

## 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

**Annual General Meeting of Shareholders** 

1 May 2019 West Perth, WA



Patrick Mutz
Managing Directror
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

- Project construction and commissioning completed 'on-schedule' and 'on-budget'
- Production commenced 1 Dec 2018
- Ramp-up to full production in 2<sup>nd</sup> month of operations
- Completed first full quarter of operations (March 2019)
  - HMC Production 167% of budget
  - Ore Grade 176% of budget
  - Project Operating Costs 72% of budget
  - Operating Margin and EBITDA 400% of budget



#### **Investor Snapshot**



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

- > Zircon grade in ore 129% of budget
- > Zircon = 84% of revenue
- Revenue \$24.8 million



- ➤ Share price \$0.20¹
- Market capitalisation A\$192M¹



Rough zircon grains

#### **Products and Applications**



#### Key products are zircon and titanium dioxide

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



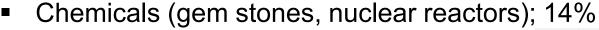
Ceramics (tiles); 55% demand



Foundry Sands (castings); 14%



Refractories (furnace linings); 10%





Others; 7%



metal bio-compatible

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

whitener

opacifier

heat resistant

abrasion resistant

Source: Zirconium Industry Association www.zircon-association.org

## **Products and Applications**



#### Key products are zircon and titanium dioxide

➤ Titanium dioxide (TiO2) 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



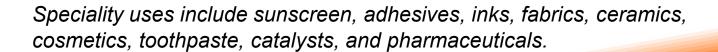
Welding rods (flux coating);



 Titanium metal (light, strong, corrosion-resistant, biocompatible);



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



#### **Project Location**



# 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 km² tenements portfolio
- > 100% focus on mineral sands
- Strandline projects (dry mining)

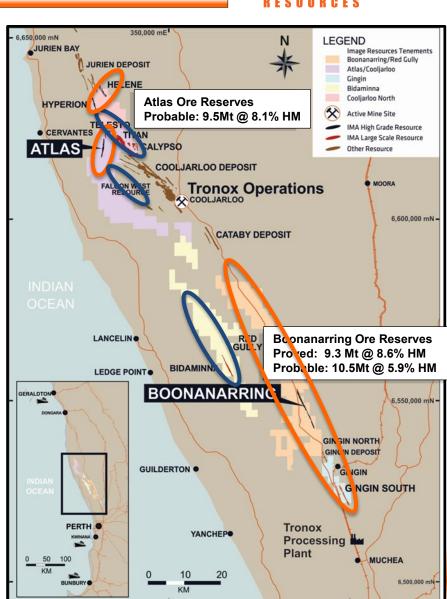


Dredge mining prospects



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

Bidaminna is high on priority list.





#### **Ore Reserves**





## QUALITY ORE RESERVES

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

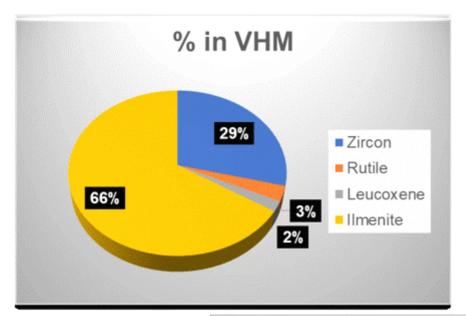
High Grade Ore Reserves - Strand Deposits; in accordance with he JORC Code (2012)											
Project/Deposit	Category	Volume	Tonnes	% HM	% Slimes	HM Tonnes	VHM	Ilmenite	Leucoxene	Rutile	Zircon
							(%)	(%)	(%)	(%)	(%)
Boonanarring <sup>1</sup>	Proved	5,008,000	9,344,000	8.6	14.3	803,771	76.081	48.9	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
Total Boonanarring	3	10,573,000	19,858,000	7.2	16.1	1,426,200	77.203	50.4	1.8	2.4	22.7
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
Total Atlas		5,000,000	9,477,000	8.1	15.5	767,637	73.3	50.7	4.5	7.5	10.6
		•									
Total Ore Reserves		15,573,000	29,335,000	7.5	15.9	2,193,837	75.8	50.5	2.7	4.2	18.4

