



**IMAGE**  
RESOURCES

# *Australia's newest mineral sands miner*

## Boonanarring Mineral Sands Project

*100%-owned; high-grade; zircon-rich*

*80km north of Perth in Western Australia*

*On-track for positive cashflow end 1<sup>st</sup> QTR 2019*



**RIU Explorers Conference  
19-21 February 2019  
Fremantle, WA**

**Patrick Mutz  
Managing Director  
Image Resources NL  
ASX: IMA**

# Disclaimer and Forward-Looking Statements



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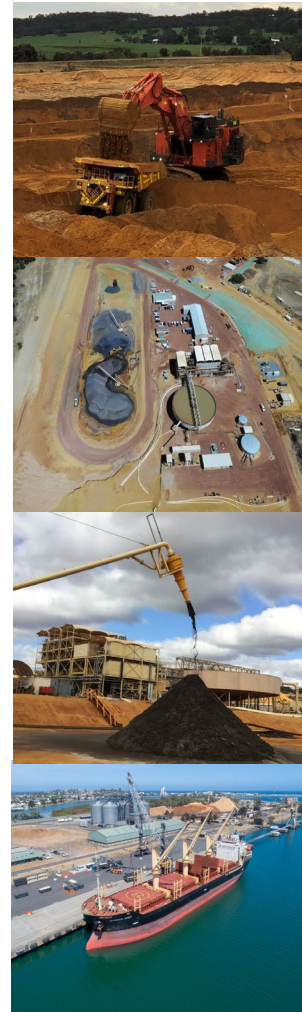
Accessing the information contained in this presentation implies an acknowledgement that you have read and understood the above disclaimer and qualifications regarding forward-looking statements.

Information regarding the calculation of ore reserves and mineral resources in this presentation (if any), and the consents provided by the respective Competent Persons is presented at the end of this presentation. For additional information and details on the content of this presentation, please refer to the ASX releases on the Company's website.

# Investor Snapshot

## *Company transitioning to profitable miner and realisation of full valuation*

- **Company fully funded to positive cashflow**
- **Project construction and commissioning complete 30 Nov 2018**
  - **‘on-budget’ and ‘on-schedule’**
- **Production commenced 1 Dec 2018**
- **First bulk shipment HMC product exported 13 Jan 2019**
- **First revenue received 22 Jan 2019**
- **Cashflow positive forecast 1<sup>st</sup> QTR 2019**
- ***2<sup>nd</sup> HMC shipment sailed 16 Feb; likely cashflow positive in Feb***



## *Company transitioning to profitable miner at a time of supply shortage of zircon*

- **Binding off-take agreements in place for 100% of HMC production for life of mine**
- **Project NPV A\$235 million<sup>1</sup>; IRR 125%<sup>1</sup>; 13 month payback<sup>1</sup>**
  - *metrics have strengthened with 12% zircon price rise on 1 October 2018*
- **Company market cap. A\$163M<sup>2</sup>**
- **Share price \$0.17<sup>2</sup>**



© geology.com  
Rough zircon grains

*Notes: 1 – Per updated bankable feasibility study results announced 28 June 2018. Image confirms that all material assumptions from that announcement underpinning the production targets and forecast financial information derived from the production targets continue to apply and have not materially changed.*

*2 – as at 15 February 2019*

*Key products are zircon and titanium dioxide*

- **Zircon sand is processed into zirconium compounds, intermediate products and zirconium metal for a variety of applications;**



- Ceramics (tiles); 55% demand



- Foundry Sands (castings); 14%
- Refractories (furnace linings); 10%



- Chemicals (gem stones, nuclear reactors); 14%
- Others; 7%

Qualities

whitener

opacifier

heat resistant

abrasion resistant

metal bio-compatible



*Speciality uses include fibre optics, glass, paints, catalysts, underarm deodorants, adhesives, cosmetics, paper, dental ceramics plus many research applications.*

# Products and Applications

*Key products are zircon and titanium dioxide*

- **Titanium dioxide (TiO<sub>2</sub>) from rutile and ilmenite is processed into titanium based products and titanium metal for a variety of applications;**



- Ultra-white pigments (paint, paper, plastic); ~90% demand

- Welding rods (flux coating);

- Titanium metal (light, strong, corrosion-resistant, bio-compatible);



- Used in aircraft, spacecraft, motor vehicles and medical implants;



*Speciality uses include sunscreen, adhesives, inks, fabrics, ceramics, cosmetics, toothpaste, catalysts, and pharmaceuticals.*

## LOCATION

- North Perth Basin in Western Australia
- 80 km north of Perth CBD
- Proven mineral sands address
  - Including majors Iluka and Tronox
- Infrastructure rich
  - paved roads, power, gas pipeline water, telecommunications etc.
- Local communities and landowners experienced with, and accepting of, mineral sands mining.

