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



ASX : LTR | September 2020





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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% Li₂O” released on the 11th May 2020 which is available on 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 2nd December 2019 which is available on 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 9th June 2020 which is available on 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”, “Strong gold, PGE, nickel and copper anomalism returned from initial fieldwork completed at 100%-owned Moora Project, WA”, “Further outstanding gold, PGE and nickel results from 100%-owned Moora Project, WA” and “Large, strong EM conductors identified at the Moora Project, WA” released on 16th April 2020, 13th May 2020, 13th July 2020 and 24th September 2020 which are available on 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 8th November 2019 which is available on www.ltresources.com.au.

The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market 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% Li_2O & 130ppm Ta_2O_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 Au-PGE-Ni-Cu province
 - Largely unexplored
 - Strong early results
- **Buldanina Project**
 - ~15Mt @ 1.0% Li_2O
 - Exploration upside

Low Risk



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

Kathleen Valley Lithium Project

Moora Ni-Cu-PGE -Au Project

WESTERN AUSTRALIA

KALGOORLIE

PERTH

Buldanina Lithium Project

Kathleen Valley Lithium-Tantalum Project

WESTERN AUSTRALIA
100%

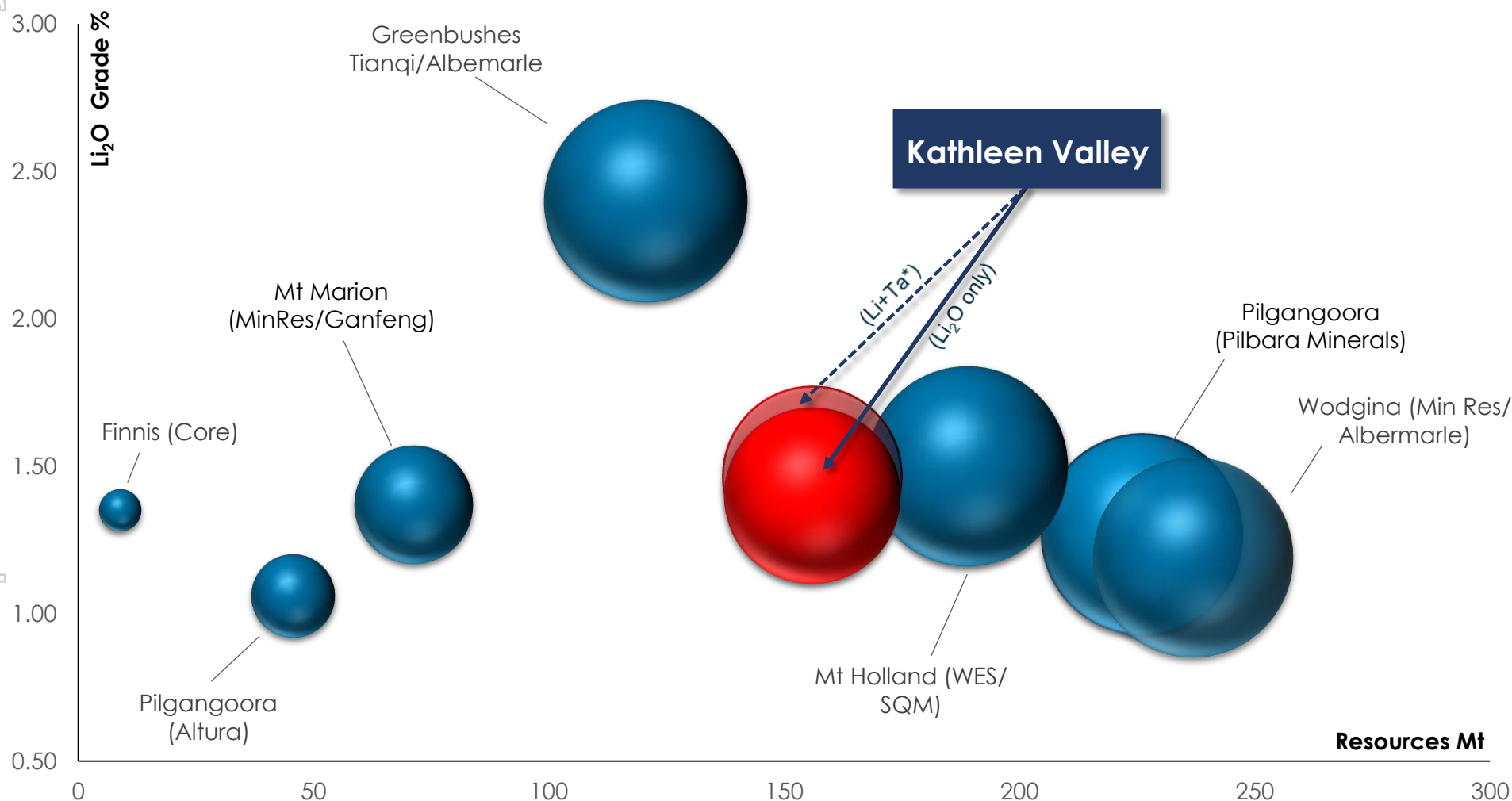


A Tier 1 lithium resource



Australian Hard Rock Lithium Operations and Advanced Projects

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Tonnes x Grade | Li₂O Only

Refer to Appendix (Slide 25) for Peer Comparison Information including Resource Classifications

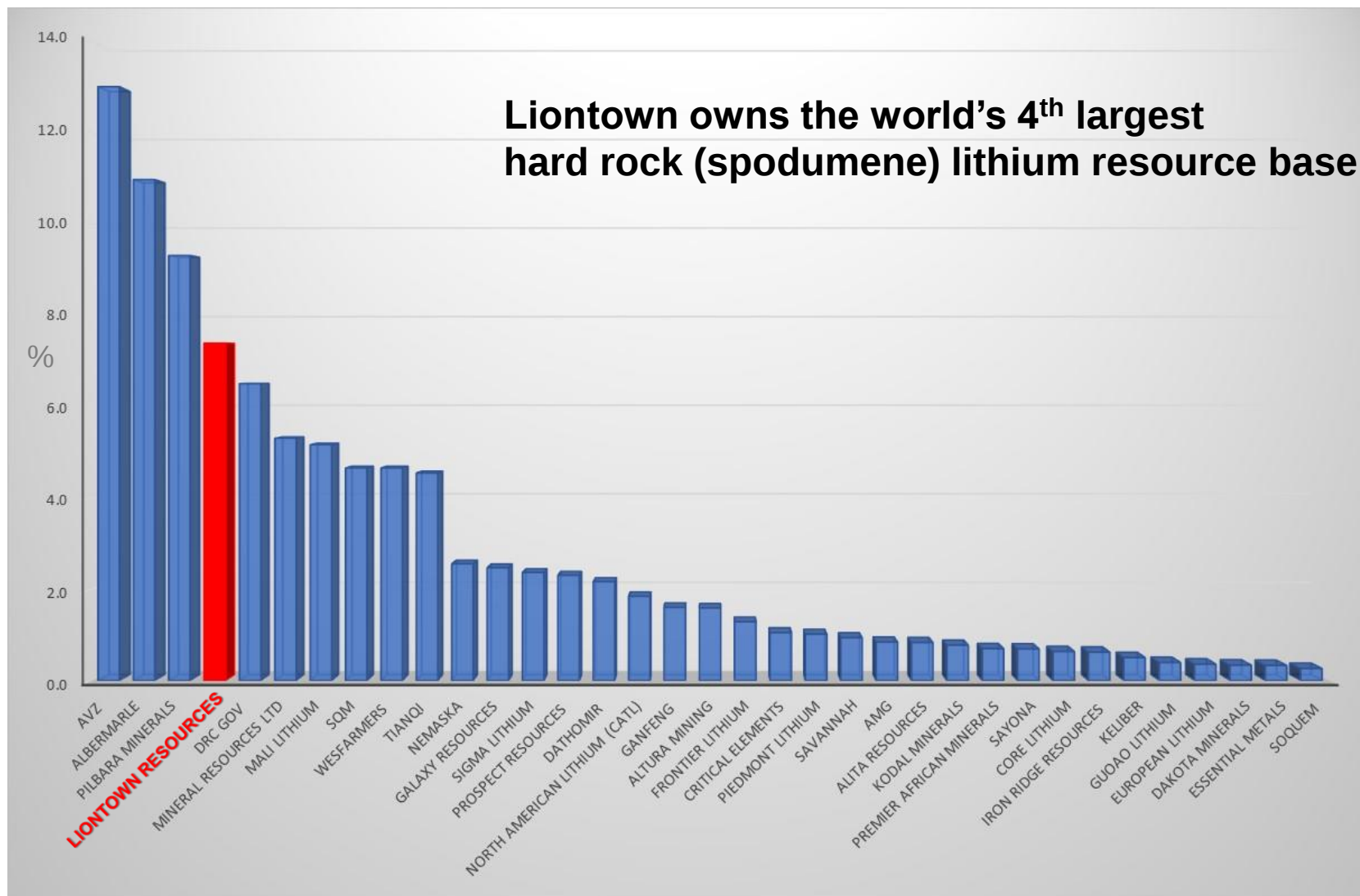
*Refer to Appendix (Slide 26) for lithium equivalents parameters and calculations

