

Jacinth-Ambrosia Site Visit

31 October 2018



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This document contains non-IFRS financial measures including cash production costs, non production costs, Mineral Sands EBITDA, 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.

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Mineral Resources and Ore Reserves Estimates

As an Australian company with securities listed on the Australian Securities Exchange (ASX), Iluka 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 27 February 2018 in the 2017 Annual Report, 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 outlok 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.



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7.00am – 9.45am	Flight to JA					
	Site induction					
10.00am - 11.00am	Morning tea					
	Company presentation					
11.15am – 1.15pm	 Site tour Tails platform Mining unit platform Rehabilitation Ambrosia road Wet concentrator / control room 					
1.15pm – 1.45pm	Lunch					
2.00pm – 4.45pm	Return flight to Adelaide					

Welcome to Jacinth-Ambrosia





- · JA is Iluka's primary zircon mine
- Enabling Iluka to maintain Group zircon production of ~335kt over the next 4 years

Iluka Executive



Executive

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Tom O'LearyManaging Director



Adele Stratton CFO



Matt Blackwell Head of Marketing



Other presenters

Hamish Little
Operations Manager
Jacinth-Ambrosia



Steve Wickham COO



Melissa Roberts
GM Investor
Relations and
Commercial MS
Operations



Dan McGrath Chief Metallurgist



Zircon Market Update



Zircon Applications and Sales



Zircon is an opaque (white), hard wearing mineral. It has many unique properties, including water, chemical, heat and abrasion resistant and non-conductive.

Global Zircon Demand by Application Iluka Zircon Sales by Customer Industry, H1 2018

Iluka Zircon Sales by Region, H1 2018



Zirconia, Zirconium Chemicals and Metal

~20% of demand

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~25% of Iluka sales

Refractory and Foundry

- ~30% of demand
- ~5% of Iluka sales

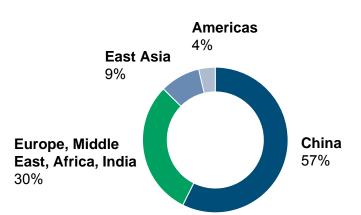




Ceramics

- ~50% of demand
- ~70% of Iluka sales

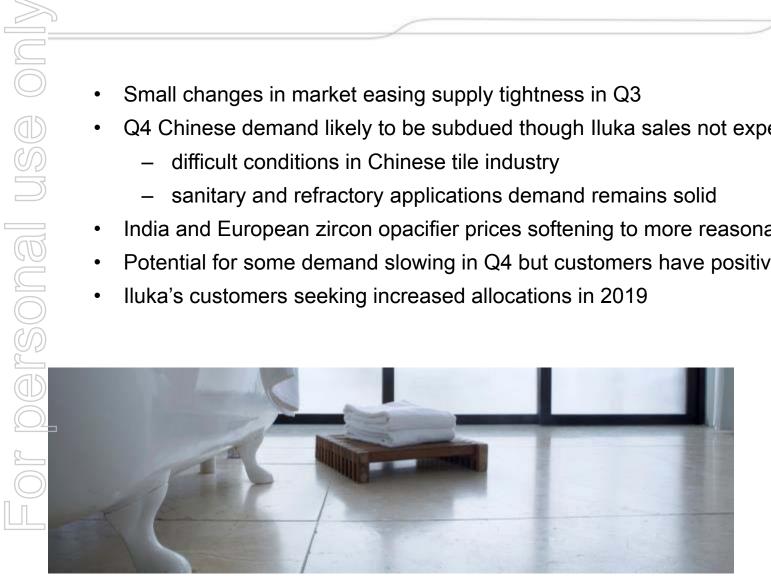




Demand Fundamentals



- Small changes in market easing supply tightness in Q3
- Q4 Chinese demand likely to be subdued though Iluka sales not expected to be impacted
 - difficult conditions in Chinese tile industry
 - sanitary and refractory applications demand remains solid
- India and European zircon opacifier prices softening to more reasonable level
- Potential for some demand slowing in Q4 but customers have positive outlook for 2019
- Iluka's customers seeking increased allocations in 2019







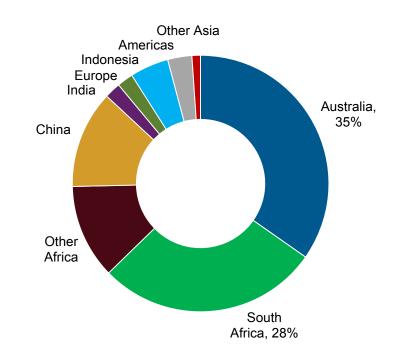
Global Zircon Supply and Consumption

- Significant inventory depleted in recent years
 - 2016-18 supply = production + inventory
- Existing producers' mines are mature
 - entering decline in coming years
- 2019 market expected to remain tight

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Indonesia and Iluka ZIC balancing market

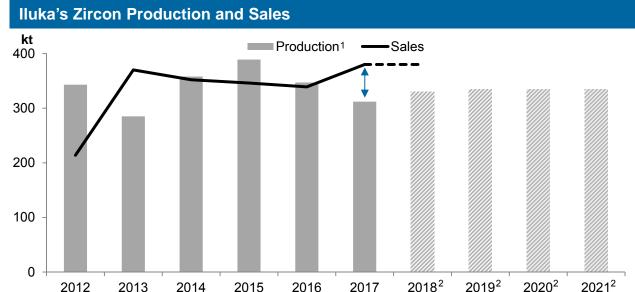
2018 Global Zircon Production



Iluka's Production Response







Iluka's response to tight market conditions:

- Guided 2018-2021 zircon production of ~335ktpa
 - Cataby project tonnes available in 2019
 - early Ambrosia mine move (smoothing production)
- Potential for additional Zircon in Concentrate (ZIC) production
- Gap filled by inventory release in 2017 and 2018, with return to normal inventory levels in 2019
- 1. Production denotes finished zircon product (includes ZIC)
- 2. 2018-2021 production guidance of 335ktpa and 2018 sales assumes 2018 H1 and H2 sales evenly weighted, as guided

ZIC Production Potential



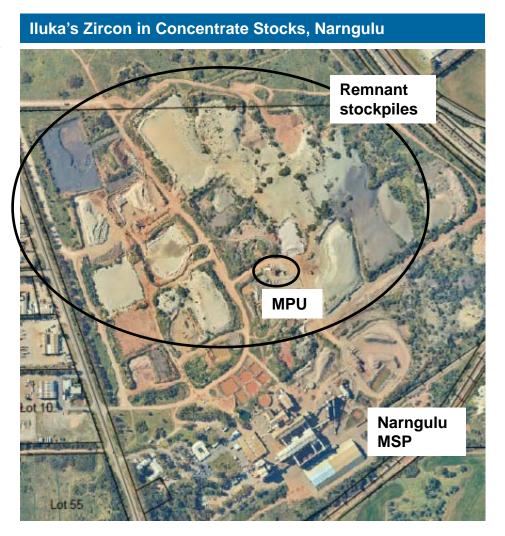
What is ZIC?

