

# More Exceptional Results up to 28.3 g/t Gold and 22.6% Copper from Drilling at the Bluebird Discovery

- High-grade gold and copper zones extended and open in all directions
- Latest drilling at the Bluebird discovery in the Northern Territory continues to produce outstanding high-grade copper-gold intersections including:
  - 16.45m @ 3.05% Cu and 2.31 g/t Au from 203.65m (downhole) in BBDD0025, incl. 3.8m @ 0.87% Cu and 9.08 g/t Au from 203.65m incl. 1.03m @ 28.3 g/t Au & incl. 3.4m @ 8.22% Cu and 0.16 g/t Au from 216.7m incl. 1.1m @ 22.6% Cu
- The new results extend the thick, dilational, high-grade Bluebird gold and copper zone to the west and below the previously announced spectacular intersections which included:
  - BBDD0021: 24m @ 0.66% Cu, 11.8 g/t Au including 5.7m @ 0.74% Cu and 49.3 g/t Au<sup>1</sup> and,
  - BBDD0018: 30.5m @ 6.2% Cu, 6.8 g/t Au including 17.8m @ 5.2% Cu, 11.5 g/t Au<sup>2</sup>.
- > Drilling set to commence to extend the Bluebird discovery west of recent spectacular gold and copper results, as well as at depth below the latest high-grade copper-gold intersections.
- In parallel, a new induced polarisation (IP) geophysics survey will test for extensions to the low-resistivity anomaly associated with the Bluebird mineralisation on 80m step-out sections to the west and east of the discovery, as well as linking to Perseverance across a 2.5km zone.
- Following the IP survey, further drilling will test for extensions/repeats of Bluebird and test other priority targets identified within the 2.5km Bluebird-Perseverance Corridor, where recent drilling has intersected mineralised structures.

# **Tennant Minerals Chairman Matthew Driscoll commented:**

"The continued intersection of high gold and copper grades at Bluebird, over thick intervals, confirms that we are onto a genuine high-grade copper-gold discovery.

"Bluebird remains completely open in all directions and we will now drill for immediate extensions along strike and at depth, with the aim of defining a multi-million tonne high-grade mineral resource of similar tenor to the historically mined Peko deposit, 20km west of Bluebird, which produced 3.7 million tonnes of 4% copper and 3.5 g/t gold from the 1930s to the 1970s<sup>3</sup>.

*"We are also confident our upcoming IP geophysical program will identify more Bluebird look-alike targets for drill testing along the 2.5km Bluebird-Perseverance Corridor.* 

"The potential for multiple high-grade copper-gold discoveries along this 2.5km corridor significantly enhances the scope for our 100% owned Barkly Project to be developed into a standalone mining operation."



Tennant Minerals Ltd ("Tennant" or "the Company") (ASX:TMS) is very pleased to announce further, **outstanding, high-grade copper and gold results from the latest diamond drilling program at the Bluebird copper-gold discovery**, on the Company's 100% owned Barkly Project, 40km east of Tennant Creek in the Northern Territory (see longitudinal projection, Figure 1, cross section, Figure 2, and location, Figure 3).

The new results include thick and high-grade copper and gold intersections in BBDD0025 (see Table 1):

## o 16.45m @ 3.05% Cu and 2.31 g/t Au from 203.65m (downhole),

incl. 8.35m @ 2.35% Cu and 4.47 g/t Au from 203.65m,

incl. 3.8m @ 0.87% Cu and 9.08 g/t Au from 203.65m incl. 1.03m @ 1.47% Cu, 28.3 g/t Au,

and incl. 3.4m @ 8.22% Cu and 0.16 g/t Au from 216.7m incl. 1.1m @ 22.6% Cu.

