



**Pilbara
Minerals**

...Powering a Sustainable Energy Future

Pilgangoora: a world class lithium and tantalum production centre

Corporate presentation - April 2019

ASX: PLS

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Mineral Resources and Ore Reserves

Recipients of this presentation outside Australia should note that it is a requirement of the Australian Securities Exchange listing rules that the reporting of ore reserves and mineral resources in Australia comply with the Australasian Joint Ore Reserves Committee Code for Reporting of Mineral Resources and Ore Reserves ("JORC Code"), whereas mining companies in other countries may be required to report their ore reserves and/or mineral resources in accordance with other guidelines (for example, SEC Industry Guide 7 in the United States). Recipients should note that while Pilbara's mineral resource and ore reserve estimates comply with the JORC Code, they may not comply with the relevant guidelines in other countries, and do not comply with SEC Industry Guide 7. In particular, SEC Industry Guide 7 does not recognise classifications other than proven and probable reserves and, as a result, the SEC generally does not permit mining companies to disclose their mineral resources, including indicated and inferred resources, in SEC filings. Accordingly, if Pilbara were reporting in accordance with SEC Industry Guide 7, it would not be permitted to report any mineral resources, including indicated and inferred resources, and the amount of reserves reported by Pilbara may be lower than its estimates. You should not assume that quantities reported as "resources" will be converted to reserves under the JORC Code or any other reporting regime or that Pilbara will be able to legally and economically extract them. In addition, investors should note that under SEC Industry Guide 7, mine life may only be reported based on ore reserves. Mine life estimates in this presentation assume that a portion of non-reserve resources will be converted to ore reserves, which would not be permitted under SEC Industry Guide 7.

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By attending a presentation or briefing, or accepting, accessing or reviewing this document you acknowledge, accept and agree to the matters set out above.

Competent Persons Statements

The Company confirms it is not aware of any new information or data that materially affects the information included in the 17 September 2018 Pilgangoora Mineral Resource estimate and that all material assumptions and technical parameters underpinning the estimate continue to apply and have not materially changed when referring to its resource announcement made on 17 September 2018.

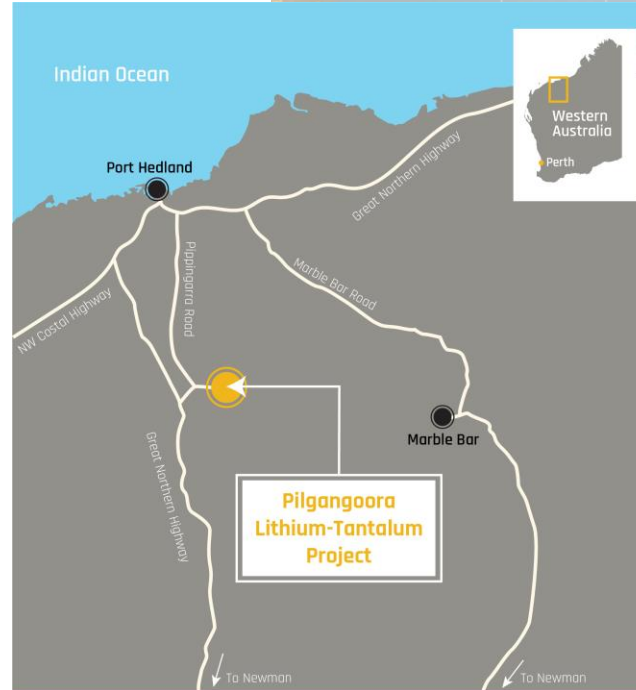
The Company confirms it is not aware of any new information or data that materially affects the information included in the 17 September 2018 Pilgangoora Ore Reserve estimate and that all material assumptions and technical parameters underpinning the estimate continue to apply and have not materially changed when referring to its resource announcement made on 17 September 2018.

The information in this presentation that relates to Exploration Results and Exploration Targets is based on and fairly represents information and supporting documentation prepared by Mr John Holmes (full-time Exploration and Geology Manager of Pilbara Minerals Limited). Mr Holmes is a shareholder of Pilbara Minerals. Mr Holmes is a member of the Australasian Institute of Geoscientists and has sufficient experience of relevance to the styles of mineralisation and types of deposits under consideration, and to the activities undertaken to qualify as Competent Persons as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Holmes consents to the inclusion in this report of the matters based on his information in the form and context in which they appear.

Pilgangoora Lithium-Tantalum Project

One of the largest spodumene-tantalite resources in the world

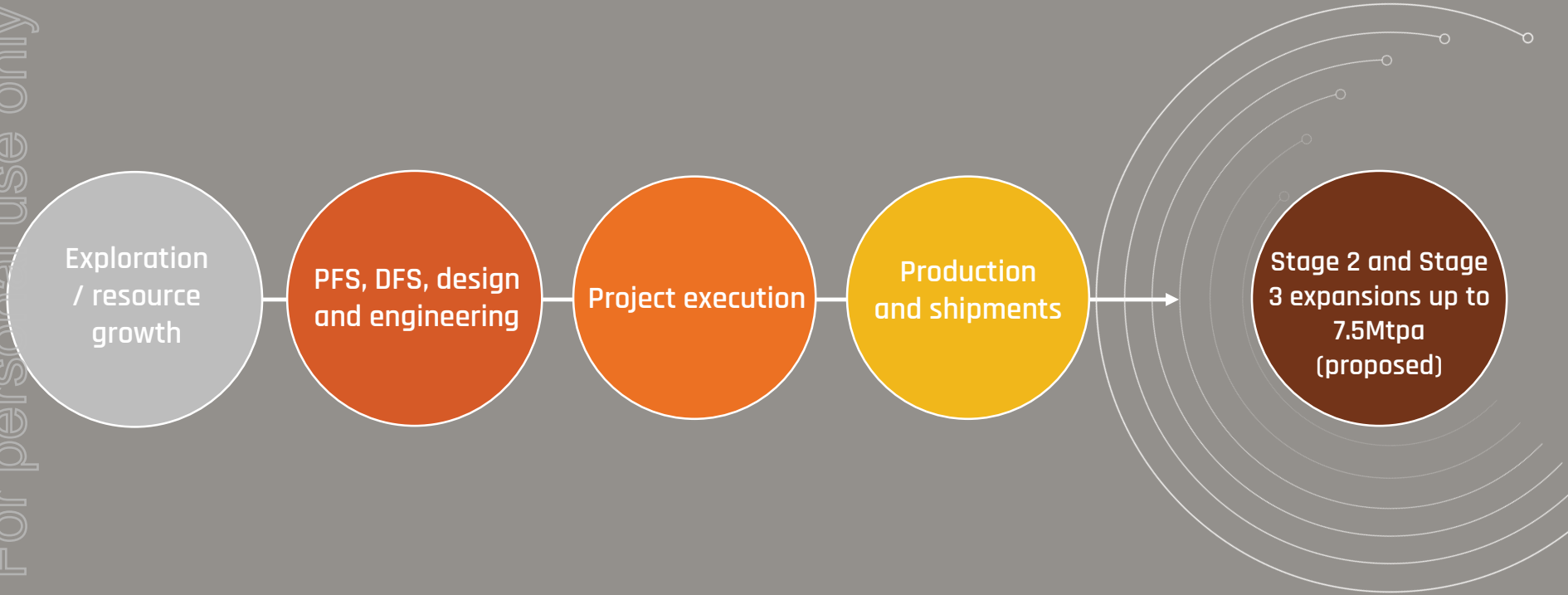
- 100% owned by Pilbara Minerals (ASX200, market cap \$1.2B)
- 23 year mine life to date (based on Stage 2)
- Established transport and port infrastructure
- Stage 1 (2Mtpa) production of 330,000tpa spodumene and 321,000lbspa of tantalite concentrate
- Production ramp up well advanced
- Regular customer product shipments
 - ~6% spodumene concentrate
 - +5% tantalite concentrate
- +25% tantalite concentrate production under development
- Downstream 'value adding' strategy via participation in future chemical conversion capacity



Pilbara Minerals: delivering on project execution

Pilgangoora Lithium-Tantalum Project: from first drill hole to product shipment in under four years

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Exceptional growth opportunity

A clear expansion pathway to meet customer growth requirements

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STAGE 1: 2MTPA

STAGE: Operations

STATUS: Production and shipments

PRODUCTION: 330,000tpa ~6% spodumene concentrate
321,000lbspa +5% and tantalite concentrate

OFFTAKE: Stage 1 and 2 spodumene concentrate
100% under agreement

STAGE 2: 5MTPA

STAGE: DFS and FID complete

STATUS: Financing underway

PRODUCTION: 800-850,000tpa~6% spodumene concentrate
800,000lbspa +5% tantalite concentrate

