Ardea Resources Limited

ASX & Media Release

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ASX Symbol

ARL

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194,751,915

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Nickel Sulphide Prospectivity Confirmed and Lithium-Caesium-Rubidium bearing intrusives in Highway EIS drillhole

The jointly funded Ardea-WA State Government Exploration Incentive Scheme (**EIS**) core drill-hole AHID0024 returned the following results:

- **Pentlandite mineralisation confirms fertile ultramafic at Highway**
  - Petrological studies confirm the key nickel sulphide mineral pentlandite is present in AHID0024. The Walter Williams Formation (**WWF**) komatiite ultramafic within the Goongarrie Hub is demonstrated to be fertile for nickel sulphide mineralisation.
- **Lithium-caesium intrusives** with **very high rubidium** were identified in the EIS drill hole. Along with historic drill holes at Highway, a highly fractionated fertile Lithium-Caesium-Tantalum (**LCT**) mineral system is confirmed.

  Significant intersections in AHID0024 include:
  - 21.2m @ 0.23% Li_2O, 945ppm Cs, 1,237ppm Rb from 406.8m

    including 3.45m @ 0.34% Li_2O, 4,108ppm Cs, 4,772ppm Rb from 409.1m
  - 0.85m @ 0.34% Li_2O, 3,392ppm Cs, 4,222ppm Rb from 368.75m
  - 0.95m @ 0.15% Li_2O, 3,000ppm Cs, 4,830ppm Rb from 390.85m
- **Multiple fertile intrusives identified at Highway**

  Based on the geological model generated from the EIS hole:
  - The lithium-caesium-rubidium style anomalism discovered in the AHID0024 fresh drill core has now been identified in intermediate-felsic porphyries within the weathered regolith throughout the Highway Project, with highest-grade zones on the biotite-rich intrusion margins.
  - Review of historic drill holes at Highway identified eleven holes with intersections >0.1% Li_2O, with the highest intersection 2m @ 0.68% Li_2O, 1.43% Rb, all within the oxidised weathered profile.
  - Recent Ardea mapping at Highway and Ghost Rocks has identified and sampled numerous prospective LCT intrusive outcrops including pegmatites, with assay results from Highway pending.

Ardea Resources Limited (**Ardea** or the **Company**) is pleased to report on its completed EIS drill hole AHID0024 at Highway, within its Kalgoorlie Nickel Project (**KNP**) in the Eastern Goldfields of Western Australia (Figures 1 and 2). As well as confirmation of a nickel sulphide fertile WWF, based on EIS geological data, lithium-caesium-rubidium bearing LCT intrusives have been identified at Highway, and subsequently at Ghost Rocks.

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Managing Director and CEO Andrew Penkethman noted:

"Ardea acknowledges the vision and support of the Western Australian State Government's Exploration Incentive Scheme (EIS) which encourages mineral exploration within Western Australia. This initiative helps incentivise new exploration concepts which are tested with co-funded drilling, with the results providing invaluable information for the WA resources sector.

Whilst Ardea are entirely focussed on concluding the Kalgoorlie Nickel Project Goongarrie Hub Strategic Partner process, the Company considers that its broader Kalgoorlie Nickel Project tenements have significant Battery and Critical Mineral exploration potential. The results from drilling the EIS core hole at Highway, have reiterated this prospectivity by confirming that the Walter Williams Formation (WWF) is prospective for hosting nickel sulphide mineralisation at depth, as well as the extensive surface nickel laterite development. The identification of lithium-caesium-rubidium bearing intrusives occurring within the WWF has prompted a broader assessment of Ardea Goongarrie Hub tenure that meets the EIS hole exploration model, and has demonstrated that lithium bearing LCT intrusives are present and can be ranked for future exploration."

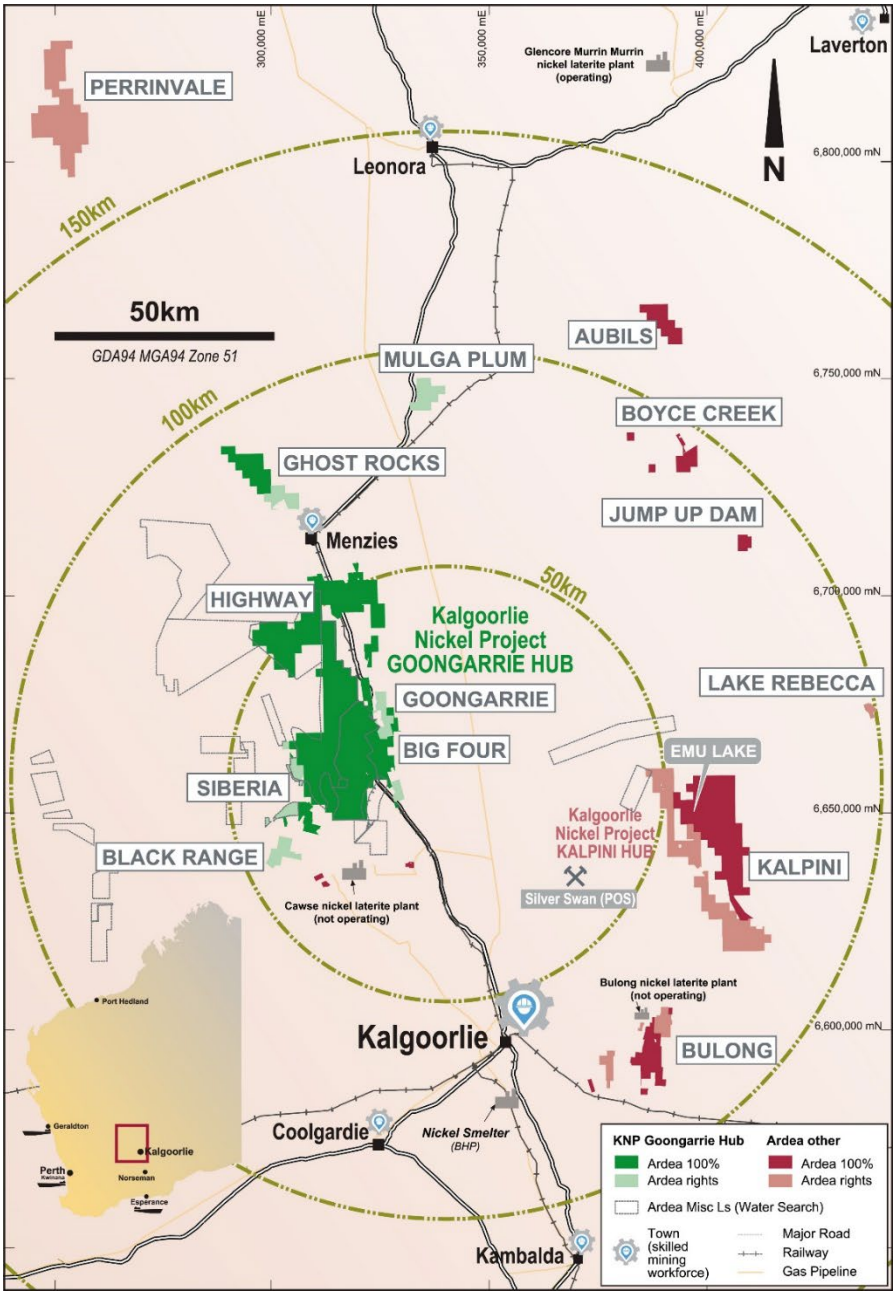

Figure 1: Ardea Kalgoorlie Nickel Project location and tenure plan

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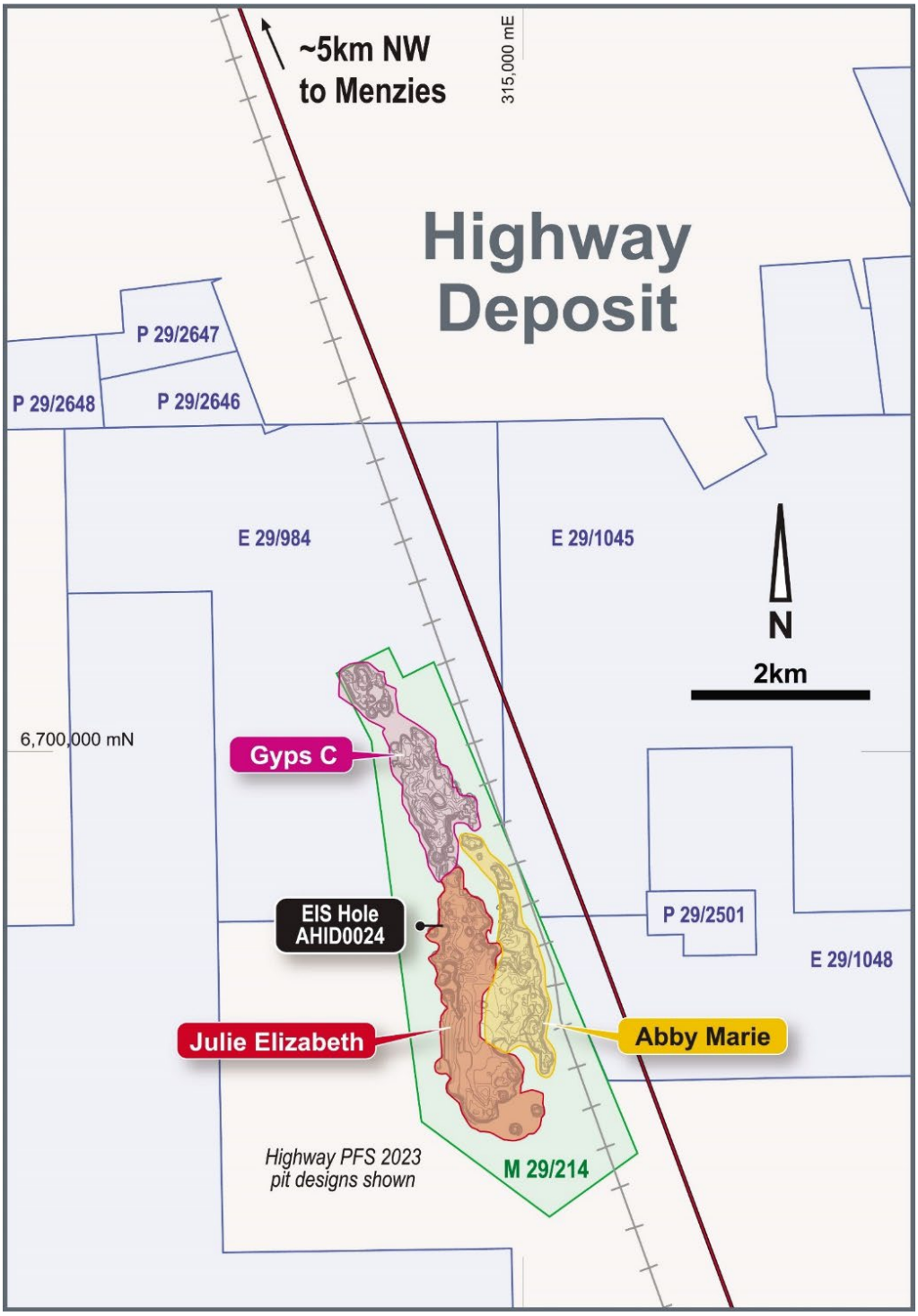

