ILUKA RESOURCES LIMITED (ASX:ILU)
AUSTRALIAN SECURITIES EXCHANGE NOTICE

QUARTERLY REVIEW TO 31 DECEMBER 2022 — 25 JANUARY 2023

KEY FEATURES

- Q4 2022 Zircon/Rutile/Synthetic Rutile (Z/R/SR) production of 157kt, in line with Q3 2022, despite the demerger of Sierra Rutile in August 2022
  - record Full Year synthetic rutile production for SR2 of 231kt
  - SR1 restart completed successfully, producing 7kt in December 2022
- Q4 2022 Z/R/SR sales of 155kt
  - Iluka sold out of zircon in 2022, with inventory at historic lows
  - Full Year synthetic rutile sales exceeded production
- Weighted average zircon price achieved in Q4 2022 for premium and standard sand was US$2,054/t
  - zircon sand prices in line with Q3 2022
- Q4 2022 rutile price up 1.6% to US$1,681/t[1]
- Key synthetic rutile offtake arrangements agreed
  - SR2 volumes contracted for four years
  - SR1 volumes available for spot sales
- Rare earths (Eneabba refinery)
  - bulk earthworks and ground improvement activities have progressed
  - achieved financial close on strategic partnership with Australian Government, administered by Export Finance Australia, with first loan utilisation in December
- Renegotiation of Multi Option Facility Agreement (MOFA) completed in December
  - undrawn commercial bank facilities of $570 million
- Net cash of $489 million as at 31 December 2022 ($295 million at 31 December 2021)
  - reflecting free cash flow of $444 million and capital expenditure of $153 million

PHYSICAL AND FINANCIAL SUMMARY	Q4 21	Q3 22	Q4 22	FY 21	FY 22	FY 22 vs FY 21
PRODUCTION kt						%
Zircon	93.6	69.7	76.3	324.2	302.7	(6.6)
Rutile[2]	65.1	24.9	16.6	196.6	139.1	(29.2)
Synthetic Rutile	60.0	59.2	63.9	198.7	237.6	19.6
Z/R/SR Production	**218.7**	**153.8**	**156.8**	**719.5**	**679.4**	**(5.6)**
Ilmenite	163.3	150.9	151.1	563.7	590.9	4.8
Monazite concentrate	19.3	-	-	57.7	-	n/a
SALES kt						
Zircon	88.8	63.1	80.0	354.7	333.6	(5.9)
Rutile[2]	65.3	33.0	12.0	207.2	140.2	(32.3)
Synthetic Rutile	38.2	47.9	62.6	305.9	246.1	(19.5)
Z/R/SR sales	**192.3**	**144.0**	**154.6**	**867.8**	**719.9**	**(17.0)**
Ilmenite	28.7	44.0	36.7	189.6	218.2	15.1
Monazite concentrate	31.2	-	-	62.4	-	n/a
REVENUE & CASH COSTS $ million						
Z/R/SR revenue	330.1	332.1	387.4	1,382.0	1,594.6	15.4
Ilmenite and other revenue	28.2	25.2	27.8	103.9	132.8	27.8
Mineral Sands Revenue	**358.3**	**357.3**	**415.2**	**1,485.9**	**1,727.4**	**16.3**
Production cash costs of Z/R/SR				559.1	637.6	14.0
Ilmenite concentrate & by product costs				20.1	12.7	(36.8)
Total cash costs of production				**579.2**	**650.1**	**12.2**
$ per tonne						
Unit cash production costs Z/R/SR produced				777	938	20.7
Unit cost of goods sold Z/R/SR sold				916	1,031	12.5
Revenue Z/R/SR sold	1,717	2,306	2,506	1,593	2,215	39.1
AUD:USD cents	72.9	68.4	65.7	75.2	69.5	(7.5)

[1] Excluded from rutile sales prices is a lower value titanium dioxide product, HYTI, 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%.

[2] Rutile sales and production volumes include HYTI.

Operations

Mining at Jacinth Ambrosia in South Australia produced 152kt of heavy mineral concentrate (HMC), up from 63kt in Q3 2022. Higher HMC production was the result of higher ore treatment volumes and higher ore grade associated with the return to processing the higher grade Ambrosia deposit in September 2022.

In Western Australia, the Cataby operation produced 114kt of HMC, in line with Q3 2022.

The Narngulu mineral separation plant processed both Cataby and Jacinth Ambrosia HMC. This produced a total of 76kt of zircon, up from 70kt in Q3 2022 due to higher zircon assemblage within the HMC and recovery; and 17kt of rutile, up from 15kt in Q3 2022 due to higher recovery.

