

24 May 2017

For Immediate Release

## *LIFE OF MINE UPDATE*

Ramelius Resources Limited (ASX:RMS) is pleased to announce that a new **Life of Mine (LoM) plan** has been generated for the combined Mt Magnet & Vivien operations in Western Australia (refer Figure 1). This has been achieved on the back of several Ore Reserve upgrades in recent months and now also includes a new open pit Mineral Resource at Morning Star, which is part of the Mt Magnet operation (refer Figure 2).

### LIFE OF MINE PLAN<sup>1</sup>

Key aspects of the plan (refer Figure 3) include;

- Total recovered ounces of 545koz, representing ~4 years production starting in FY2018 before any underground extensions are required
- Preliminary AISC of A\$1,175/oz for FY2018 and avg. of A\$1,170 AISC over the LoM
- Recovered grade of 2.20g/t for FY2018 and an avg. of 2.25 g/t over the LoM
- Overall metallurgical recovery of 92.1% (Mt Magnet 91-92% & Vivien 95%)
- Ore Reserves of 334,020 ounces (61%)
- Indicated Resources (outside of Ore Reserves) of 157,139 ounces (29%)
- Inferred Resources of only 54,450 ounces (10%)
- Potential further extensions to Vivien, Water Tank Hill, Morning Star or Galaxy underground resources are currently not included

### MT MAGNET

- Upgraded open pit Mineral Resource at Morning Star of **9,188,000 tonnes @ 1.7g/t for 506,000 ounces**, with initial optimisation and design work indicating a viable open pit which is included in the LoM
- Recently announced Ore Reserves for Stellar, Stellar West, Brown Hill, Vegas & Shannon open pits of **1,682,000 tonnes @ 1.7g/t for 94,000 ounces**, also included
- RC and Diamond Drilling is currently ongoing at the Zeus and Morning Star Deeps projects, although no Resources have yet been generated for these deposits

### VIVIEN UNDERGROUND MINE

- Recently announced Ore Reserve for Vivien of **525,000 tonnes @ 7.3 g/t for 123,000 ounces** (as at 31 December 2016) is included in the LoM
- Underground diamond drilling commenced on 1 May 2017 and the first drill results are expected late in the June 2017 Quarter

With deeper exploration drilling currently underway at Morning Star and Vivien, and access available for exploration at both Water Tank Hill and the Galaxy Complex later in the year, foundations are in place for a further mine plan upgrade in 6-9 months' time.

For further information contact:

**Mark Zeptner**  
Managing Director  
Ramelius Resources Limited  
Ph: +61 8 9202 1127

**Duncan Gordon**  
Executive Director  
Adelaide Equity Partners  
Ph: +61 8 8232 8800

24 May 2017

#### ISSUED CAPITAL

Ordinary Shares: 525M

#### DIRECTORS

NON-EXECUTIVE CHAIRMAN:  
Robert Kennedy  
NON-EXECUTIVE DIRECTORS:  
Kevin Lines  
Michael Bohm  
MANAGING DIRECTOR:  
Mark Zeptner

[www.rameliusresources.com.au](http://www.rameliusresources.com.au)  
[info@rameliusresources.com.au](mailto:info@rameliusresources.com.au)

#### RAMELIUS RESOURCES LIMITED

**Registered Office**  
Suite 4, 148 Greenhill Road  
Parkside, Adelaide  
South Australia 5063  
Tel +61 8 8271 1999  
Fax +61 8 8271 1988

