Liontown

ASX ANNOUNCEMENT

ASX : LTR 8th November 2019

Liontown announces maiden Mineral Resource Estimate for its 100%-owned Buldania Lithium Project, WA

Anna pegmatite confirmed as significant new, West Australian lithium discovery, providing a solid foundation for further exploration in an emerging lithium district

HIGHLIGHTS

- **Maiden Indicated and Inferred Mineral Resource Estimate (MRE) completed for Liontown's 100%-owned Buldania Lithium Project in WA:**
  - **14.9Mt @ 0.97% Li_2O and 44ppm Ta_2O_5 (see Table 1 for cut-offs applied)**
  - **Containing 144,530t of Li_2O or 372,889t of lithium carbonate equivalent (LCE).**
- **60% of the Mineral Resource classified as Indicated.**
- **The lithium mineralisation is hosted by spodumene-bearing pegmatites and is fresh from surface.**
- **The Mineral Resource remains open both along strike and at depth.**
- **Significant potential for further lithium discoveries within Liontown's large land position, which is largely unexplored for lithium outside of the Anna pegmatite.**
- **The Mineral Resource is located in an established, well-serviced mining district, close to existing transport, power and camp infrastructure.**
- **The completion of a maiden MRE for Buldania complements Liontown's flagship Kathleen Valley Lithium-Tantalum Project where recent drilling has confirmed the potential to significantly expand the current MRE of 74.9Mt @ 1.3% Li_2O and 140ppm Ta_2O_5 and where a Pre-Feasibility Study is due to be completed by year-end.**

Liontown Resources Limited (ASX: LTR – "Liontown" or "the Company") is pleased to advise that it has taken a further step towards its objective of developing a portfolio of high-quality Australian lithium assets with the announcement of a maiden Mineral Resource Estimate (MRE) for its 100%-owned **Buldania Lithium Project**, located in Western Australia's Eastern Goldfields, 600km east of Perth and 200km south of Kalgoorlie (**Figure 1**).

The Indicated and Inferred Mineral Resource, which was prepared by independent specialist resource and mining consulting group Optiro Pty Ltd ("Optiro"), comprises **14.9Mt @ 0.97% Li_2O and 44ppm Ta_2O_5** and is set out in **Table 1** below:

Table 1: Anna Deposit, Buldania Project – Mineral Resource as at October 2019

Resource category	Million tonnes	Li_2O %	Ta_2O_5 ppm
Indicated	9.1	0.98	45
Inferred	5.9	0.95	42
Total	**14.9**	**0.97**	**44**

Notes:
- *Reported above a Li_2O cut-off grade of 0.5%*
- *Tonnages and grades have been rounded to reflect the relative uncertainty of the estimate*

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

Liontown Managing Director David Richards said the maiden Mineral Resource confirmed Buldania as a significant new greenfields lithium-tantalum discovery with substantial growth potential.

"The resource remains open and offers significant growth potential within an emerging district that is almost completely unexplored for lithium mineralisation," he said. *"The maiden resource for the Anna pegmatite sets a strategic foundation for future exploration in this highly prospective region whilst also complementing our flagship, high-quality resource at Kathleen Valley.*

"Our focus remains at Kathleen Valley, where a major resource expansion drill program is continuing in parallel with a Pre-Feasibility Study due for completion by the end of this year."

Buldania Overview

The Buldania Project is located at the southern end of the Norseman-Wiluna Greenstone Belt within the Archaean Yilgarn Craton, close to the boundary with the Proterozoic Albany-Fraser Province. The lithium mineralisation at the Buldania Project is within spodumene-bearing LCT (lithium-caesium-tantalum) type pegmatites which, at Anna, are hosted by a sequence of komatiite, high-Mg basalt, dolerite and carbonaceous shale.

Eight mineralised pegmatites have been identified at Anna.

Mineral Resource

A number of drilling programs have been undertaken at Anna since early 2018 and the drilling database used to define the lithium mineralisation comprises 133 Reverse Circulation drill holes for a total of 21,218m and 9,383 assays, and three diamond drill holes for a total of 548.5m and 435 assays. The drill section spacing ranges from 50m to 100m and the on-section hole spacing is generally 40m to 80m.

