ASX AND MEDIA RELEASE

ASX: ARV | OTCQB: ARTFF | Frankfurt: ATY

11 February 2019

CARLOW CASTLE Au-Cu-Co METALLURGICAL UPDATE

- **Objective of programme was to determine amenability of Carlow Castle Au-Cu-Co Project to conventional gravity, leach and flotation processes**
- **Results confirm effective separation and high recoveries of Gold, Copper and Cobalt via conventional process routes**
- **Preliminary test work on two composite samples indicates:**
  - ***Total recovered gold of 98-99% - with significant coarse, gravity recoverable gold up to 48%***
  - ***Total recovered copper of 77-85% - with flotation producing premium grade concentrates of ≈30% Cu***
  - ***Total recovered cobalt of 73-79% - with flotation producing concentrates of 2.3 – 5.3% Co***
  - **Gold not recovered via flotation amenable to cyanide leach process**
- **Results provide a strong basis for further flowsheet optimisation and geometallurgical test work**

Artemis Resources Limited ("Artemis" or "the Company") (ASX:ARV, Frankfurt: ATY, US OTCQB: ARTTF) is pleased to provide this metallurgical update on the company's Carlow Castle Au-Cu-Co Project in the Pilbara region of Western Australia.

Laboratory scale gravity gold, cyanide leach and flotation processes were adopted with a view to gain an insight into the metallurgical behaviour and recoverability of gold, copper and cobalt. Two drill hole composites were generated and tested at ALS Metallurgy in Western Australia. **Table 1** summarises metallurgical results from optimised tests from a 50-test suite.

Table 1: Carlow Castle Au-Cu-Co Project – Summary of Optimised Results

		Metal Recovery				Concentrate Grade				
Comp	Metallurgical Process	Gold %	Silver %	Copper %	Cobalt %	Gold g/t	Silver g/t	Copper %	Cobalt %	Arsenic %
COM 01	Gravity recoverable	46	4	-	-	-	-	-	-	-
	Cyanide in leach (CIL)	4	2	-	-	-	-	-	-	-
	Copper concentrate	22	64	81	6	19.3	84.0	30.0	0.5	0.7
	Cobalt concentrate	26	26	3	73	20.1	29.8	3.4	5.3	7.2
	Total recovered metal	**98**	**96**	**85**	**79**	-	-	-	-	-
COM 02	Gravity recoverable	48	4	-	-	-	-	-	-	-
	Cyanide in leach	7	10	-	-	-	-	-	-	-
	Copper concentrate	25	66	75	5	21.5	84.0	29.6	0.2	0.3
	Cobalt concentrate	19	16	2	68	12.2	15.5	2.2	2.3	3.1
	Total recovered metal	**99**	**96**	**77**	**73**	-	-	-	-	-

Artemis Chief Executive Officer Wayne Bramwell commented;

"Artemis is encouraged by the amenability of the deposit to conventional processing options and the excellent recoveries of the three key minerals. Gold and high-grade copper concentrates will be the primary value drivers at Carlow Castle with cobalt representing a third and valuable product stream that should appeal to many potential off-take partners."

DETAILS OF THE METALLURGICAL TEST WORK PROGRAMME

Artemis has completed preliminary metallurgical test work on the Carlow Castle Au-Cu-Co Project at ALS Metallurgy in Western Australia. The programme focussed on metallurgical amenability on selected samples from the Carlow Castle deposit employing conventional gravity gold, cyanide leach and flotation processes. Outcomes specific to the metallurgical response and recovery for three target commodities (gold, copper and cobalt) are proposed to be used for further project development evaluations.

Sample Selection

Two 100 kg HQ diamond core metallurgical composites, sampled from drill holes CCAD001 to CCAD012 (refer ASX release 15 October 2018 and **Figure 1**), were used for this programme.

