



5 February 2018

ASX Code: WCN

## Cobalt and Nickel Mineralisation identified at Cogia Well

### Highlights:

- Portfolio review identifies substantial cobalt and nickel mineralisation in existing drilling:
  - 28 metres at 0.12% cobalt and 0.55% nickel from 60 metres including;
    - 16 metres at 0.16% cobalt and 0.65% nickel
  - 12 metres at 2.2% nickel and 0.06% cobalt from 80 metres including;
    - 4 metres at 3% nickel and 0.06% cobalt
- Located in a region of extensive mining infrastructure and nickel-cobalt processing facilities
- Adds to other prospective WA cobalt-nickel projects in White Cliff portfolio
- Statutory approvals for drilling lodged with the WA Government

White Cliff Minerals Limited (“**White Cliff**” or the “**Company**”) is pleased to report that a review of the existing exploration data from its 100%-owned Cogia Well project 70km southeast of Laverton in Western Australia’s north-eastern goldfields (Figure 1) has identified substantial cobalt and nickel mineralisation that will be the subject of further assessment.

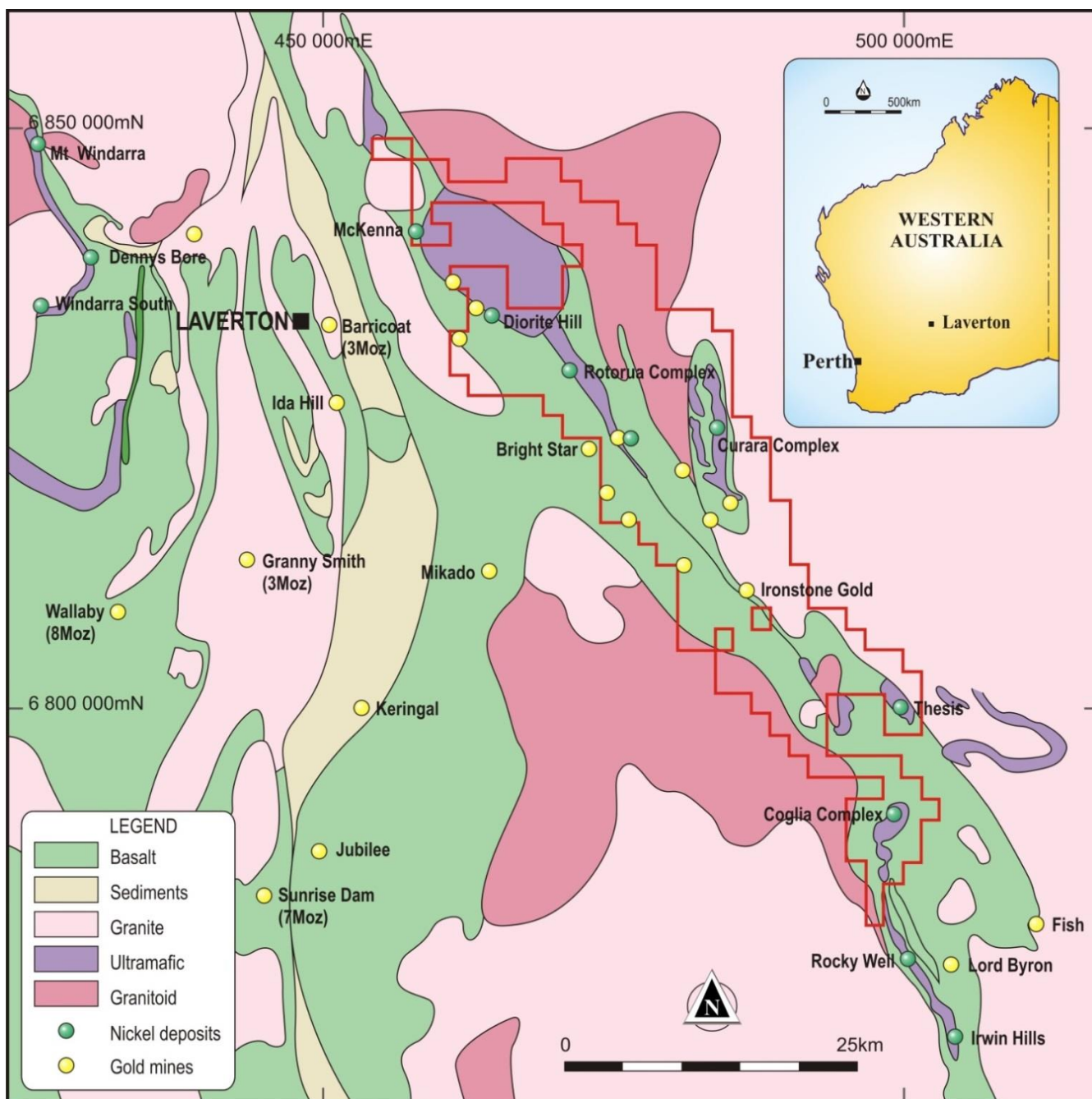
White Cliff acquired the Cogia Well project (Figure 2) via exploration license applications in 2009 and 2012, having been initially attracted to its nickel sulphide exploration potential. Following the substantial increase in the cobalt price in 2017 and a recovering nickel price, the Company conducted a review of the existing drilling and sampling resulting in the identification of substantial cobalt and nickel mineralisation over a large area. Drilling results include:

- 28 metres at 0.12% cobalt and 0.55% nickel from 60 metres including;
  - 16 metres at **0.16% cobalt** and 0.65% nickel
- 12 metres at 2.18% nickel and 0.06% cobalt including
  - 4 metres at **2.95% nickel**, 0.06% cobalt

Drilling has occurred on wide spaced lines generally 650 metres apart with holes spaced at 320 metre intervals. Cobalt and nickel mineralisation occurs on all lines and occurs between 40 and 80 metres depth. Mineralisation has developed in the regolith profile above a weathered ultramafic unit which was originally a dunite (an olivine rich ultramafic rock). A series of existing drill programs (2001-2003) outlined cobalt and nickel mineralisation over a zone approximately 2.5km long by 500 metres wide and 10-15 metres thick (see table 1 for drilling results). Mineralisation is open along strike in both directions. A total of 22 holes have been drilled for 2062 metres but holes drilled in 2001 (MPRC001-008) were not assayed for cobalt.

