Ardea Resources Limited

Free Milling Gold confirmed for Lily Albany Discovery

- **Overall average gold extractions of 95.1%**
- **No refractory issues or deleterious contaminants**
- **Conventional operating conditions and reagent consumptions**
- **Process improvement opportunities under investigation for incorporation into Ardea's broader gold strategy**

Initial metallurgical testwork completed on four samples selected from Ardea's Lily Albany gold discovery[1], located on a granted mining lease within the Goongarrie Nickel Cobalt Project (GNCP), 70km north west of Kalgoorlie.

Laboratory testwork employing industry standard (gravity-leach) procedures attained very high gold recoveries of >95% under conditions and reagent consumptions matching industry norms for both shallow supergene oxide mineralisation and deep sulphide-bearing mineralisation. Metallurgical results are highly encouraging, and indicate that the Lily Albany discovery has potential to achieve reasonable prospects for eventual economic extraction of gold.

Ardea's Managing Director, Andrew Penkethman, said:

"Ardea have rapidly advanced the understanding of the gold mineralisation in the Aphrodite North target area, with the confirmation of the Lily Albany gold discovery on 29 October 2020. To help determine the potential gold recoveries at Lily Albany ahead of further drill-appraisal, four composite RC samples were taken for metallurgical test work. The results indicate that conventional gravity and leach gold recoveries of greater than 95% can be achieved, with no refractory issues or deleterious contaminants. These results at this early project stage are important for assessing project priorities. Given the strong zones of gold mineralisation intersected thus far from exploration drilling, combined with the high gold extractions from metallurgical testwork, Lily Albany remains a priority project.

An RC drill rig is planned to be back at site in December to resume drilling at the recent Zeus and Lily Albany gold discoveries. Diamond drilling is also being planned and a core rig will be secured to further assess our projects.

Ardea continues to maintain momentum on the emerging Bardoc Tectonic Zone (BTZ) gold camp, hidden beneath transported cover, within its Goongarrie Nickel Cobalt Project tenements.

With 65kms of strike of the major gold controlling BTZ covered by Ardea tenements, the Company is well placed to build upon the gold discovery success achieved thus far."

[1] ASX release "Lily Albany" gold discovery confirmed by RC drilling at Aphrodite North, 29 October 2020.

ASX & Media Release
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ASX Symbol
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Issued Capital
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Overview

On 13 August 2020, Ardea announced significant gold mineralisation from the first ever RC drilling in the Aphrodite North target area, within the Bardoc Tectonic Zone (BTZ) on Ardea's Goongarrie Nickel Cobalt Project (GNCP) tenements[2]. Follow-up RC drilling confirmed a new gold discovery within the Aphrodite North target area, now named Lily Albany. Confirmation of the Lily Albany gold discovery confirmed the integrity of Ardea's geological model, proposing an orogenic gold system within a layered mafic complex, that had not previously been explored before and was hidden by 10 to 40 metres of transported cover.

Follow up metallurgical bench-scale testing has been completed on four Lily Albany RC composite samples to determine routes for gold recovery. This is a necessary stage to establish that the deposit has Reasonable Prospects of Eventual Economic Extraction (RPEEE).

Initial tests on the four samples returned average gold recoveries >95%, which is consistent with that of a free-milling gold deposit, using conventional gravity gold techniques, followed by separate leaching of the gravity concentrate and tailings. These results provide metallurgical grounds for RPEEE from this discovery. Significant additional work including resource drill out, resource estimation and mining studies are still required ahead of any mining operation.

As Ardea's understanding of the Lily Albany gold discovery continues to evolve through additional exploration and resource definition drilling, further metallurgical testwork will be conducted to both confirm the deposit's RPEEE status and to optimise the metallurgical parameters.

