



Pilbara Minerals (PLS.ASX)

10 December 2014

## Producing cash by March 2015

Tabba Tabba start delayed; Resource upgrades coming; high grade Li<sub>2</sub>O hits in Pilgangoora;

### Recommendation

**BUY; High Risk**

### Price

**3.9c**

### Valuation

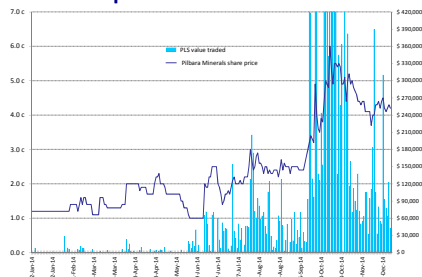
**11.5c**

- The start of production at Tabba Tabba has been delayed by the works permit. First product is now expected early February.
- PLS has the results of the first 15 of 35 RC holes of an infill programme at Pilgangoora. The Li<sub>2</sub>O grades are well above the current resource grade.
- PLS announced an agreement to investigate the production of battery grade Li<sub>2</sub>CO<sub>3</sub> using lepidolite mineralisation.
- Beer & Co sees many sources of upside potential which could be realised over the next 4 months.

### Snapshot

Market Cap	\$23m
Shares on Issue	594.1m
Cash on hand (30 Sept 2014)	\$3.0m
52 Week High	6.5c
52 Week Low	1.0c
1 month / 6 month VWAP	4.2c / 4.0c

### PLS Share price v. volume



Pilbara Minerals acquired a 50% stake in the Tabba Tabba project in October 2013. Its partner is the privately owned metallurgical engineering company Nagrom.

PLS published a feasibility study on Tabba Tabba in February and has since raised equity to bring it into production.

In May 2014, PLS announced the acquisition of 100% of Pilgangoora, 55km from Tabba Tabba in the the Pilbara region.

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### Tabba Tabba – production delayed

We had expected first product during December. While PLS has a Mining Licence, it needs a works approval to begin construction and this has been delayed. It is expected to be able to begin site works in early January.

The plant has been constructed but needs to be transported to site and assembled. First product is now expected in February 2015.

### Agreement to evaluate Lithium Carbonate potential

On 26 November, PLS announced that it had agreed with Cobre Montana (CXB.ASX) for a 6 month period for CXB to test the potential to produce Li<sub>2</sub>CO<sub>3</sub> from lepidolite at Pilgangoora, which has otherwise limited value.

### High grade, wide Li<sub>2</sub>O intercepts at Pilgangoora

PLS has reported assay results from the first 15 holes of a 35 hole infill programme to upgrade the resource estimate from Inferred to at least Indicated. The intercepts suggest lower a waste : ore ratio than the 10 we assumed in our analysis, and Li<sub>2</sub>O grades much higher than we assumed.

### Resource Upgrade pending

PLS expect to announce a resource upgrade by March 2015, with a significant component of Indicated Resources.

Beer & Co expects the balance of the programme to increase the overall volume of the resource estimate.

### Beer & Co's risked valuation remains 11.5c.

Higher grades and a larger resource at Pilgangoora and a lower strip ratio will significantly increase our valuation, possibly to over 20c.

Beer & Co confirms our BUY, High Risk recommendation.

This report was produced by Beer & Co Research, an independent research and advisory firm.

It is intended for wholesale investors ONLY.

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## Tabba Tabba delayed

### Tabba Tabba permitting delayed.

On 24 November, 2014, PLS announced that the final works approval to begin construction of operations at Tabba Tabba had been delayed.

PLS has a granted Mining Licence. A works approval is required to begin construction. Final documents have now been submitted and PLS expects to receive final approval within 2 weeks.

Due to delays in the final permits, first product from Tabba Tabba looks like it will be February, rather than December as we had expected.

### Minimal Impact

The processing plant has been built, but still needs to be transported to site.

When the works permit is finally granted, PLS needs to undertake civil works for the process plant, roads, finalise water and power supply.

The final step is the pre-strip of the mine and to commission the plant.

If the permit is granted in 2 weeks, which is about a week before Christmas, we expect that site works will begin in January and Beer & Co expects first product in February.

This has had a small negative impact on our valuation.

Beer & Co has adjusted our model to reflect this change, reducing our valuation from 12.0c to 11.5c/share.

