



# Echo Resources Limited

ACN 108 513 113

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ASX Announcement  
ASX Code: EAR

## NEW GOLD EXPLORATION TARGETS IDENTIFIED

### HIGHLIGHTS

- Auger geochemical sampling at key areas located in the Bronzewing District have revealed two large strong gold-in-soil anomalies
- Targets were identified by integrating a newly consolidated drilling and geochemical database, geophysics and surface mapping. This process focused on identifying the fundamental controls on mineralisation in the region and delineating areas that have not undergone appropriate geochemical testing or drilling
- Auger geochemistry on a 100m x 50m grid pattern defined a number of discrete +100 ppb gold anomalies between 300-600m in strike and 150m in width
- Planning continues for a comprehensive drill program to test these new targets.

Echo Resources Limited ("Echo", ASX: EAR) is pleased to announce the identification of new gold-in-soil anomalies located on large mineralised structures that have previously been underexplored.

Chief Executive Officer Mr Simon Coxhell said: "As a part of our project generation process, we have completed over 2,000 auger holes since April, in areas that surface mapping and geophysical interpretation has identified as suitable for surficial sampling techniques, coupled to areas located on structural targets which remain essentially untested.

"Results have identified a number of areas of strong gold anomalism which, in some cases, are verified in instances where historical drilling is present (see Figures 2 and 3), principally located in the oxide zone and providing a number of drill-ready targets for detailed resource exploration drilling.

"Encouraging results from Gold Alley have identified two new gold in soils anomalies, proximal to the Anomaly 45 gold prospect, that have never been drill tested. Additionally, another significant anomaly has been identified that is coincident with shallow, historical drill intersections of 8 metres @ 1.78g/t from 8m and 6 metres @ 3.44g/t from 15m. Anomalies identified at Dragon South are coincident, in places, with significant historic drill intersections that include 6 metres @ 3.8 g/t Au from shallow depths.

"Targets identified by this program will be initially tested with aircore drilling as part of the 2017 exploration program, which is designed to discover the next significant gold deposit in the Yandal Greenstone Belt."

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### Auger Geochemistry Program Overview

Two main areas were sampled as a part of this soil geochemistry program; Gold Alley and Dragon South which are located 12 and 28 kilometres respectively south of the Bronzewing Processing Hub. Auger geochemistry on a 100m x 50m grid pattern delineated a number of discrete +100 ppb gold anomalies between 300-600 metres in strike and 150 metres in width.

