

27 January 2021

ASX: ILU

## QUARTERLY REVIEW TO 31 DECEMBER 2020

### 2020 KEY FEATURES

- Zircon, rutile and synthetic rutile (Z/R/SR) production of 585 thousand tonnes (2019: 702 thousand tonnes)
  - From April, Iluka adjusted production settings at the Nangulu mineral separation plant and Jacinth-Ambrosia mine in response to market uncertainty associated with the impact of COVID-19, reducing global zircon supply by approximately 10%
  - Full year zircon production of 185 thousand tonnes (2019: 322 thousand tonnes)
  - Full year rutile production of 173 thousand tonnes (2019: 184 thousand tonnes), reflecting lower runtimes and throughput at Sierra Rutile, which produced 120 thousand tonnes
  - Synthetic rutile production was 227 thousand tonnes (2019: 196 thousand tonnes), a record production performance from Synthetic Rutile Kiln 2 (SR2)
  - Production from SR2 will be suspended temporarily for a period of three to six months from February 2021 to reduce stocks of synthetic rutile. Stocks are currently at an elevated level, owing to a previously disclosed contractual dispute with Chemours. While litigation in respect of this dispute remains ongoing, Chemours has scheduled a vessel to take its first shipment of synthetic rutile for 2021 (4 thousand tonnes in late January), in line with the contract
- Z/R/SR sales of 518 thousand tonnes (2019: 681 thousand tonnes)
  - Full year zircon sales 240 thousand tonnes (2019: 274 thousand tonnes), reflecting a continued recovery in key markets following COVID-19 related shutdowns in Q1. Increased purchasing was most evident in the fourth quarter – a traditionally subdued sales period
  - Full year rutile sales 162 thousand tonnes, marginally lower than production due to timing of shipments
  - Full year synthetic rutile sales 116 thousand tonnes (2019: 207 thousand tonnes)
- Zircon prices maintained, with the weighted average zircon (premium and standard) price in Q4 US\$1,291 per tonne (Q3: US\$1,311 per tonne)
- Rutile pricing (excluding HYTI) steady at US\$1,199 per tonne in Q4 (Q3: US\$1,195 per tonne)
- Revenues from other products, including monazite concentrate and activated carbon, \$106 million, up 65% from 2019. Operations at Eneabba commenced in April and 44 thousand tonnes of monazite concentrate were shipped in 2020. Eneabba is now the highest grade rare earths operation globally
- Ongoing focus on maintaining a strong balance sheet
  - Net cash as at 31 December was \$50 million (31 December 2019: net cash \$43 million)
  - Free cash flow of \$36 million incorporates investment of \$71 million in capital expenditure and \$166 million in tax payments, including a \$98 million 2019 final tax payment in H2 2020
  - Closing inventory of \$616 million, an increase from \$425 million at the start of the year
  - Iluka received \$13.6 million in JobKeeper subsidies from the Australian Government following a significant decline in zircon demand and associated revenue in Q1. Given the company's subsequent financial performance, Iluka has decided to return this voluntarily (the net cash and free cash flow cited above are inclusive of the \$13.6 million received)
  - Prudent approach to dividends in 2020, including no interim dividend declared
- Investment of International Finance Corporation (IFC) in Sierra Rutile increased from 3.57% to 10%
- The company has commenced an efficiency programme to ensure business improvement and cost effectiveness; and has made changes to the Iluka Executive

## PRODUCTION

|                                       | Q4<br>2019   | Q3<br>2020   | Q4<br>2020   | Full year<br>2019 | Full year<br>2020 | Full year<br>2020 vs<br>2019 |
|---------------------------------------|--------------|--------------|--------------|-------------------|-------------------|------------------------------|
|                                       | kt           | kt           | kt           | kt                | kt                | %                            |
| Zircon                                | 68.9         | 32.1         | 60.9         | 322.1             | 185.2             | (42.5)                       |
| Rutile                                | 55.8         | 47.9         | 40.6         | 184.1             | 172.6             | (6.2)                        |
| Synthetic rutile                      | 56.4         | 55.3         | 60.6         | 196.2             | 227.4             | 15.9                         |
| <b>Total Z/R/SR production</b>        | <b>181.1</b> | <b>135.3</b> | <b>162.1</b> | <b>702.4</b>      | <b>585.2</b>      | <b>(16.7)</b>                |
| Ilmenite                              | 91.9         | 111.2        | 129.4        | 318.6             | 455.9             | 43.1                         |
| <b>Total mineral sands production</b> | <b>273.0</b> | <b>246.5</b> | <b>291.5</b> | <b>1,021.0</b>    | <b>1,041.1</b>    | <b>2.0</b>                   |
| Monazite concentrate <sup>1</sup>     | -            | 20.6         | 14.1         | -                 | 44.4              | -                            |

## SALES

|                                   | H1<br>2020   | H2<br>2020   | Full year<br>2019 | Full year<br>2020 | Full year<br>2020 vs<br>2019 |
|-----------------------------------|--------------|--------------|-------------------|-------------------|------------------------------|
|                                   | kt           | kt           | kt                | kt                | %                            |
| Zircon                            | 78.4         | 161.2        | 274.0             | 239.6             | (12.6)                       |
| Rutile                            | 74.7         | 87.4         | 200.1             | 162.1             | (19.0)                       |
| Synthetic rutile                  | 88.5         | 27.3         | 206.7             | 115.8             | (44.0)                       |
| <b>Total Z/R/SR sales</b>         | <b>241.6</b> | <b>275.9</b> | <b>680.8</b>      | <b>517.5</b>      | <b>(24.0)</b>                |
| Ilmenite                          | 107.1        | 149.0        | 170.8             | 256.1             | 49.9                         |
| <b>Total mineral sands sales</b>  | <b>348.7</b> | <b>424.9</b> | <b>851.6</b>      | <b>773.6</b>      | <b>(9.2)</b>                 |
| Monazite concentrate <sup>1</sup> | 9.7          | 34.7         | -                 | 44.4              | -                            |

