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ILUKA



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16 May 2018

# Disclaimer, Forward Looking Statements

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This presentation may use non-IFRS financial information including mineral sands EBITDA, mineral sands EBIT and Group EBIT which are used to measure both group and operational performance. A reconciliation of non-IFRS financial information to profit before tax is included in the supplementary slides where appropriate. Non-IFRS measures have not been subject to audit or review.

This presentation constitutes a summary of Iluka’s financial performance and should be read in conjunction with the Iluka Resources Limited Annual Report – 31 December 2016, which contains financial statements and consolidated financial statements of the group.

# Iluka's Portfolio

Iluka Resources has expertise in the exploration, project development, mining, processing and marketing of mineral sands. The company is a major global producer of zircon and high-grade titanium dioxide products.



**Virginia, US**  
Rehabilitation  
(mine closed Dec 2016)



**Sierra Leone**  
Gangama dry mine  
Lanti dredge & dry mine  
Sembehun deposits



**Sri Lanka**  
Puttalam deposit



**MAC Royalty, Australia**  
BHP's Mining Area C



**Perth Basin, Australia**  
Synthetic rutile kiln  
Cataby project



**Eucla Basin, Australia**  
Jacinth-Ambrosia mine



**Murray Basin, Australia**  
Balranald deposit

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# Mineral Sands Applications

## Zircon Applications

Zircon is opaque (white) and water, chemical, heat and abrasion resistant.

**Zirconia, Zirconium  
Chemicals and Metal**  
~20% of demand



**Refractory and  
Foundry**  
~30% of demand



**Ceramics**  
~50% of demand



## Titanium Applications

Titanium pigment is opaque (white), UV resistant and inert. Titanium metal has high strength to weight ratio and is corrosion resistant.

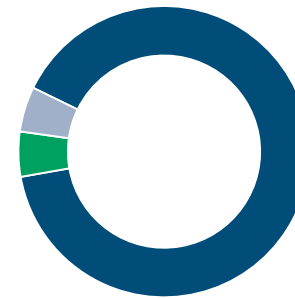
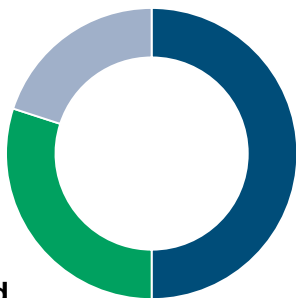
**Titanium metal**  
~5% of demand



**Welding (flux)**  
~5% of demand



**Pigment**  
~90% of demand



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# Iluka's Approach

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## Deliver sustainable value

### Disciplined capital allocation

Iluka applies a capital allocation framework that prioritises funds for investment where strict financial criteria and strategic rationale can be met

Iluka is focused on delivering sustainable value to shareholders



### Preserve and advance growth opportunities

Catby project under construction

Sierra Rutile expansion projects at various stages of development

Balranald staged development approach

Puttalam project early stages of evaluation



### Flex assets in line with market conditions

Operational settings reflect market conditions to deliver value and reduce costs where appropriate, including:

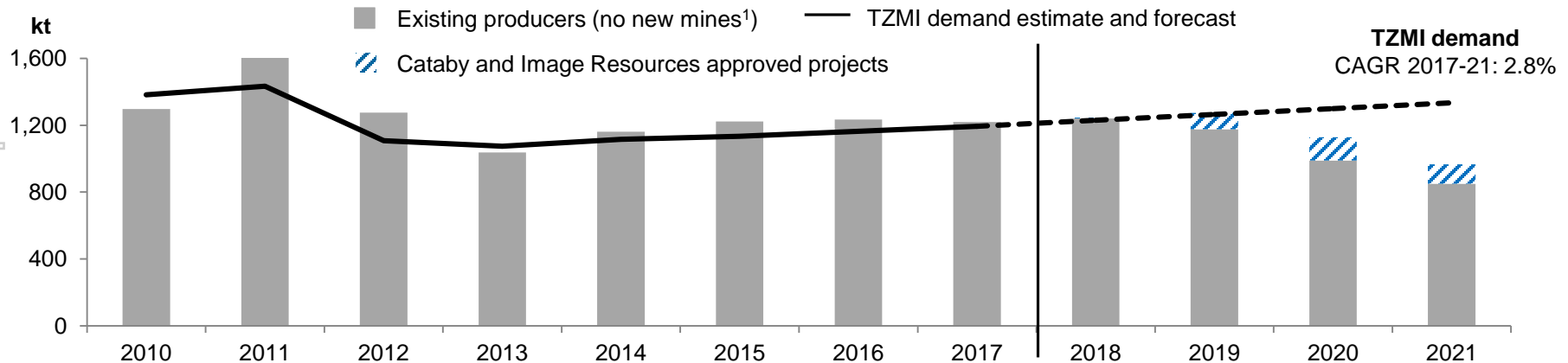
- Jacinth-Ambrosia mine idling in April 2016 and subsequent restart in December 2017
- idling Hamilton mineral separation plant, full utilisation of Narngulu plant