**Operations Office**  
Level 1, 130 Royal Street  
East Perth WA 6004  
Tel +61 8 9202 1127

**ABOUT RAMELIUS**

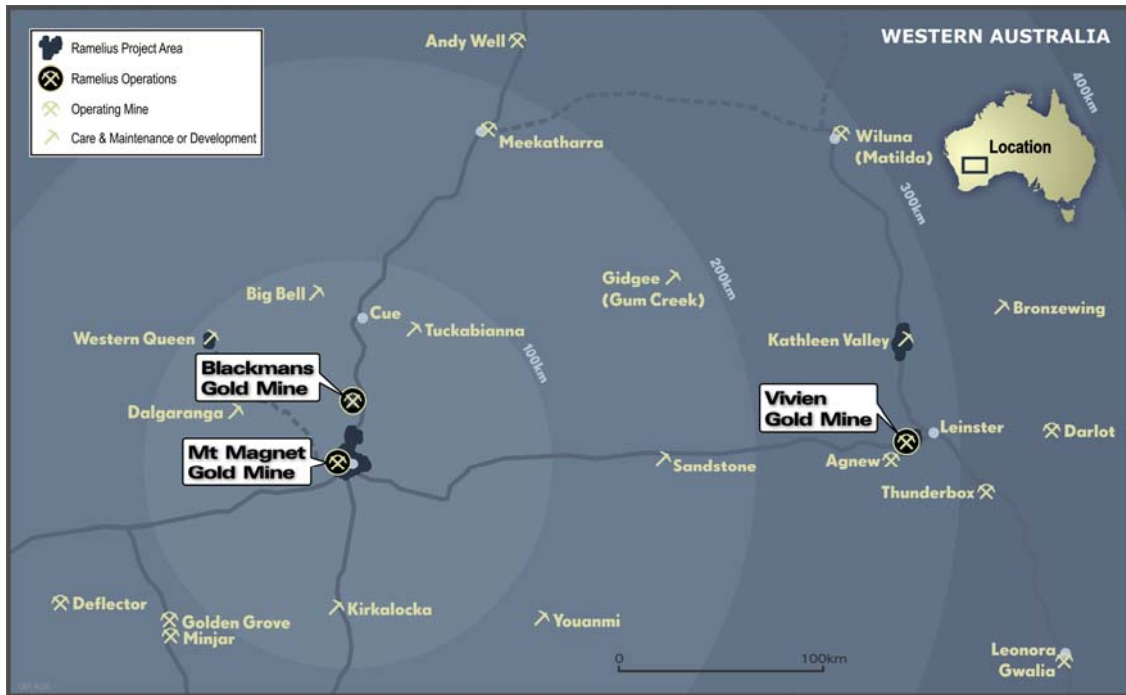


Figure 1: Ramelius' Operations & Development Project Locations

Ramelius owns 100% of the Mt Magnet gold mine and associated processing plant located in the Murchison region of Western Australia. The Company is mining underground at the high-grade Vivien gold mine near Leinster, in addition to open pit mining at Mt Magnet and Blackmans, 30km north of Mt Magnet.



