## **Boonanarring Mineral Sands Project:** The next cab off the mineral sands rank?

17<sup>th</sup> Annual Informa Mineral Sands Conference



15-16 March 2017 Hyatt Regency Perth Perth WA 6005

Patrick Mutz Managing Director Image Resources NL ASX: IMA



### **Forward Looking Statement**

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Certain statements made in connection with this communication, including, without limitation, those concerning the economic outlook for the mining industry, expectations regarding prices, exploration or development costs and other operating results, growth prospects and the outlook of Image's operations contain or comprise certain forward looking statements regarding Image's operations, economic performance and financial condition. Although Image believes that the expectations reflected in such forward-looking statements are reasonable, no assurance can be given that such expectations will prove to be correct.

Accordingly, results could differ materially from those set out in the forward looking statements as a result of, among other factors, changes in economic and market conditions, success of business and operating initiatives, changes that could result from future acquisitions of new tenements, the risks and hazards inherent in the mining business (including industrial accidents, environmental hazards or geologically related conditions), changes in the regulatory environment and other government actions, risks inherent in the ownership, exploration and operation of or investment in mining properties, fluctuations in prices and exchange rates and business and operations risks management, as well as generally those additional factors set forth in our periodic filings with ASX. Image undertakes no obligation to update publicly or release any revisions to these forward-looking statements to reflect future events or circumstances or to reflect the occurrence of unanticipated events.



#### **Image Resources NL**

ASX: IMA

Advanced mineral sands exploration company with extensive tenement holdings hosting substantial high-grade mineral resources and ore reserves in the North Perth Basin in Western Australia.

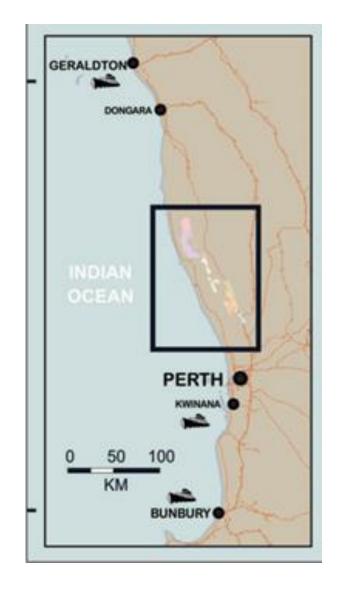
The Company is actively focused on fast-tracking the development of its 100%-owned, high-grade and high-zircon flagship Boonanarring mineral sands project and targeting transitioning to mineral sands producer in early 2018.

### **Project Location**

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- 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.



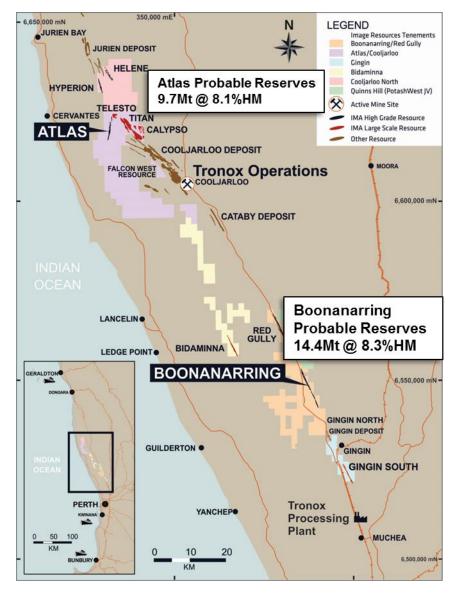
### **Mineral Resources and Ore Reserves**