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- Produced by blending/upgrading MSP tails
- Source material is remnant stockpiles and current MSP production
- Currently processing/selling material from South West, SRL, US and Narngulu
- At Narngulu, Mineral Processing Unit (MPU) moves to each stockpile to reclaim material and blend for sale

How much can Iluka produce¹?

- Announced 30kt additional ZIC in 2018
- At Narngulu:
 - Total 2018 ZIC production ~40kt
 - MPU production capacity ~90ktpa
 - Stockpiled inventory could support production for ~10 years at ~60ktpa
- US inventory likely exhausted next year

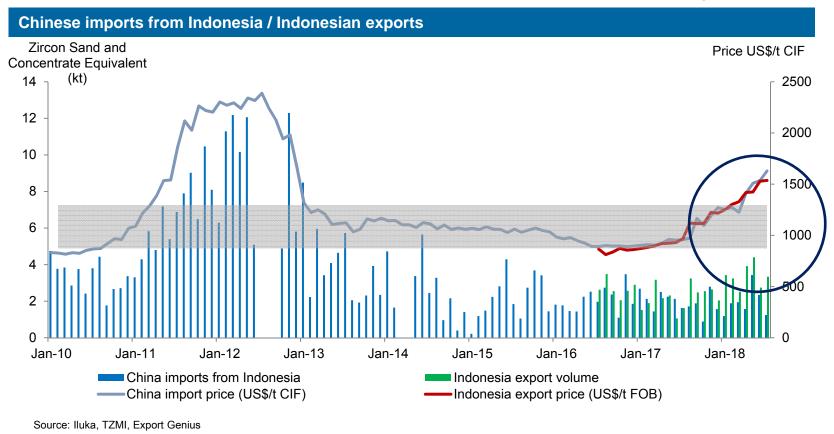


Industry Response

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- Aside from Iluka, current industry response still limited to Kalimantan
- Indonesian zircon prices now in line with market (less speculative pricing)

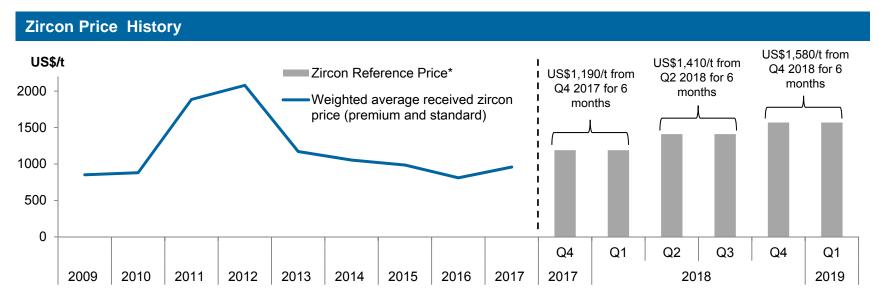


- Inducement price for Kalimantan exports generally regarded to be ~US\$1,400/t
- Indonesian exports currently ~50ktpa rate

Approach to Pricing



- Iluka approaching pricing decisions mindful of history
- · Current price appropriate given:
 - market conditions
 - customers capacity to pay
 - optimising returns for Iluka shareholders



Source: Iluka

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^{*} Zircon Reference Price is based on 2 tonne bag of Zircon Premium, DAT, ex-China warehouse



Lessons Learned After 2012 Price Spike

Industry myths 'debunked' ...

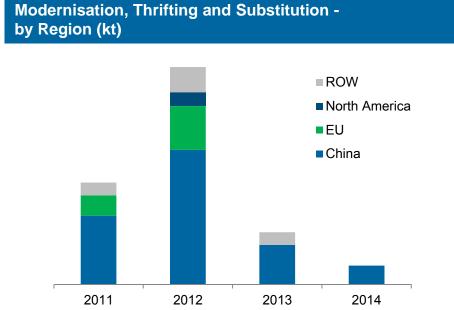
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Myth	2012 experience				
No substitute for zircon - demand inelastic to price	Alumina, feldspar and other materials were used to reduce zircon loading.				
	Double charging and other new manufacturing techniques reduced the loading of zircon in tiles.				
Quantity of zircon per tile meant that cost is immaterial to end consumer and large	Zircon is a meaningful percentage of downstream purchasing manager's portfolio.				
cost increases can be easily absorbed	Cadence and magnitude of price increases were too fast and too large.				

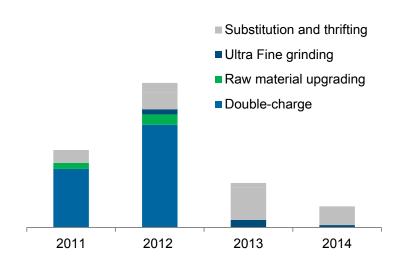
Where Zircon Demand Was Lost



- Price spike induced industry wide demand destruction of ~250kt
- Largest impact in areas with lowest technical/adoption hurdles (ceramics and foundry)
- European producers had already started modernisation process well before 2011
- Impact now fully reflected, zircon growing from new, but lower base



Modernisation, Thrifting and Substitution - in Chinese Porcelain Tiles (kt)



Zircon Recap





Pricing

- Six monthly reference pricing intervals receiving positive feedback
- Q4 2018 Zircon Reference Price of US\$1,580/t
- Market prices converged within narrow range, reduced speculation

