

Wednesday, 31 January 2024

Activities Report for the Quarter Ended 31 December 2023

NT Minerals Limited (ASX: NTM) ('NT Minerals', 'NTM' or 'the Company') is pleased to provide the following review of activities for the three months ending 31 December 2023.

Highlights:

- ✓ Finalised the acquisition of the Wollongorang Project
- ✓ Teck Australia Pty Ltd signs option to acquire 4 tenements from NT Minerals.
- ✓ Finnis River Critical Minerals Project due diligence completed and Independent Experts Report and Valuation commissioned
- ✓ Mountain Home Prospect, geological review identified the following key features:
 - Mineralisation identified in rock chips, >1% Cu and up to 1.31 g/t Au, over a 150 metres length of strike.
 - Gold associated with high grade copper mineralisation.
 - Mineralisation coincident with an interpreted +5-kilometre-long structure.
 - Multiple structures interpreted from satellite imagery with +10 kilometres of cumulative strike.
- ✓ ELR94
 - soil geochemical sampling record values up to 600.7 ppm Cu, 598.3 ppm Cu and 484.5 ppm Cu.
 - strong copper anomalism recorded across five targets identified from gravity, geophysical re-processing – ACM_{MAG} modelling and historical surface geochemical sampling.
 - Assays pending for 54 soil samples across an additional four targets.
- ✓ 2024 field season program being finalised, including 8-10 RC drill targets within ELR94
- ✓ Continued review of potential strategic/critical minerals green/brownfields projects that meet disciplined criteria
- ✓ Private Placement Completed
- ✓ First drawdown of Convertible Notes

REDBANK PROJECT, NORTHERN TERRITORY

The Redbank Project is located in the southeast McArthur Basin and extends from the Northern Territory/Queensland border north-west to Glencore’s McArthur Mine (see Figure 1). NT Minerals Limited through its 100% subsidiaries Redbank Operations Pty Ltd and the recently acquired Mangrove Resources Pty Ltd (Wollogorang Project), now holds granted and in-application tenements totalling 16,988 km² (less tenement reductions post quarter end) with a 100% interest in this highly strategic and prospective location (refer Figure 1).

