

October 2018 ASX : LTR



## AN AUSTRALIAN BATTERY METAL OPPORTUNITY

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

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

The Information in this report that relates to the Exploration Results for the Buldania Project is extracted from the ASX announcement entitled "More strong assays confirm significant lithium discovery at Buldania Project in WA" and "Second significant lithium discovery in WA at Buldania" released on the 26<sup>th</sup> March 2018 and 19<sup>th</sup> September 2018 respectively which are available on <u>www.ltresources.com.au</u>.

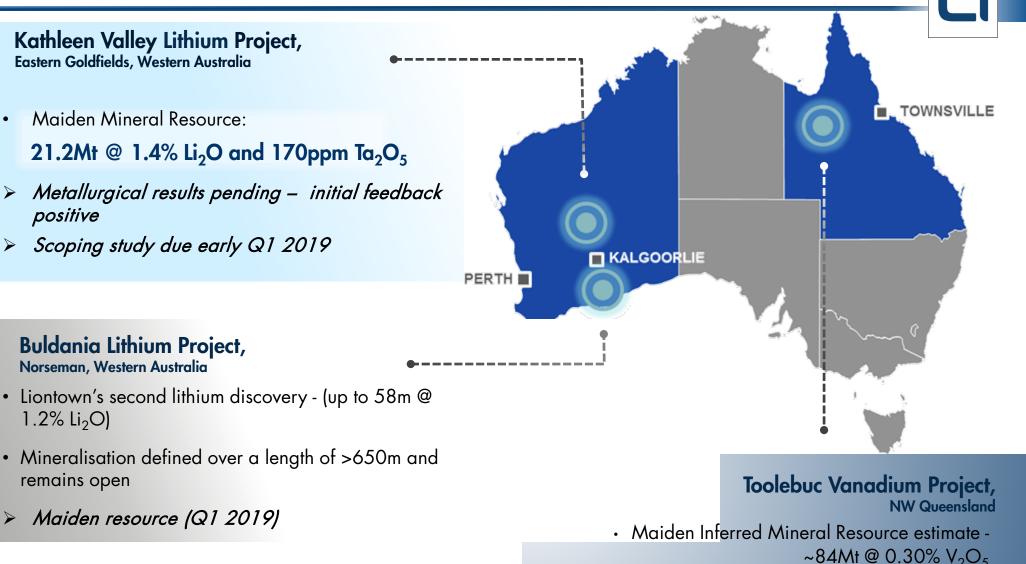
The Information in this report that relates to Exploration Results for the Toolebuc Vanadium Project is extracted from the ASX announcements entitled "Initial fieldwork confirms outstanding potential of Toolebuc Vanadium Project in Queensland" and "Extensive Vanadium Mineralisation Defined – Toolebuc Project" released on the 4<sup>th</sup> and 23<sup>rd</sup> April 2018 which are available on <u>www.ltresources.com.au</u>.

The Information in this report that relates to Mineral Resources for the Toolebuc Vanadium Project is extracted from the ASX announcement "Liontown Announces Maiden 84Mt Vanadium Resource" released on the 30<sup>th</sup> July 2018 which is available on <u>www.ltresources.com.au</u>.

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

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

## PROJECTS – HIGHLIGHTS AND MILESTONES



(All projects are either wholly-owned or Liontown has 100% of the relevant mineral rights)