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## 

### **QUALITY RESOURCES/RESERVES**

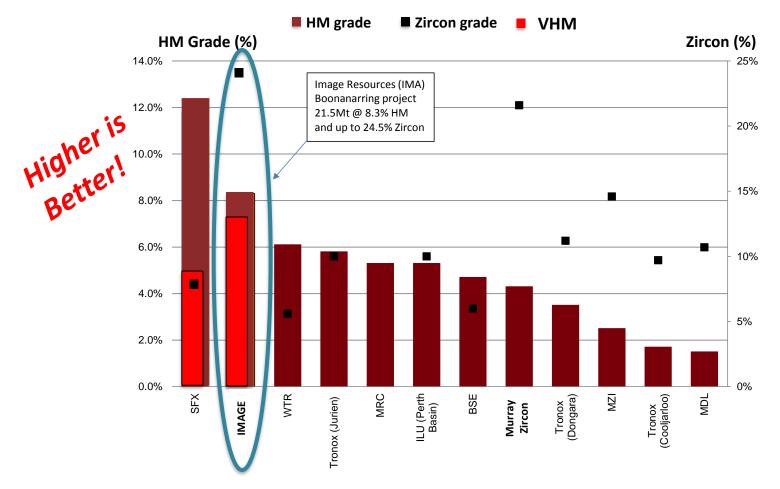
- Boonanarring Mineral Resources
  (2017) JORC Code (2012);
  - 43.7M tonnes at 5.6%THM;
  - 18% zircon in THM;
  - 72% 'Valuable' HM in THM
- Boonanarring Ore Reserves
  (2013) JORC Code (2004);
  - 14.4M tonnes at 8.3%THM;
  - 24% zircon in THM;
  - 78% 'Valuable' HM in THM
    (2017) JORC Code (2012);
  - To be announced soon.



**Boonanarring Project Comparison** 

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#### High HM and Zircon grades relative to peers



Source: Released on 4th May 2015 - Morgan's Research Note

### High HM, VHM and very high zircon grade at Boonanarring

Probable Reserves	Ore	НМ	Slimes	VHM	Zircon	Rutile	Leucoxene	Ilmenite
	(Mt)	(%)	(%)	(%)	(%)	(%)	(%)	(%)
Boonanarring <sup>1</sup>	14.4	8.3	17.0	80	24	3	6	47
Atlas <sup>1</sup>	9.6	8.1	15.5	74	11	7	1	55
TOTAL	24.0	8.2	16.4	78	19	5	4	50

Resources	Ore (Mt)	HM (%)	Slimes (%)	VHM (%)	Zircon (%)	Rutile (%)	Leucoxene (%)	llmenite (%)
Boonanarring <sup>3</sup>	43.8	5.6	18	72	18	3	2	49
Atlas <sup>1</sup>	10.8	7.9	15.7	76	10	8	5	52
Red Gully <sup>1</sup>	6.0	7.7	11.2	90	12	3	8	66
Gingin North <sup>1</sup>	2.4	5.5	15.0	77	6	3	10	57
Cooljarloo <sup>2</sup>	191.6	1.9	17.8	85	10	1	2	71
Chandala / Gingin <sup>1</sup>	8.1	6.1	7.3	89	8	5	10	65
Cooljarloo North <sup>1</sup>	15.2	5.4	18.8	81	10	4	1	67
<b>Bidaminna</b> <sup>1</sup>	44.6	3.0	3.6	96	5	1	7	82
TOTAL	300.2	3.2	15.1	86	10	2	3	70

1 = 2.5% cut-off. 2 = 1.0% cut-off. 3 = 2.0% cut-off

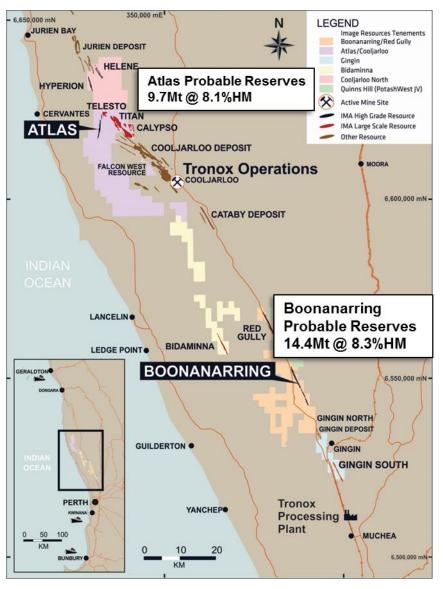
### **Mineral Resources and Ore Reserves**

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LOCATION QUALITY RESOURCES/RESERVES

### UPSIDE POTENTIAL

1000 km<sup>2</sup> with significant potential for extensions of known resources and discovery of new deposits;



### **Boonanarring Deposit Extensions**

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#### Seeking to extend mine life beyond 10 years – 60km prospective target zone

#### **Boonanarring North**

Targeting potential 5.6km extension; drilling1.3km north of the deposit includes14m @ 18% HM & 8m @ 22% HM; 50 drill holes planned (subject to access).

#### **Boonanarring to Gingin North**

Potential for 3.2km extension south of the Boonanarring deposit which is 13.2km long.