## REVENUE AND CASH COST

|  | Q4<br>2019   | Q3<br>2020   | Q4<br>2020   | Full year<br>2019 | Full year<br>2020 | Full year<br>2020<br>vs 2019 |
|--|--------------|--------------|--------------|-------------------|-------------------|------------------------------|
| <i>A\$ million</i>   |              |              |              |                   |                   | %                            |
| Z/R/SR revenue   | 377.7        | 186.7        | 246.2        | 1,128.7           | 841.0             | (25.5)                       |
| Ilmenite and other revenue <sup>2</sup>                          | 17.0         | 23.5         | 34.0         | 64.4              | 106.0             | 64.6                         |
| <b>Mineral sands revenue<sup>3</sup></b>                         | <b>394.7</b> | <b>210.2</b> | <b>280.2</b> | <b>1,193.1</b>    | <b>947.0</b>      | <b>(20.6)</b>                |
| <i>A\$ million</i>   |              |              |              |                   |                   |                              |
| Production cash costs Z/R/SR                                     |              |              |              | 528.7             | 537.1             | 1.6                          |
| Ilmenite concentrate & by-product costs                          |              |              |              | 10.9              | 21.6              | 98.9                         |
| <b>Total cash cost of production</b>                             |              |              |              | <b>539.6</b>      | <b>558.7</b>      | <b>3.4</b>                   |
| <i>A\$ per tonne</i>   |              |              |              |                   |                   |                              |
| Unit cash production cost per tonne Z/R/SR produced <sup>4</sup> |              |              |              | 753               | 918               | 21.9                         |
| <b>Unit cost of goods sold per tonne Z/R/SR sold</b>             |              |              |              | <b>889</b>        | <b>1,032</b>      | <b>16.1</b>                  |
| <b>Revenue per tonne of Z/R/SR sold</b>                          | <b>1,632</b> | <b>1,712</b> | <b>1,476</b> | <b>1,654</b>      | <b>1,625</b>      | <b>(1.8)</b>                 |
| Average AUD:USD (cents)  | 68.3         | 71.5         | 73.0         | 69.5              | 69.1              | (0.6)                        |

All currency is Australian dollar denominated unless otherwise indicated.

1. Monazite concentrate production is recognised upon sale.

2. Ilmenite and other revenue include revenues derived from other materials, including monazite concentrate, activated carbon products and iron concentrate.

3. Represents FOB revenue.

4. Excludes ilmenite and by-products.

## PRODUCTION AND OPERATIONS

### Australian Operations

At Iluka's Jacinth-Ambrosia mine in South Australia, 95 thousand tonnes of heavy mineral concentrate (HMC) was produced in Q4, up from 77 thousand tonnes in the previous quarter. Mining occurred at the Jacinth North deposit, with increased throughput rates and ore grades contributing to the higher production. Full year HMC production was 357 thousand tonnes, with mining taking place at the Ambrosia deposit in Q1 and Q2, followed by a move back to Jacinth North in Q3.

In Western Australia, the Cataby operation produced 117 thousand tonnes of HMC in Q4, which was down from the 139 thousand tonnes produced in the previous quarter. This included 75 thousand tonnes of magnetic material (for use as synthetic rutile feed) and 42 thousand tonnes of non-magnetic material (for zircon and rutile production). Reduced HMC production was the result of lower ore grades owing to mine sequence, with throughput volumes being in line with the previous quarter. Full year HMC production at Cataby was 520 thousand tonnes (344 thousand tonnes magnetic; 176 thousand tonnes non-magnetic).

The Narngulu mineral separation plant (MSP) processed 68 thousand tonnes of HMC in Q4, down from 89 thousand tonnes in Q3. Material processed during the quarter was sourced exclusively from Jacinth-Ambrosia. From April, the MSP's production settings were adjusted to reduce zircon production in response to the impact of COVID-19 on zircon markets. The plant retains flexibility to return to higher production settings quickly.

Production from SR2 at Capel was 61 thousand tonnes, an increase from 55 thousand tonnes in the previous quarter. SR2's record production performance (for both Q4 and the full year of 227 thousand tonnes) was driven by higher runtime and use of reduced ilmenite stocks.

As stocks of synthetic rutile are currently at an elevated level, production from SR2 will be suspended for a period of three to six months from February 2021. In addition to optimising inventory levels and minimising costs, the opportunity will be taken to carry out maintenance works, though Iluka plans to retain the ability to adjust production settings (and restart the kiln) promptly if required. No redundancies will result from the production suspension.

The Eneabba operation shipped a further 14 thousand tonnes of monazite-zircon concentrate during the quarter. Production commenced in Q2 and a total of 44 thousand tonnes was shipped for the year.

### Sierra Leone Operations

Q4 rutile production was 27 thousand tonnes, down from 31 thousand tonnes in Q3. Production continued to be hampered by several downtime events, leading to lower throughputs. As disclosed in the September 2020 Quarterly Review, a minor fire occurred in the secondary rutile recovery (or scavenger) circuit of Sierra Rutile's MSP in October. For the remainder of the quarter this circuit was bypassed. The incident reduced rutile production by approximately 5 thousand tonnes, with throughput reduced to minimise losses associated with the bypass. The scavenger circuit is planned to be replaced in H1 2021. Tailings generated during the period prior to replacement of the circuit will be reprocessed (once the circuit has been replaced) in 2021 such that the majority of lost production will be recovered over the course of the year.