The Lily Albany Gold Project

The Lily Albany Gold Project is located within Ardea's GNCP tenure approximately 70km north west of the City of Kalgoorlie-Boulder and approximately 3.5km north east of Ardea's Big Four gold deposit (Figure 1). As reported by Ardea in previous ASX announcements, gold mineralisation has been discovered at the Lily Albany prospect, within one of Ardea's granted mining leases. Significant Lily Albany exploration intercepts to date include:[2 and 3]

AANR0001 **6m at 3.60g/t Au** from 44m *(supergene)*
including **2 m at 4.94 g/t gold** from 22 m
and **8m at 4.94g/t Au** from 172m to 180m EOH
including 4m 9.42g/t Au from 172m

AANR002 **10m at 1.52g/t Au** from 76m *(supergene)*
and 2m at 0.63g/t from 226m to 228m EOH

AANR004 **12m at 0.73g/t Au** from 160m
including 2m at 2.39g/t from 162m

AANR0008 **10m at 3.55g/t Au** from 40m *(supergene)*
including 2m at 15.50g/t Au from 44m

AANR0009 **50m at 0.70g/t Au** from 194m
including 18m at 1.07g/t Au from 216m
including 2m at 2.45g/t Au from 218m

AANR0010 **10m at 1.30g/t Au** from 136m
including 2m at 2.45 g/t Au from 136m

AANR0014 6 m at 1.68 g/t gold from 246m

Note: Holes AANR0001 and AANR0002 were stopped while drilling in mineralisation due to drilling difficulties.

[2] ASX release, Significant gold in first RC drilling at Aphrodite North, 13 August 2020
[3] ASX release, Lily Albany gold discovery confirmed by RC drilling at Aphrodite North, 29 October 2020.

