

New High-Grade Copper Sulphide & Gold Intersections Extend Bluebird Discovery to More Than 250m Depth

Latest holes include Massive Sulphides (Chalcocite) grading up to 54.5% copper

➤ Latest drilling results from the Bluebird Discovery have produced exceptionally high-grade copper-gold sulphide intersections that have extended the mineralisation to over 250m depth and include massive sulphides with copper grades up to 54.5% Cu and gold grades up to 39 g/t.



- ➤ Drillhole BBDD0013 extended the thick, westerly-plunging high-grade copper-gold zone to the west of BBDD0012 (63m @ 2.1% Cu, 4.6 g/t Au incl. 27.55m @ 3.6% Cu, 10 g/t Au¹), where the mineralisation remains completely open. Exceptional intersections from BBDD0013 include:
 - 40m @ 2.6% Cu and 1.34 g/t Au from 131m (down hole)
 - including **24.5m** @ **3.9% Cu** and 0.45 g/t Au from 146.5m
 - including 4.75m @ 15.2% Cu and 0.36 g/t Au from 164m incl. 0.8m @ 54.5% Cu
 - and including 3.0m @ 1.8% Cu and 13.2 g/t Au from 181m incl. 1m @ 39 g/t Au.
- ➤ Diamond drillhole BBDD0015 is a 100m step-out that has doubled the depth of Bluebird to more than 250m, where it remains completely open. High-grade intersections from BBDD0015 include:
 - 17.8m @ 3.7 % Cu and 0.34 g/t Au from 277m (down hole)
 - Including 9.5m @ 6.0 % Cu and 0.48 g/t Au from 278m
 - including 2.3m @ 12.3 % Cu and 0.36 g/t Au from 285.2m
- Assay results are pending for the remaining two completed holes (BBDD0016 & 0017), both of which intersected thick hematite and visible copper sulphide mineralisation (see Appendix 1).
- Down-hole electromagnetics (DHEM) as well as a surface Induced Polarisation (IP) survey have commenced, to map extensions and/or repeats of the sulphide zones for further drill-testing.



Tennant Minerals Chairman Matthew Driscoll commented: "The latest thick and high-grade copper and gold intersections from our Bluebird diamond drilling program are a real breakthrough, as they have confirmed the continuity of the high-grade sulphide mineralisation at depth and the massive chalcocite grades of up to 54.5 percent copper, coupled with gold grades of up to 39 grams per tonne, are truly spectacular.

"The recognition that the majority of the high-grade copper mineralisation is in sulphides has given impetus to our down hole EM program, to detect extensions to this high-grade copper-gold discovery.

"We have also commenced an IP geophysical survey over Bluebird to fingerprint the copper sulphide mineralisation, which will help us prioritise the up to 12 geophysical targets within the Bluebird-Perseverance Target Zone for drill-testing.

"This will give us even more confidence that Bluebird is just one of several high-grade copper and gold deposits awaiting discovery within the Company's broader Barkly Project."

Northern Territory focused copper-gold explorer, Tennant Minerals Limited (ASX: TMS) is very pleased to announce the assay results from a further three diamond drillholes recently completed at the Bluebird copper-gold discovery. These latest results include outstanding high-grade sulphide copper and gold intersections which have extended the Bluebird discovery by a further 100m to over 250m below surface (see longitudinal projection, Figure 1 and cross section 448,340mE, Figure 2).

Diamond drillhole BBDD0013 tested extensions of the mineralisation to the west of the previous spectacular copper and gold intersection in BBDD0012 (63m @ 2.1% Cu, 4.6 g/t Au incl. 27.55m @ 3.6% Cu, 10 g/t Au¹), producing the following intersections of high-grade copper and gold that include spectacular assays associated with massive sulphides (chalcocite - Cu₂S) of up to 54.5% Cu (see Photo 1):

- o 40.0m @ 2.6% Cu and 1.34 g/t Au from 131.0m (down hole)
 - including 24.5m @ 3.9% Cu, 0.45 g/t Au from 146.5m
 - including 4.75m @ 15.2% Cu, 0.36 g/t Au from 164.0m incl. 0.8m @ 54.5% Cu
 - & including 3.0m @ 1.8% Cu and 13.2 g/t Au from 181.0m incl. 1.0m @ 39 g/t Au.

Diamond drillhole **BBDD0015** is a 100m step-out at depth (down-plunge) from BBDD0012 that produced the following thick and high-grade copper sulphide with gold intersections:

- o **17.8m @ 3.7 % Cu** and 0.34 g/t Au from 277m (down hole)
 - Including 9.5m @ 6.0 % Cu and 0.48 g/t Au from 278.0m
 - including 2.3m @ 12.3 % Cu and 0.36 g/t Au from 285.2m.

The intersection in BBDD0015 has doubled the depth extent of the Bluebird discovery to more than 250m below surface, where it remains completely open (see Figures 1 and 2).

Re-logging of cut and sampled core from these new intersections, as well as the previous spectacular intersection in BBDD0012, indicates that the majority of the copper mineralisation is the sulphide mineral chalcocite (Cu₂S), which has the highest proportion of copper of any sulphide mineral.

The thick copper-gold intersection in BBDD0013 is associated with a dilational thickened zone developed within an anticlinal hinge "roll-over" position (Figure 2). Structural measurements indicate **that BBDD0015** is close to another anticlinal dilational thickened target zone at depth (see Figure 2), which will be drill-tested as part of the Stage 2 follow-up program currently being planned.



