FOSTER STOCKBROKING

EQUITY RESEARCH

Materials

28th September 2016

Pilbara Minerals Ltd (PLS.ASX)

No surprises as DFS in-line, while expansion offers upside

Event:

- **Pilgangoora 2Mtpa DFS and 4Mtpa expansion PFS.**

Investment Highlights:

- **PLS released its DFS on a 2Mtpa Pilgangoora operation, with NPV_{10} of $709M in-line with our estimate of $722M**. Key differences were the DFS assumed both a higher spodumene price and cash cost.
- **Capex allows for expansion**. Pre-production capex of $214M was higher than PFS and our estimate of $184M, but mostly due to including footprint capability for a 4Mtpa expansion.
- **Advanced offtake negotiations.** In addition to General Lithium, PLS said it was in advanced negotiations with another Chinese converter, which may include a prepayment, as well as with two agents for tantalum concentrate.
- **PFS on the 4Mtpa expansion resulted an NPV_{10} of $1,165M, or delta of $456M over the 2Mtpa base case.** This exceed our expansion assumption which was 3Mtpa with incremental unrisked NPV_{10} of $203M**.** The expansion case highlights the material option PLS can exploit should lithium demand warrant it.
- **We have increased our long-term spodumene 6% Li_2O forecast to US$525/t from $489/t,** resulting in the 2Mtpa base case generating $100M p.a. in net free cashflow (after tax and sustaining capex). Our revised NPV_{10} for the base case has increased $745M - mostly due to increase in the Li_2O and tantalum prices, partially offset by higher cash costs.
- **First-right-of-refusal (FROR) dispute takes shine off DFS**. Unfortunately for PLS the continuing FROR dispute with Mineral Resources Ltd has introduced uncertainty that is overhanging the stock. We expect this to be eventually resolved, and currently do not factor any material negative impact for PLS.

Earnings and Valuation:

- **Our valuation of PLS has decreased slightly to $0.77/share risked and $0.99/share unrisked (previous $0.78 and $1.03).** While our valuation of Pilgangoora (including expansion and exploration) has increased, it has been offset by the dilutive increase in shares and options on issue, plus those we have assumed to be issued in future as part of financing.
- **We estimate PLS requires ca. $233M of funding for startup capex, working capital, corporate, and studies**. Deducting $100M of cash and the conditional first tranche General Lithium $18M placement implies a shortfall of $115M. We assume this to be funded by a combination of equity (including 2nd tranche of General Lithium), debt, and prepayment which are accounted for in valuation.
- **We forecast FY19e NPAT of $96M, the first full year of production**. Applying the sector average resource multiple of 12x implies valuation of $0.97/share, in-line with our unrisked valuation, highlighting the upside once PLS is a producer.

Recommendation:

- **We maintain our Buy recommendation on PLS with price target of $0.77/share (**prior $0.78/share) based on our risked valuation. Catalysts include securing further offtake; financing progress; resolution of FROR; positive JV lithium conversion plant study results; higher lithium prices.

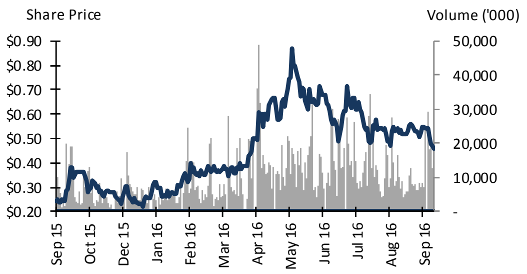
Recommendation	Buy
Previous	Buy
Risk	High
Price Target	**$0.77**
Previous	$0.78
Share Price (A$)	**$ 0.45**
ASX Code	PLS
52 week low - high (A$)	0.22-0.87
Valuation (A$/share) - risked	**$0.77**
Methodology	DCF
Capital structure	
Shares on Issue (M)	1,150
Market Cap (A$M)	**518**
Net Debt/(Cash) (A$M)	-100
EV (A$M)	**418**
Options (M)	114
Fully diluted EV ($M)	**469**
12mth Ave Daily Volume ('000)	9,906

Y/e Jun (A$M)	2016a	2017e	2018e	2019e
Sales	0.0	0.0	155.5	300.3
Adj EBITDA	-41.8	-8.7	81.6	157.2
Adj NPAT underlying	**-44.3**	**-6.8**	**46.9**	**95.6**
Adj EPS diluted $	**-0.05**	**-0.01**	**0.04**	**0.07**
PER x diluted	**nm**	**nm**	**12.5**	**6.1**
EV/EBITDA x	nm	nm	5.7	3.0

*Adj = underlying FSB estimate

Board	
Tony Kiernan	Non-Executive Chairman
Ken Brinsden	Managing Director
Neil Biddle	Non-Executive Director
Robert G Adamson	Non-Executive Director
Steve Scudamore	Non-Executive Director
John Young	Executive Director

Share Price Graph



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Foster Stockbroking acted as Sole Lead Manager to the $12M placement of 52M shares at $0.23 in November 2015. Foster Stockbroking received fees for this service.

