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# DECEMBER 2024
# QUARTERLY ACTIVITY REPORT

NT Minerals Limited (ASX: NTM) ('**NT Minerals**', '**NTM**' or '**the Company**') presents its Quarterly Activities Report for the quarter that ended 31 December 2024.

**HIGHLIGHTS**

**Exploration:**

- **High grade copper results in rock chips received subsequent to end of the quarter from reconnaissance sampling program at Twin Peaks Project in Western Australia.**
  - **High grade copper (25.6% Cu) recorded from malachite ironstone lode material at Ringing Bell Lode.**
  - **High grade copper (up to 24.6% Cu) recorded from surface pittings along 330 metres of the Main Shaft mineralised trend.**
- **Elevated Base Metal and Pathfinder element responses associated with high grade copper**
  - **Silver up to 113.44 g/t,**
  - **Bismuth up to 57.14 ppm,**
  - **Cobalt up to 501.2 ppm,**
  - **Molybdenum up to 40.45 ppm,**
  - **Tellurium up to 22.61 ppm,**
  - **Tungsten up to 163.74 ppm and**
  - **Zinc up to 0.24%.**
- **Planning for drilling programs at both the Redbank Project (NT) and Twin Peaks has commenced.**

**Corporate:**

- **The Company entered into option agreements for its Redbank and Emu East tenements.**
- **Draft submission of Rehabilitation Management Plan provided to NSW Resources Regulator for the legacy McKinnons' mine as per s240 Notice.**

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**CORPORATE UPDATE**

***Twin Peaks – Copper/Gold/Lead/Zinc/Fe-ore Opportunity - WA***

The Twin Peaks Project is a low-cost exploration and ownership opportunity in the Archaean Yilgarn Craton of Western Australia, located 200 kilometres northeast of Geraldton.

Subsequent to the end of the quarter, at the request of 10M Pty Ltd, the Company acquired a 50% interest in 10M Pty Ltd's wholly owned subsidiary Deepsea Australia Pty Ltd, the registered holder of the tenements which comprise the Twin Peaks Project.

***Emu East Project - NT***

During the Quarter, the Company entered into a term sheet with Maverick2 Pty Ltd under which Maverick2 can earn a 20% interest in the Emu East Project (EL32464, 465, 466 and 467) by paying NTM $130,000 ($30,000 within 5 days of execution of the Term Sheet and $100,000 on execution of Definitive Agreement – both payments received by the Company). Maverick2 can earn a further 31% (cumulative 51%) by expending $500,000 on Exploration Expenditure within 24 months, a further 39% by expending an additional $2,000,000 within 36 months of earning 31% (cumulative 90%). Maverick2 can acquire the remaining 10% by paying NTM $2,000,000. All payments/earn-in expenditure can be accelerated by Maverick2.

***Golden Horse Option Agreement - NT***

In the previous quarter, NTM entered into an exclusive option agreement with TSX-V listed Golden Horse Minerals Limited ("GHM") over tenements comprising the Redbank and Wollogorang Projects. GHM commenced trading on the ASX under "GHM" on 16 December 2024.

Under the terms of the Option Agreement, in consideration for payment of a non-refundable option fee of $100,000 which the company received on 18 December 2024, a 12-month option period commenced on 1 January 2025, whereby GHM has the right to conduct due diligence on the tenements. In the event GHM spends $600,000 in exploration expenditure on the Tenements during the option period and at GHM's sole election, it will acquire an initial 10% interest in the Tenements. Upon exercising the option, NTM and GHM will aim to form a joint venture to explore and develop mineral deposits on the tenements, using their best efforts to negotiate and enter into formal JV arrangements.

***McKinnon's Rehabilitation – NSW***

In December, the Company submitted a draft the Risk Assessment and Rehabilitation Management Plan to the NSW Resources Regulator in December 2023.

The Company is currently awaiting comments from the NSW Resources Regulator.

***Millers Creek JV - SA***

The Company was advised by Blue Top Pty Ltd of its withdrawal from the Millers Creek JV. Upon withdrawal by Blue Top Pty Ltd, NTM commenced the process to surrender the tenements comprising the Millers Creek Project, to reduce corporate overheads and allow the Company to focus on the Finniss River Critical Minerals and Twin Peaks Projects.

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**EXPLORATION:**

***Western Australia***

***Twin Peaks Project***

During the quarter, the Company finalised planning for its second reconnaissance sampling program at the Twin Peaks Project located 520km north of Perth and approximately 200km northeast of Geraldton (Figure 1). The project covers the known extent of the Twin Peaks Greenstone Belt and has the potential to host a variety of mineralisation styles and considered prospective for copper, gold, base metals and iron ore.

