

## **Outstanding 61.8m @ 2.3% Copper intersection at Bluebird - includes 6.85m Massive Sulphide Zone grading 17% Copper**

- Latest exceptional copper with gold results from diamond drillhole BBDD0045 at the Bluebird discovery have extended the western high-grade copper-gold zone with the outstanding intersection of (see cross section, Figure 1):
  - **61.8m at 2.3% Cu, 0.4g/t Au (2.8% CuEq\*)** from 149.2m (downhole)
    - including **13.2m at 9.6% Cu, 1.51 g/t Au, (11.1% CuEq\*)** from 149.9m,
    - including **6.85m at 17% Cu, 0.5 g/t Au, (17.7% CuEq\*)** from 155m, and,
    - including **gold grades of up to 14.7 g/t Au.**
- The new intersection lies to the west and extends the massive copper sulphide zone intersected in previously announced diamond drillhole BBDD0018<sup>1</sup>, which included a **16.1m massive copper sulphide intersection grading 10.5% Cu** and an overlapping **17.8m high-grade gold intersection grading 11.5 g/t Au, 5.2% Cu** within an overall intersection of **30.5m @ 6.2% Cu and 6.8 g/t Au, (12.4% CuEq\*)** from 153.6m downhole (see longitudinal projection, Figure 2).
- The new results also **extend the high-grade copper-gold zone** below the previously announced intersection in BBDD0046 of **36.7m @ 1.14% Cu, 0.08 g/t Au (1.3% CuEq\*)** from 129.3m<sup>2</sup> on section 448,300mE, and the high-grade zone remains open at depth (see cross section, Figure 1).
- Results are pending from five holes which tested for Bluebird repeats along strike within the 1.5km gravity-ironstone target zone (see Figure 3). Two of these holes intersected visual copper mineralisation at the Bluebird East target, including<sup>\*\*</sup>:
  - a **61m zone of hematite alteration including 14m of strong hematite alteration with visible copper mineralisation<sup>\*\*</sup>** (chalcopyrite and minor chalcocite) in BBDD0048<sup>2</sup>, and,
  - a **24m zone of strong hematite alteration with 8m of copper mineralisation<sup>\*\*</sup>** in BBDD0043<sup>3</sup>.
- Structural interpretation suggests a **potential link between Bluebird East and the main Bluebird high-grade discovery over an 800m strike-length and over 400m vertically - remaining open in all directions** (see longitudinal projection, Figure 2 and plan projection, Figure 3).
- Following receipt of all results from drilling and ongoing metallurgical testwork on holes BDD0045 and BBDD0046, a **new drilling program is planned** to further test and define the Bluebird East discovery and to extend the main Bluebird high-grade zone to the west and at depth.
- This new drilling program will **aim to produce a maiden copper-gold Mineral Resource to support a stand-alone mining and processing development at the Company's Barkly Project.**

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**Tennant Minerals CEO Vincent Algar commented:**

*“This latest exceptional intersection of copper with gold at Bluebird has extended and confirmed the continuity of the high-grade massive copper sulphide zone, which remains open at depth.*

*“It follows the intersection of significant visible copper mineralisation in two wide-spaced holes at the Bluebird East discovery, which indicates potential for the Bluebird mineralisation to continue from surface to more than 400m depth and link with Bluebird East over a strike-length of more than 800m.*

*“Every hole we drill gives us more encouragement that Bluebird is an exceptional emerging copper-gold discovery which will continue to grow with further exploration.*

*“We can now look forward to launching our next drilling program, aiming to define and extend the enlarged mineralised footprint and define a maiden Mineral Resource to support a stand-alone mining and processing operation to help meet growing global demand for copper and gold.”*

**EXCEPTIONAL NEW DRILLING INTERSECTION FROM BLUEBIRD WESTERN EXTENSION**

Tennant Minerals Ltd (ASX:TMS) (“the Company”) is pleased to announce **further exceptional drilling results at the Bluebird high-grade copper gold discovery** in the Northern Territory (location, Figure 4).

Bluebird is one of multiple copper-gold targets within a 5km gravity-defined corridor within the Company’s 100% owned Barkly Project, which is located on the eastern edge of the richly-endowed Tennant Creek Mineral Field, that **produced 5.5Moz of gold and 700kt of copper** from 1934 to 2005<sup>4</sup> (Figure 4).

The latest drilling results include an **exceptional intersection of 61.8m at 2.3% Cu, 0.4g/t Au from 149.2m** in diamond drill-hole BBDD0045. This intensely mineralised intersection, from the western extension of the Bluebird discovery, includes a **very high-grade zone of 9.6 % copper over 13.2m**, and a **massive chalcopyrite interval grading 17% copper over 6.85m**. Gold grades of up to **14.7 g/t Au** were also identified (see Table 1, significant intersections).

The new intersection in BBDD0045 lie to the west of the previously reported spectacular intersection in BBDD0018<sup>1</sup> which also intersected **massive chalcopyrite** and included a **16.1m copper intersection grading 10.5% Cu** and an overlapping **17.8m high-grade gold intersection grading 11.5 g/t Au, 5.2% Cu** within an overall intersection of **30.5m @ 6.2% Cu and 6.8 g/t Au, (12.4% CuEq\*)** from 153.6m downhole (see longitudinal projection, Figure 2).

