



# ***MZI Resources Limited***

## **121 Mining Investment Conference Hong Kong**

17-18 October 2017

**Martin Purvis – CEO & Managing Director**



# Important Notice



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## Forward-Looking Statements

This presentation contains forward looking statements concerning the operations and projects owned by MZI Resources Ltd. Statements concerning mining reserves and resources may also be deemed to be forward looking statements in that they involve estimates based on specific assumptions. Forward-Looking statements are not statements of historical fact and actual events and results may differ materially from those described in the forward looking statements as a result of a variety of risks, uncertainties and other factors. Forward Looking statements are based on Management's beliefs, opinions and estimates as of the dates the forward looking statements are made and no obligation is assumed to update forward looking statements if these beliefs, opinions and estimates should change or to reflect other future developments.

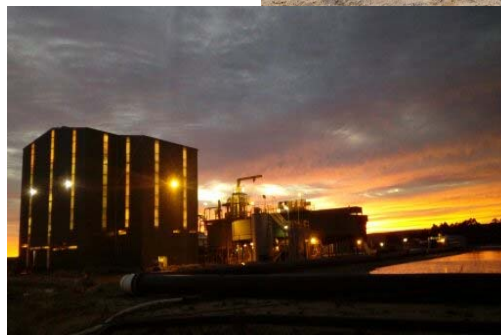
## Competent Person's Statement – Exploration Results

The information in this report that relates to exploration results is based on information compiled or reviewed by Mr Stephen Harrison BSc (Hons) who is a member of the Australia Institute of Geoscientists. Stephen Harrison is a full time employee of MZI Resources Ltd. Stephen Harrison 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'. Stephen Harrison consents to the inclusion of this information in the form and context in which it appears in this report.

# Introducing MZI Resources



- ASX listed mineral sands producer.
- Most recent addition to “Exclusive Club” of mineral sands producers.
- Project pegged in 2000.
- Production started in November 2015.
- Two year, two stage commissioning process.
- Project now tracking original design parameters ~4.5Mtpa.
- Implementation plans underway to modify plant and process to lift “Steady State” production rate to 5.25Mtpa.





# Board & Senior Management



**Martin Purvis**  
Managing Director



**Rodney Baxter**  
Independent  
Chairman



**Stephen Ward**  
Non-Exec Director



**Maree Arnason**  
Non-Exec Director



**Ronald Beevor**  
Non-Exec Director



**Chi To (Nathan)  
Wong**  
Non-Exec Director



**John Traicos**  
Legal Manager &  
Company Secretary



**John Westdorp**  
Chief Financial  
Officer



**Kevin Watters**  
Head of Operations



**Graham O'Grady**  
General Manager –  
Marketing



**Jordeana Cain**  
External Affairs  
Manager



**Steve Harrison**  
Chief Geologist

# Keysbrook Investment Case (I)



## Location

- Logistics ~70km south of Perth.
- Power / Water / Infrastructure.
- Very favourable and stable geopolitical setting in a “mining state”.
- Regional mining culture and skills base.
- Low population density.
- Strong investment climate for resources projects in WA.
- Daily DIDO for local workforce.

## In Production

- De-risked funding and commissioning hurdles.
- New mineral sands projects:
  - Harder to find
  - Harder to fund
  - Harder to get away

## Mineral Assemblage and Deposit Characteristics

- $\text{TiO}_2$  content presented as higher value leucoxene products.
- Ancient dunes revealed at surface for lower mining costs.
- Niche market attractiveness.



# Keysbrook Investment Case (II)



## Sustainable Business Enterprise

- **Soft Environmental Footprint**
  - Chemical free processing
  - Recycle >85% of annual water requirements
  - No residual waste from mining/processing
  - No permanent mining voids
  - Disturbed areas rehabilitated within 2 to 3 growing seasons
  - Rehabilitation to better than pre-mining state
- **Community**
  - 90% of staff reside within 30mins of site
  - Multiple local service providers and contractors
  - Local funding initiatives through Keysbrook Community Consultation Group
- **Robust Mine Life**
  - +10 year Proved Reserve Life
  - +25 year Resource Potential
  - Significant Regional Exploration Prospects



Mine Open Day



Newly Rehabilitated Land

Resource Capital Funds	48.76%
Rich Mark Development (Group) Pty Ltd	5.49%
MZI KMP	1.72%
Top 20 Shareholders	75.70%
Total No. of Shareholders	1,992

