

## New Results Confirm Eastern Bluebird Extension Discovery with Strongly Mineralised Intersection Results to Come

### - Further drilling to test near-surface extensions and new low-resistivity Bluebird-repeat targets east and west of the initial discovery

- Results from another four holes continue to extend the Bluebird copper-gold discovery at shallower levels and to the east, where the mineralisation remains completely open.
- The first hole into the newly discovered eastern Bluebird extension has produced a substantial copper intersection with gold and bismuth (see below). The results of two further strongly-mineralised intersections in this zone (BBDD0032 and 0038) are expected within two to three weeks (see Appendix 2 for descriptions of mineralisation).

**17.4m @ 2.6% CuEq\*** (1.58% Cu, 0.06 g/t Au, 0.25% Bi) from 129.8m downhole in **BBDD0033**,  
incl. **5.44m @ 4.4% CuEq\*** (3.66% Cu, 0.10 g/t Au, 0.20% Bi) from 132.0m, and,  
incl. **3.2m @ 3.5% CuEq\*** (1.62% Cu, 0.08 g/t Au, 0.55% Bi) from 144.0m.

- Significant copper with gold and bismuth results were also produced from two holes drilled on the western side of Bluebird, extending the mineralisation closer to the surface above the previously announced exceptional intersection in BBDD0026 of **17.95m @ 2.66% Cu, 11.08 g/t Au, 1.30% Bi** including **5m @ 6.11% Cu, 38.6 g/t Au, 4.50% Bi<sup>1</sup>**. These new results include:

**20.4m @ 1.9% CuEq\*** (0.68% Cu, 0.90 g/t Au, 0.12% Bi) from 119.6m downhole in **BBDD0031**,  
incl. **2.4m @ 7.2% CuEq\*** (0.45% Cu, 6.13 g/t Au, 0.48% Bi) from 119.6m, and,  
incl. **3.5m @ 2.9% CuEq\*** (1.63% Cu, 0.52 g/t Au, 0.24% Bi) from 126.0m.

**18m @ 1.9% CuEq\*** (1.80% Cu, 0.04 g/t Au, 0.01% Bi) from 106m downhole in **BBRC0021**,  
incl. **10m @ 3.0% CuEq\*** (2.85% Cu, 0.05 g/t Au, 0.01% Bi) from 109m,  
incl. **5m @ 4.8% CuEq\*** (4.65% Cu, 0.07 g/t Au, 0.01% Bi) from 114m.

- Further drilling is planned to extend and define the newly discovered shallow extensions of the Bluebird mineralisation, which has now been identified over a 500m strike-length<sup>1</sup>.
- The drilling will also test new Induced Polarisation (IP) low-resistivity targets to the east and west of Bluebird (currently undergoing 3-D inversion modelling), targeting repeats of the high-grade copper-gold discovery.

\*see Appendix 1 for copper equivalent (CuEq) calculations.

**Tennant Minerals Ltd** (Tennant or “the Company”) (ASX:TMS) is pleased to announce the results from a further four holes from the Stage 3 drilling program at the Company’s Bluebird high-grade copper-gold discovery (see longitudinal projection Figure 1, 3-d model, Figure 2 and cross section, Figure 3).

Bluebird is located within the Company’s 100% owned Barkly Project, on the eastern edge of the richly endowed Tennant Creek Mineral Field in the Northern Territory, which **produced over 5.5Moz of gold and over 700kt of copper** from 1934 to 2005<sup>2</sup> (see location, Figure 4).

The new results include a **substantial copper (Cu), gold (Au) and bismuth (Bi) intersection from the newly discovered eastern extension of the deposit** (see Figure 1):

- 17.4m @ 2.6% CuEq\* (1.58% Cu, 0.06 g/t Au, 0.25% Bi)** from 129.8m downhole in **BBDD0033**,
- incl. **5.44m @ 4.4% CuEq\* (3.66% Cu, 0.10 g/t Au, 0.20% Bi)** from 132.0m, and,
- incl. **3.2m @ 3.5% CuEq\* (1.62% Cu, 0.08 g/t Au, 0.55% Bi)** from 144.0m.

**Assay results pending include those from thick and strongly mineralised intersections in BBDD0032 and BBDD0038** (see below and descriptions in Appendix 2), also from the eastern discovery zone, which projects to within 60m of the surface (see Figures 1 and 2) and represents a target for initial open-pit mining:

- **BBDD0038:** 53m from 90m hematite/secondary magnetite alteration including 28m of strong copper mineralisation (3 - 10% chalcocite and 1-3% malachite).
- **BBDD0032:** 66m from 70m hematite/secondary magnetite alteration incl. 20m of strong copper mineralisation (3 - 5% chalcocite and 1% malachite).

**Cautionary note regarding visual estimates:**

*In relation to the disclosure of visual mineralisation above 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 – 5 weeks. Target mineral abundances are estimated along with general geological descriptions.*

Significant copper with gold and bismuth results were also produced from two shallower holes drilled on the western side of Bluebird. These new results are from the same section as the recently announced exceptional intersection in **BBDD0026 of 17.95m @ 2.66% Cu, 11.08 g/t Au, 1.30% Bi** including **5m @ 6.11% Cu, 38.6 g/t Au, 4.5% Bi**<sup>1</sup> and extend the mineralisation closer to the surface where the zone remains open (see Figure 3):

- 20.4m @ 1.9% CuEq\* (0.68% Cu, 0.90 g/t Au, 0.12% Bi)** from 119.6m downhole in **BBDD0031**,
- incl. **2.4m @ 7.2% CuEq\* (0.45% Cu, 6.13 g/t Au, 0.48% Bi)** from 119.6m, and,
- incl. **3.5m @ 2.9% CuEq\* (1.63% Cu, 0.52 g/t Au, 0.24% Bi)** from 126.0m.
- 18m @ 1.9% CuEq\* (1.80% Cu, 0.04 g/t Au, 0.01% Bi)** from 106m downhole in **BBRC0021**,
- incl. **10m @ 3.0% CuEq\* (2.85% Cu, 0.05 g/t Au, 0.01% Bi)** from 109m, and,
- incl. **5m @ 4.8% CuEq\* (4.65% Cu, 0.07 g/t Au, 0.01% Bi)** from 114m.

