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Heron Resources Limited

ASX/TSX Release

6 January 2017

Ardea Resources Limited

KNP Cobalt Zone – Australia's Premier Cobalt Resource

Heron Resources Limited (**Heron** or **Company**) is pleased to advise that its wholly owned subsidiary, Ardea Resources Limited (**Ardea**), has completed an independent Resource Statement for the cobalt-rich portions of the Kalgoorlie Nickel Project (**KNP**). The **KNP Cobalt Zone** is a key element of Ardea's IPO and listing on ASX, planned for February 2017.

The new estimate for the KNP Cobalt Zone is **49.7Mt at 0.12% cobalt and 0.86% nickel**, occurring within three separate KNP centres (Table 1). The global cobalt resource for the full KNP remains unchanged at **805Mt at 0.05% cobalt** using a 0.5% Ni cut-off grade.

Ardea completed a review of the KNP in late 2016, concluding that the KNP as a whole comprises **Australia's and the developed world's largest cobalt resource**[1].

The KNP Cobalt Zone is located 50-150km north and northeast of Kalgoorlie in Western Australia (Figures 1 & 2), a favoured investment jurisdiction with excellent infrastructure that can facilitate **ethical cobalt production** for green energy.

Vale Inco[2] completed a $34.5 million Pre-Feasibility Study (PFS) on the KNP in 2009 concluding that it is "**one of the most prospective nickel laterite tenement packages in the world**" and "**the KNP tenements form one of the largest potential nickel laterite deposits in the world**".

Independent firm Ridley Mineral Resource Consulting Pty Limited (**RMRC**) has reported the following Mineral Resources within the five cobalt-rich prospect areas based on identified zones of continuous elevated cobalt mineralisation using a 0.08 % Co cut-off in these areas:

Table 1 – KNP Cobalt Zone – Resource Statement from RMRC

Area	Prospect	Resource category	Cutoff (% Co)	Size (Mt)	Co (%)	Ni %	MgO* %	FeO* %	Al_2O_3* %	SiO_2* %	CaO* %	Mn* %	Cr* %
Goongarrie	Goongarrie South	Measured	0.08	3.4	0.14	1.19	1.6	47	6.3	17	0.16	1.02	1.27
		Indicated	0.08	11.2	0.11	0.92	1.8	43	6.2	23	0.78	0.71	1.20
		Inferred	0.08	1.4	0.11	0.76	1.8	39	5.9	30	0.32	0.74	1.20
	Big Four	Indicated	0.08	4.5	0.11	0.89	1.6	40	5.3	32	0.68	0.76	1.07
		Inferred	0.08	0.2	0.11	0.95	1.6	38	4.2	36	0.25	0.73	1.09
	Scotia Dam	Inferred	0.08	2.9	0.14	0.88	3.2	34	4.4				
	Goongarrie subtotal			*23.6*	*0.12*	*0.94*							
Siberia	Black Range	Inferred	0.50(Ni)	20.1	0.10	0.75	7.9	28	6.7				
Yerilla	Aubils	Inferred	0.08	6.0	0.15	0.90	6.4	33	4.7	31	4.57	0.91	
KNP TOTAL				**49.7**	**0.12**	**0.86**							

*Estimates for MgO, FeO, Al_2O_3, SiO_2, CaO, Mn and Cr are provided for reference only and do not constitute Mineral Resources
Goongarrie South, Big Four and Scotia Dam are effectively a contiguous mineralized belt

RMRC has prepared the 2017 updated Resource Statement using modified reporting criteria for cobalt abundances in existing resource models that were previously prepared by Snowden Mining Industry Consultants (Snowden) and Heron.

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[1] *By contained cobalt metal. Source of data: SNL Metals & Mining database (www.snl.com)*
[2] *Vale Inco has not consented to the use of the PFS in this announcement.*

This update describes the current publicly reported Mineral Resources for five prospect areas within the KNP known to contain cobalt-rich mineralisation. Two of the estimates, completed by Snowden in 2004, formed part of Heron's early assessment of the Scotia Dam and Black Range prospect areas.

Estimates for the Goongarrie South and Big Four prospects were completed by Heron in 2009 as part of a KNP PFS update following an initial PFS completed by Vale Inco in 2009. The current estimate for Aubils was by Heron in 2008 as part of feasibility assessment of the Yerilla Nickel Project.

The KNP Cobalt Zone is associated with a distinctive geo-metallurgical type defined as "Clay Upper Pyrolusitic". Mineralogy is goethite, gibbsite and cobaltian pyrolusite (strictly "asbolite" or "cobaltian wad"). Each of the cobalt-rich zones typically occurs as a sub-horizontal body (Figure 4) at a palaeo-water table within the KNP (and developed as a late stage supergene enrichment). This material is particularly well developed at Goongarrie South, which will be the focus area for Ardea's cobalt development studies.

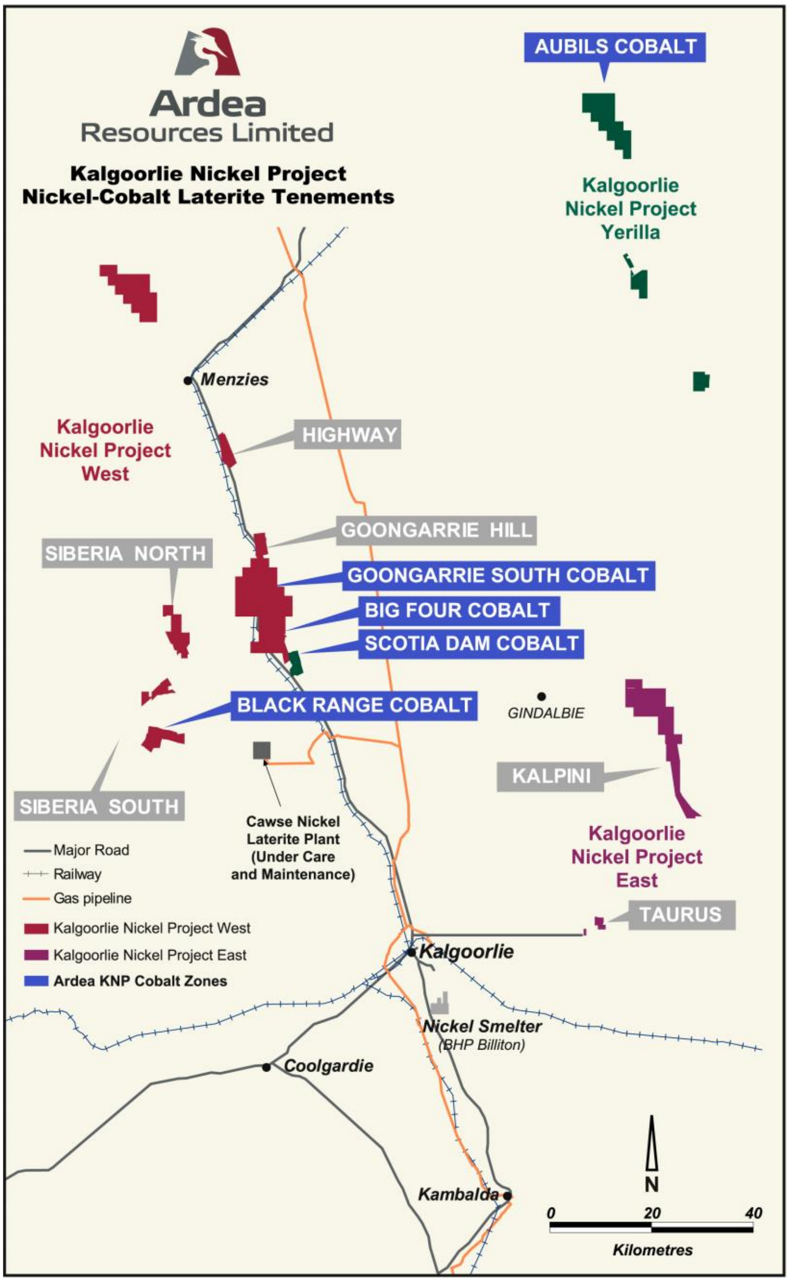

Figure 1 – Ardea Resources Limited, Kalgoorlie Nickel Project showing KNP Cobalt Zones reviewed by RMRC

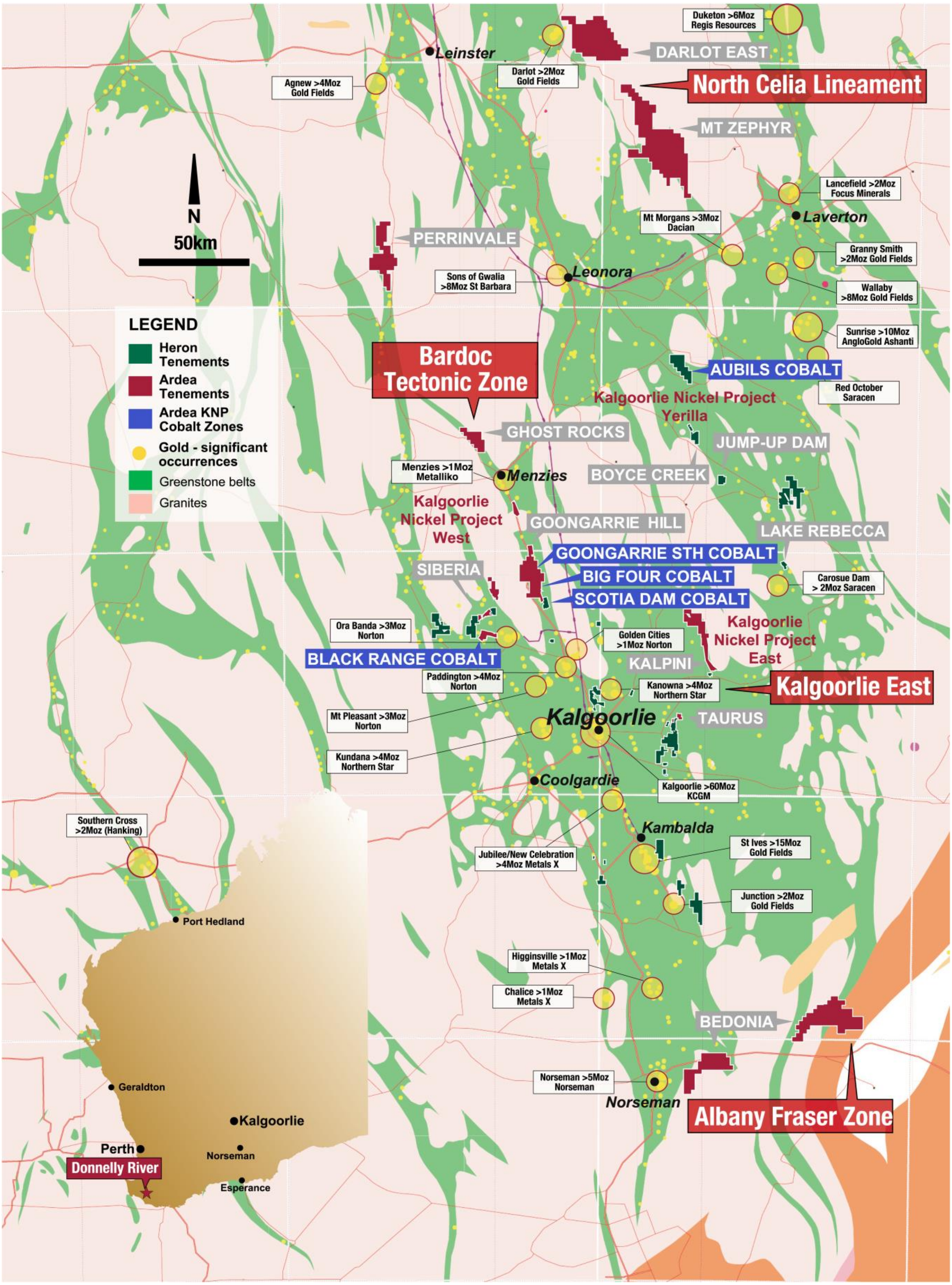

Figure 2 – Ardea Resources Limited, Project Locations showing KNP Cobalt Zones and regional infrastructure

Based on the contained cobalt metal within the deposit, the KNP is Australia's largest cobalt deposit (Table 2, Figure 3). By this measure, it is more than three times larger than Australia's second largest cobalt deposit. The newly-defined cobalt resource from the high-grade KNP Cobalt Zone is a subset within the larger KNP resource, and the subset by itself is Australia's fourth largest cobalt resource. The KNP Cobalt Zone also is amongst the highest cobalt grades in Australia (Tables 2 & 3). In terms of global cobalt resources, the KNP is the premier resource within stable western jurisdictions.

The updated resource reporting for cobalt-rich zones provides a basis for KNP remodelling work planned by Ardea that is focused on cobalt grade shells. Quantifying the cobalt-rich mineralisation at the KNP marks the first part of a refocussing for the KNP onto the cobalt component of the deposit.

Forthcoming drilling and metallurgical studies will move the KNP towards a PFS focussing on cobalt-nickel-manganese feedstocks for the lithium ion battery industry (Lithium Nickel Manganese Cobalt Oxide - $LiNiMnCoO_2$ or NMC).

Table 2 – Ardea Benchmarks, ASX-listed companies ranked by contained cobalt metal

	Company	Size (Mt)	Co (%)	Co metal (kt)	Project	Mineralisation style
1	**Ardea Resources**	**805**	**0.05%**	**386.4**	**Kalgoorlie Nickel Project, WA**	**Laterite Ni-Co**
2	CleanTeq Holdings	109	0.10%	114	Syerston, NSW	Laterite Ni-Co-Sc
3	GME Resources	108	0.06%	65.1	NiWest Project, WA	Laterite Ni-Co
4	**Ardea Resources**	**50**	**0.12%**	**59.6**	**KNP Cobalt Zone, WA**	**Laterite Co-Ni-Mn**
5	Conico Limited	32	0.12%	39.3	Mt Thirsty, WA	Laterite Ni-Co
6	Cobalt Blue Hlding	36	0.08%	30.0	Broken Hill, NSW	Co sulphide
7	Regal Resources	4	0.72%	29.1	Kalongwe, DRC	Cu-Co sulphide
8	Havilah Resources	18	0.10%	17.5	Mutooroo, NSW	Cu-Co sulphide
9	CuDeco Limited	57	0.03%	16.7	Rocklands, Qld	Cu-Au-Co sulphide
10	Mithril Resources	27	0.05%	13.4	Leaky Bore, NT	Cu-Co sulphide
11	Platina Resources	9	0.15%	12.6	Owendale, NSW	Laterite Ni-Co-Sc
12	Independence Gp	14	0.08%	11.4	Nova-Bollinger, WA	Ni-Cu-Co sulphide
13	Augur Resources	16	0.05%	8.2	Homeville, NSW	Laterite Ni-Co
14	Cougar Metals	10	0.07%	7.1	Pyke Hill, WA	Laterite Ni-Co
15	Hammer Metals	6	0.11%	6.5	Millenium, Qld	Cu-Au-Co sulphide

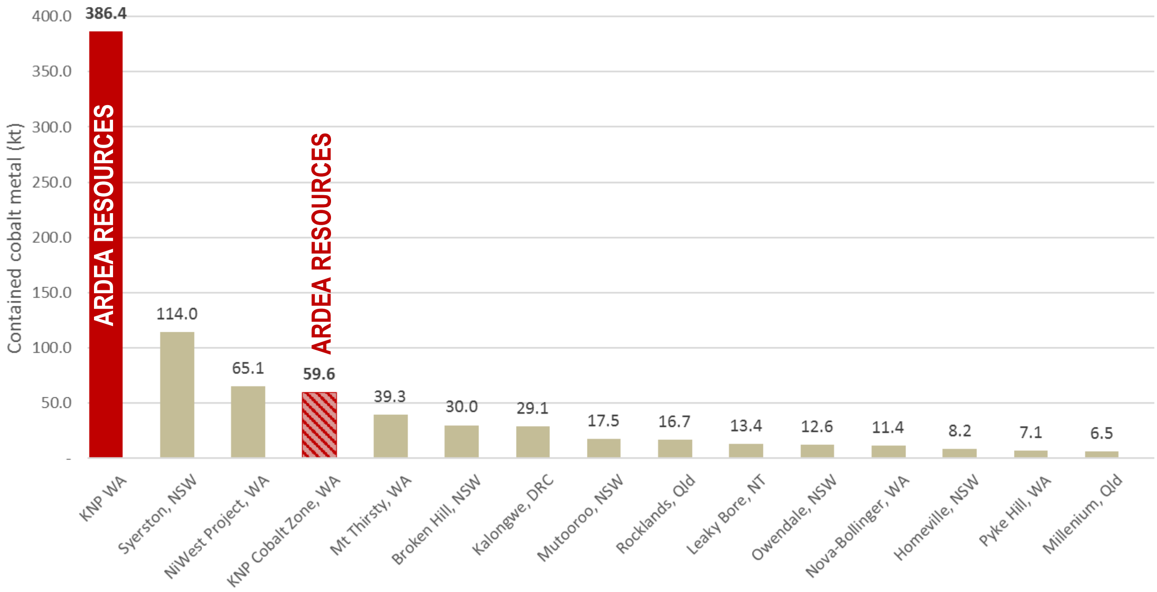

Figure 3 – Ardea Benchmarks, ASX-listed companies ranked by contained cobalt metal