Supply/Demand

- Softness in Chinese ceramics markets
- Solid demand for products across all major sectors and regions
- Ramp-up of production from Indonesian artisanal 'swing' producers
- No evidence of substitution, thrifting more apparent in some markets

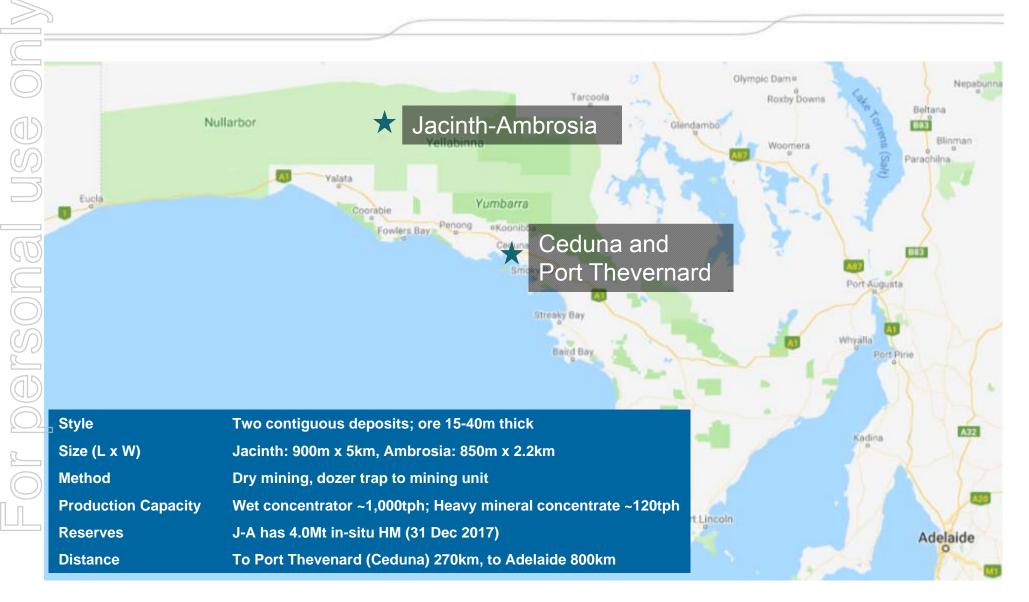


Jacinth-Ambrosia









Site Safety

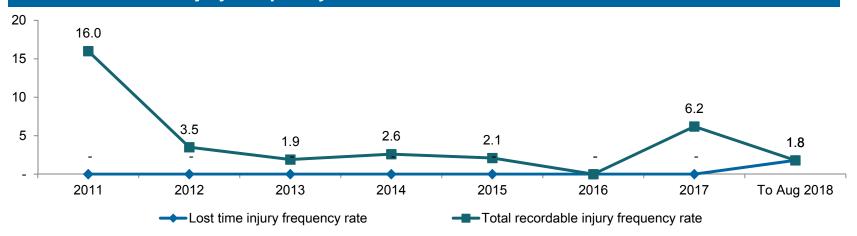
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- Workplace safety an important part of everyday and everything we do
- Exceptional site safety record
 - One lost time injury (LTI) in 10 years
- Continual drives for improvements through awareness and training

Jacinth Ambrosia Injury Frequency Rates



Jacinth-Ambrosia History



- Globally significant zircon deposit, discovered by Iluka in 2004
- Located within Yellabinna and Nullarbor regional reserves
- First operation approved for mining in mixed use reserves within South Australia
- Development capital expenditure: \$390 million (including \$63 million Narngulu upgrade)
- Mining commenced October 2009
- Mine produces heavy mineral concentrate (HMC)
 - down stream processing into final products at Narngulu mineral separation plant, Western Australia
- Idled April 2016
- Site activities limited to rehabilitation activities until mining resumed in December 2017







>	•	
	Deposit	Low in moisture, no groundwater, strip ratio ~0.5:1 (waste:ore)
15	•	Ore ~15-40 metres thick
10		Jacinth deposit - 900 metres wide, 5km long
		Ambrosia deposit - 850 metres wide, 2.2km long (main pit)
2)	Mining	Overburden fleet 6x 785 150 tonne dump trucks and 2500 excavator
		Ore mining fleet 3x D10T and 1x D11 bulldozers
(D)		Fully mobile mining unit (1000t track mounted) ~1300tph capacity (ore), >10mm oversize screen
		Ore slurry pumped ~2km from mining unit to concentrator
	Concentrating	1,000tph (rougher head feed) capacity concentrator
		Primarily gravity separation equipment
15	Transport	Heavy mineral concentrate transported 270km by sealed road to Port of Thevenard
		Triple road trains 96 tonne capacity
		40kt storage bunker at Port of Thevenard





<u>.</u>	
Site Facilities	
D)	Sealed airstrip, 5 flights per week
Employees	103 FTE Iluka employees under full production and ~90 contractors
3	Fly in – fly out basis
	20% indigenous employment target for Iluka employees (26% reached in 2017) and contractors
Power	Off grid 10MW on site power station
	Diesel power generators
	Site typically uses 6.8MW, camp and offices use <0.5MW
Water	Sourced from a borefield 32km away and piped to plant and camp
Power Water	Water from source is hyper saline (used in processing)
	Fresh water made by reverse osmosis generation plant for drinking and dust supression on sensitive soils
Rehabilitatio	n Landform restoration
	Mine void progressively filled and re-vegetated





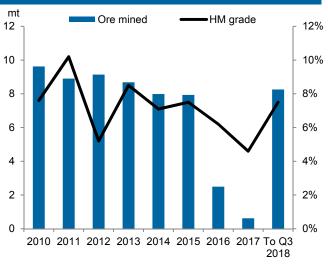


- 150m x 100m ore blocks
- Ore pushed by dozers into mining unit plant dozer trap
- Mining occurs in slices to stabilise the grade to the plant



