



**ASX ANNOUNCEMENT**

**23 January 2023**

## **QUARTERLY ACTIVITY REPORT – DECEMBER 2022**

### **HIGHLIGHTS:**

#### **MANAGEMENT**

- A rights issue offers of up to 16,521,407 shares at \$0.13 per share was made on July 18, 2022. All rights issue shares had been issued as of December 31, 2022, raising a total of \$2,147,783 (before costs).
- EPM28038 Maneater Hill diamond drill hole MPD002 (636.2m) & MPD003 (384.7m) diamond drilling completed on 19<sup>th</sup> Nov 2022. Core assay results scheduled in Jan 2023.

#### **MANEATER PEAK POLYMETALLIC BRECCIA PROJECT, DIMBULAH, QLD**

- Successful completion of two diamond drill holes from Pad 1 on Maneater Peak for a total length of drilling of 1020.9m.
- MPD002 drilled to an End-of-Hole (EOH) depth of 477.6m at a dip angle of approximately -77 degrees.
- MPD003 drilled to EOH depth of 543.3m at a dip angle of approximately -60 degrees, shallower than MPD002.
- Both drill holes successfully identified sulfides and have demonstrated significant volume of sulfide-bearing breccias.
- Preliminary results demonstrate higher silver, zinc, copper and gold than previous drilling as expected. Results support that drilling is in the upper part (shallow levels) of the mineralised breccia.
- All core cut, sampled and assayed with final assays for MPD003 due in mid-January.
- The drilling crew were demobilized from the peak on November 20, prior to the beginning of the wet season.

#### **ARCOONA PROJECT, EASTERN GOLDFIELDS, WA**

- Ultrafine geochemical results planned QAQC and analysis completion by end March 2023. Preliminary results plotted and ready for review.

#### **Mt VETTERS PROJECT, EASTERN GOLDFIELDS, WA**

- New remote sensing data and a re-view of existing data have highlighted opportunity for targeting complex gold- and nickel-associated structures and lithologies where there is no previous drilling.

#### **THE NULLARBOR PROJECT WESTERN AUSTRALIA**

- Assays reviewed and released to ASX in December for first Helios diamond hole. No significant copper but demonstrable positive features of IOCG-style of mineralisation identified such as elevated U and depleted Ti in heavily altered and hematite-bearing section.

Copper- and gold-focussed exploration company **Native Mineral Resources Holdings Limited** (ASX: NMR), or (“NMR” or “the Company”), is pleased to provide its quarterly activity report for the three months ended 31 December 2022.

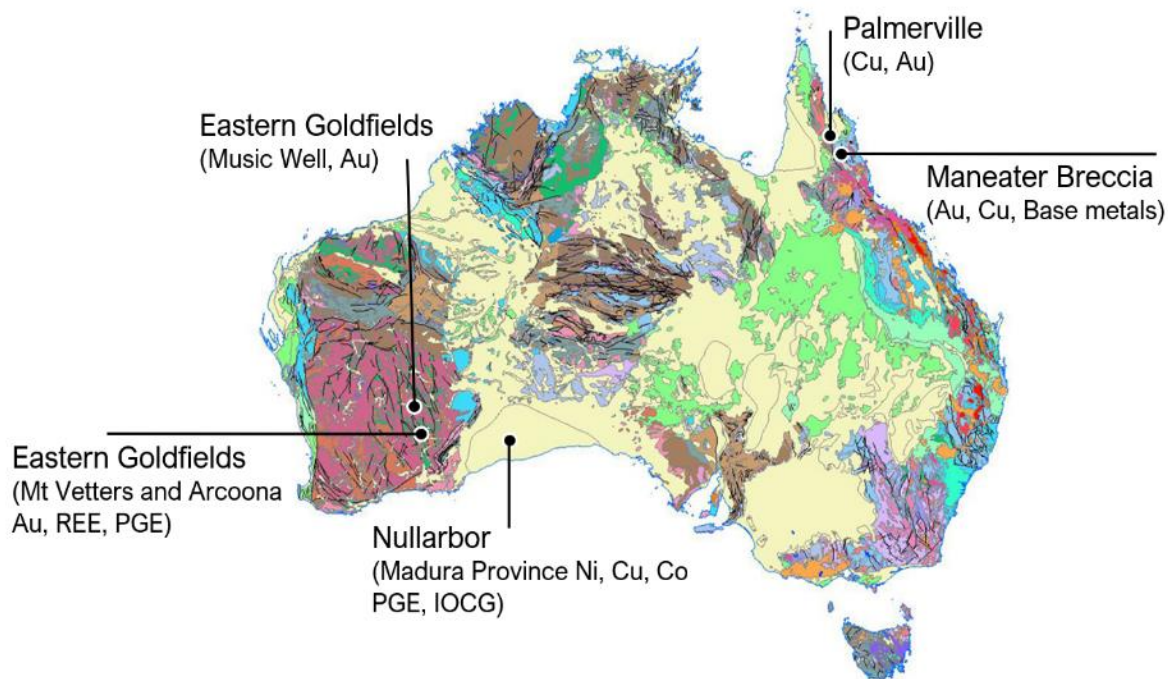
## Management Commentary

Commenting on progress made during the December quarter, NMR’s Managing Director, Blake Cannavo, said:

*“This quarter was another success with the focus has been drill testing the confirmed, polymetallic Maneater Peak Breccia. Two diamond holes, with very different purposes, have both demonstrated the presence of abundant massive, semi-massive and disseminated sulfides over their entire length making this a large and significant target requiring further investigation. Drilling of the initial steep diamond hole was unfortunately terminated before reaching the target depth due to issues that could not be resolved. A second, shallower drill hole was completed to the west which significantly extends the depth and extent, and therefore volume, of the breccia complex. NMR were pleased to see results including higher gold values than previously obtained including 1m @ 2.14g/t Au.*

*In addition to drilling and the positive results being received at Maneater, assays from the first Helios IOCG drill hole were reviewed relative to the geology again with extremely positive results. The geology and assays all support the interpretation that the drill hole intersected the outer part of a large alteration zone associated with an IOCG-style deposit. We are now looking at more detailed geochemistry of the two drill holes to help the team vector towards the potential deposit.”*

## PROJECT OVERVIEW



**Figure 1.** Map of Australia highlighting NMR's three main project areas (Yilgarn, Nullarbor and Palmerville) including the new exploration permit application over the Maneater Hill polymetallic breccia pipe, North Queensland Australia.

## MANEATER HILL, QLD

### Maneater Hill (EPM 28038)

Much of the reporting period has been focussed on the first diamond drilling campaign by NMR at its recently granted Maneater Peak/Maneater Hill polymetallic sulfide breccia project. The mineralised breccia pipe located near Chillagoe in Northern Queensland (**Figure 4**). The tenement is located 100 km west of Cairns in North Queensland. NMR completed the drilling of two diamond drill hole MPD002 and MPD003 in October and November 2022. MPD002 had planned to target the deeper, north-eastern part of the breccia pipe from an existing drill pad (Pad 1), however due to difficulties, the drill hole orientation could not be maintained and the hole was terminated early. In order to utilise the drill pad and infrastructure in place, a second hole oriented to the west was completed at shallower angles (-60) in order to test the western and southwestern extent of the breccia while the company awaited assays on MPD002. Both drill holes were considered successful, and both terminated in what NMR would consider to be mineralised part of the breccia and are therefore open at depth. Based on the structural geometries and the predicted results (proving metal zoning) from both holes, the company has opted to complete a geophysical survey to help pinpoint the deeper part of the interpreted breccia pipe.



**Figure 2.** Photos of sulfides at 185.5m in-filling breccia fragments. Host rocks are altered metasediments. Sulfides include predominantly pyrite and sphalerite. (MPD003 - NQ diameter drill core).

