

# BLUEBIRD COPPER-GOLD DISCOVERY

The Barkly Project
Tennant Creek, Northern Territory, Australia





#### **Cautionary Statements and Competent Persons Declaration**

#### CAUTIONARY STATEMENT REGARDING FORWARD LOOKING INFORMATION

This presentation 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 Fellow 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 presentation the Company has relied on the announcements previously made by the Company that are referenced below the first mention of the information. 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.

#### CASH, CAPITAL STRUCTURE AND SHARE PRICE



MARKET CAP

CASH

\$17.20m

**\$4.47m** (@ 30/06/2024)

(@\$0.017 - 16/09/2024)

SHARES ON

ISSUE \

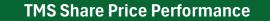
955.89 m

ENTERPRISE VALUE

**\$12.73m** (@16/09/2024)

#### **OPTIONS**

TMSOA (L), 85.4m, \$0.06, Ex 15/7/25 TMSO(L) 271.9m, \$0.048, Ex 31/12/27





#### **Copper and Gold Positive Investment Outlook**





Copper is an essential metal for civilization and the global energy transition



Gold is trading at an all-time high, reaching a price of US\$2,462/oz in August 2024



New copper discoveries such as Bluebird are rare - high-grade, mining friendly jurisdiction, standard beneficiation



Recoverable gold, accessible as part of Cu-Au and Ag mineral systems offers high value opportunity to shareholders



Copper in global supply deficit - demand increasing and inventories falling



Cu and Au are large commodity markets with strong underlying support

### Barkly Project and the Bluebird Cu-Au Discovery





#### **World-Class Location**

Tennant Creek

Alice Springs

The Barkly Project and the **Bluebird discovery** are located 40km east of Tennant Creek at the eastern end of this major copper-gold field, which **has produced 5.5Moz** of gold and 700kt of copper<sup>1</sup>



Bluebird is a shallow greenfields, high-grade copper-gold discovery in a major mineral field



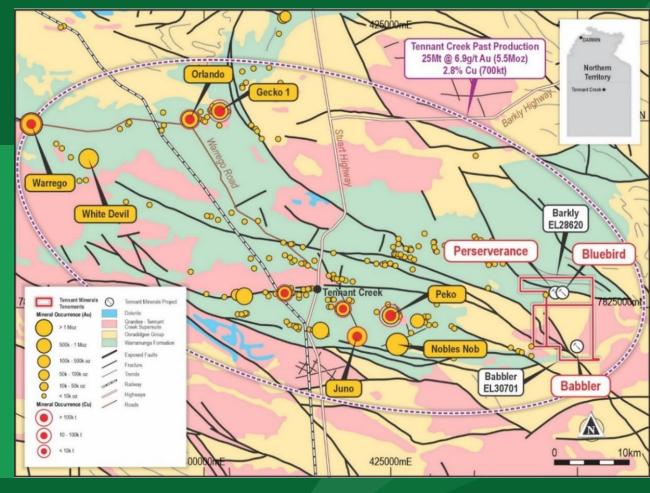
Bluebird has identified upside potential comparable to major high-grade Cu-Au deposits at Tennant Creek e.g. Warrego (6.75Mt @ 6.6 g/t Au, 1.9% Cu)<sup>1</sup> and Peko (3.7Mt @ 4% Cu, 3.5 g/t Au)<sup>1</sup>



Bluebird geology similar to these previously mined major deposits - being hosted by altered and mineralised ironstone with intense hematite alteration in the Warramunga Formation



Intensive exploration and development activity in the region points to potential for revival of this world-class mineral field with TMS and Bluebird an integral part of that revival



<sup>&</sup>lt;sup>1</sup> Portergeo.com.au/database/mineinfo. Tennant Creek - Gecko, Warrego, White Devil, Nobles Nob, Juno, Peko, Argo.