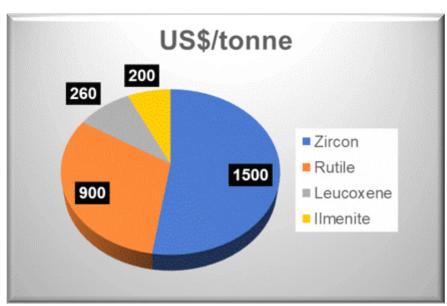
#### 1. COMPLIANCE STATEMENT - Boonanarring/Atlas Ore Reserves

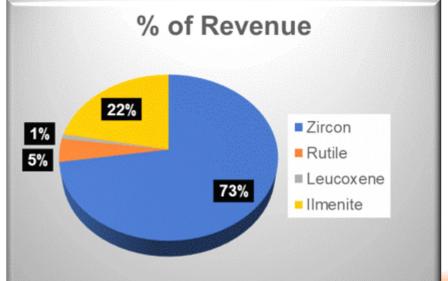
The Ore Reserves statement has been compiled in accordance with the guidelines of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code – 2012 Edition). The Ore Reserves have been compiled by Jarrod Pye, Mining Engineer and full-time employee of 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**









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



## **Target Production Rate**



## **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

## **Boonanarring – Production Statistics**



## 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 potential to add 3-4 years additional ore reserves

## **Boonanarring – 2019 Guidance**

**2019 CY Prod** 



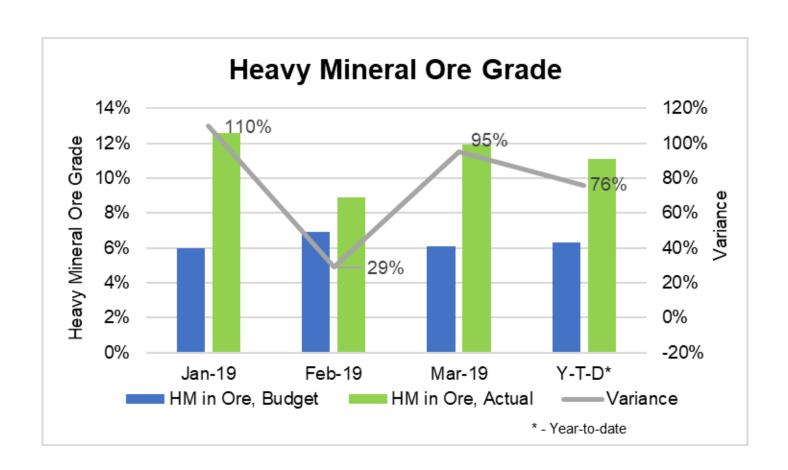
duction and Profitability Guidance <sup>1,</sup>	<sup>2</sup> 2019		
<u>Production</u>	<u>Guidance</u>	2020 Forecast	
Ore processed (million tonnes)	3.4-3.7	3.6-3.8	
HMC <sup>3</sup> produced (000 tonnes)	220-240	280-300	
HMC sold (000 tonnes)	220-240	280-300	
Costs (AU\$)			
Project operating costs <sup>4</sup> (million)	\$85-95	\$85-95	
Cost per tonne HMC	\$385-420	\$310-330	
Revenue (AU\$) 8% HM Or	re Grade	11% I	HM Ore Grade
Total revenue (million)	\$125-142	\$180-200	
Project EBITDA <sup>4</sup> (AU\$ million)	\$40-50	\$90-110	Jan-Mar 2019
USD:AUD Fx	0.74	0.74	actual ore grade
USD.AUD FX	0.74	0.74	11.1% HM

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.