### Resource Upgrade pending

PLS completed its RC drilling programme at Tabba Tabba for mine planning and resource extension. Figure 1 shows current resource estimate for Tabba Tabba, which will be initially mined at the rate of 120kt/yr.

An upgrade resource estimate for Tabba Tabba is expected soon

**Figure 1 : Tabba Tabba Resource estimate**

		Ta <sub>2</sub> O <sub>5</sub> grade	contained Ta <sub>2</sub> O <sub>5</sub>
Measured	30.1 kt	1,610 ppm	106,960 lb
Indicated	124.4 kt	1,260 ppm	346,040 lb
Inferred	58.4 kt	925 ppm	119,200 lb
<b>TOTAL</b>	<b>212.9 kt</b>	<b>1,220 ppm</b>	<b>572,200 lb</b>

Source : PLS ASX announcement, 18 November 2013, Beer & Co

Figure 2 shows the Reserve announced by PLS on 19 February 2014, together with the initial mining inventory.

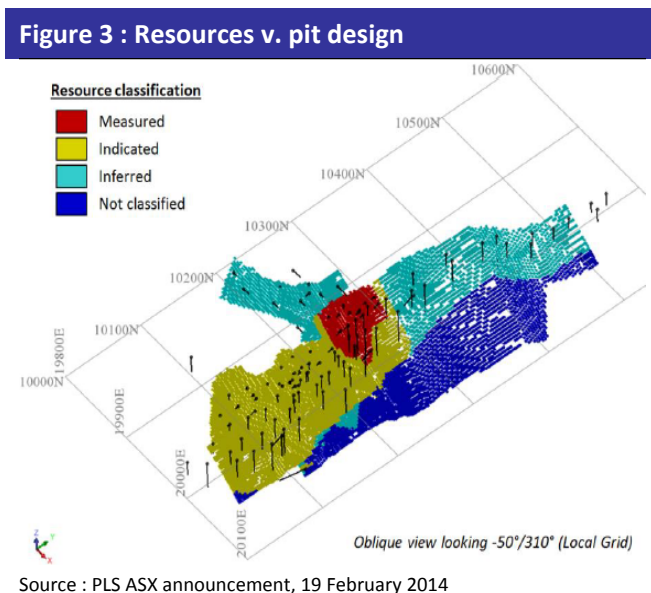
**Figure 2 : Tabba Tabba Reserves and mining inventory**

		Ta <sub>2</sub> O <sub>5</sub> grade	contained Ta <sub>2</sub> O <sub>5</sub>	Nb <sub>2</sub> O <sub>5</sub> grade	contained Nb <sub>2</sub> O <sub>5</sub>
Proved	32.0 kt	1,420 ppm	100,178 lb	294 ppm	20,741 lb
Probable	101.0 kt	1,249 ppm	278,111 lb	292 ppm	65,019 lb
Total Reserves	133.0 kt	1,290 ppm	378,289 lb	292 ppm	85,760 lb
Pit Design	162.2 kt	1,240 ppm	443,411 lb		

Source : PLS ASX announcement, 19 February 2014, Beer & Co

Figure 3 shows the relationship between Resources and the pit design as included in the Feasibility Study.

There is significant potential in the area of the Tabba Tabba pit.



Beer & Co's analysis is based on an estimated mining inventory as shown in Figure 4.

Beer & Co's base case valuation assumes a resource upgrader and a larger mining inventory

**Figure 4 : Mining inventory assumed by Beer & Co**

		Ta <sub>2</sub> O <sub>5</sub> grade	contained Ta <sub>2</sub> O <sub>5</sub>
Reserves	133 kt	1,290 ppm	378k lb
Resources	80 kt	1,100 ppm	194k lb
near pit	50 kt	900 ppm	99k lb
Along strike	500 kt	750 ppm	827k lb
Strelly, high grade	500 kt	600 ppm	661k lb
Strelly, balance	900 kt	450 ppm	892k lb
<b>TOTAL</b>	<b>2,162 kt</b>	<b>640 ppm</b>	<b>3,051k lb</b>

Source : Beer & Co estimates

**Minimal Impact**

Beer & Co will await the Resource upgrade at Tabba Tabba, but we expect that this is reflected in our current valuation, though it may reduce the risk weighting we have assigned.

