Great Boulder RESOURCES LIMITED

# Deep drilling campaign to test high-grade nickel targets in core of Eastern Mafic intrusion

**Updated geological model based on latest drilling and geophysics suggest the intrusion originated at depth rather than along the feeder structure as previously believed**

## Highlights

- Updated geological model based on recent drilling has generated a more accurate interpretation of the Eastern Mafic complex within the Yamarna project in WA
- Modelling of the Eastern Mafic geometry suggests it originated at depth rather than along structures to the south-east as previously thought
- The previously-defined feeder zone appears to represent discrete magma chambers formed along pre-existing structures and fed from the main intrusion
- This interpretation is supported by the multiple, discrete magma pulses which have been mapped over several kilometres with distinct nickel tenor associations
- Areas where high-tenor nickel sulphides have been intersected in previous drilling will now be drilled to greater depths, targeting basal accumulations of massive nickel sulphide
- EIS drilling grant has been awarded to GBR by the Government of Western Australia to target the core of the Eastern Mafic intrusion

Great Boulder Resources (ASX:GBR) is pleased to advise that it will embark on a deep drilling program at the Eastern Mafic nickel-copper-cobalt deposit after completing a revised geological interpretation based on the latest drilling and geophysical results.

The deeper drilling is aimed at testing the core of the Eastern Mafic intrusion, where the conduit system and primary target for high-grade nickel sulphide is interpreted to be located.

Assay and geophysical data collected from the recently completed drill program has been used to better define the shape and geometry of the Eastern Mafic and has also been successful in mapping discrete magma pulses hosting nickel sulphide.

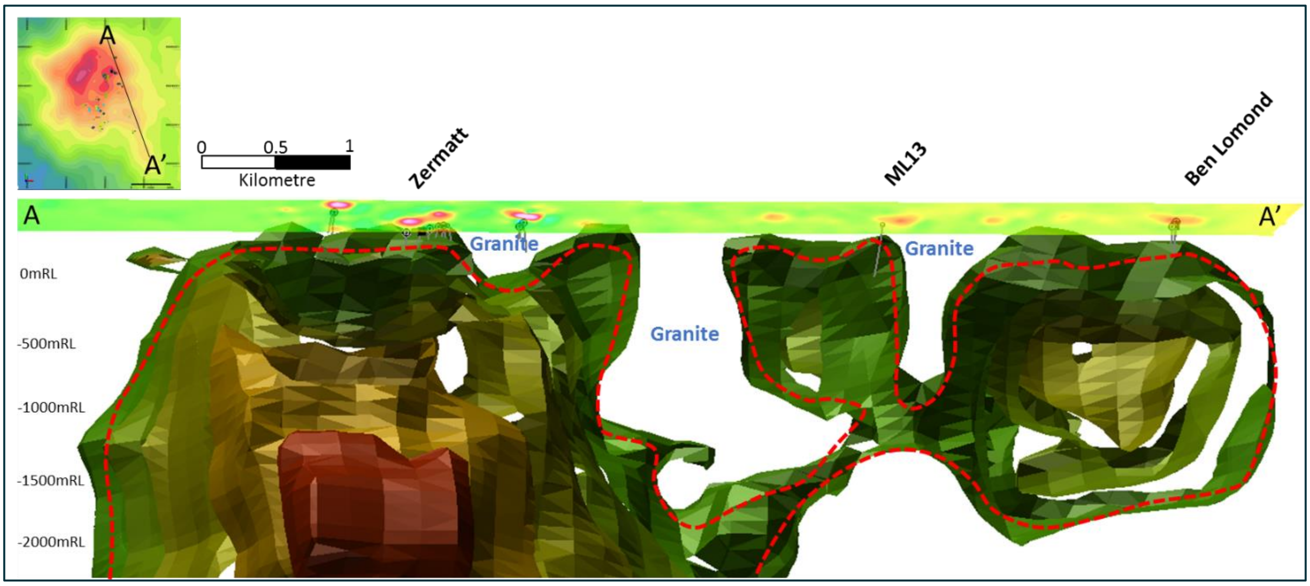
A key conclusion drawn from this new model is that the Eastern Mafic appears to have formed from depth rather than along the previously described feeder structure.

Drilling to date has therefore only intersected the top of the intrusion, leaving the main body of the intrusion untested.

Where the intrusion is modelled close to surface, there is a strong correlation with EM conductors that represent a bedrock sulphide source within the mafic intrusion (Figure 1).

The near surface EM conductors are typically low nickel tenor, however they represent the top of the intrusion. Where drilling has tested below these conductors, particularly at Zermatt, ML13 and Ben Lomond, a second more nickel-rich unit is intersected.

