BEADELL
ASX:BDR

ANNUAL RESOURCE AND RESERVE STATEMENT UPDATE

Beadell Resources Limited (**Beadell** or **Company**) announces a depletion only Annual Ore Reserve and Mineral Resource update as at 30 June 2018, produced in accordance with the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code).

Due to budget constraints (resulting from the Tucano Plant Upgrade and change in mining contractor) and changes in management earlier in the year, Beadell has undertaken insufficient drilling to add to its mineral resources and ore reserves estimates in 2018. This update is a re-statement of the Annual Ore Reserve and Mineral Resource statement as at 30 June 2017, after depletion by mining and processing activities from 1 July 2017 through to 30 June 2018. Initial limited drilling has indicated promising results, but the Company is not able to report exploration results until further drilling and analysis has occurred. Beadell expects to be in a position to undertake this further work throughout 2019 upon completion of the announced transaction with Great Panther Silver Limited (Great Panther) (ASX Announcement 24 September 2018). Beadell plans infill and step out drilling to convert inferred resources to measured and indicated resources and to further define the four discoveries (ASX Announcement 18 September 2018) along the Tucano mine trend. The highest priority step-out target will be the Neo lodes as they occur in the current Tap AB reserve pit outline in an area classified as waste. The Company will update the market on the progress of this drilling once underway.

Dr Nicole Adshead-Bell, CEO & Managing Director of Beadell, commented: "We look forward to demonstrating the potential of the Tucano mine trend upon completion of the transaction with Great Panther. This transaction will result in the creation of a growth-oriented precious metals producer with the balance sheet to prove the potential of the Tucano mine trend via investment in infill and step-out drilling to increase Tucano's reserves, life of mine and net present value, delivering increased value per share to both Beadell and Great Panther shareholders".

TUCANO ORE RESERVES

Total Ore Reserves as at 30 June 2018 were 21.67 million tonnes @ 1.81 g/t gold for 1.26 million ounces compared to 25.06 million tonnes @ 1.83 g/t gold for 1.47 million ounces as at 30 June 2017. This is a decrease of 145,000 ounces due to depletion over the second half of 2017 and first half of 2018 and 67,000 ounces due to a revision of the Urucum Underground Reserve.

Total Open Pit Reserves are 16.52 million tonnes @ 1.74 g/t gold for 924,000 ounces compared to 18.45 million tonnes @ 1.77 g/t gold for 1.05 million ounces as at 30 June 2017.

Total Stockpile Reserves are 2.77 million tonnes @ 0.66 g/t gold for 59,000 ounces compared to 3.64 million tonnes @ 0.66 g/t gold for 77,000 ounces as at 30 June 2017.

Total Underground Reserves as at 30 June 2018 were 2.38 million tonnes @ 3.64 g/t gold for 278,000 ounces compared to 2.97 million tonnes @ 3.61 g/t gold for 345,000 ounces as at 30 June 2017. This is a decrease of 67,000 ounces resulting from a revision of the Urucum Underground reserve by AMC. Please see page 4 of this announcement for further clarification.

MINERAL RESOURCES

The Company's Measured, Indicated and Inferred Mineral Resources as at 30 June 2018 were 59.24 million tonnes @ 1.86 g/t gold for 3.54 million ounces. This is a decrease of 187,000 ounces (5%) after allowing for ounces mined during the second half of 2017 and first half of 2018.

Total Open Pit Resources are 32.09 million tonnes @ 1.62 g/t gold for 1.67 million ounces compared to 35.43 million tonnes @ 1.61 g/t gold for 1.84 million ounces as at 30 June 2017.

Total Stockpile Resources are 4.26 million tonnes @ 0.58 g/t gold for 79,000 ounces compared to 5.23 million tonnes @ 0.59 g/t gold for 99,000 ounces as at 30 June 2017.

Total Underground Resources at Urucum and Tap AB are 16.43 million tonnes @ 2.76 g/t gold for 1.46 million ounces.

TABLE 1: ORE RESERVE

As at 30 June 2018

BRAZIL	PROVEN			PROBABLE			TOTAL ORE RESERVE			CUT-OFF
	Tonnes ('000)	Grade g/t	Ounces ('000)	Tonnes ('000)	Grade g/t	Ounces ('000)	Tonnes ('000)	Grade g/t	Ounces ('000)	g/t
Urucum Open Pit Oxide	177	1.15	7	122	1.14	4	299	1.14	11	0.7
Urucum East Open Pit Oxide	0	0.00	0	151	1.71	8	151	1.71	8	0.7
Tap AB Open Pit Oxide	1,450	2.20	102	1,723	1.74	97	3,173	1.95	199	0.6
Tap C Open Pit Oxide	206	0.95	6	168	0.85	5	374	0.9	11	0.6
Total Oxide	**1,832**	**1.96**	**115**	**2,165**	**1.64**	**114**	**3,998**	**1.78**	**229**	
Urucum Open Pit Primary	4,311	1.63	227	5,504	1.76	311	9,815	1.7	537	0.8
Urucum East Open Pit Primary	0	0.00	0	16	1.50	1	16	1.50	1	0.9
Tap AB Open Pit Primary	952	2.14	66	1,094	1.77	62	2,047	1.95	128	0.8
Tap C Open Pit Primary	248	1.34	11	401	1.40	18	648	1.38	29	0.8
Total Primary	**5,511**	**1.71**	**303**	**7,015**	**1.74**	**392**	**12,525**	**1.72**	**695**	
Urucum Open Pit Total	4,488	1.62	233	5,626	1.74	315	10,114	1.69	548	
Urucum East Open Pit Total	0	0.00	0	167	1.69	9	167	1.69	9	
Tap AB Open Pit Total	2,402	2.18	168	2,818	1.76	159	5,220	1.95	327	
Tap C Open Pit Total	453	1.16	17	569	1.24	23	1,022	1.2	40	
Total Oxide and Primary	**7,343**	**1.77**	**418**	**9,180**	**1.71**	**506**	**16,523**	**1.74**	**924**	
Open Pit Stockpile	1,994	0.66	42	0	0.00	0	1,994	0.66	42	0.5
Spent Ore Stockpile	307	0.61	6	0	0.00	0	307	0.61	6	0.5
ROM Expansion Stockpile	470	0.70	11	0	0.00	0	470	0.70	11	0.5
Total Stockpiles	**2,771**	**0.66**	**59**	**0**	**0.00**	**0**	**2,771**	**0.66**	**59**	**0.5**
TOTAL TUCANO OPEN PIT & STOCKPILES	**10,115**	**1.47**	**477**	**9,180**	**1.71**	**506**	**19,294**	**1.58**	**983**	
Urucum Underground Primary Total*	0	0.00	0	2378	3.64	278	2378	3.64	278	
Urucum Underground Primary Total*	**0**	**0.00**	**0**	**2378**	**3.64**	**278**	**2378**	**3.64**	**278**	
TOTAL BRAZIL	**10,115**	**1.47**	**477**	**11,558**	**2.11**	**784**	**21,672**	**1.81**	**1,261**	

*In order to align with NI43-101 reporting requirements, the Urucum Underground reserves are being reported here without the inclusion of the 67koz of inferred material. Please see page 4 of this announcement for further clarification.

See Appendix 1 for JORC Code section criteria

TABLE 2: MINERAL RESOURCE

As at 30 June 2018

BRAZIL	MEASURED RESOURCES			INDICATED RESOURCES			INFERRED RESOURCES			TOTAL RESOURCES			CUT-OFF
	Tonnes ('000)	Grade g/t	Ounces ('000)	Tonnes ('000)	Grade g/t	Ounces ('000)	Tonnes ('000)	Grade g/t	Ounces ('000)	Tonnes ('000)	Grade g/t	Ounces ('000)	g/t
Urucum Open Pit Oxide	360	1.07	12	278	1.03	9	69	0.96	2	707	1.04	24	0.5
Urucum East Open Pit Oxide	0	0	0	200	1.88	12	9	1.58	0	209	1.87	13	0.5
Tap AB Open Pit Oxide	1,854	2.23	133	3,376	1.79	195	663	1.26	27	5,893	1.87	354	0.5
Tap C Open Pit Oxide	370	0.91	11	284	0.85	8	88	0.71	2	742	0.86	21	0.5
Duckhead Open Pit Oxide	89	4.24	12	140	1.74	8	60	1.56	3	289	2.47	23	1.0
Total Oxide	**2,674**	**1.95**	**168**	**4,277**	**1.68**	**232**	**889**	**1.21**	**35**	**7,840**	**1.72**	**434**	
Urucum Open Pit Primary	5,279	1.54	262	7,131	1.72	393	397	1.56	20	12,808	1.64	675	0.5
Urucum East Open Pit Fresh	0	0	0	211	1.45	10	84	0.94	3	295	1.30	12	0.5
Tap AB Open Pit Primary	1,918	1.80	111	3,858	1.61	199	1,257	1.29	52	7,033	1.60	362	0.5
Tap C Open Pit Primary	468	1.22	18	1,966	1.22	77	1,044	1.35	45	3,478	1.26	141	0.5
Duckhead Surface Primary	115	2.28	8	264	2.26	19	262	1.81	15	641	2.08	43	1.0
Total Pit Primary	**7,781**	**1.6**	**400**	**13,429**	**1.62**	**699**	**3,045**	**1.38**	**135**	**24,255**	**1.58**	**1,234**	
Urucum Open Pit Total	5,639	1.51	275	7,409	1.69	402	466	1.47	22	13,515	1.61	699	0.5
Urucum East Open Pit Total	0	0	0	411	1.66	22	92	1.00	3	503	1.54	25	0.5
Tap AB Open Pit Total	3,772	2.01	243	7,233	1.69	394	1,921	1.28	79	12,926	1.72	717	0.5
Tap C Open Pit Total	838	1.08	29	2,250	1.17	85	1,132	1.30	47	4,220	1.19	161	0.5
Duckhead Open Pit Total	205	3.14	21	404	2.08	27	322	1.76	18	930	2.20	66	1.0
Total Oxide and Primary Open Pit	**10,455**	**1.69**	**568**	**17,707**	**1.63**	**930**	**3,933**	**1.34**	**170**	**32,094**	**1.62**	**1,668**	
Open Pit Stockpile	1,994	0.66	42	0	0	0	0	0	0	1,994	0.66	42	0.5
Spent Ore Stockpile	307	0.61	6	0	0	0	0	0	0	307	0.61	6	0.5
ROM Expansion Stockpile	470	0.70	11	0	0	0	0	0	0	470	0.70	11	0.5
Marginal Ore Stockpiles	1,491	0.43	21	0	0	0	0	0	0	1,491	0.43	21	0.3
Total Stockpiles	**4,263**	**0.58**	**79**	**0**	**0**	**0**	**0**	**0**	**0**	**4,263**	**0.58**	**79**	
Total Open Pit & Stockpiles	**14,717**	**1.37**	**647**	**17,707**	**1.63**	**930**	**3,933**	**1.34**	**170**	**36,357**	**1.49**	**1,747**	
Tap AB Underground Primary*	22	1.49	1	1,025	2.30	76	3,653	3.19	375	4,700	2.99	452	1.2
Urucum Underground Primary	260	4.06	34	2,634	4.24	359	8,839	2.15	611	11,733	2.66	1,004	1.6
TOTAL UNDERGROUND	**282**	**3.86**	**35**	**3,659**	**3.70**	**435**	**12,492**	**2.45**	**986**	**16,433**	**2.76**	**1,456**	
Tartaruga	**0**	**0.00**	**0**	**0**	**0.00**	**0**	**6,451**	**1.63**	**337**	**6,451**	**1.63**	**337**	**0.5**
TOTAL BRAZIL	**14,999**	**1.41**	**682**	**21,365**	**1.99**	**1,365**	**22,877**	**2.03**	**1,493**	**59,241**	**1.86**	**3,540**	

