

ACN 001 717 540 ASX code: RMS

30 April 2020

#### **ISSUED CAPITAL**

Ordinary Shares: 770M

#### **DIRECTORS**

Non-Executive Chairman: Kevin Lines Managing Director: Mark Zeptner Non-Executive Directors: Michael Bohm David Southam Natalia Streltsova

COMPANY SECRETARY: Richard Jones

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#### RAMELIUS RESOURCES LIMITED

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# AS RELEASE

30 April 2020

#### RAMELIUS LIFE OF MINE UPDATE

#### **HIGHLIGHTS**

- Tampia Feasibility Study (Edna May)
  - Significantly reduced Upfront Capital (\$26.4M vs \$50.0M)
  - o Processing solution simplified flotation & fine-grind processing removed
  - o 73% increase in project NPV compared to previous Strategic Review
- Eridanus Open Pit (Mt Magnet)
  - Significantly larger open pit (+115% increase on original pit)¹
  - Allows for single 5-year open pit at Mt Magnet, simplifying operations
  - Increases mine life at Mt Magnet to beyond 5 years
- Full Life-of-Mine (LoM) plan release deferred to include high grade Penny West Project acquired through Spectrum Metals takeover<sup>2</sup>
- FY2021 on track for estimated 250,000oz production level

Ramelius Resources Limited (ASX:RMS) ("Ramelius", "the Company") is pleased to provide the results of the Tampia Feasibility Study (Edna May) and an updated Ore Reserve for the Eridanus open pit (Mt Magnet), two important milestones in the development of its portfolio of assets located in Western Australia (refer Figure 5).

In reference to Tampia, the Feasibility Study has delivered a simplified processing solution for the project, resulting in a significant reduction in capital cost (~A\$24M) and a commensurate reduction in operating costs associated with processing. In turn, this has improved the estimated financial returns for the project, as compared to the Strategic Review carried out in May 2019. Negotiations are continuing with both the landowner and with the 10% minority owner to resolve incomplete arrangements made with the previous tenement holders. In light of this, the projected start date for the Tampia project has been pushed back from mid-2020 to the start of 2021 calendar year. Importantly, it is not expected that this will result in lower production for FY2021 due to other favourable developments, such as the upgrade at Eridanus.

The Eridanus open pit (Stage 1), which has been mined to a depth of approximately 40 metres, will move to a Stage 2 cut-back whilst ore mining continues in Stage 1. At the point in time that the Stage 2 cutback "catches up" with the Stage 1 mining, the pit will be then progressed as a single pit to its design depth of approximately 235 metres. The potential for further open pit or underground mining beyond that point is currently the subject of a Scoping Study.

Finally, as a result of the rapid progress of the Spectrum (ASX: SPX) Takeover Offer, with current acceptances of 89.42%, the compilation of the Company Life-of-Mine plan will be deferred in order to incorporate the high grade Penny West gold project ("Penny"). It is now expected that the new plan will be published before 30 June 2020 and will include the changes to Tampia and Eridanus outlined above.

<sup>&</sup>lt;sup>1</sup> Based on calculation of original pit of 110,000oz versus final pit of 236,000oz, see page 8 for further details

<sup>&</sup>lt;sup>2</sup> See RMS ASX Release "Ramelius Makes Recommended Takeover Offer for Spectrum Metals", 10 February 2020

#### TAMPIA GOLD PROJECT (WA) - FEASIBILITY STUDY RESULTS

#### **Summary**

Ramelius is pleased to provide the results of its Tampia Feasibility Study for the development of the project located near Narembeen, WA.

The Feasibility Study focused on the option to haul ore to Ramelius' Edna May processing facility, as chosen based on the Strategic Review carried out in the first half of 2019. This option, called the Haulage Option, is included by way of comparison with the Feasibility Study results in Table 1 below.

Table 1 - Tampia Gold Project Study Summaries

Parameter	Unit	Strategic Review – Haulage	Feasibility Study
		(May 2019)	(April 2020)
Mining			
Ore tonnes (high grade)	Mt	2.2	2.5
Grade	g/t	2.77	2.65
Contained Gold	koz	197	210
Processing			
Ore processed	Mt	2.2	2.5
Grade	g/t	2.77	2.65
Recovery	%	88.7	88.4
Gold Production	koz	174	186
Financial			
Upfront Capital Cost	A\$M	50	26.4
AISC	A\$/oz	1,119	1,167
Gold Price	A\$/oz	1,900	2,100
Cashflow	A\$M	82	139
NPV @ 5%	A\$M	67	116
IRR	%	66.1	155.7

The project financials are calculated on Ore Reserves only and are shown on a 100% basis. The Tampia project is 90% owned by Ramelius along with a 10% minority holder who is free-carried until a decision to mine is made.

#### **Location & Project History**

The Tampia deposit is located 12km south-east of Narembeen and 100km south of the Edna May gold mine, in the Wheatbelt region of Western Australia. The deposit was discovered in the 1980s by BHP. Ramelius acquired the project via the takeover of Explaurum Limited (**Explaurum**) in early 2019.

#### **Geology and Mineralisation**

Tampia is hosted within Archaean mafic-felsic granulite facies units. Gold mineralisation is hosted within a mafic gneiss unit dominated by pyroxene-plagioclase-amphibole minerals. Late granitic sills intrude the mafic gneiss. Gold mineralisation occurs as shallow dipping (20°-30°), 2-20m thick lode zones, sub-parallel to the granitic sills. Alteration includes silica, microcline, hornblende and clinopyroxene. Gold mineralisation is associated with disseminated pyrrhotite, arsenopyrite, chalcopyrite and rare pyrite. Total sulphide content of mineralised zones is typically 1-3%. Arsenic grade is a good indicator of gold mineralisation, which is frequently nuggety. The resource covers an area of 900m x 500m.

#### **Mineral Resource**

Table 2 - Mineral Resource Summary

	Me	easure	d	Inc	dicate	d	lr	ıferred		Total	Resou	irce
Deposit	Tonnes	Au	Au	Tonnes	Au	Au	Tonnes	Au	Au	Tonnes	Au	Au
	t	g/t	oz	t	g/t	oz	t	g/t	oz	t	g/t	oz
Tampia	390,000	2.4	31,000	7,700,000	1.7	420,000	130,000	1.8	7,400	8,200,000	1.7	460,000

Figures rounded to 2 significant figures. Rounding errors may occur.

The project financials are calculated on Ore Reserves only and are shown on a 100% basis. The Tampia project is 90% owned by Ramelius along with a 10% minority holder who is free-carried until a decision to mine is made.

#### **Mineral Resource Commentary**

Drillhole data used for the resource comprises of 953 RC holes for 71,740m and 21 diamond holes for 3,716m, drilled between 2015 and 2019 (refer Figure 1). Drill spacing is predominantly 40m x 40m. 53 RC holes for 6,365m were completed at targeted positions on 20m infill lines by Ramelius in 2019. 133 RC holes for 8,332m were drilled in late 2018 as a close spaced 'Grade Control' 10m x 10m pattern in the central south area. 353 RC holes for 8,707m were drilled targeting the shallow Mace paleochannel zone in 2018. A small number of historic (pre-2015) holes (15 RC, 3 RAB and 1 DD) were included where they compared well with newer drilling.

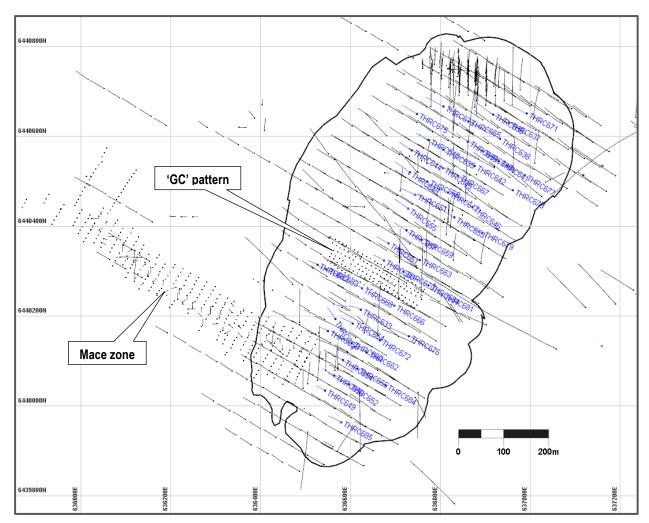


Figure 1 – Tampia drillhole plan with RMS 2019 infill (blue holes)

RC drill sampling utilised a Metzke splitter to collect a primary and duplicate 3-4kg split sample from each 1m interval. Significant QAQC measures were used to check sample quality including real-time weighing of total sample and assay and comparison of duplicates from mineralised zones. Standards and blanks were submitted with all jobs. All samples were assayed by a commercial Perth laboratory via 50g Fire Assay. All samples were assayed for Au & As.