Results were also received for BBDD0014, which intersected 28m @ 0.65% Cu from 128m downhole including 2m @ 1.6% Cu, 0.17 g/t Au and 2m @ 2.1% Cu. These intersections are interpreted to represent the top of the Bluebird copper-gold zone (see longitudinal projection, Figure 1 and cross section, Figure 2).

Results are awaited from two further step-out diamond drillholes that tested the Bluebird discovery to the west of all previous drillholes (see Figure 1) and include:

- o BBDD0017: 64m hematite alteration from 162m, including 33m of intense hematite-magnetite with visual copper mineralisation from 173m (see Appendix 1 for descriptions), and,
- BBDD0016: deeper zone with 35m zone of hematite alteration from 291m with 21m of copper mineralisation from 294m (predominantly chalcocite - see Appendix 1 for descriptions).

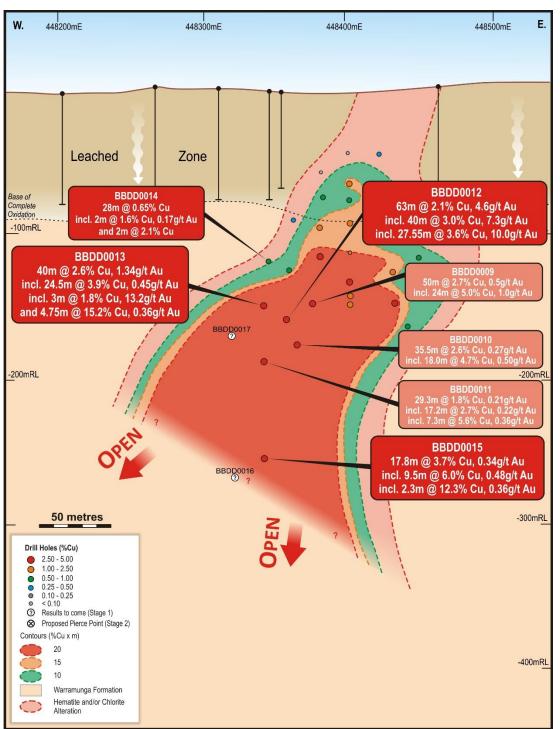


Figure 1: Bluebird longitudinal projection with new & previous Cu-Au intersections.



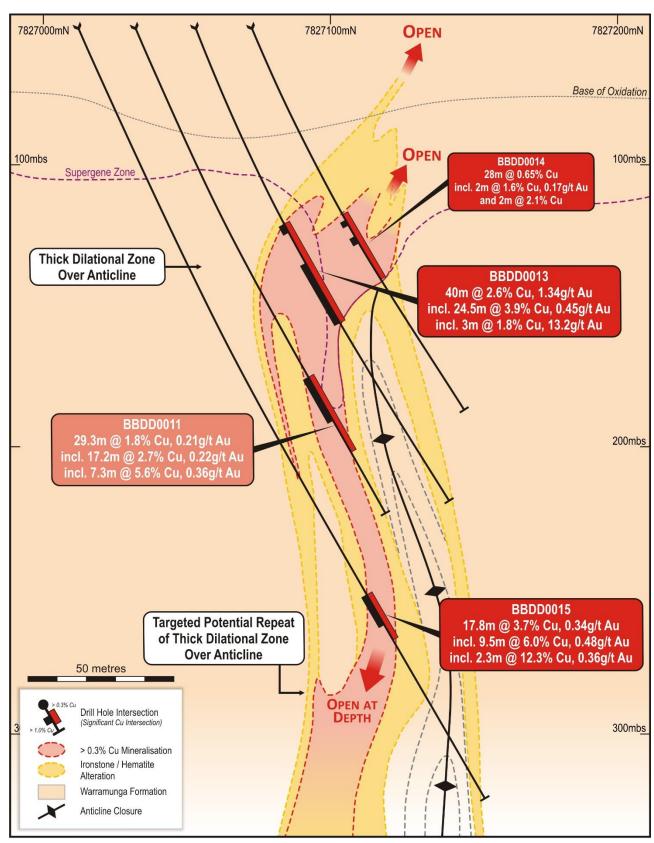


Figure 2: Cross-section 448,340mE with new intersections BBDD0013, 14 and 15 and previous BBDD0010 drill-hit

An IP survey has commenced across the top of Bluebird to effectively "fingerprint" the sulphide mineralisation. In addition, downhole electromagnetics (**DHEM**) will shortly be carried out from the western-most holes (BBDD0016 and BBDD0017) to detect conductors that may represent extensions or repeats of the Bluebird sulphide zone.



Following receipt of all Stage 1 diamond drilling results and interpretation of structural and alteration data, a 3-dimensional model of the mineralised zone drilled to date will be constructed. This, combined with modelling of geophysical data, including the DHEM and IP surveys, will enable fine tuning of the follow-up Stage 2 drilling program that will be designed to significantly expand the footprint of Bluebird to over 300m strike length and >500m depth.

The dimensions and grades being produced from drilling of the Bluebird discovery suggest the potential similarity to the Peko deposit which produced 3.7Mt @ 4% Cu and 3.5 g/t Au from 1934 and 1981³. Peko is located only 20km west of Bluebird in a similar geological setting (see Figure 3 for location).

ABOUT THE BLUEBIRD COPPER-GOLD DISCOVERY

Bluebird is located within the Company's 100% owned Barkly Project in the Northern Territory at the eastern edge of the Tennant Creek (copper-gold) Mineral Field (TCMF), which **produced over 5Moz of gold and over 500kt of copper** from 1934 to 2005⁴ (see location, Figure 3 below).