Figure 2: Mt Magnet gold camp key project locations

PRODUCTION TARGETS (LoM)<sup>1</sup>

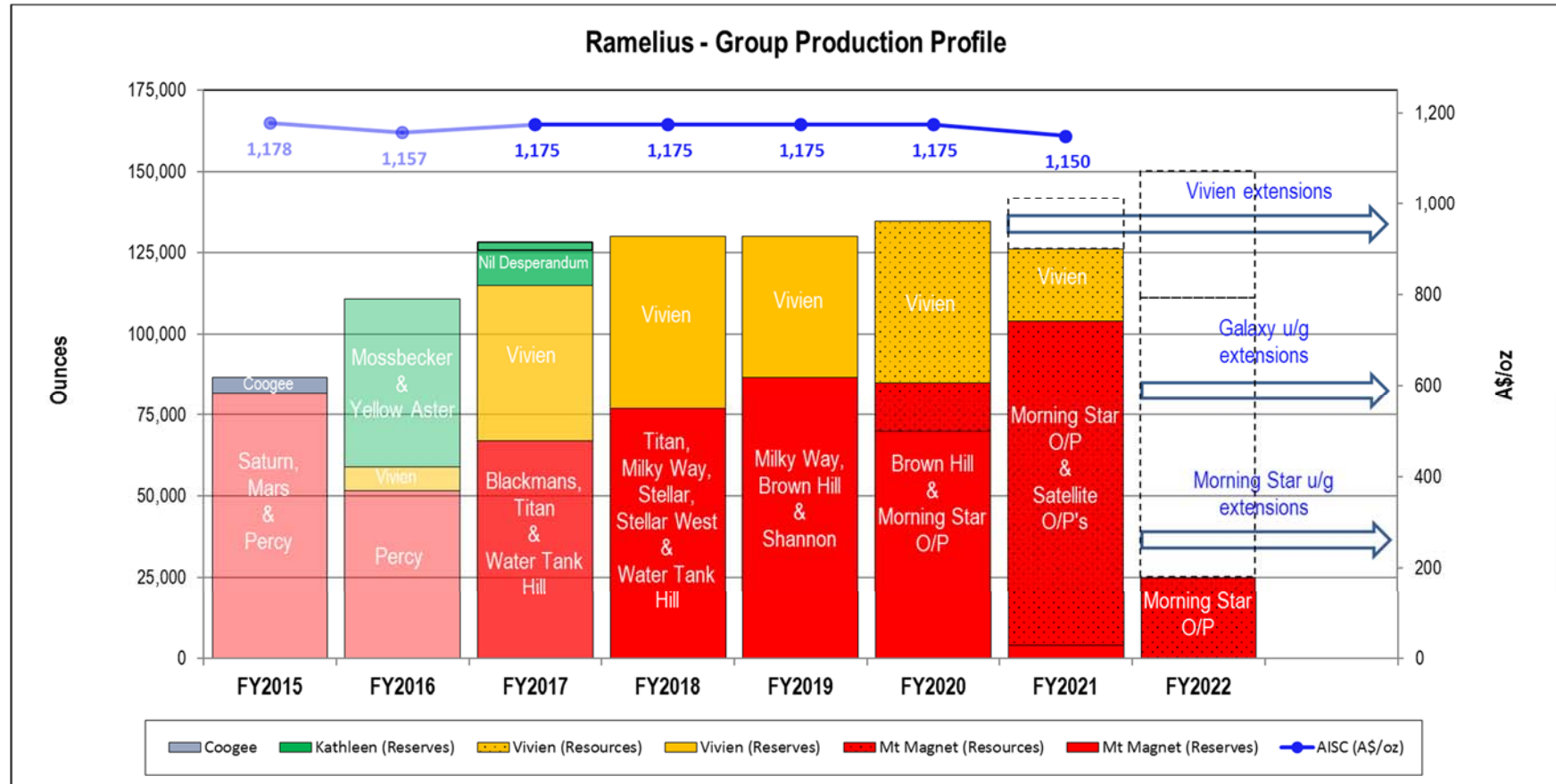


Figure 3: Life of Mine Production Profile

The Group Production profile for the Company shows a slight increase in production from FY2017 of 126-130koz at an AISC of A\$1,175/oz to 130koz at a similar AISC for FY2018. The total recovered production over the LoM is 545koz ounces with production expected to average 135koz per year whilst on the growth curve towards the targeted 150koz production level. The AISC is also expected to be A\$1,170/oz over the duration of the LoM.

The mill recovered grade is expected to be 2.20g/t for FY2018 and will average 2.25g/t over the duration of the LoM whilst the metallurgical recovery is expected to average 92.1% (Mt Magnet 91-92% and Vivien 95%).

Capital development costs that are up-front, as opposed to sustaining capex which is included in the AISC above, are shown below in Table 1 for the same LoM. Total exploration is planned to reduce back to A\$10M per year from FY2018, and any capital costs associated with underground extensions such as at Vivien, Morning Star or Galaxy are excluded.

Project	FY2017	FY2018	FY2019	FY2020	FY2021
Titan open pit	A\$8.2M				
Water Tank Hill underground	A\$11.8M				
Blackmans open pit	A\$0.8M				
Milky Way open pit		A\$18.5M			
Morning Star open pit				A\$15M	
Satellite open pits		A\$5.7M	A\$13M		A\$5M
Mt Magnet tails dam		A\$3M		A\$3M	
Exploration	A\$15.3M	A\$10M	A\$10M	A\$10M	A\$10M
<b>Total</b>	<b>A\$36.1M</b>	<b>A\$37.2M</b>	<b>A\$23M</b>	<b>A\$28M</b>	<b>A\$15M</b>

Table 1: Life of Mine Capital Requirements

### **1 Production Target Note**

The Group LoM numbers are a production target. The target is based on current Probable Ore Reserves (61% ozs), Indicated Mineral Resources (29% ozs) and Inferred Mineral Resources (10% ozs). In respect to inferred resources *'there is a low level of confidence associated with inferred mineral resources and there is no certainty that further exploration work will result in the determination of indicated mineral resources or that the production target itself will be realised'*. The LoM uses the current mine planning and budgeting methodology for the operating Mt Magnet and Vivien gold mines and was completed in May 2017. Gold price used is A\$1,600/oz or current forward sold gold prices where they exist. Costs are based on current operating and contract rates. The Ore Reserves and Mineral Resources used were prepared by the competent persons listed in the statement below.

Details of Ore Reserves and Mineral Resources used for the LoM can be found in the releases: 'Resources and Reserves Statement 2016, 30 Sep 2016', 'Exploration & Resource Development Drilling Update, 19 Dec 2016', 'December 2016 Quarterly Activities Report, 31 Jan 2017', 'New Ore Reserves at Vivien and Mt Magnet & Exploration Update, 4 April 2017'.

## **RESOURCE DEVELOPMENT**

### **Morning Star Mineral Resource & Pit Optimisation (Mt Magnet)**

Using a recently updated Mineral Resource model, new first pass open pit optimisations were generated in May 2017.

Table 2: Mineral Resource (>0.7g/t)

Category	tonnes	grade	ounces
Indicated	4,866,000	1.9	301,000
Inferred	4,322,000	1.5	205,000
Total	9,188,000	1.7	506,000

Note: Figures rounded to nearest 1,000 tonnes, 0.1g/t and 1,000 ounces. Rounding errors may occur.

## Mineral Resource Commentary

Morning Star is a previously mined large open pit and deep underground located 3.2km NW of Mt Magnet townsite and 1.8km SE of the Checkers processing plant. Previous production recorded includes 6.2Mt @ 3.4g/t for 675,000oz from the open pit and 3.6Mt @ 5.4g/t for 629,000oz from the underground (UG). The Star UG mine was closed in 2005, at a depth of 980m. The deposit consists of several subsidiary ore bodies including Star, Latecomer, Evening Star, Broken Bond and Eddie Carson. Varying mineralisation styles occur with main examples being; Latecomer – porphyry hosted, wide, quartz-carbonate-molybdenite vein stockwork, Evening Star – BIF hosted with pyrite-pyrrhotite-quartz veins and Star – pipe-like stockwork of steeply plunging shoots with quartz-carbonate-pyrite-molybdenite vein arrays hosted in strongly altered and sheared mafic volcanics.