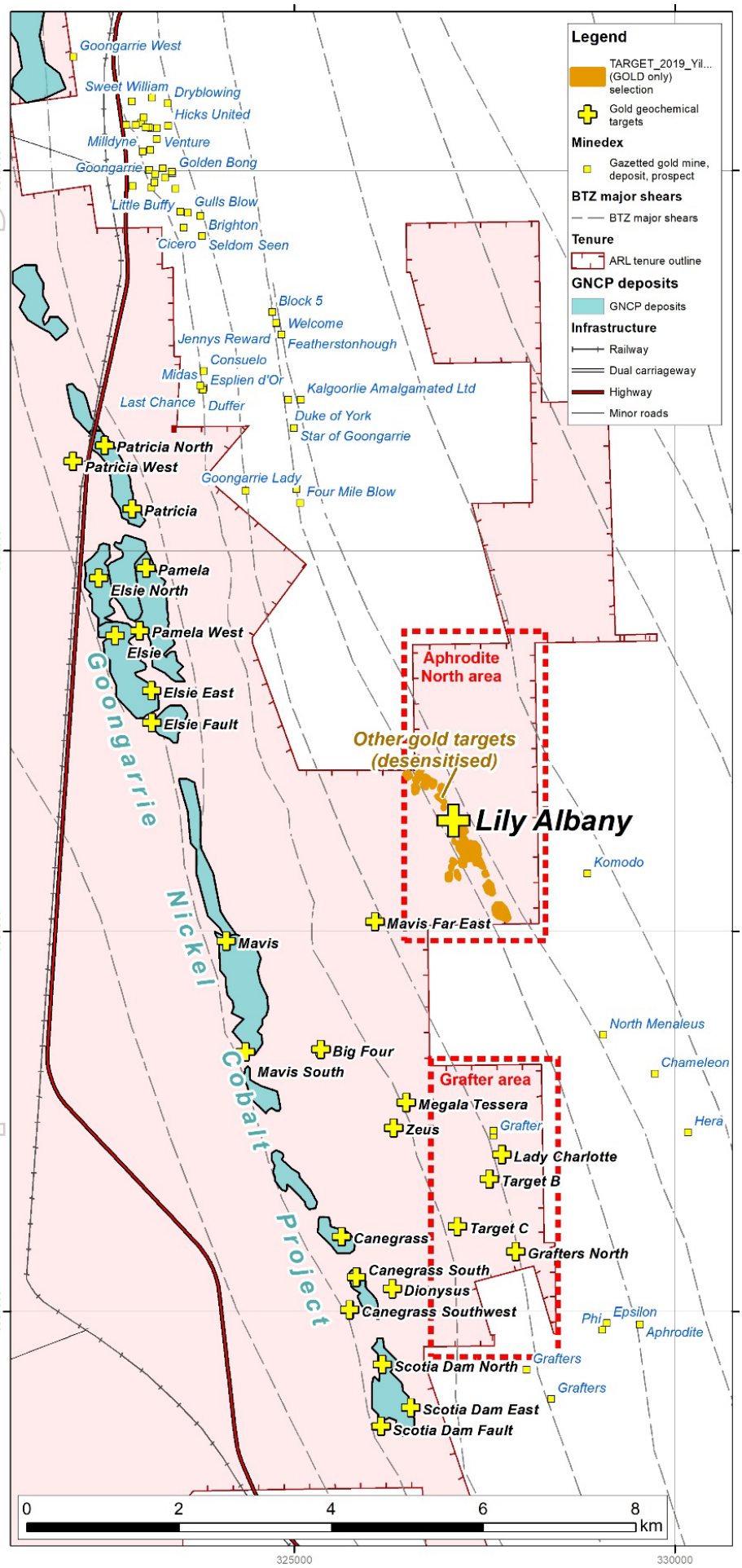

Figure 1: Location of the Lily Albany gold discovery at Aphrodite North. Also shown is the desensitised range of gold targets along the Aphrodite Trend, the structural line linking the Aphrodite gold project to the south with Goongarrie Lady and other deposits at Goongarrie to the north. Targets for other areas not shown. Projection: GDA94 MGA94 Zone 51.

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Metallurgical test work shows free milling recoveries

Composites recovered from existing Lily Albany RC drill samples were dispatched by Ardea personnel to Bureau Veritas, Canning Vale, for processing and evaluation.

Metallurgical tests used the same procedure as previously reported in Ardea's recent ASX release of 12 October 2020 (*First metallurgical tests: Very high gold recoveries from Big Four Gold deposit*). This procedure comprised conventional gravity and cyanide leach technology, as used for free milling gold recovery, and is discussed in Appendix 4. Gold deportment and recovery data are summarised below (Table 1).

Table 1: Lily Albany gold deportment and recovery data from first phase metallurgical testwork. Composite samples LA#01 and LA#03 represent shallow supergene gold mineralisation and samples LA#02 and LA#04 represent deeper sulphide gold mineralisation.
Note the the Lily Albany deposit forms part of Ardea's Aphrodite North target area and is not to be confused with the similarly-named Aphrodite deposit under development by Bardoc Gold Limited.

Composite sample	Head gold grade (g/t) assay	Head gold grade (g/t) calculated	Gold Recovery			
			Gravity Gold Recovery (%)	Gravity Gold Concentrate Leach (%)	Gravity Gold Tails Leach (%)	Overall Gold Recovery (%)
LA#01	2.45	2.3	52.3%	98.8%	99.4%	99.1%
LA#02	3.96	4.65	52.9%	97.2%	84.9%	91.4%
LA#03	1.48	1.3	27.0%	75.6%	99.5%	93.1%
LA#04	0.71	0.67	68.7%	99.3%	92.0%	97.0%
TOTAL RECOVERY						**95.1%**

The arithmetic average gold recovery for all samples was 95.1%. An average of 50.2% of the gold deported to the gravity gold concentrate, which is expected to provide options for enhancing the overall gold recovery. Gold recoveries were generally good, but anomalous results were observed for the sample 2 gravity tailings leach and the sample 3 gravity concentrate leach. After an appraisal of the multi-element analyses failed to identify significant levels of refractory-type elements (e.g. organic carbon, arsenic, antimony and tellurium) in these streams, further sizing and diagnostic leach tests were commissioned. These tests are in progress at the time of this report, and it is expected that the results will be used to improve testing procedures and to fine-tune the process.