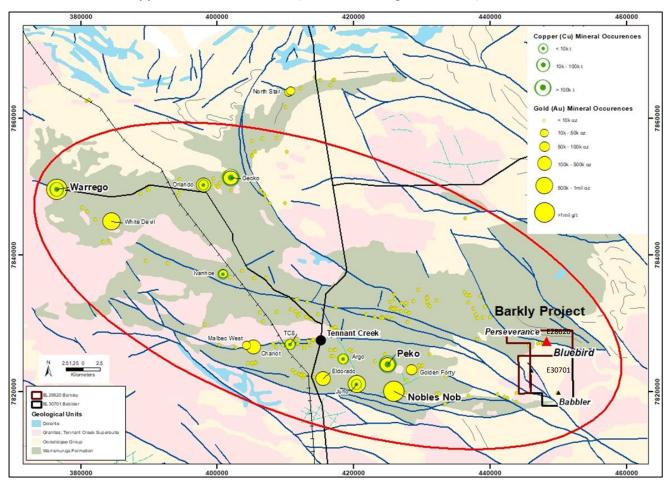


Figure 3: Location of the Barkly Project and major historical mines in the Tennant Creek Mineral Field

The six-hole (1,700m) Stage 1 follow-up diamond drilling program (for details, see Table 2) was designed to scope out and expand the footprint of the high-grade copper-gold zone discovered at Bluebird.

The intensely mineralised copper-gold intersections in BBDD0012 (see cross section, Figure 4), BBDD0013 and BBDD0015 (Figure 2) are located to the west and deeper (further down plunge) than BBDD0009, which intersected **50m @ 2.7% Cu and 0.52 g/t Au** from 158m (down hole) including **24m @ 5.01% Cu, 1.01 g/t Au and 61.7 g/t Ag** from 159m³ (see cross section 448,380mE, Figure 5 and Figure 1).



The drilling to date has identified a westerly plunging zone of copper-gold mineralisation that extends from 60m to more than 250m below surface (Figure's 1 and 2) and 150m along strike in an east-west orientation.

Interpretation of the key drilling intersections, utilising structural data from logging of drill core, indicates that the thick and high-grade copper and gold intersection in BBDD0012 is associated with steeply dipping structures that have intersected the axis of a shallow-plunging anticline (see Figure 2 and Figure 4 below). This association with anticlinal fold structures is analogous to other major discoveries at Tennant Creek including the **Warrego copper-gold deposit** (Figure 3) which produced **6.75Mt @ 1.9% Cu, 6.6 g/t Au**⁴ and the **Rover 1** discovery of Castille Resources (ASX. CST), located under cover to the southwest of Tennant Creek, where a Mineral Resource of **4.7Mt @ 1.63% Cu and 1.73 g/t Au** has recently been announced⁵.

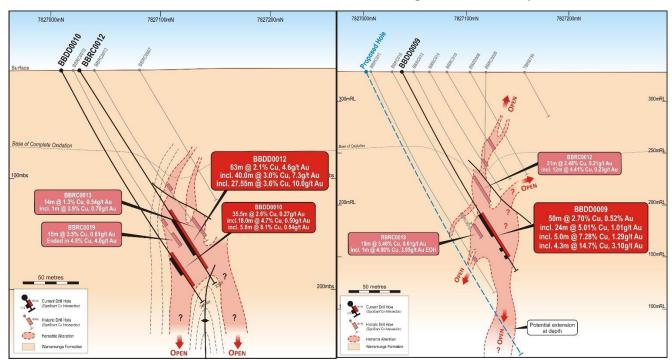


Figure 4: Cross-section 448,360mE & BBDD0012 & 10

Figure 5: Cross-section 448,380mE & BBDD0009

MULTIPLE COPPER-GOLD TARGETS IDENTIFIED WITHIN THE BLUEBIRD CORRIDOR

The Barkly Project comprises the Barkly (EL 28620) and Babbler (EL 30701) tenements (see location, Figure 3) which are both highly prospective for magnetite-hematite (iron-oxide) copper-gold (IOCG) mineralisation.

The Bluebird discovery is associated with a gravity high, which is part of a 5km long gravity anomaly known as the "Bluebird Corridor". This gravity anomaly reflects high-density, iron enrichment in the primary zone below the near surface leaching that extends to >60m depth at Bluebird (Figure 1).

Interpretation of new detailed drone magnetics imagery and modelling (Figures 6 and 7), combined with the detailed gravity data, has identified 12 coincident magnetic-gravity copper-gold targets within a 2km "Bluebird-Perseverance Target Zone" extending west of the high-grade Bluebird copper-gold discovery¹. This major target zone includes an exceptionally strong magnetic-gravity feature centred below the historical Perseverance gold workings (see Figure 6, drone magnetics and Figure 7, detailed gravity image).

Previous RC drilling under the historical gold workings at Perseverance produced shallow high-grade gold intersections such as **3m @ 50.0 g/t Au from 42m in PERCO15**⁶ and **3m @ 43.2 g/t Au from 72m in PERCO01**⁶. These high-grade gold intersections have not been followed up and the underlying iron-stone copper-gold target is yet to be drill-tested.



The Company has commenced an IP geophysical survey over Bluebird to obtain a fingerprint of the sulphide mineralisation. This will help prioritise the drill testing of the up to 12 gravity-magnetic targets identified within the Bluebird-Perseverance Target Zone² (see Figure's 6 and 7).