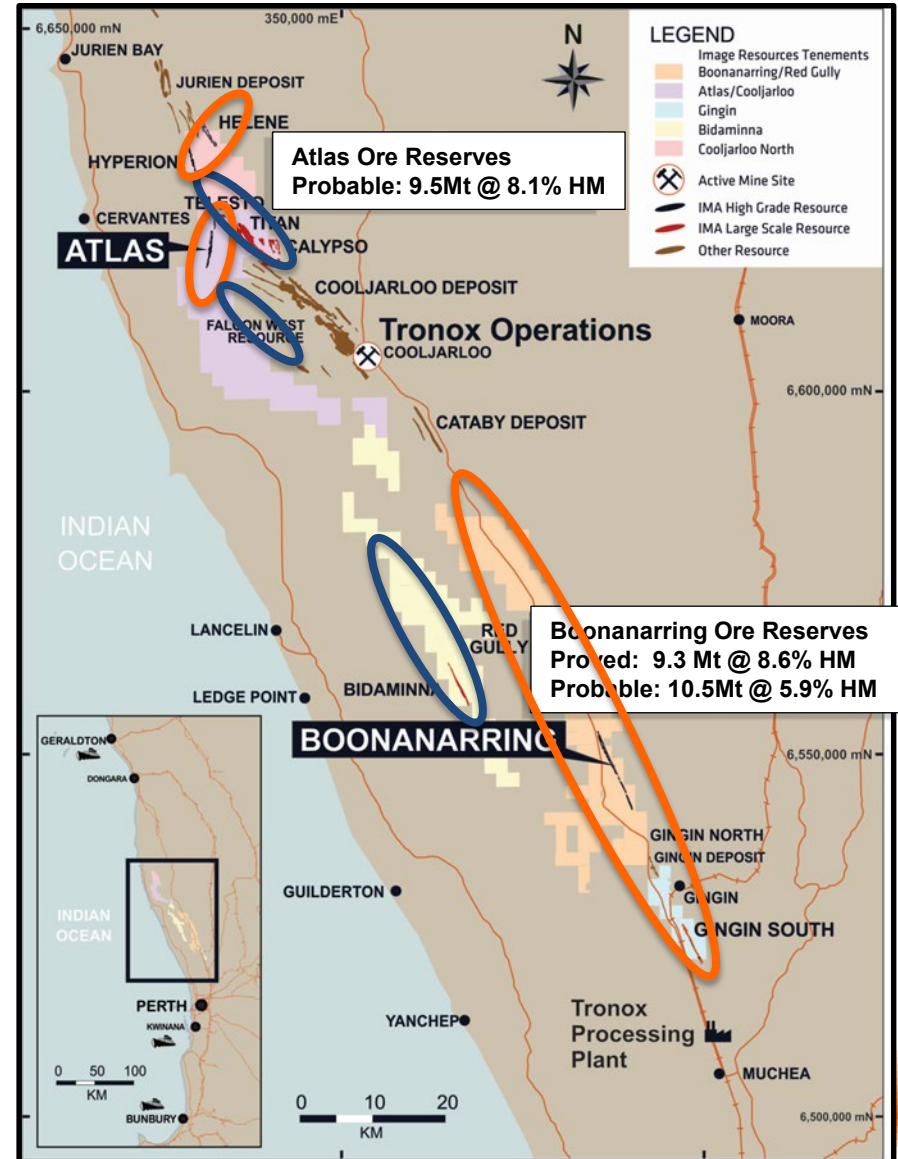


# Project Types and Locations

- 1,000 km<sup>2</sup> tenements portfolio
- 100% focus on mineral sands
- Strandline projects (dry mining)
- Dredge mining prospects

*Multiple opportunities for a second stand-alone mining project within the current 100%-owned tenement package.*

***Bidaminna is high on priority list.***





## QUALITY ORE RESERVES

- JORC Code (2012) Compliant
- High HM, VHM and very high zircon at Boonanarring

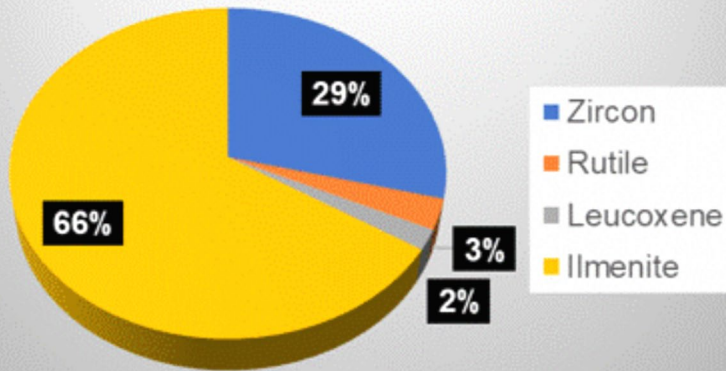
High Grade Ore Reserves - Strand Deposits; in accordance with the JORC Code (2012)											
Project/Deposit	Category	Volume	Tonnes	% HM	% Slimes	HM Tonnes	VHM (%)	Ilmenite (%)	Leucoxene (%)	Rutile (%)	Zircon (%)
Boonanarring <sup>1</sup>	Proved	5,008,000	9,344,000	8.6	14.3	803,771	76.081	48.9	1.8	2.2	23.2
Boonanarring <sup>1</sup>	Probable	5,565,000	10,514,000	5.9	17.6	622,429	78.653	52.3	1.8	2.7	21.9
<b>Total Boonanarring</b>		<b>10,573,000</b>	<b>19,858,000</b>	<b>7.2</b>	<b>16.1</b>	<b>1,426,200</b>	<b>77.203</b>	<b>50.4</b>	<b>1.8</b>	<b>2.4</b>	<b>22.7</b>
Atlas <sup>1</sup>	Probable	5,000,000	9,477,000	8.1	15.5	767,637	73.3	50.7	4.5	7.5	10.6
<b>Total Atlas</b>		<b>5,000,000</b>	<b>9,477,000</b>	<b>8.1</b>	<b>15.5</b>	<b>767,637</b>	<b>73.3</b>	<b>50.7</b>	<b>4.5</b>	<b>7.5</b>	<b>10.6</b>
<b>Total Ore Reserves</b>		<b>15,573,000</b>	<b>29,335,000</b>	<b>7.5</b>	<b>15.9</b>	<b>2,193,837</b>	<b>75.8</b>	<b>50.5</b>	<b>2.7</b>	<b>4.2</b>	<b>18.4</b>

