

17 January 2013

## QUARTERLY PRODUCTION REPORT 31 DECEMBER 2012

### OVERVIEW

- Production volumes year-on-year were lower, with total zircon, rutile and synthetic rutile (Z/R/SR) production volumes of 811.8 thousand tonnes, compared with 1,168.5 thousand tonnes in 2011, a 30.5 per cent reduction. Lower production year-on-year reflects the lower demand environment and Iluka's exercise of production flexibility in light of market conditions. Zircon production, in particular, was reduced progressively during the year. Further production response measures undertaken in the latter part of the year and planned for the first part of 2013 are outlined on page 4 of this report, including the intention to idle the Eneabba mining operation (Mid West, Western Australia) in March.
- Combined Z/R/SR sales volumes for the 12 months to 31 December 2012 were 488.9 thousand tonnes, compared with 1,038.1 thousand tonnes in 2011, a 52.9 per cent decrease. As the company has commented upon on previous occasions, lower sales volumes were influenced by a combination of external factors, including: low demand associated with global economic conditions and fragile business confidence levels; inventory de-stocking and lower levels of zircon usage in tile manufacturing in China.
- Mineral sands sales revenue for the three months to 31 December 2012 was \$182.5 million (December quarter 2011: \$434.0 million). Revenue for the 12 months to 31 December 2012 was \$1,069.8 million (2012: \$1,536.7 million), a 30.4 per cent decline year-on-year.
- The lower sales revenue reflects a material reduction in the sale of Iluka's principal and higher value products of zircon, rutile and synthetic rutile in 2012, compared with 2011, influenced by the factors referred to previously, despite weighted average 2012 full year Z/R/SR prices being 41.5 per cent higher than 2011.
- Revenue per tonne of Z/R/SR sold during 2012 of \$1,991 was 34.5 per cent higher than the corresponding 2011 figure of \$1,480 per tonne. There was a weakening in prices received, especially in the latter part of the third quarter and into the fourth quarter (refer Iluka's ASX Release, Mineral Sands Market Update, 13 December 2012), which meant that the revenue per tonne of Z/R/SR in the second half of \$1,654 of Z/R/SR was lower than the first half revenue per tonne of \$2,255.
- Iluka's total cash costs of production for the full year of \$583.5 million were below Iluka's guidance level and 6.3 per cent lower than 2011 cash production costs of \$628.9 million. Unit cash costs of production of \$719 per tonne of Z/R/SR increased relative to the 2011 level of \$537 per tonne by 33.9 per cent, reflecting materially lower production in 2012.

## Summary Physical and Financial Data

	Dec-11 Quarter	Dec-12 Quarter	12 mth to Dec-11	12 mth to Dec-12	12 mth Dec-11 vs 12 mth Dec-12
	kt	kt	kt	kt	%
<b>Production</b>					
Zircon	148.4	56.5	601.5	343.2	(42.9)
Rutile	65.9	56.7	281.3	220.3	(21.7)
Synthetic Rutile	68.7	52.7	285.7	248.3	(13.1)
<b>Total Z/R/SR Production</b>	<b>283.0</b>	<b>165.9</b>	<b>1,168.5</b>	<b>811.8</b>	<b>(30.5)</b>
Saleable Ilmenite	111.8	66.7	459.7	385.6	(16.1)
<b>Total Mineral Sands Production<sup>1</sup></b>	<b>394.8</b>	<b>232.6</b>	<b>1,628.2</b>	<b>1,197.4</b>	<b>(26.5)</b>
Upgradeable Ilmenite	60.5	49.1	201.9	288.5	42.9
<b>Sales</b>					
Zircon			514.5	213.8	(58.4)
Rutile			265.9	105.5	(60.3)
Synthetic Rutile			257.7	169.6	(34.2)
<b>Total Z/R/SR Sales</b>			<b>1,038.1</b>	<b>488.9</b>	<b>(52.9)</b>
Ilmenite			570.9	443.2	(22.4)
<b>Total Mineral Sands Sales</b>			<b>1,609.0</b>	<b>932.1</b>	<b>(42.1)</b>
<b>Mineral Sands Revenue<sup>2</sup> A\$ million</b>	<b>434.0</b>	<b>182.5</b>	<b>1,536.7</b>	<b>1,069.8</b>	<b>(30.4)</b>
Average AUD:USD cents	101.1	103.9	103.2	103.6	0.4
Cash Costs of Production - A\$ million			628.9	583.5	7.2
Cash Costs per Tonne of Z/R/SR Produced- A\$			537	719	(33.9)
Revenue per Tonne of Z/R/SR Sold <sup>3</sup> - A\$			1,480	1,991	34.5

Refer page 15 for 1<sup>st</sup> Half and 2<sup>nd</sup> Half 2012 data.

## MARKET CONDITIONS

### Zircon

Market conditions remained relatively subdued throughout the December quarter, consistent with previous commentary provided by the company.<sup>4</sup> While it is evident that modernisation, thrifting and substitution activities<sup>5</sup> had an effect on zircon demand during 2012, Iluka's observations, based on engagement with industry participants and its own research and analysis, would suggest that these practices, some of which have had a structural effect on zircon demand, have largely worked through. There are also recent indications that lower zircon pricing and inefficiencies brought about by the use of some partial substitutes for zircon in ceramics tile manufacturing may mean that reductions in zircon-based opacifier usage may be partially reversed.

Low demand for zircon during the quarter also reflected buyer uncertainty in the lead up to an announced zircon auction and, as Iluka advised in its 13 December ASX Release, a further significant fall in zircon pricing to ~US\$1,500/tonne level followed the auction. Continued market competitiveness in December led to some further reductions in prices. It is evident that a number of customers Iluka deals with believe that a stabilisation in zircon pricing is a necessary precursor to significant demand resumption following recent sharp declines in pricing which have made planning of production, raw material purchases and flow-on customer commercial arrangements very challenging.

