

9 May 2023

Greater Carlow Exploration Update and JORC Exploration Target for the Carlow Castle Deposit

Highlights:

Greater Carlow Exploration Update

- Rapid assessment program to be undertaken to define new mineralisation around the 704,000 oz Au Eq. Carlow Castle Mineral Resource estimate (refer ASX release of 13 October 2022).
- Priority areas include Europa gravity anomaly, Titan target and Carlow Castle extensions.
- Moving Loop Electromagnetic survey (MLTEM) contractor engaged to complete surveys over Europa, Titan, and Carlow Castle.
- Mapping and rock chip sampling planning underway for Titan gold target.

JORC Exploration Target for the Carlow Castle Deposit

- An Exploration Target reported in accordance with the JORC Code, 2012 around the 704,000 oz Au Eq. 2022 Mineral Resource has been compiled for the Carlow Castle gold-copper-cobalt project.
 - The Exploration Target is reported as: 2.5 Mt to 5.0 Mt at 2.5 g/t Au Eq. to 3.1 g/t Au Eq. for 200,000 oz Au Eq. to 500,000 oz Au Eq.

An Exploration Target as defined in the 2012 JORC Code is a conceptual indication of tonnage and grade range of mineralisation, which is not necessarily economic. These figures are not Mineral Resource or Ore Reserve estimates. There is no guarantee that such tonnages or grades will be either realised or economic, or that further study will result in the estimation of a Mineral Resource.

Artemis Resources Ltd (ASX/AIM: ARV) is pleased to provide an exploration update for the Greater Carlow project area, and the delivery of a JORC Exploration Target for the Carlow Castle deposit. Artemis' 100% owned gold, copper, and cobalt Carlow Castle project is situated in the premier mining district of Western Australia's West Pilbara, 25 km from the regional city of Karratha. With well serviced infrastructure on its doorstep including power, roads and port access, the project is a well-serviced, undeveloped polymetallic deposit with potential for resource development.

Technical Director, and interim CEO, Dr Simon Dominy commented "*The Artemis technical team have been working to prepare for an active and successful exploration season around the Greater Carlow project area. The Company is making a concerted effort to identify and assess new prospective targets as part of its plan to add gold ounce equivalents to the project.*"

Greater Carlow Exploration

The July 2022 MLTEM survey was the first time a high-powered deep penetrating EM survey had been completed within the Greater Carlow project and resulted in the identification of a significant EM anomaly at Marillion. Encouraged by this success Artemis, in conjunction with its geophysical consultants (Southern Geoscience Consultants), has engaged a contractor to complete four new MLTEM surveys over high priority exploration targets within the Greater Carlow project area in search for additional sulphide hosted mineralisation.

A MLTEM survey will be conducted over Europa and Titan along with two surveys around Carlow Castle to define new structures and/or extensions to the known mineralisation (Figure 1).

