

16 April 2014

## QUARTERLY PRODUCTION REPORT 31 MARCH 2014

### SUMMARY OF PHYSICAL AND FINANCIAL DATA

	Mar-13 Quarter	Dec-13 Quarter	Mar-14 Quarter	Mar-14 Qtr vs Dec-13 Qtr	Mar-14 Qtr vs Mar-13 Qtr
	kt	kt	kt	%	%
<b>Production</b>					
Zircon	56.1	68.5	77.8	13.6	38.7
Rutile	25.8	22.2	33.2	49.5	28.7
Synthetic Rutile	29.0	-	-	-	(100.0)
<b>Total Z/R/SR Production</b>	<b>110.9</b>	<b>90.7</b>	<b>111.0</b>	<b>22.4</b>	<b>0.1</b>
Ilmenite	160.9	116.4	110.2	(5.3)	(31.5)
<b>Total Mineral Sands Production<sup>1</sup></b>	<b>271.8</b>	<b>207.1</b>	<b>221.2</b>	<b>6.8</b>	<b>(18.6)</b>
Z/R/SR sales revenue	121.3	217.4	94.8	(56.4)	(21.8)
Ilmenite and other revenue	18.6	16.9	35.9	112.4	93.0
<b>Mineral Sands Revenue A\$ million</b>	<b>139.9</b>	<b>234.3</b>	<b>130.7</b>	<b>(44.2)</b>	<b>(6.6)</b>
<b>Average AUD:USD cents</b>	<b>103.9</b>	<b>92.9</b>	<b>89.7</b>	<b>3.4</b>	<b>13.7</b>

### OVERVIEW

- Iluka continued to operate at below full production rates, as the company has previously advised, through a combination of lower mineral separation plant utilisation and asset idling.
- Zircon production in the quarter increased relative to the December 2013 quarter and the March 2013 quarter, in line with a planned production increase in 2014 as demand recovers and finished goods inventory is drawn down.
- Higher rutile production in the quarter relative to the December 2013 and March 2013 quarters, reflects a return to normal mining operations in the Murray Basin. There was no synthetic rutile production in the quarter (synthetic rutile capacity was idled in the June quarter 2013).
- Lower ilmenite production in the quarter relative to the March 2013 quarter reflects the idling of two mining operations in Western Australia (Eneabba and Tutunup South), as well as lower ilmenite production from the Virginia operation.
- Mineral sands sales revenue (including ilmenite and by-products) for the 3 months to 31 March 2014 was \$130.7 million, compared with \$139.9 million in the same period in 2013 and reflects subdued sales volumes (refer Mineral Sands Market Conditions section below) and materially lower received prices period-on-period.

<sup>1</sup> Total mineral sands production includes ilmenite available for upgrading to synthetic rutile and ilmenite that is available for sale. For both commercial reasons and given the company's increased flexibility in utilising ilmenite production from multiple sources for upgrading to synthetic rutile, the company no longer separates ilmenite production into saleable and upgradeable components. Iluka does not report sales volumes in the March and September quarters. The relative utilisation of ilmenite for upgrading or sale is more apparent with the reporting of sales volumes in the June and December quarterly reports.

## **MINERAL SANDS MARKET CONDITIONS**

During the first quarter Iluka observed numerous positive on-ground market indications regarding a likely recovery in demand for both zircon and high grade titanium dioxide feedstocks during 2014.

Indications include inventory normalisation downstream of Iluka and an increase in enquiries regarding availability of Iluka products, but this interest is not as yet reflected in all geographies or in the prompt dispatch of material volumes to customers.

As a result, the anticipated slow start to the year in terms of deliveries was evident in the quarter, which was also associated with: northern hemisphere winter conditions; the Chinese New Year; and the timing of discussions with key customers about deliveries beyond the first quarter.

Second quarter market conditions are expected to provide a better insight into the likely trend of demand recovery across key product markets.

