

# **COPPER DISCOVERY GROWS AT GREGJO PROSPECT**

Copper mineralisation intersected 400m along the GregJo Fault and up to 120m across the fault (across strike) in at least two individual fault structures

Best drill intersections include (pXRF):

- o 4m @ 1.14% Cu from 12m (18RAB051)
- 18m @ 0.5% Cu from 1m (18RAB020)
  - including 1m @ 1.1% Cu from 13m and 1m @ 1.06% Cu from 18m
- 11m @ 0.45% Cu from 16m (18RAB031)
  - including 1m @ 1.22% Cu from 18m

Sulphide mineralisation has been identified at depth in some holes, this will be targeted with a planned geophysics survey (Induced Polarisation) and subsequent deeper drilling

The positive results have prompted an expanded drilling program, with drilling at the GregJo Prospect expected to continue for the next two weeks

#### **GregJo Prospect**

Northern Cobalt Limited (**ASX: N27**) is pleased to announce it has increased the extent of known copper mineralisation associated with the GregJo Fault, located approximately 4 km south of the Stanton Cobalt Deposit (Figure 1). The mineralised envelope now extends more than 400m along strike of the GregJo Fault and for up to 120m across strike. Drilling continues to intersect thick intervals of copper mineralisation of 9m-20m @ 0.2%-0.5% Cu which includes higher grade intervals of 1-4m @ between 1% and 5% Cu. Drilling will continue to test the lateral extents of mineralisation over the coming weeks. Outcropping copper mineralisation has been mapped to the north-west of the current drilling, indicating that mineralisation is also open in this direction.

"The maiden discovery of the GregJo Copper prospect, proves the Wollogorang Project is mineralised beyond the Stanton Cobalt Deposit and we have only just begun testing the extensive prospective rocks; furthermore this discovery fits with the company's strategy of adding resources close to our existing deposit as the company seeks to build multiple assets to support the battery and new technology metals industries insatiable demand for Co, Li, Cu, Ni and REE". Michael Schwarz (MD).

#### **CAPITAL STRUCTURE**

Ordinary Shares Issued 50.8 M

Options Listed 6.3 M @ 20c Unlisted 12.3 M @ 25c Performance Shares Class A 9.6 M Class B 3.6 M

Last Capital Raise 24 April 2018 - SPP \$0.6M @ 35c BOARD

Len Dean - Chair Michael Schwarz - MD Duncan Chessell - Exec Dir Andrew Shearer - NED Jarek Kopias - Co Sec

