Ardea Resources Limited

ASX & Media Release

28 April 2022

ASX Symbol

ARL

Ardea Resources Limited

Suite 2 / 45 Ord St
West Perth WA 6005

PO Box 1433
West Perth WA 6872

Telephone

+61 8 6244 5136

Email

ardea@ardearesources.com.au

Website

www.ardearesources.com.au

Directors

Mat Longworth
Non-Executive Chair

Andrew Penkethman
Managing Director & CEO

Ian Buchhorn
Executive Director

Executive Management

Sam Middlemas
Company Secretary

Alex Mukherji
Manager Land Access & Compliance

Mike Miller
General Manager Technical Services

Issued Capital

Fully Paid Ordinary Shares
169,737,772

Performance Rights
4,422,000

Options
4,000,000

ABN 30 614 289 342

For personal use only

QUARTERLY OPERATIONS REPORT

For the Quarter ended 31 March 2022

CORPORATE

Ardea Resources Limited (**Ardea** or the **Company**) is a battery minerals Company focussed on its 100%-owned Kalgoorlie Nickel Project (**KNP**), which hosts the largest nickel-cobalt resource in Australia[1]. The KNP Goongarrie Hub is being advanced towards development and production by working with stakeholders, industry leading partners and completing feasibility programs.

Ardea remains debt free, with a tight capital structure. During the Quarter, the Company completed a strongly oversubscribed $21.5M Placement (before costs)[2] and had $24.1M cash-at-bank, at the end of the March 2022 Quarter.

DEVELOPMENT

Kalgoorlie Nickel Project

- **Strategic Partner** engagement is a Company priority with multiple potential partners seeking to secure sustainable and ethical nickel-cobalt mineral supply for the lithium-ion battery (**LIB**) sector. Ardea's decision to retain off-take and link this to project development funding is the optimum strategy to develop the globally significant KNP.
- The Company has a preference to engage with geopolitically favoured partners that are key Australian trading partners requiring supply chain diversity and security. The objective is favourable ECA funding terms.
- **Major Project Status** awarded by the Australian Prime Minister streamlining the approvals process and provides additional project funding optionality[1].
- **KNP Feasibility Study work streams on the Goongarrie Hub:**
  - Goongarrie Hub (**Goongarrie**), base case 3.5Mtpa incorporating proven hydrometallurgical technology successfully utilised at a number of existing nickel laterite operations.
  - Definitive Feasibility Study (**DFS**) base case end product, Mixed Hydroxide Precipitate (**MHP**), has evolved as the new Class 1 nickel for LIB sector.
  - Hydrometallurgical test-work ongoing to attain **maximum resource utilisation and optimisation of the low-carbon flow sheet**.
  - **Goongarrie water abstraction licences granted**[3].

EXPLORATION

WA Nickel Sulphide and Critical Minerals

Exploration for nickel-copper-PGE sulphide and Critical Minerals continues on compelling targets which are complementary to the development of the KNP.

- **Nickel Sulphide** – Diamond core drilling and downhole Electromagnetic (**DHEM**) surveys underway at **Emu Lake** and awaiting assay results from Bulong layered mafic complex target.
- **Critical Minerals** – Kalpini pulp assay results return Scandium and Rare Earth Elements with high-grade nickel-cobalt, including: WERC0371: **12m at 1.70% nickel, 0.151% cobalt, 28g/t scandium**[4] from 20m with;
  - **0.244% Total Rare Earth Oxide,** includes Nd, Pr, La and Ce; and
  - **1.320% Total Rare Metal Oxide,** includes Ti, Y, Zr, Nb, Hf, Ta and W.

Ardea ASX releases - [1] 21 March 2022. [2] 22 February 2022. [3] 11 March 2022. [4] 14 March 2022.

For personal use only

March 2022 Quarter

Environmental, Social and (Corporate) Governance

Environmental, Social and (Corporate) Governance (**ESG**) considerations are at the forefront of the Ardea operation. All project designs and work practices are based on the Company minimising CO_2 green-house gas emissions when in production. The proposed flowsheet (Figure 5) has been enhanced for CO_2 mitigation in the neutralisation circuit through introducing an Atmospheric Leach (**AL**) circuit. This upgrades the site acid plant and allows Ardea to generate its own site power requirements off-grid, without relying on fossil fuel for power generation

Ardea has contributed its Critical Mineral technical expertise to groups advocating for net zero by 2050 and lodged a supportive submission to the House of Representatives Standing Committee on the Environment and Energy inquiry into the Climate Change (National Framework for Adaptation and Mitigation) Bill 2020. The KNP was also included in the *Geological Survey of Western Australia nickel-cobalt investment flyer*, as the largest nickel resource in Western Australia (and therefore the largest in Australia), and the Commonwealth Government's 2021 *Australian Critical Minerals Prospectus*.

The recent granting of Major Project Status (**MPS**) by the Prime Minister the Honourable Scott Morrison MP, Federal Minister for Industry, Energy and Emissions Reduction, the Honourable Angus Taylor MP in a joint media release with Federal Minister for Resources and Water the Hon Keith Pitt MP and Federal Member for O'Connor, the Honourable Rick Wilson MP, reinforces the significance of the KNP to the Nation, as the World transitions to a low carbon future (ASX release 18 March 2022).

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. These important considerations are an essential part of the feasibility study work Ardea is undertaking on the KNP.

Ardea enjoys strong support from the communities in which we operate, primarily the City of Kalgoorlie-Boulder and the Shire of Menzies, and has a Native Title Agreement in place for development of the Goongarrie Hub.

Ardea continues to contribute to the local community through its Eastern Goldfields Education Grant Program. The most recent contribution has helped provide team uniforms and travel expenses for 17 youth basketball team members.

The Ardea Team are the Company's most important asset and comprise over 31% female participation, all in key management roles. The Company is a strong advocate for gender equality and fair representation for all community groups. All personnel and their families are offered complimentary support by a 'wellbeing' service provider.

Nickel Sector Commentary

Supply chain security issues and sourcing long term, reliable sources of sustainable and ethical nickel supply have continued to escalate and contributed to record nickel price appreciation during the Quarter. Nickel supply issues have been further exacerbated by rising geopolitical tensions around the tragic conflict taking place in Ukraine.

During the Quarter, the nickel price reached a record high of around US$101,000 on March 8, prior to the London Metal Exchange (**LME**) nickel contract being suspended. Since LME nickel trading resumed on 16 March, the price has been consistently selling at levels above US$31,000 per tonne (the price in the current KNP financial model is US$19,500).

Demand for nickel continues to grow at record rates from traditional uses such as stainless steel and in particular from the rapidly growing Lithium-Ion Battery (**LIB**) supply chain for the Electric Vehicle (**EV**) sector where nickel is an essential component of high performance chemistry batteries (Figure 1).

Current world battery grade nickel production levels cannot keep pace with demand. Even if every currently identified nickel laterite and sulphide deposit that can deliver sustainable and ethical mineral supply enters production. Without the development of significant nickel resources like the KNP, the EV revolution will be impeded and COP26 Glasgow climate commitments will be delayed.

With Ardea's KNP hosting one of the largest nickel-cobalt resources in the developed world, **830Mt at 0.71% Ni and 0.046% Co** (**5.9Mt contained nickel metal, 380kt contained cobalt metal** – ASX release 16 June 2021), Ardea is in the prime position to provide essential supplies of sustainably sourced nickel and cobalt, along with other Critical Minerals (notably scandium and the rare earth elements (**REEs**) neodymium and praseodymium).

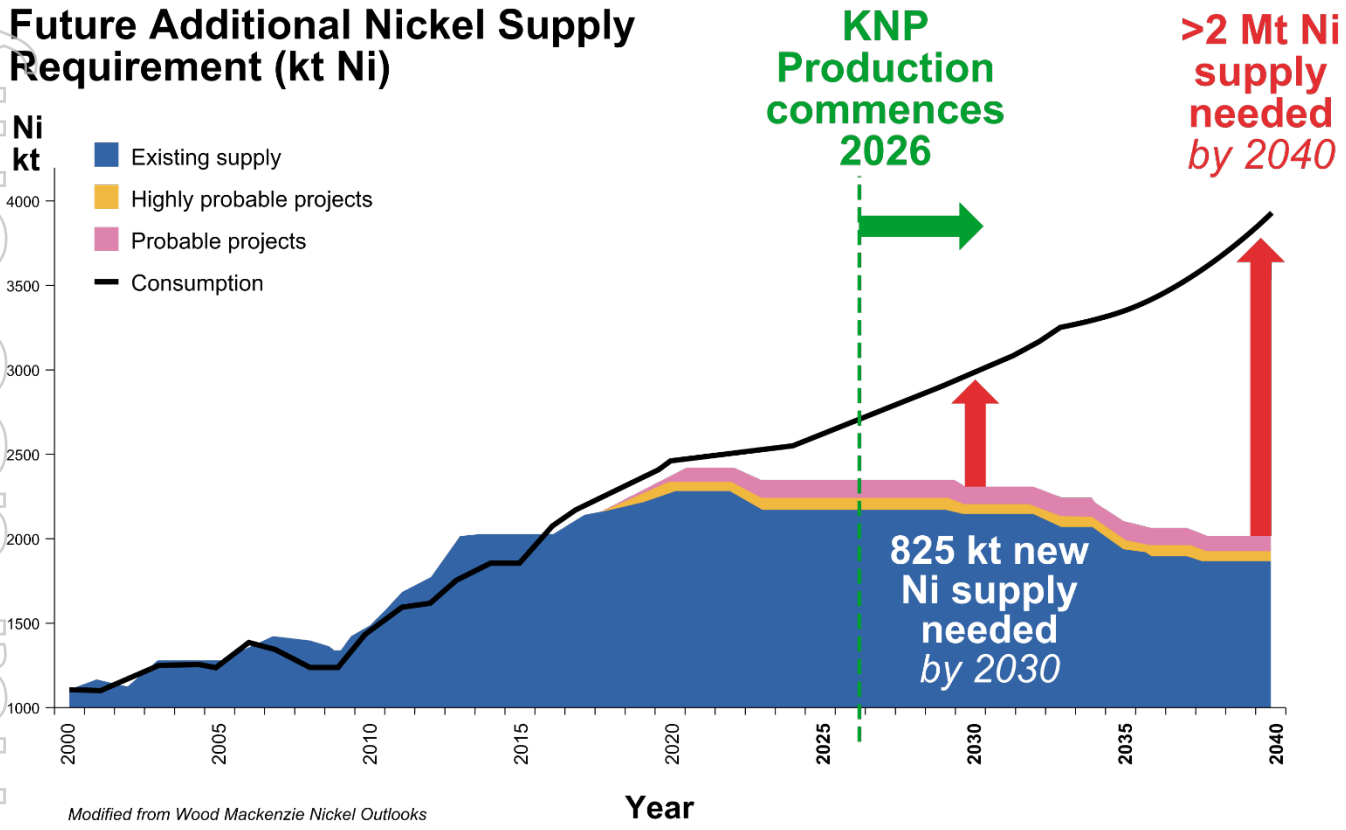


*Figure 1: Existing and forecast nickel supply and consumption highlighting the critical need for new nickel supply from 2022 onwards. *KNP production subject to completing a Definitive Feasibility Study, making a final investment decision, funding and developing the Goongarrie Hub.*

1. KALGOORLIE NICKEL PROJECT - GOONGARRIE HUB

The Goongarrie Hub is located 70km northwest of the mining city of Kalgoorlie-Boulder and is Ardea's most advanced project, within the broader KNP (Figure 2). Resources from the Goongarrie and Highway deposits are planned to be the base load feed for two High Pressure Acid Leach (**HPAL**) autoclaves and one AL plant located at Goongarrie. The 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 6km (Figure 2). All Goongarrie Hub resources are located on granted mining leases with Native Title Agreement in place and tenure 100%-controlled by Ardea.