Iluka does not provide price forecasts and does not provide price updates unless a material change in weighted average received prices in its markets has occurred. Seasonal impacts and the anticipated slow start to 2014, referred to below for high grade titanium dioxide ore sales, have been associated with some price erosion in high grade titanium ore markets relative to the fourth quarter of 2013<sup>1</sup>.

### **Zircon**

Reasonable market demand conditions continue to be evident in the China ceramic and North American industrial markets.

In China, customer zircon feedstock inventory has been low and as factories have ramped up after the holiday period, product inquiries and sales have increased in line with expectations. The fused zirconia market is showing signs of recovery with some major customers operating at full capacity and smaller customers increasing orders.

Demand continues to increase in North America as zirconia producers respond to increased orders from the steel refractory and other industrial manufacturing markets.

Market conditions and customer sentiment in Europe and Asian markets, including Japan, remain subdued. In Europe, some pressure on zircon value chain price structures has been evident, in large measure associated with market share based competition by downstream customers. In these circumstances, Iluka has chosen to step away from some potential sales.

In India, tile manufacturing activity has recommenced in the main ceramic production province after protracted industrial disputes in November and December.

### **High Grade Titanium Dioxide Feedstocks**

Rutile sales have commenced the year in line with Iluka's expectations. Synthetic rutile shipments from existing inventory are scheduled to commence in the second quarter.

While high grade titanium dioxide feedstock sales volumes dispatched to the pigment sector in the first quarter were low as anticipated, enquiries regarding product availability increased.

Niche markets, such as welding in Japan, Korea and Southeast Asia, are showing signs of strengthening demand.

Iluka has quantities of both rutile and synthetic rutile placed with emerging Chinese chloride pigment producers for trials in recently, and to be, commissioned plants.

## **PRODUCTION**

---

<sup>1</sup> Iluka's most recent comments on weighted average received prices were made at the time of the December Quarterly Production Report and Full Year Results, and are also contained (along with physical and financial guidance parameters) in the 21 February disclosure, Key Physical and Financial Parameters 2014.

Iluka operated its Australian mining and separation assets in a manner consistent with the production settings outlined at the time of the company's full year results announcement (refer slide 14 of the 2013 Full Year Results slide presentation available on the Iluka website [www.iluka.com](http://www.iluka.com)).

This has entailed lower than usual mineral separation plant utilisation to enable the progressive drawdown of finished goods inventory, particularly zircon, and reduced transport and operating costs. At the company's two Australian operating mines, Jacinth-Ambrosia in South Australia and Wornack, Rownack and Pirro (WRP) in Victoria, mining operations continued at essentially full utilisation rates. Consistent with the settings for 2013, the Jacinth-Ambrosia mine remained on its original mine development pathway, while at WRP, the mining operations operated at near full utilisation. Both settings are designed to optimise unit cash cost outcomes for the production of heavy mineral concentrate (HMC), which in the case of WRP is likely to entail a build of HMC levels over 2014, which will be drawn down following the completion of planned mining in the first half of 2015 and before the commencement of mining at the next planned mine development at Balranald in New South Wales, scheduled for mid-2016.

At Jacinth-Ambrosia, HMC is being transported for processing at more usual rates, in line with expected continued zircon demand recovery in 2014. Jacinth-Ambrosia HMC is being processed at both the Nargulu mineral separation plant in Western Australia, which is operating at approximately 50 per cent utilisation, and at Hamilton in Victoria. This plant is taking an 80/20 per cent blend of WRP and Jacinth-Ambrosia concentrate respectively.

Iluka's mining operation in Western Australia, Tutunup South, remains idled associated with the idling of all synthetic rutile kilns in the State, as the company has previously advised.

In Virginia mining continued at both the Concord and Brink mines in the remaining lower grade sections of the deposits on a 24/7 basis. The mineral separation plant continued to be operated at a reduced capacity.

The Concord mining operation is scheduled to be idled in the second quarter of 2014, in line with the plan to draw down on available finished goods inventory.

Iluka's cash cost of production is trending year-to-date in line with the guidance the company provided at the time of the full year results (Refer Key Physical and Financial Parameters Iluka 2014, 21 February 2014).

