



November 2018 ASX : LTR



## AN AUSTRALIAN BATTERY METAL OPPORTUNITY

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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 [www.ltresources.com.au](http://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 "Maiden 21 million tonne Lithium-Tantalum Mineral Resource sets strong growth foundation for Liontown at Kathleen Valley" released on the 4<sup>th</sup> September 2018 which is available on [www.ltresources.com.au](http://www.ltresources.com.au).

The Information in this report that relates to Metallurgy for the Kathleen Valley Project is extracted from the ASX announcement "Highly encouraging results from initial metallurgical test work at the Kathleen Valley Lithium-Tantalum Project, WA" released on the 12<sup>th</sup> November 2018 which is available on [www.ltresources.com.au](http://www.ltresources.com.au).

The Information in this report that relates to the Exploration Results for the Buldania Project is extracted from the ASX announcements entitled "More strong assays confirm significant lithium discovery at Buldania Project in WA", "Second significant lithium discovery in WA at Buldania", "Outstanding new drilling results continue to expand lithium mineralisation at Buldania", "Liontown further expands prospective lithium footprint at Buldania in WA's South-Eastern Goldfields" and "Latest assays confirm lithium mineralisation over >1.3km strike length at the Buldania Lithium Project in WA" released on the 26<sup>th</sup> March 2018, 19<sup>th</sup> September 2018, 1<sup>st</sup> November 2018, 13<sup>th</sup> November 2018 and 20<sup>th</sup> November 2018 respectively which are available on [www.ltresources.com.au](http://www.ltresources.com.au).

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 [www.ltresources.com.au](http://www.ltresources.com.au).

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 [www.ltresources.com.au](http://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 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



## 1 Kathleen Valley Lithium Project, Eastern Goldfields, Western Australia

- Maiden Mineral Resource:  
21.2Mt @ 1.4% Li<sub>2</sub>O and 170ppm Ta<sub>2</sub>O<sub>5</sub>



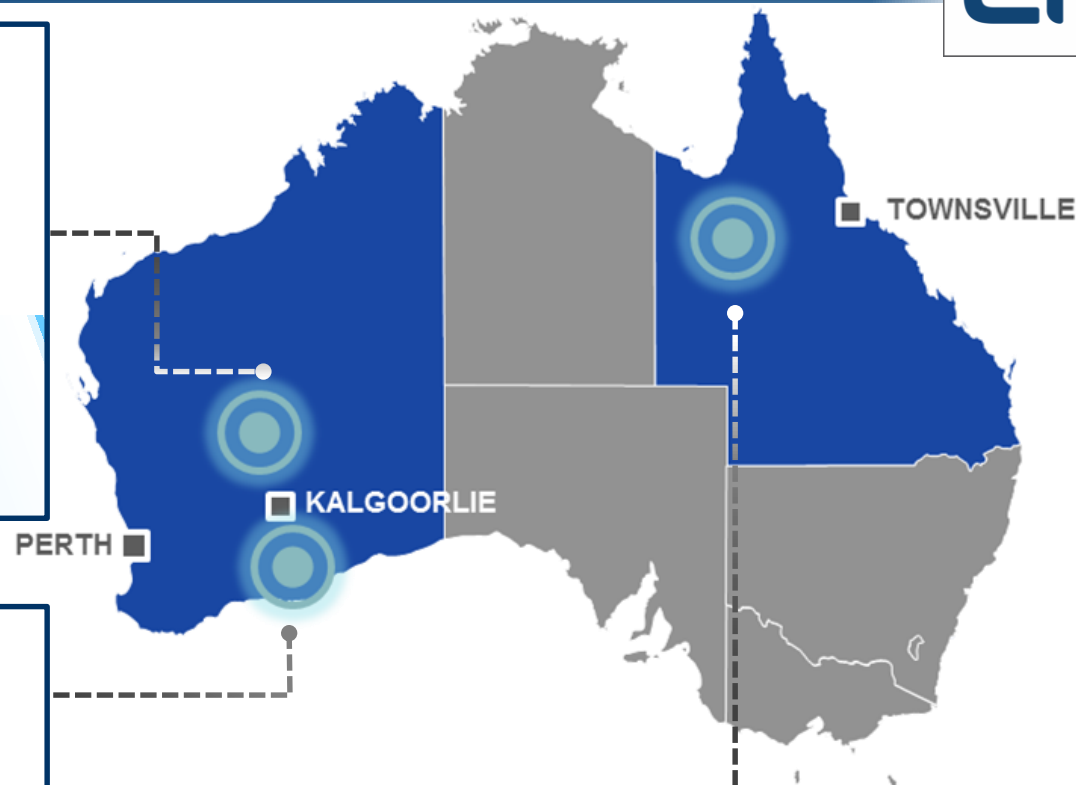
- Metallurgy confirms saleable concentrate and low iron (<0.5% Fe<sub>2</sub>O<sub>3</sub>)
- Scoping study due early Q1 2019

## 2 Buldania Lithium Project, Norseman, Western Australia

- Lontown's second lithium discovery up to:  
up to 58m @ 1.2% Li<sub>2</sub>O in drilling
- Mineralisation confirmed over a length of >1.3km and remains open



- Maiden resource (Q1 2019)



## 3 Toolebuc Vanadium Project, NW Queensland

- Maiden Inferred Mineral Resource estimate:  
~84Mt @ 0.30% V<sub>2</sub>O<sub>5</sub>
- Excellent exploration potential



- Resource extensional drilling Q1 2019

*All projects are either wholly-owned or Lontown has 100% of the relevant mineral rights*