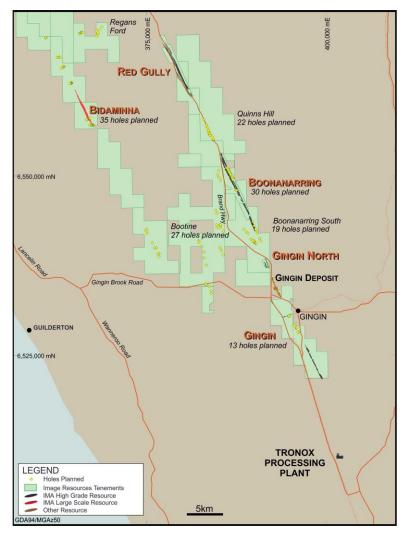
#### Gingin

Targeting a further 1.3-1.5mt HM @ 5-6% HM; 7km strand; previous drilling includes 6m @ 10% HM from 27m;. Further drill holes planned to follow up results along 7km strand.

#### **Red Gully**

Infill drilling proposed to increase grades and upgrade resource category in the southern half of deposit. Zircon grades elevated at 12-15%. The deposit is shallow starting at 15 meters.

Note: The potential quantity and grade of the Exploration Targets are conceptual in nature, there has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.



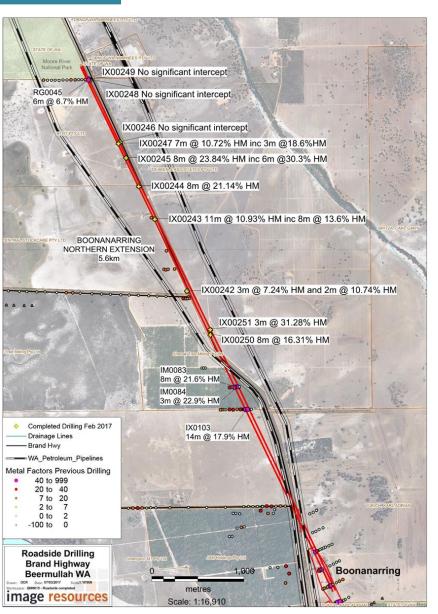
### **Boonanarring Deposit Extensions**

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#### ASX Announcement 13 March 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% M in IX00244; and
  - 8m @ 16.3% HM in IX00250.



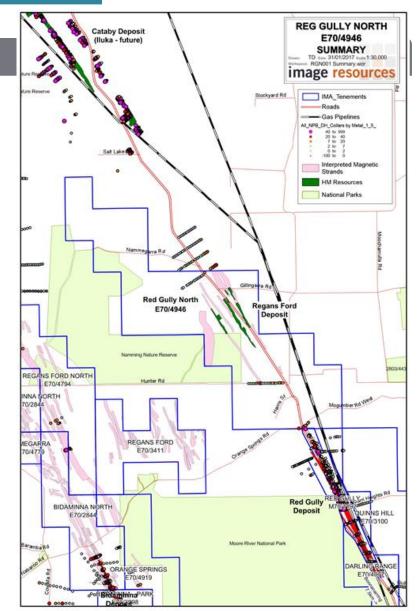
### **Upside Potential**



#### ASX Announcement 20 February 2017

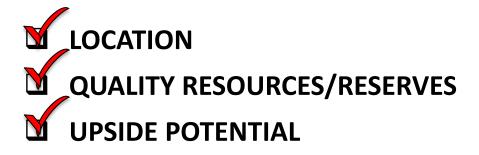
Application Filed for New ELA70/4946 (83 sq. km)

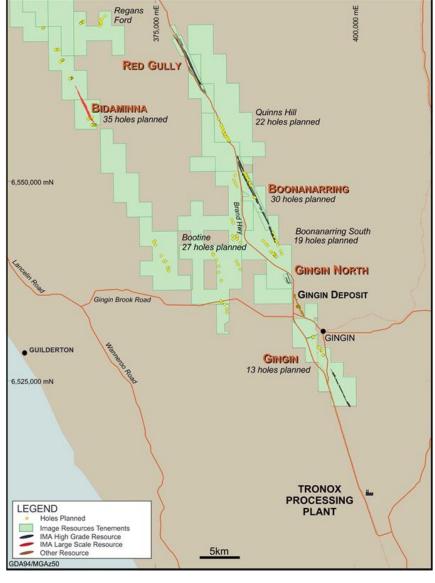
- Area will include 100% of Reagans Ford North heavy mineral deposit;
- Estimated Mineral Resources of 9.9M tonnes at 9.7% HM (JORC 2004);
- Ground magnetic surveys indicate a further 14km of potential target area beyond current 8.5km mineral resource strike length.