### 1. COMPLIANCE STATEMENT - Boonanarring/Atlas Ore Reserves

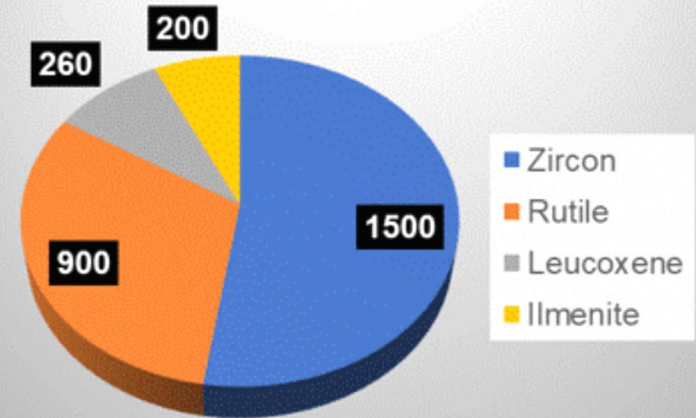
The Ore Reserves statement has been compiled in accordance with the guidelines of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code – 2012 Edition). The Ore Reserves have been compiled by Jarrod Pye, Mining Engineer and full-time employee of Image Resources, under the direction of Andrew Law of Optiro, who is a Fellow of the Australasian Institute of Mining and Metallurgy. Mr Law has sufficient experience in Ore Reserves estimation relevant to the style of mineralisation and type of deposit under consideration to qualify as a Competent Person as defined in the 2012 Edition of the “Australasian Code for Reporting of Mineral Resources and Ore Reserves”. Mr Law consents to the inclusion in the report of the matters compiled by him in the form and context in which it appears.

# Products and Prices

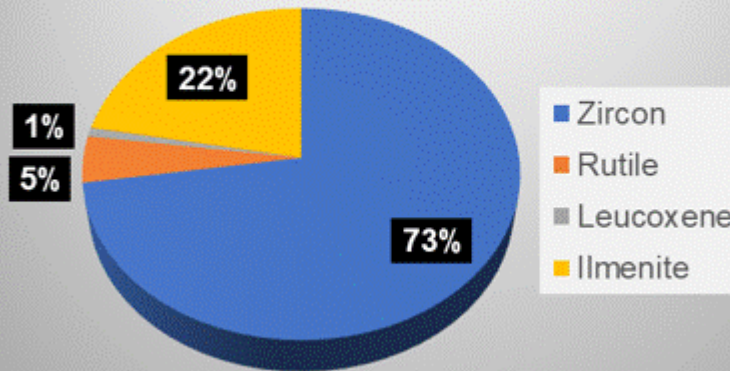
### % in VHM



### US\$/tonne



### % of Revenue



Notes: VHM assemblages and commodity prices are estimates based on Boonanarring project heavy mineral concentrate product.

## Base Assumptions

- Start mining at Boonanarring
- Dry, open-cut mining
- Production rate - 500 dry tonnes per hour
  - 3.7M dry tonnes per year
- Conventional gravity separation using spirals
- Product: Heavy Mineral Concentrate (HMC)
  - Production rate: avg. approx. 240K tonnes/annum
  - Truck to Bunbury for bulk shipments to China

***Punches 4 times above its weight\*!***

*\* -Equivalent in revenue to  
2,000 tonnes per hour at  
Ore grades of  
3% HM in ore and  
10% zircon in VHM*

## Average annual production at Boonanarring (5 yrs)

- 240k tonnes HMC; containing;
  - 60kt zircon (70kt/year in 2019-20)
  - 130kt ilmenite
  - 6kt rutile
  - 4kt leucoxene
- 5.5 years mine life with ability to add 3-4 years additional ore reserves

# Boonanarring – BFS Production Statistics



## Boonanarring Project Production Forecast - updated July 2018

	2018	2019	2020	2021	2022	2023	Total
Ore processed (Kt)	<del>700</del> 350	3,600	3,800	3,700	3,800	3,500	19,100
Ore grade (%HM)	<del>6%</del> 7%	8%	11%	6%	8%	11%	8%
<u>Assemblage (% of HM)</u>							
Zircon	<del>19%</del> 21%	25%	22%	25%	25%	16%	22%
Rutile	3%	3%	2%	3%	3%	6%	3%
Ilmenite	55%	49%	51%	49%	49%	53%	51%
Leucoxene	2%	2%	2%	2%	2%	3%	2%
HMC produced (Kt)	<del>12</del> 19	222	345	168	227	343	1,317
HMC sold (Kt)	<del>11</del> 0	219	320	190	230	230	1,200
<u>HMC content</u>							
Zircon (Kt)	<del>2</del> 3	64	87	40	71	42	306
Rutile (Kt)	0.3	5	6	5	5	13	34
Ilmenite (Kt)	<del>7</del> 13	117	176	115	118	125	658
Leucoxene (Kt)	0.2	3	5	3	2	5	19
Trash HM/silica (Kt)	2	30	46	28	33	45	184
Total (Kt)	<del>12</del> 19	219	320	191	229	230	1,202
%VHM in HMC	83%	86%	86%	85%	86%	80%	85%

