

21 June 2024

## STUDY DELIVERS 2MTPA EXPANSION OPTION – HIGHLY ACCRETIVE

Pilbara Minerals Limited (**Pilbara Minerals** or the **Company**) is pleased to release the outcomes of a pre-feasibility study (**PFS**) which determined that production capacity at the Company's 100% owned Pilgangoora Operation could be expanded to more than 2.0 million tonnes per annum (**Mtpa**). Such an expansion is expected to result in the first ten years of annual production averaging ~1.9Mtpa, with production of more than 2Mtpa over the first six years after ramp up. The expansion project will be named the P2000 Project (**P2000**).

### Highlights

- The P2000 PFS establishes that the Pilgangoora Operation could be expanded to an annualised production volume of more than 2Mtpa with an average forecast annual spodumene concentrate production for the first ten years of 1.9Mtpa (spodumene concentrate (**SC**) 5.2% grade).
- The Company's existing Pilgangoora Ore Reserves<sup>1</sup> solely underpin the P2000 production profile with a revised life of mine (**LOM**) of 23 years.
- P2000 would further extend Pilbara Minerals' position as the largest pure play lithium producer globally. The timing of the P2000 Project will be subject to the successful outcome of the next level of feasibility study, project approvals and the market outlook at the time of the financial investment decision (**FID**).
- P2000 would require construction of a new whole of ore flotation plant at Pilgangoora with an estimated capital expenditure of \$1.2B (-20/+30% accuracy). The new plant would complement existing processing flowsheets in use at the Pilgangoora Operation.
- The expansion will create significant shareholder value with a P2000 incremental net present value (**NPV**) of \$2.6B<sup>2</sup> and incremental internal rate of return (**IRR**) of 55%.
- Pilbara Minerals has commenced a feasibility study in relation to P2000 (**FS**) with outcomes expected in the December Quarter of calendar year 2025 (**CY25**). A potential FID will follow the FS outcomes.
- Funding requirements will be determined during the FS and FID phases. Pilbara Minerals will consider all available funding options including the Company's cash balance (\$1.8B as at 31 March 2024), cashflows from existing production, new loan facilities or other sources.
- P2000 will deliver significant additional spodumene concentrate annual production capacity for offtake and strategic partnership opportunities which Pilbara Minerals will explore in parallel with the FS and FID.
- An investor webcast and teleconference call is scheduled for 9.30am AEST today (Friday, 21 June 2024). Details available on page 11.

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

*"The PFS demonstrates a strong value accretive project with an incremental NPV of \$2.6B<sup>2</sup> through this potential future expansion to the operation at Pilgangoora. This study follows the 35% reserve upgrade to 214Mt announced in August last year. The growth of the reserve, and the optionality to incrementally*

expand production, further reinforces Pilgangoora's position as a Tier 1 asset of global significance.

"This expansion is expected to provide an average 1.9Mtpa production for the first 10 years and more than 2Mtpa over the first six years after ramp up. The scale benefits of this expansion will further build on Pilbara Minerals' position as one of the major leading lithium suppliers globally.

"The next level of feasibility study will now commence with expected completion in the December Quarter CY25. As we have done in the past, the timing of the FID will be considered in conjunction with prevailing market conditions and only proceed when it makes sense to do so. In parallel to the feasibility study, the Company will consider the full suite of opportunities associated with this expansion including funding, offtake strategy and downstream partnerships."

### Key outcomes

Financial outcomes		P2000
10 year average unit operating costs (FOB) <sup>3</sup>	A\$/t	<b>550-650</b>
Capex (-20/+30% accuracy)	A\$B	<b>1.2</b>
P2000 Expansion Project incremental NPV (8% real, post-tax) <sup>2</sup>	A\$B	<b>2.6</b>
P2000 Expansion Project incremental IRR on cashflows (post-tax) <sup>2</sup>	%	<b>55</b>
Economic assumptions		
Assumed long term exchange rate	AUD:USD	<b>0.70</b>
Long term SC6 price (real)	\$US/t	<b>1,500</b>
Long term SC5.2 price (real)	\$US/t	<b>1,300</b>

Table 1: P2000 PFS outcomes and assumptions<sup>4</sup>

### Overview

The Pilgangoora Operation is located in the Pilbara region of Western Australia, approximately 140km to the port of Port Hedland via road, where the Company's spodumene concentrate is shipped to international customers.

First production was achieved at the Pilgangoora Operation in 2018. Over the past six years of operation the Company has pursued a staged and incremental expansion strategy growing the production capacity from the mine as the lithium market has grown. The operation is on track to deliver a nameplate production rate of 1Mtpa following completion and ramp-up of the P1000 Project during September Quarter 2025.

The P2000 PFS focused on the opportunity to realise further value from the Ore Reserve, which was increased by 35% to 214Mt at 1.19% Li<sub>2</sub>O<sup>1</sup> in August 2023. This value was identified through mine planning studies focused on accelerating production from existing Ore Reserves<sup>1</sup> with a target to support ore feed to a third processing facility to be constructed on site.

The PFS concluded that an increase in ore supply rate to 12.4Mtpa is achievable and supports the construction of a third onsite concentrator, generating a significant increase in the spodumene concentrate supply rate from the Pilgangoora Operation to ~1.9Mtpa at current SC5.2 grades over a 10 year average. This acceleration of mining rate affords the Pilgangoora Operation the ability to incorporate a larger dedicated bulk waste fleet, targeted to address the higher strip ratio associated with the pit depth extensions identified in the 2023 Ore Reserve<sup>1</sup> upgrade.

The P2000 Project provides a significant increase in production capacity that, if brought to market, may time favourably with expected deficits within the lithium market as forecast by Benchmark Minerals Intelligence (BMI)<sup>5</sup>.