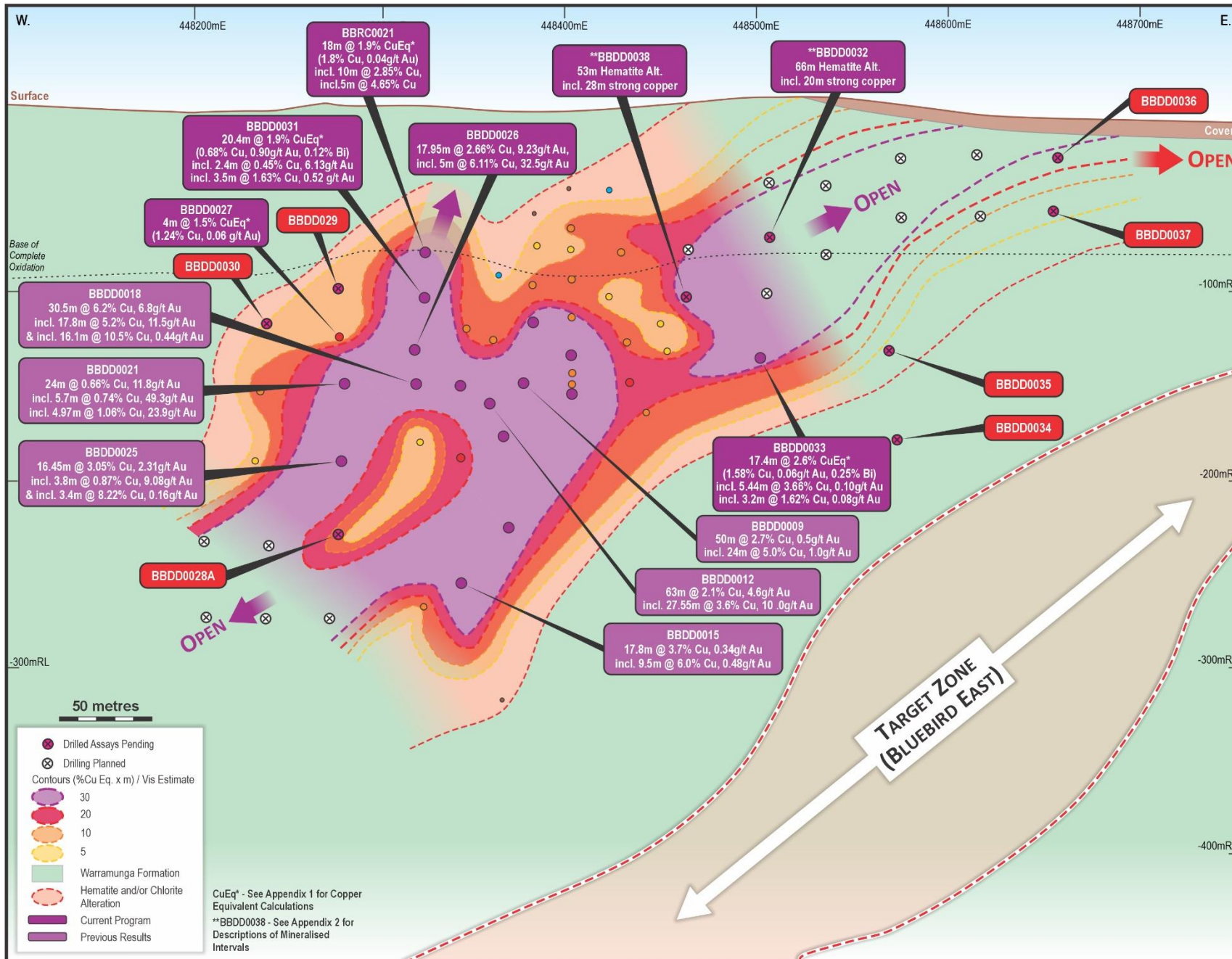
The ongoing Stage 3 drilling program has so far comprised 14 holes for 3,166m<sup>1</sup>. **Further drilling is planned to extend and define the newly discovered shallow extensions of the Bluebird mineralisation**, which has now been identified over a 500m strike-length and remains open.

New drilling will also test IP low-resistivity targets, currently being modelled, to the west and **particularly east of Bluebird, where past RAB drilling identified strongly anomalous copper results** (see Figure 5).

*\*see Appendix 1 for copper equivalent (CuEq) calculations.*

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**Figure 1: Bluebird longitudinal projection showing new copper with gold and bismuth intersections and strongly mineralised holes - results pending.**

