ILUKA RESOURCES LIMITED (ASX:ILU)

AUSTRALIAN SECURITIES EXCHANGE NOTICE



QUARTERLY REVIEW TO 30 JUNE 2023

26 July 2023

KEY FEATURES

- Zircon/rutile/synthetic rutile (Z/R/SR) production of 217kt
 - Narngulu mineral separation plant operated at full capacity producing 107 thousand tonnes of zircon and 23 thousand tonnes of rutile, processing ore from Jacinth-Ambrosia and Cataby
 - SR1 and SR2 in Capel ran at maximum operating rates producing 87 thousand tonnes of synthetic rutile
- Q2 2023 Z/R/SR sales of 176kt, up 74% from Q1 2023 due to higher zircon (including ZIC) and rutile sales. Q1 2023 synthetic rutile sales were impacted by timing of shipments
- Weighted average zircon price achieved in Q2 2023 for premium and standard sand was US\$2,088 per tonne
- Q2 2023 rutile price of US\$1,871 per tonne and synthetic rutile price of \$US1,267 per tonne
- Q3 zircon prices to remain flat on Q2 pricing
- SR2 offline for approximately two months due to a planned major maintenance outage in H2 2023
- Project updates
 - Eneabba accommodation camp upgrade complete. Operational camp construction commenced
 - Balranald EPCM contract awarded
 - PFS for South West Deposits (Tutunup) completed. DFS funding of \$12m approved
 - Atacama PFS extended to include test pit trial, with completion scheduled for 2024
- Net cash for the Group at 30 June was \$343 million
 - Free cashflow in the half comprised: \$16 million outflow from mineral sands, mainly driven by a 2022 tax final payment of \$127 million; \$52 million outflow from the Eneabba refinery; and \$13 million inflow from Deterra. Total capital expenditure in the half was \$108 million

PHYSICAL AND		04.00				H1 23
FINANCIAL SUMMARY ¹	Q2 22	Q1 23	Q2 23	H1 22	H1 23	vs H1 22
						%
PRODUCTION						
Zircon	45.5	59.3	70.1	99.3	129.4	30.3
ZICOII ZIC ²	45.5 30.9	59.5	37.2	53.4	37.2	
Rutile ³	9.6	8.0	22.8	23.6	30.7	(30.3) 30.1
Synthetic Rutile	60.1	83.6	86.6	114.4	170.2	48.8
Z/R/SR Production	146.1	150.9	216.7	290.7	367.5	26.4
Ilmenite	155.6	152.3	150.0	259.0	302.3	16.7
SALES						
kt	60.6	42.0	F4.F	120.2	00.0	(22.5)
Zircon ZIC ²	69.6	42.0	54.5	126.3	96.6	(23.5)
Rutile	33.1 6.5	11.6	37.7 15.2	60.2 25.5	37.7 26.8	(37.4) 5.1
Synthetic Rutile	89.2	48.0	69.0	135.7	117.0	(13.8)
Z/R/SR sales	198.4	101.6	176.4	347.7	278.1	(20.0)
Ilmenite	68.5	41.8	40.2	98.1	82.1	(16.3)
						(====)
REVENUE & CASH \$ million	COSTS					
Z/R/SR revenue	421.1	237.9	423.9	725.2	661.8	(8.7)
Ilmenite and other revenue	38.5	18.8	31.7	63.4	50.5	(20.3)
Mineral Sands Revenue	459.6	256.7	455.6	788.6	712.3	(9.7)
Production cash costs				239.8	306.1	27.6
By-product costs				4.7	5.2	10.6
Total cash costs of production				244.5	311.3	27.3
\$ per tonne						
Unit cash						
production costs Z/R/SR				825	833	1.0
produced Unit cost of						
goods sold Z/R/SR sold				842	1,062	26.1
Revenue Z/R/SR sold	2,122	2,342	2,403	2,086	2,380	14.1
AUD:USD cents	71.5	68.4	66.8	72.0	67.6	(6.0)

¹ Prior periods (Q2 2022 and H1 2022) have been restated to exclude Sierra Rutile Ltd which was demerged from the Iluka Group in August 2022.

² Production of zircon in concentrate (ZIC) is recognised on sale. ZIC sales include small amounts of lower grade zircon products processed by third parties.

³ 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

Mining at Jacinth-Ambrosia in South Australia produced 59 thousand tonnes of heavy mineral concentrate (HMC), down from 95 thousand tonnes in Q1 2023. Lower HMC production was the result of lower ore grade in comparison to Q1 2023, however production was in line with the planned mining sequence.

In Western Australia, the Cataby operation produced 144 thousand tonnes of HMC, up from 118 thousand tonnes in Q1 2023. Higher HMC production was due to higher ore treatment volumes and ore grade.

