



# Australian Securities Exchange Notice

24 October 2018

ASX: ILU

## QUARTERLY REVIEW 30 SEPTEMBER 2018

### KEY FEATURES

- Market conditions for Iluka's zircon and high grade titanium dioxide products remained strong through the quarter, with sales volumes largely being limited by production rather than the market.
- Zircon/rutile/synthetic rutile (Z/R/SR) revenue was up 19% year-to-date from the prior corresponding period to \$872 million, driven by price increases. Weighted average prices achieved in Q3 were 11% higher for rutile, and 10% higher for zircon from the first half average prices. The Zircon Reference Price increased US\$170 per tonne (12%) effective 1 October 2018 to US\$1,580 per tonne delivered.
- Group Z/R/SR production of 194 thousand tonnes in Q3 2018 was 14% higher than Q2
  - Q3 2018 zircon production of 97 thousand tonnes, was up 25% on June quarter and almost double relative to same period last year.
  - Rutile production was up slightly in Q3 from Q2, though ~10 thousand tonnes below management's expectations for the quarter, reflecting ongoing runtime issues at Sierra Rutile.
  - Synthetic rutile production was in line with Q2, with full year production guidance increased to 210 – 215 thousand tonnes from 205 thousand tonnes reflecting strong run rates.
- As described in Iluka's announcement on 23 October, mining operations have been halted at Sierra Rutile as a result of unlawful strike action.
- The Ambrosia mine move has received Board approval, which is expected to extend steady Group zircon production levels of ~335ktpa out to and including 2021, with the mine move scheduled to be completed by October 2019. Capital expenditure in 2019 is expected to be ~\$35 million with deferred capital of \$20 million to be spent across 2020 and 2021 for tailings management.
- Development of the Cataby mine continues on time and within budget.

### SUMMARY OF PHYSICAL AND FINANCIAL DATA

|                                       | Sep-17<br>Quarter | June-18<br>Quarter | Sep-18<br>Quarter | Sep-17<br>YTD | Sep-18<br>YTD | Sep-18<br>YTD vs<br>Sep-17<br>YTD |
|---------------------------------------|-------------------|--------------------|-------------------|---------------|---------------|-----------------------------------|
|                                       | kt                | kt                 | kt                | kt            | kt            | %                                 |
| <b>Production</b>                     |                   |                    |                   |               |               |                                   |
| Zircon                                | 49.4              | 77.3               | 96.5              | 253.1         | 255.4         | 0.9                               |
| Rutile                                | 96.0              | 38.4               | 43.7              | 245.8         | 126.4         | (48.6)                            |
| Synthetic Rutile                      | 58.1              | 53.8               | 53.7              | 157.7         | 163.0         | 3.4                               |
| <b>Total Z/R/SR Production</b>        | <b>203.5</b>      | <b>169.5</b>       | <b>193.9</b>      | <b>656.6</b>  | <b>544.8</b>  | <b>(17.0)</b>                     |
| Ilmenite                              | 90.3              | 111.9              | 118.3             | 318.4         | 329.2         | 3.4                               |
| <b>Total Mineral Sands Production</b> | <b>293.8</b>      | <b>281.4</b>       | <b>312.2</b>      | <b>975.0</b>  | <b>874.0</b>  | <b>(10.4)</b>                     |