The resource model for the Anna deposit was constructed using a parent block size of 15mE by 15mN on 1.0m benches and the parent blocks were allowed to sub-cell down to 2.5mE by 2.5mN by 0.5mRL to more accurately represent the geometries and volumes of the mineralised pegmatites. Lithium oxide (Li_2O) % and tantalum pentoxide (Ta_2O_5) ppm block grades were estimated using ordinary kriging techniques, with appropriate top-cuts applied to the Ta_2O_5 sample data. A bulk density of 2.70 t/m^3 was applied for tonnage estimation.

The Mineral Resource has been classified on the basis of confidence in the geological and grade continuity and by taking into account the quality of the sampling and assay data, data density and confidence in the estimation of Li_2O and Ta_2O_5 content (from the kriging metrics). In general, the mineralised pegmatites that are within the north-western area of the Anna deposit, that have been

tested by the 40m by 50m spaced drill holes and have good confidence in the geological interpretation, have higher estimation quality and were classified as Indicated.

Two additional areas in the south-east that have been tested by the 40m by 100m spaced drill holes, have good confidence in the geological interpretation and have higher estimation quality were also classified as Indicated. Areas with poorer estimation quality and where the drill spacing is up to 80m by 100m have been classified as Inferred.

Three mineralised pegmatites (the top pegmatite and the two lowermost pegmatites) which have been estimated from limited data (<100 samples) have been classified as Inferred.

The Mineral Resource has been classified in accordance with the guidelines of the JORC Code (2012) and has been reported above a cut-off grade of 0.5% Li_2O (**Table 2**). A cut-off grade of 0.5% Li_2O has also been chosen to represent the portion of the resource that may be considered for eventual economic extraction by open pit mining. This cut-off grade was selected by Liontown in consultation with Optiro, is based on current experience and is commensurate with cut-off grades applied for the reporting of open pittable lithium Mineral Resources hosted in LCT pegmatites elsewhere in Australia.

Table 2: Buldania Project, Anna Deposit – Mineral Resource reported by Li_2O% cut-off grades

Cut-off Li_2O%	Million tonnes	Li_2O%	Ta_2O_5 ppm
0.3	15.3	0.95	44
0.4	15.3	0.95	44
0.5	14.9	0.97	44
0.6	13.9	1.00	44
0.7	12.1	1.04	44
0.8	10.1	1.09	44
0.9	7.9	1.16	44
1.0	6.0	1.22	42

The mineralisation at the Anna deposit is such that open pit mining methods can be appropriately considered. The deposit is located in a well-established mining region and sits in close proximity to major road and rail infrastructure, with direct links to the Port of Esperance.

Summary of JORC 2012 Table 1

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

Geology and Mineralisation Interpretation

At the Anna deposit eight mineralised pegmatites (**Figure 2**) have been identified that are sub-horizontal in the northwest (dips of 0° to -10°) and which steepen in the southeast (dips of up to -65° to the west and to the east). The mineralised pegmatites have been drilled over an area of 1,300 m by 380 m and to a depth of 300 m. The individual mineralised pegmatites are up to 35 m thick and have an average thickness of 4m to 9m and a combined average thickness of 26 m.

The lithium-mineralised zones of the pegmatites have been defined from geological logging and above a nominal cut-off grade of 0.4% Li_2O. Additional Ta_2O_5 mineralisation is present in the pegmatites and is external to the mineralisation defined by the Li_2O.

Drilling Techniques

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

Sampling Techniques

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

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

Sampling Analyses

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

Mineral Resource Classification

The Mineral Resource has been classified on the basis of confidence in geological and grade continuity and by 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).

In general, the mineralised pegmatites within the north-western area of the Anna deposit that have been tested by the 40m by 50m spaced drill holes, have good confidence in the geological interpretation and have higher estimation quality were classified as Indicated. Two additional areas in the southeast that have been tested by the 40 m by 100 m spaced drill holes, which have good confidence in the geological interpretation and have higher estimation quality were also classified as Indicated

Areas with poorer estimation quality and where the drill spacing is up to 80m by 100m have been classified as Inferred. Three mineralised pegmatites (the top pegmatite and the two lowermost pegmatites) which have been estimated from limited data (<100 samples) have been classified as Inferred.