The project also has mobile coverage and ready access to high-quality infrastructure with the Goldfields Highway, rail line and power infrastructure passing through the project area (Figure 3). There are two port options, these being Kwinana and Esperance, that are also 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. Ardea is engaged with State and Commonwealth statutory authorities who are coordinating the push for a downstream battery industry within the State of Western Australia where all the feedstocks, including nickel and cobalt, are available at the scales required.

For personal use only

For personal use only

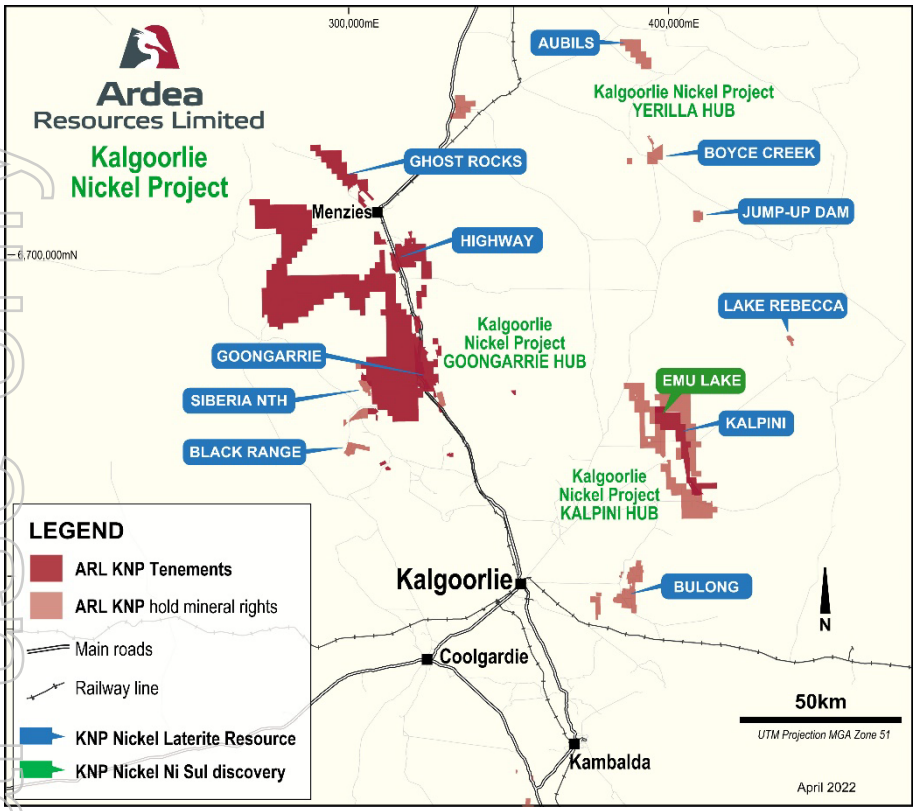


Figure 2: KNP location and infrastructure plan centred on the World's premier mining hub of the last 130 years being Kalgoorlie Boulder.

Projection GDA94 MGA94 Zone 51.

Figure 3: Aerial image of Ardea's Goongarrie Hub at Goongarrie South looking south showing road and rail infrastructure within the granted mining leases upon which the resources are located.

Note the semi-arid woodland environment, ideal for project development, safe tailings management and revegetation post mining.

All pits for the critical Payback period at project start-up are located in the flat terrain east of the road in an area of dominant goethite grind ore, in places extending to depths exceeding 100m. This is the jewel in the KNP crown and the reason LIB OEMs are so keen to engage with Ardea to secure sustainable nickel-cobalt offtake.

Feasibility Programs

The KNP is owned 100% by Ardea and is undergoing a DFS for a 3.5Mtpa operation, with two HPAL autoclave trains, each rated at 1.5Mtpa, as well as an AL circuit of at least 0.5Mtpa. The leach streams will initially produce MHP as an ethical and sustainable supply chain product for the LIB sector. There is potential to upgrade to PCAM as a stage 2 enhancement.

With the substantial KNP resource base with 5.9Mt of contained nickel, there is potential for many more trains of the 1.5Mtpa HPAL module, for KNP to be a significant World-scale nickel-cobalt producer.

The Goongarrie Hub Material Types allows the mineralisation to be optimally matched to the HPAL and AL circuits, and results in maximising resource utilisation. High magnesium plant feed which in previous schedules was stockpiled at pit ramp exits for late project HPAL processing is now designed to feed the AL circuit contemporaneously with mining.

Significantly, the additional sulphuric acid now required for the AL circuit leads to a larger sulphur-burning acid plant. The Acid Plant reaction chemistry is highly exothermic and generates substantial steam which will be used to generate electricity and process heating for the site. This allows a material de-carbonising of the project which is already low by industry standards (Figure 4) and will continue to be reduced as part of in-progress DFS work.

With the AL circuit positive impact on the site acid and energy balance, the operation is likely to be off-grid. Ongoing DFS work is in fact considering the operation as an energy exporter.

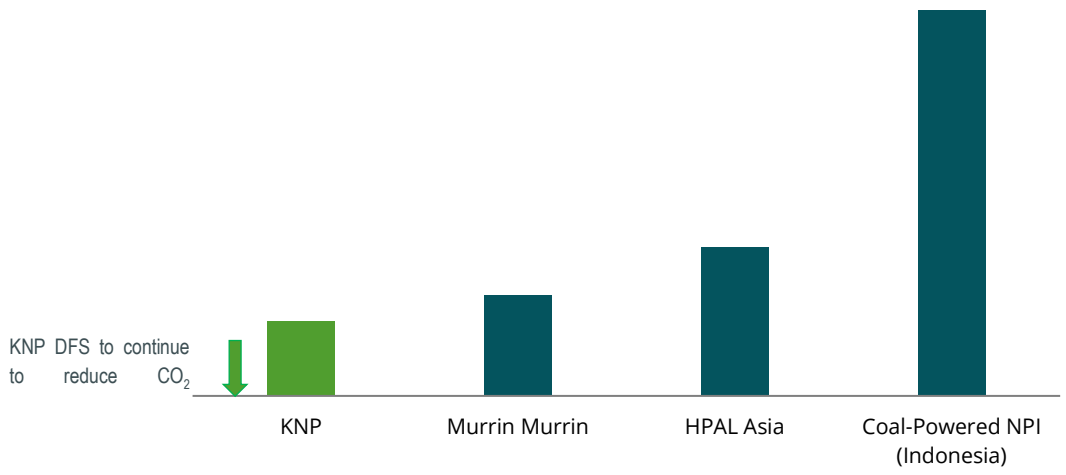


Figure 4: Indicative CO2 emissions intensity for laterite nickel production per kg of nickel production. After WoodMac Nickel Industry Costs and Ardea internal analysis.

As well as the Ardea 2018 KNP studies, the A$34.5M PFS completed by former KNP joint venture partner Vale Inco in 2009 in partnership with previous KNP owner Heron Resources Limited, has been a valuable information source. In particular, Vale Inco completed considerable bench-scale metallurgical work on screen beneficiation (termed **Bene Ore**) which Ardea has used in framing its current metallurgical bench-scale laboratory programs. Beneficiation has been a project risk at previous WA nickel laterite operations due to poor feed grade predictive models, so the KNP is more reliant on direct feed (termed **Grind Ore**), particularly during the Payback period.

Vale Inco test-work also returned favourable nickel-cobalt recoveries from Atmospheric Leach test work. However, at that point in time, Vale Inco's focus was on an alternate ancillary non-HPAL flow sheet which did not progress. Accordingly, there was no consideration for the potential benefits from including an AL circuit. With the Global Financial Crisis of 2008, Vale Inco closed multiple nickel operations and withdrew from the KNP joint venture.

For personal use only

For personal use only

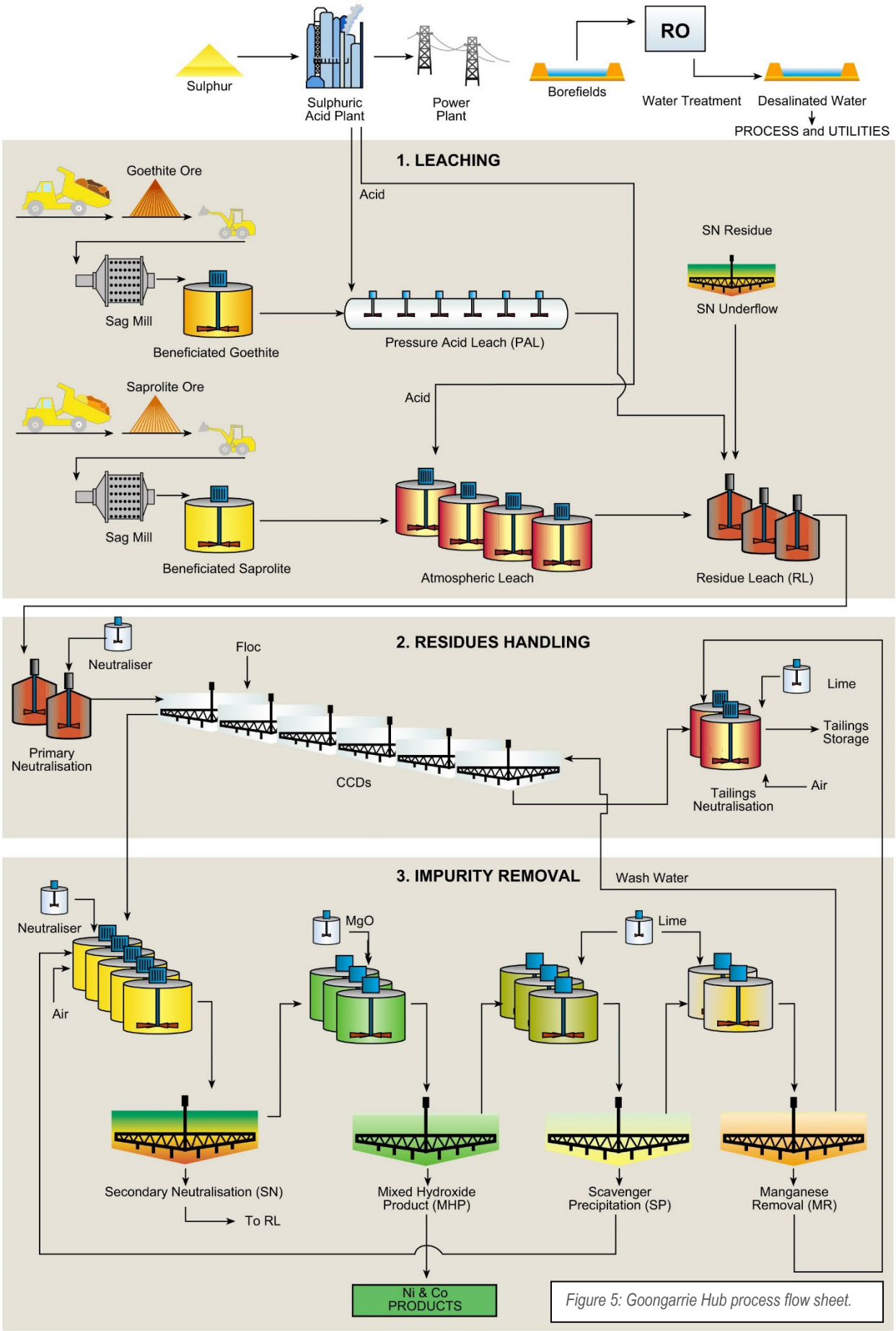


Figure 5: Goongarrie Hub process flow sheet.

