

## Australian Securities Exchange Notice

16 April 2015

## QUARTERLY PRODUCTION REPORT 31 MARCH 2015

## **OVERVIEW**

- Iluka's core mineral sands production and associated cash production costs were in line with company expectations in the March quarter.
- A highlight of the quarter was the recommencement of operations at the Tutunup South mine in Western Australia in February and the achievement of name plate capacity within 12 hours.
- Subsequent to this, Iluka's synthetic rutile kiln 2, which was idled in July 2013, was restarted efficiently
  on 21 March, following extensive pre-planning and with minimal capital and other pre-start expenditure.
  The restart reflects stronger demand for high grade chloride feedstocks and is underpinned by
  appropriate commercial arrangements.
- First quarter revenue of \$115.2 million, while seasonally low as usual, was also affected by:
  - deferral of 11 thousand tonnes of zircon sales and 12 thousand tonnes of synthetic rutile sales (available from stock) to after the end of the quarter, in line with shipping schedules;
  - scheduling of bulk synthetic rutile shipments to align with the re-start of synthetic rutile kiln 2 production, with four bulk shipments due to sail in the June quarter following the successful re-start;
  - a hiatus in zircon orders and deliveries in March while Iluka engaged with customers in relation to a new pricing and payments framework. Expected volumes resumed in April following the conclusion of most of these discussions; and
  - lower ilmenite and by-product revenues, associated with lower Murray Basin ilmenite sales, given weak sulphate market conditions and lower iron oxide sales associated with the falling iron ore price.
- Weighted average prices for Iluka products sold displayed no material change from levels advised on 17 February 2015 associated with the full year results announcement.

#### **SUMMARY OF PHYSICAL AND FINANCIAL DATA**

Mar-15 Mar-15 Qtr vs Qtr vs Mar-14 Dec-14 Mar-15 Dec-14 Mar-14 Quarter Quarter Quarter Otr Qtr % **Production** 77.8 84.2 Zircon 65.7 (22.0)(15.6)Rutile 33.2 58.0 20.3 (65.0)(38.9)Synthetic Rutile 1.6 Total Z/R/SR Production 111.0 142.2 87.6 (38.4)(21.1)Ilmenite 110.2 64.8 79.6 (27.8)22.8 Total Mineral Sands Production<sup>1</sup> 221.2 207.0 167.2 (19.2)(24.4)Z/R/SR sales revenue 94.8 219.1 99.1 (54.8)4.5 Ilmenite and other revenue 35.9 14.8 16.1 (55.2)Mineral Sands Revenue A\$ million 115.2 130.7 233.9 (50.7)(11.9)Average AUD:USD cents 89.7 85.7 78.7 (12.3)

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 PRODUCTION**

The previous table displays quarterly zircon, rutile and synthetic rutile (Z/R/SR) production which, in aggregate, declined by 21.1 per cent in the March 2015 quarter compared with the March quarter 2014. The 12 month comparative figures on page 4 indicate that to the end of March 2015, Z/R/SR production increased by 8.5 per cent, reflecting higher zircon and rutile production (up 12.6 per cent and 22.2 per cent respectively) partially offset by lower synthetic rutile production associated with kiln idling.

Lower March quarter zircon and rutile production mainly reflects the idling of the Hamilton mineral separation plant in the Murray Basin, Victoria, as planned in January and February, with processing re-commencing in March.

The Woornack, Rownack, Pirro mine in the Murray Basin, Victoria was fully depleted during the period. Higher than forecast ore grades were experienced resulting in additional heavy mineral concentrate production and inventory build. Stockpiled concentrate from Woornack, Rownack, Pirro and a proportion of heavy mineral concentrate from Jacinth-Ambrosia in South Australia will be processed at the Hamilton mineral separation plant for conversion to finished products, including rutile. This and finished product in inventory will be supplied into the market over the period leading to the next planned Murray Basin mine development, Balranald.

