



## Quarterly Report - Activities

for the quarter ended 30 September 2018

### Highlights

- **Coglia Well drilling program delivers substantial cobalt- nickel mineralisation**
- **Coronation Dam drilling program continues to deliver wide intervals of cobalt and nickel mineralisation**
- **Corporate restructure, capital consolidation and rights issue launched to raise \$2.3M**

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### Summary

#### *Australian Cobalt-Nickel Projects (100% owned)*

During the September quarter further assay results were received from a 5,000 metre program conducted at the Coronation Dam cobalt and nickel project. Assays received from the RC program have returned shallow and wide intervals of cobalt and nickel mineralisation, confirming the project's prospectivity and potential to host an economic resource.

Final results were received from a 2,869 metre drilling program at the Coglia Well cobalt and nickel project completed in the March quarter. Drilling identified widespread cobalt and nickel mineralisation within the regolith profile above an ultramafic unit. Drilling also identified significant copper anomalism more usually associated with nickel sulphide mineralisation.

#### *Kyrgyz Republic Aucu Gold Project (90% owned)*

During the quarter, the Company conducted an extensive review of all historical rock sampling results across the project to prioritise exploration targets. An extensive soil sampling program infilling the previous program where anomalous gold and copper values were identified was undertaken along with follow up rock and outcrop sampling. Results from these programs will be released in the current quarter.

The Company has also reviewed the updated resource estimate announced in the June quarter to assess what further work is required to convert it to an Indicated mineral resource. The Company is also in the process of transforming part of the license into an exploration permit. Once an exploration permit is granted the Company can formally lodge resource estimates and scoping studies with the Government and commence the process of applying for a mining permit.

#### *Corporate*

During the quarter the Company consolidated the share structure 50:1 and appointed a new Company Secretary.

Subsequent to the quarter end the Company has launched a partially underwritten 2:1 renounceable rights issue to raise \$2.3 Million and appointed a new Non-executive Chairman.

Todd Hibberd  
Managing Director  
31 October 2018

## 1 Cobalt-Nickel Projects, Western Australia (WCN 100%)

### 1.1 Coronation Dam Cobalt and Nickel Project

During the quarter the Company received further drilling results (ASX release 1 Aug 2018) from a 5,000m RC program completed at the Coronation Dam cobalt and nickel project in the June quarter. Results received to date include:

- 40 metres at 0.11% cobalt and 1.04% nickel from 16 metres
  - 15 metres at **0.20% cobalt** and 1.1% nickel from 29 metres
- 20 metres at **0.27% cobalt** and 0.66% nickel from 28 metres including:
  - 1 metre at 0.95% cobalt and 0.97% nickel from 31 metres and;
  - 1 metre at 0.63% cobalt and 0.70% nickel from 35 metres
- 24 metres at 0.19% cobalt and 1.2% nickel from 8 metres
- 8 metres at 0.16% cobalt and 1.0% nickel from surface
- 56 metres at 0.06% cobalt and 0.90% nickel from 20 metres
- 32 metres at 0.05% cobalt and 0.80% nickel from 44 metres and;
- 4 metres at 0.24% cobalt and 1.53% nickel from 76 metres
- Mineralisation up to **550 metres wide and 40 metres thick**

The results are from cross sections drilled in the central part of the deposit to confirm the historical drilling results. Extensive cobalt mineralisation was identified from surface, extends up to a depth of 65 metres and is approximately 550 metres wide. The orebody dips at a shallow angle to the west.

Once all drilling results have been received the Company anticipates conducting preliminary metallurgical test work to determine suitable processing options and to calculate a maiden JORC compliant cobalt and nickel resources.