Pilbara Minerals (PLS)

Full Year Ended 30 June

Profit and Loss A$M	2016a	2017e	2018e	2019e
Sales	0.0	0.0	155.5	300.3
Operating Costs	41.8	8.7	73.8	143.1
Underlying EBITDA	**-41.8**	**-8.7**	**81.6**	**157.2**
D&A	0.1	0.1	14.3	18.7
Underlying EBIT	**-41.9**	**-8.8**	**67.3**	**138.5**
Net Interest exp / (income)	2.2	-2.0	0.3	2.0
Profit before tax	**-44.1**	**-6.8**	**67.0**	**136.5**
Tax exp / (benefit)	0.2	0.0	20.1	41.0
Underlying NPAT	**-44.3**	**-6.8**	**46.9**	**95.6**
Non-recurring exp. (benefit)	11.3	0.0	0.0	0.0
Reported NPAT	**-55.6**	**-6.8**	**46.9**	**95.6**
Underlying EPS diluted ($)	**-0.05**	**-0.01**	**0.04**	**0.07**

Cashflow A$M	2016a	2017e	2018e	2019e
Underlying EBITDA	-41.8	-8.7	81.6	157.2
Change in WC	1.6	-0.7	-14.1	0.5
Tax paid	-0.2	0.0	-20.1	-41.0
Other	-0.8	25.0	-20.0	0.0
Net interest	0.1	2.0	-0.3	-2.0
Share based payments	26.6	2.0	0.0	0.0
Operating Cashflow	**-14.6**	**19.6**	**27.1**	**114.7**
Purchase of PP&E	-4.6	-107.0	-111.4	-4.3
Investments	-2.0	0.0	0.0	0.0
Other	-1.0	0.0	0.0	0.0
Investing Cashflow	**-7.6**	**-107.0**	**-111.4**	**-4.3**
Equity issue	122.7	69.5	0.0	0.0
Debt proceeds	4.0	38.3	0.0	0.0
Debt repayments	-0.7	0.0	0.0	0.0
Other	-7.0	0.0	0.0	0.0
Financing Cashflow	**119.0**	**107.8**	**0.0**	**0.0**
Net Cashflow	**96.8**	**20.3**	**-84.3**	**110.4**

Balance Sheet A$M	2016a	2017e	2018e	2019e
Cash	100.0	120.3	36.0	146.5
Receivables	1.5	0.0	25.6	24.7
Inventories	0.0	0.0	0.0	0.0
PPE	0.8	107.8	204.8	190.4
Capitalised exploration	0.3	0.3	0.3	0.3
Intangibles	0.0	0.0	0.0	0.0
Total Assets	**102.7**	**228.4**	**266.7**	**361.9**
Accounts payable	3.0	0.7	12.1	11.8
Provisions	1.0	0.7	0.7	0.7
Debt	0.3	38.6	38.6	38.6
Other	0.0	27.2	27.2	7.2
Total Liabilities	**4.3**	**67.3**	**58.7**	**58.3**
Reserves and capital	168.2	237.7	237.7	237.7
Retained earnings	-69.8	-76.6	-29.7	65.9
Minorities	0.0	0.0	0.0	0.0
Total Equity	**98.4**	**161.1**	**208.0**	**303.6**

Source: Company; Foster Stockbroking estimates

Financial Metrics	2016a	2017e	2018e	2019e
Sales growth %	nm	nm	nm	93%
EPS growth %	nm	nm	nm	104%
EBITDA margin	nm	nm	53%	52%
EBIT margin	nm	nm	43%	46%
Gearing (ND/ND+E)	nm	-103%	1%	-55%
Interest Cover (EBIT/net int)	nm	nm	225x	70x
Average ROE %	nm	nm	25%	37%
Average ROA %	nm	nm	27%	44%
Wtd ave shares (M)	823	1,186	1,186	1,186
Wtd ave share diluted (M)	920	1,300	1,300	1,300

Sales and earnings multiples	2016a	2017e	2018e	2019e
P/E x	**nm**	**nm**	**12.5**	**6.1**
EV/EBITDA x	nm	nm	5.7	3.0
EV/EBIT x	nm	nm	7.0	3.4
Dividend yield %	0	0	0	0

