

**QUARTERLY REVIEW TO 31 MARCH 2021**

**23 April 2021**

**KEY FEATURES**

- Zircon/Rutile/Synthetic Rutile (Z/R/SR) production of 125kt, down 23% from Q4 2020
  - Synthetic rutile production lower due to planned production suspension in February and March to manage inventory levels, with production recommencing on 1 April, earlier than anticipated
  - Zircon production of 70kt reflects a return to full production at the Narngulu mineral separation plant in January
  - Group rutile production down 11% from Q4 to 36kt, with lower production from Sierra Rutile reflecting acute operational challenges
- Synthetic rutile production in 2021 expected to be 190kt, owing to the two month production suspension period (initially planned for three to six months)
- Strong first quarter Z/R/SR sales, up 29% from Q4 2020
  - Zircon sales of 87kt – a positive start to the year in what is traditionally a seasonally slower quarter
  - Synthetic rutile sales were 76kt, with the recommencement of shipments to Chemours
- Zircon and rutile prices were in line with those achieved in Q4 2020
- Monazite concentrate sales of 11kt, in line with the offtake agreement in place to underpin Phase 1 rare earths operations at Eneabba

PHYSICAL AND FINANCIAL SUMMARY	Q1 20	Q4 20	Q1 21	Q1 21 vs Q1 20	
				Q4 20	Q1 20
				%	%
<b>PRODUCTION</b>					
<b>kt</b>					
Zircon	50.1	60.9	70.1	15.1	39.9
Rutile <sup>1</sup>	49.3	40.6	36.2	(10.8)	(26.6)
Synthetic Rutile	53.2	60.6	19.0	(68.6)	(64.3)
<b>Z/R/SR Production</b>	<b>152.6</b>	<b>162.1</b>	<b>125.3</b>	<b>(22.7)</b>	<b>(17.9)</b>
Ilmenite	108.9	129.4	75.3	(41.8)	(30.9)
Monazite concentrate	-	14.1	16.2	14.9	n/a
<b>SALES</b>					
<b>kt</b>					
Zircon	24.9	98.0	86.5	(11.7)	247.4
Rutile <sup>1</sup>	47.2	53.6	53.5	(0.2)	13.3
Synthetic Rutile	51.0	15.3	75.5	393.5	48.0
<b>Z/R/SR sales</b>	<b>123.1</b>	<b>166.9</b>	<b>215.5</b>	<b>29.1</b>	<b>75.1</b>
Ilmenite	33.6	87.9	49.5	(43.7)	47.3
Monazite concentrate	-	20.7	10.5	(49.3)	n/a
<b>REVENUE</b>					
<b>A\$ million</b>					
Z/R/SR revenue	209.7	246.2	320.1	30.0	52.6
Ilmenite and other revenue	22.5	34.0	24.4	(28.2)	8.4
<b>Mineral Sands Revenue</b>	<b>232.2</b>	<b>280.2</b>	<b>344.5</b>	<b>22.9</b>	<b>48.4</b>
Average AUD:USD cents	65.9	73.0	77.3	5.9	17.3

<sup>1</sup> Rutile sales and production volumes include the lower value titanium dioxide product, HYTI, that typically has a titanium dioxide content of 70-90%. This product sells at a lower price than rutile, which typically has a titanium dioxide content of 95%.



### Australian Operations

The Narngulu mineral separation plant (MSP) returned to full processing capacity in January. Since March 2020, the plant had been operating under adjusted production settings to reduce zircon production in response to the market impacts of the COVID-19 pandemic. In Q1 2021, the plant processed material from Jacinth-Ambrosia exclusively, with 135 thousand tonnes of heavy mineral concentrate (HMC) processed to produce 70 thousand tonnes of zircon and 10 thousand tonnes of rutile.

At Jacinth-Ambrosia, mining continued at Jacinth North, with 71 thousand tonnes of HMC produced.

