ASX ANNOUNCEMENT

11 October 2017

Keysbrook Mineral Resource and Ore Reserve Update

- Keysbrook Mineral Resource and Ore Reserve updated to increase confidence and understanding of Keysbrook Deposit.
- Keysbrook Mineral Resource estimated at 146.8 Mt grading 2.0% Total Heavy Mineral (THM) (4 August 2015: 155 Mt 2.2% THM).
- Ore Reserve estimated at 58 Mt @ 2.3% THM (23 March 2016: 72.1Mt @ 2.2% THM).
- Measured Resource classification increased to 86% of total (from 71%).
- Proved Ore Reserve classification increased to 92% of total (from 75%).
- Resource remains open to north, west and south-west.
- Updated Ore Reserve underpins 5.25Mtpa Operating Plan.

MZI Resources Ltd (ASX: MZI) has updated the Keysbrook Mineral Resource and Ore Reserve, following infill drilling and a detailed technical review to provide increased understanding and confidence in the orebody for mine planning purposes.

This work has resulted in an updated Mineral Resource estimate of 146.8 Mt grading 2.0% THM, and an updated Ore Reserve of 58.0 Mt grading 2.3% THM as at 30 June 2017. The updated estimates reflect depletion, dilution factor and sterilisation by mining totalling 7.5 Mt since operational activities commenced in mid-2015. Other technical adjustments identified during the review also reduced the total Ore Reserve by a further 6.6 Mt compared with the prior estimate (refer ASX releases dated 7 August 2015 and 23 March 2016, respectively).

The updated Mineral Resource and Ore Reserve substantiates increasing confidence in the Keysbrook Deposit, with 86% of the total Mineral Resource now classified as Measured (from 71% previously) and 92% of the total Ore Reserve now classified as Proved (from 75% previously).

Significantly, the Mineral Resource remains open to the north, west, and south west, and will be progressively tested by further drilling over the life of the operation.

Mineral Resources

A drilling program was completed in mid-2016 to increase confidence in areas scheduled for mining in the next 12-18 months and to provide incremental lateral additions to the resource inventory of the Keysbrook Deposit.

Table 1, over the page, shows the updated Keysbrook Project Global Mineral Resource as at 30 June 2017.

Level 2, 100 Royal Street, East Perth, Western Australia 6004 | PO Box 3011, East Perth, Western Australia 6892
Tel: +61 (8) 9328 9800 Fax: +61 (8) 9328 9911 | admin@mzi.com.au
ABN: 52 077 221 722

www.mzi.com.au

Table 1. Keysbrook Project Global Mineral Resource

Category	Tonnes (Mt)	THM (%)	Contained THM (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
Total	**146.8**	**2.0**	**2,940**	**10.3**

A comparison with the prior Keysbrook Project Global Mineral Resource estimate, by individual deposit, is shown in Table 2, with their locations in Figure 1.

Table 2. Keysbrook Project Deposit Component Resource Statement

	30 June 2017							4 August 2015						
Class	Ore	THM	Contained THM	Clay Fines	L70	L88	Zircon	Ore	THM	Contained THM	Clay Fines	L70	L88	Zircon
	Mt	%	kt	%	%	%	%	Mt	%	kt	%	%	%	%
Keysbrook														
Measured	74.3	2.2	1,630	8.7	23.9	58.1	12.1	63.9	2.2	1,400	8.1	26.1	50.1	13.6
Indicated	7.5	2.0	150	9.6	34.4	48.4	11.3	15.6	2.2	350	10.2	28.0	46.1	14.7
Inferred	4.4	2.4	110	10.5	31.8	50.2	11.7	10.8	2.4	260	11.9	26.4	48.7	14.3
Total	**86.2**	**2.2**	**1,890**	**8.9**	**25.2**	**56.9**	**12.0**	**90.3**	**2.2**	**2,010**	**8.9**	**26.5**	**49.2**	**13.9**
Yangedi														
Inferred	47.0	1.6	750	12.6	59.0	25.4	8.9	51.1	1.5	790	12.1	61.2	20.0	10.8
Total	**47.0**	**1.6**	**750**	**12.6**	**59.0**	**25.4**	**8.9**	**51.1**	**1.5**	**790**	**12.1**	**61.2**	**20.0**	**10.8**
Railway														
Indicated	13.6	2.2	300	11.0	-	-	-							
Total	**13.6**	**2.2**	**300**	**11.0**	-	-	-							

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.*

The 2016 drilling program conducted at the Keysbrook Deposit comprised 1,397 Aircore holes, 14,121 sample analyses and 387 metallurgical test analyses.

