15 October 2019 Australian Nickel Conference Presentation

Presented by Andrew Penkethman
Disclaimer

Important notice

This presentation contains general information only and is, or is based upon, information which has been released to ASX or is contained in the Ardea Resources Limited (Ardea or the Company) prospectus dated 9 November 2016 (including supplementary prospectuses dated 18 November 2016 and 6 January 2017), the Goongarrie Nickel Cobalt Project Pre-Feasibility Study (dated 28 March 2018) the Goongarrie Expansion Study (24 July 2018), Goongarrie Pilot Plant trial produces battery grade crystals (31 October 2018), Lewis Ponds met testwork produces high grade concentrates (26 November 2018), Goongarrie Nickel Cobalt Project Update (8 April 2019), Drilling at Gale identifies large scale gold system (11 April 2019), Ardea advances NSW Gold and Base Metals IPO (29 April 2019), Ardea Quarterly Operations Report, for the quarter ended 31 March 2019 (30 April 2019), Ardea Quarterly Operations Report, for the quarter ended 30 June 2019 (22 July 2019) and Nickel sulphide exploration commences at Perrinvale Project (24 July 2019). This presentation is not an invitation, offer or recommendation (express or implied) to subscribe for, or apply for the purchase of, or to take any other action in respect of securities of any entity described herein and is not a prospectus, product disclosure statement or disclosure document for the purposes of the Corporations Act 2001 (Cth) and has not been lodged with ASIC. None of Ardea Resources Limited (Ardea or the Company) or its representatives are providing or offering investment advice or services by making this presentation.

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The Goongarrie Project has completed the Pre-Feasibility Study phase and has commenced programs that are part of the Definitive Feasibility Study. Though reasonable care has been taken to ensure that the facts are accurate and/or that the opinions expressed are fair and reasonable, no reliance can be placed for any purpose whatsoever on the information contained in this document or on its completeness. Actual results and developments of projects and the market development may differ materially from those expressed or implied by these forward looking statements depending on a variety of factors. A key conclusion of the Pre-Feasibility Study and Expansion Study, which is based on forward looking statements, is that the Goongarrie Project is considered to have positive economic potential.

No stock exchange, regulation services provider, securities commission or other regulatory authority has approved or disapproved the information contained in this news release.
Ardea Resources Limited
Is an Australia-focused developer and explorer

1. DEVELOPING
   the Goongarrie Nickel Cobalt Project,
   Australia’s premier battery Ni-Co project

2. EXPLORING
   for Gold & Nickel Sulphides in
   WA’s prolific Eastern Goldfields

3. DIVESTING
   our NSW Gold and Base Metal Projects
   through the Godolphin Resources IPO

Nickel Sulphate crystals from
ARL pilot plant work

Gold nuggets recovered from
ARL WA tenements

Visible gold from
ARL Gundagai project
Corporate Snapshot

Capital Structure, as at 30 September 2019

- Shares on Issue: 112,291,853
- Share Price: $0.535
- 52 week high / low: $0.76 / $0.355
- Cash: $10.7 million
- Market Cap: $60 million
- Unlisted Stock $0.25 options (IPO): 5,008,582
- Staff performance rights: 5,161,000

- Ian Buchhorn and associates: 11.14%
- Brian O’Shannassy and associates: 8.1%
- Citicorp Nominees (Sprott): 7.4%
- BNP Paribas Nominees: 4.9%
- JP Morgan Nominees: 4.8%

Top 20 shareholders hold: 53%

- Katina Law: Executive Chair
- Ian Buchhorn: Executive Director
- Wayne Bramwell: Non-Executive Director
- Andrew Penkethman: Chief Executive Officer
- Sam Middlemas: Company Secretary and Chief Financial Officer
- Dr Matt Painter: GM - Exploration

Experienced management team with global experience in the resources sector, from corporate fundraising, exploration, discovery, feasibility studies, development and operations.