* The June 2018 Tap AB UG Resource includes 173,000t @ 4.68g/t of Inferred Oxide in the Inferred Fresh Category

CLARIFICATION REGARDING URUCUM UNDERGROUND RESERVES

Beadell also provides clarification to the difference in the Urucum Underground Reserves outlined in ASX Release 31 March 2016 'Positive Urucum Underground Pre-Feasibility Study' and in all news announcements related to Tucano resource and reserves since that date; and those quoted by Great Panther's 6 November 2018 news release titled "Announces Filing of NI 43-101 Technical Report for the Tucano Gold Mine".

The Great Panther Silver release noted corrections to Beadell's previously disclosed Reserves and Resources, stating "*the Proven and Probable Mineral Reserves for Urucum Underground reported in the September 23, 2018 news release (dated September 24 in Australia) incorrectly stated the tonnage and grade, resulting in an overstatement of approximately 67 k ounces of contained gold*".

This statement was clarified on page viii of NI 43-101 report filed on SEDAR: "*The JORC reserve released on 19 December 2017 to the ASX ("Interim Mineral Resource and Ore Reserve Update as at 30 June 2017") stated the total Urucum Underground Reserve was 2,972 kt at 3.61 g/t Au for 345 koz Au. This reserve was reported by AMC inclusive of Inferred Resource blocks captured inside the stope designs that were optimized on Measured and Indicated Resources in the 2016 PFS. The Inferred Resources falling within the stope designs were removed from the estimations and Urucum Underground Reserves reported in accordance with NI 43-101 requirements by AMC in 2018 and has been quoted in the Table 1.3*."

The difference in the reserve ounces (67 koz) quoted in the PFS undertaken by AMC in 2016 and prepared under JORC Code 2012 requirements; and the numbers quoted by AMC prepared under NI 43-101 requirements is the result of the different regulatory reporting requirements. AMC have provided the following statement:

'AMC acknowledges the existence of two different Ore (Mineral) Reserves statements for the proposed Underground Urucum mine at the Tucano Gold Mine Property in Brazil. They were reported under different regulatory systems; the JORC Code, and NI 43-101. The Beadell 19 December 2017 ASX Ore Reserve, reported in accordance with the JORC Code, included some Inferred Resources in the stated Ore Reserve. AMC notes that the Inferred Resources reported were not the determining factor in the project economics, and the project was viable even without the Inferred Resources being included. The JORC Code urges caution if using Inferred Resources in studies. Part of the reason for inclusion of Inferred Resource was the distribution of Inferred Resources, that made stope design difficult without the inclusion of some Inferred Resources.

The revised Ore Reserve estimate (as at 30 June 2018) is consistent with the NI 43-101 Technical Report and does not include any Inferred Resources due to specific exclusion of Inferred from the Mineral Reserve process in the CIM Definition Standards.

Both estimates are justifiable under the differing requirements of the reporting standards under which they were produced.'

ABOUT BEADELL

Beadell operates the Tucano Gold Mine in mining-friendly Amapá State, northern Brazil. Tucano occurs within 2,500 km2 of 100%-owned, highly prospective and under-explored 'Birimian age' greenstone terrane. The recently upgraded Tucano plant can process approximately 3.5 million tonnes per year of oxide-sulphide ore feed in a wide range of blends. There is a pregnant pipeline of high potential in-mine and near-mine prospects, anchored by several high-grade gold drill intervals over several metres, that are the near-term opportunity to improve the head grade and prolong the mine life.

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COMPETENT PERSONS STATEMENT

The information in this report relating to Open Pit Ore Reserves is based on information compiled by Mr Felipe Fernandes who is a member of the Australasian Institute of Mining and Metallurgy and who has sufficient experience which is relevant to the styles of mineralisation and type of deposit under consideration and to the activity which 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'. Mr Fernandes is a full-time employee of the Beadell Brasil Ltd 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 relating to Underground Ore Reserves is based on information compiled by Mr Gary Methven who is a member of the Australasian Institute of Mining and Metallurgy and who has sufficient experience which is relevant to the styles of mineralisation and type of deposit under consideration and to the activity which 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'. Mr Methven is a consultant and a full-time employee of AMC Consultants (Canada) Ltd. 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 relating to Mineral Resources has been approved by Mr Paul Tan who is a member of the Australasian Institute of Mining and Metallurgy and has sufficient experience which is relevant to the various styles of mineralisation under consideration to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Tan is a full-time employee of the Beadell Brasil Ltda 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 relating to Urucum Underground, Tap AB Underground, Tap C open pit and Duckhead Open pit Mineral Resources is based on information compiled by Mr Marcelo Batelochi who is a member of the Australasian Institute of Mining and Metallurgy and has sufficient exploration experience which is relevant to the various styles of mineralisation under consideration to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Batelochi is a consultant 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 relating to Urucum open pit and Tap AB open pit Mineral Resources is based on information compiled by Mr Brian Wolfe who is a member of the Australian Institute of Geoscientists and has sufficient experience which is relevant to the various styles of mineralisation under consideration to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration

Results, Mineral Resources and Ore Reserves'. Mr Wolfe is a consultant 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

These materials include forward looking statements. Forward looking statements inherently involve subjective judgement and analysis and are subject to significant uncertainties, risks and contingencies, many of which are outside the control of, and may be unknown to, the company.

Actual results and developments may vary materially from that expressed in these materials. The types of uncertainties which are relevant to the company may include, but are not limited to, commodity prices, political uncertainty, changes to the regulatory framework which applies to the business of the company and general economic conditions. Given these uncertainties, readers are cautioned not to place undue reliance on forward looking statements.

Forward looking statements in these materials speak only at the date of issue. Subject to any continuing obligations under applicable law or any relevant stock exchange listing rules, the company undertakes any obligation to publicly update or revise any of the forward-looking statements, changes in events, conditions or circumstances on which any such statement is based.

APPENDIX 1

JORC CODE, 2012 EDITION – TABLE 1 REPORT

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections)

Criteria	JORC Code explanation	Commentary
Sampling techniques	*Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.*	Until the 30 June 2017, drilling within the Tap AB, Tap C and Urucum deposits totalled 13,581 of Reverse Circulation (RC) holes for a total of 498,889m. Of these, 1,404 (122,158m) were resource holes and 12,177 (376,731m) were grade control holes. 1,349 Resource Diamond Drill Holes (DD) holes were completed for a total of 216,825 m.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	RC drilling was largely excluded from the Urucum North Underground resource estimate. Surface RAB drilling was used in the estimation of shallow oxide mineralization at Urucum which accounts for about 4% of the Urucum Open Pit Resource. Beadell drill hole collar locations were picked up by site- based authorized surveyors using a Total Station Leica 407. Downhole surveying was measured by the drilling contractors using a Maxibore II Downhole Survey Instrument for Diamond holes. Shallow RC holes were picked up at the rig's rod string using Total Station. In late 2013, the survey tool was changed to a Reflex Gyro instrument.
	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 (e.g. '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 (e.g. submarine nodules) may warrant disclosure of detailed information	All diamond core samples were sent to SGS Geosol in Belo Horizonte for analysis. Resource RC holes were analysed at SGS Geolsol in Belo Horizonte until June 2017. Following this date, RC resource holes were analysed at the Beadell mine lab and mineralized zones interpreted from the assays results had their corresponding split pulp samples sent to SGS Geosol for reanalysis. The SGS Geosol results then superseded the Beadell mine lab results in the database and were used as an additional means to compare the performance of the Beadell Lab. Grade control holes had samples analysed at the Beadell Mine Lab only. Certified standards were inserted every 20th sample by Beadell to assess the accuracy and methodology of the laboratory. Field duplicates were inserted every 20th sample of diamond core to assess the repeatability and variability of the gold mineralisation. A blank standard was inserted at the start of every batch of approximately 150 samples. In addition, the contract labs SGS Geosol also carried out their own internal standards and lab duplicates for each lot. Results of the QAQC sampling were assessed on a batch by batch basis and were considered acceptable. 1m RC samples were obtained by an adjustable

Criteria	JORC Code explanation	Commentary
		cone splitter attached to the base of the cyclone (1.5kg – 6.0kg) and were utilised for both lithology logging and assaying. Diamond core was used for structural, geotechnical and density measurements as well as lithology logging and assaying. Core was orientated using a Reflex ACT III tool. HQ2 diameter diamond coring has been used through the less competent, near surface oxide material and later changed to NQ2 with the commencement of more competent oxide or fresh rock. The core has predominantly been sampled at 1m intervals, with some sampling on geological intervals (0.6m – 1.4m). Density measurements were done for both oxide and fresh whole core with the oxide being weighed before and after drying to determine wet SG, dry SG and moisture content. At the mine exploration sample preparation facility, core samples are dried at 105C, crushed to -8mm then to -2mm and split to 0.9-1kg before being pulverised to 1mm. This sample is quarter cut to between 200-400g before being pulverised to 95% passing 105µm. The final pulp is quartered again to achieve a sample of 100 - 200g and is sent to SGS laboratories in Belo Horizonte for fire assay. At the same preparation facility RC 1m samples are dried at 140C, crushed to -2mm (if aggregated) and riffle split to 1kg. The 1 kg sample is then pulverised to 1mm and quarter cut to between 200 and 400g. This sample is then pulverised to 95% passing 105µm and quarter cut to a 100-200g sample to send to SGS.
Drilling techniques	*Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).*	A 5.5'' diameter face sampling hammer was used for RC drilling. Diamond drilling in the resource area comprises HQ, HQ2, NQ and NQ2 sized core. Core orientations have been completed using a Reflex Act III RD (NQ) orientation tool since 2014. Deposits where holes have been orientated using this method include Tap AB and Urucum.

