Ardea Resources Limited

ASX & Media Release
31 January 2024

ASX Symbol
ARL

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Company Secretary

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Mike Miller
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General Manager Geology & Exploration

Issued Capital

Fully Paid Ordinary Shares
197,016,915

Performance Rights
6,149,400

Options

3,000,000

ABN 30 614 289 342

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QUARTERLY OPERATIONS REPORT

For the Quarter ended 31 December 2023

Ardea Resources Limited (ASX:ARL) (**Ardea** or the **Company**) is pleased to provide the following report on its activities during the December 2023 Quarter.

DECEMBER 2023 QUARTER HIGHLIGHTS

The Company is well capitalised with $19.6M cash-at-bank as at 31 December 2023, has no debt and continues to benefit from a supportive set of shareholders as it continues to progress the development of the world-significant Kalgoorlie Nickel Project (**KNP**).

Kalgoorlie Nickel Project

The KNP Goongarrie Hub is Ardea's focus with the Company prioritising conclusion of the current Strategic Partner process and preparing for commencement of the Definitive Feasibility Study (**DFS**) upon binding agreements being signed.

Key December 2023 Quarter activities included:

- Completed invitations to tender for the six key DFS work packages, being Process Plant and Process Plant Utilities, Non-Process Infrastructure, Approvals, Geology, Mining and Hydrogeology.
- DFS bids are currently being reviewed to enable a final Program and Budget to be settled and work packages awarded.
- Hydrogeology planning and preparing surface drilling locations for an aircore drilling program due to commence in March 2024 to quantify long-term water supply.
- Completed a passive seismic survey over several Goongarrie Hub palaeochannel water targets.
- Concluded the following expanded baseline environmental surveys: Flora and Vegetation; Terrestrial Fauna; Short Range Endemic Fauna; Targeted Conservation Significant Butterfly and Subterranean Fauna.
- Refined DFS metallurgical test work programs using existing drill core.
- Commenced a detailed mine plan update to support a potential increase in processing capacity to 4Mtpa.
- Designed the Measured Resource and five-year production profile, including infill drill hole spacing and metres to be drilled for the DFS.
- Ongoing exploration for nickel and LCT metals (rubidium-lithium) at the Highway and Ghost Rocks Nickel Projects.

Strategic Partner Process

Ardea continues to make substantial progress with the Japanese Consortium (ASX release 21 December 2023) who have advised the Company that they have completed their technical due diligence on the 5 July 2023 Pre-Feasibility Study.

Continued collaboration has resulted in agreement on the DFS scope of work, with the DFS tender review and budget nearing completion. Ardea and the Japanese Consortium are working towards executing binding long form Final Agreements before the end of March 2024 to form a joint venture to facilitate the completion of the KNP Goongarrie Hub DFS, make a Final Investment Decision and jointly secure project development funding for this strategic nickel-cobalt project.

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Ardea Managing Director, Andrew Penkethman noted:

"The Ardea team advanced DFS workstreams during the December Quarter 2023 by completing the DFS work packages and received bids which the Company is currently evaluating to select preferred service providers and define a final Program and Budget.

Ardea has been disciplined in retaining 100% nickel-cobalt offtake to date with any offtake rights to be considered as part of the Strategic Partner process to ensure the best outcome for Ardea and its shareholders. As we progress through the Strategic Partner process, Ardea's objective remains to fully fund DFS expenditure and for the DFS to be completed to the highest standard. This approach will allow a clear pathway for sufficient detailed engineering in the Front End Engineering and Design for a Final Investment Decision to be made, linked to securing favourable Export Credit Agency debt terms. Ardea look forward to developing the KNP Goongarrie Hub, as a multi decade source of nickel-cobalt that meets the highest global standards."

Strategic Partner Process

Ardea's Strategic Partner strategy is linked to DFS and project development funding to enable the KNP Goongarrie Hub to be developed and realise its full potential as a long life (>40 years) source of nickel-cobalt, from the premier resources operating jurisdiction being the Eastern Goldfields of Western Australia (**WA**).

Ardea continues to work closely with a consortium consisting of Sumitomo Metal Mining Co., Ltd and Mitsubishi Corporation, (**Japanese Consortium**) (ASX release 21 December 2023), with multiple site visits and meetings taking place during the Quarter.

The Japanese Consortium have advised Ardea that they have concluded their technical due diligence on the 5 July 2023 KNP Goongarrie Hub Pre-Feasibility Study and are working towards completing all due diligence by the end of February 2024.

Ardea and the Japanese Consortium have completed the DFS work packages that were issued for bids, which have been received and are being evaluated so that service providers can be selected, the budget finalised and the DFS commence in the June Quarter of 2024.

Following the completion of the DFS, Ardea and the Japanese Consortium will work towards making a Final Investment Decision and securing project development funding, with a focus on Australian and foreign Export Credit Agency (**ECA**) long tenor, low interest rate debt.

The Japanese Consortium will look to ultimately earn a significant interest in a joint venture which will develop and operate the KNP Goongarrie Hub and will have certain off-take rights. The final binding terms of a proposed joint venture continue to be negotiated between Ardea and the Japanese Consortium.

Final Agreements, including binding terms for full funding of the DFS, are expected to be executed by the end of the March Quarter 2024.

Ardea and the Consortium's exclusivity arrangements provide that Ardea may continue discussions with other interested parties that had commenced due diligence under the Strategic Partner process until the Consortium completes its due diligence, which is expected to be completed by 29 February 2024. Customary fiduciary carve-outs will continue to apply.

Nickel and Cobalt Sector Commentary

The long-term fundamentals for unprecedented nickel demand remain, driven by growing Electric Vehicle (**EV**) and battery energy storage use, in addition to traditional uses such as stainless steel (Figure 1). This trend has been reiterated by many of the Lithium-ion Battery (**LIB**) and Original Equipment Manufacturer (**OEM**) companies that Ardea engages with, who all prefer high nickel content cathodes in batteries, due to the increased energy density and battery life. In the case of Lithium-ion Batteries for EVs, most groups either have in place or are moving towards having the nickel content of their cathodes equal to or greater than 90%.

Despite the long-term fundamentals for nickel remaining compelling, the rapid rise in Chinese funded nickel production from Indonesia has resulted in current supply outstripping demand and a declining trend in the nickel price.

This situation is not expected to be sustainable, as Australia and key ally countries push for increased supply chain diversity and security. Other factors, such as additional clarity on the US Inflation Reduction Act (**IRA**), provided on 4 December 2023 by the US Department of the Treasury include the definition of the Foreign Entities of Concern (**FEOC**).

This update is important for countries, such as Australia, as starting in 2024, vehicles containing battery components manufactured or assembled by an FEOC will be ineligible for the clean vehicle tax credit. From 2025, vehicles whose batteries contain certain Critical Minerals, including nickel, extracted or processed by an FEOC will also be ineligible for the credit. This is expected to make Chinese dominated Indonesian nickel production ineligible for the clean vehicle tax credit.

It is Ardea's view that current producers of nickel will not meet demand forecasts and higher nickel prices will be required to enable new investments to come online, especially from jurisdictions like Western Australia, which can provide geopolitical and supply chain security, with production meeting the high ESG standards expected in the clean energy transition.

These fundamentals underpin the global significance of the KNP and its international recognition, given the strategic scale of the resource, industry leading low-carbon flowsheet and location in the premium mineral resources operating jurisdiction in the World (Figure 2).

With Ardea's KNP hosting one of the largest nickel-cobalt resources in the developed World, 854Mt at 0.71% Ni and 0.045% Co for **6.1Mt of contained nickel and 386kt of contained cobalt** (ASX release 30 June 2023), Ardea is in a prime position to provide essential supplies of ESG-compliant nickel and cobalt, along with other Critical Minerals such as scandium.

The current downturn in the Australian nickel sector is considered by Ardea as an opportune time to commence the DFS and ultimately develop the Goongarrie Hub, as the Company will have increased access to appropriately skilled and experienced service providers.

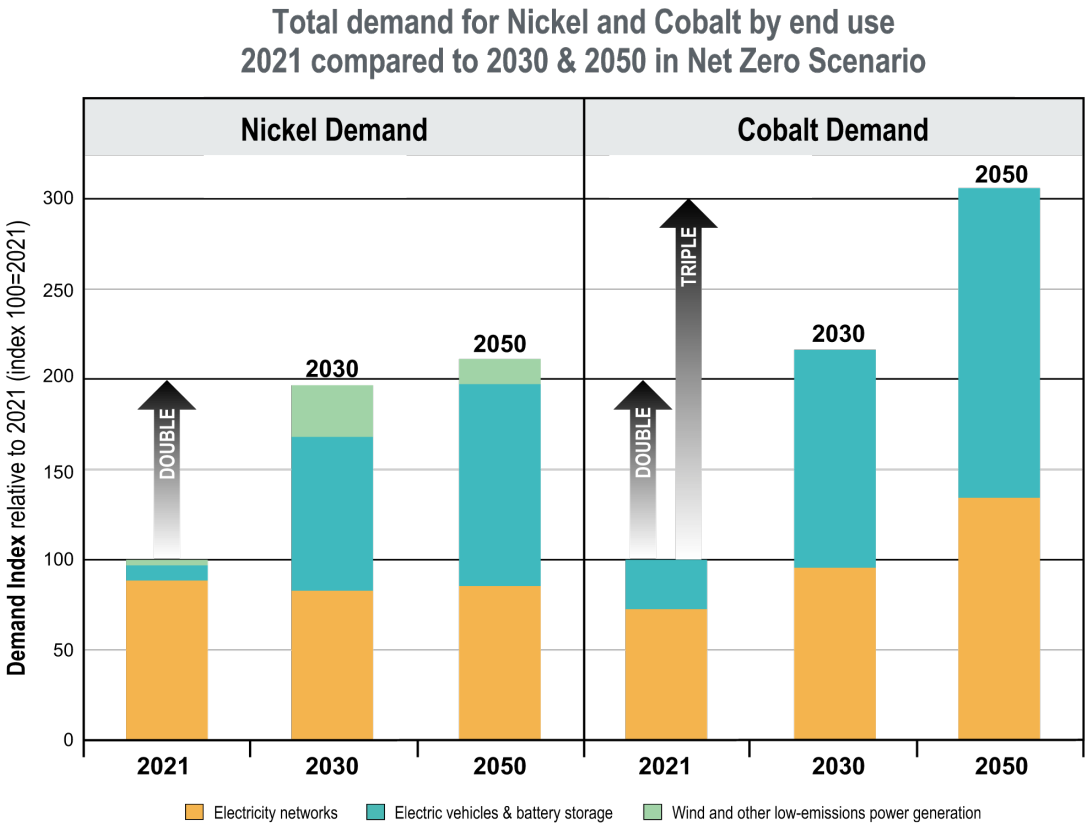

Figure 1: International Energy Agency (IEA), Total nickel and cobalt demand by scenario, 2020-2040, IEA, Paris After 11/07/2023, 09.01 IEA. Licence: CC by 4.0 www.iea.org/data-and-statistics/charts/total-demand-for-selected-minerals-by-end-use-in-the-net-zero-scenario-2021-2050.

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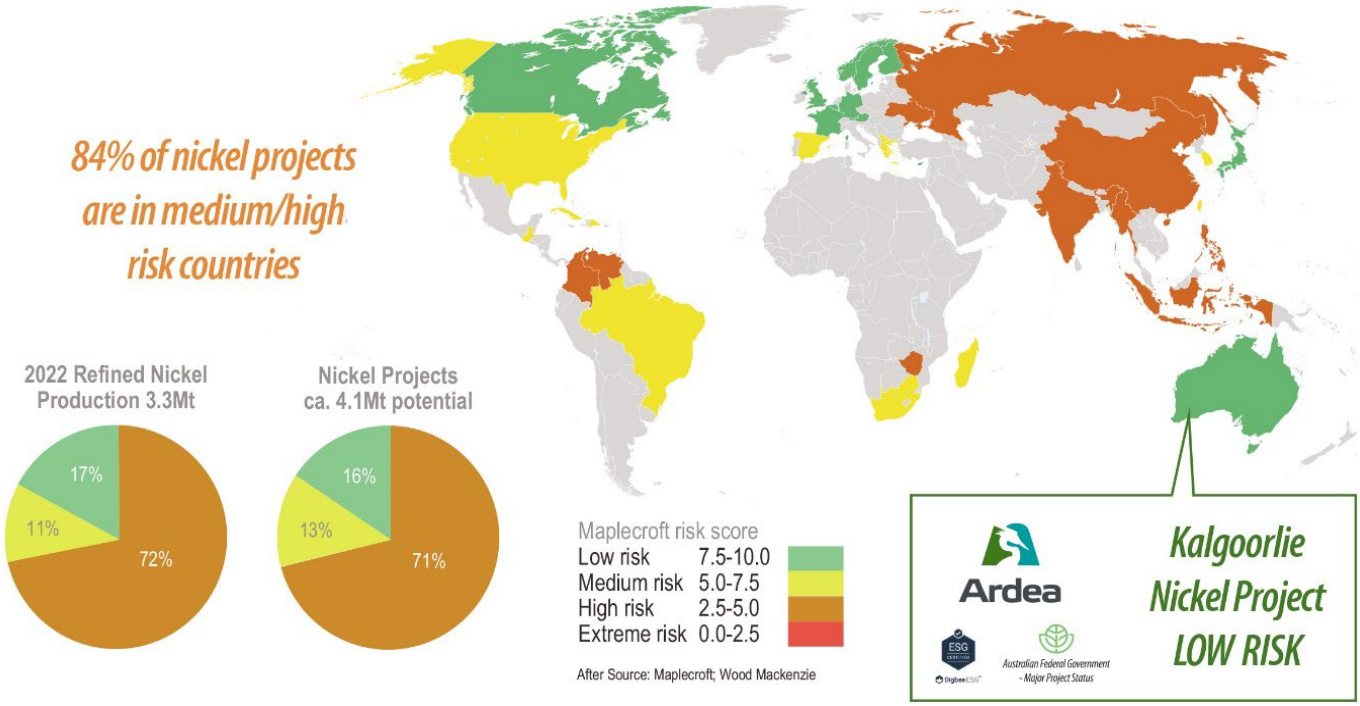

Figure 2: Overlaying the critical demand for nickel is the ethical and risk considerations. The map above shows that 84% of nickel projects are considered medium/high risk countries. Ardea's KNP project is in the enviable, premier, and low risk mining jurisdiction of Western Australia. After WoodMac "LME Metals Forum, October 2022 - Nickel"

Health and Safety

There were nil incidents or Lost Time Injuries (**LTI**) recorded during the Quarter. Safety topics included hydration, bush fires, lightning strikes, wildlife, Job Safety Environmental Analyses (**JSEA**) and safe driving techniques. There was a bushfire near Comet Vale in the Goongarrie Hub on 6 November 2023 with the Goldfields Highway closed. No Ardea personal were near the affected location.