# Market Attractiveness



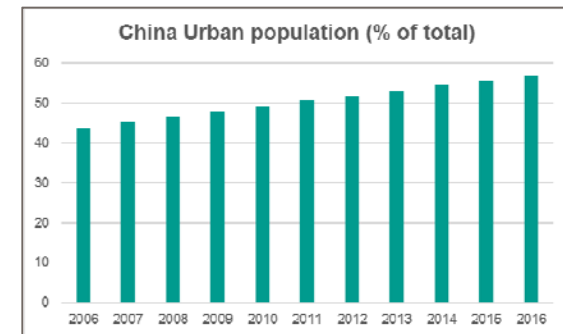
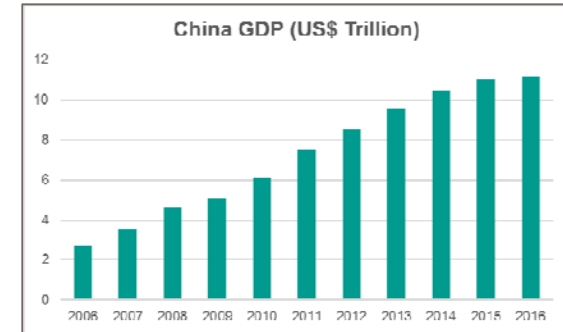
Key ingredients in everyday products for which global demand is growing strongly.

## TiO<sub>2</sub> Leucoxene L88 and L70 Products

- Everyday pigments (paints, plastics, coatings, paper...)
- Industrial uses ~ welding rods
- Titanium metal applications ~ aerospace, industrial, medical
- 3D Printing

## Zircon

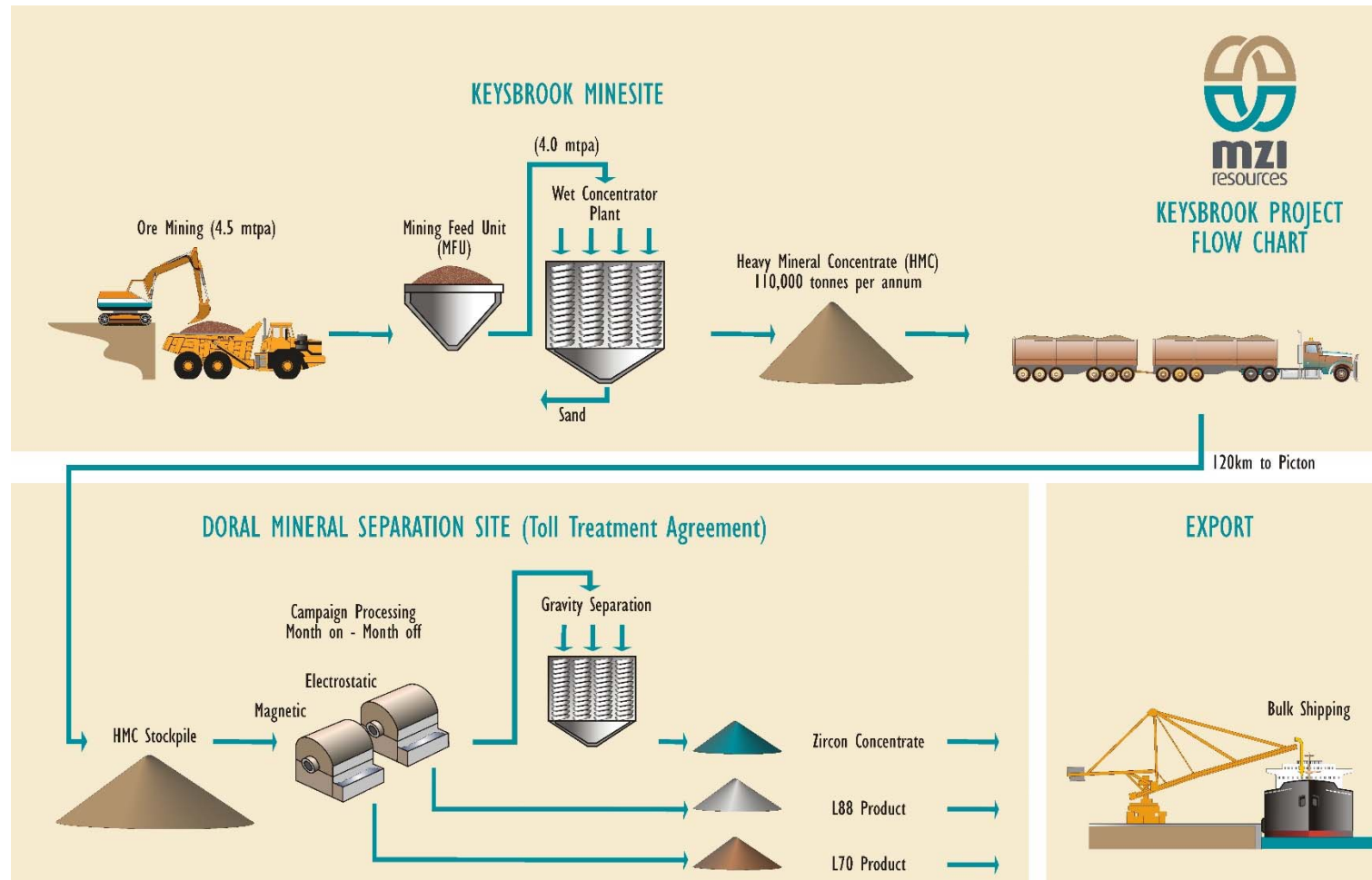
- Architectural ceramics (tiles, bathroom fixtures)
- High performance refractories (kiln/furnace linings)
- Friction abrasives (brakes)
- Precision casting (auto manufacturing)
- Digital printing inks
- Zirconium metal (nuclear fuel rods)



