

Paterson Central - Drilling of Nimitz Prospect Completed

17 December 2020

Highlights

- **First Artemis drilling campaign completed at Paterson Central Project located next to the Newcrest Mining / Greatland Gold Havieron gold deposit in the Paterson Province, WA.**
- **Three deep diamond holes were drilled only 2.5km to the east of Havieron in the Nimitz Prospect area for a total of 3,012m, with 1,151m drilled into Proterozoic bedrock of the Lamil Group, which is the host rock to the Havieron and Telfer gold deposits.**
- **Drilling has provided core samples which provide visual indications that rocks in the Nimitz prospect area have potential to host gold and copper mineralisation.**
- **Two drillholes (GDRCD001 and GDRCD003) testing Lamil Group rocks in the west (Nimitz South) are considered the best because they returned multiple zones of particularly intense hydrothermal alteration, with breccias flooded by carbonate-sericite and quartz-carbonate-chlorite veining, all associated with hematite and trace to minor pyrite and chalcopyrite.**
- **All three holes drilled encountered intervals of intense hydrothermal alteration of upper Lamil Group rocks in close proximity to Havieron. This suggests that causative effects of alteration surrounding such a large gold system as seen at Havieron extend into, and occur on, the adjacent Artemis lease directly to the east. This supports the Company's belief that the Paterson Central licence is very fertile and prospective for large intrusive related gold and copper deposits.**
- **Selected intervals of core were recovered during drilling for immediate assaying and petrological analysis based on visual estimates of alteration and brecciation. Results from initial field samples are expected to be available early in the New Year, with larger sections of core analysis to follow.**
- **Given these highly encouraging preliminary drilling observations, the Company is now planning an expanded 2021 multi-rig drill programme to cover the top priority Apollo and Atlas targets, follow-up drilling at the Nimitz group of targets, and to test the Enterprise targets to the South.**

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 Paterson Central Project located in the East Pilbara region of Western Australia.

Alastair Clayton, Executive Director commented: *“These three drill holes, our first at the Paterson Central Project, are a watershed in our understanding of the potential for significant mineralised systems across our 605 sq km tenement footprint. The Nimitz group of targets were selected to be drilled in 2020 given relatively easy access from an existing Havieron main track, however, in reality, our highest priority ranked targets, Apollo and Atlas, will be drilled as soon as possible in 2021.*

It is exceptionally significant that drilling has intersected large intervals of intensely hydrothermally altered breccias that are in places hematite overprinted and with trace to minor pyrite and chalcopyrite enrichment from our very first holes, with those testing the Nimitz South area seen as having the most potential. These are precisely the geological textures and features we are targeting and we are looking forward to receiving the first sets of assay and petrography results early in the New Year.

We are confident that we are generating the correct targets using a combination of geophysics, geochemistry and structural models and the drill core to date clearly demonstrates the geology at Nimitz is indeed fertile for intrusive related gold-copper deposits. By retaining 100% ownership of our licence we provide our shareholders with uniquely unencumbered leverage to continued exploration success in the Havieron area of the Paterson Province. Industry leading consultants Resource Potentials, led by Dr Jayson Meyers, undertook all of the field work during the programme and DDH1 were the drilling contractor.”

First Drilling of Phase 1 Holes Completed – Basement Lithologies

Photographs of selected bedrock core intervals from holes GDRCD001 and GDRCD003, showing clear signs of hydrothermal alteration and veining, are shown in **Figure 1**. These photographs show a range of rock types and hydrothermal alteration styles that have affected the Proterozoic basement rocks close to the western tenement boundary with the Havieron Project. The scout drilling of these deep holes has provided core samples which provide early visual indications that rocks in the Nimitz Prospect area have potential to host gold and copper mineralisation, and results of petrographic analysis and geotechnical assay results will provide more geological insight into the gold and copper potential of the Nimitz Prospect area.