Skills training evaluations continue to be developed to assess personnel competence in line with the Ardea competency matrix. First-aid training was completed for four members of the Geology and Exploration team, providing the team with essential understanding on emergency life support and general first aid. Ardea employees also completed Health and Safety Legislation training in the Perth office in November 2023.

Environmental, Social and (Corporate) Governance

Environmental, Social and (Corporate) Governance (**ESG**) considerations are at the forefront for Ardea. Project designs and work practices are based on the Company minimising the project development footprint and CO_2 green-house gas emissions when in production. The proposed flowsheet has been enhanced for CO_2 mitigation in the neutralisation circuit through introducing an Atmospheric Leach (**AL**) circuit to assist in neutralising the High Pressure Acid Leach (**HPAL**) discharge. The AL circuit facilitates upgrade of the site acid plant utilisation and allows Ardea to generate its own site power requirements off-grid through burning elemental sulphur, without relying on fossil fuel for power generation.

Responsible sourcing of materials, through mechanisms such as mandatory reporting of CO_2 footprints for all batteries sold is essential. Traceability is also being implemented with raw materials used in batteries that must be procured according to OECD guidelines for sustainable sourcing (part of Ardea's FBICRC R&D, see following).

Ardea enjoys strong support from the communities in which it operates, primarily the City of Kalgoorlie-Boulder and the Shire of Menzies. The benign environmental setting, being the Great Western Woodlands, allows excellent post-mining rehabilitation and reafforestation.

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Ardea's in-pit tailings disposal strategy, incorporating waste rock back fill, stockpiled topsoil and finally progressive revegetation, minimises land disturbance and accelerates rehabilitation, concurrent with operations (Figure 5).

Critically, at the Goongarrie Hub, mining and processing has no land-use conflict with agricultural activity which occurs in multiple peer nickel laterite centres.

During the Quarter, Ardea continued to engage with stakeholders, who are uniformly supportive of the Goongarrie Hub development and are looking forward to the contributions the operation can make to the local community through increased skilled job opportunities, training and enhancing community contributions. Stakeholder engagement also continued with the Western Australian Government; the Department of Biodiversity, Conservation and Attractions (**DBCA**) on whose ground is vested the ex-Goongarrie Pastoral Lease where the majority of the Goongarrie Hub granted mining leases are located and with the Department of Mines, Energy, Industry Regulation and Safety (**DEMIRS**) for a new mining lease application at Highway North.

In having a West Kalgoorlie Operations Office, Ardea maintains a permanent presence and regular engagement with the communities within which the Company operates.

A historic Nyalpa Pirniku Native Title Determination hearing was held in Menzies, Western Australia on 31 October 2023. Two Ardea staff attended the event where the Federal Court awarded native title to the group for an area covering approximately 30,000km^2.

ESG Compliance

Internationally accredited Digbee ESG has awarded Ardea an overall ESG rating of "BBB" for both corporate and the Kalgoorlie Nickel Project (ASX release 24 November 2022). For an emergent development company such as Ardea, BBB is a meritorious outcome and an excellent platform to achieve AAA as the Company grows.

Ardea is currently working on aspects of its ESG rating that require improvement and has met with Digbee representatives to outline how Ardea's positive improvements can be incorporated into its annual ESG update. Following further in-depth meetings with Digbee's CEO and Chairman, Jamie Strauss and Claire Mortoni, Head Asia Pacific, Ardea's update was commenced in December 2023 and will be completed during the March 2024 Quarter.

1. KALGOORLIE NICKEL PROJECT - GOONGARRIE HUB

The Goongarrie Hub is located 70km northwest of the mining centre the City of Kalgoorlie-Boulder and is the premium ore feed within the broader KNP (Figure 3). Resources from the Goongarrie, Highway and Siberia North laterite nickel-cobalt deposits are planned to be the base load feed for a processing operation located at Goongarrie South.

The mineral resources at Goongarrie are dominantly the premium goethite style and extend continuously over 25km of strike and at Highway, 30km north, over a strike length of 10km (Figure 3). All key Goongarrie Hub mineral resources are located on granted mining leases and tenure 100%-controlled by Ardea.

The project also has ready access to high-quality infrastructure with the Goldfields Highway, rail line and power infrastructure passing through the project area (Figure 3 and 4). The Goldfields gas pipeline is located some 30km to the east and there are two port options, these being Esperance and Kwinana, that are well serviced by the KNP road and rail network.

Significantly, the KNP is located on the rail connection to the developing battery hub at the Port of Kwinana industrial area immediately south of Perth, as well as east to Port Augusta and developing low-carbon energy hubs on the eastern Australia seaboard.

Ardea is actively engaged with Federal and State agencies and statutory authorities who are coordinating the push for a downstream battery industry within Australia through "*Team Australia*" and the State of Western Australia through "*Team WA*".

All the LIB feedstocks, including nickel and cobalt, are available in Australia and WA in particular at the scales required for World-significant green energy centres of excellence.

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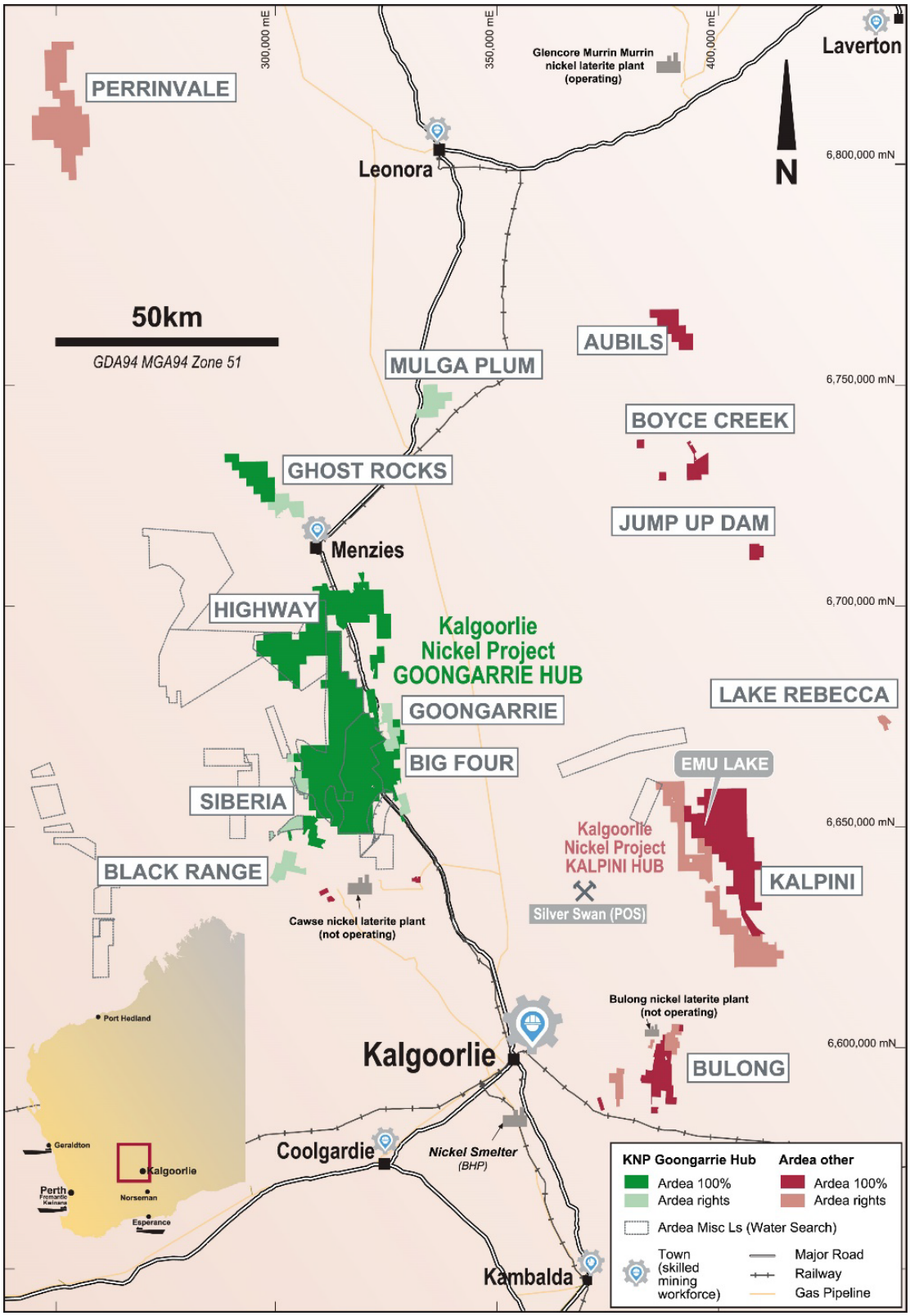

Figure 3: KNP location plan. Projection GDA94 Zone 51.

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Figure 4: Aerial image of Ardea's Goongarrie Hub at Goongarrie South looking south towards Kalgoorlie-Boulder showing road and rail infrastructure within the granted mining leases upon which the resources are located. Note the semi-arid woodlands environment, ideal for project development, safe tailings management and revegetation post mining.

Feasibility Programs

Ardea's focus remains development of the KNP Goongarrie Hub.

To assist Ardea in advancing DFS readiness workstreams, several specialist project management consultants have been retained to help manage document drafting, bid assessment and budget compilation.

Considerable progress continues to be made with key December 2023 Quarter DFS activities including:

- Further detailed mine development studies.
- Additional studies into mine dewatering.
- Finalising the environmental baseline studies.
- Development of the next level of detail on the project schedule.
- The planning and preparation for the DFS, advanced significantly in the Quarter including:
  - Tenders were issued for all six key work package areas (being Process Plant and Process Plant Utilities, Non-Process Infrastructure, Approvals, Geology, Mining and Hydrogeology) with multiple bids received during the Quarter and the remaining bids received in January 2024.
  - Bids also received for Early Contractor Involvement (**ECI**); whereby early equipment design (e.g. acid plant, autoclaves) can then be incorporated into the overall design.
  - Smaller quotes for DFS support services received and analysis being finalised.
  - The DFS Owner's Team structure, roles and responsibilities was further refined.
  - Commenced the bid assessments.
  - Further progressed the development of the detailed DFS estimate.

Once the Strategic Partner process has been concluded and the DFS commenced, Ardea will further accelerate the recruitment of key personnel to help manage the DFS.

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Project Funding

The KNP Goongarrie Hub technical and economic fundamentals provide a strong platform for Ardea to source traditional financing through debt and equity markets, in addition to pursuing other financing strategies should this be to the benefit of Shareholders. Ardea continues to engage with multiple financial institutions, including ECAs within Australia and abroad, with these financial institutions expressing a high level of interest in being involved in funding the KNP Goongarrie Hub. Typical project development financing would involve a combination of debt and equity. Initial indications from financiers are that the debt component of the funding requirement would be significantly greater than the equity funding requirement.

The Company is running a Strategic Partner process to select a preferred partner or consortium of partners to provide input into the DFS Scope of Work, fund the DFS and also to work with Ardea on securing future project development funding. Now that Ardea has concluded the KNP Goongarrie Hub PFS, interest in this process is high, as multiple companies express strong interest in securing a share of nickel-cobalt off-take. Project off-take rights will only be awarded to selected Strategic Partner(s) that commit to making a substantial equity investment in the KNP Goongarrie Hub Project.

Resource Workflows

Resource workstreams during the December Quarter 2023 consisted of pre-DFS work, preparing for an infill drill program and updated Mineral Resource Estimates.

A scope of work has been compiled for a planned infill drill program to upgrade nickel-cobalt laterite resources to Measured category at Highway, Goongarrie Hill, Goongarrie South, Big Four, Scotia Dam and Siberia North. Drill plans were created for a five-year production profile. Scope of services have been written for drill companies, assay laboratories and earthworks contractors for tender. A scope of work has also been completed for drilling and passive seismic programs for dewatering studies and for geotechnical drilling.

A review of the existing diamond and sonic drillholes was undertaken, to assess the requirement for additional diamond drilling for QAQC purposes after completion of the infill drill program. Work continued with geotechnical and hydrogeology consultants to optimise drill coverage within the Goongarrie Hub deposits.

Work commenced with Resource consultants on geology domain interpretations for DFS resource estimates, to be completed after the infill drilling.

The KNP global Mineral Resource Estimate (using a 0.5% Ni cut-off grade) stands at **854Mt at 0.71% Ni and 0.045% Co for 6.1Mt of contained nickel and 386kt of contained cobalt** (Table 1). All the resources are constrained within optimised pit shells using appropriate nickel and cobalt prices, mining and processing costs and pit slope parameters to determine the material that could potentially be economically mined in the future. The Mineral Resource has been estimated and reported in accordance with the guidelines of the 2012 edition of the Australian Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves, the JORC Code (2012).

Table 1 - KNP nickel and cobalt MRE based on a greater than 0.5% Ni cut-off grade. Minor discrepancies may occur due to rounding of appropriate significant figures. Legend: LUC – Local Uniform Conditioning; UC – Uniform Conditioning; OK – Ordinary Kriging.

