

**ASX & Media Release**

4 May 2017

**ASX Symbol**

ARL

**Ardea Resources Limited**

Suite 2 / 45 Ord St  
West Perth WA 6005

PO Box 1433  
West Perth WA 6872

**Telephone**

+61 8 6244 5136

**Email**

ardea@ardearesources.com.au

**Website**

www.ardearesources.com.au

**Directors**

Katina Law  
*Chair*

Matt Painter  
*Managing Director*

Ian Buchhorn  
*Non-Executive Director*

**Issued Capital**

*Shares*  
67,000,747

*Unlisted options*  
12,310,022

ABN 30 614 289 342

---

## First cobalt drillhole completed at Goongarrie South, KNP Cobalt Zone

Core drilling program focused on cobalt will generate representative samples for developing the KNP Cobalt Zone metallurgical flow-sheet

---

- The first cobalt-focused core has been drilled into the high-grade Pamela Jean Deeps zone at Goongarrie South
  - Resource estimation is well advanced for Goongarrie South to Big Four, aiming to define the early mine-life production schedule grades and thus cobalt grade requirements for the planned metallurgical samples
  - Drilling assay results are awaited from the April 2017 Kalpini and Black Range RC drilling within the KNP Cobalt Zone
- 

Ardea Resources Limited (ASX:ARL, "Ardea" or "the Company") is pleased to announce that the first cobalt-focused drillhole was completed yesterday (3 May 2017) at Goongarrie South.

### Core drilling in the KNP Cobalt Zone

Core drilling aims to generate material suitable for metallurgical testing, piloting and flow-sheet development. In total, the program, which commenced on 27 April, will comprise four drill holes which are expected to be between 70 and 170 m deep.

The four proposed core holes are twinning existing RC drill holes spaced at a 200 m interval through the high grade cobalt zone in the Pamela Jean Deeps segment of Goongarrie South (Figure 1). Where most of the KNP Cobalt Zone is within 50 m of surface, high-grade mineralisation at Pamela Jean Deeps extends from around 40 m to over 150 m deep. The first hole (Figure 2) has been drilled to 165.3 m. Logging and sampling are presently underway.

Historical assays show that the cobalt mineralisation in the drill area is consistently 0.1–0.2% cobalt, so it is well suited to securing "run-of-mine" cobalt grades upon which to complete the planned metallurgical test-work.

## Resource estimation at Goongarrie South and Big Four (KNP Cobalt Zone)

An upgraded cobalt-focused resource estimation is well advanced for the Goongarrie South to Big Four portions of the KNP Cobalt Zone, which aims to define the early mine-life production schedule grades and thus cobalt grade requirements for the metallurgical samples. At a 0.1% Co cut-off grade, Goongarrie South to Big Four is a semi-continuous sheet of mineralisation over some 15 km strike length. Work is yet to commence on modelling the Goongarrie Hill area which is contiguous with and to the north of Goongarrie South.

## KNP April RC Drilling

Drilling assay results are expected shortly from the April 2017 Kalpini and Black Range RC drilling within the KNP Cobalt Zone.

Once geo-metallurgical interpretations are completed, updated resource estimations will be finalised.

Follow-up core drilling of the Black Range high grade cobalt zone is also planned to obtain material for metallurgical test-work.

## KNP Cobalt Zone Pre-feasibility Study

Simulus Engineers have been retained to conduct the test-work and follow up flow-sheet development for the KNP Cobalt Zone. These studies will be the basis of engineering design work for the Pre-feasibility Study.

**For further information regarding Ardea, please visit [www.ardearesources.com.au](http://www.ardearesources.com.au):**

**Ardea Resources:**

Dr Matt Painter  
Managing Director, Ardea Resources Limited  
Tel +61 8 6500 9200  
[ardea@ardearesources.com.au](mailto:ardea@ardearesources.com.au)

**Media or Investor Inquiries:**

Jon Snowball  
FTI Consulting  
Tel +61 2 8298 6100 or +61 477 946 068  
[jon.snowball@fticonsulting.com](mailto:jon.snowball@fticonsulting.com)

