



ASX Announcement – 21 February 2019

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ACCELERATION OF EXPLORATION AND DRILLING PROGRAMME – MON AMI GOLD PROJECT

Great Southern Mining Limited (the “Company” or “GSN”) is pleased to outline that the Phase 2 drilling programme at the Company’s exciting new gold discovery, the Mon Ami Gold Project (Project).

HIGHLIGHTS

- Rapid programme planned* comprising up to 20,000m of drilling including 18,000 of RC drilling and 2,000m of diamond core drilling, estimated to take 2-3 months to complete.
- Designed to expand the Resource base through infill and extensional drilling providing the basis for an upgraded Mineral Resource Estimate to be provided end of Q2 2019.
- Delineate additional resources down plunge testing mineralisation below 150m.
- DMIRS Programs of Works (PoW) have been submitted for the updated drilling programme, whilst site preparation is underway.

The Resource is open along strike and at depth. The programme is designed to expand the resource including the targeting of deeper high-grade shoot extensions noting that a number of holes finished in mineralisation beyond the 150m limit of the Maiden Mineral Resource estimate (Figure 1).

PROGRAMME OBJECTIVES

The extensive programme is designed to achieve the following:

- 1) Quickly add ounces to the current Resource with drill extensions to the south extending exploration over a continuous 800m – 1,000 m strike length (Figure 3).
- 2) To expand the Resource at depth, testing extensions below a number of previous and/or new high-grade drilling intersections; and
- 3) To increase confidence in the existing Resource.

Metallurgical testwork

Continued metallurgical testing planned to complement the exceptional 97% recoveries to date. Testing planned to understand transitional ore and test amiability to heap leach processing.

* The programme will be undertaken as planned subject to successful capital raising initiatives announced 4 February 2019.

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Estimated Exploration Target

Approximately 20,000m of RC drilling is planned at the Mon Ami Gold Project where the Company recently announced the Maiden Mineral Resource Estimate (MRE) of **59,000 oz's at 1.7 g/t gold**. Drilling will comprise systematic step-out drilling along strike of the reported gold intersections

Given the planned extensional and infill drilling program and the drilling undertaken to date, the Company has an Estimated Exploration Target of 200,000 oz's to 250,000 oz's. The volumetric estimate is based on lower and upper grade cut-off values of 1.0g/t gold to 2.0g/t gold. Target Cautionary Statement: The potential quantity and grade of the exploration target is conceptual in nature. There has been insufficient exploration to determine a mineral resource and there is no certainty that further exploration work will result in the determination of mineral resources. The actual number of holes drilled and the final metres drilled may vary based on geology and exploration results.

The Estimated Exploration Target has been based on modelling prepared by the Company's independent consultants and the Company's Competent Person and is based on models developed during work undertaken on the MRE combined with the estimated outcome of the proposed drilling programme of infill spacing and extensional drilling to expand the current resource. The proposed drilling and spacing is contained in Figure 3. The drilling underpinning the MRE was announced on 16 July 2018 with the MRE announced to the market on 7 November 2018. The Company also commissioned significant metallurgical testwork with results announced to the market on 25 January 2019.

Geophysical and geochemical work is also planned to further delineate targets to the north, west and south of the deposit with mapping to be undertaken to the east of the Barnicoat Shear which has been subject to very little historical exploration techniques.

Given a number of holes finished in mineralisation below 150m, which are currently excluded from the MRE, the programme also includes holes designed to test the structural targets at depth and examine the underground potential of the deposit.

Following the results of the updated MRE, estimated for the end of Q2 2019, further exploration to upgrade the Exploration Target to a Mineral Resource will entail diamond drilling at depth to ensure sufficient information around density is gathered. Further work will commence on the assumption that adequate funding can be secured.

GSN's Executive Chairman, John Terpu, commented

"We're excited to resume drilling on the Mon Ami Gold deposit and to be testing the continuity of the mineralization along strike and to depth. Our highly successful Phase 1 programme intersected very consistent mineralization throughout each hole and the current resource provides a very robust base to build from. The coming months look very promising for the continued development.