## GROUP MINERAL SANDS PRODUCTION

The following table details total Iluka production by product group, with the source of that production attributed to the regional operating mines and basins. Processing of final product occurs, in Australia, at one of two mineral separation plants, Hamilton in Victoria and Narngulu in Western Australia. All United States material is processed at the Stony Creek mineral separation plant in Virginia. A similar table showing a 12 month comparison is on page 5. Given the integrated nature of Iluka's Australian operations, heavy mineral concentrate is capable of being processed into final product at one or both of the Australian mineral processing facilities. Appendix 1 provides details of the physical data for operating mines.

### Physical Production

	Mar-13 Quarter	Dec-13 Quarter	Mar-14 Quarter	Mar-14 Qtr vs Dec-13 Qtr	Mar-14 Qtr vs Mar-13 Qtr
	kt	kt	kt	%	%
<b>Zircon<sup>1</sup></b>					
Eucla/Perth Basin (SAWA)	32.8	50.8	54.4	7.1	65.9
Murray Basin (VIC)	13.3	7.9	15.9	101.3	19.5
<b>Australia</b>	<b>46.1</b>	<b>58.7</b>	<b>70.3</b>	<b>19.8</b>	<b>52.5</b>
<b>Virginia (USA)</b>	<b>10.0</b>	<b>9.8</b>	<b>7.5</b>	<b>(23.5)</b>	<b>(25.0)</b>
<b>Total Zircon Production</b>	<b>56.1</b>	<b>68.5</b>	<b>77.8</b>	<b>13.6</b>	<b>38.7</b>
<b>Rutile</b>					
Eucla/Perth Basin (SAWA)	9.5	7.4	5.5	(25.7)	(42.1)
Murray Basin (VIC)	16.3	14.8	27.7	87.2	69.9
<b>Total Rutile Production</b>	<b>25.8</b>	<b>22.2</b>	<b>33.2</b>	<b>49.5</b>	<b>28.7</b>
<b>Synthetic Rutile (WA)</b>	<b>29.0</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>(100.0)</b>
<b>TOTAL Z/R/SR PRODUCTION</b>	<b>110.9</b>	<b>90.7</b>	<b>111.0</b>	<b>22.4</b>	<b>0.1</b>
<b>Ilmenite</b>					
Eucla/Perth Basin (SAWA)	91.9	25.4	17.8	(29.9)	(80.6)
Murray Basin (VIC)	21.1	51.7	63.9	23.6	202.8
<b>Australia</b>	<b>113.0</b>	<b>77.1</b>	<b>81.7</b>	<b>6.0</b>	<b>(27.7)</b>
<b>Virginia (USA)</b>	<b>47.9</b>	<b>39.3</b>	<b>28.5</b>	<b>(27.5)</b>	<b>(40.5)</b>
<b>Total Ilmenite</b>	<b>160.9</b>	<b>116.4</b>	<b>110.2</b>	<b>(5.3)</b>	<b>(31.5)</b>
<b>TOTAL MINERAL SANDS PRODUCTION</b>	<b>271.8</b>	<b>207.1</b>	<b>221.2</b>	<b>6.8</b>	<b>(18.6)</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-13	12 mths to Mar-14	12 mths Mar-14 vs 12 mths Mar-13
	kt	kt	%
<b>Zircon</b>			
Eucla/Perth Basin (SAWA)	123.8	207.3	67.4
Murray Basin (VIC)	114.1	62.4	(45.3)
<b>Australia</b>	<b>237.9</b>	<b>269.7</b>	<b>13.4</b>
<b>Virginia (USA)</b>	<b>45.7</b>	<b>37.1</b>	<b>(18.8)</b>
<b>Total Zircon Production</b>	<b>283.6</b>	<b>306.8</b>	<b>8.2</b>
<b>Rutile</b>			
Eucla/Perth Basin (SAWA)	42.8	29.3	(31.5)
Murray Basin (VIC)	152.7	105.1	(31.2)
<b>Total Rutile Production</b>	<b>195.5</b>	<b>134.4</b>	<b>(31.3)</b>
<b>Synthetic Rutile (WA)</b>	<b>226.7</b>	<b>30.0</b>	<b>(86.8)</b>
<b>TOTAL Z/R/SR PRODUCTION</b>	<b>705.8</b>	<b>471.2</b>	<b>(33.2)</b>
<b>Ilmenite</b>			
Eucla/Perth Basin (SAWA)	290.3	137.1	(52.8)
Murray Basin (VIC)	139.4	226.5	62.5
<b>Australia</b>	<b>429.7</b>	<b>363.6</b>	<b>(15.4)</b>
<b>Virginia (USA)</b>	<b>209.3</b>	<b>170.2</b>	<b>(18.7)</b>
<b>Total Ilmenite</b>	<b>639.0</b>	<b>533.8</b>	<b>(16.5)</b>
<b>TOTAL MINERAL SANDS PRODUCTION</b>	<b>1,344.8</b>	<b>1,005.0</b>	<b>(25.3)</b>