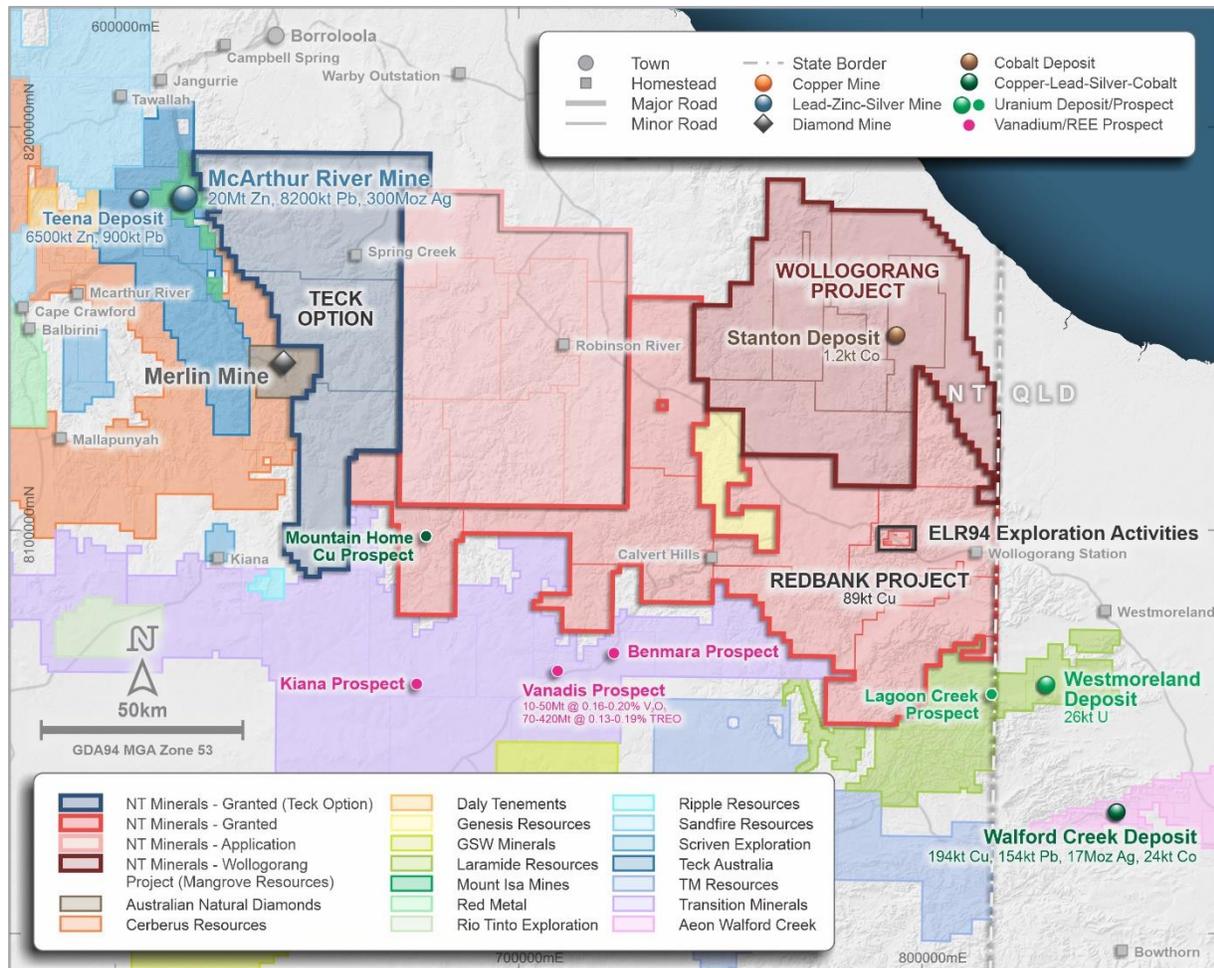


Figure 1. NT Minerals Tenement Holdings in the Southern McArthur Basin.

The Company continues to review and enhance the extensive database which it holds for the Redbank Project and surrounding areas advancing its understanding of the project at both a prospect and regional scale.

- **2024 Field Season Program**

Work programs for the 2024 field season are currently being finalised with planning activities targeting reconnaissance field programs at the Mountain Home and Copperado Prospects along with reconnaissance programs across the Wollogorang Project. Dedicated RC drill programs will evaluate 8 – 10 target areas on tenement ELR94, these targets have been identified through results achieved from the recently reported geophysical and geochemical programs.

The 2024 field season program will be finalised during the current quarter.

- **ELR94**

The tenement has been the subject of significant exploration activities, geochemical, geophysical with majority of drilling focussed on the seven known mineralised pipes. NTM continues to review this historical data and where appropriate supplement with new concepts or techniques.

During the quarter, field activities included targeted detailed (100m x 100m) soil sampling across seventeen targets, these targets were selected through the application of three target generation concepts to foundation datasets and tested areas not targeted by previous explorers or to confirm historical soil geochemical anomalism:

- 1) Targets identified from geophysical review of gravity data and specifically areas of low gravity response, T01 -T28, (ASX:NTM 26th April 2023),
- 2) Targets identified from reprocessing of geophysical datasets by Archimedes Consulting, AT1 – AT21, (ASX:NTM 24th October 2023),
- 3) Targets identified from broad regional based soil geochemistry program completed in 2021 and historical surface geochemistry programs.

Subsequent to the end of the quarter, the Company released results from this sampling program across 13 target areas with strong anomalism recorded across five targets identified from gravity (T17, T24, T25), geophysical re-processing – ACM_{MAG} modelling (AT18) and surface geochemical sampling (RN_North) with values up to 600.7 ppm Cu, 598.3 ppm Cu and 484.5 ppm Cu. Results for an additional 54 samples from this program are pending.

Importantly this program provided supplementary multi-element data with results recording elevated pathfinder element responses (Bismuth > 0.5ppm, Molybdenum > 2ppm, Antimony > 2ppm, Thallium > 1ppm) which provide further support for copper mineralisation potential across each designated target.

A summary of the targeting features and geochemical responses for each designated target are provided in Table 1 and location of results shown in Figure 2.

