



TENNANT MINERALS

# **BLUEBIRD COPPER-GOLD PROJECT**

**Barkly Region**

Tennant Creek, Northern Territory, Australia



RIU EXPLORERS CONFERENCE | FEBRUARY 2025 | ASX:TMS

ersonal use only

# 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 ('FAusIMM'). 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



## SHARE PRICE

**\$0.014**

On 17 February 2025  
52 Week Range \$0.009 - \$0.034

## SHARES ON ISSUE

**955.89m**

## MARKET CAPITALISATION

**\$13.4m**

On 17 February 2025

## CASH

**\$1.9m**

On 30 Dec 2024

## ENTERPRISE VALUE

**\$11.5m**

On 17 February 2025

## OPTIONS

TMSOA (L), 85.4m, \$0.06, Ex 15/7/25  
TMSO(L) 271.9m, \$0.048, Ex 31/12/27  
TMSOPT1 (UNL) 26m, \$0.08, Ex 8/4/25



# Copper and Gold Positive Investment Outlook



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



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



Copper in global supply deficit - demand increasing and inventories falling (Cu price at US\$4.65/lb in February 2025)



Gold is trading at an all-time high, reaching a price around US\$2,800/oz in February 2025



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



Cu and Au are large commodity markets with strong underlying support



# Barkly Project and the Bluebird Cu-Au Discovery

## World-Class Location

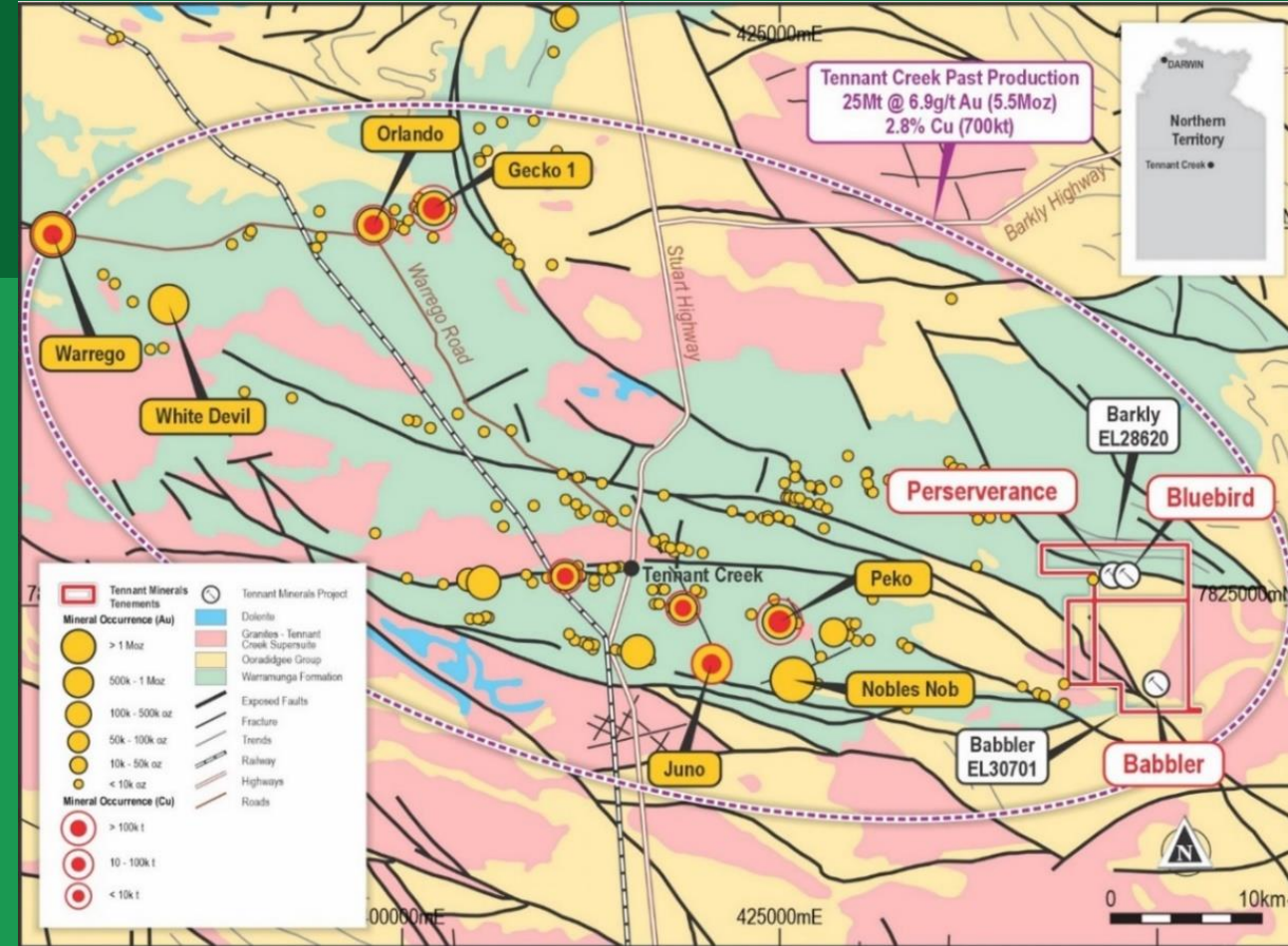
The Barkly Project and the **Bluebird discovery** are located 40km east of Tennant Creek at the eastern end of this major copper-gold field, which has produced 5.5Moz of gold and 700kt of copper<sup>1</sup>