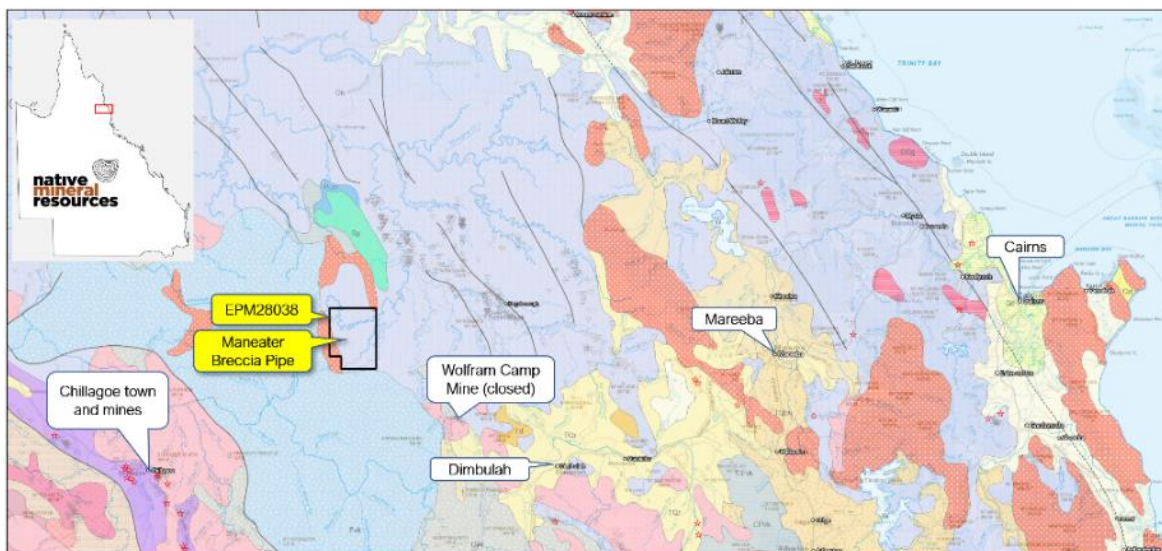




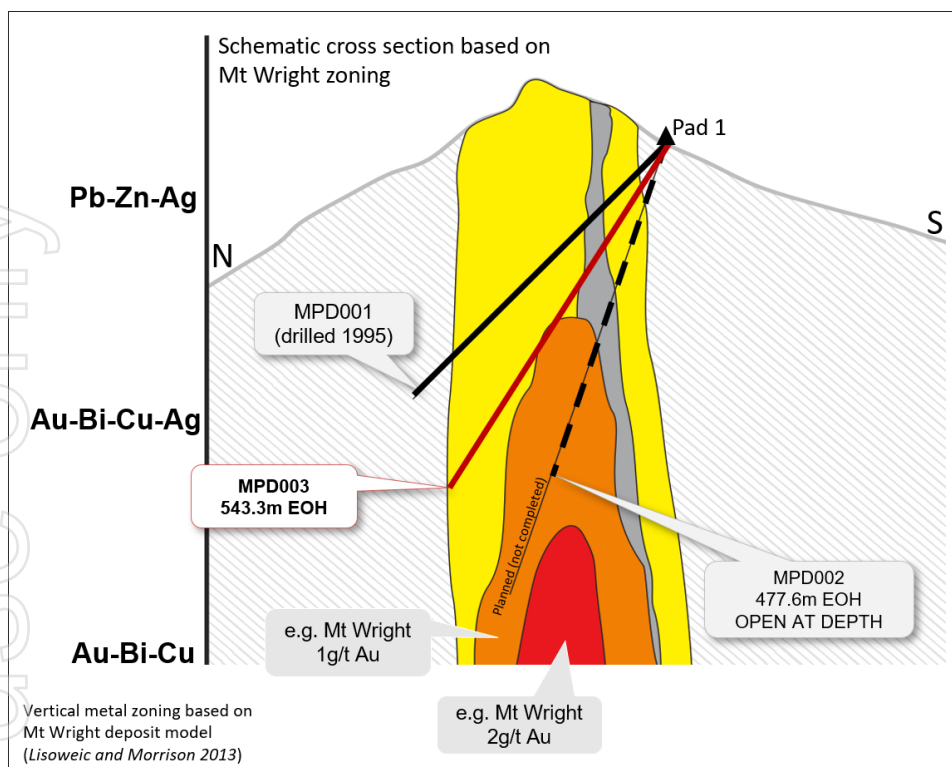
**Figure 3.** Photo of brecciated mudstone (pelite) showing original depositional bedding/layering. The fragments are broken, rotated and the infill space replaced with sulfides (mainly pyrite and sphalerite), quartz and carbonates. MPD002 approx. 284.3m down hole depth. ØHQ drill core.

284-285m (1m) @ **24.8g/t Ag**, 0.3% Pb, 789ppm Sb, 0.54% Zn.

NMR interpreted the model based on the new and updated understanding of metal zoning in breccia pipe systems from Mt Wright Gold Mine whereby Pb- and Zn-rich zone lies at the surface whereas the Au- and Cu-rich mineral zone lies at depth (**Figure 1**). A drilling campaign is being planned to test the deeper parts of the mineralised system that have already been identified by previous exploration.



**Figure 4.** Map showing the location of NMR's Maneater Breccia exploration tenement application EPM28038. The tenement is located in northern Queensland, approximately 100km west of Cairns.



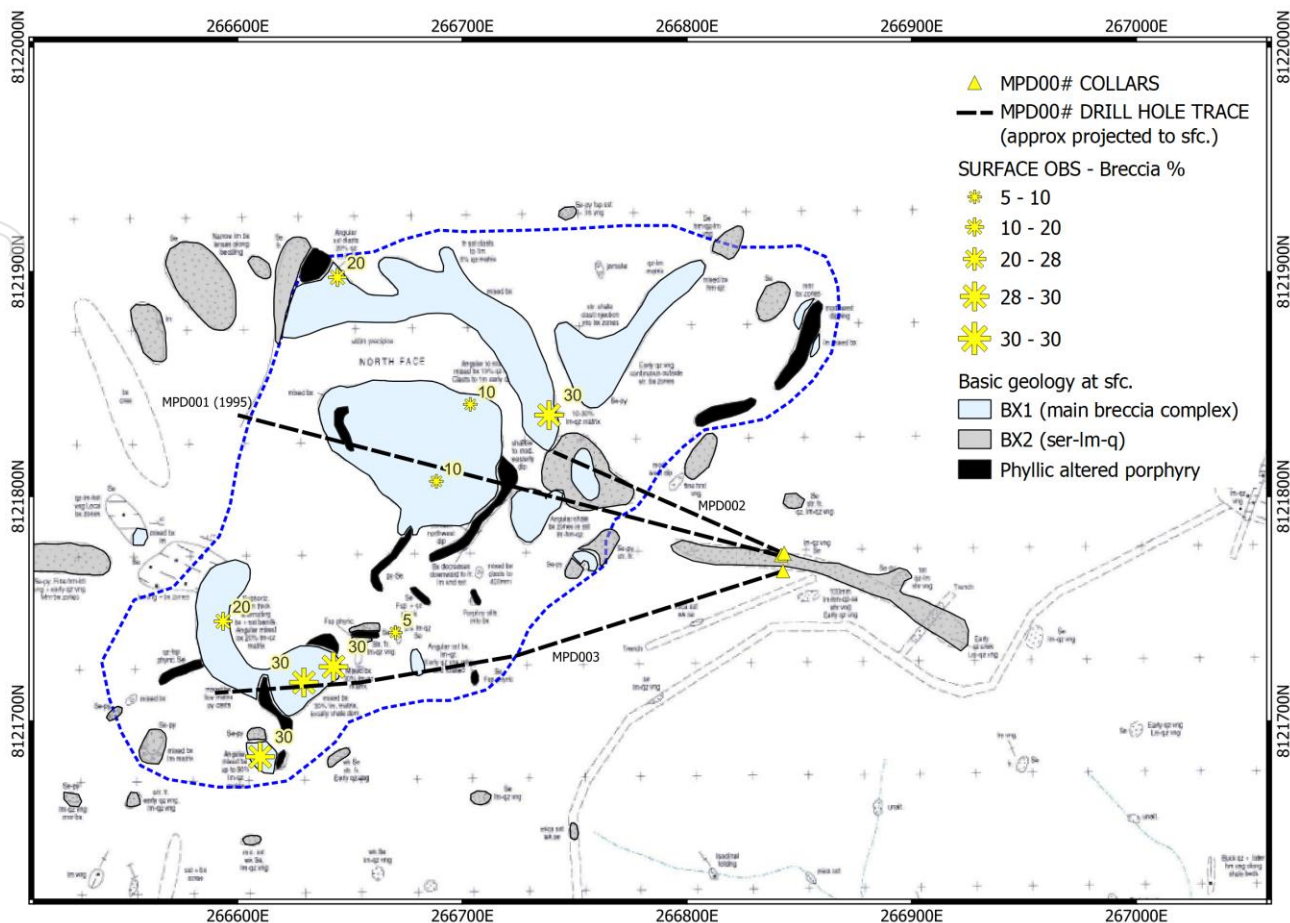
**Figure 5.** Interpreted cross section of the Maneater Breccia derived using the approximate shape, internal zoning and the vertical metal zoning of the Mt Wright gold deposit. Refer to previous ASX announcements for more detail. Figures below for detailed drill paths.

**Note:** Metal zoning is indicated on the left-hand side showing elevated Pb, Zn and Ag at shallower levels of the Mt Wright gold deposit.

	Av grade - MPD003 "SHALLOWER"	Av grade - MPD002 "DEEPER"
Ag (ppm)	<b>5.2</b>	3.9
Zn (ppm)	<b>1236.9</b>	570
Pb (ppm)	<b>532.4</b>	335.6
Au (ppm)	0.25 max	<b>2.14 max</b>
As (ppm)	123.7	<b>171.2</b>
Bi (ppm)	5	<b>8</b>
Cu (ppm)	99.17	<b>126.3</b>
Mo (ppm)	0.4	<b>0.6</b>
Sb (ppm)	125.9	<b>132.8</b>
W (ppm)	2.7	<b>3.9</b>

**Table 1.** The table of results below presents average values (max values for Au) from all drill core assays from MPD002 and MPD003. Results presented in **bold** are the higher of the two sets and demonstrate the proposed vertical metal zonation.

Note: Increase in Ag, Zn and Pb in the shallower-dipping drill hole MPD003 which intersected higher levels of the breccia complex. All elements are consistent with the Mt Wright model of zoned metal abundance.

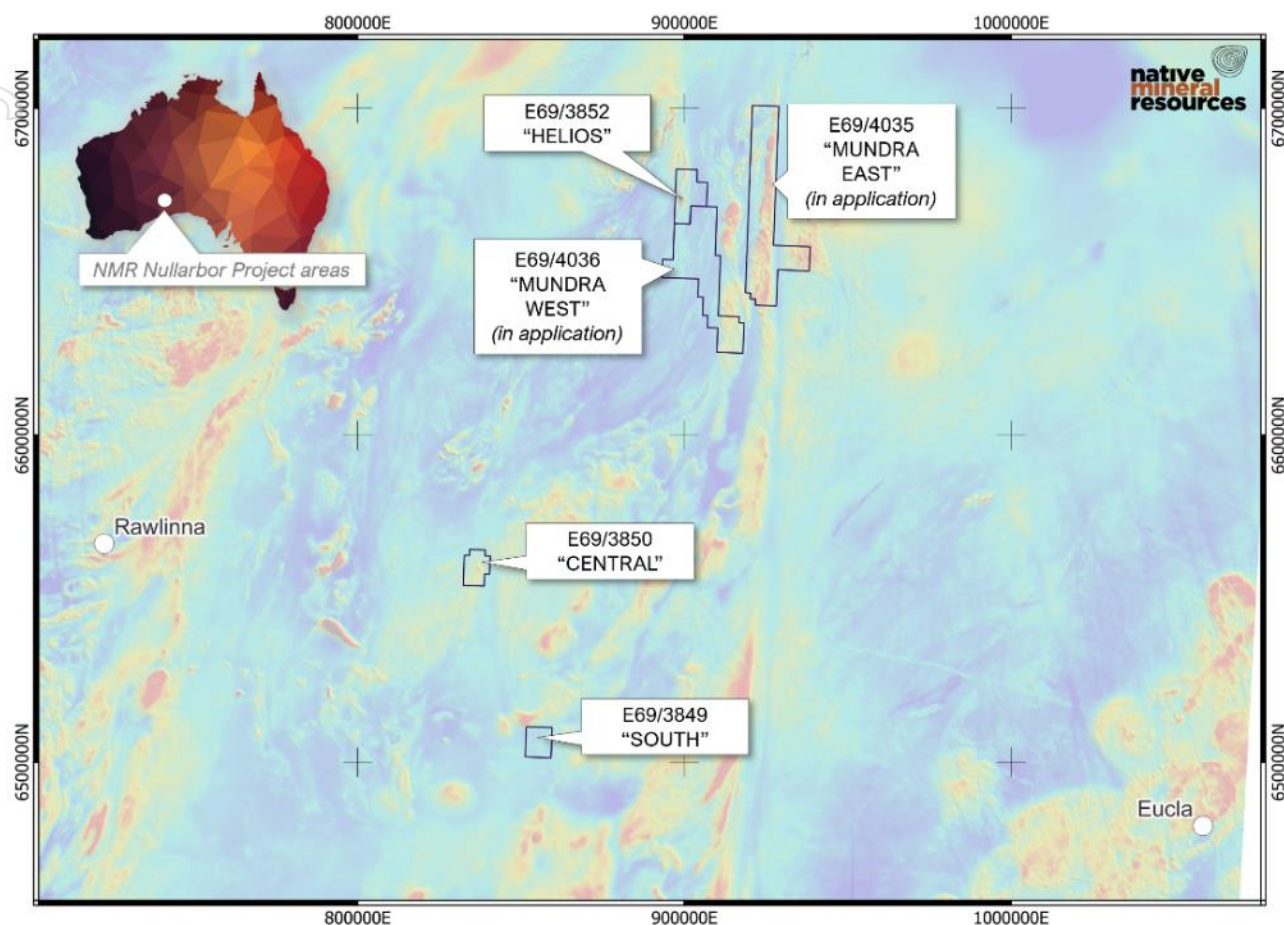


**Figure 6.** Map of the Maneater Breccia Complex (approximate sfc area 46,000m<sup>2</sup>) showing the location of the main breccia units mapped at the surface (BX1) and the heavily altered by less brecciated units surrounding the complex. The location of altered porphyry intrusive is shown, however, the unit occurs as apparently separate dykes and sills with both steep and shallow-dipping contact with the breccias. The location of drill holes MPD001 (1995), MPD002 (NMR) and MPD003(NMR) are shown for reference