Significant new drilling has been conducted since 2008 and is combined with the large historic drilling dataset (refer to Figure 4). Ramelius has completed 286 RC and 82 Aircore holes for 50,688m. RC sub-samples were assayed by Fire Assay at Perth commercial laboratories. Appropriate QAQC samples accompanied primary sample batches. Old data includes surface drilling of 4,286 RC and 408 Diamond holes, UG drilling of 1,209 Diamond and 6,475 sludge holes and Face samples from 14,901 faces.

Data spacing within the top 250m generally ranges from 12.5m x 25m to 25m x 50m. All new RC drilling used a 5.5" face sampling bit and 1m sample collection via a cone splitter. Interpretation was carried out 12.5m spaced sections utilising appropriate geological and weathering interpretations. Mineralised domains were generated using geological constraints and a 0.5-0.7 g/t cut-off.

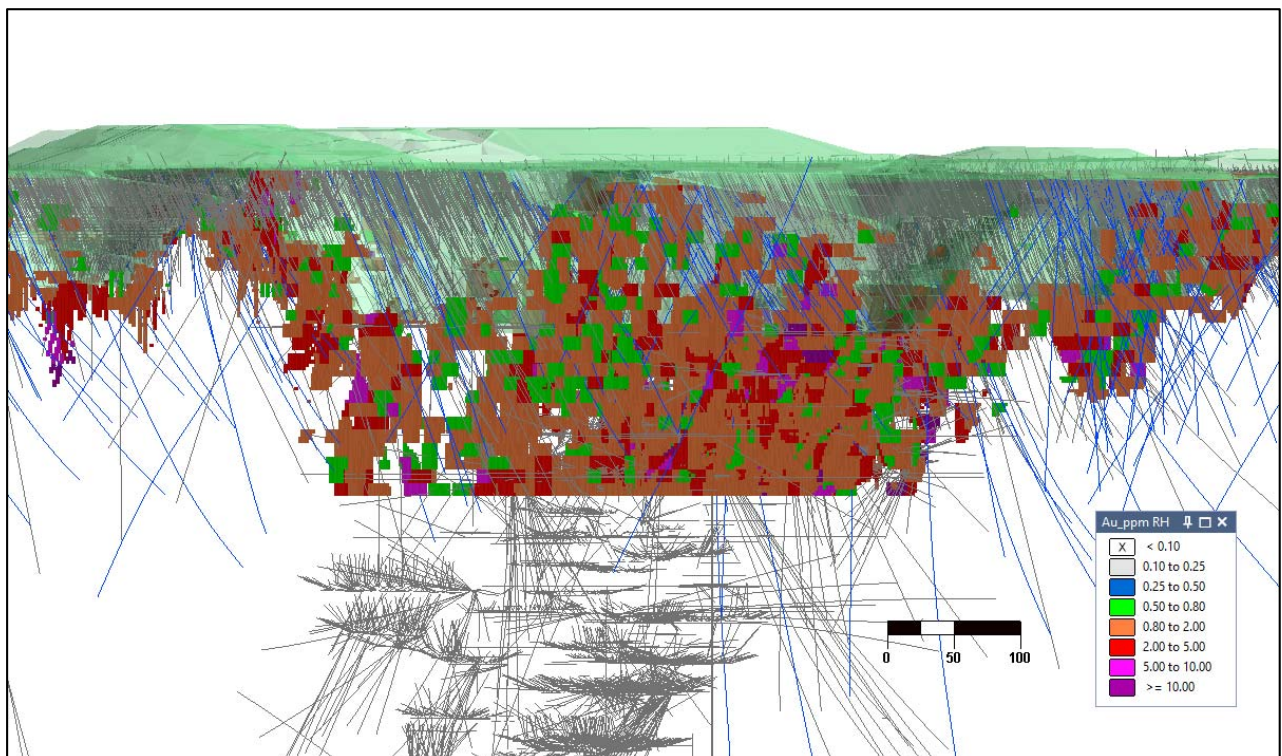


Figure 4: Morning Star long section view to west – existing pit, model >0.7g/t & above 200mRL (250m), drill data (RMS blue)

Domained samples were composited to 1m intervals, top-cut and grades estimated using constrained ID<sup>2</sup> and interpreted anisotropic searches. Parent block size is 12.5m x 12.5m x 10m with subcelling (to minimum 25%) inside domains. Samples falling inside mined UG development and stope voids were removed before estimation. Resource classification was applied based on drill hole density and interpreted mineralisation continuity. Resources were depleted for previous mining and reported above a 0.7 g/t lower cut-off. Resources have been generated in-house for evaluation by open-pit mining methods and have a maximum depth of 250m. Density values are based on established Mt Magnet values. Detailed information is given in Appendix A attached below.