OFFTAKE: Stage 1 and 2 spodumene concentrate
100% under agreement

STAGE 3: UP TO 7.5MTPA

STAGE: Proposed

STATUS: Scoping study complete
PFS initiated

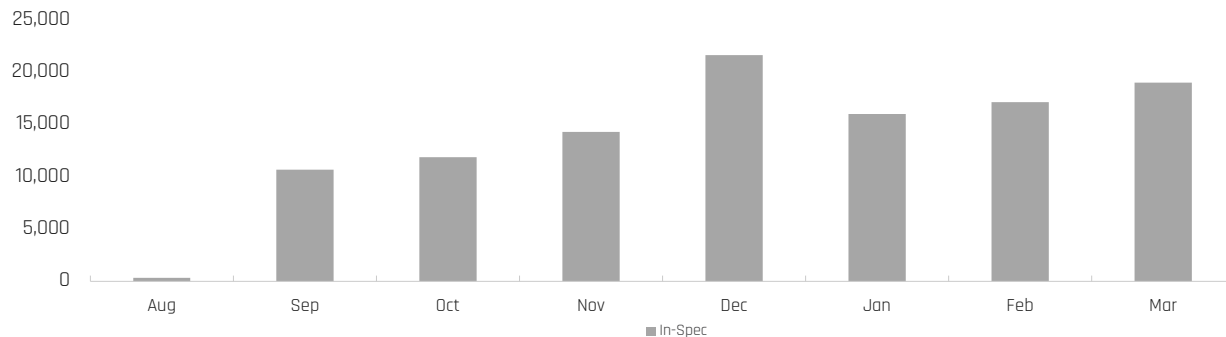
PRODUCTION: up to 1.2Mtpa ~6% spodumene concentrate
1,100,000lbspa +5% tantalite concentrate

OFFTAKE: Partnering process underway
Proposed chemical conversion plant

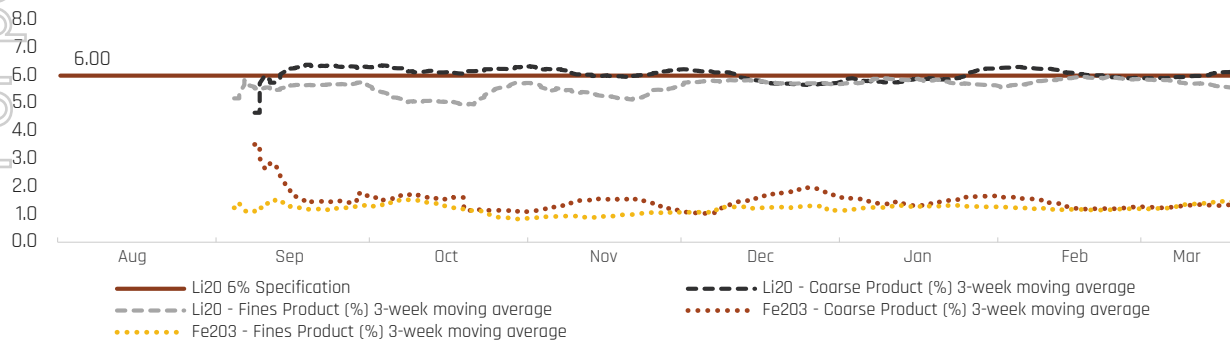
Commercial production achieved

Achievement of sustained output and quality of concentrate from Stage 1 (2mtpa) operation

Total monthly Spodumene concentrate production (6% Li, 1.8% Fe)



Spodumene concentrate quality performance (moving average) for iron and lithia



Commercial production declared as of 1 April 2019

Production and sales

Consistent production and customer sales for the March Quarter

Production and sales

	Units	Q3 FY18	Q4 FY18	Q1 FY19	Q2 FY19	Q3 FY19
Direct Shipping Ore (DSO) sold	<i>wmt</i>	-	145,974	205,766	0 ²	0 ²
Spodumene concentrate produced	<i>dmt</i>	-	-	11,015	47,859	52,196
Spodumene concentrate sold	<i>dmt</i>	-	-	0	46,598 ¹	38,562
Tantalite concentrate produced	<i>lb</i>	-	-	22,151	56,663	33,374
Tantalite concentrate sold	<i>lb</i>	-	-	7,378 ¹	27,821	30,356 ³

¹ Concentrates have been adjusted following final results.

² The DSO program was suspended in Q2 FY19.

³ Sales estimates pending final assays results.

Stocks

	Units	Q1 FY19	Q2 FY19	Q3 FY19
ROM stockpile	<i>dmt</i>	N/A ¹	487,292 ³	520,606
Coarse ore stockpile	<i>dmt</i>	N/A ¹	82,430	96,139
Spodumene concentrate stocks	<i>dmt</i>	17,677 ²	17,266 ²	30,900 ²
Tantalite concentrate product stocks	<i>lb</i>	14,774 ⁴	43,616 ⁴	46,634

¹ No previous reporting for period due to completion of build and commissioning phase.

² Includes low-spec stocks produced during initial commissioning phase which are expected to be sold over time.

³ Prior quarter results have been adjusted to reflect the re-classification of certain ore tonnes to mineralised waste.

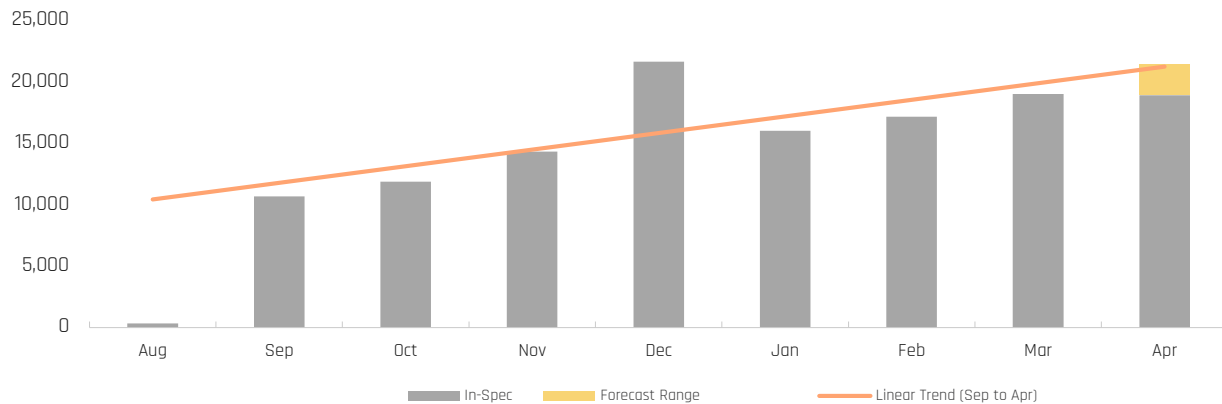
⁴ Concentrates adjusted following final sales results.



Production trend

Steady increase in spodumene concentrate production as processing plant is further optimised for lithia recovery and throughput

Spodumene concentrate production (dmt)



¹ April production is unreconciled production to 27 April 2019, with an estimate of expected production to April 2019 month end.

Forecast April production estimate of 20–22kt (dmt, SC6.0 basis) driven by improving lithia recovery trend

Adjustments to the Pilgangoora plant are delivering planned recovery improvements:

- March 26 to April 18 recovery (unreconciled) of 63% (SC6.0 basis), representing approx. 85% of design (75% lithia recovery)
- 9th April to 18th April recovery (unreconciled) of 65% (SC6.0 basis)

- A total of 52,196 dmt (dry metric tonnes, SC6.0 basis) spodumene concentrate produced during the March Quarter

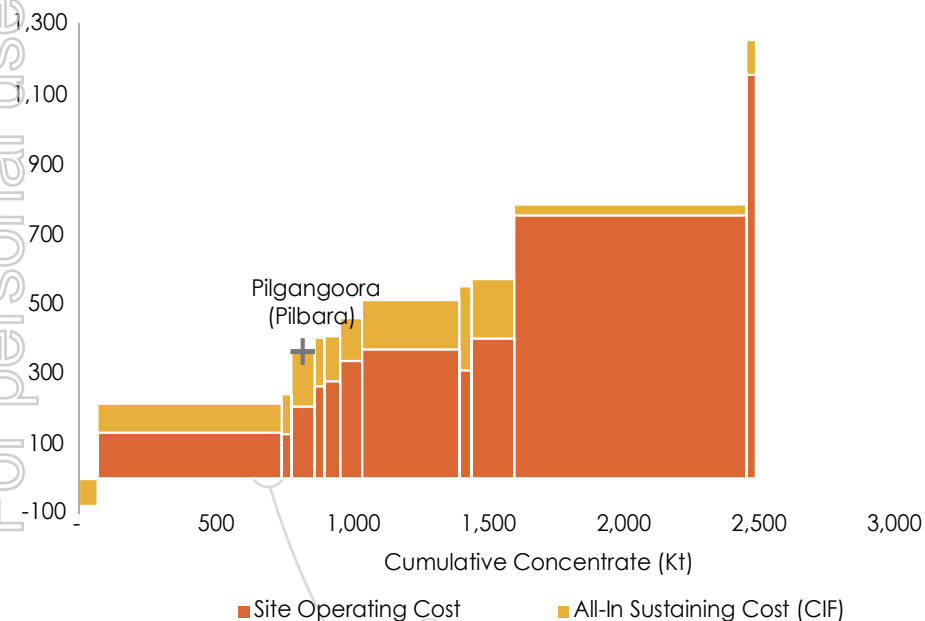


A low-cost hard rock lithium operation

Based upon Roskill's most recent lithium cost model, Pilgangoora is expected to be positioned favourably on the global spodumene cost curve