Interpretation was carried out on 20m sections striking 300°. 10m sections were used in the grade control infill drilling area. Geological interpretation was completed for the overall mafic gneiss/felsic gneiss contact and for the granite sills.

Mineralised lodes were interpreted using a nominal 0.3-0.5 g/t cut-off and/or above 200-400 ppm arsenic anomalism. Tampia gold mineralisation is nuggety and the mineralised population is characterised by a high coefficient of variance. Use of arsenic anomalism helps generate coherent lode shapes, however this also means a significant proportion of gold values are sub-economic (0.2-0.3 g/t) but need to be included. Given the shallow dip, a minimum thickness of approximately 3m was used to generate realistically mineable lode shapes.

Eight primary lode domains were interpreted, plus the Mace paleochannel ore zone. Two high-grade internal sub-domains were interpreted to deal with very high-grade gold values. Samples were grouped by domain, composited to 1m intervals and gold and arsenic were estimated using anisotropic searches, Ordinary Kriging and Inverse Distance. Top-cuts in the 98-99.5 percentile range were applied after investigation of assay domain statistics. Densities were applied by rock type and weathering.

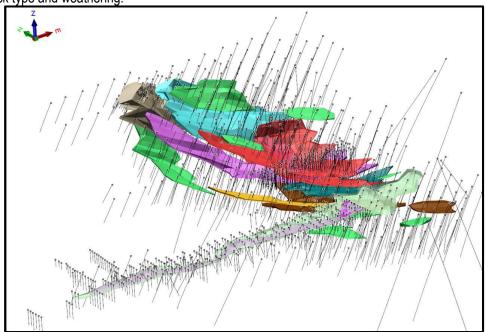


Figure 2 – Tampia drilling and lode domains

Parent block size is 5mE x 10mN x 5mRL, with variable sub-blocking to a 1m x 2m x 1m minimum. Resource classification was applied based on drillhole density and interpreted mineralisation continuity. Resources have been generated for evaluation by open-pit mining. Significant changes from previous resource models occur in lode interpretation, top-cutting and estimation method. They are all designed to deliver a realistic, economically viable model. Resources are reported above 0.6 g/t.

#### **Metallurgical Flow Sheet and Processing Costs**

The original processing method incorporated gravity recovery, flotation, ultra-fine grinding, and enhanced leaching to treat the more refractory elements of the ore, with carbon-in-leach (CIL) being used to treat the flotation and enhanced leach tailings product. Subsequent testwork on this flotation and ultrafine grind process demonstrated that cyanide consumption and hence recovery was adversely affected by the fine grind liberation of the pyrrhotite minerals. Additional test work was conducted on spatially representative ore samples, which included the more refractory elements of the ore. This additional test work demonstrated that at a range of reduced grind sizes ( $75\mu$ m,  $106\mu$ m and  $125\mu$ m), the standard gravity and CIL process is equally effective, if not superior, to the initial proposed flotation and ultra-fine grind

processing at arsenic levels up to 5,000ppm. Resource modelling indicates less than 15% of the gold in the Tampia ore to be associated with arsenic levels greater than 5,000ppm.

The revised milling process for Tampia uses a simpler, more conventional gravity recovery and CIL process at a moderately finer grind size of 125um. Capital costs for the Edna May processing facility have reduced from \$35M to \$7.5M and operating costs are reduced from \$25/t down to \$22.47/t.

#### Ore Reserve

Table 3: Ore Reserve Summary

	Proven		Pro	Probable			Total Reserve		
Deposit	Tonnes	Au	Au	Tonnes	Au	Au	Tonnes	Au	Au
	t	g/t	oz	t	g/t	oz	t	g/t	oz
Tampia	190,000	3.4	20,000	2,300,000	2.6	190,000	2,500,000	2.7	210,000

Figures rounded to 2 significant figures. Rounding errors may occur.

The project financials are calculated on Ore Reserves only and are shown on a 100% basis. The Tampia project is 90% owned by Ramelius along with a 10% minority holder who is free-carried until a decision to mine is made.

#### **Ore Reserve Commentary**

The Resource model was regularised to an SMU size of 5mE x 10mN x 2.5mRL to generate an appropriate evaluation model. Pit optimisations and designs were carried out on the regularised models using appropriate mining and ore costs, mining recovery and dilution factors, wall angles, mill recoveries and a A\$2,000/oz gold price (refer Figure 3).

Mill recovery was based on a test work derived recovery curve based on the gold/arsenic grade ratio. A recovery was calculated for each SMU block for a method utilising CIL.

Mining and ore haulage costs were based on contractor supplied budget estimates. Milling and additional ore costs were based on actual current rates for the Edna May processing plant and other comparable projects. Open pit design work included use of external geotechnical recommendations and groundwater studies. Ore Reserves utilise Measured and Indicated Resources and are reported above 0.9g/t Au recovered grade. Detailed information is provided in the JORC Table 1 in Attachment A.

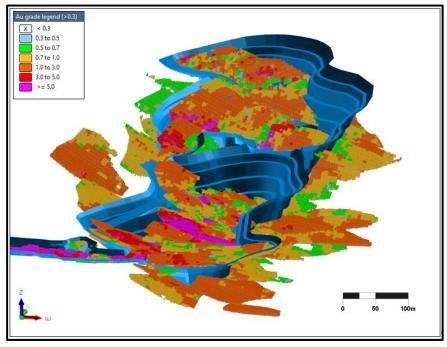


Figure 3 – Tampia Resource model and open pit design

#### ERIDANUS OPEN PIT (MT MAGNET, WA) – UPDATED ORE RESERVE

#### **Location & Project History**

The Eridanus Pit is located 7.8 kilometres southwest, by haul road from the Mt Magnet Mill. The Mineral Resource is situated between the historical Lone Pine open pit and the backfilled Theakston open pit. The deposit was discovered by Ramelius in late 2017 and mining of the Stage 1 pit commenced in mid-2019.

#### **Geology and Mineralisation**

Eridanus is predominately hosted within a granodiorite intruded into felsic aphyric to porphyritic intrusive rocks. Mineralisation occurs as stockwork veins concentrated around inferred low angle structures within the east-west orientated Eridanus Granodiorite intrusion. The granodiorite has undergone pervasive sericite—carbonate alteration and silica healing manifesting in quartz plus quartz-tourmaline veins. A supergene zone is recognised in the transitional weathered zone between 25-50m depth, below up to 25m of depletion (refer Figure 4).

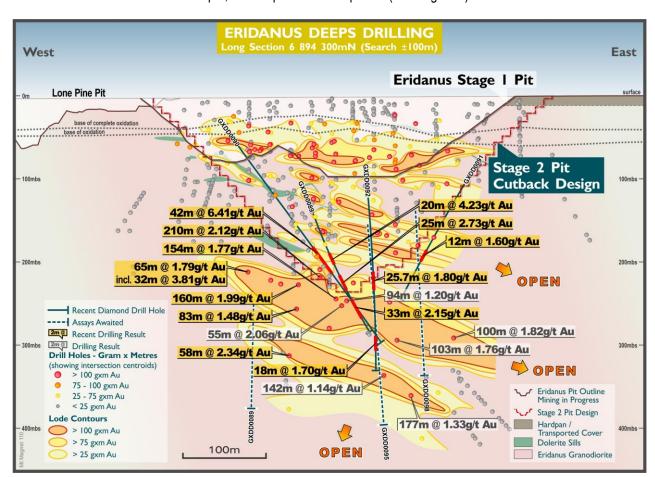


Figure 4: Selected Eridanus Deeps diamond drill hole traces below Stage 2 cutback pit design

#### **Mineral Resource**

Table 4 - Mineral Resource Summary

	Me	asure	d	Inc	dicate	d	In	ferred		Total I	Resou	rce
Deposit	Tonnes	Au	Au	Tonnes	Au	Au	Tonnes	Au	Au	Tonnes	Au	Au
	t	g/t	OZ	t	g/t	oz	t	g/t	oz	t	g/t	oz
Eridanus	1,500,000	1.2	56,000	5,900,000	1.3	240,000	4,500,000	1.3	190,000	12,000,000	1.3	490,000

Figures rounded to 2 significant figures. Rounding errors may occur.