Figure 1: Selected core photographs from Artemis deep diamond holes at the Nimitz prospect showing zones of hydrothermally altered Proterozoic bedrock and quartz-carbonate-chlorite-hematite veins usually containing trace pyrite and chalcopyrite. A) Hole GDRCD001 from 919m showing carbonate-sericite-hematite altered calcarenite with pyrite and chalcopyrite (<1%). B) Hole GDRCD001 from 1,022m showing calcarenite (bottom) and quartz-carbonate vein (top) with large chalcopyrite mineral grain (inside of red circle). C) Hole GDRCD001 from 972m showing carbonate-hematite altered calcarenite cut by a narrow quartz-carbonate-biotite vein containing trace sulphides (<1%). D) Hole GDRCD003 from 744m showing calcarenite breccia flooded by carbonate-chlorite veining. E) Hole GDRCD003 from 922m showing gabbro highly altered by silica and hematite with trace disseminated sulphides less than 1% (top) in contact with a breccia vein flooded by quartz-carbonate-chlorite and trace sulphides (bottom). F) Hole GDRCD003 from 952m showing brecciated dolerite and quartz-carbonate-biotite-pyrite veining.

First Drilling of Phase 1 Holes Completed in Havieron Dune Corridor

Figure 2 is a drone photograph showing the location of the Nimitz North drill pad in the foreground and Havieron in the background to the west.

The Company has identified 7 initial targets/prospects for deep drill testing at Paterson Central, with 5 of them surrounding the Havieron gold-copper deposit to the north, east and south (**Figure 3**). Drilling commenced at the Company's Nimitz Prospect in early October and was completed by mid-December. Nimitz was chosen because of its easily accessible location along an existing track that passes through Havieron and continues east into Artemis' Exploration Licence in a swale formed between 2 E-W trending linear sand dunes (**Figure 3**).

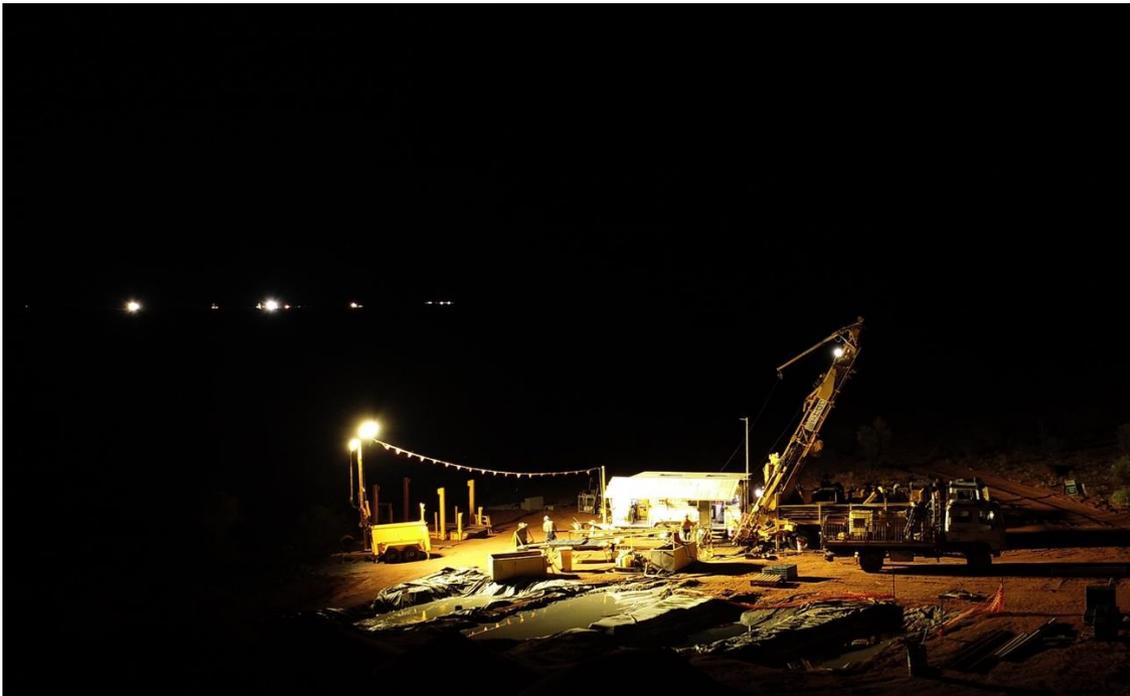


Figure 2: Night time drone photograph looking west showing Nimitz North drill pad in the foreground and Havieron drill rigs and camp lights in the background.