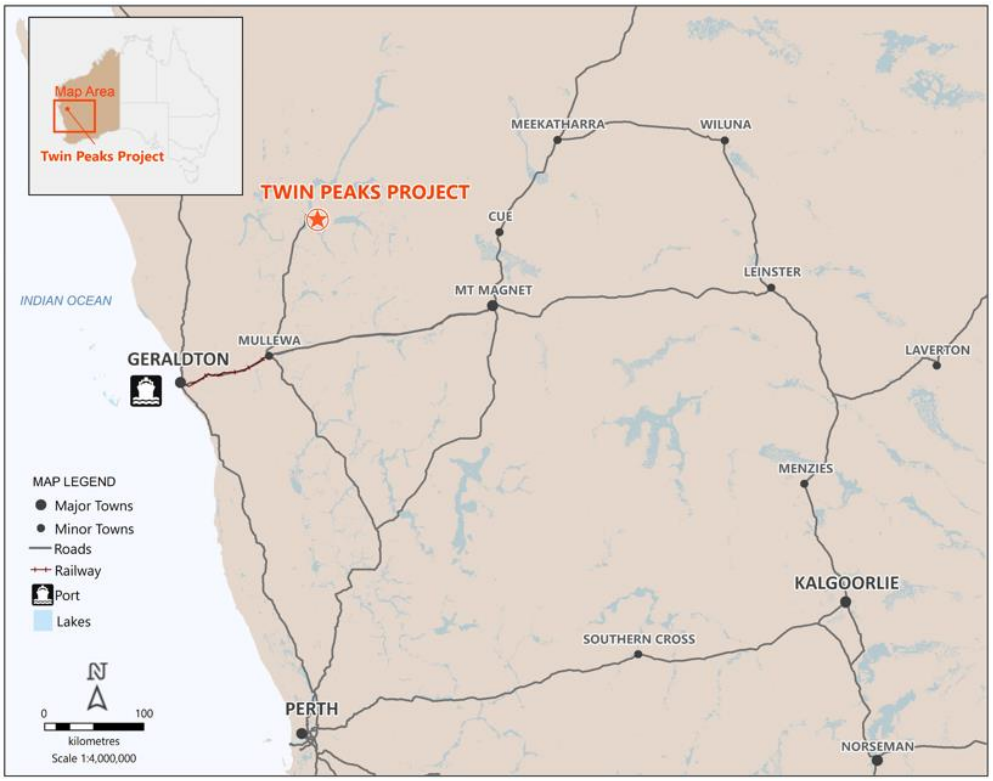


**Figure 1: NTM Minerals – Western Australian Project Location**

The Company identified five areas of interest for initial investigation, the Twin Peaks Copper Workings, Woolbung Peak Gravity Anomalies, Premiership Gravity Target and Gatherwell Target (refer ASX:NTM announcement, 25 November 2024). The reconnaissance program commenced in mid-December 2024 with field activities halted prematurely due to significant rainfall affecting the Murchison-Gascoyne region. Work was partially completed at the Twin Peaks Copper Workings and the Premiership Gravity Target (refer Figure 2).