White Cliff Managing Director Todd Hibberd said: “*The Cogia project was initially acquired for its nickel sulphide potential but the higher cobalt and nickel grades encountered in the 2016 drilling suggest that there is substantial shallow oxide mineralisation that may be economic. The Company has lodged a drilling program with the WA government and is conducting 3D modelling of the mineralisation in preparation for drilling.*”

“*White Cliff now has three shallow cobalt nickel deposits – Cogia Well, Coronation Dam and Ghan Well – in a region with extensive mining and processing infrastructure and within trucking distance to Glencore’s Murrin-Murrin nickel-cobalt processing facilities.*”



**Figure 1** Location map of the tenements at the Merolia Project near Laverton WA showing the Coglia Well complex (lower right)

### The Coglia Well Nickel-Cobalt Deposit

The Coglia ultramafic complex covers a 11.5 kilometre by 1.5 kilometre area and is part of a 100 kilometre-long trend of ultramafic rock running from Diorite Hill in the north to Mulga Tank in the south. At Coglia Well, approximately 2.5 kilometres of the 11.5 kilometres of strike have been partially drill tested, resulting in the identification of extensive cobalt and nickel mineralisation.

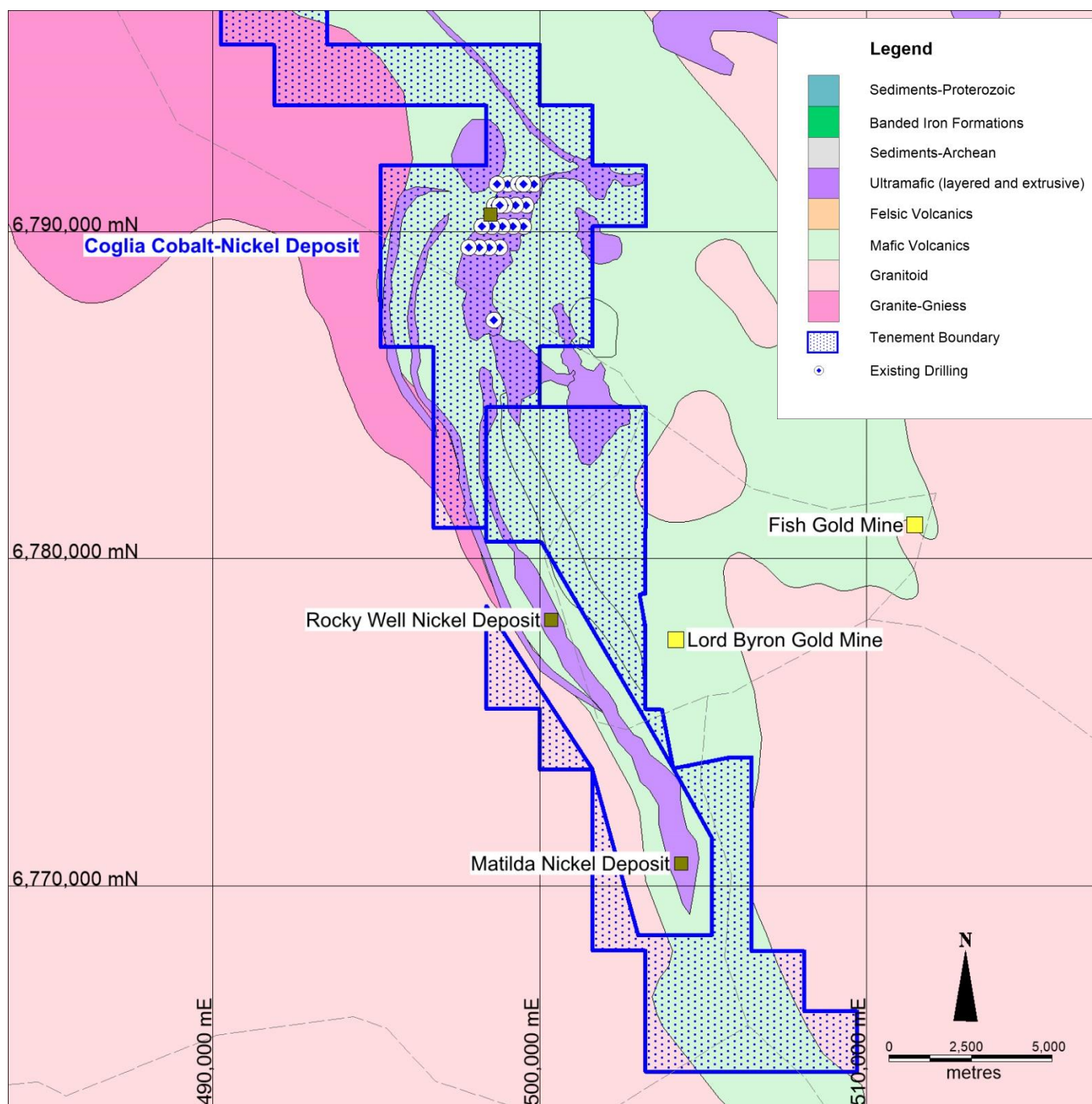
The cobalt grade appears to increase substantially to the south of the main mineralisation, which is consistent with the grade of Glencore PLC's adjacent Irwin Hills cobalt and nickel deposits which contain 29Mt at 0.11% cobalt and 1% nickel. A single RC hole, MERC005, drilled 2.5 kilometres south of the main mineralisation, encountered 28 metres at 0.12% cobalt and 0.55% nickel. There is a further 7 kilometres of untested prospective ultramafic rock to the tenement boundary adjacent to Glencore's deposit.