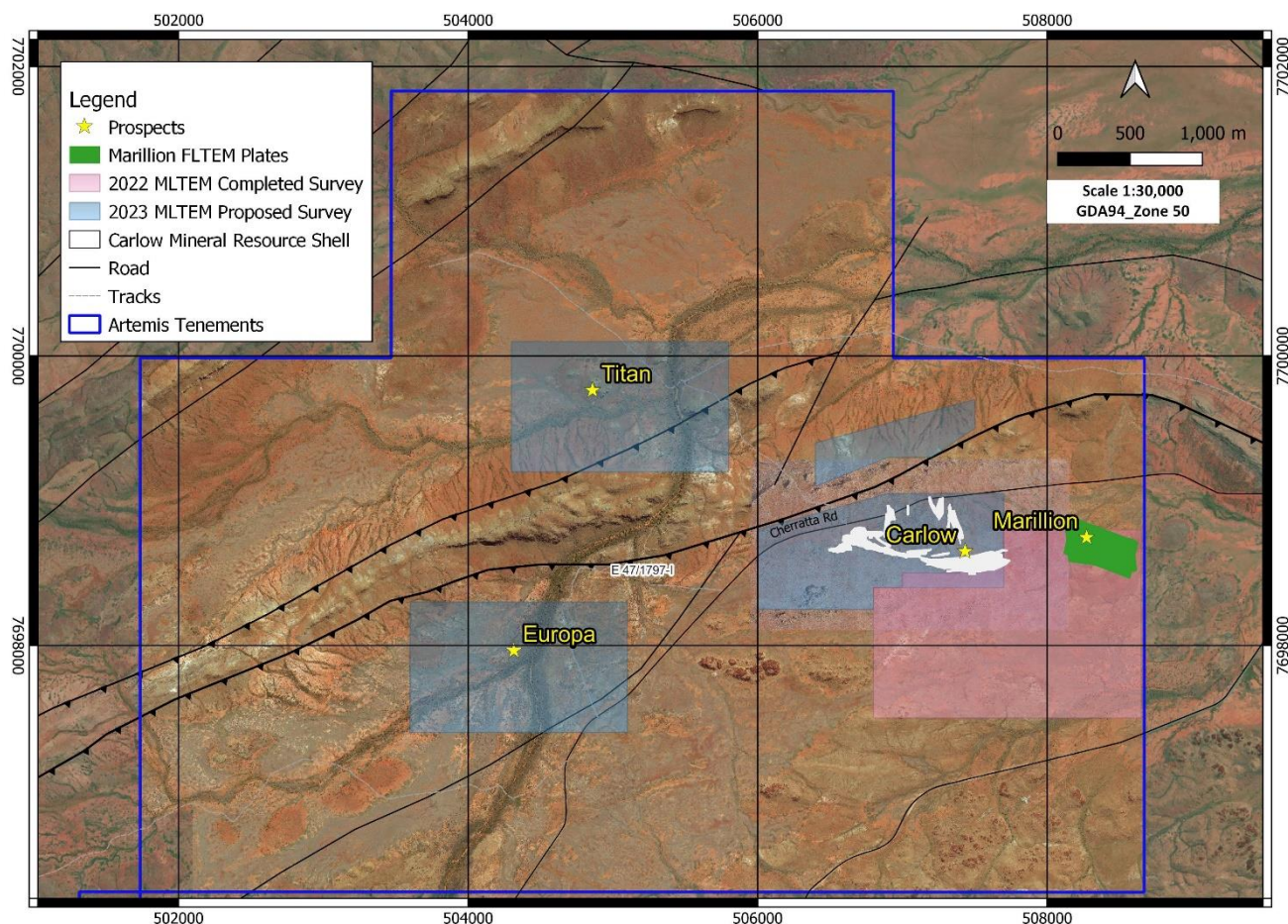


Figure 1: Proposed 2023 MLTEM surveys against prospect locations and the 2022 MLTEM survey which identified Marillion.

The Europa target is located approximately 1.7 km south-west along strike of the Carlow Castle deposit. It is situated within a structurally bound gravity high on the southern side of the Regal Thrust within the prospective Roebourne Complex. Its structural and gravity signature are of a similar nature to the Carlow Castle deposit. With no surface exposure, MLTEM has been identified as the preferred exploration technique in defining new conductors that may represent sulphide mineralisation.

Following the success of the Ultrafine Fraction (UFF) soil program in defining coincident gold and arsenic over the Titan target (refer ASX release 03/04/2023), the Company has also decided to complete a MLTEM program over the anomalous zone to determine if any conductors can be identified at depth. The MLTEM program will traverse over the anomalous skeletal soils to the north and track over the covered basement to the south, in which modern alluvial sediments cover the

basement. Additionally, the program will cover a subtle bulls-eye gravity anomaly immediately south of the main Titan soil anomaly that also produced an elevated gold signal.

MLTEM will also be used to assist in defining new mineralisation and/or extensions to the Carlow Castle mineralised system. Two surveys have been planned around Carlow Castle to assist. The first survey, immediately to the north, covers two north-west striking gossanous outcrops, one of which is believed to be the structure that host the Crosscut mineralisation to the south. This area was cleared as part of an archaeological and ethnographical heritage survey in August 2022, and has an approved work plan lodged for both RC and diamond drilling.

