

# **Quarterly Activities Report**

24 July 2014

## **Highlights**

- ✓ Acquisition of 51% of Weerianna gold project in West Pilbara
- ✓ Weerianna contains 70,000 oz gold (Au) Inferred Mineral Resource with potential for significant resource additions and potential exploration/development synergies with Artemis' nearby Carlow Castle Project (40,000oz Au Inferred Mineral Resource) project
- ✓ Artemis' exploration has confirmed and identified multiple copper, nickel and gold targets with drill ready targets defined by Electro-Magnetic (EM) surveys at 13 prospects
- Experienced geologist, Ed Mead, appointed to manage exploration and growth strategy in West
   Pilbara
- ✓ Native Title and Aboriginal Heritage Agreement finalised for West Pilbara project, awaiting Ngarluma Aboriginal Corporation board approval
- ✓ Encouraging metallurgy test results from Eastern Hills antimony project.
- ✓ Further Exploration Incentive Scheme grant received for drilling of Eastern Hills project high grade zone

Artemis Resources Limited (ASX: ARV) ("Artemis" or "the Company") is pleased to provide its Quarterly Activities Report for the quarter ended 30 June 2014.

During the quarter the Company acquired a 51% interest in the Weerianna Gold Project<sup>1</sup> located less than 5 kilometres west of the town of Roebourne in the Pilbara district, Western Australia (the "Project") (Figure 1) via the acquisition of 51% of the issued capital of private company Western Metals Pty Ltd. The Company has the option to increase its interest in Western Metals to 80%. The acquisition of the Weerianna Gold Project (Figure 1) enhances the Company's existing West Pilbara Project.

The Weerianna Project currently hosts an Inferred Mineral Resource of **1 million tonnes at 2.2 g/t Au for a total of 70,000 ounces** of gold using a 1.0 g/t Au cut-off grade<sup>2</sup>, estimated in accordance with JORC (2012). Excellent potential exists for a substantial increase in tonnage as the current resource is open at depth and along strike.

The Weerianna Project is within 7 km of Carlow Castle, an existing tenement in the Artemis West Pilbara portfolio which currently hosts a JORC Inferred Mineral Resource<sup>2</sup> of 416,000 tonnes at 2.9 g/t Au and 0.6% copper (Cu) for a total contained metal of 40,000 ounces of Au and 2,500 tonnes of Cu (Table 1).

Table 1: West Pilbara Project – JORC (2012) Inferred Resource Table<sup>2</sup>

|   | Project       | Cutoff Grade<br>(Au g/t) | Tonnes (t) | Au (g/t) | Cu (%) | Contained Au<br>(oz) | Contained Cu<br>(t) |
|---|---------------|--------------------------|------------|----------|--------|----------------------|---------------------|
| ١ | Weerianna**   | 1.0                      | 1,005,000  | 2.2      | -      | 70,000               | -                   |
|   | Carlow Castle | 1.0                      | 416,000    | 2.9      | 0.6%   | 40,000               | 2,500               |

<sup>\*</sup>Note: Rounding may result in apparent inconsistencies within this table

<sup>&</sup>lt;sup>2</sup> As per ASX announcement dated 30 June 2014 "Completion of Gold Project Acquisition – Update on West Pilbara Resource Status"



Artemis Resources Limited ABN: 80 107 051 749

<sup>\*\*</sup>Resource reported as 100%

<sup>&</sup>lt;sup>1</sup> As per ASX announcement dated 26 June 2014 "Acquisition of Gold Deposit to Kickstart West Pilbara Exploration"



This acquisition increases the gold inventory controlled by Artemis\*\* in the West Pilbara to over 100,000 oz Au (Table 1). The Company's objective is to increase the gold and base metal inventory of its West Pilbara Project, including at Weerianna, with exploration drilling. The acquisition of Weerianna is part of an ongoing process of aggregating tenements in the West Pilbara area that are geographically proximate and geologically contiguous with the potential of hosting an economically viable resource.