The Cataby operation produced 126 thousand tonnes of HMC, up from 117 thousand tonnes in Q4 2020. The higher production reflects mining of higher grade ore sections. The Narngulu MSP did not process any Cataby zircon or rutile during the quarter, as HMC feed is campaigned through the plant, with the next Cataby campaign starting in May 2021.

Synthetic Rutile Kiln 2 underwent a planned production suspension in February and March to manage synthetic rutile stock levels. The suspension was originally planned for a period of three to six months; but the resumption of sales to Chemours and the subsequent reduction in inventory levels facilitated the recommencement of production on 1 April. Full year synthetic rutile production is expected to be 190 thousand tonnes. Planned refurbishment occurred during the suspension.

### Sierra Leone Operations

Rutile production was 26 thousand tonnes.

Heavy mineral concentrate grade was lower, affecting rutile production. In addition, mining unit feed rates and run times were below planned levels. This was due to a number of factors, including mining unit feed blockages; and downtime associated with maintenance works to pipes, pumps and conveyors.

Sierra Rutile continues to experience acute operational challenges, impacting efforts to achieve operational consistency. This includes the ability to maintain specialised skillsets in-country, typically provided by expatriate workers.

MINERAL SANDS PRODUCTION	Q1 20	Q4 20	Q1 21	Q1 21 vs Q4 20	Q1 21 vs Q1 20
	kt	kt	kt	%	%
<b>ZIRCON<sup>2</sup></b>					
Jacinth-Ambrosia / Mid west WA	39.5	34.6	70.1	102.6	77.5
Cataby/South west WA	10.6	14.8	-	n/a	n/a
Sierra Leone	-	6.6	-	n/a	n/a
Idle (US)	-	4.9	-	n/a	m/a
<b>Total Zircon</b>	<b>50.1</b>	<b>60.9</b>	<b>70.1</b>	<b>15.1</b>	<b>39.9</b>
<b>RUTILE</b>					
Jacinth-Ambrosia / Mid west WA	6.5	10.6	10.4	(1.9)	60.0
Cataby/South west WA	6.8	2.7	-	n/a	n/a
Sierra Leone	36.0	27.3	25.8	(5.5)	(28.3)
<b>Total Rutile</b>	<b>49.3</b>	<b>40.6</b>	<b>36.2</b>	<b>(10.8)</b>	<b>(26.6)</b>
<b>Synthetic Rutile (WA)</b>	<b>53.2</b>	<b>60.6</b>	<b>19.0</b>	<b>(68.6)</b>	<b>(64.3)</b>
<b>TOTAL Z/R/SR</b>	<b>152.6</b>	<b>162.1</b>	<b>125.3</b>	<b>(22.7)</b>	<b>(17.9)</b>
<b>ILMENITE</b>					
Jacinth-Ambrosia / Mid west WA	25.4	22.3	38.1	70.9	50.0
Cataby/South west WA	68.4	97.2	26.7	(72.5)	(61.0)
Sierra Leone	15.1	9.9	10.5	6.1	(30.5)
<b>Total Ilmenite</b>	<b>108.9</b>	<b>129.4</b>	<b>75.3</b>	<b>(41.8)</b>	<b>(30.9)</b>
<b>MONAZITE</b>					
Jacinth Ambrosia / Mid west WA	-	14.1	16.2	14.9	n/a

<sup>2</sup> Iluka's zircon production figures include volumes of zircon attributable to external processing arrangements.

### Zircon

First-quarter zircon sales of 87 thousand tonnes, including zircon in concentrate (ZIC).

Q1 is typically lower for zircon sales due to ceramic plant shutdowns associated with Chinese New Year. While these shutdowns still occurred in 2021, tile manufacturers in China returned shortly after the Chinese New Year.