Operations in Sierra Leone remain impacted by COVID-19, with quarantine and travel restrictions impeding Iluka's ability to maintain specialised skillsets typically provided by expatriate resources.

In June 2019 Iluka and International Finance Corporation (IFC), a member of the World Bank Group, entered into a strategic partnership in Sierra Leone, with IFC making a US\$20 million investment in Sierra Rutile for an initial 3.57% stake. A key priority for IFC in entering the strategic partnership was the facilitation of the Sembehun project in a timely manner and, as advised at the time, further investment by IFC was subject to approval of commencement of early works for this project. Given the delay in approval of Sembehun and the significance of the strategic partnership, Iluka and IFC have been in ongoing discussions regarding its terms. These discussions have concluded, with Iluka and IFC agreeing that IFC's stake in Sierra Rutile is increased from 3.57% to 10%. No additional consideration was paid in respect of the increased stake.

## MINERAL SANDS MARKET CONDITIONS

### Zircon Markets

Fourth-quarter sales of 98 thousand tonnes (sand and ZIC) were 55% higher than the previous quarter and 10% higher than Q4 2019, with full year zircon sales (sand and ZIC) of 240 thousand tonnes.

Total zircon sand sales for 2020 were 187 thousand tonnes, broadly in line with the 191 thousand tonnes sold in 2019. This result reflects a modest rebound from the initial impact of COVID-19 related disruptions early in the year. While activity in most end markets remains below previous years, improvement was discernible over the course of 2020, with increased purchasing most evident in the fourth quarter – a traditionally subdued sales period.

In China, the ceramics industry continued to operate at approximately 60% capacity, reflecting in part a reduced demand for exported tiles. However, opacifier demand appears to have stabilised with increased use in higher-end large format tiles offsetting some declining use in lower quality products. Tile manufacturer operating rates improved across India, Europe, and South America. Demand for frits, glazes, and inks from consumers based in Castellon, Spain, the world's most concentrated group of manufacturers, continued to outperform other markets during the quarter, despite regional COVID-19 impacts.

Fused zirconia markets remain stable. Foundries in China reported receiving fresh orders, while refractory markets were steady. Zircon chemicals markets in China are mixed, with increased exports, while domestic demand remains subdued.

As foreshadowed in the September Quarterly Review, ZIC sales during Q4 were higher due to two shipments rolling over from Q3.

Zircon prices were maintained across the quarter, with the weighted average price of zircon sand (premium and standard) US\$1,291 per tonne. The weighted average zircon price for 2020 was US\$1,319 per tonne, down only 11% from 2019, a solid result given market conditions and reflective of Iluka's market discipline.

### Titanium Dioxide Feedstock Markets

Sales of high grade titanium dioxide feedstock (rutile and synthetic rutile) for the quarter were 69 thousand tonnes, up 50% from Q3 but well down on Q4 2019. Rutile sales in Q4 2020 were 54 thousand tonnes, up 58% from Q3. Synthetic rutile sales of 15 thousand tonnes were in line with Q3, reflecting the contractual dispute with Chemours. While litigation in respect of the contractual dispute remains ongoing, Chemours has scheduled a vessel to take its first shipment of synthetic rutile for 2021 (4 thousand tonnes in late January), in line with the contract.

Despite the continuing impact of COVID-19 restrictions in many markets, pigment demand remained strong during Q4. Iluka understands that paint plant shutdowns that typically occur over year-end were cancelled in order to keep up with demand, with one large paint producer looking to increase production by 10% during the first half of 2021. Iluka's current level of enquiry for high-grade feedstocks is encouraging.

Pigment producers have responded to the positive market conditions by announcing a series of price increases for Q1 2021. Most industry observers believe the increases will be implemented. Lead times for certain pigment grades now exceed 30 days; and recent shipping and logistics issues have exacerbated the supply tightness. COVID-19 has caused shipping containers to be in short supply at key ports in China, with associated delays in exports and increased freight rates. These logistics issues are helping to improve market conditions in European and South East Asian markets that have previously relied on Chinese exports.

Demand from the welding sector was strong, with quarterly sales to this relatively small market segment the highest on record. Titanium sponge demand in China has improved and Iluka was able to secure sales of rutile during the quarter to two new sponge producers.

Weighted average rutile prices in December quarter were US\$1,199 per tonne, in line with third quarter pricing. The 2020 weighted average price achieved was \$1,220 per tonne, up 7% from 2019.

## PROJECT UPDATES

Iluka continues to progress work on its pipeline of major projects. Updates on projects with material progress over the December quarter are detailed below.

### Eneabba, Western Australia

The Eneabba project in Western Australia involves the extraction, processing and sale of a strategic stockpile rich in monazite (a mineral containing rare earth elements) and zircon. Eneabba is currently the highest grade rare earths operation globally. Phase 1 of operations is producing a mixed monazite-zircon concentrate, with the monazite fraction at approximately 20%.

Phase 2 of the project is currently in execute. Once commissioned, this will see the production of two separate concentrates: a dedicated monazite concentrate at approximately 90%, suitable as a direct feed to a downstream rare earths refinery; and a zircon-ilmenite concentrate, which will be processed into finished products (zircon and ilmenite) at Narngulu. Regulatory approvals are proceeding in line with expectations and all major construction and procurement contracts have been awarded.

Additionally, Iluka is actively exploring the potential for the downstream processing of rare earths in Australia.

