

ASX & Media Release

12 August 2019

ASX Symbol

ARL

Ardea Resources Limited

Suite 2 / 45 Ord St
West Perth WA 6005

PO Box 1433
West Perth WA 6872

Telephone

+61 8 6244 5136

Email

ardea@ardearesources.com.au

Website

www.ardearesources.com.au

Directors

Katina Law
Executive Chair

Ian Buchhorn
Technical Executive Director

Wayne Bramwell
Non-Executive Director

Issued Capital

Fully Paid Ordinary Shares
106,145,424

*Unlisted options
exercisable at \$0.25*
11,155,011

*Directors/Employee
Performance Rights*
5,161,000

ABN 30 614 289 342

Visible high-grade gold at surface at Gundagai, NSW

- As Ardea advances the spin out of Godolphin Resources, assessment of each project continues to return significant results.
- Recent rock-chips from historic workings on the Gundagai Project confirm locally high-grade gold mineralisation of up to **37.90 g/t**. This corresponds with **visible gold in surface sampling**.
- Significant gold mineralisation in surface sampling at Big Ben (up to **4.43 g/t** at Gundagai South), and, at Lewis Ponds, gold (up to 3.22 g/t), silver (up to 329 g/t), copper (up to 12.45 %), and lead (up to 9.02 %) mineralisation in surface sampling further highlights the strong potential for the Godolphin tenement suite.
- Follow-up field work at each of the projects will be undertaken by Godolphin Resources after it lists in late 2019, and is expected to include geological mapping, systematic sampling and drilling.
- As at a future Record Date and following listing, Ardea shareholders will receive an in-specie distribution of the 30 million Godolphin Vendor Shares at nil cost, plus have a priority right to subscribe for IPO Shares.

The Ardea Resources Limited (Ardea or the Company) demerger of its NSW gold and base metal assets continues into a new listing, Godolphin Resources Limited (Godolphin), via an initial Public Offering. Finalisation of work programs prior to the demerger is yielding significant exploration results as project appraisal continues.

Recent examination of the Emu workings on the Gundagai Project has defined visible gold mineralisation at surface, with associated base metal (copper, lead, zinc) accessory sulphides.

Ardea CEO Andrew Penkethman noted:

“Identification of gold grades of up to 37.9g/t at surface during first phase project assessment is an outstanding start to the Gundagai North exploration. Ardea’s Orange-based exploration team continue to assess our NSW projects and advance the understanding of these under-explored tenements. The large regionally significant land holding assembled by Ardea in NSW provides an exceptional platform for Godolphin to build upon as a dedicated NSW gold and base metals exploration and development company.”

Gold workings at Gundagai and Lewis Ponds assessed

As Ardea moves towards an IPO and spinout of its NSW assets into Godolphin Resources Limited, project assessment continues. Several work streams are in progress and are planned to be finalised prior to the IPO. These include:

- Resource upgrade at Lewis Ponds gold-zinc-silver-copper-lead project;
- Maiden Resource for Mt Aubrey gold project; and
- Resource for the Yeoval gold-copper project.

All resources will be completed following JORC Code (2012) guidelines.

In addition, field appraisal of the extensive ground position at and around Gundagai and Lewis Ponds continues, with new results described as follows.

Gundagai Gold Project

Emu Workings, Gundagai North

The Emu workings north of Gundagai show significant potential (Figure 1, Table 1).

Selective samples were taken to provide confirmation of gold mineralisation in the area and to define mineral associations at each site. These relationships are pivotal to defining the most appropriate and efficient exploration programs for each prospect. Such selective sampling is by no means representative of the overall grade of the prospects, which is expected to be better determined by Godolphin once listed.

Values as high as **37.90 g/t gold** were recorded in sulphide-bearing quartz veins with visible gold (sample CL2816), whilst **20.90 g/t gold** was recorded in quartz veins with ferruginous staining without visible gold (CL2811). All samples were collected from within and around the historic Emu workings north of Gundagai township. Encouragingly, elevated **gold levels exceeding 1.0 g/t gold** are evident in 7 of the 14 samples collected, with anomalous gold values present in most of the remainder.

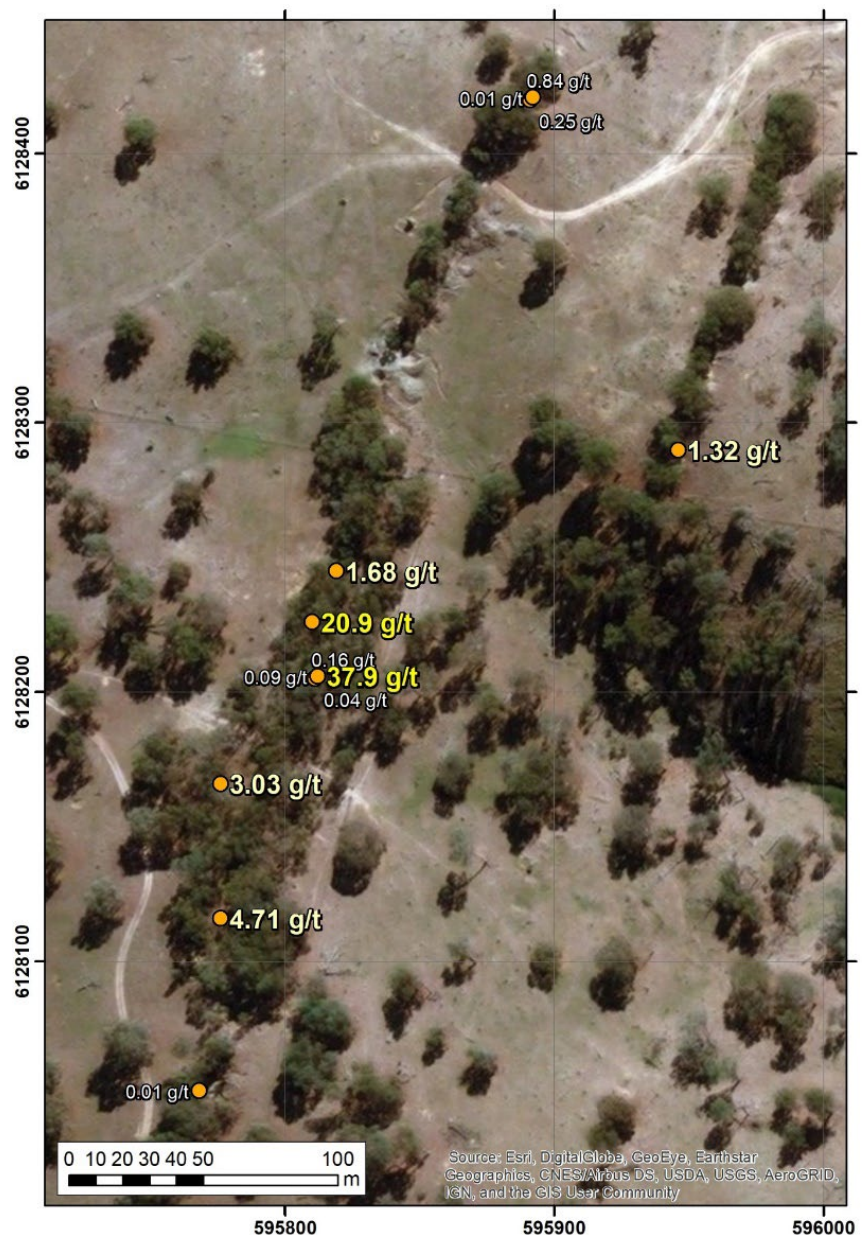


Figure 1 – Gold in rock chips at the Emu workings, Gundagai North. Projection: MGA 94 Zone 55.