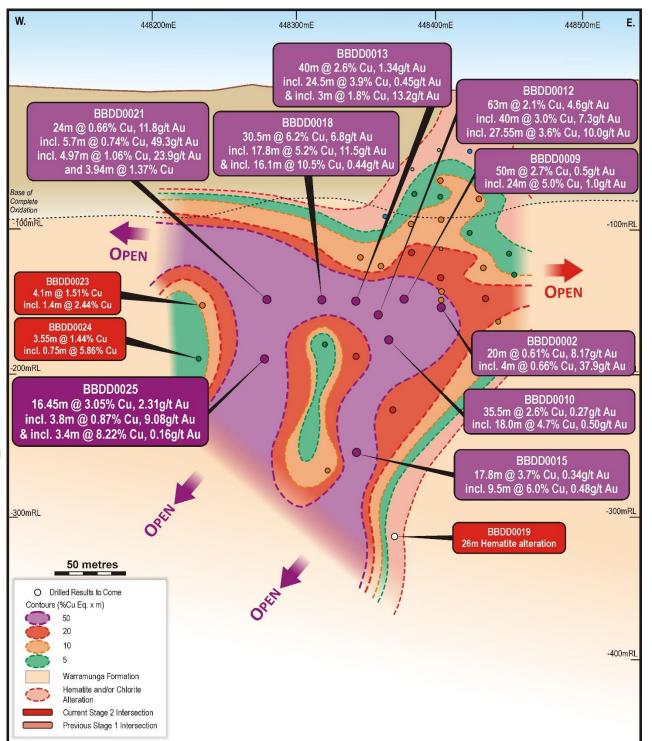
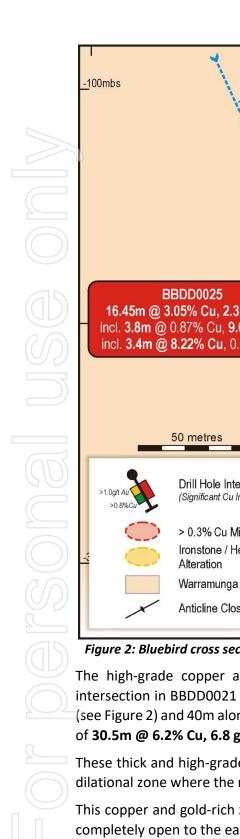


Figure 1: Bluebird discovery, longitudinal projection showing latest exceptional Cu-Au intersection in BBDD0025





100mN 7827200mN -100mbs **BBDD0021** 24m @ 0.66% Cu, 11.8g/t Au incl. 5.7m @ 0.74% Cu, 49.3g/t Au incl. 4.97m @ 1.06% Cu, 23.9g/t Au and 3.94m @ 1.37% Cu 16.45m @ 3.05% Cu, 2.31g/t Au -200mbs incl. 3.8m @ 0.87% Cu, 9.08g/t Au incl. 3.4m @ 8.22% Cu, 0.16g/t Au Drill Hole Intersection (Significant Cu Intersection) > 0.3% Cu Mineralisation Ironstone / Hematite -300mbs Warramunga Formation Anticline Closure

Figure 2: Bluebird cross section 448,280mE showing high-grade gold-copper intersections in BBDD0021 & 0025.

The high-grade copper and gold results in BBDD0025 are down dip of the previous bonanza gold intersection in BBDD0021 of **24m @ 0.66% Cu**, **11.8 g/t Au including 5.7m @ 0.74% Cu and 49.3 g/t Au<sup>1</sup>** (see Figure 2) and 40m along strike and down-plunge to the west of the spectacular intersection in BDD0018 of **30.5m @ 6.2% Cu**, **6.8 g/t Au including 17.8m @ 5.2% Cu**, **11.5 g/t Au<sup>2</sup>**.

These thick and high-grade copper and gold intersections are associated with a shallow easterly-plunging dilational zone where the mineralised structure at Bluebird has intersected an anticlinal closure (Figure 2).

This copper and gold-rich zone has now been defined by drilling across a 240m strike-length and remains completely open to the east and west, as well as at depth (Figure 1).

The footprint of the Bluebird discovery is already of similar dimensions to other high-grade copper-gold deposits mined at Tennant Creek. These include the **Peko** mine, just 20km west of Bluebird (see location, Figure 3), which produced **3.7Mt of ore grading 4% Cu and 3.5 g/t Au**<sup>3</sup> from the 1930s, closing in the 1970s.

The **Warrego** deposit, which was the last major mine at Tennant Creek, occurs at the western edge of the Tennant Creek Mineral Field (see Figure 3) and **produced 6.75Mt @ 6.6 g/t Au, 1.9% Cu<sup>3</sup>** from a fully preserved deposit (un-eroded). Bluebird is similarly fully preserved, with the top of the deposit at 80m below surface and geophysics indicating continuations at depths greater than 400m below surface.



