

## More Exceptional Copper Intersections from Bluebird

*Discovery still open at depth and to the west - with priority follow-up diamond drilling program set to commence*

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- Further exceptional, thick and high-grade, copper with gold intersections from step-out drilling at the Bluebird copper-gold discovery, Tennant Creek, including:
    - 35.5m @ 2.58% Cu and 0.27 g/t Au from 194m (down hole) in BBDD0010,
      - including 18.0m @ 4.74% Cu and 0.50 g/t Au from 197m,
      - including 5.0m @ 6.53% Cu and 0.67 g/t Au from 197m, and
      - including 5.6m @ 8.06% Cu and 0.84 g/t Au from 205m
    - 29.3m @ 1.76% Cu and 0.21 g/t Au from 195.7m (down hole) in BBDD0011,
      - including 17.2m @ 2.67% Cu and 0.22 g/t Au from 195.7m,
      - including 7.3m @ 5.59% Cu and 0.36 g/t Au, 0.37% Bi from 195.7m
  - These latest two copper-gold intersections are similar to previously announced BBDD009 (50.0m @ 2.70% Cu and 0.52 g/t Au from 158m incl. 24.0m @ 5.01% Cu, 1.01 g/t Au<sup>0</sup>) but are interpreted to be underneath the thickest part of the plunging copper-gold deposit.
  - Priority follow-up drilling program set to commence to test up and down dip of the known high-grade copper and gold zone, as well as down plunge to the west, to scope the tonnage and grade potential of this significant new discovery in the Tennant Creek Copper-Gold Field.
  - Drilling also planned to test up to 13 other priority magnetic copper-gold targets with coincident gravity highs identified along the 5km Bluebird Corridor, following remodelling of gravity and magnetic data.
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**Tennant Minerals Chairman, Mr Matthew Driscoll, commented:**

*“These exceptional results from the two step-out holes at Bluebird reinforce our view that we are just seeing the top of this high-grade copper-gold deposit.”*

*“The new results indicate that the thick and high-grade copper mineralisation continues to the west and is completely open at similar grade to the previously reported 50m intersection of high-grade copper in BBDD0009.*

*“We look forward to our follow-up drilling program at Bluebird which is set to commence within weeks to test the projected thickest part of the copper gold deposit as well as test the mineralisation down plunge.”*

*“This further drilling will look to scope out this exciting new discovery, that may ultimately rival other deposits historically mined at Tennant Creek, including the Peko deposit, just 20km west of Bluebird, which historically produced 147,000 tonnes of copper grading 4% and 414,000 ounces of gold grading 10 g/t.”*

Tennant Minerals Limited (ASX: TMS) (“Tennant”, or the “Company”) is pleased to announce the results of the two step-out holes completed at the Bluebird Prospect (“Bluebird”), located on the 100% owned Barkly Project, 45km east of Tennant Creek township in the Northern Territory (see location, Figure 5).

The two step-out holes are the last of five diamond drillholes in the latest 1,048m drilling program at the Barkly Project<sup>1</sup>, which aimed to test for extensions of the Bluebird copper-gold discovery – including below previous holes that had stopped in high-grade copper and gold mineralisation.

**All five drillholes in the latest program intersected intense hematite alteration with visible copper mineralisation including malachite and/or chalcocite (copper sulphide), as well as native copper in the two deeper step-out holes BBDD0010 and 0011<sup>0</sup>.**

Diamond drillhole **BBDD0010** tested the mineralised zone ~30m down plunge from the previous intersection in **BBDD0009 (50.0m @ 2.70% Cu, 0.52 g/t Au from 158m incl. 24.0m @ 5.01% Cu, 1.01 g/t Au<sup>0</sup>)**, intersecting more than 35m of quartz veining, hematite alteration and copper mineralisation.

**BBDD0010 produced the following thick and high-grade copper with gold intersections:**

- **35.5m @ 2.58% Cu and 0.27 g/t Au (0.4% Cu cut-off) from 194.0m,**
  - including **18.0m @ 4.74% Cu and 0.50 g/t Au (1.0% Cu cut-off) from 197.0m,**
  - including **5.0m @ 6.53% Cu and 0.67 g/t Au (3.0% Cu cut-off) from 197.0m, and,**
  - including **5.6m @ 8.06% Cu and 0.84 g/t Au (2.0% Cu cut-off) from 205.0m.**

The thick and high-grade copper with gold intersection in BBDD0010 is down dip and to the west of previous hole, **BBRC019**, which intersected **15m @ 3.46% Cu, 0.61g/t Au** from 172m before being abandoned due to in-hole caving in **1m @ 4.80% Cu, 3.95g/t Au** (see cross section 448,360mE, Figure 1).