Estimation Methodology

Block grades for Li_2O% and Ta_2O_5 ppm were estimated using ordinary kriging (OK) with an appropriate top-cuts applied. Variogram analyses were undertaken to determine the grade continuity and the kriging estimation parameters used for the OK.

Cut-off Grades

A cut-off grade of 0.5% Li_2O has been selected to represent the portion of the resource that may be considered for eventual economic extraction by open pit mining methods. The cut-off grade was selected by Liontown and is commensurate with cut-off grades applied for reporting of lithium Mineral Resources hosted in spodumene-rich pegmatites elsewhere in Australia.

Mining Factors

The mineralisation at Anna extends from surface, is largely shallowly dipping and would be suitable for open-pit mining.

Metallurgical Factors

Preliminary metallurgical test work has been completed on approximately 300kg of mineralised sample collected from the three diamond holes drilled into the north-western, outcropping part of the Anna pegmatite. The test work was completed at Nagrom Laboratory and supervised by Lycopodium Minerals Pty Ltd.

Comminution testing showed moderate competency, SAG-specific energy and abrasion index typical of spodumene-bearing pegmatites. Dense media and flotation test work on shallower samples showed a combined concentrate grade of 6% Li_2O, at an estimated recovery of 60%.

DAVID RICHARDS
Managing Director

For More Information:

David Richards
Managing Director
T: +61 8 9322 7431

Investor Relations:

Nicholas Read
Read Corporate
T: +61 8 9388 1474

The information in this report which relates to Mineral Resources for the Anna deposit is based upon and fairly represents information compiled by Mrs Christine Standing who is a Member of the Australian Institute of Geoscientists and a Member of the Australasian Institute of Mining and Metallurgy. Mrs Standing is an employee of Optiro Pty Ltd and has sufficient experience relevant to the style of mineralisation, the type of deposit under consideration and to the activity undertaken to qualify as a Competent Person as defined in the 2012 edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mrs Standing consents to the inclusion in the report of a summary based upon her information in the form and context in which it appears.

The Information in this report that relates to metallurgical test work for the Anna deposit is extracted from then ASX announcement "Liontown on track for maiden Resource at Buldania following receipt of further high-grade lithium assays" released on the 17th September 2019 which is available on www.ltresources.com.au.

The Information in this report that relates to Mineral Resources for the Kathleen Valley Project is extracted from the ASX announcement "Kathleen Valley Lithium Resource jumps 353% to 74.9Mt @ 1.3% Li_2O" released on the 9th July 2019 which is available on www.ltresources.com.au.