### 1.2 Coglia Well Cobalt and Nickel Project

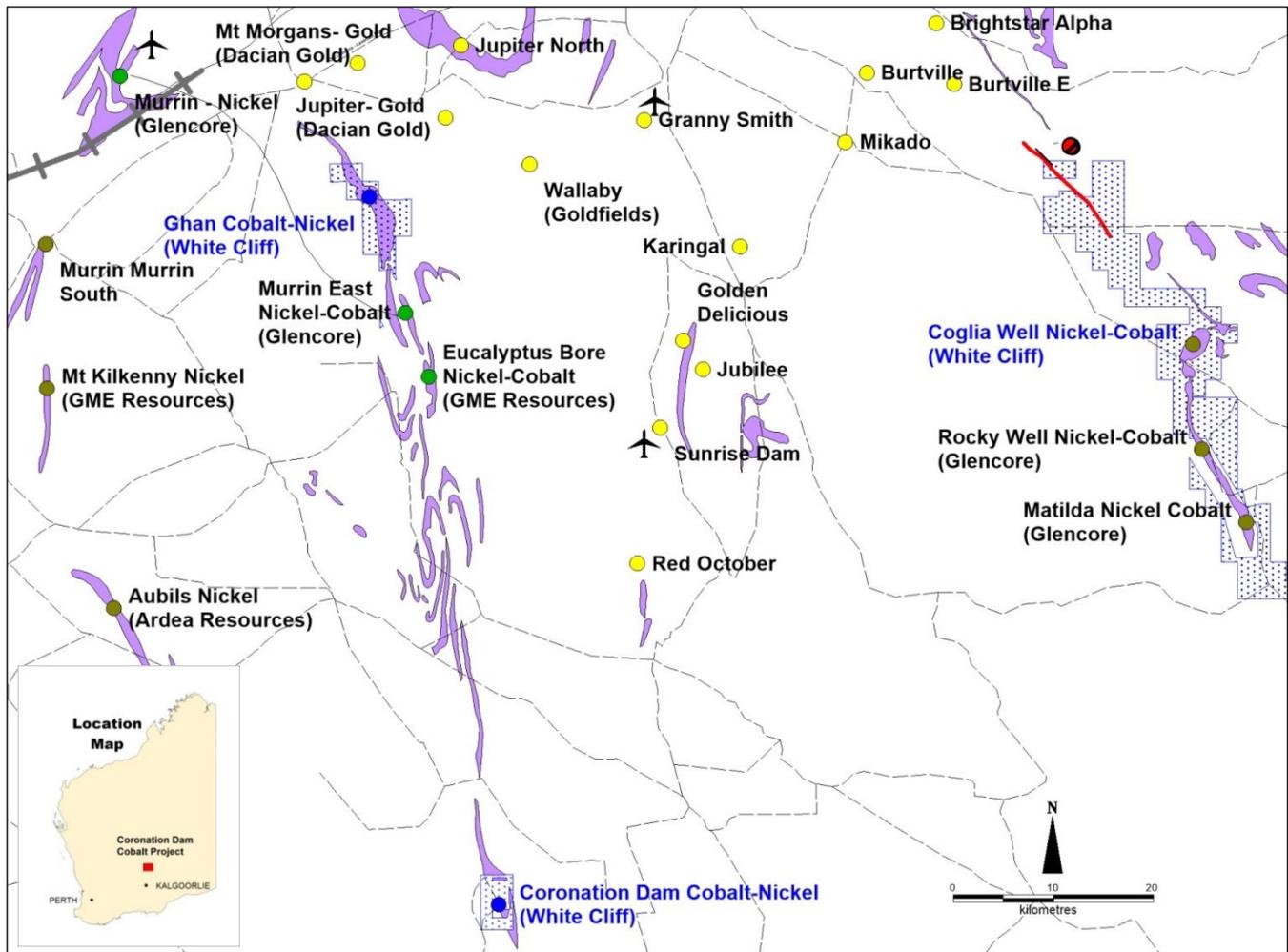
During the quarter the Company received final drilling results from a 2,869m RC program (completed late in the March quarter) at the Coglia Well cobalt and nickel project. The drilling identified widespread cobalt and nickel mineralisation within the regolith profile along a 5 kilometre long and 1 kilometre wide section of the Coglia ultramafic complex. The results have confirmed the high grade of cobalt and nickel mineralisation previously identified at the Coglia Well deposit and extended the mineralised zone to 5 kilometres long. Better results include:

- 20 metres at **0.1% cobalt** and 0.7% nickel from 32 metres including
  - 11 metres at **0.13% cobalt** and 0.63% nickel from 41 metres
- 16 metres at **0.12% cobalt** and 0.52% nickel from 40 metres including
  - 12 metres at **0.13% cobalt** and 0.55% nickel
- 17 metres at 0.11% cobalt and 1.01% nickel from 78 metres including;
  - 6 metres at 0.22% cobalt 1.6% nickel
  - Single metre intersections of **0.49% and 0.29% cobalt**
- Single metre cobalt grades of **0.41% and 0.36% cobalt**
- 2 metres at 0.38% cobalt and 1.05% nickel from 65 metres
- Multiple holes ended in mineralisation
- Mineralised zone is 1,000 metres wide and 10-20 metres thick

The drilling also identified **exceptionally high nickel grades** including 4 metres at 3.2% nickel and 1 metre at 4.2% nickel more usually associated with nickel-copper sulphide mineralisation. The project also contains anomalously high copper that is also suggestive of sulphide mineralisation. Results included:

- 4 metres at **3.20% nickel, 0.11% cobalt**, and 314ppm copper from 43 metres including;
  - 3 metres at **3.85% nickel**, 0.12% cobalt, and 346ppm copper
- Highly anomalous copper assays suggestive of sulphide mineralisation including;
  - 23 metres at 1,024ppm (0.1%) copper from 22 metres
  - 33 metres at 527ppm copper from 18 metres

The Company anticipates conducting metallurgical test work to determine suitable processing options over coming months prior to further drilling which will be designed to develop JORC-compliant cobalt and nickel resources.



**Figure 1:** Location and infrastructure map of the Coghia Well, Coronation Dam and Ghan Well cobalt projects. The area is serviced by rail, roads, towns, airports and Glencore’s nickel processing facility at Murrin Murrin

All three projects are located close to multiple operating mines serviced by substantial existing infrastructure such as roads, telecommunications, power, gas and with access to a skilled workforce. They are all within trucking distance of Glencore’s Murrin Murrin nickel-cobalt processing plant and other proposed processing facilities that could potentially pose an option for monetising resources.

## 2 Aucu Gold Project, Kyrgyz Republic (WCN 90%)

During the quarter, the Company conducted an extensive review of all historical rock sampling results across the project to prioritise exploration targets. An extensive soil sampling program infilling the previous program where anomalous gold and copper values were identified was undertaken along with follow up rock and outcrop sampling. Results from these programs will be released in the current quarter.

The Company has also reviewed the updated resource estimate announced in the June quarter to assess what further work is required to convert it to an Indicated mineral resource. The Company is also in the process of transforming part of the license into an exploration permit. Once an exploration permit is granted the Company can formally lodge resource estimates and scoping studies with the Government and commence the process of applying for a mining permit.

As previously announced, the updated inferred gold resource using a lower cut-off grade of 1 g/t gold consists of 2.95 million tonnes grading 5.1 g/t gold containing 484,000 ounces of gold. The new resource represents a 60% increase in contained gold ounces over the previous gold resource of 302,000 ounces reported in April 2017.

This latest resource estimate also identified a new inferred copper resource, using a lower cut of grade of 0.25% copper, of 16.5 Mt tonnes at 0.37% copper, containing 64,000 tonnes of copper. The new copper resource represents a 46% increase in contained copper over the previous contained copper resource of 44,870 tonnes reported in April 2017.

As previously reported the gold and copper resources start at surface, have only been shallowly drilled in most areas' and remain open along strike and at depth. The reported gold resources represent less than 5% of mineralised faults identified by rock-chip sampling to date. Approximately 95% of the mineralised faults identified by rock chip sampling are still to be drilled. The gold bearing mineralised structures extend beyond the current resource estimate area over a length greater than 3,000 metres and occur as multiple lodes (Figure 2).