Information on the 3 deep diamond holes is presented in **Table 1**, which shows that a total of 3,012m were drilled, of which 1,151m were drilled into Proterozoic bedrock of the Lamil Group, the host rock to the Havieron and Telfer gold deposits, and the remainder was drilled through overlying Permian glacial deposit cover having an average vertical thickness of 568m, in comparison to about 450m at Havieron.

Figure 4 shows simplified lithology initially logged from the core in the field plotted down the drillhole traces. About 70 short intervals of core (10-20cm long) were sampled in the field crossing key rock types, different alteration zones and veins of interest. These samples are being analysed for petrology and are being assayed for an extensive geochemical element suite. The remaining core will be properly measured, marked up, logged, cut, sampled and stored at Artemis' Radio Hill Mine site.

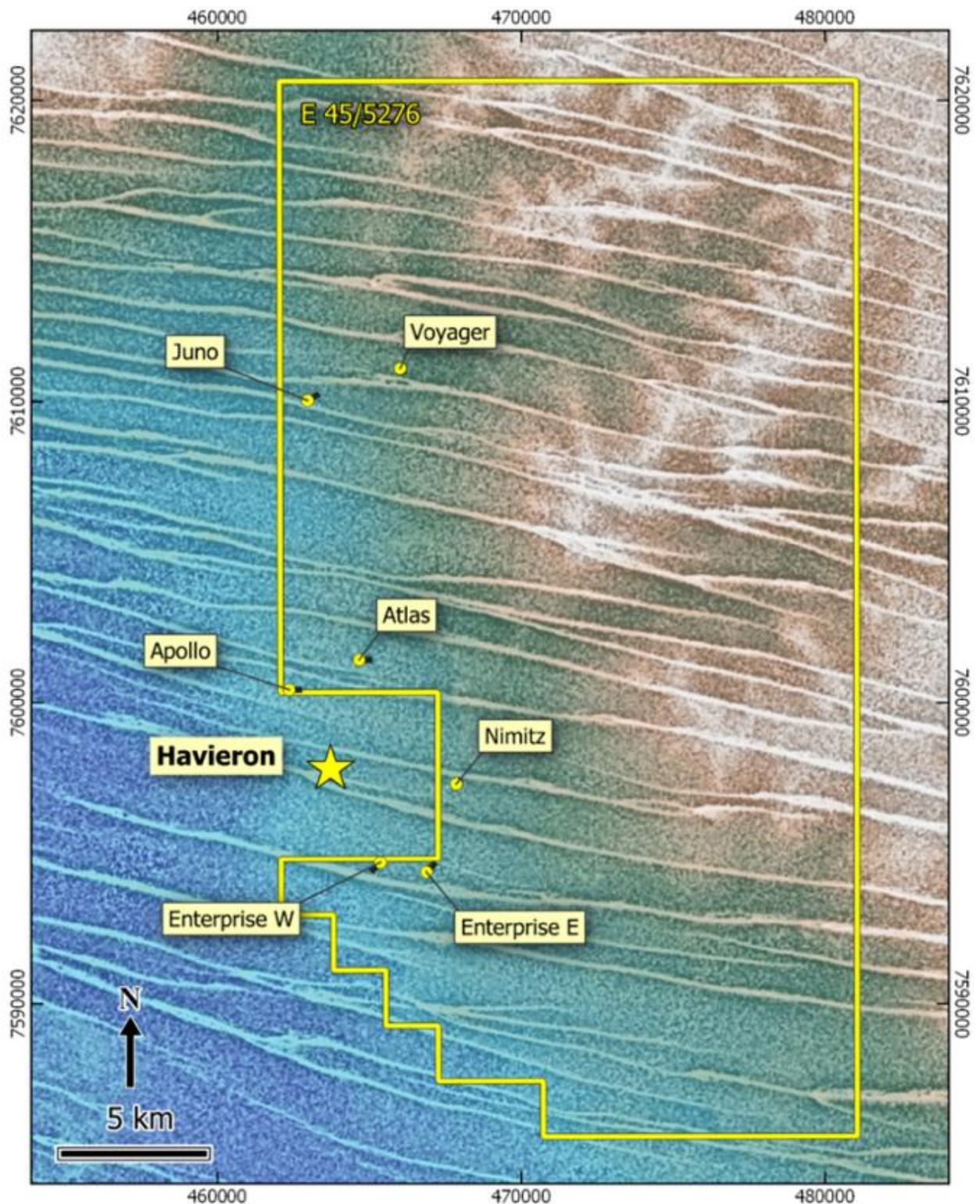


Figure 3: Digital terrain model and Artemis 100% owned Paterson Central tenement (yellow outline), with 7 initial targets/prospects shown (yellow dots). An extensive array of linear sand dunes