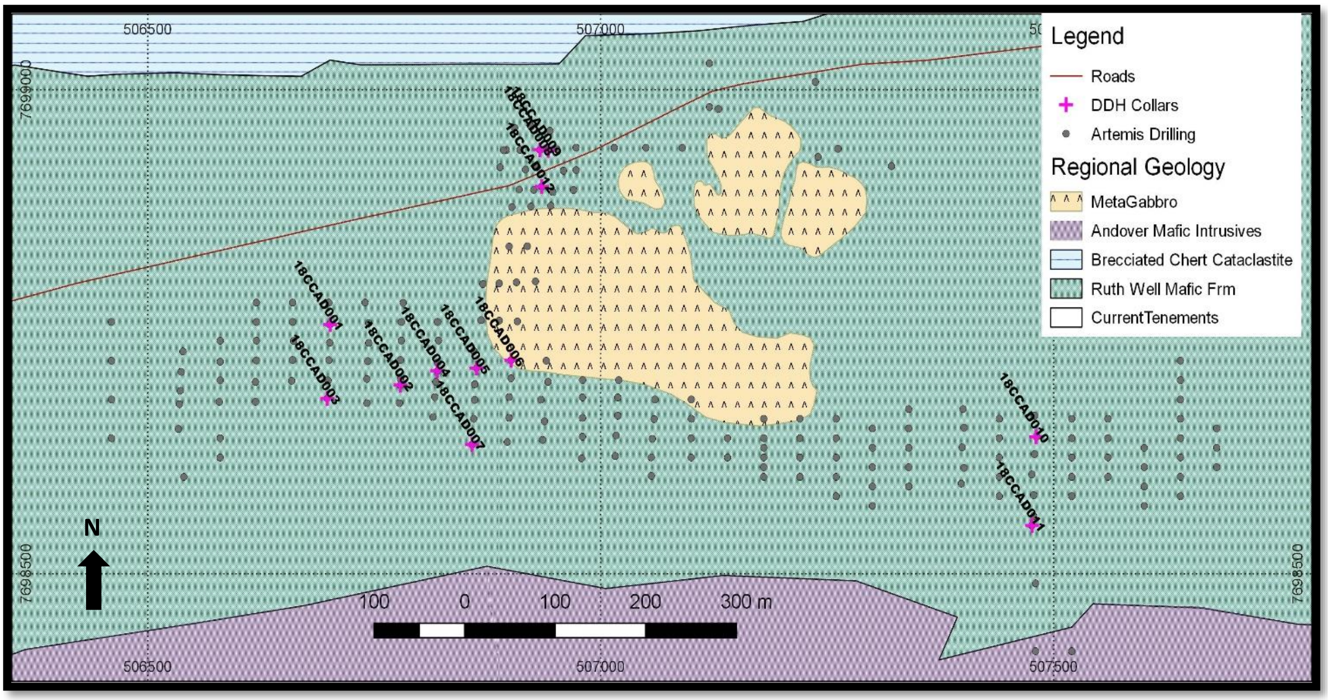

Figure 1 – Drill Hole locations at Carlow Castle sampled for COM-01 and COM-02

Table 2 summarises the composite head grades with COM-01 selected as a high-grade sample to more readily discern its metallurgical characteristics.

Table 2 – Carlow Castle Metallurgical Composite Samples – Head Grade

Sample ID	Gold g/t	Silver g/t	Copper %	Cobalt %
COMPOSITE 01 (COM-01)	5.0	7.5	2.1	0.46
COMPOSITE 02 (COM-02)	2.2	3.3	1.0	0.12

Scope of Test work

The metallurgical test work scope was focused on recovery of:

- **Gold** – from both gravity recovery and cyanide leaching processes to produce a gold product suitable for on-site smelting and production of gold dore; and
- **Copper and Cobalt** – via conventional flotation to produce separate copper and cobalt concentrates.

The metallurgical test flowsheet utilises typical processing pathways for precious and base metal ores.

Each composite was crushed and ground with coarse gold removed using conventional gravity devices. The ground-gravity tailing is then subjected to a series of sulphide flotation stages. The flotation stages employ mineral specific reagents to selectively recover copper and cobalt minerals. Copper flotation is performed first with the tailings sent for selective cobalt flotation.

Copper and Cobalt mineral rougher concentrates may require a light regrind to release any locked minerals and improve the final grades of the respective cleaned concentrates.

Tailings from the flotation process containing fine or non-floating gold is subjected to conventional cyanide leach and carbon adsorption processes.

Figure 2 presents the test work flowsheet and forms the basis of results presented.