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, development and M&A 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



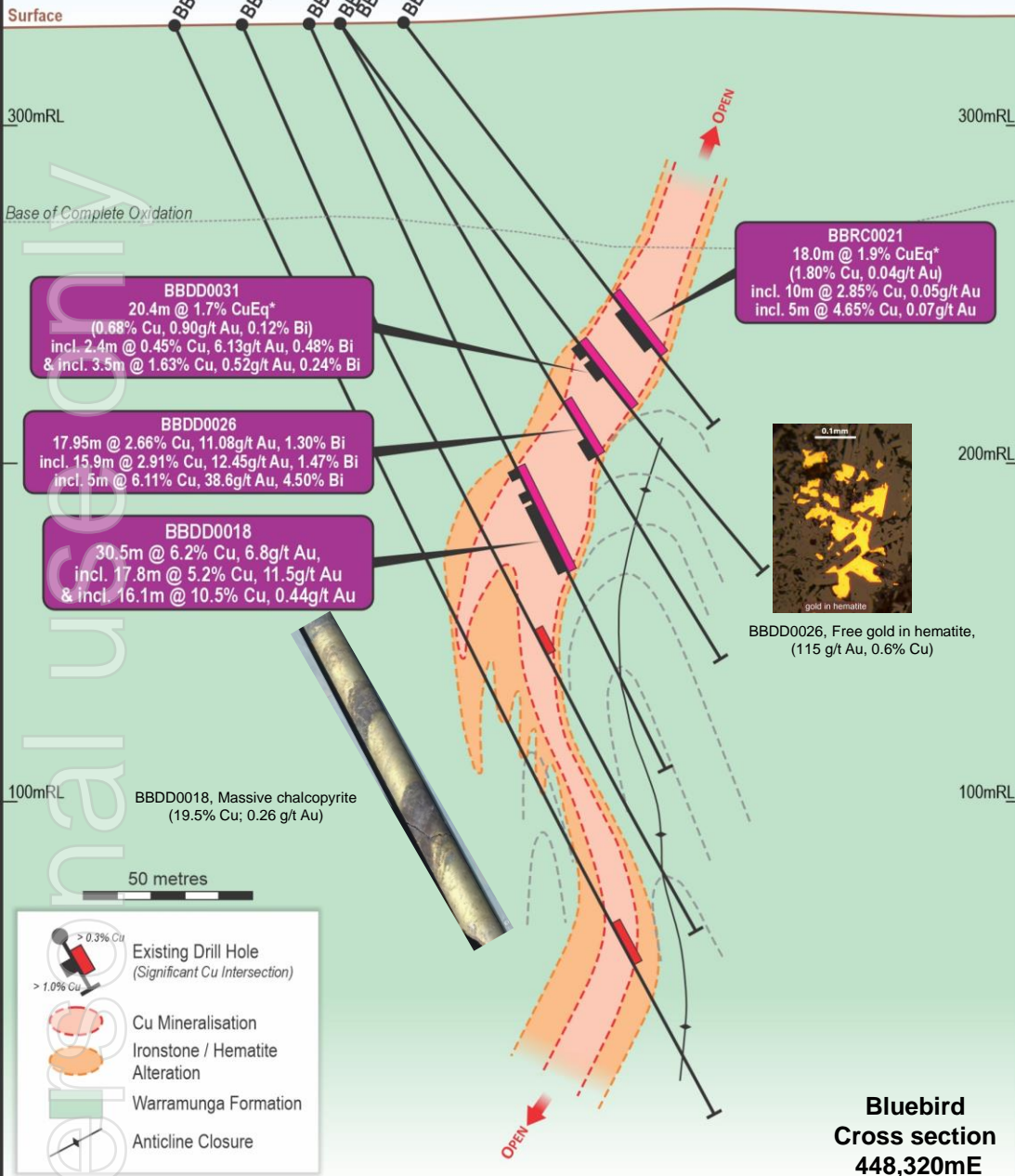
<sup>1</sup> [Portergeo.com.au/database/mineinfo](http://Portergeo.com.au/database/mineinfo). Tennant Creek - Gecko, Warrego, White Devil, Nobles Nob, Juno, Peko, Argo.

