



## ASX & Media Release

2 May 2023

### ASX Symbol

ARL

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*Managing Director & CEO*

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Rebecca Moylan  
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*Project Director*

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& Compliance*

Mike Miller  
*General Manager Technical  
Services*

Matthew McCarthy  
*General Manager Exploration*

### Issued Capital

Fully Paid Ordinary Shares  
171,502,772

Performance Rights  
7,082,000

Options  
4,000,000

ABN 30 614 289 342

## Nickel sulphide anomalism from aircore drilling at Kalpini Project

- Twenty-four exploration aircore drill holes for 1,077m were completed in October 2022 at Emu Lake with one drill line to the north of the Binti Prospect and two drill lines to the south
- Drill hole AELA0022 intersected significant nickel sulphide anomalism:
  - **14m @ 0.52% Ni, 231ppm Cu and 129ppb Pt+Pd from 24m including**
  - **4m @ 0.62% Ni, 310ppm Cu and 177ppb Pt+Pd from 32m**
- Textures including presence of distinctive pits in the drill chips indicate weathered nickel sulphide mineralisation in saprock ultramafic
- AELA0022 is located 1km south-southeast of the Binti South Prospect (Ardea discovery hole AELD0003: 2.72m at 5.42% Ni and 0.85% Cu from 391.04m<sup>1</sup>) in an area with no previous surface electromagnetic (EM) surveys

Ardea Resources Limited (**Ardea** or the **Company**) is pleased to provide an update on exploration activities at its Kalpini Hub within the larger Kalgoorlie Nickel Project (**KNP**) in the Eastern Goldfields of Western Australia.

In addition to the ongoing priority Prefeasibility Study (**PFS**) work programs at the Goongarrie Hub, compelling Battery and Critical Mineral exploration opportunities continue to be evaluated over Ardea's Eastern Goldfields of Western Australia land holding. This includes ongoing evaluation of nickel sulphide potential at the Kalpini Hub (Figure 1), where Type 1 massive nickel-copper-PGE sulphides were discovered by Ardea at the Binti Prospect, with follow-up drilling intersecting additional magmatic nickel sulphides<sup>2</sup>.

### Managing Director and CEO Andrew Penkethman noted:

*"The recently received aircore assay results from Ardea's Kalpini Hub reiterate the prospectivity of the Western Komatiite Belt for hosting magmatic nickel sulphides. With exploration only completed over approximately 1.5km of a 20km trend, Ardea has a first mover advantage over a large area that is only 70km northeast of the City of Kalgoorlie-Boulder and easily accessed from the Company's West Kalgoorlie Operations Office.*

*Whilst the Company focus is on completing the Goongarrie Hub PFS, the Ardea Team acknowledge that the Kalpini Hub nickel sulphide opportunity should continue to be advanced. Ardea is in the fortunate position of having a pipeline of compelling Battery and Critical Minerals targets and will undertake further exploration to realise additional value at Kalpini."*