# Zircon Market Outlook

- Zircon from existing producers declining due to depletion and grade/assemblage decline
- Inventory largely depleted
- Supply projections include Iluka's Cataby development and recently funded Image Resources development
- Structural deficit could be mitigated by a combination Ambrosia mine move acceleration from 2022 to 2019 and likely supply response from artisanal miners in Kalimantan, Indonesia

## Zircon Supply and Demand – Existing producers and approved new mines



Note: In 2012, zircon demand fell by 200-250kt due to modernisation, substitution and thrifting, predominantly in the ceramics sector

Source: Iluka production, Image Resources outlook (May 2018) and TZMI supply for remaining producers; and TZMI demand February 2018

# 2018 Zircon Market

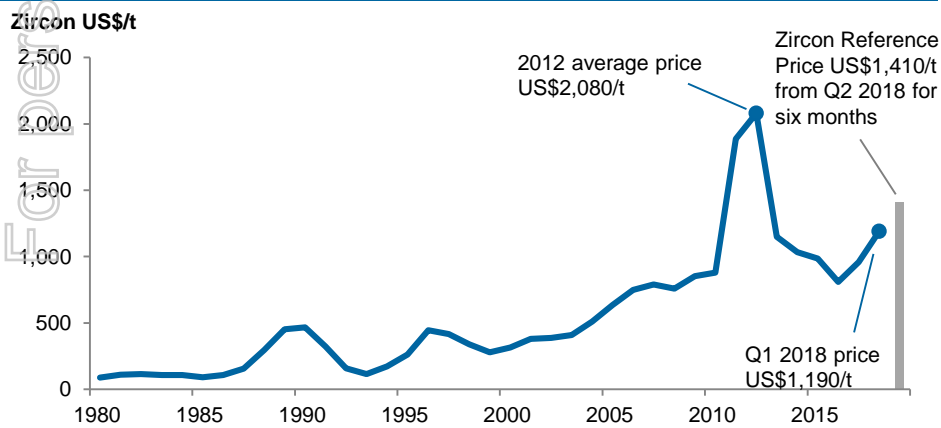
- Tight supply conditions leading to steady price increases
- Prices remain well down on previous spike
- Targeting gradual price increases to avoid historic volatility
- Downstream product prices have escalated

## Iluka's Zircon Pricing Strategy

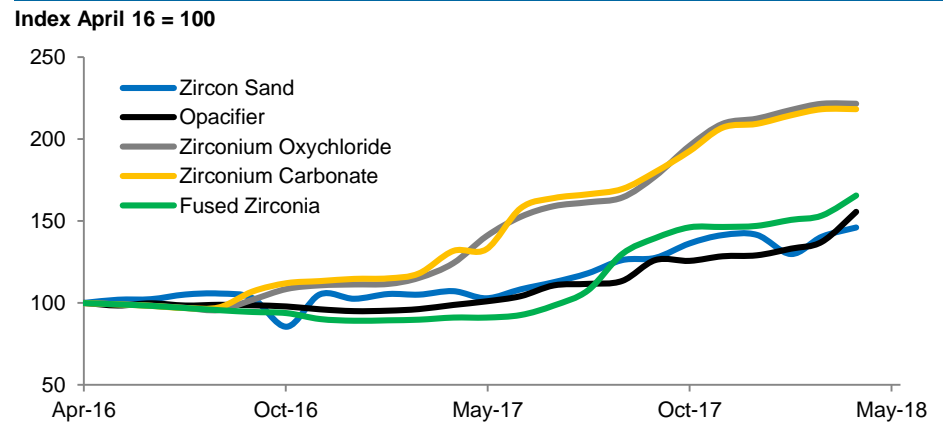
- Zircon <5% of final tile cost
- Previous price spike induced substitution and thrifting
- Current customer feedback suggests higher prices can be absorbed if gradual
- Iluka targeting smooth and gradual price appreciation to allow customers time to adjust
- Pricing strategy subject to change in line with market response

