

Trend Investing Talks With Ardea Resources Managing Director, Andrew Penkethman & General Manager Exploration Matt McCarthy

Dec. 22, 2022 10:28 PM ET

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About: [Ardea Resources Limited \(ARRRF\)](#)

Summary

Ardea Resources ("Ardea") is already well known for their massive 100% owned Kalgoorlie Nickel Project ("KNP") in Western Australia. It contains an estimated 5.9mt nickel and 384kt cobalt contained metal.

Ardea Resources has >4,200 km² of tenure in one of Australia's premier gold and nickel sulphide provinces.

This interview is focused on Ardea Resources potential to discover lithium, rare earths, and nickel sulphide on their WA tenements.



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Ardea Resources Ltd [ASX:ARL] ([OTCPK:ARRRF](#))

Ardea Resources ("Ardea") is already well known for their massive 100% owned Kalgoorlie Nickel Project ("KNP") located in the Eastern Goldfields region of Western Australia ("WA").

The KNP resource area contains a total of **830Mt @ 0.71% Ni and 0.046% Co for 5.9Mt nickel and 384kt cobalt contained metal**. The Goongarrie Hub within the KNP resource has a high grade component of **78Mt @ 1.0% Ni and 0.069% Co for 784kt contained nickel and 54kt contained cobalt**.

Ardea also have exploration potential for vanadium, chromium, aluminium, manganese, nickel, gold, and now lithium and rare earths.

This interview is focused on Ardea's lithium, rare earths, and nickel sulphide potential for discovery on their tenements.

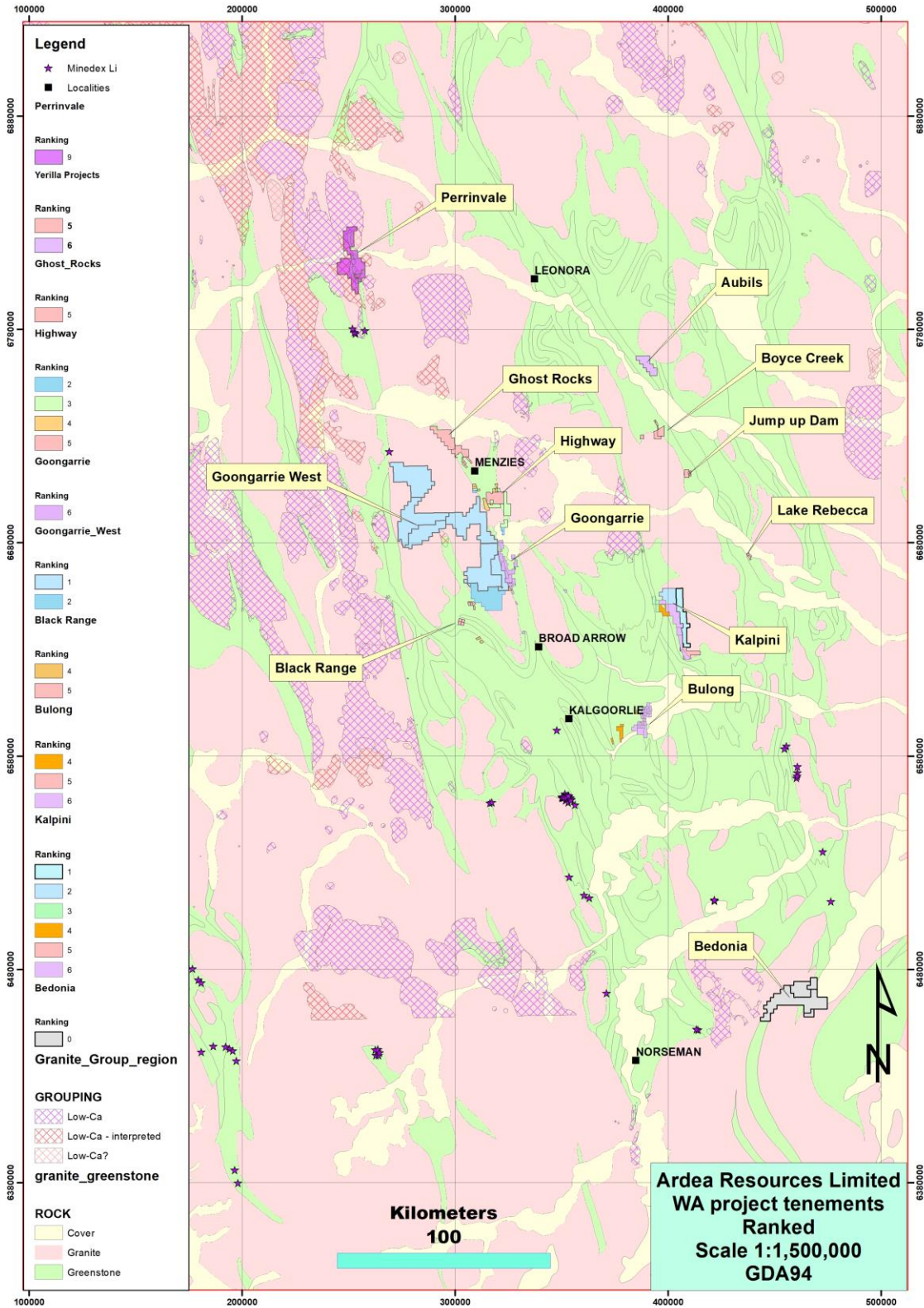
Interview with Managing Director, Andrew Penkethman & General Manager Exploration Matt McCarthy