## NULLARBOR TENEMENTS, WA

NMR has been granted three (E69/3849, E69/3850 and E69/3852) of the tenements in the Nullarbor region of SE Western Australia (**Figure 7**). The three tenements are located over potential iron-oxide copper-gold (IOCG)-style mineralisation.



**Figure 7.** Map of the western Nullarbor region showing NMR's recently granted tenements (E69/3852, E69/3850 and E69/3849) and new applications Mundra East (E69/4035) and Mundra West (E69/4036). The tenements are located in a prospective area of South-eastern Western Australia surrounded by other major mineral explorers. Map grid is GDA94. Background image is TMI (40m pixels) from DMIRS.

In its maiden drill hole (HELIOS\_DD001), NMR has successfully identified the hematite-rich rocks typically found in close association with IOCG deposits (e.g. **Figure 9**). The basement rocks and targets found on the Nullarbor are all completely buried under cover, and there are no other drill holes for well over 30 kilometres in any direction, so this is a phenomenal result for NMR. The very first hole identified pervasive hematite-sericite-magnetite-pyrite alteration typical of other IOCG deposits such as Olympic Dam and Ernest Henry (refer below for further details). NMR have completed the acquisition and modelling of a drone-based magnetic survey over the central part of the tenement in Q4 2021 and, following these results have completed drill hole Helios\_DD001 in March 2022. The alteration identified in Helios\_DD001 has prompted NMR to move forwards with a second drill hole known as the phase 2 Helios\_DD002. The Helios\_DD002 has been supported by a successful \$220,000 co-funded EIS grant as well as the ground gravity data collected during through the gravity survey in May 2022. Phase 2 Helios\_DD002 was recently completed and is awaiting laboratory assay results.



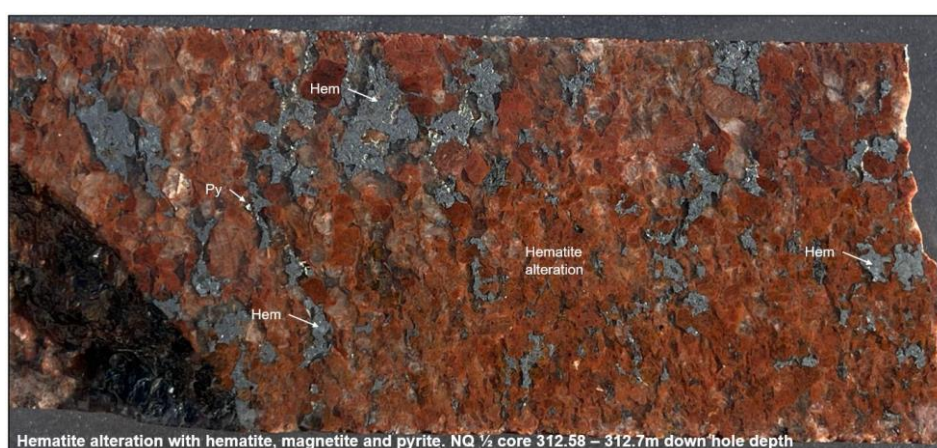
**Figure 8.** Hematite alteration of the igneous host rock, similar to the alteration found around other IOCG deposits in Australia

The southern and central tenement E69/3849 and E69/3850 were acquired to enable NMR to explore two geophysical anomalies identified as potential indicators of IOCG-style mineralisation. The distinctive anomalies identified in the magnetics are within proximity to a distinctive zone of relatively low resistivity identified in a regional Magnetotelluric (MT) geophysical survey. The target on E69/3850 lies in a setting similar to the Olympic Dam Deposit which also lies above relatively low resistivity zones defined in the MT, referred to in the Olympic Dam setting as the “Fingers of God”.

#### E69/3852 Helios target

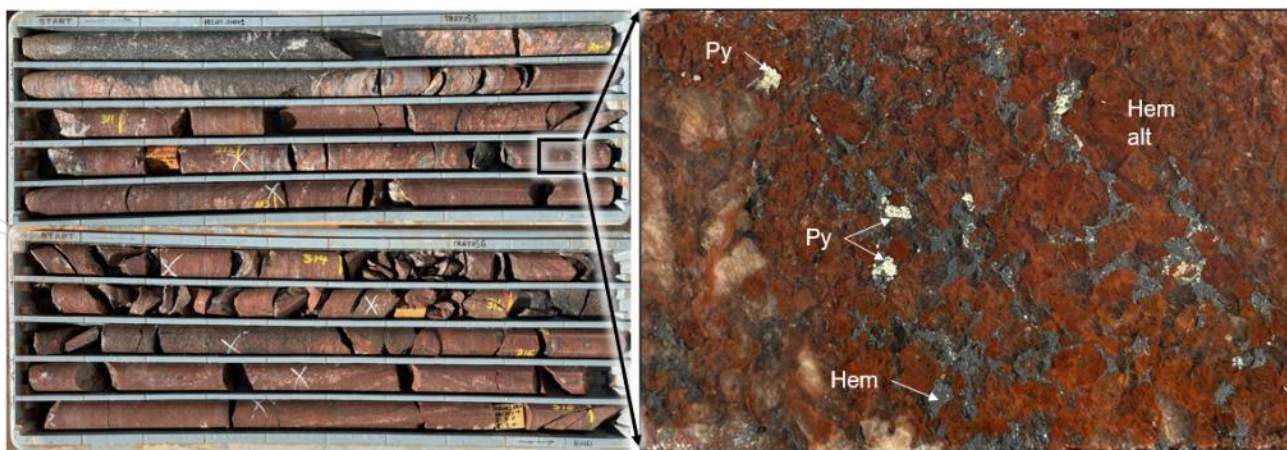
NMR has completed a 500m-long mixed RC and diamond drill hole into the centre of the Helios magnetic target back in March 2022. Based on preliminary observations, NMR has intercepted significant hematite, sericite, magnetite, and pyrite alteration (**Figure 8**), (**Figure 9**). This style of alteration is indicative of, and often found in association with other Iron Oxide Copper Gold (IOCG) deposits in Australia.

This is the first drill hole known to NMR to have encountered significant IOCG-style alteration in the under-explored Madura Province and one of the first possible IOCG-style occurrences in Western Australia. The basement is only 110m below the surface, making this an exciting new area requiring further investigation. Hematite- and magnetite-bearing felsic breccias generally increase in number with depth and hematite alteration also increases with depth until the end of hole (EOH) at 500.9m.



**Figure 9.** Photo of drill core (NQ 1/2 core) from a down-hole depth of 312.58-312.7m showing intensive hematite alteration. All photos are of NQ diamond drill core.

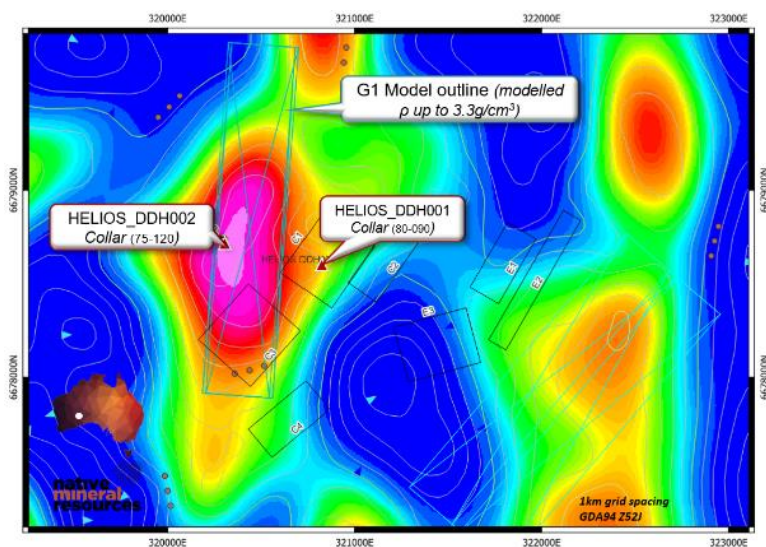




**Figure 10.** Hematite alteration in drill core HELIOS\_DD001. Note the presence of hematite staining of granitic hostrock, hematite in the groundmass and pyrite post-dating hematite. Drill core is NQ. ~312.5m down hole depth.

After the initial drilling campaign at Helios, NMR commissioned a third-party geophysics firm to undertake a ground-based gravity survey. The results revealed a gravity high offset by a few hundred meters to the west of the magnetic high (**Figure 11.**).

This survey will assist in the delineation of areas of increasing density below cover. High-density zones (reflected in elevated gravity measurements) can be indicative of mineralisation at depth. Prior to the drilling of HELIOS DDH001, NMR had already completed a magnetics survey using a drone over the area. The magnetics data was crucial to the planning of drill hole, as the modelling identified a 0.17 SI unit susceptibility target magnetic body. A higher magnetic body (0.2 SI) modelled at greater depth was not reached by drilling.



**Figure 11.** Map showing the location of drill collar Helios\_DD002 superimposed on gravity inversion - 400m RL level depth slices. Also shown are the modelled magnetic bodies C1 and C2 with the drill hole aimed at the center of the gravity high. Grid is UTM Z52J.

