Ardea Resources Limited

Emu Lake Nickel Sulphide Follow-up Drilling Commenced

- Diamond core drill rig has commenced drilling at the **Emu Lake Nickel Sulphide Camp**.
- The drill program of approximately 4,350m to follow-up the **Binti South Prospect** high-grade massive nickel-copper-PGE sulphide discovery within the footwall contact of the Western Ultramafic, with Ardea discovery results including:
  - AELD0002: **4.80m at 1.44% Ni** and 0.09% Cu from 365.9m
    including ***1.10m at 4.78% Ni*** *and 0.16% Cu from 366.9m*
    (Ardea ASX release 10 June 2021)
  - AELD0003: **2.72m at 5.42% Ni** and 0.85% Cu from 391.04m
    including ***1.23m at 8.22% Ni*** *and 0.55% Cu from 391.04m*
    (Ardea ASX release 14 January 2022)
- Drilling will also be undertaken at the **Binti Gossan Prospect** 1km northwest of Binti South within the footwall contact of the Central Ultramafic:
  - ELD015: **2.0m at 6.08% Ni** and 1.82% Cu from 336.0m (**open at depth**)
    including ***0.6m at 18.82% Ni*** *and 5.57% Cu from 336.3m*
    (Heron Resources ASX release 26 November 2013)
- Detailed DHEM surveys will be undertaken on all drill holes to help locate conductor plates that are typically associated with Emu Lake nickel sulphide mineralisation.
- Select historical drill holes, to be extended to intersect the Western Ultramafic nickel sulphide target so that modern DHEM surveys can be completed.
- Un-tested outcropping gossan zone identified at Binti Gossan immediately west of the Central Ultramafic and interpreted to represent a northern strike extension of the mineralised Western Ultramafic from Binti South.

Ardea's Managing Director, Andrew Penkethman, said:

"The $21.5M raised by Petra Capital in the February 2022 Placement has brought a very high quality investor cohort to the Ardea register, seeking follow up of the Emu Lake nickel sulphide discovery, but also committed to the broader Kalgoorlie Nickel Project nickel laterite development.

Supported by funding from the placement, the Ardea team have drawn upon their strong local relationships with key service providers and secured a core drill rig ahead of schedule to resume the nickel sulphide drilling at Emu Lake. This follow-up drill program is aimed at building upon the discovery success at Binti South and will also test targets down dip and plunge of high grade mineralisation intersected in historic drilling at Binti Gossan.

The Emu Lake nickel sulphide exploration is evolving as part of a broader Kalpini nickel story. It can significantly contribute to Ardea's building of a green, forward-facing integrated nickel company servicing the Lithium Ion Battery supply chain with an ESG-compliant, sustainable and ethical product."

ASX & Media Release

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ASX Symbol

ARL

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Issued Capital

Fully Paid Ordinary Shares
169,537,772

Performance Rights
4,771,000

Options
4,000,000

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Kalpini Project - Emu Lake Nickel Sulphide Camp

The Emu Lake Nickel Sulphide Camp is located 70km northeast of Kalgoorlie and 35km east of the Black Swan Nickel Project (Silver Swan nickel mine), operated by Poseidon Nickel Ltd, within a parallel komatiite belt to Emu Lake (Figure 1). There are close geological similarities between the massive nickel sulphides at Emu Lake and Silver Swan (Ardea ASX release 14 January 2022).

The Emu Lake Nickel Sulphide Camp was discovered during the 1970s "Nickel Boom". More recent nickel sulphide exploration has included that completed between 2003 and 2011 by Image Resources Limited, Emu Nickel NL and Xstrata Nickel Australasia Pty Ltd. Their key target was the Binti Gossan zone, represented by a 1,200m strike zone of very strong gossan float (weathered expression of nickel sulphide). Historic drilling identified several high-grade, albeit generally thin (0.1-0.3 metre) massive nickel sulphide surfaces.

A detailed compilation of the historical data by Ardea Resources Limited (**Ardea** or the **Company**) and follow-up exploration drilling and down-hole electromagnetic surveys (**DHEM**) confirmed the Binti South Prospect high-grade massive nickel-copper-PGE sulphide discovery (Ardea ASX releases 14 January and 7 February 2022).