In Ardea's Nov. 22, 2022 [announcement](#) the Company stated: "Eastern Goldfields Projects Exploration Update.... Eastern Goldfields tenement portfolio for LCT and REE opportunities..... The Company tenement portfolio covers 4,200km² and is one of the largest land holdings over nickel-hosting komatiite ultramafic stratigraphy in Australia. The significant land holding is also prospective for other economic mineralisation including Critical Minerals such as Lithium-Caesium-Tantalum (LCT) elements and Rare Earth Elements [REE]. These compelling magmatic nickel sulphide and Critical Mineral opportunities are being evaluated for their exploration potential. Of particular significance, exploration over the last 12 months has identified REE and LCT settings in association with nickel laterite occurrences."

Q.1 Please discuss the most promising Lithium Caesium tantalum ("LCT") pegmatites on Ardea's tenements? Any evidence of spodumene crystals yet?

The highest ranked area for LCT pegmatites on Ardea's tenure is the Perrinvale Project, where multiple pegmatites have previously been mapped and several reconnaissance rock chip samples recently taken and submitted for assay (results awaited). Ardea also notes the ongoing LCT pegmatite exploration and resource development from several other ASX listed companies around Ardea's Perrinvale tenure (i.e. Red Dirt's Mt Ida Project 25km to the south). Pegmatites have also been identified at the company's Ghost Rocks project and samples recently taken and submitted for assay.

Map showing LCT rankings (1 is low 10 is high)



Project locations assessed by CSA Global for LCT pegmatites exploration potential. Prospectivity ranking for rare-element LCT pegmatites is shown. A ranking of 1 is low and 10 is high prospectivity. Mindex lithium occurrences are shown by stars.

Ardea Resources - [Source](#): Ardea announcement Nov. 22, 2022

Q.2 Regarding the rare earth elements [REE] please discuss what rare earths Ardea is chasing and have you found any signs of the valuable NdPr magnet rare earths yet?

