

ASX & Media Release

28 May 2020

ASX Symbol

ARL

Ardea Resources Limited

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Ian Buchhorn
Technical Executive Director

Wayne Bramwell
Non-Executive Director

Executive Management

Sam Middlemas
Company Secretary & CFO

Matt Painter
General Manager Exploration

Issued Capital

Fully Paid Ordinary Shares
117,300,435

Directors/Employee
Performance Rights
4,476,000

ABN 30 614 289 342

KNP R&D Advances

Ardea Resources Limited (Ardea) is developing its Kalgoorlie Nickel Project (KNP), starting with the flagship Goongarrie Nickel Cobalt Project (GNCP) which is a “state-of-the-art” battery metals and new technology minerals project. Innovative Research and Development (R&D) is a key pillar of the metallurgical programs completed by Ardea. The quality of the KNP/GNCP research has been recognised with a \$2 million R&D Tax Offset being received from the Federal Government Australian Tax Office.

The 2019 GNCP Research and Development programme focussed on:

- **Pilot Plant** – 15 tonnes of specially drilled GNCP core and ancillary drill material was processed in a pilot-scale High Pressure Acid Leach (HPAL) circuit to produce Mixed Sulphide Product (MSP), culminating in the reporting of the 2.25Mtpa Expansion Study (ASX release 24 July 2018).
- **Crystal Production** – the MSP then underwent multiple experiments at bench-scale to remove impurities and produce nickel sulphate and cobalt sulphate that was distributed to potential users and found to meet battery industry quality requirements (ASX release 31 October 2018).
- **Geo-metallurgy** – all GNCP drill samples are subject to a 67-element assay suite with 12 specific ratios, X-ray Diffraction (XRD) and specialised geological logging then used as a predictive tool to hypothesize future HPAL plant performance. Samples continue to be selected from Ardea’s extensive pulp sample storage facility in Kalgoorlie.
- **Multiple product revenue streams** – the detailed analytical suite has quantified multiple potential co-products that can value add to the nickel and cobalt sulphate, including manganese sulphate, scandium trioxide, vanadium pentoxide, High Purity Alumina (HPA) and Rare Earth Elements (REE) for magnet production.
- **Onsite Neutraliser** – the key innovation was identifying material within mine waste and saprock that could be used for process plant neutraliser following the HPAL dissolution of the ore (ASX release 8 April 2019 and 30 April 2019).

Critical R&D work continues to be undertaken by Ardea and leading research organisation partners, with the Company committed to realising the full potential of its projects.

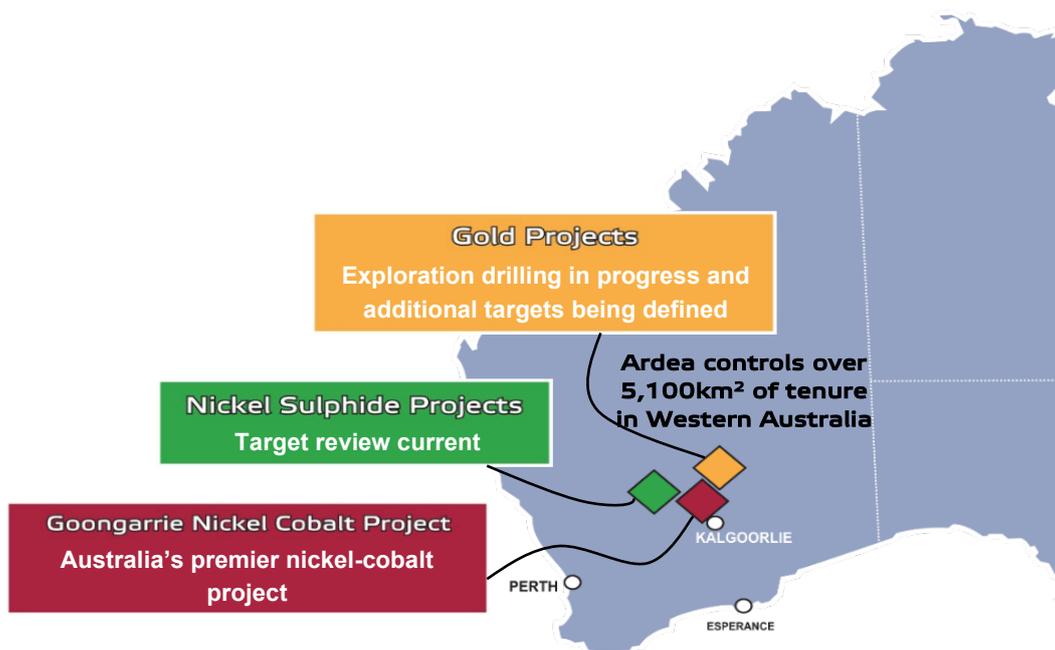
The ATO R&D refund for 2019 was recently received, being \$2 million, with Ardea cash reserves now approximately \$10.4 million. This funding ensures that the KNP continues to advance towards becoming a key cathode metal supply source for the Lithium Ion Battery and Static Storage Battery sectors.

Authorised for lodgement by the Board of 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 5,100km² WA nickel sulphide and gold tenure located on crustal-scale structures in lake settings within the Eastern Goldfields world-class nickel-gold province.



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

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