Company Valuation	A$M	A$/sh	A$M	A$/sh
DCF, WACC 10% nominal				
	Unrisked	**Unrisked**	**Risked**	**Risked**
Segment	**A$M**	**A$/sh**	**A$M**	**A$/sh**
Pilgangoora 2Mtpa - base case	745	$0.52	707	$0.50
Pilgangoora 4Mtpa - incremental value	407	$0.29	142	$0.10
Pilgangoora - Expl/Resources ex-Reserves	57	$0.04	38	$0.03
Unallocated corporate	-17	-$0.01	-17	-$0.01
Cash - 1st tranche conditional GL* raising	18	$0.01	16	$0.01
Cash - other equity raise (incl 2nd tranche GL)	57	$0.04	54	$0.04
Cash - exercised options	43	$0.03	40	$0.03
Net cash (debt) June 2016	100	$0.07	100	$0.07
Company Valuation	**1,408**	**$0.99**	**1,081**	**$0.77**
Ordinary shares now M	1,150		1,150	
Shares - exercise of options M	114		108	
Shares - conditional GL 1st tranche raise M	36		32	
Shares - other equity raise (incl 2nd tranche GL) M	128		121	
Pro-forma diluted shares M	**1,428**		**1,412**	

** GL = General Lithium Corporation*

Commodity Assumptions	2016a	2017e	2018e	2019e
Prices				
Spodumene 6% Li_2O (US$/t), CFR	-	558	556	542
Tantalite (US$/lb)	-	67	73	78
A$ (US$)	0.73	0.73	0.73	0.74
Production				
Spodumene kt	0.0	0.0	183.4	364.3
LCE kt	0.0	0.0	27.2	54.0
Tantalite t	0.0	0.0	72.6	145.2
All-in-sustaining costs US$/t, CFR	nm	nm	238	229

Capital structure	M
Ordinary shares	1,150.4
Options (ex price $0.03 to $0.65, expiries Dec 2016 to Sep 2019)	114.1
Fully diluted shares	**1,264.5**

PILGANGOORA DFS YIELDS NO SURPRISES

- Pilbara Minerals (PLS) released its DFS on the 2Mtpa Pilgangoora litihium-tantalum project, which offered no surprises and was in-line with our estimates. The DFS revealed an NPV_{10} of $709M for the project, based on a 36 year mine life underpinned by the recently expanded reserves. Our NPV estimate was $722M based on a 30 year life (comprising $492M for first 15 years and $230M for years 16-30).
- There were some differences across some various parameters, most of them slight, and these tended to balance each other out. The laregst differences were higher spodumene prices and higher cash costs vs our estimates.

Figure 1: Comparison of Pilgangoora 2Mtpa DFS Parameters vs FSBe and PFS

Parameter	DFS	FSBe	PFS	Comment
NPV_{10} $M	**709**	**722**	**407**	**DFS based on recent reserves upgrade**
Life of mine years	36	30	15	
Mine rate Mtpa	2	2	2	
Ave. head grade Li_2O	1.26%	1.31%	1.31%	
Li_2O recovery	77.5%	76.7%	76.7%	Improved recoveries
Ta_2O_5 recovery	55%	47%	47%	
Ave. spodumene prod'n ktpa	314	307	330	Lower grade in latter years vs PFS
Ave. spodumene prod'n LCEpa	44	46	48	
Spodumene 6% price LOM, CFR, real, US$/t	537	490	456	DFS uses recent consensus.
Tantalite price, US$/t, FOB, real	73	63	60	
Initial capex $M	214	184	184	DFS incl. footprint for 4Mtpa expansion
Cash costs LOM, CFR, real	258	207	205	FSBe was FOB, excluded native title costs, & Lower strip ratio.
Strip ratio LOM	4.07	3.47	3.47	
A$:US$	0.75	0.73	0.75	
EBITDA average, real, $M p.a.	121	114	103	
IRR	38.1%	49.9%	44.4%	
Payback, years	2.7	2.1	2.2	

Source: Company; Foster Stockbroking estimates.

RESERVES OF 70Mt UNDERPIN 36 YEAR MINE LIFE

- The DFS is supported by 69.8Mt of JORC reserves, which allows for a mine rate of 2Mtpa. The reserves represent a 136% increase on that of the PFS.

