



**Middle Island**  
RESOURCES LIMITED



Middle Island Resources Limited  
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**Middle Island Resources Ltd**  
ACN 142 361 608  
**ASX code: MDI**  
[www.middleisland.com.au](http://www.middleisland.com.au)

**Capital Structure:**

469 million ordinary shares  
800,000 unlisted options

**Cash**

\$3.6m (as at 30 June 2016)

**Directors & Management:**

**Peter Thomas**

Non-Executive Chairman

**Rick Yeates**

Managing Director

**Beau Nicholls**

Non-Executive Director

**Dennis Wilkins**

Company Secretary

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## ASX Release – 2 September 2016

### Geophysical review identifies significant additional targets at the Sandstone gold project.

- Geophysical modelling of the Two Mile Hill banded iron formation (BIF) target has identified the presence of two additional prospective BIF units, respectively modelled to lie below the known, high grade, mineralised BIF, which has recently returned resampling results of:-
  - 22m at 23.8g/t Au**
  - 8m at 56.0g/t Au**
  - 5m at 26.5g/t Au**
- The identification of a further two BIF units at depth potentially increases the aggregate, prospective, mineralised plunge length along both the east and west contacts of the tonalite from 500m to 1,500m, substantially increasing the significance of this high grade underground target.
- Significantly, modelling of the existing down-hole electromagnetic (DHEM) data in hole TRCD734 has identified an off-hole conductor coincident with the newly identified, middle, BIF unit, immediately adjacent to the Two Mile Hill tonalite intrusive.
- This large conductive plate almost certainly represents one or more zones of massive sulphide (pyrite) which, in the upper BIF, hosts intervals of high grade gold mineralisation. This plate represents an immediate new target for proposed diamond drilling.
- A further finding of the geophysical review is that zones of higher down-hole magnetic susceptibility exist within the tonalite itself. These zones are consistent with visible haematite alteration and are interpreted to represent portions of BIF that have been assimilated by the tonalite magma on intrusion. Importantly, these zones appear to be of consistently higher grade, including **13m at 6.39g/t, 11m at 6.89g/t & 9.5m at 6.23g/t Au.**
- In order to refine these significant new targets for proposed diamond drilling in October, a geophysical crew has been commissioned to commence additional surveys next week.

**Middle Island Managing Director, Mr Rick Yeates:**

“...the initial geophysical component of the Two Mile Hill BIF review identifies that multiple BIF units are present at Two Mile Hill, representing significant, high value, underground targets for immediate diamond drill testing...”

## **Two Mile Hill BIF Target**

### **Geological Review**

High grade mineralisation associated with the Two Mile Hill BIF deposit is hosted within the Shillington BIF at a depth of ~200m where it's intruded by the mineralised Two Mile Hill tonalite. This deposit may possibly be accessed via a conventional decline from the planned Two Mile Hill or Shillington pits. The existing deposit is developed over a 50m plunge length on the western margin of the tonalite, but remains open along the balance of the western margin and is essentially un-drilled along the 250m length of the eastern margin, an aggregate potential plunge length of ~500m.

Re-logging of the existing mineralised drill core indicates that gold mineralisation within the BIF is preferentially developed proximal to the tonalite contact and the gold-mineralising fluids have clearly been sourced from or through the tonalite itself. Gold mineralisation is associated with pyrite replacement of magnetite horizons within the BIF, with massive sulphide developed over substantial widths closer to the tonalite contact.

While proximity to the tonalite contact is the primary control on mineralisation within the BIF, re-logging indicates that the density of quartz veining also has a significant influence on the width and grade of mineralised intervals.

Given that the Two Mile Hill tonalite is elongate in a north-south orientation and the Shillington BIF dips shallowly to the northeast, the mineralised zone of intersection between the two has been modelled to plunge at ~45° towards the north.

In order to verify previous diamond core results from the Two Mile Hill BIF target, a selection of quarter-core intervals were sampled and submitted for 50gm fire assay. Re-sampling (ASX Release 14 July 2016) confirmed broad widths (approximately true widths) of high grade gold mineralisation, comprising:-

- TRCD733: 22m at 23.8g/t Au from 243m**
- TDR735: 5m at 26.5g/t Au from 216m**
- TDCD825: 8m at 56.0g/t Au from 196m**

Particularly given the high grade nature of mineralisation, the individual assays and composited intersections demonstrated remarkable consistency with those originally assayed by Troy Resources, providing considerable confidence in the veracity of the earlier results.

### **Geophysical Review**

In addition to the geological review, Western Geophysics Pty Ltd was engaged to evaluate the geophysical properties the Two Mile Hill BIF deposit has that may assist in refining the precise location and extent of mineralisation in order to better target deeper diamond core drilling now planned for October.

The geophysical review primarily involved analysis and modelling of new magnetic susceptibility data from diamond core, and downhole electromagnetic (DHEM) and magnetic susceptibility data.