The planned Phase 2 drilling programme is budgeted for at least 20,000m with 80% of the programme dedicated to expanding and upgrading the current resource estimate as announced on 7 November 2018, and 20% allocated to exploration drilling outside of the resource area. The expansion programme will focus largely on the western and southern extensions where the potential for rapidly increasing the resource appears most favorable, the aim being to add ounces as quickly and as cheaply as possible. Approximately 120 holes are planned to better define the current resource, fill gaps between any widely-spaced holes, test the at-depth extensions of the known zones as well as verify their potential continuation along strike.

Given the geographical compatibility of the deposit to a number of operating mills within 25km – 50kms the extensional and infill drilling will assist in maximizing the potential of the deposit and allow us to continue to examine potential development scenarios. A deposit of this size will be close to, and well supported by, existing infrastructure and could be an exciting addition to the renowned gold district."

For more information:

John Terpu
Executive Chairman
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Background

Following encouraging gold mineralisation being identified through reverse circulation (RC) drilling undertaken by Valleybrook Investments Pty Ltd in late 2017 GSN acquired the Mon Ami Gold Project in March 2018. The project comprises a Mining Lease, M38/1256, granted in 2012 for a term of 21 years.

In June-July 2018, GSN completed its maiden drilling programme comprising 5,821 drill meters from 40 RC drill holes (MLRC011 to 050) designed to test the continuity of that gold mineralisation. Significant intercepts from the drilling were reported in an ASX release dated 16 July 2018.

At the completion of the maiden drilling programme the Company commissioned an independent resource estimate. The JORC (2012) MRE was **1.1 Mt @ 1.7 g/t gold for 59 Koz**. This was released to the market on 7 November 2018 and has been estimated above a 1.0 g/t gold cut-off.

Results examining the mineralogical and metallurgical characteristics demonstrate **outstanding recoveries at up to 97%** and show conventional processing flowsheet and under standard processing conditions are suitable for treating the Project ore. These ores would be suited to treatment through a standalone CIL/CIP gold operation or toll treated through one of the existing regional mills, of which there are several currently operating within 25 kms of the Project (Figure 2). The results relating to the metallurgical testwork were released to the market on 25 January 2019.

In September 2018 the Company entered an agreement to acquire E38/2829 (refer Figure 2) (ASX announcements of 3 September 2018) which is contiguous to M38/1256. The acquisition of E38/2829 provided the Company with an opportunity to expand the exploration programme at the project and test strike extensions of the Mon Ami deposit along the main mineralised corridor which tracks centrally through the adjoining E38/2829.

