



# The World's Newest Mineral Sands Producer

**Presentation to TZMI Conference  
18 November 2015**

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# What makes MZI and Keysbrook compelling

- MZI is the world's newest producer of high value Zircon and TiO<sub>2</sub> products
- Focused on the Keysbrook Project, 70km from Perth
- Keysbrook is a high-margin long-life project with strong growth potential
- Construction completed and production commenced **on budget and ahead of schedule**
- Keysbrook will be the world's biggest primary producer of Leucoxene

## Robust Economics\*

Low LOM Operating costs  
 Premium quality products  
 Potential+30 year life, subject to land access and further approvals.

## Low Risk

100%-owned Australian Project  
 Construction complete  
 Production underway  
 Soft environmental footprint

## High Value Products\*

38 ktpa 88% TiO<sub>2</sub>  
 29 ktpa 70% TiO<sub>2</sub>  
 29 ktpa Zircon Concentrate

## Growth Potential

Significant potential to grow Resources through exploration  
 Project expansion studies underway

## Committed Sales

Offtakes cover +85% of output  
 TiO<sub>2</sub> products L88 and L70 sales agreements with Chemours  
 Zircon concentrate contract with Tricoastal/Wensheng

## Strong Board and Management

Over 100 years of mineral sands experience within the company

# Prime Australian Location

## Keysbrook Project (100% MZI)

- High quality product mix
- Production commenced November 2015
- Potential multi-decade producer



70km from Perth

## Western Australia

- Australia's largest minerals exporting State
- Major global producer of mineral sands
- Established workforce and infrastructure
- Broad community support for mining



# The Keysbrook location advantage

- Mine located 70km south of Perth
- Near large population, mining and industrial centres
- No need for employee transport, accommodation or catering
- Connected to grid power, high standard road transport, product storage and port facilities
- Basic wet processing at mine site
- Dry processing de-risked via toll treatment agreement to utilise Doral plant at Picton



# Keysbrook: a platform for reliable long life supply



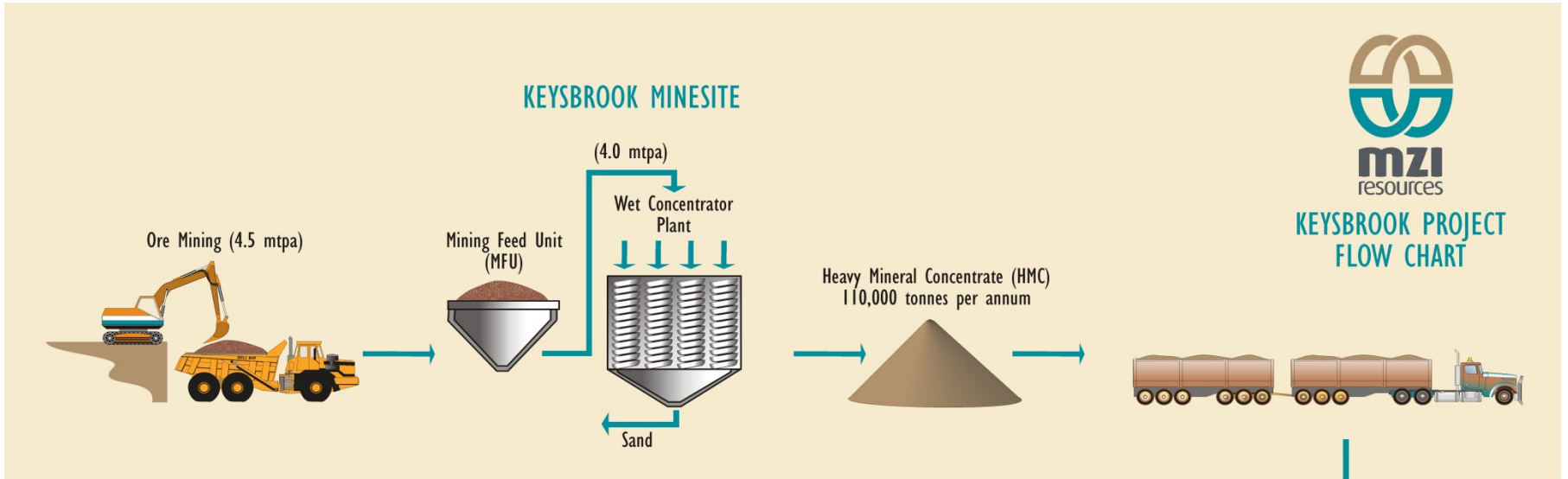
- 155Mt Global Mineral Resource\*, including Ore Reserves of 26Mt, with significant exploration upside
- High value product mix and potential +30\* years LoM at initial planned production rate
- Low cost mining – free dig sand, average depth 2.2m with nil strip ratio
- Low slimes
- Simple conventional processing flowsheet
- Offtake agreements for +85% of production under five year sale agreements with Chemours and Tricoastal-Wensheng
- Testwork confirmed potential to increase HM recoveries – specifically L88

