

# **Iluka Investor Modelling Information**

# Prepared June 2015, updated November 2019

This document has been designed to assist investors and analysts to model the physical operations and financial statements of Iluka Resources. All information is based on previously disclosed material.

This document has been prepared by Iluka Resources Limited (Iluka). By accessing this presentation you acknowledge that you have read and understood the following statement. The information is provided to assist sophisticated investors with the modelling of the company, but should not be relied upon as a predictor of future performance. The current outlook parameters supersede all previous key physical and financial parameters.

This information is based on Iluka forecasts and as such is subject to variation related to, but not restricted to, economic, market demand/supply and competitive factors. It is Iluka's approach to modify its production settings based on market demand, and this can have a significant effect on operational parameters and associated physical and financial characteristics of the company.

#### Forward Looking Statements

This presentation contains certain statements which constitute "forward-looking statements". Often, but not always, forward looking statements can generally be identified by the use of forward looking words such as "may", "will", "expect", "plan", "believes", "estimate", "anticipate", "outlook" and "guidance", or similar expressions, and may include, without limitation, statements regarding plans; strategies and objectives of management; anticipated production and production potential; estimates of future capital expenditure or construction commencement dates; expected costs or production outputs; estimates of future product supply, demand and consumption; statements regarding future product prices; and statements regarding the expectation of future Mineral Resources and Ore Reserves.

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#### Non-IFRS Financial Information

This document contains non-IFRS financial measures including cash production costs, non-production costs, Mineral Sands EBITDA, Underlying Group EBITDA, EBIT, free cash flow, and net debt amongst others. Iluka management considers these to be key financial performance indicators of the business and they are defined and/or reconciled in Iluka's annual results materials and/or Annual report. Non-IFRS measures have not been subject to audit or review.

All figures are expressed in Australian dollars unless stated otherwise.

#### Mineral Resources and Ore Reserves Estimates

As an Australian company with securities listed on the Australian Securities Exchange (ASX), lluka is subject to Australian disclosure requirements and standards, including the requirements of the Corporations Act and the ASX. Investors should note that it is a requirement of the ASX listing rules that the reporting of ore reserves and mineral resources in Australia comply with the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the "JORC Code") and that the Ore Reserve and Mineral Resource estimates underpinning the production targets in this presentation have been prepared by a Competent Person in accordance with the JORC Code 2012.

Information that relates to Mineral Resources estimates has been previously announced to ASX on 24 July 2019 in *Eneabba Mineral Sands Recovery Project Updated Mineral Resource Estimate*, on 20 February 2017 in *Updated Mineral Resource and Ore Reserve Statement*, on 21 February 2019 in 2018 *Annual Report* and on 27 February 2018 in 2017 *Annual Report*, all available at www.iluka.com/investors-media/asx-disclosures. Iluka confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed. Iluka confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.

#### Production outlook

Production outlook and the basis thereof are noted within the relevant disclosure. The outlook included in this presentation is indicative only and should not be construed as guidance. The information is subject to changes in market and operating conditions; political risk; and any significant unplanned operational issues.

# 1. MINERAL SANDS GENERAL INFORMATION

# A. GRADE, ASSEMBLAGE AND REVENUE: CASH COST RATIO

Mineral sands deposits typically contain both titanium dioxide mineral and zircon. Heavy mineral (HM) grade refers to the proportion of the ore body which contains heavy minerals (both valuable and trash components). HM grade typically provides an indication of the cost of mining or the amount of ore required to be mined to extract the valuable component. Assemblage refers to the relative composition of the heavy or valuable heavy mineral components, and includes, typically, ilmenite, rutile and zircon in varying proportions.

Assemblage has an influence on the financial characteristics of mineral sands deposits. Each product stream has different, and often highly varied, price structures that influence revenues. In the case of titanium dioxide products, their value generally reflects the titanium dioxide (TiO<sub>2</sub>) content (expressed as a per cent) which, in turn, affects the relative value in use of each product in downstream applications. Zircon has typically had a price structure at, or above, high grade titanium dioxide products. As such, it can be an important co-product stream in some mineral sands deposits. For more detail on mineral sands prices, refer to section 3 of this document.

Project economics can be influenced as much by assemblage or revenue per tonne attributes as by the cash cost of production. Consequently, the industry typically utilises revenue to cash cost ratios or unit margin metrics to compare deposits. Key factors influencing unit costs are the grade of valuable mineral, scale and mining method, and associated costs. Unit revenue is determined by assemblage and respective product pricing.

Industry participants, when considering 'cost curves', typically use a cost curve based on the principal product, say ilmenite, or in the case of a zircon-rich deposit like Iluka's Jacinth-Ambrosia deposit in South Australia, zircon. As such a deposit can be considered in terms of various cost curves, and in some cases with the cost attributed to the principal product able to be netted off by 'co-product' credits, whether zircon, or in the case of upgraded slagging operations, pig iron credits.

