

## ASX & Media Release

21 April 2021

## ASX Symbol

ARL

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## Directors

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*Non-Executive Chair*

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*Managing Director & CEO*

Ian Buchhorn  
*Executive Director*

## Executive Management

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*Company Secretary & CFO*

Matt Painter  
*General Manager Exploration*

## Issued Capital

Fully Paid Ordinary Shares  
127,670,582

Directors/Employee  
Performance Rights  
4,236,000

ABN 30 614 289 342

# QUARTERLY OPERATIONS REPORT

For the Quarter ended 31 March 2021

## CORPORATE

Ardea Resources Limited (**Ardea** or the **Company**) continues significant work programs on its Kalgoorlie Nickel Project (**KNP**) in the Eastern Goldfields of Western Australian (**WA**) with no disruption from COVID-19.

Ardea remains debt free, with a tight capital structure and strong cash position with **\$8.3M** cash-at-bank at the end of the March 2021 Quarter.

The Company continues to consolidate its large WA project portfolio and focus on the sustainable and ethical development of the KNP. Exploration programs continue testing compelling nickel sulphide, Critical Mineral and gold exploration targets within KNP tenure, along with strategic opportunities to further consolidate Ardea's tenement base.

Work continues on the planned Kalgoorlie-Boulder focussed gold IPO spin-out, Kalgoorlie Gold Mining Limited (**KalGold**), with planned in-specie share distribution.

## DEVELOPMENT

### Goongarrie Nickel Cobalt Project (GNCP)

- **Strategic Partner** process has seen increased interest from OEMs wanting to secure sustainable, ethical off-take for nickel and cobalt in response to growing demand for critical mineral supplies associated with the lithium-ion battery (**LIB**) supply chain. Ardea remains committed to ensuring any off-take agreement is linked to project development funding.
- **Goongarrie Line resource update**<sup>1</sup> defined a **high-grade core of 60 million tonnes at 1.0% nickel** and reaffirmed the GNCP as a sustainable long-life battery metal resource, including a maiden scandium resource that could represent a valuable by-product.
- **Industry Partnerships** continue to be formed with key Critical Mineral and LIB participants. Ardea was accepted as a key industry participant of the Future Battery Industry Co-operative Research Centre (**FBICRC**).

## EXPLORATION

### WA Nickel Sulphide, Critical Minerals and Gold

Exploration continues on Ardea's strategic KNP tenements for nickel-copper-PGE sulphide, Critical Minerals and gold, with multiple work programs underway.

- **Nickel Sulphide** – Initial Emu Lake diamond drill hole intersected remobilised nickel sulphides confirming the target prospectivity. DHEM surveys defined a compelling 8,000 siemens conductor with a follow-up diamond hole and DHEM survey just completed on this target. A MLEM survey is underway on a further five targets at Kalpini<sup>2</sup>.
- **Bardoc Tectonic Zone Critical Minerals and Gold** – Multiple targets were drill tested from regional air core to deep diamond drilling at Windanya where a 862m hole has recently been completed. A very large laboratory backlog of assays is continuing to frustrate the reporting of results.
- **CSIRO study of Critical Minerals/gold within GNCP** - Several key pathfinder mineral associations were highlighted indicating both hydrothermal and magmatic mineralisation targets, with a final report expected soon.

<sup>1</sup> Ardea ASX release 15 February 2021.

<sup>2</sup> Ardea ASX releases 2 and 30 March 2021.

## March 2021 Quarter

### Environmental, Social and corporate Governance

Ardea and importantly the Original Equipment Manufacturers (**OEM**) with whom it deals all operate to ensure Environmental, Social and corporate Governance (**ESG**) considerations are at the forefront of the way in which the Company does business and assesses societal impact. All project designs and work practices are predicated on ensuring the Company minimises green-house gas emission per tonne of nickel equivalent production. In doing so, the Company can ensure responsible sourcing of critical mineral supply, through sustainable and ethical production.

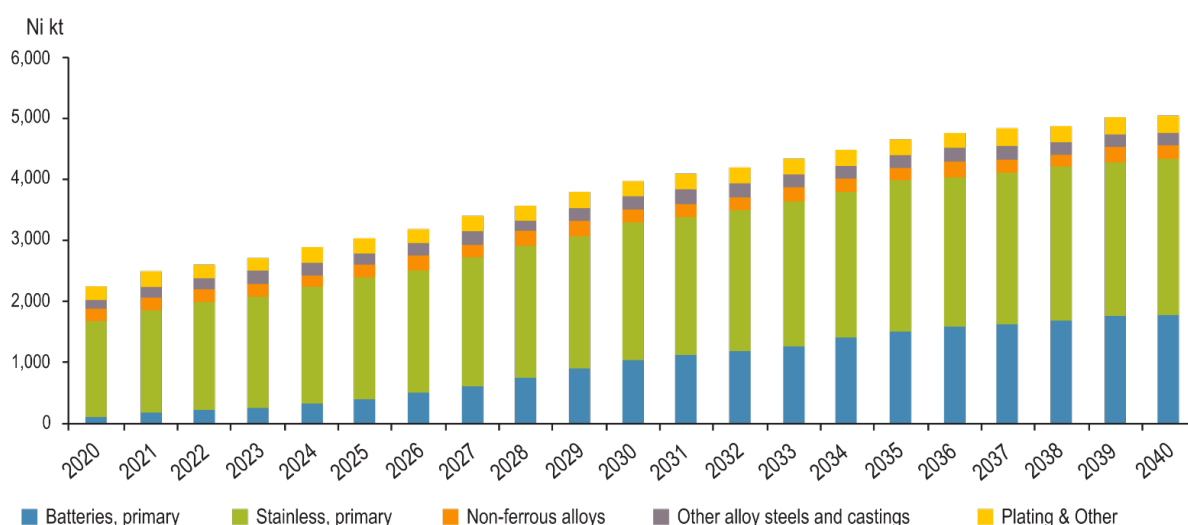
Jurisdictions such as Europe are leading the way in responsible sourcing of materials, through mechanisms such as mandatory reporting of CO<sub>2</sub> footprints for all batteries sold. Traceability is also being implemented with raw materials used in batteries that must be procured according to OECD guidelines for sustainable sourcing. These important considerations are part of the work Ardea is undertaking with the Future Battery Industry Co-operative Research Centre (**FBICRC**), which the Company joined during the Quarter.

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 Nickel Cobalt Project.

The Ardea team comprises over 31% female participation, all in key management roles, and the Company is a strong advocate for gender equality and fair representation for all community groups.

### Nickel Sector Commentary

The nickel sector is expected to continue to experience a rapid rise in demand linked to the lithium-ion battery (**LIB**) supply chain as well as traditional uses such as stainless steel (Figure 1). Current nickel production is not expected to be able to keep pace with demand with all currently identified laterite and sulphide nickel deposits that can ensure sustainable and ethical mineral supply expected to be developed in the years ahead to meet this demand. With Ardea's Kalgoorlie Nickel Project (**KNP**) hosting one of the largest nickel-cobalt resources in the developed world, **826Mt at 0.7% nickel and 0.05% cobalt (5.8Mt of contained nickel metal and 384kt of contained cobalt metal** – ASX release 15 February 2021), Ardea is well placed to provide essential supplies of sustainably sourced nickel and cobalt, along with other Critical Minerals (notably scandium and the Rare Earths neodymium, praseodymium and cerium). At the projected rate of nickel demand increase, the World needs to commission five new “KNPs” (at 20ktpa nickel output) every year. Based on projected demand, in 2040 the World would consume the full KNP nickel resource equivalent within some 18 months.



Source: Roskill, 2020

Figure 1: Total primary nickel demand estimate by first use sector from 2020 to 2040 (kt nickel), after Roskill 2020.

## 1. GOONGARRIE NICKEL COBALT PROJECT

The Goongarrie Nickel Cobalt Project (**GNCP**) is located 70km northwest of the mining city of Kalgoorlie-Boulder and is Ardea's most advanced development project, within the broader Kalgoorlie Nickel Project (Figure 2). GNCP resources extend over 25km of strike and are located on granted mining leases within a single consolidated operation (Figure 3) with Native Title Agreement in place and tenure 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 and 4) and port options being Kwinana and Esperance serviced by the road and rail network.

Critically, 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 all 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 critical scales required.

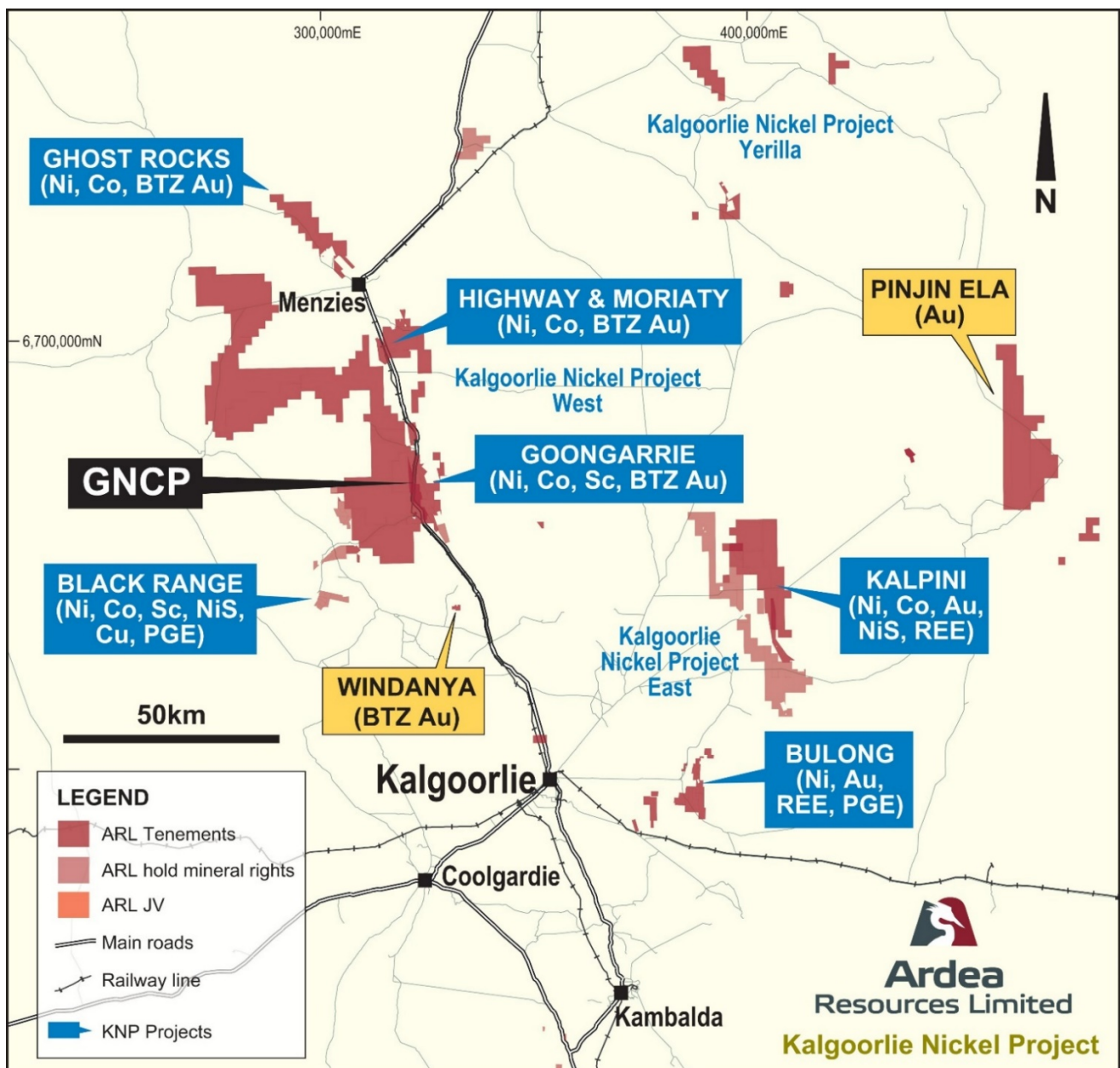


Figure 2: KNP location and infrastructure plan. Projection GDA94 MGA94 Zone 51.



## Feasibility Programs

Ardea's **"WINNER"** (Water, In-pit Neutraliser and Nickel Enhanced Reserve study) strategy is aimed at adding further value to the development of the GNCP and supporting resources within the KNP. One of the main aims of the WINNER initiative was to optimise plant feed grades to a 2Mtpa High Pressure Acid Leach (HPAL) plant exceeding 1% nickel for at least 15 years, requiring at least 30 million tonnes. With the completion of the GNCP resource update in mid-February defining a high-grade core of 60 million tonnes at 1.0% nickel, this goal has been greatly exceeded. Significant cobalt, scandium, manganese and aluminium components have also been quantified.

With options available such as developing a second GNCP 2Mtpa HPAL train, as dependent upon the production requirements of the successful Strategic Partner, Ardea is in a unique position within Australia of having this resource optionality due to the large size and exceptional quality of the nickel and cobalt resources, facilitating high grading and selective recovery of key geo-metallurgical mineralisation types.