\*Refer ASX release 7 August 2015, and slides 25-26

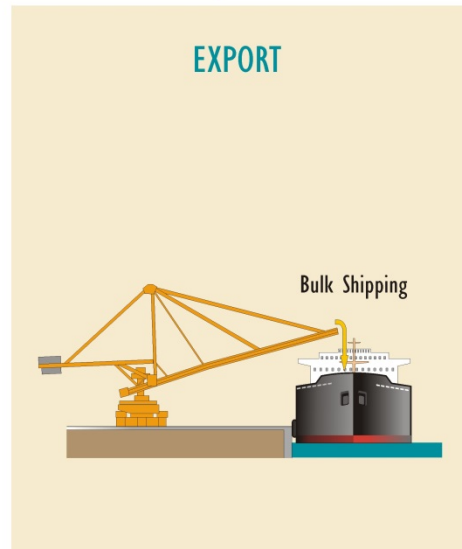
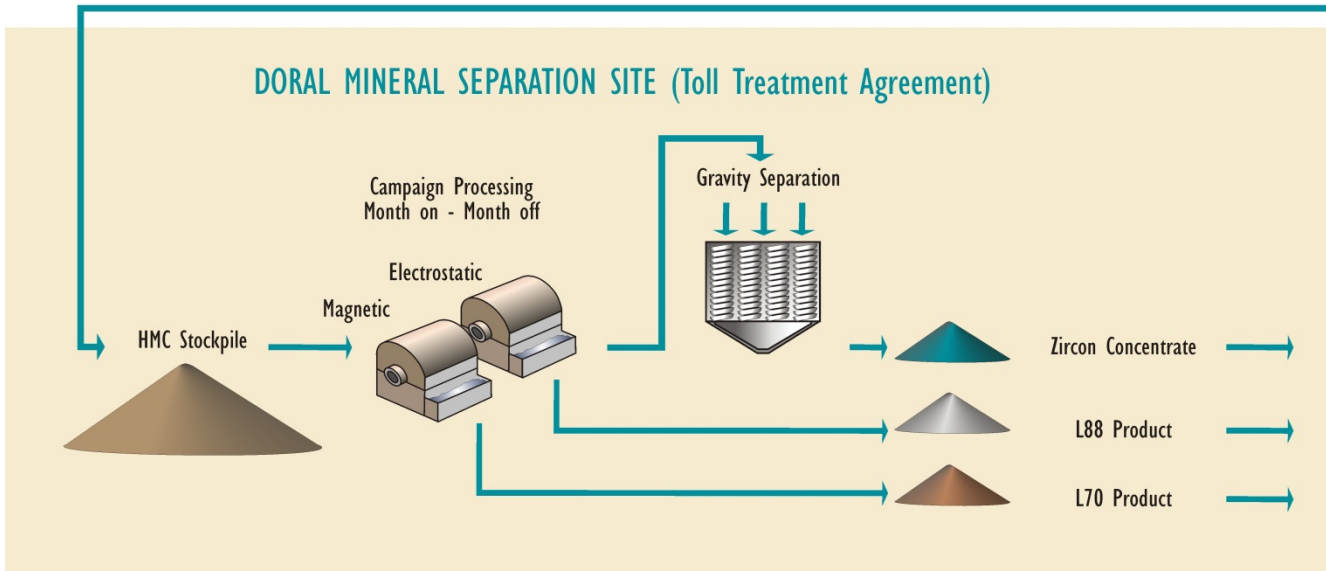
## An outstanding performance to date:

- ✓ Siteworks commenced February 2015 with total capital development budget of \$75.6m
- ✓ Mining and wet processing commenced late October 2015, one month ahead of schedule and within budget
- ✓ First HMC concentrate produced 26 October 2015
- ✓ Dry plant commissioning commenced early November, first batch of saleable product produced 5 November 2015
- ✓ First sales targeted for December 2015 – ahead of original early 2016 target date
- ✓ Commissioning ramp-up tracking to attain nameplate capacity by end 2015

# Keysbrook – A Simple Flowchart



## KEYSBROOK PROJECT FLOW CHART





View video at:

<http://www.mzi.com.au/index.php/investor-relations/videos>



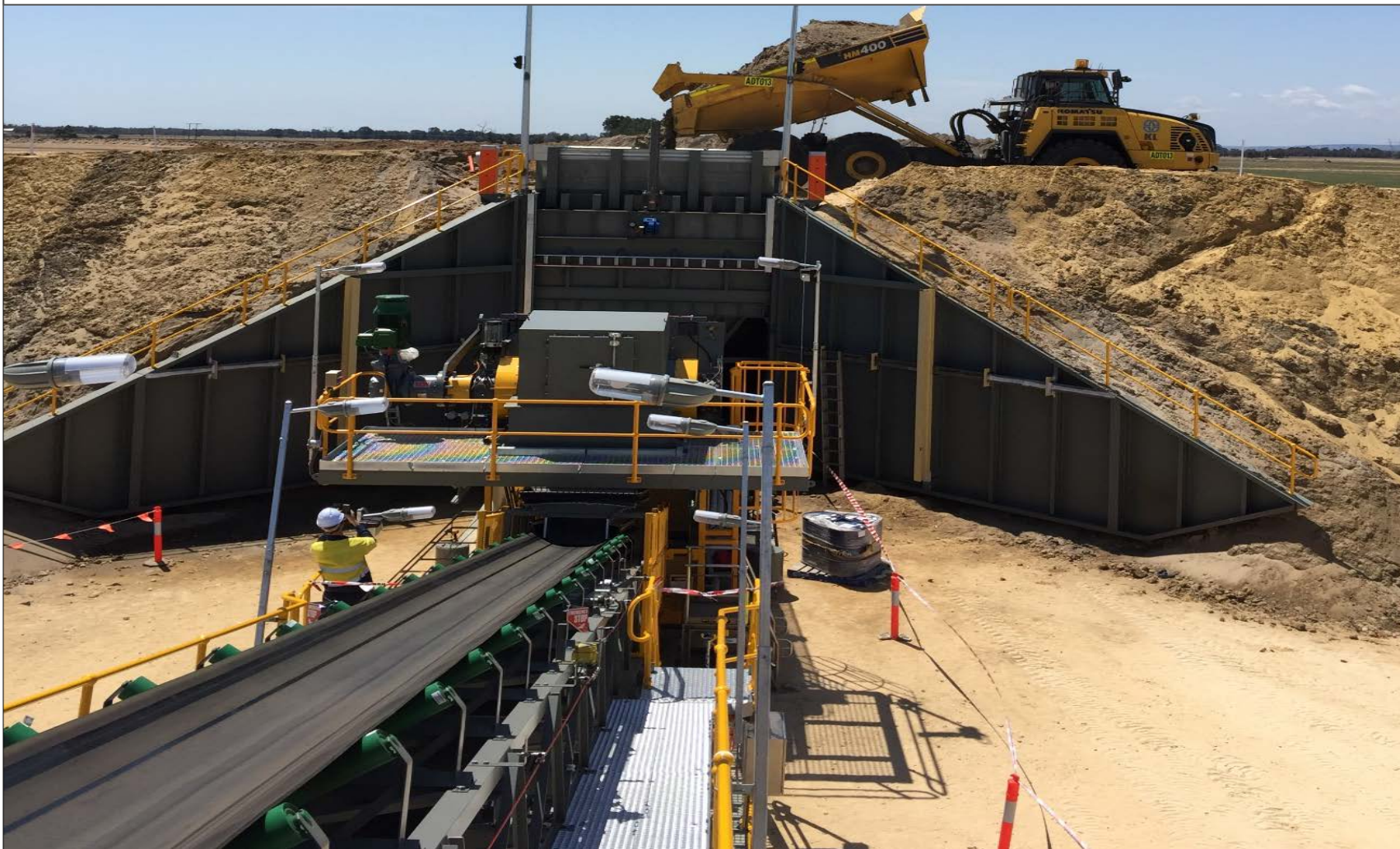
# On budget and ahead of schedule

✓ *Continuous mining commenced October 2015*



# On budget and ahead of schedule

✓ *First ore fed into Keysbrook MFU in October 2015*



# On budget and ahead of schedule

✓ *HMC production commenced at Keysbrook in late October 2015*



# On budget and ahead of schedule

✓ *HMC processing at Picton MSP commenced early November 2015*



# On budget and ahead of schedule

✓ *First saleable products produced early November 2015*



# Expansion potential

- Cost effective recovery improvements increase production
- Large resource base and exploration upside provides substantial scope to increase annual production rate
- Significant processing capacity available at Picton MSP
- Potential to double mine output via addition of second MFU and concentrator expansion at Keysbrook
- Expansion studies underway