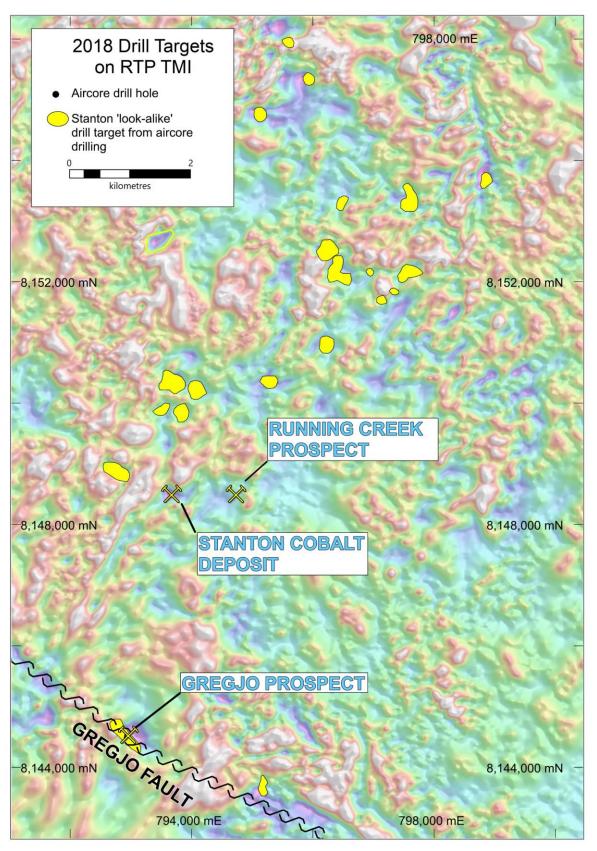


Figure 1. 2018 RTP magnetic image with high priority drill targets

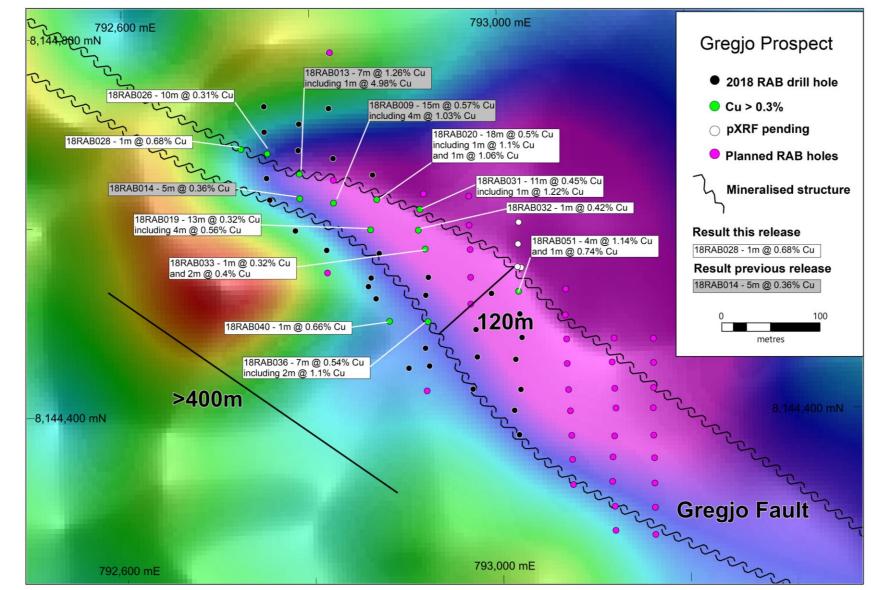


Figure 2. 2018 RTP magnetic image with RAB hole locations and copper results

Copper mineralisation appears to be spatially associated with at least two structures within the GregJo Fault. Higher grade copper occurs adjacent to and within the interpreted fault structures which are steeply dipping. Vertical RAB drilling has difficulty intersecting these zones but once the lateral extent of mineralisation is defined, deeper angled slim-line RC drill holes will be used to target high-grade mineralisation in conjunction with results from the planned IP survey.

Lower grade mineralisation extends laterally from the fault structures within shallow dipping, pyritic sandstone and siltstones (Figure 4). This style of mineralisation has many similarities with Aeon Metals (**ASX:AML**) Walford Creek Cu-Co deposit approximately 90 km to the southeast.

In the oxide zone, above the zone of weathering, the copper mineralisation takes the form of malachite and lesser azurite. Below the zone of weathering, in the primary zone copper mineralisation occurs as chalcopyrite within pyritic sediments. Only limited drilling has penetrated below the zone of weathering to date.

