

QUARTERLY ACTIVITIES REPORT DECEMBER 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

- **Drilling at Mt Clement returns outstanding results including 4m @ 9.33g/t gold, 6m @ 4.34g/t gold and 3m @ 5.22g/t gold**
- **Drilling at Mt Clement also returns excellent silver and copper results including 7m @ 581g/t silver, 5m @ 511g/t silver, 3m @ 105g/t silver, 5m @ 1.85% copper and 4m @ 2.56% copper**
- **High grade sulphide gold, silver, copper extended in 2 directions at Mt Clement**
- **Near-surface, in-fill drilling planned for Mt Clement oxide mineralisation**
- **First-pass drilling program planned for Yandal Gold Project, Western Australia in Q1, 2011**

Australian resources company, Artemis Resources Ltd (**ASX: ARV**) today posts its December 2010 quarterly activities report. The report highlights continuing successful exploration drilling results at its Mt Clement Gold project in Western Australia. The Company reports that the success of the last 2 drilling programs has encouraged Artemis to advance towards near-surface, in-fill drilling of the oxide gold mineralisation.

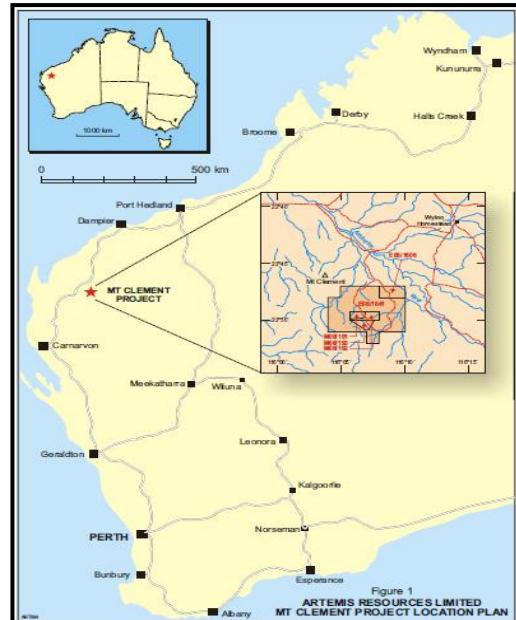
The Company also reports that preparations are well-advanced for a first-pass drilling programme at its promising Yandal Gold Project in Western Australia.



Mt Clement Gold Project, Western Australia

The Mt Clement Gold Project is located in the 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 Deposit itself. The Mt Clement Project lies 30km south of the Paulsen's Gold Mine operated by Artemis' 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 sulphide-rich, 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 and highly oxidised. The mineralisation varies from 5m to 25m in thickness and is broadly flat lying, although the orientation varies considerably due to folding. Prior to drilling by Artemis, historical drilling has mainly intersected “Type 2” lower grade mineralisation.

Quarter Review

During the quarter, Artemis implemented a significant and sustained program of reverse circulation and diamond drilling at Mt Clement involving some 2,900m of drilling. Drilling was aimed at tracking high-grade sulphide mineralisation towards the west and north and at depth. This program successfully extended the sulphide gold, silver and copper towards both the north and west and at depth.

Results from this drilling program include those from hole ARMCRC011, which intersected several gold, silver and copper zones including **20m @ 1.99g/t gold, 66.8g/t silver and 0.2% copper** between 39m and 59m depth. This broad interval included a narrower interval of 11m @ 2.09g/t gold, 88g/t silver and 0.32% copper. Further internal subdivisions within this 11m interval included 3m @ 4.28g/t gold, 105.5g/t silver and 0.73% copper between 47m and 50m depth and 5m @ 114.7g/t silver from 40m to 45m. A third internal interval in drill hole ARMCRC011 at 56m down-hole depth averaged 3.0m @ 5.22g/t gold and 87.7g/t silver.