Cobalt mineralisation occurs as a shallow layer of manganiferous oxides that form between the smectite clays and the overlying ferruginous clays. High grade cobalt mineralisation typically occurs between 30-50 metres depth and is associated with nickel mineralisation. The cobalt mineralisation generally occurs slightly higher than nickel mineralisation in the regolith profile.

At Coggia Well there is substantial nickel mineralisation and the cobalt mineralisation discussed above has formed from the same processes. The Company believes that the cobalt mineralisation has the potential to economically extractable in its own right. The proximity of the project to Glencore's Murrin-Murrin nickel-cobalt processing plant is likely to strongly impact the possibility of economic development of both the cobalt and nickel mineralisation.

While White Cliff has not yet calculated any mineral resources it is clear that potential exists for a substantial resource. Current drilling has only tested a small fraction of the mapped ultramafic unit indicating there is potential to locate significant additional mineralisation.

The Company has lodged an application to conduct an RC drilling program at Coggia Well and is in the process of generating a 3D geological and orebody model prior to drilling.

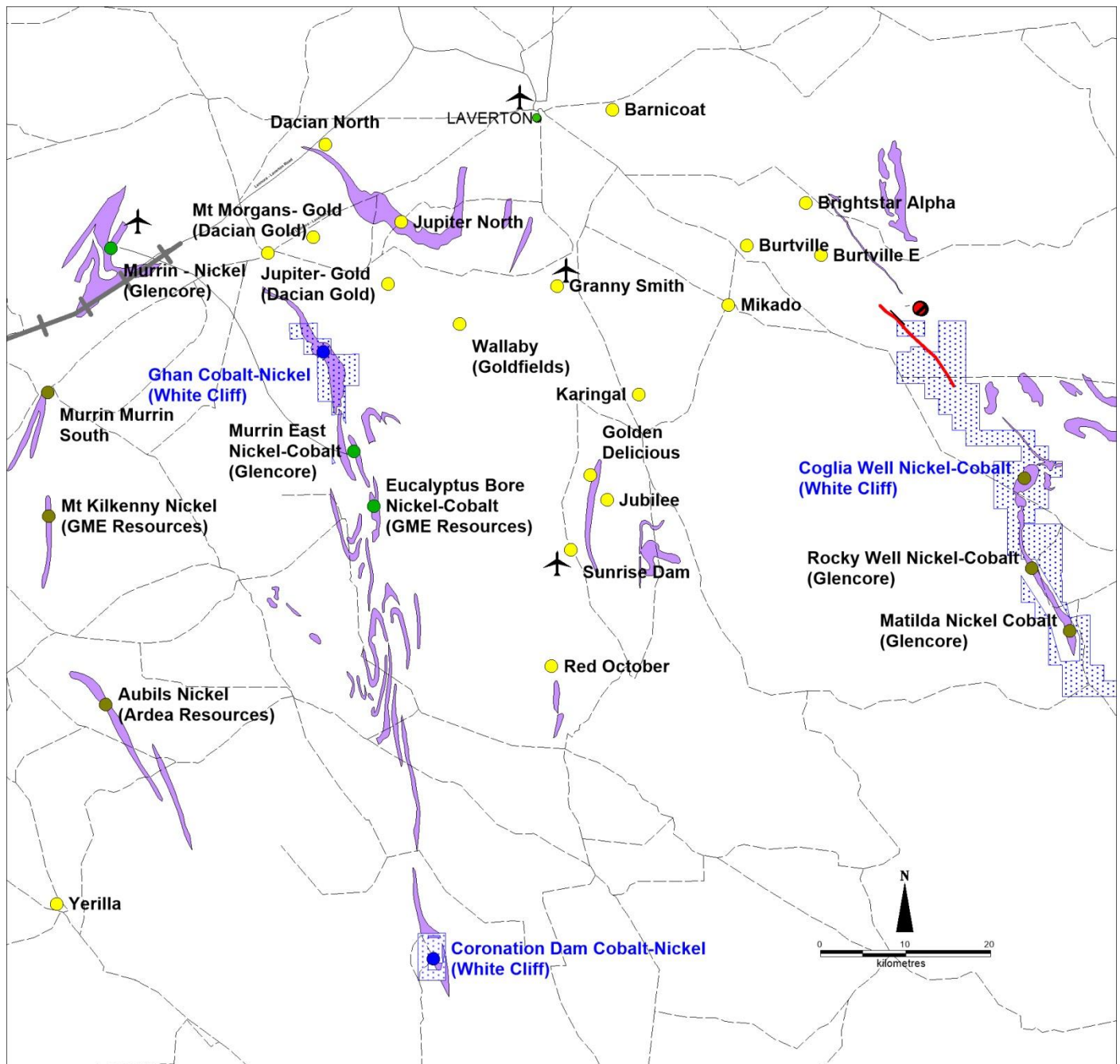


**Figure 2** Coggia Well drilling plan showing historical and White Cliff drilling, geology and local deposits and mines



## Regional Infrastructure

The Cogleia Well nickel and cobalt deposit occurs in a region hosting multiple mining operations that have substantial existing infrastructure such as roads, telecommunications, power and gas and with access to a skilled mining workforce. The project is located 130km via road from Glencore's Murrin Murrin nickel-cobalt processing plant and is adjacent to their Irwin Hills nickel-cobalt deposit. The region is well serviced by transport services and airports.



