

ASX: ARV ATY: FRANKFURT

# Base, Battery and Precious Metals

ARTEMIS RESOURCES LIMITED IS AN AUSTRALIAN MINERAL DEVELOPER ADVANCING ITS WEST PILBARA BASE METALS, BATTERY AND PRECIOUS METALS ASSETS TOWARDS PRODUCTION.

ARTEMIS HAS CONSOLIDATED A MAJOR LAND HOLDING IN THE WEST PILBARA AND IS THE 100% OWNER OF THE RADIO HILL OPERATIONS AND PROCESSING INFRASTRUCTURE, STRATEGICALLY LOCATED 30 KM FROM THE CITY OF KARRATHA, THE POWERHOUSE OF THE PILBARA.

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## **ASX / Media Announcement**

3 July 2018

## UPDATE ON SUPER-DEEP HOLE IN WEST PILBARA - Western Australia -

**Artemis Resources Limited ("Artemis"** or "the Company") (ASX: ARV) is pleased to provide this update on ASD-1, the West Pilbara super-deep diamond drill hole.

Diamond Drill Hole – ASD-1 Super Deep Hole			
Date 2 July 2018			
Time	12 pm WST		
Drill Size (outside diameter)	PQ (~122.6mm)		
	(0-500m)		
Drill Size (outside diameter)	HQ (~96mm)		
	(500m -?)		
Current Depth of Drill hole	595 metres		

Figure 1: Rig 43 from DDH1 Drilling on site drilling ASD-1



ASD-1 is planned for a vertical depth of +3,300m and designed to test the many rock sequences in the Pilbara Basin from surface and deep into the basement's geology.

DDH1 Drilling have completed mobilising all their equipment to site and have now commenced 24 hour diamond drilling operations (Figure 1). The current drilling rate has reduced to 20m/shift from 40m/shift and is expected to increase again, as at 500m the core size was reduced from PQ to HQ.

The drill core from the hole is being moved from the drill site to Artemis's Radio Hill Operations, located some 43 km to the north, where core is being logged and photographed. The round trip to move core is taking some 7 hours as care is being taken to not damage the core while in transit on unsealed roads. This is delaying the logging and reporting of lithology to coincide with depth reporting on Tuesday mornings.

The whole core will then be sent to the GSWA's Perth Core Library for analysis.



ASD-1 is located on E47/3707 (co-ordinates 480100mE, 7637370mN, 330m RL, Azi: 180, Dip: -85 degrees, Estimated Depth: 3,300m), some 43km south of Artemis' Radio Hill Mine in the West Pilbara, of Western Australia. (Refer to previous Artemis news release, dated 22 March 2018 for further details on ASD-1).

Figure 2 and 4 highlights the CRA diamond drill hole DDH 84 MF1 that was drilled in 1986, which now resides at the WA Core Library.

7630000mN 7640000mN 480000mE **Artemis E47/3707** ASD.1 Portland River Fault Surface -0m Tumbina Fm Maddina 153.5m Volcanics Kylena Fm 470m -500m 595m Current depth Hardey Fm Kylena Fm 1000m Hardey Fm 1500m 0.5m @ 10.67 g/t Au from 1,756m 2000m **⊥** TD 2270m -2500m Pre-Fortescue Group Rocks -3000m Proposed 1000m TD 3300m

Figure 2: Interpretative Long-Section. North south orientation of section with Munni Munni and Purdy's Reward to the north (right side of image) as the basin shallows.

#### **Cobalt Potential**

Sampling within the region by De Beers consisted of stream geochemistry and BLEG (Bulk Leach Extractable Gold) with Fox Resources conducting validation BLEG and stream sampling with numerous rock chip samples. All samples were analysed for numerous elements including Cobalt, Copper, Silver, Nickel and Gold. Anomalous responses for Cobalt within the new tenement areas have been noted and collation of all data is underway.

Many of these rock chip samples were in and around the numerous VTEM anomalies identified by a large scale survey completed in September 2007<sup>1</sup>. The source of many of the anomalies were ascribed to zones of pyritic sediments. Artemis has not identified any which were drill tested.