#### **Zircon**

Zircon usually occurs in lower quantities in minerals sands assemblages than titanium dioxide. The historical average ratio of zircon to titanium dioxide has been 1:4 to 1:5. Iluka's Jacinth-Ambrosia operation, as indicated, is an industry exception with zircon accounting for approximately 50 per cent of the assemblage of valuable heavy mineral, approximately 10 times the industry average.

# Titanium dioxide feedstocks

Titanium dioxide feedstocks are graded by their titanium dioxide content, which ranges from approximately 45 per cent for sulphate ilmenite to approximately 95 per cent for natural rutile. Feedstocks are sold as raw minerals (rutile and chloride or sulphate ilmenite) or upgraded feedstocks.

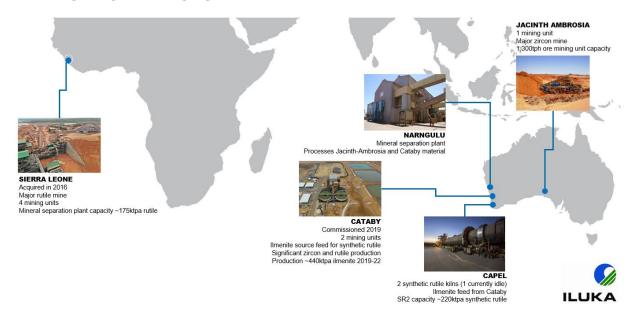
Form of Titanium Dioxide	Titanium Dioxide Content (%)
Rutile	95-97
Synthetic rutile	88-95
Ilmenite - sulphate - chloride	52-54 58-62
Slag - sulphate - chloride - upgraded	80-85 85-90 95

#### C. INDUSTRY MINING METHODS AND UPGRADING PROCESSES

Mineral sands mining involves both dry and wet (dredge) mining operations. All of Iluka's mining operations are dry mining, typically involving the extraction of heavy mineral ore from relatively shallow, unconsolidated and free flowing deposits.

Upgrading involves chloride or sulphate ilmenite being heated in a kiln or furnace to remove impurities (mostly iron) and increase the titanium dioxide content. Upgraded feedstocks are synthetic rutile, chloride and sulphate slag and upgraded slag. In terms of upgraded products, Iluka produces synthetic rutile. Iluka upgrades ilmenite (58 to 62 per cent titanium dioxide) to synthetic rutile (with a composition of 88 to 95 per cent titanium dioxide). This process uses approximately 1.7 tonnes of ilmenite to produce 1 tonne of synthetic rutile (depending on grade). Upgraded products of chloride and sulphate slag are produced by other companies.

# 2. ILUKA OPERATIONS



# A. ILUKA'S APPROACH - DELIVER SUSTAINABLE VALUE

# Strong Market Fundamentals

Mineral sands demand linked to urbanisation, rising living standards, increasing array of applications

# Value Driven Marketing Model

Direct customer relationships
Price driven by value in use
Focussed on sustainable pricing

# Quality Mineral Sands Assets

Australia and Sierra Leone operations
Product mix weighted to premium
zircon and high grade titanium dioxide

# Capital Discipline Framework

Strong balance sheet, disciplined capital allocation

Focus on shareholder returns via dividend framework

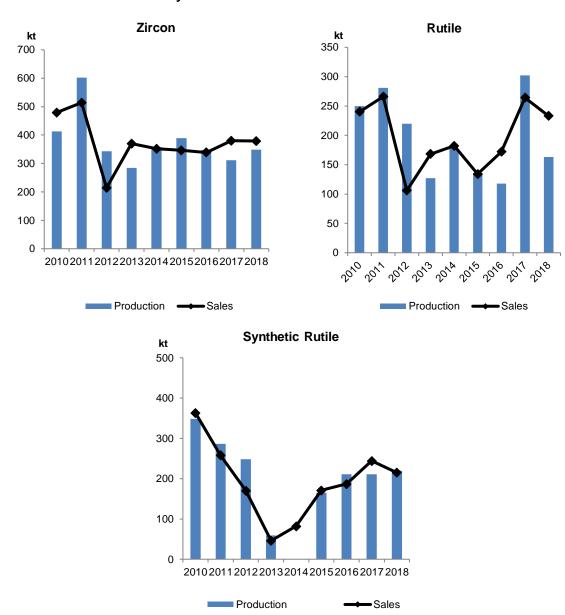
# **Project Pipeline**

Sustaining and growth projects in Australia and Sierra Leone

# World-class Iron Ore Royalty

Royalty stream from BHP's Mining Area C hub in Western Australia Growth from BHP's South Flank development

# **Production and Sales History**



Iluka has integrated mining and processing operations that allow the company's production of its main products to vary according to demand and for appropriate building and subsequent drawdown of inventory levels over the market cycle.