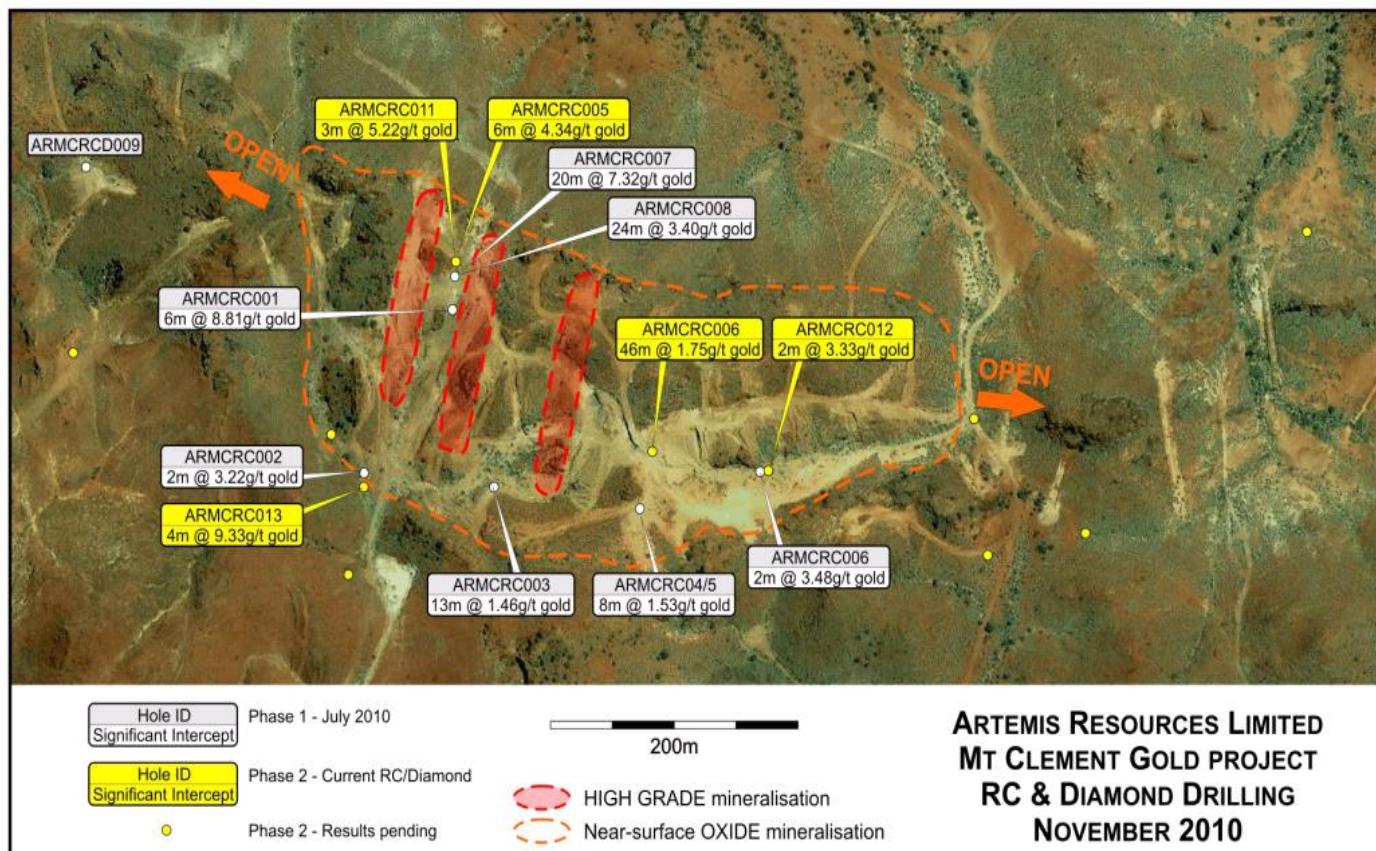
Hole ARMCRC011 was drilled north of all previous holes and was aimed to extend high grade mineralisation to the north. This was successfully achieved with a broad zone of mineralisation being intersected containing high grade intervals of gold, silver and copper.

Drill hole ARMCR012 was drilled in the oxide portion of the gold deposit to test for southern extensions of gold mineralisation. The hole was drilled towards the south and encountered **2m @ 3.33g/t gold** providing sound evidence that mineralisation continues towards the south.

ARMCRC013 intersected high grade gold, silver and copper over an 11m wide down-hole interval between 97m and 108m depth, grading 4.76g/t gold, 260g/t silver and 1.1% copper. This broad interval includes a narrower interval of **4m @ 9.33g/t gold, 610.75g/t silver and 2.56% copper**. A further internal subdivision within the 4m interval includes 2m @ 12.95g/t gold, 882.50g/t silver and 3.48% copper.

