

**ILUKA**

Australian Securities Exchange Notice

31 October 2019

ASX: ILU

QUARTERLY REVIEW 30 SEPTEMBER 2019

KEY FEATURES

- September quarter zircon/rutile/synthetic rutile (Z/R/SR) production up 17% to 198kt (Q2 2019: 169kt):
 - rutile production of 48kt, up 18% on previous quarter (Q2: 40kt);
 - zircon production up 29% to 94kt (Q2: 73kt); and
 - synthetic rutile production steady at 57kt (Q2: 56 kt)
- Z/R/SR sales volumes 10% lower during the quarter at 148kt (Q2: 165kt)
- Year to date mineral sands revenues of \$798 million
- Expansion projects at Lanti and Gangama complete
 - Gangama achieving nameplate capacity, and Lanti entering ramp up phase
- Operating performance continues to be below expectations at Sierra Rutile
- Year-to-date revenue per tonne up 22% on previous corresponding period to A\$1,666/t (Sep 2018 YTD: A\$1,370/t)
- Net debt as at 30 September was \$89 million, down from \$142 million as at 30 June.

PHYSICAL AND FINANCIAL SUMMARY

	Sep-18 Quarter	June-19 Quarter	Sep-19 Quarter	Sep-18 YTD	Sep-19 YTD	Sep-19 YTD vs Sep-18 YTD
	kt	kt	kt	kt	kt	%
<u>Production</u>						
Zircon	96.5	72.7	93.5	255.4	253.4	(0.8)
Rutile	43.7	40.4	47.5	126.4	128.3	1.5
Synthetic Rutile	53.7	56.0	57.0	163.0	139.8	(14.2)
Total Z/R/SR Production	193.9	169.1	198.0	544.8	521.5	(4.3)
Ilmenite	118.3	82.2	101.7	329.2	226.7	(31.1)
Total Mineral Sands Production	312.2	251.3	299.7	874.0	748.2	(14.4)
<u>Sales</u>						
Zircon	108.2	67.7	51.7	297.8	185.0	(37.9)
Rutile	46.7	39.5	41.5	182.8	124.4	(31.9)
Synthetic Rutile	43.2	57.4	54.3	156.1	139.9	(10.4)
Total Z/R/SR Sales	198.1	164.6	147.5	636.7	449.3	(29.4)
Ilmenite	47.8	58.2	19.6	167.3	141.0	(15.7)
Total Mineral Sands Sales	245.9	222.8	167.1	804.0	590.3	(26.6)

	Sep-18 Quarter	June-19 Quarter	Sep-19 Quarter	Sep-18 YTD	Sep-19 YTD	Sep-19 YTD vs Sep-18 YTD
						%
<i>\$ million</i>						
Z/R/SR revenue	303.4	276.0	241.1	872.1	748.2	(14.2)
Ilmenite and other revenue ¹	13.5	19.2	11.8	53.8	50.2	(6.7)
Mineral Sands Revenue²	316.9	295.2	252.9	925.9	798.4	(13.8)
<i>\$ million</i>						
Production cash costs of Z/R/SR				325.7	381.3	17.1
Ilmenite concentrate and by-product costs				9.0	8.7	(3.1)
Total Cash Costs of Production				334.7	390.1	16.5
<i>\$ per tonne</i>						
Unit Cash Production Costs per tonne Z/R/SR Produced ³				598	731	22.3
Unit Cost of Goods Sold per tonne Z/R/SR Sold				744	866	16.4
Revenue per tonne Z/R/SR Sold	1,532	1,677	1,634	1,370	1,666	21.6
Average AUD:USD cents	73.2	70.0	68.6	75.8	69.9	(7.8)

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 198 thousand tonnes, up 16% from the June quarter of 169 thousand tonnes.

Australian Operations

During the quarter, the mine move from the Jacinth North deposit to the Ambrosia deposit was completed ahead of schedule and budget, with mining and concentrating of heavy mineral concentrate (HMC) now running at expected operational levels at the Ambrosia deposit. HMC produced from Jacinth-Ambrosia for the three quarters to 30 September 2019 was 407 thousand tonnes, while zircon production from the Narngulu mineral separation plant (MSP) attributable to Jacinth-Ambrosia for the same period was 212 thousand tonnes.

