Ardea Resources Limited

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**ASX & Media Release**
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ARL

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**Issued Capital**
*Fully Paid Ordinary Shares*
127,670,582

*Directors/Employee Performance Rights*
4,236,000

**ABN** 30 614 289 342

# High-grade shallow gold intercepts continue at Lady Charlotte, Goongarrie BTZ

- High-grade, shallow intercepts in two drill holes in the south of Lady Charlotte:
  - ABFR0360: **12m at 5.20g/t gold** from 42m
    *including* **8m at 7.49g/t gold** from 42m
  - ABFR0361: **8m at 4.06g/t gold** from 54m
    *including* **4m at 6.86g/t gold** from 56m
- Intercepts are associated with minor shallow surface workings and 1.32g/t Au rock chip sample in mineralised veins located during Ardea mapping.
- Although clearly of a supergene gold style, initial analysis suggests that these intercepts may be primary oxidised veins similar to those along strike at Lily Albany to the north (ARL:ASX, announcement 13 August 2020, 29 October 2020) and Aphrodite to the south (BDC:ASX, announcement 6 May 2021). Further drilling is planned to quantify the lode geometry, in particular evaluate potential primary lodes to the west of current drilling.
- The gold programs are an integral component of infrastructure site selection along the east crest of the Goongarrie Line proposed nickel-cobalt-scandium open pits. Results from recent follow-up drilling at Ardea's 2020 and 2021 Goongarrie virgin gold discoveries continue to be returned, confirming and expanding the known extent of the gold systems. More results expected soon.

Ardea Resources Limited (**Ardea** or the **Company**) is pleased to announce further shallow, high-grade gold intercepts from infrastructure planning drill programs at Lady Charlotte east of the Goongarrie Nickel Cobalt Project (**GNCP**) deposits.

New drilling at several sites on the Lady Charlotte structure has defined further gold mineralisation that is being modelled for follow-up, but two drill-holes 1,200m south of a previously reported high grade intercept show great promise (ARL:ASX, announcement 24 August 2020). What appears to be high-grade, flat-lying, thick gold mineralisation is evident from 42m downhole or around 30m vertical depth within completely oxidised clays (which would be normally depleted in gold due to intense surface leaching).

Though oxidised, the presence of quartz vein fragments and the lack of a lateritic redox front suggest that these intercepts are from an oxidised, quartz vein array that represents the uppermost portion of an orogenic gold system. Further drilling is planned to understand the style of mineralisation.

Ardea's Managing Director, Andrew Penkethman, said:

*"Ardea continues to reveal the gold potential of the GNCP. Through years of exploration, resource definition and now with a pathway toward development, the nickel pedigree of the GNCP has never been in doubt. However, the historic focus on nickel means that gold did not receive the attention that it deserved.*

*The Ardea Team are awaiting assay results from other gold targets recently drilled within the GNCP infrastructure sites and will provide updates on these, as information and interpretation becomes available."*

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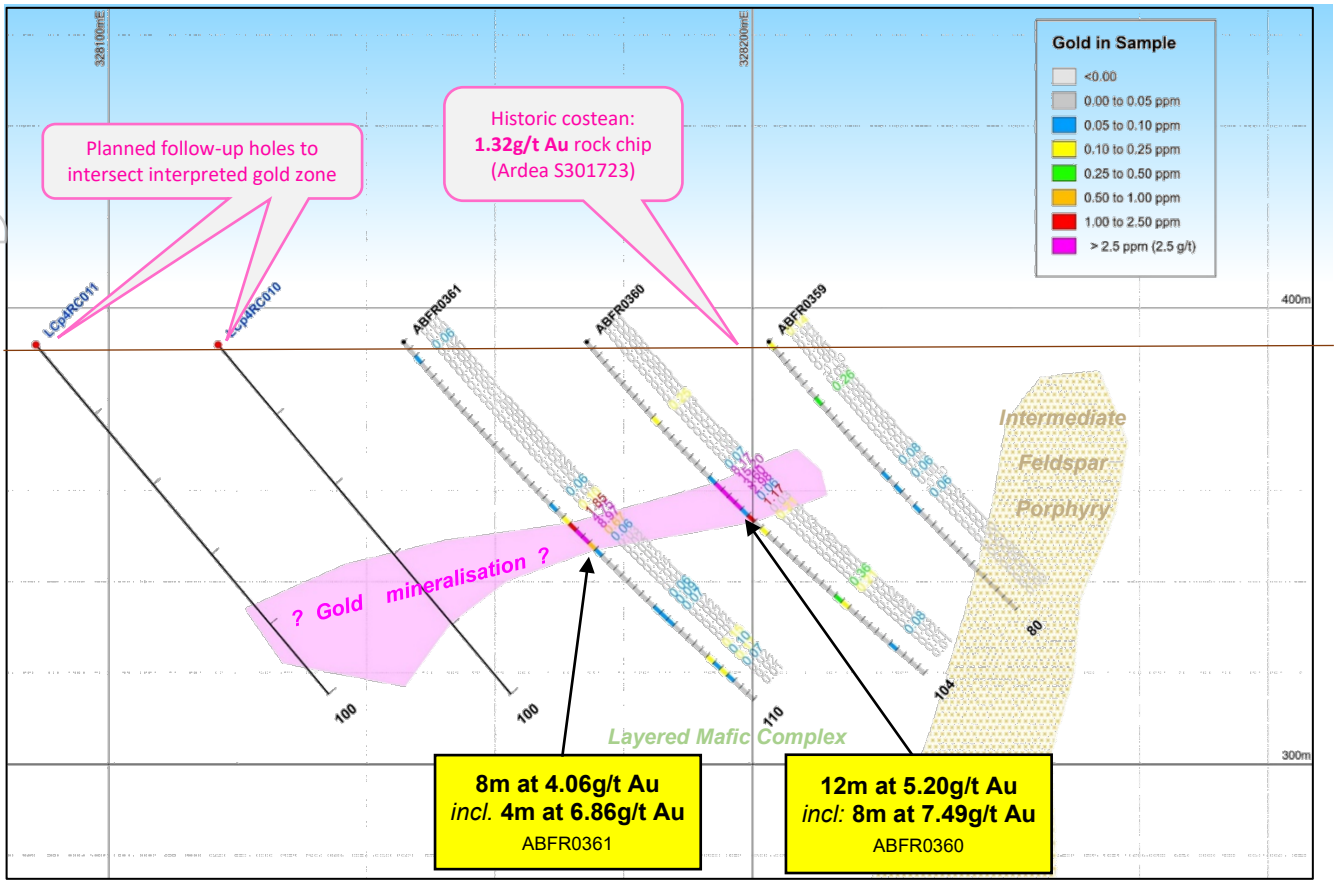