Ardea has a quality project portfolio and the team to make their projects succeed.
Ardea Project Portfolio

Goongarrie Nickel Cobalt Project
Australia’s premier nickel-cobalt project - DFS programs, Metallurgy and Approvals underway

Nickel Sulphide Projects, WA
Literature review complete, surface EM and soil geochemistry planned

Gold Projects, WA
First drilling at Mt Zephyr & Bardoc Tectonic Zone confirmed the exploration models & intersected gold mineralisation

Porphyry & Epithermal
Copper-Gold Projects & VMS Base Metal Projects, NSW
Godolphin IPO preparation, focus on Lewis Ponds, Mt Aubrey and Yeoval

Ardea 3,500km² Tenure in WESTERN AUSTRALIA

Ardea 3,216km² Tenure in NEW SOUTH WALES
Looking towards the plant site at Goongarrie adjacent to the Goldfields Highway, looking NE

Ardea’s flagship is Australia’s premier Nickel Cobalt Project
The Kalgoorlie Nickel Project

- **Kalgoorlie Nickel Project (KNP)** has a globally significant nickel and cobalt resource of 773Mt at 0.7% Ni and 0.05% Co*
  - 5.6 million tonnes contained nickel
  - 405,000 tonnes contained cobalt
- The **Goongarrie Nickel Cobalt Project (GNCP)** is part of the broader KNP, with a resource of 216Mt at 0.71% Ni and 0.06% Co*
  - 1.5 million tonnes contained nickel.
  - 130,700 tonnes contained cobalt
  - LOM production of nickel sulphate is 2.04Mt, cobalt sulphate is 259.2kt, with plant feed grade for 25 years of 0.88% Ni and 0.10% Co²
- Potential for **multiple processing hubs** and multi-decade mine life
- The satellite KNP projects provide potential satellite high grade feed options for the GNCP plant or additional processing hubs

1. * See Appendix for resource breakdown.
2. Per Goongarrie Expansion Study ASX release, 24 July 2018. All the material assumptions underpinning the forecast financial information derived from a production target, in the initial public report referred to in rule 5.17 continue to apply and have not materially changed.
KNP is globally significant

GLOBAL PEERS

KNP - Largest and only Australian Nickel Project of any type amongst the top 10 globally by contained metal

Source: SNL database & Ardea Company data (KNP only).

* Nickel equivalents defined using the following values (9 July 2019, US$ price): Ni ($12,646.50/t), Co ($26,647/t), Cu ($5,808.50/t). Ni equivalent grade (Ni eq. %) = Ni(%) + 2.107xCo(%) + 0.459xCu(%). Recoveries were not considered for high-level comparison purposes. These values used for nickel equivalent calculations throughout this document. Nickel equivalents are used because nickel is the major proportion of the deposit by value, and these values allow for direct comparison to major deposits globally.

* Ni equivalent grade: Ni eq. % = Ni(%) + 2.107xCo(%) + 0.459xCu(%).
KNP and GNCP are world class and largest in Australia

Source: SNL database & Ardea Company data (KNP & GNCP only).

* Nickel equivalents defined using the following values (9 July 2019, US$ price): Ni ($12,646.50/t), Co ($26,647/t), Cu ($5,808.50/t). Ni equivalent grade (Ni eq. %) = Ni(%) + 2.107xCo(%) + 0.459xCu(%). Recoveries were not considered for high-level comparison purposes. These values used for nickel equivalent calculations throughout this document. Nickel equivalents are used because nickel is the major proportion of the deposit by value, and these values allow for direct comparison to major deposits globally.
Goongarrie Nickel - Cobalt Project Highlights

The 100% owned GNCP is part of the largest Nickel Cobalt Resource in the developed world^  

- Potential multi-decade producer of high-quality nickel and cobalt sulphate  
- 100% nickel and cobalt offtake available  
- 1.0Mtpa base case PFS – low CAPEX start-up with robust project economics*  
- 2.25Mtpa expanded case – mill feed grades 0.88% Ni and 0.10% Co*  
- Low technical risk project to provide nickel and cobalt for the growing battery markets (Electric Vehicle and Static Storage Battery)  
- DFS programs underway  
- Strategic partner interest is high as concerns rise around secure long-term ethical supply of battery grade nickel and cobalt

Refer to ASX releases: *Ardea Resources Annual Report 2017. *Goongarrie Nickel Cobalt Project, PFS study, 28 March 2018 & Goongarrie Expansion Study, 24 July 2018. All the material assumptions underpinning the forecast financial information derived from a production target, in the initial public report referred to in rule 5.17 continue to apply and have not materially changed.
A High Quality Nickel and Cobalt Sulphate Project

Outstanding results delivered from PFS* and Expansion Studies completed in 2018:

<table>
<thead>
<tr>
<th></th>
<th>1.0Mtpa</th>
<th>1.5Mtpa</th>
<th>2.25Mtpa</th>
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<tbody>
<tr>
<td><strong>Status</strong></td>
<td>PFS</td>
<td>PFS</td>
<td>ES</td>
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<tr>
<td><strong>No. Trains</strong></td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td><strong>Pre Tax NPV</strong> US$</td>
<td>1.13 billion</td>
<td>1.52 billion</td>
<td>2.4 billion</td>
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<tr>
<td><strong>Pre Tax IRR</strong></td>
<td>29 %</td>
<td>29 %</td>
<td>31%</td>
</tr>
<tr>
<td><strong>CAPEX</strong> US$</td>
<td>472 million</td>
<td>588 million</td>
<td>918 million</td>
</tr>
<tr>
<td><strong>C1 cash cost</strong> US$/lb</td>
<td>0.42</td>
<td>0.45</td>
<td>(0.34)</td>
</tr>
<tr>
<td><strong>Payback</strong></td>
<td>5.3 years</td>
<td>5.6 years</td>
<td>5.1 years</td>
</tr>
<tr>
<td><strong>Cobalt sulphate</strong></td>
<td>5,500tpa</td>
<td>6,900tpa</td>
<td>10,000tpa</td>
</tr>
<tr>
<td><strong>Nickel sulphate</strong></td>
<td>41,500tpa</td>
<td>55,300tpa</td>
<td>81,000tpa</td>
</tr>
</tbody>
</table>

- PFS of 1Mtpa and 1.5Mtpa base case over a 25-year mine life completed
- Expansion study of 2.25Mtpa with a 25-year mine life completed
- 94.5% nickel and 95.5% cobalt recovery – life of mine
- Pre-cobalt credit C1 costs in line with current worldwide operators
- Pressure Acid Leach (PAL) 5th generation plant is a proven design, successfully operated in other laterite projects globally
- 2.25Mtpa case based on only 26% of Goongarrie Resource

The information shown on this slide has been previously released on the ASX platform by Ardea in ASX releases, *Goongarrie Nickel Cobalt Project, PFS study, 28 March 2018 & Goongarrie Expansion Study, 24 July 2018*. All the material assumptions underpinning the forecast financial information derived from a production target, in the initial public report referred to in rule 5.17 continue to apply and have not materially changed.
Thick, high-grade, single ore type, low strip ratio
Nickel Block Model – Cross Section 6669600mN

Well understood mineralogy with consistent nickel and cobalt grades

Goongarrie Nickel Cobalt Project
Pamela Jean Deeps
Section 6669600mN
Cobalt Block Model – Cross Section 6669600mN

Large scale, long-life open pit mining potential

Goongarrie Nickel Cobalt Project
Pamela Jean Deeps
Section 6669600mN

Cobalt Grade Estimates
Block Model

- < 0 Co%
- 0 to 0.025 Co%
- 0.025 to 0.050 Co%
- 0.050 to 0.080 Co%
- 0.080 to 0.10 Co%
- 0.10 to 0.20 Co%
- > 0.20 Co%
### GNCP Material Types “run-of-mine goethite ore”

<table>
<thead>
<tr>
<th>Depth (m)</th>
<th>Regolith</th>
<th>Ni %</th>
<th>Co %</th>
<th>Mn %</th>
<th>Sc ppm</th>
<th>Cr %</th>
<th>V ppm</th>
<th>Al %</th>
<th>Ca %</th>
<th>Fe %</th>
<th>LOI %</th>
<th>Mg %</th>
<th>Si %</th>
<th>Ti %</th>
<th>Zr ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>41-42</td>
<td>CUGZR</td>
<td>1.61</td>
<td>0.194</td>
<td>0.74</td>
<td>60</td>
<td>1.73</td>
<td>-100</td>
<td>2.5</td>
<td>0.0</td>
<td>43.8</td>
<td>15.3</td>
<td>0.9</td>
<td>4.4</td>
<td>0.04</td>
<td>10</td>
</tr>
<tr>
<td>42-44</td>
<td>CUGZR</td>
<td>1.56</td>
<td>0.267</td>
<td>1.52</td>
<td>60</td>
<td>2.63</td>
<td>-100</td>
<td>1.4</td>
<td>0.0</td>
<td>45.4</td>
<td>15.5</td>
<td>0.7</td>
<td>1.9</td>
<td>0.03</td>
<td>10</td>
</tr>
<tr>
<td>44-44.8</td>
<td>CUGZR</td>
<td>1.76</td>
<td>0.202</td>
<td>2.10</td>
<td>50</td>
<td>2.19</td>
<td>-100</td>
<td>1.0</td>
<td>0.0</td>
<td>46.7</td>
<td>15.6</td>
<td>0.6</td>
<td>1.5</td>
<td>0.03</td>
<td>10</td>
</tr>
<tr>
<td>45.3-47</td>
<td>CUGZR</td>
<td>1.73</td>
<td>0.223</td>
<td>2.56</td>
<td>50</td>
<td>1.90</td>
<td>-100</td>
<td>0.7</td>
<td>0.0</td>
<td>46.0</td>
<td>16.1</td>
<td>0.7</td>
<td>1.5</td>
<td>0.04</td>
<td>10</td>
</tr>
</tbody>
</table>