show up as E-W trending lines, with topographic elevation highlighted by hotter colour attributes. The linear sand dunes range in height from 5 to 15 metres above the relatively flat landscape. The Nimitz Prospect is located 3km to the east of the centre of the Havieron deposit (3.4Moz Au), in the same inter-dune swale which was chosen for initial drilling due to relatively easy access.

Table 1: Drill collar information for first 3 deep diamond drillholes at Artemis' Paterson Central Project.

Hole ID	Northing (MGA51)	Easting (MGA51)	EOH Depth (m)	Azimuth (degrees true N)	Dip (degrees)
GDRCD001	7596691	467485	1061	145	-70
GDRCD002	7597300	467855	905	45	-80
GDRCD003	7597299	467856	1046	212	-60

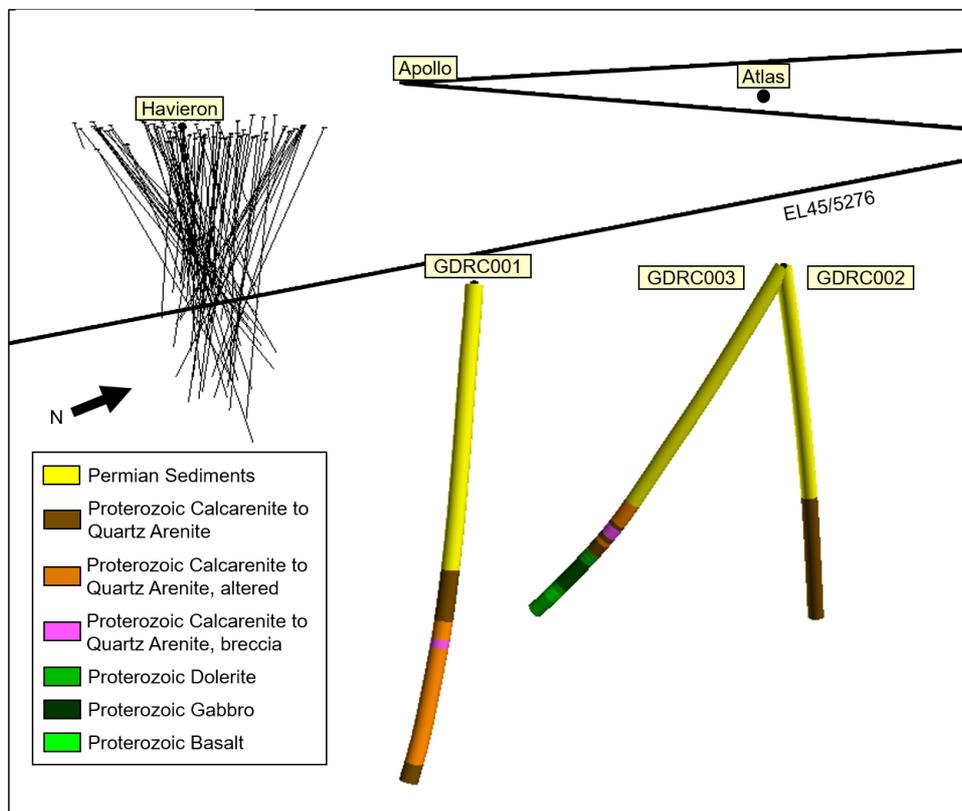


Figure 4: 3D view looking to the NW at Artemis deep drillholes into the Nimitz Prospect in the foreground coloured by simplified lithology down the hole traces. In the background are drillhole traces at Havieron up until end of September 2020 (taken from Newcrest quarterly reports to the ASX prior to the discovery of the Northern Breccia Zone at Havieron), and Artemis targets/prospects Apollo and Atlas.

