Liontown

ASX ANNOUNCEMENT

ASX : LTR 11th January 2021

Kathleen Valley Lithium-Tantalum Project Advancing to the Next Level with Definitive Feasibility Study Underway

Key consultants appointed to assist in delivering DFS in Q4 2021

HIGHLIGHTS

- **Definitive Feasibility Study (DFS) follows on from highly encouraging studies completed in Q4 2020 (see ASX releases dated 9th and 22nd October 2020) which support a stand-alone 2Mtpa mining operation with a 40-year mine life.**
- **Key consultants including Lycopodium Minerals Pty Ltd, Snowden Mining Industry Consultants Pty Ltd, Knight Piésold Pty Ltd, MBS Environmental and ALS Metallurgy Pty Ltd appointed to ensure a high-quality DFS.**
- **Water exploration drilling has identified a number of prospective follow-up targets for full bore development and testing.**
- **Comminution Study completed which has identified the potential for further process circuit optimisation.**
- **Geotechnical/in-fill drilling confirms the potential to upgrade Inferred parts of the Mineral Resource Estimate (MRE), with several high-grade intersections received, including:**

KVGT0013
- **9.9m @ 1.9% Li_2O from 135.9m**, including:
  - **5.1m @ 2.9% Li_2O from 135.9m, and**
- **30.8m @ 1.6% Li_2O from 260.6m**, including:
  - **3m @ 3.0% Li_2O from 261m, and**
  - **4.9m @ 2.5% Li_2O from 278.1m**

KVDD0076
- **9.2m @ 1.6% Li_2O from 189.2m**, including:
  - **2m @ 2.2% Li_2O from 191m, and**
- **13.4m @ 1.7% Li_2O from 269.6m**, including:
  - **8m @ 2.0% Li_2O from 274m**

KVDD0077
- **14m @ 1.8% Li_2O from 186m**, including:
  - **4m @ 2.5% Li_2O from 195m, and**
- **39.7m @ 1.6% Li_2O from 280.4m**, including:
  - **5m @ 2.4% Li_2O from 285m, and**
  - **3.3m @ 2.2% Li_2O from 299.1m**

*(True widths – 70-85% of down-hole widths. See Appendix 1 for further details **including tantalum assays**)*

Liontown Resources Limited (ASX: LTR, "Liontown" or "Company") is pleased to advise that it has moved to the next key pre-development stage at its 100%-owned **Kathleen Valley Lithium-Tantalum Project** in Western Australia with work now well underway on a Definitive Feasibility Study (DFS).

The DFS, which is scheduled for completion in Q4 2021, follows on from the highly encouraging studies completed in Q4 2020 that included:

- A Pre-Feasibility Study (PFS) into establishing a 2Mtpa mining operation to produce an average 350,000tpa of spodumene concentrate (SC6) for 40 years; and
- A subsequent Scoping Study into the potential to undertake downstream processing on-site to produce Lithium Hydroxide or Lithium Sulphate.

Liontown has appointed several highly credentialled consulting groups to assist with the DFS including Lycopodium Minerals Pty Ltd (Process Engineering), Snowden Mining Industry Consultants Pty Ltd (Mine Engineering), Knight Piésold Pty Ltd (Tailings and Hydrogeological Engineering), MBS Environmental (Environmental and Permitting) and ALS Metallurgy Pty Ltd (Metallurgical Test Work).

The Company has also undertaken additional geotechnical and water exploration drilling to acquire data identified by the 2020 PFS which is required to complete the DFS.

The geotechnical drilling comprised six diamond core holes totalling 1,312m (***Appendix 1***) and was designed to provide rock quality data for the proposed underground portals and the north-western part of the deposit. Data from the holes indicate good ground conditions suitable for underground mining and are consistent with previous drilling.

Two of the geotechnical holes, KVDD0076 and KVDD0077, drilled into an Inferred part of the Mineral Resource (***see Figure 1***), intersected significant widths of high-grade lithium mineralisation (see Highlights), confirming the continuity of the system. The assay data from KVDD0076 and KVDD0077 will be used to upgrade parts of the Mineral Resource Estimate to the Indicated category, which will subsequently be available for conversion to Ore Reserves as part of the DFS.

The water drilling comprised 10 Reverse Circulation (RC) holes totalling 1,018m with the holes targeting structures defined by aeromagnetic and ground EM data. A number of holes intersected water and further drilling to fully develop 2-3 bores and measure flow rates and draw-down is scheduled for late Q1 2021.

Further metallurgical test work on approximately 3 tonnes of material will also commence during the current Quarter to provide DFS-level data for recovery, variability, grind size optimisation and comminution.

A Process Comminution Study has also been completed which has confirmed the viability of further process optimisation leading to possible capital savings and improved operability through the removal of one stage of crushing and increased grinding mill size. This change will be incorporated into the DFS.

Further market updates will be provided as the DFS progresses.

Kathleen Valley Overview

The 100%-owned Kathleen Valley Lithium-Tantalum Project is located in the North Eastern Goldfields of Western Australia, approximately 400km north of Kalgoorlie (***Figure 2***) close to well-established transport and energy infrastructure. Liontown acquired the Project in 2017 and has since drilled 461 RC and diamond core holes for a total of 89,066m.

Data from the drilling has been used to prepare a MRE of **156Mt @ 1.4% Li_2O and 130ppm Ta_2O_5**, making Kathleen Valley one of the larger, spodumene-related hard rock lithium resources in the world.

The MRE formed the basis of a PFS completed in October 2020 with the key metrics from the study tabled below:

Description	PFS
$NPV_{8\%(real)}$ LOM (Post Tax)	**A$1.12B**
IRR (%) LOM (Post Tax)	**37%**
Payback (years)	**3**
OPEX US$/t Li_2O (dmt) Years 1-10 (exc. royalties)[2][3]	**US$283/dmt**
LOM Free Cashflow (post tax)	**A$4.8B**
Annual Production 6% Li_2O (dmt)	**350ktpa**
Annual Production 30% Ta_2O_5 (dmt)	**430 tpa**
Capital Cost A$M (inc. $67M pre-production costs)	**A$325M**
Ore Reserve	**71Mt @ 1.40% Li_2O & 130ppm Ta_2O_5**
Production Inventory [1]	**79Mt @ 1.40% Li_2O & 130ppm Ta_2O_5**
Mine Life (at 2 Mtpa)	**~40 years**

Cautionary statement:

[1]The production targets and forecast financial information referred to in the PFS comprise Proven Ore Reserves (19.7%), Probable Ore Reserves (69.8%) and Inferred Mineral Resources (10.5%). The Inferred material included in the inventory is 8.28Mt @ 1.36% Li_2O & 120 ppm Ta_2O_5. The Inferred material has been scheduled such that less than 1Mt is mined in the first ten years, with 6.44Mt at the end of the underground mine life and 0.84Mt after year 25 for the open pit.

The Inferred material does not have a material effect on the technical and economic viability of the project.

There is a low level of geological confidence associated with inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of indicated Mineral Resources or that the production target itself will be realised.

[2] Cash operating costs include all mining, processing, transport, freight to port, port costs and site administration/ overhead costs. Excludes sustaining capital.

[3]As royalties are predominantly sales-price dependent they have not been included in cash costs. At PFS average Li_2O pricing to 2040 of US$739/t royalties equates to $62/t of 6% Li_2O for the 1st 10-year case presented above.

Given the highly encouraging results from the PFS, Liontown has commenced a DFS which is scheduled for completion in Q4 2021.

The Company has also undertaken a Scoping Study which supports the establishment of a downstream processing facility on-site to produce lithium hydroxide or lithium sulphate using 6% Li_2O spodumene concentrate (SC6) from Kathleen Valley. Further test work is planned to provide the additional data required to determine whether Liontown should pursue this option further.

This announcement has been authorised for release by the Board.

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Competent Person Statement

The Information in this report that relates to Exploration Results is based on and fairly represents information and supporting documentation prepared by Mr David Richards, who is a Competent Person and a member of the Australasian Institute of Geoscientists (AIG). Mr Richards is a full-time employee of the company. Mr Richards has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activities being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Richards consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The Information in this Presentation that relates to Mineral Resources for the Kathleen Valley Project is extracted from the ASX announcement "Kathleen Valley confirmed as a world-class lithium deposit as Mineral Resource increases to 156Mt @ 1.4% Li2O" released on the 11th May 2020 which is available on www.ltresources.com.au.

The Information in this Presentation that relates to Ore Reserves, Production Target and Pre-Feasibility Study (PFS) for the Kathleen Valley Project is extracted from the ASX announcement "Updated Kathleen Valley Pre-Feasibility Study delivers substantial increase in NPV to A$1.1 billion and mine life to ~40 years" released on 9th October 2020 which is available on www.ltresources.com.au

The Information in this Presentation that relates to the Downstream Scoping Study (DSS) is extracted from the ASX announcement "Downstream Scoping Study: Kathleen Valley Lithium-Tantalum Project" released on 22 October 2020 which is available on www.ltresources.com.au

The company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

Forward Looking Statement

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.