*Figure 1 – Cross section of the recent drilling at Lady Charlotte, which targeted hypogene gold mineralisation beneath surface workings and mineralised rock chips (Figure 2). Planned follow-up drill holes are shown to the left. Looking towards the northwest. Projection MGA 94 Zone 51.*

Intercepts from the most recent drilling at Lady Charlotte include:

| | |
|---|---|
| ABFR0354 | 4m at 1.12g/t Au from 50m |
| ABFR0360 | **12m at 5.20g/t Au** from 42m |
| | *including* **8m at 7.49g/t Au** from 42m |
| ABFR0361 | **8m at 4.06g/t Au** from 54m |
| | *including* **4m at 6.86g/t Au** from 56m |

*Figure 2 – Rock chip sample of a mineralised quartz vein returning 1.32g/t Au from a costean at Lady Charlotte.*

Mineralisation around these new intercepts is hosted by a Layered Mafic Complex with multiple shear zones apparent in RC drill chips. It also coincides with a costean at surface where a rock chip sample of a mineralised quartz vein returned 1.32g/t Au (Figure 2). Mineralisation is open in every direction except the east (Figure 1). Ardea's in-house, high resolution structural models show intersections of several structures and orientations at Lady Charlotte, but it is not yet clear which of these specific structures provides the main gold mineralisation controls. Tightly spaced follow-up RC drilling has been planned to delimit the extent of gold mineralisation and the controls on its distribution. Drilling is scheduled to commence in July when the RC rig is expected to return to site.

Elsewhere throughout the program area, intercepts and anomalism returned from this program are further enhancing and informing the exploration model and hence drill campaign.

A side benefit of any gold exploration within the GNCP footprint is that areas of low or no gold anomalism or mineralisation can be defined for infrastructure planning for the development of the proposed GNCP mine and plant. The Lady Charlotte area, like Lily Albany, Zeus and Big Four, is clearly not a sterilised area that would be suitable

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for such infrastructure. Fortunately for GNCP planning purposes, suitable sites are also present on the west side of the proposed pits, but systematic drill evaluation of these sites is yet to commence (Figure 3).

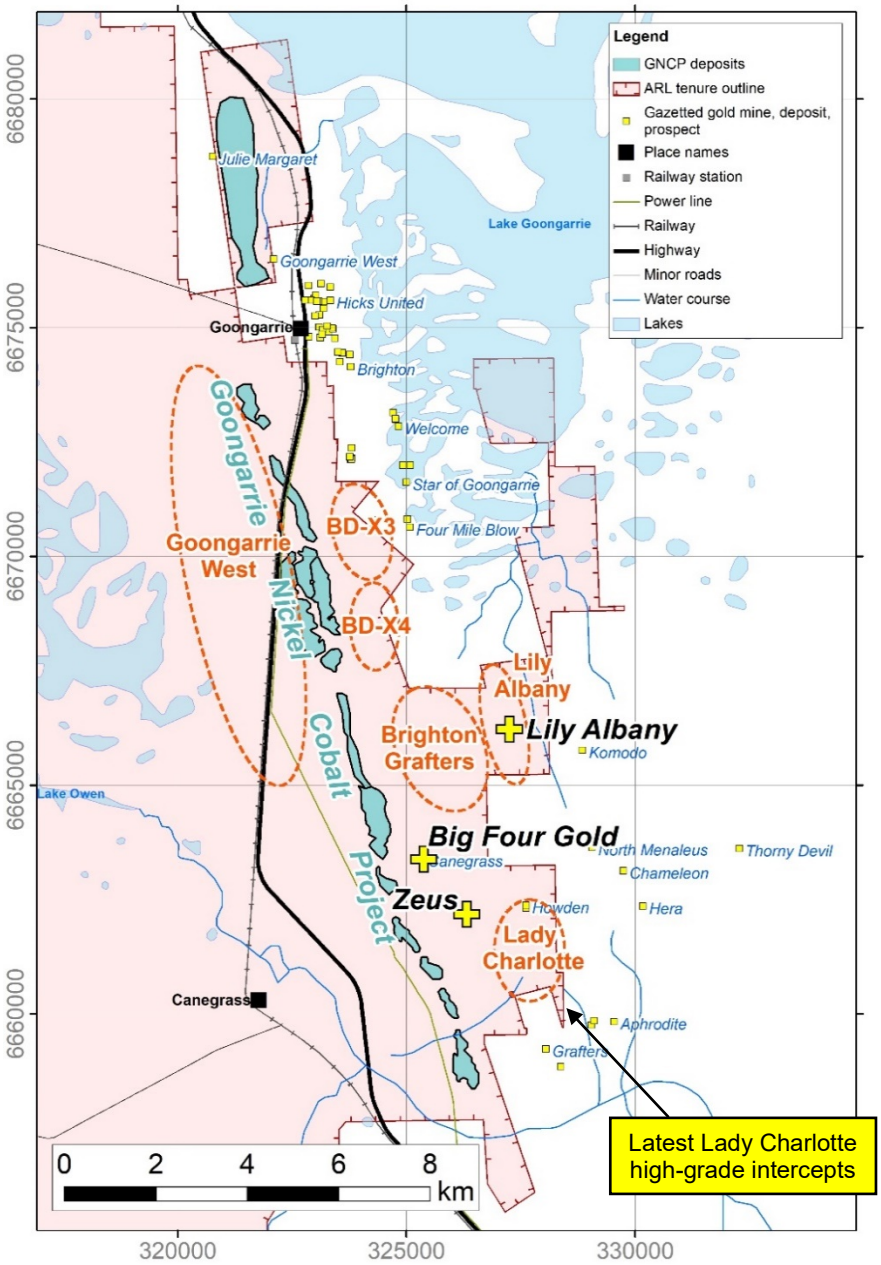


*Figure 3 – Map of the GNCP and the series of gold target areas, showing the location of the latest high-grade intercepts at Lady Charlotte. Projection MGA 94 Zone 51.*

## Other drilled programs awaiting assay results

Other gold focussed RC and aircore drill programs within the Bardoc Tectonic Zone (**BTZ**) have been completed within the footprint of the GNCP and at Windanya.