Drill hole ARMCRCD005 returned a broad interval of 13m @ 2.61g/t gold, 334g/t silver and 0.82% copper from 27m depth. Within this interval, a number of zones exist including **6m @ 4.34g/t gold, 7m @ 582g/t silver (18.7oz/t) and 5m @ 1.85% copper** (28m – 33m).

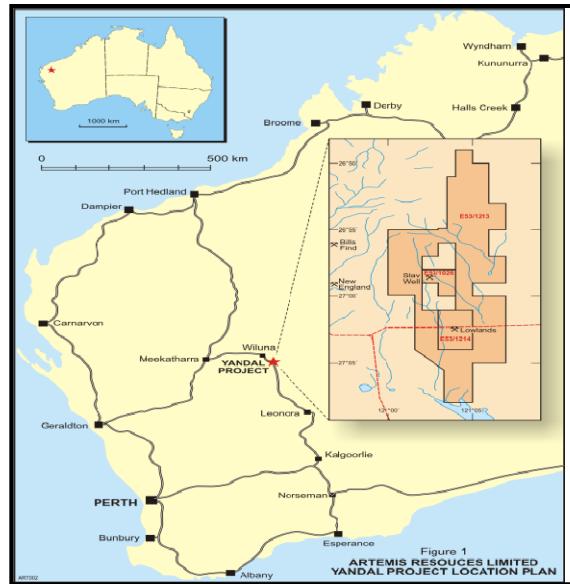
Hole ARMCRCD006 was drilled to in-fill the near-surface drilling pattern. This hole included a broad interval of **46m @ 1.75g/t gold** from 24m depth. Within this interval, a number of higher grade zones exist including 5m @ 3.35g/t gold and 3m @ 4.21 g/t gold. This hole successfully filled the gap in drilling and has boosted the tonnage potential in the oxide zone.



Plan showing location of drill holes and significant results at Mt Clement.

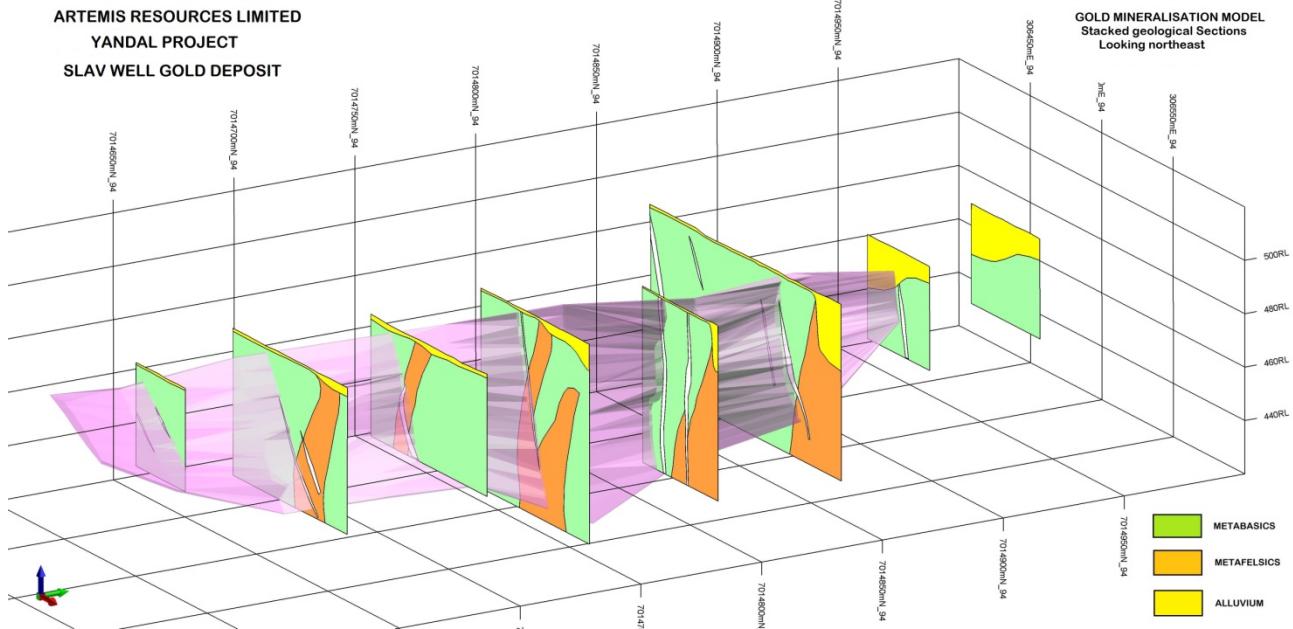
Yandal Gold Project, Western Australia

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. 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 recent re-appraisal of the **Slav Well Gold Deposit** at Yandal has resulted in the recognition of a linear (north-south) striking gold mineralised body which has only been partially tested. 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 best gold intercepts from historic drilling at Slav Well include;