### Balranald, New South Wales

Balranald and Nepean are two rutile-rich deposits in the northern Murray Basin, New South Wales. Owing to their relative depth, Iluka is assessing the potential to develop these deposits via a novel, internally developed, underground mining and backfilling technology.

Field activities associated with the third trial (T3) of Iluka's innovative underground mining method were completed during the quarter. The field activities confirmed the effectiveness of the underground mining method and validated key elements of the mining unit design; including materials of construction that have thwarted previous attempts to mine for extended periods of time. Continuous backfilling of tailings was not achieved. This is not considered a fatal flaw, with traditional on-surface placement a low-risk alternative.

Site teams have since demobilised and the site secured. The project team, in collaboration with our technology partners, is now collating, interpreting and analysing the significant volume of data generated during the trial.

Work has commenced to scope the Definitive Feasibility Study (DFS) and the company will determine whether to proceed with a DFS mid-year.

### Wimmera, Victoria

The Wimmera project involves the mining and beneficiation of a fine grained heavy mineral sands ore body in the Victorian Murray Basin for the potential long term supply of zircon and rare earths.

One characteristic shared by the fine grained mineral sands deposits located in Western Victoria (those held by Iluka and other project proponents) is higher levels of impurities in their zircon. Absent a processing solution to remove these impurities, the zircon is ineligible for sale into the ceramics market. Iluka's study work for Wimmera is focussed on validating such a processing solution.

Environmental baseline studies were also progressed during the quarter.

### Sembehun, Sierra Leone

The Sembehun group of deposits are situated 20 to 30 kilometres north-west of the existing Sierra Rutile operations. Sembehun is one of the largest and highest quality known rutile deposits in the world. Iluka is focused on determining an approach which balances the risk and reward associated with the development of Sembehun and has commenced a process to identify third parties willing to invest in the next phase of Sierra Rutile's growth.

While access to Sierra Leone remained difficult in the quarter, planning progressed to undertake a field trial of hydraulic mining in the current mining area site during H1 2021. If this trial is successful, it has potential to complement production at the current mining area and validate hydraulic mining as an option for Sembehun.

## **Puttalam Quarry (PQ), Sri Lanka**

In the September Quarterly Review, Iluka announced it would be writing down the PQ Resource in the company's 2020 Ore Reserve and Mineral Resource Statement. This follows the expiration of the exploration lease (EL) covering the Resource.

Iluka's 2020 full year results will reflect a \$12 million impairment associated with this write down.

## **EXPLORATION**

Expenditure on exploration and evaluation in the December quarter 2020 was \$2.2 million, with full year expenditure of \$9.4 million (2019: \$11.7 million).

Despite ongoing challenges relating to COVID-19 restrictions, which prevented a significant amount of planned field work, Iluka continued field activities on regional targets in the US. Samples extracted will be analysed in Q1 2021. Preparations for field programmes in Australia are well advanced with drilling anticipated to commence in Q1 2021.

## **CORPORATE UPDATES**

### **Iluka Efficiency Project**

Since August 2020, Iluka has been executing a company-wide efficiency programme to ensure business improvement and cost effectiveness. The programme is expected to implement cost reductions of \$30-40 million in 2021, with the full impact of efficiency measures likely to be realised over the longer term. Restructure costs of \$6 million will be recognised as part of Iluka's full year accounts. A number of organisational changes have been enacted across corporate and operational support functions. Further changes to improve efficiency at operations in Australia are scheduled for implementation in Q1 2021.

### **Changes to Iluka Executive**

The following changes have been made to Iluka's Executive:

- Matthew Blackwell has added responsibility for Marketing and is now Head of Major Projects and Marketing.
- Adele Stratton has added responsibility for development to her current role and is now Chief Financial Officer and Head of Development.
- Shane Tilka is General Manager, Australian Operations, with accountability for all Australian sites.
- Dan McGrath is appointed Chief Technical Officer and Head of Rare Earths, bringing dual focus to addressing key technical matters and leading the development of Iluka's emerging rare earths business.
- Theuns de Bruyn, formerly Chief Operating Officer, Sierra Rutile, has been appointed Chief Executive Officer, Sierra Rutile.
- Rob Hattingh has assumed the role of Chief Development Officer, Sierra Rutile, with a focus on progressing development activities, including the planned trial for Sembehun and the review of potential investment in the next phase of Sierra Rutile's growth.

## 2020 Full Year Results

Iluka is scheduled to release its 2020 Full Year Results on 25 February 2021. An investment market conference call will take place on the day.

Dial-in details for the conference call will be on the events page of Iluka's website in due course: [www.iluka.com/investors-media/events](http://www.iluka.com/investors-media/events)

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

### Investment market and media enquiries

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## APPENDIX: QUARTERLY REVIEW DATA TABLES