Iluka's production flex capability is associated with a focus on seeking to preserve positive and profitable margins, even at the low part of the cycle. As such, management of operations is structured in a manner to balance unit cash cost, inventory management and rapid reactivation capacity. For example, mining operations, where they continue to be run, typically mine in an optimum manner to ensure efficient unit cash costs of production, while mineral processing plants can be 'de-rated' and other capacity, such as synthetic rutile kilns, can be idled.

# **B. OPERATIONAL DETAILS AND CAPACITIES**

Jacinth-Ambrosia, Eucla Basin		Cataby, Western Australia	Sierra Rutile, Sierra Leone
Mine	<ul> <li>Zircon-rich deposit</li> <li>Dry mining</li> <li>150m x 100m ore blocks</li> <li>Ore at ~15-40 metres thick</li> <li>Ore pushed by dozers into mobile mining unit plant dozer trap</li> <li>Primary geological grade maintained via blending 'slices' at various grades across ore block</li> <li>Mining unit capacity ~1,300tph, oversize remove</li> <li>Ore slurry pumped to wet concentrator plant</li> </ul>	Chloride ilmenite suitable as feed for synthetic rutile kiln/s Dry mining Two in-pit mining units  d	<ul> <li>Three mining operations</li> <li>Lanti dry mine, 500-600tph ore</li> <li>Gangama dry mine, 500-600tph ore</li> <li>Lanti dredge mine, 780tph ore (scheduled for completion 2019)</li> </ul>
Logistics	<ul> <li>Accommodation village - 18 persons</li> <li>Sealed airstrip</li> <li>Water from borefield to site 32 km</li> <li>Off-grid diesel power statior (6.8 MW)</li> </ul>	Workforce based locally	<ul> <li>28MW generator capacity (heavy fuel oil)</li> <li>Three on site camps</li> </ul>
Wet concentrator plant (WCP)	Wet concentrator capacity ~1,000tph	<ul> <li>Wet concentrator capacity         ~1,100tph</li> <li>Wet high intensity magnetic separation (WHIMS) plant on site to separate magnetic and non-magnetic material</li> </ul>	Concentrators with each mine
Heavy Mineral Concentrate (HMC) transport	<ul> <li>HMC transported 270km by road to Port of Thevenard</li> <li>Triple road trains – 96t capacity</li> <li>40kt storage bunker at Port of Thevenard</li> <li>Charter shuttle vessels to Geraldton for Narngulu separation plant (WA) and Portland for Hamilton separation plant (Vic):         <ul> <li>payload of 20kt – 30kt</li> <li>approximately two week round trips</li> </ul> </li> </ul>		Heavy mineral concentrate trucked to on-site mineral separation plant
Mineral Separation Plant	<ul> <li>Final product processing at Narngulu mineral separation plant, Geraldton</li> <li>Plant capacity ~1,200ktpa heavy mineral concentrate, ~365ktpa zircon</li> </ul>	at Narngulu mineral separation plant, Geraldton.	Capacity of ~175ktpa rutile
Synthetic Rutile Kiln	n/a	<ul> <li>Cataby ilmenite to supply feedstock to kiln SR2 (capacity ~200ktpa synthetic rutile)</li> <li>Currently idle kiln SR1 (capacity ~120ktpa synthetic rutile)</li> </ul>	n/a

# C. PROJECTS

For project status updates, please refer to latest Quarterly Review, available at www.iluka.com.

# D. RECOVERIES

As a guide, recoveries of final product at the Hamilton and Narngulu mineral separation plants are:

- rutile ~86-93%;
- zircon ~85-94%; and
- ilmenite 90-95%.

Recoveries are a function of the heavy mineral concentrate source feed and product stream characteristics and properties.

# **E. OPERATING MINES PHYSICAL DATA**

Data for 12 months to 31 December 2018 is shown below. For latest information, please refer to company website for latest Quarterly Review.