7827000mN

7827100mN

7827200mN

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

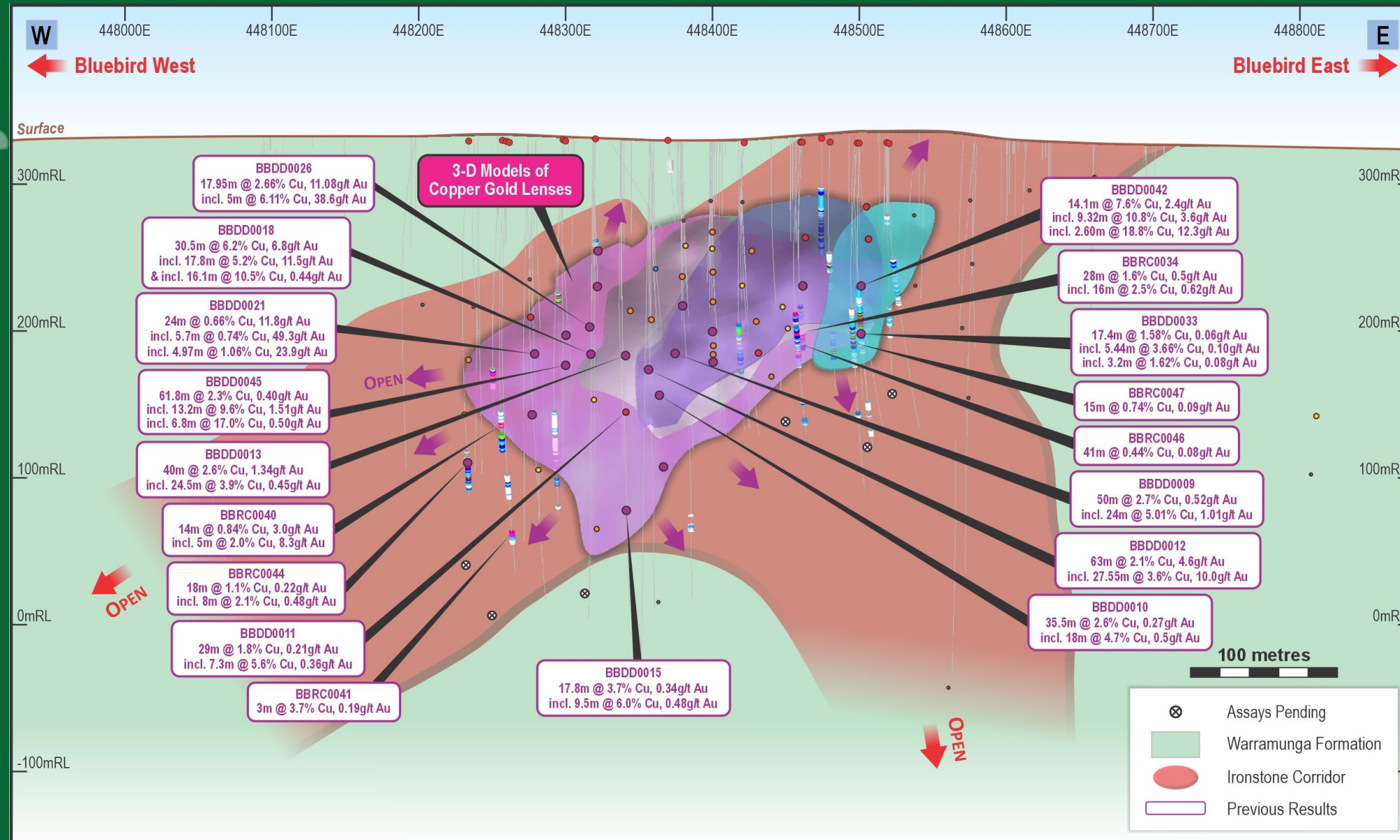
<sup>3</sup> 08/02/2023. "Spectacular Drill Hit 30.5m 2 6.2% Cu, 6.8 g/t Au".

<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>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 – Building up Significant Copper-Gold Intersections