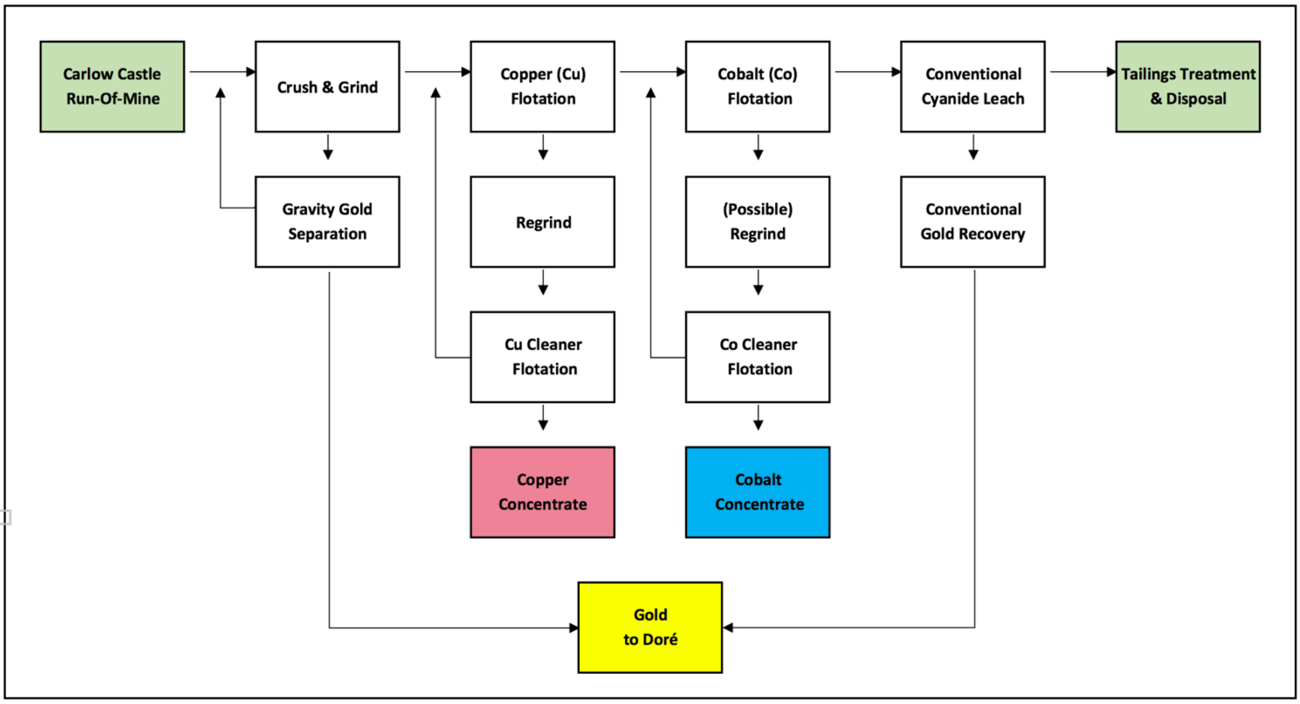

Figure 2: Carlow Castle Au-Cu-Co Project metallurgical test work flowsheet

Test Results

More than 50 metallurgical tests have been conducted at ALS Metallurgy to date with encouraging metallurgical response and reproducibility for all commodities. The collective metallurgical response for the two composites tested to date is presented in **Table 3**.

Test results present indicative metallurgical behaviour for both composites and comprise the following tests:

- Optimised gravity gold and copper flotation results from ALS Test 4407 and 4406 (COM-01 and COM-02 respectively);
- Cobalt flotation results from ALS Test 4403 and 4406 (COM-01 and COM-02 respectively); and
- Cyanide leach results from ALS Test 1574 and 1575 (COM-01 and COM-02 respectively).