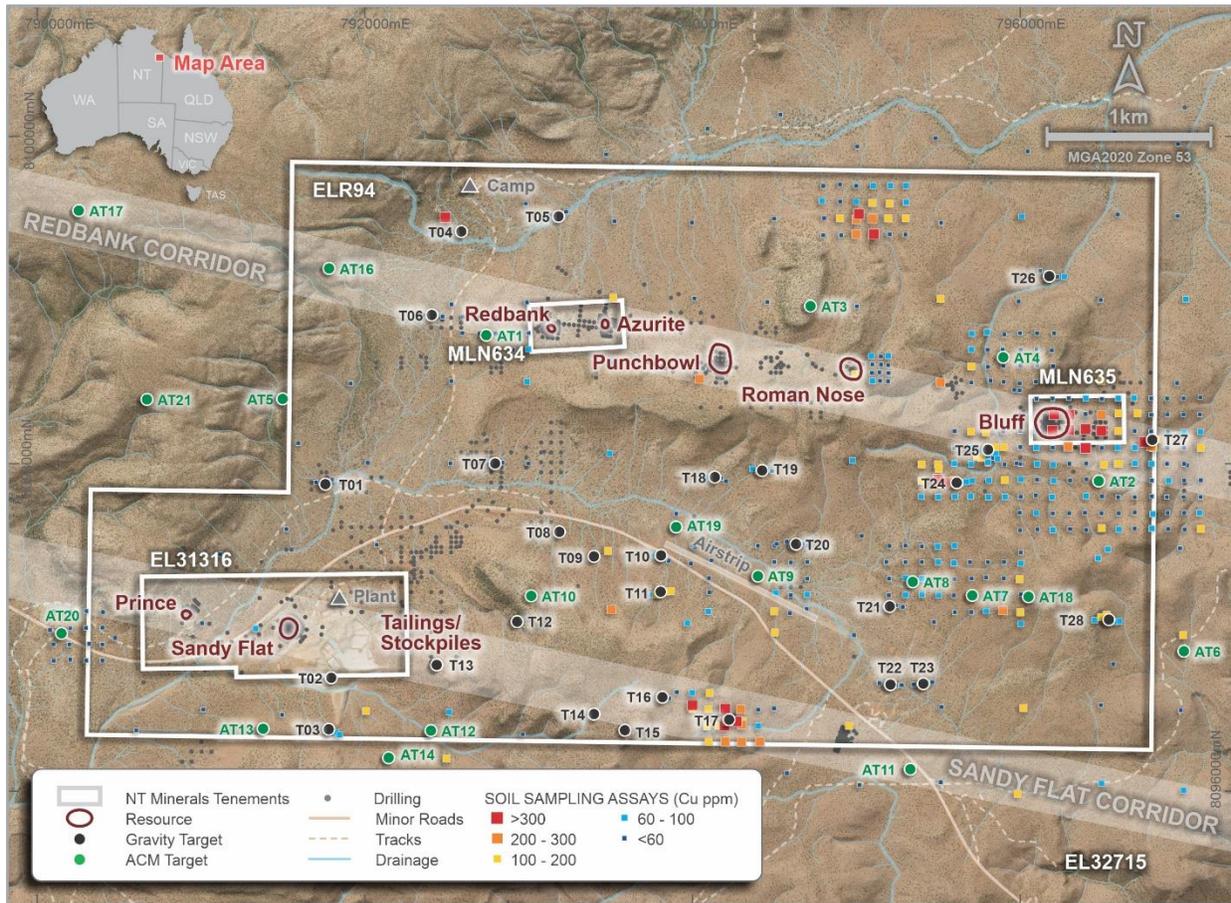


Figure 2: ELR94 – Geophysical Target Locations, Gravity (T01-T28) and ACM_{MAG} Model (AT1-AT21) with 2023 Soil Geochemical Sampling Program.

During the quarter, the Company re-processed aeromagnetic datasets over ELR94 utilising Automatic Curve Matching (“ACM” - a proprietary geophysical processing technique developed for the petroleum industry). The ACM technique utilises special input parameters and filters designed to analyse anomalies arising from magnetic bodies located within the top 2 km of the crust using the high to medium frequency component of Total Magnetic Intensity (TMI) and vertical gradient of TMI. This procedure allows the rock magnetism at different depths to be imaged and clusters of magnetic sources to be mapped which could represent features and/or structural elements such as “pipe” like breccia zones observed at Redbank. Results from the ACM_{MAG} Modelling confirmed the technique can be applied to the known mineralised breccia pipes, identifying areas of higher magnetic susceptibility adjacent to the pipes and extending well below the current levels of drilling, from the ACM_{MAG} Model, 21 areas of interest (AT1 – AT21) have been identified (ASX:NTM 24th October 2023) complementing the 28 gravity targets.

Table 1: ELR94 Selected Exploration Targets – Geochemical and Geophysical Features Summary.

Target ID	Historical Geochem	Geophysical Signature	2023 Geochem Response (Max Values)				
	Max Cu Value		Cu	Bi	Mo	Sb	Tl
RN_Exten	149		84.9	1.16	1.30	2.32	0.79
RN_North	470		598.3	2.07	1.64	1.57	0.72
AT1	Not Sampled	ACM _{mag} Model - prominent "pipe" shaped feature	67.0	0.61	1.53	2.38	0.30
AT4	88	Gravity Low, "pipe" shaped feature in ACM _{mag} Model	134.8	0.86	1.11	2.97	1.35
AT7	Not Sampled	AT7 & AT8 are located close to each other, form prominent semi-vertical "pipe" shaped features in ACM _{mag} Model	86.7	0.37	1.45	2.74	0.77
AT8	Not Sampled	As Above	83.8	0.52	1.19	2.55	0.55
AT9 (Partial Results)	80	Prominent vertical feature in ACM _{mag} Model	114.9	0.39	1.83	1.90	0.43
AT18	Not Sampled	"pipe" shaped feature in ACM _{mag} Model	245.3	0.58	1.79	2.76	1.22
AT19	60	"pipe" shaped feature in ACM _{mag} Model	46.0	0.30	1.04	1.79	0.21
AT20	Not Sampled	"pipe" shaped feature in ACM _{mag} Model	21.3	0.25	1.40	1.06	0.33
T08	100	Gravity Low, Magnetic Low, prominent vertical feature in ACM _{mag} Model		Assays	Pending		
T10	230	Gravity Low, Magnetic Low, prominent vertical feature in ACM _{mag} Model		Assays	Pending		
T11 (Partial Results)	230	Weak gravity response, Magnetic Low, in ACM _{mag} Model no distinct separation from T10 target	69.4	0.70	1.15	3.46	0.43
T17	345	Gravity Low, Magnetic Low, no observed feature feature in ACM _{mag} Model.	600.7	1.72	2.48	3.63	0.92
T20	50	Gravity Low, prominent vertical feature in ACM _{mag} Model	56.6	0.31	1.34	2.02	0.56
T24	360	Weak gravity response, Magnetic Low, four "pipe" like features observed in ACM _{mag} Model within gravity low	307.8	1.36	1.69	4.19	1.41
T25	420	Broad Gravity Low, "pipe" like feature in ACM _{mag} Model	128.2	1.28	1.69	2.41	0.75

The Company cross-referenced the ACM_{MAG} model with the previous gravity targeting and noted gravity target T11 displays a strong magnetic susceptibility response (Figure 3). A reconnaissance soil traverse across this target reported moderate copper anomalism (~100 ppm), moderate Bi (0.3 ppm) and high Sb (2 to 3.5 ppm) responses.