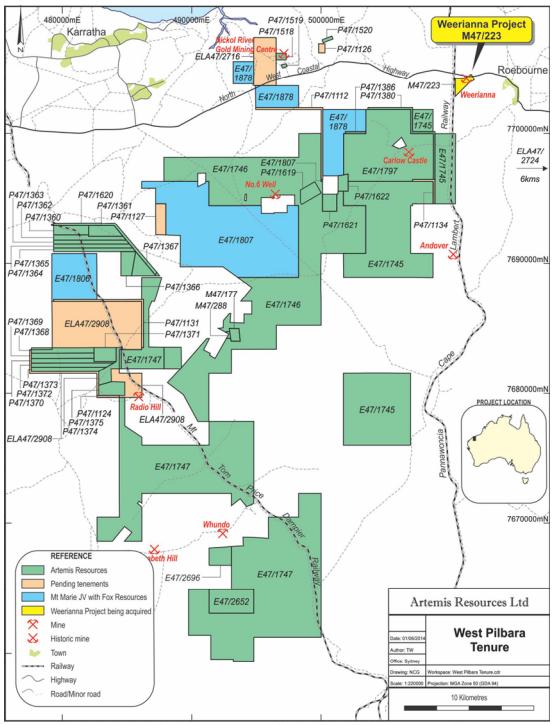


Figure 1: Location Plan – Artemis West Pilbara tenure and Weerianna Gold Project



### Weerianna Gold Resource

A Mineral Resource estimate incorporating all drilling on the Weerianna Project was undertaken in August 2009 by an independent consultancy group. While no significant exploration activities affecting the resource have been completed since that time, the Inferred Mineral Resource was recently reviewed by the same consultancy group and upgraded to comply with JORC (2012). The review resulted in an estimate of an Inferred Mineral Resource containing 70,000 ounces of gold (Table 2).

The Weerianna gold deposit is located within a chert-ultramafic schist sequence, on the overturned eastern limb of an east-northeast trending syncline (Figure 2).

Table 2: Weerianna Gold Deposit – Inferred Mineral Resource Estimate (above 1g/t Au)

| Material     | Tonnes (t) | Au (g/t) | Contained Au (oz) |
|--------------|------------|----------|-------------------|
| Oxide        | 125,000    | 2.31     | 9,000             |
| Transitional | 710,000    | 2.16     | 49,000            |
| Primary      | 171,000    | 2.12     | 12,000            |
| GRAND TOTAL  | 1,005,000  | 2.17     | 70,000            |

<sup>\*</sup>Note: Rounding may result in apparent inconsistencies within this table \*\*Resources reported as 100%

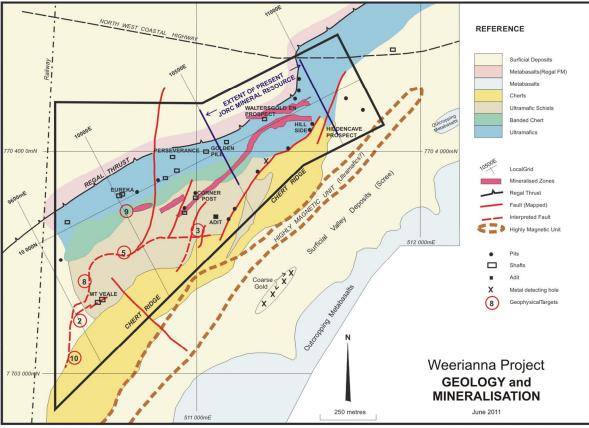


Figure 2: Weerianna Gold Project (M47/223) – Geology and Mineralisation

### **Exploration Program**

Artemis has recently undertaken a rights issue which will fund the first drilling campaigns on its West Pilbara tenements.



During the quarter Artemis commissioned a review of the West Pilbara geophysical data by Southern Geoscience, which focussed on drill hole ranking and design. The prospects of interest require an initial 20 RC drill hole program for a total of 1,800 metres.