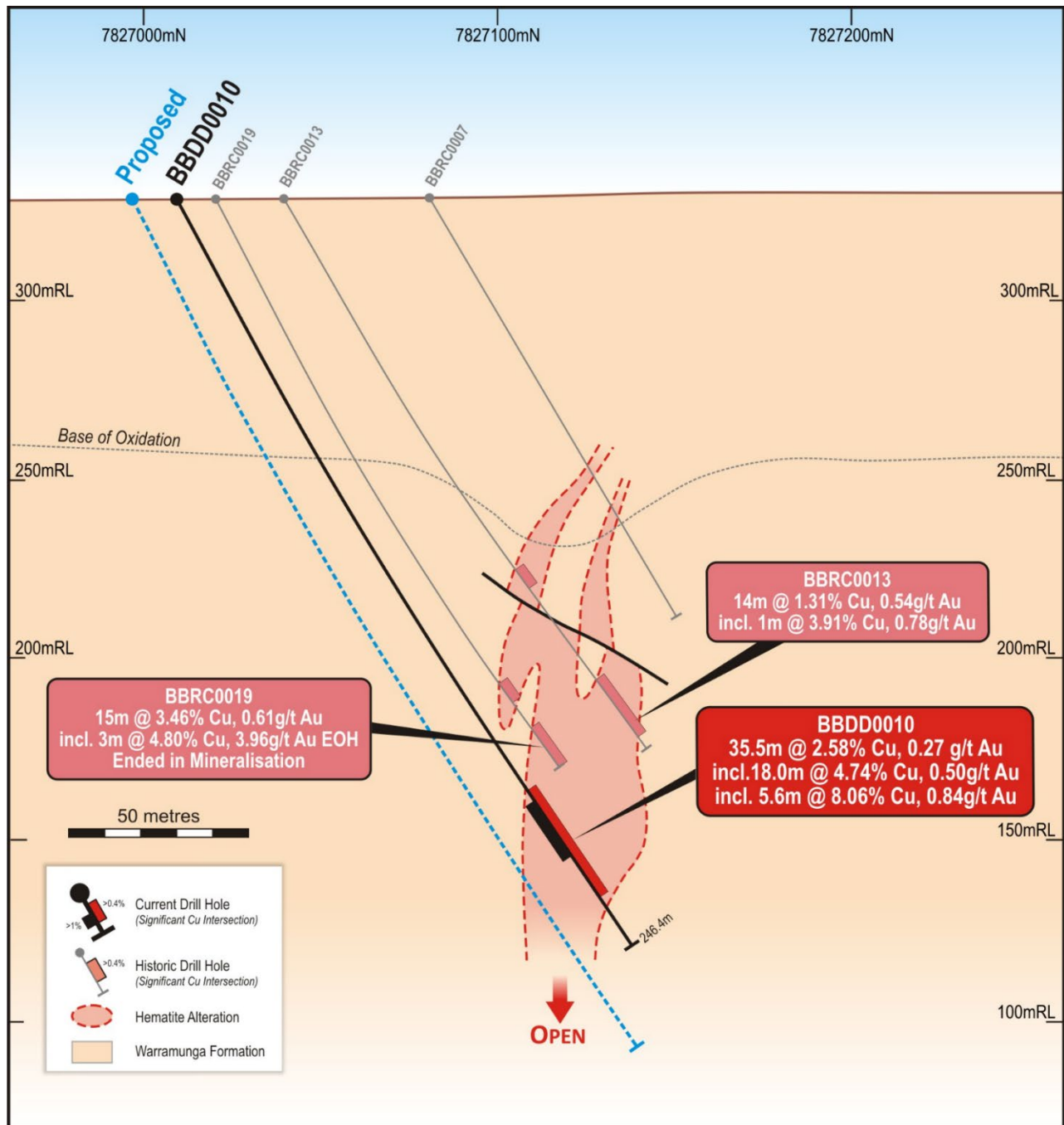
**BBDD0010 is interpreted to have tested underneath the thickest part of the shallow-plunging copper-gold shoot and remains open both up and down dip as well as to the west.**

Diamond drillhole **BBDD0011** intersected over 27m of hematite alteration with malachite, native-copper and chalcocite mineralisation a further 30m down plunge to the west of **BBDD0010** (see longitudinal projection Figure 2) and is the only drillhole that has tested the mineralisation on this section 448,340mE (see Figure 3).

**The results from BBDD0011 included the following significant copper with gold intersections:**

- **29.3m @ 1.76% Cu and 0.21 g/t Au (0.4% Cu cut-off) from 195.7m,**
  - including **17.2m @ 2.67% Cu and 0.22 g/t Au (1.0% Cu cut-off) from 195.7m,**
  - including **7.3m @ 5.59% Cu and 0.36 g/t Au, 0.37% Bi (2.0% Cu cut-off) from 195.7m.**

The intersection in **BBDD0011** is interpreted to be below the central, thickest, part of the plunging copper-gold zone and further drilling is set to commence to test up-dip through the centre of the target (Figures 2 and 3).



**Figure 1: Bluebird cross-section 448,360mE with the 35.5m intersection of high-grade copper in BBDD0010**

The mineralisation intersected at Bluebird is typical of the high-grade copper-gold ore-bodies in the Tennant Creek Mineral Field of the Iron-Oxide-Copper-Gold (IOCG) type.

The high-grade copper mineralisation is associated with intense hematite (iron) alteration and brecciation with quartz veining inside a halo of chlorite alteration and variable hematite development. The upper parts of the deposits typically include secondary malachite (copper-carbonate) minerals which transition through a native copper zone, to primary sulphide mineralisation at depth e.g. chalcocite, bornite, chalcopyrite or tennantite.

**The drilling to date has only just penetrated the transition to primary sulphide zone at Bluebird.**

Orebodies such as the nearby Peko copper-gold deposit (see Figure 5), that historically produced **147,000 tonnes of copper at 4% Cu and 414Koz gold of 10 g/t Au<sup>7</sup>**, occur as multiple shoots within a plunging alteration zone of similar dimensions to Bluebird.

**The shoot currently being drilled at Bluebird may represent only the upper part of a much larger deposit and this next stage of drilling will test for extensions of the high-grade copper with gold mineralisation to the west and at depth.**

## FOLLOW-UP DRILLING PROGRAM

A priority follow-up diamond drilling program is set to commence at Bluebird within weeks, to test:

- Up and down dip extensions of the copper-gold mineralisation on the two step-out sections 448,360mE (below and possibly above BBDD0010 – see Figures 1 and 2) and 448340mE (above BBDD0011 – see Figure 3), including targeting the thickest part of the plunging copper-gold shoot.
- Step-out 40m to the west on section 448,300mE, targeting the down-plunge extensions of Bluebird (see Figure 2) to determine the immediate scope of this outstanding copper-gold discovery.