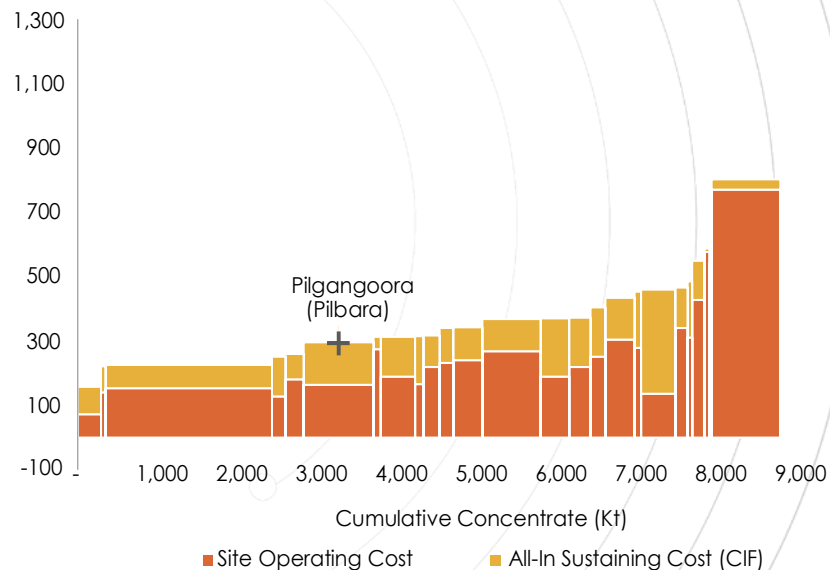
2018 spodumene concentrate cost curve

US\$/t spodumene 6%, CIF real 2019



2023 spodumene concentrate cost curve

US\$/t spodumene 6%, CIF real 2019



Source: Roskill Lithium Cost Model. Note: Cost curves have been provided by Roskill – Roskill's costing methodology differ from Pilbara Mineral's internal estimates.

Stage 2, 5Mtpa expansion

DFS results and offtake partner confidence support major project expansion

- Additional 3Mtpa processing circuit to increase processing capacity to 5Mtpa
- Average annual production of approximately 800-850ktpa of 6% spodumene concentrate
- DFS capital estimate² A\$231M
- Post-tax NPV^{1,2}_{10%} of A\$2.160B
- Forecast life of mine revenue² of A\$12.2B
- First five years average annual EBITDA (real), post ramp-up² of +A\$400M
- 23 year mine life
- FID approved by Board and terms agreed with customers underpinning funding package
- Long lead items ordered and detailed engineering underway

Aerial photograph w/- Stage 2 3D model overlay



Stage 2 - indicative delivery schedule

2018			2019				2020				2021
Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
DEFINITIVE FEASIBILITY STUDY											
FINAL INVESTMENT DECISION											
CUSTOMER FUNDING AGREED											
			FUNDING COMPLETION								
REGULATORY APPROVALS											
			DETAILED ENGINEERING								
			EQUIPMENT PROCUREMENT								
			CIVIL TENDER		CIVIL MOBILISATION AND CONSTRUCTION						
			PLANT CONSTRUCTION TENDER		PLANT CONSTRUCTION						
									COMMISSIONING/RAMP UP		

¹Valuation date of 1 July 2018 at after tax nominal discount of 10%.

²ASX announcement "DFS results and customer confidence support major expansion" dated 3 August 2018

Stage 3, 7.5Mtpa expansion

Scoping study results delivers positive results and support long term growth

- Additional 2.5Mtpa processing circuit to increase processing capacity to 7.5Mtpa
- Average annual production of approximately 1.2Mtpa of 6% spodumene concentrate
- Scoping study capital estimate A\$225.83M¹ (+/- 30%)
- Post-tax NPV^{2,3}_{10%} of A\$3.73B
- Forecast life of mine revenue⁴ of A\$16.6B
- LOM project EBITDA (pre-tax; real) A\$10.3B
- 15 year mine life
- PFS work commenced
- Stage 3 partnering process commenced

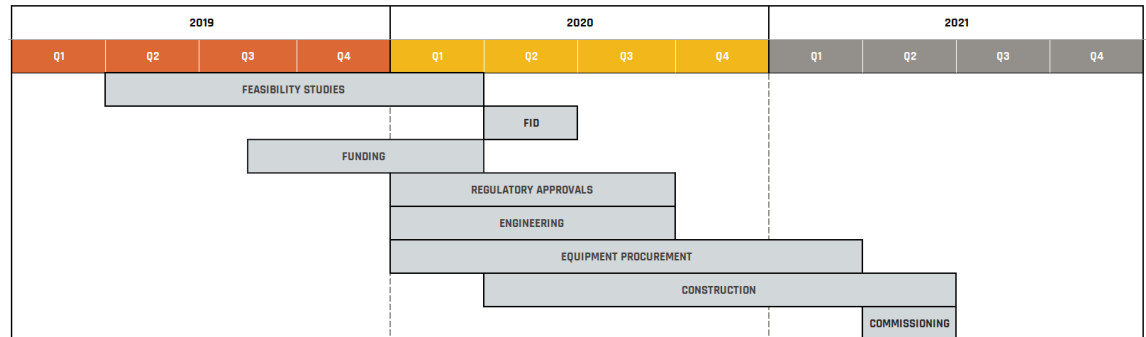
¹ Stage 3 capital is exclusive of Stage 2 capital of A\$231 million as per Pilbara Minerals' Stage 2 Definitive Feasibility Study (3 August 2018)
² Valuation date is 1 July 2019 at an after tax nominal discount rate of 10%
³ ASX announcement "Positive scoping study outcomes support Pilgangoora's long term growth trajectory" 26 March 2019
⁴ Real excluding tantalite



Aerial photograph w/- Stage 2 and 3 3D model overlay



Stage 3 - indicative delivery schedule



Stage 3 partnering process

Partners to be considered for Stage 3 offtake, chemical plant and project expansion

Potential sale of
minority project
level interest
20 - 49%

Support funding
package Stage 2
and 3 expansion

Stage 3 offtake
and further
diversification
downstream

Fully integrated
lithium raw
materials and
chemicals supplier

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Pilbara Minerals - connected to the entire supply chain

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Pilbara Minerals



Li Resource

Chemical Converters

Battery Grade LiOH / LC

Pre-Cursor

Cathode Material

Cathode Material

Cells & Battery Packs

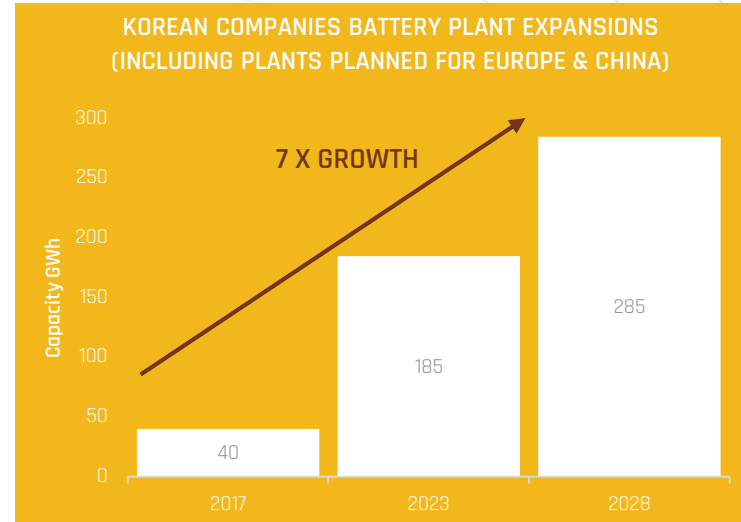
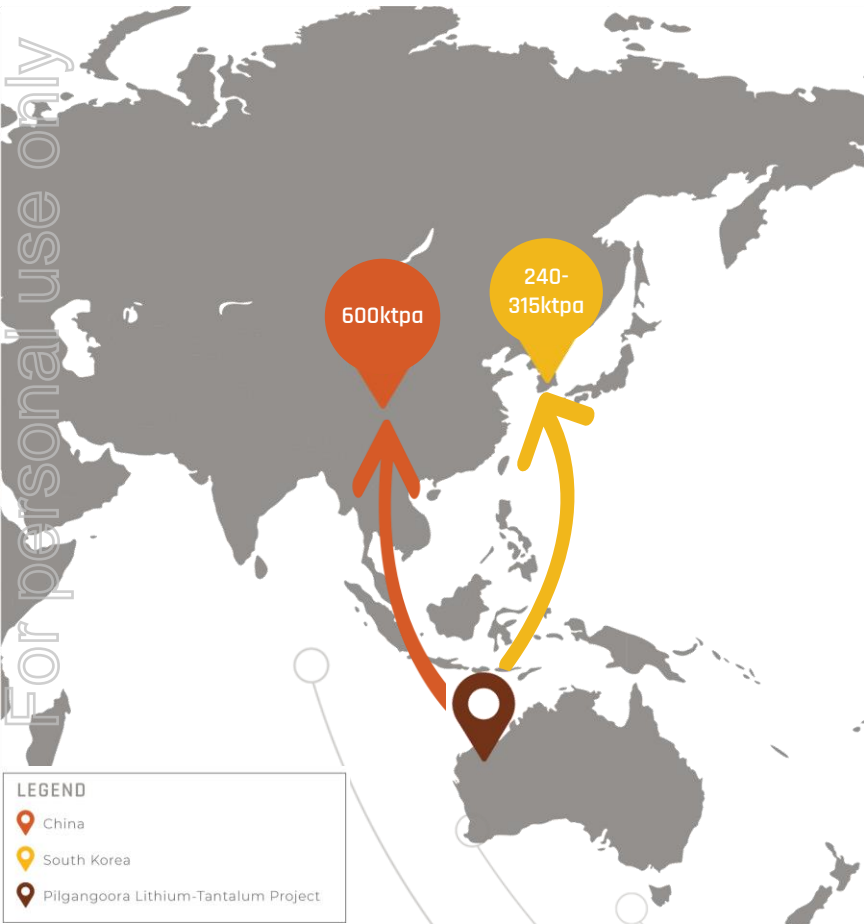
EVs



