

21 April 2016

## QUARTERLY PRODUCTION REPORT 31 MARCH 2016

### SUMMARY OF PHYSICAL AND FINANCIAL DATA

	Mar-15 Quarter	Dec-15 Quarter	Mar-16 Quarter	Mar-16 Qtr vs Dec-15 Qtr	Mar-16 Qtr vs Mar-15 Qtr
	kt	kt	kt	%	%
<b>Production</b>					
Zircon	65.7	117.3	74.2	(36.7)	12.9
Rutile	20.3	45.1	25.3	(43.9)	24.6
Synthetic Rutile	1.6	52.6	52.4	(0.4)	3,175.0
<b>Total Z/R/SR Production</b>	<b>87.6</b>	<b>215.0</b>	<b>151.9</b>	<b>(29.3)</b>	<b>73.4</b>
Ilmenite	79.6	149.2	81.3	(45.5)	2.1
<b>Total Mineral Sands Production</b>	<b>167.2</b>	<b>364.2</b>	<b>233.2</b>	<b>(36.0)</b>	<b>39.5</b>
Z/R/SR sales revenue	99.1	259.0	93.5	(63.9)	(5.7)
Ilmenite and other revenue	16.1	25.2	8.6	(65.9)	(46.6)
<b>Mineral Sands Revenue A\$ million</b>	<b>115.2</b>	<b>284.2</b>	<b>102.1</b>	<b>(64.1)</b>	<b>(11.4)</b>
<b>Average AUD:USD cents</b>	<b>78.7</b>	<b>72.0</b>	<b>72.1</b>	<b>0.1</b>	<b>(8.4)</b>

### OVERVIEW

- Iluka's combined zircon/rutile/synthetic rutile production for the March quarter was 151.9 thousand tonnes, compared with 87.6 thousand tonnes in the corresponding quarter in 2015. Higher production mainly reflects the operation of the SR kiln 2, which was restarted in late March 2015. Slightly higher zircon and rutile production is due to increased utilisation of mineral separation plants (MSP) in the first quarter compared to the corresponding quarter in 2015. Planned MSP utilisation for the full year is unchanged from that previously guided and is lower than 2015.
- Combined Z/R/SR sales volumes<sup>1</sup> in the first quarter of 2016 were slightly higher when compared with the March quarter 2015, reflecting the pull forward of some rutile volumes as well as higher synthetic rutile sales, offsetting an approximate 25 per cent reduction in zircon sales. Sales of zircon in January and February were in line with the company's expectations, however sales in March were impacted by a rumoured reduction of zircon price for the second quarter by a major competitor. This was subsequently confirmed and Iluka's zircon price response was the subject of an Iluka ASX Release on 7 April 2016.
- First quarter mineral sands revenue of \$102.1 million was lower than the \$115.2 million in the March 2015 quarter as a result of lower zircon sales and limited ilmenite sales, partially offset by higher rutile and synthetic rutile sales. The lower revenue was also due to a combination of different product mix and lower average weighted received prices for products, partially offset by a decline in the AUS/USD exchange rate.
- Iluka announced on 16 February 2016 its intention to suspend mining and concentrating activities at Jacinth-Ambrosia, South Australia, for a period of 18 to 24 months. This occurred from mid-April.
- As indicated in the Mineral Sands Market section below, while zircon demand in China was lower in March, for price-related reasons described above, European zircon demand was firmer and demand in

<sup>1</sup> Iluka discloses sales volumes in the June and December Quarterly Production Reports.

the Americas was stable. In the case of high grade titanium dioxide feedstocks (rutile and synthetic rutile), a pull forward of volumes by some customers occurred in the March quarter, for the first time since 2012, which reflects both demand from pigment consumers associated with favourable paint sales trends in the later part of 2015 and the first quarter of 2016, together with lower inventories of both titanium feedstocks and pigment held through the value chain.