### GROUP MINERAL SANDS PRODUCTION

|  | Q4<br>2019   | Q3<br>2020   | Q4<br>2020   | Full year<br>2019 | Full year<br>2020 | Full year<br>2020 vs<br>2019 |
|--|--------------|--------------|--------------|-------------------|-------------------|------------------------------|
|  | kt           | kt           | kt           | kt                | kt                | %                            |
| <b>Zircon<sup>1</sup></b>                    |              |              |              |                   |                   |                              |
| Jacinth-Ambrosia/Mid west WA                 | 47.9         | 11.5         | 34.6         | 260.2             | 114.9             | (55.8)                       |
| Cataby/South west WA                         | 16.9         | 20.6         | 14.8         | 53.5              | 58.8              | 9.9                          |
| Sierra Leone                                 | 4.1          | -            | 6.6          | 8.5               | 6.6               | (22.4)                       |
| Idle Operations (US/Aus)                     | -            | -            | 4.9          | -                 | 4.9               | -                            |
| <b>Total zircon production</b>               | <b>68.9</b>  | <b>32.1</b>  | <b>60.9</b>  | <b>322.1</b>      | <b>185.2</b>      | <b>(42.5)</b>                |
| <b>Rutile</b>                                |              |              |              |                   |                   |                              |
| Jacinth-Ambrosia/Mid west WA                 | 5.1          | 3.5          | 10.6         | 31.2              | 24.5              | (21.5)                       |
| Cataby/South west WA                         | 6.7          | 13.4         | 2.7          | 15.6              | 27.9              | 78.8                         |
| Sierra Leone                                 | 44.0         | 31.0         | 27.3         | 137.2             | 120.2             | (12.4)                       |
| <b>Total rutile production</b>               | <b>55.8</b>  | <b>47.9</b>  | <b>40.6</b>  | <b>184.1</b>      | <b>172.6</b>      | <b>(6.2)</b>                 |
| <b>Synthetic rutile (WA)</b>                 | <b>56.4</b>  | <b>55.3</b>  | <b>60.6</b>  | <b>196.2</b>      | <b>227.4</b>      | <b>15.9</b>                  |
| <b>TOTAL Z/R/SR PRODUCTION</b>               | <b>181.1</b> | <b>135.3</b> | <b>162.1</b> | <b>702.4</b>      | <b>585.2</b>      | <b>(16.7)</b>                |
| <b>Ilmenite</b>                              |              |              |              |                   |                   |                              |
| Jacinth-Ambrosia/Mid west WA                 | 20.5         | 4.4          | 22.3         | 107.0             | 67.7              | (36.7)                       |
| Cataby/South west WA                         | 55.0         | 94.7         | 97.2         | 152.4             | 342.4             | 124.7                        |
| Sierra Leone                                 | 16.4         | 12.1         | 9.9          | 59.2              | 45.8              | (22.6)                       |
| Idle Operations (US/Aus)                     | -            | -            | -            | -                 | -                 | n/a                          |
| <b>Total Ilmenite</b>                        | <b>91.9</b>  | <b>111.2</b> | <b>129.4</b> | <b>318.6</b>      | <b>455.9</b>      | <b>43.1</b>                  |
| <b>TOTAL MINERAL SANDS PRODUCTION</b>        | <b>273.0</b> | <b>246.5</b> | <b>291.5</b> | <b>1,021.0</b>    | <b>1,041.1</b>    | <b>2.0</b>                   |
| <b>Monazite concentrate (WA)<sup>2</sup></b> | <b>-</b>     | <b>20.6</b>  | <b>14.1</b>  | <b>-</b>          | <b>44.4</b>       | <b>-</b>                     |

1. Iluka's zircon production figures include volumes of zircon attributable to external processing arrangements (i.e. zircon in concentrate).
2. Monazite concentrate production is recognised upon sale.

Note: The above table details Iluka's total production by product group, with the source of that production attributed to the regional operating mines and basins. Processing of final product occurs in mineral separation plants located in Australia at Narngulu, Western Australia and in Sierra Leone. Iluka also has a mineral separation plant at Stony Creek in Virginia, United States (closed) and Hamilton, Murray Basin (idled). Appendix 1 provides further production details.



## Iluka 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.

| Weighted Average Price<br>US\$/tonne FOB                                 | Full year<br>2019 | H1<br>2020 | Q3<br>2020 | Q4<br>2020 | H2<br>2020 | Full year<br>2020 |
|--|-------------------|------------|------------|------------|------------|-------------------|
| Zircon Premium and Standard  | 1,487             | 1,354      | 1,311      | 1,291      | 1,301      | 1,319             |
| Zircon<br>(all products including zircon in<br>concentrate) <sup>1</sup> | 1,380             | 1,265      | 1,271      | 1,144      | 1,194      | 1,217             |
| Rutile<br>(excluding HYTI and TIC) <sup>2</sup>                          | 1,142             | 1,246      | 1,195      | 1,199      | 1,197      | 1,220             |
| Synthetic rutile <sup>3</sup>  | -                 | -          | -          | -          | -          | -                 |

### 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. In 2020, the split of zircon sand and concentrate by zircon sand-equivalent is approximately: 78%:22%. (2019: 70%:30%).
- 2: Included in rutile sales volumes reported elsewhere in this Quarterly Review are lower titanium dioxide products, HYTI and titanium-in-concentrate (TIC). HYTI that typically has a titanium dioxide content of 70 to 91%. This product sells at a lower price than rutile, which typically has a titanium dioxide content of 95%. 2020 full year sales of the lower grade HYTI material were 29% of rutile sales (2019: 23%).
- 3: Iluka's synthetic rutile sales are, in large part, underpinned by commercial offtake arrangements. The terms of these arrangements, including the pricing arrangements are commercial in confidence and as such not disclosed by Iluka. Synthetic rutile, due to its lower titanium dioxide content than rutile, is priced lower than natural rutile.