A Globally Significant Deposit

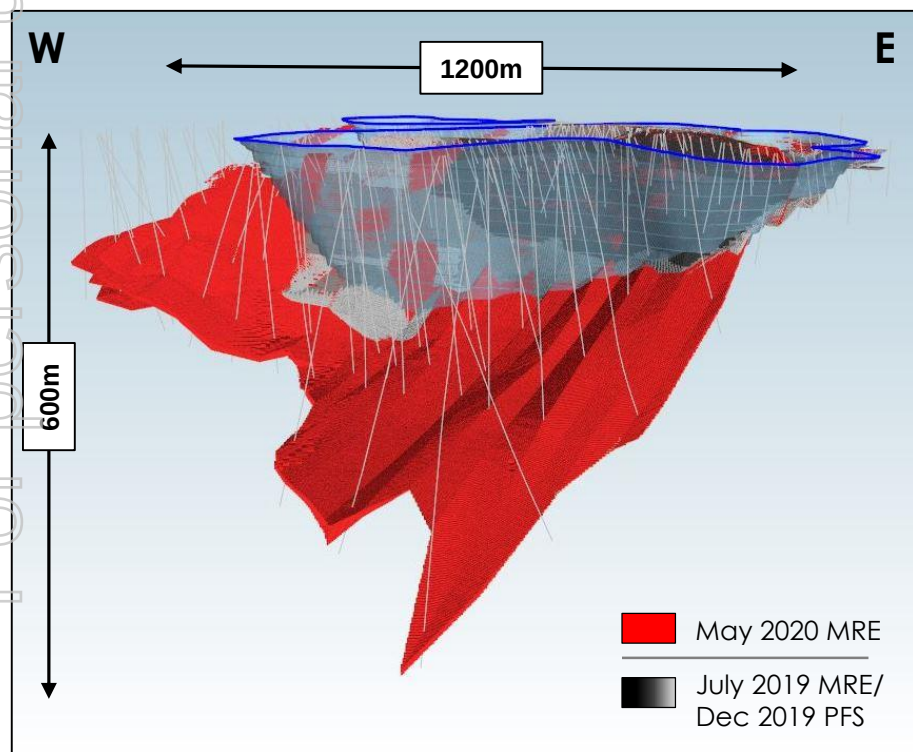
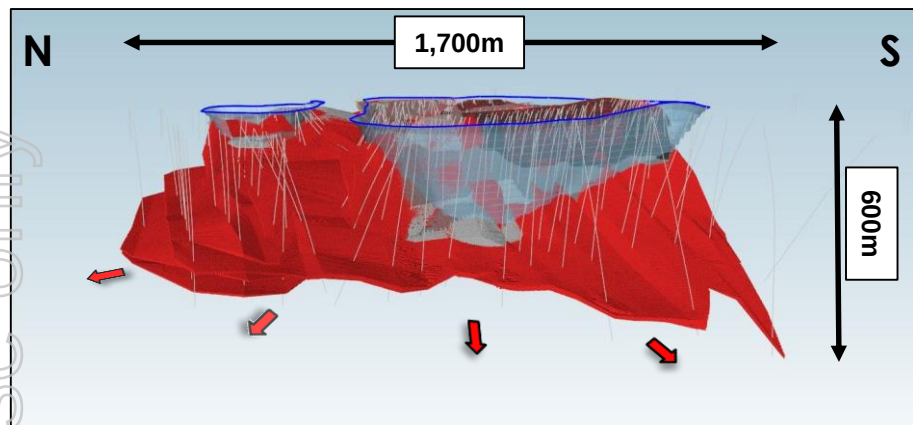


World Hard Rock Lithium (Spodumene-dominant) Operations and Advanced Projects – % Attributable Resources by Company Ownership

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*Refer to Appendix (Slides 27 and 28) for source data



80% Measured and Indicated

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

Cut-off Li ₂ O%	Mt	Li ₂ O%	Ta ₂ O ₅ (ppm)
0.4	158	1.34	128
0.55	156	1.35	130
0.6	155	1.35	130
0.8	148	1.39	130
1.0	130	1.45	131
1.2	100	1.56	132
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.

Based on Jul 2019 MRE – 74.9Mt @ 1.3% Li₂O

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SC6.1:
295Ktpa



Mining:
2Mtpa



Reserve:
50Mt @ 1.2% Li₂O



Life of Mine
26 years

A\$

Total Free Cash
Flow +\$1.9B

NPV¹

\$507M

IRR

25.1%

Payback Period

~4 YEARS

Opex²
(excl. Ta credits)

\$564/t conc.
(US\$406/t conc.)

Ave. Strip Ratio

7.7:1

Ave. SC6 Price³

A\$960/t
(US\$690/t)

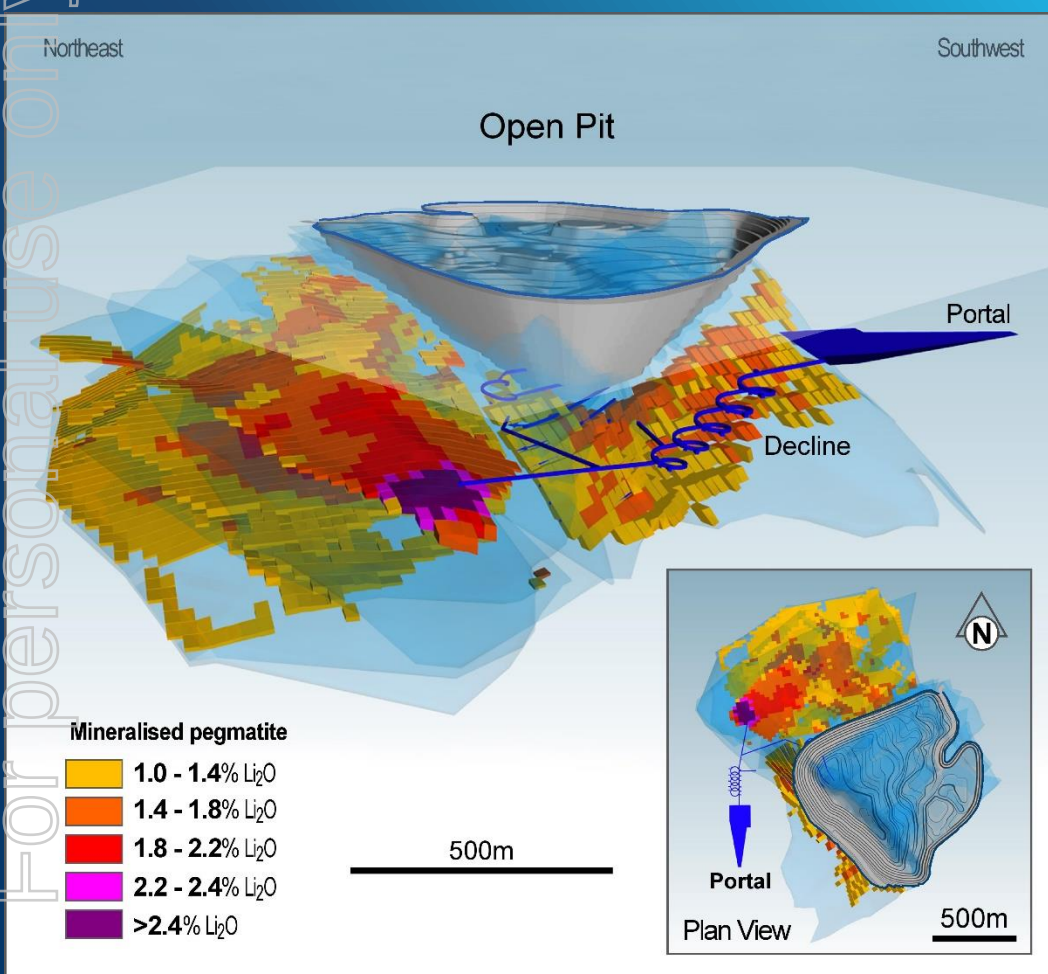
Capex

\$240M

¹ 8% (real). ² Operating costs include all mining, processing, transport, state and private royalties, freight to port, port costs and site administration and overhead costs. ³ 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



Lontown has engaged Lycopodium Minerals and other highly reputable and experienced consultants who will ensure a high standard of work

1

Underground & Optimised Open Pit Mining

- Access higher grades sooner
- Reduce unit costs by:
 - Lowering mine dilution
 - Increasing concentrate production
- Shorten payback

2

Process Improvements

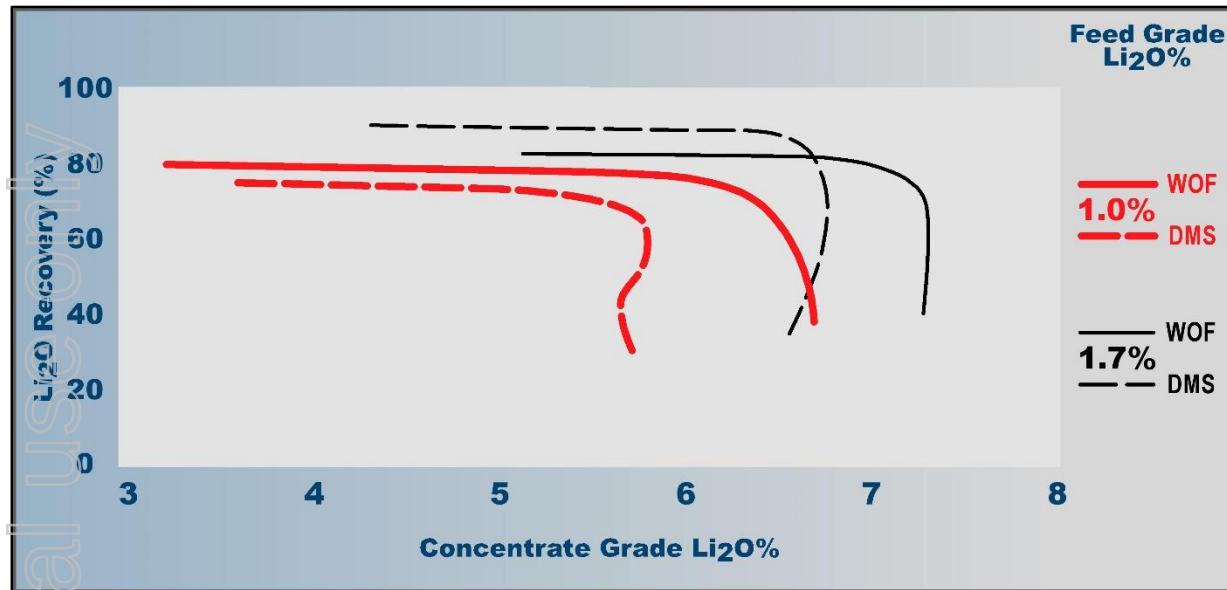
- Tantalum circuit
- Whole Ore Flotation
 - Simpler
 - Higher grade concentrates
 - Maximises tantalum recovery