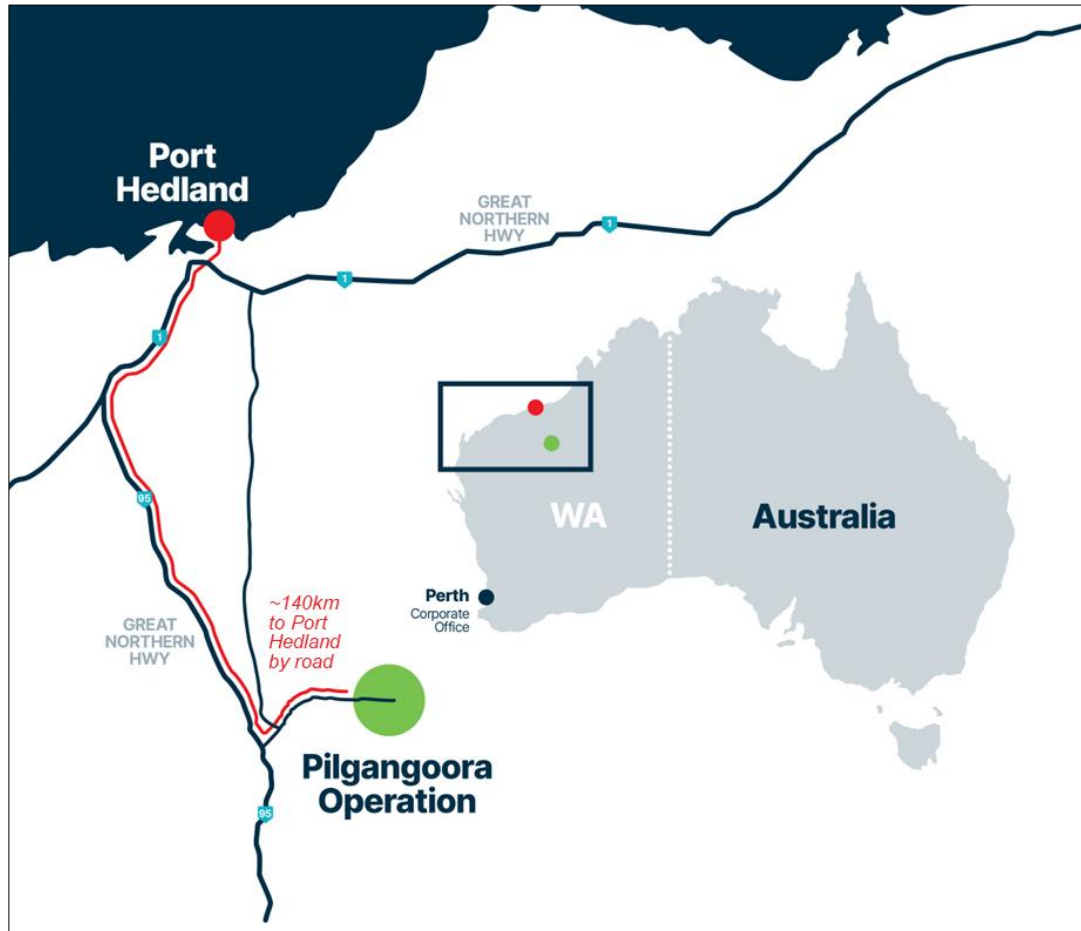


Image 1: Pilgangoora Operation location

### P2000 PFS key findings

A summary of key findings from the P2000 PFS is shown in Table 2 with a comparison to estimated P1000 outcomes.

PFS physical outcomes and targets	unit	P1000	P2000
Mine life (from 30-Jun-24)	years	34	<b>23</b>
LOM ore mined (from 1-Jul-24)	Mt	211	<b>211</b>
LOM strip ratio (excl. bulk waste)	w:o	n/a	<b>4.7x</b>
LOM strip ratio (incl. bulk waste)	w:o	7.7x	<b>7.7x</b>
Total feed rate (diluted, all plants)	M tpa	6.8	<b>12.4</b>
10-year average production target (SC5.2) per annum <sup>6</sup> (from FY29)	k dmt	1,060 (1,073* from FY25)	<b>1,895</b>

Table 2: P2000 PFS physical outcomes and targets

\*This average estimated annual production over 10 years from FY25 replaces the production profile which was set out in figure 2 of the Company's ASX Announcement, "P1000 Project Final Investment Decision" released on 29

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March 2023.

### **Ore Reserves and mining**

The P2000 production profile is solely underpinned by the 2023 Pilgangoora Ore Reserves<sup>1</sup> released on 24 August 2023. This modelling also accounted for predicted depletion due to mining of 13.4Mt over financial year 2024 (**FY24**) and FY25<sup>7</sup>.

A key factor addressed in the PFS was identifying the maximum ore feed rate that could reasonably be supplied from the existing Ore Reserves<sup>1</sup>. The study found that Ore Reserve pits would sustain mining rates of 110Mtpa, which would deliver greater than 10Mtpa of ore feed for over 12 years, enough to support a new 5Mtpa concentrator. The operations current mining methodology would remain the same (drill and blast) with changes to stage designs and bench heights to support increased mining rates.

Availability of land for waste storage, with waste of 1.6 billion tonnes (**Bt**) over LOM was also reviewed with the PFS finding there is sufficient land within current tenements to build the required waste landforms. Options may be available to reduce waste movement costs and will be explored in the FS. In addition, bulk waste zones within the pits could be mined with a larger class waste mining fleet, reducing waste movement unit cost further.

Under the P2000 production run rate it is anticipated that LOM decreases from 34 years to 23 years based on the current Pilgangoora Ore Reserves<sup>1</sup>. However, exploration is continuing at the Pilgangoora Operation and may provide future opportunities to extend mine life including from the prospective East Extension and Central Extension areas which are undergoing further drill testing during the CY24 drilling campaign.

### **Metallurgy and processing**

Engineering studies and metallurgical test work support a 'whole of ore' flotation flowsheet tailored to the ore body, with a 0.9-1.2% Li<sub>2</sub>O subset ore feed to the new plant and target average lithium recoveries of 67.5%. The flowsheet would feature the following:

- construction of a crushing and ore sorting circuit as utilised in the P680 Project;
- whole of ore comminution circuit; and
- pre-flotation magnetic separation and tantalum by-product recovery circuit.

