



ASX ANNOUNCEMENT

26 April 2019

ASX: NWM

**ACTIVITIES REPORT FOR QUARTER ENDED  
31 MARCH 2019**

**Highlights:**

- **Reverse circulation (RC) drilling of gold & base metals targets undertaken at the Marymia Project in WA**
- **Phase 2 - RC drilling down-dip of recent gold intercepts completed at the Warriedar project in WA**
- **Deep diamond drilling of the Arunta West 8km x 4km North Dovers iron-oxide-copper-gold (IOCG) anomaly scheduled to commence early May 2019**
- **Soil sampling programme covering total Arunta West Project area (1,450 square kilometres) underway**

**Norwest Minerals Limited** ("Norwest" or "the Company") (Australia ASX: NWM) is pleased to present its Quarterly Report for the period ending 31 March 2019.

Field activities are progressing or about to commence at a number of Norwest's West Australian gold and base metals projects. The exploration fieldwork included the completion of reverse circulation (RC) drilling at Marymia with 7 holes drilled into the Jenkins VMS target and 4 holes drilled into the North Dixon magnetic anomaly.

Follow-up RC drilling at the Warriedar project totaled 9 RC holes testing targets at Reid's Ridge, Lang's Find and extensions to gold mineralization below the Mount Laws gold trend. All RC samples collected are currently undergoing analysis for gold and base metals with results expected near the end of April.

At Arunta West, deep diamond drilling is scheduled to commence early May. The drilling will test the highly prospective North Dovers Iron-Oxide-Copper-Gold (**IOCG**) target which is defined by a large 4km x 8km coincident magnetic-gravity anomaly with geological features analogous to world class **IOCG** systems such as those hosting Olympic Dam and Ernest Henry.



## MARYMIA PROJECT (NWM 81% - Riedel/Audax 19%)

The Marymia Project is located approximately 900 kilometres north of Perth within the Archean Marymia Inlier. The project is situated 40 kilometres east of the Plutonic Gold Mine, 20 kilometres southeast of the Marymia gold camp, and 55 kilometres northeast of Sandfire Resources NL's DeGrussa copper mine (Figure 1).

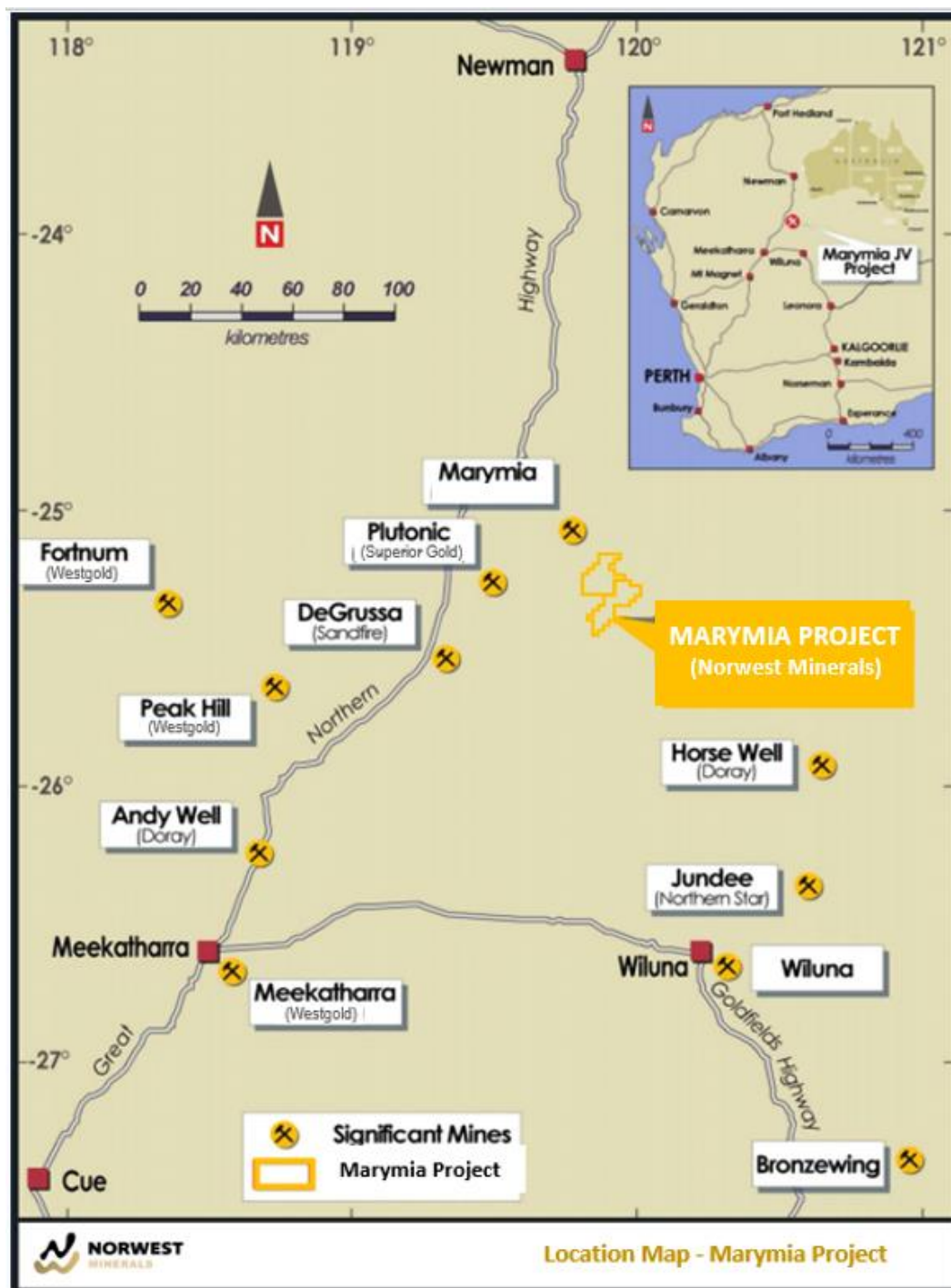


Figure 1: Marymia project location map.



During the Quarter, exploration at the Marymia Project employed reverse circulation (RC) drilling to test two high-priority targets being the Dixon North Magnetic Anomaly (gold) and the Jenkins Volcanogenic Massive Sulphide (VMS) soil anomaly (Figure 2).