3

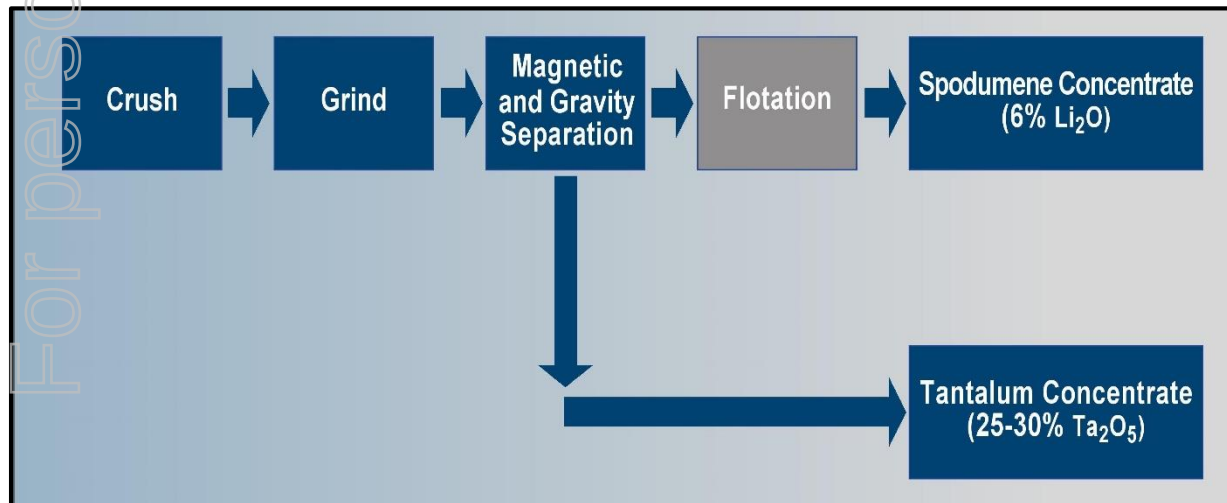
Other

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

Updated PFS – Proposed Processing Flowsheet



WOF v DMS – Grade and Recovery Relationships



Proposed Whole Ore Flotation (WOF) Flowsheet

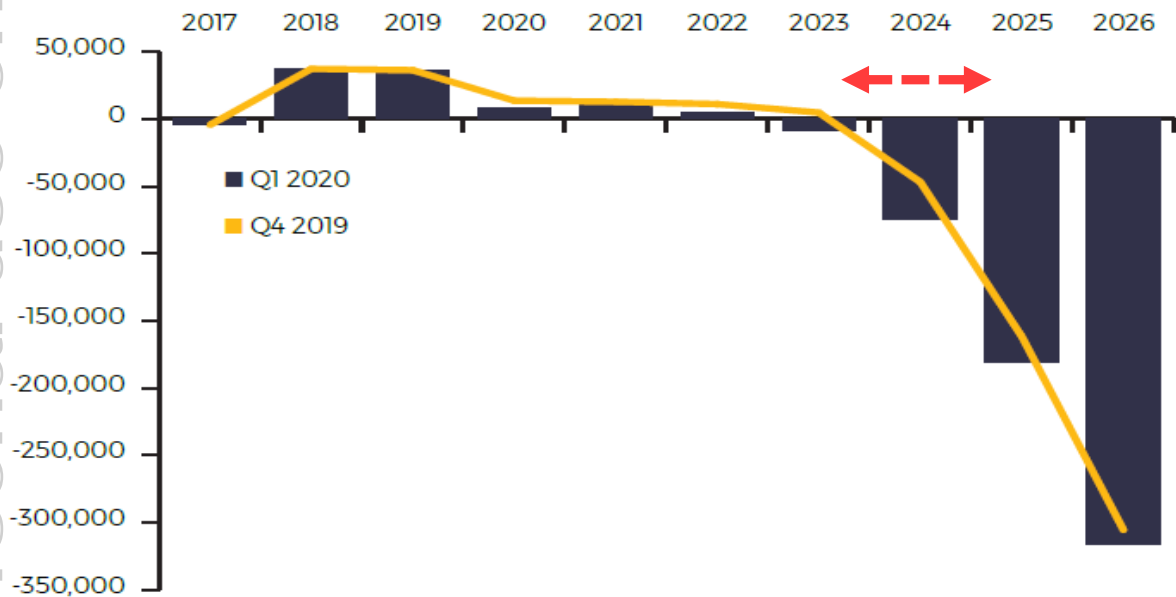
2020 Test Work Outcomes

- WOF produces higher grade concentrate compared with conventional DMS/Flotation process.
- Tantalum recovery of 56% at a grade of 15.3% Ta_2O_5 achieved.
- Tantalum mineralogy appears suitable for upgrade of concentrate to 25 – 30% Ta_2O_5 at off site facility.
- Magnetic separation reduces iron in flotation feed by up to 55%.



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 is on track 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

EV industry hits a major milestone: 1 million public charge points globally

June 2020:

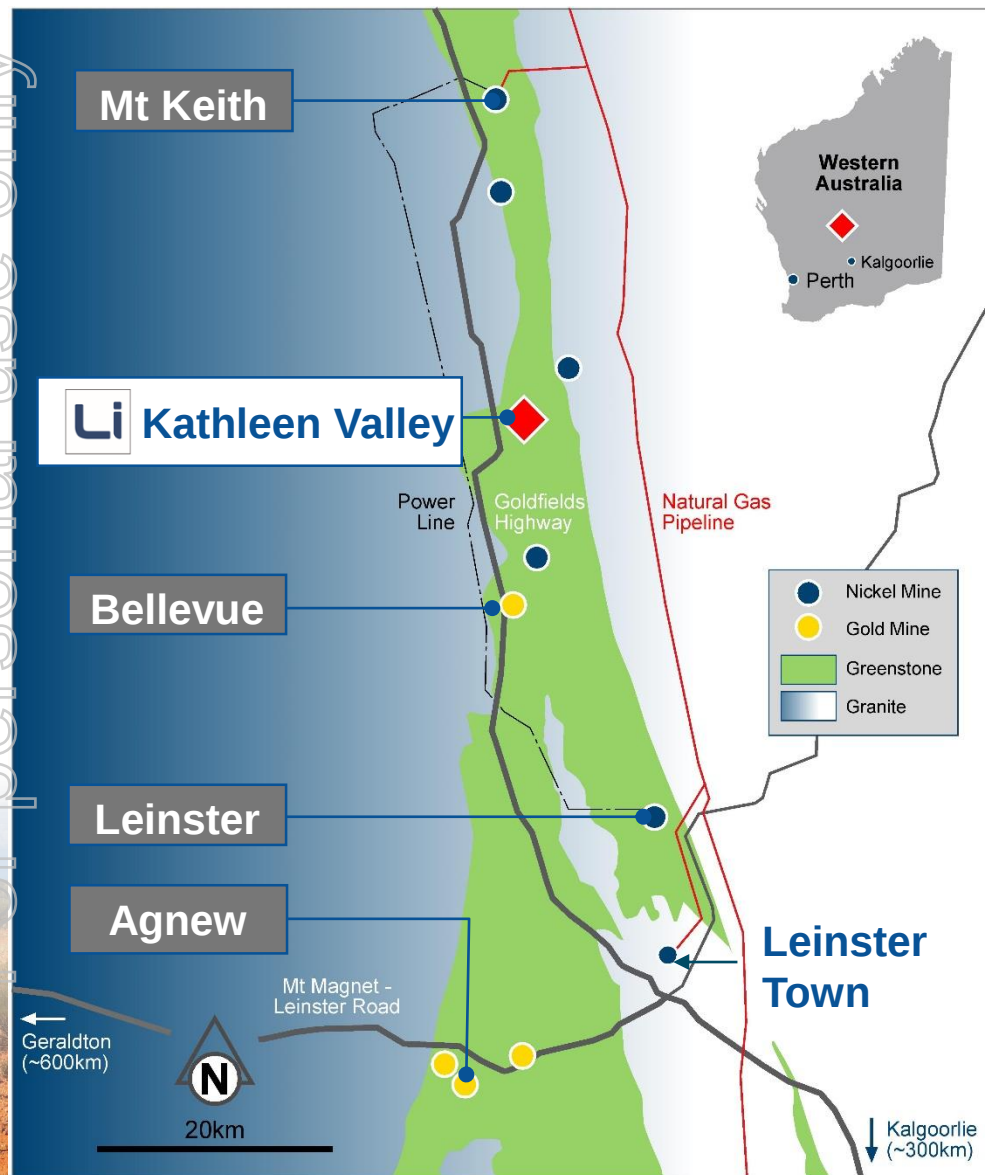
CATL to produce battery with 16-year lifespan capable of 2M km of travel