Other new results from drillholes at the western end of the current drill-testing at Bluebird produced significant copper intersections which are completely open to the west as well as up and down dip. These results include (see Table 1 for details):

# o 4.1m @ 1.51% Cu from 174.8m incl. 1.4m @ 2.44% Cu in BBDD0023

## 3.55m @ 1.44% Cu from 206.25m incl. 0.75m @ 5.86% Cu, 0.16 g/t Au in BBDD0024

Results are pending for the deeper extension of BBDD0019, which intersected the Bluebird structure with 26m of hematite alteration at 300m below surface (see Appendix 1 for description of mineralisation).

The next drilling program at Bluebird will commence as soon as possible following the wet season (expected early to mid-April). Drilling is planned to test immediate extensions of the high-grade copper and gold zone to the west and at shallow depth from the exceptional intersections in BBDD0018 (**30.5m @ 6.2% Cu, 6.8** g/t Au)<sup>2</sup> and BBDD0021 (**24m @ 0.66% Cu, 11.8 g/t Au**)<sup>1</sup> (see Figure 1).

Deeper drilling is also planned to test below the high-grade copper and gold intersection in BBDD0025 (16.45m @ 3.05% Cu, 2.31 g/t Au) and below the previous intersection in BBDD0015 (17.8m @ 3.7% Cu, 0.34g/t Au)<sup>4</sup> for extensions of the high-grade zone as well as testing potential for a repeat of the thick dilational zone at depth, where the mineralised structure is projected to intersect the next anticlinal closure (see Figure 1 and Figure 2).

The objectives of the immediate drilling program are to test Bluebird along strike as well as up and downdip/plunge to define the potential of the discovery to host a multi-million tonne, high-grade copper-gold resource, which could potentially support a stand-alone mining and processing project.

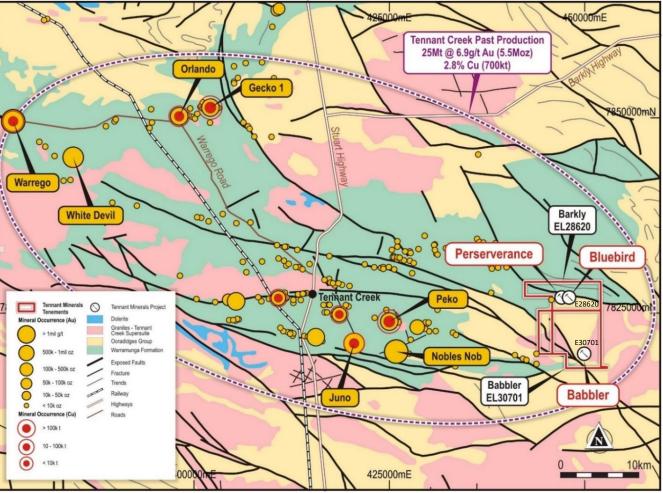


Figure 3: Location of the Barkly Project and major historical mines in the Tennant Creek Mineral Field



### OTHER PRIORITY TARGETS TO BE TESTED IN BLUEBIRD-PERSEVERANCE CORRIDOR

The results of the previous IP program carried out by Planetary Geophysics at Bluebird<sup>5</sup> revealed a distinct low-resistivity (high conductivity) response, corresponding with the Bluebird mineralisation on cross section 448,360mE (see Figure 4 below). This confirmed that the mineralised structure at Bluebird can be detected using IP geophysics. This section includes the BBDD0012 intersection of **63m @ 2.1% Cu, 4.6g/t Au**<sup>6</sup> and the IP low-resistivity zone shows potential continuity below 400m depth.

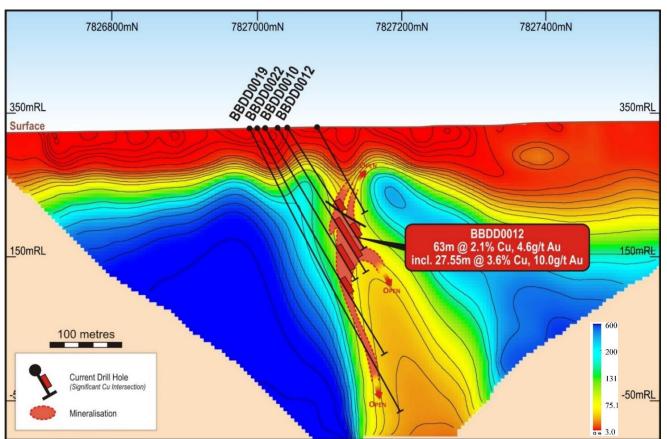


Figure 4: Bluebird cross section 448,360mE on IP resistivity (reverse colour stretch).