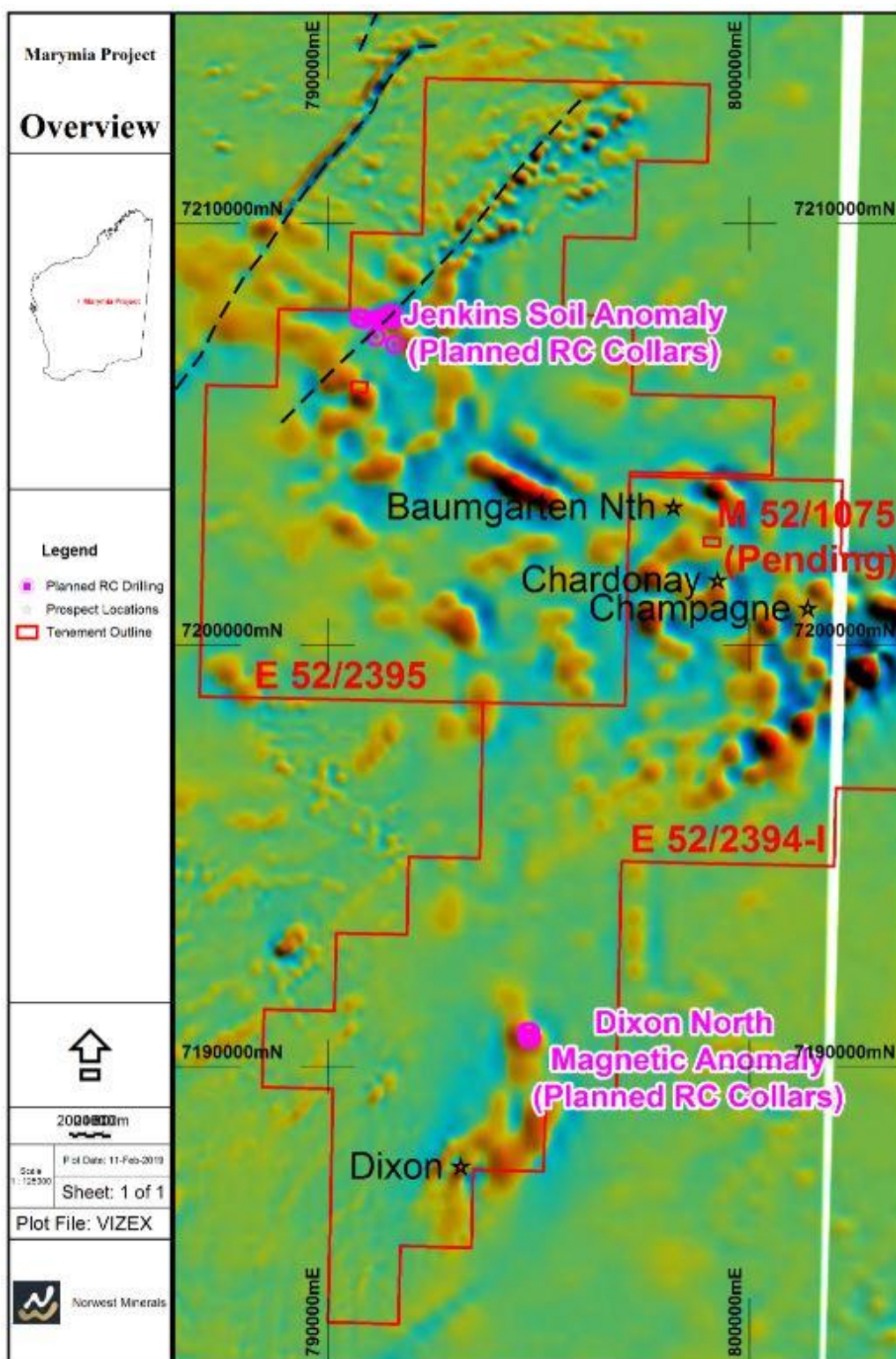


Figure 2: RC drill collars to test Dixon North (gold) and the Jenkins Anomaly (VMS).



### Dixon North (gold)

Dixon North is a 400 metre by 200 metre magnetic anomaly located within the same geological setting and less than 1 kilometre north of the aircore drilling conducted at the Dixon gold zone in mid-2018. Dixon North has a similar magnetic intensity as the Dixon prospect and is potentially coincident with the mineralised mafic-felsic volcanoclastic contact mapped from 2018 air-core work progressing north from Dixon. Due to the thick transported cover in the area, Norwest drilled 4 holes utilising an RC drill rig to test this anomaly (Figure 3).

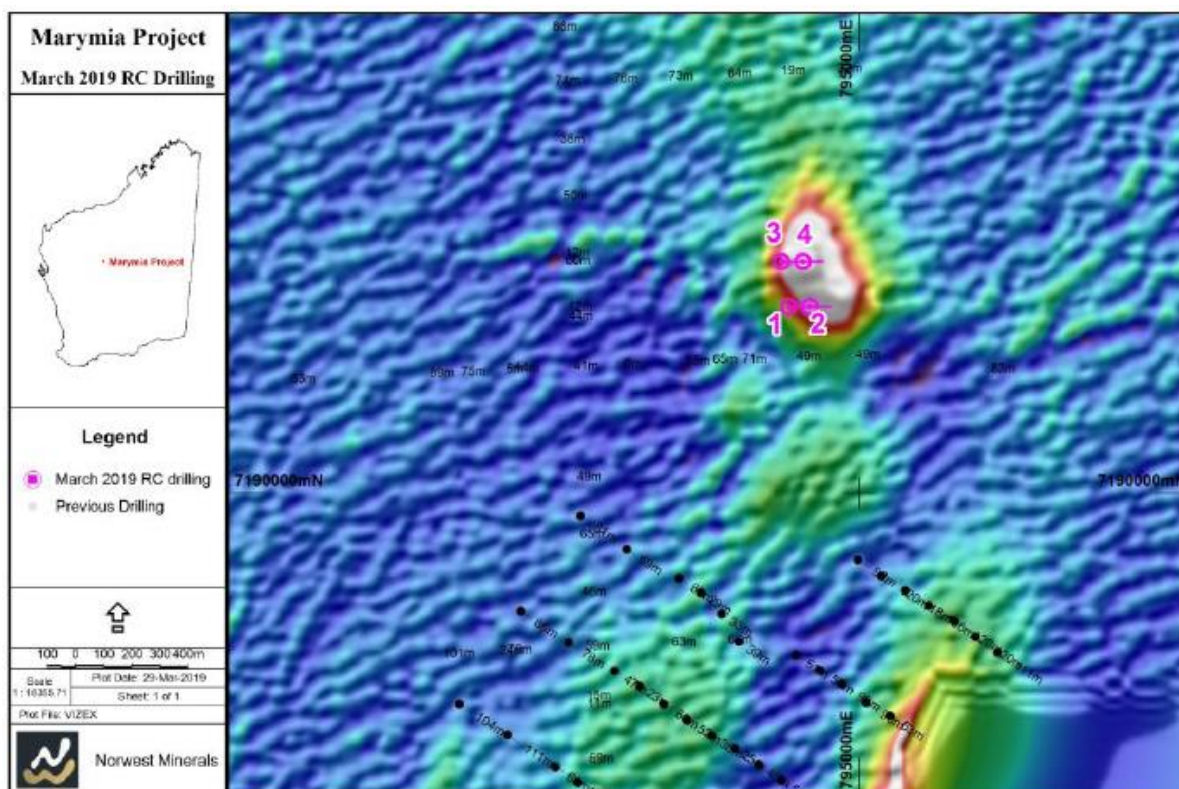


Figure 3: Location of the 4 RC holes drilled into the Dixon North magnetic anomaly.

The RC drilling was designed to penetrate the Proterozoic cover and test the contact between the hanging wall magnetic dolerite and non-magnetic footwall volcanoclastic rocks or basalt where gold mineralisation was intercepted at Dixon in 2018.

All holes intercepted this contact target with the exception of the first RC hole which penetrated a 30 metres quartz-rich, highly altered clay shear zone within a felsic unit before ending in basalt. The hole did not intersect the magnetic dolerite target.

Gold assay results from the 4 RC holes totalling 729m are expected within the coming month.

## Jenkins VMS (base metals)

In early 2018, a tightly spaced geochemical sampling program was undertaken in the Jenkins Area to identify potential VMS - DeGrussa style base metal mineralisation with over 700 samples collected.

The results identified a high-level copper-zinc-lead anomaly. The tight distribution of the lead (Pb) along recognised geological features with coincident anomalous values from rock chip samples collected from gossans (in-situ) indicated that this soil anomaly may be due to underlying bedrock mineralisation. This has been partially confirmed in drill hole MMRC003 (2016) that intersected 21m @ 0.05% copper and 0.21% zinc from 193m.

Given the association of economically significant elements with outcropping gossan, Norwest drilled 7 RC holes during the quarter to test the target for VMS style base metal mineralisation (Figure 4).