**Table 1: 2018 JORC Inferred gold resource estimate**

Area	Category	Tonnes	Gold (g/t)	Gold (Ounces)
Lower Gold Zone	Inferred	1,160,000	4.0	148,000
Upper Gold Zone	Inferred	770,000	4.7	116,000
Sandstone Zone	Inferred	280,000	11.4	102,000
Quartz Zone	Inferred	330,000	<b>6.2</b>	65,000
Quartz Zone Halo	Inferred	190,000	1.9	11,000
Camp Gold Zone	Inferred	110,000	8.8	30,000
Eastern Gold Zone	Inferred	120,000	2.8	11,000
<b>Total</b>	<b>Inferred</b>	<b>2,950,000</b>	<b>5.1</b>	<b>484,000</b>

**Table 2: 2018 JORC inferred copper resource estimate**

Area	Category	Tonnes	Copper %	Copper (tonnes)
Quartz Zone	Inferred	700,000	0.51	4,000
Chanach Porphyry	Inferred	16,500,000	0.36	60,000
<b>Total</b>	<b>Inferred</b>	<b>17,500,000</b>	<b>0.37</b>	<b>64,000</b>

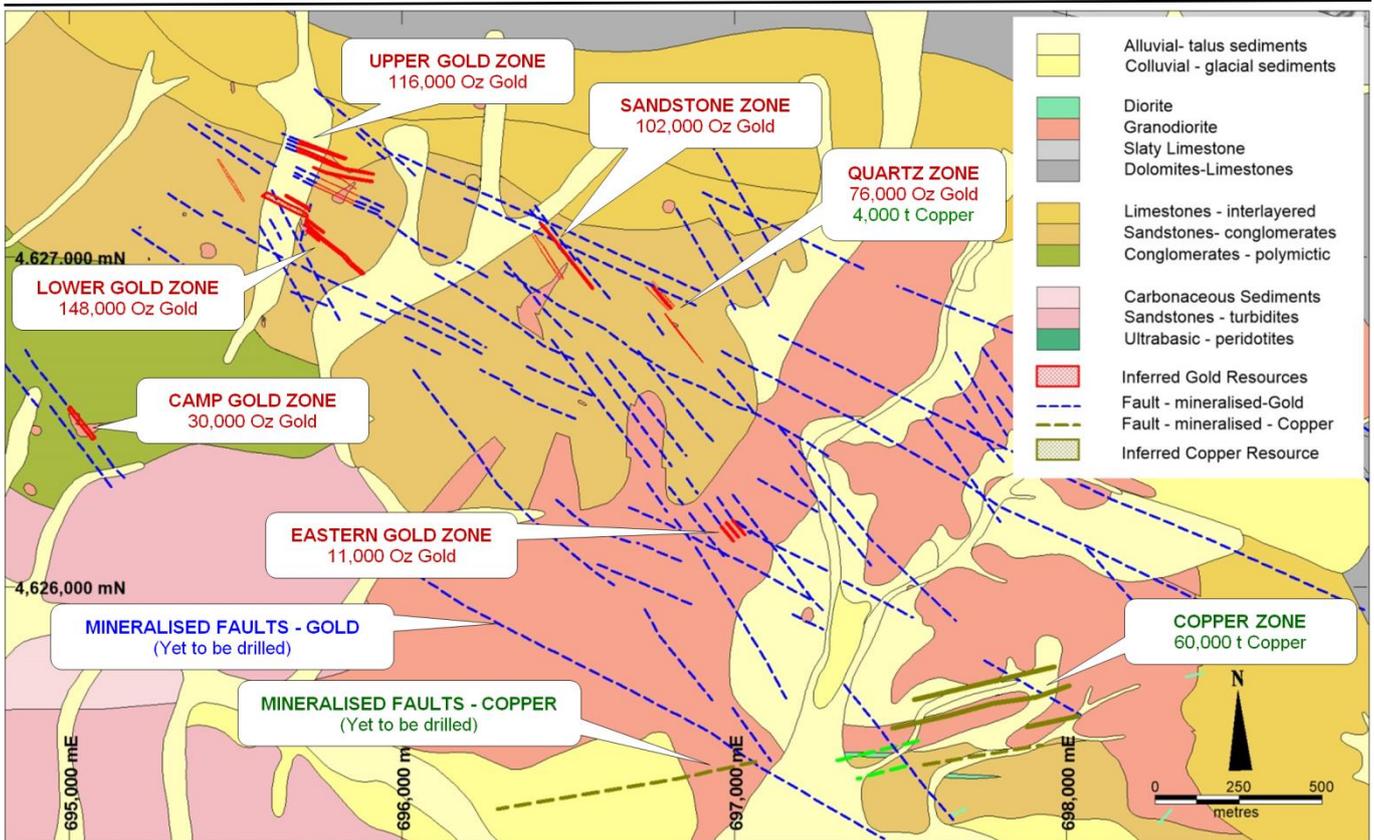


Figure 2: Aucu geology map showing existing Inferred resource areas and undrilled structures in blue.



Figure 3: Location Map: Northwest Kyrgyz Republic, Central Asia

### 3 Corporate

During the quarter the Company consolidated its capital structure 50:1 resulting in the issued capital reducing to 76.9 million shares and 23 million options.

The Company also undertook a review of its corporate structure and has appointed Ian Hobson as Company Secretary and Jack Gardner as Non-executive Chairman (ASX Announcements 27/09/18 and 26/10/18).

Mr Hobson is a fellow chartered accountant and chartered secretary with in excess of 30 years professional accounting experience working for large chartered accounting firms together with commercial experience in Australia, UK and Canada.

Mr Gardner is an engineer with extensive experience bringing mines into production. Mr. Gardner graduated from the University of Melbourne in 1962 with a Bachelor of Engineering (Mechanical) degree and is a Fellow of the Institution of Engineers Australia. He also holds a Master of Business Administration degree from Curtin University, Western Australia.