Production of synthetic rutile from SR2 at Capel was 57kt, down from 59kt in Q3 2022, with SR2 achieving an annual production record of 231kt in 2022. In December, the restart of SR1 was commissioned, producing 7kt of synthetic rutile, having achieved runtime, throughput, recovery and product quality targets. Both SR1 and SR2 are now running at full capacity.

Owing to recent constraints in coal production in Western Australia, Iluka has imported some coal to supplement local supply and to support the restart of SR1.

Cash costs of production

Cash costs of production are in line with the revised guidance provided in Iluka's June 2022 Quarterly Review. Tight labour market conditions in Western Australia remain a source of pressure on operating costs.

MINERAL SANDS PRODUCTION	Q4 21	Q3 22	Q4 22	FY 21	FY 22	FY 22 vs FY 21
	Kt	kt	kt	kt	kt	%
ZIRCON[3]						
Jacinth-Ambrosia/ Mid west WA	62.7	53.7	59.1	271.2	243.7	(10.1)
Cataby/South west WA	26.8	16.0	17.2	48.9	55.0	12.5
Sierra Leone	4.1	-	-	4.1	4.0	(2.4)
Total Zircon	**93.6**	**69.7**	**76.3**	**324.2**	**302.7**	**(6.6)**
RUTILE						
Jacinth-Ambrosia/ Mid west WA	5.0	3.3	6.6	30.3	20.7	(31.7)
Cataby/South west WA	22.8	11.7	10.0	37.0	34.4	(7.0)
Sierra Leone	37.3	9.9	-	129.3	84.0	(35.0)
Total Rutile	**65.1**	**24.9**	**16.6**	**196.6**	**139.1**	**(29.2)**
Synthetic Rutile (WA)	**60.0**	**59.2**	**63.9**	**198.7**	**237.6**	**19.6**
TOTAL Z/R/SR	**218.7**	**153.8**	**156.8**	**719.5**	**679.4**	**(5.6)**
ILMENITE						
Jacinth-Ambrosia/ Mid west WA	27.8	34.0	27.7	127.7	137.1	7.4
Cataby/South west WA	119.5	112.1	123.4	383.9	419.0	9.1
Sierra Leone	16.0	4.8	-	52.1	34.8	(33.2)
Total Ilmenite	**163.3**	**150.9**	**151.1**	**563.7**	**590.9**	**4.8**
MONAZITE						
Jacinth Ambrosia/ Mid west WA	**19.3**	-	-	**57.7**	-	**n/a**

Z/R/SR CASH COSTS OF PRODUCTION	FY 21	FY 22	FY 22 vs FY1 21
A$ million			%
Australian and Idle Operations	372.1	521.6	40.2
SRL Operations[4]	187.0	129.1	(31.0)
Total cash costs of production	**559.1**	**637.4**	**14.0**
A$ per tonne			
Australian and Idle Operations	670	882	31.6
SRL Operations[4]	1,402	1,466	4.6
Unit cash production costs Z/R/SR produced	**777**	**938**	**20.7**

[3] Iluka's zircon production figures include volumes of zircon attributable to external processing arrangements.

[4] Sierra Rutile Limited (SRL) costs are up to demerger on 4 August 2022.

Iluka has observed a shift to a 'value over volume' approach in a number of the downstream market segments for zircon and titanium feedstocks. This is evidenced by many opacifier producers resisting efforts from end consumers to discount year-end inventory; and the unprecedented downward adjustment of pigment production in response to slowing demand, which at this time appears to have prevented any unseasonal build of inventory.

These disciplined responses are an encouraging evolution for the mineral sands and downstream opacifier and pigment industries and should reduce volatility, with positive implications for many through the supply chain. Furthermore, security and reliability of supply are increasingly prominent considerations for many downstream consumers in light of continuing production interruptions at some facilities.

The conclusion of key offtake arrangements for the company's synthetic rutile demonstrates the level of customer interest for high grade feedstocks produced by Iluka in Australia (see below).

Zircon

Total sales in the fourth quarter of 80kt were in line with expectations despite ongoing macroeconomic uncertainty globally. Iluka's supply continues to remain tight, with total sales in 2022 exceeding production for the year.

The Chinese ceramic market deteriorated further during the quarter due to the confluence of COVID restrictions, softness in the real estate market, and other economic pressures. The fused zirconia, zirconium chemicals, refractories and foundries markets experienced softness towards the end of the quarter. The recent removal of strict COVID restrictions is expected to have a positive impact on demand for zircon, in line with increased economic activity.

European ceramic manufacturers slowed production of some tile formats during the quarter while production of large ceramic slabs continued to outperform. At this stage, it remains unclear how the price cap on gas will affect the European ceramic industry and other energy intensive industries in early 2023.

Production of tiles and foundry products in India continues to outperform, with solid demand for Iluka's zircon.

