



**Keysbrook Project AJM Mineral Sands Conference 24-25 March 2015** 

Trevor Matthews – Managing Director

## The MZI Investment Case



- Keysbrook Mineral Sands Project is fully funded through to operations and cashflow
- Keysbrook construction underway with site works commenced
- ✓ Low risk construction and low capex
- ✓ Five year binding sales contracts for 85% of annual production.
- ✓ Commissioning and production in Q4 2015
- ✓ Shipments and sales revenue commence Q1 2016
- High margin project based on high grade mineral assemblage
- ✓ Long life project with expansion potential
- Mineral sands market is improving
- ✓ Lower AUD improving project economics
- Products made from titanium dioxide and zircon used in everyday life
- Exploration programme in progress potential to significantly expand resources
- ✓ Updated JORC Resource mid 2015

## **MZI** Corporate Overview



ASX	MZI
Issued Capital	79m FPO Shares
Current Price	\$0.35
Market Capitalisation <sup>1</sup>	\$27.7m
Enterprise Value <sup>1</sup>	\$32.0m

### **Major Shareholders**

•	RCF	25.9%
•	Technical Investing	5.2%
•	Board and Management	5.0%
•	Slade Technologies	4.7%
•	Xiang Lin	4.4%
•	Tricoastal	3.6%

RCF				
Convertible Loan (fully drawn)	US\$21.0m			
Bridge Facilities (US\$25.5m drawn)	US\$33.5m			
RMB				
Project Facility	US\$37.5m			
Working Capital	US\$3.0m			
Bank Guarantee Facility	A\$11.5m			
FX Hedge and Interest Rate Swap Facility				

## **Board & Executive Management**

Mal Randall	Chairman
Trevor Matthews	Managing Director
Nathan Wong	Non-Executive Director
Stephen Ward	Non-Executive Director
Peter Gazzard	Chief Operating Officer
Keith Vuleta	Chief Financial Officer
John Traicos	Legal Manager / Company Secretary
Jamie Wright	Chief Development Officer

### 12 month Price and Volume<sup>1</sup>



# **Keysbrook Project Financing**



### MAJOR FACTORS IN FINALISING PROJECT FUNDING

- Cornerstone Investor financial capacity to provide additional funding if required. Prepared to provide mezzanine finance on a subordinated basis.
- Credit Insurance provide insured protection to RMB in a worse case scenario for a material part of the senior debt exposure.
- Offtakes critical to get binding multi year sales contracts from credible/investment grade customers.
- Hedging protect your cashflows during the debt tenor.
- EPC construction contract essential to managing cost overrun risk.

# - PLUS ALL THE COMPANY AND PROJECT FACTORS ON THE NEXT FEW SLIDES

# What makes Keysbrook a great project



- MZI is a mineral sands company focused on the development of the Keysbrook project located 70km from Perth
- Keysbrook will be a high margin long life project
- Previous success in developing and operating a high grade Zircon/Rutile project in the Tiwi Islands

## **Project Economics**

+15 year mine life with opportunity to extend
High margin per tonne of product

### **Product Mix**

38 ktpa 88% TiO<sub>2</sub>
29 ktpa 70% TiO<sub>2</sub>
29 ktpa Zircon Concentrate
(56% ZrO<sub>2</sub> + 11% Rutile Grade TiO<sub>2</sub>)

## Strong Board and Management

Over 100 years of mineral sands experience within the company

### Low Risk

Australian based project MZI has 100% ownership Soft environmental footprint

## **Funding & Costs**

Development fully funded Low LOM Operating costs ~ A\$380/t

## Sales

TiO2 products L88 and L70 sales agreements with DuPont

Zircon concentrate sales agreement with

Tricoastal/Wensheng

# An overview of the Keysbrook Project



### Location

- 70km south of Perth
- Near major population, mining and industrial centres

### Mine Life

- Reserve life of 5.5 years
- Resource life of +15 years
- Exploration program underway

## Mineral Assemblage/ Products

- High value mineral assemblage
- Product mix of L88, L70 and Zircon concentrate
- Strong offtake customers DuPont and Tricoastal/Wensheng

### Low Capex

- No need for employee camp/transport
- Power from SWIS, high standard road transport, product storage and port facilities
- Agreement with Doral for MSP upgrade
- 12 month construction

### Low Risk

- No pressure on capital or operating costs
- Simple mining and low slimes
- Basic wet processing and de-risked dry processing (Doral agreement)
- No chemicals used in processing
- Progressive rehabilitation and sustainable land use