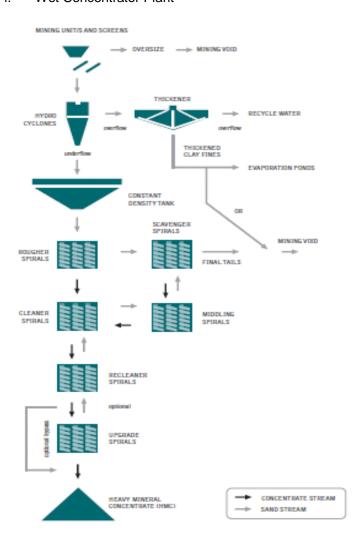
#### 12 Months to 31 December 2018

	Jacinth- Ambrosia	Murray Basin	Western Australia	Australia Total	Sierra Leone	Virginia	Group Total 2018	Group Total 2017
Mining								
Overburden moved kbcm	3,010	-	1,457	4,467	-	-	4,467	1,037
Ore mined kt	10,312	-	1,653	11,965	8,227	-	20,192	13,381
Ore grade HM %	8.2	-	14.0	9.0	3.0	-	n/a	n/a
VHM grade %	7.3	-	11.6	7.9	2.3	-	n/a	n/a
Concentrating								
HMC produced kt	674	-	20	694	240	-	934	612
VHM produced kt	597	-	18	615	171	-	786	485
VHM in HMC assemblage %	88.7	-	86.9	88.6	71.4	-	84.2	79.2
Zircon	62.9	-	13.5	61.4	3.7	-	46.6	9.7
Rutile	5.9	-	9.1	6.0	47.7	-	16.7	31.4
Ilmenite	19.9	-	64.3	21.2	20.0	-	20.9	38.1
HMC processed kt	530	-	265	795	242	-	1,037	1,280
Finished product <sup>1</sup> kt								
Zircon	289.1	0.1	38.7	327.9	11.4	9.3	348.6	312.3
Rutile	38.0	-	3.7	41.7	121.5	-	163.2	302.1
Ilmenite (saleable/upgradeable/WHIMS)	121.7	50.8	168.1	340.6	54.5	-	395.1	448.1
Synthetic rutile produced kt	-	-	219.9	219.9	-	-	219.9	210.8

 $<sup>^{1}</sup>$  Finished product includes material from heavy mineral concentrate (HMC) initially processed in prior periods.

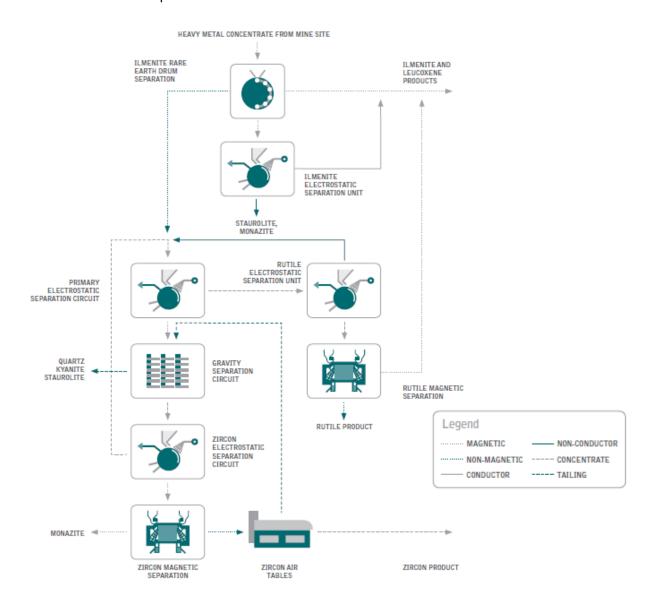
# F. PROCESS FLOW DIAGRAMS

i. Wet Concentrator Plant

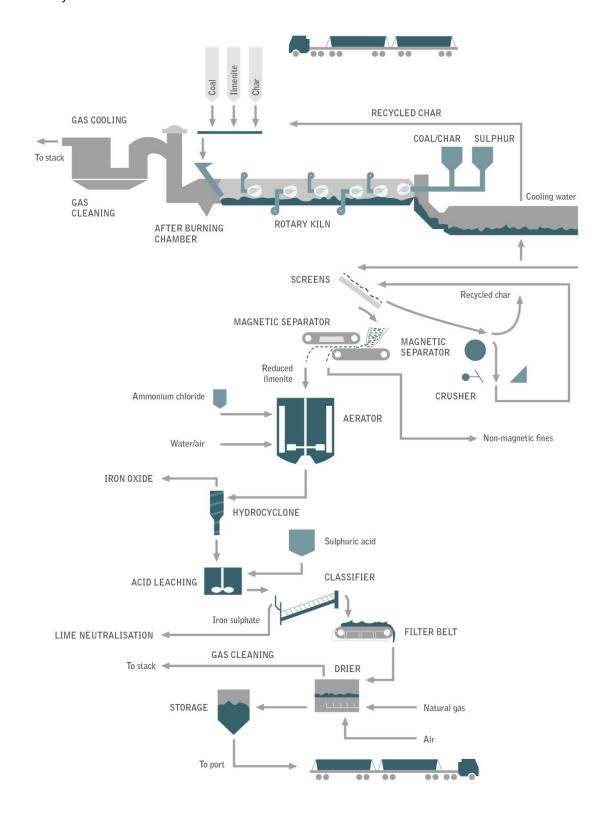


This represents a typical wet concentrator plant. At Cataby, there is a Wet High Intensity Magnetic Separation (WHIMS) plant that separates the magnetic and non-magnetic product streams.