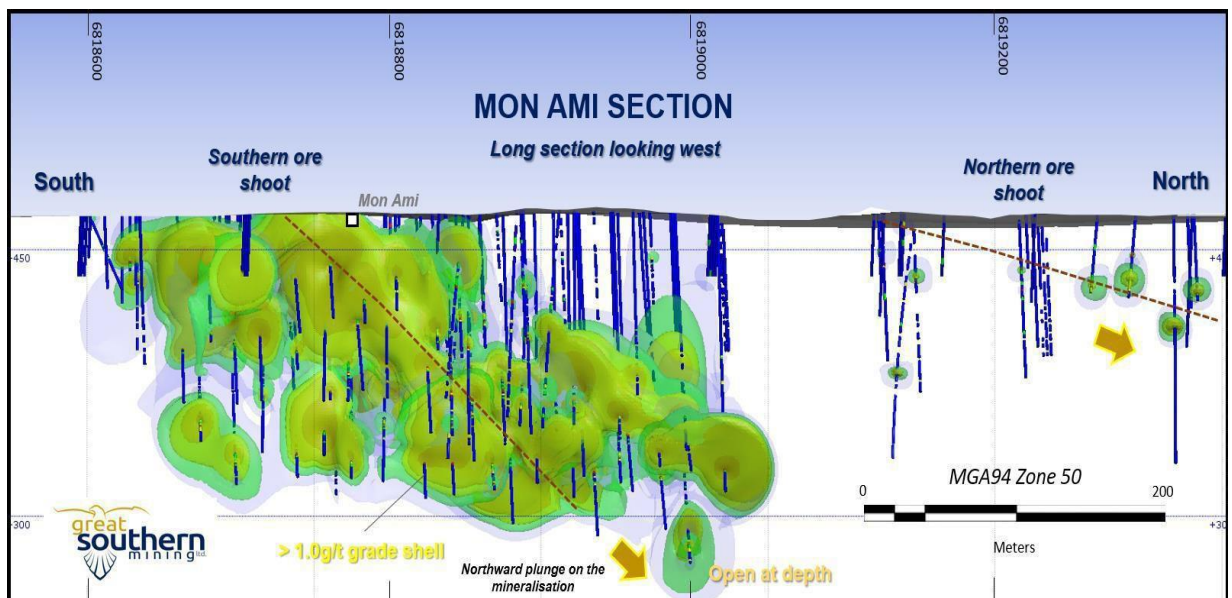


Figure 1: Gold grade shells plunging to the north.