<sup>1</sup> ASX release 14 January 2022

<sup>2</sup> ASX release 14 October 2022

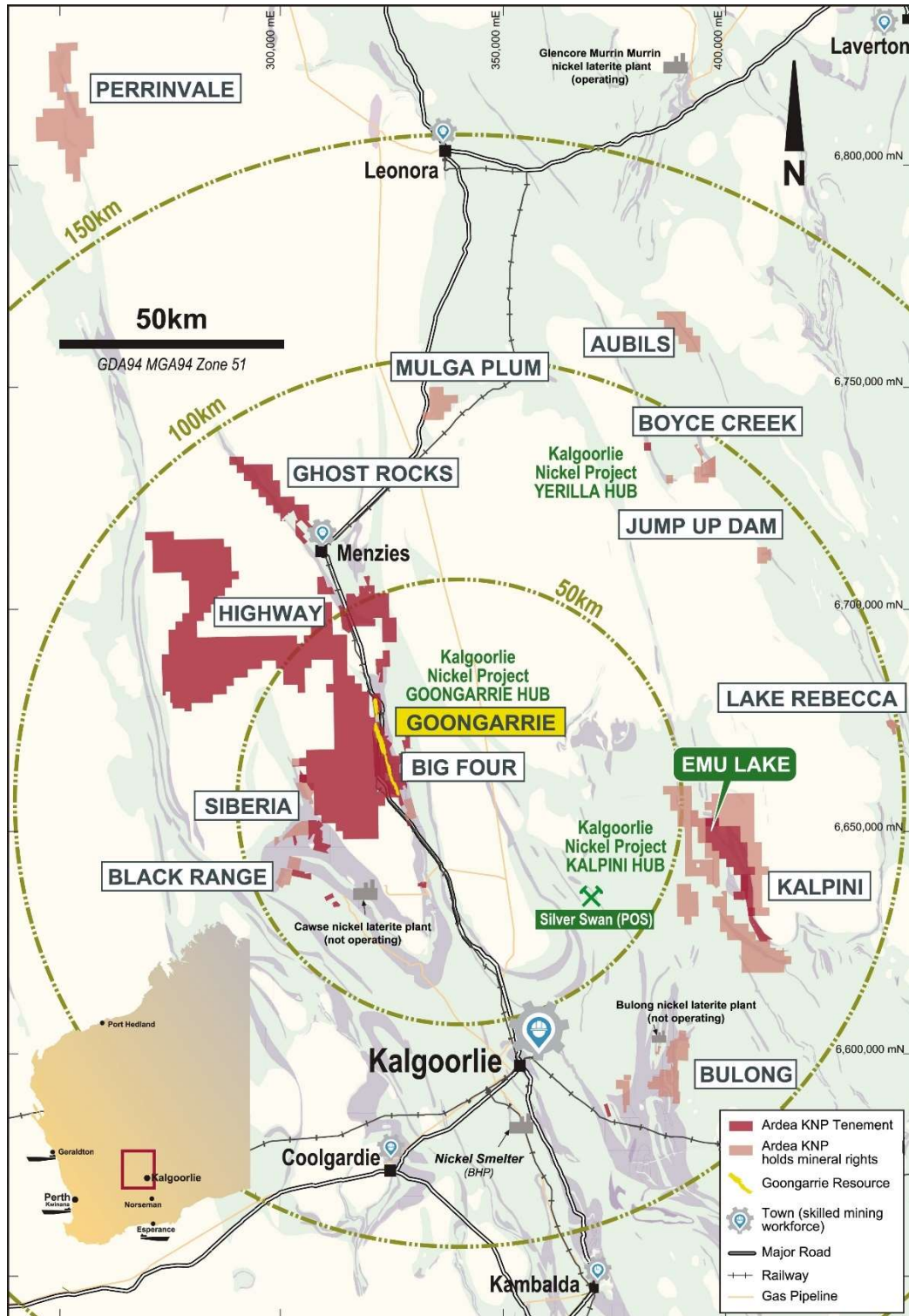


Figure 1. Location of Ardea's projects in the Eastern Goldfields of WA. Projection GDA94 Zone 51.

### Kalpini Nickel Sulphides

The current focus for nickel sulphide exploration is the Kalpini Hub which has known Type 1 massive nickel-copper-PGE sulphides at the Binti Prospect. The significance of this discovery is that it occurs in the Kurnalpi Terrane in which there are only a few Type 1 nickel sulphide occurrences. At the Kalpini Project, Ardea hold approximately 20km strike of the prospective Western Komatiite Belt which is largely unexplored for primary





magmatic nickel sulphide mineralisation. Ardea believe there is significant potential to make additional high-grade nickel-copper-PGE discoveries in the Kalpini Project.

In October 2022 Ardea completed twenty-four (24) exploration aircore drill holes for 1,077m at Emu Lake. Three lines were drilled with one line to the north of the Binti Prospect and two to the south (Figure 2).