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

July 2020:

S&P Global Platts predicts global passenger EV sales forecast to reach 6.2 million units by 2024 and Deloitte forecasts EVs to make up a third of new cars sold globally by 2030

Well serviced and highly active mining region



Major Ni & Au Mines



Goldfields Highway



Sealed Airstrips



Town of Leinster



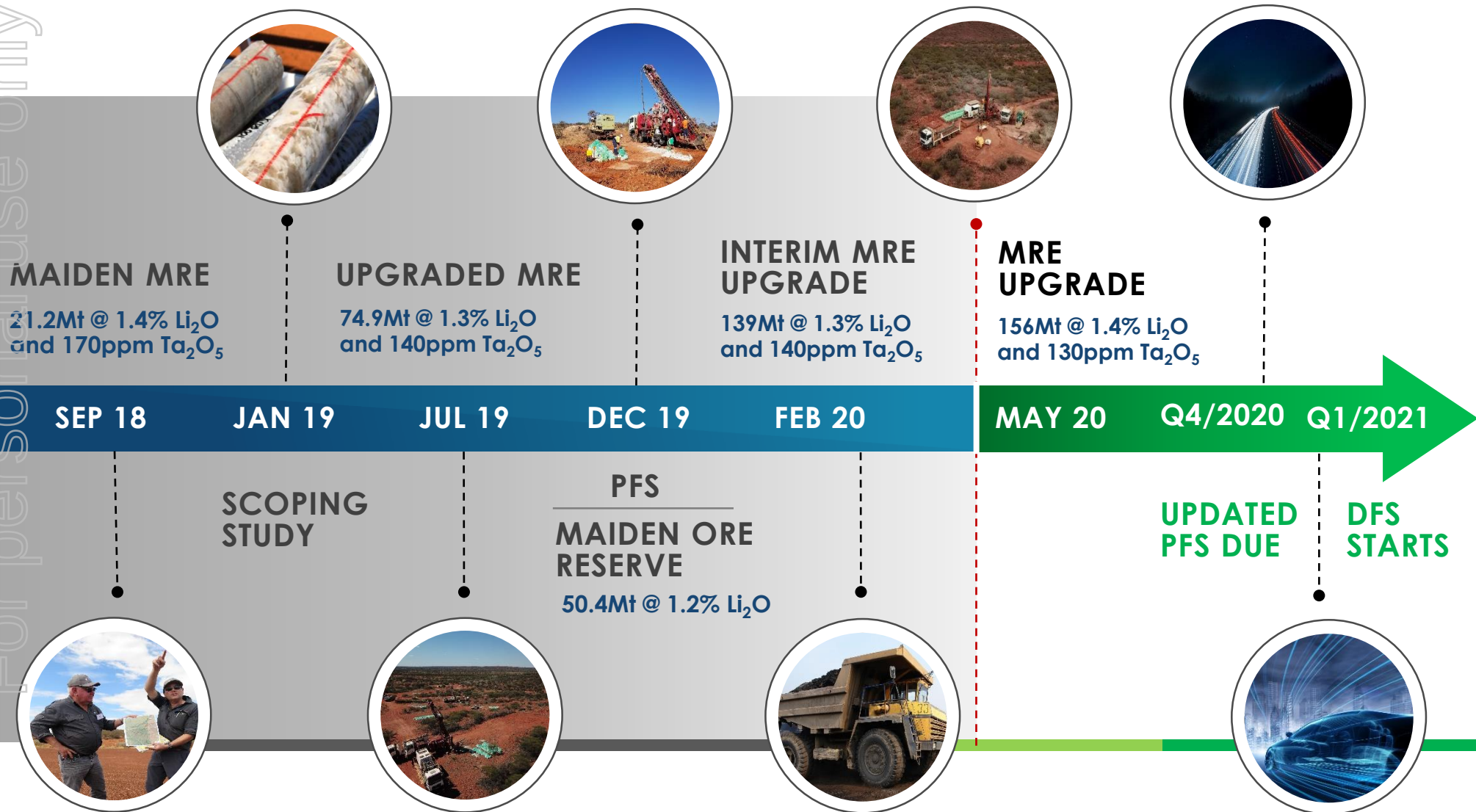
Power



Natural Gas

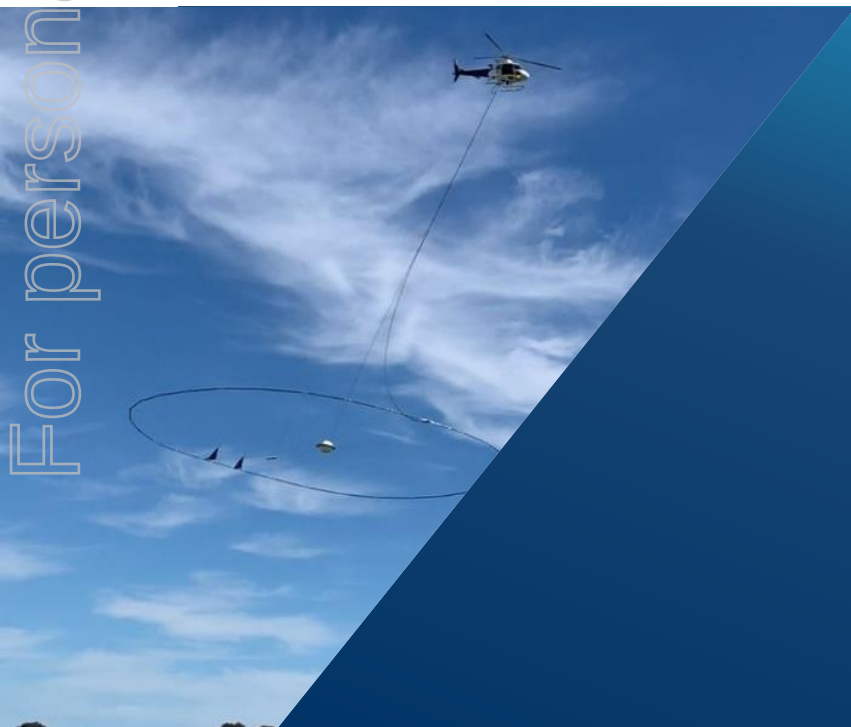
Consistent delivery of results with targets met or exceeded

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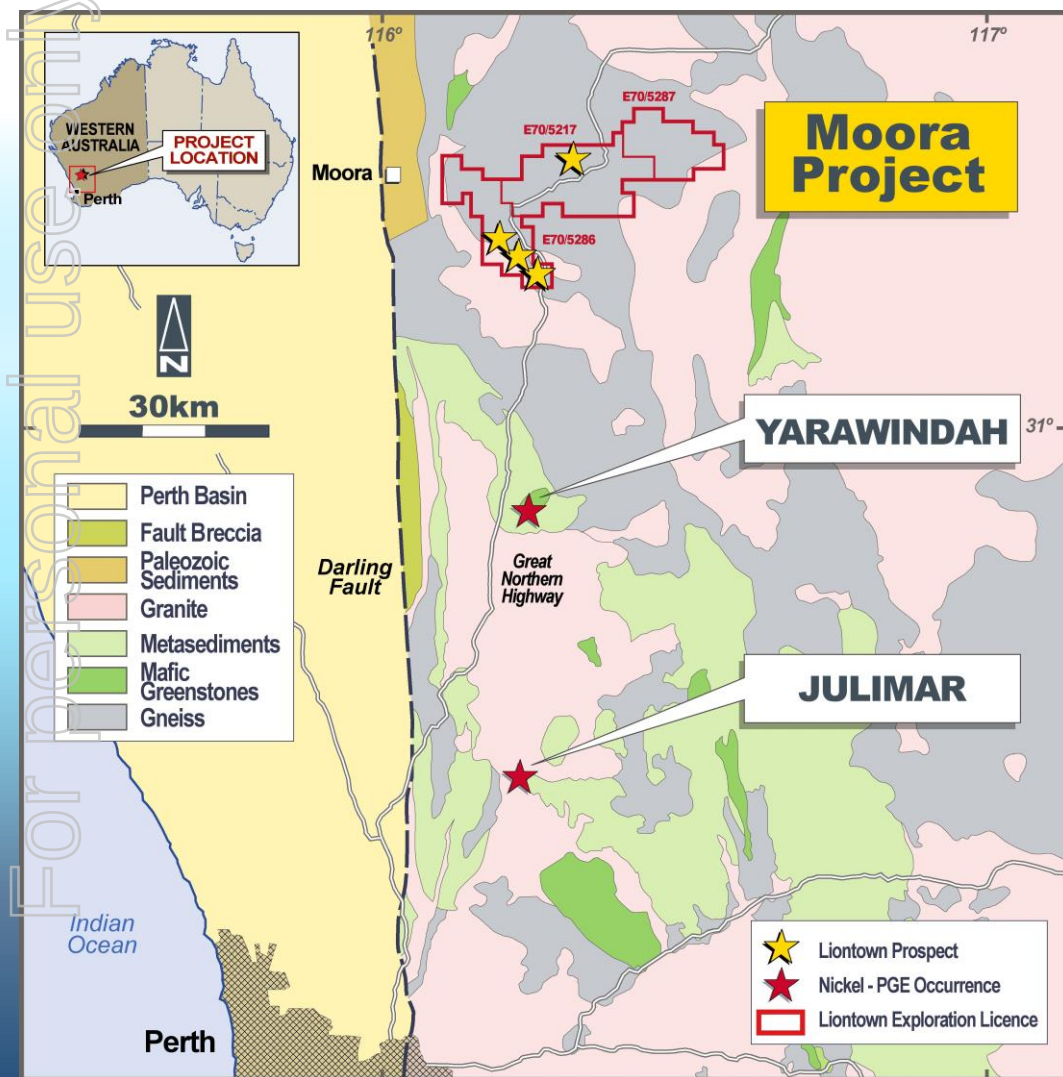