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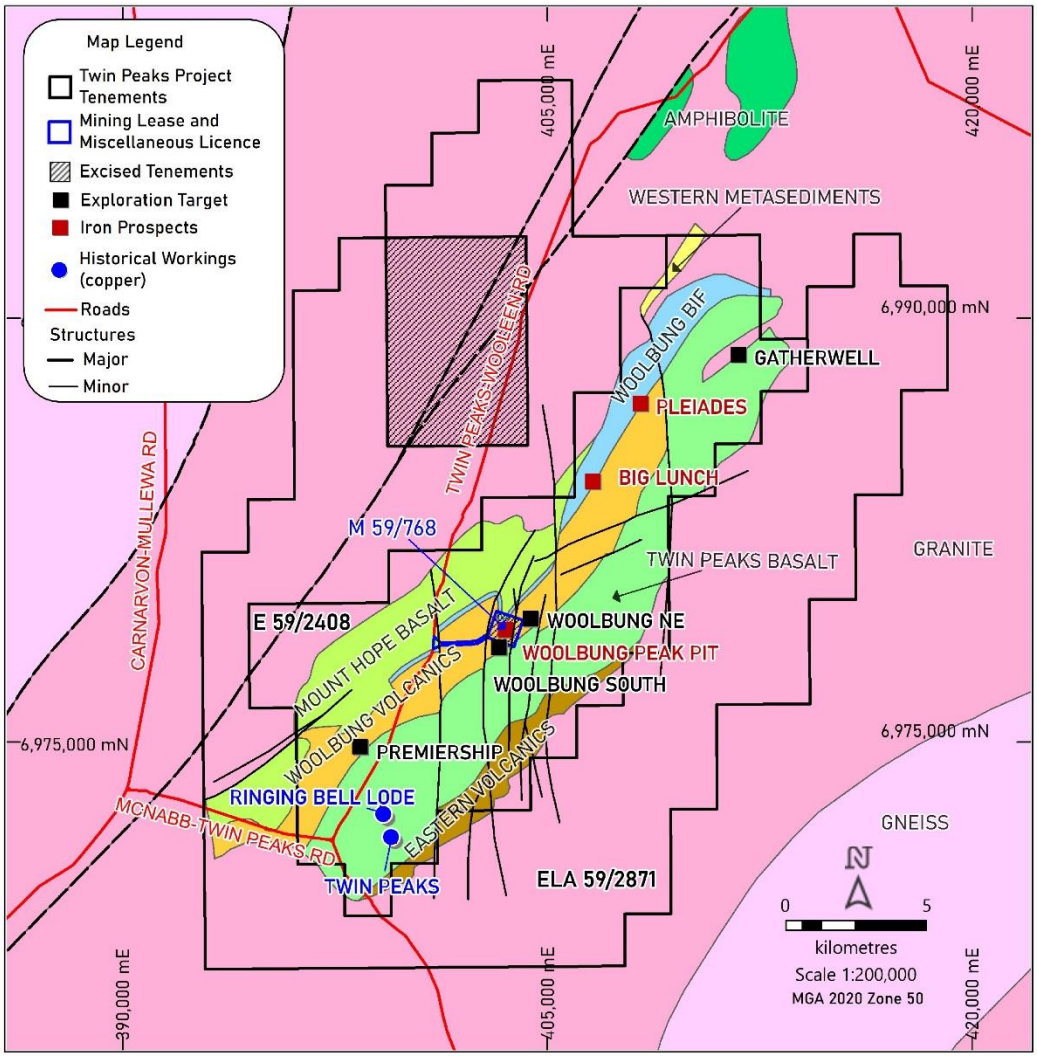


**Figure 2: Twin Peaks Project Geology and Prospect Location Plan**

***Background***

Previous explorers describe the stratigraphy observed within the project as analogous to stratigraphy hosting the Golden Grove Cu-Zn-Pb-Ag-Au deposit, located 200 kilometres to the south-southeast. The stratigraphy at Twin Peaks comprises three west-dipping and facing volcano-sedimentary sequences separated by two basalt sequences, with the entire sequence from east to west comprised of Eastern Volcanic Sequence, Twin Peaks Basalts, Woolbung Volcanic Sequence, Mount Hope Basalts and Western Sedimentary Sequence (refer Figure 2).

Historical exploration activities on the Twin Peaks Project targeted Golden Grove-style Volcanic-Hosted Massive Sulphide ("VHMS") mineralisation from 1979 to 2011. More recent exploration activities focused on the Fe-ore potential within the Woolbung BIF, initially by Trafford Resources Limited (2012 - 2014) and more recently by private company 10M (2020 - 2024), which conducted trial mining activities at the Woolbung Peak pit in early 2024.

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***Twin Peaks Copper Workings (Twin Peaks Main Shaft and Ringing Bell Lode)***

The **Twin Peaks Copper Workings** cover an area of approximately 2,000 metres by 1,200 metres, encompassing historical workings such as the **Main Shaft** (estimated depth of 30 metres) and the **Ringing Bell Lode** (featuring two shallow shafts, 6 to 10 metres in depth). The area also includes a prominent 1,200-metre-long elliptical gravity anomaly located north and east of the Main Shaft and Ringing Bell Lode workings, respectively.

During the December 2024 reconnaissance program, **12 rock chip samples** were collected from historical workings and sub-cropping felsic intrusions (refer Figure 3). These samples were subjected to a comprehensive analysis of **48 elements** using a four-acid (total) digest. This marks the first time that samples from the Twin Peaks Copper Workings have undergone such an extensive elemental analysis.

Subsequent to the end of the quarter, results were received for the rock chip results and revealed highly elevated levels of base metals and pathfinder elements, particularly from malachite-rich samples (refer ASX:NTM announcement, 23 January 2025). Highlights include:

- **Copper (Cu):** up to 25.6%
- **Silver (Ag):** up to 113.44 g/t
- **Bismuth (Bi):** up to 57.14 ppm
- **Cobalt (Co):** up to 501.2 ppm
- **Molybdenum (Mo):** up to 40.45 ppm
- **Tellurium (Te):** up to 22.61 ppm
- **Tungsten (W):** up to 163.74 ppm
- **Zinc (Zn):** up to 0.24%

At the **Twin Peaks Main Shaft**, previous exploration identified a mineralised trend aligned with a series of surface pits and shallow shafts. This trend extends southwest from the Main Shaft over a distance of approximately 330 metres, highlighting the area's significant potential for further exploration.