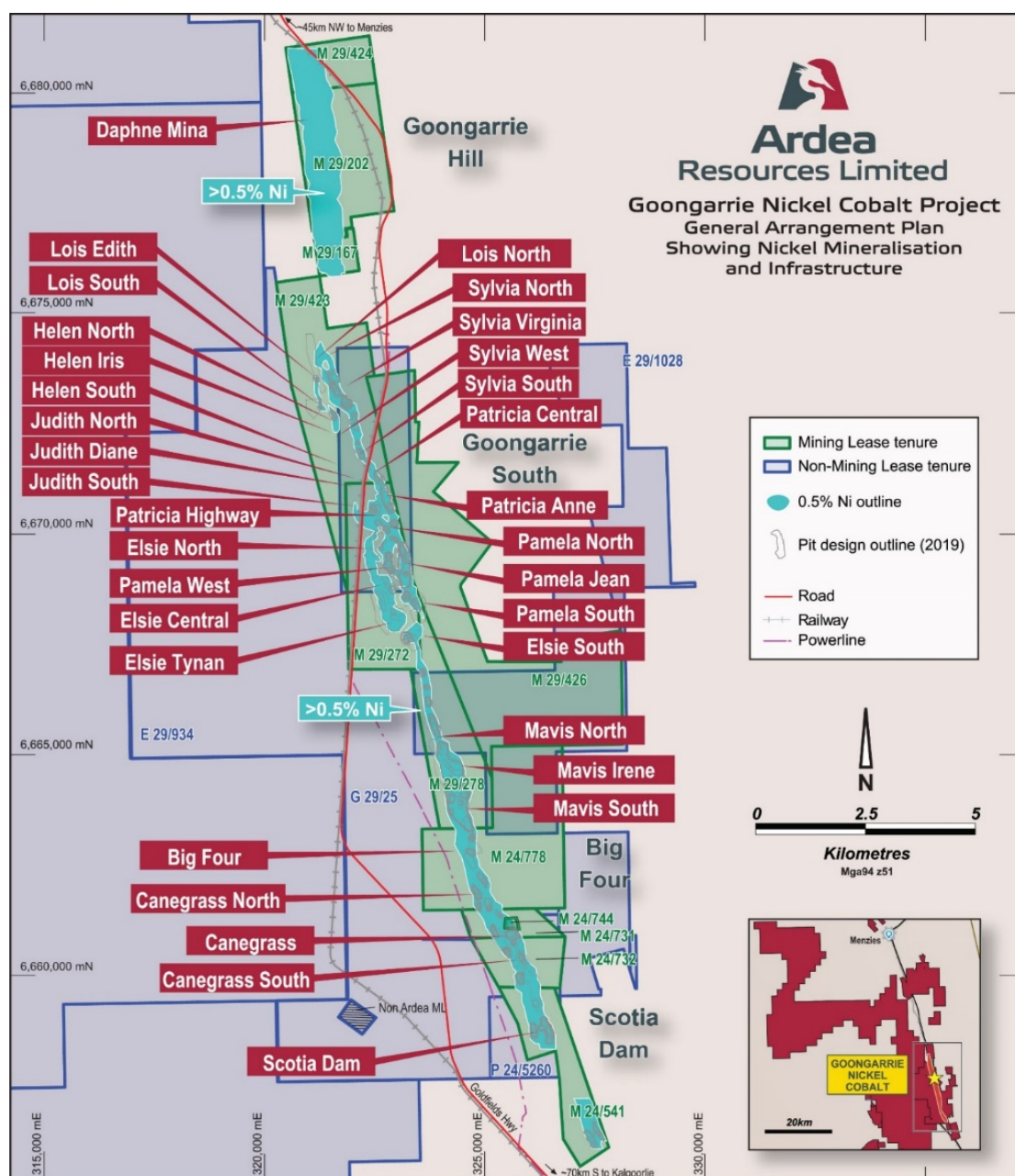


Figure 3: GNCP general arrangement plan highlighting the extensive zones of nickel mineralisation and current open pit mine designs at Goongarrie South, Big Four and Scotia Dam. Projection GDA94 MGA94 Zone 51.



Figure 4: Aerial images of Ardea's GNCP. Left photo looking north and right photo looking south. Both images show road and rail infrastructure within the project and the benign semi-arid woodland environment, ideal for project development and rapid revegetation post mining.

### Resource Modelling

For the past 12 months, the KNP has undergone a series of high-grade nickel optimisations for >1% nickel plant feed options, “desk-top” by-product metallurgical studies including scandium, and ensured that all mineral resource estimation uses uniform methodologies. A review of the full KNP high-grade nickel Mineral Resource Estimate (**MRE**) has commenced, with initial completion of the Goongarrie Line, hosting continuous nickel mineralisation over 25km from Goongarrie Hill (**GH**) in the north, to Goongarrie South (**GS**), Big Four (**BF**) and finally Scotia Dam (**SD**) in the south.

Following the completion of the 2018 Prefeasibility Study (**PFS**), Ardea completed substantial infill RC drilling at the GS, BF and SD deposits targeting high grade regions of the deposits identified in the PFS to be the focus of mining operations for the initial 25 years of production upon the development of the project. The infill RC drilling was augmented with significant diamond and sonic drilling to secure pilot plant materials for metallurgical test work and also enabled verification of the results from both historical and recent RC drilling and provide samples for systematic bulk density determinations of all the mineralised and waste material domains identified within the GNCP.

The data from the Ardea 2018 RC and diamond drilling programmes, XRD mineralogy studies and re-assaying of historical drill sample pulps has been used together with the vast historical exploration database for the GNCP to:

- Complete a comprehensive review of the exploration data quality for the GNCP.
- Undertake updated geological modelling of the GNCP mineralisation and regolith profile boundaries to constrain updated resource estimation.
- Investigate other materials within the weathering profile at the GNCP deposits that could add value to the project, including:
  - Pedogenic calcrete at surface and subsurface paleochannel sediments overlying the nickel laterite mineralisation that are rich in the calcium and magnesium carbonate minerals calcite, dolomite and magnesite that could be used as neutralising reagents in the proposed ore processing flowsheet based on HPAL, as well as environmental management of tailings.
  - Materials rich in the carbonate minerals dolomite and magnesite, underlying the nickel laterite mineralisation, particularly nickel-bearing carbonate saprock and serpentine saprock immediately beneath the high-grade nickel and cobalt mineralisation.
- Undertake updated nickel and cobalt resource estimation by Ordinary Kriging (**OK**) followed by Local Uniform Conditioning (**LUC**) to produce recoverable nickel and cobalt grade estimates for a selective mining unit resolution of 10mE by 10mN by 2mRL and coincident grade control drill spacing.
- Estimate additional grade attributes into the resource models including MgO, FeO, Al<sub>2</sub>O<sub>3</sub>, SiO<sub>2</sub>, CaO, LOI, Mn, Cr and Sc by ordinary kriging into 10mE by 10mN by 2mRL size blocks.

- Develop comprehensive geo-metallurgical material type classification schemes for GS and GH based on the multi-element geochemistry and the XRD mineralogy datasets.
- Assign material type codes to the resource models based on the OK multi-element grade estimates and determined material type classification schemes.
- Determine appropriate average dry bulk density (**BD**) and moisture content values subdivided by the material type classification schemes based on the datasets of physical measurements of core samples and including where available downhole geophysical density logging.
- Apply Mineral Resource classification based on JORC 2012 Guidelines with definitive classification parameters based on geological confidence and estimation quality statistics relating to the OK/LUC nickel estimates.
- Undertake detailed Mineral Resource reporting based on the updated GNCP resource estimates.

The new Mineral Resources for the GNCP (ASX release 15 February 2021) have been reported using a base cut-off grade of 0.5% Ni (Table 1).

Table 1 – GNCP nickel, cobalt and scandium Mineral Resources based on a 0.5% Ni cut-off grade. Figures have been rounded off.

Deposit	Resource Category	Tonnes (Mt)	Ni %	Co %	Contained Metal		Sc Resources	
					Ni (kt)	Co (kt)	Mt	Sc ppm
Goongarrie Hill	Indicated	40	0.65	0.037	260	14.7	10.5	16
	Inferred	29	0.60	0.025	178	7.3	2.0	16
	<b>Subtotal</b>	<b>69</b>	<b>0.63</b>	<b>0.032</b>	<b>438</b>	<b>21.9</b>	<b>12.5</b>	<b>16</b>
Goongarrie South	Measured	18	0.94	0.085	172	15.4	18.2	40
	Indicated	82	0.71	0.049	587	40.2	53.1	23
	Inferred	10	0.64	0.033	61	3.1	5.5	24
	<b>Subtotal</b>	<b>110</b>	<b>0.75</b>	<b>0.053</b>	<b>820</b>	<b>58.7</b>	<b>76.8</b>	<b>27</b>
Big Four	Indicated	49	0.71	0.047	345	22.9	31.9	24
	Inferred	14	0.68	0.043	95	6.1	2.9	24
	<b>Subtotal</b>	<b>63</b>	<b>0.70</b>	<b>0.046</b>	<b>440</b>	<b>28.9</b>	<b>34.8</b>	<b>24</b>
Scotia Dam	Indicated	12	0.71	0.065	82	7.4	11.2	25
	Inferred	5	0.72	0.043	37	2.2	0.6	22
	<b>Subtotal</b>	<b>17</b>	<b>0.72</b>	<b>0.058</b>	<b>118</b>	<b>9.6</b>	<b>11.7</b>	<b>25</b>
<b>GNCP Total</b>	Measured	18	0.94	0.085	172	15.4	18.2	40
	Indicated	182	0.70	0.047	1,274	85.1	106.6	23
	Inferred	58	0.64	0.032	371	18.6	11.0	23
	<b>Grand Total</b>	<b>259</b>	<b>0.70</b>	<b>0.046</b>	<b>1,817</b>	<b>119.2</b>	<b>135.8</b>	<b>25</b>

Higher grade 0.8% Ni (Table 2) cut-offs have also been applied to the MREs in order to provide insight into the tonnages and grades of high-grade material that would likely be the focus of mining operations in the initial 25 years of the GNCP project development. Most importantly, there is superb continuity of high nickel and cobalt grades at GS, BF and SD which demonstrates the potential for selective mining and processing high grade material over a prolonged period.

At a 0.8% Ni cut-off grade, GNCP nickel head grades approach those of the wet tropical laterites, but without the environmental and ethical challenges of mining operations in rain forests of the seismically active, wet tropics.



Table 2 – GNCP nickel, cobalt and scandium Mineral Resources based on a 0.8% Ni cut-off grade. Figures have been rounded off.

Deposit	Resource Category	Tonnes (Mt)	Ni %	Co %	Contained Metal		Sc Resources	
					Ni (kt)	Co (kt)	Mt	Sc ppm
Goongarrie Hill	Indicated	5.3	0.92	0.050	49	2.6	2.4	17
	Inferred	1.9	0.92	0.034	17	0.6	0.4	16
	<b>Subtotal</b>	<b>7.2</b>	<b>0.92</b>	<b>0.046</b>	<b>66</b>	<b>3.3</b>	<b>2.8</b>	<b>17</b>
Goongarrie South	Measured	11.0	1.13	0.106	125	11.6	11.0	39
	Indicated	21.1	0.99	0.071	208	15.0	15.5	25
	Inferred	1.2	0.92	0.043	11	0.5	0.5	25
	<b>Subtotal</b>	<b>33.3</b>	<b>1.03</b>	<b>0.081</b>	<b>344</b>	<b>27.1</b>	<b>27.0</b>	<b>31</b>
Big Four	Indicated	12.1	0.97	0.068	118	8.3	8.9	27
	Inferred	2.7	0.94	0.062	25	1.7	0.5	27
	<b>Subtotal</b>	<b>14.7</b>	<b>0.97</b>	<b>0.067</b>	<b>143</b>	<b>9.9</b>	<b>9.4</b>	<b>27</b>
Scotia Dam	Indicated	2.9	0.98	0.108	29	3.2	2.9	28
	Inferred	1.4	1.02	0.057	14	0.8	0.0	26
	<b>Subtotal</b>	<b>4.3</b>	<b>0.99</b>	<b>0.091</b>	<b>43</b>	<b>4.0</b>	<b>2.9</b>	<b>28</b>
GNCP Total	Measured	11.0	1.13	0.106	125	11.6	11.0	39
	Indicated	41.5	0.97	0.070	404	29.0	29.7	25
	Inferred	7.1	0.95	0.051	67	3.6	1.4	23
	<b>Grand Total</b>	<b>59.6</b>	<b>1.00</b>	<b>0.074</b>	<b>595</b>	<b>44.3</b>	<b>42.2</b>	<b>29</b>

Ardea's updated 2021 GNCP resource estimate was incorporated into historic KNP resource estimate compiled by various parties between 2004 and 2009 and signed off to meet JORC-2012 guide lines by Heron Resources in 2013 (refer Table 3 below). The significant observation is the KNP West estimate of 556Mt, able to supply a premium goethite material to a HPAL process plant located at the GNCP.

Table 3 – Updated KNP nickel and cobalt Mineral Resources based on a 0.5% Ni cut-off grade. Figures have been rounded off.