The Nimitz Prospect is located on the western side of a broad NW-SE trending gravity ridge that runs along the eastern side of the Havieron Thrust Fault, and extends through the Artemis lease and into the adjacent lease containing Havieron (**Figure 5**). This gravity ridge is cut across to the south by an interpreted meandering paleo-valley incised into the top of the Proterozoic bedrock, and it is also cut across to the north by an interpreted granite batholith. This NW-SE gravity high trend can now be explained as an anticlinal structural corridor containing mafic sills within the Lamil Group based on the results from Artemis deep drillhole GDRCD003.

The company will now focus its next efforts on obtaining access to other targets/prospects within the Paterson Central Project area, with the aim to resume deep drilling on targets around Havieron and targets located further to the north in the first quarter of 2021.

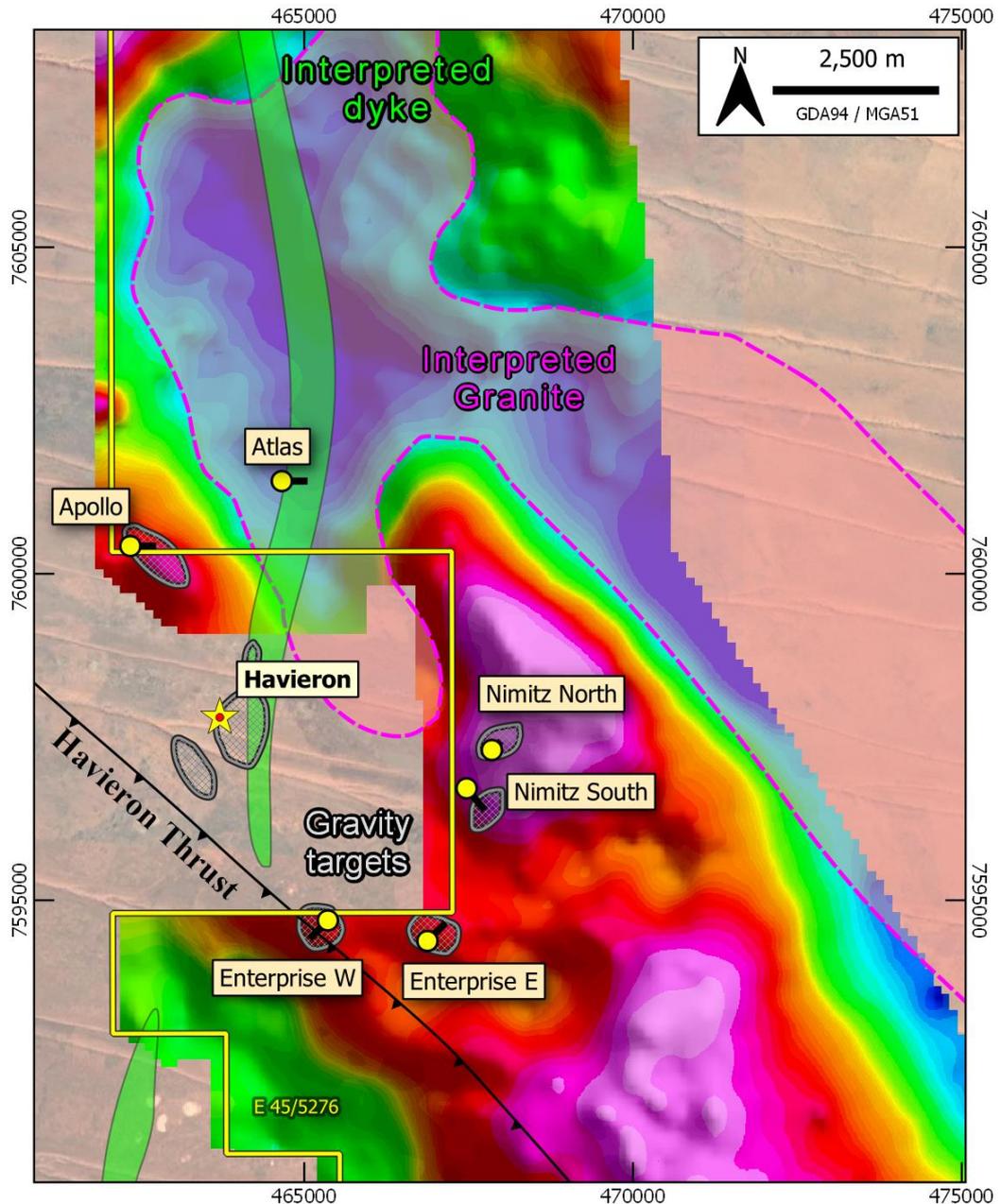


Figure 5: Gravity anomaly image after applying 12km high-pass filter and NE sun shading. Interpreted geological features highlighting a N-S trending post-mineralisation mafic dyke, Havieron Thrust Fault and granitic intrusion. Locations of Artemis targets/prospects and proposed drillholes are shown as yellow dots, and downhole traces of planned drillholes projected to surface are shown as black lines, as well as local gravity high zones outlined in grey.

Background to the Paterson Central Project

The Paterson Central Project is located in the Yaneena Basin of the Paterson Province, which hosts large scale mineral deposits, such as the World class Telfer Gold-Copper Mine, recently discovered Winu copper-gold deposit, Nifty Copper Mine, and the rapidly growing Havieron gold and copper deposit. The Company's Paterson Central project forms a 100% owned exploration tenement E45/5276, which surrounds the Havieron gold deposit on three sides, and covers the same continuous geological domain (**Figure 6**).

The geology of the project area consists of Canning Basin sediments - primarily Permian siltstones in this part of the basin - which overlie Proterozoic meta-sedimentary basement rocks which form the main host rocks to large mineral deposits in the region. The sedimentary cover is 300m thick in the far western part of the project area and is interpreted to deepen to over 800m in the far east. The Havieron gold and copper deposit is associated with a strong magnetic anomaly and sits under about 450m of sedimentary cover. Mineralisation at Havieron extends over deep intervals to at least 600m below the base of sedimentary cover, where the mineralisation starts, and it continues to remain open at depth and laterally, with the recent discovery of the Northern Breccia Zone by Newcrest. The Company is exploring the Paterson Central Project for both Havieron and Telfer styles of gold and copper mineralisation.