Other intersections from the western high-grade extension of Bluebird show that **this zone includes exceptionally high-grade gold grades as well as the massive chalcopyrite copper-rich intersections** as reported in this release (see Figure 2). Previous very high-grade gold intersections reported from this zone include:

- **17.95m @ 11.08 g/t Au, 2.66% Cu incl. 15.9m @ 12.45 g/t Au, 2.91% Cu** in BBDD0026<sup>5</sup>
- **24.0m @ 11.8 g/t Au, 0.66% Cu incl. 5.7m @ 49.3 g/t Au, 0.74% Cu** in BBDD0021<sup>6</sup>

This new result in BBDD0045 also lies vertically below the previously reported copper intersection at Bluebird in BBDD0046<sup>2</sup> (see cross section, Figure 1), which included:

- **36.7m @ 1.14% Cu, 0.08 g/t Au (1.3% CuEq\*)** from 129.3m downhole  
incl. **7.2m @ 1.8% Cu, 0.15 g/t Au (2.0% CuEq\*)** from 129.3m  
incl. **9.5m @ 1.8% Cu, 0.15 g/t Au (2.0% CuEq\*)** from 156.5m

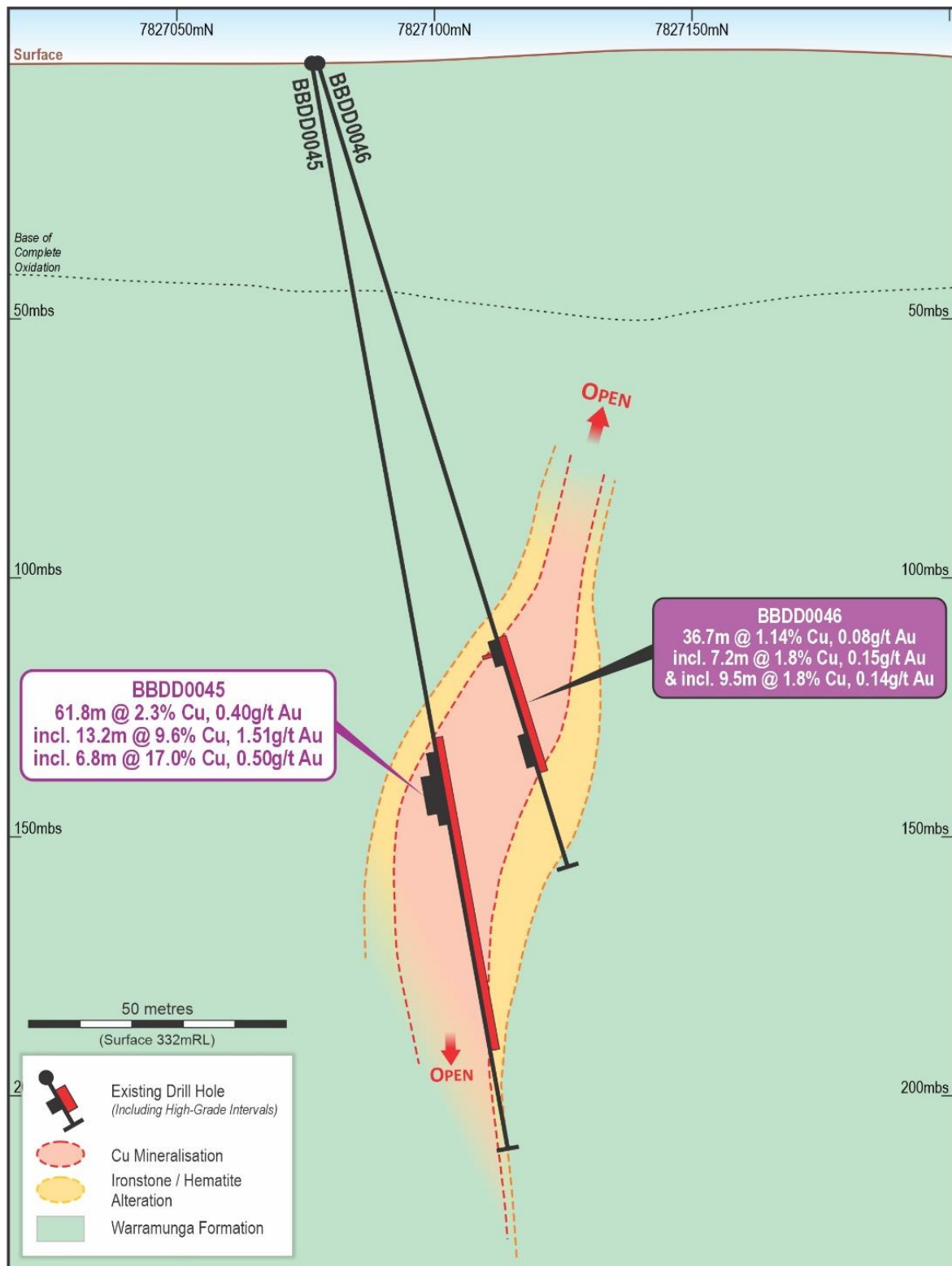


Figure 1: Bluebird cross section 448,300mE showing new high-grade copper intersection in BBDD0045.

The new results are from the recent successful extension drilling program at Bluebird, which has to date comprised 17 holes for 3,886m of drilling (see to Table 2 for drillhole details).

Two bulk composite samples from BDD0046 and BBDD0045 are undergoing metallurgical test-work<sup>2</sup>, supervised by Perth-based Strategic Metallurgy. The test-work includes flotation tests to recover the copper sulphide mineralisation (predominantly chalcopyrite, chalcocite and bornite) and gravity concentration tests will aim to recover native copper and free gold. The metallurgical testwork results are expected to be available in March.

\* See Appendix 1 for copper equivalent (CuEq) calculations. \*\* See Appendix 2 for descriptions of mineralisation.