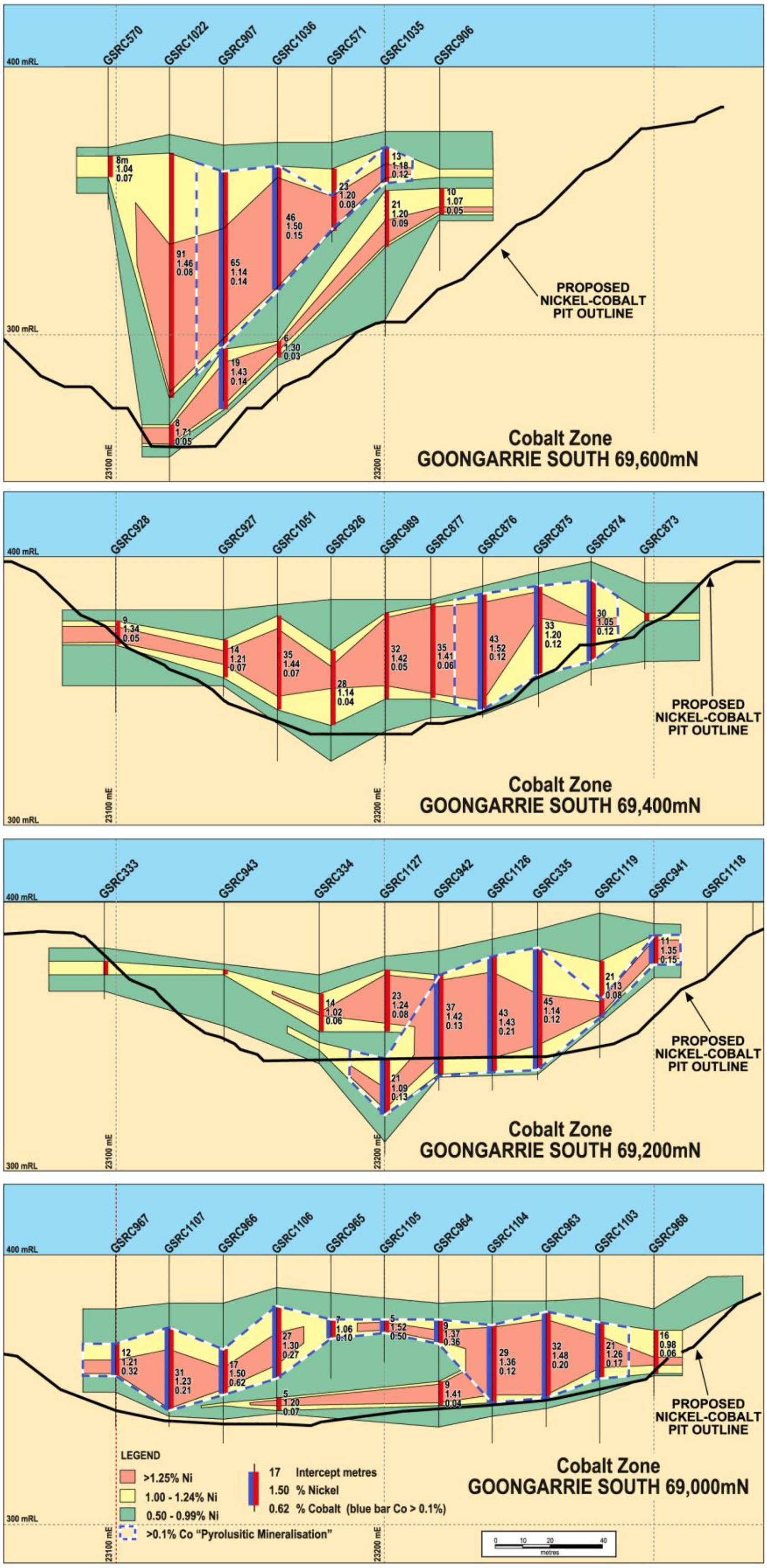

Figure 4 – Ardea Resources Limited, KNP Goongarrie South showing "Pamela Jean Deeps"

Table 3 – Goongarrie South, Scotia and Aubils, Selected High-Grade Drill Intercepts of Pyrolusitic Mineralisation

Hole ID	North (mN)	East (mE)	From (m)	To (m)	Width (m)	Co* (%)	Ni (%)
Goongarrie							
GSRC0002	71600	2080	13	31	18	0.102	1.22
GSRC0036	69200	3120	11	60	49	0.094	1.15
GSRC0043	68400	2790	11	23	**12**	**0.399**	**1.53**
GSRC0049	70800	2560	6	10	4	0.827	0.96
GSRC0063	63606	4166	19	26	**7**	**1.401**	**1.56**
GSRC0160	71199	2401	21	45	24	0.146	1.32
GSRC0197	68798	3040	34	52	**18**	**0.289**	**1.52**
GSRC0204	68004	2801	20	41	21	0.431	1.23
GSRC0259	68239	2721	11	37	26	0.191	1.34
GSRC0276	68478	2640	16	39	**23**	**0.236**	**1.20**
GSRC0309	68719	3043	24	71	**47**	**0.228**	**1.43**
GSRC0317	68879	2960	28	66	**38**	**0.298**	**1.27**
GSRC0319	68878	3123	20	60	40	0.156	1.22
GSRC0330	69040	2718	38	60	22	0.141	1.41
GSRC0335	69038	2718	38	60	22	0.141	1.41
GSRC0346	69119	3119	13	45	32	0.142	1.40
GSRC0354	69280	3038	26	62	36	0.126	1.40
GSRC0363	69360	3121	17	53	36	0.133	1.22
GSRC0420	63757	4322	26	56	30	0.139	1.11
GSRC0562	69440	2320	18	40	**22**	**0.232**	**1.23**
GSRC0577	69520	2480	21	37	**16**	**0.257**	**1.30**
GSRC0672	70637	2855	49	91	**42**	**0.223**	**1.25**
GSRC0724	71440	2454	10	33	**23**	**0.325**	**1.65**
GSRC0870	69356	3236	20	63	43	0.187	1.39
GSRC0898	69680	3140	67	106	**39**	**0.253**	**1.42**
GSRC0907	69600	3140	35	124	89	0.131	1.19
GSRC0924	69440	3220	21	52	**31**	**0.212**	**1.62**
GSRC0966	69000	3140	18	57	**39**	**0.291**	**1.13**
GSRC0970	68960	3140	21	46	**25**	**0.425**	**1.30**
GSRC1022	69600	3120	30	141	111	0.077	1.37
GSRC1025	69640	3120	26	144	118	0.123	1.31
GSRC1032	69680	3160	37	118	81	0.197	1.24
GSRC1040	69520	3160	29	122	93	0.141	1.33
GSRC1100	68960	3160	16	62	**46**	**0.254**	**1.30**
Scotia Dam							
GSRC0068	59203	6010	14	38	**24**	**0.239**	**1.32**
GSRC0076	58800	6169	14	35	**21**	**0.226**	**1.39**
Aubils							
AURC0015	63200	90420	23	34	**11**	**0.320**	**1.04**
AURC0016	63200	90500	38	45	7	0.195	1.14
AURC0037	63200	90880	25	38	13	0.131	1.14

*Grades in excess of 0.2% cobalt highlighted. Detailed reporting covering the above drilling programs and results were released by Heron Resources Limited in its March 1999 to December 2002 Quarterly Reports, which are available on request from Ardea. These drill results were the subject of a JORC 2012-compliant mineral resource released by Heron in October 2013 and provided on pages 85-87 of the Ardea Prospectus dated 9 November 2016.

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COMPLIANCE STATEMENT (JORC 2012 and NI43-101)

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, 27 August 2015, 2015 Heron Annual Report;*
2. *Big Four-Goongarrie on 13 March 2012, 26 June 2012 and 24 July 2012.*

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 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 and verified by Mr Ian Buchhorn who is a Member of the Australasian Institute of Mining and Metallurgy and currently a full-time employee of Heron 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 information in this report that relates to Mineral Resources for the Goongarrie South, Big Four and Aubils Prospects is based on information originally compiled by Mr James Ridley in 2008 and 2009 when employed as a Senior Resource Geologist with Heron Resources Limited. The information in this report that relates to Mineral Resources for the Scotia and Black Range Prospects is based on information originally compiled by Snowden Mining Industry Consultants on behalf of Heron in 2004. The Mineral Resource estimates for all five prospect areas have been reviewed and validated by James Ridley who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Ridley is now a full-time employee of Ridley Mineral Resource Consulting Pty 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'. Mr Ridley 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 exploration and industry benchmarking summaries are based on information reviewed by Mr Ian Buchhorn, who is a Member of the Australian Institute of Mining and Metallurgy. Mr Buchhorn is a full-time employee of Heron 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'. Mr Buchhorn 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 and Canadian 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 Canada, 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.

REPORT and RESOURCE STATEMENT – KALGOORLIE NICKEL PROJECT, COBALT ZONES

Ridley Mineral Resource Consulting Pty Limited

Refer RMRC memo following:

> "Updated Mineral Resource Reporting for Regions of Continuous Cobalt Rich Mineralisation in the Kalgoorlie Nickel Project"

Memorandum

Recipient	Ian Buchhorn	**Recipient company**	Ardea Resources Limited
		Memo date	5/01/2017
Author	James Ridley Director and Principal Geologist – Ridley Mineral Resource Consulting Pty Ltd		
Memo Subject	Updated Mineral Resource Reporting for Regions of Continuous Cobalt Rich Mineralisation in the Kalgoorlie Nickel Project		

Introduction

Ridley Mineral Resource Consulting Pty Ltd (RMRC) has been retained by Ardea Resources Limited (Ardea) to undertake updated Mineral Resource reporting for five prospect areas containing continuous cobalt rich nickel laterite mineralisation in Ardea's Kalgoorlie Nickel Project (KNP) located from 65km to 170km north of Kalgoorlie in Western Australia. The five cobalt rich prospect areas include, Goongarrie South, Big Four, Scotia, Black Range and Aubils which are highlighted in blue in the project location plan displayed in Figure 1.

James Ridley (Ridley), a Director, Principal Geologist and full time employee with RMRC was previously employed as a Senior Resource Geologist with Heron Resources Limited (Heron) from 2004 to 2011 when Heron owned the KNP and has detailed knowledge of the geology, mineralisation, exploration procedures and data, and current resource models for the KNP. Ridley prepared the resource models used by Ardea and Heron for current Mineral Resource Estimate (MRE) reporting for the Goongarrie South (GS), Big Four (BF) and Aubils (AU) prospect areas and is also familiar with the resource models prepared by Snowden Mining Industry Consultants Pty Ltd (Snowden) on behalf of Heron in 2004 which inform current MRE reporting for the Scotia (SC) and Black Range (BR) prospect areas. Ridley has visited all five prospect areas whilst employed by Heron.

Neither RMRC nor Ridley has any vested interest in Heron or their upcoming spinoff Ardea.

KNP Mineralisation Summary

The nickel laterite mineralisation within the KNP areas is developed from the weathering and near surface enrichment of Achaean-aged olivine-cumulate ultramafic units. The mineralisation is usually within 60 metres of surface and can be further sub divided on mineralogical and metallurgical characteristics into upper iron-rich material and lower magnesium-rich material based on the ratios of iron to magnesium. The deposits are analogous to many weathered ultramafic-hosted nickel-cobalt deposits both within Australia and world-wide.

Cobalt rich mineralisation is typically best developed in iron rich material in regions of deep weathering in close proximity to major shear zones or transfer shear structures and to a lesser extent as thin zones along the interface of ferruginous and saprolite boundaries at shallower depths proximal to shear structures.

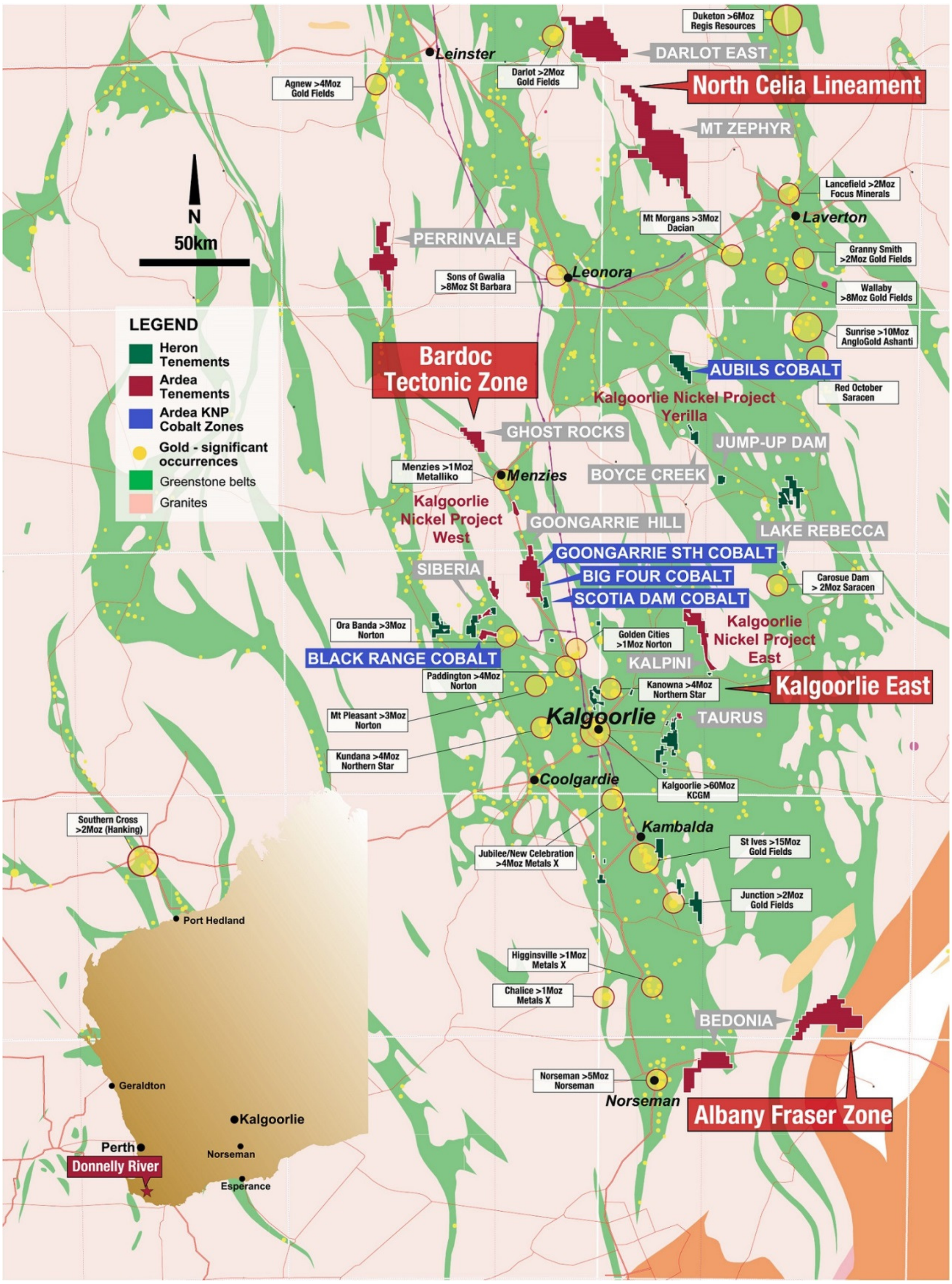


Figure 1: - KNP location plan

Resource Models

The updated MRE reporting is based on resource estimates for the GS, BF, and AU prospects completed in 2008 and 2009 by Heron (Ridley), and estimates for the SC and BR prospects completed by Snowden Mining Industry Consultants Pty Ltd (Snowden) on behalf of Heron in 2004. These resource estimates remain a contributing source to Heron's ongoing Annual Mineral Resource Reporting for the greater KNP through FY 2016, albeit with additional constraints applied and updated reporting documentation produced by Heron in FY13 aligned with updated reporting requirements complying with the implementation of JORC Code 2012. No further drilling or resource modelling work has been undertaken for the KNP subsequent to the resource modelling noted above.

