

## PILBARA MINERALS LTD (PLS)

### Stage 2 expansion PFS to 5Mpta

Pilbara Minerals Ltd (PLS) has released the PFS for the Stage 2 expansion to 5Mpta (~100ktpa LCE). The production outcomes are broadly as expected, although capex was slightly more than we had modelled (A\$207m versus A\$175m modelled).

We have made model changes to bring our assumptions closer to the expansion PFS, but we remain higher on costs than the study estimates purely for a more conservative assumption given traditional commissioning risks. First production for Stage 2 is expected in December 2019, with FID expected in December this year.

We estimate FY21 EBITDA of \$383m. The Company estimate for FY21 is \$477m, with the difference being our cost assumptions and tantalum sales (volume and price) assumptions (we have similar spodumene price assumptions). At spot prices, we estimate A\$765m FY21 EBITDA.

### Financing

As a reminder, Stage 2 offtake is 300ktpa (versus Stage 2 production of ~425-500ktpa). The binding offtake is from Ganfeng and Great Wall for 75ktpa each (combined 150ktpa) and an additional 75ktpa each (combined 150ktpa) subject the partners providing US\$100m of cash pre-payment or debt facilities. The consequence is ~US\$55m financing shortfall and ~125-200ktpa of uncontracted Stage 2 production.

We assume that PLS will be peak net debt Stage 1 of ~A\$100m at September 2018 and generate >\$200m of EBITDA in FY19. Consequently it seems very reasonable that the US\$55m shortfall for Stage 2 could be financed with additional debt / pre-payment, particularly given the uncontracted volumes available. We assume no new equity in our model, but even if we were to assume new equity, the dilution is modest (~5-10%).

### Stage 1 "mid year" and positive cash flow in Dec Qtr

PLS says that Stage 1 is on track for mid-year production and positive cash flow expected Q4. Remember the flotation circuit is due to be commissioned first, with the DMS to be complete in Q3 and hence the capex payments will still occurring in Q3 even after first product sales. We have slightly reduced our FY18 production estimates but still expect a small shipment in July 2018.

### Maintain Buy with \$1.35 price target

We have a twelve month price target to \$1.35 (barely changed from \$1.31cps), which implies 6.2x FY21 EBITDA (4.5x spot). At the current share price, we estimate PLS trades on 7.5x FY19 EV/EBITDA (peak debt) and FY21 of 4.1x. At spot prices, the multiple is 6.5x and 2.0x respectively.

Our base valuation is 92cps, and our spot valuation is \$2.12. We assume long run spodumene prices of US\$600/t, but this may need to be revised upwards if long term LC demand assumption continue to be revised upwards (ie if long term demand forecasts for LCE begin to substantially exceed 1Mtpa). Of course, the key risk is if lower than expected selling prices eventuate because global supply accelerates but demand, for some reason, was to disappoint.

Share Price	\$0.845
Valuation	\$0.92
Price Target (12 month)	\$1.35

#### Brief Business Description:

Very large spodumene development in WA

#### Hartleys Brief Investment Conclusion

Very large deposit that is highly economic and Company is looking to expand downstream.

#### Chairman & MD

Tony Kiernan (Non-exec Chair.)

Ken Brinsden (MD)

#### Major Shareholders

Mineral Resources (7.8%)

Ganfeng (4.6%)

Great Wall Motors (3.4%)

#### Company Address

Level 2, 88 Colin St,  
West Perth, WA, 6005

#### Issued Capital

1645.7m

- fully diluted 1718.0m

Market Cap A\$1390.6m

- fully diluted A\$1451.7m

Cash (31 Dec 17a) A\$205.2m

Debt (31 Dec 17a) A\$133.3m

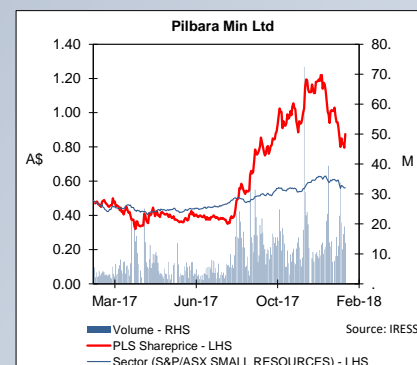
EV A\$1318.7m

EV/Resource Spod. A\$40.5/t

EV/Reserve Spod. A\$77.6/t

Prelim. (A\$m)	FY19e	FY20e	FY21e
Prod (Li Spod. eq)	0.287	0.573	0.888
Op Cash Flw	153.9	232.8	274.6
Norm NPAT	145.8	208.3	235.0
CF/Share (cps)	8.9	12.6	14.1
EPS (cps)	11.7	16.5	18.2
P/E	9.5	6.7	6.0