*Potential PLS JV partners

Pilgangoora - a new hard rock lithium supply to feed the growing Korean market

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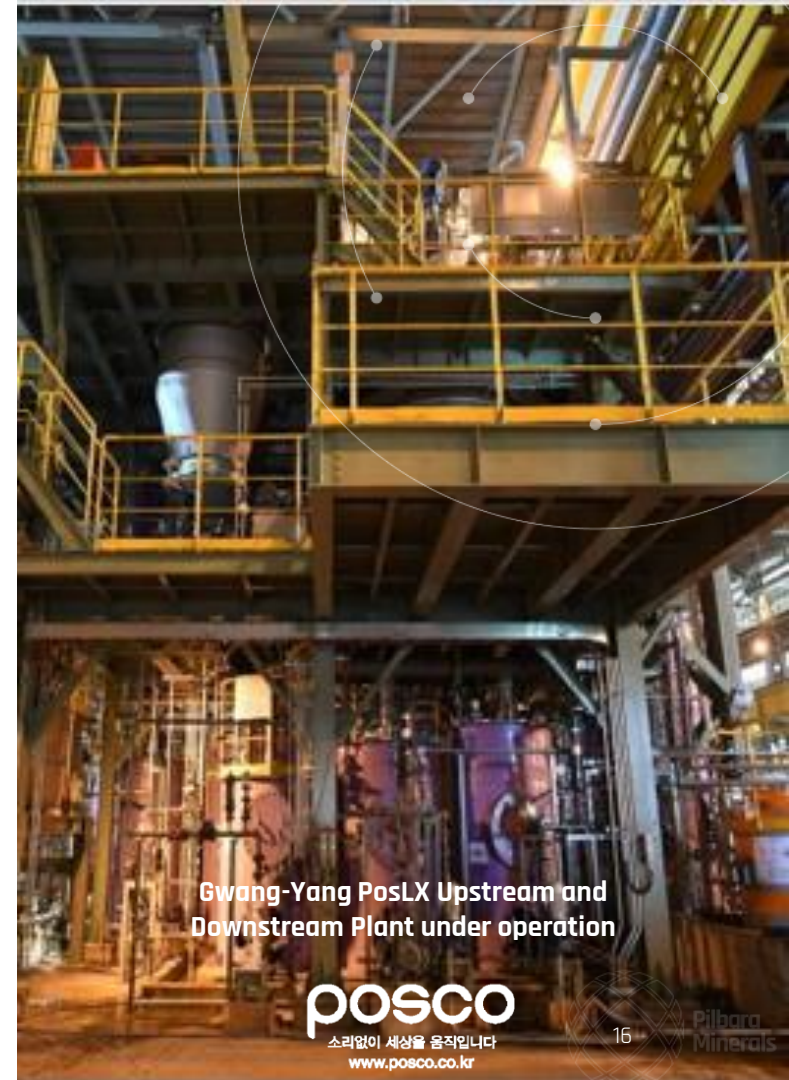
Source: Benchmark Minerals Intelligence (October 2018)

- Korea to be a significant player in the global battery supply chain ~25 % of worldwide capacity by 2028
- Further diversifies Pilbara Minerals' customer base
- Pilbara Minerals' first position in the downstream supply chain through hydroxide production

Proposed Pilbara Minerals - POSCO JV

Future participation in the rapidly developing Korean lithium ion battery market through a jointly owned lithium chemicals plant

- Spodumene sales into the Korean market
- 30% JV in chemical conversion facility in South Korea with the capacity of up to 40ktpa LCE
- Facility to apply Posco's PosLX technology for lithium chemicals purification
 - Outstanding technology creating very high purity products and reagent recycling
 - Targeting production from 1st half of 2020
 - Hydroxide / carbonate production underway at the Gwang-Yang demo plant
- Synergy maximisation through development within a larger battery raw materials industrial park
- Due diligence process well progressed
- Board has exercised option to participate subject to final DD and financing, FID due May 2019



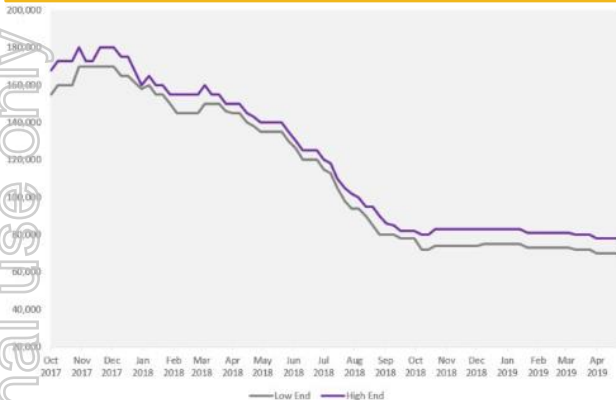
Gwang-Yang PosLX Upstream and Downstream Plant under operation

Global lithium chemicals pricing

Source: FastMarkets MB, Friday April 26 2019

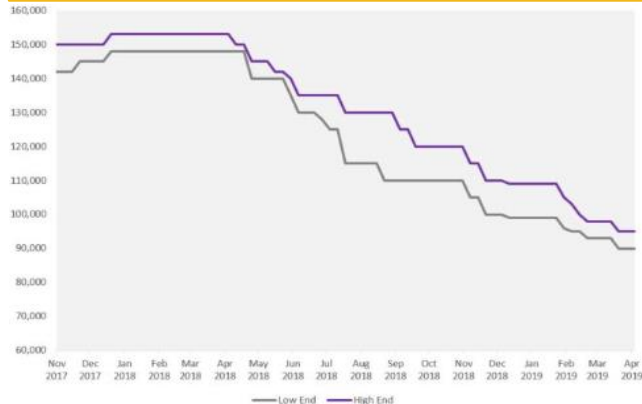
Lithium carbonate ex-works domestic China

Lithium carbonate min 99.5% Li_2CO_3 battery grade, ex-works domestic China, yuan per tonne



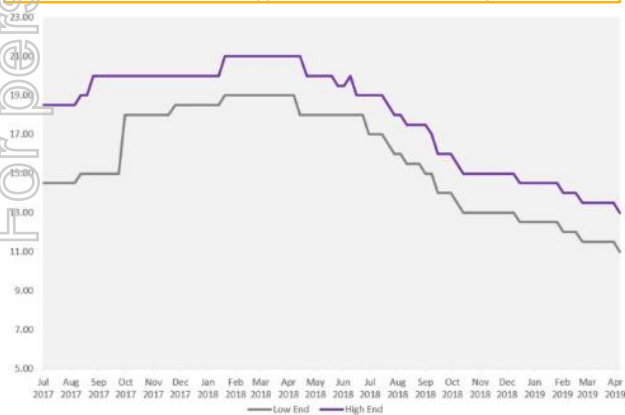
Lithium hydroxide ex-works China

Lithium hydroxide monohydrate min 56.5% $\text{LiOH}\cdot\text{H}_2\text{O}$ battery grade, ex-works domestic China, yuan per tonne



Lithium carbonate cif China, Japan and Korea

Lithium carbonate min 99.5% Li_2CO_3 battery grade, CIF China, Japan & Korea, \$ per kg



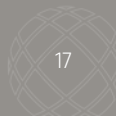
Lithium hydroxide cif China, Japan and Korea

Lithium hydroxide monohydrate min 56.5% $\text{LiOH}\cdot\text{H}_2\text{O}$ battery grade, CIF China, Japan & Korea, \$ per kg



China domestic pricing continues to stabilise, relative to 2018 outcomes

Ex-China pricing has remained relatively strong, particularly in the hydroxide segment



LITHIUM EXTRACTED FROM ORE THE FUTURE PROOF SOLUTION FOR VOLKSWAGEN

Lithium ore to lithium hydroxide

- Commercially more attractive
- More stable to extract and easier to scale
- Better suited to next generation of batteries

Australia the world market leader for ore-based production

- Stable political system
- High degree of transparency
- Ambitious environmental standards

Volkswagen focused on lithium supply from mining industry

- Stable prices
- Guaranteed capacity
- Transparent sustainability

Source: Volkswagen AG 2019



Lithium ore mining Pilgangoora Lithium-Tantalum project

Pilgangoora is set for a bright future

Securing Pilbara Minerals' position as one of the largest, lowest cost lithium-tantalum producers in the world is the focus of 2019

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OPTIMISATION



Continue Stage 1 optimisation works to achieve name-plate capacity, including design plant utilisation and lithia recovery rate.