The following resource models (Vulcan software format) were used to inform the updated Mineral Resource reporting for the five cobalt rich prospect areas:

- Goongarrie South (Heron-2009): gsrbm_ikok_trim.bmf
- Big Four (Heron-2009): b4rbm_ikok_trim.bmf
- Aubils (Heron-2008): aubresmod_0608trim.bmf
- Scotia (Snowden-2004): scotia.bmf
- Black Range (Snowden-2004): siberia.bmf

A copy of each model was produced with a '_201612' suffix added to each file name, in which an additional block model variable was added, 'co_res_201612' in which coding relating to cobalt rich mineralisation constraints was assigned.

Resource Modelling

The original resource modelling studies for the five prospect areas considered in this study included the following investigations:

- Review of regional and local geology;
- Review of exploration drilling, survey (topography and collars), geological logging, sampling and geochemical and bulk density analytical methods and procedures;
- Drillhole database review and validation;
- Assessment of available routine laboratory and external QAQC data and verification sampling data (twinning of RC holes with diamond and sonic drillholes);
- Interpretation and 3-D wireframe modelling of base overburden, base of 'ClayUpper' (ferruginous zone) and base of 'Clay Lower' (saprolite zone). The boundary between ferruginous and saprolite domains for Goongarrie South and Big Four was determined by indicator kriging where the weathering profile is more complicated and ferruginous material can underlie saprolite material as the result of paleo-water table fluctuations;
- Interpretation and wireframe modelling of mineralisation envelopes using a nominal 0.25% Ni lower cutoff for the Goongarrie South and Big Four prospects, a 0.4% Ni cutoff for Aubils and a

0.5% Ni cutoff for the Scotia and Black Range prospects. Lower grade intersections were also included where necessary in order to maintain 3-D geological continuity of the envelopes.

- Detailed statistical analysis of Ni, Co, MgO, FeO, Al2O3, CaO, SiO2, Mn, and Cr data for 2 metre composites of the drill sample assay data subdivided by the Ni laterite focused modelling domains (ferruginous and saprolite). CaO, SiO2, Mn and Cr data were not available for the Scotia and Black Range prospects;
- Statistical analysis of relationships between XRD determined mineralogy and multi-element geochemistry for samples from the Jump-Up Dam (JUD) prospect located in the Yerilla sub-project area of the KNP. The resulting geochemical material type classification scheme was subsequently applied to the AU, GS and BF resource models after cross validation against drill sample regolith logging data;
- Statistical analysis of the available bulk density data for the GS and JUD prospects subdivided by the JUD geochemical material type classification scheme. Mean bulk density values determined for GS were applied to the BF prospect and the results for JUD were signed to the AU prospect based on the similar host ultramafic lithologies and mineralisation styles between the paired prospect areas. Estimated average bulk density values were assigned to the earlier resource models for the Scotia and Black Range prospect areas;
- Detailed variography for all grade attributes estimated in each prospect area;
- Resource block models constructed using parent block sizes with dimensions typically half the average drill hole spacing in the mineralised regions of each prospect area. However, block dimensions for BR are not optimal, having been chosen to best represent the drill spacing(s) in the Siberia North and South prospect areas which were incorporated into the same resource model as the BR prospect.
- Ordinary kriging grade estimation mostly based on 2m drillhole composites of all grade attributes with available assay data for each prospect area.
- Original Mineral Resource classification and reporting based on drill hole spacing, nickel grade continuity and/or estimation quality criteria based on assessments of kriging efficiency results.
- Updated Mineral Resource classification based on the original classification and additional constraints based on a pit optimisation work completed by Heron in 2013 for reporting which excluded previously reported resources located outside pit shells produced using optimistic mining, processing and development capital cost criteria.

Assessment of Cobalt Rich Mineralisation

Assessment of the cobalt rich mineralisation in each prospect area has been undertaken using the following approach:

- Generate wireframe grade shells based on the resource block model cobalt grade estimates using a 0.08% Co cutoff grade.
- Visually check the grade shells against the block model grade estimates in plan, section and 3-D.
- Identify grade shell regions containing continuous cobalt rich mineralisation informed by multiple drill hole intersections.

- Use wireframe boolean operations to remove grade shell regions that are poorly informed with drilling or demonstrate poor 3-D continuity. No trimming of the grade shells for the Black Range prospect was conducted as drill spacing was considered too broad (400mE by 100mN) to adequately demonstrate robust zones of higher grade cobalt mineralisation that are more selective than currently Mineral Resource reporting constraints using a 0.5% Ni cutoff.
- Generate wireframe grade shells based on the block model nickel grade estimates using 0.5% Ni and 0.7% Ni cutoff grades and review the relative location and extents of the trimmed cobalt rich grade shells against the two sets of nickel grade shells. These grade shell comparisons clearly demonstrate that most of the cobalt rich mineralisation is associated with higher grade nickel mineralisation.

Plan views of the raw and trimmed cobalt grade shells and drill hole collars for each prospect area are displayed in Figures 2 though 9, while similar views comparing the trimmed cobalt rich grade shells with the nickel grade shells are displayed in Figures 10 through 18.

Updated Resource Reporting for Cobalt Rich Zones

The trimmed block model grade shells based on a 0.08% Co cutoff were used to constrain flagging of the resource block model for each prospect area; co_res_201612 = 1. The block model flagging was then used to constrain the updated Mineral Resource reporting for the cobalt rich mineralisation with no cutoff grade criteria applied. The same resource classification currently used by Ardea and Heron for Mineral Resource reporting for the greater KNP remains unchanged as the informing resource models and grade attributes of economic interest (nickel and cobalt) for the updated reporting remain unchanged.

The Mineral Resource estimates for the KNP have been classified in accordance with the guidelines as set out in the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" (JORC, 2012 Edition). The classification has taken into consideration the quality of the exploration data, geological understanding, grade continuity and drill hole spacing. RMRC has checked the current resource classification criteria and corresponding block model coding for each of the five prospect areas informing the updated resource reporting and determined them to be valid.

The Mineral Resources relating regions of continuous cobalt rich mineralisation identified in this study are summarised in Table 1. These resources predominantly form a subset of the Mineral Resources reported by Heron for the greater KNP and do not supersede nor materially add to the current resources reported by Heron for the greater KNP. The current Mineral Resources reported by Heron using a 0.5% Ni cutoff for the five prospect areas containing cobalt rich resources are summarised in Table 2.

Table 1: - KNP Cobalt rich Mineral Resources

Region	Prospect	Resource Category	Cutoff Co %	Million Tonnes	Co %	Ni %	MgO* %	FeO* %	Al2O3* %	SiO2* %	CaO* %	Mn* %	Cr* %
Goongarrie	Goongarrie South	Measured	0.08	3.4	0.14	1.19	1.6	47	6.3	17	0.16	1.02	1.27
		Indicated	0.08	11.2	0.11	0.92	1.8	43	6.2	23	0.78	0.71	1.20
		Inferred	0.08	1.4	0.11	0.76	1.8	39	5.9	30	0.32	0.74	1.20
	Big Four	Indicated	0.08	4.5	0.11	0.89	1.6	40	5.3	32	0.68	0.76	1.07
		Inferred	0.08	0.2	0.11	0.95	1.6	38	4.2	36	0.25	0.73	1.09
	Scotia	Inferred	0.08	2.9	0.14	0.88	3.2	34	4.4				
	Goongarrie Subtotal			**23.6**	**0.12**	**0.94**							
Siberia	Black Range	Inferred	0.5 % Ni	20.1	0.10	0.75	7.9	28	6.7				
Yerilla	Aubits	Inferred	0.08	6.0	0.15	0.90	6.4	33	4.7	31	4.6	0.91	
	KNP Total			**49.7**	**0.12**	**0.86**							

* Estimates for MgO, FeO, Al2O3, SiO2, CaO, Mn and Cr are provided for reference only and do not constitute Mineral Resources

Table 2: - Current Mineral Resources reported by Heron using a 0.5% Ni cutoff for the KNP prospect areas containing cobalt rich resources

Region	Prospect	Resource Category	Million Tonnes	Ni %	Co %
Goongarrie	Goongarrie South	Measured	5.8	1.08	0.105
		Indicated	54.2	0.79	0.066
		Inferred	34.4	0.63	0.042
	Big Four	Indicated	42.6	0.69	0.052
		Inferred	12.4	0.54	0.054
	Scotia	Inferred	11.2	0.77	0.080
	Goongarrie Sub-total		**160.6**	**0.72**	**0.059**
Siberia	Black Range	Inferred	20.1	0.75	0.103
Yerilla	Aubils	Inferred	49.4	0.7	0.066
	Combined Prospects		**230.1**	**0.72**	**0.064**