Further dipole-dipole IP traverses, in combination with detailed drone magnetics and detailed gravity modelling, has identified six priority targets for the discovery of buried high-grade copper-gold deposits within the 2.5km Bluebird-Perseverance Corridor<sup>5</sup> (see Figure 5).

Three priority, coincident magnetic, gravity and IP low-resistivity targets were selected for initial drilltesting, including **Perseverance North**, **Perseverance** and **Bluebird West**<sup>7</sup> (Figure 4). Eight reversecirculation (RC) holes with six diamond tails tested the shallow expression of target zones, for a total of 1981.1m (see Table 3 for drilling details). The initial drill testing of these priority targets intersected mineralised and brecciated fault structures in all three target areas<sup>7</sup>. The potentially mineralised structures are interpreted to lie above ironstone hosted copper-gold targets previously identified from inversion modelling of gravity and magnetics, as well as associated with IP low resistivity geophysical anomalies. Results are pending for these recently completed RC and diamond drill holes.

Following the success of this initial IP program, a further dipole-dipole IP survey will now be carried out by Planetary Geophysics. The program will include 80m spaced IP lines that step out east and west of Bluebird, to locate extensions and/or repeats of the Bluebird mineralisation for follow-up drill testing. This will be followed by a series of 160m spaced lines across the Bluebird-Perseverance Corridor (Figure 5), designed to map the potentially mineralised structures. A total of over 32 line-km of dipole-dipole IP are planned.

The results of the IP survey will be modelled and combined with gravity and magnetics inversion models to define targets for ironstone hosted copper-gold mineralisation.



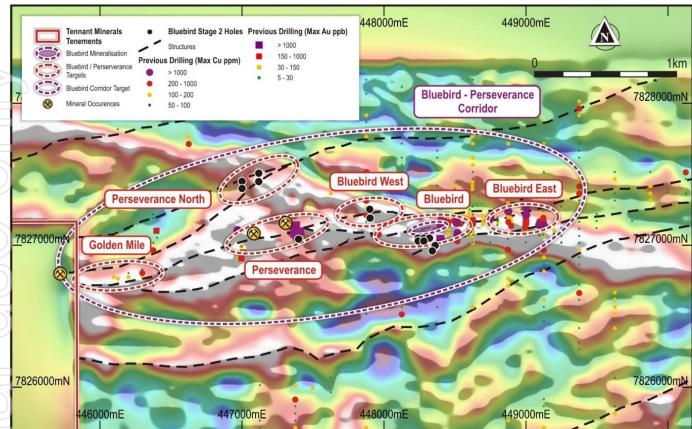


Figure 5: Bluebird-Perseverance zone bouguer gravity image with structures & gravity-magnetic-IP resistivity targets.

Following receipt of results from the initial drill testing of the other priority targets, and the results of the follow-up IP program, further drilling will be carried out to test the ironstone hosted copper-gold targets.

The ability to detect ironstone hosted copper-gold deposits using a combination of detailed gravity, magnetics and dipole-dipole IP geophysics represents a breakthrough that offers potential to directly drill target new high-grade copper-gold discoveries within the Bluebird-Perseverance Corridor.

The drilling programs at both Bluebird and the other priority targets will target multiple, multi-million tonne, high-grade copper-gold deposits within the Barkly Project.

The Company's ultimate objective is to discover and define sufficient high-grade copper-gold mineral resources to underpin the development of a stand-alone, copper-gold mining project.

# ABOUT THE BARKLY PROJECT AND THE BLUEBIRD COPPER-GOLD DISCOVERY

The high-grade Bluebird copper-gold discovery is located within the Company's 100% owned Barkly Project, on the eastern edge of the richly endowed Tennant Creek Mineral Field, which **produced over 5.5Moz of gold and over 700kt of copper** from 1934 to 2005<sup>3</sup> (see Figure 3).