NMR considers the combination of magnetics and gravity to be crucial information used for refining and guiding future drilling. A \$220,000 Exploration Incentive Scheme (EIS) grant is used to fund the phase 2 DDH002 diamond drill hole at Helios (ASX announcement 2nd May, 2022) which was completed in Sep 2022 with depth until the end of hole (EOH) at 1020.3m (ASX announcement 20<sup>th</sup> September, 2022). Drilling ended in intense IOCG-style alteration with pervasive red hematite staining and hematite infill in heavily altered granites and granite breccias (**Figure 12** *Error! Reference source not found.*). The IOCG-style, hematite-dominated alteration has now been shown to extend for over 1000m between the two diamond drill holes highlighting a much larger alteration footprint than initially anticipated. Drilling has confirmed that the IOCG-style alteration is part of an extensive Fe-dominated/enriched alteration zone similar to other IOCG deposits such as Ernest Henry. NMR is currently preparing the drill core for sampling and sample assay.



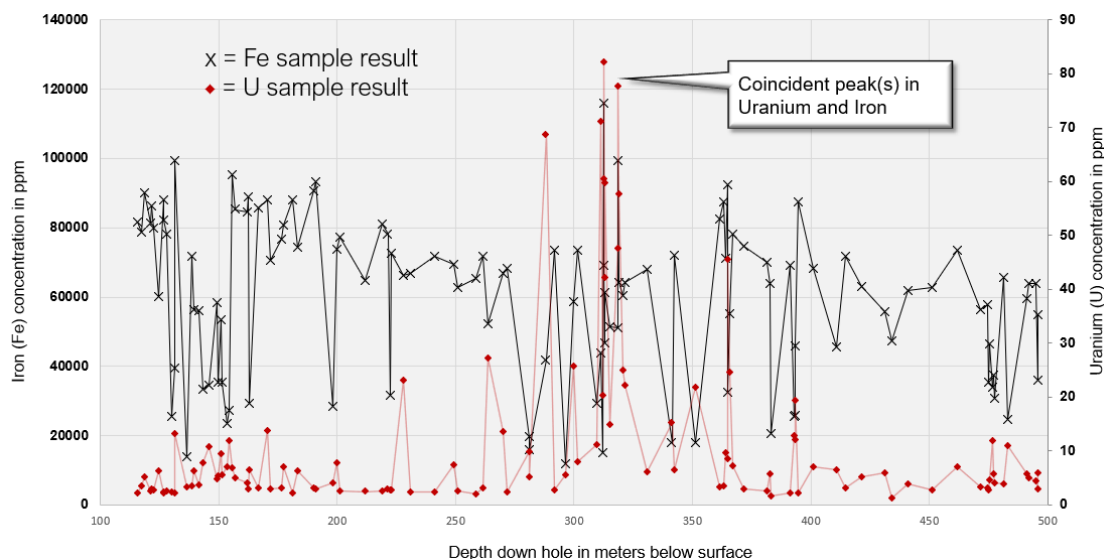
**Figure 12.** Felsic intrusive breccia containing significant hematite alteration with hematite and minor magnetite and pyrite within the matrix (HELIOS\_DDH002). NQ size drill core. Yellow numbering represents down-hole depth in meters.



**Figure 13.** Pervasive iron oxide staining (red) together with hematite (grey) minor magnetite and sericite alteration of the host granite (HELIOS\_DDH002). NQ drill core  $\varnothing \sim 47\text{mm}$ .

## Results from Helios meet many of the published IOCG targeting criteria

- 1) **Elevated Uranium above background.** Uranium concentrations in the drill core vary from less than 2ppm to over 80ppm in heavily altered sections. The average concentration in the core is 11.2ppm but this includes the section of core containing higher than background values between 311m-319m down hole. If the anomalous zone is removed, the background average for Uranium concentration is only 7.5ppm. Accordingly, values of over 70ppm in the approximately nine-meter intercept width present a significant increase above background levels.
- 2) **Elevated values of uranium coincident with significant elevations in iron content over the same interval.** The results obtained from drill core and presented in **Figure 14** below demonstrate a strong coincidence between elevated iron and elevated uranium. The values confirm observations in the drill core which show intense hematite staining and hematite replacing the granite groundmass. High iron and uranium are indicative of IOCG mineralisation and a positive indicator for potential ore-forming fluids. NMR recognises the significance of Uranium and iron enrichment relative to the existing host rocks, but the degree of alteration observed, combined with the elevated concentration of U and Fe and the replacement of groundmass by hematite support targeting criteria for IOCG deposits.



**Figure 14.** Plot of Uranium (red) and Iron (black) of samples collected from HELIOS\_DD001. Corresponding iron and uranium are indicative of other IOCG alteration systems.

- 3) **Titanium depletion.** Titanium values drop from above 1.0-1.2% for the majority of the samples analysed to an average of less than 0.3% in the section of core between 311m and 319m.
- 4) **Hematite present in altered rocks.** Hematite abundance is up to 10 percent in some samples (see various photos).
- 5) **Pyrite and/or pyrrhotite are generally present in minor amounts or may be absent.** Pyrite is not common in the drill core but locally occurs in quartz-pyrite-magnetite veins cutting across the altered granite. Similar veins have been observed in the halo of the Olympic Dam deposit.
- 6) **Hydrothermal quartz is minor relative to Fe oxides.** The core displays minor hydrothermal quartz veining and the amount of hydrothermal quartz is, based on observations, orders of magnitude less than the volume of hematite.
- 7) **The hydrothermal alteration footprint is large** with a proven extent of over 1000m based on intersections in the recently completed HELIOS\_DD002.
- 8) No garnet and minor epidote have been observed within the rocks from HELIOS\_DD001, however, recent observations of the rocks from the "Central" IOCG target show both garnet and epidote in siliciclastic rocks that resemble skarn mineralogies and is also consistent with the IOCG exploration criteria **epidote and garnet are uncommon, and are mostly confined to local zones of skarn mineralogy.**
- 9) **Fluorite** has been identified in HELIOS\_DD002.
- 10) The rocks observed in drill core also exhibit evidence of multiphase alteration. Potassic alteration has been interpreted to be localised and pre-dating the pervasive Fe-oxide alteration. Secondary biotite is also observed in some rocks along with secondary magnetite. It has been noted that **Proximal alteration zones at mid-levels in the hydrothermal systems are Fe<sup>2+</sup>-K-enriched with deeper magnetite-biotite (±albite) and shallower magnetite-K-feldspar sub-zones.** The rocks observed at Helios appear to preserve, based on initial, pre-petrographic observations, early magnetite plus biotite alteration in the upper (westernmost) parts of the core overprint by the later phase of hematite and then pyrite alteration.
- 11) A critical criteria linked to IOCG deposits is the presence of **Uppermost (near-surface to epithermal) levels in the hydrothermal systems are dominated by Fe<sup>3+</sup> (hematite) and hydrolytic (sericite, chlorite) ± carbonate alteration minerals.** The granite within both the HELIOS\_DD001 and DDH002 core are heavily altered by hematite (flushing) plus hematite replacement of groundmass in granite (refer to photos provided below). Granite also preserves abundant fine-grained sericite alteration of feldspars in association with the hematite alteration.
- 12) **Deposits are epigenetic, syn-tectonic (brittle-ductile mid-crustal to brittle upper crustal deformation regimes), and occur as hydrothermal breccias, disseminated to massive sulfide replacements, and vein**

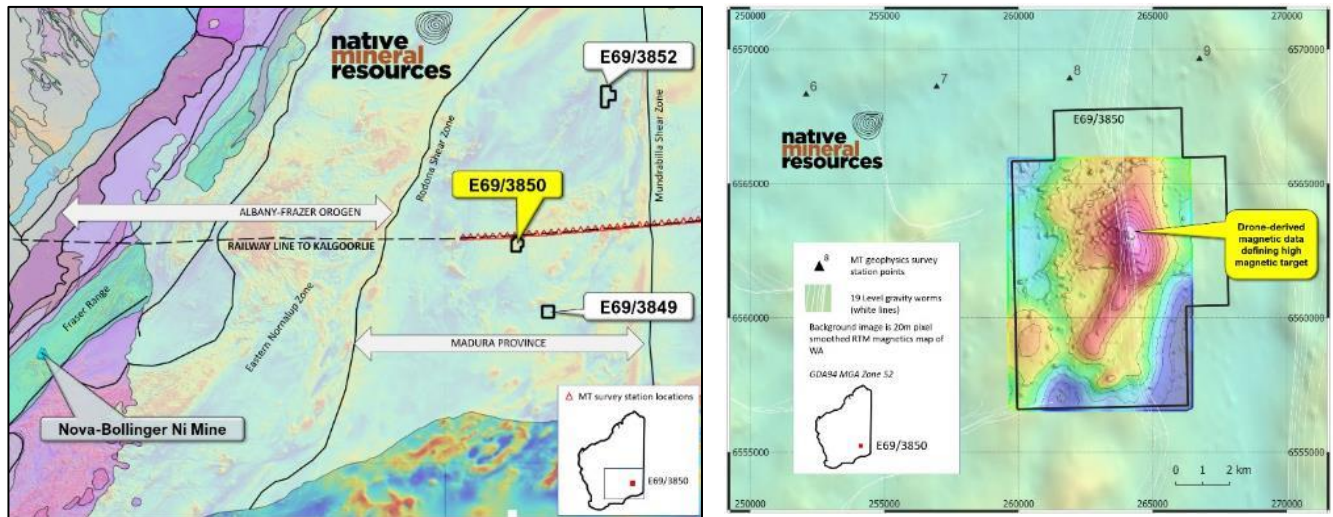


**stockworks.** Breccias and granite within the Helios drill core indicate mid-crustal deformation with localised altered mylonites developed synchronous with hematite alteration. The breccias show groundmass replaced with hematite and sulfides (predominantly pyrite).

- 13) **Deposits are distal from broadly coeval felsic and mafic igneous intrusions.** The most abundant evidence for co-magmatic bi-modal intrusions is preserved within the HELIOS\_DDHC002 drill core where alteration is associated with early mafic magmas cutting across heavily altered felsic granitic hostrocks. The more mafic diorites and basalts are partly altered and some diorite porphyries show partial replacement of phenocrysts by pyrite (refer to image below). This observation is also consistent with those from Olympic Dam where “A suite of mafic and felsic igneous intrusions, mainly dykes, are interpreted to have been emplaced just prior to or during brecciation and mineralisation”.

### E69/3850 – “Central” IOCG target

The central target has been derived using a drone-based magnetic survey that has confirmed the presence of a significant anomaly - 1200m long and 400m wide - with a relative peak of over 760nT (**Figure 15b**). Target depth is estimated at approximately 300m below the surface. The high magnetic anomaly lies directly above a well-defined zone of low resistivity imaged in the results from the regional Magnetotelluric survey transect that passes directly along the northern boundary of the tenement (**Figure 15a**).