Subsequent to the quarter the Company announced a partially underwritten 2:1 rights issue to raise \$2.3 Million to fund exploration at the Aucu Gold project and Coronation Dam cobalt-nickel project (ASX announcement 16/10/18).

### 4 Tenement information

TENEMENT	PROJECT	LOCATION	OWNERSHIP	CHANGE IN QUARTER
AP590	Chanach	Kyrgyz Republic	90%	-
E38/2484	Merolia	Laverton	100%	-
E38/2552	Merolia	Laverton	100%	-
E38/2690	Merolia	Laverton	100%	-
E38/2693	Merolia	Laverton	100%	-
E38/2847	Merolia	Laverton	100%	-
E38/2848	Merolia	Laverton	100%	-
E38/1833	Merolia	Laverton	100%	-
E63/1222	Lake Percy	Dundas	100%	-
E63/1793	Lake Percy	Dundas	100%	-
E63/1716	Bremer Range	Dundas	100%	-
P63/1988	Bremer Range	Dundas	100%	-
P63/1989	Bremer Range	Dundas	100%	-
E63/1264	Bremer Range	Dundas	100%	-
E39/1479	Ghan Well	Laverton	100%	-
E39/1585	Laverton	Laverton	100%	-
E31/1101	Coronation Dam	Leonora	100%	-

## About White Cliff Minerals Limited

White Cliff Minerals Limited is a Western Australian based exploration company with the following main projects:

### Cobalt-Nickel Projects:

**Coronation Dam Cobalt Project (100%):** The project consists of one tenement (16km<sup>2</sup>) in the Wiluna-Norseman greenstone belt 90km south of the Murrin Murrin nickel-cobalt HPAL plant. The tenement contains an extensive ultramafic unit that contains zones of cobalt mineralisation associated with nickel mineralisation. The Cobalt grades range for 0.01% to 0.69% cobalt and occur within the regolith profile above the ultramafic units.

**Ghan Well Cobalt Project (100%):** The project consists of one tenement (39km<sup>2</sup>) in the Wiluna-Norseman greenstone belt 25km southeast of the Murrin Murrin nickel-cobalt HPAL plant. The tenement contains an extensive ultramafic unit that contains zones of cobalt mineralisation associated with nickel mineralisation. The Cobalt grades range for 0.01% to 0.75% cobalt and occur within a zone of manganiferous oxides that form in the regolith profile.