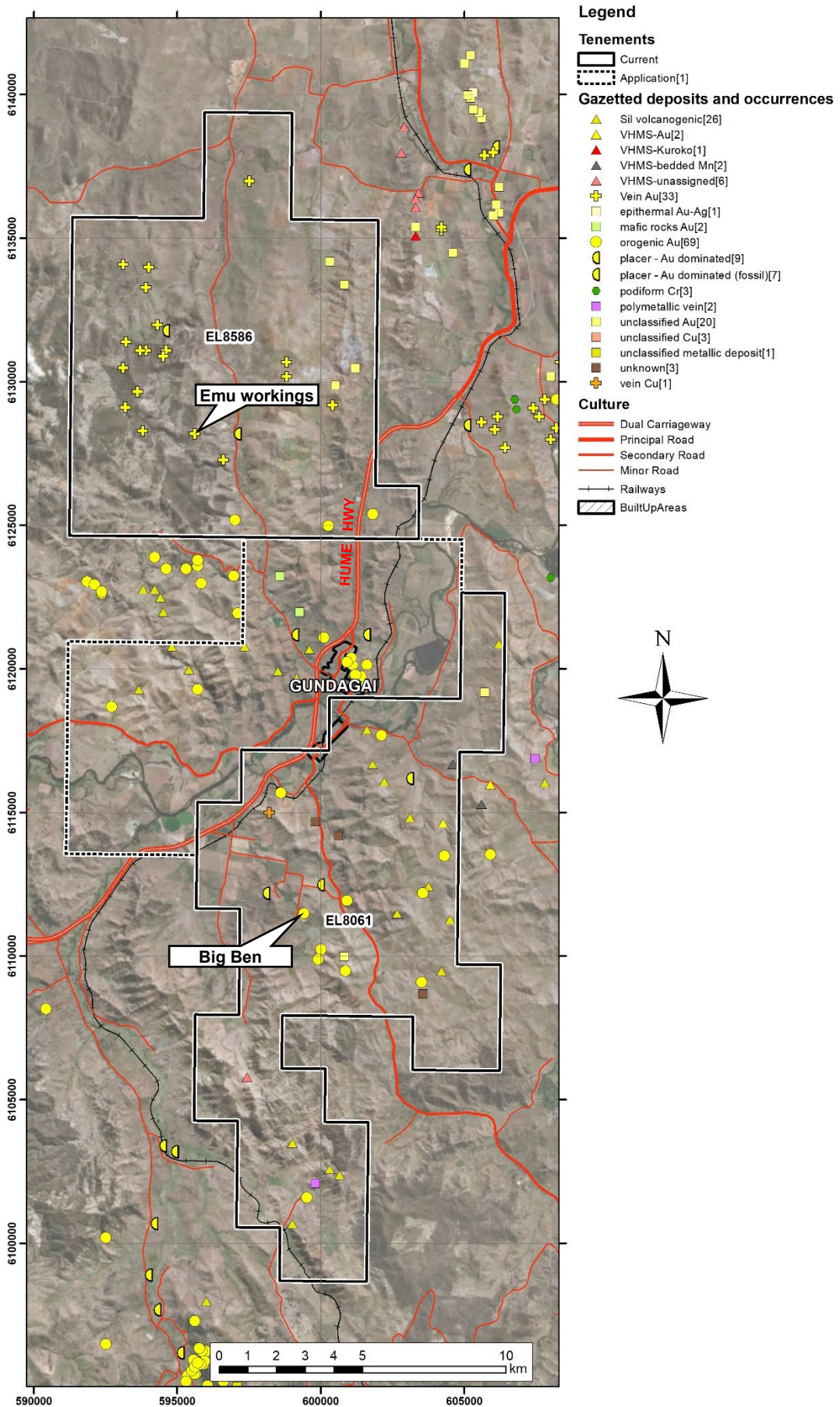


Figure 2 –The Gundagai Project. The Emu workings and the Big Ben prospect are highlighted. Projection: MGA 94 Zone 55.

Table 1 – Selected rock chipping results from the Emu workings at Gundagai North. Gold values in excess of 1 g/t (1ppm) are shown. All results are presented in Appendix 1. Samples were selected from mineralised rocks to confirm gold grades and mineral associations and should not be considered indicative of overall deposit grade or size. There is presently insufficient data to define resources or reserves at each project. Coordinates recorded in MGA 94 Zone 55.

Prospect	Sample number	Northing (mN)	Easting (mN)	Gold (g/t)	Silver (g/t)	As (ppm)	Sb (ppm)	Cu (ppm)	Pb (ppm)	Sample description
Emu	CL2810	6128245	595819	1.68	0.07	5.2	1.22	22.5	44	Quartz veins, ferruginous staining
	CL2811	6128226	595810	20.90	0.66	4.3	1.39	20.1	110	Quartz veins, ferruginous staining
	CL2815	6128206	595812	1.62	0.30	9.0	1.25	41.3	42	Sheeted quartz vein set
	CL2816	6128206	595812	37.90	7.93	3.6	1.54	28.5	2570	Quartz vein with sulphides and visible gold
	CL2817	6128116	595776	4.71	0.44	22.2	1.52	12.5	49	Quartz vein with sulphides
	CL2818	6128166	595776	3.03	1.86	6.6	1.04	66.8	437	Quartz vein with sulphides
	CL2820	6128290	595946	1.32	0.94	3.2	0.88	7.2	163	Quartz vein with sulphides
Big Ben	CL2837	6111332	599417	4.43	0.31	2.3	0.32	20.9	195	Sheeted quartz vein set in porphyry
	CL2838	6111346	599411	2.52	0.82	6.1	0.60	602.0	134	Porphyry with quartz stockwork

Surface sampling at Big Ben, Gundagai South

At Gundagai South, a reconnaissance program aimed primarily at defining local rock types at the Big Ben prospect showed anomalousness within sheeted quartz veins associated with a porphyry intrusive of 2.52 and 4.43 g/t gold (Figure 3). Big Ben is expected to be the first of many gold prospects to be assessed and explored by Godolphin once it lists later in 2019.

Potential of the Gundagai Project

Appraisal of various projects also continues. Recently, the gap between the Gundagai North and Gundagai South tenements was pegged by Ardea, for Godolphin, to consolidate this highly prospective regional land holding. The area remains in application, but its pegging has led to a renewed assessment of the entire Gundagai project area.

Gundagai is a historic gold mining centre, with numerous 1800s vintage gold workings located around the historic town site. On currently granted tenure, there are 65 gazetted historic mine sites, deposits, and occurrences of gold and some minor base metals. The new application contains another 23 such sites, predominantly gold and copper, for a total in the Gundagai area of 88 gazetted localities (Figure 2).