For personal use only

Resource Modelling

The KNP continues to be evaluated for high-grade, >1% nickel, plant feed options. This includes by-product metallurgical studies including scandium and REE, and that all mineral resource estimation uses uniform methodologies. A review of the full KNP high-grade nickel Mineral Resource Estimate (**MRE**) is current, with Siberia North in the western Goongarrie Hub currently being assessed.

The combined Mineral Resources at the Goongarrie and Highway deposits for a starter processing plant development at the KNP Goongarrie Hub are reported below (Table 1), with an initial focus on the high-grade resource based on a 0.8% Ni cut-off.

The full Goongarrie Hub now has a single Material Types algorithm based solely on XRD-generated mineralogy. This modelling is the basis for pit optimisations, metallurgical flow sheet and engineering designs. Specifically, the Material Type classification aims to maximise feed to the HPAL and AL circuits.

Most importantly, Material Types are now segregated in the comminution circuit as Grind or Bene, and in leaching as HPAL feed, AL feed and Neutraliser. The Material Types algorithm is such that it can predict material down to mine road surface sheeting. The system has been developed by Ardea's in-house Resource Geologist, and is illustrative of the elite expertise the Company has developed since its 2017 ASX listing.

Drill core for the in progress metallurgical test-work has been selected on the basis of the modelled Material Types. The Vale Inco 2005-2009 and Ardea 2017-2018 piloting very much focussed Grind HPAL plant feed, so the current programs are skewed towards AL feed.

In terms of beneficiation, the KNP model used to select the test material was based on an assumed grade of scats (siliceous material rejected in screening) of 0.3% Ni. The financial model at that time used a nickel price of US$19,500 per tonne.

At the current nickel price exceeding US$30,000 per tonne, grades as low as 0.3% Ni have a considerable value which has the potential to move plant feed away from Bene in favour of Grind. Additionally, HPAL with 94% nickel recovery is favoured over AL with lower recoveries. To accommodate such considerations, the KNP financial model has been upgraded.

Table 1 - Highway and Goongarrie (ASX release 16 June 2021) nickel and cobalt Mineral Resources using a 0.8% Ni cut-off grade

Deposit	Resource Category	Tonnes (Mt)	Ni %	Co %	Contained Metal Ni (kt)	Contained Metal Co (kt)
Goongarrie Hub (GH, GS, BF & SD)	Measured	11.0	1.13	0.106	125	11.6
	Indicated	41.5	0.97	0.070	404	29.0
	Inferred	7.1	0.95	0.051	67	3.6
	Subtotal	59.6	1.00	0.074	595	44.3
Highway	Indicated	15.1	1.01	0.053	152	8.0
	Inferred	3.7	0.98	0.053	36	2.0
	Subtotal	18.8	1.00	0.053	188	10.0
Combined Deposits	Measured	11.0	1.13	0.106	125	11.6
	Indicated	56.5	0.98	0.066	556	37.1
	Inferred	10.8	0.95	0.051	103	5.6
	Grand Total	**78.3**	**1.00**	**0.069**	**784**	**54.3**

Ardea's updated 2021 Goongarrie and Highway resource estimates were incorporated with historic KNP resource estimates compiled by various parties between 2004 and 2009 and signed off to meet JORC-2012 guidelines by Heron Resources in 2013 (refer Table 2 below).

The KNP Goongarrie Hub MRE, based on a 0.5% Ni cut-off grade, is 561Mt with 3.8Mt of contained nickel and 248kt of contained cobalt and will be able to supply premium goethite plant feed to a HPAL process plant located at Goongarrie for multiple decades.

For personal use only

Table 2 – KNP nickel and cobalt Mineral Resources based on a 0.5% Ni cut-off grade

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	2021
		Inferred	21	0.67	0.040	141	8	LUC	Ardea	2021
	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	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	523	27	OK	Snowden	2004
	Siberia North	Indicated	10	0.64	0.051	64	5	OK	Snowden	2009
		Inferred	53	0.66	0.043	352	23	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	19	0.65	0.070	126	13			
		Inferred	144	0.66	0.041	943	59			
		Combined	***163***	***0.66***	***0.045***	***1,070***	***73***			
KNP Goongarrie Hub	**TOTAL**	Measured	18	0.94	0.085	171	15			
		Indicated	272	0.69	0.046	1,885	126			
		Inferred	270	0.65	0.039	1,767	107			
		Combined	***561***	***0.68***	***0.044***	***3,822***	***248***			
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
	Bulong East	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	357	0.72	0.047	2,584	168			
		Inferred	452	0.68	0.044	3,088	199			
	GRAND TOTAL	***Combined***	***830***	***0.71***	***0.046***	***5,879***	***384***			

Legend: LUC – Local Uniform Conditioning; OK – Ordinary Kriging.

Ardea is in the unique position of having unrivalled resource optionality and can consider the KNP resources outside of the Goongarrie Hub, as future satellite sources or separate stand-alone developments.

Processing Research and Development - Scandium and Rare Earth Elements

Current Ardea FY2022 Research & Development (**R&D**) is primarily based upon metallurgical experiments aimed at optimising the downstream product and hence revenue streams from the KNP and its sub-set Goongarrie Hub.

Key experiments relate to sustainability enhancements for the KNP HPAL and AL flowsheets, notably predicated upon the use of in-pit neutralisers. In terms of potential product revenue streams, opportunities involving the Critical Minerals cobalt, scandium and magnesium, the Platinum Group Elements (PGE) - Ru, Rh, Os and the REE neodymium, praseodymium and cerium, used in EV motors and wind-turbine power generation.

The securing of feed for the AL circuit is critical, since this was the mechanism to increase acid demand and thus excess steam generation to allow site energy self-sufficiency. Designing the AL programs is the key program in FY2022 R&D.

The priority focus is the diamond drill core metallurgical testwork current at ALS Balcatta metallurgical laboratory, which in addition to the nickel-cobalt HPAL and AL work is also considering Critical Minerals essential for the new age technologies used in limiting carbon emissions, such as the EV, Static Storage Battery (**SSB**) and electric motor/wind-turbine sectors.

Highly-sought Critical Minerals within the KNP lateritic enrichment regolith profile include:

- NCM content in LIB including precursor cathode-active material;
- EV electric motor REE permanent NdFeB magnet metals, most notably Nd-Pr. The KNP also has common Ce, and potential for Dy and La;
- Scandium for scandium-aluminium lightweight, high-strength fabrication in general and EV chassis in particular;
- Vanadium for community-scale and larger SSBs;
- Critical Minerals targets at potentially extractable grades identified during KNP R&D include:
  - Ba, Cr, Ga, In, Mg, Mo, Te, Ti, Sn, W, Y, Zr; and
  - PGEs - Ru, Rh, Os (due to excessive assay cost, using Pt-Pd as a pathfinder in pulp re-assay).

All of these Critical Minerals can be assessed because the HPAL process requires complete dissolution of goethite-hosted nickel-cobalt mineralisation, thereby rendering all contained metals into solution and thus amenable to recovery. This does not require each of these metals to be in stand-alone economic concentrations in their own right. Recovery of these metals relies on nickel and cobalt hydrometallurgical recovery, potentially providing significant credits and upside to the project economics. In-progress metallurgical test work will help determine the viability of recovering co-product Critical Minerals from the HPAL Pregnant Liquor Solution (**PLS**).

Critical Minerals research and development is predicated on the 60 element Ardea multi-element assay suite used in all sampling programs. The main R&D focus for the Company continues to be searching the KNP technical data base to select archived Ardea drilling sample pulps for re-assay for Critical Minerals (notably REE co-products and identifying fertile nickel sulphide multi-element ratios indicative of PGEs). This R&D is a joint CSIRO-Ardea program.

Re-assay of historic Kalpini Nickel Project drill pulps has confirmed very high-grade historical nickel-cobalt intercepts and identified previously undocumented but significant scandium credits. Additionally, significant REE and Rare Metal (**RM**) grades were indicated within the historic nickel-cobalt laterite mineralisation, highlighting the value of Ardea's R&D programs. Significant results received and reported during the Quarter include (ASX release 14 March 2022):

- WERC0371: 12m at 1.70% nickel, 0.151% cobalt, 28g/t scandium from 20m with;
  - 0.244% Total Rare Earth Oxide (**TREO**)
    Includes neodymium (**Nd**), praseodymium (**Pr**), lanthanum (**La**), cerium (**Ce**)
  - 1.320% Total Rare Metal Oxide (**TRMO**)
    Includes titanium (**Ti**), yttrium (**Y**), zircon (**Zr**), niobium (**Nb**), hafnium (**Hf**), tantalum (**Ta**), tungsten (**W**)

For personal use only

- VKPRC0112: 4m at 1.66% nickel, 0.102% cobalt, 40g/t scandium from 29m with;
  - 0.1297% TREO
  - 0.7193% TRMO

Subject to current bench-scale metallurgical test-work on Highway core material, REEs and RMs at Kalpini will be targeted to provide potential by-product credits as does cobalt and also potentially scandium.

Critical Minerals

Ardea continues to engage with the Commonwealth Critical Minerals Facilitation Office and other State and Federal agencies, such as Austrade and the Major Projects Facilitation Agency. Meetings with various other industry groups also continue.

CSIRO

Ardea continues to work with industry leading research partners, such as Australia's national science agency, CSIRO. The nickel sulphide study is supported and co-funded by the Australian Government's Entrepreneurs' Programme, Innovation Connections service and is continuing, with several samples from Emu Lake, Goongarrie and Highway being assessed to confirm key sulphide indicators. As an example of the value this work can add, CSIRO work helped lead to the recognition of the Thermal Erosion komatiite model, which is being applied to Emu Lake nickel sulphide target generation.

FBICRC

The FBICRC is an independent centre where industry, government and researchers can come together to create the tools, technologies, and skills to grow the role of battery storage in Australia's electricity grids, and make Australia a larger downstream player in global battery value chains.

Ardea continues to sponsor and work with the FBICRC team on the following work streams:

1. Cathode Precursor Project.
2. Innovative Nickel-Cobalt Extraction.
3. Electrochemical testing of Australian battery materials in standard cell formats.
4. Provenance and Trusted Supply Chains.
5. Certification and Environmental life Cycle Assessment.

Each one of these work streams is aimed at ensuring quality product specifications and ESG compliance for the LIB sector and sustainable and ethical supply from the best-regarded operating jurisdiction in the world, WA.

The consortium of FBICRC participants includes some of the largest nickel and chemicals producers in the world who are working with companies such as Ardea to produce from locally sourced materials the batteries used in electric vehicles.

Ardea has assembled suitable bulk drill sample material from current Goongarrie Hub drilling plus product from the 2018 PFS Goongarrie pilot run as test material for the FBICRC pilot plant.

Bench-scale Metallurgy

Bench scale metallurgical testwork is continuing at the ALS metallurgical laboratory in Perth. As well as conventional HPAL, the metallurgical test-work program is investigating atmospheric leaching of high-magnesium plant feed as well as the mineralised neutraliser, which would be performed in parallel to HPAL leaching of the iron-rich goethitic feed. From a process perspective, atmospheric leaching will be beneficial for stabilising the overall circuit, especially with

For personal use only

regards to sulphuric acid plant production and its role in maintaining the off-grid, carbon free, site energy balance. Other ALS test-work will include HPAL and Sc-REE recovery.

