referred to elsewhere in this Table.

Criteria	JORC Code explanation	Commentary
exploration data	<i>method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i>	
Further work	<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"> • Metallurgical testwork is in progress. • Preliminary pit optimisation is planned to determine the likely economic depth extend of the mineralisation.

Section 3 Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
Database integrity	<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"> • Drillhole data was extracted directly from the Company's drillhole database, which includes internal data validation protocols. • Data was further validated by Optiro upon receipt, and prior to use in the estimation.
	<i>Data validation procedures used.</i>	<ul style="list-style-type: none"> • Validation of the data was confirmed using mining software (Datamine) validation protocols, and visually in plan and section views.
Site visits	<i>Comment on any site visits undertaken by the Competent Persons and the outcome of those visits.</i>	<ul style="list-style-type: none"> • LioneTown personnel Mr Richards and Mr Day have visited the site on numerous occasions to supervise the drilling programmes. • 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. • Mrs Standing (Optiro) has not visited the site.
Geological interpretation	<i>Confidence in (or conversely, the uncertainty of the geological interpretation of the mineral deposit).</i>	<ul style="list-style-type: none"> • The confidence in the geological interpretation is reflected by the assigned resource classification.
	<i>Nature of the data used and of any assumptions made.</i>	<ul style="list-style-type: none"> • Both assay and geological data were used for the mineralisation interpretation. • The lithium mineralisation is defined by a nominal 0.4% Li₂O cut-off grade. • Continuity between drillholes and sections is good.
	<i>The effect, if any, of alternative interpretations on Mineral Resource estimation.</i>	<ul style="list-style-type: none"> • No alternative interpretations were considered. • Any alternative interpretations are unlikely to significantly affect the Mineral Resource estimate.
	<i>The use of geology in guiding and controlling Mineral Resource estimation.</i>	<ul style="list-style-type: none"> • Geological logging (including spodumene crystal orientation from the diamond core) has been used for interpretation of the pegmatites.
	<i>The factors affecting continuity both of grade and geology.</i>	<ul style="list-style-type: none"> • The mineralisation is contained within pegmatite veins that are readily distinguished from the surrounding rocks. • Sectional interpretation and wireframing indicates good continuity of the interpreted pegmatite veins both on-section and between sections. • The confidence in the grade and geological continuity is reflected by the assigned resource classification.
Dimensions	<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"> • Eighteen mineralised pegmatites have been identified at the Kathleen Valley Project which extend from surface to a depth of 220 m. • 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

Criteria	JORC Code explanation	Commentary
		<p>outcrop at Kathleen's Corner, extend down dip to Mt Mann and have an average thickness of 5 m.</p> <ul style="list-style-type: none"> • 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. • 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. • 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.
<p>Estimation and modelling techniques</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"> • Lithium oxide (Li₂O) % and tantalum pentoxide (Ta₂O₅) ppm block grades were estimated using ordinary kriging (OK). Optiro considers OK to be an appropriate estimation technique for this type of mineralisation. • 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. • 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. • Data analysis and estimation was undertaken using Snowden Supervisor and Datamine software. • Over 93% of the assay data is from samples of 1 m intervals, 0.3% is from sample of >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. • Variogram analysis was undertaken to determine the kriging estimation parameters used for OK estimation of Li₂O and Ta₂O₅. • Li₂O 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. • Ta₂O₅ 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. • Kriging neighbourhood analysis was performed in order to determine the block size, sample numbers and discretisation levels. • Three estimation passes were used for Li₂O and Ta₂O₅; 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 Li₂O block grades (almost 63%) were estimated in the first pass, 22% in the second pass and the remaining 5% in the third pass.