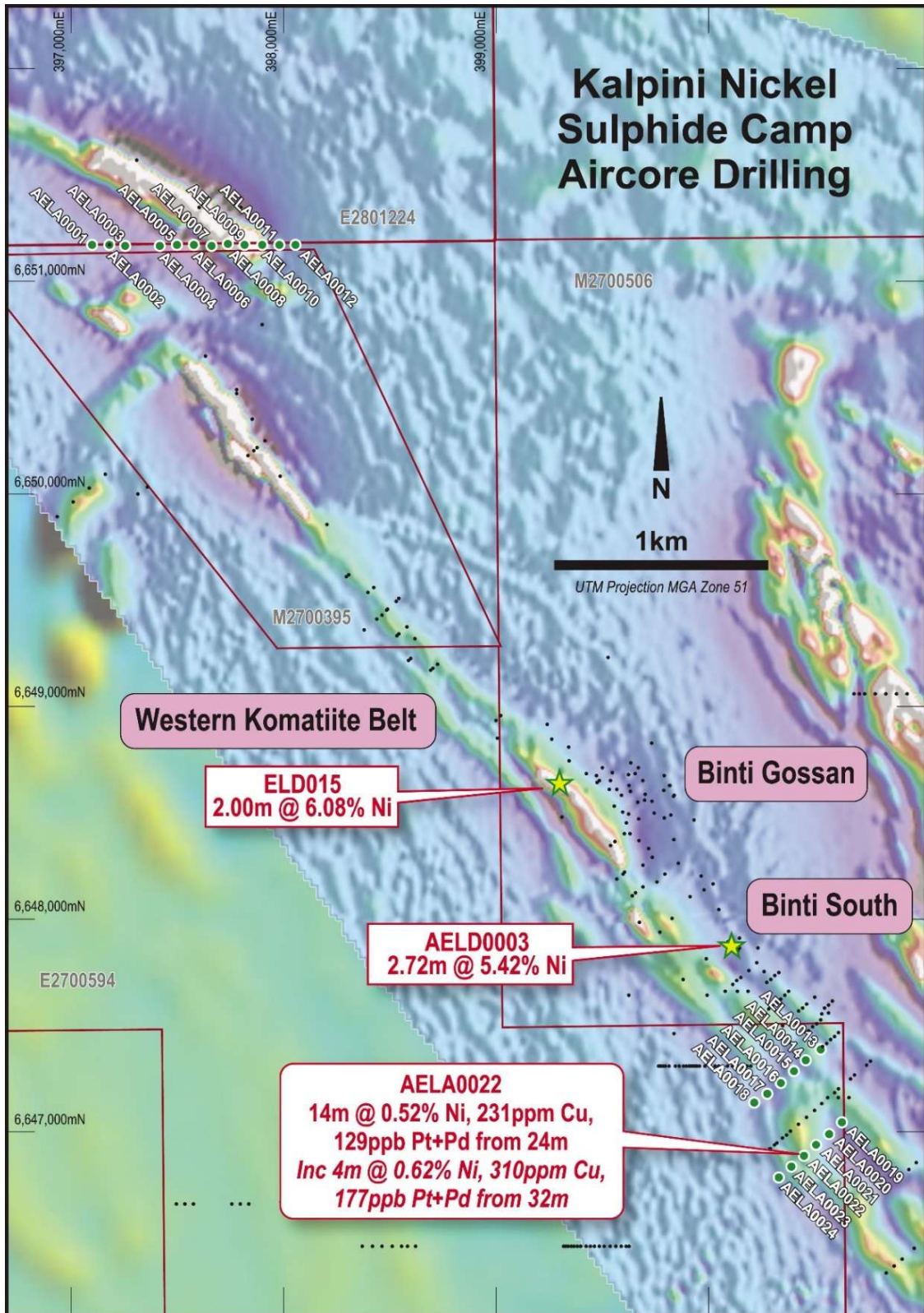


Figure 2: Location of aircore drillholes (AELA0001 – AELA0024) over three lines at Emu Lake and significant intersection in AELA0022. Projection GDA94 Zone 51.



On the southern-most drill line one aircore hole intersected significant nickel sulphide anomalism: AELA0022 intersected 14m @ 0.52% Ni, 231ppm Cu and 129ppb Pt+Pd from 24m *including* 4m @ 0.62% Ni, 310ppm Cu and 177ppb Pt+Pd from 32m. This intersection occurs in partially weathered saprock ultramafic with dark purple-red limonite pits in the aircore chips indicating weathered nickel sulphide mineralisation (Figure 3). AELA0022 is located 1km south-southeast of Binti South discovery hole AELD0003 (2.72m at 5.42% Ni and 0.85% Cu from 391.04m; Figure 2). The ultramafic stratigraphy around the AELA0022 drill hole has had no previous surface EM coverage.



*Figure 3: Nickel sulphide anomalism intersected in AELA0022 (4m @ 0.62% Ni, 310ppm Cu, 177ppb Pt+Pd from 32m) within saprock ultramafic with dark purple-red pits indicating weathered nickel sulphide mineralisation.*

The two southern aircore lines identified several ultramafic flow units separated by dacites (felsic volcanics) and flanked by a shale unit to the west. AELA0022 is located on the southern flank of a discrete magnetic anomaly which could represent a primary ultramafic channel feature.

The anomalism intersected in AELA0022 occurs at the base of an ultramafic unit directly east of the Western Shale marker horizon (Figure 4). This is the same stratigraphic position as the Western Ultramafic that hosts Type 1 massive nickel-copper-PGE mineralisation at Binti South 1km to the north-northwest. The combination of the anomalous geochemistry, flank of magnetic anomaly, the stratigraphic interpretation and absence of surface EM in this area make this a compelling nickel sulphide target to follow up.

The northern aircore line produced no significant results although it did define the ultramafic interpreted from the aeromagnetic survey, with AELA0007 to AELA0010 intersecting the ultramafic unit, including AELA0008 which intersected 8m @ 0.58% Ni, 0.052% Co, 20ppm Cu, 41ppb Pt+Pd from 8m occurring as nickel laterite mineralisation.

Recent technical assessment of the Kalpini project has indicated that nickel sulphide mineralisation in the Western Komatiite Belt occurs in ultramafic flows with channelised sheet flow chemistry. Examples include the Central Ultramafic (ELD015: 2m @ 6.08% Ni – ASX release 7 February 2022) and the Western Ultramafic (2.72m @ 5.42% Ni – ASX release 14 January 2022). Komatiites with no nickel sulphide mineralisation identified to date (such as the Eastern Ultramafic and Western Ultramafic 1) exhibit less prospective layered lava lake chemistry. The geochemistry of historic drillholes along strike of AELA0022 confirm it has intersected an ultramafic unit which has channelised sheet flow chemistry and is likely a continuation of the prospective Western Ultramafic.



