

QUARTERLY ACTIVITIES REPORT SEPTEMBER 2010

About Artemis Resources

Artemis Resources is an ASX-listed mineral exploration company with a focus on gold.

Key Projects

Gold

Mt Clement (WA)
Yandal (WA)

Rare Metals

Yangibana (WA)
Buchanan's Creek (QLD)

Uranium

Mundong Well (WA)
TAG II/IV (Niger, Africa)

Artemis' corporate strategy is to maximise shareholder returns through a combination of exploration success and quality project acquisition.

Gold forms a central platform for the Company's growth strategy.

Australian Securities Exchange

Code: ARV
Options: ARVOB

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HIGHLIGHTS

- **New high grade gold, silver, copper mineralised zone discovered at the Mt Clement Gold Project in Western Australia**
- **Drilling at Mt Clement returned exceptional gold results including 6m @ 8.81g/t, 20m @ 7.30g/t and 24m @ 3.40g/t gold**
- **Drilling at Mt Clement also returned outstanding silver and copper results including 20m @ 395g/t silver and 24m @ 168g/t silver and 0.5% copper**
- **Multiple drilling targets have been identified at the Yandal Gold Project in Western Australia**
- **Placement and Renounceable Rights Issue raises A\$5.4million to enable on-going aggressive exploration program**

Australian resources company, Artemis Resources Ltd (**ASX: ARV**) today posted its September 2010 quarterly activities report highlighting significant exploration success at its Mt Clement Gold project in Western Australia and preparations for a major drilling programme at its Yandal Gold Project in Western Australia.





Mt Clement Gold Project, Western Australia

The Mt Clement Gold Project is located in the reinvigorated Ashburton Gold Province of Western Australia. Artemis has more than 5 square kilometres under tenement surrounding the former workings at Mt Clement, including 3 current Mining Leases directly over the Mt Clement Gold/Silver Deposit itself. The Mt Clement Project lies 30km south of the Paulsen's Gold Mine operated by ARV's 20% Joint Venture partner, Northern Star Resources Limited (ASX: NST).

Artemis has identified 2 styles of gold mineralization at Mt Clement. "Type 1" gold mineralization is typically higher grade gold and is usually associated with high silver and copper values. Type 1 mineralisation is also characterised by steep dipping structures and has a moderate plunge towards the south-southwest.

The "Type 2" gold mineralisation style is typically lower grade (between 1 - 2g/t gold) and is stratabound. The mineralisation varies from 5m to 25m in thickness and is broadly flat lying, although the orientation varies considerably due to folding. Historical drilling has mainly intersected "Type 2" lower grade mineralisation.

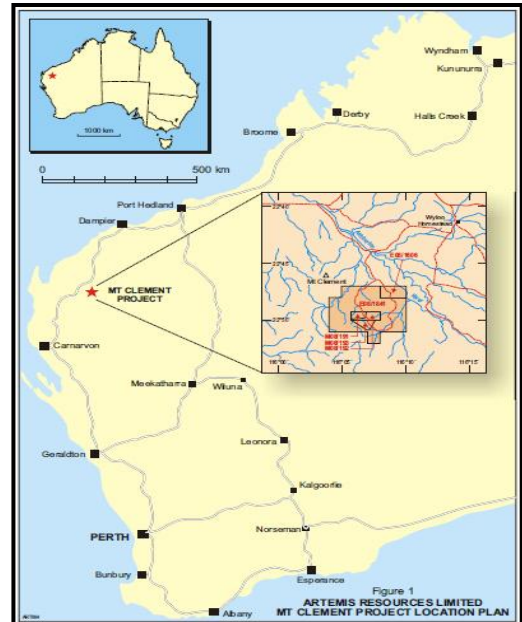
Quarter Review

During the quarter, Artemis undertook a reverse circulation drilling program at Mt Clement. This initial drilling program was aimed at testing the mineralisation model developed by Artemis' in-house technical team.

The first drill hole (ARMCRC001) successfully intersected massive sulphide and high-grade gold with the best results from this hole being **6.0m @ 5.23g/t Au** between 14m and 20m downhole depth and **6.0m @ 8.81g/t Au** between 106m and 112m downhole depth

ARMCRC001 was aimed at testing the first of 5 high grade zones and confirmed that Artemis' mineralisation model was correct. The intercept from 106m (averaging **6m @ 8.81g/t Au**, including **3.0m @ 13.68g/t Au**) is the deepest intersection in the western part of Artemis' Mining Lease (M 08/192).