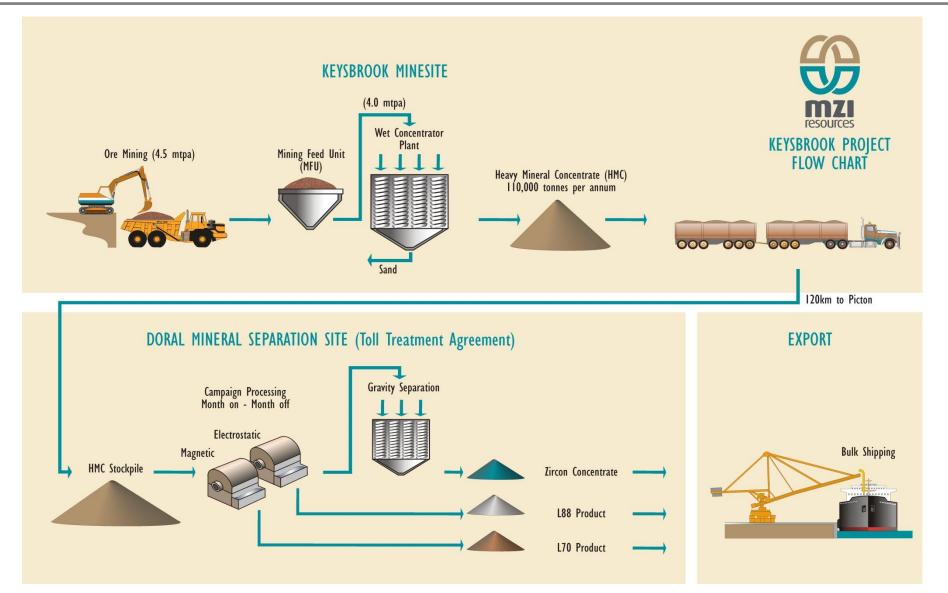
### **Status**

- Fully funded to production
- Construction commenced with site works underway.
- Production Q4 2015



# **Keysbrook – A Simplified Flowchart**





# **Keysbrook Metrics**

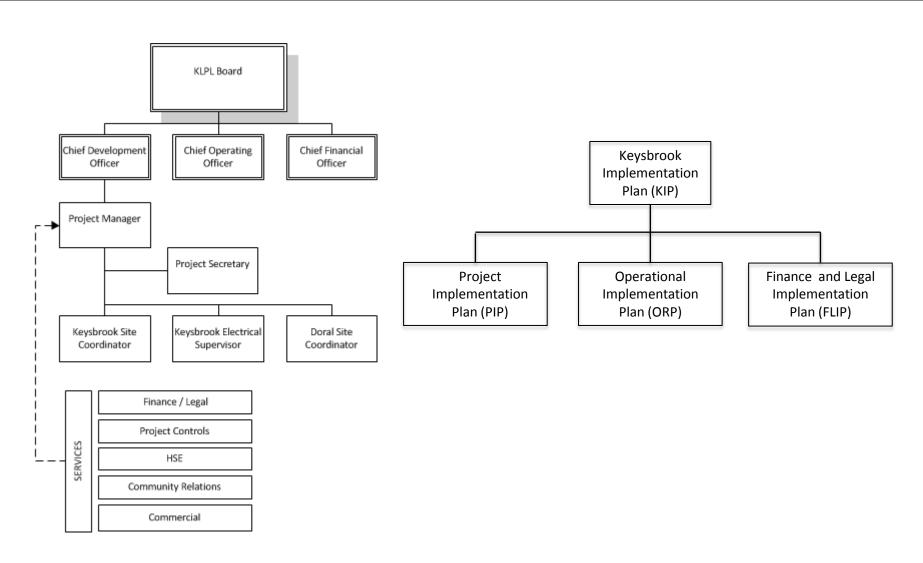


Item	Result
Ore Mining Rate	4.5Mtpa
Average mining depth	2.2 metres
Strip Ratio	Nil
Mining Inventory	24.5 million dry tonnes (Reserve)
Mine Life	5.5 years (Reserve) +15 years (Resource)
Concentrator throughput	4.0Mtpa (dry)
Concentrator Recovery	L70 – 90% L88 – 71% Zircon – 98%
HMC Produced	111,000tpa (dry)
MSP contract	Toll treating – month on / month off
MSP throughput	111,000tpa (dry)
MSP Recovery	L70 – 99% L88 – 90% Zircon – 98%
Final Product	L70 – 28,800tpa (dry) L88 – 38,400tpa (dry) Zircon con – 29,000tpa (dry)
Zircon concentrate composition	56% Zr, 11% L88



