



POSITIVE STAGE 3 SCOPING STUDY OUTCOMES SUPPORT PILGANGOORA'S LONG-TERM GROWTH TRAJECTORY

Stage 3 Scoping Study demonstrates the Pilgangoora Project's significant scale, long-life, high-quality products and expected low-cost of operations, supporting its continued expansion pathway and Pilbara Minerals' downstream participation strategy.

HIGHLIGHTS

- Strong interest from existing and new customers prompts Stage 3 Scoping Study and engineering works to unlock additional production and available offtake.
- Scoping Study for Stage 3 expansion delivers positive results including:
 - **Exceptional project economics**, post-tax NPV_{10%} of A\$3.73B, life of mine (LOM), project revenue of A\$16.6B (real excluding tantalite) and LOM Project EBITDA of A\$10.3B (pre-tax, real), with underlying spodumene pricing developed from revised lithium chemicals' forward price forecasts provided by Roskill for the purpose of the study;
 - **Substantial increase in processing capacity** to 7.5Mtpa to deliver average annual production of approximately 1.2Mtpa of SC6.0 spodumene concentrate and approximately 1.1Mlbspa of 30% tantalite concentrate over a mine life of 15 years (based on existing Reserves);
 - **Competitive LOM operating costs** of approximately US\$291/tonne CIF (real, net of tantalite credits).
- Proposed Stage 3 expansion supports Pilbara Minerals' **further participation in downstream lithium chemicals facilities**, including:
 - As a first priority, the enlarged 40kt LCE downstream joint venture proposed with POSCO.
 - Potential participation in a second lithium chemical conversion facility currently under evaluation, with the scoping and location study identifying several Australian and international locations as economically viable.

Australian lithium and tantalum producer Pilbara Minerals Limited (ASX: PLS) ("Pilbara Minerals" or "the Company") is pleased to announce that a Scoping Study considering the Stage 3 expansion (Stage 3 project) at the Pilgangoora Lithium-Tantalum Project (Pilgangoora Project) has delivered exceptionally positive results.

The Study re-affirms the Pilgangoora Project's scale and quality and continues to position Pilbara Minerals to become one of the world's largest, lowest cost hard-rock lithium and tantalum producers.

With an estimated incremental capital cost of A\$225.83M (+/- 30%), the proposed Stage 3 project would see the Pilgangoora Project's processing capacity expand to 7.5Mtpa. This would deliver an average of approximately 1.2Mtpa ~6% spodumene concentrate and ~1.1Mlbspa 30% tantalite

concentrate over an estimated 15-year LOM, based on the existing project Reserves. Stage 3 capital is in addition to the previously announced Stage 2 capital expenditure of A\$231M.

The Stage 3 Scoping Study, which was based on the current Reserves of 108Mt, has delivered positive economics (for 100% of Stage 1, 2 and 3) including a LOM project revenue of A\$16.6B, a post-tax NPV_{10%} A\$3.73B and an average annual LOM cash operating cost of US\$291/tonne CIF.

Originally announced in January 2019, the proposed Stage 3 project is a reflection of strong customer interest in further product supply and will support Pilbara Minerals' objective for increased participation in downstream lithium chemicals opportunities with POSCO and other possible partners in the future.

With the majority of spodumene concentrate for both Stage 1 and Stage 2 now committed under offtake agreements, the additional production from Stage 3 is intended to be used by Pilbara Minerals to supply existing and new customers.

A first priority is the proposed downstream joint venture with POSCO in South Korea, which was recently agreed via a non-binding MoU (ASX announcement: 2 January 2019) to be enlarged to 40kt LCE and therefore requires a further 75kt of spodumene concentrate (beyond the originally agreed 240kt in offtake).

In addition, the Company is considering further spodumene concentrate offtake in support of a second lithium chemical conversion operation in the future.

Pilbara Minerals' Managing Director and CEO, Ken Brinsden, said;

"The Stage 3 Scoping Study has delivered exceptional results which further reinforce the Pilgangoora Project's outstanding quality and scale. The ability to expand the Project to a production rate of well over 1Mtpa of spodumene concentrate, with a minimum mine life of 15 years, underlines our position as a globally significant lithium raw materials producer. At the same time, we believe there is excellent potential to grow the mine life beyond 15 years.