# Boonanarring – 2019 Guidance



14

## 2019 CY Production and Profitability Guidance<sup>1,2</sup>

<u>Production</u>	<u>Guidance</u>	<u>2020 Forecast</u>
Ore processed (million tonnes)	3.4-3.7	3.6-3.8
HMC <sup>3</sup> produced (000 tonnes)	220-240	280-300
HMC sold (000 tonnes)	220-240	280-300
<b><u>Costs (AU\$)</u></b>		
Project operating costs <sup>4</sup> (million)	\$85-95	\$85-95
Cost per tonne HMC	\$385-420	\$310-330
<b><u>Revenue (AU\$)</u></b>		
Total revenue (million)	\$125-142	\$180-200
<b>Project EBITDA<sup>4</sup> (AU\$ million)</b>	<b>\$40-50</b>	<b>\$90-110</b>
<b>USD:AUD Fx</b>	<b>0.74</b>	<b>0.74</b>

Notes: 1. To be read in conjunction with Disclaimer and Forward-Looking Statements.

2. Information derived from Image 2017 Bankable Feasibility Study (announced to ASX 30 May 2018) and as subsequently updated for commodity prices and foreign exchange rate (announced to ASX 28 June 2018) but with other material assumptions underpinning the 2017 BFS unchanged.

3. Heavy Mineral Concentrate product.

4. Non-IFRS Financial Information: This document contains non-IFRS unaudited financial measures including Project operating costs and Project EBITDA. Image management considers these to be key financial performance indicators used to measure underlying operational performance. Project operating costs include costs incurred in producing HMC at the Boonanarring Project plus logistics costs but exclude corporate and exploration costs, depreciation/amortisation, financing costs and income tax. Project EBITDA is calculated as revenue from sale of HMC less Project Operating Costs.

# Boonanarring – Ramp-up Production

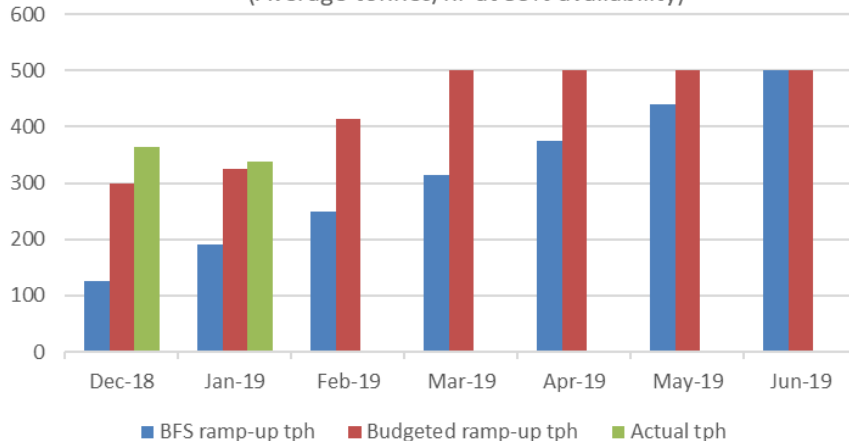


Operating Statistics – December 2018

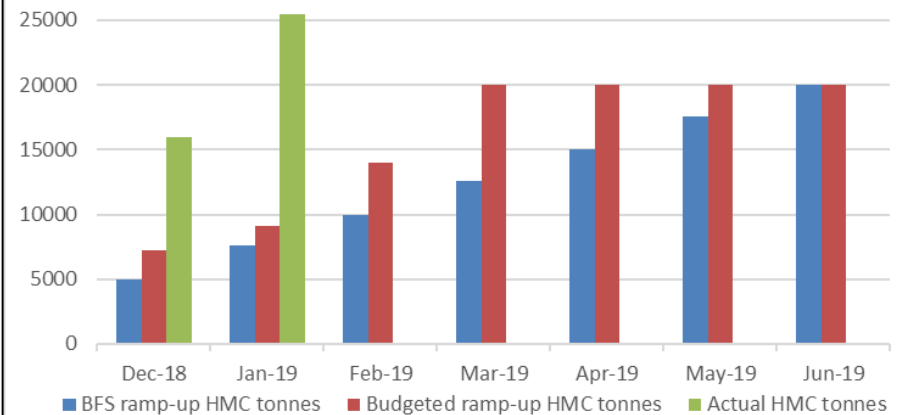
January 2019

Item	Unit	Actual	Budget	Variance	Actual	Budget	Variance
FPP/WCP runtime	hrs.	639	558	15%	646	632	2%
FPP Ore Feed	t	232,664	167,400	39%	217,341	205,720	6%
FPP Ore Feed	tph	364	300	21%	338	325	4%
Ore HM grade	%	7.3	6.1	19%	12.6	6.0	110%
Availability	%	85.8	75	14%	86.8	85	2%
<b>HMC produced</b>	<b>t</b>	<b>15,935</b>	<b>7,210</b>	<b>121%</b>	<b>25,492</b>	<b>9,126</b>	<b>179%</b>
HMC HM grade	%	90.6	85	7%	92.2	91.7	1%
HM Recovery	%	84.9	71.6	19%	86.1	74.1	16%