#### 7827000mN 7827200mN Surface 300mRL Base of Complete Oxidation (1.80% Ču, 0.04g/t Au) incl. 10m @ 2.85% Cu, 0.05g/t Au (0.68% Cu, 0.90g/t Au, 0.12% Bi) incl. 2.4m @ 0.45% Cu, 6.13g/t Au, 0.48% Bi & incl. 3.5m @ 1.63% Cu, 0.52g/t Au, 0.24% Bi 17.95m @ 2.66% Cu, 11.08g/t Au, 1.30% B ncl. 15.9m @ 2.91% Cu, 12.45g/t Au, 1.47% Bi incl. 5m @ 6.11% Cu, 38.6g/t Au, 4.50% Bi 30.5m @ 6.2% Cu, 6.8a/t Au, incl. 17.8m @ 5.2% Cu, 11.5g/t Au incl. 16.1m @ 10.5% Cu, 0.44g/t Au (115 a/t Au. 0.6% Cu) 100mRL BBDD0018, Massive chalcopyrite (19.5% Cu; 0.26 q/t Au) Existing Drill Hole (Significant Cu Intersection) **Cu Mineralisation** Ironstone / Hematite Narramunga Formation Bluebird Cross section Anticline Closure 448,320mE

## **Bluebird Copper-Gold Discovery**



- A blind discovery (no surface expression) under shallow soil cover and weathered Warramunga Formation sedimentary rocks hosted in mineralised ironstone.
- The main discovery was made through follow-up of shallow drilling and drill-testing the entire ironstone (e.g. BBDD0012: **63m @ 2.1% Cu, 4.6 g/t Au**<sup>2</sup>, BBDD0018: **30.5m @ 6.2% Cu, 6.8 g/t Au**<sup>3</sup>).
- High-grade copper and gold mineralisation hosted by deformed and hematite altered ironstone where structure dilates across fold axes<sup>4</sup>.
- Thick, high-grade, copper-gold-bismuth mineralisation associated with First Hydrothermal Event<sup>4</sup> into the dilational zones<sup>5</sup>.
- Mineralisation includes free gold with intense hematite and/or chlorite alteration and primary and/or secondary copper sulphides (including chalcocite, chalcopyrite and native copper).
   Metallurgical (gravity and flotation) testing confirm excellent recovery.

<sup>&</sup>lt;sup>2</sup> 17/08/2022. Tennant Minerals (ASX. TMS): "Bonanza 63m @ 2.1% Copper and 4.6 g/t Gold Intersection at Bluebird".

<sup>&</sup>lt;sup>3</sup> 08/02/2023. "Spectacular Drill Hit 30.5m 2 6.2% Cu, 6.8 g/t Au".

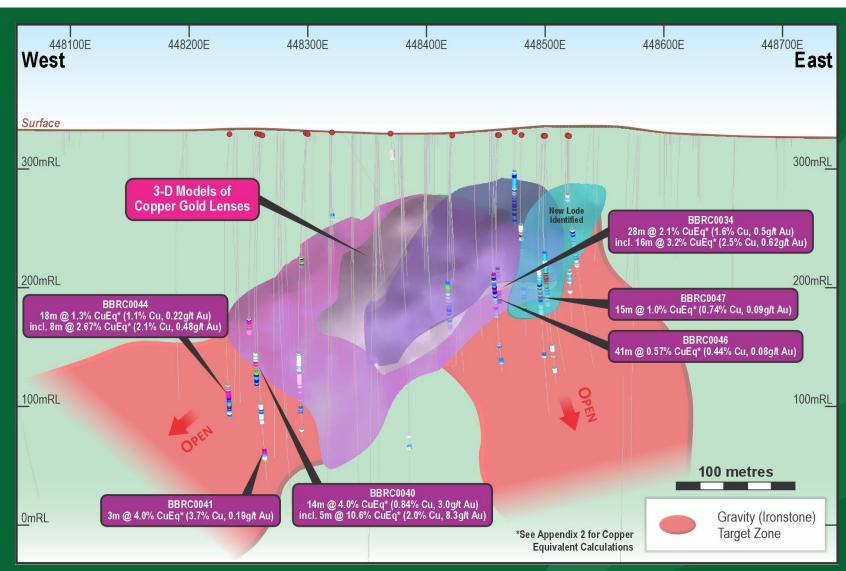
<sup>&</sup>lt;sup>4</sup> Huston DL, Bolger C and Cozens G, 1993. A comparison of mineral deposits at the Geko and White Devil deposits: implications for ore genesis in the Tennant Creek District, Northern Territory, Australia. Economic Geology 88, 1198–1225.

