

## ASX ANNOUNCEMENT

17 May 2019

ASX: NWM

# Norwest commences diamond drilling of large iron-oxide-copper-gold (IOCG) target

- Diamond drilling of the highly prospective 4km x 8km North Dovers IOCG target is underway
- North Dovers is a BHP-identified IOCG target located in the Arunta region of Western Australia
- The large coincident magnetic-gravity anomaly is similar to those hosting Ernest Henry and Olympic Dam style IOCG<sup>1</sup>
- \$200,000 grant established for North Dovers drill program from Western Australian State Government
- Surface soil sampling across the entire 1,450 square kilometre Arunta West Project area also underway

**Norwest Minerals Limited** (“Norwest” or “the Company”) (Australia ASX: NWM) is pleased to announce that diamond drilling has commenced at the Company’s Arunta West Project in Western Australia. The drilling will test the highly prospective North Dovers Iron-Oxide-Copper-Gold (**IOCG**) target.

North Dovers is defined by a large coincident magnetic-gravity anomaly similar to world class **IOCG** deposits such as those hosting Olympic Dam and Ernest Henry.

North Dovers was identified by BHP in 1999 as the area’s primary **IOCG** target but due to strict access regulations at that time, no exploration was conducted.

On 6 December 2018 Norwest announced the granting of all appropriate statutory approvals enabling the Company to immediately commence exploration activities across the entire Arunta West project area.

1 ASX Announcement AUZ 7 August 2018: Drill planning for potential IOCG target at Arunta West Project

The start of the diamond drilling program establishes Norwest as the first company to drill into the North Dovers **IOCG** target since its identification 20 years ago. Norwest will receive a \$200,000 grant towards the cost of diamond drilling via the Western Australia Exploration Incentive Scheme<sup>2</sup>.



**Figure 1.** Geologist logging core from historic first drill hole into the large North Dovers IOCG target.

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<sup>2</sup> ASX Announcement NWM , 6 December 2018: Approvals received for diamond core drill program of IOCG target at North Dovers

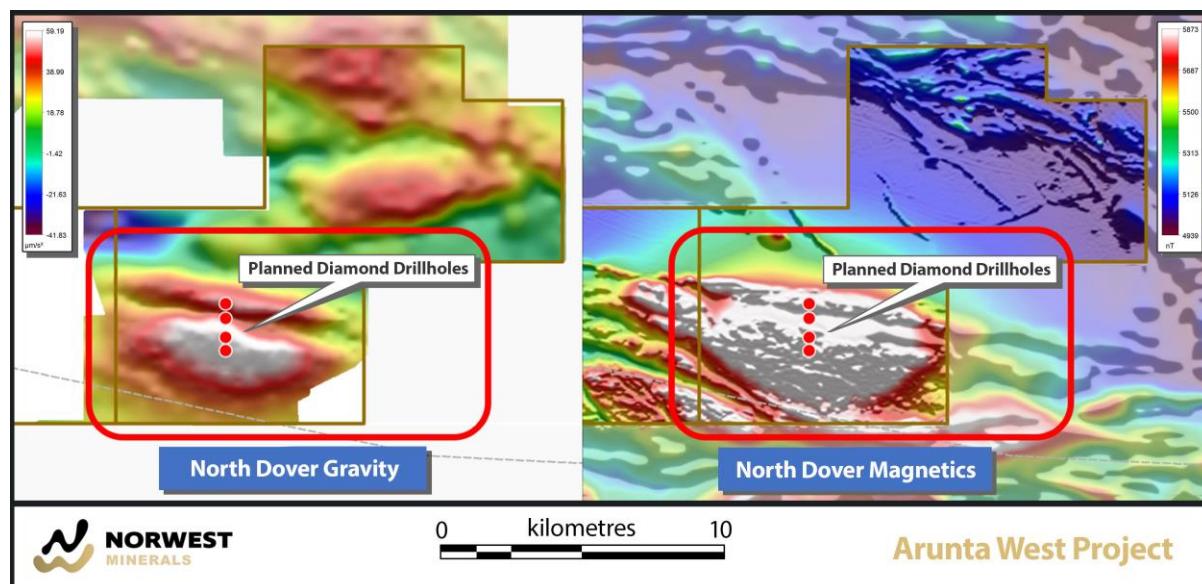
## Arunta West Project – North Dovers IOCG Prospect

The Arunta West project area contains a complex suite of rock types of Proterozoic age which straddles a major terrain boundary marked by the Central Australian Suture (CAS), and its subsidiary structures. The rock types in the area include green schist facies metamorphic schists variably modified by thermal metamorphism associated with extensive granitoid intrusion. Amongst these is the 1640 Ma Mt Webb Granite, a fractionated I-type granitoid thought to represent a major continental collision event. Similar geologic features are associated with other Proterozoic IOCG districts such as those hosting Ernst Henry and Olympic Dam<sup>3</sup>.

