Ardea Resources Limited

Emu Lake Nickel Sulphide Target: Diamond Core Drilling Commences

- Drilling of the compelling downhole EM target at Emu Lake in Ardea's Kalpini Nickel Project has commenced.
  - The 450m drillhole is targeting a strong (8,000 Siemens) EM conductor approximately 50m north of Ardea's initial drillhole (AELD0001)
  - The conductor aligns with remobilised sulphide mineralisation that returned 0.65m @ 2.95% nickel and 0.08% copper from 336.7m in AELD0001[1].
  - The new drill hole is co-funded by the Western Australian Department of Mines, Industry Regulation and Safety (DMIRS) Exploration Incentive Scheme.
- Other active Ardea nickel sulphide geophysical programs include:
  - Moving loop EM surveys at Kalpini and induced polarisation (IP) surveys at Highway targeting Kambalda-style basal ultramafic flow nickel sulphide mineralisation.
  - IP surveys at Black Range targeting Julimar-style magmatic nickel sulphide mineralisation in a layered mafic complex.

Ardea Resources Limited (**Ardea** or the **Company**) is pleased to report drilling has commenced to test a downhole electromagnetic (DHEM) conductor at Emu Lake within its wholly owned Kalpini Nickel Project, 70km northeast of Kalgoorlie.

The ultramafic flows at Emu Lake contain proven Silver Swan/Kambalda-style nickel sulphide mineralisation. The current drill hole (AELD0002) will test a strong, 8,000 Siemen off-hole conductor, targeting the centre of the modelled DHEM plate.

Ardea's Managing Director, Andrew Penkethman, said:

"Results from our first drill hole at Emu Lake provided Ardea with confirmation of nickel sulphide mineralisation and project prospectivity. Detailed follow-up analysis suggests that the AELD0001 intercept represents tectonically mobilised mineralisation that could well be on the margin of komatiite-hosted, Kambalda-style nickel sulphide mineralisation. One of the most challenging aspects of exploration for this style of nickel mineralisation is defining coherent primary sulphide mineralisation.

Ardea have defined a strong conductor that represents a compelling target that is now being drilled and provides the Company with the opportunity to make a significant nickel sulphide discovery to complement our globally significant Kalgoorlie Nickel Project nickel-cobalt-scandium resource inventory.

[1] ASX release 2 March 2021.

ASX & Media Release
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ASX Symbol
ARL