Mining at the Jacinth-Ambrosia operation continued at full capacity, with higher grade ore mined during the quarter, as scheduled. Iluka's Narngulu mineral separation plant in Western Australia, continued to operate at 50 per cent of capacity over the quarter, treating Jacinth-Ambrosia and minor proportions of South West, Western Australia, non-magnetic (zircon and rutile) concentrate.

Mining at the Tutunup South mine in Western Australia restarted in February. Recommencement of mining operations occurred successfully, with full capacity reached within 12 hours. Production rates have been as planned, with ilmenite produced used as a feed source for synthetic rutile kiln 2 which was reactivated from 21 March. Kiln recommissioning is progressing smoothly with initial finished product available and with first product planned to be shipped in April. Annual production capacity is approximately 200 thousand tonnes, with approximately 140 thousand tonnes expected to be produced in 2015.

As previously advised, mining and processing at Iluka's United States operations will be completed in 2015 (refer ASX release 12 December 2014). Mining at the Brink deposit continued during the quarter, with high grade sections of ore and topsoil targeted to maximise heavy mineral concentrate production. The Concord mine, idled in April 2014, is planned to recommence production in July and to operate until depleted, which is expected before year end. The Stony Creek mineral separation plant operated above expected levels due to higher feed volumes and recoveries, increasing volumes of final products, including zircon.

Iluka's planned operational settings for 2015 have been outlined in the company's full year results (refer slide 43 of the 2014 Full Year Results presentation available on the Iluka website <a href="https://www.iluka.com">www.iluka.com</a>).

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 4. 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.

## **Group Physical Production**

Croup i rijorou i roudouo.	Mar-14 Quarter	Dec-14 Quarter	Mar-15 Quarter	Mar-15 Qtr vs Dec-14 Qtr	Mar-15 Qtr vs Mar-14 Qtr
	kt	kt	kt	%	%
Zircon <sup>1</sup>					
Eucla/Perth Basin (SA/WA)	54.4	47.9	49.0	2.3	(9.9)
Murray Basin (VIC)	15.9	32.2	7.6	(76.4)	(52.2)
Australia	70.3	80.1	56.6	(29.3)	(19.5)
Virginia (USA)	7.5	4.1	9.1	122.0	21.3
Total Zircon Production	77.8	84.2	65.7	(22.0)	(15.6)
Rutile					
Eucla/Perth Basin (SA/WA)	5.5	7.3	7.3	-	32.7
Murray Basin (VIC)	27.7	50.7	13.0	(74.4)	(53.1)
Total Rutile Production	33.2	58.0	20.3	(65.0)	(38.9)
Synthetic Rutile (WA)		-	1.6	n/a	n/a
TOTAL Z/R/SR PRODUCTION	111.0	142.2	87.6	(38.4)	(21.1)
<u>Ilmenite</u>					
Eucla/Perth Basin (SA/WA)	17.8	23.6	35.2	49.2	97.8
Murray Basin (VIC)	63.9	24.6	9.2	(62.6)	(85.6)
Australia	81.7	48.2	44.4	(7.9)	(45.7)
Virginia (USA)	28.5	16.6	35.2	112.0	23.5
Total Ilmenite	110.2	64.8	79.6	22.8	(27.8)
TOTAL MINERAL SANDS PRODUCTION	221.2	207.0	167.2	(19.2)	(24.4)

<sup>&</sup>lt;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	12 mths to	12 mths Mar-15 vs
	Mar-14	Mar-15	12 mths Mar-14
<b>7.</b>	kt	kt	%
Zircon	007.0	0044	40.0
Eucla/Perth Basin (SA/WA)	207.3	234.1	12.9
Murray Basin (VIC)	62.4	84.7	35.7
Australia	269.7	318.8	18.2
Virginia (USA)	37.1	26.7	(28.0)
Total Zircon Production	306.8	345.5	12.6
Rutile			
Eucla/Perth Basin (SA/WA)	29.3	31.5	7.5
Murray Basin (VIC)	105.1	132.7	26.3
Total Rutile Production	134.4	164.2	22.2
Synthetic Rutile (WA)	30.0	1.6	(94.7)
TOTAL Z/R/SR PRODUCTION	471.2	511.3	8.5
Ilmenite			
Eucla/Perth Basin (SA/WA)	137.1	120.0	(12.5)
Murray Basin (VIC)	226.5	113.4	(49.9)
Australia	363.6	233.4	(35.8)
Virginia (USA)	170.2	101.5	(40.4)
Total Ilmenite	533.8	334.9	(37.3)
TOTAL MINERAL SANDS PRODUCTION	1,005.0	846.2	(15.8)