#### **Mineral Resource Commentary**

All Eridanus drilling is circa Ramelius drilling undertaken since 2017. It includes a major 25m x 25m RC resource drilling pattern in the upper 150m, plus significant RC and diamond drilling targeting deeper resources on a more variable pattern. Deeper drilling to 400m vertical depth, has been completed in numerous orientations to test for any potential bias in drill directions within the stockwork mineralisation. No bias has been detected in the stockwork zones but a significant high grade NNW trending shear oriented quartz lode is recognised within the pit and its depth extent can be predicted in the deeper drilling completed to date. The upper area of the (yet to be mined) pit also used available RC grade control data which allows for Measured resource classification.

Interpretation was carried out using Micromine geological software. A geological interpretation was generated first and generally formed the basis of the grade domains used in the estimation. Interpretation was carried out on 25m sections. The Eridanus supergene zone is a grade bounded (~0.4 g/t Au) envelope while the granodiorite fresh rock stockwork is geologically constrained by the depth projections of the Eridanus Granodiorite.

Samples were grouped by domain, composited at 1m intervals and evaluated. Top-cuts were applied and search ellipses were generated using the interpreted mineralisation continuity. A +0.3 g/t indicator model was generated for the primary granodiorite mineralisation to generate mineralised and non-mineralised estimation domains. These domains were then used to flag assay composites and generate separate estimation domains. Estimation was by Ordinary Kriging for the larger domains and Inverse Distance squared for small domains.

Parent block sizes used were 10m E x 5m N x 5m RL for Eridanus with a minimum sub-cell of 25%. Estimation is restricted to parent cells. Resource classification was applied based on geological and grade continuity, drill hole spacing, estimation variance and likely economic viability. Contiguous Measured, Indicated and Inferred envelopes were generated and used to apply classifications. The resource model was then depleted to end of November 2019.

The Eridanus resource has been generated for evaluation by open pit as well as bulk underground mining techniques and is reported above a 0.6 g/t Au cut-off to a maximum depth of 430m below surface (refer Figure 5).

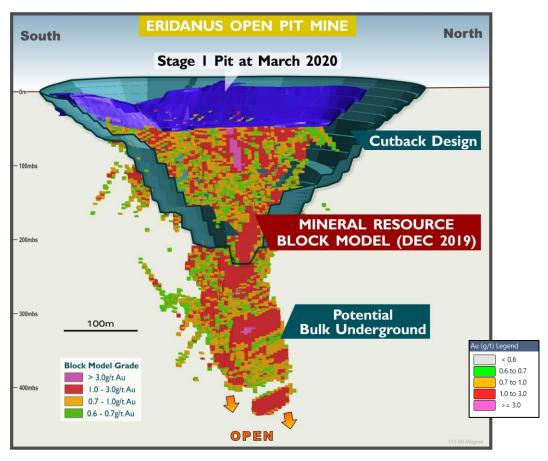


Figure 5 – Truncated view to West. Block model (>0.6g/t) with Stage 1 pit at March 2020 (blue) & Stage 2 cutback design (green)

#### Ore Reserve

**Table 5** - Ore Reserve Summary

	Proven			P	Probable			Total Reserve		
Deposit	Tonnes	Au	Au	Tonnes	Au	Au	Tonnes	Au	Au	
	t	g/t	oz	t	g/t	OZ	t	g/t	oz	
Eridanus	360,000	1.0	12,000	3,800,000	1.2	150,000	4,160,000	1.2	162,000	
Mined HG Stocks	1,000,000	1.0	32,000				1,000,000	1.0	32,000	
Total Reserve	1,400,000	1.0	44,000	3,800,000	1.2	150,000	5,200,000	1.2	194,000	

Figures rounded to 2 significant figures. Rounding errors may occur. Figures current at 1 April 2020.

#### **Ore Reserve Commentary**

Pit optimisation and design was carried out on the Mineral Resource model using appropriate mining recovery and dilution factors, wall angles, mill recoveries and a A\$2,000/oz gold price. Mining rates were based on contractor budget pricing. Ore haulage, milling and additional ore costs were based on actual current rates. Pit design work included the use of external geotechnical recommendations based on numerous purpose geotechnical diamond drill holes and on groundwater studies.

Ore Reserves have been reported from Measured and Indicated Resources and are reported above a 0.6 g/t Au cut-off. Detailed information is provided in the JORC Table 1 in Attachment B.

Proven Ore Reserves include 1.0Mt @ 1.0g/t for 32,000oz of high-grade ore already mined and stockpiled.

Reported mining production to date is 1,776,852t @ 1.29g/t for 73,587oz. Reconciliation against the original Ore Reserve model shows a positive reconciliation, in the order of +21% tonnes, +15% grade and +39% ounces.

Eridanus reconciled mill production to end of March 2020 was 728,404t @ 1.78g/t for 41,573oz milled (39,412oz recovered). Combining this figure with the new Ore Reserve and stockpiled high-grade ore gives a total of 236,000 ounces for Eridanus compared to the original Ore Reserve of 110,000 ounces, an increase of 115%<sup>1</sup>.

#### **FULL LIFE-OF-MINE (LoM) UPDATE**

Release of the full LoM update will now be delayed in order to incorporate the high grade Penny West gold project. Changes to the previous LoM plan, released in June 2019 (see RMS ASX Release "Ramelius Unveils 1 Million Ounce Life of Mine Plan", 17th June 2019), are to include:

- Vivien Underground an additional year, through to end of FY2021, as announced in 2019 (see RMS ASX Release "Vivien Life if Mine Extension", 12 September 2019)
- Eridanus Stage 2 open pit as described above plus the outcomes of current Scoping Studies below this open pit
- Tampia as described above
- Symes' Find updated Mineral Resource and Ore Reserve
- Penny inclusion of new Mineral Resources for the Penny North, Penny West and Magenta deposits

It is expected that the new LoM plan will be ready for release prior to the end of the financial year. The previous LoM plan contemplated a gold production estimate in FY2021 of 235,000 ounces; however, by incorporating the developments above into the LoM plan, indications are that FY2021 is on track for an estimated 250,000 ounces in production.

This announcement has been authorised for release by the Board of Directors. For further information contact:

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#### **ABOUT RAMELIUS**

Ramelius Resources Limited (ASX:RMS) is a Western Australian gold producer that has been listed on the ASX since 2003 and in production since 2006. Ramelius owns and operates the Mt Magnet, Edna May, Vivien and Marda gold mines and owns a 90% interest in the Tampia Hill gold project, all in Western Australia (refer Figure 6).

Ore from the high-grade Vivien underground mine, located near Leinster, is trucked to the Mt Magnet processing plant where it is blended with ore from both underground and open pit sources. The Edna May operation currently processes ore from its underground operations and hauled ore from the Marda gold mine.

On 24 February 2020, Ramelius announced a 329% increase in its Net Profit after Tax for the 6 months to December 2019 of A\$20.5M. The financial performance was achieved on the back of production for the 6 months of 92,084 ounces of gold at an AISC of A\$1,240/oz for the half-year. In its March 2020 Quarter update (released to the ASX on 1 April 2020), Ramelius re-iterated its guidance for the 2020 Financial Year of 205,000-225,000 ounces of gold produced at an AISC of A\$1,225-\$1,325/oz.

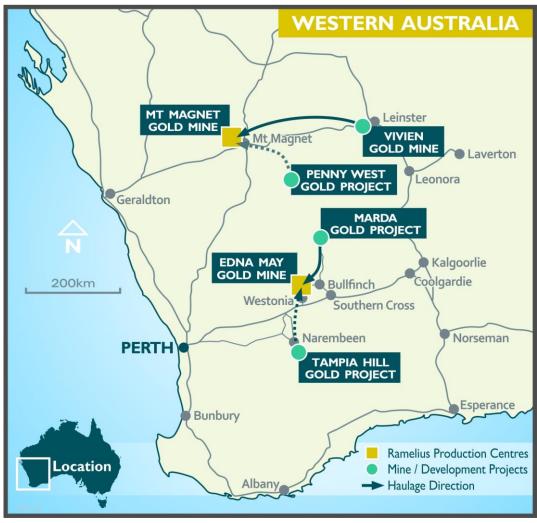


Figure 6 – Ramelius' Production Centre and Development Project locations

#### 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 Exploration Results, Exploration Targets, 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 Exploration Results, 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.