<sup>1</sup> Total mineral sands production excludes upgradeable ilmenite as this is used in the manufacture of synthetic rutile.

<sup>2</sup> Mineral sands revenues include revenues derived from other materials not included in production volumes, including activated carbon products and iron oxide.

<sup>3</sup> Revenue from the sale of zircon, rutile and synthetic rutile products.

<sup>4</sup> Refer also to Iluka's ASX Release, Mineral Sands Market Update, 13 December 2012.

<sup>5</sup> Refer Iluka's Briefing Paper, Modernisation, Thrifting and Substitution in the Manufacture of Ceramic Tiles, December 2012. Available on [www.iluka.com](http://www.iluka.com)

## **Titanium Dioxide**

As Iluka advised previously, historically low levels of pigment plant utilisation and, in this context, a preference for lower grade titanium dioxide feedstocks and/or those available under lower priced legacy contracts, meant that demand for high grade feedstocks remained subdued from the third quarter into the fourth quarter. Weaker demand in niche markets, such as welding and titanium sponge, also remained features of the period.

In this context, rutile and synthetic rutile sales were lower in the second half than in the first half and meant that, for the full year, Iluka's rutile and synthetic rutile sales were lower than in the most recent lowest demand year experienced for high grade feedstocks – 2009.

The existence of high grade ore supplies inventoried by some pigment producers, as well as some low priced rutile volumes available to the market, influenced rutile and synthetic rutile pricing at year end and into the first part of 2013.

Several lead indicators, including housing completions and sales in China and US manufacturing activity, as well as the avoidance of worst-case scenarios associated with economic slowdown and leadership transition in the former, and the US "fiscal cliff" in the latter, together with some signs of increased confidence levels across parts of Iluka's customer base, provide a basis for a more positive demand environment to emerge in 2013.

## **PRODUCTION**

Zircon production for the 12 months to 31 December 2012 was 343.2 thousand tonnes compared with 601.5 thousand tonnes in 2011. The major reduction occurred in finished product sourced from the Eucla/Perth Basin which declined by 51.0 per cent year-on-year. This was mainly as a result of a reduction in production of Jacinth-Ambrosia material (143.2 thousand tonnes in 2012 compared with 313.7 thousand tonnes in 2011), as a result of mining in a lower grade part of the ore body for most of 2012 and the associated processing of less heavy mineral concentrate through Narngulu mineral separation plant in Western Australia, as well as the deferral of processing of Jacinth-Ambrosia zircon-rich concentrate at the Hamilton mineral separation plant in Victoria.

Rutile production for the 12 months to 31 December 2012 was 220.3 thousand tonnes, compared with 281.3 thousand tonnes in 2011. The lower production mainly reflects the planned move from three mining operations in the Murray Basin in 2011 (Douglas, Echo and Kulwin) to one mining operation in 2012 (Kulwin and then Woonack, Rownack, Pirro), as well as the mine move from Kulwin to Woonack, Rownack, Pirro during 2012.

Synthetic rutile production in 2012 was 248.3 thousand tonnes, compared with 285.7 thousand tonnes in 2011. This reflects the operation of two of Iluka's four synthetic rutile kilns during both years, with lower 2012 production mainly the result of the decision to operate the largest of the two kilns, SR2, at lower throughput rates from mid year.

Iluka further reduced production via the temporary suspension of a major part of the operational base during the Christmas and New Year period. This included idling the Virginia mining and processing operations, the Hamilton and Narngulu mineral separation plants, the mining operations at Eneabba in the Mid West of Western Australia and the Tutunup South mine in the South West of Western Australia, together with an extension of the idling of SR kiln 3 in the Mid West until the end of March 2013.

## **FURTHER PRODUCTION RESPONSES**

Iluka's approach to the exercise of production flexibility is consistent with its medium term return on capital and margin capture objectives while maintaining the capacity to respond quickly to recovery in market demand. Actions taken are in the context of what Iluka believes is a "cyclical low" for mineral sands product demand exacerbated by large price disparities existing in the market for the same or similar products in 2012/13 as remaining legacy contracts unwind. Iluka commences 2013 with inventory levels which are capable of being drawn down to meet demand before restoring production settings to match more typical underlying demand conditions.

In addition to further production adjustments, some of which are outlined below, the focus areas include managing inventory levels while also optimising operating cash costs, in conjunction with other efforts to protect cash flows by reductions in non-production cash costs and overheads and in capital expenditure levels.

The production initiatives include:

- a return to normal, higher grade mining at Jacinth-Ambrosia in February 2013, rather than the low grade option pursued in 2012. This move reduces unit cash costs of production at the operation. While this action will increase heavy mineral concentrate build at site, it is considered appropriate in light of the reduction in zircon prices from the end of August 2012 and the receipt of approvals from South Australian authorities to accommodate higher heavy mineral concentrate storage volumes on site;
- as indicated earlier, the Eneabba mining operation (Mid West, Western Australia) will be idled in March, with the company able to source alternative internal ilmenite feed for its synthetic rutile kiln operations. The action will unfortunately result in the redundancy of up to 65 positions; and
- various operations (Hamilton mineral separation plant, Murray Basin mining operations, Virginia mining and mineral processing operations) operating on a reduced roster/utilisation basis.

These and other potential actions will reduce costs across the business. Capital expenditure levels, relative to 2012, will also be reduced. Iluka expects to provide further guidance on forecast production levels, cash production costs, other costs and capital expenditure levels at the time of its full year results on 21 February.