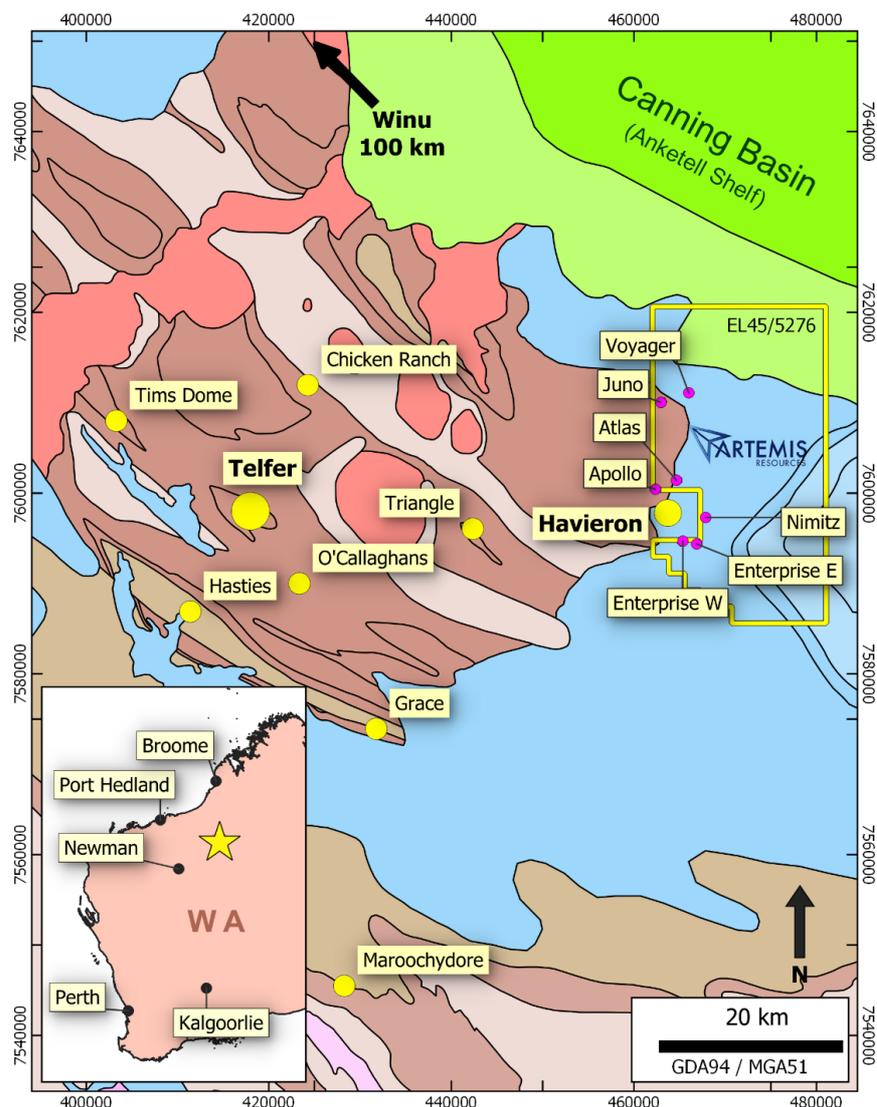


Figure 6: Paterson Central Tenement E45/5276 (yellow outline) with 7 target areas proposed for drilling, overlying main geological units and showing locations of major gold and base metal deposits.

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

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
<i>Sampling techniques</i>	<ul style="list-style-type: none"> Representative intervals of HQ and NQ diameter core samples from the Proterozoic bedrock were collected from plastic core trays and broken into 10-20cm intervals using a hammer. The sample intervals were marked on remaining core, and core sample intervals were geologically logged, measured for average length, photographed, and placed into numbered calico bags. Remaining core samples were stored in plastic core trays, stacked onto pallets and lashed to pallets with metal strapping for transport to the Company's Radio Hill Mine site in WA, where the core will be properly measured, marked up, logged in greater detail, cut for assaying, and stored.
<i>Drilling techniques</i>	<ul style="list-style-type: none"> Deep diamond drilling of HQ and NQ diameter core using drilling contractor DDH1.
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> Sample recovery has not yet been estimated and this will be carried out in the core farm at the Company's Radio Hill Mine in WA.
<i>Logging</i>	<ul style="list-style-type: none"> Initial logging has been carried out visually to produce simple lithological quick-logs, and more detailed geological logging and core measurements will be carried out on properly measured and marked up core in a core farm.
<i>Sub-sampling techniques and sample preparation</i>	<ul style="list-style-type: none"> Spot samples of core collected in the field will be cut by rock saw to remove small blocks of rock to use for generating thin section slides for petrographic and microscopic analysis. Such petrological samples will also