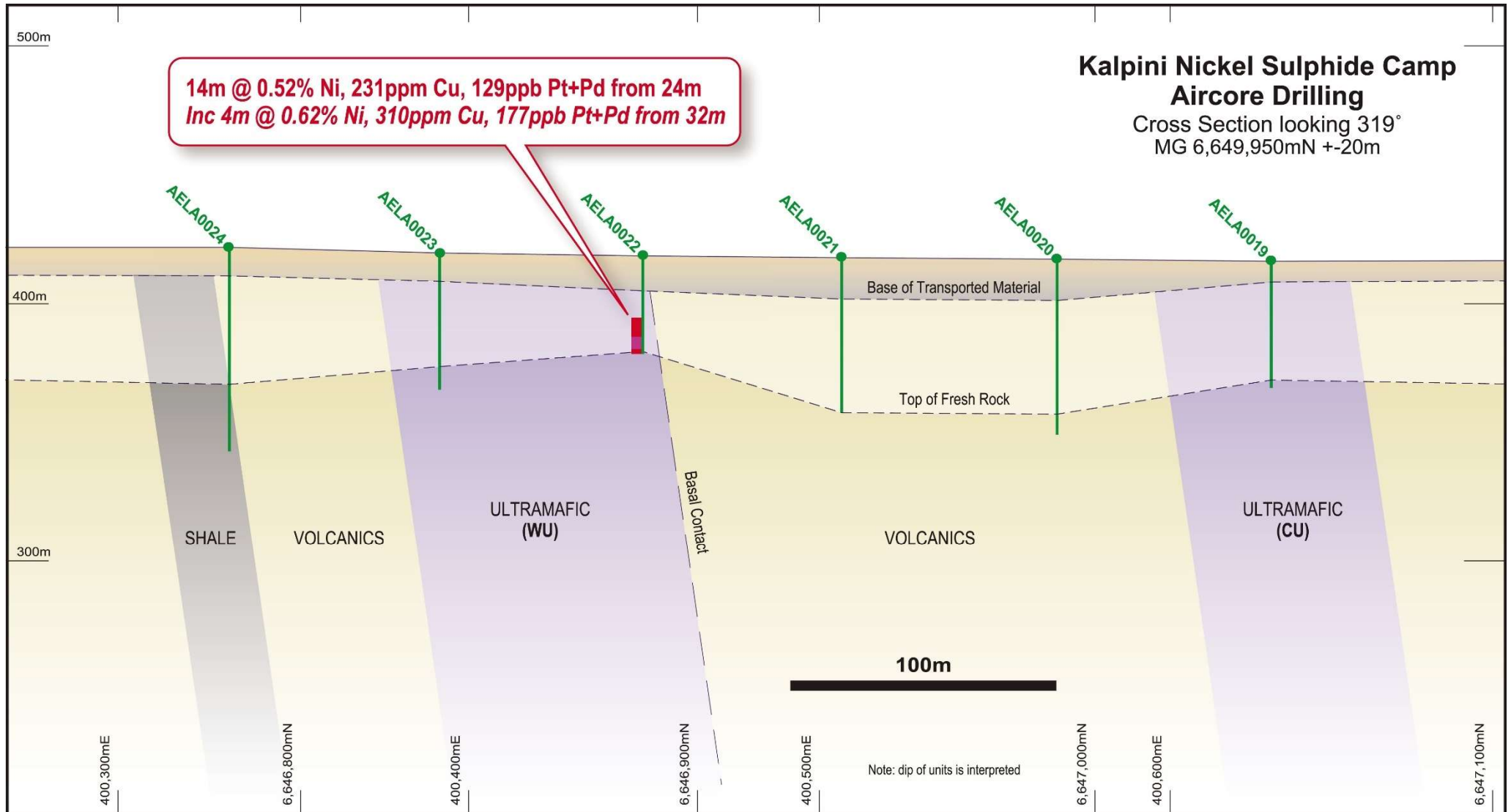


Figure 4: Cross section of Aircore drill line 1km south-southeast of Binti South, with significant nickel sulphide anomalism in AELA0022 and geological interpretation. Projection GDA94 Zone 51.



Detailed geochemical assessment will continue to be an integral part of the workflows at Kalpini, essential to targeting the most prospective ultramafic flows across the belt.

Regional technical targeting recently completed by Ardea generated twelve (12) nickel sulphide exploration targets in the ~20km strike Western Komatiite sequence (Figure 5). Exploration drill programs are being planned, which will include RC drill testing below the nickel sulphide related anomalism in AELA0022, once current PFS hydrogeology programs are completed.