The new processing plant would be located adjacent to the existing Pilgan plant to leverage key existing services, process facilities, infrastructure and operational labour synergies. Drawing from a common run-of-mine pad, the plant will be designed for high availability and incorporates eight years of operational learning and technology innovation within Pilbara Minerals, providing Pilgangoora with a suite of processing flowsheets tailored to optimise ore characteristics encountered throughout the Ore Reserves<sup>1</sup>.

The new plant will be designed to manage ore feed that contains higher levels of host rock dilution, allowing an increase in bulk mining operations and complementing the processing strategy of reserving higher grade coarse ore feeds for the Pilgan processing plant in order to maximise lithium ore recoveries.



Image 2: Proposed P2000 expansion footprint

### P2000 production profile

The indicative 10 year Pilgangoora production profile, following an assumed commencement of the P2000 expansion project in CY28, is shown in chart 1 below.

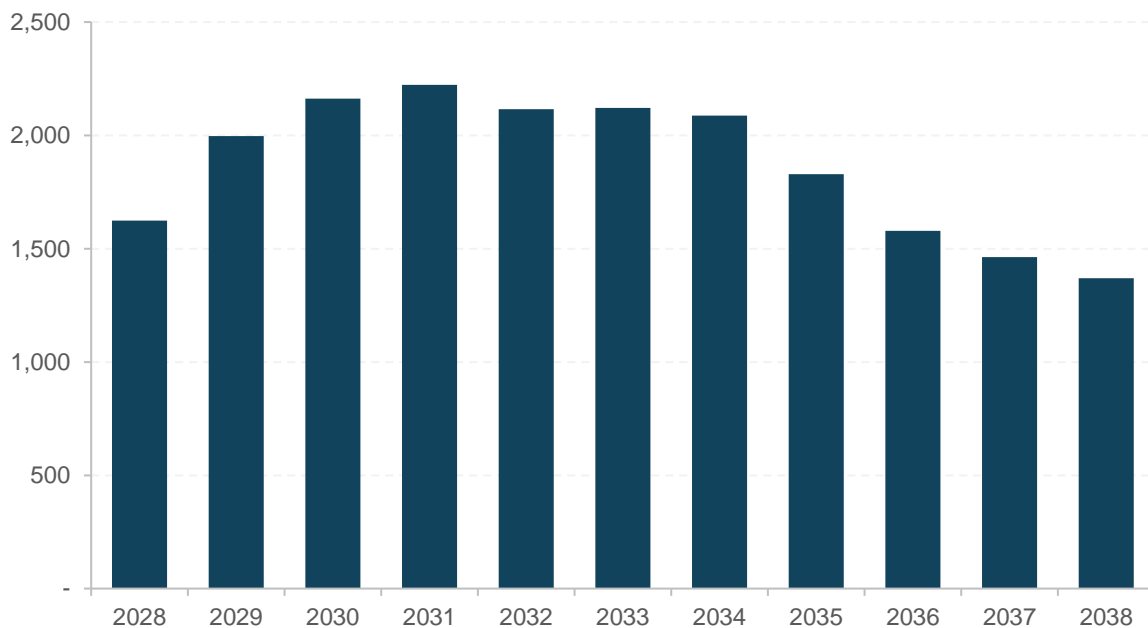


Chart 1: Pilgangoora 10 year spodumene concentrate production at SC5.2 grade with CY28 a ramp up year<sup>6</sup>.

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The indicative Pilgangoora production profile for the LOM, assuming completion of the P2000 expansion is shown in chart 2 below.

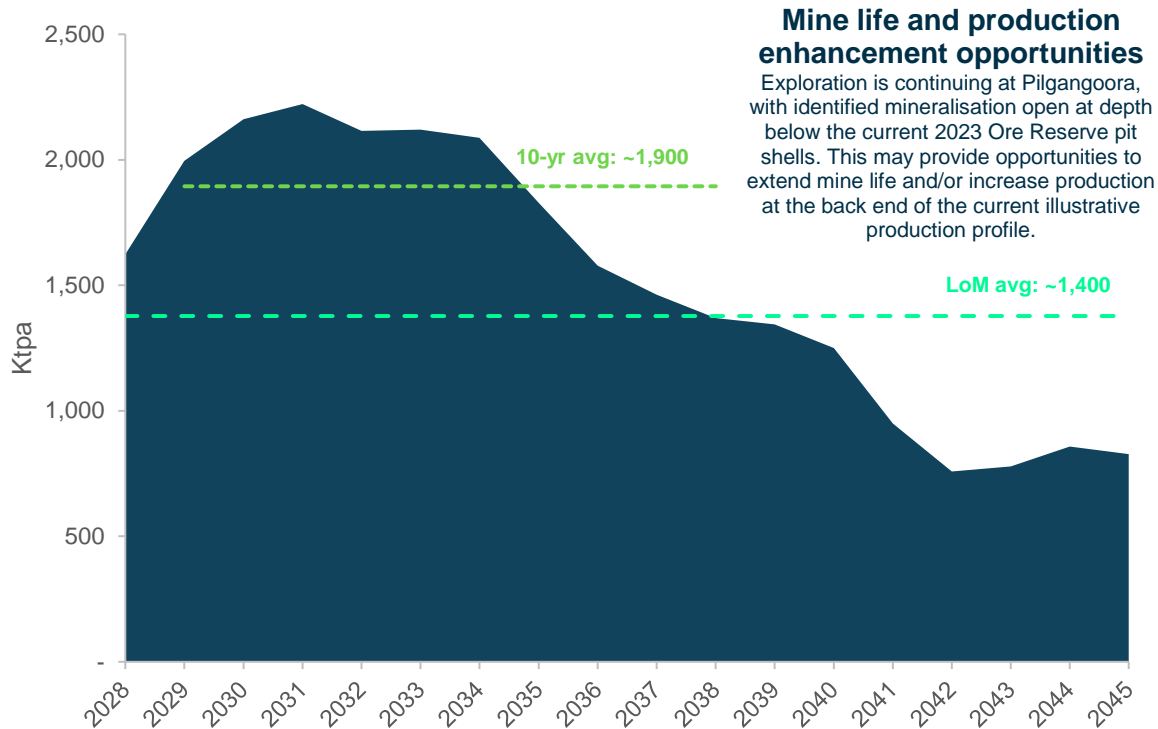


Chart 2: Pilgangoora LOM spodumene concentrate production (kdmt) at SC5.2 grade<sup>6</sup>.