Camp	Prospect	Resource Category	Size (Mt)	Ni (%)	Co (%)	Contained Metal Ni (kt)	Contained Metal Co (kt)	Estimation Details Method	Estimation Details Source	Estimation Details Year
Goongarrie	Goongarrie South	Measured	18	0.94	0.085	171	15	LUC	Ardea	2021
		Indicated	82	0.71	0.049	584	40	LUC	Ardea	2021
		Inferred	10	0.64	0.033	61	3	LUC	Ardea	2021
	Highway	Indicated	71	0.69	0.038	487	27	LUC	Ardea	2023
		Inferred	21	0.67	0.040	141	8	LUC	Ardea	2023
	Ghost Rocks	Inferred	47	0.66	0.042	312	20	OK	Snowden	2004
	Goongarrie Hill	Indicated	40	0.65	0.037	259	15	LUC	Ardea	2021
		Inferred	29	0.60	0.025	176	7	LUC	Ardea	2021
	Big Four	Indicated	49	0.71	0.047	346	23	LUC	Ardea	2021
		Inferred	14	0.68	0.043	96	6	LUC	Ardea	2021
	Scotia Dam	Indicated	12	0.71	0.065	82	7	LUC	Ardea	2021
		Inferred	5	0.72	0.043	37	2	LUC	Ardea	2021
	Goongarrie Subtotal	Measured	18	0.94	0.085	171	15			
		Indicated	253	0.69	0.044	1,758	112			
		Inferred	127	0.65	0.037	823	47			
		Combined	***398***	***0.69***	***0.044***	***2,753***	***175***			
Siberia	Siberia South	Inferred	81	0.65	0.033	525	27	OK	Snowden	2004
	Siberia North	Indicated	14	0.72	0.042	102	6	Ni(UC) Co(OK)	Snowden	2009
		Inferred	72	0.74	0.034	534	25	Ni(UC) Co(OK)	Snowden	2009
	Black Range	Indicated	9	0.67	0.090	62	8	OK	HGMC	2017
		Inferred	10	0.69	0.100	68	10	OK	HGMC	2017
	Siberia Subtotal	Indicated	24	0.70	0.061	165	14			
		Inferred	163	0.69	0.038	1,127	61			
		Combined	***186***	***0.69***	***0.040***	***1,292***	***75***			
KNP Goongarrie Hub	**TOTAL**	Measured	18	0.94	0.085	171	15			
		Indicated	277	0.70	0.046	1,923	127			
		Inferred	289	0.67	0.037	1,951	108			
		Combined	***584***	***0.69***	***0.043***	***4,044***	***250***			
Bulong	Taurus	Inferred	14	0.84	0.051	119	7	OK	Snowden	2007
	Bulong East	Indicated	16	1.06	0.055	169	9	OK	Snowden	2004
		Inferred	24	0.79	0.053	190	13	OK	Snowden	2004
	Bulong Subtotal	Indicated	16	1.06	0.055	169	9			
		Inferred	38	0.81	0.052	309	20			
		Combined	***54***	***0.88***	***0.053***	***477***	***29***			
Hampton	Kalpini	Inferred	75	0.73	0.044	550	33	OK	Snowden	2004
	Hampton Subtotal	Inferred	75	0.73	0.044	550	33			
KNP Kalpini Hub	**TOTAL**	Indicated	16	1.06	0.055	169	9			
		Inferred	114	0.76	0.047	859	53			
		Combined	***130***	***0.79***	***0.048***	***1,028***	***62***			
Yerilla	Jump Up Dam	Measured	4	0.94	0.048	36	2	OK	Snowden	2008
		Indicated	42	0.78	0.043	324	18	OK	Snowden	2008
		Inferred	18	0.63	0.034	116	6	OK	Snowden	2008
	Boyce Creek	Indicated	27	0.77	0.058	206	16	OK	Snowden	2009
	Aubils	Inferred	49	0.70	0.066	346	33	OK	Heron	2008
KNP Yerilla Hub	**TOTAL**	Measured	4	0.94	0.048	36	2			
		Indicated	68	0.78	0.049	531	33			
		Inferred	68	0.68	0.057	462	39			
		Combined	***140***	***0.73***	***0.053***	***1,028***	***74***			
KNP TOTAL		Measured	22	0.94	0.079	207	17			
		Indicated	361	0.73	0.047	2,622	169			
		Inferred	471	0.70	0.043	3,272	200			
	GRAND TOTAL	***Combined***	***854***	***0.71***	***0.045***	***6,101***	***386***			

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Ore Reserve

The 2023 PFS (ASX release 5 July 2023) defined an Ore Reserve of 194.1Mt at 0.70% Ni and 0.05% Co for 1.36Mt contained nickel and 99kt contained cobalt (Table 2). Other Goongarrie Hub deposits (Ghost Rocks, Siberia South and Black Range) have not been included in the current Ore Reserve and provide potential to significantly extend the mine life.

Table 2 - KNP Goongarrie Hub Ore Reserve Summary consisting of ore above 0.5% Ni as the feed stock for the processing facility, and ore as Mineralised Neutraliser above 0.5% Ni equivalent (Nieq) and Loss on Ignition (LOI) above 25%.

	Ore >= 0.5% Ni					Ore > 0.5% NiEq and LOI > 25%					Total Ore				
Deposit	Mt	Ni %	Co %	Ni kt	Co kt	Mt	Ni %	Co %	Ni kt	Co kt	Mt	Ni %	Co %	Ni kt	Co kt
Proven															
Goongarrie South	16.7	0.96	0.09	160	15	0.05	0.43	0.03	0.20	0.01	16.7	0.96	0.09	160	15
Sub-total	**16.7**	**0.96**	**0.09**	**160**	**15**	**0.05**	**0.43**	**0.03**	**0.20**	**0.01**	**16.7**	**0.96**	**0.09**	**160**	**15**
Probable															
Big Four/Scotia Dam	34.9	0.76	0.07	265	23	0.8	0.38	0.04	3	0	35.7	0.75	0.06	268	23
Goongarrie South	33.6	0.79	0.07	265	23	1.8	0.40	0.03	7	1	35.4	0.77	0.07	272	24
Goongarrie Hill	15.8	0.70	0.04	110	7	0.1	0.44	0.02	0	0	15.9	0.70	0.04	111	7
Highway	54.0	0.70	0.04	380	22	27.2	0.39	0.01	106	4	81.2	0.60	0.03	486	26
Siberia North	9.2	0.74	0.05	68	4	-	-	-	-	-	9.2	0.74	0.05	68	4
Sub-total	**147.4**	**0.74**	**0.05**	**1,087**	**79**	**29.9**	**0.39**	**0.02**	**117**	**5**	**177.4**	**0.68**	**0.05**	**1,204**	**84**
PROVEN AND PROBABLE TOTAL															
Big Four/Scotia Dam	34.9	0.76	0.07	265	23	0.8	0.38	0.04	3	0	35.7	0.75	0.06	268	23
Goongarrie South	50.2	0.85	0.08	425	38	1.9	0.40	0.03	7	1	52.1	0.83	0.07	432	39
Goongarrie Hill	15.8	0.70	0.04	110	7	0.1	0.44	0.02	0	0	15.9	0.70	0.04	111	7
Highway	54.0	0.70	0.04	380	22	27.2	0.39	0.01	106	4	81.2	0.60	0.03	486	26
Siberia North	9.2	0.74	0.05	68	4	-	-	-	-	-	9.2	0.74	0.05	68	4
TOTAL	**164.1**	**0.76**	**0.06**	**1,247**	**94**	**30.0**	**0.39**	**0.02**	**117**	**5**	**194.1**	**0.70**	**0.05**	**1,365**	**99**

Notes:

1. *The Ore Reserve is reported in accordance with JORC Code (2012). The Ore Reserve information shown in this ASX release has been previously released on the ASX platform by Ardea in ASX release 5 July 2023, in accordance with Listing Rule 5.9.*
2. *The Company confirms that it is not aware of any new information or data that materially affects the information included in the previous market announcement noted above and that all material assumptions and technical parameters underpinning the Ore Reserve in the previous market announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Persons' findings are presented have not been materially modified from the original market announcement.*
3. *Ore reserves are reported at a cut-off of 0.5% Ni for primary feed stock to the processing facility, plus Mineralised Neutraliser as ore at a cut-off of 0.5% NiEq and LOI above 25%.*
4. *NiEq defined using Ni + 2.32 x Co.*
5. *The Ore Reserve was evaluated using a base price of US$22,000/t for Ni and US$51,000/t for Co at 85% payable for a Mixed Hydroxide Precipitate (MHP) product, and an exchange rate 0.69 USD/AUD. In view of forward metal price projections averaging US$25,000/t Ni.*
6. *Ore Reserves account for mining dilution and mining ore loss.*
7. *Ore Reserves are reported on a Dry Tonnage Basis.*
8. *Proven Ore Reserves are based on Measured Mineral Resources only and Probable Ore Reserves are based on Indicated Mineral Resources only.*
9. *The sum of individual amounts may not equal due to rounding.*
10. *This Ore Reserve estimate is for a subset of the KNP Goongarrie Hub deposits being Goongarrie South, Big Four / Scotia Dam, Goongarrie Hill, Highway and Siberia North.*

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Processing Research and Development

The Ardea FY2023 Research & Development (R&D) is based upon metallurgical experiments aimed at optimising the plant performance, product range and hence revenue streams from the KNP and its Goongarrie Hub.

Mineralised Neutraliser – Global Patent Application

Ardea continues progress with FB Rice in support of patent applications in Australia (AU2022903389) and with the World Intellectual Property Office (WIPO) (PCT/AU2023/050520, ASX release 16 June 2023). These applications relate to the use of Mineralised Neutraliser in the Ardea process. Additional drill core has been selected for bench-scale metallurgy in planning the DFS to better populate the production model in terms of Mineralised Neutraliser Fines to hydrometallurgy leaching for nickel-cobalt recovery and oversize Scats to the neutralisation circuit for mixed nickel-cobalt precipitate recovery.

Scandium and Rare Earth Elements

CSIRO-Ardea conceptual nickel sulphide and hydrothermal alteration target concepts at the Highway Nickel Prospect were investigated with an Exploration Incentive Scheme (EIS) jointly State government/Ardea funded diamond core hole ("Nickel Sulphide Prospectivity Confirmed and the Lithium-Caesium-Rubidium bearing intrusives in the Highway EIS drillhole." ASX release 15 December 2023). Based on the EIS research, it is planned that DFS drilling at Highway will include a multi-element assay suite to quantify the Sc-REE-LCT potential, as well as better define the Mineralised Neutraliser role in the plant.

Future Battery Industries – Cooperative Research Centre (FBICRC)

Ardea continues to support the FBICRC developments and have monitored progress over the Quarter. No specific requests for material or intellectual support were received during the period.

Bench-scale Metallurgy

Sighter Atmospheric Leaching batch tests were conducted. The concept involved splitting the saprolite additions into two stages to control the acidity in the jarosite precipitation phase. This will be extended in further testwork.

Bench-scale tests successfully produced a synthetic potassium-rich iron sulphate, which will be used as seed material for the next phase of testwork. The residue stoichiometry was similar to that of potassium jarosite.

Flowsheet and process information discussions have taken place during dialogue with potential Strategic Partners. These discussions have identified gaps in the process knowledge and potential risks associated with relocating a relatively novel technology to a new process setting. While these risks are not believed to compromise the process integrity, Ardea considers it prudent to include appropriate testwork in the DFS investigations program for process integrity.

Testwork plans are being devised in consultation with the Strategic Partners, and suitable feed sample inventory has been located. The first stage of DFS testing is likely to consist of bulk beneficiation trials for various ore types to both improve Ardea's process knowledge and to generate representative samples for downstream process testing. A scope of work for the downstream leach and hydrometallurgy work is being prepared for presentation to suitable service providers.

Metallurgical Bulk Samples

Bulk sample requirements for the bench-scale metallurgy program are being evaluated. Blending requirements for the main ore types have been based on the resource bulk composition and included in the ore preparation testwork scope. It is expected that samples will be representative of the run-of-mine ore production from the first five years of operation.

Flowsheet Research and Development

Discussions with potential Strategic Partners have highlighted opportunities to revise the existing Goongarrie Hub mass and energy model, along with requirements for additional research and test work.

An initiative to improve the metal extraction efficiency from the AL circuit was identified in the December Quarter. This involved retaining a fraction of the fresh magnesian saprolite feed and adding it downstream of the main leaching stage

to act as a neutraliser and to promote the precipitation of ferric iron as jarosite from the leach liquor (the primary acid dosage was increased to accommodate the downstream acid requirement). Sighter tests were performed this Quarter.

The sighter tests for Atmospheric Leaching split circuit leaching demonstrated good potential for the process.

A review of the geological database identified a significant body of information from earlier studies relating to the beneficiation properties of various ore types within the Goongarrie Hub. Further research is being conducted to capture the information and collate it into a searchable format.

Hydrogeology

At Goongarrie, all nickel-cobalt-scandium mineral resources are located on granted mining leases. As such, Ardea has first rights to any ground water underlying these areas. Past work by Ardea has defined multiple water sources outside the mine area, with water for project development to be sourced from dedicated bore fields.

Planned pre-DFS hydrogeology work includes the regional water exploration Aircore drill program of 100 holes to commence in March 2024. Drill site preparation works for the Aircore drill program is complete and logistics planning is ongoing.

Passive seismic lines were surveyed in December 2023 at Rowles, Black Range South, Flat Rocks and Emu Lake targets. The survey results will be used to assist drill targeting and allow more accurate planning of drill holes. Good data quality was achieved from the surveys to delineate the interface between the regolith cover and bedrock and define paleochannel geometry.

The Hydrogeology Water Resource scope of work was provided to the Japanese Consortium along with an updated borefields schedule and multiple face-to-face meetings. Planned DFS hydrogeology work includes drilling production bores on selected targets including test pumping and sampling, initiating schedule of water sources to supply -3 years to 15 years for the Goongarrie Hub, cost-benefit analysis of supply options and engineering studies including borefield and piping design. Dewatering studies will also be undertaken on the Goongarrie open pit locations. The studies will review the potential for lower salinity water near the top of the water table in the planned open pits, to be recovered for use in ore processing.

The water dipping program to establish Standing Water Level (**SWL**) at the Goongarrie Hub continued during the Quarter, with a focus on dipping drill holes at Goongarrie South, Highway, Goongarrie Hill, Big Four and Siberia North. Water samples are being collected every 10 metres down hole with each sample measured in the field for conductivity/Total Dissolved Solids (**TDS**) with confirmatory assay in an independent commercial laboratory. The objective of the program is to cross-check background TDS in the mine areas and quantify environmental matters. Analyses to date indicate a benign ground water regime.

Environment

All project development within the KNP is aimed at including systematic and rapid rehabilitation concurrent with operations.

Due to the expanded development footprint of the Goongarrie Hub, as defined in the 2023 Pre-Feasibility Study (ASX release 5 July 2023), baseline surveys completed in 2018 have been extended and include further surveys to incorporate the latest environmental standards and guidelines.

During the Quarter, Ardea completed the following expanded baseline surveys: Flora and Vegetation; Terrestrial Fauna; Short Range Endemic Fauna; Targeted Conservation Significant Butterfly and Subterranean Fauna. Review and assessment of the completed surveys will continue to be managed by Ardea's environmental consultant and final baseline survey reports are expected to be received in the March 2024 Quarter.

