



Advancing a world  
class lithium deposit  
and an emerging  
nickel-PGE-gold  
project

**Liontown**

ASX : LTR | JUNE 2020



## Forward Looking Statements

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## Competent Person Statement

The Information in this report 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% Li<sub>2</sub>O” released on the 11<sup>th</sup> May 2020 which is available on [www.ltresources.com.au](http://www.ltresources.com.au).

The Information in this report that relates to Ore Reserves and Pre-Feasibility Study (PFS) for the Kathleen Valley Project is extracted from the ASX announcements “Kathleen Valley Pre-Feasibility Study confirms potential for robust new long-life open pit lithium mine in WA” released on 2<sup>nd</sup> December 2019 which is available on [www.ltresources.com.au](http://www.ltresources.com.au)

The information in this report that relates to 2020 metallurgical test work for the Kathleen Valley Project is extracted from the ASX announcement “Liontown defines input criteria for updated PFS at Kathleen Valley Lithium-Tantalum Project, W.A.” released on 9<sup>th</sup> June 2020 which is available on [www.ltresources.com.au](http://www.ltresources.com.au).

The Information in this report that relates to Exploration Results for the Moora Project is extracted from the ASX announcements “Initial phase of exploration completed at 100%-owned Moora Nickel Project, located north-east of Perth in Western Australia” released on the 16<sup>th</sup> April 2020 and “Strong gold, PGE, nickel and copper anomalism returned from initial fieldwork completed at 100%-owned Moora Project, WA” released on 13<sup>th</sup> May 2020 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 Buldania Project is extracted from the ASX announcement “Liontown announces maiden Mineral Resource Estimate for its 100%-owned Buldania Lithium Project, WA” released on the 8<sup>th</sup> November 2019 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 and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed. 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 announcements.





## Kathleen Valley



- World class resource
- 156Mt @ 1.4%  $\text{Li}_2\text{O}$  & 130ppm  $\text{Ta}_2\text{O}_5$
- 80% Measured and Indicated
- Potential long life (>25 years) mine
- Significant opportunities to build on previous positive PFS:
  - Access higher grades earlier
  - Tantalum by-product
- Updated PFS due Q4 2020

## Pipeline Projects

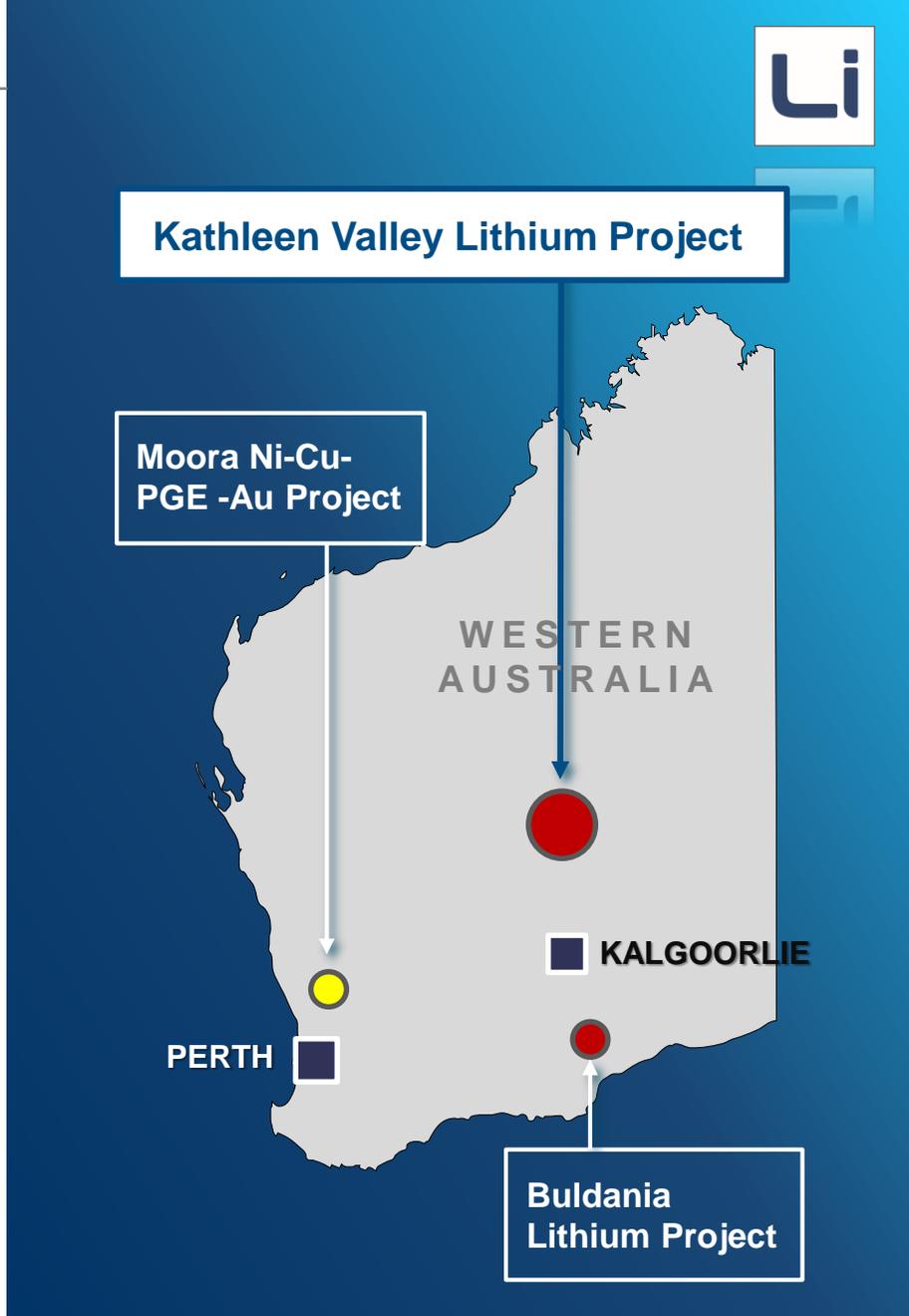


- **Moora Project**
  - Emerging Ni-Cu-PGE-Au province
  - Largely unexplored
  - Strong early results
- **Buldanía Project**
  - ~15Mt @ 1.0%  $\text{Li}_2\text{O}$
  - Exploration upside

## Low Risk



- All Projects - 100% owned
- Stable, investor friendly jurisdiction
- Established, modern infrastructure



# Kathleen Valley Lithium-Tantalum Project

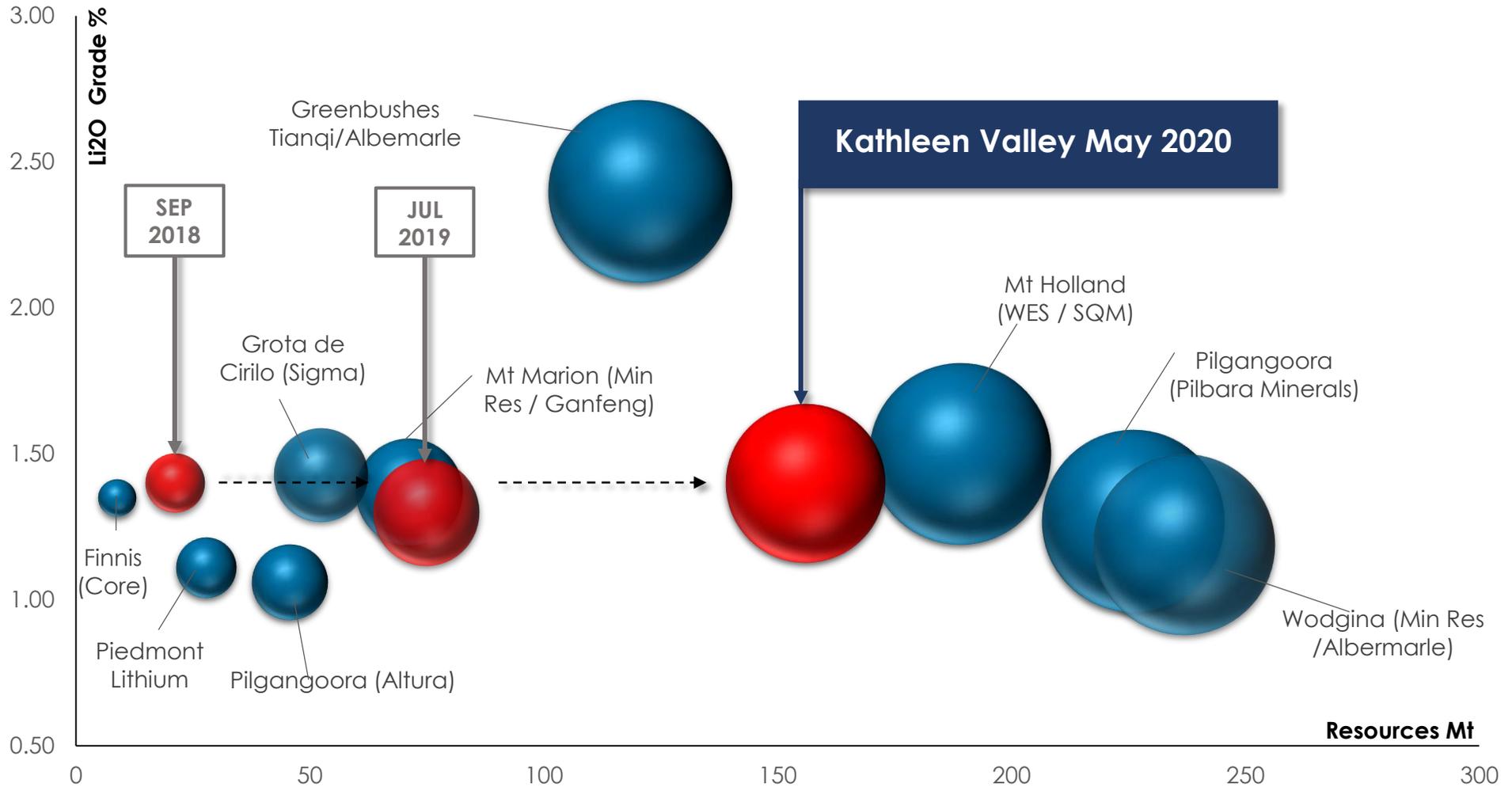
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WESTERN AUSTRALIA  
100%