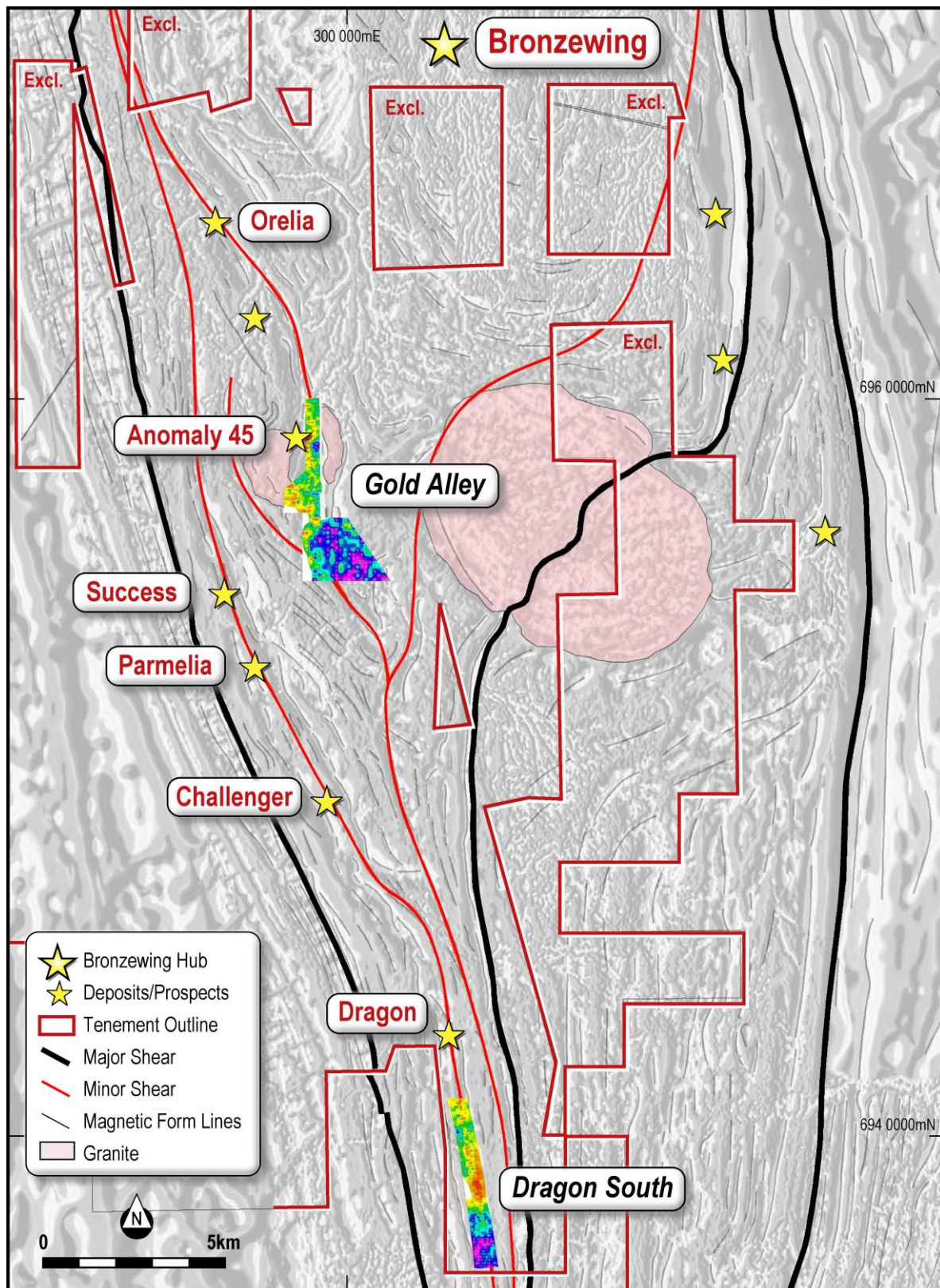


Figure 1: Derivative Magnetics with shearing and geochemistry overlay





### The Gold Alley Trend

The Gold Alley granite trend was identified in gravity data as a west-north-west trending zone that transects the Yandal Greenstone Belt and controls the emplacement of a number of granitic bodies of varying age. It is interpreted that this zone represents an early formed transfer zone that focuses multiple magmatic and fluid events. The localisation of significant gold occurrences (e.g. Orelia and Lotus, Anomaly 45) and the lack of detailed exploration along this trend identified Gold Alley as a priority exploration region.