**OPERATING MINES – PHYSICAL DATA**  
**3 Months to 31 December 2020**

|                                    | Jacinth-<br>Ambrosia/<br>Mid west | Cataby /<br>South west | Australia<br>Total | Sierra<br>Leone | Idle<br>Operations | Group Total |
|------------------------------------|-----------------------------------|------------------------|--------------------|-----------------|--------------------|-------------|
| <b>Mining</b>                      |                                   |                        |                    |                 |                    |             |
| Overburden moved kbcm              | 466                               | 2,717                  | 3,183              | 32              | -                  | 3,214       |
| Ore mined kt                       | 2,730                             | 3,336                  | 6,067              | 1,902           | -                  | 7,968       |
| Ore treated grade HM %             | 4.0%                              | 4.7%                   | 4.3%               | 3.4%            | -                  | 4.1%        |
| VHM treated grade %                | 3.7%                              | 4.1%                   | 3.9%               | 2.5%            | -                  | 3.5%        |
| <b>Concentrating</b>               |                                   |                        |                    |                 |                    |             |
| HMC produced kt                    | 95.1                              | 116.9                  | 212.0              | 73.7            | -                  | 285.7       |
| VHM produced kt                    | 85.7                              | 102.6                  | 188.3              | 49.9            | -                  | 238.2       |
| VHM in HMC assemblage %            | 90.1%                             | 87.8%                  | 88.8%              | 67.7%           | -                  | 83.4%       |
| Zircon                             | 45.7%                             | 12.1%                  | 27.2%              | 4.9%            | -                  | 21.4%       |
| Rutile                             | 7.9%                              | 7.1%                   | 7.4%               | 44.1%           | -                  | 16.9%       |
| Ilmenite                           | 36.5%                             | 68.6%                  | 54.2%              | 18.8%           | -                  | 45.0%       |
| HMC processed kt                   | 67.5                              | 86.0                   | 153.5              | 60.7            | -                  | 214.2       |
| Finished product <sup>1</sup> kt   |                                   |                        |                    |                 |                    |             |
| Zircon                             | 34.6                              | 14.7                   | 49.3               | 6.6             | 4.9                | 60.9        |
| Rutile                             | 10.6                              | 2.7                    | 13.3               | 27.3            | -                  | 40.6        |
| Ilmenite<br>(saleable/upgradeable) | 22.3                              | 97.3                   | 119.5              | 9.9             | -                  | 129.4       |
| Synthetic rutile produced kt       | -                                 | 60.6                   | 60.6               | -               | -                  | 60.6        |

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

**OPERATING MINES – PHYSICAL DATA**  
**12 Months to 31 December 2020**

|                                    | Jacynth-<br>Ambrosia/<br>Mid west | Cataby /<br>South west | Australia<br>Total | Sierra<br>Leone | Idle<br>Operations | Group<br>Total<br>2020 | Group<br>Total<br>2019 |
|------------------------------------|-----------------------------------|------------------------|--------------------|-----------------|--------------------|------------------------|------------------------|
| <b>Mining</b>                      |                                   |                        |                    |                 |                    |                        |                        |
| Overburden moved kbcm              | 3,146                             | 12,164                 | 15,310             | 254             | -                  | 15,564                 | 12,602                 |
| Ore mined kt                       | 10,349                            | 13,343                 | 23,692             | 8,928           | -                  | 32,620                 | 29,124                 |
| Ore treated grade HM %             | 4.0%                              | 5.7%                   | 4.9%               | 3.4%            | -                  | 4.4%                   | 3.9%                   |
| VHM treated grade %                | 3.7%                              | 4.8%                   | 4.2%               | 2.5%            | -                  | 3.7%                   | 4.3%                   |
| <b>Concentrating</b>               |                                   |                        |                    |                 |                    |                        |                        |
| HMC produced kt                    | 357                               | 520                    | 876                | 306             | -                  | 1,182                  | 1,087                  |
| VHM produced kt                    | 318                               | 454                    | 772                | 200             | -                  | 971                    | 911                    |
| VHM in HMC assemblage %            | 89.0%                             | 87.4%                  | 88.1%              | 65.4%           | -                  | 82.2%                  | 83.8%                  |
| Zircon                             | 49.7%                             | 11.4%                  | 27.0%              | 4.2%            | -                  | 21.1%                  | 30.9%                  |
| Rutile                             | 8.0%                              | 6.8%                   | 7.3%               | 43.4%           | -                  | 16.6%                  | 18.7%                  |
| Ilmenite                           | 31.3%                             | 69.3%                  | 53.8%              | 17.7%           | -                  | 44.5%                  | 34.2%                  |
| HMC processed kt                   | 232                               | 483                    | 715                | 293             | -                  | 1,008                  | 961                    |
| Finished product <sup>1</sup> kt   |                                   |                        |                    |                 |                    |                        |                        |
| Zircon                             | 114.9                             | 58.8                   | 173.7              | 6.6             | 4.9                | 185.2                  | 322.1                  |
| Rutile                             | 24.5                              | 27.9                   | 52.4               | 120.2           | -                  | 172.6                  | 184.1                  |
| Ilmenite<br>(saleable/upgradeable) | 67.7                              | 342.4                  | 410.1              | 45.8            | -                  | 455.9                  | 318.6                  |
| Synthetic rutile produced kt       | -                                 | 227.4                  | 227.4              | -               | -                  | 227.4                  | 196.2                  |

**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 treated grade HM %** refers to percentage of heavy mineral (HM) in the ore processed through the mining unit.

**VHM treated grade %** refers to percentage of valuable heavy mineral (VHM) - titanium dioxide (rutile and ilmenite), and zircon in the ore processed through the mining unit.

**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 a mineral processing plant.

**HMC produced** refers to HMC, which includes the valuable heavy mineral concentrate (zircon, rutile, ilmenite) as well as other non-valuable heavy minerals (gangue).

**VHM produced** refers to an estimate of valuable heavy mineral in heavy mineral concentrate expected to be processed.

**VHM produced and the VHM assemblage** - provided to enable an indication of the valuable heavy mineral component in HMC.

