



# Echo Resources Limited

ACN 108 513 113

4 April 2017  
ASX Announcement  
ASX Code: EAR

## ORELIA GOLD DEPOSIT DRILLING RETURNS EXCELLENT RESULTS

### HIGHLIGHTS

- Significant results have been returned from the first 6 RC holes drilled at Orelia, located 8km from the Bronzewing Processing Hub, including:
  - 31 metres @ 10.61 g/t Au from 69 metres (ORC006, incl. 6m @ 35.83, 5m @ 18.12)
  - 16 metres @ 6.26 g/t Au from surface (ORC001, incl. 4m @ 24.40)
  - 15 metres @ 2.72 g/t Au from 1 metre & 9 metres @ 2.55 from 80 metres (ORC004)
  - 10 metres @ 2 g/t Au from 44 metres (ORC002)
- The results provide confidence that Orelia may be an ideal opportunity to quickly and significantly increase available Reserves
- Drilling is ongoing with further results to follow in the coming weeks from both Orelia in the Bronzewing District and a number of prospects in the Empire District located ~70km from the Bronzewing Processing Hub.

Echo Resources Limited (ASX:EAR) ('Echo' or the 'Company') has received excellent results from the first 6 reverse circulation ('RC') drill holes completed within the Orelia gold deposit ('Orelia') which is located only 8km from the Bronzewing Processing Hub.

While there is existing historic Orelia drill data, Echo is taking a back-to-basics approach and building its geological knowledge and interpretation of the deposit from the ground up, using historical data in conjunction with data generated in the current drilling program. The current 4,000m program is designed to independently assess and understand the geology and gold distribution of the deposit, and these first results are in line with expectations returning a number of very high grade results.

Echo's CEO, Simon Coxhell said the results strongly suggest the Orelia gold deposit should provide Echo with another high-grade open-pittable resource. The results will flow into an updated resource model, with pit optimisation and project studies to follow.

"Our current Yandal exploration program is aimed at building our global gold reserve base to underpin the re-start of Echo's Bronzewing Processing Hub. These high-grade results at Orelia suggest that following further work we will achieve our goal. In addition, we know that the Orelia gold deposit forms part of a much larger mineralised system with high-grade south plunging ore bodies down to significant depths which will be tested as a part of future drilling.

