

**QUARTERLY REVIEW TO 30 SEPTEMBER 2024**

**22 October 2024**

**KEY FEATURES**

- Production of zircon/rutile/synthetic rutile (Z/R/SR) in Q3 2024 was 138kt
  - 43kt of zircon sand
  - 27kt of zircon-in-concentrate (ZIC), with production recognised upon sale
  - 59kt of synthetic rutile, reflecting SR2 running at full capacity
- Z/R/SR sales were 97kt
  - 59kt of zircon sales, including 24kt of ZIC. Q4 zircon sand sales are expected to be impacted by seasonal weakness. ZIC sales are 49kt YTD, being 9kt ahead of guidance and it is expected a further ~10kt will be sold in Q4
  - synthetic rutile sales were 25kt, with a shipment of ~12kt slipping from Q3 to Q4. As previously guided, synthetic rutile sales are second half weighted and Iluka has ~200ktpa of synthetic rutile take-or-pay contracts, representing the expected sales volumes for 2024
- Weighted average zircon sand price was broadly stable at US\$1,891/t (Q2 2024: US\$1,907/t)
- Synthetic rutile price was US\$1,178/t (Q2 2024: US\$1,194/t)
- YTD unit cash costs of production were A\$1,302/t. These costs in part reflect lower production of finished goods in the quarter, with the ongoing pause at SR1 and the associated build of work in progress material

PHYSICAL AND FINANCIAL SUMMARY	Q3 23	Q2 24	Q3 24	Q3 23 YTD	Q3 24 YTD	Q3 24 YTD vs Q3 23 YTD
<b>PRODUCTION</b>						<b>%</b>
<b>kt</b>						
Zircon sand	55.4	46.5	42.5	184.7	113.3	(38.7)
ZIC <sup>1</sup>	20.0	14.6	26.7	57.2	54.2	(5.2)
Rutile <sup>2</sup>	10.4	23.4	10.4	41.1	46.0	11.9
Synthetic rutile	81.3	57.6	58.7	251.5	153.4	(39.0)
<b>Z/R/SR production</b>	<b>167.1</b>	<b>142.1</b>	<b>138.3</b>	<b>534.5</b>	<b>366.9</b>	<b>(31.4)</b>
Ilmenite	123.1	121.9	107.9	425.4	298.8	(29.8)
<b>SALES</b>						
<b>kt</b>						
Zircon sand	27.3	59.3	35.2	123.8	142.9	15.4
ZIC <sup>1</sup>	20.0	14.3	24.2	57.8	49.4	(14.5)
Rutile	7.4	14.4	12.2	34.2	35.8	4.7
Synthetic rutile	26.8	48.5	25.0	143.8	110.8	(22.9)
<b>Z/R/SR sales</b>	<b>81.5</b>	<b>136.5</b>	<b>96.6</b>	<b>359.6</b>	<b>338.9</b>	<b>(5.8)</b>
Ilmenite	40.8	36.0	19.2	122.9	90.4	(26.4)
<b>REVENUE &amp; CASH COSTS</b>						
<b>\$ million</b>						
Z/R/SR revenue	199	314	212	861	772	(10.2)
Ilmenite and other revenue	23	24	20	73	66	(10.1)
<b>Mineral sands revenue</b>	<b>222</b>	<b>338</b>	<b>232</b>	<b>934</b>	<b>838</b>	<b>(10.2)</b>
Production cash costs of Z/R/SR				463	478	3.2
By-product costs				6	4	(25.0)
<b>Total cash cost of production</b>				<b>469</b>	<b>482</b>	<b>2.9</b>
<b>\$ per tonne</b>						
Unit cash production costs Z/R/SR produced				<b>866</b>	<b>1,302</b>	<b>50.4</b>
Unit cost of goods sold Z/R/SR sold				<b>1,041</b>	<b>1,177</b>	<b>13.1</b>
Unit revenue Z/R/SR sold	2,437	2,297	2,197	2,393	2,279	(4.8)
AUD:USD cents	66	66	67	67	66	(0.7)

<sup>1</sup> Production of ZIC is recognised on sale. ZIC sales include small amounts of lower grade zircon products processed by third parties.

<sup>2</sup> Rutile sales and production volumes include the lower value titanium dioxide product, HYTI, that typically has a titanium dioxide content of 70-90%. This product sells at a lower price than rutile, which typically has a titanium dioxide content of 95%.