Artemis has budgeted for a total of approximately \$400,000 in exploration spend for the West Pilbara, including the Weerianna and Carlow Castle projects (Figure 1), before the close of this calendar year. It is estimated that targeting of these prospects in a first round drilling campaign will cost approximately \$300,000. A further \$100,000 will be required to complete Down Hole Electromagnetics (DHEM) to refine conductor locations, depth, size, dip and plunge. The Company then plans to re-rank the prospects, based on drilling and DHEM results at the 13 prospects identified with Electromagnetic (EM) anomalies (Figure 3).

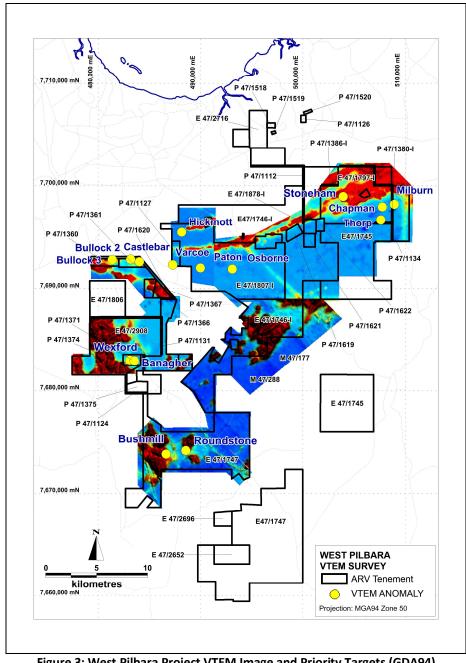


Figure 3: West Pilbara Project VTEM Image and Priority Targets (GDA94)



### **EASTERN HILLS ANTIMONY-LEAD PROJECT**

### Metallurgical testing

Limited preliminary metallurgical testing of three selective RC chip samples from the Taipan Zone resource<sup>3</sup> has confirmed encouraging results for the complex antimony-lead mineralisation at the Eastern Hills Antimony-Lead Project. It should be noted that RC chips are not expected to provide optimum metallurgical test results, considering the sample material is already heavily crushed in the RC drilling process. Research and development sample testing was completed by **hrl**testing under the design and management of Core Process Engineering Pty Ltd in Brisbane.

Roughing and cleaning bench scale flotation tests were undertaken on two of the three samples, initially to successfully produce a lead/antimony (sulphide) concentrate. At this stage, the average grades in the Taipan Zone need to be optimised and improved to produce a smelter-ready concentrate. This hypothesis could be aided if the very high grades reported previously at surface in the Dugite Zone can be confirmed by scheduled drilling and a higher grade resource established.

Further work is also required to fully assess the ramifications of deleterious elements, some of which (mercury, selenium) have yet to be assayed in Artemis' first round of drilling. However, limited analysis of anomalous antimony samples from surface rockchips has returned mercury results at (or below) 1ppm Hg.

Experimentation using alkaline sulphide leaching proved to be a successful method of separating the antimony and lead products from the flotation concentrate with greater than 97% extraction of antimony, and is likely to be a viable method of antimony separation. The pregnant leach liquor requires further processing to extract the antimony via electrowinning or precipitation/crystallisation. Antimony product options could include antimony cathode via electrowinning or sodium antimonite via precipitation/crystallisation of the pregnant leach liquor. Another possible flowsheet option is to pyrometallurgically treat the mixed lead/antimony product in a fuming furnace to fume off the antimony (and other deleterious elements) into a dust and then treat that dust in a hydrometallurgical plant to make an antimony product.

More definitive mineralogical and metallurgical testing is required to optimise the current metallurgical study. This will be targeted once diamond drill core is available from the proposed phase 2 Taipan Zone drilling program and on the higher grade Dugite Zone. At that stage, more detailed scoping engineering studies will develop capital and operating cost scenarios for the most likely flowsheet options.

### WA Government Exploration Incentive Scheme (EIS)

The Company has recently received confirmation that it has been successful in its application for WA EIS cofunding for drilling of the high grade Dugite Zone at Eastern Hills in the amount of approximately \$60,000. Artemis wishes to take this opportunity to thank and acknowledge the WA Government for its EIS programs and the assistance that they provide to the exploration sector.