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

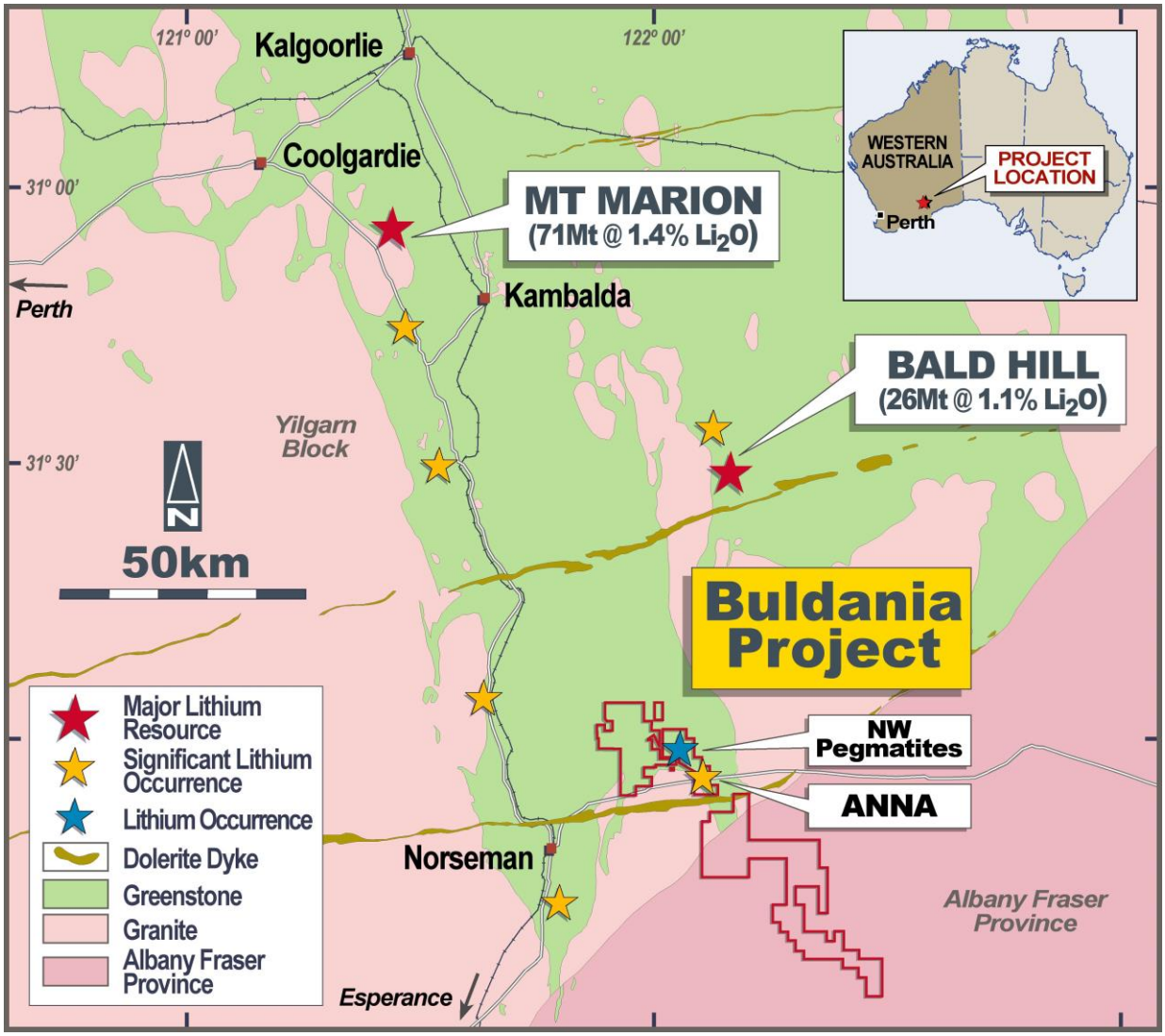

Figure 1: Buldania Project – Location and regional geology.