Chinese tile exports have been impacted by anti-dumping and trade restrictions in some regions. The slowdown in Chinese exports has opened up opportunities for producers in other countries to service domestic demand and export markets. In particular, tile exports from European producers (Spain and Italy) have increased to the US. Indian tile producers have also increased sales to export markets traditionally serviced by China. Domestic demand for tiles in Europe has been solid, with increased renovation activity.

Foundries in China continued their recovery from last year, with higher orders through the quarter.

Fused zirconia markets remain robust in China due to their use in special refractories for solar and medical glass. US producers are also reporting growth in new orders.

Iluka's zircon inventory levels declined over 2020 to the point the company now holds a normal level of zircon stocks.

Iluka has maintained zircon sand prices in line with those achieved in Q4 2020. In February, the company announced a price increase of US\$70 per tonne, effective 1 April.

### Titanium Dioxide Feedstocks

High grade titanium dioxide feedstock sales were 129 thousand tonnes.

The titanium dioxide pigment market remains robust, with many producers running their assets to maximise throughput. Pigment inventory levels are below seasonal norms, with extended lead times for certain grades. Do-it-yourself (DIY) paint demand remains strong heading into the Northern Hemisphere's spring and summer peak demand season.

Chinese pigment domestic demand has also been strong, with Chinese producers electing to sell domestically. This has resulted in shortages for lower priced Chinese pigment in Europe, South East Asia and Latin America.

Pigment prices have increased following a series of price increase announcements – the most recent increases are mid-single digit percentage points and, in some cases, higher.

The welding market remains very strong with demand for natural rutile outstripping supply.

The market for titanium metal is showing signs of improvement, with positive indicators evident in aircraft orders. However, demand from this market sector is not expected to return to pre-COVID-19 levels for several years.

Iluka has a minimum of 295 thousand tonnes of rutile and synthetic rutile take-or-pay contracts with a range of customers in place for 2021. In addition, to date, a further 30 thousand tonnes of high grade feedstocks are contracted. While litigation relating to 2020 offtake of synthetic rutile by Chemours remains ongoing, it has resumed offtake in line with the contract.

Rutile prices achieved were at similar levels to Q4 2020.

Updates on selected projects for the March quarter are detailed below.

#### Eneabba, Western Australia

The Eneabba project in Western Australia involves the reclaiming, 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. All major construction and procurement contracts have been awarded and the project is tracking in line with plans. Phase 2 is due for completion in H1 2022.

Additionally, Iluka is progressing a feasibility study for a fully integrated rare earths refinery at Eneabba (Phase 3).

#### 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 technology.

Iluka completed the third trial (T3) of the underground mining method late in 2020. The trial confirmed the effectiveness of the underground mining method and validated key elements of the mining unit design.

The focus in the first quarter has been to collate, interpret and analyse the significant volume of data generated during the trial. Work is now underway to improve definition (cost and schedule) on potential development pathways which will then inform the Definitive Feasibility Study (DFS) scope.

#### 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 the zircon processing solution and progressing baseline environmental studies. The rare-earth bearing minerals within the Wimmera deposit are very similar to the stockpiled minerals at Eneabba; and could supplement feed to Iluka's potential downstream refining activities at Eneabba in future years.

#### 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.

For more detail on projects please refer to Iluka's website [iluka.com/operations-resource-development/resource-development](https://iluka.com/operations-resource-development/resource-development)

## EXPLORATION

---

Expenditure on exploration and evaluation in the March quarter 2021 was \$2.4 million.

Testing of western US regional basin scale opportunities were completed with a total of 1,775 metres of drilling. Assays have been submitted to Iluka's US laboratory for analysis. US exploration activities will shift to regional exploration targets located on the eastern seaboard in Q2 2021.

Drilling activities were undertaken in Australia in the March quarter with 4,832 metres of Resource definition completed at the Cataby mine site. Preparations for new regional exploration field programmes in Australia were advanced with drilling anticipated to commence in May 2021.