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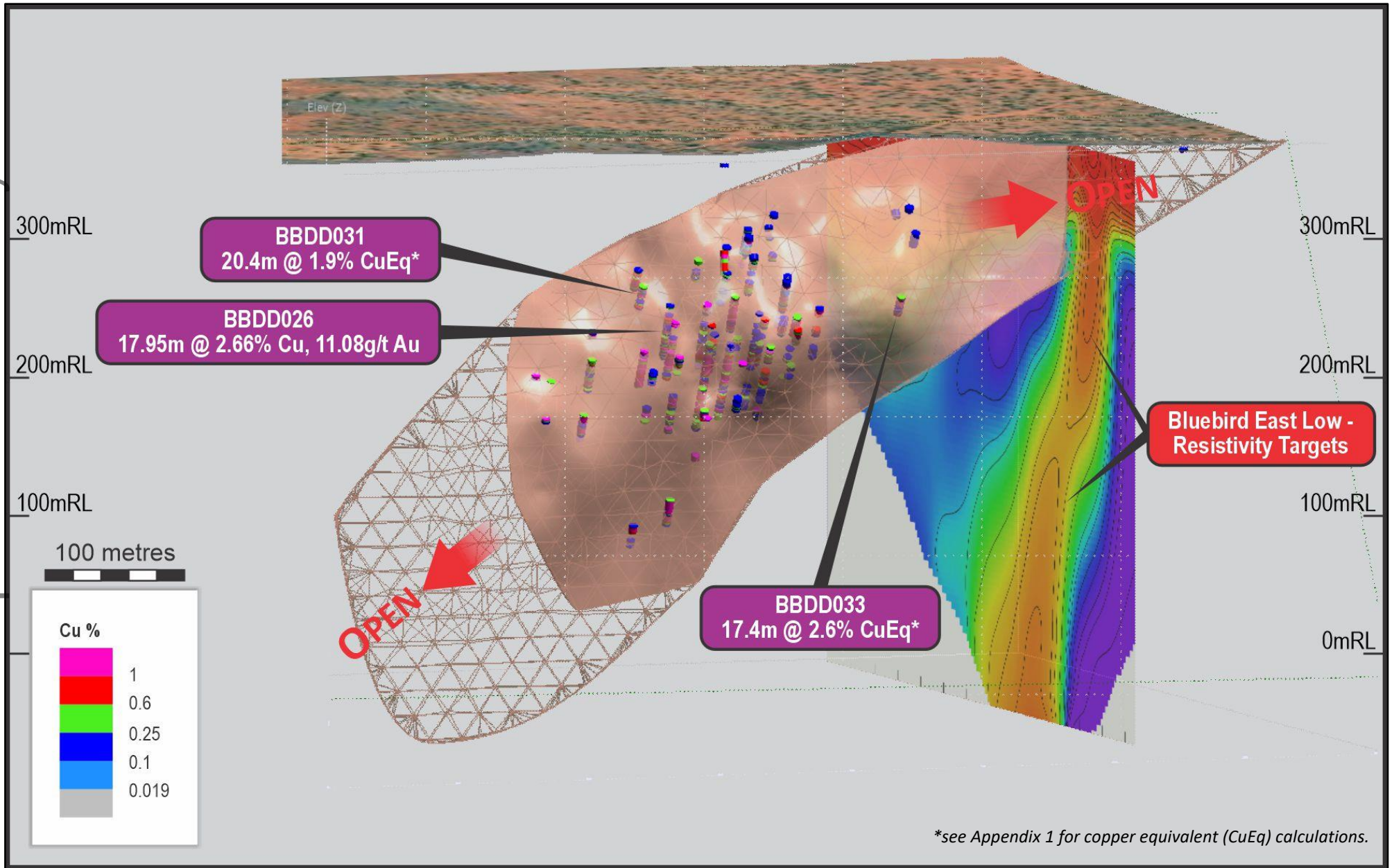


Figure 3: Bluebird 3-D perspective view with IP resistivity section 448,660mE showing strong low resistivity drilling targets

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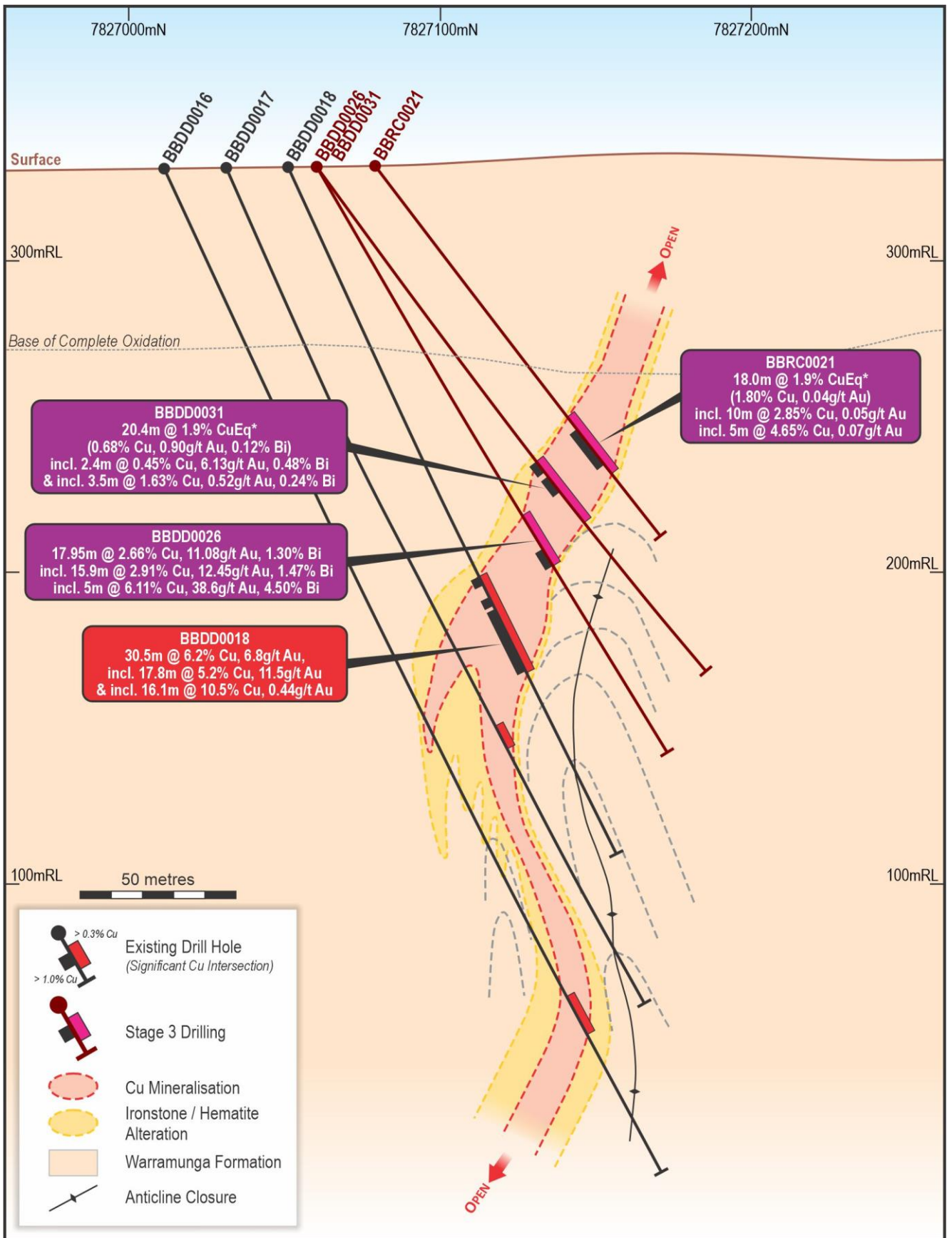