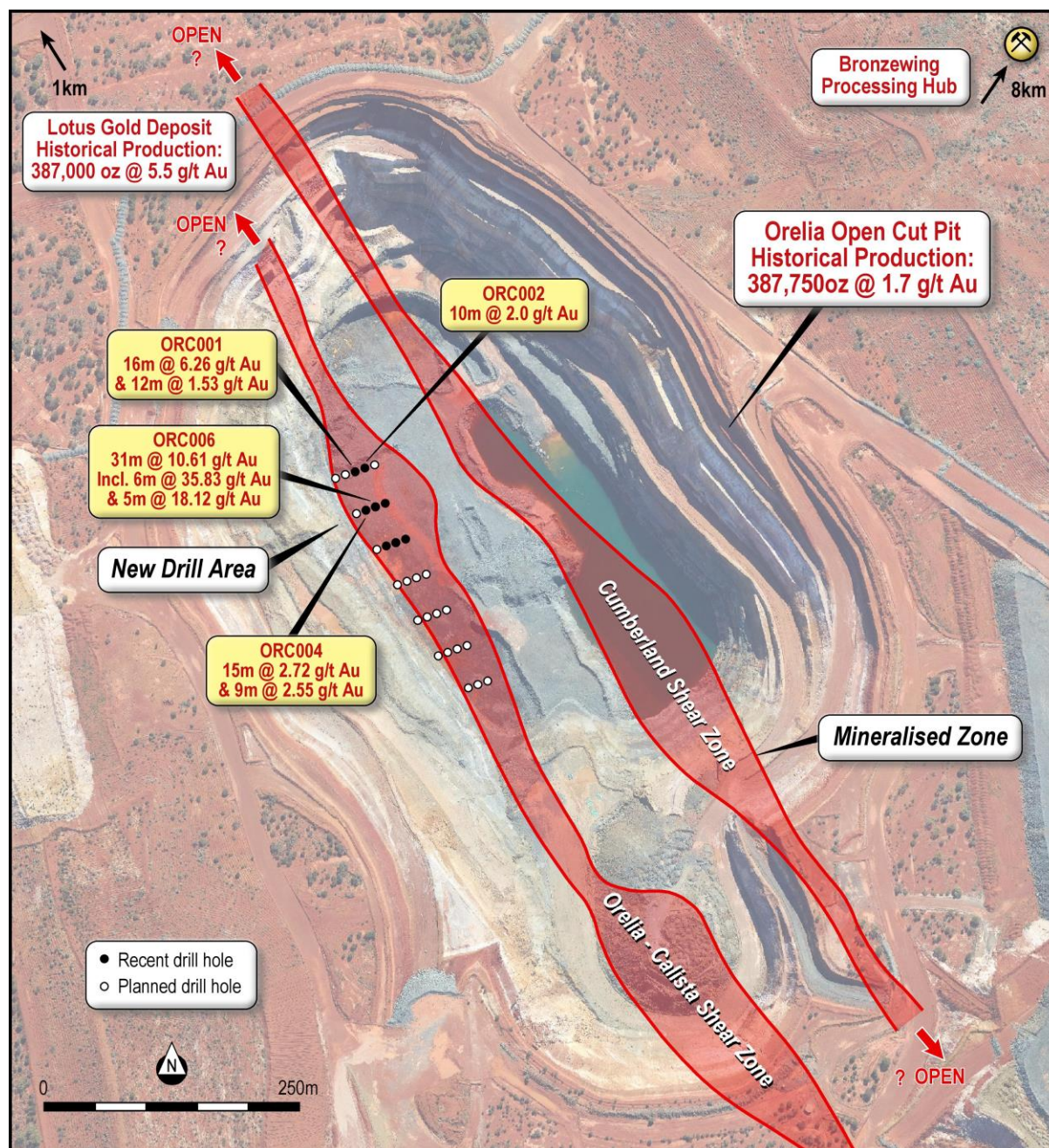
"Thanks to a large cut-back of the open pit in 2012-2013 the existing pit is ready for a significant depth extension to approximately 100 metres below the current pit floor. This potentially enables access to quality reserves for minimal upfront mine development costs.

"The results from the Bronzewing District follow last week's early success at the Orpheus gold prospect in the Empire District and continue to support our overall exploration strategy in the Yandal greenstone belt."



## Orelia Drill Program & First Results

This first drill program at the Orelia gold deposit, located only 8 kilometres from the Bronzewing Processing Hub, comprises approximately 4,000 metres of drilling and is aimed at testing the extent and continuity of the Orelia gold mineralisation system that is accessible via open pit mining.



