

## HIGHLIGHTS

- MZI joins ranks of global mineral sands producers
- Keysbrook construction completed early and within budget
- Nameplate throughput and handover achieved at Keysbrook and Picton processing facilities within 7 weeks of start up
- First mineral sands shipment successfully exported
- Letter of Intent & Cooperation signed to supply L88 to China
- \$45 million capital raising finalised to retire RCF Bridge Facilities
- Significant Product Sales targeted for first quarter 2016.

The December quarter was a transformational period for MZI and its wholly owned subsidiary Keysbrook Leucoxene Pty Ltd (KLPL), marking the Company's elevation to the ranks of global mineral sands producers. This resulted from the successful commencement of operations at its flagship Keysbrook Project early in the quarter which enabled the export of Keysbrook's first mineral sands shipment in December.

Key milestones achieved in the quarter included:

- Construction of Keysbrook Project was completed and operations commenced ahead of schedule and within budget in late October
- First saleable zircon and leucoxene was produced at the Picton Mineral Separation Plant (MSP) in early November
- Both the wet concentration plant and the mineral separation plant met the throughput tests to achieve commissioning by mid-December, just seven weeks after the commencement of operations
- The first shipment of mineral sands, comprising 1,008 tonnes of zircon concentrate, was exported to China in late December, heralding the commencement of sales and project cashflows
- A Letter of Intent and Co-operation was entered into with leading Chinese chloride pigment producer, Jinzhou Titanium Industry Co, regarding the potential long term supply of Keysbrook L88 to China
- Capital structure significantly simplified through \$45 million raising to repay RCF Bridge Facilities.
- Subsequent to the end of the quarter, the Company announced that it was targeting product sales of 23,000 tonnes during the March 2016 quarter.

## **CORPORATE**

MZI finished the December 2015 quarter with \$4.7 million in cash and undrawn cash and guarantee facilities of \$21.2 million.

Total issued capital at 31 December 2015 was 162,035,785 ordinary shares with a further 8,250,000 unlisted options with varying exercise prices and maturity dates.

On 27 October 2015, the Company announced a Placement and Share Purchase Plan to jointly raise up to \$45 million to retire the RCF Bridge Facilities and provide working capital. The Placement comprises the issue of 106,837,381 ordinary fully paid shares in the Company at an issue price of \$0.40 to sophisticated investors and clients of Argonaut Securities Ltd and Bell Potter Securities Ltd and to the Company's major shareholder Resource Capital Fund VI L.P.

The Placement consists of 3 tranches of shares, with Tranche 1 comprising the issue of 8,723,203 shares completed on 27 October and Tranche 2, comprising the issue of 66,985,621 shares completed following approval by shareholders at the Company's AGM in November. Tranche 3, which comprises 31,128,557 shares to be issued to RCF, will be put before shareholders for approval at a General Meeting scheduled for 24 February 2016<sup>1</sup>.

The first two tranches of the Placement provided MZI with total proceeds of \$22 million, of which \$5 million was reserved for working capital and the remainder was committed to the retirement of the RCF Bridge Facilities. The outstanding US\$8.7 million value of the Bridge Facilities will be repaid in February 2016, subject to shareholder approval of Tranche 3 of the Placement.

The SPP, which will enable shareholders to participate at the same price as the Placement and raise up to \$2 million for working capital, is scheduled to follow approval and completion of Tranche 3 of the Placement.

The Company's AGM was held on 26 November with all resolutions passed.

### **Keysbrook Project**

During the quarter, the construction and throughput commissioning of the Keysbrook wet concentration plant and the Picton mineral separation plant was completed and practical completion granted to GR Engineering Services Limited (GRES). The Keysbrook Project was delivered ahead of schedule and within budget.

### **Operations**

As stated above, Keysbrook transitioned from development to the operational ramp-up phase during the December quarter, following the commencement of continuous mining operations and plant commissioning in October.

As indicated, first ore was fed into the Keysbrook WCP to produce the first HMC in late October. Following the start of commissioning of the Company's processing annexe at the Picton MSP, the first batch of saleable zircon concentrate and leucogene were produced on a short trial basis in early November.

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<sup>1</sup> Refer ASX release and Notice of Meeting dated 22 January 2016

# QUARTERLY ACTIVITIES REPORT

FOR THE PERIOD ENDING 31 DECEMBER 2015



Handover of the WCP and the MSP occurred with the achievement of sustained operations at nameplate throughput in early December. Achieving nameplate throughput on a sustained basis and defined plant availability levels were the primary milestones required to meet the practical completion and handover requirements with construction contractor GRES, and consequently were the key operational objectives during the commissioning period. Actual MSP processing time was 22 days for the quarter.

Following handover of both the WCP and MSP, MZI's primary focus is now on optimising Heavy Mineral recoveries, in particular L88 recoveries. HM recoveries in the short operating period in the quarter were still being ramped up toward design, as is to be expected during initial operations of a newly built plant. Operating costs were tracking at or below expectations, in part reflecting lower than budgeted energy consumption and lower fuel and power prices. Mining performance was in line with expectations.