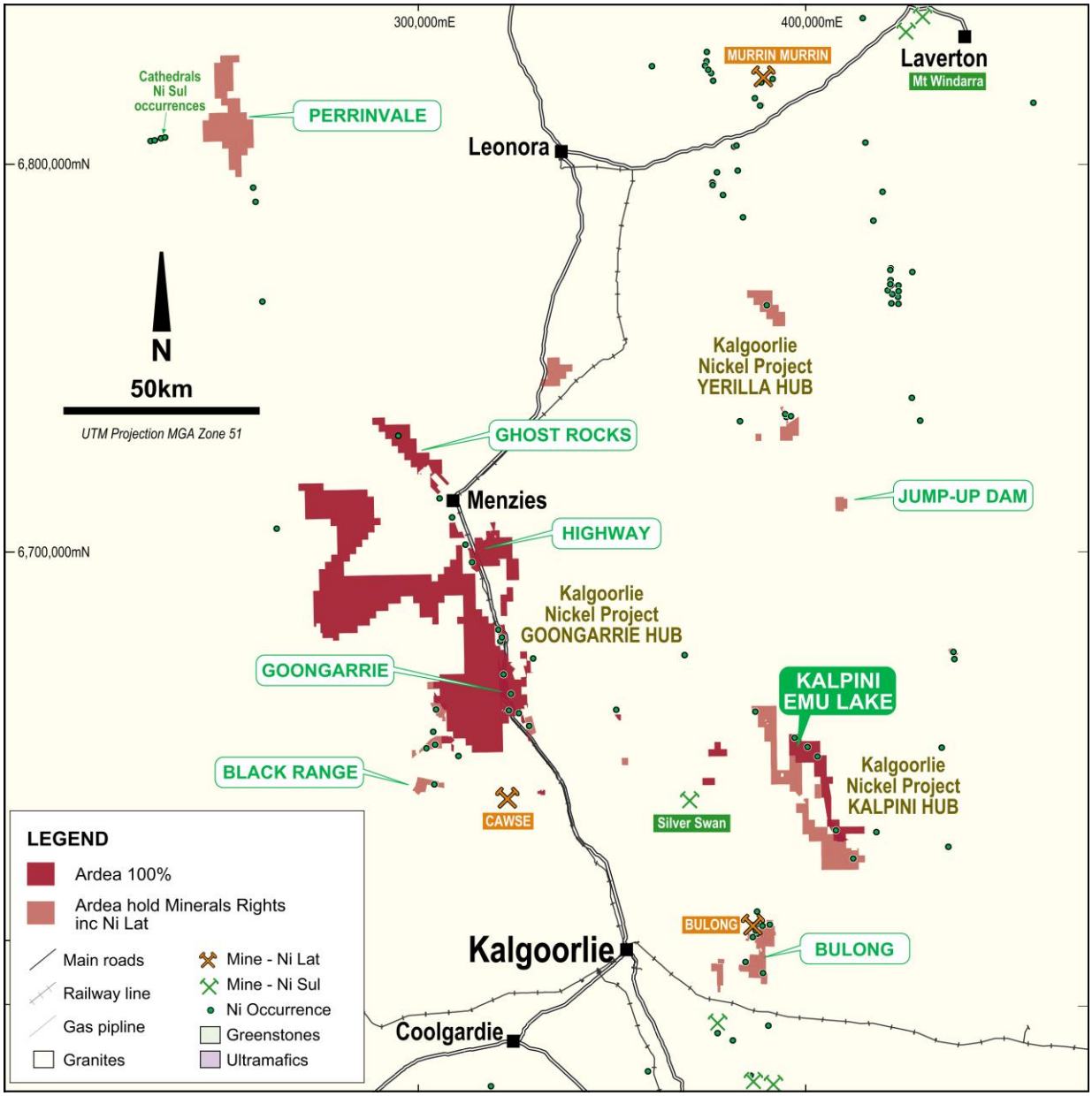

Figure 1: Ardea tenement plan highlighting the location of the Kalpini Project, Emu Lake Nickel Sulphide Camp and nickel mines and deposits in the region. Projection MGA 94 Zone 51.