# ii. Mineral Separation Plant

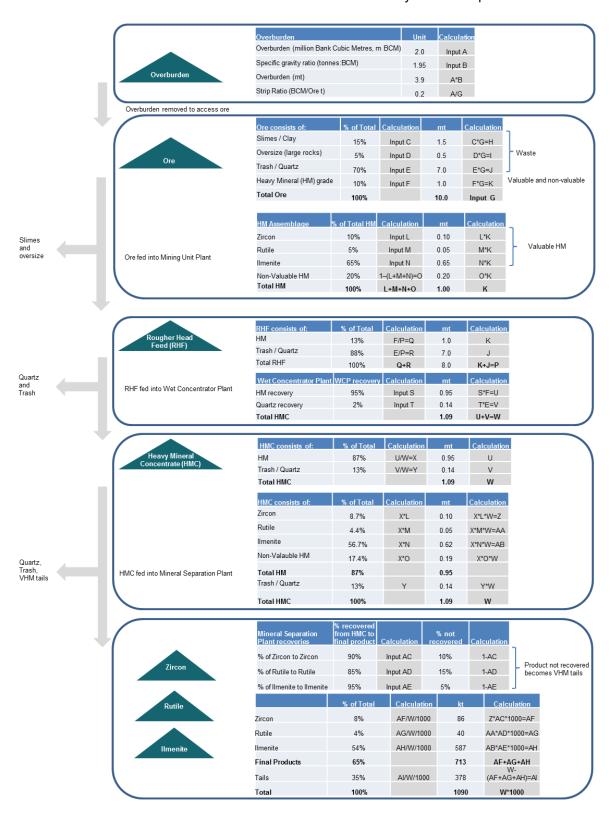


# iii. Synthetic Rutile Kiln



# G. WORKED PHYSICAL EXAMPLE

The following is an illustrative example of mining through to final products. The figures are provided to show the calculations involved. The values do not reflect any of Iluka's operations.

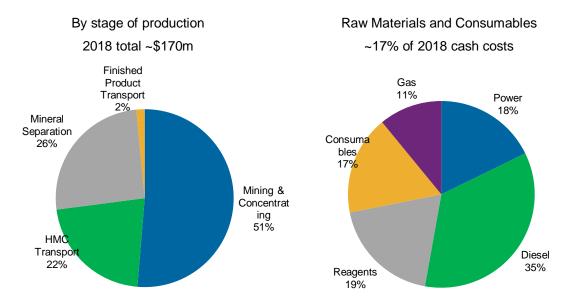


# H. OPERATING COST BREAKDOWNS

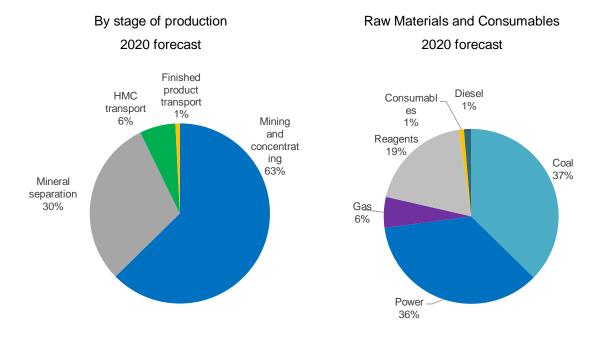
# **Sierra Rutile Production Cash Costs**

By stage of production By cost element 2017 total US\$97m 2017 total US\$97m Support and other 9% Support 14% Labour Transport Contracte 32% 4% d services 14% Mineral separation 18% Mining and concentrati Fuel ng 64% 23% Consuma bles 22%

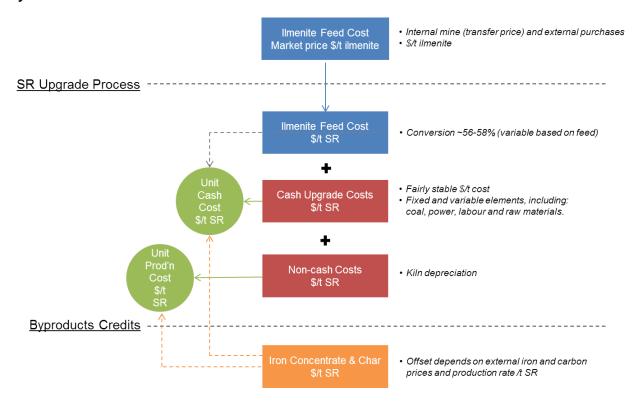
# **Jacinth-Ambrosia and Narngulu Cash Costs**



# **Cataby and South West Cash Costs**



# **Synthetic Rutile Cost Schematic**



# I. ADDITIONAL TECHNICAL INFORMATION

The Mineral Sands Technical Information booklet provides additional information on the mineral sands process: Mineral Sands Technical Information.