## Value from Lepidolite at Pilgangoora

On 26 November, PLS announced that it had executed a Memorandum of Understanding with Cobre Montana (CXB.ASX) for the latter to execute a 6 month test programme to evaluate the potential to produce battery grade lithium carbonate ( $\text{Li}_2\text{CO}_3$ ) from lepidolite contained in the pegmatites at Pilgangoora.

### Description

On 27 October 2014, CXB announced that it had produced battery grade (99.5%)  $\text{Li}_2\text{CO}_3$  from Lepidolite, as shown in Figure 5.

Figure 5 : Lithium Carbonate from Lepidolite

PLS has executed an MoU with CXB.ASX to investigate the potential to produce battery grade lithium carbonate from lepidolite at Pilgangoora

There is lepidolite in the pegmatites at Pilgangoora, easily identified by its purple colour



Source : CXB presentation, November 2014

As shown in Figure 5, lepidolite is a source of lithium, as well as potassium sulphate ( $\text{K}_2\text{SO}_4$ ). It is one of a range of sources of lithium :

- Hard rock deposits, which are Li / Al silicates such as spodumene and petalite
  - Tabba Tabba and Pilgangoora are examples
  - About half of the world's supply of lithium comes from hard rock sources;
- Brines, producing from soluble salts, especially in northern Argentina and Bolivia
  - Orrocobre's (ORE.ASX, ORL.TSX) Salar de Olaroz is one example
  - About half of the world's supply of lithium comes from brine;

There is no established technology to produce lithium carbonate from lepidolite

CXB has an exclusive licence for a new technology to do this for all projects in WA, as well as 2 other projects globally

While this has upside risk for PLS, its potential value cannot be known.

- Clays, which is a process in commercial development
  - the economic viability of this process will then be determined; and
- Lepidolite, for which there is not yet a commercially viable process.

CXB has exclusive rights from the process developers, Strategic Metallurgy, to all projects in WA, plus the rights to 2 other projects globally.

Prior to this agreement with PLS, CXB had invested in 3 other projects :

- 80% of a joint venture with Focus Minerals (FML.ASX) 15km south of Coolgardie,
  - There is about 400kt of lepidolite rich material in waste dumps, and it was from this that CXB produce the samples shown in Figure 5
- An option to move to 100% of pegmatites at Ravensthorpe that had previously been mined for spodumene; and
- 80% of a joint venture with Tungsten Mining (TGN.ASX) at Seabrook, 60km N-E of Southern Cross, based on lithium pegmatites associated with tungsten skarns.

### Impact on PLS

Lepidolite at Pilgangoora is not given any value.

The tests are at no cost to PLS and so PLS has no downside and significant potential upside.

PLS is progressing a 10,000m drill programme at Pilgangoora

## Drilling at Pilgangoora

### Background

Having completed its Resource upgrade drilling at Tabba Tabba, PLS is executing a 10,000m programme at Pilgangoora.

On 1 December, PLS announced assay results for the first 5 holes and on 9 December the assay results from the next 10 holes.

At that time, 35 holes had been drilled from 3,215m of the programme. This has infilled the existing resource along the eastern pegmatite body, as shown in Figure 7.

### Drill results

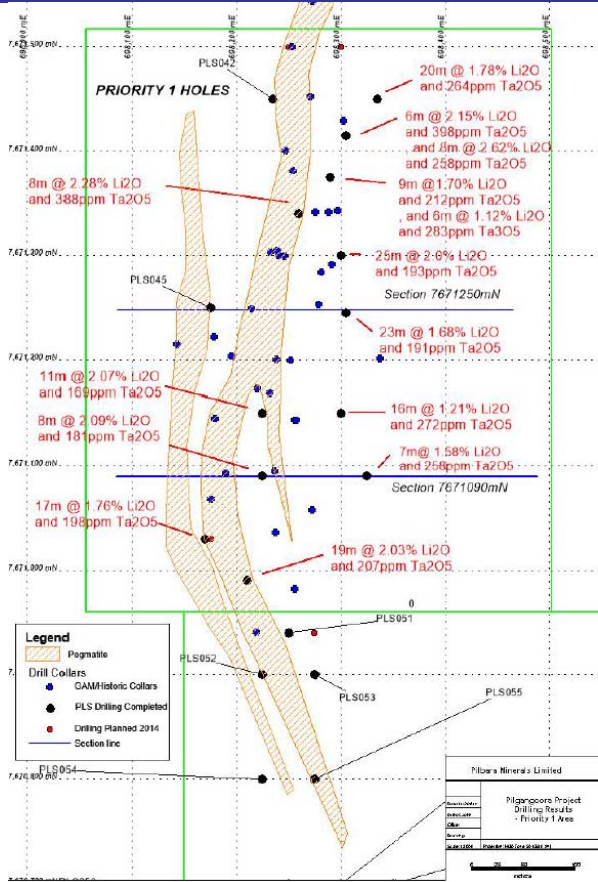
Figure 6 shows the Resource reported by PLS for Pilgangoora.