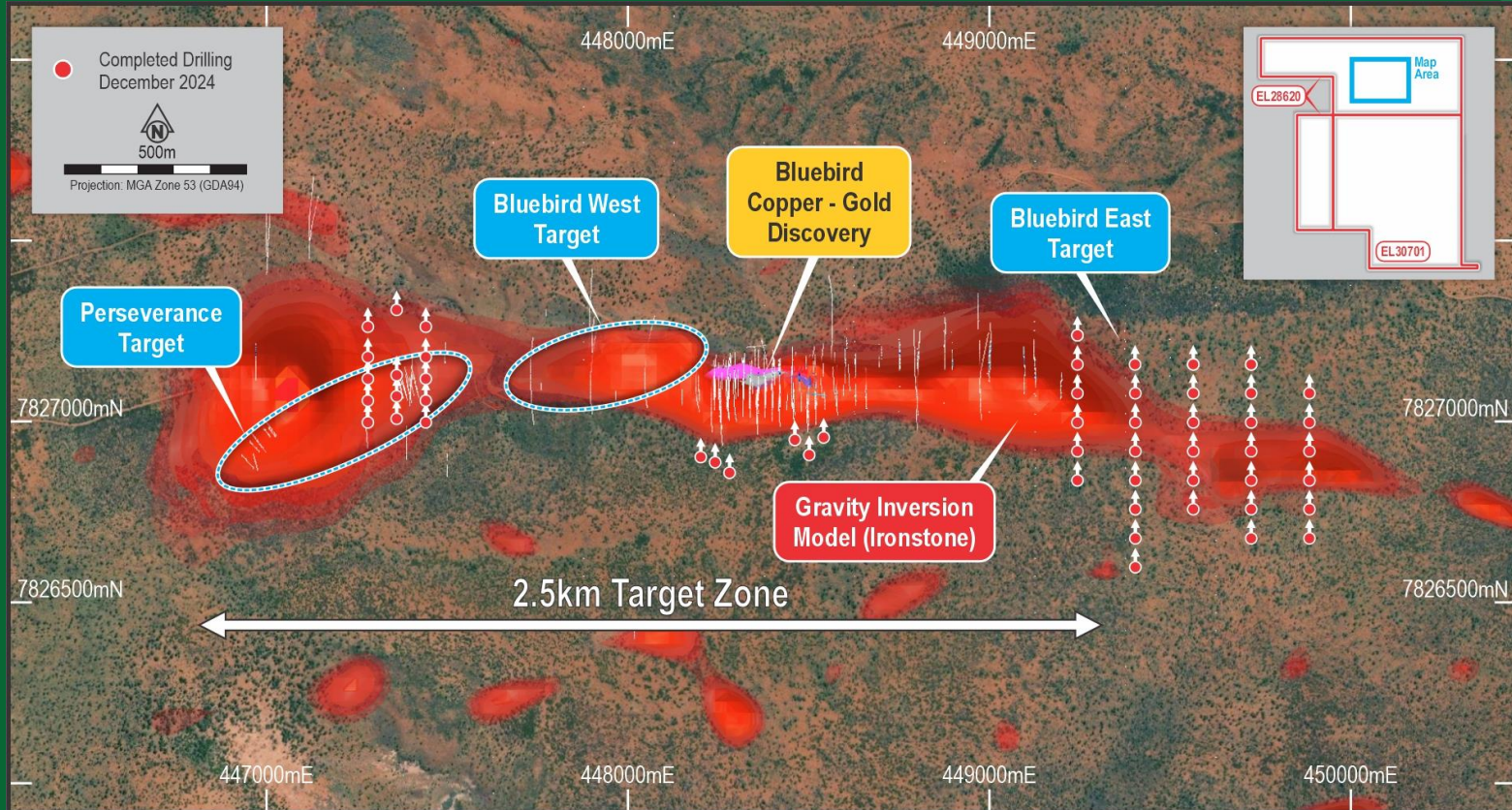


Tennant Minerals (ASX.TMS): Various ASX Announcements from 2021 to 2024 contain the intersections. shown in this diagram



# New Drilling on Multiple Targets Completed – Awaiting Assays

- A follow up drill program was completed at Bluebird in December 2024 Targeting ;
- Bluebird - following up previous results from June 2024 including<sup>6</sup>;
  - 28m @ 1.6% Cu, 0.5 g/t Au, 2.4 g/t incl 16m @2.5% Cu, 0.62 g/t Au
  - 14m @ 0.8% Cu, 3.0 g/t Au incl Ag incl 5m @ 2.0%Cu, 8.3g/t Au
  - 18m @ 1.1% Cu, 0.22g/t Au
  - 3m @ 3.7% Cu, 0.19 g/t Au
  - 41m @ 0.44% Cu, 0.08 g/t Au
- The historic Perseverance Gold Mine, a small but very high- grade open cut gold mine to the West of Bluebird where historical drilling identified<sup>7</sup> :
  - 3m @ 50g/t Au from 42m in PERC 0015
  - 3m @ 43.2 g/t Au from 72m in PERC001
- Bluebird East prospect, an untested, combined magnetic and gravity anomaly east of the main Bluebird.
- The Company is awaiting assays for the program, expected in March Quarter 2025