**Infrastructure**

The P2000 expansion provides a significant increase to the existing production capacity of the Pilgangoora Operation and will require some further investment in additional infrastructure. This includes the construction of mining fleet permanent maintenance facilities and a new storage and outloading facility at the port facility at Lumsden Point being constructed by the Pilbara Ports Authority. This infrastructure is not included in the P2000 capital expenditure estimate and will be progressed separately to P2000.

Due to the proposed ore flotation flowsheet power intensity per tonne for P2000 is expected to increase compared to projected P1000 levels. Pilbara Minerals released a power strategy in late 2023 which addressed how the Company intends to increase power capacity and reduce power related emissions intensity by 2030<sup>8</sup>. This will include the opportunity to investigate renewable power generation and associated grid infrastructure, which could reduce power emissions intensity to the Pilgangoora Operation, contingent upon third-party development. The FS for P2000 will address additional power requirements, and management of associated emissions.

The PFS focussed on potential water supply options beyond the existing borefield supply. Along with increased borefield supply, another option to be investigated in the FS is the dewatering of tailings from the processing facilities.

**Approvals**

The Pilgangoora Operation is currently operated under approvals from the Department of Energy,

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Mines, Industry Regulation and Safety (**DEMIRS**) and the Department of Water and Environmental Regulation (**DWER**) granted in accordance with the *Mining Act (1978)* and *Environmental Protection Act (1986)*.

The P2000 Project proposes to expand the current Pilgangoora Operations beyond existing granted approvals, and as such Pilbara Minerals has completed the initial scoping of future supporting studies during the PFS.

This scoping exercise has identified that additional studies will be required beyond those already completed, including environmental (flora and fauna), heritage, geochemistry, hydrology and hydrogeology. The results of these studies will allow preparation and submission of additional project approvals in consultation with Traditional Owner groups and relevant regulatory agencies as required.

No immediate limiting factors were identified during the PFS study.

### Offtake and markets

Pilbara Minerals receives significant unsolicited inbound interest from existing and potential new customers in relation to spodumene offtake on a regular basis. As a part of the FS, the Company will actively engage with selected participants across the battery materials supply chain to explore offtake and partnering opportunities in respect of product available from this potential expansion of production capacity. The Company has confidence that there will be long term demand for high quality production from Pilgangoora, in particular in the latter part of this decade by which time P2000 could be able to ramp up into production.

### Financial analysis

A summary of the key financial assumptions and outcomes is provided in table 3 below.

	unit	P2000
<b>P2000 PFS financial assumptions and outcomes</b>		
Long term price used (SC6)	US\$/t	1,500
Long term SC5.2 price (real)	US\$/t	1,300
Assumed long term exchange rate	AUD: USD	0.70
10 year average unit operating costs (FOB)	A\$/t	550-650
Capex (-20/+30% accuracy, including contingency and escalation)	A\$B	1.2
P2000 Project Expansion incremental NPV (8% real) <sup>2</sup>	A\$B	2.6
P2000 Expansion Project incremental IRR on cashflows (post-tax) <sup>2</sup>	%	55
P2000 Project Expansion cashflow payback period	years	~3

Table 3: Key P2000 PFS financial assumptions and outcomes

Notes:

- The PFS model has been prepared on an ungeared basis.
- Revenue and costs have been prepared on a real<sub>2024</sub> basis.
- Cashflows discounted to 31-Dec-25 at a post-tax, real 8% discount rate.
- Base case OPEX unit cost drivers have been derived from internal long-term budget forecast at P1000.
- Additional plant processing OPEX has been estimated based on the expected differential to Pilgan processing and maintenance costs (sourced from internal budget forecast).
- Mining costs determined at \$8.20 / total material mined (**tmm**) for ore & selective waste fleet, \$6.20 / tmm for bulk waste fleet (applicable only to P2000 case) on the basis of a PFS-level waste placement assessment and internal cost-buildups (inclusive of equipment hire costs under similar arrangements to current operations).
- Further operating cost synergies and cost-out drivers will be identified in the FS and through internal business driver programs.
- The P2000 Project Expansion NPV and IRR specified above is incremental to the Group's latest mine plan (assuming current expansion projects are complete), excluding P2000, with the key parameters summarised in Table 2.

- Unit operating cost (FOB Port Hedland excluding freight and royalties) includes mining, processing, transport, port charges, and site based general and administration costs and is net of any tantalite by-product credits. It is calculated on an incurred basis (including accruals), and includes inventory movements, and credits for capitalised deferred mine waste development cost, and it excludes depreciation of fixed assets and right of use leases, and amortisation of deferred stripping.

### Capital expenditure estimate

The PFS estimates total capital expenditure of \$1.2B (estimate accuracy of -20/+30%) with the high-level breakdown shown in Table 4 below. Given the forward implementation timeframe, the estimate incorporates a level of contingency consistent for a pre-feasibility level of study which will be further refined in the FS.

Description	Total cost (A\$M)
Process facility	514
Tailings	74
Workshops and utilities	106
Owner's costs	122
Common costs and services <sup>9</sup>	69
Escalation and contingency	308
<b>Total P2000 Project capital cost</b>	<b>1,193</b>

Table 4: Key P2000 PFS capital expenditure

### P2000 returns

The P2000 PFS estimates strong returns with incremental NPV (8% real) of \$2.6B<sup>2</sup>. The P2000 Project incremental NPV<sub>8%</sub> sensitivities of P2000 to the long-term spodumene concentrate price (6% basis) are shown in chart 3 below.