### 3. SALES AND PRICING

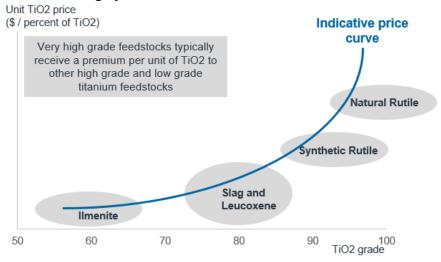
#### A. MINERAL SANDS PRICE SETTING

Mineral sands products were traditionally sold on the basis of long term contracts, often referred to as legacy contracts This historical contractual setting resulted in an extended period of relative price stability and only modest price growth.

Constrained pricing in the context of declining grade and/or assemblage, increasing costs and adverse currency movements, were major contributors to the historically poor returns in the titanium feedstock industry. Low returns acted as a disincentive for new investment, with the industry still largely reliant on mining provinces which have been in existence for many years. Iluka was the first of the major titanium dioxide producers to come off so-called "legacy contracts" at the end of 2010 and consequently had the opportunity, under the prevailing market conditions, to increase its rutile and synthetic rutile prices. The remaining use of legacy contracts by other industry participants reportedly ended at the end of 2014.

Most high grade titanium feedstocks are sold to major pigment or titanium metal customers on contractual periods of varying periods, typically less than 12 months. Volumes to the welding and titanium metal sectors are usually sold on a shorter basis, usually monthly to quarterly contracts. Titanium product prices are based on value in use, with price increasing by titanium grade, see chart below.

# **Titanium Feedstocks Pricing by Titanium Grade**



In 2015 Iluka introduced a new zircon pricing and payments framework. The approach entails an Iluka benchmark or contract price and spot pricing arrangements.

Mineral sands products are not exchanged traded. As such, there are no readily sourced representative traded prices for mineral sands products. In Iluka's case the vast majority of its sales are direct; the company does not make use of distributors or agents to any significant extent.

Selected Iluka annual weighted average received prices for the last five years are shown in the table below. For latest pricing commentary, please refer to Iluka's latest quarterly and financial results at <a href="https://www.iluka.com">www.iluka.com</a>.

# Selected Annual Weighted Average Mineral Sands Prices US\$ / tonne

	2014	2015	2016	2017	2018
Zircon (premium and standard)	1,054	986	810	958	1,351
Zircon (all products)	1,033	961	773	940	1,321
Rutile (excluding HYTI)	828	763	731	790	952
Synthetic rutile	750	Not disclosed	Not disclosed	Not disclosed	Not disclosed

Source: Iluka

#### C. ILUKA REVENUE BY REGION

Mineral Sands Revenue, by region (% of total)

	2018 %
Americas	13
Europe	30
China	37
Rest of Asia and Middle East	17
Australia	3

# 4. FINANCIAL STATEMENTS, GUIDANCE AND NOTES

Iluka reports its financial statements on a calendar year basis. All figures are in Australian dollars unless otherwise stated.

The company issues quarterly production reports which disclose production and sales revenue in March and September and, in addition to this information, sales volumes and cash costs of production in June and December.

### A. KEY PHSYICAL AND FINANCIAL PARAMETERS

Iluka typically discloses annual guidance of key physical and financial parameters for the forthcoming year, along with associated contextual comments. This guidance typically includes: production; cash costs of production; other cash costs; and capital expenditure.

It is not Iluka's practice to provide sales guidance, although contextual comments may be included. Iluka does not provide price forecasts.

# **B. INVENTORY AND COST OF GOODS SOLD**

Earnings reflect the difference between revenue and cost of goods sold, rather than the cash costs of production and depreciation incurred in a period.

Cost of goods sold is the inventory value (cash and non-cash costs) of each tonne of finished product sold. All production is added to inventory at cost with separate inventory stockpile values for each product (including heavy mineral concentrate (HMC) at mine sites) and location. The inventory value used for each tonne of finished product sold is the weighted average value per tonne for the stockpile from which the product is sold.

Inventories are valued at the lower of weighted average cost and estimated net realisable value. Weighted average cost includes direct costs and an appropriate portion of fixed and variable overhead

expenditure, including depreciation and amortisation. Net realisable value is the amount estimated to be obtained from sale in the normal course of business, less any anticipated costs of completion and the estimated costs necessary to make the sale.

Iluka typically provides guidance on cash and non-cash costs of production, as well as finished goods production volumes, which in periods of low and stable inventory levels will be a proxy for cost of goods sold.

Inventories expected to be sold within twelve months after the balance sheet date are classified as current assets, all other inventories are classified as non-current assets.

#### C. MINING AREA C IRON ORE ROYALTY

Iluka holds a royalty over iron ore produced from specific tenements of BHP Billiton's Mining Area C (MAC) province in Western Australia. The agreement provides for a revenue-based royalty and production capacity payments consisting of:

- quarterly royalty payments of 1.232 per cent of free-on-board sales revenue from the MAC Royalty Area (less all export duties and export taxes) and;
- a series of one-off payments of A\$1 million tonne increase in the annual production level from the MAC Royalty Area during any 12 month period ending 30 June above the previous highest annual production level, paid within 30 days of the relevant amount of production being produced.