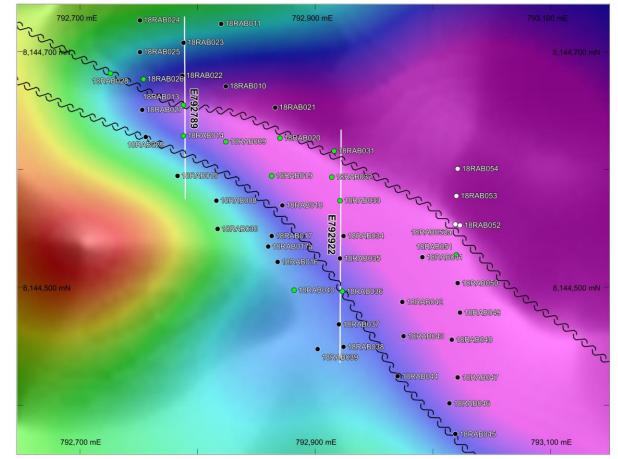
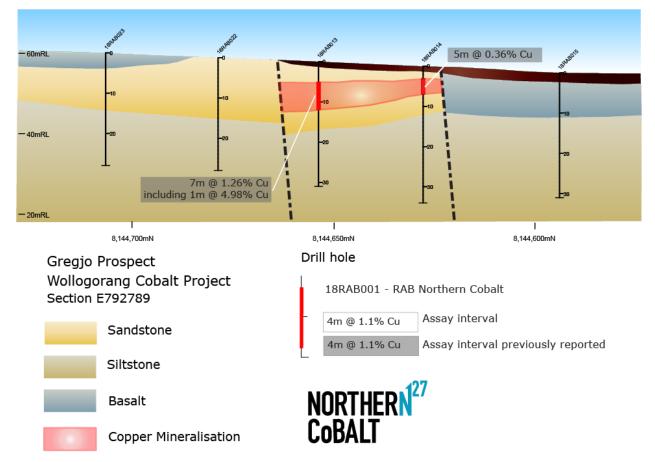


Figure 3. Section plan GregJo Prospect on RTP TMI



#### Figure 4. Cross section E792789 through the GregJo Prospect

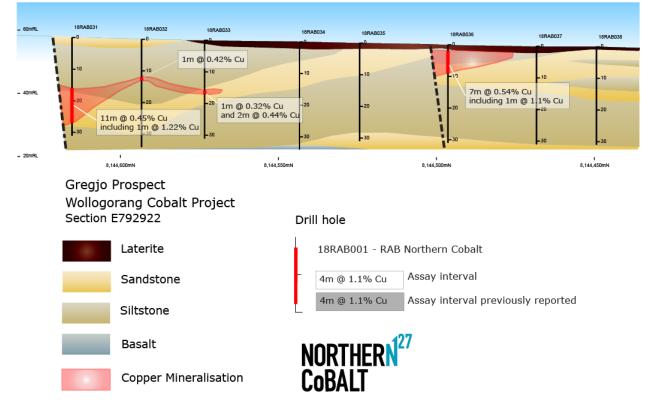
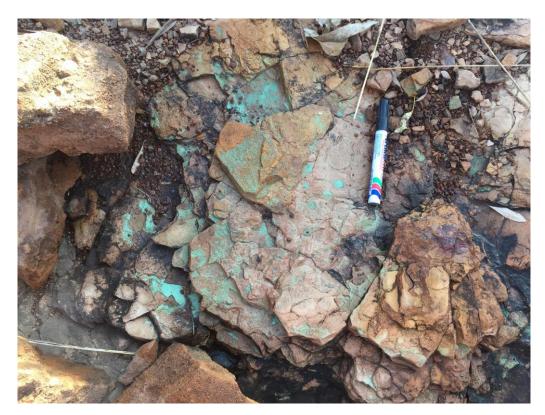


Figure 5. Cross section E792922 through the GregJo Prospect

Hole ID	Easting	Northing	Depth From	Depth To	Interval	Cu (%)	Error (%)
18RAB009	792824	8144624	1	16	15	0.57	0.004
		including	6	10	4	1.03	0.005
18RAB013	792788	8144655	5	12	7	1.26	0.005
		including			1	4.98	0.011
18RAB014	792788	8144629	3	7	5	0.36	0.003
18RAB019	792863	8144595	5	17	13	0.32	0.003
		including	13	17	4	0.56	0.004
18RAB020	792870	8144627	1	19	18	0.50	0.004
		including	13	14	1	1.10	0.006
		and	18	19	1	1.06	0.005
18RAB026	792754	8144677	2	11	10	0.31	0.003
18RAB028	792726	8144682	0	1	1	0.68	0.004
18RAB031	792916	8144616	16	27	11	0.45	0.003
		including	18	19	1	1.22	0.006
18RAB032	792914	8144594	12	13	1	0.42	0.003
18RAB033	792921	8144574	16	17	1	0.32	0.003
		and	18	20	2	0.40	0.003
18RAB036	792923	8144497	2	9	7	0.54	0.004
		including	2	3	1	1.10	0.005
18RAB040	792882	8144498	4	5	1	0.66	0.004
18RAB051	793020	8144528	12	16	4	1.14	0.005
		and	17	18	1	0.74	0.005