This intersection proved that gold mineralisation is not restricted to near-surface secondary (weathering) enrichment of gold. The mineralisation was intersected on target as modelled and extended the gold mineralisation 37m deeper than the previous BHP intersection drilled in 1979 (hole number CD004 which intersected 8.5m @ 5.80g/t Au).





The near-surface intercept averaging 6m @ 5.23g/t Au successfully confirmed and in-filled mineralisation associated with the Pacific Lode, forming part of the stratabound near-surface gold mineralisation model.

Importantly, the first drill hole at Mt Clement also encountered high-grade copper and silver within massive sulphide. The best results from hole ARMCRC001 include **5.0m @ 2.80% copper** between 106m and 111m downhole depth and **5.0m @ 656g/t silver** also between 106m and 111m downhole depth.

Artemis' second drill hole (ARMCRC002) at Mt Clement was aimed to test for gold, silver and copper mineralisation down dip from its first hole. Mineralisation was successfully intersected 35m below hole ARMCRC001. This intersection (**2.0m @ 3.22g/t gold**) occurs between 147m and 149m downhole depth and is closely associated with **3.0m @ 22.10g/t silver** and 0.12% copper between 150m and 153m downhole depth. The successful intercept at this depth (136m vertical depth below surface) demonstrates that gold, silver and copper mineralisation is persisting at depth and is likely to continue deeper.

A second high-grade gold, silver, copper zone was intersected 95m east of the first high-grade zone at Mt Clement. The best results from this third drill hole (ARMCRC003) include **13.0m @ 1.46g/t gold, 67.59g/t silver and 0.24% copper** between 92m and 105m downhole depth. Drill hole number ARMCRC003 was aimed at testing the second of the 5 high-grade zones identified by Artemis. This hole drilled by Artemis intersected gold, silver and copper in an area previously untested by drilling and proves that mineralisation remains open in all directions.

Holes ARMCRC004 and ARMCRC005 were drilled from the same collar position but in different directions and with different dips. The purpose of these 2 holes was to extend the stratabound style "Type 2" mineralisation 100m east of drill hole ARMCRC003. Both holes successfully intersected the near-surface Pacific and Atlantic gold lodes. Best intervals include **8.0m @ 0.12g/t gold** at 2m depth and **1.0m @ 1.10g/t gold** at 51m depth in hole ARMCRC004 and **8.0m @ 1.53g/t gold** at 8m depth in hole ARMCRC005. The gold encountered in ARMCRC004 and ARMCRC005 extended the Pacific and Atlantic gold lodes 25 metres to the south of all previous known gold intersections.

Drill hole ARMCRC006 was drilled 315m east of the high grade mineralised zone and was designed to infill a gap in drilling in the near-surface, stratabound gold mineralisation. This hole intersected **12m @ 0.41g/t gold** from 12m depth and confirms the continuity of gold mineralisation very close to surface. From 78m depth, hole 6 also encountered **2m @ 3.48g/t gold** which opens up the possibility of a deeper zone of mineralisation not previously identified.





Artemis' seventh drill-hole at Mt Clement (ARMCRC007) intersected excellent grades over a substantial down hole length. The best intervals from this hole include **20.0m @ 7.32g/t gold, 395g/t silver and 0.78% copper from 86m depth**. This interval includes an intersection of **11.0m @ 10.69g/t gold, 318g/t silver and 1.07% copper at 91m depth**. The intercept is further enhanced by an internal interval of **5.0m @ 14.34g/t gold, 412g/t silver and 1.15% copper**, also from 91m depth.

The seventh hole was deliberately drilled across the high-grade zone identified by holes ARMCRC001 and ARMCRC002 to gain a 3-dimensional understanding of the high-grade geometry and successfully confirmed and strengthened the grade of gold in close proximity to the historical hole CD004. Hole ARMCRC007 has increased the 3-dimensional knowledge of the high-grade lode. With this new 3-dimensional knowledge of the high-grade zone, the average true width of the high-grade gold zone is now known to be 5m.