#### D. BALANCE SHEET

Iluka targets credit metrics broadly consistent with investment grade credit profile, whilst balancing the impacts of commodity pricing and investment factors through the cycle.

#### **E. DIVIDED FRAMEWORK**

Iluka's dividend framework is:

- pay a minimum 40% of free cash flow not required for investing or balance sheet activity; and
- distribute the maximum practicable level of available franking credits.

#### F. EXCHANGE RATE IMPACTS AND EXPOSURE

The majority of Iluka's sales are in US dollars and the majority of operating costs, except for the company's Sierra Leone operations, in Australian dollars.

For hedging arrangements, please refer to latest company results.

# 5. RESOURCES AND RESERVES

For latest Mineral Resources and Ore Reserve statement, refer to latest Annual Report document.

### A. MINERAL RESOURCES AND ORE RESERVES

Mineral resources are sub-divided, in order of increasing geological confidence in the estimate based on available data, into Inferred, Indicated and Measured categories.

Iluka's Mineral Resources, as reported, are inclusive of Ore Reserves.

Inferred Mineral Resource is that part of a mineral resource for which tonnage, grade and mineral content can be estimated with a low level of confidence. There is insufficient data or exploration to confirm geological and grade continuity

Indicated Mineral Resource is that part of a mineral resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a reasonable level of confidence. There is, hence, sufficient detail to support mine planning and evaluation of the economic potential of the viability of the deposit (i.e. would support a feasibility study).

Measured Mineral Resource is that part of a mineral resource for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a high level of confidence.

Any additional drilling/exploration would be highly unlikely to significantly change the economic value of the deposit

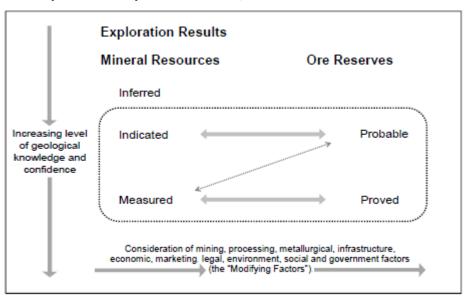
Ore Reserve is the economically mineable part of a Measured or Indicated Mineral Resource. It includes diluting materials and allowance for losses which may occur when the material is mined. Appropriate assessments, which may include feasibility studies, have been carried out, and will include consideration of an modification by realistically assumed mining, metallurgical, economic, marketing, legal, environmental, social and governmental factors. These assessments demonstrate at the time of reporting that extraction could reasonably be justified. Ore Reserves are sub-divided in order of increasing confidence into Probable Ore Reserves and Proved Ore Reserves.

A Probable Ore Reserve is the economically mineable part of an Indicated Mineral Resource, and in some circumstances, Measured Mineral Resource.

A Proved Ore Reserve is the economically mineable part of a Measured Mineral Resource.

The relationship is summarised in Table 1 of the JORC Code (below).

# General relationship between exploration results, mineral resources and ore reserves



Refer to Appendix C for additional definitions and terminology.

#### **B. RESOURCE TO RESERVE CONVERSION**

Iluka typically converts Mineral Resources to Ore Reserves with the completion of definitive feasibility studies for potential projects and when sufficient confidence is achieved in relation to the technical and economic development of deposits.

Historically Iluka's conversion ratio from Resource to Reserve has varied between ~50 and 95 per cent averaging around 65 per cent. Reconciliation of reserve recovery (comparison of the actual HM recovered from the material mined compared to the estimate made before mining) is typically around 105 per cent in recent years but does vary from site to site.

# **APPENDIX A**

#### **PROFIT OR LOSS STATEMENT NOTES**

- 1. The majority of Iluka's sales are denominated in US dollars and converted to Australian dollars.
- 2. Production cash costs includes the following main components:
  - mining and concentrating costs;
  - transport of heavy mineral concentrate;
  - mineral separation;
  - synthetic rutile production and costs for externally purchased ilmenite;
  - production overheads; and
  - Iandowner royalty payments, but not Australian State Government royalties.

The respective weighting of each of these components varies by region and by factors including grade, mining rate, throughput, processing location and other factors.

3. Earnings reflect the difference between revenue and cost of goods sold, rather than the cash costs of production and depreciation incurred in a period.

Cost of goods sold is the inventory value (cash and non-cash costs) of each tonne of finished product sold. All production is added to inventory at cost with separate inventory stockpile values for each product (including heavy mineral concentrate (HMC) at mine sites) and location. The inventory value used for each tonne of finished product sold is the weighted average value per tonne for the stockpile from which the product is sold.