Figure 2: Pilgangoora JORC Reserves

Category	Ore (Mt)	Li2O %	Li_2O kt	$Ta20_5$	Ta_2O_5 Mlbs
Proven	17.5	1.31	230	143.00	5.55
Probable	52.3	1.25	653	128	14.8
Total	**69.8**	**1.26**	**883**	**132**	20.3

Source: Company

MINING – STILL CONVENTIONAL OPEN PIT

- Mining is by conventional open pit, with pits optimised for a spodumene price of US$460/t, up on the US$430/t used in the PFS – but still well below both current spot and long-term consensus prices. Life-of-mine strip ratio is 4.07, slightly up on the 3.47 determined in the PFS.

METALLURGY – IMPROVED RECOVERIES FOR BOTH LITHIUM & TANTALUM

- A major area of improvement in the DFS was in recovery of both lithium and tantalum, following the series of met testwork undertaken post the PFS. Recovery of lithia (Li_2O) increased to 77.5% from 76.7% in the PFS, using a combination of flotation and heavy media separation. Improved recovery of tantalite (Ta_2O_5) was more marked - increasing to 55% from 47%.
- Products produced are battery (chemical) grade spodumene concentrate grading 6% Li_2O with medium iron, and 30% tantalite concentrate. Further met work is being undertaken to improve flotation recoveries of lithia, including optimisation of reagents.

WATER – NEGOTIATING ADEQUATE SUPPLY SOURCE

- The DFS estimated water demand to be 58L/sec, of which on-tenement supply is estimated to be 27 to 30L/sec. PLS is negotiating an agreement for access from an existing licensed borefield, as well as accessing high flow bore near the project area.

NPV/CAPEX ATTRACTIVE AT 3.3x – INCLUDES CAPACITY TO SCALE

- Pre-production capex of the project was $214M, up 16% on the PFS and our estimate of $184M. However some of the increase was due to accommodate any future expansion by including larger scale equipment – notably the primary crushing circuit and crushed ore stockpile. This is still attractive, as it results in an NPV/capex ratio of 3.3x
- While not disclosed, we estimate that sustaining capex will be ca. 2%-3% of the pre-production capex p.a. over LOM.

CASH COSTS HIGHER OVER LOM BUT LOWER IN EARLY YEARS

- Total cash operating costs were presented on a CFR basis, to be consistent with the spodumene pricing also being estimated on CFR terms. This resulted in the total cash costs being US$258/t (real) over the life of mine. The costs included mining, processing, transport, marketing, site, corporate allocation, government and private royalties, native title payments, and freight.
- The cost was higher than that of the PFS (US$205/t) and our estimate (US$207/t), which were based on FOB. Even after adding freight (US$18/t) to our costs (increasing it to US$225/t) and that of PFS (increasing it to US$223/t), these are still below the DFS cash costs. The major reason is the impact of the longer mine life making the latter years offer lower head grade (and lower production) vs the PFS, a higher strip ratio over LOM, native title payments, and other royalties.
- However it is important to note is that cash costs are lower in the earlier years, when higher grade is mined. The DFS stated cash costs would be US$189/t (ex-royalties, native title) in the first five years and $207/t in the first 15 years. If we add back royalties and native title this translates to ca. USS240/t in first five years and US$247/t in first 15 years.

Figure 3: Pilgangoora DFS Cash Costs

Item	US$/t
Mining	87
Processing	115
Transport & loading	36
G&A, selling, corporate allocation	26
Seaborne freight	18
Credit (tantalite)	-75
Royalties & native title	51
Total cash costs CFR	**258**

Source: Company.

SPODUMENE PRICING – BASED ON CONSENSUS

- In contrast to the PFS where the company based its spodumene pricing on Roskill estimates alone, the DFS used a number of investment bank forecasts as well as Roskill to obtain a consensus estimate of US$537/t, CFR. This was above our previous forecast of US$490/t and that of the PFS's US$456/t assumption.
- The DFS price is also below current spot pricing of spodumene US$650/t, and probably more accurately reflects the future impact of increasing production coming onstream, notably from Western Australia as well as brine expansion from South America. However it is important to note this is balanced by increasing demand for lithium, especially in the forecast increase penetration of electric vehicles (EVs), as well as energy storage. Battery grade lithium carbonate pricing has been recently as high as US$20,500/t in June 2016.
- The market for tantalum is not as rosy as for lithium, nor as deep, with a long term price of US$80/lb adopted in the DFS based on Roskill for 30% Ta_2O_5 concentrate.