Drilling contractor, Titeline Drilling Pty Ltd, will be mobilised in early April to conduct this drilling program, in order to build on the exceptional results received to date.

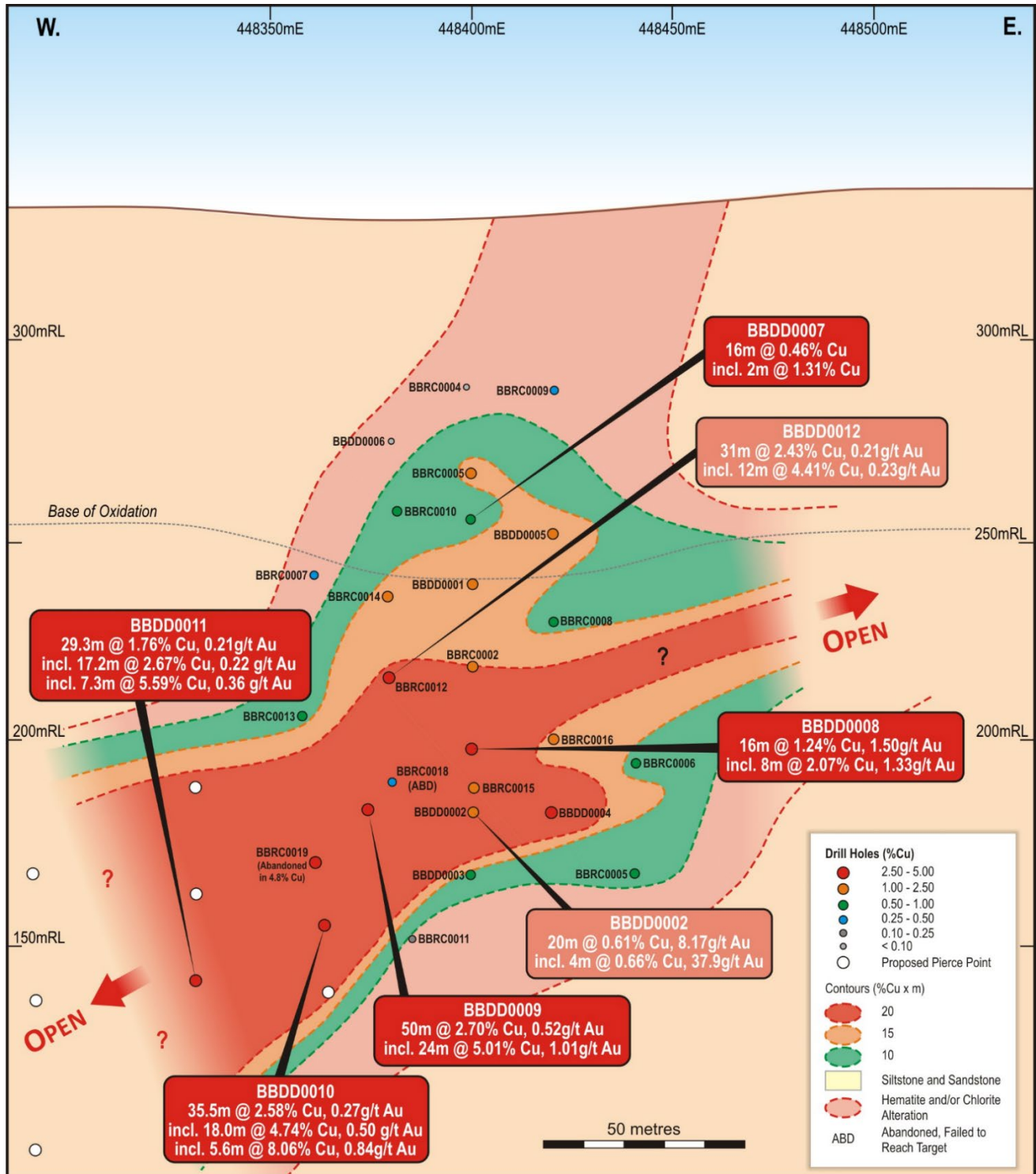
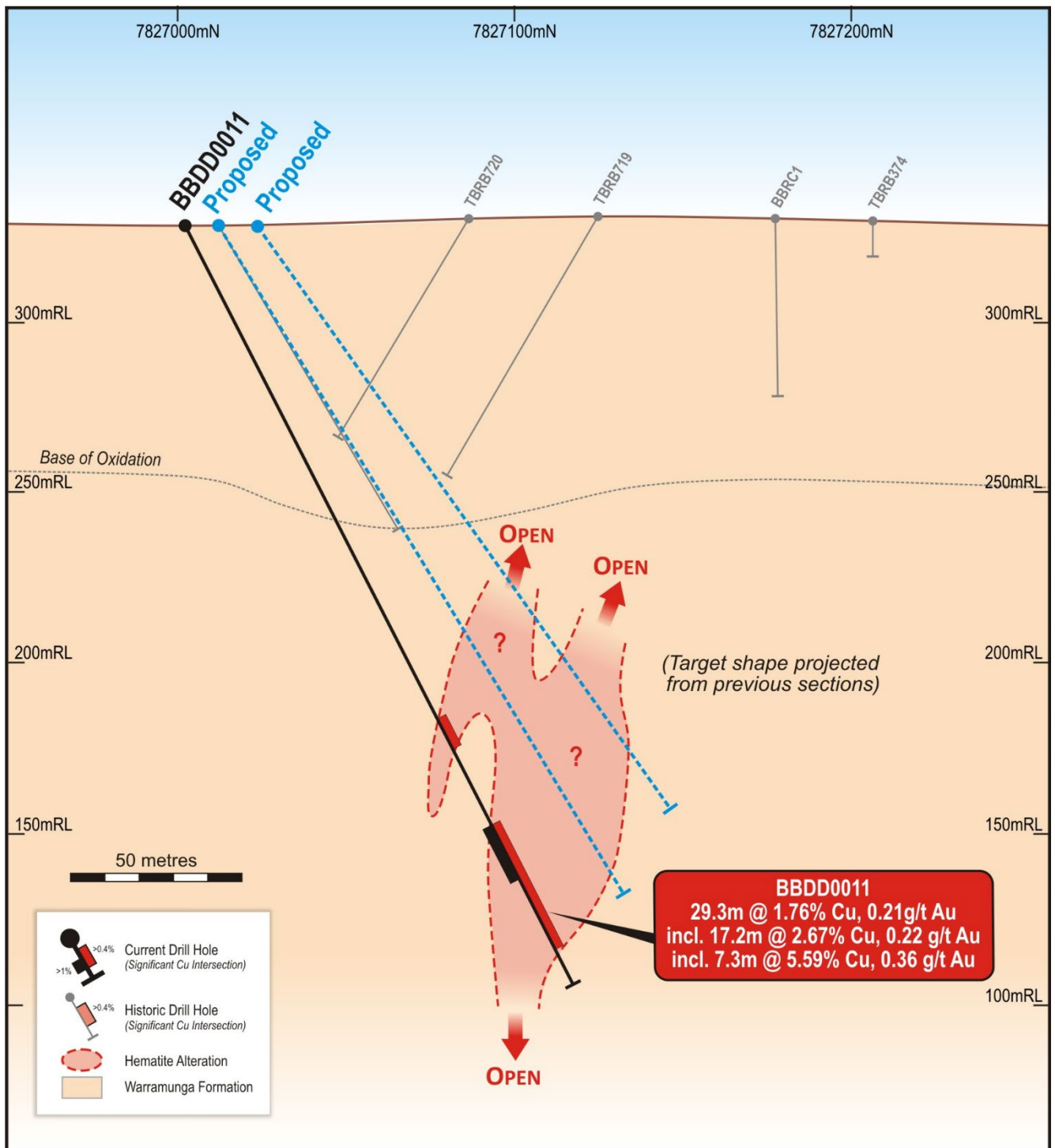