Keysbrook WCP



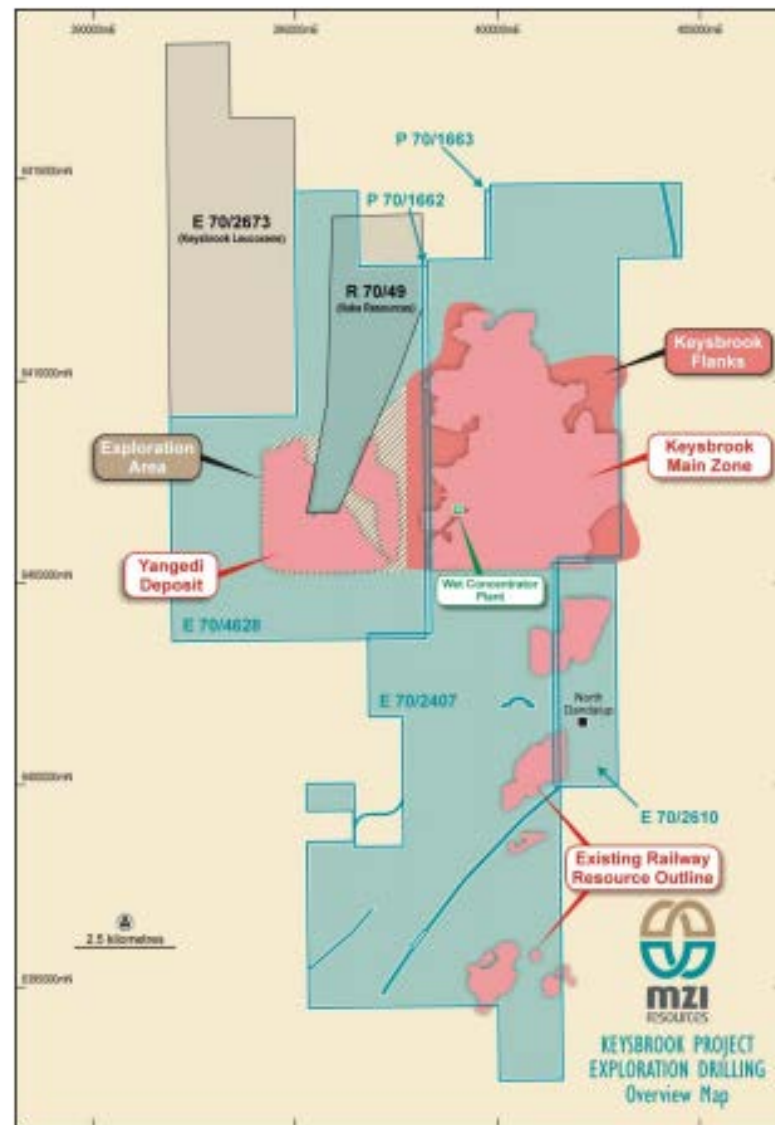
Picton MSP

# Improved HM recovery offers material upside

- Strong cash margins expected from current 85% WCP recovery
- Initial testwork has confirmed potential to increase HM recovery:
  - Overall HM recovery to **+90%\***
  - L88 recovery to **~83% - 90%** from 71%
- Follow-up testwork underway to define optimum flowsheet modifications
- Moderate capital cost to achieve higher recoveries and able to be retro-fitted with minimal interruption to operations
- Higher recoveries flow almost directly to the bottom line

# Expanding resources a platform for growth

- Keysbrook Global Mineral Resource increased by **68%** to **155Mt @ 2.0% HM** in August 2015\*
- Total contained HM increased to **3.1Mt** in the Keysbrook, Yangedi and Railway deposits
- Keysbrook Deposit increased **14%** to **90Mt @ 2.2% HM** containing **2.0Mt HM**
- Maiden Mineral Resource estimate for Yangedi Deposit of **51Mt @ 1.5% HM** containing **0.79Mt HM**
- Mineralisation remains open to the west, north and south
- Mineral Resources equivalent to +30\* years of life at initial production rates, subject to land access and further approvals
- Increased resource base positive for ongoing capacity expansion studies
- Current Ore Reserves of 26Mt @ 2.6% HM to be updated in late 2015



\*Refer ASX release dated 7 August 2015, and slides 25-26



# Soft environmental footprint minimises impacts

- Only small areas (30ha) opened for mining at any one time, average mining depth 2.2m
- No comminution of mined sand and chemical free processing
- Recycle >85% of annual water requirements
- No residual waste from processing
- After processing, sand and clay material is returned to the mined area
- Stockpiled topsoil is replaced and mine rehabilitation is complete within 2 to 3 growing seasons and returned to previous land use
- Disturbed areas revegetated to better than pre-mining state
- Comprehensive noise, dust, water and transport management plans in place