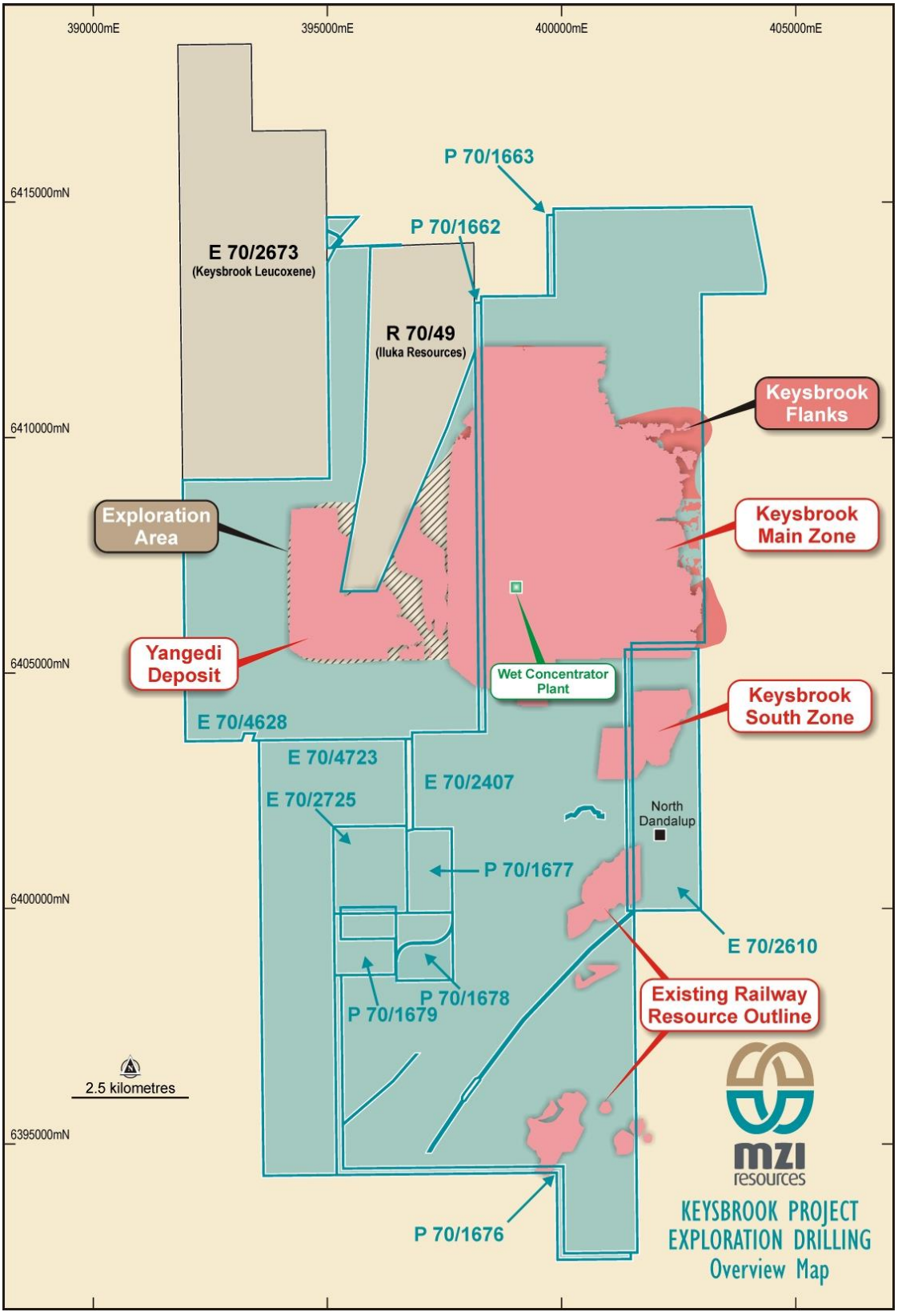

Figure 1. Keysbrook Project Deposit Location

Several key changes were made to this Mineral Resource estimate to align the resource with operating parameters of the Keysbrook operation, including:

- Changing the sizing definition of clay fines for the Keysbrook and Yangedi Deposits from -45µm to -53µm to reflect cyclone sizing at the Keysbrook Wet Concentrator Plant (WCP).
- Modified analysis methodology and increased density of heavy mineral assemblage analysis to provide better and more frequent reconciliation to Keysbrook operational data.
- Reinterpretation of the poddy 'coffee rock' lateritic layer which forms a partial base to the deposit using implicit modelling techniques.

The net result of these changes is an improved Mineral Resource estimate more accurately reflecting what has been observed during the first twelve months of operation at Keysbrook.

Significantly, the proportion of Measured Mineral Resources has increased to 86% of the total, compared with 71% previously.

The work has also highlighted potential beyond the existing resource boundary, with partial replenishment of the 7.5 Mt of mined and sterilised resources to 30 June 2017 being achieved despite limited exploration activity. This partial replenishment totalled 5.0 Mt. Figure 2 outlines the current resource envelope as well as areas for potential extension.