### Attachment A: JORC Table 1 Report Tampia Project

The project financials are calculated on Ore Reserves only and are shown on a 100% basis. The Tampia project is 90% owned by Ramelius along with a 10% minority holder who is free-carried until a decision to mine is made.

**Section 1 Sampling Techniques and Data** 

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>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.</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 (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.</li> </ul>	<ul> <li>Over 95% of sampling gold was conducted using 1m intervals collected from reverse circulation (RC) drill holes. Surface Diamond holes may be sampled along sub 1m geological contacts, otherwise 1m intervals are the default.</li> <li>RAB drilling occurs and is generally excluded from resource modelling with a few minor exceptions.</li> <li>Drill hole locations were designed to allow for spatial spread across the interpreted mineralised zone. All RC samples were collected and split to 3-4kg samples on 1m metre intervals. Diamond core is half cut along downhole orientation lines. Half core is sent to the laboratory for analysis and the other half is retained for future reference.</li> <li>Standard fire assaying was employed using a 50gm charge with an AAS finish for all diamond, RC and RAB samples.</li> </ul>
Drilling techniques	Drill type (eg core, reverse circulation, openhole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, facesampling bit or other type, whether core is oriented and if so, by what method, etc).	<ul> <li>Drilling was completed using 5 ¾" face sampling RC drilling hammers for all RC drill holes. Diamond drilling used HQ and NQ diamond core. RAB holes were completed using 4" blade bits or hammers.</li> </ul>
Drill sample recovery	<ul> <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> <li>RC primary, duplicate and total sample was weighed and graphed at the rig to check sample recovery and interval accuracy. All diamond core is jigsawed to ensure any core loss, if present is fully accounted for. Any wet, contaminated or poor sample returns are flagged and recorded in the database to flag potential sampling bias.</li> <li>Zones of poor sample return both in RC are recorded in the database and cross checked once assay results are received from the laboratory to ensure no misrepresentation of sampling intervals has occurred.</li> </ul>
Logging	<ul> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>Samples are geologically logged on site by geologists.         Details on the rock type, mineralogy, fabrics and textures are recorded.     </li> <li>Drill hole logging is qualitative on visual recordings of rock forming minerals and on estimates of mineral abundance.         Additionally a downhole Televiewer collected structural information including contacts, folications, banding and veining and a geophysical tool collected gamma density and magnetic susceptibility measurements.     </li> <li>All core photographed wet &amp; dry prior to cutting</li> <li>The entire length of each drill hole is geologically logged.</li> </ul>

#### 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 subsampling 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.

- Core samples were sawn and half core sampled.
- Over 95% of RC 1m samples were split to 3kg via a
  Metzke splitter a powered rotary device designed to
  reduce sampling variance. A primary and duplicate sample
  was collected for each interval. The Metzke splitter also
  deals with wet samples more effectively.
  A small proportion of sampling was conducted using a rig
  mounted cone splitter.
- 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.
- Significant numbers of mineralised duplicate samples were selected based on Arsenic grade (by handheld pXRF analysis) and submitted. Analysis of duplicates shows good quality.
- The sample size is considered appropriate for the type, style, thickness and consistency of mineralization.

## 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.
- The fire assay method is designed to measure the total gold. The technique involves standard fire assays using a 50gm sample charge with a lead flux (decomposed in the furnace). The prill is totally digested by HCl and HNO3 acids before measurement of the gold determination by AAS.
- No field analyses of gold grades are completed.
   Quantitative analysis of the gold content is undertaken in a controlled laboratory environment.
   Handheld pXRF analysis of Arsenic and alteration minerals was conducted in the field as a 1st pass indication of mineralised zones. Arsenic final grade generated by laboratory analysis.
- Industry best practice was employed with the inclusion of duplicates and standards. Standards and blanks are interrogated to ensure they lie within acceptable tolerances. Additionally, sample size, grind size and field duplicates were examined to ensure no bias to gold grades exists.

## 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.
- Ramelius personnel have inspected the diamond core and RC chips in the field to verify the correlation of mineralised zones between assay results and lithology, alteration and mineralization.
- A number of holes effectively replicate existing holes and provide good correlation. 133 close spaced RC holes (10m x 10m) were completed and give a good indication of short range grade continuity.
- Holes are digitally logged in the field and data is collected in auto validating spreadsheets. These sheets were loaded into an Access database using scripting and further validation steps. Data was then exported to Micromine for visual validation by the Project Geologist.
- The responsible geologist makes the DBA aware of any errors and/or omissions to the database and the corrections (if required) are corrected in the database immediately.
- No adjustments or calibrations are made to any of the assay data recorded in the database.

## 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.  All drill hole collars are picked up using accurate DGPS survey control by a commercial survey contractor. All down hole surveys are collected using downhole gyro surveying techniques provided by the drilling contractors.

	<ul> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>All holes were picked up in MGA94 – Zone 50 grid coordinates. A Local grid was used for final modelling and utilises a two-point transformation.</li> <li>An accurate topographic surface has been established from a recent aerial survey and is used to check DGPS surveys.</li> </ul>
Data spacing and distribution	<ul> <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> <li>The dominant RC pattern is a 40m x 40m grid. Ramelius has added selected infill drilling on 20m infill sections on variable 20-50m spacings. 6 lines of 10m x 10m infill RC were included in the central south area of the deposit. Diamond holes all included and a minor number of historic RC holes were included where supported by surrounding holes.</li> <li>Drill spacing is sufficient to establish appropriate continuity and classifications.</li> <li>No physical compositing has been applied within mineralised intervals.</li> </ul>
Orientation of data in relation to geological structure	<ul> <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> <li>The RC drilling is completed orthogonal to the interpreted strike and dip of the mineralisation.</li> <li>No orientation bias is evident</li> </ul>
Sample security	The measures taken to ensure sample security.	All bagged samples are delivered via a certified freight company to the assay laboratory in Perth, whereupon the laboratory checks the physically received samples against sample submission/dispatch notes.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No external audits have been completed to date.

## **Section 2 Reporting of Exploration Results**

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <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> <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>	<ul> <li>The results reported in this report are located on granted Mining Leases (ML) owned by Explaurum Limited, which is under Compulsory Acquistion by Ramelius Resources Ltd.</li> <li>Currently all the tenements are in good standing. There are no known impediments to obtaining a licences to operate in either area.</li> <li>The project sits on freehold farmland for which an mining access agreement or purchase is still required.</li> </ul>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>Exploration and dilling by other parties has been reviewed and used. Previous parties have completed shallow RAB, Diamond and RC drilling. Companies include BHP 1980's, Nexus Minerals 1990's, Auzex Exploration and Explaurum Ltd (EXU) from 2014.</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	Tampia is hosted within an Archaean mafic-felsic granulite facies units. Gold mineralisation is hosted within a mafic gniess unit dominated by pyroxene-plagioclse -amphibole minerals. Late granitic sills intrude the mafic gniess. Gold mineralisation occurs as shallow dipping (20°-30°), 2-20m thick lode zones sub-parallel to the granitic sills. Gold mineralisation of associated with disseminated pyrrhotite,

Drill hole Information	<ul> <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> <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> <li>arsenopyrite, chalcopyrite and rare pyrite.</li> <li>The mafic gniess, granite sills and mineralised lodes have a shallow SE dipping, gently folded orientation forming a 'bowl' shaped geometry.</li> <li>All drill holes completed, including holes with no significant results (as defined in the Attachments) are reported in previous announcements by Explaurum Ltd and Ramelius Resources.</li> <li>Easting and northing are given in MGA94 Z50 coordinates as defined in the Attachments</li> <li>RL is AHD</li> <li>Dip is the inclination of the hole from the horizontal. Azimuth is reported in MGA94 degrees. MGA94 and magnetic degrees vary by &lt;2 in the project area.</li> <li>Down hole length is the distance measured along the drill hole trace. Intersection length is the thickness of an anomalous gold intersection measured along the drill hole trace.</li> <li>Hole length is the distance from the surface to the end of the hole measured along the drill hole trace.</li> <li>No results currently available from the exploration drilling are excluded from reports.</li> </ul>
Data aggregation methods	<ul> <li>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.</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 stated.</li> </ul>	<ul> <li>The first gold assay result received from each sample reported by the laboratory is tabled in the list of significant assays. Subsequent repeat analyses when performed by the laboratory are checked against the original to ensure repeatability of the assay results.</li> <li>Weighted average techniques are applied to determine the grade of the anomalous interval when geological intervals less than 1m have been sampled.</li> <li>Exploration drilling results are generally reported using a nominal 0.3 g/t Au lower cut-off (as reported in the previous Attachments) and may include up to 4m of sub-grade internal dilution. No metal equivalent reporting is used or applied.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>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').</li> </ul>	The intersection length is measured down the length of the hole and essentially true width. The known geometry of the mineralisation with respect to the drill holes reported in this report is well understood.
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.	Example maps and sections are included.
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.	All drill holes completed to date are reported in previous releases and all material intersections are reported.