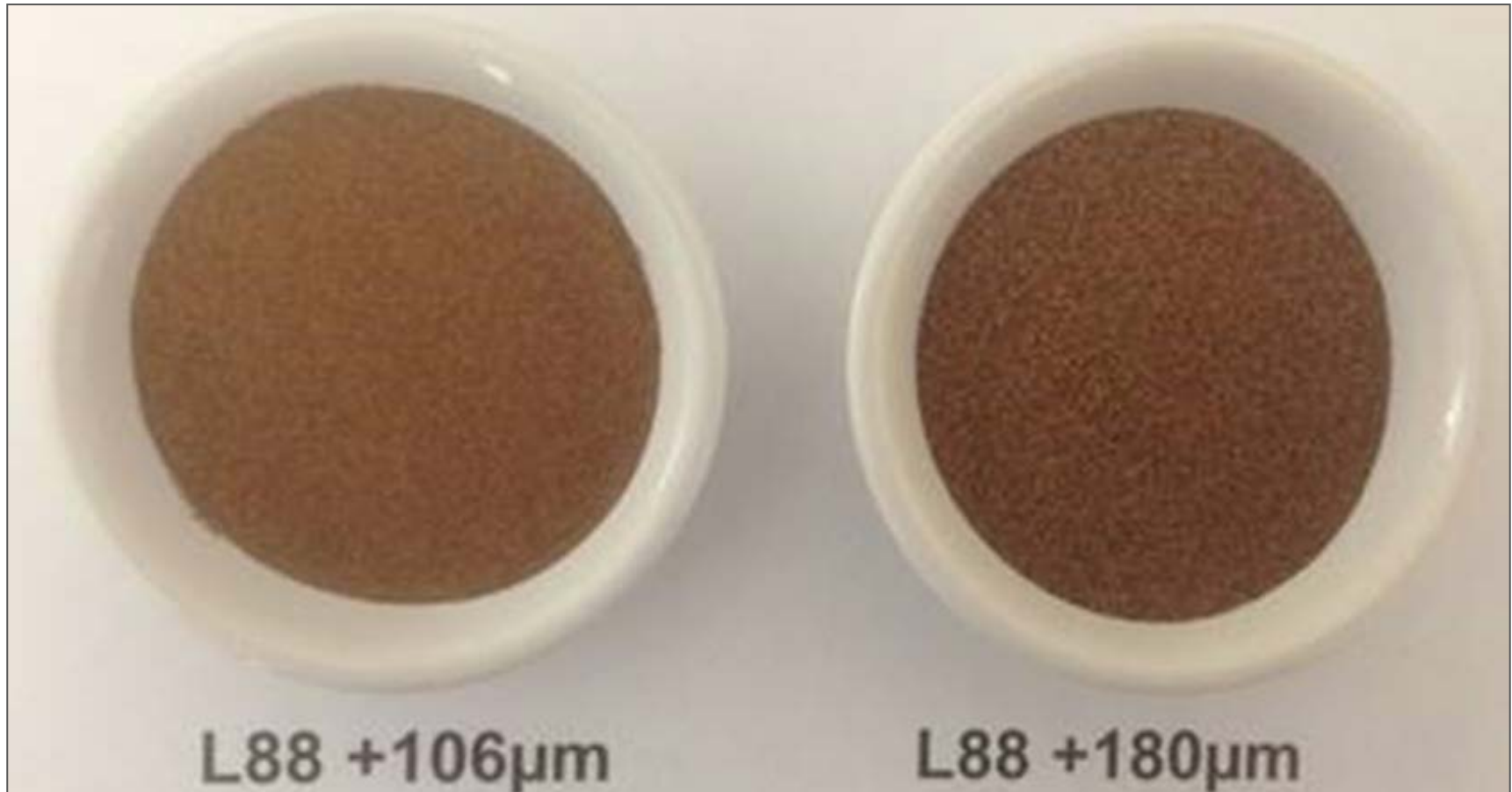
Nearby post-mining rehabilitated pasture