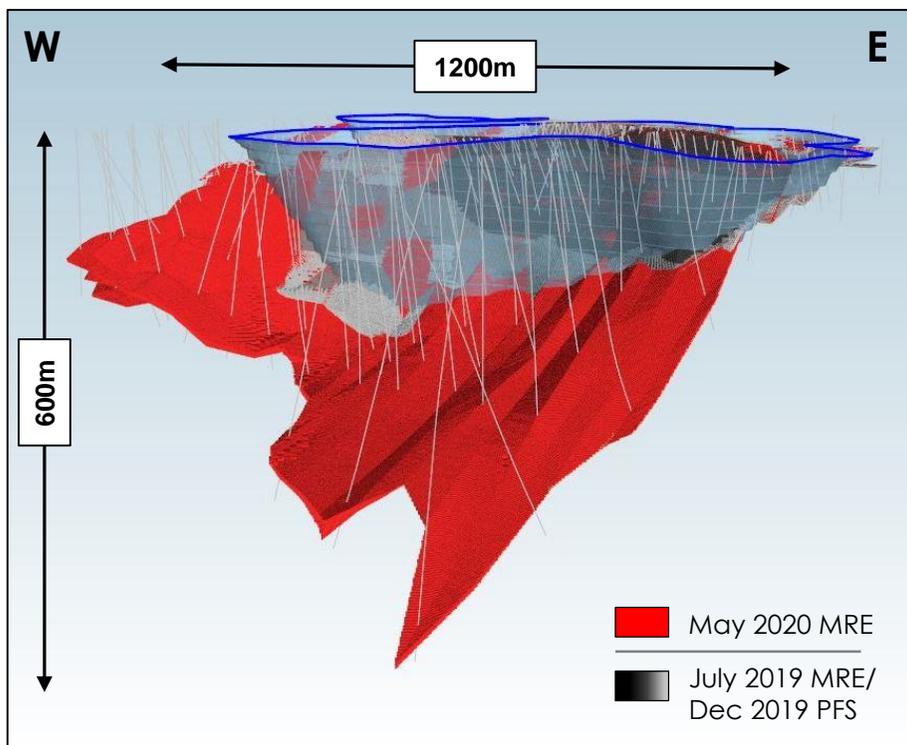
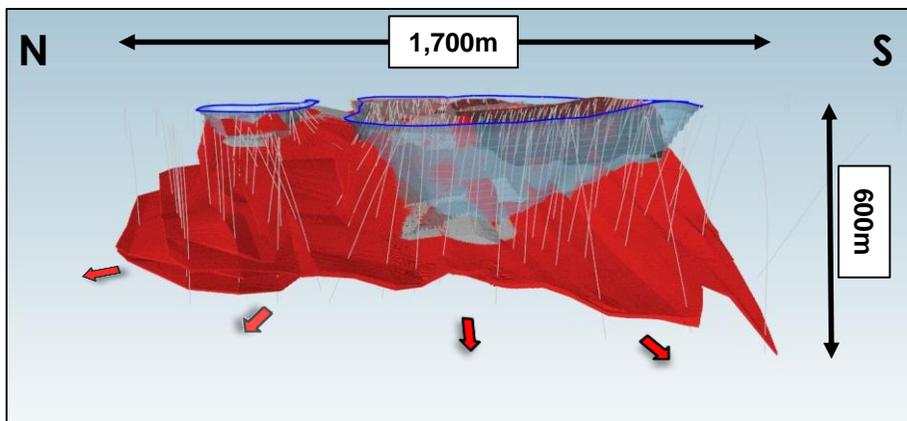




# A globally significant lithium resource



Worldwide (excl. Africa) | Spodumene Dominant | Tonnes x Grade | Li<sub>2</sub>O Only



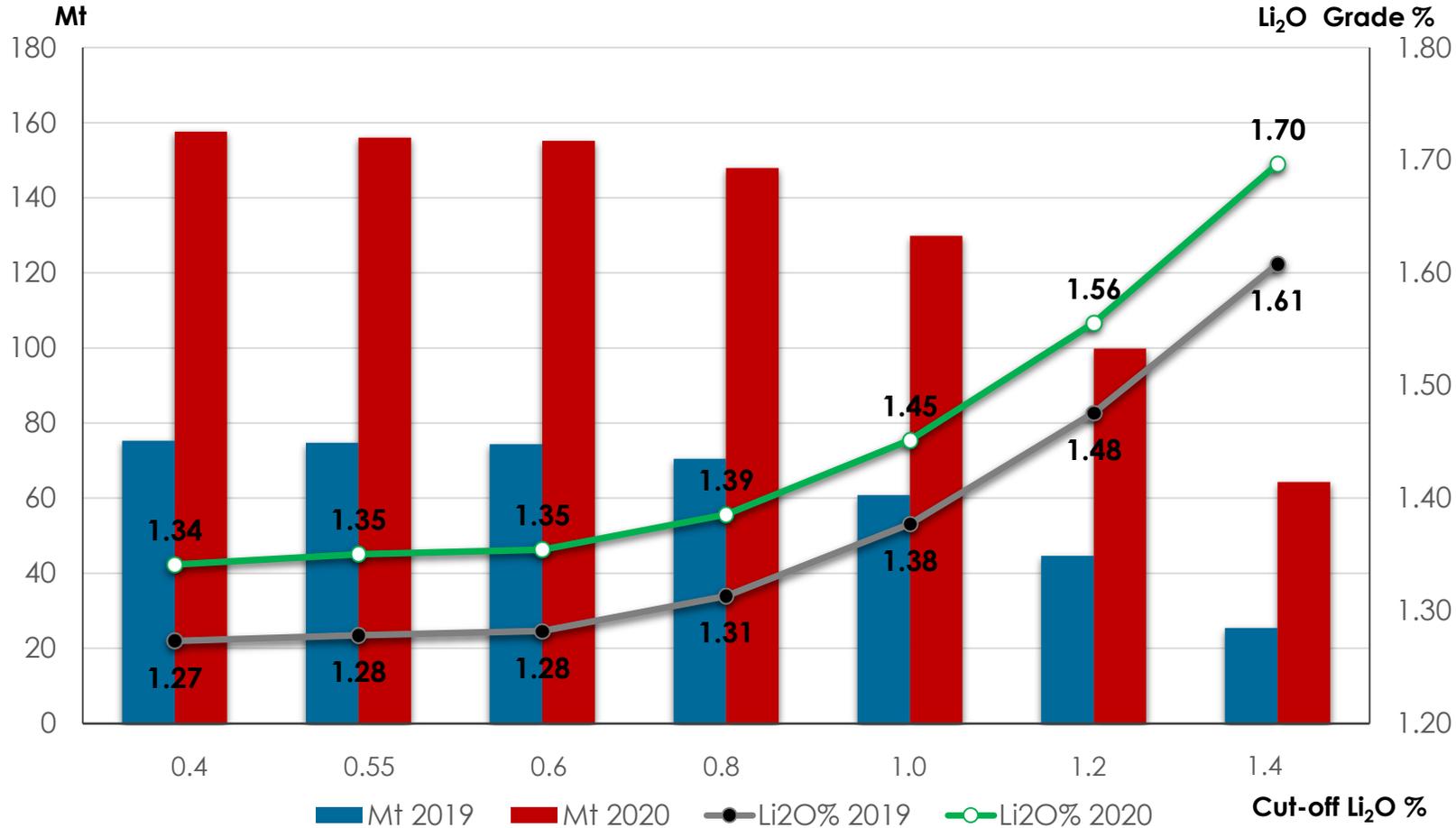
### 80% Measured and Indicated

Cut-off Li <sub>2</sub> O%	Resource Category	Million Tonnes	Li <sub>2</sub> O%	Ta <sub>2</sub> O <sub>5</sub> (ppm)
0.55	Measured	20	1.3	140
	Indicated	105	1.4	130
	Inferred	32	1.3	110
<b>Total</b>		<b>156</b>	<b>1.4</b>	<b>130</b>

Cut-off Li <sub>2</sub> O%	Mt	Li <sub>2</sub> O%	Ta <sub>2</sub> O <sub>5</sub> (ppm)
0.4	158	1.34	128
<b>0.55</b>	<b>156</b>	<b>1.35</b>	<b>128</b>
0.6	155	1.35	128
0.8	148	1.39	129
1.0	130	1.45	131
<b>1.2</b>	<b>100</b>	<b>1.56</b>	<b>132</b>
1.4	64	1.70	131

\* Tonnages and grades have been rounded to reflect the relative uncertainty of the estimate. Inconsistencies are due to rounding.

