

Pilgangoora: discovery to product shipment in under four years

Corporate Presentation – UBS Australian Equities Conference, November 2018



**Pilbara
Minerals**

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.

Corporate overview

Capital structure	ASX: PLS
Current share price ¹	A\$0.835
Shares on issue	1,744 million
Options on issue ²	55 million
Market capitalisation ¹	A\$1.46 billion
Cash at bank ³	A\$90.6M
Top 20 shareholders (as at 28 September 2018)	37.4%
3 month average daily volume ⁴	~8M shares

¹ As at 9 November 2018

² Options have a volume weighted average exercise price of A\$0.515 and a volume weighted average time to expiry of 392 days

³ As at 30 September 2018

⁴ Between 5/8/2018 and 9/11/2018

Share price - last 12 months



Supportive shareholder base, experienced Board and proven leadership team.

What sets us apart

● **LOW COST, LONG LIFE LITHIUM AND TANTALUM PRODUCER**

● **HIGH QUALITY PRODUCTS**

● **LEADING GLOBAL OFFTAKE PARTNERS COMMITTED TO 100% OF STAGE 1 AND 2 PRODUCTION**

● **PILGANGOORA PRODUCTION IN UNDER 4 YEARS FROM FIRST DRILL HOLE, PROVEN MGT TEAM**

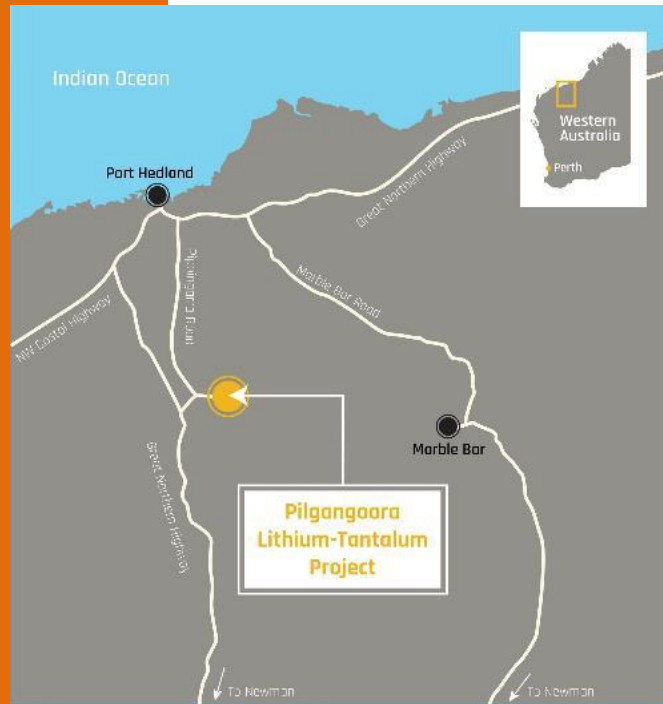
● **LARGE RESOURCE, RESERVES AND PRODUCTION EXPANSION CAPACITY**

● **CONCENTRATE RAMP UP UNDERWAY WITH NEAR-TERM CASHFLOW**

Pilgangoora Lithium-Tantalum Project

One of the largest spodumene-tantalite resources in the world

- 100% ownership
- Stage 1, 2Mtpa processing plant
- LOM Stage 1 production of 330,000tpa concentrate
- Established transport and port infrastructure
- Production ramp up underway
- First 2 concentrate shipments complete
- Regular tantalite deliveries underway
- Further production growth proposed based on customer demand in offtake



Exploration



Construction



Production



Shipping

Production and cash-flow today....

