

27 April 2021

## ASX Announcement



### Carlow Castle – New Exploration Targets at Good Luck and Little Fortune

#### Highlights

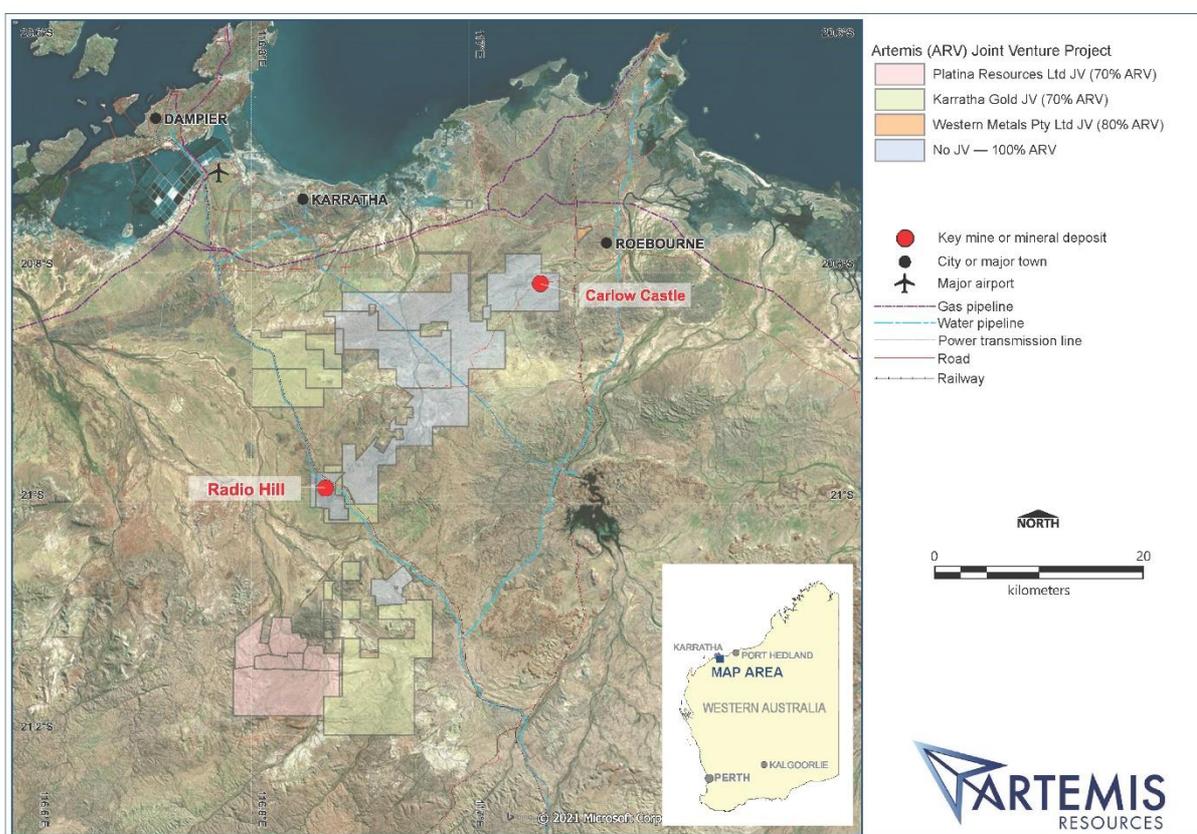
- Dipole-Dipole Induced Polarisation (DDIP) survey was completed in Q1 2021 over Carlow Castle and extended to cover the Good Luck and Little Fortune exploration prospects located ~1km to 2km to the south of the main Carlow discovery zone.
- Good Luck and Little Fortune are historical mine workings prospective for Au, Ag, Cu and Ni mineralisation, and previously reported exploration drilling in 2016 intersected anomalous Cu, Au and Ag mineralisation (see ARV release to the ASX dated 11 February 2016):
  - 9m @ 2.7% Cu and 16.3 g/t Ag from 67m in LFRC002 (Little Fortune)
  - 1m @ 4.6% Cu, 2.2 g/t Au and 27 g/t Ag from 33m in LFRC003 (Little Fortune)
  - 4m @ 0.42% Cu from 103m in GLRC001 (Good Luck)
- DDIP surveying shows extensive chargeable anomalies occur at both prospects, and re-processing of VTEM airborne EM survey data has also identified electrically conductive targets at both prospects.
- These new geophysical target zones were not tested by historical drilling, and some of them sit below historical workings and near drillholes with high-grade Cu, Ag and Au, with anomalous Ni, and are in favourable fold and shear structures on the western margin of the Andover Intrusion.
- Artemis intends to carry out a ~2,000m RC drilling campaign to test the new DDIP and VTEM targets at the Good Luck and Little Fortune prospects in May-June, subject to heritage clearance.