# An increase in grade and tonnes





Based on Jul 2019 MRE – 74.9Mt @ 1.3% Li<sub>2</sub>O



SC6.1:  
295Ktpa



Mining:  
2Mtpa



Reserve:  
50Mt @ 1.2% Li<sub>2</sub>O



Life of Mine  
26 years

A\$

Total Free Cash  
Flow +\$1.9B

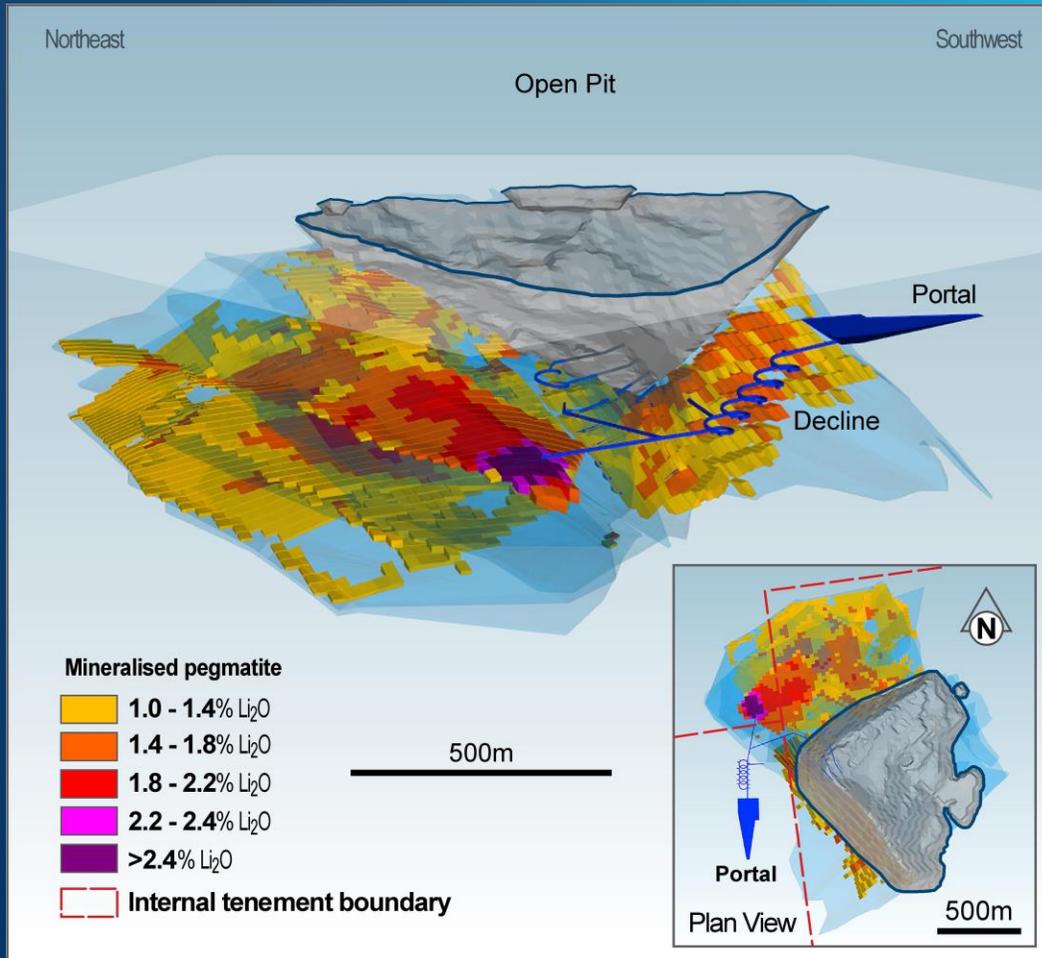


NPV <sup>1</sup>	\$507M
IRR	25.1%
Payback Period	~4 YEARS
Opex <sup>2</sup> (excl. Ta credits)	\$564/t conc. (US\$406/t conc.)
Ave. Strip Ratio	7.7:1
Ave. SC6 Price <sup>3</sup>	A\$960/t (US\$690/t)
Capex	\$240M

<sup>1</sup> 8% (real). <sup>2</sup> Operating costs include all mining, processing, transport, state and private royalties, freight to port, port costs and site administration and overhead costs. <sup>3</sup> Source: Roskill 2019 and Lontown base case related party and arms length prices 2024 -2040.

# Updated PFS – Input Criteria

New, larger MRE will underpin future feasibility studies



Liontown has engaged Lycopodium Minerals who, along with the assistance of highly reputable and experienced consultants, will ensure a high standard of work

1

## Underground & Optimised Open Pit Mining

- **Access higher grades sooner**
- **Reduce opex by:**
  - Lowering mine dilution
  - Increasing concentrate production
  - Reduce initial private royalties
- **Shorten payback**

2

## Second Product Stream

- **Tantalum circuit**

3

## Revised Process Flowsheet

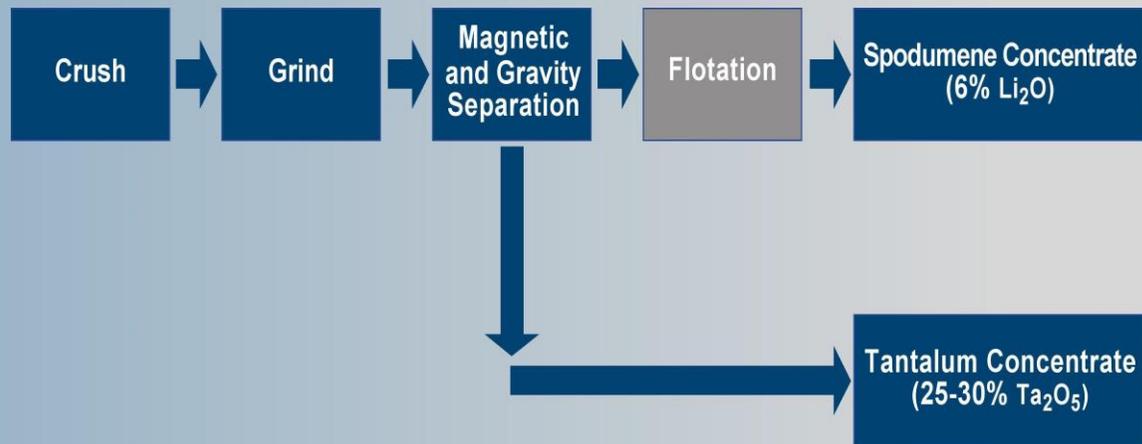
- Whole-Ore Flotation (WOF) has clear project benefits

4

## Downstream Potential

- Long life operation with potential to attract strategic partner
- Downstream Scoping study awarded
- **Existing infrastructure provides significant head start**

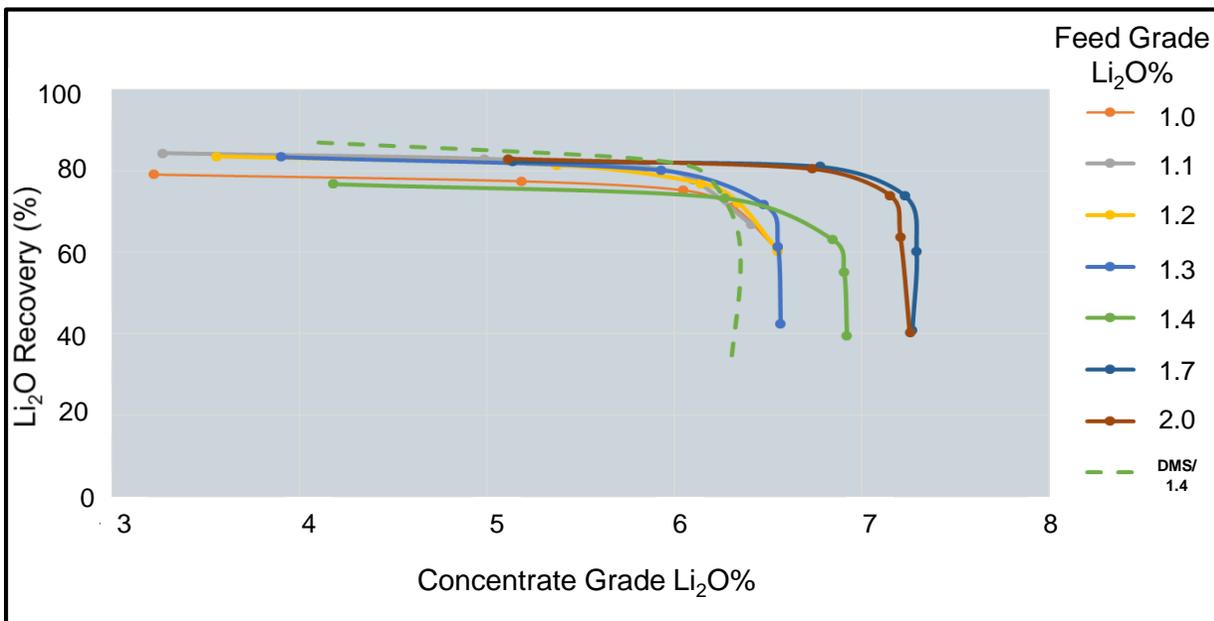
## Updated PFS – Proposed Processing Flowsheet



Proposed Whole Ore Flotation (WOF) Flowsheet

## 2020 Test Work Outcomes

- Higher grades have higher recovery.
- WOF produces higher grade concentrate compared with conventional DMS/Flotation process.
- Tantalum recovery of 56% at a grade of 15.3% Ta<sub>2</sub>O<sub>5</sub> achieved.
- Tantalum mineralogy appears suitable for upgrade of concentrate to 25 – 30% Ta<sub>2</sub>O<sub>5</sub> at off site facility.
- Magnetic separation used to recover tantalum reduces iron in flotation feed by up to 55%.