Ardea Resources Limited
Suite 2 / 45 Ord St
West Perth WA 6005

PO Box 1433
West Perth WA 6872

Telephone
+61 8 6244 5136

Email
ardea@ardearesources.com.au

Website
www.ardearesources.com.au

Directors
Mat Longworth
Non-Executive Chair

Andrew Penkethman
Managing Director & CEO

Ian Buchhorn
Technical Executive Director

Executive Management
Sam Middlemas
Company Secretary & CFO

Matt Painter
General Manager Exploration

Issued Capital
Fully Paid Ordinary Shares
127,670,582

Directors/Employee Performance Rights
4,236,000

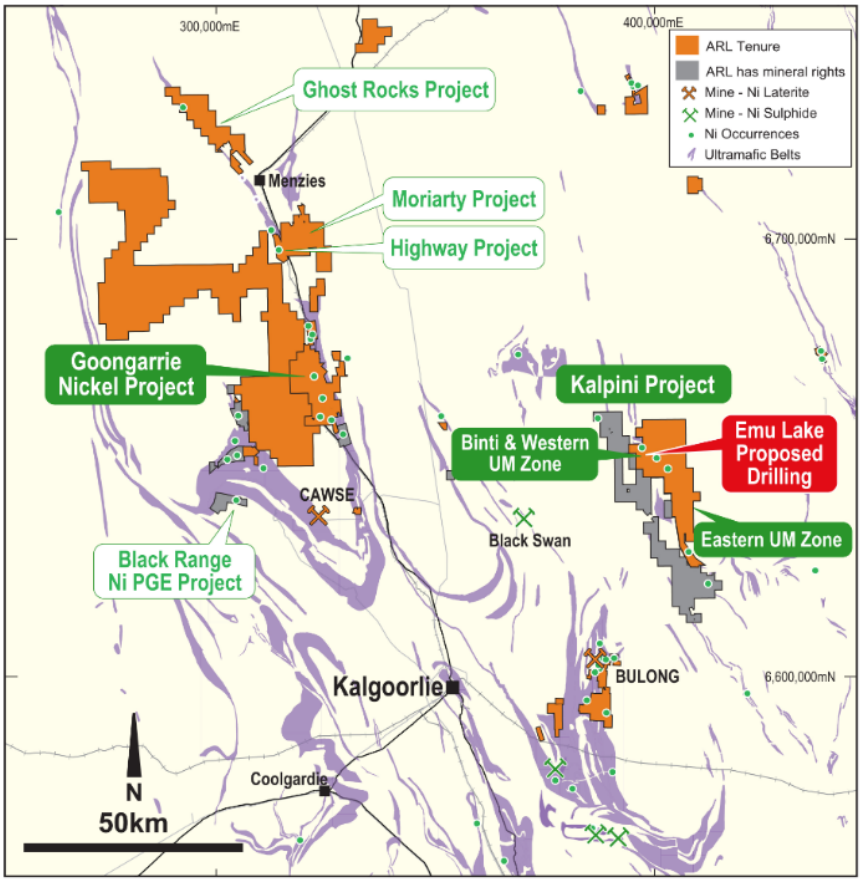
ABN 30 614 289 342

ASX Listed

Emu Lake Nickel Sulphide Target

The Kalpini Nickel Project extends over 240km^2, with the leading nickel sulphide target, Emu Lake, located 70km north-east of Kalgoorlie (Figure 1). This strategic tenement package contains an east and a west ultramafic belt each with 20km of strike of prospective nickel sulphide ultramafic stratigraphy held 100% by Ardea and mostly within granted mining leases. The project is 35km east of the Black Swan Nickel Project, operated by Poseidon Nickel Ltd, within a parallel komatiite volcanic belt.

Figure 1: Location of the Emu Lake prospect with other Ardea prospects near Kalgoorlie, Western Australia. Projection MGA 94 Zone 51.



Ardea completed drilling its first Emu Lake core hole, AELD0001, targeting an interpreted legacy DHEM plate within the Binti target zone in late December 2020. The drill hole intersected a zone of stringer nickel sulphides with pentlandite and chalcopyrite over 0.65m from 336.7m (Figure 2) within a highly sheared intermediate volcanic unit.

The stringer interval returned: **AELD0001: 0.65m @ 2.95% Ni and 755ppm Cu from 336.7m** [2]

The stringer mineralisation represents a zone of nickel sulphides re-mobilised into a shear zone within intermediate volcanics. The original source is considered to be a primary massive sulphide body within a nearby komatiite host rock.

Upon completion of drilling AELD0001, a DHEM survey was completed which defined an off hole conductor, modelled by Newexco geophysical consultants to be 50m to the north of AELD0001 (Figure 2). The modelled plate is 100m long and 50m high with a conductance of 8,000 siemens, which is similar to typical Kambalda ore zones modelled in the past by Newexco.

[2] ASX release 4 March 2021.

Drilling at Emu Lake to test the DHEM conductor at Emu Lake (Figure 2 and 3) commenced on 29 March and is expected to continue through to mid-April upon reaching a downhole depth of 450m.

Figure 2: Emu Lake prospect in plan view, showing recent drilling with nearby defined DHEM plate and proposed drillhole, local Binti grid.