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.	No other exploration data that has been collected is considered meaningful and material to this report.
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 extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	Exploration of the wider Tampia project area is in progress.     Additional resource infill drilling may take place prior to commencement of mining.

## Section 3 Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
Database integrity	<ul> <li>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.</li> <li>Data validation procedures used.</li> </ul>	<ul> <li>Data was imported from digital logging sheets and validated via a number of steps when entered into the Access database. Validation includes scripting checks and final visual validation by the Resource geologist.</li> <li>Data was exported from the Access database as Micromine data files for use in the estimate</li> </ul>
Site visits	<ul> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	The Competent Person is a full-time employee of Ramelius Resources and has made two site visits Visits verified understanding of deposit and available information
Geological interpretation	<ul> <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> <li>Confidence in the geological interpretation is reasonably high.</li> <li>Data used includes drilling assays &amp; logging, density and multi-element data from a number of generations of drilling.</li> <li>No alternate interpretation required</li> <li>Geology forms a base component in the mineralisation interpretation. Mineralisation is sub-parallel to the banding and granitic sills.</li> </ul>
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 deposit has a strike of 1000m, down-dip width of around 400m and depth extent of around 150m.
Estimation and modelling techniques	<ul> <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</li> </ul>	<ul> <li>The interpretation of the mineralised lodes forms the grade domains. A minimum thickness of 2-3m is used and lodes frequently incorporate sub-grade material to generate viable ore shapes. Mulitiple lode domains were generated reflecting the different lodes and grades. Two internal high-grade sub domains where interpreted to control zones of notably higher grade.</li> <li>The resource model was constructed using Micromine software.</li> <li>Grade within the domain is estimated by geological</li> </ul>

estimates and/or mine production records and software using Inverse Distance<sup>1</sup> within hard bounded whether the Mineral Resource estimate takes domains. Ordinary Kriging grades were generated and appropriate account of such data. compared. The assumptions made regarding recovery of Gold and Arsenic grade is estimated by-products. Arsenic grade has a impact on recovery and is used to Estimation of deleterious elements or other calculate mill recoveries using a formula. non-grade variables of economic significance Parent cell of 5mE x 10mN x 5mRL with sub-cells to (e.g. sulphur for acid mine drainage minimum of 1mE x 2mN x 1mRL. Parent cell estimation characterisation). only. The sub-cell size is small to allow for narrow sections In the case of block model interpolation, the of the lode to be defined. Parent cells are SMU size or block size in relation to the average sample spacing and the search employed. Domains are statistically analysed and assigned Any assumptions behind modelling of selective appropriate search directions, top-cuts and estimation mining units. parameters. The search is aligned with the observed geological strike and dip of the lodes. Lodes domains Any assumptions about correlation between estimated separately. variables. Samples were composited within ore domains to 1m Description of how the geological interpretation was used to control the resource estimates. lengths. Discussion of basis for using or not using Top cuts were applied to domains after review of grade grade cutting or capping. population characteristics. Topcuts used ranged from 20 to The process of validation, the checking 70 g/t for the primary lode domains and 120 & 150 g/t for process used, the comparison of model data to the two high-grade sub-domains. drill hole data, and use of reconciliation data if Validation includes visual comparison against drillhole grades and comparison against previous models. available. Moisture Whether the tonnages are estimated on a dry Tonnages are estimated on a dry basis basis or with natural moisture, and the method of determination of the moisture content. Cut-off The basis of the adopted cut-off grade(s) or Cutoffs reflect the grade continuity of mineralised zones. parameters quality parameters applied. Interpretation cutoffs range around 0.2-0.5 g/t Au and 200-400ppm As. Arsenic is an important indicator of the mineralised zone where gold grades are frequently nuggety. Reporting cutoff is 0.6g/t reflecting economic considerations at a \$2000/oz gold price Mining factors or Assumptions made regarding possible mining Resources are reported on the assumption of mining by assumptions methods, minimum mining dimensions and conventional open pit mining methods. internal (or, if applicable, external) mining A regularised model was generated for mining evaluation. dilution. It is always necessary as part of the Blocks were regularised to 5mE x 10mN x 2.5mRL to process of determining reasonable prospects generate SMU size blocks with appropriate dilution for for eventual economic extraction to consider mining shallow dipping hard-rock lodes. 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. Metallurgical The basis for assumptions or predictions A number of historic and recent metallurgical tests have factors or regarding metallurgical amenability. It is been carried out. Recovery is variable and appears to assumptions always necessary as part of the process of relate to presence of arsenopyrite and loellingite (FeAs<sup>2</sup>). determining reasonable prospects for eventual A calculated recovery factor was generated per block economic extraction to consider potential based on arsenic grade for use in evaluations metallurgical methods, but the assumptions Overall recovery of ore grade material using standard CIL regarding metallurgical treatment processes method is estimated to be in the 80-90% range. 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	
Environmental factors or assumptions	<ul> <li>Assumptions made.</li> <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> <li>Mining Approvals are yet to commence. A Clearing Permit should not be required for freehold farm land.</li> <li>Processing will take place at the Edna May gold mine.</li> </ul>
Bulk density	<ul> <li>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.</li> <li>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.</li> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	<ul> <li>EXU collected a number of weight in air/weight in water core sg measurements.</li> <li>Downhole gamma density measurements were collected on a large proportion of the 40m x 40m resource drilling. These values were compared against core measurments and found reliable.</li> <li>Downhole gamma densities should account for bulk sg's in less competent zones of weathered rocks.</li> <li>The bulk of the deposit and mineralisation is in fresh mafic gneiss and uses a density of 3.1. A range of lessor densities were applied to weathered rocks and other rocktypes.</li> </ul>
Classification	<ul> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>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).</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	The resource has been classified as Measured, Indicated or Inferred category's based on geological and grade continuity and drillhole spacing and generation. The resource classification accounts for all relevant factors The classification reflects the Competent Person's view
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	No audits or reviews conducted. A resource geological consultant was used to generate alternative slightly earlier versions of the resource and several methodologies were adopted from this work. This also gave a model for comparison.
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	<ul> <li>The accuracy and confidence in the Resource is reasonably high given the deposit style, quality and density of drilling and sampling.</li> <li>Resources are global estimates</li> <li>No production data is available</li> </ul>

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.

## Section 4 Estimation and Reporting of Ore Reserves

Criteria	JORC Code explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	<ul> <li>Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.</li> <li>Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.</li> </ul>	Mineral Resource models described above were regularised to form a diluted Ore Reserve model using selective mining units for evaluation and reporting     Mineral Resources are reported inclusive of Ore Reserves
Site visits	<ul> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	The Competent Person has made two site visits     Visits verified understanding of deposit and available information
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 effect, if any, of alternative interpretations on Mineral Resource estimation.	A feasibility study has been carried out appropriate to the deposit type, mining method and scale. The study was carried out internally and externally using consultants where appropriate. The feasibility study was a refinement of the previously completed pre-feasibility study.
Cut-off	The basis of the cut-off grade(s) or quality	Cutoff is calculated at 0.9 recovered g/t based on milling,
parameters	parameters applied.	hauling and administration cost estimates
Mining factors or assumptions	<ul> <li>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).</li> <li>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.</li> <li>The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.</li> <li>The major assumptions made and Mineral</li> </ul>	<ul> <li>Mining method is conventional open-pit with drill and blast, excavate, load and haul. SMU block reflects expected grade control density and mining equipment size</li> <li>An external geotechnical report was commissioned based on previous geotechnical logging and information and gives recommended pit design details</li> <li>Additional mining dilution of 2% was applied (regularized model has already diluted resource model)</li> <li>Mining recovery of 96% was applied</li> <li>Minimum width reflected by SMU block (5m)</li> <li>Inferred Resources were tested, but are not used or included in optimisation or final designs</li> <li>Infrastructure required is moderate and of a temporary nature, i.e. administration offices, mining and haulage</li> </ul>