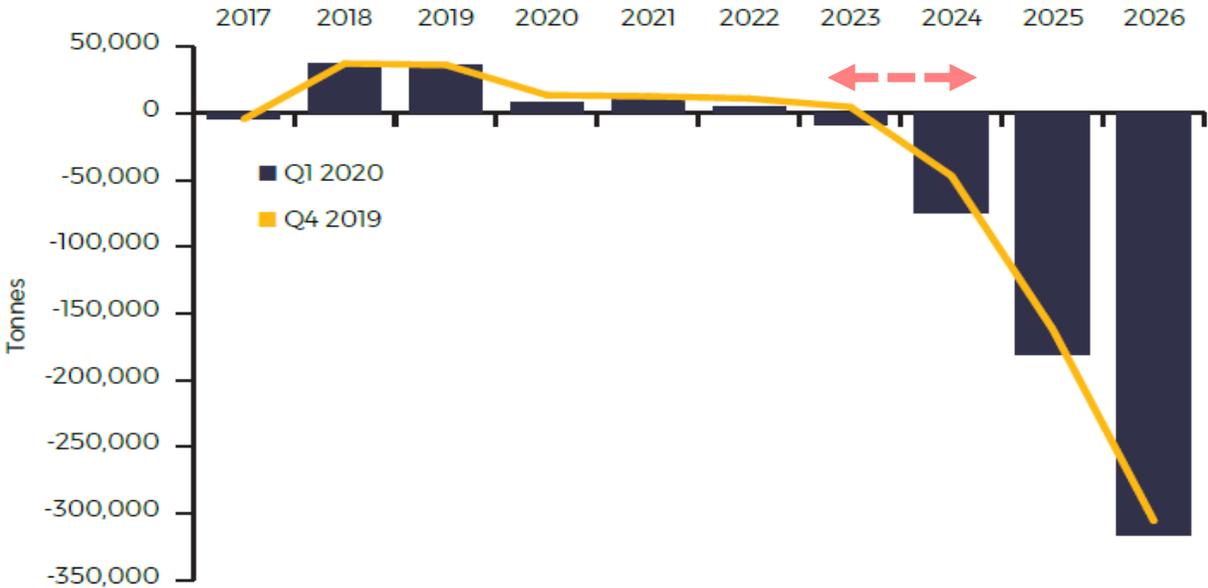


WOF – Grade and Recovery Relationship



# The longer-term fundamentals remain strong

Lithium market balance



Source: Benchmark Mineral Intelligence Lithium Forecast

Source: Benchmark Minerals, INTELLIGENCE SPECIAL REPORT, April 2020

**Kathleen Valley production has the flexibility to align with the forecast rise in lithium demand**

# The rise of lithium batteries continues

**January 2020:**

China extends subsidies on EV's

EU rules begin – heavily penalising carmakers on CO2 emissions

**May 2020:**

France to provide €12,000 subsidies to swap to EVs – wants to be #1 EV manufacturer in Europe

**June 2020:**

CATL to produce battery with 16-year lifespan capable of 2M km of travel

China targeting EVs to comprise 25% of all new vehicles sold by 2025

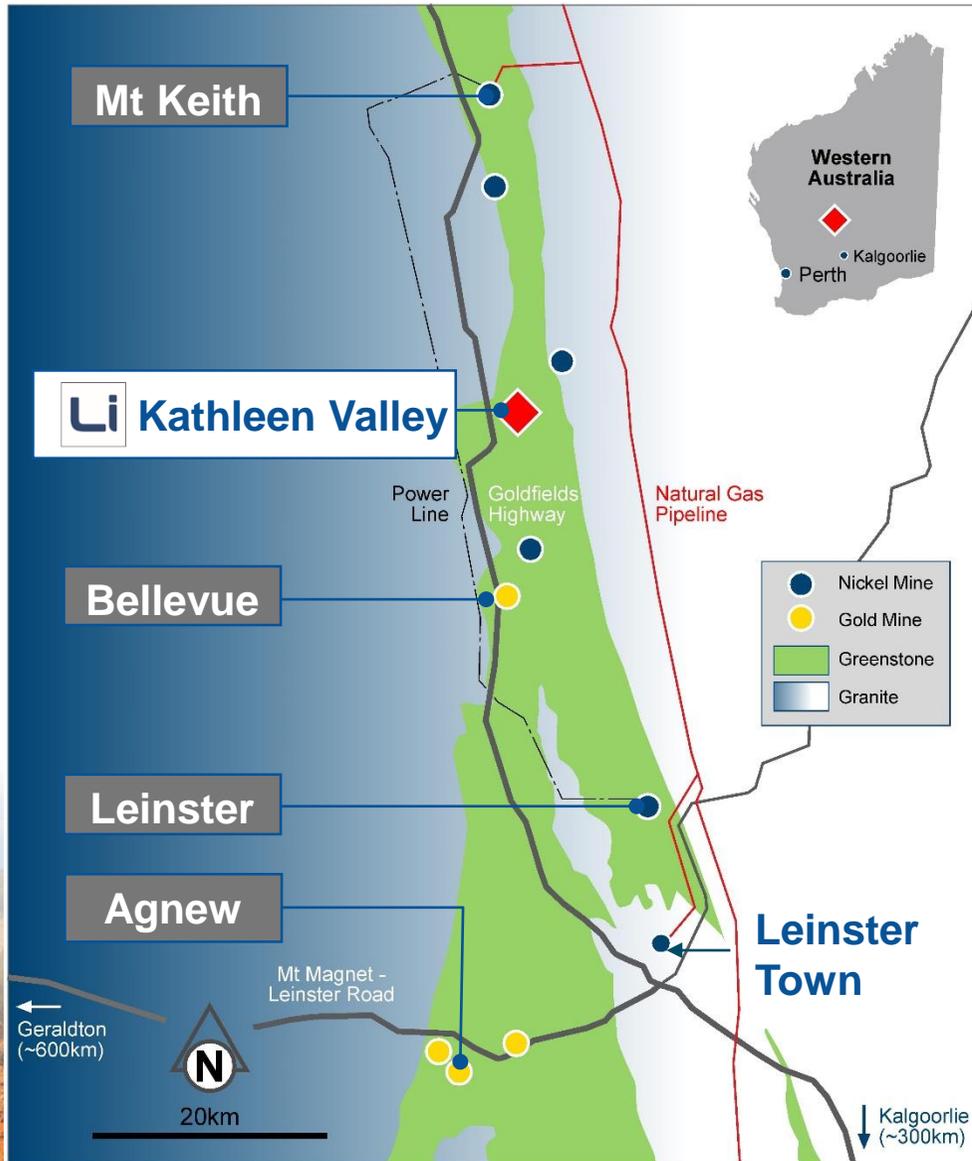
Germany to mandate EV chargers at all fuel/gas stations on top of €6,000 subsidies to swap to EVs

**COVID-19 2020:**

In Europe, Jan-Feb 2020 EV sales were 140,000 units - a ~6% penetration rate compared to ~ 2% in 2019