### **BUCHANAN'S CREEK PROJECT**

Artemis' joint venture partner - Strategic Metals Australia Pty Ltd (earning 75%) – has reported an aggressive field campaign on the Buchanan's Creek tantalum-lithium-niobium project, located south of Georgetown (Qld). The aerial photographic interpretation, geological mapping, stream and rock chip sampling has so far identified at least five areas of interest for further detailed follow up. Approximately 300 individual quartz

<sup>&</sup>lt;sup>3</sup> As per ASX announcement dated 29 November 2013 "Maiden JORC Resource Achieved at Eastern Hills"



blows and pegmatites – typical hosts for this type of mineralisation - have also been mapped, indicating additional prospectivity.

### **CORPORATE**

West Pilbara - During the quarter Artemis engaged highly experienced geologist, Mr Ed Mead, to manage the Company's exploration and growth strategy in the West Pilbara. Mr Mead is a geologist with more than 20 years' experience in gold and base metals exploration, mine development and mine production and previously worked at the nearby Radio Hill Nickel Mine.

The Company has recently finalised a native Title and Heritage Agreement (NTA) subject to the approval of the Board of the Board of the Ngarluma Aboriginal Corporation RNTBC, the body representing the Ngarluma people. The NTA will provide a foundation for the conduct of Aboriginal heritage surveys by the Ngarluma people for Artemis' ground disturbance/drilling exploration programs, allowing Artemis to fully comply with and discharge its obligations under Aboriginal heritage and native title legislation.

Execution of this agreement will be an important milestone for Artemis and will allow, following the conduct of heritage surveys, its drilling campaign to commence.

The Company has a number of tenements in its West Pilbara portfolio under plaint which it is dealing with in the ordinary course of business.

Yangibana - The Company sold the 10% interest it held in the Yangibana project during the quarter for \$150,000.

Rights Issue - On the 27 June 2014, the Company announced a partially underwritten rights issue to raise up to \$1.27 million. The rights issue closed on 22 July, with total funds raised expected to be confirmed to ASX on 25 July 2014, in accordance with the timetable announced on 1 July 2014. The Directors have the ability to place any remaining shortfall up until 22 October 2014. At the time of announcing the rights issue the Company received a loan of approximately \$542,000 from the underwriter of the rights issue. The loan is unsecured, carries an interest rate of 8% and in the event it is not converted into shortfall shares in accordance with the underwriting agreement is repayable within twelve months.

### **Forward Looking Statements**

This report contains forecasts, projections and forward looking information. Such forecasts, projections and information 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.



### **ABOUT ARTEMIS RESOURCES**

Artemis Resources Limited is a resources exploration company with a focus on its prospective Eastern Hills (antimony), Mount Clement (gold), Yandal (gold) and West Pilbara (gold and base metals) projects in Western Australia. These projects have significant exploration potential and close proximity to existing important deposits or producing mines. Artemis aims to develop a significant gold inventory through exploration and acquisitions which have the potential to become mines and create shareholder value.

### For further information, please contact:

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# Indian Ocean Port Hedland Roebourne Karratha Roebourne Karratha Roebourne Mt Clement Project Meekatharra Project Meekatharra Willuna Project Menzies Kalgoorfie Indian Ocean Bunbury Albany West Pilbara Project Mt Clement Project Menzies Albany Menzies Albany Myndham Wyndham Wyndham Wastern Australia Nullagine Project Menzies Albany Albany

**Artemis – WA Project locations** 

### **Competent Person Statements**

The information in this document that relates to Mineral Resources for the Weerianna Project is based on estimates provided by Geostat Services Pty Ltd and previously reported to ASX. The information is extracted from the reports entitled "Acquisition of Gold Deposit to Kickstart West Pilbara Gold and Base Metals Exploration" released on 26 June 2014 and "Completion of Gold Project Acquisition — Update on West Pilbara Resource Status" released on 30 June 2014 and are available to view on the ASX website. The company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and, in the case of estimates of Mineral Resources, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

