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**Corporate Information**  
**ASX Code: ARV**



**ASX / Media Announcement**

**19 March 2018**

**Positive Pit Optimisation Outcome on Carlow Castle Project  
- Karratha, Western Australia -**

**Highlights:**

- Carlow Castle Cobalt/Copper/Gold Project's Mineral Resource estimate of 4.5 Mt @ 0.9g/t Au, 0.07% Co, 0.4% Cu was optimised at a cobalt price of A\$104,046/t, copper price of A\$8,831/t and a gold price of A\$1,650/oz to assess potential plant feed for Artemis' Radio Hill processing plant.
- The optimisation pits included 4.135 million tonnes with grade of 0.77 g/t Au, 0.38% Cu and 0.06% Co at a strip ratio of 4.71:1.
- The Carlow Castle deposit is located only 30 km from Artemis' 100% owned Radio Hill Plant.
- The optimisation confirmed that the deposit has significant scope for expansion with additional drilling.
- Recent SAM geophysics survey confirms multiple "very high-order" targets for future drilling.

**David Lenigas, Artemis's Executive Chairman, commented;**

*"As part of Artemis's review of all of its projects in the Karratha area, to prioritise potential plant feed for the Radio Hill Plant in readiness for its recommissioning scheduled for June this year, we have just completed the first optimisation of our Carlow Castle Cobalt/Copper/Gold Project with highly encouraging results. The results confirm that nearly all of the currently identified Mineral Resource estimates fall within the optimised pit shells. We have just completed a detailed Sub Audio Magnetics (SAM) survey over 1.9km<sup>2</sup> covering the immediate Carlow Castle area and we are now planning an extensive drilling programme based on these SAM findings to increase the size of this new and exciting cobalt/copper/gold discovery in the Pilbara."*

Artemis Resources Limited ("Artemis" or "the Company") (ASX: ARV) advises that it has received positive results from pit optimisations of its Carlow Castle Cobalt/Copper/Gold Project Mineral Resource. The optimisation was done to assess potential plant feed of Artemis' Radio Hill Processing Plant for its re-commissioning around the middle of the year.

The Carlow Castle Project (Figure 3) is located about 30 km north-east of Artemis' Radio Hill Plant site and is easily accessible via gazetted roads and highways.

Diamond drilling is currently underway at the project for final metallurgy and geotechnical studies.

Carlow Castle is on a granted Exploration tenement and has a current Indicated and Inferred Mineral Resource classified and reported in compliance with the JORC Code (2012) of **4,500,000 tonnes at 0.9 g/t Au 0.07% Co, 0.4% Cu & 1.3 g/t Ag<sup>1</sup>** for a contained metal content of 127,000 ounces of gold, 18,000 tonnes of Copper and 3,150 tonnes of Cobalt and 188,000 ounces of silver. The current resource outcrops at surface and remains open at depth and along strike.

*Note: In accordance with ASX Listing Rule 5.23.2, Artemis confirms that it is not aware of any new information or data that materially affects the information included in the 31 January 2018 market announcement referred to above, and that all material assumptions and technical parameters underpinning the Mineral Resource estimates in that announcement continue to apply and have not materially changed.*

*Note: In accordance with ASX Listing Rule 5.16.6, There is a low level of geological confidence associated with inferred resources and there is no certainty that further exploration work will result in the determination of indicated mineral resources or that the production target itself will be realised. The stated production target is based on the company's current expectations of future results or events and should not be solely relied upon by investors when making investment decisions. Further evaluation work and appropriate studies are required to establish sufficient confidence that this target will be met.*

Best drill intersections to date include<sup>2</sup>:

- 6m at 1.9% Co, 3.4 g/t Au and 1.4% Cu from 52m (ARC006)
- 6m at 1.8% Co, 13.9 g/t Au and 5.9% Cu from 41m (ARC033a)

#### **Pit Optimisation Parameters:**

Open pit optimisations using Whittle software were completed by AMC Consultants Pty Ltd. The 31 January 2018 Mineral Resource model (total resources) was optimised at a base case gold, copper and cobalt prices and input parameters as shown in Table 1 below.