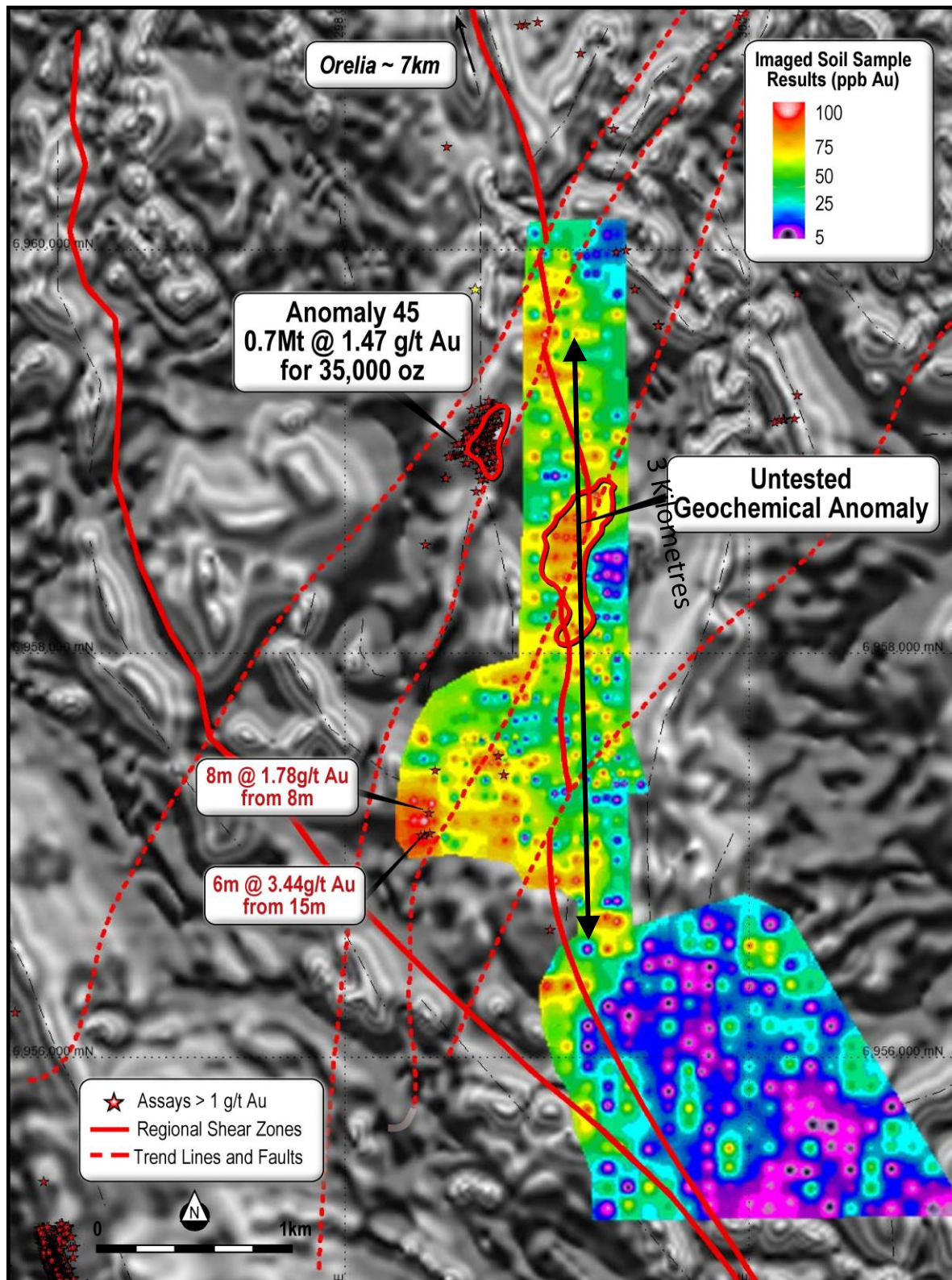


Figure 2: Gold Alley Auger Geochemistry Results





### The Dragon South Anomaly

The Dragon South auger program was focussed on the same mineralised structure that hosts the Success, Parmelia, Challenger and Dragon open pits. Collectively these deposits have produced over 150,000 ounces at an average of grade of more than 3 g/t Au. Database review highlighted Dragon South as an area where limited drilling had been conducted on a significantly endowed structure. The southern half of the geochemical survey was completed in an area where the transported overburden deepened, and deeper drilling will be required to adequately test the structure.