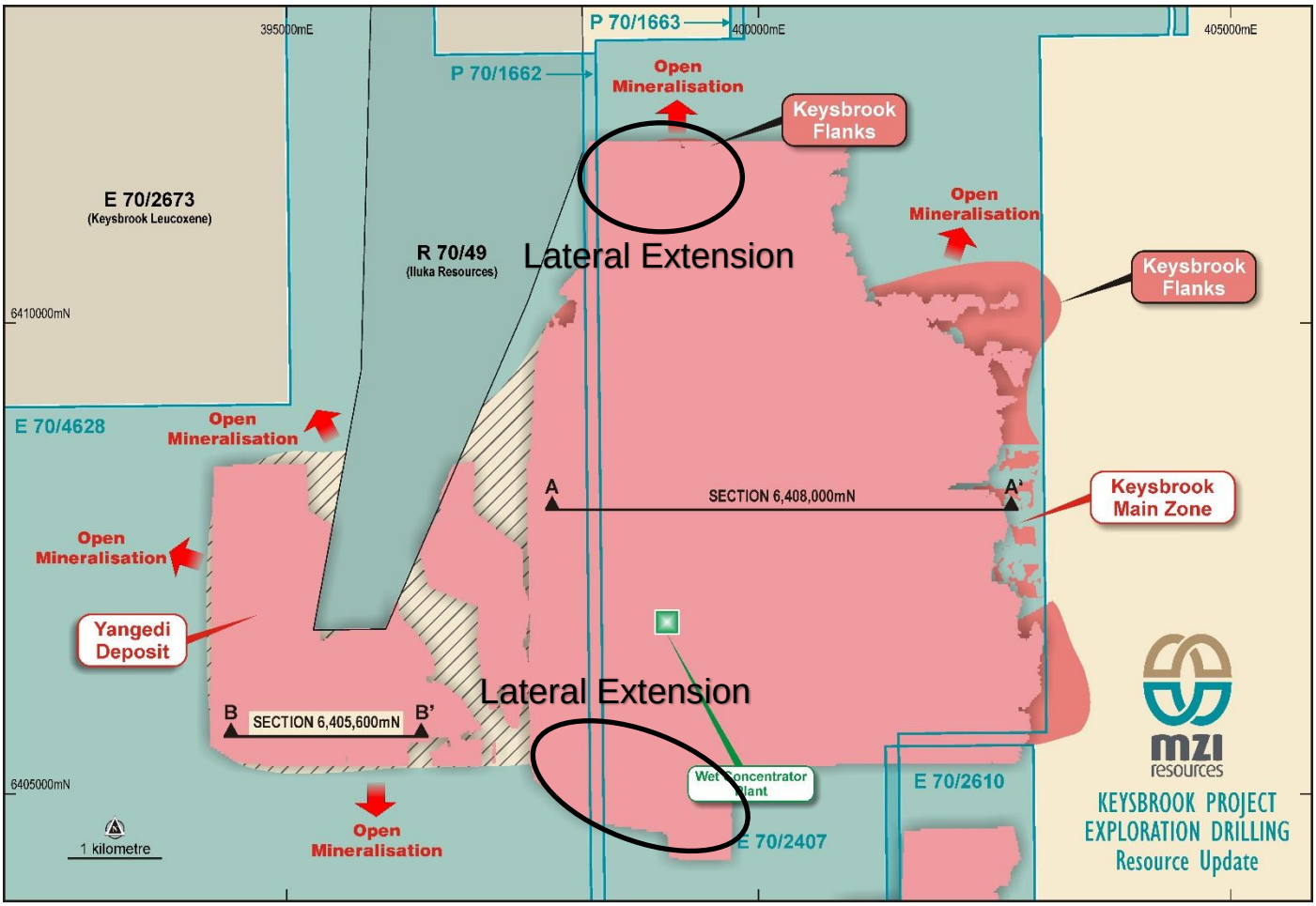

Figure 2. Keysbrook and Yangedi – Resource Extents and Upside

Ore Reserves

The Ore Reserve was updated based on the Mineral Resource estimate discussed above. Parameters used in the estimation of the Ore Reserve have followed those of the previous 2015 Ore Reserve estimation, with the modification of parameters to capitalise on learnings from current mining operations at the Keysbrook Deposit:

- Removal of Ore Reserves due to mine depletion, reserve dilution factor and sterilisation (net loss of 7.5 Mt).
- Removal of watercourse exclusion zones included in previous Ore Reserve estimate (net loss 3.1 Mt).
- Reinterpretation of geology resulting in a better definition of the coffee rock unit and removal of >15% oversize material from material previously reported as reserve (net loss 3.1 Mt).
- Sterilisation of ore beneath perched coffee rock horizons (net loss 1.4 Mt).
- Application of minimum mining thickness to 1 metre (net loss 1.1 Mt).
- Change to definition of clay fines material from -45µm to -53µm (net loss 0.5 Mt).
- Removal of non-excluded powerpole exclusion zones (net loss of 0.5 Mt).
- Modification of lots included in Ore Reserve based on current sentiment of obtaining appropriate approvals (net gain of 3.1 Mt).

In combination, these factors have resulted in a gross reduction in Ore Reserves of approximately 14.1 Mt compared with the prior estimate, and an effective net reduction (after mining depletion) of 6.6 Mt. Significantly, the updated Ore Reserve is technically more robust and a more accurate reflection of actual operational parameters at the Keysbrook Operations as demonstrated since production commenced.

Proved Ore Reserves are now estimated to account for approximately 92% of the total Ore Reserve, compared with 75% previously. Proved Ore Reserves reduced by less than 1 Mt, with most of the reduction occurring in the Probable reserve category.

Table 3. Keysbrook Project Ore Reserve Compilation

Class	30 June 2017							23 March 2016						
	Ore Tonnes	Contained THM	THM	THM Assemblage				Ore Tonnes	Contained THM	THM	THM Assemblage			
				L70	L88	Zircon	Other				L70	L88	Zircon	Other
	Mt	Mt	%	%	%	%	%	Mt	Mt	%	%	%	%	%
Keysbrook														
Proved	53.3	1.2	2.3	24.5	57.8	11.8	5.9	54.1	1.2	2.2	25.5	50.2	13.4	10.8
Probable	4.7	0.1	2.2	36.7	46.4	10.9	6.0	18.0	0.4	2.2	28.5	46.4	14.1	11.0
Total	**58.0**	**1.3**	**2.3**	**25.4**	**56.9**	**11.7**	**5.9**	**72.1**	**1.6**	**2.2**	**26.3**	**49.3**	**13.6**	**10.8**

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).*

JORC Table 1 Summary of Information

A summary of the attached JORC Table 1 is provided below with regards to the Mineral Resource and Ore Reserve in line with the requirements of ASX listing rule 5.8.1.