**Table 1: Carlow Castle Project - Pit Optimisation Input Parameters and Assumptions**

Gold price (AU\$/oz)	1,650
Copper price (AU\$/tonne)	8,831
Cobalt price (AU\$/tonne)	104,046
Gold royalty (%)	2.5
Plant Gold recovery (%)	95
Plant Copper recovery (%)	95
Plant Cobalt recovery (%)	90
Gold Refinery recovery (%)	95
Copper refinery recovery (%)	95
Cobalt refinery recovery (%)	95
Processing cost - incl. all transport related cost (AU\$/t)	45.59
Mining Cost (AU\$/t)	3.78
Incremental mining cost (AU\$/t per 5m vertical)	0.025
Mining dilution (%)	12%
Mine losses (%)	7.5%
Slope angle of Pits (degrees)	65 degree batter angle with 5m berms equates to overall slope of 40 degrees with ramps.
Haul road width (m)	single lane 12m for the first 20m vertical from bottom and then double lane 20m.

It is assumed that Carlow Castle material is transported to the Radio Hill Plant by semi-trailer road trains.

<sup>1</sup> Artemis Resources Limited announcement dated 31 January 2018 - 4.5 Mt of Cobalt/Copper/Gold JORC Resources at Carlow Castle

<sup>2</sup> Artemis Resources Limited ASX announcement dated 31 July 2017 – Artemis June 2017 Quarterly Report

## Pit Optimisation Results:

At the metal prices shown and using the other inputs above in Table 1, the optimal pit shells generated encompassed nearly all of the resource model. The results of the optimisation (as shown in Table 2 below), indicate that potential exists to truck the optimised 4,135,673 tonnes to the Radio Hill Plant.

**Table 2: Carlow Castle Project's Optimised Pit Estimates:**

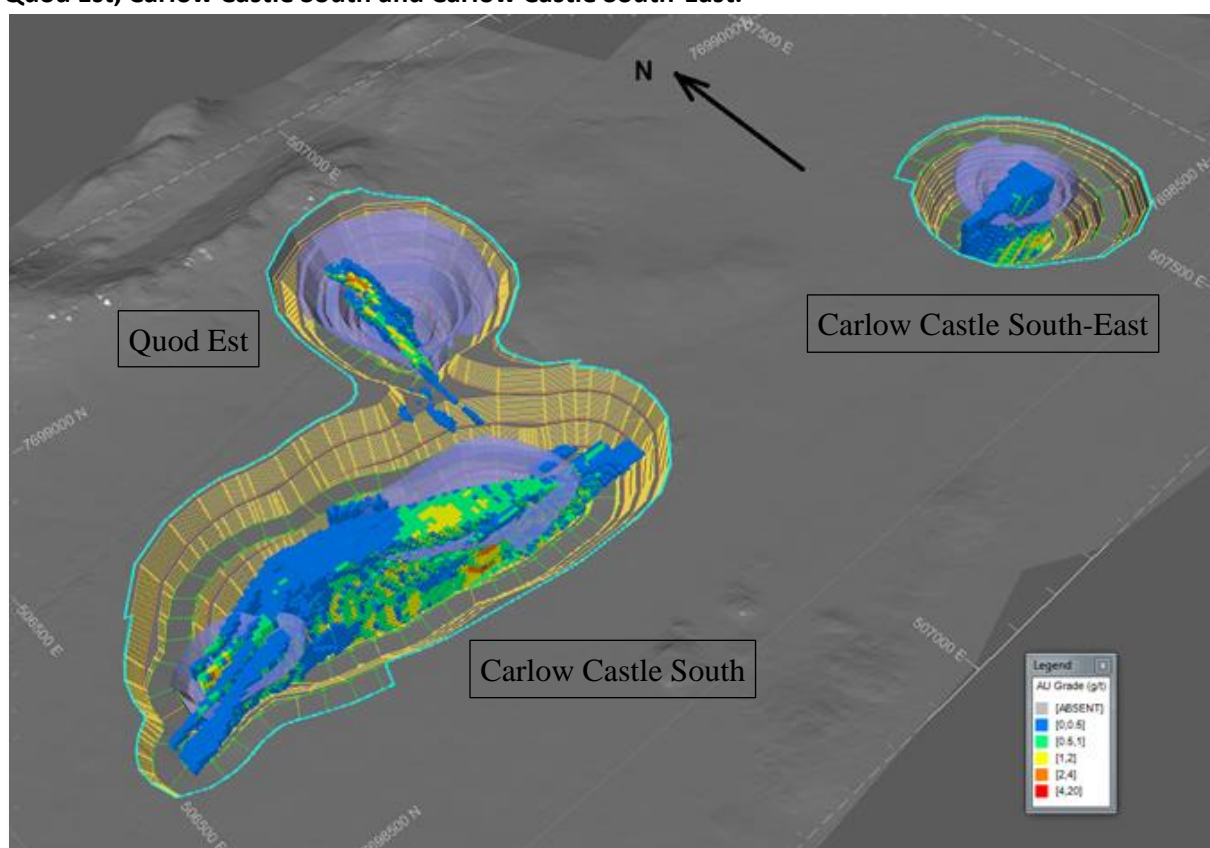
	Ore Tonnes	Au Grade (g/t)	Copper Grade (%)	Cobalt Grade (%)	Waste Tonnes ('000 tonnes)	Strip Ratio
Quod Est	337,111	1.22	0.56	0.20	4,053,285	12.02
Carlow Castle South	3,240,522	0.73	0.36	0.05	11,687,259	3.61
Carlow Castle SE	558,040	0.72	0.39	0.05	3,720,506	6.67
<b>Total</b>	<b>4,135,673</b>	<b>0.77</b>	<b>0.38</b>	<b>0.06</b>	<b>19,461,049</b>	<b>4.71</b>

