# **ASX** ANNOUNCEMENT



## Cygnus Bencubbin drill program update

### **ASX ANNOUNCEMENT:**

**25 February 2020** 

ASX: CY5

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E: info@cygnusgold.com W: www.cygnusgold.com Cygnus Gold (Cygnus or the Company) (ASX:CY5) has now received results from the recently completed aircore drilling program on the Company's 100% owned Bencubbin North Project.

The 76-hole (2,663m) program at Bencubbin North intersected target geology and alteration systems on several of the high priority nickel and base metals targets tested.

Highlights from the drilling included:

- Thick (up to 800m wide) komatiite sequences were intersected in the shallow drilling over the Bencubbin North nickel targets, the first ultramafic rocks described in the belt and analogous to the rocks that host nickel deposits elsewhere in the Yilgarn.
- Several narrow zones of Pb and Zn mineralisation were intersected at the Mandiga lead-zinc-copper target, including:
  - 4m @ 0.12% Pb + Zn from 12m in BNAC0023
  - o 1m @ 0.13% Pb + Zn from 18m in hone BBNAC0041
  - o 1m @ 0.45% Pb + Zn in hole BNAC0042.
- Widespread volcanogenic massive sulfide (VMS) related alteration in the Mandiga trend, including strong sericite-chlorite and pathfinder mineral assemblages associated with elevated base metals.

The Company is encouraged by the geology seen in the drilling and the nickel sulfide prospectivity of the more than 15km long belt, as well as the broader Bencubbin greenstone sequence interpreted to extend a further 60km under Cygnus tenure to the south.

The drilling also supports the application of electrical geophysical methods for follow up on the base metals and nickel targets as a relatively cheap and effective method to test for sulfide related mineralisation under shallow cover in open terrain.

Commenting on the results Cygnus Gold's Managing Director James Merrillees said the Company was encouraged by the early shallow drill results at Bencubbin North in this exciting, newly identified belt.

"These are the first holes drilled to test the nickel prospective stratigraphy and we've been encouraged by the widths and strike length of komatiites intersected on wide-spaced drill lines.

Drilling on the VMS trend at Mandiga has extended the known mineralisation two kilometres further south than previously tested with results supporting the potential for a widespread, sulfide-dominant mineralising system that should respond well to electrical geophysical methods, which are relatively cheap and effective to deploy in the open paddocks of this part of the Wheatbelt".

The Bencubbin North drilling program was co-funded by a grant from the WA Government's Exploration Incentive Scheme (EIS), a strong endorsement of the Company's technical team and projects.

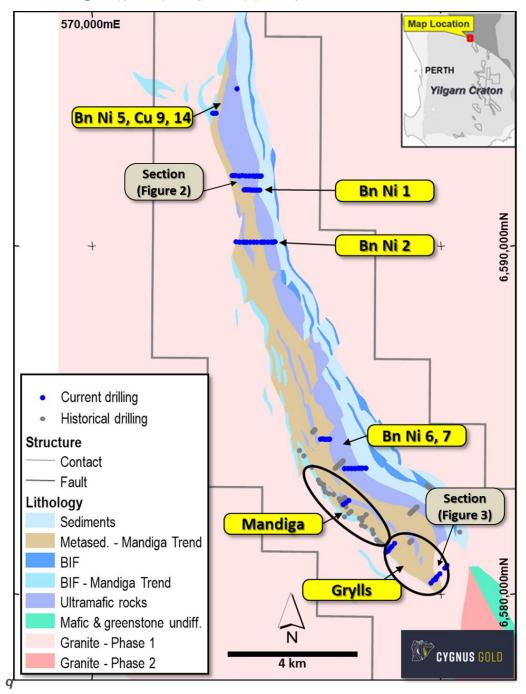
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Cygnus Gold Limited

#### **BENCUBBIN PROJECT (100% CY5)**

Cygnus Gold's 675km² Bencubbin Project comprises three granted tenements (E70/4988, Bencubbin, E70/5169, Bencubbin North and E70/5168, Bencubbin South). The project, approximately 200km northeast of Perth, covers the Bencubbin Greenstone Belt – a suite of rocks extending over a strike length of 70km and up to 5km in width - where the Company's review of historical exploration confirmed the belt's prospectivity for (refer Figure 1 and Cygnus Gold ASX announcement 30/11/2018)¹:

- 1. 'Kambalda-style', komatiite-hosted magmatic nickel-copper sulfides and
- 2. Volcanogenic massive sulfide (VMS) base metals (lead-zinc-copper) mineralisation associated with the Mandiga gossan where exploration by previous explorers included best results of:
  - 18m @ 0.14% Ni from 32m in Hole DMA4;
  - 2m @ 0.63% Pb from 52m in Hole DMA2; and
  - 2m @ 1.7% Zn from 176m in Hole DMA5.



**Figure 1:** Bencubbin North, geology, targets and Cygnus Dec. 2019-Jan 2020 aircore program and historical drilling (refer ASX Announcement 7 October 2019)<sup>1</sup>.

