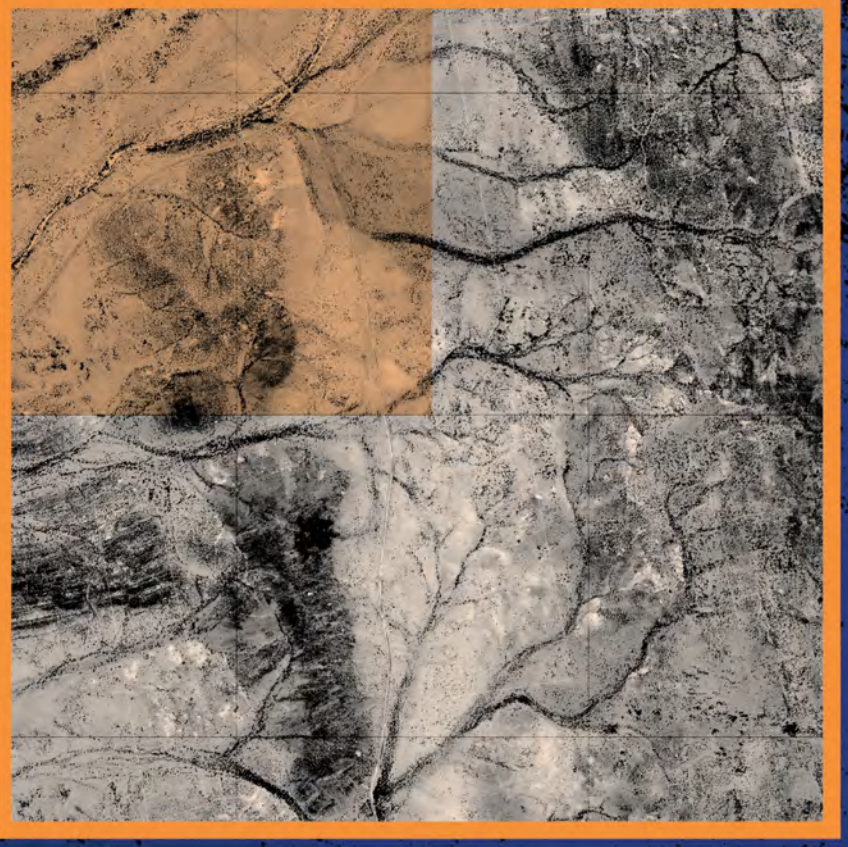
Liontown

Fast charging towards a low carbon future



Kathleen Valley Lithium Project

DEFINITIVE FEASIBILITY STUDY & UPDATED DOWNSTREAM SCOPING STUDY | NOVEMBER 2021

ASX: LTR

Important information

Cautionary Statement

The production targets and forecast financial information referred to in the Definitive Feasibility Study (DFS) and Downstream Scoping Study (DSS) were based on Proven Ore Reserves (3.3%), Probable Ore Reserves (79.5%) and Inferred Mineral Resources (17.2%). The Inferred material included in the inventory was 14.3Mt @ 1.1% Li_2O & 120 ppm Ta_2O_5. The Inferred material was scheduled such that less than 10% of the Inferred material is mined in the first ten years, with the remainder mined through to the end of the mine life.

The Inferred material does not have a material effect on the technical and economic viability of the project.

There is a low level of geological confidence associated with inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of indicated Mineral Resources or that the production target itself will be realised.

Forward looking statements

This Presentation contains forward-looking statements which are identified by words such as 'may', 'could', 'believes', 'estimates', 'targets', 'expects', or 'intends' and other similar words that involve risks and uncertainties. These statements are based on an assessment of present economic and operating conditions, and on a number of assumptions regarding future events and actions that, as at the date of this Presentation, are considered reasonable. Such forward-looking statements are not a guarantee of future performance and involve known and unknown risks, uncertainties, assumptions and other important factors, many of which are beyond the control of the Company, the Directors and the management. The Directors cannot and do not give any assurance that the results, performance or achievements expressed or implied by the forward-looking statements contained in this Presentation will actually occur and investors are cautioned not to place undue reliance on these forward-looking statements. The Directors have no intention to update or revise forward-looking statements, or to publish prospective financial information in the future, regardless of whether new information, future events or any other factors affect the information contained in this Presentation, except where required by law or the ASX listing rules.

Disclaimer

Whilst care has been exercised in preparing and presenting this presentation, to the maximum extent permitted by law, Liontown Resources Limited and its representatives:

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- Accept no responsibility or liability as to the adequacy, accuracy, completeness or reasonableness of this Presentation; and
- Accept no responsibility for any errors or omissions from this Presentation.

Competent person statement

The Information in this Presentation that relates to Exploration Results and Mineral Resources for the Kathleen Valley Project is extracted from the ASX announcement "Strong progress with Kathleen Valley Definitive Feasibility Study as ongoing work identifies further key project enhancements" released on 8 April 2021 which is available on www.ltresources.com.au.

The Information in this Presentation that relates to metallurgical testwork and process design, Ore Reserves, Production Target and DFS for the Kathleen Valley Project is extracted from the ASX announcement "Kathleen Valley DFS confirms Tier-1 global lithium project with outstanding economics and sector-leading sustainability credentials" released on 11 November 2021 which is available on www.ltresources.com.au.

The Information in this Presentation that relates to the DSS for the Kathleen Valley Project is extracted from the ASX announcement "Updated Downstream Scoping Study Highlights Next Growth Horizon for Kathleen Valley Project" released on 11 November 2021 which is available on www.ltresources.com.au.

The Information in this Presentation 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 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 or production targets or forecast financial information derived from a production target (as applicable) 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.

Authorisation

This Presentation has been authorised for release by the Board.

Highlights

Kathleen Valley (KV) is a globally significant lithium resource, located within a stable and established mining jurisdiction with a strong ESG position with growth optionality. The project is well positioned, with start of production expected to coincide with a significant spodumene market deficit

Globally significant Tier 1 project	• World-class lithium deposit with a globally significant Mineral Resource Estimate (MRE) of 156Mt @ 1.4% Li_2O • Exceptional economics, delivering a post-tax NPV_8 of A$4.2bn and post-tax IRR of 57%
Low cost, long-life scalable operations	• Current resource base supports an initial ~23 year life of mine, with Liontown targeting further expansion • Low cash operating costs of US$314/dmt (Years 1-5)[1] and capital intensity below other spodumene development projects
Timed to perfection	• Significant supply deficits forecast to emerge from 2024, expected to align with start of production at KV • KV is positioned to become one of very few projects advanced enough to meet demand, with full offtake optionality
Strong ESG focus	• Liontown is on a net zero trajectory, with a climate strategy roadmap in place targeting net zero emissions by 2034 • Leveraged underground mining approach to achieve a strong ESG profile relative to peers
Clear and achievable long-term strategy	• DFS contemplates an expansion of SC6.0 production from ~500ktpa to ~700ktpa facilitating downstream ambition • Updated Downstream Scoping Study (post-tax NPV_8 of A$9.6bn, IRR of 56%) provides value maximising pathway
Funding & Offtake Advanced	• Actively progressing all funding options. Board confident that funding will be in place prior to FID Q2 2022 • Offtake discussions well advanced with potential customers, diversified by geography and stage in the value chain

1. Excluding royalties

Liontown Corporate Overview

Liontown is a leading ASX-listed lithium company focused on the development of the world-class Kathleen Valley Lithium Project

Projects

Kathleen Valley

World-class scale and economics

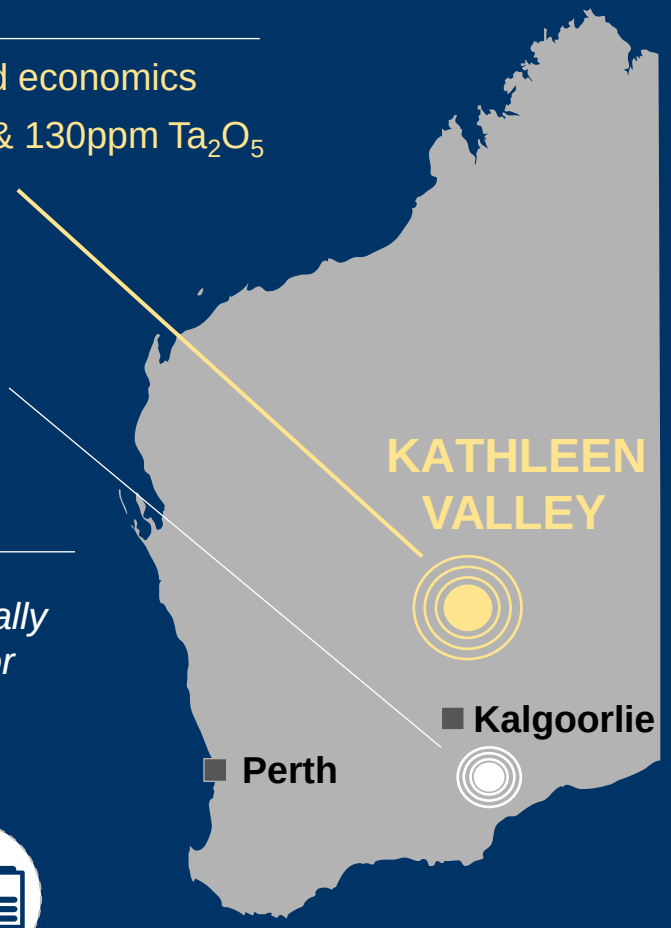
156Mt @ 1.4% Li_2O & 130ppm Ta_2O_5

High-grade

Buldania

15Mt @ 1.0% Li_2O

Resource upside



Strategy

We aim to be an ESG-leader, and a globally significant provider of battery materials for the rapidly growing clean energy market

Corporate snapshot (8 Nov 2021) ASX: LTR

Market Cap.

A$3.6bn

Share price ($/s)

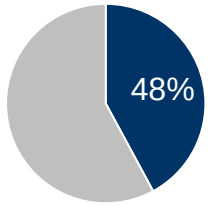
A$1.86

Shares on issue

1,911m

~22% held by Board and Executive Leadership Team

Major shareholders



Top 20 (incl. ~17% held by Chairman - Tim Goyder)

Cash and liquid assets[1]

A$27.8m

Research coverage

MACQUARIE · BELL POTTER · BRIDGE STREET CAPITAL PARTNERS · Canaccord Genuity · TAYLOR COLLISON

1: Includes ~$26.5m in cash and ~$1.3m in listed investments as at 30 September 2021

Board and Management

Liontown has a highly experienced Board and Executive Leadership Team, with a track record of delivering shareholder value

Board of Directors

Tim Goyder

Chairman

+40 years (Mining Executive)

Chairman Chalice Mining

Craig Williams

Non-Executive Director

+40 years (Geologist)

Founder and CEO of Equinox Minerals

Anthony Cipriano

Non-Executive Director

+30 years (Chartered Accountant)

Former Senior Partner at Deloitte

Steven Chadwick

Non-Executive Director

+40 years (Metallurgist)

Director of Lycopodium Limited

Jennifer Morris

Proposed Non-Executive Director

+20 years (Corporate Executive)

Director of Fortescue Metals and Sandfire Resources

Has agreed to join the Liontown Board (subject to shareholder approval at AGM)

Tony Ottaviano

Managing Director

+30 years (Mech. Engineer)

Former BHP, Rio Tinto, and Wesfarmers executive

Executive Leadership Team

Tony Ottaviano

Managing Director / CEO

+30 years (Mech. Engineer)

Former BHP, Rio Tinto, and Wesfarmers executive

Adam Smits

COO

+20 years (Mech. Engineer)

Former COO Nzuri Copper

Craig Hasson

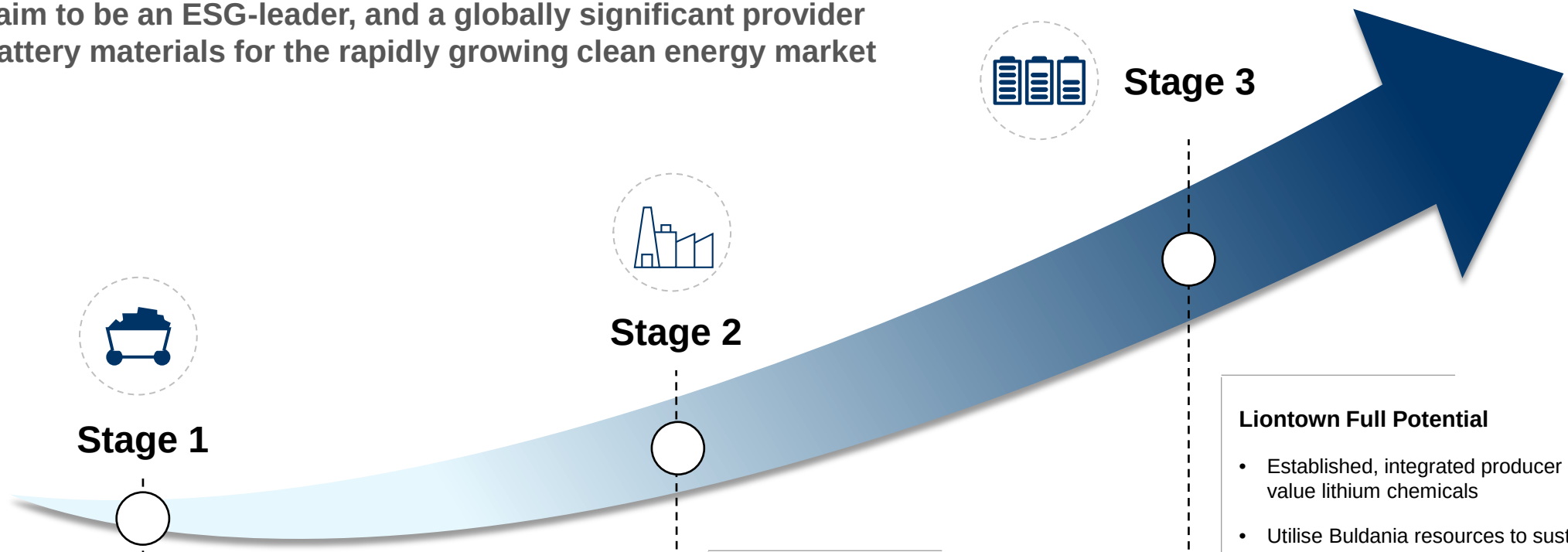
CFO

+15 years (Chartered Accountant)