Source: The World Bank



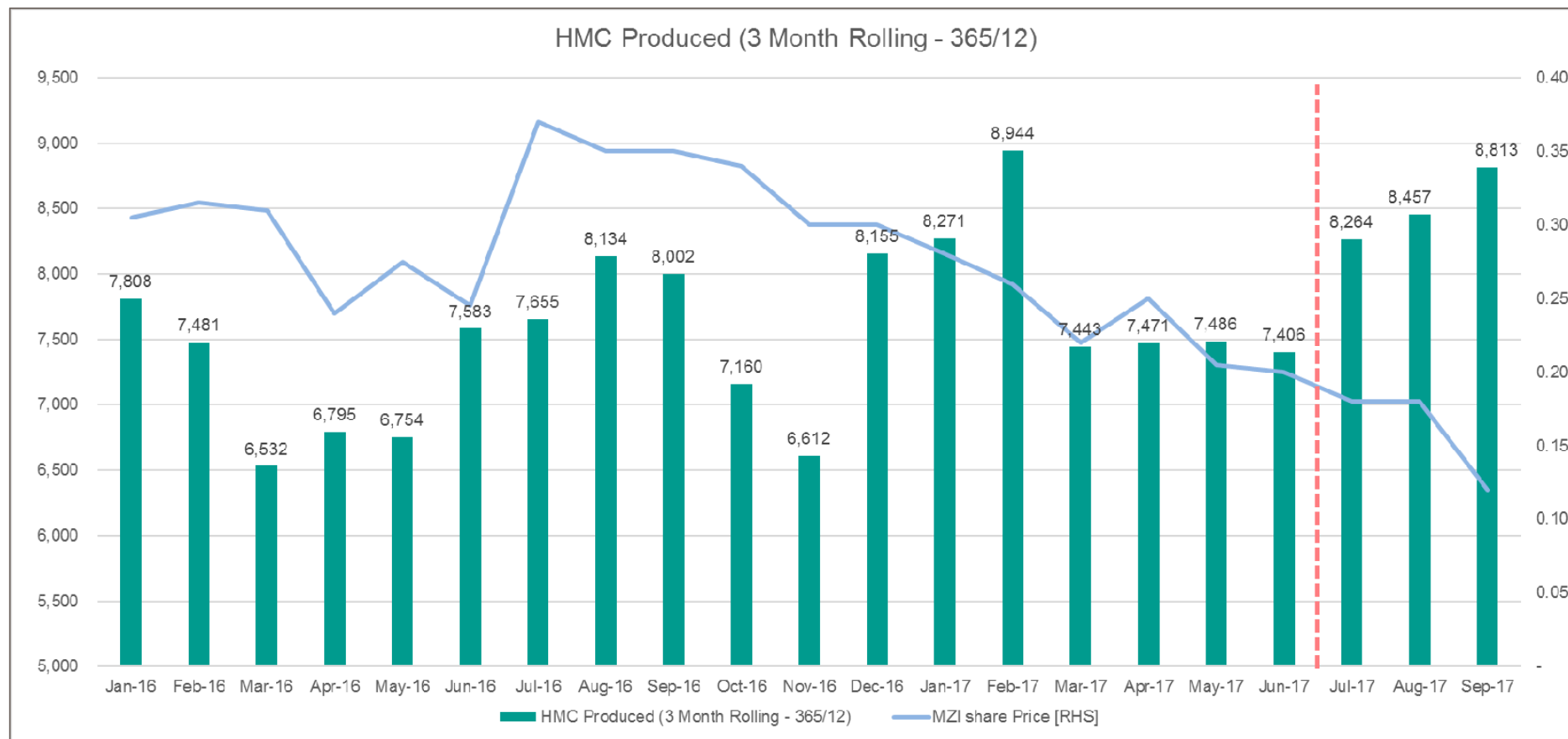
# Flow Chart



**5.25Mtpa Implementation Plan underway at a capital cost of approximately \$5 million.  
Modified “Steady State” targeted for Q4 FY2018.**