Camp	Prospect	Resource Category	Size (Mt)	Ni (%)	Co (%)	Contained Metal		Estimation Details		
						Ni (kt)	Co (kt)	Method	Source	Year
<b>Goongarrie</b>	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	53	0.66	0.042	349	22	OK	Heron	2009
		Inferred	34	0.64	0.038	218	13	OK	Heron	2009
	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
	<b>Goongarrie Subtotal</b>	Measured	18	0.94	0.085	171	15			
		Indicated	235	0.69	0.046	1,620	108			
		Inferred	140	0.65	0.037	900	52			
		<b>Combined</b>	<b>393</b>	<b>0.68</b>	<b>0.044</b>	<b>2,692</b>	<b>175</b>			
<b>Siberia</b>	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
	Siberia North	Inferred	53	0.66	0.043	352	23	OK	Snowden	2009
	Black Range	Indicated	9	0.67	0.090	62	8	OK	HGMC	2017
	Black Range	Inferred	10	0.69	0.100	68	10	OK	HGMC	2017
	<b>Siberia Subtotal</b>	Indicated	19	0.65	0.070	126	13			
		Inferred	144	0.66	0.041	943	59			
		<b>Combined</b>	<b>163</b>	<b>0.66</b>	<b>0.045</b>	<b>1,070</b>	<b>73</b>			
<b>KNP WEST</b>	<b>TOTAL</b>	Measured	18	0.94	0.085	171	15			
		Indicated	255	0.69	0.048	1,747	121			
		Inferred	283	0.65	0.039	1,844	111			
		<b>Combined</b>	<b>556</b>	<b>0.68</b>	<b>0.045</b>	<b>3,761</b>	<b>248</b>			

<b>Bulong</b>	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
	<b>Bulong Subtotal</b>	Indicated	16	1.06	0.055	169	9			
		Inferred	38	0.81	0.052	309	20			
		<b>Combined</b>	<b>54</b>	<b>0.88</b>	<b>0.053</b>	<b>477</b>	<b>29</b>			
<b>Hampton</b>	Kalpini	Inferred	75	0.73	0.044	550	33	OK	Snowden	2004
	<b>Hampton Subtotal</b>	Inferred	75	0.73	0.044	550	33			
<b>KNP EAST</b>	<b>TOTAL</b>	Indicated	16	1.06	0.055	169	9			
		Inferred	114	0.76	0.047	859	53			
		<b>Combined</b>	<b>130</b>	<b>0.79</b>	<b>0.048</b>	<b>1,028</b>	<b>62</b>			
<b>Yerilla</b>	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
	<b>KNP YERILLA TOTAL</b>	Measured	4	0.94	0.048	36	2			
		Indicated	68	0.78	0.049	531	33			
		Inferred	68	0.68	0.057	462	39			
		<b>Combined</b>	<b>140</b>	<b>0.73</b>	<b>0.053</b>	<b>1,028</b>	<b>74</b>			
<b>KNP TOTAL</b>		Measured	22	0.94	0.079	207	17			
		Indicated	339	0.72	0.048	2,446	163			
		Inferred	465	0.68	0.044	3,165	203			
	<b>GRAND TOTAL</b>	<b>Combined</b>	<b>826</b>	<b>0.70</b>	<b>0.046</b>	<b>5,817</b>	<b>384</b>			

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

## DMIRS resource update – MINEDEX database

In addition to the JORC 2012 resource update, Ardea has worked with the Western Australia mines department, the Department of Mines, Industry Regulation and Safety (DMIRS) to ensure accurate capture of the Company's resources within official datasets, known as MINEDEX.

Observant stakeholders will note that the resources attributed to the KNP within MINEDEX are substantially more than those quoted by Ardea. This is because DMIRS uses MINEDEX as a repository of the Western Australia mineral inventory and is not constrained by the same regulations governing ASX listed companies. As such, MINEDEX includes a historic JORC 2004 resource for Lake Rebecca that cannot be quoted in official Ardea figures (and cannot be quoted here). The Lake Rebecca JORC 2004 resource remains unchanged, with the defined mineralisation still in the ground, but it requires update to JORC 2012 for official quotation by the Company. Other workstreams are presently prioritised but this remains a future project that is expected to further enhance the quotable JORC 2012 KNP global resource.

## Processing Research and Development - Scandium and Rare Earth Elements

Within Ardea's KNP tenure the priority Research and Development (R&D) focus continues upon the Critical Minerals essential for the new age technologies used in limiting carbon emissions, such as the Electric Vehicle (EV), Static Storage Battery (SSB) and wind-turbine sectors.

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

- Nickel-manganese-cobalt (NMC) content in LIB precursor cathode-active material;
- EV electric motor REE magnet metals notably Nd-Pr, KNP has common Ce, and potential for Dy, La, Tb.
- Scandium for scandium-aluminium lightweight-high strength EV chassis;
- High Purity Alumina (HPA) for LIB separators, and sapphire glass in EVs and mobile devices such as phones and computers;
- Vanadium for SSBs;
- Critical Minerals targets at potentially extractable grades identified during KNP R&D include:



- Ba, Cr, Ga, In, Mo, Te, Ti, Sn, W, Y, Zr; and
- Extra PGEs - Ru, Rh, Os (due to excessive assay cost, using Pt-Pd as a pathfinder in pulp re-assay).

Critical Minerals research and development is predicated on the Ardea multi-element assay suite used in all sampling programs. The main R&D focus for the Company continues to be searching the archived Ardea drilling sample pulps for re-assay for Critical Minerals (notably REE co-products and fertile nickel sulphide multi-element ratios for PGEs).

### Critical Minerals

Ardea continues to engage with the Commonwealth Critical Minerals Facilitation Office and other State and Federal agencies. Meetings with various industry groups also continue.

During the Quarter, research continued on the Ardea drill hole data base, defining multiple Critical Minerals REE settings. The REE enrichment mirrors nickel-cobalt enrichment at the Magnesia Discontinuity within the regolith. The R&D programs have focussed on HPAL REE recovery (notably neodymium, praseodymium and cerium) in parallel circuit with scandium (using Ion Exchange).

An example of the indicative scandium and REE intersections associated with nickel laterite mineralisation within the GNCP are shown below (Table 4 – ASX release 15 February 2021). Further work is continuing on other deposits within the KNP to help determine Critical Mineral potential and the viability of being able to extract these from the HPAL Pregnant Liquor Solution (PLS) as by-products.

Table 4 – GNCP Indicative scandium (blue) and REE (green) intersections associated with nickel laterite mineralisation.

Pit Area	Drill Hole	Int Depth (m)	Int Length (m)	Ni (%)	Co (%)	Mn (%)	Sc (ppm)	Y (ppm)	Ce (ppm)	La (ppm)	Nd (ppm)	Pr (ppm)
Elsie North	AGSR001	14-18	4	0.85	0.21	0.98	43	6	968	10	14	4
Pamela Jean	AGSR170	22-24	2	0.63	0.05	0.24	43	318	32	216	340	75
Elsie North	AGSR369	18-26	8	0.49	0.14	1.28	40	25	325	51	59	16
Patricia Anne	AGSR392	24-26	2	0.49	0.07	0.11	52	215	1120	260	341	87
Patricia Anne	AGSR430	8-14	6	1.05	0.77	4.60	14	57	447	161	135	38
Patricia Anne	AGSR495	18-22	4	1.19	1.01	7.53	24	28	365	30	27	7
Pamela Jean	GSDD003	30-33	3	0.71	0.64	3.03	16	4	367	10	0	10
Pamela Jean	GSDD004	15-21	6	0.66	0.03	0.07	161	6	15	4	4	1
Pamela Jean	GSRC986	29-32	3	0.81	0.04	0.10	8	72	101	103	110	28
Canegrass Sth	ABFR012	22-24	2	0.63	0.01	0.13	122	14	34	7	8	2
Canegrass Sth	ABFR014	26-28	2	0.51	0.05	0.52	128	8	43	5	7	2
Mavis North	ABFR061	20-28	8	0.24	0.05	0.76	37	190	315	70	110	26
Mavis South	ABFR155	20-26	6	0.96	0.18	0.66	37	62	116	12	16	5
Mavis South	ABFR164	12-16	4	0.40	0.07	0.36	36	8	1125	12	16	5

Historic drill assay pulps continue to be systematically re-assayed throughout the KNP on a nominal 80mx80m to 160mx80m collar spacing. The main projects reviewed during the Quarter were Kalpini, Bulong and Siberia, with a further 832 KNP pulps submitted for assay and others continue to be sourced from Ardea's West Kalgoorlie storage facility. Pulp assay results will continue to be reviewed and interpreted, with appropriate follow-up work planned.

### FBICRC

Ardea has been in discussions with the Future Battery Industry Co-operative Research Centre (FBICRC) since 2020 and became a formal member as a key participant during the Quarter. 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 player in global battery value chains. FBICRC research projects will help expand Australia's battery minerals and chemicals production, develop opportunities for specialist battery manufacture, support the deployment of batteries to households, communities, and industry, and optimise the circular economy for the use and re-use of battery systems.

The FBICRC are currently building a Precursor Cathode Active Material (PCAM) plant at Curtin University in Perth and it is planned that material from the GNCP will be used to pilot PCAM flowsheets. This initiative is seen as a

natural progression towards the development of GNCP resources, as the deposit can be mined to generate nickel, cobalt, and manganese in the required ratios for PCAM production in a responsible and sustainable manner.

The key FBICRC work streams that Ardea has subscribed to include:

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 for the LIB sector and sustainable and ethical supply from the best-regarded operating jurisdiction in the world, Australia, led by Western Australia.

### **Bench-scale Metallurgy**

Programs of work were secured for drilling at the GNCP to obtain test material for bench-scale metallurgical studies involving PCAM metal recovery, mineralised neutraliser and Sc-REE refining.

### **Hydrology**

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 water bores and conventional open pit dewatering ahead of mining. During the Quarter, work continued on assessing fractured bedrock and palaeochannel sediment water sources.

Two applications for groundwater extraction licences (**GWL**) have been submitted to the WA Department of Water and Environmental Regulation (**DWER**) to secure as much of this water as possible from tenements held by Ardea, near the planned GNCP processing plant. The first application is for a draw of 2Gl/a from fractured bedrock and the second application is for a draw of 1.5Gl/a from palaeo-channel sands.

A contract is being let for the requisite pump test drilling.

Both typical Eastern Goldfields saline water and potable water will be required for project development. Ardea's US-based nanofiltration testwork has already demonstrated the potential for this technology to be used to help source sufficient higher quality process water where required in the GNCP flow sheet.

### **Environment and Rehabilitation**

Studies continued regarding the preferred rehabilitation strategies, with carbon sequestration the driving force.

A consultant was appointed to model potential GNCP carbon outputs, as a guide to sequestration requirements.

## **2. WA NICKEL SULPHIDE AND GOLD PROJECTS**

Ardea's vast 4,000km<sup>2</sup> WA mineral exploration tenure represents a strategic land holding in the Eastern Goldfields of WA, Australia's premier nickel sulphide, Critical Minerals and gold province. In addition to the laterite-hosted nickel-cobalt-scandium opportunities, Ardea's tenure also hosts significant "greenfields" nickel sulphide, Critical Mineral and gold mineralisation (Figure 2, 5 and 12).

### **Ardea Nickel Sulphide Strategy**

Ardea's principal focus continues to be the development of the KNP, commencing with the GNCP nickel laterite. 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/GNCP and is aimed at maximising returns for shareholders.

Ardea controls an extensive holding of ultramafic stratigraphy which hosts the KNP nickel laterite resources (Figure 5). This same tenure is highly prospective for 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 autoclave planned for Ardea's GNCP. Although sulphides would only be processed in limited quantities relative to the lateritic throughput, they have the added benefit of helping control autoclave oxidising potential and typically improving nickel recoveries. An additional bonus is that metal concentrations considered deleterious to regular 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.

During the Quarter, Ardea's nickel sulphide work included diamond drilling at Emu Lake and multiple geophysical programs, including Induced Polarisation (IP) programs at Highway, Big Four and Black Range and surface and downhole electromagnetic (EM) surveys at Kalpini/Emu Lake.

Additionally, the routine drill pulp re-assay program includes platinum-palladium assays as "low-cost" pathfinders for the Critical Mineral targets of ruthenium-rhodium-osmium. This program as an ancillary benefit generated nickel sulphide geochemical targets at the Kalpini Eastern Ultramafic which were followed up with ground MLEM (interpretations awaited, but field review suggests conductor targets have been generated).

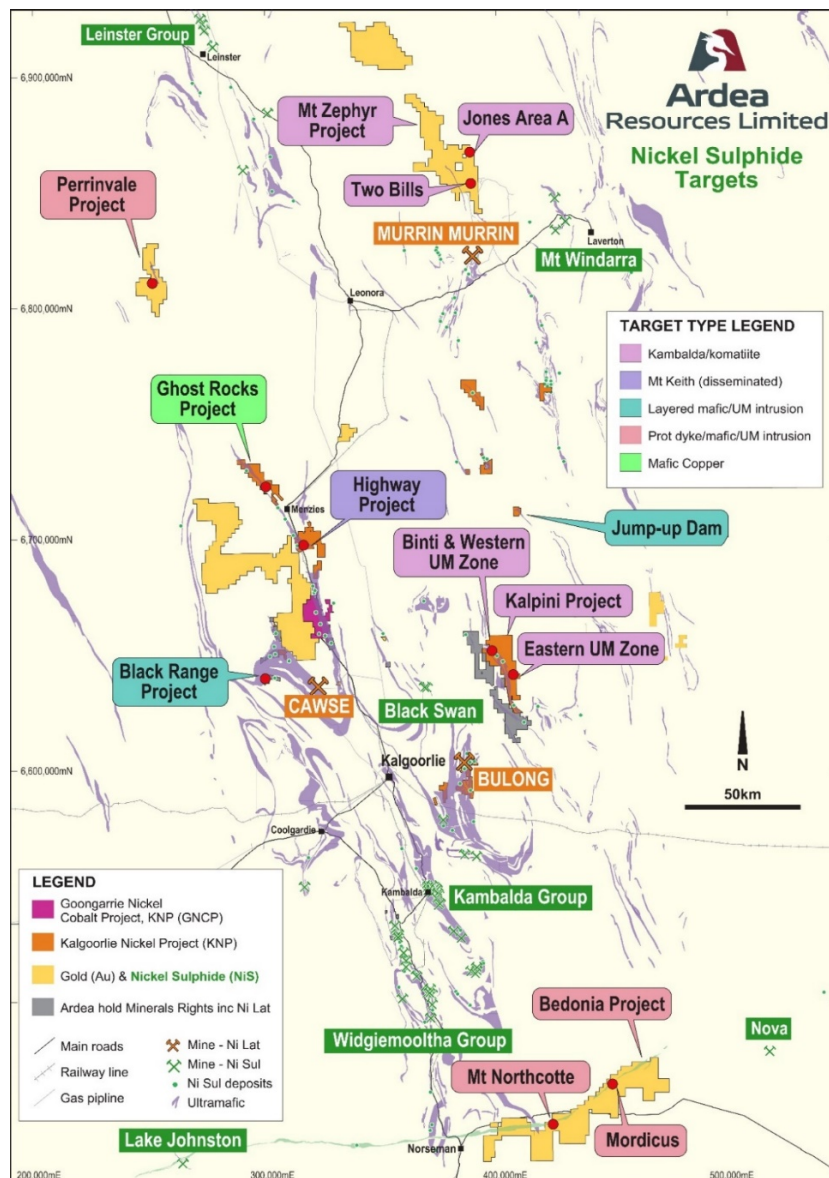


Figure 5: Ardea's tenure, key nickel sulphide and PGE targets, Eastern Goldfields, WA. Projection: GDA94 MGA Zone 51.