Sections 1, 2, and 3 (relevant to Mineral Resource Estimation)

- Geology – interpretation was undertaken based on a combination of the observed geology and analyses. Material with <20% clay fines and <15% oversize was determined to be sand material of Bassendean or Yoganup sand, either of dune sand near surface or beach at depth, dependant on spatial location. Material with >15% oversize was interpreted as coffee rock. Material with >20% clay fines and <15% oversize was interpreted as Guildford or Leederville Clay dependant on spatial location.
- Drilling method – the dominant drilling method used is NQ aircore. A small quantity of hand auger and push probe drilling methods was employed.
- Resource classification – this was based on confidence in the continuity of grade and geology using the drilling density, geological model, modelled grade continuity and kriging efficiency. As a general rule, drill spacing of less than 200m by 50m resulted in a Measured classification, between 200m by 50m and 400m by 100m was Indicated with any broader spacing being Inferred.
- Sample Analysis method – well established methods of heavy media separation using tetrabromylethane (TBE). Pre-2007 was a combination of Western Geochem labs and Dunelabs with some differing sieve sizes being employed for which corrections were applied and confidence downgraded. Post-2007 analysis was undertaken at Diamantina using the same methods, the exception being a change of the sieve sizes for ore material being changed from +45µm and -2mm to +53µm and -2mm, with +53µm and -500um for the grade control portion of the 2016 program. This change was made to better reflect the fines cyclone sizing at the Wet Concentrator Plant (WCP) and the proportion of coarse sand fraction which may cause pumping issues from the field to the WCP.
- Estimation methodology – resource estimation was undertaken using ordinary kriging for THM, clay fines and oversize. Mineral assemblage was undertaken using nearest neighbor and polygon assignment.
- Cut-off parameters – THM cut-off used is 1%, clay fines is <20% and oversize is <15%. These cut-offs were applied based on processing constraints for the Keysbrook wet processing plant.
- Sampling – drilling methods mostly utilised 1m sample intervals, with the exception of the 2015/2016 grade control drilling which utilised 0.5m samples.
- Sub-sampling – 2kg subsamples were taken from sample buckets into a calico bag for processing. Subsampling was either undertaken using a rotary splitter (2012 drilling) or by hand, homogenising the sample before extracting a subsample.
- Mining modifying parameters – minimum mining width of 0.5m and open pit mining method. Buffers were also applied to remove areas such infrastructure and environmental buffers from the mineral resource.
- Metallurgical methods – assemblage samples were analysed both by magnetic separation and QEMSCAN in order to determine the best method for reconciliation against production data. This reconciliation revealed QEMSCAN to reconcile more effectively. As a result QEMSCAN analyses were used in preference throughout the model, with a correction applied to the magnetic separation where QEMSCAN data was not available.

Section 4 (relevant to Ore Reserves)

- Cut-off Parameters – calculated using spreadsheets and an individual cut-off grade applied to each block within the model. The calculations consider, among other considerations, individual mineral and product values, operating costs and other practical considerations (ore and overburden variabilities) and recoveries.
- Mining factors or assumptions - truck and shovel method selected as mining method deemed appropriate due to ore thickness, access and nature of geology. Inferred resource not used in Ore Reserve output.
- Metallurgical factors or assumptions – the metallurgical process the Ore Reserve is based on is well tested, documented and is commonly used in similar operations worldwide.
- Environmental – the mine is current with all environmental approvals and compliant to the conditions set out in these approvals. It is reasonable to expect that future approvals will be granted given the status of the operation.

- Costs – projected capital costs relate to sustaining capital only and are considered appropriate. Operating history and Feasibility Study in combination with offtake agreements in place for sale of various commodities produced at Keysbrook, at varying proportions of product volume provide adequate coverage for the estimation of operating costs. For the purpose of the Reserve financial calculations the contract prices are commercially sensitive. Long term exchange rate of A$0.70 sourced from Bloomberg. Transportation charges reflect contract rates with service provider. The transportation charges are included in the selling costs. The selling costs include provision for bagging, handling, transport to port, and port costs. All product prices have been derived on an FOB basis and as such shipping prices have not been included.
- Revenue factors – TZMI have provided a pricing range for products. Product revenue is calculated using TZMI long term prices adjusted for product quality and other factors contained in offtake agreements as well as the company's expectations.
- Economic - to demonstrate the Ore Reserve is economic it has been evaluated through a high-level financial model. This process has demonstrated the Ore Reserve generates positive cash flows above the cut-off grade.
- Social - agreements are in place with all current relevant stakeholders and negotiations are well advanced with those identified as high probability of needing agreements to be in place. MZI has a comprehensive community engagement program.

For further details please contact:

Martin Purvis

Managing Director

+61 8 9328 9800

Competent Person's Statement – Mineral Resources

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.

About MZI

MZI Resources Ltd (ASX:MZI) is a mineral sands company based in Perth, Western Australia, focused on the high value minerals of zircon, rutile and leucoxene. Its flagship operating asset is the Keysbrook Mineral Sands Project, located 70km south of Perth. At the Keysbrook mine, mineral sands are mined and processed to produce heavy mineral concentrate (HMC) which is processed into final products under a toll treating arrangement with Doral Mineral Sands Pty Ltd at the Picton Mineral Separation Plant (MSP) near Bunbury. Production commenced in late 2015, making the Keysbrook Project Australia's first – and the world's largest - primary producer of high value leucoxene.