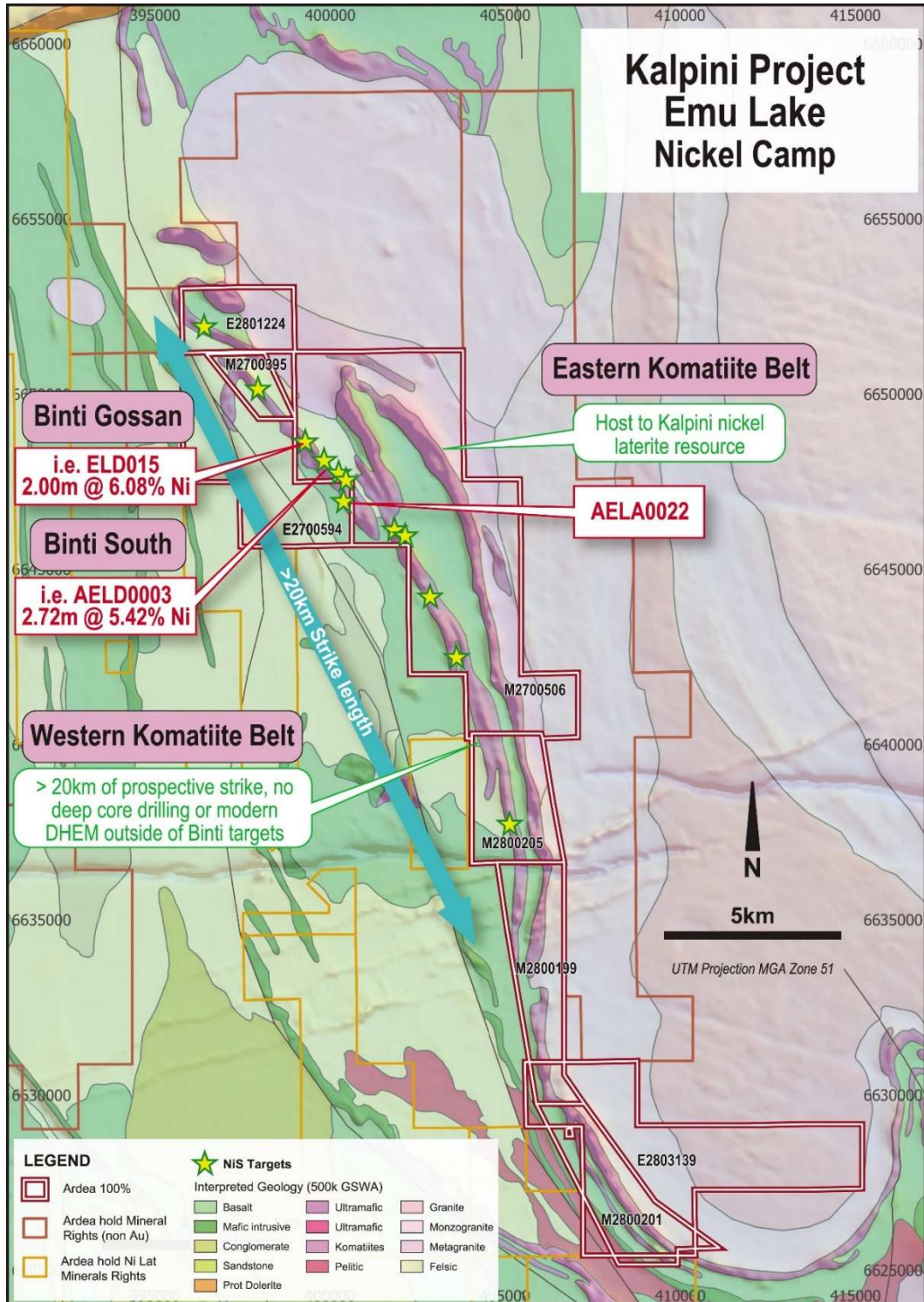


Figure 5. Map of the Kalpini Nickel project showing tenements over interpreted geology and nickel sulphide (NiS) targets (stars) including AELA0022. Projection GDA94 Zone 51.



This announcement is authorised for release 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

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**About Ardea Resources**

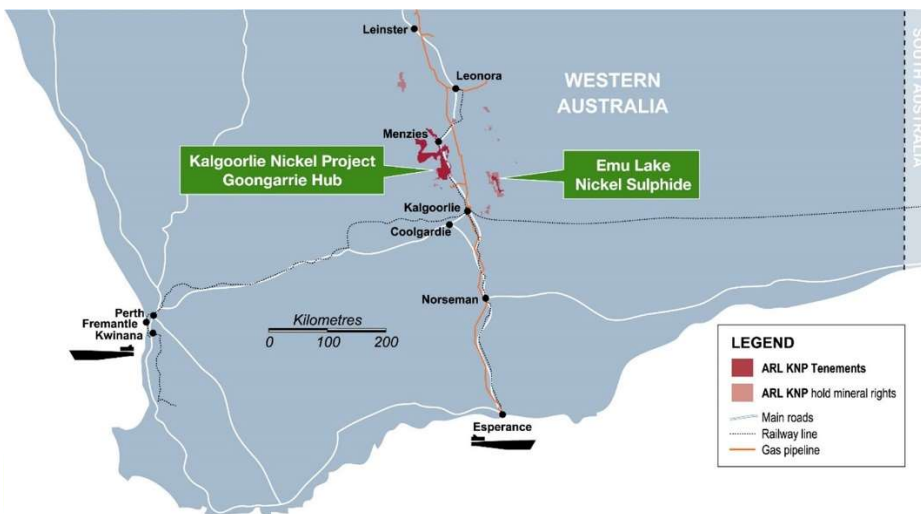
Ardea Resources Limited (ASX:ARL) is an ASX-listed nickel resources company, with a large portfolio of 100%-controlled West Australian-based projects, focussed on:

- 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 Environmental Social and Governance (**ESG**) credentials, notably environment.
- Advanced-stage exploration at compelling nickel sulphide targets, such as Emu Lake, and Critical Minerals targets including scandium and Rare Earth Elements throughout the KNP Eastern Goldfields world-class nickel-gold province, with all exploration targets aimed at 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 sector, the Electric Vehicle and Energy Storage System battery customers demand an ESG-compliant, sustainable, and ethical supply chain for nickel and other inputs. In the wet tropics, with their signature HPAL submarine tailings disposal and rain forest habitat destruction, an acceptable ESG regime is problematic. In contrast, the world-class semi-arid, temperate KNP Great Western Woodlands with its benign environmental setting is likely the single greatest asset of the KNP.

The KNP is located in a well established mining jurisdiction with absolute geopolitical acceptance and none of the land-use and societal conflicts that commonly characterise nickel laterite proposals elsewhere. All KNP Goongarrie Hub production tenure is on granted Mining Leases with Native Title Agreement in place.



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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 Persons statement**

*The information in this report that relates to planning and results for nickel sulphide exploration is based on information reviewed or compiled by Matthew McCarthy, who is a Member of the Australian Institute of Geoscientists. Mr McCarthy 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 activities undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr McCarthy consents to the inclusion in this report of the information in the form and context in which it appears.*