The second area for the MLTEM survey covers the western and southern sides of Carlow Castle. With such a significant EM anomaly being identified at Marillion, it is hoped an additional MLTEM anomaly can be defined immediately west of Carlow Castle.

The Artemis geological team are also making final preparations for a mapping and rock chipping program around the Titan gold target. The team will map and sample a 3 km by 1.5 km area around Titan to better understand the geology and structural controls of the Titan target. Currently only limited reconnaissance has occurred, however highly altered and sheared rocks were identified. Field work will commence in the coming days.

The Marillion target is a significant EM anomaly with conductance over 11,000S. It was originally identified in July 2022 with a MLTEM survey and then reconfirmed with a Fixed Loop Electromagnetic survey (FLTEM) in October 2022. The anomaly is located 450 m east of the Carlow Castle MRE and has a modelled strike length of 500 m to 600 m with a down dip extent of 250 m to 360 m (Figure 2). With a conductance greater than 11,000s Artemis technical team believe Marillion is a target of exceptional potential. Depth to the top of the anomaly is 350 m to 450 m and the anomaly dips at 40° to the south-southwest.

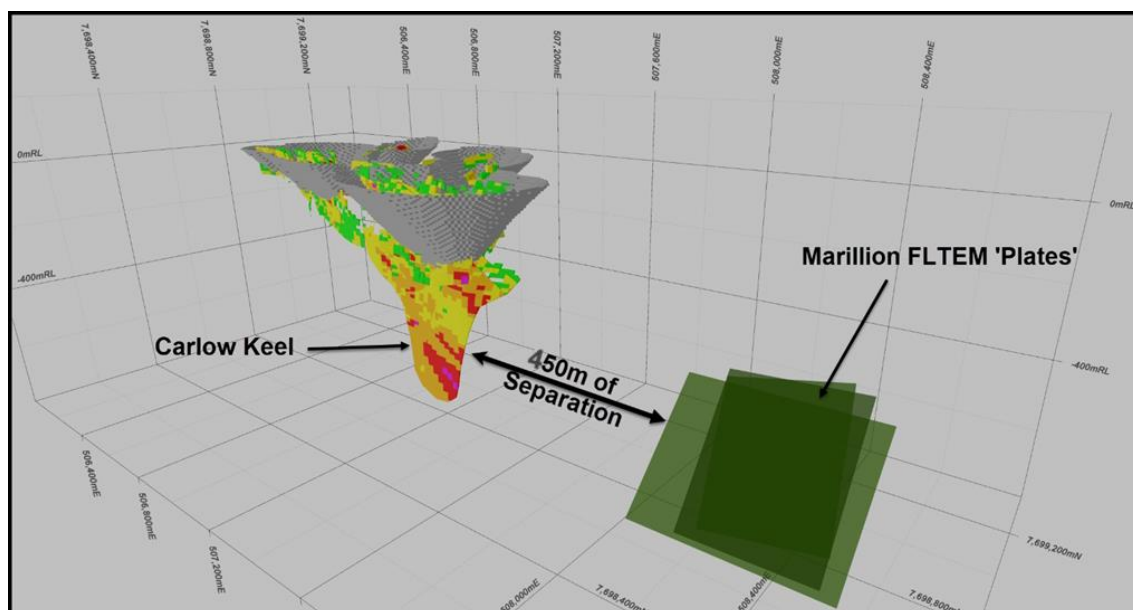


Figure 2: 3D oblique view of the Carlow Castle MRE and spatial location of the Marillion 'plates'

Two drillholes have initially been planned to intercept the EM plate at a depth of approx. 550 m and 600 m below surface via a combination of RC pre-collars and diamond drillhole tails.

JORC Exploration Target for the Carlow Castle Deposit

Artemis is pleased to advise that it has calculated an Exploration Target at Carlow Castle. The Exploration Target covers the Main, Quod Est, and Crosscut zones of Carlow Castle (Table 1) and has been expressed as a range of gold equivalent grades and tonnages. The potential for copper and cobalt, in addition to gold, has been assessed. The Exploration Target is additional to the 2022 MRE.