Appendix

JORC Code, 2012 Edition – Table 1 Report

Section 1 - Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.*	• All pre-2016 and non-grade control 2016 samples analysed individually for THM, clay (-45um) and oversize (+2mm) • Grade control 2016 samples analysed individually for THM (+53um to 500um), clay (-53um) and oversize (+53um-2mm and +2mm) • Sample collection (2003-2008): samples collected into buckets from cyclone then placed into calico bags. • Sample collection (2010): samples from auger tipped onto mat on ground then collected into calico bags. • Sample collection (2012) – samples collected in a calico bags via a rotary splitter attached to the bottom of the cyclone. • Sample collection (2015) - samples collected in sample bucket, thoroughly homogenised by hand and placed into 2kg calico bags. Initial intent to pass through rotary splitter, however damp nature of some samples and splitter design resulted in extensive contamination issues, so splitter was removed. • Sample collection (2016) - samples collected in sample bucket, thoroughly homogenised by hand and placed into 2kg calico bags. Changeover to 0.5m samples removed need to subsample with all sample being collected for analysis • Sample Analysis (March 2004): Western Geochem Labs. OS>2mm, SL -45um. TBE analysis on -2mm +45um. • Sample Analysis (August 2004): Western Geochem Labs or Dunelabs. Western Geochem Labs screen +3.3mm, -45um wet screen; OS screen +2mm. TBE analysis on -2mm +45um. Dunelabs screen -3.3mm fraction at 0.7mm, weigh. Screen -0.7mm fraction at -45um. TBE analysis on -0.7mm + 45um fraction. • Sample analysis (2006): Western Geochem Labs -45um wet screen; OS screen +2mm. TBE analysis on -2mm +45um. • Sample Analysis (2007-2015 and 2016 non-grade control): Diamantina Laboratories. Samples dried, rotary split to 100g then deslimed (no TSPP). Material was screened at -45um and +2mm and placed into TBE with an SG of 2.95g/cc for heavy media separation. Cleaned with acetone, then dried, weighed and calculations compiled. • Sample analysis (2016 grade control): Diamantina Laboratories. Samples dried, rotary split to 100g then deslimed (no TSPP). Material was screened at -53um, +53um to -500um, +500um to -2mm and +2mm. The +53 to -500um fraction was placed into TBE with an SG of 2.95g/cc for heavy media separation. Cleaned with acetone, then dried, weighed and calculations compiled.
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).*	• 2003, March 2004: Wallis Edson 3000 Versadrill truck mounted aircore rig • August 2004, 2006: Orbit drilling Mantis 100 4WD mounted aircore rig • 2007, 2008: OnDrill Mantis 100 Canter mounted aircore rig • 2010: Hand auger. • 2012-2015: Drilling completed using Arrinooka Drilling utilising a Hydco RAB50 truck-mounted drilling rig. • 2016: drilling completed using Wallis Mantis 82 4WD mounted drill rig • All aircore drilling completed with NQ sized (3½") Aircore rods.

Criteria	JORC Code explanation	Commentary
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• Sample quality recorded during drilling. • All observations logged into spreadsheet based system at the drill site. •
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• Logging of rock types, quality, hardness, washability and grain size undertaken in field. Panned estimate of clay fines, oversize and heavy mineral also completed. Photography not taken. All intervals logged.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• 2003-2008: samples collected via a rotary splitter into calico bags. • 2010: auger samples not subsampled – complete 1m sample placed in calico bag for analysis. • 2012: samples collected via a rotary splitter into calico bags. • 2015: Samples collected in sample bucket, thoroughly homogenised by hand and placed into 2kg calico bags. Initial intent to pass through rotary splitter, however damp nature of drilling and design resulted in extensive contamination issues, so splitter was removed. • 2016: Samples collected in sample bucket, no need to subsample given 0.5m sample intervals • (2015-2016) Duplicate samples taken at a rate of 1 in 25. Samples taken as a grab from homogenised bucket of sample. • (2015-2016) Refer to sample preparation and analysis technique above. • (2015-2016) Results from duplicate sampling show good correlation.

Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*
	• *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.*
	• *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*
		• Heavy media separation using Tetrabromylethane - appropriate method.
		• 2015-2016:
		  • Twin holes drilled at 1 in 20 ratio.
		  • Standards inserted at a rate of 1 in 25 samples.
		  • Blanks inserted at rate of 1 in 50 samples.
		  • Duplicate samples taken at a rate of 1 in 25 samples.

Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• A program of twin holes was completed in 2013 to test 5% of each historical program drilled up to 2012, using the push probe drilling method. This program was used to identify potential bias in the aircore method used during any of the programs. No bias was identified. • Twin holes: (2015) drilled at 1 in 20 ratio. (2016) no twin holes planned • Data stored in Excel logging files and backed up via Email nightly. • Compilation of analysis with geological interpretation into a single working sheet was undertaken by an MZI Geologist, with problems identified and rectified prior to inclusion in resource.
Location of data points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• Approximately 95% of the drillholes in the resource estimate have been located via RTK DGPS, with an accuracy of 0.1m lateral and 0.25m vertical • Approximately 5% of the drillholes have been located via handheld GPS in MGA94. • Topographic coverage: accurate LIDAR data was captured with 0.5m vertical contour intervals with a 0.3m accuracy.

Criteria	JORC Code explanation	Commentary
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	• Drill spacing used for the resource estimate ranges from 50m by 25m to 400m by 200m. • Individual 0.5m samples collected over areas where grade control drilling has been undertaken. Individual 1m samples taken for all other drilling
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• Mineralisation is flat lying. All holes are vertical and perpendicular to geology and mineralisation and no bias will have been incurred
Sample security	• *The measures taken to ensure sample security.*	• Samples stored on locked property whilst awaiting dispatch for analysis. Samples stored in analytical laboratory sample preparation shed
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Due diligence was undertaken on all work undertaken prior to 2015 as part of the funding requirements for the project. This included twinning of existing aircore drilling with push probe to determine any biases present, of which there were none. • Program-specific reviews have been undertaken internally and in conjunction with the Competent Person during the update of the resource estimate

Section 2 - Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* • *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	• Exploration Licence numbers E70/2407, E70/2610 and E70/4628 are relevant to this report, as are Prospecting Licences P70/1662 and P70/1663. These tenements are held 100% by Keysbrook Leucoxene Pty. Ltd, a wholly owned subsidiary of MZI Resources Ltd. • It is understood by MZI that all licences are located on pre-1899 fee simple, freehold land
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Exploration was undertaken during the period 2006-2008 by Iluka Resources as part of tenement E70/2495. This data was not used for the resource estimate
Geology	• *Deposit type, geological setting and style of mineralisation.*	• Geologically the deposit comprises Bassendean and Yoganup Sand Formation sediments. This is composed of localised sand dunes, overlying a basal zone of sand. These mineralised units overly the clay-rich Guildford Formation. • Mineralisation is dispersed throughout the sand units.