HMC production from the Cataby mine for the period year-to-date was 153 thousand tonnes. As previously outlined, the magnetic material from the Cataby operation is trucked to Capel for processing where it is upgraded from ilmenite to synthetic rutile at the SR2 kiln. The kiln has produced 140 thousand tonnes of synthetic rutile from a combination of stockpiled and Cataby sourced ilmenite for the first three quarters of the year. Synthetic rutile production of 57 thousand tonnes during the quarter has been above expectations and the Company expects similar performance in the fourth quarter. The non-magnetic material from Cataby is being trucked to the Narngulu MSP for separation, with production of Cataby zircon and rutile commencing during the quarter. Production attributable to Cataby and from South West concentrate sales for the period was 37 thousand tonnes of zircon and 9 thousand tonnes of rutile.

Sierra Leone Operations

Rutile production for the September quarter was 33 thousand tonnes compared to 30 thousand tonnes in the June quarter.

September was the first full month of four operational mining fronts at Sierra Rutile. The Gangama expansion was commissioned in June, while the expansion at Lanti is in ramp up phase with completion expected in the fourth quarter. The MSP produced 13 thousand tonnes of rutile in the month of September and the MSP, which currently has annual capacity of around 175 thousand tonnes per annum, is expected to be operating at full capacity for the remainder of the year.

The September quarter saw targeted production across the mining operations affected by lower than expected ore throughputs and runtimes reflecting materials handling issues encountered at Lanti, maintenance outages and interruptions to mining as a result of wet season conditions and power outages. Of note however during the quarter, the external specialist maintenance team mobilised to site in July have identified and rectified a number of issues that were impacting runtime and throughput, one of which related to gland water supply infrastructure and had been a significant contributor to downtime.

Given the performance at Sierra Rutile continues to be below expectations, the Company has continued work to assess the carrying value of the Sierra Rutile operations, comprising US\$360 million at 30 September 2019 and a deferred tax asset of US\$115 million. This work will be completed as the relevant information becomes available and the Company will update the market accordingly.

GROUP MINERAL SANDS PRODUCTION

	Sep-18 Quarter	June-19 Quarter	Sep-19 Quarter	Sep-18 YTD	Sep-19 YTD	Sep-19 YTD vs Sep-18 YTD
	kt	kt	kt	kt	kt	%
Zircon¹						
Jacinth-Ambrosia/Mid west WA	82.5	59.0	75.2	225.1	212.4	(5.6)
Cataby/South west WA	9.2	9.6	18.0	15.9	36.6	130.2
Sierra Leone	-	4.1	0.3	5.1	4.4	(13.7)
Idle Operations (US/Aus)	4.8	-	-	9.3	-	(100.0)
Total Zircon Production	96.5	72.7	93.5	255.4	253.4	(0.8)
Rutile						
Jacinth-Ambrosia/Mid west WA	9.7	8.2	8.7	29.3	26.1	(10.9)
Cataby/South west WA	1.7	1.9	5.4	3.7	9.0	143.2
Sierra Leone	32.3	30.3	33.4	93.4	93.2	(0.2)
Total Rutile Production	43.7	40.4	47.5	126.4	128.3	1.5
Synthetic Rutile (WA)	53.7	56.0	57.0	163.0	139.8	(14.2)
TOTAL Z/R/SR PRODUCTION	193.9	169.1	198.0	544.8	521.5	(4.3)
Ilmenite						
Jacinth-Ambrosia/Mid west WA	29.7	32.1	28.3	92.8	86.5	(6.8)
Cataby/South west WA	51.9	37.0	56.8	143.5	97.3	(32.2)
Sierra Leone	16.5	13.1	16.6	42.1	42.9	1.9
Idle Operations (US/Aus)	20.2	-	-	50.8	-	(100.0)
Total Ilmenite	118.3	82.2	101.7	329.2	226.7	(31.1)
TOTAL MINERAL SANDS PRODUCTION	312.2	251.3	299.7	874.0	748.2	(14.4)

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).

¹ Iluka's zircon production figures include volumes of zircon attributable to external processing arrangements (i.e. zircon in concentrate).

MINERAL SANDS MARKET CONDITIONS

Zircon Market

Zircon market conditions in the third quarter continued to be affected by global economic uncertainties. As business sentiment remains subdued in key markets, businesses including Iluka customers are reducing zircon inventories throughout the supply chain.