**Boyd Timler, Executive Director commented:** *“The new DDIP and VTEM geophysical targets at Good Luck and Little Fortune prospects show high exploration potential as previous drillholes have returned good grades of Cu-Au-Ag and interpreted to be in very close proximity of these new geophysical anomalies. Little Fortune and Good Luck have the potential to significantly expand the Carlow Castle Project mineralisation footprint to the south. The Carlow Castle gold-copper-cobalt project is within Artemis’ 100% owned tenement E47/1797, where most of the company’s exploration and resource expansion focus has been. We look forward to drill testing Good Luck and Little Fortune in May-June.”*

**Artemis Resources Limited** (“Artemis” or “the Company”) (ASX:ARV, Frankfurt: ATY, US OTCQB: ARTTF) is pleased to provide an update on mineral exploration activities at its 100%-owned Carlow Castle Project located in the West Pilbara region of Western Australia.

## Carlow Castle DDIP Survey Extended South to Cover Good Luck and Little Fortune Prospects

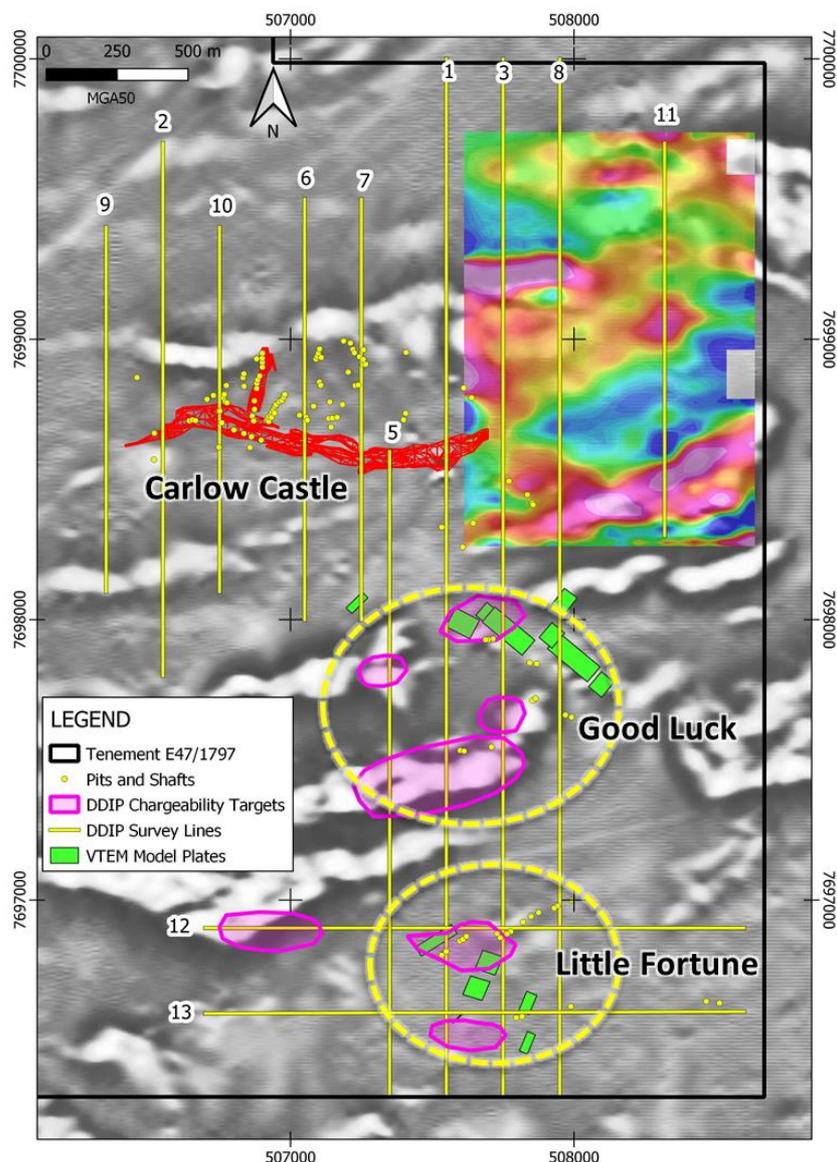
The Carlow Castle project is located in the north-eastern portion of the Company’s West Pilbara landholding, close to towns, sealed highway and ports, and is ~35 km from Artemis’ 100% owned Radio Hill Processing Plant (**Figure 1**). Carlow Castle is a 1.5km long E-W trend of structurally controlled mineralisation hosted in basalt and gabbro, and contains a JORC 2012 inferred mineral resource estimate (MRE) of **418Koz Au, 48Kt Cu and 7Kt Co** within **8Mt @ 0.51% Cu, 1.6 g/t Au and 0.08% Co** (see ARV ASX Announcement on 20 November 2019). Several drilling phases in 2020 and 2021 have been carried out following this MRE, and results of these drilling phases are being studied by CSA Global consultants to potentially expand the Carlow Castle MRE.