## **MINERAL SANDS PRODUCTION**

Iluka's production settings entering 2016 include the following:

- mining activities are not occurring in the Murray Basin following the cessation of mining at Wornack, Rownack, Pirro (WRP) at the end of the first quarter of 2015. WRP heavy mineral concentrate (HMC) stocks continue to be drawn down and processed at the Hamilton MSP. The next planned mine development in the Murray Basin is the Balranald project, which is at definitive feasibility stage;
- the Hamilton MSP is planned to operate at ~60 per cent capacity, utilising a blend of WRP HMC and Jacinth-Ambrosia HMC;
- as announced on 16 February, mining and concentrating activities at Jacinth-Ambrosia have been suspended from mid-April to allow the progressive draw down of HMC stockpiles held at site. Iluka expects the period of mining and concentrating suspension to be for 18 to 24 months, dependent on market demand. Jacinth-Ambrosia HMC is processed at both the Hamilton and Narngulu (Western Australia) MSPs;
- the Narngulu MSP is planned to run at ~50 per cent of capacity;
- the Tutunup South mine in the South West of Western Australia, continued to operate as an ilmenite feed source to SR kiln 2;
- a trial was completed to establish the ability to swing Iluka's largest kiln, SR2, from producing synthetic rutile to producing ASSR and follow up trials are planned for the second quarter to produce commercial quantities for customer testing; and
- operations in Virginia were idled in December 2015, as foreshadowed.

## Group Physical Production

	Mar-15 Quarter	Dec-15 Quarter	Mar-16 Quarter	Mar-16 Qtr vs Dec-15 Qtr	Mar-16 Qtr vs Mar-15 Qtr
	kt	Kt	kt	%	%
<b>Zircon<sup>1</sup></b>					
Eucla/Perth Basin (SAWA)	49.0	88.2	64.4	(27.0)	31.4
Murray Basin (VIC)	7.6	19.3	9.8	(49.2)	28.9
<b>Australia</b>	<b>56.6</b>	<b>107.5</b>	<b>74.2</b>	<b>(31.0)</b>	<b>31.1</b>
Virginia (USA)	9.1	9.8	-	n/a	n/a
<b>Total Zircon Production</b>	<b>65.7</b>	<b>117.3</b>	<b>74.2</b>	<b>(36.7)</b>	<b>12.9</b>
<b>Rutile</b>					
Eucla/Perth Basin (SAWA)	7.3	12.4	8.5	(31.5)	16.4
Murray Basin (VIC)	13.0	32.7	16.8	(48.6)	29.2
<b>Total Rutile Production</b>	<b>20.3</b>	<b>45.1</b>	<b>25.3</b>	<b>(43.9)</b>	<b>24.6</b>
<b>Synthetic Rutile (WA)</b>	<b>1.6</b>	<b>52.6</b>	<b>52.4</b>	<b>(0.4)</b>	<b>3,175.0</b>
<b>TOTAL Z/R/SR PRODUCTION</b>	<b>87.6</b>	<b>215.0</b>	<b>151.9</b>	<b>(29.3)</b>	<b>73.4</b>
<b>Ilmenite</b>					
Eucla/Perth Basin (SAWA)	35.2	61.4	72.1	17.4	104.8
Murray Basin (VIC)	9.2	50.8	9.2	(81.9)	0.0
<b>Australia</b>	<b>44.4</b>	<b>112.2</b>	<b>81.3</b>	<b>(27.5)</b>	<b>83.1</b>
Virginia (USA)	35.2	37.0	-	n/a	n/a
<b>Total Ilmenite</b>	<b>79.6</b>	<b>149.2</b>	<b>81.3</b>	<b>(45.5)</b>	<b>2.1</b>
<b>TOTAL MINERAL SANDS PRODUCTION</b>	<b>167.2</b>	<b>364.2</b>	<b>233.2</b>	<b>(36.0)</b>	<b>39.5</b>

<sup>1</sup> Iluka's zircon production figures include small volumes of zircon attributable to external processing arrangements.