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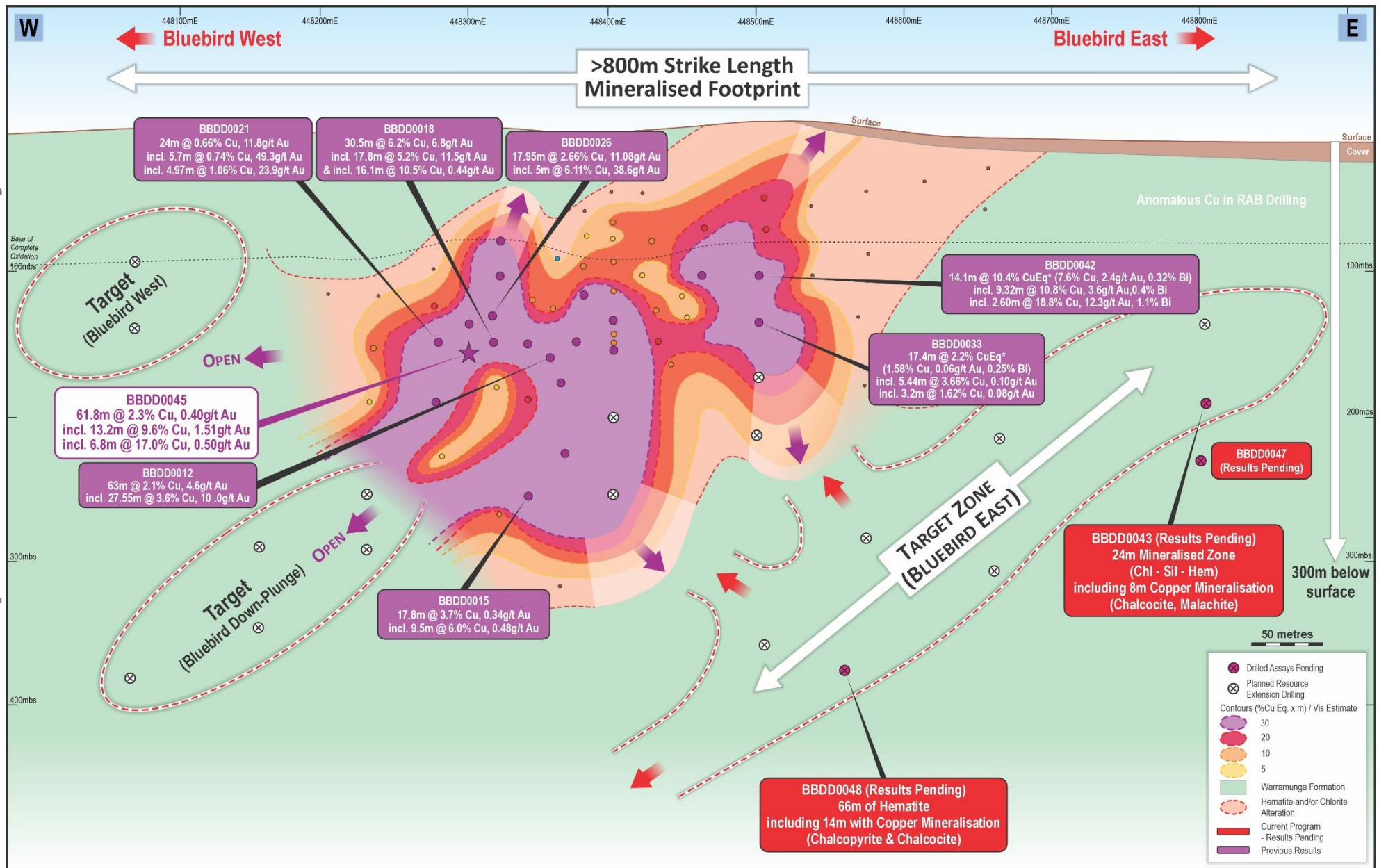


Figure 2: Bluebird longitudinal projection highlighting the outstanding intersection in BBDD0045 and copper mineralised intersections at Bluebird East.

\* See Appendix 1 for copper equivalent (CuEq) calculations. \*\* See Appendix 2 for descriptions of mineralisation.



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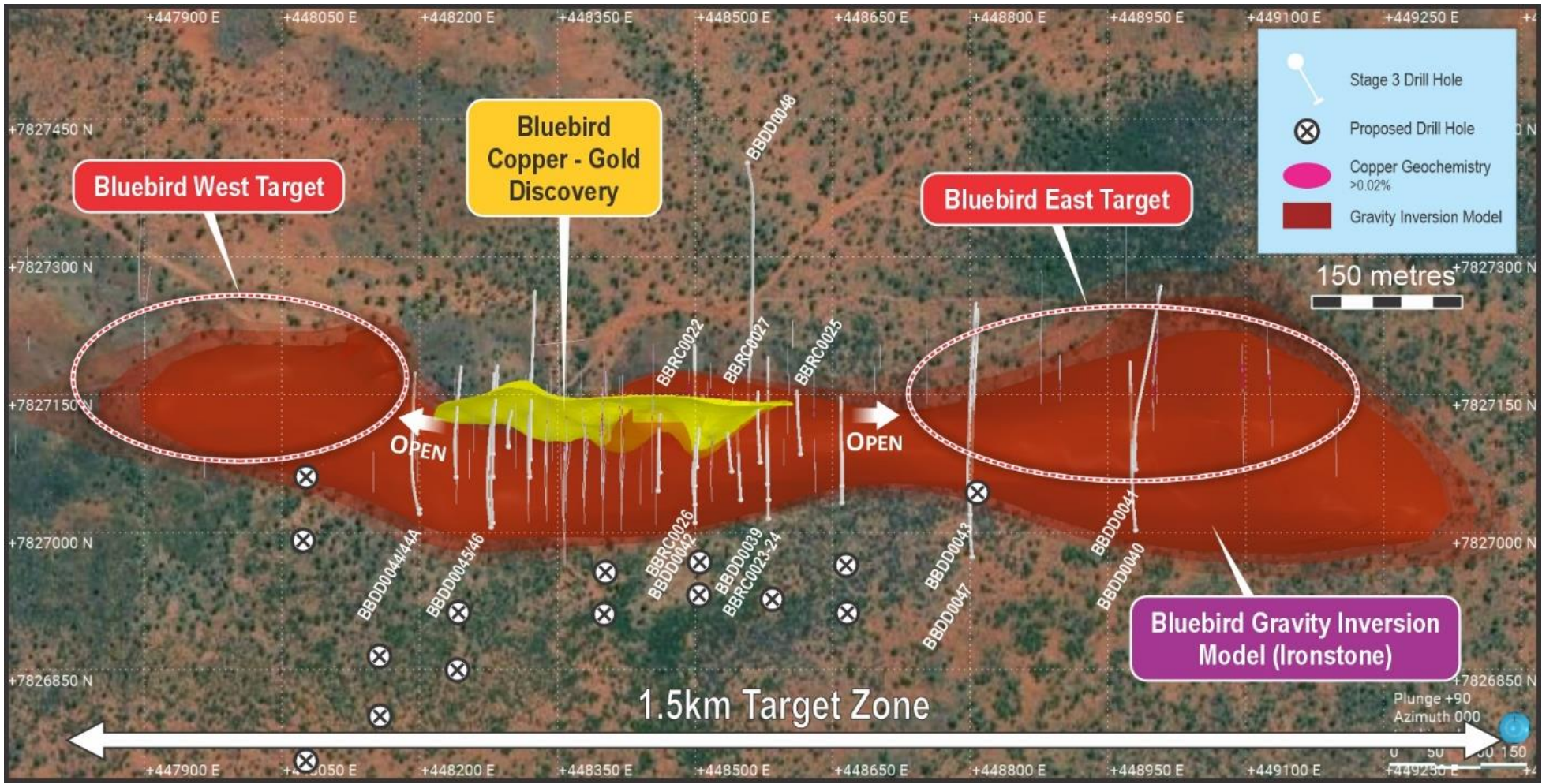


Figure 3: Bluebird plan projection showing 3D gravity inversion model and current and planned drilling.