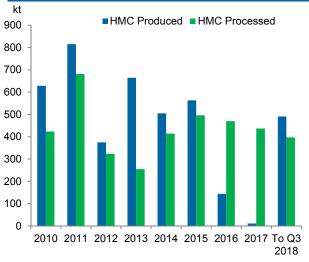


Ore Mined and Heavy Mineral (HM) Grade



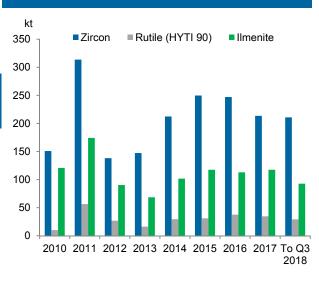
- Site idled from April 2016 to December 2017
- Average HM grade since 2010 7.6%
- Decision to mine lower grade in 2012 due to high stocks
- 2018 ore grade higher than expected

Heavy Mineral Concentrate (HMC)



- Draw down of HMC inventory over 2016-17
- HMC build in 2018
 - higher ore grade
 - reduced processing rate to optimise recoveries

Final Products



- 2018 production to Q3:
 - zircon 211kt
 - rutile (HYTI90) 29kt
 - ilmenite 93kt





Ore Reserves, as at 31 December 2017

				HM Assemblage ²			
	Ore ¹	HM Grade	In situ	Ilmenite	Zircon	Rutile	
	Mt	%	HM Mt	%	%	%	
Ambrosia							
Proved	53.9	3.5	1.9	23.7	52.7	4.8	
Probable	2.6	2.3	0.1	20.9	48.9	4.7	
Total Ambrosia	56.5	3.5	2.0	23.6	52.6	4.8	
Jacinth							
Proved	44.5	4.4	2.0	31.1	46.7	4.2	
Probable	1.4	1.8	0.0	19.1	59.2	3.4	
Total Jacinth	45.8	4.3	2.0	31.0	46.9	4.2	

Notes:

- (1) Ore Reserves are a sub-set of Mineral Resources.
- (2) Mineral assemblage is reported as a percentage of in situ HM component.

- Ore mined at Jacinth to Q3 2018 of 8.3mt at HM grade 7.5%
- Ambrosia HM grade 3.5%
 - Average mined HM grade since 2010: 7.6%
- Multiple options considered to smooth production profile and partially offset the impact of declining grade
- Accelerated move to Ambrosia assessed as best option
 - low capital
 - smooth zircon profile

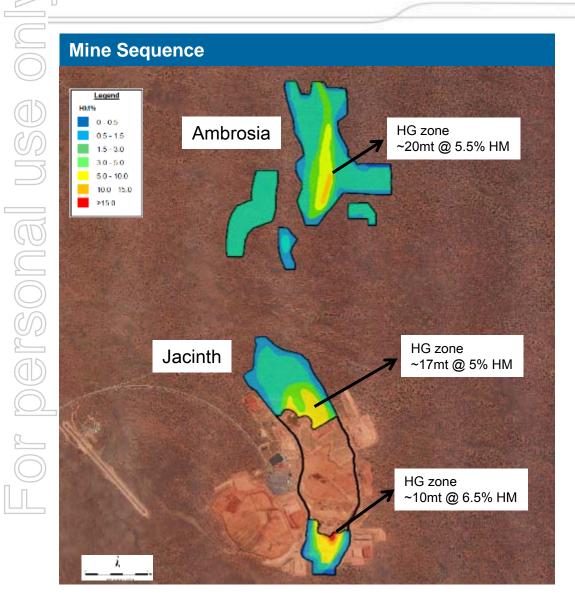






Jacinth Ambrosia Mine Plan



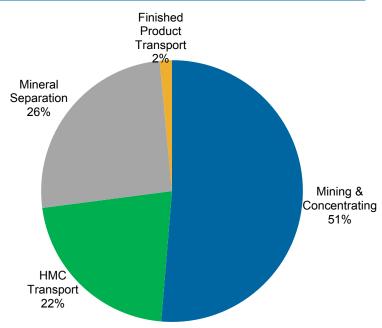


- Expect to maintain similar production levels to current operations in early years of Ambrosia
- Ambrosia mining supplemented with heavy mineral concentrate stockpile built from Jacinth
- Group zircon production expected to be ~335kktpa 2018-2021 from:
 - acceleration of the mine move to Ambrosia
 - heavy mineral concentrate inventory
 - production from Cataby

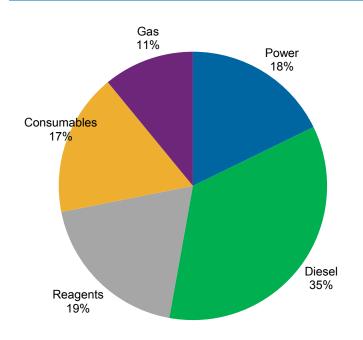




Cash costs of production J-A and Narngulu



Raw materials and consumables J-A and Narngulu



- Annual cash production cost levels vary dependent on strip ratio, grade, throughput and other factors
- 2018 cash costs of production ~\$170 million
- Raw materials and consumables account for around 17% of cash costs in 2018
- · Low sustaining capital

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Key Parameters		2014	2015 ¹		2018	2019	Comments	
Average annual production ²								
Zircon (including ZIC)	kt	212	250		~300	~280	Smooth production outlook reflects mine move to Ambrosia in 2019 and	
Rutile (HYTI90) ³	kt	30	31		~35	~40	drawdown of heavy mineral concentrate inventory built during 2018	
Total Z/R	kt	242	281		~335	~320		
Ilmenite	kt	102	118		~115	~110		
Unit Cash Costs of Production	A\$/t Z/R	600	550		~500	~500	Broadly flat unit cost profile	
Non Production Cash Costs ⁴	A\$/t Z/R	50	70		~100	~100		
Capital Expenditure ⁵	A\$m	n/a	n/a		~15	~50	Includes Ambrosia mine move plus minor sustaining capital	

J-A total cash costs are approximately 60% fixed and 40% variable

All costs and capital expenditure are stated in real 2018 dollars (except 2014 and 2015 actual costs)