## SALES VOLUMES

Sales volumes for zircon for the full year were 213.8 thousand tonnes (2011: 514.5 thousand tonnes), a 58.4 per cent decline, with sales of 87.4 thousand tonnes in the first half and 126.4 thousand tonnes in the second half of 2012.

Sales volumes for rutile for the full year were 105.5 thousand tonnes (2011: 265.9 thousand tonnes), 60.3 per cent decline, with sales of 85.4 thousand tonnes in the first half and 20.1 thousand tonnes in the second half of 2012.

Sales volumes for synthetic rutile for the full year were 169.6 thousand tonnes (2011: 257.7 thousand tonnes), a 34.2 per cent decline, with 2012 sales of 101.1 thousand tonnes in the first half and of 68.5 thousand tonnes in the second half of 2012.

The lower second half sales volumes for rutile and synthetic rutile reflect the preference by pigment producers for lower grade feedstocks, as they sought to work down pigment inventories as well as take advantage of lower priced, lower titanium grade feedstocks priced under legacy contracts.

Iluka sold 443.2 thousand tonnes of ilmenite in 2012 (2011: 570.9 thousand tonnes), with the level of ilmenite available for sale dependent on production levels of other products and internal requirements for synthetic rutile production.

## Sales Revenue and Cash Cost/Revenue Per Tonne

	6 mth to Jun-12	Sep -12 Quarter	Dec-12 Quarter	6 mth to Dec-12	12 mth to Dec-11	12 mth to Dec-12
<b>Mineral Sands Revenue \$Am</b>	662.8	224.5	182.5	407.0	1,536.7	1,069.8
<b>Weighted average pricing US\$/t FOB</b>						
Zircon	2,490		1,449	1,856	1,886	2,080
Rutile	2,505		2,094	2,305	1,174	2,464
Synthetic rutile	1,950		1,463	1,465	878	1,771
<b>Average Z/R/SR price received US\$/t FOB</b>	2,296		1,478	1,772	1,453	2,056
<b>Total cash costs \$Am</b>	314.7			268.8	628.9	583.5
<b>Cash costs per tonne – Z/R/SR produced - \$A</b>	709			730	537	719
<b>Revenue per tonne of Z/R/SR sold - \$A</b>	2,255			1,654	1,480	1,991
<b>Average A\$/US\$ spot rate (cents)</b>	103.3	103.8	103.9	103.8	103.2	103.6

This table conveys mineral sands revenues, weighted average pricing and cash costs for 2012.

Iluka's full year revenue per tonne of Z/R/SR was \$1,991 (2011: \$1,480) with Z/R/SR cash cost per tonne for the full year of \$719 (2011: \$537).

## 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 Nargulu 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 7. 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

	Dec-11 Quarter	Mar-12 Quarter	Jun-12 Quarter	Sep-12 Quarter	Dec-12 Quarter	Dec-12 Qtr vs Sep-12 Qtr	Dec-12 Qtr vs Dec-11 Qtr
	kt	kt	kt	kt	kt	%	%
<b>Zircon<sup>1</sup></b>							
Eucla/Perth Basin (SA/WA)	72.7	67.2	42.9	32.9	15.2	(53.8)	(79.1)
Murray Basin (VIC)	59.2	34.8	36.5	31.9	32.4	1.6	(45.3)
<b>Australia</b>	<b>131.9</b>	<b>102.0</b>	<b>79.4</b>	<b>64.8</b>	<b>47.6</b>	<b>(26.5)</b>	<b>(63.9)</b>
<b>Virginia (USA)</b>	<b>16.5</b>	<b>13.7</b>	<b>13.9</b>	<b>12.9</b>	<b>8.9</b>	<b>(31.0)</b>	<b>(46.1)</b>
<b>Total Zircon Production</b>	<b>148.4</b>	<b>115.7</b>	<b>93.3</b>	<b>77.7</b>	<b>56.5</b>	<b>(27.3)</b>	<b>(61.9)</b>
<b>Rutile</b>							
Eucla/Perth Basin (SA/WA)	16.2	16.8	14.1	12.6	6.5	(48.4)	(59.9)
Murray Basin (VIC)	49.7	33.9	38.8	47.4	50.2	5.9	1.0
<b>Total Rutile Production</b>	<b>65.9</b>	<b>50.7</b>	<b>52.9</b>	<b>60.0</b>	<b>56.7</b>	<b>(5.5)</b>	<b>(14.0)</b>
<b>Synthetic Rutile (WA)</b>	<b>68.7</b>	<b>50.6</b>	<b>80.6</b>	<b>64.4</b>	<b>52.7</b>	<b>(18.2)</b>	<b>(23.3)</b>
<b>TOTAL Z/R/SR PRODUCTION</b>	<b>283.0</b>	<b>217.0</b>	<b>226.8</b>	<b>202.1</b>	<b>165.9</b>	<b>(17.9)</b>	<b>(41.4)</b>
<b>Ilmenite – Saleable</b>							
Eucla/Perth Basin (SA/WA)	42.8	46.0	21.1	7.9	11.6	46.8	(72.9)
Murray Basin (VIC)	-	36.5	16.0	34.3	9.7	(71.7)	n/a
<b>Australia</b>	<b>42.8</b>	<b>82.5</b>	<b>37.1</b>	<b>42.2</b>	<b>21.3</b>	<b>(49.5)</b>	<b>(50.2)</b>
<b>Virginia (USA)</b>	<b>69.0</b>	<b>41.1</b>	<b>54.0</b>	<b>62.0</b>	<b>45.4</b>	<b>(26.8)</b>	<b>(34.2)</b>
<b>Total Ilmenite – Saleable</b>	<b>111.8</b>	<b>123.6</b>	<b>91.1</b>	<b>104.2</b>	<b>66.7</b>	<b>(36.0)</b>	<b>(40.3)</b>
<b>TOTAL MINERAL SANDS PRODUCTION<sup>2</sup></b>	<b>394.8</b>	<b>340.6</b>	<b>317.9</b>	<b>306.3</b>	<b>232.6</b>	<b>(24.1)</b>	<b>(41.1)</b>
<b>Ilmenite – Upgradeable</b>							
Eucla/Perth Basin (SA/WA)	38.8	46.2	59.4	56.6	41.8	(26.1)	7.7
Murray Basin (VIC)	21.7	14.0	16.4	34.6	7.3	(78.9)	(66.4)
<b>Australia</b>	<b>60.5</b>	<b>60.2</b>	<b>75.8</b>	<b>91.2</b>	<b>49.1</b>	<b>(46.2)</b>	<b>(18.8)</b>
<b>Virginia (USA)</b>	<b>-</b>	<b>12.2</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>n/a</b>	<b>n/a</b>
<b>Total Ilmenite – Upgradeable</b>	<b>60.5</b>	<b>72.4</b>	<b>75.8</b>	<b>91.2</b>	<b>49.1</b>	<b>(46.2)</b>	<b>(18.8)</b>