At the Bedonia Project it was recommended to assess for ionic clay REE deposits in paleochannels or local lacustrine basins. The presence of lignite previously identified at Bedonia may indicate prospective basins in which REE may have accumulated, with REE mineralisation associated with these deposits elsewhere. Review of REE potential on other projects is ongoing, and although the recent CSA review did not identify any hard rock REE sources such as carbonatites, rare earth pegmatites or syenites on the tenements, there is potential for ionic clay REE mineralisation at other projects which are currently being assessed for any higher value REE including Dysprosium, Terbium, Neodymium and Praseodymium.

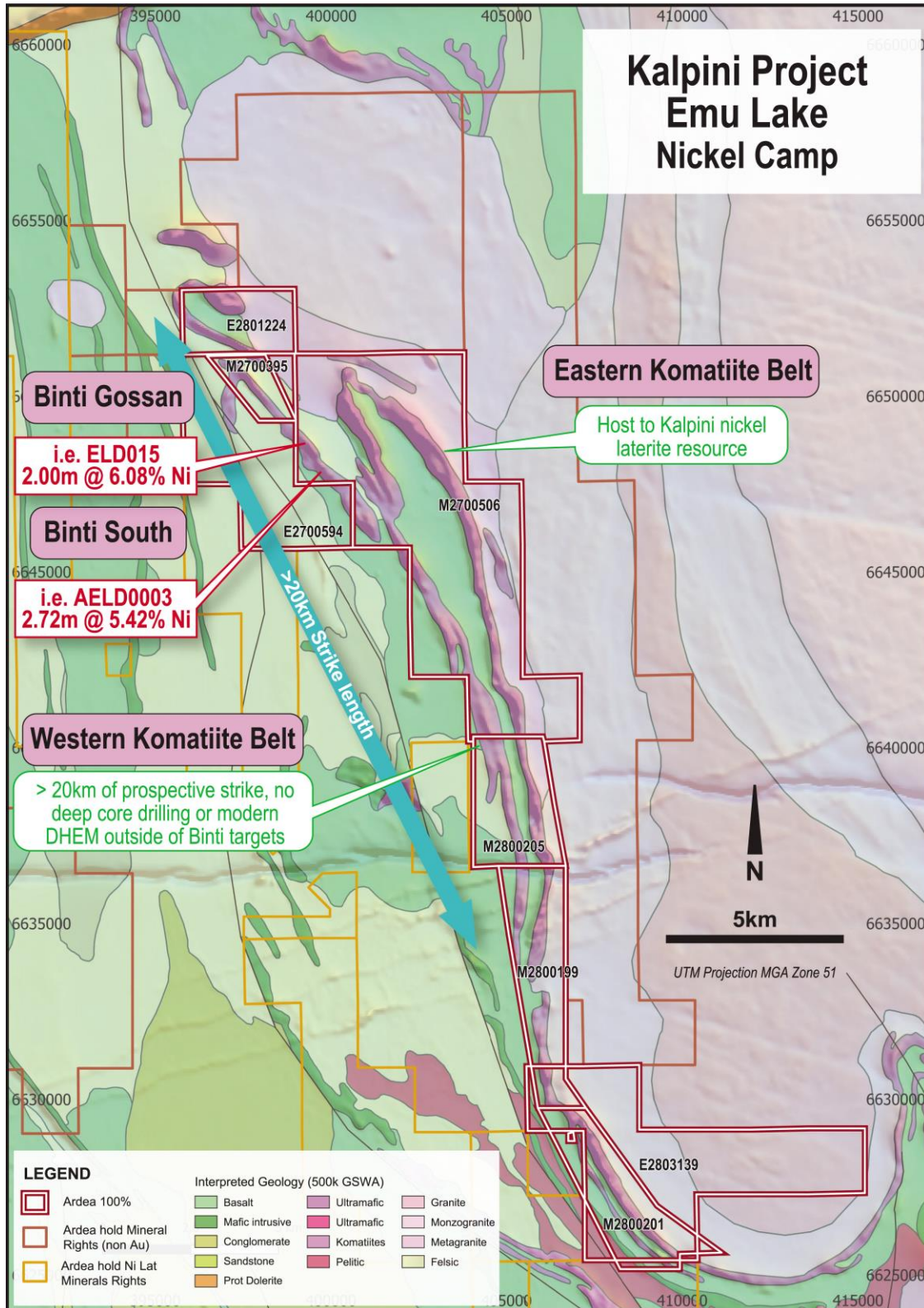
Ardea has also noted some elevated REE mineralisation within some of the nickel-cobalt laterite resources, in particular at the Goongarrie and Kalpini Hubs. At both localities the REE mineralisation, which includes Neodymium and Praseodymium, is associated with intermediate intrusives that have been derived from deep mantle melts and tended to intrude the host ultramafic lava flows, proximal to the path of least resistance for the intrusives, such as lithological contacts and structural discontinuities, such as faults and shears. In some areas the REE mineralisation has been elevated within the laterite profile and future metallurgical testwork will consider where these elements naturally upgrade within the flow sheet designed to recover the main target minerals, nickel and cobalt.