Completion of remaining baseline studies will allow further assessment of the need for the Project to be formally assessed under the State Environmental Protection Act (**EP Act**) and the Commonwealth Environment Protection and Biodiversity Conservation Act (**EPBC Act**). If it can be shown that environmental impacts are low and or can be adequately managed by other regulatory agencies using other mechanisms, the Environmental Protection Authority (**EPA**) may make an assessment on the referral that the Project is not to be formally assessed.

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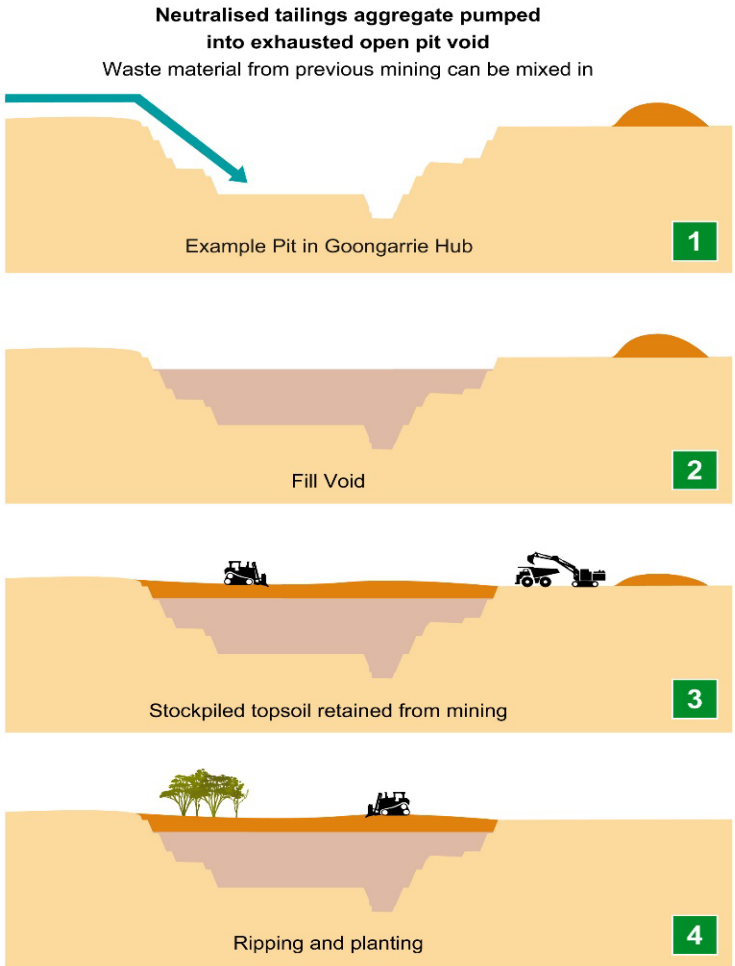
Similarly, if the EPA believes impacts on some factors are not significant and can be adequately managed by other regulatory agencies using other mechanisms, the number of Key Factors to be assessed by the EPA under the Part IV process would be reduced.

Figure 5: Planned Goongarrie Hub in-pit tails disposal and rehabilitation strategy.



Mine rehabilitation methodology is facilitated through four decades of WA open pit gold mine operations, and the KNP footprint is minimised using mining voids for tailings and mullock disposal. Mining voids will be progressively rehabilitated during operations and returned to their pre mining state, by dressing the back filled open pit voids with topsoil (Figure 5) and then revegetating.

In terms of ESG compliance for hydrometallurgical metal processing, the KNP's benign and manageable environmental footprint contrasts strongly with "wet tropical laterite" projects. The tropical laterites require submarine tailings disposal or valley tailings storage with consequent substantial environmental risk. Tailings disposal in these environments tends to be further complicated by high rainfall and the fact that most tropical laterite deposits are in seismically active regions. Additionally, wet tropical laterite production areas commonly involve non-restorable rain forest habitat destruction.

It is doubtful whether wet tropical laterite hydrometallurgical battery metal sources can comply with the ESG standards required by the Japanese, South Korean, European and north American EV sectors, particularly where submarine tailings disposal is used. Similarly, with more than 3,000mm of annual rainfall in the tropical laterites, it is an immense challenge for long-term tailings stabilisation.

The KNP semi-arid climate with robust environmental setting is likely just as important as the premium goethite, high nickel grade and excellent ore rheology for its economic attractiveness.

2. NICKEL SULPHIDES and CRITCAL MINERALS

Ardea's extensive and strategic land holding in the Eastern Goldfields of WA comprises over 170 tenements, covering over 4,100km^2 and in addition to the globally significant nickel-cobalt-scandium KNP resource, is highly prospective for nickel sulphides and critical minerals (Figure 6).

Ardea Nickel Sulphide Strategy

Ardea's nickel sulphide exploration strategy complements the development of the KNP nickel laterite. The KNP nickel sulphide targets are an asset in a region of multiple nickel sulphide concentrators, with most constrained by insufficient sulphide feed availability particularly with recent mine closures in the Kambalda region.

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Nickel sulphide also has potential value for a nickel laterite operation, in that it is a potential addition to any goethite autoclave feed for exothermic heating (optimise steam use), Eh reduction to control hexavalent chromium and adding nickel and sulphur units to the autoclave reaction vessel, and typically improving overall nickel recoveries.

An additional benefit is that metal concentrations considered deleterious to conventional nickel sulphide flotation concentrator processing do not affect the HPAL process, opening the possibility of mineral extraction from nickel sulphide deposits that may otherwise be overlooked.

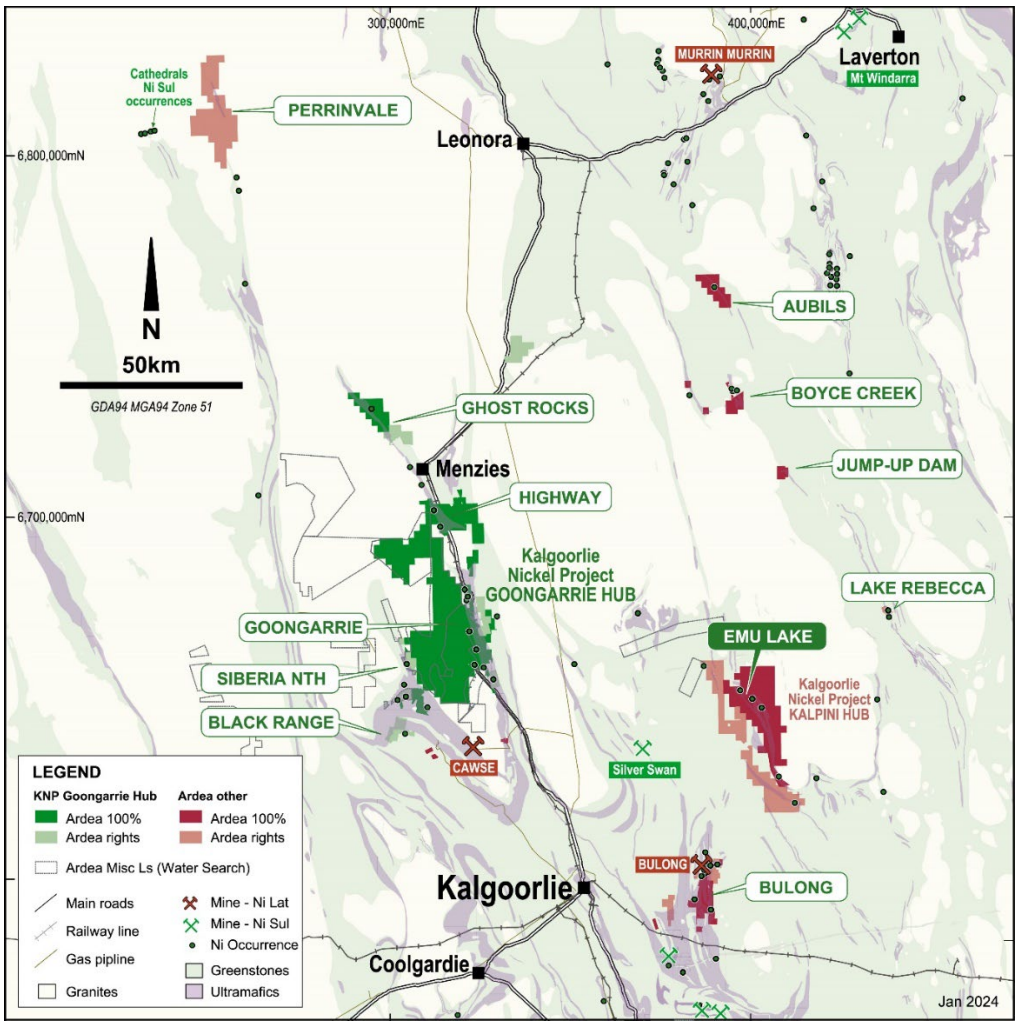

Figure 6: Ardea tenement plan highlighting the location of the Kalpini Project, Emu Lake Nickel Sulphide Camp and nickel mines and deposits in the region. Projection MGA 94 Zone 51.

Nickel Sulphide Exploration

Kalpini Project

Ardea's Kalpini Project is located 70km northeast of the City of Kalgoorlie-Boulder and covers 121km^2 of contiguous granted tenure 100%-owned by Ardea (Figure 6, 7). The Type 1 massive nickel-copper-PGE sulphides discovered at the Binti Prospect occur in the Kurnalpi Terrane which is significant given there are only a few other Type 1 nickel sulphide occurrences in this Terrane. Ardea hold over 20km strike of the prospective Western Ultramafic sequence that is largely unexplored and highly prospective for primary magmatic nickel sulphide mineralisation.

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Regionally there are two distinct Kalpini ultramafic units each with 20-25km strike within Ardea tenure (Figure 7):

- The **Kalpini Eastern Komatiite Belt** hosts the Wellington East and Acra North nickel laterite deposits containing **75Mt at 0.73% nickel and 0.04% cobalt**, for 549.7kt nickel and 32.6kt cobalt (Ardea ASX release 30 June 2023). The ultramafics are typical of the Walter Williams Formation style consisting of a thick 200-600m sheet with olivine orthocumulate upper and lower contacts and core olivine meso-adcumulate (Dunitic Sheet Flows-Layered Lava Lakes) which weathers to nickel laterite.
- The **Kalpini Western Komatiite Belt** hosts the Binti nickel sulphide mineralisation. There are at least two fertile nickel sulphide ultramafic flows at Emu Lake. The volcanics are characterised by a bi-modal co-magmatic suite, with each cycle having a footwall dacite volcanic overlain by ultramafic volcanic flows. The ultramafics are orthocumulate flows typically 10-40m thick, with massive, matrix, blebby and disseminated nickel sulphides identified in the Western Ultramafic (**WU**) and Central Ultramafic (**CU**).

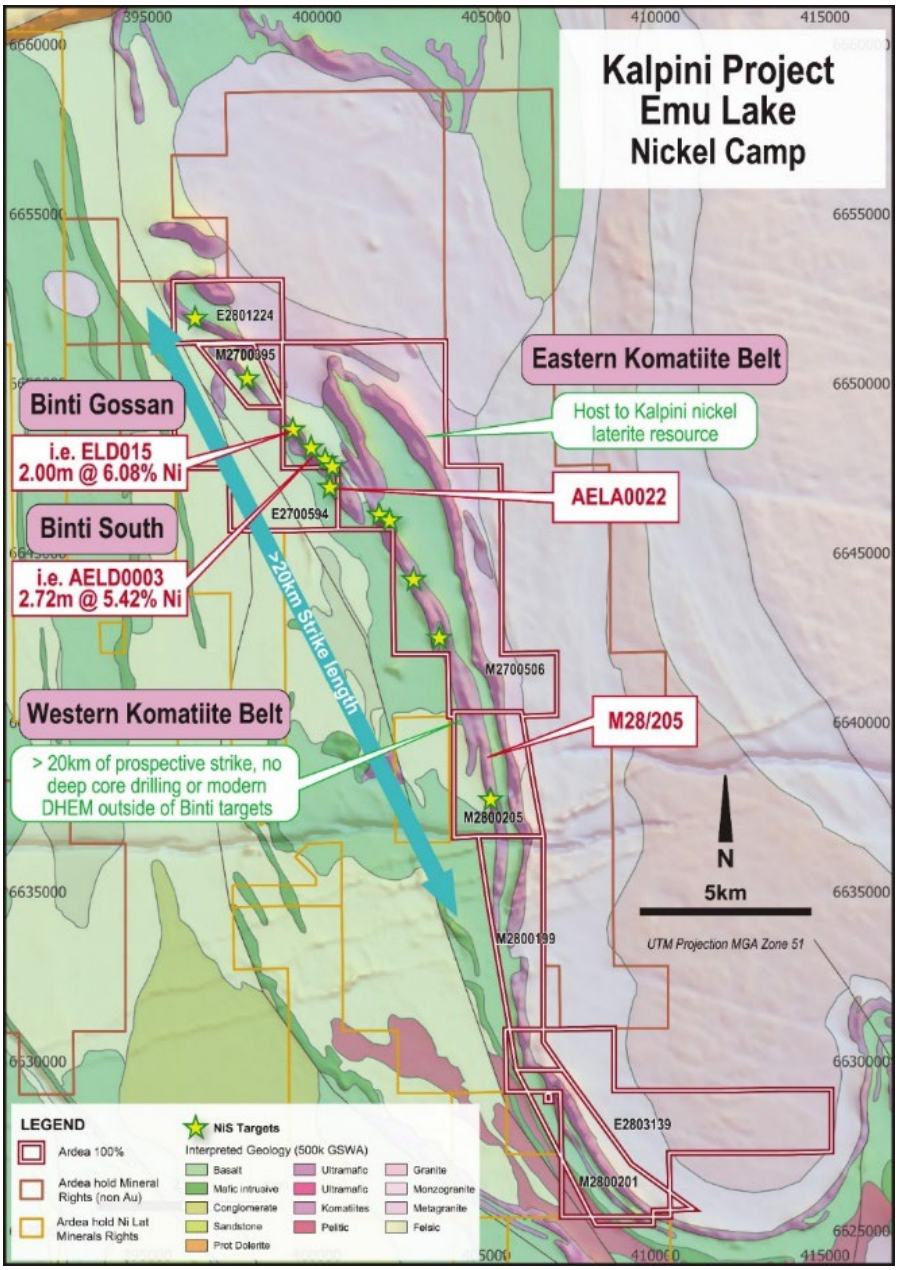

Figure 7: The Kalpini Project showing interpreted geology and Komatiite Belts. The historic nickel laterite resources are located on the Eastern Komatiite Belt, with the Western Belt highly prospective for nickel sulphide (NiS) mineralisation (Ardea ASX release 14 January 2022). Tenements are shown, with NiS targets (stars) (Ardea ASX release 2 May 2023). Projection MGA 94 Zone 51.