The information in this document that relates to Mineral Resources for the Carlow Castle Project is based on estimates provided by Mr Phillip A Jones and previously reported to ASX. The information is extracted from the reports entitled "Acquisition of Gold Deposit to Kickstart West Pilbara Gold and Base Metals Exploration" released on 26 June 2014 and "Completion of Gold Project Acquisition — Update on West Pilbara Resource Status" released on 30 June 2014 and are available to view on the ASX website. The company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and, in the case of estimates of Mineral Resources, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

The information in this document that relates to other Exploration Results is based on information compiled or reviewed by Mr Trevor Woolfe, who is a Member of The Australasian Institute of Mining and Metallurgy and a Member of the Australian Institute of Geoscientists. Mr Woolfe is a consultant to the Company, and is employed by Alexander Cable Pty Ltd. Mr Woolfe has sufficient experience which 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 Woolfe consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.



# Tenement Schedule (as at 30 June 2014)

– All Projects are located in Western Australia with the exception of the SMA JV

| West Pilbara          | Mt Clement                | Yandal       |
|-----------------------|---------------------------|--------------|
| E47/1745              | E08/1841                  | E53/1735     |
| E47/1746              | E08/2602 (a)              | E53/1742 (a) |
| E47/1747              | E08/2603 (a)              | E53/1749 (a) |
| E47/1797              | M08/191 <sup>1</sup>      | E53/1759 (a) |
| E47/1806³             | M08/192 <sup>1</sup>      | P53/1606     |
| E47/1807 <sup>3</sup> | M08/193 <sup>1</sup>      | P53/1607     |
| E47/1878 <sup>3</sup> |                           | P53/1608     |
| E47/2652              | SMA JV – QLD <sup>4</sup> | P53/1609 (a) |
| E47/2696              | ML 3311                   | P53/1610 (a) |
| E47/2716 (a)          | ML 30123                  | P53/1611 (a) |
| E47/2724 (a)          | ML 30208                  | P53/1612 (a) |
| E47/2908 (a)          | EPM 13694                 | P53/1613 (a) |
| M47/177 <sup>2</sup>  | EPM 14988                 | P53/1614 (a) |
| M47/288 <sup>2</sup>  | EPM 18490                 | P53/1615 (a) |
| M47/223 <sup>5</sup>  |                           | P53/1616     |
| P47/1360              | Yandal                    | P53/1617 (a) |
| P47/1361              | E53/1026                  | P53/1618     |
| P47/1366              | E53/1213                  | P53/1619     |
| P47/1367              | E53/1214                  |              |
| P47/1371              | E53/1412 <sup>2</sup>     |              |
| P47/1374              | E53/1413 <sup>2</sup>     |              |
| P47/1375              | E53/1525 <sup>2</sup>     |              |
| P47/1380              | E53/1526 <sup>2</sup>     |              |
| P47/1386              | E53/1626                  |              |
| P47/1518              | E53/1627                  |              |
| P47/1519              | E53/1662                  |              |
| P47/1520              | E53/1665                  |              |
| P47/1112 (a)          | E53/1689                  |              |
| P47/1124 (a)          | E53/1729 (a)              |              |
| P47/1126 (a)          |                           |              |
| P47/1127 (a)          |                           |              |
| P47/1131 (a)          |                           |              |
| P47/1134 (a)          |                           |              |
| P47/1619              |                           |              |
| P47/1620              |                           |              |
| P47/1621              |                           |              |
| P47/1622              |                           |              |

<sup>(</sup>a) Tenement applications

<sup>&</sup>lt;sup>1</sup>80% Artemis - Gold joint venture with Northern Star Resources (20%)

<sup>&</sup>lt;sup>2</sup> 80% Artemis

<sup>&</sup>lt;sup>3</sup> 40% Interest – Non managed joint venture with Fox Resources Limited

<sup>&</sup>lt;sup>4</sup> Strategic Metals Australia Pty Limited (SMA) earning 75%, with an option over the remaining 25%

<sup>&</sup>lt;sup>5</sup> 51% Interest