Bluebird is a greenfields discovery with no previous mining apart from the historical Perseverance Mine, located 1.5km west of Bluebird, which was a small high-grade gold producer mined to only shallow depth.

The mineralisation intersected at Bluebird is typical of the high-grade copper-gold orebodies in the Tennant Creek Mineral Field. The high-grade mineralisation is associated with intense hematite alteration and brecciation with secondary malachite (copper-carbonate) in the upper parts as well as native copper, which transitions to primary sulphide mineralisation at depth e.g. chalcocite, bornite and chalcopyrite.

Drilling to date has defined high-grade copper-gold mineralisation at Bluebird over a 240m strike length and to over 250m depth, and it remains completely open in all directions (Figure 1).



The Company has the dual approach of defining the resource potential of the Bluebird discovery, as well as testing other key targets in the Bluebird-Perseverance corridor (Figure 5).

A total of 16 holes for 4,321m were drilled in the latest Barkly Project drilling program at both Bluebird and the other priority targets in the Bluebird-Perseverance Corridor (see Tables 2 and 3). Significant results in this announcement are summarised in Table 1 below. Results are pending from one completed hole at Bluebird and eight Bluebird-Perseverance Corridor holes.

Hole #	From	То	Interval	Cu%	Au g/t	Ag g/t	Bi %	Co g/t	Fe %	Cut-off
BBDD0023	174.80	178.90	4.10	1.51	0.05	0.5	0.01	21.0	37.4	0.2% Cu
incl.	175.40	178.90	3.50	1.72	0.02	0.6	0.02	11.8	38.8	1.0% Cu
incl.	176.10	177.50	1.40	2.44	0.03	1.1	0.02	15.0	44.2	1.0% Cu
BBDD0024	206.25	209.80	3.55	1.44	0.05	<0.1	0.03	18.0	24.6	0.1% Cu
incl.	206.25	208.00	1.75	2.72	0.03	<0.1	0.01	46.9	68.5	0.3% Cu
incl.	206.25	207.00	0.75	5.86	0.16	<0.1	0.10	57.0	21.0	5.0% Cu
BBDD0025	203.65	220.10	16.45	3.05	2.31	1.11	0.11	192.0	27.0	0.1 g/t Au
incl.	203.65	212.00	8.35	2.35	4.47	1.46	0.21	138.8	30.2	0.5 g/t Au
incl.	203.65	207.45	3.80	0.87	9.08	0.68	0.45	225.2	25.3	1.0 g/t Au
incl.	205.34	206.37	1.03	1.47	28.3	1.74	1.27	290.9	26.5	3.0 g/t Au
BBDD0025	205.34	220.10	14.76	3.39	2.30	1.23	0.12	187.9	27.2	0.3% Cu
incl.	205.81	212.00	6.19	3.04	3.94	1.85	0.17	109.0	32.2	1.0% Cu
& incl.	216.70	220.10	3.40	8.22	0.16	1.76	0.01	453.4	16.5	1.0% Cu
incl.	218.80	219.90	1.10	22.6	0.21	5.10	0.02	1037.0	12.6	5.0% Cu

### Table 1 below includes all significant intersections in BBDD0023, BBDD0024 and BBDD0025:

### Table 2: Bluebird Stage 2 drillhole details

Hole #	Dip°	Az Grid°	GRID_E	GRID_N	RL	Mud (m)	DDC (m)	Depth (m)
BBDD0018	-65	0	448,320	7,827,050	332	62.7	184.1	246.8
BBDD0019	-65	0	448,360	7,826,990	332	41.4	406.3	447.7
BBDD0020	-65	0	448,340	7,826,960	332	54.9	77.8	132.7
BBDD0021	-65	0	448,280	7,827,050	332	80.0	211.5	291.5
BBDD0022	-60	0	448,360	7,826,998	332	40.1	336.4	376.5
BBDD0023	-65	0	448,240	7,827,050	332	81.0	174.0	255.0
BBDD0024	-65	0	448,240	7,827,030	332	47.8	204.7	252.7
BBDD0025	-65	0	448,280	7,827,030	332	50.8	256.1	306.9
Total						458.7	1,881.1	2,339.8