## OTHER UPDATES

---

### **Cyclone Seroja Impact**

Cyclone Seroja crossed the West Australian coast on 11 April. The cyclone impacted the mid west region, including Iluka's Narngulu mineral separation plant, near Geraldton.

Iluka's facilities (plant and infrastructure) sustained very minor damage; but were without power and communications for several days. For safety and security reasons, the plant was shut down at 10.00am (WST) on 11 April. Production recommenced at 3.00pm on 15 April, with full production achieved at 12.00am on 16 April.

### **Annual General Meeting**

Iluka's Annual General Meeting (AGM) will be held at 9.30 am (WST) on 29 April 2021. The meeting will be webcast at <http://web.lumiagm.com/385467567> (Meeting ID is 385-467-567). Further information can be found on Iluka's website at [2021 AGM information](#).

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

### **Investment market and media enquiries:**

Luke Woodgate  
Group Manager, Investor Relations and Corporate Affairs  
Mobile: +61 (0) 477 749 942  
Email: [investor.relations@iluka.com](mailto:investor.relations@iluka.com)

## APPENDIX 1 – MINING AND PRODUCTION PHYSICAL DATA



Physical Data 3 Months to 31 March 2021	Jacinth- Ambrosia / Mid west	Cataby / South west	Australia Total	Sierra Leone	Group Total
<b>Mining</b>					
Overburden Moved kbcm	279	2,125	<b>2,404</b>	-	<b>2,404</b>
Ore Mined kt	2,607	2,317	<b>4,924</b>	2,588	<b>7,512</b>
Ore Treated Grade HM %	3.4%	5.8%	<b>4.6%</b>	2.0%	<b>3.8%</b>
VHM Treated Grade %	3.1%	5.1%	<b>4.0%</b>	2.0%	<b>3.4%</b>
<b>Concentrating</b>					
HMC Produced kt	71	126	<b>197</b>	72	<b>269</b>
VHM Produced kt	63	111	<b>174</b>	41	<b>215</b>
VHM in HMC Assemblage %	88.4%	88.3%	<b>88.3%</b>	57.1%	<b>80.0%</b>
Zircon	42.1%	10.7%	<b>22.1%</b>	3.7%	<b>17.1%</b>
Rutile	7.0%	7.2%	<b>7.1%</b>	36.1%	<b>14.9%</b>
Ilmenite	39.3%	70.5%	<b>59.2%</b>	17.3%	<b>47.9%</b>
HMC Processed kt	135	18	<b>153</b>	78	<b>231</b>
<b>Finished Product<sup>3</sup> kt</b>					
Zircon	70.1	-	<b>70.1</b>	-	<b>70.1</b>
Rutile	10.4	-	<b>10.4</b>	25.8	<b>36.2</b>
Ilmenite (saleable/upgradeable)	38.1	26.7	<b>64.8</b>	10.5	<b>75.3</b>
Monazite concentrate kt	16.2	-	<b>16.2</b>	-	<b>16.2</b>
Synthetic Rutile kt	-	19.0	<b>19.0</b>	-	<b>19.0</b>

### Explanatory comments on terminology

**Overburden moved** (bank cubic metres) refers to material moved to enable mining of an ore body.

**Ore mined** (thousands of tonnes) refers to material moved containing heavy mineral ore. For Cataby/ South West this refers to ore treated.

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

**VHM Treated Grade %** refers to percentage of valuable heavy mineral (VHM) - titanium dioxide (rutile and ilmenite), and zircon found in a deposit.

**Concentrating** refers to the production of heavy mineral concentrate (HMC) through a wet concentrating process at the mine site, which is then transported for final processing into finished product at the company's Australian mineral processing plant, or the Sierra Leone mineral processing plant.