**Coglia Well Cobalt Project (100%):** The project consists of two tenements (238km<sup>2</sup>) in the Merolia greenstone belt 50km south east of Laverton, WA. The tenements contain extensive ultramafic units that host zones of cobalt mineralisation associated with nickel mineralisation. Historical drilling has identified Cobalt grades including 16 metres at **0.16% cobalt** and 0.65% nickel.

**Bremer Range Cobalt Project (100%):** The project covers 127km<sup>2</sup> in the Lake Johnson Greenstone Belt prospective for shallow cobalt-nickel mineralisation. Historical drilling has identified extensive cobalt and nickel mineralisation associated with ultramafic rocks extending 15 kilometres in length and up to 1500 metres wide. The tenements are only 130 kilometres from the Ravensthorpe cobalt and nickel processing facility.

**Lake Percy Nickel Project (100%)** The Lake Percy tenements (E63/1222i and E63/1793) contain substantial nickel and cobalt anomalism associated with outcropping ultramafic units.

**Merolia Nickel Project (100%):** The project consists of 325km<sup>2</sup> of the Merolia Greenstone belt and contains extensive ultramafic sequences including the Diorite Hill layered ultramafic complex, the Rotorua ultramafic complex, the Curara ultramafic complex and a 51 kilometre long zone of extrusive ultramafic lava's. The intrusive complexes are prospective for nickel-copper sulphide accumulations possibly with platinum group elements, and the extrusive ultramafic rocks are prospective for nickel sulphide and nickel-cobalt accumulations.

### Gold Projects:

**Kyrgyz Copper-Gold Project (90%):** The Project contains extensive porphyry related gold and copper mineralisation starting at the surface and extending over several kilometres. Drilling during 2014-7 has defined a **gold deposit** currently containing an inferred resource of **3 Mt at 5.1 g/t** containing **484,000 ounces** of gold. Drilling has also defined a significant **copper deposit** at surface consisting of **17.2 Mt at 0.37% copper** containing **64,000 tonnes** of copper. Extensive mineralisation occurs around both deposits demonstrating significant expansion potential. The project is located in the Kyrgyz Republic, 350km west-southwest of the capital city of Bishkek and covers 57km<sup>2</sup>. The Chanach project is located in the western part of the Tien Shan Belt, a highly mineralised zone that extending for over 2500 km, from western Uzbekistan, through Tajikistan, Kyrgyz Republic and southern Kazakhstan to western China.

**Ironstone Gold Project (100%):** The project consists of 175km<sup>2</sup> of the Merolia Greenstone belt consisting of the Ironstone, Comet Well and Burtville prospects. The project contains extensive basalt sequences that are prospective for gold mineralisation. including the Ironstone prospect where historical drilling has identified 24m at 8.6g/t gold.

**Laverton Gold Project (100%):** The project consists of one granted tenement (22km<sup>2</sup>) in the Laverton Greenstone belt. The Red Flag prospect is located 20km southwest of Laverton in the core of the structurally complex Laverton Tectonic zone immediately north of the Mt Morgan's Gold Mine (3.5 MOz) and 7 kilometres northwest of the Wallaby Gold Mine (7 MOz).