Commercial & Financial experience

Liontown's Strategy

We aim to be an ESG-leader, and a globally significant provider of battery materials for the rapidly growing clean energy market



Kathleen Valley Full Potential

- Globally significant supplier of spodumene
- Expansion of SC6.0 production from ~500ktpa to ~700ktpa
- Maximise value through offtake strategy
- Increase Resources / Reserves at KV
- Assess opportunities for further growth

Downstream Expansion

- Utilise Kathleen Valley production in integrated operations, capturing higher margins
- DSS supports pathway to maximise value for Kathleen Valley
- Establish downstream processing expertise (and partnerships, as appropriate) to support future ambition

Liontown Full Potential

- Established, integrated producer of high value lithium chemicals
- Utilise Buldania resources to sustain chemical plant for long-term, while exploring opportunities for additional feedstock (e.g. exploration, acquisition)
- Develop expertise in alternative commodities which support Liontown's battery minerals strategy
- Consider Liontown's part in the circular economy, including recycling and other ESG-positive solutions

Liontown's ESG Focus

Environment

- Aspiring to have Best-in-class Scope 1 and 2 emissions and reduced impact on local surroundings due to UG[4] approach
- ~60% renewable energy target to reduce Scope 2 emissions
- Minimising water usage through recycling

Social and corporate governance

- Native Title Holders have provided consent for signing Native Title Agreement
- Social licence fundamental to sustainable, long-term operation
- Best-in-class reporting aligned with GRI[1], TCFD[2] and SASB[3] standards
- First sustainability report expected Q4 2021

Customers

- Automotive OEMs increasingly demand environmentally-friendly, low-carbon batteries to achieve Scope 1-3 targets
- Carbon footprint labelling and transparency will enable end-consumer choice for ESG

Climate Strategy Roadmap

First Production
2024

Design & build for the future

- ~60% renewable power with built in expansion potential
- Conventional mine fleet with future proofed UG infrastructure
- Alternative fuels for mine and transport fleet
- Redesigned mine-plan with a focus on reduced ground disturbance

1st Goal
2029

Refine

- Target >75% renewable power
- Upgraded mining fleet with electric trucks
- Target 50% biofuel powered road transport & LV fleet
- Reduced site water consumption via greater recycling

Net Zero
2034

Consolidate

- Target 100% renewable power
- Target 100% electric or clean fuel powered mining & LV Fleet
- Net zero to ship loading

10 years to net zero[5]

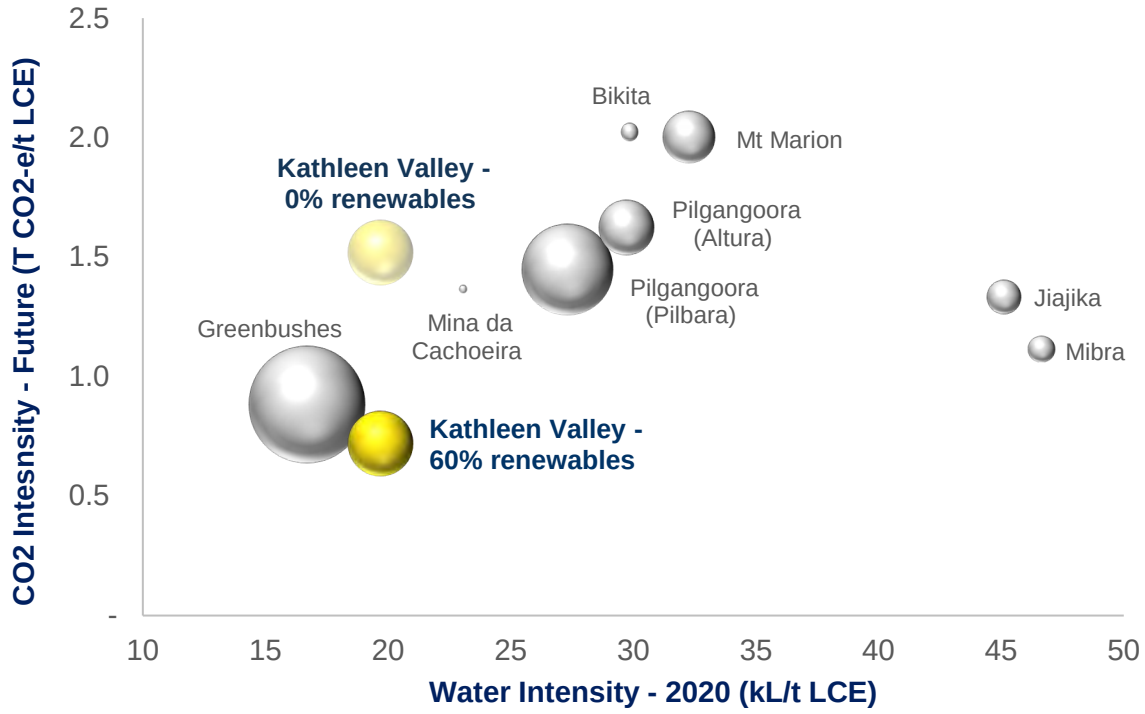
1. Global Reporting Initiative, an internationally-agreed set of sustainability reporting standards | 2. Task force on climate related financial disclosures
3. Sustainability Accounting Standards Board | 4. UG = underground mining | 5. From start of production

Liontown's ESG Focus (cont.)

Underground mining provides significant sustainability advantages compared to peers, owing to higher ore quality and grades and minimisation of waste

Sustainability Benchmarking

Liontown is expected to be one of the first new mining companies in Australia to have 60% renewable power at start-up



Source: Peers – Roskill and Kathleen Valley numbers are internal estimates
Bubble size represents annual production of spodumene on a LCE basis

Social Engagement

Tjiwarl input has been included in the project initial design to ensure areas of cultural significance are respected

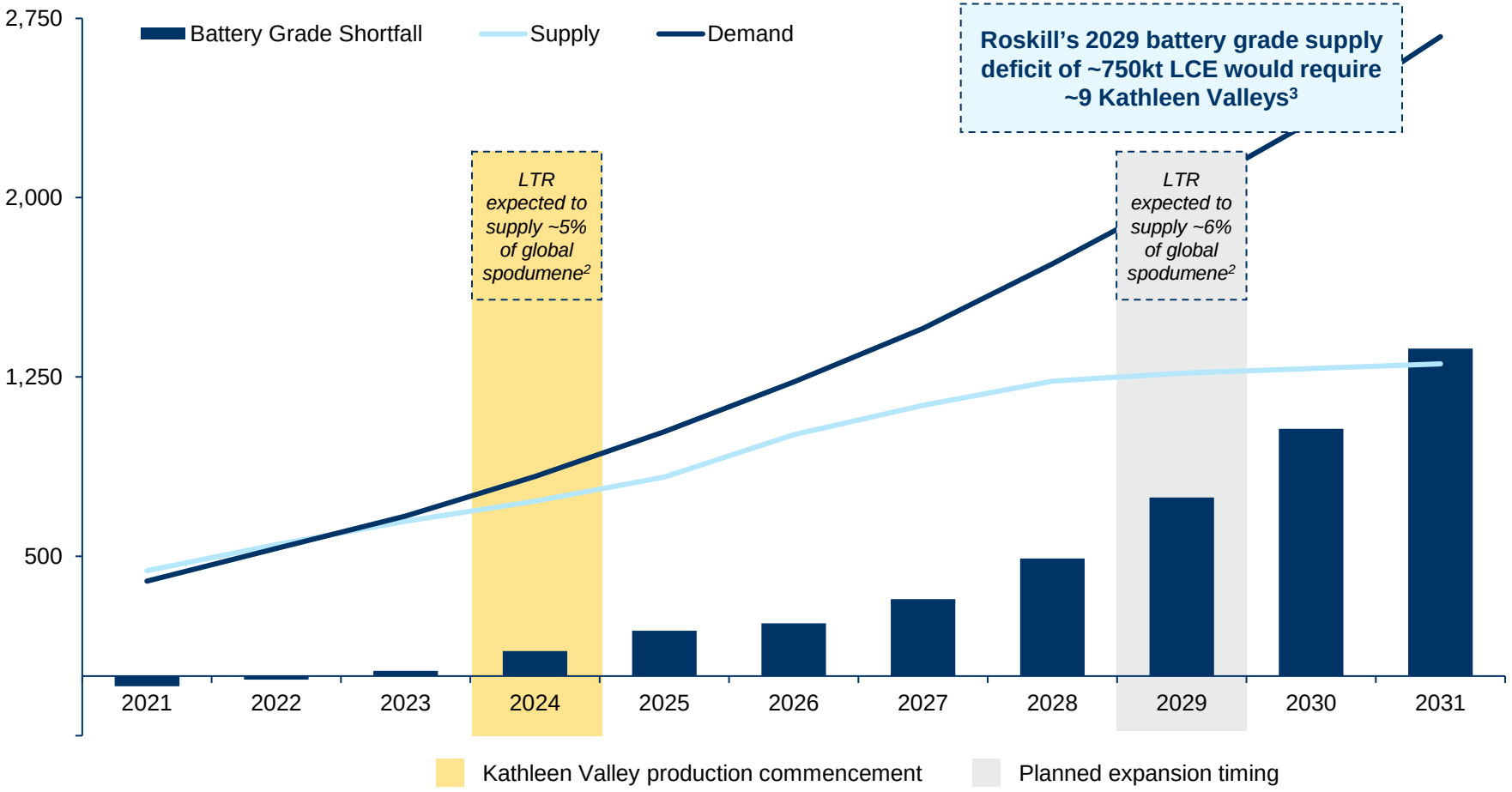
- Native Title Holders (the Tjiwarl) have provided their consent for the signing of the Kathleen Valley Project Native Title Agreement (NTA)
- Agreement talks to areas that matter for the Tjiwarl:
  - Communication
  - Land and Water Management
  - Aboriginal Heritage Management
  - Cultural Awareness & Access
  - Compensation
  - Social Opportunities and Development
  - Employment and Contracting
- **Securing a NTA is a key enabler for project permitting**

TJIWARL
ABORIGINAL CORPORATION (RNTBC)

Lithium Market Dynamics

Production at Kathleen Valley is expected to commence in 2024, coinciding with a forecast market deficit that is expected to continue and grow beyond 2024. Liontown has optionality to further increase production towards the end of the decade to capitalise on the widening deficit

Global lithium market balance (battery grade), 2021-31, kt LCE



Demand

- **25% forecast CAGR for Lithium-ion Battery demand –** driven by stronger GHG regulations and improving EV adoption
- **25% forecast CAGR for lithium hydroxide –** as preferred product for cathodes

Supply

- **Liontown is a globally significant source of supply –** Liontown forecast to supply ~5% of global spodumene in 2024 and ~6% in 2029[2]
- **Significant supply constraints –** Constraints on peers (e.g. environmental, permitting, customer agreements) make Liontown one of few viable options to meet supply deficit
- **17% cost advantage for hard rock** – compared to producing LiOH from brine[1]

