

HIGHLIGHTS

- Design HMC recovery and grade achieved at Keysbrook Wet Concentrator Plant (WCP) in December following completion of Optimisation Project
- Increased production with a number of records achieved. Total finished products 15,636t (+17%), L88 8,194t (+21%, record) and HMC 24,744t (record)
- Steady product sales 10,061t with receipts of \$7.5M after port congestion delayed planned December leucoxene (L70) shipment until 2 January
- Keysbrook operating cash flow negative (-\$3.9M) due principally to timing of sales (including delayed shipment, \$3.0M) and temporary higher mining-related costs. Importantly, half yearly operating cash flow was positive (\$3.4M)
- US\$16 million debt facility secured with RCF
- Leadership transition announced with Steve Ward appointed Interim Managing Director and Kevin Watters permanent Head of Operations
- Land access program progressed
- Mineral sands market conditions continuing to strengthen

During the December quarter 2016, MZI's primary focus remained on ramping-up production at the Company's Keysbrook Operations to achieve targeted recovery and production rates.

Production and sales data for the December quarter are detailed in Table 1 on page 3 of this report.

Comment

MZI Interim Managing Director Steve Ward said: *"The December quarter was one of special significance for MZI, during which the Keysbrook WCP achieved critical Design Performance milestones following the recently completed Optimisation Project. We also achieved significantly higher production in the quarter, with a number of records set including L88 production."*

"The WCP Optimisation Project has quickly proven its worth and we are now working to deliver above-design performance on a sustainable basis as a part of our continuous improvement approach. The excellent improvement already achieved at Keysbrook should also flow through to the performance of the Picton Mineral Separation Plant (MSP) when our next processing campaign commences late in January."

"On the corporate front, cash flows from Keysbrook Operations were negative this quarter in part reflecting the irregular and lumpy nature of our business in terms of sales revenue, but significantly they still remain positive for the half year period. A US\$16 million loan facility from our major shareholder RCF has given us greater financial flexibility as we complete our ramp-up to full production. Importantly, Keysbrook is starting to hit its straps at the right time, with the market outlook for mineral sands, including higher value products such as Keysbrook leucoxene, continuing to strengthen. This puts MZI in a strong position heading into 2017."

CORPORATE

MZI finished the December 2016 quarter with \$13.1 million in cash and undrawn guarantee facilities of \$6.9 million.

In November¹, MZI announced a leadership transition. Mr Trevor Matthews had elected to resign after four and a half years as Managing Director, during which time he oversaw the successful development and start-up of the Keysbrook Mineral Sands Project. With the project now undergoing a transformation from an early-stage operation to ramping up to design capacity with steady state production, the Board and Mr Matthews mutually agreed the time was right to transition to a new Managing Director. To begin this process, MZI Resources' Independent Non-Executive Director Dr Steve Ward was appointed as interim Managing Director while an executive search for a permanent candidate for the role is conducted. In addition, Kevin Watters was appointed as permanent Head of Operations, succeeding Chief Operating Officer Mike Ferraro.

To support the transformation of the Keysbrook Project, MZI also announced a US\$16 million debt funding package with Resource Capital Fund VI L.P. These funds will ensure MZI has the financial flexibility to deliver on the optimisation activities required at the Keysbrook Operations to ensure the plant achieves the targeted production rates.

On 22 November 2016², the Company held its Annual General Meeting, at which all resolutions were passed unanimously on a show of hands. As previously announced, it also marked the retirement from the Board of Non-Executive Director and former Chairman, Mr Mal Randall, after ten years with the Company. In accordance with the Company's succession plan and to ensure that the Company has access to his experience, Mr Randall will be retained as a consultant to the Company for a further 12 months.

The Company continued discussions with landowners in the ore reserve footprint in relation to land access or property purchases to support future production plans including potential expansion opportunities. One property was acquired and other negotiations are in progress.

Total issued capital at 31 December 2016 was 210,444,785 ordinary shares with a further 6,762,500 unlisted options with varying exercise prices and maturity dates.