#### 2019-2020 Aircore Drilling Program

In late 2019 - early 2020 Cygnus completed a 76-hole (2,663m) aircore drilling program designed to test priority nickel and base metals targets at Bencubbin North.

The wide-spaced drilling (on 100m hole spacing on lines often kilometres apart) was designed to identify the broad bedrock stratigraphy sitting below the extensive Ni-Cu, Cu-Pb-Zn, Cu-Zn or Cu-Bi-Cs soil anomalies identified in historical soil sampling (for details of targets refer Table 1 and CY5 ASX Announcement 30/11/2018)1:

- Nickel-copper sulfide targets (BN\_Ni 1, 2 & 6) associated with high magnesium ultramafic (komatiite) rocks analogous to the Kambalda deposits in Western Australia (WA). These discrete targets are within a regionally extensive nickel-in-soil geochemical anomaly, defined by anomalous auger soil samples with coincident nickel (more than 4,000ppm Ni) and copper (maximum 197ppm Cu) developed over a strike length of ~18km and up to 800m wide
- Volcanogenic massive sulfide (VMS) style base metals (Pb-Zn-Cu-Au) targets analogous to Golden Grove in WA on the 'Mandiga trend'. This included a target below a strong Pb-Zn-Cu auger soil anomaly that extends the historical Mandiga Cu-Pb-Zn system for a further 1.6km to the south, where there has been no historical drilling ('Grylls' target).

#### **Discussion of Results**

#### Nickel-copper sulfide targets

Aircore drilling traverses across the strongest nickel (Ni) – copper (Cu) soil anomalies tested four target areas with five lines of aircore holes over a nine-kilometre strike length (Figure 1):

- BN\_Ni\_1 with two lines ~400m apart,
- BN\_Ni2: one line, plus extensions to test a hangingwall unit,
- BN\_Ni5: one hole only as drilling was abandoned when fibrous minerals were identified, (subsequently found not to be asbestos)
- BN Ni6: one line.

This broad-spaced drilling was designed to target ultramafic (komatiite) lithologies, the host rock for nickel sulfide mineralisation elsewhere in the Yilgarn craton (e.g. Kambalda), with the aim of the program being to:

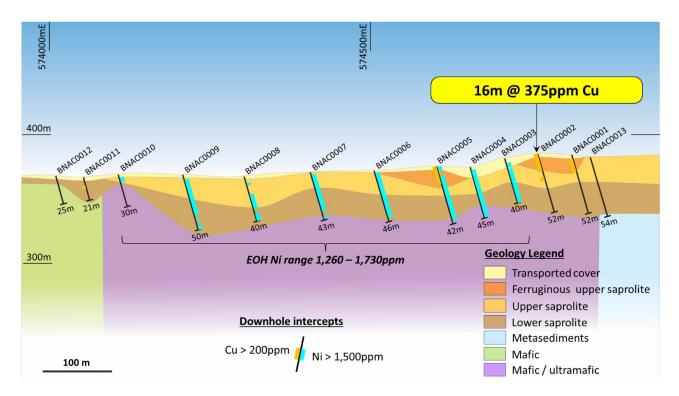
- Find evidence (direct or indirect) for the presence of magmatic sulfides
- Locate the ultramafic/country rock contacts and therefore possible basal flows which may host mineralisation
- Define the geochemical nature of the ultramafic units including MgO content and any (prospective) adcumulate facies within the sequence.

The target ultramafic lithologies were intersected on all the nickel targets drilled. This included komatiite units more than 800m wide, with a series of smaller ultramafic units intersected to the west of the main ultramafic unit including a broad zone of elevated copper (16m @ 375ppm Cu) within the weathering zone (Figure 2).

In fresh rock the ultramafic rocks contain between 1,250 - 1,750ppm Ni, 1,500 - 2,000ppm chromium (Cr) and 9 - 12% magnesium (Mg), or ~15 - 20% MgO. Although the Mg results are at the lower end of 'fertile' komatiites elsewhere in the Yilgarn, these are 'hydrous' values which would be expected to increase when calculated as 'anhydrous' MgO values.

While volcanic textures were not identified, the chemistry is consistent with spinifex to (possibly) orthocumulate textured komatiite, now recrystallised under moderate metamorphic conditions.

Although the nickel analyses broadly reflect 'average crustal abundance' in ultramafic rocks, PGE analyses are underway to better understand the fertility of these ultramafic units for magmatic nickel mineralisation.



**Figure 2:** Bn Ni 1 target, cross section 6592000mN (section looking north) with wide (>800m) komatiite unit and zones of elevated copper (Cu).

#### Base metals targets (Pb-Zn-Cu)

Three lines of aircore drilling were completed across the Grylls - Mandiga system on 1,600m spaced lines with 100m hole spacing. A line of aircore drilling was also drilled across target BN\_Cu14, a strong Cu-Zn-As-Sb-Au soil anomaly.