## Appendix 1 – Drill hole information

| Drill hole | Depth (m) | Tenure    | Grid     | Easting  | Northing | RL (mASL) | Dip (°) |
|------------|-----------|-----------|----------|----------|----------|-----------|---------|
| AELA0001   | 32        | E27/00524 | MGA94_51 | 397099   | 6651168  | 411.51    | -90     |
| AELA0002   | 35        | E27/00524 | MGA94_51 | 397180.5 | 6651168  | 412.02    | -90     |
| AELA0003   | 35        | E27/00524 | MGA94_51 | 397254.9 | 6651167  | 412.52    | -90     |
| AELA0004   | 35        | E27/00524 | MGA94_51 | 397417.7 | 6651167  | 413.83    | -90     |
| AELA0005   | 33        | E27/00524 | MGA94_51 | 397498.5 | 6651171  | 414.56    | -90     |
| AELA0006   | 36        | E27/00524 | MGA94_51 | 397578.2 | 6651171  | 415.08    | -90     |
| AELA0007   | 41        | E27/00524 | MGA94_51 | 397661.7 | 6651163  | 415.81    | -90     |
| AELA0008   | 22        | E27/00524 | MGA94_51 | 397738.5 | 6651175  | 416.39    | -90     |
| AELA0009   | 27        | E27/00524 | MGA94_51 | 397816.9 | 6651168  | 417.17    | -90     |
| AELA0010   | 18        | E27/00524 | MGA94_51 | 397899.7 | 6651170  | 417.73    | -90     |
| AELA0011   | 37        | E27/00524 | MGA94_51 | 397980.6 | 6651169  | 418.2     | -90     |
| AELA0012   | 38        | E27/00524 | MGA94_51 | 398056.6 | 6651171  | 418.69    | -90     |
| AELA0013   | 29        | E27/00524 | MGA94_51 | 400529.1 | 6647386  | 418.45    | -90     |
| AELA0014   | 63        | E27/00524 | MGA94_51 | 400458.5 | 6647335  | 418.03    | -90     |
| AELA0015   | 42        | E27/00524 | MGA94_51 | 400402.6 | 6647283  | 417.91    | -90     |
| AELA0016   | 63        | E27/00524 | MGA94_51 | 400340.9 | 6647228  | 418.64    | -90     |
| AELA0017   | 52        | E27/00524 | MGA94_51 | 400277.7 | 6647179  | 419.57    | -90     |
| AELA0018   | 92        | E27/00524 | MGA94_51 | 400216.3 | 6647137  | 420.75    | -90     |
| AELA0019   | 49        | E27/00524 | MGA94_51 | 400628.9 | 6647044  | 416.4     | -90     |
| AELA0020   | 68        | E27/00524 | MGA94_51 | 400568.8 | 6646989  | 417.22    | -90     |
| AELA0021   | 60        | E27/00524 | MGA94_51 | 400507.7 | 6646935  | 417.77    | -90     |
| AELA0022   | 38        | E27/00524 | MGA94_51 | 400450.4 | 6646885  | 418.5     | -90     |
| AELA0023   | 53        | E27/00524 | MGA94_51 | 400391.1 | 6646836  | 419.66    | -90     |
| AELA0024   | 79        | E27/00524 | MGA94_51 | 400331.8 | 6646782  | 421.78    | -90     |



## JORC Code, 2012 Edition, Table 1 report

### Section 1 - Sampling Techniques and Data

(Criteria in this section applies to all succeeding sections)

| Criteria                     | JORC Code explanation  | Commentary   |
|------------------------------|--|--|
| <b>Sampling techniques</b>   | <ul style="list-style-type: none"> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul> | <ul style="list-style-type: none"> <li>Aircore holes were sampled on a 4 metre composite interval basis with exceptions being end of hole final-lengths.</li> <li>Sample condition, sample recovery and sample size were recorded for samples collected by Ardea.</li> <li>Industry standard practice and QAQC procedures were carried out using Ardea protocols, with samples collected in calico bags.</li> <li>Assay of samples utilised standard laboratory techniques with mixed-acid digest ICP-AES and ICP-MS undertaken to determine 60 elements, and lead collection fire-assay to determine Au, Pt, Pd. Further details of lab processing techniques are found in Quality of assay data and laboratory tests below.</li> </ul> |
| <b>Drilling techniques</b>   | <ul style="list-style-type: none"> <li>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>  | <ul style="list-style-type: none"> <li>Aircore drilling was completed utilising either 3<sup>1</sup>/<sub>2</sub> or 4<sup>1</sup>/<sub>2</sub> inch tungsten tipped blade, with hammer drilling into harder basement rock as required.</li> </ul>   |
| <b>Drill sample recovery</b> | <ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>   | <ul style="list-style-type: none"> <li>Qualitative sample recoveries are recorded for each sample interval. Sample condition recorded using a three code system, D=Dry, M=Moist, W=Wet.</li> <li>With AC drilling, fluids can be used to maximise recoveries where appropriate as can conservative drill penetration rates to limit overgrinding and pressure, maintaining a clean cyclone and drilling equipment, as well as regular communication with the drillers and slowing drill advance rates when poor ground conditions are encountered.</li> </ul>  |
| <b>Logging</b>               | <ul style="list-style-type: none"> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>   | <ul style="list-style-type: none"> <li>Visual geological logging was completed using standard Ardea logging legend which records lithology, mineralisation, weathering, texture, alteration, colour and comments.</li> <li>The geological logging is considered qualitative.</li> <li>All drill holes were logged in full to end of hole.</li> <li>Handheld Niton XRF was also used to cross-check logging and specific rock properties.</li> <li>A small selection of representative chips were collected for every 1 metre interval and stored in chip-trays for future reference.</li> </ul>  |