**Figure 6 : Pilgangoora Resource and Beer & Co's assumed extension**

		Ta <sub>2</sub> O <sub>5</sub> grade contained	Ta <sub>2</sub> O <sub>5</sub>	Li <sub>2</sub> O grade	Contained Li <sub>2</sub> O
Inferred Resource	10,400 kt	240 ppm	5,503k lb		
	8,600 kt			1.01 %	87 kt
Extension	15,000 kt	240 ppm	7,937k lb	1.25 %	210 kt
TOTAL	25,400 kt	240 ppm	13,439k lb	1.17 %	297 kt

Source : PLS ASX announcement, 17 June 2014, Beer & Co

**Figure 7 : Drilling at Pilgangoora**



Source : PLS ASX announcement, 9 December 2014

Assays received to date for Li<sub>2</sub>O are much higher than the grade in the current resource estimate

while Ta<sub>2</sub>O<sub>5</sub> grades are roughly in line

This is not surprising as the resource estimation was focussed on Ta<sub>2</sub>O<sub>5</sub>, while Li<sub>2</sub>O was almost an accidental by-product

The results also show potential for a lower waste : ore ratio than we assumed in our analysis

As a general overview, the results to date :

- Support the Ta<sub>2</sub>O<sub>5</sub> grades used in the Beer & Co analysis; and
- Suggest much higher Li<sub>2</sub>O grades.

This conclusion should not be a surprise as the drilling on which the resource estimate was based targeted Ta<sub>2</sub>O<sub>5</sub>.

Also, the width and depth of the intercepts suggests a much lower waste to ore ratio than the 10 : 1 that Beer & Co has assumed in our analysis, with most holes reporting waste being only 2x to 3x the amount of ore.

Beer & Co's valuation of PLS is based on the Inferred resource shown in Figure 6, plus the extension estimated by Beer & Co and also shown in Figure 6, both appropriately risk weighted.

PLS has now reported assays from 15 holes.

These results have shown some negative correlation between Ta<sub>2</sub>O<sub>5</sub> and Li<sub>2</sub>O results; ie higher grades of one tend to be associated with lower grades of the other, though there are some cases of higher grades of both in the same zone.

The results have also confirmed that the Li<sub>2</sub>O grades tend to be better in the south and the Ta<sub>2</sub>O<sub>5</sub> grades better in the north.

## Conclusions

Figure 8 shows Beer & Co's base case valuation. The analysis above indicates there are 6 areas of potential upside to our valuation.

As shown earlier, the delay to the first product from Tabba Tabba has had virtually no impact on our valuation.

**Figure 8 : Beer & Co base case valuation of PLS is 11.5c/share**

	discount rate = 12.0 %	risk :	30-Jun-14		10-Dec-14	
			100%	Product	per share	
<b>Beer &amp; Co's base case valuation of PLS is 11.5c/share</b>						
Tabba Tabba Resources		85 %	\$ 4m	\$ 4m	0.5 c	0.6 c
Tabba Tabba Extensions		65 %	\$ 5m	\$ 3m	0.4 c	0.5 c
Strelly		45 %	\$ 2m	\$ 1m	0.1 c	0.1 c
fanking credits		50 %	\$ 1m	\$ 1m	0.1 c	0.1 c
Pilgangoora Resources		40 %	\$ 80m	\$ 32m	4 c	5 c
Pilgangoora Extension		20 %	\$ 58m	\$ 12m	1 c	2 c
fanking credits		20 %	\$ 56m	\$ 12m	2 c	2 c
Corporate		100 %	(\$6m)	(\$6m)	(0.7c)	(0.7c)
Cash / debt		100 %	(\$0m)	(\$0m)	(0.1c)	0.1 c
cash raised		100 %	\$ 8m	\$ 8m	1.0 c	0.8 c
<b>TOTAL</b>			<b>\$ 208m</b>	<b>\$ 66m</b>	<b>8.4 c</b>	<b>11.5 c</b>
Shares on issue			330.3m	FPO shares	91.8m options	
			263.8m	issued 2014	91.8m op. ex'd	
			42.8m	CNs converted		
			51.6m	new equity		