### **Upside Potential**

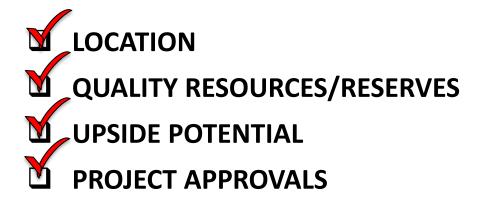
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### **Project Approvals**





- Mining Lease & General Purpose Lease
- Part IV, Environmental Protection Act (WA) PER
- EPBC Act (Commonwealth)
- Landowner agreements
- Groundwater Abstraction Licence (Dept of Water and Dept Parks & Wildlife)
- Project Management Plan/Radiation Management Plan 80% Complete
- Works Approval (EPA) 50% Complete
- Mining Proposal (includes Mine Closure Plan) 70% Complete

### **Company Highlights**

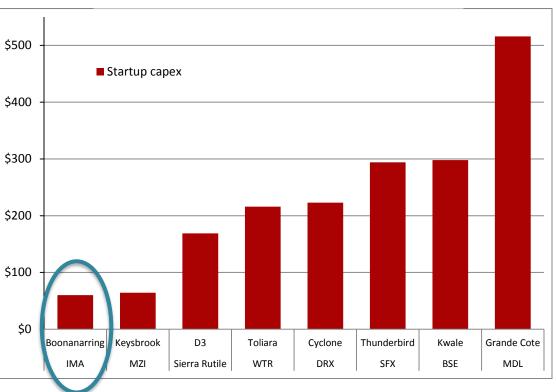
LOCATION QUALITY RESOURCES & UPSIDE POTENTIAL

PROJECT APPROVALS

### FEASIBILITY STUDY

- Original FS announced 16 July 2013 with \$145m NPV and only \$64m capital;
- Updating Study to bankable standard is in final stages.

#### Project Capital Cost (A\$million)







## Australia's next mineral sands miner?

**Key Growth and Transition Milestone** 

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### 8 June 2016

### **Equity Transaction**

completed with

### **Murray Zircon Pty Ltd**

#### and

### Guangdong Orient Zirconic Ind Sci & Tech Co., Ltd

Completion of transaction allows Image to tick the boxes on a number of critical project development issues and focus squarely on a fast-track path to production.

### Who is Murray Zircon Pty Ltd?



- Owner/operator Mindarie Minerals Sands Project, Murray Basin, South Australia;
- Successfully redeveloped, commissioned and operated Mindarie 2011-2015 followed by rapid and successful mine rehabilitation;
- Developed strong relations with landowners, community, regulators and government; earning its social licence to operate in South Australia;
- Developed a number of innovative approaches to productivity and cost control;
- Operationally proven wet plant and equipment of right design and capacity;
- Demonstrated project development and operations management experience;
- > 79% owned by **Orient Zirconic**.