Figure 3: Cross section 448,320mE showing substantial new copper & gold intersections in BBDD0031 & BBRC0021.

**Table 1: Significant Stage-3 drilling intersections to date:**

Hole #	From	To	Interval (m)	CuEq%*	Cu%	Au g/t	Ag g/t	Bi %	Co g/t	Cut-off
<b>BBRC0021</b>	106.0	124.0	<b>18.0</b>	<b>1.9</b>	<b>1.80</b>	<b>0.04</b>	0.7	<b>0.01</b>	47	0.3 % Cu
incl.	109.0	119.0	<b>10.0</b>	<b>3.0</b>	<b>2.85</b>	<b>0.05</b>	0.9	<b>0.01</b>	43	1.0 % Cu
incl.	114.0	119.0	<b>5.0</b>	<b>4.8</b>	<b>4.65</b>	0.07	1.3	0.01	57	3.0 % Cu
<b>BBDD0027</b>	147.7	151.7	<b>4.0</b>	<b>1.5</b>	<b>1.24</b>	<b>0.06</b>	<b>0.6</b>	<b>0.04</b>	64	0.3% Cu
incl.	147.70	149.9	<b>2.2</b>	<b>1.9</b>	<b>1.69</b>	<b>0.08</b>	<b>0.9</b>	<b>0.03</b>	39	1.0 % Cu
<b>BBDD0033</b>	129.8	147.2	<b>17.4</b>	<b>2.6</b>	<b>1.58</b>	<b>0.06</b>	<b>0.8</b>	<b>0.25</b>	17	0.3 % Cu
incl.	130.4	137.44	<b>7.04</b>	<b>3.7</b>	<b>2.99</b>	<b>0.08</b>	<b>1.5</b>	<b>0.18</b>	12	0.8 % Cu
& incl.	132	137.44	<b>5.44</b>	<b>4.4</b>	<b>3.66</b>	<b>0.10</b>	<b>1.8</b>	<b>0.20</b>	15	1.0 % Cu
incl.	144	147.2	<b>3.2</b>	<b>3.5</b>	<b>1.62</b>	<b>0.08</b>	<b>0.8</b>	<b>0.55</b>	22	1.0 % Cu
<b>BBDD0031</b>	119.6	140.0	<b>20.4</b>	<b>1.9</b>	<b>0.68</b>	<b>0.90</b>	<b>0.8</b>	<b>0.12</b>	89	0.3 % Cu
incl.	119.6	129.5	<b>9.9</b>	<b>3.0</b>	<b>0.75</b>	<b>1.76</b>	<b>1.3</b>	<b>0.22</b>	146	0.3 g/t Au
incl.	119.6	122.0	<b>2.4</b>	<b>7.2</b>	<b>0.45</b>	<b>6.13</b>	<b>0.5</b>	<b>0.48</b>	342	1.0 g/t Au
& incl.	126	140.0	<b>14.0</b>	<b>1.3</b>	<b>0.87</b>	<b>0.16</b>	<b>0.9</b>	<b>0.07</b>	50	0.6% Cu
incl.	126	129.5	<b>3.5</b>	<b>2.9</b>	<b>1.63</b>	<b>0.52</b>	<b>2.5</b>	<b>0.24</b>	103	0.6 % Cu
incl.	128.5	129.5	<b>1.0</b>	<b>6.2</b>	<b>4.05</b>	<b>0.50</b>	<b>2.2</b>	<b>0.52</b>	94	0.6 % Cu

Hole #	From	To	Interval (m)	CuEq%	Cu%	Au g/t	Ag g/t	Bi %	Co g/t	Cut-off
<b>BBDD0026</b>	131.0	149.0	<b>18.0</b>	N/A	<b>2.66</b>	<b>11.08</b>	<b>5.4</b>	<b>1.31</b>	167	0.3% Cu
incl.	131.8	147.7	<b>15.9</b>	N/A	<b>2.91</b>	<b>12.45</b>	<b>5.9</b>	<b>1.47</b>	185	0.9% Cu
incl.	131.8	137	<b>5.2</b>	N/A	<b>2.63</b>	<b>0.31</b>	<b>1.8</b>	<b>0.03</b>	232	<1 g/t Au
incl.	142.7	147.7	<b>5.0</b>	N/A	<b>6.11</b>	<b>36.8</b>	<b>16</b>	<b>4.50</b>	255	1.0 g/t Au
incl.	145.45	147.7	<b>2.25</b>	N/A	<b>9.57</b>	<b>64.0</b>	<b>26</b>	<b>7.60</b>	478	20 g/t Au

\*see Appendix 1 for copper equivalent (CuEq) calculations.