Figure 2: Bluebird longitudinal projection with BBDD0010 & BBDD0011 intersections and planned hole pierce points



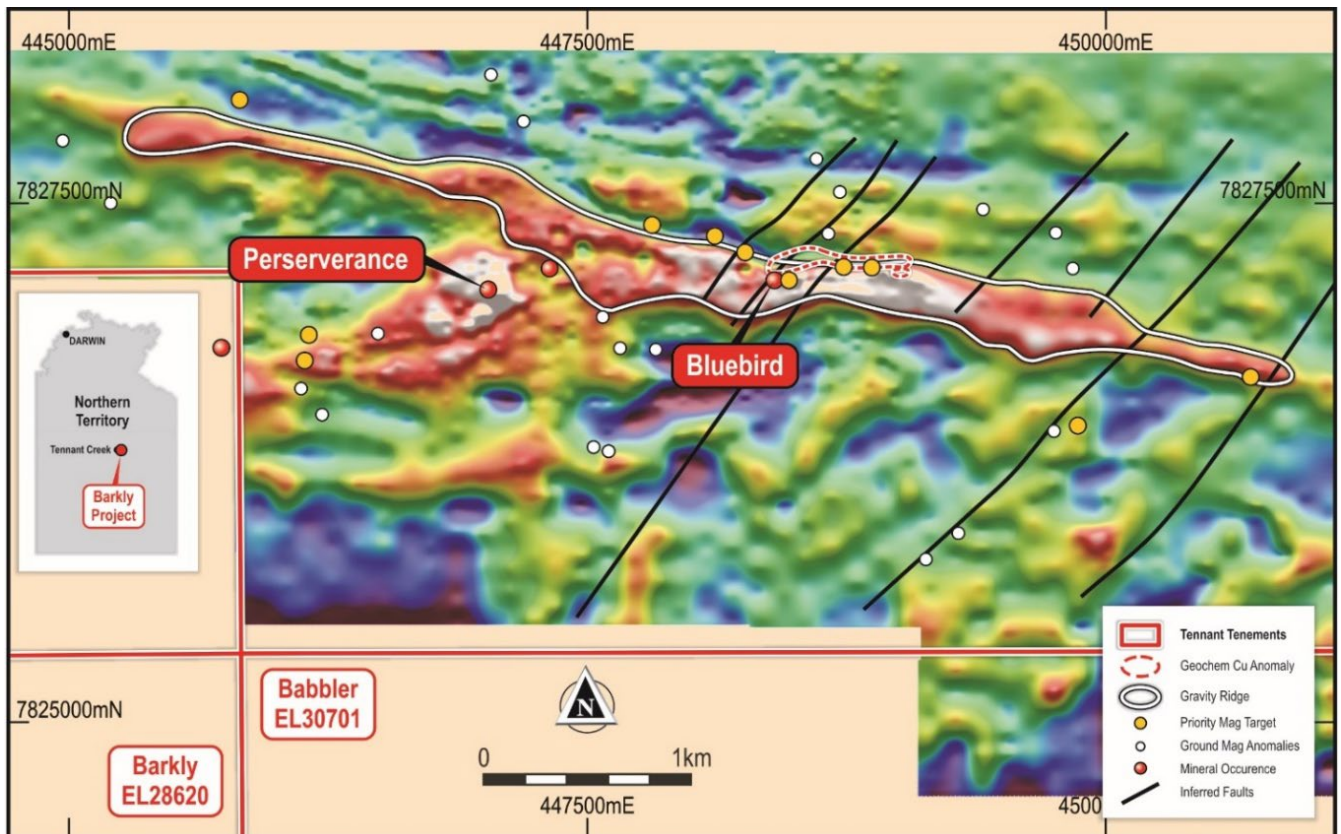


**Figure 3: Bluebird cross-section 448,340mE with the BBDD0011 intersections and proposed drilling with target**

#### **ADDITIONAL HIGHLY-PROSPECTIVE TARGETS ALONG THE 5KM BLUEBIRD CORRIDOR**

In addition to Bluebird, there is excellent potential to discover multiple high-grade copper-gold shoots at the Barkly Project within the 5km strike length gravity-ridge corridor with coincident magnetic highs.