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

<sup>2</sup> Total mineral sands production excludes upgradeable ilmenite as this is used in the manufacture of synthetic rutile.

## Physical Production – 12 Month Comparison

	12 mth to Dec-11	12 mth to Dec-12	12 mth Dec-12 vs 12 mth Dec-11
	kt	kt	%
<b>Zircon</b>			
Eucla/Perth Basin (SAWA)	323.0	158.2	(51.0)
Murray Basin (VIC)	218.2	135.6	(37.9)
<b>Australia</b>	<b>541.2</b>	<b>293.8</b>	<b>(45.7)</b>
<b>Virginia (USA)</b>	<b>60.3</b>	<b>49.4</b>	<b>(18.1)</b>
<b>Total Zircon Production</b>	<b>601.5</b>	<b>343.2</b>	<b>(42.9)</b>
<b>Rutile</b>			
Eucla/Perth Basin (SAWA)	56.4	50.0	(11.3)
Murray Basin (VIC)	224.9	170.3	(24.3)
<b>Total Rutile Production</b>	<b>281.3</b>	<b>220.3</b>	<b>(21.7)</b>
<b>Synthetic Rutile (WA)</b>	<b>285.7</b>	<b>248.3</b>	<b>(13.1)</b>
<b>TOTAL Z/R/SR PRODUCTION</b>	<b>1,168.5</b>	<b>811.8</b>	<b>(30.5)</b>
<b>Ilmenite – Saleable</b>			
Eucla/Perth Basin (SAWA)	171.6	86.6	(49.5)
Murray Basin (VIC)	-	96.5	n/a
<b>Australia</b>	<b>171.6</b>	<b>183.1</b>	<b>6.7</b>
<b>Virginia (USA)</b>	<b>288.1</b>	<b>202.5</b>	<b>(29.7)</b>
<b>Total Ilmenite – Saleable</b>	<b>459.7</b>	<b>385.6</b>	<b>(16.1)</b>
<b>TOTAL MINERAL SANDS PRODUCTION<sup>1</sup></b>	<b>1,628.2</b>	<b>1,197.4</b>	<b>(26.5)</b>
<b>Ilmenite – Upgradeable</b>			
Eucla/Perth Basin (SAWA)	102.4	204.0	99.2
Murray Basin (VIC)	99.5	72.3	(27.3)
<b>Australia</b>	<b>201.9</b>	<b>276.3</b>	<b>36.8</b>
<b>Virginia (USA)</b>	<b>-</b>	<b>12.2</b>	<b>n/a</b>
<b>Total Ilmenite – Upgradeable</b>	<b>201.9</b>	<b>288.5</b>	<b>42.9</b>

## PLANNED NEW PRODUCTION

### Balranald Deposits, New South Wales

Balranald and Nepean are two rutile-dominated deposits in the northern Murray Basin, approximately 20 kilometres north of the town of Balranald in New South Wales.

A pre-feasibility study (PFS) is progressing to schedule and includes the evaluation of alternate mining methods, water management options and infrastructure options. During the quarter progress included:

- groundwater modelling applied to various scenarios;
- the completion of mining, hydrogeology, metallurgy and infrastructure assessments;
- continuation of environmental development approvals;
- commencement of environmental impact assessments; and
- a project risk review.

<sup>1</sup> Total mineral sands production excludes upgradeable ilmenite as this is used in the manufacture of synthetic rutile.

It is expected that a recommendation regarding the progression of the project to the next phase will be made during the first quarter of 2013.

#### **Cataby, Western Australia**

Iluka is currently undertaking a PFS on the Cataby mineral sands deposit located approximately 150 kilometres north of Perth. Cataby is a large, long life, high quality chloride ilmenite deposit, suitable as a feed source to Iluka's synthetic rutile facilities or for direct sale. The PFS is likely to be completed by mid-2013.

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

The Hickory mineral sands deposits in Virginia are located approximately 19 kilometres west of the existing Iluka Stony Creek mineral separation plant. The Hickory project will constitute a third mine and mineral concentrating operation in Virginia.

The definitive feasibility study (DFS) for the Hickory project was completed during the December quarter. The project has moved into a phase one execute stage which will include the completion of detailed engineering design and construction plans, detailed mining plans and the securing of all permits in 2013.

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

The Aurelian Springs project involves a PFS for the potential development of multiple mineral sands deposits, located in Halifax County, North Carolina, approximately 90 kilometres south of Iluka's mineral separation plant at Stony Creek.

The PFS progressed during the quarter. Current plans are to relocate the Concord mining unit and concentrator plant to Aurelian Springs in the first quarter of 2015. A DFS is planned to commence in 2013 to complete detailed engineering design and secure the required operating permits.