Basic operating statistics are depicted in the table below, but are not considered representative of steady-state operations given performance in the period was primarily related to commissioning activities and ramp-up. Consequently, costs and revenue continued to be capitalised until the end of December 2015. MZI expects to provide more representative operating data in the March 2016 quarterly report, after Keysbrook has completed a full quarter of commercial operation.

		December Quarter 2015
Ore Mined	(tonnes)	618,480
Ore Processed	(tonnes)	599,369
HMC Production	(tonnes)	16,008
HMC Processed	(tonnes)	9,011
Zircon concentrate	(tonnes)	1,775
L70 production	(tonnes)	2,316
L88 production	(tonnes)	1,795

All production reported in dry tonnes unless indicated otherwise

## Sales

As reported during the period, the first batch of saleable zircon concentrate and leucoxene products was produced from the Picton MSP during initial processing in early November with continuous feed of Keysbrook HMC and daily production of all products commencing 23 November 2015 for a period of 22 days.

In late December, the Company completed its first mineral sands shipment from the Keysbrook Project with the successful export of 1,008 tonnes of zircon concentrate from the Port of Fremantle to major Chinese customer Tricoastal/Wensheng. The first shipment was completed approximately a month earlier than the original schedule, with the proceeds received in the first week of January 2016.

Subsequent to the end of the quarter, in January 2016<sup>2</sup>, MZI announced it had confirmed a schedule to commence leucoxene shipments to major US customer Chemours. The first cargo of L70 is scheduled to occur in early March 2016, with the first shipment of L88 scheduled to occur in late March/early April 2016.

MZI is now targeting total product sales of up to 23,000 tonnes during the March 2016 quarter, inclusive of targeted zircon concentrate sales of approximately 7,500 tonnes. Achieving these sales, which remain subject to operational performance and confirmation of final shipping dates, would represent approximately 24% of the average planned annual production from Keysbrook.

In December 2015<sup>3</sup>, MZI announced a Letter of Intent and Co-Operation with Jinzhou Titanium Industry Co Ltd, a leading Chinese chloride pigment producer, regarding potential future supply of L88. Subject to satisfactory test work results from trial processing of an initial small shipment of Keysbrook L88 at Jinzhou's processing facilities in China, the parties intend to enter into commercial negotiations regarding a potential large scale offtake agreement to supply Jinzhou with Keysbrook L88.

#### **Mineral Sands Market**

Mineral sands products such as rutile and leucoxene contain titanium dioxide (TiO<sub>2</sub>), which is primarily used in the manufacture of pigments in paints, plastics, inks and coatings. TiO<sub>2</sub> is also used to produce titanium metal which is most commonly associated with aerospace and other specialist applications. Zircon is a major component in ceramics used to manufacture tiles and bathroom furniture and is also used in specialty chemicals, precision castings and specialty metals. Consequently, the mineral sands market is closely aligned with global economic growth and urbanisation.

The mineral sands market remained soft during the December quarter, reflecting volatility in global commodity and equity markets, which continue to impact confidence and demand for final products. There is a growing sentiment that the mineral sands market cycle is near the bottom as the impact of capacity closures starts to affect supply and inventory and although prices for all products have softened, the outlook remains positive with some recovery expected later in 2016.

The US economy has remained relatively strong which augers well for pigment consumption in 2016. However, an excess of pigment inventory dampened demand in the December quarter delaying an expected rise in feedstock price. The demand for chloride pigment is expected to remain relatively strong and ultimately put upward price pressure on high-TiO<sub>2</sub> feedstock such as rutile and leucoxene. Economic growth in the US and Europe is still expected to continue to remain positive throughout 2016, supporting overall pigment demand.

Weakness in the Chinese economy has been driving negative sentiment in the zircon market, although some early signs of improvement in housing prices in major cities may help rebuild confidence and stimulate other parts of the economy. In the meantime zircon prices have continued to remain steady as zircon producers continue to limit their production to ensure the market is not oversupplied.

<sup>2</sup> Refer ASX release dated 22 January 2016

<sup>3</sup> Refer ASX release dated 4 December 2015

### **Health, Safety and Environment**

There were no Lost Time Injuries or statutory non-compliances at the Company's operations during the reporting period.

An Environmental Licence for the Keysbrook Project under Part V of the Environmental Protection Act 1986 (WA), was issued by the Department of Environment Regulation during the quarter.

### **Community**

During the quarter, MZI entered into a Memorandum of Understanding with Fairbridge Western Australia Inc. to work in partnership to bring about positive sustainable change in the lives of young people, their families and community in the local area. The partnership aims to develop a broad range of initiatives over time with the initial focus on graduates from the national award-winning Fairbridge Bindjareb Project moving into employment and contracting opportunities.