Following the IP survey, further drilling will be planned to test the priority copper-gold targets identified from the magnetics and gravity modelling and the IP survey, within the 2km Bluebird-Perseverance Target Zone (Figures 6 and 7 below):

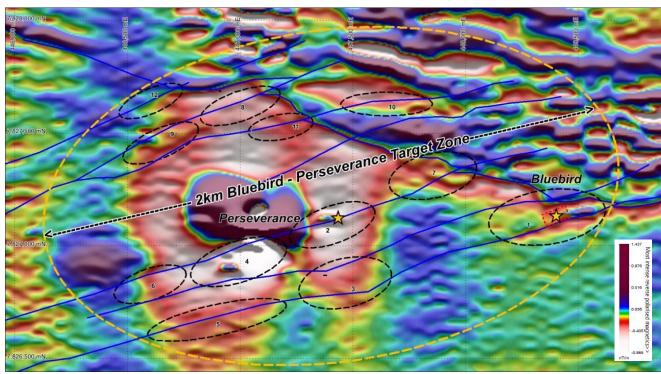


Figure 6: Bluebird-Perseverance magnetic intensity (reversed) image, with structures & magnetic-gravity targets

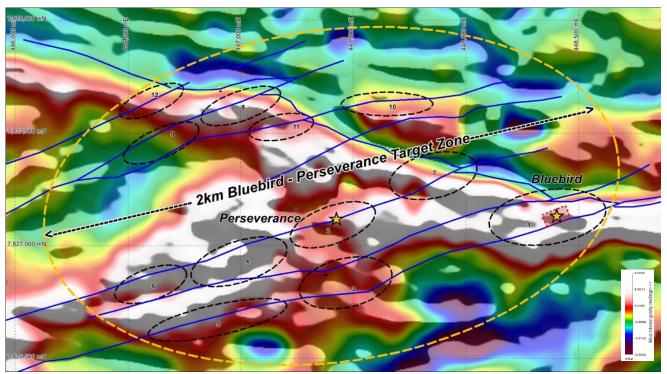


Figure 7: Bluebird-Perseverance bouger gravity image, with interpreted structures & magnetic-gravity targets



Table 1 below includes all significant intersections in BBDD0013, BBDD0014, BBDD0015:

Drillhole	From	То	Interval	Cu %	Au g/t	Ag g/t	Bi %	Co g/t	Fe %	Cut-off
BBDD0013	131.00	171.00	40.00	2.6	1.34	1.21	0.02	105.7	13.7	0.3% Cu
including	131.00	134.00	3.00	1.8	13.16	1.20	0.04	76.7	9.7	1.0% Cu
& including	146.50	171.00	24.50	3.9	0.45	1.64	0.03	123.5	14.6	1.0% Cu
including	164.00	168.75	4.75	15.2	0.36	4.44	0.10	29.0	14.6	3.0% Cu

Drillhole	From	То	Interval	Cu %	Au g/t	Ag g/t	Bi %	Co g/t	Fe %	Cut-off
BBDD0015	277.00	294.80	17.80	3.7	0.34	2.1	0.04	222.7	12.3	1.0% Cu
including	278.00	287.50	9.50	6.0	0.48	3.1	0.06	299.4	12.6	2.0% Cu
including	280.00	287.50	7.50	6.9	0.29	3.5	0.04	356.8	14.2	3.0% Cu
including	285.20	287.50	2.30	12.3	0.36	6.4	0.05	567.4	11.6	5.0% Cu

Drillhole	From	То	Interval	Cu %	Au g/t	Ag g/t	Bi %	Co g/t	Fe %	Cut-off
BBDD0014	128.00	156.00	28.00	0.65	0.08	0.79	0.02	42.8	18.5	1.0% Cu
including	130.00	139.00	9.00	0.87	0.07	0.99	0.02	75.0	20.3	2.0% Cu
including	130.00	132.00	2.00	1.56	0.17	1.84	0.02	251.5	28.0	3.0% Cu

Table 2 below includes Stage 1 drillhole details to date:

Hole #	Dip°	Azi_Grid°	GRID_E	GRID_N	RL	Mud-rot. (m)	DDC (m)	Depth (m)
BBDD012	-60	0	448,360	7,827,032	332	87	142	229
BBDD013	-65	0	448,340	7,827,052	332	81	162	243
BBDD014	-65	0	448,340	7,827,072	332	57	151	208
BBDD015	-65	0	448,340	7,827,012	332	57	298	355
BBDD016	-65	0	448,320	7,827,010	332	60	303	363
BBDD017	-65	0	448,320	7,827,030	332	60	243	303
Total						401	1,299	1,700

Appendix 1 includes descriptions of the mineralisation intersected in BBDD0016 and BBDD0017. Results for these holes will be reported when available. Appendix 2 is JORC Table 1, Sections 1 and 2.

REFERENCES

ENDS

This release was authorised by the Board of Tennant Minerals Ltd.

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¹ 17/08/2022. Tennant Minerals (ASX. TMS): "Bonanza 63m@ 2.1% Copper and 4.6 g/t Gold Intersection at Bluebird".

² 25/08/2022. Tennant Minerals (ASX. TMS): "Standout Geophysical Targets to Replicate Bluebird Cu-Au Discovery".

³8/03/2022. Tennant Minerals (ASX. TMS): "Spectacular 50m @ 2.7% Copper intersection at Bluebird".