## PRODUCTION COMMENTARY

The Jacinth-Ambrosia mine in South Australia produced 52kt of heavy mineral concentrate (HMC), down from 80kt in Q2, due to processing of lower grade ore. Heavy mineral (HM) grade over year to date of 3% is in line with the mine plan as outlined in the March Quarterly Review.

In Western Australia, the Cataby mine produced 159kt of HMC. Ore treated volumes in Q3 were up 9% from Q2 following the commissioning of the second new mining unit.

The Narngulu mineral separation plant primarily processed Jacinth-Ambrosia material, producing a total of 69kt of zircon (including ZIC) and 10kt of rutile.

The SR2 kiln produced 59kt of synthetic rutile. Synthetic rutile produced from SR2 services the ~200ktpa of long term take-or-pay contracts Iluka has in place.

In the year to date to Q3 2024, work in progress (HMC) inventory increased by 193kt, predominantly ilmenite-bearing concentrate from Cataby. This inventory underpins Iluka's capability to restart the SR1 kiln (currently offline) when required.

ILUKA MINERAL SANDS PRODUCTION	Q3 23	Q2 24	Q3 24	Q3 23 YTD	Q3 24 YTD	Q3 24 YTD vs Q3 23 YTD
	kt	kt	kt	kt	kt	%
<b>ZIRCON SAND</b>						
Jacinth-Ambrosia / Mid west WA	49.3	22.1	35.7	156.8	78.5	(50.0)
Cataby/South west WA	6.1	24.4	6.8	27.9	34.8	24.7
<b>Total zircon</b>	<b>55.4</b>	<b>46.5</b>	<b>42.5</b>	<b>184.7</b>	<b>113.3</b>	<b>(38.7)</b>
<b>ZIC<sup>3</sup></b>						
Jacinth-Ambrosia / Mid west WA	20.0	14.3	24.0	51.9	45.1	(13.1)
Cataby/South west WA	-	0.3	2.7	5.3	9.1	71.7
<b>Total ZIC</b>	<b>20.0</b>	<b>14.6</b>	<b>26.7</b>	<b>57.2</b>	<b>54.2</b>	<b>(5.2)</b>
<b>RUTILE</b>						
Jacinth-Ambrosia / Mid west WA	6.2	2.6	2.4	19.7	9.7	(50.8)
Cataby/South west WA	4.2	20.8	8.0	21.4	36.3	69.6
<b>Total rutile</b>	<b>10.4</b>	<b>23.4</b>	<b>10.4</b>	<b>41.1</b>	<b>46.0</b>	<b>11.9</b>
<b>Synthetic rutile (WA)</b>	<b>81.3</b>	<b>57.6</b>	<b>58.7</b>	<b>251.5</b>	<b>153.4</b>	<b>(39.0)</b>
<b>TOTAL Z/R/SR</b>	<b>167.1</b>	<b>142.1</b>	<b>138.3</b>	<b>534.5</b>	<b>366.9</b>	<b>(31.4)</b>
<b>ILMENITE</b>						
Jacinth-Ambrosia / Mid west WA	28.0	11.1	11.2	82.8	34.6	(58.2)
Cataby/South west WA	95.1	110.8	96.7	342.6	264.2	(22.9)
<b>Total ilmenite</b>	<b>123.1</b>	<b>121.9</b>	<b>107.9</b>	<b>425.4</b>	<b>298.8</b>	<b>(29.8)</b>

<sup>3</sup> Includes zircon attributable to external processing arrangements.

### Zircon

Zircon sales in Q3 2024 were 59kt, including 24kt zircon-in-concentrate (ZIC). The Q3 weighted average realised zircon sand price (premium and standard) was US\$1,891/t, essentially flat on the prior quarter.

Since the pandemic, China has introduced a range of measures to stimulate domestic demand. The announcements in September targeting the property sector aim to boost liquidity, encourage lending and stabilise prices. These measures are not expected to have an immediate impact. Chinese demand for ceramics remains subdued, impacting demand for raw materials such as opacifier. The fused zirconia, refractory and foundry markets also showed some softening over the quarter. Zirconium chemicals production remained steady.

European zircon demand remained stable. Tile production and opacifier demand traditionally slows over the fourth quarter based on seasonal demand and end-of-year working capital considerations. US manufacturing held steady, with falling interest rates having the potential to spur a rebound in activity.

Monsoon floods in the Indian ceramic industry district of Morbi disrupted tile production for a few weeks, impacting opacifier demand. Iluka expects a recovery over Q4.