Figure 2: Map showing the Highway Deposit, location of EIS hole AHID0024 and PFS 2023 nickel-cobalt laterite pit outlines (ASX release 5 July 2023). Projection MGA94 Zone 51.

INTRODUCTION

In August 2023 Ardea drilled Round 26 EIS sponsored diamond core hole, AHID0024, at the Highway deposit, in which the State government Geological Survey of Western Australia funded $112,500 of the drilling costs. The aim of the drill hole was to test the basal contact of the WWF, in a proposed Highway nickel laterite pit area termed the Julie Elizabeth. Minor nickel sulphides consisting of pentlandite, and millerite have been identified in previous petrographic work on RC drill holes (ASX release 30 September 2020). Recent collaborative research with Australia's national science agency, CSIRO, as part of their 'Indicator Minerals for Nickel Sulphide' project identified low ruthenium signatures (<150ppb) in chromite, and nickel and copper depletion in olivine, both suggesting possible sulphur saturation and thus nickel sulphide prospectivity within the WWF.

The EIS hole was designed to test the WWF basal contact for nickel sulphides, and in addition to extend beyond the interpreted contact to investigate potential hydrothermal alteration systems associated with discrete alkaline intermediate-felsic intrusives within the WWF. The intrusives when intersected in shallow nickel laterite RC drilling are distinctive white oxidised clays with a signature alteration mineral identified in Ardea R&D as sepiolite. The sepiolite-hosted nickel laterite has a distinctive cobalt-manganese-copper (Co-Mn-Cu) signature.

AHID0024 RESULTS

Drill hole AHID0024 was drilled to a depth of 499.1m (Table 1) as a stratigraphic hole to test the basal contact and lower sequence of the WWF.

Table 1: Details of EIS drillhole AHID0024

Hole_ID	Type	Depth (m)	Tenement	Grid	Easting (mE)	Northing (mN)	RL (mASL)	Dip (°)	Azi (°)
AHID0024	DD	499.1	M29/214	MGA94_51	313850.4	6698048.9	406	-55	90

AHID0024 intersected thick WWF from 132.25m – 499.1m (end of hole) with multiple intrusive intermediate-felsic units intersected. Importantly nickel sulphide blebs were identified between 441.7m – 442.7m (confirmed by petrography - Figure 3) which assayed 1m @ 0.35% Ni. Though only minor nickel sulphides were intersected, this is further evidence that the WWF achieved some sulphur saturation and is fertile for nickel sulphide mineralisation. A Down-Hole Electro-Magnetic (**DHEM**) survey of AHID0024 did not identify any in-hole or off-hole bedrock conductors requiring follow-up.

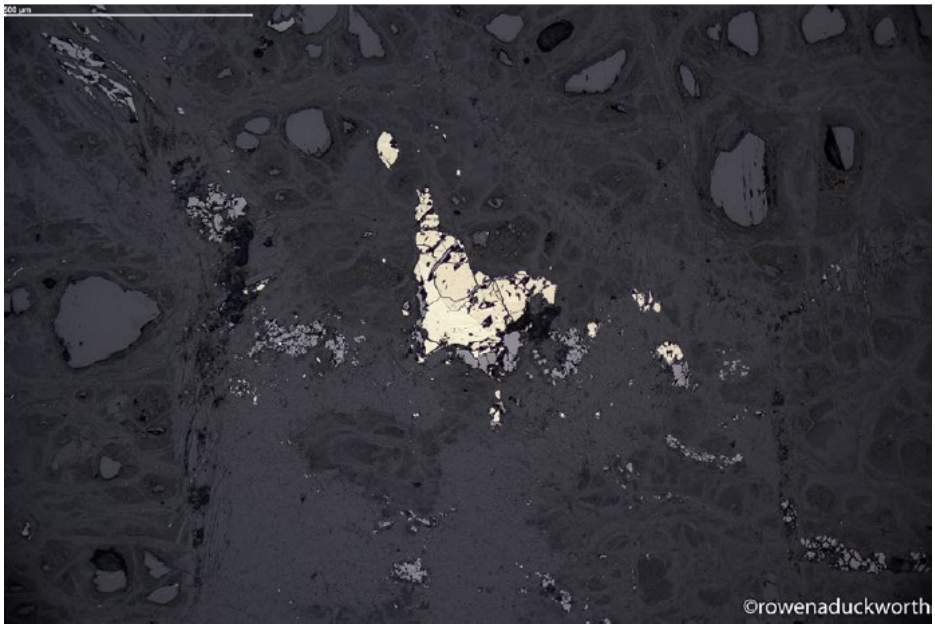

Figure 3: Reflected light photomicrograph of sample AHID0024_442.55 (x10) illustrating fine-grained pentlandite (light yellow) with pyrrhotite (light brown).

Source: *Image copyright courtesy of Mintex Petrological Solutions (2023)*

Assays for the multiple intrusive intermediate-felsic units intersected in AHID0024 (Figures 4, and 5) returned the following anomalous lithium-caesium-rubidium results:

- 21.2m @ 0.23% Li_2O, 945ppm Cs, 1,237ppm Rb from 406.8m *including* 3.45m @ 0.34% Li_2O, 4,108ppm Cs, 4,772ppm Rb from 409.1m
- 0.85m @ 0.34% Li_2O, 3,392ppm Cs, 4,222ppm Rb from 368.75m
- 0.95m @ 0.15% Li_2O, 3,000ppm Cs, 4,830ppm Rb from 390.85m

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The lithium-caesium-rubidium anomalism in AHID0024 occurs in intermediate-felsic plagioclase-biotite porphyries that intrude the WWF (Figure 6). The highest-grade zones are in biotite-rich margins on the contacts of the porphyries (Figures 4 and 5) and on the margins of minor granodiorites and pegmatite stocks. The biotite-rich contact zones are generally thin (<2.5m) and may be a result of late-stage hydrothermal alteration upgrading from the anomalous felsic intrusives. None of the intrusive contacts in drill-core were sufficiently intact to record oriented structural measurements to interpret in 3D.

Figure 4: AHID0024: Section of core from 0.85m @ 0.34% Li_2O, 3,392ppm Cs, 4,222ppm Rb, 51ppm Tl from 368.75m with the Li-Cs-Rb-Tl anomalism within the dark biotite-rich interval on contact with the plagioclase-biotite porphyry.