** The actual number of holes drilled and the final metres drilled may vary based on geology and exploration results.*

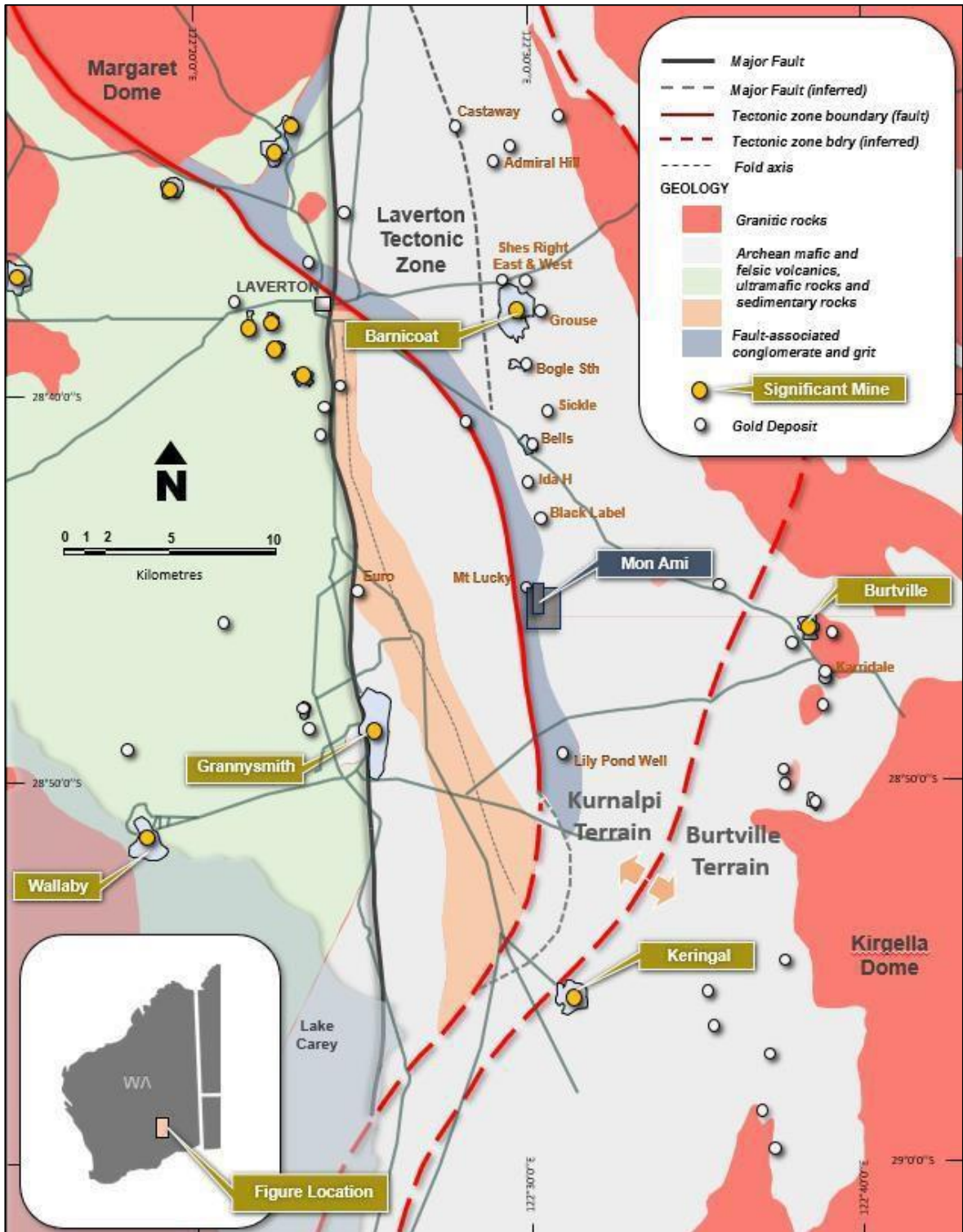


Figure 2: Location of the Mon Ami project with respect to existing infrastructure.

Along strike extensions

Gold mineralisation at Mon Ami is hosted by quartz – sulphide veined and sheared metasediment / carbonaceous contact zone within a regional north-south trending shear zone. The contact is marked by a 40-50 m wide deformation zone with intense shearing and alteration with a number of steeply west dipping lodes.

The deposit currently consists of three high grade, north-south trending lodes (Figure 4). All of which are open in all directions and at depth providing excellent opportunity to expand the resource through extensional drilling.

Through the acquisition of E38/2829, the Company has acquired an additional >500m metres of southern strike extension of the mineralised shear zone hosting the Mon Ami deposit which demonstrates geological continuity through the project.

The mineralised trend hosts significant artisanal workings at surface in the form of shallow excavated pits and sunken shafts of unknown depth, all of which are located above the priority structural targets. The strike length of shear zone through E28/2829 remains untested by modern exploration methods.

Deeper high-grade extensions – The Ida H Analogue

Drilling completed by the Company during the 2018 field season produced a number of exceptionally high grade gold intersections which confirmed previous drilling results eluding to a number of moderately to steeply plunging high-grade ore shoots.

Highlights from GSN's previous phase of drilling include:

- 8m at **4.17 g/t Au** from 136m (MLRC020)
- 10m at **4.60 g/t Au** from 128 m (ML029)
- 2m @ **29.85 g/t Au** from 173m (MLRC036)
- 3m @ **22.71 g/t** from 72m (MLRC024)

Refer ASX announcement dated 16 July 2018 for further details on this phase 1 of drilling.

The Resource is constrained by the current level of drilling. A number of holes from the initial drilling programme finished in mineralisation below 150m which were not included in the MRE. There are strong prospects of increases in ounces down plunge due to extensional drilling.

Deeper analogues for the Barnicoat shear and Mon Ami deposit include the Ida H deposit which is located approximately 6 km to the north and similarly hosted at the contact between sheared metasediments and mafics (i.e., the Barnicoat Shear Zone). Ida H mine began production as a small (<50 koz) open pit but quickly progressed into an underground development. The Ida H mine was operated in the 1900's and produced a total of 229,000 tonnes @ an average grade of **22.6 g/t Au** for **172,000 ounces**. The deeper levels of the mine (level 16) are approximately 480 m below surface, and appear to have exploited the plunge component of the 'Main lode' high grade system.

Mon Ami shows good potential to develop into a similar deposit plunging northward within the Barnicoat shear. Historical underground mining at Mon Ami targeted a number of 'high-grade quartz reefs' producing 311 ounces of ore at an average grade of 48 g/t Au (GSWA, 1906). Deeper downhole and at depth drilling is planned to test this theory and explore the underground potential of the deposit.