**There are many potential source of upside to our valuation**

Source : Beer & Co estimates

### Upside potential #1 – risk weighting, Tabba Tabba

**Upside potential from de-risking Tabba Tabba from a Resource upgrade and successful commissioning**

When PLS upgrades the resource estimate for Tabba Tabba it may cause us to change our assumed mining inventory in terms of volume and / or grade.

A resource upgrade is likely to impact on our risk weighting.

Successful commissioning at Tabba Tabba will also reduce the risk.

However, just as the delay to the start of Tabba Tabba did not have a discernible impact, neither does the potential upgrade of Tabba Tabba

### Upside potential #2 – risk weighting, Pilgangoora

**Upside potential from reducing risk at Pilgangoora from a Resource upgrade**

PLS expect to announce a resource upgrade at Pilgangoora by March.

If all of the Inferred resources, shown in Figure 6, are upgraded to Indicated (or higher), then we will reduce the risk weighting we assigned in Figure 8.

If the risk attached to Pilgangoora Resources shown in Figure 8 are reduced from a 60% penalty (ie. 40% of the NPV) to a 30% penalty (ie. 70% of the NPV), then Beer & Co's valuation in Figure 8 increases from 11.5c to 14.8c.

**Upside potential from a larger Resource at Pilgangoora**
**Upside potential #3 – Pilgangoora Resource volumes**

Figure 6 shows that PLS has 10Mt in Resources and Beer & Co has assumed a further 15Mt in extensions.

If the revised resource is greater than 10Mt, then our valuation will rise; eg. if the revised Resource is 15Mt, with a further 10Mt still of potential, then our valuation would rise further, from 14.8c to about 16c.

There is still further upside if the Pilgangoora resource estimate is greater than 25Mt. However, Beer & Co expects that this may not be this current round of drilling, but may be seen at a later date.

**Upside potential from higher Li<sub>2</sub>O grades at Pilgangoora**
**Upside potential #4 – Pilgangoora Li<sub>2</sub>O grades**

Above, we suggested that the assays reported to date :

- Support the Ta<sub>2</sub>O<sub>5</sub> grades used in the Beer & Co analysis; and
- Suggest much higher Li<sub>2</sub>O grades.

Figure 6 showed that Beer & Co has assumed in this analysis :

- A Resource grade of 1.01% Li<sub>2</sub>O; and
- A grade of 1.25% Li<sub>2</sub>O for the extension.

The assays reported to data appear to average around 2.0% Li<sub>2</sub>O.

If we assume a grade of 1.5% Li<sub>2</sub>O for the mining inventory, then Beer & Co's valuation rises from 16c to 27c.

**Upside potential from lower waste to ore at Pilgangoora**
**Upside potential #5 – Pilgangoora Waste : Ore ratio**

Reviewing the assays reported shows that the mineralised section is up to half of the total depth drilled; on average, the assays show waste being just over 2x ore.

Beer & Co's valuation assumes a waste : ore ratio of 10 : 1. If this is reduced to 4.0 : 1, then our valuation increases further to 34c.

**Upside potential #6 – Potential value from lepidolite at Pilgangoora**

We have stated that there is upside potential here, but we cannot have any idea of the value without knowing its technical feasibility first (ie, will it work) and secondly its commercial viability (ie. does it make money).



### Concluding Comments

Figure 9 summarises the upside potential in PLS.

It shows a value of 12.0c before adjustments. This value compares with 11.5c in our last report. The difference shows how PLS's value grows over time.

Much of this could be more definitively known within about 4 months.

**Figure 9 : Upside potential to PLS valuation**

Previous	Tabba Tabba delay	Tabba Tabba de-risk	Pilgangoora de-risk	Pilgangoora Resource tonnes	Pilgangoora Li2O grade	Pilgangoora Waste : Ore	Lepidolite potential
12.0 c	<b>11.5 c</b>	11.5 c	14.8 c	16.3 c	26.9 c	34.0 c	???