The Narngulu mineral separation plan processed both Cataby and Jacinth-Ambrosia HMC, producing 107 thousand tonnes of zircon (including zircon in concentrate) and 23 thousand tonnes of rutile. Higher zircon production was due to higher ZIC sales compared to Q1 2023, with ZIC production recognised on sale.

Total synthetic rutile production from Capel was 87 thousand tonnes with both SR1 and SR2 operating at full capacity. SR1 is offline for two weeks in July for a planned maintenance event and SR2 will be offline for approximately two months in H2 2023 due to a planned major maintenance outage, currently planned to commence in November.

ILUKA MINERAL SANDS PRODUCTION	Q2 22	Q1 23	Q2 23	H1 22	H1 23	H1 23 vs H1 22
ZIRCON SAND ⁴	kt	kt	kt	kt	kt	%
Jacinth-Ambrosia/ Mid west WA	38.3	59.3	48.2	80.1	107.5	34.2
Cataby/South west WA	7.2	-	21.9	19.2	21.9	14.1
Total Zircon	45.5	59.3	70.1	99.3	129.4	30.3
ZIC						
Jacinth-Ambrosia/ Mid west WA	28.3	-	31.9	50.8	32.0	(37.0)
Cataby/South west WA	2.6	-	5.3	2.6	5.2	(100)
Total ZIC	30.9	-	37.2	53.4	37.2	(30.3)
RUTILE						
Jacinth-Ambrosia/ Mid west WA	4.6	8.0	5.6	10.9	13.5	23.9
Cataby/South west WA	5.0	-	17.2	12.7	17.2	35.4
Total Rutile	9.6	8.0	22.8	23.6	30.7	30.1
Synthetic Rutile (WA)	60.1	83.6	86.6	114.4	170.2	48.8
TOTAL Z/R/SR	146.1	150.9	216.7	290.7	367.5	26.4
ILMENITE						
Jacinth-Ambrosia/ Mid west WA	36.2	34.3	20.5	75.3	54.9	(27.1)
Cataby/South west WA	119.4	118.0	129.5	183.7	247.4	34.7
Total Ilmenite	155.6	152.3	150.0	259.0	302.3	16.7

SRL MINERAL SANDS PRODUCTION	Q2 22	Q1 23	Q2 23	H1 22	H1 23	H1 23 vs H1 22
	kt	kt	kt	kt	kt	%
ZIC	4.0	-	-	4.0	=	n/a
Rutile	38.6	-	-	74.1	-	n/a
TOTAL Z/R	42.6	-	-	78.1	-	n/a
Ilmenite	15.1	-	-	30.0	-	n/a
	•	•			•	•

⁴ Iluka's zircon production figures include volumes of zircon attributable to external processing arrangements.

Zircon

Total zircon sales in H1 2023 were 134kt including zircon in concentrate (ZIC).

China's recovery was relatively muted in Q2 2023. Ongoing softness in the real estate market impacted the ceramic market and industrial activity slowed, contributing to uncertainty in other zircon segments. The government has started to ease some restrictions, including lowering interest rates and introducing other measures that could support the domestic economy.

European demand remained stable in Q2 2023, however activity is expected to ease during the typically quieter summer quarter.

India's ceramic industry continues to outperform, notwithstanding a production hiatus caused by cyclone Biparjoy, which affected ceramic production in the Morbi area. Despite the disruption, the Indian property market is expected to continue to grow strongly.

Factory activity in other Asian economies has started to contract due to China's subdued recovery, which is also expected to weigh on US and European economic growth.

Consumers through the supply chain appear unwilling to hold or build inventory citing the broader macro-economic uncertainties.

Q3 2023 zircon prices to remain flat on Q2 2023 pricing.

Titanium Dioxide Feedstocks

Sales of synthetic rutile in H1 2023 were 117kt and sales of rutile (including HyTi) were 27kt, with Iluka building 57kt of inventory.

Demand from the pigment market remains soft as paints and coatings producers experience lower demand from customers, following a two year period of elevated levels of do-it-yourself (DIY) projects and home building in North America and Europe.

Despite lower levels of demand, pigment prices have been resilient, with pigment producers demonstrating their ability to reduce operating rates to meet demand. In past soft demand environments it has been typical for a number of pigment producers to maintain production at elevated levels, building excess stocks. In the current environment however, the majority of producers across the pigment industry have curtailed rates to match production to demand.

Higher chlorine prices in North America continue to support selection of high grade feedstocks, as this minimises chlorine consumption.

Consistent with the longer term trend, chloride capacity continues to grow in China, with the potential to further support demand for Iluka's high grade feedstocks, including the additional volumes from the restart of SR1.