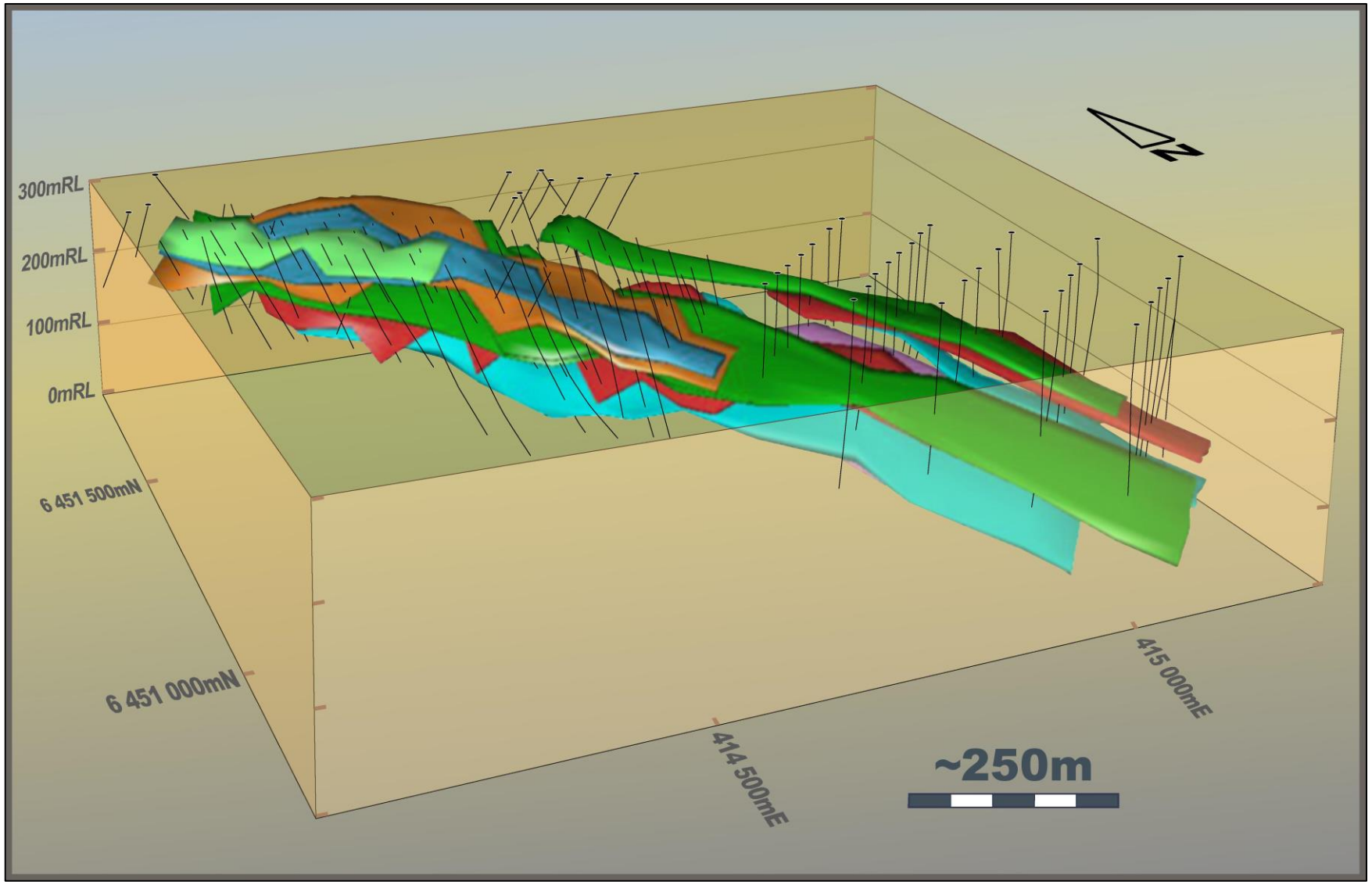

Figure 2: Anna Deposit – 3D view (looking northeast) of drill holes and mineralised pegmatites

Buldania – JORC Code 2012 Table 1 Criteria (5th November 2019)

The table below summaries the assessment and reporting criteria used for the Anna deposit, Buldania 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 in rare occasions 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 residual 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. • HQ diamond core has been sampled in intervals of ~ 1 m (up to 1.12 m) where possible, otherwise intervals less than 1 m have been selected based on geological boundaries. Geological boundaries have not been crossed by sample intervals.
Drilling techniques	*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 comprise: • Reverse Circulation (RC/5.5") with a face sampling hammer. • HQ core was drilled directly from surface for all holes. Core orientation was provided by an ACT REFLEX (ACT II RD) tool.
Drill sample recovery	*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 green mining 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 preferential loss/gain of fine/coarse material.	• It has been demonstrated that no relationship exists between sample recovery and grade. No grade bias was observed with sample size variation.
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),

Criteria	JORC Code explanation	Commentary
		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 has been retained and the second quarter will be used for metallurgical studies. • Density measurements have been taken on all quarter core samples using the Archimedes method.
	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 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 few issues with contamination (or sample mix-ups) and a good level of accuracy.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	• Sample size is considered appropriate for the stage of exploration
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.*	• Assaying (2018 and 2019) completed by Nagrom (primary laboratories) and ALS (Umpire laboratory) Perth. • Nagrom uses 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,	• None used.