### **Tiwi Islands**

No significant activity occurred during the December 2015 quarter.

## **EXPLORATION**

The main focus for the quarter was providing technical assistance to the Keysbrook Project following the commencement of mining operations. Key tasks completed included statutory reporting for the MZI/KLPL lease portfolio and assessment of assemblage data from outside the current mine plan. This data confirmed that mineral assemblage values outside the current mine plan are comparable to those in equivalent mineralised zones within the current mine plan.

Planning has commenced for the drilling program which is scheduled late in the coming quarter.

A project to compile and assess all historic data for newly acquired leases in the southern Perth Basin was commenced during the month which has identified a significant volume of exploration data within the footprint of the new leases. A first pass review of this data has identified the potential for further shallow dune-style mineralisation similar to that identified at Keysbrook. Assessment of data is continuing.

For further details please contact:

**Trevor Matthews**

*Managing Director*

+61 8 9328 9800



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# QUARTERLY ACTIVITIES REPORT

## FOR THE PERIOD ENDING 31 DECEMBER 2015



### SCHEDULE OF TENEMENTS AS AT 31 DECEMBER 2015

Tenement	Location	Status	Registered Holder	Interest at quarter end
E70/2407	Pinjarra, WA	Granted	Keysbrook Leucoxene Pty. Ltd.	100%
E70/2610	Pinjarra, WA	Granted	Keysbrook Leucoxene Pty. Ltd.	100%
E70/2673	Pinjarra, WA	Application	MZI Resources Ltd	100%
E70/4628	Pinjarra, WA	Granted	Keysbrook Leucoxene Pty. Ltd.	100%
E70/4723	Pinjarra, WA	Application	Keysbrook Leucoxene Pty. Ltd.	100%
E70/4725	Pinjarra, WA	Granted	Keysbrook Leucoxene Pty. Ltd.	100%
E70/4764	Pinjarra, WA	Application	Keysbrook Leucoxene Pty. Ltd.	100%
E70/4765	Pinjarra, WA	Application	Keysbrook Leucoxene Pty. Ltd.	100%
E70/4766	Pinjarra, WA	Application	Keysbrook Leucoxene Pty. Ltd.	100%
E70/4767	Pinjarra, WA	Application	Keysbrook Leucoxene Pty. Ltd.	100%
E70/4768	Pinjarra, WA	Application	Keysbrook Leucoxene Pty. Ltd.	100%
P70/1662	Pinjarra, WA	Application	Keysbrook Leucoxene Pty. Ltd.	100%
P70/1663	Pinjarra, WA	Application	Keysbrook Leucoxene Pty. Ltd.	100%
P70/1676	Pinjarra, WA	Application	Keysbrook Leucoxene Pty. Ltd.	100%
P70/1677	Pinjarra, WA	Application	Keysbrook Leucoxene Pty. Ltd.	100%
P70/1678	Pinjarra, WA	Application	Keysbrook Leucoxene Pty. Ltd.	100%
P70/1679	Pinjarra, WA	Application	Keysbrook Leucoxene Pty. Ltd.	100%
P70/1680	Pinjarra, WA	Application	Keysbrook Leucoxene Pty. Ltd.	100%
P70/1682	Pinjarra, WA	Application	Keysbrook Leucoxene Pty. Ltd.	100%
P70/1683	Pinjarra, WA	Application	Keysbrook Leucoxene Pty. Ltd.	100%
P70/1684	Pinjarra, WA	Application	Keysbrook Leucoxene Pty. Ltd.	100%
P70/1685	Pinjarra, WA	Application	Keysbrook Leucoxene Pty. Ltd.	100%
EL23862	Tiwi Islands, NT	Granted	MZI Resources Ltd	100%
EL24329	Tiwi Islands, NT	Granted	MZI Resources Ltd	100%
EL24851	Tiwi Islands, NT	Granted	MZI Resources Ltd	100%
EL25457	Anson Bay, NT	Application	MZI Resources Ltd	100%
EL25458	Anson Bay, NT	Application	MZI Resources Ltd	100%
EL25459	Anson Bay, NT	Application	MZI Resources Ltd	100%
EL25460	Anson Bay, NT	Application	MZI Resources Ltd	100%
EL25461	Anson Bay, NT	Application	MZI Resources Ltd	100%
EL26421	Anson Bay, NT	Application	MZI Resources Ltd	100%
EL29800	Croker Island, NT	Application	MZI Resources Ltd	100%
EL29839	Arnhem Land, NT	Application	MZI Resources Ltd	100%
EL30924	Tiwi Islands, NT	Application	MZI Resources Ltd	100%
ML24510	Tiwi Islands, NT	Granted	MZI Resources Ltd	100%
ML24511	Tiwi Islands, NT	Granted	MZI Resources Ltd	100%
ML27438	Tiwi Islands, NT	Granted	MZI Resources Ltd	100%