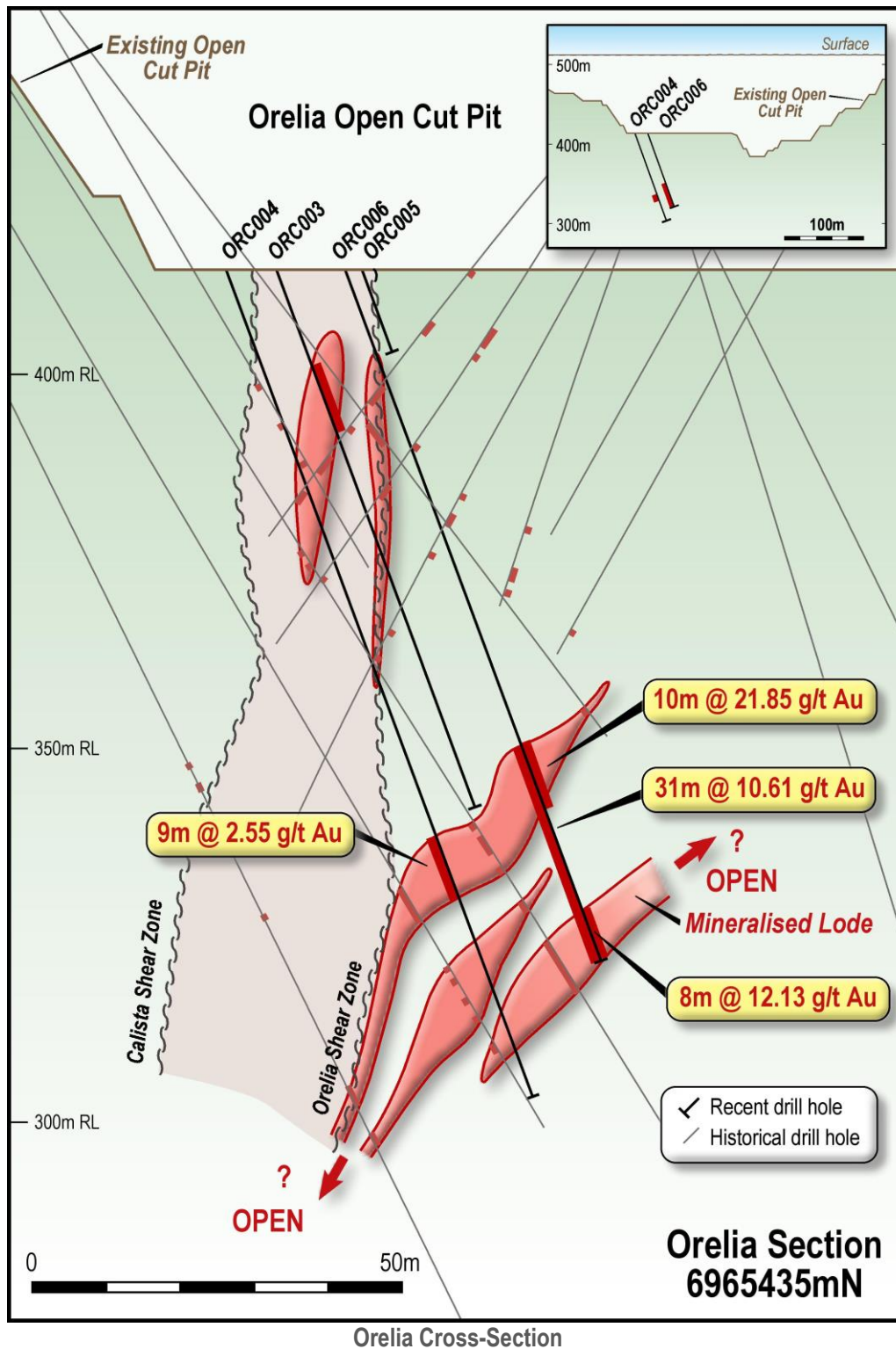
Orelia Plan View with Holes and Key Intersections<sup>1</sup>

Structural studies highlight a stretching lineation, that defines the fold axis of the Orelia Antiform, dipping moderately to the SE. This stretching lineation controls the geometry of high-grade ore shoots and suggests there is potential for continuity of mineralisation down-plunge. Further drilling is being planned to assess the depth potential of the Orelia system.

Results received from the first 6 holes have provided excellent grades and reasonable correlation with historical (cross-check) data as evident within the section below.

<sup>1</sup> Refer to ASX: MKO announcement dated 1 September 2016





Drilling at Orelia will continue with further results due in the coming weeks which will enhance our geological understanding and facilitate further interpretation of the Orelia system.