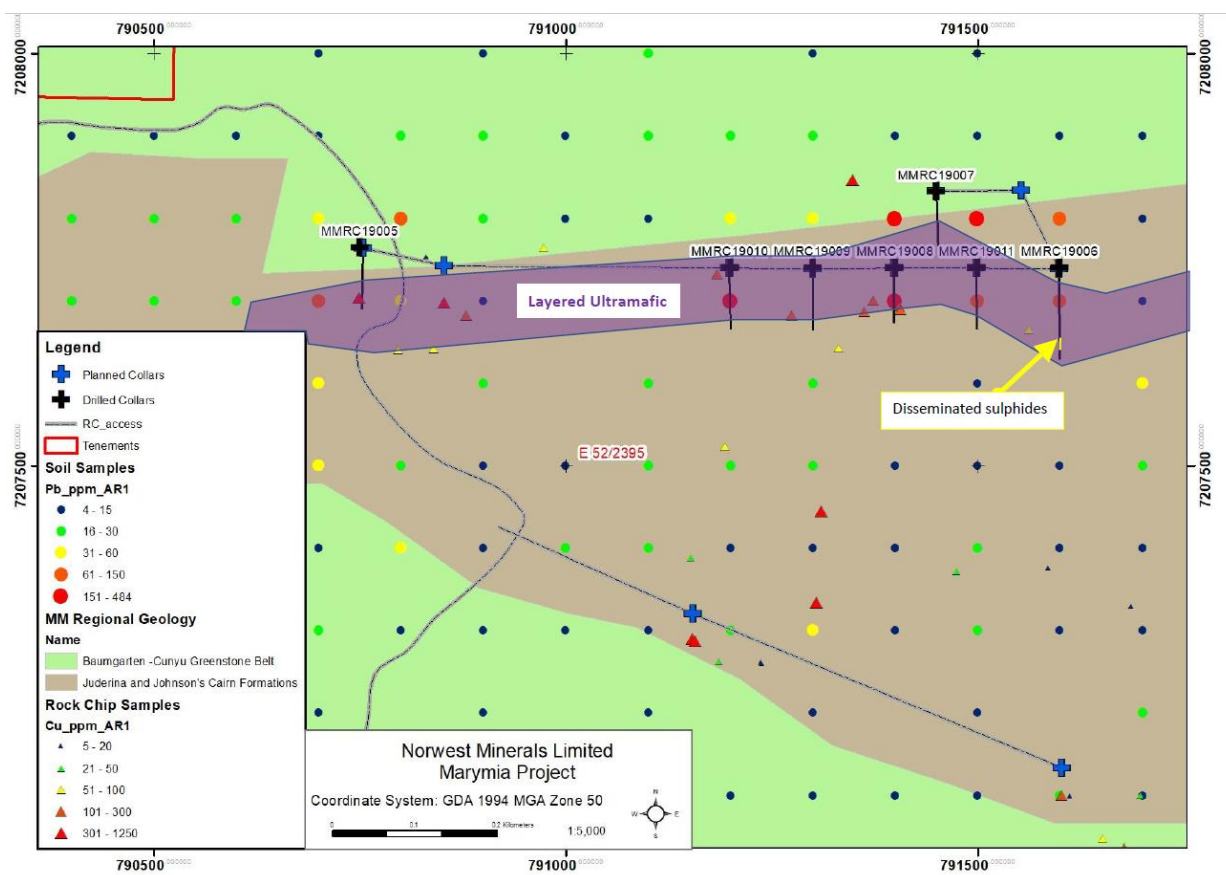


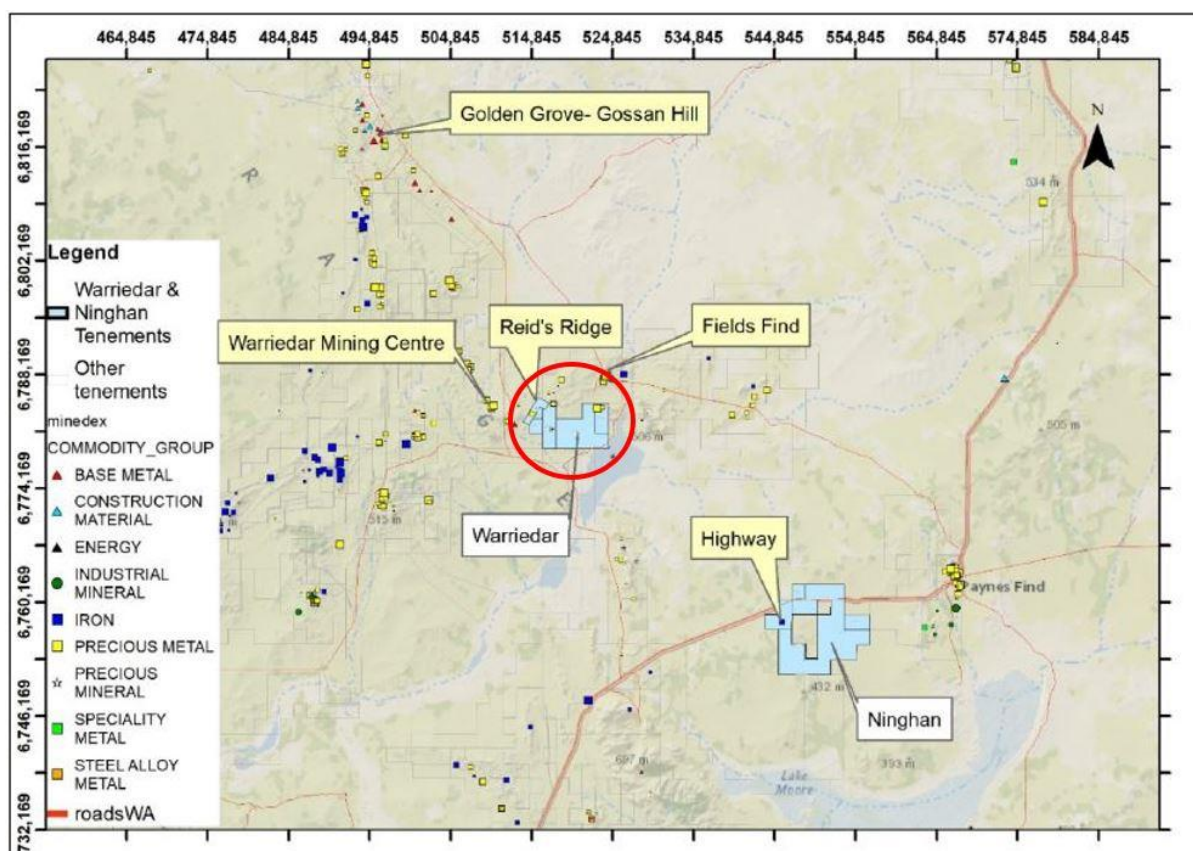
Figure 4: Location of RC drilling to test potential VMS drill targets.

The first drill hole into the soil anomaly intersected an east-west trending ultramafic unit having a footwall and hanging wall sequence of black shale, and sediments. The drilling then refocused from VMS to ortho-magmatic Ni-Cu-Co style mineralisation. Aside from a single hole (near MMRC003) having black shale with quartz veining and a quartz vein with sulphides in the Ultramafic, the drilling did not show any obvious signs of strong mineralisation. Quartz veining was scattered throughout as thin stringers.

A total of 1,126 samples were submitted to the lab for multi-element assay analysis.

### Warriedar Gold Project - (100%)

The 100%-owned Warriedar Gold Project, located 125 kilometres southwest of Mount Magnet in Western Australia, has a number of drill-ready targets including the project's historic Reid's Ridge Gold Mine and the Mount Laws 1.5-kilometre mineralised trend. Reverse circulation drilling (RC) was undertaken during the March 2019 quarter to follow-up on exploration programmes carried out last November which included RC drilling, soil sampling and a ground magnetic survey.



**Figure 5:** Location of Warriedar project tenements near Paynes Find, WA.

### **RC Drilling**

A 9-hole, 984 metre follow-up RC drilling programme was undertaken at several of the Warriedar prospects including Mount Laws, Lang's Find and Reid's Ridge during the March 2019 quarter.

