ACN 001 717 540 ASX code: RMS

AMELIUS

29 September 2017

ISSUED CAPITAL

Ordinary Shares: 526M

DIRECTORS

Non-Executive Chairman: Robert Kennedy Non-Executive Directors: Kevin Lines Michael Bohm Managing Director: Mark Zeptner

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RAMELIUS RESOURCES LIMITED

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For Immediate Release

RESOURCES AND RESERVES STATEMENT 2017

RELEASE

The Directors of Ramelius Resources Limited (ASX: RMS) are pleased to announce new estimates of Mineral Resources and Ore Reserves as at 30 June 2017, with Mineral Resources up 16% and Ore Reserves up 12% for the year, after mining depletions.

Total Mineral Resources are estimated to be;

• 36.35Mt at 2.2g/t Au for 2,549,000 ounces of gold

Total Ore Reserves are estimated to be;

• 6.58Mt at 2.1g/t Au for 452,000 ounces of gold

Additions for both Resources and Reserves were largely due to changes for the Morning Star, Stellar, Stellar West, Shannon and Brown Hill deposits. These deposits all saw additional drilling, resource model updates and mine feasibility work completed during the year.

The Vivien deposit saw a Reserve net increase of 5,000 ounces, after production of 53,000 ounces, due to an updated Resource model which included grade control data and increased levels of confidence gained during mining. The Mt Magnet and Vivien Ore Reserves have been estimated at a gold price of A\$1,600 per ounce.

Managing Director, Mr Mark Zeptner today said:

"It is very encouraging to see the additional investment in brownfields exploration starting to pay off at Ramelius. To grow both the Mineral Resources and Ore Reserves by over 10% each whilst achieving a second straight year of record production is a significant result for the exploration and resource development teams.

With our ongoing drilling at a number of Mt Magnet locations plus the work that is ongoing at the Vivien underground mine, we are targeting a further increase next year with the aim to have a 5-year life-of-mine for our Mt Magnet based business model."

Detailed tables of Resources and Reserves are shown below.

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ABOUT RAMELIUS



Figure 1: Ramelius' Operational Project Locations

Ramelius owns the Mt Magnet Gold mining and processing operation. Mt Magnet is comprised of a number of active open pits and the Water Tank Hill underground mine. The Company is also mining at, and hauling from, the high-grade Vivien gold mine near Leinster, Western Australia.

Recently, the Company also entered into a binding agreement with Evolution Mining Limited to purchase the Edna May gold mine, some 350km east of Perth. The transaction is expected to be completed in early October 2017 and will add significant Resources and Reserves in the 2018 financial year.

MINERAL RESOURCES

	MINERAL RESOURCES AS AT 30 JUNE 2017 - INCLUSIVE OF RESERVES											
Measured			Indica	ted		Inferred Total Resou		ource				
Deposit	Tonnes	Au	Au	Tonnes	Au	Au	Tonnes	Au	Au	Tonnes	Au	Au
	('000s)	g/t	Oz	('000s)	g/t	Oz	('000s)	g/t	Oz	('000s)	g/t	Oz
Galaxy	92	1.8	5,000	5,254	1.9	318,000	4,017	1.2	159,000	9,364	1.6	482,000
Morning Star				4,866	1.9	301,000	4,322	1.5	205,000	9,188	1.7	506,000
Bartus Group	49	2.2	4,000	115	2.1	8,000	238	1.6	12,000	402	1.8	24,000
Boomer				1,194	1.8	68,000	786	1.0	26,000	1,980	1.5	94,000
Britannia Well				179	2.0	12,000				179	2.0	12,000
Bullocks				202	3.3	21,000	40	2.5	3,000	242	3.2	24,000
Eastern Jaspilite	146	2.2	10,000	121	2.8	11,000	134	2.5	11,000	401	2.4	32,000
Eclipse				167	2.2	12,000	41	2.1	3,000	208	2.1	15,000
Golden Stream				154	2.9	14,000	7	1.7	-	160	2.8	14,000
Hill 60							309	4.6	46,000	309	4.6	46,000
Lone Pine	199	2.5	16,000	277	1.7	15,000	147	1.7	8,000	623	1.9	39,000
Milky Way				2,660	1.3	114,000	1,258	1.2	50,000	3,918	1.3	164,000
O'Meara Group				231	2.5	18,000	151	1.5	7,000	383	2.1	25,000
Shannon				249	3.3	27,000	81	3.9	10,000	330	3.5	37,000
Spearmont - Galtee				25	2.9	2,000	207	4.3	28,000	232	4.1	30,000
Stellar				637	1.5	32,000	124	1.9	7,000	761	1.6	39,000
Stellar West				414	1.7	22,000	97	1.1	3,000	511	1.6	25,000
Welcome - Baxter	222	1.6	11,000	276	1.6	15,000	198	1.8	11,000	696	1.7	37,000
Total Open Pit Deposits	708	2.0	46,000	17,021	1.8	1,010,000	12,157	1.5	589,000	29,886	1.7	1,645,000
Hill 50 Deeps	279	5.5	49,000	932	7.0	209,000	396	6.4	81,000	1,607	6.6	339,000
Morning Star Deeps				195	4.2	26,000	334	5.0	53,000	528	4.7	79,000
Saturn UG							1,607	2.5	127,000	1,607	2.5	127,000
Water Tank Hill UG				229	6.6	49,000	89	4.9	14,000	318	6.1	63,000
Total UG deposits	279	5.5	49,000	1,355	6.5	284,000	2,426	3.5	275,000	4,060	4.7	608,000
Mt Magnet Stockpiles	594	1.2	23,000		-	-		-	-	594	1.2	23,000
Mt Magnet Total	1,581	2.3	118,000	18,376	2.2	1,294,000	14,582	1.8	864,000	34,539	2.0	2,276,000
Western Queen South				104	3.6	12,000	81	3.4	9,000	185	3.5	21,000
Coogee				31	3.6	4,000	65	3.3	7,000	96	3.4	11,000
Vivien				530	6.7	114,000	174	5.5	31,000	785	6.9	175,000
Kathleen Valley				222	3.4	24,000	523	2.5	42,000	745	2.8	66,000
Other Projects Total				886	5.4	154,000	844	3.3	89,000	1,812	4.7	273,000
Total Resources	1,581	2.3	118,000	19,262	2.3	1,448,000	15,426	1.9	953,000	36,351	2.2	2,549,000

Table A: Mineral Resources

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

Mineral Resource Commentary

Mt Magnet comprises of numerous gold deposits contained within a contiguous tenement holding and located within an 8km radius of the Checkers gold mill. The Galaxy group includes the Saturn, Mars, Perseverance, Titan, Brown Hill and Vegas deposits. Current mining operations include the Titan and Brown Hill North pits, Milky Way and Stellar West pits, and the Water Tank Hill underground mine. Mining depletions of 71,000oz were calculated for mining during the year to 30 June 2017.