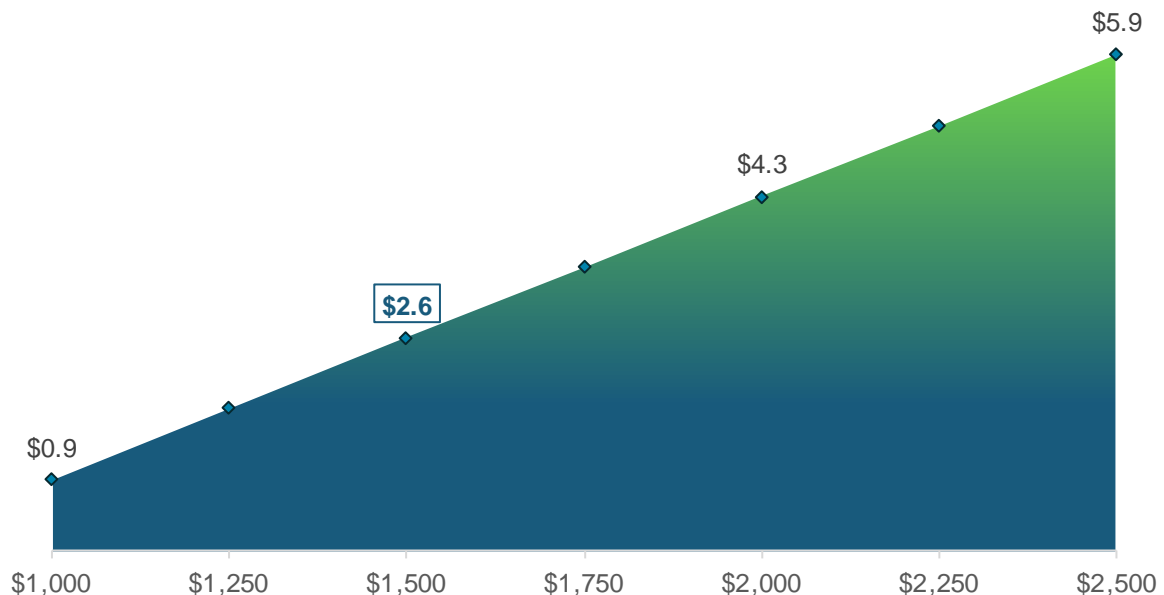


Chart 3: P2000 Expansion Project incremental NPV sensitivity (A\$ billion) to SC6 price (US\$/t, real).

Chart 4 below shows a range of long term spodumene concentrate price forecasts (SC6) including the US\$1,500/t used as the base case for the PFS, consensus forecasts from 11 market experts, including BMI.

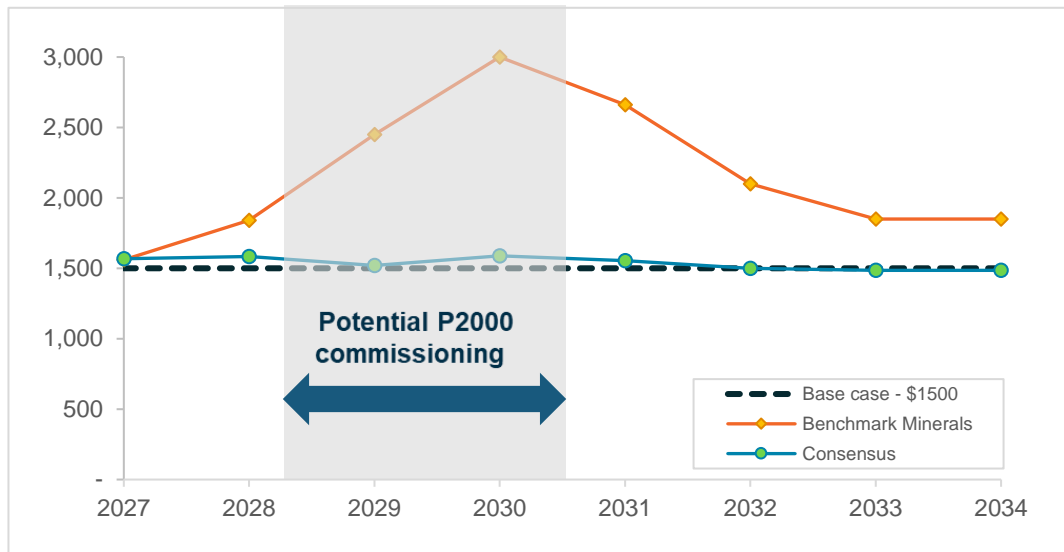


Chart 4: A range of price scenarios presented in the analysis.

The BMI pricing scenario detailed in Chart 4 forecasts pricing to rise significantly from CY28 for a period of 5 years before moderating to a stable long-term average. Under this pricing scenario, P2000 Project incremental NPV would increase to \$5.4B as detailed in Table 5.

**P2000 Expansion Project incremental NPV<sub>8% real</sub> under various SC6 price scenarios**  
(A\$ billion)

\$1000 flat	\$1500 flat	\$2000 flat	BMI Q1-24	\$2500 flat
0.9	2.6	4.3	5.4	5.9

Table 5: P2000 Expansion Project incremental NPV under various SC6 price scenarios.

### Funding

If the Company proceeds with the expansion, the P2000 Project may be funded from the Company's cash balance (\$1.8B as at 31 March 2023), cashflows from existing production, new loan facilities or other sources. Pilbara Minerals will review its funding options for P2000 during completion of the FS and FID.

The Company has commenced initial discussions exploring different funding options including engagement with Australian Federal Government financing agencies. Following this initial engagement these agencies have provided non-binding Letters of Support for up to \$400M for the project.