# Table 1. Significant drill intersections (pXRF results only, sample have been sent for assay)



Example of copper mineralisation in outcrop to the north-east of drilling. Green chrysocolla (copper carbonate) occurs on both fracture planes and intestinally with both sandstone and siltstone.

# **Regional Targets**

In addition to the emerging copper prospect at GregJo, Northern Cobalt has identified at least two additional drill targets along the same GregJo Fault. GregJo West occurs only 1.2 km to the north-west along the same fault structure and GregJo East occurs 1.8 km to the south-east. Both targets consist of a magnetic low along the GregJo Fault which have had anomalous copper and cobalt values in the regional aircore drilling program.

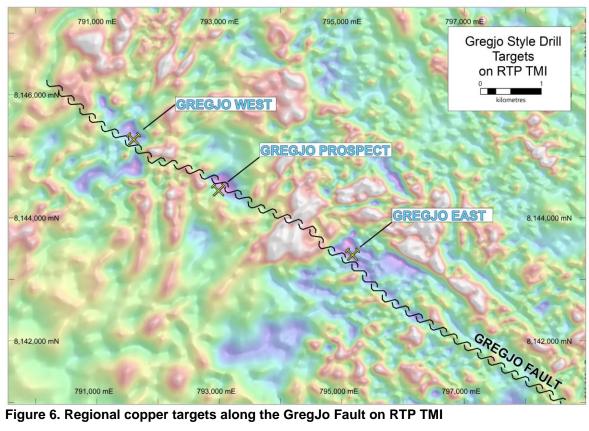
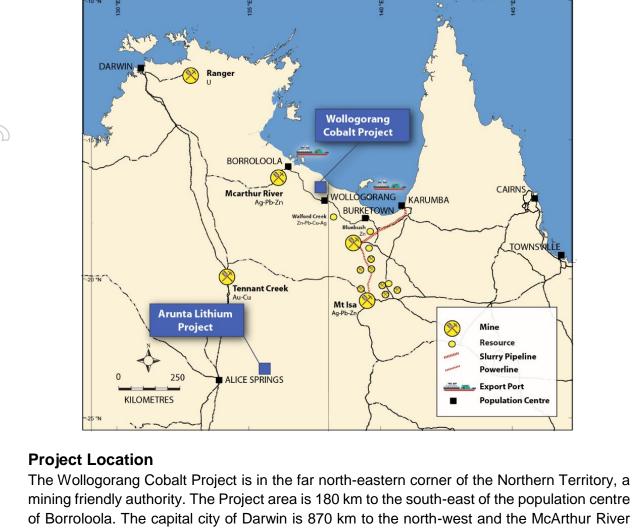


Figure 6. Regional copper targets along the GregJo Fault on RTP TMI



## **Competent Persons Statement**

Mine is approximately 150 km to the west-northwest.

The information in this report that relates to exploration results is based on, and fairly represents, information and supporting documentation compiled by Mr Michael Schwarz who is a member of the Australian Institute of Geoscientists. Mr Michael Schwarz is a full-time employee of the company and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Michael Schwarz consents to the inclusion in the report of the matters based on his information in the form in which it is appears. The information in this announcement is an accurate representation of the available data and studies of the material mining project. This report includes results that have previously been released under JORC 2012 by the Company as "Copper Discovery at the GregJo Prospect" on the 28<sup>th</sup> August 2018. The Company is not aware of any new information or data that materially affects the information included in this announcement and all material assumptions and technical parameters underpinning the Mineral Resource continue to apply and have not materially changed.