**Figure 3** Regional location plan showing main nickel and cobalt deposits and the infrastructure surrounding White Cliff's cobalt-nickel deposits

**Table 1: Existing drill holes at Coggia Well**

Hole_ID	North	East	RL	Depth
<b>MPRC001</b>	6790800	499580	400	47
<b>MPRC002</b>	6790800	499260	400	70
<b>MPRC003</b>	6790800	498940	400	72
<b>MPRC004</b>	6790800	498620	400	73
<b>MPRC005</b>	6789520	498780	400	51
<b>MPRC006</b>	6789520	498460	400	74
<b>MPRC007</b>	6789520	498140	400	74
<b>MPRC008</b>	6789520	497820	400	72
<b>MPRC009</b>	6790160	499500	400	80
<b>MPRC010</b>	6790160	499180	400	92
<b>MPRC011</b>	6790160	498860	400	86
<b>MPRC012</b>	6790160	498540	400	92
<b>MPRC013</b>	6790160	498220	400	89
<b>MPRC014</b>	6791440	499660	400	86
<b>MPRC015</b>	6791440	499340	400	80
<b>MPRC016</b>	6791440	499020	400	86
<b>MPRC017</b>	6791440	498700	400	86
<b>MPRC018</b>	6791440	499820	400	92
<b>MPRC019</b>	6791440	499500	400	80
<b>MPRC020</b>	6790800	498780	400	80
<b>MERC004</b>	6790800	498875	400	250
<b>MERC005</b>	6787300	498600	400	250

**Table 2: Mineralised intervals for existing drilling at Coggia Well (>5000ppm Nickel)**

Hole_ID	From	To	Interval	Cobalt (ppm)	Chrome (ppm)	Copper (ppm)	Nickel (ppm)	Lead (ppm)	Zinc (ppm)
MERC004	72	76	4	353	6170	176	6270	14	350
MERC004	76	80	4	<b>621</b>	9580	244	9060	30	395
MERC004	76	77	1	<b>660</b>	9680	175	7520	-999	490
MERC004	77	78	1	<b>640</b>	8940	280	8950	-999	480
MERC004	78	79	1	<b>430</b>	9020	275	8130	-999	345
MERC004	79	80	1	<b>1060</b>	12000	375	9350	-999	330
MERC004	80	81	1	<b>830</b>	11300	340	7410	-999	280
MERC004	80	84	4	<b>817</b>	7700	254	<b>20400</b>	42	515
MERC004	81	82	1	<b>580</b>	12900	335	<b>9120</b>	-999	345
MERC004	82	83	1	<b>590</b>	6450	240	<b>12800</b>	-999	330
MERC004	83	84	1	<b>1180</b>	5180	270	<b>30900</b>	-999	730
MERC004	84	85	1	<b>740</b>	5750	235	<b>25700</b>	-999	665
MERC004	84	88	4	<b>617</b>	4970	164	<b>29500</b>	13	865
MERC004	85	86	1	<b>620</b>	3410	165	<b>31400</b>	-999	945
MERC004	86	87	1	380	6050	210	<b>16000</b>	-999	395
MERC004	87	88	1	310	5370	105	<b>11900</b>	-999	285
MERC004	88	92	4	378	4510	126	<b>15700</b>	9	230
MERC004	88	89	1	170	4490	45	4300	-999	130
MERC004	89	90	1	220	4380	60	9930	-999	180
MERC004	90	91	1	210	4210	60	9210	-999	120
MERC004	91	92	1	480	4320	310	<b>23000</b>	-999	365
MERC004	92	96	4	282	8920	80	<b>9320</b>	7	145