## PLANNED NEW PRODUCTION

### West Balranald, 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, would provide the potential for approximately eight years of rutile, zircon and associated ilmenite products. It is proposed that the Balranald development would follow the completion of mining at Woorneck, Rownack and Pirro and utilise the existing Hamilton mineral separation plant. Dependent on the outcome of the definitive feasibility study and the form of development, as well as market conditions, Balranald has the potential to produce approximately 160 thousand tonnes of rutile; approximately 130 thousand tonnes of zircon and approximately 700 thousand tonnes of ilmenite in total across both chloride and sulphate grade material on average per annum.

The planned activities associated with the definitive feasibility study continued including site establishment and drilling for an extensive hydrogeological pilot programme, followed by the detailed engineering required for project execution. Test work to better assess the proportion of the ilmenite from Balranald suitable for various downstream processing technologies continued during the quarter. Iluka also continued progress with all regulatory approvals.

Environmental approvals planning work continues as a precursor to the submission of an Environmental Impact Statement, planned currently for early 2015.

## **Cataby, Western Australia**

The Cataby mineral sands deposit, located north of Perth, is a chloride ilmenite deposit that is also expected to produce material levels of zircon. Subject to study completion and approvals, Cataby has the potential to produce annual volumes of approximately 330 thousand tonnes of chloride ilmenite (suitable for sale or as a feed source for synthetic rutile production); approximately 55 thousand tonnes of zircon and approximately 30 thousand tonnes of rutile over an initial 6 years economic life, which is potentially extendable.

Process flow diagrams for the mining unit and wet concentrator plant were completed during the quarter. Groundwater modelling continued during the quarter and is expected to be completed in the second quarter of 2014.

Discussions have occurred with various stakeholder groups including the indigenous native title claimant groups.

## **Eucla Basin Satellite Deposits, South Australia**

Iluka has undertaken a scoping study on the Sonoran, Atacama and Typhoon satellite deposits in close proximity to the Jacinth-Ambrosia operation in the Eucla Basin. Chloride ilmenite from these deposits is expected to be suitable as a feed source to Iluka's synthetic rutile kilns or for direct sale. The deposits would also produce associated zircon. The pre-feasibility study is underway and on schedule for completion in 2014, for the potential development of one or more of these deposits.

During the quarter, the following activities occurred:

- discussions continued for a formal Native Title Mining Agreement;
- hydrogeological, geotechnical and soils survey drilling programmes completed;
- a geo-metallurgical test work programme commenced at Iluka's Capel Minerals Testing Facility;
- pre-concentrator and wet concentrator plant test work programmes for Sonoran and Typhoon were completed;
- conceptual engineering design works have commenced; and
- a review of the geological drilling data for Atacama has been concluded and the findings have shown improvements to the Mineral Resource.