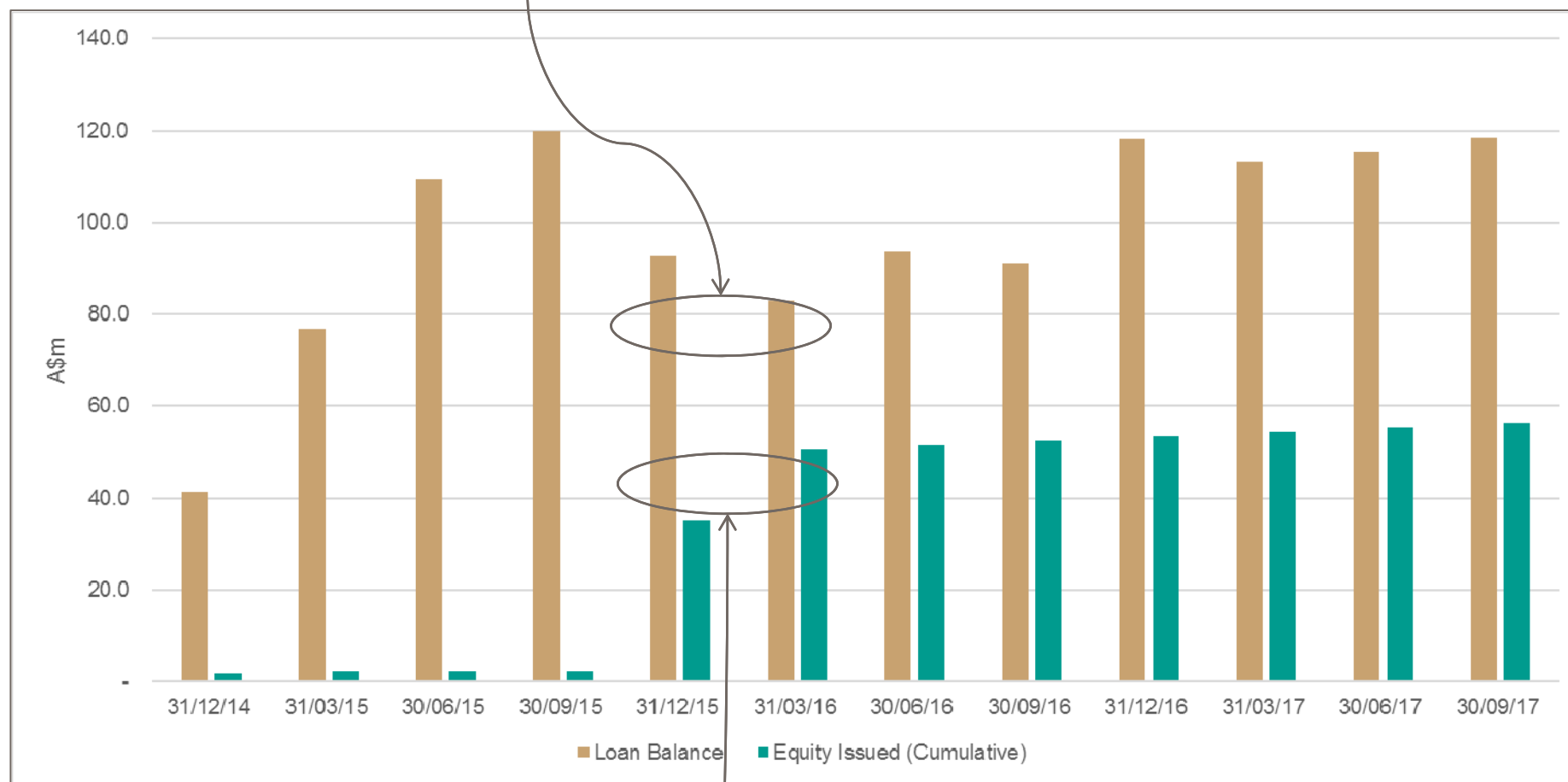
# Typical Ramp-Up Challenges



# Funding Profile



## Completion of Construction and First Stage Commissioning

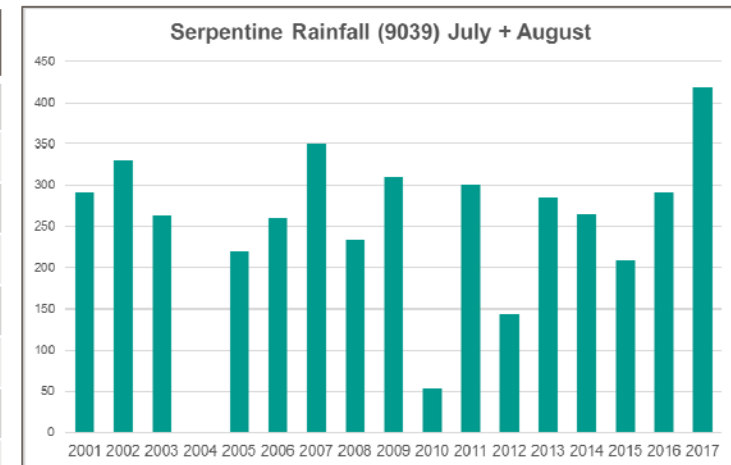


Equity Raise Post Construction to Repay Bridge Facilities

# Statistics and Targets



		FY18	Q4 FY18	FY17 Actual
Mining/MFU feed (annualised)	Mdtpa	4.9	5.25	4.0
Mined Grade	%HM	2.9	2.7	2.67
HMC Produced	kdt	120-130	30-33	93
HMC grade	%HM	84	85	79.7
HMC Recovery	%	76	79	69.3
Saleable products	kdt	95-97	27-29	62
C1 unit cash operating costs	\$/dt	470-485	385-400	668^
Total (all-in) unit cash operating costs*	\$/dt	680-695	550-565	1040^
Average Realised Price (all products)	A\$/dt sold	700-715	735-750	635



Source: Bureau of Meteorology

\*Total cash costs include C1 costs, interest, royalties, inventory movement, leases, MZI corporate costs and financing fees.

^FY2017 costs are unaudited

## Strong Progress in September Quarter 2017

- Operational performance tracking to meet FY 2018 guidance, despite unusually heavy rainfall during quarter.
- Quarterly HMC recovery increased to 73%, tracking to meet FY2018 target 75.9%.
- L88 recovery of 69.3% achieved for September – within 2% of design.
- Record quarterly HMC production of 26,669t.

Detailed September quarter information, including cost and revenue information, will be detailed in the September Quarter report scheduled for release at the end of October.

# Summary and Key Takeaways

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- Demand and prices for mineral sands products are recovering and rising accordingly.