The GNCP programs are all aimed at assessing parts of the project area that meet the following criteria:

- They show gold prospectivity or potential.
- They contain a gold target or targets as defined by Ardea's gold prospectivity indices.
- They have received little to no effective, historic exploration.
- They are being considered as infrastructure sites for development of the Goongarrie nickel-cobalt mine site and plant.

*Table 1 – Listing of outstanding assay results pending for recent drill programs.*

| Program | Tenement | Drill type | No. holes | Metres | Comment | Status |
|---|---|---|---|---|---|---|
| Lily Albany | M29/426 | RC | 15 | 2,122 | Follow-up program | Assays received and being interpreted, announcement pending |
| Zeus | M24/778 | RC | 19 | 1,150 | Follow-up program | Assays received, and being interpreted announcement pending |
| Goongarrie West | E29/934 | RC | 11 | 850 | First-pass testing of type targets | Assays pending |
| BD-X3 | M29/426 | Aircore | 48 | 1870 | Along strike from Goongarrie Gold Mining Centre | Assays pending |
| BD-X4 | M29/426 | Aircore | 43 | 1191 | Along strike from Goongarrie Gold Mining Centre | Assays pending |
| Windanya | P24/5169 | Diamond | 1 | 861.8 | EIS drilling of gold-bearing structures and stratigraphy | Assays pending |

At Windanya, a historic, regionally significant early 1900s gold mine at Half Mile Reef has not been tested adequately for extensions or repetitions. Ardea has defined a series of targets that have been tested by EIS co-funded diamond drilling. Several potentially mineralised zones have been sampled and submitted for assay.

Long assay turn-around times continue to be an issue across the mining industry. Ardea will announce results once they are received, processed, and fully interpreted (Table 1).

Authorised for lodgement by the Board of Ardea Resources Limited.

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

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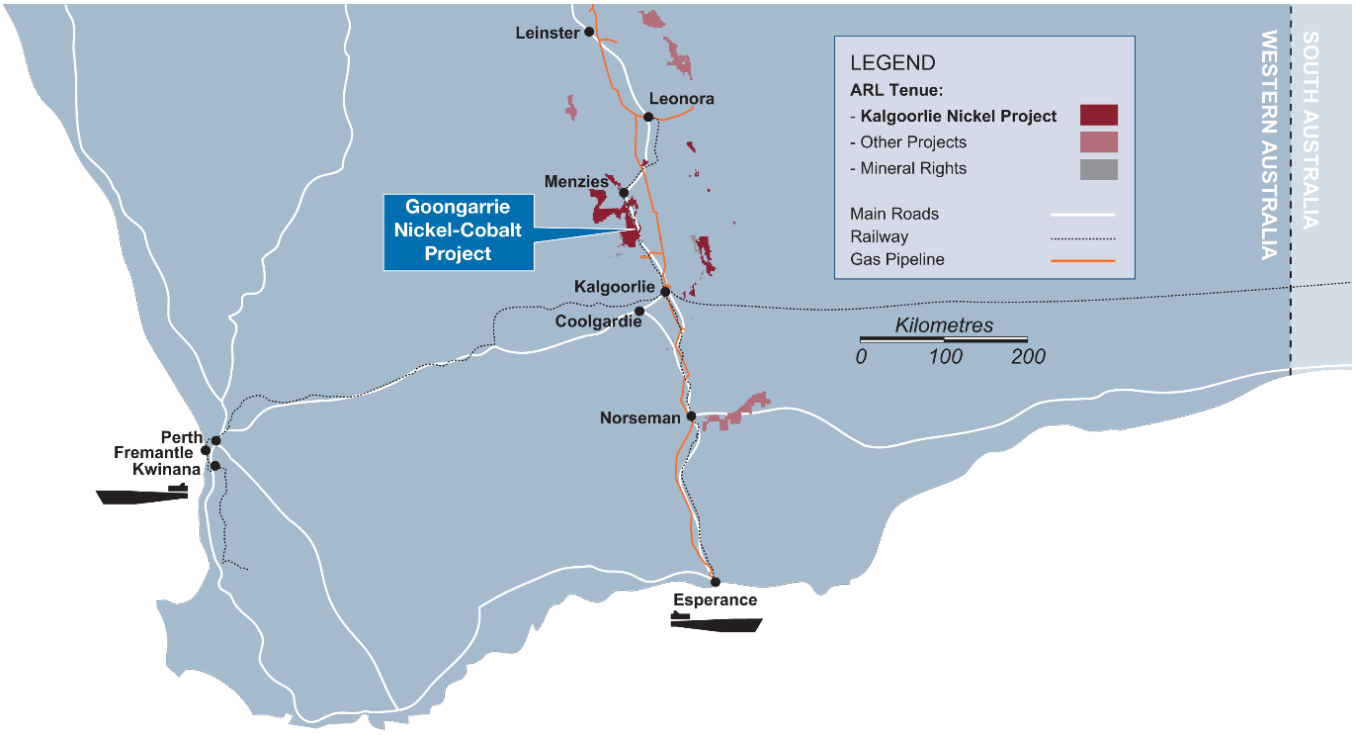
**About Ardea Resources**

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, Critical Mineral and gold targets within the KNP Eastern Goldfields world-class nickel-gold province.

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***CAUTIONARY NOTE REGARDING FORWARD-LOOKING INFORMATION***

*This news release contains forward-looking statements and forward-looking information within the meaning of applicable Australian securities laws, which are based on expectations, estimates and projections as of the date of this news release.*

*This forward-looking information includes, or may be based upon, without limitation, estimates, forecasts and statements as to management's expectations with respect to, among other things, the timing and amount of funding required to execute the Company's exploration, development and business plans, capital and exploration expenditures, the effect on the Company of any changes to existing legislation or policy, government regulation of mining operations, the length of time required to obtain permits, certifications and approvals, the success of exploration, development and mining activities, the geology of the Company's properties, environmental risks, the availability of labour, the focus of the Company in the future, demand and market outlook for precious metals and the prices thereof, progress in development of mineral properties, the Company's ability to raise funding privately or on a public market in the future, the Company's future growth, results of operations, performance, and business prospects and opportunities. Wherever possible, words such as "anticipate", "believe", "expect", "intend", "may" and similar expressions have been used to identify such forward-looking information. Forward-looking information is based on the opinions and estimates of management at the date the information is given, and on information available to management at such time.*