\* See Appendix 1 for copper equivalent (CuEq) calculations. \*\* See Appendix 2 for descriptions of mineralisation.

## Extending the Bluebird Mineralisation Footprint

The Company recently announced the deepest significant copper mineralisation intersection to date, at more than 400m below surface in a north-to-south oriented diamond drillhole BBDD0048, at the Bluebird East Target<sup>2</sup>. This is the second copper-mineralised intersection at the Bluebird East discovery, within the 1.5km strike-length Bluebird ironstone target corridor (see Figure 3).

Diamond drill hole BBDD0048 (results pending – see Figure 2), intersected 66m of hematite alteration, including a **14m zone of strong hematite alteration with visible copper mineralisation** from 484m (chalcopyrite and minor chalcocite\*\*), which is more than 400m vertical depth below surface<sup>2</sup>. This is the second wide-spaced intersection of significant copper mineralisation at Bluebird East since the **24m zone of hematite alteration with 8m of copper mineralisation**<sup>3</sup> in BBDD0043<sup>2</sup> (results pending – see Figure 2). These copper intersections confirm the discovery of a new mineralised zone, that has the potential to increase the strike-length of identified mineralisation to over 800m and extend the depth extent from near surface to more than 400m vertical depth (see Figure 2).

### Cautionary note regarding visual estimates:

*In relation to the disclosure of visual mineralization within the text above and below and detailed in Appendix 2, the Company cautions that visual estimates of oxide, carbonate and sulfide 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) associated with the visible mineralisation reported from preliminary geological logging. The Company will update the market when laboratory analytical results are received and compiled. Assay results pending are expected to be available within the next 4-6 weeks.*

## NEXT STEPS

Further drilling is now required to define the Bluebird East mineralisation and test for continuity within the main Bluebird discovery. The intersection of deep copper mineralisation at Bluebird East opens up the potential for deeper extensions to the west and down plunge of the Bluebird discovery, as well extensions of the Bluebird gravity corridor and coincident magnetic and Induced Polarisation (IP) resistivity anomalies at Bluebird West (see targets outlined on Figures 2 and 3).

The key objective of the new drilling program is to extend the Bluebird discovery and define high-grade copper-gold mineralisation from near surface to over 400m depth and more than 800m strike-length (see Figure 2). The Company believes the potential tonnage and grade of this expanded footprint will be sufficient to support a stand-alone mining and processing operation at Bluebird.

This would enable the Company to establish a maiden Mineral Resource estimate at Bluebird and, with the benefit of new metallurgical information, commence development studies and permitting for a new high-grade copper-gold project at a critical time of growing demand for copper (and gold) globally.

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

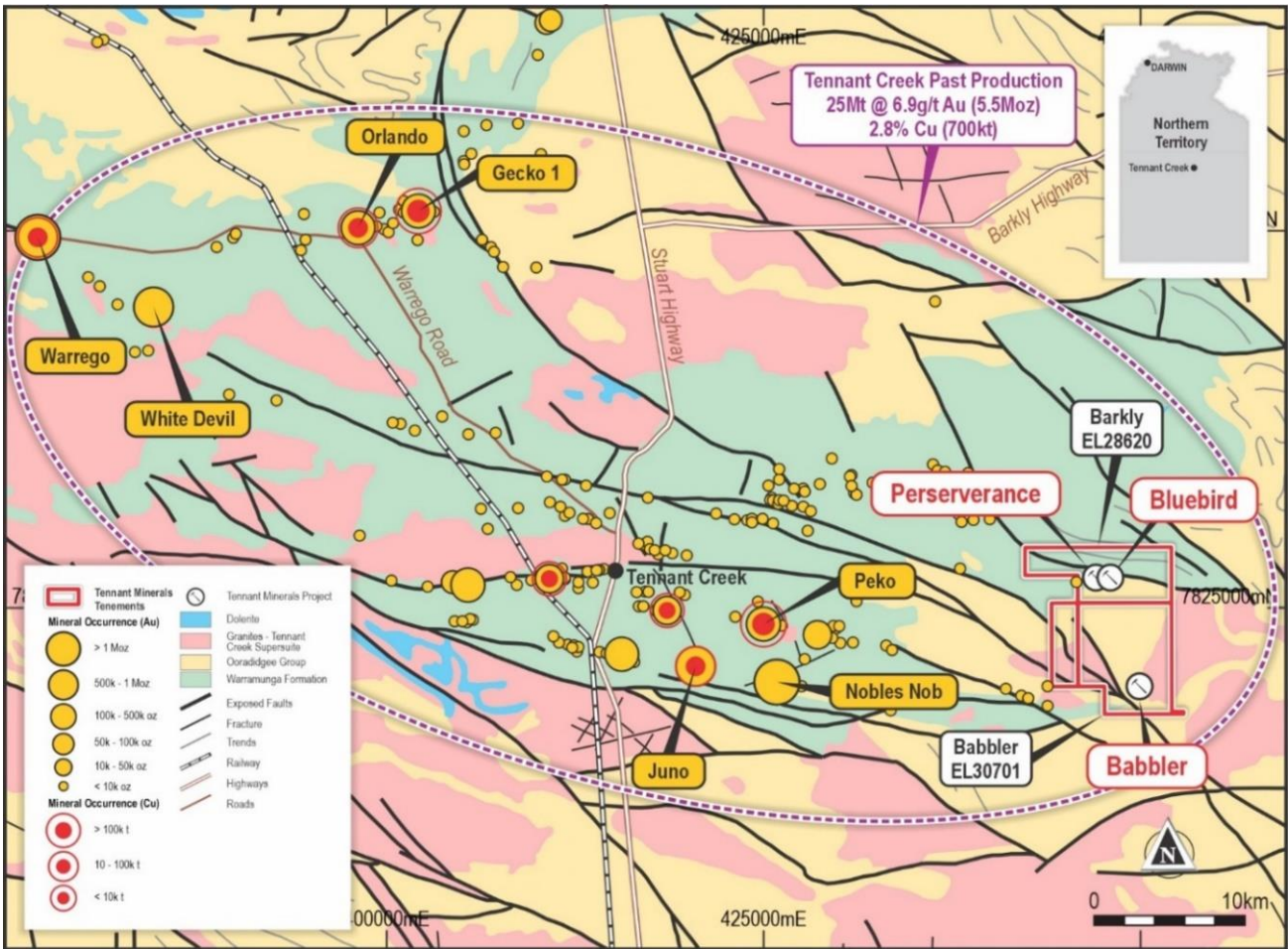
The Bluebird discovery is part of the Company's Barkly Project which comprises two exploration licences located 40km east of Tennant Creek in the Northern Territory. The mineralisation intersected at Bluebird is typical of the high-grade copper-gold orebodies previously mined in the Tennant Creek Mineral Field, which **produced over 5.5Moz of gold and over 700kt of copper** from 1934 to 2005<sup>3</sup> (see Figure 4 below).