Morning Star (refer Figure 3) is the most significant resource addition for the year (+403,000oz) as a result of significant additional drilling and re-modelling of earlier data. See RMS ASX Release 'Life of Mine Update, 24 May 2107', for full details.

All resources except Hill 50 Deeps, Morning Star Deeps, Saturn UG and Water Tank Hill UG (refer Figure 4) are generated as open pit resources and reported to maximum vertical depth of 200m below original topography. Morning Star and Milky Way are reported to 250m depth.

The Vivien resource was re-modelled in January 2017. The resource was upgraded due to drilling, grade control sampling and increased confidence. The Kathleen Valley deposits were mined during 2015/16 and have been depleted accordingly.

All resources are based on combinations of RC (usually predominant) and diamond drill holes. Sampling has been via riffle or cone splitters (RC) or by sawn half core. Assaying is carried out by commercial laboratories and accompanied by QAQC samples. A significant proportion of drill data is historical in nature, however Ramelius has added further resource drilling for most deposits, especially those forming Ore Reserves. Mineralisation has been modelled as cross-sectional interpretations using deposit suitable lower cut-offs & geological interpretations or characteristics. Interpretations have then been wire- framed using geological software, including Micromine & Surpac. Mineralisation has been grouped by domain where required and statistical analysis, top-cutting and estimation carried out using anisotropic search ellipses. Estimation uses Ordinary Kriging and/or Inverse Distance methods. Modelling has been undertaken with recognition of the probable mining method and resource classifications reflect drill spacing, data quality, geological and grade continuity. Density information is generally well established and new measurements have frequently been obtained. All deposits listed have had some degree of recent production or historic mining. Resources are reported using a A\$1,600/oz gold price.

Further details can be seen in RMS ASX Releases for individual projects. Further detailed information relating to generation of the resource estimates is attached below in Table 1 – JORC 2012 Reporting Criteria.



Figure 2: Resource Inventory Change



Figure 3: Morning Star view to west - existing pit, model >0.7g/t & above 200mRL (250m), drill holes (RMS blue)



Figure 4: Water Tank Hill UG, 3D view to NE, model, drilling & historic voids



Figure 5: Milky Way pit, 3D truncated view to N, model, drilling & pit design



Figure 6: Vivien UG, 3D view to NW, model, drilling & underground

ORE RESERVES

ORE RESERVE STATEMENT AS AT 30 JUNE 2017									
	Proven				Probable		To	tal Reserv	'e
	Tonnes	Au	Au	Tonnes	Au	Au	Tonnes	Au	Au
	('000s)	g/t	Oz	('000s)	g/t	Oz	('000s)	g/t	Oz
Galaxy Pits									
Titan	8	1.6	-	213	1.5	11,000	221	1.5	11,000
Brown Hill				623	1.6	31,000	623	1.6	31,000
Brown Hill North				18	2.6	2,000	18	2.6	2,000
Vegas				192	1.4	8,000	192	1.4	8,000
Cosmos Pits									
Milky Way				1,836	1.3	77,000	1,836	1.3	77,000
Stellar				388	1.5	19,000	388	1.5	19,000
Stellar West				267	1.8	15,000	267	1.8	15,000
Shannon				208	2.9	20,000	208	2.9	20,000
Morning Star Pit									
Morning Star				1,099	1.9	68,000	1,099	1.9	68,000
Satellite Pits									
Boomer				132	2.9	12,000	132	2.9	12,000
Lone Pine				258	1.8	15,000	258	1.8	15,000
O'Meara				46	3.4	5,000	46	3.4	5,000
Golden Stream				95	3.0	9,000	95	3.0	9,000
Underground									
Water Tank Hill				167	6.5	34,000	167	6.5	34,000
Stockpiles	594	1.2	23,000				594	1.2	23,000
Mt Magnet Total	602	1.2	23,000	5,541	1.8	326,000	6,143	1.8	349,000
Vivien Underground				440	7.3	103,000	440	7.3	103,000
Total Reserves	602	1.2	23,000	5,982	2.2	429,000	6,583	2.1	452,000

Table B: Ore Reserves

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

Ore Reserve Commentary

All Ore Reserves have been reported from Measured and Indicated Resources only. Titan ore reserve is generated for the current operational pit and depleted to end of June 2017. All ore reserves have been estimated from a number of internal and external mining optimisation and design studies using appropriate cost, geotechnical, slope design criteria, dilution, cut-off grade and recovery parameters. Reserves are utilised in the current Life of Mine plan (May 2017).

Mt Magnet and Vivien reserves utilise a gold price of A\$1,600/oz. Water Tank Hill uses A\$1400/oz. Mining, milling and additional overhead costs are based on currently contracted and budgeted operating costs. The Vivien mine plan was updated in February 2017 in conjunction with a Resource model update. Costs for Vivien underground mining and ore haulage are based on current contracted and budgeted rates. Significant ore mining and milling has taken place for Titan and the Vivien and Water Tank Hill undergrounds. Mt Magnet stockpiles consist of ROM stocks & Low Grade stocks mined post 2012. Further detailed information relating to generation of the reserve estimates is attached below in Table 1 - JORC 2012 Reporting Criteria.



Figure 7: Reserve Inventory Change

Competent Persons Statements

The information in this report that relates to Mineral Resources is based on information compiled by Rob Hutchison, a Member of the Australasian Institute of Mining and Metallurgy. Rob Hutchison has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Rob Hutchison is a full-time employee of the company and consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to Ore Reserves is based on information compiled by Duncan Coutts, a Member of the Australasian Institute of Mining and Metallurgy. Duncan Coutts has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Duncan Coutts is a full-time employee of the company and consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Forward Looking Statements

This report contains certain forward looking statements with respect to Ramelius' operations, production grades and other matters that are subject to various risks and uncertainties. Actual results, performance or achievements could be significantly different from those expressed in or implied by those forward looking statements. Such forward looking statements are not guarantees of future performance and involve known and unknown risks, uncertainties and other factors that are beyond the control of Ramelius that may cause actual results to differ materially from those expressed in the forward looking statements contained herein. Ramelius Resources Limited gives no warranties in relation to the information and statements within this report.