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Highway Project

The Round 26 Exploration Incentive Scheme (EIS) diamond drill hole, AHID0024 (Table 3), that tested the nickel sulphide target at Highway (ASX release 21 August 2023*)* intersected thick Walter Williams Formation komatiite ultramafic from 132.25m – 499.1m (EOH), with multiple intrusive intermediate-felsic units also intersected. Assays were returned which included a result of 1m @ 0.35% Ni for the interval with nickel sulphide blebs between 441.7m – 442.7m. The occurrence of pentlandite was confirmed by petrography (Figure 8). A Downhole Electromagnetic (**DHEM**) survey was completed on AHIRD0024 and while no bedrock conductors were detected, the Walter Williams Formation within the Goongarrie Hub has been demonstrated to be fertile for nickel sulphide mineralisation. The EIS interim report was submitted to the DEMIRS during the Quarter.

Table 3: Details for EIS #26 diamond drill hole (Highway NiS) with collar coordinates (MGA94-51)

Hole_ID	Type	Depth (m)	Tenement	Grid	Easting (mE)	Northing (mN)	RL (mASL)	Dip (°)	Azi (°)
AHID0024	DD	499.1	M29/214	MGA94_51	313850.4	6698048.9	406	-55	90

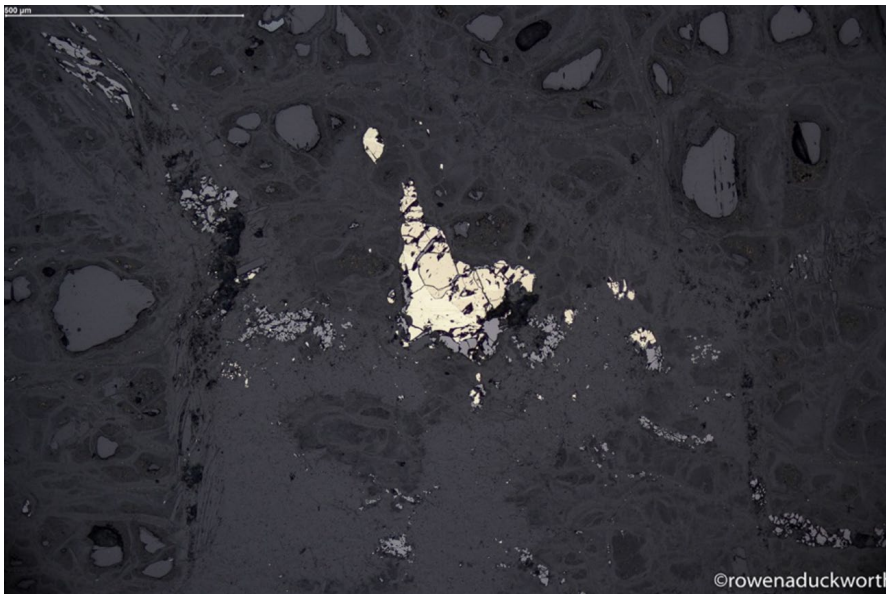

Figure 8. Reflected light photomicrograph of sample AHID0024_442.55m (x10) illustrating fine-grained pentlandite (yellow) with pyrrhotite (light brown)

Lithium Exploration

Highway Project

An ASX release was lodged on 15 December 2023 that highlighted the multiple lithium-caesium-rubidium anomalous intermediate-felsic intrusives intersected in the recent EIS drill hole, AHID0024, completed at Highway. Key observations include:

- Lithium-caesium intrusives with very high rubidium were identified in the EIS drill hole. Along with historic drill holes at Highway, a highly fractionated fertile Lithium-Caesium-Tantalum (**LCT**) mineral system has been confirmed.
- Significant intersections in AHID0024 include (Figure 9):
  - 21.2m @ 0.23% Li_2O, 945ppm Cs, 1,237ppm Rb from 406.8m
    - including 3.45m @ 0.34% Li_2O, 4,108ppm Cs, 4,772ppm Rb from 409.1m
  - 0.85m @ 0.34% Li_2O, 3,392ppm Cs, 4,222ppm Rb from 368.75m
  - 0.95m @ 0.15% Li_2O, 3,000ppm Cs, 4,830ppm Rb from 390.85m

- The lithium-caesium-rubidium style anomalism discovered in AHID0024 has been identified in intermediate-felsic porphyries within the weathered regolith throughout the Highway Project, with highest-grade zones on the biotite-rich intrusion margins (Figure 10) resulting from late-stage hydrothermal alteration from the anomalous felsic intrusives at depth.
- Review of historic drill holes at Highway identified eleven holes with intersections >0.1% Li_2O, with the highest intersection 2m @ 0.68% Li_2O, 1.43% Rb all within the oxidised weathered profile.
- Recent Ardea field mapping at Highway has identified and sampled numerous prospective LCT intrusive outcrops including pegmatites (Figure 11), with assay results pending.

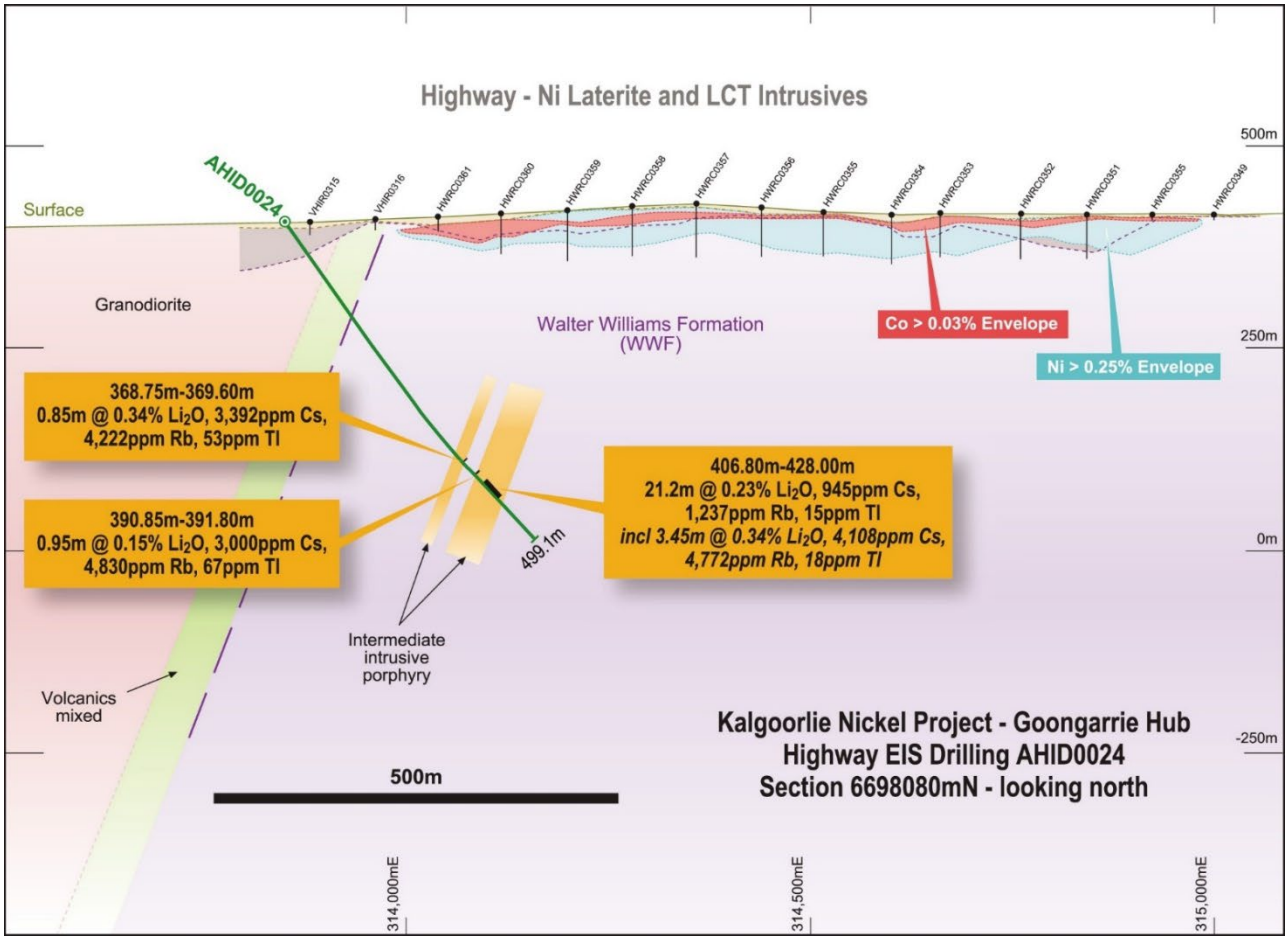

Figure 9: Cross Section of EIS hole AHID0024 (looking North) showing Li-Cs-Rb anomalism within porphyry intrusives. Projection MGA94 Zone 51.

Figure 10: AHID0024: Section of core from 0.85m @ 0.34% Li_2O, 3,392ppm Cs, 4,222ppm Rb, 51ppm Tl from 368.75m with the Li-Cs-Rb-Tl anomalism within the dark biotite-rich interval on contact with the plagioclase-biotite porphyry.

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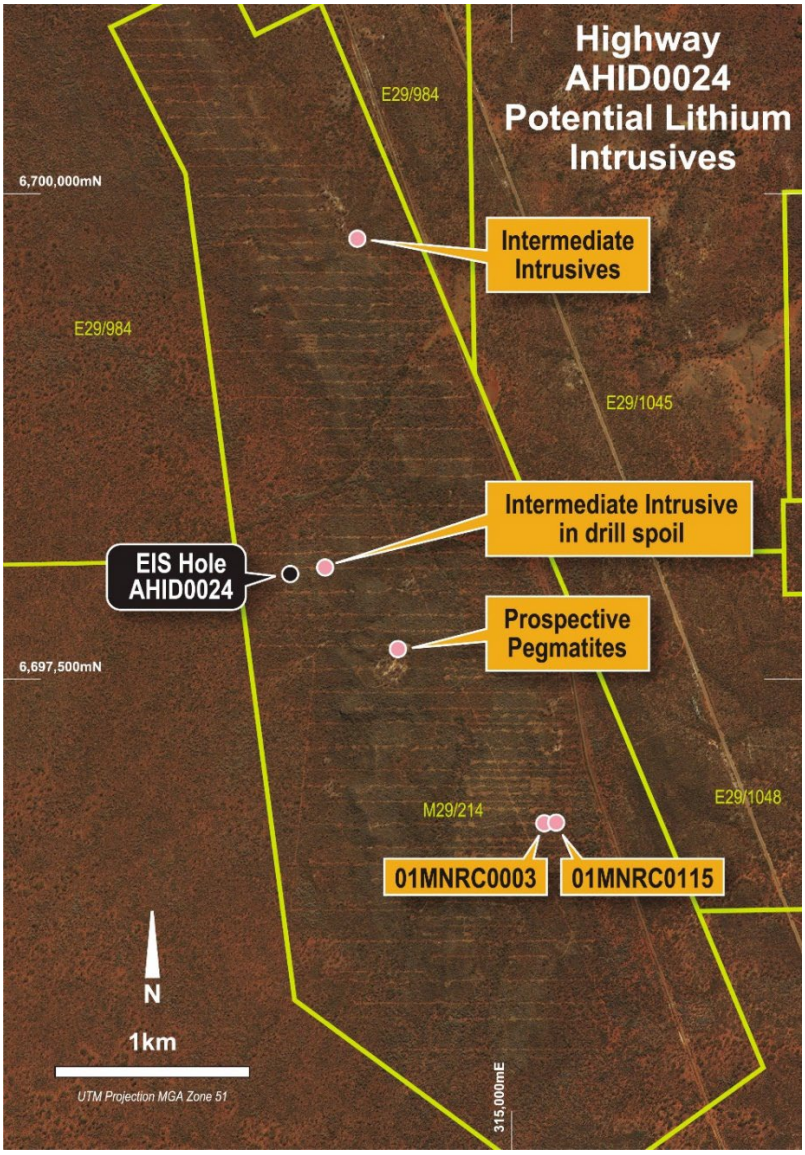

Figure 11: Location of prospective intrusive outcrops/drillholes relative to EIS drill hole AHID0024.

The two rock chip samples shown in Figure 12 are from outcrops located by Ardea 600m southeast of AHID0024 (Figure 11). These samples have been despatched for assay with the geochemical information, once received, to be used to help define whole rock chemistry which can assist with defining granite and pegmatite fertility for hosting Critical Minerals. Additional assessment at Highway has located several historic RC holes with thick intercepts of intrusive porphyry, including 01MNRC0115 and 01MNRC0003 (Figure 11 and 12, right hand image). Re-assay of pulps from these holes is proposed and historic RC chip trays have been located for review.

Figure 12: Left and Centre images - Pegmatite samples 600m southeast of AHID0024 showing mica zone. Assays awaited. Right hand image - Drill hole 01MNRC0115 with 0-30m (EOH) of LCT prospective white intermediate-felsic porphyry.

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Ghost Rocks Project

The Ghost Rocks project is located 16km north-west of the Menzies township and approximately 32km north-northwest along strike from the Highway deposit (Figure 3 and 6). Regional reconnaissance lithium exploration was conducted intermittently at Ghost Rocks throughout 2023 with the focus on assessing LCT pegmatite targets.

A total of 78 rock chip samples were collected in August-September 2023. Full assay results were received during the Quarter (ASX release 15 December 2023) which showed lithium anomalism in four samples ranging 0.23% – 0.72% Li_2O and up to 207ppm Cs, 264ppm Ta and 2,780ppm Rb located in pegmatites associated with an internal granite, in two clusters 900m apart on 100% Ardea tenement E29/941 (Figure 13).