### Who is Orient Zirconic?



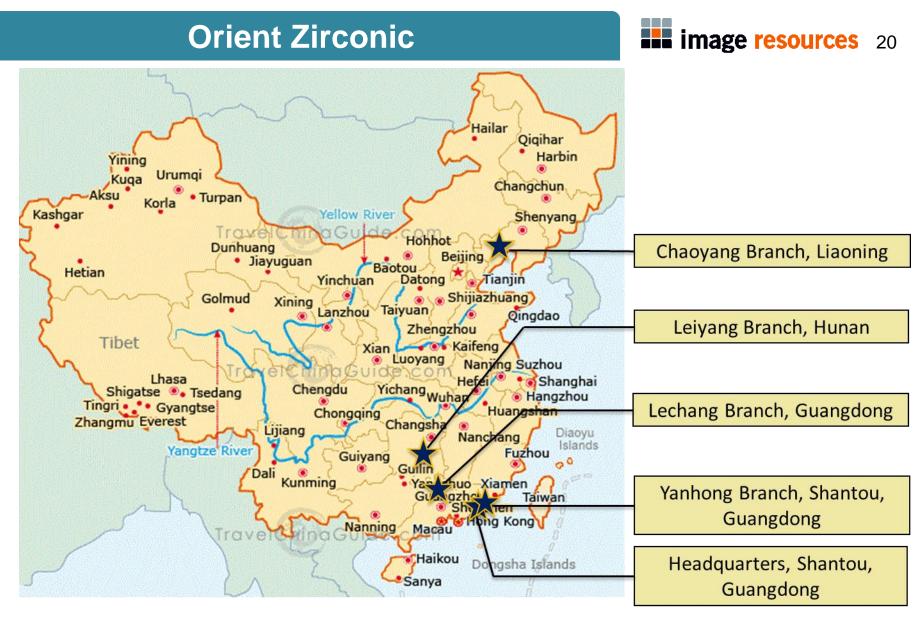
- One of China's largest zircon processing companies with one of the most diverse range of zirconium products in the world;
- Global sales of zirconium products ranging from bulk commodities to nuclear grade zirconium sponge for nuclear reactors;
  - Products used in special ceramics, biological ceramics, optical communication devices, solid-fuel battery, aerospace fields, electronic ceramics, jewel, ceramic glaze colour, high fireproofing, and many new materials. Bulk commodities including zirconium oxychloride, zirconium dioxide, fused zirconia and others.
- Listed on the Schenzen Stock Exchange under ID 0002617;
- Market capitalisation approximately RMB8.1billion (AUD1.5billion);
- Approximately 1,200 employees across five factory locations across China;

### **Orient Zirconic**





Orient Zirconic headquarters, Shantou, Guangdong, China



Orient Zirconic factory locations in China

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## CAPITAL EQUIPMENT

 All plant & equipment and internal infrastructure items necessary to construct a complete heavy mineral recovery operation; from slurry unit in the mine to wet concentration plant for HMC.

## SHORT TERM FUNDS

\$4M Short-Term loan funds with very favourable terms;

## OFFTAKE AGREEMENT

 Contracted off-take agreement with Orient Zirconic for 90% of zircon at market price (~70% of revenue);

## WORKING CAPITAL

 2ndary working capital loan funds of US\$8M following First Production;

### **Key Benefits of Transaction**



## MINERAL SEPARATION SERVICES

- Access to mineral separation services in China;
- Purchase option for a Mineral Separation Plant in SA; and
- Local toll-processing option;

## **CORNERSTONE SHAREHOLDER**

New cornerstone shareholder with 20 years zircon processing and global zirconium products sales;

## INDEPENDENT CHAIRMAN

New very experienced independent Chairman;

### **NEW DIRECTORS WITH PRODUCTION EXPERIENCE**

 3 new Board members including Managing Director, all with mineral sands operations experience;

### Key Benefits of Transaction

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## EXPERIENCED MANAGEMENT

 Project development and operations experienced senior management team;

### MINORITY SHAREHOLDER PROTECTIONS

- Contracted protections for two years;
- No interference with 3 incumbent Directors or replacements;
- No vote on merger related issues;
- Mandatory equity raising support for 1 year; and
- Additional board seat for shareholder with >10% shareholding.

## LOW CAPITAL COSTS

 Significantly lower remaining capital requirements with acquisition of wet plant and equipment.

### Plant and Equipment (select examples)

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Wet Concentration Plant



Mineral Separation Plant (Option)



Slurry Booster Stations & pipelines





Power poles, wires & transformers



Mine Slurry Unit

**HMC Stackers** 

Plus much, much more.



#### Targeting first production in early 2018\*

					2016						2017											2018							
	Apr	May	Jun	Jul	Aug	Sep	Oct	Νον	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Νον	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	
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\* Conditional on feasibility results

#### Targeting first production in early 2018\*

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\* Conditional on feasibility results

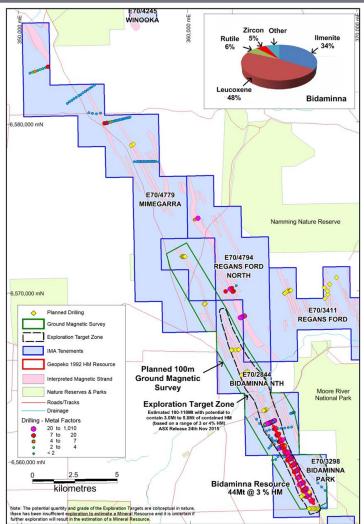
### **Bidaminna Project**

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#### Bidaminna Park (E70/3298), Bidaminna North (E70/2844), Mimegarra (E70/4779)