Drill hole Information	• *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:*
	  ○ *easting and northing of the drill hole collar*
	  ○ *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*
	  ○ *dip and azimuth of the hole*
	  ○ *down hole length and interception depth*
	  ○ *hole length.*
	• *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*
		• Not relevant – mineral resource defined. Exploration results are not being reported for the Mineral Resource area.

Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated*	• Exploration results are not being reported for the Mineral Resource area.

Criteria	JORC Code explanation	Commentary
	and some typical examples of such aggregations should be shown in detail. • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').*	• Flat-lying mineralisation intersected by vertical drillholes.
Diagrams	• *Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.*	• Refer to ASX release
Balanced reporting	• *Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.*	• Exploration results are not being reported for the Mineral Resource area.

Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.*	• 2015 assemblage data
		  • Compositing of TBE sink material to form single sample.
		  • Processing of composite via CARPCO magnet to split sample into magnetic components (Mag 1-4 & Non-Mag).
		  • XRF analysis of each component to ascertain concentration of relevant elements
		  • Post processing of XRF results via proprietary algorithm to determine proportion of products.
		• A second process, QEMSCAN, was used for 11 samples within the resource estimate due to errors in the magnetic separation data.
		
		• 2016 assemblage data
		  • Compositing of TBE sink material to form single sample.
		  • Insertion of an assemblage standard into the sequence at an initial ratio of 1:4 decreasing to 1:8 as quality was established. Standard generated from a homogenized and split TBE separation of Keysbrook HMC
		  • Split composite/standard into two samples - magnetic separation & QEMSCAN
		  • Magnetic separation samples
		  • Processing of composite via a REE magnet to split sample into magnetic components (Mag 1-4 & Non-Mag).
		  • XRF analysis of each component to ascertain concentration of elements
		  • Post processing of XRF results via proprietary algorithm to determine proportion of products.
		  • QEMSCAN samples
		  • Post processing of results to establish product components, including removal of mineral species such as iron oxides which incorrectly report to sinks
		  • Correlation between the magnetic separation data and QEMSCAN for mine block (100x100) composites to allow a correction to be applied to pre-2016 data to reflect removal of iron oxides

Further work	• *The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible*	• Land access agreement discussions. • Aircore drilling in order to define the mineralisation laterally and at depth across the lease area.

Criteria	JORC Code explanation	Commentary
	extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	

Section 3 - Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• Direct computer field entry of data, assays imported from Excel spreadsheets, validation and storage within MZI Micromine database. Historical data imported from Optiro Access database.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• The competent person has visited site and has been associated with the Keysbrook Project for ten years.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• The geological confidence in the resource is high for the main ore zone (Yoganup Dune) east of Hopeland Road due to the history of the project and density of exploration data. The cut-off between the Yoganup Dune and the underlying laterite or Guildford Clay was defined from the geology logging and assay results. The geological confidence in the Bassendean Dune ore zone to the west of Hopeland Road is lower, primarily due to it being a new zone with a lower density of data. • Hard boundaries were used to define the different geological domains. • Continuity of grade and geology of the dune sand material is controlled primarily by proximity to the main dune system and the presence of dune sand material. Continuity of the underlying laterite layer is controlled primarily by the water table (both current and historic) and the thickness of the overlying dune sequence which can result in varying degrees of formation of the laterite unit.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• The mineralisation has been shown from drilling and assemblage studies to extend for approximately 13 km north/south and 6km east/west within the Keysbrook area (refer Figure 1). Mineralisation is from surface to a maximum of 20m below surface.
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of*	• Surpac resource estimation software was used to create a geological model and define the mineralisation envelopes. A series of geological domains was used to constrain the mineralisation estimates. • Wireframes were checked in cross section, long section and plan against the geological interpretation and assay results. • Induration (coffee rock or laterisation) was identified from oversize assays and geological logging and wireframed as a domain for exclusion from the resource estimate. • Samples were composited to 1m maximum and in the grade control area to 0.5m to ensure compositing was consistent with the most common drilling intervals. • The influence of extreme THM and slimes sample distribution outliers was reduced by top-cutting. The top cut level was determined using a combination of top cut analysis tools including grade histograms, log probability plots and the coefficient of variation. • Kriging neighbourhood analysis was performed in order to determine the block size, sample numbers and discretisation. • THM mineralisation continuity at Keysbrook was interpreted from variogram analyses to have an along strike range of 2,000m and an across strike range of 800m within the upper sand layer and along strike range of 1,850m and an across strike range of 950m within the lower sand unit. • THM continuity at Yangedi was interpreted from variogram

