ASX / MEDIA ANNOUNCEMENT

Wednesday, 29 June 2022

FINAL INVESTMENT DECISION TO INCREASE PILGANGOORA PRODUCTION CAPACITY

BOARD APPROVAL FOR P680 PROJECT TO DELIVER A FURTHER 100,000tpa OF PRODUCTION CAPACITY FROM PILGAN PLANT

KEY POINTS

- Final Investment Decision (FID) made to increase the Pilgangoora Operation's nameplate production capacity from ~ 580,000 to 680,000tpa of spodumene concentrate (**P680 Project**).
- Construction of primary rejection heavy media separation circuit (**Primary Rejection**) enabling rejection of low-grade waste material and providing an additional 100,000tpa of spodumene concentrate production capacity at an estimated capital cost of $103.0M.
- Construction of integrated crushing and ore sorting facility (**Crushing and Ore Sorting**) capable of processing up to 5mtpa of ore throughput and supporting further process improvements and concentrate quality, at an estimated capital cost of $194.5M.
- The P680 Project includes both Primary Rejection and Crushing and Ore Sorting to deliver total nameplate production capacity at the Pilgangoora Operation of between 640,000 to 680,000tpa at a total estimated capital investment of $297.5M, including $50M of pre-investment capital towards future expansions up to 1Mtpa of spodumene concentrate production (**P1000 Project)**.
- Commissioning of Primary Rejection expected to commence from September Quarter 2023, with the additional production capacity to follow three months later.
- Downstream joint venture with POSCO, together with continued strong market demand, support the P680 Project.
- Supports decarbonisation strategy by rejecting more waste at the front end of the processing circuit, reducing overall energy intensity and carbon per spodumene concentrate tonne.

Australian lithium producer, Pilbara Minerals Limited (**Pilbara Minerals or the Company** – ASX: PLS), is pleased to announce that the Board has approved the capital investment for the P680 Project.

The Company will make this investment in the Pilgan Plant, resulting in processing improvements that are expected to deliver a 100,000tpa increase in average annual life of mine (**LOM**) spodumene concentrate production. This will ultimately increase the annual production run rate from the Pilgangoora Operation to approximately 640,000 to 680,000dmt from the December Quarter 2023.

This investment supports Pilbara Minerals' long term growth strategy to incrementally increase production capacity at the Pilgangoora Operation in line with customer and market demand.

The P680 Project is expected to leverage existing infrastructure to achieve higher production volumes at reduced unit operating costs through the introduction of a new

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Primary Rejection circuit. This will involve an additional Heavy Media Separation (**HMS**) circuit installed adjacent to the Pilgan Plant's existing HMS circuit. The P680 Project will also see the introduction of ore sorting technology to the front-end of the Pilgan Plant, which is designed to reject basalt (and other non-lithium hosting materials) earlier in the production process. Both investments are expected to deliver processing efficiencies and improved lithia recoveries.

The Company will self-manage delivery of the P680 Project to help mitigate cost and schedule overruns, with key long-lead procurement to be undertaken prior to the award of key construction contracts.

Production from the P680 Project will support the chemical conversion facility currently under development in South Korea in joint venture with POSCO (refer ASX announcement 11 April 2022). In addition, the Company continues to receive strong interest in longer-term spodumene concentrate supply contracts from both its existing customer base as well as from other industry participants. Recent positive market demand for spodumene concentrate was demonstrated by Pilbara Minerals most recent BMX auction, which achieved a price of approximately US$7,017/dmt (SC6.0, CIF China basis) (refer ASX announcement 23 June 2022).

The P680 Project's estimated capital cost of $297.5M includes approximately $50M of pre-investment capital to assist with the next phased expansion at the Pilgangoora Operation, with targeted production capacity of up to 1Mtpa (**P1000 Project**). Whilst the P1000 Project remains subject to a separate final investment decision (**FID**), suitable market conditions, and regulatory approvals, this pre-investment of capital should mitigate significant cost escalations associated with retrofitting expansion capacity for both the primary rejection and crushing and ore sorting circuits. In addition, this pre-investment assists in avoiding future operational interruptions associated with infrastructure duplication and brownfield interactions. FID for the P1000 Project is targeted for late December 2022.

The P680 Project' capital investment will be funded from existing cashflow and debt facilities, with the Company considering a broader restructure of its existing debt facilities.