|  |  |  |
|--|--|--|
| <p><b>Sub-sampling techniques and sample preparation</b></p> | <ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> <li>• <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li>• <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li>• <i>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</i></li> <li>• <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul> | <ul style="list-style-type: none"> <li>• No core drilling was utilised</li> <li>• 4m aircore composite samples were recovered using a 15:1 rig mounted cone splitter or trailer mounted riffle splitter during drilling into calico sample bags.</li> <li>• The sample preparation involves oven drying, coarse crush and pulverisation of the entire sample to minimum of 85% passing -75µm</li> <li>• QAQC was employed. A standard, blank or duplicate sample was inserted into the sample stream as per company procedure to determine precision and accuracy of assays.</li> <li>• Sample equipment was cleaned between drill sites to avoid contamination</li> <li>• The sample size collected is considered appropriate</li> </ul>  |
| <p><b>Quality of assay data and laboratory tests</b></p>     | <ul style="list-style-type: none"> <li>• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li>• <i>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i></li> <li>• <i>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</i></li> </ul>  | <ul style="list-style-type: none"> <li>• All Ardea samples were submitted to Kalgoorlie Bureau Veritas (BV) laboratories and transported to BV Perth, where they were pulverised.</li> <li>• The samples were sorted, wet weighed, dried then weighed again. Primary preparation has been by crushing and splitting the sample with a riffle splitter where necessary to obtain a sub-fraction which has then been pulverised in a vibrating pulveriser. All coarse residues have been retained.</li> <li>• Analysis at BV Perth was by Mixed acid digest Full ICP-AES and ICP-MS utilising a 50g charge (ARL02 Suite) to define: Ag, Al, As, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cs, Cu, Dy, Er, Eu, Fe, Ga, Gd, Ge, Hf, Ho, In, K, La, Li, Lu, Mg, Mn, Mo, Na, Nb, Nd, Ni, P, Pb, Pr, Rb, Re, S, Sb, Sc, Se, Sm, Sn, Sr, Ta, Tb, Te, Th, Ti, Tl, Tm, U, V, W, Y, Yb, Zn, Zr</li> <li>• For PGM suite elements (Au, Pt, Pd) 40g lead collection fire assay ICP-MS was used.</li> <li>• LOI (Loss on Ignition) was also determined using robotic TGA system where sample is dried at 105°C then ignited at 1000°C.</li> <li>• No geophysical tools were used to determine any element concentrations</li> <li>• BV routinely inserts analytical blanks, standards and duplicates into the client sample batches for laboratory QAQC performance monitoring.</li> <li>• Ardea also inserted QAQC samples into the sample stream at a 1 in 20 frequency, alternating between duplicates, blanks (industrial sands) and standard reference materials.</li> <li>• All of the QAQC data has been statistically assessed. There were rare but explainable inconsistencies in the returning results from standards submitted, and it has been determined that levels of accuracy and precision relating to the samples are acceptable.</li> </ul> |
| <p><b>Verification of sampling and assaying</b></p>          | <ul style="list-style-type: none"> <li>• <i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li>• <i>The use of twinned holes.</i></li> <li>• <i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li>• <i>Discuss any adjustment to assay data.</i></li> </ul>  | <ul style="list-style-type: none"> <li>• Significant intersections have been verified by multiple company personal, including technical staff and management</li> <li>• No twin holes have been completed</li> <li>• Primary sampling data is collected in a set of standard company templates. The information is managed by Ardea's Database Manager and compiled into the central database</li> </ul>   |
| <p><b>Location of data points</b></p>                        | <ul style="list-style-type: none"> <li>• <i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i></li> <li>• <i>Specification of the grid system used.</i></li> <li>• <i>Quality and adequacy of topographic control.</i></li> </ul>   | <ul style="list-style-type: none"> <li>• All drill holes were recorded using handheld Garmin GPS and later surveyed using an RTK DGPS system with either a 3 or 7 digit accuracy. The coordinates are stored in the exploration database referenced to the MGA Zone 51 Datum GDA94.</li> <li>• Topography is generally flat. The topographic surface has been constructed from hole collar surveys. These are consistent with regional DTMs and are considered adequate for exploration purposes.</li> </ul>   |





|   |  |  |
|---|--|--|
| <p><b>Data spacing and distribution</b></p>                           | <ul style="list-style-type: none"> <li>• <i>Data spacing for reporting of Exploration Results.</i></li> <li>• <i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i></li> <li>• <i>Whether sample compositing has been applied.</i></li> </ul>                        | <ul style="list-style-type: none"> <li>• The drill hole spacing for the aircore program was 80m centres along selected drill lines.</li> <li>• The spacing is not considered sufficient at this stage for the definition of Mineral Resources.</li> <li>• Samples were composited over 4m for the Aircore drilling.</li> </ul>   |
| <p><b>Orientation of data in relation to geological structure</b></p> | <ul style="list-style-type: none"> <li>• <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></li> <li>• <i>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</i></li> </ul> | <ul style="list-style-type: none"> <li>• All aircore drill holes in this program were vertical. The sampling is preliminary in nature and is currently not possible to assess whether sampling is unbiased.</li> <li>• Not applicable as above.</li> </ul>   |
| <p><b>Sample security</b></p>   | <ul style="list-style-type: none"> <li>• <i>The measures taken to ensure sample security.</i></li> </ul>   | <ul style="list-style-type: none"> <li>• All samples were collected and accounted for by Ardea employees/consultants during drilling. All samples were bagged into calico plastic bags and closed with cable ties. Samples were transported to Kalgoorlie from logging site by Ardea employees/consultants and submitted directly to BV Kalgoorlie.</li> <li>• The appropriate manifest of sample numbers and a sample submission form containing laboratory instructions were submitted to the laboratory. Any discrepancies between sample submissions and samples received were routinely followed up and accounted for.</li> </ul> |
| <p><b>Audits or reviews</b></p>                                       | <ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>   | <ul style="list-style-type: none"> <li>• ARL has periodically conducted internal reviews of sampling techniques relating to resultant exploration datasets, and larger scale reviews capturing the data from multiple programs within the KNP.</li> <li>• The BV Laboratory was visited by ARL staff in 2021, and the laboratory processes and procedures were reviewed at this time and determined to be robust.</li> </ul>   |