|   | Sep-17<br>Quarter | June-18<br>Quarter | Sep-18<br>Quarter | Sep-17<br>YTD | Sep-18<br>YTD | Sep-18<br>YTD vs<br>Sep-17<br>YTD |
|---|-------------------|--------------------|-------------------|---------------|---------------|-----------------------------------|
| <b>Sales</b>  |                   |                    |                   |               |               |                                   |
| Zircon  | 110.8             | 99.4               | 108.2             | 308.2         | 297.8         | (3.4)                             |
| Rutile  | 89.3              | 75.6               | 46.7              | 207.7         | 182.8         | (12.0)                            |
| Synthetic Rutile  | 41.2              | 59.1               | 43.2              | 179.2         | 156.1         | (12.9)                            |
| <b>Total Z/R/SR sales</b>   | <b>241.3</b>      | <b>234.1</b>       | <b>198.1</b>      | <b>695.1</b>  | <b>636.7</b>  | <b>(8.4)</b>                      |
| Ilmenite  | 26.4              | 75.4               | 47.8              | 121.5         | 167.3         | 37.7                              |
| <b>Total Mineral Sands Sales</b>  | <b>267.7</b>      | <b>309.5</b>       | <b>245.9</b>      | <b>816.6</b>  | <b>804.0</b>  | <b>(1.5)</b>                      |
|   |                   |                    |                   |               |               | %                                 |
| <i>\$ million</i>   |                   |                    |                   |               |               |                                   |
| Z/R/SR revenue  | 261.6             | 319.5              | 303.4             | 731.7         | 872.1         | 19.2                              |
| Ilmenite and other revenue <sup>1</sup>   | 6.9               | 25.4               | 13.5              | 40.5          | 53.8          | 32.8                              |
| <b>Mineral Sands Revenue</b>  | <b>268.5</b>      | <b>344.9</b>       | <b>316.9</b>      | <b>772.2</b>  | <b>925.9</b>  | <b>19.9</b>                       |
|   |                   |                    |                   |               |               |                                   |
| <i>\$ million</i>   |                   |                    |                   |               |               |                                   |
| Production cash costs of Z/R/SR<br>Ilmenite concentrate and by-product<br>costs |                   |                    |                   | 269.8         | 325.7         | 20.7                              |
|   |                   |                    |                   | 8.7           | 9.0           | 3.7                               |
| <b>Total Cash Costs of Production</b>   |                   |                    |                   | <b>278.5</b>  | <b>334.7</b>  | <b>20.2</b>                       |
|   |                   |                    |                   |               |               |                                   |
| <i>\$ per tonne</i>   |                   |                    |                   |               |               |                                   |
| Unit Cash Production Costs per tonne of<br>Z/R/SR Produced                      |                   |                    |                   | 411           | 598           | 45.4                              |
| <b>Unit Cost of Goods Sold per tonne of<br/>Z/R/SR Sold</b>                     |                   |                    |                   | <b>743</b>    | <b>744</b>    | <b>0.2</b>                        |
|   |                   |                    |                   |               |               |                                   |
| <b>Revenue per tonne of Z/R/SR Sold<sup>2</sup></b>                             | <b>1,084</b>      | <b>1,365</b>       | <b>1,532</b>      | <b>1,053</b>  | <b>1,370</b>  | <b>30.1</b>                       |
|   |                   |                    |                   |               |               |                                   |
| Average AUD:USD cents   | 78.9              | 75.7               | 73.2              | 76.6          | 75.8          | (1.0)                             |

All currency is Australian dollar denominated unless otherwise indicated.

1. Ilmenite and other revenue include revenues derived from other materials not included in production volumes, including activated carbon products and iron concentrate. Iluka receives a royalty payment from its Mining Area C iron ore royalty. This is not reported as part of quarterly reports but is disclosed in the financial statements.
2. Represents FOB revenue.

## **PRODUCTION COMMENTARY**

Total Z/R/SR production for the third quarter was 194 thousand tonnes, up 14% from the June quarter of 170 thousand tonnes.

### **Australian Operations**

The Jacinth-Ambrosia mine in South Australia continued to operate at capacity, producing 491 thousand tonnes of heavy mineral concentrate (HMC) during the first three quarters of 2018. Production performance at Jacinth-Ambrosia since the restart in December 2017 has been better than expected, largely as a consequence of higher grade ore than had been anticipated in the mine plan. This has contributed to a 94 thousand tonne increase in HMC inventory, which will help to smooth future zircon production from the site.

Iluka's synthetic rutile kiln at Capel, SR2, operated at full capacity for the quarter, as it has done over the year. Full year SR production is expected to be 5 to 10 thousand tonnes above previous guidance of 205 thousand tonnes. SR2 is being fed by previously stockpiled and externally sourced ilmenite until the commencement of the Cataby mine in the first half of 2019. Plans for a major maintenance outage for SR2 in the first quarter of 2019 are progressing on schedule ahead of the next four-year kiln campaign.

### **Sierra Leone Operations**

Year-to-date rutile production from Sierra Rutile was 93 thousand tonnes, while production for the September quarter was 32 thousand tonnes, up from 28 thousand tonnes in the previous quarter. Although the September quarter saw an improvement from the previous period, production was affected by lower than expected ore throughputs and runtimes across the operation reflecting:

- harder digging conditions and mechanical issues at the Lanti dredge;
- a bearing failure within the Lanti dry mining unit and unplanned outages due to higher than expected rates of wear; and
- higher than expected rock content of ore at Gangama and a requirement to run at a reduced rate while recently replaced parts were bedded in before achieving targeted throughput rates.