## Physical Production – 12 Month Comparison

	12 mths to Mar-15	12 mths to Mar-16	12 mths Mar-16 vs 12 mths Mar-15
	kt	kt	%
<b>Zircon</b>			
Eucla/Perth Basin (SAWA)	234.1	312.4	33.4
Murray Basin (VIC)	84.7	56.5	(33.3)
<b>Australia</b>	<b>318.8</b>	<b>368.9</b>	<b>15.7</b>
<b>Virginia (USA)</b>	<b>26.7</b>	<b>28.2</b>	<b>5.6</b>
<b>Total Zircon Production</b>	<b>345.5</b>	<b>397.1</b>	<b>14.9</b>
<b>Rutile</b>			
Eucla/Perth Basin (SAWA)	31.5	41.1	30.5
Murray Basin (VIC)	132.7	100.4	(24.3)
<b>Total Rutile Production</b>	<b>164.2</b>	<b>141.5</b>	<b>(13.8)</b>
<b>Synthetic Rutile (WA)</b>	<b>1.6</b>	<b>215.8</b>	<b>13,387.5</b>
<b>TOTAL Z/R/SR PRODUCTION</b>	<b>511.3</b>	<b>754.4</b>	<b>47.5</b>
<b>Ilmenite</b>			
Eucla/Perth Basin (SAWA)	120.0	267.9	123.3
Murray Basin (VIC)	113.4	90.0	(20.6)
<b>Australia</b>	<b>233.4</b>	<b>357.9</b>	<b>53.3</b>
<b>Virginia (USA)</b>	<b>101.5</b>	<b>109.9</b>	<b>8.3</b>
<b>Total Ilmenite</b>	<b>334.9</b>	<b>467.8</b>	<b>39.7</b>
<b>TOTAL MINERAL SANDS PRODUCTION</b>	<b>846.2</b>	<b>1,222.2</b>	<b>44.4</b>

## MINERAL SANDS MARKET CONDITIONS

### Zircon

The first quarter of the year is typically the slowest in terms of zircon demand, particularly in China associated with the Chinese Luna New Year. 2016 was no exception, with volumes sold in January and February in line with Iluka's expectations. European demand increased year-on-year, which was reflected in Iluka's sales to key markets, and demand in the Americas was stable.

March sales in China were adversely affected by a rumoured price decrease for the second quarter by a major zircon competitor. This rumoured action was a major disincentive for customers to order until the situation was clarified. As a result, Iluka's sales volumes for zircon in March were materially lower than the company had budgeted. Iluka announced on 7 April 2016 that in response to a confirmed price reduction of ~US\$100/tonne by a major competitor, its Zircon Reference Price for the second quarter was to be reduced by ~10 per cent to ~US\$950/tonne<sup>1</sup>. The Zircon Reference Price is the benchmark against which a range of Iluka zircon products are priced. Iluka's weighted average received price can vary from this, reflecting product and customer mix as well as commercial arrangements for specific customers.

The price reduction was disappointing as feedback from customers to Iluka's idling of its operations in Virginia, United States (at the end 2015) and the suspension of mining and concentrating activities at Jacinth-Ambrosia (announced in February 2016), was generally positive and viewed as contributing to zircon market stability.

<sup>1</sup> The Zircon Reference Price reflects the price for an Iluka premium grade zircon. Weighted average received prices for any period reflect the mix of products sold (premium, standard, zircon in concentrate and zircon tailings). The prices for each product vary considerably, as does the mix of such products sold period to period.

Based on engagement with customers to date, Iluka expects a recovery in zircon volumes in the second quarter, although whether Iluka is able to fully make up for volumes deferred or foregone in the month of March will require a longer period of time to determine.

Consistent with Iluka's approach to maximising value from its product portfolio, Iluka expects to sell a combination of zircon premium and standard product and, as previously indicated, is utilising market conditions to monetise volumes of zircon in concentrate and other lower cost material it has available. This, and the provision of product to customers in the Iluka Loyalty Program, is reflected in a weighted average received zircon price which is currently below the disclosed Iluka Zircon Reference Price, which applies to Iluka's premium zircon product.

### **Titanium Dioxide Feedstocks**

As Iluka indicated previously, the majority of its high grade titanium feedstock sales of rutile and synthetic rutile are contracted for the 2016 year with opportunities to sell spot volumes to the welding and pigment markets as conditions improve.