## MINERAL SANDS MARKET CONDITIONS

Mineral sands markets continued to display the characteristics which Iluka has advised previously. These include variable demand conditions across markets for zircon, and indications of a recovery in demand for high grade titanium dioxide feedstocks.

#### **Zircon**

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As conveyed previously, following robust demand in December and January for zircon, sales volumes moderated in February associated mainly with Chinese New Year and in March with some delay of sales as Iluka implemented a new zircon pricing and payments framework. Indications in April to date are that expected volume offtake has recommenced.

Iluka has recently completed its annual ceramic tile study, encompassing China, India and Europe. This is the third such study and expanded empirical data and statistical methods were employed to gain further insight into zircon usage trends across ceramic tile products and regions, as well as to track practices in ceramic tile production, such as digital printing. The results suggest that substitution and thrifting initiatives have largely run their course and that there is no evidence that digital printing leads to a decrease in zircon loadings. The study observed an overall year-on-year increase in the loading of zircon in many tile product categories across key production regions, including the main ceramic production provinces of China. In China, the digitally-printed porcelain tiles, such as crystal jade and glazed porcelain, have shown consistently higher median zircon loadings than the conventional double-charged, polished porcelain tiles. It is evident that digitally printed porcelain tiles represent a major and increasing form of tile production, allowing ceramic tile producers greater flexibility in tile design and production. It appears that there is also reduced scope for substitution of zircon in digitally printed ceramics, associated with the use of zircon in some or all of engobes, glazes, frits and inks.

#### **Titanium Dioxide**

Improving demand for high grade feedstocks was reflected in Iluka's recommencement of operations at its largest synthetic rutile kiln and in generally healthy demand indicators for chloride pigment and related end applications leading into the northern hemisphere summer. As Iluka has advised previously, while the company will have less rutile available over the next two years at least, as it allocates available volumes following the cessation of mining operations at Woornack, Rownack, Pirro and before the next Murray Basin mine commences, synthetic rutile product is now available in larger quantities.

Lower demand and lower prices for sulphate ilmenite, particularly in China, led to reduced sales revenue from this by-product component of Iluka's Murray Basin production stream.

#### **PLANNED NEW PRODUCTION**

#### **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, will provide the potential for approximately eight years of substantial rutile, zircon and associated ilmenite production. It is proposed that the Balranald development will utilise the existing Hamilton mineral separation plant.

Activities associated with the definitive feasibility study have continued, including an extensive hydrogeological pilot programme, and mining simulations activities which have refined pre-feasibility assumptions. These works are substantially complete, and are to be followed by the detailed engineering required for project pre-execution activities. Initial test work to better assess the proportion of the ilmenite from Balranald suitable for various downstream processing technologies supports the preliminary assessment and will continue during the next quarter. Iluka completed environmental impact assessments for the development and the final technical reports, required for the submission in the first half of 2015, of an Environmental Impact Statement. The timing of the Balranald project remains subject to the final results of the definitive feasibility study, 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 feed source for synthetic rutile production, plus material volumes of zircon and rutile. Cataby is expected to have an economic life of approximately 8.5 years.

The definitive feasibility study is substantially complete and planning for pre-execute activities and implementation is well advanced.

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

Iluka has undertaken a scoping study on the Sonoran, Atacama and Typhoon satellite deposits in proximity to the Jacinth-Ambrosia operation in the Eucla Basin. The pre-feasibility study is underway and scheduled for completion in 2016.