EXPANSION



Proposed Stage 2 and Stage 3 expansion to up to 7.5Mtpa and launch of Stage 3 partnering process to support expansion.








DIVERSIFICATION



Secure Pilbara Minerals' position in the downstream lithium raw materials supply chain through partnership with POSCO and further vertical integration.

What sets us apart?

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1		World class lithium resource	The Pilgangoora Project is one of the premier hard-rock lithium-tantalum resources globally (by size and grade) where there is both spodumene concentrate offtake and a joint venture position available, with Tantalite by-product credits.
2		Low cost operation	Forecast LOM cash cost of US\$291/t ¹ (net of tantalum by-products) with the Pilgangoora Project's cost position benefiting from high grade, scalable mining operations, low strip ratio and tantalum by-products.
3		Quality product and customers	Pilbara Minerals has secured long-term offtake arrangements with world-class customers to support Stage 1 and Stage 2 production and has consistently delivered high quality products to market that meet customer requirements.
4		Clear expansion pathway	A three-phased growth strategy that includes expansion to 7.5Mtpa processing capacity (1.2Mtpa spodumene concentrate), development of a lithium hydroxide conversion facility and exploration target set to drive mine life extension.
5		Proven operator	Pilbara Minerals has a highly experienced management team who have led the Pilgangoora Project from first drill hole to production in under 4 years and successfully met high quality 6% battery grade product requirements.
6		Exploration upside	Pilbara Minerals plans to extend the mine life of the Pilgangoora Project through Resource conversion and further discoveries from its 50 - 90Mt of exploration targets which include potential near-surface tonnes.
7		Diversification into downstream processing	Through its joint venture with POSCO and the evaluation of a proposed secondary lithium chemical conversion facility in either Australia or overseas, Pilbara Minerals is positioned to expand its operations into the high-value lithium chemical market.

1. Metrics based upon Pilbara Minerals' Stage 3 Scoping Study, constrained by JORC Reserves of 108Mt



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Corporate overview

CAPITAL STRUCTURE

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Current share price ¹	A\$0.655
Shares on issue	1,848 million
Options on issue ²	35 million
Market capitalisation ¹	A\$1.21 billion
Cash at bank ³	A\$103.9M
Top 20 shareholders (as at 15 April 2019)	33%
3 month average daily volume ⁴	~9.8M shares

¹ As at 26 April 2019

² Weighted average exercise price is 65.5c and the weighted average time to expiry is 343 days

³ As at 31 March 2019

⁴ Between 15/01/2019 and 15/4/2019

Share price - last 12 months



Supportive shareholder base, experienced Board and proven leadership team

Experienced board of directors



Tony Kiernan
Non-Executive Chairman

Highly experienced company director and former solicitor with over 35 years' in the management and operation of listed public companies. Currently Chairman and a non-executive director of several ASX-listed resource companies.



Ken Brinsden
Managing Director & CEO

Mining engineer with over 25 years' experience including mine management, production, and brown-fields and green-fields project development. Previously MD of ASX listed Atlas Iron Ltd contributing to its growth from junior explorer to significant Pilbara iron ore producer.



Nick Cernotta
Non-Executive Director

Highly experienced mining executive with over 30 years' mining experience across a range of commodities. Recently the Director of Operations with Fortescue Metals Group (FMG) and previously the Chief Operating Officer for Macmahon Holdings Limited.



Sally-Anne Layman
Non-Executive Director

Mining engineer, corporate financier and advisor. Ms Layman has 23 years' experience in exploration, mining and finance and over 16 years of successfully identifying and closing over \$1.8 billion in financial deals and equity investments across six continents and more than 20 countries.



Steve Scudamore
Non-Executive Director

Highly experienced public company director. His career includes more than three decades with KMPG incl. senior roles in Australia, London and Papua New Guinea. Currently holding several other board roles incl. Chairman of MDA National Insurance.

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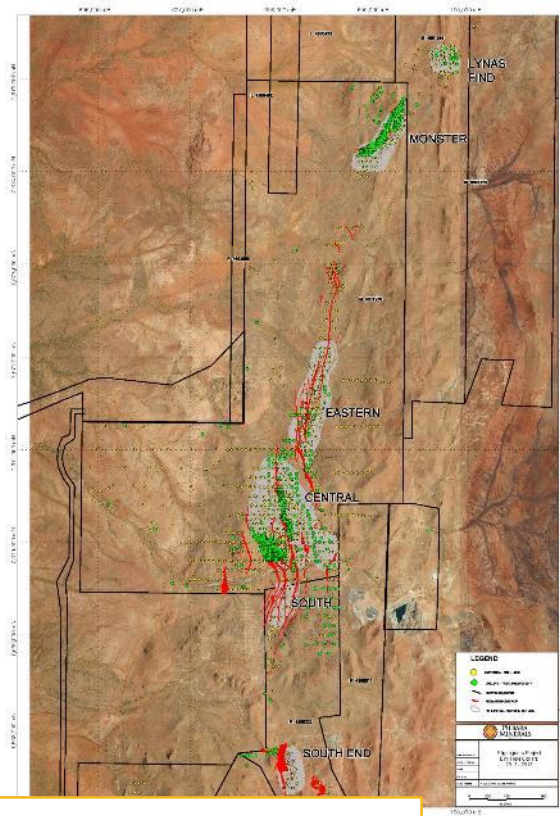
Resources and reserves

JORC Mineral Resource Estimate - September 2018 (using 0.2% Li₂O cut off grade)

CATEGORY	TONNAGE (MT)	Li ₂ O (%)	TA ₂ O ₅ (PPM)	Li ₂ O (T)	TA ₂ O ₅ (MLBS)	FACTORED FE ₂ O ₃ (%)
Measured	22.8	1.38	145	314,000	7.3	0.44
Indicated	112.8	1.29	119	1,456,000	29.5	0.57
Sub-total M&I	135.6	1.31	123	1,770,000	36.8	0.55
Inferred	90.4	1.21	105	1,094,000	20.8	0.67
TOTAL	226.0	1.27	116	2,864,000	57.7	0.60

JORC Ore Reserve Estimate - September 2018

CATEGORY	TONNAGE (MT)	Li ₂ O (%)	TA ₂ O ₅ (PPM)	FE ₂ O ₃ (%)	Li ₂ O (MT)	TA ₂ O ₅ (MLBS)
PROVED	22.1	1.30	135	1.11	0.29	6.6
PROBABLE	86.1	1.24	116	1.19	1.07	21.9
TOTAL	108.2	1.25	120	1.17	1.36	28.5



Resource drilling locations 2018

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Exploration target: demonstrates incredible project mineral endowment

Many areas at Pilgangoora remain under-explored and as such are important targets to support future resource growth.