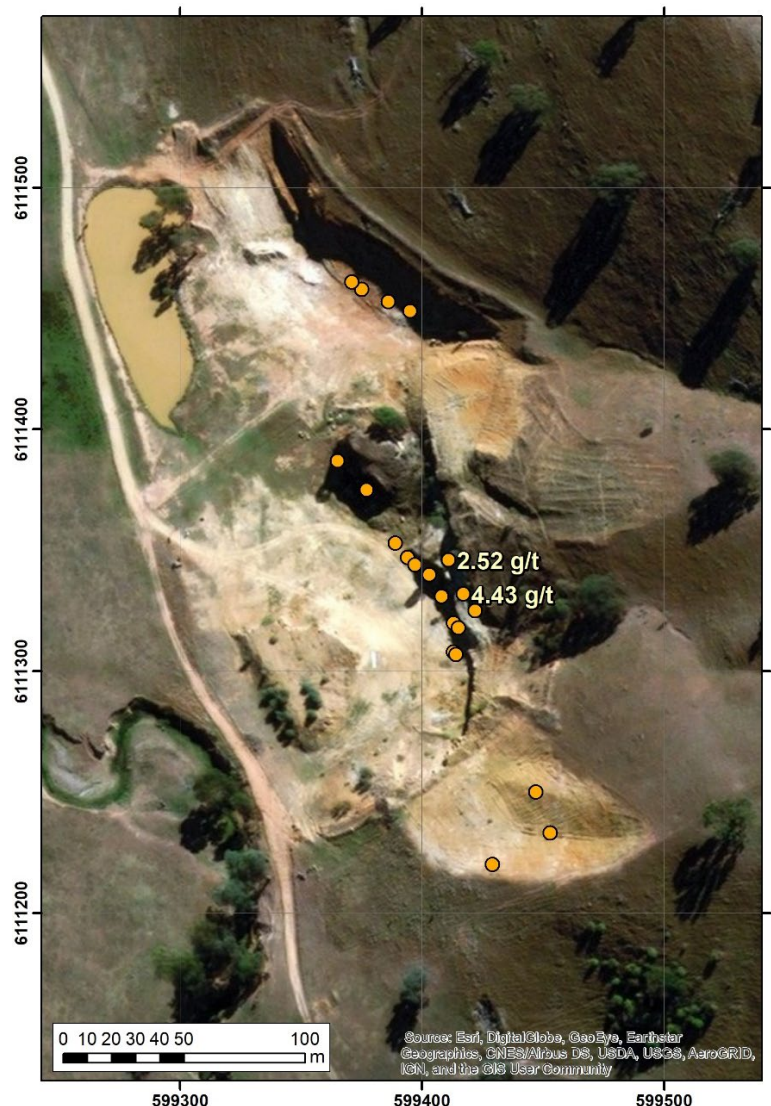


Figure 3 – Gold in recent rock chip sampling at the Big Ben prospect at Gundagai South, showing only those samples in excess of 1 g/t Au.

Each of these will be assessed by Godolphin upon listing, but more importantly, the abundance of mineralisation in the area points to untapped potential that will be targeted using modern exploration and modelling techniques.

Surface sampling at Lewis Ponds

Sampling was completed at Lewis Ponds and constitutes the final phase of assay data gathering for Ardea resources on the NSW projects prior to the Godolphin IPO later this year.

The sampling was undertaken on the southern extensions of the Lewis Ponds project as part of a mapping exercise exploring the surface expression of a possible strike extension of the mineralisation.

Significant gold anomalism is present. At Lewis Ponds, surface sampling continued to highlight values up to **3.22 g/t gold** at the historic Toms workings, with gold anomalism spread along the full strike length of base metal mineralisation. With modelling of the new resource in its final stages, it is encouraging to find gold mineralisation is so common throughout the deposit at surface, justifying Ardea's model that gold will be a significant product of any future mining operation at Lewis Ponds.

In addition to the gold results, silver (up to **329 g/t Ag**), copper (up to **12.45 % Cu**) and lead (up to **9.02 % Pb**) were also locally highly anomalous. Results for a representative suite of elements for all samples collected are presented in Appendix 1.

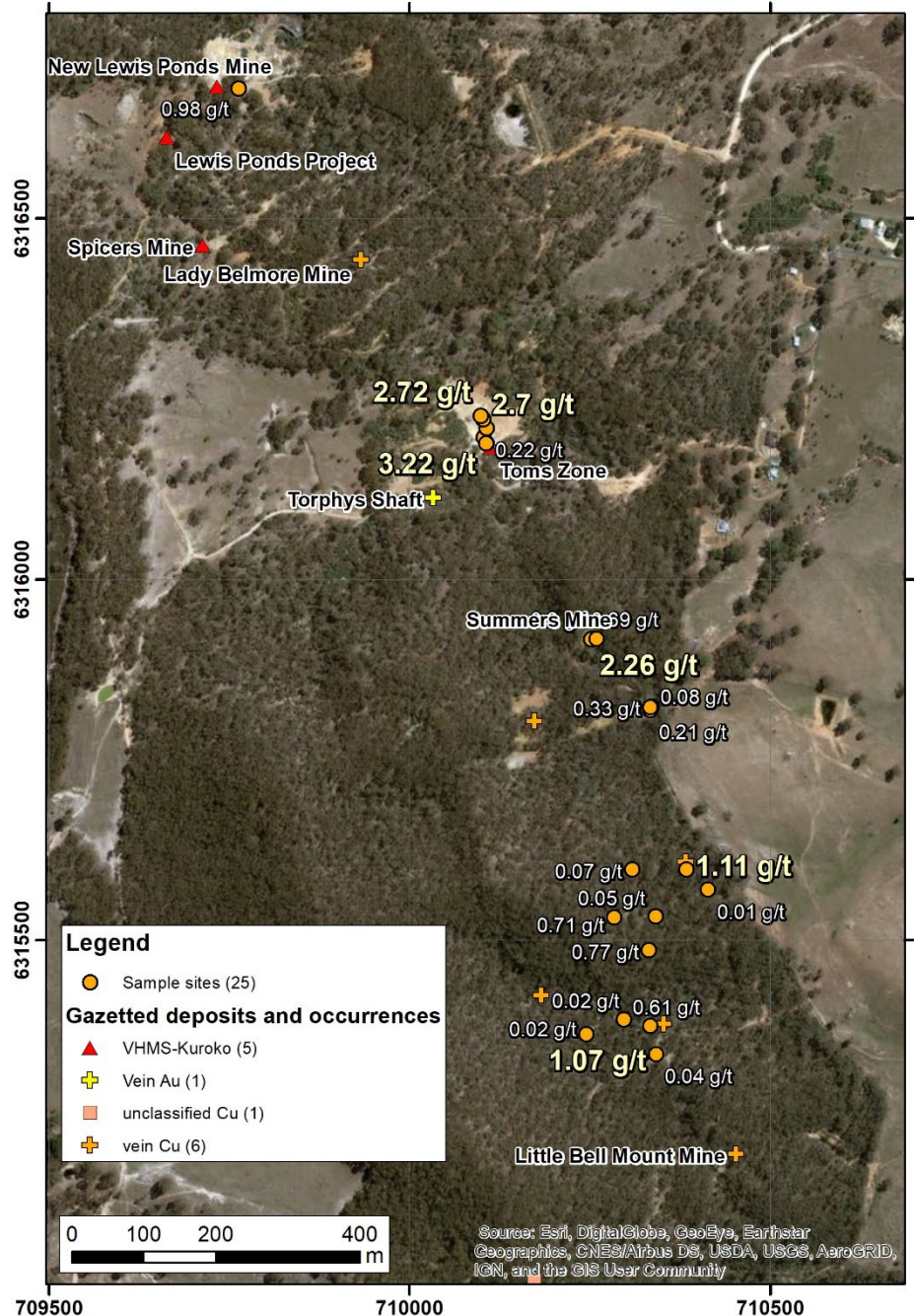


Figure 4 – Recent Lewis Ponds surface rock chip sampling results, showing the main Lewis Ponds area in the north, extending along near-continuous mineralisation to Little Bell Mount Mine in the south, around 1.7 km strike. Unlike previous studies of the project, this entire area and further along strike to the south is being appraised as part of the Lewis Ponds project. Projection: MGA 94 Zone 55.