Artemis believes these responses are largely lithologically controlled, with the Kimberlites outcropping at Backtop indicating that deep crustal structures exist that could be conduits for other styles of mineralisation.

<sup>&</sup>lt;sup>1</sup> As per ASX Fox Resources 2008 Annual Report to Shareholders.

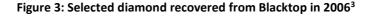


#### **Blacktop Kimberlite**

The Blacktop Kimberlite discoveries, which were assessed by the DeBeers/Tawana Resources NL JV in 2006/7 is located 85 km SSW of Karratha and only 60 km SE of the Company's Radio Hill Mine site (Figure 5).

The JV conducted a bulk sampling programme of approximately 6,000 tonnes<sup>2</sup> in 2006/7. A total of 2,320 diamonds, weighing 163.89 carats were recovered from this trial mining. The majority of the stones were white dodecahedrons (Figure 3), with the largest stone weighing 1.41 carats (Figure 3). All diamonds were recovered from the +1mm to -19mm size fractions of the material processed.

The diamonds were valued at the time by Diamdel at the time, a De Beers diamond trading and marketing company, at US\$52.56 per carat. Commenting on the diamonds Tawana reported that the valuers said that the parcel was unusual in that it contained no boart (low quality industrial) diamonds and that the presence of larger diamonds in a larger parcel would result in a higher valuation.





<sup>&</sup>lt;sup>2</sup> As Per ASX announcement by Tawana Resources NL, AGM Presentation 2007, 31 May 2007

<sup>&</sup>lt;sup>3</sup> As Per ASX announcement by Tawana Resources NL, 2 October 2006



Figure 4: Summary drill logs for CRAE drill hole and progress summary drill log for Artemis's ASD-1. Geology comparison.

## DDH 84 MF1 (after CRAE)

	(5	IILEI CRAE,	/
Depth (m)	Stratigraphic Unit	Lithology	Rock Type
- - - -250 - - - -500	Maddina Basalt (Maddina Fm)		Amygdaloidal and massive basalt 538 m
	Pillingini Tuff (Tumbiana Fm)	~	Tuffs, partially stromatolitic, epislastic sandstone, siltstones and shales 731 m
-750 - - - - - - -1000	Kylena Basalt (Kylena Fm)		Amygdaloidal, massive and pillowed basalt, interbedded tuff
- 2 - 2		****** ****** ******	Tuffs, lithic sediments 1200 m
-1250 - - - -			Tuffaceous sandstone, tuffs 1500 m
-1500 - - - - - -1750	Cliff Springs Fm (Hardey Fm)	V	Tuffaceous grits, diamictites and pepple conglomerate
			0.5m @ 10.67 g/t Au in Conglomerates from 1,756m
		000000	Basalt boulder breccia 2133 m
- -2250	Pre-Fortescue Group Rocks	4 7 4 7 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	Pillow basalts, cherts
-			EOH 2270 m

## ASD-1

Depth (m)	Stratigraphic Unit	Lithology	Rock Type
	Tumbiana Fm	~~~~~ ~~~~~ ~~~~~ ~~~~~~	Tuffaceous sediments, minor lapilli tuff and laminated shales 153.5 m
- -250 - - -	Kylena Fm		Amygdaloidal, massive basalt, interbedded tuffs 470 m
-500 -	Hardey Fm	**************************************	Tuffs, lithic sediments 595 m - Current depth
			Proposed death 3300 m
		_	Proposed depth 3300 m



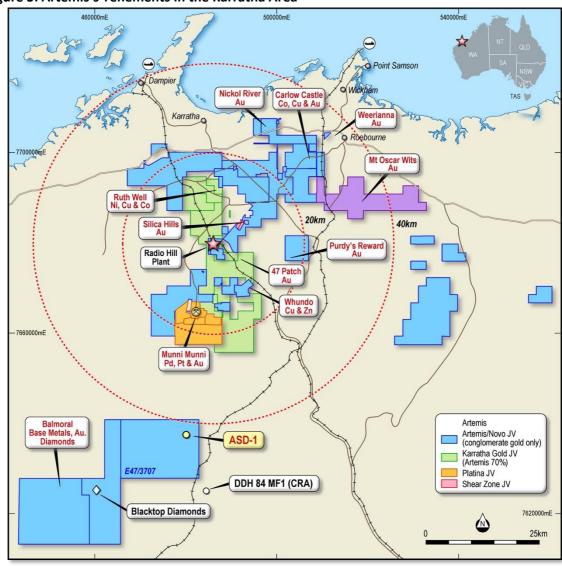


Figure 5: Artemis's Tenements in the Karratha Area

#### **CONTACTS:**

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#### COMPETENT PERSONS STATEMENT:

The information in this document that relates to Exploration Results and Exploration Targets is based on information compiled or reviewed by Edward Mead, who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Mead is a Director of Artemis Resources Limited and is a consultant to the Company, and is employed by Doraleda Pty Ltd. Mr Mead has sufficient experience that is relevant to the style 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 Mead consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Appendix 1: CRAE Collar Location & Significant Analyses from DDH84MF#1 drilled in 1984-85, reported in 1987.

										Au
	Hole	Max					From	То	Au	(ppm)
Hole_ID	Type	Depth	MGA_N	MGA_E	Latitude	Longitude	(M)	(M)	(ppm)	(rpt)
DDH84MF#1	DDH	2270	7627119	484459	-21° 27.5"	116° 51"	1756	1756.5	10.67	11.7

Note: Latitude /Longitude converted to MGA Zone 50 co-ordinates by Artemis personnel.

## JORC Code, 2012 Edition – Table 1

## **Section 1 Sampling Techniques and Data**

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>CRA drillhole</li> <li>Sampling was undertaken diamond core drilling</li> <li>Diamond drill core was cut in half with a diamond blade on nominal 0.5 metre interval, or to lithological contacts.</li> <li>Sampling was carried out using protocols established by CRA Exploration at the time.</li> <li>ASD-1</li> <li>No sampling undertaken</li> </ul>
Drilling techniques	<ul> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka,</li> </ul>	CRA drillhole  Diamond drilling has been undertaken by Rockdrill Pty Ltd



Criteria	JORC Code explanation	Commentary
	sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, facesampling bit or other type, whether core is oriented and if so, by what method, etc).	<ul> <li>Drilling was Reverse Circulation to 257.5m, HQ diamond drilling to 960.5m and NQ diamond drilling to 2269.95m.</li> <li>ASD-1</li> <li>Diamond drilling from surface is being undertaken by DDH 1 Drilling Pty Ltd.</li> <li>All core to date is PQ which is intended to be finished at 600m, when core size will change to HQ.</li> </ul>
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul> <li>CRA drillhole</li> <li>Diamond drilling recovery has generally been excellent and close to 100%.</li> <li>The core is measured against core blocks placed at the end of each drill rod pull.</li> <li>ASD-1</li> <li>Diamond drill recovery to date is excellent at 100%.</li> <li>Core is measured and marked against core blocks.</li> </ul>
Logging	<ul> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of</li> </ul>	<ul> <li>CRA drillhole</li> <li>Reverse Circulation drill chips were lithologically logged</li> <li>Diamond core is lithologically logged.</li> <li>ASD-1</li> <li>Diamond core is lithologically logged.</li> </ul>
Sub-sampling techniques and sample preparation	<ul> <li>the relevant intersections logged.</li> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.</li> </ul>	CRA drillhole Diamond core is cut using the shimming technique where approx. a third was taken from the core.  ASD-1  Diamond core has not been cut or sampled yet.
	<ul> <li>Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field</li> </ul>	Diamond core has not been cut



Criteria	JORC Code explanation	Commentary
Quality of assay data and laboratory tests	<ul> <li>material being sampled.</li> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation etc.</li> <li>Nature of quality control procedures adopted (eg standards blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	Perchloric acid/AAS  • Ba, U – Pressed der XRF.
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independen or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>CRA drillhole         <ul> <li>All geological logging was typed into hard copy records.</li> <li>Hard copy of analytical results included in report.</li> </ul> </li> </ul>
Location of data points	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	
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	CRA drillhole     Diamond drill hole was vertical to intersect the stratigraphy, orientations at depth were unknown at commencement.



