

**QUARTERLY REVIEW TO 31 DECEMBER 2023**

**23 January 2024**

**KEY FEATURES**

- Q4 2023 zircon/rutile/synthetic rutile (Z/R/SR) production of 105kt
  - 55kt of zircon sand and 30kt of zircon-in-concentrate (ZIC), with the latter recognised as production upon sale
  - 8kt of synthetic rutile with production at both kilns (SR1 and SR2) paused from early October, as previously announced
- Full year 2023 Z/R/SR production of 639kt
- Q4 2023 Z/R/SR sales of 134kt
  - 53kt of zircon sales (including ZIC)
  - 67kt of synthetic rutile sales, in line with contracted sales volumes
- 2023 full year Z/R/SR sales were 494kt
  - lower zircon sales reflect subdued economic activity in key markets, including Europe and China, though pricing remained relatively strong
  - ‘take or pay’ contracts in place for synthetic rutile have provided a degree of revenue certainty for this product stream
- Unit cash costs of production rose 10% over 2023, reflecting increases in fuel, labour and consumables costs
- H2 2023 capital expenditure was \$105 million for mineral sands and \$68 million for rare earths (full year 2023 \$161 million and \$121 million for mineral sands and rare earths respectively)
  - mineral sands free cash flow in H2 2023 was negative \$74 million, excluding rare earths cash flows
  - dividends received from Deterra Royalties were \$18 million
- As at 31 December 2023, net cash for the group was \$225 million, comprising \$308 million net cash for the mineral sands business and \$83 million net debt for the rare earth business
- Iluka’s high grade titanium feedstock swing production asset, SR1, is now expected to remain offline in 2024 until demand for additional synthetic rutile is supported by market conditions. SR2 will restart at the end of January 2024 as planned

PHYSICAL AND FINANCIAL SUMMARY <sup>1</sup>	Q4 22	Q3 23	Q4 23	FY 22	FY 23	FY 23 vs FY 22
<b>PRODUCTION</b>						
<b>kt</b>						<b>%</b>
Zircon sand	58.5	55.4	54.7	211.0	239.5	13.5
ZIC <sup>2</sup>	17.8	20.0	30.2	87.7	87.5	(0.2)
Rutile <sup>3</sup>	16.6	10.4	11.6	55.1	52.7	(4.4)
Synthetic rutile	63.9	81.3	8.1	237.6	259.5	9.2
<b>Z/R/SR production</b>	<b>156.8</b>	<b>167.1</b>	<b>104.6</b>	<b>591.4</b>	<b>639.2</b>	<b>8.1</b>
Ilmenite	151.1	123.1	35.2	556.1	460.6	(17.2)
<b>SALES</b>						
<b>kt</b>						
Zircon sand	61.5	27.3	23.5	233.7	147.3	(37.0)
ZIC <sup>2</sup>	18.5	20.0	29.6	95.9	87.4	(8.9)
Rutile	12.0	7.4	14.2	57.4	48.3	(15.9)
Synthetic rutile	62.6	26.8	67.2	246.1	211.0	(14.3)
<b>Z/R/SR sales</b>	<b>154.6</b>	<b>81.5</b>	<b>134.4</b>	<b>633.1</b>	<b>494.0</b>	<b>(22.0)</b>
Ilmenite	36.7	40.8	25.9	178.8	148.8	(16.8)
<b>REVENUE &amp; CASH COSTS</b>						
<b>A\$ million</b>						
Z/R/SR revenue	387	199	283	1,416	1,143	(19.3)
Ilmenite and other revenue	28	23	22	116	95	(18.1)
<b>Mineral sands revenue</b>	<b>415</b>	<b>222</b>	<b>305</b>	<b>1,533</b>	<b>1,238</b>	<b>(19.2)</b>
Production cash costs of Z/R/SR				508	605	19.1
By-product costs				13	11	(12.1)
<b>Total cash cost of production</b>				<b>521</b>	<b>616</b>	<b>18.3</b>
<b>\$ per tonne</b>						
Unit cash production costs Z/R/SR produced				<b>860</b>	<b>947</b>	<b>10.2</b>
Unit cost of goods sold Z/R/SR sold				<b>964</b>	<b>1,040</b>	<b>7.9</b>
Unit revenue Z/R/SR sold	2,506	2,437	2,103	2,237	2,314	3.4
AUD:USD cents	66	66	65	70	66	(4.8)

<sup>1</sup> Prior period (FY22) has been restated to exclude Sierra Rutile Ltd which was demerged from the Iluka Group in August 2022.