TABLE 1 - JORC REPORTING CRITERIA

Section 1	Sampling Techniques and Data					
Project	Mt Magnet, includes Galaxy, Morning 50 Deeps and numerous other deposit Saturn, Mars, Titan, Perseverance and consists of Milky Way, Stellar, Stellar V deposits.	Western Queen	Coogee	Vivien	Kathleen Valley	
Project History	Field discovered in 1891. Hill 50 UG mine operated 1934-1976 & 1981-2007. Recorded production of 5.5 Moz. Majority of drilling data is historic and by numerous companies including WMC, Metana Minerals, Hill 50 Gold and Harmony Gold. Project acquired by Ramelius Resources Ltd (RMS) in 2010, with exploration, mining and milling recommencing early 2012. Milky Way deposit drilled by RMS in 2015/16. Morning Star drilled by RMS 2013-2017.		Historic underground production in 1936/37. Significant drilling and exploration by WMC in early 1990's. Western Queen (WQ) pit mined by Equigold 1998-2001. Western Queen South (WQS) mined by Harmony Gold in 2007. Mined by RMS 2013/14.	Discovered in mid- 1990's. Majority of drilling by Sovereign Resources shortly after discovery in 1996, with lesser amounts by Harmony Gold (2002) and recently by Ramelius (2012). Mined by RMS 2013/2014.	Historic underground production in early 1900's. Early drilling by Asarco, Wiluna Mines and Australian Goldfields (AGFNL). Pit mined on 1997/98 by AGFNL. Major drilling by Agnew Gold Mining Company in 2000's. RMS mining commenced 2016.	Historic underground production in early 1900's at Yellow Aster (YA) and Nils Desperandum (ND). Explored by Newmont (1980's), Sir Samuel Mines/Jubilee Mines (1990's - 2000's) and Xstrata (2012). RMS acquisition & drilling in 2014. Mined by RMS 2015/16.
Sampling techniques	Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to	1m intervals in a cyclone a was in collected in number not split but collected in a p outside mineralised areas, selected intervals. Core wa sampled. Vivien dataset includes 3kg All sampling by convention representivity. Sampling Technique detail methods of sampling, how which have not been syste affect sample recovery and	image: commenced 2016. Commenced 2016. Campling was completed using a combination of Reverse Circulation (RC) and Diamond Drilling (DD). RC drill samples were collected at m intervals in a cyclone at the side of the drilling rig and a sub-sample collected via a riffle or cone splitter. A split portion weighing 2-3kg vas in collected in numbered sample bags. The remaining portion was laid out on the ground for logging. Occasional wet samples were ot split but collected in a plastic bag then spear sampled. Some samples were collected as 2m or 4m composites. These were generally utside mineralised areas, with exception of early Kathleen Valley holes. Diamond Drilling (DD) core was sampled as 1m or geologically elected intervals. Core was sawn to provide half core samples for analysis. Core outside lode or mineralised zones is not always ampled. /ivien dataset includes 3kg grade control chip samples collected from geologically domained intervals across the ore drive face. All sampling by conventional gold industry drilling methods. More recent RC drilling have duplicate samples collected to test sample			

	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.					
Drilling techniques	Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face- sampling bit or other type, whether core is oriented and if so, by what method, etc).	Mt Magnet & WQS: Recent (+2009): +1,500 RC and DD holes drilled by Ramelius, with majority as RC using face sampling bit. Diamond drilling (DD) consists of NQ or HQ drill core. Most core not orientated. Morning Star 2016/17 drilling added 143 RC holes and 4 DD holes to deposit. <i>Old:</i> Exploration/resource database contains 74,000 holes, with around 23,000 RC and 5,000 DD. Not all hole types recorded. Older RC holes may have used cross-over subs. Some RAB, AC or VAC holes may be included in shallow resource estimates (i.e. surficial laterites). Underground drilling includes some smaller core sizes such as BQ and grade control sludge holes.Resource defined by 140 RC holes and 2 DD holes. RC used face sampling bit. 15 RC and 2 HQ diamond core holes were drilled by RMS in 2012. Core not orientated. RAB and AC holes exist but are not used for estimationDrillholes for resource comprise 70 RC and 158 DD holes. DD holes are NQ size and normally have RC precollars. ≈80% of drilling is post 2002. Infill, geotechnical and exploratory DD holes (3 x HQ3, 7 x NQ2) in 2013. Core orientated using EzyMark.Drillholes for resources comprise 854 RC and 56 Diamond holes. DD drillholes include HQ and NQ core sizes. Core was not orientated. The majority of drilling is post 2002. Not all holes exist but are not used for estimationDrillholes for resource comprise 70 RC and 158 DD holes. DD holes are NQ size and normally have RC precollars. ≈80% of drilling is post 2002. NG in 192-96. X strata drilled 73 RC and 30 DD holes in 2012. RMS 				
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. Whether a relationship exists	Core recovery has been logged for more recent drilling at Mt Magnet, Western Queen South, Kathleen Valley (post 2009) and Vivien (post 2002) and is generally excellent (≈100%). Minor wet intervals occur and can affect RC sample recovery. Chip sample recovery is generally not logged. Voids relating to historic UG workings are logged as open or filled stope voids Sample recovery at all deposits is generally excellent in weathered and fresh rocks. Recent drilling has utilised RC rigs of sufficient size and air capacity to maximise recovery and provide dry chip samples.				
leoovery	between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	No indication of sample bias is evident or has been established				
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	Recent drilling (+2009) has been logged for lithology, oxidation, alteration, veining and sulphides and all core is photographed and unsampled core retained. Chip-trays were retained for RC precollars and holes. Older drilling generally has a minimum of lithology logged for +90% of holes, with varying degrees of other information. All projects have a number of holes drilled and logged specifically for geotechnical purposes and the level of detail supports resource estimation, mining studies and metallurgical understanding. Underground face samples are collected from geologically domained intervals with accompanying face mapping and photography.				
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. The total length and percentage of	Drillhole logging of RC chips & DD core is qualitative on visual recordings of rock forming minerals & estimates of mineral abundance. Photography for recent (+2002) DD core exists for most deposits. The entire length of drillholes are geologically logged				
	the relevant intersections logged.					
Sub- sampling techniques	If core, whether cut or sawn and whether quarter, half or all core taken.	Core holes are sawn and sampled as half core. Some 1/4 core sampling has occurred as checks. Older drilling details incomplete but where available were similar. Old Mt Magnet core may have been hand split in some instances				