Moora Au-PGE-Ni-Cu Project

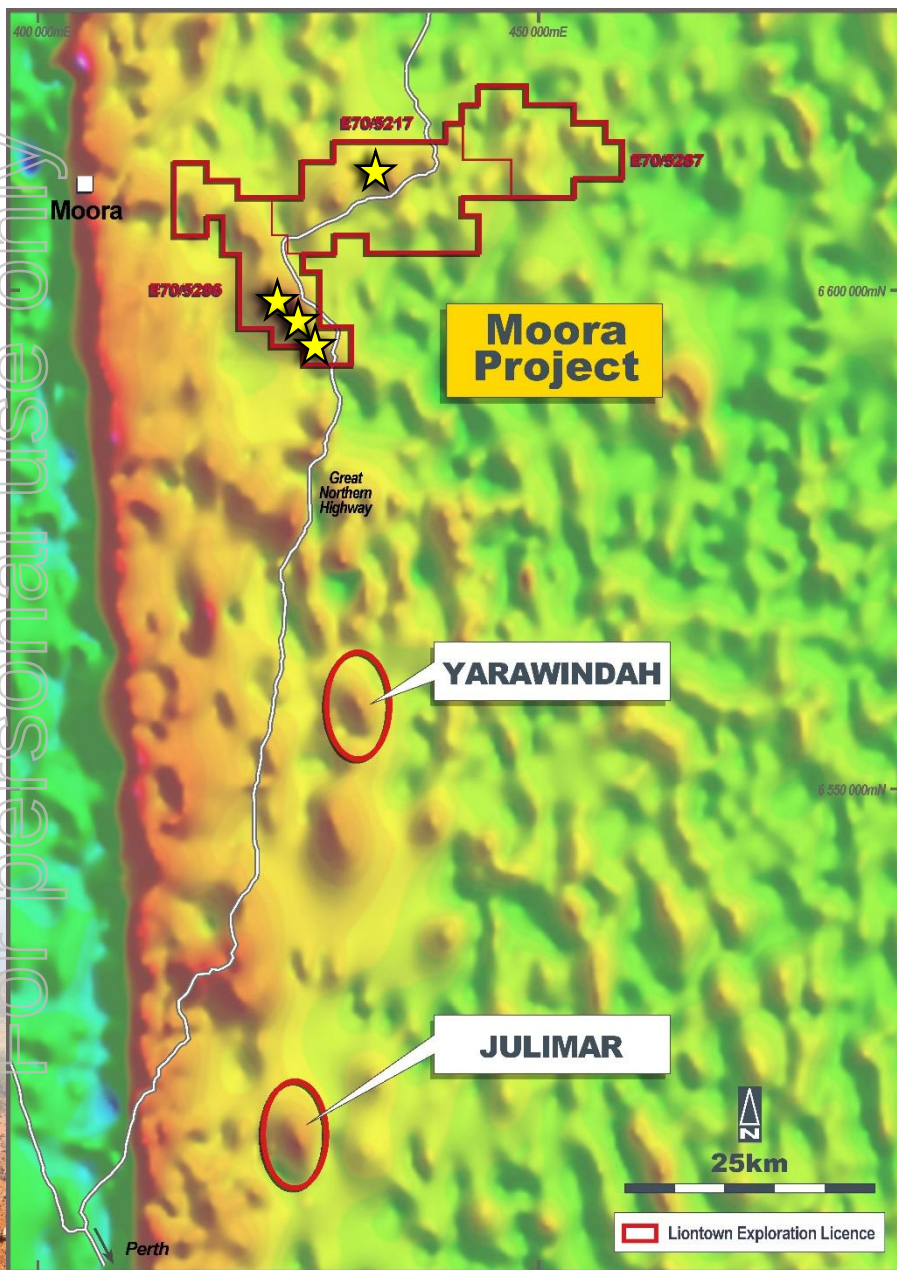
WESTERN AUSTRALIA
100%



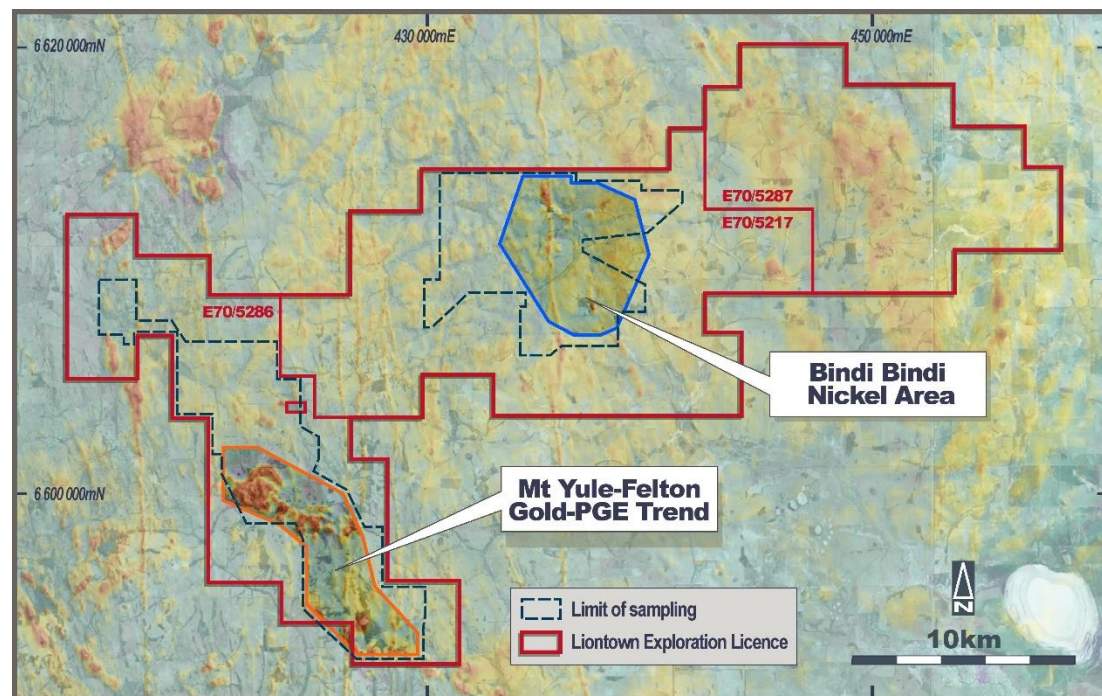
Moora is located in an emerging precious and base metal mineral province