*Forward-looking information involves significant risks, uncertainties, assumptions and other factors that could cause actual results, performance or achievements to differ materially from the results discussed or implied in the forward-looking information. These factors, including, but not limited to, 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.*

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# Appendix 1 – Collar location data

Collar location data for all new RC drill holes completed by Ardea Resources within the Lady Charlotte area.

| Target area | Drill hole | Type | Depth (m) | Tenement | Grid | Easting (mE) | Northing (mN) | RL (mASL) | Dip (°) | Azimuth (°) |
|---|---|---|---|---|---|---|---|---|---|---|
| Lady Charlotte | ABFR0346 | RC | 80 | E24/196 | MGA94_51 | 327641 | 6662271 | 378.5 | -50 | 045 |
| | ABFR0347 | RC | 118 | E24/196 | MGA94_51 | 327613 | 6662243 | 378.2 | -50 | 045 |
| | ABFR0348 | RC | 100 | E24/196 | MGA94_51 | 327584 | 6662215 | 378.3 | -50 | 045 |
| | ABFR0349 | RC | 110 | E24/196 | MGA94_51 | 327584 | 6662328 | 379.2 | -50 | 045 |
| | ABFR0350 | RC | 100 | E24/196 | MGA94_51 | 327556 | 6662300 | 378.5 | -50 | 045 |
| | ABFR0351 | RC | 80 | E24/196 | MGA94_51 | 327528 | 6662271 | 378.1 | -50 | 045 |
| | ABFR0352 | RC | 80 | E24/196 | MGA94_51 | 327630 | 6661827 | 390.2 | -50 | 045 |
| | ABFR0353 | RC | 70 | E24/196 | MGA94_51 | 327687 | 6661770 | 392.3 | -50 | 045 |
| | ABFR0354 | RC | 137 | E24/196 | MGA94_51 | 327630 | 6661714 | 397.5 | -50 | 045 |
| | ABFR0355 | RC | 120 | E24/196 | MGA94_51 | 327574 | 6661770 | 397.5 | -50 | 045 |
| | ABFR0356 | RC | 80 | E24/196 | MGA94_51 | 327558 | 6661564 | 394 | -50 | 045 |
| | ABFR0357 | RC | 80 | E24/196 | MGA94_51 | 327530 | 6661535 | 394 | -50 | 045 |
| | ABFR0358 | RC | 90 | E24/196 | MGA94_51 | 327502 | 6661507 | 394 | -50 | 045 |
| | ABFR0359 | RC | 80 | E24/196 | MGA94_51 | 328202 | 6660991 | 394 | -50 | 045 |
| | ABFR0360 | RC | 104 | E24/196 | MGA94_51 | 328174 | 6660963 | 394 | -50 | 045 |
| | ABFR0361 | RC | 110 | E24/196 | MGA94_51 | 328145 | 6660934 | 394 | -50 | 045 |

# Appendix 2 – Rock chip assay results, Lady Charlotte

*Abbreviations used:* Au – gold, Ag – silver, As – arsenic, Sb – antimony, S – sulphur, m – metre, g/t – grams per tonne, ppm – parts per million, b.d. – below detection.

| Grid | Easting | Northing | Sample number | Au (g/t) | Ag (g/t) | As (ppm) | Sb (ppm) | S (%) | Description |
|---|---|---|---|---|---|---|---|---|---|
| MGA94_51 | 328185 | 6660978 | S301723 | **1.32** | b.d. | b.d. | 0.2 | 0.005 | Quartz vein, moderate goethite staining |

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# Appendix 3 – Assay results from Lady Charlotte

All assays >0.1g/t Au and their adjacent 2 samples from recent RC drilling at Lady Charlotte.

*Abbreviations used:* Au – gold, Ag – silver, As – arsenic, Sb – antimony, W – tungsten, S – sulphur, m – metre, g/t – grams per tonne, ppm – parts per million, b.d. – below detection.