The southern-most aircore line(Grylls) intersected low level Pb-Zn mineralisation including:

- 1m @ 0.13% Pb + Zn from 18m in BBNAC0041 and
- 1m @ 0.45% Pb + Zn in hole BNAC0042.

This confirmed the Pb -in-soils anomalies and effectively extends the Mandiga (Cu-Pb-Zn-Ag) system a further 1,600m south of the original historical drilling.

These anomalous base metals are associated with widespread sericite-chlorite alteration (now metamorphosed), and anomalous Cu-Ag-Bi and Ag-Pb-Zn. This alteration signature is developed in several horizons across 200 to 300m of stratigraphy and is typical of VMS mineralisation elsewhere in Australia (e.g. Golden Grove in the Murchison).

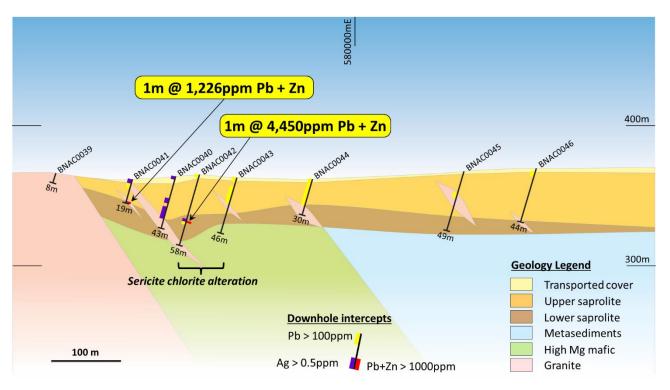
The northern line of drilling over Mandiga itself intersected weak base-metal and 'pathfinder' element anomalism, associated with strong albite alteration, although the line was potentially drilled too far to the east to have tested the main Grylls-Mandiga stratigraphy.

The data again suggest the Mandiga- Grylls system is a strike extensive (now over 7km long) and broadly stratabound Ag-Pb-Zn-Cu and pathfinder element anomaly associated with broad alteration haloes, consistent with a VMS style mineralised system.

The Company considers the anomalism identified in the three lines of drilling significant, particularly given the widespread drilling to date with limited stratigraphic and depth coverage.

While no significant intersections are reported from the relatively shallow 100m spaced drilling, similar alteration and metal anomalism was defined in BN\_Cu\_8 and 11, targets that are 7km apart, and in zones several hundred metres wide at each locality.

Given the similarity in rocks and alteration in the two targets, a very extensive (effectively stratabound) alteration system is defined, with locally anomalous metal contents.



**Figure 3:** Grylls aircore traverse (section looking northwest) with narrow higher-grade Pb-Zn intervals within weathering zone associated with strong (metamorphosed) sericite-chlorite alteration in a high magnesian basalt.

### **Next Steps**

The drilling reported here, at 100m hole spacing and on lines often kilometres apart, was designed to identify the broad bedrock stratigraphy below the extensive Ni-Cu, Cu-Pb-Zn & Cu-Zn soil anomalies identified in historical soil sampling rather than to test specific stratigraphic horizons or contacts within the package.

In particular, no electrical geophysics such as electromagnetics (EM) has been undertaken on the Ni targets, and no modern (i.e. post 1980) EM has been completed on the VMS targets, including Mandiga.

For the Ni targets further sampling of Cu anomalous samples, and EOH samples, in the ultramafics are warranted, looking for cryptic evidence of a sulphur saturation event in the ultramafic rock. If this can be established, ground TEM would be warranted looking for blind adcumulate hosted Ni-sulphide systems. In particular, the anomalous Cu results in ferruginous saprolite will be re-assayed for PGE's, perhaps scavenged from a magmatic sulphide source.

Cygnus is now reviewing options for advancing this project, which may include joint venture funding.