Table 1. Carlow Castle Exploration Target. The Exploration Target excludes the 2022 MRE. The metal equivalent relationship from the 2022 MRE is restated as Note 1 below from the ASX release dated 13/10/22.

Metric	Low case	High case
Tonnage range	2.5 Mt	5.0 Mt
Grade range	2.5 g/t Au Eq.	3.1 g/t Au Eq.
Contained Au eq. range	200,000 oz Au Eq.	500,000 oz Au Eq.

¹Gold equivalent equations for the oxide, transition and fresh domains as derived for October 2022 Resource Estimate:

Oxide Au Eq. = Au(g/t) + Cu(%) x 0.86 + Co(%) x 2.31

Transitional Au Eq. = Au(g/t) + Cu(%) x 0.81 + Co(%) x 2.17

Fresh Au Eq. = Au(g/t) + Cu(%) x 1.31 + Co(%) x 3.96

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Metallurgical factors supporting the Exploration Target

Preliminary metallurgical testwork was completed in 2019 at an independent laboratory on two 100 kg drill core composites. The testwork demonstrated a potential Carlow Castle process flowsheet utilising gravity and cyanide leach for gold, and flotation to produce copper and cobalt concentrates. Some 48% of the gold was recovered using gravity separation, with most of the balance recoverable in sulphide concentrates as a by-product using standard flotation. The total recovery of gold achieved was 94.8%. Quick floating copper minerals produced a high-grade, premium copper concentrate of approximately 30% Cu. Deleterious elements, including arsenic, could be managed with a light concentrate polishing using regrind or blend control. Recoveries depended on mineralogy, with 77% to 85% copper recoveries achieved. Unrecovered copper minerals relate to non-floating silicates and/or secondary copper oxides. Cobalt recoveries ranged from 73% to 79%. Saleable cobalt concentrate grades ranged from 2.3% to 5.3% Co. Cobaltite (CoAsS) is the dominant cobalt bearing mineral, and is therefore intrinsically linked to arsenic, affecting its sale price. The gold equivalent equations are given in the Table 1 footnote.

For the metal equivalent calculations used in the 2022 MRE and this Exploration Target, the metallurgical recoveries applied are given in Table 2.

Table 2. Metallurgical recoveries used in the metal equivalent calculations.

Metal	Metallurgical recovery		
	Oxide	Transitional	Fresh
Gold	96%	93.5%	93%
Copper	61%	56%	90.5%
Cobalt	47%	43%	78%

Basis of the Carlow Castle Exploration Target

Carlow Castle mineralisation is confined to the chlorite-silica altered mafic volcano-sedimentary rocks of the Ruth Well Formation. Primary sulphide mineralisation is the most significant (70% of the 2022 MRE) and occurs as relatively continuous vein-hosted breccias and sheared quartz-carbonate ± sulphide veins. The deposit comprises fresh sulphide-dominated and oxide-dominated (oxide, silicate, and carbonates) mineralisation. A transition zone shows characteristics of both fresh and oxide mineralisation. The 2022 MRE area is open in a number of directions, as shown in Figure 3.