**Feed Preparation Plant Ore Feed Rate**  
(Average tonnes/hr at 85% availability)



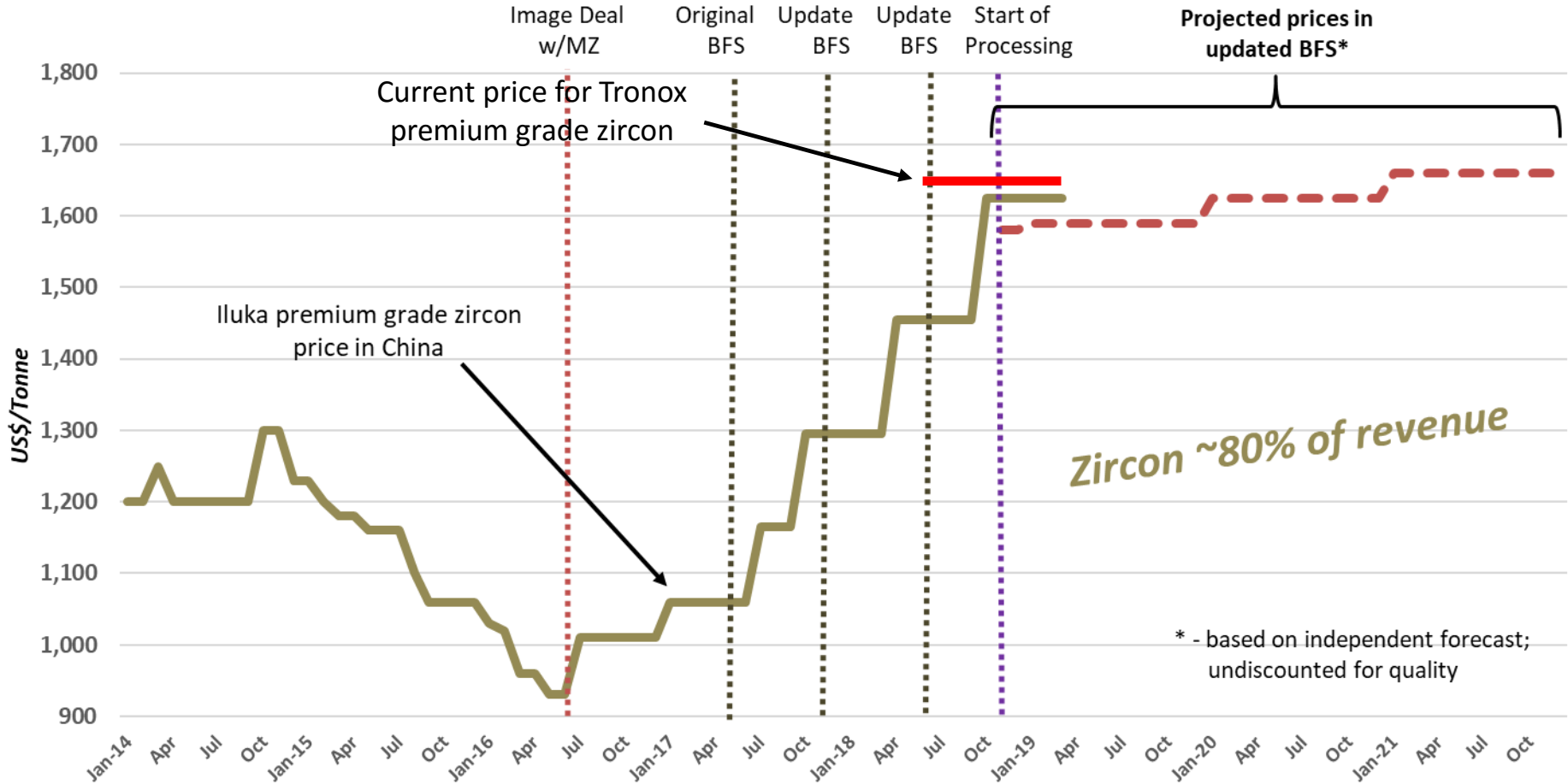
**HMC Production**  
(dry tonnes)



# Zircon Prices – Actual and Forecast



## Actual Zircon Prices and BFS Price Assumptions



Sources: CNFEOL commodity pricing website by subscription ([www.cnfeol.com](http://www.cnfeol.com)) and Image Updated BFS announced to ASX 28 June 2018.