The December reconnaissance program further confirmed the mineralised trend at the **Twin Peaks Main Shaft**. Sampling at the Main Shaft yielded values of **1.6% Cu** and **28.62 g/t Ag** (Sample 24TPK020). Additionally, sampling from a shallow trench located 105 metres southwest of the Main Shaft returned exceptional results of **24.6% Cu** and **17.22 g/t Ag** (Sample 24TPK022), derived from a malachite-rich zone near the base of the trench. Adjacent country rock within the same trench was also anomalous in copper, returning **0.13% Cu** and **1.83 g/t Ag** (Sample 24TPK021).

Further southwest, approximately 220 metres from the Main Shaft, rock chip sampling of sub-cropping porphyries revealed additional anomalous results, including **0.38% Cu** and **2.15 g/t Ag** (Sample 24TPK026), as well as **0.10% Cu** and **0.73 g/t Ag** (Sample 24TPK027). These findings complement historical rock chip sampling conducted by Jabiru Metals Limited in 2006, which reported values of **4.75% Cu** and **57 g/t Ag** (Sample 354902) and **4.29% Cu** and **3.0 g/t Ag** (Sample 354901).

In a previously identified copper workings area, which lacked any historical sampling records, rubbly float adjacent to a shallow shaft returned values of **12.3% Cu** and **113.44 g/t Ag** (Sample 24TPK025).

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At the **Ringing Bell Lode**, previous exploration described mineralisation aligned along a north-south orientation, associated with two shallow shafts. Recent sampling of malachite-rich ironstone float material near the prominent shaft returned impressive values of **25.6% Cu** and **30.94 g/t Ag** (Sample 24TPK031).