**Figure 1:** Artemis’ West Pilbara land holdings, showing the Carlow Castle project in the north-east and Radio Hill processing plant in the west, as well as nearby infrastructure.

A high-resolution aeromagnetic survey carried out in late 2020 using 25m N-S oriented survey line spacing has been used to help map sub-surface continuity of geological units and cross faults prospective for hosting Au-Cu-Co mineralisation in the project area. This aeromagnetic survey was followed up by DDIP survey lines crossing the main Carlow Castle mineralised trend and a Gradient Array IP (GAIP) survey grid to cover an area immediately east of Carlow Castle. IP surveying was carried out from February to March to identify chargeable and conductive anomalies associated with sulphide minerals and zones of deep weathering following favourable structures with potential for hosting Au-Cu-Co mineralisation (**Figure 2**). GAP Geophysics carried out this extensive IP survey program, with the surveying planned and monitored by Resource

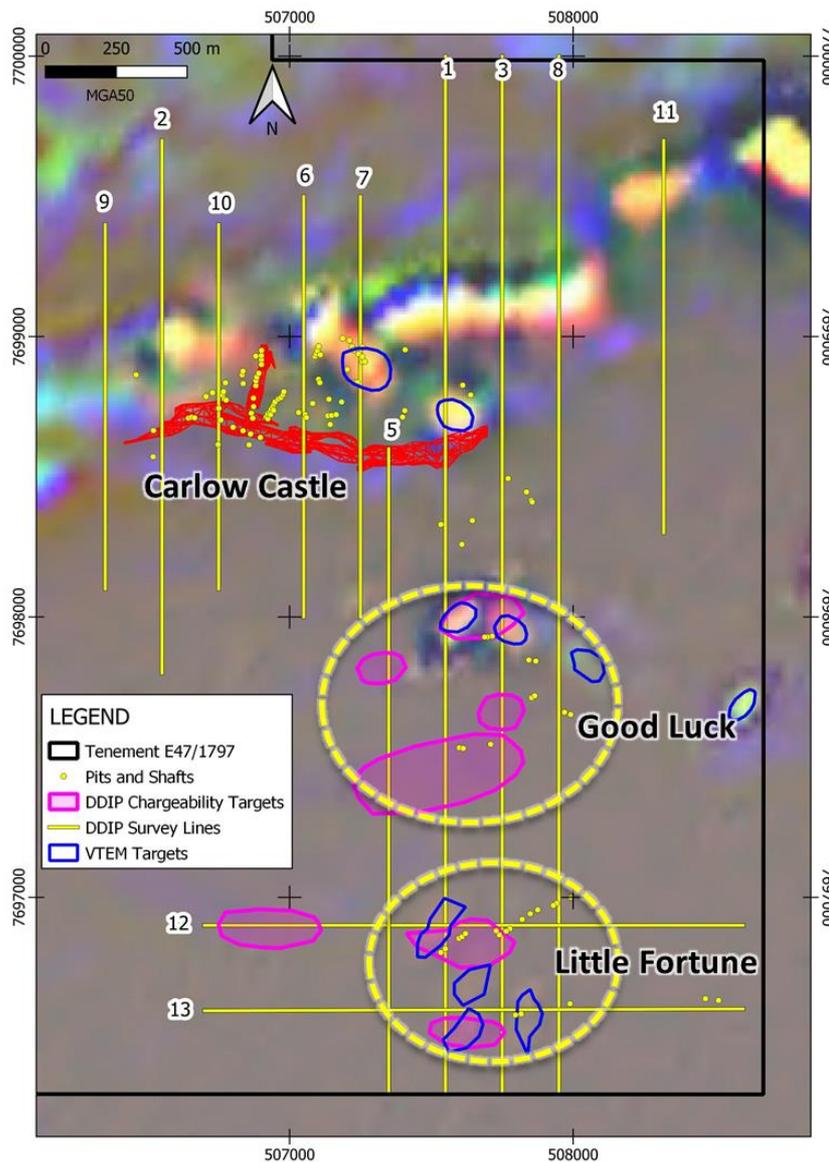
Potentials geophysical consultants. A total of 12 DDIP survey lines for 26.1km (10 N-S lines and 2 E-W lines), and a GAIP grid area of 1.5km<sup>2</sup> were carried out over Carlow Castle, which was extended south to cover the Good Luck and Little Fortune prospects, which are underexplored and have potential for Au, Cu, Ag, Ni and Co mineralisation (**Figure 2**).



**Figure 2:** Map showing the location of Carlow Castle DDIP survey lines (yellow) and colour image of GAIP chargeability, overlying a magnetic anomaly image after 2<sup>nd</sup> vertical derivative filtering. Also shown is the Carlow Castle and Quod Est resource wire frame outline (red), historical mine workings (yellow dots), DDIP chargeability target outlines (purple), and modelled VTEM airborne electromagnetic conductor source targets (green rectangles).

DDIP survey data have been processed and interpreted to generate electrical conductivity and chargeability depth models in 2D, and these results have been gridded laterally to generate 3D models of source bodies. These results have been interpreted to generate DDIP chargeability anomaly target areas which could be caused by sulphide minerals associated with Cu-Au mineralisation. Historical VTEM airborne electromagnetic survey data flown in 2007 at 100m spaced and NW-SW oriented survey lines were also re-processed, and VTEM conductivity targets were also selected and modelled for conductive sources over the Little Fortune and Good Luck prospects to plan drillholes for testing them. **Figure 3** shows an image of VTEM conductor anomalies and the location of DDIP chargeability targets, and note how the DDIP and VTEM targets

sit below, along strike or adjacent to historical Cu-Au mine workings at the Good Luck and Little Fortune prospects.