### Opportunities and risks

Key opportunities and risks identified during the P2000 PFS include (but are not limited to):

- To enable increased ore extraction rates in the mine plan, ore containing host rock (diluted ore) is predicted to increase. Accordingly, the new plant flowsheet will be designed to optimise a higher proportion of diluted ore. Metallurgical test work will be completed in the FS to verify flowsheet performance.
- The 2023 Ore Reserve<sup>1</sup> upgrade results in an increase in the strip ratio largely as a result of hanging wall waste zones. These waste zones and the increased mining rates provide an opportunity to introduce a larger waste fleet to reduce waste movement costs, somewhat offsetting the higher strip ratio.

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- The larger pit shells have the potential to allow for larger cutbacks in the two main pits, which provide an opportunity to improve the efficiency of the ore zone fleets by providing larger working bench areas for mining.
- P2000 will require new borefields which will be reliant on successful water exploration and approvals including additional water abstraction and tenure.
- The expansion would increase the scale of the overall Pilgangoora Operation by ~60%-80%, providing an opportunity for economies of scale across the business on fixed cost.

The risk factors detailed in this announcement are not exhaustive and further risk factors apply to the Company and its business (such as those previously announced to the ASX by the Company).

**Next steps**

Pilbara Minerals considers the PFS findings highly accretive and has therefore commenced a FS of the P2000 Project. It is anticipated that the study will be completed in the December Quarter 2025 and will focus on the following core areas:

- mine planning;
- regulatory approvals;
- water supply;
- metallurgy and processing;
- tailings management;
- supporting infrastructure; and
- financial analysis and funding.

Market outlook, including supply and demand projections, will be a key consideration ahead of FID. It is anticipated that production could commence from 2028, if supported by market dynamics. Alternatively, if market conditions are not compelling, Pilbara Minerals may complete the FS, seek the required approvals and then progress to FID when market conditions are more favourable. It is not expected that any construction associated with P2000 will impact existing operations.

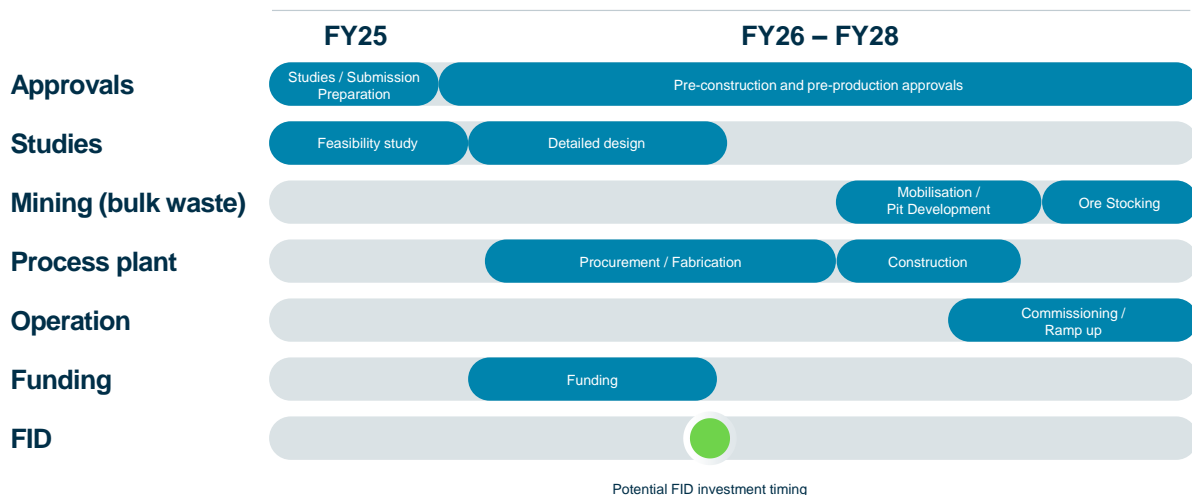


Image 3: Indicative timeline<sup>10</sup>.

### Investor webcast

Pilbara Minerals will host an investor webcast and conference call to discuss the P2000 PFS today at 7.30am (AWST) / 9.30am (AEST):

- Retail shareholders and investors – <https://edge.media-server.com/mmc/p/7s4i4ob3/>
- Analysts, brokers, fund managers and media – <https://register.vevent.com/register/Bld9e0fd70e1ff4cf8982d8db216ab7375>

*Release authorised by Dale Henderson, Pilbara Minerals Limited's Managing Director and CEO.*

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### About Pilbara Minerals

ASX listed Pilbara Minerals is the largest pure play lithium producer globally, 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 spodumene and tantalite concentrates. The significant scale and quality of the operation has attracted a consortium of high quality, global partners including POSCO, Ganfeng, Chengxin, Yahua, Yibin Tianyi and General Lithium.

### Important information

This announcement contains forecasts, estimates, assumptions and other forward-looking statements (including production targets and financial forecasts). Forward-looking statements are not guarantees of future performance, and involve known and unknown risks, uncertainties, sensitivities, contingencies, assumptions and other important factors, many of which are beyond the control of the Company and its directors and management. Although the Company believes that its expectations, estimates and forecast outcomes and other forward-looking statements are based on reasonable assumptions (and that the material assumptions are based on reasonable grounds), it can give no assurance that they will be achieved or be accurate. They may be affected by a variety of variables and changes in underlying assumptions that are subject to known and unknown risk factors associated with the nature of the business, which could cause actual results to differ materially from those expressed herein.

The production targets, financial forecasts and other forward-looking statements in this announcement (such as NPV, IRR, unit costs and capital and operating expenditure) are based on assumptions (such as those detailed in this announcement), budgets and estimates existing at the time of assessment which may change over time, impacting the accuracy of those estimates. These estimates are developed in the context of an uncertain operating environment including in respect of inflationary macroeconomic conditions, incomplete engineering and uncertainties surrounding the risks associated with mining and project development including the construction, commissioning and ramp up of P680 and P1000 which may delay or impact production and have a flow on effect on sales. Various assumptions may prove to be incorrect, and known and unknown risk factors such as those non-exhaustively detailed in this announcement (and in the Company's previous announcements) may also cause the production targets and financial forecasts and other forward-looking statements in this announcement to not be achieved, or to be inaccurate.