Ardea use an industry-leading 61 multi element analysis with XRD for material type
The high quality of Goongarrie ore is the key to project success:

- High levels of nickel and cobalt with scandium-rare earth credit potential
- Ore mainly goethitic (>40% Fe), no smectite clays (unlike many other laterite deposits, so no drying required before ore processed)
- Highly soluble in PAL, low acid consumption (~263kg/t), excellent rheology, high pulp density (+40%)
- No screen upgrade required, eliminates ore preparation risk (commonly a stumbling block for non-goethitic deposits)
- Neutralizer recovered as surface calcrete during mining, provides a cost-effective alternative to importing limestone
- High ore quality results in lower Capex and Opex compared to peers
Kalgoorlie-Boulder, Western Australia offers **world-class infrastructure in an established mining district**

- Over 125 years of mining in the region
- Nil sovereign risk, very strong Local Government support
- Goongarrie is 80km north on the main Goldfields Highway
- Railway line, power line, optic fibre cross Goongarrie tenements, mobile phone coverage
- Gas pipeline adjacent to east
- Rail access to ports of Kwinana and Esperance

Western Australia’s **safety, health and environmental standards are world’s best practice**

An **Australian source for battery metals** removes supply line concerns

**Goongarrie offers an ethical, secure, long-life source of nickel and cobalt**
The Nickel Market – Reserve Life of Major Battery Minerals

- High levels of most battery minerals but **not nickel**
- **Nickel supplies most critical**
- **Declining global nickel reserves**
- **Growing nickel demand with constrained supply**
- No shortage of graphite or lithium

• Production and consumption growth have been increasing
• During the Chinese economic boom, 2000-2015, GDP growth between 10 and 30% per annum (pa) initiated the acceleration
• Growth has been accelerating even faster over last five years
• Market size doubled between 1995 and 2016, i.e. ~20 years, to add 1 million tonnes.
• Currently adding ~0.5Mt in 5 years in a depressed market!
• Future production not expected to keep up with growing demand, driven mainly by the battery sector

Projected Nickel Demand from Energy Revolution

- Current nickel market size ~2.5 million tonnes pa
- Depending on the scenario for the EV/SSB rate of adoption, nickel volumes to meet additional demand vary between 750,000 tonnes and 2 million tonnes pa
- **Nickel demand** from EV/SSB is expected to far exceed nickel production from existing operations in any scenario of EV/SSB adoption

Drill samples from Black Range west of the Goongarrie Nickel Cobalt Project. Black Range contains high nickel, cobalt, and accessory scandium, platinum and palladium.

Battery minerals for the EV and Battery revolution
Gold and base metals in Australia’s prime locations
EXPLORING

for Western Australian Gold and Nickel Sulphides

Exceptional greenfields opportunities in overlooked areas of the Eastern Goldfields
2019 Exploration Program

- 3,500km² of 100% controlled tenure in one of Australia’s premier gold and nickel sulphide provinces
- Drilling completed at Bardoc Tectonic Zone (BTZ) confirms gold mineralisation potential with multiple targets, resource modelling current at Big Four as model for 65km target strike of BTZ
- Drilling confirms gold mineralisation at Gale and nickel sulphide gossan at Jones A, within the Mt Zephyr project
- Gold exploration programs active on Taurus, Bedonia, Ghost Rocks, Mulga Plum and Windanya (on the BTZ)
- Perrinvale nickel (-copper-PGE) sulphide EM survey
- Bedonia, Emu Lake, Highway and Ghost Rocks nickel (-copper-PGE) sulphide projects being assessed
- Extensive tenure position provides multiple strategic options
- Considering JV on Mt Zephyr and Darlot East
One of the major gold-bearing structures of the Eastern Goldfields runs through the GNCP

- +80 km long gold-producing regional shear / fault system (~65km controlled by Ardea)
- Hosts Paddington gold mine, Goongarrie, Menzies, and Comet Vale historic gold mining centres
- Contiguous with Boulder-Lefroy Fault, hosts Kalgoorlie, St Ives mining centres.