# KATHLEEN VALLEY LITHIUM PROJECT

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WESTERN AUSTRALIA

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



## >21 Million 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

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

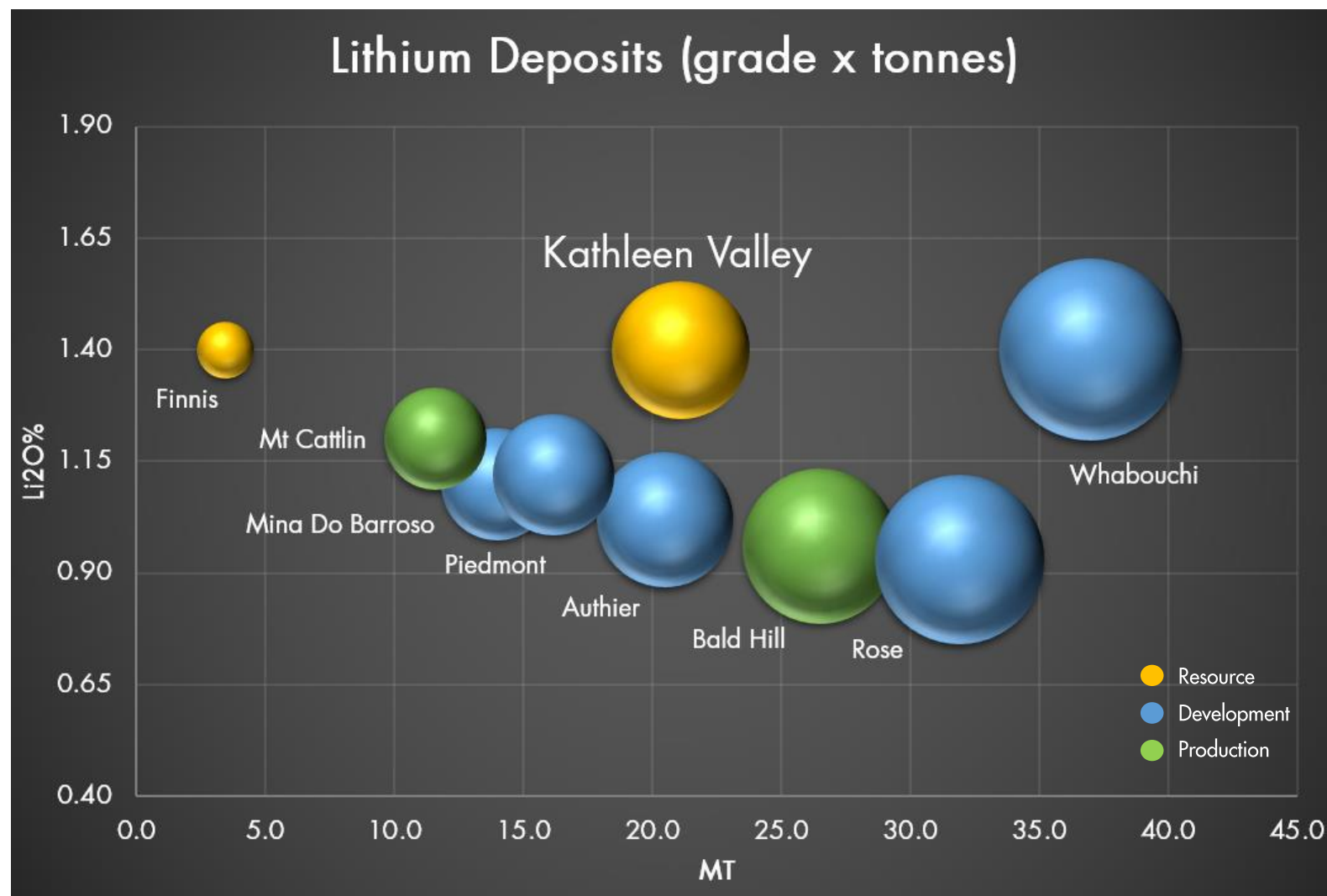
### READY-TO-GO



- 75% Measured and Indicated
- Metallurgy test results confirm saleable concentrate and low iron (<0.5% Fe<sub>2</sub>O<sub>3</sub>)
- 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



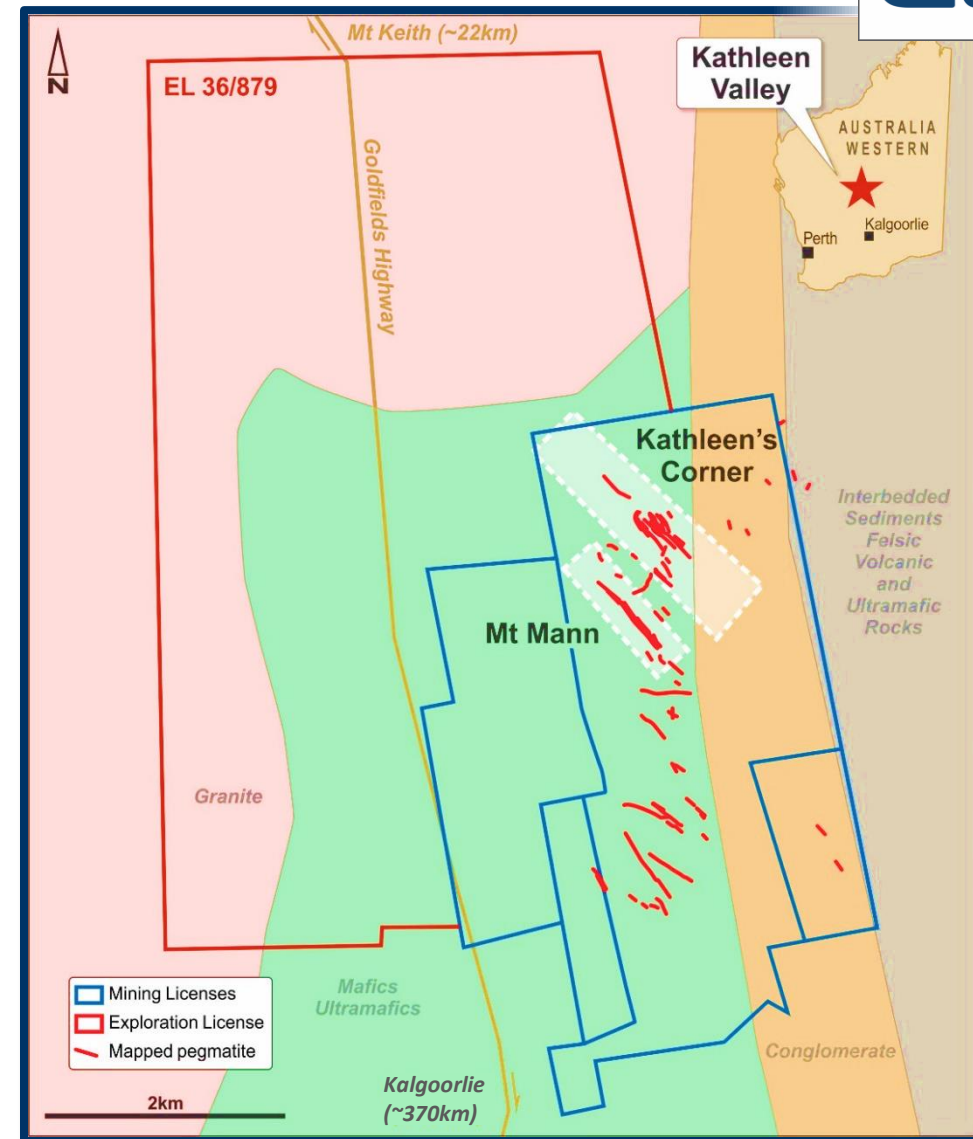
- Two mineralised pegmatite swarms – Kathleen's Corner and Mt Mann
- 18 mineralised pegmatites
- Stacked and predominantly shallowly dipping ( $0-20^{\circ}$ )
- Individually up to 20m thick