Ceramics applications are still the most affected by the resulting pressure on sales volume and prices, both in China and Southern Europe. The foundry and refractory industries are being impacted by global trade tensions to a lesser extent. We observe that some of the reduction in tile exports from China has shifted to production in other Asian countries, in particular developing ceramics markets in the Indian subcontinent and South East Asia.

Iluka has introduced a number of measures to support its customer base in this more challenging environment. These include enhancing loyalty rewards and adjusting the product offering. The implementation of these measures is delivering satisfactory outcomes, though the September quarter sales volume reflects the lag in translating these measures into customer offtake. The company maintains its guidance that zircon sales are expected to be evenly weighted between the first and second half.

Iluka continues to manage sales of zircon across the company's product suite, including zircon in concentrate (ZIC), based on customer requirements and market dynamics. As noted in the June Quarterly Review, Iluka's second half product mix will include more Standard Zircon and ZIC. The company also expects to carry forward some inventory of higher value Premium Zircon.

The year-to-date weighted average price received for Zircon Standard and Premium products was US\$1,505 per tonne.

Titanium Dioxide Feedstock Market

Market conditions in the high grade titanium feedstock market remained steady in the third quarter with customers taking all available spot and contracted volumes.

The pigment industry is dealing with divergent themes, most chloride plants running at high rates of capacity utilisation with long-lead times for certain pigment grades, whereas the sulphate pigment plants are experiencing stronger competition deriving from increased Chinese exports. North America continues to be the steadiest regional market, while Europe deals with the uncertainty of Brexit and the fall out of the China/US trade war with additional sulphate volume finding a home in the EU market.

Welding and sponge markets continue to perform well with demand for high grade ore feedstocks holding firm.

WEIGHTED AVERAGE RECEIVED PRICES

The following table provides weighted average received prices for Iluka's main products compared to 2018. Iluka's Annual Report, available at www.iluka.com contains further historical mineral sands price information.

	Full Year 2018	H1 2019	Q3 2019	Sept 2019 YTD
<i>US\$/tonne FOB</i>				
Zircon Premium and Standard	1,351	1,522	1,458	1,505
Zircon (all products, including zircon in concentrate) ¹	1,321	1,465	1,364	1,437
Rutile (includes all rutile products, excluding HYTI) ²	952	1,108	1,152	1,123
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 2019, the year-to-date split of premium, standard and concentrate by zircon sand-equivalent was approximately: 46%:29%:25% (year to date 2018: 49%, 32%, 19%).
- 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 2019, year-to-date sales of the lower grade HYTI material were 22% of total sales (2018 full year: 22%).
- 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

Lanti dry and Gangama mine expansions, Sierra Leone

Both the Lanti and Gangama dry mine expansion projects have been completed successfully. The second Gangama concentrator has been operating at design capacity since June 2019 and the construction and commissioning activities related to the re-purposing of the Lanti floating concentrator were completed during August. The Lanti dry mine and concentrator have since been handed over to operations and ramp-up to design capacity is expected to be completed during the fourth quarter.

Sembehun Development and MSP Upgrade, Sierra Leone

The Sembehun group of deposits are situated 20 to 30 kilometres north-west of the existing Sierra Rutile operations.

As noted in the previously released quarterly, as we progressed through the definitive feasibility study (DFS) for Early Works (haul road, bridge and process water dam) and Phase 1 of developing Sembehun it became evident that additional capital, beyond that estimated in mid-2018, would be required to execute Sembehun in line with the selected development approach.

In response, the company has undertaken a review of its approach and commenced the re-scoping of development options that are considered both fit for purpose for Sierra Rutile and optimise the risk-return relationship. Once the re-scoping is complete the company will undertake preliminary feasibility studies on preferred options with the objective to commence detailed design of a preferred development pathway in 2020.

Ambrosia mine move, South Australia

In October 2018, the Iluka Board approved funding of ~\$55 million to bring forward the mine move to the Ambrosia deposit to Q4 2019 (previously planned for 2022).

The mining unit was relocated to Ambrosia in August. The plant and equipment associated with mining Ambrosia was successfully commissioned and handed over to operations in mid-August at full production rates, two months ahead of schedule.

Approximately \$35 million was allocated to be spent on the initial move expenditure. The project has been completed under budget. The remaining deferred capital of ~\$20 million is to be spent over 2020-21 and relates to tailings infrastructure and management.