**TABLE 1:** Bencubbin North, targets, drilling and results.

Target	Holes	Target Description	Results and Next Steps
BN_Ni_1	BNAC0001 - 13	Two AC lines to test an	Logging, supported by Ni-Cr and Mg
	BNAC0014 - 23	interpreted fold closure in	geochemistry confirm an ultramafic host up
		an ultramafic package -	to 800m wide, consistent with a komatiitic
		highest Ni in auger soil	precursor. Elevated Cu identified in a
		anomaly, and strong Cu in	ferruginous saprolite- PGE assays underway
		auger soils	to test for possible magmatic sulphide source
			to the copper
BN_Ni_2	BNAC0024 - 30	Main ultramafic package	Ultramafic host confirmed, over 200m wide;
	BNAC0034 - 38	and interpreted	Second ultramafic located to the west, over
		hangingwall ultramafic	250m wide. PGE assays underway.
DN 0 44	DNIA 00000 05	rock.	
BN_Cu_11	BNAC0030 - 35	Cu-Pb-Zn- auger soil	Cu-Zn-Ag anomalism and alteration reported,
		anomaly between the two	but no Pb. Pb-in-soils anomaly not explained
		ultramafic units in BN_Ni_1 & BN_Ni_2	
BN_Ni_6	BNAC0058- 63	Main ultramafic package	Ultramafic host confirmed, 200m wide. PGE
DIN_INI_O	DIVAC0036- 63	Main ultramanc package	assays underway.
BN_Cu_7	BNAC0055 - 60	Strong Cu-Bi-Te-W auger	Strong Bi and anomalous Te, Mo, W, Pb. No
	2147100000 00	soil anomaly on the	Cu source found for Cu anomaly. The source
		interpreted footwall	may be located between the 100m spaced
		contact of the main	holes.
		ultramafic package above	
BN_Cu_8	BNAC0064 - 69	Strong Cu-Pb-Zn-Bi auger	Sulphide mineralisation, alteration, and
		soil anomaly on the	anomalous Ag, Cu, Zn, As, Sb, Te, Mo, Tl
		interpreted hangingwall of	and Cd with weak Pb in high-mag mafic on
		the main ultramafic	mafic contact. Similar host/ signature to
<b>.</b>	5111.00000	package	BN_Cu_11.
Grylls	BNAC0039 - 46	The peak Pb in the	Anomalous Ag, Cu, Pb, Zn across 200m of
		"Grylls" extension to the	stratigraphy with broad alteration and
		Mandiga trend	mineralisation developed. Includes 1m @
			0.13% Pb + Zn from 18m in BBNAC0041 <i>AND</i>
			1m @ 0.45% Pb + Zn in hole BNAC0042.
Grylls	BNAC0047 - 54	Test the Mandiga	Separate Ag-Cu-Bi (in siliceous sulphide
		stratigraphic package and	bearing sediments) and Ag-Pb-Zn
		mineralisation, on	anomalism in mafic rocks, across 200m of
		boundary between	stratigraphy.
	D114 00074 70	Mandiga and Grylls	B 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Mandiga	BNAC0074 - 76	Historic drilling on the	Results suggest drilling did not test the key
		Grylls trend, near the	stratigraphic package.
		approximate position of	
		historic diamond hole DMA5	
BN_Cu_14	BNAC0070 - 72	Test across strong Cu-Zn-	Strongly anomalous As, Sb (very high), W
DI1_OU_17	5147.00070 - 72	As-Sb-Au auger soil	and Cs, weakly anomalous Ag, Cu, Bi, Mo,
		anomaly (NB: no Pb	Sn, Mn, all hosted in high magnesian basalt.
		anomalism here, unlike	One further hole in laboratory. Cu-Zn results
		the main Mandiga- Grylls	to date do not explain the strong Cu-Zn soil
		trend)	anomaly.
BN_Ni_5 and Cu_9	BNAC0073	Designed to test Ni	Only one hole completed in the target as the
		anomaly on main	drilling was terminated due to the presence
		ultramafic package, and a	of fibrous minerals (now confirmed not to be
		strong Cu-Bi-Te-Sn-W	asbestos). Assays awaited
		auger soil anomaly on	
		interpreted footwall (east)	
		contact of main ultramafic.	
		Traverse abandoned due	
		to presence of fibrous minerals.	
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#### **About Cygnus Gold**

Cygnus is targeting the discovery of gold and base metals deposits within the Southwest Terrane, in the Wheatbelt region of Western Australia. The Southwest Terrane is an underexplored package of high metamorphic-grade rocks forming part of the well mineralised Yilgarn Craton.

Cygnus Gold's tenements ranges from early stage exploration areas through to advanced drill-ready targets.

In addition to the wholly owned projects, Cygnus is also managing exploration on the Lake Grace and Yandina JV Projects, two significant joint ventures with successful explorer/developer Gold Road Resources Ltd (ASX:GOR).

#### **Competent Persons Statement**

The information in this announcement that relates to Exploration Results is based on information and supporting documentation compiled by Mr James Merrillees, a Competent Person who is a member of The Australasian Institute of Mining and Metallurgy. Mr Merrillees is Managing Director and a full-time employee of Cygnus Gold and holds shares in the Company.

Mr Merrillees has sufficient experience relevant to the style of mineralisation 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 Merrillees consents to the inclusion in this announcement of the matters based on this information in the form and context in which it appears.

For and on behalf of the Board.

James Merrillees - Managing Director

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1: Refer ASX announcement on the said date for full details of these results. Cygnus is not aware of any new information or data that materially affects the information included in the said announcement.

## **APPENDIX 1 – DRILL HOLE INFORMATION**

**TABLE 1:** Aircore coordinate details – Bencubbin North (E70/5169). Drill hole coordinates MGA94 Zone 50 (GDA94). Collars located with handheld GPS ( $\pm 5$  m accuracy), AC = Air core hole.