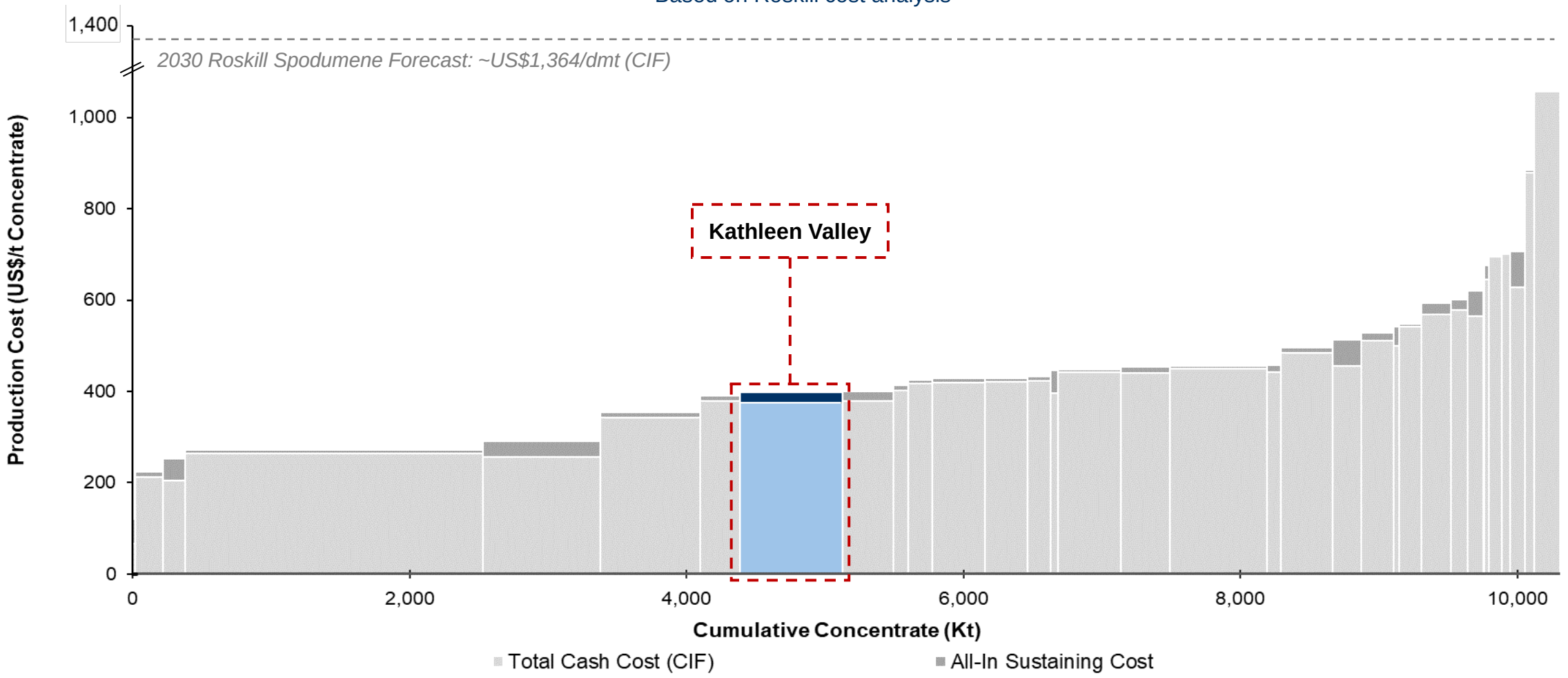
Source: Roskill, MineSpans
1. Costs represent indicative 2025 cost base for typical brine and spodumene operations; Source: MineSpans
2. Liontown expected to supply 5% of global spodumene and 4% of global lithium in 2024 and Liontown expected to supply 6% of global spodumene and 4% of global lithium in 2029
3. Kathleen Valley 2029 production of ~681kdmt SC6.0 equivalent to ~86kt LCE (converted at 7.93t SC6.0 = 1t LCE)

Competitive Cost Curve Position

In 2030, Liontown will become a globally significant, cost competitive producer once 4Mtpa expansion ramp-up is complete

Roskill Spodumene Cost Curve: 2030

Based on Roskill cost analysis



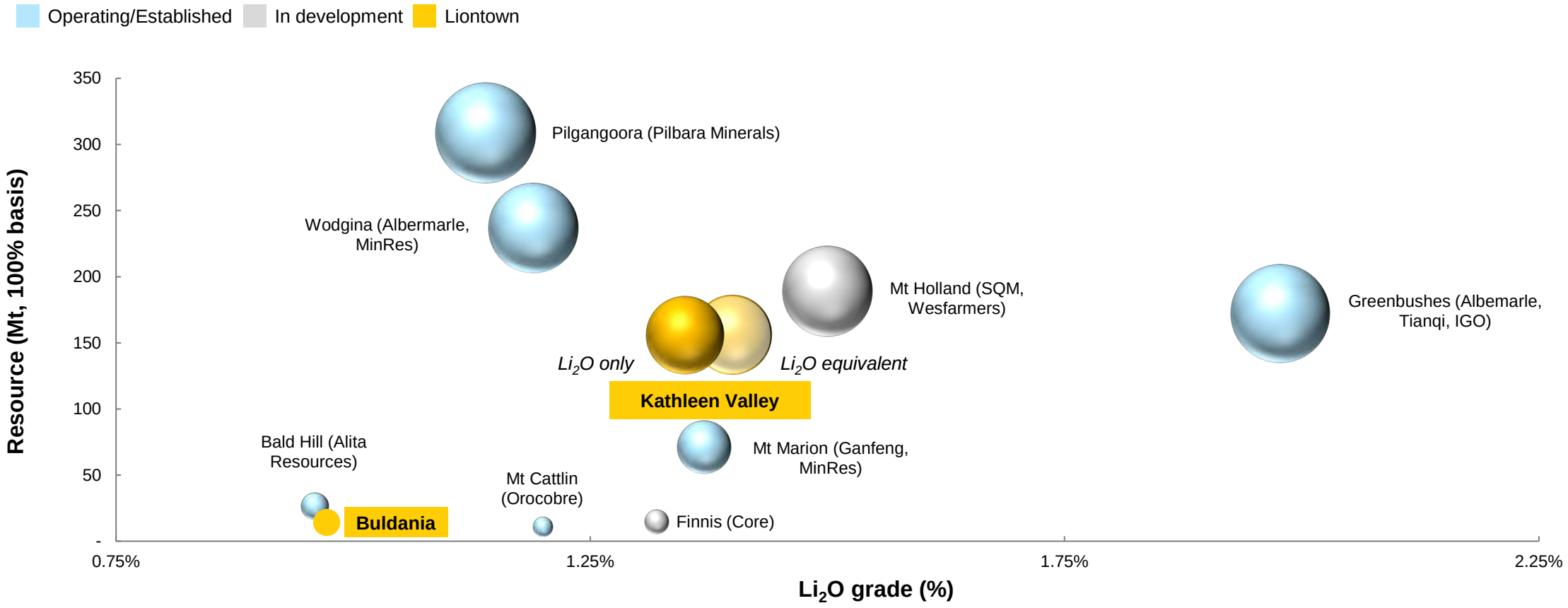
1. Roskill 2030 cost curve with Kathleen Valley 2030 Cash Cost (CIF) normalized to Roskill price and FX, AISC and production inserted

Kathleen Valley Benchmarked

Kathleen Valley is a uniquely positioned, globally significant Tier 1 lithium resource with exploration potential

Australian hard rock lithium operations and advanced projects [1]

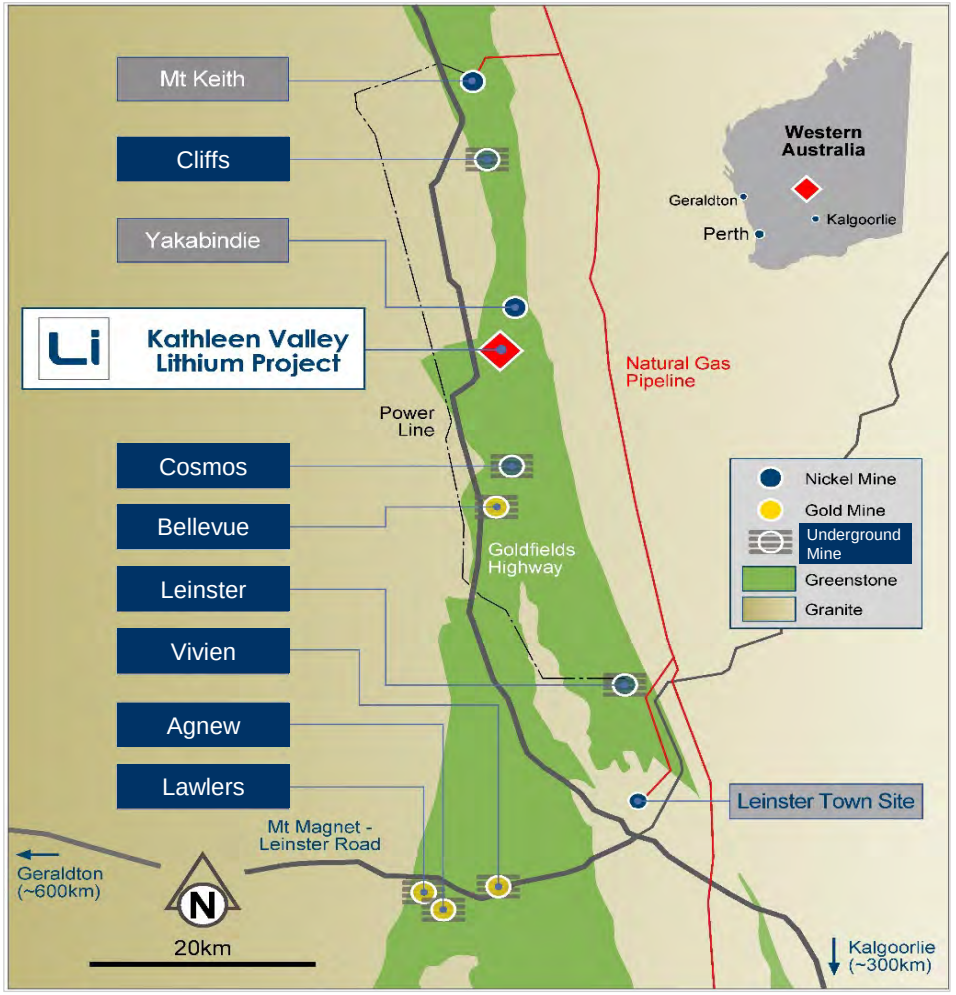
By project, size, and grade



1: Refer to Appendix for Peer Comparison information including Resource Classifications; refer to Appendix 2 for Li_2O equivalents parameters and calculations
2: Bubble size represents the Resource tonnes multiplied by lithium oxide (%).

Kathleen Valley Location

Kathleen Valley is located in a stable, established and well-governed mining jurisdiction, giving Liontown confidence to execute an accelerated project delivery timetable and providing long-term operation support to Kathleen Valley



Major Nickel and Gold Mines

Town of Leinster

Goldfields Highway (access to Geraldton port)

Natural gas pipeline

Powerline

Sealed airstrips

November 2021 DFS Key Metrics

Based on April 2021 MRE – 156Mt @ 1.4% Li_2O and 130ppm Ta_2O_5

NPV[1] (post-tax)	**A$4.2B**
IRR / Payback	57% / 2.3 years
SC6 Opex Years 1-5[3] (FOB)	US$402/dmt US$314/dmt (excl. royalties)
SC6 Opex Years 1-10[3] (FOB)	US$417/dmt US$319/dmt (excl. royalties)
AISC Years 1-10[4] (FOB)	US$452/dmt
Ave. SC6 Price Years 1-10[5] (FOB)	US$1,287/dmt (Based on Roskill price)
Capex[6]	A$473M (incl. $107M Pre-production)

Reserve

68.5Mt @ 1.34% Li_2O &120ppm Ta_2O_5

Mining

2.5 Mtpa (increasing to 4Mtpa)

Total Production Inventory

82.7Mt @ 1.30% Li_2O & 117ppm Ta_2O_5

Opex[3] and AISC (Years 1-10)

Opex: US$417/dmt

AISC: US$452/dmt

Production

SC6: 511Ktpa (increasing to 658Ktpa)

Ta_2O_5 (30%): 428tpa (increasing to 587tpa)

Total Free Cash Flow after tax

+A$12.2B

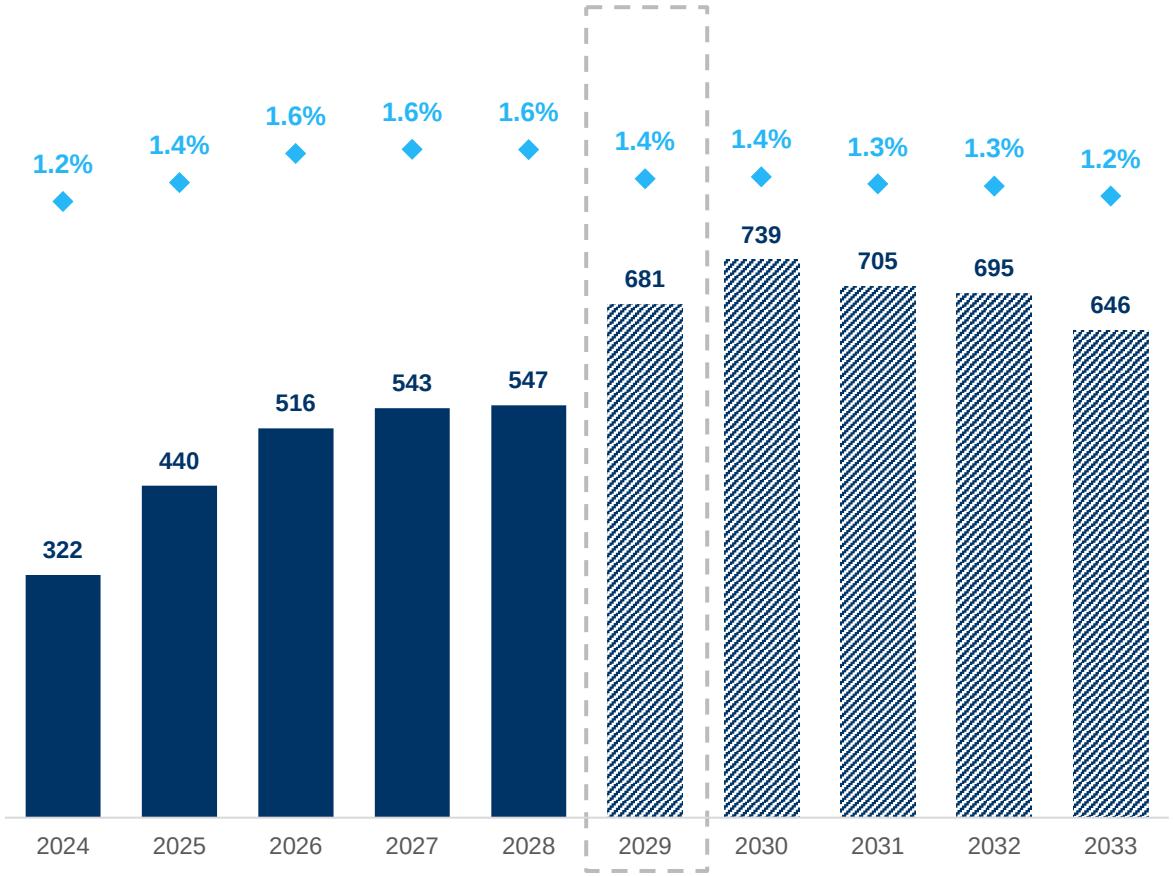
1. 8% (real). FX assumption of 0.73
2. Refer Cautionary Statement on Slide 2.
3. Operating costs include all mining, processing, transport, state and private royalties, freight to port, port costs and site administration and overhead costs (includes tantalum credits). Excludes sustaining capital.
4. All in Sustaining Capital Costs (AISC), as referred to in this announcement, are cash operating costs including all mining, processing, transport, freight to port, port costs, site administration/ overhead costs, tantalum credits, state and private royalties and sustaining capital.
5. Based on Roskill November 2021 price forecasts
6. Project totals exclude working capital, finance costs, sustaining capital and corporate costs associated with project development