Flagship Pilgangoora Lithium-Tantalum Project – from first drill hole to commissioning in under four years

- Long project life
- Low cost, high quality product
 - ✓ +6% Li_2O , low-iron
- Regular spodumene concentrate shipments underway
- Regular tantalite deliveries underway, +5% Primary Concentrate
- Plant ramp-up to achieve design capacity well underway
- Offtake for 100% of Stage 1 and Stage 2 projects
- Stage 2 Project FID approved by Board and long-lead orders underway



Pilgangoora Site - Production metrics

First shipment average grade:

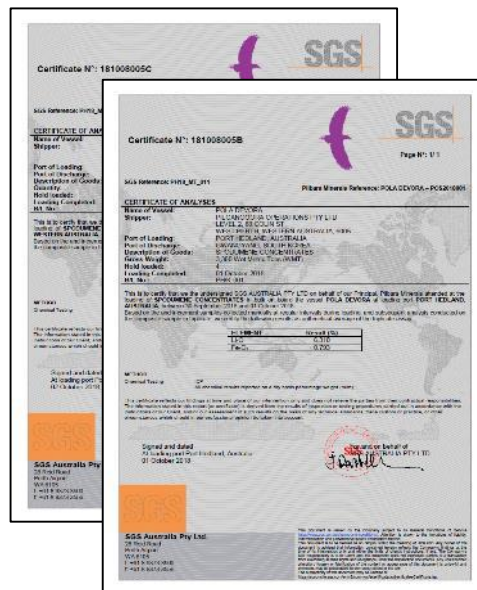
Lithia = 6.2%

Fe_2O_3 = 0.7%

Second shipment average grade:

Lithia = 6.3%

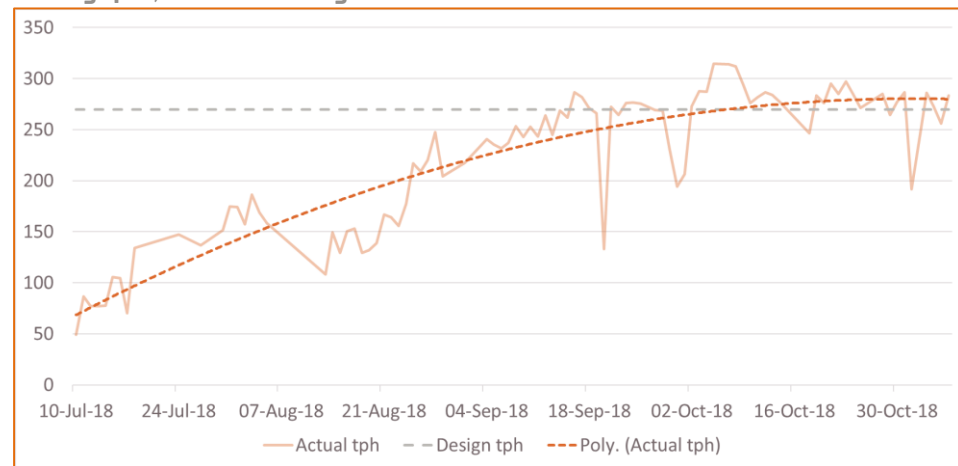
Fe_2O_3 = 1.2%



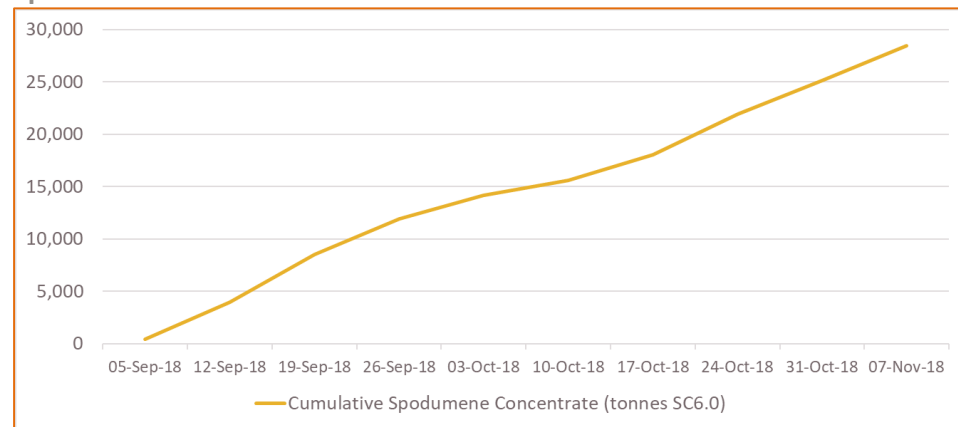
	Units	Q2 FY18	Q3 FY18	Q4 FY18	Q1 FY19
Ore Mined	wmt	0	0	344,549	525,559
Waste Mined	wmt	151,812	1,832,205	2,851,161	1,884,335
Total Material Mined	wmt	151,812	1,832,205	3,195,710	2,409,894
Ore Mined - Grade	%	-	-	1.45	1.43
Ore Crushed	wmt	-	-	50,185	177,369
Ore Processed	wmt	-	-	-	173,667
DSO Sold (mine gate)	wmt	-	-	145,974	205,766
Spodumene Concentrate Produced	dmt	-	-	-	11,814
Spodumene Concentrate Sold	dmt	-	-	-	-
Tantalite Concentrate Produced	lb	-	-	-	16,891
Tantalite Concentrate Sold	lb	-	-	-	4,974