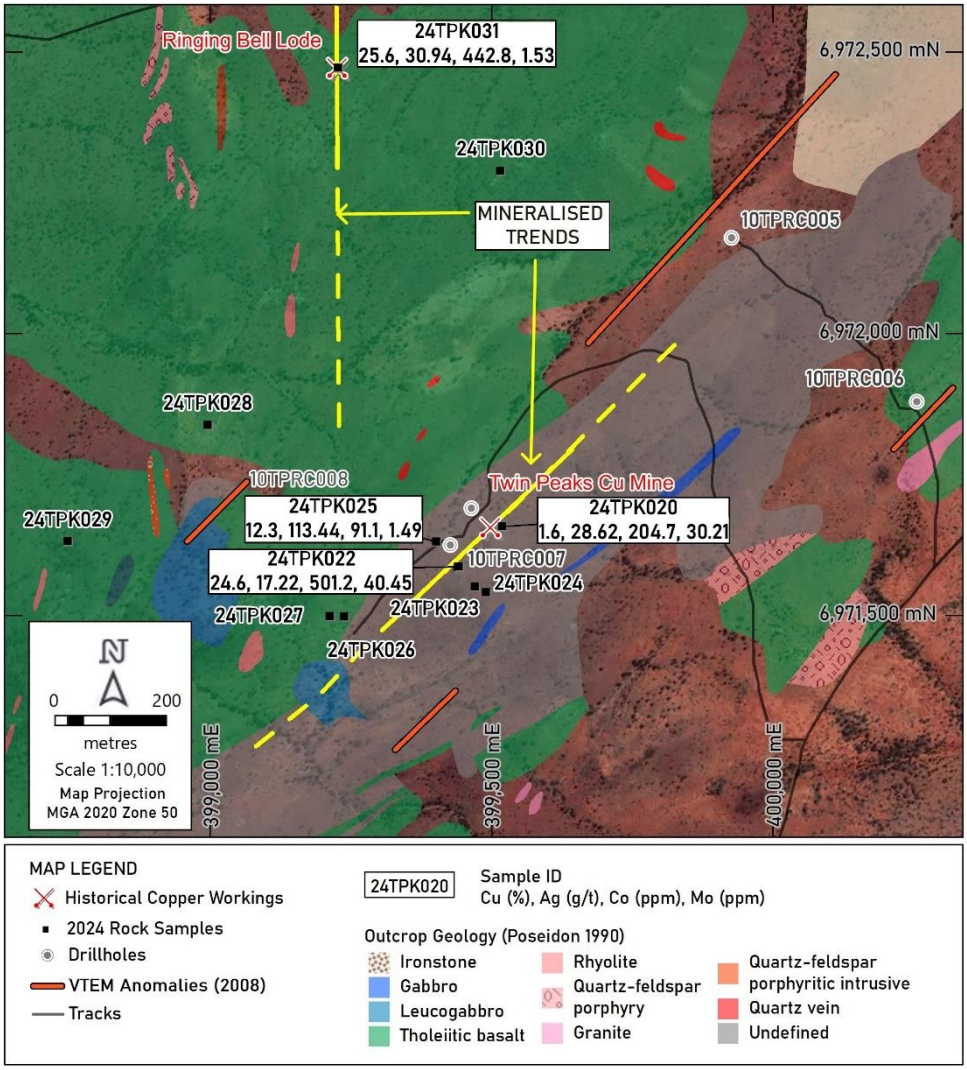


**Figure 3: Twin Peaks Copper Workings – Rock Chip Sample Locations overlain on outcrop geology, Poseidon (1990).**

**Twin Peaks Copper Workings (Gravity Anomaly)**

The elevated multi-elemental abundances mentioned earlier are characteristic of **Volcanogenic Hosted Massive Sulphide (VHMS)** deposits. This style of mineralisation had been the focus of earlier explorers, including Amoco Minerals Australia, Poseidon Exploration, and Jabiru Metals, within the Eastern Volcanic metasedimentary sequence, northeast of the Twin Peaks Main Shaft (refer to ASX:NTM announcement, 29 July 2024).

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Mineralisation along the **southwest–northeast oriented Main Shaft Trend** is hosted within the Eastern Volcanic sequence. In contrast, the **north–south-oriented Ringing Bell Lode** is interpreted as structurally related, with multi-elemental abundances resembling those of other magmatic-related mineralisation systems.

A review of geophysical data, particularly the detailed gravity survey conducted in 2008 by Jabiru Metals Limited (200m x 50m station spacing), identified a discrete, **1,200-metre-long elliptical gravity anomaly** at the Twin Peaks Copper Workings. This anomaly exhibits an elevated (denser) gravity response at the outer edges with a lower-density core, suggesting a potential intrusive feature at depth (refer Figure 4). The denser outer envelope may reflect an alteration halo, possibly hematitic, supported by historical rock chip sampling and mapping at the **Southern V prospect**, which returned iron-rich values of **64.12% Fe** and **61.95% Fe** (refer ASX:NTM announcement, 23 January 2025). Similarly, ironstone-associated malachite mineralisation at the Ringing Bell Lode lies within this outer gravity envelope.

Furthermore, the gravity data reveals a prominent north–south structure, located approximately 200 metres west of, and parallel to, the Ringing Bell Lode mineralised trend near the Southern V prospect. This structure represents a significant exploration target.