Table 3: Bluebird – Perseverance Priority Targets drillhole details

Hole #	Dip°	Az Grid°	GRID_E	GRID_N	RL	RC (m)	DDC (m)	Depth (m)
Perseverance	Perseverance North							
PNDD0001	-65	0	447,000	7,827,450	330	91.1	149.5	240.6
PNDD0002	-65	0	447,000	7,827,400	330	179.9	148.7	328.6
PNDD0003	-65	0	447,118	7,827,507	330	119.8	120.6	240.4
PNDD0004	-65	0	447,118	7,827,448	330	179.8	129.7	309.5
Bluebird We	st							
BWDD0001	-65	0	447,899	7,827,253	335	120.1	195.4	315.5
BWRC0001	-65	0	447,902	7,827,191	335	186.0	nil	186.0
Perseverance	9							
PVDD0001	-65	0	447,398	7,827,043	335	60.5	180	240.5
PVRC0001	-55	0	447,398	7,827,045	335	120.0	nil	120.0
Total						1057.2	923.9	1981.1



### REFERENCES

<sup>1</sup>07/03/2023. Tennant Minerals (ASX.TMS): "Bonanza Bluebird Gold Results Including 5.7m 2 49.3 g/t Au".
 <sup>2</sup>08/02/2023. Tennant Minerals (ASX.TMS): "Spectacular Bluebird Drill-Hit 30.5m @ 6.2% Cu, 6.8 g/t Au".
 <sup>3</sup> Portergeo.com.au/database/mineinfo. Tennant Creek - Gecko, Warrego, White Devil, Nobles Nob, Juno, Peko, Argo.
 <sup>4</sup> 07/09/2022. Tennant Minerals (ASX. TMS): "Up to 54.5% Cu in Massive Sulphides at Bluebird".
 <sup>5</sup> 25/08/2022. Tennant Minerals (ASX. TMS): "Standout Geophysical Targets to Replicate Bluebird Cu-Au Discovery".
 <sup>6</sup> 17/08/2022. Tennant Minerals (ASX. TMS): "Bonanza 63m@ 2.1% Copper and 4.6 g/t Gold Intersection at Bluebird".
 <sup>7</sup> 24/01/2023. Tennant Minerals (ASX. TMS): "Mineralised Structures at Key Copper-Gold Targets".

#### \*\*\*ENDS\*\*\*

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### 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 and/or reviewed by Mr Jonathon Dugdale. Mr Dugdale is the Technical Advisor to Tennant Minerals Ltd and a Fellow of the Australian Institute of Mining and Metallurgy ('FAusIMM'). Mr Dugdale has sufficient experience, including over 35 years' experience in exploration, resource evaluation, mine geology, development studies and finance, relevant to the style of mineralisation and type of deposits under consideration to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee ('JORC') Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves. Mr Dugdale consents to the inclusion in this report of the matters based on this 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 as listed under "References". 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. Visual estimates of mineralisation intersected in BBDD0019:

### 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.

BBDD0019: Summary Log							
From	То	Zone	Lithology & alteration/mi	neralisation			
0	48	Hanging Wall	Moderately weathered red	ddish-brown siltstone, bedding			
			down core axis.				
48	70.5		Weakly weathered purplis	h grey siltstone			
70.5	206.2		Purplish grey to grey siltste	one, bedding down core axis.			
			Occasional thin breccia / fault zones below ~106m.				
206.2	207.05			noderate chlorite alteration.			
207.05	207.6	Massive Sulphide	60% massive irregular blek	by pyrite, rounded blebs to			
			10mm, trace bright chalco	pyrite			
207.6	229.9	Hanging Wall	Grey siltstone, patchy chlo	oritic alteration			
229.9	244.7			sandstone, scattered zones of			
			quartz veining & stockwor	k, some minor brecciation.			
244.7	247.8	Peripheral Alt Zone	Stronger quartz veining &	stockwork & chlorite alteration.			
247.8	251.3	Intermediate Zone	Sandstone, some moderat	e to intense quartz stockwork.			
251.3	251.75	Main Alt Zone	Patchy intense hematite &	specular hematite.			
251.75	252.2	Main Alt Zone	Patchy intense chlorite or	quartz alteration.			
252.2	253.3	Intermediate Zone	Grey vf sandstone, some fa	ault/fracture, quartz veins.			
253.3	254.25	Main Alt Zone	Pervasive intense hematite alteration, patchy intense dark				
			chlorite alteration.				
254.25	254.72	Intermediate Zone	Massive grey siltstone, mo	oderate to strong quartz			
			stockwork.				
254.72	254.8	Main Alt Zone	Brecciated (vein?) quartz in brown vuggy haematite				
			groundmass.				
254.8	266	Footwall	Grey siltstone.				
266	293		Grey to purple-grey siltsto	ne & sandstone, bedding down			
		-	core axis.				
293	325		Grey to purple-grey siltsto				
			312-315m: Some quartz st	ockwork.			
325	326	-	Red siltstone.				
326	328.5	-		ssibly very close to unaltered.			
328.5	348.7		Red siltstone, bedding dov	vn core axis, oxidised Fe.			
348.7	374	Haematite alteration	Red siltstone, bedding dov				
			Patchy weak qtz stockworl				
374	394.4		· ·	ndstone interbeds down core			
			axis.				
394.4	396		Purple grey (less oxidised) fractured siltstone.				
396	418.6		Red siltstone, very fine sandstone interbeds, bedding alpha				
			zero to 30 degrees down core axis. Strong qtz stockwork fracturing at 417-418 near base.				
418.6	426	REDOX altered Footwall	Fine grained grey arkosic s				
426	447.7		VFG brownish to	Moderate redox alteration.			
	EOH		greenish sandstone	patches of reddish hematite.			