## Emu Lake Nickel Sulphide and Gold Prospect

The Kalpini Nickel Project extends over 240km<sup>2</sup> and hosts 75Mt at 0.7% nickel and 0.04% cobalt occurring as lateritic nickel mineralisation (Ardea ASX announcement, 15 February 2021). The leading Ardea nickel sulphide target, at Kalpini, Emu Lake, is located 70km north-east of Kalgoorlie (Figure 5). This strategic tenement package contains an East and West Ultramafic belt each with 20km of strike of prospective nickel sulphide ultramafic stratigraphy held 100% by Ardea and mostly within granted mining leases. The project is 35km east of the Black Swan Nickel Project, operated by Poseidon Nickel Ltd, within a comparable parallel komatiite volcanic belt.

Ardea completed drilling its first Emu Lake core hole, AELD0001 in late December 2020, targeting an interpreted legacy downhole electromagnetic (**DHEM**) plate within the Binti nickel sulphide target zone. The drill hole intersected a zone of stringer nickel sulphides with pentlandite and chalcopyrite over 0.65m from 336.7m within a highly sheared intermediate volcanic unit (ASX release 4 March 2021).

The stringer interval returned: **AELD0001: 0.65m at 2.95% Ni and 755ppm Cu from 336.7m**

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

On “intact” nickel sulphide proximity grounds, upon completion of AELD0001, a DHEM survey was completed which defined an off-hole conductor, modelled by Newexco geophysical consultants to be 50m to the north of AELD0001. The modelled plate is 100m long and 50m high with a high conductance of 8,000 siemens, which is similar to typical Kambalda-style zones modelled in the past by Newexco.

Diamond drilling to test the AELD0001 DHEM conductor at Emu Lake commenced on 29 March and was completed on 5 April 2021, at a depth of 430 metres. A zone of semi massive nickel sulphide (pentlandite) was intersected from 366.9 to 367.6m (Figure 6) and was underlain by disseminated nickel sulphide and chalcopyrite from 367.6 to 368.7m. The rock sequence is overturned, hence the disseminated underlies the massive sulphides. This intersection of nickel sulphides corresponds with the location of the modelled DHEM conductor from AELD0001.

Mineralisation is particularly significant, being located on an intact basal contact between a porphyritic felsic volcanic footwall and an ultramafic lava unit, which indicates that it is insitu. Next steps include logging and sampling the drill hole in detail and additional geophysical surveys to vector in on zones of critical volume now that the key basal contact has been identified and nickel sulphide fertility confirmed (laboratory assays awaited to confirm grade).



Figure 6: Recently completed Ardea diamond drill hole, AELD0002 showing massive (top) and disseminated (bottom) sulphides.

A surface moving loop electromagnetic survey (MLEM) commenced in March at Kalpini/Emu Lake and is currently 50% complete. Three significant MLEM anomalies have so far been recorded, two south of the Binti Gossan zone and one associated with the Wellington East Eastern Ultramafic belt. Once all results have been reviewed this information will be modelled and interpreted in detail for RC drill follow up and a dedicated update provided.

### Jump-Up Dam – Nickel Sulphide Target

The Jump-Up Dam Project, located 150km north east of Kalgoorlie Boulder and 96km east northeast of Goongarrie, is wholly owned by Ardea. It contains a nickel laterite resource of 64Mt at 0.75% nickel and 0.04% cobalt for 479kt nickel and 26.1kt cobalt\* associated with an Archaean ultramafic complex. Drilling on the eastern side of the ultramafic has defined a 400m long, north-south trending, zone of copper-nickel enrichment in the regolith profile and in places extending into the upper saprolite (Figure 7). The anomalous zone includes an intercept of 18m at 0.10% copper and 0.52% nickel from 18m to end of hole in hole JDRC0127. Interestingly, gold is also anomalous in this intercept – up to 0.21g/t Au over 2m. The litho-geochemistry strongly suggests a sulphide source for these metals which has resulted in the observed copper plume in the regolith. A field check has been completed and a review of historic drilling chip trays is underway.

To further follow-up on this strong geochemical anomaly, a MLEM survey and drill pulp re-assay is being planned to test for any bedrock conductors associated with massive sulphides. Drilling will then test any conductors identified.

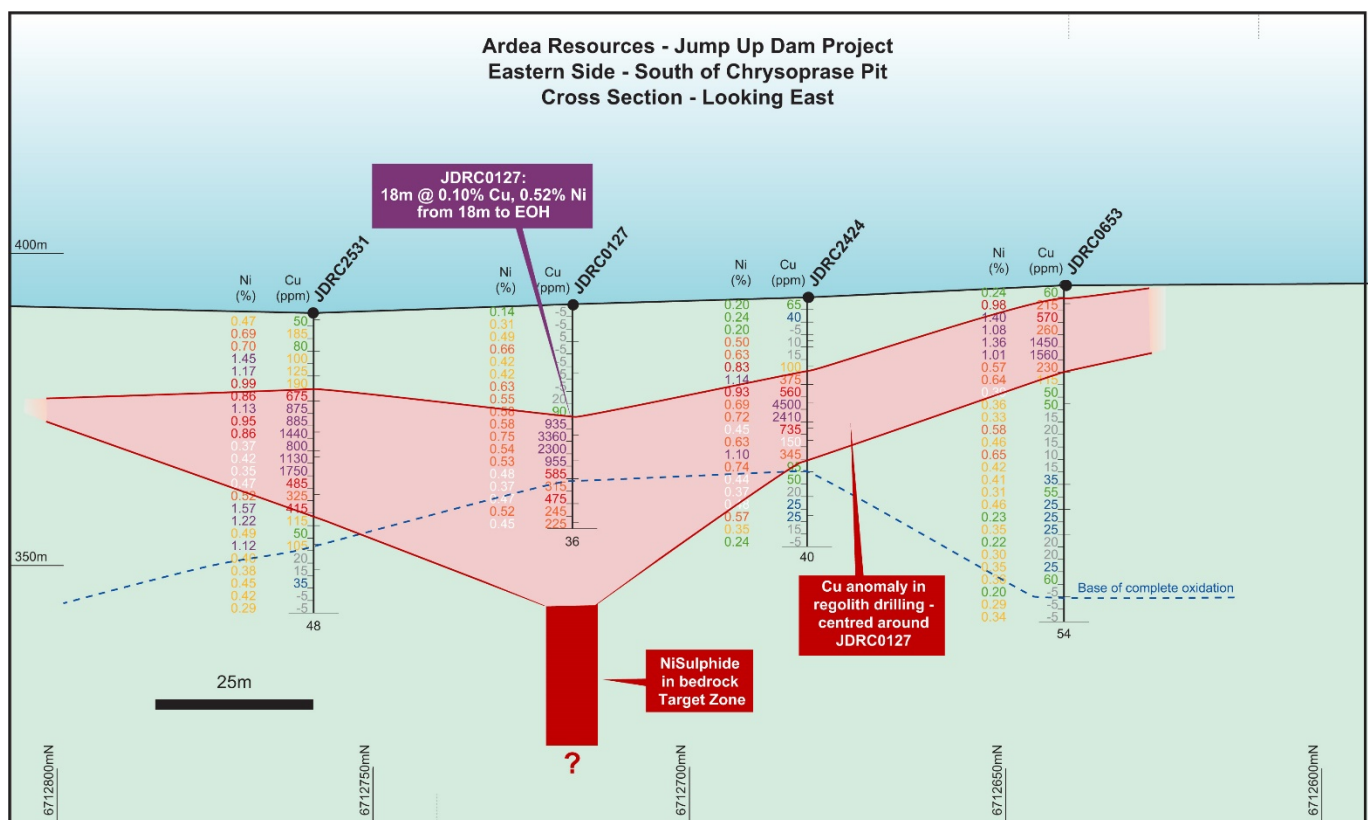


Figure 7: Jump Up Dam Project – Copper anomaly Long-Section view – looking east. Bedrock lithologies consist of olivine cumulate units with some mafic components which are part of the broader ultramafic/mafic complex. Projection: GDA94 MGA Zone 51.

\* Ardea Annual Report 2019 (24 October 2019)

## Bardoc Tectonic Zone Nickel Sulphide

Exploration to unlock the nickel sulphide potential throughout Ardea's ground holding in the Bardoc Tectonic Zone (BTZ) has been accelerated with the appointment to Ardea of a dedicated nickel sulphide expert. Several defined occurrences and anomalies have been identified at Big Four East, Highway and Moriarty.

Ardea is also continuing to do research work with the CSIRO to further assess the ultramafic sequences of the GNCP, where nickel sulphide mineralisation, if it exists, would be located in undrilled fresh rock beneath the lateritic deposits. Using various geochemical markers and re-evaluating historical geophysical data, new targets are being developed for potential drill testing. Ardea are also evaluating a dedicated KNP nickel sulphide study with CSIRO, following on from the very successful gold in laterite study at the GNCP.

## Highway Nickel Prospect

The Highway Prospect, located 110km north of Kalgoorlie Boulder and 30km north of Goongarrie, is within a wholly owned and granted mining lease which hosts the Company's Highway nickel laterite resource (87.0Mt at 0.65% nickel and 0.04% cobalt, for 567.2kt nickel and 35.1kt cobalt)<sup>†</sup>.

Magmatic nickel sulphide has been identified in historic RC drilling near the basal contact of the Walter Williams Formation (Figure 8). A MLEM survey in 2009 identified two subtle conductors along strike from the disseminated sulphide occurrence, however, drilling did not intersect massive sulphides. The fact that this portion of the Walter Williams Formation is fertile for nickel sulphides is significant with little or no focus on such occurrences over the last 20 years. It also raises the possibility of nickel sulphide occurrences beneath the GNCP to the south.

With modern geophysical techniques, such as Induced Polarisation (IP), it is possible to map disseminated sulphides to extensive depths (>800m) and this approach has been applied at Highway during the Quarter with five lines of IP completed. Results are currently being interpreted.

The prize of finding economic nickel sulphides in the Walter Williams Formation is significant as it immediately opens up a large new search space, of which Ardea through the GNCP to the south is overwhelmingly the major ground holder, controlling 40km of cumulative strike.

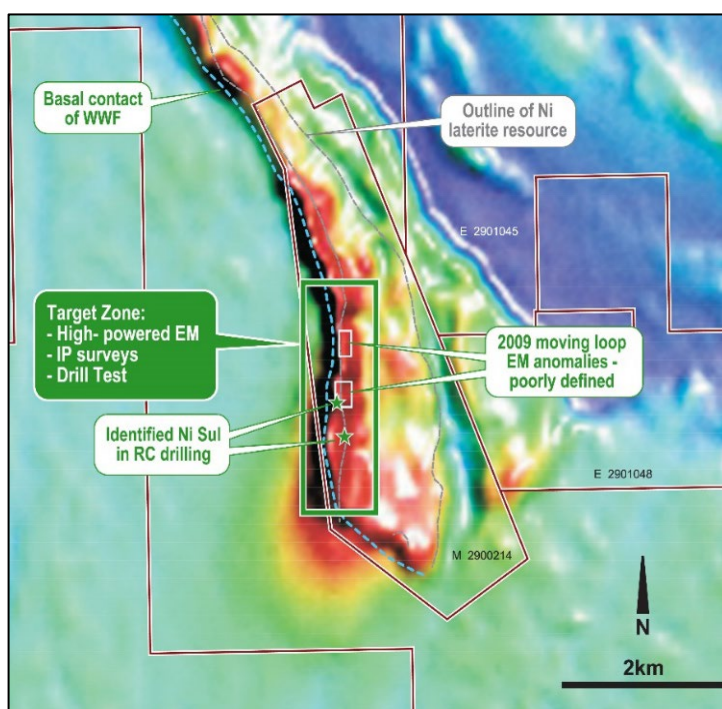
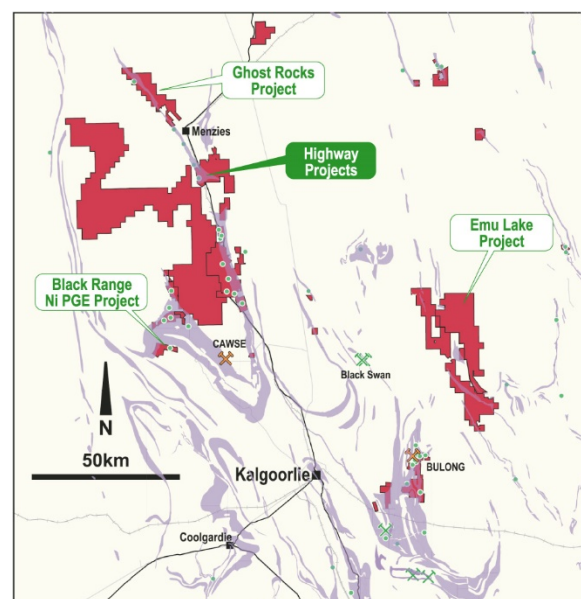


Figure 8: Highway Project – Aeromagnetic image showing location of magmatic nickel sulphide and EM anomalies (left) and project location (right).