The evidence of multiple magma pulses with increasing nickel tenor at depth supports the potential for further magma pulses within the core of the intrusion to host more nickel-rich sulphide mineralisation.



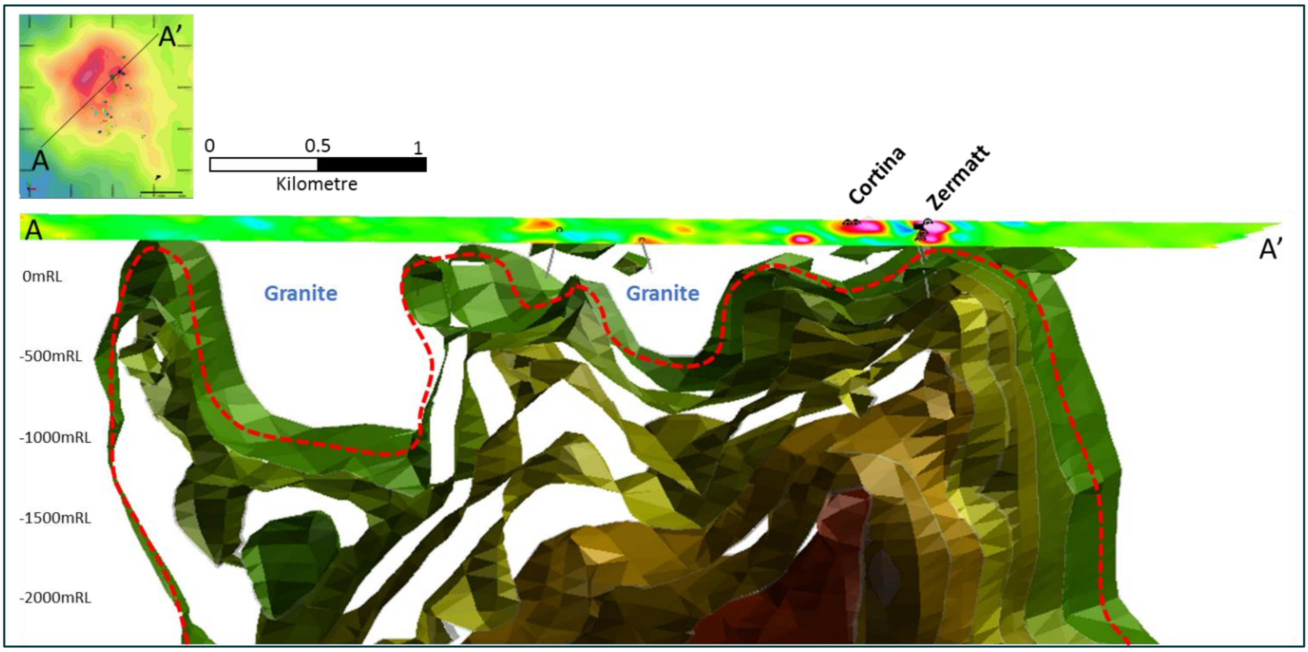




**Figure 1:** Revised gravity inversion model showing the Eastern Mafic intrusion in cross-section and close association of EM conductors when the intrusion is near-surface.

A diamond drill program will be undertaken beneath Zermatt, ML13 and Ben Lomond, testing deeper into the intrusion to identify massive accumulations of nickel sulphide already intersected, plus additional magma pulses that may host higher nickel tenor and grade.

## Deep Targets

Figure 1 above shows the updated gravity inversion model with the Eastern Mafic intrusion's geometry in cross-section. The denser rocks, which represent the more mafic units in the core of the intrusion, are shown as 'hotter' colours. Where the intrusion is close to surface, EM anomalies are detected which represent bedrock sulphide mineralisation.

Drilling to date has been influenced by near-surface EM conductors that appear to be on the edge of the intrusion. The EM conductors are typically low in nickel tenor as they form further away from the feeder or conduit system and have been diluted by country rock sulphur addition.

Evidence from deeper drilling shows a dynamic system with multiple magma pulses, defined by higher grade and tenor nickel sulphide. The feeder to the system is now believed to have originated from depth and is the primary exploration target for high-grade nickel sulphide. The EIS co-funded drilling grant enables Great Boulder to test these deeper targets.

A further outcome of the technical review is the identification of late-stage granite intrusions that have stoped out the Eastern Mafic in parts, remobilizing the sulphide into accumulations of barren massive to semi-massive sulphide.

Ongoing exploration will avoid areas of extensive granite intrusions as they generate spurious surface EM conductor responses.

## Shallow Targets

In addition to testing the deeper targets, near-surface extensions of mineralisation will also be tested to determine the potential for open pit mineralisation at the Eastern Mafic to complement shallow sulphide mineralisation at the adjacent Mt Venn deposit.