Laterite cover has obscured the BTZ’s true gold potential at Goongarrie

Program of exploration drilling tied in with GNCP site layout sterilisation drilling

- First phase sterilisation drilling completed and multiple gold targets defined with further work planned
- Future drilling must penetrate laterite to fresh rock to test for gold
- Project data being refined to optimally drill gold targets in the near future

Gold endowment along the Bardoc Tectonic Zone and the contiguous Boulder-Lefroy Fault, after Hodkiewicz et al. 2005.
The Cathedrals Belt, Australia’s newest nickel province, is a geologically unusual E-W belt.

Ardea has the eastern strike extent of the host structure of St George Mining’s recent Mt Alexander Ni-Cu(-PGE) sulphide discoveries.

St George Mining notes that:

- they have 42 untested conductors within their tenure
- all EM anomalies tested to date contain Ni-Cu sulphides
- drill programs underway

Ardea has completed its first EM program along strike to generate targets, interpretations current
- Drill testing to follow

* Source: St George Mining publicity document, 9 July 2019, “42 EM conductors ready to drill at Mt Alexander nickel-copper sulphide project”. St George Mining Limited has not consented to the use of this report reference nor its contents.
Examining historic mine workings at Lewis Ponds, NSW

Australia’s premier address for bulk-tonnage copper-gold porphyry, epithermal gold, and polymetallic VMS deposits
Spinning out NSW assets to focus on WA Nickel & Gold

• 3,216km² of 100% controlled, highly prospective tenure within the Lachlan Fold Belt (LFB) NSW.

• Excellent record of exploration success leading to low-cost production.

• High-quality infrastructure (road, rail, power and water), Communities with mining culture whilst proximal to Sydney.

• Data reviews completed and drill-targets defined for all projects.

• Leverage off recent Boda gold-copper porphyry discovery (502m @ 0.48g/t Au and 0.20% Cu) reiterating premium exploration potential of LFB.

• Godolphin IPO timeline:
  – prospectus to be issued in Q4 2019
  – Aiming to list in 2019

* Source: Alkane Resources ASX release 9 September 2019. Alkane Resources has not consented to the use of this report reference nor its contents.
Investment Summary

- Goongarrie is Australia’s premier nickel-cobalt project, with potential for scandium-rare earth credits

- Globally significant mineral resource in an **infrastructure-rich and stable jurisdiction** provides ability to increase production from multiple processing hubs within the KNP

- Up to **100% off-take is available**, subject to financing support from Strategic Partner

- Leveraged to increasing nickel and cobalt demand from the rapidly growing Electric Vehicle and Static Storage Battery markets

- Ardea has an extensive (3,500km²), highly prospective landholding in the Eastern Goldfields of WA with active work programs for gold and nickel sulphides

- Strategic portfolio of NSW gold and base metal assets leading into Godolphin IPO
Ardea Resources Limited

Ardea Resources is an Australia-focused developer and explorer

APPENDICES

For further information regarding Ardea, please visit www.ardearesources.com.au
Our Flagship Goongarrie Nickel - Cobalt Project

Continuous nickel - cobalt mineralisation exceeding 15 km at Goongarrie

Goongarrie JORC Resource
215.6 Mt at 0.71% nickel and 0.06% cobalt*

Reserves optimised for 25 year mine life only, less than 20% of Goongarrie resource utilised at this scale (40.1 Mt at 0.82% Nickel & 0.09% Cobalt*)

* See appendix for resource breakdown
Summary of total mineral resources within the Goongarrie Nickel Cobalt Project area, comprising resources at Goongarrie Hill, Goongarrie South, Big Four, and Scotia Dam (14 March 2018).