Excellent exploration potential

Resource definition drilling





## KATHLEEN VALLEY LITHIUM PROJECT

WESTERN AUSTRALIA

## A SIGNIFICANT NEW, HIGH-GRADE LITHIUM DISCOVERY IN A TIER-1 MINING REGION

## >20million tonne Lithium-Tantalum Mineral Resource

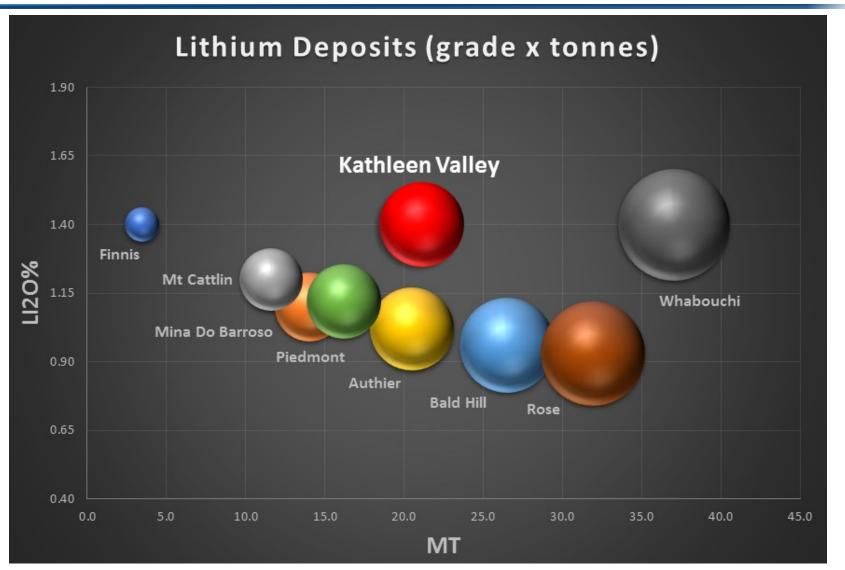
Cut-off (Li <sub>2</sub> O %)	Million Tonnes	Li <sub>2</sub> O %	Ta <sub>2</sub> O <sub>5</sub> ppm
0.3	21.2	1.37	166
0.4	21.2	1.37	166
0.5	21.2	1.37	166
0.6	21.2	1.37	166
0.7	21.0	1.37	166
0.8	20.7	1.38	166
0.9	20.1	1.40	167
1.0	18.9	1.43	167
1.1	17.3	1.46	167
1.2	15.1	1.51	168
1.3	12.3	1.56	170
1.4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

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

#### **READY-TO-GO**

- 75% Measured and Indicated
  - Spodumene
  - Outcropping
  - Granted Mining Leases
  - Excellent transport, energy and camp infrastructure

## COMPARISON OF GRADE AND TONNAGE



\*As at 17 October 2018 (Sourced from company websites)

## OUTCROPPING HIGH GRADE MINERALISATION ON GRANTED MINING LEASES CLOSE TO ESTABLISHED INFRASTRUCTURE

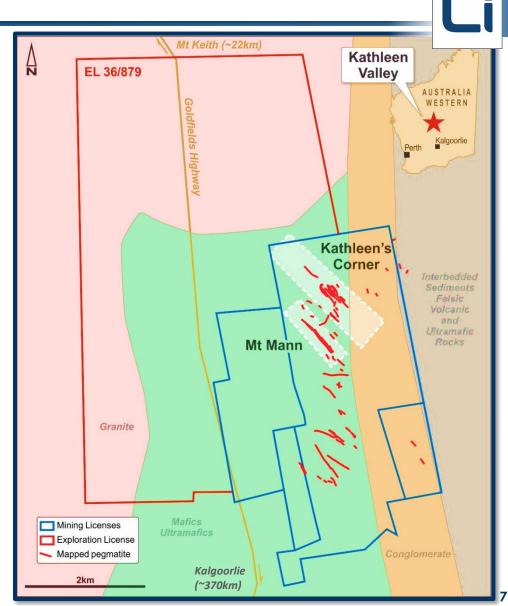
- Two mineralised pegmatite swarms Kathleen's Corner and Mt Mann
- 18 mineralised pegmatites
- Stacked and predominantly shallowly dipping (0-20°)
- Individually up to 20m thick