Godolphin Resources spinout, late 2019

Ardea has incorporated a wholly owned subsidiary, Godolphin Resources Limited (Godolphin) for the spin out of its NSW projects, through an Initial Public Offering, as summarised in ASX release, “Godolphin Resources Limited a spin-out of Ardea’s NSW tenements”, 25 June 2019.

Godolphin’s development focus will be the Mount Aubrey epithermal gold and Lewis Ponds gold-zinc projects associated with the Lachlan Transverse Zone (LTZ) of the Lachlan Fold Belt (LFB) in central NSW.

The Proposed Transaction is subject to various conditions, including approval by Ardea shareholders at an Extraordinary General Meeting (EGM), in anticipation of listing in Q4 2019.

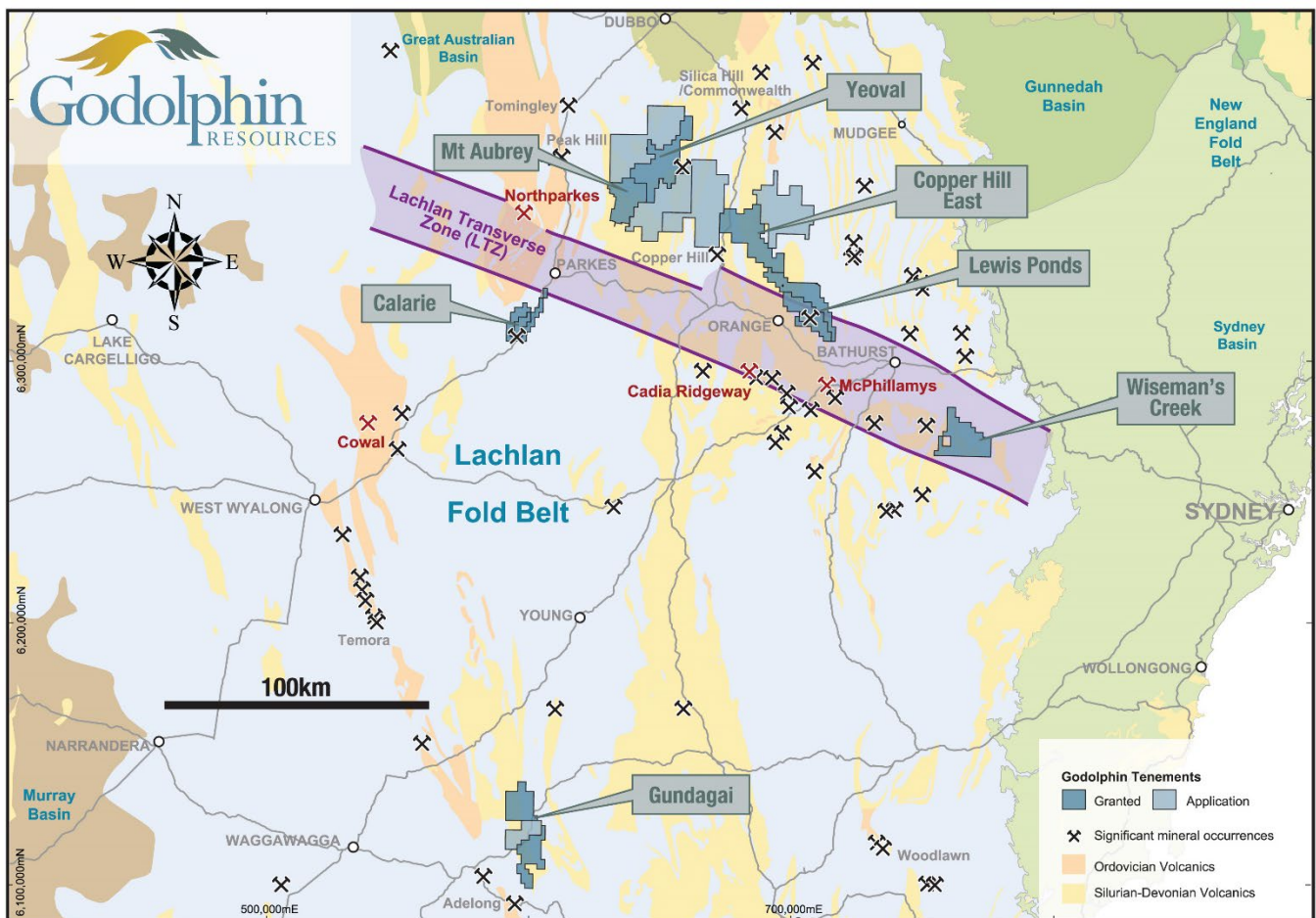


Figure 5 – Locations of Ardea’s outcropping gold projects described in this announcement. Projection: MGA 94 Zone 55.

The Ardea Board is committed to unlocking the significant value held in the LFB assets and believes that this is best achieved through the ASX listing of a focused, standalone gold and base metal exploration and development company, with dedicated funding, board and management team.

Godolphin has been registered as a wholly-owned subsidiary of Ardea, with title to the NSW assets in the process of being transferred to Godolphin.

The derivation of the Godolphin name is from the Godolphin Fault, a crustal-scale structure that hosts significant mineral deposits along its entire strike length, including the 60km of strike held by Godolphin.

Since its listing in 2017, Ardea has become the second largest mineral tenement holder in NSW with Godolphin now holding some 3,216km², with tenure being associated with the key LFB metallogenic

provinces being the LTZ and Gilmore Suture. This dominant land position has been acquired through detailed project scale and regional data compilation and analysis. This work has been carried out by the dedicated exploration team based in Orange. The work has highlighted the prospectivity of the Godolphin tenements and remarkably, the fact that this area is largely under explored by modern standards.