Q.3 What is the most promising nickel sulphide discovery across Ardea's tenements? Please discuss the main targets and potential for further discovery.

To date the most promising nickel sulphide exploration project is Emu Lake in the Kalpini Hub where Type 1 massive nickel-copper-PGE sulphides were discovered by Ardea at the Binti Prospect (i.e. AELD0003: 2.72m @ 5.42% Ni, 0.85% Co, 0.15% Co, 0.85g/t PGEs from 391.04m). The significance of this discovery is that it occurs in the Kurnalpi Terrane in which there are only a few other Type 1 nickel sulphide deposits. At the Kalpini Project Ardea hold approximately 20km strike of the prospective Western Komatiite Belt, and though demonstrably fertile this belt is historically largely unexplored for primary magmatic nickel sulphide mineralisation.

Ardea believe there is significant potential to make additional high-grade nickel-copper-PGE discoveries in the Kalpini Project outside the Binti Prospect. Regional technical assessment of the Kalpini project will commence in Q1 2023 using detailed geochemical ratios, geophysical data, geological and structural interpretation to generate a pipeline of nickel sulphide exploration targets. Initial review has identified multiple untested moving loop electromagnetic (MLEM) plates associated with the Western Ultramafic komatiite flow which is currently the priority target for nickel sulphide mineralisation.

Nickel sulphide potential on Ardea's tenements



Map of the Kalpini Nickel project showing tenements over interpreted geology. Projection GDA94 Zone 51

Ardea Resources [Source](#): Ardea announcement Nov. 22, 2022

Q.4 What is the time frame and next steps/catalysts for the Eastern Goldfields Projects lithium, rare earths, and nickel sulphide exploration?

- LCT pegmatites – assess assay results in Jan/Feb 2023 from recent rock chip sampling and complete additional field programs
- REE – ongoing review of ionic clay hosted REE potential, initially at the Goongarrie Hub
- Nickel Sulphide – regional target generation in Jan/Feb 2023, additional diamond drilling at Binti prospect thereafter. Also during 2023 Ardea will commence assessment for nickel sulphide potential at other projects in the KNP including the Goongarrie Hub, Yerilla Hub, Bulong and Perrinvale. All projects comprise significant volumes of komatiite ultramafic flows that are either underexplored or unexplored for magmatic nickel sulphides.

Q.5 Is there anything else you would like to add?

Watch this space!

Conclusion

Trend Investing would sincerely like to thank Andrew Penkethman and Matt McCarthy for giving freely of their time and insight into Ardea Resources lithium, rare earths, and nickel sulphide potential.

We already know the KNP Project has a massive nickel and cobalt laterite resource.

Disclosure: I/we have a beneficial long position in the shares of Ardea Resources [ASX:ARL], either through stock ownership, options, or other derivatives.

I wrote this article myself, and it expresses my own opinions. I am not receiving compensation for it. I have no business relationship with any company whose stock is mentioned in this article.

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