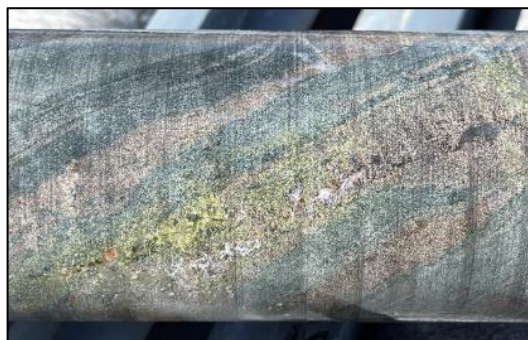


**Figure 15. a.** Map showing the location of E69/3850 to the south of the MT survey line (red diamonds). **b.** NMR's first high-resolution (30m flight height) drone-acquired magnetic survey over E69/3850 central Nullarbor tenement

NMR has completed its diamond hole (DDHC003) at its second Nullarbor target, known as "Central" in early August 2022 at EOH 551.4m. Initial observations show multiple styles of hydrothermal alteration overprinting regional host rocks and granites (**Figure 16, Figure 17, Figure 18, Figure 19**).



**Figure 16.** Initial first-pass observation of stage 2 hydrothermal alteration of host rocks. Initial observations indicate epidote-chlorite-sericite +/- actinolite and biotite alteration. Diamond HQ drill core Central\_DDH003.



**Figure 17.** "Green rock" alteration (with possible garnet, pink) of host country rocks in Central\_DDH003



**Figure 18.** Photo showing an example of granite found in drill core from Central DDH003.



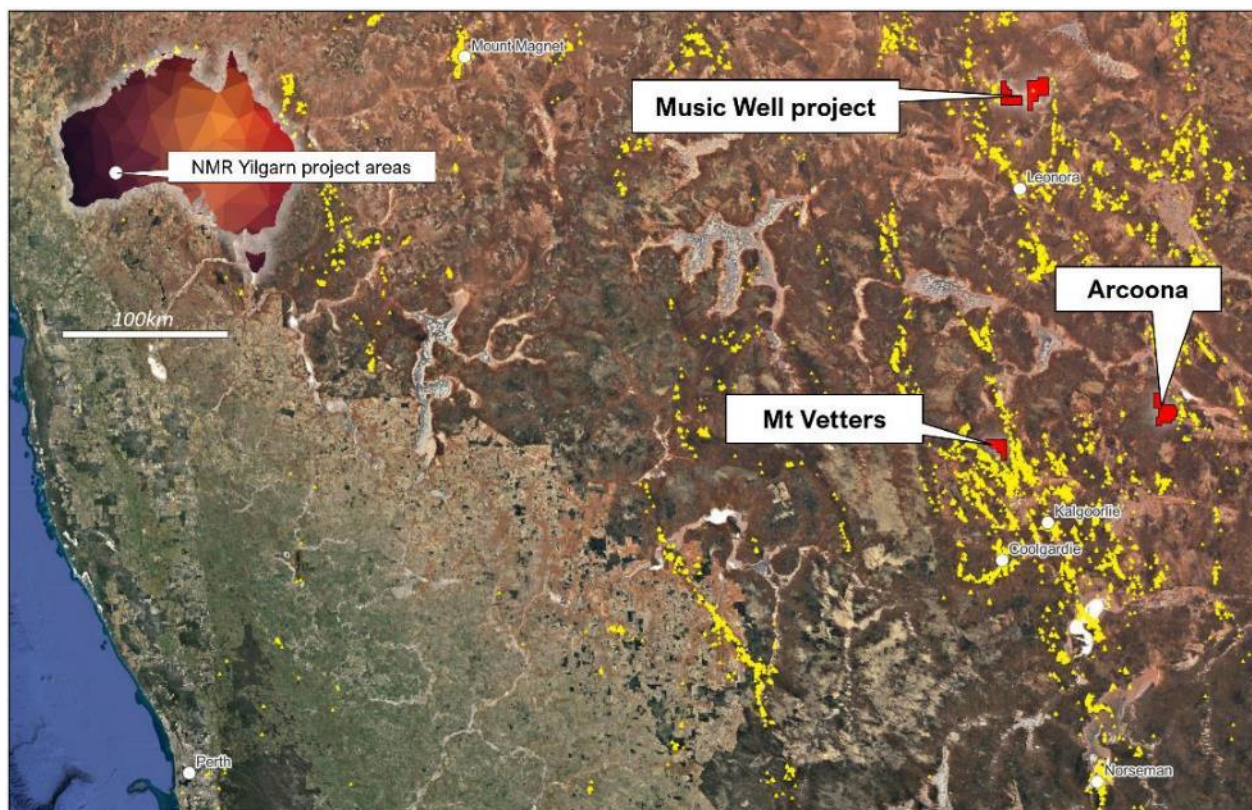
**Figure 19.** Photo of HQ diamond drill core CENTRAL\_DDH003 showing hematite staining of country rocks.



## EASTERN GOLDFIELDS PROJECTS, WA

### Project Background and Exploration Summary

The Eastern Goldfields is located in the eastern part of the world famous Yilgarn Craton. This unique part of Australia is host to significant mineral resources, particularly gold and nickel and is becoming an increasingly important target area for lithium, REE's and other key metals and minerals. Native Mineral Resources is exploring for granite-hosted gold mineralisation and a host of new mineralisation opportunities across four highly prospective tenements in the Eastern Goldfields (**Figure 20**).



**Figure 20.** Location map of NMR projects (four tenements) in the Eastern Goldfields of Western Australia. All three projects are located within close proximity to operating mines and proven mineralisation. NMR's Music Well Project is located approximately 60km north of Leonora.

#### Music Well Project (E37/1362 and E37/1363)

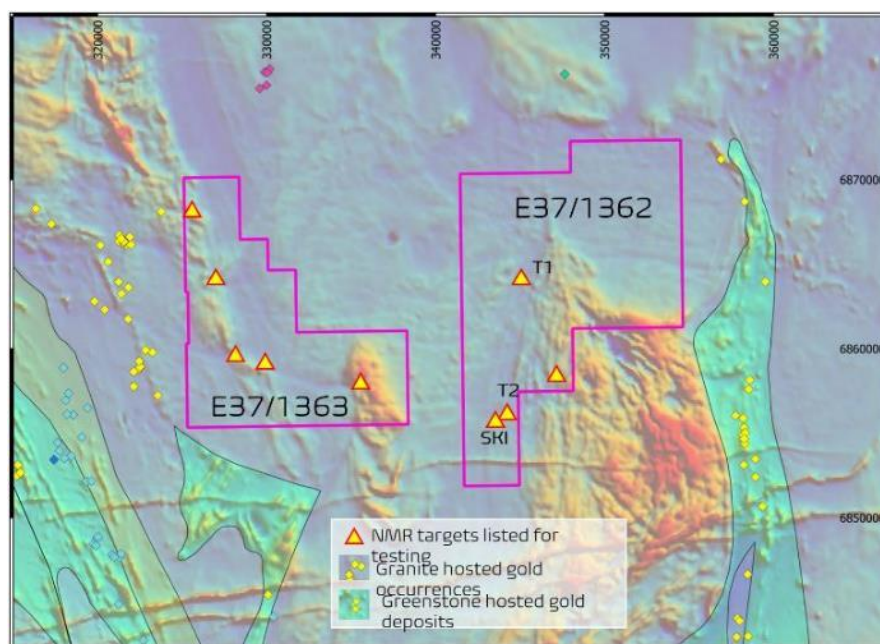
The discovery of structurally controlled high-grade gold at Music Well, has prompted NMR to focus on this prospect in the upcoming field campaign.

The Music Well Gold Project is located approximately 60 km north of Leonora and is comprised of the two tenements E37/1362 and E37/1363 (**Figure 21**). Exploration on E37/1363 (western tenement **Figure 21**) to date has revealed several targets and recent completion of high-resolution airborne magnetics survey has added significant information about these targets. The results have prompted NMR to complete the recent high-resolution (50m line spacing) 6500-line kilometer airborne magnetic survey over the entire tenement E37/1363 (**Figure 22**). The high-resolution magnetic data will provide the NMR team the ability to help interpret the structures and rock types beneath the cover rocks. The results of the magnetic survey are being interpreted and a field sampling campaign is being planned on the back of these results. NMR's geologists are already in the field in Western Australia and looking forward to heading to Music Well in the coming months. Ongoing focus on

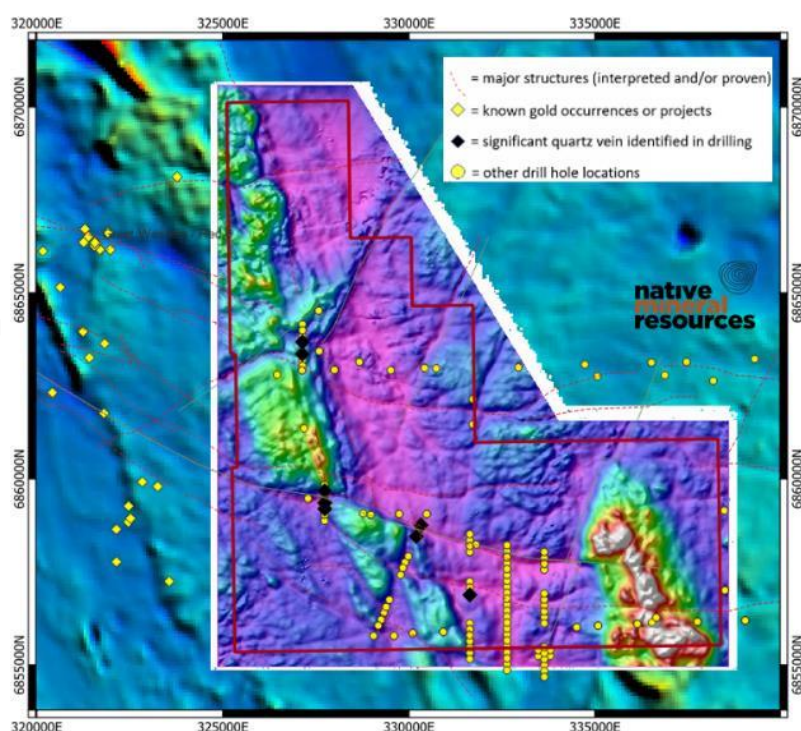


pinpointing high-grade gold targets on both tenements with another cluster of gold indicators found on E37/1363 will be followed up with field work in 2022.

Target 2 Veins, located on the southern part of E37/1362 (identified from previous NMR mapping and sampling), are to be targeted using trenching, sampling, and targeted geochemistry. The Target 2 (T2) vein and the SKI targets (shown in **Figure 21**) will be investigated and sampled for Au mineralisation in our next field campaign in upcoming quarter.