Table 3: Carlow Castle Au-Cu-Co Project – Summary of Optimised Results

		Metal Recovery				Concentrate Grade				
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COM 01	Gravity recoverable gold	46	4	-	-	-	-	-	-	-
	Cyanide in leach (CIL)	4	2	-	-	-	-	-	-	-
	Copper concentrate	22	64	81	6	19.3	84.0	30.0	0.5	0.7
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	Total recovered metal	**98**	**96**	**85**	**79**	-	-	-	-	-
COM 02	Gravity recoverable gold	48	4	-	-	-	-	-	-	-
	Cyanide in leach	7	10	-	-	-	-	-	-	-
	Copper concentrate	25	66	75	5	21.5	84.0	29.6	0.2	0.3
	Cobalt concentrate	19	16	2	68	12.2	15.5	2.2	2.3	3.1
	Total recovered metal	**99**	**96**	**77**	**73**	-	-	-	-	-

The results to date confirm amenability for gold, copper and cobalt processing with excellent recoveries. Analysis of the metallurgical results indicate:

Gold

- **Significant gravity recoverable gold component -** ranging up to 48% and suitable for on-site processing into gold doré;
- **The balance of the non-gravity gold is expected to be recovered into flotation concentrates** - as a by-product credit or recovered by a cyanide leach process; and
- **Cyanide leach test work confirms amenability to conventional low-cost gold recovery processes** - with exceptional final tailings grades 0.03 to 0.10 g/t.

Copper

- **Fast floating copper minerals produce high-grade, premium copper concentrate** – of approximately 30% Cu;
- **Key deleterious elements including arsenic are easily managed with a light polishing regrind or blend control -** COM-01 is considered a high-grade sample and therefore comes with elevated arsenic linked to the cobalt mineral; arsenic levels are expected to return in line with COM-02 (0.3% As) and as such, will be well below smelter penalty limits of circa 0.5% As; and
- **Recoveries in line with mineralogy realising 77–85% copper recovery** - unrecovered copper minerals are predominantly represented by non-floating silicates or secondary copper minerals.

Cobalt

- **Cobalt recoveries ranging 73-79% - considered exceptional for the preliminary nature of the current metallurgical test work programme;**
- **Cobalt concentrate grades ranging 2.3–5.3% Co are saleable – with circa 3% Co concentrates being typical smelter feed and >5% Co being considered high grade** – it should be noted that concentrate grades as high as 19% Co were achieved in several tests conducted. Mineralogy conducted on cobalt concentrates from COM-01 and COM-02 indicate well liberated minerals (cobaltite and gangue) and are amenable to significant further upgrade. Test work continues to improve cobalt concentrate grades and ultimately aims to maintain optimal recovery and reduce shipping / smelter treatment charges; and
- **Cobaltite (CoAsS) is the dominant cobalt bearing mineral** - and is therefore intrinsically linked to arsenic. Targeting lower specification Co concentrates will minimise processing capital and if high specification Co concentrates are targeted a higher capital, hydrometallurgical flowsheet will be required. As such and with a view to optimising returns, a trade-off study of capital and operating expense versus revenue from differing grade product streams will be evaluated prior to final flowsheet selection.

LOOKING FORWARD

The Carlow Castle Au-Cu-Co process flowsheet currently targets conventional, low cost processes with the copper and gold process routes essentially proven. Options exist to refine the cobalt concentrate quality with the next phase of the geometallurgical programme to support the optimal process scale and flowsheet selection.

The results of the metallurgical test work programme and forthcoming resource update will provide Artemis with a basis to plan and advance project development activities including:

- Resource and pit optimisation;
- Structural and geotechnical drilling;
- Generation of a representative metallurgical master composites;
- Continue to metallurgically characterise existing and alternative low-cost process flowsheets including:
  - Expanding knowledge of cobalt flotation chemistry and optimisation,
  - Maximising gold recovered via cyanide leach (i.e. to Dore);
- Engage smelters and offtake partners;
- Detailed geo-metallurgical test programme;
- Engineering trade-off studies to attain the optimal process flowsheet and major equipment selections;
- Project economics and project viability; and
- Engineering and Feasibility Studies.

A detailed development timeline for Carlow Castle is being currently reviewed.

For further information on this announcement or the Company generally, please visit our website at www.artemisresources.com.au or contact:

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BACKGROUND INFORMATION ON ARTEMIS RESOURCES

Artemis Resources Limited is an exploration and development company focussed on its large (~2,400 km^2) and prospective base, battery and precious metals assets in the Pilbara region of Western Australia. Artemis owns 100% of the 500,000 tpa Radio Hill processing plant and infrastructure, located approximately 35 km south of the city of Karratha.