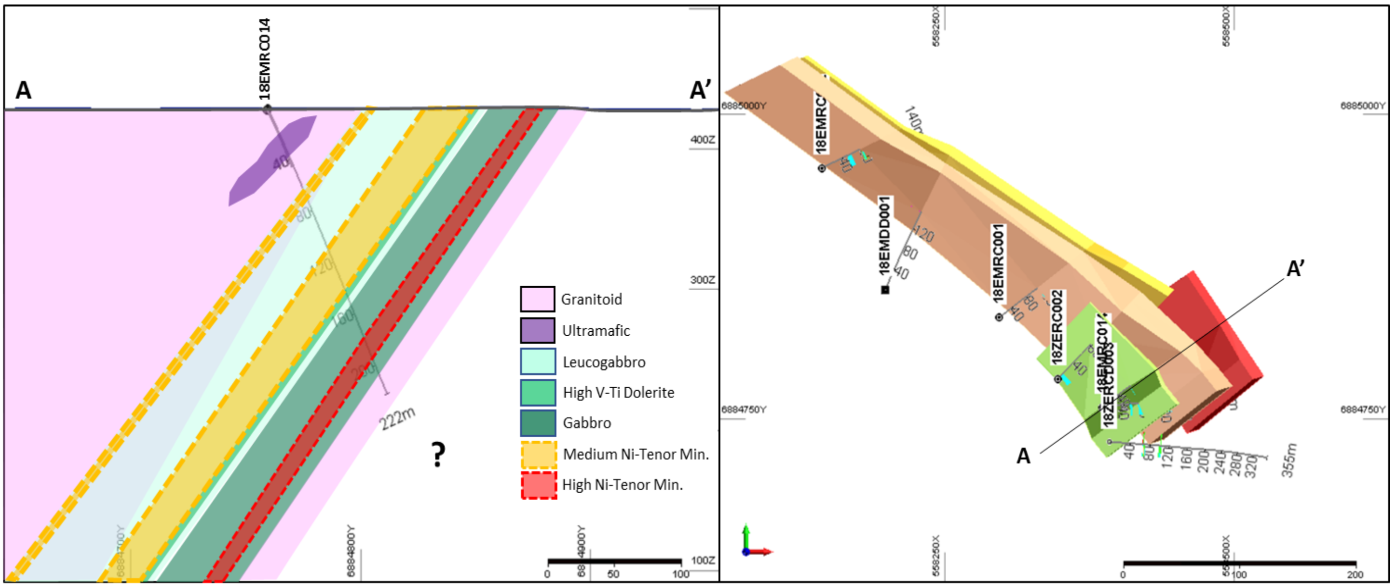



**Figure 2:** Schematic cross section (LHS) and plan view (RHS) of the Zermatt prospect showing simplified geology and mineralised lenses. The deepest lens (red outline) hosts the highest nickel tenor and grade intersected to date

At Zermatt, four separate lodes of semi-massive to massive sulphide have been intersected. Drilling has only tested the strike extension of mineralisation so far, with the shallow up-dip extensions to be tested in this next round of drilling, particularly at the southern end where the highest grades and best nickel tenor has been intersected.

Drilling at Cortina, located 400m to the west of Zermatt, has also intersected medium tenor nickel sulphide with significant copper. The geology at Cortina appears more complex, with the current interpretation indicating an east-west strike, oblique to Zermatt and the regional stratigraphy that strikes northwest - southeast.

Drill hole 18EMRC021 intersected 4m at 1.3% Cu, 0.2% Ni from 134m, and 10m at 0.5% Cu, 0.4% Ni from 141m downhole. The strike and up-dip extensions to mineralisation remain open and will also be tested in the next phase of drilling.

Additional Down-hole EM (DHEM) conductor plates have been interpreted in the hanging wall sequence at Cortina, however these remain poorly constrained and will be further tested and refined with DHEM following the next round of drilling.