Drilling to date at Bluebird has identified copper-gold mineralisation over an 800m strike length and now to over 400m depth. The mineralisation is associated with intense hematite alteration and brecciation with malachite, native copper and visible gold in the upper parts of the zone, which transitions to primary sulphide mineralisation including chalcocite, bornite and chalcopyrite.

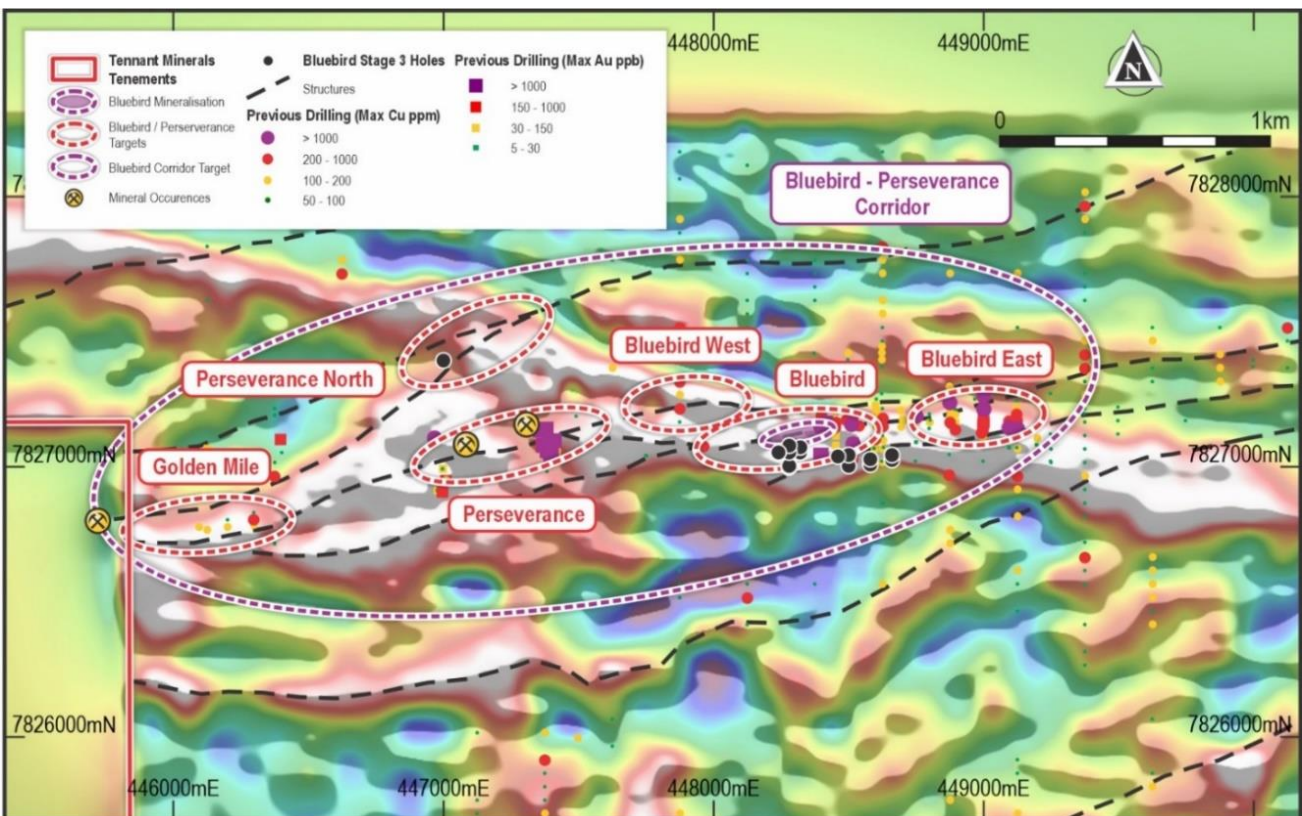
\* See Appendix 1 for copper equivalent (CuEq) calculations. \*\* See Appendix 2 for descriptions of mineralisation.



The Company has adopted a dual strategic approach of defining the Mineral Resource potential of the Bluebird discovery whilst also testing other key targets in the 5km Bluebird gravity corridor (Figure 5)<sup>7</sup>.



**Figure 4: Location of the Barkly Project and major historical mines in the Tennant Creek Mineral Field.**



**Figure 5: Barkly Project, 5km Bluebird gravity corridor and key copper-gold target zones.**

\* See Appendix 1 for copper equivalent (CuEq) calculations. \*\* See Appendix 2 for descriptions of mineralisation.