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

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

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

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

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

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

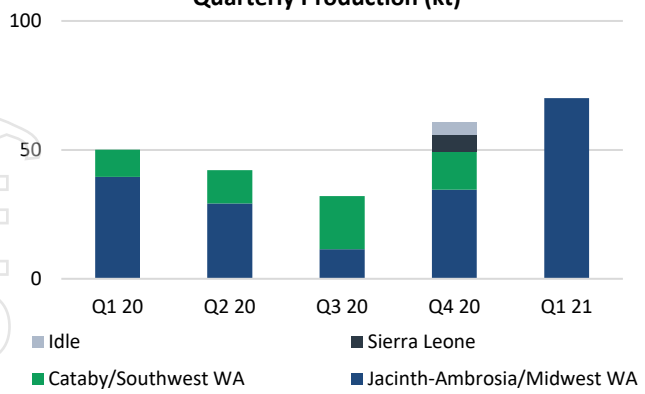
Typically, 1 tonne of upgradeable ilmenite will produce between 0.56 to 0.60 tonnes of SR. Iluka also purchases external ilmenite for its synthetic rutile production process.

<sup>3</sup> Finished product includes material from heavy mineral concentrate (HMC) initially processed in prior periods.

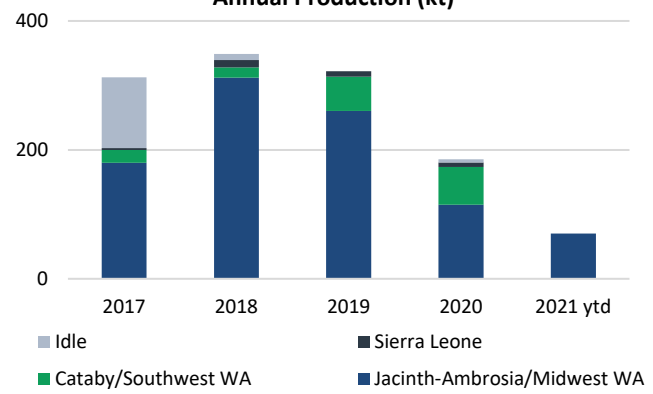


APPENDIX 2 – PRODUCTION SUMMARIES

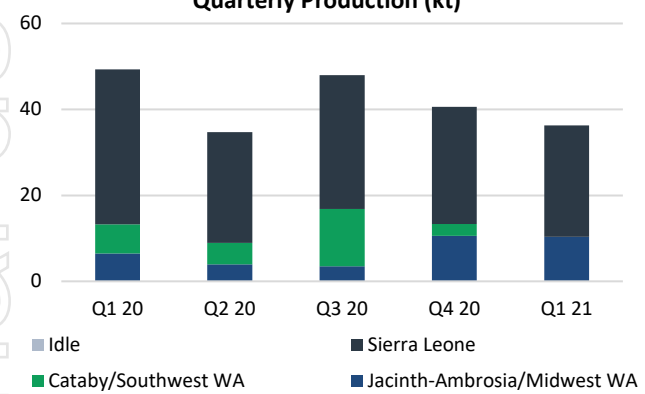
Zircon Quarterly Production (kt)



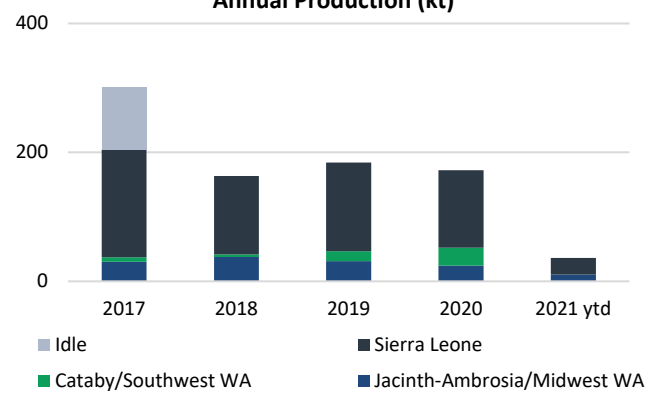
Zircon Annual Production (kt)