<sup>†</sup> Ardea Annual Report 2019 (24 October 2019)



## Ghost Rocks Project

The Ghost Rocks Project, located 140km north of Kalgoorlie and 60km north of Goongarrie contains a mixed package of mafic and ultramafic stratigraphy associated with the Walter Williams Formation (Figure 9) and hosts Ardea's Ghost Rocks laterite resource (47.3Mt at 0.66% nickel and 0.04% cobalt, for 312.9kt nickel and 19.9kt cobalt)<sup>‡</sup>. It was extensively prospected for nickel and copper sulphide deposits in the late 1960s and early 1970s where copper gossan zones were mapped in the mafic/ultramafic package. Drilling of these gossan zones by Newmont in the early 1970s returned a best result in the oxide zone of 3.3m (10 foot) grading 2.14% copper to end of hole from 12m depth.

Work by Heron Resources in 2008/09 identified several MLEM anomalies that were drilled and intersected broad zones of "cloud nickel sulphides" in ultramafic rocks and copper assays up to 0.53% over 2m in a differentiated mafic unit. No follow-up was completed at the time.

Re-assessing historic MLEM anomalies and the effectiveness of past drilling has continued at Ghost Rocks. With a modern MLEM survey planned to be completed in the June 2021 Quarter. There is also potential to complete DHEM on the existing drilling (if holes have remained open), to vector towards massive sulphides. The broad zone of copper mineralisation is also of significant interest and an IP survey is being considered to map out this sulphide zone which extends for some 4km along strike.

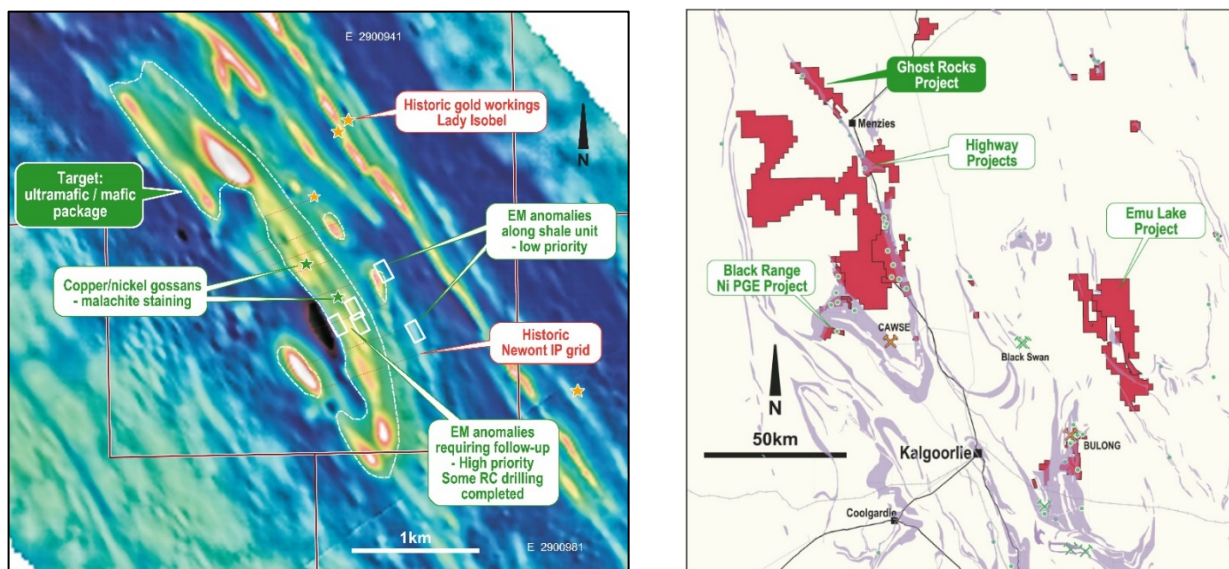


Figure 9: Ghost Rocks Project – aeromagnetic image showing target package of mafic and ultramafic rocks and key EM targets.

## Black Range Project

The Black Range Project is located 65km north-west of Kalgoorlie Boulder and contains a 5km zone of the Ora Banda Sill mafic/ultramafic complex enriched in nickel, cobalt, copper, scandium and PGE metals (Figures 10). The Ardea Black Range resource comprises 19.2Mt at 0.68% nickel and 0.09% cobalt, for 130.7kt nickel and 17.8kt cobalt, as well as 8.70Mt at 65.6g/t scandium for 570,000kg scandium, and 6.55Mt at 0.33g/t Pt and 0.21g/t Pd for 70,300oz platinum and 44,000oz palladium<sup>§</sup>.

Past Ardea drilling programs have delineated a zoned lateritic distribution of nickel, cobalt, copper, scandium and PGE metals, as shown in the cross section below (Figure 11). Highly anomalous copper-PGE zones include:

- ABR0001/4-20m 16m at 0.24% Ni, 0.11% Cu, 0.29g/t Pd, 0.38g/t Pt
- ABR0016/2-18m 16m at 0.45% Ni, 0.17% Cu, 0.15g/t Pd, 0.26g/t Pt
- ABR0021/4-24m 20m at 0.18% Ni, 0.09% Cu, 0.29g/t Pd, 0.36g/t Pt

<sup>‡</sup> Ardea Annual Report 2019 (24 October 2019)

<sup>§</sup> Ardea ASX announcement "Black Range cobalt, nickel, scandium and platinum/palladium resources" (31 October 2017).

This geochemical signature is consistent with a sulphidic nickel metal source and is different to the usual KNP nickel laterite geochemistry. The target zone is located at a specific rock unit contact within the Ora Banda Sill layered mafic complex (**LMC**) with potential for Nova or Julimar style intrusion-related nickel-copper-PGE sulphides.

The Black Range laterite geochemical signature, notably for copper, is comparable to the initial aircore drilling results at what became the Nova Ni-Cu-PGE sulphide discovery. Comparable Nova discovery results include SFRA0450, 7m at 0.49% Ni and 0.1% Cu from 72m and SFRA0457, 3m at 0.45% Ni and 0.1% Cu from 84m (refer Sirius Resources NL, ASX announcement, 10 May 2012, 26 July 2012).

A Moving Loop EM survey from 2011 identified several conductors on the western side of the package and these are being reviewed and possibly re-surveyed with modern higher-powered EM systems. Concentration of PGEs and related metals is clearly occurring in the lateritic regolith and is an economic target in its own right, however, finding the bedrock sulphide source of the nickel-copper PGE metals is the current focus. With this in mind, two lines of IP were completed during the Quarter and a strong chargeability anomaly has been identified, that is located below the geochemical anomaly (ASX release 19 April 2021). The coincident geochemical and IP anomaly represents a compelling target and a follow-up exploration hole has been planned and will be completed, once a suitable drill rig can be sourced.

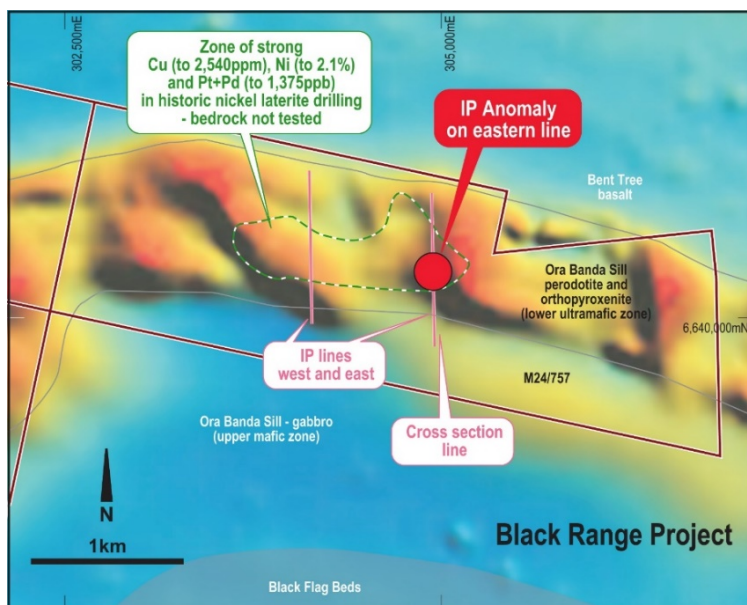


Figure 10: Black Range project, Ardea tenements over TMI aeromagnetic image showing the outline of the zone enriched in nickel, cobalt, copper, scandium and PGE metals, IP lines and strong chargeability anomaly. Projection: GDA94 MGA Zone 51.

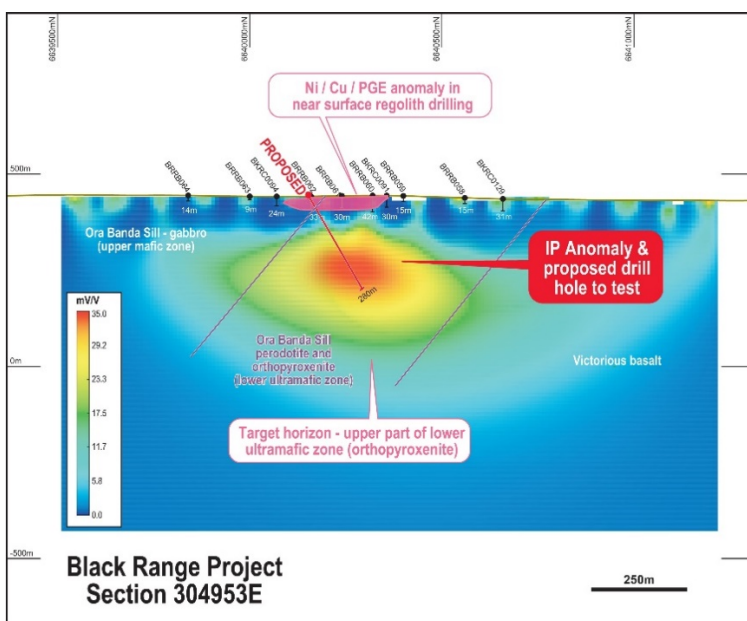


Figure 11: Black Range Cross Section looking west. Zone of enriched PGE metals and Sc in the laterite regolith are potentially derived from a narrow source within the Ora Banda Sill. Projection: GDA94 MGA Zone 51.

## Ardea Gold Strategy

Ardea's KNP nickel laterite deposits are localised upon crustal-scale Tectonic Zones (**TZ**) (Figure 12), which structures control evolving geological events from initial olivine komatiite rift volcanism (with nickel sulphide potential), epiclastic sedimentation, Layered Mafic Complex (dolerite) emplacement (with PGE potential), late-stage alkaline diorite intrusion (with REE potential) and finally through to the late-stage crustal convective cells responsible for orogenic gold deposition.

The TZs are exceptional greenfields gold targets, especially when associated with lakes (recessive weathering associated with large-scale alteration). The Bardoc Tectonic Zone (**BTZ**) is the northern strike continuation of the Boulder Lefroy TZ, which hosts major gold camps at Kalgoorlie-Boulder (>80Moz gold), New Celebration (>3.2Moz) and St Ives (>6.5Moz).

Despite the obvious gold pedigree of Ardea's tenure, during its first 23 years, the KNP has been solely evaluated as a nickel-cobalt laterite project, with ownership and control successively by Heron Resources and then Vale Inco (PFS 2009). Until recently by Ardea, there had been no systematic modern gold exploration.

With Ardea's acquisition of the project in 2017, for the first time in two decades, systematic Critical Mineral and gold evaluation commenced, through Ardea's gold and multi-element pathfinder assay suite and detailed geophysical data interpretation to help "see" through the cover of lake sediments and blanket laterite.

In terms of developing a gold exploration model, Ardea's approach has highlighted the presence of intense deformation, Layered Mafic Complex host rocks, alkaline diorite intrusives and late stage epiclastic basins within KNP tenure. These features are all key criteria for significant gold mineralisation within Kalgoorlie-Boulder's Eastern Goldfields gold province.

Ardea has a systematic evaluation matrix and has now defined well over 100 gold targets. Where synergies exist with Ardea's KNP development plans, such as infrastructure sterilisation drilling, such targets are prioritised. The immediate focus is on the top ranked gold targets at the GNCP, where all drilling information helps provide important information to assist with siting future nickel project development infrastructure.

To assist in unlocking gold and Critical Minerals opportunities within and below the regolith which masks the majority of prospective basement rocks in the Eastern Goldfields, Ardea's collaborative research with the CSIRO is nearly complete, with a final report expected in May. Learnings from this research will be applied to further refine Critical Minerals opportunities throughout Ardea's KNP tenure.