## Kathleen's Corner

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

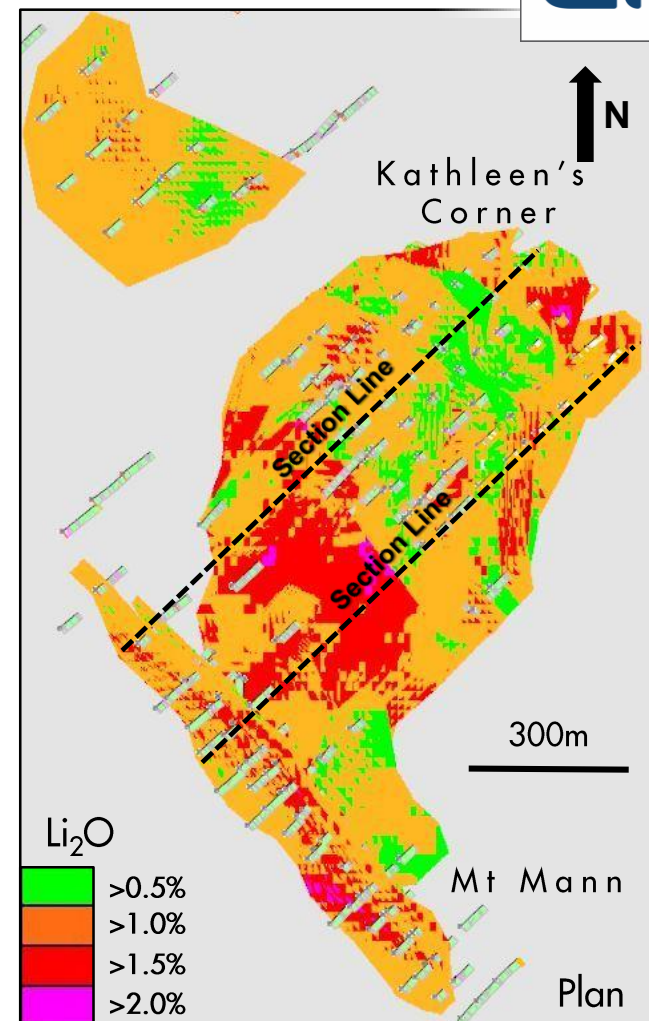
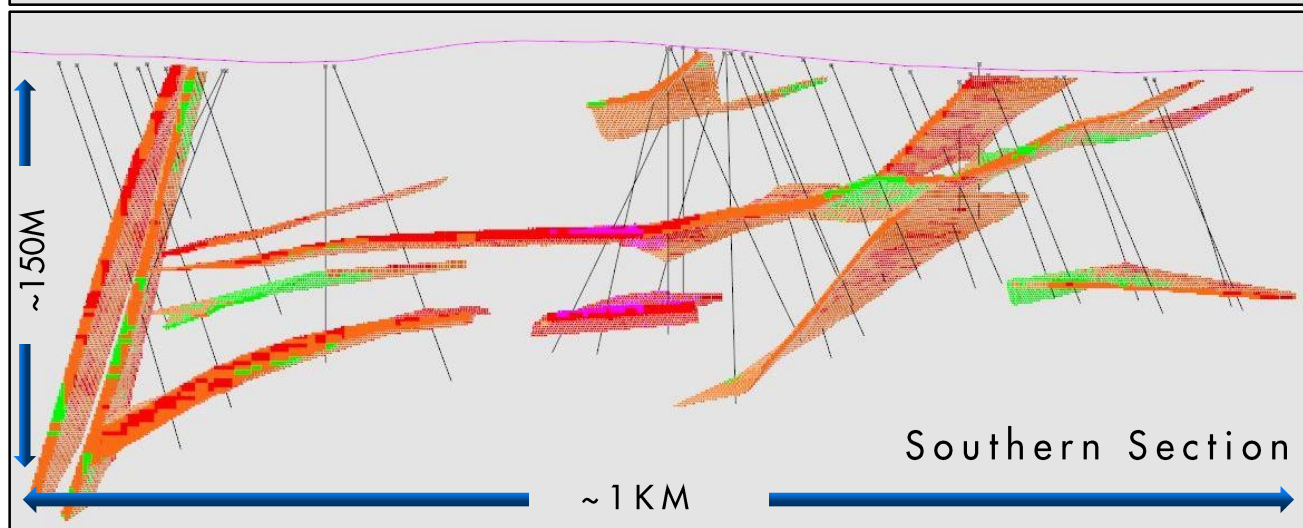
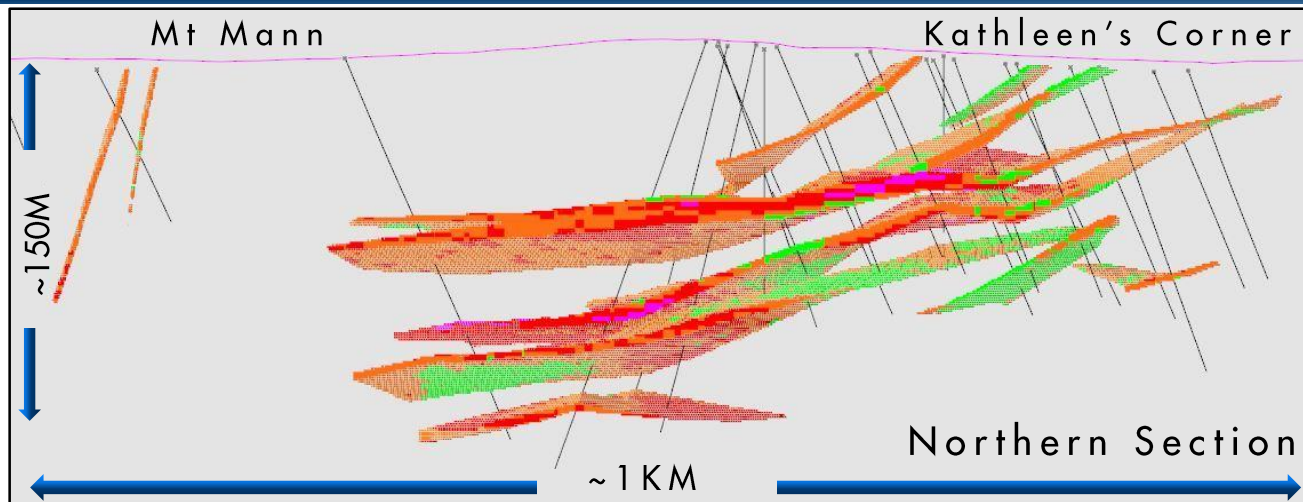
## Mt Mann