- Potential high volume dredge mining target; mineralisation 15-35 metres thick and located below water table; low slimes (3-4%); strip ratio <1 and coarse grain size (105 microns);</li>
- Atypically high leucoxene grades ranging 27-65% of THM; increasing to the north;
- higher in-situ value per tonne or ore compared to typical ilmeniterich assemblage;
- Historic Mineral Resources 5.5km in length; 44Mt at 3% THM
- Exploration Target to the north could add another 100-110Mt at 3-4% THM; potential to contain 3-4Mt of HM;
- A further 14km of potential mineralisation extends to the north identified by preliminary magnetic surveys.
- Detailed ground magnetics surveys currently underway to determine further extents of mineralisation in advance of likely follow-on drilling programme.

Note: The potential quantity and grade of the Exploration Targets are conceptual in nature, there has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.



### **Tronox Royalty**

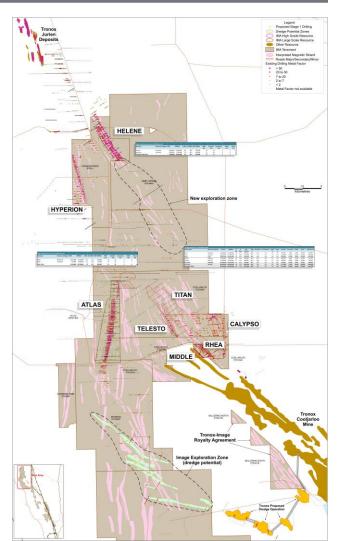
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### Potential near term royalty cash flows from Mullering

#### Royalty deal and extension potential

- A\$50,000 cash payment has been received;
- Sliding-scale royalty:
  - at 2.5% average grade the royalty will be 1.25%
  - at 3.0% average grade the royalty will be 2.50%
  - at 3.5% average grade the royalty will be 3.75%
  - at 4.0% average grade the royalty will be 5.00%

Arrangement is first of possible future deals with Tronox or others based on extensive dredge potential zone within Image's tenements in the vicinity of Tronox's dredge operations.

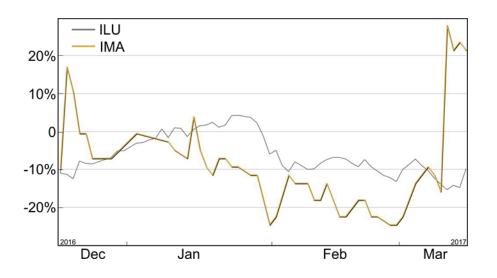


### Image Corporate Snapshot

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#### Diverse and experienced Board and Management

Share Code:	IMA
Share Price:	A\$0.06*
12 Month Price Range:	A\$0.04 - 0.11
Shares on Issue:	537.6m
Market Cap:	A\$32m*
Cash on hand:	A\$6.1m**
Debt (short-term):	A\$4.0m
Top 20 Shareholders:	68%



#### **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

#### Key Management

Patrick Mutz – CEO George Sakalidis – Exploration Director John McEvoy – Chief Financial Officer Todd Colton – General Manager – Dev.

> \* - as at 14 March 2017 \*\* - as at 28 February 2017

#### COMPETENT PERSON'S STATEMENT – EXPLORATION RESULTS, MINERAL RESOURCES AND ORE RESERVES

Information in this report that relates to Exploration Results, Mineral Resources is based on information compiled by George Sakalidis BSc (Hons) who is a member of the Australasian Institute of Mining and Metallurgy. At the time that the Exploration Results, Mineral Resources and Mineral Reserves were compiled, George Sakalidis was a director of Image Resources NL. He has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. George Sakalidis consents to the inclusion of this information in the form and context in which it appears in this report.

The information in this report that relates to the estimation of Mineral Resources for the Boonanarring Project is based on information compiled by Mrs Christine Standing, who is a Member of the Australasian Institute of Mining and Metallurgy (AusIMM) and the Australian Institute of Geoscientists (AIG). Mrs Standing is a full-time employee of Optiro Pty Ltd and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which she is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mrs Standing consents to the inclusion in this report of the matters based on her information in the form and context in which it appears.

For further information

# image resources

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