### **EXPLORATION**

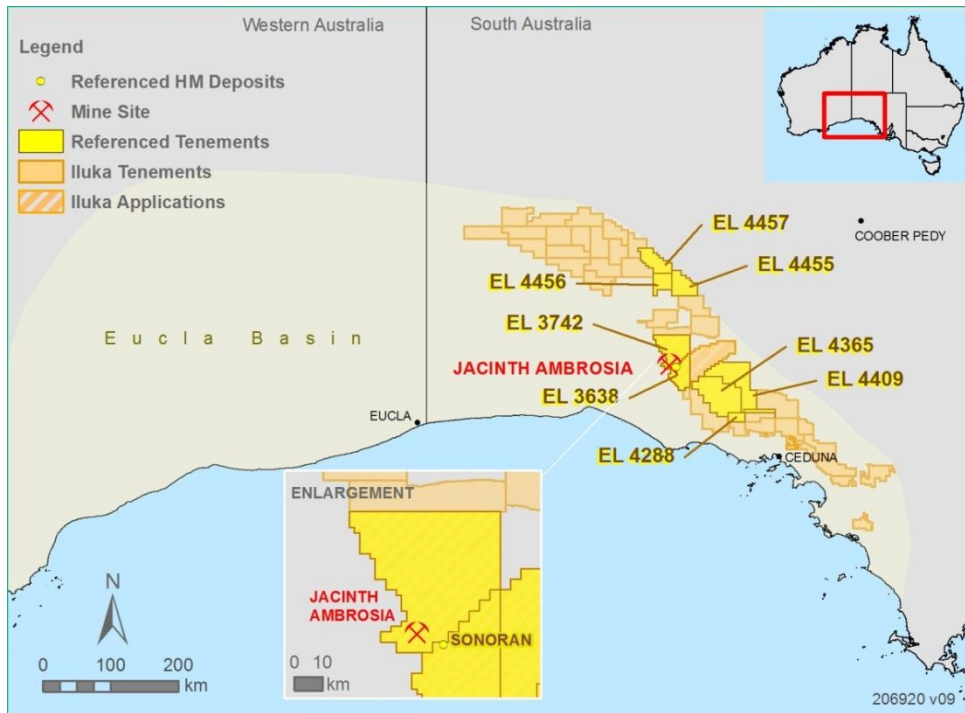
#### **Eucla Basin, South Australia/Western Australia**

Greenfield exploration activity in the Eucla Basin during the quarter included:

- drilling at Maralinga/Barton North programs on EL4455, EL4456 and EL4457;
- commencement of drilling at the Bay of Plenty program on EL4288, EL4365 and EL4409;
- drilling on EL4409; and
- project exploration activities included resource delineation drilling at the Sonoran deposit on EL 3742 and EL3638.



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



**Murray Basin, Victoria/New South Wales**

Greenfields exploration activity in the Murray Basin during the quarter included:

- completion of drilling at Parcoola and the Southern Mallee region in eastern South Australia; and
- drilling at Glenorchy along the south-western margin of the Murray Basin in Western Victoria.

**Figure 2 Murray Basin Tenement and Recent Areas of Exploration Activity**





## **Project Generation**

Iluka is actively exploring for mineral sands outside of Australia, with early stage exploration (including drilling) underway in several countries.

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**APPENDIX 1 - OPERATING MINES – PHYSICAL DATA**  
**Year to date 31 December 2012**

	Jacinth- Ambrosia	Murray Basin	Western Australia	Australia Total	Virginia	Group Total
<b>Mining</b>						
Overburden Moved bcm	905.8	12,010.2	426.8	13,342.8	0.0	<b>13,342.8</b>
Ore Mined kt	9,137.9	3,528.4	12,377.1	25,043.4	4,694.8	<b>29,738.2</b>
Ore Grade HM %	5.2	22.5	4.4	7.2	7.1	<b>7.2</b>
VHM Grade %	4.3	9.4	3.6	4.7	5.9	<b>4.9</b>
<b>Concentrating</b>						
HMC Produced kt	374.9	384.8	446.9	1,206.6	323.1	<b>1,529.7</b>
VHM Produced kt	336.5	262.8	363.3	962.6	251.3	<b>1,213.9</b>
VHM in HMC Assemblage %	89.7	68.3	81.3	79.8	77.8	<b>79.4</b>
Zircon	52.2	28.1	12.8	29.9	15.5	<b>26.9</b>
Rutile	6.2	37.8	8.4	17.1	0.0	<b>13.5</b>
Ilmenite	30.5	0.0	55.2	29.9	62.3	<b>36.8</b>
HMC Processed kt	323.4	444.0	350.1	1,117.5	350.6	<b>1,468.1</b>
Finished Product kt						
Zircon	138.2	135.6	20.0	293.8	49.4	<b>343.2</b>
Rutile	26.9	170.3	23.1	220.3	0.0	<b>220.3</b>
Ilmenite Saleable	86.6	96.5	0.0	183.1	202.5	<b>385.6</b>
Ilmenite Upgradeable	3.8	72.3	200.2	276.3	12.2	<b>288.5</b>
Synthetic Rutile Produced kt			248.3	248.3		<b>248.3</b>

An explanation of the Iluka's physical flow information for mineral sands, from overburden removal and mining to processing, 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, October 2010

## Explanatory Comments on Terminology

**Overburden moved** (bulk 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 ilmenite.

**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 heavy mineral concentrate (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.