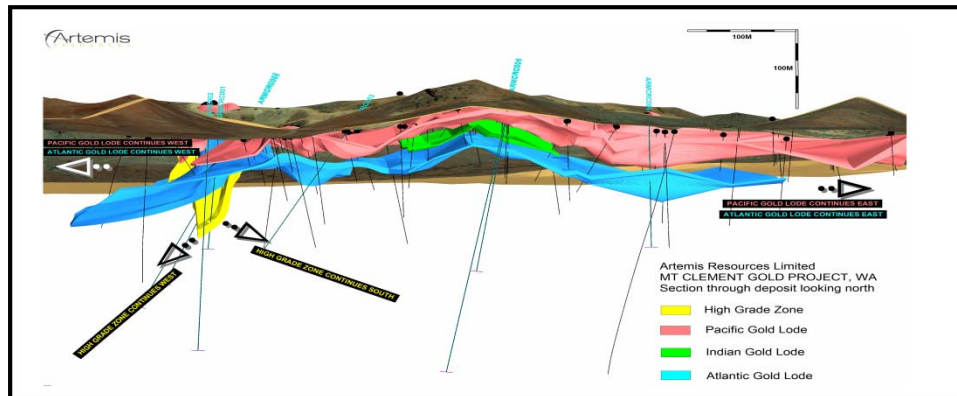
Artemis' drill hole ARMCRC008 intersected a number of gold, silver and copper zones including a 35m long down-hole interval between 31m and 66m depth grading **2.91g/t gold, 118g/t silver and 0.36% copper**. This broad interval includes a narrower interval of **24m @ 3.40g/t gold, 168g/t (5.4oz/t) silver and 0.5% copper** between 42m and 66m depth. The interval is further enhanced by a 3m internal interval from 62m to 65m averaging 8.39g/t gold, 176g/t (5.7oz/t) silver and 1.08% copper.

Drill hole 8 was drilled from east to west and was aimed at gaining information in the third dimension to help establish the shape and width of the high-grade mineralised zone. The hole also encountered a 2m wide zone of high-grade gold, silver and copper at 89m depth which averages 4.02g/t gold, 210g/t (6.75oz/t) silver and 1.13% copper.

Two additional, deeper mineralised intersections were also discovered in hole 8 including **2m @ 2.58g/t gold, 180g/t (5.8oz/t) silver and 0.5% copper** between 101m and 103m down-hole depth. The deepest intersection in hole 8 occurs between 214m and 215m which grades **2.15g/t gold, 106g/t (3.4oz/t) silver and 0.46% copper**. This represents the deepest intersection of mineralisation in the Mt Clement Deposit and provides evidence for the continuity of gold, silver and copper at depth.

Artemis targeted four holes into the modelled high-grade zone and successfully encountered four intervals in the high-grade zone. This outstanding exploration success rate provides the Company's technical team with the data to model the shape and extent of the high-grade zone. The high-grade zone is now known to extend over an area of 100m x 100m and remains open.

The Company plans to implement a significant and sustained program of resource definition drilling involving some 4,000m of drilling. A Program of Work (POW) has been submitted to the WA Department of Minerals and Energy encompassing the commencement of this sustained work. Planned drilling will track high-grade mineralisation towards the west and south on 50m centres.



Cross Section of Mt Clement looking towards the north, showing new high-grade zone in yellow. This zone is the target for future exploration.

Yandal Gold Project, Western Australia

The 100%-owned Yandal Gold Project is situated within the highly productive Yandal gold belt in Western Australia which has produced more than 12 million ounces of gold to date. The Yandal Project lies 90km south of the Jundee Gold Mine (5.4million ounces) and 50km north of the Bronzewing Gold Mine (2.3million ounces). The Project is host to the Lowlands, Slav Well, Forked Stick, 6 Mile Well and International Gold Deposits, each of which has been drilled by previous explorers. Gold mineralisation remains open at all deposits and potential exists to increase the size of these deposits substantially with additional drilling.



A re-appraisal of historical drilling at Yandal has resulted in the recognition of multiple, coherent gold-bearing layers. Gold intercepts encountered in previous drilling lie mostly within 50m from the surface and gold mineralisation is well-suited to an open cut mining scenario. The reinterpretation has identified a folded sequence of rocks with gold deposited preferentially in and around the fold closure but with strong intercepts over 5g/t gold extending down the fold limbs.

Computer-aided modeling of the mineralisation and geology at the **Lowlands Gold Deposit** within the Yandal Project (Figure 1), has highlighted a well-defined and well-drilled deposit hosted by a tightly-folded sequence of mafic rocks which are strongly sheared and moderately veined. The fold has been mineralised with gold which follows the layers and forms bedding-controlled gold lodes. Drilled gold intercepts from historical drilling at Lowlands includes; 24m @ 3.10g/t, 8m @ 6.30g/t, 5m @ 4.30g/t, 16m @ 2.90g/t, 17m @ 2.30g/t, 3m @ 8.00g/t, 16m @ 2.20g/t and 2m @ 9.80g/t gold.