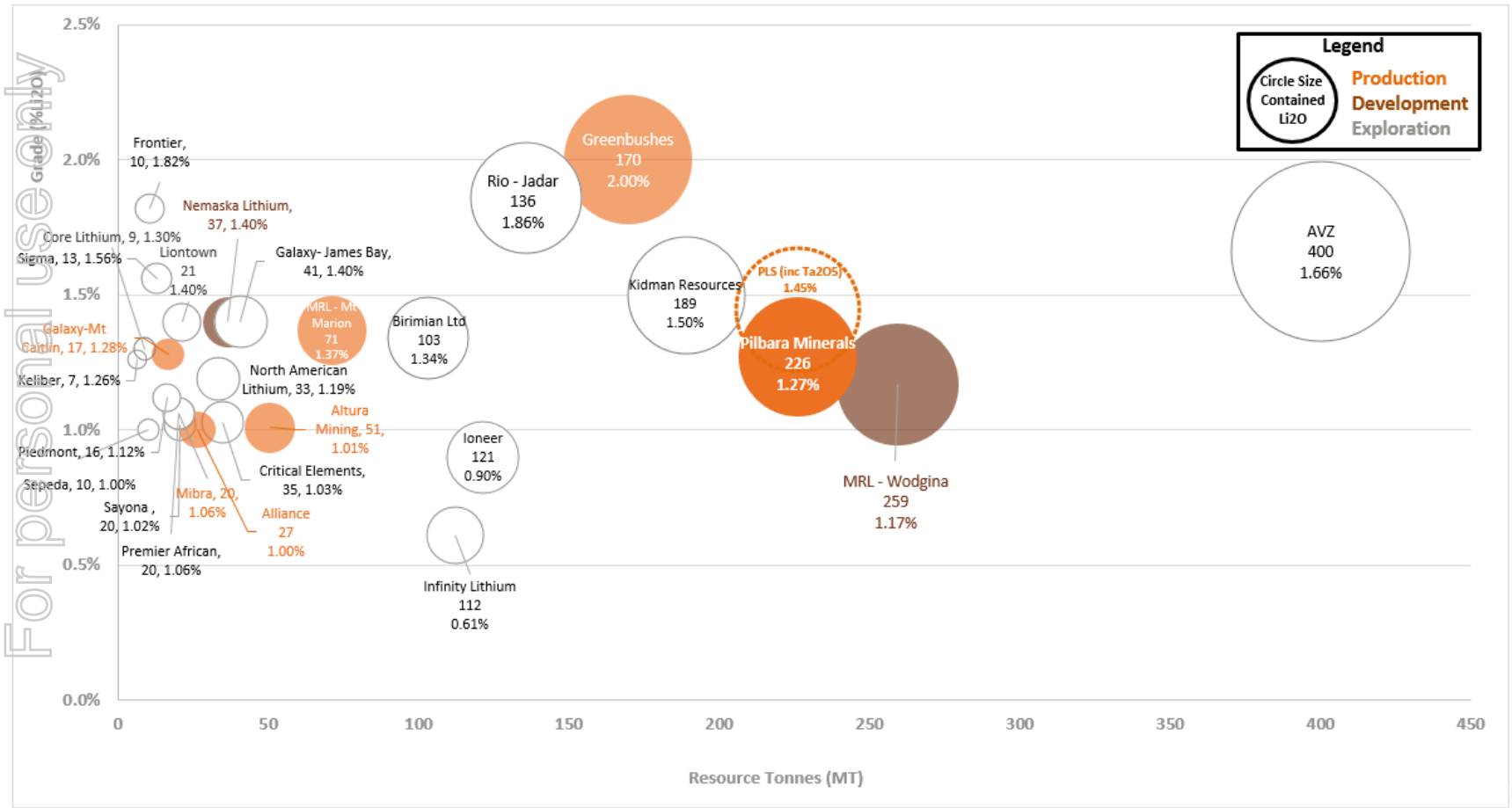
TARGET AREA	MILLION TONNES	GRADE Li ₂ O %	GRADE Ta ₂ O ₅ PPM
Monster-Houston Creek	5-10	1.2 - 1.5	100 - 150
Eastern Prospects	10-15	1.2 - 1.5	200 - 250
Heartbreak Hill	10-15	1.0 - 1.2	200 - 250
Central West	5-10	1.2 - 1.5	100 - 150
Far East	5-10	1.2 - 1.5	100 - 150
Southern Prospects	5-10	1.0 - 1.2	50 - 100
Extensional margins of existing resource	10-20	1.0 - 1.5	50 - 150
Exploration Target*	50-90	1.0 - 1.5	50 - 250

The new Exploration Target*, which is in addition to the current JORC total Measured, Indicated and Inferred Resource of 226 million tonnes grading 1.27% Li₂O and 116ppm Ta₂O₅ and 0.60% Fe₂O₃, has been determined from interpretation of numerous datasets, detailed geological mapping and interpolations from existing pegmatite domains in the Pilgangoora 3D geological model. The majority of target areas are further qualified by the occurrence of outcropping spodumene bearing pegmatites. RC drilling to test the validity of selected target areas will be undertaken in the first half of 2019

Note to Exploration Target: The potential quantities and grades of the Exploration Target are conceptual in nature and there has been insufficient exploration to date to define a Mineral Resource. It is not certain that further exploration will result in the estimation of a Mineral Resource.



Pilgangoora - a globally significant hard rock lithium resource

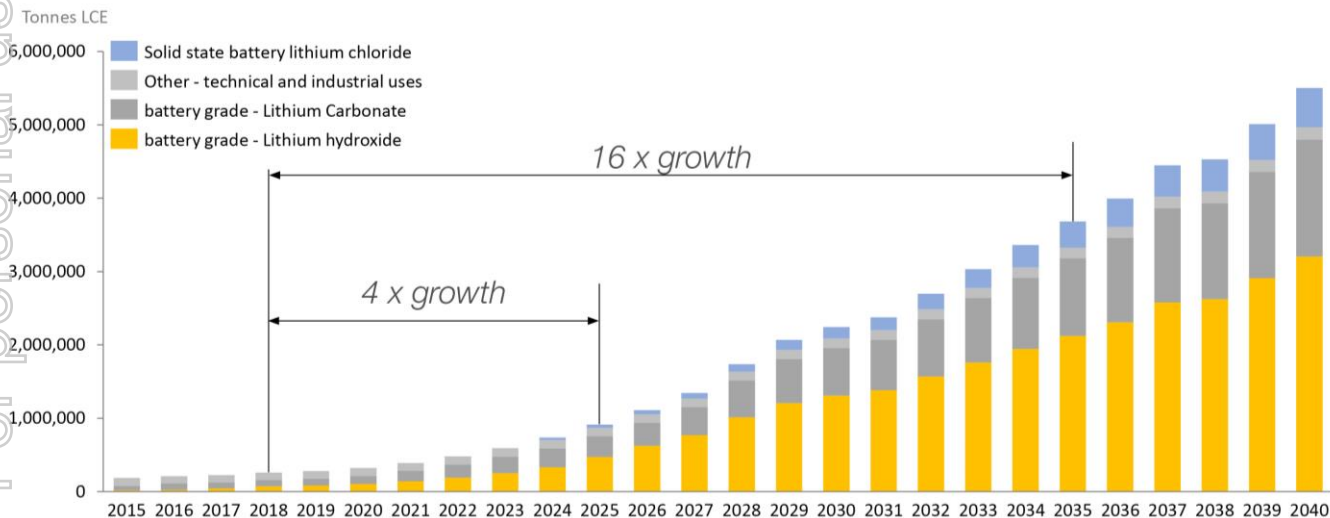


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Future lithium raw material supply

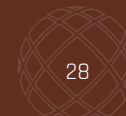
Lithium hydroxide will become the sought after product for battery manufacturers presenting a significant opportunity for hard rock lithium projects

Forecast for lithium demand by lithium chemical production across all sectors



BENCHMARK MINERAL INTELLIGENCE – MINERAL RESOURCES LIMITED – JULY 2018

A stable supply of hard rock lithium for the manufacturer of high quality batteries to feed the growing EV and energy storage sectors.



Strong offtake partners committed to Stage 1 and 2 production



General Lithium Corporation

Major producer of lithium chemicals in China

- Highly experienced with more than 15 years of operational and technical know how
- Customers include top cathode producers in China
- Patented process from direct conversion of spodumene into LiOH
- Producing 25ktpa LCEs with plans to add 60ktpa



China's largest fully integrated lithium company

- Listed Shanghai Stock Exchange
- Market cap RMB39.2B ~US\$5.8B
- Commissioning another 40ktpa LCEs with plans for another 25ktpa to reach 100ktpa LCEs
- Customers include major cathode producers in China, Japan and South Korea



Pilbara Minerals



Biggest steel producer in South Korea

- Listed on KSX, market cap US\$29.5B
- Largest producer of automotive grade steel
- PosLX Technology to produce very high battery grade LiOH
- Produces high Ni NCM cathode and anode materials
- Strategic partnership with a major Chinese co. and Ni producer
- Established the first Korean LC and LiOH plant