The North Dovers prospect features a large, 8 x 4 kilometre, ovoid coincident magnetic-gravity anomaly recently modelled using high resolution ground gravity and aeromagnetic data collected across the prospect in 2016 and 2018 respectively. (Figure 1)

According to Southern Geoscience Consultants (SGC), modelling of the new geophysical data indicates that the North Dovers target is similar to that of South Australia's Gawler Craton **IOCG** mineralisation with the interpreted depth to source being approximately 400 metres below surface<sup>4</sup>.

Direct drill targeting based on the gravity and magnetic modelling in hand with the areas geological features has resulted in the planning of four deep diamond drill holes at North Dovers designed to test this highly prospective target for **IOCG** and other styles of economic mineralisation.

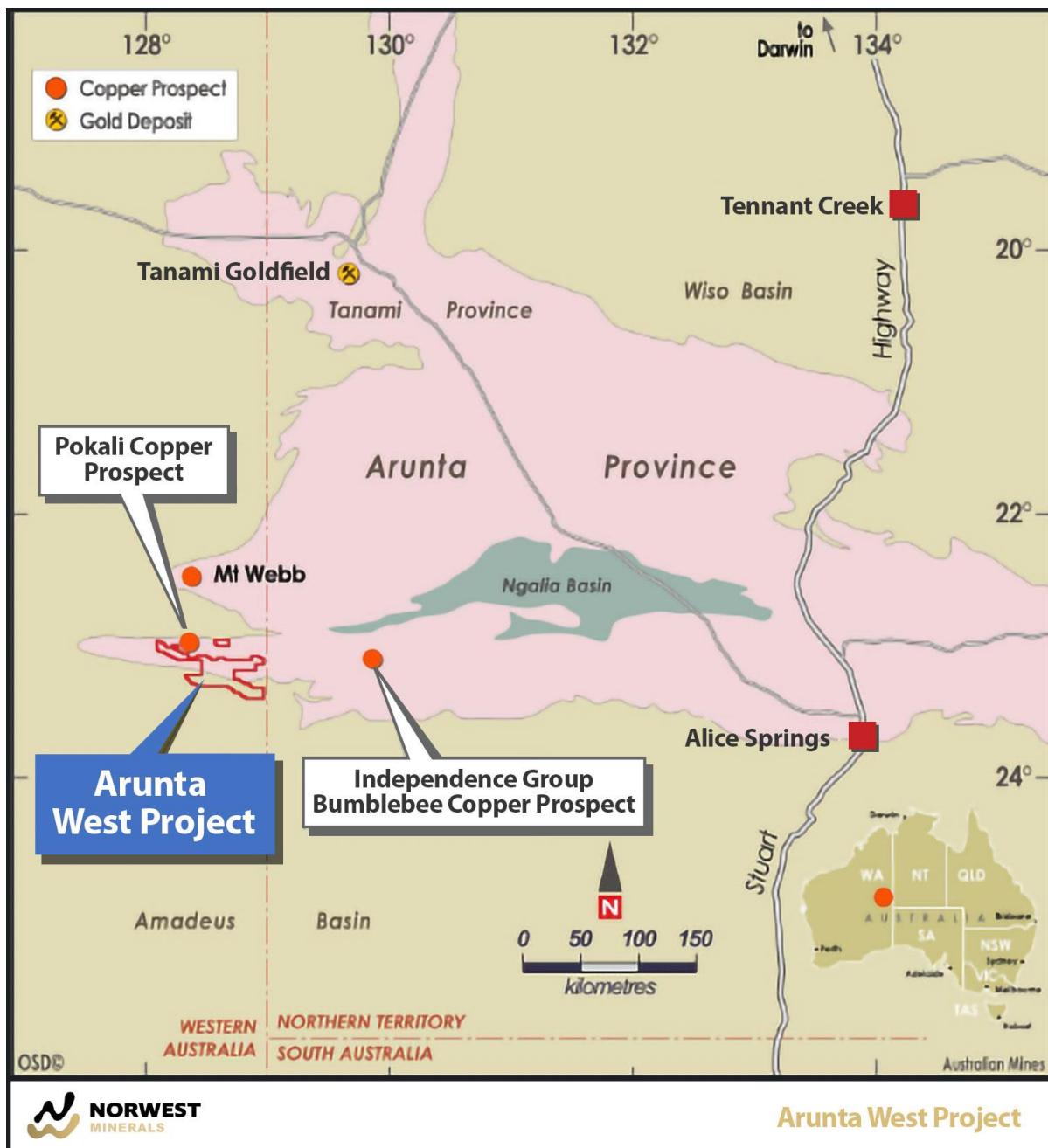