The continued poor production performance is disappointing and Iluka and SRL management continue to review carefully the underlying causes of that operating performance and assess additional steps to improve outcomes.

As announced on 23 October, mining operations were halted at Sierra Rutile as a result of unlawful strike action. SRL management has engaged with employees and union officials to understand the rationale for the strike action which predominantly relates to security of jobs in the mining areas of the operation (the dredge operation will be decommissioned in February 2019, following depletion of the resource). Concerns have also been raised relating to work conditions and pay, as well as supervision of the mining operations.

Iluka is focused on achieving an appropriate resolution to the strike action and will keep the market informed of progress toward that resolution.

Due to the lower runtimes and production in the quarter, full year maximum rutile production has been reduced to ~135 thousand tonnes, with final outcomes dependent on when the strike action is resolved.

## GROUP MINERAL SANDS PRODUCTION

|                                | Sep-17<br>Quarter | Jun-18<br>Quarter | Sep-18<br>Quarter | Sep-17<br>YTD | Sep-18<br>YTD | Sep-18<br>YTD vs<br>Sep-17<br>YTD |
|--------------------------------|-------------------|-------------------|-------------------|---------------|---------------|-----------------------------------|
|                                | kt                | kt                | kt                | kt            | kt            | %                                 |
| <b>Zircon</b>                  |                   |                   |                   |               |               |                                   |
| Eucla/Perth Basin (SA/WA)      | 24.2              | 72.7              | 91.7              | 188.6         | 240.9         | 27.7                              |
| Murray Basin (VIC)             | 25.1              | 0.1               | -                 | 54.6          | 0.1           | (99.9)                            |
| <b>Australia</b>               | <b>49.3</b>       | <b>72.8</b>       | <b>91.7</b>       | <b>243.2</b>  | <b>241.0</b>  | <b>(0.9)</b>                      |
| Sierra Leone                   | 0.1               | -                 | -                 | 3.0           | 5.1           | 69.1                              |
| Virginia (USA)                 | -                 | 4.5               | 4.8               | 6.9           | 9.3           | 35.0                              |
| <b>Total Zircon Production</b> | <b>49.4</b>       | <b>77.3</b>       | <b>96.5</b>       | <b>253.1</b>  | <b>255.4</b>  | <b>0.9</b>                        |
| <b>Rutile</b>                  |                   |                   |                   |               |               |                                   |
| Eucla/Perth Basin (SA/WA)      | 4.3               | 10.8              | 11.4              | 30.8          | 33.1          | 7.3                               |
| Murray Basin (VIC)             | 44.5              | -                 | -                 | 88.8          | -             | (100.0)                           |
| <b>Australia</b>               | <b>48.8</b>       | <b>10.8</b>       | <b>11.4</b>       | <b>119.6</b>  | <b>33.1</b>   | <b>(72.4)</b>                     |
| Sierra Leone                   | 47.2              | 27.6              | 32.3              | 126.2         | 93.4          | (26.1)                            |
| <b>Total Rutile Production</b> | <b>96.0</b>       | <b>38.4</b>       | <b>43.7</b>       | <b>245.8</b>  | <b>126.4</b>  | <b>(48.6)</b>                     |
| <b>Synthetic Rutile (WA)</b>   | <b>58.1</b>       | <b>53.8</b>       | <b>53.7</b>       | <b>157.7</b>  | <b>163.0</b>  | <b>3.4</b>                        |
| <b>TOTAL Z/R/SR PRODUCTION</b> | <b>203.5</b>      | <b>169.5</b>      | <b>193.9</b>      | <b>656.6</b>  | <b>544.8</b>  | <b>(17.0)</b>                     |
| <b>Ilmenite</b>                |                   |                   |                   |               |               |                                   |
| Eucla/Perth Basin (SA/WA)      | 51.8              | 68.0              | 81.6              | 198.1         | 236.3         | 19.3                              |
| Murray Basin (VIC)             | 21.9              | 30.6              | 20.2              | 77.1          | 50.8          | (34.1)                            |
| <b>Australia</b>               | <b>73.7</b>       | <b>98.6</b>       | <b>101.8</b>      | <b>275.2</b>  | <b>287.1</b>  | <b>4.3</b>                        |
| Sierra Leone                   | 16.6              | 13.3              | 16.5              | 43.2          | 42.1          | (2.6)                             |
| <b>Total Ilmenite</b>          | <b>90.3</b>       | <b>111.9</b>      | <b>118.3</b>      | <b>318.4</b>  | <b>329.2</b>  | <b>3.4</b>                        |
| <b>TOTAL MINERAL SANDS</b>     | <b>293.8</b>      | <b>281.4</b>      | <b>312.2</b>      | <b>975.0</b>  | <b>874.0</b>  | <b>(10.4)</b>                     |

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).