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Prospect	Hole ID	Hole Type	Total Depth (m)	East MGA	North MGA	RL MGA	Dip	Azimuth MGA
BN_Ni_1	BNAC0001	AC	52	574812	6591995	384.588	-60	90
BN_Ni_1	BNAC0002	AC	52	574759	6591997	385.852	-60	90
BN_Ni_1	BNAC0003	AC	40	574708	6591997	381.896	-60	90
BN_Ni_1	BNAC0004	AC	46	574654	6591995	374.996	-60	90
BN_Ni_1	BNAC0005	AC	52	574602	6592004	375.811	-60	90
BN_Ni_1	BNAC0006	AC	46	574505	6592003	372.506	-60	90
BN_Ni_1	BNAC0007	AC	43	574406	6592005	371.375	-60	90
BN_Ni_1	BNAC0008	AC	40	574303	6592008	368.228	-60	90
BN_Ni_1	BNAC0009	AC	50	574207	6592005	369.295	-60	90
BN_Ni_1	BNAC0010	AC	30	574107	6592008	369.899	-60	90
BN_Ni_1	BNAC0011	AC	21	574053	6592008	367.31	-60	90
BN_Ni_1	BNAC0012	AC	25	574010	6592008	368.625	-60	90
BN_Ni_1	BNAC0013	AC	54	574841	6592000	383.216	-60	90
BN_Ni_1	BNAC0014	AC	36	574804	6591597	379.45	-60	90
BN_Ni_1	BNAC0015	AC	46	574749	6591597	378.715	-60	90
BN_Ni_1	BNAC0016	AC	34	574700	6591599	377.587	-60	90
BN_Ni_1	BNAC0017	AC	37	574649	6591598	379.381	-60	90
BN_Ni_1	BNAC0018	AC	21	574603	6591597	379.423	-60	90
BN_Ni_1	BNAC0019	AC	43	574551	6591598	377.431	-60	90
BN_Ni_1	BNAC0020	AC	33	574502	6591604	375.983	-60	90
BN_Ni_1	BNAC0021	AC	22	574453	6591604	374.71	-60	90
BN_Ni_1	BNAC0022	AC	47	574403	6591602	376.443	-60	90
BN_Ni_1	BNAC0023	AC	48	574351	6591602	378.965	-60	90
BN_Ni_2	BNAC0024	AC	24	575235	6590106	374.29	-60	90
BN_Ni_2	BNAC0025	AC	27	575188	6590104	370.065	-60	90
BN_Ni_2	BNAC0026	AC	37	575135	6590101	369.121	-60	90
BN_Ni_2	BNAC0027	AC	25	575030	6590102	367.891	-60	90
BN_Ni_2	BNAC0028	AC	29	574934	6590102	368.076	-60	90
BN_Ni_2	BNAC0029	AC	39	574883	6590101	369.119	-60	90
BN_Ni_2	BNAC0030	AC	60	574833	6590101	369.497	-60	90
BN_Ni_2	BNAC0031	AC	52	574719	6590100	365.456	-60	90
BN_Ni_2	BNAC0032	AC	49	574630	6590098	365.952	-60	90
BN_Ni_2	BNAC0033	AC	27	574526	6590098	366.683	-60	90
BN_Ni_2	BNAC0034	AC	31	574428	6590103	363.925	-60	90
BN_Ni_2	BNAC0035	AC	37	574376	6590102	362.161	-60	90
BN_Ni_2	BNAC0036	AC	31	574323	6590100	360.799	-60	90
BN_Ni_2	BNAC0037	AC	19	574223	6590101	362.451	-60	90
BN_Ni_2	BNAC0038	AC	24	574121	6590107	361.721	-60	90
Grylls_PbZnCu_12	BNAC0039	AC	8	579707	6580314	366	-60	225
Grylls_PbZnCu_12	BNAC0040	AC	43	579842	6580422	363.792	-60	225
Grylls_PbZnCu_12	BNAC0041	AC	19	579779	6580396	361.554	-60	225
Grylls_PbZnCu_12	BNAC0042	AC	58	579844	6580466	365	-60	225
Grylls_PbZnCu_12	BNAC0043	AC	46	579882	6580503	363.145	-60	225
Grylls_PbZnCu_12	BNAC0044	AC	30	579956	6580581	361.92	-60	225
Grylls_PbZnCu_12	BNAC0045	AC	49	580098	6580743	367.343	-60	225
Grylls_PbZnCu_12	BNAC0046	AC	44	580162	6580824	369.458	-60	225
Grylls_PbZnCu_13	BNAC0047	AC	25	578420	6581201	383.354	-60	225
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Prospect	Hole ID	Hole Type	Total Depth (m)	East MGA	North MGA	RL MGA	Dip	Azimuth MGA
Grylls_PbZnCu_13	BNAC0048	AC	20	578476	6581241	382.585	-60	225
Grylls_PbZnCu_13	BNAC0049	AC	51	578430	6581210	384.869	-60	45
Grylss_PbZnCu_13	BNAC0050	AC	40	578468	6581236	384.376	-60	225
Grylls_PbZnCu_13	BNAC0051	AC	20	578497	6581277	383.229	-60	225
Grylls_PbZnCu_13	BNAC0052	AC	14	578528	6581316	381.341	-60	225
Grylls_PbZnCu_13	BNAC0053	AC	15	578576	6581360	381.874	-60	225
Grylls_PbZnCu_13	BNAC0054	AC	11	578661	6581451	383.86	-60	225
BN_Ni_6	BNAC0055	AC	4	577835	6583609	380.15	-60	90
BN_Ni_6	BNAC0056	AC	19	577835	6583609	380.15	-60	90
BN_Ni 6	BNAC0057	AC	19	577735	6583612	378.864	-60	90
BN_Ni_6	BNAC0058	AC	25	577705	6583609	381.677	-60	90
BN_Ni_6	BNAC0059	AC	15	577630	6583606	387.33	-60	90
BN_Ni_6	BNAC0060	AC	25	577531	6583604	388.059	-60	90
BN_Ni 6	BNAC0061	AC	21	577434	6583604	387.021	-60	90
BN_Ni_6	BNAC0062	AC	23	577331	6583604	385.394	-60	90
BN_Ni_6	BNAC0063	AC	43	577232	6583603	387.396	-60	90
BN_Cu_8	BNAC0064	AC	28	576805	6584446	384.286	-60	90
BN_Cu_8	BNAC0065	AC	46	576747	6584441	381.451	-60	90
BN_Cu_8	BNAC0066	AC	52	576697	6584446	378.006	-60	90
BN_Cu_8	BNAC0067	AC	70	576647	6584446	378.729	-60	90
BN_Cu_8	BNAC0068	AC	67	576593	6584448	378.634	-60	90
BN_Cu_8	BNAC0069	AC	32	576541	6584446	378.888	-60	90
BN_Cu_14	BNAC0070	AC	49	573548	6593795	378.069	-60	90
BN_Cu_14	BNAC0071	AC	46	573503	6593796	377.935	-60	90
BN_Cu_14	BNAC0072	AC	43	573447	6593798	375.281	-60	90
BN_Ni_5	BNAC0073	AC	19	574151	6594502	380.745	-60	90
BN_Ni_5	BNAC0074	AC	35	577272	6582626	386.55	-60	240
BN_Ni_5	BNAC0075	AC	30	577349	6582688	389.345	-60	240
BN_Ni_5	BNAC0076	AC	30	577196	6582570	382.692	-60	240