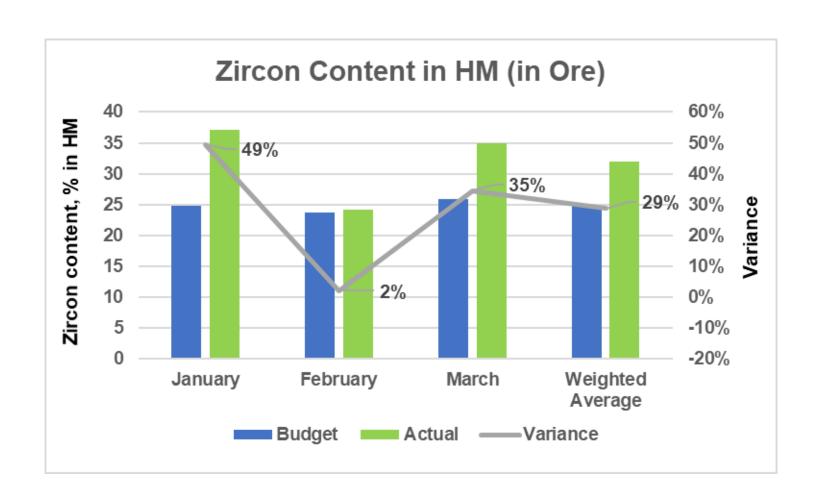
## **Boonanarring – HM Ore Grade**





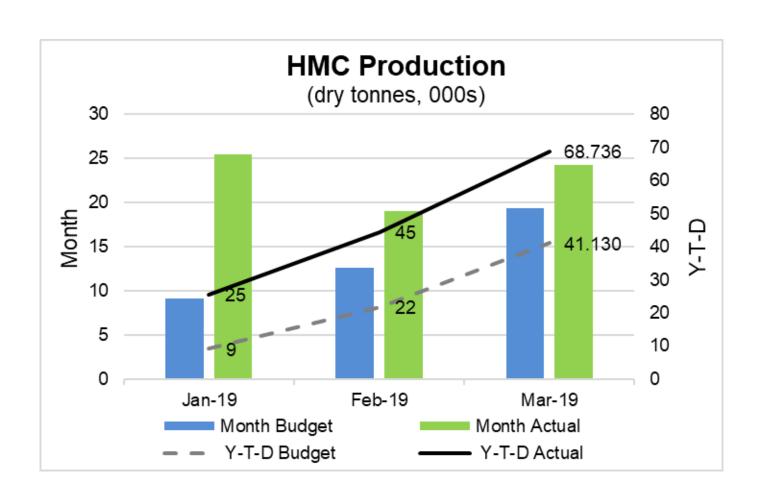
## **Boonanarring – Zircon Grade in Ore HM**