**Table 2: Bluebird Stage 3 drillhole details:**

Hole #	Dip°	Az Grid°	GRID (m)	GRID_N (m)	RL (m)	Pre-Collar/RC (m)	DDC (m)	Depth (m)
BBDD0026	-60	0	448,320	7,827,060	332	123	96.7	219.4
BBDD0027	-61	0	448,280	7,827,060	332	102	115.8	217.3
BBDD0028	-66	0	448,280	7,827,010	332	122	-	122 (Abnd)
BBDD0028A	-67	351	448,278	7,827,005	330	147	213.2	360.4
BBDD0029	-63	0	448,280	7,827,085	332	72	108.5	180.5
BBDD0030	-60	357	448,240	7,827,060	332	96	123	219
BBDD0031	-53	358	448,320	7,827,060	332	63	141.2	204.2
BBDD0032	-53	0	448,500	7,827,050	330	78	178.9	257
BBDD0033	-53	358	448,500	7,827,010	332	72	147.1	218.7
BBDD0034	-53	357	448,580	7,827,015	331	72	269.1	341.1
BBDD0035	-55	353	448,580	7,827,035	332	30	136.7	166.2
BBRC0021	-52	359	448,321	7,827,079	331	150	-	150
BBDD0036	-54	360	448,660	7,827,050	333	18	145.5	163.5
BBDD0037	-55	357	448,660	7,827,032	331	51	138.6	189.8
BBDD0038	-55	0	448,460	7,827,045	332	75	81.8	156.8
Total <sup>1</sup>	-	-	-	-	-	<b>1,270</b>	<b>1,896</b>	<b>3,166</b>

Notes: 1. Drilling May/June 2023 (from BBDD0026 – program stopped 27/06/2023). BBDD0026 announced 19/07/2023<sup>1</sup>

## 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>2</sup>. Major historical mines in this region include **Peko**, which produced **3.7Mt @ 4% Cu, 3.5 g/t Au**<sup>2</sup> and **Warrego**, which produced **6.75Mt @ 6.6 g/t Au, 1.9% Cu**<sup>2</sup> (see Figure 4).

Mineralisation intersected at Bluebird is typical of the high-grade copper-gold orebodies previously mined 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 with native copper, transitioning with depth to primary sulphides chalcocite, bornite and chalcopyrite.

Drilling to date has now identified copper-gold mineralisation at Bluebird over a 500m strike length and from 75m below surface to over 250m depth. The deposit remains open in all directions (Figures 1 and 2).

Exceptional intersections produced from the Bluebird discovery to date, from west to east, include:

- BBDD0018: **30.5m @ 6.2% Cu, 6.8 g/t Au** from 153.6m incl. **17.8m @ 5.2% Cu, 11.5 g/t Au**<sup>4</sup>
- BBDD0012: **63m @ 2.1% Cu, 4.6 g/t Au** from 153m incl. **27.55m @ 3.6% Cu, 10.0 g/t Au**<sup>5</sup>
- BBDD0007: **50m @ 2.7% Cu, 0.52 g/t Au** from 158m incl. **24m @ 5.0% Cu, 1.0 g/t Au**<sup>6</sup>

The Company has the dual approach of defining the resource potential of the Bluebird discovery as well as testing other targets within the Bluebird-Perseverance Corridor<sup>7</sup> (Figure 5). Targets are defined using gravity, magnetics, and IP resistivity modelling, as well as previous geochemistry if applicable<sup>3</sup>.