The Company is waiting on results from the detailed (100m x 100m) soil sampling program completed during the quarter across this interesting and prospective target.

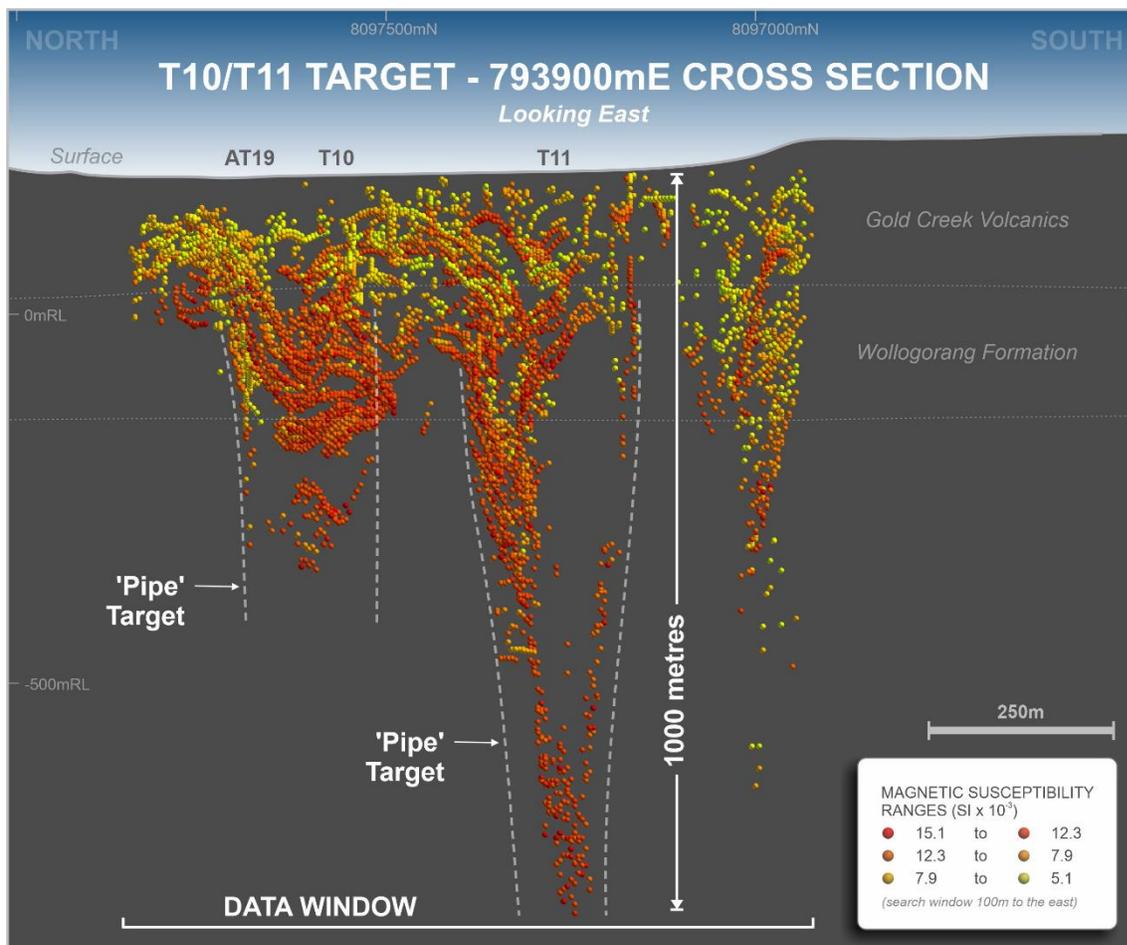


Figure 3. Target T10/T11/AT19 – North/South Oriented Cross Section.

- Regional**

In addition to the field activities on ELR94, NTM also conducted regional based sampling traverses across several areas of interest, results for this work have yet to be received and will be reported as they are received and compiled.
- Mountain Home Prospect**

During the quarter, the Company completed a geological review over the Mountain Home prospect. This prospect is located in the Redbank West group of tenements with previous activities reported by NTM comprising a helicopter supported reconnaissance sampling program including rock chip sampling and broad spaced soil sampling (2km x 500m) along seven traverses (refer ASX:RCP 3 March 2022). Rock chip sampling (10 samples) along a 150m trend of surface workings/pittings returned assays of **32.73% Cu, 25.20% Cu, 15.69% Cu and 9.81% Cu with associated gold values up to 1.31 g/t Au**, refer Figure 4 and 5.