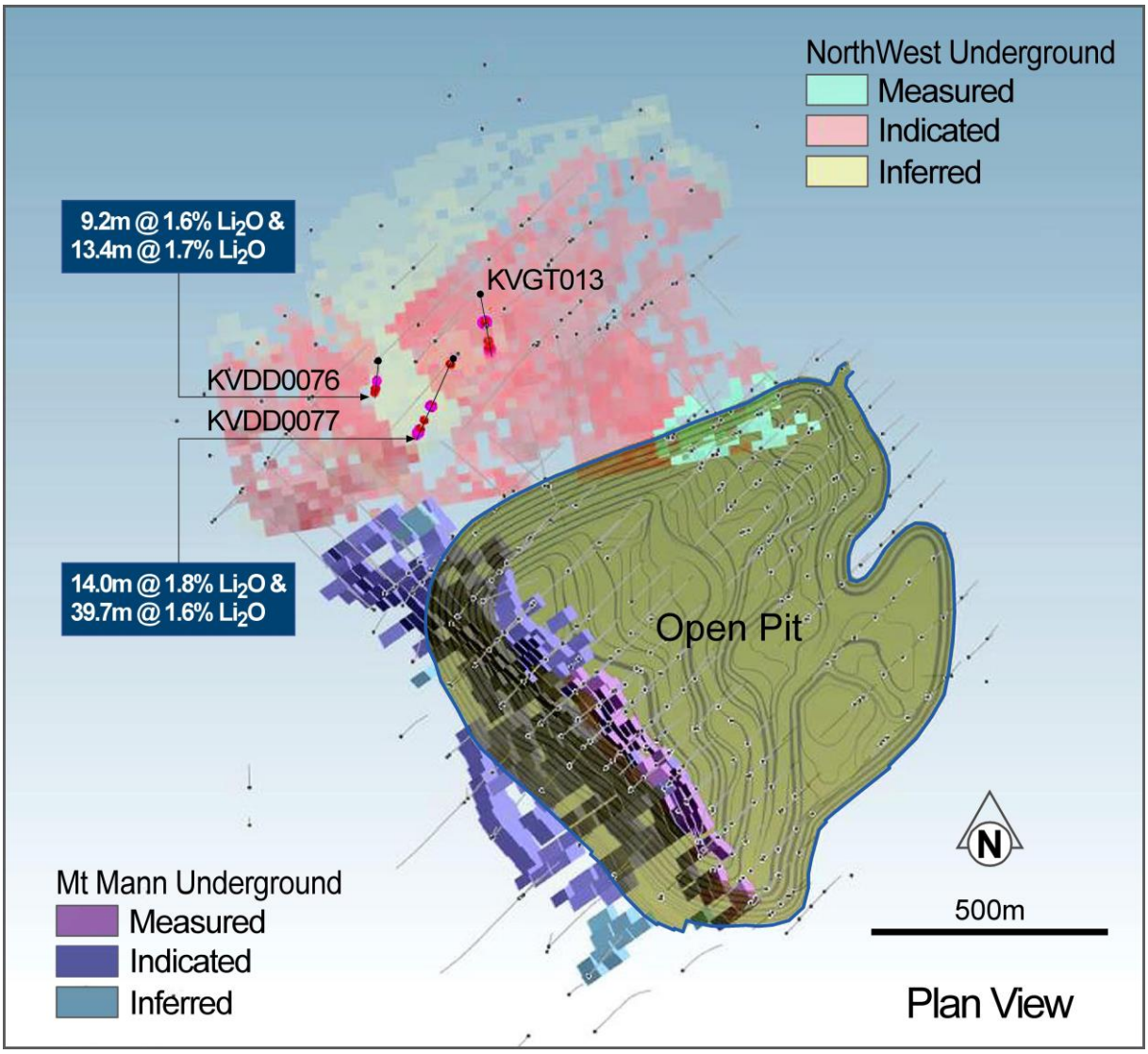

Figure 1: Kathleen Valley – Plan showing proposed underground stopes and latest drill results.

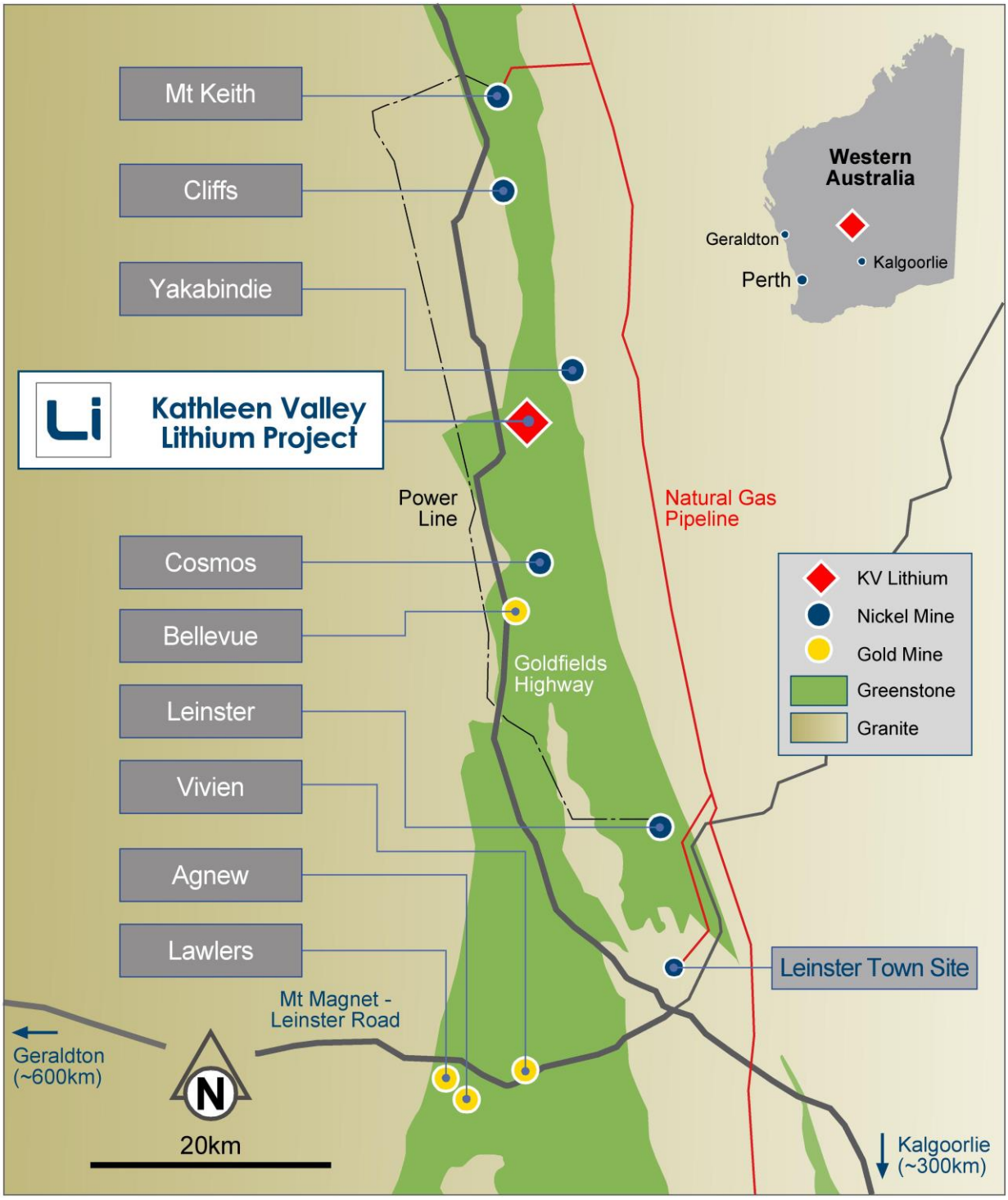

Figure 2: Kathleen Valley – Regional loaction and geology plan.

Appendix 1 – Kathleen Valley –Drill hole statistics (Q4 2020)

Hole_ID	East	North	RL	Dip	Azimuth	Depth (m)	Significant Li2O (>0.4%) and Ta2O5 (>50ppm) results				
							From(m)	To(m)	nterval(m	Li2O (%)	Ta2O5 (ppm)
KVDD0076	257885	6959310	506	-75	183	334.1	189.2	198.4	9.2	1.6	14
							incl. 2m @ 2.2% Li2O and 14ppm Ta2O5 from 191m				
							and 2m @ 1.8% Li2O and 25ppm Ta2O5 from 194m				
							and 1.53m @ 2.3% Li2O and 7ppm Ta2O5 from 196.5m				
							236	239.4	3.4	0.6	105
							258	266.1	8.1	1.8	173
							incl. 5m @ 2.0% Li2O and 190ppm Ta2O5 from 258m				
							269.6	283	13.4	1.7	203
							incl. 1.83m @ 2.2% Li2O and 58ppm Ta2O5 from 269.6m				
							and 8m @ 2.0% Li2O and 252ppm Ta2O5 from 274m				
							291.3	297.2	5.9	1.7	176
							incl. 4.72m @ 1.9% Li2O and 171ppm Ta2O5 from 291.3m				
							302.3	303.2	0.9	1	247
KVDD0077	258042	6959310	506	-56	203	350.5	21	24	3	1.7	178
							incl. 1m @ 2.4% Li2O and 122ppm Ta2O5 from 22m				
							181	182.75	1.75	1.2	411
							186	200	14	1.8	48
							incl. 3.9m @ 2.2% Li2O and 19ppm Ta2O5 from 187.1m				
							and 4m @ 2.5% Li2O and 44ppm Ta2O5 from 195m				
							249.2	254	4.8	1.2	98
							incl. 1m @ 2.5% Li2O and 111ppm Ta2O5 from 253m				
							255.5	257.45	1.95	0.8	237
							280.4	320.1	39.7	1.6	180
							incl. 5m @ 2.4% Li2O and 177ppm Ta2O5 from 285m				
							and 1m @ 2.1% Li2O and 202ppm Ta2O5 from 293m				
							and 3.3m @ 2.2% Li2O and 272ppm Ta2O5 from 299.1m				
							and 0.9m @ 3.3% Li2O and 204ppm Ta2O5 from 304.1m				
							and 9.1m @ 1.8% Li2O and 196ppm Ta2O5 from 311m				
KVGT013	258100	6959450	507	-61	176	360.1	135.9	145.8	9.9	1.9	94
							incl. 5.1m @ 2.9% Li2O and 70ppm Ta2O5 from 135.9m				
							222.7	226.7	4	1.4	183
							incl. 1m @ 2.5% Li2O and 160ppm Ta2O5 from 223m				
							233.3	234.7	1.4	1.1	105
							251	256	5	1.5	193
							incl. 2m @ 2.5% Li2O and 229ppm Ta2O5 from 253m				
							260.2	291	30.8	1.6	189
							incl. 3m @ 3.0% Li2O and 110ppm Ta2O5 from 261m				
							and 5.3m @ 1.9% Li2O and 234ppm Ta2O5 from 269.7m				
							and 4.9m @ 2.5% Li2O and 176ppm Ta2O5 from 278.1m				
KVGT014	257610	6958320	504	-70	360	51.9	**Geotechnical holes only - not assayed**				
KVGT015	257610	6958400	504	-65	358	115.1					
KVGT016	258755	6958170	525	-55	58	100.1					