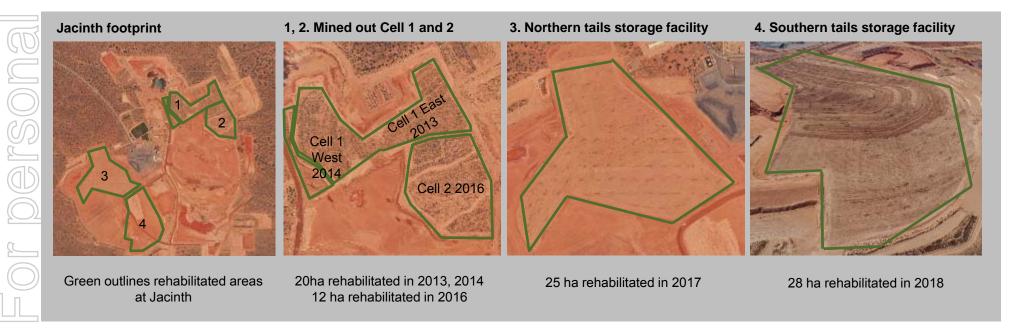
- 1. 2015 included as last full year of production from J-A with mining and concentrating activities suspended from April 2016, and to be restarted in December 2017
- 2. The Jacinth Ambrosia HM production target for 2019 is based on 98% Proved Ore Reserve and 2% Probable Ore Reserve. This is in line with the previously announced Ore Reserves stated in the ASX announcement on 20 February 2017, Updated Mineral Resource and Ore Reserve Statement. Iluka confirms that it is not aware of any new information or data that affects the information included in the original announcement and that all the material assumptions underpinning the Ore Reserves supporting the Production Target continue to apply and have not materially changed.
- 3. HYTI 90 is a lower value rutile product, that reports through to Iluka's total rutile production volumes.
- 4. Non production costs include sales and marketing, inclusive of product storage and handling, royalties and by-product costs
- 5. Capex includes expenditure required at Narngulu

ILUKA

Rehabilitation

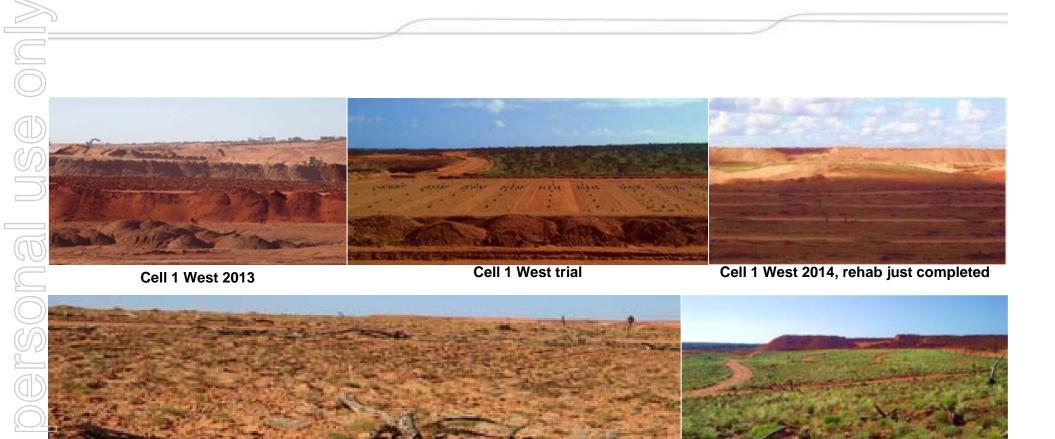
Rehabilitation principles

- Direct return of overburden lower cost with minimal rehandle and preserves topsoil organisms
- Pump tails back to void lower cost and only need to profile surface
- Undertake research to continually improve rehabilitation methods and outcomes



Rehabilitation – before and after





Cell 1 East 2013 Cell 1 East 2014

Community Support and Engagement



Local communities underpin our operations

- Partnership with Far West Coast Aboriginal Corporation
- 2017 South Australian Premier's Community Excellence Award for Social Inclusion
- NAIDOC week events and fundraising for Royal Flying Doctor Service
- Support community events



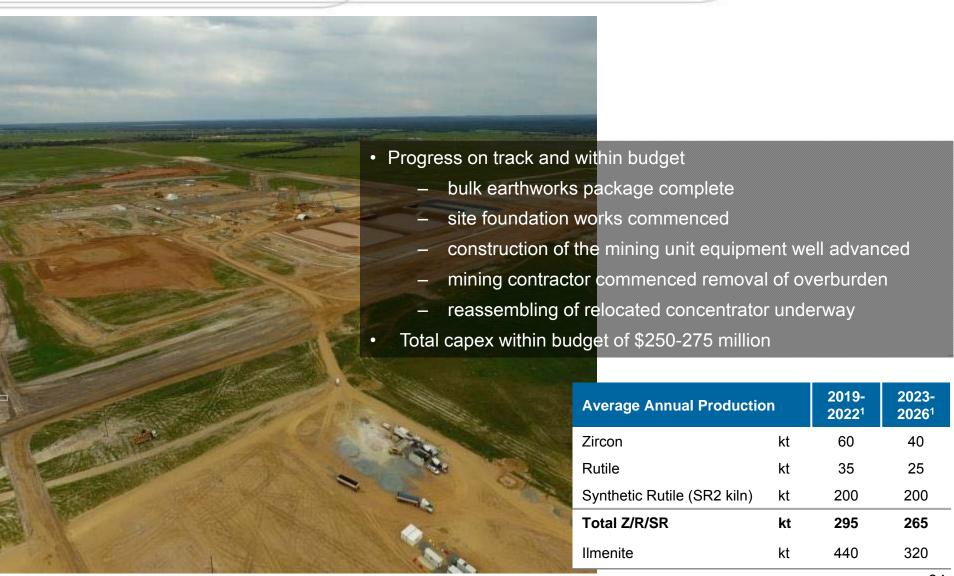


Zircon Projects



Cataby





Fine Minerals

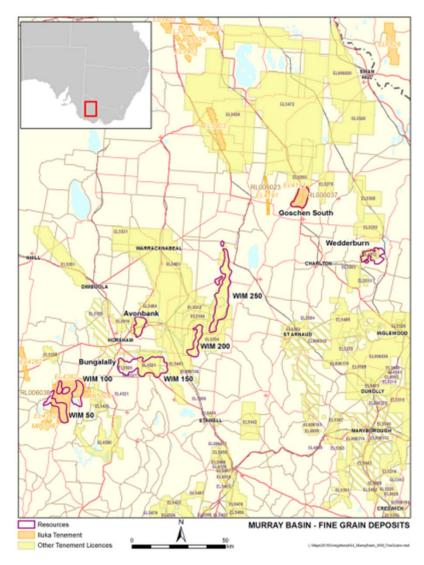


- Conducting pre-feasibility study on development of WIM deposits in western Victoria
- Underlying challenges of deposits
 - recovery of fine sized minerals
 - zircon product eligibility for ceramic market
 - monetizing rare earth co-product
- Strategic rationale of development
 - large, long life deposits
 - close to infrastructure
 - new source of zircon
 - diversification to rare earths

Rare Earth Elements

Rare earth elements are a group of seventeen elements with unique chemical and physical properties. Certain rare earth elements are considered a critical input in a number of rapidly evolving markets and industrial and military applications.