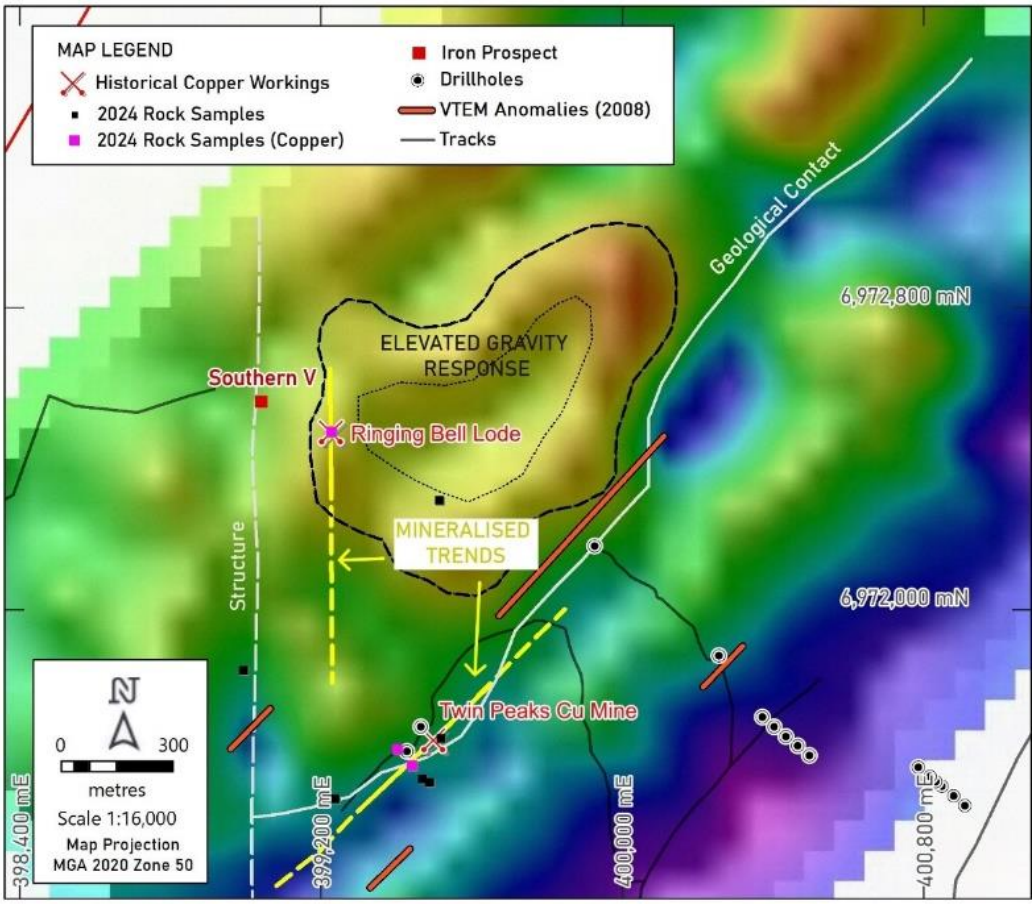


**Figure 4: Twin Peaks Copper Workings – Gravity Anomaly. (Image: Gravity_up50_1VD_nesun_rbw)**

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***Northern Territory***

The Company's tenement holdings within the Northern Territory comprise the Redbank/Wollogorang Projects located in the southeast McArthur Basin and the Finniss River Critical Minerals Project located 70 kilometres southwest of Darwin.

***SE McArthur Basin (Redbank and Wollogorang Projects)***

In the previous quarter, the Company entered into an exclusive option agreement with formally TSX-V-listed, now ASX-listed Golden Horse Minerals Limited over tenements comprising the Redbank and Wollogorang Projects (refer to Figure 5); refer to the *Corporate Update Section* above for further details.

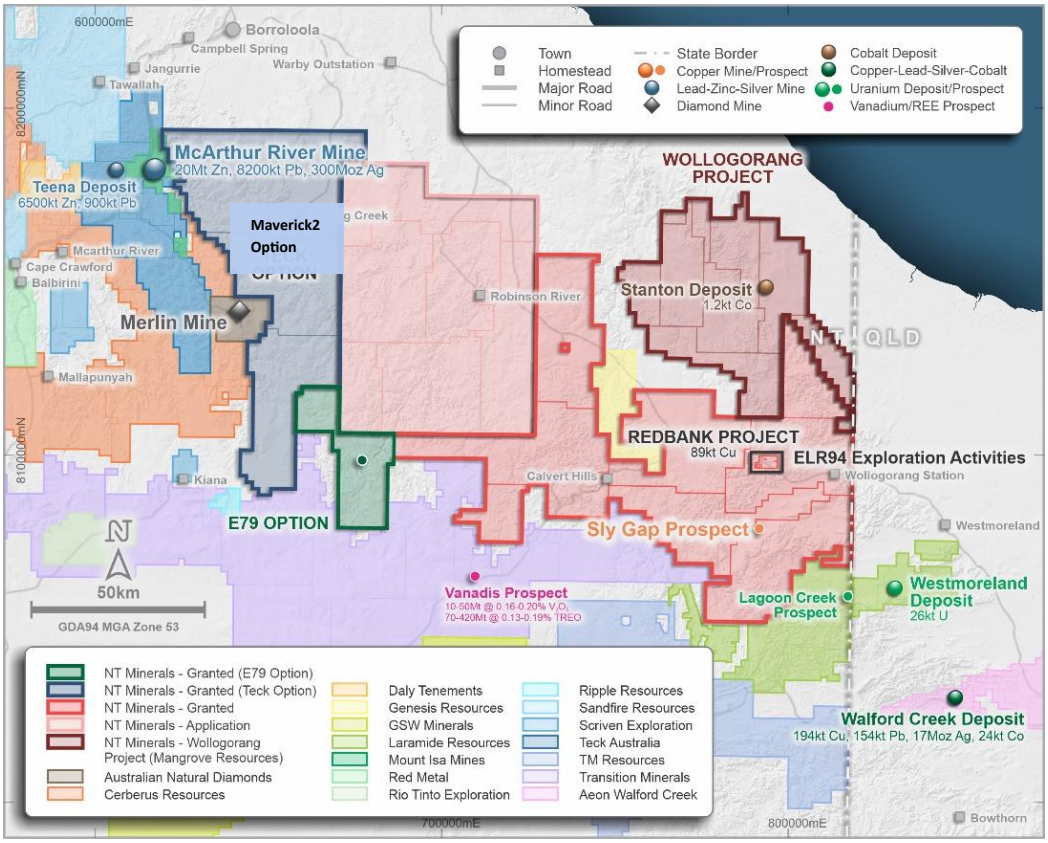


**Figure 5: NT Minerals – SE McArthur Basin Landholdings**

***Finniss River Critical Minerals Project***

The Finniss River Critical Minerals Project comprises four exploration licences covering an area of 2,276.63 km$^2$. Two tenements (EL33160 and EL33161) were granted in late 2022, and the other two tenements (EL33157 and EL33158) are still in application, pending negotiation of a Land Access Agreement with the owners of the Wagait Aboriginal Reserve. With commencement of the wet season during the quarter, no fieldwork was undertaken.