At the peak of China's COVID-19 closures in Feb, EV penetration rose 3.2%

## Well serviced and highly active mining region



Major Ni & Au Mines



Goldfields Highway



Sealed Airstrips



Town of Leinster



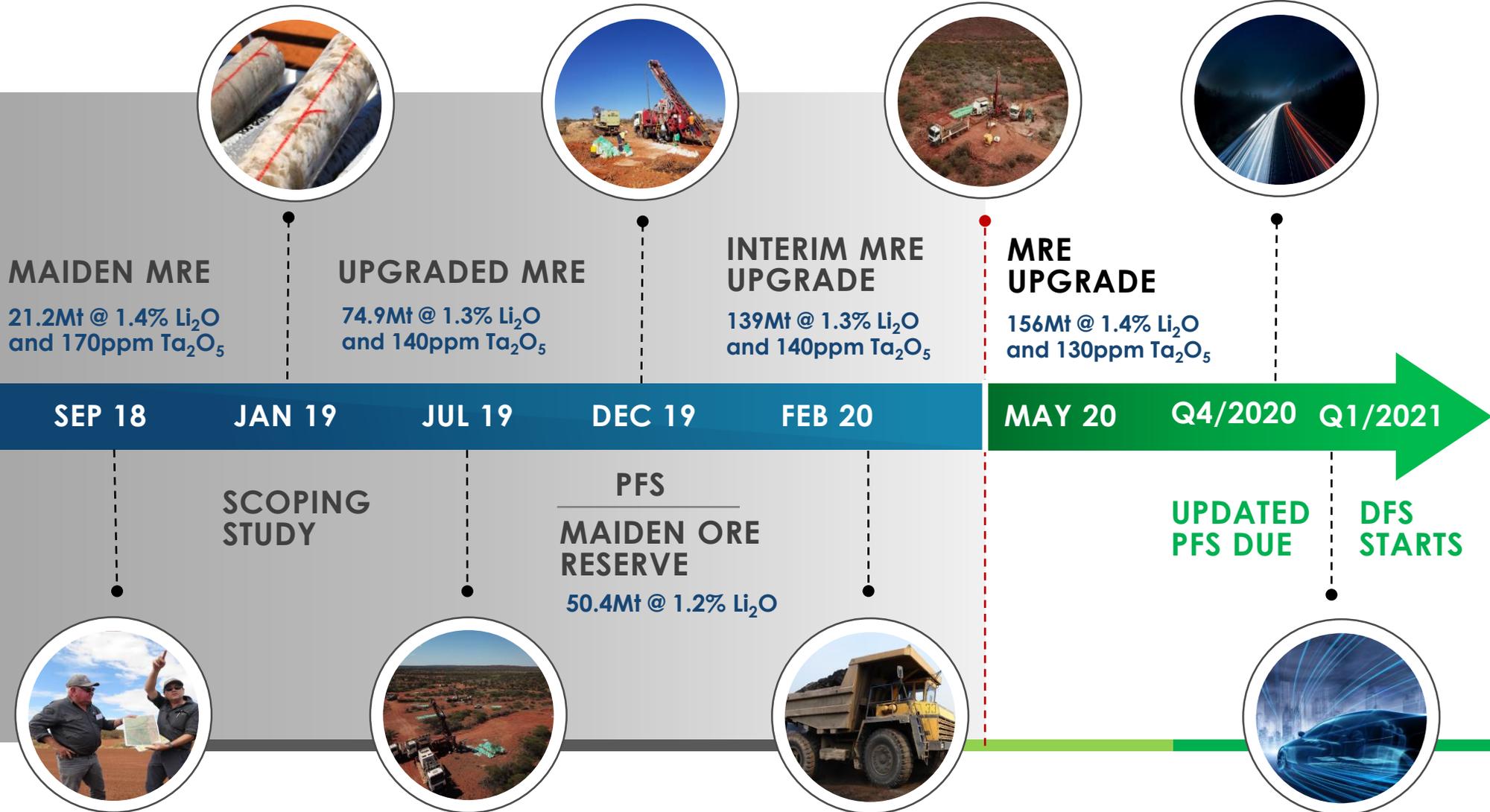
Power



Natural Gas



## Consistent delivery of results with targets met or exceeded



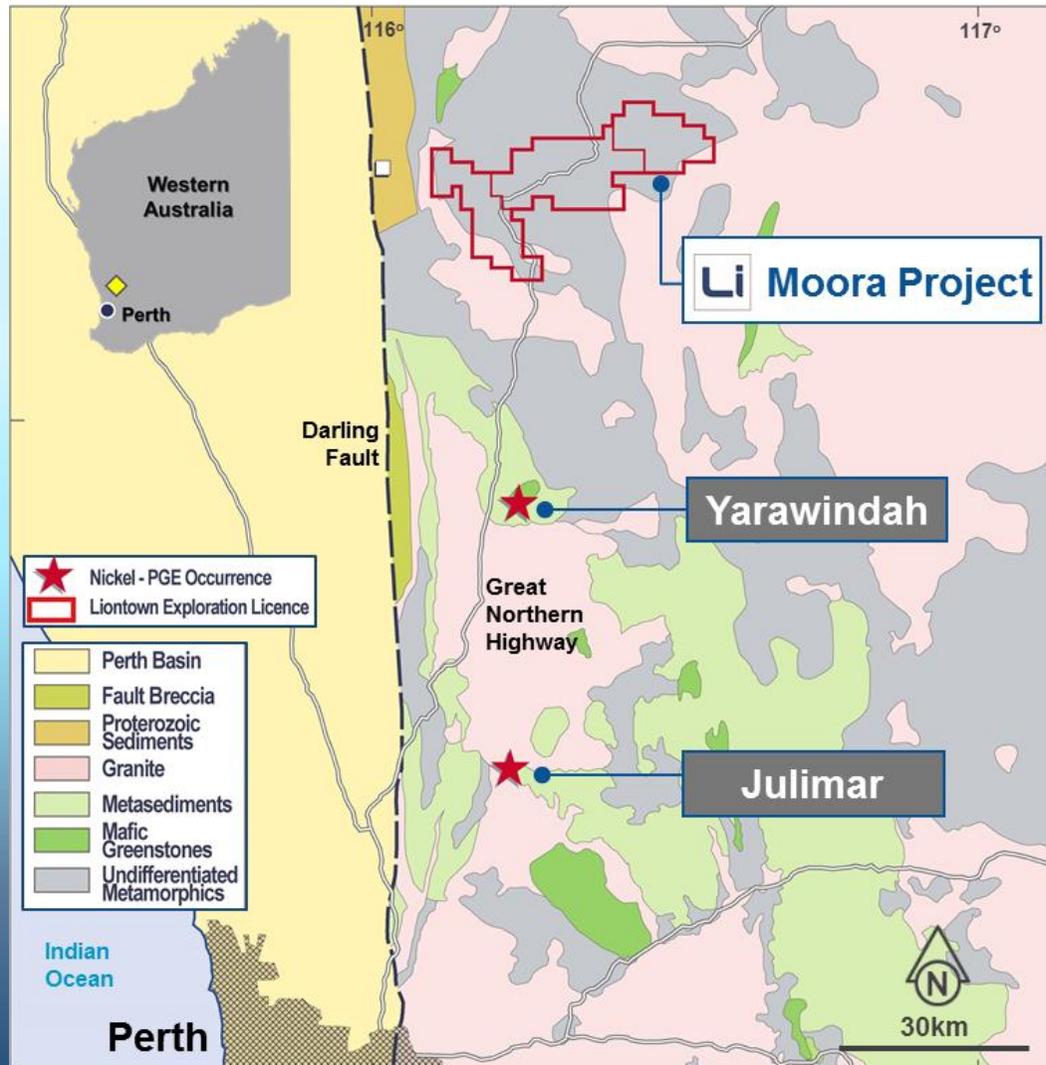
# Moora Ni-Cu-PGE-Au Project

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WESTERN AUSTRALIA  
100%



Moora is located in an emerging precious and base metal mineral province



1

Located in the same geological terrain as the Julimar discovery – a significant, new Ni-PGE discovery by Chalice Gold Mines<sup>1</sup>.

2

Liontown acquired the tenements in 2018 and 2019 as part of its generative exploration strategy for battery metals

3

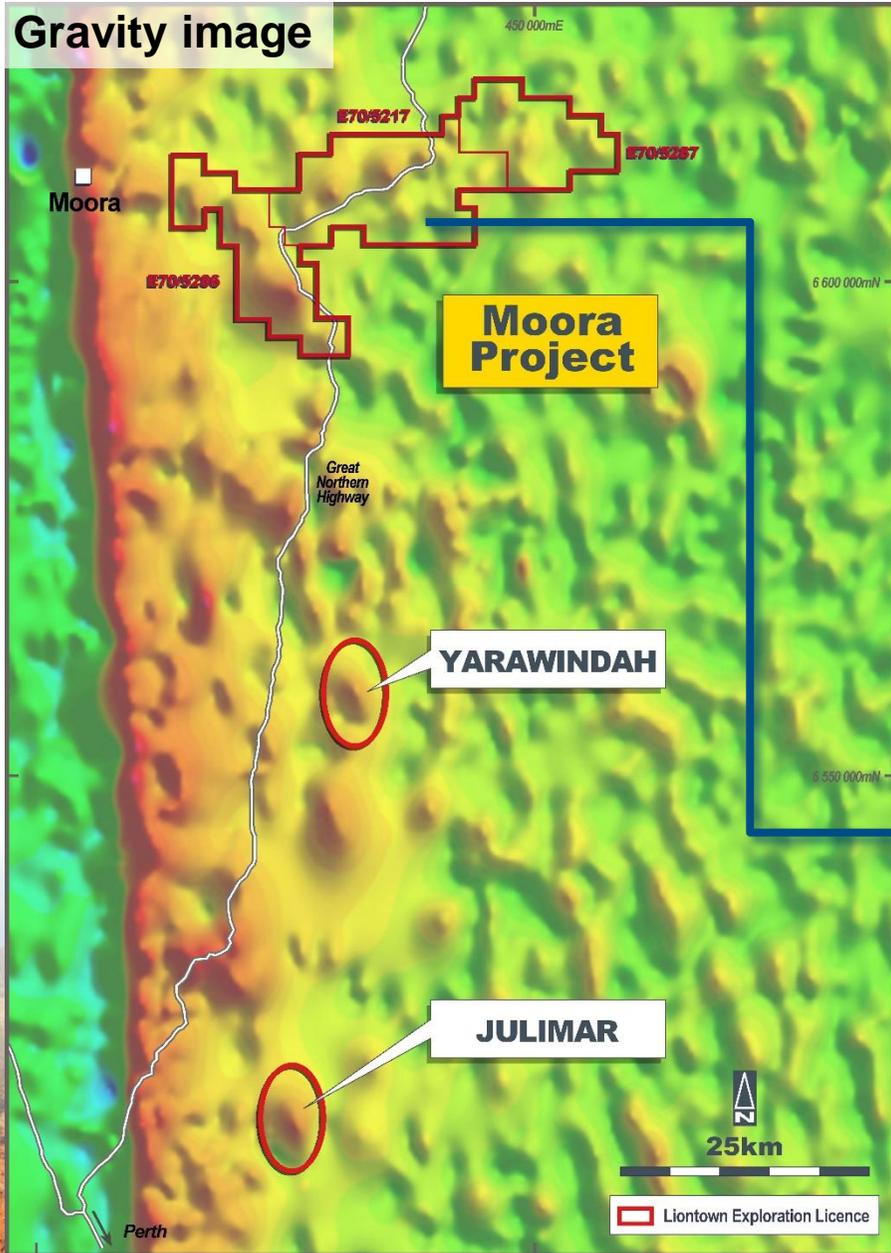
Limited historical surface geochemistry and shallow drilling has recorded strongly anomalous nickel, copper, PGEs & gold