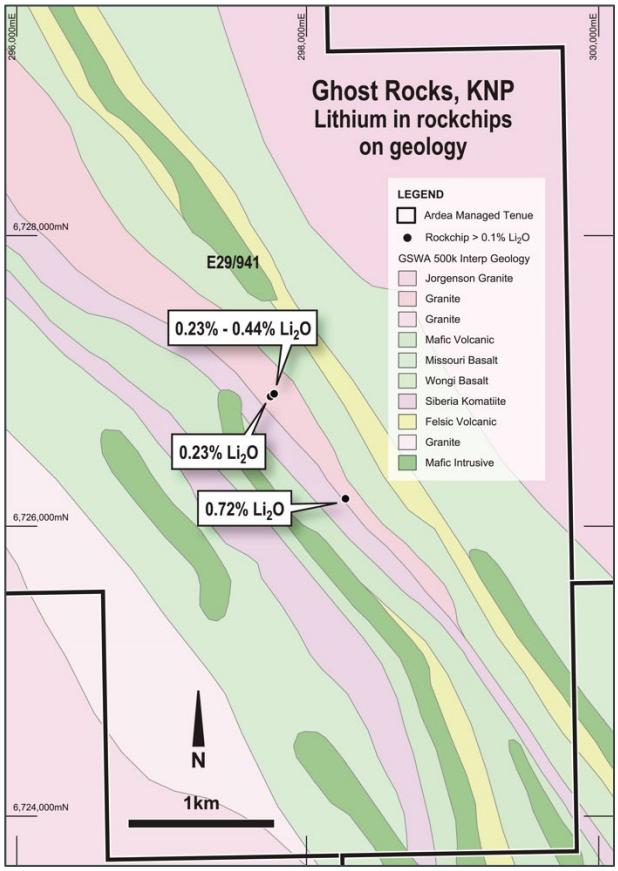

Figure 13: Rock chip samples from Ghost Rocks showing Li_2O pegmatite anomalism. Projection MGA94 Zone 51.

Other Projects

Bulong

Ardea lodged two additional prospecting licence applications adjoining Bulong nickel laterite resources. The two new applications are P25/2778 and P25/2779. Three prospecting licences were also renewed (P25/2613-2615).

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3. CORPORATE

Strategy

Ardea's priority is KNP nickel-cobalt laterite project development, commencing with the Goongarrie Hub, to produce Battery and Critical Minerals for the LIB supply chain to further advance the transition to a low carbon future.

The starter KNP development project is the Goongarrie Hub to capitalise on the premium goethite ore type and infrastructure-rich location. Complementary exploration opportunities in nickel sulphides and Critical Minerals will also be pursued, such as the Ardea nickel sulphide discoveries at Emu Lake, and LCT pegmatite exploration at Highway and Ghost Rocks.

Once the Goongarrie Hub Strategic Partner has been selected and the DFS is underway, Ardea can consider partner or joint venture options for other projects, such as the Kalpini and Yerilla Hubs.

Finance

The Company's cash position was $19.6M at Quarter end with no debt and all current programs are well funded.

Issued capital as at 31 December 2023 was 197,016,915 Shares, with 5,925,000 Performance Rights and 3,000,000 Options.

During the Quarter 1,500,000 Performance Rights were issued (ASX release 7 December 2023), and 2,355,000 shares were issued to Directors and employees pursuant to the vesting of staff Performance Rights (ASX release 7 December 2023 and 28 December 2023). 3,000,000 Options were issued to Corporate Advisors and 4,000,000 Options were cancelled (ASX release 3 November 2023).

Summary of Expenditures for the Quarter

During the Quarter the Company incurred a total net expenditure from operating activities of $2.9M. This expenditure included $1.85M expended on exploration and evaluation activities including feasibility studies, $172k on staff costs and $782k on administrative and corporate costs related primarily to Ardea's Strategic Partner process, with the balance on minor items.

Funds received during the Quarter included $63k from Directors following the 24 November 2023 AGM, where Shareholders voted in favour of approving the issue of Directors placement shares which was linked to the August 2023 placement (ASX release 30 August 2023). Additional funds received were interest of $54k and tenement rents refund of $5k.

Included in these costs were payments made to Directors of the entity and their associates. These payments were Directors Salaries and Superannuation payments and Consulting fees of $236k and rental for the Company's West Kalgoorlie operations office of $49k for the Quarter. All payments were made on an arm's length basis.

Further details on Quarterly expenditures are included in the Appendix 5B – Quarterly Cashflow Report attached to this Quarterly Report.

Investor Relations and Stakeholder Engagement

During the Quarter, management continued discussions with multiple Federal and State stakeholders and attended several industry events, including:

- An AMEC Boardroom Lunch with the Hon Roger Cook MLA BA LLB MLA, Premier; Minister for State and Industry Development, Jobs and Trade; Public Sector Management; Federal-State Relations.
- The Australian Nickel Conference was held in Perth on 4 October and the South-West Connect ASX Showcase from 18 to 19 October 2023. Ardea received positive feedback and engagement at both conferences.
- A KNP Goongarrie Hub update meeting with the Major Projects Facilitation Agency.
- The Company completed two peer mining company site visits in the Eastern Goldfields of Western Australia pursuant to Strategic Partner due diligence studies, for which Ardea is most appreciative.

- The IMARC event in Sydney and participated in several Battery and Critical Mineral forums and met with several Shareholders, investors, advisors and industry peers.
- Two Ardea staff attended the Nyalpa Pirniku Native Title Determination hearing held in Menzies, Western Australia on Tuesday 31 October 2023, where the Federal Court awarded native title to the group for an area covering approximately 30,000km^2.
- WA's place in a zero-carbon Australian-Japanese economy.
- Completed a Western Australia's Battery and Critical Minerals Strategy Stakeholder Consultation Paper 2023 submission.

4. LOOKING FORWARD

During the March 2024 Quarter, Ardea will focus upon the following programs.

Kalgoorlie Nickel Project

Ardea will continue to work with all stakeholders, including industry groups and the Federal, State and Local Governments to ensure project development is predicated on the highest industry standards, notably ESG. To assist with this process an updated Digbee independent ESG assessment will be completed.

KNP DFS

- Commence the Phase 1 Mining and Dewatering Studies (Early DFS Work).
- Further review and align scopes between the DFS bids.
- Finalise contract terms and conditions with the preferred DFS consultants and contractors.
- Finalise the DFS program and cost estimate.

Strategic Partner Process

- Continue working with the Japanese Consortium to complete the DFS budget, award bids, and finish drafting and execute Final Agreements to formalise our working relationship on the KNP Goongarrie Hub.
- Continue engagement with other parties who have expressed interest in the KNP.

Securing off-take is the primary driver for all Strategic Partner engagements, with these rights only available if there is a project equity investment and critically, securing project development finance.

Mineral Resource Updates

- Finalisation of infill drill program, for Measured Mineral Resource for the first five-years of production.
- Continuation of pre-DFS resource workflows including data review, interpretation, and mineral resource wireframing.

Stakeholder Engagement

- Community consultation with our First Nations groups, the City of Kalgoorlie Boulder, Shire of Menzies, Southern Ports Esperance and all other stakeholders.
- Continue engagement with groups such as the Australian Commonwealth Government, Austrade, DFAT, CMO and MPFA, WA State Government, and for R&D the FBICRC and CSIRO.

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WA Nickel Sulphide, Critical Minerals

Nickel Sulphides

Low cost/low impact work such as field mapping and rock chip sampling of the fertile Kalpini Western Ultramafic will recommence in 2024.

Additional collaborative research related to nickel sulphide exploration at Goongarrie between Ardea and CSIRO is ongoing.

Lithium

Further work at Highway is to continue, including reconnaissance mapping to better define the prospective intermediate and felsic intrusives. There is a significant amount of historic RC drill holes at Highway and a pulp re-assay program to test for LCT anomalism will be undertaken, selecting drill holes with any logged intermediate-felsic intrusives and any adjacent to intrusives identified during mapping.

At Ghost Rocks further detailed mapping and sampling for LCT pegmatites will continue intermittently during 2024.

Cost effective Battery and Critical Mineral target generation and research will continue to be undertaken over Ardea's strategic KNP tenure. All further planned exploration programs are pending in priority behind feasibility workstreams and Strategic Partner discussions for the Goongarrie Hub nickel-cobalt laterite resources.

Investor Relations

Regular engagement with Shareholders and investors will continue in person and through Ardea's website, LinkedIn, and Twitter (X) accounts.

Ardea will participate in the RIU Explorers Conference in Fremantle from 13 to 15 February 2024 and will have team members available for questions, at booth 50 and Managing Director and CEO, Andrew Penkethman, will be presenting, at 12:30pm, on 13 February 2024. Interested Ardea Shareholders are encouraged to contact the Company to organise a shareholders/investor pass for part of the event.

This announcement is authorised for release by the Board of Ardea Resources Limited.

For further information regarding Ardea, please visit the Company website or contact:

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

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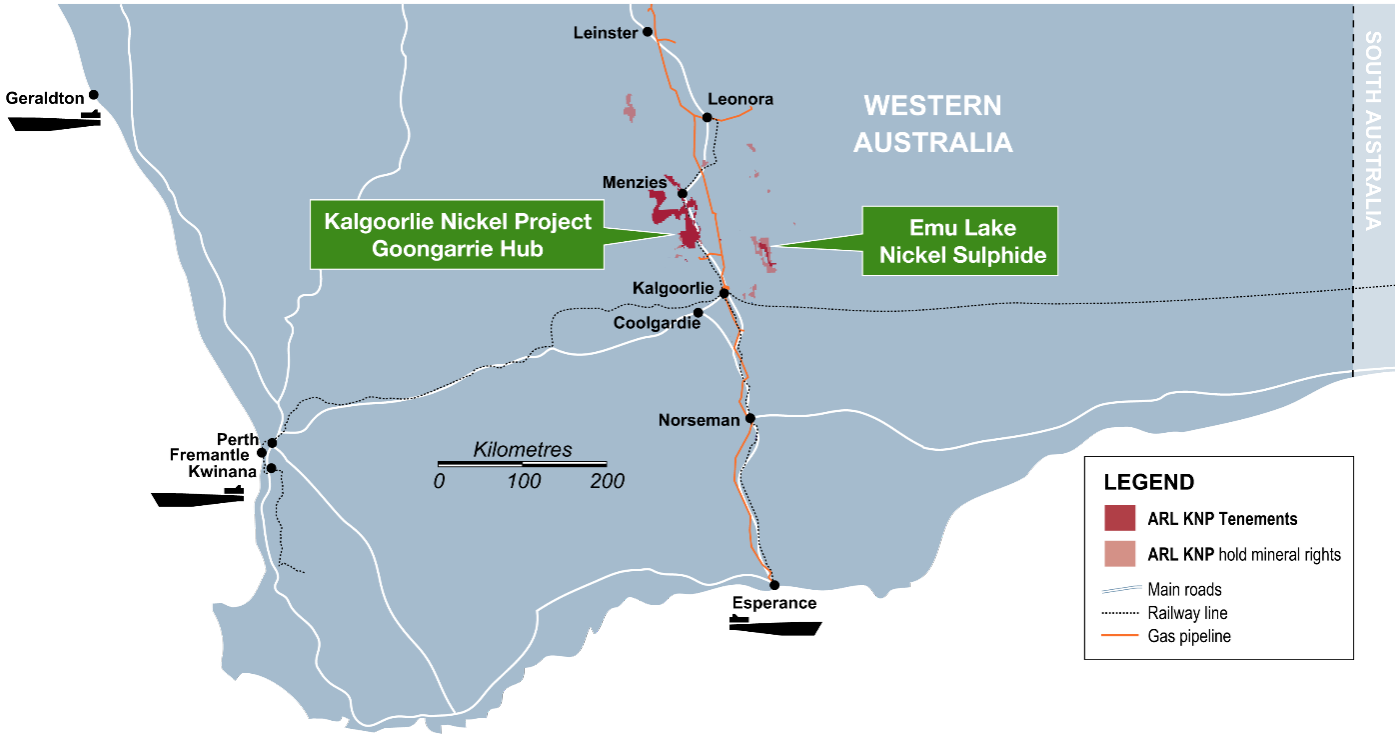
About Ardea Resources

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 **854Mt at 0.71% nickel and 0.045% cobalt for 6.1Mt of contained nickel and 386kt of contained cobalt** (Ardea ASX release 30 June 2023), located in a jurisdiction with exemplary Environmental Social and Governance (**ESG**) credentials.
- Advanced-stage exploration at compelling nickel sulphide targets, such as Kalpini, and Critical Minerals targets including lithium, scandium and Rare Earth Elements throughout the KNP Eastern Goldfields world-class nickel-gold province, with all exploration targets complementing the KNP nickel development strategy.



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Australian Federal Government - Major Project Status

KNP KALGOORLIE NICKEL PROJECT
Battery Minerals to the World

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COMPLIANCE STATEMENT (JORC CODE (2012))

A competent person's statement for the purposes of Listing Rule 5.22 has previously been announced by the Company for:

1. *Emu Lake Nickel Sulphide Discovery confirmed with 2.72m at 5.42% Ni, 14 January 2022.*
2. *Kalgoorlie Nickel Project Recognition on All Tiers of Australian Government, 21 March 2022.*
3. *Ardea Completes KNP ESG Accreditation from Independent Leading Global Platform, 24 November 2022.*
4. *Notification of Issue, Conversion or Payment up of Unquoted Equity Securities, 24 April 2023.*
5. *Mineralised Neutraliser Global Patent Lodged, 15 June 2023.*
6. *Kalgoorlie Nickel Project Mineral Resource Estimate Exceeds 6 Million Tonne Contained Nickel, 30 June 2023.*
7. *KNP Goongarrie Hub Ore Reserve and Feasibility Study Defines +40 Year Operation with Strong Financial Metrics, 5 July 2023.*
8. *Ardea Kalgoorlie Nickel Project – MOU with Sumitomo Metal Mining, Mitsubishi Corporation, and Mitsu & Co., Ltd, 5 July 2023.*
9. *Highway EIS Nickel Sulphide Drillhole, 21 August 2023.*
10. *Annual Report 2023, 27 September 2023.*
11. *Appendix 4G and Corporate Governance Statement 2023, 28 September 2023.*
12. *Ardea and Japanese Consortium Update on MOU, 29 September 2023.*
13. *Nickel Sulphide Prospectivity Confirmed and Lithium-Caesium-Rubidium bearing intrusives in Highway EIS drillhole, 15 December 2023.*
14. *Ardea and Japanese Consortium: Update on Progress on KNP – Goongarrie Hub, 21 December 2023.*

Competent Persons Statement

Resource Estimation, Exploration Results, and Industry Benchmarking

The Resource Estimation and Industry Benchmarking summaries are based on information reviewed or compiled by Mr Ian Buchhorn, and Mr Andrew Penkethman. Mr Buchhorn is a Member of the Australasian Institute of Mining and Metallurgy and Mr Penkethman is a Fellow of the Australasian Institute of Mining and Metallurgy and a Member of the Australian Institute of Geoscientists. Both Mr Buchhorn and Mr Penkethman are full-time employees of Ardea Resources Limited and have sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are 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 and Mr Penkethman have reviewed this press release and consent to the inclusion in this report of the information in the form and context in which it appears. Mr Buchhorn and Mr Penkethman own Ardea shares.