"From the start our strategy has been quite clear to develop each stage with a focus on the potential to continue to expand the Pilgangoora Project. We remain very focused on the Stage 1 optimisation in progress and have teams dedicated to that task. However, in parallel, we continue to capitalise on the opportunities in the high quality spodumene concentrate and lithium chemicals market.

"The opportunity in front of us has never been more apparent. As the electric vehicle and battery storage sector grows, so does the opportunity for Pilbara Minerals to become a player in the lithium raw materials supply chain. Together these projects diversify our entrance into this growing market and play directly into our downstream value-adding strategy," he added.

The Stage 3 project would build off the current Stage 1 operation and the proposed Stage 2 project, through the construction of a parallel processing train. While the key process steps would remain unchanged, the build would involve the construction of an additional 2.5Mtpa crushing circuit to complement the combined Stage 1 and 2 circuits processing 5Mtpa.

A LOM mining schedule completed as part of the Scoping Study continues to demonstrate a robust mine life of at least 15 years based on the September 2018 Reserve (108Mt), with potential upside to the LOM when considering the inferred material within the current Resource.

In addition, with much of the Pilgangoora Project area remaining under-explored and several recently identified target areas showing potential for further resource growth, Pilbara Minerals is confident it can continue to increase the Resource. The Company recently upgraded its exploration target to 50-90 million tonnes grading 1.0-1.5% Li₂O (Lithia) (ASX Announcement: September 2018 Quarterly Activities Report).

The Stage 3 project would involve upgrades to some key infrastructure on site including the power station, water bores, accommodation, buildings, and waste water treatment plant. The logistical operations would remain the same with product transported via road to Port Hedland Port for export.

Given Stage 3 falls largely within the already approved disturbance envelopes of Stages 1 and 2, it is not anticipated that any Federal or State Ministerial approvals are required beyond the standard mining approvals process experienced in the development of Stages 1 and 2 at the Pilgangoora Project.

The Stage 3 project final investment decision and delivery schedule would be determined by the progress of further feasibility studies, market demand analysis, customer requirements, the timing of any associated chemical conversion facility and project funding outcomes. A further consideration is the development timeline of any proposed chemical facilities that may be linked to Stage 3 offtake. Notwithstanding these points, it is currently estimated construction of Stage 3 could commence late in the second quarter of the 2020 calendar year with commissioning commencing early in the second quarter of the 2021 calendar year.

Since announcing Pilbara Minerals' intention to investigate the opportunity for the development of lithium hydroxide facilities outside of China (ASX announcement: 4 July 2016), the Company has continued to assess opportunities to grow its presence downstream. Recently Pilbara Minerals worked with a leading engineering firm to update its 2016 scoping study on the potential for a 30-60ktpa chemical conversion facility. This has identified several Australian and international site locations that could be economically viable.

If developed, this additional new facility would secure Pilbara Minerals' further participation in lithium chemicals facilities for global markets, and in particular lithium hydroxide supply. This would be a separate venture and would not interfere with Pilbara Minerals' first priority lithium chemicals development, which is through the proposed joint venture with POSCO for a potential ~40ktpa lithium hydroxide facility in South Korea which recently received 'conditional' Board approval on 18 March 2019 (ASX announcement: 18 March 2019).

SUMMARY OF KEY SCOPING STUDY OUTCOMES

The Scoping Study results (Table 1) demonstrate a long-life, low-cost operation with a strong LOM revenue of A\$16.60B and LOM average annual EBITDA of A\$684M (real) over an estimated 15-year¹ mine life. Spodumene concentrate pricing inputs for the Scoping Study were developed from revised lithium chemicals' forward price forecasts provided by Roskill for the purposes of the study dated 14th March 2019.

Further details on pricing assumptions are outlined in the section "Forecast Pricing" below with further sensitivity analysis on pricing provided in the 'Financial Analysis' section of this announcement.

Table 1: Stage 3 Scoping Study key outcomes

KEY SCOPING STUDY OUTCOMES	
Life of mine (based upon reserves)	15 years ¹
LOM project revenue (real excluding tantalite)	A\$16.6 billion
LOM project EBITDA (pre-tax; real)	A\$10.3 billion
Stage 3 pre-production capital (incl contingency)	A\$225.8million ²
Post-tax NPV_{10%}	A\$3.73 billion³
Average annual LOM cash operating costs⁴ (real, net of Ta₂O₅ credits)	US\$291/dmt CIF⁵

KEY SCOPING STUDY OUTCOMES

Spodumene concentrate price first five years (average, real)	US\$700/dmt CIF ⁵
Spodumene concentrate price (LOM average, real)	US\$765/dmt CIF ⁵
Foreign currency exchange rate (AUD: USD)	0.75
LOM average annual EBITDA (real)	A\$684M

¹ Mine life is calculated from 1 July 2019.