Previous interpretation of magnetic imagery identified over 13 priority targets, including the Bluebird copper-gold deposit and the historical Perseverance gold mine (Figure 4).



**Figure 4: Gravity ridge on the Barkly E28620, with Bluebird Prospect and magnetic targets in the Bluebird Corridor**

Gravity highs within the Tennant Creek Mineral Field are interpreted to be associated with iron enrichment and the magnetic highs potentially associated with primary or secondary magnetite. Iron enrichment is commonly broadly associated with IOCG mineralisation at Tennant Creek and more than 20% iron is associated with the Bluebird copper-gold mineralisation (see Table 1).

**The Bluebird deposit is essentially “blind”, with only weak geochemical expression at surface. Previous drilling along strike from Bluebird failed to penetrate the near surface leached zone and high-grade copper with gold intersections have now been produced below that level (e.g. BBDD0011 - see Figure 3).**

Further modelling of the magnetic and gravity data is in progress. **However, it is already evident that multiple coincident gravity and magnetic targets remain to be tested along the 5km Bluebird Corridor** (see Figure 4 above).

Completion of the gravity and magnetics modelling, to determine size and depth of the multiple targets, will allow planning of a further reverse circulation (RC) drilling program to run in parallel with diamond drilling of the Bluebird deposit.

Table 1 is a summary of all intersections from **BBDD0010** and **BBDD0009** as well as previous, 2021/22 drilling intersections<sup>0</sup>.

Table 2 lists drillhole details e.g. location and orientation, for the recent drilling program.

Appendix 1, JORC Table 1, includes drilling details and sampling procedures in current and previous drill holes.

**Table 1: Bluebird copper-gold deposit, summary of significant intersections from recently completed program:**

Drillhole	From	To	Interval	Cu %	Au g/t	Ag g/t	Bi %	Co g/t	Fe%	Cut off Cu%
<b>BBDD0007</b>	69.0	85.0	<b>16.0</b>	<b>0.46</b>	<b>0.10</b>	<0.5	0.018	<b>102</b>	<b>12.3</b>	0.1%
incl.	78.0	83.0	<b>5.0</b>	<b>0.83</b>	<b>0.05</b>	<0.5	0.006	179	<b>18.3</b>	0.4%
incl.	79.0	81.0	<b>2.0</b>	<b>1.31</b>	<b>0.05</b>	<0.5	0.006	<b>166</b>	<b>20.7</b>	1.0%
<b>BBDD0008</b>	154.0	176.0	<b>22.0</b>	<b>0.94</b>	<b>1.12</b>	1.0	<b>0.141</b>	<b>314</b>	<b>17.2</b>	0.1%
incl.	156	172	<b>16.0</b>	<b>1.24</b>	<b>1.50</b>	1.38	<b>0.191</b>	<b>367</b>	<b>19.5</b>	0.2%
incl.	164	172	<b>8.0</b>	<b>2.07</b>	<b>1.33</b>	2.75	<b>0.266</b>	<b>566</b>	<b>25.5</b>	1.0%
incl.	162	170	<b>8.0</b>	<b>1.87</b>	<b>2.68</b>	2.25	<b>0.360</b>	<b>462</b>	<b>25.5</b>	0.5%
<b>BBDD0009</b>	151.0	216.3	<b>65.3</b>	<b>2.11</b>	<b>0.43</b>	22.8	0.056	<b>163</b>	<b>16.7</b>	0.1%
incl.	158.0	208.0	<b>50.0</b>	<b>2.70</b>	<b>0.52</b>	29.8	0.060	178	<b>18.4</b>	0.4%
incl.	159.0	183.0	<b>24.0</b>	<b>5.01</b>	<b>1.01</b>	61.7	0.086	<b>302</b>	<b>18.2</b>	0.8%
incl.	165.0	170.0	<b>5.0</b>	<b>7.28</b>	<b>1.29</b>	<b>290.7</b>	0.038	<b>228</b>	<b>19.1</b>	5.0%
& incl.	176.6	180.9	<b>4.3</b>	<b>14.68</b>	<b>3.10</b>	3.4	0.098	<b>344</b>	<b>19.2</b>	5.0%
<b>BBDD0009</b>	195.0	208.0	<b>13.0</b>	<b>0.85</b>	<b>0.08</b>	0.9	0.061	17	<b>21.0</b>	0.4%
incl.	198.0	200.0	<b>2.0</b>	<b>3.01</b>	<b>0.07</b>	2.5	<b>0.190</b>	66	<b>20.7</b>	1.0%
incl.	206.0	208.0	<b>2.0</b>	<b>1.11</b>	<b>0.40</b>	<0.5	0.067	14	<b>20.7</b>	1.0%
<b>BBDD0010</b>	194.0	232.0	<b>38.0</b>	<b>2.42</b>	<b>0.26</b>	6.8	0.074	107	<b>18.8</b>	0.1%
incl.	194.0	229.5	<b>35.5</b>	<b>2.58</b>	<b>0.27</b>	6.6	0.079	110	<b>18.9</b>	0.4%
incl.	197.0	215.0	<b>18.0</b>	<b>4.74</b>	<b>0.50</b>	1.8	<b>0.145</b>	179	<b>22.5</b>	1.0%
incl.	197.0	202.0	<b>5.0</b>	<b>6.53</b>	<b>0.67</b>	4.4	<b>0.152</b>	<b>318</b>	<b>25.9</b>	3.0%
& incl.	205.9	215.0	<b>9.1</b>	<b>5.53</b>	<b>0.53</b>	1.2	0.036	90	<b>22.0</b>	1.0%
incl.	205.9	211.5	<b>5.6</b>	<b>8.06</b>	<b>0.84</b>	1.9	0.056	140	<b>23.0</b>	2.0%
incl.	208.8	211.5	<b>2.7</b>	<b>14.12</b>	<b>1.53</b>	4.0	0.091	162	<b>17.8</b>	5.0%
<b>BBDD0011</b>	161.0	170.0	<b>9.0</b>	0.57	0.14	1.3	0.031	<b>349</b>	<b>23.0</b>	0.3%
incl.	161.0	167.0	<b>6.0</b>	0.60	0.10	0.0	0.031	279	<b>26.1</b>	0.4%
incl.	161.0	162.0	<b>1.0</b>	<b>1.41</b>	<b>0.23</b>	0.0	0.098	279	<b>32.1</b>	1.0%
<b>BBDD0011</b>	195.0	227.0	<b>32.0</b>	<b>1.63</b>	<b>0.20</b>	1.6	0.098	176	<b>20.6</b>	0.1%
incl.	195.7	225.0	<b>29.3</b>	<b>1.76</b>	<b>0.21</b>	1.7	<b>0.106</b>	183	<b>21.5</b>	0.4%
incl.	195.7	212.9	<b>17.2</b>	<b>2.67</b>	<b>0.22</b>	2.9	<b>0.176</b>	274	<b>24.6</b>	1.0%
incl.	195.7	203.0	<b>7.3</b>	<b>5.59</b>	<b>0.36</b>	4.8	<b>0.366</b>	<b>477</b>	<b>18.0</b>	2.0%
incl.	197.0	202.1	<b>5.1</b>	<b>6.55</b>	<b>0.44</b>	5.1	<b>0.373</b>	<b>393</b>	<b>18.4</b>	5.0%