Criteria	JORC Code explanation	Commentary
		<ul style="list-style-type: none"> The Li₂O and Ta₂O₅ 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.
	<i>Description of how the geological interpretation was used to control the resource estimates.</i>	<ul style="list-style-type: none"> Geological interpretations were completed on sections which were wireframed to create a 3D interpretation of the mineralised pegmatites. The interpretation of mineralisation was by Liontown based on geological logging and Li₂O content. A nominal grade of 0.4% Li₂O was used to define the mineralisation within the interpreted pegmatites. The mineralised domain is considered geologically robust in the context of the resource classification applied to the estimate.
	<i>Discussion of basis for using or not using grade cutting or capping.</i>	<ul style="list-style-type: none"> Li₂O and Ta₂O₅ have low coefficients of variation (CV). Some higher-grade outliers were noted and both the Li₂O and Ta₂O₅ 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.
	<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"> Mineral Resources have not previously been reported for this deposit area and no production has occurred.
	<i>The assumptions made regarding recovery of by-products.</i>	<ul style="list-style-type: none"> No assumptions have been applied for the recovery of by-products. Metallurgical testwork samples have been submitted by Liontown to determine the recoveries that could be expected.
	<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"> Deleterious elements were not considered for the Mineral Resource estimate. Metallurgical testwork is in progress. Results to date indicate very low levels of Fe within the interpreted mineralised pegmatite domains.
	<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"> Grade estimation was into parent blocks of 10 mE by 15 mN by 1.0 mRL. Block dimensions were selected from kriging neighbourhood analysis and reflect the variability of the deposit as defined by the current drill spacing. Sub-cells to a minimum dimension of 2 mE by 2.5 mN by 0.5 mRL were used to represent volume.
	<i>Any assumptions behind modelling of selective mining units.</i>	Selective mining units were not modelled.
	<i>Any assumptions about correlation between variables.</i>	<ul style="list-style-type: none"> Li₂O and Ta₂O₅ are not correlated. Both Li₂O and Ta₂O₅ were estimated independently.
	<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"> No production has taken place and thus no reconciliation data is available.
Moisture	<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"> Tonnages have been estimated on a dry basis.
Cut-off parameters	<i>The basis of the adopted cut-off grade(s) or quality parameters applied.</i>	<ul style="list-style-type: none"> The Mineral Resource estimate for the Kathleen's Corner and Mt Mann deposits has been reported above a cut-off grade of 0.5 % Li₂O to represent the portion of the resource that may be considered for eventual economic extraction. This cut-off grade has been selected by Liontown

Criteria	JORC Code explanation	Commentary
		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.
Mining factors or assumptions	<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"> The mineralisation at Kathleen's Corner and Mt Mann extends from surface and would be suitable for open pit mining. 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. 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.
Metallurgical factors or assumptions	<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"> Preliminary metallurgical testwork completed on RC chips in January 2018 indicates the dominant lithium mineral is spodumene and probably suitable for conventional processing techniques. Samples from six HQ diamond core holes are currently undergoing comminution and further metallurgical test work at Nagrom with results expected by mid-September 2018. This work is being supervised by independent consulting group Lycopodium.
Environmental factors or assumptions	<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"> 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.
Bulk density	<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"> Bulk density was measured for 575 core samples from diamond holes using Archimedes measurements. The density data has a range of 2.08 to 3.34 t/m³. A bulk density of 2.69 t/m³ was assigned to the oxide and transitional material and 2.74 t/m³ was assigned to the fresh material.
Classification	<i>The basis for the classification of the Mineral Resources into varying confidence categories.</i>	<ul style="list-style-type: none"> Mineral Resources have been classified as Measured, Indicated or Inferred. 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.
	<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"> 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 Li₂O and Ta₂O₅ content (from the kriging metrics).
	<i>Whether the result appropriately reflects the Competent Person's view of the deposit</i>	<ul style="list-style-type: none"> The assigned classification of Measured, Indicated and Inferred reflects the Competent Persons'

Criteria	JORC Code explanation	Commentary
		assessment of the accuracy and confidence levels in the Mineral Resource estimate.
Audits or reviews	<i>The results of any audits or reviews of Mineral Resource estimates.</i>	<ul style="list-style-type: none"> The Mineral Resource has been reviewed internally as part of normal validation processes by Optiro. No external audit or review of the current Mineral Resource has been conducted.
Discussion of relative accuracy/ confidence	<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"> The assigned classification of Measured, Indicated and Inferred reflects the Competent Persons' assessment of the accuracy and confidence levels in the Mineral Resource estimate.
	<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"> The confidence levels reflect potential production tonnages on a quarterly basis, assuming open pit mining.
	<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"> No production has occurred from the deposit.