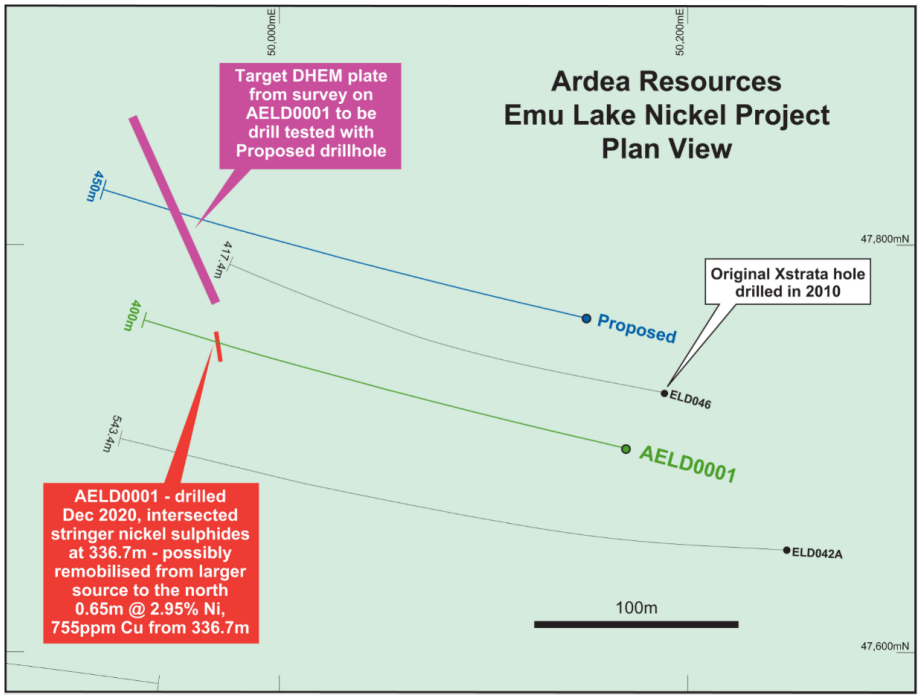
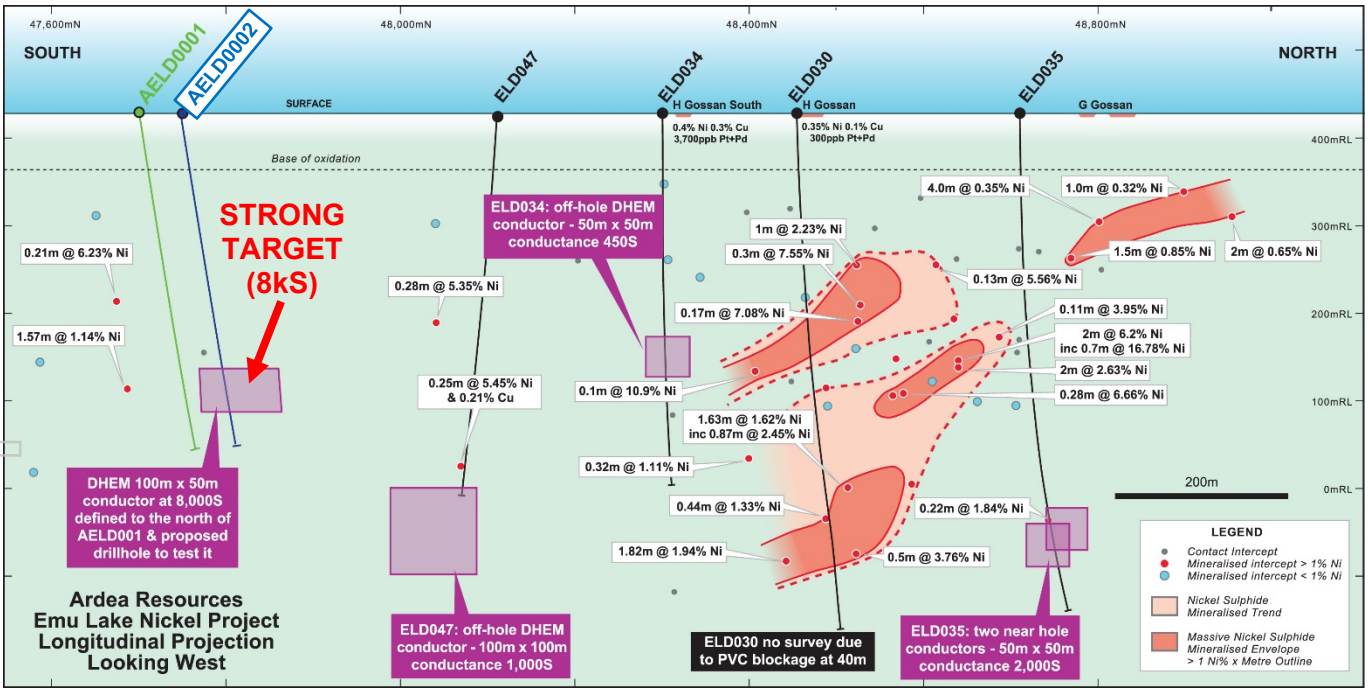


Figure 3: Emu Lake long section looking west showing AELD0002 and the strong 8,000 Siemen target.