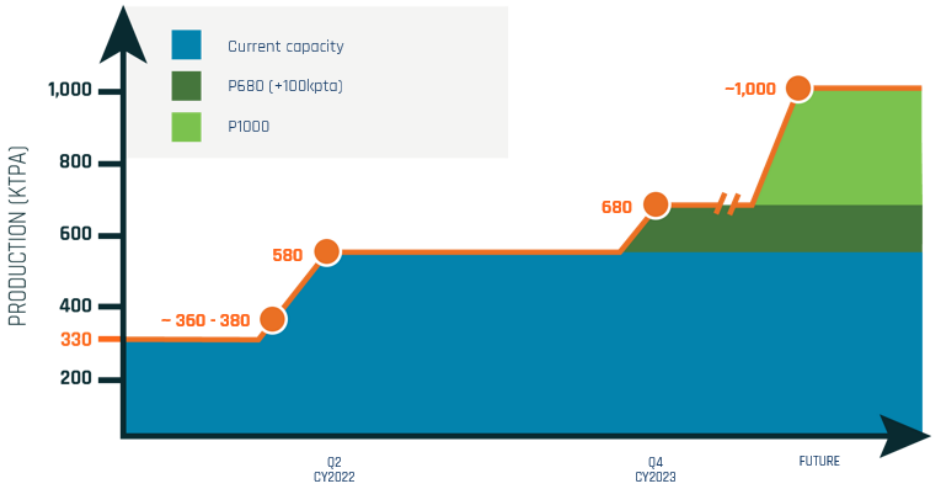

Figure 1 - Pilgangoora growth pathway[1]

[1] Production capacity uplift to up to 680,000tpa subject to successful construction and commissioning of P680 Project. P1000 commencement is subject to Pilbara Minerals Board approval, regulatory approvals and market conditions. Expansions in production capacity are underpinned by the Company's existing Ore Reserves.

Pilbara Minerals incoming Managing Director and CEO, Dale Henderson, said:

"This is an exciting milestone for Pilbara Minerals. It reinforces the exceptional scale and quality of our Pilgangoora Project, which is one of the few hard rock lithium production operations globally that has both the resource size and existing operating platform to enable a rapid scale-up of production to meet our customers' long-term requirements.

"From the outset, our long-term growth strategy has been to develop each stage with a focus on tailoring production to meet demand, while also planning for future expansion opportunities.

"Following the Board's Final Investment Decision, we are now able to commence construction of the P680 Project in the coming months and expect commissioning of the primary rejection facility during the second half of next year with the crushing and ore sorting facility to follow shortly thereafter.

"This increase in production capacity will enable the Company to continue to capitalise on the opportunities in the lithium chemicals market, being driven by rapid transition to decarbonisation through technologies such as electric vehicles and battery storage.

"The increase in production from the Pilgangoora Project will coincide with the expected commissioning and ramp-up in production from the downstream chemical conversion plant being constructed under our Joint Venture with POSCO, which will see Pilbara Minerals become a fully integrated lithium raw materials company."

P680 PROJECT

The P680 Project is well supported for both approvals and supporting infrastructure. All major regulatory approvals are already in place for construction of the Primary Rejection facility. Regulatory approvals for the Crushing and Ore Sorting facility will be sought from the relevant authorities and have been allowed for in the project delivery schedule. The existing processing support infrastructure is sufficient to support the project, including tails management facility, power plant and water infrastructure.

Additional camp rooms and support services will be required to accommodate the expected increase in the combined construction and operational workforce and have been included in the project costs.

Primary Rejection

The Primary Rejection facility includes an additional Heavy Media Separation (**HMS**) circuit installed between the coarse ore stockpile and existing Pilgan Plant HMS circuit which will produce a coarse, low-grade lithia reject material, representing 20-25% of plant feed.

Supported by extensive metallurgical test work, this early rejection of waste material enables an increased concentrator feed rate (~2.3Mtpa to ~3Mtpa). The mine fleet currently being deployed will be scaled-up to accommodate the higher production run-rate. Increased mining activity has already commenced in preparation for the higher through-put requirements of the P680 Project.

The Primary Rejection circuit will increase spodumene concentrate production from the Pilgan Plant by approximately 100,000tpa, which is expected to support better lithia recovery performance from improved lithia feed grades (post waste rejection), supporting targeted life-of-mine lithia recovery range of 72-78%.