Production Schedule and Mine Overview

Kathleen Valley is a globally significant, high-grade resource – average grade in first five years of 1.5%

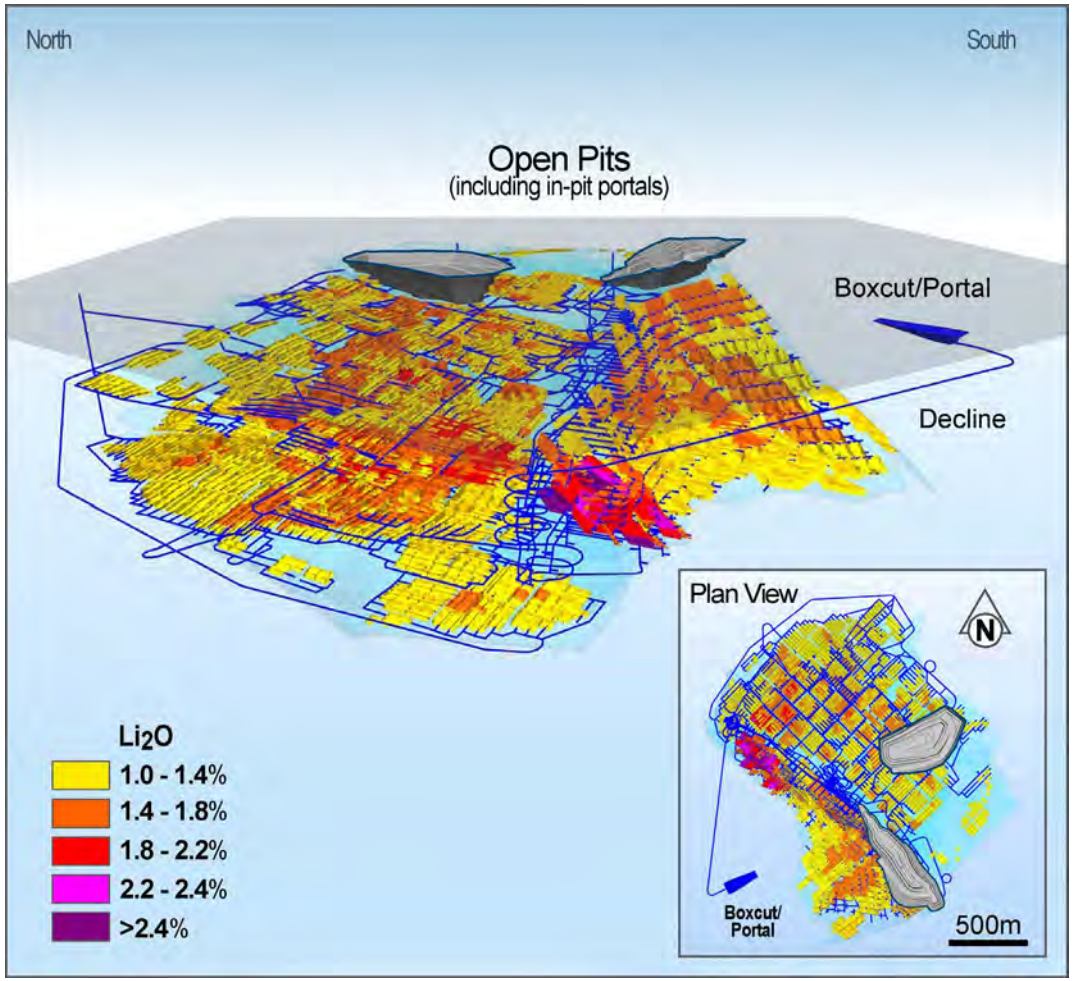
10-Year Production Schedule

Spodumene Concentrate (kdmt) and **Processing Grade (%)**



Planned throughput expansion

Mine Overview



Mining and Processing

Conventional mining method, proven and reliable technology with a flowsheet grounded in evidence based design

Underground Mining Method

- **Conventional mining methods** (room-and-pillar and long-hole stoping) with proven technology
- **Shallow mine** - first ore at 120m, total depth 450m
- **Competent ground conditions** with ~5km dedicated geotechnical drilling to prove UG design
- **Well-established underground mining precinct**
  - Seven underground operations in area
  - Highly skilled underground workforce (including contractors)

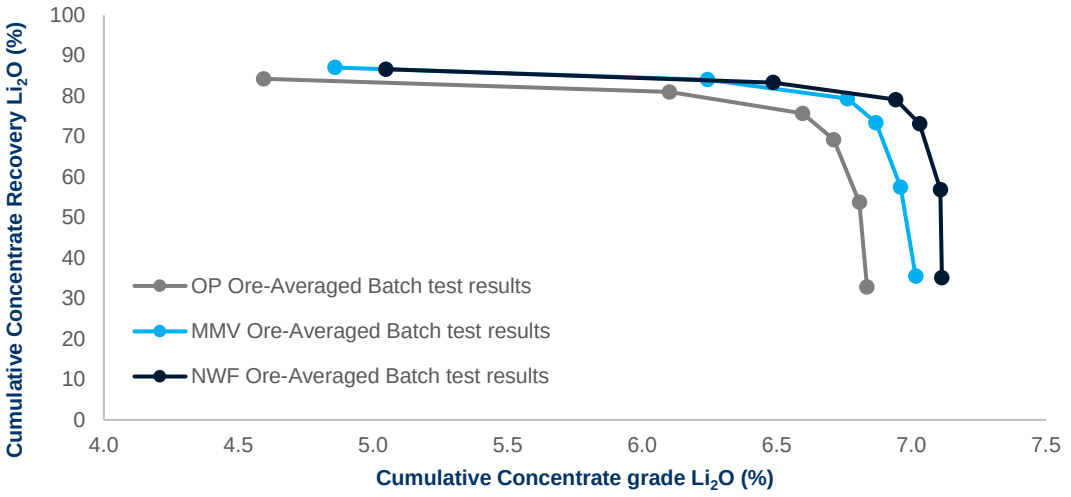
Economic Benefits of Underground Mining

- **Early access** to higher grade parts of the deposit
- **High tonnage** per vertical metre (100 kt/m – 206 kt/m at 200 – 400 metres below surface)
- **Selective mining** avoids dilution from host rocks
- **Less waste removal**

WOF Processing Strategy

- Simple flowsheet – better operability and reliability
- KV ore has **outstanding metallurgical properties**
- Test work has repeatedly achieved **greater than 80% Lithia recovery** and >6.0% concentrate grade
  - Supported by **140+ staged float tests** and variability analysis
  - **78%** has been conservatively assumed for financial modelling

Cumulative Grade vs. Recovery – Avg. of multiple Batch Tests[1]

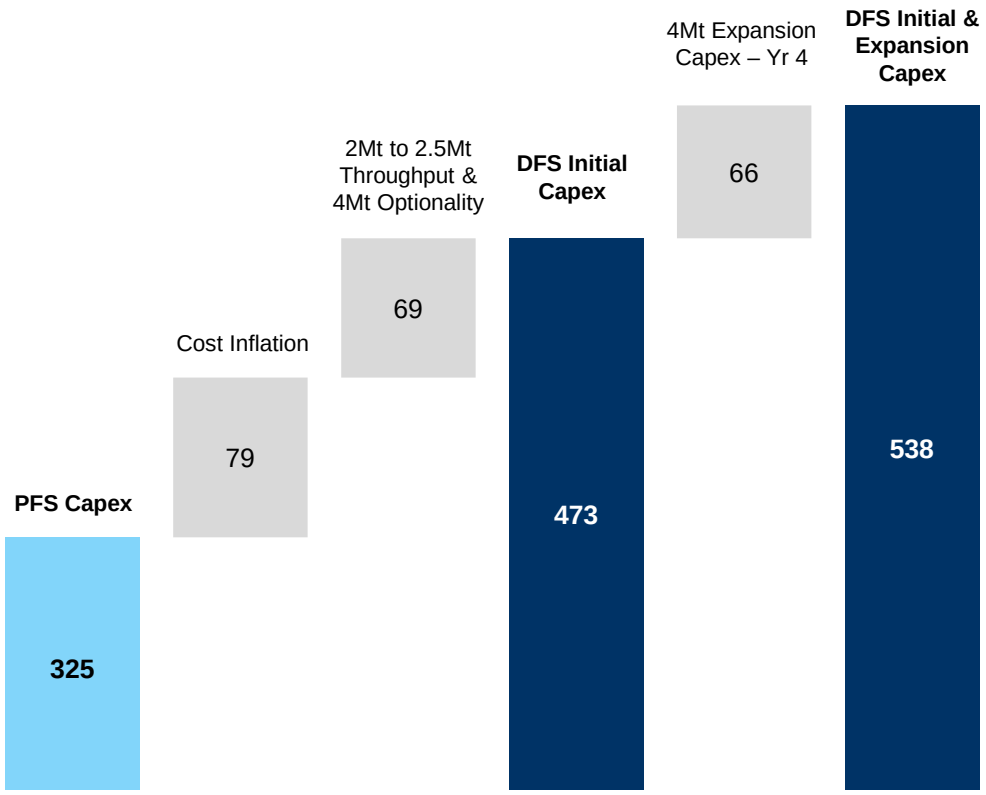


1. OP = Open Pit, MMV = Mount Mann Vertical, NWF = NorthWest Flats

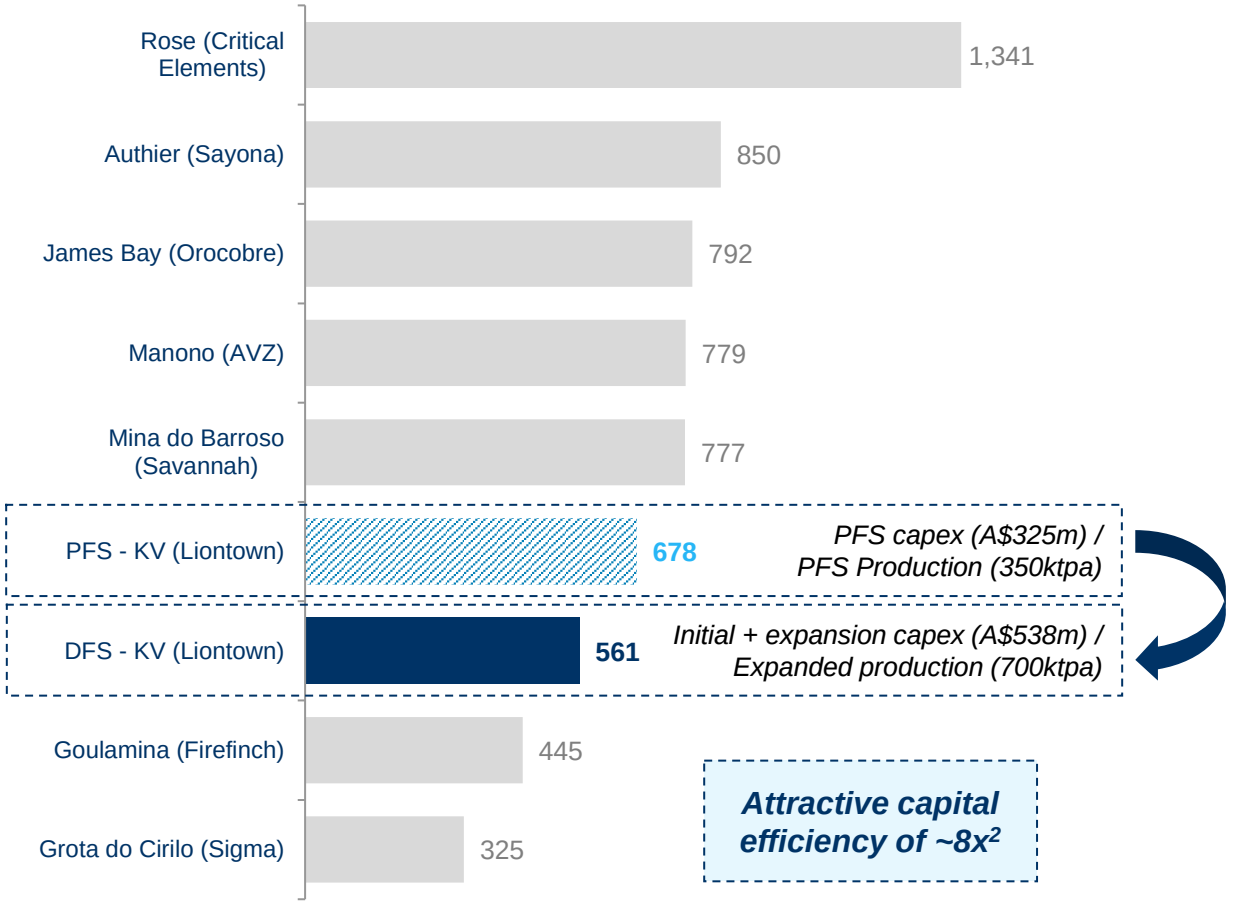
Leading Capital Intensity

Despite inflationary pressures across the industry, Liontown's DFS represents a significant improvement in capitalIntensity at Kathleen Valley. Once expanded, Liontown will have one of the lowest capital intensity development projects globally and strong capital efficiency