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## Zircon Price History



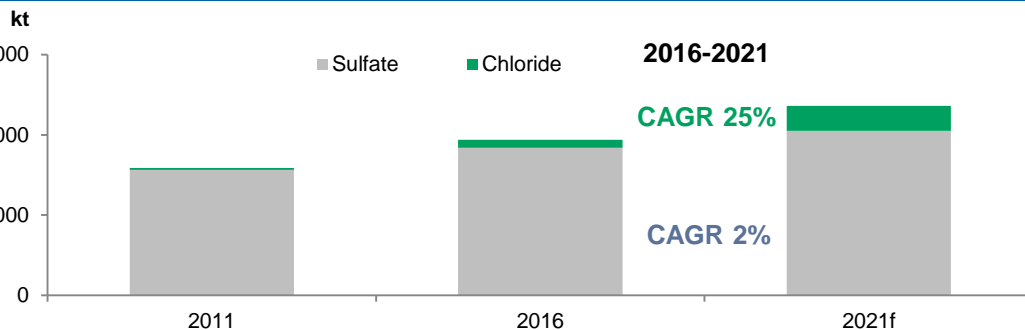
## Zircon sand compared to downstream Prices



Source: Iluka (zircon sand), Ruidow (others)

# China Chloride Pigment Growth

## China forecast to favour chloride pigment for growth

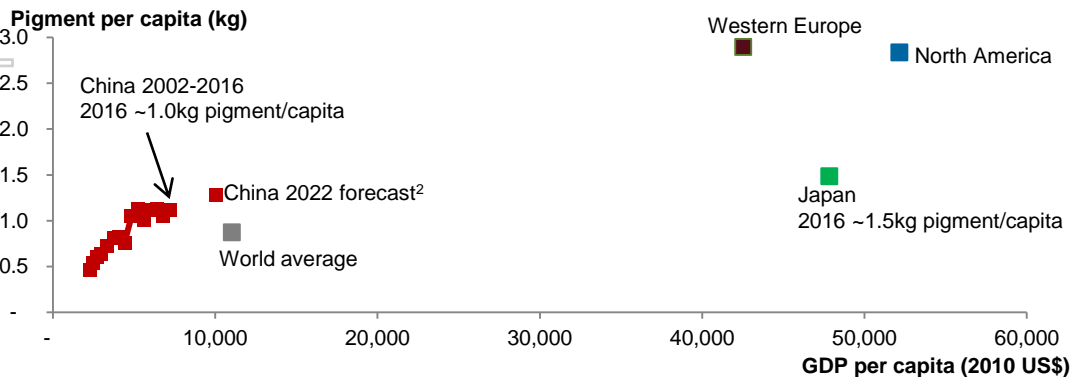


Four new chloride pigment plants built in last two years - total capacity of 200 ktpa

Industry analysts expect more chloride capacity to come on line in next 2-5 years

Higher environmental standards favour relatively cleaner chloride pigment plants

## Long term pigment demand linked to GDP per capita<sup>1</sup>



Pigment per capita growth follows s-curve path with GDP per capita subject to the individual nature of regional housing

If China's pigment per capita reaches 1.5kg per person (similar to Japan), Chinese pigment demand would grow by ~600kt (or ~40%)<sup>3</sup>

Source: IHS, IMF, TZMI, Iluka.