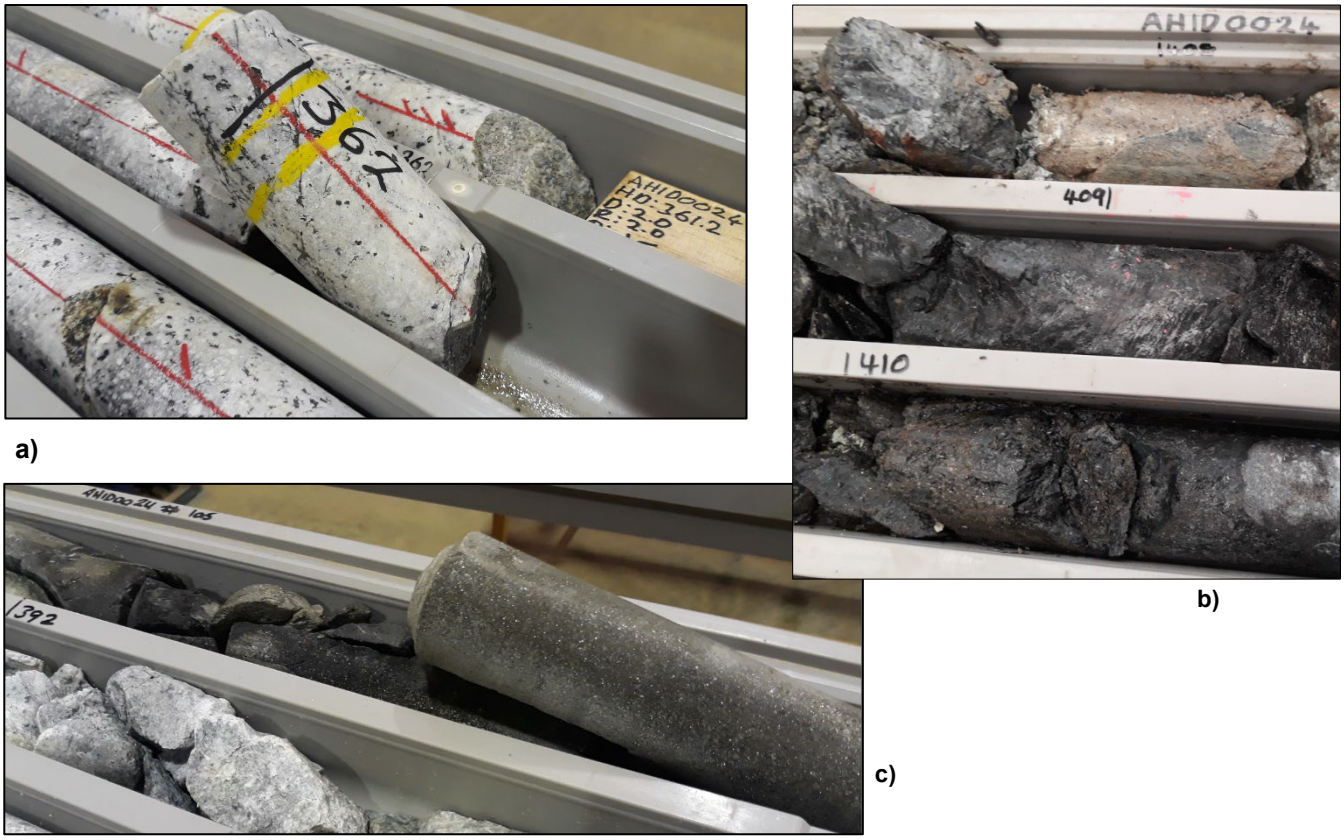

Figure 5: Highly fractionated lithium-bearing intrusives in AHID0024. Clockwise from top left:

a) Porphyry intrusive host with up to 0.29% Li_2O background values; b) Biotite-rich unit with 0.49% Li_2O, 5,580ppm Cs, 6,860ppm Rb from 409.1m; c) Flaky bronze colour mica unit 0.15% Li_2O, 3,000ppm Cs, 4,830ppm Rb from 390.85m.

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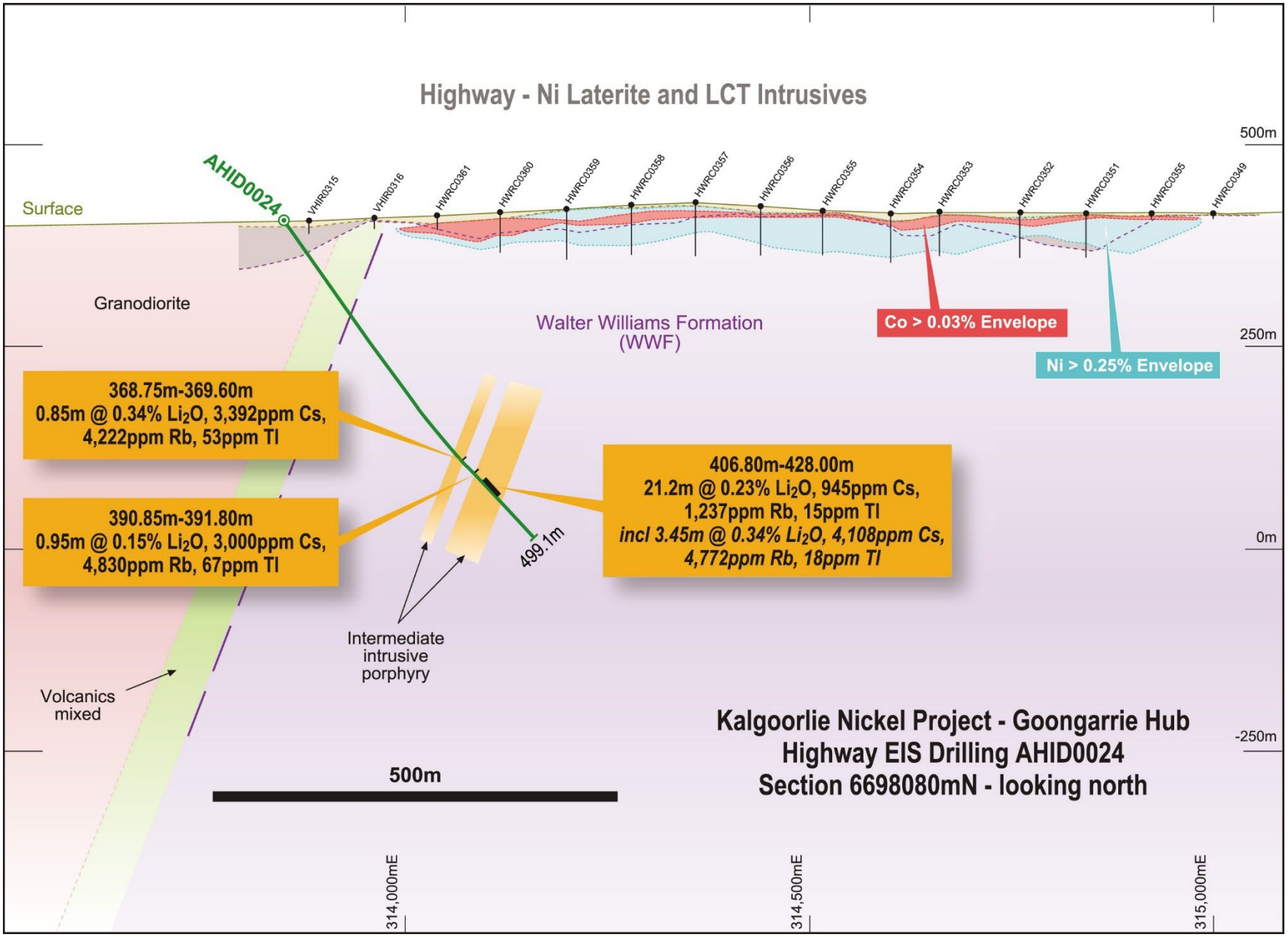

Figure 6: Cross Section of EIS hole AHID0024 (looking North) showing Li-Cs-Rb anomalism within porphyry intrusives. Projection MGA94 Zone 51.

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PREVIOUS HIGHWAY DRILL HOLES

In light of the EIS hole results, assay data from previous drilling at Highway (ASX release 11 February 2022) was reviewed for anomalous lithium results in the rare holes assayed for lithium. Eight diamond holes and three RC holes had intersections >0.1% Li_2O, with the best intersection in drill hole AHID0015: 10m @ 0.5% Li_2O from 22m including 2m @ 0.68% Li_2O and 1.43% Rb from 30m (Figure 7). Review of drill core for the anomalous diamond holes at Highway identified that lithium-caesium-rubidium +/- thallium-tantalum-tin results are also associated with porphyries and weathered pegmatites, with some high-grade intersections also in biotite-rich zones on the contacts. All anomalous samples in historic drilling were within the oxidised profile, with the only confirmed fresh-rock intersection being the recent EIS drill hole, AHID0024.

Figure 7: AHID0015: 2m @ 0.68% Li_2O, 0.02% Ta and 1.43% Rb from 30-32m, with the highest Li-Rb anomalism within the dark biotite-rich interval at the contact between white porphyry and dark yellow goethitic clay being weathered WWF (nickel laterite mineralisation).

HIGHWAY FIELD ASSESSMENT

Recent field assessment at Highway following the EIS hole has identified numerous intrusive outcrops/subcrops with potential for further lithium-caesium-rubidium mineralisation (Figure 10).

The samples shown in Figures 8, and 9 are from outcrops located by Ardea 600m southeast of AHID0024 (Figure 10).

These samples have been sent off for assay with the geochemical information, once received, to be used to help define whole rock chemistry, and mineralogy which can assist with defining granite and pegmatite fertility for hosting Critical Minerals.

Additional field work will also be conducted to assess the extent of the pegmatite units.

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Figure 8: Pegmatite samples 600m southeast of AHID0024 showing mica zone. Assays awaited.

Figure 9: Intrusive outcrop samples 600m southeast of AHID0024. Assays awaited.