Following the resource delineation air core drilling on the Atacama deposit in early 2014, the Atacama resource increased substantially. A further drilling programme has subsequently been completed to move the resource definition from Inferred to Indicated. Geological analysis and updated modelling is scheduled for the third quarter of 2015.

Planned activities associated with the next phase of the study focus primarily on the geometallurgical characteristics and ilmenite quality of the Atacama mineral to assist in process design.

#### 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 is capable of producing high quality chloride grade ilmenite and an associated zircon production stream utilising the existing mineral separation plant at Stony Creek.

The definitive feasibility study for the Hickory project has been completed and further activities suspended in accordance with Iluka's ASX Release of 12 December 2014.

#### 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 deposit is capable of producing chloride ilmenite and an associated zircon production stream.

The project has progressed to the definitive feasibility stage with permitting activities continuing while further activities have been suspended in accordance with Iluka's ASX Release of 12 December 2014.

#### Puttalam, Sri Lanka

In Sri Lanka, the focus remained on gaining clarity with the Government in relation to the legal and investment terms for the development of the Puttalam project.

Iluka's Major Project Group has commenced a scoping study on the PQ deposit aimed at transitioning to potential pre-feasibility study stage in the fourth quarter of 2015.

Refer Iluka's website (www.iluka.com) - Section: Company Overview, Projects, for more detail on these projects. Iluka's full year results slides, issued on 17 February, also include details on the main internal mineral sands projects, including commentary of technical and financial analysis (refer slides 31-34).

#### **EXPLORATION**

#### **Eucla Basin, South Australia**

Processing of samples from the Atacama (refer Figure 1) delineation drilling programme continued during the quarter. Work has also commenced on updating the geological model and revising the resource estimate, which will be completed in the September quarter.

## St Vincent Basin, South Australia

Iluka has completed greenfield exploration drilling in the St Vincent Basin on exploration licence EL 4863 (refer Figure 2). The exploration drilling comprised 42 holes for 1,475 metres, along two traverses. Samples will be processed through Iluka's exploration laboratory in Hamilton Victoria. Final assay results and geological review will available late in the June quarter.

#### Perth Basin, Western Australia

Iluka continued to negotiate Exploration Access Agreements with land owners and occupiers of parts of E70/2464 (refer Figure 3) to obtain their consent, in accordance with section 29 of the Mining Act 1978 (WA), to the grant of surface rights so that exploration drilling may be carried out. Subject to obtaining land owner and occupier consent and weather conditions, Iluka aims to commence exploration drilling on parts of E70/2464 this year.

#### **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. During the quarter, Iluka made significant progress towards the establishment of an exploration office within Kazakhstan in order to conduct early stage exploration for mineral sands targets within the country.

South Australia

E u c l a B a s i n

EL 5198

ATACAMA

JACINTH AMBROSIA

Referenced Tenements

Applications

Granted

South Australia

EL 5165

ATACAMA

ATACAMA

ATACAMA

Applications

Granted

Figure 1 Eucla Basin Tenements

**Figure 2 St Vincent Basin Tenements** 



Figure 3 Perth Basin, Western Australia



#### **Exploration – New Commodities**

Iluka has a small team, the role of which is to assess non mineral sands prospectivity on Iluka tenements, and also enter into arrangements to acquire opportunities on other tenements. Recent activities are outlined below.

Canning Basin, Western Australia

Iluka commenced negotiations with pastoral lease holders to secure access for greenfield exploration drilling in the Canning Basin which is scheduled for the second quarter. Meetings were held with the Karajarri Traditional Lands Association Aboriginal Corporation and Nyamba Buru Yawuru Ltd to commence heritage surveys where drilling is planned. The heritage surveys are required under the Native Title, Heritage Protection and Minerals Exploration Agreements.

Fowler Project - Base Metals

Exploration activities during the quarter at the Fowler Project, located 60 kilometres north east of the Jacinth-Ambrosia mine, included preparation work for further airborne electromagnetic (EM) and ground gravity surveys. These surveys are expected to be completed during the second quarter.