Criteria	JORC Code explanation	Commentary
	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 material.	<ul> <li>ASD-1</li> <li>The Diamond drill hole is being drilled at -85 degrees and the core is being orientated.</li> <li>Geological structure will be captured.</li> </ul>
Sample security	The measures taken to ensure sample security.	<ul> <li>CRA drillhole</li> <li>Core is now held in WA Core Library.         <u>ASD-1</u></li> <li>The drill hole core is being trucked to the WA Core Library.</li> </ul>
Audits or reviews	<ul> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul> <li>CRA drillhole</li> <li>Not reported.</li> <li>ASD-1</li> <li>No sampling reported as not completed at this stage.</li> </ul>

## **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	<ul> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul> <li>CRA drillhole</li> <li>The tenement was historically called EL47/182, was an application at time of drilling held by CRA Exploration Pty Ltd.         ASD-1 and Balmoral Project     </li> <li>The Balmoral Project consists of E47/3707, E47/3708 and E47/3709 covering a total of 599km².</li> <li>ASD-1 is on E47/3707.</li> <li>All tenements are in good standing.</li> <li>The tenements are 100% owned by KML no2 Pty Ltd, a 100% owned subsidiary of Artemis Resources Limited. The tenements also form part of the Novo Joint Venture where Novo Resources Corp have a 50% interest in paleoplacer and conglomerate gold.</li> </ul>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	CRA drillhole  Work was entirely completed by CRA Exploration.  Balmoral Project  Tawanna Resources and De Beers Australia Exploration (DBAE) discovered Black top 1 and 2 where gem quality diamonds were recovered in 2006 with trial mining.  As part of DBAE exploration stream sediment sampling was conducted over a large area of the West Pilbara. This data covers the Balmoral Project, but has not been publicly released.  A VTEM survey was flown over the



Criteria	JORC Code explanation	Commentary
Geology	Deposit type, geological setting and style of mineralisation.	northern part of the Balmoral tenements by Fox Resources Limited in 2007.  Fixed Loop Electromagnetics has been undertaken on several VTEM anomalies.  Fox Resources Limited also conducted rock chip sampling.  All exploration to date is considered of a good quality, and other companies recommended further exploration was warranted.  Artemis agrees that further exploration is required and that this means a better understanding of the geology and geological model which encapsulates mineralisation identified to date, which includes cobalt, zinc, lead, gold and diamonds.  CRA drillhole  The drillhole was completed to test stratigraphic concepts relating to sediment hosted gold and uranium deposits, with strong affinities to the Witwatersrand style.  Balmoral Project  All mineralisation models that relate to sedimentary, and intrusion related
Drill hole Information	<ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:         <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	<ul><li>deposits are being investigated.</li><li>All drill hole information is contained</li></ul>
Data aggregation methods	<ul> <li>In reporting Exploration         Results, weighting averaging         techniques, maximum and/or         minimum grade truncations (eg</li> </ul>	Not relevant to exploration being undertaken.



Criteria	JORC Code explanation	Commentary
Polotionahin hatusan	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.	CDA drillhala
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> </ul>	<ul> <li>CRA drillhole</li> <li>A better understanding of the thicknesses of stratigraphic units in the Fortescue Group is required.</li> </ul>
	<ul> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	<ul> <li>Balmoral Project</li> <li>Not being reported.</li> </ul>
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	Appropriate maps and sections are available in the body of this announcement.
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.	Reporting of results in this report is considered balanced.
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	Interpretation of regional geophysical data is ongoing.



Criteria	JORC Code explanation	Commentary		
	substances.			
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions, depth extensions or large-scale stepout drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>Artemis is planning with GSWA and CSIRO to complete significant work programmes on the diamond drill core from ASD-1.</li> <li>Hylogger, XRF and high quality core photos with structural logging will be completed, before the core is cut and sent for whole rock assay analysis.</li> <li>The results of this work and how the drill hole compares to exploration results to date will be used to further exploration.</li> </ul>		