# 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 techniq	<ul> <li>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.</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 (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.</li> </ul>	<ul> <li>Exploration results are based on industry best practices, including sampling, assay methods, and appropriate quality assurance quality control (QAQC) measures.</li> <li>Core samples (2021 and 2022) are taken as half HQ3 core and sampled on nominal 1m intervals, with sampling breaks adjusted to geological boundaries where appropriate.</li> <li>Reverse Circulation (RC), 2020 and 2022 program:</li> <li>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.</li> <li>Diamond drill samples submitted to the laboratory are crushed and pulverised followed by a four-acid total digest and multi-element analysis by inductively coupled plasma optical emission spectrometry (ICP-OES) and inductively coupled plasma optical emission spectrometry (ICP-OES) and inductively coupled plasma optical emission spectrometry (ICP-OES) finish.</li> </ul>
Drilling technique	<ul> <li>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).</li> </ul>	<ul> <li>RC drilling (2020-22) was conducted using a 5<sup>1</sup>/<sub>4</sub>" face sampling hammer, with 2022 holes drilled between -55 and -65 degrees.</li> <li>Rotary mud (RM) drilling (2021 and 2022) was completed with 126mm PCD hammer with holes drilled between -60 and -65 degrees.</li> <li>2021 and 2022 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.</li> </ul>
Drill sample reco	<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 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>	<ul> <li>RC sample recovery is monitored by the field geologist. Low sample recoveries are recorded on the drill log. There were no significant sample recovery issues encountered during the drilling program.</li> <li>RM sample recovery was monitored by the site geologist, logged and a sample record was retained for future interpretation. No analysis of rotary mud collars was undertaken.</li> <li>The quality of diamond core samples is monitored by the logging of various</li> </ul>



Criteria	JORC Code explanation	Commentary
		geotechnical parameters, and logging of core recovery and competency.
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>All logging is completed according to industry best practice.</li> <li>RC chips are logged at 1m intervals using a representative sample of the drill chips. Logging records include lithology, alteration, mineralisation, colour and structure.</li> <li>RM chips are logged at 2m intervals using a representative sample of the drill chips. Logging records include lithology, alteration, mineralisation and colour and structure.</li> <li>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.</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>For all sample types, the nature, quality and appropriateness of the sample preparation technique is considered adequate as per industry best practice.</li> <li>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.</li> <li>RC samples are dried at the laboratory and then pulverised to at least 85% passing 75 microns.</li> <li>RM samples were not analysed. A sample was retained for future interpretation.</li> <li>Core is cut using an Almonte automated core cutting saw. Half core is taken for 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 (e.g., standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e., lack of bias) and precision have been established.</li> </ul>	<ul> <li>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 Perth or Townsville Australia for analysis.</li> <li>Pulp sample(s) were digested with a mixture of four Acids including Hydrofluoric, Nitric, Hydrochloric and Perchloric Acids for a total digest.</li> <li>Analysis of 2020 RC drilling; Cu, Pb, Ag, Bi, Co Ni, Sb have been determined by Inductively Coupled Plasma (ICP) Mass Spectrometry (MS-OES).</li> <li>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).</li> </ul>