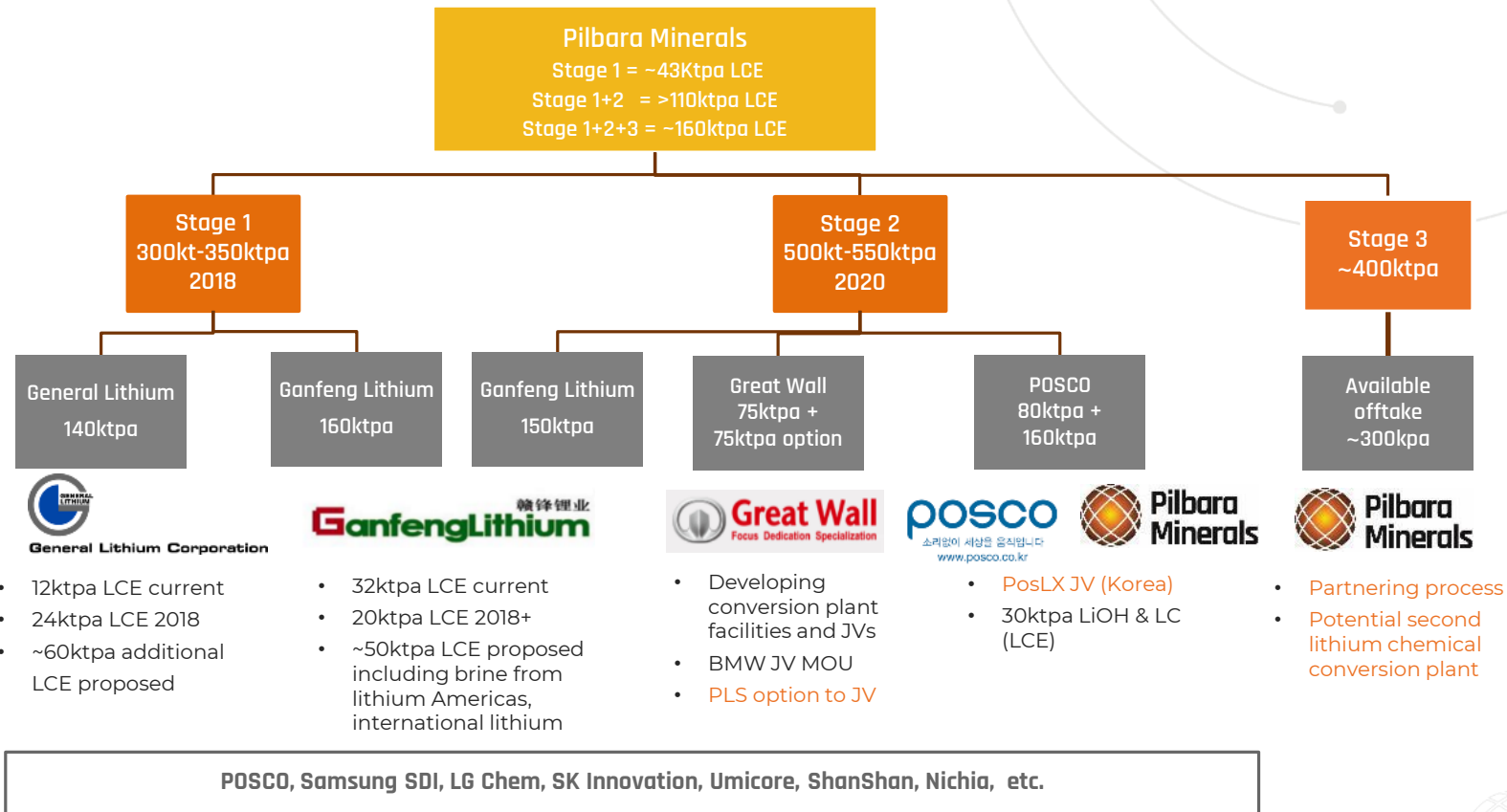
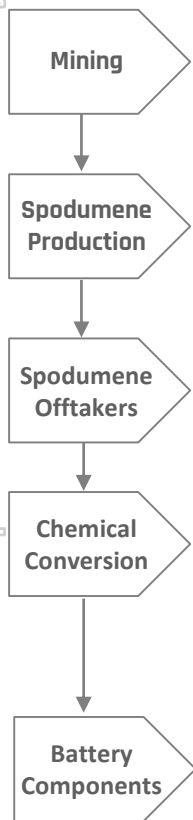
China's largest SUV and pickup manufacturer

- Listed Hong Kong and Shanghai Stock Exchange
- Market cap RMB120B ~US\$19B
- Producing ~1M vehicles per annum
- Aiming to produce 500,000 electric and hybrid cars a year by early 2020
- JV with BMW to supply mini-EV's
- Establishing a fully integrated mine to EV supply chain

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Offtake for 100% of stage 1 and 2 of Pilgangoora

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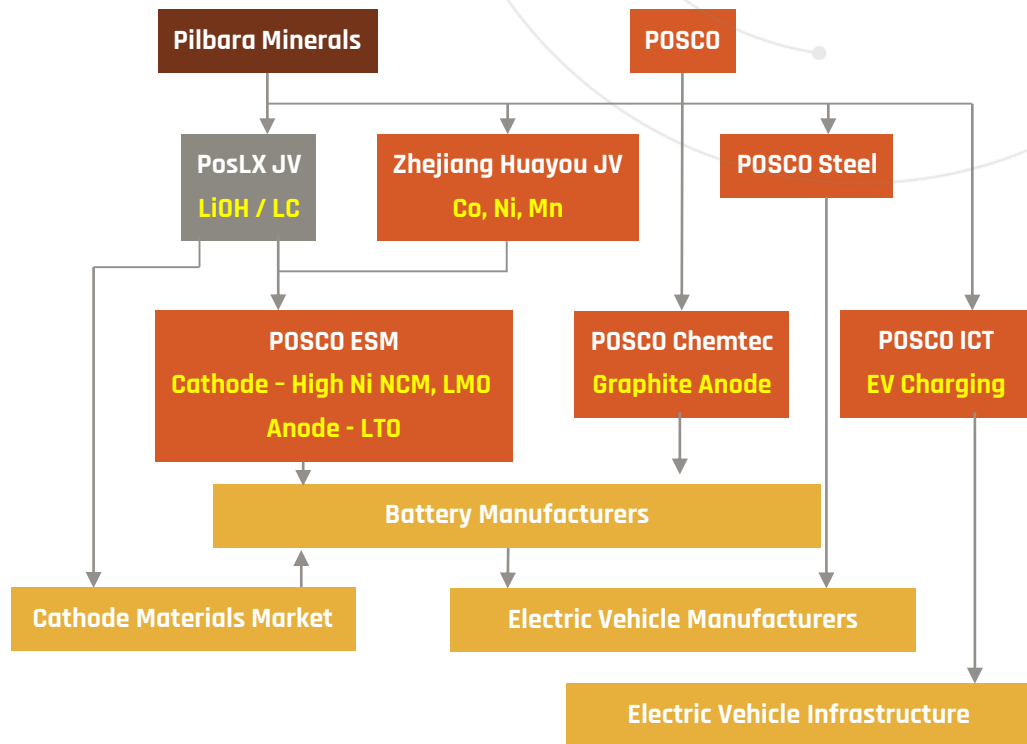


Joint venture with POSCO

Positioning Pilbara Minerals at the forefront of the rapidly growing South Korea battery market

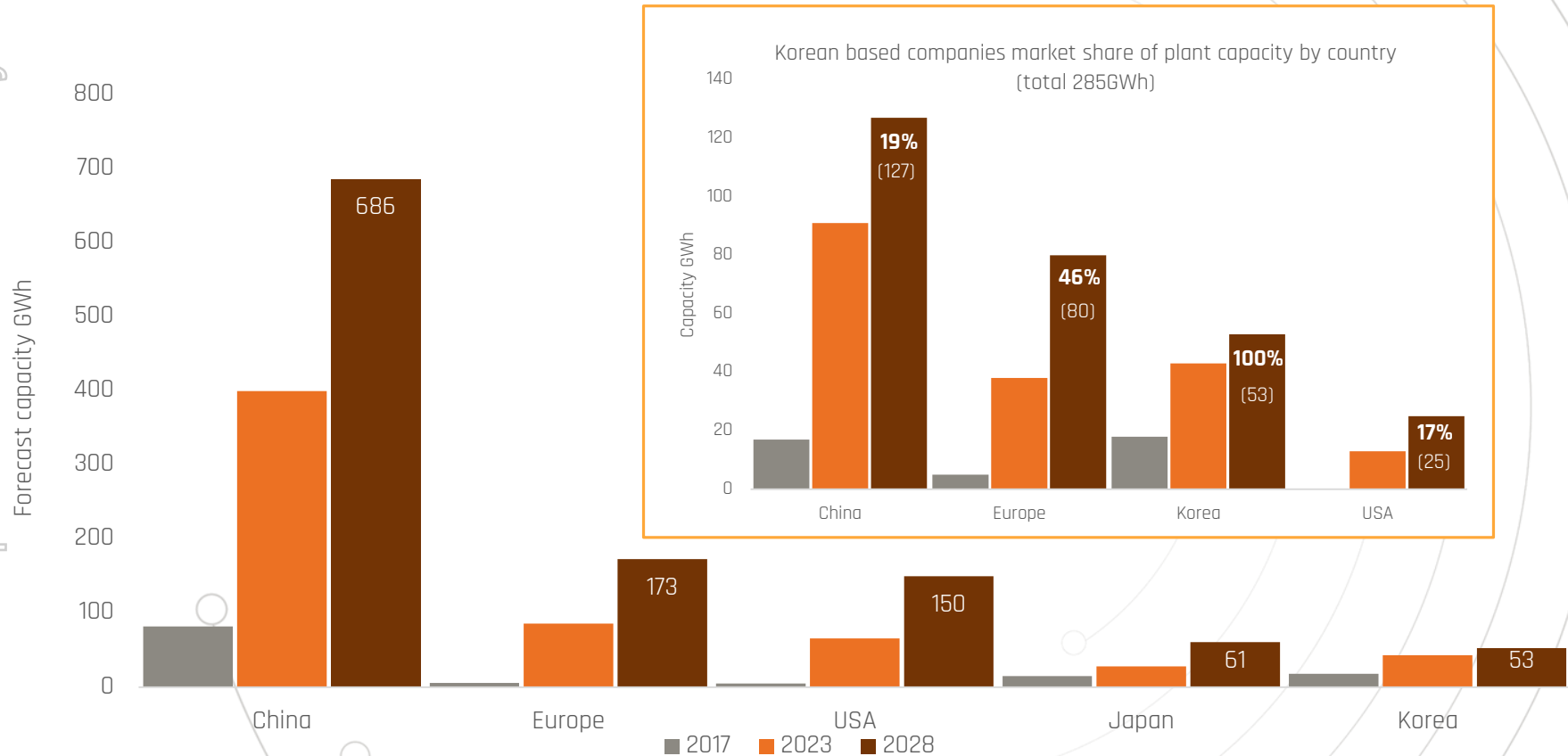
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- Provides a strategic link to lithium battery and EV manufacturers
- Expands access to the battery industry and allows Pilbara Minerals to expand its knowledge of the lithium supply chain
- Broadens customer base, providing geographic diversification and greater access to global cathode makers
- Enables further value to be created downstream through chemical conversion to produce a lithium hydroxide