MARKETING – ADVANCED NEGOTIATIONS IN PROGRESS

- To date, PLS has secured a binding offtake agreement with General Lithium Corporation (GLC) of China, which includes minimum chemical grade spodumene 140ktpa (40% of capacity) for 6 + 4 years. Critically, pricing is referenced to a mix of both domestic and import pricing of lithium carbonate, reset every six months. This should allow PLS to participate in some of the upside of the carbonate, capturing some of the profitability that currently is disconnected from spodumene prices.
- PLS is also in advanced negotiations with another major Chinese converter, which may include a prepayment, which would obviously assist in funding the project.
- The company is also in negotiations with two agencies re tantalum offtake subject to pilot plant samples.

PERMITTING

- PLS has completed environmental impact assessment (EIA) studies to support regulatory approvals for mine construction. No major issues have been identified to date. Mining proposal, groundwater license, and works approval are all in process of being completed.

TIMELINE – AIMING FOR COMMISSIONING END CY2017

- PLS remains ambitious in its timeline, seeking to conclude financing and offtake by end of CY2016, a well as award of the mining contractor. This would the pave the way for procurement and major construction beginning CY2017. Aim would then be to commission Pilgangoora by end of CY2017.

PFS ON 4MTPA – HIGHLIGHTS THE OPTIONALITY OFFERED BY PILGANGOORA

Expansion case exceeds our previous 3Mtpa assumption

- Contemporaneously with DFS, PLS released a PFS detailing a 4Mtpa operation beginning in Year 3. This resulted in an NPV_{10} of $1,165M, or an incremental NPV_{10} of $456M for an additional capex contribution of $128M, equivalent to NPV of 3.6x capex. Our most recent valuation only factored a 3Mtpa expansion case which provided incremental unrisked NPV of $230M vs the $456M provided by the 4Mtpa. On this basis the PFS has exceeded our expectations on adding value.
- Key differences are highlighted in Figure 4. The company also introduce a technical grade spodumene (sc7.0, or 7.0%), stream in the 4Mtpa scenario, which would comprise 30ktpa, or ca. 5%, of total spodumene concentrate. This would be suitable for the glass-ceramics market.

Figure 4: PFS on 4Mtpa vs 2Mtpa DFS Case.

Parameter	4Mtpa	2Mtpa	Increment
LOM, years	19	36	-17
Revenue LOM real, A$b	9.23	9.15	0.08
Spodumene price, real, US$/t	539	537	2
Tantalite conc 30% LT, US$/lb	72	80	-8
Spodumene prod'n ktpa	564	314	250
Spodumene prod'n LCEpa	79	44	35
Tantalite prod'n lbs pa	579	321	258
LOM cash costs, real, CFR, US$/t	230	258	-28
Pre-production capex, $M	342	214	128
EBITDA $M pa, real	245	121	124
NPV_{10}, $M	**1165**	**709**	**456**
IRR	46%	38%	8%
Payback, years	3.1	2.7	0.4

Source: Company; Foster Stockbroking estimates.

- The 4Mtpa highlights the world class nature of Pilgangoora. The scale of the resource provides PLS with an option to exploit lithium markets should the bullish growth scenario for lithium stemming from growth in EV penetration pan out and swallow the planned expansion coming onstream from Western Australia hard rock and South American brine supply.
- As part of progressing the expansion case, PLS will undertake further feasibility, likely to DFS. Part of this will include more precisely pinning down the supply-demand outlook for lithium.

NPV SENSITIVITY OF PILGANGOORA

- The DFS and PFS included a sensitivity analysis for both the 2Mtpa and 4Mtpa cases to changes in spodumene prices and the A$, which we have summarised in Figure 5.

Figure 5: Summary of Pilgangoora PFS and DFS NPV Sensitivities

Case	Chng in NPV
2Mtpa:	
±US$100/t in spodumene price	±$233M to $234M
±US$0.05 in A$	±$115M to $151M
4Mtpa case	
+US$100/t in spodumene price	$373M to $374M
+US$0.05 in A$	$165M to $187M

Source: Company; Foster Stockbroking estimates

PILGANGOORA CASHFLOWS - $100M P.A. NET FREE CASHFLOW

Revised commodity assumptions

- We have revised our cashflow forecasts for Pilgangoora, based on results of the DFS. Key changes are an upgrade in our forecast spodumene prices to be more in line with consensus.