In addition, the PFS is by its nature not definitive, the assumptions and inputs into the PFS (and consequently the outputs of the PFS) are subject to change over time and there is further work and

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analysis required before the PFS can be progressed to the proposed FS (such as the further work detailed in this announcement), any of which may also impact on the forward-looking statements in this announcement. The Company's indicative plans, including its mining and infrastructure plans for the Pilgangoora Project, may also change, if deemed appropriate by the Company.

Actual results may therefore vary significantly from the content of this announcement. This announcement should not be relied upon as a predictor of future performance, and past performance is not a guide to future performance. This announcement is not exhaustive of all factors which may impact on the forward-looking statements. Given the various uncertainties involved, investors should not make any investment decisions based solely on the results of the PFS. The Company does not undertake to update any forward-looking statements, except in accordance with applicable securities laws.

Information in this announcement regarding production targets and expansions in nameplate capacity of the Pilgangoora Operation in respect of the P680, P1000 and P2000 projects are underpinned solely by the Company's existing Ore Reserves<sup>1</sup> that have been prepared by a Competent Person (Mr Ross Jaine) in accordance with the JORC Code (2012 Edition) and were released by the Company to ASX on 24 August 2023 in its release entitled "55Mt increase in Ore Reserves to 214Mt". The relevant proportions of proved Ore Reserves<sup>1</sup> and probable Ore Reserves underpinning the production targets are 9% proved Ore Reserves and 91% probable Ore Reserves. The Company confirms it is not aware of any new information or data that materially affects the information included in that 24 August 2023 release and that all material assumptions and technical parameters underpinning the Ore Reserves estimates continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

The Inferred category Mineral Resource estimate has not been included in the Ore Reserves<sup>1</sup> or production targets and have not been included in the PFS or any of its outputs. There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources (or Ore Reserves) in relation to that mineralisation.

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

There is no certainty that the P2000 PFS will be able to be funded when needed (nor any certainty as to the form such funding may take, such as disclosed in this announcement). It is also possible that such funding may only be available on terms that dilute or otherwise affect the value of the Company's shares.

The Company uses certain financial measures to assess how the Pilgangoora Project is projected to perform. These financial measures, such as net present value (NPV) and internal rate of return (IRR) (collectively referred to as **Non-IFRS Financial Measures**) are not recognised under International Financial Reporting Standards (**IFRS**).

The financial forecasts in this announcement are Non-IFRS Financial Measures.

The Company considers these measures provide useful information about the estimated financial outcomes derived from the PFS, however, they should not be considered in isolation or as a substitute for measures of performance or cash flow prepared in accordance with IFRS.

Since the financial forecasts and economic discussion in this announcement are not based on IFRS, they do not have standardised definitions and the way these measures have been derived may not be comparable to similarly titled measures used by other companies. Investors should therefore not place undue reliance on these Non-IFRS Financial Measures.

## Mineral Resources and Ore Reserves

An update to the Pilgangoora Ore Reserves<sup>1</sup> was released on 24 August 2023<sup>1</sup> and an update to the Mineral Resources was released 7 August 2023<sup>11</sup>. Both are estimated as at 30 June 2023. These are summarised in Table 6, below.

The information in Table 6 does not account for any depletion due to mining in the 2024 financial year.

Category	Tonnes	Li <sub>2</sub> O	Ta <sub>2</sub> O <sub>5</sub>	Fe <sub>2</sub> O <sub>3</sub>	Li <sub>2</sub> O	Ta <sub>2</sub> O <sub>5</sub>
	(Mt)	(%)	(ppm)	(%)	(Mt)	(M lb)
<b>Mineral Resources estimate at 30 June 2023</b>						
Measured	22.1	1.34	146	0.44	0.3	7
Indicated	315.2	1.15	106	0.53	3.6	74
Inferred	76.6	1.07	124	0.54	0.8	21
<b>Total</b>	<b>413.8</b>	<b>1.15</b>	<b>112</b>	<b>0.53</b>	<b>4.8</b>	<b>102</b>

Table 6: Pilgangoora Mineral Resources.

Category	Tonnes	Li <sub>2</sub> O	Ta <sub>2</sub> O <sub>5</sub>	Fe <sub>2</sub> O <sub>3</sub>	Li <sub>2</sub> O	Ta <sub>2</sub> O <sub>5</sub>
	(Mt)	(%)	(ppm)	(%)	(Mt)	(M lb)
<b>Ore Reserves estimate at 30 June 2023</b>						
Proved	19.1	1.32	133	0.92	0.3	6
Probable	195.1	1.18	100	1.00	2.3	42
<b>Total</b>	<b>214.2</b>	<b>1.19</b>	<b>103</b>	<b>0.99</b>	<b>2.5</b>	<b>48</b>

Table 7: Pilgangoora Ore Reserves.

Notes:

- Totals may not add up due to rounding.
- All Open-pit Ore Tonnes are defined using the weighted average cost and recovery of the Pilgan and Ngungaju Plants.
- Ore Reserves were estimated using projected concentrate prices of US\$1,450/dmt (CIF price) for 6% spodumene concentrate and US\$36/lb for Ta<sub>2</sub>O<sub>5</sub> in concentrate.
- The Mineral Resource estimate is not additional to the Ore Reserve estimate. The Ore Reserve is the economically mineable part of the Measured and Indicated Resource. It includes allowance for ore losses and dilution during mining extraction discussed further below.
- Pilbara Minerals ensures that the Mineral Resource and Ore Reserve estimates quoted are subject to governance arrangements and internal controls at both a site level and at the corporate level. Mineral Resources and Ore Reserves are reported in compliance with the JORC Code 2012, using industry standard techniques and internal guidelines for the estimation and reporting of Ore Reserves and Mineral Resources. The Mineral Resources and Ore Reserve statements included in this document were reviewed by the Competent Persons prior to inclusion.
- Stockpiles at the Ngungaju Plant have had no Ta<sub>2</sub>O<sub>5</sub> grade applied.