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





# KATHLEEN VALLEY – A LARGE, LITHIUM MINERALISED SYSTEM

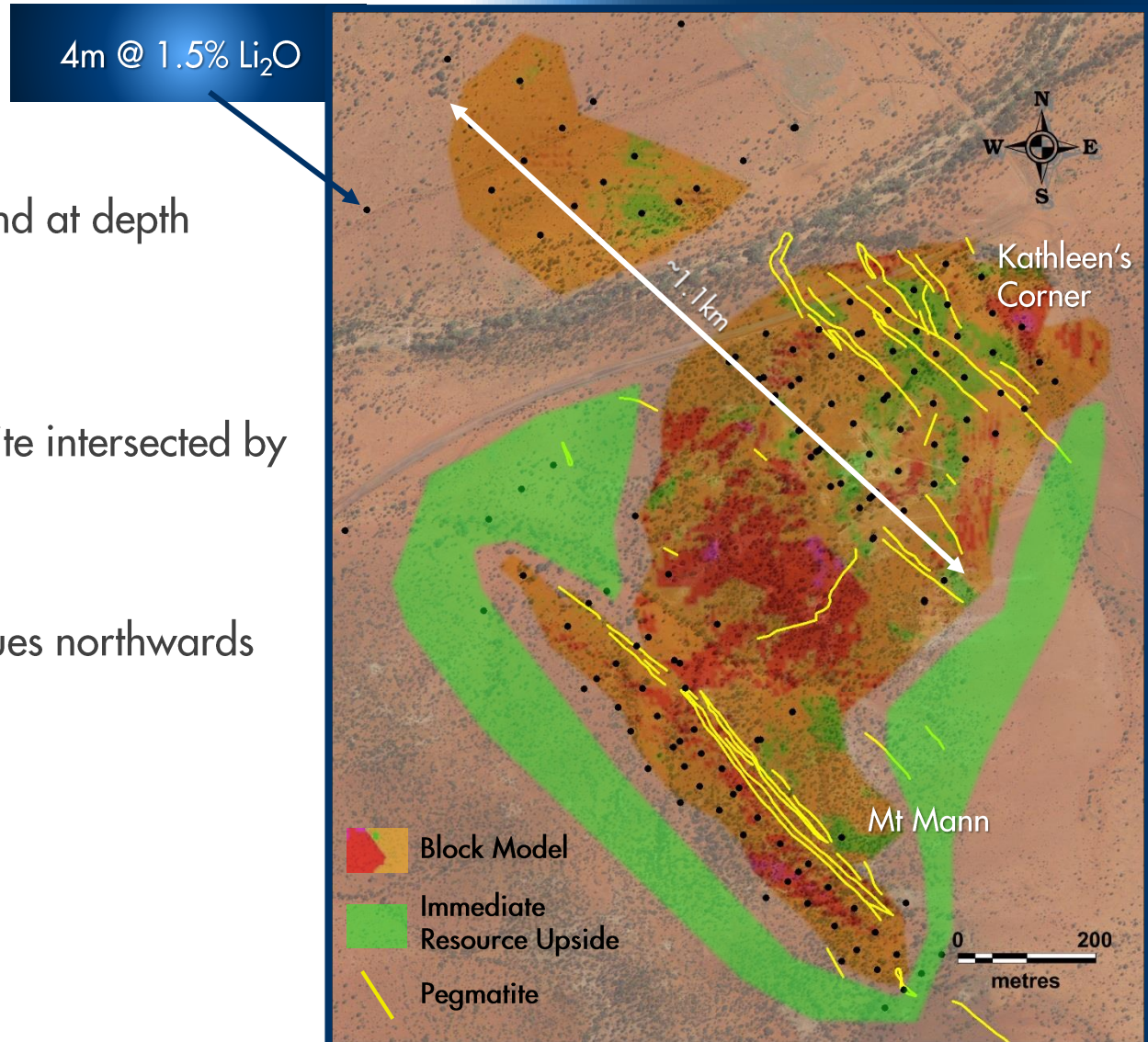


Sections and Plan from Mineral Resource Block Model



# 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%  $\text{Li}_2\text{O}$
- Mineralised system continues northwards under cover
  - No previous drilling