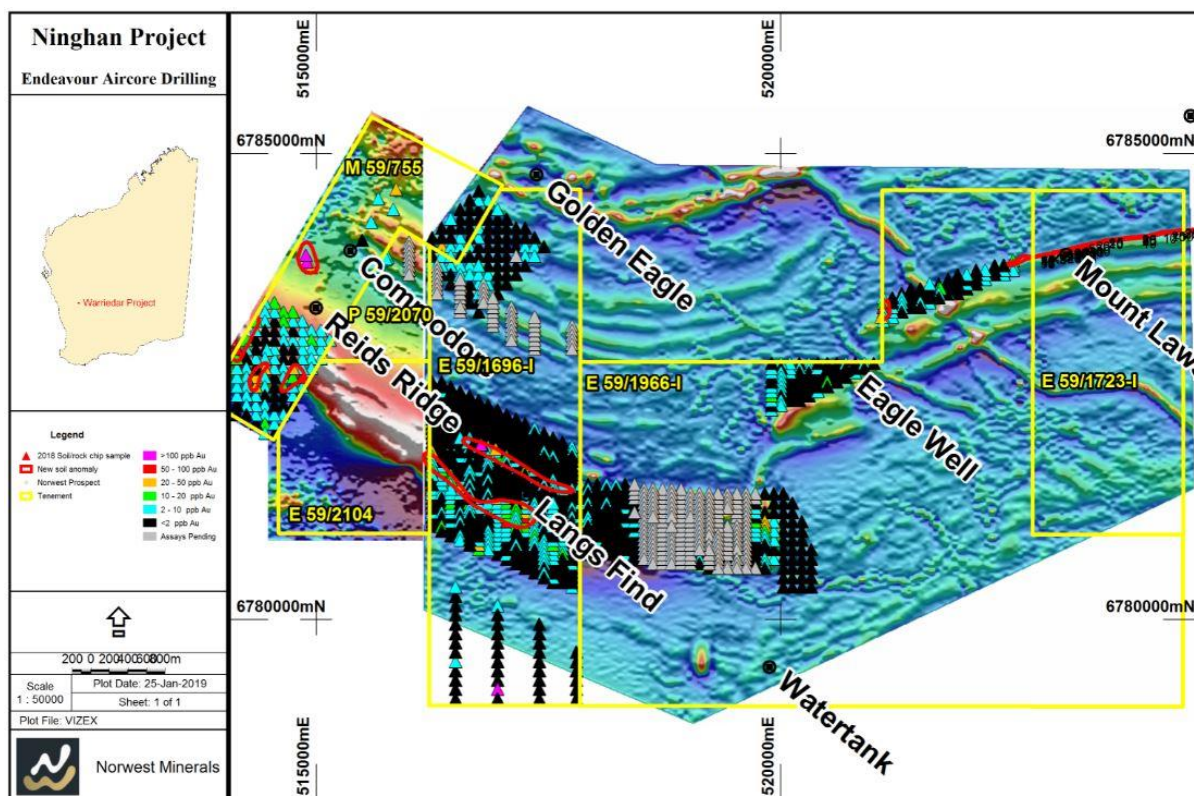
#### **Mount Laws**

Four RC holes were drilled totalling 562 metres to test the down dip extensions to gold intercepts encountered in Norwest's November 2018 RC drilling programme where drill intercepts included<sup>1</sup>:

<sup>1</sup> Norwest Minerals Quarterly Report for period ending 31 December 2018



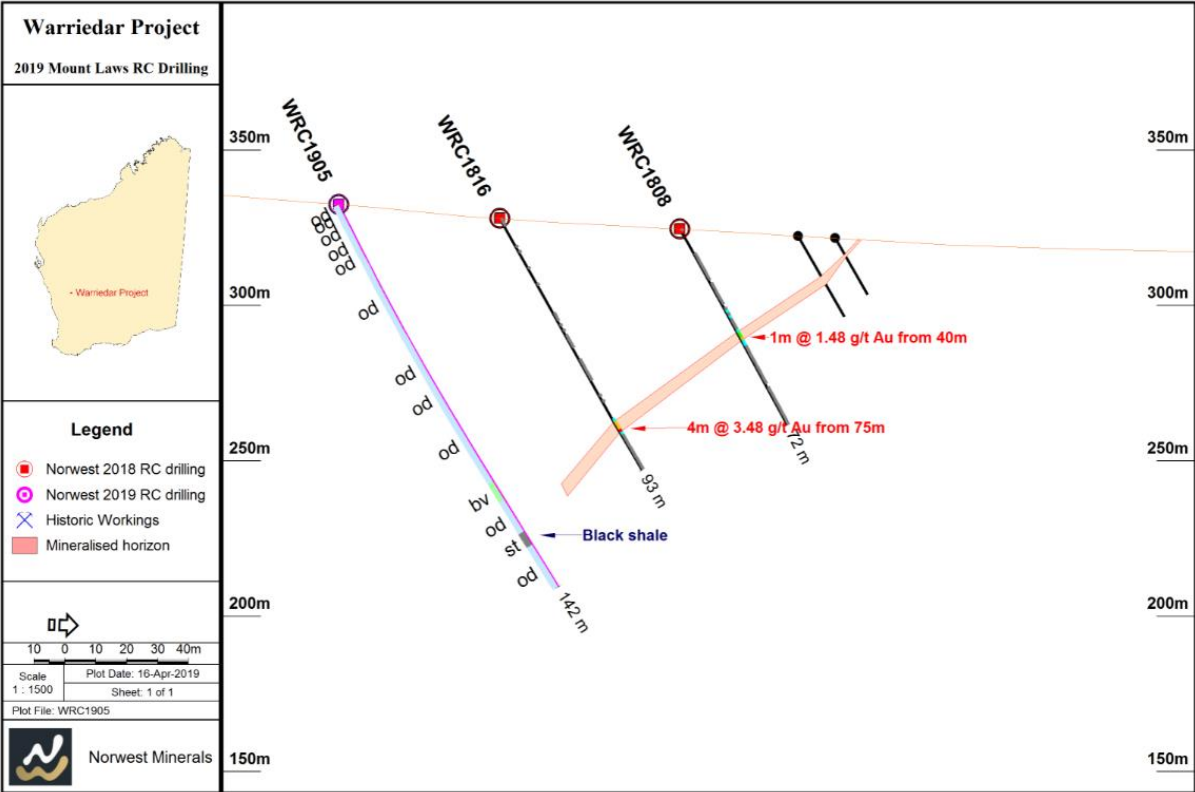
- 4m @ 3.48 g/t Au from 75m (in hole WRC1816)
- 2m @ 3.32 g/t Au From 87m (in hole WRC1815)
- 2m @ 3.09 g/t Au from 49m (in hole WRC1807)



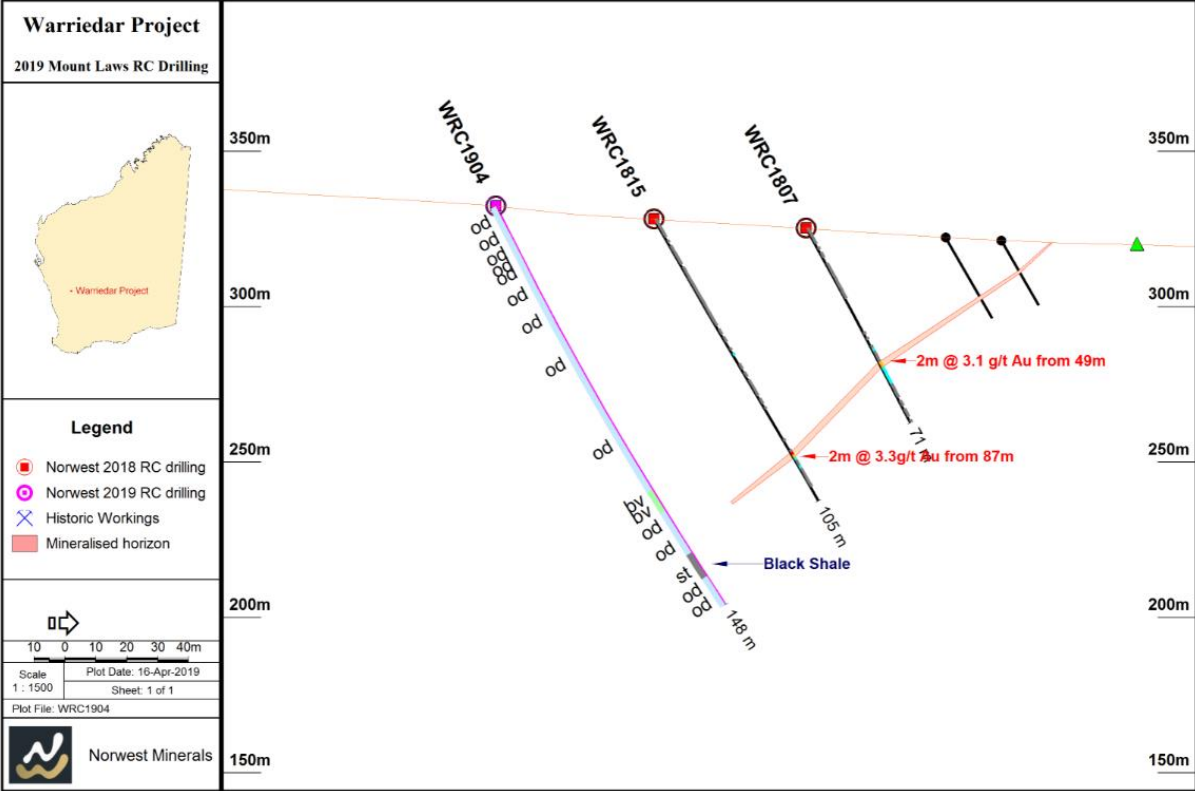
**Figure 6:** Warriedar project soils highlighting Mount Laws, Lang's Find and Reid's Ridge RC targets