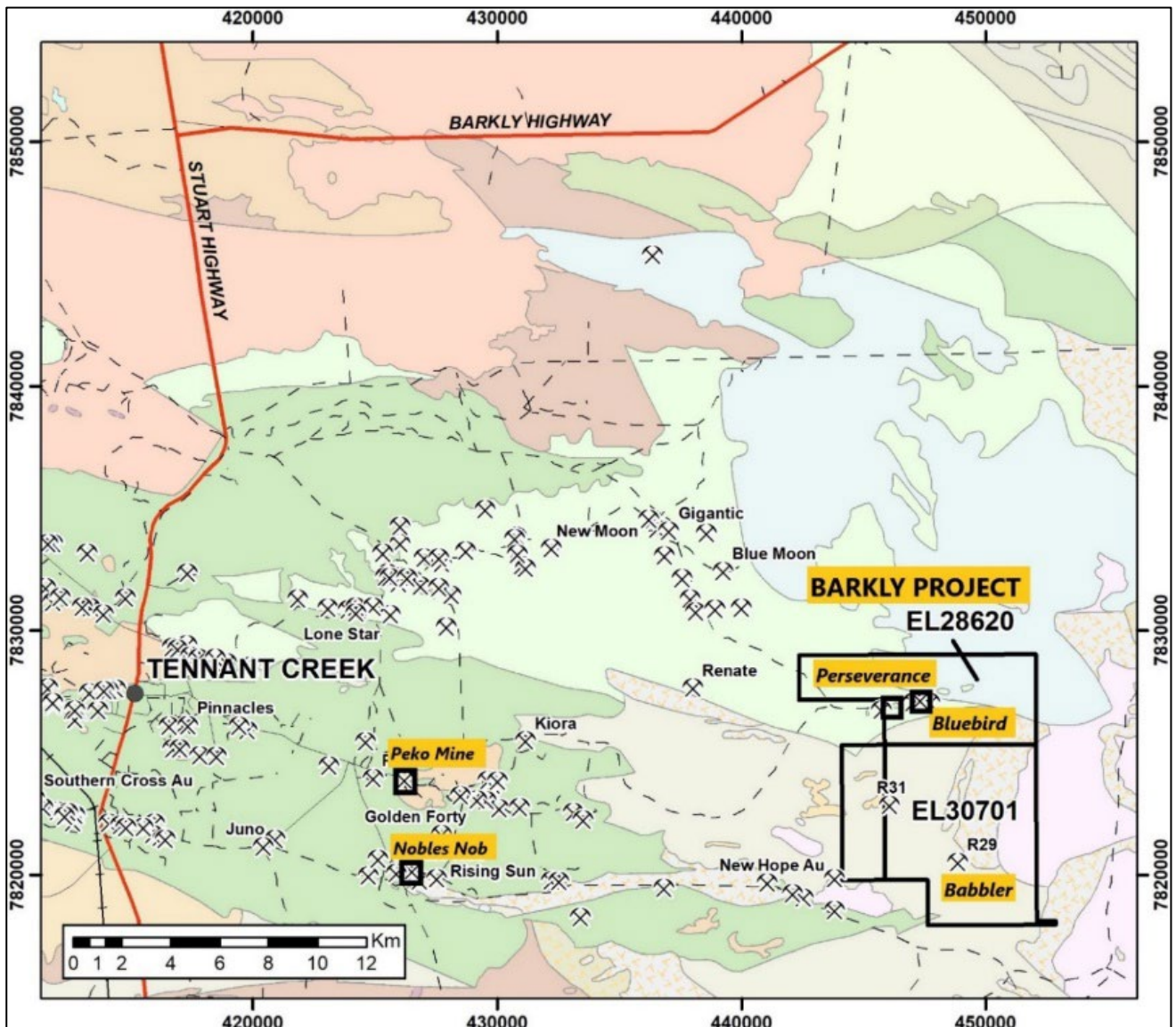
**Table 2, Drillholes details, current program to date:**