1. China 2002-2016, other regions 2016

2. TZMI pigment forecast, IMF population and GDP forecast

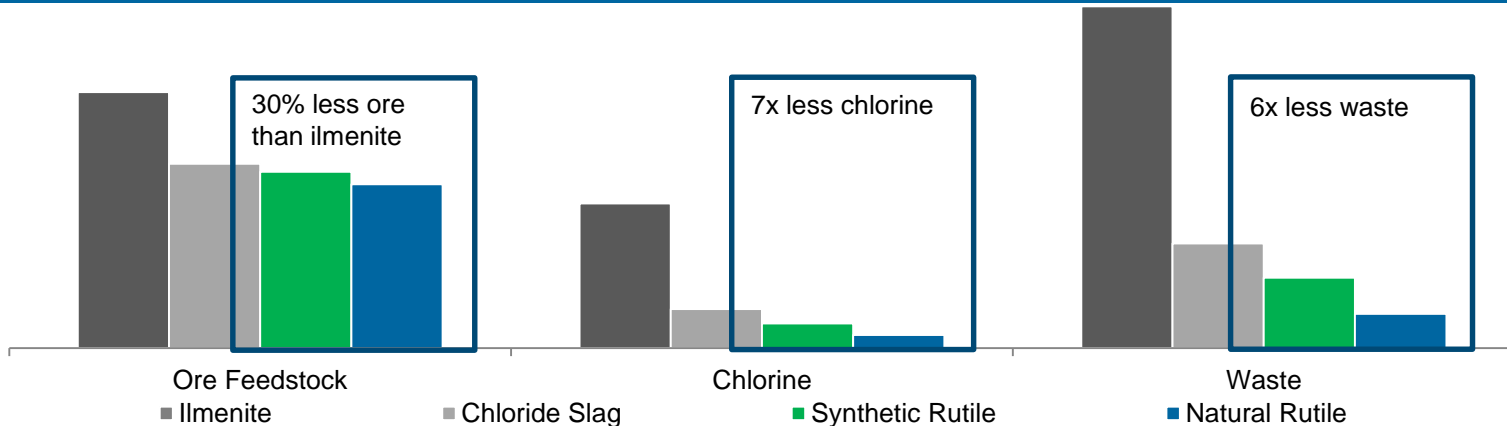
3. Assumes no population growth



# High Grade Titanium Feedstock Advantage

- Natural and synthetic rutile have a higher titanium grade than other feedstocks
- Advantages in pigment production:
  - lower ore tonnes required;
  - lower chlorine input cost; and
  - lower waste generation (environmental and cost benefits)
- High 'value in use' for Iluka's main products