Importantly, the review identified and highlighted key features in the Mountain Home area which have not been observed or documented elsewhere within the McArthur Basin, these include:

- Mineralisation hosted within the McDermott Formation, a unit stratigraphically lower than the Gold Creek Volcanics which is the known host of breccia pipe mineralisation at Redbank.
- **Gold** associated with high grade copper mineralisation.
- High grade **copper-gold** mineralisation identified along a 150 metre trend of pittings/workings coinciding with a +5 km long structure interpreted from satellite imagery (white dashed line in Figure 6).
- Mineralisation associated with mappable structure, in particular steep dipping shear hosted mineralisation clearly cross-cutting stratigraphy.
- Multiple similar oriented structures interpreted from satellite imagery (black dashed lines in Figure 6) with + 10 kilometres of cumulative strike.
- NTM considers the high levels of the pathfinder element Bismuth (Bi), maximum value of 804 ppm in rock chip sample 21RRX0179, significant as bismuth is commonly associated with **gold mineralisation systems**.



Figure 4: Mountain Home Prospect - Rock Chip Sample 21RRX0179, 32.73% Cu and 0.16 g/t Au.



Figure 5: Mountain Home Prospect - Rock Chip Sample 21RRX0188, 9.81% Cu and 1.31 g/t Au.

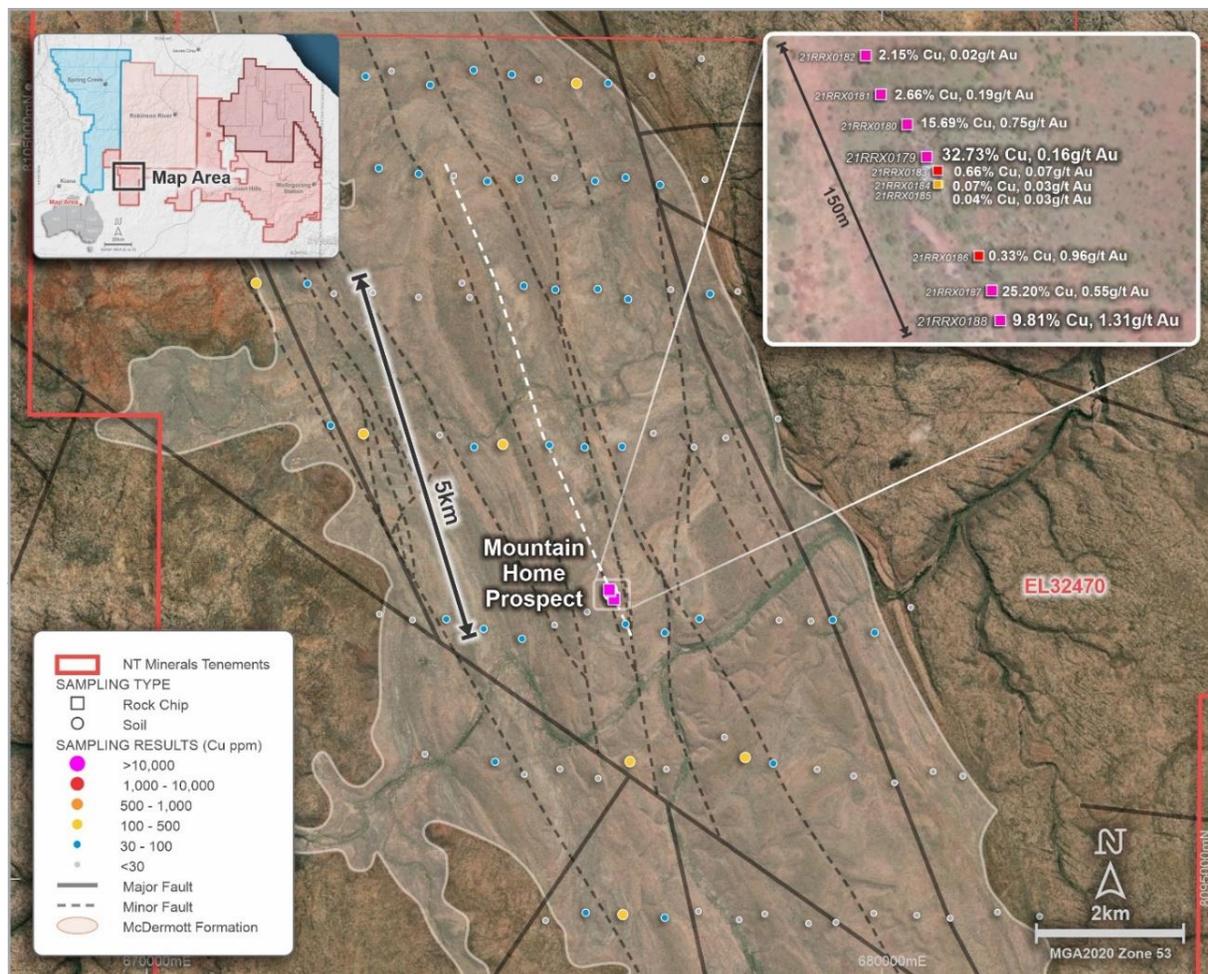


Figure 6: Mountain Home Prospect, with rock chip results and soil geochemical traverses.