Hole #	Dip°	Azi_Grid°	GRID_E	GRID_N	RL	Mud-rotary (m)	DDC (m)	Total (m)
<b>BBDD0007</b>	-62	0	448,400	7,827,090	332	40	80	120
<b>BBDD0008</b>	-62	0	448,400	7,827,040	332	92	118	210
<b>BBDD0009</b>	-62	0	448,380	7,827,038	332	71.5	151.1	222.6
<b>BBDD0010</b>	-60	0	448,360	7,827,010	332	89.6	156.8	246.4
<b>BBDD0011</b>	-65	0	448,340	7,827,030	332	83.6	165.7	249.3
<b>Total</b>						<b>376.7</b>	<b>671.6</b>	<b>1048.3</b>



## ABOUT THE BARKLY PROJECT AND THE BLUEBIRD COPPER-GOLD DEPOSIT DRILLING PROGRAM

The Barkly Copper-Gold Project (“**Barkly**” or “**the Project**”) is located approximately 45km east of the town of Tennant Creek and comprises two Exploration Licences, EL 28620 (**Barkly Project**) and EL 30701 (**Babbler Project**) (Figure 5).



**Figure 5: Location of the Barkly (EL 28620) and Babbler (EL 30701) Barkly Projects showing Peko and Nobles Nob mines**

The **Barkly** and **Babbler** Projects (Figure 5) are considered highly prospective for magnetite – hematite hosted copper-gold mineralisation, similar to other major deposits found elsewhere in the Tennant Creek Mineral Field, such as the **Peko deposit** (Figure 5), only 20km to the west of the Barkly Project, that produced **147,000 tonnes of 4% Cu and 414Koz at 10 g/t Au** between 1934 and 1981<sup>7</sup>.

The Company’s initial focus is the Bluebird prospect, where previous drilling intersected high-grade copper-gold mineralisation at relatively shallow depth.

The recently completed diamond drilling program at the Bluebird prospect included five diamond drillholes for a total of 1,048m of drilling. The program has successfully tested the entire, up to 50m, thickness of the high-grade copper-gold mineralisation, as well as intersecting down-dip / plunge extensions of the zone that remains open at depth and to the west (see longitudinal projection, Figure 2).

The drilling follows-up previous high-grade drilling intersections from the November 2020 RC drilling program<sup>4</sup>, when the Company undertook an initial exploration drilling campaign at the Barkly Project of seven drill holes for a total of approximately 1,170m.



Significant intersections from the 2020 program included:

<b>BBRC0015</b>	<b>20m @ 1.67% Cu, 1.79g/t Au from 156m, including 10m @ 2.32% Cu, 2.87 g/t Au<sup>4</sup></b>
<b>BBRC0019</b>	<b>15m @ 3.46% Cu, 0.61g/t Au from 172m, including 4m @ 6.28% Cu, 0.24g/t Au from 175m, and 1m @ 4.80% Cu, 3.95g/t Au from 186 (finishing in mineralisation, Figure 1)<sup>4</sup></b>

The 2020 RC holes were drilled to in-fill and extend previous RC and diamond drilling completed in 2014<sup>6</sup>, that intersected high-grade copper-gold mineralisation within an ironstone unit on a west-northwest trending, steeply south dipping, fault zone and produced several very high-grade intersections, including:

<b>BBDD0004:</b>	<b>16m at 3.02% Cu, 0.65g/t Au from 139m, incl. 4m at 6.49% Cu, 0.74g/t Au<sup>6</sup></b>
<b>BBRC0012:</b>	<b>31m at 2.48% Cu, 0.21g/t Au from 116m incl. 12m at 4.41% Cu, 0.23g/t Au<sup>6</sup></b>
<b>BBDD-2:</b>	<b>20m at 0.61% Cu, 8.17g/t Au, from 157m incl. 0.66% Cu, 4m at 37.9g/t Au<sup>5</sup></b>
<b>BBRC-5:</b>	<b>25m at 1.90% Cu, 0.28 g/t Au from 62m incl. 4m at 8.99% Cu, 1.06g/t Au<sup>5</sup></b>
<b>BBRC0013:</b>	<b>14m at 1.31% Cu, 0.54g/t Au from 162m incl. 1m at 3.91% Cu, 0.78g/t Au<sup>5</sup></b>

Significantly, drill hole **BBRC0019<sup>4</sup>**, drilled below BBRC013, which was previously the deepest and most westerly hole drilled at Bluebird<sup>3</sup>, intersected strongly hematite altered siltstone and ironstone from 172m to 187m but was abandoned at that depth due to in-hole caving and **ended in high-grade copper-gold mineralisation, with the last metre assaying 4.81% Cu and 3.9 g/t Au<sup>4</sup>**.

The recently completed diamond drilling program at Bluebird has now tested the entire thickness of the mineralised zone at Bluebird, with **BBDD0009 intersecting 50m of high-grade copper with gold mineralisation<sup>0</sup> and BBDD0010, producing a 35.5m high-grade copper intersection** (see Table 1) **below BBRC0019** (see Figure 1).

The deepest hole of the recent program, a step-out of 30m down plunge from **BBDD0011, produced a 29.3m copper intersection** (see Table 1) **of mineralisation that is open up and down dip as well as down plunge to the west** (Figures 2 and 3).