## **MINERAL SANDS MARKET CONDITIONS**

### **Zircon Market**

Zircon sales for the third quarter were 108 thousand tonnes, a 9% increase from the second quarter volumes, with year-to-date sales of zircon totalling 298 thousand tonnes.

The previously announced 12% increase to the Zircon Reference Price, effective 1 October 2018 to 31 March, has been accepted by Iluka's customers. Iluka has observed that pricing for zircon has narrowed to a tighter range recently, with some producers increasing prices by a similar quantum to Iluka and several opportunistic suppliers moderating their pricing from levels that were creating volatility and uncertainty in the broader market. Feedback from downstream customers on Iluka's approach to the market remains positive as the company seeks to provide both sustainability and predictability in pricing.

Late in the third quarter Iluka started to observe some easing in the tightness of supply, despite what the company understands are ongoing delivery backlogs from some other zircon producers. Iluka does not believe there are any material additional quantities of zircon available for sale or that there has been a material reduction in overall global demand; rather, small changes in some markets have eased the tension on tight supply.

Customers suggest that, while there is a softening in demand for opacifier (milled zircon) into the ceramics sector, it is temporary in nature; and that they expect a slower fourth quarter followed by improved conditions in 2019. Indications are that stocks of zircon and opacifier held downstream are within normal operating limits for customers. All of Iluka's major accounts have indicated that they plan to take their full allocation in the fourth quarter.

As disclosed with the half year results, Iluka increased its zircon production guidance for 2018, by releasing additional product into the market in the form of zircon in concentrate (ZIC). This action was taken to mitigate potential supply shortfalls. Iluka has the capacity to release more finished goods and ZIC into the market should competitors' supply disruptions continue through Q4 and into 2019. The company continues to monitor the market for evidence of substitution and thrifting and while some thrifting is apparent, there is no evidence of attempts to substitute zircon out from formulations.

The weighted average achieved price YTD for zircon premium and standard is up 36% from 2017 to US\$1,307 per tonne.

### **Titanium Dioxide Feedstock Market**

Year-to-date sales of rutile and synthetic rutile were 339 thousand tonnes, compared to 387 thousand tonnes for the same period in 2017. The comparatively lower sales are a result of depleting all of the Murray Basin inventory and lower rutile production at Sierra Rutile.

The market for high-grade titanium feedstocks remained tight through the third quarter as pigment customers maintained high levels of plant utilisation, creating strong demand during a period in which production disruptions at feedstock producers limited supply. Ongoing issues with feedstock suppliers have led to some downstream customers noting concerns as to whether there will be sufficient high-grade ore available in 2019. The rutile market remains particularly tight, with no available inventory being reported in the supply chain. All of Iluka's high-grade titanium feedstock production remains contracted or allocated to customers for the remainder of the year, with sales limited by production.

Western pigment producers are reported to be reducing prices in some regions. This follows a peak in the second quarter of the year, with some market commentators expecting pigment prices to continue to track lower over the fourth quarter and possibly into the first quarter 2019 before stabilising in the second half 2019. Iluka has observed operating rates remaining elevated during this time while pigment producers re-build inventory, which is positive for high-grade feedstock demand. So, while pigment prices may be softening in some regions, the tightness in chloride feedstock availability should support pricing momentum well into 2019.

Year-to-date average received prices for rutile (excluding HYTI) were up 18% from full year 2017 pricing to US\$931 per tonne. The rutile price achieved in Q3 of \$1,007 per tonne was impacted by a 9 thousand tonne rutile sale made at Q2 prices due to port congestion in late June, with the vessel sailing in early July. Synthetic rutile prices are moving with market as allowed for under the contracted arrangements.