- **Garawa Applications**

Six tenements in the Redbank Project remain to be granted within the Garawa Aboriginal Land Trust (GALT) land. The Northern Land Council (NLC) and the Company agreed to extend the negotiation period for grant of the tenements to 31 October 2025. All parties will endeavour to convene a meeting in Q2C24 to advance negotiations.

WOLLOGORANG PROJECT, NORTHERN TERRITORY

During the quarter, the Company finalised the acquisition of the Wollogorang Project via its acquisition of 100% of the issued capital of Mangrove Resources Pty Ltd from Resolution Minerals Ltd.

The project comprised seven granted exploration licences (Figure 7) covering an area of 3,803 km² complementing the Company's Redbank Project and its strategic development of copper and critical minerals projects.

Subsequent to the end of the quarter the Company reviewed the Wologorang Project and reduced the tenements by some 50%, retaining the most prospective areas.

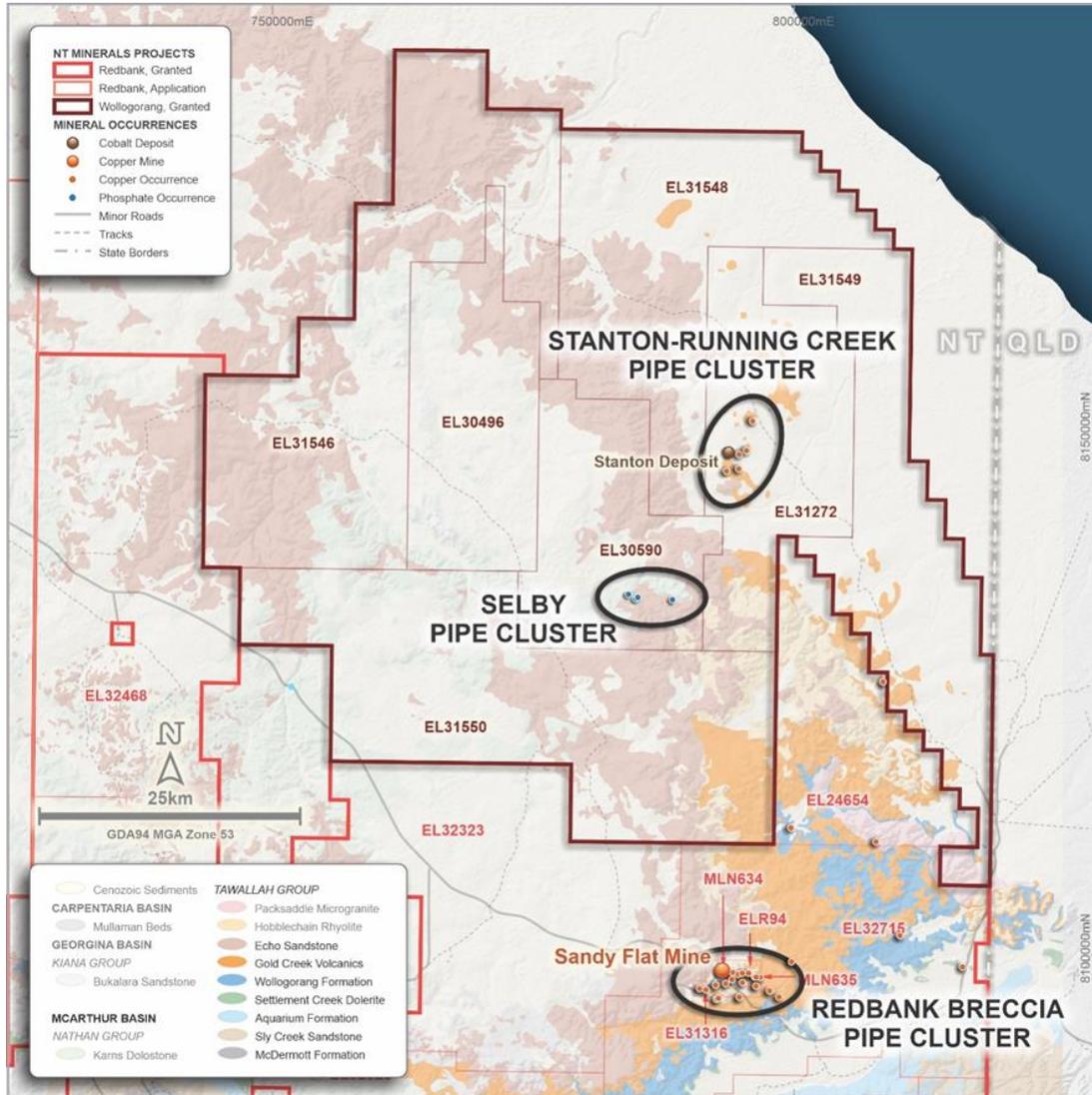


Figure 7. Wologorang / Redbank Projects – Known Breccia Clusters

Historical exploration within the project area has identified numerous prospective areas, with focus on two areas or pipe clusters the Stanton – Running Creek Cluster and the Selby Pipe Cluster (refer Figure 8). Prospects at both clusters include Stanton (Cobalt, Nickel, Copper), Running Creek (Copper Cobalt), Gregjo (Copper, Cobalt), Felix (Copper) and Selby (Phosphate, Uranium, Copper, REE), other prospects include Karns (Cobalt, Uranium).