Traditionally, Q4 is seasonally softer as customers are reluctant to hold inventory at year-end. This seasonal impact, combined with competition among millers, is likely to lead to some pressure on zircon prices with Q4 prices expected to decline US\$40-50/t. Iluka continues to maintain a disciplined approach to product marketing.

### Titanium Dioxide Feedstocks

Iluka sold 25kt of synthetic rutile in Q3 2024. One bulk shipment slipped to October as FOB customers saved on freight by combining shipments on one vessel.

Natural rutile sales volumes were 12kt (including HyTi). Chinese exports of welding-grade rutile into a subdued market has put pressure on rutile prices in Asia, though Iluka's sales volumes are not expected to be impacted. The Q3 rutile price (excluding HyTi) was US\$1,589/t.

The global pigment market remains stable heading into the seasonally slower northern hemisphere winter, with pigment producers running at higher operating rates in anticipation of a market turnaround in 2025. Titanium pigment producers view several external events as supporting renewed demand growth in 2025, including the final implementation of the EU antidumping tariffs on Chinese imports; economic stimulus measures being implemented in China to support additional domestic pigment consumption; and lower interest rates in the US helping to support new and existing home sales.

The weighted average synthetic rutile price was US\$1,178/t for the quarter. Synthetic rutile sales volumes are second-half weighted, and take-or-pay contract volumes for 2024 are ~200kt; representing the expected sales volumes for 2024.

Updates on selected projects for the quarter are detailed below.

### Execute



#### Eneabba, Western Australia

Eneabba would be Australia's first fully integrated refinery for the production of separated rare earth oxides.<sup>4</sup>

This is taking place via a strategic partnership between Iluka and the Australian Government, including a \$1.25 billion non-recourse loan to Iluka under the Critical Minerals Facility administered by Export Finance Australia.

Capital guidance for the project is \$1.7-1.8 billion and discussions with government continue in relation to funding arrangements. A broader project update will be issued in H2.

Q3 site works activity focussed on progressing critical path items at an appropriate level of capital outlay given ongoing nature of funding discussions.

Tendering and awarding of equipment, fabrication and site works contract packages continues with prioritisation and approach based on criticality to schedule and overall cost commitment given the status of funding discussions. This included the award of structural steel and pipe racks.



#### Balranald, New South Wales

Balranald is a rutile-rich critical minerals development located in the Riverina district of south western New South Wales. Owing to its relative depth, Iluka is developing Balranald via a novel, internally developed, remotely operated underground mining technology.

A final investment decision was approved in February 2023.

Construction of the site access road will be completed in Q4. Site earthworks are progressing at both the wet concentrator location and future accommodation village; and accommodation units are due to arrive over Q4. Off-site construction of the concentrator is approaching completion and preparations are underway for shipping to site.

Factory Acceptance Testing of the first of four mining rigs has been completed to Iluka's satisfaction and it will now be transported to site.

The project remains on track for commissioning in H2 2025.

### Definitive Feasibility Study (DFS)



#### Wimmera, Victoria

The Wimmera development involves the mining and beneficiation of a fine grained heavy mineral sands ore body in Western Victoria for the potential long term supply of rare earths and zircon.

A preliminary feasibility study (PFS) was completed in early 2023 and Iluka's Board approved \$30 million funding for a DFS in February 2023. This was accompanied by the declaration of an Ore Reserve for the WIM 100 deposit in respect of the rare earths (zircon revenue not yet accounted for in Wimmera's Ore Reserve.)

Data collected from the recent field development programme is being interpreted and used to advance the mine and process facilities design. The programme included additional resource drilling, geotechnical test pits, cultural heritage test pits and further hydrogeological investigations.

Environmental approvals processes are progressing, alongside process engineering and mine design.

For more detail on these and other projects, refer to: [iluka.com/operations-resource-development/resource-development](https://iluka.com/operations-resource-development/resource-development)

<sup>4</sup> For further information refer Iluka ASX release, *Eneabba Rare Earths Refinery – Final Investment Decision*, 3 April 2022.

## EXPLORATION

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Expenditure on exploration and evaluation in Q3 2024 was \$4.3 million. Drilling completed during the quarter included a combination of air core and sonic techniques.

In Australia, 9,059 metres of drilling was completed, comprising resource evaluation activities at Jacinth-Ambrosia and exploration drilling in south west New South Wales and in Queensland. Field mapping and sampling programmes were also completed at projects in the Northern Territory.