Process Plant Performance

Throughput, Actual vs Design



Spodumene Concentrate Production



Plant commissioning and rapid ramp-up in capacity

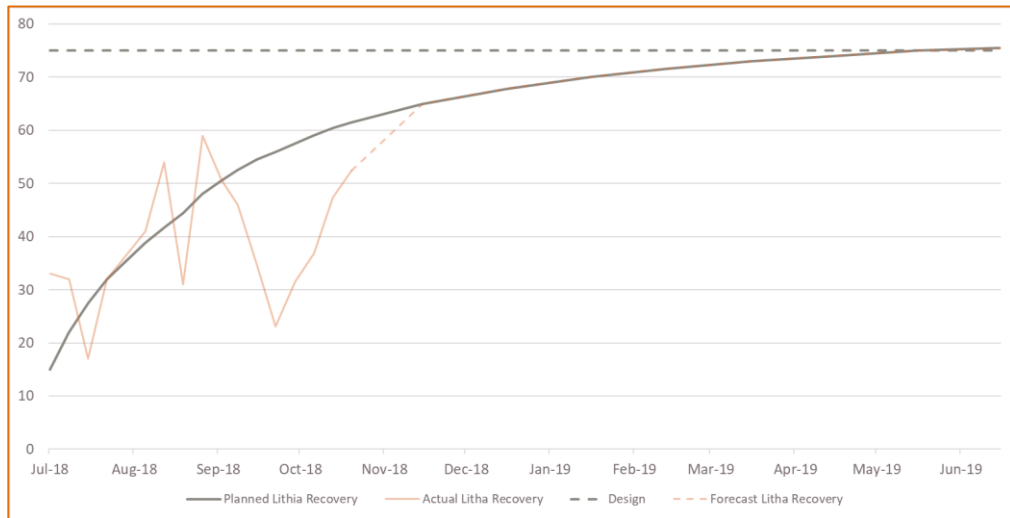
Proven plant sub-components and overall plant capacity

Very high product quality produced and shipped

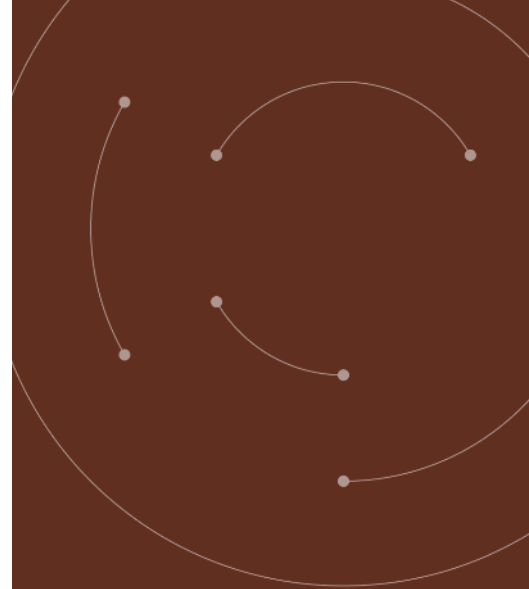
Focus on lithia recovery and plant run time optimisation over the next 4-6 months

Process Plant Performance

Lithia Recovery, Actual vs Design (% Lithia)



- Late Sept, early-mid Oct lithia recovery was impacted by:
 - process water clarity (pond sedimentation), and
 - recirculating reagent load from the fines flotation circuit.
- Additional process water now added to further dilute reagent load, anti-foaming agent added and process water pond dredging underway.
- Recovery trend improving markedly and in-line with expectations.