Figure 5: Revised Commodity Price Forecasts

Commodity		FY17e	FY18e	FY19e	FY20e	FY21e	LT
Spodumene 6% Li_2O, US$/t, CFR	**New**	**558**	**556**	**542**	**523**	**519**	**525**
	Old	496	506	495	487	488	489
	Chng	*13%*	*10%*	*9%*	*7%*	*6%*	*7%*
A$:US$	**New**	**0.73**	**0.73**	**0.74**	**0.74**	**0.74**	**0.75**
	Old	0.70	0.70	0.71	0.71	0.72	0.73
	Chng	*4%*	*4%*	*4%*	*4%*	*3%*	*3%*
Tantalite 30% US$/lb	**New**	**62**	**67**	**73**	**78**	**80**	**82**
	Old*	60	60	60	61	62	64
	Chng	*3%*	*12%*	*21%*	*27%*	*29%*	*28%*

Source: Foster Stockbroking estimates.

Net Free Cashflow of A$100M p.a. for 2Mtpa Case, $200M for 4Mtpa expansion

- Figure 6 shows a summary of our forecast cashflows for the Pilgangoora 2Mtpa operation. The project should generate net free cashflow of A$100M p.a. after tax and sustaining capex. This translates to EBITDA of $136M-$154M p.a in the first years of production. Average over LOM is $120M pa real, in-line with the DFS estimate of $121M pa.
- Figure 7 shows our modelling for the 4Mtpa expansion case in the initial years. Net free cashflow essentially doubles to ca. $200M p.a, while we forecast nominal EBITDA of $236M-$241M in the first years of 4Mtpa production. Average real EBITDA is $248M p.a. over the LOM – in-line with DFS estimate of $245M p.a.
- We estimate payback in ca. 2 years for the 2Mtpa case and ca. 2.5 years for 4Mtpa.

Figure 6: Pilgangoora 2Mtpa Base Case Cashflows – First Six Years, nominal

FY/e June	Unit	2017e	2018e	2019e	2020e	2021e	2022e
Commodity assumptions, CFR							
Spodumene concentrate 6% Li2O	US$/t	558	556	542	523	519	525
Tantalite	US$/lb	67	73	78	80	82	83
A$	US$	0.73	0.73	0.74	0.74	0.74	0.74
Ore mined	**Mt**	**0.0**	**1.0**	**2.0**	**2.0**	**2.0**	**2.0**
Production							
Spodumene 6% Li_2O	kt	0	183	364	362	359	357
Contained Li_2O	kt	0	11	22	22	22	21
LCE	Mt	0	27	54	54	53	53
Tantalite mineral	t	0	73	145	145	145	145
Cashflow:							
Spodumene 6% Li_2O sales (A)	**A$M**	**0**	**140**	**267**	**256**	**252**	**253**
Unit costs per concentrate, CFR:							
C1 costs	US$/t	0	168	169	171	178	184
C2 costs (C1 + royalties)	US$/t	0	220	220	221	227	234
Total cash costs	**A$M**	**0**	**55**	**108**	**110**	**113**	**113**
EBITDA	**A$M**	**0**	**84**	**159**	**153**	**142**	**140**
All-In-Sustaining (C2 + sust capex)	US$/t	0	238	229	229	236	243
All-In-Sustaining Costs (B)	A$M	0	60	113	112	115	117
Pre-production capex (C)	A$M	107	107	0	0	0	0
Chng In Working Capital (D)	A$M	0	12	-1	0	-1	0
Tax (E)	A$M	0	21	43	41	38	37
Net Free Cashflow (A-B-C-D-E)	**A$M**	**-107**	**-60**	**112**	**108**	**101**	**99**

Source: Company; Foster Stockbroking estimates.

Figure 7: Pilgangoora 4Mtpa Cashflows - First Six Years, nominal

FY/e June	Unit	2017e	2018e	2019e	2020e	2021e	2022e
Commodity assumptions							
Spodumene 6% Li_2O	US$/t	558	556	542	523	519	525
Tantalite	US$/lb	67	65	70	72	72	72
A$	US$	0.73	0.73	0.74	0.74	0.74	0.74
Ore mined	**Mt**	**0.0**	**1.0**	**2.0**	**3.0**	**4.0**	**4.0**
Production							
Spodumene 6% Li_2O	**kt**	**0**	**183**	**364**	**543**	**718**	**713**
Contained Li_2O	kt	0	11	22	33	43	43
LCE	Mt	0	27	54	80	107	106
Tantalite mineral	t	0	73	145	218	290	290
Cashflow:							
Spodumene 6% Li_2O sales (A)	**A$M**	**0**	**140**	**267**	**383**	**504**	**506**
Unit costs per concentrate sold							
C1 costs	US$/t	0	156	157	156	163	171
C2 costs (C1 + royalties)	US$/t	0	208	207	206	212	221
Total cash costs	**A$M**	**0**	**65**	**130**	**194**	**263**	**270**
EBITDA	**A$M**	**0**	**74**	**137**	**190**	**241**	**236**
All-in-sustaining (C2+capex)	US$/t	0	225	216	211	216	226
All-in-sustaining costs (B)	A$M	0	56	106	155	210	217
Project capex (C)	A$M	107	107	0	128	0	0
Chng In working capital (D)	A$M	0	11	-1	6	6	0
Tax (E)	A$M	0	22	45	65	83	81
Net Free Cashflow (A-B-C-D-E)	**A$M**	**-107**	**-57**	**117**	**29**	**206**	**208**

Source: Company; Foster Stockbroking estimates.