¹ Refer ASX release dated 7 November 2016

² Refer ASX release dated 22 November 2016

OPERATIONS

Production and Costs

The primary focus of activity during the December quarter was the continuing ramp-up of production at the Keysbrook Operations. Production and sales statistics are detailed in Table 1 below.

Table 1: Keysbrook Production and Sales

Production	Unit	Dec-Qtr 2015	Mar-Qtr 2016	Jun-Qtr 2016	Sep-Qtr 2016	Dec-Qtr 2016	Total FY2016-17
Ore Mined	dt	618,480	886,357	1,017,474	1,037,963	966,406	2,004,369
Ore Processed	dt	599,369	847,995	937,957	957,581	895,435	1,853,016
Mined Grade	% HM	2.99	2.58	2.47	2.53	2.73	2.63
WCP Availability	%	82.4	83.5	82.9	82.3	74.5	78.4
MSP Availability	%	Commissioning	85.7	93.4	90.9	95.5	93.2
HMC Production (WCP)	dt	16,008	19,566	22,636	24,218	24,744	48,962
HMC Processed (MSP)	dt	9,011	24,055	20,140	21,161	22,932	44,093
L70	dt	2,316	6,349	3,475	2,985	3,640	6,625
L88	dt	1,795	4,943	3,779	6,748	8,194	14,942
Zircon Concentrate	dt	1,775	4,888	3,572	3,645	3,802	7,447
Total Products	dt	5,586	16,270	10,826	13,378	15,636	29,014
Sales							
L70	dt	-	6,825	7,000	-	0	0
L88	dt	-	-	8,250	6,850	6,243	13,093
Zircon Concentrate	dt	958	4,572	3,770	3,211	3,923	7,134
Total	dt	958	11,397	19,020	10,061	10,166	20,227

In summary there was a significant improvement in operational performance with a number of production records achieved:

- Record quarterly HMC production of 24,744 tonnes with record daily and monthly HMC production achieved in December
- Quarterly saleable production increased 17% to 15,636 tonnes (all products):
 - Record L88 production of 8,194 tonnes, up 21%
 - L70 production increased 22% to 3,640 tonnes
 - Zircon concentrate production increased 4% to 3,802 tonnes

Mining volumes were 12% lower in the December quarter compared with the record level attained in the prior quarter, totalling 966,406 tonnes. The mined grade for the quarter was 2.73% heavy mineral compared with 2.53% in the previous quarter. Mining volumes did not constrain overall production and were consistent with overall HMC production levels achieved.

Mining activities were adjusted to cater for long road haul distances as the exploitable ore in the current Mining Feed Unit (MFU) location nears exhaustion. Additionally, as part of MZI's adaptive noise management measures to better understand and manage its noise footprint mentioned in the previous

quarter, night time mining was temporarily ceased at this location. The longer haul distances and increased daytime mining required the hire of additional mobile equipment, with an associated increase in overall operating costs. Night-time processing continued and day-time mining was consequently increased to deliver sufficient material to maintain 24-hour WCP processing and HMC production. Mining in the current area will be completed shortly, and mining activity will move to a new area on the eastern side of the orebody in February when normal haul distances will be re-established and a return to night-time mining is planned.

Ore processed decreased 6% to 895,435 tonnes, reflecting downtime at the Mine Feed Unit (MFU) until equipment reliability issues were substantially resolved and a planned shutdown (circa 4 days) for the tie-ins for the WCP Optimisation Project was completed.

As previously reported, the MFU has experienced reliability issues with the low profile feeder, screen and trommel, resulting in ongoing excessive MFU downtime. This also impacted costs in the December quarter, with repairs to equipment and also the need to use supplementary mobile feeder equipment to supply ore to the trommel. However, as noted above, mining is scheduled to move to the eastern side of the Keysbrook orebody in February, and instead of relocating the existing MFU as originally planned, a proven alternative mobile integrated feeder/screening unit will be used at the new mining area.

Since commissioning and processing commenced in late 2015, the operational focus has been on improving heavy mineral recovery both at the Keysbrook WCP and Doral's Picton MSP and in achieving long-term sustainable throughput rates.