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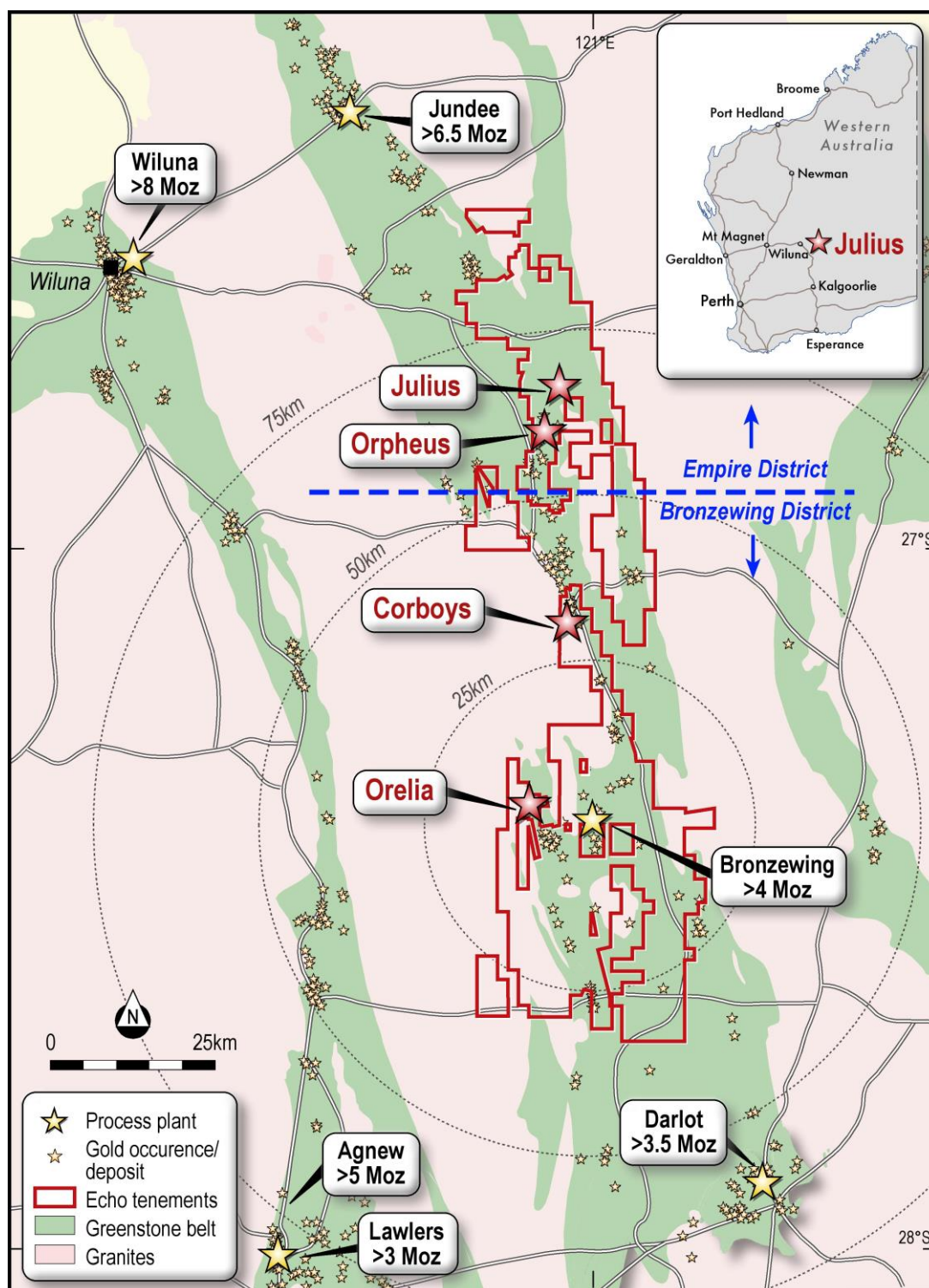


## ABOUT ECHO

### Exploration & Development Strategy

Echo's exploration program is focussed on building Reserves across the Company's strategic Yandal landholding to provide sufficient mine life to support a decision to mine. Echo can quickly move into production utilising its key infrastructure asset, the 2Mtpa Bronzewing Processing Hub, which a BFS confirmed can be operational in less than six months from a decision to mine for just A\$12.5 million (refer to ASX announcement 18 January 2017).