	Mt	LizO	Spod.
Resources (LizO)	156.3	1.25%	32.6
Reserve (LizO)	80.3	1.27%	17.0



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Hartleys has assisted in the completion of part of a capital raising in the past 12 months for Pilbara Mines Limited.

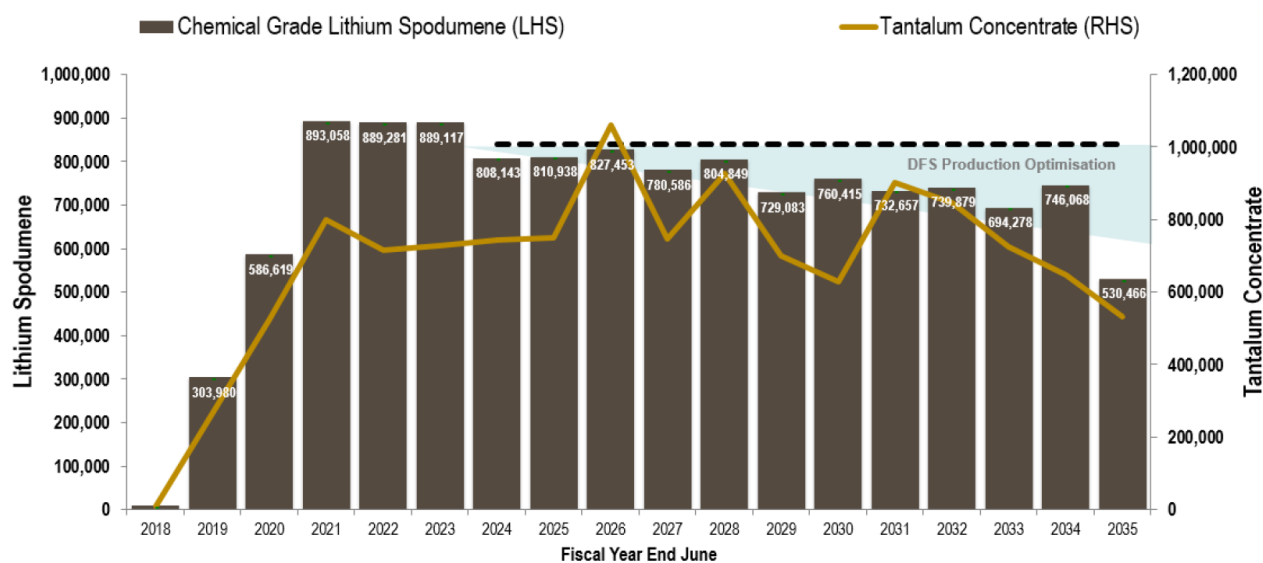


Fig. 1: Hartleys Earnings Changes

	FY18e			FY19e			FY20e			FY21e		
	Old	New	% diff	Old	New	% diff	Old	New	% diff	Old	New	% diff
Production	0.043	0.011	-73.9%	0.349	0.287	-17.8%	0.647	0.573	-11.6%	0.805	0.888	10.2%
Selling Price	949.7			876.8	861.9	-1.7%	747.2	734.6	-1.7%	600.0	600.1	0.0%
<b>Net Revenue</b>	<b>52.5</b>	<b>13.7</b>	<b>-73.9%</b>	<b>401.1</b>	<b>324.1</b>	<b>-19.2%</b>	<b>634.1</b>	<b>551.4</b>	<b>-13.0%</b>	<b>625.6</b>	<b>689.8</b>	<b>10.3%</b>
<b>Total Costs</b>	<b>-22.3</b>	<b>-9.9</b>	<b>-55.5%</b>	<b>-142.9</b>	<b>-116.6</b>	<b>-18.4%</b>	<b>-261.5</b>	<b>-210.2</b>	<b>-19.6%</b>	<b>-309.7</b>	<b>-306.7</b>	<b>-1.0%</b>
- /t USD	-404.1			-312.4	-310.1	-0.7%	-308.1	-280.1	-9.1%	-297.1	-266.8	-10.2%
- /t ore USD				-54.5	-56.5	3.6%	-49.9	-51.3	2.9%	-47.8	-47.4	-1.0%
- /t ore USD DFS				-49.3	-49.3		-49.3	-49.3			-42.4	
EBITDA	30.2	3.7	-87.6%	258.2	207.5	-19.6%	372.6	341.1	-8.4%	315.9	383.1	21.3%
- margin	57%	27%		64%	64%	-0.5%	59%	62%	5.3%	50%	56%	10.0%
Depreciation/Amort	-10.2	-10.2	0.0%	-22.6	-23.8	5.4%	-29.9	-33.3	11.5%	-32.4	-36.9	13.7%