Demand for titanium dioxide pigment (the major market for high grade feedstocks) has improved since the end of 2015, with producers reporting robust demand in the first quarter. This increased demand for pigment, combined with lower inventory levels has resulted in a number of price increase announcements by the major western pigment producers, including successive announced increases for 1 April (US\$175-200/tonne) and 1 May (US\$175/tonne). In addition, pigment demand in China has been stronger than expected resulting in four consecutive monthly price increases announced by the largest Chinese producers, including the most recent increase announced effective 1 April of US\$77/tonne.

Iluka has experienced rutile and synthetic rutile sales being brought forward by some customers and additional titanium dioxide sales volumes which, in combination, have offset the lower zircon sales volumes in the month of March.

Demand in some of the niche markets, such as titanium metal and welding have also improved, with firming of prices in these sectors. The continuation of the above trends would represent a positive dynamic for high grade feedstocks over 2016 and into 2017.

Sales of Iluka chloride ilmenite to a major customer resumed in April.

## **PLANNED NEW PRODUCTION**

### **Balranald, Murray Basin, New South Wales**

Balranald and Nepean are two rutile-rich mineral sands deposits in the northern Murray Basin, New South Wales. The Balranald development, if approved, will provide approximately eight years of rutile, zircon and associated ilmenite production. It is proposed that the Balranald development will utilise the existing Hamilton MSP.

Balranald Stage 1 definitive feasibility study (DFS) is nearing completion.

During the quarter, activities associated with the DFS included integrating the mining and material movement optimisation findings with the site infrastructure assessments, plus the commencement of early design work of mining systems as a lead activity of the detailed engineering required for project pre-execution activities. Test work to better assess the proportion of the ilmenite from Balranald which is suitable for various downstream processing technologies, including synthetic rutile, has been concluded and supports preliminary assessments. Activities to generate additional samples to assist with marketing have commenced.

As part of the statutory planning process, Iluka has received a key approval from the New South Wales State Government for the Balranald project development. Iluka will continue to work with the State and local Government on remaining approvals. The Federal Government Environmental Impact Statement has been on public exhibition and is now under final assessment prior to submission for approval. Iluka continues to inform the community of the assessments and proposed development of the project.

The timing of the Balranald project remains subject to the final results of the DFS, environmental and other approvals and economic and market conditions.

### **Cataby, Western Australia**

The Cataby mineral sands deposit, located north of Perth, is a deposit that is expected to produce ilmenite suitable for sale, or as a quality ilmenite feed source for synthetic rutile production, as well material volumes of zircon and rutile. Cataby is expected to have an economic life of approximately 8.5 years.

All DFS work has been completed and the project is at pre-execute stage, with timing dependent on market demand conditions.

Preparations for an execute decision continued with finalisation of infrastructure designs, with a number of environmental management plans being approved. The Works Approval for the construction of the Cataby mine has been received from the Department of Environment Regulation.

Various project optimisation initiatives continued in the context of the resource activity slowdown in Western Australia and will continue through project execute. Iluka has also increased execution timing flexibility by obtaining a substantial extension of the State Government approval validity period and by purchasing chloride ilmenite. Work also continues to reduce the period between an execute decision and first production.

### **Puttalam, Sri Lanka**

Iluka is currently assessing the development of a mineral sands deposit known as the Puttalam Quarry (PQ) deposit. The PQ deposit is located in the North Western Province of Sri Lanka, 170 kilometres north of the capital Colombo.

The Puttalam project focus remained on government negotiations in relation to the legal and investment terms for the development. A phased pre-feasibility study approach has been adopted, with funds approved in January 2016 to undertake a limited number of work packages to address areas including:

- collection and processing of metallurgical bulk samples;
- hydrogeology, drilling of boreholes and subsequent monitoring;
- geology; and
- environmental (soil survey).

Refer Iluka's website ([www.iluka.com](http://www.iluka.com)) – Company Overview, Projects, for more detail on these projects.

## EXPLORATION

### Scott River Plain, Western Australia

Iluka completed resource modelling of the heavy mineral (HM) mineralisation found in E7002464 (Figure 1). The work was undertaken under the terms of the Farm-In and Exploration Joint Venture Agreement between Iluka Resources and Governor Broome Sands Pty Ltd.