## **Hickory, Virginia, United States of America**

The Hickory project is located in Dinwiddie County, Virginia, approximately 19 kilometres west of the existing Iluka Stony Creek mineral separation plant and includes unmined portions of the Old Hickory ore body. The Hickory project, if approved, would help extend the life of operations in Virginia by approximately six to ten years, producing quality chloride grade ilmenite and an associated zircon production stream. Ore concentrated at Hickory would be trucked to the existing mineral separation plant at Stony Creek, Virginia for processing into final products.

Iluka has previously undertaken mining operations over parts of the project area from 1995 to 2009. The mining and concentrating operations ceased in January 2009 when the economic reserves were depleted. The Old Hickory concentrator was subsequently moved to the Brink deposit. A definitive feasibility study was completed for the Hickory project in December 2012. During 2013, the project progressed detailed engineering activities including infill drilling and ore sampling; additional mineral processing tests; detailed construction designs for the concentrator plant, mine, and tailings areas; bid documents preparation; acquisition of construction quotes; and securing of environmental and operating permits.

During the quarter, work focused on optimising mining and tailings plans.

## **Aurelian Springs, North Carolina, United States of America**

The Aurelian Springs project involves a feasibility study for the potential development of a mineral sand deposit located in Halifax County, North Carolina, approximately 90 kilometres south of Iluka's mineral separation plant at Stony Creek, Virginia. The evaluation is based currently on the relocation of the Concord mining unit and concentrator plant to Aurelian Springs.. The mine is capable of producing chloride ilmenite and an associated zircon production stream, and would extend the economic life of Iluka's current United States' mineral sands operation for approximately 11 years.

The pre-feasibility study was completed in 2013 in accordance to plan, and the project has progressed to the definitive feasibility stage which will be completed in 2014. One key outcome of the pre-feasibility study has been confirmation that the ilmenite produced is suitable not only for use in the chloride pigment manufacturing process, but also the sulphate pigment manufacturing process, increasing the global marketability of the product.

The definitive feasibility study work includes acquisition of the remaining land and mineral rights, securing of permits, detailing a work plan for relocation of the mine and concentrator, and developing a detailed cost estimate and schedule. During the quarter, the following work was progressed:

- in-fill drilling and sample analysis;
- confirmation of additional water supply wells;
- bulk heavy mineral concentrate sample testing;
- completion of competitive bidding for the design work associated with mineral separation plant upgrade;
- permit acquisition work; and
- detailed engineering for the Concord concentrator plant relocation.