Reagent consumptions were tested under both bottle roll and tank leach conditions. These are reported below (Table 2).

Table 2: Bottle roll and tank leach reagent consumptions.

Composite sample	Bottle Roll Test, kg/t		VAT Leach Test, kg/t	
	CN	Lime	CN	Lime
LA#01	0.51	19.2	3.19	18.6
LA#02	0.13	11	0.62	7.45
LA#03	0.19	11.4	0.64	9.45
LA#04	0.15	12	0.45	8.15

Cyanide consumption in the Vat Leach tests were higher than the bottle roll tests most likely due to reagent loss though evaporation. Typically, the Vat Leach test results overestimate cyanide consumption due to scaling factors, while the bottle roll test underestimates cyanide consumption because it is conducted in a sealed vessel. Full scale operations are expected to be within the given range.

From the data to hand, it is concluded that the emerging Lily Albany discovery would be classified as "free milling" and would not justify exotic processing as required elsewhere to manage refractory-type components.

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Trace element analysis

Multi-element analysis of the composite head samples and gravity gold products was conducted to locate any potential chemistry issues in the mineralisation. A summary of these data is shown in Table 3.

In general, refractory elements were not seen in significant concentrations. The tellurium level in sample 2 was relatively high, this analysis being confirmed by comparing the head assays with the gravity concentration mass balance. Tellurium was found to deport to the gravity gold concentrate but did not seem to affect the gold leach recovery for that composite. Similarly, arsenic and sulphur (as sulphide) concentrated in the gravity gold concentrate but appear to have decomposed under the gravity concentrate leach conditions.

It is concluded that where refractory trace elements have been analysed, they do not appear to have affected gold recoveries.

Table 3: Multi-element analysis of the composite head samples and gravity gold products.

Analyte		LA#01	LA#02	LA#03	LA#04
Au 1	ppb	2360	3750	1420	447
Au 2	ppb	2530	4160	1540	970
Au Ave	ppb	**2445**	**3955**	**1480**	**709**
Ag	ppm	<0.5	0.5	<0.5	<0.5
As	ppm	22.00	1100.00	14.00	228.00
Sb	ppm	3.99	1.30	6.18	1.07
S	ppm	300	21300	500	9250
S^{2-}	ppm	<100	19200	<100	8000
C_{TOTAL}	%	0.43	2.73	0.69	0.96
C_{ORG}	%	0.35	0.15	0.59	0.31
CO_3^{2-}	%	0.40	12.90	0.50	3.25
Hg	ppb	10.9	26.0	10.2	47.1
Pt	ppb	<5	<5	<5	<5
Pd	ppb	<5	<5	<5	<5
Cu	ppm	64.00	90.00	44.00	48.00
Zn	ppm	92.00	64.00	286.00	254.00
Co	ppm	30.00	45.00	20.00	40.00
Ni	ppm	106.00	40.00	66.00	18.00
Te	ppm	0.10	1.09	0.10	0.13

1. Arsenic, Antimony, Mercury and Tellurium analyses were calculated from a gravity separation mass balance. Where level of detection was encountered, 50% of limit of detection (LOD) was used.

Further development of the Lily Albany discovery

Geological exploration continues with the aim of delimiting the extent of gold mineralisation and defining a maiden mineral resource.

Diagnostic metallurgical testing is being performed to identify the cause of anomalous gold recoveries in the sample #2 gravity tails and the #3 gravity concentrate leach stages. Answering those questions is expected to result in a material increase in the already very good recoveries disclosed.

Authorised for lodgement by the Board of Ardea Resources Limited.