PFS Capex to DFS Capex (A$m)



Capital Intensity of Comparable Projects (US$/tpa)[1]



1: Assumes AUD USD of 0.73 and CAD USD of 0.81. Adjusted to 6.0% spodumene concentrate grade. Only projects with >10 year LOM shown
2: Capital efficiency calculated as NPV of $4.2B divided by initial + expansion capital of $538m

We aim to accelerate the schedule to meet expected market shortfall

Project milestones right on schedule

Liontown well positioned to deliver project on accelerated schedule

Updated PFS Complete	DFS Complete	FEED/ FID	Early works/ design	Construction complete	Commissioning	Production
Q4 2020	Q4 2021	Q2 2022	Q4 2022	Q4 2023	Q1 2024	Q2 2024

Continued assessment of growth and downstream processing options

Near Term: Next steps prior to FID

- Permitting
- NTA signoff (17th Nov)
- Finalise offtake agreements
- Ordering critical long lead items
- Award EPCM and key supplier and engineering contracts
- Recruitment of Project Execution Team
- Finalise funding arrangements

<3 years

Target to production

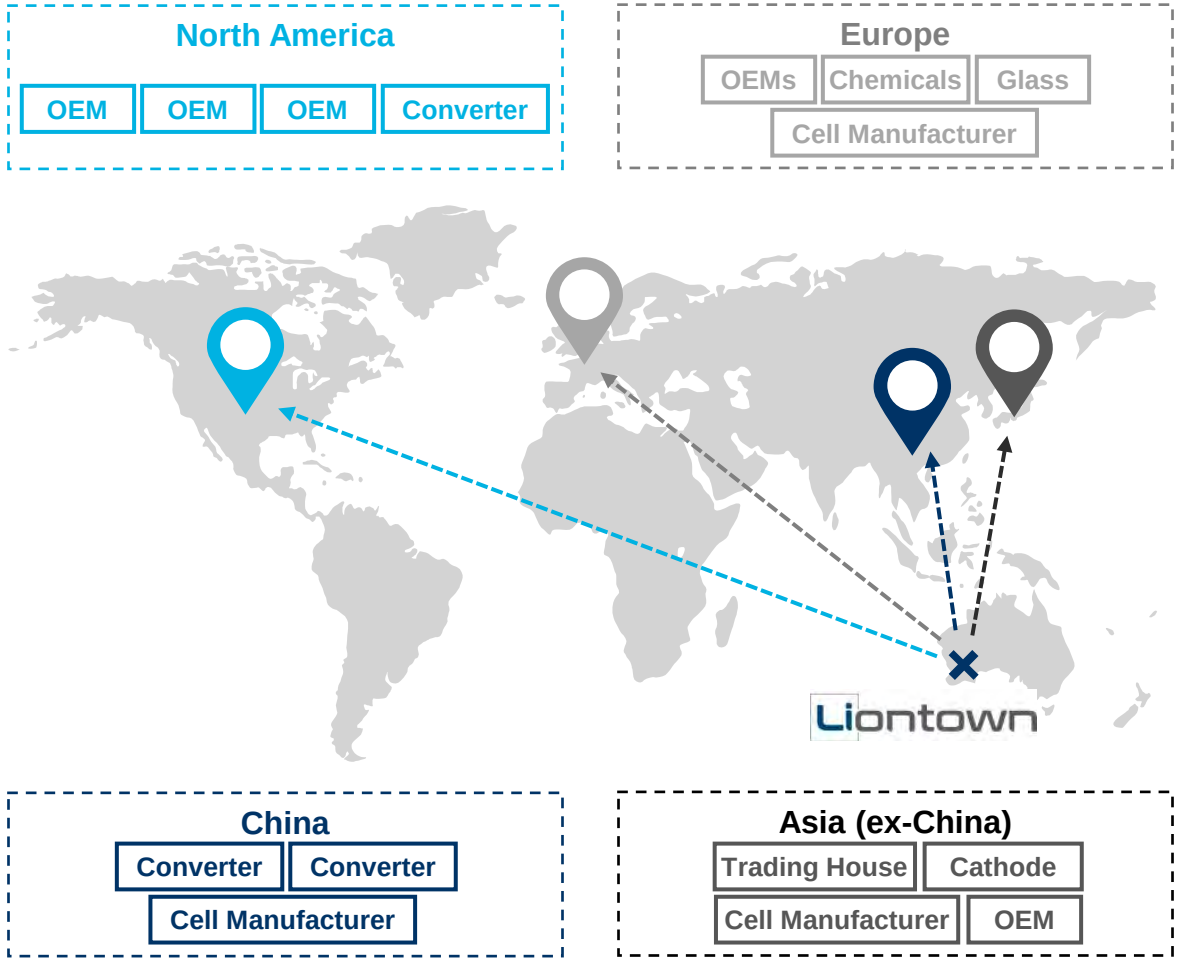
Offtake Strategy

Liontown intends to put in place large foundation offtake agreements, aiming to deliver diversification by geography and stag e in value chain

Offtake Strategy

- Discussions held with in excess of 50 parties who have expressed interest in offtake
- Leveraging strong position given full offtake optionality, patience has been a strength in the rapidly improving lithium market
- Offtake pricing likely to be determined with reference to the lithium hydroxide price, exposing Liontown to higher value end product
  - Liontown expects spodumene pricing calculated with reference to hydroxide price will provide potential for realised prices in excess of a spodumene index priced offtake
- Discussions are in advanced stages with a number of parties, diversified by geography and stage in value chain
- Offtake for tantalum by-product is also being explored with customers
- Any uncontracted production intended to be sold into the spot market – various options are being explored, including auction platforms (such as the Battery Mineral Exchange, where other spodumene producers have recently achieved outstanding results)

Geographic Breakdown and Indicative Target Customers

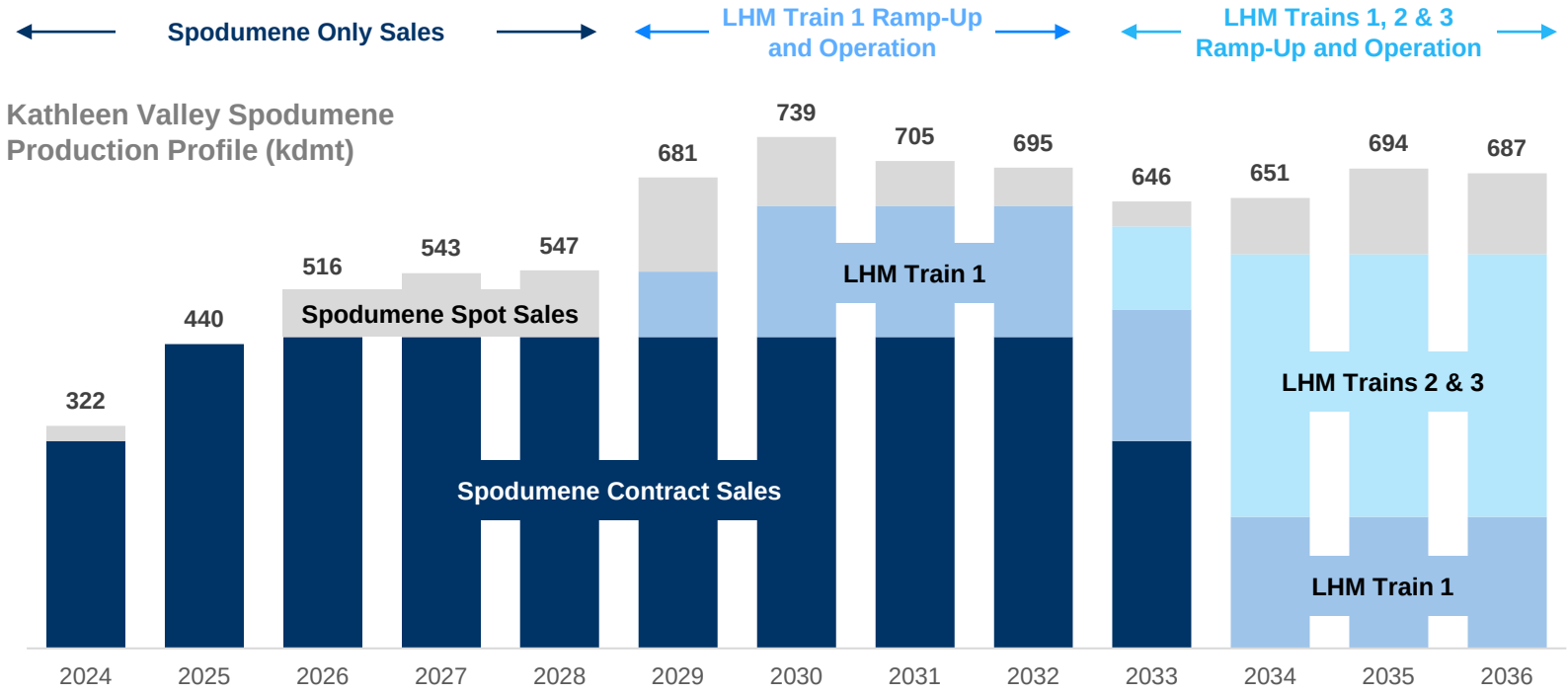


Downstream Processing Opportunity

The updated DSS confirms: Value maximizing pathway for Liontown is a staged-build, integrated mining, processing and refining operation producing Lithium Hydroxide Monohydrate ("LHM")

The Integrated Project has the potential to make Liontown the 3rd largest supplier of LHM in the world (based on 2031 Roskill LHM projections) producing ~86ktpa LHM

Refinery will be included in our Climate Strategy Roadmap and benefit from the energy renewables developed during the operation of KV reducing its carbon footprint



Value Maximising Pathway

- Exposure to higher margin end-product more quickly
- Capture highly favourable market environment
- Unlocks additional offtakers (particularly OEMs) with potential for nearer-term discussions
- Value maximising pathway with significant NPV value upside
- Liontown progressing to pre-feasibility study phase for downstream opportunity

November 2021 Downstream Scoping Study Key Metrics

Downstream Scoping Study updated for new input assumptions from the Kathleen Valley DFS

NPV[1] (post-tax)	**A$9.6 Billion**
IRR	56%
LOM Free Cash Flow	A$32 Billion
LHM Opex[3] (US/t LHM)	US$5,864/t LHM
Avg. LHM Price[4] (2029-2046)	US$29,401/t LHM
Design Production	28.8ktpa LHM (per train) 86.4ktpa LHM (3-trains)
Capex[5]	A$2 Billion (incl. KV mine and SC6.0 processing plant)

Production

86.4ktpa LHM

Spodumene Feedstock

Processing feed of ~570 ktpa SC6.0

Weighted Avg. Conversion Cost

US$3,303/t LHM

LHM Opex[3]

US$5,864/t LHM

Product Sold

LHM: 1.3M dmt

SC6.0: 5.3M dmt

Total Free Cash Flow (after tax)

A$32.4B

(1) 8% (real) **| (2)** Refer Cautionary Statement on Slide 2. **| (3)** Cash operating costs during the years of refinery operation include all mining, processing, downstream refining, transport, state & private royalties, freight to port, port costs, site administration, overhead costs and tantalum credits. Excludes sustaining capital. **| (4)** Based on Roskill November 2021 price forecasts **| (5)** Integrated CAPEX for LHM production includes $538M for the mine / 6% Li_2O (SC6.0) processing plant (DFS) and $1.5B for the downstream refinery. Excludes working capital, finance costs, sustaining capital and corporate costs associated with project development. SC6.0 plant capital to DFS level +/-15% accuracy, DSS to +/-30% accuracy. DFS included no contingency on SC6.0 operating costs, DSS includes no contingency on operating costs. DFS included ($31M) capital contingency, DSS includes ($258M) contingency on capital costs.