4

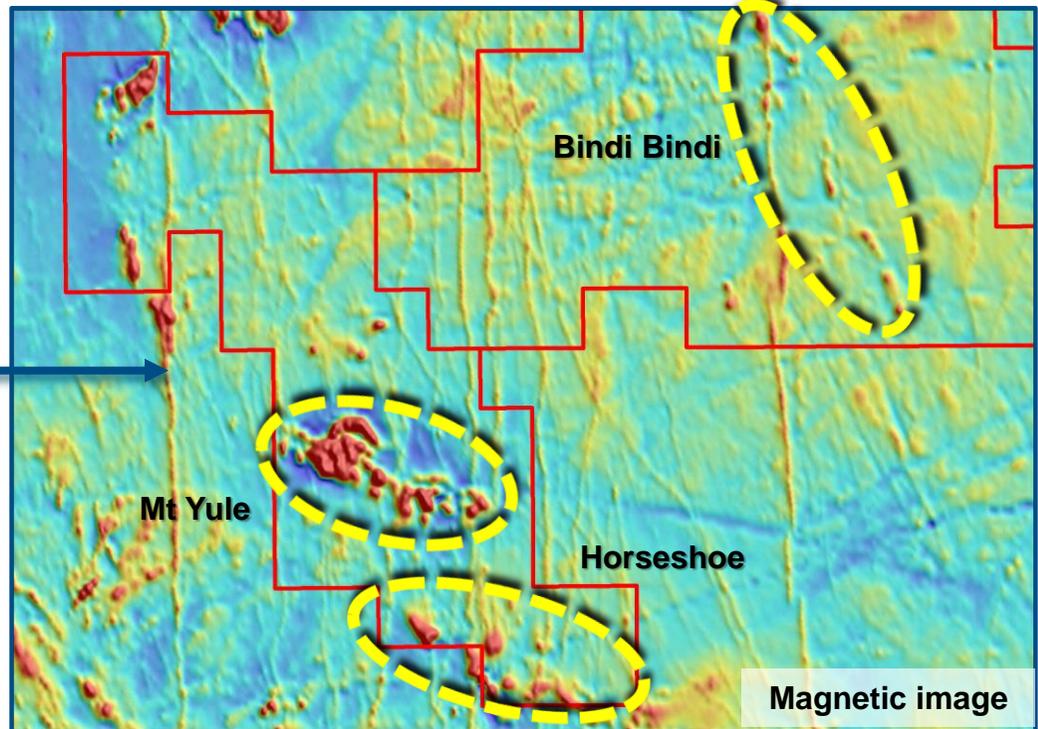
Most of Project area is unexplored

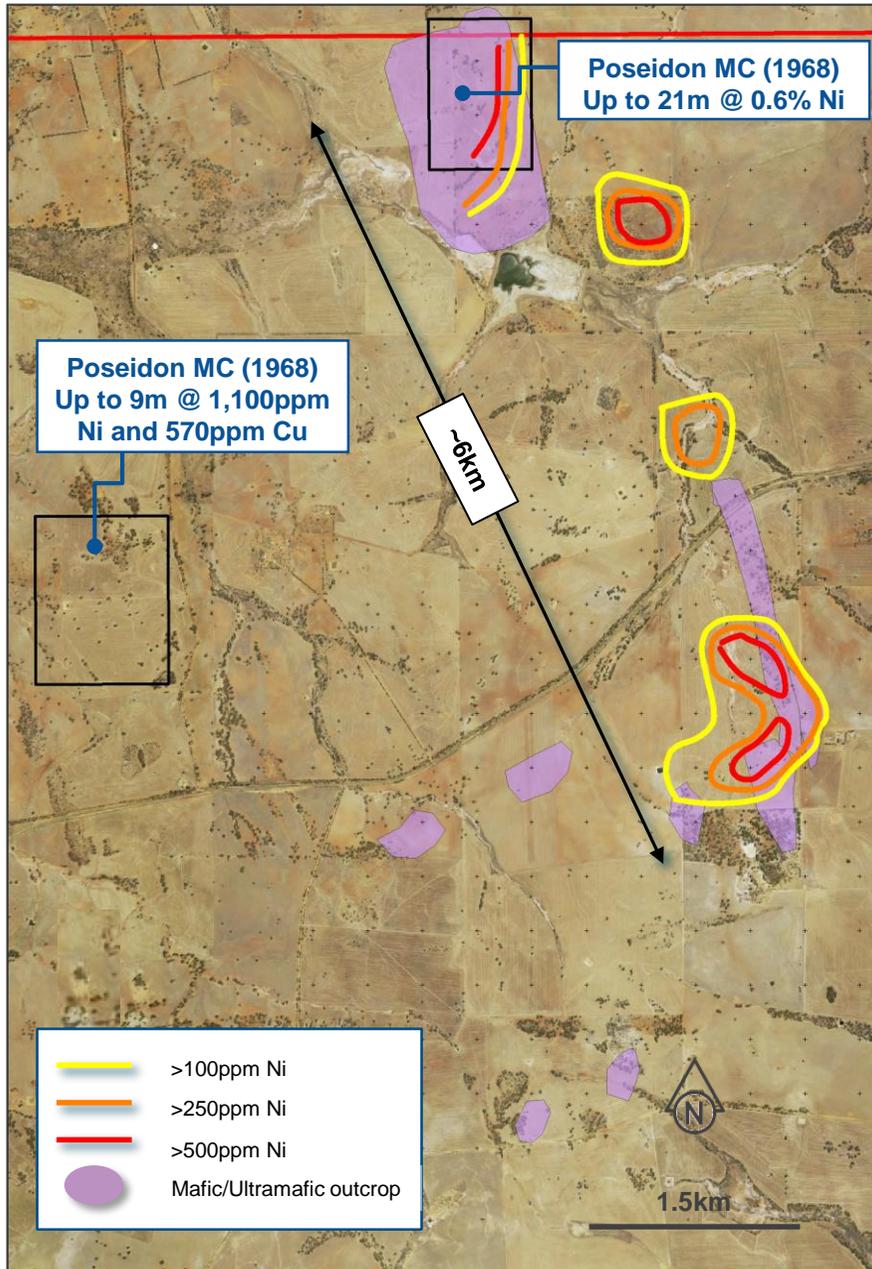
5

100%-owned, granted tenure covering 467km<sup>2</sup> – only 150km from Perth



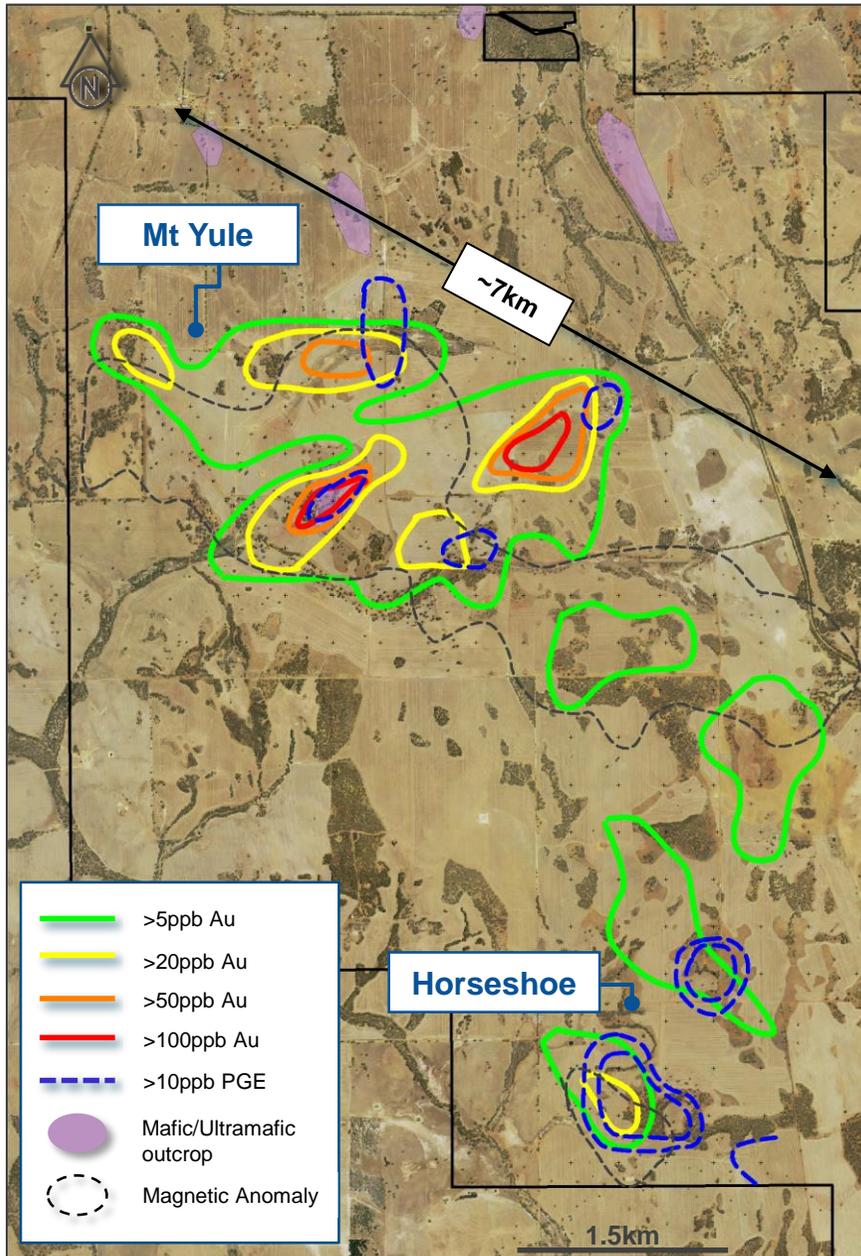
- Regional geophysics indicate that Moora is underlain by mafic/ultramafic intrusions similar to that which hosts the Julimar discovery
- There has been no drill testing of the fresh bedrock at Moora.
- Initial field program has defined 3 priority targets – **Bindi Bindi**, **Mt Yule** and **Horseshoe**