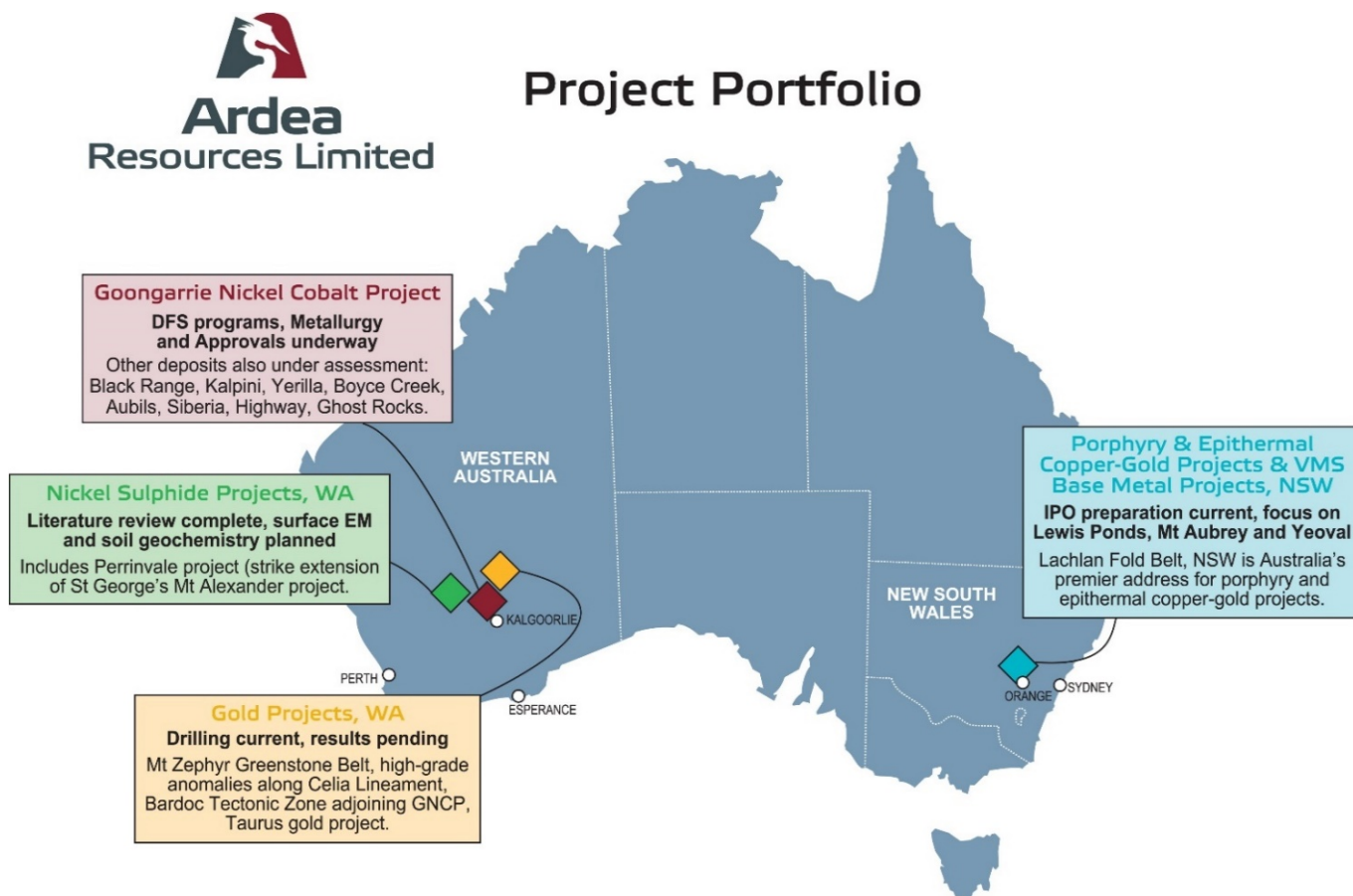
Work completed thus far by Ardea has advanced its NSW projects towards defining three separate JORC-compliant mineral resources. Work programs completed include land-holder access agreements, digitally capturing historic exploration data, geological mapping and soil auger geochemistry, leading to the definition of drill-ready targets across granted Godolphin tenure.

These newest results presented here will no doubt spur field programs in the Gundagai group of tenements and at Lewis Ponds.

About Ardea Resources

Ardea Resources (“Ardea” – ASX:ARL) is an ASX listed resources company, with 100% controlled Australian-based projects, prioritising a three-pronged value creation strategy which is:

- development of the Goongarrie Nickel Cobalt Project, which is part of the Kalgoorlie Nickel Project, a globally significant series of nickel-cobalt-scandium deposits which host the largest nickel-cobalt resource in the developed world, coincidentally located as a cover sequence overlying fertile orogenic gold targets;
- advanced-stage exploration at WA gold and nickel sulphide targets within the Eastern Goldfields world-class nickel-gold province; and
- the Godolphin Resources Limited demerger of the NSW gold and base metal assets with planned in-specie share distribution, with all projects located within the Lachlan Fold Belt world-class gold-copper province, specifically within the Lachlan Transverse Zone (hosts McPhillamy’s Gold and Cadia and Northparkes copper-gold) and splay fault of the Gilmore Suture (hosts Cowal gold).



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

Ardea Resources:

Andrew Penkethman

Chief Executive Officer, Ardea Resources Limited

Tel +61 8 6244 5136

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 ability to complete the Ardea spin-out, the timing and amount of funding required to execute the Company's exploration, development and business plans, capital and exploration expenditures, the effect on the Company of any changes to existing legislation or policy, government regulation of mining operations, the length of time required to obtain permits, certifications and approvals, the success of exploration, development and mining activities, the geology of the Company's properties, environmental risks, the availability of labour, the focus of the Company in the future, demand and market outlook for precious metals and the prices thereof, progress in development of mineral properties, the Company's ability to raise funding privately or on a public market in the future, the Company's future growth, results of operations, performance, and business prospects and opportunities. Wherever possible, words such as "anticipate", "believe", "expect", "intend", "may" and similar expressions have been used to identify such forward-looking information. Forward-looking information is based on the opinions and estimates of management at the date the information is given, and on information available to management at such time. Forward-looking information involves significant risks, uncertainties, assumptions and other factors that could cause actual results, performance or achievements to differ materially from the results discussed or implied in the forward-looking information. These factors, including, but not limited to, the ability to complete the Ardea spin-out on the basis of the proposed terms and timing or at all, fluctuations in currency markets, fluctuations in commodity prices, the ability of the Company to access sufficient capital on favourable terms or at all, changes in national and local government legislation, taxation, controls, regulations, political or economic developments in Australia or other countries in which the Company does business or may carry on business in the future, operational or technical difficulties in connection with exploration or development activities, employee relations, the speculative nature of mineral exploration and development, obtaining necessary licenses and permits, diminishing quantities and grades of mineral reserves, contests over title to properties, especially title to undeveloped properties, the inherent risks involved in the exploration and development of mineral properties, the uncertainties involved in interpreting drill results and other geological data, environmental hazards, industrial accidents, unusual or unexpected formations, pressures, cave-ins and flooding, limitations of insurance coverage and the possibility of project cost overruns or unanticipated costs and expenses, and should be considered carefully. Many of these uncertainties and contingencies can affect the Company's actual results and could cause actual results to differ materially from those expressed or implied in any forward-looking statements made by, or on behalf of, the Company. Prospective investors should not place undue reliance on any forward-looking information.

Although the forward-looking information contained in this news release is based upon what management believes, or believed at the time, to be reasonable assumptions, the Company cannot assure prospective purchasers that actual results will be consistent with such forward-looking information, as there may be other factors that cause results not to be as anticipated, estimated or intended, and neither the Company nor any other person assumes responsibility for the accuracy and completeness of any such forward-looking information. The Company does not undertake, and assumes no obligation, to update or revise any such forward-looking statements or forward-looking information contained herein to reflect new events or circumstances, except as may be required by law.

No stock exchange, regulation services provider, securities commission or other regulatory authority has approved or disapproved the information contained in this news release.

Competent Person Statement

The information in this report that relates to Exploration Targets, Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Dr Matthew Painter, a Competent Person 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 that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being 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. Dr Painter consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Appendix 1 – Assay results

Ardea's recent rock chip assay results from Gundagai and Lewis Ponds projects.

Abbreviations used: Au – gold, Ag – silver, As – arsenic, Sb – antimony, Cu – copper, Pb – lead, m – metre, g/t – grams per tonne, ppm – parts per million, bd – below detection.