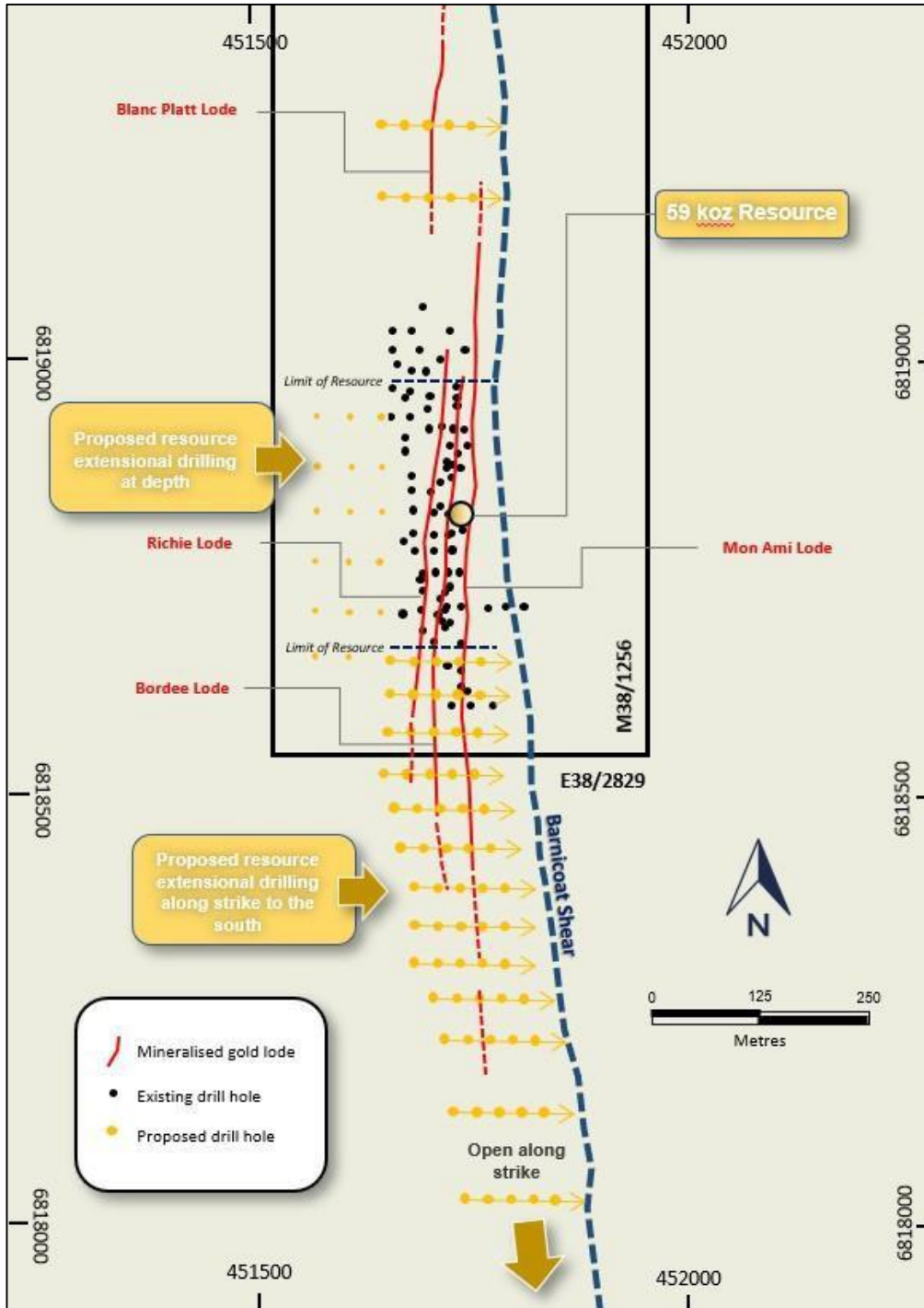


Figure 3: Location of proposed drilling and basic geology.