### WEIGHTED AVERAGE RECEIVED PRICES

The following table provides weighted average received prices for Iluka's main products compared to 2017. Iluka's Annual Report, available at [www.iluka.com](http://www.iluka.com) contains further historical mineral sands price information.

|  | Full Year 2017 | H1 2018      | Q3 2018 | Sept YTD |
|--|----------------|--------------|---------|----------|
| <i>US\$/tonne FOB</i>  |                |              |         |          |
| Zircon Premium and Standard  | 958            | 1,278        | 1,365   | 1,307    |
| Zircon<br>(all products, including zircon in concentrate) <sup>1</sup> | 940            | 1,240        | 1,359   | 1,283    |
| Rutile<br>(includes all rutile products, excluding HYTI) <sup>2</sup>  | 790            | 906          | 1,007   | 931      |
| Synthetic rutile   |                | Refer Note 3 |         |          |

**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 2018, the year-to-date split of premium, standard and concentrate by zircon sand-equivalent was approximately: 49%:32%:19% (2017 full year: 56%; 32%; 12%).
- 2: Included in rutile sales volumes reported elsewhere in this Quarterly Review is a lower titanium dioxide product, 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%. At the end of the September quarter, year-to-date sales of the lower grade HYTI material were 19% of total sales (2017 full year: 18%).
- 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.

## **PROJECT UPDATES**

### **Sierra Leone Projects**

Iluka announced in its half year results on 16 August 2018 that preliminary estimates indicate capital costs may increase 40-60% from an initial US\$300 million estimate to deliver the Sierra Rutile expansion projects. Iluka continues work on value optimisation options for these expansion projects. Initial work to re-evaluate project options relating to the Sembehun mine development and mineral separation plant upgrade has enabled the project team to compress the Sembehun early works schedule, whereby this work can commence later in 2019, allowing further time for value optimisation work to be fully developed.

Iluka's recently established project office in Johannesburg, which is now fully staffed and managing Sierra Rutile's project portfolio, is leading this value optimisation work.

#### **Sembehun mine, Sierra Leone**

The Sembehun group of deposits are situated 20 to 30 kilometres north-west of the existing Sierra Rutile operations. Iluka plans to initially develop a new 1,000-1,200 tonne per hour mine at these deposits.

The definitive feasibility study (DFS) commenced in March 2018 and is continuing with solid progress having been made to complete geotechnical drilling and data collection to support the detailed design of the early works scope, which includes the bridge and road construction to access the deposits. The Environmental and Social Impact Assessment is progressing with submission currently planned for December 2018.

#### **Lanti dry and Gangama mine expansions, Sierra Leone**

Iluka is progressing with the doubling of capacity of both the Gangama and Lanti dry operations from 500-600 tonne per hour to 1,000-1,200 tonne per hour. Capital expenditure for these expansions received Board approval in December 2017.

Progress on the expansion projects is in line with the budget and schedule. The engineering, procurement and construction (EPC) contractor mobilised to site in July to commence construction activities. The fleet of earth moving vehicles was recently delivered to site; and civil construction and equipment fabrication is progressing according to schedule. The first major delivery of structural steel and equipment is scheduled to arrive on site early November 2018, with commissioning of Gangama and Lanti expansions on track for mid-2019.

#### **Mineral separation plant upgrade, Sierra Leone**

Mineral separation plant equipment and general site upgrades are required to meet the additional capacity that will be generated by the planned mine expansions. The upgrade will also assist in improving safety, operational and metallurgical efficiencies. The project team has completed the prefeasibility study (PFS) and is continuing to work through various plant capacity options.

### **Catoby, Western Australia**

Catoby is a large, chloride ilmenite-rich deposit 150 kilometres north of Perth. The mine development was approved in December 2017, with first production scheduled for the first half of 2019. Construction is nearing completion, on time and within budget. Recently completed works include construction of the accommodation villages, installation of high voltage power distribution, bulk earthworks and majority of site foundations. Construction of the mining unit is progressing as planned, as is reassembly of the thickener and Newman concentrator, following its relocation from Eneabba. Removal of overburden to expose the ore body is ongoing. Commissioning and operational readiness planning for all plant and equipment has commenced, alongside a recruitment campaign and training of operators.

The mine is a conventional mineral sands development, utilising dozer push and truck and excavator mining to feed two in-pit mining units. An onsite Wet High Intensity Magnetic Separation (WHIMS) plant will separate the magnetic (ilmenite) and non-magnetic product streams (zircon and rutile), with the mine expected to produce approximately 370 thousand tonnes of chloride ilmenite, 50 thousand tonnes of zircon and 30 thousand tonnes of rutile on average over an eight and a half year mine life. Access to additional ore reserves could extend the mine life by a further four years.