- 400 x 400m auger geochemistry returns up to **1,690ppm Ni**.
- **~6km long anomaly** coincident with linear magnetic and gravity highs.
- Coincident with mapped mafic/ultramafic outcrops.
- Results **validate** historic, shallow (<30m) Poseidon drilling
- No previous drill testing of fresh bedrock





## Mt Yule

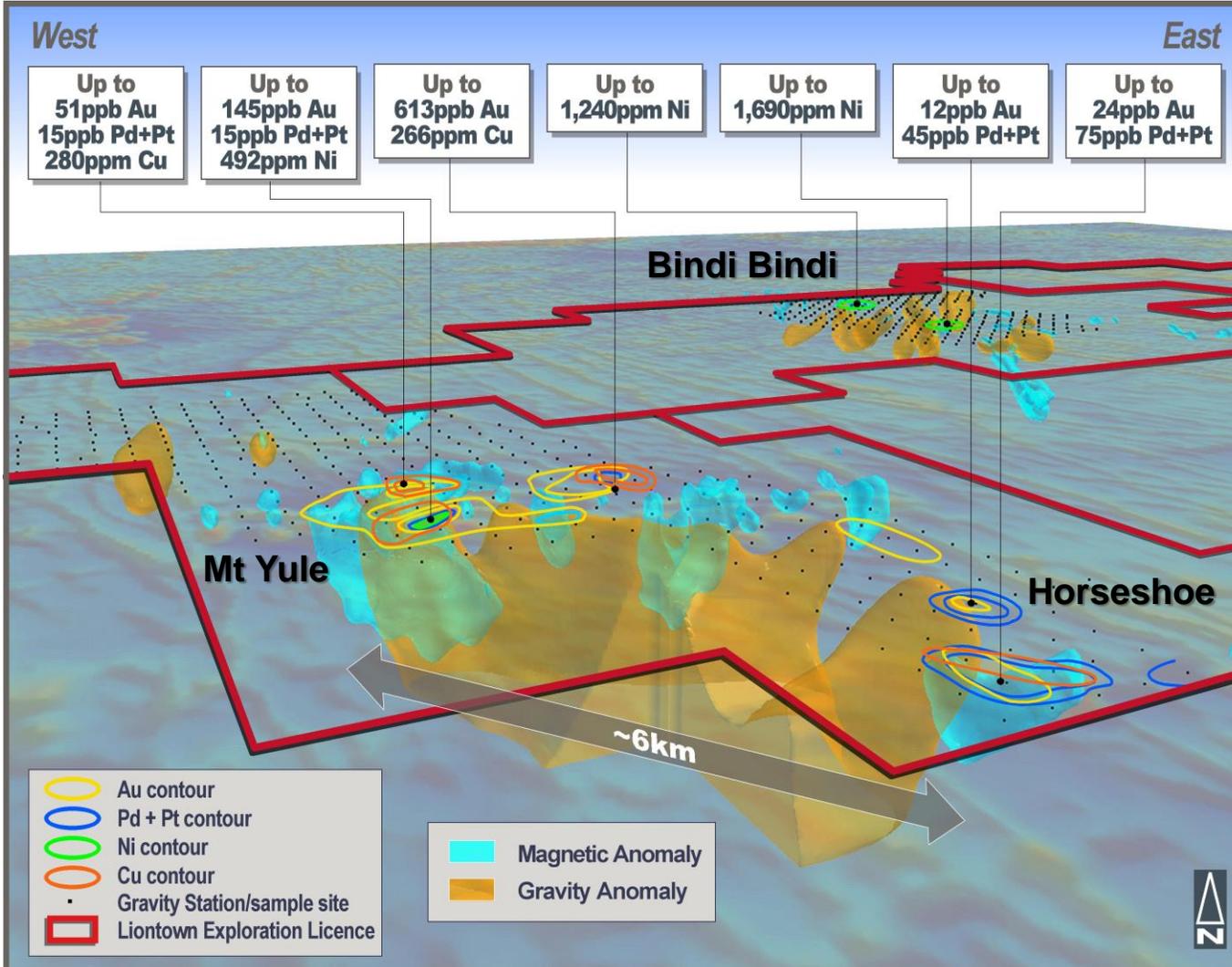
- Large, multi-element auger anomaly with up to:
  - **613ppb Au**
  - **492ppm Ni**
  - **288ppm Cu**
  - **15ppb Pd+Pt**
- Coincident with high order, regionally significant gravity/magnetic anomaly
- No previous exploration

## Horseshoe

- Strong PGE/Au auger anomaly with up to:
  - **75ppb Pd + Pt**
  - **24ppb Au**
- NW end of largely untested magnetic anomaly
- No previous exploration



# Initial results validate exploration concept



## Phase 1 (Q2/Q3 2020)

- Infill auger sampling – in progress
- Extend first pass, 400 x 400m gravity and auger sampling to adjacent areas - pending
- Airborne EM – July 2020
- **Total budget ~ \$500,000**

## Phase 2 (Q4 2020/Q1 2021)

- Ground EM (MLEM)
- Complete gravity/auger coverage
- Aircore drilling
- RC/Diamond drilling
- **Total budget ~ \$1,200,000**

## The only uncommitted “Tier 1” lithium resource in Australia, strengthened by exciting new targets



### Kathleen Valley Lithium-Tantalum Project



156Mt resource



Multiple opportunities to improve economics



Flexible development timeline aligned to demand



Updated PFS Q4 2020



### Moora Project



Ni-Cu-PGE-Au Project in an emerging mineral province



Initial results highly encouraging with follow up ongoing

**Projects are 100% owned and in a stable, established, investor friendly jurisdiction**



David Richards

Managing Director

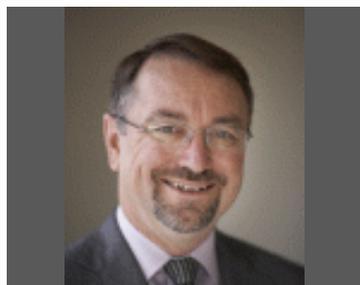
- +35 years
- Discovered multi-million ounce Vera Nancy Gold Deposits



Tim Goyder

Chairman

- +40 years
- Executive Chairman Chalice Gold Mines



Craig Williams

Non-Executive Director

- +40 years
- Founder and CEO of Equinox Minerals



Anthony Cipriano

Non-Executive Director

- +30 years
- Former Senior Partner at Deloitte



Steven Chadwick

Non-Executive Director

- +40 years
- Director of Lycopodium Limited



Adam Smits

Chief Operating Officer

- +20 years
- Former COO Nzuri Copper
- Mechanical Engineer



Craig Hasson

Chief Financial Officer & Company Secretary

- +15 years
- Range of finance and commercial positions
- Former Ernst & Young



Jamie Day

Exploration Manager

- +20 years
- Former Senior Geologist for Independence Group, Mincor & Newmont

## Corporate Snapshot

**ASX CODE: LTR**

Shares on Issue	~1,711M
Market Capitalisation	~\$205M (AT 12cps)
Major Shareholder	Tim Goyder~18%
Top 20 Shareholders	~43%
Cash	~A\$5.8M (as at 31-Mar-20)

# Liontown

## THANK YOU



For more information visit  
[www.ltresources.com.au](http://www.ltresources.com.au)



# Appendix 1

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## PEER COMPARISON INFORMATION