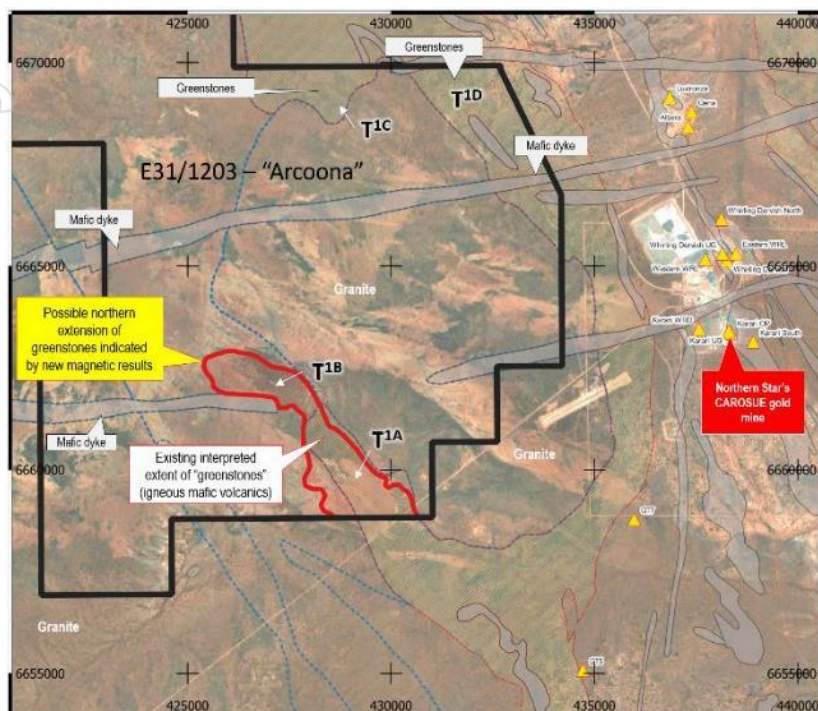
**Figure 21:** Target generation over the two music well tenements has been very successful, southern targets T2 and SKI are next to be investigated Targets 2 occurs 8km south of the T1 vein.



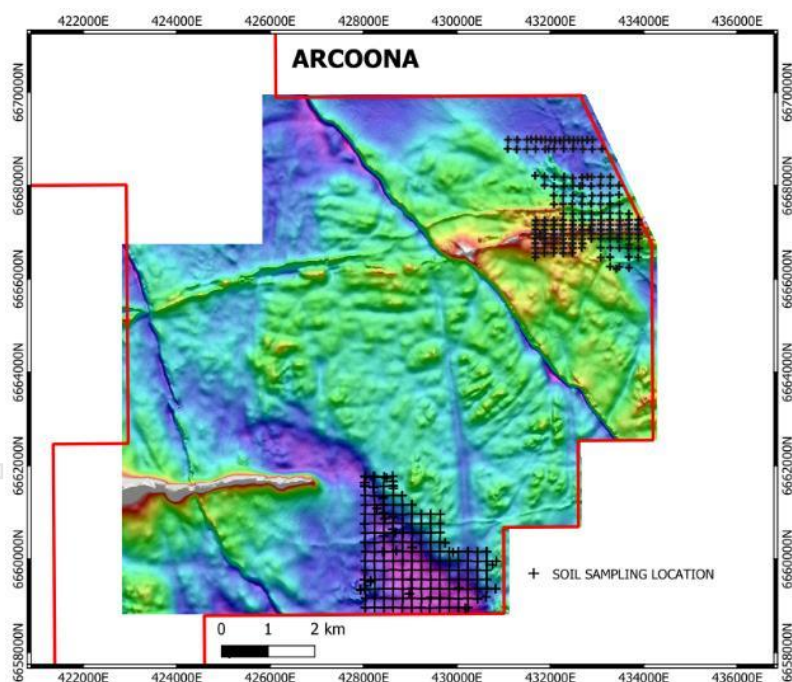
**Figure 22:** Map showing the new acquired magnetics data from the fixed-wing airborne magnetic survey in Dec 2021. The image is magnetics TMI RTP and been colour graded with NW sun tilt angle to highlight major NE- and SW-trending structures. These structures host gold mineralisation and gold mines on the tenement to the east of Music well (<3km). Significant quartz veining has been identified in previous drilling with the quartz occurrences appearing to coincide with major structures as predicted by NMR. Background image is public available magnetic data.

## Arcoona Project (E31/1203)

The Arcoona Au-Ni-Cr-Co project (E21/1203) is located approximately 100 kilometres northeast of Kalgoorlie and is surrounded by big mining firms' tenements, notably Northern Stars Carosue Dam gold mine (ex-Saracen) located to the east of the EPM (**Figure 23**).



**Figure 23:** Map showing the region identified as hosting potential for gold mineralisation in buried Greenstones on Arcoona (E31/1203) tenement. T1A-T1D are new target areas identified using the recently processed airborne magnetic data. NMR have interpreted a NW-extension to the greenstones where anomalous gold has been identified by previous explorers' soil sampling. Please refer to previous ASX announcement (12 April 2022) for further details.



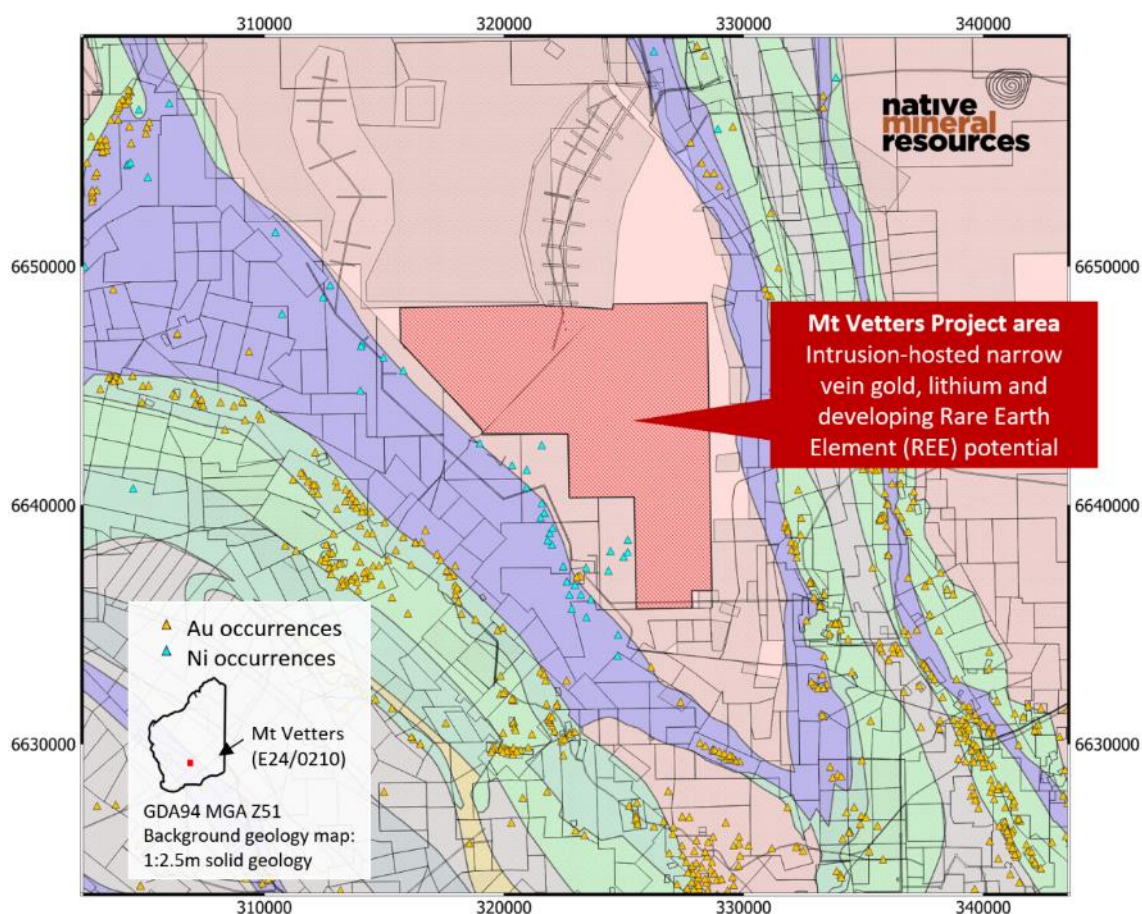
**Figure 24:** Map showing the location of some of the recently completed soil sampling locations overlain on Magnetics TMI RTP. Samples are awaiting QAQC.

Following the completion of the 4,632 Line-km airborne geophysical survey in December 2021, eight new targets were identified. A major field sampling campaign was completed in May 2022 (**Figure 24**) to follow up on these gold and possible Co-Cr-Ni-magnetics new targets. 352 soil samples collected, and samples assayed. Results are currently under review and QAQC and expected to release next quarter.



## Mt Vettters Project (E24/210)

Mt Vettters project (E24/210) is located 45 km northwest of Kalgoorlie, 4 km to the west of the Goldfields Highway in the Eastern Goldfields region of Western Australia (**Figure 25**). Mt Vettters is a new opportunity in a highly competitive and emerging area close to Kalgoorlie. It lies adjacent to multiple Ni mines and is one of the largest single tenements in this area.



**Figure 25:** Intrusion-hosted narrow vein Au, Li and REE potential on the Mt Vettters area

The major surface sampling campaign, which was initially scheduled for Q3 CY2022, has been moved to Q1 CY2023, as a result of the extended in-series drilling campaign at the Nullarbor. A specialized methods are being developed to rapidly and accurately sample large areas for key elements.