For further information please contact: Michael Schwarz Managing Director, Northern Cobalt Ltd M: +61 402 101 790 E: mschwarz@northerncobalt.com.au

CAIRNS

Mine

Resource **Slurry Pipeline** Powerline

Export Port

**Population Centre** 

TOWNS

#### Appendix 1. Drill hole table

	Max						
	Depth		Easting	Northing			
Hole_ID	(m)	Grid_ID	(mE)	(mN)	RL (m)	Azimuth	Dip
18RAB001	13	MGA94_53	794101	8150276	74	360	-90
18RAB001a	15	MGA94_53	794102	8150276	74	360	-90
18RAB002	31	MGA94_53	793809	8149907	74	360	-90
18RAB003	25	MGA94_53	793834	8149929	74	360	-90
18RAB004	31	MGA94_53	793861	8149901	74	360	-90
18RAB005	20	MGA94_53	793596	8150273	88	360	-90
18RAB006	22	MGA94_53	793722	8150174	88	360	-90
18RAB007	18	MGA94_53	793744	8150206	88	360	-90
18RAB008	31	MGA94_53	792816	8144574	61	360	-90
18RAB009	31	MGA94_53	792824	8144624	56	360	-90
18RAB010	31	MGA94_53	792824	8144671	56	360	-90
18RAB011	31	MGA94_53	792820	8144724	56	360	-90
18RAB012	21	MGA94_53	792821	8144783	59	360	-90
18RAB013	31	MGA94_53	792788	8144655	64	360	-90
18RAB014	34	MGA94_53	792788	8144629	64	360	-90
18RAB015	31	MGA94_53	792783	8144595	64	360	-90
18RAB016	31	MGA94_53	792868	8144522	48	360	-90
18RAB017	13	MGA94_53	792863	8144544	54	360	-90
18RAB017a	31	MGA94_53	792860	8144535	48	360	-90
18RAB018	28	MGA94_53	792872	8144570	86	360	-90
18RAB019	31	MGA94_53	792863	8144595	86	360	-90
18RAB020	31	MGA94_53	792870	8144627	55	360	-90
18RAB021	31	MGA94_53	792866	8144653	58	360	-90
18RAB022	28	MGA94_53	792787	8144680	48	360	-90
18RAB023	28	MGA94_53	792788	8144708	48	360	-90
18RAB024	20.5	MGA94_53	792751	8144727	48	360	-90
18RAB025	28	MGA94_53	792751	8144700	53	360	-90
18RAB026	31	MGA94_53	792754	8144677	53	360	-90
18RAB027	31	MGA94_53	792753	8144651	56	360	-90
18RAB028	28	MGA94_53	792726	8144682	56	360	-90
18RAB029	25	MGA94_53	792756	8144628	58	360	-90
18RAB030	25	MGA94_53	792817	8144550	58	360	-90
18RAB031	31	MGA94_53	792916	8144616	58	360	-90
18RAB032	34	MGA94_53	792914	8144594	58	360	-90
18RAB033	31	MGA94_53	792921	8144574	56	360	-90
18RAB034	34	MGA94_53	792924	8144544	56	360	-90
18RAB035	31	MGA94_53	792921	8144525	65	360	-90
18RAB036	31	MGA94_53	792923	8144497	61	360	-90
18RAB037	31	MGA94_53	792920	8144469	60	360	-90
18RAB038	31	MGA94_53	792924	8144450	58	360	-90
18RAB039	31	MGA94_53	792902	8144448	58	360	-90
18RAB040	31	MGA94_53	792882	8144498	58	360	-90
18RAB041	31	MGA94_53	792979	8144520	54	360	-90