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Historic drill exploration has focussed entirely on the Eastern Ultramafic (**EU**) and Central Ultramafic (**CU**), with the key historic drill-hole being ELD015 with 2m at 6.08% Ni (Ardea ASX release 7 February 2022) (Figure 2). Drill testing of the Western Ultramafic (**WU**) was restricted to minimal "scissor" sections with easterly drill direction. These holes invariably intersected the WU in the depleted saprolite weathered zone.

The EU and CU nickel sulphide surfaces show remarkable continuity and are open north and south and down-dip (Figure 2). Their uniform geometry suggests a sheet-flow environment for the komatiite flows. The discrete flow channels that must have been present to have fed the sheet flows are yet to be intersected in Emu Lake drilling.

Significantly, Binti South includes as the red shape (Figure 3) the WU with basal nickel sulphide mineralisation as confirmed by AELD0002 and 0003. The Western Ultramafic is now the exploration focus of Ardea, at both Binti South and Binti Gossan, with additional exploration upside on the CU and EU ultramafic flows with all target surfaces able to be tested by each drillhole.

DHEM surveys will be completed wherever possible in the current program, to identify any off-hole conductor plates for testing in follow up drill-holes.

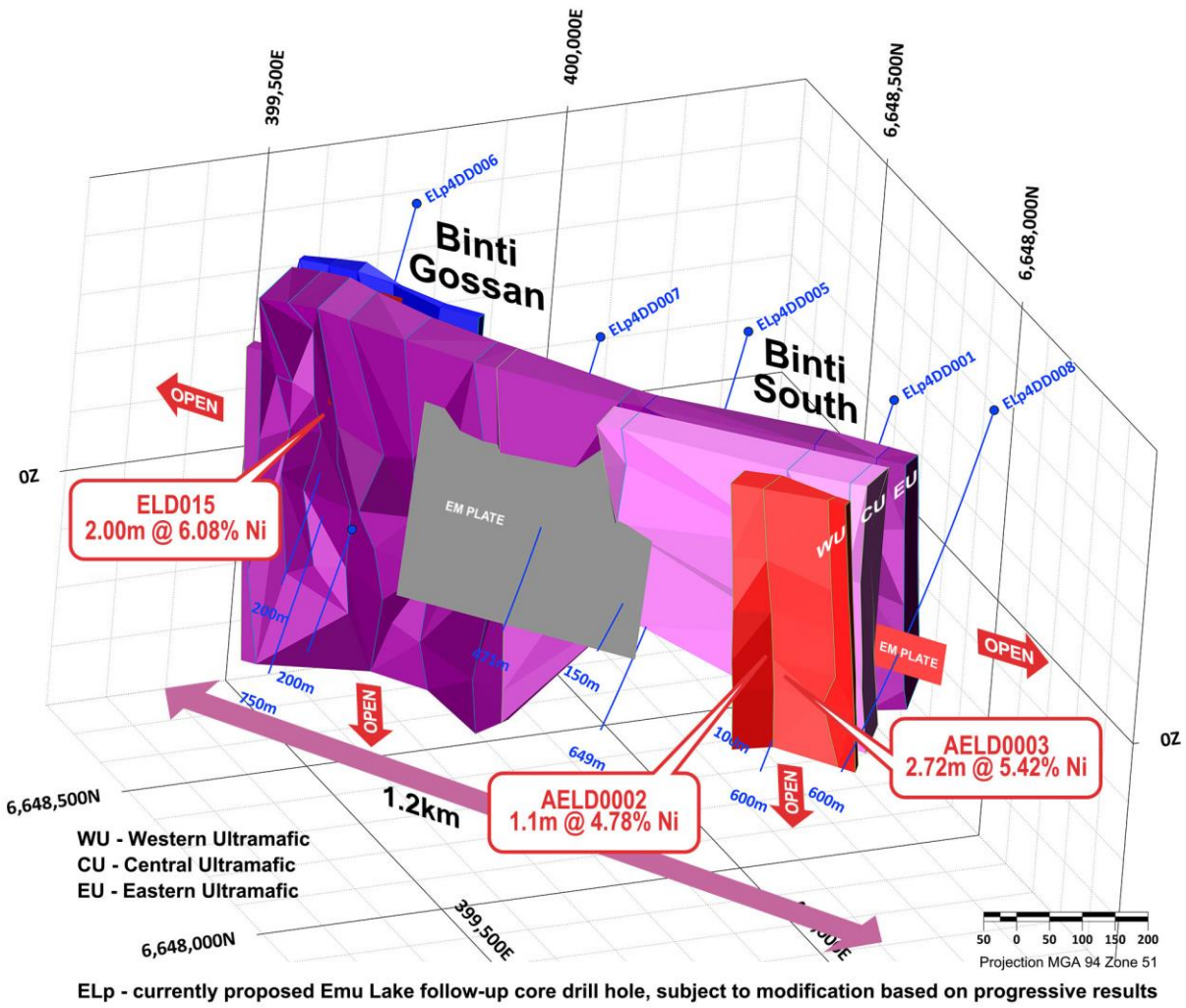

Figure 2: Three-dimensional geological interpretation of the Binti Gossan and Binti South Prospects, showing the Western Ultramafic (WU), Central Ultramafic (CU) and Eastern Ultramafic (EU). Selected initial follow up drill holes are displayed as the blue traces testing through to the Western Ultramafic nickel sulphide surface target.

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Follow-up Program