² 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).

³ Valuation date is 1 July 2019 at an after tax nominal discount rate of 10%.

⁴ Cash operating costs include mining, processing, transport, state and private royalties, native title costs, port, shipping/freight and site based general and administration costs, an allocation of corporate administration/overhead cost and are net of Ta₂O₅ by-product credits.

⁵ CIF ("Cost Insurance and Freight") (Incoterm) is a trade term requiring the seller to deliver goods onboard at port of discharge, plus cover the cost of transport and freight insurance to the destination port.

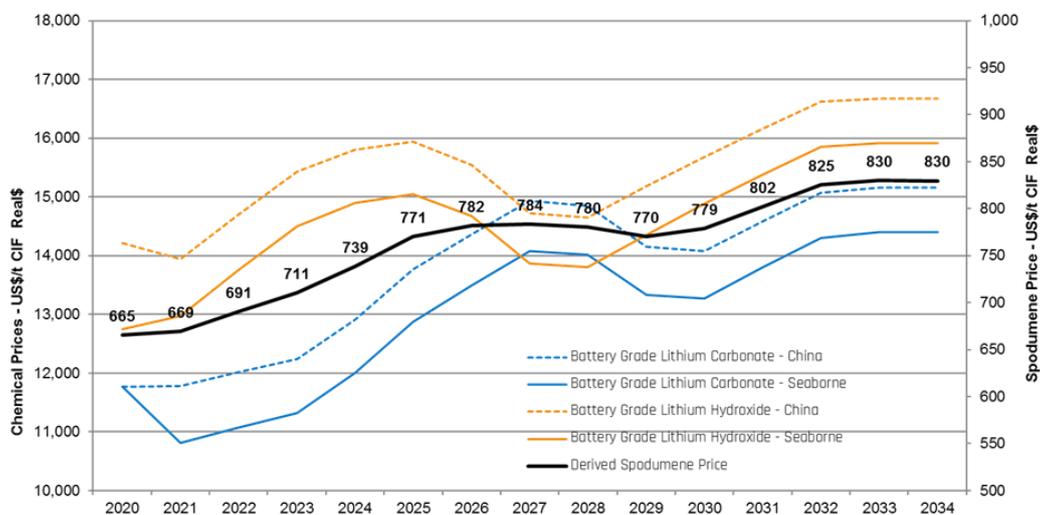
FORECAST PRICING

Pilbara Minerals' offtake agreements include a pricing mechanism for chemical grade spodumene concentrate based on formulae that track the battery grade lithium carbonate and lithium hydroxide prices in the Chinese and Asian markets.

Each customer's pricing mechanism has been reflected in the financial model over their respective contract terms for each of the offtake agreements with General Lithium, Ganfeng Lithium, Great Wall Motors and POSCO. Pricing for any uncommitted Stage 3 tonnes has been calculated on a consistent basis to existing offtake arrangements with references to battery grade lithium carbonate and lithium hydroxide prices in the Chinese and Asian markets.

Pilbara Minerals commissioned Roskill to provide updated price forecasts to help determine underlying spodumene concentrate pricing for the purposes of the Scoping Study. Delivered on 14th March 2019, Roskill provided forecasts through to 2032 for each of the four market prices which are referenced in Pilbara Minerals' offtake contracts (including China domestic pricing – see Figure 1 below).

Figure 1: Derived spodumene concentrate price based off forecast carbonate and hydroxide prices



DELIVERY TEAM

In delivering the Stage 3 Scoping Study, Pilbara Minerals utilised the services of its in-house expertise and engaged specialist consultants (Table 2), the majority of which were actively involved in the preceding Stages 1 and 2 developments at the Pilgangoora Project.

Table 2: Stage 3 Scoping Study contributing consultants

AREA	CONSULTANT
Market analysis	Roskill Consulting Group Ltd
Geology and resources	Trepanier Pty Ltd
Mining and mine design	AMC Consultants Pty Ltd
Process plant and infrastructure (incl contribution to plant capital and operating estimates)	DRA
Tailings management facility	ATC Williams Pty Ltd
Water Supply	HydroConcept Pty Ltd

MARKET ANALYSIS

Leading battery minerals industry consultant Roskill was engaged by Pilbara Minerals to provide a lithium and tantalum market outlook which has been used to support the Stage 3 Scoping Study.