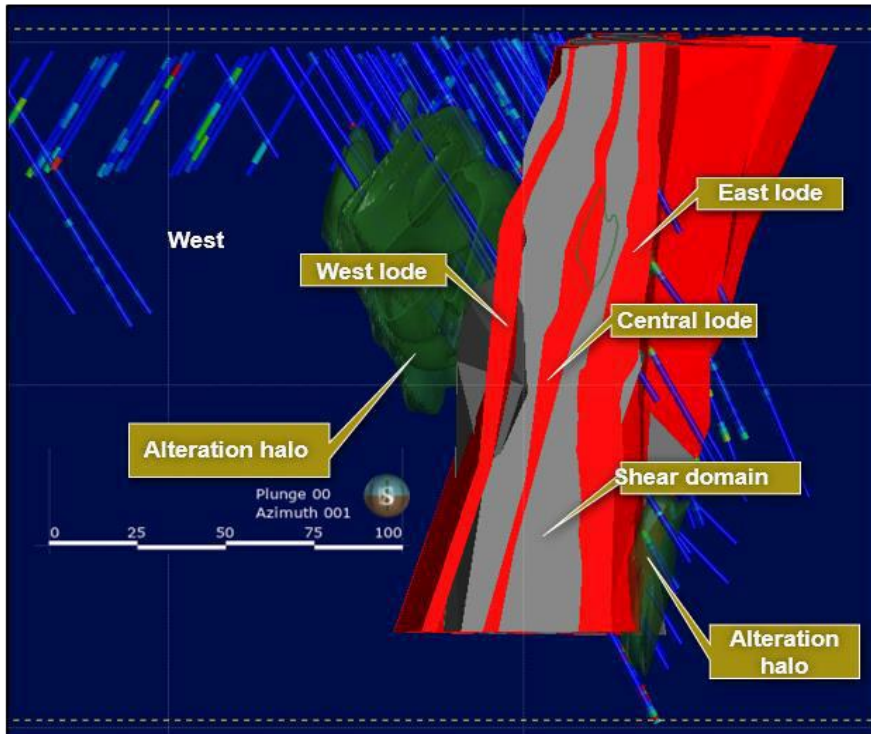
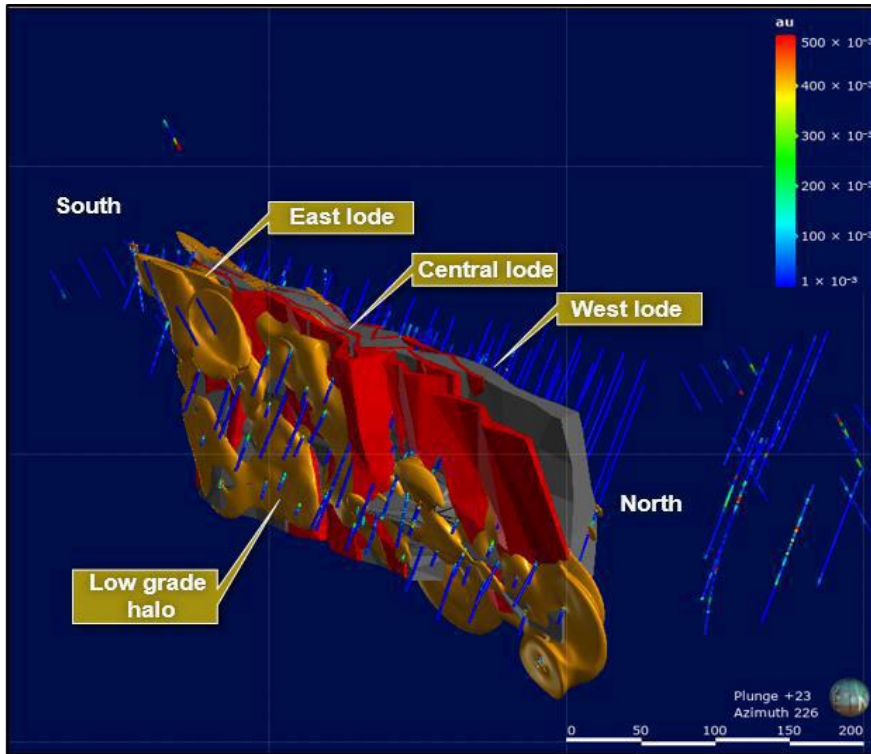