Criteria	JORC Code explanation	Commentary
	reconciliation data if available.	analyses to have an along strike range of 500m and an across strike range of 400m. • Grade estimation was into parent blocks of 25mE by 50mN on 1m benches and 12.5mE by 25mN on 0.5m benches in closer spaced drilling areas. • Estimation was carried out using ordinary kriging at the parent block scale. Three estimation passes were used for all domains; the first search was a reduced range in direction 1 based on the KNA for each domain in the three principal directions; the second search was the same as the initial search with reduced sample numbers required for estimation. The third search was three times the initial search. The majority of blocks (98%) were estimated in the first pass for domains 1 and 2. • The THM and slimes (clay fines) estimated block model grades were visually validated against the input drillhole data and comparisons were carried out against the declustered drillhole data and by northing, easting and elevation slices.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• All grade reports and calculated tonnages are on a dry basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• Minimum mining grade has been defined as 1.0% THM
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	• Minimum mining width is 0.5m. • Minimum THM grade is 1.0%. • Maximum laterite is 15%. • Maximum clay fines is 20%. • Open pit mining method.
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• Mineral assemblage data within the mineral resource estimate has been sourced from five different assemblage programs undertaken since 2011. • The 2011 and 2012 programs were taken as individual test pits at varying locations throughout the resource area. • The 2013b program was a composite program based on the approved mine plan at the time. This resulted in 23 quarterly samples. • The 2015 program was a combination of composite samples based on the currently approved mine plan, spatial composites in areas outside the current mine plan, individual hole composites and individual downhole samples. This varying approach was undertaken to acquire data over different scales throughout the resource. • The 2016 program was based mainly on the compositing of individual sample sinks into spatial areas relating to individual mine plan blocks where sufficient sink material was available. Where outside the mine plan composites were generated to reflect changes in dune morphology or spatial location • Analysis of all programs was undertaken by passing the heavy mineral through a Carpco (pre-2016) or REE (2016) magnetic separator to split the material into components based on magnetic susceptibility. • All relevant components form the magnetic separation were analysed by XRF to determine the content of elements of relevance for calculation of the mineralogy based on assumptions made from previous test programs and results from previous grain counting studies. Mineralogy was then calculated within a spreadsheet by the Technical Director (pre-2016) or by the site metallurgist (2016).

Criteria	JORC Code explanation	Commentary
		• Parts of the 2015 sample program were also analysed using QEMSCAN. All samples in the 2016 program were analysed with QEMSCAN
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• All waste materials are returned to the mining void. • Environmental exclusion zones are excluded from the reported resource.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• Three phases of test work have been completed over the Keysbrook Project since 2006, using volume displacement and troxlar nuclear density gauge methods. This has determined that a global bulk density of 1.6g/cc is valid for the resource estimate.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• The THM Mineral Resources have been classified as Measured, Indicated and Inferred on the basis of confidence in geological and grade continuity using the drilling density, geological model, modeled grade continuity and conditional bias measures (kriging efficiency). • The classification considers all available data and quality of the estimate and reflects the Competent Person's view of the deposits.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• The geological interpretation, estimation parameters and validation of the resource models were peer reviewed by the Competent Person.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• The assigned classification of Measured, Indicated and Inferred reflects the Competent Person's assessment of the accuracy and confidence levels in the Mineral Resource estimate. • The confidence levels reflect production volumes on a monthly basis.

Section 4 - Estimation and Reporting of Ore Reserves

Ore Reserve estimates have been based on Measured and Indicated Resource estimates.

Ore reserves have had all appropriate environmental & economical exclusions applied.

Criteria	JORC Code explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	• *Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.* • *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*	• The Mineral Resource Estimate used is classified a JORC 2012 Mineral Resource statement as per MZI Resources Ltd, the Keysbrook Project Mineral Resource estimate was completed by Susan Havlin Standing (the Competent Person for Estimation and Reporting of Mineral Resources) of Optiro Pty Ltd. • The Mineral Resources are reported inclusive of the Ore Reserves.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• Ongoing Site visit have been undertaken by Andrew Law of Optiro Pty Ltd (the Competent Person for Estimation and Reporting of Ore Reserves) from February 2015 to February 2017, with the purpose of the visits being to assess requirements for evaluating the updated reserve and ongoing operational assistance.
Study status	• *The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.* • *The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.*	• The project has achieved operational status with construction having been completed & production commencing October 2015. On this basis, the analysis is considered to be at a higher level than a Feasibility Study. • Where insufficient operating history has been available, MZI has used the Feasibility Study which was completed in October 2012 and is considered current.
Cut-off parameters	• *The basis of the cut-off grade(s) or quality parameters applied.*	• The cut-off grade in the case of Keysbrook has been calculated using spreadsheets and an individual cut-off grade applied to each block within the model. The calculations consider, among other considerations, individual mineral and product values, operating costs and other practical considerations (including ore and overburden variabilities) and recoveries.
Mining factors or assumptions	• *The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).* • *The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.* • *The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.* • *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).* • *The mining dilution factors used.* • *The mining recovery factors used.* • *Any minimum mining widths used.* • *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.* • *The infrastructure requirements of the selected mining methods.*	• The truck and shovel method has been chosen as this is the method of mining utilised on site. The truck and shovel method is used in similar operations in the Australia. Appropriate factors have been applied to the Mineral Resource to derive the Ore Reserves. • The choice of the truck and shovel method was deemed appropriate due to the ore thickness, access, and nature of the geology. Similar mining methods are also used in the geographical area adjacent to the mining areas proposed. • Geotechnical parameters were not required as the orebody has an average depth of 2.2m and the method chosen is not reliant of geotechnical input. • Mining dilution and recovery factors (0%) are assumptions made for similar mining operations and mining techniques. Reconciliations to date have supported these assumptions. • Grade control is used for short term planning and drilling is at a closer spacing than that used for Mineral Resources. MZI completed a comprehensive grade control drilling program in 2015, the results of which were included in the Mineral Resources. • Inferred resources were not used in the Ore Reserve output. However were used in an operations schedule for internal purposes.
Metallurgical factors or assumptions	• *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.* • *Whether the metallurgical process is well-tested technology or novel in nature.*	• The ore is processed through a wet concentration plant (WCP) to produce a Heavy Mineral Concentrate (HMC) which is further processed at an off-site Mineral Separation Plant (MSP) to generate final products. The WCP and MSP use traditional mineral sands separation