Ilmenite sourced from Cataby will be transported to Capel for synthetic rutile production (approximately 200 thousand tonnes per year on average) and the non-magnetic stream to Iluka's Narngulu mineral separation plant at Geraldton for final processing (zircon and rutile). As previously announced, Iluka has secured offtake agreements with Western pigment producers for 85% of the synthetic rutile production from Cataby, underpinning returns from the project.

#### **Jacinth-Ambrosia, South Australia**

Iluka has assessed options to smooth the production profile of Jacinth-Ambrosia to partially offset the impact of declining grade over its remaining operating life. This assessment has accelerated the mine move to the Ambrosia deposit to the fourth quarter of 2019 (previously planned to occur in 2022).

The DFS for the Ambrosia mine move is now complete and the Board has approved ~\$55 million of funding (\$5 million lower than previous estimates), with execution activity commencing in November 2018.

The capital expenditure will occur over three years, with ~\$35 million in 2019 for scope related to roads, earthworks, high voltage power, mining pipework and pumping infrastructure, as well as site infrastructure and buildings. The deferred capital of ~\$20 million to be spent over 2020 and 2021 is related to tailings infrastructure and management.

#### **Fine Minerals, Murray Basin, Victoria**

A PFS into the mining and beneficiation of fine mineral zircon products has commenced at the WIM deposits in Victoria. This project has the potential for the long term supply of zircon into the market along with rare earth elements in mixed carbonate form.

#### **Balranald, Murray Basin, New South Wales**

Balranald and Nepean are two rutile-rich deposits in the northern Murray Basin, New South Wales. Work on the development at Balranald has continued. A drilling programme to provide a more detailed understanding of the deposit mineralisation has been initiated and will conclude in the fourth quarter. The proposed final trial in 2019 has been designed to demonstrate that the technical work packages are effective in a continuous mining and processing environment.

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

The potential for the development of the mineral sands deposit known as the Puttalam Quarry (PQ) continues to be assessed. The PQ deposit is a large sulphate ilmenite deposit, located approximately 30 kilometres north of the town of Puttalam in the North Western Province of Sri Lanka, approximately 170 kilometres from the capital Colombo.

PQ project work is focussed on legal and investment terms for the development and includes securing surface access rights, ministerial and other governmental approvals for any subsequent mining licence, reaching agreement with the Sri Lankan Government regarding the fiscal and other arrangements that will apply to the project.

A PFS is being undertaken on the project, including work packages relating to pre-mining or baseline conditions of the PQ deposit. This is expected to be completed in H1 2019.

## EXPLORATION

Expenditure on exploration and evaluation charged to the profit and loss account for the September quarter 2018 was \$4.1 million, with expenditure year-to-date of \$8.7 million.

### Canada

Iluka continued to fund Societe d'Exploration Miniere Vior Inc. ("Vior") to undertake exploration for high grade rutile/ilmenite deposits in the Foothills, Grand Duc and Big Island Lake (BIL) Project areas of Quebec.

At the BIL prospect, results from 700m diamond drilling do not indicate sufficient rutile grades at depth to justify further work. An airborne gravity survey at the Foothills and Grand Duc projects is due to start in late-October.



Figure 1 Grand Duc, Foothills and Big Island Lake Projects, Quebec, Canada

### Sierra Leone

The Pejebu Exploration Target<sup>1</sup> at Sierra Rutile is adjacent to current mining operation and comprises approximately 15Mt - 20Mt of material grading 0.9 to 1.1% in situ rutile. The target was identified based on historical documentation and assay results from recent exploration drilling. Near mine exploration drilling continued in Q3 and results will be assessed in Q4.

<sup>1</sup> For further information refer to ASX release on 15 August 2018, *Sembehun Mineral Resource Increase and Pejebu Exploration Target, Sierra Rutile*.

## JACINTH-AMBROSIA SITE VISIT

A site visit for equity market stakeholders to Jacinth-Ambrosia is planned for 31 October 2018. Any related presentation material will be released via the ASX platform. There are limited spaces remaining for interested investors to attend the site visit. Please contact Investor Relations via [investor.relations@iluka.com](mailto:investor.relations@iluka.com) to express an interest in attending the site visit.