Detection limits: Au – 0.001 g/t, Ag – 0.01 ppm, As – 0.2 ppm, Sb – 0.05 ppm, Cu – 0.2 ppm, Pb – 0.5 ppm

Gundagai Project field sampling results

Prospect	Sample number	Northing (mN)	Easting (mN)	Gold (g/t)	Silver (g/t)	As (ppm)	Sb (ppm)	Cu (ppm)	Pb (ppm)	Sample description
Emu	CL2810	6128245	595819	1.68	0.07	5.2	1.22	22.5	44	Quartz veins, ferruginous staining
	CL2811	6128226	595810	20.90	0.66	4.3	1.39	20.1	110	Quartz veins, ferruginous staining
	CL2812	6128205	595811	0.16	0.39	4.4	1.36	35.5	53	Laminated quartz veins in felsic porphyry
	CL2813	6128205	595811	0.04	0.54	3.6	1.12	19.0	174	Quartz veins, ferruginous staining
	CL2814	6128206	595812	0.09	0.09	6.5	2.84	31.7	37	Ferruginous quartz vein from mullock
	CL2815	6128206	595812	1.62	0.30	9.0	1.25	41.3	42	Sheeted quartz vein set
	CL2816	6128206	595812	37.90	7.93	3.6	1.54	28.5	2570	Quartz vein with sulphides and visible gold
	CL2817	6128116	595776	4.71	0.44	22.2	1.52	12.5	49	Quartz vein with sulphides
	CL2818	6128166	595776	3.03	1.86	6.6	1.04	66.8	437	Quartz vein with sulphides
	CL2819	6128052	595768	0.01	0.19	1.9	0.48	11.4	12	Vuggy quartz and minor quartz vein with sulphides
	CL2820	6128290	595946	1.32	0.94	3.2	0.88	7.2	163	Quartz vein with sulphides
	CL2821	6128420	595891	0.84	21.10	9.2	3.68	101.5	5110	Quartz vein with galena
	CL2822	6128420	595891	0.25	7.91	4.2	1.79	44.4	2680	Quartz vein with galena
	CL2823	6128421	595892	0.01	1.43	1.2	0.76	32.8	445	Quartz vein with galena
Big Ben	CL2824	6111220	599429	0.01	5.09	7.9	3.80	60.5	1240	Quartz vein with sulphides
	CL2825	6111250	599447	0.00	0.24	2.8	0.50	26.1	53	Quartz vein with sooty pyrite
	CL2826	6111233	599453	0.00	0.07	6.5	0.79	38.4	14	Laminated quartz vein with Fe and Mn oxides
	CL2827	6111387	599365	0.02	0.18	22.6	0.55	365.0	27	Fault breccia
	CL2828	6111375	599377	0.01	0.22	25.4	0.68	31.9	45	Fault breccia
	CL2829	6111353	599389	0.00	0.10	7.7	0.45	10.4	21	Lithic sandstone
	CL2830	6111347	599394	0.01	0.17	17.0	0.69	21.1	26	Fault breccia
	CL2831	6111344	599397	0.01	0.12	9.1	1.27	28.4	27	Stockwork quartz veins in felsic porphyry
	CL2832	6111340	599403	0.01	0.19	9.9	0.57	13.8	19	Conglomerate
	CL2833	6111331	599408	0.01	0.14	12.8	1.07	35.3	68	Mass flow sandstone
	CL2834	6111320	599413	0.01	0.18	4.7	0.46	71.5	23	Porphyry contact, Mn-bearing
	CL2835	6111318	599415	0.02	0.12	5.0	0.89	48.5	30	Porphyry with quartz stockwork
	CL2836	6111325	599422	0.01	0.05	4.2	0.55	19.3	22	Porphyry contact, weathered
	CL2837	6111332	599417	4.43	0.31	2.3	0.32	20.9	195	Sheeted quartz vein set in porphyry
	CL2838	6111346	599411	2.52	0.82	6.1	0.60	602.0	134	Porphyry with quartz stockwork
	CL2839	6111308	599413	0.35	0.64	7.8	0.68	300.0	89	Porphyry with quartz veins
	CL2840	6111307	599414	0.02	0.06	4.9	0.51	55.3	27	Porphyry
CL2841	6111449	599395	0.01	0.12	13.9	0.92	42.1	47	Porphyry with quartz veins	
CL2842	6111453	599386	0.02	0.57	10.3	0.46	81.2	36	Porphyry with quartz veins	
CL2843	6111458	599375	0.06	0.16	30.0	1.33	115.0	30	Porphyry with quartz veins	
CL2844	6111461	599371	0.01	1.07	20.7	0.99	1820.0	29	Sandstone, Mn-bearing	

Lewis Ponds Project field sampling results

Prospect	Sample number	Northing (mN)	Easting (mN)	Gold (g/t)	Silver (g/t)	As (ppm)	Sb (ppm)	Cu (%)	Pb (%)	Sample description
Toms	CL2784	6316189	710107	0.67	12.0	339	19	0.01	0.15	Sulphidic sinter
	CL2785	6316197	710103	3.22	96.5	976	225	0.05	1.40	Quartz veins with sulphides
	CL2786	6316189	710106	0.18	21.6	217	43	0.22	1.95	VMS host unit
	CL2787	6316210	710107	0.22	19.5	552	27	0.41	1.17	VMS host unit
	CL2788	6316222	710102	2.70	240.0	1710	431	0.18	9.02	Massive sulphides
	CL2789	6316227	710099	2.72	135.0	1055	317	0.12	5.53	Massive sulphides
Summers	CL2790	6315918	710259	0.34	1.9	314	67	0.06	0.35	Massive sulphides
	CL2791	6315918	710255	0.69	18.6	477	46	0.09	0.54	Gossan
	CL2792	6315917	710252	2.26	19.4	370	53	0.08	0.55	Gossan
	CL2793	6315918	710259	0.20	9.3	307	31	0.01	0.59	Semi-massive pyrite, siliceous
	CL2794	6315824	710336	0.08	9.0	6	1	1.46	0.02	Sulphide-rich selvage to quartz vein
	CL2795	6315819	710334	0.21	11.2	14	2	1.96	0.07	Quartz vein with chalcopyrite
	CL2796	6315823	710334	0.33	21.0	30	4	5.72	0.04	Quartz vein with chalcopyrite
Little Bell north	CL2797	6315598	710384	1.11	12.4	613	62	0.07	0.59	Mudstone
	CL2798	6315570	710414	0.01	2.3	34	2	0.02	0.20	Felsic volcanoclastic
	CL2799	6315598	710309	0.07	10.6	135	5	0.07	0.06	Massive sulphides
	CL2800	6315532	710284	0.71	1.6	17	2	0.35	0.00	Breccia fault gouge with copper staining
	CL2801	6315486	710332	0.77	21.0	344	17	0.23	0.02	Gossan
	CL2802	6315533	710341	0.05	0.6	32	3	0.04	0.02	Ferruginous quartz vein
Little Bell	CL2803	6315342	710342	0.04	7.3	22	1	3.13	0.00	Mica schist with malachite staining
	CL2804	6315381	710334	0.61	44.3	131	12	1.62	0.05	Sulphidic quartz eye tuff
	CL2805	6315390	710297	0.02	1.5	7	1	0.61	0.00	Copper staining of quartz eye tuff
	CL2806	6315370	710245	0.02	1.1	1	0	1.39	0.00	Vein quartz in quartz eye tuff
	CL2807	6315370	710245	1.07	20.5	3	1	12.45	0.01	Copper staining of quartz eye tuff
Main Shaft	CL2849	6316681	709763	0.98	329.0	196	251	0.21	8.08	Massive sulphides