#### Kathleen's Corner

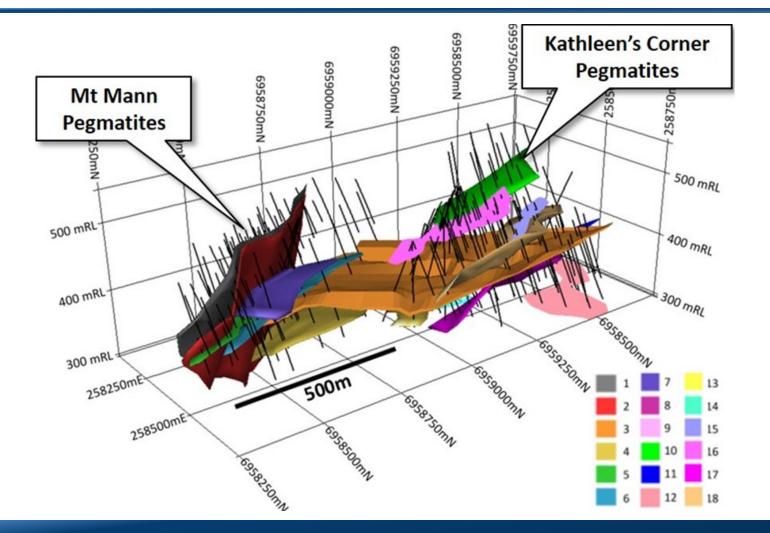
- >1,100m strike length, >800m down dip (~150m vertical)
- Open along strike and at depth

#### Mt Mann

- ~650m strike length, ~150m vertical
- Open at depth



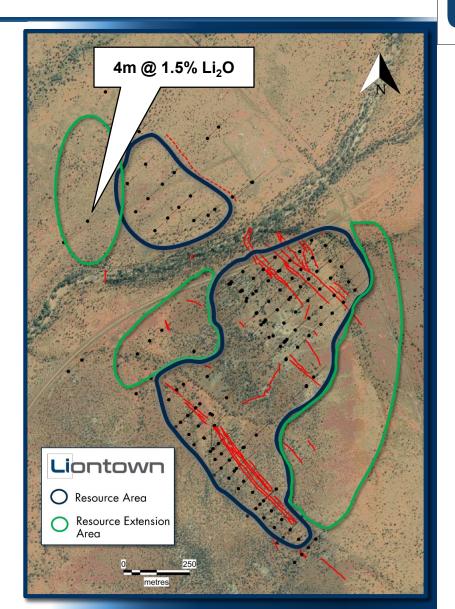
## KATHLEEN VALLEY – A LARGE, LITHIUM MINERALISED SYSTEM



3D views of drill holes and mineralised pegmatites (looking NW)

# RESOURCE REMAINS OPEN ALONG STRIKE AND AT DEPTH – OUTSTANDING POTENTIAL FOR FURTHER GROWTH

- Kathleen's Corner
  - Open along strike and at depth
- Mt Mann
  - Open at depth
- Newly discovered pegmatite intersected by a single drill hole
  - 4m @ 1.5% Li<sub>2</sub>O
- Mineralised system continues northwards under cover
  - No previous drilling