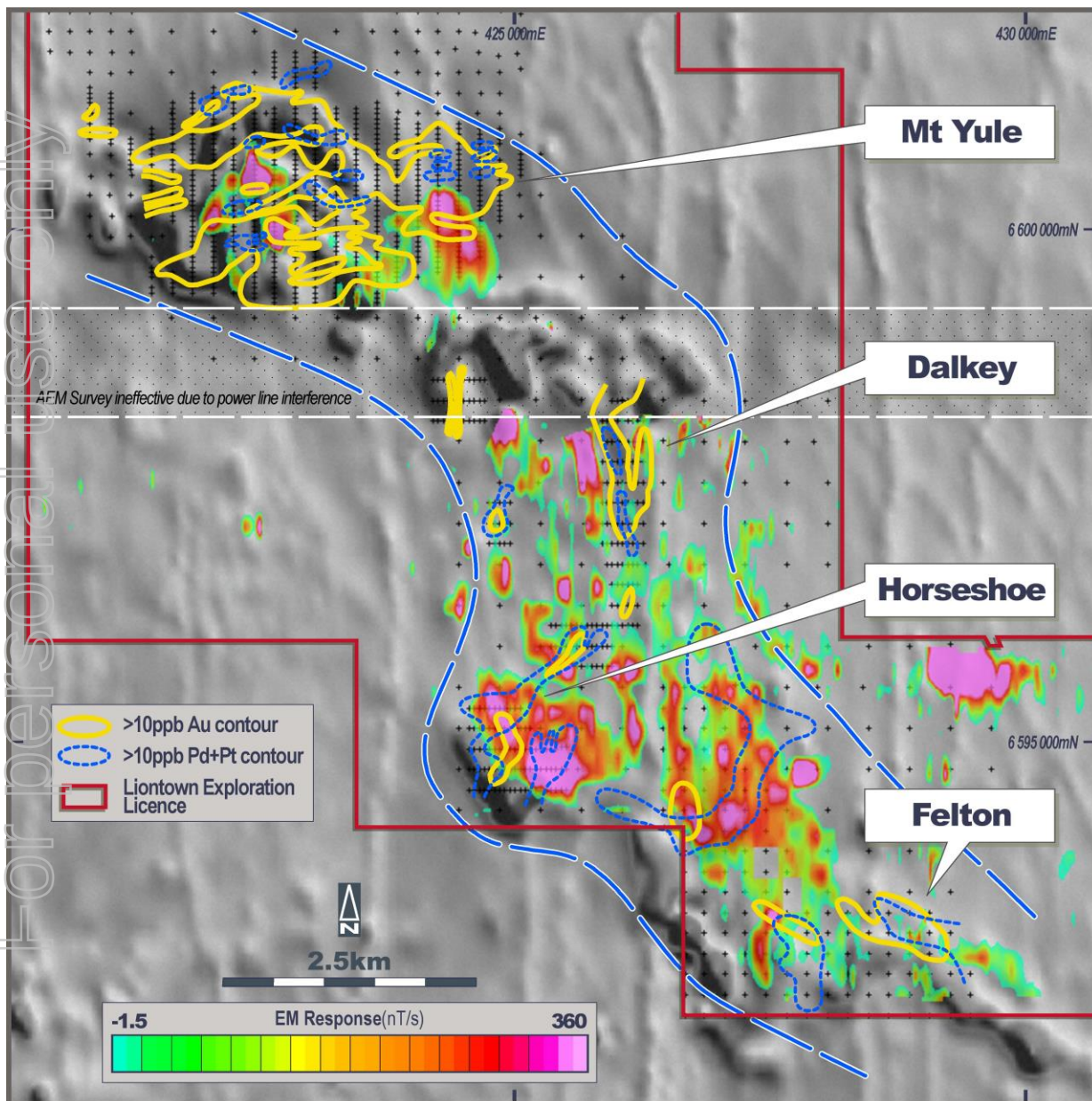


- 1 Same geological terrain as the Julimar Ni-PGE-Au discovery by Chalice Gold Mines¹.
- 2 Tenements acquired in 2018 and 2019 as part of generative exploration strategy for battery metals
- 3 Limited historical surface geochemistry and shallow drilling has recorded strongly anomalous nickel, copper, PGEs & gold
- 4 Most of Project area is unexplored
- 5 100%-owned, granted tenure covering 467km² – 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 programs have defined 2 priority target areas – **Mt Yule/Felton Trend** and **Bindi Bindi**





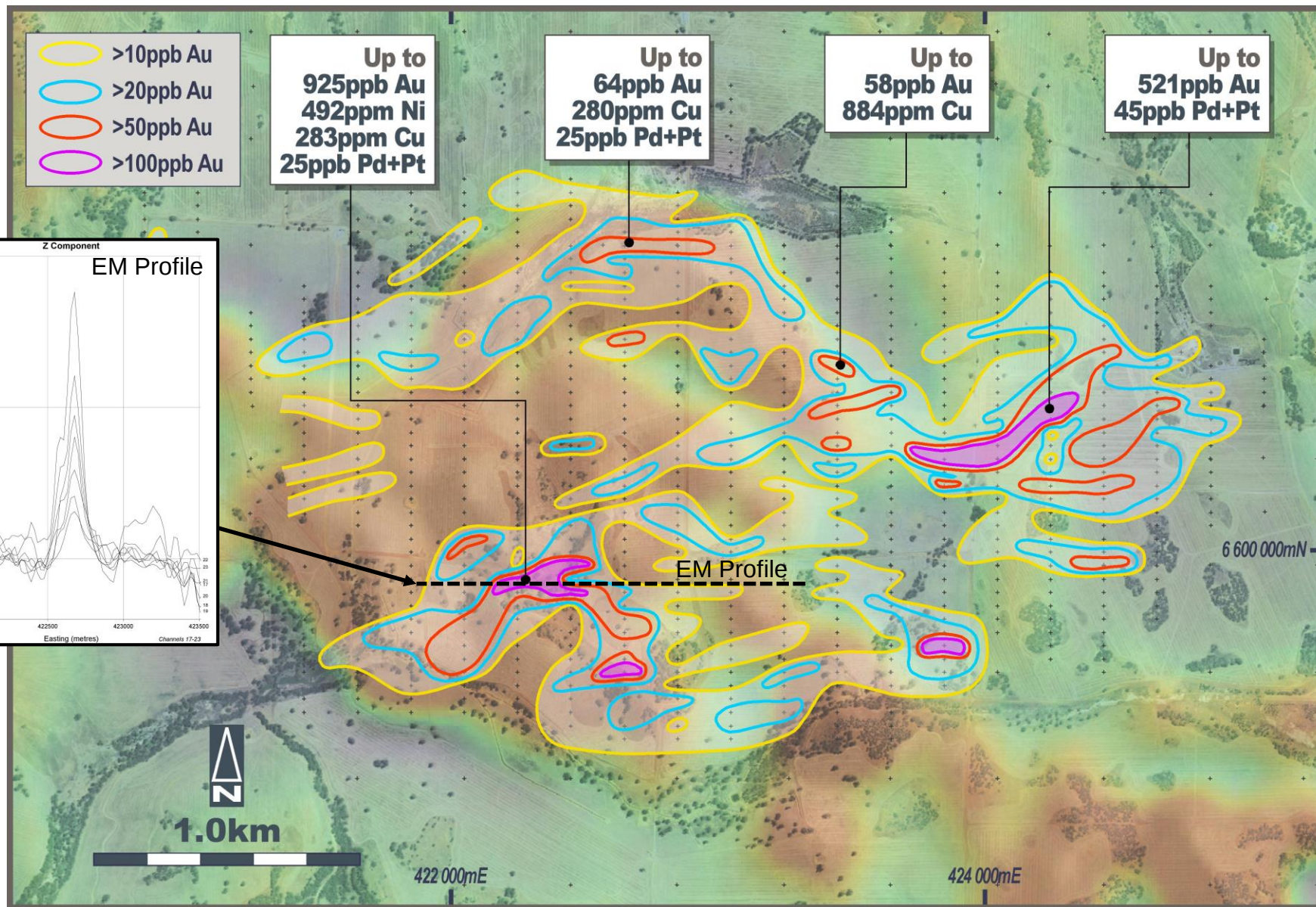
- 15km long, 2.5km wide zone with multiple, coincident Au-PGE and magnetic anomalies
- Individual auger assays up to:
 - **925ppb (0.92g/t) Au**
 - **75ppb Pd+Pt**
 - **492ppm Ni**
 - **884ppm Cu**
- Multiple plus 100ppb (0.1g/t) Au zones
- Airborne EM survey defines multiple late-time responses indicating possible sulphide-related mineralisation