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

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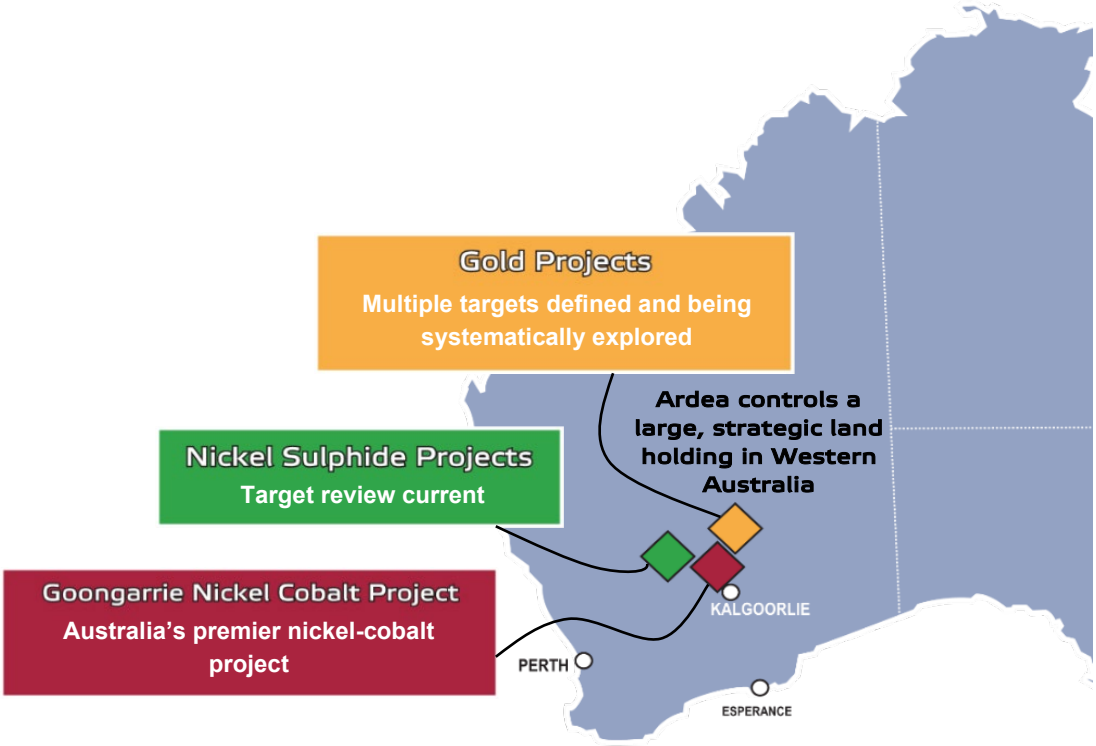
Ardea Resources Limited

About Ardea Resources

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

- Development of the Goongarrie Nickel Cobalt Project, which is part of the Kalgoorlie Nickel Project, a globally significant series of nickel-cobalt deposits which host the largest nickel-cobalt resource in the developed world, coincidentally located as a cover sequence overlying fertile orogenic gold targets; and
- Advanced-stage exploration within its WA nickel sulphide and gold exploration tenure located on crustal-scale Tectonic Zone structures in lake settings within the 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, the ability to create and spin-out a gold focussed Company, 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 or reviewed 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. Supporting analysis and metallurgical review for this testwork has been provided by Mr Michael John Miller who is a Member of the Australian Institute of Mining and Metallurgy. Mr Miller is a metallurgist with over 30 years' experience in the design, management and review of major metallurgical testwork programs and can be deemed to be knowledgeable in these activities. Mr Miller consents to the contents of this report relating to the specifics of the metallurgical testwork and reporting. 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, Lily Albany metallurgical test work

Collar location data for recent RC drill holes used by Ardea Resources for metallurgical test work at Lily Albany.