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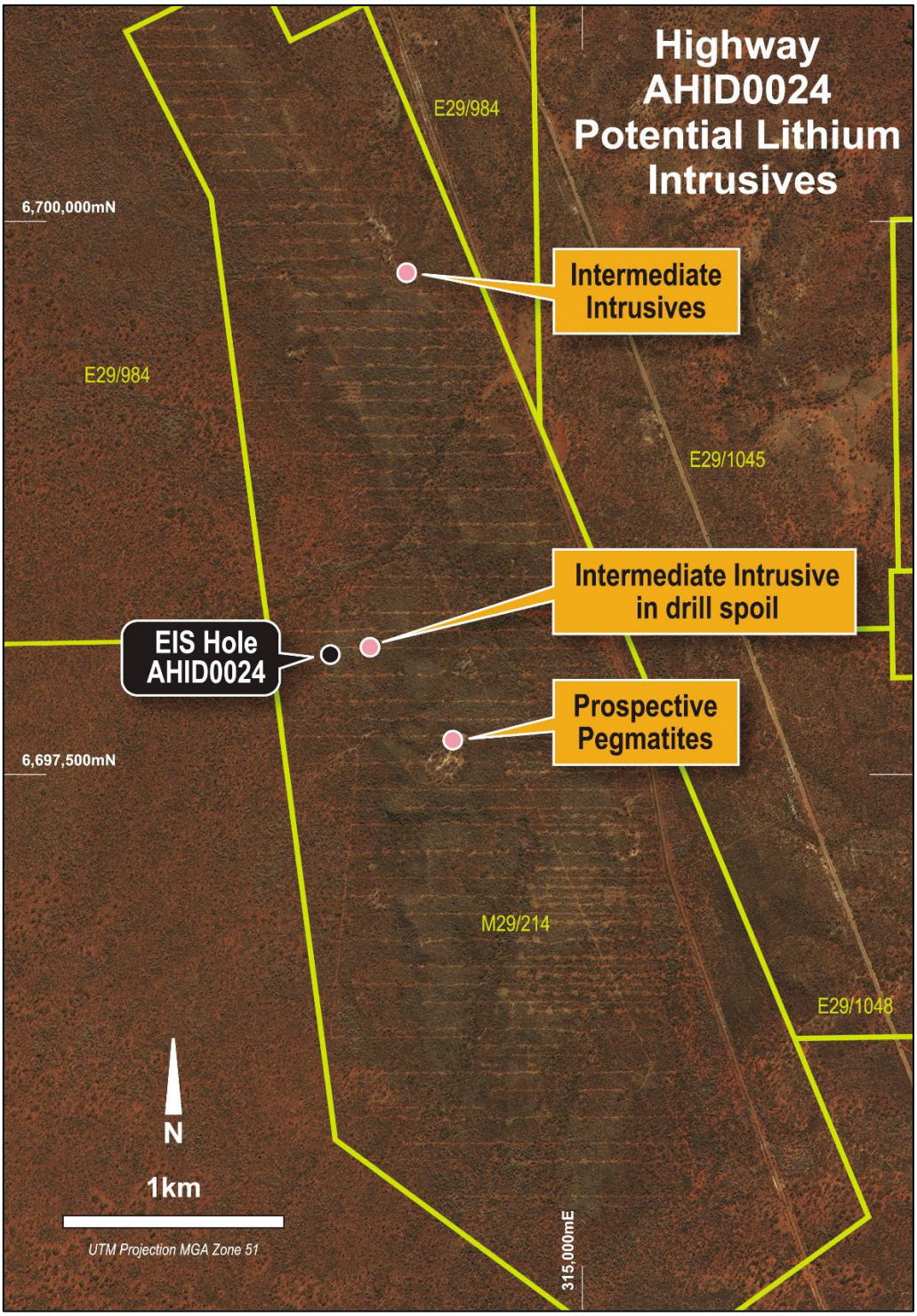

Figure 10: Location of prospective intrusive outcrops relative to EIS drill hole AHID0024.

GHOST ROCKS LCT PEGMATITES

The Ghost Rocks project is located 16km north-west of the Menzies township and approximately 32km north-northwest along the WWF strike from the Highway deposit (Figure 1). Regional reconnaissance lithium exploration was conducted intermittently at Ghost Rocks throughout 2023 with the focus on assessing Lithium-Caesium-Tantalum (LCT) pegmatite targets.

A total of 78 rock chip samples were collected and analysed in August-September 2023. Assay results showed lithium anomalism in four samples ranging 0.23% – 0.72% Li_2O and up to 207ppm Cs, 264ppm Ta and 2,780ppm Rb (Tables 2, 3 and Figure 11). The anomalous samples occur in pegmatites associated with an internal granite, in two clusters 900m apart on 100% Ardea tenement E29/941 (Figure 12).

In the light of the EIS hole results, the Ghost Rocks LCT intrusive suite has strong affinities with Highway.

Table 2: Significant Assays (Li-Cs-Rb + Be) of rock chips from recent sampling at Ghost Rocks

Sample	Li	Li2O	Li2O	Cs	Ta	Rb	Sn	Nb	Be
UNITS	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm
S302586	68	146.4	0.01	21.9	58.7	896	3	36	98.8
S302587	3340	7191.0	0.72	207	25.3	2780	9	44.5	321
S302588	248	533.9	0.05	18.1	24.3	512	3	29.5	48.5
S302589	22	47.4	0.00	35.8	27.8	1420	2	47.5	7.6
S302590	24.5	52.7	0.01	70.4	264	1410	-1	54.5	179
S302702	1430	3078.8	0.31	179	37.4	1420	3	51.5	50.6
S302703	2030	4370.6	0.44	140	42.1	1710	16	71	155
S302704	1050	2260.7	0.23	154	32.2	1670	9	39.5	101

Table 3: Details of recent anomalous rock chip samples from Ghost Rocks

SampleID	Lease_ID	Sampled_Date	NAT_Grid_ID	NAT_North	NAT_East	NAT_RL
S302586	E29/00941	24/08/2023	MGA94_51	6726191	298262	391
S302587	E29/00941	24/08/2023	MGA94_51	6726185	298266	396
S302588	E29/00941	24/08/2023	MGA94_51	6726191	298265	389
S302589	E29/00941	24/08/2023	MGA94_51	6725752	299262	388
S302590	E29/00941	24/08/2023	MGA94_51	6725724	299354	394
S302702	E29/00941	24/08/2023	MGA94_51	6726908	297775	396
S302703	E29/00941	24/08/2023	MGA94_51	6726908	297776	392
S302704	E29/00941	24/08/2023	MGA94_51	6726889	297750	393

Figure 11: Pegmatite sample S302587 from Ghost Rocks with 0.72% Li_2O, 207ppm Cs, 2,780ppm Rb + 321ppm Be.

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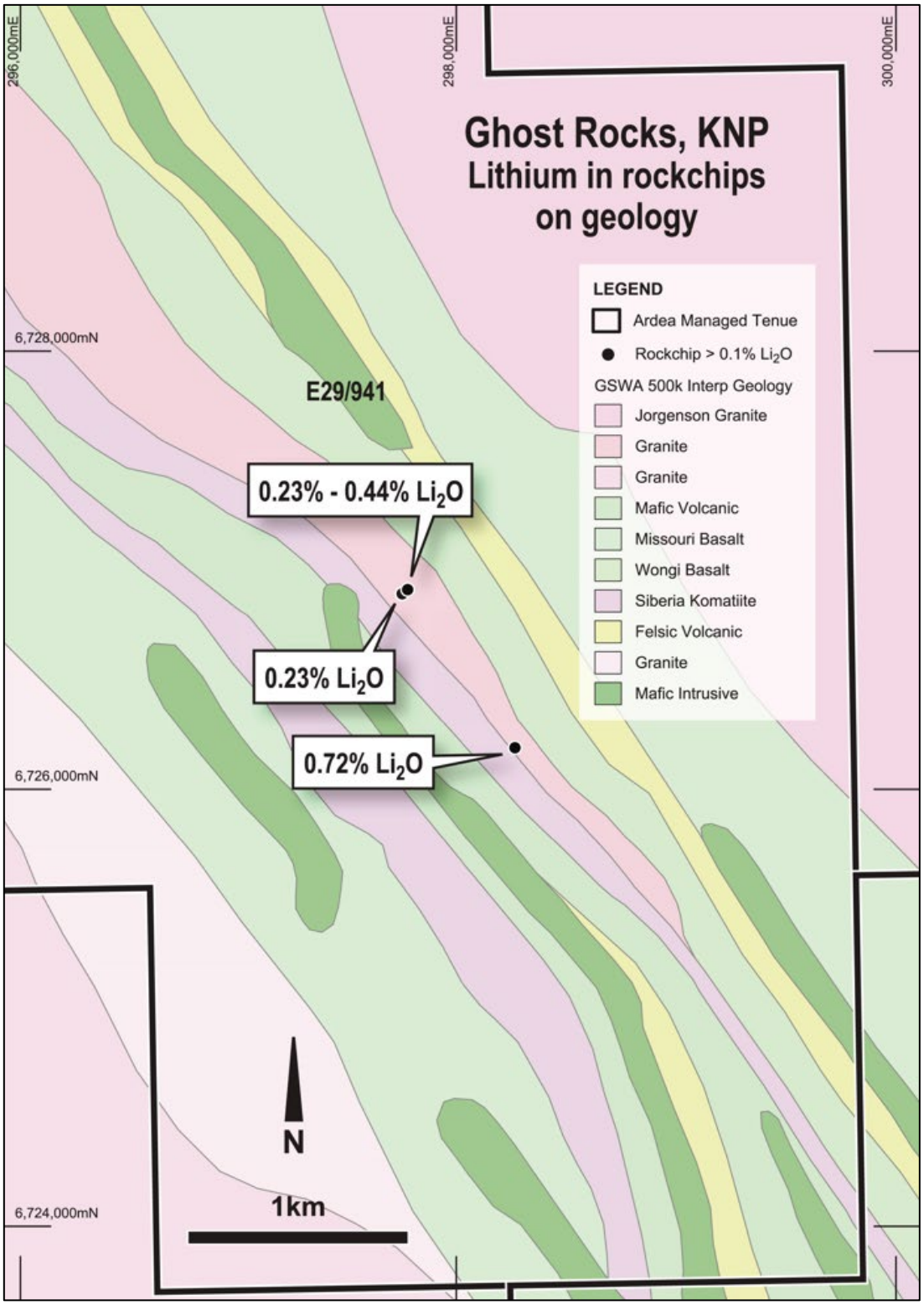

Figure 12: Rock chip samples from Ghost Rocks showing Li_2O pegmatite anomalism. Projection MGA94 Zone 51.

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SCHEMATIC MODEL OF GRANITE - PEGMATITE SYSTEM

The intrusives at Highway and Ghost Rocks appear to be consistent with LCT intrusive models with increased fractionation and enrichment outwards from a granite source emplaced into greenstone sequences (Figure 13).