***Cash Position***

NT Minerals' cash at the bank on 31 December 2024 was $2k, with $1.56m still available under the Convertible Note facility.

***Payments to related parties of the entity and their associates***

In accordance with ASX Listing Rule 5.3.5, the Company advises that no payments were made to related parties, as advised in Appendix 5B for the quarter ended 31 December 2024.

***Exploration Expenditure***

In accordance with ASX Listing Rule 5.3.1, the Company spent $236,000 on exploration work during the quarter, which comprised of project management, geological consulting, and tenement rents.

***Mining Production and Development Activities***

In accordance with ASX Listing Rule 5.3.2, there were no substantive mining production and development activities during the quarter.

**-ENDS-**

This announcement was approved and authorised for issue by the Board of NT Minerals.

**Investor Enquiries**

**Mr Rodney Illingworth**
**Managing director**
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## Competent Person's Statement

The information in this report related to Exploration Results or Mineral Resources is based on and fairly represents information reviewed and compiled by Mr Greg Wilson, a Member of the Australian Institute of Mining and Metallurgy. Mr. Wilson is a Consulting Geologist providing services to NT Minerals Limited and is a participant in NT Minerals Limited Incentive Awards Plan. Mr Wilson has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration and to the activity he is undertaking, to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Wilson confirms there is no new or unreported data provided in this report and consents to the inclusion of the matters based on his information in the form and context in which it appears.

All exploration results or mineral resources reported in this quarterly report have previously been released to ASX and are available on the company website at www.ntminerals.com.au. The Company confirms it is not aware of any new information that materially affects the information included in the original announcement. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original announcements.

This Quarterly Report contains information extracted from the following announcements:

| | |
|---|---|
| 23 January 2025 | Twin Peaks Project Update |
| 19 December 2024 | Rock Sampling and Field Investigation at Twin Peaks Project |
| 28 November 2024 | Exclusive Exploration Agreement |
| 25 November 2024 | Second Field Program Planning Finalised at Twin Peaks |
| 31 October 2024 | Emu East Option Agreement |
| 18 October 2024 | Application for quotation of securities – NTM (3) |
| 17 October 2024 | Proposed issue of securities - NTM |
| 17 October 2024 | Cleansing Prospectus |
| 17 October 2024 | Conversion of Convertible Notes |
| 16 October 2024 | Proposed issue of securities - NTM |
| 09 September 2024 | Maiden Field Trip Results from Twin Peaks |
| 04 September 2024 | Option Agreement |
| 08 August 2024 | Maiden Field Program Conducted at Twin Peaks Project |
| 29 July 2024 | Copper, Base Metal, Gold Asset Acquisition – Yilgarn Craton |
| 18 July 2024 | Redbank Copper Project Secures Offtake Agreement |
| 21 May 2024 | Agreement provides a pathway to unlock value |

## Disclaimer

This announcement contains certain forward-looking statements. Forward-looking statements include but are not limited to statements concerning NT Minerals Limited's ('NTM's) planned exploration program and other statements that are not historical facts, including forecasts, production levels and rates, costs, prices, future performance, or potential growth of NTM, industry growth or other trend projections. When used in this announcement, words such as "could", "plan", "estimate", "expect", "intend", "may", "potential", "should", and similar expressions are forward-looking statements. Such statements do not guarantee future performance and involve unknown risks and uncertainties, as well as other factors beyond the control of NTM. Depending on various factors, actual results and developments may differ materially from those expressed or implied by these forward-looking statements. Nothing in this announcement should be construed as either an offer to sell or a solicitation of an offer to buy or sell securities.

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## Appendix 1: Tenement Schedule (ASX Listing Rule 5.3)