## Morning Star Pit Optimisation

Open pit optimisation shells have been generated using the updated Resource model. The optimisations and preliminary open pit design are based on current and forecast contractor mining rates and incorporate appropriate dilution and recovery factors. Milling and other ore costs are based on historical and budgeted Mt Magnet costs. Initial pit results are included in the LoM production target. Further geotechnical work is required prior to generation of an Ore Reserve.

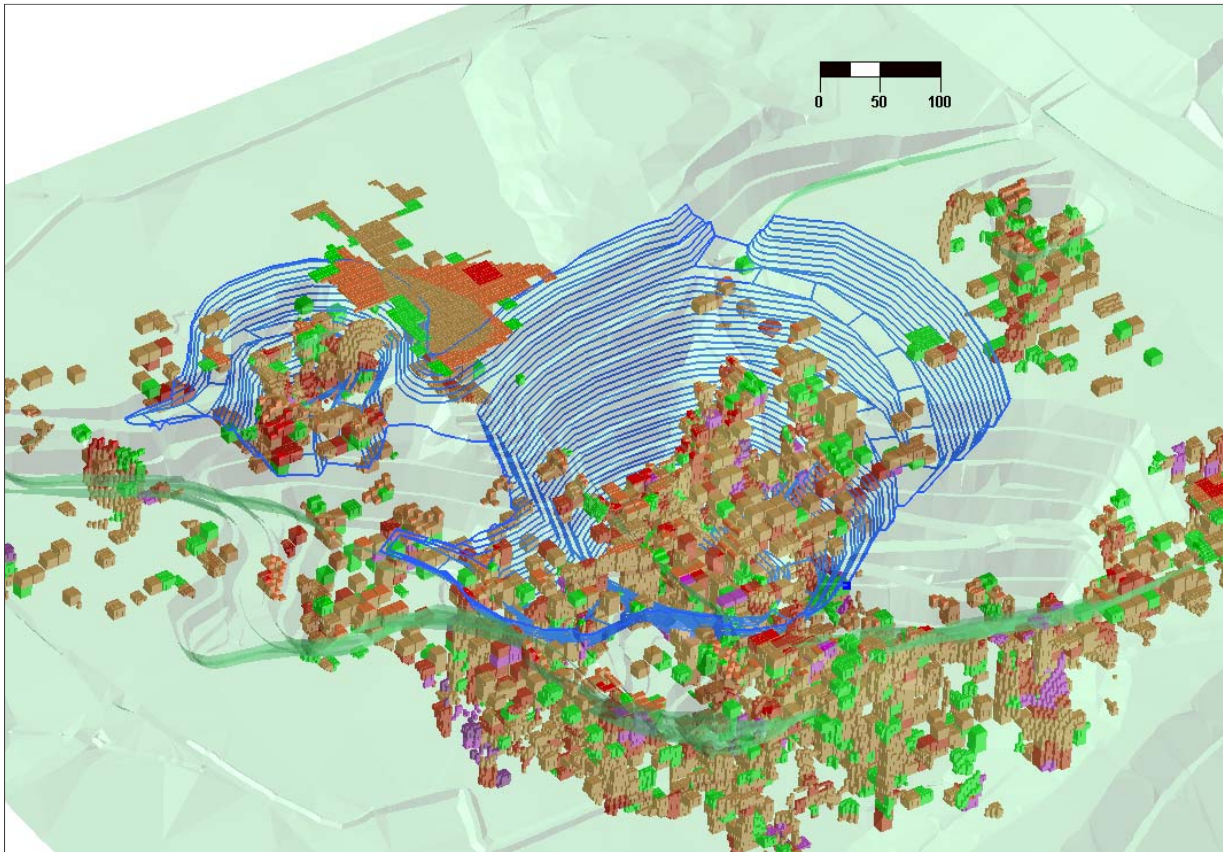


Figure 5: Morning Star looking East – model & initial pit design

## ***FORWARD LOOKING STATEMENTS***

This report contains forward looking statements. The forward-looking statements are based on current expectations, estimates, assumptions, forecasts and projections and the industry in which it operates as well as other factors that management believes to be relevant and reasonable in the circumstances at the date such statements are made, but which may prove to be incorrect. The forward-looking statements relate to future matters and are subject to various inherent risks and uncertainties. Many known and unknown factors could cause actual events or results to differ materially from the estimated or anticipated events or results expressed or implied by any forward-looking statements. Such factors include, among others, changes in market conditions, future prices of gold and exchange rate movements, the actual results of production, development and/or exploration activities, variations in grade or recovery rates, plant and/or equipment failure and the possibility of cost overruns. Neither Ramelius, its related bodies corporate nor any of their directors, officers, employees, agents or contractors makes any representation or warranty (either express or implied) as to the accuracy, correctness, completeness, adequacy, reliability or likelihood of fulfilment of any forward-looking statement, or any events or results expressed or implied in any forward-looking statement, except to the extent required by law.