<b>EBIT</b>	<b>20.0</b>	<b>-6.4</b>	<b>-132.2%</b>	<b>235.6</b>	<b>183.6</b>	<b>-22.0%</b>	<b>342.7</b>	<b>307.8</b>	<b>-10.2%</b>	<b>283.5</b>	<b>346.3</b>	<b>22.2%</b>
Net Interest	-7.5	-7.5	0.7%	-16.5	-16.7	1.4%	-18.0	-18.5	2.7%	-19.4	-19.9	2.6%
<b>Pre-Tax Profit</b>	<b>12.5</b>	<b>-14.0</b>	<b>-211.7%</b>	<b>219.1</b>	<b>166.9</b>	<b>-23.8%</b>	<b>324.7</b>	<b>289.3</b>	<b>-10.9%</b>	<b>264.1</b>	<b>326.4</b>	<b>23.6%</b>
Tax Expense	0.0	0.0		-39.2	-21.1		-90.9	-81.0		-73.9	-91.4	
<b>Normalised NPAT</b>	<b>12.5</b>	<b>-14.0</b>	<b>-211.7%</b>	<b>179.9</b>	<b>145.8</b>	<b>-18.9%</b>	<b>233.8</b>	<b>208.3</b>	<b>-10.9%</b>	<b>190.1</b>	<b>235.0</b>	<b>23.6%</b>
Abnormal Items	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Reported Profit	12.5	-14.0	-211.7%	179.9	145.8	-18.9%	233.8	208.3	-10.9%	190.1	235.0	23.6%
Minority	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
<b>Profit Attrib</b>	<b>12.5</b>	<b>-14.0</b>	<b>-211.7%</b>	<b>179.9</b>	<b>145.8</b>	<b>-18.9%</b>	<b>233.8</b>	<b>208.3</b>	<b>-10.9%</b>	<b>190.1</b>	<b>235.0</b>	<b>23.6%</b>
<b>Capex</b>	<b>-228.8</b>	<b>-228.8</b>	<b>0.0%</b>	<b>-131.8</b>	<b>-156.8</b>	<b>19.0%</b>	<b>-57.8</b>	<b>-82.8</b>	<b>43.3%</b>	<b>-8.8</b>	<b>-8.8</b>	<b>0.0%</b>
Net Debt	36.2	58.8	62.6%	-18.5	61.7	-434.1%	-220.0	-88.3	-59.8%	-444.7	-354.1	-20.4%