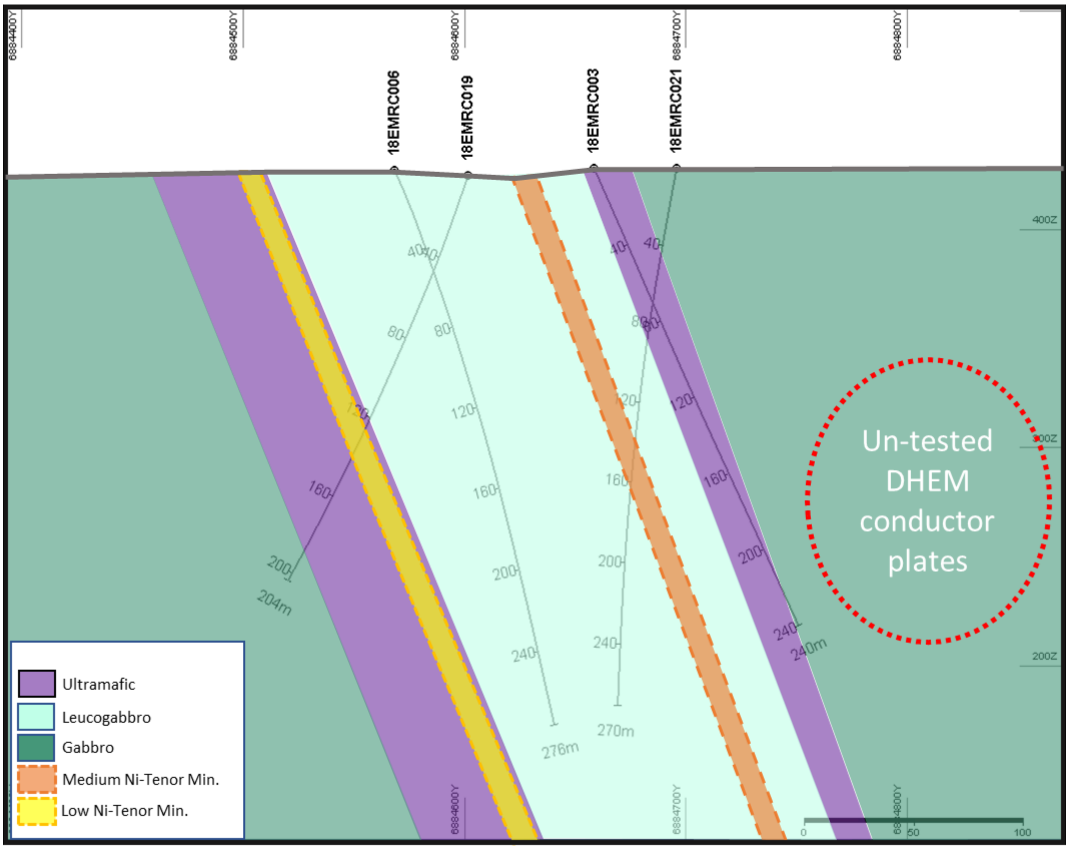



**Figure 3:** Schematic cross section of the Cortina prospect showing simplified geology, mineralised lenses and location of interpreted hanging wall DHEM conduct plates

## Next Steps

Great Boulder is now finalising its program for the deeper EIS co-funded diamond drilling, targeting deeper accumulations of high-grade nickel sulphide, plus the shallow targets amenable for open pit mining.

Once heritage and site clearance activities are completed it is anticipated that drilling activities will commence early in the new year, weather permitting.

## Competent Person's Statement

Exploration information in this Announcement is based upon work undertaken by Mr Stefan Murphy whom is a Member of the Australasian Institute of Geoscientists (AIG). Mr Stefan Murphy has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity which 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' (JORC Code). Mr Stefan Murphy is an employee of Great Boulder and consents to the inclusion in the report of the matters based on their information in the form and context in which it appears.

## Forward Looking Statements

This Announcement is provided on the basis that neither the Company nor its representatives make any warranty (express or implied) as to the accuracy, reliability, relevance or completeness of the material contained in the Announcement and nothing contained in the Announcement is, or may be relied upon as a promise, representation or warranty, whether as to the past or the future. The Company hereby excludes all warranties that can be excluded by law. The Announcement contains material which is predictive in nature and may be affected by inaccurate assumptions or by known and unknown risks and uncertainties and may differ materially from results ultimately achieved.

The Announcement contains "forward-looking statements". All statements other than those of historical facts included in the Announcement are forward-looking statements including estimates of Mineral Resources. However, forward-looking statements are subject to risks, uncertainties and other factors, which could cause actual results to differ materially from future results expressed, projected or implied by such forward-looking statements. Such risks include, but are not limited to, copper, gold and other metals price volatility, currency fluctuations, increased production costs and variances in ore grade recovery rates from those assumed in mining plans, as well as political and operational risks and governmental regulation and judicial outcomes. The Company does not undertake any obligation to release publicly any revisions to any "forward-looking statement" to reflect events or circumstances after the date of the Announcement, or to reflect the occurrence of unanticipated events, except as may be required under applicable securities laws. All persons should consider seeking appropriate professional advice in reviewing the Announcement and all other information with respect to the Company and evaluating the business, financial performance and operations of the Company. Neither the provision of the Announcement nor any information contained in the Announcement or subsequently communicated to any person in connection with the Announcement is, or should be taken as, constituting the giving of investment advice to any person.