| Hole | From (m) | To (m) | Sample number | Au (g/t) | Ag (g/t) | As (ppm) | Sb (ppm) | W (ppm) | S (%) |
|---|---|---|---|---|---|---|---|---|---|
| ABFR0349 | 86 | 88 | AR039720 | b.d. | b.d. | 10 | 1.6 | 2.0 | 0.016 |
| ABFR0349 | 88 | 90 | AR039721 | b.d. | b.d. | 10 | 0.8 | 1.5 | 0.017 |
| ABFR0349 | 90 | 92 | AR039722 | 0.139 | 0.4 | 40 | 1.3 | 1.5 | 0.017 |
| ABFR0349 | 92 | 94 | AR039724 | 0.124 | 0.3 | 10 | 2.1 | 1.0 | 0.017 |
| ABFR0349 | 94 | 96 | AR039725 | 0.006 | 0.2 | 20 | 1.6 | 1.5 | 0.012 |
| ABFR0349 | 96 | 98 | AR039726 | 0.003 | b.d. | 20 | 1.6 | 1.0 | 0.018 |
| ABFR0351 | 58 | 60 | AR039821 | 0.002 | b.d. | b.d. | 1.1 | 0.5 | 0.010 |
| ABFR0351 | 60 | 62 | AR039822 | 0.003 | b.d. | b.d. | 0.6 | 0.5 | 0.007 |
| ABFR0351 | 62 | 64 | AR039824 | 0.140 | b.d. | b.d. | 1.4 | b.d. | 0.009 |
| ABFR0351 | 64 | 66 | AR039825 | 0.008 | b.d. | b.d. | 1.2 | b.d. | 0.005 |
| ABFR0351 | 66 | 68 | AR039826 | 0.007 | b.d. | b.d. | 0.6 | b.d. | 0.007 |
| ABFR0354 | 46 | 48 | AR039942 | 0.003 | b.d. | b.d. | 1.4 | 1.0 | 0.064 |
| ABFR0354 | 48 | 50 | AR039944 | 0.001 | b.d. | b.d. | 0.7 | 1.0 | 0.051 |
| ABFR0354 | 50 | 52 | AR039945 | 1.080 | 0.2 | b.d. | 0.6 | 2.0 | 0.045 |
| ABFR0354 | 52 | 54 | AR039946 | 1.160 | 0.6 | b.d. | 0.8 | 4.5 | 0.043 |
| ABFR0354 | 54 | 56 | AR039947 | 0.131 | 0.7 | b.d. | 0.6 | 1.0 | 0.035 |
| ABFR0354 | 56 | 58 | AR039948 | 0.174 | 0.1 | 10 | 0.9 | 3.0 | 0.037 |
| ABFR0354 | 58 | 60 | AR039949 | 0.005 | b.d. | b.d. | 0.7 | 1.5 | 0.039 |
| ABFR0354 | 60 | 62 | AR039950 | 0.003 | b.d. | b.d. | 0.6 | 2.5 | 0.036 |
| ABFR0354 | 62 | 64 | AR039951 | 0.020 | b.d. | b.d. | 0.6 | 4.0 | 0.033 |
| ABFR0354 | 64 | 66 | AR039952 | 0.002 | b.d. | b.d. | 0.7 | 2.5 | 0.039 |
| ABFR0354 | 66 | 68 | AR039954 | 0.196 | b.d. | b.d. | 0.5 | 3.5 | 0.025 |
| ABFR0354 | 68 | 70 | AR039955 | 0.005 | b.d. | b.d. | 0.8 | 1.5 | 0.039 |
| ABFR0354 | 70 | 72 | AR039956 | 0.188 | 0.2 | b.d. | 0.7 | 2.0 | 0.030 |
| ABFR0354 | 72 | 74 | AR039957 | 0.023 | 0.2 | 10 | 0.7 | 1.0 | 0.018 |
| ABFR0354 | 74 | 76 | AR039958 | 0.031 | b.d. | b.d. | 0.8 | 1.0 | 0.018 |
| ABFR0355 | 34 | 36 | AR040270 | 0.001 | b.d. | 10 | 2.2 | 1.0 | 0.072 |
| ABFR0355 | 36 | 38 | AR040271 | 0.011 | b.d. | 10 | 1.2 | 1.0 | 0.058 |
| ABFR0355 | 38 | 40 | AR040272 | 0.274 | 0.8 | 10 | 1.4 | b.d. | 0.028 |
| ABFR0355 | 40 | 42 | AR040273 | 0.005 | 0.2 | 10 | 1.7 | 1.0 | 0.029 |
| ABFR0355 | 42 | 44 | AR040274 | 0.001 | 0.1 | 10 | 0.8 | b.d. | 0.018 |
| ABFR0355 | 44 | 46 | AR040276 | 0.164 | 0.1 | 10 | 0.8 | 0.5 | 0.016 |
| ABFR0355 | 46 | 48 | AR040277 | 0.032 | b.d. | 10 | 0.8 | 1.0 | 0.026 |
| ABFR0355 | 48 | 50 | AR040278 | 0.023 | b.d. | b.d. | 0.4 | 1.0 | 0.017 |
| ABFR0359 | 0 | 2 | AR040457 | 0.141 | 0.1 | 20 | 2.4 | 7.5 | 0.810 |
| ABFR0359 | 2 | 4 | AR040458 | 0.040 | b.d. | 10 | 1.0 | 8.0 | 0.061 |
| ABFR0359 | 4 | 6 | AR040459 | 0.035 | b.d. | 20 | 0.9 | 33.0 | 0.064 |
| ABFR0359 | 6 | 8 | AR040460 | 0.022 | b.d. | 10 | 0.8 | 12.5 | 0.077 |
| ABFR0359 | 8 | 10 | AR040461 | 0.002 | b.d. | 20 | 0.7 | 20.5 | 0.077 |
| ABFR0359 | 10 | 12 | AR040462 | 0.002 | b.d. | 10 | 0.7 | 5.5 | 0.074 |
| ABFR0359 | 12 | 14 | AR040463 | b.d. | b.d. | 10 | 0.7 | 5.0 | 0.072 |
| ABFR0359 | 14 | 16 | AR040464 | 0.031 | 0.1 | 20 | 1.2 | 19.5 | 0.079 |
| ABFR0359 | 16 | 18 | AR040466 | 0.257 | 0.5 | 30 | 3.2 | 34.5 | 0.141 |
| ABFR0359 | 18 | 20 | AR040467 | 0.003 | b.d. | 20 | 1.3 | 7.5 | 0.091 |
| ABFR0359 | 20 | 22 | AR040468 | 0.004 | b.d. | 10 | 1.1 | 9.0 | 0.074 |
| ABFR0360 | 18 | 20 | AR040511 | 0.006 | b.d. | b.d. | 0.5 | 2.5 | 0.029 |
| ABFR0360 | 20 | 22 | AR040512 | 0.012 | b.d. | b.d. | 0.8 | 4.5 | 0.069 |
| ABFR0360 | 22 | 24 | AR040514 | 0.249 | b.d. | b.d. | 1.1 | 4.5 | 0.047 |
| ABFR0360 | 24 | 26 | AR040515 | 0.031 | b.d. | b.d. | 0.6 | 3.0 | 0.052 |
| ABFR0360 | 26 | 28 | AR040516 | 0.013 | b.d. | 10 | 0.9 | 4.0 | 0.021 |
| ABFR0360 | 38 | 40 | AR040522 | 0.003 | 0.3 | 10 | 1.0 | 5.0 | 0.038 |
| ABFR0360 | 40 | 42 | AR040524 | 0.075 | 0.3 | 10 | 0.9 | 4.0 | 0.032 |
| ABFR0360 | 42 | 44 | AR040525 | **8.170** | 0.5 | 10 | 0.7 | 5.5 | 0.032 |
| ABFR0360 | 44 | 46 | AR040526 | **15.200** | 1.8 | 10 | 0.7 | 12.5 | 0.023 |
| ABFR0360 | 46 | 48 | AR040527 | **3.600** | 0.7 | 10 | 0.8 | 13.0 | 0.026 |
| ABFR0360 | 48 | 50 | AR040528 | **2.980** | 0.4 | 10 | 0.6 | 8.0 | 0.029 |
| ABFR0360 | 50 | 52 | AR040529 | 0.062 | 0.1 | 10 | 0.8 | 4.0 | 0.025 |
| ABFR0360 | 52 | 54 | AR040530 | **1.170** | 0.4 | 10 | 0.9 | 8.0 | 0.026 |
| ABFR0360 | 54 | 56 | AR040531 | 0.025 | 0.3 | 10 | 0.6 | 2.0 | 0.031 |
| ABFR0360 | 56 | 58 | AR040532 | 0.211 | 0.3 | 10 | 0.9 | 1.5 | 0.033 |
| ABFR0360 | 58 | 60 | AR040534 | 0.044 | 0.2 | 10 | 0.9 | 2.0 | 0.032 |
| ABFR0360 | 60 | 62 | AR040535 | 0.006 | 0.2 | 10 | 0.5 | 1.5 | 0.029 |
| ABFR0361 | 46 | 48 | AR040585 | 0.008 | 0.1 | 10 | 0.7 | 7.0 | 0.029 |
| ABFR0361 | 48 | 50 | AR040586 | 0.057 | 0.3 | b.d. | 0.5 | 1.5 | 0.032 |
| ABFR0361 | 50 | 52 | AR040587 | 0.027 | 0.2 | 10 | 0.6 | 1.0 | 0.030 |
| ABFR0361 | 52 | 54 | AR040588 | 0.104 | 0.1 | 10 | 0.7 | 3.0 | 0.029 |
| ABFR0361 | 54 | 56 | AR040589 | **1.850** | 0.1 | 10 | 0.5 | 11.0 | 0.029 |
| ABFR0361 | 56 | 58 | AR040590 | **4.750** | 0.1 | 10 | 0.6 | 11.5 | 0.027 |
| ABFR0361 | 58 | 60 | AR040591 | **8.970** | b.d. | 10 | 0.9 | 10.0 | 0.034 |
| ABFR0361 | 60 | 62 | AR040592 | 0.672 | b.d. | 10 | 0.7 | 5.0 | 0.028 |
| ABFR0361 | 62 | 64 | AR040594 | 0.056 | b.d. | 10 | 0.6 | 3.5 | 0.024 |
| ABFR0361 | 64 | 66 | AR040595 | 0.027 | b.d. | 10 | 0.5 | 2.5 | 0.029 |
| ABFR0361 | 66 | 68 | AR040596 | 0.023 | b.d. | 10 | 0.5 | 2.5 | 0.026 |
| ABFR0361 | 92 | 94 | AR040610 | 0.023 | 0.3 | b.d. | 0.4 | 1.0 | 0.008 |
| ABFR0361 | 94 | 96 | AR040611 | 0.013 | 0.5 | 10 | 0.6 | 4.0 | 0.015 |
| ABFR0361 | 96 | 98 | AR040612 | 0.146 | 0.5 | 10 | 0.6 | 4.0 | 0.018 |
| ABFR0361 | 98 | 100 | AR040614 | 0.099 | b.d. | 10 | 0.7 | 3.5 | 0.030 |
| ABFR0361 | 100 | 102 | AR040615 | 0.169 | 0.1 | b.d. | 0.6 | 2.5 | 0.025 |
| ABFR0361 | 102 | 104 | AR040616 | 0.065 | 0.2 | b.d. | 0.4 | 1.0 | 0.010 |
| ABFR0361 | 104 | 106 | AR040617 | 0.024 | b.d. | b.d. | 0.9 | 2.0 | 0.012 |