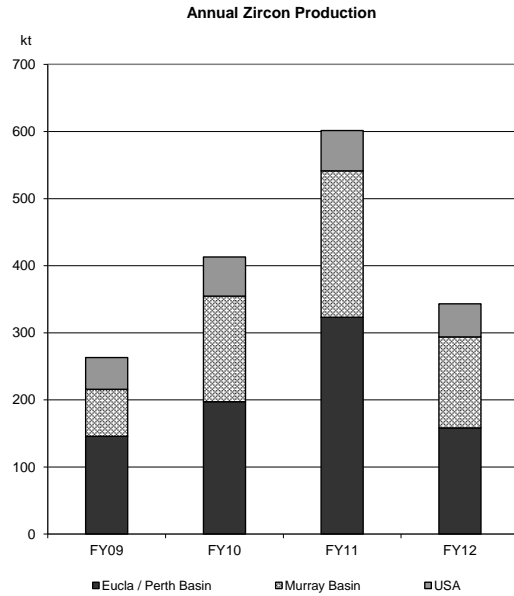
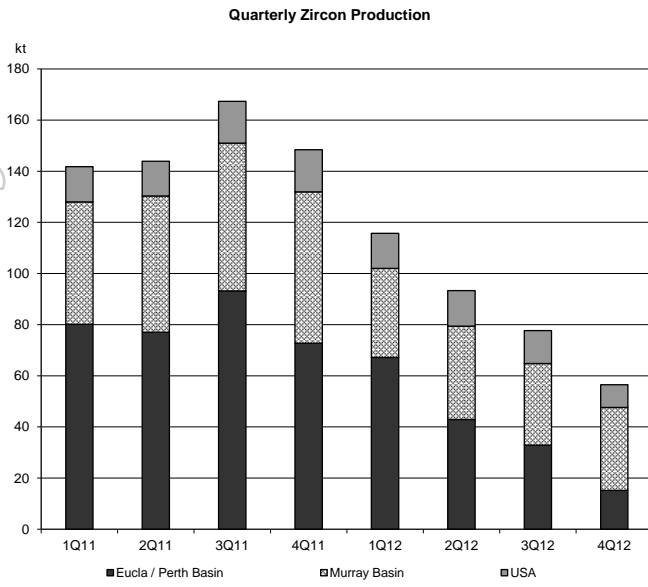
**Attributable finished product** is provided as an indication of the finished production (zircon, rutile, ilmenite – both saleable and upgradeable) attributable to the VHM in HMC production streams from the various mining operations. Finished product levels are subject to recovery factors which can 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, zircon) is subject to recovery loss at the processing stage – this may be in the order of 10%.

**Ilmenite saleable** is ilmenite produced for sale rather than as a synthetic rutile feedstock.

**Ilmenite upgradeable** is that which is used in the manufacture of synthetic rutile. 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.

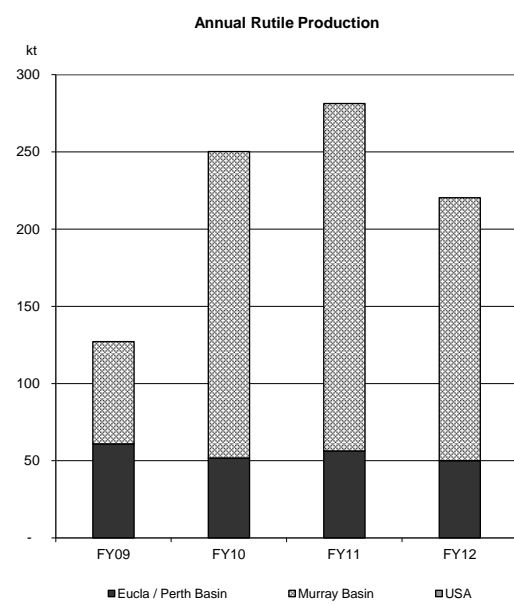
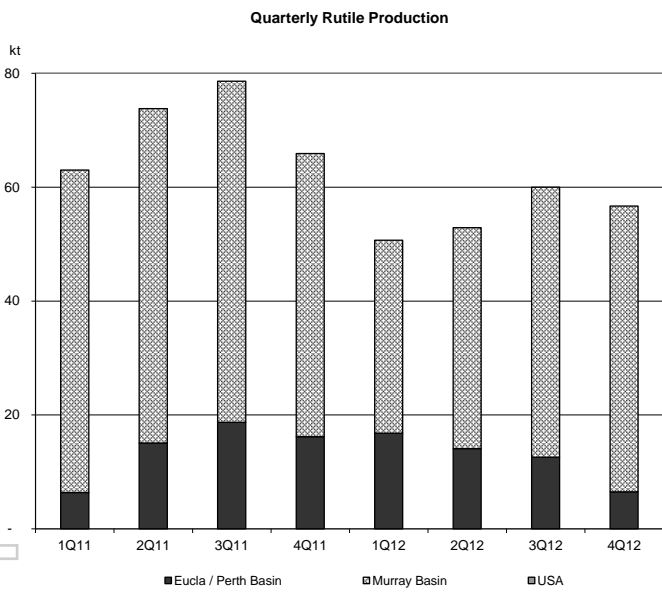
## APPENDIX 2 – QUARTERLY AND ANNUAL PRODUCTION SUMMARIES