Drill hole	Type	Depth (m)	Tenement	Grid	Easting (mE)	Northing (mN)	RL (mASL)	Dip (°)	Azimuth (°)
AANR0001	RC	180	M29/426	MGA94_51	327040.7	6666438.7	379	-60	090
AANR0002	RC	228	M29/426	MGA94_51	327269.8	6666442.6	379	-60	270

Appendix 2 – Individual increment subsamples tested

Hole	From (m)	To (m)	Sample ID	Sent to Met Lab Weight (kg)	Split for Composite (dry kg)	Comments	Eventual Composite
AANR0001	44	45	APN_M01_44_45	19.35	5.00	supergene	AphNth#01
AANR0001	45	46	APN_M01_45_46	21.55	5.00	supergene	AphNth#01
AANR0001	46	47	APN_M01_46_47	20.00	5.00	supergene	AphNth#01
AANR0001	47	48	APN_M01_47_48	29.60	5.00	supergene	AphNth#01
AANR0001	48	49	APN_M01_48_49	20.25	5.00	supergene	AphNth#01
AANR0001	49	50	APN_M01_49_50	26.35	5.00	supergene	AphNth#01
AANR0001	172	173	APN_M02_172_173	9.90	3.75	primary	AphNth#02
AANR0001	173	174	APN_M02_173_174	7.55	3.75	primary	AphNth#02
AANR0001	174	175	APN_M02_174_175	6.85	3.75	primary	AphNth#02
AANR0001	175	176	APN_M02_175_176	11.85	3.75	primary	AphNth#02
AANR0001	176	177	APN_M02_176_177	7.35	3.75	primary	AphNth#02
AANR0001	177	178	APN_M02_177_178	9.50	3.75	primary	AphNth#02
AANR0001	178	179	APN_M02_178_179	10.55	3.75	primary	AphNth#02
AANR0001	179	180	APN_M02_179_180	16.05	3.75	primary	AphNth#02
AANR0002	76	77	APN_M03_76_77	32.15	3.00	supergene	AphNth#03
AANR0002	77	78	APN_M03_77_78	36.40	3.00	supergene	AphNth#03
AANR0002	78	79	APN_M03_78_79	5.15	3.00	supergene	AphNth#03
AANR0002	79	80	APN_M03_79_80	12.05	3.00	supergene	AphNth#03
AANR0002	80	81	APN_M03_80_81	7.00	3.00	supergene	AphNth#03
AANR0002	81	82	APN_M03_81_82	7.25	3.00	supergene	AphNth#03
AANR0002	82	83	APN_M03_82_83	30.75	3.00	supergene	AphNth#03
AANR0002	83	84	APN_M03_83_84	26.15	3.00	supergene	AphNth#03
AANR0002	84	85	APN_M03_84_85	9.65	3.00	supergene	AphNth#03
AANR0002	85	86	APN_M03_85_86	13.55	3.00	supergene	AphNth#03
AANR0002	144	145	APN_M04_144_145	5.15	3.58	IS	AphNth#04
AANR0002	145	146	APN_M04_145_146	12.85	3.92	primary	AphNth#04
AANR0002	146	147	APN_M04_146_147	14.25	3.75	primary	AphNth#04
AANR0002	147	148	APN_M04_147_148	18.85	3.75	primary	AphNth#04
AANR0002	148	149	APN_M04_148_149	19.20	4.46	primary	AphNth#04
AANR0002	149	150	APN_M04_149_150	2.80	2.34	IS	AphNth#04
AANR0002	150	151	APN_M04_150_151	14.50	4.46	primary	AphNth#04
AANR0002	151	152	APN_M04_151_152	20.95	3.75	primary	AphNth#04

1. *Composites were compiled on the basis of equal dry weight per linear metre*
2. *IS = Insufficient sample. Additional material to reach target sample weight was taken from adjoining interval(s).*

Appendix 3 – Head assay analyses for the Lily Albany testwork composites

Select multi-element head assay analyses for the Lily Albany testwork composites. Only those elements typically associated with gold mineralisation and discussed in the body of the announcement are shown here.