Wimmera, Murray Basin, Victoria

The Wimmera project involves the mining and beneficiation of a fine grained heavy mineral sand ore body in the Victorian Murray Basin for the potential long term supply of zircon into the market along with rare earths. Technical challenges relating to purity and recovery of the valuable mineral have, in the past, impeded development of this style of deposit. Since 2015, Iluka has been undertaking technical development studies to overcome these challenges. To date the studies have yielded pathways to address successfully the challenges with recovery and purity, and a pre-feasibility study has commenced to assess the technical and economic viability, focussing on the WIM100 project area.

In the September quarter pilot plant test work and optimisation continued on a variety of separation and refining processes for both rare earth and zircon. Environmental baseline studies also continued as both state and federal Governments have confirmed that an Environmental Effects Statement is required for the development. The company continues to engage with government, community and landholders.

A key outcome of the PFS is selection of the preferred development option. This will take into account many factors including market conditions, for both zircon and rare-earths, capital intensity and execution risk. The PFS is currently scheduled for completion in H1 2020. The project will move to a Definitive Feasibility Study only when all factors are adequately addressed.

Eneabba mineral sands recovery, Western Australia

The Eneabba mineral sands recovery project (Phase 1) involves the extraction, processing and sale of an historical monazite-rich tailings stockpile that is currently stored in a mining void at Eneabba, Western Australia.

Upon finalisation of the underpinning offtake agreement, construction activity commenced and is progressing to schedule. A number of key approvals have been granted and applications for all outstanding approvals have been submitted. Commissioning is expected in H1 2020 and first sales in Q3 2020. The execution budget for Phase 1 is less than \$10 million.

The focus of Phase 1 is to monetise monazite concentrates contained in the Mineral Separation Plant By-Product Mineral Resource. This has required the development of a viable processing methodology and the selection of a channel to market, which satisfies product stewardship protocols. Studies into Phase 2 of the project, which involves further processing, have now commenced.

Atacama, South Australia

Atacama is a satellite deposit to Iluka's existing operation at Jacinth-Ambrosia. Iluka has commenced a project to evaluate the potential for this deposit to add material zircon production when required, potentially from as early as 2022.

A pre-feasibility study commenced in Q4 2018 and options have been identified to process the Atacama deposit economically by utilising the existing infrastructure at the Jacinth-Ambrosia mine site. External stakeholder consultation has commenced. Completion of this stage of works is targeted for Q1 2020.

SR1 restart, Western Australia

The scoping study and cost estimate for SR1 restart is complete. Project execution remains subject to determining appropriate feed source(s). The kiln is adjacent to the currently operational SR2 kiln and has capacity to produce ~120 thousand tonnes of synthetic rutile per annum. The project team is developing the detailed refurbishment scope for existing equipment. Iluka has considered and is progressing a range of internal and external ilmenite feed options.

Balranald, Murray Basin, New South Wales

Balranald and Nepean are two rutile-rich deposits in the northern Murray Basin, New South Wales.

A drilling programme to provide more detailed understanding of the deposit mineralisation was completed in late 2018. The results were positive and have increased Iluka's confidence in the resource. The proposed final trial to determine whether the underground mining and backfilling technology is economically viable in a continuous mining and processing environment, is now being executed.

Activities in the quarter focused on final planning, engineering, procurement and recruitment of resources in preparation to mobilise to site.

Puttalam, Sri Lanka

The Puttalam Quarry (PQ) deposit is a large sulphate ilmenite deposit, located approximately 30 kilometres from the town of Puttalam in north western Sri Lanka.

A pre-feasibility study has been completed. Following the devastating Colombo terrorist attacks in April, Iluka withdrew its project team from the country. This team returned during the quarter following safety reviews. Since this time, Iluka has continued engagement activities with the government and other stakeholders on legal and investment terms for the development.

EXPLORATION

Expenditure on exploration and evaluation charged to the profit and loss account for the September quarter 2019 was \$3.5 million with expenditure year to date of \$8.3 Million (year to date Q3 2018: \$8.7 million).

Canada

Iluka continued to fund Societe d'Exploration Miniere Vior Inc. ("Vior") to undertake greenfield exploration for high grade rutile/ilmenite deposits in the Foothills and Grand Duc project areas in Quebec.

A diamond drilling campaign of high grade rutile-ilmenite targets was commenced and scheduled to be completed in Q1 2020. Sample analysis by IOS Services Géoscientifiques is being undertaken in the coming months.