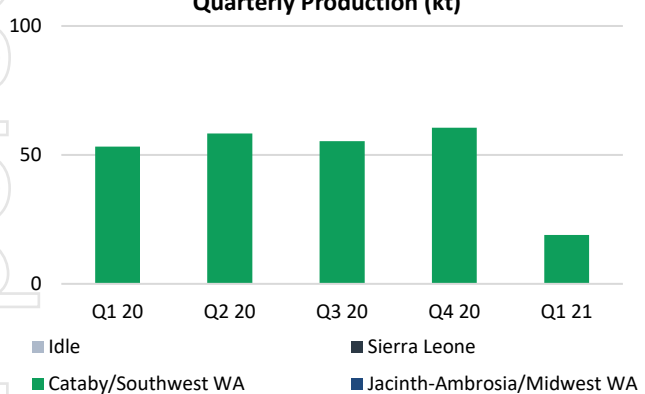
Rutile Quarterly Production (kt)



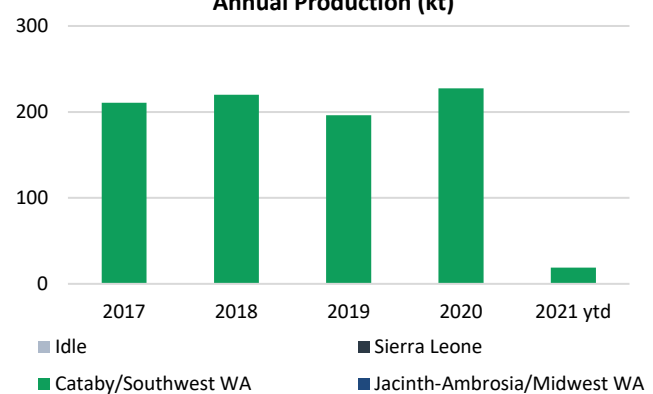
Rutile Annual Production (kt)



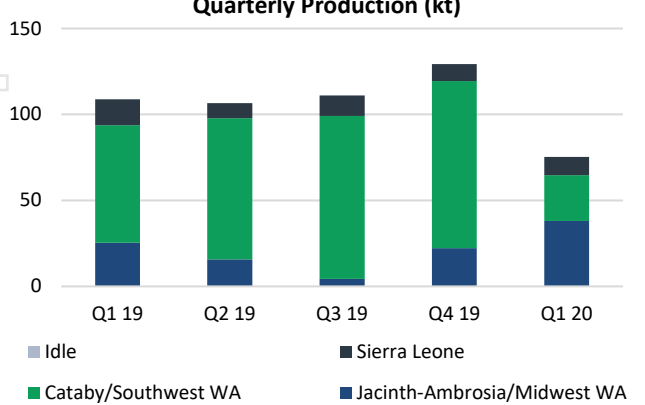
Synthetic Rutile Quarterly Production (kt)



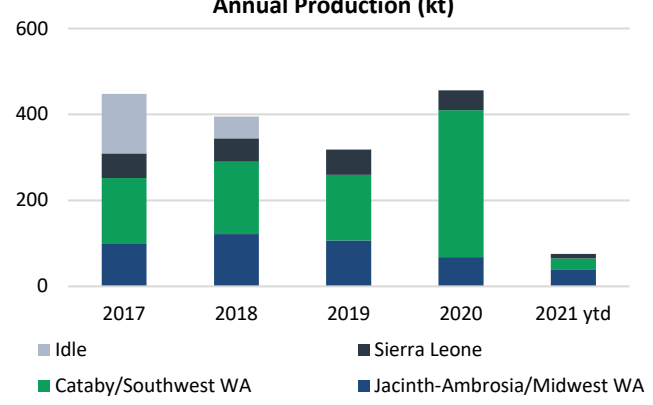
Synthetic Rutile Annual Production (kt)



Ilmenite Quarterly Production (kt)



Ilmenite Annual Production (kt)



For personal use only