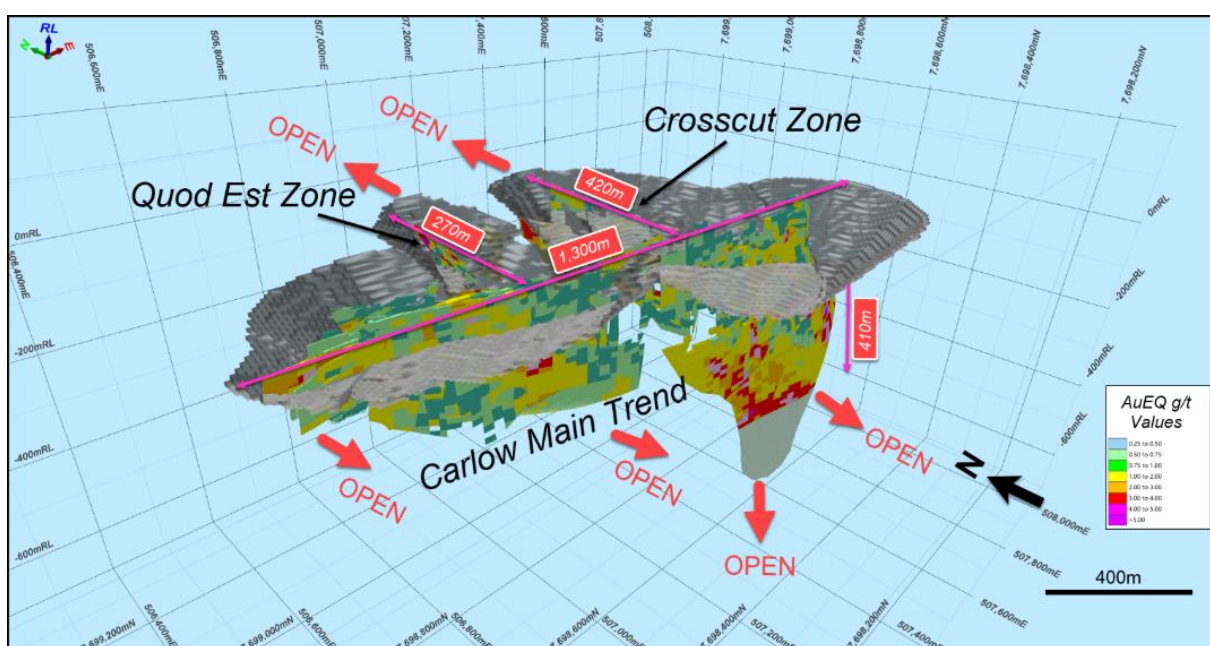


Figure 3. Oblique view of the 2022 MRE model showing potential continuations of known mineralised zones.

The Exploration Target is located around the down-dip margins of the 2022 MRE (Figure 4). Polygons were constructed using DATAMINE Studio RM Pro, based on projections around the block model for the Main East and West, Crosscut and Quod Est domains (Figure 4). Where necessary, parallel structures were assessed separately with their own polygons (e.g. Main West South and Main West North structures). The 150 m maximum projection distance was based on the maximum geostatistical range identified by variography during the 2022 MRE. For Crosscut and Quod Est, a more conservative maximum projection of 100 m was applied. For all Main Zone domains, the maximum projection applied was 150 m. In all domains, the existing drilling information was used to control the actual projection distance.