Under the Farm-In and Exploration Joint Venture Agreement between Iluka and Governor Broome Sands Pty Ltd, Iluka has met the initial expenditure requirement under the terms of the agreement and is now the registered holder of 51 per cent of the tenement and a formal joint venture has been established. Iluka has provided the relevant reports and data to Governor Broome Sands Pty Ltd, as per the terms of the joint venture.

### Carnarvon, Western Australia

Iluka completed a reconnaissance visit and sampling program on E 0902034 (Figure 2). The exploration activities are being undertaken under the terms of the Farm-In and Exploration Joint Venture Agreement between Iluka and Meehan Minerals Pty Ltd. Under the Farm-In and Exploration and Exploration Joint Venture Agreement Iluka can earn 51 per cent of the tenement by funding exploration.

### Murray Basin, Victoria/New South Wales

Iluka completed a drilling program in the Murray Basin on tenement EL 4282 (Figure 3). For the quarter, 78 holes were drilled for 2,457 metres. The drilling on EL 4282 targeted the lateral extents of the WIM50 and WIM100 heavy mineral prospects which are both within the Loxton Parilla sands that host the HM accumulations. Samples are currently being processed at Iluka's exploration laboratory in Hamilton, Victoria.

Figure 1 Scott River Plain, Western Australia

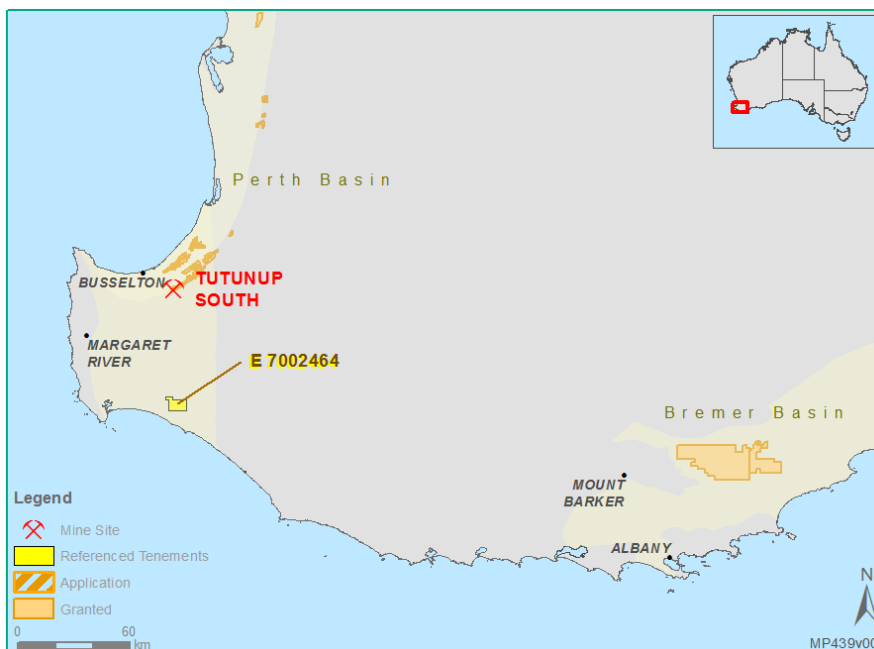
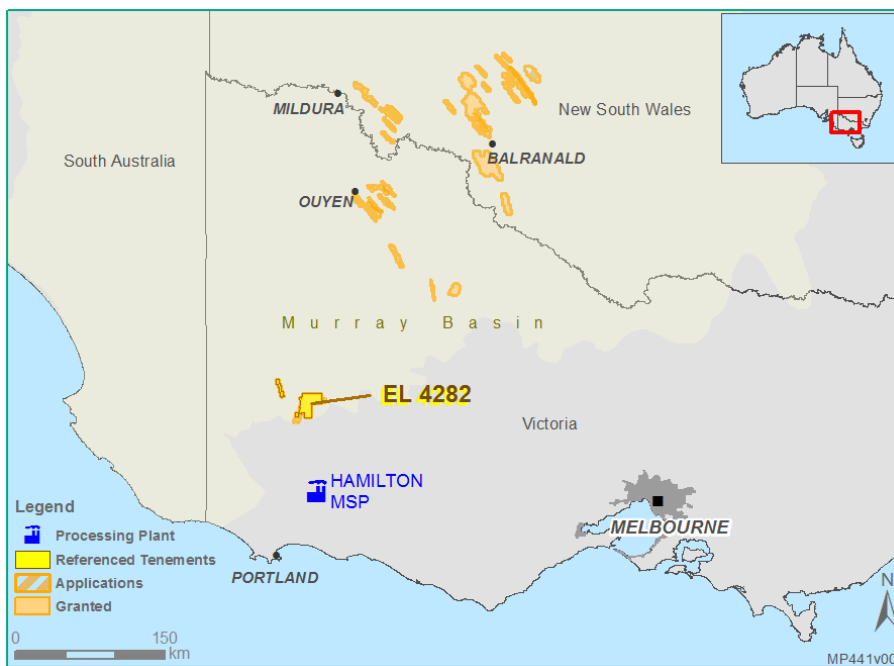