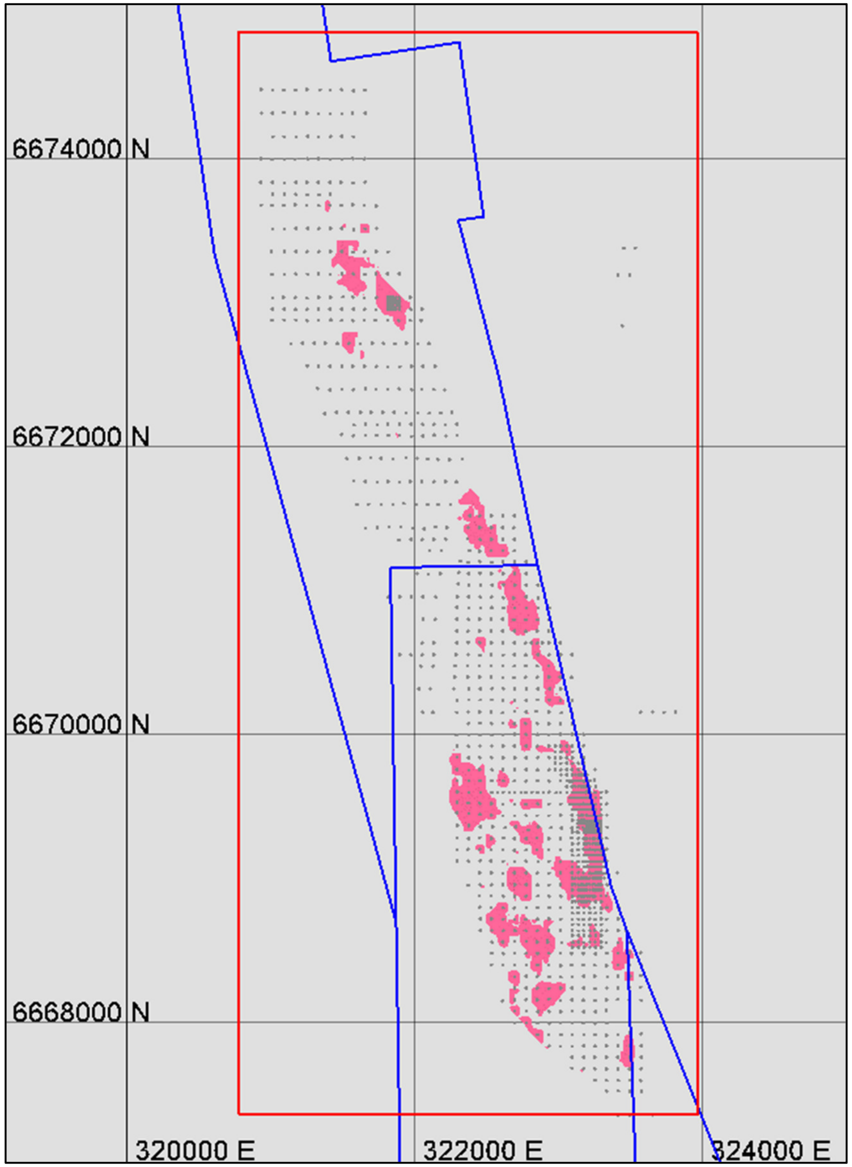


Figure 2: - Goongarrie South - raw block model grade shell based 0.08% Cutoff

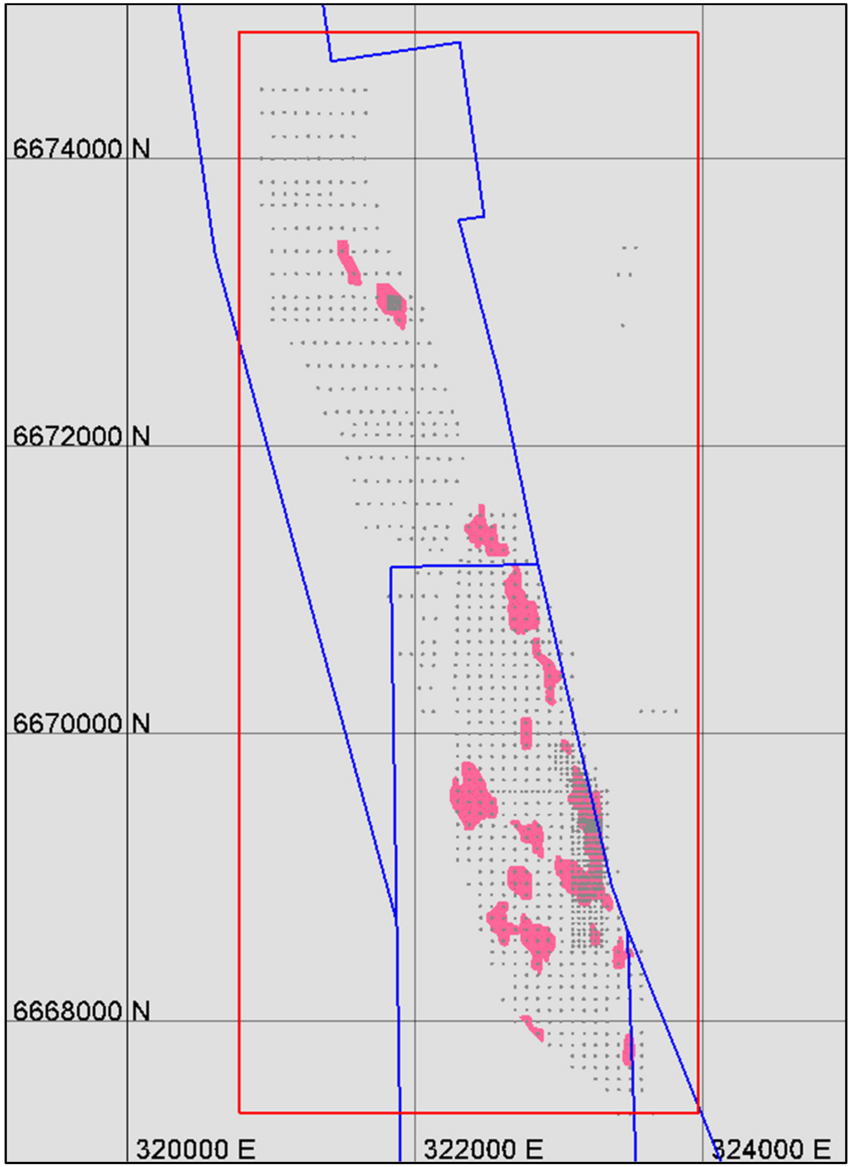


Figure 3: - Goongarrie South - trimmed grade shell based on 0.08% Co cutoff

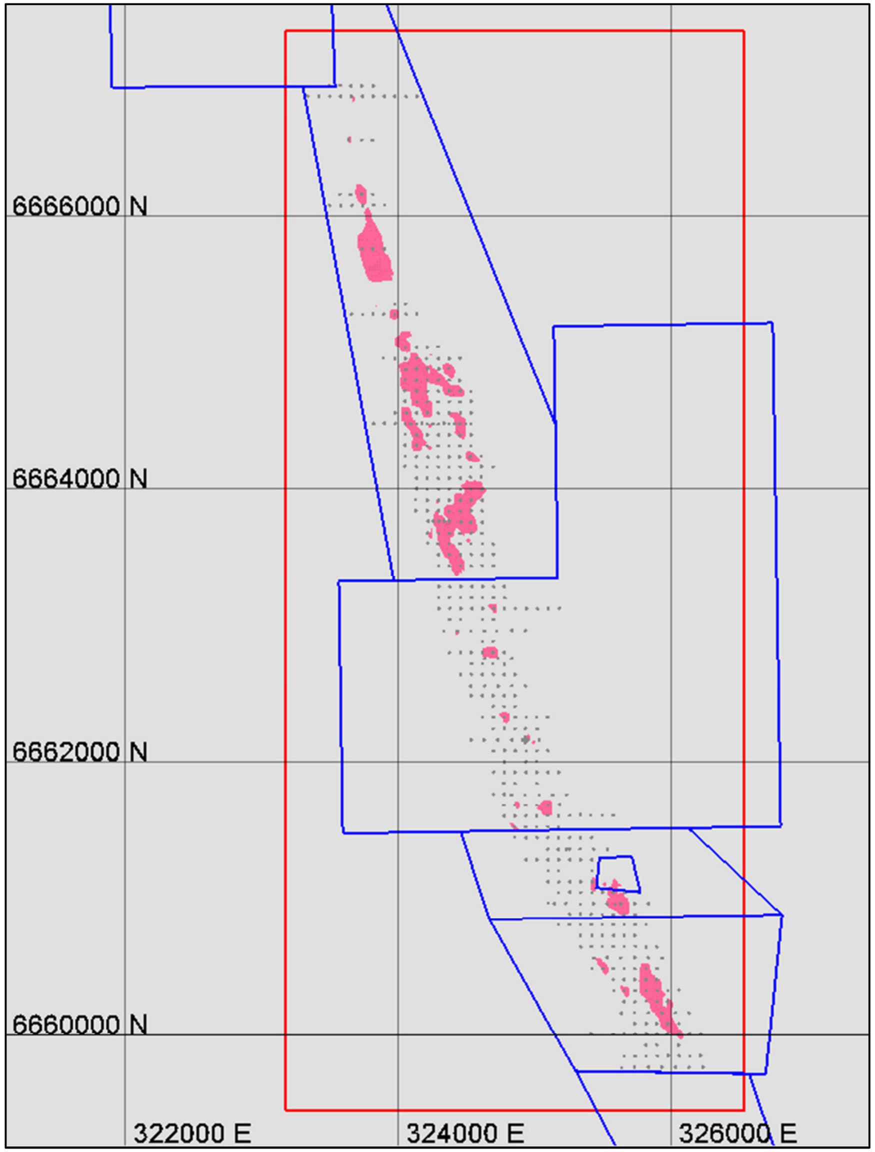


Figure 4: - Big Four - raw block model grade shell based 0.08% Cutoff

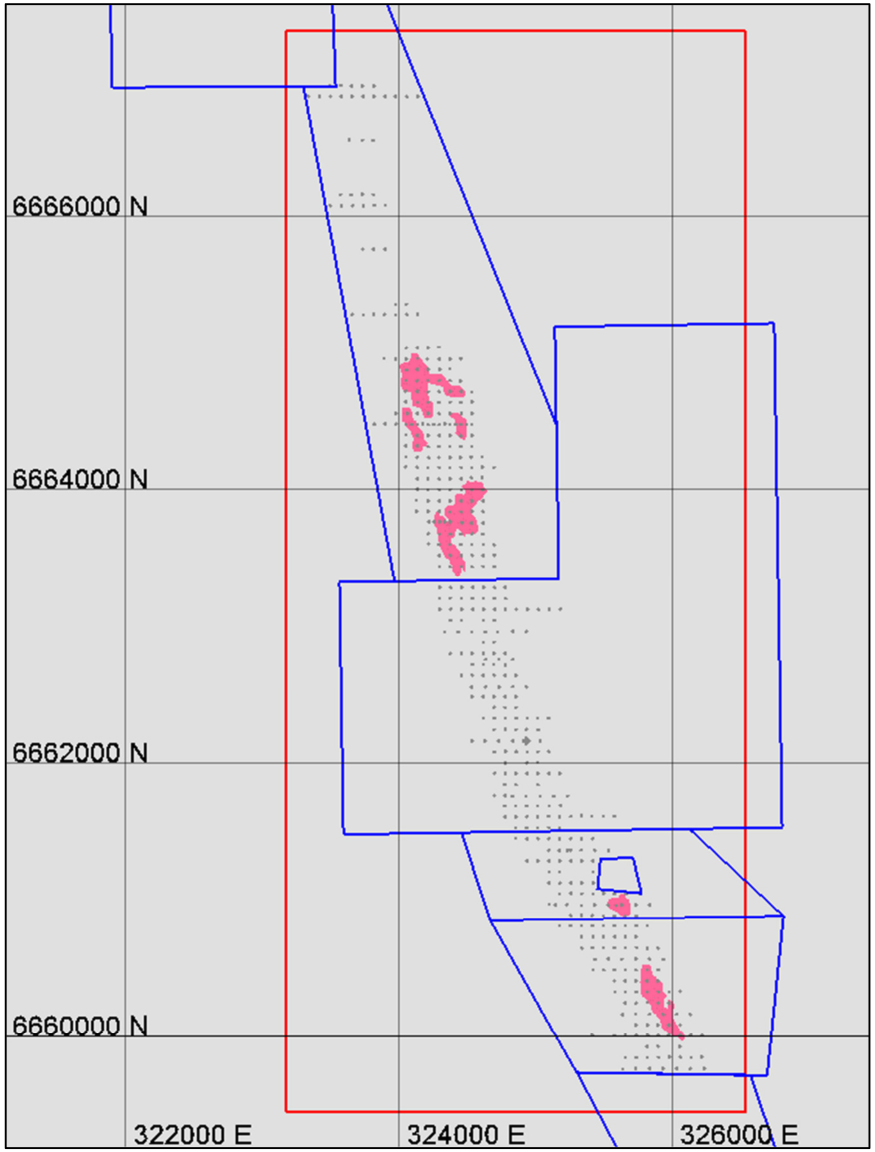


Figure 5: - Big Four - trimmed grade shell based on 0.08% Co cutoff

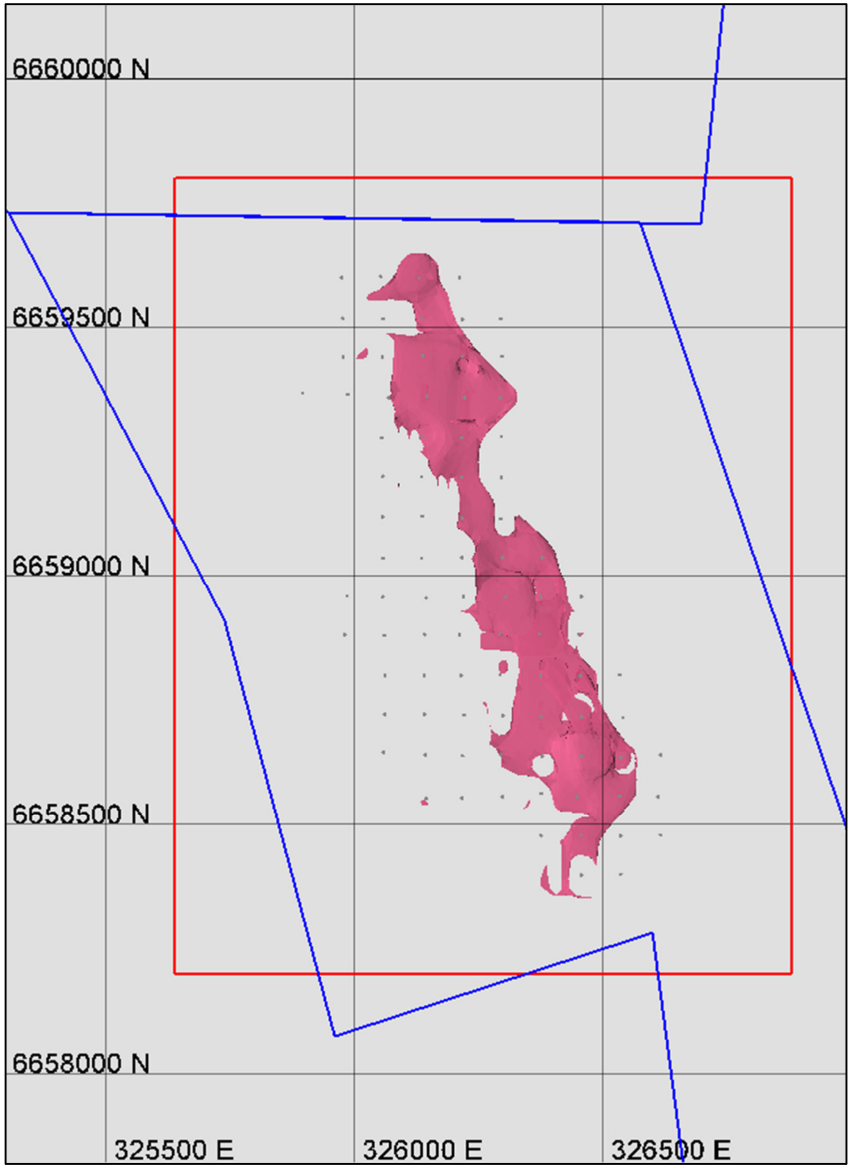


Figure 6: - Scotia - raw block model grade shell based 0.08% Cutoff

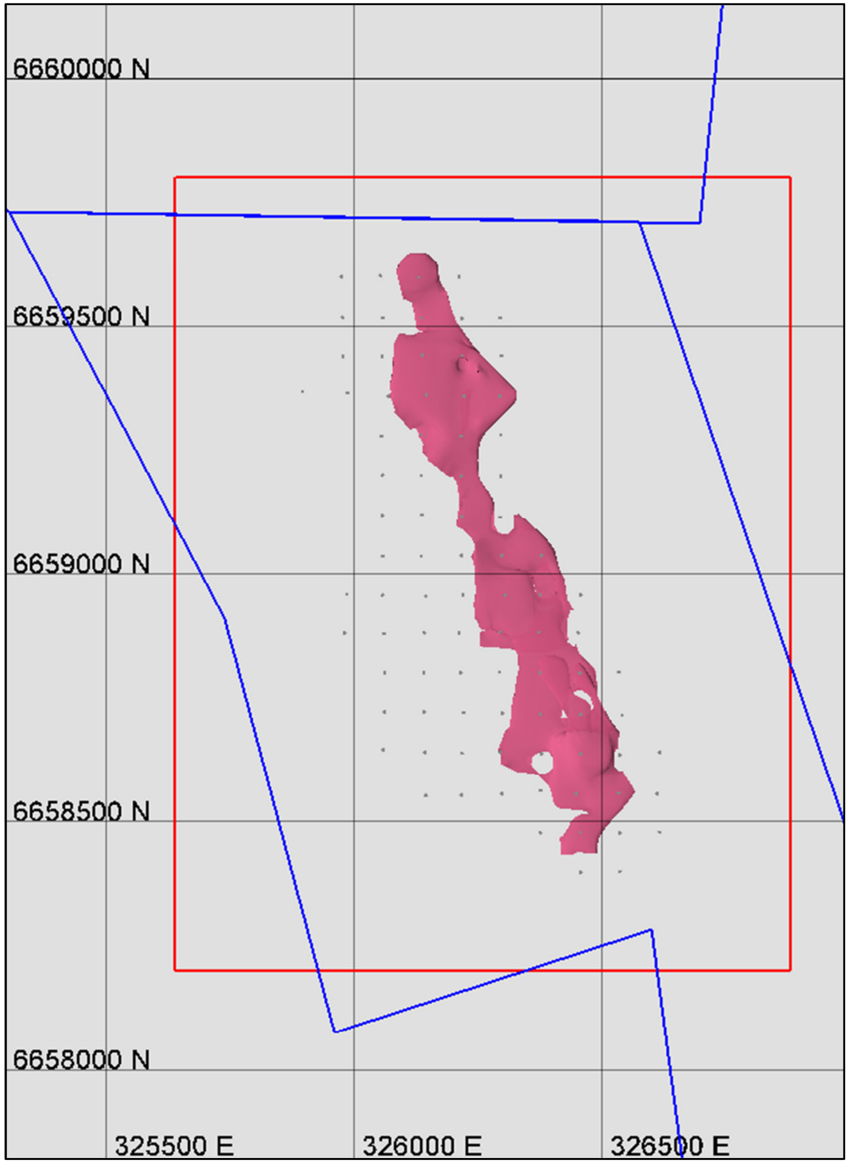


Figure 7: - Scotia - trimmed grade shell based on 0.08% Co cutoff

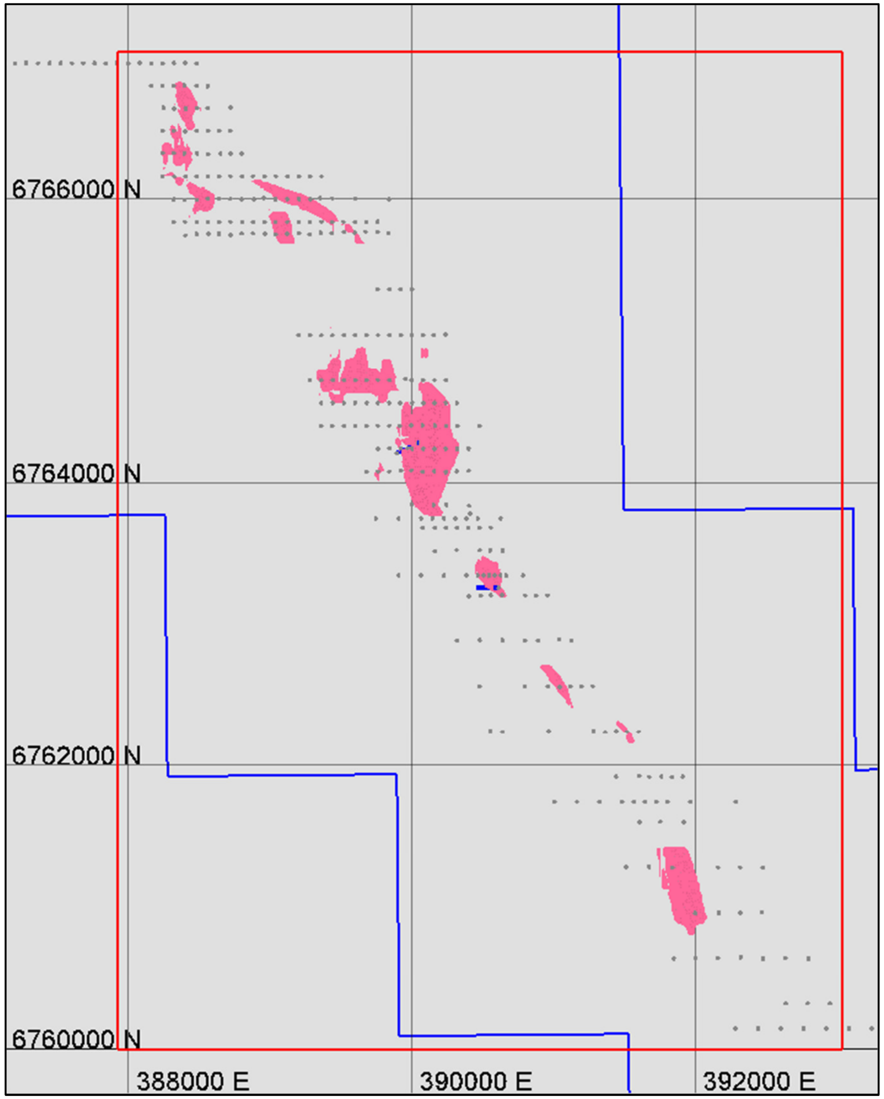


Figure 8: - Aubils - raw block model grade shell based 0.08% Cutoff

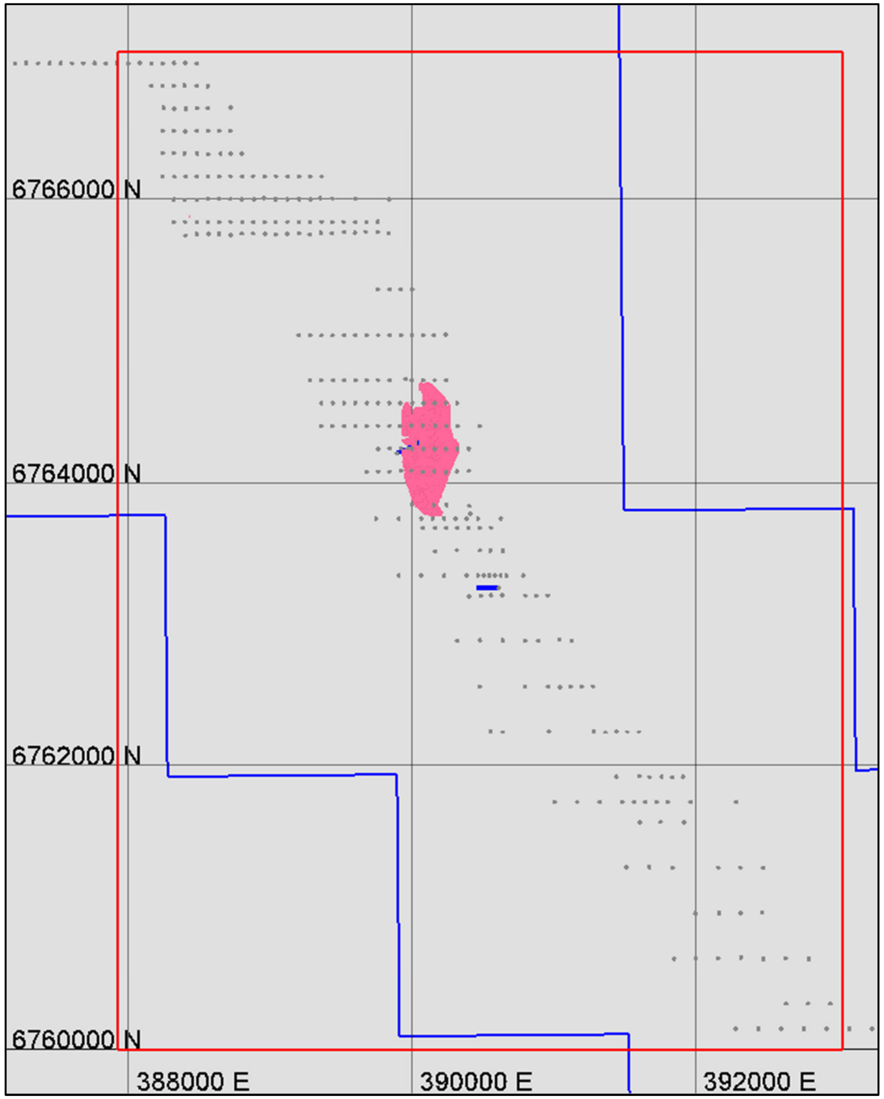


Figure 9: - Aubils - trimmed grade shell based on 0.08% Co cutoff