and sample preparation	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	Recent RC holes sub-sampled by rig mounted cone or riffle splitter. Majority of old drilling details unknown. Kathleen Valley (KV) 90's drilling collected in plastic bags and manually riffle split. Occasional wet samples spear sampled from plastic bags.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Sub-sample methods appear appropriate for deposit and sample type using accepted industry practices.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	Recent RC samples have field duplicate samples taken at regular intervals and compared. For older sampling reports exist referencing similar methods, however detailed information is incomplete or lacking for the majority of older data or exists in hardcopy formats which have not been systematically investigated.
	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.	All recent samples sub-sampled using accepted splitting techniques and have been delivered to laboratory for total preparation by crushing and pulverisation, before being sub-sampled for analysis. For recent Mt Magnet (+2009) samples pill standards have been frequently submitted testing sample preparation and homogenisation.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Sample sizes are generally appropriate for grain size and material types being sampled, although nuggety gold exists at Vivien and Kathleen Valley and smaller samples, i.e. half NQ core, may be less representative than larger RC samples.
	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	Recent assaying (+2002) has all been by commercial laboratories including ALS, SGS, KalAssay and Genalysis, typically by 40-50g Fire Assay to measure total contained gold. Earlier assaying includes a number of techniques and laboratories and details are often incomplete or unknown. 1990's assays at Kathleen Valley were typically by Aqua regia 25g, but mineralised zones re-assayed by 1kg BLARG (Multilab - Leonora). Older Mt Magnet assays frequently use PAL assay method conducted by site laboratories.
Quality of assay data and laboratory tests	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.	No field analyses of gold grades are completed. Quantitative analysis of the gold content and trace elements is undertaken in a controlled laboratory environment.
	Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.	Recent assaying (+2002) has had QAQC measures including certified reference standards, field duplicates, blank samples and umpire laboratory check samples carried out for all deposits by the various companies and have shown acceptable levels of accuracy and precision. For older data reports and tables exist, referencing similar QAQC methods, however detailed information is incomplete or lacking for the majority of old data. 1990's Kathleen Valley samples lack blanks and standards, but have frequent repeat assays using BLARG or SFA and a reasonable number of interlab check assays (Genalysis) carried out and compared.
	The verification of significant intersections by either independent or alternative company personnel	The Competent person has verified significant intersections of recent RMS drilling during the resource modelling process
Verification of	The use of twinned holes	In most projects holes were not twinned deliberately, but there are frequent holes that are effectively twinned by varied drill angles and hole density. All significant projects have holes drilled more recently as a check of older drilling data.
sampling and assaying	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Recent (+2002) data was captured using logging software (i.e. Field Marshall) and transferred to a central databases (i.e. SQL). Assay results are loaded electronically. All drillhole data is visually validated prior to resource modelling. For old data detailed information for verification of sampling and assaying is generally not available.
	Discuss any adjustment to assay data	No adjustment of assay data

Location of data points	Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. Specification of the grid system used. Quality and adequacy of topographic	Mt Magnet, WQS and Vivie recorded for all old holes, h were frequently planned to drilling, notably vertical RC Local grids have been used translated. Original survey Quality topographic surface	en were downhole surveyed owever at Mt Magnet and V a pegged survey grid and o drilling at Coogee and Kath d for resource modelling of coordinates are retained. es have been generated mo	using electronic camera or /ivien mine site surveyors v frilled on the grid to +/- 1-2r nleen Valley. If present, dow all deposits. Holes may hav pre recently from aerial phot	gyroscopic survey tools. C vere available and used. Ai n accuracy. Downhole surv whhole survey method frequ re been picked up in local g	
Data spacing and distribution	control. Data spacing for reporting of Exploration Results.	data has been adjusted to r The majority of Mt Magnet deposits are drilled on 25m based sections and frequently closed to 12.5m. On section spacing is generally 20-50m, with spacing generally closer near surface and wider at depth. Some deposits are drilled on 20m section spacings.	WQS resource holes on 25m sections with variable 10-50m on section spacing.	Majority of Coogee drilling is 25m section by 10m on section spacing, with some infill to 5m on lines in core high grade zones and/or selected 12.5m sections.	Vivien drilling pattern generally on 25m sections and 10-30m eastings.	KV drilling pattern generally on 25m sections and 10- 20m eastings and frequently closer.
	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. Whether sample compositing has	pits can be difficult. High de	ensity grade control dataset es are 1m with minor 2 or 4	s have been incorporated for the second s	or some deposits, i.e. Titar utside main mineralised are	iately under previously mined n, Milky Way, Stellar eas. Diamond: 1m samples or
Orientation of data in relation to geological structure	been applied. Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	geologically defined 0.3 - 1 Orientation of geological structure and deposit geometry is varied at Mt Magnet. Intercept angles are usually orthogonal or high-angle to stratigraphy and vary to suit individual deposits. Mineralisation is frequently complex with structurally controlled stratigraphic and cross- cutting sub-vertical trends. Drillhole dip angles are generally at a moderate to high angle to steeply dipping stratigraphy and mineralisation.	brillholes are orientated orthogonal to the geological and mineralised trend. Intercept angles are moderate to high angle. Typically as -60° east dipping holes drilling a steeply -80° west dipping lode zone.	Drillholes are orientated orthogonal to the geological and mineralised trend. Intercept angles are at a high angle and close to true width. Most holes are vertical drilling a shallow -30° west dipping lode zone. New RMS drilling is -60° to the east.	Drillholes are orientated orthogonal to the geological and mineralised trend. Intercept angles are at a moderate to high angle to the lode. Typically as -60° NW dipping holes drilling a - 75° SE dipping lode zone.	Drillholes are orientated orthogonal to the geological and mineralised trend. Intercept angles are at a high angle to the lode. Typically as -60° E dipping or vertical holes drilling a flat to shallow W dipping lode zone.

	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.	No bias considered present for all deposits. At Mt Magnet, potential for orientation bias for some individual holes exists, but no bias is believed evident at deposit scales.
Sample security	The measures taken to ensure sample security.	<i>Recent</i> : All samples have been collected by Ramelius geological staff. Samples are transported to the laboratory by commercial transport companies. The laboratory receipts received samples against the sample dispatch documents and issues a reconciliation report for every sample batch. <i>Old</i> : unknown
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	No external audits or reviews of sampling techniques and data collection have been undertaken.