## PERTH OFFICE RELOCATION

As of 5 November 2018, Iluka Resources will be relocating its Perth office to:

240 St. Georges Terrace  
Perth, WA, 6000

### Investor enquiries:

Melissa Roberts  
General Manager, Investor Relations  
and Commercial Mineral Sands Operations  
Mobile: + 61 (0) 450 398 431  
Email: [investor.relations@iluka.com](mailto:investor.relations@iluka.com)

### Media enquiries:

Luke Woodgate  
Manager, Corporate Affairs  
Phone: + 61 (0) 8 9360 4785  
Mobile: +61 (0) 477 749 942  
Email: [luke.woodgate@iluka.com](mailto:luke.woodgate@iluka.com)

## TELECONFERENCE DETAILS

Iluka Resources will be holding a teleconference on 24 October 2018 from **8:30am – 9:15am AWST**  
(**11:30am – 12:15pm AEDT**)

### Teleconference dial-in details

**Conference ID: 6493933**

|                            |               |                                   |                 |
|----------------------------|---------------|-----------------------------------|-----------------|
| Australia (toll-free)      | 1800 123 296  | Hong Kong (toll-free)             | 800 908 865     |
| Japan (toll-free)          | 0120 477 087  | Singapore (toll-free)             | 800 616 2288    |
| New Zealand (toll-free)    | 0800 452 782  | United States (toll-free)         | 1855 293 1544   |
| United Kingdom (toll-free) | 0808 234 0757 | Canada (toll-free)                | 1855 5616 766   |
| China (toll-free)          | 4001 203 085  | Any other country or mobile phone | +61 2 8038 5221 |

**OPERATING MINES PHYSICAL DATA**  
**9 Months to 30 September 2018**

|   | Jacynth-<br>Ambrosia | Murray<br>Basin | Western<br>Australia | Australia<br>Total | Sierra<br>Leone | Virginia | Group<br>Total |
|---|----------------------|-----------------|----------------------|--------------------|-----------------|----------|----------------|
| <b>Mining</b>   |                      |                 |                      |                    |                 |          |                |
| Overburden Moved kbcm   | 2,496                | -               | 7                    | 2,503              | -               | -        | 2,503          |
| Ore Mined kt  | 8,411                | -               | 229                  | 8,640              | 5,939           | -        | 14,579         |
| Ore Grade HM %  | 7.3                  | -               | 12.9                 | 7.5                | 3.1             | -        | n/a            |
| VHM Grade %   | 6.4                  | -               | 10.7                 | 6.5                | 2.4             | -        | n/a            |
| <b>Concentrating</b>  |                      |                 |                      |                    |                 |          |                |
| HMC Produced kt   | 491                  | -               | 20                   | 512                | 186             | -        | 698            |
| VHM Produced kt   | 437                  | -               | 18                   | 455                | 133             | -        | 588            |
| VHM in HMC Assemblage %   | 89.0                 | -               | 87.2                 | 88.9               | 71.4            | -        | 84.2           |
| Zircon  | 62.3                 | -               | 13.4                 | 60.3               | 3.8             | -        | 45.2           |
| Rutile  | 6.2                  | -               | 8.7                  | 6.3                | 47.4            | -        | 17.3           |
| Ilmenite  | 20.5                 | -               | 65.2                 | 22.3               | 20.2            | -        | 21.7           |
| <b>Processing (HMC to finished product at a mineral separation plant)</b> |                      |                 |                      |                    |                 |          |                |
| HMC Processed kt  | 397                  | -               | 228                  | 625                | 189             | -        | 814            |
| Finished Product <sup>1</sup> kt  |                      |                 |                      |                    |                 |          |                |
| Zircon  | 210.9                | 0.1             | 30.0                 | 240.9              | 5.1             | 9.3      | 255.3          |
| Rutile  | 29.3                 | -               | 3.7                  | 33.1               | 93.4            | -        | 126.4          |
| Ilmenite  | 92.8                 | 50.8            | 143.5                | 287.1              | 42.1            | -        | 329.1          |
| Synthetic Rutile kt   | -                    | -               | 163.0                | 163.0              | -               | -        | 163.0          |