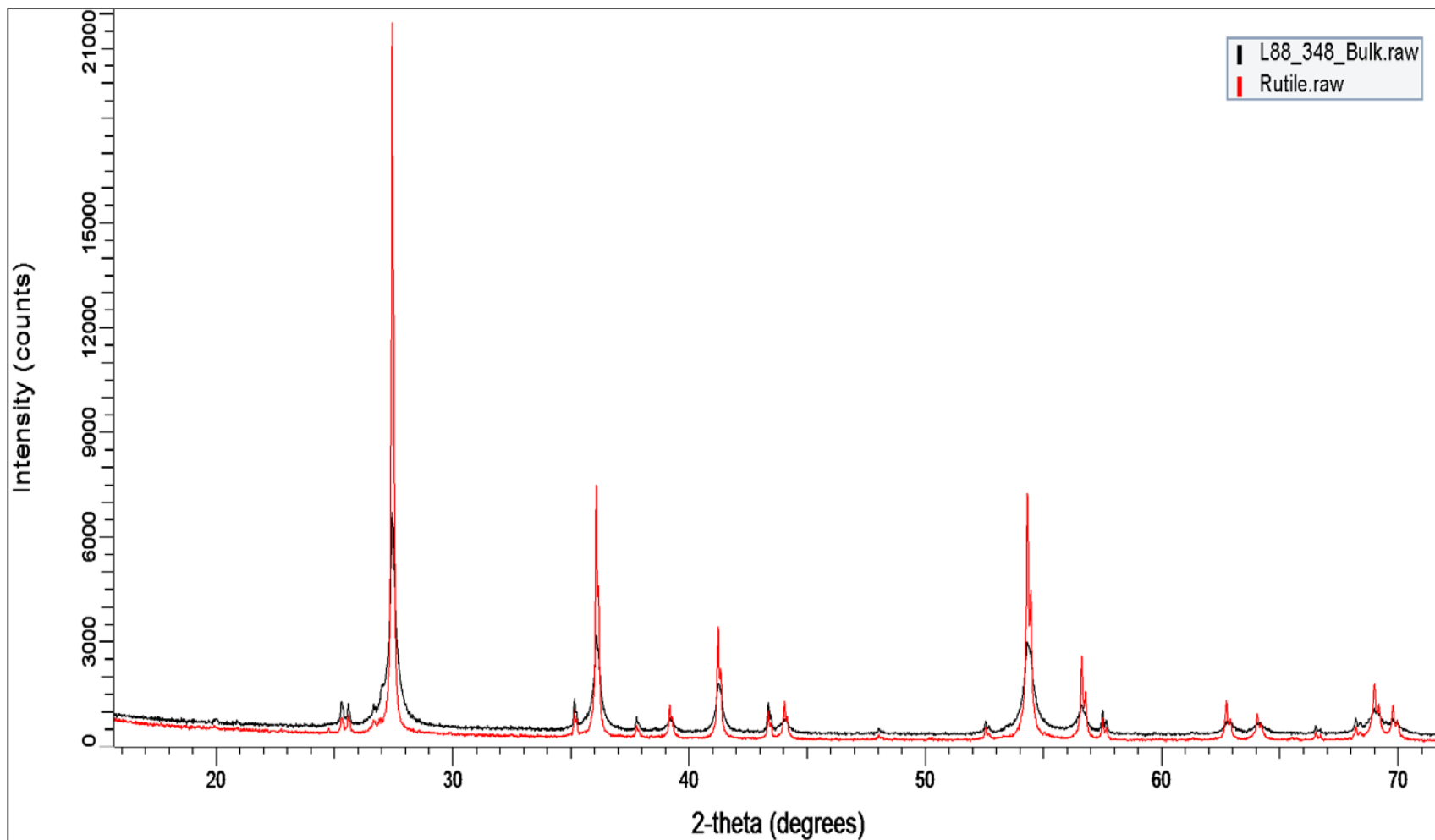
Rehabilitation progress at MZI's Tiwi Islands project

# What is Leucoxene?

- Not defined as a mineral
- Considered to be a material which has a variable  $\text{TiO}_2$  content ranging from 70% to 93%