Criteria	JORC Code explanation	Commentary
Drill sample recovery	*Method of recording and assessing core and chip sample recoveries and results assessed.*	Diamond core recovery was logged and recorded in the database, with no significant core loss issues occurring in the mineralised zones. The diamond drilling contract included penalty rates for poor core recovery to encourage drillers to maximise sample recovery. Average core recovery is 99% for the mineralised zones. No penalty rates are applicable for RC drilling.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	Core yard staff measure and record the recovery of the core shortly after it is received. This information is later used to adjust the drill contractor payment invoice. Diamond core was reconstructed on racks for orientation and marking. Depths are checked and measured against those marked by the drilling contractors on core blocks.
	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.	RC samples were visually checked for recovery, moisture and contamination. The drilling contractor utilised a cyclone and cone splitter to provide uniform sample size. The cone splitter was cleaned at the end of every 3m rod and the cyclone cleaned at the completion of every hole. Sample recoveries for diamond and RC holes were high within the mineralised zones. No significant bias is expected.
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.*	Lithology, alteration, veining, mineralisation, structure (foliation, bedding etc.), weathering, resistance (knife scratch test), recovery, RQD, density were all logged for the diamond core using Logchief software and saved in an SQL (Datashed) database. Whole core photographs were taken and all half-core was retained in a core yard for future reference. Lithology, alteration, veining, mineralisation and weathering were logged from the RC chips and stored in an SQL (Datashed) database. Chips from selected holes were also placed in chip trays and stored in a designated building at site for future reference.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	All logging is qualitative except for density, recovery and RQD. All core photography was completed shortly after being received at the core yard and always prior to cutting.
	The total length and percentage of the relevant intersections logged.	All drill holes are logged in full.

Criteria	JORC Code explanation	Commentary
Sub-sampling techniques and sample preparation	*If core, whether cut or sawn and whether quarter, half or all core taken.*	All core was cut in half onsite with a core saw or with a chisel in the case of clay/soft oxide. Half core samples for analysis were all collected from the same side. Where field duplicates are taken, the other half of the core is used as the duplicate sample. At the on-site sample preparation facility the half core sample is dried, crushed to -8mm, then to -2mm and split to approximately 1kg for pulverisation.
	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	The RC drilling utilised a cyclone and cone splitter to produce samples in the 1kg to 6kg range. Once collected, the sample is dried, crushed to -2mm and split at the site sample preparation lab down to approximately 1kg prior to pulverisation.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	The 1 kg sample is then pulverised to 1mm and quarter cut to between 200 and 400g. This sample is then pulverised to 95% passing 105µm and quarter cut to a 100-200g sample to send to SGS.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	Beadell has inserted its own QAQC samples within every batch as follows; Certified standards were inserted at every 25th sample and blanks at the start of every batch to assess the accuracy of the external laboratory (SGS), and field duplicates were inserted every 20th sample for diamond core to assess the repeatability and variability of the gold mineralisation. In addition, the contract labs SGS Geosol and ACME also carried out their own internal standards, lab duplicates for each lot.
	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.	The results of the field duplicates show an acceptable level of repeatability of gold analysis. Screen fire analysis was completed on several intersections where visible gold was observed in order to negate a coarse gold bias in the fire assay result.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	Sample sizes of 1kg to 6kg are considered to be a sufficient size to accurately represent the gold mineralisation based on the mineralisation style, the width and continuity of the intersections and the sampling methodology. Field duplicates of diamond core have routinely been collected to ensure monitoring of the sub-sampling quality. Acceptable precision and accuracy are noted in the field duplicates albeit the majority of these were outside the very high grade zones.

Criteria	JORC Code explanation	Commentary
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 (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.*	All diamond core samples were sent to SGS Geosol in Belo Horizonte for analysis. Resource RC holes were analysed at SGS Geolsol in Belo Horizonte until June 2017. Following this date, RC resource holes were analysed at the Beadell mine lab and mineralized zones interpreted from the assays results had their corresponding split pulp samples sent to SGS Geosol for reanalysis. The SGS Geosol results then superseded the Beadell mine lab results in the database and were used as an additional means to compare the performance of the Beadell Lab. Grade control holes had samples analysed at the Beadell Mine Lab only. All gold assaying (SGS in Belo Horizonte and Beadell Mine laboratories) is done using a 30g charge for fire assay analysis with an AAS finish. This technique is industry standard for gold and considered appropriate. Geophysical tools not used. Beadell has inserted its own QAQC samples within every batch as follows; Certified standards inserted at every 25th sample and blanks at the start of every batch to assess the accuracy of the external laboratory (SGS Geosol), and field duplicates were inserted every 20th sample in diamond core to assess the repeatability and variability of the gold mineralisation. In addition, the contract labs SGS Geosol and ACME also carried out their own internal standards, lab duplicates for each lot. Each analysis batch (approx. 150 samples) is checked to ensure that the standards fall within the accepted levels of standard deviation. Where any standard assay exceeds 3 standard deviations or where more than one standard falls between 2 and 3 standard deviations, the entire batch is resubmitted for analysis.

Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	*The verification of significant intersections by either independent or alternative company personnel.*	The high-grade intersections of core at Urucum have been observed by various visiting geological consultants. Very high-grade intersections occur associated with pyrrhotite where visible gold is occasionally present.
	The use of twinned holes.	Twinned diamond holes have been undertaken at Urucum and at Tap AB.
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	All geological logging information is entered directly into Logchief and synchronised with the Datashed database. Other field data (e.g. sampling sheets, downhole surveys etc.) are entered into excel spreadsheets formatted for Datashed importation. Lab assay reports are directly imported into Datashed along with all QAQC data and metadata. Data importation was done by Maxwell Geoservices staff under contract by Beadell Resources. In 2014 data entry into the Datashed Brazilian database commenced with geology site personnel. All data loading procedures have been documented by Maxwell Geoservices. Maxwell Geoservices has reported QAQC for the major deposits over a 5 year period as at 19th Oct 2017.
	Discuss any adjustment to assay data.	Data below the detection limit is defined with a negative value, e.g. <0.01 = -0.01.
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.*	Beadell drill hole collar locations were picked up by site- based authorized surveyors using Total Station Leica 407, calibrated to a base station (expected accuracy of 20mm). Downhole surveying was measured by the drilling contractors using a Maxibore II Downhole Survey Instrument for diamond holes. Shallow RC holes were picked up at the collar and 2 points on the rod string using Total Station (for dip and azimuth). 13 deeper RC holes were re-entered and downhole surveyed using Maxibore II. Maxibore II surveys were completed every 3m down the drill hole and the entire survey re-run after every 100m of drilling to check drill hole deviation and repeatability between surveys.
	Specification of the grid system used.	The grid system is SAD 69 Zone 22N.
	Quality and adequacy of topographic control.	Beadell Brasil Ltda Survey Staff generate high resolution, digital terrain model (DTM) from a Riegl VZ-1000 scanner. Scans are done on a weekly basis.

Criteria	JORC Code explanation	Commentary
Data spacing and distribution	*Data spacing for reporting of Exploration Results.*	The underground resources have been drilled up to a maximum 700 vertical metres below surface on a nominal 50 m x 50 m drill pattern, however due to unavoidable hole deviation in deeper holes the spacing is variable. Deeper inferred resources are at approximately 100 x 100 m spacing. Holes are generally angled either east or west to intersect the orebody.
	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.	The data spacing and distribution is sufficient to demonstrate spatial and grade continuity of the mineralised domains to support the definition of Inferred, Indicated and Measured Mineral resources under the 2012 JORC code.
	Whether sample compositing has been applied.	Drill hole samples have been composited to a nominal 1 m interval.
Orientation of data in relation to geological structure	*Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*	The majority of drilling is orientated with a 60 – 70 degree dip east west, which generally intersects the mineralization at a reasonably high angle of intersection.
	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.	Diamond drilling at Urucum was from both east and west directions which is orthogonal to the consistent north-south strike of the mineralisation. Detailed structural logging of the last campaign of diamond drilling was used to wireframe model the mineralisation.
Sample security	*The measures taken to ensure sample security.*	Samples are securely sealed and stored onsite, until delivery to Macapa via the company contracted driver, who then also delivers the samples directly to airline's cargo dispatch facility for delivery to Belo Horizonte. Sample submission forms are sent with the samples to the laboratory and the laboratory emails a confirmation that the samples have been received along with a job number for tracking purposes.
Audits or reviews	*The results of any audits or reviews of sampling techniques and data.*	Geology audits and site visit were completed in 2012 and 2015 by independent consultants to review sampling procedures and QAQC practices. This visit concluded the sampling to be at an industry standard, and of sufficient quality to carry out a Mineral Resource Estimation.

Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	*Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.* *The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.*	All deposits with the exception of Duckhead and Urucum East are located on the 851.676/1992 mining concession centrally located within the northern state of Amapa, Brazil. The mining concession is owned by Beadell Brasil Ltda. The deposits are located on granted mining concessions which are regulated by Brazilian mining and environmental law. Duckhead is located on mining concession lease 858.079/14. Urucum East is located on exploration tenement number 850.865/1987. This tenement is in the process of being converted to a mining concession.
Exploration done by other parties	*Acknowledgment and appraisal of exploration by other parties.*	Beadell Brasil Ltda acknowledges the previous operator MPBA for the discovery of all deposits at Tucano.
Geology	*Deposit type, geological setting and style of mineralisation.*	The deposit setting is an orogenic, structurally controlled gold mineralising system hosted in Paleoproterozoic rocks. At Urucum, Tap C and Tap AB mineralisation occurs over a 7 km strike length and is associated with a north-south shear zone and a BIF (Banded Iron Formation) unit which also hosts significant quantities of friable iron ore. Mineralisation at Duckhead is controlled by the intersection of steep east-west striking shear zones with a banded iron formation lithological contact. This intersection forms steeply, west-plunging high-grade shoots. The texture and mineralogy along the shear zone indicate high-temperature hydrothermal alteration, particularly silicification and sulfidation, bearing auriferous pyrite. Deep weathering is present in a majority of the deposits with high grade mineralisation extending right to the surface through a layer of colluvium several metres thick. The Urucum underground resource covers a strike length of approximately 800 metres down to a depth of approximately 500 metres below the open pit reserve showing a gold endowment of over 1,000 ounces per vertical metre. The lodes form continuous subparallel ore shoots hosted within an approximately 100 m wide Banded Iron Formation (BIF). Three main ore lode horizons have been defined by the drilling and are named Lode 1, Lode 2 and Lode 300 with each lode dipping sub-vertically and generally separated by 20-30 m. The average true horizontal width of each lode is 6 m. Continuous high grade shallowly plunging ore

Criteria	JORC Code explanation	Commentary
		lodes are developed along mineralised shear zone hosts. The geometry and plunge of the ore shoots is interpreted to be controlled by gently plunging F2 fold hinges and more steeply dipping fault intersections. Gold mineralisation at Urucum is predominantly stratabound to specific sheared lithological units within the BIF and is characterised by strong disseminated and shear fabric pyrrhotite sulphide. The strong association between gold and pyrrhotite results in a highly visual ore in fresh rock that is easily discernible from un-mineralised BIF and other waste rock.
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:* o *easting and northing of the drill hole collar* o *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* o *dip and azimuth of the hole* o *down hole length and interception depth* o *hole length.* *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	Drill hole information has not been included because it is not Material to the resource and Reserve update. Individual drill hole results have been released in previous announcements.
Data aggregation methods	*In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.* *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.* *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	Drill hole information has not been included because it is not Material to the resource and Reserve update. Individual drill hole results have been released in previous announcements.