Criteria	JORC Code explanation	Commentary
		<ul> <li>Gold was analysed by Fire Assay with a 25g charge and an ICP-MS finish with a 5ppb Au detection limit.</li> <li>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 pe batch regardless of the size of the batch.</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>All significant intercepts are reviewed and confirmed by at least two senior personnel before release to the market.</li> <li>No adjustments are made to the raw assay data. Data is imported directly to Datashed ir raw original format.</li> <li>All data are validated using the QAQCR validation tool with Datashed. Visual validations are then carried out by senior staff members.</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>All drill hole collars were located with a hand held GPS with an accuracy of +/-5m. At the completion of the drilling program all holes were surveyed by DGPS.</li> <li>Downhole surveys (2020 RC) were taken at 30m intervals using a Reflex single shot camera. The camera records azimuth and dip of hole.</li> <li>Downhole surveys for the 2021 and 2022 diamond drilling were taken at 6-12m intervals by solid state gyro to maintain strong control of drill direction.</li> <li>Survey co-ordinates: GDA94 MGA Zone 53.</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>Data spacing and distribution used to determine geological continuity is dependen 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.</li> <li>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.</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>Orientation of sampling is as unbiased as possible based on the dominating mineralise structures and interpretation of the deposit geometry.</li> <li>If structure and geometry is not well understood, sampling is orientated to be perpendicular to the general strike of stratigraphy and/or regional structure.</li> </ul>



Criteria	JORC Code explanation	Commentary
Sample security	• The measures taken to ensure sample security.	<ul> <li>All samples remain in the custody of company geologists and are fully supervised from point of field collection to laboratory drop-off.</li> </ul>
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	None yet undertaken for this dataset

# JORC 2012 Edition - Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral teneme land tenure stat		<ul> <li>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.</li> </ul>
Exploration don other parties	· · · ·	<ul> <li>Several other parties have undertaken exploration in the area between the 1930s through to the present day including Posgold, Meteoric Resources and Blaze Resources.</li> </ul>
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>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.</li> </ul>
Drill hole Inform	<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>	<ul> <li>Tables 2 and 3 include drillholes details from the recent Barkly drilling programs.</li> <li>Previous releases by the Company including on 07/09/2022. "Up to 54.5% Cu in Massive Sulphides at Bluebird". Include drilling details and previous, Stage 1, intersections.</li> <li>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".</li> <li>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 Acquisition of High-Grade Gold-Copper Project".</li> </ul>
Data aggregatio 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.	<ul> <li>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.</li> </ul>



Criteria	JORC Code explanation	Commentary
	<ul> <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>No high-grade cut-offs are applied</li> </ul>
Relationship between mineralisation 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 (e.g., 'down hole length, true width not known').</li> </ul>	<ul> <li>Mineralisation at Bluebird is interpreted to be striking east-west true azimuth with a dip of 70-80 degrees towards 180 degrees true azimuth.</li> <li>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.</li> </ul>
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.	<ul> <li>Refer to Figure 1, a longitudinal projection though the Bluebird mineralisation including pierce point locations. Figures 2 and 4 are representative cross sections through the Bluebird deposit. Figures 3 and 5 are plan views showing the location of the Barkly Project and Bluebird, and other prospects respectively.</li> </ul>
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.	<ul> <li>All background information is discussed in the announcement.</li> <li>Full drill results for copper and gold assays for previous drilling are shown in Appendix 1 of the ASX announcement of 18 March 2020, "High-Grade Copper and Gold Intersected in Drilling program at Bluebird".</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>	• No other data is material to this report.
Further work	<ul> <li>The nature and scale of planned further work (e.g., 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>Additional drilling is planned to extend mineralisation along strike to the west, east and at depth.</li> <li>A further IP survey is planned to define low- resistivity Cu-Au targets.</li> <li>Further drilling of modelled gravity, drone magnetic and IP data will be carried out to drill target repeats of the high-grade Bluebird copper gold discovery within the 2.5km Bluebird-Perseverance Corridor.</li> </ul>