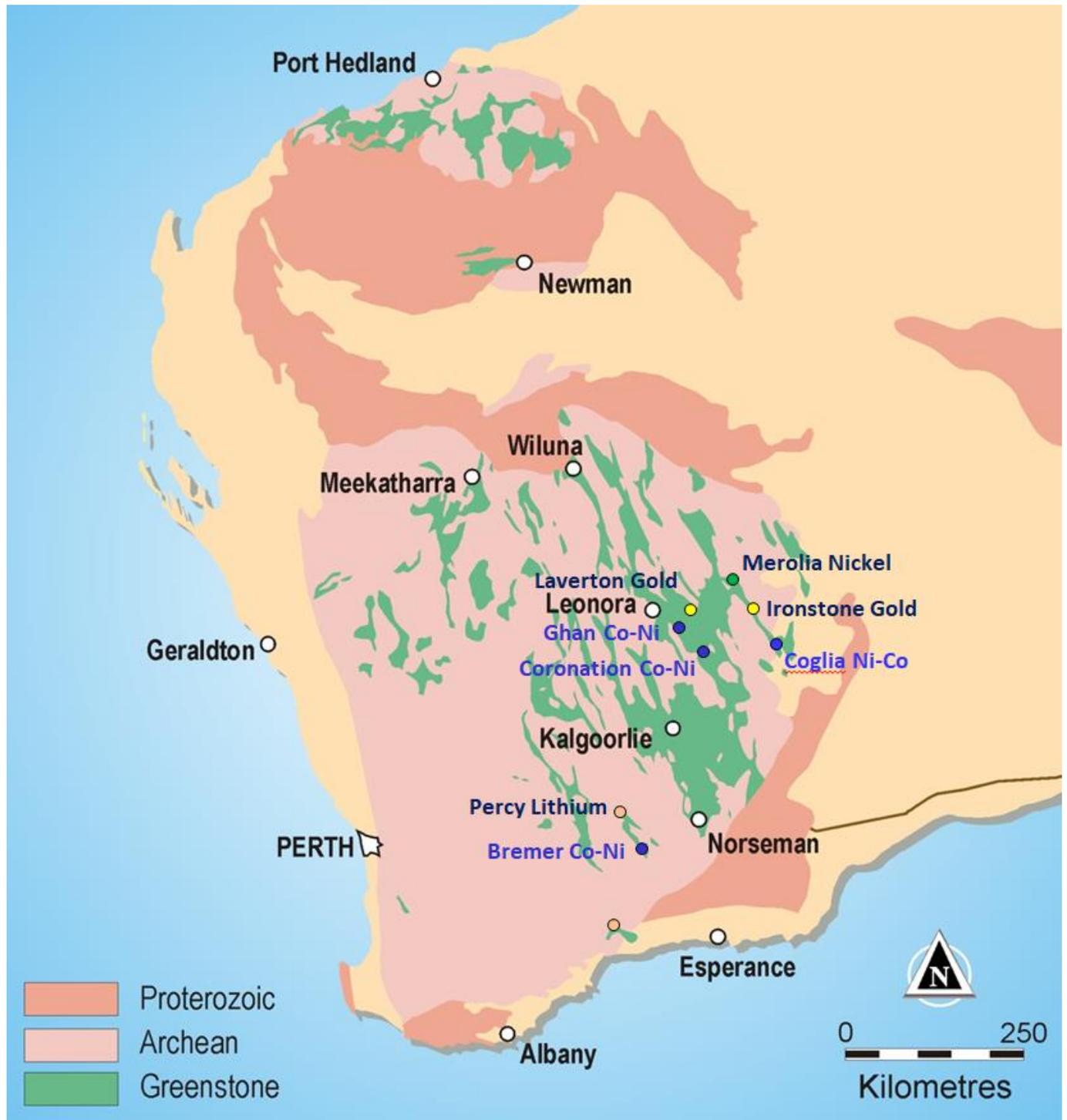
#### JORC Compliance

The Information in this update that relates to Exploration Results is based on information compiled by Mr Todd Hibberd, who is a member of the Australasian Institute of Mining and Metallurgy. Mr Hibberd is a full time employee of the Company. Mr Hibberd has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the 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 (the JORC Code)'. Mr Hibberd consents to the inclusion of this information in the form and context in which it appears in this report.

<sup>1</sup>The Information in this report that relates to Mineral Resources is based on information compiled by Mr Ian Glacken, who is a Fellow of the Australasian Institute of Mining and Metallurgy. Mr Glacken is a full time employee of Optiro Pty Ltd. Mr Glacken has sufficient experience which



is relevant to the style of mineralisation and type of deposits under consideration and to the 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 (the JORC Code). Mr Glacken consents to the inclusion of this information in the form and context in which it appears in this report.



**Tenement Map - Australia.** A regional geology and location plan of White Cliff Minerals Limited exploration projects in the Yilgarn Craton, Western Australia