be photographed. This work will be carried out by a specialised laboratory based in Perth, WA. Off-cut samples from petrology preparation and remaining core will be stored in numbered calico bags and sent to a qualified assay laboratory located in Perth, WA. Standard sample packs and duplicate samples will be inserted with every 20 core samples analysed for QA/QC analysis.
<i>Quality of assay data and laboratory tests</i>	<ul style="list-style-type: none"> For every 20 core samples submitted for geochemical analysis, one sample will be split into 2 samples by using a rock saw to cut down the middle of the core, or disaggregated core samples will be broken and manually split, so that duplicate samples can be analysed for repeatability Certified standard sample packs of representative Au-Cu mineralized rock will be submitted with every 20 core samples for additional QA/QC.
<i>Verification of sampling and assaying</i>	<ul style="list-style-type: none"> Laboratory standards and blank samples will be inserted at regular intervals and duplicate samples will be taken for QC checks at a ratio of 1 to 20 core samples.
<i>Location of data points</i>	<ul style="list-style-type: none"> Coordinate and height information were collected with a differential GPS (DGPS) using the GDA94 datum and MGA Zone 51 projection accurate to within 1m. Where DGPS survey information was not available, locations were measured using a handheld GPS accurate to within 5m and the SRTM digital elevation model or Landgate 2010 digital elevation model was used as a height datum. Downhole hole position surveys were collected at 30m intervals using a north seeking gyroscopic downhole survey tool operated by DDH1.
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> Core samples 10-20cm long were collected in the field were taken at random intervals based on visual changes in host geology, overprinting hydrothermal alteration effects or veining for immediate analysis by the Company.