Moving Loop EM Surveys

Kalpini Nickel Project

Ardea has also recently commenced a series of moving loop electromagnetic (MLEM) surveys within the broader Kalpini area targeting further Kambalda-style massive nickel sulphide mineralisation over five target areas. These

surveys are testing for massive nickel sulphides associated with zones of elevated nickel, copper, and platinum group elements within historical nickel laterite drilling from both the Wellington Eastern and Western Ultramafic belts.

The Kalpini ultramafics host 75Mt at 0.7% nickel and 0.04% cobalt occurring as lateritic nickel mineralisation (Ardea ASX announcement, 15 February 2021).

Induced Polarisation Surveys

Highway Nickel Project

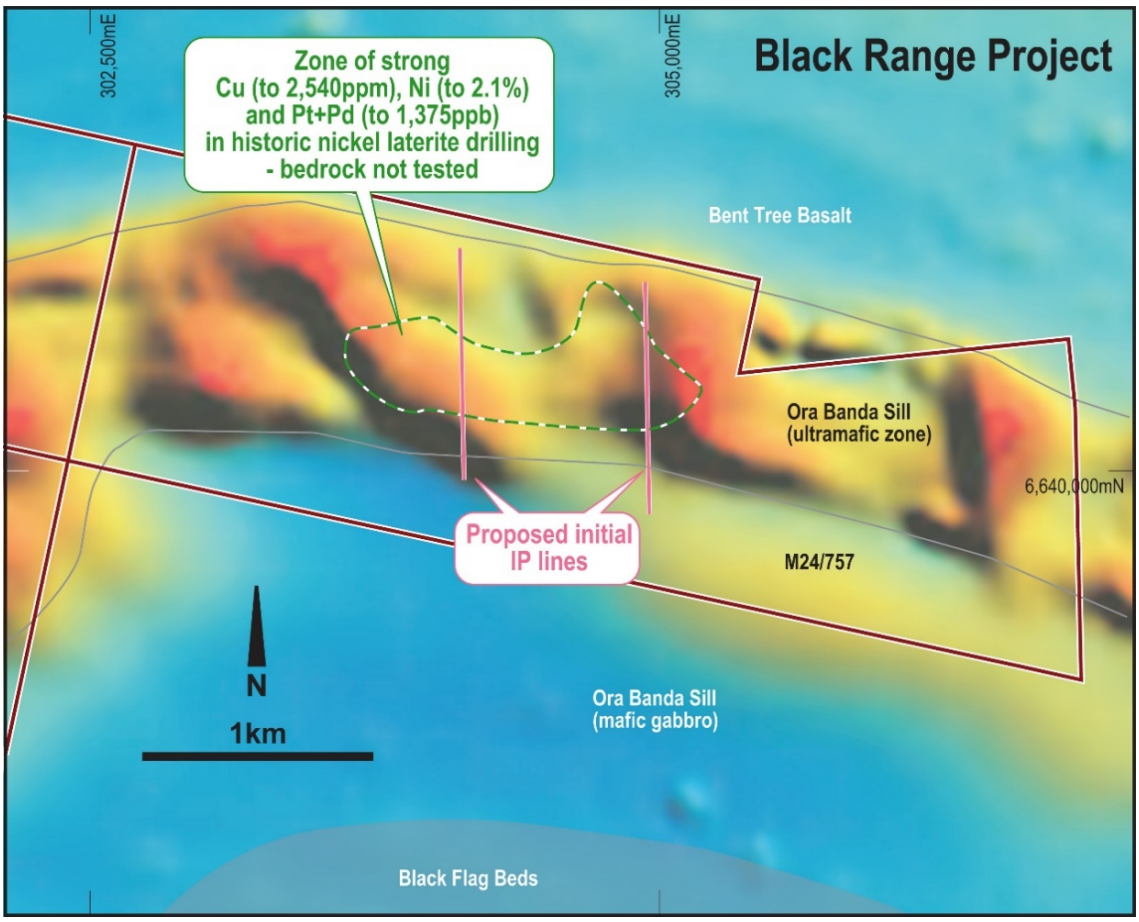
On-ground geophysical surveys continue in other parts of the KNP. At Highway in the northern KNP, approximately 100km northwest of Kalgoorlie (Figure 1), IP surveys are informing exploration for disseminated Mt Keith-style nickel sulphide mineralisation in the Walter Williams Formation, which also hosts 87Mt at 0.7% nickel and 0.04% cobalt occurring as lateritic nickel mineralisation (Ardea ASX announcement, 15 February 2021).