**Figure 2:** Processed gravity (residual Bouguer gravity anomaly) and reduced-to-pole magnetic data clearly display the coincident highs (red to white peaks) associated with the North Dovers anomaly.

<sup>3</sup> Ashburton Minerals Limited, Mt Webb Project Annual Report, 2010

<sup>4</sup> ASX Announcement by AUZ, 07 August 2018: Norwest stepping-up pursuit of copper-gold mineralisation at its large North Dovers anomaly

The Arunta West Copper-Gold project is located approximately 600 kilometres west of Alice Springs in Western Australia and is strategically located between the Pokali mineral occurrences to the west and Independence Group's (ASX: IGO) Lake MacKay project hosting a number of new copper-gold discoveries to the east (Figure 3).

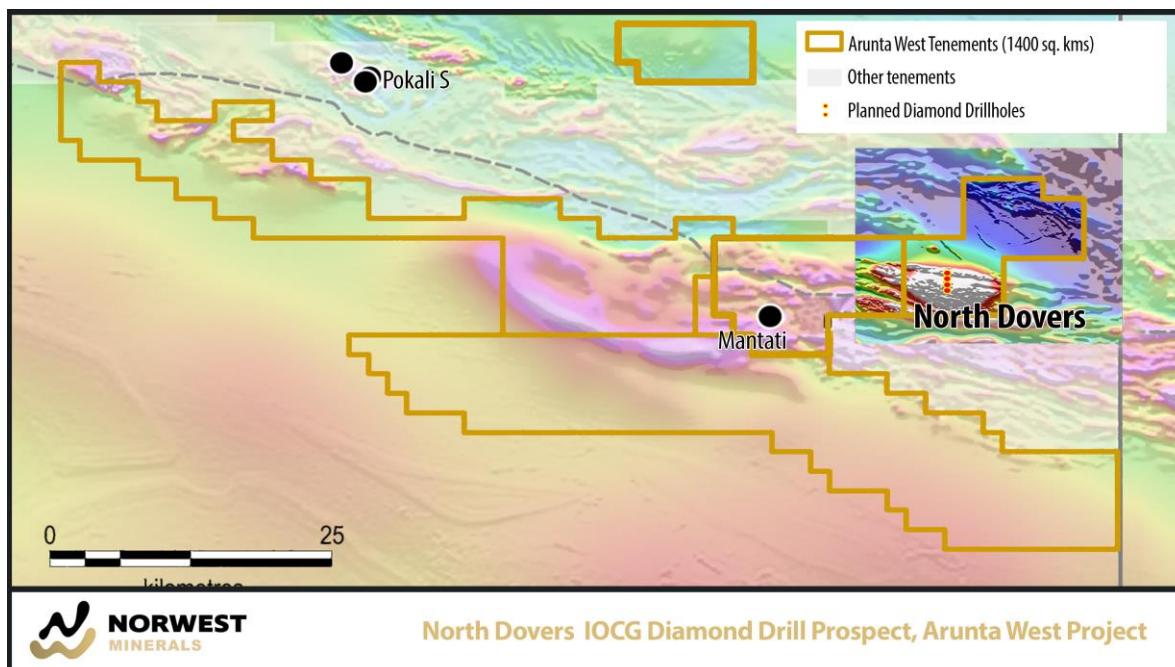


**Figure 3:** The Arunta West project covers an area of approximately 1,500 square kilometres in a region rapidly becoming known as Australia's next copper province.