The following program has been designed, focussed on evaluating the Western Ultramafic nickel sulphide surface with the first drill hole underway (Figure 3).

- New drill holes - Five holes for 3,100m.
- Extending historic drill holes - Four holes for 650m
- Potential wedges - Five wedges for 600m

Whilst setting up the collar positions for the current drilling, an un-drilled gossan (weathering product of iron sulphide mineralisation) was identified (Figure 4). The gossan location corresponds to the surface projection of the Western Ultramafic at the Binti Gossan Prospect. The gossan outcrop has been sampled, and depending on assay results, may be added to the current drill program.

The current drilling and DHEM program is expected to take some three months, with variations as based on progressive results. Regular updates will be provided as the drilling progresses.

Figure 3: Diamond drill rig from industry-leading contractor DDH1 set up for drill hole AELD0004 at Binti South.

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Figure 4: Gossan outcrop located at the Binti Gossan target whilst surveying the proposed diamond drill collars.

Next Steps

Additional nickel sulphide exploration will be planned over the 20km strike within Ardea granted Mining Lease tenure, targeting the Kalpini Eastern Komatiite Belt (which hosts the Wellington East and Acra North nickel laterite deposits) and the Kalpini Western Komatiite Belt (which is the focus of current nickel sulphide exploration) stepping out from the Binti Gossan and Binti South prospects.

With nickel sulphide deposits tending to occur in clusters, Ardea look forward to ongoing and future exploration at Kalpini being rewarded with further discovery success.

Authorised for lodgement by the Board of Ardea Resources Limited.