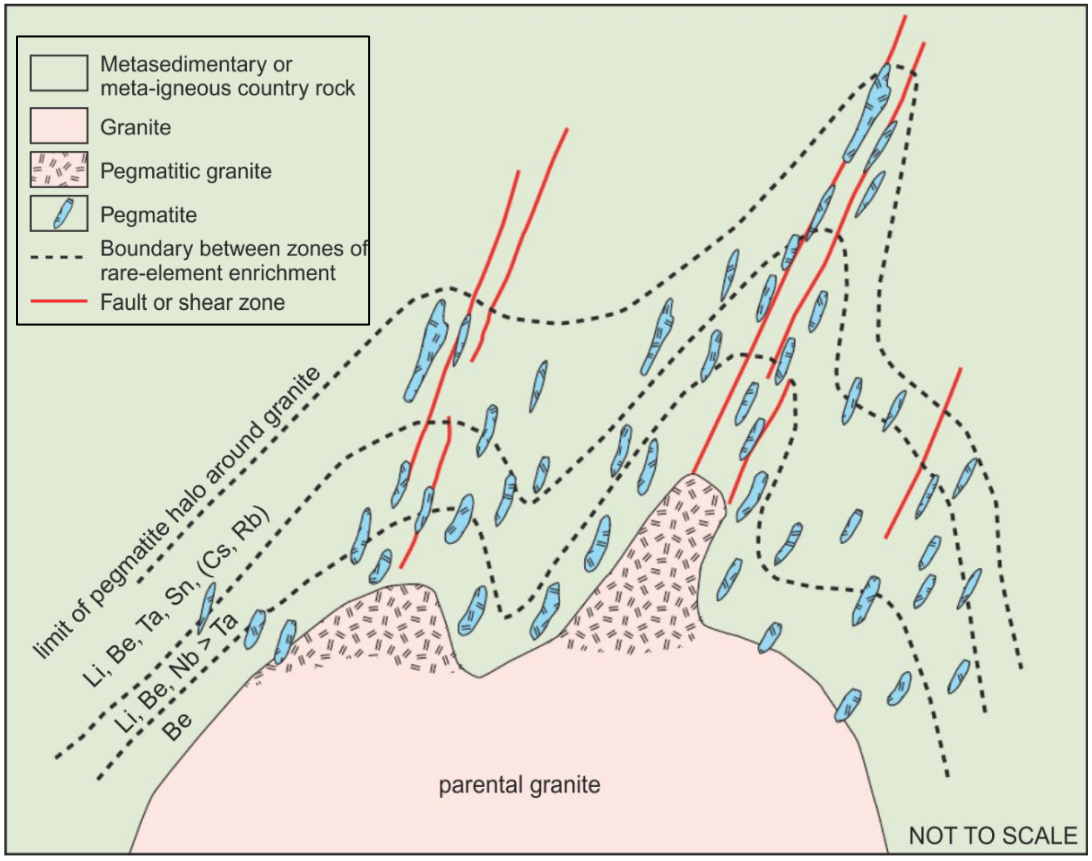

Figure 13: Schematic model of regional zoning in fertile intrusive pegmatite field.

Source: Modified from Bradley (2017) and Duuring (2020)

The above LCT Intrusive model shows a regional scale granitoid intruding into greenstone and characteristic zonation of element suites in pegmatite offshoots. Selway (2004) highlights the highly fractionated end member as having the most economic potential for lithium, ceasium, tantalum and rubidium deposits to occur. This is typical of many major global LCT deposits, with increased fractionation and enrichment outwards from the granite often adjacent to and along structures.

FURTHER WORK

Further work at Highway is to continue reconnaissance mapping to better define any prospective intermediate and felsic intrusives. There is a significant amount of historic RC drill holes at Highway, however, most holes are shallow exploring for nickel-cobalt laterite mineralisation. A pulp re-assay program to test for LCT anomalism may be undertaken, selecting drill holes with any logged intermediate-felsic intrusives and any adjacent to intrusives identified during mapping.

At Ghost Rocks further detailed mapping and sampling for LCT pegmatites will continue intermittently during 2024.

Additional collaborative research related to nickel sulphide exploration at Goongarrie between Ardea and CSIRO is ongoing.

All further planned exploration programs are pending in priority behind feasibilty workstreams and Strategic Partner discussions for the Goongarrie Hub nickel-cobalt laterite resources.

This announcement is authorised for release by the Board of Ardea Resources Limited.

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

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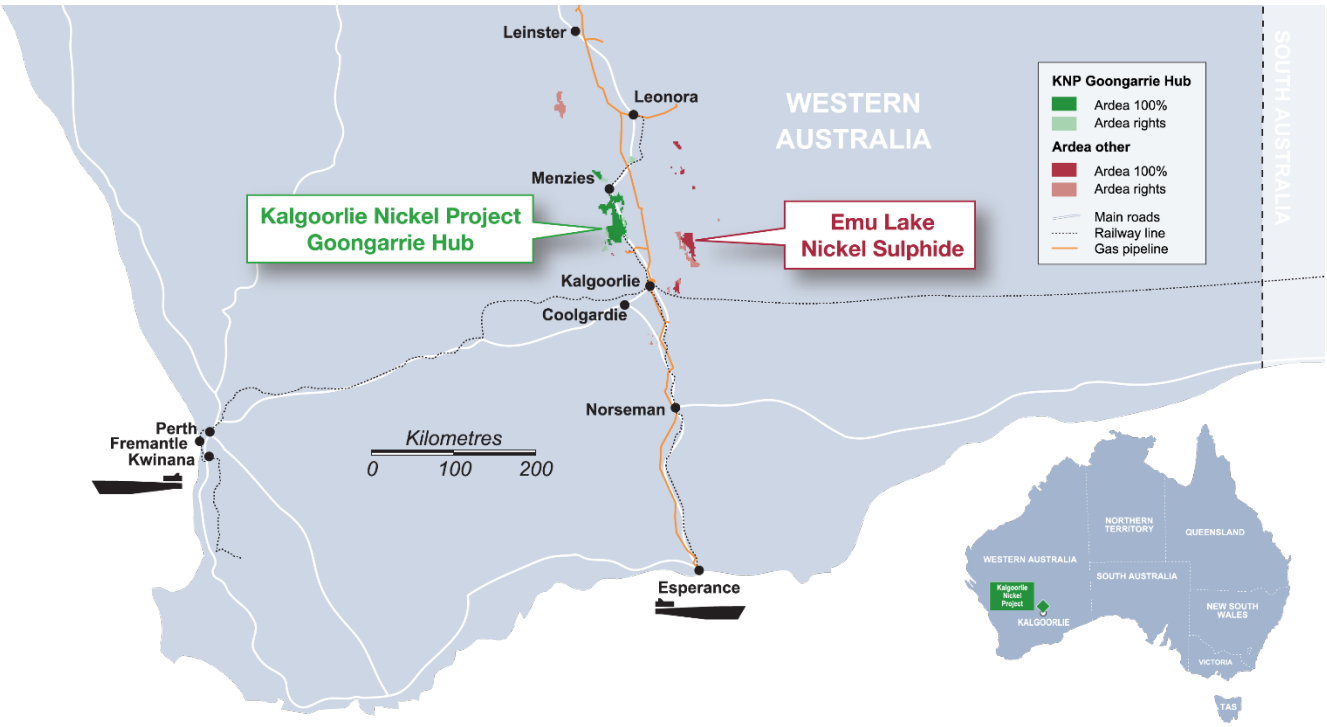
About Ardea Resources

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

- Development of the Kalgoorlie Nickel Project (**KNP**) and its sub-set the Goongarrie Hub, a globally significant series of nickel-cobalt and Critical Mineral deposits which host the largest nickel-cobalt resource in the developed world at **854Mt at 0.71% Ni and 0.045% Co for 6.1Mt of contained nickel and 386kt of contained cobalt** (Ardea ASX release 30 June 2023), located in a jurisdiction with exemplary Environmental Social and Governance (**ESG**) credentials, notably environment.
- Advanced-stage exploration at compelling nickel sulphide targets, such as Kalpini, and Critical Minerals targets including scandium and Rare Earth Elements throughout the KNP Eastern Goldfields world-class nickel-gold province, with all exploration targets aimed at complementing the KNP nickel development strategy.



Ardea's KNP development with its 6.1 million tonnes of contained nickel is the foundation of the Company, with the nickel sulphide exploration, such as Kalpini, as an evolving contribution to Ardea's building of a forward-facing integrated nickel company.

Electric Vehicle and Energy Storage System lithium-ion battery customers demand an ESG-compliant, sustainable, and ethical supply chain for nickel and other inputs. Unlike the wet tropics, where HPAL submarine tailings disposal and rain forest habitat destruction are problematic, the semi-arid, temperate KNP is located in the Great Western Woodlands that is an environment amenable to best practice progressive disposal of tailings in open pit voids. The KNP is located in one of the world's premier mining jurisdictions with unquestionable geopolitical acceptance (WA ranked 2nd in the Fraser Institute Investment Attractiveness index) and none of the land-use and societal conflicts that commonly characterise nickel laterite proposals elsewhere. All KNP Goongarrie Hub production tenure is on granted Mining Leases with Native Title Agreement in place.

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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 Persons statement

The information in this report that relates to nickel sulphide and lithium-related exploration is based on information reviewed or compiled by Ian Buchhorn who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Buchhorn is a full-time employee of Ardea Resources Limited and has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration, and to the activities undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Buchhorn consents to the inclusion in this report of the information in the form and context in which it appears.

Ardea wishes to clarify that its current Kalgoorlie Nickel Project (KNP) Mineral Resource Estimate (MRE) following JORC Code (2012) guidelines is:

Camp	Prospect	Resource Category	Size (Mt)	Ni (%)	Co (%)	Contained Metal Ni (kt)	Contained Metal Co (kt)
KNP TOTAL		Measured	22	0.94	0.079	207	17
		Indicated	361	0.73	0.047	2,622	169
		Inferred	471	0.70	0.043	3,272	200
	GRAND TOTAL	***Combined***	***854***	***0.71***	***0.045***	***6,101***	***386***

Note: 0.5% nickel cutoff grade used to report resources. Minor discrepancies may occur due to rounding of appropriate significant figures.