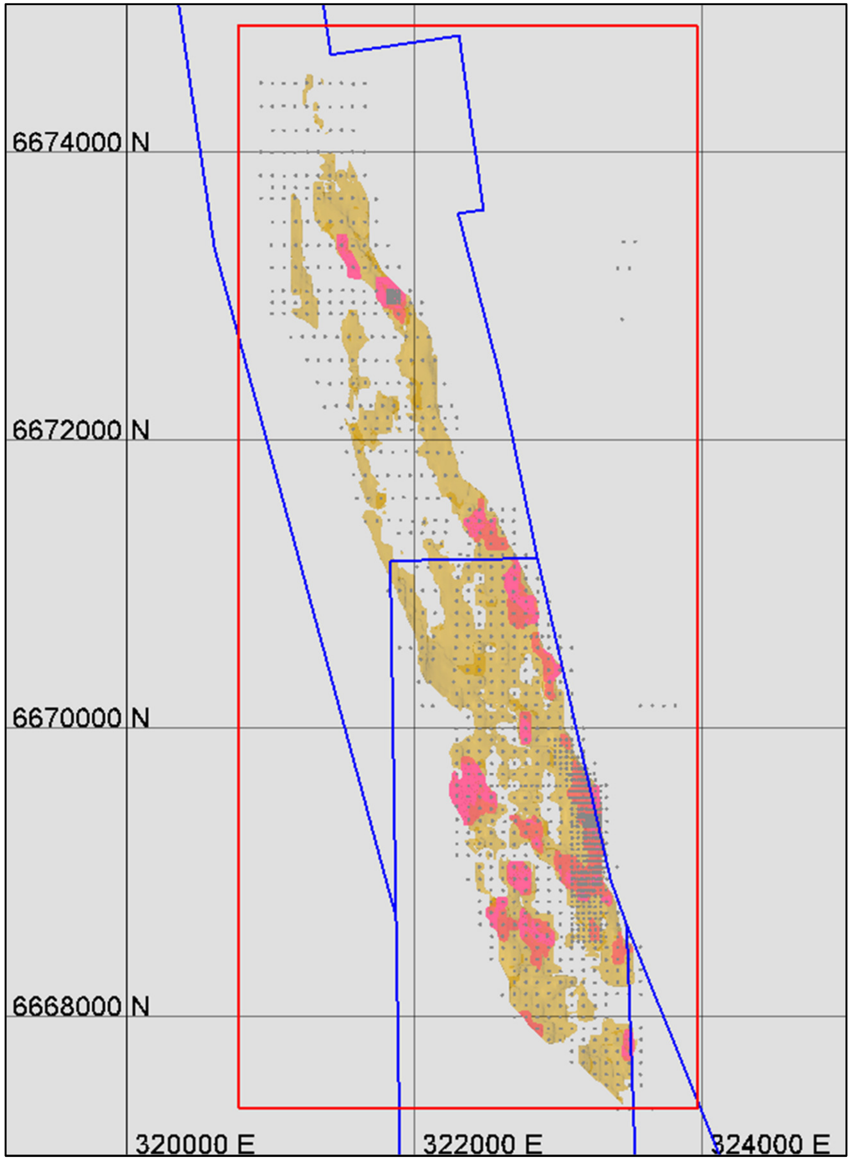


Figure 10: - Goongarrie South - trimmed block model grade shell based on 0.08% Co cutoff (red) and raw grade shell based on 0.5% Ni cutoff (yellow)

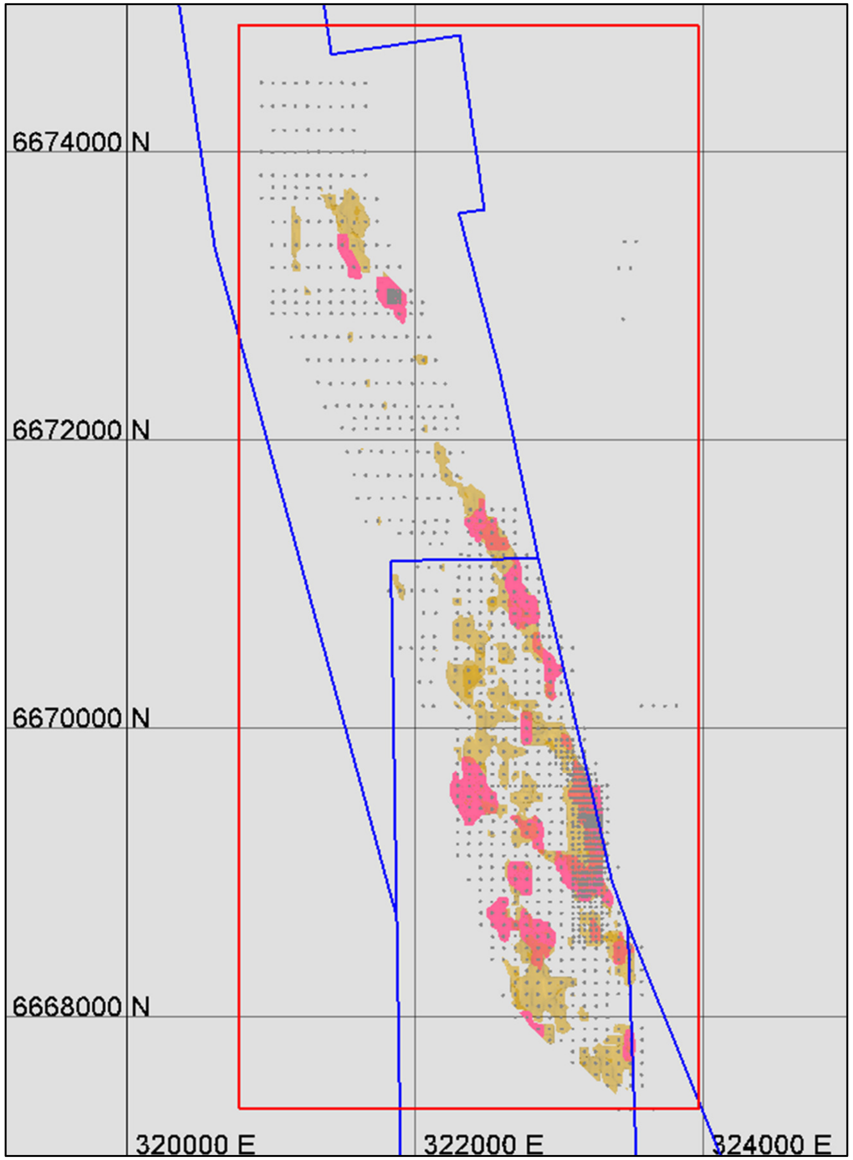


Figure 11: - Goongarrie South - trimmed block model grade shell based on 0.08% Co cutoff (red) and raw grade shell based on 0.7% Ni cutoff (yellow)

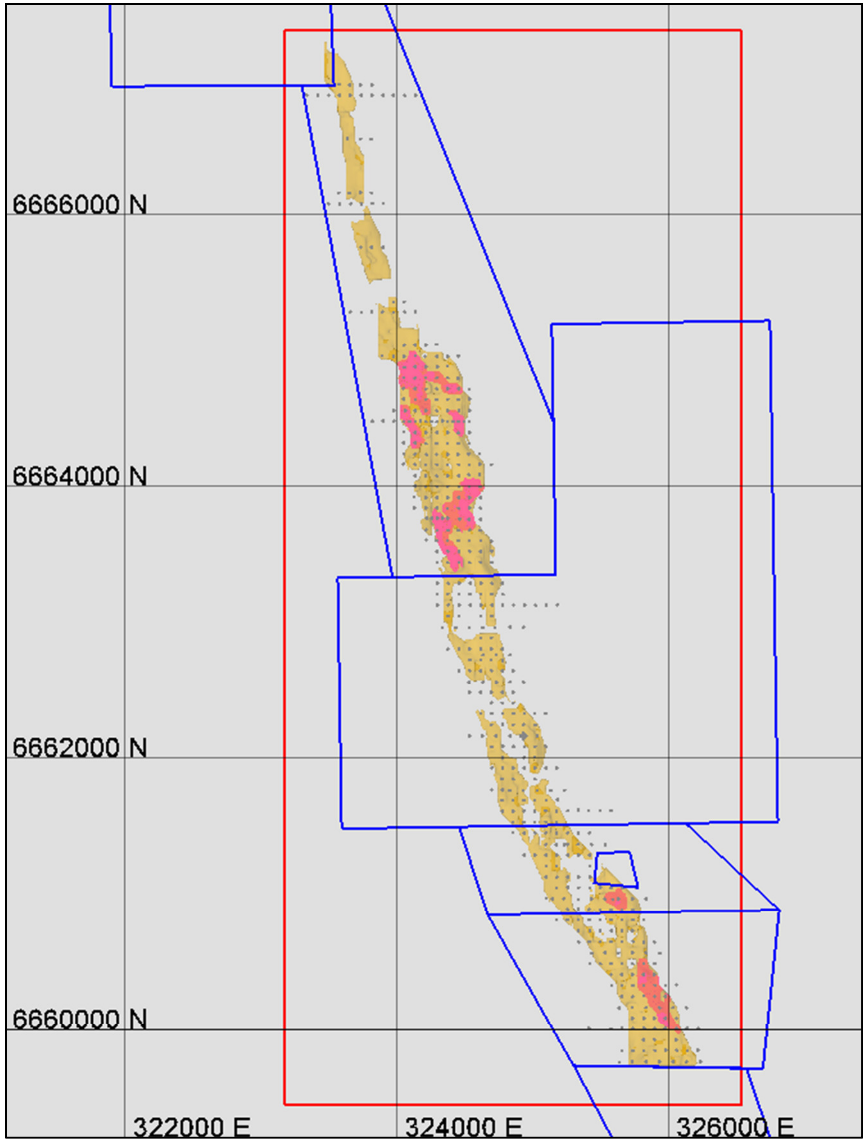


Figure 12: - Big Four - trimmed block model grade shell based on 0.08% Co cutoff (red) and raw grade shell based on 0.5% Ni cutoff (yellow)

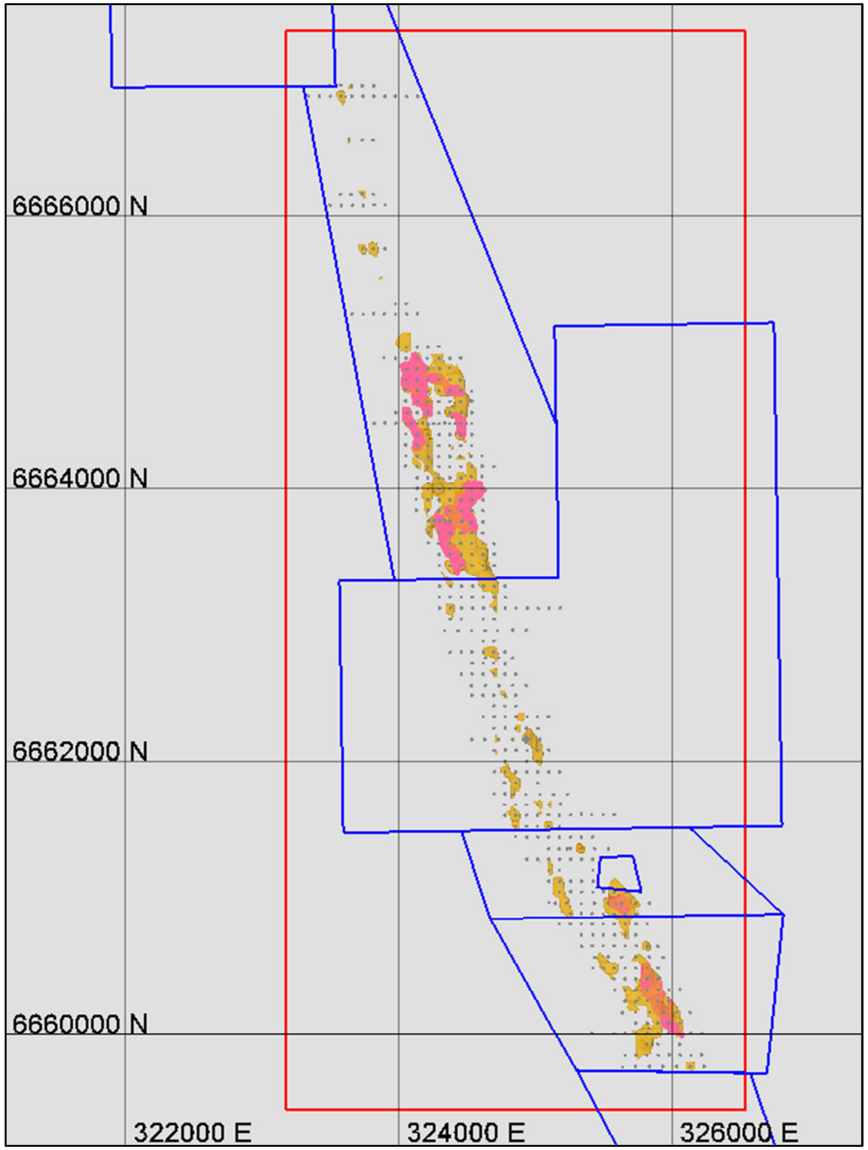


Figure 13: - Big Four - trimmed block model grade shell based on 0.08% Co cutoff (red) and raw grade shell based on 0.7% Ni cutoff (yellow)

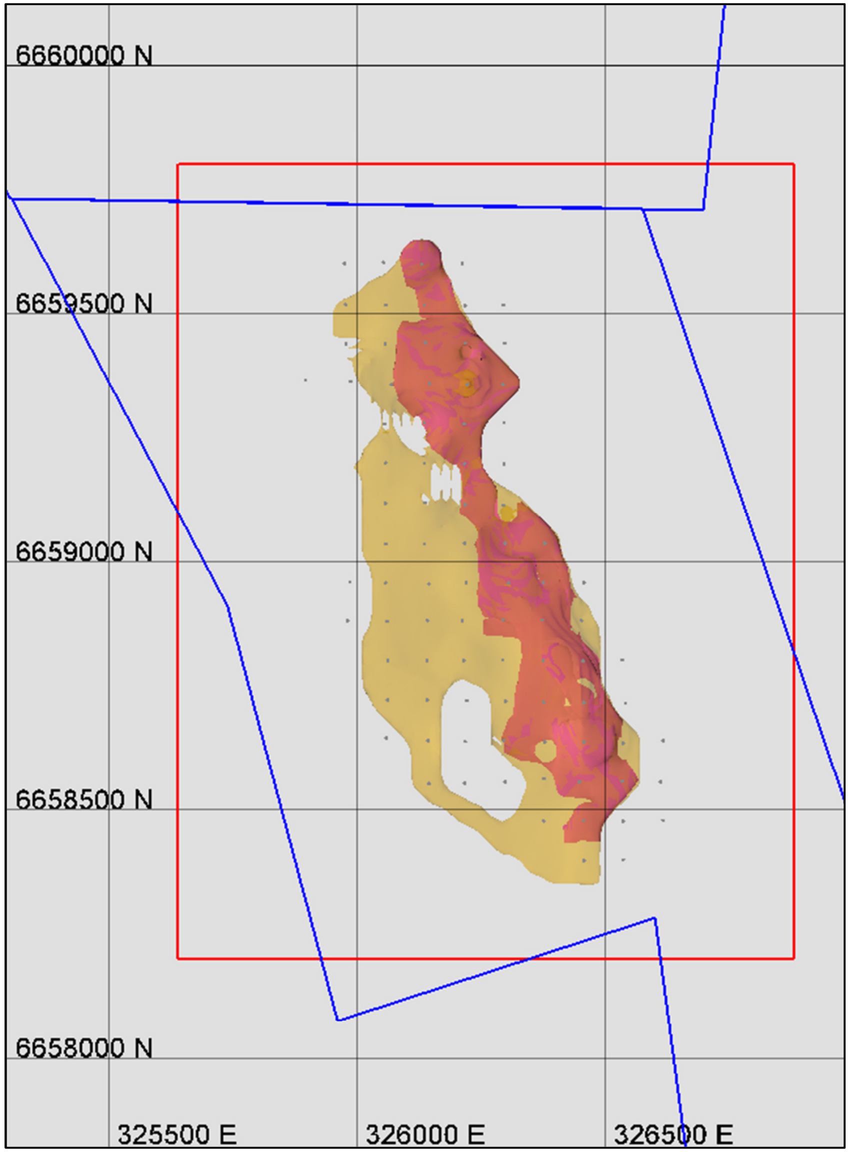


Figure 14: - Scotia - trimmed block model grade shell based on 0.08% Co cutoff (red) and raw grade shell based on 0.5% Ni cutoff (yellow)