⁴ Portergeo.com.au/database/mineinfo. Tennant Creek - Gecko, Warrego, White Devil, Nobles Nob, Juno, Peko, Argo.

⁵ 08/03/2022. Castile Resources (ASX. CST): "Large Increases in Gold, Copper and Cobalt at Rover 1".

⁶ 25/02/1995, Posgold. Final Report for Exploration Licence 7693, 2/6/92 to 25/11/94. NTGS Report CR19950192.



ABOUT TENNANT MINERALS LIMITED

Tennant Minerals Limited (ASX:TMS) is an exploration and development company with copper-gold projects in the Tennant Creek area of the Northern Territory.

Tennant Minerals' primary focus is the **Barkly** and **Babbler Copper-Gold Projects**, located approximately 45km east of the major copper-gold mineral field of Tennant Creek (Figure 3). The Company is targeting major new, high-grade, copper-gold deposits in these project areas.

At the **Barkly Project**, the Company has discovered a thick and high-grade copper and gold mineralised zone at the Bluebird Prospect. Drilling to date at Bluebird has identified a steep westerly plunging zone of coppergold mineralisation that extends from 60m to >250m below surface and at least 150m along strike in an east-west orientation.

Magnetics and gravity modelling indicate that Bluebird is associated with a linear, west-southwest trending magnetic anomaly and coincident gravity high. The Company has identified another 12 similar magnetic-gravity targets along the 2km Bluebird-Perseverance Target Zone (Figures 6 and 7) which is part of the 5km strike-length Bluebird geophysical corridor.

The Company is awaiting final results of the Stage 1 drilling program before planning a second stage of drilling to scope the potential of the Bluebird discovery and to test other gravity—magnetic (and IP) targets for other high-grade copper-gold discoveries alongside Bluebird.

The Company is also planning geophysics and follow-up drill targeting at its **Babbler Project**, which adjoins the Barkly tenement to the south. The Company has been awarded \$66,000 co-funding under the 2022 Northern Territory Governments' Geophysics and Drilling Collaborations program for an exploration hole testing key copper-gold targets within the underlying Warramunga Formation at Babbler. A detailed gravity survey is planned to further define the drilling targets to be tested following the Stage 2 program at Bluebird.

CAUTIONARY STATEMENT REGARDING FORWARD LOOKING INFORMATION

This release contains forward-looking statements concerning Tennant Minerals Ltd. Forward-looking statements are not statements of historical fact and actual events and results may differ materially from those described in the forward-looking statements as a result of a variety of risks, uncertainties and other factors. Forward-looking statements are inherently subject to business, economic, competitive, political and social uncertainties and contingencies. Many factors could cause the Company's actual results to differ materially from those expressed or implied in any forward-looking information provided by the Company, or on behalf of, the Company. Such factors include, among other things, risks relating to additional funding requirements, metal prices, exploration, development and operating risks, competition, production risks, regulatory restrictions, including environmental regulation and liability and potential title disputes.

Forward looking statements in this release are based on the company's beliefs, opinions and estimates of Tennant Minerals Ltd as of the dates the forward-looking statements are made, and no obligation is assumed to update forward looking statements if these beliefs, opinions and estimates should change or to reflect other future developments.



COMPETENT PERSONS DECLARATION

The information in this report that relates to exploration results is based on information compiled or reviewed by Mr Nick Burn who is Exploration Manager for Tennant Minerals Ltd and a member of the Australian Institute of Geoscientists. Mr Burn has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 edition of the 'Australasian Code of Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Burn consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

ASX LISTING RULES COMPLIANCE

In preparing this announcement the Company has relied on the announcements previously made by the Company and specifically dated 09 December 2014, 24 September 2019, 18 March 2020, 06 December 2021, 13 December 2021, 21 December 2021, 8 March 2022, 15 March 2022, 24 March 2022, 4 April 2022, 13 May 2022, 06 June 2022, 06 July 2022, 17 August 2022 and 25 August 2022. The Company confirms that it is not aware of any new information or data that materially affects those announcements previously made, or that would materially affect the Company from relying on those announcements for the purpose of this announcement.



Appendix 1. Updated descriptions - visual estimates of mineralisation intersected, BBDD0016 & 17: Cautionary note regarding visual estimates:

In relation to the disclosure of visual mineralisation in the tables below, the Company cautions that visual estimates of oxide, carbonate and sulphide mineralisation material abundance should never be considered a proxy or substitute for laboratory analyses. Laboratory ICP-MS and ICP-OES analyses are required to determine widths and grade of the elements (e.g., copper, Cu) associated with the visible mineralisation reported from preliminary geological logging. The Company will update the market when laboratory analytical results are received and compiled.