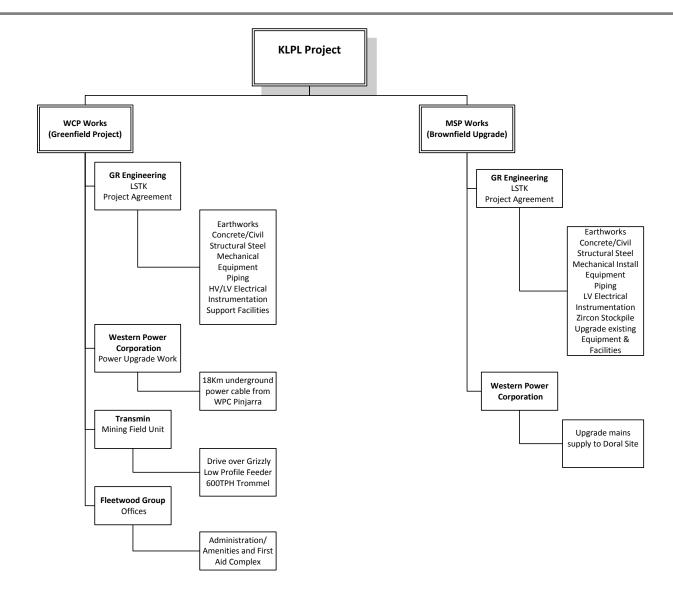
# **Project Management Structure**





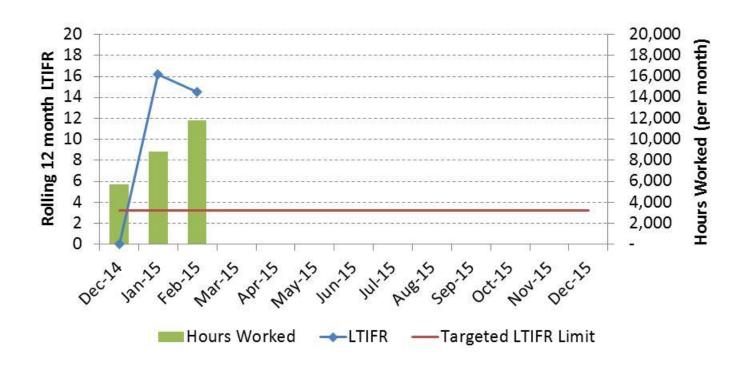
# **Delivery Structure**





## **Safety Performance**

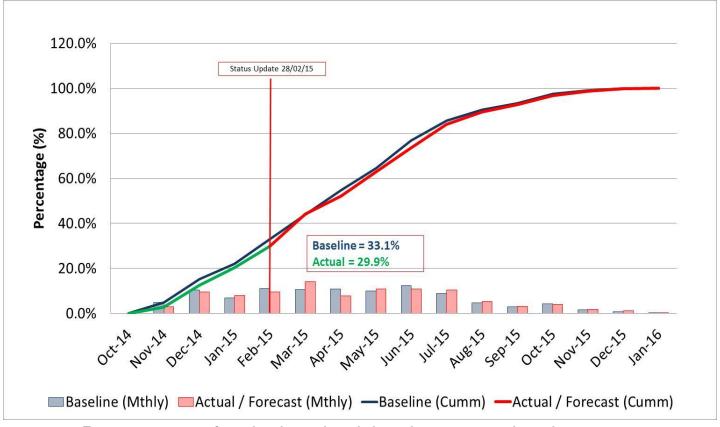




- One LTI to date
- Exploration strain injury
- Early implementation of injury management systems