## ***COMPETENT PERSONS***

The information in this report that relates to Mineral Resources and Ore Reserves is based on information compiled by Rob Hutchison (Mineral Resources) and Duncan Coutts (Ore Reserves), who are Competent Persons and Members of The Australasian Institute of Mining and Metallurgy. Rob Hutchison and Duncan Coutts are full-time employees of the company. Rob Hutchison and Duncan Coutts have sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Mineral Resources and Ore Reserves". Rob Hutchison and Duncan Coutts consent to the inclusion in this report of the matters based on their information in the form and context in which it appears.

## Appendix A – JORC Table 1 Report – Morning Star Deposit

### Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>Nature and quality of sampling (e.g. 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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30g 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 (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>New sampling is by RC drilling with samples collected as 1m samples and sub-sampled using a riffle or cone splitter to produce ≈3kg sub-samples. Drillhole locations were designed to cover the spatial extents of the interpreted mineralisation.</li> <li>Selected geological contacts and/or up to 1m intervals sampled from all diamond drilling</li> <li>Drill hole locations were designed to allow for spatial spread across the interpreted mineralised zone.</li> <li>Standard fire assaying was employed using a 50gm charge with an AAS finish.</li> <li>The majority of drilling is historic in nature. At Mt Magnet numerous reports exist referencing similar methods of sampling, however detailed information is incomplete or lacking for the majority of older data or exists in hardcopy formats which have not been systematically investigated. Early RC drill sampling (pre 1990's) may have used cross-over subs which could affect sample recovery and contamination to a greater degree than modern face sampling hammers. Early RC drilling may have been collected in bagged 1m samples and manually riffle split. Underground dataset includes large numbers of sludge holes and face samples. New drilling confirms location and tenor of previous drilling.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. 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.).</li> </ul>	<ul style="list-style-type: none"> <li>Recent (+2008) 286 RC holes and 82 Aircore holes completed using best practice 5 3/4" face sampling RC drilling hammers, 3" Aircore bits.</li> <li>Large historical dataset including surface RC (4,286 holes), DD, RAB, AC and UG DD, Sludge and Face samples.</li> <li>Minor historical RAB &amp; Aircore drilling was completed within the upper laterite zone to improve continuity</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Sample recovery at all deposits is generally excellent in weathered and fresh rocks. Poor sample recovery is noted in logs</li> <li>Recent drilling has utilised RC rigs of sufficient size and air capacity to maximise recovery and provide dry chip samples.</li> <li>No indication of sample bias is evident or has been established</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation,</li> </ul>	<ul style="list-style-type: none"> <li>All drill samples are geologically logged on site by RMS geologists. Details on the host lithologies, deformation, dominant minerals including sulphide species and alteration minerals plus veining are</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>mining studies and metallurgical studies.</i></p> <ul style="list-style-type: none"> <li>• <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</i></li> <li>• <i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<p>recorded relationally (separately).</p> <ul style="list-style-type: none"> <li>• Drillhole logging of chips or core is qualitative on visual recordings of rock forming minerals and estimates of mineral abundance.</li> <li>• The entire length of drillholes are geologically logged</li> <li>• Older drilling generally has a minimum of lithology logged for +90% of holes, with varying degrees of other information.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</i></li> <li>• <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li>• <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li>• <i>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.</i></li> <li>• <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Duplicate samples are collected every 25<sup>th</sup> sample from the drill chips or core samples.</li> <li>• Dry RC 1m samples are split on the rig to 3kg as drilled and dispatched to the laboratory. Any wet samples are recorded in the database as such and allowed to dry before splitting and dispatching to the laboratory</li> <li>• All samples are pulverized prior to splitting in the laboratory to ensure homogenous samples with 85% passing 75um. 200gm is extracted by spatula that is used for the 50gm charge on standard fire assays.</li> <li>• All samples submitted to the laboratory are sorted and reconciled against the submission documents. In addition to duplicates a high grade or low grade standard is included every 25<sup>th</sup> sample, a controlled blank is inserted every 100<sup>th</sup> sample.</li> <li>• The sample size is considered appropriate for the type, style, thickness and consistency of mineralization.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li>• <i>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.</i></li> <li>• <i>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The fire assay method is designed to measure the total gold in the sample. A standard 50g charge is fired followed by acid digestion and measurement by AAS.</li> <li>• No field analyses of gold grades are completed. Quantitative analysis of the gold content and trace elements is undertaken in a controlled laboratory environment.</li> <li>• Industry best practice is employed with the inclusion of duplicates and standards as discussed above, and used by Ramelius as well as the laboratory. All Ramelius standards and blanks are interrogated to ensure they lie within acceptable tolerances. Additionally, sample size, grind size and field duplicates are examined to ensure no bias to gold grades exists.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>• <i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li>• <i>The use of twinned holes.</i></li> <li>• <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li>• <i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Alternative Ramelius personnel have inspected the chips in the field to verify the correlation of mineralised zones between assay results and lithology, alteration and mineralization.</li> <li>• Some new holes test older drillhole intercepts.</li> <li>• Field duplicate samples are taken at regular intervals and compared.</li> <li>• All holes are digitally logged in the field and all primary data is forwarded to Ramelius' Database Administrator (DBA) in Perth where it is imported into Datashed. Assay data is electronically merged when received from the laboratory. The responsible project geologist reviews the data in the database to</li> </ul>