Building A Sustainable Company Starts With Good People

Sustainability and governance has been approached to date with a clean slate and a small team, allowing the fundamentals to be established early to provide a valuable blueprint as the employee numbers and the company grows through aligned values

Our Values

Safety

Do no harm. In all our activities we must send everyone home safe, every day

Respect

We ensure all voices are respectfully heard and work toward solutions that balance the interests of all stakeholders

Sustainability

Work towards a circular economy in which the raw materials we produce are used efficiently and responsibly

Integrity

We have the courage to do the right thing, even when it is the harder thing. We don't take 'shortcuts'

Ambition

The challenge of constant improvement motivates us. We set objectives and then discover how these can be achieved

Teamwork

We are inclusive
We celebrate our diversity
We have fun
We do important work

Our Principles

1. **Empower our people**
2. **Continuous Improvement**
3. **Create value for our stakeholders**

Corporate / Operations

- Corporate team responsible for commercial, marketing and logistics
- Operations to become a major focus

Project / Execution

- Experienced project team leading delivery with support of our key engineering and technical partners

Board and Management

Downstream Development

- Recruit downstream expertise
- Consider partnerships to fast track downstream ambition

Contractors

- Partner with the best mining and construction service providers to ensure delivery on budget on time

Liontown's Long-Term Strategy

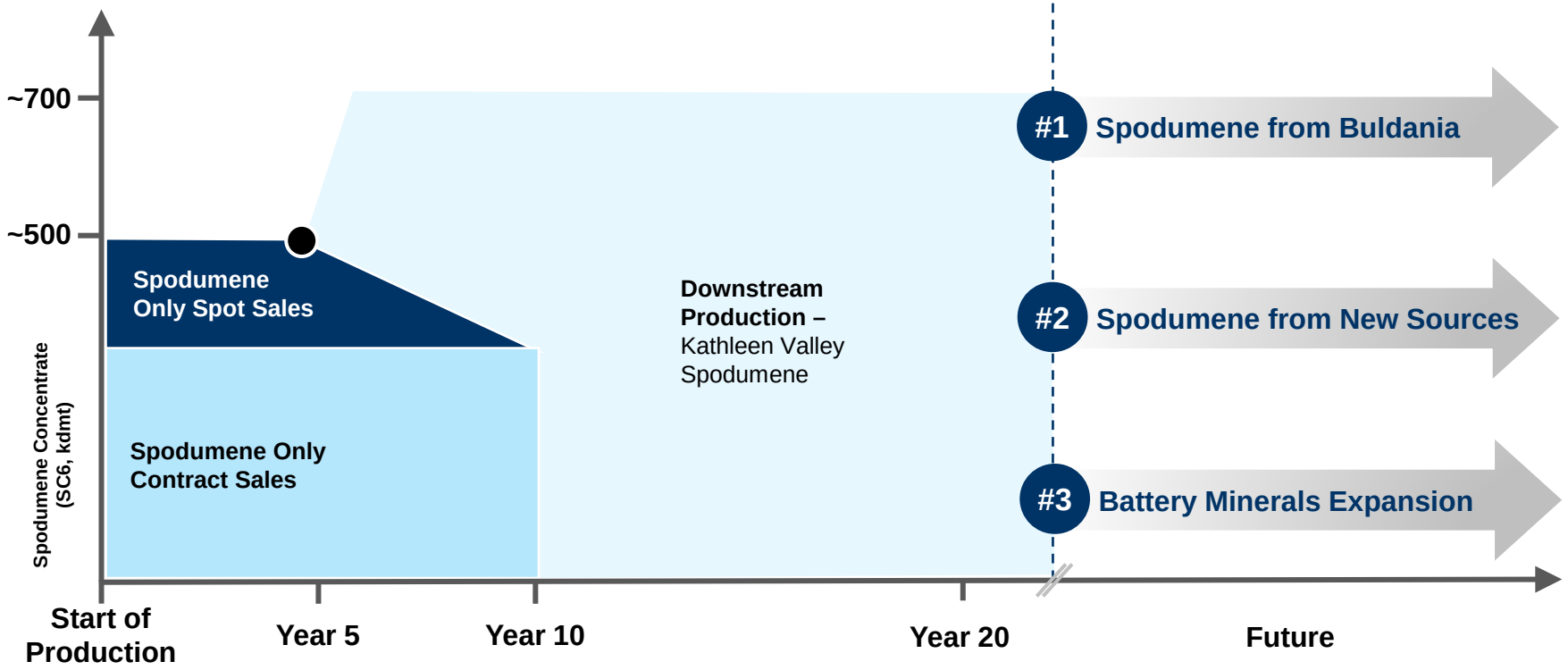
Liontown is planning for the future

Kathleen Valley Spodumene

Optionality for spodumene or processed lithium sales based on market conditions

Future Supply

Liontown is continuously exploring opportunities to increase battery minerals inventory



- Near-term focus on maximising spodumene value from Kathleen Valley through offtake agreements and further resource drilling
- Accelerate progression to higher value downstream production
- Continuously explore options for development / expansion of lithium inventory
- Develop expertise in alternative commodities which support Liontown's battery minerals strategy

Liontown's Funding Strategy

Discussions are progressing positively. Liontown is confident its optimal funding mix will be in place prior to final investment decision in Q2 2022.

Short-term funding requirement

DFS Capex: ~A$473M[1]

Debt	• Strong interest from tier 1 domestic and international banks • Indicative term sheets over the coming weeks – some presented now
Equity	• Strength in equity markets evidenced by strongly supported raises across lithium peers
Other	• Liontown exploring other financing options (e.g. "Green loans", customer pre-payments, streaming opportunities, etc.)

Long-term funding

Expansion Capex: ~A$66M

Internal Cash Flows	• Liontown expects expansion will be funded through internally generated cash flows

DSS Capex: ~A$1.5B[1]

Internal Cash Flows or Other	• Current estimated project cashflows sufficient to fund but optionality remains to fund via traditional debt / equity markets or other sources (e.g. downstream partner, etc.)

1. Excludes working capital, finance costs, sustaining capital and corporate costs associated with project development.

Liontown's Investment Proposition

Tier 1 Asset

Kathleen Valley is a world-class lithium deposit, with exceptional economics and growth optionality

ESG-Positive

Net zero trajectory, with a climate strategy roadmap in place targeting net zero emissions by 2034

Timed To Perfection

Significant supply deficits forecast to emerge from 2024, which is expected to align with start of production at Kathleen Valley

Integrated Opportunity

Integrated, long-term lithium producer, positioned to capture value from mine to end-use in the electric vehicle market

Near Term Priorities

1. Execute attractive offtake agreements to support final investment decision
2. Progress and finalise project funding
3. Secure long-lead items to support accelerated development timeline
4. Appoint industry leading EPCM contractor to spearhead Kathleen Valley development
5. Continue to develop downstream strategy

Thank You

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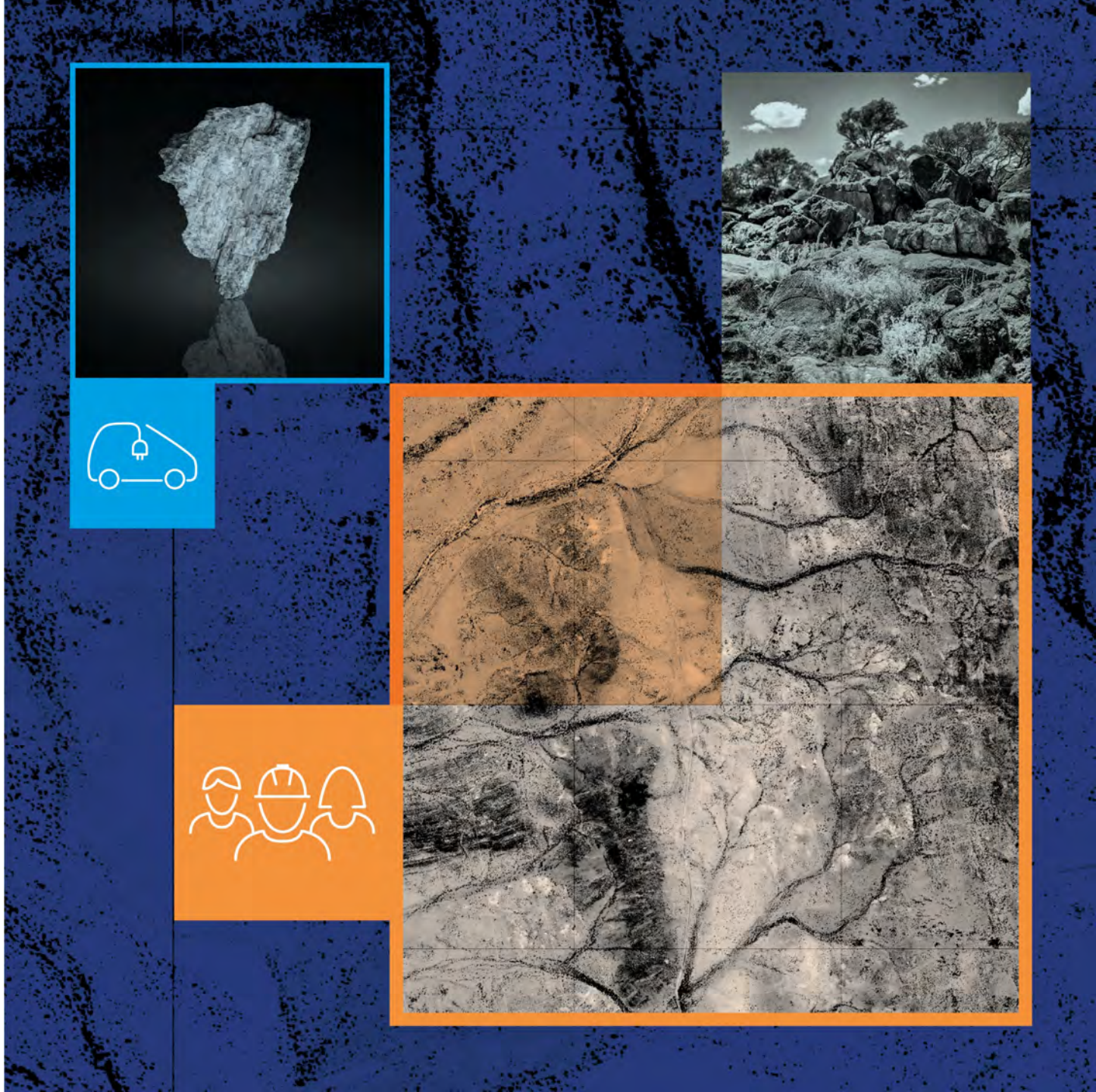


APPENDIX 1

Kathleen Valley Project

Additional Information

Resources & Reserves

Kathleen Valley is a globally significant, high-grade resource

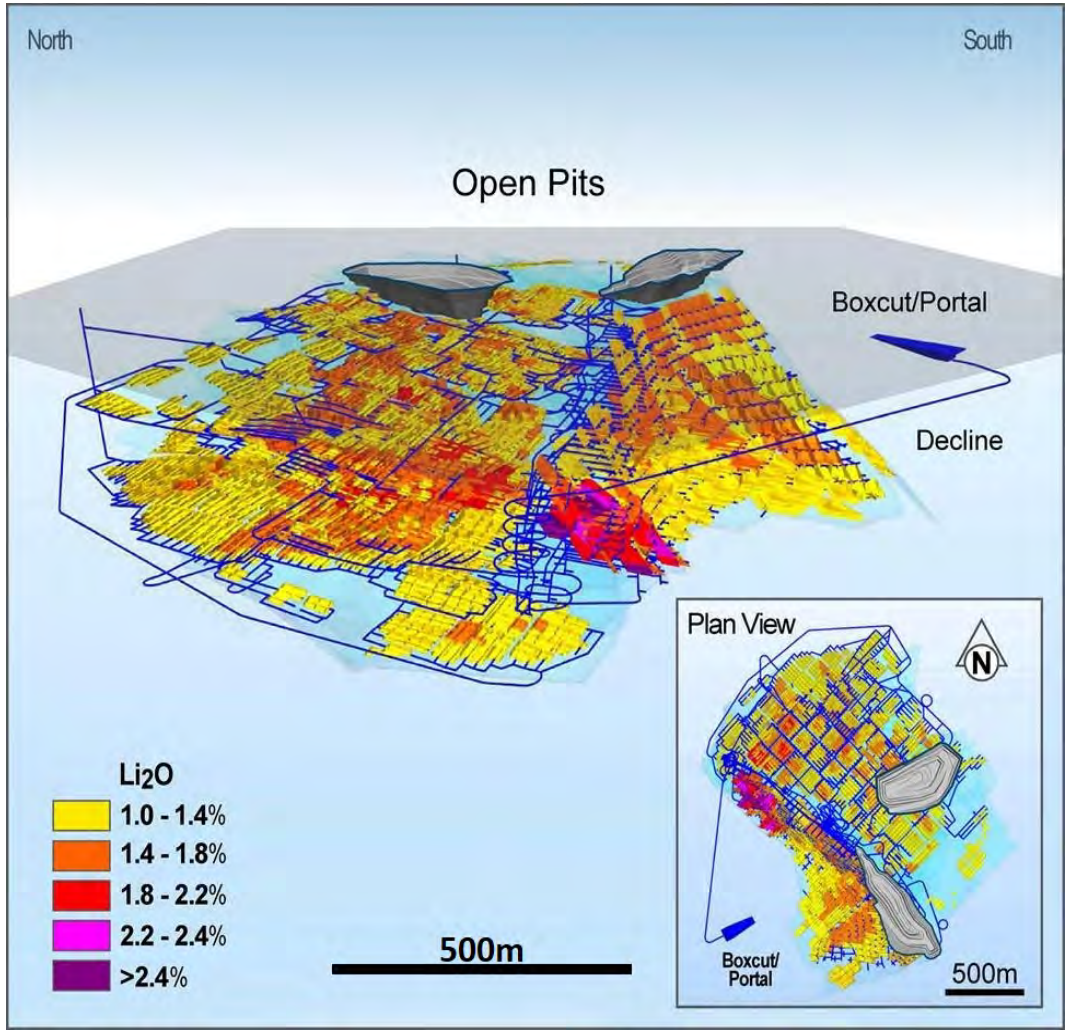
Mineral Resource Estimate[1] – April 2021