## Key Financial Metrics

	<u>Original BFS<sup>1</sup></u>	<u>Updated BFS<sup>2</sup></u>	<u>Updated BFS<sup>3</sup></u>
➤ Pre-Tax NPV (@ 8%)	A\$135M	A\$197M	<b>A\$235M</b>
➤ Pre-Tax IRR	64%	104%	<b>125%</b>
➤ Payback period (months)	22	16	<b>13</b>
➤ Mine life 8+ years			
➤ Project capital cost A\$52M			
• includes ~\$8M for land			

1 - ASX Announcement 30 May 2017

2 - ASX Announcement 27 November 2017

3 – ASX Announcement 28 June 2018

## Upside potential at and near Boonanarring

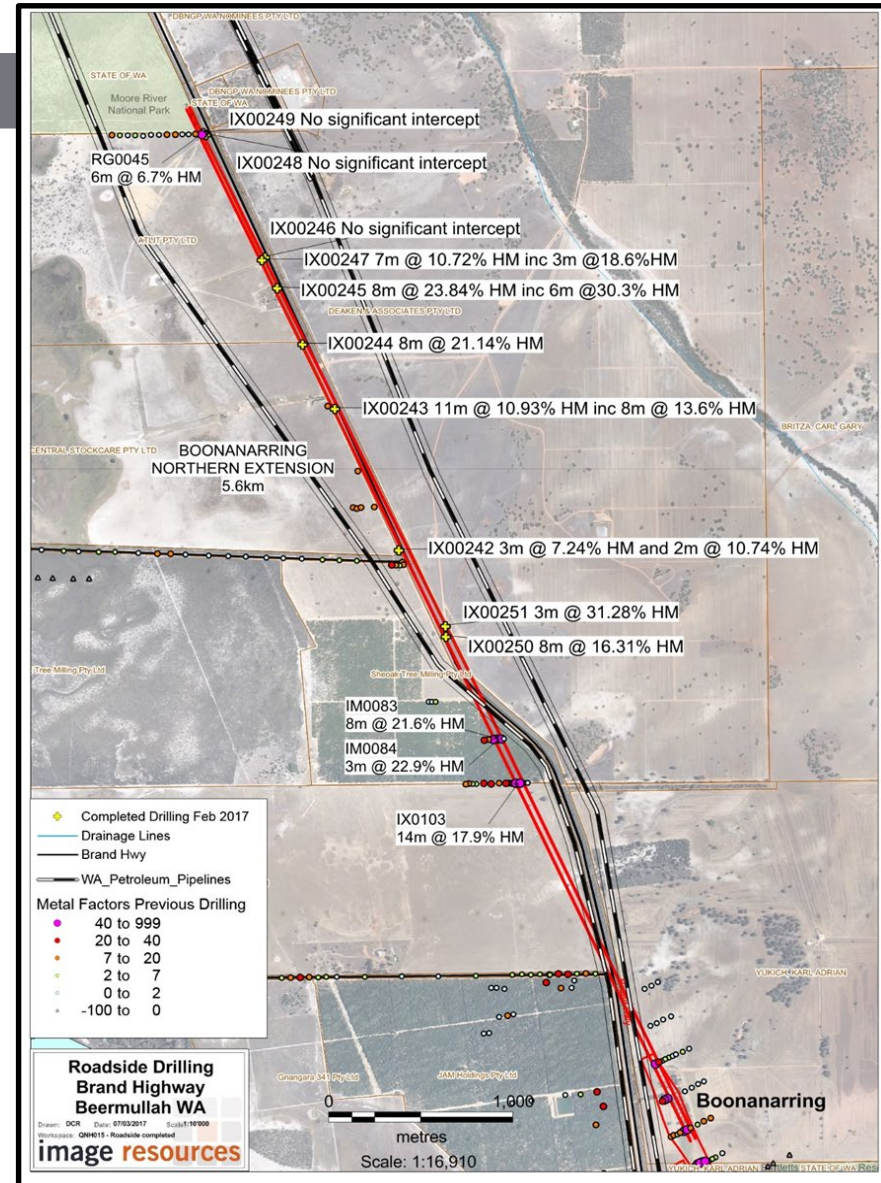
- Confirmed potential to extend mine life with high grade mineralisation (ASX announcement 13 March & 26 June 2017);
  - Assuming mineralisation in extension area is identical to known Ore Reserves in all aspects and economics; **two years of additional mine life could add AU\$60M to project NPV.**
- Potential to process lower grade overlying layer of mineralisation;
- Potential to process ores from several other deposits with high grade mineral resources in the vicinity;
  - Red Gully, Regans Ford, and Gingin (South and North).

# Boonanarring High-Grade Extension

ASX - 13 March & 26 June 2017

## New Drilling Results (Feb 2017)

- Confirm 5.6km northern extension of Boonanarring mineralisation
  - Outstanding high grade intersections:
    - 8m @ 23.8% HM in IX00245
    - 8m @ 21.1% HM in IX00244 and
    - 8m @ 16.3% HM in IX00250
- Importantly with high grade zircon:
- 21.5% Zr in HM in IX00245 & 247
  - 22.1% Zr in HM in IX00243 & 244
  - 16.4% Zr in HM in IX00242, 250, 251