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

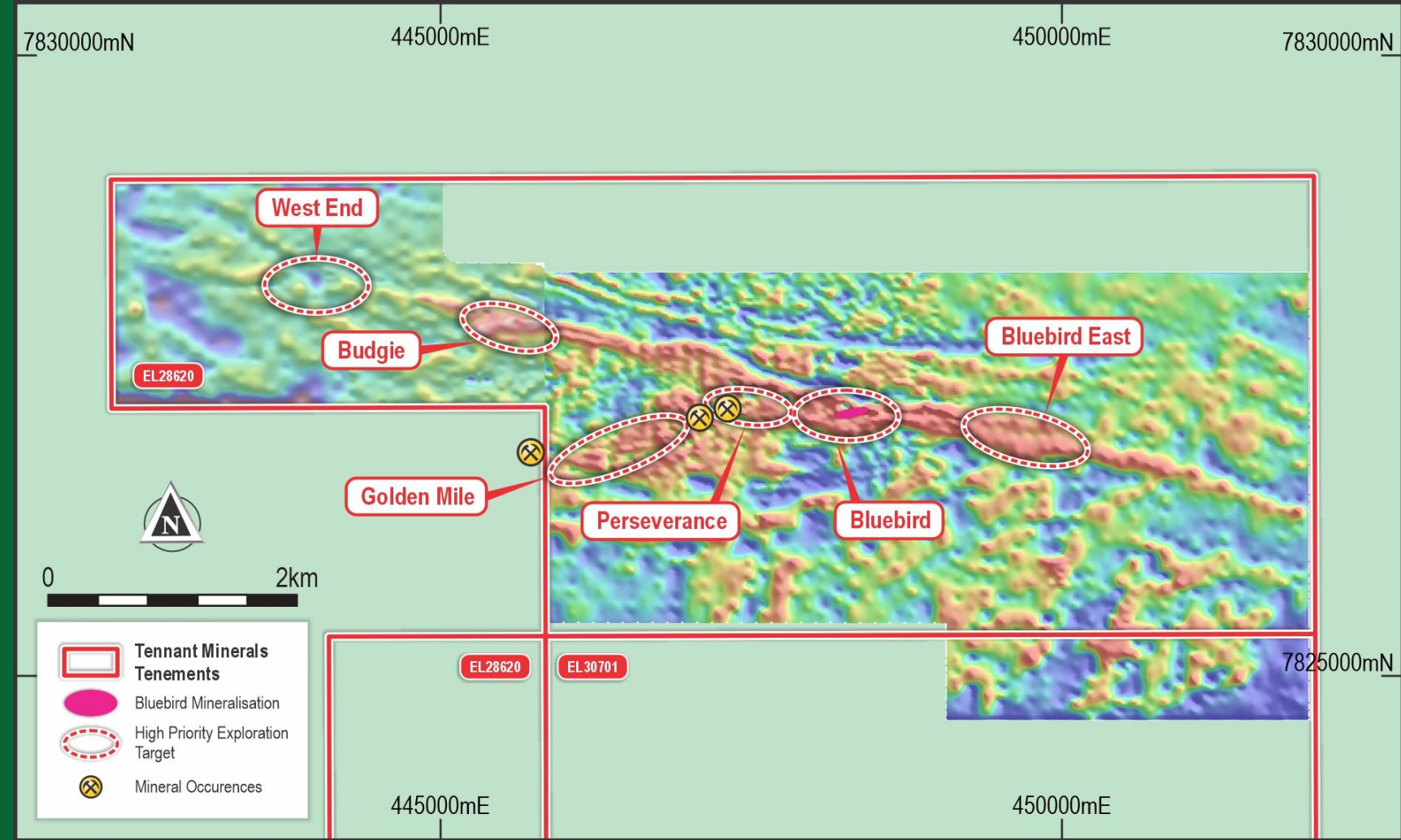
<sup>6</sup> 20/10/2024 Tennant Minerals (ASX: TMS): "Thick High Grade Gold and Copper Intersections".

<sup>7</sup> NTGS Report ID 1532559938 - Meteoric Resources, MLC57-MLC217-224\_2015\_GA



# Project Discovery Opportunities—5km Gravity / Ironstone Corridor

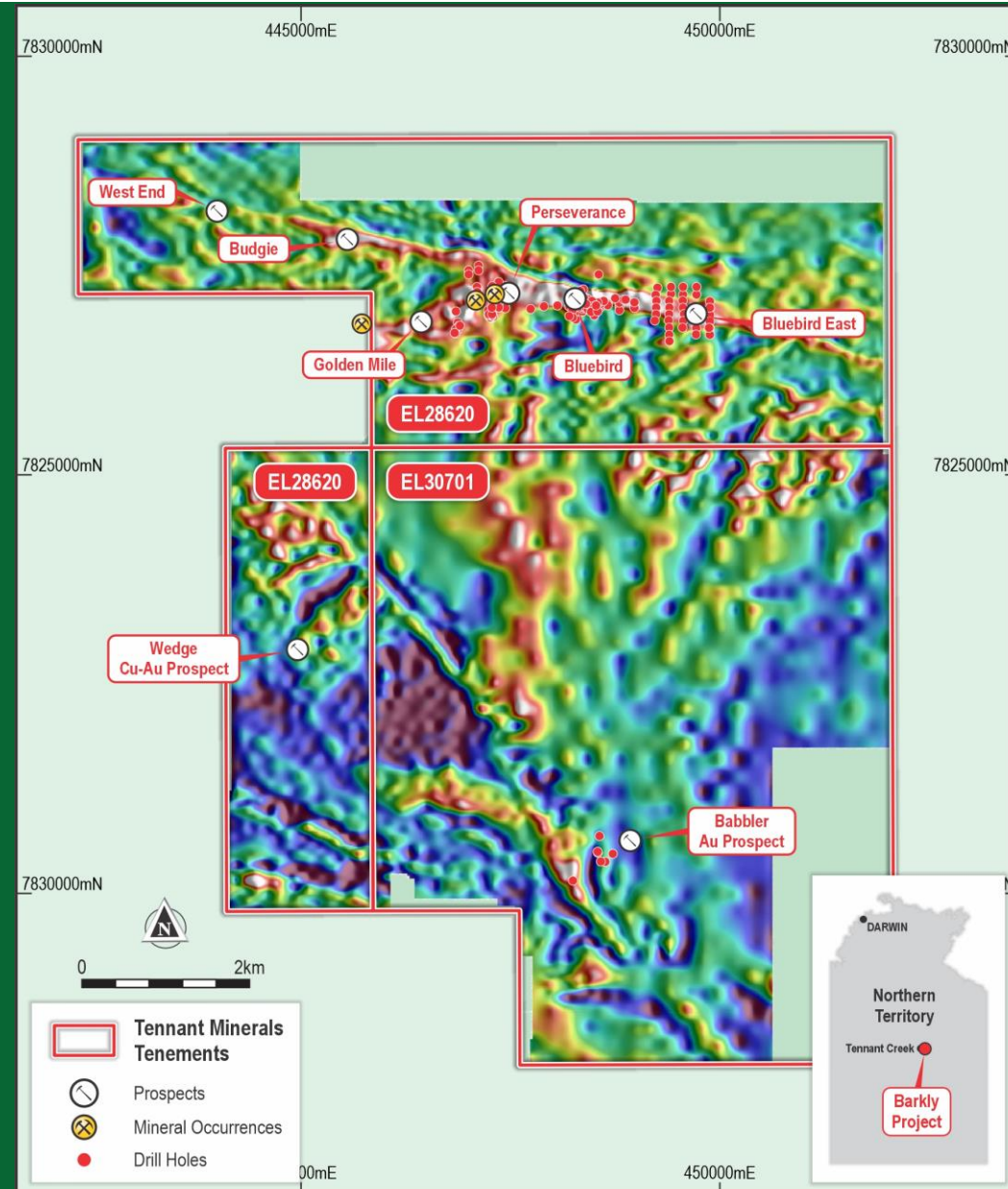
- Targets cover a 5km east-west trending gravity-high indicating major ironstone corridor with multiple discoveries potential
- Gravity/Ironstone corridor intersected by ENE-WSW trending fault structures - associated with copper and gold mineralisation in 2.5km Perseverance to Bluebird Target Zone
- 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 data collection, review and geochemistry programs finalised pending analysis and results will generate multiple new drill targets to test in 2025.