Assay results received during the Quarter from the Highway drill holes have returned multiple high-grade near surface nickel-cobalt significant results which confirm historic drill data (ASX release 11 February 2022) and include:

- AHID0002 42m at 0.77% nickel and 0.11% cobalt from 2m
  including **12m at 1.01% nickel and 0.22% cobalt from 16m**
  and **6m at 1.00% nickel and 0.04% cobalt from 38m**
- AHID0003 36m at 0.95% nickel and 0.08% cobalt from 2m
  including **24m at 1.11% nickel and 0.10% cobalt from 4m**
- AHID0004 40m at 0.86% nickel and 0.10% cobalt from 10m
  including **28m at 0.96% nickel and 0.12% cobalt from 14m**
- AHID0008 18m at 1.08% nickel and 0.06% cobalt from 4m
  including **14m at 1.21% nickel and 0.06% cobalt from 6m**
- AHID0010 28m at 0.87% nickel and 0.04% cobalt from 14m
  including **8m at 1.23% nickel and 0.05% cobalt from 22m**
- AHID0019 10m at 1.18% nickel and 0.12% cobalt from 18m
  including **8m at 1.32% nickel and 0.15% cobalt from 18m**
- AHID0020 28m at 0.78% nickel and 0.04% cobalt from 26m
  including **6m at 1.08% nickel and 0.08% cobalt from 30m**
  and **2m at 1.02% nickel and 0.04% cobalt from 46m**
- AHID0022 34m at 0.88% nickel and 0.04% cobalt from 8m
  including **14m at 1.14% nickel and 0.04% cobalt from 16m**
  and **2m at 1.01% nickel and 0.03% cobalt from 38m**

There is consistently **high cobalt grades**, with significant intercepts:

- AHID0001 22m at 0.56% nickel and **0.47% cobalt** from 38m
  including 2m at 1.17% nickel and **1.42% cobalt** from 40m
- AHID0002 12m at 1.01% nickel and **0.22% cobalt** from 16m
- AHID0004 12m at 0.80% nickel and **0.19%** cobalt from 34m

The Highway metallurgical hole selection was primarily based on obtaining representative in situ material for testing an Atmospheric Leach hydrometallurgical flowsheet. In particular, high-magnesium nontronite-serpentine clay mineralisation was sought on the basis of its role in sulphuric acid demand and hence the KNP low-carbon flowsheet.

Metallurgical Bulk Samples

Where parties doing technical due diligence on the KNP have required bulk samples for their independent test-work, this has been facilitated through Ardea's extensive drill sample laboratory coarse residue archive (several tonnes of material archived at the West Kalgoorlie yard and at the Malaga storage unit). These are key R&D assets.

For personal use only

For personal use only

Tailings Disposal Study

During the Quarter a review was conducted to identify best practice tailings management strategies. The review compared and contrasted nickel and alumina tails storage practices, and suggested that safe, cost effective and environmentally sound tailings management could be achieved by complementary handling of barren leach residues and mining waste, while ultimately restoring the landform to its original profile.

The independent review concluded that in-pit tails disposal at Goongarrie is expected to be the most environmentally favourable outcome, as it minimises land disturbance and the project footprint, whilst allowing rehabilitation to be completed cost effectively, concurrently with active mining operations (Figure 6).

Specifically, the KNP does not require high technical risk dry-stack tailings (dry-stack is required in high rainfall tropical settings in order to achieve the ESG standings which are mandatory for high-end LIB OEMs).

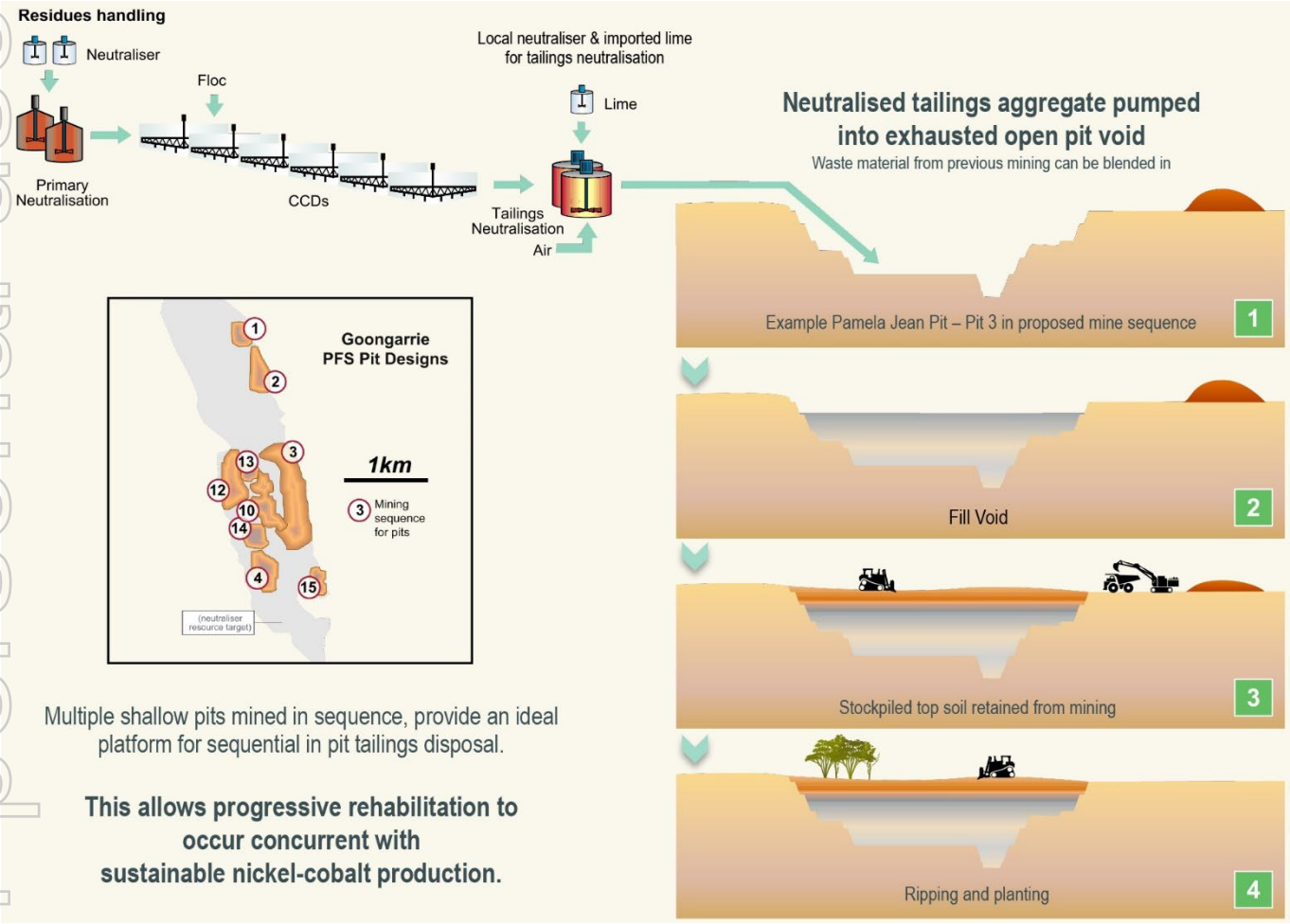


Figure 6: Planned Goongarrie Hub in-pit tails disposal and rehabilitation strategy.

Hydrogeology

At Goongarrie, all nickel-cobalt-scandium 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 potential water sources with water for project development expected to be sourced from dedicated bores and conventional open pit dewatering ahead of mining.

During the Quarter (ASX release 11 March 2022) the Department of Water and Environmental Regulation granted the Company two Groundwater Licences for the annual abstraction of 3.5Gl of saline water for processing and mine dewatering and development activities within Ardea's KNP Goongarrie Hub. The initial period of grant is 10 years and is renewable.

Additional water sourcing activities continue with 13 RC water exploration holes drilled during the Quarter, at Siberia North for 905m, assessing fractured rock aquifers. Additional drilling is currently underway to assess water flow rates and quality, with at least two water bores expected to be drilled during the June 2022 Quarter.

Both typical Eastern Goldfields saline water and potable water will be required for project development.

Ardea's US-based nano-filtration R&D test-work has already demonstrated the potential for this technology to be used for softening the HPAL water feed and for recycling barren process water to reduce both the project's water consumption and its water evaporation pond footprint.

Infrastructure and Logistics

As part of its ongoing stakeholder engagement, Ardea has accelerated communications with a number of key stakeholders, including:

1. The City of Kalgoorlie-Boulder – to provide both organisations with an update on key project development considerations, such as infrastructure and worker accommodation. Monthly meetings continue.
2. Southern Ports, Esperance - to provide both organisations with an update on key project development considerations, such as the transport of goods and services between Esperance and Goongarrie.
3. Goldfields Industrial Water Group – to study means of working co-operatively with local community and industry for efficient collection, use and recycling of water resources in the Kalgoorlie region.
4. Rail infrastructure and logistical suppliers in the Kalgoorlie region.

Environment and Rehabilitation

All project development within the KNP is aimed at ensuring systematic and rapid rehabilitation, concurrent with operations. The KNP is located within the Great Western Woodlands, the largest and healthiest temperate to semi-arid (Mediterranean climate) woodland remaining on Earth. The woodlands cover almost 16,000,000 hectares from the Nullarbor Plain in the east to the Wheatbelt in the west; from Esperance in the south through to the inland mulga country north of Kalgoorlie including the KNP as a very small component (Figure 2 and 3).

Comprehensive KNP flora and fauna surveys by Vale Inco in 2009 and Ardea in 2017 have confirmed environmental sustainability within the "temperate dry laterite" ecosystem.

Mine rehabilitation methodology is facilitated through three decades of WA open pit gold mine operations, and the KNP footprint is minimised through use of mining voids for tailings and mullock (in any event KNP has a low strip ratio, so relatively low mullock generation during mining).

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 located in seismically active regions. Additionally, wet tropical laterite production areas commonly involve non-restorable rain forest habitat destruction, which is unacceptable to OECD battery metal end-users.

It is doubtful whether wet tropical laterite hydrometallurgical battery metal sources can comply with the ESG standards required by the EV sector, particularly where submarine tailings disposal is used. Similarly, with in excess of 3,000mm of annual rainfall, it is an immense challenge for long-term tailings stabilisation.

For personal use only

Remarkably, the KNP semi-arid climate is likely just as important as its high nickel grade for its robust environmental and economic viability.

2. WA NICKEL SULPHIDE

Ardea's extensive and strategic land holding in the Eastern Goldfields of WA comprises 146 tenements, covering over 3,450km^2 and in addition to the globally significant nickel-cobalt-scandium KNP resource, is highly prospective for nickel sulphide and Critical Minerals (Figure 2 and 7).

Ardea Nickel Sulphide Strategy

The Company priority continues to be the development of the KNP, commencing with the Goongarrie Hub nickel laterite deposits. However, Ardea's strategic tenure in the heart of the Eastern Goldfields of Western Australia is also highly prospective for nickel sulphide which is mined extensively throughout the region. Ardea's nickel sulphide strategy complements the development of the KNP. The KNP nickel sulphide targets are a valuable asset in a region of multiple nickel sulphide concentrators, with most constrained by insufficient sulphide feed availability.

Ardea's KNP tenure covers extensive zones of ultramafic stratigraphy which hosts the KNP nickel laterite resources (Figure 7). This same tenure is highly prospective for both Kambalda style komatiite lava flow and Nova-Julimar style intrusive related nickel sulphide mineralisation. It is important to note that any nickel sulphide discovery has the potential to be processed supplementary to laterite mineralisation through the autoclaves planned for Goongarrie.

Although sulphides would only be processed in limited quantities compared to the lateritic throughput, they have the added benefit of helping control autoclave oxidising potential, assisting exothermic reaction kinetics (reduce autoclave steam heating requirement), and typically improving overall nickel recoveries.

An additional bonus is that metal concentrations considered deleterious to conventional nickel sulphide flotation concentrator processing (and that have historically curtailed development of several Eastern Goldfields deposits) do not affect the HPAL process, opening the possibility of mineral extraction from nickel sulphide deposits that may otherwise be overlooked.