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

**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.

**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.

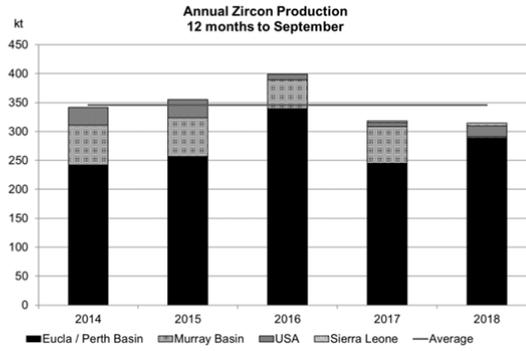
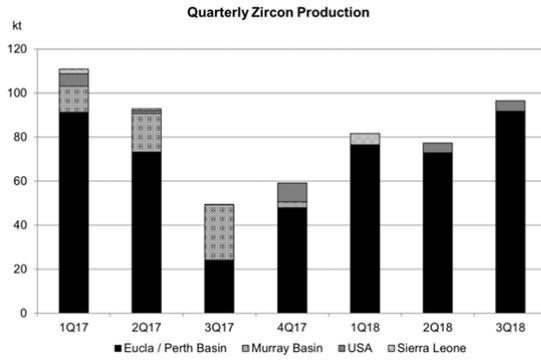
**Finished product** provides an indication of the finished production (zircon, rutile, ilmenite) attributable to the VHM in HMC production streams from the various mining operations. Finished product levels are subject to recovery factors which can vary. The difference between the VHM produced and finished 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%.

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

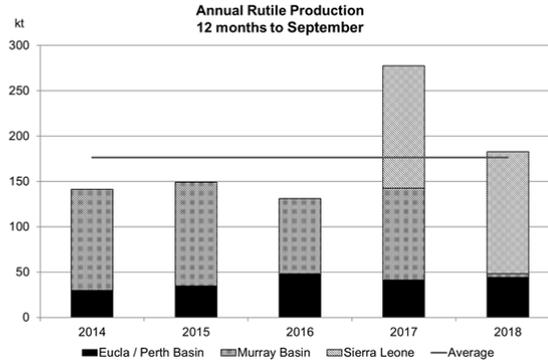
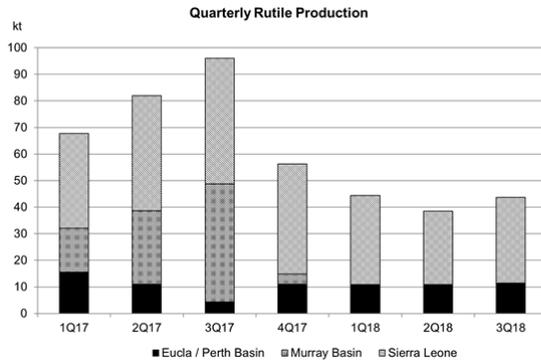
Typically, 1 tonne of upgradeable ilmenite will produce between 0.56 and 0.60 tonnes of synthetic rutile. Iluka also purchases external ilmenite for its synthetic rutile production process.

# PRODUCTION SUMMARIES

## Zircon

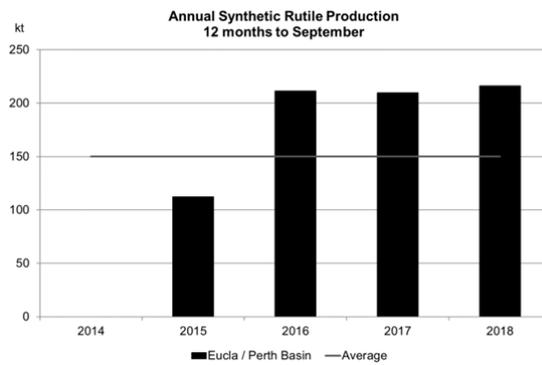
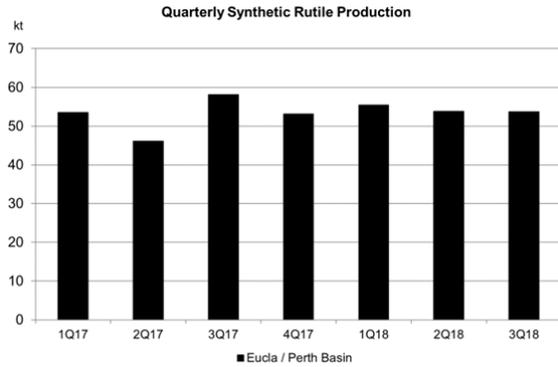


## Rutile



## PRODUCTION SUMMARIES (continued)

### Synthetic Rutile



### Ilmenite