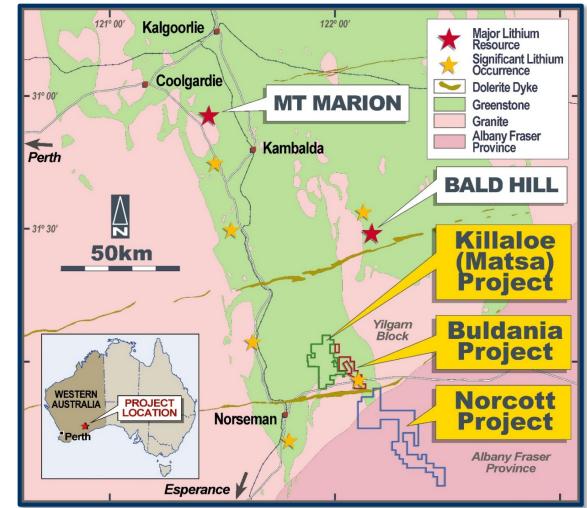
## BULDANIA LITHIUM PROJECT

WESTERN AUSTRALIA

## BULDANIA IS STRATEGICALLY LOCATED IN A LITHIUM-RICH MINERAL PROVINCE

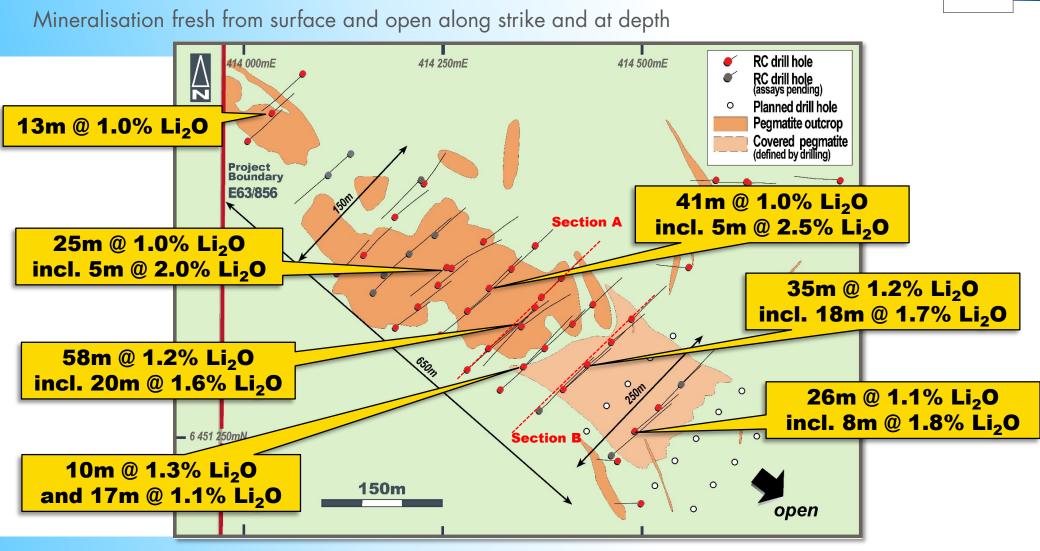
- Outcropping, fresh, spodumene-related mineralisation
- Mineralisation at Anna extended to the SE under shallow cover – strike length >650m and open
- Phase 2 drilling program upgraded to resource drill out and expanded
- Core drilling for preliminary metallurgical test work completed
- Similar geology to the Mt Marion and Bald Hill lithium deposits (78Mt and 19Mt respectively)
- Good infrastructure located on Eyre Highway ~30km east of Kalgoorlie-Esperance railway
- Liontown has 100% of the lithium and related metal rights\*

Significant lithium discovery



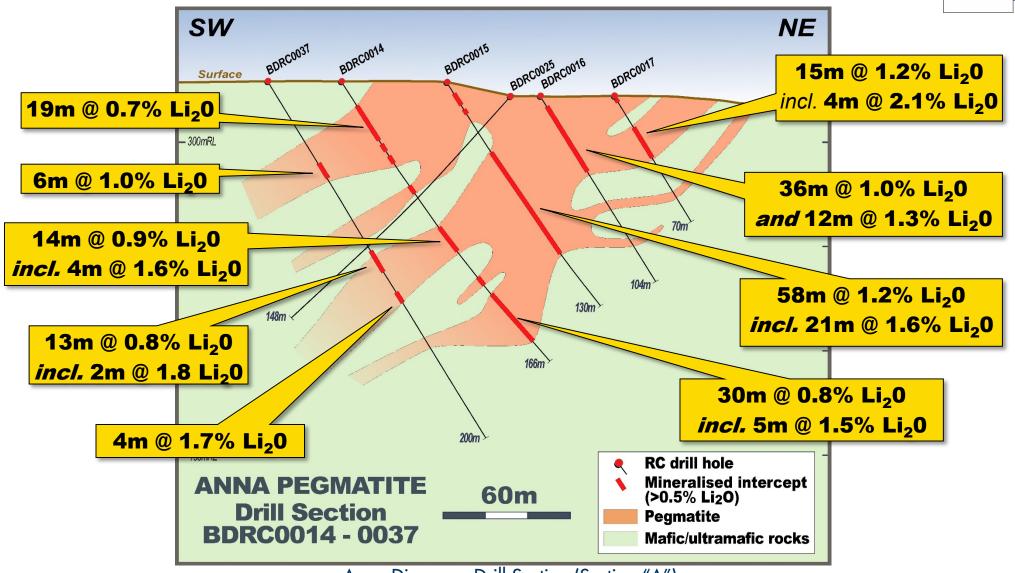
#### Total land position ~600km<sup>2</sup>