Cut-off Li_2O%	Resource Category	Million Tonnes	Li_2O%	Ta_2O_5 (ppm)
0.55	Measured	20	1.3	145
	Indicated	109	1.4	130
	Inferred	27	1.3	113
TOTAL		**156**	**1.4**	**130**

Ore Reserve – November 2021

Category		Million Tonnes	Li_2O%	Ta_2O_5 (ppm)
Underground	Proved	-	-	-
	Probable	65.4	1.34	119
	Sub Total	65.4	1.34	119
Open Pit	Proved	2.7	1.30	141
	Probable	0.5	0.93	148
	Sub Total	3.2	2.23	142
TOTAL		**68.5**	**1.34**	**120**

1. Inclusive of ore reserve



DFS Key Parameters And Assumptions

General and Economic	DFS [1]
Discount rate (real, post-tax)	8%
Weighted average LOM SC6.0 (FOB Geraldton)	US$1,392/t [5]
Weighted average Tantalum LOM 30% conc. (FOB Fremantle)	US$84/lb [6]
Exchange rate – AUD/USD	0.73
Mining and Production	
Average LOM strip ratio (Open Pit)	6:8:1
Processing rate	2.5 to 4Mtpa
Life-of-Mine Production Target (79.6Mt UG & 3.2Mt OP)	82.7 Mt ore
Li_2O & Ta_2O_5 grades (diluted) years 1-10 processed (% / ppm)	1.4% / 126 ppm
LOM average Li_2O & Ta_2O_5 grades (diluted) processed (% / ppm)	1.3% / 117 ppm
LOM average Test Work Li_2O recovery [2]	78%
Overall Ta_2O_5 recovery (% including off-site upgrade losses of ~4%)	38%
SC6.0 grade	6%
Ta_2O_5 Concentrate final grade	30%
Moisture content of SC6.0 concentrate	9%
Average steady state annual tonnes of SC6.0 (Years 2-5 / Years 6-22)	511ktpa / 658ktpa
Average steady state annual tonnes of 30% Ta_2O_5 concentrate (Years 2-5 / Years 6-22)	428tpa / 587tpa

Cost Assumptions	DFS [1]
LOM avg open pit mining costs [3] (A$/dmt ore mined [4])	28
LOM avg U/G mining costs [3] (A$/dmt ore mined [4])	45
LOM average processing cost (A$/dmt ore processed)	22
Logistics and transport (A$/wmt conc. incl. Port Charges)	69
General and admin (A$/dmt ore processed incl. mining)	8
Private and state royalties (A$/dmt)	145
Corporate tax rate	30%
Estimated opening tax losses (A$M)	55

1: Refer Cautionary Statement on Slide 2 | **2.** Based on test work derived grade recovery relationship for DFS was 81%, for purposes of financial modelling a figure of 78% has been applied. | **3:** Includes ROM rehandle | **4:** Excludes pre-production | **5:** Based on Roskill November 2021 price forecast, adjusted to FOB. | **6:** Based on Roskill September 2021 price forecast, adjusted to FOB.

DSS Key Parameters And Assumptions

General and Economic	DSS [1]
Discount rate (real, post-tax)	8%
SC6.0 weighted average price (FOB)	US$1,289/t [2]
Weighted average LHM price (FOB)	US$29,401/t
Weighted average tantalum 30% conc. (FOB Fremantle)	US$84/lb [3]
Exchange rate – AUD/USD	0.73
Downstream Integrated Refinery	
Number of processing trains	3
Recovery Li (%)	90
Calcination temperature (°C)	1,100
Sulphuric Acid Addition (mol/mol)	1.25 (H_2SO_4:Li_2O)
Acid Roast Temperature (°C)	250
Acid Leaching Residence Time (minutes)	120
Lithium Crystalliser Stages (per train)	3
Design Production	28.8ktpa LHM

Cost Assumptions	DSS [1]
SC6.0 LOM average operating cost excl. transport [4] (US$/dmt SC6.0 produced)	378
SC6.0 Transport cost (to Geraldton incl. Port Charges) (US$/dmt SC6.0 sold)	55
LHM weighted average processing conversion cost (US$/dmt LHM)	3,303
LHM Transport cost (to Fremantle incl. Port Charges) (US$/dmt LHM)	70
Royalties	As per DFS, based on spodumene feedstock market value
Corporate tax rate	30%
Estimated opening tax losses (A$m)	55

1: Refer Cautionary Statement on Slide 2 | **2:** Based on Roskill November 2021 price forecast, adjusted to FOB. | **3:** Based on Roskill September 2021 price forecast, adjusted to FOB. | **4:** Includes royalties and tantalum credits, excludes sustaining capital. Refer to separate DFS announcement published 11th November 2021

APPENDIX 2

Kathleen Valley Project

Peer Benchmarking

Kathleen Valley

Lithium Equivalency (Li_2O + Ta_2O_5) Parameters

Inputs				Outputs	Li_2O%	
Tantalite (Ta_2O_5) $/lb	84	(B2)	US$			
Spodumene $/tonne	1,392	(B3)	US$			
Tantalite recovery	38%	(B4)	Per LTR testwork incl. off site losses ie 90% of 42%	Ta_2O_5 =	0.0487	(F4)
Spodumene Recovery	81%	(B5)	Per LTR testwork			
Ta_2O_5 Grade	30%	(B6)		Equiv Li2O grade =	1.40%	
Li_2O Grade	6%	(B7)		(Li_2O% +Ta2O5)		
Grade Ta_2O_5 in resource	130	(B9)	ppm (per resource)			
Grade Li_2O in resource	1.35%	(B10)	(per resource)			

F4=B9*((B2)/(B3/B7))*(B4/B5)*2204*0.0001

Equiv. Li_2O grade (Li_2O% + Ta_2O_5%) = F4/(100+B10)

Peer Comparison Information – Mineral Resource Estimates

Company	Project	Stage	Measured Mt	Indicated Mt	Inferred Mt	Global MRE Mt	MRE Li_2O Grade %	Information Source
Liontown Resources	Kathleen Valley	Development	20.0	109.0	27.0	156.0	1.35	ASX Release 8/4/2021
	Buldania	Scoping	0.0	9.1	5.9	14.9	0.97	ASX Release 8/11/2019
Pilbara Minerals	Pilgangoora	Operating	21.5	188.7	98.8	308.9	1.14	ASX Release 6/10/2021
SQM(50%)/Wesfarmers (50%)	Mt Holland	Development	66.0	106.0	17.0	189.0	1.50	ASX Release 19/3/2018 (Kidman Resources)
Albermarle (49%)/ Tianqi (26%)/IGO (25%)	Greenbushes (excl taillings)	Operating	0.2	163.1	8.9	172.2	1.98	IGO acquisition presentation and ASX release 9/12/20
Alita Resources	Bald Hill	Operating (C+M)	0.0	14.4	12.1	26.5	1.00	ASX Release 6/6/2018 (Alliance Minerals Assets)
Ganfeng (50%)/ MinRes Ltd (50%)	Mt Marion	Operating	0.0	22.7	48.7	71.3	1.37	ASX Release 31/10/2018 (Mineral Resources)
Core Lithium	Finnis	Development	4.1	4.2	6.5	14.7	1.32	ASX Release 26/07/2021
Albermarle (60%)/ Min Res Ltd (40%)	Wodgina (excl. tailings)	Operating (C+M)	0.0	177.0	59.9	236.9	1.19	ASX Release 23/10/2018 (Mineral Resources)
Orocobre	Mt Cattlin (100%)	Operating	0.3	7.8	2.9	11.0	1.20	ASX Release 3/06/2021 (Galaxy)

Peer Comparison Information – Capital Intensity

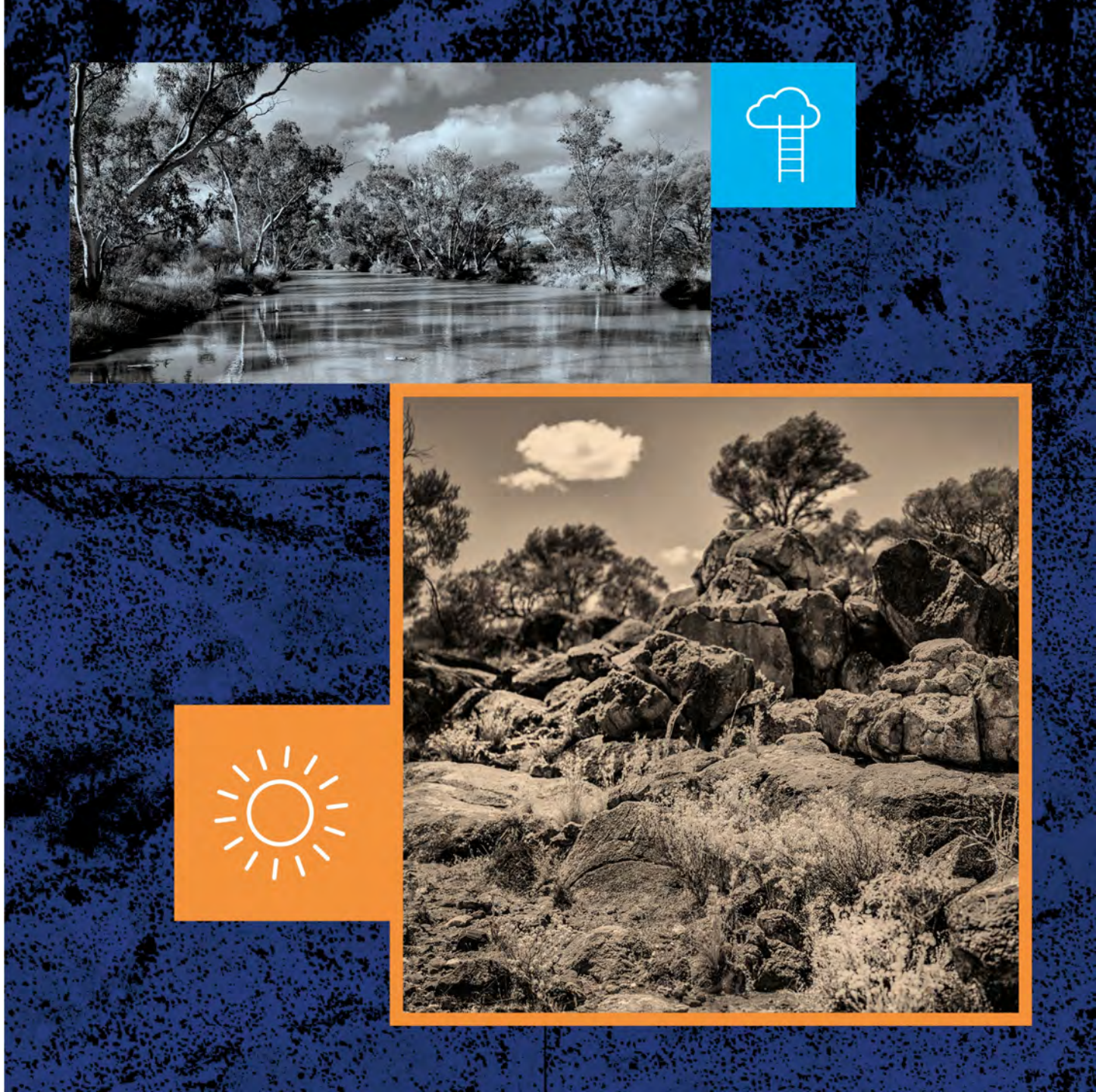
Company	Project	Stage	Capital Cost (US$m[1])	Average Annual Spodumene Production (ktpa)	Grade (%)	Capital Intensity[2]	Information Source
Liontown Resources	Kathleen Valley – PFS	Development	237	350	6.0	678	ASX Announcement – Kathleen Valley PFS Presentation, 9 October 2020
	Kathleen Valley – DFS	Development	393	700	6.0	561	ASX Announcement – Kathleen Valley DFS Presentation, 11 November 2021
Critical Elements	Rose	DFS	276	205	5.2[3]	1,341	Website – https://www.cecorp.ca/en/projects/rose-lithium-tantalum/
Sayona	Authier	DFS	97	114	6.0	850	ASX Announcement – Revised Authier DFS Shows Boost to Profitability, 11 November 2019
Orocobre	James Bay	Exploration	244	330	5.6	792	ASX Announcement – James Bay Development Plan, 9 March 2021
AVZ Minerals	Manono	DFS	545	700	6.0	779	ASX Announcement – Capital Raising Presentation, 2 July 2021
Savannah Resources	Mina do Barroso	Exploration	136	175	6.0	777	LSX Announcement – Scoping Study for the Mina do Barroso, 14 June 2018
Firefinch / Ganfeng	Goulamina	Exploration	194	436	6.0	445	ASX Announcement – Goulamina: Confirmed as World Class Deposit, 20 October 2020
Sigma	Grota do Cirilo	Development	143	440	6.0	325	TSX Announcement – Investor Presentation, 8 September 2021

1: FX assumption of 0.73
2: Adjusted for comparable grade of 6.0%
3: Weighted average