The Mineral Resource Estimate information shown in this ASX release has been previously released on the ASX platform by Ardea in ASX release 30 June 2023, in accordance with Listing Rule 5.8.

The Company confirms that it is not aware of any new information or data that materially affects the information included in the previous market announcement noted above and that all material assumptions and technical parameters underpinning the Mineral Resource Estimate in the previous market announcement continue to apply and have not materially changed.

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APPENDIX 1 – COLLAR LOCATION DATA

EIS drill hole by Ardea Resources at Highway.

Hole_ID	Type	Depth (m)	Tenement	Grid	Easting (mE)	Northing (mN)	RL (mASL)	Dip (°)	Azi (°)
AHID0024	DD	499.1	M29/00214	MGA94_51	313850.42	6698048.86	405.88	-55	90

Previous drill hole by Ardea Resources at Highway.

Hole_ID	Type	Depth (m)	Tenement	Grid	Easting (mE)	Northing (mN)	RL (mASL)	Dip (°)	Azi (°)
AHID0015	DD	54.2	M29/00214	MGA94_51	313310	6700484	405.00	-90	0

APPENDIX 2 – ASSAY RESULTS FROM HIGHWAY DRILLING

Assays from recent EIS drilling at Highway.

Abbreviations used: S – sulphur, Ni – nickel, Be – beryl, Ca – calcium, K – potassium, Na – sodium, Ta – tantalum, Sn – tin, Li – lithium, Cs – cesium, Rb – rubidium, Tl - thallium, m – metre, % – percent, ppm – parts per million.

A stoichiometric conversion factor of 2.1527 is used to convert from Li element to Li2O (lithium oxide).

Hole ID	From (m)	To (m)	Sample ID	S (%)	Ni (%)	Be (ppm)	Ca (ppm)	K (ppm)	Na (ppm)	Ta (ppm)	Sn (ppm)	Li (%)	Li (ppm)	Cs (ppm)	Rb (ppm)	Tl (ppm)
AHID0024	338	340	AR050466	0.10	0.23	-0.1	2900	100	500	-0.1	-1	0.00	2	0.3	1.2	-0.1
AHID0024	340	342	AR050467	0.23	0.23	0.1	3400	-100	400	-0.1	-1	0.00	2	0.3	1.2	-0.1
AHID0024	342	344	AR050469	0.30	0.25	-0.1	400	-100	400	-0.1	-1	0.00	1.5	0.3	0.6	-0.1
AHID0024	344	346	AR050470	0.18	0.22	-0.1	2400	-100	400	-0.1	-1	0.00	1	0.2	0.2	-0.1
AHID0024	346	348	AR050471	0.12	0.24	-0.1	500	-100	200	-0.1	-1	0.00	1	0.3	0.2	-0.1
AHID0024	348	350	AR050472	0.15	0.23	0.1	1200	-100	300	-0.1	-1	0.00	1	0.3	0.2	-0.1
AHID0024	350	352	AR050473	0.24	0.23	0.2	1000	-100	300	-0.1	-1	0.00	1.5	0.3	0.2	-0.1
AHID0024	352	353.3	AR050474	0.23	0.20	0.4	8200	-100	400	-0.1	-1	0.00	21.5	5.6	1.2	0.4
AHID0024	353.3	354.1	AR050475	0.07	0.08	1.2	25900	3300	29100	0.2	-1	0.10	452	24	71.4	0.9
AHID0024	354.1	355.7	AR050476	0.03	0.18	0.6	2800	500	2600	0.1	-1	0.15	686	38.7	34.2	0.9
AHID0024	355.7	357	AR050477	0.01	0.00	3.6	5700	2800	76800	0.3	3	0.04	174	154	182	2.5
AHID0024	357	359	AR050479	0.01	0.00	5.4	7000	3000	75100	0.3	5	0.03	129	118	164	2.2
AHID0024	359	361	AR050480	0.02	0.00	4.3	7000	2600	76200	0.3	5	0.02	75.5	164	177	2.5
AHID0024	361	362	AR050481	0.02	0.00	3.8	4900	4600	76000	0.3	5	0.03	148	383	376	5.2
AHID0024	362	363	AR050482	0.01	0.00	4.1	4400	4500	74600	0.3	4	0.04	185	395	383	5.3
AHID0024	363	365	AR050483	0.02	0.00	4.7	5900	2800	76400	0.3	5	0.02	106	164	203	2.9
AHID0024	365	367	AR050484	0.02	0.00	4.3	5800	2400	78200	0.4	4	0.02	70.5	102	138	1.9
AHID0024	367	368	AR050485	0.01	0.00	4.9	5800	1900	78400	0.5	3	0.01	64.5	67.7	104	1.4
AHID0024	368	368.75	AR050486	0.01	0.00	4.6	5700	2100	79700	0.3	4	0.02	76.5	63	111	1.5
AHID0024	368.75	369.15	AR050487	0.01	0.02	7.3	2100	19800	55600	0.2	2	0.17	779	1370	1660	20.6
AHID0024	369.15	369.6	AR050489	0.01	0.09	14.6	1600	73600	2400	0.3	3	0.49	2290	5190	6500	80.9
AHID0024	369.6	371	AR050490	0.02	0.09	3.9	25600	2000	38400	0.2	2	0.05	212	56.2	105	1.9
AHID0024	371	372.9	AR050491	0.01	0.21	0.8	5400	200	1100	-0.1	-1	0.01	32	7.4	16.6	0.6
AHID0024	372.9	375	AR050492	0.14	0.25	0.6	700	-100	800	-0.1	-1	0.01	34.5	3.1	2.6	0.5
AHID0024	375	377	AR050493	0.18	0.25	0.3	6400	100	900	-0.1	-1	0.00	18.5	3.4	4.2	0.4
AHID0024	377	378	AR050494	0.05	0.15	0.2	42400	-100	1500	-0.1	-1	0.01	52.5	4	2.4	0.1

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ASSAY RESULTS (continued)