Cross-sections 523095E and 523175E (Figures 7 & 8) highlight where the higher tenor gold mineralisation was intersected by RC drilling late last year. The initial observations indicate that both gold grade and width of gold mineralisation improve at depth. The follow-up March 2019 RC drilling appears to have intersected mineralisation down dip with confirmation pending until the assay results are received from the laboratory.

Two further RC holes were drilled at the western extension of the Mount Laws trend where anomalous rock chips were collected during a June 2018 surface sampling programme. The target BIF unit was intersected by both RC holes at 38 metres and was approximately 6 metres thick. Both holes were terminated at 64 metres. Results from these 2 RC holes are also expected within the coming weeks.



**Figure 7: Section 523095E showing gold intercepts and new RC drill hole (assays pending)**



**Figure 8:** Section 523175E showing gold intercepts and new RC drilling



#### Lang's Find

One 94 metre RC hole was drilled to test below anomalous rock chip samples collected as part of the November 2018 Warriedar surface sampling program. The RC hole intersected multiple intervals of abundant quartz veining from surface to 55 metres and intersected the BIF target unit at 58 metres depth. The BIF unit (magnetic) was interlayered with thin units of dolerite, with its lower boundary extending to 77 metres downhole. Within the BIF unit, an interval of 6 metres had abundant sulphide mineralization (pyrite) and moderate quartz veining. Assay results for the samples collected from this RC drilling are pending.

#### Reid's Ridge

Two RC holes tested underneath anomalous rock chip samples collected from historic programs and from the November 2018 sampling program. The holes were drilled into a massive granodiorite. Both holes encountered multiple zones of moderate to abundant pyrite mineralization, and quartz veining. The holes additionally encountered multiple thin (<1m) dykes of a black basalt or dolerite, which showed potential for mineralization. These assay results will be available in May.

### **Arunta West Project – Deep Diamond Drilling to commence 4<sup>th</sup> of May**

Diamond drilling is scheduled to commence at the Company's Arunta West Project in Western Australia early May 2019. 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 and geological features analogous 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 no exploration was conducted. On 6 December 2018 Norwest announced the granting of all statutory approvals enabling the Company to immediately commence exploration activities across the entire Arunta West project area.

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.

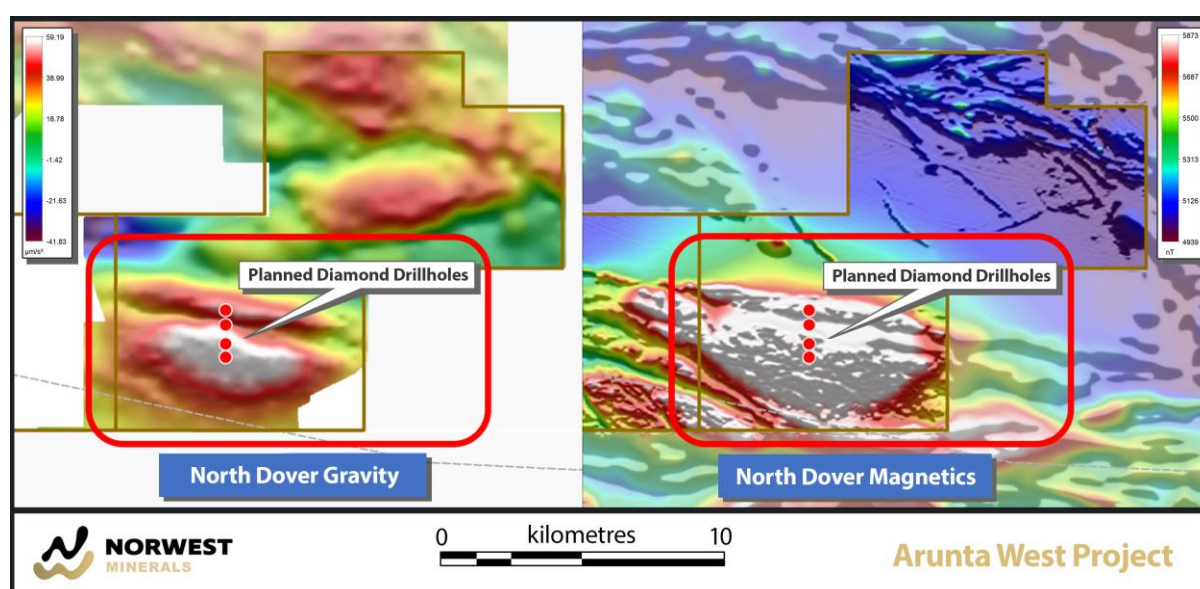
### **Background – Arunta West Project / North Dovers prospect**

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>2</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 9)

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>3</sup>.

Direct drill targeting based on the gravity and magnetic modelling and 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.



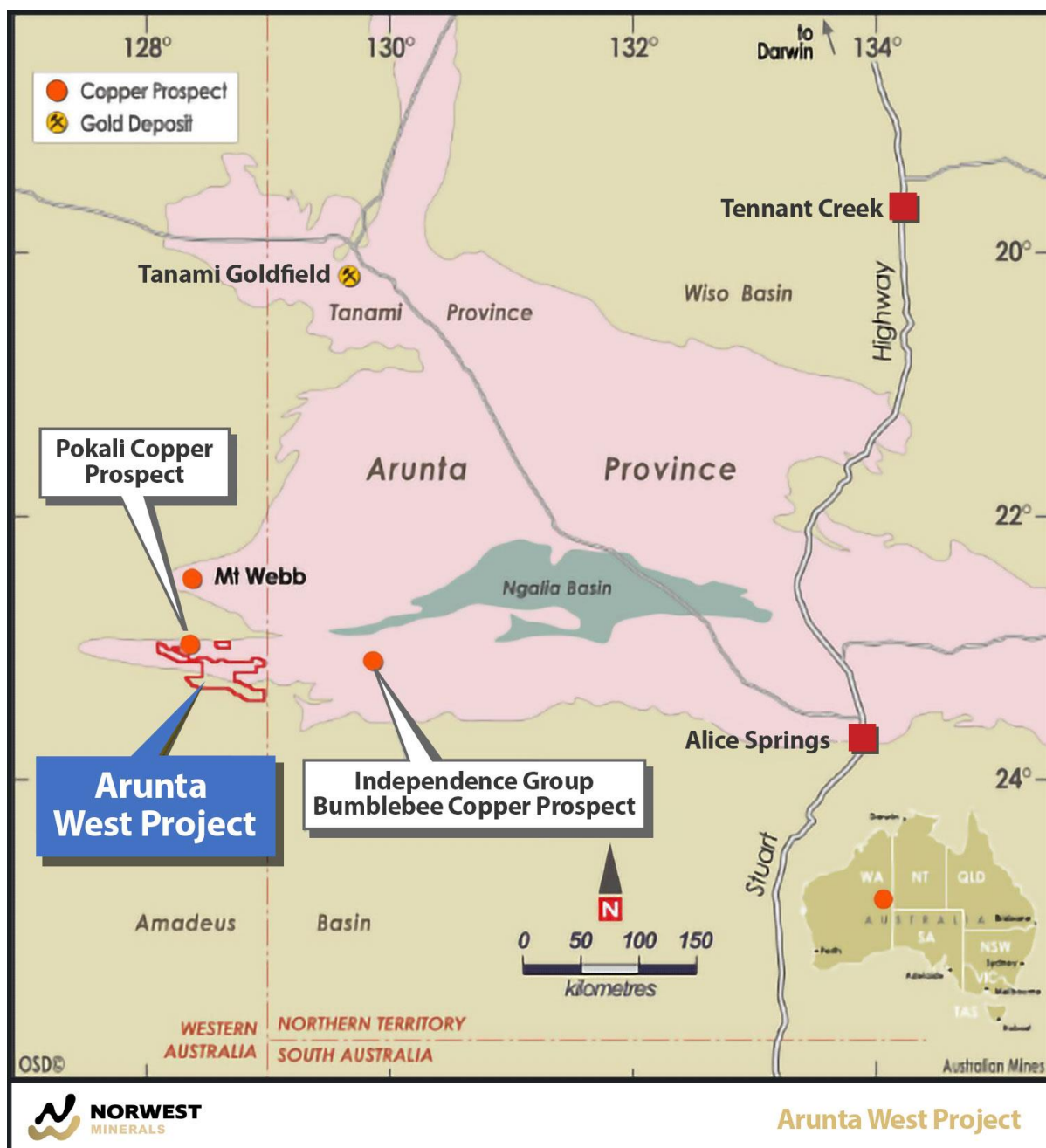
**Figure 9:** Processed gravity (residual Bouguer gravity anomaly) and reduced-to-pole magnetic data clearly display the coincident highs (red to white peaks) associated with the North Dovers anomaly.