Figure 4: Block Model of the Mon Ami deposit.

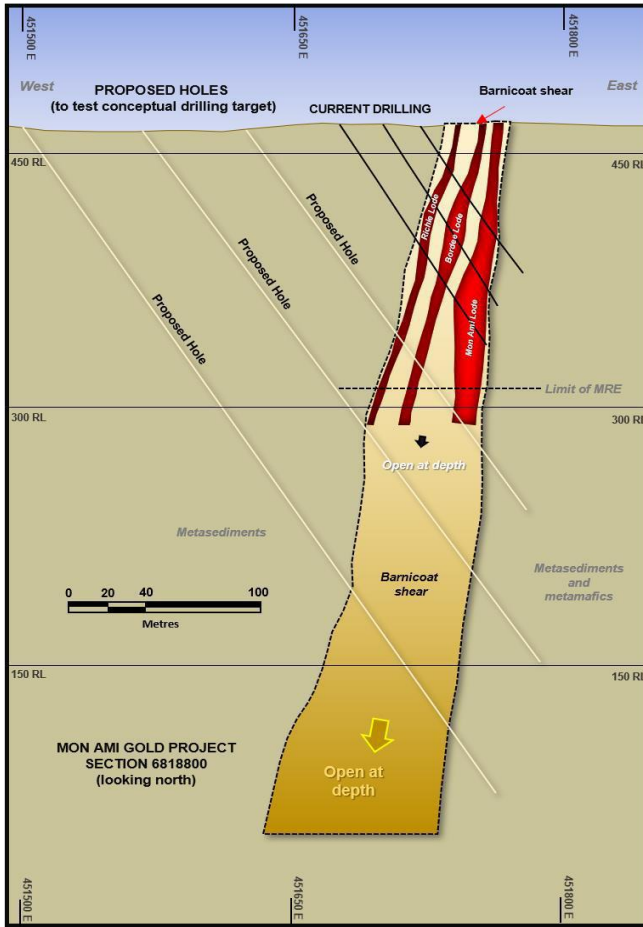


Figure 4: Geological cross-section through the deposit showing the location of proposed drilling and basic geology.