# Regional Review Generating New Targets for 2025 and Beyond

- Updated gravity surveys completed including high resolution areas over Bluebird ironstone corridor
- Extensive 2m auger geochemistry sampling program completed
- New mapping and review of geophysics has led to new target generation across the Tennant licences
- Exciting targets generated for follow up drilling in 2025;
  - Babbler gold target area
  - Wedge Ironstone target
- Soil Assays pending will be analysed with geophysics and mapping to finalise new drill targets.

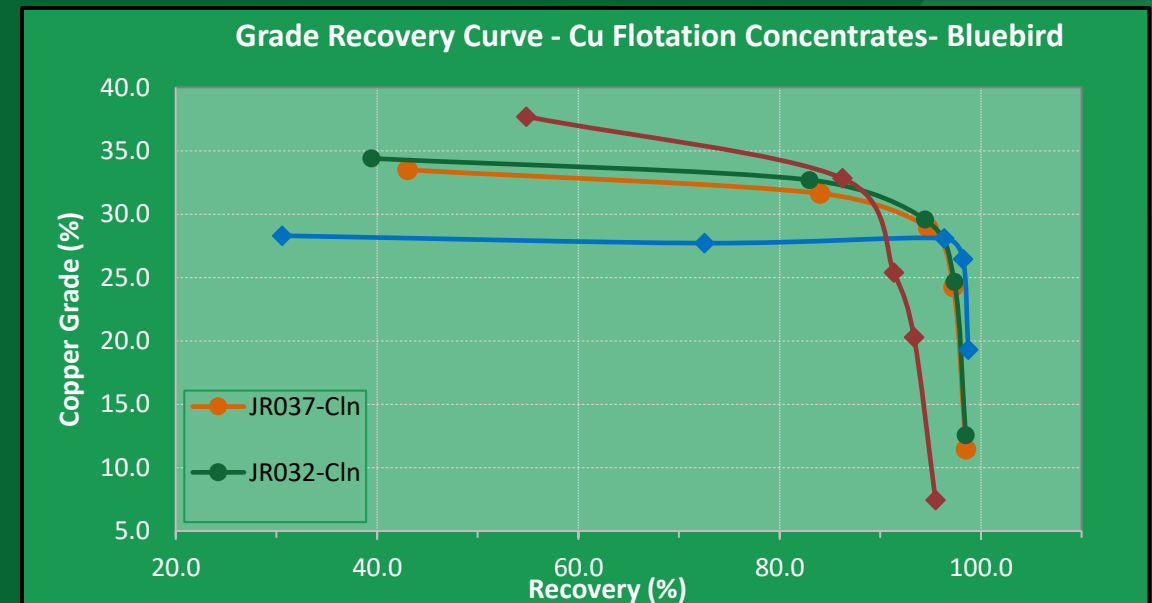
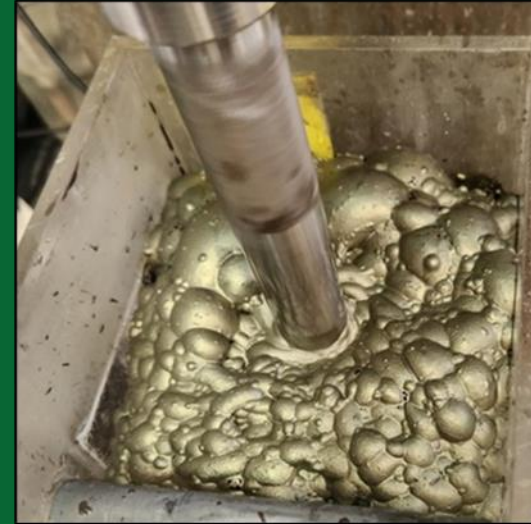
*Prospects over detailed gravity image on TMS tenements*





# 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)**.<sup>8</sup>
- 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.