## Section 2 - Reporting of Exploration Results

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

| Criteria  | JORC Code explanation   | Commentary  |
|---|---|---|
| <p><b>Mineral tenement and land tenure status</b></p> | <ul style="list-style-type: none"> <li>• <i>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</i></li> <li>• <i>The security of the tenure held at the time of reporting along with any known impediments</i></li> </ul> | <ul style="list-style-type: none"> <li>• The tenement on which the Aircore drilling was E27/524. Ardea Resources Ltd subsidiary Kalgoorlie Nickel Pty Ltd is the sole holder of the tenement, which is in good standing.</li> <li>• Given the early stage of the exploration no mining specific applications have been made and there are no known impediments (e.g. overriding royalties, historical sites, wilderness or national park and environmental settings) to mining in the tenure</li> </ul> |
| <p><b>Exploration done by other parties</b></p>       | <ul style="list-style-type: none"> <li>• <i>Acknowledgment and appraisal of exploration by other parties.</i></li> </ul>  | <ul style="list-style-type: none"> <li>• The Kalpini project has had minor exploration for nickel sulphides since 2003 by Image Resources, Skryne Hill, Jubilee Mines, Emu Nickel and Xstrata. Data collected by these companies has been reviewed by Ardea</li> </ul>  |



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| <p><b>Geology</b></p>  | <ul style="list-style-type: none"> <li>• <i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>   | <ul style="list-style-type: none"> <li>• The Nickel sulphide model is Archaean komatiite hosted nickel sulphides and related deposits, commonly referred to as Kambalda-style; and nickel-cobalt laterite deposits.</li> </ul>  |
| <p><b>Drill hole Information</b></p>   | <ul style="list-style-type: none"> <li>• <i>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:</i></li> <li>• <i>easting and northing of the drill hole collar</i></li> <li>• <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></li> <li>• <i>dip and azimuth of the hole</i></li> <li>• <i>down hole length and interception depth</i></li> <li>• <i>hole length.</i></li> </ul>   | <ul style="list-style-type: none"> <li>• All holes drilled in this program are reported in the table in the body of the release.</li> </ul>   |
| <p><b>Data aggregation methods</b></p>   | <ul style="list-style-type: none"> <li>• <i>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</i></li> <li>• <i>Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</i></li> <li>• <i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></li> </ul> | <ul style="list-style-type: none"> <li>• Significant intercepts from the Kalpini drilling have been provided by Ardea in previous ASX reports and for the recent Aircore drilling in this report. Exploration results have been reported using the weighted average of each sample result by its corresponding interval length, as is industry standard practice.</li> <li>• Grades &gt;0.3% Ni are used to identify nickel sulphide mineralisation in fresh rock samples, but are also deemed significant in partially oxidised samples when associated with other elements (i.e. Pt, Pd, Cu) suggesting bedrock magmatic nickel sulphide mineralisation.</li> <li>• Top cuts were not deemed applicable considering the style of nickel mineralisation.</li> <li>• No metal equivalent calculations have been used in this assessment.</li> </ul> |
| <p><b>Relationship between mineralisation widths and intercept lengths</b></p> | <ul style="list-style-type: none"> <li>• <i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li>• <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li>• <i>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</i></li> </ul>   | <ul style="list-style-type: none"> <li>• True width of the reported nickel sulphide anomalous zones has not been attempted during this early stage of reporting and may have no relation to true width of bedrock mineralisation. Drill hole lines are oriented orthogonal to the trend of stratigraphy.</li> </ul>   |
| <p><b>Diagrams</b></p>   | <ul style="list-style-type: none"> <li>• <i>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i></li> </ul>  | <ul style="list-style-type: none"> <li>• Maps, cross-sections and photos relevant to the drill locations and target mineralisation style are shown within the report.</li> </ul>  |
| <p><b>Balanced reporting</b></p>   | <ul style="list-style-type: none"> <li>• <i>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</i></li> </ul>   | <ul style="list-style-type: none"> <li>• Not applicable to this report. All results are reported either in the text or in the associated appendices</li> </ul>  |



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| <p><b>Other substantive exploration data</b></p> | <ul style="list-style-type: none"> <li>• <i>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i></li> </ul> | <ul style="list-style-type: none"> <li>• No other data are, at this stage, known to be either beneficial or deleterious to recovery of the metals reported. All results considered to be significant are reported.</li> </ul>   |
| <p><b>Further work</b></p>                       | <ul style="list-style-type: none"> <li>• <i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li>• <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>                          | <ul style="list-style-type: none"> <li>• Follow-up drill programs for the Kalpini project are being planned based on regional technical targeting recently completed by Ardea that generated twelve (12) nickel sulphide exploration targets in the ~20km strike Western Komatiite sequence. This will include RC drill testing below the nickel sulphide related anomalism in AELA0022.</li> </ul> |