Criteria	JORC Code explanation	Commentary
	reading times, calibrations factors applied and their derivation, etc.	
	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.	• Three diamond holes are twins of 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 is entered directly into Microsoft Excel spreadsheets onsite while drilling is ongoing. Data is then entered into Access Database and validated before being processed by industry standard software packages such as MapInfo and Micromine. • Representative chip samples are collected for later reference.
	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 drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.*	• All drillholes and geochemical samples are initially located using a handheld GPS and subsequently surveyed with DGPS. • All RC drillholes have been surveyed by a multi-shot digital downhole camera provided by the drilling contractor. • All diamond drillholes have been surveyed with a REFLEX EZI-SHOT (1001) magnetic single shot camera.
	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 and GPS. • Drillhole collars are surveyed post drilling with DGPS.
Data spacing and distribution	*Data spacing for reporting of Exploration Results.*	• Drill spacing varies due to initial drill programmes largely being designed to test the down-dip potential of mineralised outcrops. The drill section spacing is 50 m to 100 m and on-section hole spacing is generally 40 m to 5 0m.
	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	• Drilling orientation generally intersects the mineralisation at appropriate angles so as to be

Criteria	JORC Code explanation	Commentary
	considered to have introduced a sampling bias, this should be assessed and reported if material.	mostly unbiased and suitable 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 the 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. • The 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.*	• None completed

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 Buldania Project (which includes the Anna deposit and the Conda prospect) is located ~600 km east of Perth and 30 to 40 km ENE of Norseman in Western Australia. The Project area totals ~67 km^2 and comprises one granted exploration licence (EL63/856), one granted prospecting licence (PL63/1977) and one granted mining lease (M63/647) – the "Tenements". • The Tenements are held by Avoca Resources Pty Ltd which is a wholly owned subsidiary of RNC Minerals. RNC acquired Avoca from Westgold Resources Limited in 2019. • Liontown Resources Limited through its wholly owned subsidiary, LRL (Aust) Pty Ltd, acquired the lithium and related metal rights for the Buldania Project in 2017. • Avoca retains the rights to all other metals (excluding lithium and related metals) and has priority access for exploration. • The Tenements are covered by the Ngadju Determined Native Title Claim (WCD2014/004). Avoca has an Access Agreement with the Ngadju which will apply to Liontown's exploration activities.
	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.
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	• Multiple phases of exploration completed for gold and nickel. This has not been reviewed in detail due to Liontown only having the rights to lithium and related metals. • There has no previous exploration for lithium and related metals; however, past explorers have mapped large pegmatite bodies and recorded spodumene mineralisation in a number of places.
Geology	*Deposit type, geological setting and style of mineralisation.*	• The Buldania Project contains a series of quartz-feldspar-muscovite-spodumene pegmatites largely hosted in mafic rocks. The Project is located at the southern end of the Norseman- Wiluna Belt within the Archaean Yilgarn Craton close to the boundary

Criteria	JORC Code explanation	Commentary
		with the Proterozoic Albany-Fraser Province. • 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.*	• Diagrams in the report show the location of and distribution of drillholes in relation to the Mineral 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.*	• Not relevant – Exploration results are not being reported; a Mineral Resource has been defined.
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').*	• Not relevant – Exploration results are not being reported; a Mineral Resource has been defined.
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 drill hole collar locations and appropriate sectional views.*	• Not relevant – Exploration results are not being reported; a Mineral Resource has been defined.
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.*	• Not relevant – Exploration results are not being reported; a Mineral Resource has been defined.
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).*	• Project review to determine next steps.

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 programmes. • Mrs Standing (Optiro) has not visited the site. Mrs Standing has inspected the drill core from the Anna deposit.