Hole_ID	From	To	Interval	Cobalt (ppm)	Chrome (ppm)	Copper (ppm)	Nickel (ppm)	Lead (ppm)	Zinc (ppm)
MERC004	92	93	1	300	17200	95	<b>8730</b>	-999	195
MERC004	93	94	1	410	10000	95	<b>10400</b>	-999	160
MERC004	94	95	1	180	5200	100	6070	-999	125
MERC004	95	96	1	180	4480	80	7230	-999	115
MERC004	96	100	4	273	1910	50	7830	3	70
MERC005	60	64	4	<b>852</b>	16000	112	4280	35	255
MERC005	64	68	4	<b>1690</b>	14600	50	<b>5520</b>	19	295
MERC005	68	72	4	<b>1010</b>	16000	22	<b>7020</b>	4	290
MERC005	72	76	4	<b>2480</b>	13900	26	<b>7920</b>	1	245
MERC005	76	80	4	<b>1210</b>	12400	22	<b>5790</b>	3	250
MERC005	80	84	4	<b>434</b>	9790	12	4280	-1	145
MERC005	84	88	4	<b>597</b>	10600	20	4140	4	150
MPRC002	59	60	1	-10	4800	-50	5590	-999	95
MPRC002	61	62	1	-10	4800	61	4820	-999	110
MPRC002	66	70	4	-10	5200	-50	4270	-999	87
MPRC003	62	63	1	-10	12300	407	4440	-999	148
MPRC003	63	64	1	-10	20900	570	<b>9090</b>	-999	286
MPRC003	64	65	1	-10	18800	482	<b>8140</b>	-999	388
MPRC003	65	66	1	-10	19800	458	<b>8560</b>	-999	367
MPRC003	66	67	1	-10	20000	387	<b>8500</b>	-999	328
MPRC003	67	68	1	-10	18500	360	<b>8370</b>	-999	360
MPRC003	68	69	1	-10	17500	310	<b>8130</b>	-999	355
MPRC003	69	70	1	-10	16500	209	<b>7980</b>	-999	291
MPRC003	70	71	1	-10	17600	188	<b>7840</b>	-999	229
MPRC004	69	70	1	-10	5200	-50	<b>5380</b>	-999	88
MPRC004	70	71	1	-10	5600	-50	<b>8930</b>	-999	111
MPRC004	71	72	1	-10	4200	-50	4860	-999	82
MPRC006	69	70	1	-10	18000	-50	9160	-999	313
MPRC006	70	71	1	-10	15500	-50	6390	-999	221
MPRC006	71	72	1	-10	13500	-50	5890	-999	198
MPRC006	72	73	1	-10	15100	-50	5540	-999	187
MPRC007	66	67	1	-10	40600	142	7710	-999	367
MPRC007	67	68	1	-10	20300	176	<b>9030</b>	-999	453
MPRC007	68	69	1	-10	15000	133	<b>9270</b>	-999	415
MPRC007	69	70	1	-10	9100	79	<b>10790</b>	-999	464
MPRC007	70	71	1	-10	17200	108	<b>14200</b>	-999	480
MPRC007	71	72	1	-10	38500	89	7310	-999	303
MPRC007	72	73	1	-10	14200	101	6370	-999	216
MPRC008	40	41	1	-10	7700	174	4670	-999	163
MPRC008	41	42	1	-10	9700	143	4780	-999	163
MPRC008	43	44	1	-10	6300	159	4970	-999	286
MPRC008	44	45	1	-10	3900	133	6410	-999	227
MPRC008	45	46	1	-10	5600	139	6150	-999	217
MPRC008	46	47	1	-10	5900	130	4960	-999	231
MPRC008	47	48	1	-10	5500	141	5190	-999	296
MPRC008	48	49	1	-10	5300	236	5080	-999	371
MPRC008	49	50	1	-10	4300	195	5930	-999	375
MPRC008	50	51	1	-10	4100	155	5920	-999	381

Hole_ID	From	To	Interval	Cobalt (ppm)	Chrome (ppm)	Copper (ppm)	Nickel (ppm)	Lead (ppm)	Zinc (ppm)
MPRC008	51	52	1	-10	4600	149	7970	-999	360
MPRC008	52	53	1	-10	8400	127	6660	-999	399
MPRC008	53	54	1	-10	12900	89	5760	-999	370
MPRC008	54	55	1	-10	10900	121	4940	-999	300
MPRC008	63	64	1	-10	7500	-50	4390	-999	105
MPRC008	64	65	1	-10	8400	-50	6230	-999	128
MPRC008	65	66	1	-10	7500	-50	7450	-999	137
MPRC008	69	70	1	-10	9300	-50	4910	-999	138
MPRC010	63	64	1	212	5100	138	5450	-999	166
MPRC010	64	65	1	255	9100	114	7460	-999	250
MPRC010	65	66	1	206	8800	124	6460	-999	221
MPRC010	66	67	1	280	12800	205	6060	-999	274
MPRC010	67	68	1	356	14700	636	7970	-999	413
MPRC010	68	69	1	334	15300	398	<b>9160</b>	-999	338
MPRC010	69	70	1	309	12200	364	<b>8000</b>	-999	294
MPRC010	70	71	1	346	15400	371	<b>9080</b>	-999	320
MPRC010	71	72	1	368	11000	161	<b>6880</b>	-999	213
MPRC010	72	73	1	<b>453</b>	12800	177	<b>8870</b>	-999	239
MPRC010	73	74	1	<b>420</b>	11700	269	<b>9450</b>	-999	281
MPRC011	72	73	1	<b>676</b>	4200	-50	<b>18370</b>	-999	180
MPRC011	73	74	1	<b>407</b>	5100	-50	<b>8320</b>	-999	103
MPRC011	74	75	1	346	4400	64	5170	-999	79
MPRC014	61	62	1	60	8400	829	5170	-999	219
MPRC014	62	63	1	61	8800	868	5350	-999	232
MPRC014	63	64	1	-50	800	578	4230	-999	109
MPRC014	64	65	1	128	7200	794	6170	-999	247
MPRC014	65	66	1	166	10200	653	6700	-999	230
MPRC014	66	67	1	155	12000	379	5750	-999	207
MPRC014	67	68	1	197	7000	374	5000	-999	180
MPRC014	68	69	1	158	10000	338	5450	-999	181
MPRC014	72	73	1	192	5900	255	4030	-999	101
MPRC014	76	77	1	190	7400	72	4970	-999	105
MPRC014	77	78	1	243	8100	128	5780	-999	182
MPRC014	78	79	1	373	6000	105	7110	-999	239
MPRC014	79	80	1	288	5300	-50	5160	-999	145
MPRC015	58	59	1	160	12800	66	5600	-999	225
MPRC015	59	60	1	198	10600	75	7450	-999	214
MPRC015	60	61	1	288	7200	-50	7100	-999	148
MPRC015	61	62	1	244	6800	-50	6810	-999	128
MPRC015	62	63	1	269	5000	-50	5790	-999	98
MPRC015	63	64	1	309	6200	-50	6710	-999	124
MPRC015	64	65	1	308	4500	-50	7030	-999	129
MPRC015	65	66	1	308	5600	-50	8410	-999	125
MPRC015	66	67	1	868	6700	-50	13790	-999	171
MPRC015	67	68	1	357	5000	140	7400	-999	163
MPRC015	68	69	1	347	5100	91	6820	-999	158
MPRC015	69	70	1	296	5500	89	7110	-999	157
MPRC015	70	71	1	243	3900	62	4830	-999	101