# Goongarrie South COBALT ZONE Metallurgical Core Drilling Program

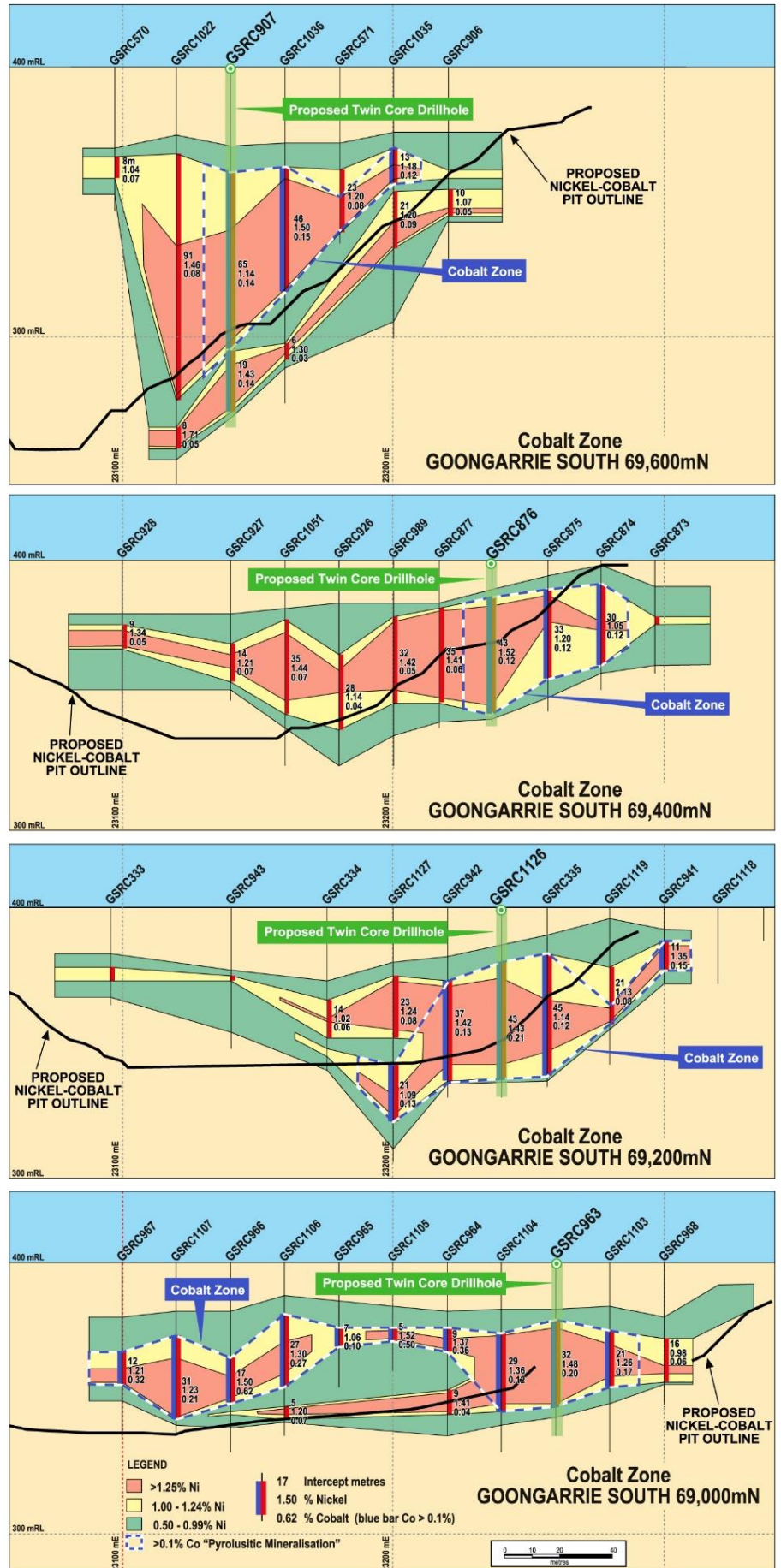


Figure 1 – Goongarrie South Cobalt Zone, metallurgical core drilling



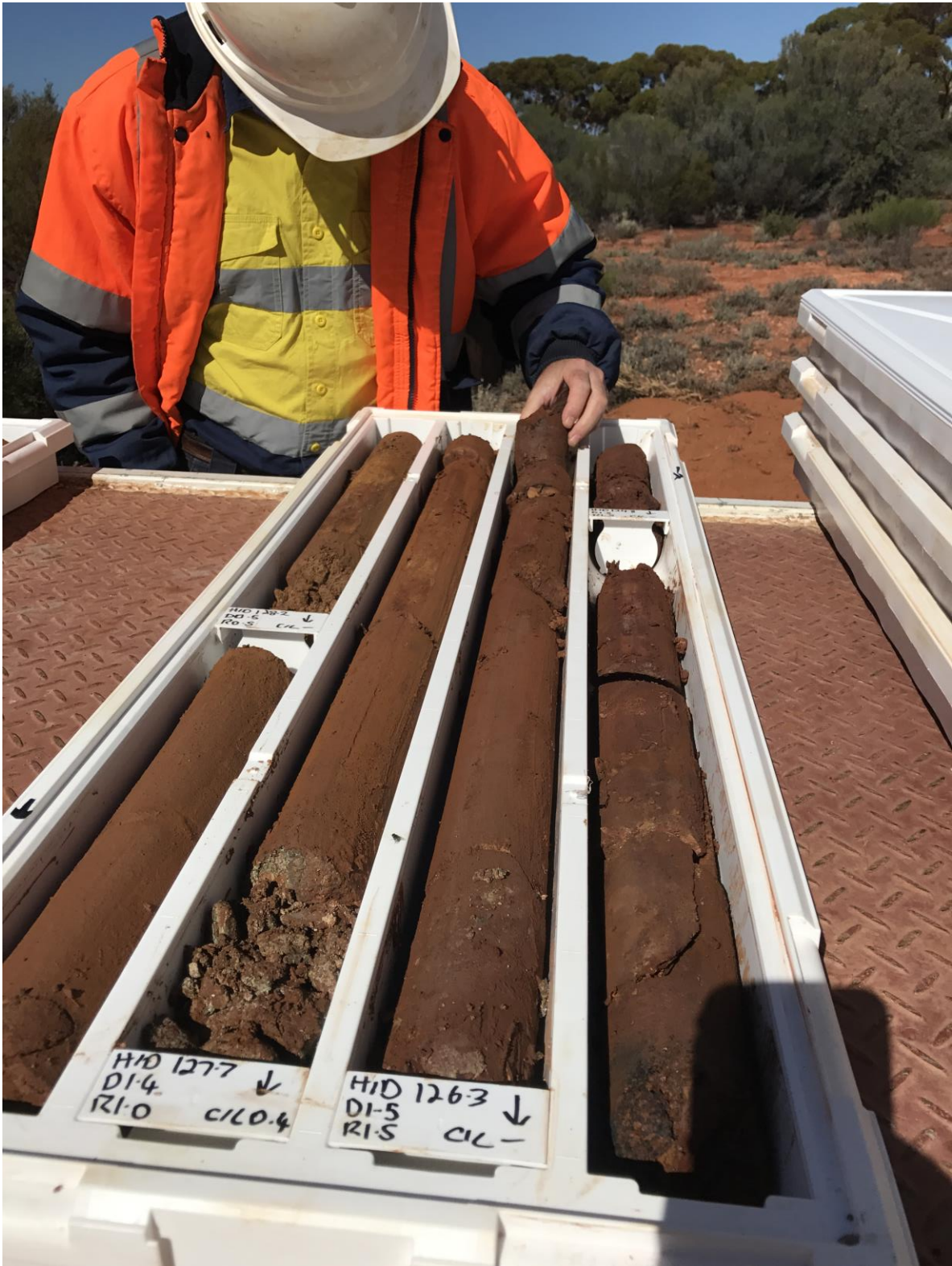


Figure 2 – Freshly drilled core from Pamela Jean Deeps at Goongarrie South

### **Compliance Statement (JORC 2012)**

A competent person's statement for the purposes of Listing Rule 5.22 has previously been announced by the Company for:

1. Kalgoorlie Nickel Project on 21 October 2013 and 31 June 2014, October 2016, 2016 Heron Resources Annual Report
2. KNP Cobalt Zone Study on 6 January 2017

The Company confirms that it is not aware of any new information or data that materially affects information included in previous announcements, and all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed. All projects will be subject to new work programs following the listing of Ardea, notably drilling, metallurgy and JORC Code 2012 resource estimation as applicable.

The information in this report that relates to KNP Exploration Results is based on information originally compiled by previous and current full time employees of Heron Resources Limited. The Exploration Results and data collection processes have been reviewed, verified and re-interpreted by Mr Ian Buchhorn who is a Member of the Australasian Institute of Mining and Metallurgy and currently a director of Ardea Resources Limited. Mr Buchhorn has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the exploration activities undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Buchhorn consents to the inclusion in this report of the matters based on his information in the form and context that it appears.