Echo controls 1,600km<sup>2</sup> of the highly prospective Yandal greenstone belt in Western Australia with brownfields and greenfields targets in two distinct districts, both within trucking distance of the Bronzewing Processing Hub.



Echo Tenement Holdings & Key Deposits





## About the Orelia Gold Deposit

The key focus of drilling within the Bronzewing District is the Orelia gold deposit which includes three mineralised systems; Orelia, Calista and Cumberland and is located eight kilometres southwest of the Bronzewing Processing Hub.



RC drill rig in progress in the Orelia pit

Reverse circulation (RC) drilling has commenced in the Orelia pit, however recent unseasonal wet weather has caused some delays. Visual review of the drill chips has revealed strongly sheared tholeiitic basalts with appreciable quantities of sulphides, predominantly pyrrhotite and pyrite.



Orelia pit with RC drill rig in progress



## Appendix 1: Detailed Results

Hole	From	To	Width	Grade (g/t Au)	Easting	Northing	Total Depth	Dip	Azimuth
ORC001	0	16	16	6.26	296068	6965473	113	-90	0
including	4	8	4	24.4	296068	6965473	113	-70	70
ORC001	96	108	12	1.53	296068	6965473	113	-70	70
ORC002	44	54	10	2.00	296077	6965476	100	-70	70
ORC003	13	25	12	0.97	296085	6965432	78	-70	70
ORC004	1	16	15	2.72	296093	6965438	132	-70	70
ORC004	80	89	9	2.55	296093	6965438	132	-70	70
ORC005	2	6	4	0.54	296101	6965436	12	-70	70
ORC006	69	100	31	10.61	296086	6965431	100	-70	70
including	72	78	6	35.83	296086	6965431	100	-70	70
including	94	99	5	18.13	296086	6965431	100	-70	70

## Appendix 2: Cautionary and Competent Persons Statements



### Forward Looking Statements and Disclaimers

This announcement is for information purposes only and does not constitute a prospectus or prospectus equivalent document. It is not intended to and does not constitute, or form part of, an offer, invitation or the solicitation of an offer to purchase or otherwise acquire, subscribe for, sell or otherwise dispose of any securities, or the solicitation of any vote or approval in any jurisdiction, nor shall there be any offer, sale, issuance or transfer of securities in any jurisdiction in contravention of any applicable law.

This announcement contains forward looking statements. Forward looking statements are often, but not always, identified by the use of words such as "seek", "target", "anticipate", "forecast", "believe", "plan", "estimate", "expect" and "intend" and statements that an event or result "may", "will", "should", "could" or "might" occur or be achieved and other similar expressions.

The forward looking statements in this announcement are based on current expectations, estimates, forecasts and projections about Echo and Metaliko and the industry in which they operate. They do, however, relate to future matters and are subject to various inherent risks and uncertainties. Actual events or results may differ materially from the events or results expressed or implied by any forward looking statements. The past performance of Echo or Metaliko is no guarantee of future performance.

None of Echo, Metaliko or any of their directors, officers, employees, agents or contractors makes any representation or warranty (either express or implied) as to the accuracy or likelihood of fulfilment of any forward looking statement, or any events or results expressed or implied in any forward looking statement, except to the extent required by law.

You are cautioned not to place undue reliance on any forward looking statement. The forward looking statements in this announcement reflect views held only as at the date of this announcement.

### No New Information or Data

This report contains references to Mineral Resource estimates, which have been cross referenced to previous market announcements made by Echo and Metaliko. Echo and Metaliko confirm they are not aware of any new information or data that materially affects the information included in the relevant market announcements and, in the case of estimates of Mineral Resources that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed.