## PALMERVILLE PROJECT, NORTH QLD

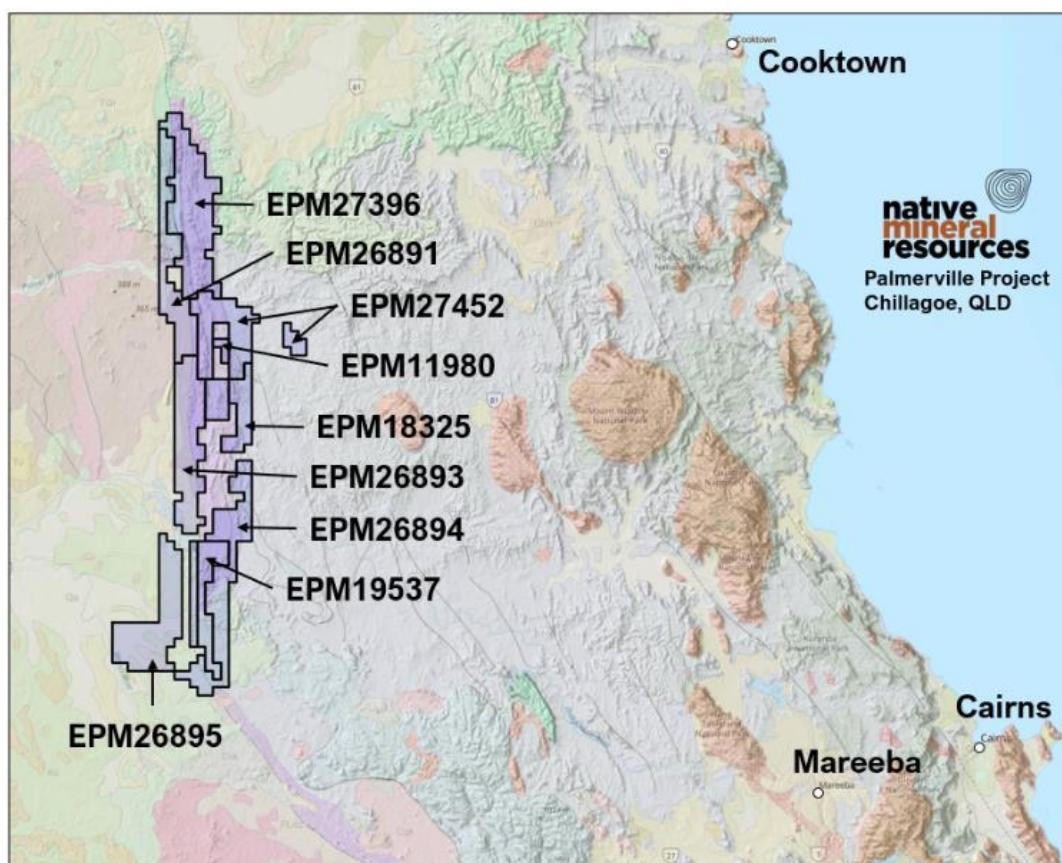
### Background

The Palmerville Project is the Company's principal copper exploration asset and covers a near-continuous strike length of 130km over an area of ~1,820km<sup>2</sup> centred 200km west-northwest of Cairns in North Queensland (**Figure 26**).

The tenements consist of nine Exploration Permit Minerals (EPMs) in the highly prospective Chillagoe Formation, which, to the south, hosts the Red Dome and Mungana porphyry and skarn-associated gold-copper deposits. The Chillagoe Formation also hosts significant zinc-rich and copper-rich limestone-hosted skarn-associated deposits, particularly at King Vol, Mungana, Griffiths Hill, and Red Cap.

The Project is prospective for the following deposit styles:

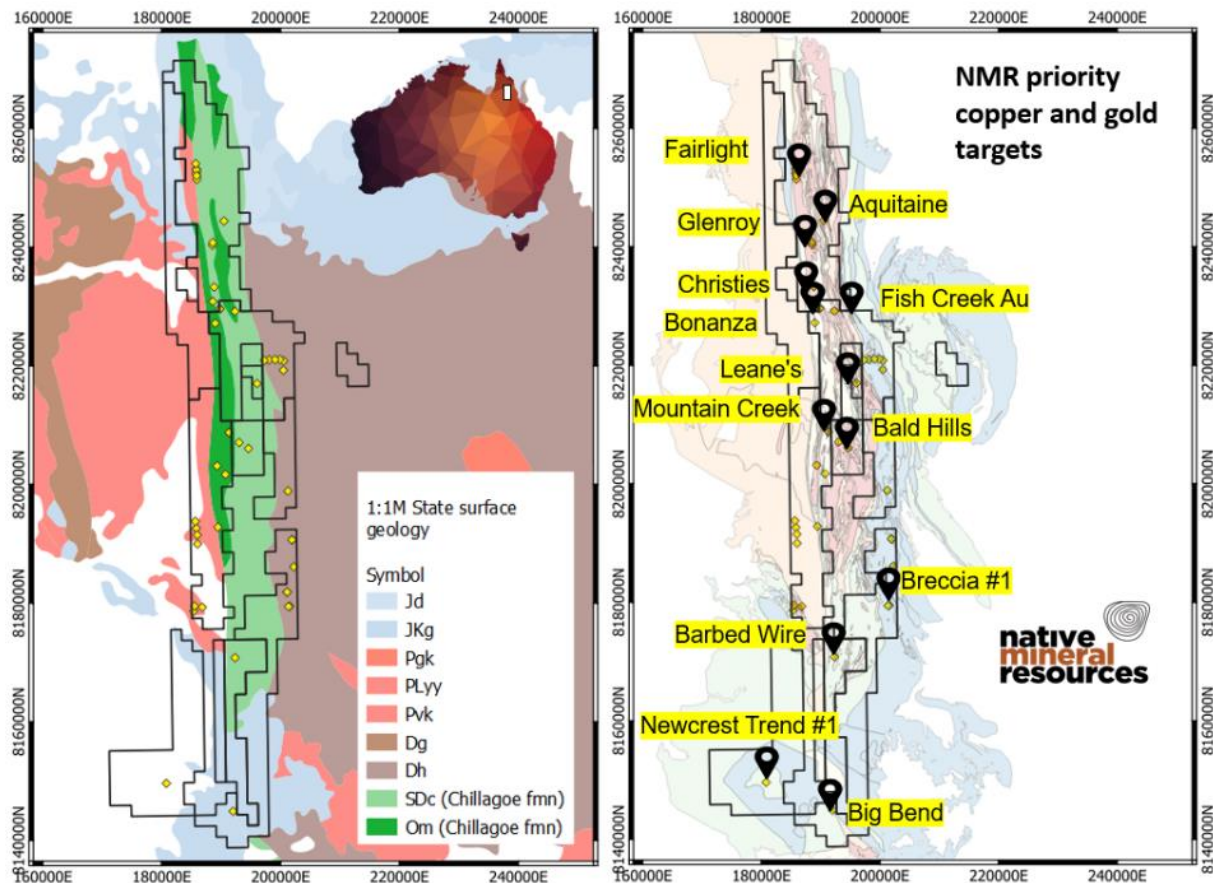
- *Copper-zinc-gold volcanic massive sulphide or vein-style mineralisation.*
- *Porphyry- and skarn-associated copper-zinc-gold mineralisation in Chillagoe Formation limestone-dominant strata.*
- *Porphyry-related copper-gold mineralisation in non-carbonate lithologies.*
- *Orogenic-style gold-antimony mineralisation.*
- *Epithermal gold mineralisation distal to porphyry intrusions*
- *Alluvial gold akin to the historic Palmerville Goldfield.*



**Figure 26:** Map showing the location of NMR's 9 tenements that make up the Palmerville project. The tenements encompass a significant portion of the Chillagoe Formation and N-S trending Palmerville Fault. Please refer to previous ASX announcements and NMR's website.

Field work is planned for in Q2 CY2023, after EPM28038 Maneater Hill drilling program, to better define

- The prospectivity of several key targets already identified as containing significant copper and gold (**Figure 27**).
- The structural geometry of the Chillagoe Formation with a particular focus on unraveling the localized structural controls on copper, gold and antimony mineralisation.
- Highlight major mineral-bearing structures and relate these back to exploration and targeting model.



**Figure 27:** Simplified geology map showing the location of NMR tenements and just a small selection of priority prospect areas including Fairlight, Leane's, Glenroy. NMR have a portfolio of copper, gold and antimony targets at Palmerville.



# PLANNING FOR Q1 CY2023

## 1. Palmerville Project

NMR have been busy finalising the plans for the Airborne Magnetics survey over the entire tenement package which it believes is critical to help prioritise over 50 very high potential copper, gold, antimony and other targets including Glenroy (rock chip samples up to 20% copper in newly identified southern extension) and Fairlight (rock chip samples up to 8% Cu). A field-based targeting program has been planned for next quarter, Q2 CY2023 after the completion of the Airborne magnetics survey and planned geophysics survey at Maneater Peak. Field work will be focussed on the highest ranked of these targets and it is anticipated that several drill targets will be identified.

## 2. Maneater Hill

Following the successful drilling campaign at EPM 28038 Maneater Hill NMR have focussed on interpreting the geochemical zoning and structural geology of the sulfide-bearing breccia complex. The assays and geochemical results obtained in drilling continues to support the presence of highest gold grades at depth. NMR has also identified structural complexity that needs to be resolved prior to completion of the third, deeper drill hole (MPD002) from Pad 2. The third drill hole has been planned to intersect the target area originally planned for MPD002. In order to confirm structural and sub-surface geometry of the target, NMR will undertake a geophysical survey prior to completing MPD004.