<sup>2</sup> Production of ZIC is recognised on sale. ZIC sales include small amounts of lower grade zircon products processed by third parties.

<sup>3</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

### Australian Operations

The Jacinth-Ambrosia mine in South Australia produced 91kt of heavy mineral concentrate (HMC) in Q4 2023, down slightly from the 101kt in Q3, with mined ore grade lower in the quarter, in line with the planned mining sequence.

In Western Australia, the Cataby mine produced 112kt of HMC, in line with the previous quarter. A new mining unit was installed and commissioned in the month of December, with a second additional mining unit due for delivery in Q1 2024. These units are expected to increase ore processing rates and deliver an associated increase in material fed to Cataby's wet concentrator plant.

The Narngulu mineral separation plant in Western Australia processed both Jacinth-Ambrosia and Cataby material in the quarter, producing 85kt of zircon (including ZIC) and 12kt of rutile.

As previously announced,<sup>4</sup> production at SR1 was paused from early October, coinciding with the planned major maintenance outage at the SR2 kiln, which is being completed over four months. Contracted synthetic rutile sales volumes were met from inventory during the quarter.

The restart of SR1 in December 2022 represented a low capital expenditure, low risk opportunity to produce an additional 110ktpa of synthetic rutile, in light of industry supply constraints. Iluka is focused on demonstrating a disciplined approach in the market for high grade feedstocks and will not build unnecessary inventory of these valuable resources. As a result, SR1 is now expected to remain offline in 2024 until demand for additional synthetic rutile is supported by market conditions. SR2 will restart at the end of January 2024 as planned, with production underpinned by take-or-pay contracts.

In October 2023, Iluka finalised agreements with renewable energy company PWR Hybrid for the supply of 9MW from a solar power facility to be built at Cataby. The facility will provide ~30% of Cataby's power requirements through a 10 year purchase agreement. PWR Hybrid will build, own and operate the facility, with construction due to commence in February 2024.

ILUKA MINERAL SANDS PRODUCTION	Q4 22	Q3 23	Q4 23	FY 22	FY 23	FY 23 vs FY 22
	kt	kt	kt	kt	kt	%
<b>ZIRCON SAND</b>						
Jacinth-Ambrosia / Mid west WA	41.3	49.3	39.0	158.6	195.9	23.5
Cataby/South west WA	17.2	6.1	15.7	52.4	43.6	(16.8)
<b>Total zircon</b>	<b>58.5</b>	<b>55.4</b>	<b>54.7</b>	<b>211.0</b>	<b>239.5</b>	<b>13.5</b>
<b>ZIC<sup>5</sup></b>						
Jacinth-Ambrosia / Mid west WA	17.8	20.0	28.9	85.1	80.8	(5.1)
Cataby/South west WA	-	-	1.3	2.6	6.7	157.7
<b>Total ZIC</b>	<b>17.8</b>	<b>20.0</b>	<b>30.2</b>	<b>87.7</b>	<b>87.5</b>	<b>(0.2)</b>
<b>RUTILE</b>						
Jacinth-Ambrosia / Mid west WA	6.6	6.2	1.3	20.7	21.1	1.9
Cataby/South west WA	10.0	4.2	10.3	34.4	31.6	(8.1)
<b>Total rutile</b>	<b>16.6</b>	<b>10.4</b>	<b>11.6</b>	<b>55.1</b>	<b>52.7</b>	<b>(4.4)</b>
<b>Synthetic rutile (WA)</b>	<b>63.9</b>	<b>81.3</b>	<b>8.1</b>	<b>237.6</b>	<b>259.5</b>	<b>9.2</b>
<b>TOTAL Z/R/SR</b>	<b>156.8</b>	<b>167.1</b>	<b>104.6</b>	<b>591.4</b>	<b>639.2</b>	<b>8.1</b>
<b>ILMENITE</b>						
Jacinth-Ambrosia / Mid west WA	27.7	28.0	16.1	137.1	99.0	(27.8)
Cataby/South west WA	123.4	95.1	19.1	419.0	361.6	(13.7)
<b>Total ilmenite</b>	<b>151.1</b>	<b>123.1</b>	<b>35.2</b>	<b>556.1</b>	<b>460.6</b>	<b>(17.2)</b>