Hole_ID	From	To	Interval	Cobalt (ppm)	Chrome (ppm)	Copper (ppm)	Nickel (ppm)	Lead (ppm)	Zinc (ppm)
MPRC015	71	72	1	293	4700	65	5780	-999	135
MPRC015	72	73	1	318	3400	51	4930	-999	105
MPRC015	73	74	1	228	3600	-50	4980	-999	105
MPRC016	55	56	1	75	1500	-50	8440	-999	137
MPRC019	63	64	1	180	9600	106	5420	-999	178
MPRC019	64	65	1	194	19100	233	6000	-999	312
MPRC019	70	71	1	254	8600	53	4020	-999	134
MPRC019	71	72	1	363	10400	-50	5750	-999	153
MPRC020	43	44	1	-50	1100	436	4160	-999	164
MPRC020	45	46	1	-50	1100	530	4440	-999	144
MPRC020	46	47	1	333	1000	713	5930	-999	238
MPRC020	47	48	1	194	800	607	5770	-999	216
MPRC020	48	49	1	284	900	563	6040	-999	227
MPRC020	49	50	1	89	800	513	5830	-999	189
MPRC020	50	51	1	76	700	219	4910	-999	154
MPRC020	51	52	1	588	2500	421	12880	-999	340
MPRC020	52	53	1	255	7200	206	5380	-999	170
MPRC020	53	54	1	388	8300	257	5620	-999	193
MPRC020	54	55	1	312	7900	179	5890	-999	167
MPRC020	55	56	1	240	8800	238	5440	-999	152
MPRC020	56	57	1	155	6600	164	4160	-999	109
MPRC020	57	58	1	168	6700	127	4810	-999	127
MPRC020	58	59	1	180	6900	78	5000	-999	137
MPRC020	59	60	1	195	7000	-50	5400	-999	135
MPRC020	60	61	1	187	7300	66	5450	-999	129
MPRC020	61	62	1	186	7400	-50	5010	-999	132
MPRC020	62	63	1	144	6800	-50	4710	-999	133
MPRC020	63	64	1	142	4200	107	5150	-999	113
MPRC020	64	65	1	106	2800	84	4020	-999	70
MPRC020	65	66	1	157	4100	-50	4530	-999	110
MPRC020	67	68	1	231	2500	-50	4600	-999	94
MPRC020	68	72	4	257	4900	-50	4090	-999	61



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## About White Cliff Minerals Limited

**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 2014-6 has defined a **gold deposit** currently containing an inferred resource of 1.8Mt at 5.2 g/t containing 302,000 ounces of gold and 608,000 tonnes at 0.64% copper containing 3870 tonnes of copper. Drilling has also defined a significant **copper deposit** at surface consisting of 10Mt at 0.41% copper containing 40,000 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 57 square kilometres. 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.

**Laverton Gold Project (100%):** The project consists of 136 square kilometres of granted tenements in the Laverton Greenstone belt. The core prospects are Kelly Well and Eight Mile Well located 20km southwest of Laverton in the core of the structurally complex Laverton Tectonic zone immediately north of the Granny Smith Gold Mine (3 MOz) and 7 kilometres north of the Wallaby Gold Mine (7 MOz).

**Merolia Project (100%):** The project consists of 771 square kilometres of the Merolia Greenstone belt and contains extensive ultramafic sequences including the Diorite Hill layered ultramafic complex, the Rotorua ultramafic complex, the Coglia 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. The project also 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.