Criteria	JORC Code explanation	Commentary
Relationship between mineralisation widths and intercept lengths	*These relationships are particularly important in the reporting of Exploration Results.* *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* *If it is not known and only the down hole lengths are reported, there should be a clear statement to this* *effect (e.g. 'down hole length, true width not known')*	Drill hole information has not been included because it is not Material to the resource and Reserve update. Individual drill hole results have been released in previous announcements.
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.*	Drill hole information has not been included because it is not Material to the resource and Reserve update. Individual drill hole results have been released in previous announcements.
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.*	Drill hole information has not been included because it is not Material to the resource and Reserve update. Individual drill hole results have been released in previous announcements.
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.*	Other exploration information has not been included because it is not Material to the resource and Reserve update. Other exploration information has been released in previous announcements.
Further work	*The nature and scale of planned further work (e.g. 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.*	All deposits remain open at depth however further drilling required to test for a continuation of mineralization at depth for the Tap C3N and Gap Pits (Tap C). In 2017 there was early stage success with the discovery of gold mineralisation at the Urso and Torres targets north and south of Tap AB respectively.

Section 3 Estimation and Reporting of Mineral Resources
(Criteria listed in section 1, and where relevant in section 2, also apply to this section)

Criteria	JORC Code explanation	Commentary
Database integrity	*Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* *Data validation procedures used.*	The database was checked against the original raw data with respect to drill collar locations and down-hole surveys, and final drill hole depths. All data with respect to sample intervals (overlaps and duplicate records) was verified. No issues were identified with the data.
Site visits	*Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* *If no site visits have been undertaken indicate why this is the case.*	Mr. Tan is a member of The Australian Institute of Mining and Metallurgy and is a Competent Person who has been based in Brazil, at the Tucano mine site since 2011. In the opinion of the competent person, the drilling, sampling and mining practices used on site are of a high industry standard. Mr. Wolfe, Principal Geologist of International Resolutions Pty Ltd, is a member of The Australian Institute of Geoscientists, is a Competent Person and has visited the Tucano Mine Site for a total of 3 days between 30 July and 1 August 2015. Mt Batelochi is a consultant Geologist for MB Soluções em Geologia e Mineração Ltda and is a Competent Person and has visited the Tucano Mine Site on numerous occasions.
Geological interpretation	*Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* *Nature of the data used and of any assumptions made.* *The effect, if any, of alternative interpretations on Mineral Resource estimation.* *The use of geology in guiding and controlling Mineral Resource estimation.* *The factors affecting continuity both of grade and geology*	For the 2017 Resources at Tap AB, Tap C, Urucum and Duckhead deposits, sectional interpretation of the geology was undertaken. Key lithological units were digitised by snapping to drill hole and then wire-framed into solids. This 3D lithological model was then used to identify major structures and help guide the plan and sectional interpretation of the gold mineralisation. The Tap C open pit model was estimated in 2015 and was revised in 2016 taking into account new drilling information and an updated geological model. No mining occurred at Tap C during 2016 or 2017. Changes to the model affected the C3W and C3N areas of the Tap C deposit. These areas were modelled separately and then inserted into the 2015 model thereby overwriting the previous estimated blocks within these areas. The Duckhead geological model was completely rebuilt in 2016 using 10m spaced sectional interpretation and covered all known gold occurrences in the area. No further mining occurred at Duckhead since 2016. For the 2016 PFS Underground resource estimate at Urucum North, detailed structural analysis of orientated core was used to aid in the structural interpretation of the Urucum underground lodes. This varied from previous interpretations where a larger envelope was modelled as part of the Urucum open pit resource estimate. The change to wire framing a tightly constrained lode as opposed to a broad through going envelope is considered to have had a significant effect on the mineral resource estimate transitioning from an open pit resource model to

Criteria	JORC Code explanation	Commentary
		an underground lode estimate. The mineralisation at Urucum, while structurally emplaced does tend to be stratabound, being hosted within specific lithological contacts. Geology was used to guide the interpretation and orientation of the lode geometries. All Ordinary Kriged estimates have been constrained within hard boundaries defined by the manually interpreted and digitised gold mineralisation solids. During estimation of the 30 June 2017 resources, geological domains used to constrain the Multiple Indicator Kriged (MIK) grade estimation relating to the open pit resource estimation at Tap AB and Urucum were generated using a Categorical Indicator Kriging (CIK) approach based on a lower cut-off grade of 0.3g/t Au and a probability threshold of between 31-35%. Wireframes were generated from the probability estimates and were validated by visual inspection, volumetric assessment and statistical investigation. Domains were generated in this manner based on orientation plan interpretation. Lithological and weathering models and 3D geometry of individual mineralised structures were interpreted on a sectional and plan basis and these have been used to guide the overall CIK orientations to ensure correct continuity and volume of mineralization constraints. Utilisation of a CIK approach to generate the estimation domains included a small percentage of below cut-off composites into the estimate. Assessment the amount of sub-grade material formed one of the criteria in assessing the selection of an appropriate probability grade shell. The shell was designed to reflect the broad continuity of both the overall geology and the grade continuity of the mineralised structures within the hose metasediments.

Criteria	JORC Code explanation	Commentary
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.*	Gold mineralisation at Tap AB occurs over a 2.5 km strike length. The deposit contains both steep dipping to vertical and flat west dipping lodes. Width of mineralisation ranges from 2m to 30m. The Tap AB deposit is characterised by a deep weathering trough up to 300m deep with a sharp transition between oxide and fresh. Tap C lodes cover a strike length of 2 km and encompasses the C1, C3 and Gap mining areas. Lodes are predominantly sub-vertical and N-S striking but become moderately east dipping thin the northern part of C3. Typical lode widths are around 6m. Gold mineralisation at Urucum is over a 2.4 km strike length and is associated with the subparallel intersection of a north-south shear zone and a BIF (Banded Iron Formation). Gold mineralisation at Tap AB is over a 2.2 km strike length and is also associated with the subparallel intersection of a north-south shear zone and a BIF (Banded Iron Formation). The Urucum underground resource covers the northernmost end of the Urucum orebody in an area of approximately 1000 m strike by 600 m depth below the below the open pit Reserve. Three main ore lode horizons have been defined by the drilling and are named Lode 1, Lode 2 and Lode 300 with each lode dipping 80 degrees to the east and generally separated by 20-30 m. Individual lodes have an average true horizontal width of 6 m. Sulphide content ranges from 5% to 10% and is predominantly pyrrhotite.
Estimation and modelling techniques	*The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* *The assumptions made regarding recovery of by-products.* *Estimation of deleterious elements or other non-grade variables of economic significance (e.g. sulphur for acid mine drainage characterisation).* *In the case of block model interpolation, the block size in relation*	For the purpose of the 30th June 2017 Resource and Reserve updates, the upper sections of the Tap AB and Urucum deposit which were amenable to open pit mining have been modelled using Multiple Indicator Kriging (MIK). The lower parts of the deposit (underground component) were estimated using Ordinary Kriging (OK) within tightly constrained mineralised envelopes. For both the Underground estimations at Tap AB and at the south end of Urucum, a 0.5g/t nominal lower cut was used to undertake the wireframing. This was increased to 1.4g/t to define lodes in the Urucum North Underground OK model for the Underground Pre-Feasibility Study. **Tap AB & Urucum Open Pit MIK Models** The Mineral Resource of 30 June 2017 estimate was generated via MIK with indirect lognormal change of support to emulate mining selectivity. Mineralised domain interpretation was completed as described above and approximated a 0.3g/t Au lower cut-off. The interpretation was coded to the drill hole database and 3m length composites were generated within the mineralisation boundaries. A series of indicator transforms were applied to the composites as determined by statistical evaluation and indicator semi-variograms were modelled for each cut-off. The semi-variograms were input in preparation for kriging of the indicator transformed data. Soft boundaries were applied to the

Criteria	JORC Code explanation	Commentary
	to the average sample spacing and the search employed. *Any assumptions behind modelling of selective mining units.* *Any assumptions about correlation between variables.* *Description of how the geological interpretation was used to control the resource estimates.* *Discussion of basis for using or not using grade cutting or capping.* *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	kriging. A search neighbourhood was applied parallel to the strike and dip with radii of 50m, 50m and 15m in the strike, down dip and across strike directions respectively. Composite counts for the estimates were set at a minimum of 24 and a maximum of 32. In the case of the domain estimated by OK, a composite count of between 6 and 8 was applied. Any blocks not estimated in the first estimation pass were estimated in either a second or third pass with expanded search neighbourhoods and relaxed composite limits to allow the domains to be fully estimated. Extrapolation of the drill hole composite data is generally limited to approximately 50m down dip. Change of support via the indirect lognormal method was applied to the indicator kriging results to emulate selectivity at the mining stage. Previous resource estimates have been via the Ordinary Kriging method making a direct comparison to the MIK difficult. Model reconciliation against past production indicates good performance of the model. The final grade tonnage curves have been compared to the global support correction using the Gaussian Discrete Model The parent block size is 9mE x 20mN x 8mRL, with sub-celling to 3mE x 5mN x 4mRL for domain volume resolution. The parent block size was chosen based on estimation methodology and is a compromise based on the variable drill spacing over the dimensions of the deposit. The search ellipse was oriented with axes rotated parallel to the mineralized bodies as previously described. Search ellipse dimensions were chosen based on the variogram orientation and overall ranges and also to encompass several drill holes up and down dip and several lines of drilling along strike. The geological model had defined domains for the oxide, transitional and primary mineralisation in addition to geological and structural zones. These domains were used as a guide when generating the grade shells to select sample populations for variography and estimation Top cutting of grades was not relevant in the context of MIK methodology and has only been considered in the case of the grade variogram used to calculate the change of support variance reduction coefficient. In the case of the OK estimates for Urucum, grade was not capped on the basis that no extreme outliers to the data were deemed present that would exert undue bias on the grade estimates. In the case of the OK estimates for Tap AB estimate, the grade was capped to values between 9 g/t Au and 20g/t Au depending on estimation domain. Validation of the block model included global comparison of the whole block model domain grades (etype) to the declustered input data and swath (profile) plots showing northing, easting and elevation comparisons. Visual validation of grade trends and metal distribution was carried out. Reconciliation of the recent production data against the model at the appropriate cut-offs indicates