The improvement trend reported in prior quarters continued in the December quarter, during which the WCP Optimisation Project was successfully completed in late November, including commissioning of 48 large capacity spirals and uprated screening equipment. Consequently, record quarterly HMC production of 24,744 tonnes was achieved, despite MFU reliability issues and a four-day shutdown at the WCP to tie-in new equipment installed as part of the Optimisation Project. Records for daily and monthly HMC production were also achieved in December.

As reported in the period, following commissioning of the new spirals and screening equipment, the WCP achieved the important Design Performance milestone with respect to HMC recovery and grade over a four-day test run at design throughput levels.

Notably, HMC recovery levels circa two per cent above design have already been shown to be possible, and the Company is now focused on continuous improvement in pursuit of sustained higher level performance.

Improved WCP production contributed to an 8% increase in HMC processed at the Picton MSP to 22,932 tonnes, compared with 21,161 tonnes in the prior quarter. Significantly, improved HMC production at Keysbrook contributed to a 17% increase in total saleable production at the Picton MSP to 15,636 tonnes for the quarter, up from 13,378 tonnes in the prior quarter. This included record L88 production of 8,194 tonnes, an increase of 21% from 6,748 tonnes, a 22% increase in L70 production to 3,640 tonne and a 4% increase in zircon concentrate production to 3,802 tonnes.

Sales

Final product sales for the quarter totalled 10,166 tonnes, compared with 10,061 tonnes in the prior quarter, comprising 6,243 tonnes of L88 and 3,923 tonnes of zircon concentrate. Congestion at Bunbury Port delayed an additional 6,500 tonne shipment of L70 previously scheduled to depart in December by approximately two weeks to 2 January 2017.

Sales revenue booked in the quarter totalled \$7.0 million, with cash received from sales in the quarter totalling \$7.5 million (prior quarter sales revenue \$6.8 million, cash receipts \$17.3 million).

Mineral Sands Market

Mineral sands products such as rutile and leucosene contain titanium dioxide (TiO₂), which is primarily used in the manufacture of pigments for paints, plastics, paper, inks and coatings. TiO₂ 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, zirconium metal and special refractories. Consequently, the mineral sands market is closely aligned with global economic growth and urbanisation.

The mineral sands market showed further signs of improvement during the December quarter as pigment producers continued to recover from the severe downturn of recent years. Pigment producers are now seeing improvement in both volume and price, which is depleting inventory. Importantly, Chinese producers have been most aggressive announcing 13 rounds of price increases in 2016. Major non-Chinese pigment producers have also announced a further pigment price increase effective early in 2017 following price increases achieved in 2016.

Another strong northern hemisphere painting season would place considerable upward pressure on high TiO₂ feedstock prices in 2017. The outlook for zircon, however, remains mixed with growth in demand being reported in western economies while Chinese demand remains subdued pending recovery in the building and construction sector. Whilst the Chinese real estate market has performed strongly in recent times, this has been largely driven by demand for existing dwellings in major cities rather than new construction.

Sentiment remains positive that the mineral sands market cycle has moved through the bottom as the reduction in feedstock supply starts to affect inventory and demand.

Importantly for MZI, demand for chloride pigment has resulted in reducing inventory levels and put upward price pressure on high-TiO₂ feedstock such as rutile and leucosene. In response to stronger demand, chloride pigment producers are expected to increase production by either restarting idled capacity or utilising higher grade feedstock to increase yield, which will be positive for existing feedstock producers. There is now also considerable effort in China to expand chloride pigment capacity which will further increase the demand for feedstock.

Flat conditions in China's building and construction sector have been driving negative sentiment in the Chinese zircon and TiO₂ coatings sector despite fresh government stimulus to help rebuild soft consumer confidence. The zircon price showed a modest increase during the December quarter with further upside expected in 2017 as zircon producers have continued to limit production to ensure the market is not oversupplied.

MZI is heavily weighted to the TiO₂ market with 70% to 75% of annual revenue from leucosene sales.