The assemblage of each rare earth deposit is different and some elements are more common than others. Iluka's current focus is a deposit with high value elements, including Neodymium, Dysprosium, Terbium and Praseodymium, commonly used in permanent magnets, such as in electric cars, wind turbines and consumer electronics.



Balranald

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- · Third field trial deferred to 2019
- Drilling programme completed, results being compiled
 - sonic drilling technique (previously drilled with air core drilling)
 - provides more accurate and detailed mineralisation and deposit delineation
 - results will form basis of future plans

100	Balranald Project Mineral Resources (at 31 December 2016)	Material mt	HM Grade %	Ilmenite %	Zircon %	Rutile %
2	Nepean					
	Indicated	8.4	27.5	59.8	14.4	14.5
2	Inferred	0.8	11.2	57.3	14.6	14.0
	West Balranald					
	Measured	11.9	31.9	64.1	10.8	12.2
Ø	Indicated	19.9	35.1	64.3	11.3	12.2
5	Inferred	4.5	26.5	62.4	8.3	9.4
3	Total Balranald	45.5	31.6	63.1	11.5	12.4

Project Overview

Large, deep, high grade rutile-rich deposit near Balranald, New South Wales

Industry significant source of rutile, ilmenite and zircon

Progressing work on underground mining method

Underground Mineral Sands Mining

Use of directional drilling technology and internal expertise

Significant advantages to approach:

- access to deep deposits (Balranald ~60m underground)
- minimal environmental footprint versus conventional mining
- · potentially less capital intensive
- scalable operations
- portfolio flexibility

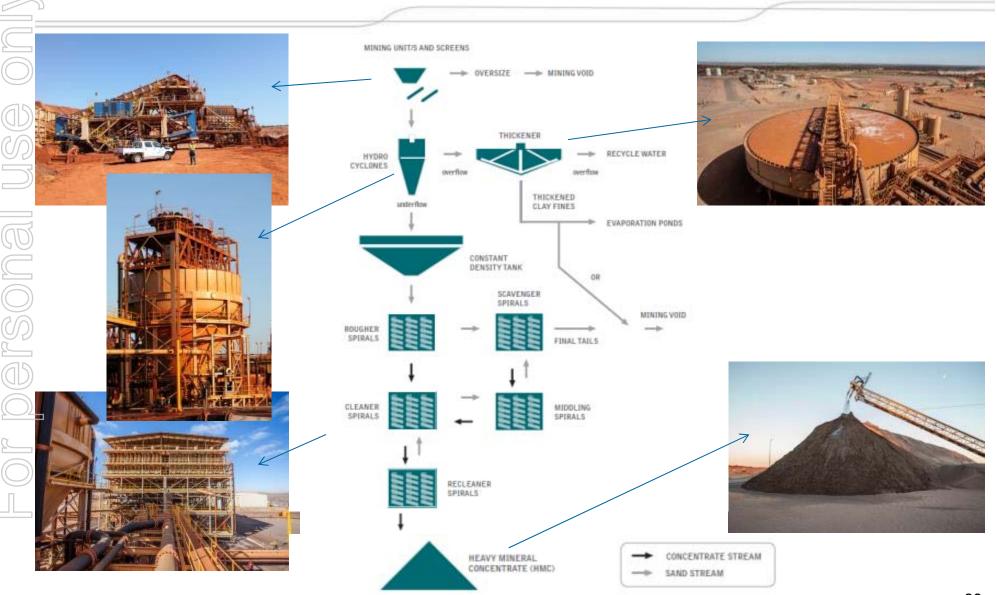


Supplementary Information



Process Overview





Wet Concentrator



- Vibrating screens to remove grit from ore slurry
- Cyclones remove fine material (clay/slimes) from ore slurry
 - slimes to thickener

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- sand fraction to spirals
- Surge bin de-couples mining unit from concentrator and regulates feed to spirals
- Spirals use gravity to separate heavy minerals from quartz
- Heavy mineral concentrate dewatered and stockpiled
- Some sand is stacked (in-pit tails cell construction)
- Remaining sand is pumped to cells with slimes



Heavy Mineral Concentrate Transport



- Transported by road to Port of Thevenard
- Fully sealed road, including 94km mine access
- 15 purpose built B-Triple 96t road trains
- 40kt storage facility at Port

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- Port facility including overland conveyors
- Charter shuttle vessels to Geraldton
 - payload of 20,000 30,000 tonnes
 - approximately two week round trip