	16			
From	To	Lith Zone	Alteration	Visible mineralisation
0.0	56.9		Rotary PCD pre-collar	
56.9	290.5	Hanging Wall		
		metasiltsone	108-182m: Weak qtz stockwork,	
			185-191.4m: Weak qtz stockwork	
			191.4-192m: Intense chlorite alteration	
			192-228.2m: Scattered thin zones blacker	trace malachite
			vitreous chlorite alteration, some reddish hem	
			staining; some vein qtz below 228m	
			231.8- 290.5m: Patchy stronger qtz stockwork,	
			esp below 240m	
290.5	297.6	Main CHL	Intense hematite chlorite alteration	
		zone		
297.6	315.2		Patchy intense completely overprinting	Fine chalcocite 1% to 5% from 294
			chlorite alteration	to 315m
315.2	325.1	Lower CHL	Some strong qtz stockwork, minor chlorite	
		QTZ zone	alteration	
325.1	362.7	Footwall	Qtz stockwork in upper 0.5m, 20cm intense	No visual copper minerals.
		Metasiltstone	chlorite alteration at 326m below qtz	
			stockwork	
BBDD0:		T	I	
From	То	Lith Zone	Alteration	Visible Mineralisation
0				
FO C	59.6	Hansins	PCD Rotary Drilling	
59.6	162.7	Hanging	139.7-162.7m: moderate chlorite alteration	
59.6		Wall		
	162.7		139.7-162.7m: moderate chlorite alteration on fractures & in breccia zones	
59.6 162.9		Wall	139.7-162.7m: moderate chlorite alteration on fractures & in breccia zones 162.9 -163.2m: Intense hematite ironstone	
	162.7	Wall	139.7-162.7m: moderate chlorite alteration on fractures & in breccia zones 162.9 -163.2m: Intense hematite ironstone 163.2 - 164.8m: Strongly silicified siltstone	
	162.7	Wall Siltstone	139.7-162.7m: moderate chlorite alteration on fractures & in breccia zones 162.9 -163.2m: Intense hematite ironstone 163.2 - 164.8m: Strongly silicified siltstone 164.8 - 168.4m: Siltstone breccia	
	162.7	Wall Siltstone Upper	139.7-162.7m: moderate chlorite alteration on fractures & in breccia zones 162.9 -163.2m: Intense hematite ironstone 163.2 - 164.8m: Strongly silicified siltstone 164.8 - 168.4m: Siltstone breccia 168.4 - 171.2m: Intense hematite ironstone	
	162.7	Wall Siltstone Upper 'Mineralised	139.7-162.7m: moderate chlorite alteration on fractures & in breccia zones 162.9 -163.2m: Intense hematite ironstone 163.2 - 164.8m: Strongly silicified siltstone 164.8 - 168.4m: Siltstone breccia	
162.9	162.7	Wall Siltstone Upper 'Mineralised Zone'	139.7-162.7m: moderate chlorite alteration on fractures & in breccia zones 162.9 -163.2m: Intense hematite ironstone 163.2 - 164.8m: Strongly silicified siltstone 164.8 - 168.4m: Siltstone breccia 168.4 - 171.2m: Intense hematite ironstone & patchy strong chlorite	
	162.7	Wall Siltstone Upper 'Mineralised Zone' Intermediate	139.7-162.7m: moderate chlorite alteration on fractures & in breccia zones 162.9 -163.2m: Intense hematite ironstone 163.2 - 164.8m: Strongly silicified siltstone 164.8 - 168.4m: Siltstone breccia 168.4 - 171.2m: Intense hematite ironstone & patchy strong chlorite 171.2 - 212.5m: Siliceous siltstone & chloritic	173 -203m: disseminated
162.9 171.2	162.7 171.2 212.5	Wall Siltstone Upper 'Mineralised Zone' Intermediate Zone	139.7-162.7m: moderate chlorite alteration on fractures & in breccia zones 162.9 -163.2m: Intense hematite ironstone 163.2 - 164.8m: Strongly silicified siltstone 164.8 - 168.4m: Siltstone breccia 168.4 - 171.2m: Intense hematite ironstone & patchy strong chlorite 171.2 - 212.5m: Siliceous siltstone & chloritic sandstone	173 -203m: disseminated chalcocite 1% to 5%, minor native
162.9	162.7	Wall Siltstone Upper 'Mineralised Zone' Intermediate	139.7-162.7m: moderate chlorite alteration on fractures & in breccia zones 162.9 -163.2m: Intense hematite ironstone 163.2 - 164.8m: Strongly silicified siltstone 164.8 - 168.4m: Siltstone breccia 168.4 - 171.2m: Intense hematite ironstone & patchy strong chlorite 171.2 - 212.5m: Siliceous siltstone & chloritic sandstone 212.5 -213.85m: Intense hematite ironstone	173 -203m: disseminated chalcocite 1% to 5%, minor native copper
162.9 171.2	162.7 171.2 212.5	Wall Siltstone Upper 'Mineralised Zone' Intermediate Zone Lower	139.7-162.7m: moderate chlorite alteration on fractures & in breccia zones 162.9 -163.2m: Intense hematite ironstone 163.2 - 164.8m: Strongly silicified siltstone 164.8 - 168.4m: Siltstone breccia 168.4 - 171.2m: Intense hematite ironstone & patchy strong chlorite 171.2 - 212.5m: Siliceous siltstone & chloritic sandstone	chalcocite 1% to 5%, minor native
162.9 171.2 212.5	162.7 171.2 212.5 213.85	Wall Siltstone Upper 'Mineralised Zone' Intermediate Zone Lower 'Mineralised Zone'	139.7-162.7m: moderate chlorite alteration on fractures & in breccia zones 162.9 -163.2m: Intense hematite ironstone 163.2 - 164.8m: Strongly silicified siltstone 164.8 - 168.4m: Siltstone breccia 168.4 - 171.2m: Intense hematite ironstone & patchy strong chlorite 171.2 - 212.5m: Siliceous siltstone & chloritic sandstone 212.5 -213.85m: Intense hematite ironstone 213.5 -213.85m: Jasper: intense silica & hematite alteration	chalcocite 1% to 5%, minor native copper
162.9 171.2	162.7 171.2 212.5	Wall Siltstone Upper 'Mineralised Zone' Intermediate Zone Lower 'Mineralised Zone'	139.7-162.7m: moderate chlorite alteration on fractures & in breccia zones 162.9 -163.2m: Intense hematite ironstone 163.2 - 164.8m: Strongly silicified siltstone 164.8 - 168.4m: Siltstone breccia 168.4 - 171.2m: Intense hematite ironstone & patchy strong chlorite 171.2 - 212.5m: Siliceous siltstone & chloritic sandstone 212.5 -213.85m: Intense hematite ironstone 213.5 -213.85m: Jasper: intense silica &	chalcocite 1% to 5%, minor native copper 203 -206m: zone of blebby
162.9 171.2 212.5	162.7 171.2 212.5 213.85	Wall Siltstone Upper 'Mineralised Zone' Intermediate Zone Lower 'Mineralised Zone'	139.7-162.7m: moderate chlorite alteration on fractures & in breccia zones 162.9 -163.2m: Intense hematite ironstone 163.2 - 164.8m: Strongly silicified siltstone 164.8 - 168.4m: Siltstone breccia 168.4 - 171.2m: Intense hematite ironstone & patchy strong chlorite 171.2 - 212.5m: Siliceous siltstone & chloritic sandstone 212.5 -213.85m: Intense hematite ironstone 213.5 -213.85m: Jasper: intense silica & hematite alteration	chalcocite 1% to 5%, minor native copper 203 -206m: zone of blebby



