

**ASX ANNOUNCEMENT** 

09 March 2022

# Exploration update: Drilling near completion at Helios and immediate start on drilling at Central IOCG target

# **Highlights:**

- NMR is nearing the completion of its first drill hole at its Helios target in the Northern Nullarbor.
- NMR had planned for up to 500m but has achieved its aim and will plan to end the diamond hole at 350m
- Diamond drill core will be immediately transported to Kalgoorlie, sampled and samples sent for assay and geochemical analysis.
- NMR are leveraging the advantage of having the drill rig at the Nullarbor and will therefore start drilling at Central as soon as drilling at Helios is complete.
- Drilling at Central is also planned for up to 500m RC and diamond tails with the final depth of drilling dependent upon ongoing review of the basement geology.
- Drilling will target the magnetic high, IOCG type target that lies above the low resistivity zone identified in regional Magnetotelluric geophysics survey.

Copper, Gold and Nickel focused exploration company Native Mineral Resources Holdings Limited (ASX: NMR), or ("NMR" the "Company"), NMR is announcing a change of plans to take advantage of the availability of the drill rig currently drilling at NMR's Helios target (tenement E69/3852). Drilling at Helios is currently planned to terminate at 350m. NMR are mobilising the drill rig to its Central IOCG target located approximately 110 kilometres to the south (tenement E69/3850).

#### **Management Commentary**

NMR's Managing Director, Blake Cannavo, commented: "NMR is pleased to announce it is advancing its exploration campaign sooner than anticipated. NMR are currently approaching 350m of drilling at the Helios target (E69/3852). We will be expediting transport of the drill core to Kalgoorlie for immediate sampling, assay, and geochemistry. The company is being proactive in its exploration of the Nullarbor tenements by taking advantage of having the drill rig available to complete a second drill hole. The company is looking forward to getting additional results from the central IOCG target (E69/3850) located approximately 110 kilometres to the south of Helios."

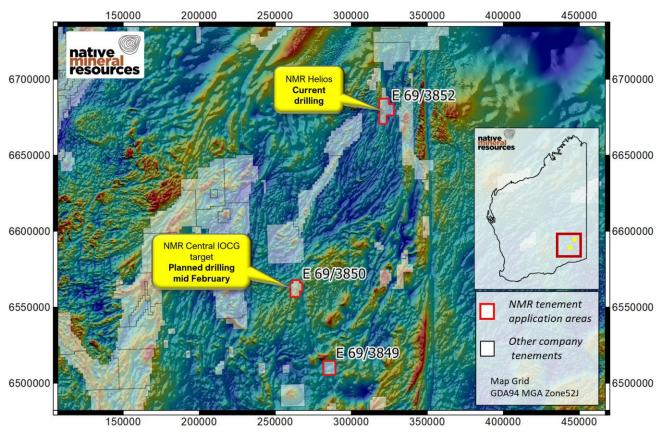


Figure 1. Map showing the location of the three tenements under exploration by NMR. Base map is the 40m pixel TMI image from the DMIRS with a west-to-east hill shade to enhance magnetic features. The tenement map shown here was obtained from DMIRS on 1st June 2021. Map grid is GDA94 MGA zone52 and coordinate values are provided in meters. NMR tenements are E69/3852, E69/3849 and E69/3850.

As previously reported (see ASX release dated 7 June 2021), the recent government geophysical survey including Magnetotelluric and seismic reflection across the northern end of the tenement E69/3850 has highlighted a possible Iron-Oxide Copper Gold (IOCG) target. Drilling will commence following completion of the diamond drill hole at the Helios target to the north (Figure 1).

### Nullarbor Tenements Background - E69/3852 and E69/3850

Tenements E69/3852 and E69/3850 are located within the Madura Province, an emerging exploration area that has received minimal mineral exploration investment to date. NMR is the first company to actively explore these geophysically-defined targets.

All targets within E69/3852 and E69/3850 are "under cover". The interpreted depth to the basement at the northern target E69/3852 is 100-125m based on inversion and modeling of the drone magnetics and for E69/3850, basement is interpreted at approximately 200-250m vertical depth.