<table>
<thead>
<tr>
<th>Camp</th>
<th>Domains</th>
<th>Cut-off</th>
<th>Resource category</th>
<th>Size (Mt)</th>
<th>Cobalt (%)</th>
<th>Nickel (%)</th>
<th>Contained metal Co (t)</th>
<th>Ni (t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goongarrie Hill</td>
<td>Ni &amp; Co</td>
<td>≥ 0.5% Ni or &gt; 0.08% Co</td>
<td>Inferred</td>
<td>52.5</td>
<td>0.04</td>
<td>0.65</td>
<td>21,600</td>
<td>340,400</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Subtotal</td>
<td>52.5</td>
<td>0.04</td>
<td>0.65</td>
<td>21,600</td>
<td>340,400</td>
</tr>
<tr>
<td>Goongarrie South</td>
<td>Ni &amp; Co</td>
<td>≥ 0.5% Ni or &gt; 0.08% Co</td>
<td>Measured</td>
<td>10.3</td>
<td>0.10</td>
<td>0.98</td>
<td>10,200</td>
<td>101,200</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Indicated</td>
<td>56.2</td>
<td>0.07</td>
<td>0.72</td>
<td>37,200</td>
<td>407,000</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Inferred</td>
<td>32.2</td>
<td>0.06</td>
<td>0.69</td>
<td>20,300</td>
<td>221,200</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Subtotal</td>
<td>98.7</td>
<td>0.07</td>
<td>0.74</td>
<td>67,700</td>
<td>729,300</td>
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<tr>
<td>Big Four</td>
<td>Ni &amp; Co</td>
<td>≥ 0.5% Ni or &gt; 0.08% Co</td>
<td>Indicated</td>
<td>45.5</td>
<td>0.06</td>
<td>0.71</td>
<td>28,200</td>
<td>320,700</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Inferred</td>
<td>9.9</td>
<td>0.06</td>
<td>0.63</td>
<td>6,100</td>
<td>61,900</td>
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<td></td>
<td></td>
<td></td>
<td>Subtotal</td>
<td>55.4</td>
<td>0.06</td>
<td>0.69</td>
<td>34,300</td>
<td>382,700</td>
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<tr>
<td>Scotia Dam</td>
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<td>≥ 0.5% Ni or &gt; 0.08% Co</td>
<td>Indicated</td>
<td>3.3</td>
<td>0.09</td>
<td>0.81</td>
<td>3,000</td>
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<td></td>
<td>Inferred</td>
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</tr>
<tr>
<td>Total</td>
<td>All</td>
<td>≥ 0.5% Ni or &gt; 0.08% Co</td>
<td>Measured</td>
<td>10.3</td>
<td>0.10</td>
<td>0.98</td>
<td>10,200</td>
<td>101,200</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Indicated</td>
<td>105.0</td>
<td>0.07</td>
<td>0.72</td>
<td>68,400</td>
<td>754,600</td>
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<td></td>
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<td>Inferred</td>
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<td>0.05</td>
<td>0.67</td>
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<td>Goongarrie Resource Global</td>
<td></td>
<td></td>
<td>TOTAL</td>
<td>215.6</td>
<td>0.06</td>
<td>0.71</td>
<td>130,700</td>
<td>1,522,700</td>
</tr>
</tbody>
</table>

Note: All nickel and cobalt domains are included, and are encapsulated by an envelope defined by nickel grades equal to or greater than 0.5%. Note that figures are rounded to reflect degree of certainty and may not tally.
**APPENDIX – Reserves Defined for Goongarrie Nickel Cobalt Project**

### Goongarrie Nickel Cobalt Project, Ore Reserves based on 25 year mine life at 1.5 Mtpa.

<table>
<thead>
<tr>
<th>Deposits</th>
<th>Class</th>
<th>Size (Mt)</th>
<th>Cobalt (%)</th>
<th>Nickel (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goongarrie South</td>
<td>Proven</td>
<td>8.95</td>
<td>0.10%</td>
<td>0.96%</td>
</tr>
<tr>
<td></td>
<td>Probable</td>
<td>17.26</td>
<td>0.09%</td>
<td>0.79%</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>26.22</strong></td>
<td><strong>0.10%</strong></td>
<td><strong>0.85%</strong></td>
</tr>
<tr>
<td>Big Four</td>
<td>Proven</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td></td>
<td>Probable</td>
<td>13.92</td>
<td>0.09%</td>
<td>0.77%</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>13.92</strong></td>
<td><strong>0.09%</strong></td>
<td><strong>0.77%</strong></td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td>Proven</td>
<td>8.95</td>
<td>0.10%</td>
<td>0.96%</td>
</tr>
<tr>
<td></td>
<td>Probable</td>
<td>31.18</td>
<td>0.09%</td>
<td>0.78%</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>40.13</strong></td>
<td><strong>0.09%</strong></td>
<td><strong>0.82%</strong></td>
</tr>
</tbody>
</table>