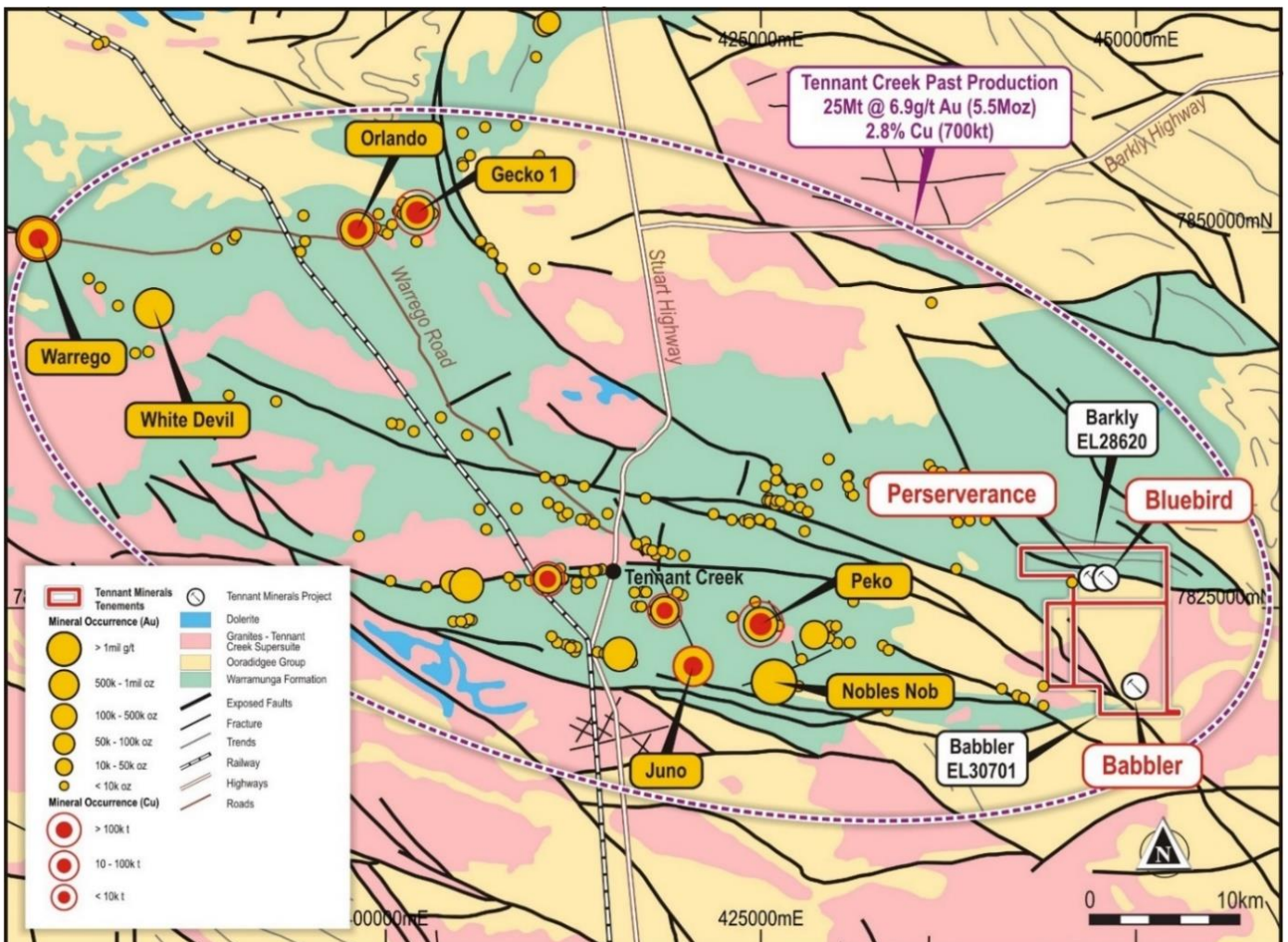


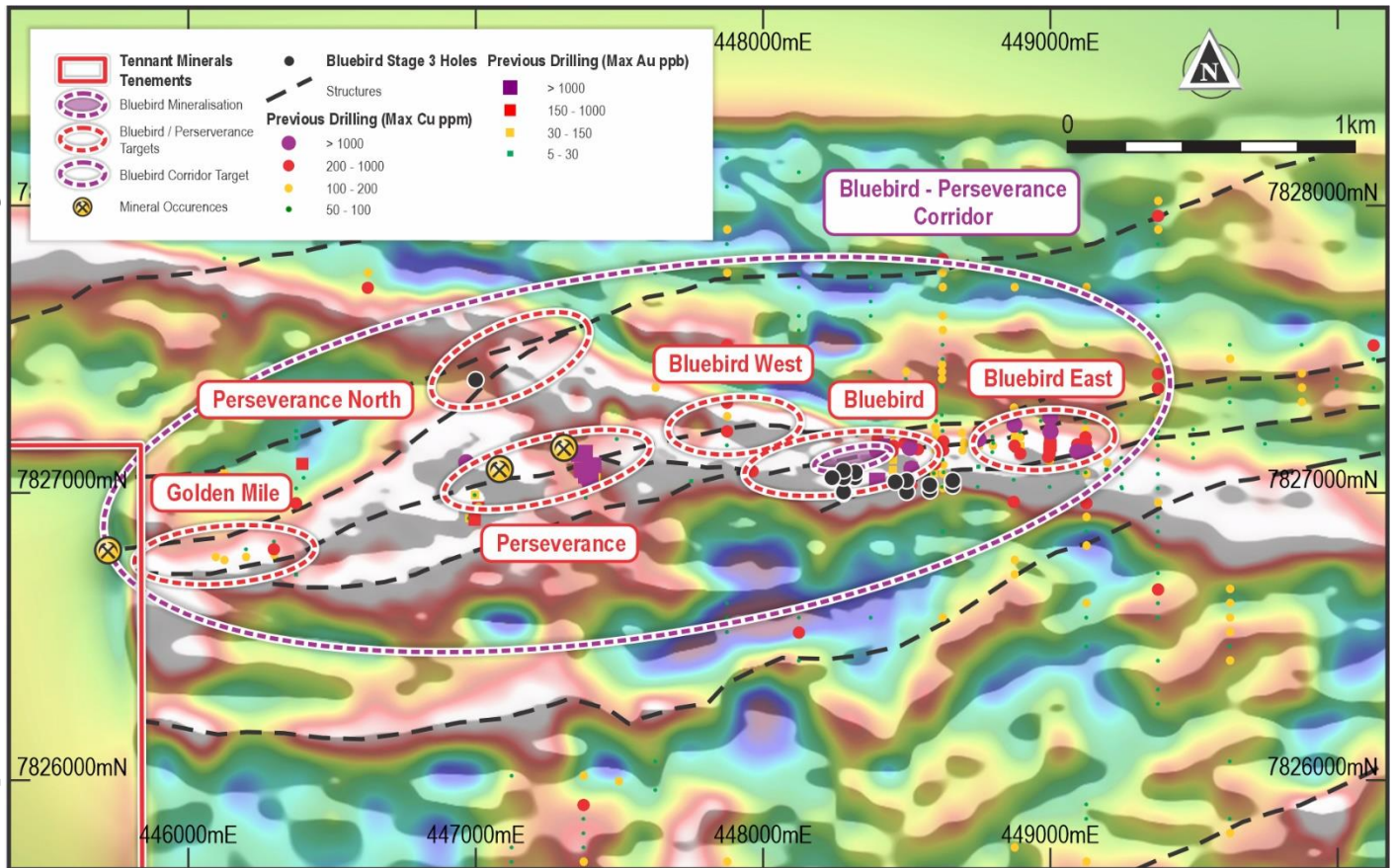
Figure 4: Location of the Barkly Project and major historical mines in the Tennant Creek Mineral Field.

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Results from the initial drill testing of the other priority gravity-magnetic-IP resistivity targets include a significant intersection at Perseverance North of **1m @ 0.93% Cu, 0.58 g/t Au** from 231m in **PNDD002** (see Tables 3 and 4 for details and Figure 5 below for location). This hole intersected hematite breccia lodes interpreted to lie above potentially copper-gold mineralised ironstone<sup>8</sup>, as indicated by the gravity anomaly and a thickening low-resistivity zone at depth.

The results of the extensive new IP resistivity survey carried out over the entire Barkly project are being modelled. Targets identified from this modelling will be tested during the next drilling phase, to commence following NT Government approval of the expanded Mine Management Plan (MMP).