# XRD L88 Bulk vs Rutile Mineralogy

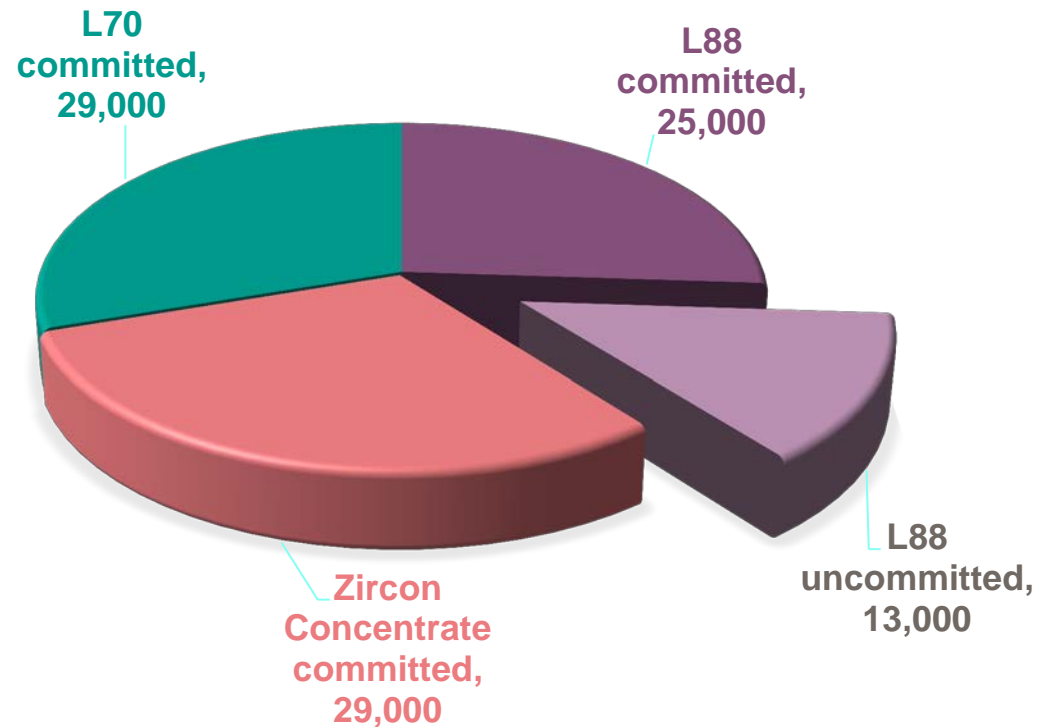


The diffraction pattern of L88 and Rutile is a very close match due to high proportion of crystalline rutile in each product

# Offtake commitments for over 85% of planned sales

- Five year offtake agreements for over 85% of all planned sales
- 100% of Zircon Concentrate committed to TriCoastal/Wensheng
- 100% of L70 committed to Chemours
- ~66% of L88 committed to Chemours
- ~34% of L88 uncommitted
- Market-based pricing for L88 and Zircon Concentrate
- Fixed pricing agreement for L70

Annual sales by product type  
(tonnes)



# Summary: MZI a rare gem in today's resources sector



- ✓ Keysbrook project construction completed and commissioning commenced on budget and ahead of schedule
- ✓ First production of saleable products achieved November 2015, first sales targeted for December 2015
- ✓ Globally competitive low cost producer
- ✓ Positive price/demand outlook for Keysbrook-type products
- ✓ Focused on higher-value end of mineral sands market: **Zircon, Leucoxene88, Leucoxene70**
- ✓ Five year binding sales contracts for +85% of annual production with blue chip customers (Chemours and Tricoastal/Wensheng)
- ✓ Long life asset with significant growth/expansion potential

# Important Notice



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This presentation contains forward looking statements concerning the 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.

Data and amounts shown in this presentation relating to capital costs, operating costs and project timelines are internally generated best estimates only. All such information and data is currently under review as part of MZI Resources Ltd's ongoing development and feasibility studies. Accordingly, MZI Resources Ltd cannot guarantee the accuracy and/or completeness of the figures or data included in the presentation until the feasibility studies are completed.

## 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.

# Appendix

# Keysbrook Metrics\*

Item	Result
Ore Mining Rate	4.5Mtpa
Average mining depth	2.2 metres
Strip Ratio	Nil
Mining Inventory	24.5 million dry tonnes (Reserve)
Mine Life	5.5 years (Reserve) +30 years (Resource)
Concentrator throughput	4.0Mtpa (dry)
Concentrator Recovery	L70 – 90% L88 – 71% Zircon – 98%
HMC Produced	111,000tpa (dry)
MSP contract	Toll treating – month on / month off
MSP throughput	111,000tpa (dry)
MSP Recovery	L70 – 99% L88 – 90% Zircon – 98%
<b>Final Product*</b>	<b>L70 – 28,800tpa (dry)</b> <b>L88 – 38,400tpa (dry)</b> <b>Zircon con – 29,000tpa (dry)</b>
Zircon concentrate composition	56% Zr, 11% L88





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 (-45um)%
Measured	63.9	2.2	1,400	8.1
Indicated	29.2	2.2	655	10.5
Inferred	61.9	1.6	1,050	12.0
<b>Total</b>	<b>155.0</b>	<b>2.0</b>	<b>3,105</b>	<b>10.1</b>