Section 2	Reporting of Exploration Results					
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.	Mt Magnet resources and reserves fall within the contiguous Mt Magnet tenement group. Consists of 62 Mining Leases and 6 Prospecting leases 100% owned by Mt Magnet Gold Pty Ltd, a wholly owned subsidiary of Ramelius Resources Ltd.	WQS falls within M59/208 owned 100% by Mt Magnet Gold Pty Ltd	Coogee falls within M26/477 owned 100% Ramelius Resources Ltd	Vivien falls within M36/34 owned 100% Ramelius Resources Ltd	Kathleen Valley mineral resources fall within M36/375. Ramelius Resources Ltd retains gold rights to the tenement.
	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.	Major operating mine site. No known impediments.	Recently operating mine site. No known impediments.	Recently operating mine site. No known impediments.	Operating minesite as of May 2015.	Recently operating mine site. No known impediments.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Hill 50 Gold and Harmony Vivien - Asarco, Wiluna Mi Mines/Jubilee Mines and X	all deposits a large proportion of exploration work has been carried out by previous owners. i.e. Mt Magnet - WMC, Metana Minerals, ill 50 Gold and Harmony Gold. Western Queen South - WMC, Equigold, Harmony Gold. Coogee - Sovereign Gold, Harmony Gold. ivien - Asarco, Wiluna Mines, Australian Goldfields and Agnew Gold Mining Company. Kathleen Valley - Newmont, Sir Samuel lines/Jubilee Mines and Xstrata. Work includes geological interpretation, soil sampling, exploration and resource drilling, geophysical urveys, data collation and modelling.			

Geology	Deposit type, geological setting and style of mineralisation	Archaean gold mineralisation. Mineralisation is principally hosted within Banded Iron Formations (BIF) where gold is spatially associated with NE trending faults and associated with pyrrhotite or pyrite mineralisation. Additionally gold is commonly found in late stage felsic intrusives or structurally controlled zones which cross-cut stratigraphy on NE trend. Interpretation for Mt Magnet resources is based on a long-history of exploration, open-pit and underground mining. Numerous geological interpretations, pit fact maps and reports exist and almost all resources have been previously mined	Archaean gold mineralisation. The WQ, WQ central and WQ south zones are hosted by steeply dipping mafic - ultramafic greenstone stratigraphy. Mineralisation occurs within a steeply dipping, NNW trending foliated mafic lode/shear zone displaying silica veining and alteration, and disseminated pyrite. The lode sits adjacent to an ultramafic contact.	Coogee is hosted by felsic dacitic and rhyolitic units. Mineralisation is hosted within a shallow (-30°) west dipping lode/shear zone. Pit exposures show the lode zone to be associated with sericite-chlorite alteration, coarse pyrite-hematite mineralisation and foliation. It is interpreted as a Archaean structurally hosted lode gold deposit possibly occurring on a sedimentary layer within the volcanic sequence. High grade zones occur as SE plunging shoots within the shear.	Vivien is a typical orogenic structurally controlled Archaean gold lode system. It is a steeply dipping narrow quartz vein hosted within a dolerite/gabbro unit. It has strong geological continuity and is well understood from diamond drill core and historic mining and investigation. Mineralisation is related to a secondary phase of quartz veining with associated sulphide mineralisation. Vein width may relate to flexures in the lode and current interpretation is that several higher grade shoots plunge shallowly to the NE within the overall lode.	Kathleen Valley deposits are orogenic structurally controlled Archaean gold lode systems. The mineralisation is generally controlled by a W dipping N/S trending fault contact between the Jones Creek Conglomerate and underlying ultramafic units. Gold occurs in flat lying silica- biotite-pyrite altered lodes hosted by the Conglomerate just above the fault contact. The Mossbecker deposit, for example, extends over 350m strike and consists of 1 or 2 main sub-horizontal lodes.
Drill hole information	A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes; - easting and northing of the drill hole collar - elevation or RL (Reduced Level - elevation above sea level in metres) of the drill hole collar - dip and azimuth of the hole - down hole length and interception depth - hole length.	No detailed tabulation of dr drilling is too numerous to l				loration releases and historic

	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.	This report relates to resources and reserves based on existing drillhole datasets. No new exploration results are reported. All previous RMS significant new drilling results have been previously reported.
	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.	No exploration results are reported. Intercepts used in resource modelling are typically defined by cut-off and/or geological interpretation. Lower cut-off varies from 0.5 to 2 g/t based on deposit style and whether open pit or underground mining scenario.
Data aggregation methods	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.	Vivien is an example of a highly mixed grade population with all quartz vein material modelled as lode zone, but erratic gold grade values, frequently below nominal cut-off, are combined to generate a representative lode average.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalents, gold only
Relationship between	These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the	No exploration intercepts reported. Mineralisation widths are effectively constrained by interpretation and modelling process. All intercepts reported with consideration of interpreted mineralisation shape and geometry (when reported).
mineralisation widths and	drill hole angle is known, its nature should be reported	
intercept lengths	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').	
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.	Appropriate deposit views have been included in the body of this report

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 exploration intercepts 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.	All deposits have had some degree of additional sampling or testwork in regard to geotechnical investigation, geochemical characterisation, metallurgical testwork and density measurement, usually on specific selected diamond core holes. Other exploration data is not material to resource estimation.
	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	Further work will consist of selected infill or extensional drilling on material projects likely to convert to reserves and extend mine life. Examples Vivien depth extensions and a number of Mt Magnet open pit deposits. Further work mainly comprises of infill drilling and no diagrams are attached
Further work	areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	

Section 3	Estimation and Reporting of Mine	Estimation and Reporting of Mineral Resources					
Database integrity	Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes. Data validation procedures used.	Recent (+2002): Ramelius employs an SQL central database using Datashed information management software. User access to the database is regulated by specific user permissions. Only specific users can overwrite data. Data collection uses Field Marshall software with fixed templates and lookup tables for collecting field data electronically. A number of validation checks occur upon data upload to the main database. Recent data from Vivien (AGMC) & Kathleen Valley (Xstrata) has employed similar measures. Old: The majority of data has been inherited as SQL or access databases and integrity measures is largely unknown. Numerous old resource reports list previous validation exercises, however new checks have not been undertaken. Validation checks include electronic checks for missing assays and geology intervals, overlapping intervals, duplicate assays, EOH depth, hole collar elevations and assay value detection limits, negative and zero values. Some historic data, notably Kathleen Valley, has been checked against hardcopy logs and assay reports.					
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits	The Competent Person is a full time employee of Ramelius Resources Ltd and has made multiple site visits to all deposits. Visits confirmed understanding of deposits and datasets					