Hole ID	From (m)	To (m)	Sample ID	S (%)	Ni (%)	Be (ppm)	Ca (ppm)	K (ppm)	Na (ppm)	Ta (ppm)	Sn (ppm)	Li (%)	Li (ppm)	Cs (ppm)	Rb (ppm)	Tl (ppm)
AHID0024	378	379	AR050495	0.11	0.18	0.3	18600	-100	1200	-0.1	-1	0.00	22	2.1	1.4	0.1
AHID0024	379	381	AR050496	0.18	0.24	0.1	6100	-100	900	-0.1	-1	0.00	11	1.1	1.2	0.2
AHID0024	381	383	AR050497	0.25	0.27	0.1	2300	-100	800	-0.1	-1	0.00	1.5	0.6	1	0.1
AHID0024	383	385	AR050499	0.31	0.25	0.3	1300	500	800	-0.1	-1	0.01	43	36.4	39.2	0.7
AHID0024	385	387	AR050500	0.22	0.27	0.2	1700	-100	300	-0.1	-1	0.00	2.5	1	2.2	-0.1
AHID0024	387	389	AR050501	0.23	0.27	0.1	2000	-100	400	-0.1	-1	0.00	1.5	1	1.2	-0.1
AHID0024	389	389.75	AR050502	0.76	0.25	0.4	15200	-100	1000	-0.1	-1	0.00	16	2.3	1.6	0.8
AHID0024	389.75	390.55	AR050503	0.03	0.07	2.1	24800	28000	7500	0.2	-1	0.13	594	1530	2140	29.6
AHID0024	390.55	390.85	AR050504	0.04	0.01	2.5	6900	6200	68500	0.3	1	0.02	107	298	449	6.9
AHID0024	390.85	391.8	AR050505	0.02	0.03	2.7	2000	63600	11600	0.2	1	0.15	713	3000	4830	67.4
AHID0024	391.8	393.6	AR050506	0.08	0.01	2.5	9800	7800	46300	0.3	-1	0.03	118	205	346	4.7
AHID0024	393.6	395	AR050507	0.26	0.26	0.4	7700	300	1500	-0.1	-1	0.00	13	11.7	17.4	0.9
AHID0024	395	397	AR050509	0.20	0.22	0.2	25900	100	3000	-0.1	-1	0.00	17	2.9	3.2	0.2
AHID0024	397	399	AR050510	0.28	0.27	0.5	4900	-100	1000	-0.1	-1	0.00	11	2.3	1.8	0.8
AHID0024	399	399.6	AR050511	0.05	0.22	0.5	16400	-100	600	-0.1	-1	0.01	43	4	2	0.2
AHID0024	399.6	401	AR050512	0.03	0.01	7.5	9000	3400	66100	0.3	-1	0.06	284	145	184	2.4
AHID0024	401	403	AR050513	0.02	0.00	7.5	7300	3700	71200	0.3	-1	0.05	217	93.1	159	1.9
AHID0024	403	405	AR050514	0.02	0.00	4.7	5000	3200	72500	0.2	1	0.03	129	25.4	92.2	0.7
AHID0024	405	406.8	AR050515	0.01	0.00	5	5500	5300	77500	0.1	1	0.05	239	291	333	4.4
AHID0024	406.8	408	AR050516	0.02	0.12	3.1	21000	30900	8700	0.1	2	0.20	945	2880	3150	38.9
AHID0024	408	409.1	AR050517	0.03	0.08	6.2	13800	46500	4400	0.3	4	0.33	1520	3910	4360	56.6
AHID0024	409.1	410.25	AR050519	0.02	0.07	11	2400	73500	2500	0.4	5	0.49	2260	5580	6860	87.9
AHID0024	410.25	412	AR050520	0.03	0.01	10.4	7700	15200	55100	0.2	2	0.14	644	715	1100	13.2
AHID0024	412	413.2	AR050521	0.04	0.00	5.1	6200	12800	59200	0.3	1	0.11	496	634	914	10.7
AHID0024	413.2	415	AR050522	0.03	0.01	3.8	8600	10400	55800	0.3	1	0.10	466	526	635	9.2
AHID0024	415	417	AR050523	0.10	0.01	6	28400	13500	16800	0.4	2	0.28	1300	689	929	12.5
AHID0024	417	419	AR050524	0.09	0.00	5.4	9800	7400	42300	0.4	2	0.27	1270	148	342	3.6
AHID0024	419	421	AR050525	0.06	0.00	7.8	9600	8500	52900	0.4	3	0.29	1360	119	373	3.4
AHID0024	421	423	AR050526	0.02	0.00	8.2	12800	6100	63300	0.4	3	0.28	1320	135	292	2.8
AHID0024	423	425	AR050527	0.05	0.00	25.3	11600	9000	57400	0.6	6	0.22	1030	43.9	314	2.4
AHID0024	425	426	AR050529	0.09	0.00	12.1	5600	13100	49400	0.3	2	0.15	679	59.5	386	2
AHID0024	426	427.25	AR050530	0.16	0.01	7.7	7500	4300	52400	0.3	2	0.08	361	73.2	150	1.3
AHID0024	427.25	428	AR050531	0.07	0.09	4.3	19200	7900	6300	-0.1	2	0.17	771	640	706	9.6
AHID0024	428	429	AR050532	0.04	0.21	4.5	28000	200	2400	-0.1	2	0.03	130	12.7	12.8	2.3
AHID0024	429	430	AR050533	0.04	0.17	8.4	49100	200	1900	-0.1	1	0.08	367	27.7	22	0.8
AHID0024	430	431	AR050534	0.07	0.14	3.8	29900	300	1500	-0.1	-1	0.05	230	26.3	19	1.4
AHID0024	431	433	AR050535	0.24	0.18	1.1	11100	200	1000	-0.1	-1	0.01	39	31.6	15.8	2.4
AHID0024	433	435	AR050536	0.68	0.18	0.8	5100	100	1100	-0.1	-1	0.00	14.5	2.2	2.2	4.2
AHID0024	435	437	AR050537	0.36	0.21	0.1	1200	-100	500	-0.1	-1	0.00	2.5	0.7	1	0.2
AHID0024	437	439	AR050539	0.29	0.23	0.2	700	-100	500	-0.1	-1	0.00	1.5	0.4	0.6	0.1
AHID0024	439	441	AR050540	0.21	0.20	0.2	4900	-100	1000	-0.1	-1	0.00	1	0.4	0.4	0.1
AHID0024	441	442	AR050541	0.22	0.26	0.3	400	-100	400	-0.1	-1	0.00	1.5	0.7	1	0.1
AHID0024	442	442.5	AR050542	0.38	0.37	0.1	800	-100	500	-0.1	-1	0.00	1	0.5	0.6	0.2
AHID0024	442.5	443	AR050543	0.47	0.33	0.1	1000	-100	500	-0.1	-1	0.00	1.5	0.4	0.4	0.1
AHID0024	443	444	AR050544	0.33	0.24	0.2	1800	-100	600	-0.1	-1	0.00	1.5	0.4	0.4	-0.1
AHID0024	444	445	AR050545	0.35	0.24	0.2	4800	-100	800	-0.1	-1	0.00	1.5	0.4	0.4	-0.1
AHID0024	445	447	AR050546	0.23	0.26	0.2	1300	-100	400	-0.1	-1	0.00	1.5	0.3	0.4	-0.1
AHID0024	447	449	AR050547	0.23	0.26	0.2	1100	-100	400	-0.1	-1	0.00	1.5	0.3	0.4	-0.1
AHID0024	449	451	AR050549	0.28	0.26	0.2	900	200	600	-0.1	-1	0.00	2	0.5	1.2	-0.1
AHID0024	451	453	AR050550	0.28	0.24	0.2	1900	-100	700	-0.1	-1	0.00	1.5	0.3	0.4	-0.1
AHID0024	453	455	AR050551	0.27	0.26	0.3	400	-100	500	-0.1	-1	0.00	1.5	0.3	0.4	-0.1
AHID0024	473	475	AR050552	0.10	0.27	0.3	800	-100	400	-0.1	-1	0.00	1.5	0.3	0.4	-0.1
AHID0024	475	477	AR050553	0.10	0.25	0.3	1700	-100	500	-0.1	-1	0.00	1.5	0.3	0.4	-0.1
AHID0024	477	479	AR050554	0.10	0.26	0.3	2100	-100	500	-0.1	-1	0.00	1.5	0.3	0.2	-0.1
AHID0024	479	481	AR050555	0.09	0.26	0.4	2000	-100	500	-0.1	-1	0.00	1.5	0.4	0.2	-0.1
AHID0024	481	483	AR050556	0.08	0.26	0.3	2100	-100	500	-0.1	-1	0.00	2	0.3	0.4	-0.1
AHID0024	483	485	AR050557	0.09	0.26	0.3	1600	-100	500	-0.1	-1	0.00	2	0.3	0.2	-0.1
AHID0024	485	487	AR050559	0.07	0.26	0.3	1400	-100	500	-0.1	-1	0.00	2	0.4	0.4	-0.1
AHID0024	487	489	AR050560	0.06	0.26	0.3	1600	-100	400	-0.1	-1	0.00	2	0.3	0.2	-0.1
AHID0024	489	491	AR050561	0.06	0.25	0.2	1500	-100	500	-0.1	-1	0.00	2	0.3	0.2	-0.1
AHID0024	491	493	AR050562	0.05	0.26	0.2	2000	-100	400	-0.1	-1	0.00	2	0.4	0.4	-0.1
AHID0024	493	495	AR050563	0.07	0.26	0.2	1500	-100	400	-0.1	-1	0.00	1.5	0.4	0.4	-0.1
AHID0024	495	497	AR050564	0.07	0.26	0.2	900	-100	300	-0.1	-1	0.00	1.5	0.3	0.2	-0.1
AHID0024	497	499.1	AR050565	0.41	0.24	0.2	18500	-100	800	-0.1	-1	0.00	1.5	0.5	0.4	0.2

ASSAY RESULTS (continued)

Assay data (reviewed) from previous drilling at Highway.

Abbreviations used: S – sulphur, Ni – nickel, Be – beryl, Ca – calcium, K – potassium, Na – sodium, Ta – tantalum, Sn – tin, Li – lithium, Cs – cesium, Rb – rubidium, Tl - thallium, m – metre, % – percent, ppm – parts per million.

A stoichiometric conversion factor of 2.1527 is used to convert from Li element to Li2O (lithium oxide).

Hole ID	From (m)	To (m)	Sample ID	S (%)	Ni (%)	Be (ppm)	Ca (ppm)	K (ppm)	Na (ppm)	Ta (ppm)	Sn (ppm)	Li (%)	Li (ppm)	Cs (ppm)	Rb (ppm)	Tl (ppm)
AHID0015	0	2	AR043916	0.07	0.05	3.4	94100	1560	5590	29.5	4.8	0.01	35.0		13	-0.2
AHID0015	2	4	AR043917	0.05	0.11	6.4	42000	1420	7880	58.7	15.6	0.01	50.0		9	-0.2
AHID0015	4	6	AR043918	0.07	0.14	9.2	4100	910	7320	117.0	23.4	0.02	70.0		5	-0.2
AHID0015	6	8	AR043919	0.10	0.12	13.6	400	760	6950	135.0	27.2	0.02	80.0		5	-0.2
AHID0015	8	10	AR043920	0.23	0.11	23.4	500	560	2830	652.0	144.0	0.00	17.0		3	0.8
AHID0015	10	12	AR043921	0.18	0.10	42.6	300	190	3510	1240.0	316.0	0.01	29.0		3	0.6
AHID0015	12	14	AR043922	0.13	0.10	27.0	200	290	3810	388.0	91.8	0.02	80.0		12	0.6
AHID0015	14	16	AR043923	0.03	0.14	7.2	200	110	1860	4.9	2.0	0.00	2.0		17	2.0
AHID0015	16	18	AR043926	0.04	0.28	65.4	200	770	6340	820.0	25.4	0.06	264.0		79	1.4
AHID0015	18	20	AR043927	0.06	0.45	49.4	600	2660	21700	1290.0	55.6	0.34	1570.0		666	3.4
AHID0015	20	22	AR043928	0.05	0.34	12.6	100	940	5630	45.1	44.8	0.06	297.0		269	1.0
AHID0015	22	24	AR043929	0.04	0.52	127.0	500	3000	15900	1440.0	59.8	0.64	2980.0		1050	8.2
AHID0015	24	26	AR043930	0.04	0.30	193.0	600	7190	25000	1570.0	98.6	0.42	1930.0		3220	21.2
AHID0015	26	28	AR043931	0.03	0.31	180.0	400	2140	17800	1250.0	120.0	0.32	1490.0		640	5.4
AHID0015	28	30	AR043932	0.03	0.21	191.0	500	1130	22800	1520.0	105.0	0.44	2060.0		90	1.0
AHID0015	30	32	AR043933	0.02	0.39	25.6	100	31400	4400	233.0	59.6	0.68	3140.0		14300	96.0
AHID0015	32	34	AR043936	0.06	0.77	11.0	100	350	6800	38.0	8.0	0.01	37.0		44	2.6
AHID0015	34	36	AR043937	0.03	0.40	11.4	200	420	3240	45.0	7.2	0.02	95.0		112	3.4
AHID0015	36	38	AR043938	0.03	0.40	4.6	100	190	3110	1.9	1.2	0.00	10.0		11	1.8
AHID0015	38	40	AR043939	0.06	0.99	15.4	100	290	4390	4.0	4.6	0.01	49.0		16	1.8
AHID0015	40	42	AR043940	0.04	0.34	3.8	200	180	3820	0.4	1.4	0.00	7.0		8	1.4
AHID0015	42	44	AR043941	0.03	0.31	3.0	600	130	3040	0.6	0.6	0.00	12.0		7	1.4
AHID0015	44	46	AR043942	0.03	0.29	5.6	1200	390	2930	14.2	4.2	0.01	50.0		110	2.0
AHID0015	46	48	AR043943	0.03	0.28	3.2	24000	120	2520	0.3	0.4	0.00	4.0		6	1.2
AHID0015	48	50	AR043946	0.02	0.21	2.8	14900	110	1680	0.2	0.2	0.00	3.0		5	0.6
AHID0015	50	52	AR043947	0.01	0.23	2.6	2800	100	1240	0.1	0.4	0.00	2.0		5	1.2
AHID0015	52	54.2	AR043948	0.02	0.23	2.2	1700	110	2190	0.0	0.4	0.00	3.0		5	0.8