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# Appendix 4 – Collated intercepts, Lady Charlotte

## Parameters used to define gold intercepts at Lady Charlotte

| Parameter | Gold | |
|---|---|---|
| Minimum cut-off | 0.5g/t | 2.0g/t |
| Minimum intercept thickness | 2m | 2m |
| Maximum internal waste thickness | 2m | 2m |

Gold intercepts are defined using a nominal 0.5g/t Au cut-off on a minimum intercept of 2m and a maximum internal waste of 2m. Secondary intercepts (i.e. the "*including*" intercepts) are defined using a nominal 2.0g/t cut-off and the same intercept and internal waste characteristics. Where appropriate, consideration is also given to geological controls, such as vein and alteration zone distributions, in the definition of intercepts.

| | Drillhole | Interval | Gold intercept (0.5 g/t cutoff) | | Gold intercept (2.0 g/t cutoff) |
|---|---|---|---|---|---|
| Lady Charlotte | ABFR0354 | 50-54m | 4m at 1.12g/t Au from 50m | | |
| | ABFR0360 | 42-54m | **12m at 5.20g/t Au from 42m** | *including* | **8m at 7.49g/t Au from 42m** |
| | AANR0361 | 54-62m | **8m at 4.06g/t Au from 54m** | *including* | **4m at 6.86g/t Au from 56m** |

# Appendix 5 – 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*** | • *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.*<br>• *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.*<br>• *Aspects of the determination of mineralisation that are Material to the Public Report.*<br>• *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.* | • All holes were sampled on a 2 metre down hole interval basis, with exceptions being made for end of hole final-lengths. All sampling lengths were recorded in ARL's standard sampling record spreadsheets. Sample condition, sample recovery and sample size were recorded for all drill-core samples collected by ARL.<br>• Industry standard practice was used in the processing of samples for assay, with 2m intervals of RC chips collected in green plastic bags.<br>• Assay of samples utilised standard laboratory techniques with standard ICP-AES undertaken on 40 gram samples for Au, Pt and Pd, and lithium borate fused-bead XRF analysis used for the remaining multi-element suite. Other elements are determined by separate XRF and LA-ICP-MS analyses. Further details of lab processing techniques are found in Quality of assay data and laboratory tests below.<br>• The rock chip was collected from a subcropping quartz vein by an Ardea geologist. |
| ***Drilling techniques*** | • *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).* | • In this program, Ardea drilled the Lady Charlotte area project with sixteen reverse circulation (RC) drill holes. All holes were drilled at -50° towards 045° in a first-pass drill program.<br>• RC drilling was performed with a face sampling hammer (bit diameter between 4½ and 5 ¼ inches) and samples were collected by either a cone (majority) or riffle splitter using 2 metre composites. Sample condition, sample recovery and sample size were recorded for all drill samples collected by ARL. |
| ***Drill sample recovery*** | • *Method of recording and assessing core and chip sample recoveries and results assessed.*<br>• *Measures taken to maximise sample recovery and ensure representative nature of the samples.*<br>• *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.* | • RC chip sample recovery was recorded by visual estimation of the reject sample, expressed as a percentage recovery. Overall estimated recovery was high. RC Chip sample condition recorded using a three code system, D=Dry, M=Moist, W=Wet. A proportion of samples were moist or wet, with the majority of these being associated with soft kaolin-goethite clays, where water injection has been used to improve drill recovery.<br>• Measures taken to ensure maximum RC sample recoveries included maintaining a clean cyclone and drilling equipment, using water injection at times of reduced air circulation, as well as regular communication with the drillers and slowing drill advance rates when variable to poor ground conditions are encountered. |
| ***Logging*** | • *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.*<br>• *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.*<br>• *The total length and percentage of the relevant intersections logged.* | • RC logging was undertaken on 1 metre intervals. Visual geological logging was completed for all drilling both at the time of drilling (using standard Ardea logging codes), and later over relevant met-sample intervals with a metallurgical-logging perspective. Geochemistry from Ardea aircore drilling data was used together with logging data to validate logged geological horizons. Aircore results cannot be used in a resource estimation.<br>• Logging was performed at the time of drilling, and planned drill hole target lengths adjusted by the geologist during drilling. The geologist also oversaw all sampling and drilling practices. ARL employees supervised all drilling. A small selection of representative chips were collected for every 1 metre interval and stored in chip-trays for future reference.<br>• In total, 1,539 m were drilled during the program, with the chips generated during entire program logged in detail. |
| ***Sub-sampling techniques and sample preparation*** | • *If core, whether cut or sawn and whether quarter, half or all core taken.*<br>• *If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.*<br>• *For all sample types, the nature, quality and appropriateness of the sample preparation* | • 2 metre composite samples were recovered using a 15:1 rig mounted cone splitter or trailer mounted riffle splitter during drilling into a calico sample bag. Sample target weight was between 2 and 3kg. In the case of wet clay samples, grab samples taken from sample return pile, initially into a calico sample bag. Wet samples were stored separately from other samples in plastic bags and riffle split once dry.<br>• QAQC was employed. A standard, blank or duplicate sample was inserted into the sample stream every 10 samples on a rotating basis. Standards were quantified |