Criteria	JORC Code explanation	Commentary
		<p>ensure that it is correct and has merged properly and that all the drill data collected in the field has been captured and entered in to the database correctly.</p> <ul style="list-style-type: none"> <li>No adjustments or calibrations are made to any assay data</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>Hole collars are picked up using accurate DGPS survey control. All down hole surveys are collected using downhole electronic single shot or gyro surveying techniques provided by the drilling contractors.</li> <li>All holes are picked up in MGA94 – Zone 50 grid coordinates.</li> <li>Topographic control is established from DTM survey control bases</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>Resource definition drillholes were generally planned on a nominal 25m x 25m spacing. Hole spacing is contingent on the scale of the anomalism being targeted. The mined pit creates limitations on drill locations and spacing.</li> <li>This resource spacing is considered adequate to define the geological and grade continuity of mineralization.</li> <li>No sampling compositing has been applied within key mineralised intervals.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>The drilling is drilled generally orthogonal to the interpreted strike of the target horizon. No significant bias has been recognised</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>All bagged drill samples are delivered directly from the field to the assay laboratory in Perth, whereupon the laboratory checks the physically received samples against Ramelius' sample submission/dispatch notes.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>No external audits have been completed to date.</li> </ul>

## Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>The results reported in this report are on granted Mining Leases throughout Mount Magnet, all owned 100% by Ramelius Resources Limited.</li> <li>All the tenements are in good standing. There are no known impediments to obtaining a licence to operate in the area.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>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.</li> </ul>	
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>Previous work consists of significant historic drilling, geology mapping and mining by previous owners including Metana, WMC, Hill 50 Gold NL and Harmony Gold.</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>Morning Star is an orogenic structurally controlled Archean gold deposit</li> <li>The deposit consists of a number of subsidiary ore bodies including Star, Latecomer, Evening Star, Broken Bond and Eddie Carson. Varying mineralisation styles occur with main examples being; Latecomer – porphyry hosted, wide, quartz-carbonate-molybdenite vein stockwork, Evening Star – BIF/Chert hosted with pyrite-pyrrhotite-quartz veins and Star – pipe-like stockwork of steeply plunging shoots with quartz-carbonate-pyrite-molybdenite vein arrays hosted in strongly altered and sheared mafic volcanics.</li> </ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li>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: <ul style="list-style-type: none"> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>No drillhole information is reported in this release</li> <li>Recent ASX releases include Morning Star drillhole information</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>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 and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly</li> </ul>	<ul style="list-style-type: none"> <li>No drillhole information is reported in this release</li> <li>No metal equivalent reporting is used or applied</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>stated.</i>	
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>• <i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li>• <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li>• <i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. ‘down hole length, true width not known’).</i></li> </ul>	<ul style="list-style-type: none"> <li>• No drillhole information is reported in this release</li> <li>• The intersection length is measured down the length of the hole and is not usually the true width</li> <li>• True widths are noted within the intercept tables</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• A representative example section is included in the text</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No drillhole information is reported in this report</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>• No other exploration data that has been collected is considered meaningful and material to this report</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>• <i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li>• <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Future exploration includes deep diamond drilling targeting the Star UG resource plus geotechnical diamond core drilling to better define the depth extent and confirm design parameters</li> </ul>

### Section 3 Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
<b>Database integrity</b>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Data validation procedures used.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Data has been sourced from the RMS drillhole database using the Datashed system</li> <li>• Validation checks were conducted for overlapping intervals, duplicate assays, EOH depth and negative or zero assay values</li> </ul>
<b>Site visits</b>	<ul style="list-style-type: none"> <li>• <i>Comment on any site visits undertaken</i></li> </ul>	<ul style="list-style-type: none"> <li>• The Competent Person has visited the site and</li> </ul>