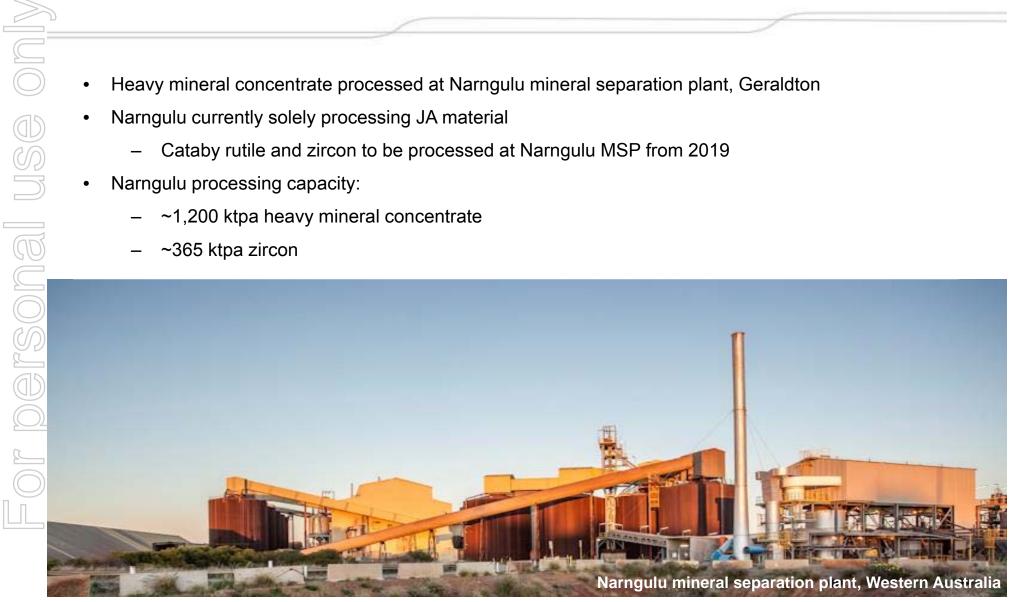




Final Product Processing



- Heavy mineral concentrate processed at Narngulu mineral separation plant, Geraldton
- Narngulu currently solely processing JA material
 - Cataby rutile and zircon to be processed at Narngulu MSP from 2019
- Narngulu processing capacity:
 - ~1,200 ktpa heavy mineral concentrate
 - ~365 ktpa zircon



Rehabilitation Research Case Studies



Cell 1 trial

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- Long-term trial established 2013, still monitoring
- Investigating whether deep-rooted tree species (red mallee, white mallee and myall trees) will set roots into tailings
- Analysing changes in electrical conductivity (salinity) across the soil profiles over time



Pearl Bluebush (Maireana Sedifolia)

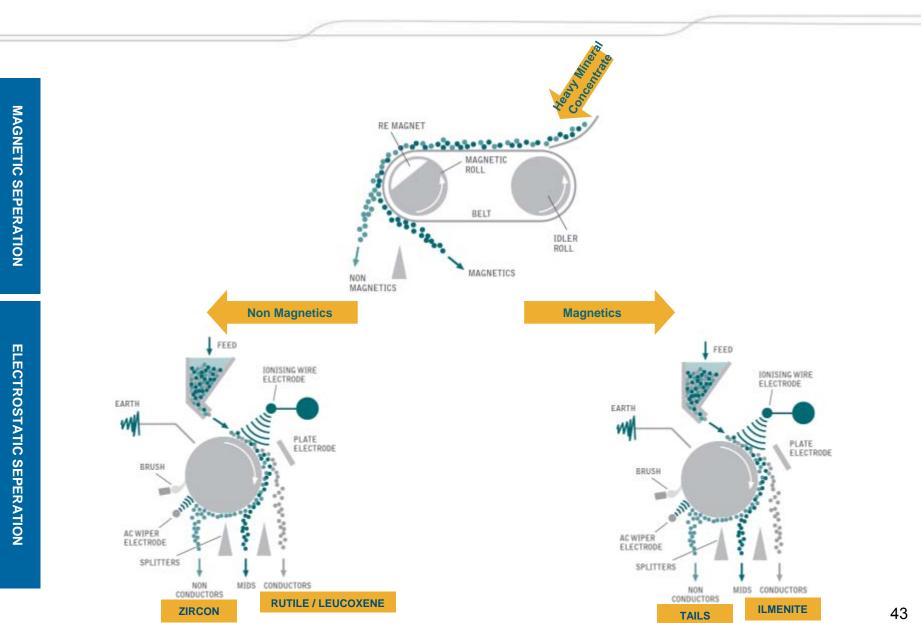
- Very common species on site (up to 1500/ha) but not recorded in rehabilitation areas, likely due to unreliable seeding & low seed viability
- Research focused on:
 - population genetics potential to source pearl bluebush seed from outside of the mine lease
 - seed production develop a method of producing viable seed using a seed farm
 - translocation of plants investigate use of cuttings or mature plants



Process Flow - Mineral Separation

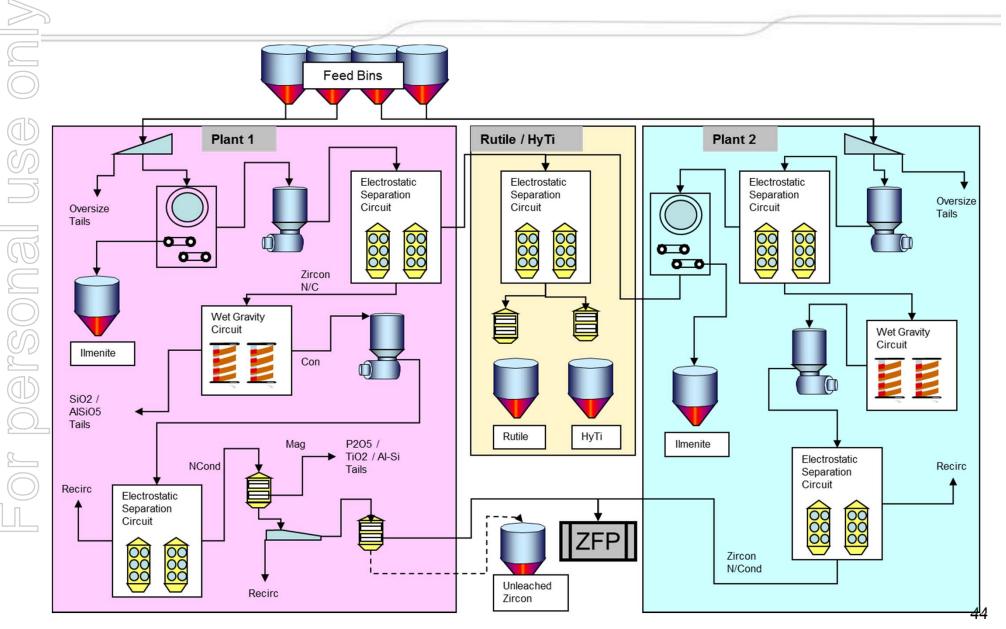
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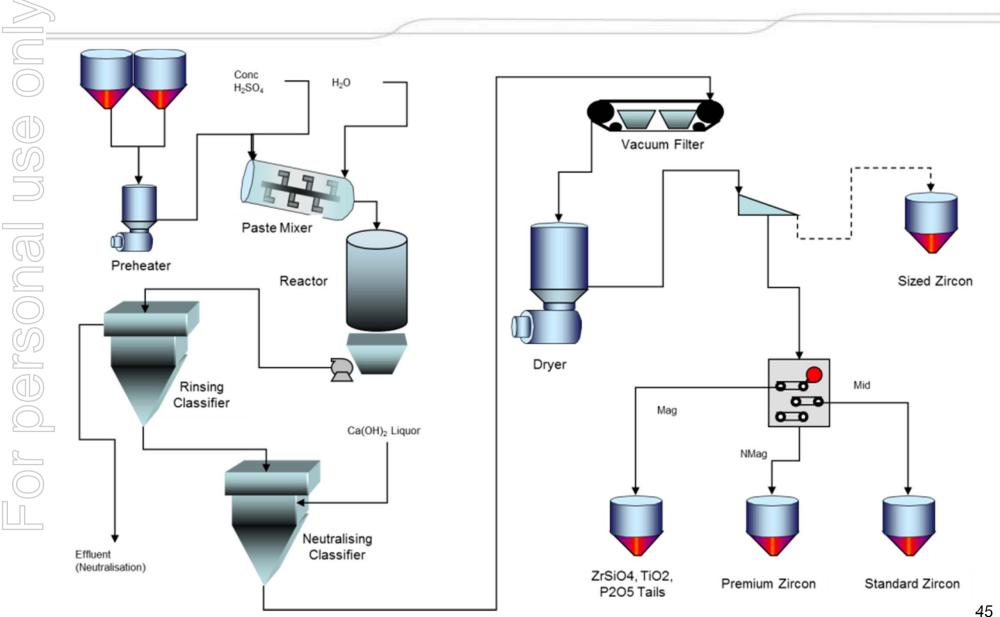
Narngulu MSP Plant 1 and Plant 2