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| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | *technique.*<br>• *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.*<br>• *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.*<br>• *Whether sample sizes are appropriate to the grain size of the material being sampled.* | industry standards. Every 30th sample a duplicate sample was taken using the same sample sub sample technique as the original sub sample. Sample sizes are appropriate for the nature of mineralisation. |
| ***Quality of assay data and laboratory tests*** | • *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*<br>• *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.*<br>• *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.* | • All Ardea samples were submitted to Kalgoorlie Bureau Veritas (BV) laboratories and transported to BV Perth, where they were pulverised.<br>  • The samples were sorted, wet weighed, dried then weighed again. Primary preparation has been by crushing and splitting the sample with a riffle splitter where necessary to obtain a sub-fraction which has then been pulverised in a vibrating pulveriser. All coarse residues have been retained.<br>  • The samples have been cast using a 66:34 flux with 4% lithium nitrate added to form a glass bead. Al, As, Ba, Ca, Cl, Co, Cr, Cu, Fe, Ga, K, Mg, Mn, Na, Ni, P, Pb, S, Sc, Si, Sr, Ti, V, Zn, Zr have been determined by X-Ray Fluorescence (XRF) Spectrometry on oven dry (105˚C) sample unless otherwise stated.<br>  • A fused bead for Laser Ablation MS was created to define Ag_LA, Be_LA, Bi_LA, Cd_LA, Ce_LA, Co_LA, Cs_LA, Dy_LA, Er_LA, Eu_LA, Gd_LA, Ge_LA, Hf_LA, Ho_LA, In_LA, La_LA, Lu_LA, Mo_LA, Nb_LA, Nd_LA, Ni_LA, Pr_LA, Rb_LA, Re_LA, Sb_LA, Sc_LA, Se_LA, Sm_LA, Sn_LA, Ta_LA, Tb_LA, Te_LA, Th_LA, Tl_LA, Tm_LA, U_LA, V_LA, W_LA, Y_LA, Yb_LA, which have been determined by Laser Ablation Inductively Coupled Plasma Mass Spectrometry (LAICP-MS).<br>  • The samples have been analysed by Firing a 40 g (approx) portion of the sample. Lower sample weights may be employed for samples with very high sulphide and metal contents. This is the classical fire assay process and will give total separation of Gold, Platinum and Palladium in the sample. Au1, Pd, Pt have been determined by Inductively Coupled Plasma (ICP) Optical Emission Spectrometry.<br>  • Loss on Ignition results have been determined using a robotic TGA system. Furnaces in the system were set to 110 and 1000 degrees Celsius. LOI1000 have been determined by Robotic TGA.<br>  • Dry weight and wet weight have been determined gravimetrically.<br>• BV routinely inserts analytical blanks, standards and duplicates into the client sample batches for laboratory QAQC performance monitoring.<br>• Ardea also inserted QAQC samples into the sample stream at a 1 in 10 frequency, alternating between blanks (industrial sands) and standard reference materials. Additionally, a review was conducted for geochemical consistency between historically expected data, recent data, and geochemical values that would be expected in a nickel laterite profile.<br>• All of the QAQC data has been statistically assessed. There were rare but explainable inconsistencies in the returning results from standards submitted, and it has been determined that levels of accuracy and precision relating to the samples are acceptable. |
| ***Verification of sampling and assaying*** | • *The verification of significant intersections by either independent or alternative company personnel.*<br>• *The use of twinned holes.*<br>• *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.*<br>• *Discuss any adjustment to assay data.* | • BV routinely inserts analytical blanks, standards and duplicates into the client sample batches for laboratory QAQC performance monitoring.<br>• Ardea also inserted QAQC samples into the sample stream at a 1 in 20 frequency, alternating between duplicates splits, blanks (industrial sands) and standard reference materials.<br>• All of the QAQC data has been statistically assessed. Ardea has undertaken its own further in-house review of QAQC results of the BV routine standards, 100% of which returned within acceptable QAQC limits. This fact combined with the fact that the data is demonstrably consistent has meant that the results are considered to be acceptable and suitable for reporting. |
| ***Location of data points*** | • *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.*<br>• *Specification of the grid system used.*<br>• *Quality and adequacy of topographic control.* | • All drill holes are to be surveyed using an RTK DGPS system with either a 3 or 7 digit accuracy. The coordinates are stored in the exploration database referenced to the MGA Zone 51 Datum GDA94.<br>• Gyroscopic downhole surveys were undertaken with hole orientation measurements gathered every 10m during descent and then on ascent of the tool.<br>• Topography is very flat. The topographic surface has been constructed from hole collar surveys. These are consistent with regional DTMs and are considered adequate for exploration purposes.<br>• A DGPS pickup up of drill collar locations is considered sufficiently accurate for reporting of resources, but is not suitable for mine planning and reserves.<br>• Rock chip locations were picked up using an industry standard handheld GPS and the results were used for planning follow-up exploration drilling. |
| ***Data spacing and distribution*** | • *Data spacing for reporting of Exploration Results.*<br>• *Whether the data spacing and distribution is sufficient to establish the degree of geological* | • The drill line spacing was 80m, with collars defined on an ad hoc basis to delimit interpreted structure, lithological, and mineralised trends.<br>• The spacing is not considered sufficient at this stage for the definition of Mineral Resources. |