The Company continues to review and develop exploration strategies which will inform future exploration campaigns.

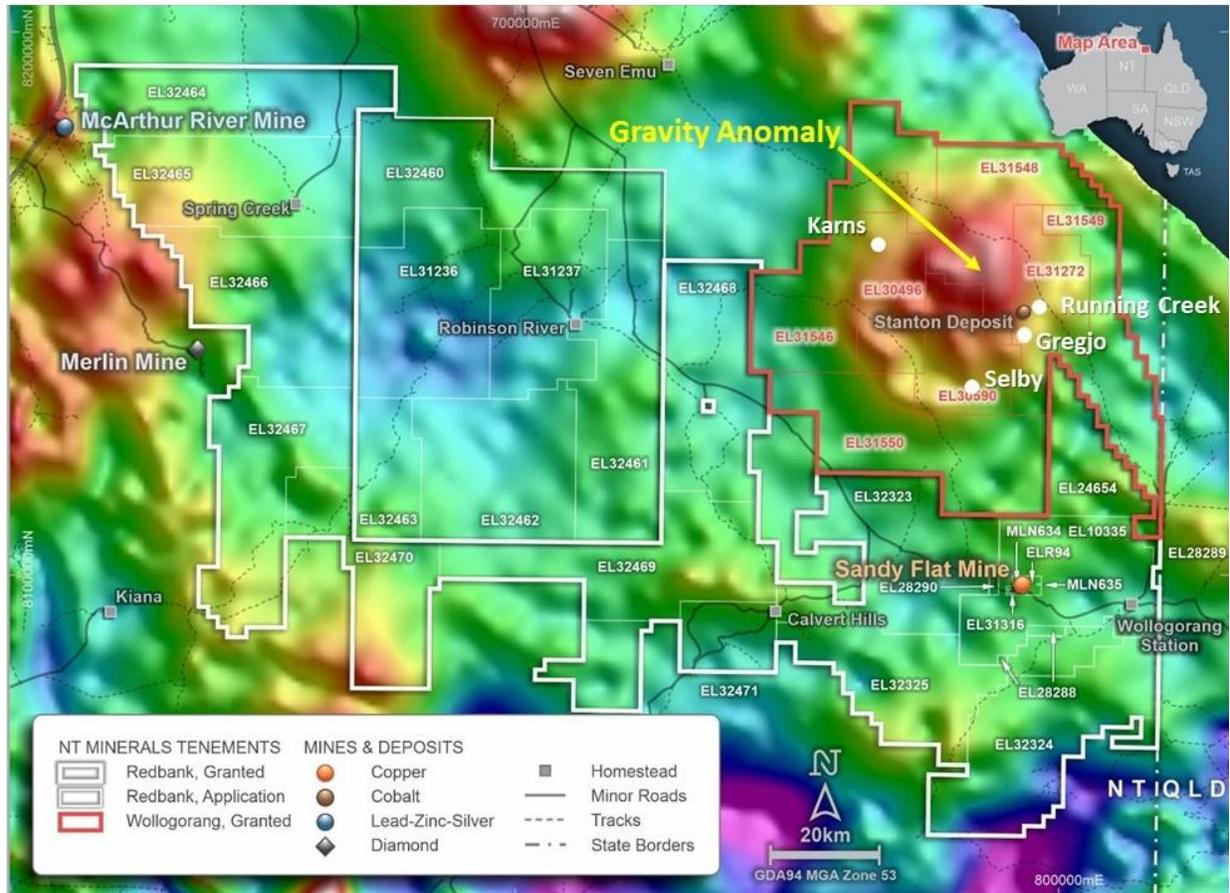


Figure 8. Regional Bouguer Gravity Image showing significant gravity high and location of prospects.

FINNIS RIVER CRITICAL MINERALS PROJECT

The Finnis River Critical Minerals Project (“FRCMP”) comprises four exploration licences covering an area of 2,276.63 square kilometres (Figure 1), two tenements (EL33160 and EL33161) were granted in late 2022 with the other two tenements (EL33157 and EL33158) still in application, pending negotiation of a Land Access Agreement with the owners of the Wagait Aboriginal Reserve.

As previously announced, the Company completed satisfactory due diligence on Strategic Minerals Pty Ltd and the Finnis River Critical Minerals Project. The Company has engaged BDO to prepare an Independent Experts Report (“IER”), including an independent valuation.

The IER has been completed and receipt of a final, signed version from BDO is imminent. Once finalised, the IER will form part of the Notice of Meeting pursuant to which the Company will seek shareholder approval of the acquisition. It is intended that the extraordinary general meeting will be held during Q1C24.

The Company intends to release the IER, together with the Notice of Meeting, once approved by the ASX and ASIC.