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**Figure 5: Bluebird-Perseverance gravity image with previous drilling geochemistry and new Stage 3 holes.**

**Table 3: Significant intersections from the Bluebird – Perseverance Drilling:**

Hole #	From	To	Interval	Cu%	Au g/t	Ag g/t	Bi g/t	Co g/t	Fe %	Cut-off
PNDD0002	231	232	1.0	0.93	0.58	2.8	10	546	26.2	0.5% Cu

**Table 4: Perseverance North PNDD0002 drillhole details:**

Hole #	Dip°	Az Grid°	GRID_E	GRID_N	RL	RC (m)	Depth (m)
Perseverance North							
PNDD0002	-65	0	447,000	7,827,400	330	179.9	328.6

Authorised for release by the board of directors.

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

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## REFERENCES

- <sup>1</sup> 19/07/2023. Tennant Minerals (ASX.TMS): “Drilling Doubles Strike Length of Bluebird copper-Gold discovery”.
- <sup>2</sup> Portergeo.com.au/database/mineinfo. Tennant Creek - Gecko, Warrego, White Devil, Nobles Nob, Juno, Peko, Argo.
- <sup>3</sup> 15/05/2023. Tennant Minerals (ASX.TMS): “Drilling Resumes at high-Grade Bluebird Cu-Au Discovery”
- <sup>4</sup> 08/02/2023. Tennant Minerals (ASX.TMS): “Spectacular Bluebird Drill-Hit 30.5m @ 6.2% Cu, 6.8 g/t Au”.
- <sup>5</sup> 17/08/2022. Tennant Minerals (ASX. TMS): “Bonanza 63m@ 2.1% Copper and 4.6 g/t Gold Intersection at Bluebird”.
- <sup>6</sup> 08 March 2022. Tennant Minerals (ASX. TMS): “Spectacular 50m @ 2.70% copper intersection at Bluebird”.
- <sup>7</sup> 25/08/2022. Tennant Minerals (ASX. TMS): “Standout Geophysical Targets to Replicate Bluebird Cu-Au Discovery”.
- <sup>8</sup> 24/01/23. Tennant Minerals (ASX.TMS): “Mineralised Structures at Key Cu-Au Targets Near 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 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. Copper Equivalent Calculation

### Equivalent Copper (CuEq) Calculation

The conversion to equivalent copper (CuEq) grade must take into account 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 current (10/08/23) market for Cu, Au, Ag sourced from the website kitcometals.com whilst estimates for Bi and Co are from other sources for current Co and Bi price.

The table below shows the grades, process recoveries and factors used in the conversion of the poly metallic assay information into an equivalent Copper Equivalent (CuEq) grade percent.

Metal	Average grade (g/t)	Average grade (%)	Metal Prices			Recovery x payability (%)	Factor	Factored Grade (CuEq%)
			\$/oz	\$/lb	\$/t			
Cu	-	1.80	61	\$3.80	\$8,375	0.8	1.0000	1.797
Au	0.042	-	1,932	\$30,912	\$68,130,048	0.8	0.8135	0.0340
Ag	0.7	0.00	23	\$368	\$811,072	0.8	0.0097	0.006
Bi	-	201	\$12.57	\$27.70	\$27,700	0.8	3.3074	0.035
Co	47	0.00	240	\$15.00	\$33,060	0.8	0.0004	0.019
							<b>CuEq</b>	<b>1.9</b>

Using the factors calculated above the equation for calculating the Copper Equivalent (CuEq)% grade of the intersection of 20.4m @ 1.80% Cu, 0.04 g/t Au, 0.7 g/t Ag, 0.01% Bi, 47 g/t Co is:

$$\text{CuEq\%} = 1 \times \text{Cu\%} + 0.81 \times 0.04\text{g/t Au} + 0.0097 \times 0.7\text{g/t Ag} + 3.31 \times 0.01\% \text{ Bi} + 0.0004 \times 47\text{g/t Co} = 1.9\% \text{ CuEq}$$

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**Appendix 2. Visual estimates of mineralisation intersected in drillholes described in this release:**

**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. All assay results for the remainder of this program are expected to be available within the next 3-6 weeks. Target mineral abundances are estimated along with general geological descriptions.*

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BBDD0032 Summary Log				
From	To	Lith Zone	Lithology	Alteration/Mineralisation
0	70	Hanging Wall	RC chips: weathered hematite-stained siltstone	
70	78 (end of pre-collar).	Upper ironstone	RC chips: weathered hematite-stained siltstone	<b>Malachite evident in RC chips (crystalised on joint surfaces), 0.5 - 1%, 76 - 78m.</b>
80	87.4		Hematite sandstone & ironstone	<b>Bladed malachite visible on joint surfaces likely after chalcocite, 1 - 2%, 80-86m. Fine chalcocite veins after original primary sulfide occurrences. 2 - 3% (81 - 82.5m) &amp; 0.5 - 1% (82.5 - 85m).</b>
87.4	105.35	Intermediate zone	Weakly to moderately hematite altered & chlorite altered siltstone & sandstone	
105.35	106.6	Mafic	Very fine grained dark green mafic	
106.6136-	118.7	Intermediate zone	Weakly to moderately hematite altered & chlorite altered siltstone & sandstone	
118.7	118.83	Thin middle ironstone	Thin ironstone within moderately hematite altered sandstone	-
118.3	125.15	Intermediate zone	Weakly to moderately hematite altered and chlorite altered siltstone & sandstone	
125.15	129.3	Silicic tuff	Fine grained faintly flow banded finely porphyritic silicic tuff; not previously recognised at Bluebird	<b>Fine chalcocite grains in hematite fractures, 0.5 - 1.0 %, 128 - 130m.</b>
129.3	129.5	Intermediate zone	Weakly to moderately hematite altered and chlorite altered siltstone & sandstone	
129	136	Lower jasper - ironstone	Strongly to intensely silicified & haematized brecciated jasper - ironstone	<b>Fine chalcocite grains in hematite fractures, 1.0 - 2.0%, 131.7 - 135m.</b>
136	144.4	Chloritic FW	Moderately chloritised siltstone / sandstone, qtz veining 141-142.9m: broken disrupted pegmatite veining in siltstone	
144.4	257 EOH	Footwall	Siltstone (& sandstone), patchy weak to moderate hematite & chlorite alteration & qtz veining	