Despite what is expected to be cautious buying in Q1 2023, customers have been indicating their full year volume requirements for 2023 to be in line with their purchases in 2022. Prices for volumes already contracted for Q1 2023 are in line with Q4 2022, which is consistent with the previous announcement of flat pricing from the prior quarter.

Titanium dioxide feedstocks

Sales of synthetic rutile in Q4 were 63kt. Sales of natural rutile were 12kt, including a spot shipment in December of 5kt. Demand for Iluka's high grade feedstocks remained strong, despite slowing pigment demand, especially in Europe and China.

In Europe, pigment demand is estimated to have declined 20-25% compared to the same period to Q4 2021. Pigment producers responded by idling or severely restricting production at all European sulphate pigment plants; and cutting back rates at chloride facilities, thereby reducing production to match demand. Producers remain optimistic for a rebound in the first half of 2023 as the northern hemisphere spring paint season ramps up. With limited inventory available and a return to seasonal demand patterns, European pigment operating rates are expected to ramp back up to normalised levels, with recent reports from customers pointing to some idled plants restarting in January 2023.

While titanium dioxide demand in North America has begun to be affected by higher interest rates and reduced housing demand, domestic pigment production remains in line with seasonal norms. Chlorine prices remain at elevated levels, incentivising chloride pigment plants to run higher head grades, utilising high grade ores such as synthetic rutile and natural rutile.

China's relaxation of COVID restrictions, coupled with economic incentives to increase housing demand and construction, bodes well for increased demand for pigment and high grade feedstocks in 2023.

Synthetic rutile offtake agreements

Interest in Iluka's premium synthetic rutile offering continues to be strong. This reflects the relative economic value of synthetic rutile compared with other high grade feedstocks; and Iluka's reputation as a consistent supplier of quality products from a reliable jurisdiction. Offtake commitments increased to ~200ktpa of synthetic rutile contracted under 'take or pay' arrangements for the next four years. With production from the SR2 kiln effectively contracted, and given the favourable outlook for synthetic rutile as a feedstock, the company will sell SR1 volumes on a spot basis as planned.

PROJECT UPDATES

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

Eneabba Rare Earth Refinery, Western Australia

On 3 April 2022, Iluka announced its final investment decision for Eneabba Phase 3, a fully integrated refinery for the production of separated rare earth oxides at Eneabba, Western Australia.[5]

This decision was taken following the agreement of a risk sharing arrangement with the Australian Government, including a $1.25 billion non-recourse loan under the $2 billion Critical Minerals Facility administered by Export Finance Australia.

Bulk earth works and ground improvement activities have progressed, and the camp upgrade is advancing to near completion. Additionally, key contracts for the kiln and operational camp have been awarded.

Fluor Australia, Eneabba's EPCM contractor, has continued to progress key design elements for the Eneabba Rare Earth Refinery.

Balranald, New South Wales

Balranald is a rutile-rich deposit in the northern Murray Basin, New South Wales. Owing to its relative depth, Iluka is assessing the potential to develop the deposit via a novel, internally developed, underground mining technology. Balranald's definitive feasibility study (DFS) funding was approved by Iluka's Board in August 2021. The company completed the Balranald DFS in late 2022 and is currently finalising the execution strategy ahead of a final investment decision.

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. Wimmera's preliminary feasibility study is on track for completion in early 2023. Study outcomes are currently being considered ahead of a gating decision for a potential definitive feasibility study.

The rare earth bearing minerals within the Wimmera deposits are very similar to Iluka's Eneabba stockpile, though with more xenotime (which contains higher levels of dysprosium and terbium), and are a potential future source of feedstock for the Eneabba Rare Earth Refinery.

Synthetic Rutile Kiln 1 Restart, Western Australia

SR1 is located at Capel, Western Australia, adjacent to SR2. SR1 was placed on care and maintenance in 2009. The restart of SR1 represents a low capital expenditure, low risk opportunity to produce an additional 110ktpa of synthetic rutile, in light of industry supply constraints. Iluka announced the execution of SR1's restart in August 2021. Site refurbishment activities have been completed in line with budget and ahead of schedule, with commissioning in December 2022. This achieved targeted runtime, throughput, recovery and grade parameters. The company has received significant interest from both existing and new customers regarding offtake from SR1, with volumes available for spot sales into a favourable market for synthetic rutile.

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 preliminary feasibility study that is scheduled for completion in early 2023. 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.

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

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

EXPLORATION

Exploration and evaluation expenditure in Q4 2022 was $3.7 million compared with $1.8 million in Q4 2021. Year to date expenditure was $10.9 million compared to $9.3 million in the same period in 2021.

Drilling activities in Q4 2022 completed within Australia focussed on resource evaluation work at Atacama and exploration drilling across several greenfields targets. A total of 17,863m of air core drilling was completed during the quarter.