Using a nickel equivalent cut of >0.81 %, which used inputs of A$18,900/t nickel and A$120,750/t cobalt. (US$15,120/t Ni and US$96,600/t Co, 0.8 exchange rate). Nickel equivalent (Nieq %) = \( \frac{Ni \text{ grade} + \left( \frac{Co \text{ grade} \times Co \text{ price}}{Ni \text{ price}} \right)}{} \). Prices used are US$15,120/t for nickel and US$96,600/t for cobalt. No assumption about recovery is included here. Recoveries are addressed elsewhere throughout the mining schedule and financial model.

The information shown on this slide has been previously released on the ASX platform by Ardea in ASX release, Goongarrie Nickel Cobalt Project, PFS study, 28 March 2018. The information in this report that relates to Ore Reserves for the Goongarrie South and Big deposits of the Goongarrie Nickel Cobalt Project is based on information compiled by Mr Steve Lampron who is a Member of the Australasian Institute of Mining and Metallurgy and who has provided expert guidance on mine planning and Ore Reserve estimation. Mr Lampron is a director of Auralia Mining Consulting and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Lampron consents to the inclusion in the report of the matters based on this information in the form and context in which it appears.
APPENDIX – KNP Resource Breakdown

KNP nickel-cobalt mineral resource (JORC 2012), Ardea Annual Report 2017

<table>
<thead>
<tr>
<th>Resource Category</th>
<th>Quantity (Mt)</th>
<th>Cobalt (%)</th>
<th>Nickel (%)</th>
<th>Contained cobalt (t)</th>
<th>Contained nickel (t)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measured</td>
<td>9.6</td>
<td>0.10</td>
<td>1.02</td>
<td>9,700</td>
<td>98,800</td>
</tr>
<tr>
<td>Indicated</td>
<td>232.9</td>
<td>0.06</td>
<td>0.75</td>
<td>141,200</td>
<td>1,759,700</td>
</tr>
<tr>
<td>Inferred</td>
<td>530.5</td>
<td>0.05</td>
<td>0.68</td>
<td>254,400</td>
<td>3,600,000</td>
</tr>
<tr>
<td>KNP Total Resources</td>
<td>773.0</td>
<td>0.05</td>
<td>0.70</td>
<td>405,400</td>
<td>5,458,400</td>
</tr>
</tbody>
</table>

In accordance with the Australian Securities Exchange Limited Listing Rules Appendix 5A:
The information in this report that relates to Mineral Resources for the Highway, Goongarrie Hill, Goongarrie South, Big Four, Aubils and Boyce Creek Prospects is based on information originally compiled in-house and validated by Steve Jones in 2013. Steve Jones is a member of the Australasian Institute of Mining and Metallurgy. Steve Jones is a full time employee of Heron Resources Limited and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the resource estimation activity that he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the ‘Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves’. Steve Jones consents to the inclusion in this report of the matters based on his information in the form and context that it appears. Note that Mineral Resources that are not Ore Reserves do not have demonstrated viability.

The information in this report that relates to Mineral Resources for the Siberia North, Bulong East, Siberia, Black Range, Taurus and Jump Up Dam Prospects is based on information compiled by Snowden Mining Industry Consultants by members of the Australian Institute of Mining and Metallurgy. Snowden Mining Industry Consultants had sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the resource estimation activity. All resources were internally audited by Snowden and signed off by a person of sufficient experience 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’. Steve Jones has validated the original resource estimates during 2013. Steve Jones consents to the inclusion in this report of the matters based on his information in the form and context that it appears. Note that Mineral Resources that are not Ore Reserves do not have demonstrated viability.
1. Leaching

2. Impurity removal

3. Ni-Co releach

4. Sulphate crystallisation

Base case GNCP flowsheet
Pressure Acid Leach, with Mixed Sulphide precipitation yields high purity product