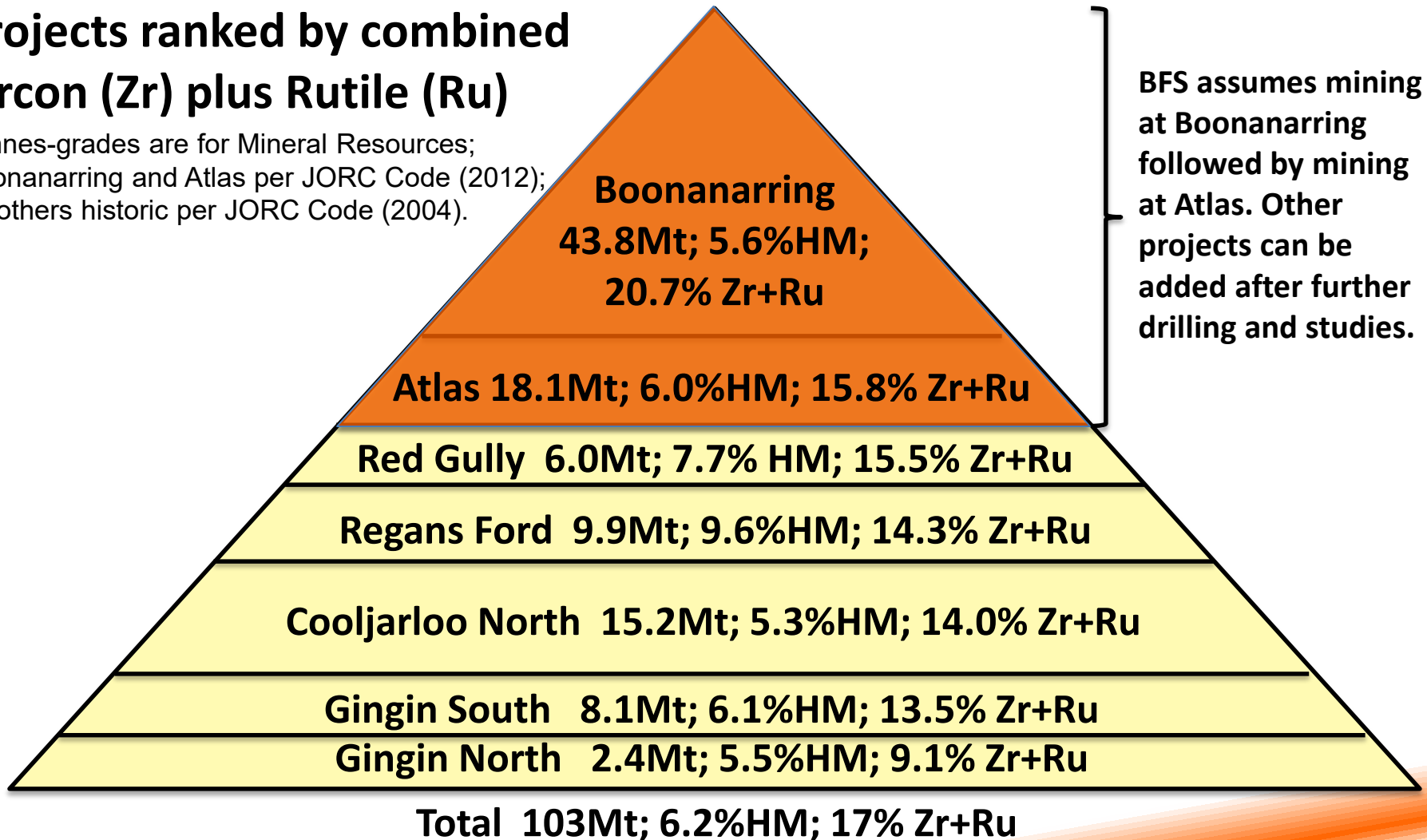


# Projects Pyramid – Strand Deposits

## Mineral Resources – Accessible by Dry Open-Cut Mining

### Projects ranked by combined Zircon (Zr) plus Rutile (Ru)

Tonnes-grades are for Mineral Resources; Boonanarring and Atlas per JORC Code (2012); All others historic per JORC Code (2004).



# Projects Pyramid – Dredge Prospects

## Mineral Resources – Accessible by Dredge Mining

### Projects ranked by HM Grade

Tonnes-grades are for historic Mineral Resources per JORC Code (2004).

**Bidamina**  
45Mt; 3.0%HM;  
6.5% Zr+Ru

**Titan-Telesto** 140Mt; 1.9%HM; 12.8% Zr+Ru

**Calypso** 51Mt; 1.7% HM; 15.9% Zr+Ru

**Total** 236Mt; 2.1%HM; 11.5% Zr+Ru

#### Positive attributes

- 90+%VHM;
- <5% slimes;
- 25-67% Leucoxene;
- 100Mt exploration target.

Potential focus for 2<sup>nd</sup> operating centre.