Black Range Nickel Project

The IP contractor team is also surveying two lines of IP at Black Range over the layered mafic complex Ora Banda Sill (Julimar style target) where strongly anomalous copper, nickel and platinum group elements have been identified in historic nickel-laterite drilling (Figure 1 and 4). If successful in defining zones of higher conductivity, compelling targets will then be drill tested with the aim of making significant nickel discoveries.

Black Range hosts 19Mt at 0.7% nickel and 0.10% cobalt occurring as lateritic nickel mineralisation (Ardea ASX announcement, 15 February 2021).

Figure 4: Black Range plan showing Ardea tenements, and interpreted geology overlain on magnetic data, highlighting the layered mafic complex and extensive geochemical anomalism. Projection MGA 94 Zone 51.



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Ardea Resources Limited

Exploration Strategy

With Ardea's KNP tenement package covering one of the largest areas of ultramafic stratigraphy in Australia, the Company is well positioned to make nickel sulphide and Critical Mineral discoveries. Ardea will continue to rank and prioritise fit-for-purpose exploration for nickel sulphides on its high-quality portfolio of Eastern Goldfields of Western Australia tenements. Any drilling as part of the nickel sulphide programs will also assess open-pit nickel-cobalt laterite, Critical Minerals including Rare Earths and gold mineralisation, with the over-riding priority continuing to be developing the KNP nickel-cobalt-scandium resources.

Authorised for lodgement by the Board of Ardea Resources Limited.

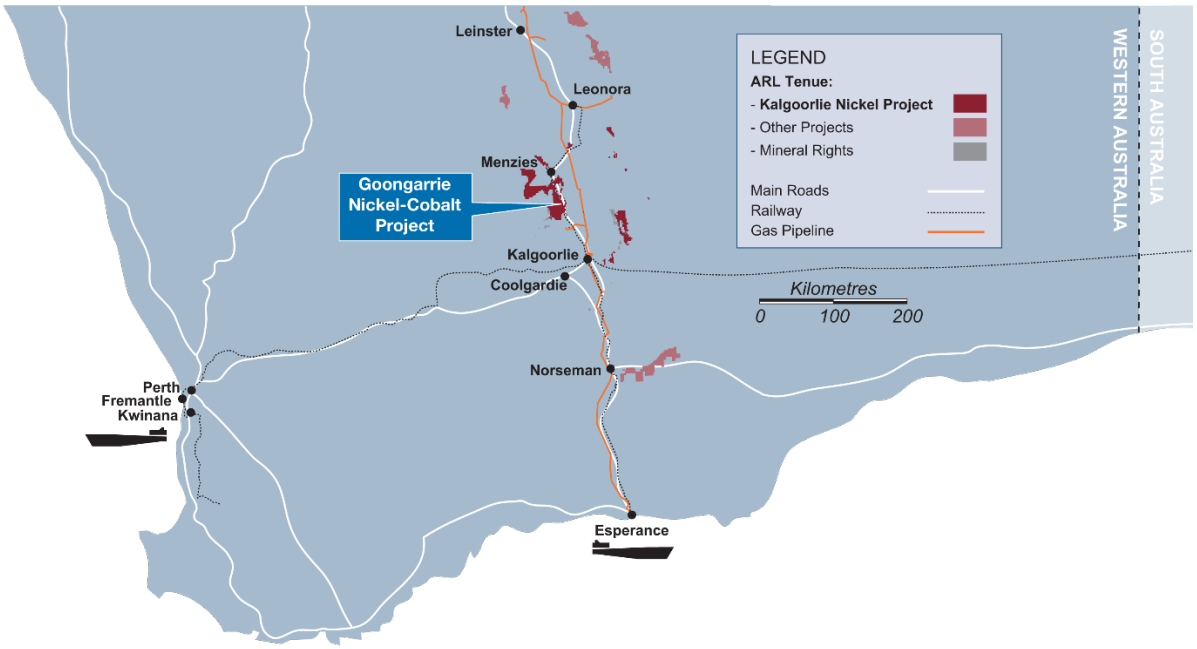
For further information regarding Ardea, please visit https://ardearesources.com.au/ or contact:

Andrew Penkethman
Managing Director and Chief Executive Officer
Tel +61 8 6244 5136

About Ardea Resources

Ardea Resources Limited (ASX:ARL) is an ASX-listed resources company, with a portfolio of 100% controlled West Australian-based projects, focussed on:

- Development of the Kalgoorlie Nickel Project (KNP) and its sub-set the Goongarrie Nickel Cobalt Project (GNCP), a globally significant series of nickel-cobalt and Critical Mineral deposits which host the largest nickel-cobalt resource in the developed world; and
- Advanced-stage exploration at compelling nickel sulphide and gold targets within the KNP Eastern Goldfields world-class nickel-gold province.



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CAUTIONARY NOTE REGARDING FORWARD-LOOKING INFORMATION

This news release contains forward-looking statements and forward-looking information within the meaning of applicable Australian securities laws, which are based on expectations, estimates and projections as of the date of this news release.

This forward-looking information includes, or may be based upon, without limitation, estimates, forecasts and statements as to management's expectations with respect to, among other things, the timing and amount of funding required to execute the Company's exploration, development and business plans, capital and exploration expenditures, the effect on the Company of any changes to existing legislation or policy, government regulation of mining operations, the length of time required to obtain permits, certifications and approvals, the success of exploration, development and mining activities, the geology of the Company's properties, environmental risks, the availability of labour, the focus of the Company in the future, demand and market outlook for precious metals and the prices thereof, progress in development of mineral properties, the Company's ability to raise funding privately or on a public market in the future, the Company's future growth, results of operations, performance, and business prospects and opportunities. Wherever possible, words such as "anticipate", "believe", "expect", "intend", "may" and similar expressions have been used to identify such forward-looking information. Forward-looking information is based on the opinions and estimates of management at the date the information is given, and on information available to management at such time.

Forward-looking information involves significant risks, uncertainties, assumptions and other factors that could cause actual results, performance or achievements to differ materially from the results discussed or implied in the forward-looking information. These factors, including, but not limited to, the ability to create and spin-out a gold focussed Company, fluctuations in currency markets, fluctuations in commodity prices, the ability of the Company to access sufficient capital on favourable terms or at all, changes in national and local government legislation, taxation, controls, regulations, political or economic developments in Australia or other countries in which the Company does business or may carry on business in the future, operational or technical difficulties in connection with exploration or development activities, employee relations, the speculative nature of mineral exploration and development, obtaining necessary licenses and permits, diminishing quantities and grades of mineral reserves, contests over title to properties, especially title to undeveloped properties, the inherent risks involved in the exploration and development of mineral properties, the uncertainties involved in interpreting drill results and other geological data, environmental hazards, industrial accidents, unusual or unexpected formations, pressures, cave-ins and flooding, limitations of insurance coverage and the possibility of project cost overruns or unanticipated costs and expenses, and should be considered carefully. Many of these uncertainties and contingencies can affect the Company's actual results and could cause actual results to differ materially from those expressed or implied in any forward-looking statements made by, or on behalf of, the Company. Prospective investors should not place undue reliance on any forward-looking information.

Although the forward-looking information contained in this news release is based upon what management believes, or believed at the time, to be reasonable assumptions, the Company cannot assure prospective purchasers that actual results will be consistent with such forward-looking information, as there may be other factors that cause results not to be as anticipated, estimated or intended, and neither the Company nor any other person assumes responsibility for the accuracy and completeness of any such forward-looking information. The Company does not undertake, and assumes no obligation, to update or revise any such forward-looking statements or forward-looking information contained herein to reflect new events or circumstances, except as may be required by law.

No stock exchange, regulation services provider, securities commission or other regulatory authority has approved or disapproved the information contained in this news release.

Competent Person Statement

The technical information in this report relating to Exploration Results is based on information compiled by Mr David von Perger, who is a Member of the Australian Institute of Mining and Metallurgy (Chartered Professional – Geology). Mr von Perger is an independent geological consultant providing services to Ardea and 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 2012 edition of the Australasian Code for Reporting of Exploration Results. Mr von Perger consents to the inclusion in the report of the matters based on his information in the form and context in which it appears. Mr von Perger owns shares in Ardea.