PILGANGOORA NPV – UPGRADES TO OUR ESTIMATES

Revised NPV of $745M for 2Mtpa Case Increases On Higher Spodumene Prices

- Our NPV of the Pilgangoora 2Mtpa base case has increased to $745M from $722M, mostly due to our upwards revision in our spodumene price forecast, in-line with consensus. It is above the DFS estimate of $709M, the key differences being higher spodumene price in latter years and lower A$ forecast ($0.74) than that of the DFS ($0.75).
- Various changes cancelled each other out in our NPV revision. Positive changes were:
  - Upward revision to spodumene and tantalite prices; and
  - Increase in spodumene and tantalite recoveries.
- Negative changes to NPV were:
  - Higher capex; and
  - Higher cash costs.
- We have also modelled a 4Mtpa case, deriving an NPV of $1,152M, in-line with PFS estimate of $1,165M.

PLS EARNINGS FORECASTS

NPAT of $47M in FY18e, $96M in FY19e as Pilgangoora comes onstream

- We have revised our earnings for PLS, based on our projected cashflows for the 2Mtpa Pilgangoora project. We do not incorporate any expansion at this time in our earnings forecast. We forecast a loss of -$6.8M in FY17 mostly due to corporate, exploration and feasibility expenses, while in FY18e we forecast $46.9M, mostly due to six months contribution from Pilgangoora, and $95.5M in FY19e with a full year contribution.
- The company recently reported a loss of -$55.6M for FY16, including a -$11.3M write down of Tabba Tabba. Underlying NPAT was $44.3M, the main contributors being share based expenses as a result of the issue of options throughout the year ($27M), and exploration expenditure ($11M).

PLS VALUATION – REDUCED TO $0.77/SHARE FROM $0.78

- Our risked valuation of PLS has reduced slightly to $0.77/share vs our previous estimate of $0.78. While our valuation of Pilgangoora (inclusive the 4Mtpa expansion and other exploration) has increased to $887M vs $754M previously, this has been offset by increase in the dilutive impact of the shares and options on issue since our last report, plus those we have assumed to be issued as part of financing. Our unrisked valuation has reduced to $0.99/share from $1.03/share.

Figure 8: PLS Valuation - Breakdown

Segment	Unrisked A$M	Unrisked A$/sh	Risked A$M	Risked A$/sh	1- Risk factor
Pilgangoora 2Mtpa - base case	745	$0.52	707	$0.50	95%
Pilgangoora 4Mtpa - incremental value	407	$0.29	142	$0.10	35%
Pilgangoora Expl'n/Resources ex-Reserves	57	$0.04	38	$0.03	67%
Unallocated corporate	-17	-$0.01	-17	-$0.01	100%
Cash - conditional GL* placement 1st tranche	18	$0.01	16	$0.01	90%
Cash - other equity raise (incl. 2nd tranche GL)	57	$0.04	54	$0.04	95%
Cash - exercised options	43	$0.03	40	$0.03	95%
Net cash (debt) June 2016	100	$0.07	100	$0.07	100%
Company Valuation	**1,408**	**$0.99**	**1,081**	**$0.77**	**77%**
Ordinary shares now	1,150		1,150		100%
Shares - exercise of options	114		108		95%
Shares - conditional GL placement 1st tranche	36		32		90%
Shares - other equity (incl 2nd tranche GL)	122		116		95%
Pro-forma diluted shares	1,422		1,407		99%

Source: Foster Stockbroking estimates.
**GL = General Lithium Corporation.*

Joint venture plant not yet included

- We have not yet included any value for the proposed downstream lithium conversion plant 50:50 JV with General Lithium at this stage, preferring to view the outcome of the scoping/conceptual study to be released by the company. We expect this would add incremental value, but key will be on how PLS will fund its interest. The plant is projected to produce a minimum of 20ktpa of lithium carbonate. We expect study results within the next month.