### Zircon



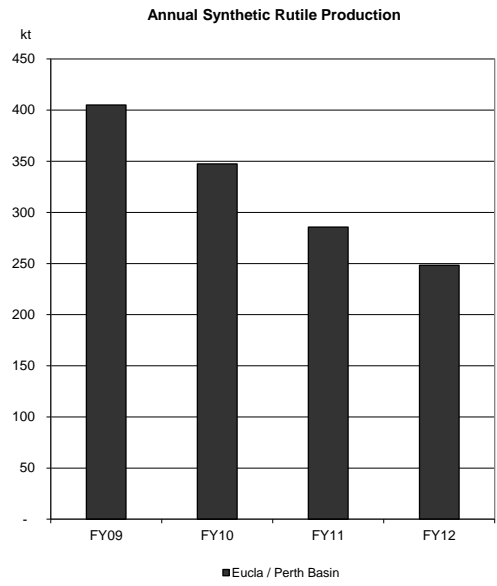
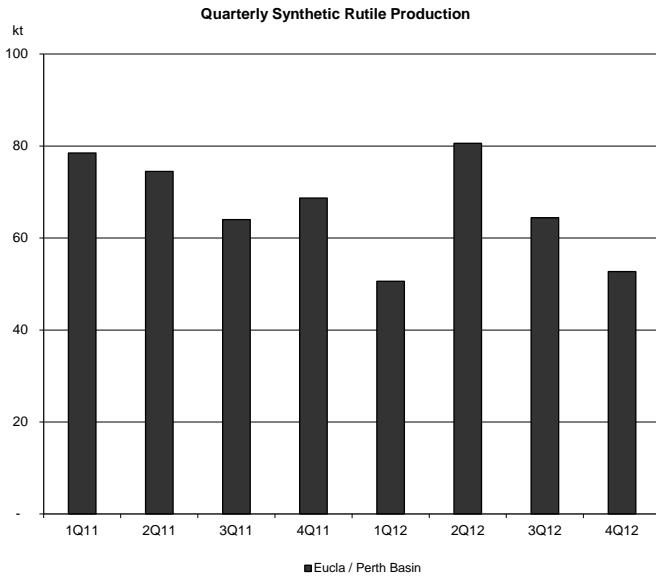
Zircon volumes exclude CRL attributed volumes. Iluka had a 51.04% interest in CRL to May 2009.

### Rutile

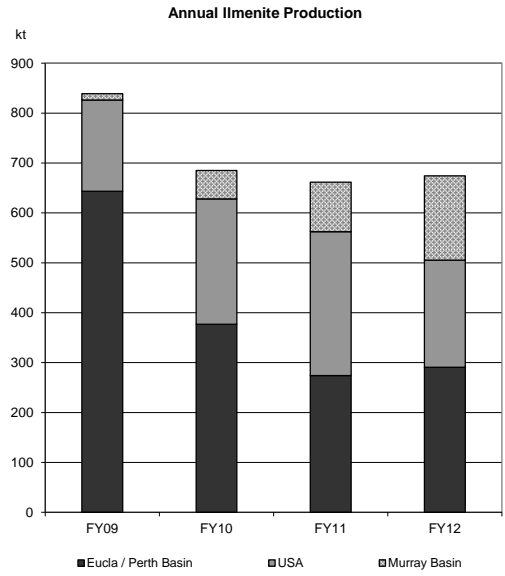
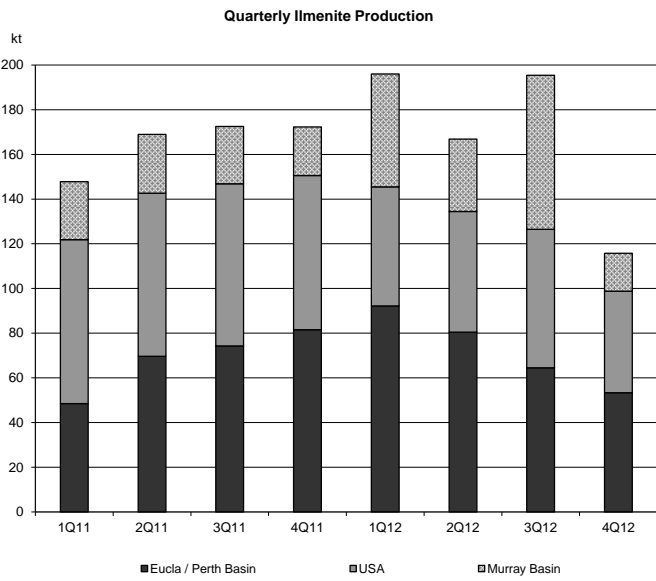


Rutile volumes exclude CRL attributed volumes. Iluka had a 51.04% interest in CRL to May 2009.

## Synthetic Rutile



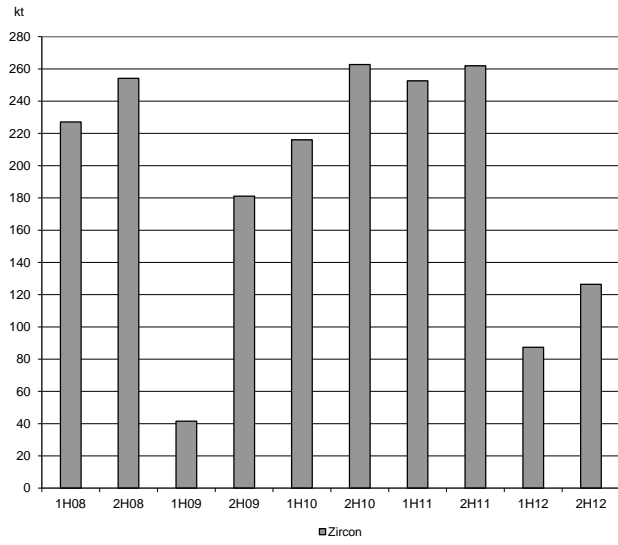
## Ilmenite



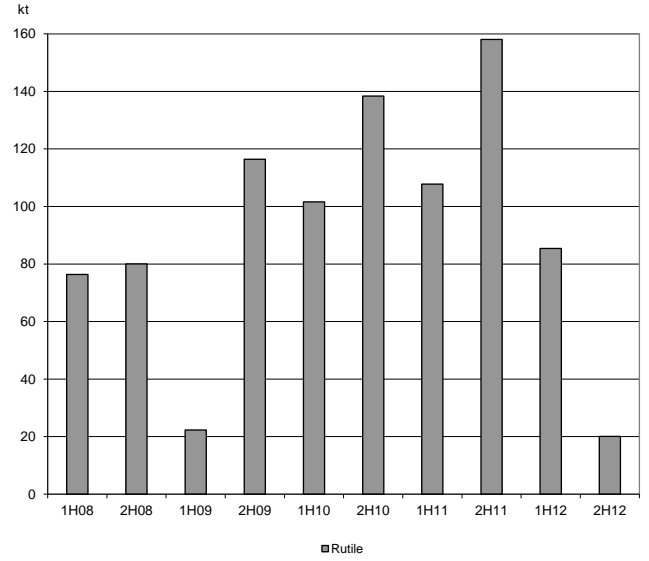
Ilmenite volumes exclude CRL attributed volumes. Iluka had a 51.04% interest in CRL to May 2009.