Criteria	JORC Code explanation	Commentary
Geological interpretation	*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.
	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.*	• Eight mineralised pegmatites have been identified at the Anna deposit which extend from surface to a depth of 300 m. • The mineralised pegmatites have a strike length of 1,300 m and an across strike length of 380 m. The individual mineralised pegmatites are up to 35 m thick and have an average thickness of 4 m to 9 m and the combined mineralised pegmatites have an average thickness of 26 m. • The pegmatites are sub-horizontal in the northwest (dip of 0° to -10°) and steepen in the southeast (dip of up to -65° to the west and to the east).
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. • The along section spacing ranges from 50 m to 100 m and the on-section spacing ranges from 50 m to 100 m. • A maximum extrapolation distance of 70 m was applied along strike and 50 m across strike. • Over 95% of the assay data within the mineralised pegmatites is from samples of 1 m intervals, 5% is from intervals of less than 1 m and there are two samples of with intervals of greater than 1 m 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 analysis to have an along strike range of 118 m and a down-dip range of 68 m. • Ta_2O_5 mineralisation continuity was interpreted from variogram analyses to have an along strike range of 75 m and a down-dip 94 m.

Criteria	JORC Code explanation	Commentary
		• 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 seven times the second search; the second and third searches had reduced sample numbers required for estimation. The majority of Li_2O block grades (almost 77%) were estimated in the first pass, 21% in the second pass and the remaining 2% in the third pass. • The Li_2O and Ta_2O_5 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 by Liontown 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.	• Within each of the domains Li_2O has a low coefficient of variation (CV) and Ta_2O_5 has a low to moderate CV. One Ta_2O_5 grade was capped (top-cut). 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.	• Mineral Resources have not previously been reported for this deposit area and no production has occurred.
	The assumptions made regarding recovery of by-products.	• No assumptions have been applied for the recovery of by-products.
	Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).	• Deleterious elements were not considered for the Mineral Resource estimate.
	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 15 mE by 15 mN by 1.0 mRL. • Block dimensions were selected from kriging neighbourhood analysis and reflect the variability of the deposit as defined by the current drill spacing. • Sub-cells to a minimum dimension of 2.5 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.
	The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	• No production has taken place and thus no reconciliation data is available.

Criteria	JORC Code explanation	Commentary
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.*	• The Mineral Resource estimate for the Anna deposit has been reported above a cut-off grade of 0.5 % Li_2O to represent the portion of the resource that may be considered for eventual economic extraction by open pit 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 Anna extends from surface and would be suitable for open pit mining. • The Buldania Lithium Project is located in a well-established mining region and 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.*	• A programme of scoping testwork has been completed on ~300 kg of mineralised sample collected from three diamond core holes drilled in 2018 into the northwestern, outcropping part of the Anna pegmatite. The testwork was completed at Nagrom Laboratory and supervised by Lycopodium Minerals Pty Ltd. • Comminution testing showed moderate competency, SAG specific energy and abrasion index typical of spodumene-bearing pegmatites. • Dense media and flotation testwork on shallower samples showed a combined concentrate grade of 6% Li_2O at an estimated recovery of 60%. • This work was preliminary in nature and further testwork and optimisation of the flowsheet is required once drill core representative of the entire mineralised system is available.
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.*	• No environmental impact assessments have been conducted. It is assumed that any remedial action to limit the environmental impacts of mining and processing will not significantly affect the economic viability of the project.
Bulk density	*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 262 core samples from diamond holes using Archimedes measurements. • The density data from the mineralised pegmatites has a range of 2.55 to 2.83 t/m^3. • A bulk density of 2.70 t/m^3 was assigned for tonnage estimation.
Classification	*The basis for the classification of the Mineral Resources into varying confidence categories.*	• Mineral Resources have been classified as Indicated or Inferred. • In general, the mineralised pegmatites that are within the north-western area of the Anna deposit that have been tested by the 40 m by 50 m spaced drillholes, have good confidence in the geological

Criteria	JORC Code explanation	Commentary
		interpretation and have higher estimation quality were classified as Indicated. Two additional areas in the south-east, that have been tested by the 40 m by 100 m spaced drillholes, have good confidence in the geological interpretation and have higher estimation quality were also classified as Indicated. Areas with poorer estimation quality and where the drill spacing is up to 80 m by 100 m have been classified as Inferred. Three mineralised pegmatites (the top and the two lowermost ones) which are estimated from limited (<100 samples) data 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 Indicated and Inferred reflects the Competent Persons' 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 Indicated and Inferred reflects the Competent Persons' 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.