True widths estimated as follows:

Holes drilled towards NE (~045) and intersecting Kathleen's Corner lodes - true widths 85-100% of downhole width

Holes drilled towards NE (~045) and intersecting Mt Mann lodes - true widths 65-100% of downhole width

Holes drilled towards SW (~225) and intersecting Kathleen's Corner lodes - true widths 65-75% of downhole width

Holes drilled towards SW (~225) and intersecting Mt Mann lodes - true widths 30-50% of downhole width

Holes drilled on NW/SE lines - true widths 60-100% of downhole widths

Appendix 2 – Kathleen Valley – JORC Code 2012 Table 1 Criteria

The table below summarises the assessment and reporting criteria used for the Kathleen's Corner, Mt Mann deposits and 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	*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.*	• 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 where limited access necessitates otherwise.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. *Aspects of the determination of mineralisation that are Material to the Public Report.* *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.*	• 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. • 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. • Diamond core has been sampled in intervals of ~1 m (up to 2.0 m within the main project area) 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	*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).*	• Drilling techniques used at Kathleen Valley comprise:
		  ○ Reverse Circulation (RC/5.5") with a face sampling hammer
		  ○ NQ2, HQ and PQ Diamond Core, standard tube to a depth of ~650 m.
		  ○ Diamond core holes drilled directly from surface or from bottom of RC pre-collars. Core orientation was provided by an ACT REFLEX (ACT II RD) tool.

Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.*	• Sample recoveries are estimated for RC by correlating sample heights in the plastic bag to estimate a recovery for each metre. • For diamond core the recovery is measured and recorded for every metre.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	• 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.
	Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to	• It has been demonstrated that no relationship exists between sample recovery and grade. No grade bias was observed with sample size variation.

Criteria	JORC Code explanation	Commentary
	preferential loss/gain of fine/coarse material.	
Logging	*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.*	• All RC drillholes are logged on 1 m intervals and the following observations recorded: ○ 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.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	• 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.
	The total length and percentage of the relevant intersections logged.	• Drillholes are logged in their entirety.
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.*	• The core has been cut in half and then quartered for sample purposes. Half core used for metallurgical studies with the remaining quarter stored as a library sample. • Density measurements have been taken on all quarter core samples using the Archimedes method.
	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	• RC samples are collected as rotary split samples. Samples are typically dry.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	• Sample preparation follows industry best practice standards and is conducted by internationally recognised laboratories; i.e. ○ Oven drying, jaw crushing and pulverising so that 80% passes -75 microns.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	• Duplicates and blanks submitted approximately every 1 in 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%.

	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.	• Measures taken include:
		  ○ 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.

	Whether sample sizes are appropriate to the grain size of the material being sampled.	• Sample size is considered appropriate and is in-line with industry standards.
Quality of assay data and laboratory tests	*The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	• Initial assaying (2017) completed by ALS Perth. Subsequent assaying (2018 onwards) completed by Nagrom laboratories Perth. • Both laboratories use industry standard procedures for rare metals such as Li and Ta. Analytical techniques are total.
	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.	• None used.

Criteria	JORC Code explanation	Commentary
	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.	• 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	*The verification of significant intersections by either independent or alternative company personnel.*	• Internal review by alternate company personnel.
	The use of twinned holes.	• 11 diamond holes have been drilled as twins or in close proximity to existing RC drillholes. Results compare well with the original RC drillholes.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	• Drilling and logging data are 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.
	Discuss any adjustment to assay data.	• Li% is converted to Li_2O% by multiplying by 2.15, Ta ppm is converted to Ta_2O_5 ppm by multiplying by 1.22.
Location of data points	*Accuracy and quality of surveys used to locate drillholes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*	• All drill collars and geochemical samples are initially located using a handheld GPS. • Drill collars are subsequently surveyed accurately by a licensed surveyor using DGPS techniques. Eastings and northings are measured to within +/-2 cm while elevations are measured to within +/-10 cm. • 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.
	Specification of the grid system used.	• GDA 94 Zone 51.
	Quality and adequacy of topographic control.	• Initial collar elevations are based on regional topographic dataset. • Drillhole collars are surveyed post drilling with DGPS (see above). • Further topographic data (20 cm contours) has been provided for the Project by a LIDAR flown by Fugro.
Data spacing and distribution	*Data spacing for reporting of Exploration Results.*	• Drillhole spacing varies due to initial drill programs 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.
	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.	• 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.
	Whether sample compositing has been applied.	• None undertaken.
Orientation of data in relation to geological structure	*Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*	• Drilling is typically oriented perpendicular to the interpreted strike of mineralisation.
	If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to	• Drilling orientation intersects the mineralisation at appropriate angles so as to be mostly unbiased and suitable

Criteria	JORC Code explanation	Commentary
	have introduced a sampling bias, this should be assessed and reported if material.	for resource estimation of the major pegmatite bodies.
Sample security	*The measures taken to ensure sample security.*	• 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	*The results of any audits or reviews of sampling techniques and data.*	• Independent, expert competent person reviews have been completed by Ms. Wild of Wildfire Resources Pty Ltd and Mrs. Standing of Optiro Limited on the resource drilling, sampling protocols and data. • This included a laboratory visit to Nagrom by Ms. Wild. • Results indicate sampling and QAQC procedures are in-line with industry standards.

Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	*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.*	• The Kathleen Valley Project is located ~670 km NE of Perth and ~45 km NNW of Leinster in Western Australia. The Project comprises four granted mining leases - MLs 36/264, 265, 459, 460, one Exploration License (EL) - E36/879 and one mining lease application (MLA) – M36/696. • The granted 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. • The Gold Rights were acquired from Ramelius via a Sales Agreement completed in June 2019. • LRL (Aust) Pty Ltd has assumed the following Agreement: ○ Bullion and Non-Bullion Royalty Agreement of a 2% Gross Production Royalty affecting M36/264-265 and 459-460. • The EL and MLA are 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 a number of agreements with the Tjiwarl which provide protocols for field activities by the Company. • LRL (Aust) Pty Ltd has received Section 18 consent to drill on MLs 36/264, 265, 459, 460.
	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.	• All tenements are in good standing.

Criteria	JORC Code explanation	Commentary
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	• Multiple phases of exploration have previously been completed for gold and nickel. This has not been reviewed in detail due to Liontown's focus on rare metal pegmatites. • 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	*Deposit type, geological setting and style of mineralisation.*	• 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	*A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes:* • *easting and northing of the drillhole collar* • *elevation or RL (elevation above sea level in metres) of the drillhole collar* • *dip and azimuth of the hole* • *down hole length and interception depth* • *hole length.*	• When reporting Exploration Results, see figures and appendices in accompanying report • When reporting Mineral Resource Estimate, diagrams in the announcement show the location of and distribution of drill holes in relation to the resource.
Data aggregation methods	*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.*	• Li_2O intercepts calculated using 0.4% cut off with a maximum 2m internal dilution typically applied except where drill hole logging (e.g. continuous pegmatite) and assays indicate wider dilution is warranted as overall grade is high enough to allow mining to take entire geological unit. • Higher grade intervals calculated using 1.5% Li_2O cut off. No upper cuts applied. • Ta_2O_5 values only quoted when lithium intersections reported. • Metal equivalents have been used on the following basis:- ➢ *Li (equiv %) = Tant grade % * ($/t Tantalum/ $/tonne Lithium) * (% Tantalum recovery / % Lithium recovery*)

Inputs			Outputs	
Tantalite (Ta_2O_5) $/lb	69.9 (B2)	US$		
Spodumene $/tonne	739 (B3)	US$		
Tantalite recovery	50% (B4)	Per LTR testwork	***Ta_2O_5 LI2O Equiv=***	**0.107 (F4)**
Spodumene Recovery	76% (B5)	Per LTR testwork		
Ta_2O_5 Grade	30% (B6)		***Equiv Li2O grade =***	**1.5**
Li_2O Grade	6% (B7)		***(Li_2O% +Ta_2O5)***	
Grade Ta_2O_5 in resource	130ppm (B9)	(per resource)		
Grade Li_2O in resource	1.35% (B10)	(per resource)		

As an equation:-

➢ *F4=B9*((B2)/(B3/B7))*(B4/B5)*2204*0.0001*

➢ *Equiv Li_2O grade (Li_2O% + Ta_2O5%) = F4/(100+B10)*

Criteria	JORC Code explanation	Commentary
Relationship between mineralisation widths and intercept lengths	*If the geometry of the mineralisation with respect to the drillhole angle is known, its nature should be reported.* *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').*	• Drillholes intersected mineralisation at near perpendicular to the dip orientation of the host lithologies and mineralisation. • Estimates of true widths provided at end of Appendices attached to ASX announcements which list drill hole statistics
Diagrams	*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 drillhole collar locations and appropriate sectional views.*	• Relevant diagrams have been included within the announcement.
Balanced reporting	*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.*	• All recent exploration results reported and tabulated.
Other substantive exploration data	*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.*	• Where relevant, this information has been included or referred to elsewhere in this Table.
Further work	*The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).*	• 2020/ 21 Definitive Feasibility Study (DFS).