# BULDANIA LITHIUM PROJECT

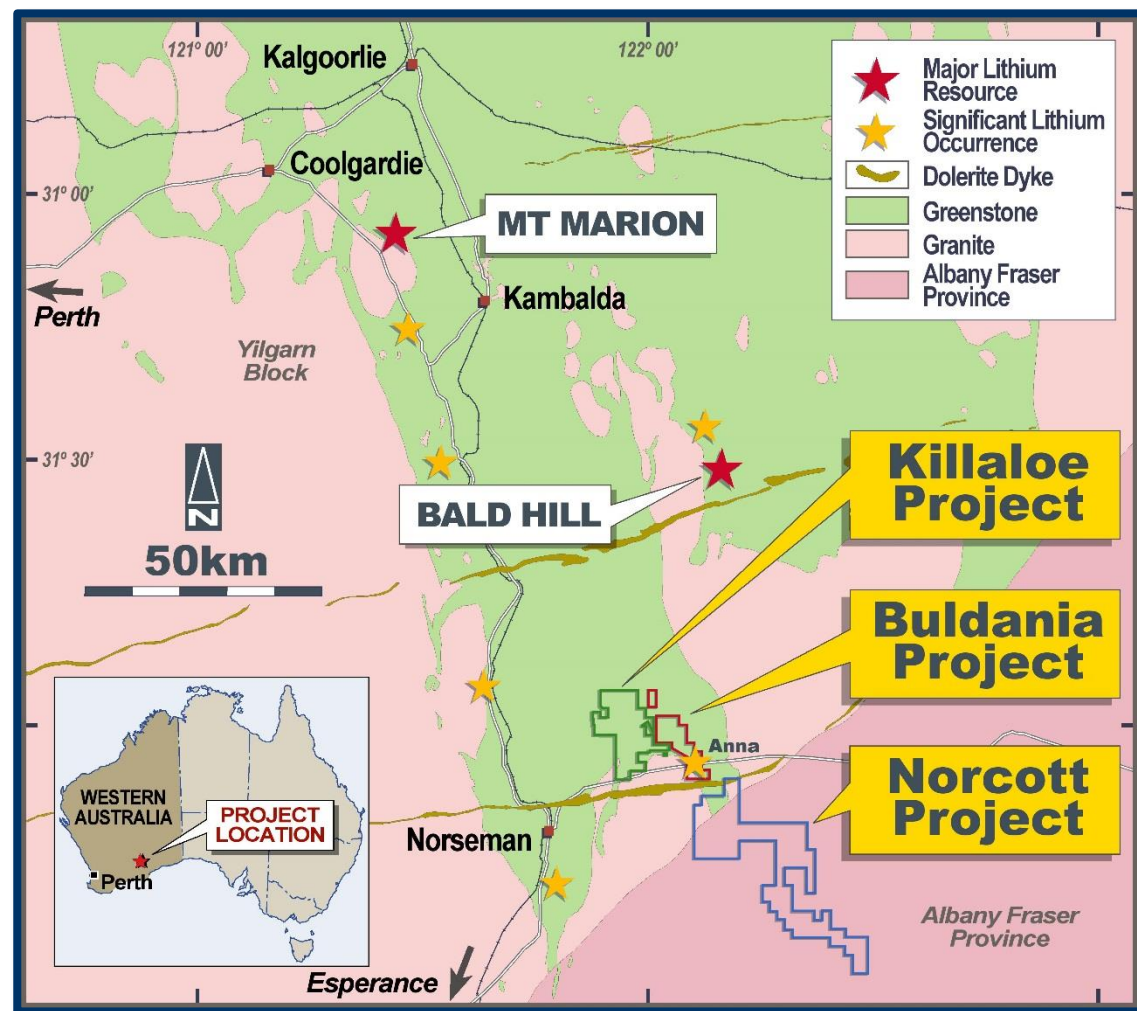
WESTERN AUSTRALIA



# 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 >1.3km and open
- Similar geology to the Mt Marion and Bald Hill lithium deposits (78Mt and 26Mt respectively)
- Good infrastructure – located on Eyre Highway ~30km east of Kalgoorlie-Esperance railway
- Liontown has 100% of the lithium and related metal rights\*
- Part of larger, 650km<sup>2</sup> strategic land holding



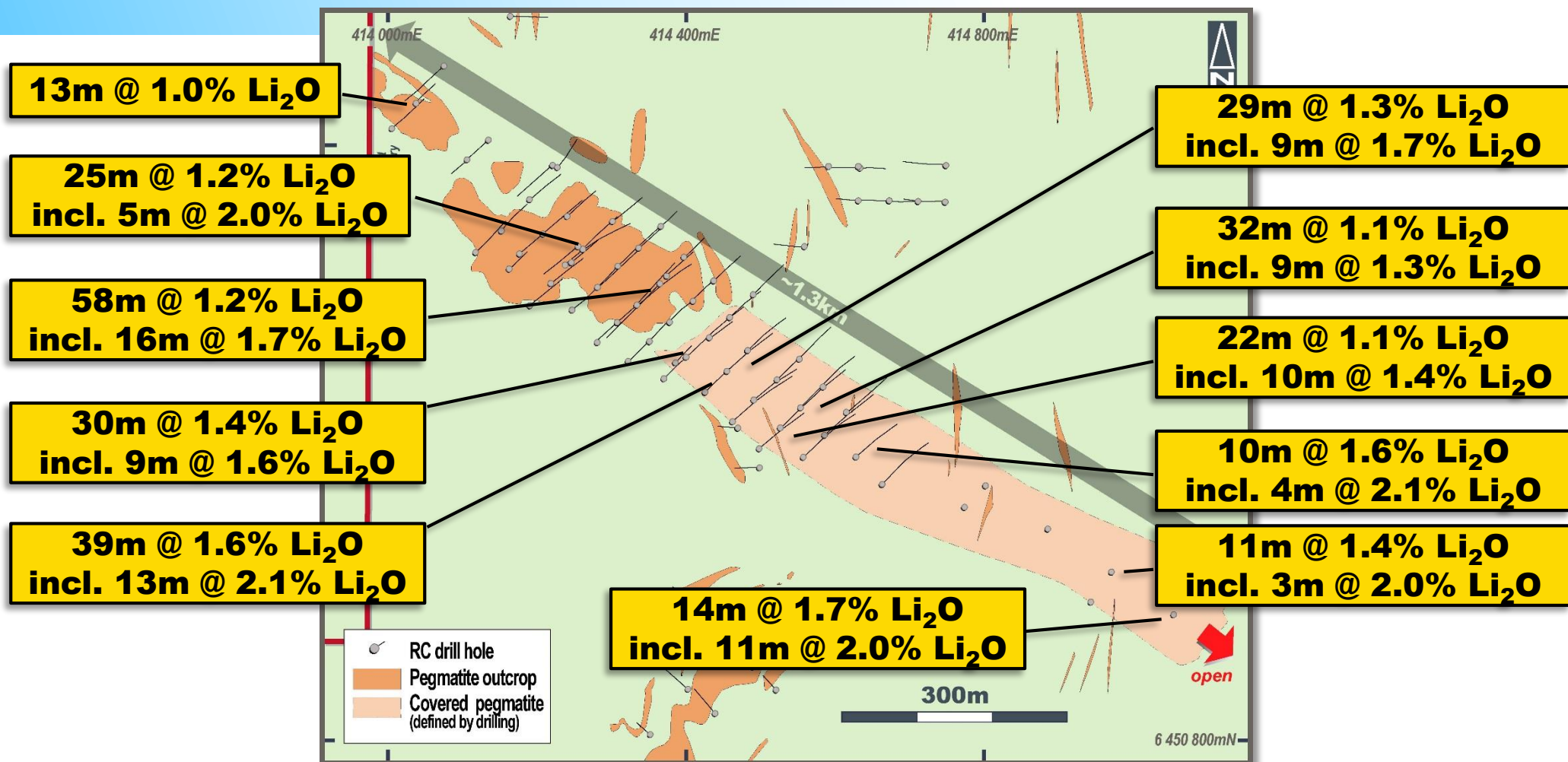
Significant lithium discovery

Total land position ~650km<sup>2</sup>

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



Mineralisation fresh from surface and open along strike and at depth



Geological modelling in progress as precursor to maiden Mineral Resource estimate



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



NW

Anna Long Section (Looking NE)

