



Middle Island
RESOURCES LIMITED

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ACN 142 361 608

Suite 1, 2 Richardson Street
West Perth WA 6005
PO Box 1017
West Perth WA 6872
Tel +61 (08) 9322 1430
Fax +61 (08) 9322 1474
info@middleisland.com.au
www.middleisland.com.au

Middle Island Resources Ltd
ACN 142 361 608
ASX code: MDI
www.middleisland.com.au

Capital Structure:
469 million ordinary shares
800,000 unlisted options

Cash
\$2.53m (as at 30 September 2016)

Directors & Management:
Peter Thomas
Non-Executive Chairman
Rick Yeates
Managing Director
Beau Nicholls
Non-Executive Director
Dennis Wilkins
Company Secretary
Linton Kirk
Sandstone Project Manager

Contact:
Rick Yeates
Mob: +61(0)401 694 313
rick@middleisland.com.au

ASX Release – 16 December 2016

PFS Update - Sandstone Gold Project (WA)

- Pit optimisation results on the updated 2012 JORC compliant 100,000oz Mineral Resource inventory announced this week (ASX Tuesday 13 December 2016) failed to meet expectations.
- The mineral inventory within currently economic pit-shells is insufficient to justify the immediate re-commissioning of the Sandstone mill and associated infrastructure.
- Priority now to be given to building a larger mineable gold inventory across the whole Sandstone project before a mine re-start.
- Prefeasibility study (PFS) work to be minimised or curtailed for now.
- Strategies already underway to source additional mill feed internally and through third party options.
- MDI's priority is now on identifying additional sources of mill feed, variously including prospects at Shillington West, Macintyre, Plum Pudding South, the isolated intercept of 4m at 17.6g/t Au recently returned from sterilisation drilling at Two Mile Hill, along with the deep, high value Two Mile BIF targets.



SANDSTONE GOLD PROJECT

Updated Mineral Resource Estimates

Please refer to the MDI ASX release of 14 December 2016 for details of the updated Mineral Resource estimate for the Shillington and Two Mile Hill deposits, down to a depth of approximately 140m below surface. Table 1 below is derived from that release and is replicated here as the updated estimates represent a fundamental input to the PFS.

Table 1									
Aggregate Mineral Resource Estimate (2012 JORC Code)									
Cut-off	Indicated			Inferred			Total		
grade (g/t Au)	Tonnes (kt)	Au (g/t)	koz Au	Tonnes (kt)	Au (g/t)	koz Au	Tonnes (kt)	Au (g/t)	koz Au
0.50	3,292	1.05	112	699	0.90	20	3,992	1.03	132
0.60	2,560	1.20	99	532	1.01	17	3,092	1.17	116
0.70	2,028	1.34	88	387	1.15	14	2,414	1.31	102
0.80	1,631	1.48	78	293	1.28	12	1,924	1.45	90
0.90	1,327	1.63	69	223	1.42	10	1,550	1.60	80
1.00	1,126	1.76	64	185	1.51	9	1,311	1.72	73

At a geologically sensible lower cut-off grade of 0.7g/t gold, the aggregate initial Mineral Resource comprises some 2.4Mt at 1.31g/t Au for ~100,000oz, with some 86% of the total resource now classified in the higher confidence, Indicated category.

Pit Optimisations

Pit optimisations completed by MDI on the new Mineral Resources are disappointing. MDI carefully reviewed and updated all input parameters applied in the preliminary, unpublished optimisation work completed by others in 2013. MDI concluded that many of the variables previously assumed by others were not reasonable and, accordingly, adopted many less favourable assumptions and inputs.

The principal factors resulting in a reduction in anticipated starting mineral inventories for the Shillington, Shillington North and Two Mile Hill open pit deposits include:-

- Total Mineral Resources being lower in terms of tonnes and gold grade, and hence contained metal. The MDI infill and extension drilling increased the proportion of Indicated Resources but did not significantly extend resources overall.
- Expected metallurgical recoveries being 2% to 3% less than those applied by others in previous pit optimisations. Previous operational data available to MDI indicates that metallurgical recoveries are partially a function of a semi-fixed tailings grade, meaning a lower head grade will result in a lower overall percentage recovery.
- Overall pit slopes being a few degrees flatter than previously used, based on parameters and ramp allowances recommended by MDI’s external geotechnical consultants.
- Mining costs about 10% higher, based on PFS budget quotes.
- Higher grade control costs, due to a recommended increase in the RC grade control drilling density and a higher unit assay cost.