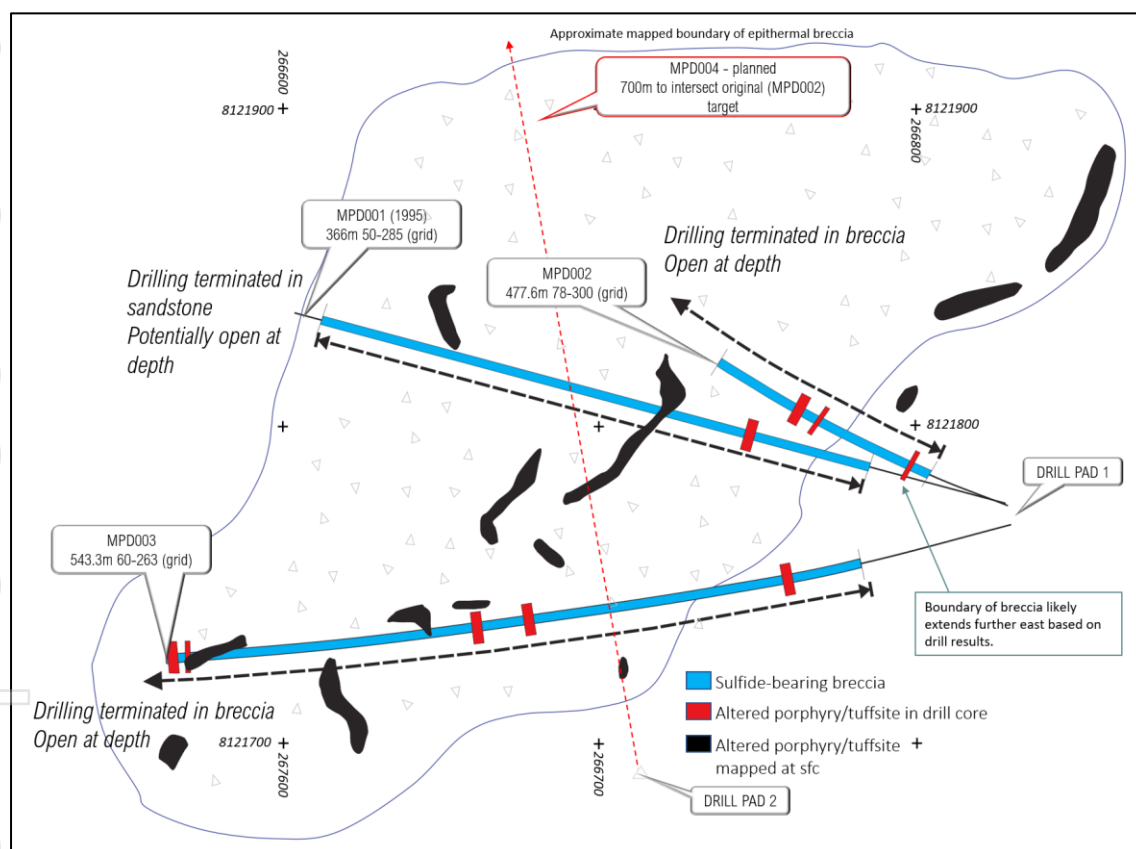


Figure 28. Map (plan view) showing the location of drill holes relative to mapped breccia at the surface. Altered porphyritic intrusive dykes and sills are shown in black. Breccia in drill holes is shown in blue. Altered intrusive in drill holes shown in red. MPD002 and MPD003 both ended with sulfides present in drill core. MPD002 (reported here) terminated early due to difficulties encountered with drill hole orientation. Planned drill hole MPD004 is also shown in red. The aim of MPD004 is to intersect the original interpreted deeper zone of mineralisation anticipated in MPD002 which was terminated early.

### 3. Nullarbor Project

Results from Helios\_DD001 have undergone review and the positive results announced in December 2022. The assays and geology obtained in the drilling provide an extensive “checklist” of features indicative of other IOCG alteration systems including presence of magnetite and hematite in drill core (up to 30% in places), pervasive hematite staining of granite host rocks over more than 1000m, uranium enriched and Ti depleted in heavily altered sections of core and many other features. All of these pieces of evidence add value to the interpretation that the drilling identified an IOCG alteration halo. Planning is underway to better target the anomaly located under only 100m of cover rock.

### 4. Eastern Goldfields Project

- **Music Well Gold Project**

NMR is continuing to model the results of the fixed-wing airborne geophysics survey over the Music Well tenement (E37/1363). The aim is to continue to up-grade new and existing targets on the tenement and to gain further knowledge about the geology and structure under cover. The company has a comprehensive and growing dataset pointing to opportunities for gold mineralisation beneath shallow cover. In addition, work is continuing on tenement E37/1362 where follow-up geochemistry and sampling will be completed on veins already identified as continuing gold mineralisation. Two additional veins, Target 2 and 'SKI', will be investigated and sampled to follow up on promising high-grade grab samples and epithermal vein textures.

- **Arcoona**

Results from the recent soil sampling are currently under review and to be completed next quarter. Finalisation of the interpreted results will be used to pinpoint targets for follow-up auger drilling works in early 2023 if anomalous mineralisation is identified.

- **Mt Vettors**

In the reporting period, NMR completed a comprehensive structural and lithology interpretation focussed on the north-western part of the tenement where a re-interpretation of regional geophysical datasets, along with new multispectral results have identified potential for complex, gold- and nickel-bearing rocks under cover where there is no previous drilling.



## TENEMENT SCHEDULE AS AT 31 DECEMBER 2022

Region	Tenement ID	Tenement Name	Date Granted	Date Expire	Sub-Block	SQKM (approx.)
Queensland	EPM 11980	Limestone Creek	3-Jun-05	2-Jun-25	4	13.16
Queensland	EPM 18325	Bald Hills	30-Jul-12	29-Jul-24	15	49.35
Queensland	EPM 19537	Mitchell River South	21-Jan-08	20-Jan-24	33	108.57
Queensland	EPM 26891	Palmerville North	29-Jan-19	28-Jan-24	63	207.27
Queensland	EPM 26893	Palmerville West	29-Jan-19	28-Jan-24	100	329
Queensland	EPM 26894	Palmerville East	1-Apr-19	31-May-24	84	276.36
Queensland	EPM 26895	Palmerville South	31-Jan-19	30-Jan-24	89	292.81
Queensland	EPM 27396	East Palmerville North	4-Jun-20	3-Jun-25	100	329
Queensland	EPM 27452	East Palmerville South	2-Feb-21	1-Feb-26	65	213.85
Queensland	EPM 28038	Maneater Hill	25-Jul-22	24-Jul-27	19	62.51
WA	E37/1362	Music Well	17-Sep-19	16-Sep-24	58	190.82
WA	E37/1363	Music Well	17-Sep-19	16-Sep-24	39	128.31
WA	E31/1203	Arcoona	19-Nov-20	18-Nov-25	61	200.69
WA	E24/210	Mt Vettors	26-Jul-21	25-Jul-25	35	115.15
WA	E69/3852	Nullarbor North	13-Oct-21	12-Oct-26	41	121.5
WA	E69/3850	Nullarbor Central	26-Oct-21	25-Oct-26	26	76.65
WA	E69/3849	Nullarbor South	13-Oct-21	12-Oct-26	25	73.7
WA	E69/4035	Mundra East	In Application since 25 <sup>th</sup> Mar 2022		196	548.8
WA	E69/4036	Mundra West	In Application since 25 <sup>th</sup> Mar 2022		151	422.8

## CORPORATE

A total of \$13,812.48 (FY23 YTD: \$27,624.96) was paid to Non-Executive Directors as Director Fees. In addition, \$139,651.38 (FY23 YTD: 279,302.76) was paid to the Managing Director as wages.

NMR intends to undertake a capital raise via a Placement of Shares to sophisticated investors. The results will be announced in due course.

The Board of Native Mineral Resources Holdings Ltd authorised this announcement to be lodged with the ASX.

For more information, please visit [www.nmresources.com.au](http://www.nmresources.com.au) or contact:

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#### Notes – Specific ASX announcements:

Material contained in this release refers to information including, but not limited to sample results and the methodologies used for sample acquisition and processing (JORC table) presented in the previous ASX Announcements listed below.

- ASX Announcement, 12<sup>th</sup> Dec 2022 – Results at Maneater Hill confirm large breccia system
- ASX Announcement, 02<sup>nd</sup> Dec 2022 – Second drill hole completed Maneater Hill- sulfides continue
- ASX Announcement, 02<sup>nd</sup> Dec 2022 – Helios Drilling Update - Early results indicate IOCG deposit
- ASX Announcement, 08<sup>th</sup> Nov 2022 – Sulfide mineralisation in second drill hole at Maneater
- ASX Announcement, 26<sup>th</sup> Oct 2022 – Maneater drilling intersects further polymetallic sulfides
- ASX Announcement, 24<sup>th</sup> Oct 2022 – Maneater Breccia Update - massive and semi massive sulfides
- ASX Announcement, 18<sup>th</sup> Oct 2022 – Drilling has commenced at the Maneater Hill Breccia
- ASX Announcement, 21<sup>st</sup> Sep 2022 – Drilling to commence at Maneater Hill Breccia
- ASX Announcement, 20<sup>th</sup> Sep 2022 – Helios drilling highlights large-scale IOCG-style alteration
- ASX Announcement, 07<sup>th</sup> Sep 2022 – Drilling extended at Helios after second hole expands target
- ASX Announcement, 18<sup>th</sup> Aug 2022 – Phase 2 diamond drilling underway at Helios
- ASX Announcement, 17<sup>th</sup> Aug 2022 – Diamond Drilling at Central IOCG Target
- ASX Announcement, 28<sup>th</sup> Jul 2022 – New Tenement Granted - Maneater Sulfide Breccia North QLD
- ASX Announcement, 23<sup>rd</sup> May 2022 – Gravity Survey to begin at Helios IOCG-style alteration
- ASX Announcement, 16<sup>th</sup> May 2022 – IOCG style alteration intercepted in drilling at Helios
- ASX Announcement, 2<sup>nd</sup> May 2022 – NMR awarded \$220,000 EIS grant for Helios phase 2 drilling
- ASX Announcement, 12<sup>th</sup> April 2022 – Multiple new target areas revealed in high-resolution magnetic data at “Arcoona”
- ASX Announcement, 9th / 10th Mar 2022 - Exploration Update – Helios and Central
- ASX Announcement, 18th Feb 2022 – NMR awarded \$200,000 CEI grant
- ASX Announcement, 24th Jan 2022 – Drilling to commence at Helios Nickel target
- ASX Announcement, 6th Dec 2021 – Magnetism survey confirms significant anomaly at its “Helios” Nickel target in the Western Nullarbor
- ASX Announcement, 26th Oct 2021 – Magnetic Survey Highlights Significant Anomaly at Nullarbor Iron-Oxide Copper-Gold (IOCG) Target
- ASX Announcement, 21st Oct 2021 – NMR explore a Mineralised Breccia Pipe in North Queensland
- ASX Announcement, 14th Oct 2021 – New Tenements Granted in WA – Exploration on Ni and Cu Targets Underway
- ASX Announcement, 23rd Sep 2021 – Positive Outcomes from Diamond Drilling at Music Well
- ASX Announcement, 30th Aug 2021 – Key Work Programmes Advanced at Music Well
- ASX Announcement, 06th July 2021 – Music Well Gold Project Access Agreement
- ASX Announcement, 01st July 2021 – Divestment of Mount Morgan Project
- ASX Announcement, 28th June 2021 - NMR Confirms Further High-Grade Gold Mineralisation at Music Well Project in WA

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- ASX Announcement, 07th June 2021 - NMR expands exploration portfolio with three new tenement applications targeting copper, gold and nickel in WA.
  - ASX Announcement, 5th May 2021 - NMR awarded EIS grant to fund diamond drilling at Music Well
  - ASX Announcement, 4th May 2021 - High-Grade Copper Confirmed At Two Targets In The Northern Chillagoe Formation
  - ASX Announcement, 29th March 2021 - High-grade and free-milling gold at Music Well
  - ASX Announcement, 4th February 2021 - East Palmerville South Permit Granted
  - ASX announcement 21st January 2021 - Porphyry Intrusions Confirmed at Leane's Copper Prospect
  - ASX announcement 21st December 2020 - Leane's Returns Shallow Intercepts Grading – Copper
  - ASX announcement 15th December 2020 - Drilling Confirms Mineralisation System at Leane's Copper Prospect
  - ASX announcement 27th November 2020 - Significant Results from Drilling at Leane's Copper Prospect.