18RAB042	31	MGA94_53	792974	8144488	52	360	-90
18RAB043	31	MGA94_53	792975	8144459	52	360	-90
18RAB044	31	MGA94_53	792970	8144425	52	360	-90
18RAB045	28	MGA94_53	793019	8144376	52	360	-90
18RAB046	31	MGA94_53	793014	8144402	51	360	-90
18RAB047	68	MGA94_53	793021	8144424	54	360	-90
18RAB048	34	MGA94_53	793016	8144456	57	360	-90
18RAB049	52	MGA94_53	793023	8144479	58	360	-90
18RAB050	40	MGA94_53	793021	8144504	58	360	-90
18RAB051	52	MGA94_53	793020	8144528	56	360	-90

# Appendix 2. The following tables are provided to ensure compliance with the JORC Code (2012) requirements for the reporting of the exploration results for the Wollogorang Cobalt Project

#### Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>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.</li> </ul>	<ul> <li>Rotary Air Blast Hammer (RAB) drilling using standard equipment.</li> <li>Sampling was undertaken at one metre intervals.</li> <li>Samples were collected in rubber buckets from the drill rig cyclone and then subsampled for analyses into plastic zip-lock bags.</li> <li>Drilling was designed to sample relatively fresh basement beneath surficial soil cover and wetherd and laterised basement.</li> <li>Samples were analysed using a Bruker Titan S1 loaded with an algorithmn to optimise the detection limits for cobalt in low iron systems. The company has worked with Bruker to develop a tailored algothithm based on pXRF analyses of conventially analysed drill samples from the Stanton Cobalt Deposit. The pXRF analyses have been directly compared to conventional laboratory four acid digest Inductively Coupled Plasma (ICP) Optical Emission Spectrometry and a calibration algorith generated.</li> </ul>
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).	<ul> <li>Rotary Air Blast (RAB) with a 137mm diameter hammer.</li> </ul>
Drill sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative</li> </ul>	<ul> <li>Recovery generally good, with poor recovery in a small number of samples due to groundwater.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul> <li>nature of the samples.</li> <li>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.</li> </ul>	
Logging	<ul> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>Drilling logged in detail on a metre by metre basis.</li> <li>Lithology, alteration and oxidation logged qualitatively.</li> </ul>
Sub- sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>Samples were collected in rubber buckets from the drill rig cyclone and then subsampled by sieving to a - 2mm mesh size fraction and placed into plastic zip-lock bags.</li> <li>Representative end-of-hole samples have been kept in plastic chip trays.</li> <li>Sample duplicates collected, and standards used to confirm representivity of sampling.</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of</li> </ul>	<ul> <li><b>pXRF Analyses</b></li> <li>Sample Preparation - The samples have been sorted and dried. Primary preparation has been by homogenising the whole sample. The samples have been split to obtain a sub-fraction which has then been place into a sample cup and covered with a prolene film.</li> <li>Analytical Methods – The samples were analysed in a temperature controlled enviroment at the Wollogorang field camp. A Bruker Titan S1 was utilised on a stand operating in cobalt applicaton mode</li> </ul>

Criteria	JORC Code explanation	Commentary
	accuracy (ie lack of bias) and precision have been established.	<ul> <li>Standards (OREAS 194), blanks and duplicates have all been applied in the QAQC methodology. Sufficient accuracy and precision have been established for the type of mineralisation encountered</li> </ul>
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>An electronic database containing collars, geological logging and assays is maintained by the Company.</li> </ul>
Location of data points	<ul> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>Holes have been surveyed using Differential GPS (DGPS).</li> <li>UTM grid MGA94 Zone 53 was used</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>RAB drill hole spacing approximately every 50m on a traverse across the drill target.</li> <li>Where more than one traverse covers a target they are spaced 50-100m apart.</li> <li>Spacing and distribution is considered to be appropriate.</li> </ul>
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	<ul> <li>Sample relationship to mineralisation and structure is unknown at this stage.</li> </ul>
Sample security	The measures taken to ensure sample security.	• Samples are bagged and sealed in plastic tubs on site and transported to the analytical laboratories by commercial transport companies for traditional anlyses and to the field camp for pXRF analyses.