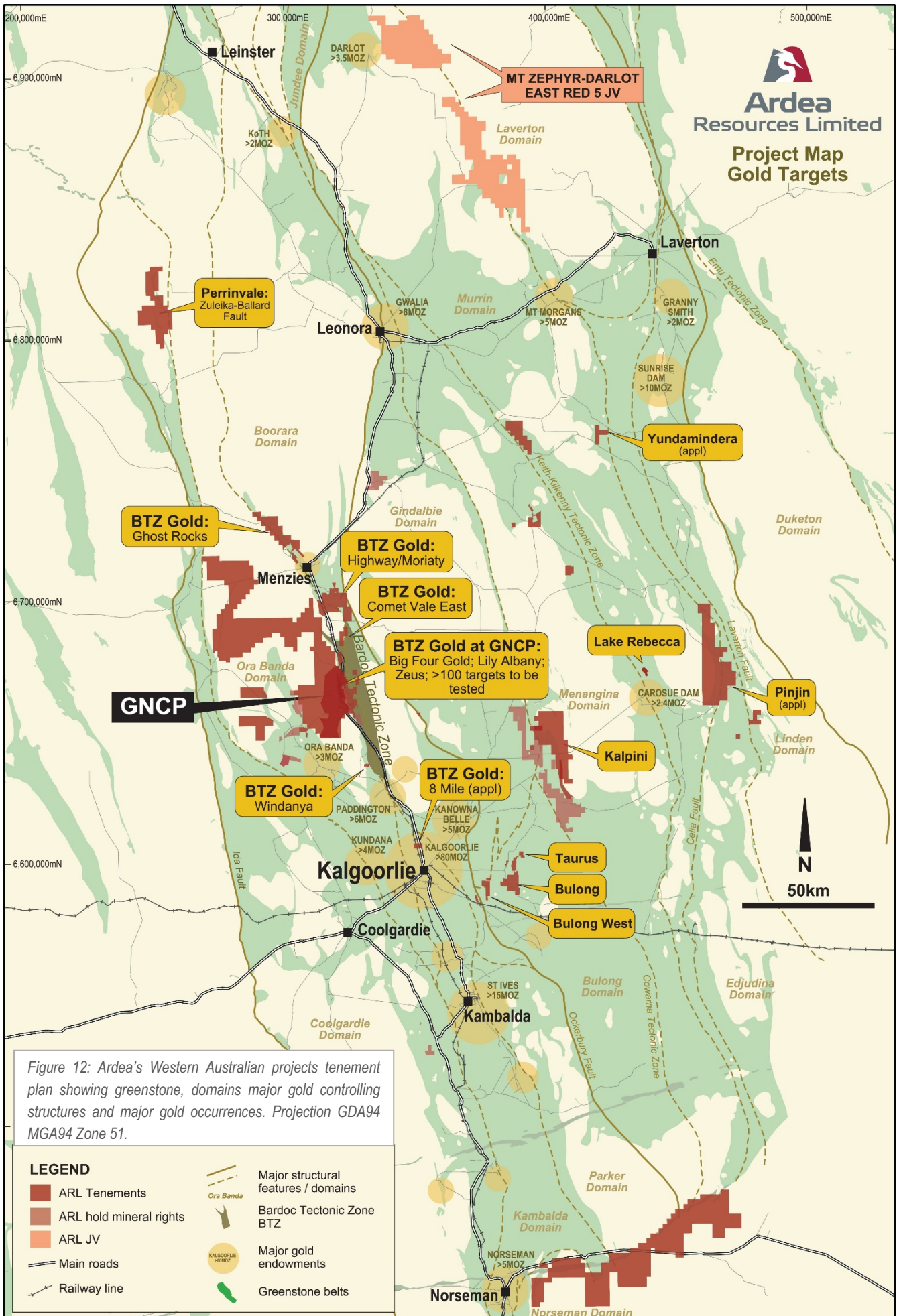
## Bardoc Tectonic Zone Gold

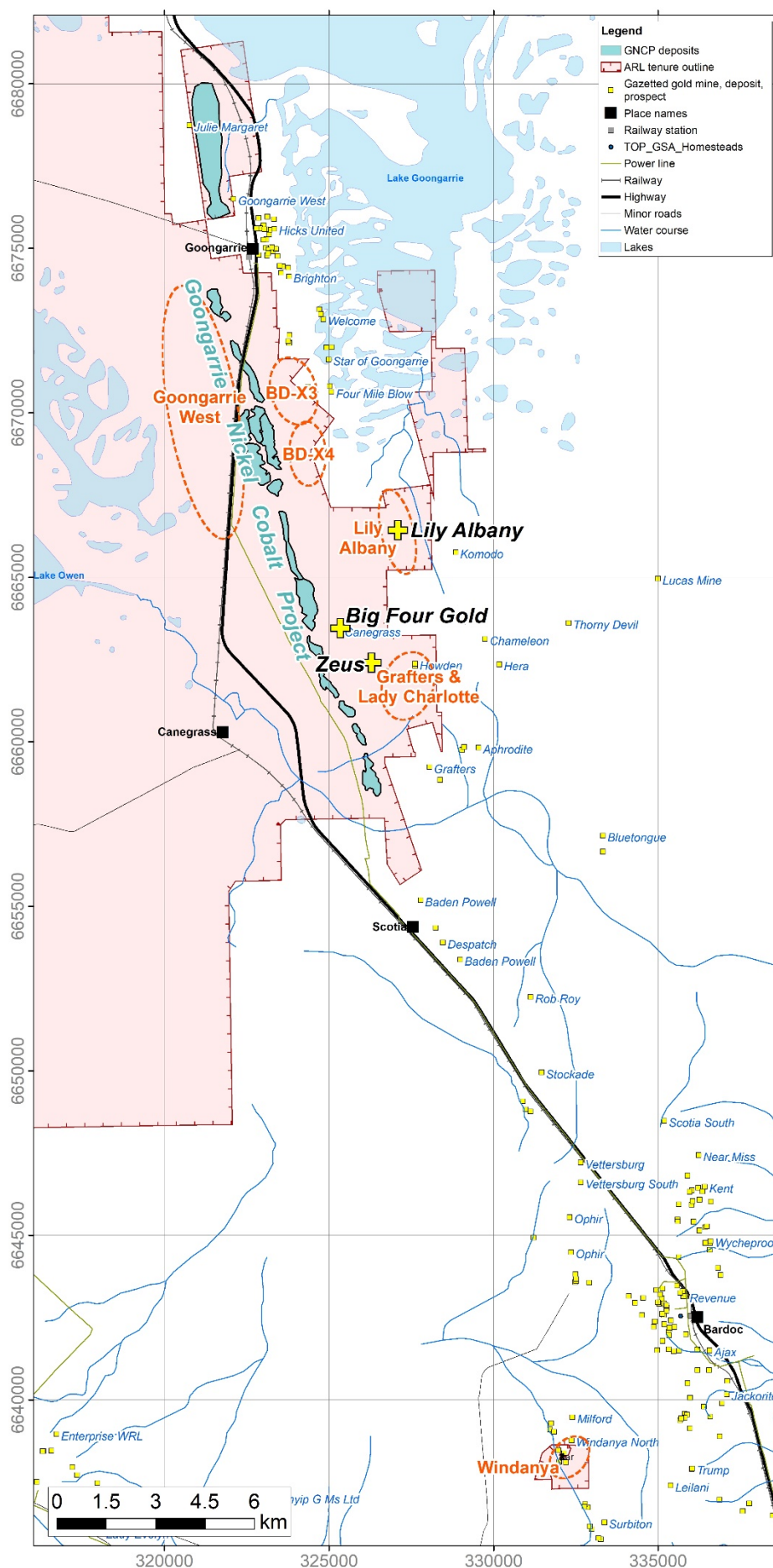
The BTZ is a major, gold-fertile, crustal-scale structure that transects the Kalgoorlie Terrane of the Eastern Goldfields. The regional shear/fault system strikes from Paddington in the south to northwest of Ghost Rocks in the north and extends over an approximate 125km total strike length. Approximately 65km of this regionally significant structural zone occurs within Ardea tenure. Ardea's GNCP is unique among the world's lateritic nickel-cobalt deposits in that it has developed upon ultramafic rocks that are within and are a part of a major, crustal-scale gold-mineralised structure.

Exploration of the GNCP gold camp has the advantage of leveraging off the extensive but largely ineffective (for gold) GNCP historic drill programs and the GNCP's infrastructure rich location.

Gold exploration at Goongarrie is more challenging relative to more "traditional" outcropping areas due to the deep development of the laterite profile across the GNCP. The most effective exploration method at Goongarrie is a combined structural-geochemical target model, where the structural data is derived from interpretation of the Ardea magnetic datasets, and the geochemical data is derived from GNCP drill hole assay suites (which currently is only very sparse in terms of bottom-of-hole fresh rock samples). This exploration strategy from Ardea has been demonstrated to be effective as shown by the 2020 gold discoveries at Lily Albany and Zeus (Figure 12 and 13).







## Big Four Gold Deposit

The Big Four Gold deposit is located 70km northwest of the City of Kalgoorlie Boulder, within the footprint of the GNCP (Figure 13). Infill and extensional drilling completed by Ardea in January 2020 and historic data collated by the Company enabled estimation of an Inferred Mineral Resource (ASX release 14 May 2020): 178kt at 2.7g/t gold, (0.5g/t Au cut off) for 15,300 oz gold. The deposit remains open down plunge to the north.

Definition of a gold resource at Big Four provides proof of concept of the gold mineralisation potential of the BTZ within Ardea's GNCP, which elsewhere is concealed by Quaternary sediments and the overprinting laterite profile.

Figure 13: Location of the Big Four Gold deposit, Lily Albany, Zeus, Windanya and other prospect areas drilled during the March 2021 Quarter, relative to the GNCP laterite deposits. Targets for other areas not shown. Projection: GDA94 MGA Zone 51.



## Aphrodite North Gold Line and Lily Albany Gold Discovery

The Aphrodite North area is located approximately 80km north of the City of Kalgoorlie-Boulder and 6km north along strike of the 1.7Moz Aphrodite gold deposit (BDC, ASX release 25 June 2020) (Figure 13). The area is entirely covered by transported material and thus exhibits no surface anomalism. The target structure extends in a north-northwest orientation throughout Ardea's granted Mining Lease, M29/426.

Lily Albany is the first gold discovery in the Aphrodite North area by any company and was confirmed by Ardea during the December Quarter 2020. It is located 3km east of Ardea's 25km long line of nickel-cobalt laterite deposits that define the GNCP (Figure 13). Lily Albany is a proof-of-concept discovery that resoundingly illustrates the gold fertility of the BTZ within Ardea's tenure.

During the Quarter, 15 resource definition RC drill holes were completed for 2,122m and two diamond drill holes for structural interpretation and geo-mechanics were completed for 365m. The initial diamond hole was cancelled at 64m, following drilling problems and the second hole was completed to 301m. Assay results are still awaited with high demand for assay services continuing to cause delays.

Structural data collected from the orientated diamond core hole will be used to refine the geological model once all assay results have been received. Initial indications suggest that gold mineralisation at Lily Albany is typically associated with shears and alteration zones within and around the layered mafic complex intrusive at the contact between the Victorious Basalt in the west and the overlying Black Flag Formation in the east. Much of the structural complexity is parallel to the main foliation which itself appears to be subparallel to the stratigraphy.

More data is needed, but the current data shows that the quartz veining within the main mineralised zone (Figure 14) has a steep westerly dip, with some constituent structures dipping shallowly southward. This is consistent with several unmineralized veinlets in the hangingwall to the main zones. In core the veins clearly cross-cut the fabric of the shear zone. The relationship suggests a ladder or tension vein array within the mineralised shear.



Figure 14 : Part of the main mineralised zone showing strong alteration and shearing of dolerite, with intense quartz-sericite-pyrite-chalcopyrite alteration evident 170.9–172.05m and 172.65–173.1m. Between these, there is a thick quartz(-pyrite-tourmaline-chalcopyrite) vein. Pervasive alteration is present up and down hole from this central zone. (ALAD0002, tray #31, 170.7 – 175.35m).

## Grafters and Lady Charlotte Gold Prospects

This area is located approximately 70km northwest of Kalgoorlie-Boulder (Figure 13). During the Quarter, 16 RC holes were drilled for 1,344m to test a variety of potential infrastructure, geochemical, structural and geophysical targets. Assay results are awaited to complete a thorough interpretation and assessment.



## Goongarrie West

The Goongarrie West area is located approximately 75km northwest of Kalgoorlie-Boulder and is covered mainly by transported cover that obscures the prospective basement geology (Figure 13). The area is interpreted as being underlain by Missouri Basalt and layered mafic intrusive units. The target has not been subject to exploration drilling in the past to penetrate the regolith and collect representative samples from saprock, being at the limit of aircore blade drilling. The area also represents a potential infrastructure site for future development of the GNCP, with sterilisation drilling required.

During the Quarter, 13 aircore holes were drilled for 1,013m to test a variety of targets interpreted from geophysical datasets such as detailed aeromagnetic data. A mafic sill target was intercepted in several holes, with up to 1% sulphides and several holes intercepted running sands within a palaeochannel. Assessment of water quality and potential volume from this feature is ongoing. Detailed interpretation will be completed once the pending assay results have been received.

## BD-X3 and BD-X4

The BD-X3 and BD-X4 targets are located approximately 75km northwest of Kalgoorlie-Boulder (Figure 13). During the Quarter 48 aircore holes were drilled for 1,870m at BD-X3 and 43 aircore holes were drilled for 1,191m at BD-X4, to clear sites for GNCP processing infrastructure and to test a variety of gold targets interpreted from geophysical datasets.

Initial observations from the geology team supervising the drilling indicate that the basement geology consists of a sequence of mafic and ultramafic units with some shearing and sulphides noted. Assay results are awaited to complete a thorough interpretation.

## Windanya Gold Prospect

Ardea's Windanya Prospect is located 50km northwest of the City of Kalgoorlie-Boulder and is a significant historical gold mining centre with town-site that was operational in the earliest 1900s (see Figure 13). Significant historic gold workings are evident on the tenement and extend as a corridor to other workings to the north and south of Ardea's Windanya tenements. The strike trend of the mineralised zone is northwest to southeast with a moderate to steep dip to the northeast. Half Mile Reef was a major underground gold mine at its peak in the early 1900s, and was the location of the regional State gold production battery. Historic records sourced for the Half Mile Reef indicate that between 1897 and 1906, 23,480 tonnes of ore were mined from an underground operation, producing 12,993 ounces of gold. This indicates a recovered gold grade of 17.2 g/t, with head grade likely to be considerably higher.

Compilation of historical data, including old mine plans and a long section, along with detailed interpretation of geophysical datasets was used to complete detailed geological interpretation and design a first phase RC program aimed at locating near surface gold mineralisation with open pit mining potential around high-grade plunging reefs extending from historically mined areas and remnant stope selvedge mineralisation.

During the Quarter Ardea's first diamond drill hole was completed to a depth of 862m, with up to 50% of the drilling costs to be refunded by the State Government as part of Ardea's successful Exploration Incentive Scheme application.

The hole was planned as a deep stratigraphic hole, targeting the down plunge extents of the Half Mile Reef and another 10 subparallel interpreted structures (Figure 15). Initial observations from the drill hole logging indicate that the regolith profile consists of a mottled zone leading into goethitic upper saprolite which transitions into a ferruginous saprolite and a green lower saprolite. Between 87m to 204m the rocks are heavily faulted. The faulting is generally comprised of large zones (up to 26m) of primarily clay only material with mylonitic zones either at the base or top of the fault. Often there is quartz veining within the clay zones with sericite and biotite mica within the veins and manganese staining. Multiple mafic units have been intersected, along with zones of disseminated sulphide and quartz veining. The drill hole will be logged in detail, sampled, and dispatched to the assay laboratory. Once results have been received a detailed interpretation can be completed.