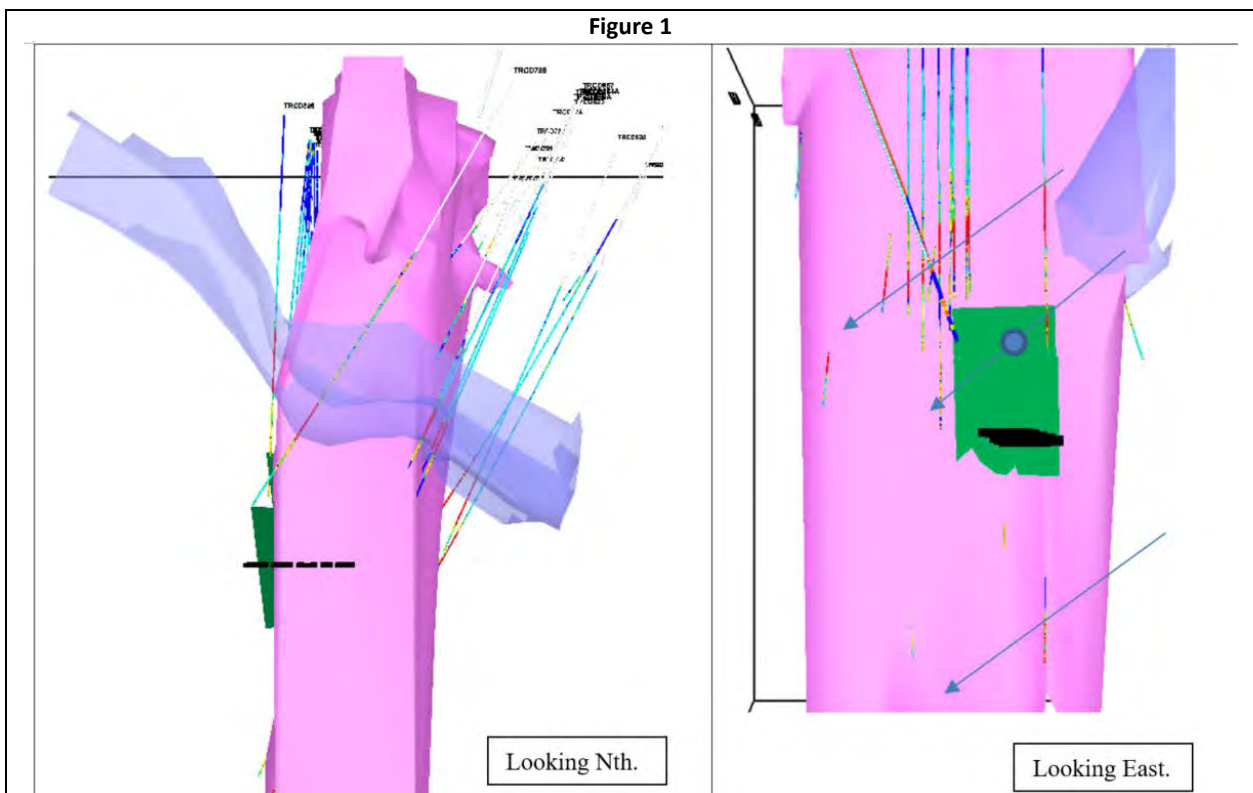
Modelling and evaluation of the down-hole magnetic susceptibility data shows three BIF units (rather than just the one identified previously), effectively trebling the aggregate potential plunge length (to 1,500m) of targets prospective this style of high grade gold mineralisation.

The physical property work also shows that the magnetic susceptibility of the strongly magnetic BIF units is diminished over intervals of sulphide alteration due to magnetite destruction proximal to the tonalite contact.

In addition, high grade zones within the tonalite intrusion, proximal to its contact with the BIF units were found to be moderately to strongly magnetic. This is consistent with zones of haematite alteration, interpreted to represent assimilation of the BIF unit by the tonalite magma on intrusion. Examples of higher grade intersections within the tonalite include:-

**TRCD727: 13m at 6.39g/t Au**  
**TRCD735: 11m at 6.89g/t Au**  
**TRCD732: 9.5m at 6.23g/t Au.**

Modelling of the existing DHEM data also demonstrates that high grade massive to semi-massive sulphides hosted within the Shillington BIF are moderately conductive. Importantly, analysis indicates the presence of a significant off-hole conductor in hole TRCD734, with the modelled plate representing an immediate target for planned diamond drilling (Figure 1 below).



**North View** – looking along the axis of the Two Mile Hill tonalite intrusion (pink), showing the ‘upper’ BIF (magenta) and the modelled electromagnetic plate (green) associated with the newly identified ‘middle’ BIF unit.

**East View** – looking at the western margin of the Two Mile Hill tonalite intrusion. Hot colours along the drill traces demonstrate zones of higher magnetic susceptibility, representing extensions of the ‘upper’ BIF unit. Arrows (blue) identify the position and plunge direction of the prospective mineralised positions within the existing (upper) and two newly identified (middle & lower) BIF units. The large EM plate (green) is clearly associated with the ‘middle’ BIF unit, representing an immediate drilling priority.