Section 3 Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
Database integrity	*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.*	• 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.
	Data validation procedures used.	• Validation of the data was confirmed using mining software (Datamine) validation protocols, and visually in plan and section views.
Site visits	*Comment on any site visits undertaken by the Competent Persons and the outcome of those visits.*	• Liontown personnel Mr. Richards and Mr. Day have visited the site on numerous occasions to supervise the drilling programs. • Ms. Wild (Principal Geologist and Director of Wildfire Resources Pty Ltd) and Mrs. Standing (Optiro Pty Ltd) have visited the site on separate occasions during resource definition drilling programs 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 has confirmed site practices are appropriate and satisfactory for the preparation of a Mineral Resource Estimate.
	Confidence in (or conversely, the uncertainty of the geological interpretation of the mineral deposit.	• The confidence in the geological interpretation is reflected by the assigned resource classification.

Criteria	JORC Code explanation	Commentary
Geological interpretation	*Nature of the data used and of any assumptions made.*	• Both assay and geological data were used for the mineralisation interpretation. • The lithium mineralisation is defined by a nominal 0.4% Li_2O cut-off grade. • Continuity between drillholes and sections is good.
	The effect, if any, of alternative interpretations on Mineral Resource estimation.	• No alternative interpretations were considered. • Any alternative interpretations are unlikely to significantly affect the Mineral Resource estimate.
	The use of geology in guiding and controlling Mineral Resource estimation.	• Geological logging (including spodumene crystal orientation from the diamond core) has been used for interpretation of the pegmatites.
	The factors affecting continuity both of grade and geology.	• 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	*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.*	• Twenty lithium mineralised pegmatites have been identified at the Kathleen Valley Project which extend from surface to a depth of 640 m. • At Mt Mann, two steeply-dipping (-70° west) pegmatites have been drilled over a strike length of 1,200 m and to a vertical depth of around 300m to 400 m. The two pegmatites are up to 35 m thick and have average thicknesses of 9 m and 11 m. • At Kathleen's Corner, 18 sub-horizontal pegmatites have been drilled over an area of 1,800 m by 1,300 m. These pegmatites outcrop in the northeast and are up to 40 m thick with an average thickness of 8 m. The pegmatites coalesce and merge with the Mt Mann pegmatites at approximately 300 m to 400 m below surface to form a single, thick (35 m to 75 m) mineralised body that extends for a further 600 m to 700 m down-dip.
Estimation and modelling techniques	*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.*	• Data analysis and estimation was undertaken using Snowden Supervisor and Datamine software. • Lithium oxide (Li_2O) % and tantalum pentoxide (Ta_2O_5) ppm block grades were estimated using ordinary kriging (OK). Optiro considers OK to be an appropriate estimation technique for this type of mineralisation. • Caesium (Cs), potassium (K), niobium (Nb), rubidium (Rb), phosphorus (P) and tin (Sn) block grades were estimated using ordinary kriging (OK). These additional variables were included for analysis of the mineralisation and fractionation trends of the pegmatite, from the K/Cs, K/Rb and Nb/Ta ratios. • The nominal spacing of the drillholes is 50 m by 50 m. The along section spacing ranges from 30 m to 100 m and on-section spacing ranges from generally 30 m to 60 m. • Almost 90% of the assay data within the lithium mineralised pegmatites is from samples of 1 m intervals, 1.5% is from sample of >1 m (to a maximum of 2 m) and almost 9% is from intervals of less than 1 m. The data was composited to 1 m downhole intervals for analysis and grade estimation. • Variogram analysis was undertaken to determine the kriging estimation parameters used for OK estimation of Li_2O and Ta_2O_5. • Li_2O mineralisation continuity was interpreted from variogram analyses to have an along strike range of 145 m to

Criteria	JORC Code explanation	Commentary
		230 m and a down-dip (or across strike) range of 110 m to 230 m. • Ta_2O_5 mineralisation continuity was interpreted from variogram analyses to have an along strike range of 58 m to 150 m and a down-dip (or across strike) range of 47 m to 170 m. • A maximum extrapolation distance of 50 m was applied along strike and down dip extrapolation was generally 30 m. • Kriging neighbourhood analysis was performed in order to determine the block size, sample numbers and discretisation levels. • Three estimation passes were used for Li_2O and Ta_2O_5; 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 four times the second search and the second and third searches had reduced sample numbers required for estimation. • Within the lithium mineralised pegmatites almost 84% of the total Li_2O block grades were estimated in the first search pass, 14% within the second search pass and 2% estimated in the third search pass. • Within the pegmatites 75% of the Ta_2O_5 block grades were estimated in the first pass, 24% in the second pass and 1% in the third pass. • The 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.
	Description of how the geological interpretation was used to control the resource estimates.	• Geological interpretations were completed on sections which were wireframed to create a 3D interpretation of the mineralised pegmatites. • The interpretation of mineralisation was based on geological logging and Li_2O content. A nominal grade of 0.4% Li_2O 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.
	Discussion of basis for using or not using grade cutting or capping.	• Li_2O and Ta_2O_5 have low coefficients of variation (CV). Some higher-grade outliers were noted and the Ta_2O_5 grades were capped (top-cut). • Cs, K, Rb, P and Sn have low coefficients of variation and Nb has a moderate coefficient of variation (1.4). A small number of high-grade outliers are present in the Cs, Nb, Rb, P and Sn data and grades were capped. • The top-cut level was determined using a combination of top-cut analysis tools, including grade histograms, log probability plots and the CV.
	The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	• The Mineral Resource was first estimated for the Kathleen's Valley Lithium Project in August 2018. The Mineral Resource, comprising 21 Mt at an average grade of 1.4% Li_2O and 170 ppm Ta_2O_5, was reported above a cut-off grade of 0.5% Li_2O • Additional drilling was undertaken during 2019 and the resource was in July 2019. The July 2019 Mineral Resource, comprising 74.9 Mt at an average grade of 1.3% Li_2O and 140 ppm Ta_2O_5, was reported above a Li_2O cut-off grade of 0.5% for open pit potential (above 200 mRL) and 0.7% for underground potential (below 200 mRL).

Criteria	JORC Code explanation	Commentary
		• Additional drilling was undertaken in 2019 and 2020 and the resource was in February 2020. The February 2020 Mineral Resource, comprising 139 Mt at an average grade of 1.33% Li_2O and 140 ppm Ta_2O_5, was reported above a cut-off grade of 0.55% Li_2O. • Since the February 2020 Mineral Resource was estimated data from an additional 16 RC holes (for a total of 6,616 m) and 28 DD holes (for a total of 9,682 m) have been incorporated into the resource database. • The resource tonnage has increased from 139 Mt in February 2020 to 156 Mt in May 2020, while the average grade has increased from 1.33% Li_2O to 1.35% Li_2O. The Ta_2O_5 grade has decreased from 140 ppm to 130 ppm. • No production has occurred.
	The assumptions made regarding recovery of by-products.	• An Investigation of tantalum recovery by magnetic separation and gravity upgrade to produce a tantalum by-product was undertaken in 2020. Using stage recoveries, the overall Ta_2O_5 reporting to concentrate has been estimated as 56% to a grade of 15.3% based on test work. A mineralogical review indicates potential to produce a 30% Ta_2O_5 concentrate at an offsite upgrade facility. • Further work on tantalum recovery is anticipated as part of the planned DFS.

	Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).	• Deleterious elements were not included in the Mineral Resource estimate.
		• Liontown does not routinely assay drill samples for iron, the main deleterious element, due to:
		  ○ contamination from drill bits and rods during drilling operations; and
		  ○ contamination during sample preparation from crushing and milling equipment.
		  ○ Assaying of blank, silica only material inserted as part of QAQC protocols indicates that contamination from sample preparation adds 0.1% to 1% Fe_2O_3 to the sample.
		  ○ Analysis of data indicates the iron content in the pegmatites averages <0.5%.
		• Sulphur assays have been determined for more than 27,000 host rock samples – results indicate that acid mine drainage will not be a significant environmental factor.

	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	• Grade estimation was into parent blocks of 10 mE by 10 mN by 3.0 mRL. • Orelogy Consulting Pty Ltd (who are undertaking mining studies for Liontown) advised that mining is likely to be undertaken using a block size of 10 mE by 10 mN on 3 m benches • This block dimension was confirmed by kriging neighbourhood analysis and reflects the variability of the deposit as defined by the current drill spacing and mineralisation continuity determined from variogram analysis. • Sub-cells to a minimum dimension of 2.5 mE by 2.5 mN by 0.5 mRL were used to represent volume.
	Any assumptions behind modelling of selective mining units.	• Selective mining units were not modelled.
	Any assumptions about correlation between variables.	• Li_2O and Ta_2O_5 are not correlated. Both Li_2O and Ta_2O_5 were estimated independently. • Correlation coefficients for Cs, K, Nb, Rb, P and Sn within the pegmatites indicate that they are not correlated, except for K and Rb which have a high positive correlation (0.87). All