# Peer Comparison Information – Mineral Resource Estimates



Company	Project	Stage	Measured Mt	Indicated Mt	Inferred Mt	Global MRE Mt	MRE Grade	Information Source
<b>Liontown Resources</b>	Kathleen Valley	Development	20	105	32	156	1.35	ASX Announcement, 11 May 2020: <a href="https://www.ltresources.com.au">https://www.ltresources.com.au</a>
	Buldanina	Scoping	0	9.1	5.9	15	0.97	ASX Announcement, 11 August 2019: <a href="https://www.ltresources.com.au">https://www.ltresources.com.au</a>
<b>Pilbara Minerals</b>	Pilgangoora	Operating	22.8	112.8	90.4	226	1.27	ASX Announcement, 17 Sept 2018: <a href="http://www.pilbaraminerals.com.au/site/PDF/2235_0/PilgangooraReserveandResourceUpgrade">http://www.pilbaraminerals.com.au/site/PDF/2235_0/PilgangooraReserveandResourceUpgrade</a>
<b>Wesfarmers / SQM</b>	Mt Holland	Development	66	106	17	189	1.50	ASX Announcement, 19 March 2018: <a href="https://wcsecure.weblink.com.au/pdf/KDR/01963105.pdf">https://wcsecure.weblink.com.au/pdf/KDR/01963105.pdf</a>
<b>Tianqi / Albermarle</b>	Greenbushes	Operating	0.6	117.9	2.1	120.6	2.40	Talison Lithium 1st Quarter FY 2013 Results: <a href="https://www.sedar.com/CheckCode.do">https://www.sedar.com/CheckCode.do</a>
<b>Piedmont Lithium</b>	Piedmont	Development	0	13.9	14	27.9	1.11	ASX Announcement, 25 June 2019: <a href="https://d1io3yog0oux5.cloudfront.net/_aee37ed4f1b7c04614dea0a7b549e5c2/piedmontlithium/db/336/2543/pdf/190625+-+Resource+Update_Final.pdf">https://d1io3yog0oux5.cloudfront.net/_aee37ed4f1b7c04614dea0a7b549e5c2/piedmontlithium/db/336/2543/pdf/190625+-+Resource+Update_Final.pdf</a>
<b>Sigma Lithium</b>	Grota de Cirilo	Development	26.3	19.4	6.6	52.4	1.43	Investor Presentation, January 2020: <a href="http://www.sigmalithiumresources.com/wp-content/uploads/2020.01.14-Sigma-Marketing-Presentation.pdf">http://www.sigmalithiumresources.com/wp-content/uploads/2020.01.14-Sigma-Marketing-Presentation.pdf</a>
<b>Mineral Resources / Jiangxi Ganfeng</b>	Mt Marion	Operating	0	22.7	48.7	71.3	1.37	ASX Announcement, 28th October: <a href="https://www.neometals.com.au/reports/2018-10-31-1697-MINMtMario.pdf">https://www.neometals.com.au/reports/2018-10-31-1697-MINMtMario.pdf</a>
<b>Altura Mining</b>	Pilgangoora	Operating	7.4	34.2	4.1	45.7	1.06	ASX Announcement, 9 October 2019: <a href="https://alturamining.com/wp-content/uploads/2019/10/1982592.pdf">https://alturamining.com/wp-content/uploads/2019/10/1982592.pdf</a>
<b>Core Lithium</b>	Finnis	Development	1.1	1.9	5.9	8.9	1.35	Investor Presentation, November 2019 – <a href="https://wcsecure.weblink.com.au/pdf/CXO/02178950.pdf">https://wcsecure.weblink.com.au/pdf/CXO/02178950.pdf</a>
<b>Mineral Resources / Albermarle</b>	Wodgina	Care & Maintenance	0	177	59.9	236.9	1.19	ASX Announcement, 23 October 2018 (only pegmatite resource used) - <a href="http://clients3.weblink.com.au/pdf/MIN/02037855.pdf">http://clients3.weblink.com.au/pdf/MIN/02037855.pdf</a>

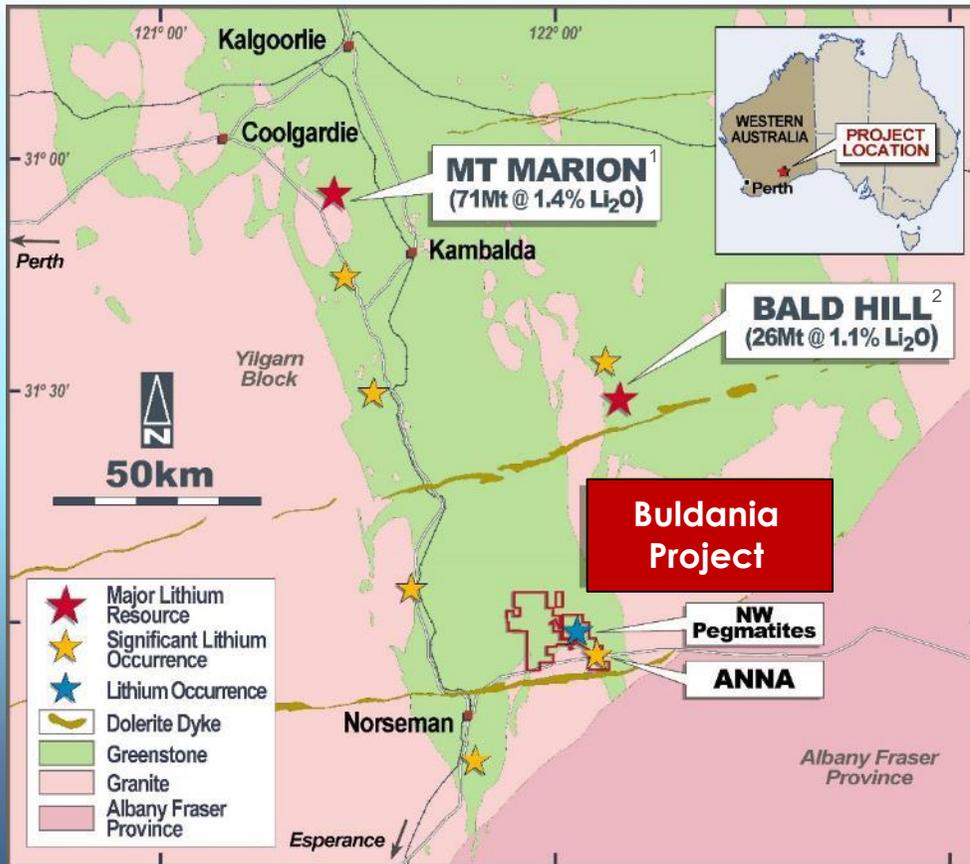
## Appendix 2

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BULDANIA LITHIUM PROJECT  
(LIONTOWN 100%)



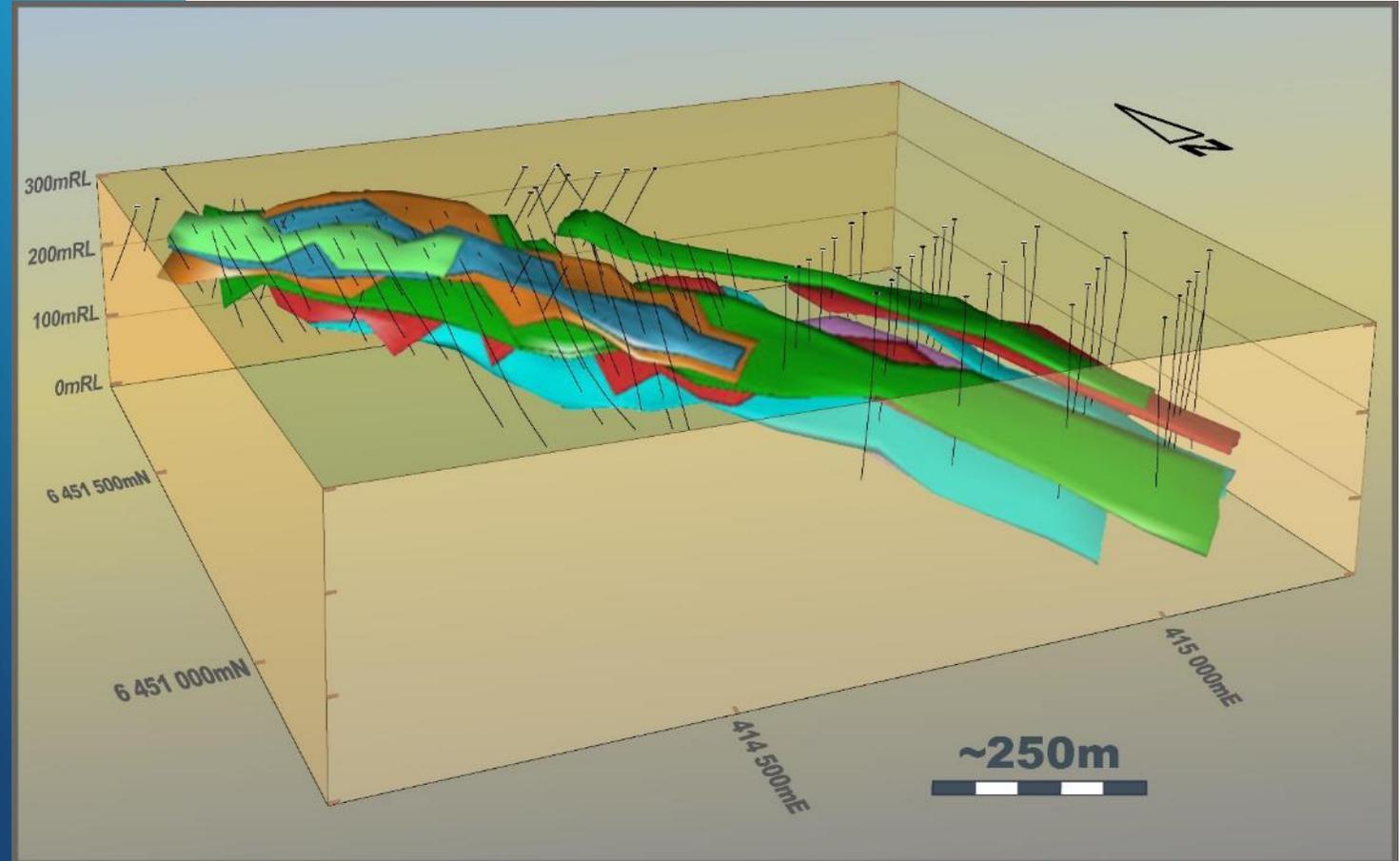
# Buldania is Located in a Lithium-Rich Mineral Province



- 1 Outcropping, fresh, spodumene-related mineralisation
- 2 Mineralisation at Anna extends to the SE under shallow cover – strike length >1.4km and open
- 3 Similar geology to the Mt Marion and Bald Hill lithium deposits (71Mt and 26Mt respectively)
- 4 Good infrastructure – located on Eyre Highway ~30km east of Kalgoorlie-Esperance railway
- 5 Liontown has 100% of the lithium and related metal rights
- 6 Part of larger, +150km<sup>2</sup> strategic land holding

<sup>1</sup>Mt Marion – please refer to Peer Comparison table – slide 25.  
<sup>2</sup> Bald Hill source: <http://www.allianceminerals.com.au/projects/>

# Maiden Mineral Resource Estimate 14.9Mt @ 1.0% Li<sub>2</sub>O



The completion of the MRE  
complements flagship Kathleen Valley  
Lithium Project



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