Mt Yule Prospect – 3.6 x 2.2km, multi-element anomaly



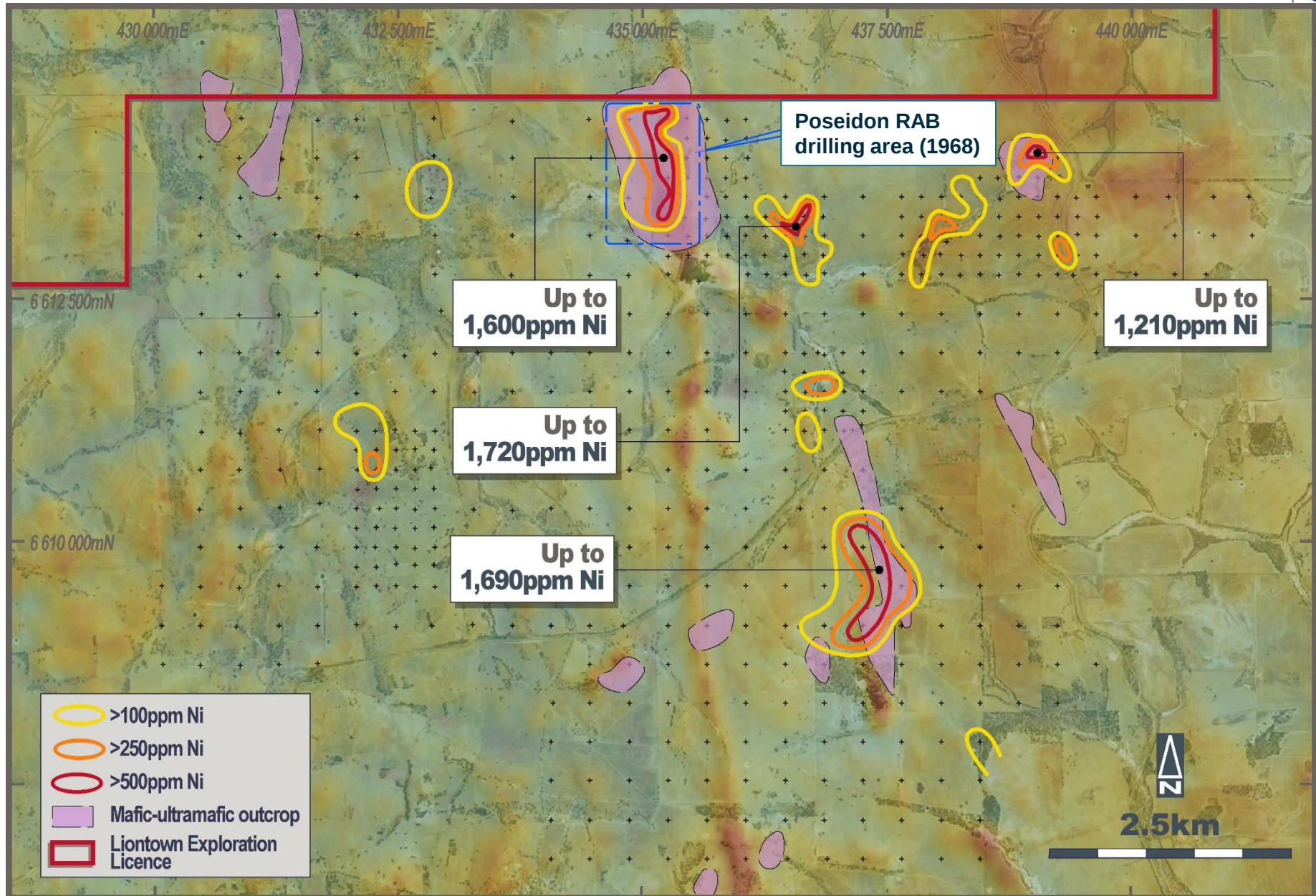
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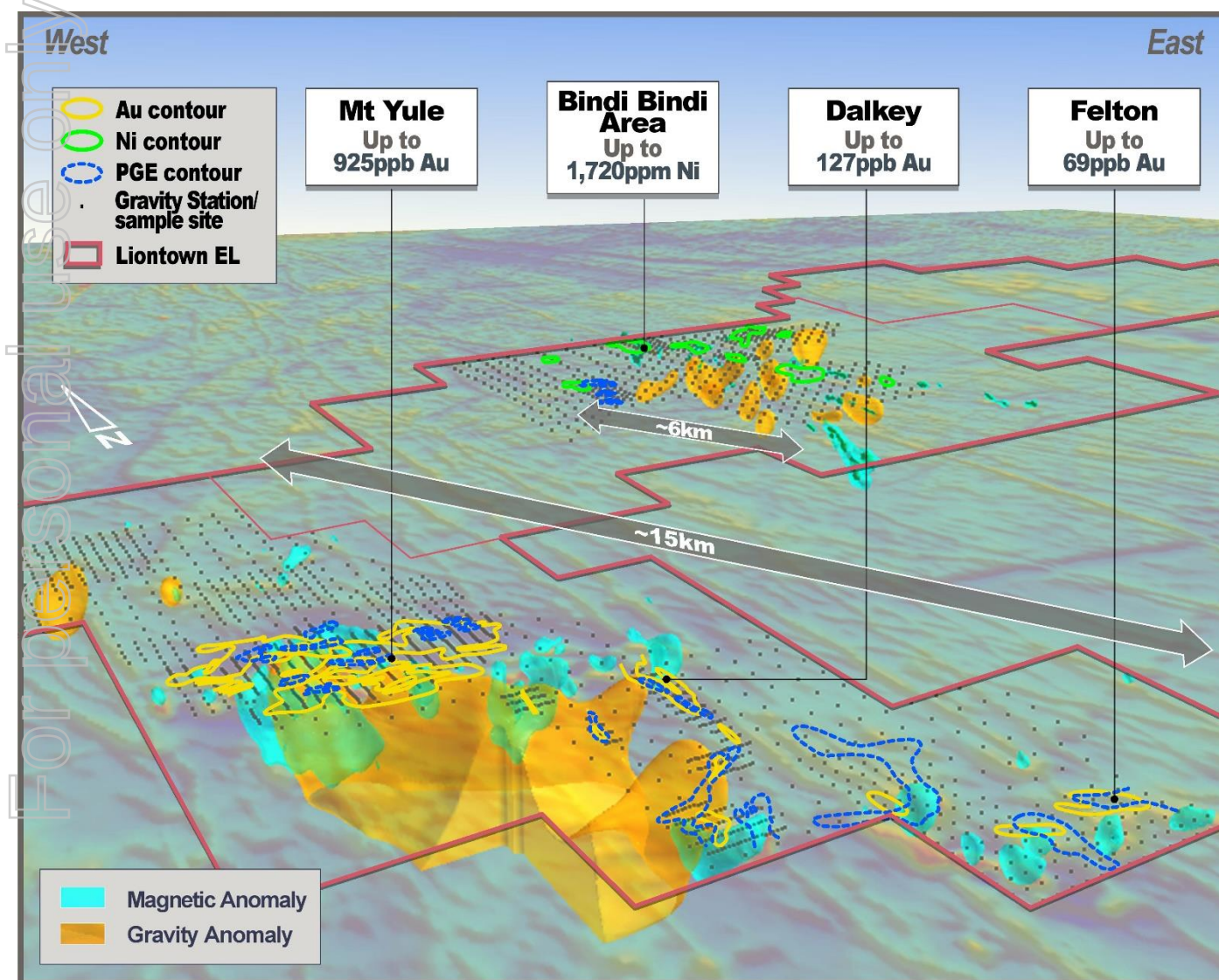
Bindi Bindi Nickel Area – Historic intersections up to 21m @ 0.5% Ni from 1.5m

Li

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Results continue to validate exploration concept



Phase 1 (Q2/Q3 2020)

- Infill auger sampling – phase 1
- Extend first pass auger sampling to adjacent areas
- Airborne EM
- **Total budget ~ \$500,000**

Phase 2 (Q4 2020/Q1 2021)

- Ground EM (MLEM) – MYFC and Bindi Bindi Area
- Aircore drilling
- RC/Diamond drilling
- Complete gravity/auger coverage
- **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

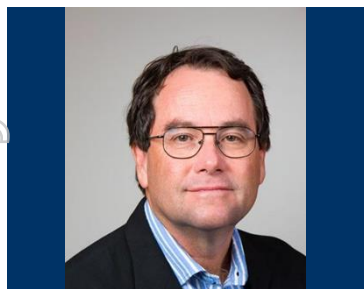


Au-PGE-Ni-Cu Project in an emerging mineral province



Exceptional early results 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	~1,713M
Market Capitalisation	~\$317M (AT 18.5cps)
Major Shareholder	Tim Goyder~18%
Top 20 Shareholders	~43%
Cash	~\$6.5M (as at 31-Aug-20)

Liontown

THANK YOU

For more information visit
www.ltresources.com.au



Appendix 1

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

Kathleen Valley – Lithium Equivalency ($\text{Li}_2\text{O} + \text{Ta}_2\text{O}_5$) Parameters



Inputs			Outputs	Li2O%
Tantalite (Ta_2O_5) \$/lb	64 (B2)	US\$ (current market price)		
Spodumene \$/tonne	689 (B3)	US\$ (per 2019 LTR PFS)		
Tantalite recovery	56% (B4)	Per LTR testwork	Ta2O5 =	0.12 (F4)
Spodumene Recovery	76% (B5)	Per LTR testwork		
Ta2O5 Grade	30% (B6)		Equiv Li2O grade =	1.47
Li2O Grade	6% (B7)		(Li2O% + Ta2O5)	
Grade Ta2O5 in resource	130ppm (B9)	(per resource)		
Grade Li2O in resource	1.35% (B10)	(per resource)		
$F4 = B9 * ((B2) / (B3 / B7)) * (B4 / B5) * 2204 * 0.0001$				
Equiv Li2O grade (Li2O% + Ta2O5%) = $F4 / (100 + B10)$				

Peer Comparison Information – Global Attributable Hard Rock (Spodumene) Resources



Company	Project (Ownership%)	Status	Source	Global MRE (Mt)	Li2O%	%Global Resources
AVZ	Manono (60%)	DFS	May 2019 Resource Update, sourced from 21/4/2020 ASX release	240.0	1.7	13.0
Albermarle	Kings Mountain (100%)	Operating (C & M)	https://en.wikipedia.org/wiki/Kings_Mountain_Mine , https://www.albermarle.com/businesses/lithium/resources--recycling/lithium-resources	45.6	0.7	11.0
	Greenbushes (49%)	Operating	Sedar, Talison Dec 2012 NI43-101 for Greenbushes	59.1	2.3	
	Wodgina (60%)	Operating (C & M)	ASX Release 23/10/2018 (Mineral Resources)	142.2	1.2	
Pilbara Minerals	Pilgangoora (100%)	Operating	2019 Ann Rep	223.2	1.3	9.3
Liontown	Kathleen Valley (100%)	PFS	ASX Release 11/5/2020	156.0	1.4	7.4
	Buldanina (100%)	Exploration	ASX Release 8/11/2019	14.9	1.0	
DRC Government	Manono (30%)	DFS	May 2019 Resource Update, sourced from 21/4/2020 ASX release	120.0	1.7	6.5
Min Res Ltd	Mt Marion (50%)	Operating	ASX Release 31/10/2018 (Mineral Resources)	35.7	1.4	5.3
	Wodgina (40%)	Operating (C & M)	ASX Release 23/10/2018 (Mineral Resources)	94.8	1.2	
Mali Lithium	Goulamina (100%)	Exploration	ASX Release 8/7/2020	108.5	1.5	5.2
SQM	Mt Holland (50%)	Pre-Development	ASX Release 19/3/2018 (Kidman Resources)	94.5	1.5	4.7
Wesfarmers	Mt Holland (50%)	Pre-Development	ASX Release 19/3/2018 (Kidman Resources)	94.5	1.5	4.7
Tianqi	Greenbushes (51%)	Operating	Sedar, Talison Dec 2012 NI43-101 for Greenbushes	61.5	2.3	4.5
Nemaska Exploration	Whabouchi (100%)	Development	Nemaska May 31 2019 NI43-101	55.7	1.4	2.6
Galaxy Resources	James Bay (100%)	Exploration	ASX Release 11/3/2020	40.3	1.4	2.5
	Mt Cattlin (100%)	Operating	ASX Release 11/3/2020	14.6	1.3	
Sigma Lithium	Grota de Cirilo (100%)	Development	SEDAR Announcement Jan 10th 2019	52.4	1.4	2.4
Prospect Resources	Arcadia (87%)	Exploration	ASX Release 20/11/2019, DFS Nov 2019, Presentation Feb 2020	63.2	1.1	2.3
Dathomir	Manono (10%)	DFS	May 2019 Resource Update, sourced from 21/4/2020 ASX release	40.0	1.7	2.2

Peer Comparison Information – Global Attributable Hard Rock (Spodumene) Resources (cont.)