Global battery plant pipeline by plant location

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Battery plant total and forecast capacity by country

Source: Benchmark Minerals Intelligence (October 2018)

Pilgangoora processing

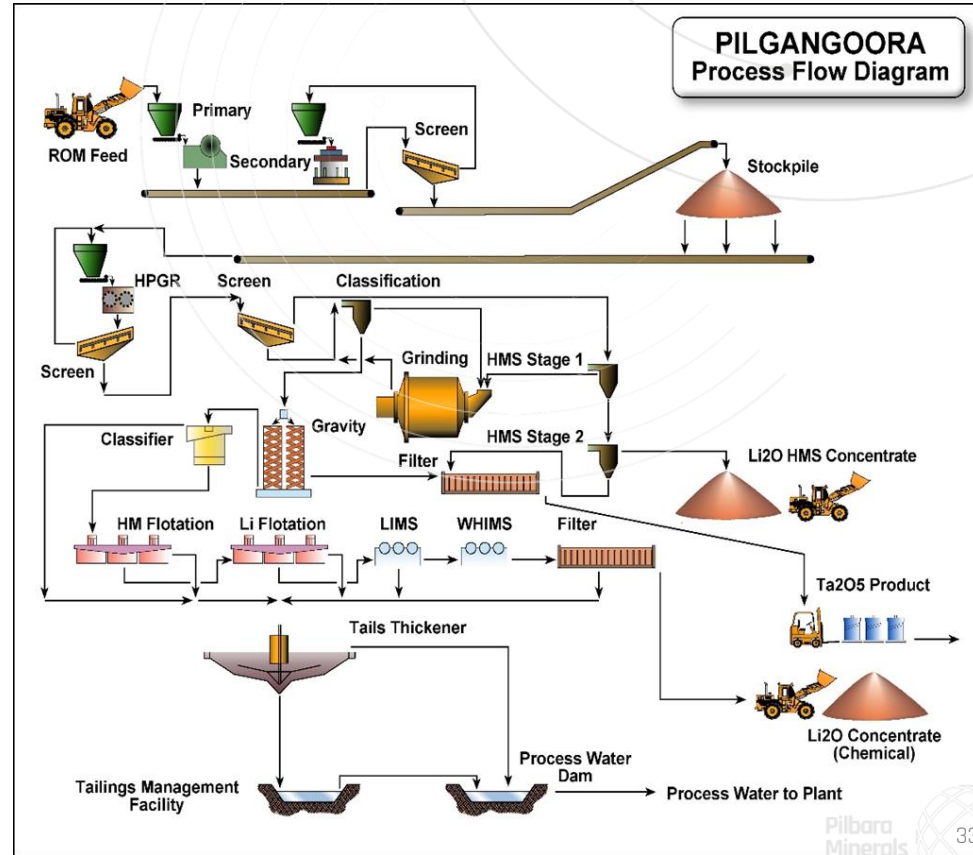
Spodumene and tantalite concentrate recovery

• **Spodumene concentrate** contains lithium in the form of lithia (Li_2O), recovered at the mine via the concentrator:

- 2-stage heavy media separation for coarse spodumene concentrate
- oxide flotation for fine spodumene concentrate
- high-grade 6% Li_2O (SC6.0 specification) produced

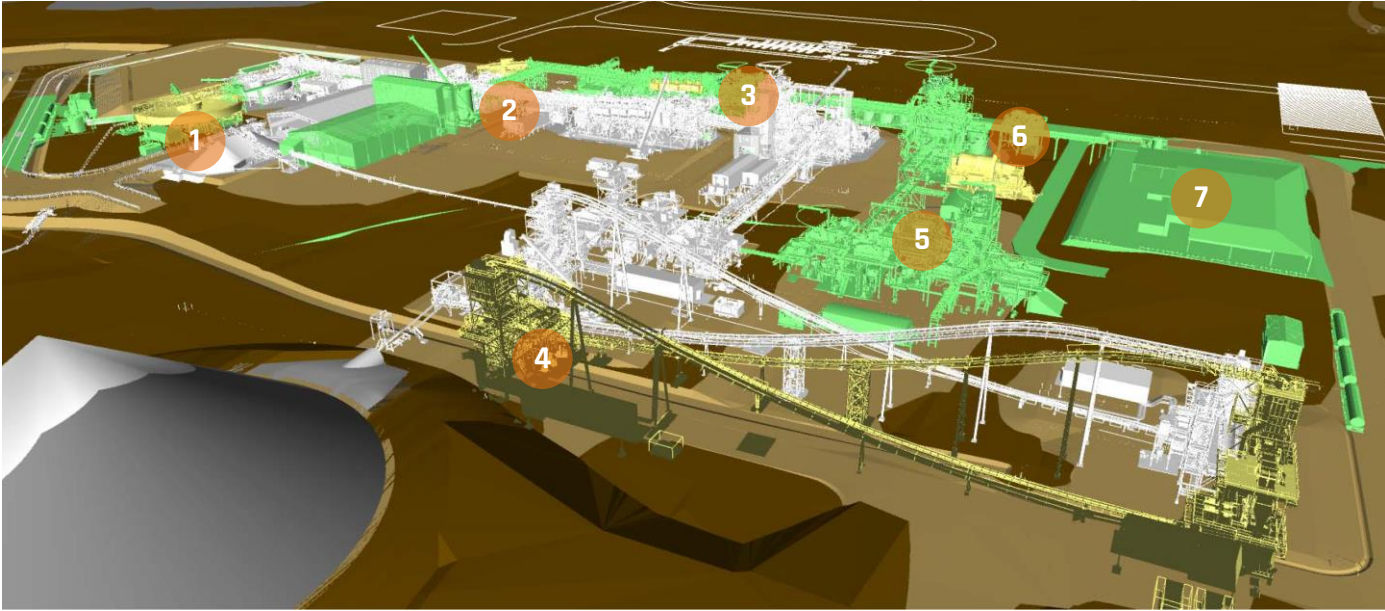
• **Tantalite concentrate** (Ta_2O_5) contains tantalum:

- Recovered in the concentrators 'gravity' circuit
- Tantalum used primarily in the electronics industry in the form of capacitors
- Also used in the medical and aerospace industries



Stage 2 processing plant upgrades to 5Mtpa

Upgrades to the concentrator will be conducted across two stages in order to reach 7.5Mtpa processing capacity



Stage 2 tailings

- Increase thickener size to cater for 5Mtpa throughput

Stage 2 spodumene dressing

- Increased concentrate thickener sized for 5Mtpa throughput
- Space provision to extend storage shed & add additional filter press

Stage 2 flotation

- Larger rougher cells
- Space provision for additional cyclone, rougher & cleaner column

Stage 2 grinding

- Separate 3Mtpa tertiary crushing circuit (instead of expanding existing circuit)
- Separate comminution circuit, including new HGR
- Space provision for 2nd high pressure grinding roll & screen (increases circuit throughput to 5Mtpa)

5 Stage 2 HMS

- Sized for 3Mtpa throughput
- Proportional bypass functionality (to facilitate higher throughput)

6 Stage 2 milling and classification

- Larger 10MW ball mill
- Increased design throughput
- Space provision in spirals

7 Tantalite dressing shed

- Upgrade to 30% tantalite concentrate

Stage 3 processing plant upgrades (to 7.5Mtpa)

Stage 3 will utilise an additional high pressure grinding roll instead of expanding the existing circuit

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1 Stage 3 spodumene dressing

- Additional concentrate filter
- Increased storage capacity (not shown)

2 Stage 3 crushing circuit

- Comminution circuit expanded with new HGR
- Expansion of crushing circuit, or
- Construction of new crushing circuit
- Increased throughput

3 Stage 1 plant

- General de-bottlenecking

4 Stage 3 flotation

- Additional cyclone, rougher flotation cell
- New cleaner column



- ## 5 Stage 3 tertiary crushing
- Additional high pressure grinding roll (instead of expanding existing circuit)

- ## 6 Stage 3 HMS
- Proportional bypass or
 - New HMS circuit

- ## 7 Stage 3 milling and classification
- Additional spirals & cyclones in gravity circuit
 - Secondary sizing screen capacity increase
 - Pumping and throughput increase