The Company is evaluating 2004 and 2012 JORC Code compliant resources of gold, nickel, copper-cobalt, PGE's and zinc, all situated within a 40 km radius of the Radio Hill plant.

Artemis have signed Definitive Agreements with Novo Resources Corp. ("Novo"), which is listed on Canada's TSX Venture Exchange (TSXV:NVO), and pursuant to the Definitive Agreements, Novo has satisfied its expenditure commitment, and earned 50% of gold (and other minerals necessarily mined with gold) in conglomerate and/or paleoplacer style mineralization in Artemis' tenements within 100 km of the City of Karratha, including at Purdy's Reward ("the Gold Rights"). The Gold Rights do not include:

(i) gold disclosed in Artemis' existing (at 18 May 2017) JORC Code Compliant Resources and Reserves; or

(ii) gold which is not within conglomerate and/or paleoplacer style mineralization; or

(iii) minerals other than gold.

Artemis' Mt Oscar tenement is excluded from the Definitive Agreements. The Definitive Agreements cover 34 tenements / tenement applications that are 100% owned by Artemis.

Pursuant to Novo's successful earn-in, two 50:50 joint ventures have been formed between Novo's subsidiary, Karratha Gold Pty Ltd ("Karratha Gold") and two subsidiaries of Artemis (KML No 2 Pty Ltd and Fox Radio Hill Pty Ltd). The joint ventures are managed as one by Karratha Gold with Artemis and Novo contributing to further exploration and any mining of the Gold Rights on a 50:50 basis.

FORWARD LOOKING STATEMENTS AND IMPORTANT NOTICE

This report contains forecasts, projections and forward-looking information. Although the Company believes that its expectations, estimates and forecast outcomes are based on reasonable assumptions it can give no assurance that these will be achieved. Expectations and estimates and projections and information provided by the Company are not a guarantee of future performance and involve unknown risks and uncertainties, many of which are out of Artemis' control.

Actual results and developments will almost certainly differ materially from those expressed or implied. Artemis has not audited or investigated the accuracy or completeness of the information, statements and opinions contained in this announcement. To the maximum extent permitted by applicable laws, Artemis makes no representation and can give no assurance, guarantee or warranty, express or implied, as to, and takes no responsibility and assumes no liability for the authenticity, validity, accuracy, suitability or completeness of, or any errors in or omission from, any information, statement or opinion contained in this report and without prejudice, to the generality of the foregoing, the achievement or accuracy of any forecasts, projections or other forward looking information contained or referred to in this report.

Investors should make and rely upon their own enquiries before deciding to acquire or deal in the Company's securities.

JORC Code, 2012 Edition – Table 1 (extracted from AM&A resource estimate report)

SECTION 1 SAMPLING TECHNIQUES AND DATA

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.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *In cases where 'industry standard' work has been done this would be relatively simple (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 drilling was RC drilling performed by Three Rivers Drilling during 2017 and Topdrill in 2017 and 2018. • RC samples from each metre were collected through a rig-mounted cyclone and split using a rig-mounted static cone splitter and submitted to an independent laboratory for chemical analysis. • Drilling included comprehensive QA/QC protocols including the use of certified standards, blanks and duplicate samples. • To assist the site geologist, all samples were analysed using a portable XRF instrument (Niton & Innovex) at drill site. • All the diamond core was cut by trained technicians along the long-axis using a diamond saw between intervals marked up by the geologist. The sampling intervals were nominally 1 m adjusted to match lithological/mineralisation boundaries. • The aim of the metallurgical test work programme was to prepare a preliminary flow sheet that may form the basis of a more detailed future test work programme from representative drill core samples when a resource update is available. This initial test work focused on attempting to identify a possible simple beneficiation technique to recover a gold, copper and cobalt. Two metallurgical composites were generated based on 122 half core drill hole intervals, selected from mineralised sections of twelve diamond drill holes (18CCAD01 to 18CCAD02). • The metallurgical core samples were placed in sealed plastic trays before being shipped to ALS Metallurgy, Perth, WA for compositing and metallurgical test work. • The two 100kg composites were crushed to minus 3.35mm before sub-splitting for exploratory test work.
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,*	• Reverse Circulation drilling at Carlow Castle South was completed by a truck-mounted Schramm 685 RC drilling rig using a 5¼ inch diameter face sampling hammer. • The HQ3 diamond drilling was completed using a truck mounted Evolution FH3000 Diamond