A recently completed Heritage study has cleared the areas at North Dovers for diamond drilling to test the **IOCG** target. The North Dovers clearance comes on the back of BHP's announcement late last year of a new **IOCG** find southeast of its Olympic Dam operation

having returned drill intercepts of over 425 metres grading 3% copper (inc. 180 metres @ 6% Copper) with associated gold, and silver metals<sup>5</sup>.

The Arunta West project is a joint venture with Jervois Mining Limited (ASX:JRV 49%) (ASX:NWM 51%-manager, earning 80%), and takes in three tenements covering 345 square kilometres of the prospective Lake Mackay district of Western Australia. Norwest also holds 100% interest in two tenements adjoining the Arunta West JV area covering an additional 1,100 square kilometres.



**Figure 4:** Arunta West tenements/regional magnetics and North Dovers with detailed magnetics.

North Dovers is primarily defined by a strong +1,000 nT magnetic anomaly covering approximately a 4-kilometre by 8-kilometre area and located immediately south of a major crustal structure. For reference, the Olympic Dam deposit also produces a +1,000 nT magnetic anomaly.<sup>6</sup>

The prospectivity of the North Dovers target was specifically recognized by the Western Australian government when they agreed to contribute up to \$200,000 toward Norwest's upcoming maiden drill programme at North Dovers via their competitive Exploration Incentive Scheme<sup>7</sup>.

The North Dovers target area is surrounded by tenements held by Independence Group NL (ASX: IGO) and their JV partners Prodigy Gold (ASX:PRX) who currently hold over 19,000km<sup>2</sup>

<sup>5</sup> BHP News Release, 27 November 2018, release number 27/18 "BHP copper exploration programme update"

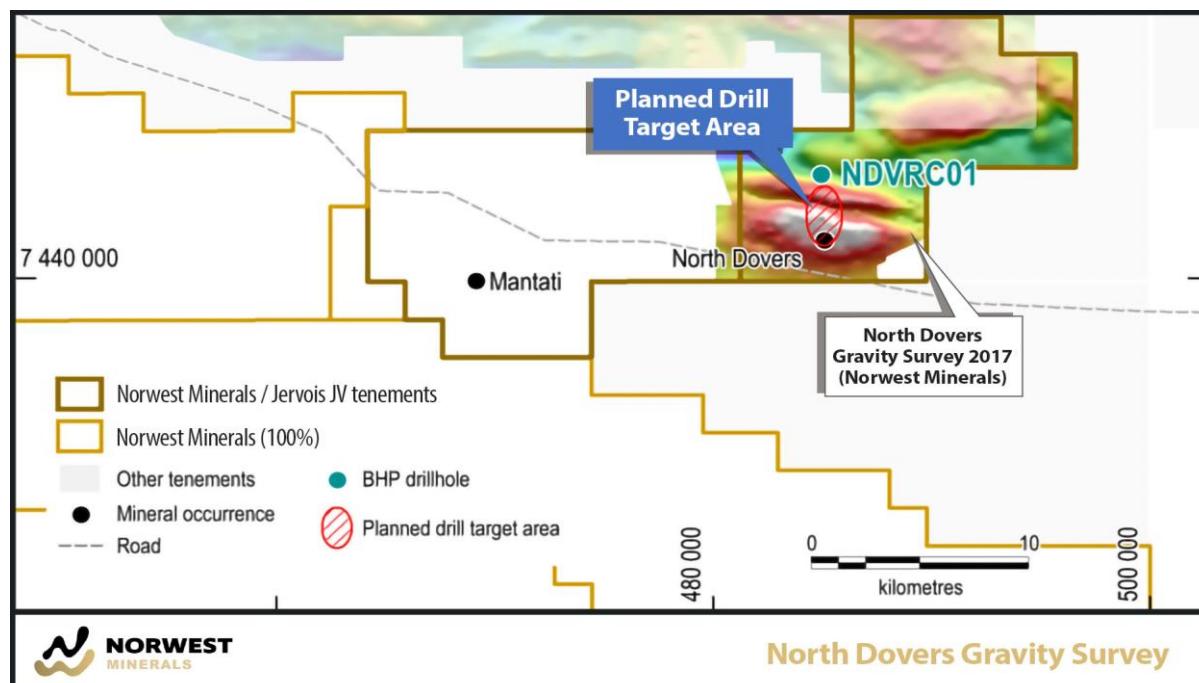
<sup>6</sup> J. Austin and C. Foss (2012). "Rich, attractive and extremely dense: A geophysical review of Australian IOCGs" 22nd International Geophysical Conference and Exhibition, 26-29 February 2012 – Brisbane, Australia