<sup>4</sup> Refer Iluka ASX release, *Iluka Resources Half Year Results 2023*, 23 August 2023

<sup>5</sup> Iluka's zircon production figures include volumes of zircon attributable to external processing arrangements.

### Zircon

Zircon sales volumes in Q4 2023 were 53kt, including ZIC, up slightly from 47kt in Q3 2023. Total sales in 2023 were 235kt, including ZIC. Despite challenging market conditions and reflecting Iluka's focus on delivering sustainable value, the company's full year weighted average zircon premium and standard price was up 6% on 2022.

Customers continued to demonstrate a degree of caution, reflecting both broad based global economic uncertainty and general weakness in key markets. In China, policymakers have made several announcements aimed at stimulating demand in the real estate market and encouraging consumer spending. While there are signs these policies are stabilising the real estate market and creating more favourable financial market conditions for economic growth, there is yet to be an increase in zircon consumption, which would be expected to lead to some re-stocking on top of underlying demand.

European demand slowed towards the end of Q4, coinciding with regular seasonal factory closures; and customers ended the quarter with lower zircon inventory. In the US, industrial production remained stable, with the overall economy in expansion.

Iluka's weighted average realised zircon price (premium and standard) in Q4 was US\$2,045/t, compared with US\$2,054/t in Q4 2022. The weighted average realised price in Q4 2023 benefitted from a reversal of accruals of US\$120/t. Average prices agreed to date for Q1 2024 are ~2% lower than the realised price for Q4 2023 (net of accruals), while contracted volumes for premium and standard zircon are up more than 50%.

### Titanium Dioxide Feedstocks

Q4 2023 sales of synthetic rutile were 67kt with full year sales of 211kt, matching the volume commitments under Iluka's 'take or pay' contracts. Rutile sales volumes in Q4 were 14kt and 48kt for the full year.

The titanium dioxide market shows signs of improving, with customers reporting better sales volumes of pigment in December; downstream inventories of pigment at minimal levels; and pigment consumers looking to replenish stocks heading into 2024. Pigment producers are also increasing plant operating rates in anticipation of a return to normalised demand patterns. Pigment prices remained relatively steady in 2023, reflecting production discipline across the industry.

In November 2023, the European Union launched an anti-dumping investigation into titanium dioxide products (including titanium pigment) imported from China. Subject to the outcome of the investigation, this could support demand for locally produced pigment in the region. The investigation is to conclude within 14 months. It is also possible that provisional measures will be imposed in the nearer term.

In the welding market, end consumers looked to curtail inventories heading into year-end, resulting in slower sales. Welding feedstock demand in 2024 is expected to be similar to 2023, as emerging markets in Southeast Asia focus investments on infrastructure, along with the increased ship building activity across Asia.

As previously announced, production at Iluka's SR1 and SR2 kilns was paused in Q4. The company has continued to service contracted synthetic rutile sales during this time from inventory. SR2 will restart at the end of January 2024 as planned, with production underpinned by take-or-pay contracts.

The Q4 2023 rutile price was US\$1,871 per tonne (noting that Iluka's sales of rutile are almost exclusively to the welding market) and synthetic rutile price was US\$1,241 per tonne. Contract prices for SR in H1 2024 are expected to decrease by a low single digit percentage compared with H2 2023, reflecting the lagging nature of the agreements.