Criteria	JORC Code explanation	Commentary
	etc).	Drill.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.*	• Sample recoveries were recorded by the field geologist in the field during logging and sampling. • If poor sample recovery is encountered during drilling, the supervising geologist and driller endeavour to rectify the problem to ensure maximum sample representative nature of the recovery.
Logging	• *Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *The total length and percentage of the relevant intersections logged.*	• All RC drill chip samples were appropriately geologically logged at 1m intervals from surface to the bottom of each drill hole. It is considered that geological logging is completed at an adequate level to allow appropriate future Mineral Resource estimation. • All diamond core was appropriately geologically and geotechnically logged in detail on site by geologist. • Geological logging is considered semi-quantitative due to the limited geological information available from the Reverse Circulation method of drilling. • All RC and diamond drill holes completed by Artemis during the current program have been logged in full.
Sub-sampling techniques sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• The RC drilling rig was equipped with a rig-mounted cyclone and static cone splitter, which provided one bulk sample of approximately 20-30 kilograms, and a representative sub-sample of approximately 2-4 kilograms for every metre drilled. • The sample size of 2-4 kilograms is considered to be appropriate and representative of the grain size and mineralisation style of the deposit, duplicate samples were collected and submitted for analysis confirming subsample representation. • The majority of samples were dry. Where wet sample was encountered, the cleanliness of the cyclone and splitter were closely monitored by the supervising geologist, and maintained to a satisfactory level to avoid contamination and ensure representative samples were being collected. • The HQ3 diamond drill core was cut by trained technicians along the long-axis using a diamond saw between intervals marked up by the geologist. The sampling intervals were nominally 1 m adjusted to match

Criteria	JORC Code explanation	Commentary
		lithological/mineralisation boundaries. • Duplicate samples were collected and submitted for analysis. Reference standards inserted during drilling. • The sample and particle sizes are appropriate for the grainsize of the material being sampled.
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.*	• More than 50 metallurgical tests have been conducted at ALS Metallurgy to date with encouraging metallurgical response and reproducibility for all commodities. • The nature and quality of assaying is considered appropriate for the metallurgical test work.
Verification sampling assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• Multiple head assays for each sub-sample of each metallurgical composite were carried out. Grade data was also reconciled for each sub-sample tested from the metallurgical composites. • No adjustments of assay data are considered necessary.
Location of c points	• *Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• A Garmin GPSMap62 hand-held GPS was used to define the location of the drill hole collars. Standard practice is for the GPS to be left at the site of the collar for a period of 5 minutes to obtain a steady reading. Collar locations are considered to be accurate to within 5m. The collars of all the completed holes were subsequently picked up with DGPS with an accuracy of within 1 cm. • Downhole surveys were captured at 30 metre intervals for the drill holes. • The grid system used for all Artemis drilling is GDA94 (MGA 94 Zone 50) • Land Surveys out of Karratha surveyed the topography using drone photogrammetry (0.035m resolution) in January 2018.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.*	• Not Applicable. Samples were for metallurgical test work and will not be used for Mineral Resource

Criteria	JORC Code explanation	Commentary
	• *Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.* • *Whether sample compositing has been applied.*	estimations.
Orientation of data in relation to geolog structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.*	• The aim of the metallurgical test work programme was to prepare a preliminary flow sheet that may form the basis of a more detailed future test work programme from representative drill core samples when a resource update is available. This initial test work focused on attempting to identify a possible simple beneficiation technique to recover a gold, copper and cobalt. Best endeavours have been made, using drill hole assays and statistical analysis to generate two metallurgical composites (COM-02) and high grade (COM-01) samples to test the mineralisation amenability to low cost processing techniques.
Sample security	• *The measures taken to ensure sample security.*	• Core samples were collected by employees of Artemis from core situated at the company's core farm located in Karratha. Samples were then transported from Karratha to Perth before being submitted to ALS Metallurgy in Perth, WA for sample preparation and metallurgical test work.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No audits completed.