- General and administration (G&A) costs significantly higher than previously utilised. The majority of G&A costs are for administration and support personnel, FIFO flights, and accommodation and catering, which have all increased since 2013.

Processing cost estimates are similar to 2013 and the same A\$1,600/oz gold price (and royalty regime) was applied.

Based on MDI's assessment, the mineral inventory within currently economic pit-shells is insufficient to justify the immediate re-commissioning of the Sandstone mill and associated infrastructure. As such, re-commissioning will be deferred and the immediate focus will be directed to extending and enhancing the project's mine life and production profile.

Ongoing PFS work will therefore be minimised, with MDI only completing work already commenced or required for other purposes, while all non-essential work will be suspended, subject to both legal and commercial constraints.

Additional information on some PFS work in progress will be provided once available, expected to be late in January 2017.

Revised MDI Strategy

In light of a deferral of mill re-commissioning at Sandstone, MDI's priority focus will be on the identification of suitable, additional mill feed. Several of these strategies are as follows:-

- Brownfields and greenfields exploration within the Company's Sandstone leases, especially targets with the potential to provide higher grade, open pit mill feed. Various examples include the Shillington West, Macintyre, Plum Pudding South prospects, and the isolated intercept of 4m at 17.6g/t Au recently returned from sterilisation drilling at Two Mile Hill. A detailed evaluation of the Macintyre target is nearing completion, and a review of Plum Pudding South and Shillington West has commenced.
- Continued exploration and conceptual studies on the deeper, high grade, Two Mile Hill BIF targets that include true width intercepts of 22m at 23.8g/t, 8m at 56.0g/t and 5m at 26.5g/t Au from resampling. Following the successful \$150,000 EIS grant application for co-funded drilling on this target (ASX Release 14 December 2016), it is planned to commence the next phase of diamond drilling in the March quarter of 2017.
- Commissioning of a 'weights of evidence' targeting study over the entire tenure, to commence early in the March quarter of 2017.
- Discussion with holders of third-party deposits and examination of additional exploration opportunities within the wider Sandstone area. Discussions and data reviews have commenced on several initial opportunities.

Comment

The decision to defer the re-commissioning of the Sandstone processing plant and infrastructure is prudent in the circumstances. This deferment provides the opportunity to identify and systematically explore the considerable gold potential of the project in order to extend and enhance the current production profile.

We look forward to bringing you regular updates on exploration that we are confident will ultimately see the Sandstone Project re-commissioned.

COMPANY CONTACTS:

Rick Yeates – Managing Director +61 (0)401 694 313
Kate Manning – Administration Manager +61 (0)418 883 959

MEDIA CONTACT:

Kevin Skinner Field Public Relations +61 (0)8 8234 9555 / +61 (0)414 822 631

WEBSITE: www.middleisland.com.au

Forward Looking Statements

Statements contained in this release, particularly those regarding possible or assumed future performance, costs, dividends, production levels or rates, prices, resources, reserves or potential growth of Middle Island, industry growth or other trend projections are, or may be, forward looking statements. Such statements relate to future events and expectations and, as such, involve known and unknown risks and uncertainties. Actual results and developments may differ materially from those expressed or implied by these forward looking statements depending on a variety of factors.

Competent Persons' Statement

Information in this report relates to exploration results and feasibility studies that are based on information respectively compiled by Mr Rick Yeates and Mr Linton Kirk (respectively a Member and a Fellow of the Australasian Institute of Mining and Metallurgy). Mr Yeates is a fulltime employee of Middle Island, while Mr Kirk is a part-time consultant to Middle Island, and each has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activities undertaken to qualify as Competent Persons as defined in the 2012 edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Yeates and Mr Kirk consent to the inclusion in the release of the statements based on their information in the form and context in which they appear.