**Further drilling is now planned to test the extent of this exciting new copper-gold discovery at Tennant Creek.**

## REFERENCES

- <sup>0</sup> 08 March 2022. Tennant Minerals (ASX. TMS): "Spectacular 50m @ 2.70% copper intersection at Bluebird"
- <sup>1</sup> 21 December 2021. Tennant Minerals (ASX. TMS): "Bluebird Native-Copper Intersected and Extended Down Plunge"
- <sup>2</sup> 13 December 2021. Tennant Minerals (ASX. TMS): "Capital Raising Completed, Exploration Update at Barkly Cu-Au Project"
- <sup>3</sup> 06 December 2021. Tennant Minerals (ASX. TMS): "New Intensely Mineralised Cu Zone Intersected at Bluebird"
- <sup>4</sup> 18 March 2020. Blina Minerals (ASX: BDI): "High-Grade Copper and Gold Intersected in Drilling program at Bluebird"
- <sup>5</sup> 24 September 2019. Blina Minerals (ASX: BDI): "Strategic Acquisition of High-Grade Gold-Copper Project"
- <sup>6</sup> 09 December 2014. Blaze International Ltd (ASX: BLZ): "High Grade Copper Sulphide Intersection at Bluebird"
- <sup>7</sup> [Portergeo.com.au/database/mineinfo](http://Portergeo.com.au/database/mineinfo). Tennant Creek - Gecko, Warrego, White Devil, Nobles Nob, Juno, Peko, Argo

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

## CONTACT AND AUTHORISATION

This release was authorised by the Board of Tennant Minerals Ltd (ASX:TMS).

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## **CAUTIONARY STATEMENT REGARDING FORWARD LOOKING INFORMATION**

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

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

## **COMPETENT PERSONS DECLARATION**

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

## **ASX LISTING RULES COMPLIANCE**

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

## APPENDIX 1

### 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>Exploration results are based on industry best practices, including sampling, assay methods, and appropriate quality assurance quality control (QAQC) measures.</li> <li>Core samples (2021) are taken as half HQ3 core and sampled on nominal 1m intervals, with sampling breaks adjusted to geological boundaries where appropriate.</li> <li>Reverse Circulation (RC), 2020 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>RC drilling (2020) was conducted using a 5<sup>1</sup>/<sub>4</sub>" face sampling hammer, with holes drilled -60 degrees.</li> <li>Rotary mud (RM) drilling (2021) was completed with 126mm PCD hammer with holes drilled between -60 and -65 degrees.</li> <li>2021 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 grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</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 was retained for future interpretation. No</li> </ul>

Criteria	JORC Code explanation	Commentary
		<p>analysis of rotary mud collars was undertaken.</p> <ul style="list-style-type: none"> <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 drillcore information on lithology, sample quality, structure, geotechnical information, alteration and mineralisation are collected in a series of detailed self-validating logging templates.</li> </ul>
<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, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</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) and precision have been established.</i></li> </ul>	<ul style="list-style-type: none"> <li>All samples were submitted to the Intertek Laboratories sample preparation facility at Alice Springs in the Northern Territory where a pulp sample is prepared. The pulp samples are then transported to Intertek in Perth or Townsville Australia for analysis.</li> <li>Pulp sample(s) were digested with a mixture of four Acids including Hydrofluoric, Nitric, Hydrochloric and Perchloric Acids for a total digest.</li> <li>Analysis of 2020 RC drilling; Cu, Pb, Ag, Bi, Co Ni, Sb have been determined by Inductively Coupled Plasma (ICP) Mass Spectrometry (MS-OES).</li> <li>Analysis of 2021 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</li> </ul>



Criteria	JORC Code explanation	Commentary
		<p>have been determined by Inductively Coupled Plasma (ICP) Mass Spectrometry (MS-OES).</p> <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 with a hand-held GPS with an accuracy of +/-5m. At the completion of the drilling program all holes were surveyed by DGPS.</li> <li>Downhole surveys (2020 RC) were taken at 30m intervals using a Reflex single shot camera. The camera records azimuth and dip of hole.</li> <li>Downhole surveys for the 2021 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>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>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</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</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>introduced a sampling bias, this should be assessed and reported if material.</i>	perpendicular to the general strike of stratigraphy and/or regional structure.
<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.)

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 controls two contiguous Exploration Licences, EL 28620 and EL30701 located east of Tennant Creek. All tenure is in good standing at the time of reporting. There are no known impediments with respect to obtaining a licence to operate in the area.</li> </ul>
<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-northwest 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 the 2020 RC drilling program refer to Appendix 1 of the ASX announcement of 18 March 2020 by Blina Minerals (ASX: BDI): “High-Grade Copper and Gold Intersected in Drilling program at Bluebird”</li> <li>For drilling details of the 2014 Diamond and RC programs refer to Appendix 1 of the ASX announcement of 24 September 2019 by Blina Minerals (ASX: BDI): “Strategic Acquisition of High-Grade Gold-Copper Project”.</li> </ul>
<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> </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> </ul>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <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>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 Figures 1, 2, and 3 for appropriate sections though the Bluebird mineralisation including pierce point locations, and Figures 4 and 5, plan view and location of the Bluebird prospect respectively.</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 background information is discussed in the announcement.</li> <li>Full drill results for copper and gold assays for previous drilling are shown in Appendix 1 of the ASX announcement of 18 March 2020, "High-Grade Copper and Gold Intersected in Drilling program at Bluebird".</li> </ul>
<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 extend mineralisation along strike and in particular to the west from BBDD011.</li> <li>Regional targeting including modelling of gravity and magnetics will be carried out to drill target repeats of the high-grade Bluebird copper gold shoot within the 5km Bluebird Corridor.</li> </ul>