- 4m @ 5.00g/t gold
- 3m @ 4.20g/t gold
- 3m @ 4.50g/t gold
- 1m @ 9.80g/t gold



Stacked geological sections showing the model for gold mineralisation (in purple colour) at the Slav Well Gold Deposit – one of 6 deposits which together make up the Yandal Gold Project.

The Slav Well Gold Deposit remains open both at depth and along strike and provides Artemis with highly prospective drilling targets for the identification of more gold mineralisation.

A Program Of Work (POW) Permit from the Department of Minerals and Energy in Western Australia has recently been approved to enable Artemis to start drilling these exciting targets at Yandal. RC drilling is expected to commence in the first quarter of 2011.

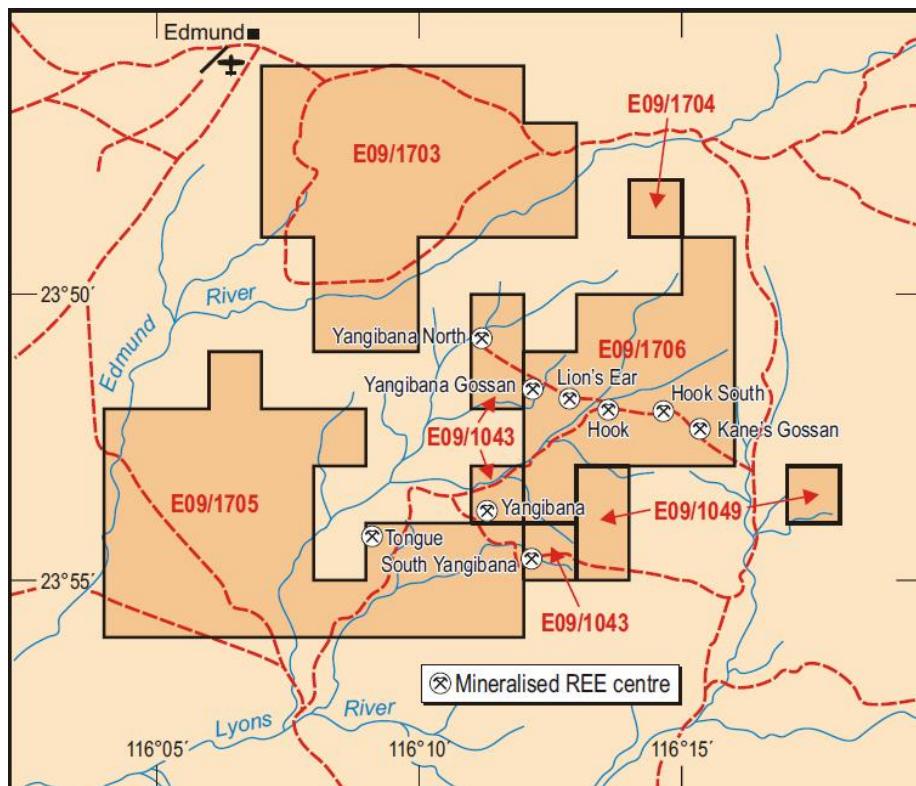
Rare Earths

Yangibana Rare Earth Project, Western Australia

Artemis holds 60% of the Yangibana Rare Earth Project in Western Australia. The tenements comprise granted Exploration Licences E08/1043 and E08/1049 and Exploration Licence Applications E09/1703, 1704, 1705 and 1706. The tenements are prospective for rare earths and uranium.

The Company's recent soil auger program completed in August 2010 confirmed the location of rare earth mineralisation along this strike and highlighted areas worthy of follow-up exploration.

Artemis' field personnel completed the sampling of 376 shallow auger holes along strike of the mineralization at Yangibana. The auger program covered the previously-identified North Yangibana, Yangibana, South Yangibana and Bald Hill prospects (see Location Map below).