Metallurgical	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 metallurgical process proposed and the	workshops, fuel tanks, generators, magazine and water transfer dams. Road haulage and workforce accommodation requirements are also considered.  • Proposed to process ore through the existing Edna May
factors or assumptions	<ul> <li>appropriateness of that process to the style of mineralisation</li> <li>Whether the metallurgical process is well-tested technology or novel in nature.</li> <li>The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.</li> <li>Any assumptions or allowances made for deleterious elements.</li> <li>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.</li> <li>For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?</li> </ul>	mill, a conventional gravity recovery and CIL processing circuit. Target grind size from the milling circuit reduced to improve overall ore recovery.  Several metallurgy testwork programs have been completed showing the ore recovery is variable and the presence of arsenopyrite/loellingite is a key variable in the overall recovery. An extensive dataset of over 2,400 'Metbleg' bottle roll leach tests has been used to verify the relationship. The testwork supports the proposed flowsheet.  A variable recovery calculation based on the testwork has been applied to Resource Model ore blocks based on an Arsenic feed grade versus Gold residue grade relationship.  Metallurgy testwork programs have included comprehensive head grade analysis, 'Metbleg' tests, grind establishment, gravity concentration, cyanide leach, reagent consumption, flotation, fine grind, mineralogy and physical (comminution) testing  No bulk sample piloting testwork has been carried out however a significant number of sample composites have been generated and tested  Additional testwork has been undertaken to further validate the recovery relationship using the proposed flowsheet with results reflecting previous work with a strong recovery correlation coefficient being achieved  Further testwork to provide additional data on reagent consumption rates is underway. This testwork is focused on lead nitrate and oxygen addition.
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.	<ul> <li>Some studies have been completed.</li> <li>Mining Approvals processes yet to commence.</li> </ul>
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	<ul> <li>Infrastructure required is moderate and of a temporary nature, i.e. administration offices, mining and haulage workshops, fuel tanks, generators, magazine and water transfer dams. Road haulage and workforce accommodation requirements are also considered with</li> </ul>

	provided, or accessed.	accommodation planned to be established at Narembeen
	provided, or accessed.	13km from the mine site.
		The project has low infrastructure requirements of a
		temporary nature
Costs	<ul> <li>The derivation of, or assumptions made, regarding projected capital costs in the study.</li> <li>The methodology used to estimate operating costs.</li> <li>Allowances made for the content of deleterious elements.</li> <li>The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co- products.</li> <li>The source of exchange rates used in the study.</li> <li>Derivation of transportation charges.</li> <li>The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.</li> <li>The allowances made for royalties payable, both Government and private.</li> </ul>	<ul> <li>Capital costs for the flotation, fine grind and intensive cyanidation addition to the Edna May Plant have been completed by an external engineering consultancy. Other capital costs are estimated from quotations or recently completed work at other Ramelius sites.</li> <li>Operating costs based on budgeted Edna May milling costs plus expected additional processing requirements, mining contractor budget pricing and recent mining and administration costs incurred at current Ramelius sites.</li> <li>No deleterious elements present.</li> <li>Pit optimisation was run at \$2,000/oz and the Financial Model was run using A2,100/oz.</li> <li>Cost models use Australian dollars.</li> <li>Ore haulage rates based on estimated contractor rates from existing Ramelius contracts.</li> <li>No penalties or specifications are applicable.</li> </ul>
Revenue Factors	<ul> <li>both Government and private.</li> <li>The derivation of, or assumptions made</li> </ul>	<ul> <li>State royalty of 2.5% used.</li> <li>Gold price of A\$2,000/oz for optimisation and A\$2,100/oz</li> </ul>
	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.	used for financial model
Market Assessment	<ul> <li>The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.</li> <li>A customer and competitor analysis along with the identification of likely market windows for the product.</li> <li>Price and volume forecasts and the basis for these forecasts.</li> <li>For industrial minerals the customer specification, testing and acceptance</li> </ul>	<ul> <li>Doré is sold direct to the Perth Mint at spot price</li> <li>Market window unlikely to change</li> <li>Price is likely to go up, down or remain same</li> <li>Not industrial mineral</li> </ul>
Classification	requirements prior to a supply contract.	The recourse has been electified as Massured Indicated
Ciassilication	<ul> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>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).</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul> <li>The resource has been classified as Measured, Indicated or Inferred categories based on geological and grade continuity and drillhole spacing and generation.</li> <li>The resource classification accounts for all relevant factors</li> <li>The classification reflects the Competent Person's view</li> </ul>
Economic	The inputs to the economic analysis to produce the net present value (NPV) in the	NPV of 5% used     Sensitivities were run on gold price, ore cost, mining cost and mill recovery.
	•	20

Social	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.	Stakeholders have been engaged with by Explaurum and
Gociai	stakeholders and matters leading to social licence to operate.	now by Ramelius. A number of agreements with key stakeholders are in progress.
Other	<ul> <li>To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:</li> <li>Any identified material naturally occurring risks.</li> <li>The status of material legal agreements and marketing arrangements.</li> <li>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 timeframes 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.</li> </ul>	Risks identified include Final processing method and recovery Agreement with freehold landholder Both areas are currently being addressed No significant issues around the mining approvals process is identified.
Classification	<ul> <li>The basis for the classification of the Ore Reserves into varying confidence categories.</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> <li>The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any)</li> </ul>	Reserves are classified according to Resource classification     They reflect the Competent Person's view     Measured Resources (from 10m x 10m close spaced drill program) are converted to Proven Ore Reserves. The bulk of Ore Reserves are Probable.
Audits or reviews	The results of any audits or reviews of Ore Reserve estimates.	No external audits carried out.
Discussion of relative accuracy / confidence	<ul> <li>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.</li> <li>The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which</li> </ul>	<ul> <li>Confidence is in line with gold industry standards and the companies aim and track record on providing effective prediction of mining projects. No statistical quantification of confidence limits has been applied.</li> <li>Estimates are global.</li> <li>The Reserve is most sensitive to; a) mill recovery, b) resource grade accuracy, c) gold price.</li> <li>Reserve confidence is reflected by the fact a Probable category is applied to the majority, which in turn reflects the confidence of the Mineral Resource</li> <li>No production data is available for comparison</li> </ul>

## Attachment B. JORC Table 1 Report Eridanus Project Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>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.</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 (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.</li> </ul>	<ul> <li>At all projects potential gold mineralised RC intervals are systematically sampled using industry standard 1m intervals collected from reverse circulation (RC) drill holes. Surface Diamond holes may be sampled along sub 1m geological contacts, otherwise 1m intervals are the default.</li> <li>Drill hole locations were designed to allow for spatial spread across the interpreted mineralised zone. All RC samples were collected and riffle or cone split to 3-4kg samples on 1m metre intervals. Aircore samples are speared from piles on the ground and are composited into 4m intervals before despatching to the laboratory. Single metre bottom of hole Aircore samples are also collected for trace element determinations. Diamond core is half cut along downhole orientation lines. Half core is sent to the laboratory for analysis and the other half is retained for future reference.</li> <li>Standard fire assaying was employed using a 50gm charge with an AAS finish for all diamond, RC and Aircore chip samples.</li> </ul>
Drilling techniques	Drill type (eg core, reverse circulation, openhole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, facesampling bit or other type, whether core is oriented and if so, by what method, etc).	<ul> <li>Drilling was completed using 5 ¾ face sampling RC drilling hammers for all RC drill holes best practice NQ diamond core.</li> </ul>
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery</li> </ul>	<ul> <li>All diamond core is jigsawed to ensure any core loss, and if present is fully accounted for. RC drill holes samples were visually inspected by the supervising geologist to</li> </ul>

	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.	ensure adequate clean sample recoveries were achieved. All diamond core is jigsawed to ensure any core loss, if present is fully accounted for. Any wet, contaminated or poor sample returns are flagged and recorded in the database to ensure no sampling bias is introduced.  • Zones of poor sample return both in RC and Aircore are recorded in the database and cross checked once assay results are received from the laboratory to ensure no misrepresentation of sampling intervals has occurred. Of note, excellent RC drill recovery is reported from all RC holes.
Sub-sampling techniques and sample preparation	<ul> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all subsampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>All drill samples are geologically logged on site by professional geologists. Details on the host lithologies, deformation, dominant minerals including sulphide species and alteration minerals plus veining are recorded relationally (separately) so the logging is interactive and not biased to lithology.</li> <li>Drill hole logging is qualitative on visual recordings of rock forming minerals and quantitative on estimates of mineral abundance.</li> <li>The entire length of each drill hole is geologically logged.</li> <li>Duplicate samples are collected every 25th sample from the RC and Aircore chips as well as quarter core from the diamond holes.</li> <li>Dry RC 1m samples are riffle split to 3-4kg 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 core, RC and Aircore chips 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 or 30 gm 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 25th sample, a controlled blank is inserted every 100th sample.</li> <li>The sample size considered appropriate for the type,</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>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.</li> </ul>	<ul> <li>style, thickness and consistency of mineralization.</li> <li>The fire assay method is designed to measure the total gold in the core, RC and Aircore samples. The technique involves standard fire assays using a 50gm sample charge with a lead flux (decomposed in the furnace). The prill is totally digested by HCl and HNO3 acids before measurement of the gold determination by AAS.</li> <li>No field analyses of gold grades are completed. Quantitative analysis of the gold content 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>
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	Alternative Ramelius personnel have inspected the diamond core, RC and Aircore chips in the field to verify the correlation of mineralised zones between assay results