Criteria	JORC Code explanation	Commentary
		acceptable model performance. **Tap C Open Pit OK Model.** The 2015 resource Tap C model Ordinary Kriged estimations were modelled separately and imported into sub-blocked Surpac models. Blocks at parent cell resolution were defined and ordinary kriging was undertaken to estimate gold block grades within the individual lode wireframes. The estimated parent block centroids were then imported into a Surpac sub-blocked model with the same parent cell size and a reduced subcell size to maintain resolution of the gold estimate against the lode boundaries. For the Tap C estimation a 2m composite was used. Parent and subcell block dimensions employed were as follows; Parent Cell Model: 8m x 20m x 4m (x,y,z) Sub Cell Model: 2m x 5m x 2m (x,y,z) Block Au (g/t) grades are estimated by Ordinary Kriging (OK) performed using parent cells and samples within hard boundaries using the variography of Lodes grouped by variogram sectors. The key parameters of the estimation were chosen after several tests. A critical parameter was the number of composites to be used for the estimates and the best number for each sector. The choice was guided by optimising the slope of regression. Kriging took place in three successive runs; the search radii are related to the semi-variogram ranges with the third run using an increasingly larger neighbourhood to fill in the blocks not estimated within the lode wireframes. The search ellipses are generally orientated in the same direction as the variogram's anisotropic axes. Typically, the search ellipse was divided in eight octants, and an optimum number of four data points per octant was sought (i.e. 32 data points in total). In the first run, a minimum of four data points (in total) was required for the block to be estimated. This condition was relaxed to one in subsequent runs. - 1st Neighbourhood represents the distance of 70 - 80 % of Sill, the distance of the main inflection of the semi- variogram, minimum number of samples 4, Maximum 32, octants search and a minimum of 2 drill holes to estimate a block. Blocks estimated in this search strategy were considered as MEASURED; - 2nd Neighbourhood represents the distance of 100% of Sill, minimum number of samples 2, maximum 16, octant search and a minimum of 2 drill holes to estimate a block. Restrictions were applied to the search radius for high grade values. Blocks estimated in this search strategy were considered as INDICATED; - 3rd Neighbourhood represents the search ellipsoid to estimate remain blocks, sectors North and South: U = 720; V = 240; W = 80; minimum of 1 Sample,

Criteria	JORC Code explanation	Commentary
		Maximum of 4. Restrictions were applied to the search radius for high grade values. Blocks estimated in this search strategy were considered as INFERRED. The 2017 revision of the Tap C model for the C3W and C3N areas was undertaken using Ordinary Kriging. Blocks were estimated directly within a Surpac sub-cell model using revised lode wire frames modelled to a nominal 0.3g/t cut off. A composite length of 2m was used. A number of lodes of similar orientation were grouped obtain a reasonable number of composites to undertake variography however estimations were carried out for individual lodes using only composites contained only within those lodes. Barren pegmatite sills cutting the lodes in the in the C3W and C3N areas were manually wire framed in order to be excluded during the compositing process. Later the pegmatite solids would be used to code zero grade to blocks within the model. The parent cell and sub-cell dimensions of the 2017 model remained the same as the 2015. Wireframes were filled in the first pass estimate to the ranges of the respective variograms for each lode group. A second pass with an expanded range was run to fill the mineralised wireframes and define the remaining inferred. In the C3N area multiple lodes are moderately dipping to the east, a search ellipsoid was orientated -50 degrees to the east with dimensions of 112m x 59m x 58m. In the C3W area lodes are flat west dipping, a search ellipsoid was orientated -10 degrees to the west with dimensions of 79m x 66m x 29m. A minimum of 3 samples and a maximum of 15 samples were used to estimate each block. The revised areas of C3W and C3N were largely drilled out to a grade control spacing with limited drilling at depth. A classification based on average sample distance to the estimated block was used define the resource categories being; Measured; Average sample distance <20m Indicated; Average sample distance 20-50m Inferred; Average sample distance >50m. **Tap AB & Urucum Underground OK Models** For the 30 June 2017 resource estimate, the Urucum Underground resource remained unchanged as there was no new drilling since 31st Dec 2016. The 31 Dec 2016 Tap AB Underground resource model was re-reported below the 30th June 2017 optimised pit shell for the 30th June 2017 Tap AB Underground Resource. The Tap AB underground model was estimated using 21 tightly constrained gold lode wireframes applying a 0.5g/t lower cut to undertake the wire framing. The Tap AB Underground database was cut off at the same date as the 31 Dec 3016 Tap AB MIK Open Pit Estimate. Model extents, parent cell size, lithological and weathering

Criteria	JORC Code explanation	Commentary
		wireframes were also the same for both models, consequently, the density estimation for the Tap AB MIK Open Pit Model was also used in the Tap AB OK Underground Model. For both Urucum and Tap AB, blocks at parent cell resolution were defined and ordinary kriging was undertaken to estimate gold block grades within the individual lode wireframes using Isatis. The estimated parent block centroids were then imported into a Surpac sub-blocked model with the same parent cell size and a reduced subcell size to maintain resolution of the gold estimate against the lode boundaries. For the Tap AB and Urucum South Underground OK models, a 3m composite was used. For the Urucum North Underground model, a 1m composite was used. Parent and sub cell block dimensions employed for the Tap AB and Urucum block models are detailed below. **Urucum North Underground (PFS Model);** Parent Cell: 8m x 20m x 20m (x,y,z) Sub Cell: 1m x 5m x 2.5m (x,y,z) **Urucum South Underground;** Parent Cell: 9x x 20m x 8m (x,y,z) Sub Cell: 1.125m x 5m x 2m (x,y,z) **Tap AB Underground;** Parent Cell; 9x x 20m x 8m (x,y,z) Sub Cell: 1.125m x 5m x 2m (x,y,z) **Tap AB Underground Model** The semi-variograms were created for 6 groups combining the lode data. These were based on the geological and statistical affinities (distribution, mean and standard deviation) of the lodes. A multi-search ordinary kriging strategy involved a three neighbourhood octant search, radii related to 80% of the variogram sill and the orientation of the individual lodes considered. A total of 21 lodes were estimated. These were separated by oxide and fresh domains if the volumetric percentage of the lesser had greater than 20% of the blocks. Estimation was undertaken using only composites within the lode wireframes and using the wireframe as a hard boundary. The following search neighbourhoods were used in the estimation; 1st Neighbourhood; Constraints of 3 consecutive empty octants, a minimum of 4 samples and 3 drill holes within the search area were applied to undertake the ordinary kriging estimation. A maximum search related to Azimuth 10NW-15NE; Dip 45-90 to N quadrants and a plunge of 10 N. Radii of 25-65m x 45-65m x 10-300m respectively were employed based on visual inspection of the semi-variogram and also several runs testing the search

Criteria	JORC Code explanation	Commentary

ellipsoid for adherence to the Nearest Neighbour Estimate and Swath Plots;

2nd Neighbourhood; A minimum number of 4 samples with a constraint of 4 consecutive empty octants within the search area was applied (2 drill hole minimum). A search ellipsoid of 50-130m x 90-130m x 20-60m was used following same orientation as the 1st Neighbourhood.

3rd Neighbourhood; A search range of 1000x1000x100m was employed to populate remaining blocks within the lode wireframe and a minimum of 2 samples was required to perform the estimation

Various top cuts were applied depending on the statistical distribution of gold within each lode or domain for each deposit. The top cut is a rounded value based on the tail of the Au log histogram and is generally around 98.5-99% of the grade distribution.

A summary estimation of domains, corresponding lodes and top cuts for the Tap AB Underground Resource is detailed below.

LODE	Top Cut	Azimuth	Dip	Var Group	Split OX/FR
lode10	9	10	-50	LODE10	Yes
lode11a	9	0	85	LODE6_11	No
lode11b	9	0	90	LODE6_11	No
lode12a	7	0	-85	LODE12	Yes
lode12b	No	10	-75	LODE12	No
lode12c	5	0	-85	LODE12	No
lode12d	15	0	85	LODE12	Yes
lode14a	20	0	90	LODE14	No
lode14b	80	15	-85	LODE14	Yes
lode1a	3	-10	-85	LODE1_3_5	No
lode1b	No	10	90	LODE1_3_5	Yes
lode1c	7	10	-60	DIP45W	Yes
lode3	20	5	90	LODE1_3_5	Yes
lode4	18	0	90	LODE4	Yes
lode5	25	0	90	LODE1_3_5	Yes
lode6	9	-10	90	LODE6_11	Yes
lode9a	10	0	-45	DIP45W	Yes
lode9b	3	15	-45	DIP45W	Yes
mlodes2a	8	0	-80	MLODES	Yes
mlodes2b	8	5	90	MLODES	Yes
mlodes2c	8	0	90	MLODES	Yes

Urucum North Underground (PFS) Model

At Urucum North Underground a 3 neighbourhood octant search was considered.

1st Neighbourhood; Constraints of 3 consecutive empty octants, a minimum of 4 samples and 2 drill holes within the search area were applied to undertake the ordinary kriging estimation.