APPENDIX 2: JORC 2012 Edition Table 1

Section 1 Sampling Techniques and Data

(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. Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used. Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g., '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 (e.g., submarine nodules) may warrant disclosure of detailed information. 	 Exploration results are based on industry best practices, including sampling, assay methods, and appropriate quality assurance quality control (QAQC) measures. Core samples (2021-22) are taken as half HQ3 core and sampled on nominal 1m intervals, with sampling breaks adjusted to geological boundaries where appropriate. Reverse Circulation (RC), 2020 program: RC drill chips were collected at 1m intervals via a cone splitter in pre-numbered calico bags. The quantity of sample was monitored by the geologist during drilling. RC samples of between 3-4kg were sent to the laboratory where they were pulverised to at least 85% passing 75 microns. The pulp sample is then split to produce a sample for analysis. Diamond drill samples submitted to the laboratory are crushed and pulverised followed by a four-acid total digest and multielement analysis by inductively coupled plasma optical emission spectrometry (ICP-OES) and inductively coupled plasma mass spectrometry (ICP-MS). Gold and precious metal analysis are completed by a 50g fire assay collection with inductively coupled plasma optical emission spectrometry (ICP-OES) finish.
Drilling techniques	Drill type (e.g., core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (e.g., core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).	 RC drilling (2020) was conducted using a 5¹/₄" face sampling hammer, with holes drilled -60 degrees. Rotary mud (RM) drilling (2021-22) was completed with 126mm PCD hammer with holes drilled between -60 and -65 degrees. 2021-22 Diamond drillholes were collared using RM drilling and switched to HQ3 approximately 30m before the target position is intersected. All coordinates are quoted in GDA94 datum unless otherwise stated.
Drill sample recovery	 Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to 	 RC sample recovery is monitored by the field geologist. Low sample recoveries are recorded on the drill log. The geologist is present during drilling to monitor the sample recovery process. There were no significant sample recovery issues encountered during the drilling program. RM sample recovery was monitored by the site geologist, logged and a sample record



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	preferential loss/gain of fine/coarse material.	 was retained for future interpretation. No analysis of rotary mud collars was undertaken. The quality of diamond core samples is monitored by the logging of various geotechnical parameters, and logging of core recovery and competency.
Logging	 Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. The total length and percentage of the relevant intersections logged. 	 All logging is completed according to industry best practice. RC chips are logged at 1m intervals using a representative sample of the drill chips. Logging records include lithology, alteration, mineralisation, colour and structure. RM chips are logged at 2m intervals using a representative sample of the drill chips. Logging records include lithology, alteration, mineralisation and colour Detailed diamond drillcore information on lithology, sample quality, structure, geotechnical information, alteration and mineralisation are collected in a series of detailed self-validating logging templates.
Sub-sampling techniques and sample preparation	 If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparation technique. Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling. Whether sample sizes are appropriate to the grain size of the material being sampled. 	 For all sample types, the nature, quality and appropriateness of the sample preparation technique is considered adequate as per industry best practice. RC samples of 3-4kg are collected at 1m intervals using a cone splitter. The sample size is appropriate for the style of mineralisation and the grain size of the material being sampled. RC samples are dried at the laboratory and then pulverised to at least 85% passing 75 microns. RM samples were not analysed. A sample was retained for future interpretation. Core is cut using an Almonte automated core cutting saw. Half core is taken for sampling.
Quality of assay data and laboratory tests	 The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc. Nature of quality control procedures adopted (e.g., standards, blanks, 	 All samples were submitted to the Intertek Laboratories sample preparation facility at Alice Springs in the Northern Territory where a pulp sample is prepared. The pulp samples are then transported to Intertek in Townsville Australia for analysis. Pulp sample(s) were digested with a mixture of four Acids including Hydrofluoric, Nitric, Hydrochloric and Perchloric Acids for a total digest. Analysis of 2020 RC drilling; Cu, Pb, Ag, Bi, Co Ni, Sb have been determined by Inductively