	<ul> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>and lithology, alteration and mineralization.</li> <li>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, a commercially available and industry accepted database software package. Assay data is electronically merged when received from the laboratory. The responsible project geologist reviews the data in the database to ensure that it is correct and has merged properly and that all the drill data collected in the field has been captured and entered into the database correctly.</li> <li>The responsible geologist makes the DBA aware of any errors and/or omissions to the database and the corrections (if required) are corrected in the database immediately.</li> <li>No adjustments or calibrations are made to any of the assay data recorded in the database.</li> </ul>
Location of data points	<ul> <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> <li>All drill hole collars are picked up using accurate DGPS survey control. All down hole surveys are collected using downhole gyro surveying techniques provided by the drilling contractors.</li> <li>All holes were picked up in MGA94 – Zone 50 grid coordinates.</li> </ul>
Data spacing and distribution	<ul> <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> <li>Drill spacing ranges from 7 x 7m grade control to a nominal 25 x 25m spacing in the upper 200m of the deposit and broadens below this to a nominal 50 x 50m.</li> <li>The spacing confirms grade continuity and resource classifications reflect the general drill spacing and confidence.</li> <li>No sampling compositing has been applied within key mineralised intervals.</li> </ul>
Orientation of data in relation to geological structure	<ul> <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> <li>Drilling at Eridanus has been conducted on multiple orientations to test potential bias in drilling stockwork style mineralisation</li> <li>Core logging shows the vein orientations are highly variable</li> <li>Some sampling bias may occur in individual holes but is not considered an issue at the resource scale</li> </ul>
Sample security	The measures taken to ensure sample security.	Sample security is integral to Ramelius' sampling procedures. All bagged 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.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	Sampling techniques and procedures are reviewed prior to the commencement of new work programmes to ensure adequate procedures are in place to maximize the sample collection and sample quality on new projects. No external audits have been completed to date.

## **Section 2 Reporting of Exploration Results**

Criteria	JORC Code explanation	Commentary
Mineral tenement and	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures,	The results reported in this report are on established, granted Mining Leases owned by Mt Magnet Gold Pty Ltd, a 100% subsidiary of Ramelius Resources Ltd.

land tenure status	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.	Currently all the tenements are in good standing. There are no known impediments to obtaining a licences to operate in either area.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>Previous work consists of significant drilling and mining conducted by previous owners including WMC, Hill 50 Gold NL and Harmony Gold, however Eridanus is a new Ramelius discovery.</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>All drill targets are orogenic structurally controlled Archean gold deposits</li> <li>Eridanus is hosted in intermediate composition intrusives (granodiorite, feldspar-porphyritic intrusive, diorite) of the Boogardie Formation. Primary mineralisation is mostly confined to an ~075° trending, sub vertical granodiorite intrusive ~60m in thickness. The main granodiorite body has intruded earlier porphyritic units. Both intrusives have subsequently been intruded by narrow (typically several metres to &lt;10m) dolerite and diorite dyke. Gold mineralisation is related stockwork style quartz veins, disseminated sulphides and sericite alteration. Veins in core appear to have a dominant easterly trend but display a wide range of orientations.</li> </ul>
Drill hole Information	<ul> <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:</li> <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> <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> <li>Drilling results have been reported in a number of previous announcements for Eridanus. No new drilling is reported in this announcement.</li> <li>Easting and northing are given in MGA94 coordinates</li> <li>RL is AHD</li> <li>Dip is the inclination of the hole from the horizontal. Azimuth is reported in magnetic degrees as the direction the hole is drilled. MGA94 and magnetic degrees vary by &lt;1° in the project area.</li> <li>Down hole length is the distance measured along the drill hole trace. Intersection length is the thickness of an anomalous gold intersection measured along the drill hole trace.</li> <li>Hole length is the distance from the surface to the end of the hole measured along the drill hole trace. No results currently available from the exploration drilling are excluded from this report.</li> </ul>
Data aggregation methods	<ul> <li>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.</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 stated.</li> </ul>	<ul> <li>Grades are weighted by sample interval.</li> <li>Drilling results are generally reported using a 0.5 g/t Au lower cut-off and may include up to 10m of anomalous internal dilution within the host granodiorite.</li> <li>No metal equivalent reporting is used or applied.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> </ul>	<ul> <li>The intersection length is measured down the length of the hole and is not usually the true width.</li> <li>True widths are variable due to the varied orientations and stockwork style, however bulked ore zones of up to 50m width are present within the Eridanus Granodiorite.</li> </ul>

	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').	The known geometry of the mineralisation with respect to the drill holes reported in this report is now well constrained.
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.	Example maps and sections are included.
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.	No new drillhole reporting
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.	No other exploration data that has been collected is considered meaningful and material to this report.
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	Current work in progress includes deep geotech diamond holes and further deep infill drilling to test potential for major pit cutbacks and/or bulk underground mining

## Section 3 Estimation and Reporting of Mineral Resources

Criteria	JORC Code explanation	Commentary
Database integrity	<ul> <li>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.</li> <li>Data validation procedures used.</li> </ul>	Recent Ramelius drilling employs an SQL central database using Datashed information management software. Data collection uses Field Marshall software with fixed templates and lookup tables for collecting field data electronically. Several validation checks occur upon data upload to the main database. Datasets were merged and show good agreement.
Site visits	<ul> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	The Competent Person is a full-time employee of Ramelius Resources and has made multiple site visits
Geological interpretation	<ul> <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> </ul>	<ul> <li>Confidence in the geological interpretation is high.</li> <li>Data used includes drilling assays &amp; logging from post 2017 drilling and initial grade control and mining</li> <li>No alternate interpretation required</li> <li>Geology forms a base component in the mineralisation interpretation.</li> </ul>

	The factors affecting continuity both of grade and geology.	
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 main granodiorite host unit is 500m long with ~075° strike. It is currently drilled to around 500m down dip and is sub-vertical, 40-60m wide and contains dominant NNW and subordinate NNE striking quartz vein sets with a wide dip variation.
Estimation and modelling techniques	<ul> <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 process used, the comparison of model data to drill hole data, and use of reconciliation data if available.</li> </ul>	<ul> <li>Deposits were estimated using geological software using OK and ID2 methods inside mineralisation domains. The estimation method is appropriate for the deposit type. Grade within the domain is estimated by geological software within hard bounded domains.</li> <li>Only gold is estimated</li> <li>No deleterious elements present</li> <li>Parent cell of 10mE x 5mN x 2.5mRL. Parent cell estimation only. Parent cells are SMU size.</li> <li>Domains are geostatistically analysed and assigned appropriate search directions, top-cuts and estimation parameters. The search is aligned with the observed geological strike and dip of the lode.</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. Top-cuts used ranged from 12 to 50 g/t.</li> <li>Validation includes visual comparison against drillhole grades and comparison against previous models.</li> </ul>
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.	Tonnages are estimated on a dry basis
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	The cut-offs used are appropriate for the bulked low-grade mining method used for Eridanus and reported above 0.6g/t.
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	Resources are reported on the assumption of mining by conventional open pit or bulked UG mining methods. Parent block size and estimation methodology were selected to generate a model appropriate for open pit mining on 2.5m flitches.