Location map of prospects at the Yangibana Rare Earth Project, Western Australia



The purpose of this shallow auger program (with holes down 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 anomalous.

Although Artemis has over 7km of strike length of a carbonatite dyke under tenement, only a small portion of the strike length was able to be tested, as the Company is awaiting the granting of tenement applications containing the bulk of the mineralised strike. With the restricted access taken into account, the results of this shallow auger program indicate consistent near-surface anomalous with most samples returning grades in multiples above the low level detection capabilities of the laboratory. The conclusions from this drilling include:

Yangibana North Prospect, auger sample results demonstrate strongly anomalous near-surface levels of Cerium (to 3883ppm), Lanthanum (to 1727ppm), Neodymium (to 1585ppm), Praseodymium (to 490ppm), Gadolinium (to 100ppm) and occasional Samarium (to 212ppm).

Yangibana South Prospect, anomalous elements include Cerium (to 468ppm), Neodymium (to 596ppm), Lanthanum (to 136ppm) and Praseodymium (to 101ppm).

Yangibana Prospect, anomalous concentrations of Cerium and Neodymium occur up to a peak of 234ppm (Ce) and 228ppm (Nd).

Bald Hill Prospect, Lanthanum and Neodymium are anomalous elements with values up to 179ppm Lanthanum and 741ppm Neodymium.

Other prospects which are within the area that is currently under application by Artemis and which were not tested in the recent auger program include:

- The Lion's Ear Prospect
- The Hook Prospect
- The Hook South Prospect
- Kane's Gossan Prospect.

Artemis tested for a full suite of rare earth and rare metal elements during the recent auger program, along with precious and base metals. Uranium and Thorium were included in the analysis, with both returning weak anomalous.

The program of auger drilling has confirmed that the areas tested have high level anomalous and hold potential for economic rare earth element mineralisation, although most prospects along strike remain untested by this recent auger program. Further field work will be undertaken in the new calendar year.



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.

No field work was completed during the December Quarter.

TAG II/IV, Niger

Artemis holds a 49% interest in the Tagaza II and IV uranium exploration tenements in Niger, West Africa. The Niger Project is located within the highly productive Tim Mersoi 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.

During the quarter the Company reached agreement with its joint venture partner, Trendfield Holdings, which provides that:

- all exploration expenditure going forward shall be borne in proportion to the interest held by each partner in the project; and
- in the event that a joint venture partner elects not to contribute then it shall dilute in accordance with a standard dilution formula which applies equally to each of them and recognises the contribution of the parties to the joint venture to date.

Artemis is aware of the recent security incidents which have taken place in Niger involving the abduction of a number of foreign nationals. Artemis has been in discussions with the Niger authorities to ensure that appropriate measures are in place for the continuing safety of its personnel.

Given these new developments and the complexities surrounding this project, the Company is considering a write down of its investment which will be reflected in the half year accounts.



Corporate

Capital Raising

The second part of the capital raising announced on 20 September 2010, a 1 for 6 underwritten renounceable rights issue, closed on 28 October 2010 with very strong support from shareholders.

The capital raising comprised two parts:

- a placement of 54,545,454 shares at A\$0.055 (plus a free 1 for 4 attaching listed option (ASX:ARVOB) with an exercise price of \$0.05) to professional and sophisticated investors. This raised A\$2.4m and was completed on 23 September 2010, and
- a 1 for 6 fully underwritten renounceable rights issue of 46,195,693 shares (plus a free 1 for 4 attaching option (ASX:ARVOB) with an exercise price of A\$0.05) to shareholders. This raised A\$2.4m and was completed on 28 October 2010.

Patersons Securities Limited acted as Lead Manager to the placement and Underwriter to the Entitlement Offer.

Board Changes

Mr. Jonathan Robinson resigned from the Board on 14 December 2010

Mr. George Frangeskides was appointed a Director on 17 January 2011

Mr. Frangeskides has a broad range of experience gained from over 15 years in the legal and corporate advisory sectors in London and Sydney. Mr. Frangeskides is an Executive Director of Berwick Capital, a corporate advisory firm which specializes in natural resources and which advises ASX and AIM-listed companies on transactions in the metalliferous, oil and gas sectors.

Prior to establishing Berwick Capital, Mr Frangeskides practiced as a lawyer at international law firms in London and Sydney where he specialized in corporate finance, commercial and capital market transactions.



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

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.