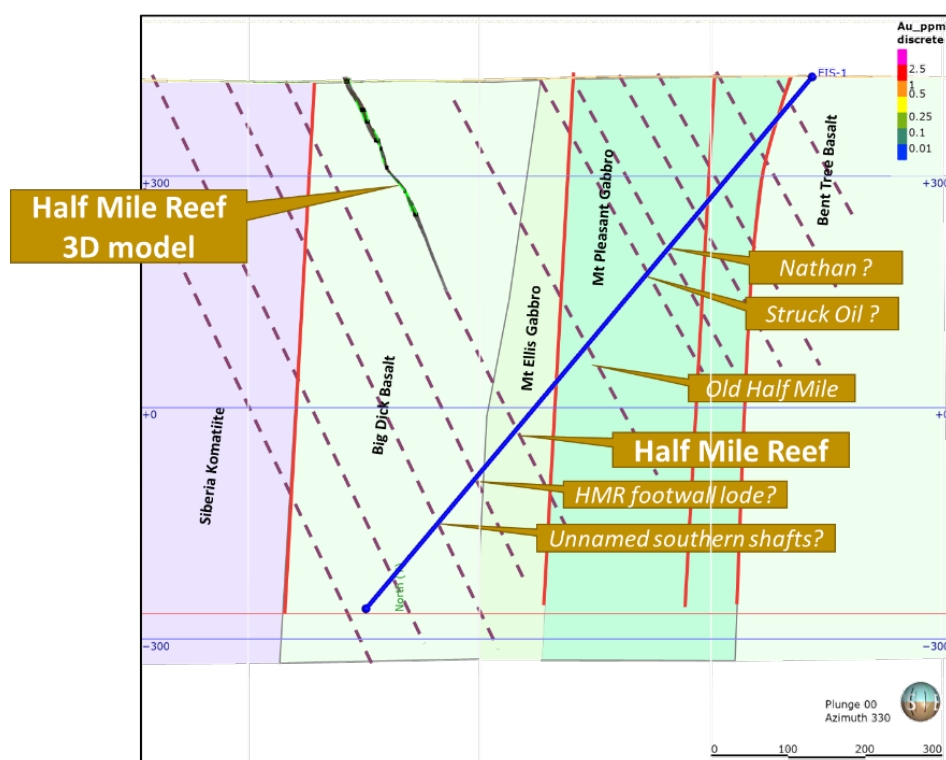


Figure 15: Diagrammatic cross section for the EIS deep diamond core hole at Windanya, showing intersection of most stratigraphic units and numerous east-southeast striking targets, potentially representing gold bearing structures.

### Bulong and Taurus Gold Prospect

Ardea's Bulong tenements are located approximately 30km east of the City of Kalgoorlie Boulder (Figure 12). The regionally significant crustal scale gold-controlling structure, the Goddard Fault, trends north-south for 17km and passes through Ardea's Bulong tenure. This structure represents a northern splay of the regionally significant Mount Monger Fault, which hosts gold mineralisation to the south, with the best-known operating mine in the area at Daisy Milano.

Historically, the focus on the Bulong tenements has been on laterite hosted nickel-cobalt mineralisation (54.1Mt at 0.88% nickel and 0.05% cobalt, for 476.1kt nickel and 28.8kt cobalt – Ardea 2020 Annual Report), with limited gold exploration completed by Ardea. A detailed mapping and sampling program around the historic Taurus underlay shaft and multiple workings in the area has helped further refine the controls on gold mineralisation in this region.

In addition to the significant nickel-cobalt resources hosted at Bulong, **36 exploration targets** have been defined. These include gold, PGE, REEs and base metals (nickel, copper, lead and zinc), and additional gold-focussed targeting is underway.

During the Quarter, a detailed review of the geo-metallurgy commenced which has identified additional mineralised neutraliser material that could be used in future KNP production. Detailed assessment is continuing.

### Laverton Tectonic Zone – Pinjin Gold

The Laverton Tectonic Zone (LTZ) hosts some of the largest gold camps in Western Australia, including Sunrise Dam and Granny Smith. The LTZ also hosts several recent gold discoveries such as Lake Rebecca. Additionally, the Mount Weld REE deposit is associated with the northern LTZ.

Ardea continues to evaluate other mineral exploration opportunities that can complement its existing project portfolio and has applied for several exploration licences and acquired another in the LTZ, in the Pinjin area. With the regolith obscuring the prospective basement rocks, Ardea can apply the same exploration methodology that has been

successful in making gold discoveries under cover at Goongarrie, to the Pinjin leases to help ensure the best chance of exploration success.

### Gold Spin-out – Kalgoorlie Gold Mining Limited

Ardea is close to finalising the structure of its planned Kalgoorlie-focussed gold spin-out, Kalgoorlie Gold Mining Limited (**KalGold**). The KalGold Assets are in all cases large contiguous tenement groups which are located on domain boundary Tectonic Zone structures, being the prime location for large scale gold deposits within the Eastern Goldfields province in the Kalgoorlie region. Additional prospectivity guides are Layered Mafic Complex host rocks, alkaline diorite intrusives and late stage epiclastic basins, indications of which are manifest within Ardea's comprehensive historic drilling multi-element data bases. Some additional projects are also being considered, along with Corporate structures, to ensure the optimum outcome for Ardea Shareholders.

A final project mix and capital structure has been settled and submission prepared for the ASX in-principle review.

The process is expected to be formalised in the June 2021 Quarter at which time an announcement will be made in respect of an Extraordinary General Meeting for shareholder approval and setting a Record Date for eligibility for In Specie share distribution at nil cost to Ardea Shareholders.

The area covered by Ardea's tenements is considered highly prospective for gold and Critical Mineral mineralisation and is under explored for gold. Where Ardea has defined nickel laterite resources, KalGold will acquire Gold Rights and Ardea will retain Non-gold Rights. Elsewhere, KalGold will acquire All Mineral Rights. Recently acquired tenure is planned to be included in the KalGold spin-out IPO.

## 3. CORPORATE

To further consolidate Ardea's tenement position and ensure that the KNP continues to be the priority, two Tenement Sale and Purchase Agreements over the Bedonia project were executed during the Quarter (Ardea ASX releases 9 February and 26 February 2021).

### Strategy

The driving Company priority is KNP nickel-cobalt-scandium laterite project development to produce sustainable and ethical battery minerals for the LIB supply chain to further advance the transition to a low carbon future. Complementary nickel sulphide, Critical Mineral (notably REE) and gold (for short-term cash flow and long-term infrastructure sites) development opportunities will also be considered. The starter project is the GNCP to capitalise on the premium goethite ore type and infrastructure-rich location.

Other opportunities to realise value continue to be pursued, notably the planned KalGold spin-out.

### Finance

The Company's cash position was **\$8.3M** at Quarter end.

Issued capital as at 31 March 2021 was 127,670,583 shares, with 4,236,000 Performance Rights on issue.

### Summary of Expenditures for the Quarter

During the Quarter, the Company incurred a total net expenditure from operating activities of \$2,574k. This was made up of \$2,117k expended on exploration and evaluation activities, \$215k on development activities, \$103k on staff costs and \$151k on administrative and corporate costs with the balance on minor items.

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 \$179k and rental for the Company's West Kalgoorlie operations office of \$19k 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 2021 Quarter, Ardea will focus upon the following programs.

##### **Kalgoorlie Nickel Project**

Ardea is well funded and will continue to work with industry groups and State and Federal Government to ensure project development is predicated on ensuring sustainable and ethical development.

Review of KNP geological settings favourable for Critical Minerals, nickel sulphide and gold will continue. This work will continue to be cost effectively undertaken using Ardea's extensive database, sample drill pulps available for re-assay at the West Kalgoorlie office and detailed geophysical datasets.

##### **Goongarrie Nickel Cobalt Project**

###### **Strategic Partner Process**

Continue active discussions and accelerate the Strategic Partner search process in light of the 15 February 2021 KNP resource update which has reiterated the strategic value and global significance of the project.

Continue engagement with groups such as the Australian Government and industry-backed FBICRC and Critical Minerals Facilitation Office.

###### **Resource Upgrades**

Continue the Highway and Kalpini data review and resource update and then commence Siberia North, Bulong, Lake Rebecca, Yerilla and other satellite nickel-cobalt prospects within hauling distance of the GNCP to define the optimum mine plan and maximise HPAL nickel feed grades and mineralised neutraliser utilisation.

###### **GNCP Flowsheet Research and Development**

Continue evaluating additional by-product credit potential from the HPAL pregnant liquor solution to supplement the nickel-cobalt-scandium resource already defined. Complete additional in-pit sourced neutraliser testwork with outputs used to optimise the flow sheet. The core focus is minimising the project development footprint and carbon emissions and adhering to Western Australia's world-class safety, health, environmental and operating standards which ensures sustainable and ethical production.

Of particular importance is current carbon sequestration studies.

##### **WA Nickel Sulphide, Critical Mineral and Gold Projects**

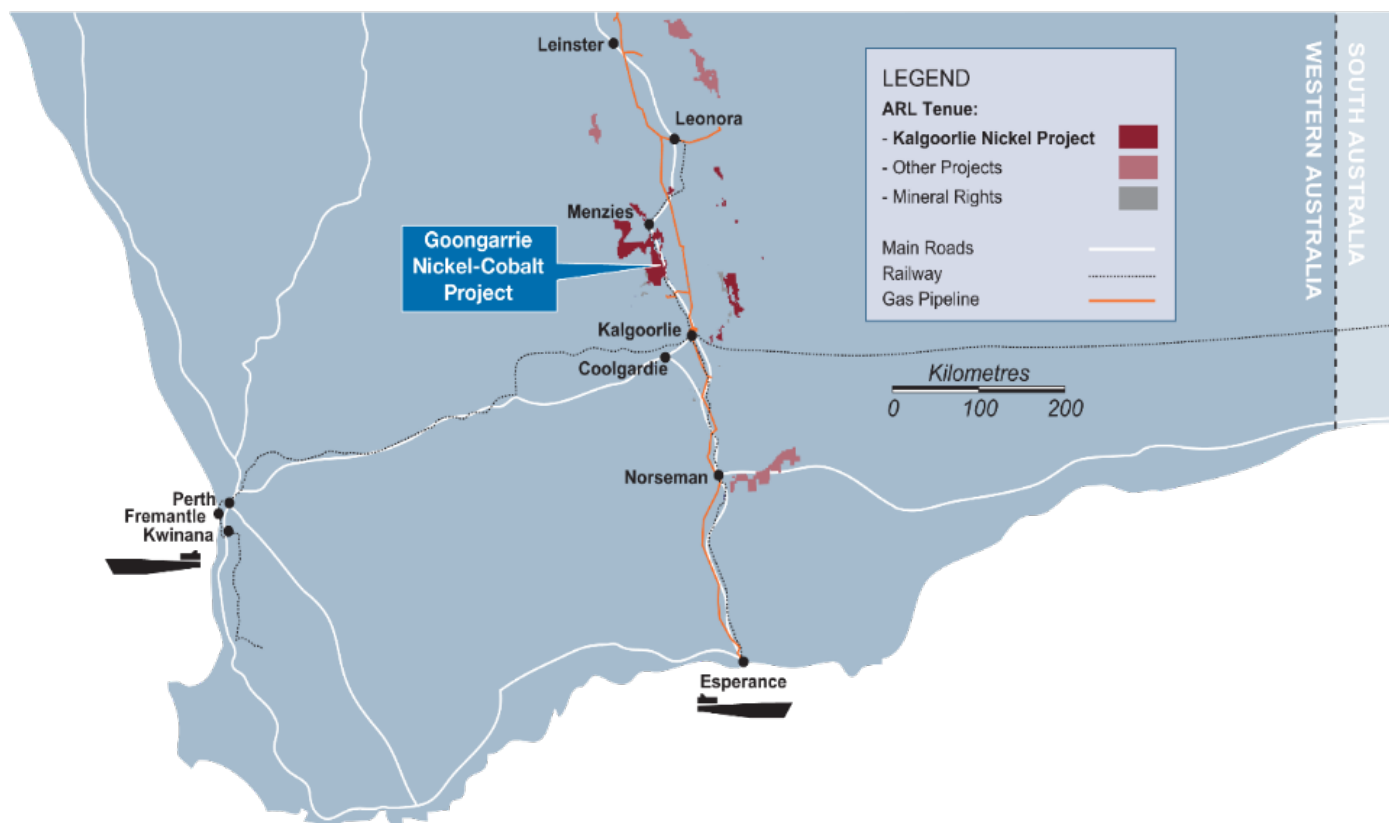
Review and interpret the results of KNP drilling and geophysical exploration programs completed during the March 2021 Quarter. These results will be integrated into the Company target ranking system to ensure that the highest ranked targets continue to be prioritised. With multiple nickel, Critical Mineral and gold targets defined, the exploration and development pipeline continue to be replenished with the aim of making a significant discovery and quantifying by-product revenue streams to create additional Company value.