**APPENDIX 3 – HALF YEARLY SALES SUMMARIES**

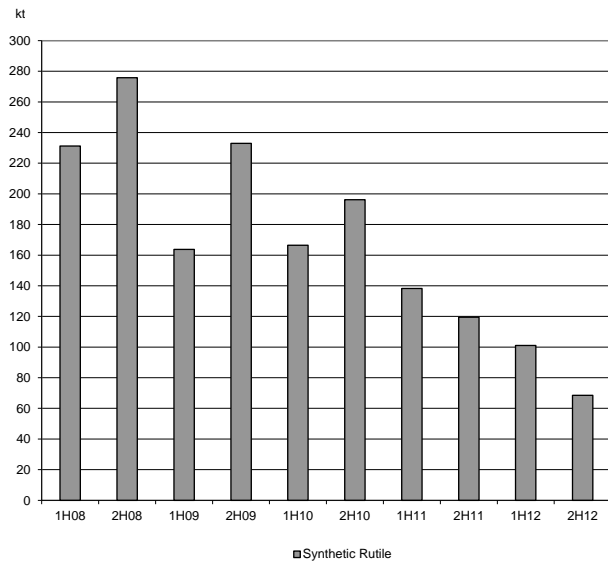
**Zircon**



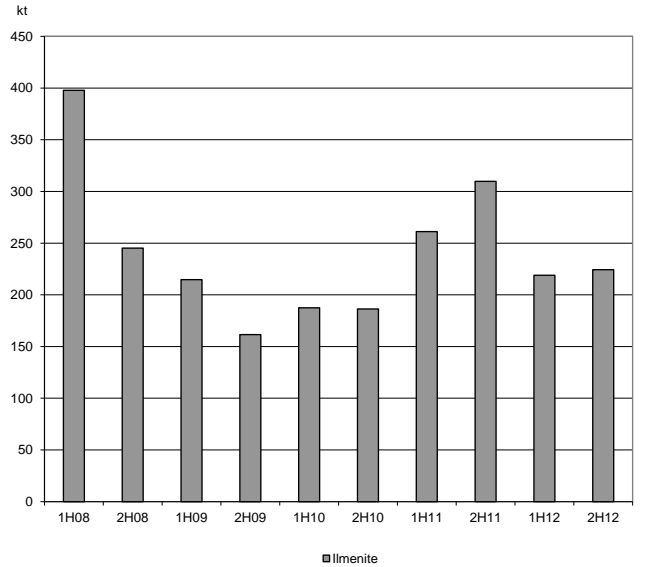
**Rutile**



**Synthetic Rutile**



**Ilmenite**



Volumes exclude CRL attributed volumes. Iluka had a 51.04% interest in CRL to May 2009.



APPENDIX 4 – 1<sup>ST</sup> HALF AND 2<sup>ND</sup> HALF 2012 DATA

	6 mth to Jun-12	6 mth to Dec-12	12 mth to Dec-12
	kt	kt	kt
<b><u>Production</u></b>			
Zircon	209.0	134.2	343.2
Rutile	103.6	116.7	220.3
Synthetic Rutile	131.2	117.1	248.3
<b>Total Z/R/SR Production</b>	<b>443.8</b>	<b>368.0</b>	<b>811.8</b>
Saleable Ilmenite	214.7	170.9	385.6
<b>Total Mineral Sands Production<sup>1</sup></b>	<b>658.5</b>	<b>538.9</b>	<b>1,197.4</b>
Upgradeable Ilmenite	148.2	140.3	288.5
<b><u>Sales</u></b>			
Zircon	87.4	126.4	213.8
Rutile	85.4	20.1	105.5
Synthetic Rutile	101.1	68.5	169.6
<b>Total Z/R/SR Sales</b>	<b>273.9</b>	<b>215.0</b>	<b>488.9</b>
Ilmenite	218.9	224.3	443.2
<b>Total Mineral Sands Sales</b>	<b>492.8</b>	<b>439.3</b>	<b>932.1</b>
<b><u>Mineral Sands Revenue<sup>2</sup> A\$ million</u></b>	<b>662.8</b>	<b>407.0</b>	<b>1,069.8</b>
<b>Cash Costs of Production - A\$ million</b>	<b>314.7</b>	<b>268.8</b>	<b>583.5</b>
<b>Cash Costs per tonne of Z/R/SR produced- A\$</b>	<b>709</b>	<b>730</b>	<b>719</b>
<b>Revenue per tonne of Z/R/SR sold<sup>3</sup>- A\$</b>	<b>2,255</b>	<b>1,654</b>	<b>1,991</b>

<sup>1</sup> Total mineral sands production excludes upgradeable ilmenite as this is used in the manufacture of synthetic rutile.

<sup>2</sup> Mineral sands revenues include revenues derived from other materials not included in production volumes, including activated carbon products and iron oxide.

<sup>3</sup> Revenue from the sale of zircon, rutile and synthetic rutile products.