	<p>by the Competent Person and the outcome of those visits.</p> <ul style="list-style-type: none"> <li>• If no site visits have been undertaken indicate why this is the case.</li> </ul>	<p>confirmed observations available in drill cuttings and surface features.</p>
<b>Geological interpretation</b>	<ul style="list-style-type: none"> <li>• Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.</li> <li>• Nature of the data used and of any assumptions made.</li> <li>• The effect, if any, of alternative interpretations on Mineral Resource estimation.</li> <li>• The use of geology in guiding and controlling Mineral Resource estimation.</li> <li>• The factors affecting continuity both of grade and geology.</li> </ul>	<ul style="list-style-type: none"> <li>• Confidence in the geological interpretation is high. The geometry and nature of mineralisation is similar to neighbouring Mt Magnet deposits</li> <li>• Data used includes drilling assay and geological logging, pit and underground mapping and previous models and interpretations</li> <li>• No alternate geological interpretation envisaged</li> </ul>
<b>Dimensions</b>	<ul style="list-style-type: none"> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• The existing pit is 750m long by 480m wide and 130m deep.</li> <li>• The Star zone comprises of 5-8 semi continuous lode zones between 5-20m wide and 20-80m long. They plunge steeply to the SW with depth continuity of at least 1200m below surface.</li> </ul>
<b>Estimation and modelling techniques</b>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.</li> <li>• The assumptions made regarding recovery of by-products.</li> <li>• Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).</li> <li>• In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.</li> <li>• Any assumptions behind modelling of selective mining units.</li> <li>• Any assumptions about correlation between variables.</li> <li>• Description of how the geological interpretation was used to control the resource estimates.</li> <li>• Discussion of basis for using or not using grade cutting or capping.</li> <li>• The process of validation, the checking</li> </ul>	<ul style="list-style-type: none"> <li>• Deposits were estimated using geological software using ID<sup>2</sup> methods inside constrained mineralisation domains. An unconstrained estimate outside the domains was also run and is used for inferred resources in areas of higher drill density. The estimation method is appropriate for the deposit type.</li> <li>• Previous models existed for the deposit</li> <li>• Only gold is estimated</li> <li>• No deleterious elements present</li> <li>• Parent cell of 12.5mN x 12.5mE x 10mRL used. Subcells (x 25%) used at topographic and mineralisation boundaries boundary. Parent cell estimation only.</li> <li>• Parent cell is considered equal or larger than selective mining unit</li> <li>• Domains were statistically analysed and assigned appropriate search directions, top-cuts and estimation parameters</li> <li>• Constrained grade for higher confidence zones, unconstrained for lower.</li> <li>• Samples were composited within ore domains to 1m lengths</li> <li>• Top cuts were applied to domains after review of grade population characteristics.</li> <li>• Validation included statistical comparisons, swath plots and visual comparison against drillhole grades</li> </ul>

	<i>process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</i>	
<b>Moisture</b>	<ul style="list-style-type: none"> <li>• Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.</li> </ul>	<ul style="list-style-type: none"> <li>• Tonnages are estimated on a dry basis</li> </ul>
<b>Cut-off parameters</b>	<ul style="list-style-type: none"> <li>• The basis of the adopted cut-off grade(s) or quality parameters applied.</li> </ul>	<ul style="list-style-type: none"> <li>• A 0.7 g/t grade cut-off has been used for resource reporting</li> </ul>
<b>Mining factors or assumptions</b>	<ul style="list-style-type: none"> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• Resources are reported on the assumption of mining by conventional open pit grade control and mining methods. Parent block size is regarded as a SMU equivalent or larger.</li> </ul>
<b>Metallurgical factors or assumptions</b>	<ul style="list-style-type: none"> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• A 92% recovery factor is used and is based on testwork and well established Mt Magnet recovery data.</li> </ul>
<b>Environmental factors or assumptions</b>	<ul style="list-style-type: none"> <li>• 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.</li> </ul>	<ul style="list-style-type: none"> <li>• No significant issues with waste rock or tailings</li> <li>• Ore treatment and tailings generation would occur at the current Mt Magnet Checkers mill site.</li> </ul>
<b>Bulk density</b>	<ul style="list-style-type: none"> <li>• Whether assumed or determined. If assumed, the basis for the assumptions.</li> </ul>	<ul style="list-style-type: none"> <li>• Density values are adopted from established Mt Magnet values</li> </ul>

	<p><i>If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.</i></p> <ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Density measurements were completed on the geotechnical diamond core holes using the weight in air/weight in water method.</li> <li>• They have been assigned by geological and weathering</li> </ul>
<b>Classification</b>	<ul style="list-style-type: none"> <li>• <i>The basis for the classification of the Mineral Resources into varying confidence categories.</i></li> <li>• <i>Whether appropriate account has been taken of all relevant factors (i.e. 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).</i></li> <li>• <i>Whether the result appropriately reflects the Competent Person's view of the deposit.</i></li> </ul>	<ul style="list-style-type: none"> <li>• The resources have been classified as Indicated or Inferred category's based on geological and/or grade continuity and drill hole spacing.</li> <li>• The resource classification accounts for all relevant factors</li> <li>• The classification reflects the Competent Person's view</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of Mineral Resource estimates.</i></li> </ul>	<ul style="list-style-type: none"> <li>• An external review of the Resource was done by Optiro Pty Ltd in May 2017.</li> </ul>
<b>Discussion of relative accuracy/confidence</b>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>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.</i></li> <li>• <i>These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.</i></li> </ul>	<ul style="list-style-type: none"> <li>• Confidence in the relative accuracy of the estimates is reflected by the classifications assigned</li> <li>• The estimate is a global estimate</li> <li>• Historic production data and from comparable nearby pits is available for comparison</li> </ul>