Source : Beer & Co estimates

**Beer & Co maintains a  
BUY, High Risk,  
recommendation on PLS**

At the present time, Beer & Co is not upgrading our base case valuation of PLS.

However, as shown in Figure 9, PLS has significant further potential, much of which should be clearer within the next 4 months.

Beer & Co confirms our BUY, High Risk recommendation.

## Beer &amp; Co Research

Pilbara Minerals (PLS.ASX)

December 2014

Year ended June	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
<b>Section 1 - P&amp;L</b>							
Sales revenue	\$A m	0	3	11	9	65	102
Interest revenue	\$A m	0	0	0	1	1	1
Other revenue	\$A m	0	0	0	0	0	0
<b>Total Revenue</b>	<b>\$A m</b>	<b>0</b>	<b>4</b>	<b>11</b>	<b>9</b>	<b>66</b>	<b>103</b>
Cost of Goods Sold	\$A m	0	(2)	(4)	(4)	(44)	(62)
Royalties	\$A m	0	0	0	0	0	0
Exploration Expense	\$A m	0	0	0	0	0	0
Corporate Costs	\$A m	(1)	(1)	(1)	(1)	(1)	(1)
Other Operating Expenses	\$A m	0	0	0	0	0	0
<b>Total Operating Expenses</b>	<b>\$A m</b>	<b>(1)</b>	<b>(3)</b>	<b>(5)</b>	<b>(5)</b>	<b>(45)</b>	<b>(63)</b>
<b>EBITDA</b>	<b>\$A m</b>	<b>(1)</b>	<b>1</b>	<b>6</b>	<b>4</b>	<b>21</b>	<b>41</b>
Dep'n & Amort'n	\$A m	0	(2)	(5)	(0)	(2)	(4)
<b>EBIT</b>	<b>\$A m</b>	<b>(1)</b>	<b>(1)</b>	<b>0</b>	<b>4</b>	<b>19</b>	<b>37</b>
Interest Expense	\$A m	0	0	0	0	(1)	(1)
Other	\$A m	0	0	0	0	0	0
<b>Pre-Tax Profit</b>	<b>\$A m</b>	<b>(1)</b>	<b>(1)</b>	<b>0</b>	<b>4</b>	<b>18</b>	<b>34</b>
Tax Expense	\$A m	0	0	(0)	(1)	(5)	(10)
<b>NPAT</b>	<b>\$A m</b>	<b>(1)</b>	<b>(1)</b>	<b>0</b>	<b>2</b>	<b>13</b>	<b>24</b>
<b>Reported NPAT</b>	<b>\$A m</b>	<b>(1)</b>	<b>(1)</b>	<b>0</b>	<b>2</b>	<b>13</b>	<b>24</b>

## Section 2 - Key Data

Ordinary shares - year end	m	330.3	594	688	780	780	780
Fully diluted shares on issue	m	464.9	729	780	780	780	780
Weighted # shares	m	291.5	594	639	734	780	780
Earnings per Share		(0.3c)	(0.2c)	0.0 c	0.3 c	1.6 c	3.1 c
Dividends Per Share		0.0 c	0.0 c	0.0 c	0.0 c	0.2 c	2.6 c