	If no site visits have been undertaken indicate why this is the case.	Multiple site visits made to	all deposits				
	Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.	Confidence in the geologic mining (except Kathleen Va campaigns.					
	Nature of the data used and of any assumptions made.	Numerous geological interpretations, pit or underground maps and reports exist and almost all resources have been previously mined to some degree. Drillhole geological logging and mapping data is primary information used to interpret geological and structural wireframes.					
Geological	The effect, if any, of alternative interpretations on Mineral Resource estimation.	No alternate interpretations have been considered necessary					
interpretation	The use of geology in guiding and controlling Mineral Resource estimation.	At Mt Magnet mineralisation is principally hosted within Banded Iron Formations (BIF) where gold is spatially associated with NE trending faults and associated with pyrrhotite and pyrite mineralisation. Additionally gold is commonly found in late stage felsic intrusives which cross-cut stratigraphy in NE trend. For resource modelling the geology has generally been interpreted first followed by a separate interpretation of mineralisation envelopes. At Coogee mineralisation is hosted within a shallow (-30°) west dipping silica-pyrite lode zone within felsic volcanic units. At Vivien mineralisation is hosted by a steeply dipping quartz vein within a dolerite host unit and strongly associated with sulphide mineralisation within the vein. At Kathleen Valley mineralisation sits in sub-horizontal silica-biotite-pyrite altered lodes within a granitic conglomerate unit just above shallow dipping fault contact with underlying ultramafics.					
	The factors affecting continuity both of grade and geology.	Continuity is affected by geological extents and mineralisation as currently defined by drilling					
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.	Numerous variations. Examples:. Titan felsic hosted stockwork deposit is wide zone 120m long, 70m wide and 70m high. Occurs 70-160m below surface. Minimum width in resource interpretations generally 3-4m, example Golden Stream narrow sub-vertical BIF hosted resource over 270m strike length, drilled to 90m down-dip.	core zone plunging - 40° to S. Occurs from 40 to 300m below surface.	Shallow dipping (-30°) tabular lode, 3-6m thick. Strike extent of 230m, drilled down dip extent up to 130m. Occurs 25-100m below surface. Smaller flat lying supergene zone, 2-5m thick sits above lode at base of complete oxidation (25- 30m depth).	Narrow vein/lode style. Strikes NNE and dips at 70° to ESE. Average width approximately 2.7m, ranging between 1- 7m. Established strike length of 600m and down dip extent of 400m.	The Mossbecker deposit extends over 350m strike (to N).Gold mineralisation occurs in shallow dipping lodes 2- 10m thick and 40-80m wide and plunges around 15° to the southwest. Lodes occur from 0-100m depth. The other deposits are of similar dimensions and geometry.	

Estimation and modelling techniques	The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.	Recent: Core deposits have been remodelled in 2012-2016. 3D mineralisation wireframes interpreted in Micromine. Often multiple domains were generated to reflect geological host, mineralisation style or local spatial trends and hard bound assay information at a nominal 0.7g/t (open-pit) cutoff. Estimation by anisotropic Ordinary Kriging or ID methods using 1m composited assay data in parent cells only. Topcuts applied by domain determined by review of population stats. All resources except Water Tank Hill have previous versions to compare. Models were validated visually against assay data. Old: A number of resources are based on previous resource estimates and models generated by Harmony Gold using Surpac software. Reports exist for all models to varying degrees of detail. All deposits have previous	Three dimensional mineralisation wireframes interpreted in Micromine. One primary and 2 minor lode domains were generated to hard bound assay information at a nominal 1g/t cutoff. Estimation by anisotropic Ordinary Kriging and comparison ID ³ methods using 1m composited assay data in parent cells only. Appropriate topcuts applied by domain determined by population stats.	Three dimensional mineralisation wireframes interpreted in Micromine software. One primary and one supergene domain were generated to hard bound assay information at a nominal 1g/t cutoff. Estimation by anisotropic ID ³ method using 1m composited topcut assay data in parent cells only.	Three dimensional mineralisation wireframe interpreted in Micromine. Single lode domain interpreted based on quartz vein position, with minimum 1.5m downhole width. Grade estimation by Ordinary Kriging method using 1m composited topcut assay data to parent cells only. Anisotropic search ellipse using strike and dip and with NE plunge used reflecting previous interpretations and variography.	Three dimensional mineralisation wireframes interpreted in Micromine. Lode domains interpreted based on 0.5g/t cutoff. Hard bounded grade estimation by Inverse Distance & Ordinary Kriging methods using 1m composited topcut assay data to parent cells only. Anisotropic search ellipse based on domain variography.
	The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	All deposits have previous (Galaxy), WQS, Coogee, K	resource estimates which athleen Valley and Vivien	have been used as checks has also occurred and allo	against current estimates wed comparison of resour	. Mining by RMS at Mt Magnet ce estimates to production.
	The assumptions made regarding recovery of by-products.	No by-products				
	Estimation of deleterious elements or other non-grade variables of economic	No non-gold elements of si	gnificance. Low sulphur or	sulphur directly related to	ore grade material.	

	significance (eg sulphur for acid mine drainage characterisation).					
	In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.	Galaxy block size 4m(X) x 10m(Y) x 5m(Z) with subcells. Parent cell estimation only. Other deposits similar sizes. Anisotropic search - maximum range 120m	Block size 4m(X) x 10m(Y) x 5m(Z) with subcells. Parent cell estimation only. Anisotropic search - maximum range 100m	Block size 5m(X) x 12.5m(Y) x 2.5m(Z) with subcells. Parent cell estimation only. Anisotropic search - maximum range 50m	Block size 5m(X) x 12.5m(Y) x 10m(Z) with subcells. Parent cell estimation only. Anisotropic search - maximum range 65m	Block size 5m(X) x 10m(Y) x 5m(Z) with subcells. Parent cell estimation only. Anisotropic search - maximum range 50m
	Any assumptions behind modelling of selective mining units.	No assumptions made in r	nodelling SMU at resource	stage		
	Any assumptions about correlation between variables.	Grades assumed to correla directions	ate along mineralised trend	ds/wireframes and estima	ted using anisotropic search	nes matching correlation
	Description of how the geological interpretation was used to control the resource estimates.	Mineralisation wireframes			·	
	Discussion of basis for using or not using grade cutting or capping. All gold deposits with lognormal grade distributions. Top cutting used in all estimates as per industry practice, generally in percentile range.				ice, generally in 97.5 to 99.5	
	The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.	swath grade plots		against drillhole grades, v	olume comparisons, global	grade statistic comparison and
Moisture	Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content	All tonnages are estimated	l on a dry basis			
Cut-off parameters	The basis of the adopted cut-off grade(s) or quality parameters applied.	method. Mt Magnet open- are nominally above 2-3g/ 0.5g/t envelope. This cut-c	bit resources are generally t. Coogee & Blackmans re ff encapsulates the minera	reported above 0.7 to 0.9 ported above 1g/t. Kathlee alisation effectively and typ	en Valley mineralisation enc pically discriminates econon	Vivien underground resources compassed and reported above nic material from waste
Mining factors	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	minimum mineralisation windeposits, including Water	dths and economic cut-off Tank Hill, Vivien and WQS	s based on current contra are currently modelled w	open pit deposits. Factors i ct mining equipment and mi th consideration of extractic sub-level cave type method	illing facilities. Mt Magnet UG on by conventional sub-level