Figure 2 Carnarvon, Western Australia



Figure 3 Murray Basin Tenements





## **Project Generation**

Iluka is continuing exploration activities, from initial prospecting and tenement acquisition to drilling activity for mineral sands, in several areas in both Australia and at early stages in six international jurisdictions.

During the quarter, Iluka prepared for second phase aerial geophysics in Kazakhstan for mineral sands targets within the country. This will be followed up with drilling during the first half of 2016, if suitable anomalies are found.

In March, an Option and Joint Venture Agreement was executed with Société D'Exploration Minière Vior Inc. (Vior) in respect of its Foothills ilmenite-rutile project in Quebec, Canada. Iluka will fund A\$0.4 million in year one for Vior to complete an agreed exploration program. Iluka is then eligible to earn 51 per cent of the project and a Joint Venture is established, or Iluka can withdraw. A further A\$2.1million expenditure over the following three years will enable Iluka to earn a 90 per cent interest in the Joint Venture. Geophysical surveys were conducted in March, with results expected in the second quarter.

## **Exploration – New Commodities**

Iluka continues to assess non mineral sands prospectivity on its tenements and also to evaluate other proximate opportunities. Iluka completed air-core exploration drilling at the nickel sulphide focussed Fowler Project (EL 5165), located south east of Jacinth-Ambrosia. A total of 32 holes for 1,285 metres of drilling were completed with several interpreted mafic and ultramafic intrusions intersected. The air-core drilling and further targeted geophysical surveys will continue in the second quarter of 2016.

At the Phar Lap Project (EL 5123), an Iluka Farm-In Agreement with Monax Mining Limited (Monax) near Coober Pedy, South Australia, Iluka continued preliminary geological and geophysical interpretation of results from diamond drilling completed in 2015. Assessment will continue in the second quarter.

## **Investment market and media enquiries:**

Dr Robert Porter

General Manager, Investor Relations

Phone: + 61 (0) 3 9225 5008

Mobile: +61 (0) 407 391 829

Email: [robert.porter@iluka.com](mailto:robert.porter@iluka.com)