Monax Farm-in Agreement

As outlined by Monax Mining to the ASX on 17 March, 2015, Iluka signed a non-binding term sheet with Monax, in which Iluka and Monax are to negotiate Farm-in and Joint Venture Agreement for Iluka to earn 80 per cent interest in the Phar Lap Project, in South Australia by spending \$2 million over four years.

#### Investment market and media enquiries:

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# APPENDIX 1 - OPERATING MINES - PHYSICAL DATA 3 Months to 31 March 2015

	Jacinth- Ambrosia	Murray Basin	Western Australia	Australia Total	Virginia	Group Total
Mining						
Overburden Moved kbcm	392	2,172	92	2,656	-	2,656
Ore Mined kt	2,192	566	291	3,049	647	3,696
Ore Grade HM %	6.3	38.9	12.1	12.9	8.3	12.1
VHM Grade %	5.5	32.2	11.3	11.0	7.0	10.3
Concentrating						
HMC Produced kt	145	144	28	317	55	372
VHM Produced kt	130	127	27	284	42	326
VHM in HMC Assemblage %	89.8	87.9	95.3	89.4	76.2	87.5
Zircon	57.8	22.9	17.6	38.4	16.3	35.1
Rutile	6.5	40.3	6.4	21.9	-	18.7
Ilmenite	25.5	24.7	71.3	29.1	59.9	33.7
HMC Processed kt	87	35	31	153	60	213
Finished Product <sup>1</sup> kt						
Zircon	41.9	7.6	7.1	56.6	9.1	65.7
Rutile	6.8	13.0	0.5	20.3	-	20.3
Ilmenite	23.2	9.2	12.0	44.4	35.2	79.6
Synthetic Rutile Produced kt			1.6	1.6		1.6

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 <a href="www.iluka.com">www.iluka.com</a>, 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.

#### **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 HMC processed into finished product.

**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.

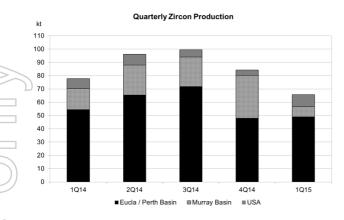
Typically, 1 tonne of upgradeable ilmenite will produce between 0.56 to 0.58 tonnes of SR. Iluka also purchases external ilmenite for its synthetic rutile production process.

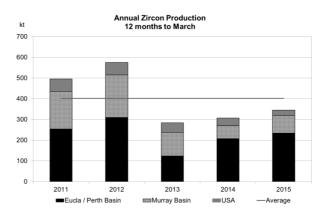
Refer Iluka's website <u>www.iluka.com</u> – Mineral Sands Technical Information for more detailed information on the mineral sands mining and production process.

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

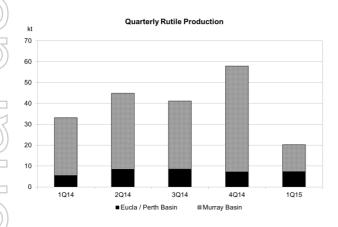
## **APPENDIX 2 - PRODUCTION SUMMARIES**

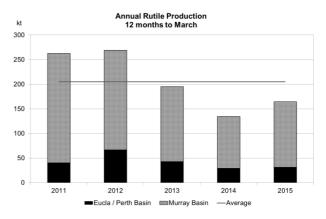
## **Zircon**



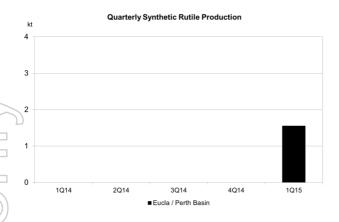


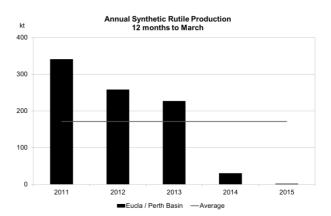
## Rutile





## **Synthetic Rutile**





## Ilmenite