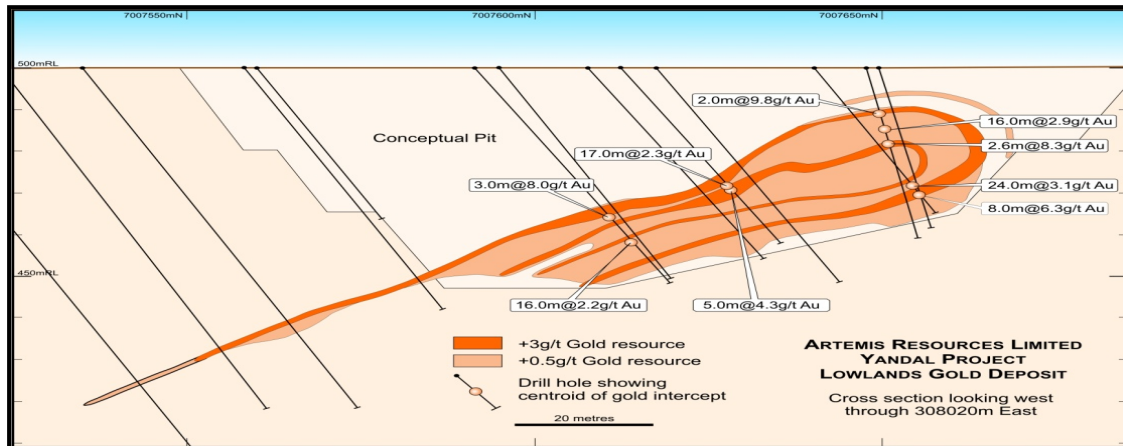


Figure 1: A cross-section through the Lowlands Gold Deposit at the Yandal Gold Project.

The **Slav Well Gold Deposit** is a second, extensively drilled gold deposit making up part of the Yandal Gold Project. Slav Well geology and mineralisation has also been modeled and provides Artemis with a second immediate drilling target. Slav Well is a linear (north-south) striking gold mineralised body which has only been partially tested. The best gold intercepts from historic drilling at Slav Well include; 4m @ 5.00g/t, 3m @ 4.20g/t, 3m @ 4.50g/t and 2m @ 5.00g/t gold.

On-going work by the Artemis geological team will focus on obtaining a satisfactory Program Of Work Permit from the Department of Minerals and Energy in Western Australia in preparation for drilling some of these exciting targets at Yandal during the December 2010 quarter.

Rare Earths

Yangibana Rare Earth Project, Western Australia

Artemis' field personnel have recently completed the drilling of 376 shallow auger holes along the strike of the mineralization at Yangibana Project in Western Australia. The auger drilling covered the previously-identified North Yangibana, Yangibana, South Yangibana and Bald Hill prospects

The purpose of this shallow drilling program (with holes drilled to 1.5m depth) was to confirm and extend knowledge of the distribution of rare earth element mineralization further along strike from known areas of anomalism.

The Company will release results of this drilling program once all of the results have been received from the laboratory and after the technical team has compiled and interpreted the results.



Rare Metals

Buchanan's Creek Rare Metal Project, Queensland

Artemis holds 100% of the Buchanan's Creek Project, southwest of Georgetown in central Queensland. The tenements comprise Mining Leases 3311, 30123 and 30208, as well as an application for a surrounding Exploration Permit for Minerals (EPM 14988). The Grant's Gully area (EPM 13694) and application area, EPMA 18490 (Mosquito Creek) also form part of the Buchanan's Creek Project. The tenements are prospective for lithium, tantalum, niobium and gold.

The project area was visited by the Artemis geological team during the September Quarter for reconnaissance mapping and sampling. Three (3) grab samples taken from the vicinity of the previously drill-tested lithium-bearing area called "Pegmatite 3" at Buchanan's Creek all returned encouraging rare metal values.

Sample BC4 of muscovite-quartz pegmatite, taken 50m east of Pegmatite 3 returned 0.98% Li_2O (Lithium), 145ppm Ta_2O_5 (Tantalum), 160ppm Nb_2O_5 (Niobium), 400ppm SnO_2 (Tin), 4670ppm Rb_2O (Rubidium) and 1700ppm Cs_2O (Cesium).

BC5 of quartz-feldspar-muscovite pegmatite, collected 50m to the north of Pegmatite 3 returned 0.08% Li_2O (Lithium) and 90ppm Nb_2O_5 (Niobium).

A further 450m northwest of Pegmatite 3, BC6 returned 0.11% Li_2O (Lithium), 120ppm Ta_2O_5 (Tantalum), 450ppm SnO_2 (Tin), 4600ppm Rb_2O (Rubidium) and 520ppm Cs_2O (Cesium).