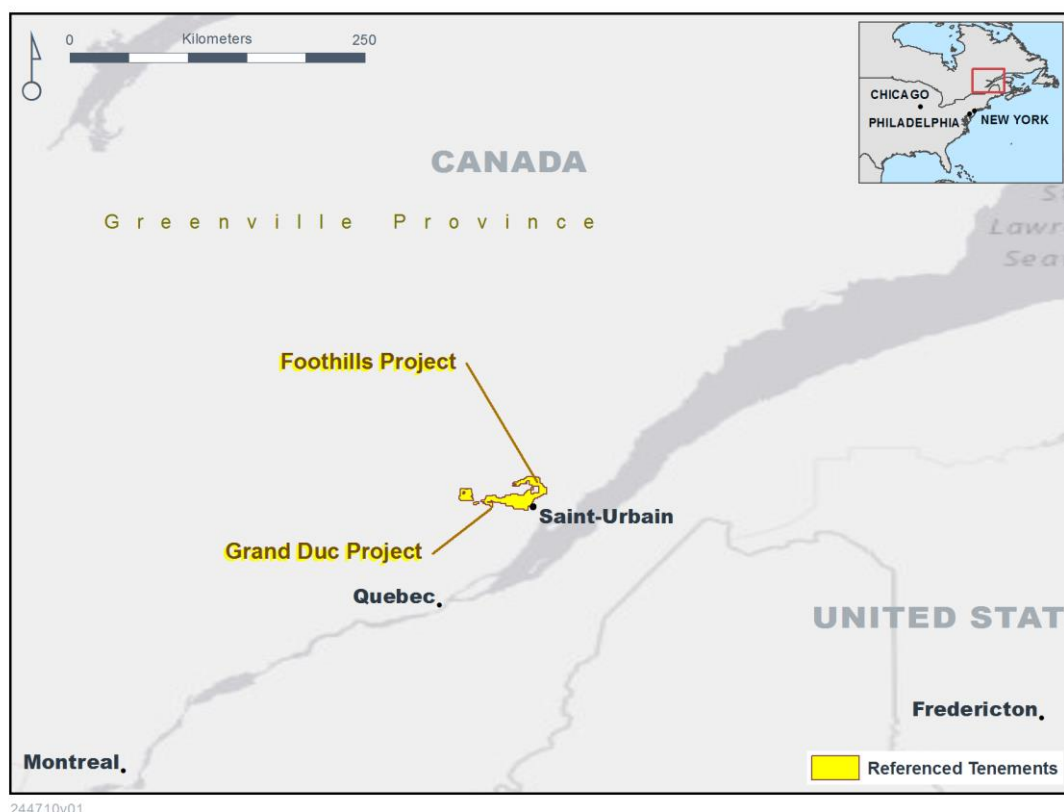
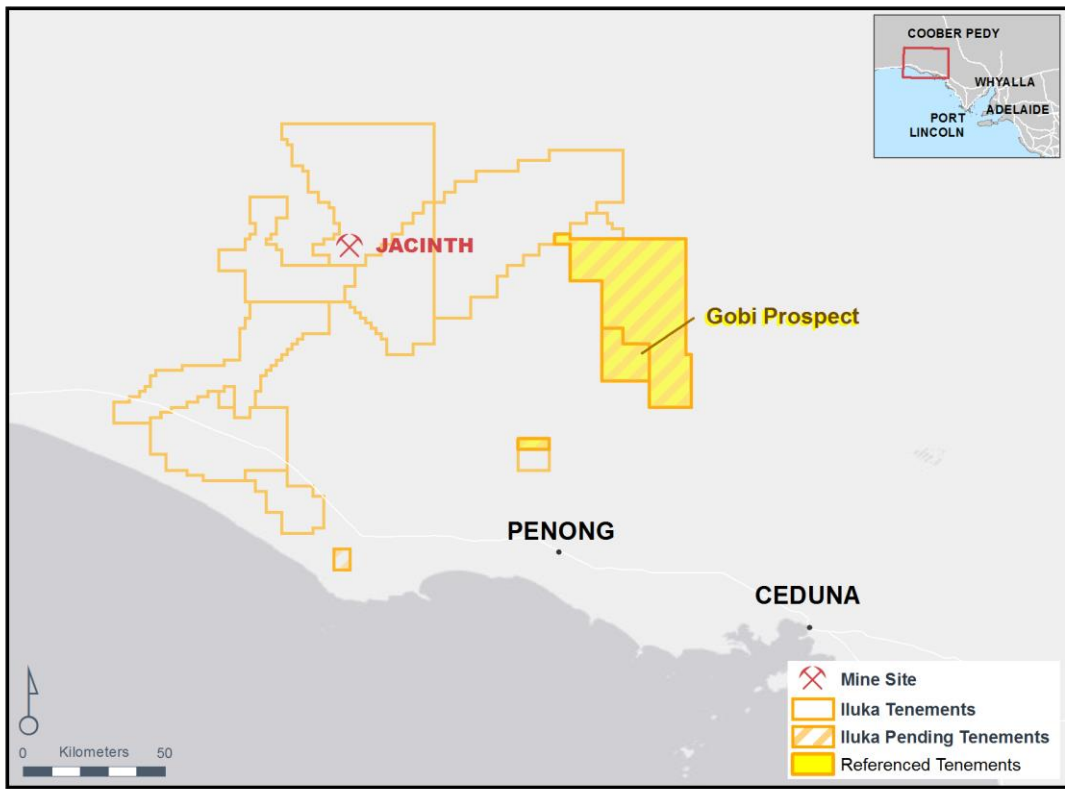