<sup>&</sup>lt;sup>5</sup> Donnellan N, 2013. Chapter 9 - Warramunga Province: in Ahmad M. and Munson T.J. (compilers). 'Geology and mineral resources of the Northern Territory.' Northern Territory Geological Survey, Special Publication 5.

#### Bluebird Longitudinal View open all directions



- Drilling to date has defined high-grade copper-gold mineralisation from 60m to over 400m depth, over 800m strike length – to the east and west<sup>7</sup>.
- Previous intersections of highgrade copper-gold intersections and include:
- 61.8m @ 2.3% Cu, 0.4 g/t Au<sup>8</sup>
- 17.95m @ 11.1 g/t Au, 2.7% Cu<sup>9</sup>
- 14.1m @ 7.6% Cu, 2.4 g/t Au<sup>10</sup>
- New drilling in July 2024 completed 6,253m focussed on open extensions and repeats of the high-grade copper-gold mineralisation.
- Objective to define a substantial high-grade copper-gold Mineral Resource suitable to support standalone operation.



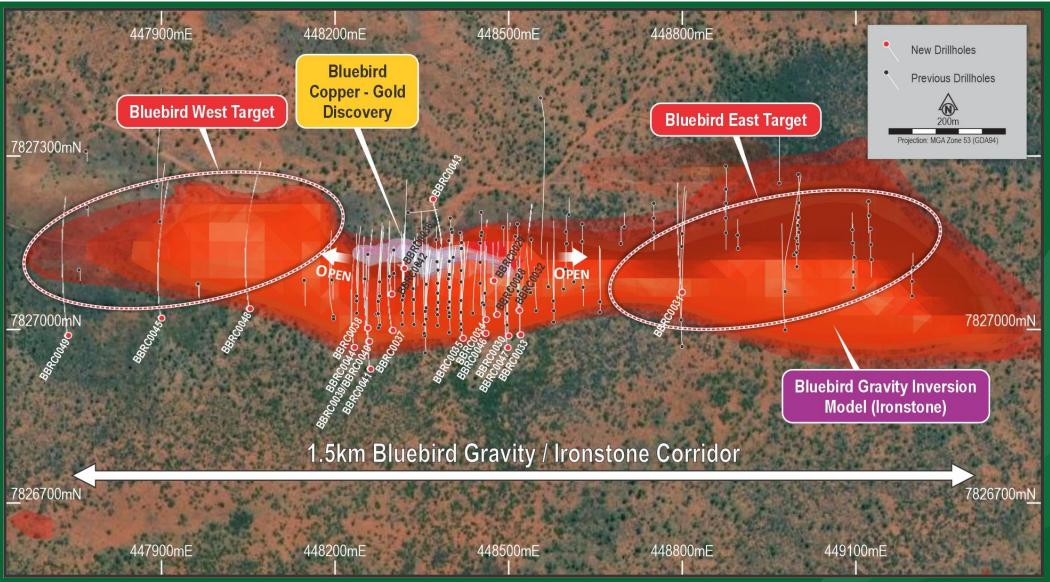
<sup>&</sup>lt;sup>7</sup> 22/01/2024. "New Copper Intersection Extends Bluebird Over 400m Depth".

<sup>8 12/02/2024. &</sup>quot;Exceptional 61.8m @ 2.3% Copper Intersection at Bluebird".

 <sup>9/07/2023.</sup> Tennant Minerals (ASX.TMS): "Drilling Doubles Strike Length of Bluebird copper-Gold discovery".
 10/04/12/2023. Tennant Minerals (ASX.TMS): "Exceptional Copper and Gold Results at Bluebird Extension".