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	duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e., lack of bias) and precision have been established.	 Coupled Plasma (ICP) Mass Spectrometry (MS-OES). Analysis of 2021-22 core drilling; Ag, Al, As,Ba,Bi,Ca,Cd,Ce,Co,Cr,Cu,Fe,K,La,Li,,Mg,Mn, Mo,Na,Ni,P,Pb,S,Sb,Sc,Sn,Sr,Te,Ti,Tl,V,W,Zn have been determined by Inductively Coupled Plasma (ICP) Mass Spectrometry (MS-OES). Gold was analysed by Fire Assay with a 25g charge and an ICP-MS finish with a 5ppb Au detection limit. A Field Standard, Duplicate or Blank is inserted every 25 samples. The Laboratory inserts its own standards and blanks at random intervals, but several are inserted per batch regardless of the size of the batch.
Verification of sampling and assaying	 The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data. 	 All significant intercepts are reviewed and confirmed by at least two senior personnel before release to the market. No adjustments are made to the raw assay data. Data is imported directly to Datashed in raw original format. All data are validated using the QAQCR validation tool with Datashed. Visual validations are then carried out by senior staff members.
Location of data points	 Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. Specification of the grid system used. Quality and adequacy of topographic control. 	 All drill hole collars were located with a handheld GPS with an accuracy of +/-5m. At the completion of the drilling program all holes were surveyed by DGPS. Downhole surveys (2020 RC) were taken at 30m intervals using a Reflex single shot camera. The camera records azimuth and dip of hole. Downhole surveys for the 2021-2 diamond drilling were taken at 6-12m intervals by solid state gyro to maintain strong control of drill direction Survey co-ordinates: GDA94 MGA Zone 53.
Data spacing and distribution	 Data spacing for reporting of Exploration Results. Whether the data spacing, and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. Whether sample compositing has been applied. 	 Data spacing and distribution used to determine geological continuity is dependent on the deposit type and style under consideration. Where a mineral resource is estimated, the appropriate data spacing, and density is decided and reported by the competent person. For mineral resource estimations, grades are estimated on composited assay data. The composite length is chosen based on the statistical average, usually 1m. Sample compositing is never applied to interval calculations reported to market. A sample length weighted interval is calculated as per industry best practice.



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Orientation of data in relation to geological structure	 Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type. If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material. 	 Orientation of sampling is as unbiased as possible based on the dominating mineralised structures and interpretation of the deposit geometry. If structure and geometry is not well understood, sampling is orientated to be perpendicular to the general strike of stratigraphy and/or regional structure.
Sample security	The measures taken to ensure sample security.	 All samples remain in the custody of company geologists and are fully supervised from point of field collection to laboratory drop-off.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	None yet undertaken for this dataset

Section 2 Reporting of Exploration Results

	receding section also apply to this section.)	Ι
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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 Company controls two contiguous Exploration Licences, EL 28620 and EL30701 located east of Tennant Creek. All tenure is in good standing at the time of reporting. There are no known impediments with respect to obtaining a licence to operate in the area.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	 Several other parties have undertaken exploration in the area between the 1930s through to the present day including Posgold, Meteoric Resources and Blaze Resources.
Geology	Deposit type, geological setting and style of mineralisation.	The Barkly Project covers sediments of the Lower Proterozoic Warramunga Group that hosts all of the copper-gold mines and prospects in the Tennant Creek region. At the Bluebird prospect copper-gold mineralisation is hosted by an ironstone unit within a west-northwest striking fault. The ironstone cross cuts the sedimentary sequence that mostly comprises of siltstone.
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 	 For drilling details of the 2020 RC drilling program refer to Appendix 1 of the ASX announcement of 18 March 2020 by Blina Minerals (ASX: BDI): "High-Grade Copper and Gold Intersected in Drilling program at Bluebird" For drilling details of the 2014 Diamond and RC programs refer to Appendix 1 of the ASX announcement of 24 September 2019 by Blina Minerals (ASX: BDI): "Strategic



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	depth hole length. 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.	Acquisition of High-Grade Gold-Copper Project".
Data aggregation methods	 In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g., 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. 	 All exploration results are reported by a length weighted average. This ensures that short lengths of high-grade material receive less weighting than longer lengths of low-grade material. No high-grade cut-offs are applied
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 (e.g., 'down hole length, true width not known'). 	 Mineralisation at Bluebird is interpreted to be striking east-west true azimuth with a dip of 70-80 degrees towards 180 degrees true azimuth. All holes are drilled as perpendicular as practical to the orientation of the mineralised unit and structure. Intersection lengths are interpreted to be close to true thickness.
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 Figures 1, 2, 4 and 5 for appropriate sections though the Bluebird mineralisation including pierce point locations, and Figure 3 (regional) and Figure's 6 and 7 (geophysics), plan views showing location of the Bluebird prospect and Barkly Project respectively.
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 avoiding misleading reporting of Exploration Results.	 All background information is discussed in the announcement. No new results are reported in this announcement. Refer to Tables in previous referenced releases for details of previous results.
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	No other data is material to this report.



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	characteristics; potential deleterious or contaminating substances.	
Further work	 The nature and scale of planned further work (e.g., tests for lateral extensions or depth extensions or large-scale step-out drilling). Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive. 	 Additional drilling planned to extend coppergold mineralisation at Bluebird along strike to the west and at depth. Drilling of modelled gravity and a drone magnetic survey data will be carried out to test for repeats of the high-grade Bluebird copper gold discovery within the 5km Bluebird Corridor.