SE

**13m @ 1.0%  $\text{Li}_2\text{O}$**

**39m @ 1.6%  $\text{Li}_2\text{O}$   
incl. 13m @ 2.1%  $\text{Li}_2\text{O}$**

**14m @ 1.7%  $\text{Li}_2\text{O}$   
incl. 11m @ 2.0%  $\text{Li}_2\text{O}$**

**30m @ 1.4%  $\text{Li}_2\text{O}$   
incl. 9m @ 1.6%  $\text{Li}_2\text{O}$**

**32m @ 1.1%  $\text{Li}_2\text{O}$   
incl. 9m @ 1.3%  $\text{Li}_2\text{O}$**

**25m @ 1.2%  $\text{Li}_2\text{O}$   
incl. 5m @ 2.0%  $\text{Li}_2\text{O}$**

**29m @ 1.2%  $\text{Li}_2\text{O}$   
incl. 9m @ 1.7%  $\text{Li}_2\text{O}$**

**11m @ 1.4%  $\text{Li}_2\text{O}$   
incl. 3m @ 2.0%  $\text{Li}_2\text{O}$**

**58m @ 1.2%  $\text{Li}_2\text{O}$   
incl. 16m @ 1.7%  $\text{Li}_2\text{O}$**

**10m @ 1.6%  $\text{Li}_2\text{O}$   
incl. 4m @ 2.1%  $\text{Li}_2\text{O}$**

200m

# BULDANIA IS PART OF A LARGE (~650km<sup>2</sup>) STRATEGIC LAND POSITION HIGHLY PROSPECTIVE FOR LITHIUM

Li

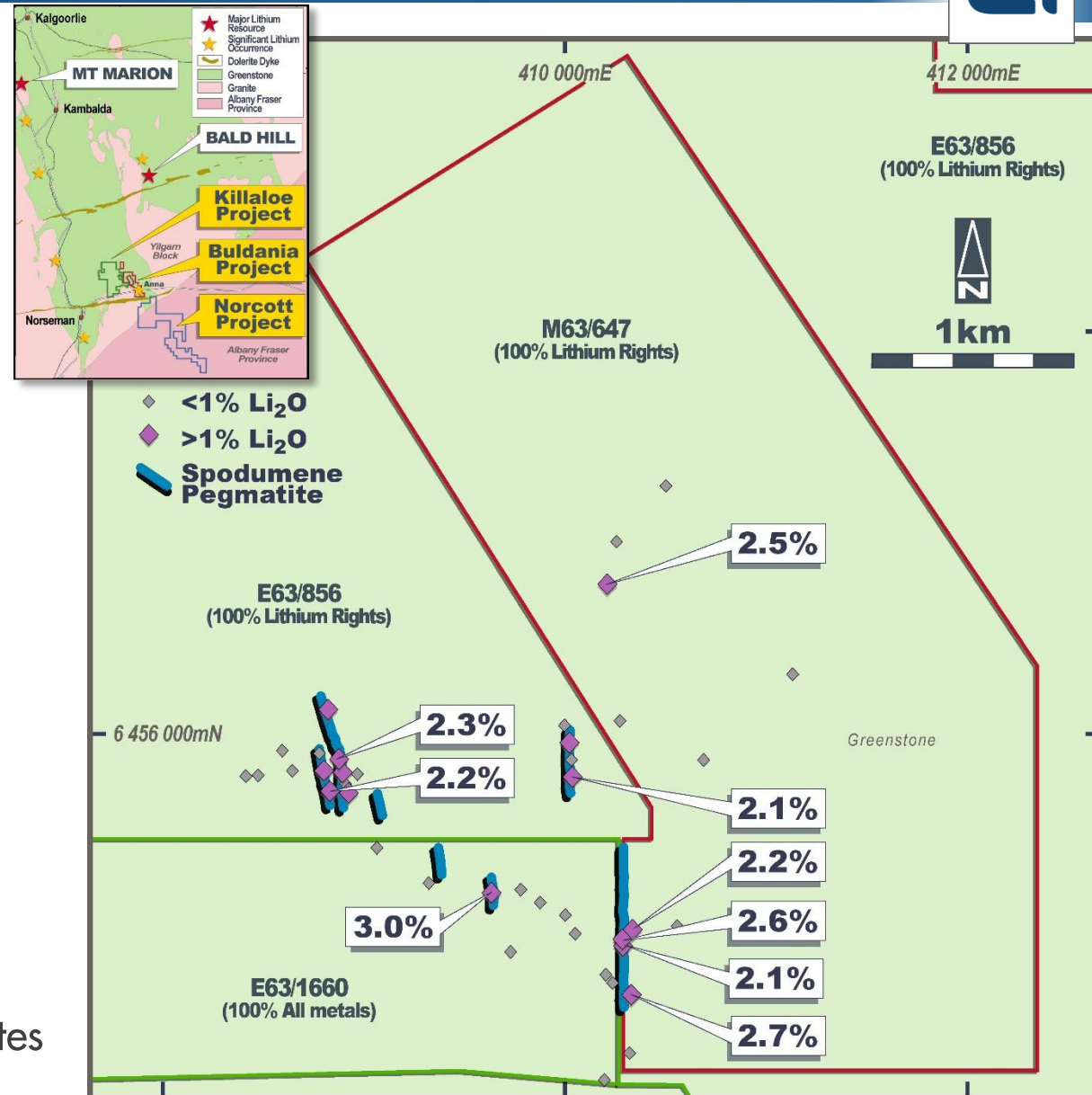
## KILLALOE PROJECT

- 163km<sup>2</sup> area located immediately north west of the Buldania Project – covers strike extension of Anna trend
- ~20km strike length of prospective stratigraphy
- Multiple spodumene-bearing pegmatites up to 800m long and 20m wide mapped
- Assay values up to 3.0% Li<sub>2</sub>O