Demand for lithium raw materials is set to remain strong with forecast growth of 28% per annum between 2018 and 2028 largely driven by the automotive sector. It is estimated that by 2030, around 66% of the world's automotive sales or 56.1 million passenger cars will have a battery as part of their powertrain.

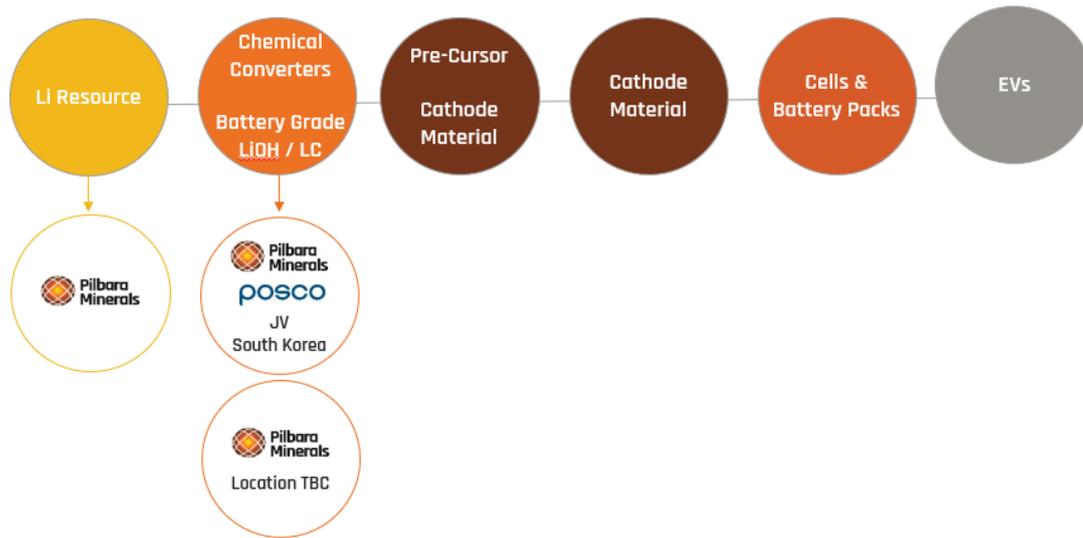
With a solid resource and reserve base, Pilbara Minerals is well placed and will continue to produce chemical grade spodumene concentrate for the growing battery market, with sales into Chinese and South Korean chemical conversion facilities.

The Company also plans to position itself to take advantage of the downstream 'value-adding' market through the vertical integration of the Pilgangoora Project's spodumene concentrate supply with lithium chemicals facilities in which Pilbara Minerals would have an economic interest.

A key objective of the Stage 3 project is to make available spodumene concentrate for current and new customers and potentially to feed into an additional lithium hydroxide facility, beyond the proposed joint venture with POSCO.

This would potentially secure Pilbara Minerals a second position in this high value market and further vertically integrate the Pilgangoora Project's spodumene with key lithium chemicals facilities (Figure 2).

Figure 2: Pilbara Minerals' position in the downstream supply chain



Tantalite concentrate would also be produced as a by-product in the spodumene concentrate recovery process. The by-product credit will contribute to Pilbara Minerals' low cost of spodumene concentrate production.

Noting the value placed on further refined products, Pilbara Minerals is continuing to pursue production of a high-grade tantalite concentrate (+30%) and, as part of the proposed Stage 2 project, is considering construction of a tantalite dressing facility on site to produce this product within future expansions.

POTENTIAL OFFTAKE FOR STAGE 3

As announced in the Subscription Agreement executed with Jiangxi Ganfeng Lithium Co. Ltd ("Ganfeng") on 28 December 2018, Pilbara Minerals agreed to provide a right to Ganfeng to purchase a further 50,000tpa of spodumene concentrate from any Stage 3 expansion. Offtake is contingent on a number of conditions precedent including provision of a product prepayment facility of not less than US\$20M. This prepayment is in addition to the A\$50 million equity subscription expected from Ganfeng by the end of March 2019.