- MZI well positioned to increase supply into this positive trend.
- Limited new “mine-ready” supply to satisfy demand growth for higher value products in next 2-3 years.
- Resource potential provides MZI with a long term platform for growth.
- Unique product mix provides an attractive, high  $\text{TiO}_2$  proposition to customers seeking an attractive, reliable supply from an Australian producer.
- Clear pathway and plan to achieve 5.25Mtpa performance targets by focusing on operational efficiency, continuous improvement and simple modifications.
- New Keysbrook operating plan will deliver significant cost reductions, higher production and lead to sustainable positive cashflow in FY2018.
- Unique “Steady State” business emerging with strong environmental credentials backed by positive community and local government support.



**Thank You**

# Appendices

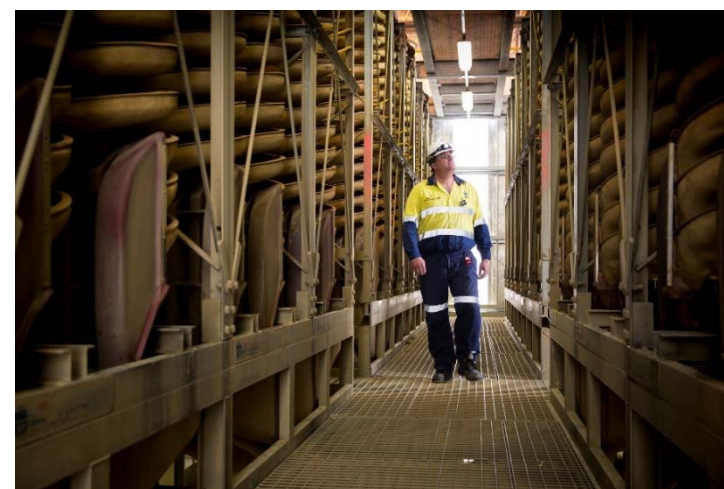
# Operating Plan to Deliver Step Change in Performance (App 1)



- Operational review identified to support Debt Restructuring Plan and enhance Plant Capacity.
- Increase in ore throughput to 5.25Mtpa ~ offsets high proportion of fixed costs (70%).
- 25-30% reduction in unit costs expected in FY2018 vs FY2017.
- Saleable production to increase by +50% in FY2018 to circa 96,000t.
- “Steady State” production and costs targeted by Q4 FY2018.
- Annualised HMC production of +120,000tpa and saleable production of +100,000t at “Steady State”.
- Modest operating surplus forecast for FY2018, and attractive annualised operating cashflow expected from Q4 FY2018.
- Financial restructure targeted for completion by early 2018.