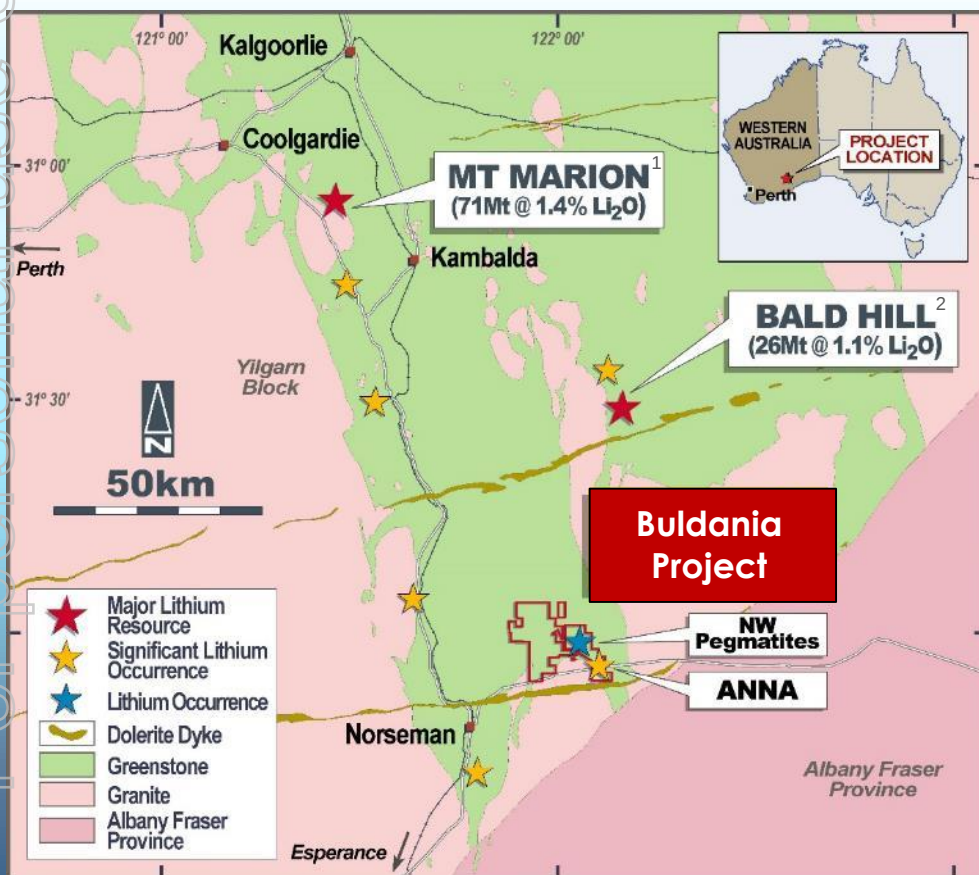
Company	Project (Ownership%)	Status	Source	Global MRE (Mt)	Li2O%	%Global Resources
North American Lithium (CATL)	La Corne (100%)	Development	NAL website - http://na-lithium.com/projects/ , from Oct 12 2012 report	47.0	1.2	1.8
Ganfeng	Mt Marion (50%)	Operating	ASX Release 31/10/2018 (Mineral Resources)	35.7	1.4	1.6
Altura Mining	Pilgangoora (100%)	Operating	2019 Ann Rep, 9/10/2019 ASX release	45.7	1.1	1.6
Frontier Lithium	PAK & SPARK (100%)	Exploration	NI43-101 March 19 2020 (Frontier Lithium)	25.8	1.5	1.3
Critical Elements	Rose (100%)	DFS	Critical Elements Nov 29, 2017 NI43-101, 2019 Ann Rep	34.7	0.9	1.0
Piedmont Lithium	Core & Central (100%)	Exploration	ASX Release 25/6/2019	27.9	1.1	1.0
Savannah	Mina Do Barosso et al (100%)	Exploration	May 2019 Resource Announcement	27.0	1.1	0.9
AMG	Mibra (100%)	Operating	3rd April 2017 AMG release	24.5	1.1	0.8
Alita Resources	Bald Hill (100%)	Operating (C & M)	ASX Release 6/6/2018 (Alliance Minerals Assets)	26.5	1.0	0.8
Kodal Minerals	Bougouni (100%)	Exploration	August 27 2020 Corp Presentation	21.3	1.1	0.8
Premier African Minerals	Zulu (100%)	Exploration	13/11/2017 Scoping Study by Bara Resources	20.1	1.1	0.7
Sayona	Authier (100%)	DFS	ASX Release 24 /9/2018	20.9	1.0	0.7
Core Lithium	Bynoe (100%)	Exploration	2019 Ann Rep, 23/6/2020 Presentation	14.7	1.3	0.6
Iron Ridge Resources	Ewoyaa-Abonko-Kaampakrom (100%)	Exploration	AIM Release 28/1/2020	14.5	1.3	0.6
Keliber	Ostrobothnia (100%)	DFS	Company releases 30/9/2019 and 5/12/2019	14.2	1.1	0.5
GuoAo Lithium	Moblan (60%)	Exploration	ASX Release 31/5/2011 (Perilya)	8.6	1.4	0.4
European Lithium	Wolfsberg (100%)	Exploration	ASX Release 3/7/2017	11.0	1.0	0.4
Exore Resources / Dakota Minerals	Sepeda (100%)	Exploration	Dakota Minerals ASX Release 20/2/2017	10.3	1.0	0.3
Essential Metals	Cade (100%)	Exploration	ASX Release 25/11/2019	8.2	1.2	0.3
SOQUEM	Moblan (40%)	Exploration	ASX Release 31/5/2011 (Perilya)	5.7	1.4	0.3

Appendix 2

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

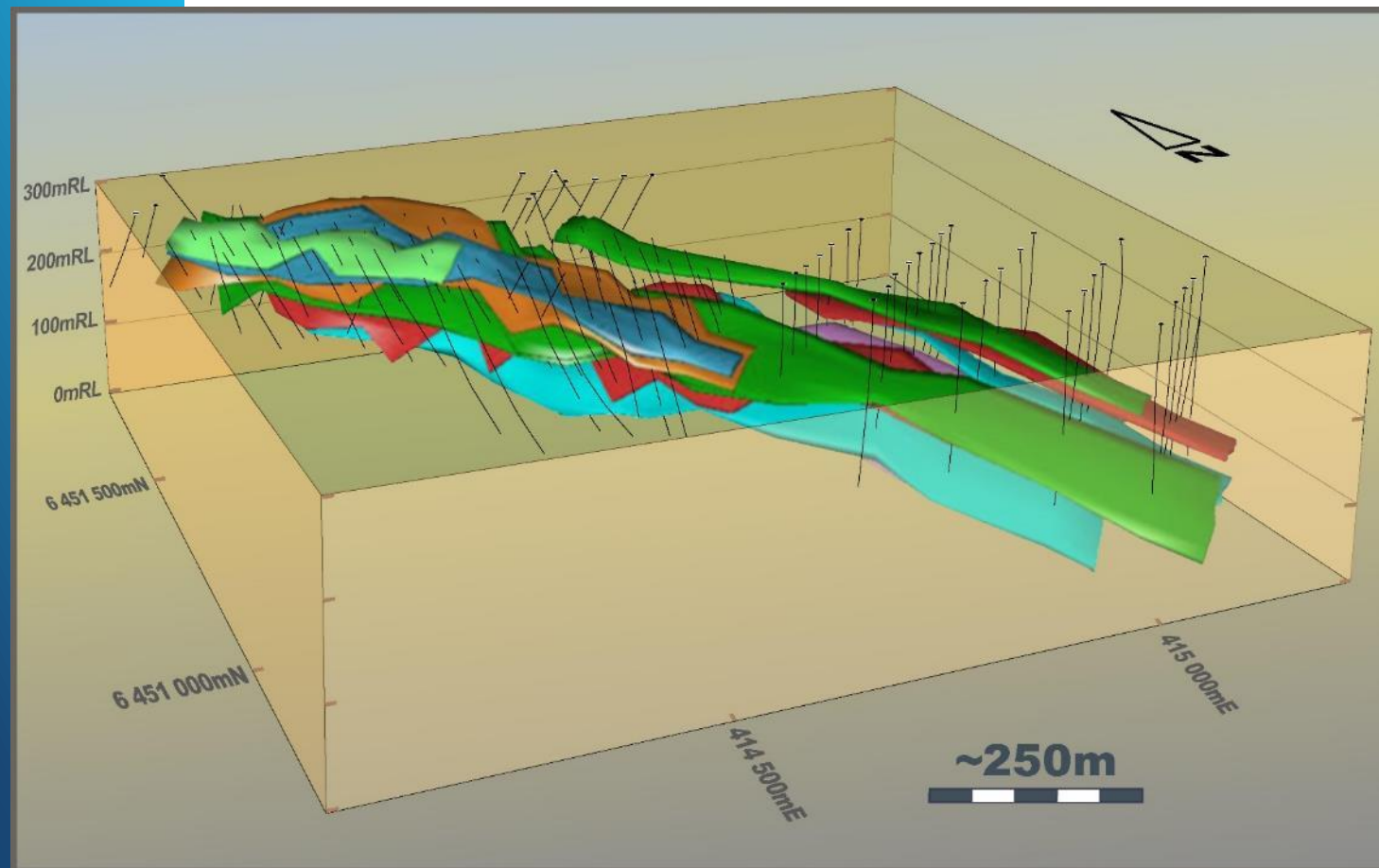
6

Part of larger, +150km² strategic land holding

¹Mt Marion – please refer to Peer Comparison table – slide 25.

² Bald Hill source: <http://www.allianceminerals.com.au/projects/>

Maiden Mineral Resource Estimate 14.9Mt @ 1.0% Li₂O



The completion of the MRE
complements flagship Kathleen Valley
Lithium Project

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