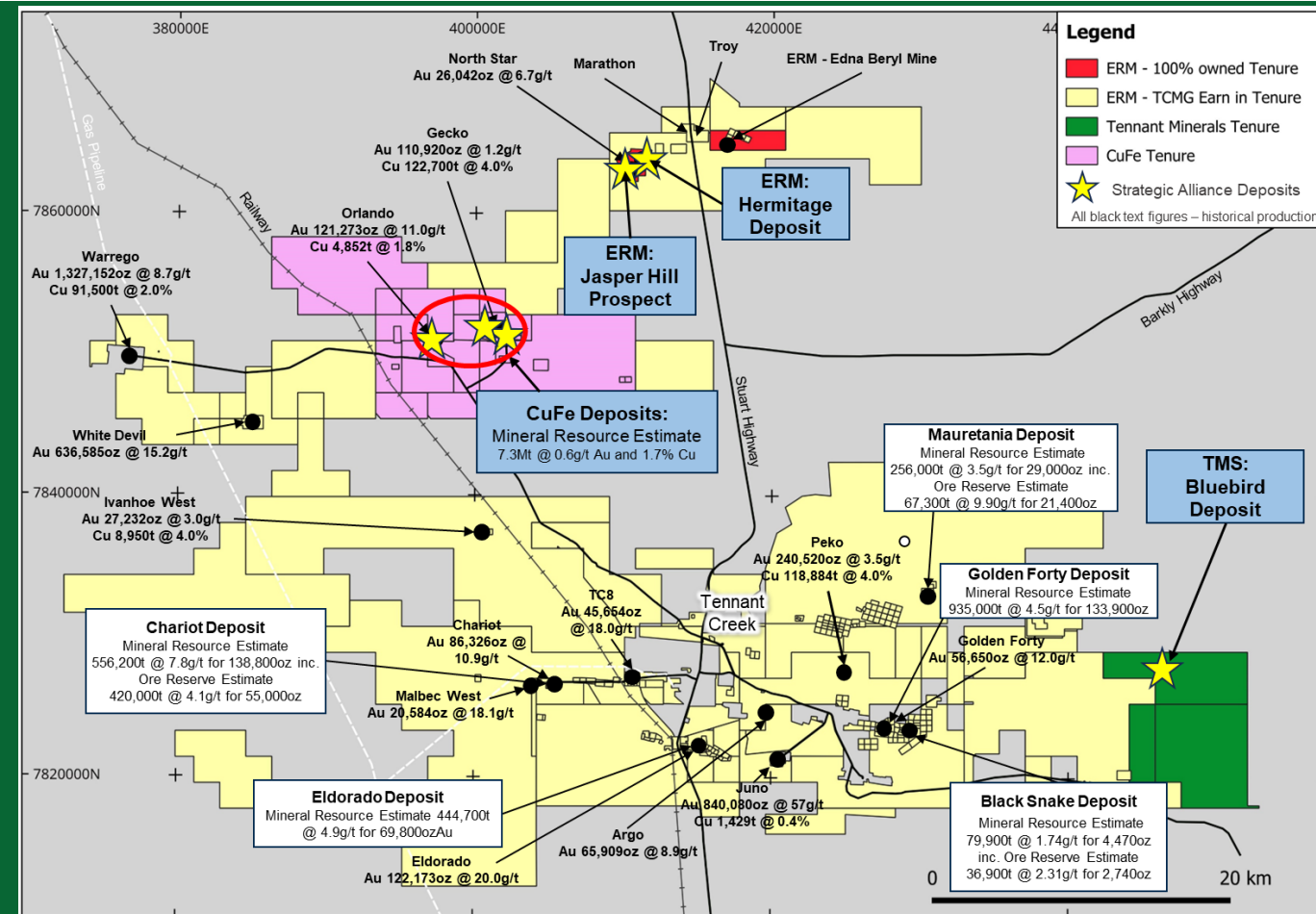
<sup>8</sup> 20/05/2024. Tennant Minerals (ASX:TMS): "High 29.6% Copper and 3.96 g/t Gold Concentrate Grades and Excellent Recoveries in Test-Work at Bluebird".



# Strategic Copper & Gold Alliance Agreement



- CuFe Limited, Emmerson Resources and Tennant Minerals have formed a Strategic Alliance in the Tennant Creek region of the Northern Territory<sup>9</sup>
- Agreement to investigate and develop a multi-user processing facility for Copper, Gold and Critical Metals, to provide an economical pathway to production for their Mineral Resources
- Landmark agreement designed to collectively fast-track development of copper and gold resources in one of Australia's premier historic production centres
- Replicating historic multi-user infrastructure will overcome economic challenge of developing individual resources on a stand-alone basis
- Provide incentive for all three companies to target fresh high-grade copper-gold discoveries
- The Alliance has commenced a review of information to determine options for the initial Scoping Study, with a view to then moving quickly onto a Pre-Feasibility Study.



