



Middle Island Resources Limited ACN 142 361 608

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

Capital Structure:

698 million ordinary shares 38,300,000 unlisted options

Cash

\$2.0m* (as at 31 December 2017) *After \$0.55m deferred Sandstone acquisition payment made in advance.

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 – 26 March 2018

Further Ore Sorting trials to focus on upgrade of key deposit at the Sandstone gold project, WA

- Following completion of a large diameter diamond core hole (MSDD261), a further campaign of ore sorting is set to commence to verify the positive results received from initial testwork on the Two Mile Hill tonalite deeps deposit at the Company's 100%-owned Sandstone gold project in WA.
- Precursor to first mineral resource for upper half of the exploration target and potential economic upgrade for project.
- Previous scoping level testwork indicated that sorting can deliver a 185%-257% increase in grade, with gold recoveries in excess of 93% and 64% of the sorter feed material being rejected.
- The new more definitive, ore sorting campaign will include iterations around crush size and grade range, designed to enhance the original results.
- Validation would likely lead to a significant positive impact on project economics, delivering reduced haulage and process operating costs, and lower tailings disposal requirements.
- The Two Mile Hill tonalite deeps deposit, located 4km north of the Company's 600,000tpa Sandstone gold processing plant, comprises an Exploration Target of 24Mt to 34Mt at 1.1g/t to 1.4g/t Au (0.9M-1.5Moz of gold).
- Hole MSDD261, drilled from surface to a depth of 284.5m with PQ and HQ diameter diamond core, returned an intercept of 100m at 2.02g/t Au from 55m to 155m downhole depth, including 7m at 18.1g/t Au, broadly consistent with previous holes at the Two Mile Hill deposit.
- On the reasonable assumption that ore sorting results will prove consistent with earlier trials, plans are in place to commence staged, RC pre-collared diamond drilling to upgrade the upper half of the Exploration Target (to a depth of ~420m) to a formal Mineral Resource.



SANDSTONE GOLD PROJECT (WA)

Two Mile Hill Tonalite Deeps Deposit

Middle Island Resources Limited (Middle island, MDI or the Company) is pleased to update shareholders on the status of diamond drilling and ore sorting trials on the Two Mile Hill tonalite deeps deposit at the Company's 100%-owned Sandstone gold project in WA.

The Two Mile Hill tonalite deeps deposit is located 4km north of the Company's 600,000tpa Sandstone gold processing plant. The deposit comprises an Exploration Target of 24Mt to 34Mt at 1.1g/t to 1.4g/t Au (0.9M-1.5Moz of gold - refer ASX Release 29 November 2017) situated between 140m (the base of quantified open pit resources) and 700m vertical depth, below which it remains open.

The potential quantity and grade of an Exploration Target is conceptual in nature, as there has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource.

Initial mineralogical assessment, which involved the assaying of a series of hand-sorted composites of quartz vein material and un-veined tonalite, suggested that >99% of the gold is hosted in the quartz veins (refer ASX release 11 October 2017). As such, an ore sorting study was initiated on gold mineralised material sourced from the Two Mile Hill tonalite deeps deposit.

The results of initial trials suggest that ore sorting can deliver a 185%-257% increase in grade, with gold recoveries in excess of 93%, and 64% of the sorter feed material being rejected (refer ASX Release 15 January 2018).

Given the considerable encouragement derived from indicative ore sorting testwork, a further, more definitive trial is required before committing to extensive resource definition drilling.

Large Diameter Diamond Core Drilling

In order to provide sufficient material for the new, more definitive ore sorting campaign, a large diameter hole (MSDD261) was drilled from surface to a depth of 284.5m with PQ and HQ diameter diamond core.

Analyses (50g fire assay) of 1m quarter core intervals from MSDD261 returned a best intercept of 100m at 2.02g/t Au from 55m downhole depth, including 7m at 18.1g/t Au from 121m depth. Although positioned in a relatively poorly drilled portion, this result is broadly consistent with previous holes at the Two Mile Hill tonalite deeps deposit.

Table 1								
	Diamond drillhole location & orientation							
Hole ID	Hole ID Deposit Easting Northing mRL Grid Depth Dip Azimuth						Azimuth	
MSDD261	Two Mile Hill	723096	6892640	520	MGA94_50	284.5m	-79°	270°

Details of diamond hole MSDD261 are provided in Table 1 below.