## Section 3 - Balance Sheet

Cash	\$A m	1	3	9	6	24	32
Receivables	\$A m	0	1	1	1	11	13
Other	\$A m	0	0	0	0	0	0
<b>CURRENT ASSETS</b>	<b>\$A m</b>	<b>1</b>	<b>4</b>	<b>11</b>	<b>7</b>	<b>35</b>	<b>45</b>
Receivables	\$A m	0	0	0	0	0	0
P, P & E	\$A m	2	3	1	20	20	18
Mining Properties / Exploration	\$A m	4	4	3	3	3	2
Other	\$A m	0	0	0	0	0	0
<b>NON-CURRENT ASSETS</b>	<b>\$A m</b>	<b>7</b>	<b>7</b>	<b>4</b>	<b>23</b>	<b>23</b>	<b>18</b>
<b>TOTAL ASSETS</b>	<b>\$A m</b>	<b>8</b>	<b>11</b>	<b>15</b>	<b>30</b>	<b>58</b>	<b>63</b>
Payables	\$A m	0	0	1	1	6	6
Debt	\$A m	0	2	0	1	3	2
Other	\$A m	0	0	0	0	0	0
<b>CURRENT LIABILITIES</b>	<b>\$A m</b>	<b>0</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>8</b>	<b>9</b>
Long Term Debt	\$A m	2	0	10	9	6	3
Deferred Tax Liability	\$A m	0	0	0	0	0	0
Other	\$A m	0	0	0	0	0	0
Provisions	\$A m	0	0	0	0	0	0
<b>NON-CURRENT LIABILITIES</b>	<b>\$A m</b>	<b>2</b>	<b>0</b>	<b>10</b>	<b>9</b>	<b>6</b>	<b>3</b>
<b>TOTAL LIABILITIES</b>	<b>\$A m</b>	<b>2</b>	<b>2</b>	<b>10</b>	<b>10</b>	<b>15</b>	<b>10</b>
<b>NET ASSETS</b>	<b>\$A m</b>	<b>6</b>	<b>9</b>	<b>5</b>	<b>20</b>	<b>43</b>	<b>53</b>
Accumulated Profit (Loss)	\$A m	(12)	(13)	(13)	(10)	3	18
Reserves	\$A m	1	2	(7)	3	13	7
Contributed Equity	\$A m	17	20	25	27	27	27
Minority Interest	\$A m	0	0	0	0	0	0
<b>Total Equity</b>	<b>\$A m</b>	<b>6</b>	<b>9</b>	<b>5</b>	<b>20</b>	<b>43</b>	<b>53</b>

## Section 4 - Cashflow

Net Cashflow from operations	\$A m	(3)	(2)	3	(7)	17	27
Net Interest Paid	\$A m	0	0	0	1	(0)	0
Taxes Paid	\$A m	0	0	0	0	(10)	(11)
Change in Working Capital	\$A m	(0)	(3)	(7)	4	(34)	(10)
<b>OPERATING CASHFLOW</b>	<b>\$A m</b>	<b>(4)</b>	<b>(5)</b>	<b>(3)</b>	<b>(2)</b>	<b>(17)</b>	<b>20</b>
Exploration Expenditures	\$A m	0	1	2	0	0	0
Maintenance Capex	\$A m	0	0	0	0	1	1
Expansion Capex	\$A m	2	1	0	19	0	0
<b>PPE Acquisitions (Total Capex)</b>	<b>\$A m</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>20</b>	<b>1</b>	<b>1</b>
PPE Divestments	\$A m	0	0	0	0	0	0
<b>INVESTING CASHFLOW</b>	<b>\$A m</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>20</b>	<b>1</b>	<b>1</b>
Change in Equity	\$A m	2	4	3	3	0	0
Dividends Paid	\$A m	0	0	0	0	(10)	(21)
Change in Debt	\$A m	2	0	8	0	(1)	(3)
<b>FINANCING CASHFLOW</b>	<b>\$A m</b>	<b>3</b>	<b>4</b>	<b>11</b>	<b>3</b>	<b>(1)</b>	<b>(23)</b>
<b>Free Cashflow</b>	<b>\$A m</b>	<b>(2)</b>	<b>(3)</b>	<b>(1)</b>	<b>17</b>	<b>(1)</b>	<b>1</b>
<b>Net Cashflow</b>	<b>\$A m</b>	<b>2</b>	<b>1</b>	<b>10</b>	<b>20</b>	<b>(16)</b>	<b>(2)</b>

## Commodity price assumptions

Year ended June	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
AUD/USD	0.863	0.850	0.850	0.850	0.850	0.850
Tantalite	US\$ / lb	83	83	83	83	83
Spodumene	US\$ / lb	3.0	3.0	3.0	3.0	3.0

## Mine Production, PLS share, '000 pounds

Tabba Tabba Ta2O5	40	131	107	142	163	135
Pilgangoora Ta2O5	0	0	0	261	430	434
Pilgangoora Spodumene	0	0	0	10,726	17,681	17,849

## Resources, Reserves and assumed mining inventory

## Tabba Tabba Ore Reserves

		Ta <sub>2</sub> O <sub>5</sub> grade	contained Ta <sub>2</sub> O <sub>5</sub>
Proved	32 kt	1,420 ppm	100k lb
Probable	101 kt	1,249 ppm	278k lb
Total Reserves	133 kt	1,290 ppm	378k lb
Pit Design	162 kt	1,240 ppm	443k lb