The exploration and industry benchmarking summaries are based on information reviewed by Dr Matthew Painter, who is a Member of the Australian Institute of Geoscientists. Dr Painter is a full-time employee and a director of Ardea Resources Limited and has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Dr Painter has reviewed this press release and consents to the inclusion in this report of the information in the form and context in which it appears.

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

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

This forward-looking information includes, or may be based upon, without limitation, estimates, forecasts and statements as to management's expectations with respect to, among other things, the timing and ability to complete the Ardea spin-out, the timing and amount of funding required to execute the Company's exploration, development and business plans, capital and exploration expenditures, the effect on the Company of any changes to existing legislation or policy, government regulation of mining operations, the length of time required to obtain permits, certifications and approvals, the success of exploration, development and mining activities, the geology of the Company's properties, environmental risks, the availability of labour, the focus of the Company in the future, demand and market outlook for precious metals and the prices thereof, progress in development of mineral properties, the Company's ability to raise funding privately or on a public market in the future, the Company's future growth, results of operations, performance, and business prospects and opportunities. Wherever possible, words such as "anticipate", "believe", "expect", "intend", "may" and similar expressions have been used to identify such forward-looking information. Forward-looking information is based on the opinions and estimates of management at the date the information is given, and on information available to management at such time. Forward-looking information involves significant risks, uncertainties, assumptions and other factors that could cause actual results, performance or achievements to differ materially from the results discussed or implied in the forward-looking information. These factors, including, but not limited to, the ability to complete the Ardea spin-out on the basis of the proposed terms and timing or at all, fluctuations in currency markets, fluctuations in commodity prices, the ability of the Company to access sufficient capital on favourable terms or at all, changes in national and local government legislation, taxation, controls, regulations, political or economic developments in Australia or other countries in which the Company does business or may carry on business in the future, operational or technical difficulties in connection with exploration or development activities, employee relations, the speculative nature of mineral exploration and development, obtaining necessary licenses and permits, diminishing quantities and grades of mineral reserves, contests over title to properties, especially title to undeveloped properties, the inherent risks involved in the exploration and development of mineral properties, the uncertainties involved in interpreting drill results and other geological data, environmental hazards, industrial accidents, unusual or unexpected formations, pressures, cave-ins and flooding, limitations of insurance coverage and the possibility of project cost overruns or unanticipated costs and expenses, and should be considered carefully. Many of these uncertainties and contingencies can affect the Company's actual results and could cause actual results to differ materially from those expressed or implied in any forward-looking statements made by, or on behalf of, the Company. Prospective investors should not place undue reliance on any forward-looking information.

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

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



# Appendix – About the KNP and the KNP Cobalt Zone

## The KNP

There is renewed global interest in cobalt owing to its prominent use in lithium ion batteries and associated technologies supporting renewable energy storage.

Ardea's Kalgoorlie Nickel Project (KNP – Figure ) is a globally significant lateritic nickel resource that contains substantial concentrations of cobalt. The global resource for the KNP is **805.3 Mt at 0.048 % cobalt and 0.70 % nickel** (Table 1 below) which equates to over **386,000 t of contained cobalt metal**.

*Table 1 – KNP Resources breakdown*

Resource Category	Quantity (Mt)	Co (%)	Ni (%)
Measured	9.6	0.081	1.02
Indicated	244.0	0.052	0.75
<i>KNP Total Measured and Indicated</i>	<i>253.6</i>	<i>0.052</i>	<i>0.76</i>
Inferred	551.7	0.046	0.68
<b>KNP Total Resources</b>	<b>805.3</b>	<b>0.048</b>	<b>0.70</b>

Recent recalculation of these resources with a focus on cobalt rather than nickel concentrations shows that the KNP is **one of the world's largest cobalt resources**, and certainly the largest in the developed world.

## The KNP Cobalt Zone

A cobalt-rich subset of the KNP, known as the KNP Cobalt Zone, contains a significant cobalt and nickel resource in its own right. The KNP Cobalt Zone contains **49.7 Mt at 0.12 % cobalt and 0.86 % nickel** (Table 2 for a total **contained cobalt metal of just under 60,000 t**. Our aim is to substantially increase upon this initial resource through exploration of known outlying cobalt occurrences and drill intercepts, and through reinterpretation of the resource based on cobalt cut-off grades rather than the current 0.5 % nickel cut-off.