In the US, drilling activities were conducted in South Carolina at heavy mineral intersections. 1,111 metres of sonic drilling was completed. Third party discussions regarding exploration opportunities were also conducted.

This document was approved and authorised for release to the market by Iluka's Managing Director.

**Investment market and media enquiries:**

Luke Woodgate

General Manager, Investor Relations and Corporate Affairs

Mobile: +61 (0) 477 749 942

Email: [investor.relations@iluka.com](mailto:investor.relations@iluka.com)

## APPENDIX 1 – MINING AND PRODUCTION PHYSICAL DATA

Physicals Data 9 months to September 2024	Jacinth-Ambrosia / Mid west	Cataby / South west	Group Total
<b>Mining</b>			
Overburden Moved kbcm	3,046	11,194	14,240
Ore Mined kt	7,148	6,206	13,354
Ore Fed/Treated kt	7,148	7,010	14,158
Ore Treated Grade HM %	3.0%	7.7%	5.3%
VHM Treated Grade %	2.8%	6.5%	4.6%
<b>Concentrating</b>			
HMC Produced kt	196	545	741
VHM Produced kt	179	429	608
VHM in HMC Assemblage %	91.1%	78.7%	82.0%
Zircon	64.2%	10.1%	24.4%
Rutile	9.4%	5.6%	6.6%
Ilmenite	17.5%	63.0%	51.0%
HMC Processed kt	211	337	548
<b>Finished Product kt</b>			
Zircon	124	44	168
Rutile	10	36	46
Ilmenite (saleable/upgradeable)	35	264	299
Synthetic Rutile	-	153	153

Physicals Data 3 months to 30 September 2024	Jacinth-Ambrosia / Mid west	Cataby / South west	Group Total
<b>Mining</b>			
Overburden Moved kbcm	735	2,865	3,600
Ore Mined kt	2,369	1,537	3,906
Ore Fed/Treated kt	2,369	2,295	4,664
Ore Treated Grade HM %	2.5%	7.5%	5.0%
VHM Treated Grade %	2.3%	6.4%	4.3%
<b>Concentrating</b>			
HMC Produced kt	52	179	231
VHM Produced kt	47	138	185
VHM in HMC Assemblage %	90.7%	77.1%	80.2%
Zircon	64.7%	10.4%	22.6%
Rutile	9.2%	5.5%	6.3%
Ilmenite	16.8%	61.2%	51.3%
HMC Processed kt	94	131	225
<b>Finished Product kt</b>			
Zircon	60	9	69
Rutile	2	8	10
Ilmenite (saleable/upgradeable)	11	97	108
Synthetic Rutile	-	59	59

#### 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. For Cataby/ South West this refers to ore treated.

**Ore Fed/Treated (thousands of tonnes)** refers material processed through the mining units for Cataby/ South West.

**Ore Treated Grade HM %** refers to percentage of heavy mineral (HM).

**VHM Treated 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 the company's Australian 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) 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. Finished product includes material from heavy mineral concentrate (HMC) initially processed in prior periods.

**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.

## APPENDIX 2 – WEIGHTED AVERAGE RECEIVED PRICES

The following table provides weighted average received prices for Iluka's main products. Iluka's Annual Report, available at [www.iluka.com](http://www.iluka.com) contains further historical mineral sands price information.

	FY 23	Q1 24	Q2 24	Q3 24	Q3 24 YTD
<i>US\$/tonne FOB</i>					
Zircon premium and standard	2,066	1,873	1,907	1,891	1,892
Zircon (all products, including zircon in concentrate) <sup>1</sup>	1,849	1,753	1,801	1,674	1,747
Rutile (excluding HyTi) <sup>2,3</sup>	1,887	1,828	1,690	1,589	1,700
Synthetic rutile	1,258	1,282	1,194	1,178	1,220

### Notes:

1. Zircon prices reflect the weighted average price for zircon premium, zircon standard and zircon-in-concentrate. The prices for each product vary considerably, as does the mix of such products sold period to period.
2. Rutile prices will vary quarter-on-quarter depending on the end market to which the product is supplied (e.g. pigment or welding). Post the demerger of Sierra Rutile Limited in H2 2022, rutile sales are a smaller contributor to Iluka's revenue.
3. HyTi is a lower value titanium dioxide product that typically has a titanium dioxide content of 70 to 90%. This product sells at a lower price than rutile, which typically has a titanium dioxide content of 95%.