## PROJECT UPDATES

Updates on selected projects for the quarter are detailed below.

### Execute



#### Eneabba, Western Australia

Iluka is building Australia's first fully integrated refinery for the production of separated rare earth oxides at Eneabba, Western Australia.<sup>6</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 \$2 billion Critical Minerals Facility administered by Export Finance Australia.

Bulk earth works and ground improvement activities have been completed. Tendering is underway for detailed earthworks (e.g. trenching, ponds and tailing storage facilities) and concrete supply and installation. Construction of the operational camp is underway with phased completion expected in Q1 and early Q2 2024. Major engineering package procurement activity is well advanced.

Front end engineering design (FEED) is scheduled to conclude in Q1 2024. Iluka and Fluor, Eneabba's EPCM contractor, continue to review value optimisation measures and operational efficiency improvements. FEED work undertaken to date indicates a capital cost of \$1.5-1.8 billion. Commissioning of the refinery is scheduled for 2026. Iluka expects to provide a project update at the end of Q1 2024.



#### 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.

During the quarter engineering activity peaked; construction of the site access road commenced; and procurement activities continued.

Consistent with Iluka's disciplined approach to production throughout its operational and project portfolio, the company will calibrate Balranald's commissioning schedule in line with market conditions.

### 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, which is the focus of the Wimmera development.

Wimmera's DFS is scheduled for completion at the end of 2025. The Environment Effects Statement (EES) approvals process is progressing, alongside process engineering and mine design.

In parallel, Iluka is continuing the process design of the zircon purification process, with the goal of demonstrating commercial viability via a demonstration plant. Zircon revenue has not yet been accounted for in Wimmera's Ore Reserve.

Iluka has a range of projects at various stages of development. For more detail on projects please refer to Iluka's website [iluka.com/operations-resource-development/resource-development](https://iluka.com/operations-resource-development/resource-development)

<sup>6</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 Q4 2023 was \$3.8 million. Drilling completed during the quarter utilised a combination of air core and sonic techniques.

In Australia, 11,566 metres of drilling was completed, comprising resource evaluation activities at Balranald, Euston, Tutunup and Cataby. Exploration drilling was also completed over regional targets in Queensland.

US exploration activities continued through Q4, with the completion of sonic drilling programs exploring two of the three regional targets in the country's south east. Key strata hosting encouraging HM content were identified for follow up. Reconnaissance of the third main target area in this region was conducted and results are being assessed for prospectivity. Third party discussions continued throughout the quarter.

Target generation work has continued in Australia and the US in line with Iluka's exploration strategy, with plans to further test specific targets. Iluka also continues to identify and apply for tenure over additional prospective regions in Australia. Exploration on these properties will commence subject to necessary approvals. The company continues to review rare earths exploration opportunities, including those presented by third parties.

## OTHER UPDATES

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### 2023 Full Year Results

Iluka is scheduled to release its 2023 Full Year Results on 21 February 2024.

A teleconference with management will be hosted on the day. Dial-in details for the conference call will be available on the events page of Iluka's website, [Events \(iluka.com\)](https://www.iluka.com/events), in due course.