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| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | *and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.*<br>• *Whether sample compositing has been applied.* | • Samples were composited over 2m for the entire drill program apart from the upper transported lake clays, which were not sampled. This is justified by the results of the previous aircore program where transported overburden was shown to be barren of mineralisation. |
| ***Orientation of data in relation to geological structure*** | • *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.*<br>• *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.* | • All drill holes in this program were angled. They were designed to delimit mineralisation at depth and to close off and intercept all possible orientations of mineralised structures at a high angle to the east-west sections. Where pre-existing drill holes were present, these were utilised to assist with delimiting mineralisation. This approach was undertaken due to limited knowledge concerning the orientation of strata and structures in the area due to a complete absence of outcrop.<br>• Without diamond drilling, the orientation of mineralised structures is unknown, but a moderate southwest dip best fits the limited data collected to date. Geological interpretation of the geology of the Lady Charlotte area continues, but presently there is sufficient uncertainty to preclude definition of sampling bias or not. |
| ***Sample security*** | • *The measures taken to ensure sample security.* | • All samples were collected and accounted for by ARL employees/consultants during drilling. All samples were bagged into calico plastic bags and closed with cable ties. Samples were transported to Kalgoorlie from logging site by ARL employees/ consultants and submitted directly to BV Kalgoorlie.<br>• 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*** | • *The results of any audits or reviews of sampling techniques and data.* | • No audit or review beyond normal operating procedures has yet been undertaken on the current dataset. 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.<br>• Internal reviews of the exploration data included the following:<br>  • Unsurveyed drill hole collars (less than 1% of collars).<br>  • Drill Holes with overlapping intervals (0%).<br>  • Drill Holes with no logging data (less than 2% of holes).<br>  • Sample logging intervals beyond end of hole depths (0%).<br>• Samples with no assay data (from 0 to <5% for any given project, usually related to issues with sample recovery from difficult ground conditions, mechanical issues with drill rig, damage to sample in transport or sample preparation).<br>  • Assay grade ranges.<br>  • Collar coordinate ranges<br>  • Valid hole orientation data.<br>• The BV Laboratory was visited by ARL staff in 2017, and the laboratory processes and procedures were reviewed at this time 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*** | • *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.*<br>• *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.* | • The tenement on which the drilling and rock chip sampling was undertaken is E24/196. ARL, through its subsidiary companies, is the sole holder of the tenement. The tenement is in good standing.<br>• Heritage surveys over the area did not identify any areas of interest over or near the program area. |
| ***Exploration done by other parties*** | • *Acknowledgment and appraisal of exploration by other parties.* | • The target area has not been subject to systematic exploration previously. The area was identified through appraisal of regional open file datasets and proprietary targeting criteria and datasets. Nickel laterite resource drilling is located ~3km to the west, and sporadic historic gold drilling recorded in open file is evident outside the tenure to the north and south. A handful of shallow drillholes of unknown type coincide with the footprint of the current drill program but are considered to have been drilled to insufficient depth and are therefore likely ineffective.<br>• Ardea's recent RC drilling programs are the only recent significant drill programs in the Lady Charlotte area prior to this RC drill program. Older historic datasets were parts of regional drill and sampling datasets covering broad areas including Lady Charlotte that were compiled by several companies including Coopers Resources (1983-1989), Aberfoyle Exploration (mid-1980s), Goldfields Exploration (~1995-1999) and Heron Resources (2000s-2010s). The data from these programs was used to |

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| Criteria | JORC Code explanation | Commentary |
|---|---|---|
| | | inform the design of this RC drill program. |
| ***Geology*** | • *Deposit type, geological setting and style of mineralisation.* | • The geology of the target area is still under assessment.<br>• A layered doleritic intrusion and/or basaltic volcanic sequence of the Bent Tree Basalt dips very steeply to the southwest. It is structurally disrupted by various generations of structures. With poor exposure, geophysics and the results of this and the previous aircore and RC programs are the only information available.<br>• The target style of mineralisation is orogenic shear or vein hosted gold mineralisation. Veining and alteration styles intersected during drilling are consistent with this style of mineralisation. |
| ***Drill hole Information*** | • *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:*<br>• *easting and northing of the drill hole collar*<br>• *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar*<br>• *dip and azimuth of the hole*<br>• *down hole length and interception depth*<br>• *hole length.* | • All holes drilled in this most recent program are listed in "Appendix 1 – Collar location data". |
| ***Drill hole Information*** | • *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.* | • All assay data relating to the metals of interest at the target area, namely gold and associated trace finder elements arsenic, antimony, silver, tungsten, and sulphur, are listed in "Appendix 2 – Assay results". Other elements were assayed but have not been reported here. They are of use and of interest from a scientific and metallurgical perspective but are not considered material and their exclusion does not detract from the understanding of this report. |
| ***Data aggregation methods*** | • *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.*<br>• *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.*<br>• *The assumptions used for any reporting of metal equivalent values should be clearly stated.* | • Drill hole samples have been collected over 2 m down hole intervals.<br>• Gold intercepts are defined using a 0.5 g/t cut-off on a minimum intercept of 1 m and a maximum internal waste of 2 m. In each case, geological contacts are taken into account.<br>• All drill hole assay samples were composited over 2m.<br>• No metal equivalent calculations have been used in this assessment. |
| ***Relationship between mineralisation widths and intercept lengths*** | • *These relationships are particularly important in the reporting of Exploration Results.*<br>• *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.*<br>• *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').* | • All drill holes in this program were angled.<br>• Without diamond drilling, the orientation of mineralised structures is unknown. At surface, several orientations are evident, but it is not apparent in RC chips. Geological interpretation of the area continues and the current best-fit geometry suggests the highest degree of representivity from the drillholes with an east azimuth, but presently there is sufficient uncertainty to preclude definition of sampling bias or not. |
| ***Diagrams*** | • *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.* | • Appropriate maps are shown in the body of the document. |
| ***Balanced reporting*** | • *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.* | • Not applicable to this report. All results are reported either in the text or in the associated appendices. |
| ***Other substantive exploration data*** | • *Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.* | • 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 |
|---|---|---|
| ***Further work*** | • *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).*<br>• *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.* | • Further drilling is required to identify the extent and nature of supergene and primary mineralisation in fresh rock. |

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