Post commissioning and the run-up in plant capacity, focus turns to lithia recovery improvements and plant run-time:

- maximise recovery, and
- minimise plant downtime.

Approximately 60% of the plant's overall production capacity realised at this stage of the ramp-up

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



Pilbara Minerals



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



소리없이 세상을 움직입니다

www.posco.co.kr

Biggest steel producer in South Korea

- Listed on KRX, 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



Great Wall
Focus Dedication Specialization

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

Connected to the entire supply chain



*Potential PLS JV partners



....with exceptional growth tomorrow

Pilgangoora Lithium-Tantalum Project - a globally significant hard rock lithium resource

- Stage 2, 5Mtpa expansion DFS released, 150% increase in production
- +100,000 tonnes LCE basis
- Positioned to be in the top 3 lithium raw material producers globally by 2020
- Strong support from offtake partners to increase production
- Stage 2 Final Investment Decision (FID), Board endorsement
- Long-lead items on order and detailed engineering underway
- Huge potential to upgrade Ore Reserves and Mineral Resources
- Downstream value adding supply chain strategy in South Korea and China

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
- FID approved by Board and funding package well advanced

Aerial photograph of current construction progress w/- Stage 2 3D model overlay



Stage 2 delivery schedule

2018			2019				2020
Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
DEFINITIVE FEASIBILITY STUDY							
FUNDING/FINAL INVESTMENT DECISION							
REGULATORY APPROVALS							
DETAILED ENGINEERING							
PLANT MAJOR EQUIPMENT PROCUREMENT							
			CIVIL TENDER	CIVIL MOBILISATION AND CONSTRUCTION			
			STEEL AND PLATE TENDER	STEEL AND PLATEWORK FABRICATION			
				PLANT CONSTRUCTION TENDER	PLANT MOBILISATION AND CONSTRUCTION		
							COMMISSIONING

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

One of the best lithium raw material projects in the world

Low cost

- High grade lithium resources
- Valuable tantalum bi-product
- Significant project size and processing capacity

Long life

- Stage 2, 5Mtpa, 23 year mine life
- Mineral Resource 226Mt grading 1.27% Li_2O (spodumene) and 116ppm Ta_2O_5 and 0.60% Fe_2O_3
- Significant upside potential to increase Mineral Resources and Ore Reserves

High quality

- Leading offtake partners General Lithium, Ganfeng Lithium, POSCO, Great Wall Motors
- 6% spodumene product
- Downstream value adding supply chain strategy

Additional Information

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.