## Input and outputs based on feedstock of pigment plant, per tonne of pigment

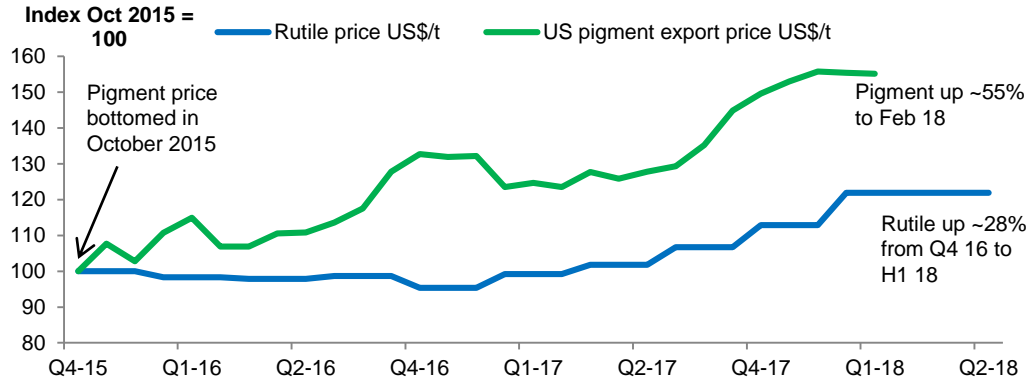


# 2018 Titanium Feedstock Market

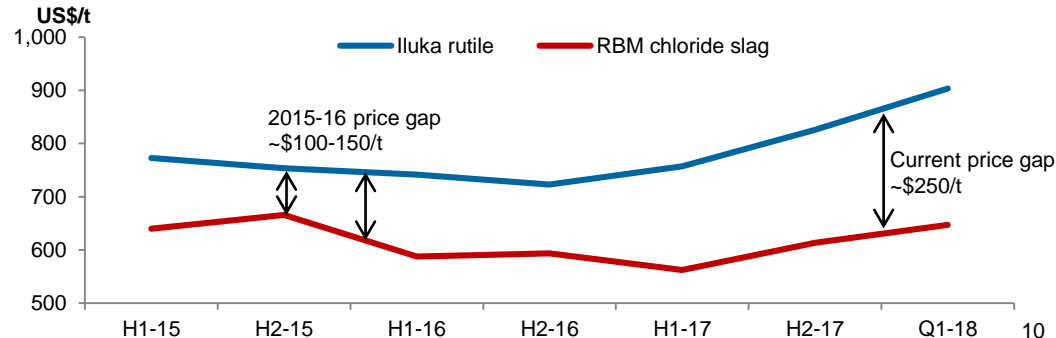
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- Positive conditions in downstream pigment market (90% of demand)
- Pigment plant closures in EU and China increasing utilisation of plants in operation
  - high grade feedstocks used to increase yields
- Pigment prices up 55% from market low (Oct 2015)
- Rutile prices up 28% from market low (Q4 2016)
- Pigment and feedstocks price growth over past 12 months comparable
- Historical lag of 6-12 months to feedstocks prices
- Rutile historically priced at premium to other high grade feedstocks
  - reflecting relative economic value, other factors
- Rutile price growth has been greater than other high grade feedstocks, increasing price differential
- Key drivers of further rutile price growth are other high grade feedstock prices, pigment prices, feedstock availability and specific pigment plant capabilities

## Rutile prices increasing, historical lag to pigment prices



## Rutile premium has increased



Source: Stuart Brown Consulting, TZMI, Iluka

# Positive Commentary from Market Players

## On pigment prices :

*... we see gradual price increases ongoing ... we've talked about before implementing first quarter price increases after this we see low to **mid-single-digit price increases for the rest of the year**. But we see that **continuing in a gradual way** and I think that's part of our whole plan around value stabilization (February 2018, Chemours Company)*

## On pigment market fundamentals:

*Looking ahead, the **market environment remains positive for TiO<sub>2</sub>**, with seasonal demands pick up expected in the first half of the year. The **inventory days remain low across the industry and utilization rates remain high** and we expect this to continue. We are manufacturing at full capacity and the industry **fundamentals continue to drive an elongated cycle**. (February 2018, Venator Materials)*

## On pigment and mineral sands market fundamentals:

*We see the **momentum in our TiO<sub>2</sub> business continuing well into 2018** and we expect to benefit from favorable market conditions in both pigment and titanium feedstock and co-products and from our vertical integration with all of our assets in full operation. We see **continued tightness in the global supply-demand balance across the entire value chain of our business**. We believe that pigment inventories in aggregate remain at or below normal levels across the industry. We also believe **pigment producers, globally, are running at high utilization rates** compared to historic levels, because of these favorable market conditions including the Chinese producers. (March 2018, Tronox Limited)*

# Sustaining and Growing Iluka's Business



## 1. Delivery of projects

Jacinth-Ambrosia restart, expansion and production options

Sierra Rutile improvements and expansions

Cataby development

Over next 1-3 years



## 2. Organic growth options

Balranald unconventional mining

Fine minerals processing, to increase resource base

Puttalam, Sri Lanka project

Exploration in Sierra Leone, Canada

2-5 years



## 3. Mergers & Acquisitions

Key criterion: Deliver sustainable value

Counter cyclical or opportunistic investment in mineral sands

Need to demonstrate an advantage

Industrial minerals opportunities potential fit – must bring more than capital

3-6 years

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# 2018 Delivery of Projects

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## Cataby mine development

- Board approved Dec 2017
- Capex \$250-275 million
- First production H1 2019



## Jacinth-Ambrosia expansion

- Increased throughput to offset grade decline
- DFS completion and Board consideration scheduled for mid 2018
- Planned commissioning 2019



## Lanti Dry and Gangama expansions

- Doubling of mine capacities
- Board approved Dec 2017
- Planned commissioning 2019