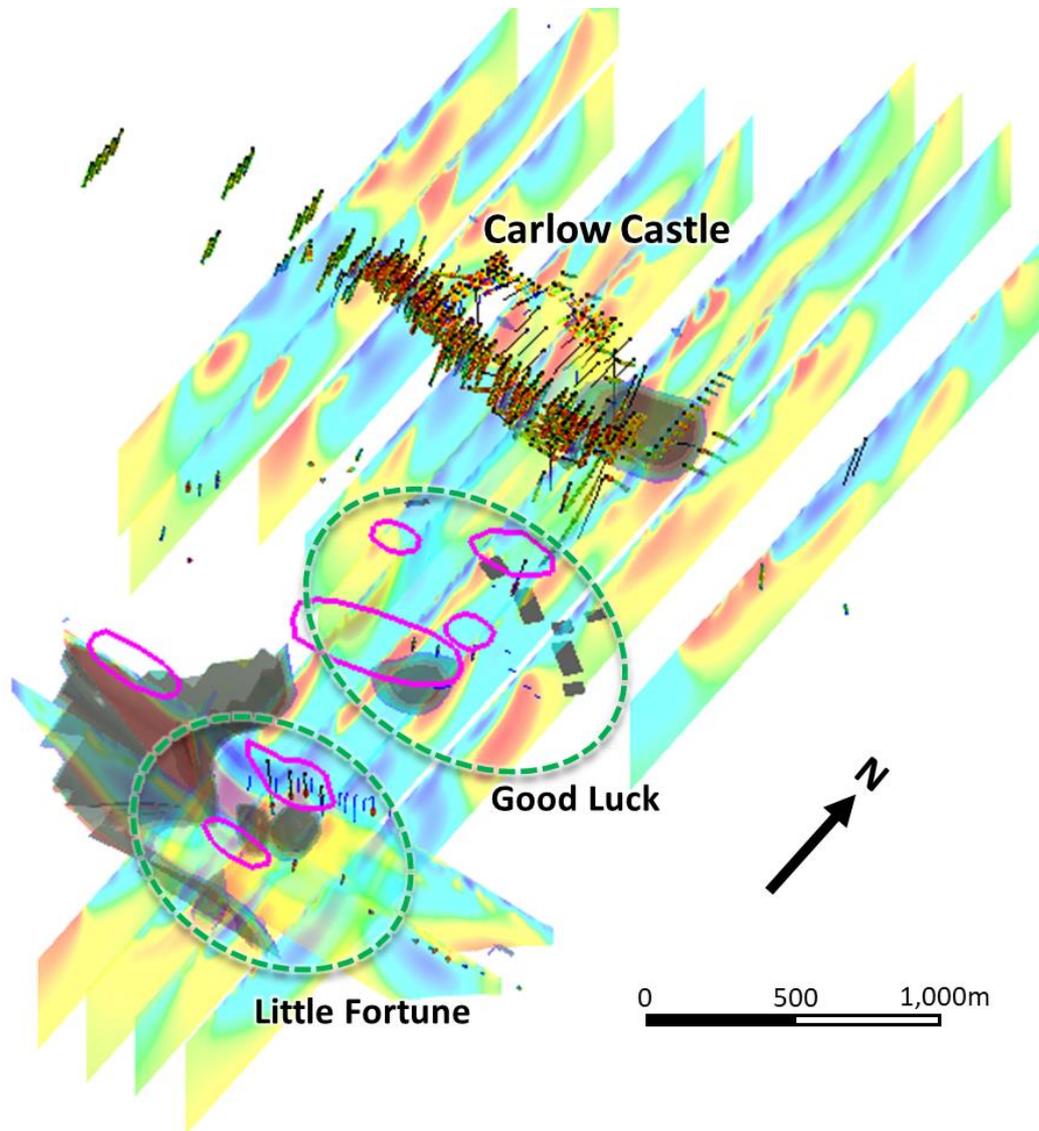


**Figure 3:** Map showing the location of Carlow Castle DDIP survey lines (yellow), overlying a VTEM electromagnetic conductivity anomaly image, coloured by electromagnetic time decay channel windows (red = ch30, green = ch20, blue = ch10, and white is all 3 colours combined due to overlapping anomalies). Also shown is the Carlow Castle and Quod Est resource wire frame outline (red), historical mine workings (yellow dots), DDIP chargeability target outlines (purple), and VTEM airborne electromagnetic targets (blue outlines).