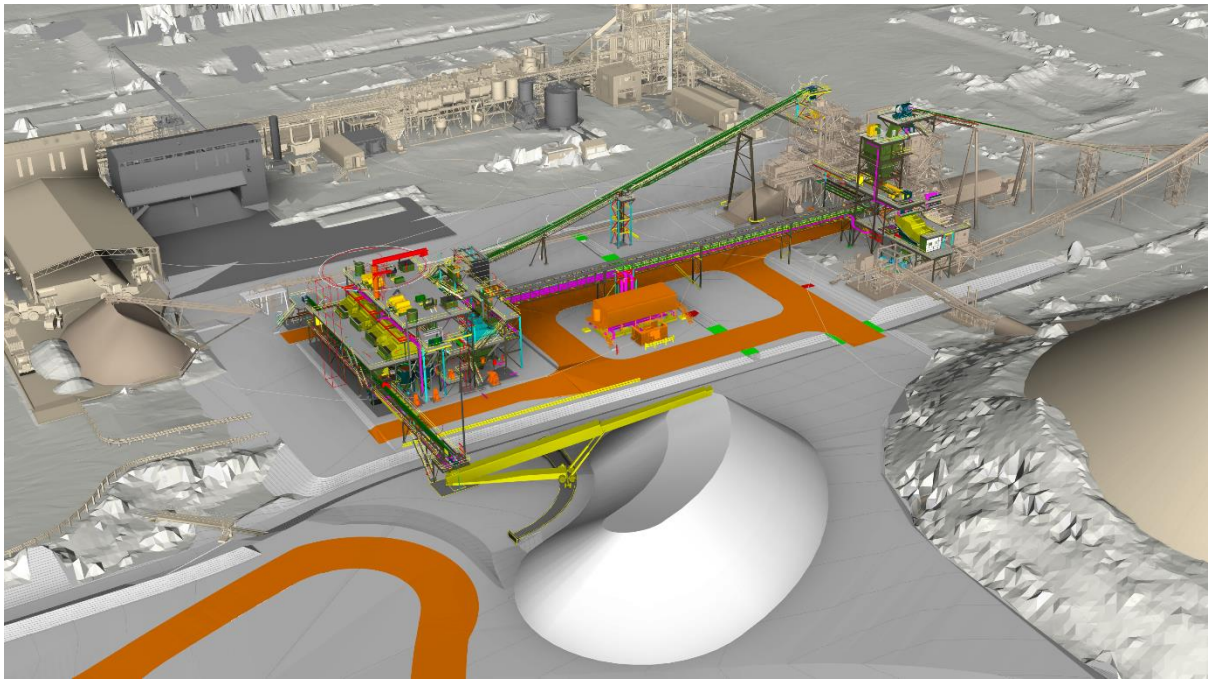

Figure 2 - Primary Rejection 3D design model (existing plant infrastructure in greyscale).

The expected capital cost and delivery timelines for the Primary Rejection circuit are outlined in Table 1 and Table 2 below.

Crushing and Ore Sorting

The Crushing and Ore Sorting facility will replace existing contracted crushing services (over time) and is expected to lower operating costs, while also providing increased crushing capacity (5mtpa) to satisfy future expansion plans for the P1000 Project.

The Ore Sorting circuit has been configured to reject waste basalt and the primary ore gangue minerals (quartz and feldspar) through a combination of single pass optical and X-ray ore sorting technologies. This will further support the Pilgangoora Ore Reserve for LOM processing of pegmatite ore, including any accumulated contaminated ore stocks.

Ore sorting technology will also support a reduction in mining volumes compared to historical rates. To date, ore material on the contact zone with elevated levels of basalt has been stockpiled for future processing.

On commencement of Primary Rejection commissioning, the Pilgan Plant's annualised feed rate will increase to ~3Mtpa, exceeding the capacity of the existing contracted crushing facility. During the period when the new Crushing and Ore Sorting facility is being installed, additional contracted mobile crushing capacity will be utilised to accommodate increased Pilgan Plant feed rates.