Table 2: Keysbrook Project Component Resource Statement

Category	Tonnes (Mt)	Total Heavy Mineral (%)	Heavy Mineral (kt)	Clay Fines (-45um) %	L70 %	L88 %	Zircon %
<b>Keysbrook Deposit</b>							
Measured	63.9	2.2	1,400	8.1	26.1	50.1	13.6
Indicated	15.6	2.2	350	10.2	28.0	46.1	14.7
Inferred	10.8	2.4	260	11.9	26.4	48.7	14.3
<b>Total</b>	<b>90.3</b>	<b>2.2</b>	<b>2,010</b>	<b>8.9</b>	<b>26.5</b>	<b>49.2</b>	<b>13.9</b>
<b>Yangedi Deposit</b>							
Inferred	51.1	1.5	790	12.1	61.2	20.0	10.8
<b>Total</b>	<b>51.1</b>	<b>1.5</b>	<b>790</b>	<b>12.1</b>	<b>61.2</b>	<b>20.0</b>	<b>10.8</b>
<b>Railway Deposit</b>							
Indicated	13.6	2.2	305	11.0	-	-	-
<b>Total</b>	<b>13.6</b>	<b>2.2</b>	<b>305</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% HM and below a cut-off of 20 % clay fines.
2. Stratigraphic units reported within the Mineral Resource are Yoganup Sand and Guildford Clay for Keysbrook, Bassendean Sand for Yangedi and Yoganup Sand for Railway.
3. Keysbrook Project resource is classified and reported in accordance with the guidelines of JORC Code 2012. Railway Deposit resource is classified and reported in accordance with the guidelines of JORC Code 2004.
4. HM is reported as a percentage of the +45um to -2mm size fraction reported as a percentage of the total material.
5. L70%, L88% and Zircon% are the proportion of the total HM.
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.

Refer Slide 27 for Competent Persons Information

## Keysbrook Project – Ore Reserve Statement as at 17 October 2012

Classification	Ore Million tonnes	In situ THM tonnes	THM Assemblage					
			THM grade %	Magnetite %	L70 %	L88 %	Zircon %	Other %
Proved	23.0	610,000	2.7	0.26	27.8	46.6	14.6	10.8
Probable	2.8	68,000	2.5	0.26	27.4	46.5	15.0	10.8
<b>Total</b>	<b>26.0</b>	<b>670,000</b>	<b>2.6</b>	<b>0.26</b>	<b>27.8</b>	<b>46.6</b>	<b>14.6</b>	<b>10.8</b>

**Note:** L70 and L88 in the THM assemblage equates to the two Leucoxene products containing 70% TiO<sub>2</sub> and 88% TiO<sub>2</sub>

### 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% slimes have been excluded from the Ore Reserves estimation.
2. The Ore Reserves are based upon a Leucoxene 70 price of US\$1,777 per tonne.
3. Mineral Resources have been reported as inclusive of Ore Reserves.
4. The Total Heavy Mineral (THM) assemblage is reported as a percentage of in situ THM content.
5. Tonnes and grade data have been rounded to two significant figures. Discrepancies in summations may occur due to rounding.
6. This Ore Reserve statement have been compiled in accordance with the guidelines of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code - 2004 Edition).

# Competent Persons Information



## 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 Christine Standing (in relation to the Keysbrook Project) who is a Member of the Australasian Institute of Mining. Mrs Standing is an employee of Optiro Pty and has sufficient experience relevant to the style of mineralisation, the type of deposit under consideration and to the activity undertaken 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 the report of a summary based upon her information in the form and context in which it appears.

The information in this report which relates to Mineral Resources is based upon information compiled Mr John Baxter (in relation to the Railway Deposit) who is a Member of the Australasian Institute of Geoscientists. Mr Baxter is a Consulting Geologist with sufficient experience relevant to the style of mineralisation, the type of deposit under consideration and to the activity being undertaken 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. Mr Baxter consents to the inclusion in the report of a summary based upon his information in the form and context in which it appears.

For supporting information on Keysbrook Mineral Resources, refer ASX release - *MZI increases Keysbrook Mineral Resources by 68%* - dated 7 August 2015.

## Competent Person's Statements – Ore Reserves

The information in this report which relates to Ore Reserves have been compiled by Mr Andrew Law of Optiro Pty Ltd, who is a Fellow of the Australasian Institute of Mining and Metallurgy. Mr Law has sufficient experience in Ore Reserve estimation relevant to the style of mineralisation and type of deposit under consideration to qualify as a Competent Person as defined in the 2004 Edition of the Australasian Code for Reporting of Mineral Resources and Ore Reserve. Mr Law consents to the inclusion in the report of the matters compiled by him in the form and context in which it appears.