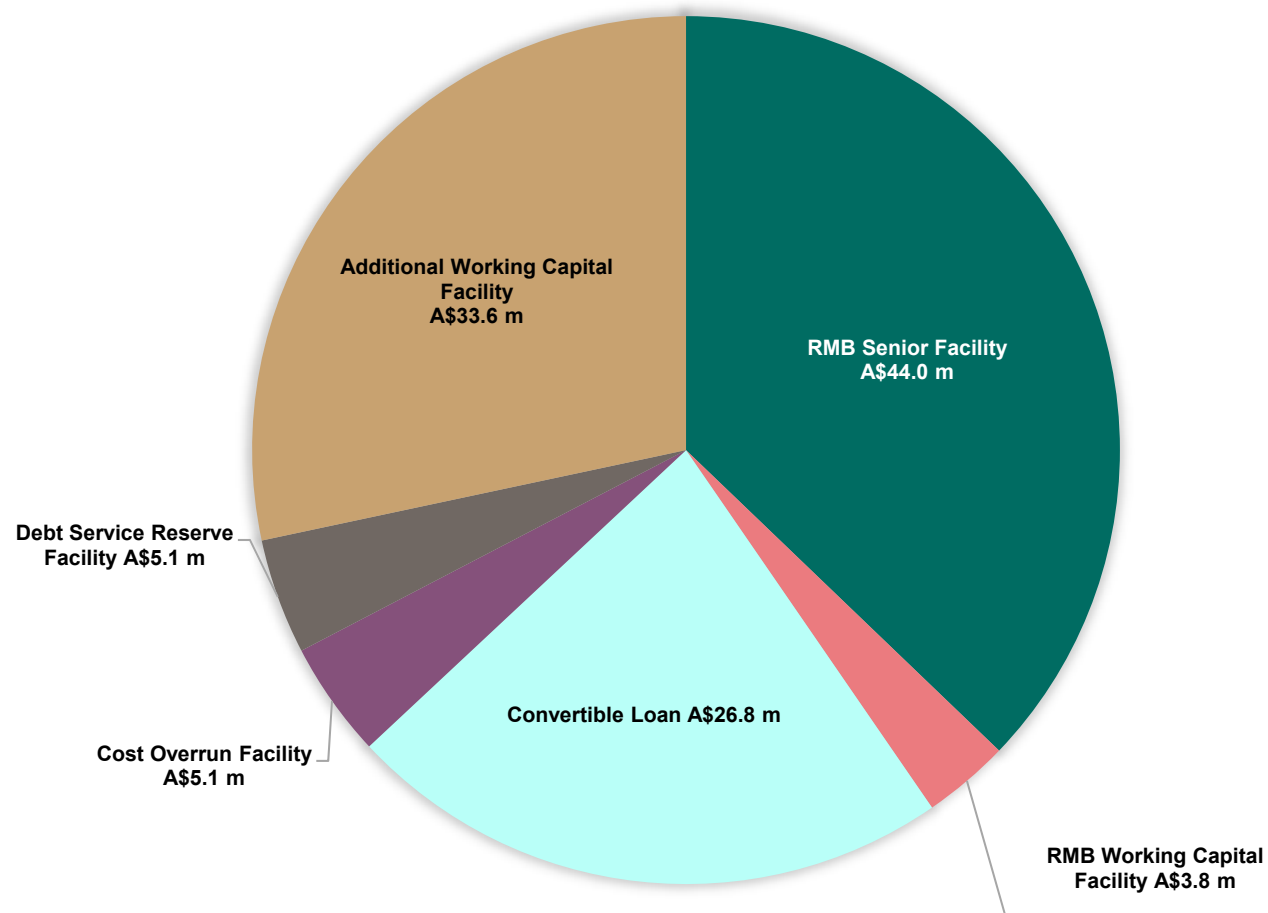


New MFU in Operation



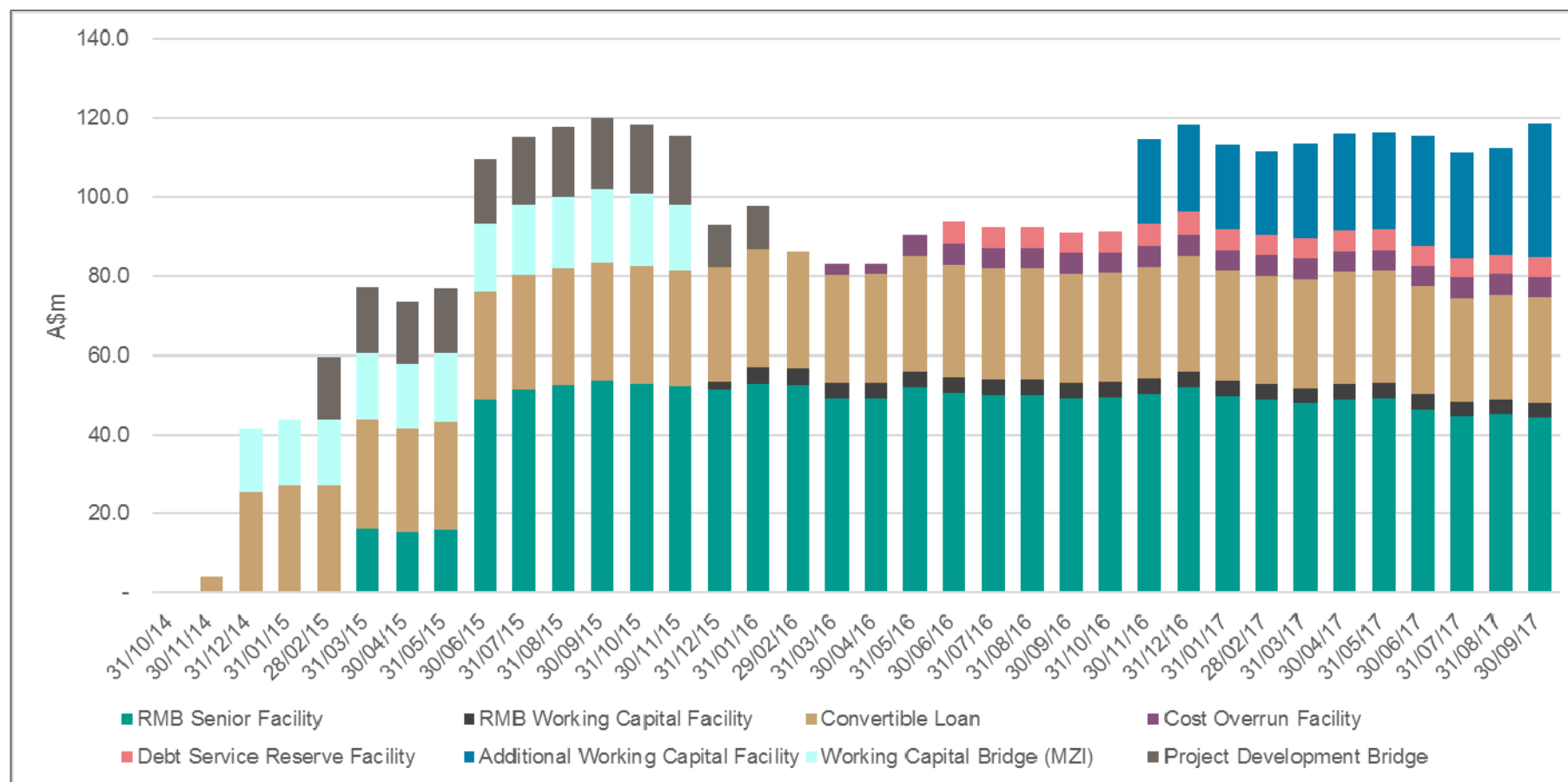
WCP Spirals

# Loan Balance – September 2017 (App 2)





# Loan Balance Structure (App 3)



# JORC Mineral Resources (App 4)



**Table 1: Keysbrook Project –Global Mineral Resources (above a 1% THM cut-off grade and below a 20% slimes grade)**

Category	Tonnes (Mt)	Total Heavy Mineral (%)	Heavy Mineral (kt)	Clay Fines %
Measured	74.3	2.2	1,630	8.7
Indicated	21.1	2.1	450	10.5
Inferred	51.4	1.7	860	12.4
<b>Total</b>	<b>146.8</b>	<b>2.0</b>	<b>2,940</b>	<b>10.3</b>