# Potential Royalty from Tronox

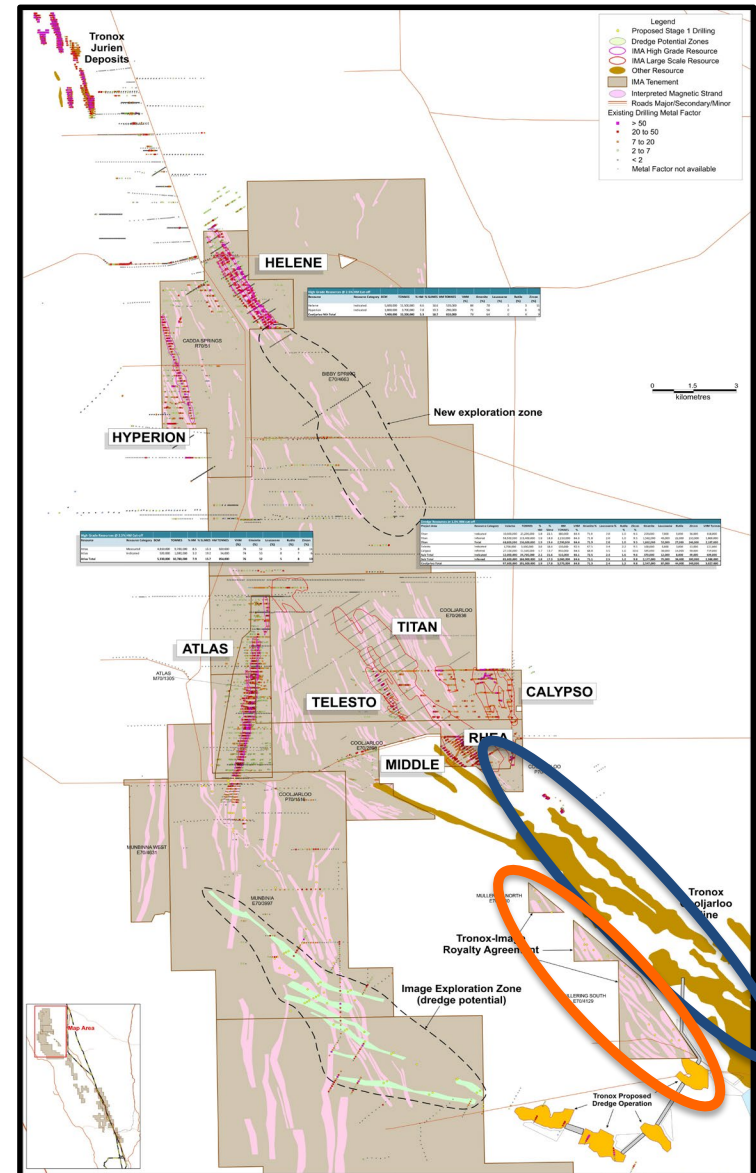
## Royalty agreement in place as of 2014

- Small cash payment (already received)
- Sliding-scale royalty on production

Avg. HM Grade	Royalty
2.5%	1.25%
3.0%	2.50%
3.5%	3.75%
4.0%	5.00%

- Indefinite production schedule
- Potential for future arrangements with Tronox or others based on large area of potential dredge mining mineralisation within Image's tenements in the vicinity of Tronox's historic dredge operations.

 Tronox historic mining area  
 Image-Tronox royalty area



## Diverse and experienced Board and Management

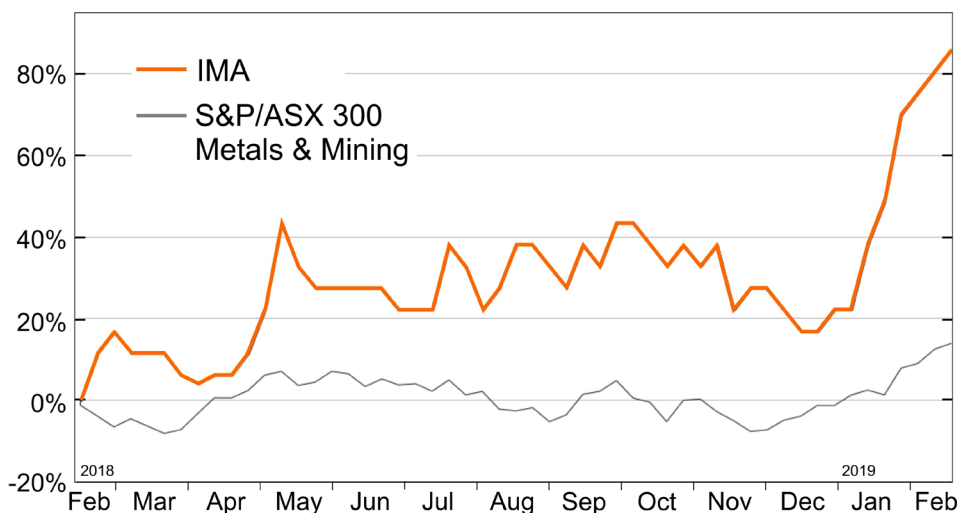
ASX Code:	<b>IMA</b>
Share Price:	<b>A\$0.17*</b>
12-Month Price Range:	<b>A\$0.08– 0.18</b>
Shares on Issue:	<b>957m</b>
<b>Market Cap:</b>	<b>A\$163m*</b>
Cash on hand:	<b>A\$11.9m**</b>
Debt:	<b>A\$64.0m**</b>
<b>Enterprise Value:</b>	<b>A\$215m</b>
Top 20 Shareholders:	<b>73%</b>

### Board of Directors

Bob Besley – Independent Chairman  
 Patrick Mutz – Managing Director  
 Chaodian Chen - Non-Executive Director  
 Aaron Chong Veoy Soo – Non-Executive Dir  
 George Sakalidis – Executive Director  
 Peter Thomas – Non-Executive Director  
 Fei (Eddy) Wu – Non-Executive Director  
 Huang Cheng Li – Non-Executive Director

### Key Management

Patrick Mutz – CEO  
 John McEvoy – Chief Financial Officer  
 Todd Colton – Chief Operating Officer  
 George Sakalidis – Exploration Director



\* - as at 15 February 2019

\*\* - as at 31 December 2018 (includes term deposits)

Heads of Agreement with **Sunrise Energy Group Pty Ltd** to provide 3-4 MW<sub>AC</sub> solar farm to be:

- Constructed and operated by Sunrise Energy;
- Located on Image owned land adjacent to Boonanarring mine site; and
- Providing 25% of total electricity requirements for mine and processing operations.





## For further information

25



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RESOURCES

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