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APPENDIX 3 - 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.*	• Rock chip samples were collected based on geological determination • Samples were between 1-5kg in calico bags, were individually labelled and documented • Samples from HQ sized drill core were sampled taking into account geological contacts, with a minimum of 0.1m and a maximum of 2m length • The core samples were sawn in half with one half remaining in the trays and submitted to the GSWA core library as part of the EIS, and the other half taken was sawn as quarter core as the laboratory sample, with remaining quarter core stored in Ardea's facility in Kalgoorlie
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).*	• Diamond core drilling with HQ size to collect sample required • Core is retrieved via standard or triple tube methods
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.*	• Drill sample recovery was recorded from diamond drilling core blocks by Ardea staff. No material issues were reported and apart from some zones of broken ground, recoveries were consistently greater than 90% • No relationship between sample recovery and grade has been yet observed and no sample bias is believed to have occurred
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.*	• Geology of rock chip samples was recorded • The diamond core was geologically logged by qualified geologists and recorded in the Ardea database • Logging is qualitative, recording rock type and mineral abundance • Geological logging data collected to date is sufficiently detailed. At this stage detailed geotechnical logging was not required • Historic drill holes were geologically logged by previous operators and this data is available to Ardea Resources

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Sub-sampling techniques and samplepreparation	• *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-sampling stages to maximise representivity of samples.* • *Measures taken to ensure that the sampling isrepresentative 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.*	• The core samples were sawn in half with one half remaining in the trays and submitted to the GSWA core library as part of the EIS, and the other half taken was sawn as quarter core as the laboratory sample, with remaining quarter core stored in Ardea's facility in Kalgoorlie • Samples were prepared and assayed in industry standard laboratories and significant results reported to JORC (2012) standards • Samples were crushed and ground to nominal 75-micron size • The samples were split into a pulp fraction for analysis and a pulp-reject for storage
Quality of assay dataand 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, readingtimes, 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 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 • Analysis at BV Perth was by Mixed acid digest Full ICP-AES and ICP-MS utilising a 50g charge (ARL02 Suite) to define: Ag, Al, As, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cs, Cu, Dy, Er, Eu, Fe, Ga, Gd, Ge, Hf, Ho, In, K, La, Li, Lu, Mg, Mn, Mo, Na, Nb, Nd, Ni, P, Pb, Pr, Rb, Re, S, Sb, Sc, Se, Sm, Sn, Sr, Ta, Tb, Te, Th, Ti, Tl, Tm, U, V, W, Y, Yb, Zn, Zr • For PGM suite elements (Au, Pt, Pd) 40g lead collection fire assay ICP-MS was used • No geophysical tools were used to determine any element concentrations • BV routinely inserts analytical blanks, standards and duplicates into the client sample batches for laboratory QAQC performance monitoring
Verification of samplingand 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.*	• Data was collected and documented by Ardea geologists in the field • Primary sampling data is collected in a set of standard company templates. The information is managed by Ardea's Database Manager and compiled into the central database • No independent verification of historic results has been undertaken at this stage • Drill holes have not been twinned • No adjustment to assay data was done
Location of data points	• *Accuracy and quality of surveys used to locatedrill 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.*	• Rock chip locations were surveyed using handheld Garmin GPS • The grid used was MGA Zone 51 Datum GDA94 • The drill collars were surveyed by a Differential GPS (+-0.1m accuracy) in GDA94/MGA Zone 51 • Ardea has needed to locate historic holes from DHEM resurvey and in all cases such holes were located within the database positions
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 applied.*	• Data spacing between rock chip samples sites vary, affected by availability of outcrop/subcrop • Data spacing not sufficient to establish geological and grade continuity • Drilling was part of an EIS co-funded scheme to test the stratigraphic rock sequence across the basal contact of the Walter Williams Formation (WWF) and to test for NiS anomalism.

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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.*	• The drilling orientation was designed at an angle (90°) to regional stratigraphy (close to perpendicular angle), with 090 azimuth and -55 dip to east • Down hole gyro survey was completed for the entire hole
Sample security	• *The measures taken to ensure sample security.*	• All samples were collected and accounted for by Ardea employees • All rock chip samples were collected in calico bags, then into plastic bags and closed with cable ties • Diamond core samples dispatched once all cutting and sampling was complete to BV laboratory. Remaining drill core is stored in Ardea's secure facility in Kalgoorlie • The appropriate manifest of sample numbers and a sample submission form containing laboratory instructions were submitted to the laboratory
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Ardea has periodically conducted internal reviews of sampling techniques relating to resultant exploration datasets, and larger scale reviews capturing the data from multiple programmes within the KNP

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*	• The tenement on which the rock chip sampling and mapping was undertaken is Ghost Rocks tenement E29/941. The tenement in which diamond drilling was completed at Highway is M29/214. Ardea or its' subsidiaries are the sole holder of the tenements. The tenements are in good standing. • The tenements are located in Ardea's Kalgoorlie Nickel Project: Ghost Rocks and Highway projects
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• No known LCT pegmatite exploration has previously been completed by other parties at the Ghost Rocks and Highway projects • Exploration at Goongarrie for nickel-cobalt laterite mineralisation was initially completed by Heron Resources Ltd and subsequently drilled by Vale Inco Limited in a Joint Venture. These parties did not evaluate for LCT pegmatite or nickel sulphide mineralisation
Geology	• *Deposit type, geological setting, and style of mineralisation.*	• The LCT pegmatite model targets pegmatites of interest for lithium-caesium-rubidium-tantalum mineralisation that belong to the rare-element class of pegmatites. Of most interest are the large complex or albite-spodumene pegmatites hosting dominant lithium bearing minerals spodumene, petalite and lepidolite and tantalum bearing minerals • The nickel sulphide model is Archaean komatiite hosted nickel sulphides and related deposits, commonly referred to as Kambalda-style
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*	• The EIS diamond hole referred to in the release is from Highway: AHID0024 (313850E, 6698049N, 406RL, -55 dip, 499.1m depth) • Anomalous Li, Cs, Rb from 368.75m depth in selected intervals shown

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	• *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.*	
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.*	• Primary lithium assay data (Li ppm) has been converted to oxide data (Li_2O) as per industry standard • Drill exploration results are reported using the weighted average of each sample result by its corresponding interval length, as is industry standard practice • Top cuts were not deemed applicable considering the style of mineralisation • 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, true width not known').*	• True width of the reported LCT intermediate to felsic intrusives and pegmatite zones in drill holes has not been attempted during this early stage of reporting
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.*	• Maps, cross-sections, and photos relevant to the LCT pegmatite mineralisation at Highway and Ghost Rocks are shown within the release
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.*	• All relevant results are in the report and is balanced taking into account the early stage of the exploration
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but notlimited 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. All results considered to be significant are reported given the early stage of exploration
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 work at Highway is to continue reconnaissance mapping to better define any prospective intermediate and felsic intrusives. A pulp re-assay program to test for LCT anomalism may be undertaken, selecting drill holes with any logged intermediate-felsic intrusives and any adjacent to intrusives identified during mapping. • At Ghost Rocks further detailed mapping and sampling for LCT pegmatites will continue intermittently during 2024. • Additional collaborative research related to nickel sulphide exploration at Goongarrie between Ardea and CSIRO is ongoing. • All further planned exploration programs are pending the current priority Ni-Co feasibility workstreams for the KNP Goongarrie project, and strategic partner discussions

References		Bradley, D, McCauley, A and Stillings, L 2017. "Mineral deposit model for lithium-cesium-tantalum pegmatites" United States Geological Survey, Reston, VA*, Scientific Investigations Report 2010-5070, 58p*. Duuring, P. 2020. "RARE-ELEMENT PEGMATITES: A MINERAL SYSTEMS ANALYSIS". *RECORD 2020/7*, Geological Survey of Western Australia. Locmelis, M., Fiorentini, M. L., Barnes, S. J., Hanski, E. J., and Kobussen, A. F., 2018, Ruthenium in chromite as indicator for magmatic sulfide liquid equilibration in mafic-ultramafic systems: Ore Geology Reviews, v. 97, p. 152-170. Selway, J, Breaks, F. 2004. "A Review of Rare-Element (Li-Cs-Ta) Pegmatite Exploration Techniques for the Superior Province, Canada, and Large Worldwide Tantalum Deposits". *Exploration and Mining Geology, Vol. 14, Nos. 1-4, pp. 1-30*.

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