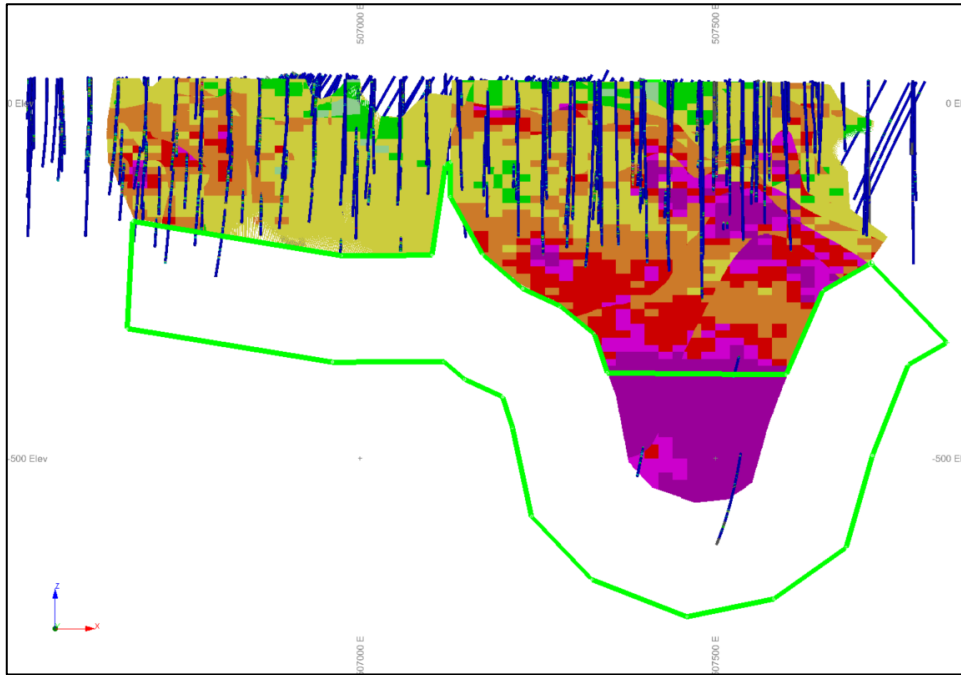


Figure 4. Carlow Castle Exploration Target projection polygon (green) around the Main Zone West and East.

The mineralisation width was assigned from the MRE wireframes that bound the polygon. The high case uses the mean model width, and the low case uses 80% (20% reduction) of the mean model width.

All volumes were modified for “geological continuity” using a percentage factor, which averaged at 90% for the high case and 80% for the low case. This attempts to allow for breaks in local geological continuity.

An additional “grade payability” factor was applied to allow for lower grade material within the mineralised volume, which averaged 70% for the high case and 50% for the low case.

The Exploration Target is dominantly located in fresh mineralisation, and a bulk density of 2.9 t/m³ was applied to both the high and low cases to define mineralisation tonnages.

The high and low case tonnages have been calculated using the formula:

$$\text{polygon area} * \text{thickness} * \text{geological continuity} * \text{grade payability} * \text{bulk density}$$

where the * factors are different between the high and low cases.

The grade was assigned at 3.1 g/t Au Eq. for the high case and 2.5 g/t Au Eq. for the low case, based on the mean MRE model grades for the underground and open pit scenarios in the 2022 MRE. Copper and cobalt grades were considered in the assessment of the Au Eq. grade.

This announcement was approved for release by the Board.

For further information contact:

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About Artemis Resources

Artemis Resources (ASX/AIM: ARV; FRA: ATY; US: ARTTF) is a Perth-based exploration and development company, led by an experienced team that has a singular focus on delivering shareholder value from its Pilbara projects – the Greater Carlow project in the West Pilbara and the Paterson Central exploration project in the East Pilbara.

For more information, please visit www.artemisresources.com.au

Announcements Related to this Release.

- 3/04/2023 Ultrafine soil sampling program confirms Titan gold prospect and defines elevated copper in Greater Carlow Project Area.
- 14/11/2022 December 2022 Quarterly Activities Report.
- 14/22/2022 Greater Carlow regional growth plan – high priority targets.
- 13/10/2022 High-grade gold-copper-cobalt Inferred Mineral Resource lays foundation for a robust Greater Carlow project.

Competent Person’s Statement

Exploration Results

The information in this report that relates to exploration results was prepared by Mr Luke Meter, a Competent Person who is a member of the Australasian Institute of Geoscientists (MAIG) and Australasian Institute of Mining and Metallurgy (MAusIMM). Mr Meter is employed by Artemis Resources as Exploration Manager. Mr Meter has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken 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 Meter consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to the Exploration Target was prepared by Dr Simon Dominy, a Competent Person who is a Fellow of the Australasian Institute of Geoscientists (FAIG RPGeo) and Australasian Institute of Mining and Metallurgy (FAusIMM CPGeo), and Chartered Geologist (FGS CGeol) of the Geological Society of London. Dr Dominy is employed by Artemis Resources as Executive Technical Director and holds Options in the Company. Dr Dominy has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken 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’. Dr Dominy consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to the Exploration Target was prepared by Ms Janice Graham, a Competent Person who is a Member of both the Australasian Institute of Geoscientists (MAIG) and Australasian Institute of Mining and Metallurgy (MAusIMM). Ms Graham is employed by Snowden Optiro as a Principal Consultant. Ms Graham has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken 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’. Ms Graham consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.