Criteria	Commentary
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> • Drillholes were oriented to target gravity and magnetic anomaly trends in the Proterozoic bedrock, and hole collar positions, azimuths and dips were designed to intersect bedrock at predicted depths below Permian cover of between 500-600, vertical depth.
Sample security	<ul style="list-style-type: none"> • Core samples collected in the field were placed in numbered calico bags, and then placed into labelled polyweave bags and sealed with plastic pull-ties. The sample bags were driven from site to offices and laboratories in Perth by Company staff and contractors.
Audits or reviews	<ul style="list-style-type: none"> • No external audits have been carried out on sampling to date.

SECTION 2 REPORTING OF EXPLORATION RESULTS

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

Criteria	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> • Drilling was entirely carried out within the Company's exploration licence E45/5276, which is 100% owned by Artemis Resources Limited and forms the Central Paterson Project. • This tenement was granted on 14 February 2019 and remains in good standing.
Exploration done by other parties	<ul style="list-style-type: none"> • All previous exploration activity in area was for oil and gas in the sedimentary basin rocks of the Canning Basin, which sit on top of the older Proterozoic basement rocks which is the current target host rock for the Company's Au-Cu exploration activities.
Geology	<ul style="list-style-type: none"> • The project occurs in the Neoproterozoic Yaneena Basin of WA (852-820Ma), which is comprised of sandstone, carbonate, marl, siltstone, shale and ironstone beds intruded by mafic sills forming the Throssell and overlying Lamil groups, and which both overlie the Rudall Metamorphic Complex basement (ca 1,800Ma). The Crofton Granite Suite was intruded into the region during the Miles Orogeny (650-600Ma), when large gold-copper deposits like Telfer were deposited. The Yaneena Basin underwent several phases of deformation, with last major event being the Paterson Orogen at ca 550Ma. Much of the host rocks to the gold and copper deposits are covered by Permian glacial deposits of the Paterson Formation / Grant Group of the Canning Basin, and Cainozoic sediments, sand dunes and regolith soil cover blanket much of the region. The style of mineralisation within the Company's project area is currently unknown, but inferred to be related to intrusive related gold, mesothermal-orogenic lode gold, or skarn styles of gold mineralisation, with elevated copper.
Drill hole Information	<ul style="list-style-type: none"> • Drilling core has been logged in the field as a first pass, and more detailed core measurements, logging and sampling will be carried out at the Company's Radio Hill Mine core farm.
Data aggregation methods	<ul style="list-style-type: none"> • Data aggregation has not yet been carried out, as only preliminary drilling results are mentioned.
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> • No mineralisation has been reported at this time.
Diagrams	<ul style="list-style-type: none"> • Appropriate plans are shown in the text.
Balanced reporting	<ul style="list-style-type: none"> • All initial results have been reported.
Other substantive exploration data	<ul style="list-style-type: none"> • Exploration data is contained in previous Company reports.
Further work	<ul style="list-style-type: none"> • Petrographic analysis and geochemical assaying of core samples collected in the field. • Site rehabilitation. • Systematic measuring, marking, logging, cutting and sampling of core at the Company's core farm.

Criteria	Commentary
	<ul style="list-style-type: none">• Analysis of partial leach soil geochemical survey data when results become available from the laboratory.• Heritage surveying on targets that require new track and site clearing.• Deep diamond drilling on additional target areas.