Further, Pilbara Minerals and POSCO have entered a non-binding Memorandum of Understanding (MoU) to evaluate an increase to the proposed jointly owned South Korean chemical conversion facility up to 40ktpa LCE, (previously 30ktpa LCE) (ASX announcement: 2 January 2019). This MoU with POSCO commensurately recognises an increase in the existing spodumene concentrate offtake agreement from the Pilgangoora Project from 240,000tpa to 315,000tpa to support the larger chemical facility.

Following the development of Stage 3, it is anticipated that between approximately 270 and 400ktpa of SC6.0 spodumene concentrate would be available for deliveries to customers and/or the development of additional chemical conversion facilities. The final spodumene concentrate available in offtake from the proposed Stage 3 expansion (up to a maximum of 400kt) will be subject to the uptake of expanded offtake agreements under option with existing customers as of the date of this report.

GEOLOGY AND RESOURCE DEFINITION

The Pilgangoora Resource is contained within six areas over a nine-kilometre strike length with a recently updated Mineral Resource of 226Mt @ 1.27% Li₂O containing 2.86Mt of Li₂O. The Pilgangoora pegmatites vary in width from a few metres to tens of metres and have traceable strikes over several hundreds of metres. The central area is the largest defined deposit and includes 12 pegmatites within a strike length of 1200m and width of 700m.

Table 3: 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

(Refer to ASX Announcement dated 17 September 2018)

Much of the Pilgangoora Project area remains under-explored with several recently identified target areas showing potential for further resource growth over the coming years. Pilbara Minerals has recently updated its exploration target at the Pilgangoora Project to aim to increase the resource by 50-90Mt grading 1.0-1.5% Li₂O (Lithia) (Table 4).

Many of these targets are shallow and have been qualified by outcropping spodumene bearing pegmatites.

Table 4: Exploration target

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

(Refer to ASX Announcement dated 16 October 2018)

MINING AND ORE RESERVES

The completion of a LOM schedule for mining at 7.5Mtpa has continued to demonstrate a robust operation with mine life of 15 years based upon the September 2018 (108Mt) Reserve estimate. Given the significant inferred resource and exploration targets, it is not unreasonable to expect further growth in both the Resource and Reserve to support future extensions to the mine life.

Open pit mining utilising mining contractors using conventional drill-and-blast and load-and-haul operations will continue.

The current JORC Reserve for the final pit design is depicted in Table 5.

Table 5: 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

(Refer to ASX Announcement dated 17 September 2018)

PROCESSING

The Stage 3 project increases the overall plant throughput from Stage 2 5Mtpa to 7.5Mtpa by expanding the proposed Stage 2 processing train from 3Mtpa to 5.5Mtpa. Stage 1 (Train 1) will be left in its current state apart from necessary upgrades to the stockpile reclaim conveyor and the HMS concentrate stacking conveyor. Apart from these tie-ins, train 1 production will not be significantly affected with the Stage 3 expansion works. The Stage 1 crushing circuit will be upgraded to 5Mtpa as part of Stage 2.

An additional 2.5Mtpa of crushing capacity is required for Stage 3 which would be achieved by the installation of a crushing circuit, comprising a primary jaw crusher and secondary cone crusher in closed circuit with a double deck dry banana screen. Crushed material from the new crushing circuit will be conveyed to the existing fine ore stockpile.

Total spodumene concentrate production at this increased throughput (7.5Mtpa) would be approximately 1.2Mtpa at 6% Li₂O together with ~1.1Mlbspa of 30% tantalite concentrate by product.

Figure 3: Stage 1 operation and Stage 2 project overlaid with Stage 3 project components



LOGISTICS AND TRANSPORT

Spodumene concentrate would be transported via the existing established haulage route currently used for the Stage 1 (and proposed Stage 2) projects. This is expected to be via triple trailer configuration road trains from the Pilgangoora Project to a Port Hedland bulk storage facility close to port in preparation for vessel loading. Chemical grade spodumene concentrate would then be transferred into half height containers and campaign transported to a Port Hedland public port facility for ship loading.

Tantalite products would be transported in sealed 200kg drums (or container bags) via shipping containers from the mine site as a ready for sale product to domestic and international markets.

SITE INFRASTRUCTURE

Although the existing Stage 1 (and planned Stage 2) infrastructure will be retained for the Stage 3 project, additional supporting infrastructure will be required to cater for the increased production capacity inclusive of the following:

- Expansion of power station under a build own operate contract;
- Expansion of tailings management facility;
- Additional water demand provided by either new reticulated bores, and/or alternate external supply;
- Upgrades to the existing accommodation camp;
- Temporary construction camp to accommodate increased construction workforce;
- New administration offices and warehousing;
- Improvements to the existing waste water treatment facility; and
- Improvements to the Wodgina East access road.