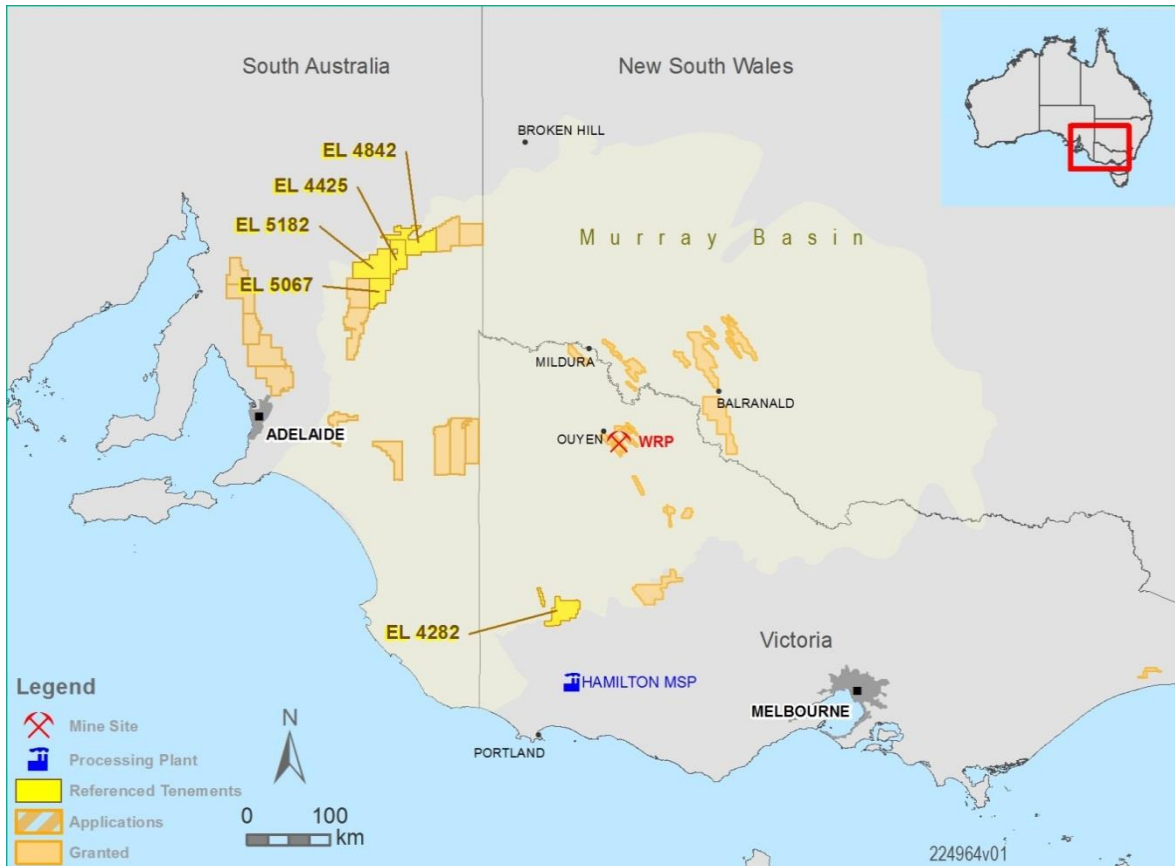
## **EXPLORATION**

### **Murray Basin**

Exploration activity during the quarter focussed in the Murray Basin and included greenfields drilling at two locations:

- continuation of drilling on Delamerian Project on EL 4425, EL 4842, EL 5067 and EL 5182; and
- commencement of greenfields drilling in the Douglas region of south west Victoria on EL 4282.

**Figure 1 Murray Basin Tenements and Recent Areas of Exploration Activity**



### **Project Generation**

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

Iluka has been granted 57 new exploration tenements, covering almost 1000 km<sup>2</sup> in north eastern Brazil.

In Sri Lanka, Iluka completed the establishment of an in-country presence and progressed regulatory discussions. A scoping study is currently being carried out before the planned commencement of a pre-feasibility study for the potential development of the large, long life ilmenite resource at Puttalam.

### **Investment market and media inquiries:**

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 2014**

	Jacynth- Ambrosia	Murray Basin	Western Australia	Australia Total	Virginia	Group Total
<b>Mining</b>						
Overburden Moved kbcm	501.7	3,643.2	-	4,144.9	-	<b>4,144.9</b>
Ore Mined kt	1,826.9	779.5	-	2,606.4	1,115.8	<b>3,722.2</b>
Ore Grade HM %	7.6	32.0	-	14.9	6.2	<b>12.3</b>
VHM Grade %	6.7	28.6	-	13.2	4.8	<b>10.7</b>
<b>Concentrating</b>						
HMC Produced kt	125.5	116.3	-	241.8	70.9	<b>312.7</b>
VHM Produced kt	110.3	104.3	-	214.6	48.6	<b>263.2</b>
VHM in HMC Assemblage %	87.9	89.7	-	88.8	68.5	<b>84.2</b>
Zircon	57.6	25.0	-	41.9	16.4	<b>36.1</b>
Rutile	6.1	38.1	-	21.5	-	<b>16.6</b>
Ilmenite	23.6	25.7	-	24.6	52.1	<b>30.8</b>
HMC Processed kt	86.0	71.6	5.2	162.8	56.4	<b>219.2</b>
Finished Product <sup>1</sup> kt						
Zircon	48.6	15.9	5.8	70.3	7.5	<b>77.8</b>
Rutile	5.5	27.7	-	33.2	-	<b>33.2</b>
Ilmenite	17.8	63.9	-	81.7	28.5	<b>110.2</b>
Synthetic Rutile Produced kt			-	-		-

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 [www.iluka.com](http://www.iluka.com), under Investor Relations, Mineral Sands Briefing Material. The nature of the Iluka operations base means that HMC from various mining locations can be processed at various mineral separation plants.