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

## About Ardea Resources

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

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



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

Follow Ardea on social media



## 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. Kalgoorlie Nickel Project on 21 October 2013 and 31 July 2014, October 2016, 2016 Heron Resources Annual Report and 6 January 2017.
2. KNP Cobalt Zone Study on 7 August 2017, PFS 28 March 2018 and Expansion Study 24 July 2018.
3. Goongarrie Nickel Cobalt Project, Supplementary Prospectuses 10 February 2017, Ardea Annual Report Nov 2017, ASX announcements 28 June 2017, 4 July 2017, 28 August 2017, 14 March 2018, 24 July 2018, 8 October 2018.
4. Ardea Resources Prospectus November 2016, Ardea Supplementary Prospectuses 6 January 2017, ASX announcements 9 March 2017, 16 March 2017, 26 April 2017.
5. Ardea Annual Report 2019, ASX announcement 24 October 2019.
6. Maiden Resource for Big Four Gold Project, WA, ASX announcement 14 May 2020.
7. Significant gold exploration results from new target at Goongarrie, ASX announcement 26 June 2020.
8. CSIRO research project commences to define gold behaviour within the critical mineral deposits of the Goongarrie Nickel Cobalt Project ASX announcement, 12 August 2020.
9. Significant gold in first RC drilling at Aphrodite North, ASX announcement 13 August 2020.
10. Ardea BTZ gold exploration success at Lady Charlotte, ASX announcement 24 August 2020.
11. Ardea Annual Report 2020, ASX announcement 29 September 2020.
12. Nickel Sulphide Targets within the Ardea Tenement Portfolio including KNP, ASX announcement 30 September 2020.
13. First metallurgical tests: very high gold recoveries from Big Four Gold deposit, ASX announcement 12 October 2020.
14. "Lily Albany" gold discovery confirmed by RC drilling at Aphrodite North, ASX announcement 29 October 2020.
15. High-grade, shallow gold discovery at Zeus, 10m at 13g/t gold, ASX announcement 9 November 2020.
16. Free Milling Gold confirmed for Lily Albany Discovery, ASX announcement 25 November 2020.
17. Ardea commences nickel sulphide core drilling at Emu Lake, ASX announcement 30 November 2020.
18. Drilling recommences at Zeus gold discovery, Lily Albany to follow, ASX announcement 15 December 2020.
19. Tenement Sale and Purchase Agreement signed with Moneghetti Minerals over Bedonia East, ASX announcement 9 February 2021.
20. GNCP High Grade Resource - 60 million tonne at 1.0% Nickel Sustainable Long-life Battery Metal Resource Confirmed, ASX announcement 15 February 2021.
21. Tenement Sale and Purchase Agreement signed with Larvotto Resources over Bedonia West, ASX announcement 26 February 2021.
22. Ardea confirms Nickel Sulphide Drill Target within the Kalgoorlie Nickel Project, ASX announcement 2 March 2021.
23. Half Year Accounts - December 2020, ASX announcement 5 March 2021.
24. Emu Lake Nickel Sulphide Target: Diamond Core Drilling Commences, ASX announcement 30 March 2021.
25. Compelling nickel-copper-platinoid sulphide drill target defined at Black Range, 19 April 2021.

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 Exploration Results and Resource Estimates for the Goongarrie Nickel Cobalt Project 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.

The exploration and industry benchmarking summaries are based on information reviewed by Dr Matthew Painter, who is a Member of the Australian Institute of Geoscientists. Dr Painter 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'. Dr Painter 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.



**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

Name of entity

Ardea Resources Limited

ABN

30 614 289 342

Quarter ended ("current quarter")

31 March 2021

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (9 months) \$A'000
<b>1.</b>	<b>Cash flows from operating activities</b>		
1.1	Receipts from customers	-	-
1.2	Payments for		
	(a) exploration & evaluation	(2,117)	(4,519)
	(b) development	(215)	(915)
	(c) production	-	-
	(d) staff costs	(103)	(381)
	(e) administration and corporate costs	(151)	(475)
1.3	Dividends received (see note 3)	-	-
1.4	Interest received	12	55
1.5	Interest and other costs of finance paid	-	-
1.6	Income taxes paid	-	-
1.7	Government grants and tax incentives	-	-
1.8	Other (provide details if material)	-	-
<b>1.9</b>	<b>Net cash from / (used in) operating activities</b>	<b>(2,574)</b>	<b>(6,235)</b>

<b>2.</b>	<b>Cash flows from investing activities</b>		
2.1	Payments to acquire or for:		
	(a) entities	-	-
	(b) tenements	-	(120)
	(c) property, plant and equipment	-	(12)
	(d) exploration & evaluation	-	-
	(e) investments	-	-
	(f) other non-current assets	-	-

<b>Consolidated statement of cash flows</b>		<b>Current quarter \$A'000</b>	<b>Year to date (9 months) \$A'000</b>
2.2	Proceeds from the disposal of:		
	(a) entities	-	-
	(b) tenements	-	82
	(c) property, plant and equipment	-	-
	(d) investments	-	-
	(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)	-	-
<b>2.6</b>	<b>Net cash from / (used in) investing activities</b>	<b>-</b>	<b>(50)</b>

<b>3.</b>	<b>Cash flows from financing activities</b>		
3.1	Proceeds from issues of equity securities (excluding convertible debt securities)	-	4,878
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	-	(265)
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)	-	-
<b>3.10</b>	<b>Net cash from / (used in) financing activities</b>	<b>-</b>	<b>4,613</b>

<b>4.</b>	<b>Net increase / (decrease) in cash and cash equivalents for the period</b>	<b>(2,574)</b>	<b>902</b>
4.1	Cash and cash equivalents at beginning of period	10,907	10,005
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(2,574)	(6,235)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	-	(50)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	-	4,613



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

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	8,333	8,333

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	1,183	498
5.2	Call deposits	7,150	10,409
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)	8,333	10,907

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	198
6.2	Aggregate amount of payments to related parties and their associates included in item 2	-
<p><i>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.</i></p> <p><i>Salaries, Directors fees and Consulting fees paid to Directors - \$178,926</i></p> <p><i>Payments for Kalgoorlie Office to a Director related entity for the quarter - \$18,750</i></p>		

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

<b>7.</b>	<b>Financing facilities</b> <i>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.</i>	<b>Total facility amount at quarter end \$A'000</b>	<b>Amount drawn at quarter end \$A'000</b>
7.1	Loan facilities	-	-
7.2	Credit standby arrangements	-	-
7.3	Other (please specify)	-	-
7.4	<b>Total financing facilities</b>	-	-
7.5	<b>Unused financing facilities available at quarter end</b>		-
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.		

<b>8.</b>	<b>Estimated cash available for future operating activities</b>	<b>\$A'000</b>
8.1	Net cash from / (used in) operating activities (item 1.9)	(2,574)
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)	(2,574)
8.4	Cash and cash equivalents at quarter end (item 4.6)	8,333
8.5	Unused finance facilities available at quarter end (item 7.5)	-
8.6	Total available funding (item 8.4 + item 8.5)	8,333
8.7	<b>Estimated quarters of funding available (item 8.6 divided by item 8.3)</b>	3.2
<i>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.</i>		
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		

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

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: 21 April 2021

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.



**Ardea Resources Limited Tenement Schedule (WA) as at 31 March 2021**
**Goongarrie Nickel Cobalt Project**

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	Pending	
L30/68	Goongarrie	100	Live		M24/919	Goongarrie-Scotia	100 Ni rights	Live	6
L16/141	Goongarrie	100	Pending		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	Goongarie East	100	Pending	
P29/2649	Highway North	100	Pending		L29/146	Goongarie East	100	Pending	

**GNCP 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	Pending	
P24/5417	Siberia	100	Pending	
P24/5418	Siberia	100	Pending	

**GNCP 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**
**GNCP Expansion**

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	Pending		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		P25/2615	Kalpini-Bulong	100	Live	
M25/59	Kalpini-Bulong	100	Live		P25/2650	Kalpini-Bulong	100	Live	
M25/134	Kalpini-Bulong	100	Live		P26/4542	Kalpini-Bulong	100	Pending	
M25/145	Kalpini-Bulong	100	Live		P26/4543	Kalpini-Bulong	100	Pending	
M25/151	Kalpini-Bulong	100	Live		M31/488	Kalpini-Lake Rebecca	100	Pending	
M25/161	Kalpini-Bulong	100	Live		P31/2038	Kalpini-Lake Rebecca	100	Live	
M25/171	Kalpini-Bulong	100	Live		P31/2039	Kalpini-Lake Rebecca	100	Live	
M25/187	Kalpini-Bulong	100	Live		P31/2040	Kalpini-Lake Rebecca	100	Live	
M25/209	Kalpini-Bulong	100	Live		E27/643	Kalpini	100	Pending	
E27/646	Kalpini	100	Pending		E27/647	Kalpini	100	Pending	

**Yerilla Hub**
**GNCP Expansion**

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

**WA Regional**

Tenure	Location	Ardea Interest (%)	Status	Note
E39/2188	Yundamindra	100	Live	
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	
E28/3036	Pinjin South	100	Pending	
E28/3040	Pinjin South	100	Pending	
E26/228	Gidji	100	Pending	

**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	
E29/1078	Perrinvale	100	Live	

**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
E63/1827	Bedonia	100	Live	14	E63/1929	Bedonia	100	Live	14
E63/1828	Bedonia	100	Live	13	E63/1974	Bedonia	100	Live	14
E63/1856	Bedonia	100	Live	13	E63/1976	Bedonia	100	Live	14
E63/1857	Bedonia	100	Live	13	E63/1995	Bedonia	100	Pending	14
E63/1928	Bedonia	100	Live	13	E63/2008	Bedonia	100	Live	14

**Ardea Resources Limited Tenement Schedule (NSW) as at 31 March 2021**
**Lachlan Fold Belt – Ardea**

Tenure	Location	Ardea Interest (%)	Status	Note
EL 8557	Restdown 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 2021.
14.	By a Tenement Sale and Purchase Agreement executed on 25 February 2021, Bedonia West was sold to Larvotto Resources Limited. Completion is subject to Larvotto Resources Limited successfully listing on the ASX in 2021.

**Interests in Mining Tenements and Petroleum Tenements Acquired or Increased during the March Quarter 2021**
**Ardea WA Tenements**

Tenure	Location	Nature of Interest	Ardea Interest beginning Quarter (%)	Ardea Interest end Quarter (%)
E27/646	Kalpini	Application	0	100
E27/647	Kalpini	Application	0	100
E29/1125	Goongarie East	Application	0	100
L29/146	Goongarie East	Application	0	100
P29/2646	Highway North	Application	0	100
P29/2647	Highway North	Application	0	100
P29/2648	Highway North	Application	0	100
P29/2649	Highway North	Application	0	100
P29/2650	Highway North	Application	0	100
P29/2651	Highway North	Application	0	100



**Ardea Resources Limited Tenement Schedule (WA) as at 31 March 2021**
**Goongarrie Nickel Cobalt Project**

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	Pending	
L30/68	Goongarrie	100	Live		M24/919	Goongarrie-Scotia	100 Ni rights	Live	6
L16/141	Goongarrie	100	Pending		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	Goongarie East	100	Pending	
P29/2649	Highway North	100	Pending		L29/146	Goongarie East	100	Pending	

**GNCP 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	Pending	
P24/5417	Siberia	100	Pending	
P24/5418	Siberia	100	Pending	

**GNCP 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**
**GNCP Expansion**

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	Pending		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		P25/2615	Kalpini-Bulong	100	Live	
M25/59	Kalpini-Bulong	100	Live		P25/2650	Kalpini-Bulong	100	Live	
M25/134	Kalpini-Bulong	100	Live		P26/4542	Kalpini-Bulong	100	Pending	
M25/145	Kalpini-Bulong	100	Live		P26/4543	Kalpini-Bulong	100	Pending	
M25/151	Kalpini-Bulong	100	Live		M31/488	Kalpini-Lake Rebecca	100	Pending	
M25/161	Kalpini-Bulong	100	Live		P31/2038	Kalpini-Lake Rebecca	100	Live	
M25/171	Kalpini-Bulong	100	Live		P31/2039	Kalpini-Lake Rebecca	100	Live	
M25/187	Kalpini-Bulong	100	Live		P31/2040	Kalpini-Lake Rebecca	100	Live	
M25/209	Kalpini-Bulong	100	Live		E27/643	Kalpini	100	Pending	
E27/646	Kalpini	100	Pending		E27/647	Kalpini	100	Pending	

**Yerilla Hub**
**GNCP Expansion**

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

**WA Regional**

Tenure	Location	Ardea Interest (%)	Status	Note
E39/2188	Yundamindra	100	Live	
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	
E28/3036	Pinjin South	100	Pending	
E28/3040	Pinjin South	100	Pending	
E26/228	Gidji	100	Pending	

**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	
E29/1078	Perrinvale	100	Live	

**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
E63/1827	Bedonia	100	Live	14	E63/1929	Bedonia	100	Live	14
E63/1828	Bedonia	100	Live	13	E63/1974	Bedonia	100	Live	14
E63/1856	Bedonia	100	Live	13	E63/1976	Bedonia	100	Live	14
E63/1857	Bedonia	100	Live	13	E63/1995	Bedonia	100	Pending	14
E63/1928	Bedonia	100	Live	13	E63/2008	Bedonia	100	Live	14

**Ardea Resources Limited Tenement Schedule (NSW) as at 31 March 2021**
**Lachlan Fold Belt – Ardea**

Tenure	Location	Ardea Interest (%)	Status	Note
EL 8557	Restdown 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 2021.
14. By a Tenement Sale and Purchase Agreement executed on 25 February 2021, Bedonia West was sold to Larvotto Resources Limited. Completion is subject to Larvotto Resources Limited successfully listing on the ASX in 2021.

**Interests in Mining Tenements and Petroleum Tenements Acquired or Increased during the March Quarter 2021**
**Ardea WA Tenements**

Tenure	Location	Nature of Interest	Ardea Interest beginning Quarter (%)	Ardea Interest end Quarter (%)
E27/646	Kalpini	Application	0	100
E27/647	Kalpini	Application	0	100
E29/1125	Goongarie East	Application	0	100
L29/146	Goongarie East	Application	0	100
P29/2646	Highway North	Application	0	100
P29/2647	Highway North	Application	0	100
P29/2648	Highway North	Application	0	100
P29/2649	Highway North	Application	0	100
P29/2650	Highway North	Application	0	100
P29/2651	Highway North	Application	0	100