**TABLE 2:** Significant drilling assay results. Intervals are calculated with a lower cut-off of 0.1% Pb + Zn with up to 1m of below cut-off internal dilution included.

Hole ID	Hole Type	Total Depth (m)	Depth From (m)	Depth To (m)	Length (m)	Pb (ppm)	Zn (ppm)	Pb + Zn (ppm)
BNAC0023	AC		12	16	4	985	134	1,119
BNAC0041	AC		18	19	1	56.4	1,170	1,226
BNAC0042	AC		28	29	1	2,820	1,630	4,450

## **APPENDIX 2: JORC Code, 2012 Edition – Table 1**

# Section 1 Sampling Techniques and Data – Bencubbin North Aircore Drilling (Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.	The results in this release relate to holes BNAC0001 – BNAC0076all drilled within the Bencubbin North tenement E70/5169 (Cygnus Gold 100%).
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any	Sampling was undertaken under Cygnus Gold's standard procedures including QAQC. The laboratory also applied QAQC protocols.
	measurement tools or systems used.	One metre samples were collected from individual plastic bags using a spear sampler, although scoops were used where the spear method was unsuitable (e.g. when the sample was wet).
		A four-metre composite was then made up these individual one metre samples to obtain an approximately 2.5 - 3kg sample.
		An individual one metre 'end of hole' sample was also collected for submission.
	Aspects of the determination of mineralisation that are Material to the Public Report.	All samples are pulverised at the lab to 85% passing -75µm to produce a 50g charge for Fire Assay with an ICP-AES finish.
	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.	
Drilling techniques	Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg	Aircore drilling with a blade bit was completed to "refusal", giving 1-2m of fresh bedrock sample. Where possible lengths of 3-12m of hammer drilling was undertaken with a face sampling hammer bit.
	core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is	Drill holes were angled perpendicular to the interpreted stratigraphy.
	oriented and if so, by what method, etc).	The program was supervised by experienced Cygnus Gold geologists.
Drill sample	Method of recording and assessing core and chip sample	One metre samples were collected in individual plastic bags via a cyclone on the rig.
recovery	recoveries and results assessed.  Measures taken to maximise sample recovery and ensure representative nature of the samples.	Sample recovery was estimated visually and was generally around 80-90% but may be as low as 30-40% in some near surface samples.