Demand from the welding market continues to be strong, with ongoing investment in infrastructure globally. In the titanium metal segment, demand is very strong, with producers operating at maximum operating rates to meet growing demand from the aviation industry.

Pricing in H2 2023 is expected to remain stable.

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

Execute



Eneabba, Western Australia

Iluka is building Australia's first fully integrated refinery for the production of separated rare earth oxides at Eneabba, Western Australia.⁵

This is taking place via a strategic partnership between Iluka and the Australian Government, including a \$1.25 billion non-recourse loan to Iluka under the \$2 billion Critical Minerals Facility administered by Export Finance Australia.

Bulk earth works and ground improvement activities continue to progress, with completion expected in Q4 2023. The accommodation camp upgrade is now complete and the operational camp construction has commenced. Fluor Australia, Eneabba's EPCM contractor, has continued to progress key design elements for the refinery, with FEED to be completed by the end of the year.



Balranald, New South Wales

Balranald is a rutile-rich critical minerals development located in the Riverina district of south western New South Wales. Owing to its relative depth, Iluka is developing Balranald via a novel, internally developed, remotely operated underground mining technology.

Iluka's Board approved the final investment decision for Balranald in February 2023. Engineering, procurement and secondary environmental approvals are progressing in accordance with plans. Iluka has now awarded the fabrication and supply of Balranald's mining units and the EPCM contract, the latter to Worley.

Definitive Feasibility Study (DFS)



Wimmera, Victoria

The Wimmera development involves the mining and beneficiation of a fine grained heavy mineral sands ore body in Western Victoria for the potential long term supply of rare earths and zircon.

A preliminary feasibility study (PFS) was completed in early 2023 and Iluka's Board approved \$30 million funding for a definitive feasibility study (DFS) in February 2023. This was accompanied by the declaration of an Ore Reserve for the WIM 100 deposit, which is the focus of the Wimmera development.

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

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

Preliminary Feasibility Study (PFS)



Atacama, South Australia

Atacama is a satellite deposit of Jacinth Ambrosia and a potential extension to Iluka's existing operations in South Australia. Located approximately 5km from Jacinth Ambrosia, the project is currently the subject of a PFS.

The PFS has been extended to allow for the construction of a test pit, with completion now scheduled for 2024. Atacama would make use of existing operational infrastructure to maximise efficiency, producing a heavy mineral concentrate for processing into final products at Iluka's facilities in Western Australia.

⁵ For further information refer Iluka ASX release *'Eneabba Rare Earths Refinery – Final Investment Decision'*, 3 April 2022.



Euston, New South Wales

The Euston deposit is a traditional mineral sands deposit located in south western New South Wales. It has significant zircon and rutile assemblages, with ilmenite as a possible feedstock for Iluka's synthetic rutile production. The development would be a traditional open cut, dry mine.

PFS work continues to progress in 2023.



South West Deposits, Western Australia

The South West Deposits project in Western Australia is initially focused on the Tutunup mineral sands deposit. Tutunup has significant ilmenite assemblage, as well as some zircon and rutile. The ilmenite at Tutunup is suitable as a feedstock for Iluka's synthetic rutile production and may unlock additional value across Iluka's portfolio if blended with other ilmenites with quality constraints. The development would be an open cut wet mine with dredge operations. Iluka's portfolio includes other deposits in the South West region that represent potential extensions to the Tutunup deposit.

During the quarter a PFS was completed and Iluka's Board approved \$12 million funding for a DFS.

For more detail on projects please refer to Iluka's website iluka.com/operations-resource-development/resource-development

EXPLORATION

Expenditure on exploration and evaluation in Q2 2023 was \$3.8 million compared with \$2.4 million in Q2 2022. H1 2023 expenditure was \$7.7m compared to \$4.6 million in H1 2022. Drilling completed during the quarter utilised a combination of air core and sonic techniques.

In Australia, a total of 26,635m was completed, comprising resource evaluation activities at Balranald, Euston, Wimmera and Atacama.

In the US, drill testing of the remaining target areas of the Atlantic coastal plain in Virginia and North Carolina were completed. Following both technical and economic review of the results, it was concluded that the focus move elsewhere, where two separate visits identified more prospective assemblages. Drilling restarted in June, with six sonic holes for 260m completed.

Target generation has continued in Australia and the US in line with Iluka's exploration strategy with plans to further test targets that demonstrated promise throughout 2022. In addition, Iluka continues to identify and apply for tenure over additional prospective regions in Australia. Exploration on these properties will commence once necessary land access approvals have been negotiated and received. The company continues to review rare earths exploration opportunities, including those presented by third parties.

OTHER UPDATES

2023 Half Year Results

Iluka is scheduled to release its 2023 half year results on 23 August 2023.

A teleconference will be hosted on the day. Dial in details will be available on Iluka's website in due course.