**APPENDIX 1 - OPERATING MINES – PHYSICAL DATA**  
**3 Months to 31 March 2016**

	Jacinth-Ambrosia	Murray Basin	Western Australia	Australia Total	Virginia	Group Total
<b>Mining</b>						
Overburden Moved kbcm	403	-	199	602	-	<b>602</b>
Ore Mined kt	2,190	-	427	2,617	-	<b>2,617</b>
Ore Grade HM %	6.4	-	11.4	7.2	-	<b>7.2</b>
VHM Grade %	5.6	-	10.1	6.4	-	<b>6.4</b>
<b>Concentrating</b>						
HMC Produced kt	131	-	58	189	-	<b>189</b>
VHM Produced kt	116	-	52	168	-	<b>168</b>
VHM in HMC Assemblage %	88.1	-	88.6	88.2	-	<b>88.2</b>
Zircon	57.2	-	16.5	44.7	-	<b>44.7</b>
Rutile	6.5	-	4.7	6.0	-	<b>6.0</b>
Ilmenite	24.3	-	67.4	37.6	-	<b>37.6</b>
<b>Processing (HMC to finished product at a mineral separation plant)</b>						
HMC Processed kt	124	44	74	242	-	<b>242</b>
Finished Product <sup>1</sup> kt						
Zircon	63.8	9.8	0.6	74.2	-	<b>74.2</b>
Rutile	8.5	16.8	-	25.3	-	<b>25.3</b>
Ilmenite (saleable/upgradeable)	27.5	9.2	44.6	81.3	-	<b>81.3</b>
Synthetic Rutile Produced kt			52.4	52.4		<b>52.4</b>

An explanation of the Iluka's physical flow information can be obtained from [Iluka's Briefing Paper - Iluka Physical Flow Information](#) on the company's website. The nature of the Iluka operations base means that HMC from various mining locations can be processed at various mineral separation plants.

**Explanatory Comments on Terminology**

**Overburden moved** (bank cubic metres) refers to material moved to enable mining of an ore body.

**Ore mined** (thousands of tonnes) refers to material moved containing heavy mineral ore.

**Ore Grade HM %** refers to percentage of heavy mineral (HM) found in a deposit.

**VHM Grade %** refers to percentage of valuable heavy mineral (VHM) - titanium dioxide (rutile and ilmenite), and zircon found in a deposit.

**Concentrating** refers to the production of heavy mineral concentrate (HMC) through a wet concentrating process at the mine site, which is then transported for final processing into finished product at one of the company's two Australian mineral processing plants, or the Virginia mineral processing plant.

**HMC produced** refers to HMC, which includes the valuable heavy mineral concentrate (zircon, rutile, ilmenite) as well as other non-valuable heavy minerals (gangue).

**VHM produced** refers to an estimate of valuable heavy mineral in heavy mineral concentrate expected to be processed.

**VHM produced and the VHM assemblage** - provided to enable an indication of the valuable heavy mineral component in HMC.

**HMC processed** provides an indication of material emanating from each mining operation to be processed.

**Finished product** is provided as an indication of the finished production (zircon, rutile, ilmenite – both saleable and upgradeable) attributable to the VHM in HMC production streams from the various mining operations. Finished product levels are subject to recovery factors which can vary. The difference between the VHM produced and finished product reflects the recovery level by operation, as well as processing of finished material/concentrate in inventory. Ultimate finished product production (rutile, ilmenite, and zircon) is subject to recovery loss at the processing stage – this may be in the order of 10 per cent.

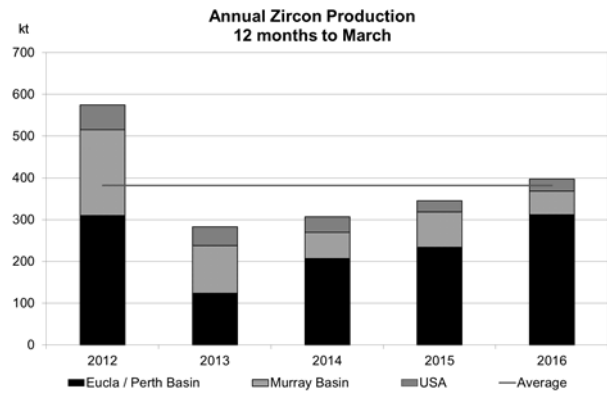
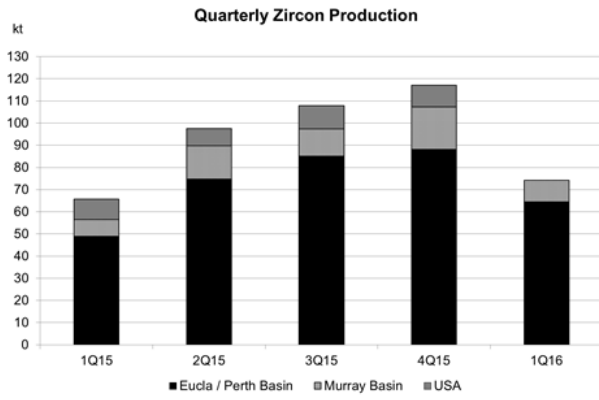
**Ilmenite** is produced for sale or as a feedstock for synthetic rutile production.