The information in this report that relates to planning and results for nickel sulphide and lithium 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.

The Company confirms that it is not aware of any new information or data that materially affects information included in previous announcements, and all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed.

Ardea wishes to clarify that its current Kalgoorlie Nickel Project (KNP) Mineral Resource Estimate (MRE) following JORC Code (2012) guidelines is:

Camp	Resource Category	Size (Mt)	Ni (%)	Co (%)	Contained Metal Ni (kt)	Contained Metal Co (kt)
KNP TOTAL	Measured	22	0.94	0.079	207	17
	Indicated	361	0.73	0.047	2,622	169
	Inferred	471	0.70	0.043	3,272	200
GRAND TOTAL	***Combined***	***854***	***0.71***	***0.045***	***6,101***	***386***

Note: 0.5% nickel cutoff grade used to report resources. Minor discrepancies may occur due to rounding of appropriate significant figures.

The Mineral Resource Estimate information shown in this ASX release has been previously released on the ASX platform by Ardea in ASX release 30 June 2023, in accordance with Listing Rule 5.8.

The Ore Reserve information shown in this ASX release has been previously released on the ASX platform by Ardea in ASX release 5 July 2023, in accordance with Listing Rule 5.9.

The Company confirms that it is not aware of any new information or data that materially affects the information included in the previous market announcements noted above and that all material assumptions and technical parameters underpinning the Mineral Resource Estimate and Ore Reserve in the previous market announcements continue to apply and have not materially changed.

The Company confirms that the form and context in which the Competent Persons' findings are presented have not been materially modified from the original market announcements.

ASX CHAPTER 5 COMPLIANCE AND PFS CAUTIONARY STATEMENT

The Company has concluded that it has a reasonable basis for providing the forward-looking statements and forecast financial information included in this announcement. The detailed reasons for that conclusion are outlined throughout this announcement and all material assumptions, including the JORC modifying factors, upon which the forecast financial information is based are disclosed in this announcement. This announcement has been prepared in accordance with the JORC Code (2012) and the ASX Listing Rules.

The actual results could differ materially from a conclusion, forecast or projection in the forward-looking information. Certain material factors were applied in drawing a conclusion or making a forecast or projection as reflected in the forward-looking information.

The KNP Goongarrie Hub Project is at the PFS phase and although reasonable care has been taken to make sure that the facts are accurate and/or that the opinions expressed are fair and reasonable, no reliance can be placed for any purpose whatsoever on the information contained in this document or on its completeness. Actual results and developments of projects and the scandium market development may differ materially from those expressed or implied by these forward-looking statements depending on a variety of factors.

A key conclusion of the PFS, which are based on forward looking statements, is that the Goongarrie Hub is considered to have positive economic potential.

The Mineral Resource used for the PFS was classified under JORC Code (2012) Guidelines and announced by the Company on 30 June 2023. The cut-off grades adapted for the PFS and reported in Table 2 are the basis of the production target assumed for the PFS.

The Company believes it has a reasonable basis to expect to be able to fund and further develop the KNP Goongarrie Hub. However, there is no certainty that the Company can raise funding when required.

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 programs, 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, 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.

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Appendix 5B

Mining exploration entity or oil and gas exploration entity quarterly cash flow report

Name of entity

Ardea Resources Limited

ABN	Quarter ended ("current quarter")
30 614 289 342	31 Dec 2023

Consolidated statement of cash flows		Current quarter $A'000	Year to date (6 months) $A'000
1.	**Cash flows from operating activities**		
1.1	Receipts from customers	5	6
1.2	Payments for		
	(a) exploration & evaluation	(1,038)	(1,944)
	(b) Feasibility Studies	(818)	(2,028)
	(c) production	-	-
	(d) staff costs	(172)	(582)
	(e) administration and corporate costs	(782)	(1346)
1.3	Dividends received (see note 3)	-	-
1.4	Interest received	54	155
1.5	Interest and other costs of finance paid	-	-
1.6	Income taxes paid/received	(48)	(58)
1.7	Government grants and tax incentives	-	-
1.8	Other (provide details if material) –	-	-
		-	-
1.9	**Net cash from / (used in) operating activities**	**(2,799)**	**(5,797)**
2.	**Cash flows from investing activities**		
2.1	Payments to acquire or for:		
	(a) entities	-	-
	(b) tenements	-	-
	(c) property, plant and equipment	-	-
	(d) exploration & evaluation	-	-
	(e) investments	-	-
	(f) other non-current assets	-	-

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Consolidated statement of cash flows		Current quarter $A'000	Year to date (6 months) $A'000
2.2	Proceeds from the disposal of:		
	(a) entities	-	-
	(b) tenements	-	-
	(c) property, plant and equipment	-	-
	(d) investments	-	-
	(e) other non-current assets	-	-
2.3	Cash flows from loans to other entities	(143)	(143)
2.4	Dividends received (see note 3)	-	-
2.5	Other (provide details if material)	-	-
2.6	**Net cash from / (used in) investing activities**	**(143)**	**(143)**

3.	**Cash flows from financing activities**		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	63	15,911
3.2	Proceeds from issue of convertible debt securities	-	-
3.3	Proceeds from exercise of options	-	-
3.4	Transaction costs related to issues of equity securities or convertible debt securities	(30)	(990)
3.5	Proceeds from borrowings	-	-
3.6	Repayment of borrowings	-	-
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (provide details if material)	-	-
3.10	**Net cash from / (used in) financing activities**	**33**	**14,921**

4.	**Net increase / (decrease) in cash and cash equivalents for the period**	(2,909)	8,981
4.1	Cash and cash equivalents at beginning of period	22,538	10,648
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(2,799)	(5,797)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(143)	(143)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	33	14,921

Consolidated statement of cash flows		Current quarter $A'000	Year to date (6 months) $A'000
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	**Cash and cash equivalents at end of period**	**19,629**	**19,629**

5.	**Reconciliation of cash and cash equivalents** at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	**Current quarter $A'000**	**Previous quarter $A'000**
5.1	Bank balances	4,411	16,825
5.2	Call deposits	15,218	5,713
5.3	Bank overdrafts	-	-
5.4	Other (provide details)	-	-
5.5	**Cash and cash equivalents at end of quarter (should equal item 4.6 above)**	**19,629**	**22,538**

6.	**Payments to related parties of the entity and their associates**	**Current quarter $A'000**
6.1	Aggregate amount of payments to related parties and their associates included in item 1	260
6.2	Aggregate amount of payments to related parties and their associates included in item 2	-

Note: if any amounts are shown in items 6.1 or 6.2, your quarterly activity report must include a description of, and an explanation for, such payments.

Salaries, Directors fees and Consulting fees paid to Directors - $210,000

Payments for Kalgoorlie Office to a Director related entity for the quarter - $50,000

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7.	**Financing facilities** *Note: the term "facility' includes all forms of financing arrangements available to the entity.* *Add notes as necessary for an understanding of the sources of finance available to the entity.*	**Total facility amount at quarter end $A'000**	**Amount drawn at quarter end $A'000**
7.1	Loan facilities	-	-
7.2	Credit standby arrangements	-	-
7.3	Other (please specify)	-	-
7.4	**Total financing facilities**	-	-
7.5	**Unused financing facilities available at quarter end**		-
7.6	Include in the box below a description of each facility above, including the lender, interest rate, maturity date and whether it is secured or unsecured. If any additional financing facilities have been entered into or are proposed to be entered into after quarter end, include a note providing details of those facilities as well.		

8.	**Estimated cash available for future operating activities**	**$A'000**
8.1	Net cash from / (used in) operating activities (item 1.9)	(2,799)
8.2	(Payments for exploration & evaluation classified as investing activities) (item 2.1(d))	-
8.3	Total relevant outgoings (item 8.1 + item 8.2)	(2,799)
8.4	Cash and cash equivalents at quarter end (item 4.6)	19,628
8.5	Unused finance facilities available at quarter end (item 7.5)	-
8.6	Total available funding (item 8.4 + item 8.5)	19,628
8.7	**Estimated quarters of funding available (item 8.6 divided by item 8.3)**	7.01

Note: if the entity has reported positive relevant outgoings (ie a net cash inflow) in item 8.3, answer item 8.7 as "N/A". Otherwise, a figure for the estimated quarters of funding available must be included in item 8.7.

8.8 If item 8.7 is less than 2 quarters, please provide answers to the following questions:

8.8.1 Does the entity expect that it will continue to have the current level of net operating cash flows for the time being and, if not, why not?

Answer: N/A

8.8.2 Has the entity taken any steps, or does it propose to take any steps, to raise further cash to fund its operations and, if so, what are those steps and how likely does it believe that they will be successful?

Answer: N/A

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8.8.3	Does the entity expect to be able to continue its operations and to meet its business objectives and, if so, on what basis?
Answer: N/A	
Note: where item 8.7 is less than 2 quarters, all of questions 8.8.1, 8.8.2 and 8.8.3 above must be answered.	

Compliance statement

1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.

2 This statement gives a true and fair view of the matters disclosed.

Date: 31 January 2024

Authorised by: Ardea Board of Directors

Notes

1. This quarterly cash flow report and the accompanying activity report provide a basis for informing the market about the entity's activities for the past quarter, how they have been financed and the effect this has had on its cash position. An entity that wishes to disclose additional information over and above the minimum required under the Listing Rules is encouraged to do so.
2. If this quarterly cash flow report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, *AASB 6: Exploration for and Evaluation of Mineral Resources* and *AASB 107: Statement of Cash Flows* apply to this report. If this quarterly cash flow report has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.
3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.
4. If this report has been authorised for release to the market by your board of directors, you can insert here: "By the board". If it has been authorised for release to the market by a committee of your board of directors, you can insert here: "By the [*name of board committee – eg Audit and Risk Committee*]". If it has been authorised for release to the market by a disclosure committee, you can insert here: "By the Disclosure Committee".
5. If this report has been authorised for release to the market by your board of directors and you wish to hold yourself out as complying with recommendation 4.2 of the ASX Corporate Governance Council's *Corporate Governance Principles and Recommendations*, the board should have received a declaration from its CEO and CFO that, in their opinion, the financial records of the entity have been properly maintained, that this report complies with the appropriate accounting standards and gives a true and fair view of the cash flows of the entity, and that their opinion has been formed on the basis of a sound system of risk management and internal control which is operating effectively.

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Ardea Resources Limited Tenement Schedule (WA) as at 31 December 2023

Goongarrie Hub

Tenure	Location	Ardea Interest (%)	Status	Note	Tenure	Location	Ardea Interest (%)	Status	Note
E24/196	Goongarrie	100	Live		**M24/731**	Goongarrie	100	Live	3
E24/209	Goongarrie	100	Live		**M24/732**	Goongarrie	100	Live	3
E24/211	Goongarrie	100	Live		**M24/744**	Goongarrie	100	Live	
E29/934	Goongarrie	100	Live		**M24/778**	Goongarrie	100	Live	3
E29/1028	Goongarrie	100	Live		**M29/167**	Goongarrie	100	Live	
E29/1038	Goongarrie	100	Live		**M29/202**	Goongarrie	100	Live	
E29/1039	Goongarrie	100	Pending		**M29/272**	Goongarrie	100	Live	
E29/1045	Goongarrie	100	Live		**M29/278**	Goongarrie	100	Live	
E29/1048	Goongarrie	100	Live		**M29/423**	Goongarrie	100	Live	
G29/25	Goongarrie	100	Pending		**M29/424**	Goongarrie	100	Live	
L24/239	Goongarrie	100	Live		**M29/426**	Goongarrie	100	Live	
L29/134	Goongarrie	100	Live		**P24/5260**	Goongarrie	100	Live	
L29/135	Goongarrie	100	Live		**P24/5328**	Goongarrie	100	Live	
L30/67	Goongarrie	100	Live		**P24/5329**	Goongarrie	100	Live	
L30/68	Goongarrie	100	Live		**P24/5265**	Goongarrie-Carr Boyd	100	Live	
L16/141	Goongarrie	100	Live		**P24/5169**	Goongarrie-Windanya	100	Live	
L30/85	Goongarrie	100	Live		**P24/5480**	Goongarrie-Windanya	100	Live	
P29/2646	Highway North	100	Live		**M24/919**	Goongarrie-Scotia	100 Ni rights	Live	6
P29/2647	Highway North	100	Live		**M24/959**	Goongarrie-Scotia	100 Ni rights	Live	6
P29/2648	Highway North	100	Live		**M24/541**	Goongarrie	100	Live	
P29/2649	Highway North	100	Live		**P29/2650**	Highway North	100	Live	
P24/5528	Goongarrie	100	Live		**P29/2651**	Highway North	100	Live	
P29/2559	Highway North	100	Live		**E29/1082**	Goongarrie	100	Live	
P29/2560	Highway North	100	Live		**E29/1089**	Goongarrie	100	Live	
P29/2501	Highway - Moriarty	100	Live		**P29/2561**	Highway North	100	Live	
P29/2511	Ghost Rocks	100	Live		**P29/2562**	Highway North	100	Live	
P29/2512	Ghost Rocks	100	Live		**E29/941**	Ghost Rocks	100	Live	
P29/2513	Ghost Rocks	100	Live		**E29/981**	Ghost Rocks	100	Live	
P29/2514	Ghost Rocks	100	Live		**M29/214**	Highway	100	Live	
P29/2515	Ghost Rocks	100	Live		**P29/2538**	Ghost Rocks	100	Live	
L16/143	Goongarrie – Credo West	100	Live		**P29/2539**	Ghost Rocks	100	Live	
L16/144	Goongarrie – Credo West	100	Live		**E29/1083**	Goongarrie	100	Live	
L16/145	Goongarrie – Credo West	100	Live		**L16/147**	Goongarrie – Credo West	100	Live	
L16/146	Goongarrie – Credo West	100	Live		**L16/148**	Goongarrie – Credo West	100	Live	
L24/252	Goongarrie	100	Pending		**L30/95**	Goongarrie – Credo West	100	Live	
E29/1235	Goongarrie	100	Pending		**E29/984**	Highway North	100	Live	15
P29/2530	Goongarrie	100	Live	15	**M29/445**	Highway North	100	Pending	15
P29/2532	Goongarrie	100	Live	15	**E29/1062**	Goongarrie	100	Live	15
P29/2467	Goongarrie	100	Live	15	**L24/253**	Goongarrie	100	Live	
P29/2468	Goongarrie	100	Live	15	**L24/254**	Goongarrie	100	Live	
P29/2380	Goongarrie	100	Live	15	**L24/255**	Goongarrie	100	Live	