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

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APPENDIX 1 – MINING AND PRODUCTION PHYSICAL DATA

Physical Data 6 months to June 2023	Jacinth- Ambrosia/ Mid west	Cataby/ South west	Group Total
Mining			
Overburden Moved kbcm	1,871	6,979	8,850
Ore Mined kt	5,022	6,574	11,596
Ore Fed/Treated kt	4,903	5,051	9,954
Ore Treated Grade HM %	3.4%	5.5%	4.5%
VHM Treated Grade %	3.2%	4.9%	4.1%
Concentrating			
HMC Produced kt	153.9	294.1	448.0
VHM Produced kt	140.9	234.7	375.6
VHM in HMC Assemblage %	91.6%	79.8%	83.8%
Zircon	61.4%	10.3%	27.8%
Rutile	8.3%	6.2%	6.9%
Ilmenite	21.8%	63.3%	49.1%
HMC Processed kt	228.7	301.4	530.2
Finished Product ⁶ kt			
Zircon	139.5	27.1	166.6
Rutile	13.5	17.2	30.7
Ilmenite (saleable/upgradeable)	54.9	247.4	302.3
Synthetic Rutile kt	-	170.2	170.2

 $^{^{6}}$ Finished product includes material from heavy mineral concentrate (HMC) initially processed in prior periods.

Physical Data 3 months to June 2023	Jacinth- Ambrosia/ Mid west	Cataby/ South west	Group Total
Mining			
Overburden Moved kbcm	922	2,737	3,659
Ore Mined kt	2,427	3,098	5,525
Ore Fed/Treated kt	2,420	2,659	5,079
Ore Treated Grade HM %	2.7%	5.7%	4.3%
VHM Treated Grade %	2.5%	5.1%	3.8%
Concentrating			
HMC Produced kt	58.8	161.8	220.6
VHM Produced kt	53.5	129.0	182.5
VHM in HMC Assemblage %	91.0%	79.8%	82.7%
Zircon	59.5%	10.9%	23.8%
Rutile	9.5%	6.1%	7.0%
Ilmenite	22.0%	62.8%	51.9%
HMC Processed kt	96.6	199.7	296.3
Finished Product ⁷ kt			
Zircon	80.1	27.1	107.2
Rutile	5.6	17.2	22.8
Ilmenite (saleable/upgradeable)	20.5	129.5	150.0
Synthetic Rutile kt	-	86.6	86.6

Explanatory comments on terminology

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

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

Ore Fed/Treated (thousand of tonnes) refers to material processed through mining units for Cataby/ South West and Sierra Leone.

 $\label{eq:continuous} \textbf{Ore Treated Grade HM \%} \ \text{refers to percentage of heavy mineral (HM)}.$

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.

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

APPENDIX 2 – WEIGHTED AVERAGE RECEIVED PRICES

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

	H1 22	H2 22	FY 22	Q1 23	Q2 23	H1 23
US\$/tonne FOB						
Zircon Premium and Standard	1,855	2,047	1,943	2,053	2,088	2,073
Zircon (all products, including zircon in concentrate) ¹	1,757	1,975	1,850	2,053	1,897	1,946
Rutile (excluding HYTI) ^{2,3}	1,506	1,662	1,550	1,903	1,871	1,882
Synthetic rutile	Re	efer Note 4		1,265	1,267	1,266

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 H1 2023 the split of zircon sand and concentrate by zircon sand-equivalent was approximately: 72%:28% (2022 full year: 70%:30%).
- 2. Rutile prices will vary quarter-on-quarter depending on the end market to which the product is supplied (e.g. pigment or welding). Post the demerger of Sierra Rutile Limited in H2 2022, rutile sales are a smaller contributor to Iluka's revenue.
- 3. HYTI is a lower value titanium dioxide product that typically has a titanium dioxide content of 70 to 90%. This product sells at a lower price than rutile, which typically has a titanium dioxide content of 95%.
- 4. From 2018-2022, the majority of Iluka's synthetic rutile sales were underpinned by three commercial offtake arrangements. The terms of those arrangements, including the pricing arrangements, were commercial in confidence and as such not disclosed by Iluka. Since the restart of SR1, synthetic rutile sales are made to a broader number of customers and Iluka will prospectively disclose the collective pricing outcome achieved from 1 January 2023; notwithstanding the pricing arrangements remain commercial in confidence. Quarterly pricing outcomes are impacted by many variables including but not limited to the timing of shipments sold under long term contract pricing mechanisms, bonus/penalty adjustments for product quality parameters and the proportion of spot sales. Synthetic rutile, due to its lower titanium dioxide content than rutile, is priced lower than natural rutile.

APPENDIX 3 – PRODUCTION SUMMARIES