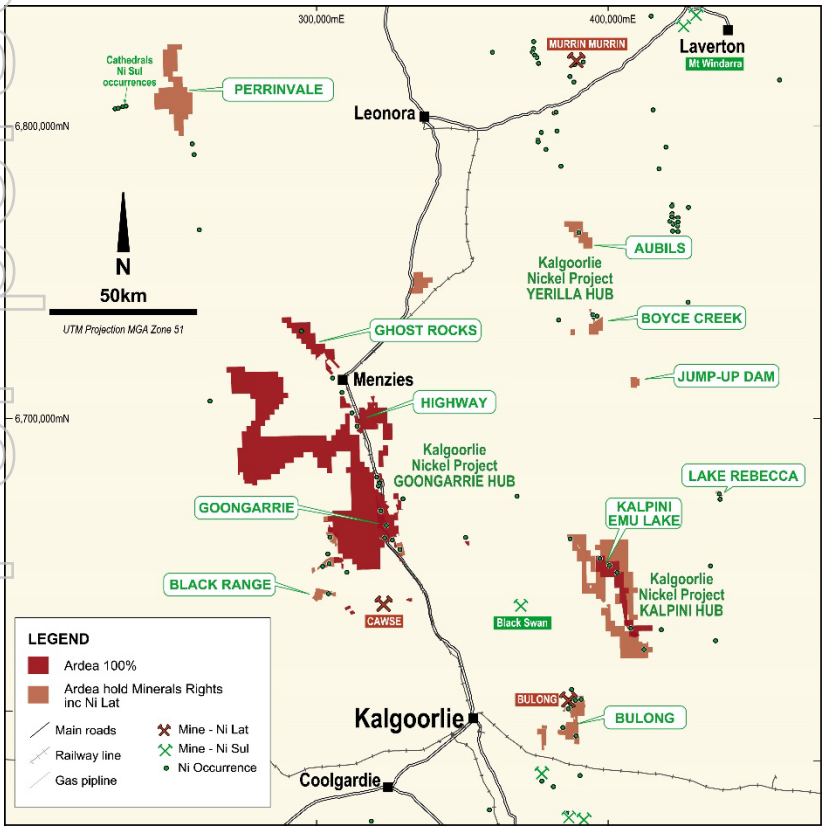


Figure 7: Ardea tenement plan highlighting the location of the Kalpini Project, Emu Lake Nickel Sulphide Camp and nickel mines and deposits in the region. Projection MGA 94 Zone 51.

For personal use only

For personal use only

Emu Lake Nickel Sulphide Prospect

Ardea's Kalpini Project is located 70km north-east of the City of Kalgoorlie-Boulder and covers 121km^2 on contiguous granted Mining Lease tenure 100%-owned by Ardea (Figure 7 and 9).

Regionally there are two distinct Kalpini ultramafic units each with 20-25km strike within Ardea tenure (Figure 9):

- 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 16 June 2021). Aeromagnetic data indicates a uniform sheet of ultramafics (lacking discrete volcanic centres). The ultramafics are typical of the Walter Williams Formation style, consisting of a thick 200-600m sheet with olivine orthocumulate upper and lower contacts with middle olivine meso to adcumulate which weathers to nickel laterite (Dunitic Sheet Flows-Layered Lava Lakes, "DSF-LLS", Figure 8). The Eastern Komatiite sits on the Kurnalpi Dome granitoid basement and is presumably an older lava flow sequence.

- The **Kalpini Western Komatiite Belt** hosts the Emu Lake Nickel Sulphide Camp. There are three documented and well-defined fertile nickel sulphide surfaces at Emu Lake (Dunitic Channelised Sheet Flows, "DCSF", Figure 8). The volcanics are characterised by a bi-modal co-magmatic suite, with each cycle having a footwall dacite volcanic overlain by ultramafic volcanic flows (Figure 8). Aeromagnetics indicate multiple discrete ultramafic centres. The ultramafic component of the flows is typically 10-40m thick, with dacite the lower flow component and komatiite the upper flow component. Massive nickel sulphide typically occurs in the upper dacite and grades stratigraphically up into disseminated nickel sulphide in the basal komatiite. The volcanic morphology is typical of a komatiite thermal erosion setting (as per Silver Swan) in a channelised flow (Huppert & Sparks 1989, Dowling et al. 2004). The Western Komatiite Belt overlies a thick felsic volcanic sequence (Black Flag Group equivalent) and is presumably a younger flow sequence.

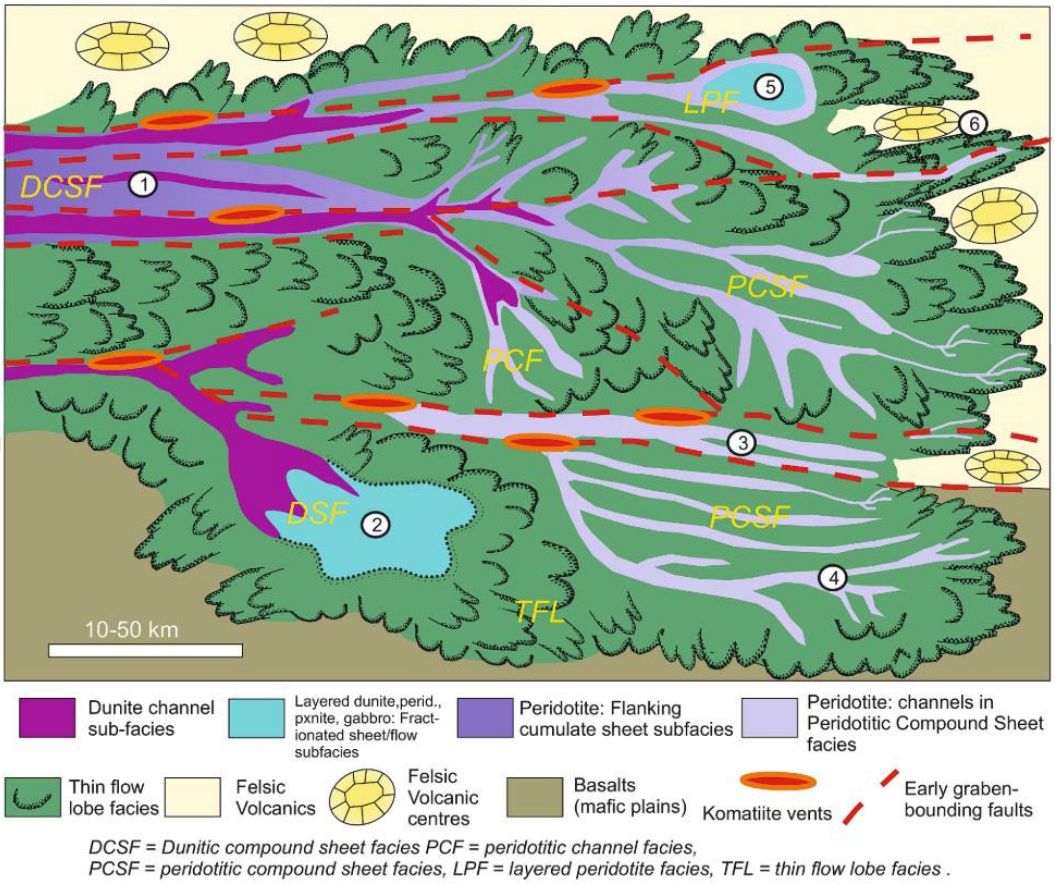


Figure 8: Komatiite facies outlined from Gole & Barnes, 2020.

For personal use only

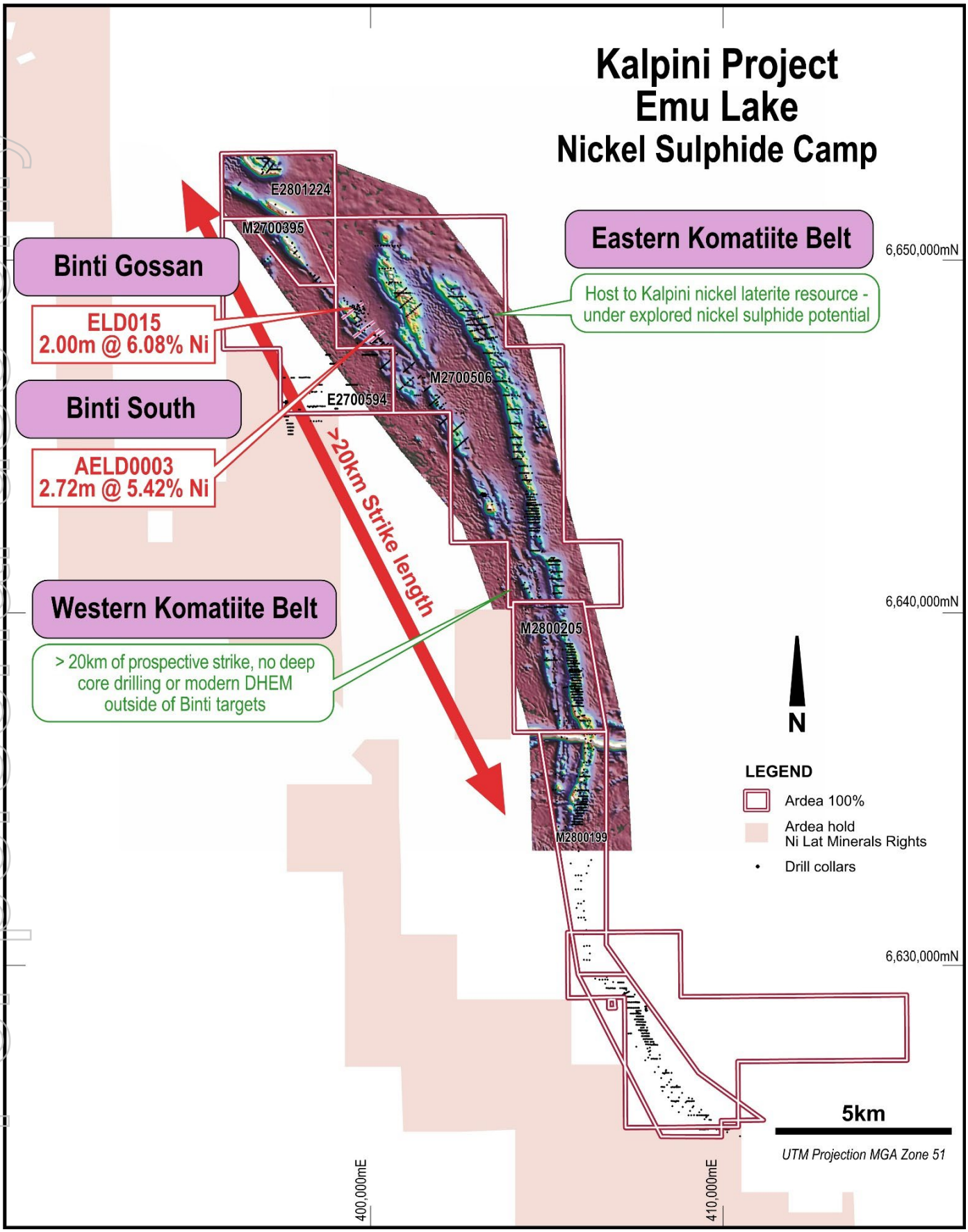


Figure 9: Aeromagnetics for the Kalpini Project showing strongly magnetic Komatiite Belts with historic shallow drill coverage focussed predominantly on nickel laterite mineralisation on the Eastern Komatiite Belt. Projection MGA 94 Zone 51.

Historic nickel sulphide drill exploration within the Kalpini Western Komatiite Belt has focussed entirely on the Eastern Ultramafic (EU) and Central Ultramafic (CU), with key historic drill-hole being ELD015 with 2m at 6.08% Ni (ASX release 7 February 2022). Drill testing of the Western Ultramafic (WU) was restricted to minimal "scissor" sections with easterly drill direction. These holes invariably intersected the WU in the depleted saprolite weathered zone. The majority of historic holes were drilled to the west and only intersected the EU and CU horizons at Binti Gossan, with the WU simply not drilled at the depths prospective for nickel sulphide mineralisation.