## LARGE LITHIUM (SPODUMENE) MINERALISED PEGMATITE INTERSECTED AT THE ANNA PROSPECT



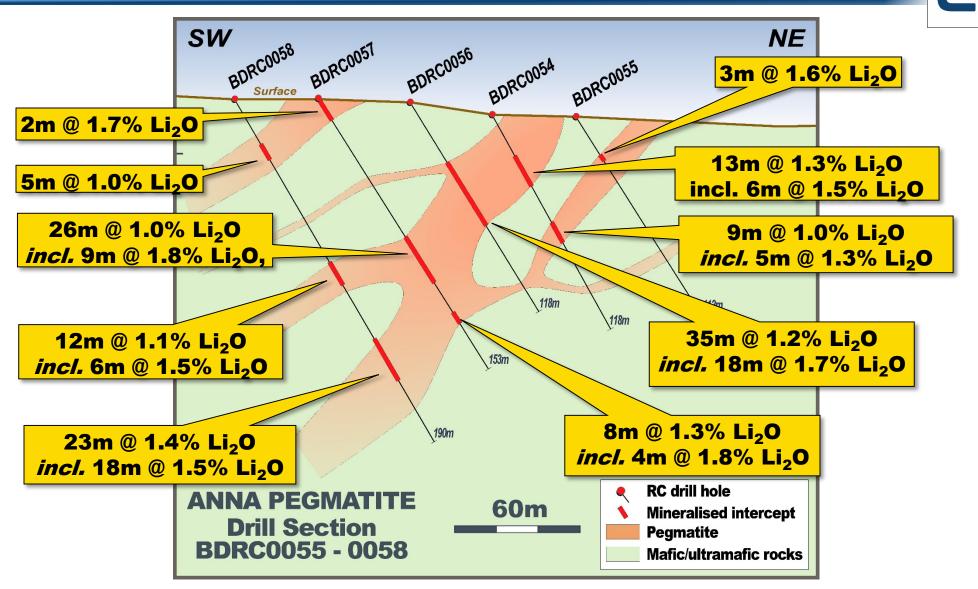
Results from the current program will be combined with those from previous drilling to prepare a maiden Mineral Resource estimate

## INITIAL DRILLING DISCOVERS WIDE ZONES OF LITHIUM MINERALISATION AT THE ANNA PEGMATITE



Anna Discovery Drill Section (Section "A")

## FOLLOW UP DRILLING EXTENDS MINERALISATION AT ANNA TO SOUTH EAST – SYSTEM REMAINS OPEN



## BULDANIA IS PART OF A LARGE (~600km<sup>2</sup>) STRATEGIC LAND POSITION HIGHLY PROSPECTIVE FOR LITHIUM

### NORCOTT PROJECT

- 377km<sup>2</sup> area located 4km to the south and along strike of the Buldania Project
- Up to 1.8% Li<sub>2</sub>O recorded from reconnaissance rock chip sampling
- Further geochemical sampling planned

#### KILLALOE PROJECT

- 163km<sup>2</sup> area located immediately north west and along strike of the Buldania Project
- Covers ~20km strike length of prospective stratigraphy
- No previous drilling or exploration for lithium







## TOOLEBUC VANADIUM PROJECT

QUEENSLAND

#### 650 000mE 700 000mE1 , Caims QUEENSLAND Additional Exploration Target<sup>#</sup> of Mt Isa **Rothbury Resource** 100 –110Mt @ 0.28% to 0.32% V<sub>2</sub>O<sub>5</sub>