## **Boonanarring – HMC Production**



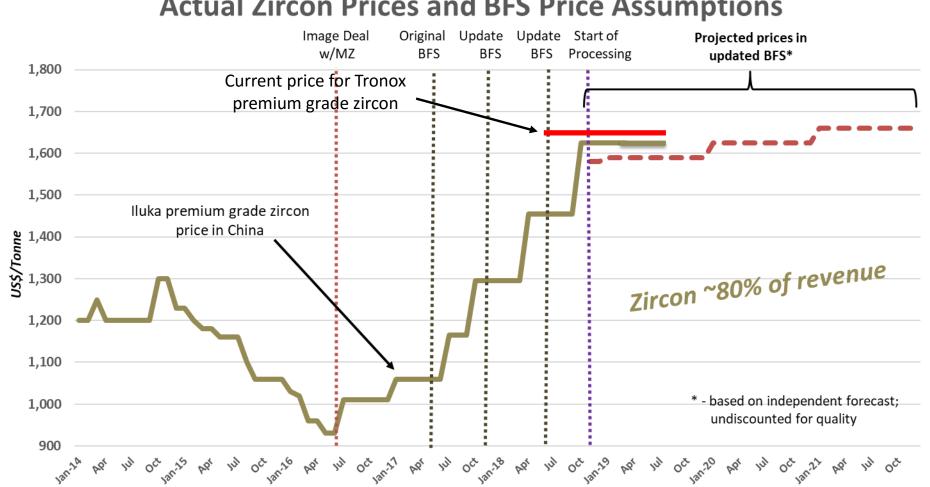




#### Zircon Prices – Actual and Forecast







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



## **Upside Potential**



#### **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**



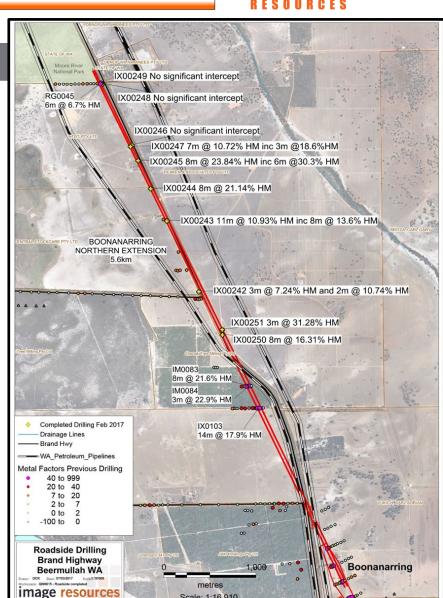
#### **ASX - 13 March & 26 June 2017**

#### **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).

Boonanarring 43.8Mt; 5.6%HM; 20.7% Zr+Ru

Atlas 18.1Mt; 6.0%HM; 15.8% Zr+Ru

Red Gully 6.0Mt; 7.7% HM; 15.5% Zr+Ru

Regans Ford 9.9Mt; 9.6%HM; 14.3% Zr+Ru

Cooljarloo North 15.2Mt; 5.3%HM; 14.0% Zr+Ru

Gingin South 8.1Mt; 6.1%HM; 13.5% Zr+Ru Gingin North 2.4Mt; 5.5%HM; 9.1% Zr+Ru

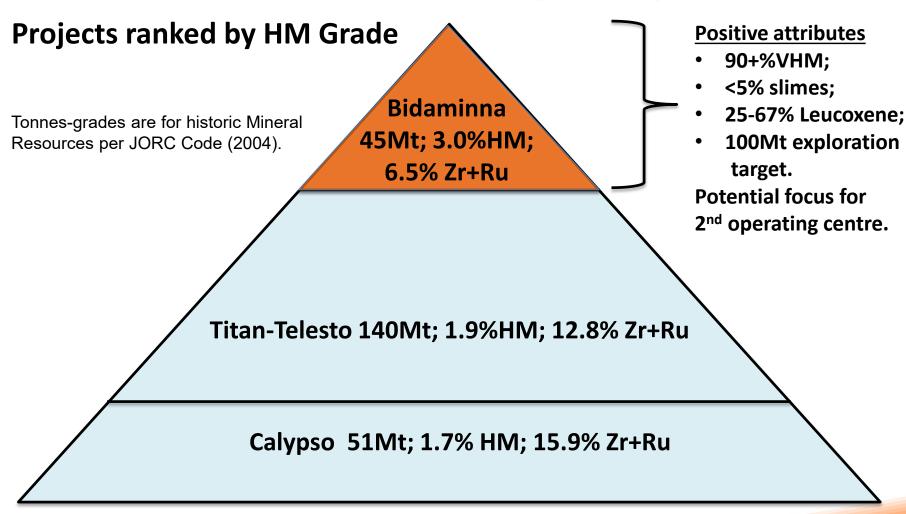
Total 103Mt; 6.2%HM; 17% Zr+Ru

BFS assumes mining at Boonanarring followed by mining at Atlas. Other projects can be added after further drilling and studies.

## **Projects Pyramid – Dredge Prospects**



Mineral Resources – Accessible by Dredge Mining



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

## **Potential Royalty from Tronox**

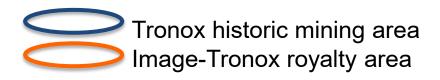


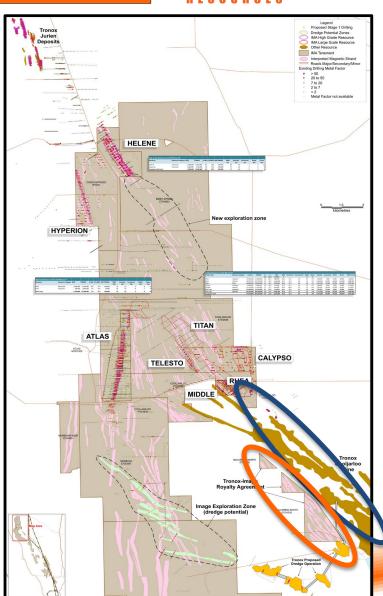
#### Royalty agreement in place as of 2014

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

Avg. HM Grade	<u>Royalty</u>
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.







## Image Corporate Snapshot



#### Diverse and experienced Board and Management

ASX Code:

**Share Price:** 

12-Month Price Range:

Shares on Issue:

Market Cap:

Cash on hand:

Debt:

**Enterprise Value:** 

Top 20 Shareholders:

#### **IMA**

A\$0.20\*

A\$0.10-0.21

964m

A\$192m\*

A\$7.4m\*\*

A\$65.1m\*\*\*

A\$250m

69%

#### **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

IMA
— S&P/ASX 300
Metals & Mining

80%
60%
40%
40%
May
June July August September October November December January Pebruary March April

<sup>\* -</sup> as at 29 April 2019

<sup>\*\* -</sup> as at 31 March 2019 (includes term deposits) and excludes \$10m from HMC shipment #3)

<sup>\* \* \* -</sup> as at 31 March 2019



## Use of Solar Energy



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



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