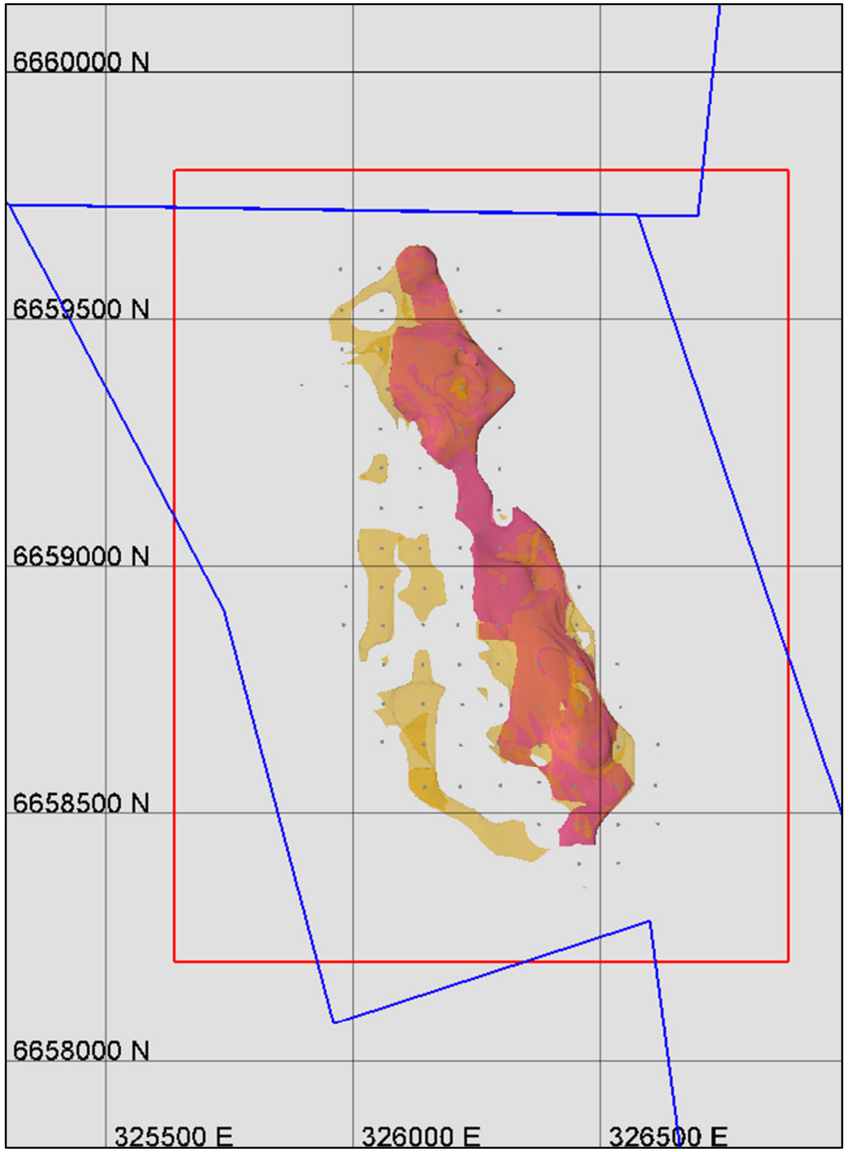


Figure 15: - Scotia - trimmed block model grade shell based on 0.08% Co cutoff (red) and raw grade shell based on 0.7% Ni cutoff (yellow)

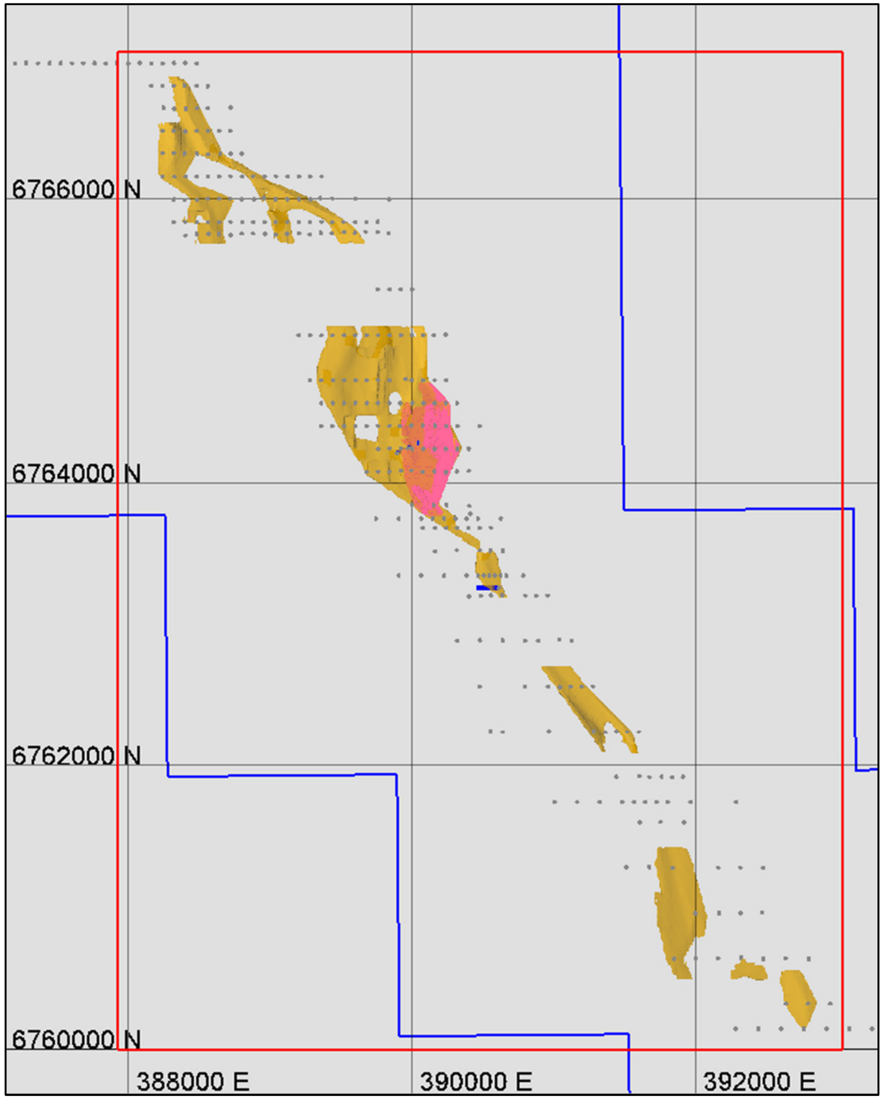


Figure 16: - Aubils - trimmed block model grade shell based on 0.08% Co cutoff (red) and raw grade shell based on 0.5% Ni cutoff (yellow)

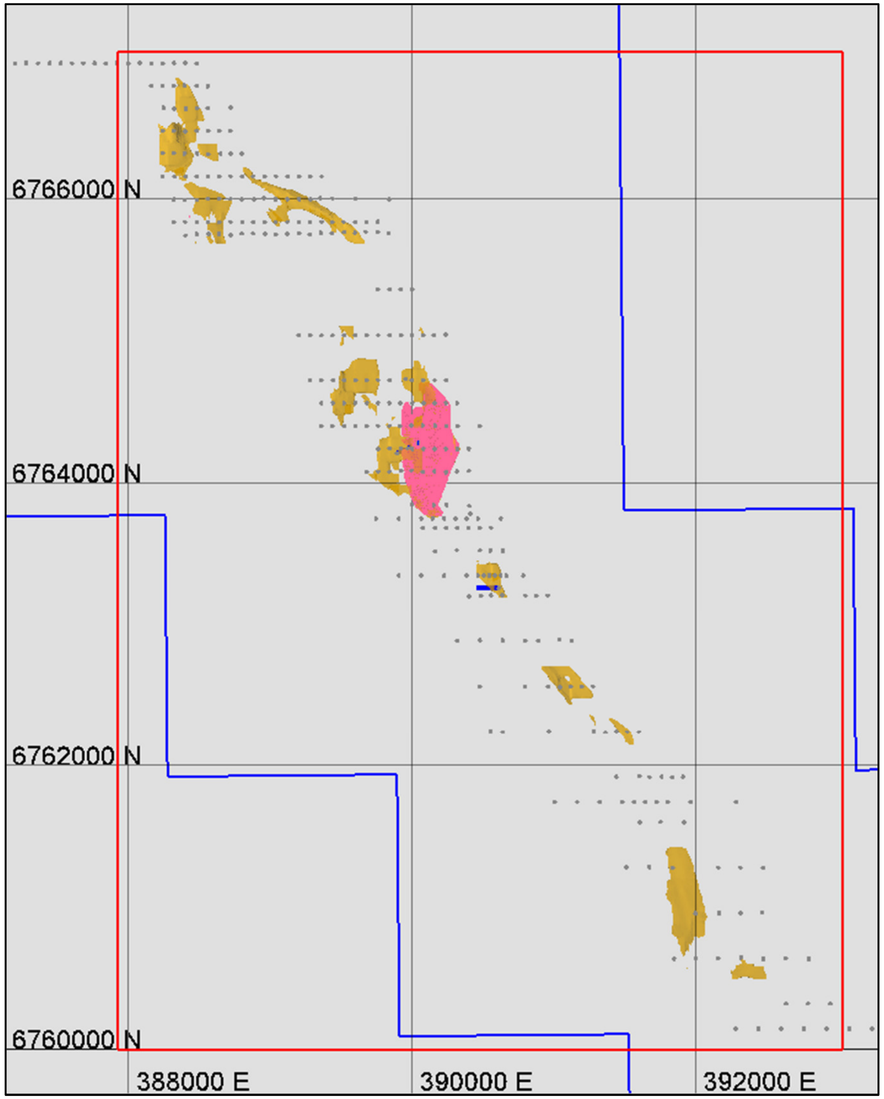


Figure 17: - Aubils - trimmed block model grade shell based on 0.08% Co cutoff (red) and raw grade shell based on 0.7% Ni cutoff (yellow)

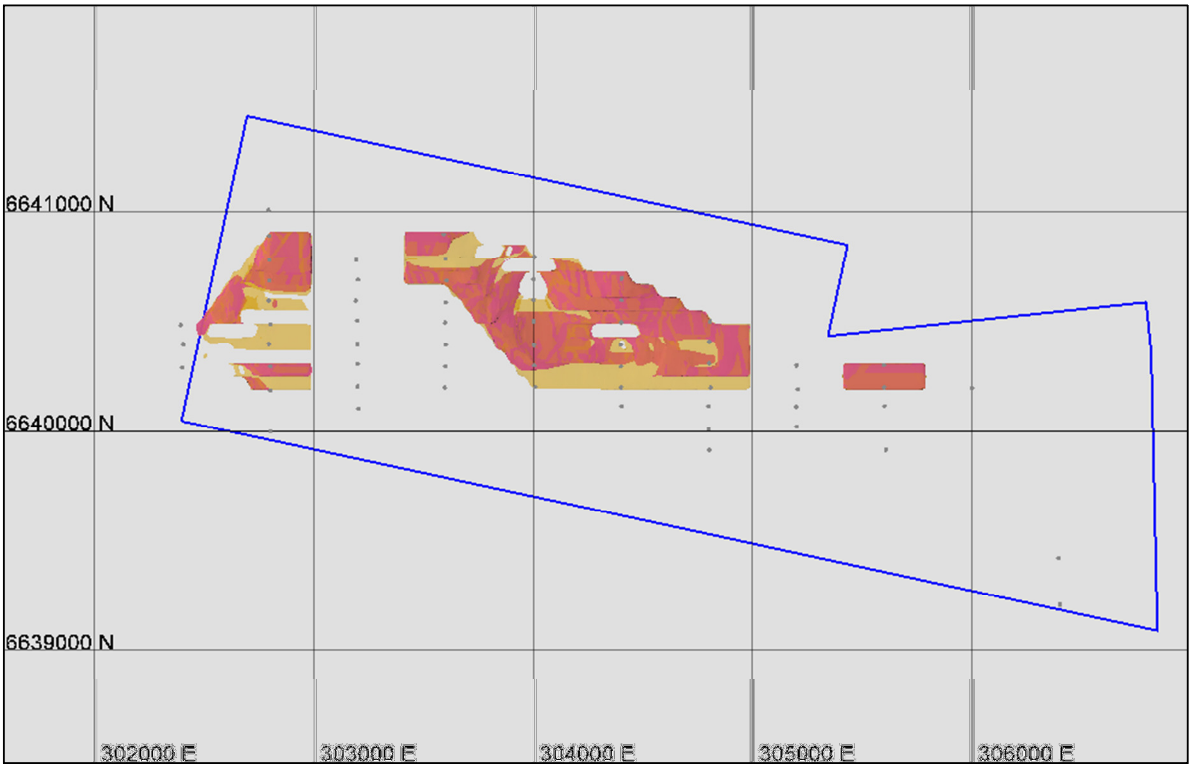


Figure 18: - Black Range - raw block model grade shell based on 0.08% Co cutoff (red) and raw grade shell based on 0.5% Ni cutoff (yellow)

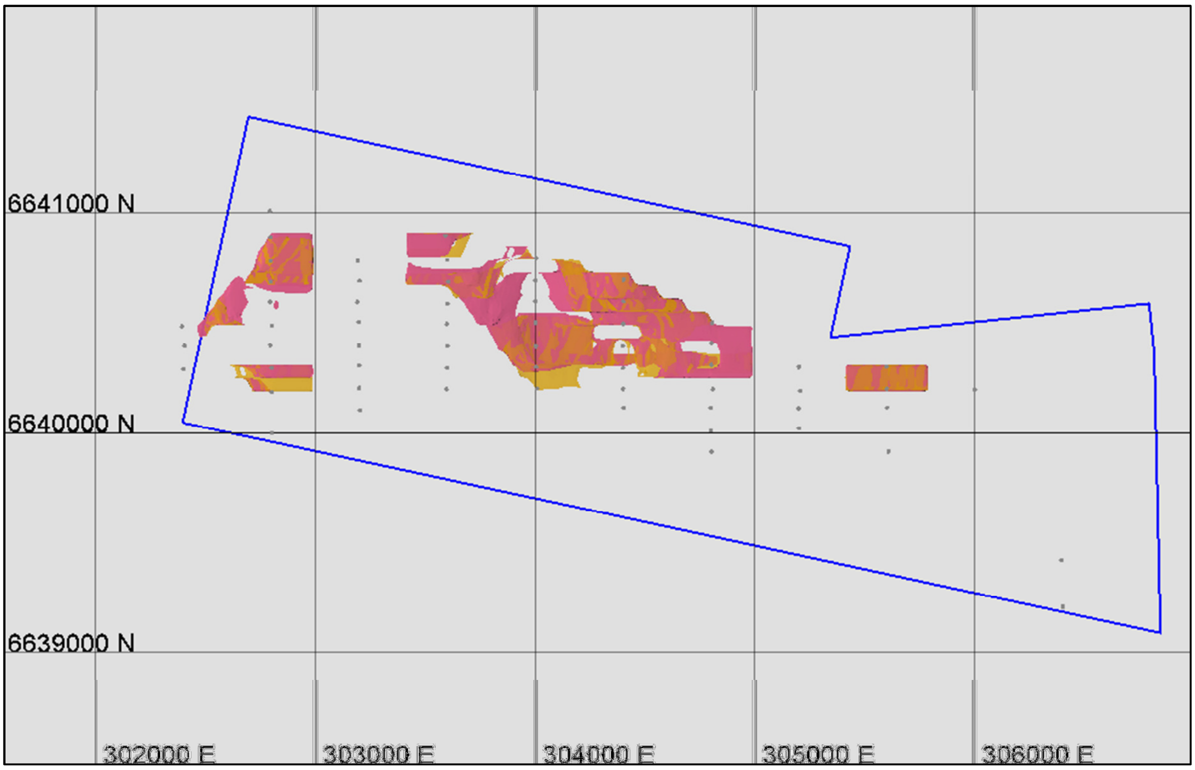
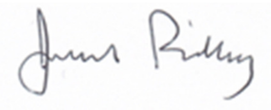


Figure 19: - Black Range - raw block model grade shell based on 0.08% Co cutoff (red) and raw grade shell based on 0.7% Ni cutoff (yellow)

For and on behalf of Ridley Mineral Resource Consulting



James Ridley

Director & Principal Geologist

Competent Persons Statement

The information in this report that relates to 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 and verified by Mr Ian Buchhorn who is a Member of the Australasian Institute of Mining and Metallurgy and currently a full time employee of Heron 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 information in this report that relates to Mineral Resources for the Goongarrie South, Big Four and Aubils prospects areas is based on information originally compiled by Mr James Ridley in 2008 and 2009 when employed as a Senior Resource Geologist with Heron Resources Limited. The information in this report that relates to Mineral Resources for the Scotia and Black Range Prospects is based on information originally compiled by Snowden Mining Industry Consultants on behalf of Heron in 2004. The Mineral Resource estimates for all five prospect areas have been reviewed and validated by James Ridley who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Ridley is now a full time employee of Ridley Mineral Resource Consulting Pty 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'. Mr Ridley 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.