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# **Current Drilling**

Drilling at Helios had been planned to reach target rocktypes at a depth of up to 500m down-hole. However, NMR are now satisfied with the outcomes of the drilling achieved so far (8<sup>th</sup> Feb 2022) and, while the company will continue to monitor the changes in rocktype over the coming days, NMR anticipates ending the first drill hole at 350m. Drill core will be transported to Kalgoorlie for sampling, assay and geochemistry.

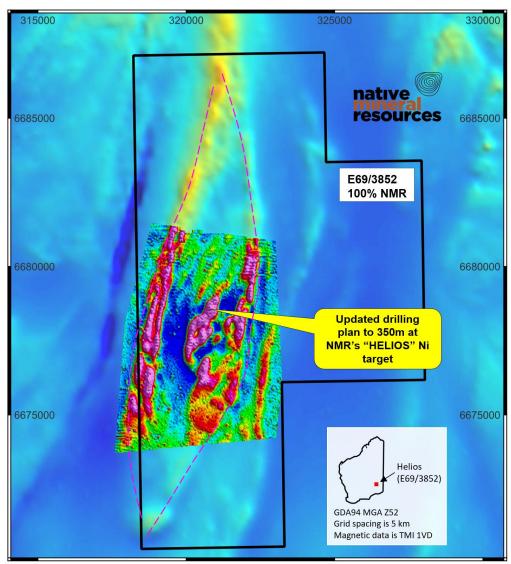


Figure 2. Map of granted tenement E69/3852 overlain on Drone magnetics RTP 1VD. NMR are currently drilling the central part of an "Eye-shaped" structure similar to that hosing IGO's Nova-Bollinger mine in the Frazer Range. The high magnetic anomaly in the center of the structure is the current drilling target as labelled. Grid reference is GDA94 MGA Zone52. Grid reference intervals are meters N and E.

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## Central IOCG drilling planned for Mid-February

Native Mineral Resources have made a strategic decision to take full advantage of 1) access to a drill rig with the capacity in the schedule to complete a second hole and 2) the rig is already located at Helios, located approximately 110 kilometres from Central, therefore providing significant cost and time saving for mobilisation to Central.

The drilling at Central will target a magnetic anomaly identified in regional and drone-magnetics (refer to ASX announcement 26 October 2021).

The primary target defined in the drone magnetic survey, and the drill target, is approximately 1200 meters long and 400m wide (Figure 3) and exhibits a pronounced NNW-SSE trend, which is oblique to the north-south and NNE-trend of the principal structures identified in the regional magnetic data surrounding the target area (Figure 4). The target also lies at the end of a NE-trending moderately magnetic ridge zone that is parallel to features observed in the regional magnetic data (Figure 3, Figure 4 (A)). The main elongate, high-magnetic anomaly is parallel to the NNE-trend of the major linear gravity low featured in the regional, publicly available gravity data available from the Department of Mines, Industry Regulation and Safety (DMIRS) via their online data portal GeoVIEW (Figure 4 (B)).

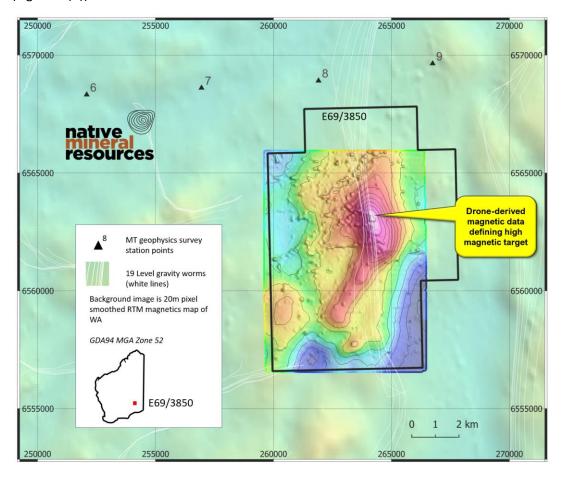


Figure 3. Map showing the results from the recent drone-based magnetic survey overlain on 20m pixel regional magnetic map. Planned drilling will target the high magnetic anomaly as indicated by the label.