**Table 1: Significant new Intersections in this report**

Hole ID	From (m)	To (m)	Interval (m)	Cu Eq. (%)	Cu (%)	Au (g/t)	Ag (g/t)	Bi (%)	Co (g/t)	Fe (%)	Cut-off Cu (%)	Sample Type
<b>BBDD0045</b>	149.2	211.0	<b>61.8</b>	<b>2.8</b>	<b>2.3</b>	0.4	1.3	0.03	232	19	0.5	DDC
incl.	149.9	150.9	<b>1.0</b>	n/a	0.1	<b>14.7</b>	21.3	0.15	319	31	0.5	DDC
incl.	152.7	211.0	<b>58.3</b>	<b>2.8</b>	<b>2.5</b>	0.2	0.8	0.03	229	19	0.7	DDC
incl.	149.9	163.1	<b>13.2</b>	<b>11.1</b>	<b>9.6</b>	<b>1.5</b>	3.9	0.04	482	27	1.5	DDC
incl.	152.7	163.1	<b>10.4</b>	<b>12.8</b>	<b>12.1</b>	0.5	2.1	0.03	531	27	2.5	DDC
incl.	155.05	161.9	<b>6.85</b>	<b>17.7</b>	<b>17.0</b>	0.5	1.9	0.02	545	28	5	DDC

**Table 2: Bluebird Stage 3 drillhole details (MGA\_94\_Z53S)**

Hole #	Dip°	Az Grid°	GRID_E	GRID_N	RL	Mud/RC m	DDC m	Depth m	Hole Type
BBDD0039	-55	356	448,546	7,827,034	328	59.9	70.8	130.7	DD
BBDD0040	-55	356	448,979	7,827,003	323	80.7	272.9	353.6	DD
BBDD0041	-51	356	448,977	7,827,060	324	119.8	159.3	279.1	DD
BBDD0042	-57	355	448,497	7,827,032	329	66	137.9	203.9	DD
BBDD0043	-51	355	448,803	7,827,018	325	98.3	248.9	347.2	DD
BBDD0044	-53	354	448,197	7,827,032	331	144	-	144	DD
BBDD0044A	-57	345	448,198	7,827,027	331	143.6	129	272.6	DD
BBDD0045	-79	357	448,298	7,827,091	332	78	153.9	231.9	DD
BBDD0046	-79	357	448,298	7,827,091	332	78	102.6	180.6	DD
BBDD0047	-53	0	448,802	7,826,973	331	78	347.7	425.7	DD
BBDD0048	-63	180	448,554	7,827,400	331	120	385	505	DD
BBRC0022	-54	356	448,458	7,827,064	330	106.2	28.4	134.6	RCD
BBRC0023	-56	357	448,579	7,827,052	328	174	-	174	RC
BBRC0024	-50	357	448,571	7,827,075	330	126	-	126	RC
BBRC0025	-55	358	448,614	7,827,086	329	126	-	126	RC
BBRC0026	-50	0	448,501	7,827,071	330	54	71.6	125.6	RCD
BBRC0027	-50	353	448,538	7,827,066	330	126	-	126	RC
<b>Total</b>						<b>1,778.5</b>	<b>2,108.0</b>	<b>3,886.5</b>	

**REFERENCES**

- 08/01/2023. Tennant Minerals (ASX.TMS): "Spectacular Drill Hit at Bluebird".
- 22/01/2024. Tennant Minerals (ASX.TMS): "New Copper Intersection Extends Bluebird Over 400m Depth".
- 15/11/2023. Tennant Minerals (ASX.TMS): "Strong to Intense Copper Mineralisation at Bluebird and Bluebird East".
- Portergeo.com.au/database/mineinfo. Tennant Creek: Gecko, Warrego, White Devil, Nobles Nob, Juno, Peko, Argo.
- 19/06/2023. Tennant Minerals (ASX.TMS): "Drilling Doubles Strike Length of Bluebird Copper-Gold Discovery".
- 7/03/2023. Tennant Minerals (ASX.TMS): "Bonanza Bluebird Results Including 5.7m @ 49.3 g/t".
- 25/08/2022. Tennant Minerals (ASX.TMS): "Standout Geophysical Targets to Replicate Bluebird Cu-Au Discovery".

**Authorised for release by the board of directors.**

**\*\*\*ENDS\*\*\***

**For enquiries please contact:**

**Vincent Algar**  
**Chief Executive Officer**  
**P: +61 (08) 9481 7833**

**Stuart Usher**  
**Company Secretary**  
**M: +61 (0) 499 900 044**

**Rebecca Hagan**  
**White Noise Communications**  
**M: +61 (0) 416 265 079**



## 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 Chris Ramsay. Mr Ramsay is the General Manager of Geology at Tennant Minerals Ltd and a Member of the Australian Institute of Mining and Metallurgy ('MAusIMM'). Mr Ramsay has sufficient experience, including over 25 years' experience in exploration, resource evaluation, mine geology, and development studies, 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 Ramsay 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.

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## APPENDIX 1: Equivalent Copper (CuEq) Calculation

The conversion to equivalent copper (CuEq) grade must consider the expected plant recovery/payability and sales price of each commodity in the calculation.

Approximate recoveries/payabilities are based on comparable deposits previously mined in the Tennant Creek mineral field, which are similar to the Bluebird discovery in terms of mineralogy.

The prices used in the calculation are based on spot market pricing for Cu, Au, Ag sourced from the website kitcometals.com, whilst price estimates for Bi and Co are from other sources. Pricing as of October 2023.

**Table 3** below shows the grades, process recoveries and factors used in the conversion of the polymetallic assay information into an equivalent Copper Equivalent (CuEq) grade percent.