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 (Figures 10 & 11).

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 the new Oak Dam **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>4</sup>.

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

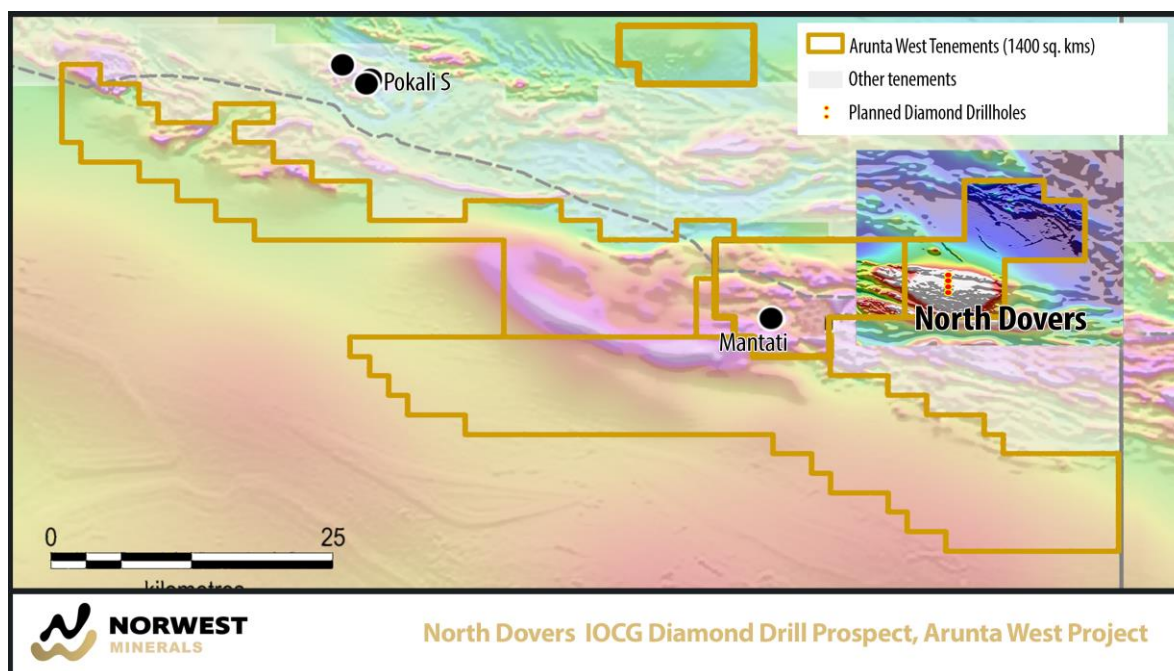
4 BHP News Release, 27 November 2018, release number 27/18 "BHP copper exploration programme update"



**Figure 10:** The Arunta West project covers an area of approximately 1,450 square kilometres in a region rapidly becoming known as Australia's next copper province.

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 11:** 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>5</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>6</sup>.

The North Dovers prospect was identified in 1999 by BHP as a potential Ernest Henry-style copper-gold target<sup>7</sup> following a prospectivity study of the region by Australian Geological Survey Organisation (AGSO)<sup>8</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>9</sup>.

5 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

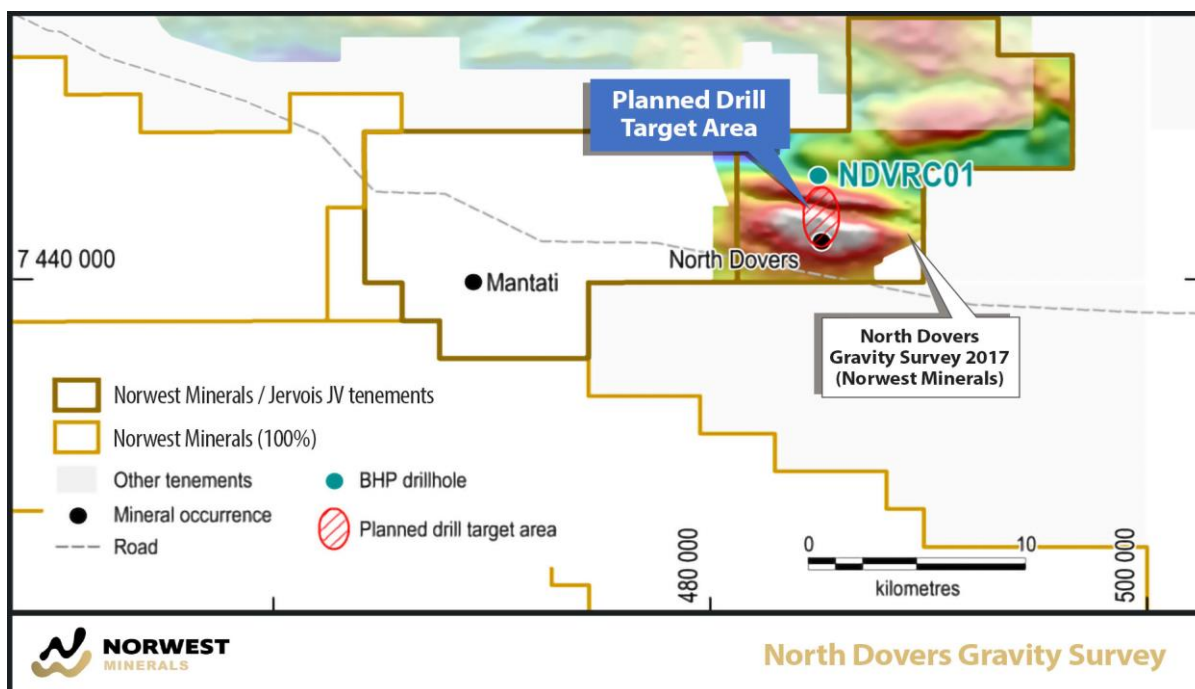
6 Co-funded exploration drilling R17, 2018-19 successful applicants, Western Australia Department of Mines, Industry Regulation and Safety, announced 29 May 2018. [http://www.dmp.wa.gov.au/Documents/R17\\_Successful\\_List.pdf](http://www.dmp.wa.gov.au/Documents/R17_Successful_List.pdf)

7 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.

8 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.

9 BHP Minerals PTY Ltd, Mt Webb Joint Venture Annual Report, Internal company report (WAMEX number a59726), December 1999

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 12).



**Figure 12:** Residual gravity image showing old BHP drill hole (NDVRC01) collar position relative to the North Dovers anomaly and Norwest's planned diamond drilling.