WATER SUPPLY AND DEMAND

To meet the long-term sustainable net water demand of up to 6.6GL/annum that would be required to operate the expanded processing plant and surrounding infrastructure, the Stage 3 expansion would require additional water supply (plus reserve capacity) which is expected to be sourced within relative proximity to the mine site.

Initial hydrogeological investigations recently completed have defined (7) general areas within 20km of the site which have varying prospects of success and would be targeted accordingly.

PROJECT IMPLEMENTATION

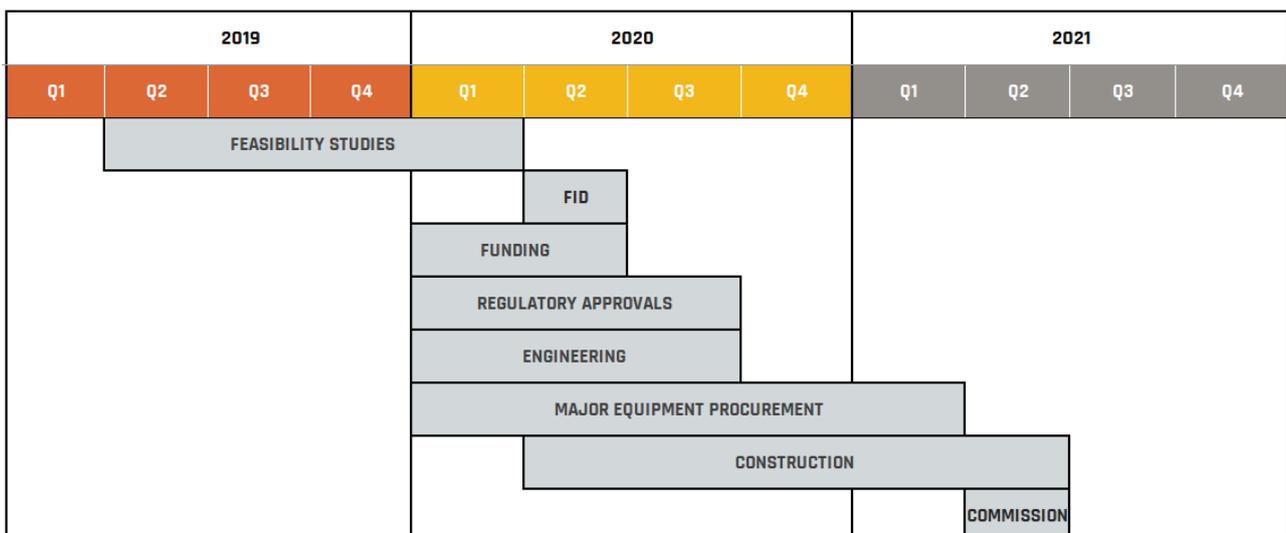
The Stage 3 project would continue to leverage off the knowledge and capability retained by Pilbara Minerals' people and contracting partners during delivery of Stages 1 and 2. The aim is to deliver first concentrate from the expanded plant during the second quarter of the 2021 calendar, however this could be varied to align with downstream customer demand.

In achieving this objective, it is likely that some works will need to be progressed ahead of a full final investment decision, specifically in engineering design and long lead procurement.

Construction of the facility is expected to be in the order of 12 months with allowances within the program for delivery in a brownfield operating environment, with commissioning commencing early in April 2021 (Figure 4).

The ultimate Stage 3 project final investment decision and delivery schedule would be determined by the progress of further feasibility studies, market demand analysis, customer requirements, the timing of any associated chemical conversion facility and project funding outcomes. However, at this stage it is estimated construction of Stage 3 would commence late in the second quarter of the 2020 calendar year with commissioning commencing early in the second quarter of the 2021 calendar year, subject to the development timeline of the proposed chemical facilities and broader customer expectations.

Figure 4: Indicative Stage 3 project delivery schedule



REGULATORY APPROVALS

Given the size and nature of the Stage 3 project, it is considered that referral to either the Environmental Protection Authority (*Environmental Protection Act*), or the Department of Energy and the Environment (*Environmental Protection and Biodiversity Conservation Act*) are unlikely as part of the project approvals process.