Abbreviations used: All element symbols are standard, C_{total} – total contained carbon, C_{org} – contained organic carbon, CO_3^{2-} - carbonate, ppm – parts per million, ppb – parts per billion.

Lily Albany Composite Feed Head Assays

		AphNth#01		AphNth#02		AphNth#03		AphNth#04	
		Head	Repeat	Head	Repeat	Head	Repeat	Head	Repeat
Gold	ppb	2360	-	3750	-	1420	-	447	705
Gold (repeat)	ppb	2530	-	4160	-	1540	-	970	-
Gold (average)	ppb	**2445**	**-**	**3955**	**-**	**1480**	**-**	**709**	**705**
Silver	ppm	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Arsenic	ppm	22	25	1100	1130	14	13	228	250
Antimony	ppm	4.2	4.2	1.2	1.2	6.2	6.4	1.2	1.0
Sulphur	ppm	0.43	0.44	2.73	2.75	0.69	0.70	0.96	0.97
Sulphur (repeat)	ppm	0.35	0.35	0.15	0.16	0.59	0.59	0.31	0.33
C_{TOTAL}	%	0.40	0.45	12.90	12.95	0.50	0.55	3.25	3.20
C_{ORG}	%	2360	-	3750	-	1420	-	447	705
CO_3^{2-}	%	2530	-	4160	-	1540	-	970	-

Lily Albany Composite Gravity Separation Elemental Deportments

* Gravity concentrate calculated from extracted grade and residue grade of high intensity leach
** Gravity tail head grade determined by sub-sampling solids for assay

		AphNth#01		AphNth#02		AphNth#03		AphNth#04	
		Grav Con*	Grav Tail**	Grav Con	Grav Tail	Grav Con	Grav Tail	Grav Con	Grav Tail
Gold	ppb	-	964	-	2,260	-	973	-	179
Gold (repeat)	ppb	-	942	-	2,290	-	967	-	172
Gold (average)	ppb	**286,597**	**953**	**276,192**	**2,275**	**60,906**	**970**	**54,540**	**176**
Silver	ppm	0.7	<0.5	25.774	<0.5	0.3	<0.5	13.3	<0.5
Arsenic	ppm	173	27	36548.919	642	84	15	13224	149
Antimony	ppm	1.9	4.0	12.360	1.2	2.5	6.2	8.8	1.0
Sulphur	ppm	1378	<100	340255.517	16200	404	<100	237086	6100
Sulphur (repeat)	ppm	600.00	<100	334000.000	17200.00	350.00	<100	205000	5950.00
C_{TOTAL}	%	0.10	0.42	1.265	2.94	0.14	0.69	1.80	0.97
C_{ORG}	%	0.06	0.31	0.020	0.05	0.07	0.55	0.22	0.23
CO_3^{2-}	%	0.18	0.58	6.23	14.43	0.38	0.68	7.88	3.73

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Appendix 4 – 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.* • *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.*	• 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 samples collected by ARL. • The drill spacing was variable with holes generally drilled on 80m spaced lines with holes approximately 40m apart on each drill line. The drilling was for initial exploration purposes with some select samples also providing material for the purpose of metallurgical sampling. • Industry standard practice was used in the processing of samples for assay, with 2m intervals of RC chips collected in green plastic bags. • Assay of samples utilised standard laboratory techniques with standard ICP-AES undertaken on 50 gram samples for Au, Pt and Pd, and lithium borate fused-bead XRF analysis used for the remaining multi-element suite. Further details of lab processing techniques are found in Quality of assay data and laboratory tests below.
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 recent programs, Ardea drilled the Aphrodite North area with fifteen reverse circulation (RC) drill holes. All holes were drilled at either -60° to 090° or -60° to 270°, with another to 205°to define the possible orientations of structures in a target with limited previous exploration drilling. • 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.* • *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.*	• 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 small proportion of samples were moist or wet (11.5%), with the majority of these being associated with soft goethite clays, where water injection has been used to improve drill recovery. • 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.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.* • *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. • 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. • In total, 3,687 m were drilled during the recent programs, with the chips generated during the 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.* • *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-*	• 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. • 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 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