## Sembehun mine development

- New mine development
- Definitive feasibility study underway
- Planned commissioning 2021



# Cataby Mine Development

- Provides ilmenite feedstock for continued synthetic rutile production
- Financial returns underpinned
  - offtake agreements for 85% of synthetic rutile production for minimum 4 years
- Construction period of ~18 months
- Progress on schedule
  - camps, high voltage power distribution, bulk earthworks and dewatering bores advancing
  - mining contract awarded
  - concentrator relocation from Eneabba commenced
- First production H1 2019

Cataby site, Western Australia

## Key Parameters

Average annual production:

Zircon	50ktpa
Rutile	30ktpa
Synthetic rutile	200ktpa

Mine life<sup>1</sup> 8.5 years

Capital cost \$250m-\$275m

1. Mine life could be extended by accessing additional ore reserves, subject to land access and approvals.

# Jacinth-Ambrosia Mine Expansion

## Mine Expansion

- Mining and concentrating capacity upgrade by 30% to partially offset impact of grade decline
- Project scope involves concentrator expansion, additional mining unit and associated infrastructure
- Definitive feasibility study well progressed
- Execute expected H2 2018, subject to Board approval
- Project cost ~\$40 million

## Move to Ambrosia

- Plan to bring forward mine commencement at Ambrosia to 2019 (previously 2022)
- Jacinth and Ambrosia mined concurrently for several years
- Further supplements zircon production
- Capital estimate to be provided following definitive feasibility study



# Lanti Dry and Gangama Expansions

- Doubling of capacity at Lanti dry and Gangama mines to 1,000-1,200tph each
  - Lanti dry: construction of second in-pit mining unit and additional concentrator capacity
  - Gangama: construction of second concentrator, expanded truck and shovel operation
- Board approved in December 2017
- Procurement activities underway and fabrication to commence mid 2018
- Planned commissioning mid 2019
- First stage of mineral separation plant expansion and port upgrade to handle additional material approved

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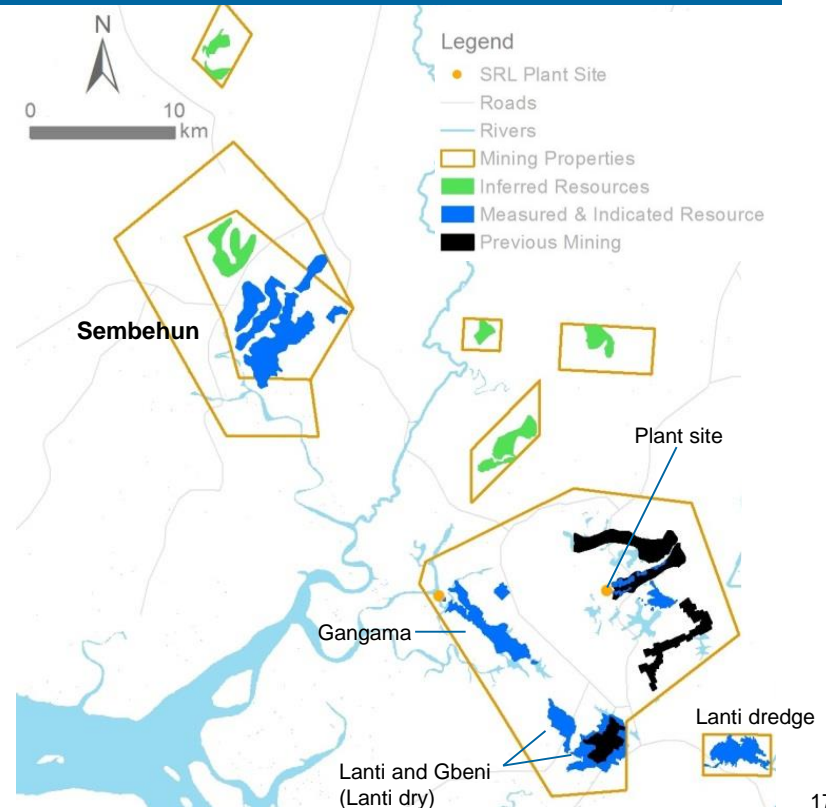
Lanti Dry mine, Sierra Rutile