Health, Safety and Environment

There were no Lost Time Injuries during the reporting period, and the Company-wide rolling 12-month Total Recordable Injury Frequency Rate (per 1 million hours worked) was 32.7 at the close of the period. Proactive reporting of potential hazards by employees continued during the period, providing a strong platform for the reduction of the risk of harm, damage or loss.

During the December Quarter, the Company continued to systematically implement a range of noise monitoring, management and abatement initiatives at Keysbrook to further understand and improve its noise footprint. These actions included refinement of the adaptive noise management approach, deployment of additional monitoring equipment, fully enclosing the WCP and installing noise cladding on individual items of equipment. In addition, mining was temporarily ceased at night time at the current location. The Company's requested review of its approved noise conditions was granted in December and MZI continues to work with the relevant regulatory authorities and stakeholders.

QUARTERLY ACTIVITIES REPORT

FOR THE PERIOD ENDING 31 DECEMBER 2016



The progressive rehabilitation of mined areas at the Keysbrook Operations continued during the period, with successful re-establishment of pasture being achieved on rehabilitated areas.

Community

The Company hosted a Mine Open Day on Saturday 12 November to mark the first year of operations and invited the local community and employees' families to attend. Approximately 350 people toured the operations which showcased the mining fleet in operation, a walking tour inside the wet concentrator plant, a first-hand view of newly rehabilitated pastoral land and participation by a number of local suppliers, including the Serpentine Lions Club, the Peel Zoo and the Serpentine Food and Farm Alliance. It was a very successful event with positive feedback received throughout the day.

Community partnership commitments continued with support given to a number of local initiatives and events.

Community engagement activities for the quarter included the annual Community Briefing held at the North Dandalup Hall in October, and communications to key stakeholders regarding the scheduled move to a new mining area in the March quarter. MZI's Keysbrook Community Consultative Group meeting was held on 7 December. As the Keysbrook Project has now transitioned to full operations, future meetings will be held on a quarterly basis.

Geology and Regional Exploration

Activities for the quarter were focused on compilation of data to enable a revised resource estimate for the Keysbrook Deposit which is expected to be completed during the March quarter 2017.

For further details, please contact:

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SCHEDULE OF TENEMENTS AS AT 31 DECEMBER 2016

Tenement	Location	Status	Registered Holder	Interest at 31/12/16
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	Granted	Keysbrook Leucoxene Pty Ltd	100%
E70/4725	Pinjarra, WA	Granted	Keysbrook Leucoxene Pty Ltd	100%
E70/4764	Pinjarra, WA	Granted	Keysbrook Leucoxene Pty Ltd	100%
E70/4765	Pinjarra, WA	Granted	Keysbrook Leucoxene Pty Ltd	100%
E70/4766	Pinjarra, WA	Granted	Keysbrook Leucoxene Pty Ltd	100%
E70/4767	Pinjarra, WA	Granted	Keysbrook Leucoxene Pty Ltd	100%
E70/4768	Pinjarra, WA	Granted	Keysbrook Leucoxene Pty Ltd	100%
E70/4925	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%
P70/1662	Pinjarra, WA	Granted	Keysbrook Leucoxene Pty Ltd	100%
P70/1663	Pinjarra, WA	Granted	Keysbrook Leucoxene Pty Ltd	100%
P70/1676	Pinjarra, WA	Granted	Keysbrook Leucoxene Pty Ltd	100%
P70/1677	Pinjarra, WA	Granted	Keysbrook Leucoxene Pty Ltd	100%
P70/1678	Pinjarra, WA	Granted	Keysbrook Leucoxene Pty Ltd	100%
P70/1679	Pinjarra, WA	Granted	Keysbrook Leucoxene Pty Ltd	100%
P70/1680	Pinjarra, WA	Granted	Keysbrook Leucoxene Pty Ltd	100%
P70/1682	Pinjarra, WA	Granted	Keysbrook Leucoxene Pty Ltd	100%
P70/1683	Pinjarra, WA	Granted	Keysbrook Leucoxene Pty Ltd	100%
P70/1684	Pinjarra, WA	Granted	Keysbrook Leucoxene Pty Ltd	100%
P70/1685	Pinjarra, WA	Granted	Keysbrook Leucoxene Pty Ltd	100%