7. The Probable Ore Reserves include 5.0Mt of stockpiles. These comprise 1.7Mt at 1.27%  $\text{Li}_2\text{O}$  and 0.72%  $\text{Fe}_2\text{O}_3$  at the Ngungaju Plant and 3.3Mt at 1.26%  $\text{Li}_2\text{O}$ , 106ppm  $\text{Ta}_2\text{O}_5$  and 0.80%  $\text{Fe}_2\text{O}_3$  at the Pilgan Plant.
8. For further information on the Pilgangoora Mineral Resource estimate and the Pilgangoora Ore Reserve estimate, refer to the ASX announcements on 7 August 2023 “Substantial 109Mt Mineral Resource increase to 414Mt - further extends Pilgangoora’s position as a world class lithium project” and ASX release dated 24 August 2023 “55Mt increase in Ore Reserves to 214Mt”. Pilbara Minerals confirms that it is not aware of any new information or data that materially affects the information included in those announcements and that all material assumptions and technical parameters underpinning the Mineral Resource and Ore Reserve estimates continue to apply and have not materially changed.

#### **Competent person’s statement**

The information in this report and the ASX release dated 7 August 2023 that relates to Mineral Resources is based on and fairly represents information compiled by Mr Lauritz Barnes (Consultant with Trepanier Pty Ltd) and Mr John Holmes (Head of Geology and Exploration at Pilbara Minerals Limited). Mr Holmes is a shareholder of Pilbara Minerals. Mr Barnes is a member of both the Australasian Institute of Geoscientists and the Australasian Institute of Mining and Metallurgy, Mr Holmes is a member of the Australasian Institute of Geoscientists and each 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 Barnes and Mr Holmes consent to the inclusion in this report of the matters based on their information in the form and context in which they appear.

The information in this report and the ASX release dated 24 August 2023 that relates to Ore Reserves is based upon information and supporting documentation prepared by and mine planning work supervised by Mr Ross Jaine (Manager Mine Planning of Pilbara Minerals Limited). Mr Jaine is a member of the Australasian Institute of Mining and Metallurgy and has sufficient experience relevant to the style of mineralization and type of deposit under consideration to qualify as a Competent Person 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 Jaine consents to the inclusion in this report of the matters based on their information in the form and context in which they appear.

<sup>1</sup> Refer to ASX release “55Mt increase in Ore Reserves to 214Mt” dated 24 August 2023 for further details and supporting information.

<sup>2</sup> The P2000 Project Expansion NPV and IRR specified are incremental to the Group’s latest mine plan (assuming current expansion projects are complete), excluding P2000, with the key parameters summarised in Table 2. These NPV and IRR are calculated using the pricing and exchange rate assumptions outlined in Table 3 of this Announcement.

<sup>3</sup> Unit operating cost (FOB Port Hedland excluding freight and royalties) includes mining, processing, transport, port charges, and site based general and administration costs and is net of any tantalite by-product credits. It is calculated on an incurred basis (including accruals), and includes inventory movements, and credits for capitalised deferred mine waste development cost, and it excludes depreciation of fixed assets and right of use leases, and amortisation of deferred stripping.

<sup>4</sup> Key assumptions used to estimate PFS outcomes included (but were not limited to):

- An average throughput of 5.0Mtpa of ore processed for the new plant.
- Assumed sales price of US\$1,500/t CIF for spodumene concentrate (SC6.0%), a realised price of US\$44.0/lb of contained Ta<sub>2</sub>O<sub>5</sub> in concentrate, and an exchange rate of 0.70 AUD/USD.
- Life of mine target average Li<sub>2</sub>O recovery for Pilgan and Ngungaju remains consistent with the Ore Reserve, an estimated 67.5% recovery has been assigned to the new proposed processing facility.
- Mining costs derived from current mining costs and PFS level assessment of waste placement and bulk waste fleet cost efficiencies.
- Processing costs consistent with forward projections of current assets at P1000 and incorporation of the additional facility.
- Total selling costs based on current costs and forward projections at increased P2000 scale.
- No allowance considered necessary for deleterious elements.

<sup>5</sup> Benchmark Mineral Intelligence - Q1 CY24 Lithium Forecast

<sup>6</sup> Future production profile is subject to successful construction and commissioning of the P1000 Project and the P2000 expansion and is influenced by a range of factors that may change over time. Production capacity in the chart over the 10 year and LOM production profile from 2028 is underpinned by the Company’s existing Ore Reserves that have been prepared by a Competent Person (Mr Ross Jaime) in accordance with the JORC Code (2012 Edition) and reported and released by the Company to the ASX on 24 August 2023 in its release “55Mt increase in Ore Reserves to 214Mt”. The relative proportions of Proven Ore Reserves and Probable Ore Reserves are 9% Proven Ore Reserves and 91% Probable Ore Reserves. The Company confirms it is not aware of any new information or data that materially affects the information included in the reported Ore Reserves and that all material assumptions and technical parameters underpinning the Ore Reserves estimates continue to apply and have not materially changed – refer to the ‘Important Information’ notice in this announcement. The Company confirms that the form and context in which the Competent Person’s findings are presented have not been materially modified from the original market announcement.

<sup>7</sup> The PFS accounts for mine depletion since the 30 June 2023 Ore Reserve estimate. Refer to ASX release “55Mt increase in Ore Reserves to 214Mt” dated 24 August 2023 for further details.

<sup>8</sup> Refer to ASX release “Pilbara Minerals power strategy to reduce emissions intensity and costs” dated 21 December 2023 for further details and supporting information.

<sup>9</sup> Consisting of fuel, flights, accommodation and other shared services cost.

<sup>10</sup> The indicative timeline is subject to change, such as due to potential delays in one or more milestones, other intervening events (such as associated with risk factors and the potential for material assumptions to be incorrect), and the Pilbara Minerals Board’s discretion as to whether, when and on what terms to approve the various actions in the timetable.

<sup>11</sup> Refer to ASX release “Substantial 109Mt Mineral Resources increase to 414Mt” dated 7 August 2023 for further details and supporting information.