	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 factors	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.	Metallurgical treatment is based on current ore production or metallurgical testwork. Milling is at Ramelius' Checkers mill (Mt Magnet), a 1.9 Mtpa CIL gold plant. Mt Magnet deposits are currently processed with recoveries around 92%. Coogee and Kathleen Valley deposits were recently processed with recovery of 97%. Vivien has processing recoveries of 95-97%. Milky Way metallurgical testwork indicates recovery of 91-92%.
Environmental factors	Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	All sites are now operating or recently operating mine sites and compliant with all legal and regulatory requirements. No significant environmental issues are currently known or envisaged.
Bulk density	Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry,	All deposits have a number of density measurements based on core and some mined ore samples using water immersion method. Calculated density is dry. The number of measurements is variable but there are enough to give representative average density values to use in ore and waste tonnage calculations.

	u c cu	
	the frequency of the	
	measurements, the nature, size	
	and representativeness of the	
	samples.	
	The bulk density for bulk material	Density measurements are available for fresh core, but fewer measurements exist for oxidised or transitional materials. Oxidised
	must have been measured by	densities used can include assumed values based on previous mining and CP experience.
	methods that adequately account	
	for void spaces (vugs, porosity,	
	etc), moisture and differences	
	between rock and alteration	
	zones within the deposit.	
	Discuss assumptions for bulk	All resources have dry densities assigned by geologically interpreted weathering horizon, plus rocktype where appropriate. At Vivien a
	density estimates used in the	variable density calculation is applied to fresh quartz lode based on ore grade. This fits with measured densities and the correlation
	evaluation process of the different	between massive sulphide content with gold grade.
	materials.	
	Discuss assumptions for bulk	It is assumed the deposit densities can be represented by the average values determined or estimated by rocktype and oxidation type.
	density estimates used in the	
	evaluation process of the different	
	materials.	
	The basis for the classification of	Mineral Resources have been classified into Measured, Indicated and Inferred categories based on drillhole spacing, geological
	the Mineral Resources into	confidence, information quality and grade continuity. Only a small proportion of resources have been classed as Measured and generally
	varying confidence categories.	occur at a areas of high drilling density at the base of previously mined pits.
	Whether appropriate account has	Appropriate account has been taken of all factors
	been taken of all relevant factors	
	(ie relative confidence in	
Classification	tonnage/grade estimations,	
-	reliability of input data, confidence	
	in continuity of geology and metal	
	values, quality, quantity and	
	distribution of the data).	
	Whether the result appropriately	The classification reflects the Competent Person's view
	reflects the Competent Person's	
	view of the deposit.	
Audits or	The results of any audits or	The Galaxy, Milky Way, WQS, Coogee, Vivien and KV mineral resource estimates have been reviewed by an external geological
reviews	reviews of Mineral Resource	consultant. While a number of minor changes and enhancements were recommended, no significant flaws to the resource models were
	estimates.	found. Historic drilling data information quality was not reviewed. Other Mt Magnet resources have not been externally reviewed.
	Where appropriate a statement of	All deposits have a number of previous resource estimates for comparison. Much of the drilling data however is historic and methodology
	the relative accuracy and	detail and quality assurance information is not always complete or in hardcopy records that have not been systematically investigated.
	confidence level in the Mineral	Hence the bulk of resources have been assigned an indicated or inferred status. At the Mt Magnet deposits: Perseverance, Morning Star,
	Resource estimate using an	St George and Vivien, some underground mining voids exist and surrounding remnant resources if existing are given a maximum of
Discussion of	approach or procedure deemed	Indicated status. Confidence levels are reflected by the classifications applied and reported.
relative	appropriate by the Competent	
accuracy	Person. For example, the	
/confidence	application of statistical or	
	geostatistical procedures to	
	quantify the relative accuracy of the resource within stated	
1	confidence limits, or, if such an	
	approach is not deemed	

appropriate, a qualitative discussion of the factors that could affect the relative accura and confidence of the estimate	
The statement should specify whether it relates to global or local estimates, and, if local, st 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.	All deposits have had some degree of recent or previous mining with production records available for comparison. Galaxy resource estimates were modified in 2012-13 to better match production data.

Section 4	Estimation and Reporting of Ore	Reserves						
Mineral Resource estimate for conversion to	Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.	Mt Magnet ore reserves are based on revised resource estimates generated by Ramelius	WQS – mined and Ore Reserve depleted	Coogee – mined and Ore Reserve depleted	Vivien ore reserve is based on the Ramelius 2017 Mineral Resource model	Kathleen Valley - mined and Ore Reserve depleted		
Ore Reserves	Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.	Mineral Resources are reported inclusive of Ore Reserves						
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits. If no site visits have been undertaken indicate why this is	The Competent Person is understanding of reserve v		nelius Resources Ltd and	has made multiple site. Vis	sits have confirmed		
Study status	the case. The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves	All reserves are based on years.	budgeted production, life c	f mine planning, feasibility	and pre-feasibility studies	conducted with the last 1 to 5		