Criteria	JORC Code explanation	Commentary
Audits review		<ul> <li>No audits undertaken at this stage as the drilling program has only recently commenced.</li> </ul>

## Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<ul> <li>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.</li> <li>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.</li> </ul>	<ul> <li>Wollogorang Cobalt Project exploration area occurs on EL 31272 which is 100% owned by Mangrove Resources Pty Ltd a wholly owned subsidiary to Northern Cobalt Ltd.</li> <li>The licence is currently in good standing with the relevant authorities.</li> </ul>
Exploration done by other parties	<ul> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	• The Stanton Cobalt Deposit and surrounding prospects were discovered by CRA Exploration Pty Ltd in the period 1990-1996 period under a farm in arrangement with W J (Joe) Fisher.
Geology	<ul> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul> <li>The local geology is dominated by the Gold Creek Volcanics of the Tawallah Group. This formation is a series of basaltic lavas and shallow intrusives, interlayered with thin oxidised sandstone, carbonate and siltstone units. It is conformably underlain by reduced sedimentary facies of the Wollogorang Formation, which includes dolostones, sandstones and carbonaceous shales. A regional dolerite sill, the Settlement Creek Dolerite, was emplaced synchronous with effusion of the Gold Creek Volcanics. The Wollogorang Formation and Settlement Creek Dolerite do not outcrop on the Stanton prospect area, but are however intersected in a number of drill holes on the tenement. Within the district, the Gold Creek Volcanics are disconformably overlain by a felsic volcanic package that includes a rhyolitic rheoignimbrite sheet (Hobblechain Rhyolite), proximal epiclastics (Pungalina Member) and distal reworked clastics (Echo Sandstone).</li> <li>Mineralisation is interpreted to be largely controlled by stratigraphy</li> </ul>

Criteria	JORC Code explanation	Commentary
		within the flat lying interbedded sediment and volcanic rock units of the Proterozoic Gold Creek Volcanics. Brecciation and faulting has a strong control on the intensity and limits of mineralisation. In fresh rock the cobalt-nickel is located in disseminated siegenite (cobalt-nickel sulphide). Chalcocite and pyrite are also noted. Weathering to a variable depth of approximately 30m has resulted in cobalt oxide secondary mineralisation in a large proportion of the deposit.
Drill hole Information	<ul> <li>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: <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>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.</li> </ul>	See Appendix 1
Data aggregation methods	<ul> <li>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.</li> <li>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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>Simple length weighted averages were used for reporting of significant drill intercepts with a cut-off grade of 0.2% (2000ppm) Cu and a maximum internal dilution of 1m @ 2000ppm.</li> <li>Samples reading in excess of 500ppm Cu have undergone a repeat analysis with the pXRF on a new sample from the source bag and results have been averaged.</li> </ul>

Criteria	JORC Code explanation	Commentary
Relationship between mineralisatio n widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>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').</li> </ul>	<ul> <li>Any observations made are down hole length and true width is not known.</li> </ul>
Diagrams	<ul> <li>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.</li> </ul>	See attached release.
Balanced reporting	<ul> <li>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.</li> </ul>	<ul> <li>All significant drill intersections have been reported and it has been noted when no significant intersection has been encountered.</li> </ul>
Other substantive exploration data	<ul> <li>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.</li> </ul>	<ul> <li>No other relevant data to report.</li> </ul>
Further work	<ul> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>Planned further work detailed in this, and previous releases, and in figures. This work includes comprises drill testing further drill targets and follow up drilling of mineralised prospects.</li> </ul>