Goongarrie Hub Expansion

Siberia

Tenure	Location	Ardea Interest (%)	Status	Note	Tenure	Location	Ardea Interest (%)	Status	Note
E24/203	Siberia	100 non Au-Ag rights	Live	4	**P24/5235**	Siberia	100	Live	
E29/889	Siberia	100 non Au-Ag rights	Live	4	**P24/5236**	Siberia	100	Live	
M24/634	Siberia	100 non Au-Ag rights	Live	1,4	**P29/2484**	Siberia	100	Live	
M24/660	Siberia	100 non Au-Ag rights	Live	4	**P29/2485**	Siberia	100	Live	
M24/663	Siberia	100 non Au-Ag rights	Live	4	**P24/5416**	Siberia	100	Live	

M24/664	Siberia	100 non Au-Ag rights	Live	4	**P24/5417**	Siberia	100	Live	
M24/665	Siberia	90 non Au-Ag rights	Live	2,4	**P24/5418**	Siberia	100	Live	
M24/683	Siberia	100 non Au-Ag rights	Live	4	**P24/5566**	Siberia	100	Live	
M24/686	Siberia	100 non Au-Ag rights	Live	4	**P24/5567**	Siberia	100	Live	
M24/772	Siberia	100 non Au-Ag rights	Live	4	**L24/248**	Siberia	100	Pending	
M24/797	Siberia	100 non Au-Ag rights	Live	4	**L24/249**	Siberia	100	Pending	
M24/915	Siberia	100 non Au-Ag rights	Live	4	**L24/250**	Siberia	100	Live	
M24/916	Siberia	100 non Au-Ag rights	Live	4	**L24/251**	Siberia	100	Pending	
M24/1002	Siberia	100 non Au-Ag rights	Pending	4	**P24/5599**	Siberia	100	Live	
P24/5618	Siberia South	100	Live		**P24/5623**	Siberia South	100	Live	
P24/5619	Siberia South	100	Live		**P24/5624**	Siberia South	100	Live	
P24/5620	Siberia South	100	Live		**P24/5625**	Siberia South	100	Live	
P24/5621	Siberia South	100	Live		**L29/181**	Siberia	100	Pending	
P24/5622	Siberia South	100	Live		**L29/183**	Siberia	100	Pending	

Goongarrie Hub Expansion
Black Range

Tenure	Location	Ardea Interest (%)	Status	Note
M24/757	Black Range	100 non Au-Ag rights; 100 ownership	Live	4
M24/973	Black Range	100 non Au-Ag rights	Pending	4
P24/4395	Black Range	100 non Au-Ag rights	Live	4
P24/4396	Black Range	100 non Au-Ag rights	Live	4
P24/4400	Black Range	100 non Au-Ag rights	Live	4
P24/4401	Black Range	100 non Au-Ag rights	Live	4
P24/4402	Black Range	100 non Au-Ag rights	Live	4
P24/4403	Black Range	100 non Au-Ag rights	Live	4
P24/5593	Black Range	100% non Au rights	Live	14
P24/5594	Black Range	100% non Au rights	Live	14
P24/5595	Black Range	100% non Au rights	Live	14
P24/5596	Black Range	100% non Au rights	Live	14

Kalpini Hub

Tenure	Location	Ardea Interest (%)	Status	Note	Tenure	Location	Ardea Interest (%)	Status	Note
E27/524	Kalpini	100 non Au rights	Live	9	**P25/2454**	Kalpini-Bulong	100	Live	
E27/606	Kalpini	100	Live		**P25/2455**	Kalpini-Bulong	100	Live	
E27/607	Kalpini	100	Live		**P25/2456**	Kalpini-Bulong	100	Live	
E28/1224	Kalpini	100	Live		**P25/2457**	Kalpini-Bulong	100	Live	
E28/2978	Kalpini	100	Live		**P25/2458**	Kalpini-Bulong	100	Live	
M27/395	Kalpini	100	Live		**P25/2459**	Kalpini-Bulong	100	Live	
M27/506	Kalpini	100	Live		**P25/2460**	Kalpini-Bulong	100	Live	
M27/512	Kalpini	100	Pending		**P25/2461**	Kalpini-Bulong	100	Live	
M28/199	Kalpini	100	Live		**P25/2482**	Kalpini-Bulong	100	Live	
M28/201	Kalpini	100	Live		**P25/2483**	Kalpini-Bulong	100 non Au rights	Live	14
M28/205	Kalpini	100	Live		**P25/2484**	Kalpini-Bulong	100 non Au rights	Live	14
E27/278	Kalpini-Acra	100 Ni Lat Ore	Live	5	**P25/2559**	Kalpini-Bulong	100 non Au rights	Live	14
E27/438	Kalpini-Acra	100 Ni Lat Ore	Live	5	**P25/2560**	Kalpini-Bulong	100 non Au rights	Live	14
E27/520	Kalpini-Acra	100 Ni Lat Ore	Live	5	**P25/2561**	Kalpini-Bulong	100 non Au rights	Live	14
E27/579	Kalpini-Acra	100 Ni Lat Ore	Live	5	**P25/2609**	Kalpini-Bulong	100	Live	
E28/1746	Kalpini-Acra	100 Ni Lat Ore	Live	5	**P25/2613**	Kalpini-Bulong	100	Live	
E28/2483	Kalpini-Acra	100 Ni Lat Ore	Live	5	**P25/2614**	Kalpini-Bulong	100	Live	
E25/578	Kalpini-Bulong	100 non Au rights	Live	14	**P25/2615**	Kalpini-Bulong	100	Live	
M25/59	Kalpini-Bulong	100 non Au rights	Live	14	**P25/2650**	Kalpini-Bulong	100 non Au rights	Live	14
M25/134	Kalpini-Bulong	100	Live		**P25/2305**	Kalpini-Bulong	100 non Au rights	Live	13, 14
M25/145	Kalpini-Bulong	100	Live		**M31/488**	Kalpini-Lake Rebecca	100 non Au rights	Pending	14
M25/151	Kalpini-Bulong	100 non Au rights	Live	14	**P31/2038**	Kalpini-Lake Rebecca	100 non Au rights	Live	14
M25/161	Kalpini-Bulong	100	Live		**P31/2039**	Kalpini-Lake Rebecca	100 non Au rights	Live	14

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Tenure	Location	Ardea Interest (%)	Status	Note	Tenure	Location	Ardea Interest (%)	Status	Note
M25/171	Kalpini-Bulong	100 non Au rights	Live	14	**P31/2040**	Kalpini-Lake Rebecca	100 non Au rights	Live	14
M25/187	Kalpini-Bulong	100	Live		**E27/647**	Kalpini	100	Live	
M25/209	Kalpini-Bulong	100	Live		**P25/2306**	Kalpini-Bulong	100 non Au rights	Live	13, 14
E27/646	Kalpini	100	Live		**M25/19**	Kalpini-Bulong	100 non Au rights	Live	13, 14
P25/2295	Kalpini-Bulong	100 non Au rights	Live	14	**P25/2307**	Kalpini-Bulong	100 non Au rights	Live	13, 14
P25/2296	Kalpini-Bulong	100 non Au rights	Live	13, 14	**P25/2408**	Kalpini-Bulong	100 non Au rights	Live	13, 14
P25/2743	Kalpini-Bulong	100	Pending		**P25/2409**	Kalpini-Bulong	100 non Au rights	Live	13, 14
E27/714	Kalpini	100	Pending		**L27/102**	Kalpini	100	Live	
E27/715	Kalpini	100	Pending		**L31/88**	Kalpini	100	Live	
M25/377	Kalpini-Bulong	100 non Au rights	Pending	14	**E28/3308**	Kalpini	100	Pending	
P25/2768	Kalpini-Bulong	100	Pending		**E28/3309**	Kalpini	100	Live	
P25/2769	Kalpini-Bulong	100	Pending		**P25/2770**	Kalpini-Bulong	100	Pending	
P25/2778	Kalpini-Bulong	100	Pending		**P25/2771**	Kalpini-Bulong	100	Pending	
P25/2779	Kalpini-Bulong	100	Pending		**P25/2773**	Kalpini-Bulong	100	Pending	

WA Regional

Tenure	Location	Ardea Interest (%)	Status	Note
M15/1101	WA Regional	Pre-emp Ni-Co Lat	Live	7
M15/1263	WA Regional	Pre-emp Ni-Co Lat	Live	7
M15/1264	WA Regional	Pre-emp Ni-Co Lat	Live	7
M15/1323	WA Regional	Pre-emp Ni-Co Lat	Live	7
M15/1338	WA Regional	Pre-emp Ni-Co Lat	Live	7
M27/510	WA Regional	100 Ni Lat Ore	Live	8
M27/272	Kanowna East	Non-Au Rights	Live	10

Yerilla Hub

Tenure	Location	Ardea Interest (%)	Status	Note
E39/1954	Yerilla-Aubils	100 non Au rights	Live	
M39/1147	Yerilla-Aubils	100 non Au rights	Pending	
E31/1092	Yerilla-Boyce Creek	100 non Au rights	Live	
E31/1169	Yerilla-Boyce Creek	100 non Au rights	Live	
E31/1208	Yerilla-Boyce Creek	100 non Au rights	Live	
E31/1213	Yerilla-Boyce Creek	100 non Au rights	Live	
E31/1355	Yerilla-Boyce Creek	100	Pending	
M31/483	Yerilla-Boyce Creek	100 non Au rights	Live	
M31/493	Yerilla-Boyce Creek	100 non Au rights	Pending	
M31/475	Yerilla-Jump Up Dam	100 non Au rights	Live	
M31/477	Yerilla-Jump Up Dam	100 non Au rights	Live	
M31/479	Yerilla-Jump Up Dam	100 non Au rights	Live	

Kookynie Gold

Tenure	Location	Ardea Interest (%)	Status	Note
E40/350	Kookynie	Non-Au Rights	Live	11
E40/357	Kookynie	Non-Au Rights	Live	11

Perrinvale Nickel-Gold

Tenure	Location	Ardea Interest (%)	Status	Note
E29/1006	Perrinvale	100 non Au rights	Live	14
E29/1078	Perrinvale	100 non Au rights	Live	14

Mt Zephyr Gold-Nickel

Tenure	Location	Ardea Interest (%)	Status	Note	Tenure	Location	Ardea Interest (%)	Status	Note
E37/1271	Mt Zephyr	40	Live	12	**E39/1706**	Mt Zephyr	40	Live	12
E37/1272	Darlot East	40	Live	12	**E39/1854**	Mt Zephyr	40	Live	12
E37/1273	Darlot East	40	Live	12	**E39/1985**	Mt Zephyr	40	Live	12
E37/1274	Mt Zephyr	40	Live	12					

Bedonia Nickel-PGE-Gold

Tenure	Location	Ardea Interest (%)	Status	Note	Tenure	Location	Ardea Interest (%)	Status	Note
E63/1828	Bedonia	100	Live		**E63/1857**	Bedonia	100	Live	
E63/1856	Bedonia	100	Live						

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Notes:	
1.	Britannia Gold Ltd retains precious metal rights.
2.	Impress Ventures Ltd has a 10% equity free-carried interest to a decision to mine.
3.	Norton Gold Fields Limited retains certain Au claw-back rights and royalty receivable.
4.	Ora Banda Mining Ltd holds Au-Ag rights while Ardea retains all non Au-Ag rights.
5.	Acra JV – Northern Star Resources Ltd earn-in with Essential Metals Limited. Former holds gold rights while latter retains nickel sulphide rights. Ardea retains rights to Ni laterite ore.
6.	Black Mountain Gold Limited all rights with exception of Ardea retaining Ni rights.
7.	Ramelius Resources Limited assignee (Maximus Resources Ltd) all rights, Ardea pre-emptive right to Ni-Co laterite.
8.	Paddington Gold Pty Ltd all mineral rights (except nickel sulphide) while Ardea retains rights to nickel laterite ore.
9.	By Sale Agreement between Northern Star (Carosue Dam) Pty Ltd and Kalnorth Gold Mines Ltd, Northern Star (Carosue Dam) Pty Ltd now owns Au rights while Ardea retains non-Au rights.
10.	Northern Star (Kanowna) Limited holds Au rights. Ardea retains non-Au rights.
11.	The Option to purchase the tenements was transferred to Metalicity Limited on 21 November 2020. Ardea retains non Au rights.
12.	The Mt Zephyr/Darlot East tenements were farmed out to Red 5 Limited on 18 November 2020 whereby Red 5 Limited may earn 80% equity interest. Ardea is free carried to Decision to Mine.
13.	Purchase of tenements by Binding Terms Sheet and Alluvial Rights Agreements dated 4 June 2021 between the Seller Steven Lionel Kean and Ardea Resources Limited.
14.	By way of the Demerger Implementation Deed executed between Ardea Resources Limited, Kalgoorlie Gold Mining Limited, Yerilla Nickel Pty Ltd, Kalgoorlie Nickel Pty Ltd and Ardea Exploration Pty Ltd dated 9 September 2021, certain tenements are to be transferred to newly listed Kalgoorlie Gold Mining Limited. For certain other tenements, Ardea Resources Limited or its subsidiaries will continue to hold and retain non-gold rights while Kalgoorlie Gold Mining Limited retain gold rights only.
15.	Tenement Swap Agreement between Brightstar Resources Limited subsidiaries, Goongarrie Operational and Mining Pty Ltd and Menzies Operational and Mining Pty Ltd, and Ardea Resources Limited subsidiary, Kalgoorlie Nickel Pty Ltd dated 15 July 2023.

Interests in Mining Tenements and Petroleum Tenements Acquired or Increased during the December Quarter 2023

Tenure	Location	Nature of Interest	Ardea Interest beginning Quarter (%)	Ardea Interest end Quarter (%)
P25/2778	Kalpini-Bulong	Application	0	100
P25/2779	Kalpini-Bulong	Application	0	100

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