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

## 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. In the case of Murray Basin it excludes grade attributable to low quality, unsaleable ilmenite some which is returned to the mine.

**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.

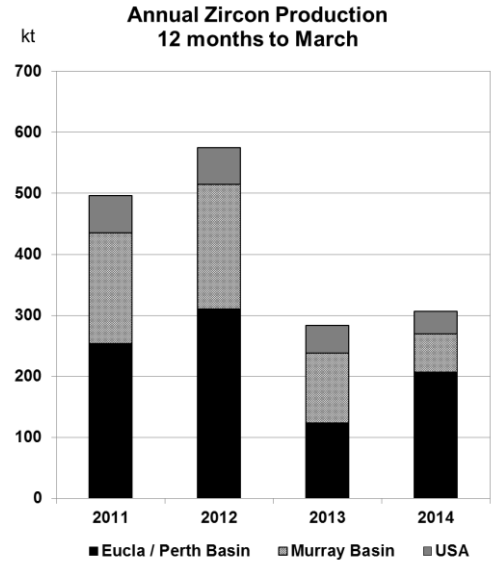
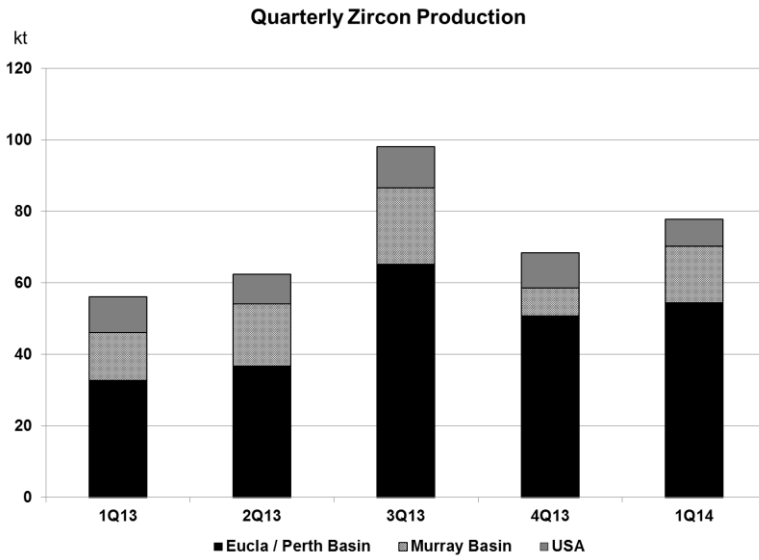
**Ilmenite** is produced for sale or as a feedstock for synthetic rutile production.

Typically, 1 tonne of upgradeable ilmenite will produce between 0.58 to 0.62 tonnes of SR. Iluka also purchases external ilmenite for its synthetic rutile production process.