Criteria	JORC Code explanation	Commentary
		variables were analysed and estimated independently.
	The process of validation, the checking process used, the comparison of model data to drillhole data, and use of reconciliation data if available.	• No production has taken place and thus no reconciliation data is available.
Moisture	*Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages have been estimated on a dry basis.
Cut-off parameters	*The basis of the adopted cut-off grade(s) or quality parameters applied.*	• A cut-off grade of 0.55% Li_2O has been selected to represent the portion of the resource that may be considered for eventual economic extraction by a combination of open pit and underground mining methods. • 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.
Mining factors or assumptions	*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.*	• The mineralisation at Kathleen Valley extends from surface and would be suitable for open pit mining. High grade mineralisation is present at depth and would be suitable for underground mining. • The Kathleen Valley Lithium Project is located in a well-established mining region in close proximity 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	*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.*	2019 Pre-feasibility study • A Pre-feasibility level test work program was conducted at ALS in Perth to provide sufficient test data to develop the process design criteria for the Project. A total of 81 samples from across the three main areas (Mt Mann, Kathleen Corner and Kathleen Valley North) were selected for the Pre-feasibility study. A master composite was created for testing from these samples which are representative of the whole deposit and include a range of grades and depths. No variability test work has been undertaken at this time. • Key aspects of the metallurgical test work included the following: ○ head assay ○ SMC testing on five comminution samples ○ size by size assay ○ crushing and wet screening at three sizes ○ heavy liquid separation (HLS) at three crush and screen sizes ○ Dense media separation (DMS) of a bulk sample ○ bond ball work index on DMS middling's ○ magnetic separation to remove ferrous materials ○ rougher flotation to examine collector choice, residence time, desliming and conditioning ○ cleaner flotation to examine residence time and number of stages ○ thickening of flotation and slime tailings (in progress) ○ filtration of concentrate ○ rheology of tailings. • Key results from the test work indicated that: ○ Samples were moderately competent with comminution results similar to other pegmatites. ○ Size by size and wet screening data indicated that there

Criteria	JORC Code explanation	Commentary
		was a trade off in crush size and screen size with liberation. A finer crush size increased liberation in the HLS stage but increased fines production. A crush size of 6 mm was selected. ○ DMS testing showed a saleable concentrate with a grade of more than 6% Li2O could be produced together with a low-grade coarse tail. ○ Grind optimisation of the flotation feed indicated a primary grind of 125 microns gave the best recovery and was selected for subsequent test work. ○ Rougher flotation test work indicated that a modified oleic acid collector gave the best flotation performance. ○ Batch cleaner flotation results indicated a concentrate with a grade of more than 6% Li2O could be produced together. ○ Concentrate filtration test work, currently being finalised, has indicated that vacuum filtration will be adequate for dewatering. ○ Rheology test work indicated the tailings had low viscosity at the proposed tailings density. • The metallurgical process consisted of three-stage comminution including high-pressure grinding rolls (HPGR), Dense Medium Separation (DMS) followed by flotation. • The feed composite used in the PFS test work consisted of diamond drill core and was compiled based on the mine plan for the study. The feed composite was deliberately diluted/blended with 10% iron-rich gabbro which hosts the mineralised pegmatites. • The PFS test work did not include any iron removal ahead of DMS separation and only low intensity magnetic separation or iron removal ahead of flotation. A combined concentrate with a grade of 6.1% Li2O containing 1.42% Fe2O3 was produced from the PFS composite sample. **2020 Metallurgical Testwork** The 2019 testwork program was focused on developing preliminary design data for a flowsheet incorporating Dense Media Separation (DMS) of a coarse feed followed by flotation of the DMS middling's and fines. Several areas were further investigated post the PFS program in 2020 and included: • The impact of change in lithium head grade on overall recovery. • Further investigation of Whole Ore Float (WOF) • Investigation of tantalum recovery by magnetic separation and gravity upgrade to produce a tantalum by-product. The 2020 program investigated these areas as part of the 2020 pre-feasibility study. The source of the grade variation samples were the intercepts remaining from the original drill program in 2019. The drill hole intercepts were sorted by lithium grade (based on geological assays) and grouped into the following grade targets: 1.0%, 1.1% 1.2%, 1.3%, 1.4%, 1.7% 2.0%. WOF was tested on all the grade samples. The same flotation regime was used as tested in the PFS at a grind size P80 of 125 µm. The DMS-Flotation route was tested for all the grade samples under the same conditions as for the 2019 PFS.

Criteria	JORC Code explanation	Commentary
		Outcomes:- ➢ Higher grade material for both processing options has a higher recovery which supports the strategy of targeting high grade zones using underground mining and optimised open-pit shells; ➢ WOF has the potential to produce a higher grade SC6.0 and improved performance with a greater degree of control; Following the outcomes of the testwork a decision was made to base the 2020 PFS on a WOF flowsheet per ASX release dated 9th June 2020 An Investigation of tantalum recovery by magnetic separation and gravity upgrade to produce a tantalum by-product was undertaken. A sample of PFS composite was used for the testwork as it provided a control against other treatment routes already tested. The sample was ground to a P80 passing size of 125 µm like all the flotation feed samples. The ground sample was then treated through a laboratory WHIMS separator followed by gravity separation. Following the gravity concentration of the primary magnetic separation magnetics, the remaining tails was subjected to sequential magnetic separation. Outcomes:- ➢ Using stage recoveries, the overall Ta_2O_5 reporting to concentrate has been estimated as 56% to a grade of 15.3% based on test work. A mineralogical review indicates potential to produce a 25-30% Ta2O5 concentrate at an offsite upgrade facility; and ➢ Magnetic and gravity separation used to recover tantalum also reduces iron levels in the potential flotation feed by up to 55%. As both the WOF and Ta_2O_5 flowsheets have considerable scope for further optimisation, this will form part of the DFS upgrade test work program to be completed in 2021. Testwork remains ongoing as part of the DFS
Environmental factors or assumptions	*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.*	• Baseline flora and fauna studies have been completed and it is considered unlikely, given current knowledge that impacts on conservation significant flora, fauna and ecological communities will result from development of the Project. • Further baseline studies are scheduled during the DFS
Bulk density	*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.*	• Bulk density was measured for 3,873 core samples (including 3,083 samples of pegmatite) from diamond holes using Archimedes measurements. • The density data overall ranges from 1.74 to 4.38 t/m^3 and the density data within the pegmatites has a range of 1.74 to 4.14 t/m^3. Outliers have been screened out of average SG applied to resource model by Optiro. • A bulk density of 2.71 t/m^3 was applied to the pegmatite with spodumene mineralisation within the oxidised horizons and a value of 2.74 t/m^3 was applied to the fresh pegmatite

Criteria	JORC Code explanation	Commentary
		with spodumene mineralisation for tonnage estimation. • A lower density, of 2.51 t/m³, was applied for areas of fresh pegmatite that was interpreted to contain petalite mineralisation. • For the pegmatite material that is external to the lithium mineralisation, a density of 2.64 t/m³ was applied within the oxidised horizons and 2.66 t/m³ was applied to the fresh pegmatite. • Most (99.5%) of the mineralised pegmatite is within the fresh material.
Classification	*The basis for the classification of the Mineral Resources into varying confidence categories.*	• Mineral Resources have been classified as Measured, Indicated or Inferred. • In general, the pegmatites that have been tested by the 50 m by 50 m spaced drillholes have high confidence in the geological interpretation and, having higher estimation quality, were classified as Measured. • Areas where the drill spacing is up to 60 m by 100 m that have good confidence in the geological interpretation and where the majority of block grades were estimated within the first search (but where the estimation quality is lower than the Measured areas) were classified as Indicated. • Areas where the drill spacing is up to 60 m by 100 m, that have good confidence in the geological interpretation and where the majority of block grades were estimated in the second and third search passes or in areas of grade extrapolation have been classified as Inferred.
	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).	• 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_2O and Ta_2O_5 content (from the kriging metrics).
	Whether the result appropriately reflects the Competent Person's view of the deposit	• The assigned classification of Measured, Indicated and Inferred reflects the Competent Person's assessment of the accuracy and confidence levels in the Mineral Resource estimate.
Audits or reviews	*The results of any audits or reviews of Mineral Resource estimates.*	• 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	*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.*	• The assigned classification of Measured, Indicated and Inferred reflects the Competent Person's assessment of the accuracy and confidence levels in the Mineral Resource estimate.
	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.	• The confidence levels reflect potential production tonnages on a quarterly basis, assuming open pit mining.
	These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	• No production has occurred from the deposit.

Section 4 -Estimation and Reporting of Ore

Criteria	JORC Code explanation	Commentary – Open PIt	Commentary - Underground
Mineral Resource estimate for conversion to Ore Reserves	• *Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.* • *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*	The mineral Resource Estimate used as a basis for the conversion to the Ore Reserve was provided on the 11th May 2020 with Christine Standing, employee of Optiro, as the Competent Person. The total Mineral Resource of 156Mt at 1.4% Li_2O includes: - • 20 Mt of Measured at 1.3% Li_2O and 140ppm Ta_2O_5, • 105 Mt of Indicated at 1.4% Li_2O and 130ppm Ta_2O_5 and; • 32 Mt of Inferred at 1.3% Li_2O and 110ppm Ta_2O_5. The Mineral Resources are reported inclusive of the Ore Reserve.	As for Open Pit.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	The Open Pit Competent Person, Mr Jake Fitzsimons, visited the proposed Project site on 28th September 2019. The following observations were made: • The site is accessed directly from the Goldfields Highway. • The site is dominated by Mt Mann which rises approximately 50 m above the surrounding terrain, and Jones Creek dry watercourse which passes through the northern half of the mining area flowing from east to west. • Existing access between the North and South deposits is across Jones Creek via a 10 m wide concrete ford with opportunity to widen to 12-15 m without disturbing any trees. • Pegmatite outcrop exists across the site. • Drilling core examined on site was hard and very competent in both the gabbro hanging wall rock and pegmatite ore zones.	The underground Competent Person, Mr Ben Wilson has not visited the site, based on the visit by Mr Jake Fitzsimons detailed above who is a coworker at Orelogy. The data collected on the site visit by Mr O'Bryan & Mr Fitzsimons has been shared with Mr Wilson. Peter O'Bryan of Peter O'Bryan and Associates, visited the site on 28th September 2019.
Study status	• *The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.* • *The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore*	An initial pre-feasibility study was completed in 2019 and was updated in 2020, based on the provision of an updated Mineral Resource in May 2020. The 2020 PFS forms the basis of most of the assumptions for reporting an Ore Reserve. The 2020 PFS report was compiled by Lycopodium on behalf of Liontown with input from: - • Optiro (geology)	The 2020 PFS forms the basis of the assumptions for reporting an Ore Reserve.