Inventories are valued at the lower of weighted average cost and estimated net realisable value. Weighted average cost includes direct costs and an appropriate portion of fixed and variable overhead expenditure, including depreciation and amortisation. Net realisable value is the amount estimated to be obtained from sale in the normal course of business, less any anticipated costs of completion and the estimated costs necessary to make the sale.

Iluka typically provides guidance on cash and non-cash costs of production, as well as finished goods production volumes, which in periods of low and stable inventory levels will be a proxy for cost of goods sold

Inventories expected to be sold within twelve months after the balance sheet date are classified as current assets, all other inventories are classified as non-current assets.

- 4. Restructure costs/plant idling costs are associated with changes in asset configuration and costs during the year, including those associated with assets previously idled.
- 5. The company has obligations to dismantle, remove, restore and rehabilitate certain items of property, plant and equipment.

The cost of an asset includes the present value of the estimated costs of dismantling and removing the asset and restoring the site on which it is located.

A provision is raised for the present value of the estimated cost of settling the rehabilitation and restoration obligations existing at balance date. Those costs that relate to rehabilitation and restoration obligations arising from the production process are recognised in cash costs of production.

As the value of the provision represents the discounted value of the present obligation to restore, dismantle and rehabilitate, the increase in the provision due to the passage of time is recognised as a finance cost.

The provisions are reassessed at least annually. A change in any of the assumptions used to determine the provisions could have a material impact on the carrying value of the provision. In the case of provisions for assets which remain in use, adjustment to the carrying value of the provision are offset by a change in the carrying value of the related asset. Where the provisions are for assets no longer in use, any adjustment is reflected directly in profit or loss.

6. Government royalties includes royalties paid to Australian State Governments. Royalties are levied as per cent of revenues generated from the sale of mineral sands products, and in the

case of South Australia, with Jacinth-Ambrosia HMC (which is not processed in South Australia), by a determination arrived at with the South Australian Government.

The royalty rates for Western Australia and Victoria (Murray Basin operations) are 5.0 per cent and 2.75 per cent, respectively. However, revenues derived from synthetic rutile production are not subject to Western Australian State Government royalty as this is classed as a value adding beneficiation process.

- 7. Marketing and selling costs include marketing overhead costs associated with Iluka's global marketing operations, as well as port costs.
- 8. Exploration and evaluation expenditure is accumulated separately for each area of interest. Such expenditure comprises net direct costs and an appropriate portion of related overhead expenditure. Each area of interest is limited to a size related to a known mineral resource, capable of supporting a mining operation.

Expenditure is carried forward (capitalised) when incurred in areas for which the group has rights of tenure and where economic mineralisation is indicated, but where activities have not yet reached a stage which permits a reasonable assessment of the existence or otherwise of economically recoverable ore reserves and active and significant operations in relation to the area are continuing. Each such project is regularly reviewed. If the project is abandoned or if it is considered unlikely the project will proceed to development, accumulated costs to that point are written off immediately.

While the level of exploration expenditure expensed and capitalised varies, typically about two thirds is expensed.

This category also includes product and technical and major development costs, which includes expenditure associated with new product development and trials as well as other mineral sands related research and development costs. These costs, as opposed to those directly related to new project expenditure (including feasibility studies) are typically expensed.

9. Depreciation and amortisation of mine buildings and mine specific machinery and equipment is provided for over the life of the relevant mine or asset, whichever is the shorter. Mine specific machinery and equipment refers to machinery and equipment for which the economic useful life cannot extend beyond the life of its host mine.

Depreciation and amortisation of mine buildings and other non-mine specific plant and equipment and reserves and development is determined on a straight-line basis as the consumption of economic benefits is not expected to vary over the operational life of the asset. Depreciation of mine specific plant and reserves and development is determined on a unit of production basis to more appropriately match depreciation with expected pattern of consumption of economic benefit of the asset.

The basis of depreciation of each asset is reviewed annually and changes to the basis of depreciation are made if the straight line or units of production basis is no longer considered to represent the expected pattern of consumption of economic benefits. The expected useful lives are typically as follows:

- Mine buildings the shorter of applicable mine life and 25 years
- Mine specific machinery and equipment the applicable mine life
- Mine specific plan units of production
- Reserves and development units of production
- Other non-mine specific plant and equipment 3 to 25 years
- 10. Corporate and other costs includes all non-operating costs not separately disclosed, including finance department, payroll, IT and other office services and Managing Director's office.
- 11. The majority of Iluka's revenue is Australian based with a prevailing corporate tax of 30%. Iluka is in a fully tax paying position and as such generating franking credits.

#### **APPENDIX 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.

**Ore Grade HM** % refers to percentage of heavy mineral (HM) found in a deposit. In the case of Murray Basin it excludes grade attributable to low quality, unsaleable ilmenite some which is returned to the mine.

**VHM 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.

**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 – both saleable and upgradeable) 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 0.58 to 0.62 tonnes of SR. Iluka can also purchase external ilmenite for its synthetic rutile production process.