**HMC processed** provides an indication of material emanating from each mining operation to be processed.

**Finished product** is provided as an indication of the finished production (zircon, rutile, ilmenite – both saleable and upgradeable) attributable to the VHM in HMC production streams from the various mining operations. Finished product levels are subject to recovery factors which can vary. The difference between the VHM produced and finished product reflects the recovery level by operation, as well as processing of finished material/concentrate in inventory. Ultimate finished product production (rutile, ilmenite, and zircon) is subject to recovery loss at the processing stage – this may be in the order of 10 per cent.

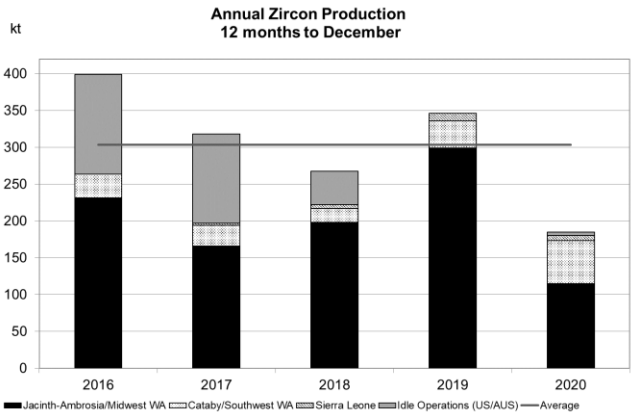
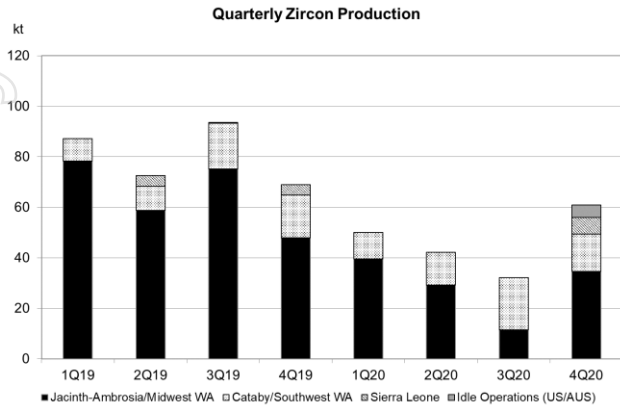
**Ilmenite** is produced for sale or as a feedstock for synthetic rutile production.

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

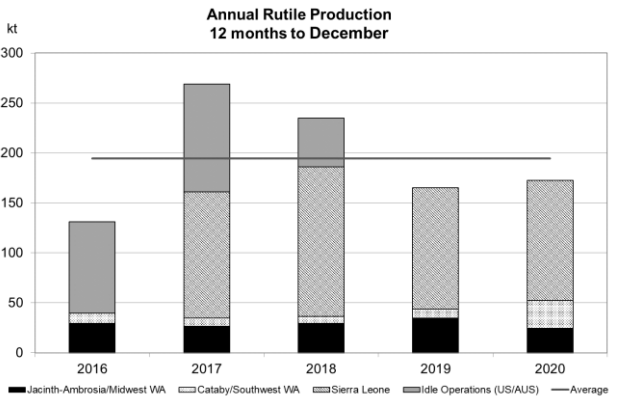
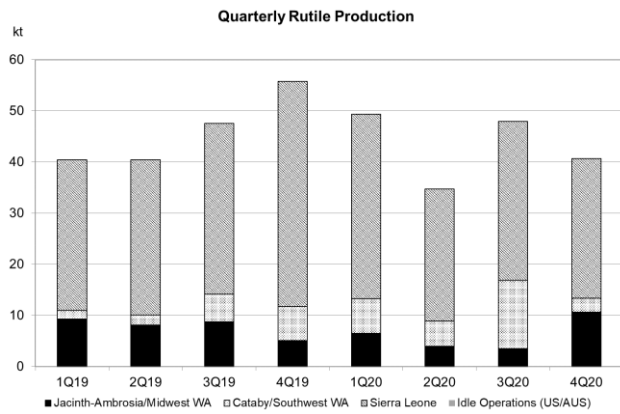
<sup>1</sup> Finished product includes material from heavy mineral concentrate (HMC) initially processed in prior periods.

# PRODUCTION SUMMARIES

## Zircon

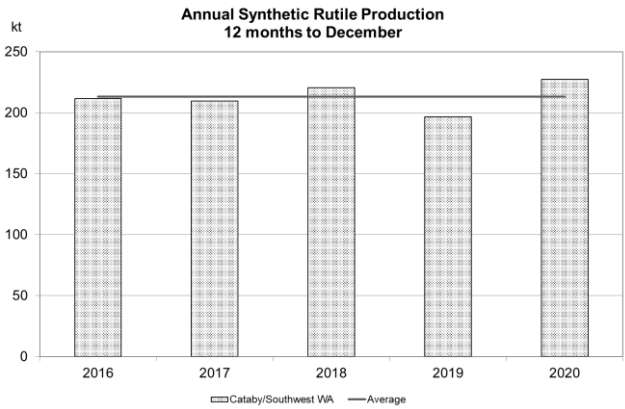
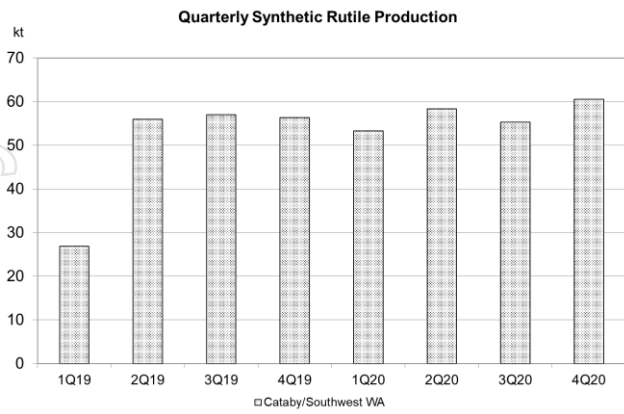