**Table 2: Keysbrook Project Component Resource Statement at 30 June 2017**

Class	30 June 2017						
	Ore	THM	Cont. HM	Slimes	L70	L88	Zircon
	Mt	%	kt	%	%	%	%
Keysbrook Deposit							
Measured	74.3	2.2	1,630	8.7	23.9	58.1	12.1
Indicated	7.5	2.0	150	9.6	34.4	48.4	11.3
Inferred	4.4	2.4	110	10.5	31.8	50.2	11.7
<b>Total</b>	<b>86.2</b>	<b>2.2</b>	<b>1,890</b>	<b>8.9</b>	<b>25.2</b>	<b>56.9</b>	<b>12.0</b>
Yangedi Deposit							
Inferred	47.0	1.6	750	12.6	59.0	25.4	8.9
<b>Total</b>	<b>47.0</b>	<b>1.6</b>	<b>750</b>	<b>12.6</b>	<b>59.0</b>	<b>25.4</b>	<b>8.9</b>
Railway Deposit							
Indicated	13.6	2.2	300	11.0	-	-	-
<b>Total</b>	<b>13.6</b>	<b>2.2</b>	<b>300</b>	<b>11.0</b>	<b>-</b>	<b>-</b>	<b>-</b>

Notes relevant to Tables 1 and 2:

1. Reported above a cut-off grade of 1% THM and below a cut-off of 20% clay fines.
2. Mineral Resources are classified and reported in accordance with the guidelines of JORC Code 2012 (Keysbrook and Yangedi) and JORC Code 2004 (Railway).
3. For Railway THM is within the +45µm to -2mm size fraction and reported as a percentage of the total material.
4. For Keysbrook and Yangedi the THM was within the +45µm to -2mm size fraction as at 4 August 2015. This has changed at 30 June 2017 to +53µm to -2mm, with +53µm to -500µm for 2016 grade control data. Size fractions are reported as a percentage of the total material.
5. L70, L88 and Zircon are reported as a percentage of the THM fraction.
6. The terms L70 and L88 refer to MZI products. L70 comprises minerals with an average titanium dioxide content of between 65% and 85% and L88 comprises minerals with an average titanium dioxide content between 85% and 95%.
7. Inconsistencies in totals are due to rounding.
8. Keysbrook Mineral Resource depleted for mining as of 30 June 2017.
9. Keysbrook Mineral Resource excludes areas with restricted access, around watercourses and environmentally protected areas.
10. The Railway Mineral Resource was initially reported to the ASX on 7 September 2005 but was not included in the Mineral Resource inventory from 2008 when Olympia Resources (OLY) changed business entity to Matilda Zircon (MZI) until 2015. Refer Final Slide for Competent Persons Information.

# JORC Ore Reserves (App 5)



## Keysbrook Proved and Probable Ore Reserves as at 30 June 2017

Project	Ore Tonnes	In-Situ THM	THM Grade	THM Assemblage			
				L70	L88	Zircon	Other
	Mt	Mt	%	%	%	%	%
<b>Keysbrook</b>							
Proved	53.3	1.2	2.3	24.5	57.8	11.8	5.9
Probable	4.7	0.1	2.2	36.7	46.4	10.9	6.0
<b>Total</b>	<b>58.0</b>	<b>1.3</b>	<b>2.3</b>	<b>25.4</b>	<b>56.9</b>	<b>11.7</b>	<b>5.9</b>

### Notes accompanying the Ore Reserve Statement

1. Ore Reserves are based upon a cut-off grade of 1.0% THM and Mineral Resource material containing more than 20% clay fines has been excluded from the Ore Reserve estimation.
2. The Ore Reserves are based upon a L70 price of US\$235 per tonne, a L88 price of US\$948 per tonne and a Zircon price of US\$1,540 per tonne.
3. Mineral Resources have been reported as inclusive of Ore Reserves.
4. THM assemblage is reported as a percentage of in-situ THM content.
5. Discrepancies in summations may occur due to rounding.
6. This Ore Reserve 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).

Refer Final Slide for Competent Persons Information

# Competent Persons Information (App 6)



## **Competent Person's Statements – Mineral Resources (Tables 1 and 2)**

The information in this report which relates to Mineral Resources is based upon information compiled by Mrs Susan Havlin (in relation to the Keysbrook Project) who is a Member of the Australasian Institute of Mining and Metallurgy and Mr John Baxter (in relation to the Railway Deposit) who is a Member of the Australasian Institute of Geoscientists. Mrs Havlin is an employee of Optiro Pty Ltd and Mr Baxter is a Consulting Geologist, both have sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as a Competent Person as defined in the 2004 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mrs Havlin and Mr Baxter consent to the inclusion in the report of a summary based upon their information in the form and context in which it appears.

## **Competent Person's Statement – Ore Reserves**

The information in this report which relates to Mineral Reserves is based upon information compiled by Mr Andrew Law who is a Fellow of the Australasian Institute of Mining and Metallurgy. Mr Law is an 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 they are 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. Mr Law consents to the inclusion in the report of a summary based upon their information in the form and context in which it appears.

For more information, refer ASX release dated 10 October 2017.