The Stage 3 project would fall largely within the disturbance envelopes of the Stage 1 and 2 projects, though some amendments (additional tailings disposal and waste landforms) are likely. A desktop assessment has been completed and has not identified any significant issues.

Studies would be completed prior to submission of Mining Act and Environmental Protection Act approvals outside of existing footprints to confirm that referral is not required under *Environmental Protection Act* and *Environmental Protection and Biodiversity Conservation Act*. At this point it is not anticipated that any Federal or State Ministerial approvals are required for the Stage 3 project beyond the standard mining approvals process experienced in the development of Stages 1 and 2 at the Pilgangoora Project.

CAPITAL COSTS

The capital cost for the Stage 3 project is estimated at A\$225.83M (+/- 30% accuracy). Of this amount, the total initial capital cost for the plant expansion are estimated to be A\$125.16M which includes all direct and indirect capital items.

Non-process infrastructure inclusive of camp, offices, warehouse, borefield, and improvements to the Wodgina East Access road is estimated at A\$31.21M (direct and indirect costs). EPCM and Owner's team costs are estimated to be A\$39.00M. An initial contingency allowance has been applied consistent with current level of development, representing approximately 25% of the total estimated direct capital costs (Table 6).

Table 6: Capital cost estimate

SUMMARY	TOTAL (A\$M)
Processing plant direct costs	101.76
Infrastructure direct costs	20.10
Construction indirect costs	34.51
EPCM, flights and accommodation and Owners Costs	39.00
Sub total	195.37
Project contingency	30.46
GRAND TOTAL	225.83

The Company anticipates spending A\$37.6M of this capital cost during the Stage 2 development and construction phase as early works expenditure on Stage 3, to achieve the lowest possible capital intensity outcome for the Stage 3 development.

OPERATING COSTS

The Stage 3 Scoping Study demonstrates highly competitive cash operating costs as a result of the size and quality of Pilgangoora's resource, low strip ratio, and its close proximity to major roads and port infrastructure.

LOM average cash operating costs per tonne of concentrate after tantalite credits are approximately A\$388/t CIF (US\$291/t CIF). These costs are slightly higher than prior estimates,

largely driven by additional waste movements associated with the latest increase in reserves and the impact of increased royalty costs as a result of higher forecast LOM selling prices.

Even with this modest increase in operating cost, the Pilgangoora Project would still be considered one of the lowest cost hard rock lithium producers globally.

The operating costs presented have been estimated to an overall accuracy of +/-15%. This takes into account both the level of study undertaken and existing operational parameters observed for the Stage 1 project (Table 7).

Table 7: Operating costs estimates

COST AREA	LOM AVERAGE OPERATING COSTS	
	A\$/t conc.	US\$/t conc.
Mining	156	117
Processing (incl contract crushing)	155	116
Site general and administrative	23	17
Transport and port costs	33	25
Corporate and selling costs	5	4
Native title	11	8
Third party royalties	2	2
State royalties	54	40
Ocean freight	38	28
Sub Total	476	357
Less tantalite credit	88	66
TOTAL (after tantalite credit)	388¹	291¹

¹ Cash operating costs include mining, processing, transport, state and private royalties, native title costs, port, shipping/freight and site based general and administration costs, an allocation of corporate administration/overhead cost and are net of Ta₂O₅ by-product credits

FINANCIAL ANALYSIS - SENSITIVITIES

Based on the key assumptions outlined above for capital and operating estimates, physicals, and commodity prices, the Stage 3 project delivers a total post-tax NPV_{10%} of A\$3.73B (for 100% of Stages 1, 2 and 3).

The Stage 3 project is expected to realise an average life of mine EBITDA of A\$684M (real) per annum and is expected to generate total cashflows (after tax) of A\$6.8 billion (real) over the LOM.

These financial outcomes are most sensitive to changes in the USD price received for spodumene concentrate and the AUD:USD foreign exchange rate. Set out below are sensitivities in AUD demonstrating the impact on the NPV of changes in both the USD commodity price and AUD:USD exchange rate.