Source: Hartleys Estimates, IRESS

Fig. 2: Production forecasts



Source: PLS

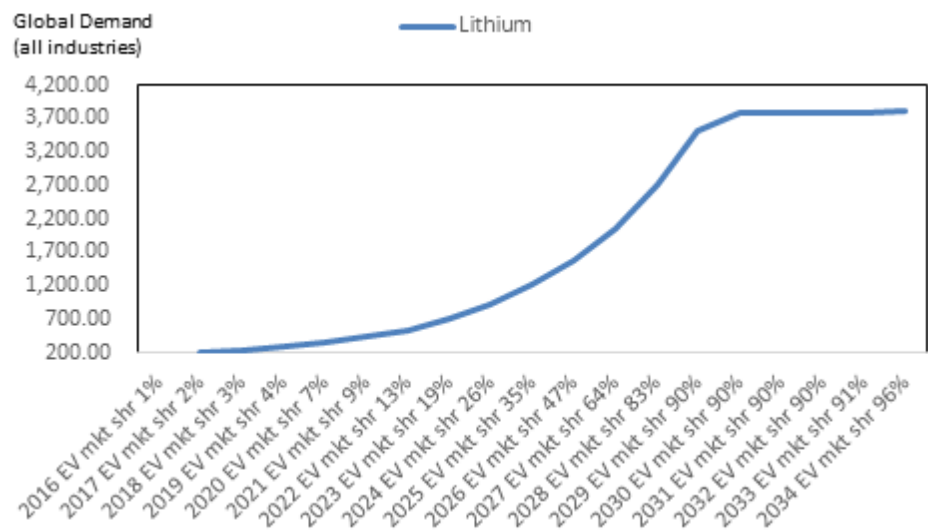
Fig. 3: Cash Cost Assumptions

Table 5 – Stage 2 Cash Operating Cost Estimate on a cost per tonne of concentrate basis

Operating Cost Area	Operating Costs (LOM Average)	
	A\$/t	US\$/t
Mining	135	101
Processing	137	103
Transport and Loading	34	26
G&A and selling costs (including corporate allocation)	29	21
Ocean Freight	26	20
<b>SUB-TOTAL CASH OPERATING COSTS CIF (before tantalite credit)</b>	<b>361</b>	<b>271</b>
less tantalite credit	116	87
<b>TOTAL CASH OPERATING COSTS CIF (after tantalite credit)</b>	<b>245</b>	<b>184</b>
add Royalties (government and private royalty, Native Title)	55	41
<b>TOTAL CASH OPERATING COSTS CIF (adjusted for royalties)</b>	<b>300</b>	<b>225</b>

Source: PLS

**Fig. 4: Lithium demand versus EV market share scenarios**



Source: Hartleys Research

**Fig. 5: Key Assumptions and Risks for valuation**

Assumption	Risk of not realising assumption	Downside risk to valuation if assumption is incorrect	Comment
~25 year mine life	Low	Moderate	This appears reasonable conservative based on current resources / reserves and assuming production of 5Mtpa (mine life longer if Stage 2 is not incorporated)
Spodumene selling prices	Moderate	Upside / Downside	We assume strong near term spodumene prices, falling to US\$600/t long term
5mtpa processing	Moderate	Moderate	We assume Stage 2 expansion.
No more equity financing	Low	Meaningful	We assume no more dilution in our valuation.
Tantalite recoveries far lower than DFS	Low	Upside	We assume low recoveries in order to be conservative
50% interest in a spodumene conversion facility	Moderate	Meaningful	We assume PLS is able to participate as an equity investor in a conversion facility.
Exploration value	Moderate	Low	We assume modest exploration value.

*Conclusion* Spodumene selling prices are the most significant risk. Commissioning and financing are also risks to our valuation.

Source: Hartleys

## PRICE TARGET

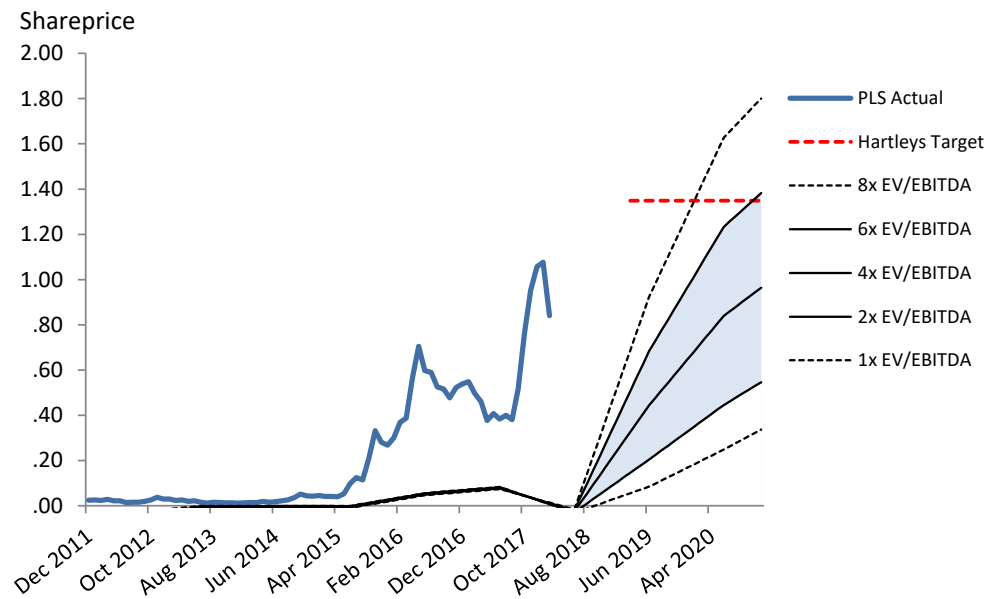
We have increased our target to \$1.35 (from \$1.31).