Greenfield drilling was undertaken at the Hughenden Project in Queensland and at the Sherwood Project in New South Wales. Sherwood drilling will continue in 2023 and an evaluation of the Hughenden program will commence when mineralogical data is processed in Q1 2023.

In the United States, drill testing of greenfield regional targets continued during the quarter. A total of 77 holes for 1,985m of sonic drilling was completed. Testing of these targets is expected to recommence in mid-January 2023.

Target generation has continued within Australia and the US in line with Iluka's exploration strategy. The company continues to review rare earths exploration opportunities, including those presented by third parties.

OTHER UPDATES

2022 Full Year Results

Iluka is scheduled to release its 2022 Full Year Results on 21 February 2022.

A teleconference with management will be hosted on the day. Dial-in details for the conference call will be available on the events page of 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 3 months to December 22	Jacinth-Ambrosia/ Mid west	Cataby/ South west	Australia Total	Sierra Leone	Group Total
Mining					
Overburden Moved kbcm	764	2,372	3,136	-	3,136
Ore Mined kt	2,635	2,466	5,101	-	5,101
Ore Fed/Treated kt	2,379	2,421	4,800	-	4,800
Ore Treated Grade HM %	6.9%	5.1%	6.0%	-	6.0%
VHM Treated Grade %	6.5%	4.4%	5.5%	-	5.5%
Concentrating					
HMC Produced kt	151.9	127.1	279.0	-	279.0
VHM Produced kt	140.5	100.4	240.9	-	240.9
VHM in HMC Assemblage %	92.5%	79.0%	86.4%	-	86.4%
Zircon	62.3%	7.7%	37.4%	-	37.4%
Rutile	7.9%	6.7%	7.4%	-	7.4%
Ilmenite	22.2%	64.6%	41.5%	-	41.5%
HMC Processed kt	107.3	179.1	286.4	-	286.4
Finished Product[6] kt					
Zircon	59.1	17.2	76.3	-	76.3
Rutile	6.6	10.0	16.6	-	16.6
Ilmenite (saleable/upgradeable)	27.7	123.4	151.1	-	151.1
Synthetic rutile kt	-	63.9	63.9	-	63.9
Monazite concentrate kt	-	-	-	-	-

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

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.

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

Physical Data 12 months to December 22	Jacinth-Ambrosia/ Mid west	Cataby/ South west	Australia Total	Sierra Leone	Group Total 2022	Group Total 2021
Mining						
Overburden Moved kbcm	2,946	9,543	12,489	860	13,349	11,103
Ore Mined kt	10,614	7,890	18,504	6,016	24,520	27,676
Ore Fed/Treated kt	9,193	9,533	18,726	5,683	24,409	29,662
Ore Treated Grade HM %	4.2%	5.3%	4.8%	3.1%	4.4%	3.8%
VHM Treated Grade %	3.9%	4.6%	4.3%	2.5%	3.9%	3.4%
Concentrating						
HMC Produced kt	351.2	500.9	852.2	196.9	1,049.0	1,106
VHM Produced kt	319.6	414.7	734.3	137.5	871.8	920
VHM in HMC Assemblage %	91.0%	82.8%	86.2%	69.8%	83.1%	83.2%
Zircon	52.7%	9.9%	27.5%	4.2%	23.1%	16.0%
Rutile	8.5%	6.5%	7.3%	45.2%	14.4%	17.5%
Ilmenite	29.8%	66.4%	51.3%	20.5%	45.6%	49.8%
HMC Processed kt	458.2	565.6	1,023.8	200.3	1,224.0	1,235
Finished Product[7] kt						
Zircon	243.7	55.0	298.7	4.0	302.7	324.2
Rutile	20.7	34.4	55.1	84.0	139.1	196.6
Ilmenite (saleable/upgradeable)	137.1	419.0	556.1	34.8	590.9	563.7
Synthetic Rutile kt	-	237.6	237.6	-	237.6	198.7
Monazite concentrate kt	-	-	-	-	-	57.7

[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	Q3 22	Q4 22	H2 22	FY 22	FY 21
US$/tonne FOB						
Zircon Premium and Standard	1,855	2,038	2,054	2,047	1,943	1,414
Zircon (all products, including zircon in concentrate)[1]	1,757	1,950	1,994	1,975	1,850	1,330
Rutile (excluding HYTI)[2]	1,506	1,654	1,681	1,662	1,550	1,264
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 FY 2022 the split of zircon sand and concentrate by zircon sand-equivalent was approximately: 70%:30% (2021 full year: 76%:24%).
2. Excluded from rutile sales prices is a lower value titanium dioxide product, HYTI, 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%.
3. Iluka's synthetic rutile sales are 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.

APPENDIX 3 – PRODUCTION SUMMARIES