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JORC Code, 2012 Edition – Table 1 report template

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary

Sampling techniques
Note: Due to the similarity of the deposit styles, procedures and estimations used this table represents the combined methods for all Heron (HRR) Nickel Laterite Resources. Where data not collected by HRR has been used in the resource calculations, variances in techniques are noted.
	• *Nature and quality of sampling (eg 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 (eg '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 (eg submarine nodules) may warrant disclosure of detailed information.*
		• The nickel laterite resources were sampled by drilling using dominantly Reverse Circulation (RC) with occasional Diamond Drill (DD) on various grid spacing between 10x10 metre and 80x160 metre spacing. Holes were usually vertical (-90 degree dip), designed to optimally intersect the sub-horizontal mineralisation. The majority of holes were sampled on 2 metre, or less commonly 1 metre down hole intervals.
		• RC holes form the majority of the samples used in the resource calculation.
		• DD holes were drilled for a combination of:
		  • twin testing of RC drilling;
		  • density determination;
		  • geotechnical logging and test work;
		  • geological logging (structural logging); and
		  • metallurgical test work.
		Where appropriate the results of diamond core sampling and assays were used in the resource estimate.
		• A number of bulk sample holes employing either Calweld (900 to 1200mm, large diameter well boring rig) or Sonic drilling techniques were also completed at Jump Up Dam, Goongarrie, Highway and Siberia Deposits. These holes were primarily for obtaining bulk samples for metallurgical studies and the assay results were not used in the resource calculation.
		• Bulong East resources were calculated using the database of Bulong Mining Pty Ltd (in Receivership). Techniques employed were broadly similar to those used by Heron.
		• Goongarrie Hill, Goongarrie South, Highway and Siberia Deposits were all partially explored by Vale between 2002 and 2007. Vale/ Inco employed the same drilling and sampling techniques as Heron for these deposits.

Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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).*	• RC drilling was performed with a face sampling hammer (bit diameter between $4^{1/2}$ and $5^{1/4}$ inches) and samples were collected by either a cone (majority) or riffle splitter using 2 metre composites. Sample condition, sample recovery and sample size were recorded for all drill samples collected by HRR. • DD holes were drilled with HQ triple tube. All material of sufficient competence was oriented using spear or Easymark™ techniques. All diamond holes were logged for geotechnical, geological and density. Where appropriate (holes not drilled for metallurgical purposes), holes were whole core sampled to geological boundaries (approximately 1 metre) and assayed.

Criteria	JORC Code explanation	Commentary
Drilling techniques (continued)		• Calweld samples (not used in resource model but used for metallurgical testing) were collected in bulka bags on 1 metre down hole intervals. • Sonic drill samples were collected as whole core samples, 6 inches diameter of up to 1 metre lengths in sealed clear plastic wrap. Sonic core of longer lengths was split as it was retrieved from the drill string to facilitate handling of the heavy samples.
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.*	• RC chip sample recovery was recorded by visual estimation of the reject sample, expressed as a percentage recovery. Overall estimated recovery was approximately 80%, which is considered to be acceptable for nickel laterite deposits. RC Chip sample condition recorded using a three code system, D=Dry, M=Moist, W=Wet. DD Core recovery was recorded during logging. A small proportion of samples were moist or wet (11.5%), with the majority of these being associated with soft goethite clays, where water injection has been used to improve drill recovery. • Measures taken to ensure maximum RC sample recoveries included maintaining a clean cyclone and drilling equipment, using water injection at times of reduced air circulation, as well as regular communication with the drillers and slowing drill advance rates when variable to poor ground conditions are encountered. • For diamond drilling, drill runs were reduced to as little as 0.5 metre in poor ground conditions to maximise core recovery. Core recovery was excellent being over 90% for all deposits. • Recovery from Sonic drilling was excellent with very good recoveries experienced in soft goethite clays where water injection was required in RC to facilitate acceptable recoveries. • In Calweld drilling, drill bit diameter was changed to account for ground hardness to maximise sample recovery and bore hole penetration. A specialized shoot was constructed to maximise the recovery from the drill head. Samples were stored in bulka bags to prevent contamination or sample loss. • A number of twin holes using both DD and RC methods were drilled to confirm that the RC sampling was repeatable and therefore representative and without significant bias. These twin holes included areas where wet ground conditions were experienced during RC drilling. No statistically significant bias was recorded in the results.
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.*	• For RC drilling, visual geological logging was completed for all RC drilling on 1 metre intervals. The logging system was developed by Heron specifically for the KNP and was designed to facilitate future geo-metallurgical studies. Logging was performed at the time of drilling, and planned drill hole target lengths adjusted by the geologist during drilling. The geologist also oversaw all sampling and drilling practices. A mixture of Heron employees and contract geologists supervised all drilling. A small selection of representative chips were also collected for every 1 metre interval and stored in chip-trays for future reference. Only drilling contractors with previous nickel laterite experience and suitable rigs were used.

Criteria	JORC Code explanation	Commentary
Logging (continued)		• For DD holes, both visual geological and geotechnical logging were performed on all drill core. Core was also selectively sampled for both geological and metallurgical test work. • Calweld and Sonic holes were visually geologically logged prior to being sampled for metallurgical test work. • The geological legend used by Heron is a qualitative legend designed to capture the key physical and metallurgical features of the nickel laterite mineralisation. Logging captured the colour, regolith unit and mineralisation style, often accompanied by the logging of protolith, estimated percentage of free silica, texture, grain size and alteration. Logging correlated well with the geochemical algorithm developed by Heron for the Yerilla Nickel Project for material type prediction from multi-element assay data. • Drilling conducted by Vale / Inco at Highway, Goongarrie and Siberia was logged in similar detail to Heron's procedures, but used a slightly modified geological legend. There is a direct translation between the Vale /Inco and Heron logging legends.
Sub-sampling techniques and sample preparation	• *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 is representative 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.*	• RC Drilling; 2 metre (and rarely 1 metre) composite samples were recovered using a 15:1 rig mounted cone splitter or trailer mounted riffle splitter during drilling into a calico sample bag. Sample target weight was between 2 and 3kg. In the case of wet clay samples, grab samples taken from sample return pile, initially into a calico sample bag. Wet samples stored separately from other samples in plastic bags and riffle split once dry. • For RC sampling QAQC was employed on all programs. A standard, blank or duplicate sample was inserted into the sample stream 10 metres on a rotating basis. Standards were either quantified industry standards, or standards made from homogenised bulk samples of the mineralisation being drilled (in the case of the Yerilla project). Every 30th sample a duplicate sample was taken using the same sample sub sample technique as the original sub sample. Sample sizes are appropriate for the nature of mineralization. QAQC results were verified against each program prior to loading into the database. • A small percentage of holes were separately resampled post drilling to confirm the integrity of the different sampling techniques employed. • For DD holes, where not required for metallurgical or geotechnical purposes, samples were taken using whole core, and submitted for assay. No duplicates of core samples were taken, but standards and blanks were employed as for the RC drilling. Whole core sampling was used to increase the sample size to approximate the same sample mass as for the RC drilling for the purposes of comparing of twinned holes, and to eliminate difficulties in biasing of samples during the splitting of core, with its inherent variable hardness.

Criteria	JORC Code explanation	Commentary
Quality of assay data and 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, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	• All Heron and Vale / Inco samples were prepared and analysed by Ultratrace Laboratories in Perth by silicate fusion / XRF analysis (lab method XRF202) for multiple grade attributes (Ni, Co, MgO, FeO, Al_2O_3, SiO_2, CaO, Mn, Cr, Cu, Zn, As, S and Cl). Fusion / XRF analysis is an industry standard method used to analyse nickel laterite ores and Ultratrace is a reputable commercial laboratory with extensive experience in assaying nickel laterite samples from numerous Western Australian nickel laterite deposits. • Ultratrace routinely inserts analytical blanks, standards and duplicates into the client sample batches for laboratory QAQC performance monitoring. • Heron also inserted QAQC samples into the sample stream at a 1 in 10 frequency, alternating between duplicates splits, blanks (quartz or garnet sands) and standard reference materials. • All of the QAQC data has been statistically assessed and the precision and accuracy of the assay data for the important grade components has been found to be acceptable and suitable for use in resource estimation. • A small number of historic samples at Bulong, Goongarrie and Highway were assayed by KAL Laboratory in Kalgoorlie using four acid digestion (4AD) and either AAS or ICP_OES finish for Ni, Co, MgO, FeO, Al_2O_3, CaO, Mn, Cr, Cu and Zn. XRF analysis of pressed powder (PP) for Ni. Co, MgO, FeO, Al_2O_3, SiO_2, CaO, Mn, Cr, Cu and Zn was also used initially at Goongarrie. Nickel and cobalt assays of laboratory pulp duplicates show the analytical precision for all three methods to be acceptable. However, there is potentially significant bias in MgO, FeO, Al_2O_3, Mn and Cr assays based of 4AD_ICP_OES and PP_XRF analyses. Both four acid digest methods were unable to analyse for SiO_2, due to incomplete digestion. As a result, whilst the nickel and cobalt results were suitable for use in modelling, the geochemical modelling of the Goongarrie deposits requires additional sampling and assaying, in particular for SiO_2.
Verification of sampling and 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.*	• A selection of samples have been analysed at an alternate laboratory (SGS Analabs) using XRF fusion technique to verify the results reported by Ultratrace. The compared results show a high degree of precision and no systematic bias. • Two metre composites for the twinned RC and DD or Sonic hole pairs have been statistically compared and determined to have similar unbiased chemical compositions for Jump Up Dam, Highway, Goongarrie deposits. Whilst there was some variability in the geology of the close spaced drill holes, the short range variance is typical of nickel laterite deposits in WA. • Where geology agreed within the twinned holes, assays were generally similar between the different methods. There was a slight negative bias in the material reporting to the fines component of RC sampling (which includes Ni, Co, FeO, Al_2O_3 and Mn) compared to the Sonic drilling in some of the twinned holes at Goongarrie and Highway, and a corresponding upgrade in coarse material (calcrete, carbonates and siliceous material).

Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying (continued)		• Despite the evidence for grade differences in some of the twined holes related to the RC drilling process, overall, the RC drilling is still considered to provide samples that adequately represent the true geochemistry of the regolith which are suitable for the purpose of resource estimation. • No adjustments have been made to the assay data.
Location of data points	• *Accuracy and quality of surveys used to locate drill 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.*	• All drill holes surveyed using an RTK DGPS system with either a 3 or 7 digit accuracy. The coordinates are stored in the exploration database referenced to the MGA Zone 51 Datum GDA94. • The majority of vertical holes used in the resource calculations were not down hole surveyed. The sub-horizontal orientation of the mineralisation, combined with the soft nature of host material would result in minimal deviation of vertical RC drill holes. All diamond holes were down hole surveyed by an external contactor. A small number of vertical open RC holes were check surveyed at Jump Up Dam, and found to have deviation over 60m of less than 1 metre, which is considered sufficiently accurate for this style of mineralisation. • The grid system for all models is GDA94. Where historic data or mine grid data has been used it has been transformed into GDA94 from its original source grid via the appropriate transformation. Both original and transformed data is stored in the digital database. • Topographic control varies between the deposits. At Jump Up Dam, LIDAR data to ±10cm vertical and ±50cm horizontal was used to generate a contour plan which was then used construct a DTM of the topography. For Bulong existing picked up pit DTMs (from mine surveys) were added to a DTM constructed from drill hole collars to produce a topographic DTM post mining. For all other deposits, DTMs were constructed from picked up drill collar locations. The use of collar data is considered sufficiently accurate for reporting of resources, but is not suitable for mine planning and reserves.
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.*	• All prospects have been drilled on uniform grids ranging from a maximum of 400mE x 100mN at Black Range to a minimum of 10mE x 10mN in trial mining areas at Jump-up Dam. The drill spacing at the prospects containing continuous cobalt rich mineralisation ranges from 20mE x 20mN to 80mE x 160mN at Goongarrie South, is mostly 80mE x 80mN at Big Four and Scotia, ranges from 80mE x 160mN to 160mE x 360mN at Aubils, and is consistently 400mE x 100mN at Black Range. • All Heron RC samples were composited to 2 metre prior to sampling during drilling. All DD twin holes and Vale 1 metre sampled RC holes have been digitally composited from 1 metre to 2 metre to match the RC composites prior to resource estimation.

Criteria	JORC Code explanation	Commentary
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 majority of the drill holes is vertical and give true width of the regolith layers and mineralisation. • On a local scale there is some variability due to sub-vertical to vertical structures which may not be picked up with the relatively broad spaced vertical drill pattern employed. This local variability is not considered to be significant for the project overall, but will have local effects on mining and scheduling later in the project life.
Sample security	• *The measures taken to ensure sample security.*	• All samples were collected and accounted for by Heron employees during drilling. All samples were bagged into plastic bags and closed with cable ties. Samples were transported to Kalgoorlie from site by Heron employees in sealed bulka bags. • Consignments were transported to Ultratrace Laboratories in Perth by Coastal Midwest Transport. All samples were transported with a manifest of sample numbers and a sample submission form containing laboratory instructions. Any discrepancies between sample submissions and samples received were routinely followed up and accounted for.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Heron has periodically conducted internal reviews of sampling techniques relating to resultant exploration datasets, and larger scale reviews capturing the data from multiple drilling programmes within the KNP. • Internal reviews of the exploration data included the following: o Unsurveyed drill hole collars (less than 1% of collars). o Drill Holes with overlapping intervals (0%). o Drill Holes with no logging data (less than 2% of holes). o Sample logging intervals beyond end of hole depths (0%). o Samples with no assay data (from 0 to <5% for any given project, usually related to issues with sample recovery from difficult ground conditions, mechanical issues with drill rig, damage to sample in transport or sample preparation). o Assay grade ranges. o Collar coordinate ranges o Valid hole orientation data. • The Ultratrace Laboratory was visited by Heron staff in 2006, and the laboratory processes and procedures were reviewed at this time and determined to be robust. • The exploration data for the Siberia and Goongarie Regions were initially reviewed in detail were by Heron in 2004 and subsequently by Vale / Inco in 2005

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 to obtaining a licence to operate in the area.*	• The tenement and land tenure status for the KNP prospect areas containing continuous cobalt rich laterite mineralisation is summarised in Table 3 following and in the Ardea Prospectus, section 9 "Solicitor's Report on Tenements".
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• The Goongarrie South, Scotia, Aubil s and Jump Up Dam deposits were discovered and explored by Heron Resources Limited. • The Black Range deposit was initially discovered and drilled by Anaconda Nickel Limited. • Vale Inco completed a prefeasibility study on the KNP which included extensive drilling of the Goongarrie South and Big Four deposits relevant to the current updated resource reporting.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The KNP nickel laterite mineralisation, including cobalt rich areas is developed from the weathering and near surface enrichment of Achaean-aged olivine-cumulate ultramafic units. The mineralisation is usually within 60 metres of surface and can be further sub divided on mineralogical and metallurgical characteristics into upper iron-rich material and lower magnesium-rich material based on the ratios of iron to magnesium. The deposits are analogous to many weathered ultramafic-hosted nickel-cobalt deposits both within Australia and world-wide. • Cobalt rich mineralisation is typically best developed in iron rich material in regions of deep weathering in close proximity to major shear zones or transfer shear structures and to a lesser extent as thin zones along the interface of ferruginous and saprolite boundaries at shallower depths proximal to shear structures. • The Cobalt Zone is associated with a distinctive geo-metallurgical type defined as "Clay Upper Pyrolusitic". Mineralogy is goethite, gibbsite and pyrolusite (strictly "asbolite" or "cobaltian wad"). The Cobalt Zones typically occur as sub-horizontal bodies at a palaeo-water table within the KNP (late stage supergene enrichment). This material is particularly well developed at Goongarrie South.