Criteria	JORC Code explanation	Commentary – Open PIt	Commentary - Underground
	Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.	• Orelogy Consulting (mine planning) • Lycopodium (metallurgical testwork, process design and non-process infrastructure) • MBS Environmental (environmental) • Knight Piesold (tailings storage, hydrology and hydrogeology) • Liontown (financial analysis) Orelogy undertook the mining component of this PFS, and in the course of the study, produced optimisations, designs, schedules and a cost model. Modifying factors considered in the open pit mine planning process included mining dilution and ore loss, slope design criteria and practical mining considerations. The activities and findings of all other disciplines are summarized in the 2020 PFS document, including details of other modifying factors such as processing recoveries, costs, revenue factors, environmental and heritage considerations, etc. Overall, the result of the open pit and underground mine plans demonstrate that the Kathleen Valley Lithium Project is technically achievable and economically viable at the forecast spodumene price.	Modifying factors considered in the underground mine planning process included mining method selection, minimum mining width, mining dilution and ore loss, geotechnical stope stability criteria, pillar and filling requirements, and practical mining considerations, for example, materials handling, ventilation and dewatering.
Cut-off parameters	• *The basis of the cut-off grade(s) or quality parameters applied.*	The Ore Reserves are reported at a 0.7 - 0.75% Li_2O cut-off grade depending on the timing with 0.75% used in the early open pit mining phase and 0.7% used for the final open pit phase. This cut-off is above the theoretical economic cut-off of 0.35% Li_2O and has been adopted as the grade tonnage curve shows very little material below this grade.	The Ore Reserves are reported as material contained within stope designs done at cut off grades of 1.2 & 1.5% Li_2O cut-off grade based on flat or vertical zones within the deposit. This cut-off has been adopted in the context of the prevailing market conditions and surrounding open pit Ore Reserve. The cut-off is above the theoretical underground economic cut-off of 0.95% Li_2O as the grade tonnage curve shows very little material below this grade. A development cut-off grade of 0.8% Li_2O has been used. This cut-off grade represents the grade at which additional haulage

Criteria	JORC Code explanation	Commentary – Open PIt	Commentary - Underground
			and treatment costs are exceeded by the value of the ore recovered during processing.
Mining factors or assumptions	• *The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).* • *The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.* • *The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.* • *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).* • *The mining dilution factors used.* • *The mining recovery factors used.* • *Any minimum mining widths used.* • *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.*	The open pit and underground Ore Reserves are underpinned by a mine plans that deliver pegmatites for processing on site to produce SC6.0 for export via the Geraldton port. The mine planning activities included open pit and underground optimisation, final and interim stage designs, mine scheduling and cost estimation. The mine plans indicated that the combined Ore Reserve derived from the Mineral Resource Estimate can easily meet the processing feed requirements for the 2.0 Mtpa production target with a mine life of approximately 40 years. A conventional open pit mining method using excavators and rigid dump trucks was selected as the preferred mining method. Experienced mining contractors will undertake all aspects of the mining operation. Supervision, grade control and planning will be undertaken by an Owner's team. All material will be blasted. Bulk waste will be blasted on 12 m benches and the ore zones will be blasted on 6 m benches and mined in two or three flitches for greater selectivity (depending on the point in the mine schedule) with ore delivered to blend fingers on the ROM pad. Open pit geotechnical guidance was provided by Peter O'Bryan and Assoc. with an allowance for ramps on the footwall and geotechnical berms on the hanging walls. Oxidation is shallow from 5-20 m in depth with slope angles of ~50° on the hanging wall and ~37 ° on the footwall. Overall slope angles in fresh material were ~57 ° on the hanging wall and ~45 ° on the footwall. As the Kathleen Valley orebody dips at substantially less than wall angle constraints, the pit shells are optimally shallower than these angles to the south-west.	As for Open Pit. Detailed mine designs were undertaken in the Deswik.CAD mining software package, incorporating all available geotechnical and practical considerations. The Kathleen Valley gabbros and spodumene-bearing pegmatites are massive, and rock mass quality is consistently very good, allowing the consideration of mass mining methods in the steeper and wider orebodies. Underground operations are expected to be carried out in essentially dry ground. The deepest mining planned is at ~440m below surface. The underground mining area consists of two main mining areas, the Mt Mann steeply dipping ore domains, located underneath and to the south-west of the open pit, and the North-West Lodes, flat dipping overlaid lodes ("the Flats"), located to the north-west of the open pit. Due to the significant variation in dip and orebody width across the mining areas, three different mining methods have been selected. The steeply dipping Mt Mann orebodies will be mined by transverse retreat open stoping, with Cemented Paste Backfill (CPB). In the North-West Lodes area, where the orebody width is greater than 10m, longitudinal retreat open stoping with CPB will be employed. In narrower areas of the North-West Lodes, Room and Pillar Mining, without filling, will be employed. Within these mining methods, several different variations will be employed, in order to meet geotechnical stability guidelines while maximising productivity. These variations are summarised in the table below:

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<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary – Open PIt</th><th>Commentary - Underground</th></tr>
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- *The infrastructure requirements of the selected mining methods.*

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An allowance for Grade Control drilling was made based on a dedicated RC drilling program at 24 m vertical intervals.

The May 2020 Datamine Mineral Resource model (kv_or_apr2020.dm) was used as a basis for the conversion to an Ore Reserve.

To establish mineable quantities, a number of open pit optimisations were completed on the Resource model after applying ore loss and dilution to the edges of the mineralisation. The base case optimisations considered Measured and Indicated materials only, excluded the Jones Creek watercourse and applied pricing, recoveries and other modifying factors. All other optimizations include Measured, Indicated and Inferred after it was shown that the Inferred material had no impact on shell size.

The shell selection was based on the business objectives of maximising the discounted cash flow whilst providing sufficient mine life.

Options investigated evolved as both Underground and open pit options were simultaneously progressed, with the approach by *Orelogy* as follows:-

- Development of an optimised open pit schedule at a 0.75% Li_2O Cut-off grade for Stages 1 and 2 for the early mining phase and 0.7% Li_2O Cut-off grade for the final three stages. The open pit schedule was manipulated by delaying stages or stretching over longer time periods.
- Assessment of flat and vertical Underground ore bodies separately at cut off grades of 0.95%, 1.2% and 1.5% Li_2O respectively and sequenced Underground ore in conjunction with the open pit schedule to maximise project returns

Schedules from Underground and open pit were combined to produce an optimised overall project mine plan

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<table>
<tr><th>Mining Area</th><th>Orebody Dip</th><th>Mining Method</th><th>Orebody Width</th><th>Stope Length x Width</th><th>Stope Height</th><th>Pillar Dimensio</th></tr>
<tr><td rowspan="4">Mt Mann</td><td rowspan="4">Steep to moderately steep</td><td rowspan="4">Transverse Retreat Open Stoping</td><td><25m</td><td>30m x 30m</td><td>Single lift 30m</td><td rowspan="5">Stopes to filled to av requireme for pillar</td></tr>
<tr><td><25m</td><td>30m x 30m</td><td>Single lift 30m</td></tr>
<tr><td>>25m</td><td>30m x 45m</td><td>Double lift 60m</td></tr>
<tr><td>>25m</td><td>30m x 45m</td><td>Double lift 60m</td></tr>
<tr><td rowspan="3">North-West Lodes</td><td rowspan="3">Shallow</td><td>Longitudinal Retreat Open Stoping</td><td>10m-30m</td><td>20m x 25m</td><td>10m - 30m</td></tr>
<tr><td rowspan="2">Room and Pillar</td><td>5m-7m</td><td>20m x 25m</td><td>7m</td><td>5m x 6.25</td></tr>
<tr><td>7m-10m</td><td>20m x 25m</td><td>10m</td><td>6m x 7m</td></tr>
</table>

These mining methods are considered appropriate, as they provide a good balance of economic recovery of the resource, cost minimisation, and safety.

The Mt Mann mining sequence is bottom up within each stoping panel, generally four stopes high. The overall sequence is top down. Stopes will be mined in a primary-secondary sequence. The lower 15m of the bottom stope of each panel will be filled with a higher strength CPB (8% rather than the standard 4%), to maintain geotechnical stability when the lower panel is mined underneath. Stopes will be mined from footwall to hangingwall, to avoid undercutting previously filled CPB stopes. Where practicable, in the secondary stopes, rock filling has been utilized to minimize waste haulage to surface.

In the North-West Lodes, the mining sequence for the open stopes is similarly bottom up, with CPB used to maintain geotechnical stability. The Room and Pillar stopes will also be mined bottom up, but will not be filled.

The use of fill in the open stopes avoids the need for pillars between stopes to maintain stope stability. Given the width of the orebody, appropriately sized pillars would significantly reduce the extraction percentage, and hence the economic viability of the orebodies. Stopes are sequenced to manage the open voids underground and maintain geotechnical stability.

Access to the mine, for personnel, equipment and ore haulage, will be via a main surface portal to the south-west of the pit, and an in-pit portal, as the pit progresses.