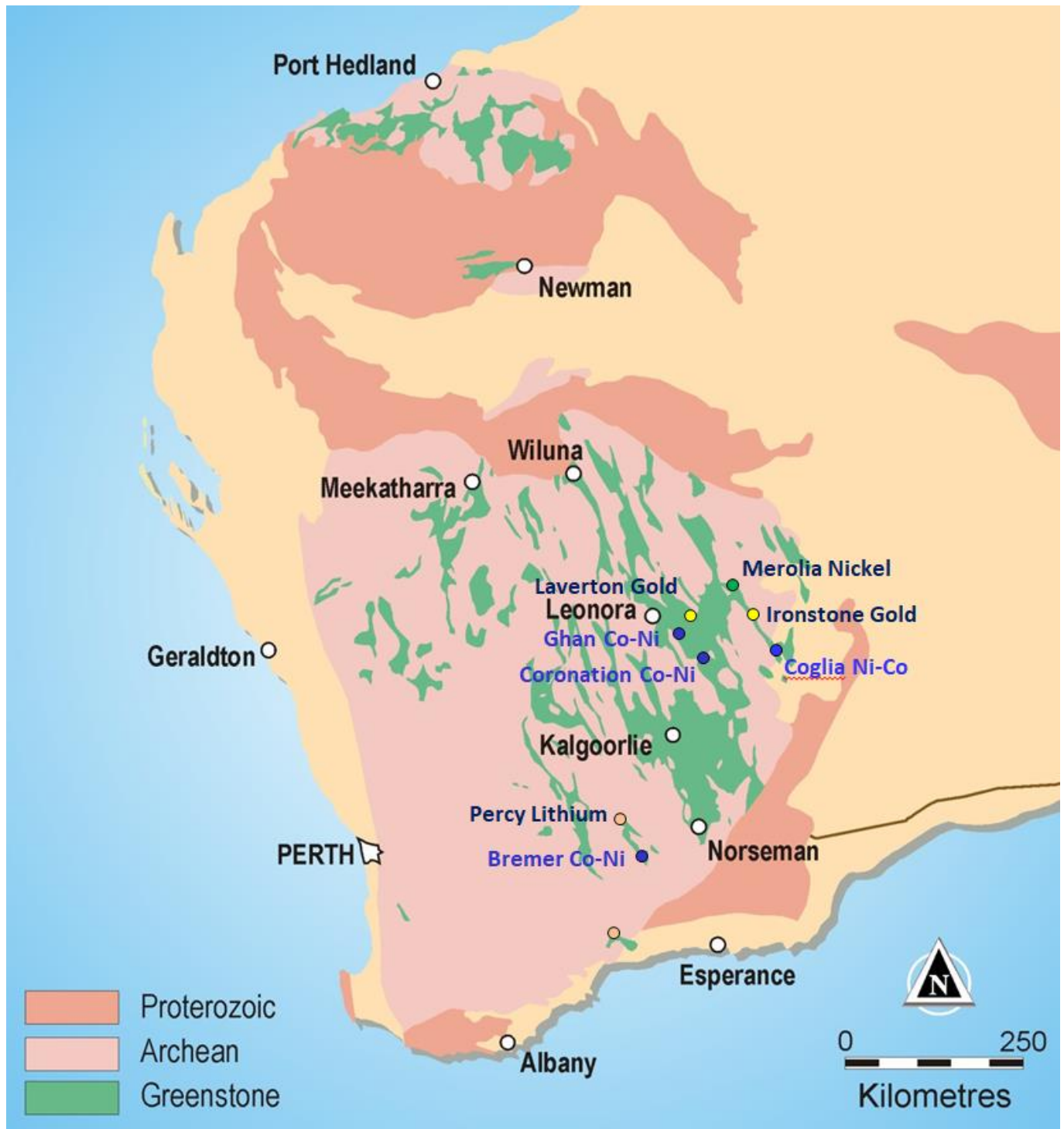
**Coronation Dam Cobalt Project (100%):** The project consists of one tenement (16km<sup>2</sup>) in the Wiluna-Norseman greenstone belt 50km south of the Murrin East nickel-cobalt mining operation. The tenement contains an extensive ultramafic unit that contains zones of cobalt mineralisation associated 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.

**Ghan Well Cobalt Project (100%):** The project consists of one tenement (39km<sup>2</sup>) in the Wiluna-Norseman greenstone belt 10km north of the Murrin East nickel-cobalt mining operation. 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.

**Bremer Range (100%):** The project covers over 127 square kilometres in the Lake Johnson Greenstone Belt, which contains the Emily Ann and Maggie Hayes nickel sulphide deposits. These mines contain approximately 140,000 tonnes of nickel. The project area has excellent prospectivity for both komatiite associated nickel-cobalt mineralisation and amphibolite facies high-grade gold mineralisation.

**Lake Percy (100%)** The Lake Percy tenement (E63/1222i) contains substantial nickel anomalism associated with outcropping ultramafic units. The Company also holds 100% of the adjacent 20km<sup>2</sup> tenement (E63/1793) which also contains untested outcropping ultramafics.

The Information in this report that relates to exploration results, mineral resources or ore reserves is based on information compiled by Mr Todd Hibberd, who is a member of the Australian 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 'Australian Code for Reporting 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.



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

## Appendix 1

The following information is provided to comply with the JORC Code (2012) requirements for the reporting of the Exploration results over the Merolia nickel and copper project.

### Section 1 Sampling Techniques and Data

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

Criteria	JORC Code Explanation	Commentary
Sampling Techniques	<p>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</p> <p>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</p> <p>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.</p>	<p>This ASX Release reports on exploration results from the Company's exploration program carried out across part of the Merolia project area.</p> <p><b>Soil Sampling:</b> None collect</p> <p><b>Soil Analysis:</b> None collected</p> <p><b>RC Sampling:</b> All samples from the RC drilling are taken as 1m samples. Samples are collected using cone or riffle splitter. Geological logging of RC chips is completed at site with representative chips being stored in drill chip trays.</p> <p><b>Moving loop electromagnetic (MLEM) survey:</b> none conducted</p> <p>The sample collar locations are picked up by handheld GPS. Sampling was carried out under standard industry protocols and QAQC procedures</p> <p>Samples are sent to Bureau Veritas Laboratories for assaying. Appropriate QAQC samples (standards, blanks and duplicates) are inserted into the sequences as per industry best practice.</p>
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).	Reverse Circulation Drilling, 1800CFM/550PSI compressor, with 133mm (5.25 inch) diameter face sampling hammer bit. Industry standard processes
Drill sample recovery	<p>Method of recording and assessing core and chip sample recoveries and results assessed</p> <p>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.</p>	<p>Calculated volume of 1m RC sample is 36kg based on rock density of 2.6 g/cm3. Sample bags were visually inspected for volume to ensure minimal size variation. Were variability was observed, sample bags were weighed. Sampling was carried out under standard industry protocols and QAQC procedures</p> <p>No measures have been deemed necessary</p> <p>No studies have been carried out</p>
Logging	<p>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.</p> <p>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) Photography The total length and percentage of the relevant intersections logged.</p>	<p>Drill samples have been geologically logged and have been submitted for petrological studies. Samples have been retained and stored. The logging is considered sufficient for JORC compliant resource estimations</p> <p>Logging is considered qualitative</p> <p>Refer to text in the main body of the announcement</p>
Sub-sampling techniques and sample preparation	<p>If core, whether cut or sawn and whether quarter, half or all core taken.</p> <p>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</p> <p>For all sample types, the nature, quality and appropriateness of the sample preparation technique</p>	<p>Not Applicable- no core drilling was carried out</p> <p>Samples were riffle split from 35kg down to 3kg. Where samples were too wet to riffle split, samples were tube sampled.</p> <p>Samples were collected using a face sampling hammer which pulverises the rock to chips. The chips are transported up the inside of the drill rod to the surface cyclone where they are collected in one metre intervals. The one metres sample is riffle split to provide a 2.5-3kg sample for analysis. Industry standard protocols are used and deemed appropriate</p>