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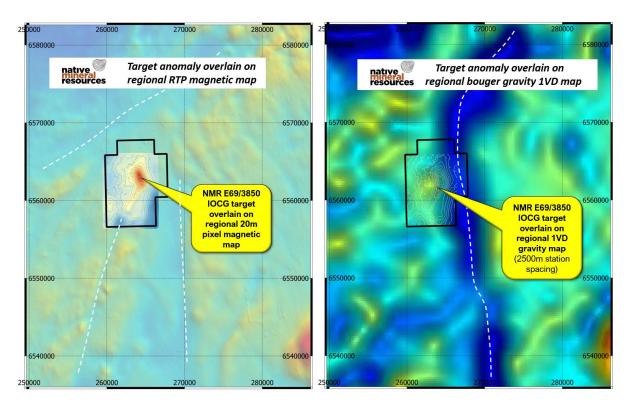


Figure 4. A) Magnetic anomaly overlain on regional smoothed 20m pixel regional magnetic map. B) Contours obtained from the processed drone magnetics overlain on the regional Bouger 1VD gravity map of SW western Australia. The magnetic anomaly identified on E69/3850 is parallel to the NNE-trend of the major gravity low.

### Other supporting geophysics

Information presented below is extracted from ASX announcement 27 October 2022. The information is provided as background information about the Central IOCG target only and no new information has been presented.

Tenement E69/3850 extends across an exciting magnetic anomaly that lies directly above a major "finger" of low resistivity identified on the regional Magnetotelluric (MT) transect and parallel seismic transect completed as part of a collaboration between multiple geoscience groups including Geoscience Australia, Geological survey of Western Australia and the Geological survey of South Australia. The MT survey (Figure 5 A-C) shows a pronounced upward-protruding zone of lower resistivity extending from below 100km depth to the surface beneath tenement E69/3850. The presence of this anomaly beneath the magnetic target is significant as it has been proposed that these zones are representative of fundamental pathways for mineral-deposit forming fluids, with a particular focus on IOCG-style deposit formation. With reference to a similar MT survey completed in the Gawler Craton of Southern Australia, Heinson et al. (2018) noted that the "least resistive zone is remarkably aligned with the world-class IOCG-U Olympic Dam deposit and the other two with significant known IOCG-U mineral occurrences" (Figure 5 D). The targeting of mineral deposits using MT results is a relatively recent advance in mineral exploration and has gathered momentum after the discovery of a similarly conductive zone

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beneath the world class Olympic Dam IOCG deposit. NMR are taking advantage of these recent advances in mineral exploration and directly targeting the area of highest priority above the MT anomaly identified in the Nullarbor.

The zone of low resistivity in the MT data is also near coincident with an area of low seismicity, another geophysical characteristic observed below the Olympic Dam IOCG deposit. The target, now defined using magnetics, lies directly above a low-resistivity zone in MT and a zone of low seismicity in parallel seismic reflection imaging (Figure 6).

In addition to the low seismic zone, the interpretation of the seismic reflection data presented by Wise et al., (2016) shows a major E-dipping, lithosphere scale structure below the site of the MT anomaly and below NMR's target presented here.

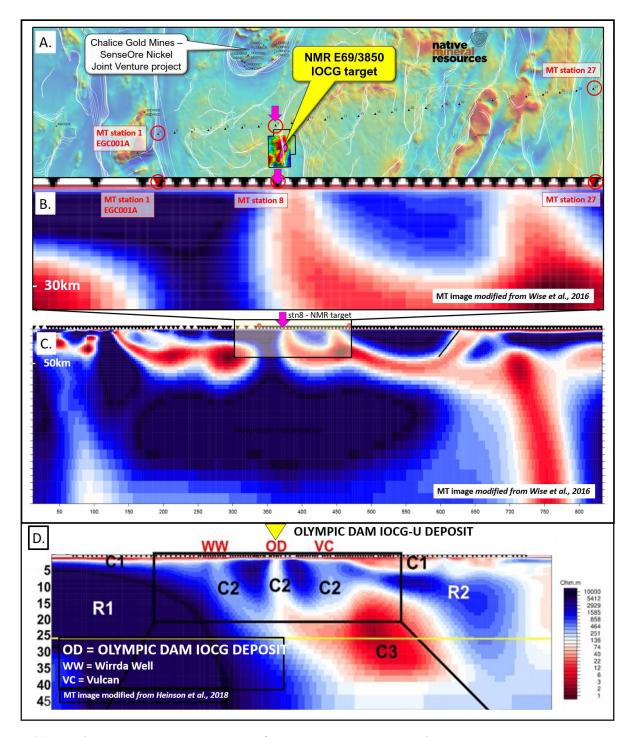


Figure 5. (A) Map of the area showing the target on E69/3852 and the location stations of the regional MT cross section to the north of the tenement. (B) and (C) are cross sections of MT data from Wise et al (2016). Cross section B) extends to a depth of approximately 35 kilometres and shows the low resistivity structure below the target anomaly. Cross-section shown on (D) is from below the Olympic Dam, Deposit. Low resistivity "fingers of God" extend the below Olympic Dam and two other deposits, Wirrda Well and Vulcan. Map (d) is from Heinson et al., 2018.