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Criteria	JORC Code explanation	Commentary
	sampling stages to maximise representivity of samples. • *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.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	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.*
	• *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.*
		• All Ardea samples were submitted to Kalgoorlie Bureau Veritas (BV) laboratories and transported to BV Perth, where they were pulverised.
		  • 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.
		  • 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.
		  • 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).
		  • 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.
		  • 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.
		  • Dry weight and wet weight have been determined gravimetrically.
		• BV routinely inserts analytical blanks, standards and duplicates into the client sample batches for laboratory QAQC performance monitoring.
		• 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.
		• 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.* • *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.*	• BV routinely inserts analytical blanks, standards and duplicates into the client sample batches for laboratory QAQC performance monitoring. • 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. • 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.* • *Specification of the grid system used.* • *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. • Gyroscopic downhole surveys were undertaken with hole orientation measurements gathered every 10m during descent and then on ascent of the tool. • 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. 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.
Data spacing and distribution	• *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*	• The drill line spacing was 80m, with collars defined on an ad hoc basis to delimit interpreted structure, lithological, and mineralised trends. • The spacing is not considered sufficient at this stage for the definition of Mineral Resources. 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

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Criteria	JORC Code explanation	Commentary
	applied.	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.* • *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. • Without diamond drilling, the orientation of mineralised structures is unknown, but a steep west dip best fits the limited data collected to date. It is also consistent with other known mineralisation along structure to the south and north. Geological interpretation of the geology of the Aphrodite North 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. • 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.
		• Internal reviews of the exploration data included the following:
		  • Unsurveyed drill hole collars (less than 1% of collars).
		  • Drill Holes with overlapping intervals (0%).
		  • Drill Holes with no logging data (less than 2% of holes).
		  • Sample logging intervals beyond end of hole depths (0%).
		• 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).
		  • Assay grade ranges.
		  • Collar coordinate ranges
		  • Valid hole orientation data.
		• 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.

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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.* • *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 was undertaken is M29/426. ARL, through its subsidiary companies, is the sole holder of the tenement. The tenement is in good standing. • 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. • Ardea's recent aircore and RC drilling programs are the only significant drill programs in the Aphrodite North area prior to this RC drill program. The data from these programs was used to 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. • A layered mafic intrusion is either thrust repeated or isoclinally folded near the contact of the Victorious Basalt with the basal units of the Black Flag Formation. With a complete lack of exposure, geophysics and the results of this and the previous aircore and RC programs are the only information available. • 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:* • *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.*	• All holes drilled and used for metallurgical testwork 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 Lily Albany, namely gold and associated tracefinder elements arsenic, antimony, and sulphur, are listed in "Appendix 3 – Composite head assay results".
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.* • *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.*	• Drill hole samples have been collected over 2 m down hole intervals. • 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. An additional 50m wide intercept of interest was calculated using a nominal 0.1g/t Au cutoff with larger internal dilution due justified on geological grounds. • All assay samples were composited over 2 m. • 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.* • *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,*	• All drill holes in this program were angled. • 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.

Criteria	JORC Code explanation	Commentary
	true width not known').	
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. Sections are not pertinent to the metallurgical testwork.
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. Examples of high-grade mineralisation are labelled as such.
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.
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).* • *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 primary mineralisation in fresh rock. Both RC and diamond drill programs are flagged to increase the understanding of controls and orientation of mineralised structures. Initially, 2 diamond drill holes would be likely. Closely-spaced, pattern RC drilling to a nominal 150m depth is being considered to fully define the uppermost distributions of gold in both saprolite and fresh rock. • More detailed metallurgical assessment, including comminution testwork, of all material types of interest at Lily Albany will be undertaken prior to progression to a Pre-Feasibility Study (PFS) should such a study be warranted.

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