Criteria	JORC Code Explanation	Commentary
	<p>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples</p> <p>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</p> <p>Whether sample sizes are appropriate to the grain size of the material being sampled</p>	<p>At this stage of the exploration no sub sampling is undertaken</p> <p>The whole sample collected is pulverised to 75um in a ring mill and a 200g sub-sample is collected. A 2-30 gram sub sample of the pulverised sample is analysed. Field duplicates are not routinely collected</p> <p>The sample sizes are considered to be appropriate to correctly represent the sought after mineralisation style</p>
Quality of assay data and laboratory tests	<p>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</p> <p>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.</p> <p>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</p>	<p>The analytical techniques used Aqua Regia digest multi element suite with ICP/OES finish, suitable for the reconnaissance style sampling undertaken.</p> <p>Samples were analysed with a Innovex portable XRF instrument using a 60 second analysis time. Calibration checks were carried out against a nickel standard every 50 samples. Samples were tested three times and the average reading recorded. The standard deviation of the three reading has been recorded</p> <p>A selection the samples have had the XRF results repeated a second time to verify and elevated samples will be checked against Laboratory analysis. The Laboratory will analyse the samples via Aqua Regia with ICP-OES finish.</p> <p>Laboratory QAQC involves the use of internal lab standards using certified reference material, blanks, splits and replicates as part of the in house procedures.</p>
Verification of sampling and assaying	<p>The verification of significant intersections by either independent or alternative company personnel.</p> <p>The use of twinned holes Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols</p> <p>Discuss any adjustment to assay data</p>	<p>Significant intersections in drill samples have been verified by an executive director of the Company</p> <p>Not Applicable Primary data was collected using a set of standard Excel templates on paper and re-entered into laptop computers. The information was sent to WCN in-house database manager for validation and compilation into an Access database.</p> <p>No adjustments or calibrations were made to any assay data used in this report.</p>
Location of data points	<p>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.</p> <p>Specification of the grid system used.</p> <p>Quality and adequacy of topographic control.</p>	<p>Sample locations were recorded using handheld Garmin GPS. Elevation values were in AHD RL and values recorded within the database. Expected accuracy is + or - 5 m for easting, northing and 10m for elevation coordinates. No down hole surveying techniques were used due to the sampling methods used. The grid system is MGA_GDA94 (zone 51)</p> <p>Topographic surface uses handheld GPS elevation data, which is adequate at the current stage of the project.</p>
Data spacing and distribution	<p>Data spacing for reporting of Exploration Results.</p> <p>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.</p> <p>Whether sample compositing has been applied.</p>	<p>The nominal drill sample spacing is 1 metre down hole. Each drill hole targets a specific target so there is no nominal drill spacing</p> <p>The mineralised domains have not yet demonstrated sufficient continuity in both geological and grade continuity to support the definition of Mineral Resource and Reserves, and the classifications applied under the 2012 JORC Code.</p> <p>Not applicable</p>
Orientation of data in relation to geological structure	<p>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</p> <p>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</p>	<p>The soil sampling method is used to provide a surface sample only.</p> <p>No orientation based sampling bias has been identified in the data at this point.</p>
Sample security	<p>The measures taken to ensure sample security.</p>	<p>Sample security is managed by the Company. Since at this stage these are field analyses, no sample transit security has been necessary.</p>
Audits of reviews	<p>The results of any audits or reviews of sampling</p>	<p>The Company carries out its own internal data audits. No</p>

Criteria	JORC Code Explanation	Commentary
	techniques and data.	problems have been detected.

## Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	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 sample positions occur is located within Exploration Licenses E38/2693 which are 100% owned by White Cliff Minerals Limited or a subsidiary  The tenements are in good standing and no known impediments exist.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Extensive historical exploration for platinum, gold and nickel mineralisation has been carried out by Placer Dome, WMC, Comet resources and their predecessors. Occurrences of nickel laterite mineralisation were identified but was deemed uneconomic
Geology	Deposit type, geological setting and style of mineralisation.	The geological setting is of Archaean aged mafic and ultramafic sequences intruded by mafic to felsic porphyries and granitoids. Mineralisation is mostly situated within the regolith profile of the ultramafic units. The rocks are strongly talc-carbonate altered. Metamorphism is mid-upper Greenschist facies. The target mineralisation has yet to be identified but is analogous to Kambalda or Sally Malay style or nickel sulphide deposits.
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.  If the exclusion of this information is justified on the basis that the information is not	Drilling detailed in Tables 1-2 in the main body of the announcement
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	No length weighting has been applied due to the nature of the sampling technique. No top-cuts have been applied.  Not applicable for the sampling methods used.  No metal equivalent values are used for reporting exploration results.
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 sampling technique used defines a surficial geochemical expression. No information is attainable relating to the geometry of any mineralisation based on these results.
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	Refer to figs. in the body of text.
Balanced Reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results	All results above 0.5% nickel are 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.	NIL
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	RAB/AC drilling will be used to further define the nature and extent of the geochemical anomalism, and to gain lithological information.



Criteria	Explanation	Commentary
	of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	