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Criteria	JORC Code explanation	Commentary – Open PIt	Commentary - Underground
		For the open pit, the model was diluted in a two-step process: • Regularisation to a SMU size of 5 m x 5 m x 2 m for the material within the 0.6 revenue factor shell for phase 1 mining • Regularisation to a SMU size of 5m x 5m x 3m for the material outside the 0.6 revenue factor shell for phase 2 mining. • Secondary edge dilution was applied to the edges of the ore zones to account for the steeply dipping Mt Mann mineralisation. The resulting mining model reported: • 2.6% dilution and 6% ore loss for the 2 m flitch height in Stage 1 and Stage 2 at 0.75% Li_2O cut-off grade. • 3.2% dilution and 6% ore loss for the 3 m flitch height in the other 3 stages at 0.7% cut-off grade. No additional mining recovery factors were applied. The final pit and stages were designed with 40 m minimum mining width between cutbacks and 25 m at the base of the pit. Only Measured and Indicated material were used in reporting of Ore Reserves. Inferred material was treated as waste in the Stage 1 and 2 pits. The LOM schedule included a total of 840kt of Inferred material with the later pit stages.	Open stope designs were based upon a design Hydraulic Radius of 10.0m, derived using empirical methods by Peter O'Bryan, of Peter O'Bryan and Associates. Sub-level intervals and hence stope heights were selected to maintain stable hydraulic radii, balanced with what would be achievable by production drilling with an acceptable level of accuracy. Room and pillar designs were also derived using empirical methods by Peter O'Bryan, of Peter O'Bryan and Associates. Two different pillar sizes were recommended based on orebody width, as detailed in the previous table. Mining dilution has been modelled with design dilution, CPB dilution and development dilution. Design dilution: During the generation of stope shapes, a dilution skin of 0.5m was added to the footwall and hanging-wall of all stopes. This was applied geometrically. CPB dilution: Mining of secondary stopes underneath and next to CPB will likely result in some dilution of ore. This has been estimated at 0.3m from the walls of the stope and 0.5m from the back. This volume of paste was added to the stope tonnage on a per-stope basis at zero grade (pure dilution). Development dilution: similarly, where part of an ore development heading protrudes beyond the orebody contact, the ore grade of the volume mine is lowered accordingly. No additional tonnage allowance for overbreak has been made. Indicative ring designs were undertaken for representative stopes from each mine area, and the three dilution factors estimated based on the geometry of the design. The capacity of the paste plant is limited by the volume of tailings produced by the processing plant. Mining has been scheduled to ensure the maximum filling capacity of 584,000m^3 per year is not exceeded. Mining recoveries of 95% were applied to all open stopes, and 90% for all room and pillar stopes, to account for ore within the stope shape that could not be extracted. This occurs primarily due to geometry issues of boggers navigating around

Criteria	JORC Code explanation	Commentary – Open PIt	Commentary - Underground
			90-degree corners and being unable to fully reclaim all blasted ground. Due to the requirement to leave behind ore pillars in the Room and Pillar stopes, mining recovery is further reduced from operational mining recovery, to 84% for the 5m-7m wide stopes, and 82% for the 7m-10m wide stopes. Mining recoveries of 100% were applied to all development, with the expectation that development headings could be bogged clean. The minimum mining width used depended on the mining area and method. These widths are shown in the Mining Method table above. However, the absolute minimum mining width for the project is 5 m, which comprises a 4 m orebody width and 0.5 m of dilution in both hanging-wall and footwall. Inferred material was optimised, designed and scheduled. Stopes have been classified on a dominant resource category basis, where the dominant resource category for the stope is reported as the resource category for the entire stope. Proven and Probable Reserve categories have an average of 3% Inferred material and 2% waste material that is included in the stope shapes. This is judged reasonable dilution of the Ore Reserve. Stopes that have a dominant resource category of Inferred are not reported as part of the Ore Reserves, and similarly have an average of 5% Indicated Resources and 5% waste material contained within the Inferred stope shapes. The base case schedule for the PFS includes Inferred material as well and Measured and Indicated material. However, this Inferred material has been scheduled as much as possible at the end of the underground mine life, and as such does not have a material effect on the technical and economic viability of the project. The majority of the Inferred material has been included in the base case schedule on the basis that it is contiguous with the surrounding Indicated mineralisation, and forms part of the overall extraction sequence for that area of the deposit.
		External infrastructure requirements for the project are minimised due to the project's location in the Goldfields area of Western Australia. The Goldfields highway and 132 kV TransAlta overhead electrical power line are located within 1 km of the site. A borehole has been proposed for water supply, and typical site facilities such as camp accommodation and facilities, sewerage plant, processing plant, maintenance facilities, and tailings storage will be	As for Open Pit.

Criteria	JORC Code explanation	Commentary – Open Pit	Commentary - Underground
		required. The underground access portal will be constructed in a box-cut adjacent to the plant ROM pad. Other surface facilities will include a paste fill plant, power/water reticulation, ventilation fans to support underground mining activities, a ROM pad, haul roads, areas for Contractor built/supplied workshops and other Contractor facilities. Lithium concentrate can be transported via the Goldfields Highway to the Port of Geraldton, for shipment overseas.	
Metallurgical factors or assumptions	• *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.* • *Whether the metallurgical process is well-tested technology or novel in nature.* • *The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.* • *Any assumptions or allowances made for deleterious elements.* • *The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole. For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?* *Environmental*	Two distinct phases of testwork were conducted for the Kathleen Valley Project in both 2019 and 2020. The Initial work resulted in the development of a DMS-Flotation flowsheet which was revised in June 2020 to a Whole Ore Flotation flowsheet. In 2019 a total of 81 intercepts from across the three main areas (Mount Mann, Kathleen Corner and North) were selected for the pre-feasibility study. These samples include a spatial spread, grade range and depth. A master composite was created for testing. A grade- recovery relationship was defined from testwork utilizing a WOF flowsheet. During 2020 further work was undertaken in order: • To develop and test a WOF flowsheet; • To establish grade-recovery curves for both DMS and WOF flowsheets at a range of composite grades to enable direct comparisons between each; and • Test and develop of preliminary flowsheets to support the extraction of tantalum. Following the outcomes of the testwork a decision was made to base the 2020 PFS on a WOF flowsheet per ASX release dated 9th June 2020 The process has been tested at pre-feasibility level in the laboratory and further work is ongoing.	As for Open Pit.

Criteria	JORC Code explanation	Commentary – Open PIt	Commentary - Underground
	• *The status of studies of potential environmental impacts*	Refer to main body of announcement and JORC table Section3. Geochemical characterisation of waste rock has been completed with representative samples (70 fresh rock, 24 oxide and transitional waste and 4 low grade ore samples) assessed for potential for saline, neutral or acid and metalliferous drainage (AMD) as well as other general geochemical properties. Several minor pockets of potentially acid forming (PAF) material was identified to be present in the dolerite gabbro and contact zone waste rock materials of the Mt Mann mine area. Provided parcels of PAF material originating from the dolerite gabbro and contact zone mine wastes are managed appropriately, there is a low risk of fresh waste rock adversely impacting groundwater and surface water quality via seepage or run-off from rainfall. Characterisation of tailings generated by metallurgical test work has been completed. Samples were assessed for potential of saline, neutral or acid and metalliferous drainage (AMD) as well as other general geochemical and some physical properties. Results indicate tailings are unlikely to pose risk to the environment and as such do not require specialized storage facilities	
Infrastructure	• *The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.*	The Project is well served by existing infrastructure with the Goldfields Highway which runs adjacent to the Project. There is a 132 kV powerline (5 km to the West) and the goldfields gas pipeline (11 km to the East) to provide mains power or a site-based power station. The process plant and waste stockpiles can be constructed on existing mining licenses. Preliminary modelling and site-based pumping trials provides confidence that sufficient available bore water of good	As for Open Pit.

Criteria	JORC Code explanation	Commentary – Open Pit	Commentary - Underground
		quality is available from within the Liontown tenements and regional sources. A desktop study confirms that the concentrate can be trucked on sealed roads from site to the port of Geraldton where an environmental license would be required to export the SC6.0 – due to the benign nature of the product, approval is unlikely to be withheld. The study assumes a camp will be constructed on a exploration license that is subject currently to conversion to a mining license application. The current tenements and labour supply is not considered unusual due to its location within driving distance of Kalgoorlie and the region is serviced by regular charter flights to Mt Keith and Leinster from Perth.	
Costs	• *The derivation of, or assumptions made, regarding projected capital costs in the study.* • *The methodology used to estimate operating costs.* • *Allowances made for the content of deleterious elements.* • *The source of exchange rates used in the study.* • *Derivation of transportation charges.* • *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.* • *The allowances made for royalties payable, both Government and private*	The capital cost estimate has been based on a mechanical equipment list with budget pricing for major equipment together with recent database rates for bulks such as concrete and steel. Electrical and earthworks were estimated separately. Operating cost estimates were based on budget quotes for consumables and a benchmarked salary schedule. Other costs have been supplied by Liontown and from Lycopodium database. A sequential magnetic separation and gravity circuit has been included in the process flowsheet to concentrate tantalum and also remove iron which is considered deleterious in the final concentrate. Forecast exchange rates for USD: AUD were sourced from a third party providing long term forecasts with a range of 0.65 to 0.80 (excluding outliers). Liontown has assumed 0.72 as its life of mine exchange rate.	As for Open Pit.

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		Haulage and ship loading costs were provided by an established haulage company that currently provides stevedoring services at the port of Geraldton. Port costs were obtained from the Port of Geraldton. Estimated shipping costs were used to determine CIF costs to potential off-takers. The following government royalties and private royalties have been included in the financial analysis as detailed below: • WA state Royalty - 5% gross sales • Third Party private royalties - 3% gross sales and A$0.50/t ore mined and milled for material sourced from within Mining leases M36/460 & M36/459 No third party royalties apply for ore sourced from exploration license E36/879 (Mining license application M36/696).	
Revenue factors	• *The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.* • *The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.*	Spodumene pricing was based on forecast estimates provided by Roskill as discussed in the main body of this announcement. Roskill has provided annual forecast pricing through to 2040 on a real, US$/dmt CIF China basis for "Arm's Length". Arm's Length prices are where no related party relationship exists between the mining company and the customer. At this stage, future production from Kathleen Valley remains 100% uncommitted in order to maintain maximum flexibility and independence over funding and development options. For the purposes of the PFS, it has been assumed that Liontown will sell 100% of its production on arm's length terms to unrelated parties on a yearly basis. The Roskill forecast pricing results in an average price of US$769/dmt CIF China for the period 2025 - 2040 (noting that while the PFS extends beyond Roskill's 2040 forecasts,	As for Open Pit.