These results indicate that rare metal mineralisation is widespread and not confined to the four lithium-bearing pegmatites drilled by previous explorers and that the overall potential of this area remains high for economic concentrations of lithium, tantalum and niobium.

TAG II/IV, Niger

Artemis holds a 49% interest in the Tagaza II and IV uranium exploration tenements in Niger, West Africa. Under the terms of the joint venture with Artemis's partner Trendfield, Artemis has the ability to increase its stake to a majority 51% holding. The Niger Project is located within the highly productive Tim Merso Basin in North-East Niger, home to two uranium mines producing 12% of the world's uranium supply. The Tagaza II and IV tenements cover approximately 1,000 km² and are situated adjacent to another major uranium deposit, Teguidda.

The Company is pleased to announce that the Government of Niger has awarded a 27-month extension to the validity of the exploration tenements at Tagaza II and IV, beyond their original three-year terms. This is in recognition of a period of force majeure which applied in 2008-9. It is also in recognition of the significant exploration work that has been carried out on the tenements, led by Artemis as manager of the projects, most recently by the completion of a maiden drilling program (Refer ARV's June 2010 Quarterly Report).



Artemis is aware of recent events and media comment surrounding the capture of a number of Areva employees in the town of Arlit, northern Niger. Artemis has been in discussions with the Niger authorities to ensure that appropriate measures are in place for the continuing safety of personnel. Artemis has been advised by the Authorities that, provided the security measures required by the Niger authorities are put in place, exploration companies should continue to carry out field activities as normal.

Since the end of the quarter Artemis has commenced a new field programme, with work aimed at examining calcrete-bearing and channel-hosted uranium anomalies identified from airborne radiometric signatures. Artemis is aware that a number of other exploration companies are also currently out in the field.

Corporate

On 24th September, Artemis completed a placement to Institutional and Sophisticated Investors, raising A\$3m before costs. On 29th September 2010, the Company issued a prospectus for an underwritten renounceable entitlement offer to existing shareholders to raise a further A\$2.4m, bringing the total gross proceeds on completion of both transactions to A\$5.4m.

Patersons Securities Ltd is the Lead Manager to the placement and underwriter of the Entitlement Offer. The proceeds from this raising will enable the Company to continue its exploration activities.

The high level of interest following the recent road-show by the Company demonstrated there is healthy investor appetite for junior gold companies with exciting prospects, high-level technical expertise and a recent track record of exploration success. The equity raising will ensure the Company has sufficient capital to continue the successful exploration conducted to date at Mt Clement.

The capital raising has been undertaken at a price of 5.5c per share, plus free attaching options on a 1 for 4 basis (Listed Option: ARVOB exercise price 5c) and will comprise:

- i) Placement to raise \$3m to Institutional and Sophisticated Investors; and
- ii) 1 for 6 underwritten renounceable pro-rata entitlement offer to existing and placement shareholders to raise approximately \$2.4m. These shares will be issued at the same price and also have free attaching listed options on the same terms as the shares issued in the placement.

As a renounceable entitlement offer, Artemis shareholders who do not take up their entitlement to participate in the Entitlement offer may receive value for those entitlements which will be tradeable on the ASX.



<p>Board of Directors and Management</p> <p>Graham Libbesson (Non-Executive Chairman)</p> <p>Frans Voermans (Non-Executive Director)</p> <p>Jonathan Robinson (Non-Executive Director)</p> <p>John Miles (Non-Executive Director)</p> <p>David Price (Executive General Manager)</p> <p>Company Secretary Guy Robertson</p>	<p>Registered Office</p> <p>Artemis Resources Limited 1 Margaret Street Sydney, NSW, 2000 AUSTRALIA</p> <p>Phone: (+61) (2) 9299 8820 Facsimile: (+61) (2) 9262 2885</p> <p>www.artemisresources.com.au</p> <p>Share Registry Security Transfer Registrars Pty Ltd 770 Canning Highway Applecross, WA, 6153 AUSTRALIA</p> <p>Phone: (+61) (8) 9315 2333 Facsimile: (+61) (8) 9315 2233 www.securitytransfer.com.au</p> <p>Please direct all shareholding enquiries to the share registry</p>

The information in this document that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Mr David W. Price, who is a Fellow of The Australasian Institute of Mining and Metallurgy and a Member of the Australian Institute of Geoscientists. Mr Price 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 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Price, who is an officer of the Company, consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.