The North Dovers **IOCG** target is flanked by Independence Group NL (ASX:IGO) and their JV partners Prodigy Gold (ASX:PRX) tenements. The IGO/PRX joint venture recently increased their ground holdings from 13,000 to 19,000km<sup>2</sup> in the highly prospective Lake MacKay region and have announced the start of a 9,600m RC drilling programme as part of IGO's \$4.4 million FY19 commitment to unlocking the potential of the area.

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

Norwest has commenced a project wide soil sampling programme to be undertaken concurrent with the deep diamond drilling at North Dovers. The soil sampling team will follow 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 and geological 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.

### **Bali Copper Project (100%)**

The Bali Project, which is located approximately 75 kilometres west of Paraburdoo in Western Australia, hosts the Bali shear being a major faulted zone proven to host copper, lead, zinc and silver mineralisation<sup>10</sup>.

A high-resolution airborne electromagnetic (AEM) and magnetic survey totaling 441 line-kilometres was flown late last year across Norwest's Bali Project. The survey was designed to highlight conductors representing potential primary copper mineralisation that may be present within the project area<sup>11</sup>.

Processing of the data to date has not revealed strong, discrete EM anomalies that present as walk-up drill targets. Strike-extensive structures that host the known Cu mineralisation are evident in both the EM (as an IP effect) and magnetic datasets. Overall, however the Bali mineralisation doesn't have a conductive AEM response. Drill targeting will be driven by the known geology and drilling at this stage, with the geophysics to map out the host structures.

Future exploration work will include:

1. a structural and lithological interpretation of the magnetic and EM data to build a project-wide framework to develop a set of targets based on integrating the interpretation results with all available geological data.
2. Characterise the physical properties of the known mineralisation to more accurately assess what geophysical methods may directly detect mineralisation. Ideally this is done on fresh drill core and hand samples if suitable.
3. Ground geophysical surveys which will require careful considered given the difficult access and terrain.
4. Test Down Hole EM could be carried out if drilling proceeds, to assess potential mineralization in closer proximity.

### **Cash position**

As at the end of the December Quarter, the Company has approximately **\$4.28** million in cash comprising cash in the bank and term deposit balances.

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

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<sup>10</sup> Norwest Minerals Limited Prospectus, Independent Geologist's Report, Section 3.3.1

<sup>11</sup> Norwest Minerals Limited Quarterly Report for period ending 31 December 2018



**For further information:**

**Shareholders contact:**

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**Competent Person's Statement**

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 Pty Ltd). 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.

**Tenement Information (Listing Rule 5.3.3)**

Country	Location	Project	Tenement	Change in Holding (%)	Current Holding (%)
Australia	WA	1 Arunta West	E80/4820	0	51
Australia	WA	1 Arunta West	E80/4986	0	51
Australia	WA	1 Arunta West	E80/4987	0	51
Australia	WA	Arunta West	E80/5031	0	100
Australia	WA	Arunta West	E80/5032	0	100
Australia	WA	2 Bali	E08/2894	0	100
Australia	WA	Warriedar	E59/1696	0	100
Australia	WA	Warriedar	E59/1723	0	100
Australia	WA	Warriedar	E59/1966	0	100
Australia	WA	Warriedar	E59/2104	0	100
Australia	WA	Warriedar	M59/755	0	100
Australia	WA	Warriedar	P59/2070	0	100
Australia	WA	Ninghan	E59/1692	0	100
Australia	WA	Ninghan	E59/2080	0	100
Australia	WA	Ninghan	E59/2103	0	100
Australia	WA	Ninghan	P59/2060	0	100
Australia	WA	3 Marymia	E52/2394	+1.07	81.07
Australia	WA	3 Marymia	E52/2395	+1.07	81.07
Australia	WA	Marriotts	M37/96	0	100

1.JV with Jervios Mining Limited (49%) - transfer of 51% tenement interest from Australian Mines Limited to Norwest Minerals awaiting Office of State Revenue assessment.

2. Transfer of tenement interest (100%) from TasEx Pty Ltd to Norwest Minerals in progress following the Bali purchase in late November 2018, assessment with OSR.

3. JV with Riedel Mining Limited and owns 100% of Audax - transfer of tenement interest (81.07%) from Australian Mines Limited to Norwest Minerals awaiting Office of State Revenue assessment. Increase from 80% to 81.07% due to Riedel/Audax choosing to dilute rather than participate in recent exploration and other costs associated with the Marymia project.

All tenement purchase costs are complete and all DMIRS fee, rents and expenditure obligations current.

## APPENDIX 1

### Reverse Circulation Drilling Summary Table – Marymia Project

Hole Id.	Easting (GDA94z50)	Northing (GDA94z50)	Elev (m)	Max. Depth (m)	Dip (Deg)	Azim (Deg)	From Depth (m)	To Depth (m)	Width (m)	Au (ppm)
MMRC19001	794750	7190660	563.6	148	-60	90	Assay results pending			
MMRC19002	794825	7190660	563.7	250	-60	90	Assay results pending			
MMRC19003	794725	7190820	564.0	184	-60	90	Assay results pending			
MMRC19004	794800	7190820	564.1	148	-60	90	Assay results pending			
MMRC19005	790750	7207765	600.3	148	-60	180	Assay results pending			
MMRC19006	791600	7207740	600.2	202	-60	180	Assay results pending			
MMRC19007	791450	7207833	600.2	148	-60	180	Assay results pending			
MMRC19008	791400	7207740	600.1	172	-60	180	Assay results pending			
MMRC19009	791300	7207740	600.0	160	-55	180	Assay results pending			
MMRC19010	791200	7207740	600.0	154	-55	180	Assay results pending			
MMRC19011	791500	7207740	600.2	142	-55	180	Assay results pending			

### Reverse Circulation Drilling Summary Table – Warriedar Project

Hole Id.	Easting (GDA94z50)	Northing (GDA94z50)	Elev (m)	Max. Depth (m)	Dip (Deg)	Azim (Deg)	From Depth (m)	To Depth (m)	Width (m)	Au (ppm)
WRC1901	522601	6783816	330.0	64	-60	0	Assay results pending			
WRC1902	522642	6783825	328.8	64	-60	5	Assay results pending			
WRC1903	523255	6783821	333.7	160	-62	0	Assay results pending			
WRC1904	523175	6783817	332.3	148	-62	0	Assay results pending			
WRC1905	523094	6783800	332.5	142	-63	0	Assay results pending			
WRC1906	523014	6783821	329.8	112	-61	0	Assay results pending			
WRC1907	516745	6781825	341.6	94	-55	40	Assay results pending			
WRC1908	514921	6783919	355.4	100	-60	245	Assay results pending			
WRC1909	514976	6783800	354.8	100	-60	245	Assay results pending			

## Reverse Circulation Drilling – March 2019

### Marymia and Warriedar Projects

#### Appendix 1: JORC Code, 2012 Edition - Table 1

#### JORC Code, 2012 Edition – Table 1 report template

#### Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li><i>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</i></li> <li><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li><i>Aspects of the determination of mineralization that are Material to the Public Report.</i></li> <li><i>In cases where ‘industry standard’ work has been done this would be relatively simple (eg ‘reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay’). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralization types (eg submarine nodules) may warrant disclosure of detailed information.</i></li> </ul>	<ul style="list-style-type: none"> <li>Reverse Circulation drilling was used to collect 1m interval samples from a 5 ½” hole split through a cone splitter to approximately 3kg sub-samples of each interval. Samples were submitted to Intertek Genalysis in Perth, WA for sample preparation and analysis.</li> </ul>