Financing assumptions – number of options in play

- PLS has a number of options it can consider to finance Pilgangoora. These include its cash balance, equity raisings, prepayments, and debt. Our valuation includes assumptions as follows:
    - We assume current cash of $100M is utilised along with the conditional first tranche of the General Lithium placement ($17.8M at $0.50/share). This is conditional upon waiver of the first-right-of-refusal. We estimate this would bring total cash to $118M, leaving ca. $115M shortfall to fund Pilgangoora (including working capital, exploration, and corporate;
    - We assume 1/3 of the shortfall to be funded by debt ($38M). We expect this would require all offtake to be secured under binding agreements; and
    - Balance of funding would be by equity and a prepayment. We assume a prepayment of ca. $25M and any equity raising of $57M at a 10% discount to the current shareprice.
- We note that while believe equity, debt, and prepayment are all currently being considered by PLS, these are our assumptions only (Figure 9) and not that of the company. PLS's final financing outcome will likely differ to those we have projected, including the price that any equity is raised at.

Figure 9: Pilgangoora Funding Assumptions

Item	A$M
Cash end FY16	100
General Lithium conditional equity subscription pro-forma	18
Pro-forma cash (A)	**118**
Pilgangoora pre-production capex	214
Corporate	5
Exploration and feasability studies	2
Working capital and other	12
Projected funding requirements (B)	**233**
Funding shortfall (A-B)	**115**
Assumed funding sources:	
Equity	51
Debt	38
Prepayment	25
Total	**115**

Source: Foster Stockbroking estimates.

MULTIPLE ANALYSIS – SECTOR PE AVERAGE OF 12x IMPLIES $0.97/SHARE

Significant potential to re-rate

- We have examined PLS valuation using a comparative PE multiple analysis with ASX-listed miners. We have selected FY19e earnings – being the first full year of Pilgangoora contributing earnings – and applied a range of PE multiples. Currently the stock is trading at only 6x FY19e earnings vs the resource sector average of 12x. Applying the latter would derive valuation of $0.97/share which is in-line with our unrisked DCF valuation. This confirms the upside potential of the shareprice should the company derisk the project and bring it into production.

Figure 10: Implied Valuation of PLS at Various PE Multiples

PER x	6.0x	8.0x	10.0x	**12.0x***	14.0x	16.0x	18.0x	20.0x
FY19 e EPS $	$0.081	$0.081	$0.081	**$0.081**	$0.081	$0.081	$0.081	$0.081
Valuation	$0.48	$0.64	$0.81	**$0.97**	$1.13	$1.29	$1.45	$1.61

*Source: Foster Stockbroking estimates; *Consensus average.*

SENSITIVITIES – EVERY +US$100/t IN PRICE ADDS $0.22/SHARE

- Figure 11 summarises the sensitivity of our valuation to change in the spodumene price and A$. We estimate that every +US$100/t change in the spodumene price adds $0.22/share to our risked valuation.

Using spot price implies $1.07/share valuation

- Using the current spot price of US$650/t for spodumene in our model flat going forward, the valuation of PLS increases to $1.07/share risked and $1.39/share unrisked. This highlights the upside to shareprice should current spoduemne prices persist for longer than expected by consensus.

Figure 12: PLS Valuation and Earnings Sensitivity

Commodity	Chng In unit	Chng in unrisked valuation	Chng in risked valuation	Chng in EPS
Spodumene 6% Li_2O price	+/-$100	±$0.29-$0.30	±$0.22	±$0.03
A$:US$	+/- 10c	±$0.21-$0.29	±$0.17-$0.22	±$0.016-$0.019

Source: Foster Stockbroking estimates.

FIRST RIGHT OF REFUSAL DISPUTE – OVERHANG IN SHORT-TERM

- Currently PLS is in dispute with Mineral Resources Ltd over the validity of the first right of refusal (FROR) concerning the Pilgangoora offtake. This dispute began in July 2016 and we believe has overshadowed to an extent the positive DFS and PFS releases.
- We expect the disagreement will be eventually resolved in the short term either by agreement between the parties or by due legal process, and we do not factor any material negative impact for PLS at this stage. Accordingly, we would expect a positive re-rate in the shareprice once a resolution without negative impact is reached.

RECOMMENDATION BUY PRICE TARGET $0.77/SHARE

- **We maintain our Buy recommendation on PLS with our price target to $0.77/share (**prior $0.78/share) based on our risked valuation.
- **Catalysts include:**
    - Resolution of the first-right-of-refusal; ;
    - Further binding offtake agreements;
    - Progress on financing;
    - Positive study results on the proposed JV lithium conversion plant;
    - Increasing lithium prices and demand.

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