# Sembehun Mine Development

- New 1,000-1,200tph mine at group of deposits northwest of existing operations
- Pre-feasibility engineering study completed
- Definitive feasibility study underway and planning for early works
- Bridge and road construction expected to commence in 2019, subject to Board approval
- Planned commissioning 2021

## Sierra Rutile operations and deposits



# Organic Growth Options – Next 3-5 years

## BALRANALD, AUSTRALIA

## PUTTALAM, SRI LANKA

## FINE MINERALS, AUSTRALIA

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High grade deposit / rich assemblage  
Potentially material source of global rutile and zircon supply, large ilmenite co-product stream  
Advancing new directional drilling underground mining technique  
Undertaking sonic drilling to further delineate deposit  
Final field trial subject to drilling results

Large sulfate ilmenite deposit  
Ore overlays operating limestone mine  
Discussions with Government of Sri Lanka to establish legal and investment terms and framework for development  
Pre-feasibility study underway  
Construction could commence 2020, operational from 2022

Large resource but fine grained  
Technically challenging – product recovery and marketability  
Potential for rare earth co-products  
Pre-feasibility study in 2018



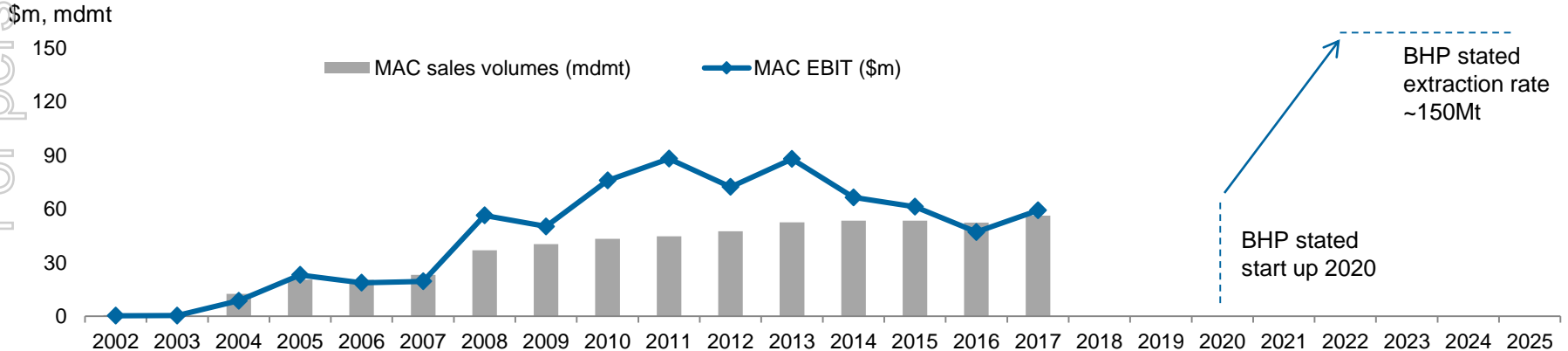
# Mining Area C Royalty Asset

- Iluka holds a royalty over iron ore produced from specific tenements of BHP's Mining Area C (MAC) mine in Western Australia
- Total contribution \$735 million since mining began
- South Flank development is contained within MAC royalty area and is BHP's stated preferred replacement for Yandi production (depleted in 5-10 years)
- Potential for up to ~150mtpa from MAC hub (current MAC production ~55mtpa)

### Mining Area C royalty terms

- 1.232% of Australian denominated revenue from royalty area; and
- one-off payment of A\$1 million per million tonne increase in annual capacity

## Mining Area C Sales Volumes and Iluka EBIT Royalty Contribution



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# 2018 Outlook

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## Strong market conditions

Positive dynamics in zircon and high grade titanium markets  
Focused on achieving sustainable zircon price outcomes

## Project delivery

Deliver projects on time and on budget - Cataby development, Jacinth-Ambrosia expansion, Sierra Rutile expansions and Sembehun development

## Progress organic growth options

Balranald, Murray Basin; Puttalam, Sri Lanka; Fine Minerals project



Jacinth-Ambrosia, Eucla Basin

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Rehabilitated land, Murray Basin

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