**Table 3: Copper Equivalent Calculations and Factors**

Metal	Average grade (g/t)	Average grade (%)	Metal Prices			Recovery x payability (%)	Factor	Factored Grade (CuEq%)
			\$/oz	\$/lb	\$/t			
Cu	-	1.14	\$0.23	\$3.69	\$8,155	0.8	1	1.14
Au	0.08	-	\$1,890	\$30,240	\$66,648,960	0.8	0.82	0.07
Ag	0.50	-	\$22.7	\$363	\$800,493	0.8	0.010	0.005
Bi	-	0.02	\$0.50	\$8.00	\$17,632	0.8	2.16	0.04
Co	55.50	-	\$0.94	\$14.97	\$33,000	0.8	0.0004	0.02
							<b>CuEq</b>	<b>1.3</b>

Using the factors calculated above the equation for calculating the Copper Equivalent (CuEq)% grade of the intersection of **36.7m @ 1.3% CuEq** (1.14% Cu, 0.08 g/t Au, 0.50g/t Ag, 0.02% Bi, 55.5g/t Co) is:

$$1 \times 1.14\% \text{ Cu} + 0.82 \times 0.08\text{g/t Au} + 0.01 \times 0.50\text{g/t Ag} + 2.16 \times 0.02\% \text{ Bi} + 0.0004 \times 55.5\text{g/t Co} = 1.3\% \text{ CuEq.}$$

## APPENDIX 2: Descriptions of Mineralisation

### Cautionary note regarding visual estimates:

In relation to the disclosure of visual mineralisation in the report and as detailed in Appendix 2, 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. All assay results for the remainder of this program are expected to be available within the next 3-6 weeks.

BBDD0048 Summary Log (from 388 m to EOH @ 504m).				
From (m)	To (m)	Lith Zone	Lithology	Mineralisation
388	389.6	Complex zone	Strong silicification, patchy to moderate hematite staining, overprinting and brecciation	
389.6	420.5	Red Siltstone	Interbedded thick 4-6m zones of red brown banded & purple-grey siltstone, bedding 90 across core axis	
420.5	432.9		Red banded siltstone with thin off white very fine sandstone interbeds, bedding across core axis	
432.9	444	Complex ironstone	Brecciated hematite siltstone, & thin patchy/veins dark black hematite ironstone with disseminate specular hematite, strong patchy silica alteration	
444	455	Hematite siltstone	Dark grey-brown moderately hematitic & moderately chloritic massive, fractured siltstone	
455	482.4	Grey sandstone / siltstone	Mostly grey very fine grained massive & fractured sandstone, moderately hematitic, bedding alpha 70 across core axis where visible, patchy zones of strongly hematitic red brown siltstone	471-472m: occasional <b>pyrite</b> & <b>sulphides</b> in shears
482.4	484		As above with stronger network qtz veining	
484	496	Hematite siltstone	Mixed zone dark red hematitic siltstone, & purple grey very fine-grained sandstone, faulted contacts	489.3 -490.7m: several partial qtz. chl. melt veins, fine disseminated <b>pyrite/chalcocopyrite</b> in shears/fractures.
496	498	Complex	Very dark red brown strongly hematitic fractured to brecciated siltstone. Faulted contacts into fractured grey moderately silicified sandstone Strong irregular thin shear zones alpha 30 to 45 & down core axis	Minor <b>chalcocopyrite</b> on fracture surfaces; <b>chalcocite</b> on shear surfaces.
498	504m EOH	Hematite siltstone	Mixed zone dark red hematitic siltstone, & purple grey very fine-grained sandstone, faulted contacts and brecciation.	Traces of fine sulphide (pyrite).

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BBDD0043 Summary Log				
From	To	Lith Zone	Lithology & alteration	Mineralisation
0	98.0		RC pre-collar.	
98.0	187.6	Hematitic HW	Ferruginous sandstone & siltstone, shearing, quartz veining.	
187.6	197.0	Chloritic HW	Sandstone & siltstone, moderately chloritised; shearing & some quartz-carb-chlorite mylonites.	
197.0	244.9	Chloritic - Hematite HW	Sandstone siltstone, some sedimentary breccia; alternating hematisation / chloritisation , more chlorite down hole; quartz veining, thin shears, thin mylonites.	<b>Trace copper mineralisation at 233 m (&lt;1%).</b>
244.9	249.2	Shear Zone	Shear zone/breccia including hematite & very hematized siltstone	Trace sulphides on fracture surfaces
249.2	252.8	Chloritic HW	Sandstone & siltstone, common thin shears	Chloritised
252.8	253.2	Hematite Breccia	Hematite-quartz breccia with chloritised& ferruginous siltstone clasts	<b>Trace chalcocite (&lt;1%)</b>
253.2	263.9	Chloritic zone	Chloritised sandstone & siltstone, numerous thin shears	
263.9	269.4	FG intrusive	Strongly sheared siltstone or fine grained intrusive	Very strongly chloritised; sulphide laminae on shear surfaces
269.4	276.9	Jasper breccia	Intensely silicified, moderately hematized jasper / polymictic breccia, some specular hematite veining in part	<b>269/271m trace malachite 275.6-276m: common (&lt;1%). malachite on shear surfaces 276-276.9m: trace malachite visible in healed fractures (&lt;1%).</b>
276.9	277.0	FW	Moderately hematized mudstone - siltstone with large oxide coated jasper clasts	
277.0	278.6	Sheared FW siltstone	Sheared moderately hematized siltstone; mylonites along bedding alpha=25°	
278.6	282.9	Chloritic FW	Chloritised sandstone siltstone, some shearing & thin breccia	
282.9	331.7	(Sheared) FW siltstone	Sheared to fractured purple to grey to reddish moderately hematized siltstone, minimal visible bedding but probably oblique, minor very fine sandstone	
331.7	331.85	Lower sheared ironstone	Strongly sheared / banded black hematite-quartz ironstone, some specular hematite; later spotty red hematite alteration	
331.85	343.0	FW siltstone	Purplish grey siltstone	
343.0	344.5		5-10cm weakly banded intense quartz-hem shear/breccia down core axis	
344.5	347.2 EOH	FW siltstone Red Shale	Sharp contact into bland massive reddish siltstone	