Figure 1: Grand Duc and Foothills Projects, Quebec, Canada

Eucla Basin, Australia

Aircore drilling was undertaken on the Gobi prospect in the Eucla Basin, South Australia with samples being processed at Iluka's internal laboratory. Further work on the prospect will be determined in the coming months following a technical assessment of the data.



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Figure 2: Gobi Prospect, Eucla Basin, South Australia

INVESTOR PRESENTATION AND CATABY SITE VISIT

Iluka is hosting an investor briefing and site visit to Cataby over 31 October and 1 November.

Webcast details for the investor briefing are:

Thursday, 31 October 2019
3:00pm – 5:00pm (AWST)
[Investor Briefing Webcast](#)

Presentation materials for both events will be available at iluka.com upon commencement of the presentation.

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OPERATING MINES PHYSICAL DATA
9 Months to 30 September 2019

	Jacynth- Ambrosia/ Mid west	Catoby / South west	Australia Total	Sierra Leone	Total Producing Ops	Idle Ops	Group Total
Mining							
Overburden Moved kbcm	907	8,689	9,596	-	9,596	-	9,596
Ore Mined kt	7,017	6,379	13,396	5,498	18,893	-	18,893
Ore Grade HM %	6.5%	4.0%	5.3%	3.3%	4.7%	0.0%	4.7%
VHM Grade %	5.9%	3.0%	4.5%	2.6%	3.9%	0.0%	3.9%
Concentrating							
HMC Produced kt	407	153	561	198	759	-	759
VHM Produced kt	364	129	493	139	632	-	632
VHM in HMC Assemblage %	89.4%	84.1%	88.0%	69.9%	83.2%	0.0%	83.2%
Zircon	50.0%	10.5%	39.2%	3.8%	30.0%	0.0%	30.0%
Rutile	8.3%	7.0%	8.0%	46.5%	18.0%	0.0%	18.0%
Ilmenite	31.1%	66.6%	40.8%	19.6%	35.3%	0.0%	35.3%
HMC Processed kt	376	195	571	199	770	-	770
Finished Product¹ kt							
Zircon	212.4	36.6	249.0	4.4	253.4	-	253.4
Rutile	26.1	9.0	35.1	93.2	128.3	-	128.3
Ilmenite (saleable/upgradeable)	86.5	97.3	183.8	42.9	226.7	-	226.7
Synthetic Rutile Produced kt	-	139.8	139.8	-	139.8	-	139.8

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.