Narngulu Zircon Finishing Plant (ZFP)







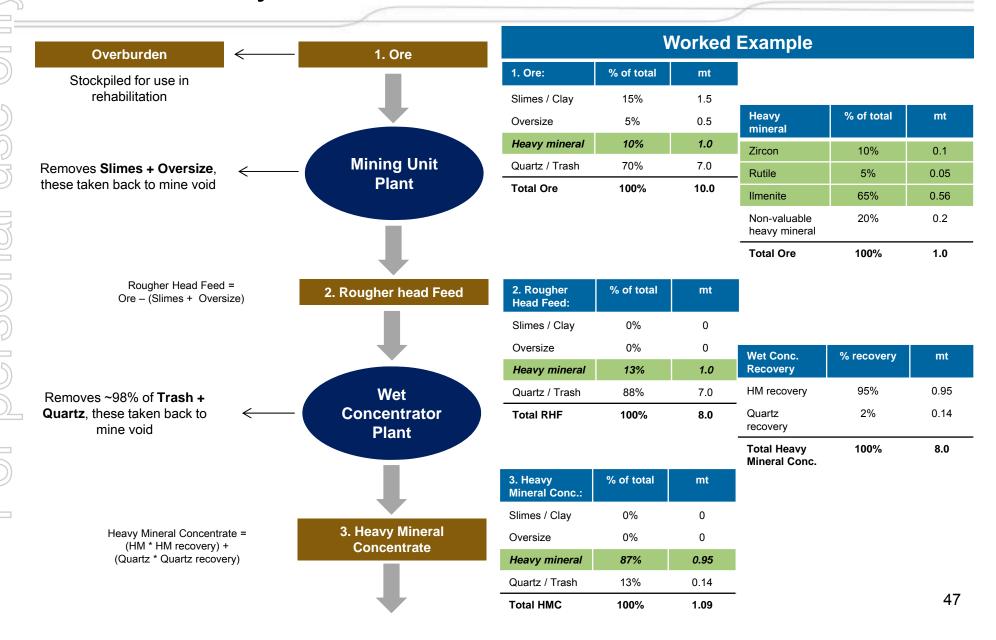
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PREMIUM	UNIVERSAL	STANDARD	CONCENTRATES / TAILINGS
High end applications in ceramics, fused zirconia, refractory and casting	 Developed in 2013 for Frit production and the growing needs of digital printing 	 Preferred feedstock of ZOC producers Some used in ceramics & foundry 	 Majority is toll processed with final product sales by Iluka Also sales to end-users with upgrading capability

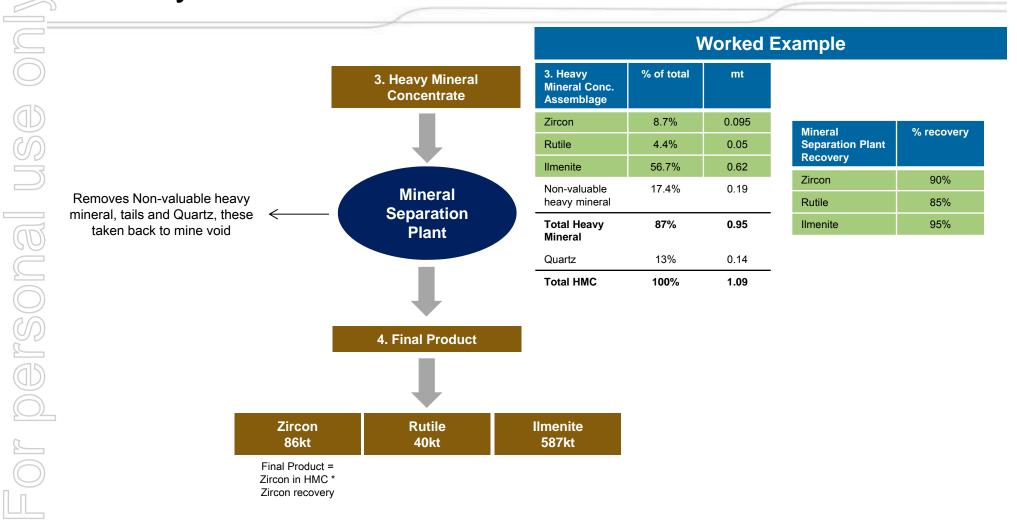
Worked Physical Example – Ore to Heavy Mineral Concentrate





Worked Physical Example – Heavy Mineral Concentrate to Final Product







Notes