***Mining tenements held at the end of the quarter and their location.***

| TENEMENT No. | LOCATION | INTEREST % | HOLDER |
|---|---|---|---|
| MLN634 | Northern Territory | 100 | Redbank Operations Pty Ltd[1] |
| MLN635 | Northern Territory | 100 | Redbank Operations Pty Ltd[1] |
| ELR94 | Northern Territory | 100 | Redbank Operations Pty Ltd[1] |
| EL31316 | Northern Territory | 100 | Redbank Operations Pty Ltd[1] |
| EL32715 | Northern Territory | 100 | Redbank Operations Pty Ltd[1] |
| EL24654 | Northern Territory | 100 | Redbank Operations Pty Ltd[1] |
| EL32323 | Northern Territory | 100 | Redbank Operations Pty Ltd[1] |
| EL32324 | Northern Territory | 100 | Redbank Operations Pty Ltd[1] |
| EL32325 | Northern Territory | 100 | Redbank Operations Pty Ltd[1] |
| EL31236 | Northern Territory | 100 | Redbank Operations Pty Ltd[1] |
| EL31237 | Northern Territory | 100 | Redbank Operations Pty Ltd[1] |
| EL32460 | Northern Territory | 100 | Redbank Operations Pty Ltd[1] |
| EL32461 | Northern Territory | 100 | Redbank Operations Pty Ltd[1] |
| EL32462 | Northern Territory | 100 | Redbank Operations Pty Ltd[1] |
| EL32463 | Northern Territory | 100 | Redbank Operations Pty Ltd[1] |
| EL32464 | Northern Territory | 100 | Redbank Operations Pty Ltd[1] |
| EL32465 | Northern Territory | 100 | Redbank Operations Pty Ltd[1] |
| EL32466 | Northern Territory | 100 | Redbank Operations Pty Ltd[1] |
| EL32467 | Northern Territory | 100 | Redbank Operations Pty Ltd[1] |
| EL32468 | Northern Territory | 100 | Redbank Operations Pty Ltd[1] |
| EL32469 | Northern Territory | 100 | Redbank Operations Pty Ltd[1] |
| EL32470 | Northern Territory | 100 | Redbank Operations Pty Ltd[1] |
| EL32471 | Northern Territory | 100 | Redbank Operations Pty Ltd[1] |
| EL32807 | Northern Territory | 100 | Redbank Operations Pty Ltd[1] |
| EL32873 | Northern Territory | 100 | Redbank Operations Pty Ltd[1] |
| EL30496 | Northern Territory | 100 | Mangrove Resources Pty Ltd[1] |
| EL30590 | Northern Territory | 100 | Mangrove Resources Pty Ltd[1] |
| EL31272 | Northern Territory | 100 | Mangrove Resources Pty Ltd[1] |
| EL31546 | Northern Territory | 100 | Mangrove Resources Pty Ltd[1] |
| EL31548 | Northern Territory | 100 | Mangrove Resources Pty Ltd[1] |
| EL31549 | Northern Territory | 100 | Mangrove Resources Pty Ltd[1] |
| EL31550 | Northern Territory | 100 | Mangrove Resources Pty Ltd[1] |
| ELA33157 | Northern Territory | 100 | Strategic Exploration Pty Ltd[1] |
| ELA33158 | Northern Territory | 100 | Strategic Exploration Pty Ltd[1] |
| EL33160 | Northern Territory | 100 | Strategic Exploration Pty Ltd[1] |
| EL33161 | Northern Territory | 100 | Strategic Exploration Pty Ltd[1] |
| EL6321 | South Australia | 100 | NT Minerals Ltd [2] |

| TENEMENT No. | LOCATION | INTEREST % | HOLDER |
|---|---|---|---|
| EL6321 | South Australia | 100 | NT Minerals Ltd [2] |
| M59/768 | Western Australia | Refer Note 3 | 10M Pty Ltd |
| EL59/2408 | Western Australia | Refer Note 3 | 10M Pty Ltd |
| ELA59/2871 | Western Australia | Refer Note 3 | 10M Pty Ltd |
| L59/202 | Western Australia | Refer Note 3 | 10M Pty Ltd |

**Note 1**: Redbank Operations Pty Ltd, Mangrove Resources Pty Ltd and Strategic Exploration Pty Ltd are wholly owned subsidiaries of NT Minerals Limited.

**Note 2**: Millers Creek Project (50%) – Private company Bluetop Pty Ltd withdrew from the JV, NTM regained 100% interest in the tenements which NTM has started the process of surrendering.

**Note 3**: NT Minerals Limited has an exclusive term, initial 12-month period, extendable at NT Minerals option, the rights to all minerals discovered during exploration (excluding Fe-ore on M59/768).

***Mining tenements acquired during the quarter and their location***

Nil

***Mining tenements disposed of during the quarter and their location***

South Australia – EL6247 and EL6321 (Millers Creek Project)

***The beneficial percentage of interests held in farm-in or farm-out agreements at the end of the quarter***

Mountain Home (EL32470) optioned to E79 Gold Mines Limited.

Redbank and Wollogorang Projects optioned to Golden Horse Minerals Limited.

Emu East Project (EL32464, EL32465, EL32466, EL32467) optioned to Maverick2 Pty Ltd.

***The beneficial percentage interests in farm-in or farm-out agreements acquired or disposed of during the quarter***

Emu East Project (EL32464, EL32465, EL32466, EL32467): optioned to Maverick2 Pty Ltd.

## Summary of Expenditure per Project during the Quarter

| Project | Expenditure $'000 |
|---|---|
| Sandy Flat Project | 0 |
| Redbank Project | 171 |
| Wollogorang Project | 2 |
| Finniss River Critical Minerals Project | 37 |
| Twin Peaks Project | 72 |
| Millers Creek Project | 2 |
| **Total** | **284** |

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