Criteria	JORC Code explanation	Commentary
	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.	
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support	Samples were wet sieved and logged for colour, weathering, grain size, major lithology (where possible) along with any visible alteration, sulphides or other mineralisation
	appropriate Mineral Resource estimation, mining studies and metallurgical studies.	The entire hole is logged by experienced geologists employed by Cygnus Gold using Cygnus Gold's logging scheme.
		The level of detail is considered sufficient for early stage exploration of the type being undertaken here.
	Whether logging is qualitative or quantitative in nature.	Geological logging is qualitative whereas magnetic susceptibility are quantitative
	Core (or costean, channel, etc) photography.	All chip trays are photographed in the field.
	The total length and percentage of the relevant intersections logged.	All holes are logged over their entire length.
Sub-sampling	If core, whether cut or sawn and whether quarter, half or	Samples were composited over 4m intervals with a 1m 'end of hole' sample also collected.
techniques and sample	all core taken.  If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	Samples were generally dry and duplicate samples were taken and submitted at the frequency of 1
preparation		duplicate per 50 samples.
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	All samples were prepared at the ALS Laboratory in Perth. All samples were dried and pulverised to 85% passing 75µm and a sub sample of approximately 200g retained. A nominal 50g charge was used for the fire assay analysis. The procedure is industry standard for this type of sample and analysis.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	Sample sizes are considered appropriate given the particle size and the need to keep 4m samples below a targeted 3kg weight which meet the targeted grind size using LMS mills used in sample preparation by
	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.	ALS.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	
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.	Samples were analysed at ALS Laboratory, Perth. The analytical method used was a 50g charge for Fire Assay with an ICP-AES finish for gold only. This method gives a near total digest of the sample and is considered appropriate for the material and mineralisation.

Criteria	JORC Code explanation	Commentary
		Representative samples were also analysed using ALS method ME-MS61 which is a four-acid digest with an ICP-MS or ICP-OES finish depending on the element being reported with Cygnus requesting analyses for 48 elements. Four acid digestion is considered a 'near total' digest.
	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.	Magnetic susceptibilities were recorded in the field using a magROCK magnetic susceptibility metre with a sensitivity of 1x10 <sup>-5</sup> SI units.
	Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias)	Cygnus has submitted a mix of Certified Reference Materials (CRMs) and blanks at a rate of five per 100 samples.  Umpire checks are not required for early stage exploration projects.
	and precision have been established.	- The control and the required for early enage expressions projected
Verification of sampling and assaying -	The verification of significant intersections by either independent or alternative company personnel.	Significant results are checked by the Project Geologist and Competent Person in addition to checks by the Database Manager.
assayıng	The use of twinned holes.	No twined holes have been completed at this early stage of exploration.
-	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	All field logging is carried out on a laptop using Ocris Mobile software. Logging data is submitted electronically to the Database Manager based in Perth. Assay files are received from the lab electronically and all data is stored in the Company's SQL database managed by Expedio Ltd in Perth.
	Discuss any adjustment to assay data.	No assay data is adjusted.
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.	Aircore collars were determined by handheld GPS, which are considered accurate to ±5m in Northing and Easting.
	Specification of the grid system used.	The grid system used is MGA94 Zone 50 (GDA94).
	Quality and adequacy of topographic control.	RLs are allocated to the hole collar using a DTM derived from detailed topography. The accuracy is estimated to be better than 2m in elevation.
Data spacing	Data spacing for reporting of Exploration Results.	Aircore lines are spaced 400 and 2,000m apart on individual targets, with holes spaced ~100m along lines.
and distribution	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.	The current drill spacing is broad and designed to follow up regolith anomalism and geological targets identified from Cygnus interpretation of regional geophysical surveys.
	Whether sample compositing has been applied.	Samples were composited over 4m intervals except for the 'end of hole' sample, which is a single, 1m sample of the last metre of drilling.
Orientation of data in relation	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	Drilling is orthogonal to the general trend of stratigraphy.

Criteria	JORC Code explanation	Commentary
to geological structure	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.	Drill holes are angled perpendicular to the interpreted stratigraphy.
Sample security	The measures taken to ensure sample security.	Samples are placed in calico bags which are placed in larger polyweave bags and sealed with cable ties before transport to the laboratory in Perth by a local courier (approximately 300km by road). Sample dispatches are accompanied by supporting documentation, signed by the site project geologist, which outline the submission number, number of samples and preparation/analysis instructions.
		Drill holes are logged prior to being sampled.
		ALS maintains the chain of custody once the samples are received at the preparation facility, with a full audit trail available via the ALS Webtrieve site.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	Sampling and assaying techniques are considered to be industry standard. At this stage of exploration, no external audits or reviews have been undertaken.