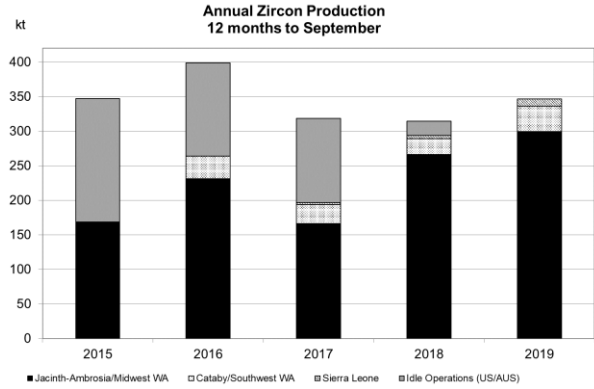
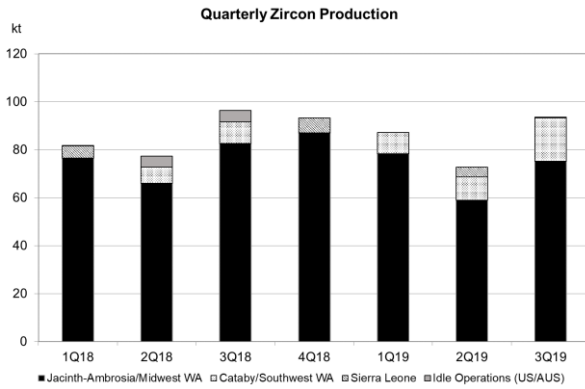
Finished product provides an indication of the finished production (zircon, rutile, ilmenite) attributable to the VHM in HMC production streams from the various mining operations. Finished product levels are subject to recovery factors which can vary. The difference between the VHM produced and finished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

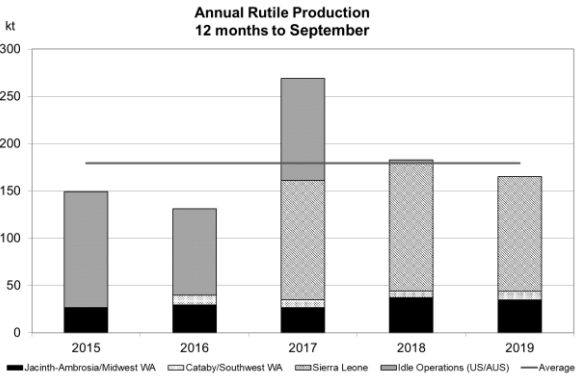
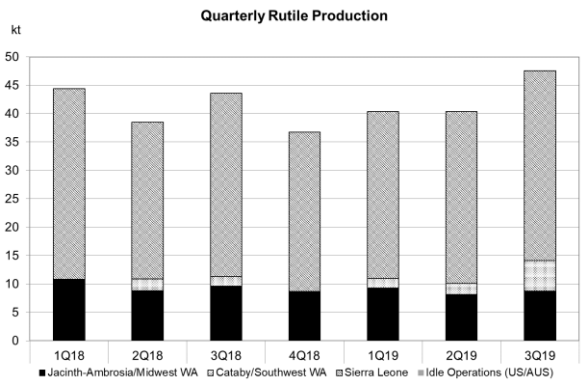
Typically, 1 tonne of upgradeable ilmenite will produce between 0.56 and 0.60 tonnes of synthetic rutile. Iluka also purchases external ilmenite for its synthetic rutile production process.

APPENDIX 1 - PRODUCTION SUMMARIES

Zircon

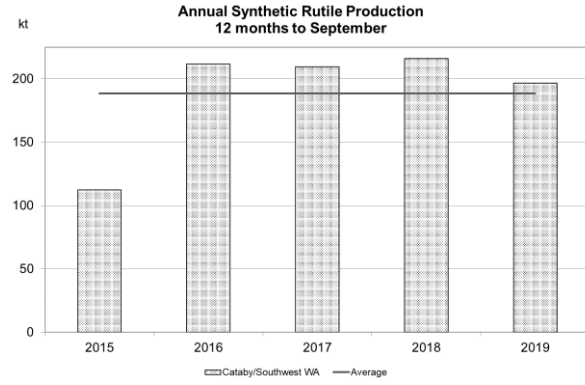
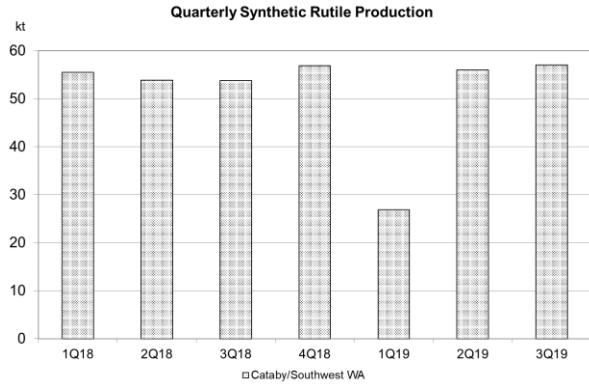


Rutile



APPENDIX 1 - PRODUCTION SUMMARIES (continued)

Synthetic Rutile



Ilmenite