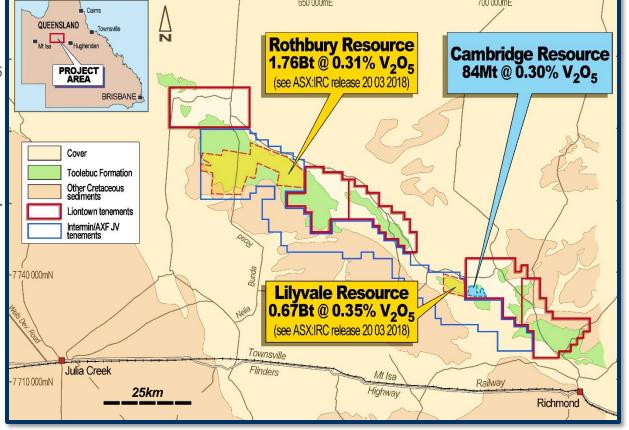
- Low cost exposure to emerging energy-storage metal
- Project adjoins very large vanadium resources defined by adjacent explorer (Intermin Resources)
- Includes large areas of unexplored, outcropping Toolebuc Formation which hosts the known resources
- Excellent infrastructure close to Townsville – Mt Isa transport links
- 100% owned, ~1,000km<sup>2</sup> area



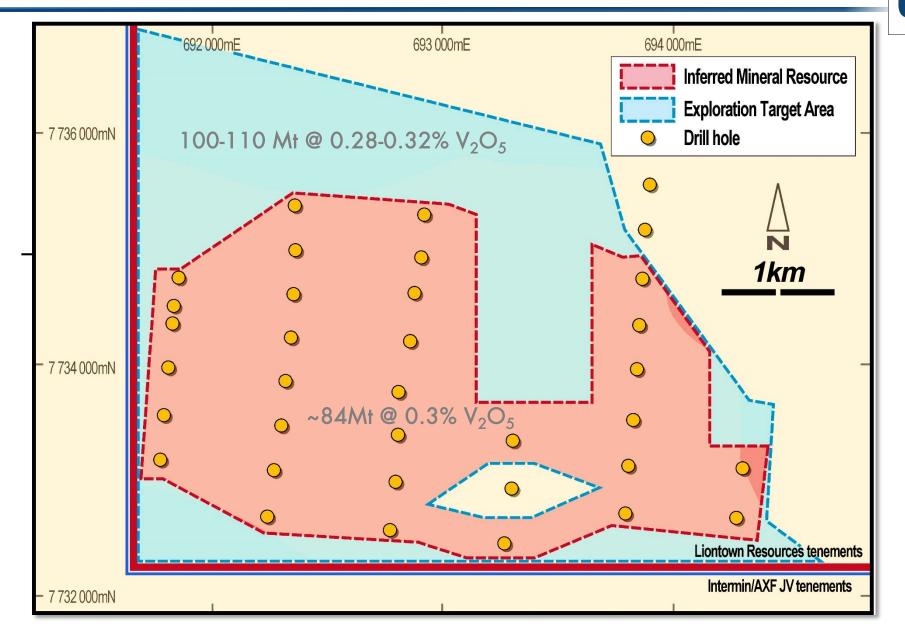
"The potential grade and tonnage of the exploration target referred to above is conceptual in nature and there has been insufficient exploration to estimate a Mineral Resource. It is uncertain if further exploration will result in the estimation of a Mineral Resource. 17

## MAIDEN ~84MT VANADIUM RESOURCE CONFIRMS SIGNIFICANT ADDITION TO BATTERY-METAL PORTFOLIO

Inferred Mineral Resource estimate -  $\sim$ 84Mt @ 0.30% V<sub>2</sub>O<sub>5</sub>