# Section 2 Reporting of Exploration Results - Bencubbin North Aircore Drilling (Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and	Type, reference name/number, location and ownership including agreements or material issues with third parties	The drill holes reported here were all drilled within E70/5169 (Bencubbin North) which is owned 100% by Cygnus.
land tenure status	such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.	The landownership within E70/5169 is mostly freehold with the exception of small reserves set aside by the government for infrastructure or nature conservation.
pain and on in	, G	Cygnus has Land Access Agreements according to the Mining Act 1978 (WA) with the underlying landowners that own the ground.
		Cygnus has signed a standard Indigenous Land Use Agreement (ILUA) for E70/5169.
	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 Bencubbin North tenement (E70/5169) is in good standing with the Western Australian Department of Mines, Industry Regulation and Safety ( <b>DMIRS</b> ). Cygnus is unaware of any impediments for exploration on this licence.
•	Acknowledgment and appraisal of exploration by other parties.	Previous exploration on Cygnus' Bencubbin Nth tenement (E70/5169) was undertaken by a variety of companies. This historical work is best summarised by Rubicon Resources Limited in WAMEX Report a87615, Table 1.
		General summary of previous work:
		1997-1998 Shell Minerals: Detailed mapping and diamond drilling of the Mandiga gossans
		<ul> <li>1978-1984 Otter Resources: Exploration for VMS systems and Mandiga Gossans. Work included a 7-hole RC program, SIROTEM and surface geochemical sampling.</li> </ul>
		<ul> <li>1991 CRA Exploration: Regional laterite sampling in search of gold, RAB drilling</li> </ul>
		1993-1994 Troy Resources NL: RAB drilling for gold close to the Bencubbin North Nickel target
		<ul> <li>1996-1998 Astro Mining NL: Primarily searched for Diamond and Gold mineralisation across the region, work included aeromagnetics, surface geochemistry and RC, RAB and Aircore Drilling (MERA1-60). Results included 20m @ 0.19% Ni in hole MERA2.</li> </ul>
		2006-2010 Rubicon Resources Limited/Heron Resources: mapping, rock chip and auger sampling
		2011-2013 Australia Minerals and Mining Group: RC drilling of Banded Iron Formations for Fe-ore
Geology	Deposit type, geological setting and style of mineralisation.	Cygnus' E70/5169 is located in the Murchison Domain of the Youanmi Terrane of the Yilgarn Craton.
		Project-scale geology comprises granite-greenstone lithologies that have been metamorphosed to amphibolite to granulite facies grade. The Archaean lithologies are cut by Proterozoic dolerite dykes.
		Deposit styles targeted by Cygnus in the Bencubbin North project are:

Criteria	JORC Code explanation	Commentary
		Archaean Nickel Sulfide deposits (Nickel-Copper ± Cobalt ± Platinum Group Elements ± Gold)
		Saprolitic Nickel-Chrome deposits
		Archaean Orogenic mesothermal gold deposits
		Copper-Lead-Zinc-Silver-Gold Volcanogenic Massive Sulfide (VMS) deposits
Drill hole	A summary of all information material to the understanding	All assay and collar information are tabulated in Appendix 1 of this report.
Information	of the exploration results including a tabulation of the following information for all Material drill holes:	All significant intercepts are reported at a 0.1% Pb + Zn cut-off.
	<ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above</li> </ul>	Summaries of previous significant drill intersections at Bencubbin North (including JORC Table 1 information) were provided in Cygnus Gold ASX Announcement 30/11/2018.
	sea level in metres) of the drill hole collar	No information has been excluded.
	<ul> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> </ul>	
	<ul> <li>hole length.</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</li> </ul>	
	case.	
Data aggregation	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations	Intersection lengths and grades for 'significant intercepts' in Appendix 1 Table 2 are reported as a downhole, length weighted average of grades above a cut-off of 0.1% Pb + Zn.
methods	(eg cutting of high grades) and cut-off grades are usually Material and should be stated.	Where reported in the text or figures, lower grade intervals are quoted to provide context for significant intervals.
	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.	Intersection lengths and grades for 'significant intercepts' in Appendix 1 Table 2 are reported as a downhole, length weighted average of grades above a cut-off of 0.1% Pb + Zn.
		Details of all intersections are included in Appendix 1 in the body of the announcement.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalent values are reported.
Relationship between	These relationships are particularly important in the reporting of Exploration Results.	Drill hole intersections are reported down hole, and true width is unknown.
mineralisation widths and	If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.	

Criteria	JORC Code explanation	Commentary
intercept lengths	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').	
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 the figures in the body of this announcement for relevant plans including a tabulation of intercepts.
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and	Intersection lengths and grades for 'significant intercepts' in JORC Table 2 are reported as a down-hole, length weighted average of grades above a cut-off of 0.1% Pb + Zn.
	high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	Numbers of drill holes and metres are included in the body of the announcement.
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.	No other substantive exploration data is available for reporting.
Further work	The nature and scale of planned further work (eg tests for	Follow up AC drilling is planned to expand and infill the current survey.
	lateral extensions or depth extensions or large-scale step out drilling).	Selected deeper RC and/or diamond drilling is planned to test stratigraphy below significant intersections.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	