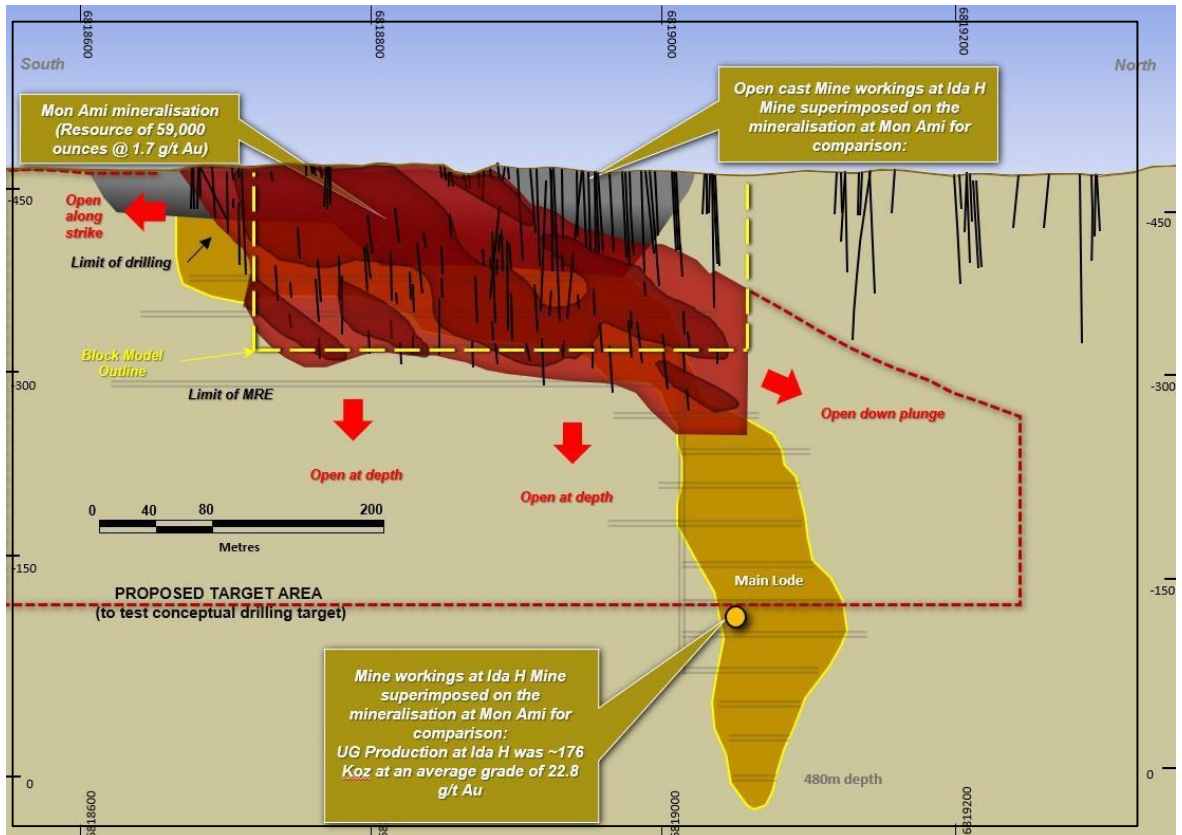


Figure 5: Geological long-section showing the target areas beneath the limit of drilling of the current deposit.

Competent Person's Statement

The information in this report that relates to exploration targets and exploration results on M38/1256 and E38/2829 is based on, and fairly represents, information and supporting documentation compiled by Dr Bryce Healy. Dr Healy is an employee of Noventum Group Pty Ltd (ACN 624 875 323) and has been engaged by Great Southern Mining Limited as Head of Exploration. He has sufficient experience relevant to the style of mineralisation and type of deposit under consideration. Dr Healy is a Member of the Australian Institute of Geoscientists and as such, is a Competent Person for the Reporting of Exploration Results, Mineral Resources and Ore Reserves under the JORC Code (2012). Dr Healy consents to the inclusion in the report of the matters based on his information in the form and context in which they occur.

For information relating to the Maiden Mineral Resource Estimate – refer announcement of 7 November 2018.

For information relating to the metallurgical testwork results – refer announcement of 25 January 2019.

The Company confirms that it is not aware of any new information or data that materially affects the information included in the relevant announcements and in the case of mineral resource estimates, all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed.

Forward Looking Statements

Forward- looking statements are only predictions and are not guaranteed. They are subject to known and unknown risks, uncertainties and assumptions, some of which are outside the control of the Company. Past performance is not necessarily a guide to future performance and no representation or warranty is made as to the likelihood of achievement or reasonableness of any forward looking statements or other forecast. The occurrence of events in the future are subject to risks, uncertainties and other factors that may cause the Company's actual results, performance or achievements to differ from those referred to in this announcement. Given these uncertainties, recipients are cautioned not to place reliance on forward looking statements. Any forward- looking statements in this announcement speak only at the date of issue of this announcement. Subject to any continuing obligations under applicable law and the ASX Listing Rules, the Company, its directors, officers, employees and agents do not give any assurance or guarantee that the occurrence of the events referred to in this announcement will occur as contemplate.

Exploration Target Cautionary Statement

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