CORPORATE UPDATE

Cash Position

NT Minerals' cash at bank at 31 December 2023 was \$158,000.

The Company drew down the first tranche of the Convertible Notes in late December 2023, with further drawdown notices issued for \$1,100,000 in Q3F24.

Payments to related parties of the entity and their associates

In accordance with ASX Listing Rule 5.3.5, the Company advises that the payments to related parties, as advised in the Appendix 5B for the quarter ended 31 December 2023, pertain to Director fees of \$36,000.

Payments to for exploration activities

During the quarter, the Company paid \$294,000 for exploration expenditure which included drilling and associated costs with drilling activities, assay work and various exploration consulting fees. There were no substantive mining production and development activities during the Quarter.

-ENDS-

For further information please contact:

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

Competent Person's Statement

The information in this release that relates to Exploration Results or Mineral Resources is based on, and fairly represents, information 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. 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 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 to be viewed on the Company website 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:

15 January 2024	Exploration Update – ELR94
14 December 2023	Interpreted +5 km Long Mineralised Structure at Redbank West – Mountain Home Prospect
2 November 2023	Option to Acquire Redbank West Tenure Signed
24 October 2023	Soil Geochemistry results confirm Gravity Targets
17 October 2023	RML: Wollogorang Project Sale Complete
8 September 2023	NT Minerals to Acquire the Wollogorang Project, NT – Updated
29 August 2023	Acquisition of Finniss River Critical Minerals Project
21 July 2023	NTM enters into Millers Creek Project Joint Venture
19 July 2023	NTM to Acquire Greenfields Critical Minerals Project
26 April 2023	NT Minerals Activities Update

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, the words such as "could", "plan", "estimate", "expect", "intend", "may", "potential", "should", and similar expressions are forward-looking statements. Such statements are not a guarantee of future performance and involve unknown risks and uncertainties, as well as other factors which are beyond the control of NTM. Actual results and developments may differ materially from those expressed or implied by these forward-looking statements depending on a variety of factors. Nothing in this announcement should be construed as either an offer to sell or a solicitation of an offer to buy or sell securities.

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	NT	100	Redbank Operations Pty Ltd ¹
MLN635	NT	100	Redbank Operations Pty Ltd ¹
ELR94	NT	100	Redbank Operations Pty Ltd ¹
EL31316	NT	100	Redbank Operations Pty Ltd ¹
EL32715	NT	100	Redbank Operations Pty Ltd ¹
EL24654	NT	100	Redbank Operations Pty Ltd ¹
EL32323	NT	100	Redbank Operations Pty Ltd ¹
EL32324	NT	100	Redbank Operations Pty Ltd ¹
EL32325	NT	100	Redbank Operations Pty Ltd ¹
EL31236	NT	100	Redbank Operations Pty Ltd ¹
EL31237	NT	100	Redbank Operations Pty Ltd ¹
EL32460	NT	100	Redbank Operations Pty Ltd ¹
EL32461	NT	100	Redbank Operations Pty Ltd ¹
EL32462	NT	100	Redbank Operations Pty Ltd ¹
EL32463	NT	100	Redbank Operations Pty Ltd ¹
EL32464	NT	100	Redbank Operations Pty Ltd ¹
EL32465	NT	100	Redbank Operations Pty Ltd ¹
EL32466	NT	100	Redbank Operations Pty Ltd ¹
EL32467	NT	100	Redbank Operations Pty Ltd ¹
EL32468	NT	100	Redbank Operations Pty Ltd ¹
EL32469	NT	100	Redbank Operations Pty Ltd ¹
EL32470	NT	100	Redbank Operations Pty Ltd ¹
EL32471	NT	100	Redbank Operations Pty Ltd ¹
EL32807	NT	100	Redbank Operations Pty Ltd ¹
EL32873	NT	100	Redbank Operations Pty Ltd ¹
EL30496	NT	100	Mangrove Resources Pty Ltd ¹
EL30590	NT	100	Mangrove Resources Pty Ltd ¹
EL31272	NT	100	Mangrove Resources Pty Ltd ¹
EL31546	NT	100	Mangrove Resources Pty Ltd ¹
EL31548	NT	100	Mangrove Resources Pty Ltd ¹
EL31549	NT	100	Mangrove Resources Pty Ltd ¹
EL31550	NT	100	Mangrove Resources Pty Ltd ¹
EL6247	SA	50	NT Minerals Limited
EL6321	SA	50	NT Minerals Limited

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

Mining tenements acquired during the quarter and their location

Northern Territory – Mangrove Resources Pty Ltd (EL30496, EL30590, EL31272, EL31546, EL31548, EL31549, EL31550)

Mining tenements disposed of during the quarter and their location

Nil

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

Millers Creek Project (50%) – joint ventured out to private company Bluetop Pty Ltd.

Redbank West tenements (EL32464, EL32465, EL32466, EL32467) optioned to Teck Australia Pty Ltd.

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

Nil.

Summary of Cash Expenditure per Project during the Quarter

Project	Cash Expenditure \$'000
Sandy Flat Project	-
Redbank Project	252
Wollogorang Project	32
Millers Creek Project	2
Total	286