A maximum search related to Azimuth 0N; Dip 80NE and plunge10N was used. Radii of 80m x50m x20m respectively were employed based on visual inspection of the semi- variogram and also several runs testing the search ellipsoid with number of estimated blocks, adherence to the Nearest Neighbour Estimate and Swath Plots;

Criteria	JORC Code explanation	Commentary
		2nd Neighbourhood; A minimum number of 4 samples with a constraint of 4 consecutive empty octants within the search area were applied (2 drill hole minimum). A search ellipsoid of 160m x100mx20m was used following same orientation as the 1st Neighbourhood. 3rd Neighbourhood; A search range of 1000m x 1000m x 100m was employed to populate remaining blocks within the lode wireframe and a minimum of 2 samples was required to perform the estimation All lodes at were constrained within the tightly constrained wireframes defining gold mineralization using a 1.4g/t envelope. At Urucum North Underground various top cuts were applied depending on the statistical distribution of gold within each lode or domain for each deposit. The top cut is a rounded value based on the tail of the Au log histogram and is generally around 98.5-99% of the grade distribution. A summary of top cuts applied is shown below: South Lode 1: Top cut 40 g/t Central Lode 1: top cut 25 g/t Minor Lode 1: top cut 25 g/t Lode 2: Uncut Lode 300: Uncut Minor Lodes 8-25 g/t **Urucum South Underground Model** At Urucum South Underground a 3 neighbourhood octant search was considered. Searches were based on the orientation of individual lodes being estimated. 1st Neighbourhood; Constraints of a minimum number of 4 samples, a maximum of 32, 8 sectors and a minimum of 3 drill holes around a 120° Spaced, 3D continuity were used in the estimation. The search ellipsoid employed was 35m x 30m x15 m. 2nd Neighbourhood; Constraints of a minimum of 4 samples, a maximum of 32, and 3 empty consecutive sectors (2 drill holes around a 120° spaced, 2D continuity) were used in the estimation. The search ellipsoid employed was 70m x 60m x30 m. 3rd Neighbourhood: A minimum of 1 sample, a maximum of 4 and a search ellipsoid of 500m x 500m x 100m (enough to estimate all blocks inside lodes) was employed. At Urucum South Underground various top cuts were applied depending on the statistical distribution of gold within each domain for each deposit. The top cut is a rounded value based on the tail of the Au log histogram and is generally around 98.5-99% of the grade distribution. In general, top cuts ranged up to 20g/t with

Criteria	JORC Code explanation	Commentary
		some of the minor lodes being left uncut. At Tap AB Underground a 3 neighbourhood octant search was considered. 1st Neighbourhood: A minimum of 4 samples and a maximum 4 composites per hole were used within the search area to undertake the ordinary kriged estimation. An additional constraint of 2 empty consecutive sectors (3 drill holes around a 120° spaced, 3D continuity) was used. The search ellipsoid employed was 35m x55m x10m. For Colluvium the search ellipsoid used was 30m x30m x 30m. 2nd Neighbourhood: A minimum of 4 samples and a maximum 4 composite per hole were used within the search area to undertake the ordinary kriged estimation. An additional constraint of 3 empty consecutive sectors (2 drill holes around 120° spaced, 2D continuity) was used. The search ellipsoid employed was 70m x 110m x 20m and for colluvium search ellipsoid was 30m x 30m x30m. 3rd Neighbourhood; A minimum of 1 sample and a search ellipsoid of 500m x 500m x 100m was employed to fill the remaining blocks within the wireframe. At Tap AB Underground, various top cuts were applied depending on the statistical distribution of gold within each lode or domain. The top cut is a rounded value based on the tail of the Au log histogram and is generally around 98.5-99% of the grade distribution. Most lodes had a top cut of less than 35g/t however the high grade 407 shoot (Tap AB2 Trough Lode) had a top cut of 98g/t applied. Tucano gold lode mineralisation contains considerable magnetite by-product associated with the BIF which forms a high quality and high-grade concentrate when passed through the magnetic separation plant. Currently the magnetic separation plant at Tucano is on care and maintenance, while mostly oxide gold ores are being processed. However, future processing of Tucano fresh rock ore is likely to yield a high quality iron concentrate by-product. For the purposes of the gold resource and subsequent pre-feasibility study, no economic value will be attributed to the iron concentrate
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 were calculated using dry density.

Criteria	JORC Code explanation	Commentary
Cut-off parameters	*The basis of the adopted cut-off grade(s) or quality parameters applied.*	For Ordinary Kriged (OK) and Multiple Indicator Kriged (MIK) estimates a nominal 0.3g/t lower cut-off was used to interpret the boundaries of the lode mineralisation. For the OK models this increased to 0.5g/t below the limits of an open pit resource. In the case of the Urucum North Underground Resource used in the 2016 PFS, a lower assay cut off of 1.4 g/t was used to guide the wireframing the constraining lode envelopes. For the 30th June 2017 and re-stated 30 June 2018 Resource statement, a 0.5g/t Au cut-off grade was used to report all Surface Mineral Resources in the main Tucano trend. The Duckhead deposit, which is a satellite resource, was reported at a cut-off of 1g/t. All Underground Mineral Resources were reported at a cut-off of 1.2g/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 explanation of the basis of the mining assumptions made*	For the purpose of the 30th June 2017 Mineral Resources at Urucum, the following reporting constraints were used; The Urucum North Underground Ordinary Kriged Model has been reported for lodes below the 30 June 2017 pit design and north of the 99300mN Northing, representing the southernmost limit of the Urucum North Underground Model. Resources relating to the Urucum North Pre- Feasibility Study publicly reported at a cut-off of 1.6g/t are a subset of the total Urucum North Underground Resource reported at 1.2g/t. The Urucum North underground scoping study defined several alternative underground mining methods. These were considered in the application of the lode wire framing and classification to ensure a minimum true horizontal width x grade was achieved. The Urucum South Underground Ordinary Kriged model was reported below the Urucum $US1500 optimised pit shell and south of the 99300mN at a cut-off of 1.2g/t. Surface Resources reported from the Urucum Multiple Indicator Kriged (MIK) model have been reported north of 99300mN, within the Urucum reserve pit design and south of the 99300mN within the $US1500 Urucum Optimised Pit Shell. Minor colluvium mineralisation occurring north of 99300mN and between the reserve pit design and US$1500 optimised pit shell was included in the Urucum North Open Pit Resource For the purpose of the 30th June 2017 Mineral Resources at Tap AB, the following reporting constraints were used; Tap AB Underground; reported below the $US1,500 optimised pit shell at a 1.2g/t cut-off. Minor oxide resources occurring below the $US1,500 optimized pit shell have been included with the Tap AB Underground Sulphide Resource. The Tap AB Open Pit Resource; reported entirely within the $US1,500 optimised pit shell at a cut-off of 0.5g/t. All pit designs and optimised pit shells used to constrain the Tap AB and Urucum resources were derived from optimisation work carried out on the Multiple Indicator Kriged (MIK) models for these deposits.

Criteria	JORC Code explanation	Commentary
		The MIK models incorporate a degree of external dilution owing to the method of generation. Mining recovery factors are not considered. The OK resource estimates represent an undiluted resource model with no external dilution or mining recovery factors applied. The addition of dilution was applied by AMC as part of the Pre-feasibility study to determine mineable SMU blocks for the Urucum North Underground Project.
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*	Extensive metallurgical test work has been completed at Urucum by previous owners and Beadell during the DFS. Studies confirmed the free milling nature of the primary mineralisation and recoveries of 90% expected. In October 2016, 10 metallurgical samples (cut diamond drill core) were sent to SGS Geosol in Belo Horizonte for the purpose of determining the leaching kinetics at 3 grind sizes; 53µm, 75µm and 105µm. The results of the leaching tests at the 3 grind sizes showed a range of 88.9% to 96.1% for the extraction of gold after 24hrs of leaching at a 75um grind. An expansion of the CIL circuit has just been completed with final optimization ongoing. Once fully commissioned the plant is expected to achieve a consistent grind size of 75um and in increased recovery of 93%
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 greenfield 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.*	Both the mine and the processing facility have full environmental licensing in place for the open pit operation. An underground development of the Urucum orebody is considered to involve only limited additional environmental studies and regulatory permit addendums. Open pit mining is currently underway at Tap AB and Urucum.

Criteria	JORC Code explanation	Commentary
Bulk density	*Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc.), moisture and differences between rock and alteration zones within the deposit.* *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	All stratigraphic lithological domains were manually interpreted in cross-section and the built into inter-locking wireframes without gaps or overlaps. Cross-cutting late stage pegmatite dykes and sills were manually interpreted and wire framed. These were then used cut into the older lithological units and also to overprint the gold grade model with zero grade. An extensive database of fresh rock density measurements has been recorded at Tucano and has been used to estimate the density via OK estimation into the resource models. All modelled tonnages are estimated on a dry basis.
Classification	*The basis for the classification of the Mineral Resources into varying confidence categories.* *Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* *Whether the result appropriately reflects the Competent Person's view of the deposit.*	**Tap AB & Urucum Open Pit MIK Models** Resource was classified as Measured, Indicated and Inferred as per the guidelines of the 2012 JORC Code. The Mineral Resource classification of Measured is based on high confidence in the geological and grade continuity, together with sufficient drilling density to allow grade control to be carried out. The Mineral Resource classification of Indicated is based on good confidence in the geological and grade continuity, together with a drilling spacing of approximately 20 m x 20 m to 20 x 40m. Blocks not assigned a category of Measured or Indicated have been assigned a category of Inferred and the relative confidence in these resources may be considered low. The input data is comprehensive in its coverage of the mineralisation and does not favour or misrepresent in-situ mineralisation. The validation of the block model shows good correlation of the input data to the estimated grades The Mineral Resource estimate appropriately reflects the view of the Competent Person. **Tap AB & Urucum Underground Resource OK Models** At Urucum North underground slope of regression was used to classify the resource into the following categories; Inferred = 0 – 0.5, Indicated = 0.5 – 0.85, Measured = 0.85 – 1.0. Lode 2 used Inferred 0 – 0.35, Indicated 0.35 –0 85, Measured 0.85 – 1.0. Several lodes were manually adjusted from Measured and Indicated to an Inferred classification on the basis of lower geological confidence and minimum true width x gram meter requirements. Urucum North Resources in the 1.2 -1.6g/t range were considered to be Inferred in the 30th June 2017 resource estimate. At Urucum South and at Tap AB Underground resources were manually adjusted to an Inferred classification on the basis of lower geological confidence and early stage of economic evaluation.

Criteria	JORC Code explanation	Commentary
Audits or reviews	*The results of any audits or reviews of Mineral Resource estimates.*	The Pit MIK Mineral Resource Estimate at Tap AB and Urucum reflects work completed by International Resource Solutions, a consultant to Beadell. The Estimate has been internally reviewed by Beadell, and as such, the competent person is not aware of any external reviews or audits to date. For the Tap AB and Urucum underground models, swath plots were used for comparison of the kriged grade, sample mean grade, declustered mean, nearest neighbourhood grade and resource classification. A check of the resource classification was done using swath plots of the slope of regression. In all cases a reasonable correlation between samples and model blocks was observed in the measured and indicated categories. The gold lodes were reviewed against the database used in the estimation to visually check the estimation on a section by section basis. AMC consulting completed peer reviews of the Urucum North Underground Resource estimate as part of the Underground Pre-feasibility study.
Discussion of relative accuracy/ confidence	*Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	**Tap AB & Urucum Pit MIK Models** While the Mineral Resource Estimate has not been subject to assessment of accuracy and confidence using any geostatistical or probabilistic approach, the relative accuracy of the Mineral Resource estimate is reflected in the reporting of the Mineral Resource as Measured, Indicated and Inferred as per the guidelines of the 2012 JORC Code. A description of the basis of that classification is provided above. Factors that could affect the accuracy of the estimate include selection of the constraining indicator grade shell and assumptions of mineralisation continuity, particularly in areas of thinly spread data. Drill hole pattern spacing is a major input factor to the accuracy and confidence level with a reduction in both as less drill holes become available within the estimation neighbourhood. The statement relates to global estimates of tonnes and grade with depletion for mining applied as at 30th June 2018. **The Tap & Urucum Underground Resource OK Models** The Urucum underground resource model was tightly constrained to the high-grade lodes, representing a changed approach to the previous open pit resource estimate which encapsulated a large through going envelope along the entire length of the lode shear zone. The previous open pit resource estimate is considered to have incurred a high degree of smoothing as a result of the large envelope being used with Ordinary Kriging. The current underground resource model is considered to be a more accurate estimate of the high-grade lode mineralisation.