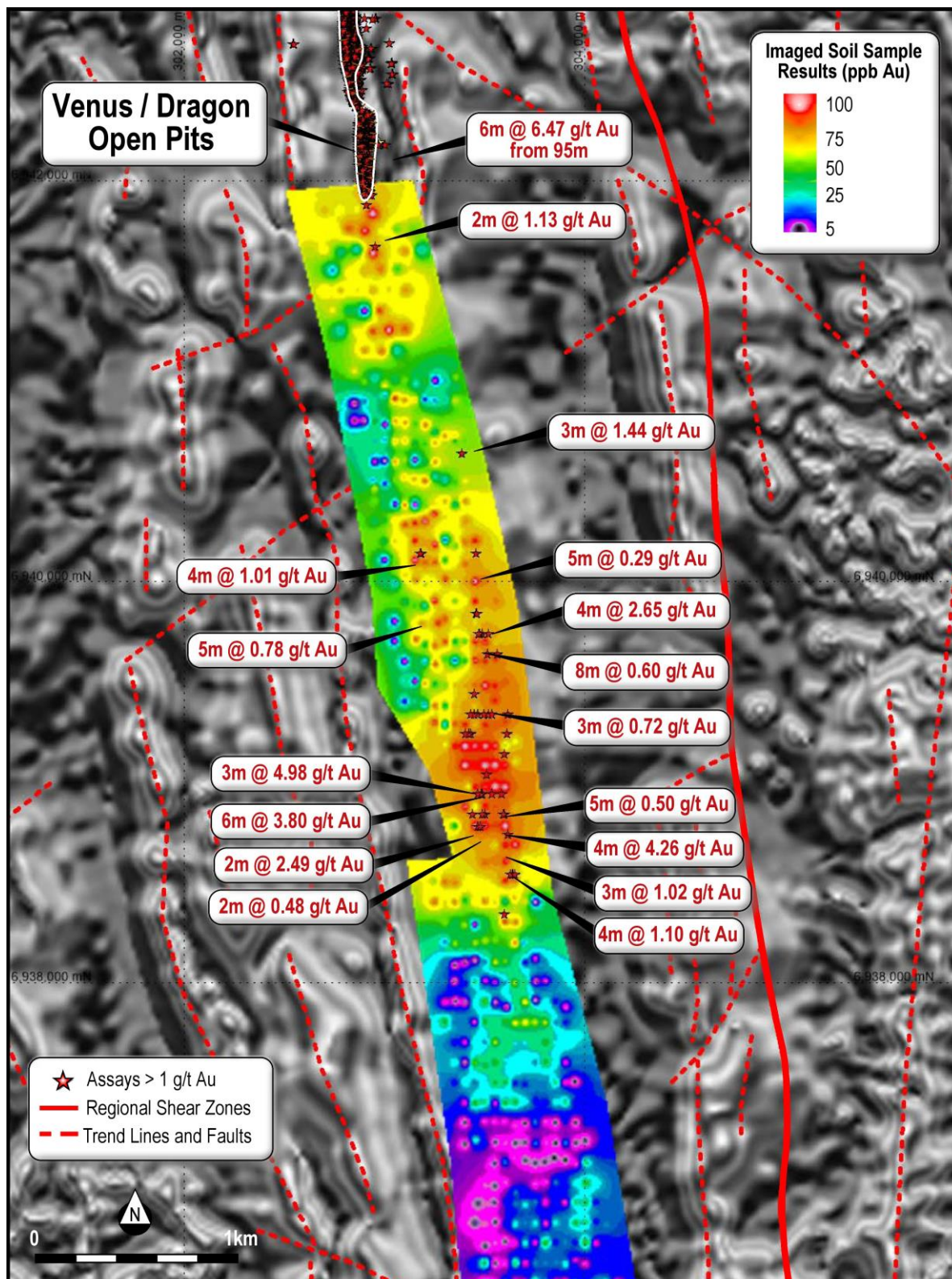


Figure 3: Dragon South Auger Geochemistry Results



### ***Sampling Results***

Results have identified a number of areas of strong gold anomalism which, in some cases, are verified in instances where historical drilling is present (see Figures 2 and 3), principally located in the oxide zone and providing a number of drill-ready targets for detailed resource exploration drilling.

Anomalies identified at Dragon South are coincident, in places, with significant historic drill intersections that include 6 metres @ 3.8 g/t Au from shallow depths. Encouraging results from Gold Alley have identified two new gold in soils anomalies, proximal to the Anomaly 45 gold prospect, that have never been drill tested. Additionally, another significant anomaly has been identified that is coincident with shallow, historical drill intersections of 8 metres @ 1.78g/t from 8m and 6 metres @ 3.44g/t from 15m.

Targets will be subject to first pass aircore drilling as a part of the upcoming 2017 exploration program.



## Appendix 1: Mineral Resource & Ore Reserve Estimates

### Echo Mineral Resource Estimates

Echo Mineral Resources <sup>7</sup>	Measured			Indicated			Inferred			Total			Ownership Cut-off	
	Tonnes (Mt)	Grade (g/t Au)	Ounces (Au)	Tonnes (Mt)	Grade (g/t Au)	Ounces (Au)	Tonnes (Mt)	Grade (g/t Au)	Ounces (Au)	Tonnes (Mt)	Grade (g/t Au)	Ounces (Au)		
Julius <sup>4</sup>	1.8	2.1	124,227	1.6	1.3	67,789	1.8	2.5	142,991	5.2	2.0	335,007	100%	0.8
Regional <sup>5</sup>							2.8	1.5	134,925	2.832	1.5	134,925	100%	0.5
Corboys <sup>3</sup>				1.7	1.8	96,992	0.5	1.8	28,739	2.2	1.8	125,731	100%	1.0
Orelia <sup>2</sup>				2.3	2.4	175,306	3.3	1.6	173,493	5.6	1.9	348,799	100%	0.9
Woorana North <sup>2</sup>				0.3	1.4	13,811				0.3	1.4	13,811	100%	0.5
Woorana South <sup>2</sup>				0.1	1.0	3,129				0.1	1.0	3,129	100%	0.5
Fat Lady <sup>1,2</sup>				0.7	0.9	19,669				0.7	0.9	19,669	70%	0.5
Mt Joel 4800N <sup>1,2</sup>				0.2	1.7	10,643				0.2	1.7	10,643	70%	0.5
<b>Total Mineral Resources</b>	<b>1.8</b>	<b>2.1</b>	<b>124,227</b>	<b>6.9</b>	<b>1.7</b>	<b>387,339</b>	<b>8.432</b>	<b>1.8</b>	<b>480,148</b>	<b>17.132</b>	<b>1.8</b>	<b>991,714</b>		