## **Drilling Program Summary**





# New Drilling Results\* – Confirming New Structures and Expanding Mineralisation

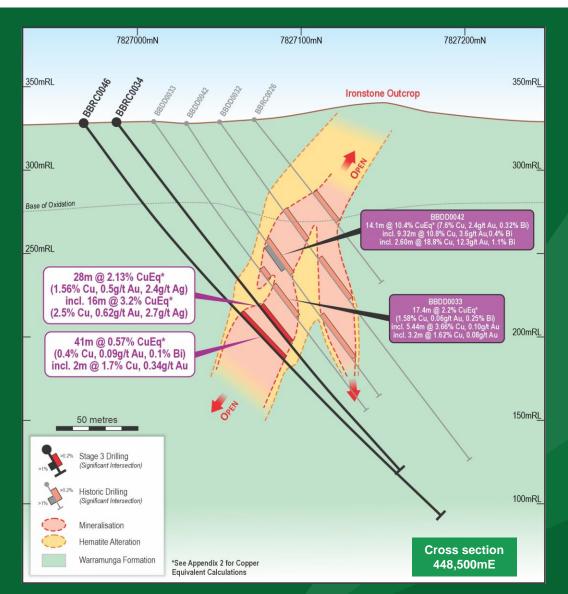


- Further thick, high-grade copper and gold zones including silver intersected in the latest RC drilling program at the Bluebird discovery within Tennant Minerals' 100%-owned Barkly Project in the Northern Territory.
- Latest results include new high-grade intersections to the west and down-plunge of previous drilling, confirming and extending the potential for the high-grade mineralisation to continue to the west within the regional ironstone gravity corridor. Results include:
  - A 5m high-grade gold zone grading 8.3 g/t Au, 2.0% Cu, 9.8 g/t Ag, 0.27% Bi in BBRC0040 incl. grades of up to 22.7 g/t Au, 1.6% Cu, 41.4 g/t Ag, 0.51% Bi from 233m, in an overall zone of 14m @ 4.0% CuEq\* (0.8% Cu, 3.0 g/t Au, 3.6 g/t Ag, 0.1% Bi)
  - 18m @ 1.3% CuEq\* (1.1% Cu, 0.22 g/t Au) from 260m in BBRC0044 incl. 8m @t 2.7% CuEq\*, %Cu, 0.48 g/t Au from 260m, and 3m @ 4.0% CuEq\* (3.7% Cu, 0.19 g/t Au, 3.4 g/t Ag) from 342m in BBRC0041
- A new well-mineralised zone of copper-gold mineralisation identified at Bluebird East, which is thickening with depth and demonstrates significant expansion potential. Results include:
  - 28m @ 2.1% CuEq\* (1.6% Cu, 0.5 g/t Au, 2.4 g/t Ag) from 146m downhole in BBRC0034 incl. 16m @ 3.2% CuEq\* (2.5% Cu, 0.62 g/t Au, 2.7 g/t Ag) from 158m incl. 2m @ 7.9% Cu, 0.85 g/t Au, 7.8 g/t Ag from 158m
  - 15m @ 1.0% CuEq\* (0.7% Cu, 0.09 g/t Au, 0.1% Bi) from 166m in BBRC0047
  - 41m @ 0.57% CuEq\* (0.4% Cu, 0.08 g/t Au) from 156m in BBRC0046

# New Drilling Results – Confirming New Structures and Expanding Mineralisation



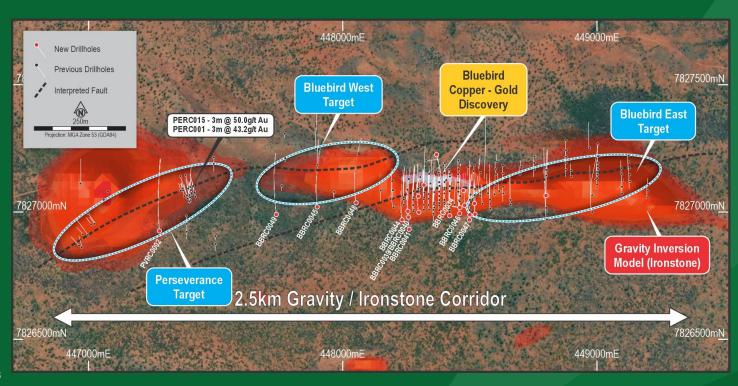
- ➤ Up to four large, high-grade, coppergold lenses each up to 300m in length and 200m deep identified from updated interpretation of the mineralisation at Bluebird.
- Lenses occur within the east-west trending ironstone host corridor which remains completely open to the east and west down-plunge of the previously-defined mineralisation.