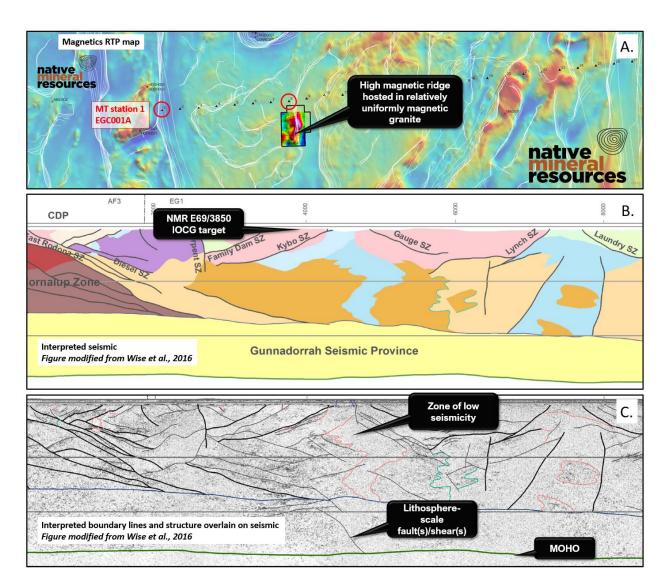


Figure 6. Map (A) and cross sections (B and C). Cross section shown in B is an interpretation of the seismic cross section shown in C. The target anomaly on E69/3850 lies above a zone of low seismicity labelled on C but importantly, the target is contained with the upper crustal intrusive rocks (pink areas on B), occupying a similar geological position as the Olympic Dam IOCG deposit. The seismic cross sections are along the same transect line as the MT section, in Figure 5.

Based on the similar geophysical features found at the magnetic anomaly on E69/3850 and other IOCG deposits in Australia, NMR are using this as a guide for exploration for a major copper deposit. NMR have presented the results from a recent drone-based magnetic survey which demonstrated the presence of a major NNW-SSE trending anomaly located on a major NNE-SSW trending gravity structure, immediately above a low-resistivity zone identified in MT, in close association with a low seismic zone and located above a major lithospheric structure identified in seismic data interpreted by Wise et al., 2016. The growing list of tectonic and geophysical features with similarities to other identified IOCG deposits in Australia has provided NMR with continually growing confidence in the target and the company is in the process of planning future exploration campaigns on the tenement including a diamond drill program for early 2022.

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#### -Ends-

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

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#### **Competent Person Statement:**

The information that relates to Exploration Targets and Exploration Results is based on, and fairly represents, information compiled by Dr Simon Richards, a Competent Person, who is a Member of the AIG and AusIMM. Dr Richards is the Chief Geologist of NMR. Dr Richards has sufficient experience in both mining and exploration, 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'. Dr Richards consents to the inclusion of the matters based on his information in the form and context in which it appears.

#### 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, 7<sup>th</sup> June 2021 NMR expands exploration portfolio with three new tenement applications targeting copper, gold and nickel in WA.
- ASX Announcement 14 October 2021 New tenements granted in WA. Exploration on Ni and Cu targets underway
- ASX Announcement 27 October 2021 Magnetic survey highlights significant anomaly at Nullarbor Iron-Oxide Copper Gold (IOCG) target
- ASX Announcement 6 December 2021 Magnetics survey confirms significant anomaly at its "Helios" Nickel target in the Western Nullarbor.
- ASX Announcement 24 January 2022 Drilling to commence at Helios Nickel Target in Western Australia

#### References

Heinson, G., Didana, Y., Soeffky, P., Thiel, P.S., Wise, T., The crustal geophysical signature of a world-class magmatic mineral system. Scientific Reports 8, 10608 (2018).