Appendix 2 – JORC Code, 2012 Edition, Table 1 report

Section 1 Sampling Techniques and Data

(Criteria in this section applies to all succeeding sections)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information. 	<ul style="list-style-type: none"> Rocks were selectively sampled to ensure high-level representivity of various rock and alteration types observed at each site. Samples collected were first-pass reconnaissance samples to develop familiarity with each of the prospects studied. Many were collected from historic dumps and around old workings, so were not strictly <i>in situ</i>, but were clearly sourced from the historic workings. Sample type, style, condition, and size were recorded for all samples collected by ARL. All results of each field program have been reported. Industry standard practice was used in the processing of samples for assay.
Drilling techniques	<ul style="list-style-type: none"> Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc). 	<ul style="list-style-type: none"> Not applicable.
Drill sample recovery	<ul style="list-style-type: none"> Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material. 	<ul style="list-style-type: none"> Not applicable.
Logging	<ul style="list-style-type: none"> Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. The total length and percentage of the relevant intersections logged. 	<ul style="list-style-type: none"> Not applicable
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparation technique. Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. Measures taken to ensure that the sampling is representative of the <i>in situ</i> material collected, including for instance results for field duplicate/second-half sampling. 	<ul style="list-style-type: none"> All core and rock chip samples are crushed then pulverised in a ring pulveriser (LM5) to a nominal 90% passing 75 microns. An approximately 250g pulp sub-sample is taken from the large sample and residual material stored. A quartz flush (approximately 0.5 kilogram of white, medium-grained sand) is put through the LM5 pulveriser prior to each new batch of samples. A number of quartz flushes are also put through the pulveriser after each massive sulphide sample to ensure the bowl is clean prior to the next sample being processed. A selection of this pulverised quartz flush material is then analysed and reported by the lab to gauge the potential level of contamination that may be carried through from one sample to the next.

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> • Whether sample sizes are appropriate to the grain size of the material being sampled. 	
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> • The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. • For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. • Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established. 	<ul style="list-style-type: none"> • Sample preparation and assaying is being conducted through ALS Laboratories, Orange, NSW with certain final analysis of pulps being undertaken at the ALS Laboratory in Perth WA. • Gold is determined by 30g fire assay fusion with ICP-AES analysis to 1ppb LLD. • Other elements by mixed acid digestion followed by ICP-AES analysis. • Laboratory quality control standards (blanks, standards and duplicates) are inserted at a rate of 5 per 35 samples for ICP work. • Ardea also insert blanks and standards at a frequency of 1 per 10 samples. • All of the QAQC data has been statistically assessed. It has been determined that levels of accuracy and precision relating to the samples are acceptable.
Verification of sampling and assaying	<ul style="list-style-type: none"> • The verification of significant intersections by either independent or alternative company personnel. • The use of twinned holes. • Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. • Discuss any adjustment to assay data. 	<ul style="list-style-type: none"> • An internal review of results was undertaken by Company personnel. No independent verification was undertaken at this stage. • All field and laboratory data has been entered into an industry standard database using a database administrator (DBA) in the Company's Perth office. Validation of both the field and laboratory data is undertaken prior to final acceptance and reporting of the data. • Quality control samples from both the Company and the Laboratory are assessed by the DBA and reported to the Company geologists for verification. All assay data must pass this data verification and quality control process before being reported.
Location of data points	<ul style="list-style-type: none"> • Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. • Specification of the grid system used. • Quality and adequacy of topographic control. 	<ul style="list-style-type: none"> • All samples were located using a handheld GPS system. The coordinates are stored in the exploration database referenced to the MGA Zone 55 Datum GDA94. • The grid system for all models is GDA94. Where historic data or mine grid data has been used it has been transformed into GDA94 from its original source grid via the appropriate transformation. Both original and transformed data is stored in the digital database.
Data spacing and distribution	<ul style="list-style-type: none"> • Data spacing for reporting of Exploration Results. • Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. • Whether sample compositing has been applied. 	<ul style="list-style-type: none"> • Not applicable
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> • Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. • If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material. 	<ul style="list-style-type: none"> • Not applicable
Sample security	<ul style="list-style-type: none"> • The measures taken to ensure sample security. 	<ul style="list-style-type: none"> • All samples were collected and accounted for by ARL employees/consultants during collection. All samples were bagged into calico bags and tied. Samples were transported to Orange from the collecting site by ARL employees/ consultants and submitted directly to ALS Orange. • The appropriate manifest of sample numbers and a sample submission form containing laboratory instructions were submitted to the laboratory. Any discrepancies between sample submissions and samples received were routinely followed up and accounted for.
Audits or reviews	<ul style="list-style-type: none"> • The results of any audits or reviews of sampling techniques and data. 	<ul style="list-style-type: none"> • No audit or review beyond normal operating procedures has yet been undertaken on the Gundagai datasets. ARL has periodically conducted internal reviews of sampling techniques relating to resultant exploration datasets, and larger scale reviews capturing the data from multiple drilling programs. • A review and assessment of the ALS laboratory procedures was under taken by Company personnel in late 2016 and determined to be robust.

Section 2 - Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings. The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area. 	<ul style="list-style-type: none"> The tenements on which the rock chip sampling was undertaken are <ul style="list-style-type: none"> <i>Gundagai North: EL8586.</i> <ul style="list-style-type: none"> The Gundagai North project is located immediately north of the town of Gundagai in New South Wales and has an elevation between 200 m and 600 m above sea-level. The exploration rights to the project are owned 100% by the Ardea Resources through the granted exploration license EL8586. <i>Gundagai South: EL8061</i> <ul style="list-style-type: none"> The Gundagai south project is located immediately south of the town of Gundagai in New South Wales and has an elevation between 200 m and 600 m above sea-level. The exploration rights to the project are owned 100% by the Ardea Resources through the granted exploration license EL8061. <i>Lewis Ponds: EL5583</i> <ul style="list-style-type: none"> The Lewis Ponds project is located 14km east-northeast of the city of Orange, central New South Wales, and has an elevation of between 700 m and 900 m above sea-level. The exploration rights to the project are owned 100% by the Ardea Resources through the granted exploration licence EL5583, which expires on 24 June 2022. A capped (A\$2M) royalty and finder's fee is payable to a private third party if the project is sold or commences production. The project is on partly cleared private land, most of which is owned by Ardea. Access agreements are in place for the private land surrounding the main deposit area. There are no national parks, reserves or heritage sites affecting the project area. Heritage surveys have not been carried out at each site.
Exploration done by other parties	<ul style="list-style-type: none"> Acknowledgment and appraisal of exploration by other parties. 	<ul style="list-style-type: none"> Each of the areas studied has undergone historic mining activities, presumably during the latest 1800s and early 1900s. A systematic review of historic exploration has not yet been undertaken at each of the prospects, however, some near-surface exploration activities have occurred over the past few decades. None have been explored to depth. <ul style="list-style-type: none"> <i>Lewis Ponds: EL5583</i> <ul style="list-style-type: none"> The Lewis Ponds deposit and surrounding workings were part of Australia's first recognised gold field, discovered 1835. Various surface and shallow underground mining operations and associated processing and smelting operations were present at various times between discovery and approximately 1920. The detailed history for this period is presently the subject of research. Amax Exploration Australia Inc entered a Joint Venture Agreement which Metals Investments Holdings NL and A.I. Consolidated Gold Pty Ltd held with the owner of the title, Wentworth Mining Corporation Pty Ltd, over ground which included the Lewis Ponds deposit. Amax drilled four DD holes totalling 875 meters in 1971-1972 which contributed four intercepts above 7% ZnE to this Resource estimate. The only drilling done prior to Amax was by Cominco in 1969. Three holes were abandoned after entering disused workings at the Spicers Mine location, Lewis Ponds. Subsequent drilling by Aquitaine Australia Minerals Pty Ltd in 1975-1976 was under joint venture agreement with Amax and Shell Company of Australia. 10 (BOA series) holes were drilled totalling 2102 metres, which also contributed four intercepts. Between 1979 and 1981 a further 7 holes totalling 2274 metres (SLP series) were drilled by Shell and Aquitaine under the JV agreement with Amax. This drilling contributed five intercepts including one twinned in a wedge hole. In total, other party exploration contributed 15 percent of the database which now determines the geometry of potentially ore grade mineralisation for this Resource estimate. In 1987-1988, the Homestake subsidiary Sabminco drilled 33 RCP holes totalling 2300 metres (LPRC series). This drilling contributed 21 intercepts of the 230 used to interpret the Resource. Prior to the acquisition of TriAusMin by Heron in August 2014, Tri Origin Australia drilled 42232 metres in 124 holes, followed by Tri Origin Minerals with 3812 metres in 30 holes.