#### TMS Receives NT Government Grant for Perseverance Target



- A follow up drill program has been planned to extend the excellent results received from the July 2024 RC program at Bluebird.
- Geophysical information, mainly gravity and magnetic data, strongly support the perseverance area as a high priority target for Bluebird lookalike discoveries
- Perseverance Gold Mine was a small but very high- grade open cut gold mine to the West of Bluebird. Historical drilling identified\*;
- 3m @ 50g/t Au from 42m in PERC 0015 and;
- 3m @ 43.2 g/t Au from 72m in PERC001
- Assays are pending on the recently drilled PRRC002, drilled near the old Perservance gold workings.
- TMS successfully applied for an NT Government "
  Resourcing the Territory" Grant for up to 50% of a
  deep diamond drillhole to test the large
  geophysical target west of Perseverance Gold
  Mine. This hole will be drilled in the next program
  planned for October 2024.



Bluebird 3D mineralisation model, gravity inversion, key targets and drilling, current and planned, at Bluebird

\*NTGS Report ID 1532559938 - Meteoric Resources, MLC57-MLC217-224\_2015\_GA

#### Barkly Project Discovery Opportunities-5km Gravity/Ironstone Corridor



- Covers a 5km strike-length, east-west trending gravity-high indicating major ironstone corridor with multiple discoveries potential.
- Gravity/Ironstone corridor intersected by ENE-WSW trending fault structures - associated with copper and gold mineralisation in 2.5km Perseverance to Bluebird Target Zone.
- Bluebird Cu-Au discovery occurs where ENE-WSW structure intersected gravity high/ironstone corridor and introduced Cu-Au mineralization.
- Associated hematite-secondary magnetite evident in magnetic "fingerprint".
- Mapping, geophysics review and geochemistry programs underway to finalise multiple drill target selection



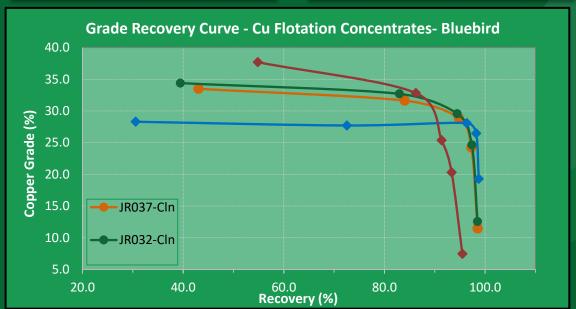
#### **Successful Metallurgical Test-work Completed\***



- Test-work shows above 91% of the copper in multiple drill-core composite samples from the Bluebird project can be extracted via conventional flotation, delivering a potentially commercial copper concentrate grading 24-29% copper (Cu) and 1.5-4g/t gold (Au).
- Multiple cleaner flotation tests on a drill-core composite samples from BBDD0045 achieved over 91% and up to 97% Cu recovery to concentrate, at a range of grind sizes from 53 µm to 75µm.
- Gold recovery to the flotation concentrates varied between 57% and 79%, with the remainder reporting to the float tailings.
- Further test-work results are expected aimed at;
  - Refining optimal conditions for all material types to simplify the processing circuit design
  - Investigating gold recoveries from tails.
  - Develop pathway for extraction of Critical Minerals other than Copper, being Bismuth and Cobalt