Table 2 Significant diamond drilling results – MSDD261				
	Depth From (m)	Depth To (m)	Interval (m)	Grade (g/t Au)
	24	32	8	0.60
	35	41	6	0.56
	55	61	6	3.59
	68	85	17	2.05
	101	108	7	0.57
	113	116	3	1.05
	122	129	7	18.1
	137	139	2	2.20
	195	201	6	5.43
	204	211	7	1.61
	227	265	38	0.79
	268	279	11	0.69
Calculated at a 0.3g/t cut-off. Maximum of 2m of continuous internal waste.				

More significant gold intercepts from MSDD261 are summarised in Table 2 below.

Geotechnical Assessment

Prior to cutting the core, a geotechnical analysis of MSDD261 was undertaken by external geotechnical consultants in order to assess the physical properties of the material for a range of possible underground mining methods, including sub-level caving and open stoping.

Whilst geotechnical logging has been completed and a report is being compiled, the findings are not yet available and will be released in due course.

<u>Mineralogy</u>

In order to better understand the mineral paragenesis, and nature and distribution of gold mineralisation at the Two Mile Hill deposit, seven variants of altered tonalite and one example of an auriferous quartz vein were submitted for petrological examination via thin and polished section.

The samples were interpreted to represent a tonalite protolith, rather than an altered (tonalitic) product of another granitoid rock. Both plutonic and high level porphyry intrusive phases are present, although the relationship between the two is still unclear.

The tonalite host has been overprinted by a consistent sericite - carbonate \pm Fe/Mg chlorite alteration assemblage, interpreted to have an auto-metasomatic origin. Significantly, the alteration appears to be widespread and is associated with disseminated anhedral to euhedral pyrite, locally containing ultrafine (1-2 micron) gold mineralisation.

Coarse, blebby and fine, particulate gold mineralisation within quartz veins is frequently associated with galena and pyrite respectively.

The off-cuts of all tonalite variants have been submitted for 50g fire assay analysis (results pending) to complete the assessment.

The results of the petrological work, particularly those relating to gold distribution, will serve to better inform the design and interpretation of ore sorting testwork.



Ore Sorting

A series of four primary (fresh) composites have been selected from HQ and PQ diamond core from MSDD261 for crushing prior to ore sorting. The composites comprise broad, single, continuous intervals of half core over three grade ranges (high grade - HG, medium grade - MG and low grade - LG). The high grade composite, comprising solely half PQ core, will be separated into two fractions for crushing to - 45mm/+15mm and -30mm/+10mm to assess the impact of crush size on sorting, while the MG and LG composites are derived from half HQ core and will be crushed at -30mm/+10mm.

The composites will be provided to Steinert for ore sorting via its commercial-scale unit in Perth. The applied sensors will comprise a combination of XRT (to detect and separate higher density sulphides associated with gold) and Laser (to detect and isolate quartz, which hosts the vast majority of gold).

Especially given the coarse, particulate nature of the majority of gold mineralisation, the various product fractions derived from each composite (along with the fines) will be assayed via multiple 1-2kg bottle rolls (with residue assays) to determine an average calculated head grade in each case.

While the priority remains on establishing the sorting characteristics of the primary (fresh) material, two (or possibly three) weathered/oxidised composites of half PQ diamond core will also be submitted for sorting at a -45/+15mm crush size, in order to determine the validity of applying ore sorting at the planned Two Mile Hill open pit deposit. In this case iterations will focus more on material type (oxidation state), rather than grade range and crush size.

As with the primary (underground) component of the deposit, a positive ore sorting outcome on the oxide mineralisation has the potential to reduce the unit haulage and process operating costs, thereby increasing the size of the optimum pit, resulting in additional potential open pit mill feed.

Resource Definition Diamond Drilling

Assuming a successful outcome on the Stage II ore sorting trials for the primary (underground) component of the Two Mile Hill deposit, the Company intends to immediately progress a staged drillout of the upper half of the Exploration Target (from 140m depth to ~420m depth) via RC pre-collared diamond drilling. The programme is designed to infill the existing drill pattern on a nominal 40m x 40m density, thereby upgrading the upper portion of the underground Exploration Target into a Mineral Resource. The full programme is planned to comprise 12 holes, including some 2,400m of RC pre-collars and 2,240m of NQ diamond core tails.

The programme is also designed to maximise the number of possible intersections of the upper and middle banded iron formations (BIFs) that are intruded by the Two Mile Hill tonalite plug, to target additional high grade gold mineralisation associated with pyrite replacement of magnetite within BIF units, peripheral to the tonalite contact.