## APPENDIX 3

## JORC 2012 Edition - Section 1 Sampling Techniques and Data

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

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>The presentation of exploration results is based on information and data collected and prepared using industry standard practices or better, including, logging protocols, sampling, assay methods, and appropriate quality assurance quality control (QAQC) measures.</li> <li>The mineralised intervals of BBDD0045 form part of a sample composite selected and submitted for mineral processing and metallurgical test-work. The core was split in half and one half was split again. The ½ core was sampled and submitted for the stated test-work, ¼ of the core remains in the core tray and ¼ was submitted for assay (this report refers to the ¼ core samples sent for assay). All sample sets were divided by the same sample intervals from the logging of the HQ core.</li> <li>Other diamond core results in this report are from ½ HQ core.</li> <li>Where relevant, Reverse Circulation (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.</li> <li>RC samples selected for analysis, 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 as per the core sample methods outlined here.</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 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.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Diamond drillholes were collared using RM or RC drilling and switched to HQ3 approximately 30m before the target position is intersected. All coordinates are quoted in GDA94 datum unless otherwise stated.</li> <li>RC drilling was conducted using a 5 1/4" face sampling hammer, with holes drilled from -45 to -60 degrees.</li> <li>Rotary mud (RM) drilling was completed with 126mm PCD hammer with holes drilled from -45 to -60 degrees.</li> <li>Some holes in this report were started as 'RC' drill holes and changed to core when drilling difficulties were encountered (in these cases the original 'RC' reference in the hole ID was not changed).</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative</li> </ul>	<ul style="list-style-type: none"> <li>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</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p><i>nature of the samples.</i></p> <ul style="list-style-type: none"> <li>• <i>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.</i></li> </ul>	<p>no significant sample recovery issues encountered during the drilling program.</p> <ul style="list-style-type: none"> <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 geotechnical parameters, and logging of core recovery and competency.</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <li>• <i>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.</i></li> <li>• <i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i></li> <li>• <i>The total length and percentage of the relevant intersections logged.</i></li> </ul>	<ul style="list-style-type: none"> <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.</li> <li>• Detailed diamond drill-core information on lithology, sample quality, structure, geotechnical information, alteration and mineralisation are collected in a series of detailed self-validating logging templates.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>• <i>If core, whether cut or sawn and whether quarter, half or all core taken.</i></li> <li>• <i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i></li> <li>• <i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i></li> <li>• <i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i></li> <li>• <i>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.</i></li> <li>• <i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i></li> </ul>	<ul style="list-style-type: none"> <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>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>• <i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li>• <i>For geophysical tools, spectrometres, handheld XRF instruments, etc, the parametres used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i></li> <li>• <i>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)</i></li> </ul>	<ul style="list-style-type: none"> <li>• All samples reported here were submitted to Intertek Laboratories in Perth for sample preparation analysis. (In previous programs some submissions were submitted to Intertek facilities in the Northern Territory).</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 all drilling samples have been determined by Inductively Coupled Plasma (ICP) Mass Spectrometry (MS-OES) and usually includes the elements Ag, Al, As, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cs, Cu, Dy, Er, Eu, Fe, Ga, Gd, Ge, Hf, Ho, In, K, La, Li, Lu, Mg, Mn, Mo, Na, Nb, Nd, Ni, P, Pb, Pr, Rb, Re, S, Sb, Sc, Se, Sm, Sn, Sr, Ta, Tb, Te, Th, Ti, Tl, Tm, U, V, W, Y, Yb, Zn, Zr.</li> </ul>



Criteria	JORC Code explanation	Commentary
	<i>and precision have been established.</i>	<ul style="list-style-type: none"> <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 per batch regardless of the size of the batch.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li><i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li><i>The use of twinned holes.</i></li> <li><i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li><i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <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 in 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>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>Specification of the grid system used.</i></li> <li><i>Quality and adequacy of topographic control.</i></li> </ul>	<ul style="list-style-type: none"> <li>All drill hole collars were located initially with a hand-held GPS with an accuracy of +/-3m. At the completion of the drilling program all holes were surveyed by DGPS.</li> <li>Downhole surveys (2023 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 2023 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>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li><i>Data spacing for reporting of Exploration Results.</i></li> <li><i>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.</i></li> <li><i>Whether sample compositing has been applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>No mineral resource estimations have occurred to date.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li><i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></li> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>Orientation of sampling is as unbiased as possible based on the dominating mineralised 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>
<b>Sample security</b>	<ul style="list-style-type: none"> <li><i>The measures taken to ensure sample security.</i></li> </ul>	<ul style="list-style-type: none"> <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>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li><i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<ul style="list-style-type: none"> <li>None yet undertaken for this dataset</li> </ul>

## 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
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul style="list-style-type: none"> <li>The Company holds 100% of 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>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <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>
<b>Geology</b>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <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-north-west striking fault. The ironstone cross-cuts the sedimentary sequence that mostly comprises of siltstone.</li> </ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <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 style="list-style-type: none"> <li>For drilling details of programs completed prior to Tennent Minerals control, such as the 2020 RC drilling program or earlier 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>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>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.</li> <li>Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated</li> </ul>	<ul style="list-style-type: none"> <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> <li>No high-grade cut-offs are applied.</li> <li>A high gold ‘nugget effect’ may exist in some samples at the Bluebird deposit.</li> </ul>

Criteria	JORC Code explanation	Commentary
	<p>and some typical examples of such aggregations should be shown in detail.</p> <ul style="list-style-type: none"> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	
<b>Relationship between mineralisation on widths and intercept lengths</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Mineralisation at Bluebird is interpreted to be striking east-west 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> <li>The angle of intersection of BBDD0045 is illustrated in Figure 1. True width of this interval could be around 40-60% of the downhole interval.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</li> </ul>	<ul style="list-style-type: none"> <li>Refer to Figures 1, 2 and 3 for appropriate diagrams of the Bluebird discovery and mineralisation including pierce point locations.</li> <li>Figure 4 is a regional location map of Barkly Project.</li> <li>Figure 5 shows location of prospects in plan view.</li> </ul>
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <li>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced avoiding misleading reporting of Exploration Results.</li> </ul>	<ul style="list-style-type: none"> <li>All relevant background information is discussed in the announcement.</li> <li>Full drill results for copper and gold assays for drilling previous to 2021 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>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li> </ul>	<ul style="list-style-type: none"> <li>No other data is material to this report.</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Additional drilling is planned to define and extend the mineralisation locally and at targets near to Bluebird. Resource definition drilling will then be carried out prior to Mineral Resource estimation.</li> <li>Regional targeting will utilise modelling of gravity and a drone magnetic survey data as well as detailed IP resistivity survey data to drill target repeats of the high-grade Bluebird copper gold discovery within the 5km Bluebird Corridor and at the Babbler project to the south.</li> </ul>