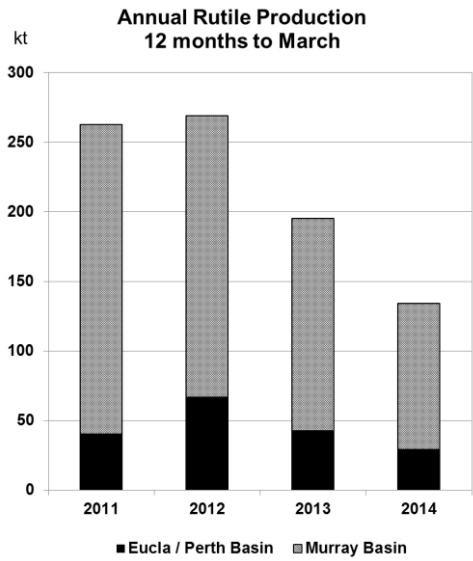
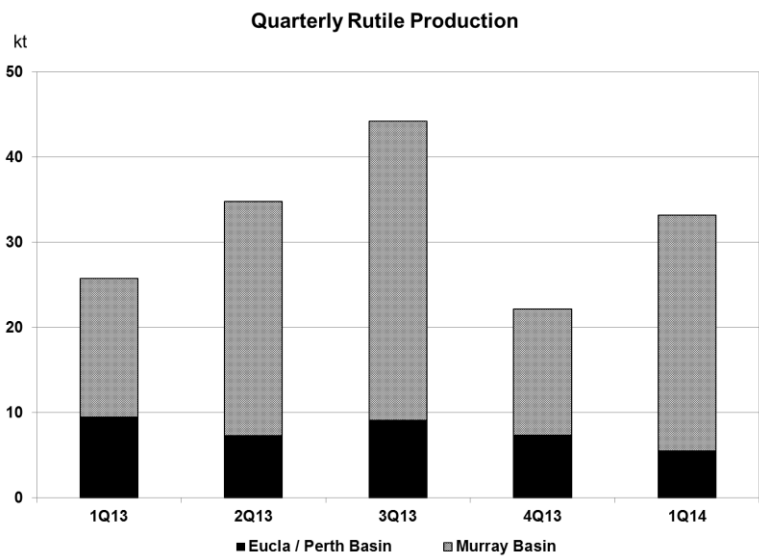
Refer Iluka's website [www.iluka.com](http://www.iluka.com) – Mineral Sands Technical Information for more detailed information on the mineral sands mining and production process.

## APPENDIX 2 – PRODUCTION SUMMARIES

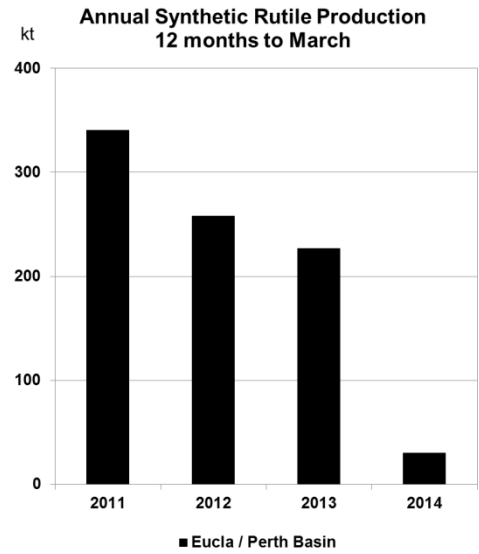
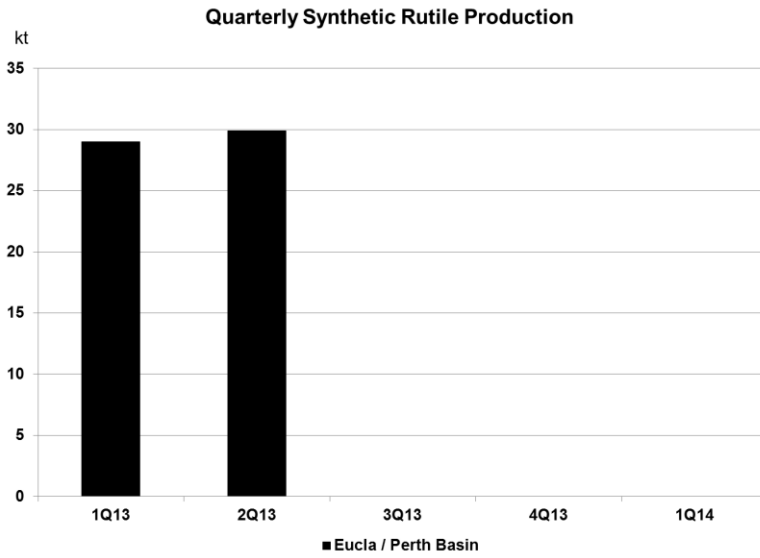
### Zircon



### Rutile



## Synthetic Rutile



## Ilmenite