**Figure 4** shows the DDIP survey chargeability results for all survey lines, along with chargeability targets, VTEM conductor targets and existing drilling coverage. This 3D view shows how historical drilling has either missed DDIP and VTEM targets or was too shallow to properly explain the underlying modelled geophysical anomaly source bodies. Drilling of 5 RC holes for 656m by Artemis at Little Fortune and Good Luck prospects in 2016 intercepted significant sulphide mineralised intervals of Cu, Ag and Au, including (see ARV release to the ASX dated 11 February 2016):

- 9m @ 2.7% Cu and 16.3 g/t Ag from 67m in LFRC002
- 3m @ 2.16% Cu, 1.22 g/t Au and 16.1 g/t Ag from 160m in LFRC001
- 1m @ 4.6% Cu, 2.2 g/t Au and 27 g/t Ag from 33m in LFRC003
- 1m @ 3.4 g/t Au from 32m in LFRC004
- 4m @ 0.42% Cu from 103m in GLRC001

These RC holes were planned to test for mineralised extensions below shallow historical mine workings and have not been followed up since then, because the main exploration focus has been on increasing the Au-Cu-Co resource at Carlow Castle. Artemis now intends to carry out an extensive RC drilling campaign of about 2,000m to test the new DDIP and VTEM targets at the Good Luck and Little Fortune prospects, and is in the process of getting these target areas heritage cleared for drilling access.



**Figure 4:** 3D “fence diagram” view of inverted DDIP chargeability data along survey lines looking to the northwest from above. Also shown are 3D bodies of high chargeability zones (grey), chargeability target outlines (purple), modelled VTEM electrical conductor source bodies (grey rectangles), and drillhole traces with elevated Cu assays plotted as hot colours downhole where historical assay data were available.

## COMPETENT PERSONS STATEMENT:

The information in this announcement that relates to Exploration Results complies with the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code) and has been compiled and assessed under the supervision of Dr Jayson Meyers, a consultant to Artemis Resources Limited and a Director of Resource Potentials Pty Ltd. Dr Meyers is a Fellow of the Australasian Institute of Geoscientists. He 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 JORC Code. Dr Meyers consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears. Dr Meyers does not hold securities in the Company.

### About Artemis Resources

Artemis Resources (ASX: 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 gold projects – the Greater Carlow Gold Project in the West Pilbara and the Paterson Central exploration project in the East Pilbara.

For more information, please visit [www.artemisresources.com.au](http://www.artemisresources.com.au)

This announcement was approved for release by the Board.

**SECTION 1 SAMPLING TECHNIQUES AND DATA**

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

Criteria	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>No rock, drill chip or other physical samples were collected for assaying or other analysis.</li> <li>DDIP and GAIP were acquired using time-domain methods, GeoPak High Power IPTX-2500 transmitter, 16 channel EMIT SMARTem24 receiver, and aluminum transmitter and stainless steel receiver electrode plates.</li> <li>DDIP data were acquired using a transmitter frequency of 0.125Hz generating electrical currents ranging from 2-35Amps, and GAIP data were collected using a transmitter frequency of 0.125Hz, 14-17Amps of current and 2,500m transmitter dipole separation.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>No new drilling was carried out.</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>No new drilling was carried out.</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <li>No geological or downhole logging was carried out.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>No sub-sampling or sample preparation was carried out.</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>No new assay information is provided in this release.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>IP survey data were downloaded and checked for location and data quality on a daily basis. Noisy data stations were either repeated or omitted from the final databases.</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>A hand-held GPS was used to define the location of IP survey lines and electrode positions using the GDA94 datum and MGA50 projection.</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>DDIP survey line data were collected on wide-spaced N-S and E-W oriented lines using 200m spaced transmitter dipoles and 100m moves per station, receiver dipole were spaced at 100m and moved using 100m spacing, this provided maximum N-levels of between 13 to 32. Location of DDIP survey lines is shown in Figures 2 and 3.</li> <li>GAIP data were collected on a grid pattern using 100m spaced N-S lines using 50m dipole spacing and 50m station spacing. Survey location is shown as an anomaly image in Figure 2.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>IP survey line transects were oriented N-S across the main geological strike which trends roughly E-W based on geological mapping, topography and airborne magnetic survey anomaly images, and 2 IP survey lines were oriented E-W to survey across VTEM conductivity targets running NNE-SSW at the Little Fortune prospect.</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>No physical samples were collected, but IP survey data were emailed from the contractor to Company staff and the Company's geophysical consultants on a daily basis for quality checking and preliminary data review.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>Data provided by the IP survey contractor have been evaluated by the Company's external geophysical consultants.</li> </ul>