	explanation of the basis of the mining assumptions made.	
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.	Eridanus testwork shows the deposit is free-milling as per neighbouring previously mined Cosmos stockwork deposits. A recovery of 93% is used for evaluations.
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.	Testwork shows no significant issues with waste rock or tailings  Ore treatment and tailings generation is occurring at the current Mt Magnet Checkers mill  Testwork shows no significant issues with waste rock or tailings  Testwork shows no significant issues with waste rock or tailings
Bulk density	<ul> <li>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.</li> <li>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.</li> <li>Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.</li> </ul>	Density values are adopted from recent testwork on diamond drill holes completed at Eridanus. Density measurements were completed on the geotechnical diamond core holes using the weight in air/weight in water method. They have been assigned by geological and weathering domains.
Classification	<ul> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>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).</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul> <li>The resource has been classified as Measured, Indicated or Inferred categories based on geological and grade continuity and drillhole spacing and generation.</li> <li>The resource classification accounts for all relevant factors</li> <li>The classification reflects the Competent Person's view</li> </ul>
Audits or reviews	The results of any audits or reviews of Mineral Resource estimates.	No audits or reviews conducted
Discussion of relative	Where appropriate a statement of the relative accuracy and confidence level in the Mineral	The accuracy and confidence in the Resource is high given the deposit style, quality and density of drilling and

accuracy/ confidence	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	sampling, both historic and new.  Resources are global estimates  Production data is available for around 6 months of mining
	1	

## Section 4 Estimation and Reporting of Ore Reserves

Criteria	JORC Code explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	<ul> <li>Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.</li> <li>Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.</li> </ul>	Mineral Resource models described above were used directly for evaluation and reporting of Ore Reserves     Mineral Resources are reported inclusive of Ore Reserves
Site visits	<ul> <li>Comment on any site visits undertaken by the Competent Person and the outcome of those visits.</li> <li>If no site visits have been undertaken indicate why this is the case.</li> </ul>	<ul> <li>The Competent Person has made multiple site visits.</li> <li>Visits verified understanding of deposit and available information.</li> </ul>
Study Status	<ul> <li>The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves</li> <li>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 effect, if any, of alternative interpretations on Mineral Resource estimation.</li> </ul>	A pre-feasibility study has been carried out appropriate to the deposit type, mining method and scale. The study was carried out internally and externally using consultants where appropriate.
Cut-off parameters	The basis of the cut-off grade(s) or quality parameters applied.	Cutoff is calculated as part of the mine optimisation evaluation and is 0.6 g/t
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	<ul> <li>Mining method is conventional open pit with drill and blast, excavate, load and haul. SMU block reflects expected grade control density and mining equipment size.</li> <li>An external geotechnical report was commissioned based</li> </ul>

appropriate factors by optimisation or by on previous geotechnical logging and information and preliminary or detailed design). logging and laboratory test work on new purposed drilled geotechnical drill core and gives recommended pit design The choice, nature and appropriateness of the details. selected mining method(s) and other mining parameters including associated design issues Additional mining dilution of 5.0% was applied. such as pre-strip, access, etc. Mining recovery of 95% was applied. The assumptions made regarding geotechnical Minimum width reflected by SMU block (5m) parameters (eg pit slopes, stope sizes, etc), Inferred Resources were tested, but are not used or grade control and pre-production drilling. included in optimisation or final designs The major assumptions made and Mineral Infrastructure required is small and of a temporary nature, Resource model used for pit and stope i.e. workshop, offices, fuel tank, generator, magazine and optimisation (if appropriate). water transfer dams, bores and turkey nests, and are The mining dilution factors used. already in place. All infrastructure is existing and in place. The mining recovery factors used. Current facilities for camp accommodation and Shire Any minimum mining widths used. airstrip will be 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. Metallurgical The metallurgical process proposed and the Processing by conventional CIL/CIP gold milling through factors or appropriateness of that process to the style of the Mt Magnet plant. assumptions mineralisation Well-tested existing technology. Whether the metallurgical process is well-Metallurgy testwork programs have included gravity tested technology or novel in nature. concentration, cyanide leach, grind establishment, reagent The nature, amount and representativeness of consumption, flotation, mineralogy and SAG Mill metallurgical test work undertaken, the nature Comminution. of the metallurgical domaining applied and the 728kt ore from deposit has already been processed. corresponding metallurgical recovery factors No deleterious elements are present. 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? **Environmental** The status of studies of potential Environmental studies are complete. environmental impacts of the mining and Environmental approvals include the previously approved processing operation. Details of waste rock Mining Proposal and Clearing Permit. A new Mining characterisation and the consideration of Proposal has been submitted and is under assessment by potential sites, status of design options DMIRS. considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported. Infrastructure The existence of appropriate infrastructure: Infrastructure at site is minimal and consists of access roads and some shallow water bores. Accommodation and availability of land for plant development, power, water, transportation (particularly for flights will use established facilities at an adjacent mine to bulk commodities), labour, accommodation; or the north.

	the ease with which the infrastructure can be	The project has low infrastructure requirements of a
	provide or accessed.	temporary nature, with all infrastructure in place.
Costs	<ul> <li>The derivation of, or assumptions made, regarding projected capital costs in the study.</li> <li>The methodology used to estimate operating costs.</li> <li>Allowances made for the content of deleterious elements.</li> <li>The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co- products.</li> <li>The source of exchange rates used in the study.</li> <li>Derivation of transportation charges.</li> <li>The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.</li> <li>The allowances made for royalties payable,</li> </ul>	<ul> <li>Capital costs based on quotations obtained from suppliers and mining contractors.</li> <li>Operating costs based on current Mt Magnet Gold Operations milling costs, quoted ore haulage rates and recent mining and administration costs incurred.</li> <li>No deleterious elements present</li> <li>Using \$2,000 gold price.</li> <li>Cost models use Australian dollars</li> <li>Ore haulage rates based on quoted contractor rates</li> <li>Treatment costs based on known current milling costs. No penalties or specifications</li> <li>State royalty of 2.5% used</li> </ul>
	both Government and private.	
Revenue Factors	<ul> <li>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.</li> <li>The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.</li> </ul>	Gold price of A\$2,100/oz used.
Market	The demand, supply and stock situation for the	Doré is sold direct to the Perth Mint at spot price
Assessment	<ul> <li>particular commodity, consumption trends and factors likely to affect supply and demand into the future.</li> <li>A customer and competitor analysis along with the identification of likely market windows for the product.</li> <li>Price and volume forecasts and the basis for these forecasts.</li> <li>For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.</li> </ul>	Market window unlikely to change     Price is likely to go up, down or remain same     Not industrial mineral
Classification	<ul> <li>The basis for the classification of the Mineral Resources into varying confidence categories.</li> <li>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).</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> </ul>	<ul> <li>The resource has been classified as Indicated or Inferred categories based on geological and grade continuity and drillhole spacing and generation.</li> <li>The resource classification accounts for all relevant factors.</li> <li>The classification reflects the Competent Person's view.</li> </ul>
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,	No audits or reviews conducted     All inputs used are derived from actual costs at Mt Magnet Gold Project or contractor quoted budget estimates

	discount rate, etc.	
	<ul> <li>NPV ranges and sensitivity to variations in the</li> </ul>	
	significant assumptions and inputs.	
Social	The status of agreements with key	Final approval (pending) of the statutory submissions to
Social	stakeholders and matters leading to social	DMIRS (Mining Proposal and Mine Closure Plan).
	licence to operate.	,
Other	<ul> <li>To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:</li> <li>Any identified material naturally occurring risks.</li> </ul>	Final approval (pending) of the statutory submissions to DMIRS (Mining Proposal and Mine Closure Plan).
	The status of material legal agreements and marketing arrangements.  The status of governmental agreements and	
Classification	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 timeframes 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.	
Classification	<ul> <li>The basis for the classification of the Ore Reserves into varying confidence categories.</li> <li>Whether the result appropriately reflects the Competent Person's view of the deposit.</li> <li>The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any)</li> </ul>	<ul> <li>Reserves are classified according to Resource classification.</li> <li>They reflect the Competent Person's view.</li> <li>Probable Reserves were derived from Measured Resources and are inclusive of mined and stockpiled ore as at 1 April 2020.</li> </ul>
Audits or reviews	The results of any audits or reviews of Ore Reserve estimates.	No external audits carried out.
Discussion of relative accuracy / confidence	<ul> <li>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.</li> <li>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</li> </ul>	<ul> <li>Confidence is in line with gold industry standards and the company's aim to provide effective prediction for current and future mining projects. No statistical quantification of confidence limits has been applied.</li> <li>Estimates are global.</li> <li>The Reserve is most sensitive to; a) resource grade accuracy, b) gold price, c) geotechnical wall angles.</li> <li>Reserve confidence is reflected by the categories applied, which in turn reflect the confidence of the Mineral Resource.</li> <li>Production data is available for around 9 months of ore mining at Eridanus</li> </ul>

- 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.
- 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.