Artemis believes it has a reasonable basis for reporting the results of the pit optimisation, which is primarily based on an inferred resource category with 300,000<sup>1</sup> tonnes in the Indicated category at Quod Est, which may potentially contribute to mill feed in to the Radio Hill Plant.

The resource optimisations reported on in this announcement are relatively shallow in depth, with the deepest optimised pit shell only being 65m deep, and resource estimation requirements for resource category upgrades consisting of infill drilling and extensional drilling along strike and at depth. This drilling has been planned and a Programme of Work (POW) has been approved by the Department for Mining Industry Regulation and Safety (DMIRS). Diamond drilling has started to advance the project.

Based on the above, Artemis has a high level of confidence in the inferred mineral resource. An isometric view of the optimal pit shells and the Mineral Resource model, that lies within the optimal pits, are shown in Figure 1 and Figure 2 and Figure 3 below.

**Figure 1: Carlow Castle Project – Isometric View of the pit optimisation with the 3 prospect areas, Quod Est, Carlow Castle South and Carlow Castle South-East.**

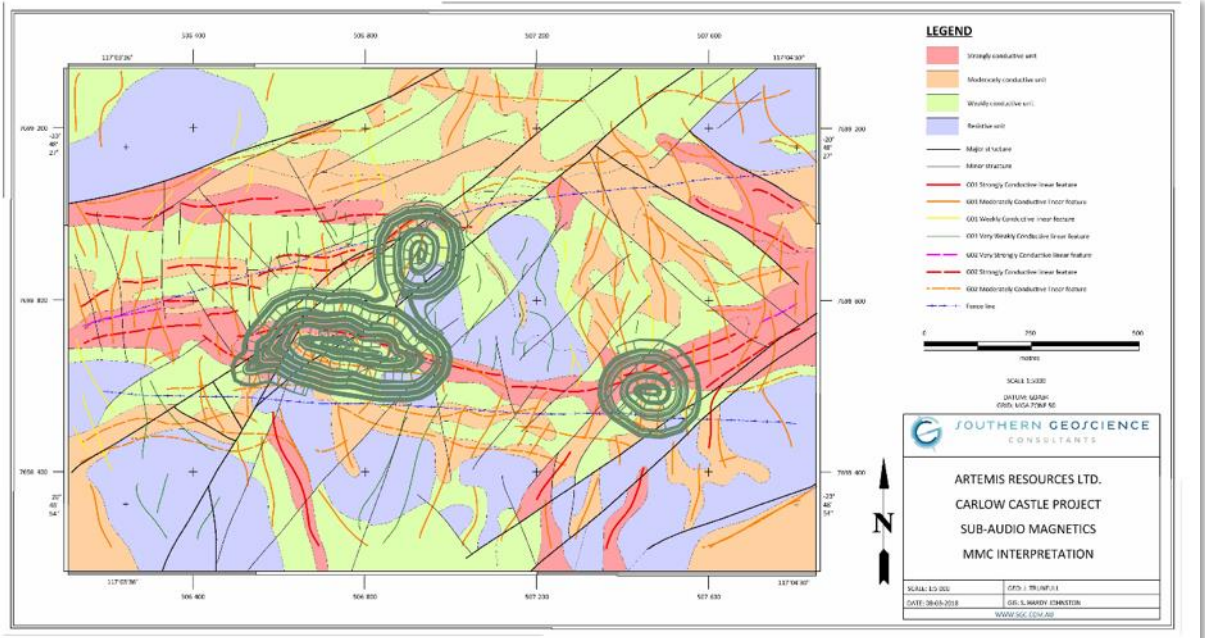




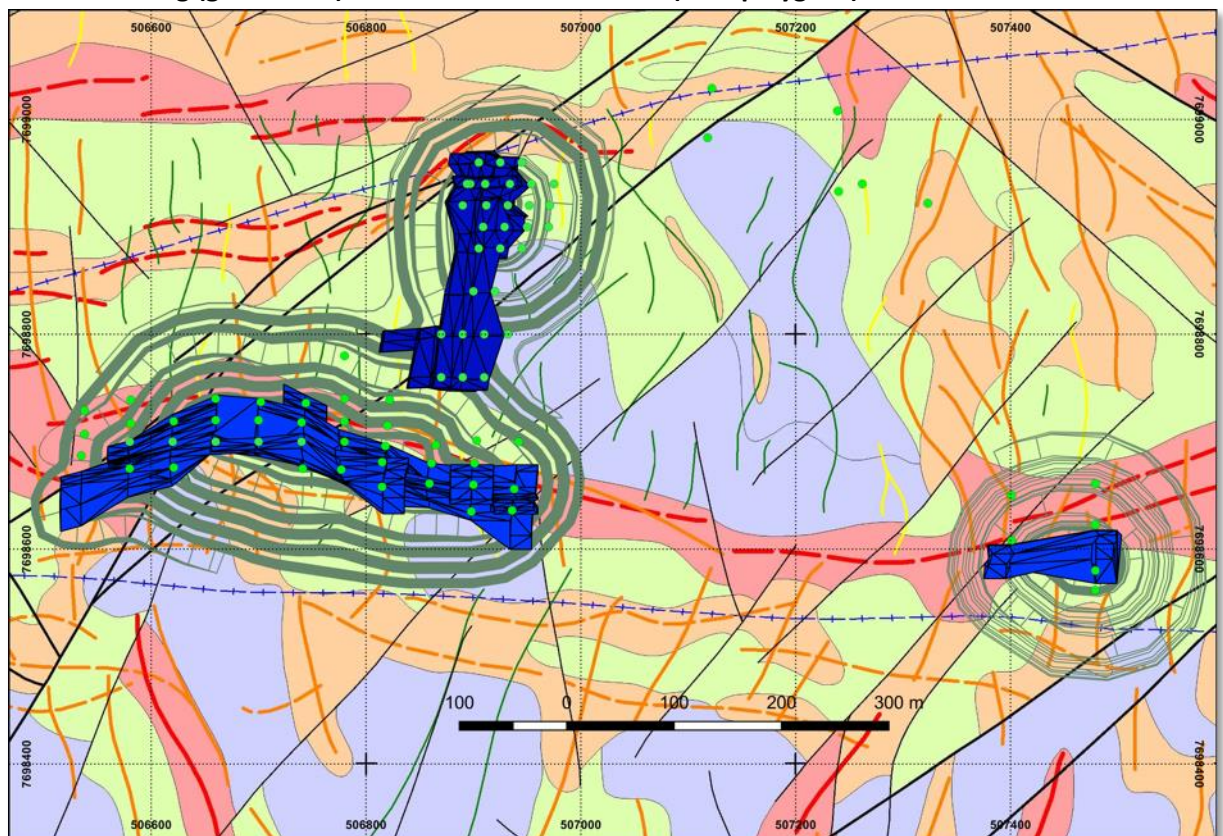
## Significant New Exploration Potential:

A recent Sub Audio Magnetic (SAM) geophysical survey completed by Gap Geophysics Pty Limited over 1.9 km<sup>2</sup> has now had interpretation by Southern Geoscience Consultants (Figures 2 and 3), which indicates strong and consistent continuity of structure and significant further exploration potential.

**Figure 2: Carlow Castle Project – Sub Audio Magnetic interpretation with optimised pits outlined.**



**Figure 3: Carlow Castle Project – Close up of SAM interpretation with optimised pit outlines, all Artemis drilling (green dots) and resource wireframes<sup>1</sup> (blue polygons).**



The geophysical method, Sub-Audio Magnetics (SAM), is an electrical channelling technique that was applied at Carlow Castle. Several parameters were collected at once and extracted from the SAM data;

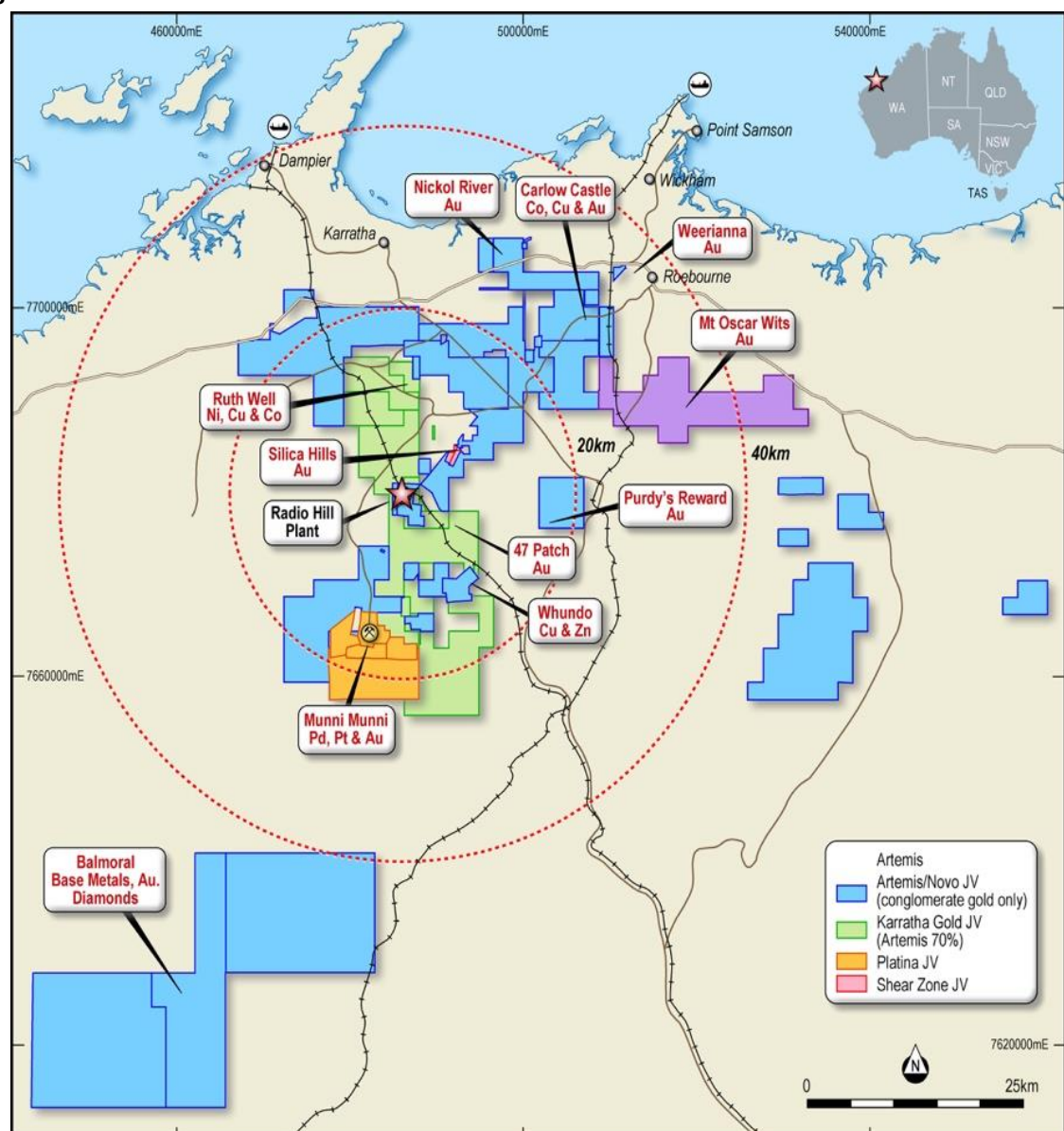
- Magnetometric conductivity (MMC) mapped relative conductors and resistors in the study area that may primarily relate to geological strata and structure.
- Total-field electromagnetics (TFEM) mapped electromagnetic response that might be expected from massive conductors such as sulphides or native metals.
- Total magnetic intensity (TMI) mapped spatial magnetic variation expected from different strata and mineralogy.