**SECTION 2 REPORTING OF EXPLORATION RESULTS**

(Criteria listed in the preceding section also apply to this section.)

Criteria	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>IP surveying was carried out on E47/1797 which is 100% owned by Artemis Resources Ltd.</li> <li>This tenement is in good standing.</li> </ul>

Criteria	Commentary
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>The most significant work to have been completed historically in the Carlow Castle area, including the Little Fortune and Good Luck prospects, was completed by Open Pit Mining Limited between 1985 and 1987, and subsequently Legend Mining NL between 1995 and 2008.</li> <li>Work completed by Open Pit consisted of geological mapping, IP geophysical surveying, and RC drilling and sampling.</li> <li>Work completed by Legend Mining Ltd consisted of geological mapping, geophysical surveying and further RC drilling.</li> <li>Compilation and assessment of historic drilling and mapping data completed by both Open Pit and Legend has indicated that this data compares well with data collected to date by Artemis. Validation and compilation of historic data is ongoing.</li> <li>All exploration and analysis techniques conducted by both Open Pit and Legend are considered to have been appropriate for the style of deposit.</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>The Carlow Castle Co-Cu-Au prospect and the Little Fortune and Good Luck prospects include a number of mineralised fault zones hosted in Ruth Well Formation comprised of mafic to ultramafic volcanic and metasedimentary rocks located on the northern margin of the Andover Intrusive Complex, and also hosted in gabbro rocks of the Andover Complex. Mineralisation is exposed in numerous workings at surface along numerous quartz rich shear zones. Both oxide and sulphide mineralisation are evident at surface associated with these shear zones.</li> <li>Sulphide mineralisation appears to consist of chalcopyrite, chalcocite, cobaltite, pyrrhotite, pyrite and arsenopyrite.</li> </ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li>No new drill hole information is contained within this report.</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>Historical intervals reported are composed of 1 metre down hole intervals for Reverse Circulation drilling and have been length weighted.</li> <li>No upper or lower cut-off grades have been used in reporting results.</li> <li>No metal equivalent calculations are used in this report.</li> </ul>
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>True widths of historical RC drill intercepts have not been calculated for this report, and as such all intersections reported are down-hole thicknesses.</li> <li>A better understanding of the deposit geometry will be achieved on thorough interpretation of the data. True thicknesses may be reported at a later date if warranted. Due to the moderately to steeply dipping nature of the mineralised zones, it is expected that true thicknesses will be less than the reported down-hole thicknesses.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>Appropriate plans are shown in the text.</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li>Reporting of results in this report is considered balanced.</li> </ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>Planning of IP surveying by Artemis was based on compilation of historic exploration data, and the surface expression of the targeted mineralised shear zones and associated historic workings, as well as anomaly patterns interpreted from aeromagnetic geophysical data.</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>The IP and VTEM survey results at Good Luck and Little Fortune prospects warrant further drilling. The historical drill results suggested that these prospects have potential to host additional mineralisation at depth, along strike and in parallel structures.</li> <li>Heritage surveying has been planned and will commence soon to clear target areas for carrying out earthworks to prepare any new access tracks and drilling pads.</li> <li>Geophysical targets will initially be tested by RC drilling, and then diamond drilling where RC drilling fails to reach target depths and where core sample is required.</li> <li>Due to the sulphide mineral association with mineralisation, drillholes will be cased with PVC pipe and surveyed using down hole electromagnetic survey methods to explore for conductive sulphide minerals that might be sitting just off to the side of the drillhole traces.</li> </ul>