Criteria	JORC Code explanation	Commentary
		The statement relates to global estimates of tonnes and grade with depletion for mining applied as at 30th June 2017.

Section 4 Part 1 Estimation and Reporting of Tucano Open Pit Ore Reserves (as per 30 June 2017)

(Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section)

Criteria	JORC Code explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	• *Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.* • *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*	Multiple Indicator Kriged (MIK) Resource models were estimated for the Urucum and Tap AB deposits. Tap C and Urucum East resources were estimated using Ordinary Kriging (OK) techniques. Ore Reserves are the material reported as a sub-set of the Mineral Resource, that which can be extracted from the mine and processed with an economically acceptable outcome. Reported Mineral Resources are 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 case.*	Mr. Felipe Fernandes is a Member of The Australian Institute of Mining and Metallurgy and is a Competent Person who is a full time employee of Beadell Brasil Ltda. and is based at the Tucano mine site. In the opinion of the Competent Person, the mining practices used on site are of a high industry standard.
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 Tucano project has been operating for 5 years. Factors used to estimate the Ore Reserves are based on a combination of actual historical data, forecast estimates and test work undertaken as part of the 2011 project Definitive Feasibility Study (DFS).

Criteria	JORC Code explanation	Commentary
Cut-off parameters	• *The basis of the cut-off grade(s) or quality parameters applied.*	For the purpose of the pit optimisation, cut-off grades were calculated using the following formula; Cut-off Grade Formula= Processing costs (inclusive of additional ore mining costs) (Gold Price - Selling Cost)*(1 - Royalty)*Processing Recovery The optimisation were carried out using a gold price of $1,100 for Tap C and Urucum and a gold price of $1,150 for Tap AB. The optimisation Cut-off Grade (COG) for Urucum was estimated to be 0.74g/t Au for oxide, 0.94g/t Au for sulphide. The COG for Tap C was estimated to be 0.66g/t Au for oxide, 0.86g/t Au for sulphide. The COG for Tap AB was estimated to be 0.66g/t Au for oxide, 0.82g/t Au for sulphide. The COG for Urucum East was estimated to be 0.74g/t Au for oxide, 0.94g/t Au for sulphide. The reserve cut-off grades were calculated using a gold price of $US1200/oz and reported within the pit designs optimised at $1150 for Tap AB and $1100 for Urucum and Tap C. The Reserve Cut-off Grade (COG) for Urucum was estimated to be 0.7g/t Au for oxide and 0.8g/t for sulphide. For Tap AB and Tap C the COG was estimated to be 0.6g/t Au for oxide and 0.8g/t for sulphide. For Urucum East the COG grade was estimated to be 0.7g/t for oxide and 0.9g/t for sulphide.
Mining factors or assumptions	• *The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimization or by preliminary or detailed design).* • *The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.* • *The assumptions made regarding geotechnical parameters (e.g. pit slopes, stope sizes, etc.), grade control and pre-production drilling.* • *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).* • *The mining dilution factors used.* • *The mining recovery factors used.* • *Any minimum mining widths used.*	Whittle pit optimisation software was used to generate the final pit shells and these formed the basis of the final pit designs used to derive the Ore Reserves. Mining is undertaken using conventional excavate load and haul open pit techniques. Mining of the oxide material is predominantly free dig with drilling and blasting being required for the harder transitional and fresh rock. Geotechnical design parameters were originally derived as part of the 2011 DFS. These have been reviewed in light of actual mining exposures over that last four years by Mr. Peter O'Bryan of Peter O'Bryan and Associates who visited the project in May 2015. His opinion was that the parameters were still applicable. Pit designs have been undertaken in accordance with the recommended parameters. Measured and Indicated Mineral Resource material blocks were assigned revenue values to drive the pit optimisation shell. Inferred Mineral Resource material blocks were classified as waste for pit optimisation purposes. The mining model for Tap AB and Urucum used a 15% mining dilution in oxide material and 20% in fresh material to generate the diluted gold grades. A 10% mining loss (90% recovery) was applied to the block tonnage of mineralized material for Tap AB. For Urucum a 100% recovery was

Criteria	JORC Code explanation	Commentary
	• *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.*	assumed. Mining dilution for Tap C was included in the re-blocked resource model with 10% allowance for ore loss. At the bottom of the pits a minimum mining width of 10m was allowed as being suitable for 40t all-wheel drive (AWD) articulated dump trucks and 60t sized excavators. In the upper levels, for example when undertaking a cut back on an existing pit, a minimum mining width of 10m was allowed. Inferred Resources were treated as waste for the estimation of Ore Reserves. The reporting of the Ore Reserves was done within the latest detailed pit design based on a Whittle optimised pit shells using the cost parameters detailed under "Costs" section.
Metallurgical factors or assumptions	• *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.* • *Whether the metallurgical process is well-tested technology or novel in nature.* • *The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.* • *Any assumptions or allowances made for deleterious elements.* • *The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.* • *For minerals that are defined by a specification, has the ore Reserve estimation been based on the appropriate mineralogy to meet the specifications?*	Ore is being processed using conventional Carbon-in leach methodology through an existing processing plant. The process is well established and has been tested to be appropriate for the type of mineralisation. The plant has been operating effectively five years. Deleterious elements are known to occur in trace amounts at some locations in the form of "preg robbing" graphitic schist. This material does not exist within any part of the existing pit designs. The gold recoveries for this Ore Reserve were based on actual recoveries of oxide ore from the existing processing plant which has been processing similar types of ore for five years. Metallurgical recoveries for fresh ore are based on the test work undertaken during the compilation of the project 2011 DFS and also the results of actually processing small parcels of fresh ore. Additional Metallurgical Testwork was conducted by SGS in Belo Horizonte during 2017 testing gold recoveries from a range of ore types and grind sizes. The ores at the Tucano have high metallurgical recoveries. All ores are free milling and the metallurgical recovery has been estimated at 93% for all ore types.

Criteria	JORC Code explanation	Commentary
Environmental	• *The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.*	The waste rock characteristics at Tucano have been evaluated via kinetic testing and indicated no adverse impacts. Tailings dams with a high percentage of sulphide material will remain in a saturated state post mining operations. Identified waste rock with ARD potential will be encapsulated in the waste dumps by non ARD potential oxide material that has a high clay content. The only area pertaining to this is at the Urucum pit. The same rock types which present at Duckhead were the subject of the above mentioned testing and no adverse conditions were the result of this study for these rock types. The Duckhead mineralisation is predominantly oxide in nature. All statutory approvals are in place.
Infrastructure	• *The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.*	The Tucano mine site is an established mining operation with an operating process plant including single stage crushing, Semi autogenous grinding (SAG) facility, Carbon in Leach (CIL) circuit and a conventional elution circuit with electro-winning plating with final site production of dore bars. The process plant surface foot print is fully established, including a ROM pad and three tailings storage facilities that are expanded yearly for future capacity. The Administration facility, mobile maintenance shop areas are fully established. This includes facilities for administration, support services, engineering, geology, mine planning and mining maintenance and preparations. The mobile maintenance workshop facility is sized and tooled for the fleet type and size, including wash bays, fuelling and services bays. The mine site road infrastructure is fully established to access the current mining areas and this is expanded as required to access new open pit areas. As part of the process plant upgrade, power is moving away from diesel powered generator sets and onto the State powered grid. As at 30 June 2018 a total of 6.0MW are supplied from the grid while the remaining 3.0MW are from diesel generators. In 2019 it is expected to achieve 12.0MW from the grid as soon as possible and authorized by the CEA. Mining operations commenced at Duckhead in August 2012 with existing infrastructure and workforce in place to mine the deposit. Mining at Urucum, Tap C, Tap D and Tap AB have been in operation since mid-2000. The mine site has camp facilities for 100 occupants, mostly senior staff. The workforce lives in three local towns that are within a 30- 40 minute commute by bus each way. The Company provides bus transportation for the workforce.

Criteria	JORC Code explanation	Commentary
Costs	• *The derivation of, or assumptions made, regarding projected capital costs in the study.* • *The methodology used to estimate operating costs.* • *Allowances made for the content of deleterious elements.* • *The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co-products.* • *The source of exchange rates used in the study.* • *Derivation of transportation charges.* • *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.* • *The allowances made for royalties payable, both Government and private.*	The key pit optimization parameters used to derive the economic pit shells for the deposits were based on parameters and cost data projected for the 2017 Budget. Mining costs were based on the Mining Contract rates escalated in accordance with the Rise and Fall clause of the mining contract. A set of process and overhead costs for processing oxide and fresh ore were estimated by the process manager based on current operating costs and projected operating costs. The exchange rate used to define the Whittle pit shells was US$ 1.0 = BRL 3.20 for Tap AB and US$ 1.0 = BRL 3.40 for Urucum and Tap C
$Revenue factors	• *The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.* • *The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.*	Gold revenue for the Whittle pit optimisations was US$1,100 per troy ounce gold at an exchange rate of US$ 1.0 = BRL 3.40 for Urucum and Tap C (these optimisations were completed in 2016). For Tap AB gold revenue was US$ 1,150 per troy ounce of gold at an exchange rate of US$ 1.0 = BRL 3.20. A 2.0% royalty charge was deducted from this base revenue as selling costs. A US$ 0.98 per troy ounce charge was used for selling and refining charges. Ore Reserves have been reported from within open pit designs based on Whittle pit optimisations result shells. For ore reserves reporting the cut-off calculation was based on a revenue of US$1,200 at an exchange rate of US$1.0 = BRL3.25
Market assessment	• *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.* • *A customer and competitor analysis along with the identification of likely market windows for the product.* • *Price and volume forecasts and the basis for these forecasts.* • *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.*	Gold is a readily tradeable commodity subject to well known market conditions.

Criteria	JORC Code explanation	Commentary
Economic	• *The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.* • *NPV ranges and sensitivity to variations in the significant assumptions and inputs.*	Whittle optimisation estimated the NPV for the optimum pit shells using a 5% discount rate. No allowance was made for inflation. All open pits were optimised and designed individually and have not yet been subject to a combined detailed production schedule for life of mine to produce a detailed NPV financial model.
Social	• *The status of agreements with key stakeholders and matters leading to social license to operate.*	All necessary agreements are in place.
Other	• *To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:* • *Any identified material naturally occurring risks.* • *The status of material legal agreements and marketing arrangements.* • *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the 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.*	All necessary legal and statutory approvals are in place for the Tucano operation.
Classification	• *The basis for the classification of the Ore Reserves into varying confidence categories.* • *Whether the result appropriately reflects the Competent Person's view of the deposit.* • *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	Measured Mineral Resources within the final pit designs that were flagged as ore, above the cut-off grade, in the Resource block model were classified as Proved Ore Reserves. Indicated Mineral Resources within the final pit designs that were flagged as ore, above the cut-off grade, in the Resource block model were classified as Probable Ore Reserves. In the opinion of the Competent Person the estimation process undertaken represents a reasonable estimate of the Ore Reserves.
Audits or reviews	• *The results of any audits or reviews of Ore Reserve estimates.*	External consultants have been engaged to review the Company's Mineral Resources and Ore Reserves procedures

<table>
<tr><th>Criteria</th><th>JORC Code explanation</th><th>Commentary</th></tr>
<tr><td>Discussion of relative accuracy/ confidence</td><td>

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 should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.
It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.