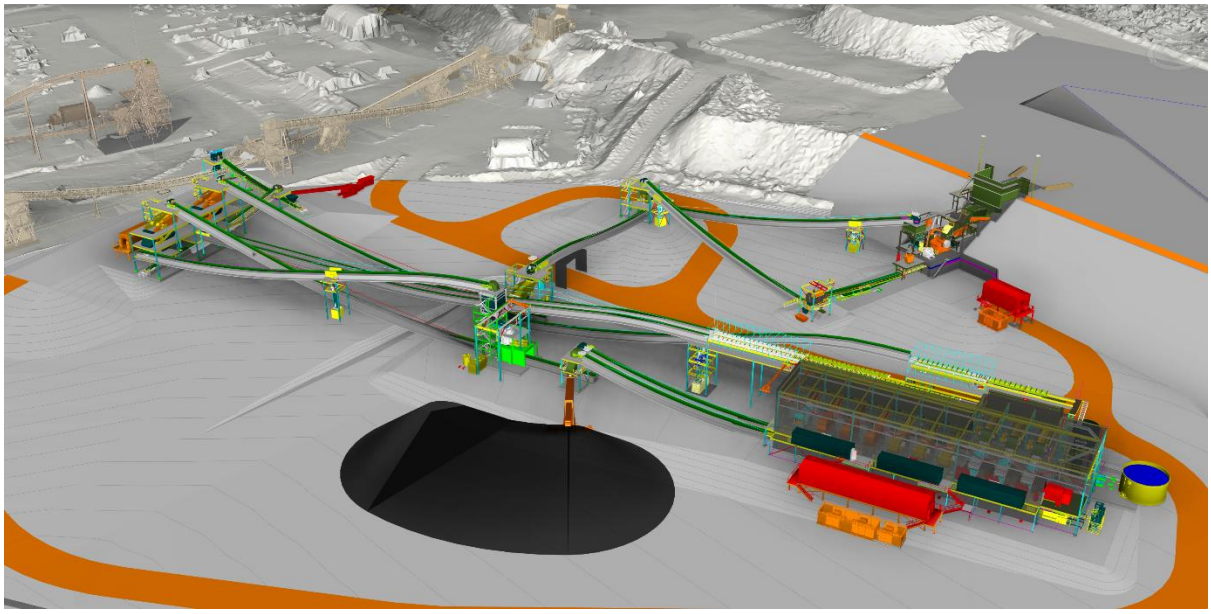

Figure 3 *– Integrated crushing and ore sorting facility 3D design model (existing plant infrastructure in greyscale)*

Schedule and capital estimate

The indicative P680 Project delivery schedule is outlined in Table 1 below, with expected capital expenditure detailed in Table 2.

Table 1 - P680 delivery schedule

Milestone	Primary Rejection	Crushing and Ore Sorting
FID	Q2 CY2022	
Construction commencement	Q3 CY2022	
Commissioning	Q3 CY2023	Q4 CY2023
Full capacity	Q4 CY2023	Q2 CY2024

Table 2 - P680 Project capital estimate

Area	Capital (A$M)[2]
Primary Rejection	103.0
Crushing and Ore Sorting	194.5
Total	**297.5**

[2] Capital estimate has been determined as a "Class 2 – Definitive Estimate" with an accuracy of -15% / +20%

Included in the capital cost estimates is a contingency and escalation factor of 13%.

Release authorised by Dale Henderson, Pilbara Minerals Limited's CEO.

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IMPORTANT INFORMATION

The capital cost estimates in this announcement for the P680 Project are indicative only, based on the Company's studies and budgeting and the P680 FID economic model. It is developed in the context of an uncertain operating environment including in respect of COVID-19 related risks (community distribution and supply chain disruption) and the commissioning and ramp of the Primary Rejection and the Crushing & Ore Sorting Projects, as well as the ramp up of the Ngungaju Plant. The information is provided as an indicative guide to assist sophisticated investors with modelling of the Company. It should not be relied upon as a predictor of future performance.

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.

Information in this presentation regarding expansions in nameplate capacity of the Pilgan Plant in respect of the P680 and P1000 projects are underpinned by the Company's existing Ore Reserves that have been prepared by a Competent Person in accordance with the JORC Code (2012 Edition) and were released by the Company to ASX on 6 October 2021. The relevant proportions of proven Ore Reserves and probable Ore Reserves are 13% proven Ore Reserves and 87% probable Ore Reserves. The Company confirms it is not aware of any new information or data that materially affects the information included in that release or report and that all material assumptions and technical parameters underpinning the Ore Reserves estimates continue to apply and have not materially changed.

All references to dollars ($) and cents in this announcement are to Australian currency, unless otherwise stated.

ABOUT PILBARA MINERALS

Pilbara Minerals is the leading ASX-listed pure-play lithium company, owning 100% of the world's largest, independent hard-rock lithium operation. Located in Western Australia's resource-rich Pilbara region, the Pilgangoora Operation produces a spodumene and tantalite concentrate. The significant scale and quality of the operation has attracted a consortium of high quality, global partners including Ganfeng Lithium, General Lithium, Great Wall Motor Company, POSCO, CATL and Yibin Tianyi.

While it continues to deliver a low-cost, quality spodumene to market, Pilbara Minerals is pursuing a growth and diversification strategy to become a sustainable, low-cost lithium

producer and fully integrated lithium raw materials and chemicals supplier in the years to come.

Through execution of this strategy, Pilbara Minerals is positioned to become a major player in the rapidly growing lithium supply chain, underpinned by increasing demand for clean energy technologies such as electric vehicles and energy storage as the world pursues a sustainable energy future.