Table 8: Price/Fx sensitivities (NPV_{10%} A\$M Roskill forecast pricing)

FX RATE / PRICE SCENARIO	ROSKILL FORECAST	ROSKILL HIGH	ROSKILL LOW
Base (0.75)	3,730	4,619	2,007
Low (0.70)	4,203	5,157	2,357
High (0.80)	3,315	4,149	1,700

Table 9: Price/Fx sensitivities (NPV_{10%} A\$M flat real US\$/dmt pricing)

FX RATE / PRICE SCENARIO	500	600	700	800	900
0.65 Flat	2,314	3,286	4,258	5,230	6,202
0.70 Flat	1,942	2,844	3,746	4,649	5,551
0.75 Flat (Base)	1,618	2,460	3,303	4,145	4,988
0.80 Flat	1,331	2,125	2,915	3,704	4,494

POTENTIAL DOWNSTREAM CHEMICAL CONVERSION FACILITY

Pilbara Minerals recognises the opportunity that exists through further vertical integration of its business and as such has been progressing a downstream ‘value adding’ strategy. A key objective of this strategy is diversification of Pilbara Minerals’ entrance into the lithium chemical market and continuing to expand the Pilgangoora Project to free up spodumene concentrate production for supply to downstream operations where the Company has economic participation. As such, Pilbara Minerals has been progressing the POSCO joint venture and the evaluation of a second chemical conversion facility either in Australia or overseas.

Since announcing Pilbara Minerals’ intention to investigate the opportunity for the development of lithium chemicals facilities outside of China (ASX announcement: 4 July 2016), the Company has continued to assess opportunities to grow its presence downstream. Subsequently, Pilbara Minerals has been working with a leading engineering firm to re-evaluate and refresh the original scoping study on a chemical conversion facility which was undertaken in 2016. Preliminary results from this evaluation indicate that several locations for the facility are economically viable both domestically and overseas.

The proposed flowsheet would be expected to achieve battery grade lithium hydroxide through a conventional spodumene acid-bake process, with Pilbara Minerals investigating the potential to develop a chemical plant with the flexibility to produce either lithium hydroxide or lithium carbonate to be able to adjust to changing customer preferences.

For the avoidance of doubt, the financial outcomes from the Stage 3 Scoping Study for the expansion to up to 7.5Mtpa do not include any financial benefit from Pilbara Minerals’ scoping study into a chemical conversion facility.

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ABOUT PILBARA MINERALS

Pilbara Minerals Limited (Pilbara Minerals – ASX: PLS) is a mining and exploration company listed on the ASX, specialising in the exploration and development of the specialty metals lithium and tantalum. Pilbara Minerals owns 100% of the world class Pilgangoora Lithium-Tantalum project which is one of the world's premier lithium development projects. Pilgangoora is also one of the largest pegmatite hosted tantalite resources in the world and Pilbara Minerals produces a tantalite by-product of its spodumene production.

ABOUT LITHIUM

Lithium is a soft silvery white metal which is highly reactive and does not occur in nature in its elemental form. It has the highest electrochemical potential of all metals, a key property in its role in lithium-ion batteries. In nature it occurs as compounds within hard rock deposits and salt brines. Lithium and its chemical compounds have a wide range of industrial applications resulting in numerous chemical and technical uses. A key growth area is its use in lithium batteries as a power source for a wide range of applications including consumer electronics, power station-domestic-industrial storage, electric vehicles, power tools and almost every application where electricity is currently supplied by fossil fuels.

ABOUT TANTALUM

The tantalum market is boutique in size with total global demand of approximately 1,700 tonnes of tantalum metal per year. Tantalum is primarily used in the electronics industry in the manufacture of capacitors for high-end applications like telecommunications and data storage. It is also used in semi-conductors, engine turbine blades and medical implants. As well as providing ductility, toughness, corrosion resistance, thermal conductivity and heat resistance to various other applications.

FORWARD LOOKING STATEMENTS AND IMPORTANT NOTICE

This announcement may contain some references to forecasts, estimates, assumptions and other forward-looking statements. Although the Company believes that its expectations, estimates and forecast outcomes are based on reasonable assumptions, it can give no assurance that they will be achieved. They may be affected by a variety of variables and changes in underlying assumptions that are subject to risk factors associated with the nature of the business, which could cause actual results to differ materially from those expressed herein. All references to dollars (\$) and cents in this announcement are to Australian currency, unless otherwise stated.

Investors should make and rely upon their own enquiries before deciding to acquire or deal in the Company's securities.

NO NEW INFORMATION OR DATA

The Company confirms it is not aware of any new information or data that materially affects the information included in the 16 October 2018 Pilgangoora Exploration Target or 17 September 2018 Pilgangoora Resource and Reserve Estimates, and that all material assumptions and technical parameters underpinning the targets and estimates in those announcements continue to apply and have not materially changed.