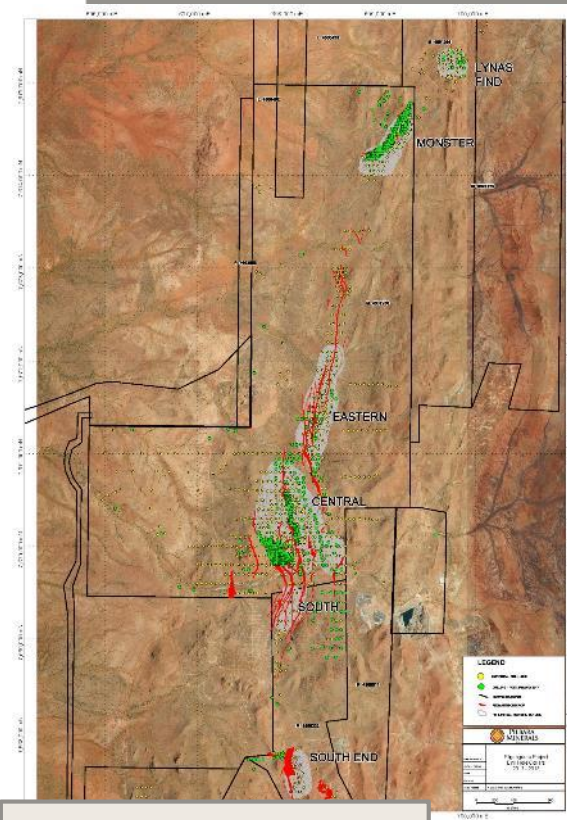
Resources and reserves

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

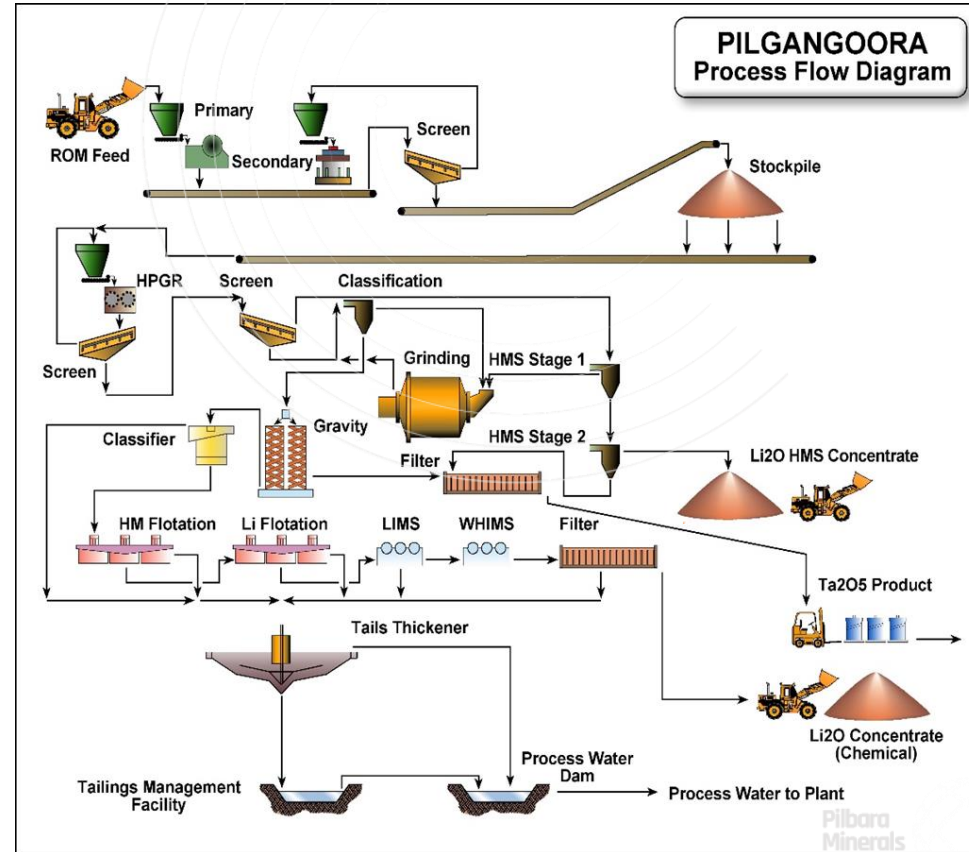


Resource drilling locations 2018

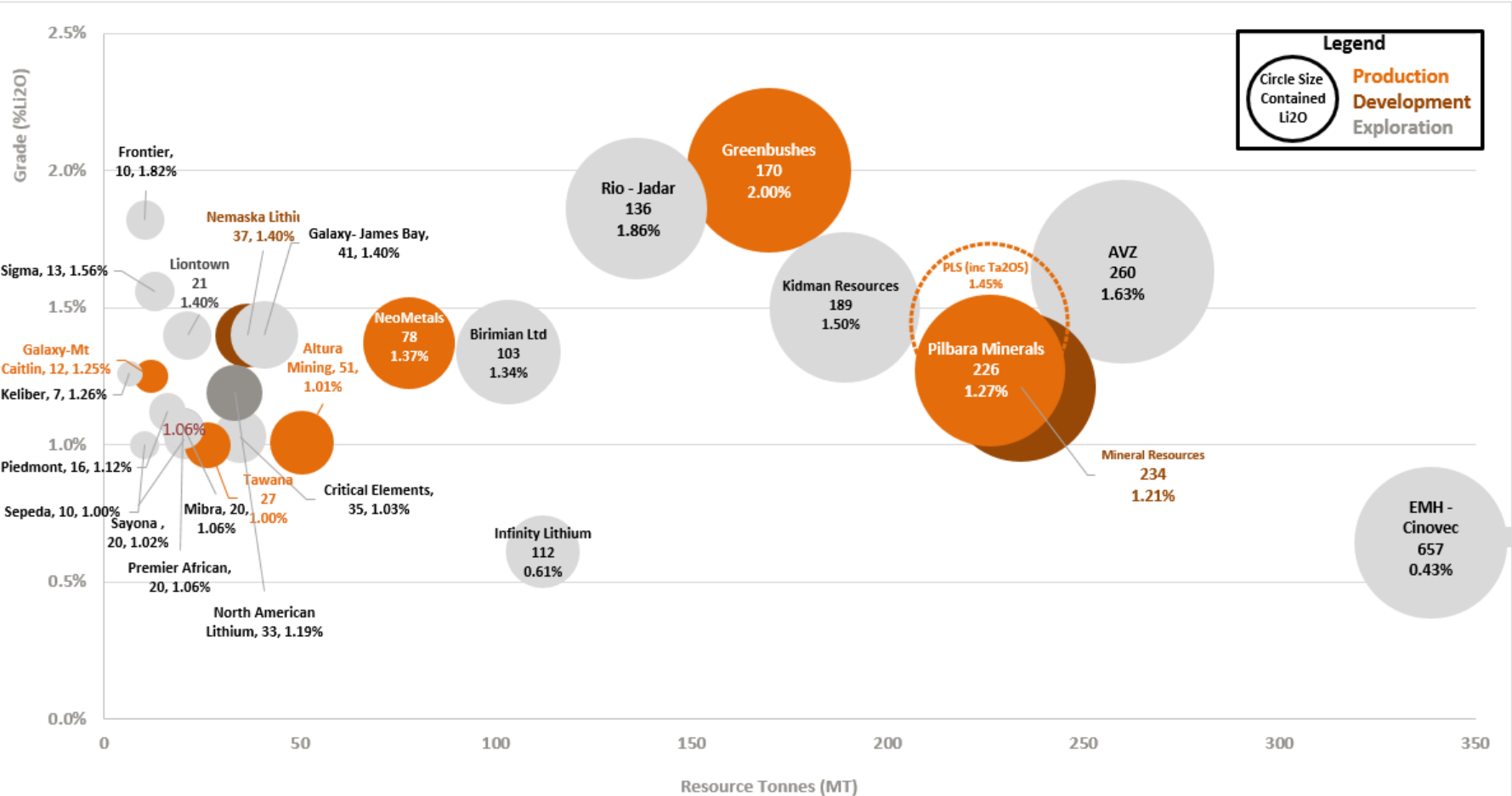
Pilgangoora Processing

Spodumene and Tantalite concentrate recovery

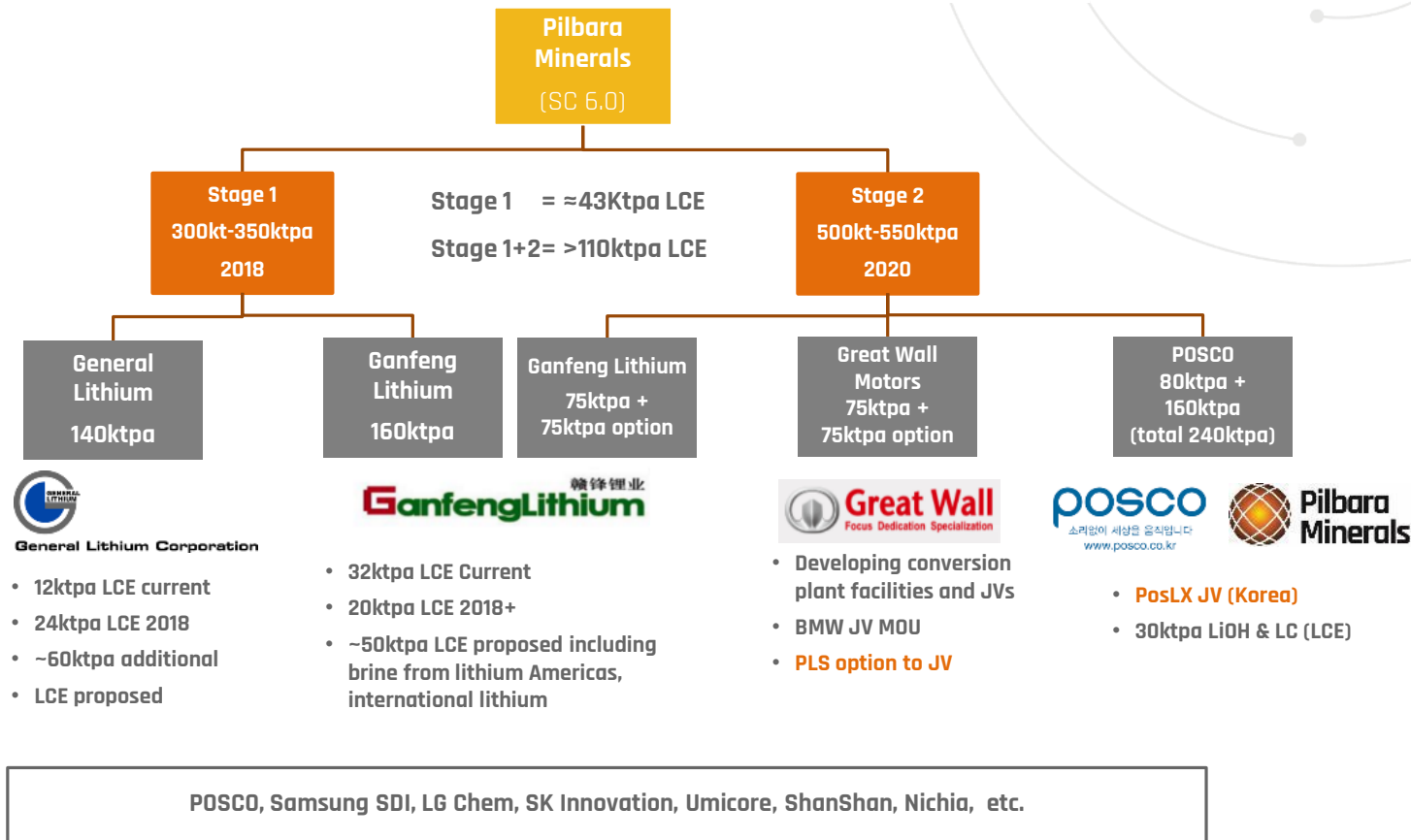
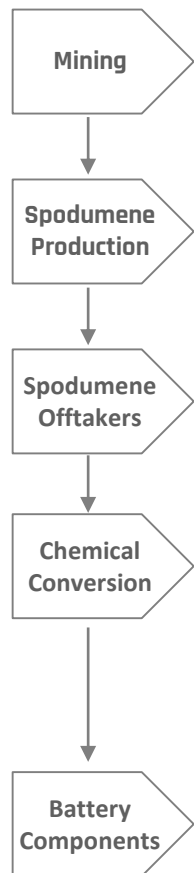
- **Spodumene concentrate** contains lithium in the form of lithia (Li_2O), recovered at the mine via the concentrator:
 - 2-stage heavy media separation for coarse spodumene concentrate, and
 - oxide flotation for fine spodumene concentrate.
 - High-grade 6% Li_2O (SC6.0 specification) produced.
- **Tantalite 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.



Pilgangoora - a globally significant hard rock lithium resource



Offtake for 100% of stage 1 and 2 of Pilgangoora



Pilgangoora project overview

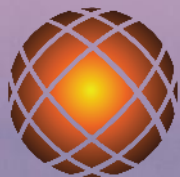


First spodumene concentrate shipment



Pilgangoora processing plant





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