## Rutile

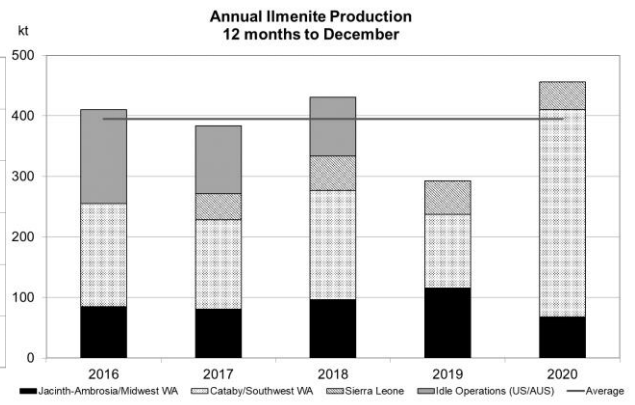
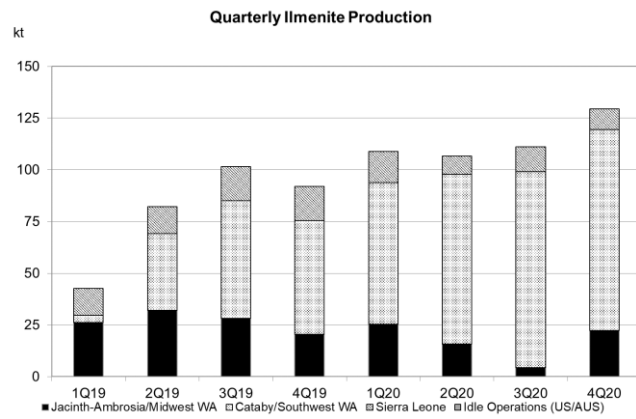


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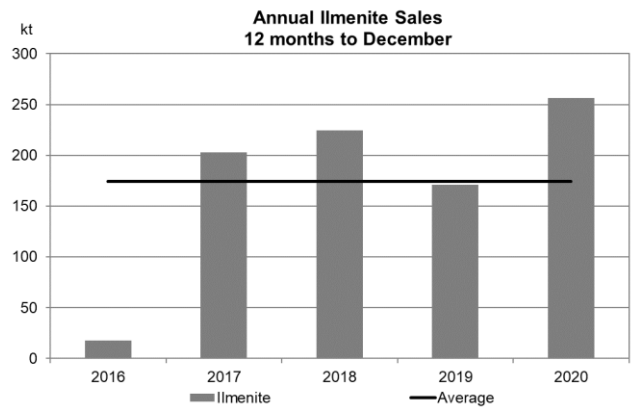
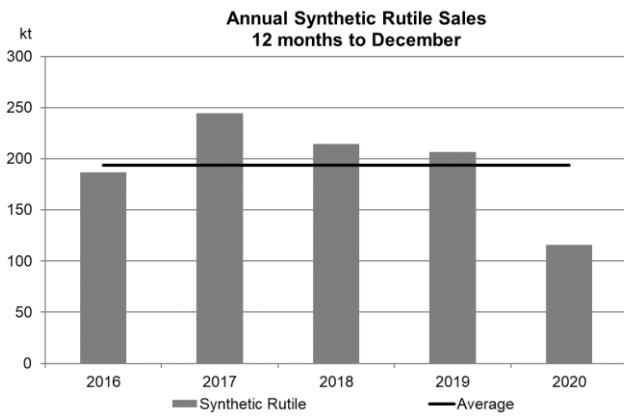
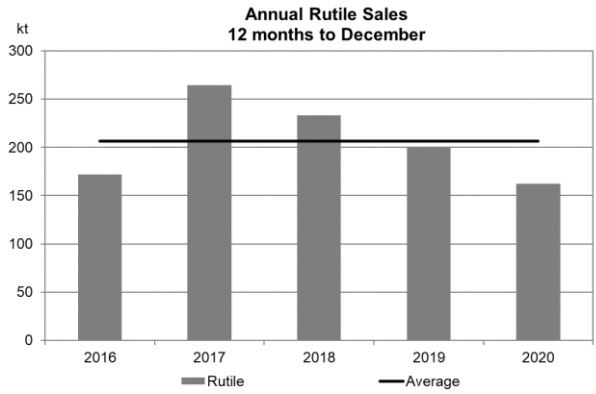
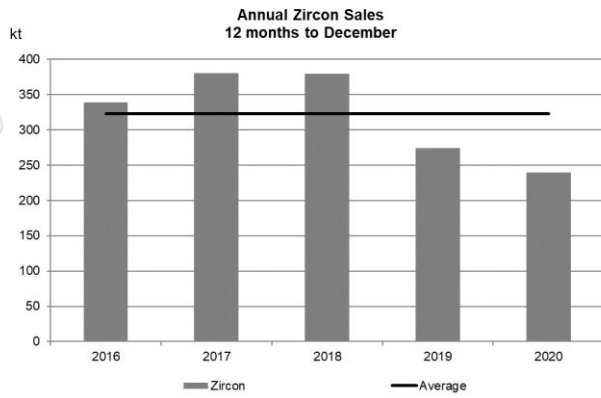
## Synthetic Rutile



## Ilmenite



### APPENDIX 3 – ANNUAL SALES SUMMARIES



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