Alliance has combined resources totalling 145,000 ounces of gold 127,000 tonnes of copper in the Tennant Creek Mineral Field, which historically produced more than 5.5Moz of gold and 700,000 tonnes of copper from 1934 to 2005 through centralised production facilities

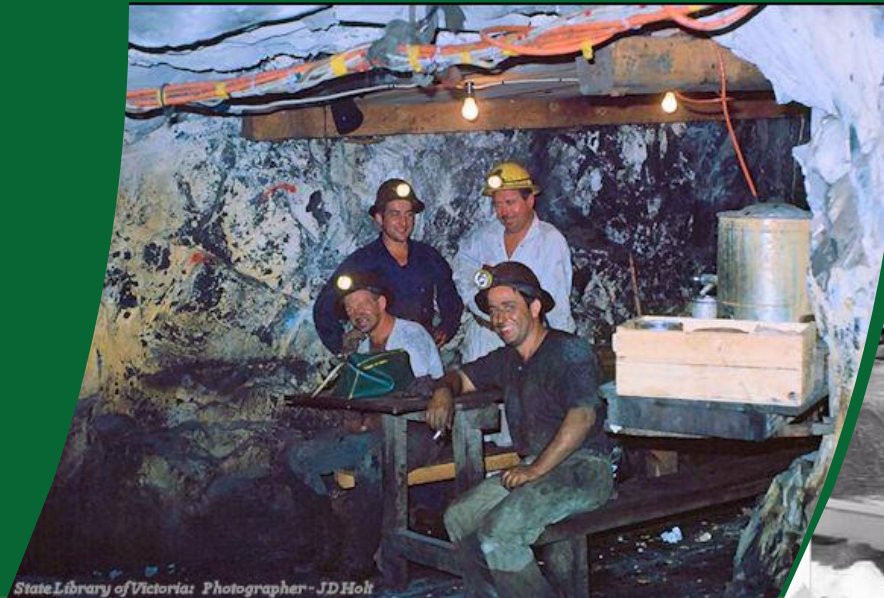
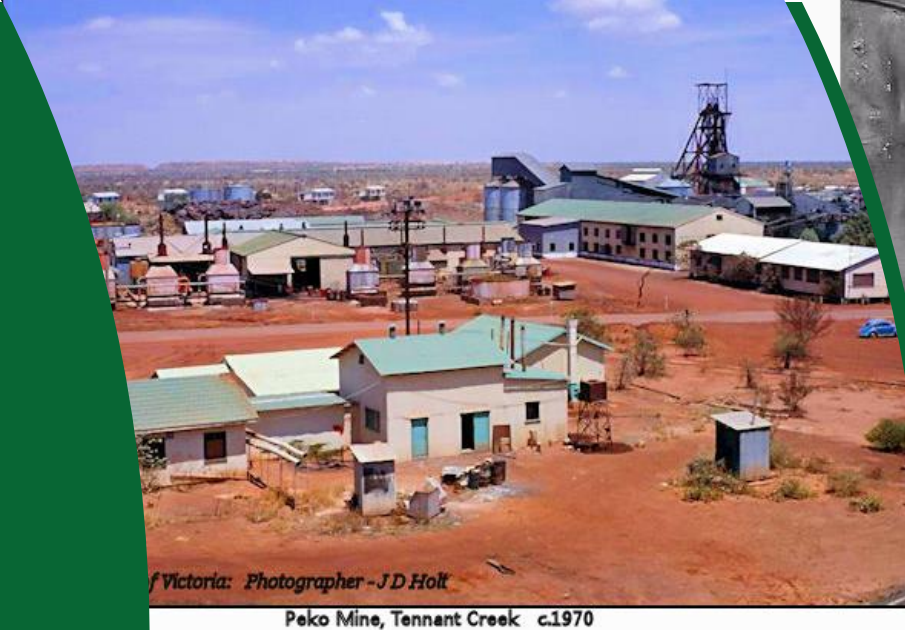
# Strategic Collaboration Objectives 2025



## Major Objectives of the Collaboration Scoping Study and Subsequent PFS;

- Determine the available resource base and size of the facility including Bluebird
- Develop an initial mining schedule
- Confirm a processing pathway for copper, gold and critical mineral concentrates
- Determine the ideal location for the shared copper facility
- Quantify the shortest development timeframe, considering workforce, transport distances, power, water and site services.
- Create a cost estimate for Capital and Operating costs, resulting in a financial model.
- Consider operating and corporate structures to expedite the funding and construction of the plant and mines.
- Engage with governments and funding agencies to support the Shared Facility.

**Images:** For Tennant Creekers website  
<https://fortennantcreekers.com>  
State Library of Victoria – JD Holt and David Tapsell





# Activity timeline for the BARKLEY PROJECT and Bluebird

## Next Steps

First pass drilling results on multiple new Bluebird 'look alike' targets

Initial Mineral Resource estimation to support collaboration studies

Environmental baseline studies and Heritage Agreement

Current and planned activity

Drilling results of eastern and western Bluebird extensions

Auger soils and gravity extension, infill – interpretation & analysis

Follow up exploration drilling on targets

Feasibility studies and permitting in collaboration





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