*Table 2 – KNP Cobalt Zone, Resource Statement from RMRC consulting group*

Area	Prospect	Resource category	Cutoff (% Co)	Size (Mt)	Cobalt (%)	Nickel (%)
<b>Goongarrie</b>	Goongarrie South	Measured	0.08	3.4	0.14	1.19
		Indicated	0.08	11.2	0.11	0.92
		Inferred	0.08	1.4	0.11	0.76
	Big Four	Indicated	0.08	4.5	0.11	0.89
		Inferred	0.08	0.2	0.11	0.95
	Scotia	Inferred	0.08	2.9	0.14	0.88
<i>Goongarrie subtotal</i>				<i>23.6</i>	<i>0.12</i>	<i>0.94</i>
<b>Siberia</b>	Black Range	Inferred	0.50(Ni)	20.1	0.10	0.75
<b>Yerilla</b>	Aubils	Inferred	0.08	6.0	0.15	0.90
<b>KNP Cobalt Zone total resources</b>				<b>49.7</b>	<b>0.12</b>	<b>0.86</b>

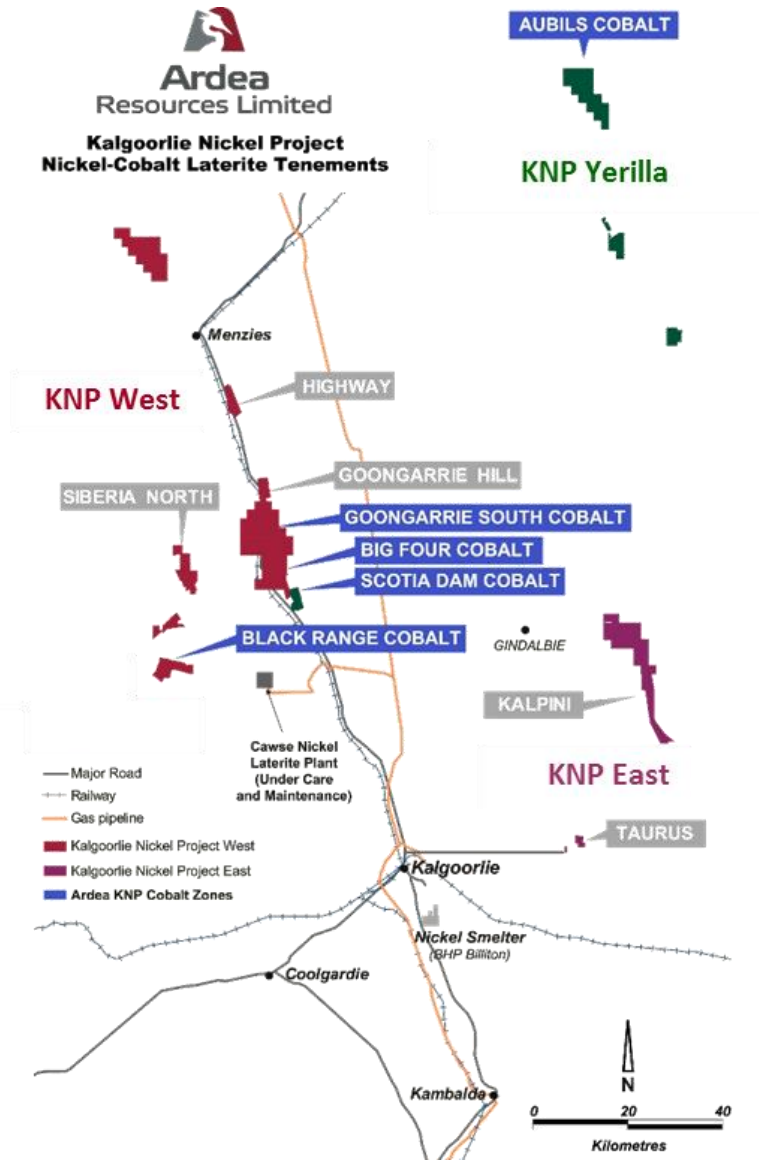


Figure 3 – The KNP and KNP Cobalt Zone, near Kalgoorlie WA