The EU and CU nickel sulphide surfaces show remarkable continuity and are open north and south and down-dip. Their uniform geometry suggests a sheet-flow environment for the komatiite flows. The discrete flow channels that must be present to have fed the sheet flows are yet to be intersected in Emu Lake drilling. The uniform position, grade and thickness of historic drill intercepts confirms the nickel sulphide fertility of the sheet-flow system.

Ardea commenced exploration of the WU in 2021 with drill-hole AELD0001, testing an off-hole DHEM anomaly from an historic survey of ELD046. This led to the discovery of the AELD0003 nickel sulphides with 2.72m at 5.42% Ni (ASX release 14 January 2022). The Binti South 3D model in figure 10 records the EU and CU with contiguous strike orientation south from Binti Gossan, though the intervening ground is undrilled at depth.

Significantly, Binti South includes as the red shape (Figure 10) the WU with basal nickel sulphide mineralisation as confirmed by AELD0002 and 0003. The Western Ultramafic is now the main exploration focus of Ardea, at both Binti South and Binti Gossan, with additional exploration upside on the CU and EU ultramafic flows with all target zones able to be tested by each drillhole.

In "Silver Swan style" nickel sulphide systems (as Emu Lake clearly is), the exploration methodology is to define a fertile nickel sulphide surface within komatiite flows and then identify the flow channel facies of the system, being the optimum setting in which massive sulphides are likely to deposit. The Ardea results for AELD0003 at Binti South and historic drill hole, ELD015, at Binti Gossan confirm an exceptionally fertile system, entirely comparable to that documented for Silver Swan.

During the Quarter, Ardea completed three diamond core drill holes for 1,044m, from a planned program of 4,350m (Figure 10) to follow-up the Binti South Prospect high-grade massive nickel-copper-PGE sulphide discovery within the footwall contact of the Western Ultramafic and at the Binti Gossan Prospect 1km northwest of Binti South within the footwall contact of the Central Ultramafic. Select historical drill holes are being re-entered, cleaned out and extended to provide DHEM platforms to test the Western Ultramafic nickel sulphide target position with modern DHEM surveys (ASX release 7 March 2022).

The core from holes completed thus far is currently being logged and will then be sampled for assay. DHEM surveys have been planned for all drill holes to help detect for off-hole conductors that could represent accumulations of conductive massive sulphides, including nickel bearing minerals such as pentlandite. This work program has been delayed by contractor equipment failure, with another contractor sourced to complete this important work.

Once all holes in the current exploration program have been drilled and DHEM surveys completed, Ardea will be able to update its geological model with a view to refining nickel sulphide potential around the historic Binti Gossan occurrence and the recent Ardea Western Ultramafic discovery, at Binti South.

Importantly, this drilling program is only testing an approximate 1km strike length with Ardea controlling 20km of this prospective ultramafic package (Figure 9). Interestingly, using Ardea's multi-element prospectivity index, historic Heron drill-hole, KPDD0001, located some 5km south of Binti is geochemically analogous to the Western Ultramafic DCSF, with core assays including 1m at 0.4% Ni, 0.1% Cu, 0.1g/t Pd and 0.8% S from 257m. The Ardea field crew are attempting to locate the hole for DHEM survey.

For personal use only

For personal use only

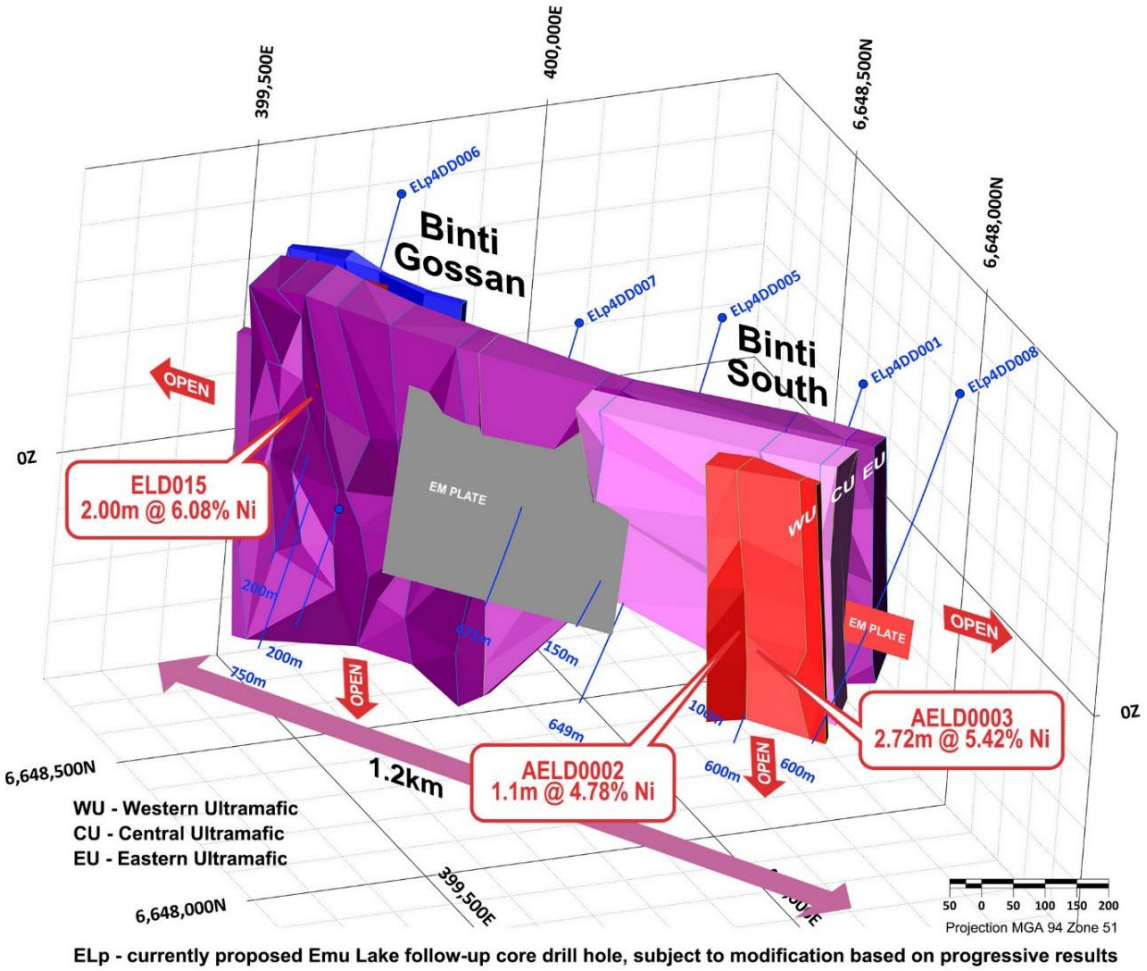


Figure 10: Three-dimensional geological interpretation of the Binti Gossan and Binti South Prospects, showing the Western Ultramafic (WU), Central Ultramafic (CU) and Eastern Ultramafic (EU). Selected initial follow up drill holes are displayed as the blue traces testing through to the Western Ultramafic nickel sulphide surface target.

Figure 11: AELD0003, NQ2 drill core from 391.04m showing the dacite footwall contact and thermal erosion on the left-hand side of the photo and high-grade massive nickel sulphide on the right-hand side of the image.

The Ardea team and partners such as CSIRO and Newexco are acknowleged for their input which has assisted in developing the Emu Lake "Thermal Erosion" nickel sulphide model which is a major exploration breakthrough for the Company, as it has opened up a significant new search space.

The Thermal Erosion model was introduced to Ardea through CSIRO collaborative research. Previous Emu Lake core logging interpreted the "flame" textures as "structural remobilisation".

With Ardea holding 20-25km of fertile komatiite strike at Emu Lake, there is significant scope to extend this nickel sulphide discoveries.

For personal use only

Bulong Nickel Sulphide Prospect

During the Quarter, six RC holes were drilled for 798m, with three holes drilled on each line to test a layered mafic complex (**LMC**) target defined by anomalous PGE soil geochemistry, limited subcrop and magnetic geophysical data (Figure 12). The concept was to test for nickel-copper-PGE mineralisation proximal to a norite (orthopyroxene gabbro) and pyroxenite contact in a similar setting to the Nova or Julimar LMC. The data collected is currently being interpreted and assay results are awaited.

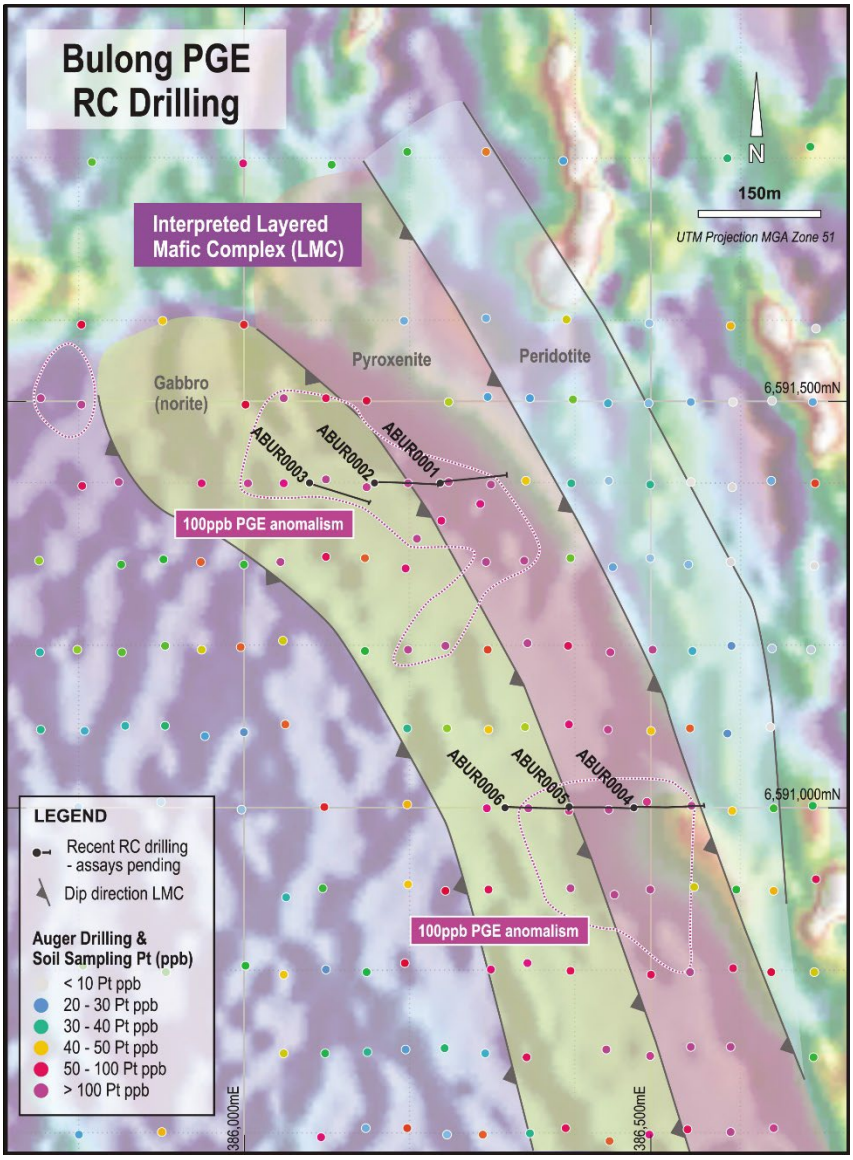


Figure 12: Bulong PGE Prospect – Aeromagnetic image, with GSWA geology boundaries, Platinum auger geochemical anomalism, >105ppb Platinum contours and recently completed drill hole traces shown. Projection MGA 94 Zone 51.