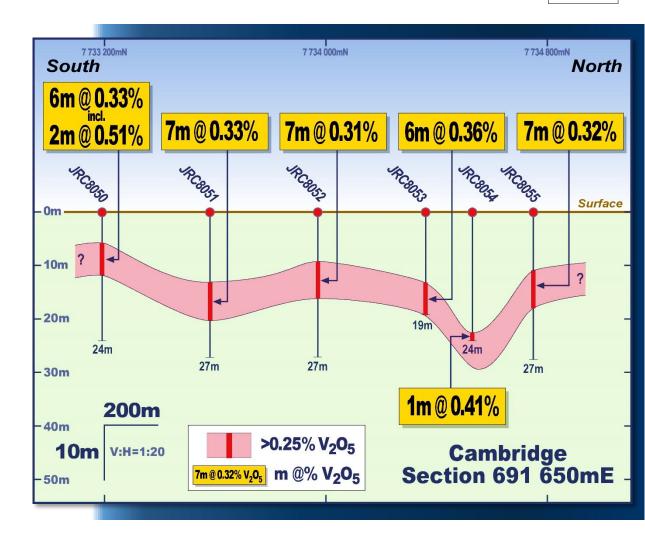


# SIGNIFICANT EXPLORATION UPSIDE ADJACENT TO EXISTING RESOURCE *(AND REGIONALLY)*



## VANADIUM MINERALISATION IS SHALLOW (<20m), SOFT AND CLOSE TO INFRASTRUCTURE

- Located immediately east of the 671Mt Lilyvale Mineral Resource of Intermin Resources' (ASX:IRC)\*
- 5km x 3km mineralised zone, open to the north and east
- Grades and widths similar to Lilyvale Mineral Resource
- Extensional drilling planned for Q3 2018
- Further metallurgical test work planned for Q4 2018



## VANADIUM IS A RELATIVE NEW COMER TO THE BATTERY METALS SPACE IN THE EMERGING LARGE SCALE ENERGY STORAGE INDUSTRY



 300% increase in price since 2017 and tipped to be the 'metal to watch' in 2018<sup>1</sup>

 Use and price underpinned by steel industry (~92% of current usage)

 Emerging Vanadium Flow Battery (VFB) market predicted to put pressure on supply

Commercial VFBs already installed world wide

# GOING FORWARD

#### **Kathleen Valley Project**

- Scoping Study (Q1 2019)
  - ✓ Metallurgy
  - ✓ Hydrology
  - Optimisation/Engineering Studies
  - ✓ Environmental
  - Financial Modelling
- Feasibility Study (Q3 2019)

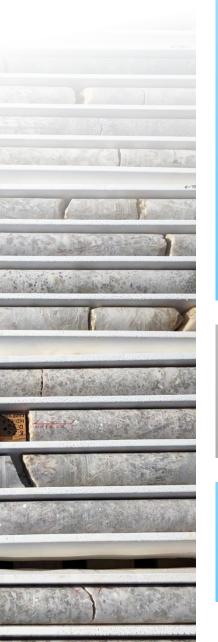
#### **Buldania** Project

- Resource Estimation (Q1 2019)
- Regional Exploration (Q4 2018 onwards)

#### **Toolebuc Project**

- Resource Extension Drilling (Q1 2019)
- Metallurgy (Q2 2019)

ALL PROJECTS ARE EITHER WHOLLY OWNED OR LIONTOWN HAS 100% OF THE RELEVANT MINERAL RIGHTS



## A PROVEN, EXPERIENCED TEAM



#### DAVID RICHARDS Managing Director

Former Senior Geologist - Battle Mountain (discovered multi-million ounce Vera Nancy gold deposits), Regional Exploration Manager – Delta and Managing Director – Glengarry Resources



#### TIM GOYDER Chairman

+40 years experience, Executive Chairman – Chalice Gold Mines, Chairman – DevEx Resources, Non-Executive Director – Strike Energy



CRAIG WILLIAMS Non-Executive Director

+40 years experience, Chairman Orecorp Ltd, co-founder and former CEO – Equinox Minerals



ANTHONY CIPRIANO Non-Executive Director

+30 years experience, former partner at Deloitte, Chartered Accountant

## CORPORATE SNAPSHOT

ASX CODE	LTR
Shares on issue	~1103M
MARKET CAPITALISATION	\$27.8M (AT ~2.6CPS)
MAJOR SHAREHOLDER	TIM GOYDER – 20.3%
TOP 20 SHAREHOLDERS	50.7%
CASH	~\$2.5M









in

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### CONNECT

https://au.linkedin.com/company/liontown-resources-limited



https://twitter.com/LiontownRes