### Competent Persons Statements

The information in this announcement that relates to Exploration Results and previous historic drilling results is based on information compiled by Simon Coxhell, a Director of Echo Resources and a member of the Australasian Institute of Mining and Metallurgy. He has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that they are 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". Mr Coxhell consents to the inclusion in the report of the matters based on the information in the form and context in which it appears



## JORC Code, 2012 Edition

### Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <li>Nature and quality of sampling (e.g. 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.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (e.g. '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 (e.g. submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<p>Exploration to date at the Orelia gold deposit comprised reverse circulation (RC) drilling of 11 holes for 1041 metres. Of these 11 holes, 2 holes failed prior to reaching the target depth due to difficult drilling conditions.</p> <ul style="list-style-type: none"> <li>Approximately 20kg of sample was collected from each metre, with approximately 2kg samples, collected via the onboard cone splitter, sampled for analysis.</li> <li>Drillhole collar locations were recorded by handheld GPS survey with accuracy +/-5 metres.</li> <li>Analysis was conducted by submitting the 2kg sample whole for preparation by crushing, drying and pulverising at Intertek Genalysis laboratory for gold analysis via Fire Assay/ICP.</li> <li>A number of 4 metre composites were also collected in areas outside of the interpreted mineralised intervals.</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. 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.).</li> </ul>	<ul style="list-style-type: none"> <li>RC drilling (5 ¼ inch face sampling hammer) from surface</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Drill sample returns as recorded were considered excellent.</li> <li>There is insufficient data available at the present stage to evaluate potential sampling bias.</li> </ul>
Logging	<ul style="list-style-type: none"> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>Drill chip logging is a qualitative activity with pertinent relevant features recorded: lithology, mineralogy, mineralisation, structural, weathering, alteration, colour and other features of the samples.</li> <li>Rock chip boxes of all sample intervals were collected. All samples were logged.</li> <li>All drilling was logged.</li> </ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>Sample preparation for all samples follows industry best practice and was undertaken by Intertek Genalysis in Kalgoorlie where they were crushed, dried and pulverised to produce a sub sample for analysis.</li> <li>Sample preparation involving oven drying, fine crushing to 95% passing 4mm, followed by rotary splitting and pulverisation to 85% passing 75 microns.</li> <li>QC for sub sampling follows Intertek Genalysis procedures.</li> <li>Field duplicates were taken at a rate of 1:30.</li> <li>Blanks were inserted at a rate of 1:30</li> <li>Standards were inserted at a rate of 1:30.</li> <li>Sample sizes are considered appropriate to the grain size of the material being sampled.</li> </ul>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	<ul style="list-style-type: none"> <li>The methods are considered appropriate to the style of mineralisation. Extractions are considered near total.</li> <li>No geophysical tools were used to determine any element concentrations at this stage.</li> <li>Laboratory QA/QC involves the use of internal lab standards using certified reference material, blanks, splits and duplicates as part of the in house procedures. Repeat and duplicate analysis for samples shows that the precision of analytical methods is within acceptable limits.</li> </ul>





Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>The Company's Geologist has visually reviewed the samples collected.</li> <li>Data and related information is stored in a validated Micromine database. Data has been visually checked for import errors.</li> <li>No adjustments to assay data have been made.</li> </ul>
Location of data points	<ul style="list-style-type: none"> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>Location grid of plans and cross sections and coordinates in this release 2017 samples use MGA94, Z51 datum.</li> <li>Topographic data was assigned based on a DTM of the Cockburn open pit surface.</li> </ul>
Data spacing and distribution	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>The holes are nominally spaced on a 10 metre NE-SW spacing. Line spacing is a nominal 40 metres.</li> <li>Data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for Mineral Resource estimation procedures.</li> <li>Sample compositing has occurred on a small number of samples (4 metre composite samples) outside of the interpreted main mineralized zone.</li> </ul>
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>The orientation of sampling is considered adequate and there is not enough data to determine bias if any. Mineralised shear zones strike northwest, and dip steeply to the southwest. Drilling was orthogonal to this apparent strike and comprised angled drillholes, drilled -70° to the northeast.</li> </ul>
Sample security	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>Chain of custody is managed by the Company and samples are transported to the laboratory via company staff with samples safely consigned to Intertek Genalysis for preparation and analysis. Whilst in storage, they are kept in a locked yard. Tracking sheets are used and track the progress of batches of samples.</li> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>No review or audit of sampling techniques or data compilation has been undertaken at this stage.</li> </ul>

## Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> <li>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.</li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>The Orelia gold deposit is situated within M36/146 and is 100% owned by MKO Mines Pty Ltd, a subsidiary of Echo Resources Ltd. The Orelia deposit is located in the southern Yandal greenstone belt, and contains 5.6 Mt at 1.9 g/t Au for 349koz Au, of indicated and inferred resource.</li> <li>The tenement is in good standing</li> <li>No impediments to operating on the permit are known to exist.</li> </ul>
Exploration done by other parties	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>Gold production began at Cockburn in 1991 by Arimco Mining Pty Ltd, who had previously operated under the name of Australian Resources Limited, who were subsequently purchased by Great Central Mines. Normandy Mining acquired Great Central Mines in 1998 who acquired the Cockburn mine at the same time, although it had closed only a short time previously. The Cockburn operations were continued under the ownership of Normandy Mining until 2002 when Newmont Mining acquired the whole package. View Resources acquired the operation in 2004 and began developing an open pit and underground mine that took in a number of ore bodies including Cockburn, but the low price of gold and the shortage of capital forced the closure of the project in early 2008. Navigator (Bronzewing) Pty Ltd, completed the purchase from the administrators in September 2009 and they re-commissioned the processing plant in April 2010, with production continuing until 2013.</li> </ul>
Geology	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>The main host rocks of mineralisation at Cockburn are deformed and altered tholeiitic basalts, and intermediate to felsic volcanoclastic rocks. Gold mineralisation typically occurs as; 1) southerly plunging ore-shoots, either at the intersection between steeply-dipping transgressive faults and favourable lithological units, 2) along fold hinges, and 3)</li> </ul>



Criteria	JORC Code explanation	Commentary
		on lithological contacts. At Cockburn, gold values are not necessarily associated with total sulphide content. In sedimentary lithologies, much of the sulphide is considered primary and is unrelated to the gold. The gold is associated with the hydrothermal phase of sulphide formation, that consists of pyrite-pyrrhotite±chalcopyrite. Gold related alteration consists of biotite-sericite-carbonate altered deformation zones.
<i>Drill hole Information</i>	<ul style="list-style-type: none"> <li>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: <ul style="list-style-type: none"> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>A total of 11 reverse circulation drillholes for 1041 metres have been drilled to date on a nominal 10 metre hole spacing, with 40 metre spaced lines. Drilling focused on steeply southwest dipping, mineralised shear zones. Full drillhole details for the results received to date, from 6 of the drillholes, are provided in this announcement. Appropriate maps and plans also accompany this announcement.</li> </ul>
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>No averaging or aggregation techniques have been applied.</li> <li>No top cuts have been applied to exploration results.</li> <li>No metal equivalent values are used in this report.</li> </ul>
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>The orientation or geometry of the mineralised zones strikes in a northwest direction and dips steeply to the southwest.</li> </ul>
<i>Diagrams</i>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Appropriate maps are included in main body of report with gold results and full details are in the tables reported.</li> </ul>
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>All results for the target economic mineral being gold have been reported.</li> </ul>
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>A thorough review of the Orelia historical data was conducted by Echo geologists. This included collating and reviewing historical reports compiled by View and Navigator resources, assessing all historical drilling, and familiarisation with the geological data such as pit maps cross-section interpretations.</li> <li>Reconnaissance pit mapping was conducted by Echo geologists and contract structural geologists in late-2016 to understand the structural controls and deformation history linked to mineralisation in the Orelia system.</li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul style="list-style-type: none"> <li>Future RC and diamond drilling is being considered to further evaluate the Orelia gold deposit.</li> <li>Refer to maps in main body of report for potential target areas.</li> </ul>