Bardoc Tectonic Zone Nickel Sulphide

Exploration to unlock the nickel sulphide potential throughout Ardea's strategic ground holding in the Bardoc Tectonic Zone continues. This work is assessing the ultramafic sequences of the KNP, where nickel sulphide mineralisation, if it exists, would be located in undrilled fresh rock beneath the laterite deposits. Using various geochemical markers, detailed petrographic studies, and re-evaluating historical geophysical data, new targets are being developed for potential drill testing.

In particular, interesting targets are evolving along the western basal contact of the Walter Williams Formation komatiite at Goongarrie South, Highway and Ghost Rocks.

For personal use only

3. CORPORATE

Strategy

Ardea's priority is KNP nickel-cobalt-scandium laterite project development, commencing with Goongarrie, to produce sustainably and ethically sourced battery 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 and development opportunities in nickel sulphide and Critical Minerals (notably REE) will also be pursued, such as the recent nickel sulphide discovery at Emu Lake.

Finance

The Company's cash position was $24.1M at Quarter end with no debt. All current programs are well funded.

Issued capital at 31 March 2022 was 169,537,772 shares, with 4,771,000 Performance Rights and 4,000,000 options.

Subsequent to the end of the Quarter (ASX release 20 April 2022), 549,000 Performance Rights lapsed, with 4,422,000 Performance Rights currently on issue and an additional 200,000 shares were issued to Directors following the 22 April 2022 Extraordinary General Meeting (ASX release 22 April 2022), taking the issued capital to 169,737,772 shares.

Summary of Expenditures for the Quarter

During the Quarter, the Company incurred a total net expenditure from operating activities of $2,405k. This was made up of $1,103k expended on exploration and evaluation activities, $976k on development activities, $188k on staff costs, and $145k on administrative and corporate costs, with the balance on minor items. Funds received during the Quarter included interest of $7k and $21,635k (before costs) from a Placement.

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 $376.5k and rental for the Company's West Kalgoorlie operations office of $22.5k 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.

4. LOOKING FORWARD

During the June 2022 Quarter, Ardea will focus upon the following programs.

Kalgoorlie Nickel Project

Ardea will continue to work with all stake-holders, including industry groups and the State and Federal Government to guarantee that project development is predicated on ensuring sustainable and ethical standards.

Strategic Partner Process

- Continue to manage and update the Virtual Data Room (VDR), in which activity continues to substantially increase.
- Continue active discussions with potential partners and Ardea advisors, to select a preferred project partner to work with Ardea on completing the DFS, make a Final Investment Decision, secure project funding and develop the Goongarrie Hub. In all discussions there is strong interest in securing off-take, with these rights requiring project equity investment and most importantly securing project finance.

Stake-holder Engagement

- Community consultation, notably with the City of Kalgoorlie Boulder, Shire of Menzies, Southern Ports Esperance and in particular with our First Nations groups.

- Continue engagement with groups such as the CSIRO, FBICRC, Australian Commonwealth Government, WA State Government, Critical Minerals Facilitation Office and Major Projects Facilitation Agency.

Resource Upgrades

- Standardising and reviewing geostatistical and block model MRE inputs, as requisitioned by VDR users.
- Complete the Siberia North resource update.
- Commence work at Kalpini, Bulong, Lake Rebecca, Yerilla and other satellite nickel-cobalt prospects.
- Incorporate pulp re-assays with all resource updates.

These satellite deposits can be considered as additional plant feed for the Goongarrie Hub or in the case of Kalpini, Bulong, Lake Rebecca and Yerilla, as a separate stand-alone production hub to further increase nickel-cobalt production rates from the KNP.

Flowsheet Research and Development

Continue evaluating additional by-product credit potential from the HPAL/AL pregnant liquor solution to supplement the nickel-cobalt-scandium resource. With bench-scale test-work underway, this process is being accelerated. This work continues to minimise the project development footprint and carbon emissions while adhering to Western Australia's world-class safety, health, environmental and operating standards.

KNP Feasibility

Accelerate DFS work streams with World-leading engineering consultancy Wood and incorporate the learnings from the in-progress bench scale metallurgical test-work focussed on mineralised neutraliser and Critical Minerals to further refine the DFS scope of work. Advance feasibility study work streams utilising both in-house personnel and supporting consultants.

WA Nickel Sulphide, Critical Mineral

Emu Lake

Complete the current diamond core drilling and DHEM programs at Emu Lake. Collate and interpret all data and plan follow-up exploration and resource definition drilling, as appropriate.

Bulong

Collate and interpret all data once assay results have been received and plan follow-up exploration and resource definition drilling, as appropriate.

Other KNP Projects

Review of geological settings favourable for nickel sulphide mineralisation and Critical Minerals throughout Ardea's strategic tenement holding will continue. Other project areas will also continue to be cost effectively reviewed using Ardea's extensive database, sample drill pulps available for re-assay at the West Kalgoorlie office and detailed geophysical datasets.

Continue work on the CSIRO nickel sulphide study, acknowledging CSIRO scientists' results to date as outstanding.

Investor Relations

The next conference Ardea is scheduled to attend will be the Noosa Mining Investor Conference over the period 20 to 22 July 2022. The Company will be presenting and also have personnel available for questions at the Ardea booth.

For personal use only

For personal use only

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

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

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

About Ardea Resources

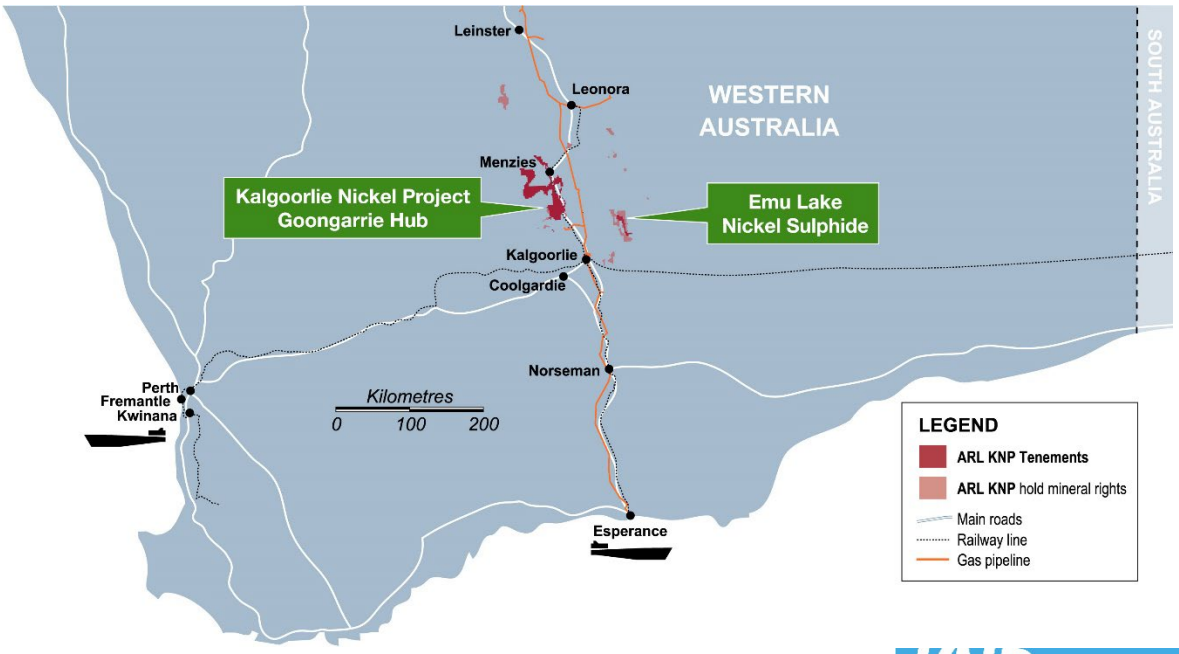
Ardea Resources (ASX:ARL) is an ASX-listed nickel resources company, with a large portfolio of 100%-controlled West Australian-based projects, focussed on:

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

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

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

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



Follow Ardea on social media

For personal use only

COMPLIANCE STATEMENT (JORC 2012)

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

1. *KNP Cobalt Zone Study on 7 August 2017, PFS 28 March 2018 and Expansion Study 24 July 2018.*
2. *GNCP High Grade Resource - 60 million tonne at 1.0% Nickel Sustainable Long-life Battery Metal Resource Confirmed, 15 February 2021.*
3. *Highway Nickel Deposit - Mineral Resource Estimate, 16 June 2021.*
4. *Annual Report 2021 – 24 September 2021.*
5. *Goongarrie Hub Feasibility Study Update, 15 November 2021.*
6. *Emu Lake Nickel Sulphide Discovery confirmed with 2.72m at 5.42% Ni, 14 January 2022.*
7. *Goongarrie Hub Feasibility Study Update, 25 January 2022.*
8. *Emu Lake Nickel Sulphide Camp Follow-Up Program, 7 February 2022.*
9. *Confirmation of High-Grade Nickel-Cobalt from Highway Metallurgical Drilling, 11 February 2022.*
10. *Successful A$21.5 Million Capital Raising, 22 February 2022.*
11. *Emu Lake Nickel Sulphide Follow-up Drilling Commenced, 7 March 2022.*
12. *Goongarrie Hub Water Extraction Licences Granted, 11 March 2022.*
13. *High-grade Nickel-Cobalt Confirmed at Kalpini with Scandium and Rare Earth Elements, 14 March 2022.*
14. *Kalgoorlie Nickel Project Awarded Major Project Status, 18 March 2022.*
15. *Kalgoorlie Nickel Project Recognition on All Tiers of Australian Government, 21 March 2022.*

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. All projects are subject to new work programs, notably drilling, metallurgy and JORC Code 2012 resource estimation as applicable.

The information in this report that relates to Resource Estimates for the KNP is based on information originally compiled by previous and current full-time employees of Heron Resources Limited and current full-time employees of Ardea Resources Limited. The Exploration Results, Resource Estimates and data collection processes have been reviewed, verified and re-interpreted by Mr Ian Buchhorn who is a Member of the Australasian Institute of Mining and Metallurgy and currently a director of Ardea Resources Limited. Mr Buchhorn has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the exploration activities undertaken 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 consents to the inclusion in this report of the matters based on his information in the form and context that it appears. Mr Buchhorn owns Ardea shares.

The exploration and industry benchmarking summaries are based on information reviewed or compiled by Mr Andrew Penkethman, who is a Fellow of the Australasian Institute of Mining and Metallurgy and a Member of the Australian Institute of Geoscientists. Mr Penkethman is a full-time employee of Ardea Resources Limited and has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Penkethman has reviewed this press release and consents to the inclusion in this report of the information in the form and context in which it appears. Mr Penkethman owns Ardea shares.

For personal use only

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 Goongarrie Nickel Cobalt Project is at the PFS phase and although reasonable care has been taken to ensure 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 and Expansion Study, which are based on forward looking statements, is that the Goongarrie Nickel Cobalt Project is considered to have positive economic potential.

The Mineral Resource used for the PFS was classified under JORC 2012 Guidelines and announced by the Company on 14 March 2018. The cut-off grades adapted for the PFS and reported in Table 3.1 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 Goongarrie Nickel Cobalt Project. 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.