# **Project Status - progress**

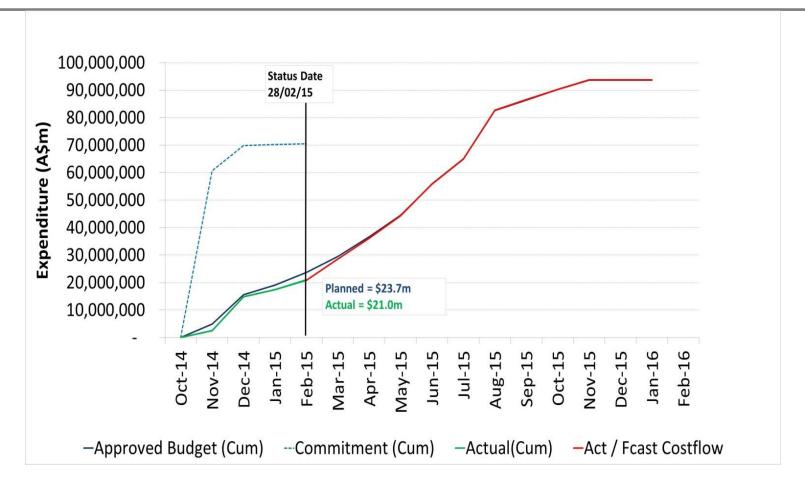




- Procurement of major long lead time items completed
- Keysbrook site earthworks in progress
- Keysbrook civils work commence in April
- MSP civils work in progress
- Operations team recruitment underway first staff commence in April

# **Project Status - expenditure**





- Project on budget with over 70% of planned expenditure now committed
- LSTK contract structure providing cost certainty

## **Site Construction Activities**



Keysbrook Site: DBNGP crossing installation



Doral MSP: Annex footings commenced



Keysbrook Site: Process water storage



Keysbrook Site: Access Road



## **Short Term Project Opportunities**



## L88 recovery

- Current WCP recovery is 71%
- Losses mainly in the middlings circuit
- Testwork programme evaluating options for improved L88 recovery
- Objective is to identify plant modifications targeting 80% or better recovery i.e. overall
   11% improvement in L88 production

## Mineralogy

- Mineralogy results from recent years work programmes show higher L88 mineralisation when compared with the Reserve
- Further work from the grade control programme drilling and selected twin holes
- Using three different methods to determine/confirm mineralogy
- Potential for increase in high value L88 production

## **Short Term Project Opportunities**



### Costs

- Oil prices driving reductions in diesel prices offset by lower exchange rate
- Energy supply in surplus in WA resulting in more competitive energy pricing
- No pressure on labour costs
- Limited imported parts and consumables
- Most of Keysbrook's activities are based on existing infrastructure with contract prices for services including dry plant processing, concentrate and final product transport and storage and shiploading
- Mine site activities are not impacted by provision of workforce transport, accommodation and meals typical of remote sites
- Shift roster arrangements based on providing a manageable number of average hours worked each week – provides time for safety and skills training, continuous improvement programmes to drive efficiencies and productivity

## **Exploration**



- Resource is 78.9Mt @ 2.5%
- Mine life is +15 years at current planned production rates subject to land access and further approvals
- Significant exploration potential beyond the current Resource boundary
- Current drilling programme in western area yielding positive result:
- Further drilling to north and east being planned
- Opportunity to significantly increase Resource and potential mine life and/or expand annual production



## **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.



# Appendix

## **JORC Mineral Resources**



#### Keysbrook Project - Mineral Resources (above a 1% THM cut-off grade and below a 20% slimes grade)

Classification	Mineral Resource as at 28 February 2013			
	Million Tonnes	THM grade %	Slimes %	
Measured	34.1	2.6	8.7	
Indicated	33.2	2.2	7.6	
Inferred	11.6	2.6	10.5	
Total	78.9	2.5	8.5	

### Kilimiraka Project - Mineral Resources (above a 1% THM cut-off grade)

Category	Tonnes (Mt)	Heavy Mineral Grade (%)	Heavy Mineral (kt)
Inferred	56.2	1.6%	894
Total	56.2	1.6%	894

### **Competent Persons Statement**

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 and Metallurgy and Mr John Baxter (in relation to the Kilimiraka Project) who is a Member of the Australasian Institute of Geoscientists. Mrs Standing 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 Standing 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.

## **JORC Ore Reserves**



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

	Ore	In-situ		THM Assemblage				
Classification	Million tonnes	THM tonnes	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
Total	26.0	670,000	2.6	0.26	27.8	46.6	14.6	10.8

**Note:** L70 and L88 in the THM assemblage equate to the two Leucoxene products containing 70%  $TiO_2$  and 88%  $TiO_2$ .

Notes accompanying the Ore Reserve Statement:

- 1. Ore Reserves are based upon a cut-off grade of 1.0% THM and Mineral Rsource material containing more than 20% slimes have been excluded from the Ore Reserve estimation.
- 2. The Ore Reserves are based upon a Leucoxene 70 price of US\$352 per tonne, a Leucoxene 88 price of US\$1,166 per tonne and a Zircon 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.
- 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 – 2004 Edition).

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.