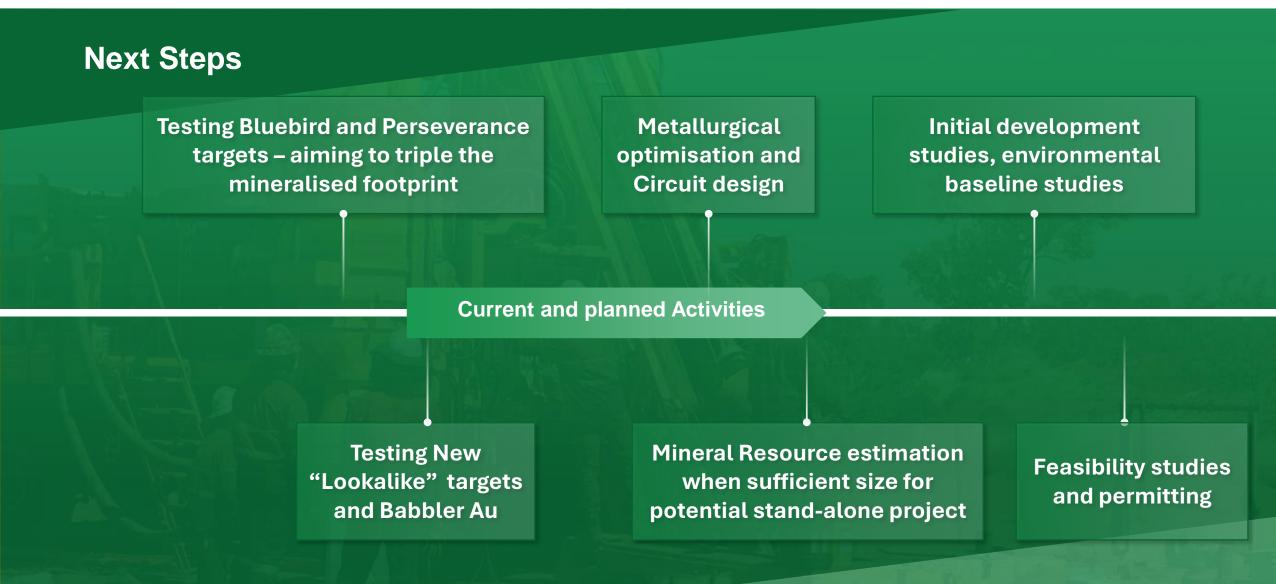






## **Barkly Project and the Bluebird Discovery**





#### **Key Technical Team**





VINCENT ALGAR

BSc (Hons) Geology MAusIMM

Chief Executive Officer

Mr Algar is a mining and resources geologist with over 33 years in the industry, Vincent brings to Tennant a strong track record of building shareholder value, most recently during his nine-year tenure as Managing Director of Australian Vanadium Ltd (ASX:AVL).

Vincent has been involved in all aspects of mining operations, exploration, and project feasibility and has held corporate roles in ASX listed junior mineral resource companies, serving both as Managing Director/CEO and in non-executive Director roles.



JON DUGDALE
BSc (Hons), FAusIMM, MAICD
Technical Advisor

Mr Dugdale is a geologist with over 35 years discovery, development and corporate experience, including direct involvement with significant gold, nickel and copper-gold discoveries.

Jon's corporate experience includes as a director/CEO of several junior resource companies focused on nickel-cobalt, graphite and copper-gold projects as well as funds management experience with Lion Selection Group.



CHRIS RAMSAY
BSc, MAPM, MAusIMM
General Manager Geology

Mr Ramsay is a geologist and project manager with over 25 years' experience in the global mining industry.

Chris' depth of experience includes operational & managerial roles in exploration, mine development and operations in underground & open-cut Gold, Nickel, Base Metal, Bauxite & Coal mines and development projects globally. Chris spent 18 years with Oceana Gold, Sons of Gwalia and Straits Resources before working as a consultant and advisor.



# **Contact**

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**ASX:TMS** 

## **Cu Equivalence Calculation**



#### **Appendix Copper Equivalent 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 (15/09/24) market for Cu, Au, Ag sourced from the website kitcometals.com whilst estimates for Bi and Co are from other sources for current Bi and Co price.

The table 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.

Metal	Average grade (g/t)	Average grade (%)	Metal Prices			Recovery x payability (%)	Factor	Factored Grade (CuEq%)
			\$/oz	\$/lb	\$/t			
Cu	1	0.52	\$0.26	\$4.21	\$9,308	0.8	1.00	0.524
Au	0.27	-	2,579	\$41,264	\$90,945,856	0.8	0.98	0.263
Ag	0.40		30.8	\$493	\$1,086,131	0.8	0.012	0.000
Bi	1	0.18	\$0.41	\$6.50	\$14,326	0.8	1.54	0.280
Со	110	0	\$0.69	\$11.03	\$24,300	0.8	0.0003	0.029
							CuEq%	1.10