</td><td>
Reconciliation between the reserve model and mill production was conducted over the period 30th June 2017 – 30th June 2018 for Tap AB and 1st Jan 2018 – 30 June 2018 for Urucum and Tap C (no mining occurred at Urucum or Tap C in 2017). Compared with the mill and stockpile reconciled mine production, results were as follows:
<table>
<tr><th></th><th>Tonnes</th><th>Au</th><th>Oz</th></tr>
<tr><td>Tap AB</td><td>127%</td><td>71%</td><td>90%</td></tr>
<tr><td>Tap C</td><td>90%</td><td>88%</td><td>79%</td></tr>
<tr><td>Urucum</td><td>101%</td><td>86%</td><td>87%</td></tr>
<tr><td>Total</td><td>114%</td><td>77%</td><td>88%</td></tr>
</table>
The negative grade reconciliation for Tap AB was partially driven by marginal oxide material in the 0.5-0.60g/t range being included in the plant feed due to oxide:sulphide blend restrictions.

Mining was completed in Tap C3 and C3N pits in early 2018. During 2018 H1 Urucum mining transitioned to 100% sulphide.

With the plant upgrade complete and the move to significantly higher percentage of sulphides in the mill feed blend, combined with the move away from supplemental oxide spent ore feed, a full review of resource modelling to mill production is planned for early 2019. This will ensure that the most accurate information is being used for reconciliation future resource and reserve modelling.
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</table>

Section 4 Part 2 Estimation and Reporting of Urucum Underground Ore Reserves. This section is reported as per the 2018 PFS compiled by AMC and filed by Great Panther Silver on the TSX under NI43-101 on September 6th 2018.

(Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section)

Criteria	JORC Code explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	*Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.* *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*	The Urucum North UG Resource (PFS), based on Measured and Indicated Mineral Resources totals 2.89 Mt @ 4.22 g/t (393,000 Oz), based on a cut-off grade of 1.6 g/t Au and constrained below open pit design (des_uru_nth_march_a2016.dxf – dated 11th March 2016) and north of 99300 mN. This Measured and Indicated Mineral Resource converts to: 2.38 Mt @ 3.64 g/t (278,000 Oz) of Probable Ore Reserves.
Site visits	*Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* *If no site visits have been undertaken indicate why this is the case.*	No site visit has yet been undertaken by this competent person.
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 NI 43-101 Technical Report was completed in 2018.
Cut-off parameters	*The basis of the cut-off grade(s) or quality parameters applied.*	The cut-off grade for estimation of underground Ore Reserves is 1.6 g/t Au. This cut-off grade was based on an incremental mining and processing cost of US$50/t, metallurgical recovery of 90% and a gold price of US1,120/oz. AMC has undertaken sufficient design, scheduling and costing work to test the effect of increasing the COG above 1.6 g/t Au. This work indicates that the low-grade stopes (between 1.6 and 2.0 g/t Au) add value to the overall project economics, partially because of already expensed “fixed costs” and already costed development that is required to access higher grade stopes.

Criteria	JORC Code explanation	Commentary
Mining factors or assumptions	*The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design). The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.* *The assumptions made regarding geotechnical parameters (e.g. pit slopes, stope sizes, etc.), grade control and pre-production drilling. The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).* *The mining dilution factors used.* *The mining recovery factors used.* *Any minimum mining widths used.* *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.* *The infrastructure requirements of the selected mining methods.*	Two mining methods have been adopted for the study, namely Benching and Up-Hole retreat. Sill pillars will be recovered using the Up-Hole retreat method. Both methods are considered to be standard underground methods and are commonly employed in underground mines in Australia and elsewhere. The underground Ore Reserves cover a strike length of 800 m and are planned to be accessed from 2 trucking declines. Ore will be mucked from stopes using Load Haul Dump (LHD) units. Ore will be trucked to surface using underground articulated trucks. Geotechnical parameters have been applied based on geotechnical studies based on diamond drill-holes specifically logged for geotechnical purposes. Stope shapes were generated using Mineable Shape Optimizer (MSO) module from Datamine Studio mine planning package. The MSO programme ensures that each stope generated has a grade greater than the 1.6 g/t COG. Stopes are based on a height of 20 m (inclusive of ore development) and 25 m along strike. A 0.5 m dilution skin was assumed for the HW and FW side of the stopes making the total dilution 1.0 m in width. Ore losses for the Benching method were assumed to be 8%. Ore losses for the Up-Hole retreat method were assumed to be 14%. Ore losses for the recovery the sill pillars, were assumed to be 35%. Sufficient scheduling was undertaken as part of the PFS to determine the preferred extraction sequence. Sufficient economic modelling was undertaken as part of the PFS to determine that the underground mine would be economic. During the above process, Inferred Mineral Resources were excluded from mine schedules and economic valuations to validate the economic viability of the Ore Reserves.

Criteria	JORC Code explanation	Commentary
Metallurgical factors or assumptions	*The metallurgical process proposed and the appropriateness of that process to the style of mineralisation. Whether the metallurgical process is well-tested technology or novel in nature.* *The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.* *Any assumptions or allowances made for deleterious elements.* *The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.* *For minerals that are defined by a specification, has the Ore Reserve estimation been based on the appropriate mineralogy to meet the specifications?*	A 3.6 Mtpa processing facility currently exists at Tucano. A processing recovery of 90% has been assumed in the PFS. Recoveries are based on various metallurgical studies of the Tucano ore supported by actual recovery data from current mining and processing of the Urucum orebody in the open pit.
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.*	Urucum Underground is located on an active and fully permitted mining concession. Permitting is required to develop an underground mine on the mining concession which currently is for the open pit. Sufficient sites for waste rock dumps exist at the site. Sufficient tailings storage facilities exist for production up to and including Year 2018. Beadell plans to build additional storage capacity for production beyond Year 2018 in future years as required.
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.*	Access to site is well established as open pit mining operations commenced in 2012. This access comprises sealed road from the port town of Macapá towards Porto Grande, unsealed road from Porto Grande to Pedra Branca do Amapari, unsealed road from Pedra Branca do Amapari to site developed specifically for the project. The journey from Macapá takes approximately 4 hours by car during the dry season and up to 6 hours during the wet season. Power and water supplies exist at the site. PFS assumes a long term power cost of US$0.08/kWhr. Workshops, messing facilities and offices already exist and service the Tucano open pits. Additional workshops, change rooms and offices are planned for the underground project.

Criteria	JORC Code explanation	Commentary
Costs	*The derivation of, or assumptions made, regarding projected capital costs in the study.* *The methodology used to estimate operating costs.* *Allowances made for the content of deleterious elements.* *The derivation of assumptions made of metal or commodity price(s), for the principal minerals and co- products.* *The source of exchange rates used in the study.* *Derivation of transportation charges.* *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.* *The allowances made for royalties payable, both Government and private.*	Capital infrastructure cost estimates have been based on budget quotations from suppliers and quotations sourced by AMC for Urucum UG as well as for other projects. Labour rates have been based on 2014 rates sourced by Beadell Resources with 10% inflation added and converted to US$ using a US$:RS of 1: 3.8 Operating cost estimates were developed by AMC from first principles, assuming contractor mining with the contractor leasing the mobile equipment fleet. A 10% contractor margin has been included in the costs. Benchmarked costs and productivities were also used in the cost model. Processing and General and Admin costs forecasted at US$17/t have been assumed in the PFS. 2% Royalty costs included in the cash flows and economic assessment.
$Revenue factors	*The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.* *The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.*	A gold price of US$1200 has been used as the revenue basis.
Market assessment	*The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.* *A customer and competitor analysis along with the identification of likely market windows for the product.* *Price and volume forecasts and the basis for these forecasts.* *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.*	Gold is an internationally sought commodity.
Economic	*The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.* *NPV ranges and sensitivity to variations in the significant assumptions and inputs.*	Financial modelling of the Urucum UG project, prepared by AMC Consultants Pty Ltd using inputs consistent with the Ore Reserve estimate, indicates the project is economically viable with a positive Net Present Value (NPV). The NPV is the discounted earnings before interest, tax, depreciation and amortisation. A 5% discount rate has been used in NPV calculations. Sensitivities indicate that the pre-tax NPV is positive when the gold price is over $1,070/

Criteria	JORC Code explanation	Commentary
Social	*The status of agreements with key stakeholders and matters leading to social license to operate.*	Beadell has an open pit workforce in the order of 400 personnel with workplace agreements and a long history of local community and government support. The development of an underground operation will require an additional workforce, however is considered to be an accretive satellite type expansion of the open pit operation that will be well supported by local municipalities and state governments due to the job opportunities and royalties it would provide.
Other	*To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:* *Any identified material naturally occurring risks.* *The status of material legal agreements and marketing arrangements.* *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the 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 Urucum Underground Ore Reserve is located entirely on Beadell's 100% owned active mining concession 851.676/92 which also contains the Tucano Gold plant which will be used to process the Urucum underground ore in the future. This mining concession has all current permitting in place for open pit mining and processing and will need to be amended to include underground mining in the mining concession.
Classification	*The basis for the classification of the Ore Reserves into varying confidence categories.* *Whether the result appropriately reflects the Competent Person's view of the deposit.* *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	The Ore Reserves consist of 100% Probable Ore Reserves with 9% of Probable Ore Reserves derived from Measured Mineral resources. The Competent Person is satisfied that the stated Ore Reserve classification reflects the outcome of technical and economic studies.
Audits or reviews	*The results of any audits or reviews of Ore Reserve estimates.*	The Ore Reserve estimate was the first estimate for this deposit.
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*	• The confidence in the Ore Reserve is reflected by the classifications shown above. • A more accurate estimate (Proven Ore Reserve) is likely either once additional drilling is performed or once underground ore development is in place, leading to a more accurate assessment of ore grades, tonnages and geotechnical conditions. Urucum UG cost estimates are considered to be not better than +25% based on the accuracy of the PFS. The confidence of these estimates will improve as feasibility study work and contractor

Criteria	JORC Code explanation	Commentary
	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 should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.* *It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	discussions/negotiations get underway.