## 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

Multiple undrilled spodumene pegmatites





# TOOLEBUC VANADIUM PROJECT

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QUEENSLAND

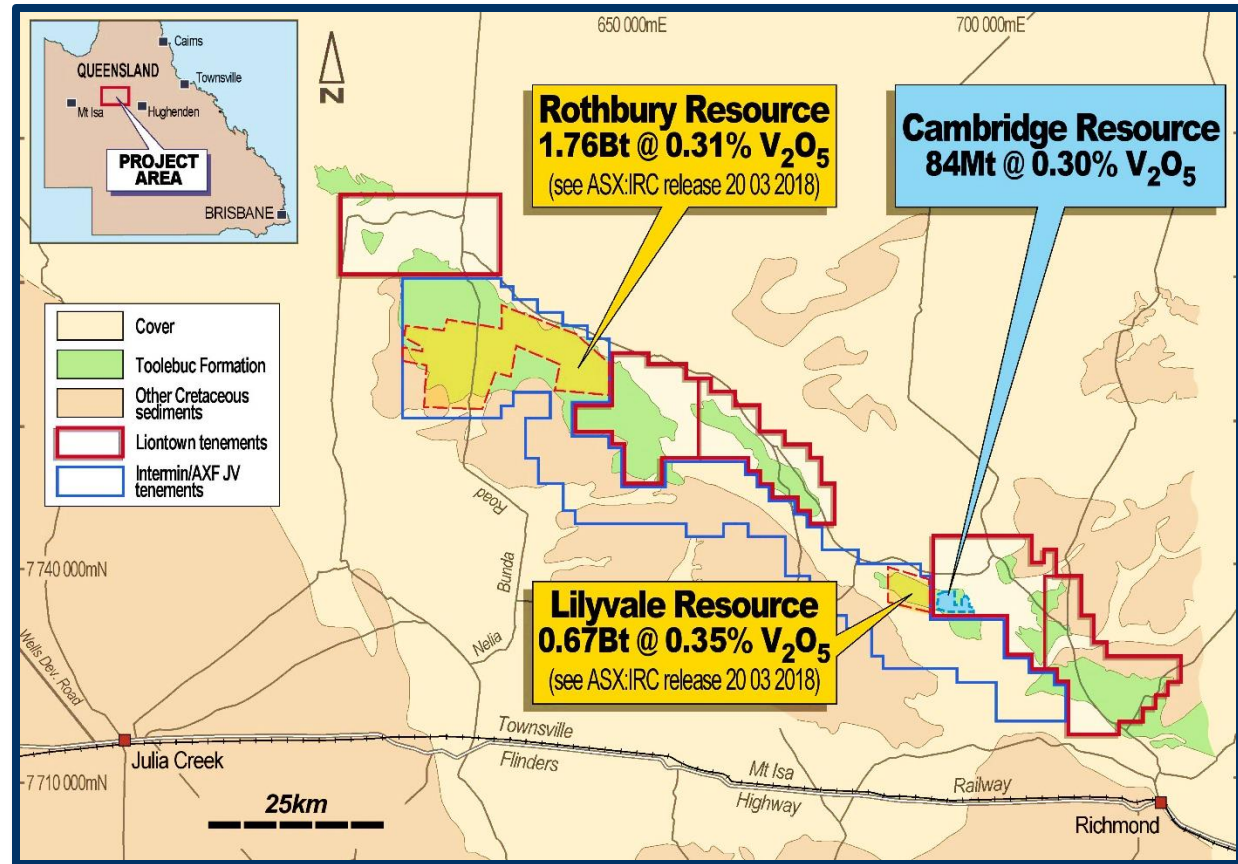


# MAIDEN ~84MT VANADIUM RESOURCE CONFIRMS SIGNIFICANT ADDITION TO BATTERY-METAL PORTFOLIO



Inferred Mineral Resource estimate - ~84Mt @ 0.30%  $V_2O_5$

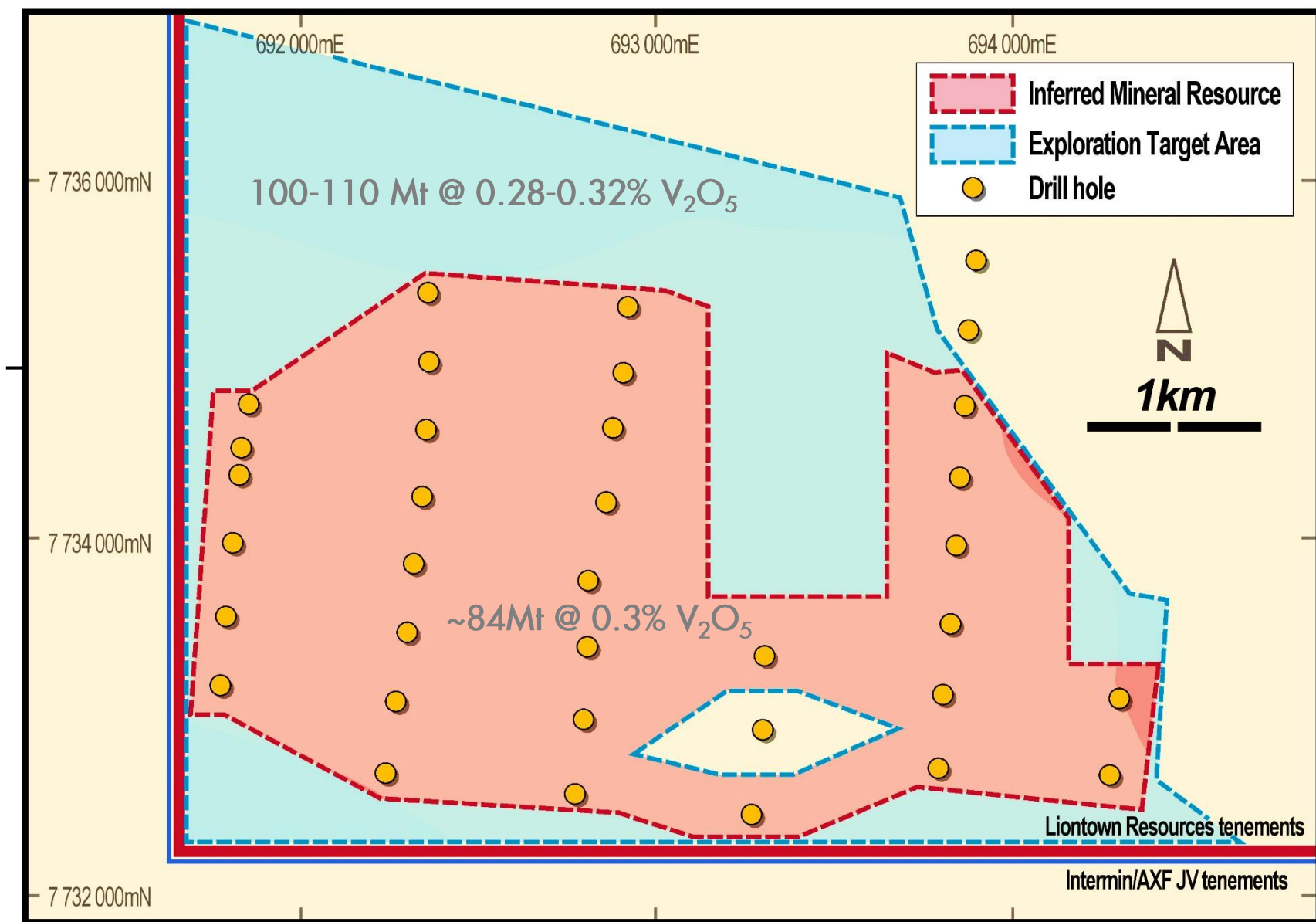
- Additional Exploration Target<sup>#</sup> of 100 – 110Mt @ 0.28% to 0.32%  $V_2O_5$
- Low cost exposure to emerging energy-storage metal
- Project adjoins very large vanadium resources defined by adjacent explorer (Intermin Resources)
- Includes large areas of unexplored, outcropping Toolebuc Formation which hosts the known resources
- Excellent infrastructure close to Townsville – Mt Isa transport links
- 100% owned, ~1,000km<sup>2</sup> area



<sup>#</sup>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.