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

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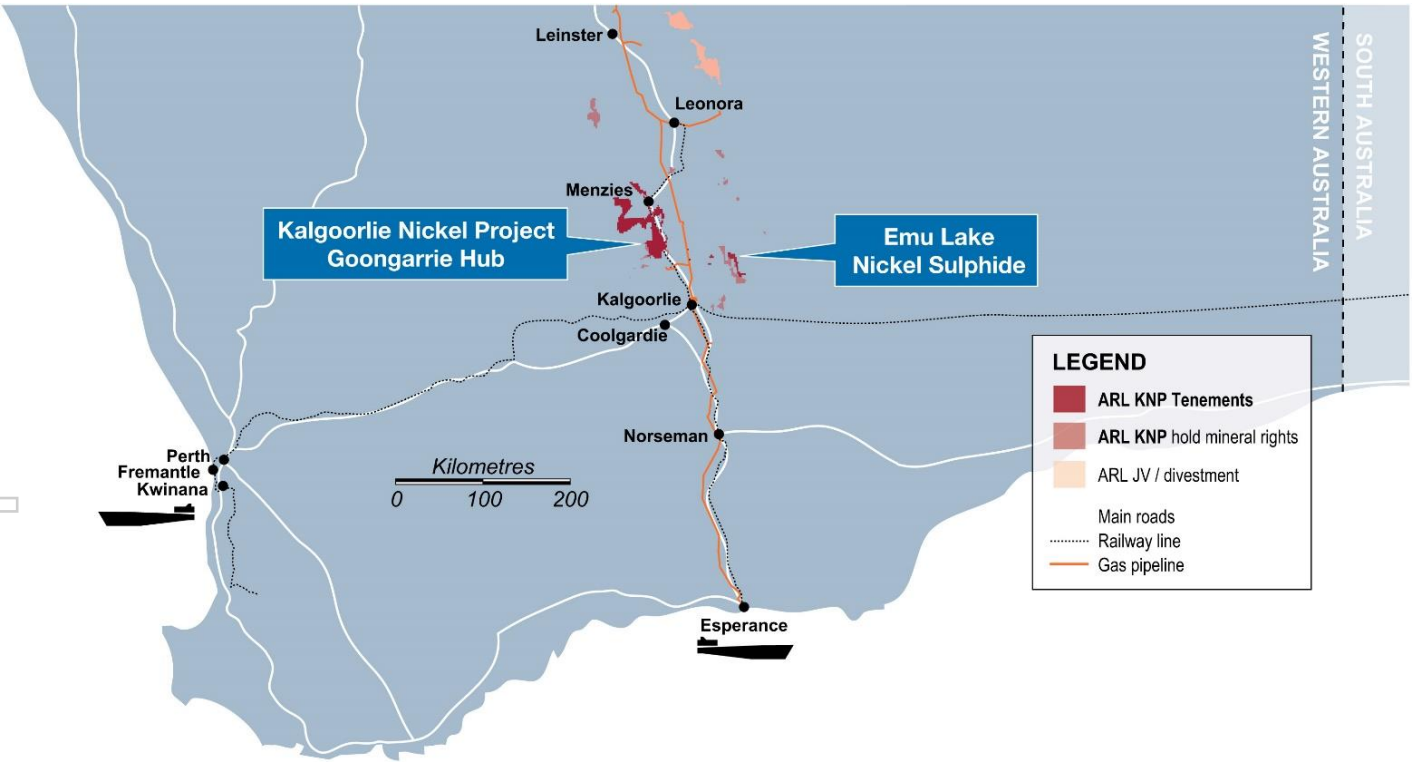
About Ardea Resources

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

- Development of the Kalgoorlie Nickel Project (**KNP**) and its sub-set the Goongarrie Hub, a globally significant series of nickel-cobalt and Critical Mineral deposits which host the largest nickel-cobalt resource in the developed world at **830Mt at 0.71% nickel and 0.046% cobalt for 5.9Mt of contained nickel and 380kt of contained cobalt** (Ardea ASX releases 15 February, 16 June 2021), located in a jurisdiction with exemplary ESG credentials.
- Advanced-stage exploration at compelling nickel sulphide targets, such as Emu Lake, and Critical Minerals targets throughout the KNP Eastern Goldfields world-class nickel-gold province, with all exploration targets complementing the KNP nickel development strategy.

Ardea's KNP development with its 5.9 million tonnes of contained nickel is the foundation of the Company, with the nickel sulphide exploration such as Emu Lake as an evolving contribution to Ardea's building of a green, forward-facing integrated nickel company.

Put simply, in the Lithium Ion Battery (**LiB**) sector, the Electric Vehicle and Static Storage Battery customers demand an Environmental Social and Governance (**ESG**) compliant, sustainable, and ethical supply chain for nickel and other inputs. In the wet tropics, with their signature submarine tailings disposal and rain forest habitat destruction attached to their nickel, an acceptable ESG regime is problematic. In contrast, the world-class semi-arid, temperate Greater Western Woodland with its benign environmental setting is likely the single greatest asset of the KNP.



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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.

Compliance Statement (JORC 2012)

The exploration and industry benchmarking summaries are based on information reviewed or compiled by Mr. Ian Buchhorn, who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Buchhorn is a full-time employee of Ardea Resources Limited 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, Mineral Resources and Ore Reserves'. Mr Buchhorn has reviewed this press release and consents to the inclusion in this report of the information in the form and context in which it appears. Mr Buchhorn owns Ardea shares