	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.	Ore Reserves have been generated after studies appropriate to the deposit type, mining method and scale and are considered to be at least Pre-Feasibility level. Mining studies have been carried out both internally and using external consultants with appropriate geotechnical, hydrological, equipment, metallurgical and mining method information. Costs have been used from current budgeted mining, milling and administration costs. Environmental, social and other factors have been considered internally.
Cut-off Parameters	The basis of the cut-off grade(s) or quality parameters applied	Mt Magnet - open pit cut-off grade of 0.7 g/t, Milky Way open pit 0.65g/t, selective UG cut-off 3.5g/t. Vivien UG cut-off 3.9g/t.
	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).	For Mt Magnet resources mineral resource models have been regularised to a parent block size to reflect likely SMU block size and mining resolution prior to optimisation and design work to generate ore reserves. The Milky Way deposit used no sub-cells. For Vivien the resource model is used with appropriate planned development and stoping planned and unplanned dilutions.
	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.	Appropriate mining methods are used. Open pit mining methods for Mt Magnet using current design, mining equipment and cost parameters. Selective open stoping underground methods are used for Mt Magnet underground reserves, except for Saturn UG which assumes bulk UG mining methods. For Vivien a conventional, narrow, top-down, long hole stoping method is used.
Mining factors or assumptions	The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.	Geotechnical parameters and grade control are established at Mt Magnet pits from past and current mining practices. New geotechnical diamond holes were drilled at Milky Way and pit design parameters recommended by a geotechnical consultant. At Vivien a geotechnical study based on specific core holes has been carried out and used in the mine design. Grade control will be by level development face sampling of the narrow lode.
	The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).	For Mt Magnet Galaxy resources mineral resource models have been regularised to a parent block size to reflect likely SMU block size and mining resolution prior to optimisation and design work to generate ore reserves. For Vivien the resource model is used with appropriate planned development and stoping planned and unplanned dilutions.
	The mining dilution factors used.	At Mt Magnet open pits dilution of 5% was used. Milky Way uses 2% grade dilution. At Vivien 20% dilution (0 g/t) is used if stopes between 1.5 and 2m and 10% dilution if wider than 2m.
	The mining recovery factors used.	At Mt Magnet open pits mining recovery of 98% was used. Milky Way uses 95% mining recovery. At Vivien mining recovery was 95% with 5% left as island rib pillars.
	Any minimum mining widths used.	At Mt Magnet a minimum width of around 4-5m is generally assumed. At Vivien, minimum stope width of 1.5m was assumed with 20% dilution (0 g/t) and 10% dilution if wider than 2m.
	The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.	Inferred mineral resources for Galaxy pits have been tested in optimisations, but are not included in Ore Reserves or final pit economic evaluations. For Vivien the mining study includes 7% of gold production sourced from Inferred resources. These resources are immediately adjacent or below reserve mined areas. Recent mining at Vivien is showing significant additions compared to the Resource/Reserve, however a revised Resource has not yet been generated. The project viability is not dependent on the inferred resource.

	The metallurgical process proposed and the appropriateness of that process to	Milling will use Checkers mill at Mt Magnet, a conventional gravity recovery and CIL processing circuit. Significant milling information, historical and current, is available for the Mt Magnet deposits.
	the style of mineralisation. Whether the metallurgical process is well-tested technology or novel in nature.	Process is proven technology
Metallurgical factors or assumptions	The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied Any assumptions or allowances	Significant milling information, historical and current, is available for the Mt Magnet deposits with long term recovery around 92%. A number of metallurgical tests, including gravity recovery, leach recovery, bond work index and concentrate mineralogy studies, have been carried out for the Vivien deposit from representative core samples and show the deposit is free milling, has high gravity recovery (+50%) and high overall recovery (95%). New recovery testwork was undertaken on Milky Way RC drill samples.
	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	No bulk samples or bulk sample requirement
	For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?	No specifications, gold only
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.	Environmental studies including waste rock characterisation studies from drill samples, flora and fauna and hydrological surveys have been carried out for all projects. Mining Approvals are currently granted for the Mt Magnet Galaxy pits and four proposed satellite pits, Cosmos pits & for the Vivien underground project. This included waste dump designs, tailings storage and clearing permits.
Infrastructure	The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.	Current site infrastructure is in place and suitable for current and planned mining and milling operations. At Mt Magnet it includes accommodation camp, Checkers mill and tailings dams, offices, magazines, roads and gas power station. At Vivien infrastructure requirements are relatively small, comprising offices, workshop, generators, underground fan, dewatering pumps, pipeline and magazine. Site access roads largely exist. Accommodation will utilise existing camps at Mt Magnet and Leinster.
Costs	The derivation of, or assumptions made, regarding projected capital costs in the study	Capital costs based on current costs and budget model or recent Feasibility studies.

	The methodology used to estimate operating costs.	Operating costs based on current costs and budget models. Additional costs i.e. void backfilling added where required
	Allowances made for the content of deleterious elements.	No deleterious elements present
	The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co- products	Using recent average gold price
	The source of exchange rates used in the study.	Cost models use Australian dollar
	Derivation of transportation charges.	Vivien ore haulage cost based on contracted rates
	The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.	Treatment costs based on known current milling costs. No penalties or specifications
	The allowances made for royalties payable, both Government and private.	Royalty costs are included in budget models, financial evaluations and feasibility models
Revenue factors	The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc. T he derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products	Mt Magnet and Kathleen Valley reserves use \$A1,600/oz. Water Tank Hill used \$A1,400/oz.
	The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.	Doré is sold direct to the Perth Mint at spot price
Market assessment	A customer and competitor analysis along with the identification of likely market windows for the product.	Market window unlikely to change
	Price and volume forecasts and the basis for these forecasts	Price is likely to go up, down or remain same
	For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.	Not industrial mineral

	The inputs to the economic	Discounted cash flows were carried out to determine relative NPV's, using a 5% annual discount rate
	analysis to produce the net	
	present value (NPV) in the study,	
	the source and confidence of	
Faanamia	these economic inputs including	
Economic	estimated inflation, discount rate,	
	etc.	
	NPV ranges and sensitivity to	Sensitivity to gold price, grade and costs were also evaluated
	variations in the significant	
	assumptions and inputs	
	The status of agreements with	Agreements are in place with stakeholders including traditional land owner claimants, pastoralists and the local Shires. Where agreement
Social	key stakeholders and matters	has not been reached the correct determination process has been followed to enable mining to occur
	leading to social licence to	
	operate. To the extent relevant, the impact	No material risks or impacts are identified
	of the following on the project	No material risks of impacts are identified
	and/or on the estimation and	
	classification of the Ore	
	Reserves:	
	Any identified material naturally	
	occurring risks.	
-	The status of material legal	
	agreements and marketing	
	arrangements.	
	The status of governmental	
	agreements and approvals critical	
Other	to the viability of the project, such	
Other	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.	
	The basis for the classification of	Reserves have been classified according to Resource classification
	the Ore Reserves into varying	
	confidence categories	
0	Whether the result appropriately	They reflect the Competent Person's view
Classification	reflects the Competent Person's	
	view of the deposit	
	The proportion of Probable Ore	No probable reserves are derived from measured resources
	Reserves that have been derived	

	from Measured Mineral Resources (if any)	
Audits or reviews	The results of any audits or reviews of Ore Reserve estimates	Vivien Ore Reserves have been reviewed by an independent mining consultant as part of the Bankable Feasibility process. No fatal flaws were found. No other reserves have been reviewed.
Discussion of relative accuracy /confidence	Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate. The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used Accuracy and confidence discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage. It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	Confidence is in line with gold industry standards and the companies aim to provide effective prediction for current and future mining operations. No statistical guantification of confidence limits has been generated. Estimates are global by deposit. The Reserve is most sensitive to a) resource grade prediction, and b) gold price.