BBDD0038 Summary Log				
From	To	Lith Zone	Lithology	Alteration/Mineralisation
0	74.8	Hanging Wall	RC pre-collar	
74.8	90.1	Hanging Wall	Grey to brown & greenish grey siltstone, patchy weak hematite &/or chlorite alteration	
90.1	101.61	Hematite - chlorite - ironstone breccia	Inter-banded strongly hematite altered or strongly chlorite altered brecciated & sheared vfg sandstone, together with ironstone	
101.6	112.2	Chlorite - hematite altered vfg sandstone	Chloritic sandstone with weak to strong hematite alteration, strong qtz veining, minor ironstone	
111.2	114.57	Ironstone & hem - chlorite rock	Ironstone & strongly hematite altered & chlorite altered sandstone	
114.57	129.8	Sheared chloritic hanging wall	Chloritic sandstone, disrupted & sheared, patchy strong hematite alteration, minor intense silicification, minor thin ironstone	<b>Bladed malachite coating on joint surfaces, 1.0 - 3.0%, 114 - 125m. Very fine chalcocite stringers and small blebs, 2 - 3%, 122 - 125m. Chalcocite stringers and small blebs with some disseminated grains, and trace coarse blebby bornite, 2-10%, 125 - 140.2m.</b>
129.8	142.82	Ironstone	Hematite ironstone, significant zones of core loss, hematite-silica jasper below 140.6m, some strongly haematized sandstone	
142.82	156.8 EOH	Footwall	Moderately to strongly haematized vfg sandstone, lesser siltstone, minor chloritization, strong qtz veins. (not clearly through all of the strong to intense Fe alteration)	

**APPENDIX 3**
**JORC 2012 Edition - Section 1 Sampling Techniques and Data**
*(Criteria in this section apply to all succeeding sections.)*

<b>Criteria</b>	<b>JORC Code explanation</b>	<b>Commentary</b>
<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>Exploration results are based on industry best practices, including sampling, assay methods, and appropriate quality assurance quality control (QAQC) measures.</li> <li>Core samples (2023) 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), 2023 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.</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 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>Holes were drilled from -53 to -75 degrees.</li> <li>RC drilling (2023) was conducted using a 5<sup>1</sup>/<sub>4</sub>" face sampling hammer.</li> <li>Rotary mud (RM) drilling (2023) was completed with 126mm PCD hammer.</li> <li>2023 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>
<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 nature of the samples.</li> <li>Whether a relationship exists between sample recovery and</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 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</li> </ul>

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Criteria	JORC Code explanation	Commentary
	<p><i>grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</i></p>	<p><i>was retained for future interpretation. No analysis of rotary mud collars was undertaken.</i></p> <ul style="list-style-type: none"> <li><i>The quality of diamond core samples is monitored by the logging of various geotechnical parameters, and logging of core recovery and competency.</i></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><i>All logging is completed according to industry best practice.</i></li> <li><i>RC chips are logged at 1m intervals using a representative sample of the drill chips. Logging records include lithology, alteration, mineralisation, colour and structure.</i></li> <li><i>RM chips are logged at 2m intervals using a representative sample of the drill chips. Logging records include lithology, alteration, mineralisation and colour</i></li> <li><i>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.</i></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><i>For all sample types, the nature, quality and appropriateness of the sample preparation technique is considered adequate as per industry best practice.</i></li> <li><i>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.</i></li> <li><i>RC samples are dried at the laboratory and then pulverised to at least 85% passing 75 microns.</i></li> <li><i>RM samples were not analysed. A sample was retained for future interpretation.</i></li> <li><i>Core is cut using an Almonte automated core cutting saw. Half core is taken for sampling.</i></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, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations</i></li> </ul>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>Pulp sample(s) were digested with a mixture of four Acids including Hydrofluoric, Nitric, Hydrochloric and Perchloric Acids for a total digest.</i></li> </ul>

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Criteria	JORC Code explanation	Commentary
	<p>factors applied and their derivation, etc.</p> <ul style="list-style-type: none"> <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 style="list-style-type: none"> <li>Analysis of 2023 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 2023 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> <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>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 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>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 style="list-style-type: none"> <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 (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>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 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>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>

<b>Criteria</b>	<b>JORC Code explanation</b>	<b>Commentary</b>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <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 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>The measures taken to ensure sample security.</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>The results of any audits or reviews of sampling techniques and data.</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.)

<b>Criteria</b>	<b>JORC Code explanation</b>	<b>Commentary</b>
<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-northHanging Wallest 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>o easting and northing of the</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <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> </ul>

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Criteria	JORC Code explanation	Commentary
	<p>drill hole collar</p> <ul style="list-style-type: none"> <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> <ul style="list-style-type: none"> <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 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 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 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> </ul>
<b>Relationship between mineralisation 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 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>
<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 Figure 1 for longitudinal projection including pierce point locations. Figure 2 is a 3-d perspective view showing a mineralisation model and potential projections. Figure 3 is an appropriate cross section through the Bluebird mineralisation. Figure 4 is a regional location plan of the Bluebird prospect and Barkly Project. Figure 5 is a local plan view of the Barkly Project and includes a detailed gravity image as a backdrop to magnetic/IP target polygons, point geochemistry data and recent drilling.</li> </ul>



<b>Criteria</b>	<b>JORC Code explanation</b>	<b>Commentary</b>
<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 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 to the east of section 448,420mE and down-plunge to the west. Resource definition drilling will then be planned.</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 shoot within the 5km Bluebird Corridor.</li> </ul>

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