The optimisations shown in this announcement, coincide well with geophysical trends identified by the SAM interpretations, and these now provide a multitude of new high priority drilling targets. All areas shown in Figure 2 with solid and dashed purple, red and orange lines are to be drill tested.

### Next Steps:

Artemis has approved POW's for drilling, which includes diamond drilling, which has just commenced. This work will be used for geotechnical and metallurgical purposes, as well as resource category upgrades.

**Figure 3: Artemis's Tenements in the Karratha Area**





## **CONTACTS:**

For further information on this update or the Company generally, please visit our website at [www.artemisresources.com.au](http://www.artemisresources.com.au) or contact:

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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 Allan Younger, who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Younger is a consultant to the Company and is employed by Indigo Geochemistry Pty Ltd. Mr Younger 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 Younger consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

## **BACKGROUND INFORMATION ON ARTEMIS RESOURCES:**

Artemis Resources Limited is a resources exploration and development company with a focus on its prospective Karratha (gold, cobalt, base metals, platinum group elements and iron ore) and the Mt Clement Paulsen's (gold) project in Western Australia.

Artemis owns the ~500,000tpa Radio Hill nickel, copper and cobalt mine and processing plant located 25km south of Karratha. JORC 2004 compliant resources of Gold, Nickel, Copper PGE's and Zinc, all situated within a 40km radius of the Radio Hill plant and on 1,838km<sup>2</sup> form the newly consolidated assets of Artemis Resources.

Artemis have signed Definitive Agreements with Novo Resources Corp. ("Novo"), and pursuant to the Definitive Agreements, Novo has satisfied its expenditure commitment, and earned-in to 50% of gold (and other minerals necessarily mined with gold) in conglomerate and/or paleo placer style mineralization in Artemis' tenements within 100km 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) Mineral Resources and Reserves reported in compliance with the JORC Code (2012), or (ii) gold which is not within conglomerate and/or paleo placer style mineralization or (iii) minerals other than gold. Artemis' Mt Oscar tenement is excluded from the Definitive Agreements.

The Definitive Agreements cover 38 tenements / tenement applications that are 100% owned by Artemis. Pursuant to Novo's successful earn-in, three 50:50 joint ventures have been formed between Novo's subsidiary, Karratha Gold Pty Ltd ("Karratha Gold") and three subsidiaries of Artemis (KML No 2 Pty Ltd, Fox Radio Hill Pty Ltd, and Armada Mining Pty Ltd). The joint ventures are managed as one by Karratha Gold. Artemis and Novo will contribute 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, 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 presentation. 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 (1) 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 (2) 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.

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