APPENDIX 3

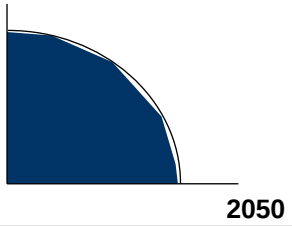
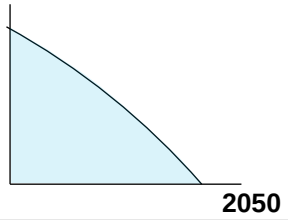
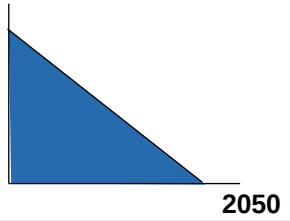
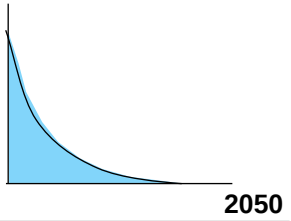
Kathleen Valley Project

Net Zero Definition



Liontown will firm up its net-zero trajectory aspiration before FID

Selected examples of different “net zero” pathways

	>2°C	2°C	“Well below 2°C”	1.5°C
Emissions ($MtCO_2e$)				
Aligned with the Paris Agreement	✗	✗	✓	✓
Average missions reductions by 2030[1]	+12%[2]	~21%[3]	~20%[4]-29%[5]	~35-64%[6]
Carbon budget remaining ($GtCO_2$)	~3170-4540[7]	~1170-1500[8]	~800-1040[9]	~420-580[10]
Example scenarios	IEA ETP RTS, IEA SPS, McK GEP Reference case	IEA ETP 2DS	IEA ETP B2DS, IEA SDS, NGFS ‘Orderly’, Shell SKY	NGFS 1.5, McK 1.5,

Sector-specific emission path for lithium still being developed as a “green growth” sector

1: Approximations, compared to 2020, based on published scenarios | 2: IEA ETP 2017 RTS (assuming 33.5 GtCO2direct emissions from energy in 2020) | 3: IEA ETP 2017 2DS (assuming 33.5 $GtCO_2$direct emissions from energy in 2020) | 4: Based on IEA 2020 WEO SDS scenario, direct CO_2 emissions from energy, global | 5: NGFS 2020 ‘Orderly’ (CO_2) | 6: NGFS 2020 1.5 with CDR and with limited CDR respectively | 7: IPCC AR5, RCP6.0, 720-1000ppm CO_2e, cumulative emissions 2011-2100: 3620-4990, minus 9 years emissions of ~50$GtCO_2e$/year since 2011 = 3170-4540, approximation of 50$GtCo_2e$/yr based on Climatewatch data | 8: IPCC SR15 report, budget starting from 2018, for 2C, at 67th and 50th percentile | 9: IPCC SR15 report, budget starting from 2018, for 1.75C, at 67th and 50th percentile | 10: IPCC SR15 report, budget starting from 2018, for 1.5C, at 67th and 50th percentile

There are many different ways to meet “net zero” by 2050

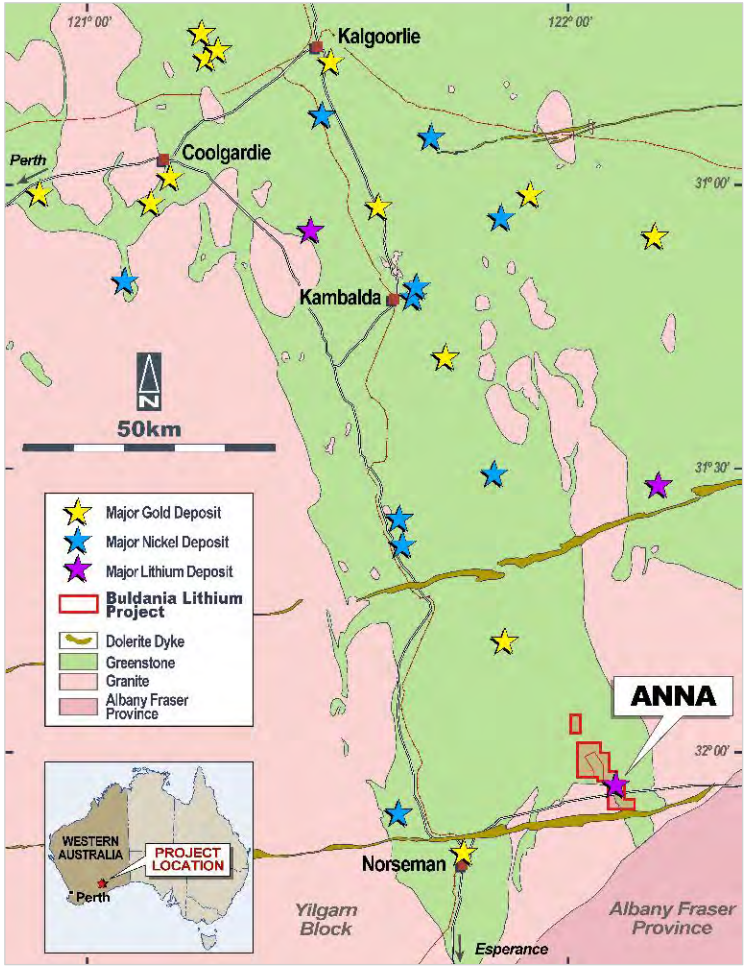
APPENDIX 4

Buldania

Buldania Project Overview

Buldania is in a lithium-rich mineral province

1. Outcropping, fresh, spodumene-related mineralization
2. Mineralisation at Anna extends to the SE under shallow cover – strike length >1.4km and open with further drilling underway
3. 15Mt Resource and similar geology to the Mt Marion and Bald Hill lithium deposits (71Mt[1] and 26Mt[2] 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. Mining Lease Application lodged over Anna deposit [1]



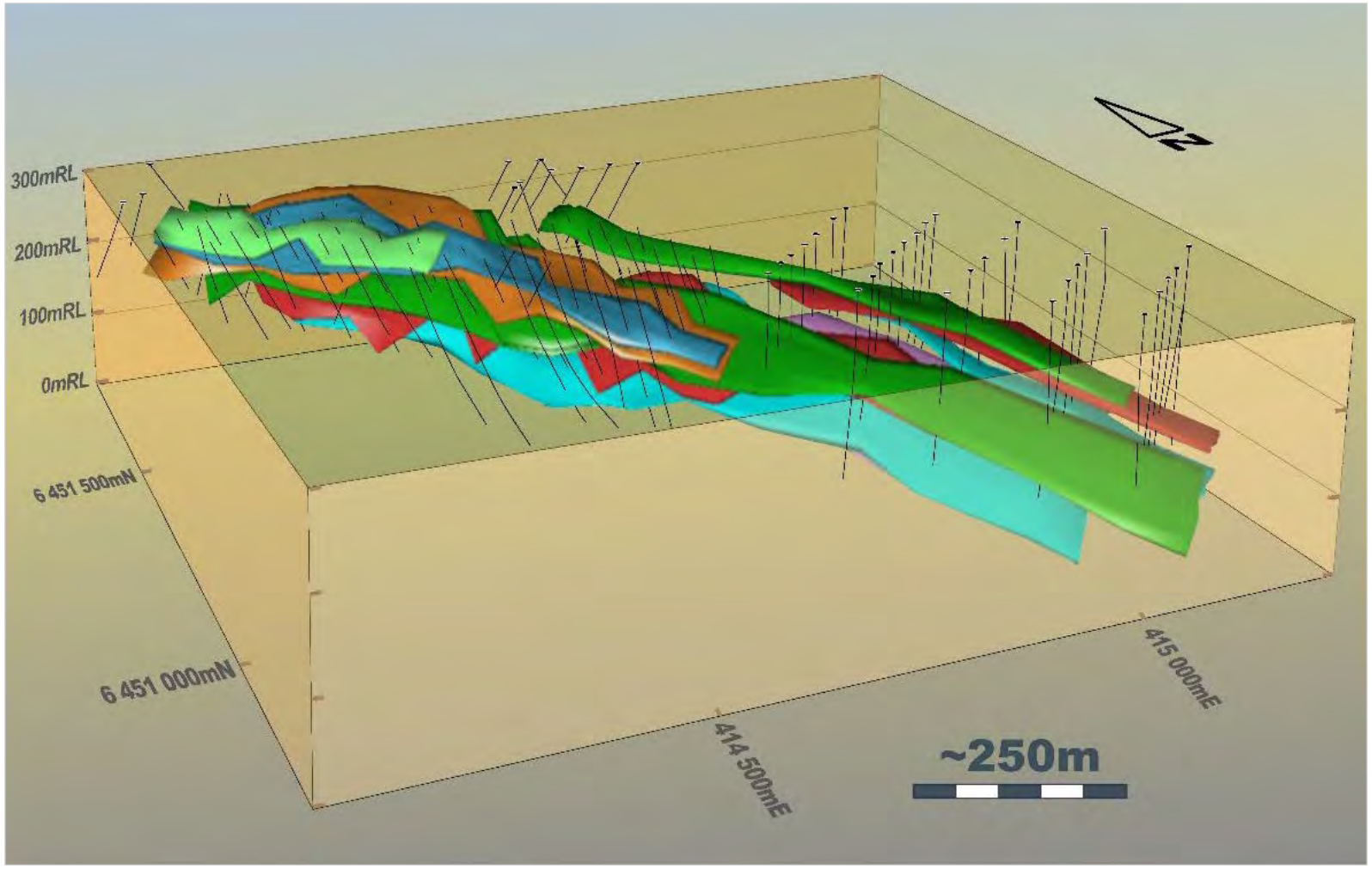
1 Mt Marion – Refer to Peer Comparison table – slide 32.
2 Bald Hill source: http://www.allianceminerals.com.au/projects/

Resource

Maiden Mineral Resource Estimate

14.9Mt @ 1.0% Li_2O

The MRE complements Liontown's flagship Kathleen Valley Lithium Project



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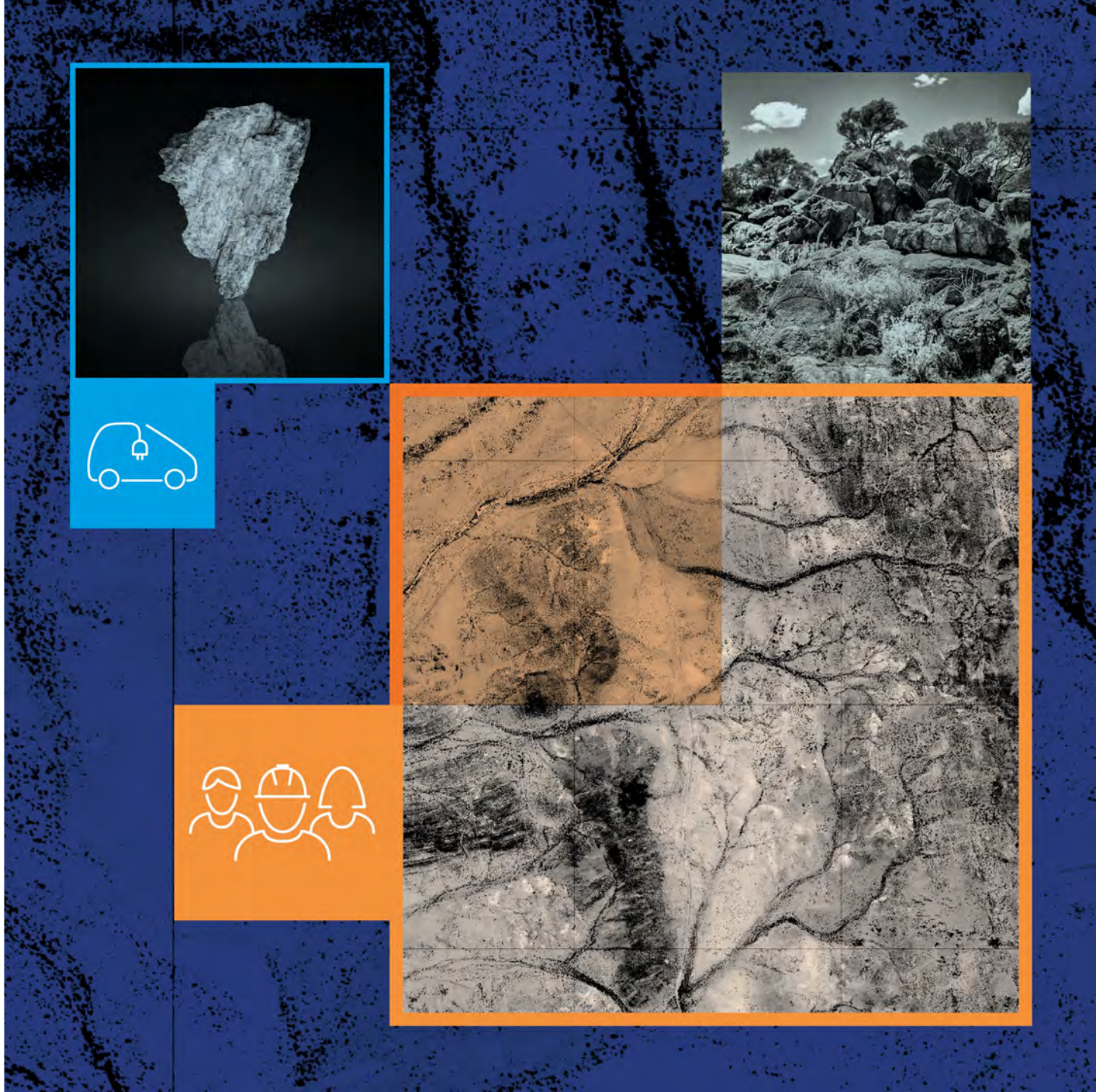
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