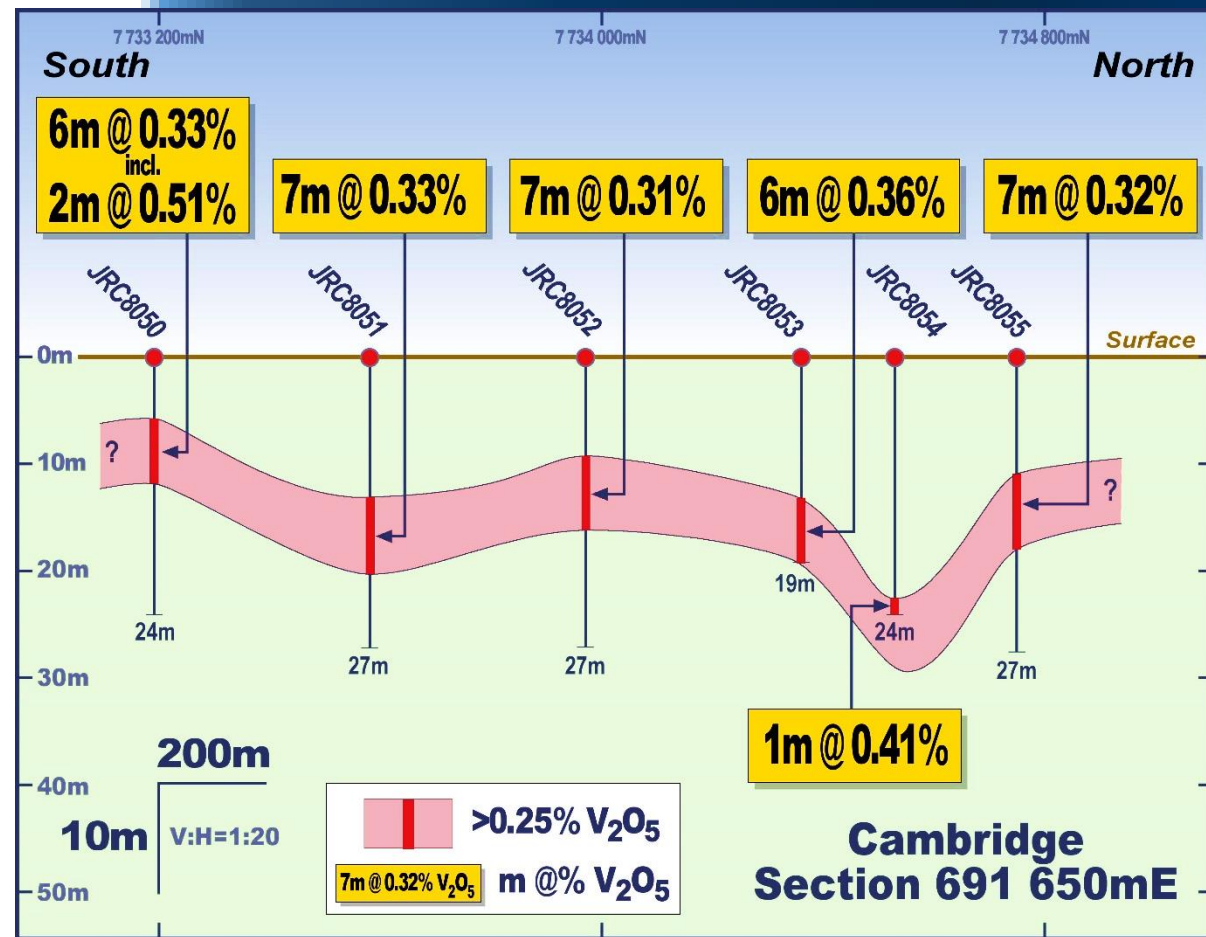
# SIGNIFICANT EXPLORATION UPSIDE ADJACENT TO EXISTING RESOURCE (AND REGIONALLY)



# 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

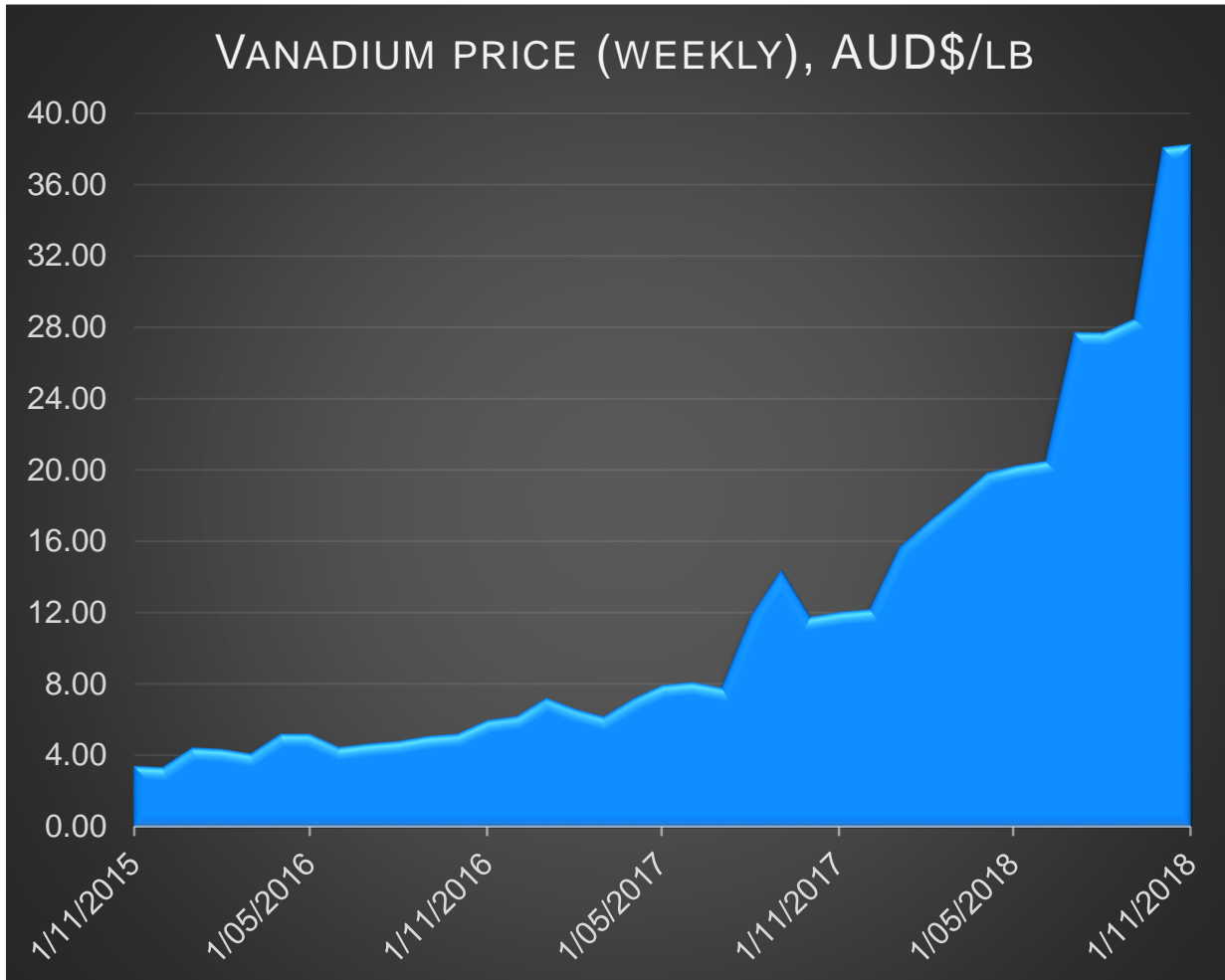


\*See Intermin Resources (ASX:IRC) ASX release dated 20 March 2018

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



VANADIUM PRICE (WEEKLY), AUD\$/LB



- One of the best performing metals: +700% increase in price since 2017
- 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

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

# 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)



# 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	\$26M (AT ~2.4CPS)
MAJOR SHAREHOLDER	TIM GOYDER – 20.3%
TOP 20 SHAREHOLDERS	50.7%
CASH	~\$1.7M



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