The programme is planned to commence in mid-April, once the ore sorting results have been fully evaluated, and is anticipated to take up to 8 weeks to complete.



Middle Island Managing Director, Mr Rick Yeates:

"Ore sorting offers the potential to make a significant positive impact on the economics of the Two Mile Hill tonalite deeps deposit. Should the new, more definitive, ore sorting campaign replicate or improve on the initial trial results, bulk underground mining at Two Mile Hill becomes a very real opportunity that would substantially extend and enhance the envisaged project production schedule.

"While the focus of the current ore sorting campaign is very much on the deeper underground potential of the Two Mile Hill deposit, given that material is available from MSDD261 through the oxide profile, we will utilise the opportunity to also assess the response of the open pit mineralisation to ore sorting.

"Middle Island will keep shareholders updated on progress with the exciting Two Mile Hill tonalite deeps deposit at the Sandstone gold project during the June and September quarters of 2018."

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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 and ore sorting trial results based on information compiled by Mr Hugo Viviani and Mr Rick Yeates. Messrs Viviani and Yeates are each Members of the Australasian Institute of Mining and Metallurgy. Mr Viviani is a consultant to Middle Island Resources Limited, while Mr Yeates is a fulltime employee of the Company. Each has sufficient experience which is relevant to the nature of work and style of mineralisation under consideration 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'. Messrs Viviani and Yeates consent to the inclusion in the release of the statements, based on their information, in the form and context in which they appear.

Appendix 1

The following Table and Sections are provided to ensure compliance with the JORC Code **Section 1 Sampling Techniques and Data**

Criteria	JORC Code explanation	Commentary
Sampling techniques	• 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.	 The diamond drill core samples comprised 1m intervals of quarter PQ and HQ core.
	• Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	• Core recovery was excellent. Core was re-aligned prior to splitting and the core was cut to the left-hand side of the orientation line. To generate the quarter core, the left-hand side half core was split, with the left-hand side core, in turn, consistently sampled.
	 Aspects of the determination of mineralisation that are Material to the Public Report. 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 mineralisation types (eg submarine nodules) may warrant disclosure of detailed information. 	• From the quarter PQ and HQ core 1-2kg was sent to the laboratory to be crushed (-10mm) and pulverised to produce a 300g pulp, then split to a 50g charge for fire assay analysis.
Drilling techniques	• 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).	 The oriented diamond drill core is PQ (85mm) and HQ (63.5mm) in size (diameter).
Drill sample recovery	 Method of recording and assessing core and chip sample recoveries and results assessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. 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. 	 Diamond core recovery data was measured for each drill run/interval and captured in a digital logging software package. The data has been reviewed and the core recovery was effectively 100% throughout the primary material. It was around 80% within the more heavily oxidised material. The water table was encountered at a 40 – 60m hole depth, but there was no issue with the water table effecting the samples. No relationship between sample recovery and grade has been established.

Criteria	JORC Code explanation	Commentary
Logging	 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. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography. The total length and percentage of the relevant intersections logged. 	 The diamond core was logged for lithology, weathering, structure, mineralogy, mineralisation, alteration, colour, RQD and geotechnical parameters. Logging was carried out according to Middle Island Resources internal protocols at the time of drilling. Diamond core was logged continuously to record all relevant features, regardless of length. Core was also photographed wet and dry within each core tray.
Sub-sampling techniques and sample preparation	 If core, whether cut or sawn and whether quarter, half or all core taken. If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparation technique 	 Core was cut by diamond saw the remaining ¾ core left in the core trays for ore sorting testwork (half core) and reference (quarter core) purposes. Quarter core samples were bagged in 1m intervals. All samples were collected and taken to the Intertek lab in Maddington, WA for cutting, sample preparation and analysis. The samples were dried and crushed to -10mm before being split and then a 300g subsample pulverized to 95% passing 75 micron. This fraction was then split again to a 50g sample charge for fire assay. The Intertek laboratories are internationally certified.
	 Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples. 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. Whether sample sizes are appropriate to the grain size of the material being sampled. 	 Middle Island's diamond core routine sample procedure was to consistently cut the core along orientation line and collect the same side of the cut core for analysis. A second core split was collected off the primary jaw crusher at a frequency of 1:19 samples to provide a field duplicate sample. Sample size and assay charge size are considered appropriate for the style of mineralisation.
Quality of assay data and laboratory tests	 The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total. 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. 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. 	 Middle Island Resources, adopted a 50g fire assay method with an ICP-OES finish. This technique is considered suitable for gold mineralisation associated with sulphides. No other measurement tool/instrument was used to derive assays, however a gyroscopic instrument was used to monitor deviation within the diamond holes. Middle Island included laboratory duplicates, field duplicates, blanks and certified standards routinely in the assay train at a 1:19 frequency, and a quartz wash was used after each sample pulverised.

Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	 The verification of significant intersections by either independent or alternative company personnel. The use of twinned holes. Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols. Discuss any adjustment to assay data. 	 Sampling was undertaken by experienced field technicians from Intertek Minerals as well as experienced geologists from Middle Island Resources who confirmed the intersections as prospective for gold mineralisation. No twinned holes or umpire assaying were used as part of this programme. Sampling data were imported and validated using a GBIS database software system by an experienced database consultancy. Assay data were not adjusted; however, re-assays were requested on the single inconsistent result.
Location of data points	 Accuracy and quality of surveys used to locate drill holes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation. Specification of the grid system used. Quality and adequacy of topographic control. 	 Surface collar coordinates were surveyed via GPS. Given magnetism inherent in the host rock, a high quality downhole gyro was used to determine the dip and azimuth of the diamond holes at 25m intervals. MGA94 Zone 50. The topographic surface was calculated from previous mine survey pickups.
Data spacing and distribution	 Data spacing for reporting of Exploration Results. 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. Whether sample compositing has been applied. 	 Core samples are reported at 1m composited sample/assay intervals. The data spacing is adequate to provide continuity of grade for exploration drilling.
Orientation of data in relation to geological	• Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	 Drilling orientations were appropriate to intersect the geology and mineralisation at an optimum angle and provide a representative sample of essentially true thickness.
structure	• 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.	 The company does not believe that any sample bias had been introduced which could have a material effect on the results.
Sample security	• The measures taken to ensure sample security.	 Middle Island Resources ensured individual samples were given due attention. The samples were taken by experienced company geologists and collected by the laboratory's designated driver. Intertek is an internationally accredited laboratory.
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	 The database was validated and audited by Expedio database consultants. Field data collected is logged and validated in a custom field logging tool.

Section 2 Reporting of Exploration Results

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• 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.	• The sampled diamond core is derived from Mining Lease M57/128, which is 100% owned by Sandstone Operations Pty Ltd, a wholly-owned subsidiary of Middle Island Resources Limited.
	• 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.	 As of 5/12/2016 Sandstone Operations Pty Ltd was the sole owner of the project, including Mining Lease M57/128.
Exploration done by other parties	• Acknowledgment and appraisal of exploration by other parties.	 Previous exploration was undertaken and reported by Herald Resources Limited and Troy Resources Limited during their respective tenure of the Sandstone gold project.
Geology	• Deposit type, geological setting and style of mineralisation.	 The Two Mile Hill deposit is hosted within a late stage, near vertical intrusive tonalite stock that intrudes the local stratigraphy of mafic volcanics and BIF.
Drill hole Information	 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: easting and northing of the drill hole collar elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar dip and azimuth of the hole down hole length and interception depth hole length. 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. 	 See tables within the release. Data is tabulated within the release for the solitary diamond hole reported.

Criteria	JORC Code explanation	Commentary
Data aggregation methods	 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. 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. The assumptions used for any reporting of metal equivalent values should 	 Parameters stated as a footnote to the relevant table within the release. Diamond drilling results are summarised using averages that are length-weighted and the method of aggregation is provided as a footnote to the table. Not applicable.
	be clearly stated.	
Relationship between mineralisation widths and intercept lengths	 These relationships are particularly important in the reporting of Exploration Results. If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported. 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'). 	 Holes have been drilled orthogonally to the general dip and strike of the mineralised units and structures. Therefore down-hole intercepts approximate true widths. The mineralisation is hosted within a late-stage, near vertical, intrusive tonalite stock with a general north-south strike, within which mineralised quartz veining has a sub-horizontal disposition.
Diagrams	 Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views. 	• See tables within the release.
Balanced reporting	• 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.	Not applicable
Other substantive exploration data	 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. 	Not applicable.
Further work	• The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).	• Resource definition RC pre-collared diamond core drilling to upgrade the Exploration Target to a Mineral Resource is planned.
	 Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive. 	Not applicable