Criteria	JORC Code explanation	Commentary – Open Pit	Commentary - Underground
		Liontown has assumed it reasonable to use the 2040 price of CIF US$825/t as the basis from 2041 - 2064). Liontown has adjusted Roskill's CIF China prices to an FOB Geraldton price by deducting US$30 per tonne to reflect the estimated costs of shipping to China from Australia as the ultimate destination of SC6.0 produced from the Kathleen Valley Project is not known at this stage. Other revenue factors were: • An exchange rate of 0.72 USD/AUD • In country transport and port charges of A$65/wmt conc. • Export shipping costs of A$41.67/wmt conc (US$30/dmt) • State royalty of 5% and private royalties of 3% gross sales and a A$0.50 per tonne mined and milled for material sourced from within Mining leases M36/460 & M36/459 • No third party royalties apply for ore sourced from exploration license E36/879 (Mining license application M36/696) Liontown has again utilised the services of Roskill for its price forecast assumptions for tantalum concentrate (30 Non-Class 7 Specification) as applied in the PFS. Roskill has provided a forecast price through to 2040 on a real, US$/lb CIF China basis for "Arm's Length" pricing. Like SC6.0, at this stage future tantalum concentrate production from Kathleen Valley remains 100% uncommitted in order to maintain maximum flexibility over funding and development options. For the purposes of the PFS, it has been assumed that Liontown will sell 100% of its production on arm's length terms to unrelated parties on a yearly basis. Roskill provided an average price of US$70/lb CIF China for 2025 to 2040. Liontown has adjusted Roskill's CIF China prices to an FOB Fremantle price by deducting US$0.1 per	

Criteria	JORC Code explanation	Commentary – Open PIt	Commentary - Underground
		pound to reflect the estimated costs of shipping to China from Australia as the ultimate destination of tantalum concentrate produced from the Kathleen Valley Project is not known at this stage. This results in an average price of US$69.9/lb FOB Fremantle. Noting that while the PFS extends beyond Roskill's 2040 forecasts, Liontown has assumed it reasonable to use the 2040 price of CIF US$65/lb as the basis from 2041 to 2064. Other Tantalum revenue factors were: • An exchange rate of 0.72 USD/AUD • In country transport charges of A$194/dmt conc. • Shipping costs of US$0.1/lb conc. • State royalty of 5% and private royalties of 3% gross sales and a A$0.50 per tonne mined and milled for material sourced from with Mining leases M36/460 & M36/459. • No third-party royalties apply for ore sourced from exploration license E36/879 (Mining license application M36/696) No penalties for contaminants were assumed or considered applicable for either Spodumene or Tantalum products.	
Market assessment	• *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.* • *A customer and competitor analysis along with the identification of likely market windows for the product.* • *Price and volume forecasts and the basis for these forecasts.* • *For industrial minerals the customer specification,*	Demand for lithium is forecast to increase significantly over the next decade driven using lithium ion batteries in automotive applications. Whilst there is a current oversupply of SC6.0 largely because of new mine capacity in Australia, it is expected that reduction in mine output from mines in Australia in 2021-2023 may initiate a phase of rebalancing. With continued strong demand and consumption growth, a supply deficit is expected to occur in the mid-2020's. Tantalum is used in high performance capacitors, superalloys and other applications consumed widely in aerospace, military and consumer electronics.	As for Open Pit.

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	testing and acceptance requirements prior to a supply contract.	Tantalum is a critical material for high performance applications, but global production is relatively small and limited to a few key regions and producers. With ongoing electrification of homes and vehicles, tantalum should play an increasingly important role from ensuring safety in autonomous vehicles to maintaining performance in the next generation of electrical devices and communications technology. While capacitors will remain the largest application (accounting for around 36% of the 2.4kt Ta of estimated demand in 2019), the largest growth will come from chemical applications and tantalum mill products. Supply-side disruptions have traditionally had the biggest impact on concentrate price trends in recent years, including the introduction of the Dodd-Frank Act in 2010, the fire at AMG's Brazilian Mibra operation in 2017, and more recently, variance in Australian by-product supply. A customer and competitor analysis was not undertaken however market windows for the product have been considered with pricing forecasts also provided by Roskill.	
Economic	• *The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.* • *NPV ranges and sensitivity to variations in the significant assumptions and inputs*	An 8% real discount rate (using industry standard assumptions in calculating a WACC) has been utilised to determine the NPV for the Kathleen Valley Project. A range of sensitivities to significant assumptions and inputs has been provided in the body of this announcement including spodumene prices, exchange rates, metallurgical recoveries, lithium grade, capex and opex.	As for Open Pit.
Social	• *The status of agreements with key stakeholders and matters leading to social licence to operate.*	The Tjiwarl People are Traditional Owners of the area that actively overlays the Project. The Project area is largely located on granted mining leases and Liontown has signed a Heritage Agreement with the Tjiwarl People relating to exploration activities.	As for Open Pit.

Criteria	JORC Code explanation	Commentary – Open PIt	Commentary - Underground
		Liontown has signed a Negotiation Protocol with the Tjiwarl People in respect to completing a mining agreement for the Project. Discussions are currently ongoing in terms of negotiating a project specific *Mining Cooperation Agreement* for the Project with the Tjiwarl.	
Other	• *To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:* • *Any identified material naturally occurring risks.* • *The status of material legal agreements and marketing arrangements.* • *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.*	There are no obvious or likely naturally occurring risks that have been identified or which may negatively impact the Project or Project area. Liontown is a 100% owner of the deposit and has not entered into any arrangements regarding future off take arrangements. All statutory government agreements permits and approvals commensurate to the status of the Project are current and in good order. A mining license application has been submitted on the 16/6/20 to convert part of exploration tenement E36/879 (mining lease application # M36/696) on which a portion of the underground reserve and likely solar farm plus accommodation camp will be sited. Timeframes for Agreements relevant to the 2020 PFS were handled appropriately and have not put the Project at risk. Agreement timeframes in respect to the Project will be handled with similar accord so as not to put the future studies and Project development at risk also.	As for Open Pit.
Classification	• *The basis for the classification of the Ore Reserves into varying confidence categories.* • *Whether the result appropriately reflects the*	Proved Ore Reserves were determined from Measured Resource material and Probable Ore Reserves were determined from Indicated Resource material as per the guidelines.	Proved Ore Reserves were determined from Measured Resource material and Probable Ore Reserves were determined from Indicated Resource material as per the guidelines. Small percentages of Inferred material (3% on average) and waste material (2% on average) were included in dominantly classified

Criteria	JORC Code explanation	Commentary – Open PIt	Commentary - Underground
	Competent Person's view of the deposit. • *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	These results reflect the Competent Person/s view of the deposit. Probable Ore was derived from Indicated material only.	Proved and Probable stope shapes. Dominantly classified Inferred stope shapes were not included in Ore Reserves. These results reflect the Competent Person/s view of the deposit. Probable Ore was derived from Indicated material only, not Measured material.
Audits or reviews	• *The results of any audits or reviews of Ore Reserve estimates.*	The Ore Reserve estimate has been peer reviewed internally by Orelogy Consulting Pty Ltd.	As for Open Pit.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.* • *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.* • *Accuracy and confidence discussions should extend to*	The Mineral Resource, and hence the associated Ore Reserve, relate to global estimates. The Ore Reserve estimate is an outcome of the 2020 Mining Pre-Feasibility Study with geological, mining, metallurgical, processing, engineering, marketing and financial considerations to allow for the cost of finance and tax. Engineering and cost estimations have been completed to a +/-25% level of accuracy, consistent with a study of this nature. Liontown's financial model estimated a post-tax $NPV_{8\%}$ of approx. **A$1.12B, and IRR of 37%,** which demonstrates that the Project is economic at forecast prices. Sensitivity analysis undertaken during the open pit and underground optimisation demonstrates that: • Overall open pit size is insensitive to costs or slope changes and mildly sensitive to price and recovery. • Open pit ore tonnes recoverable are moderately sensitive to dilution, ore loss and recovery and slightly sensitive to costs or slope angles. • Discounted cash flow for the Project is highly sensitive to parameters that directly affect revenue (i.e. commodity prices, recovery and exchange rate) and far less so to other parameters. The low sensitivity to cost variations provide reasonable confidence in the Ore Reserve estimate. However, there is no	As for Open Pit. The Ore Reserve estimate is an outcome of the 2020 Mining Pre-Feasibility Study with geological, mining, metallurgical, processing, engineering, marketing and financial considerations to allow for the cost of finance and tax. Engineering and cost estimations have been completed to a +/-25% level of accuracy, consistent with a study of this nature. Liontown's financial model estimated a post-tax $NPV_{8\%}$ of approx. **A$1.12B, and IRR of 37%,** which demonstrates that the Project is economic at forecast prices. Sensitivity analysis undertaken during the underground optimisation demonstrates that the chosen inventory is: • is relatively insensitive to costs or dilution changes and mildly sensitive to price and recovery. • Discounted cash flow for the Project is highly sensitive to parameters that directly affect revenue (i.e. commodity prices, recovery and exchange rate) and far less so to other parameters. The low sensitivity to cost variations provide reasonable confidence in the Ore Reserve estimate. However, there is no guarantee that the price assumption, while reasonable, will be achieved.

Criteria	JORC Code explanation	Commentary – Open PIt	Commentary - Underground
	specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage. • *It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	guarantee that the price assumption, while reasonable, will be achieved.	