Price Target Methodology	Weighting	Spot	12 mth out
NPV base case	58%	\$0.92	\$0.98
NPV at spot commodity and fx prices	30%	\$2.12	\$2.33
NPV spodumene US\$450/t	10%	\$0.45	\$0.50
NPV base case at discount rate of 6.0%	2%	\$1.50	\$1.54
<b>Risk weighted composite</b>		<b>\$1.24</b>	
<b>12 Months Price Target</b>		<b>\$1.35</b>	
Shareprice - Last		\$0.845	
<b>12 mth total return (% to 12mth target + dividend)</b>		<b>60%</b>	

Source: Hartleys Estimate

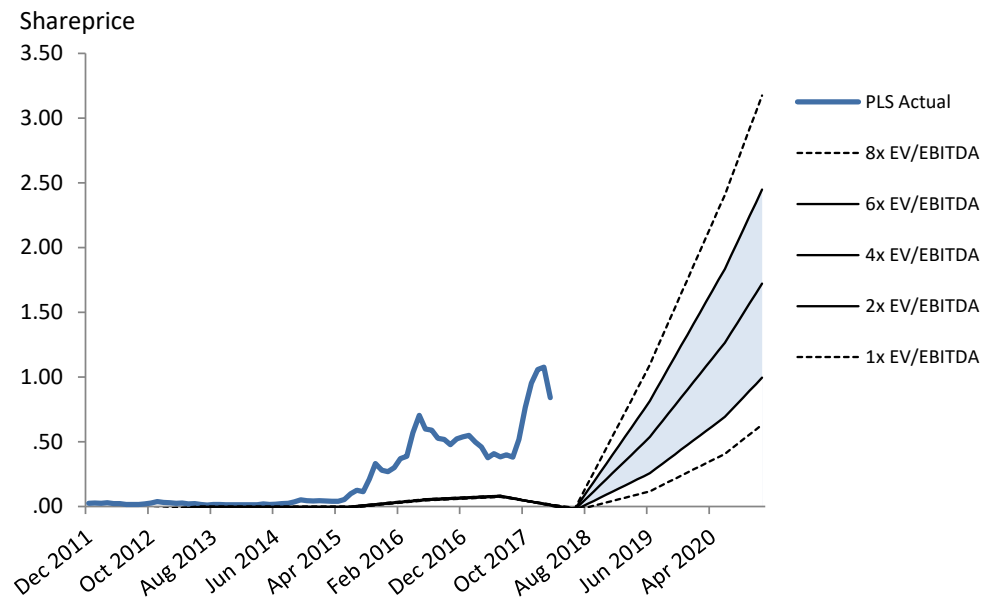
## EV/EBITDA BANDS

**Fig. 6:** Using *Hartleys base case commodity forecasts*



Source: Hartleys Estimates, IRESS

**Fig. 7:** Using *spot commodity prices*



Source: Hartleys Estimates

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## Hartleys Recommendation Categories

Buy	Share price appreciation anticipated.
Accumulate	Share price appreciation anticipated but the risk/reward is not as attractive as a "Buy". Alternatively, for the share price to rise it may be contingent on the outcome of an uncertain or distant event. Analyst will often indicate a price level at which it may become a "Buy".
Neutral	Take no action. Upside & downside risk/reward is evenly balanced.
Reduce / Take profits	It is anticipated to be unlikely that there will be gains over the investment time horizon but there is a possibility of some price weakness over that period.
Sell	Significant price depreciation anticipated.
No Rating	No recommendation.
Speculative Buy	Share price could be volatile. While it is anticipated that, on a risk/reward basis, an investment is attractive, there is at least one identifiable risk that has a meaningful possibility of occurring, which, if it did occur, could lead to significant share price reduction. Consequently, the investment is considered high risk.

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Hartleys has completed capital raisings in the past 12 months for Pilbara Minerals Limited ("Pilbara") for which it has earned fees.

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