<sup>7</sup> Co-funded exploration drilling R17, 2018-19 successful applicants, Western Australia Department of Mines, Industry Regulation and Safety, announced 29 May 2018. [http://www.dmp.wa.gov.au/Documents/R17\\_Successful\\_List.pdf](http://www.dmp.wa.gov.au/Documents/R17_Successful_List.pdf)

of ground to the east. Independence has just announced the start of a 9,600m RC drilling programme as part of its \$4.4 million FY19 commitment to unlocking the potential of the area<sup>8</sup>.

The North Dovers prospect was identified in 1999 by BHP as a potential Ernest Henry-style copper-gold target<sup>9</sup> following a prospectivity study of the region by Australian Geological Survey Organisation (AGSO)<sup>10</sup> and a review of the regional government geophysical data. BHP's work revealed a coincident gravity-magnetic anomaly suggestive of an IOCG deposit<sup>11</sup>.

A single hole, NDVRC01, was later drilled by BHP to test the North Dovers anomaly. Due to strict access issues the hole was located off the main anomaly and drilling only reached the cover sequence before being abandoned without achieving its target depth (Figure 5).



**Figure 5:** Residual gravity image showing old BHP drill hole (NDVRC01) collar position relative to the North Dovers anomaly and Norwest's planned diamond drilling.

<sup>8</sup> ASX Announcement by Prodigy Gold and Independence Group, 11 April 2019: Lake Mackay JV Update: 9,600m drilling programme underway & project area increase by 50%

<sup>9</sup> Grimley, M. and Hart, J., 1999. Final Report for Exploration Licences EL80/2039, EL80/2040, EL80/2041, EL80/2042, EL80/2255, EL80/2256, EL80/2257, EL80/2258, EL80/2259, EL80/2260, EL80/2261 and EL80/2262, and Annual Report for Exploration Licences EL80/2263, EL80/2264, EL80/2265, and EL80/2424; Mt Webb Joint Venture, WA for the period ending 31st December 1999, BHP Minerals Pty Ltd, WAMEX Report A59726, 224p.

<sup>10</sup> Wyborn, L., Hazell, M., Page, R., Idnurm, M. and Sun, S., 1998. A newly discovered major Proterozoic granite-alteration system in the Mount Webb region, central Australia, and implications for Cu-Au mineralisation, Australian Geological Survey Organisation (AGSO) Research Newsletter 28, 1-6.

<sup>11</sup> BHP Minerals PTY Ltd, Mt Webb Joint Venture Annual Report, Internal company report (WAMEX number a59726), December 1999

### **Soil sampling commences across entire Arunta West Project area**

A project wide soil sampling programme has also commenced running concurrent with the deep diamond drilling at North Dovers. The soil sampling team are following a 400m x 400m grid pattern and expects to cover the entire 1,450 square kilometre Arunta West project package in approximately 5 weeks. The results will be used in conjunction with geophysical data to develop new targets to drill test for possible economic gold and base metal mineralisation.

Mineral Exploration and Land Access Deed of Agreements have been executed with the Tjamu Tjamu (Aboriginal Corporation) RNTBC who manage the land covered by the Company's Arunta West Copper-Gold Project. The agreements open up the ability for the Company to conduct exploration programs (including drilling) across most all of its 1,450 square kilometre Arunta West tenement holding.

**Norwest Minerals Chief Executive Officer, Charles Schaus, commented:**

*"This is a very exciting time for Norwest Minerals, as even the hint of an IOCG mineralization system from the maiden diamond drill programme at North Dovers has the potential to rerate both the Company and the region"*

\*\*\*ENDS\*\*\*

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## **Competent Person's Statement**

### **Exploration Targets and Results**

The information in this report that relates to Exploration Results and Exploration Targets is based on and fairly represents information and supporting documentation prepared by Charles Schaus (CEO of Norwest Minerals Limited). Mr. Schaus is a member of the Australian Institute of Mining and Metallurgy and has sufficient experience of relevance to the styles of mineralisation and types of deposits under consideration, and to its activities undertaken to qualify as Competent Persons as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Schaus consents to the inclusion in this report of the matters based on his information in the form and context in which they appear.