Criteria	JORC Code explanation	Commentary
Geology	<ul style="list-style-type: none"> • <i>Deposit type, geological setting and style of mineralisation.</i> 	<p><i>Gundagai North</i></p> <p>EL 8586 covers part of the Tumut Trough in the Lachlan Fold Belt. The principal structural features of the region appear to be controlled by two NNW-trending fault systems, the Gilmore Suture and the Mooney Mooney Fault System but in the immediate area of EL 8586 the Gundagai and Cootamundra faults play a more direct role. These two sub-parallel fault systems are believed to have acted together as a major shear and this system makes EL 8586 highly prospective for structurally controlled gold and base metal deposits.</p> <p>The Frampton volcanics in the western section of the licence shows two structures, and a concentration of historic gold workings seem to occur along this structure. The Gundagai fault is in the eastern half of the licence and it too seems to have a congregation of workings associated with it in the Wandeen formation and also further east of the Gundagai fault. These two structures combine to make EL8586 very prospective for structurally controlled gold deposits.</p> <p>The licence has several units come together in the south. The Jackalas slate, Jones Creek Diorite, Gundagai Serpentinite, Jindalee group, Eurongilly Serpentinite and Frampton volcanics all appear along the southern boundary of the licence.</p> <p><i>Gundagai South</i></p> <p>EL 8061 covers part of the Tumut Trough in the Lachlan Fold Belt. The principal structural features of the region appear to be controlled by two NNW-trending fault systems, the Gilmore Suture and the Mooney Mooney Fault System (see Figure 2 after Stuart-Smith, P.G., 1991 and Figure 3). Several economically significant Cu-Au discoveries have been associated with the Gilmore Suture which is regarded as a major deep crustal discontinuity.</p> <p>The eastern edge of the Gilmore Suture's structural domain occurs in the south of the licence and the Mooney Mooney Fault zone (MMFZ) which lies approximately 14 km east of Gundagai. These two sub-parallel fault systems are believed to have acted together as a major shear and this system makes EL 8061 highly prospective for structurally controlled gold and base metal deposits.</p> <p>In the north, a belt of Cambrian Gundagai Serpentinite is associated with a NW-trending structure in the Jackalass Slate area. A wedge of Silurian Frampton Volcanics also occurs in the north. An outlier of Devonian Minjary Volcanics lies between the Jackalass Slate and granites in the south.</p> <p>The Cambrian and Silurian formations are unconformably overlain by the Early Devonian Minjary Volcanics. Lithologies include rhyolitic ashflow tuffs, ignimbrites and polymictic conglomerates. Intrusive phases of exploration interest are mainly of Late Silurian to Early Devonian age and are generally considered to be contemporaneous with the Gatelee and Minjary formations.</p> <p><i>Lewis Ponds</i></p> <p>The most recent statement of the Lewis Ponds geology by Dr Peter Gregory (2005) has also built on much prior geological insight by other parties in the 1970s and 1980s, and by geologists employed by predecessor companies to Tri Origin Minerals since 1992. Also, between 1999 and 2003 a comprehensive Ph.D. study of the geology was made (Agnew 2003). More recent work is resulting in a reinterpretation of the geology, controls and style of mineralisation, which is presently in progress. A re-cast of Peter Gregory's summary is as follows:</p> <ul style="list-style-type: none"> • <i>Type:</i> Results of the study show that primary volcanogenic mineralisation of Late Silurian age developed within an extensive axial zone over 1200m in a moderately deep-water trough (extensional back arc). Mineralisation deposited at one horizon close to and possibly on the seafloor within sediments and volcanoclastics and at the end of a rhyolite-dacite volcanic episode involving lava domes. Tom's Zone in the south formed in a quieter sedimentary environment dominated by siltstones. Current work by Ardea is showing that late-stage gold mineralisation overprints the earlier VMS style mineralisation. • <i>Setting:</i> The Lewis Ponds mineralised zone is located on the eastern limb of a major regional F1 anticline and within several subsidiary anticlinal and synformal zones on that limb. Plunges are variable with Main Zone plunging moderately northwest, but there appears to be little or no plunge along other sections of the mineralised trend. Various reverse faults probably emanating from a basal sole thrust at the contact of the Ordovician basement and the Silurian rift succession cut the axial zones of several of these folds and leave most volcanic sediment contacts as fault zones. The Lewis Ponds Fault, a ductile and brittle fault zone cuts a synform axis and has caused,

Criteria	JORC Code explanation	Commentary
		<p>kinking and reorientation of cleavage and remobilisation of sulphides. An interpreted southwest-northeast dip slip fault near 1220N is suggested to downfault the mineralised package to the northwest</p> <ul style="list-style-type: none"> • <i>Style of mineralisation:</i> Main Zone mineralisation to the north is largely composed of massive to semi-massive sulphide replacement as well as veining and dissemination within the host polymict breccia-volcaniclastic-siltstone package. Mineralising fluids emanating from syn-volcanic faults in the footwall porphyry moved laterally through porous zones in the host package causing sulphide replacement. The mineralising fluids may have exhaled on the seafloor at some stage based on the minor occurrence of interpreted reworked sulphide clasts and interstitial bands of fine sulphide in some carbonate dominated breccias. Tom's Zone in the south consists of a narrow massive sulphide stratiform zone in reasonable proximity to interpreted footwall feeder pyrite-chalcopyrite stringers. Subsequent, possibly epithermal style precious metal mineralisation is present though its relationship to the earlier, well-documented mineralisation is not yet clear.
Drill hole Information	<ul style="list-style-type: none"> • A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> ○ easting and northing of the drill hole collar ○ elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar ○ dip and azimuth of the hole ○ down hole length and interception depth ○ hole length. • If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case. 	<ul style="list-style-type: none"> • Not applicable
Data aggregation methods	<ul style="list-style-type: none"> • In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated. • Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. • The assumptions used for any reporting of metal equivalent values should be clearly stated. 	<ul style="list-style-type: none"> • Not applicable
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> • These relationships are particularly important in the reporting of Exploration Results. • If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. • If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known'). 	<ul style="list-style-type: none"> • Not applicable
Diagrams	<ul style="list-style-type: none"> • Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views. 	<ul style="list-style-type: none"> • Not applicable.
Balanced reporting	<ul style="list-style-type: none"> • Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results. 	<ul style="list-style-type: none"> • Not applicable to this report. All results are reported either in the text or in the associated appendices. Examples of high-grade mineralisation are labelled as such.
Other substantive exploration data	<ul style="list-style-type: none"> • Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; 	<ul style="list-style-type: none"> • No other data are, at this stage, known to be either beneficial or deleterious to recovery of the metals reported.

Criteria	JORC Code explanation	Commentary
	<i>geophysical survey results; geochemical survey results; bulk samples size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</i>	
Further work	<ul style="list-style-type: none"> • <i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</i> • <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i> 	<ul style="list-style-type: none"> • Further work is presently being assessed at each of the prospects discussed. Controls on mineralisation will need to be determined in conjunction with defining areal and down-dip extent at each prospect.