Criteria	JORC Code explanation	Commentary
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	<ul style="list-style-type: none"> <li>The drilling was conducted by an Ausdrill NW, Schramm T685 Reverse Circulation drill rig with auxiliary compressor. This drill uses a modern face sampling hammer with inner-tube and sample hose delivery to cyclone-cone splitter sample assembly.</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul style="list-style-type: none"> <li>Sample recovery and sample condition was recorded for all drilling. Sample recovery was good for all drill holes. MMRC19001 to MMRC19004 had approximately 20% wet sample (potential fines loss) due to ground conditions (water injected at cyclone to improve split efficiency in puggy clays).</li> </ul>
<b>Logging</b>	<ul style="list-style-type: none"> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>The RC drill holes were qualitatively logged and registered by geologists from Apex Geoscience.</li> <li>Chip trays were photographed to maintain a digital record of geological logs.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>The drill samples were collected at 1m intervals through a cone splitter mounted to a vertical cyclone. The samples were collected as approximately 3 kg sub-sample splits of sufficient size to represent the mineralization based on: the style of mineralization, the sampling methodology and assay value ranges for the commodities of interest. Samples were submitted to Intertek Genalysis where they were run through a jaw crusher and then pulverized down to 80% passing 75 microns.</li> <li>Quality Control on the RC drill rig included insertion of duplicate samples (2%) to test split efficiency, insertion of standards (2%) to verify lab assay accuracy and cleaning and inspection of sample assembly.</li> </ul>



Criteria	JORC Code explanation	Commentary
<i>Quality of assay data and laboratory tests</i>	<ul style="list-style-type: none"> <li><i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li><i>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</i></li> <li><i>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</i></li> </ul>	<ul style="list-style-type: none"> <li>The RC drilling samples were crushed and pulverised before undergoing an Aqua Regia digestion for inductively coupled plasma mass spectrometry (ICP-MS) finish. The assay method and laboratory procedures were appropriate for this style of mineralization. The Aqua Regia and ICP-MS techniques were designed to measure multi-element concentrations (for base metal mineralisation) in the samples. The Intertek Genalysis lab inserts its own standards and blanks at set frequencies and monitors the precision of the analyses. As well, the lab performs repeat analyses at random intervals, which return acceptably similar values to the original samples. Laboratory procedures are within industry standards and are appropriate for the commodities of interest.</li> <li>For drill holes MMRC19001-19004 (4 drill holes) and all Warriedar project holes (8 holes) targeting precious metals an additional assay step of a 50g fire assay (on pulps) was used to determine the precious metal concentration of samples.</li> </ul>
<i>Verification of sampling and assaying</i>	<ul style="list-style-type: none"> <li><i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li><i>The use of twinned holes.</i></li> <li><i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li><i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>The samples have not been analysed (as of 17/04/2019) no assay data presently exists.</li> <li>Sampling and logging data have been collected and digitally entered by independent contractor Apex Geoscience. Digital data is backed up via offsite storage.</li> </ul>
<i>Location of data points</i>	<ul style="list-style-type: none"> <li><i>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</i></li> <li><i>Specification of the grid system used.</i></li> <li><i>Quality and adequacy of topographic control.</i></li> </ul>	<ul style="list-style-type: none"> <li>Drill holes have been picked up using handheld GPS (Garmin Map 64s) in GDA94 z50.</li> <li>Downhole surveys have been completed at 30m stations (and start and end of hole) using a downhole gyroscopic survey tool (REFLEX).</li> </ul>
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <li><i>Data spacing for reporting of Exploration Results.</i></li> <li><i>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</i></li> <li><i>Whether sample compositing has been applied.</i></li> </ul>	<ul style="list-style-type: none"> <li>Drill spacing and orientation is suitable for exploration targeting.</li> </ul>

Criteria	JORC Code explanation	Commentary
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul style="list-style-type: none"> <li>Drill holes (sampling direction) are designed to intersect close to perpendicular with interpreted stratigraphic boundaries and interpreted structures.</li> <li>Structural orientations have a high degree of uncertainty at this stage.</li> </ul>
<i>Sample security</i>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>The sample security consisting of samples being collected from the field in pre numbered calico bags and loaded into polyweave bags and taken on Toll Express in Bulka Bags to the laboratory in Perth (Genalysis). The chain of custody for samples from collection to delivery at the laboratory was handled by Apex Geoscience Australia personnel. The sample submission list was submitted by email to the laboratory, where the sample counts and numbers were checked by laboratory staff.</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>No formal audits or reviews have been performed on the project, to date.</li> <li>The Norwest drill program was carried out by reputable companies and laboratories using industry best practice.</li> </ul>

## Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul style="list-style-type: none"> <li>The Marymia project RC drilling was conducted within Exploration Licences E 52/2394-I and E52/2395, held by Audax Minerals Pty Ltd and Australian Mines Limited.</li> <li>The tenement E52/2394-I was granted on 16/06/2010 and is set to expire on 15/06/2020. Tenement E52/2395 was granted on 31/08/2010 and is set to expire on 30/08/2020. The tenements are in good standing.</li> <li>The Warriedar project constitutes the tenements E 59/1723-I, E 59/1966-I, E 59/1696-I, E 59/2104, P 59/2070 and M 59/755. The</li> </ul>

Criteria	JORC Code explanation	Commentary
Exploration done by other parties	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<p>tenements are held by Norwest Minerals and in good standing.</p> <ul style="list-style-type: none"> <li>At Warriedar, significant historic work has been completed over the tenements in question, including mining operations, drilling, geophysical surveys and abundant surface sampling. Previous operators of the tenement areas include Homestake Gold of Australia Ltd (1980-1982), Noble Mining (1982), Aztec (1983-1986), Epoch Minerals (1985-1986), Kulim Ltd (1987), Gold Partners NL (1983-1990), Samantha Gold (1991), Resource Exploration NL (1996-2000), Prosperity Resources Ltd (2006-2010), West Peak Iron (2010-2013) and Aphex Minerals Pty Ltd (2013-2017).</li> <li>At Marymia; Riedel resources conducted a soil sampling program over the area on a 200x400m grid (2012). Australian Mines (2015) drilled one hole (MMRC003) in the general area of the Marymia base metal target. Australian Mines (2015-2017) have drilled numerous holes 1 to 4km south (Dixon) of the gold targeted drilling (MMRC19001-004).</li> </ul>
Geology	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralization.</li> </ul>	<ul style="list-style-type: none"> <li>Marymia south (MMRC19001-004); Mineralisation at Marymia south is associated with structures that intersect near the margin of a magnetite rich dolerite and an overlying mafic-intermediate extrusive sequence. This is interpreted as Archaean orogenic gold mineralisation.</li> <li>Marymia (MMRC19005-011); Mineralisation at Marymia occurs within Proterozoic mafic-ultramafic sills intruding Juderina formation sediments near the cratonic margin with Archaean greenstones of the Marymia inlier. Mineralisation is interpreted as orthomagmatic mafic intrusive associated base metal enrichment.</li> <li>Warriedar; Mineralisation at Warriedar is hosted within structures intersecting banded iron formation units within mafic sequences. This</li> </ul>





Criteria	JORC Code explanation	Commentary
		is a typical setting for Archaean orogenic style gold mineralisation.
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.</li> </ul>	<ul style="list-style-type: none"> <li>No significant assay results are being reported (all results are outstanding).</li> </ul>
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>No new assay results are being reported.</li> </ul>
<b>Relationship between mineralization widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralization with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>Due to the limited amount of drilling completed to date over prospects at Marymia and Warriadar there is a high uncertainty of the geometry and continuity of mineralisation. As such reported intersections are unlikely to be true width intersections.</li> </ul>
<b>Diagrams</b>	<ul style="list-style-type: none"> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being</li> </ul>	<ul style="list-style-type: none"> <li>An appropriate exploration map has been included in the release</li> </ul>



Criteria	JORC Code explanation	Commentary
	<i>reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.</i>	showing the Norwest Minerals drill holes.
<b>Balanced reporting</b>	<ul style="list-style-type: none"><li>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li></ul>	<ul style="list-style-type: none"><li>The Exploration plans included contain representative data.</li></ul>
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"><li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li></ul>	<ul style="list-style-type: none"><li>Exploration plans and maps are included in the release.</li></ul>
<b>Further work</b>	<ul style="list-style-type: none"><li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li><li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li></ul>	<ul style="list-style-type: none"><li>Future work will depend on assay results (to be received). Geological and geophysical techniques will be employed to investigate morphology and distribution of mineralisation identified and controlling geological factors.</li></ul>