Criteria	JORC Code explanation	Commentary
	• *The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.* • *Any assumptions or allowances made for deleterious elements.* • *The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.* • *For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?*	techniques. The metallurgical process and appropriateness of the process is outlined in a process map by MZI and is detailed in the Ore Reserve document. The process has been widely utilised in similar operations. • The Metallurgical process is well tested and commonly used in similar operations worldwide. • Deleterious materials include oversize material and clay fines which will be managed as part of MZI's rehabilitation management plan and mildly radioactive material, which will be returned into the pit as backfill and capped. • The Ore Reserve estimation has been based on the recoveries and processes outlined above which are well tested, and established as being appropriate for similar metallurgical specifications. • Yes, mine planning filters metallurgical recovery through to final product.
Environmental	• *The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.*	• The mine is current with all environmental approvals and compliant to the conditions set out in such approvals. It is reasonable to expect that future approvals will be granted given the status of the operation.
Infrastructure	• *The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.*	• The mine is currently in operation; current infrastructure appears suitable for ongoing operations.
Costs	• *The derivation of, or assumptions made, regarding projected capital costs in the study.* • *The methodology used to estimate operating costs.* • *Allowances made for the content of deleterious elements.* • *The source of exchange rates used in the study.* • *Derivation of transportation charges.* • *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.* • *The allowances made for royalties payable, both Government and private.*	• Projected capital costs relate to sustaining capital only and are considered appropriate. • Operating history and Feasibility Study in combination with offtake agreements in place for sale of various commodities produced at Keysbrook, at varying proportions of product volume provide adequate coverage for the estimation of operating costs. For the purpose of the Reserve financial calculations the contract prices are commercially sensitive. • Product specifications deal with deleterious elements. • Long term exchange rates of A$0.70 were sourced from Bloomberg. • Transportation charges reflect contract rates with service provider. The transportation charges are included in the selling costs. The selling costs include provision for bagging, handling, transport to port, and port costs. All product prices have been derived on an FOB basis and as such shipping prices have not been included. • Third party processing costs reflect contracted rates • Allowances made for royalties include a 2.0% revenue royalty and various landowner compensation agreements which are confidential.
Revenue factors	• *The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.* • *The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.*	• TZMI have provided a pricing range for each of the products which MZI have used. • Product revenue for the leucoxene products is calculated using TZMI long term prices adjusted for TiO2 content, product quality and other factors contained in offtake agreements as well as the company's expectations. • Product revenue for the zircon concentrate product is calculated using TZMI long term prices adjusted for zircon quality and other factors contained in the offtake agreement for this product.

Criteria	JORC Code explanation	Commentary
Market assessment	• *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.* • *A customer and competitor analysis along with the identification of likely market windows for the product.* • *Price and volume forecasts and the basis for these forecasts.* • *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.*	• Market analysis is based on independent reports and MZI marketing activities, with demand for mineral sands typically following global GDP. • MZI produces high-grade TiO2 products which are forecast to be in relative short supply in the medium term. • At advised production rate of 5.25mtpa, final products over the life of mine period are expected to average: L70 – 27 ktpa (dry); L88 – 47 ktpa (dry); Zircon con – 14 ktpa (dry). • Offtake customers have either already accepted the product or have undertaken considerable test work ahead of entering into offtake agreements.
Economic	• *The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.* • *NPV ranges and sensitivity to variations in the significant assumptions and inputs.*	• To demonstrate the Ore Reserve is economic it has been evaluated through a high-level financial model. This process has demonstrated the Ore Reserve generates positive cash flows above the cut-off grade. • Economic assumptions with respect to product pricing and operating costs are described above.
Social	• *The status of agreements with key stakeholders and matters leading to social licence to operate.*	• Agreements are in place with all current relevant stakeholders and negotiations are well advanced with those identified as high probability of needing agreements to be in place. MZI has a comprehensive community engagement program.
Other	• *To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:* • *Any identified material naturally occurring risks.* • *The status of material legal agreements and marketing arrangements.* • *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the time frames anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.*	• No identifiable naturally occurring risks have been identified to impact the Ore Reserves. • All material agreements are in place. • MZI considers there are reasonable grounds for it to believe that any remaining approvals will be granted.
Classification	• *The basis for the classification of the Ore Reserves into varying confidence categories.* • *Whether the result appropriately reflects the Competent Person's view of the deposit.* • *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	• Mineral Resources converted to Ore Reserves as per JORC 2012 guidelines, i.e. Measured to Proven, Indicated to Probable. No downgrading in category has occurred for this project. • The result reflects the Competent Person's view of the deposit. • There is no portion of "probable" Ore reserves derived from Measured Mineral Resources.
Audits or reviews	• *The results of any audits or reviews of Ore Reserve estimates.*	• The Ore Reserve has been calculated by independent consultants Optiro Pty Ltd providing the relevant direction and providing CP sign-off on the Ore Reserve with MZI personnel reviewing and approving the ore reserve estimate
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant*	• The level of accuracy for the Ore Reserve is determined largely by the Mineral Resources model, the metallurgical assumptions as well as long term revenue and cost assumptions. • Keysbrook is in its second year of operation and formal reconciliation process has been developed and is currently being implemented into the operating system.

Criteria	JORC Code explanation	Commentary
	tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used. • *Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.* • *It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	