Appendix 5B

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

For personal use only

Name of entity

Ardea Resources Limited

ABN	Quarter ended ("current quarter")
30 614 289 342	31 March 2022

Consolidated statement of cash flows		Current quarter $A'000	Year to date (9 months) $A'000
1.	**Cash flows from operating activities**		
1.1	Receipts from customers	-	-
1.2	Payments for		
	(a) exploration & evaluation	(1,103)	(3,659)
	(b) development	(976)	(3,169)
	(c) production	-	-
	(d) staff costs	(188)	(428)
	(e) administration and corporate costs	(145)	(522)
1.3	Dividends received (see note 3)	-	-
1.4	Interest received	7	16
1.5	Interest and other costs of finance paid	-	-
1.6	Income taxes paid	-	-
1.7	Government grants and tax incentives	-	(34)
1.8	Other (provide details if material) –		
	Kalgoorlie Gold costs to be repaid on IPO	-	(651)
	Kalgoorlie Gold costs repaid	-	1,102
1.9	**Net cash from / (used in) operating activities**	**(2,405)**	**(7,345)**

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	-	-

For personal use only

Consolidated statement of cash flows		Current quarter $A'000	Year to date (9 months) $A'000
2.2	Proceeds from the disposal of:		
	(a) entities	-	-
	(b) tenements	-	-
	(c) property, plant and equipment	-	-
	(d) investments	-	99
	(e) other non-current assets	-	-
2.3	Cash flows from loans to other entities	-	-
2.4	Dividends received (see note 3)	-	-
2.5	Other (provide details if material)	-	-
2.6	**Net cash from / (used in) investing activities**	**-**	**99**

3.	**Cash flows from financing activities**		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	21,635	27,335
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	(1,292)	(1,667)
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**	**20,343**	**25,668**

4.	**Net increase / (decrease) in cash and cash equivalents for the period**	17,938	18,422
4.1	Cash and cash equivalents at beginning of period	6,173	5,689
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(2,405)	(7,345)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	-	99
4.4	Net cash from / (used in) financing activities (item 3.10 above)	20,343	25,668

Consolidated statement of cash flows		Current quarter $A'000	Year to date (9 months) $A'000
4.5	Effect of movement in exchange rates on cash held	-	
4.6	**Cash and cash equivalents at end of period**	**24,111**	**24,111**

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	1,965	2,032
5.2	Call deposits	22,146	4,141
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)**	**24,111**	**6,173**

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	399
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 - $376,548

Payments for Kalgoorlie Office to a Director related entity for the quarter - $22,500

For personal use only

For personal use only

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)	(2,405)
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)	(2,405)
8.4	Cash and cash equivalents at quarter end (item 4.6)	24,111
8.5	Unused finance facilities available at quarter end (item 7.5)	-
8.6	Total available funding (item 8.4 + item 8.5)	24,111
8.7	**Estimated quarters of funding available (item 8.6 divided by item 8.3)**	9.97

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

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: 28th April 2022

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.

For personal use only

For personal use only

Ardea Resources Limited Tenement Schedule (WA) as at 31 March 2022

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		Pending		**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	
E30/500	Goongarrie	100		Live		**M29/424**	Goongarrie	100	Live	
E30/501	Goongarrie	100		Live		**M29/426**	Goongarrie	100	Live	
E30/502	Goongarrie	100		Live		**P24/5260**	Goongarrie	100	Live	
G29/25	Goongarrie	100		Pending		**P24/5328**	Goongarrie	100	Live	
L24/239	Goongarrie	100		Live		**P24/5329**	Goongarrie	100	Live	
L29/134	Goongarrie	100		Live		**P24/5265**	Goongarrie-Carr Boyd	100	Live	
L29/135	Goongarrie	100		Live		**P24/5169**	Goongarrie-Windanya	100	Live	
L30/67	Goongarrie	100		Live		**P24/5480**	Goongarrie-Windanya	100	Live	
L30/68	Goongarrie	100		Live		**M24/919**	Goongarrie-Scotia	100 Ni rights	Live	6
L16/141	Goongarrie	100		Live		**M24/959**	Goongarrie-Scotia	100 Ni rights	Live	6
L30/85	Goongarrie	100		Pending		**M24/541**	Goongarrie	100	Live	
P29/2646	Highway North	100		Pending		**P29/2650**	Highway North	100	Pending	
P29/2647	Highway North	100		Pending		**P29/2651**	Highway North	100	Pending	
P29/2648	Highway North	100		Pending		**E29/1125**	Goongarrie East	100	Live	16
P29/2649	Highway North	100		Pending		**E29/1082**	Goongarrie	100	Live	
P24/5528	Goongarrie	100		Pending		**E29/1089**	Goongarrie	100	Live	
P29/2559	Highway North	100		Live		**P29/2561**	Highway North	100	Live	
P29/2560	Highway North	100		Live		**P29/2562**	Highway North	100	Live	

Goongarrie Hub Expansion

Siberia

Tenure	Location	Ardea Interest (%)	Status	Note
E24/203	Siberia	100 non Au-Ag rights	Live	4
E29/889	Siberia	100 non Au-Ag rights	Live	4
M24/634	Siberia	100 non Au-Ag rights	Live	1,4
M24/660	Siberia	100 non Au-Ag rights	Live	4
M24/663	Siberia	100 non Au-Ag rights	Live	4
M24/664	Siberia	100 non Au-Ag rights	Live	4
M24/665	Siberia	90 non Au-Ag rights	Live	2,4
M24/683	Siberia	100 non Au-Ag rights	Live	4
M24/686	Siberia	100 non Au-Ag rights	Live	4
M24/772	Siberia	100 non Au-Ag rights	Live	4
M24/797	Siberia	100 non Au-Ag rights	Live	4
M24/915	Siberia	100 non Au-Ag rights	Live	4
M24/916	Siberia	100 non Au-Ag rights	Live	4
P24/5235	Siberia	100	Live	
P24/5236	Siberia	100	Live	
P29/2484	Siberia	100	Live	
P29/2485	Siberia	100	Live	
P24/5416	Siberia	100	Live	
P24/5417	Siberia	100	Live	
P24/5418	Siberia	100	Live	

For personal use only

Goongarrie Hub Expansion
Black Range

Tenure	Location	Ardea Interest (%)	Status	Note
M24/757	Black Range	100 non Au-Ag rights	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

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	15	**P25/2455**	Kalpini-Bulong	100	Live	
E27/607	Kalpini	100	Live	15	**P25/2456**	Kalpini-Bulong	100	Live	
E28/1224	Kalpini	100	Live		**P25/2457**	Kalpini-Bulong	100	Live	
E28/2978	Kalpini	100	Live	15	**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	Live	
M28/205	Kalpini	100	Live		**P25/2484**	Kalpini-Bulong	100	Live	
E27/278	Kalpini-Acra	100 Ni Lat Ore	Live	5	**P25/2559**	Kalpini-Bulong	100	Live	
E27/438	Kalpini-Acra	100 Ni Lat Ore	Live	5	**P25/2560**	Kalpini-Bulong	100	Live	
E27/520	Kalpini-Acra	100 Ni Lat Ore	Live	5	**P25/2561**	Kalpini-Bulong	100	Live	
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	Live	15	**P25/2615**	Kalpini-Bulong	100	Live	
M25/59	Kalpini-Bulong	100	Live	15	**P25/2650**	Kalpini-Bulong	100	Live	
M25/134	Kalpini-Bulong	100	Live	15	**P26/4542**	Kalpini-Bulong	100	Live	15
M25/145	Kalpini-Bulong	100	Live	15	**P26/4543**	Kalpini-Bulong	100	Live	15
M25/151	Kalpini-Bulong	100	Live	15	**M31/488**	Kalpini-Lake Rebecca	100	Pending	15
M25/161	Kalpini-Bulong	100	Live	15	**P31/2038**	Kalpini-Lake Rebecca	100	Live	15
M25/171	Kalpini-Bulong	100	Live	15	**P31/2039**	Kalpini-Lake Rebecca	100	Live	15
M25/187	Kalpini-Bulong	100	Live	15	**P31/2040**	Kalpini-Lake Rebecca	100	Live	15
M25/209	Kalpini-Bulong	100	Live	15	**E27/643**	Kalpini	100	Pending	15
E27/646	Kalpini	100	Pending	15	**E27/647**	Kalpini	100	Pending	15
E28/3139	Kalpini	100	Pending		**P25/2306**	Kalpini-Bulong	100	Live	14, 15
P25/2295	Kalpini	100	Live	15	**M25/19**	Kalpini-Bulong	100	Live	14, 15
P25/2296	Kalpini-Bulong	100	Live	14, 15	**P25/2307**	Kalpini-Bulong	100	Live	14, 15
P25/2297	Kalpini-Bulong	100	Live	14, 15	**P25/2308**	Kalpini-Bulong	100	Live	14, 15
P25/2304	Kalpini-Bulong	100	Live	14, 15	**P25/2408**	Kalpini-Bulong	100	Live	14, 15
P25/2305	Kalpini-Bulong	100	Live	14, 15	**P25/2409**	Kalpini-Bulong	100	Live	14, 15

For personal use only

WA Regional

Tenure	Location	Ardea Interest (%)	Status	Note
E39/2188	Yundamindra	100	Live	15
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
E31/1261	Pinjin	100	Pending	
E28/3134	Pinjin	100	Pending	
E26/228	Gidji	100	Pending	15

Yerilla Hub

Tenure	Location	Ardea Interest (%)	Status	Note
E39/1954	Yerilla-Aubils	100	Live	15
M39/1147	Yerilla-Aubils	100	Pending	
E31/1092	Yerilla-Boyce Creek	100	Live	15
E31/1169	Yerilla-Boyce Creek	100	Live	15
E31/1208	Yerilla-Boyce Creek	100	Live	15
E31/1213	Yerilla-Boyce Creek	100	Live	15
M31/483	Yerilla-Boyce Creek	100	Live	15
M31/493	Yerilla-Boyce Creek	100	Pending	15
M31/475	Yerilla-Jump Up Dam	100	Live	15
M31/477	Yerilla-Jump Up Dam	100	Live	15
M31/479	Yerilla-Jump Up Dam	100	Live	15

Kookynie Gold-Nickel

Tenure	Location	Ardea Interest (%)	Status	Note
E40/350	Kookynie	0	Live	11
E40/357	Kookynie	0	Live	11

Perrinvale Nickel-Gold

Tenure	Location	Ardea Interest (%)	Status	Note
E29/1006	Perrinvale	100	Live	15
E29/1078	Perrinvale	100	Live	15

Mt Zephyr Gold-Nickel

Tenure	Location	Ardea Interest (%)	Status	Note	Tenure	Location	Ardea Interest (%)	Status	Note
E37/1271	Mt Zephyr	100	Live	12	**E39/1706**	Mt Zephyr	100	Live	12
E37/1272	Darlot East	100	Live	12	**E39/1854**	Mt Zephyr	100	Live	12
E37/1273	Darlot East	100	Live	12	**E39/1985**	Mt Zephyr	100	Live	12
E37/1274	Mt Zephyr	100	Live	12					

Bedonia Gold-Nickel

Tenure	Location	Ardea Interest (%)	Status	Note	Tenure	Location	Ardea Interest (%)	Status	Note
E63/1828	Bedonia	100	Live	13	**E63/1857**	Bedonia	100	Live	13
E63/1856	Bedonia	100	Live	13	**E63/1928**	Bedonia	100	Live	13

Ardea Resources Limited Tenement Schedule (NSW) as at 31 March 2022

Lachlan Fold Belt – Ardea

Tenure	Location	Ardea Interest (	Status	Note
EL 8557	Restdown Tin/Lithium	100	Live	

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.	By a Tenement Sale and Purchase Agreement executed on 8 February 2021, Bedonia East was sold to Moneghetti Minerals Limited. Completion is subject to Moneghetti Minerals Limited successfully listing on the ASX in 2022.
14.	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.
15.	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.

Interests in Mining Tenements and Petroleum Tenements Acquired or Increased during the March Quarter 2022

Ardea WA Tenements

Tenure	Location	Nature of Interest	Ardea Interest beginning Quarter (%)	Ardea Interest end Quarter (%)
E08/3459	Ashburton	Application	100	0

For personal use only