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*
	  ○ *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.*
		• The drill hole data relating to the resource estimates reviewed in this study are all previously reported results. No new drilling has taken place since 2008. Ongoing studies for these prospect areas are focused on the metallurgical characteristics of the mineralisation and development of new process technology.
		• Drillhole collar, geology and assay data for each prospect area investigated in this study are provided in the Vale Inco Pre-feasibility Study, 2009 and Heron Yerilla Pre-feasibility Study, 2010.

Criteria	JORC Code explanation	Commentary
Drill hole Information	• *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	
Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg 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.*	• Most drill hole samples have been collected over 2m down hole intervals. Assay compositing completed for each deposit in preparation for statistical analysis and grade estimation was conducted using length weighted averaging of the input assay data by corresponding sample lengths. Typically a 2 compositing length was used aligned with the dominant sampling interval used for drill sample collection. • 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 (eg 'down hole length, true width not known').*	• The mineralisation of all Heron's nickel laterite resources has a strong global sub-horizontal orientation. The majority of drill holes are vertical. • With the exception of local offsets due to slumping, all vertical drill holes intersect the mineralisation at approximately 90 degrees to its orientation. All down hole widths approximate true widths for vertical holes.
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.*	• No new discoveries of nickel laterite mineralisation or cobalt rich areas are presented in this report.
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.*	• Not applicable to this report. All figures previously reported.
Other substantive exploration data	• *Other exploration data, if meaningful and material, should be reported including (but not limited 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.*	• Not applicable to this report.

Criteria	JORC Code explanation	Commentary
Further work	• *The nature and scale of planned further work (eg 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.*	• There is planned infill and extensional exploration work by Ardea to be carried out on the nickel laterite resources at Goongarrie South and Black Range as part of a $1 million PFS (refer Ardea Prospectus section 3.6(e). Ardea is focusing on developing an improved process route for extraction of cobalt-nickel-manganese ((Lithium Nickel Manganese Cobalt Oxide - $LiNiMnCoO_2$ or NMC).from the current known resources. This will involve some further metallurgical sampling (including drilling) of the currently known resources.

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• Heron employed a robust procedure for the collection of and storage of sample data. This included auto-validation of sample data on entry, cross checking of sample batches between the laboratory and the database and regular auditing of samples during the exploration phase. Sample numbers were both recorded manually and entered automatically. Discrepancies within batches (samples were batched on a daily basis) were field checked at the time of data entry, and resampled if errors could not be resolved after field inspection. • Data validation procedures include digital validation of the database on entry (no acceptance of overlapping intervals, duplicate hole and sample ID, incorrect legend information, out of range assay results, incorrect pattern of QAQC in sampling stream, failed QAQC, missing assays, samples and geological logging). • At the time of resource modelling all data was visually checked on screen, and manually validated against field notes. All changes to the database were verified by field checks.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• The Competent Person, James Ridley, is a previous employee of Heron Resources from 2004 to 2011 and has visited all of the KNP prospect areas. The drilling, sampling and geological practices were standardized for all deposits. RC drilling was generally effective, although there were some minor localised issues with sampling accuracy of wet puggy clays. Overall procedures were robust, including data entry, for the RC drilling, and where tested, repeatable by alternate drilling methods. • The Competent Person, Ian Buchhorn, is a current employee of Heron Resources and has acquitted and visited all of the KNP prospect areas. • No comment can be made on the validity of historic work by Helix, WMC and Anaconda, except to say that infill drilling has broadly similar results to the historic data. Due diligence by Ian Buchhorn at the time of acquisition by Heron confirmed acceptable QAQC by the various vendors.

Criteria	JORC Code explanation	Commentary
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• There is a strong correlation between the geology of adjacent drill holes in all of the resources. There is also a strong global correlation between weathering profile, lithology and mineralisation intensity. On a local scale the changes in weathering profile is often discrete, but of a complex geometry. There is good confidence overall in the geological model, and this has been confirmed at Jump Up Dam by the trial mining of 20,000 tonnes of mineralisation. • A combination of geological logging and assay data has been used to sub divide the mineralisation into high-iron and high-magnesium mineralisation types, within a mineralised domain. High-carbonate domains have also been defined. High-silica domains were more problematic to define, and further work is required on developing this geo-metallurgical domain. • The continuity of mineralisation is strongly controlled by bed rock alteration and palaeo water flow within the ultramafic host units. Areas of deep fracturing and water movement within the bedrock typically had higher grade and more extensive mineralisation in the overlying regolith. In the proximity of geological contacts between the ultramafic hosts and surrounding mafic and felsic lithologies there is often a distinctive increase in grade and widths of mineralisation, including the development of mineralisation along fracture planes in the adjacent felsic and mafic units. Where the host regolith overlies olivine adcumulate lithologies there is an increase in siliceous material and a loss of the high magnesium mineralisation horizon. In areas where the host ultramafic was altered to talc, or talc-carbonate lithologies there was no development of nickel mineralisation in the regolith. These areas typically formed along shears, and sheared contacts within the bedrock. • Mineralisation domains were developed using a combination observed geological logging, and multi element geochemical sampling. Lower cut-off grades for the nickel domain was 0.25% Ni for Goongarrie, Highway and Big Four deposits, and 0.4% Ni for all other domains. The domains do contain material of lower grades where continuity of interpretation warrants the addition of internal waste.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• Resource dimensions vary between deposits, however the resources are usually sub horizontal, tabular with strike length over 1000 metres, widths between 100-600 metres and thickness of 10-20 metres. Some resources outcrop, while most lie under thin (generally less than 30 metre thick) soils, cap rock or palaeo-channel sands and clays. Most of the modelled resources are less than 60 metres below surface.

Criteria	JORC Code explanation	Commentary
Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	• All deposits were Ordinary Kriged (OK), using variography of the domained Ni shells for Ni, Co, MgO, FeO, Al_2O_3 and SiO_2 assay suits. (SiO_2 was unavailable for Siberia, Kalpini and Ghost Rocks due to a lack of assays and was not modelled). In addition to the OK model estimates, Uniform Conditioning (UC) was applied to nickel only for Jump Up Dam, Boyce Creek, Aubils, Highway, Goongarrie, Big Four and Bulong deposits. Although previously reported, these figures have not been reported in the current resource statement. • Deposits were estimated using either Vulcan or Datamine mining software, with various versions of Visor being employed for the variography modelling. The original domain wireframe interpretations for Jump Up Dam were created in Micromine. • Block sizes varied between models based on drill spacing and deposit geometry as follows ○ 40 x 120 x 2 metre Siberia, Kalpini, Siberia North and Ghost Rocks ○ 80 x 80 x 4 metre Aubils ○ 40 x 80 x 2 metre Highway ○ 40 x 50 x 2 metre Bulong East and Taurus ○ 60 x 120 x 4 metre Goongarrie Hill ○ 40 x 40 x 4 metre Goongarrie South, Big Four ○ 20 x 40 x 4 metre Boyce Creek ○ 10 x 10 x 2 metre Jump Up Dam (global change of support was used to calibrate the estimates within the wider spaced drilling areas) • All models used parent cell interpolation with sub-cells half the dimension of the parent cell to improve volume reporting. • Ni and Co are the principal economic minerals. Fe has the potential to be an economic mineral under some processing options being assessed. MgO, FeO, Al_2O_3 and SiO_2 are all important minerals in the classification of the different geo-metallurgical styles of mineralisation for both materials handling and metallurgic extraction processes. All have been individually estimated for most of the deposits using OK methods. • The domain boundary for mineralisation is similar for all deposits with a step change in nickel grades being modelled around the 0.4% Ni (or 0.25% Ni for Vale deposits – see geological interpretation above) threshold using a wireframe constraint. The two sub domains within the mineralised domain were usually geostatistically analysed and modelled separately. These internal domains relate to the high-iron, and high-MgO domains, which form the upper and lower portions of the mineralised weathering profile, and are usually separated by a sharp (although often geometrically complex) geological boundary. (Note: for some deposits only one or other geochemical domain is present). Depending on results of the variography, grades were modelled independently for each element modelled within the separate

		geochemical domains within the nickel wireframe shell.

Criteria	JORC Code explanation	Commentary
		No shells were developed for cobalt or any other minerals, and grades were interpolated into the same domain. • All deposits have been previously modelled, and were checked against previous models to confirm the expected changes between models. • Model estimates were validated against drilling by comparing input and output means, moving window comparative means and by visual inspection of the models. The results of these investigations were generally acceptable for level of resource confidence applied to each model. • In the case of Jump Up dam, where trial mining has taken place, reconciliation between measured resources and mining was very good for both nickel and cobalt. There were some discrepancies in the modelled mineralogical classification of the mineralisation which will have a local effect on processing, depending on the process method employed. These discrepancies were related to the highly complex geometry of the interface between high and low magnesium portions of the deposit, even within a 10 metre spaced drilling grid.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• All tonnages reported are dry tonnes for all models. Dry density was determined from drill core and down hole gamma for the Jump Up Dam, Scotia, Highway and Goongarrie deposits. This dry tonnage was applied to the other deposits on a material type basis (see Bulk Density for more details).
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• The 0.25 and 0.4% Ni cut-offs used for the wireframe domains of the deposits was based on two observed step changes in nickel grades across the drill holes. • Routine Mineral Resource reporting by Heron has a 0.5%Ni cutoff grade applied to the resource block models as this is a common lower grade cut employed during mining of Nickel Laterite deposits. • RMRC produced block model grade shells using a 0.08% Co cutoff which were then trimmed in order to provide constraints for updated Mineral Resource reporting relating to regions of continuous cobalt mineralisation in the Goongarrie South, Big Four, Scotia and Aubils prospect areas. These cobalt rich areas are of particular interest to Heron as a potential source cobalt-nickel-manganese feedstocks for the lithium ion battery industry.

Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	• Open pit mining via conventional dig and haul with minimum blasting is assumed for all deposits. Given the lateral extent of the models the selective mining unit SMU is likely to be 10x10x4(or 2) metres and this was used to develop the uniform conditional model grades for nickel for the deposits. • For the purposes of removing unlikely to be economic resources from the resource statement, a Whittle optimization of the KNP and Yerilla deposits was carried out using an A$12.50 per pound nickel price. Mining and processing costs, along with royalty and recovery factors were taken from the 2010 Heron PFS mining study for this process. The evaluation was carried out on the Kriged nickel and cobalt grades only (uniform conditioning models were not used).

Criteria	JORC Code explanation	Commentary
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• The KNP and Yerilla Projects are both subject to ongoing metallurgical studies. Processes being considered include, heap leaching, vat leaching, high pressure acid leaching, screen upgrades prior to leaching and pyrometallurical methods. All methods are capable of processing Nickel Laterite ore types into saleable products and are currently in use at different deposits across the world. • The current focus of studies into a preferred metallurgical approach is on atmospheric acid leaching methods with a particular focus on improving the recovery of reagents during processing to improve unit costs.
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• It is expected that waste rock material will largely be disposed of inside previously completed pits during the life of mine. Tailings disposal will consist of a mixture of conventional tailings dams and disposal in mined out pits. As all of the material mined will be of an oxidized nature, there is not expected to any acid generating minerals in the waste rock material. The processed tailings will need to be neutralized or recovered from the tailings stream prior to disposal in waste storage facilities. The expected land forms at the conclusion of the project will be of similar profile to the current land forms. • Environmental studies for the project have been started with base line surveys for flora and fauna. However, as the final process route is currently subject to research, the final environmental plans are yet to be developed. It is reasonable, given the existing nickel laterite operations in WA, that all environmental issues can be resolved and it will be possible to mine the resources within current environmental guidelines.

Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• Bulk densities were measured for the Jump Up Dam, Goongarrie and Highway, by both gamma down hole measurements, weight of recovered core versus drilled volume and wet/dry density measurement of drill core. Both the wet/dry and weight of recovered core methods include voids in the density assessment. The three measurements all gave similar reading for the in-situ density of the material (including any moisture within the in-situ material). Changes in mass were recorded for the recovered core between its as drilled mass, and mass after kiln drying to apply moisture content to the density measurements producing a dry density for resource estimation purposes. The variance in measured dry density was between 1.3 and 2.05/m^3 for all material types. Most of the mineralisation lies within the 'clay' material which has a dry density of between 1.30 and 1.33t/m^3. Densities were assigned to material based on the geochemical material classification scheme for each of the deposits. • All other deposits were not measured in the field. Densities based on the above measurements were applied to similar geology on these deposits, using either the geochemical material classification scheme, or, where assays not sufficient for classification, the average density for clay material.

Criteria	JORC Code explanation	Commentary
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• Classification varied slightly between the deposits. All classification of resource estimates were based on a combination of drill hole spacing, the ranges of mineralisation continuity (developed from variography studies), availability of all assay suits for geochemical classification and the slope of regression of the ordinary kriged nickel estimates. **Measured Mineral Resource** • Drill spacing of 20x40 metre or less. • All assays (Ni, Co, MgO, Mn, Cr, AL_2O_3, $Si0_2$, FeO, MgO, CaO) available for geochemical classification. • Domains developed for both high Fe and High MgO domains. • Measured density values available for the material being modelled. • The expected global accuracy of this material is ± 10% for tonnes of nickel. • Applied to a small portion of Jump Up Dam and Goongarrie South resource models. **Indicated Mineral Resource** • Drill spacing of 20x40 metre to 80x80 metre (depending on deposit and variography results). • All assays (Ni, Co, MgO, Mn, Cr, AL_2O_3, $Si0_2$, FeO, MgO, CaO) available for geochemical classification. • Domains developed for both high Fe and high MgO domains. • Density values derived from either measured density values for that deposit, or derived from adjacent deposits and applied to similar material types. • The expected global accuracy of this material is ± 15% for tonnes of nickel.

		• Applied to significant portions of Goongarrie South, Highway, Big Four, Siberia North, Bulong East and Jump Up Dam. **Inferred Mineral Resource** • Drill spacing of 80x80 metre, up to 400x100 metre, including material extended beyond the last line of drilling where deposits have not been closed out. • All assays (Ni, Co) available. Some deposits had additional elements available. • Limited accuracy or no information available for the development of geochemical domains for high Fe and high MgO domains. • Density values assumed for the material being modelled from results of other projects. • The expected global accuracy of this material is ± 30% for tonnes of nickel. • Applied to Ghost Rocks, Goongarrie Hill, Scotia, Black Range, Aubils, Boyce Creek and Kalpini, as well as to the geological extensions to the well drilled portions of the other deposits.

Criteria	JORC Code explanation	Commentary
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• All resource estimates attributed to Snowden were reviewed internally by Snowden at the time of their creation, and externally by Heron. Models created in-house by Heron have been validated against previous models created by Snowden. All models have been checked by Heron employees both past and present and are considered to be reasonable estimates of resources given the level of confidence applied to each model.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• All models as reported provide reasonable global estimates of the available nickel and cobalt resources. Models have been validated visually against drilling for both the recoverable minerals nickel and cobalt, and important geo-metallurgical minerals modelled (FeO, MgO, Al_2O_3, CaO and SiO_2). • The measured resources trial mined at Jump Up Dam reconciled to within 5% of both tonnes mined and nickel grade of mined material (note this reconciliation is an "as-mined" reconciliation, as the material mined has not been processed to date). In the trial mine there were some significant departures in modelled geo-metallurgical material type, no doubt partially due to the small sample size of the mining volume, but also reflecting the short range complexity of the MgO horizon and difficulties in mining of the highly variable contact zone. • Overall the modelled resources present a very reasonable global estimate of the resources for Ni and Co. The also provide a reasonable global estimate for MgO, FeO and Al_2O_3 estimates within the ore domains. Where measured material has been modelled (ie 10x10 metre spaced drilling), the local estimate of nickel and cobalt reconciled well within industry standards.

Table 3 Tenure relating to the KNP prospect areas containing continuous cobalt mineralisation

Prospect	Tenement ID	Heron Interest (%)	Area (ha)	Status	Notes
Goongarrie Region					
Goongarrie South	M29/00272	100	603	Live	
Goongarrie South	M29/00278	100	478	Live	
Goongarrie South	M29/00423	100	822	Live	
Big Four	M24/00731	100	117	Live	1
Big Four	M24/00732	100	202	Live	1
Big Four	M24/00744	100	6.7	Live	1
Big Four	M24/00778	100	890	Live	1
Scotia Dam	M24/00541	100	352	Live	
Yerilla Region					
Aubils	E39/01954	100	20 (bl)	Live	
Siberia Region					
Black Range	M24/00757	100	591	Live	

Notes:

1 Placer Dome Australia Limited retains certain gold rights.