## Tabba Rabba Mineral Resources

		Ta <sub>2</sub> O <sub>5</sub> grade	contained Ta <sub>2</sub> O <sub>5</sub>
Measured	30 kt	1,610 ppm	107k lb
Indicated	124 kt	1,260 ppm	346k lb
Inferred	58 kt	925 ppm	119k lb
TOTAL	213 kt	1,220 ppm	572k lb

## Beer &amp; Co estimated mining inventory, Tabba Tabba

		Ta <sub>2</sub> O <sub>5</sub> grade	contained Ta <sub>2</sub> O <sub>5</sub>
Pit Design	162 kt	1,240 ppm	443k lb
Resources	51 kt	1,151 ppm	129k lb
near Tabba Tabba pit	50 kt	900 ppm	99k lb
Along strike	500 kt	750 ppm	827k lb
Strelly, high grade	500 kt	600 ppm	661k lb
Strelly, balance	900 kt	450 ppm	892k lb
Pit Design	2,162 kt	640 ppm	3,051k lb

## Pilgangoora Mineral Resources

		Ta <sub>2</sub> O <sub>5</sub> grade	contained Ta <sub>2</sub> O <sub>5</sub>	Li <sub>2</sub> O grade	Contained Li <sub>2</sub> O
Inferred Resource	10,400 kt	240 ppm	5,503k lb		
Inferred Resource	8,600 kt			1.01 %	87 kt

## Beer &amp; Co estimated mining inventory, Pilgangoora

		Ta <sub>2</sub> O <sub>5</sub> grade	lined Ta <sub>2</sub> O <sub>5</sub>	Li <sub>2</sub> O grade	lined Li <sub>2</sub> O
	25,400 kt	240 ppm	13,439k lb	1.17 %	297 kt

## Asset based Valuation

discount rate = 12.0 %	30 June 2014		10-Dec-14	
	risking	100% Product	per share	
Tabba Tabba Resources	\$ 4m	\$ 4m	0.5 c	0.6 c
Tabba Tabba Extensions	\$ 5m	\$ 3m	0.4 c	0.5 c
Strelly	\$ 2m	\$ 1m	0.1 c	0.1 c
fanking credits	\$ 1m	\$ 1m	0.1 c	0.1 c
Pilgangoora Resources	\$ 80m	\$ 32m	4.1 c	5.4 c
Pilgangoora Extension	\$ 58m	\$ 12m	1.5 c	2.3 c
fanking credits	\$ 56m	\$ 12m	1.5 c	2.3 c
Corporate	(\$6m)	(\$6m)	(0.7c)	(0.7c)
Cash / debt	(\$0m)	(\$0m)	(0.1c)	0.1 c
cash raised	\$ 8m	\$ 8m	1.0 c	0.8 c
<b>TOTAL</b>	<b>\$ 208m</b>	<b>\$ 66m</b>	<b>8 c</b>	<b>11.5 c</b>
Shares on issue	330.3m	FPO share	91.8m options	
	263.8m	issued 201	91.8m op. ex'd	
	42.8m	CNs converted		
	51.6m	new equity		

## Financial Ratios

Year ended June	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Revenue	\$A m	4	11	9	66	103
EBITDA	\$A m	(1)	1	6	4	21
EBIT	\$A m	(1)	(1)	0	4	19
NPAT (reported)	\$A m	(1)	(1)	0	2	13
Adjusted EPS (cps)		(0.3c)	(0.2c)	0.0 c	0.3 c	1.6 c
EPS Growth (%)			51 %	116 %	1,227 %	371 %
DPS (c)		0.0 c	0.0 c	0.0 c	0.2 c	2.3 c
Dividend Yield (%)			0 %	0 %	6 %	56 %
PE adj. (x)	x	(6)	(25)	162	12	3
EV / EBITDA (x)	x	(7)	28	5	9	1
EV / EBIT (x)	x	(7)	(24)	117	10	1
Gearing (%)		13 %	64 %	32 %	15 %	10 %
Return on Assets		(9%)	2 %	12 %	33 %	57 %
Return on Equity		(10%)	4 %	12 %	29 %	48 %
EBITDA Margin (%)		n/a	25 %	53 %	44 %	32 %
Interest Cover (x)	x	n/a	n/a	n/a	n/a	21.3

## Shareholdings

Neil Biddle	34,438m	5.8 %
Vaughan Blank	33,333m	5.6 %

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The analyst responsible for this research report certifies that all of the views expressed reflect his personal views about the securities and the issuer.

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