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

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## APPENDIX 1 – MINING AND PRODUCTION PHYSICAL DATA



Physicals Data 12 months to December 2023	Jacinth-Ambrosia / Mid west	Cataby / South west	2023	2022
<b>Mining</b>				
Overburden Moved kbcm	4,238	15,539	19,777	12,488.8
Ore Mined kt	9,919	12,302	22,221	18,503.9
Ore Fed/Treated kt	9,762	10,070	19,832	18,726.1
Ore Treated Grade HM %	3.9%	5.2%	4.5%	4.8%
VHM Treated Grade %	3.6%	4.5%	4.1%	4.3%
<b>Concentrating</b>				
HMC Produced kt	345.7	552.1	897.9	852.2
VHM Produced kt	319.0	432.6	751.6	734.3
VHM in HMC Assemblage %	92.2%	78.4%	83.7%	86.1%
Zircon	61.9%	10.1%	30.0%	27.5%
Rutile	8.3%	5.9%	6.8%	7.3%
Ilmenite	22.0%	62.4%	46.9%	51.3%
HMC Processed kt	450.3	458.5	908.8	1,023.8
<b>Finished Product<sup>7</sup> kt</b>				
Zircon	276.7	50.2	326.9	298.7
Rutile	21.1	31.6	52.7	55.1
Ilmenite (saleable/upgradeable)	99.0	361.6	460.6	556.1
Synthetic Rutile	-	259.5	259.5	237.6

<sup>7</sup> Finished product includes material from heavy mineral concentrate (HMC) initially processed in prior periods.

Physicals Data 3 months to 31 December 2023	Jacinth-Ambrosia / Mid west	Cataby / South west	Group Total
<b>Mining</b>			
Overburden Moved kbcm	1,173	5,854	7,026
Ore Mined kt	2,328	2,864	5,192
Ore Fed/Treated kt	2,322	2,428	4,751
Ore Treated Grade HM %	4.2%	5.0%	4.6%
VHM Treated Grade %	3.9%	4.4%	4.2%
<b>Concentrating</b>			
HMC Produced kt	91.0	128.2	219.1
VHM Produced kt	84.4	101.0	185.4
VHM in HMC Assemblage %	92.8%	78.8%	84.7%
Zircon	67.8%	10.0%	34.0%
Rutile	7.6%	5.5%	6.4%
Ilmenite	17.4%	63.3%	44.3%
HMC Processed kt	105.7	69.8	175.5
<b>Finished Product<sup>8</sup> kt</b>			
Zircon	67.9	17.0	84.9
Rutile	1.3	10.3	11.6
Ilmenite (saleable/upgradeable)	16.1	19.1	35.2
Synthetic Rutile	-	8.1	8.1

#### 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 and Sierra Leone.

**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, or the Sierra Leone 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.

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

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

<sup>8</sup> Finished product includes material from heavy mineral concentrate (HMC) initially processed in prior periods.

## 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.

	Q1 23	Q2 23	Q3 23	Q4 23	H1 23	H2 23	FY 22	FY 23
<i>US\$/tonne FOB</i>								
Zircon premium and standard	2,053	2,088	2,062	2,045 <sup>1</sup>	2,073	2,054	1,943	2,066
Zircon (all products, including zircon in concentrate) <sup>2</sup>	2,053	1,897	1,787	1,658	1,946	1,718	1,850	1,849
Rutile (excluding HYTI) <sup>3,4</sup>	1,903	1,871	1,908	1,871	1,882	1,892	1,550	1,887
Synthetic rutile	1,265	1,267	1,262	1,241	1,266	1,247	Note 5	1,258

### Notes:

1. The weighted average realised price in Q4 2023 benefitted from a reversal of accruals of US\$120/t.
2. 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. Full year 2023 split of zircon sand and concentrate by zircon sand-equivalent was approximately: 63%:37% (2022 full year: 70%:30%).
3. 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.
4. 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%.
5. From 2018-2022, the majority of Iluka’s synthetic rutile sales were underpinned by three commercial offtake arrangements. The terms of those arrangements, including the pricing arrangements, were commercial in confidence and as such not disclosed by Iluka. Since the restart of SR1, synthetic rutile sales are made to a broader number of customers and Iluka will prospectively disclose the collective pricing outcome achieved from 1 January 2023; notwithstanding the pricing arrangements remain commercial in confidence. Quarterly pricing outcomes are impacted by many variables including but not limited to the timing of shipments sold under long term contract pricing mechanisms, bonus/penalty adjustments for product quality parameters and the proportion of spot sales. Synthetic rutile, due to its lower titanium dioxide content than rutile, is priced lower than natural rutile.

APPENDIX 3 – PRODUCTION SUMMARIES