Typically, 1 tonne of upgradeable ilmenite will produce between 0.56 to 0.60 tonnes of SR. Iluka also purchases external ilmenite for its synthetic rutile production process.

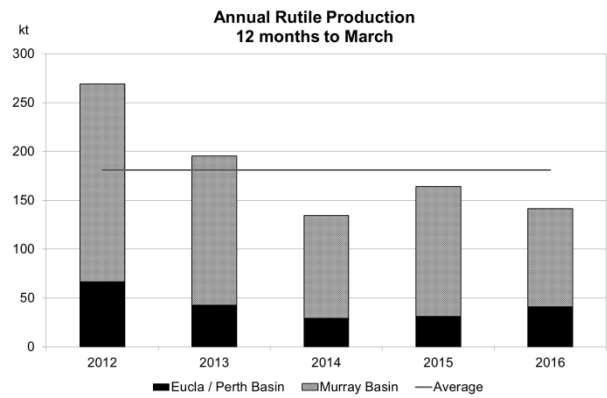
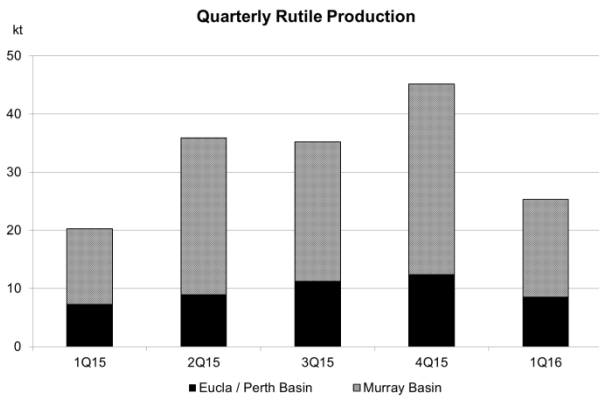
<sup>1</sup> Finished product includes material from heavy mineral concentrate (HMC) initially processed in prior periods.

## APPENDIX 2 – PRODUCTION SUMMARIES

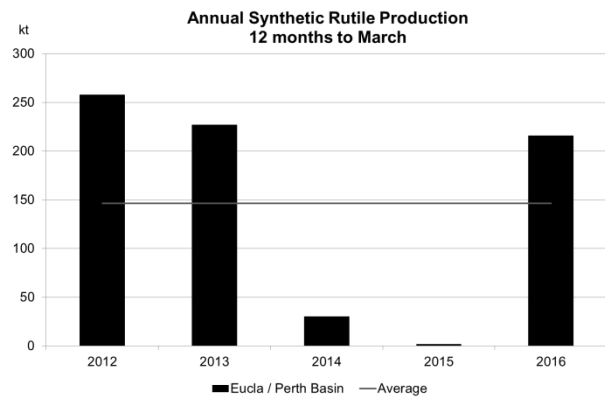
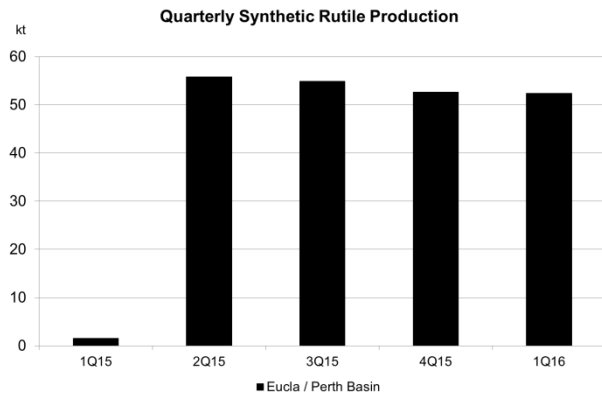
### Zircon



### Rutile



## Synthetic Rutile



## Ilmenite