### Echo Ore Reserve Estimates

Echo Ore Reserves	Proved			Probable			Total			Ownership Cut-off	
	Tonnes (Mt)	Grade (g/t Au)	Ounces (Au)	Tonnes (Mt)	Grade (g/t Au)	Ounces (Au)	Tonnes (Mt)	Grade (g/t Au)	Ounces (Au)		
Julius <sup>6</sup>	0.78	2.5	62,500	0.08	2	5,600	0.87	2.4	68,100	100%	0.8
<b>Total Ore Reserves</b>	<b>0.78</b>	<b>2.5</b>	<b>62,500</b>	<b>0.08</b>	<b>2</b>	<b>5,600</b>	<b>0.87</b>	<b>2.4</b>	<b>68,100</b>		

#### Notes:

- Resources are adjusted for Echo's 70% ownership interest
- Resources estimated by Coxrocks (refer to Competent Persons Statements) in accordance with JORC Code 2012. For full Mineral Resource estimate details refer to the Metaliko Resources Limited announcement to ASX on 1 September 2016. Metaliko is not aware of any new information or data that materially affects the information included the previous announcement, and all material assumptions and technical parameters underpinning mineral resource estimates in the previous announcement continue to apply and have not materially changed.
- Resources estimated by HGS (refer to Competent Persons Statements) in accordance with JORC Code 2012, for full details of the Mineral Resource estimate refer to the Metaliko Resources Limited announcement to ASX on 23 August 2016. Metaliko is not aware of any new information or data that materially affects the information included the previous announcement, and all material assumptions and technical parameters underpinning mineral resource estimates in the previous announcement continue to apply and have not materially changed.
- Resources estimated by Mr Lynn Widenbar (refer to Competent Persons Statements) in accordance with JORC Code 2012, for full details of the Mineral Resource estimate refer to the Echo Resources Limited announcement to ASX on 23 November 2016. Echo Resources Limited is not aware of any new information or data that materially affects the information included the previous announcement, and all material assumptions and technical parameters underpinning mineral resource estimates in the previous announcement continue to apply and have not materially changed.
- Resource estimates include Bills Find, Anomaly 45, Shady Well, Orpheus, Empire & Tipperary Well and were estimated by Golders (refer to Competent Persons Statements) in accordance with JORC Code 2004, for full details of the Mineral Resource estimates refer to the Echo Resources Limited prospectus released to ASX on 10 April 2006.
- Reserve estimated by Mr Gary McRae (refer to Competent Persons Statements) in accordance with JORC Code 2012.
- Mineral Resources are inclusive of Ore Reserves.



### Competent Persons' Declarations

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>	<ul style="list-style-type: none"> <li>Auger sampling was undertaken on a nominal 50m X 100 m staggered grid pattern. Auger drilling was completed to depths between 50-200cm and the sample was collected and sieved at ~1mm</li> <li>The sieves and spades were cleaned at the end of every sample. Approximately 500 grams of sample was collected from each soil sample collected.</li> <li>Sample locations were recorded by handheld GPS survey with accuracy +/-2 metres.</li> <li>Analysis was conducted by submitting the 500 grams sample whole for preparation by crushing, drying and pulverising at Intertek-Genalysis Laboratories for gold analysis via Aqua regia/MS.</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>Auger drilling was conducted to a maximum depth of 2m</li> <li>A soil sample was taken from the bottom of hole</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>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>The type of sample media was recorded during sampling</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>No core</li> <li>Sample preparation for all recent samples follows industry best practice and was undertaken by Intertek-Genalysis Laboratories in Kalgoorlie where they were crushed, dried and pulverised to produce a sub sample for analysis.</li> <li>Sample preparation involving oven drying, f followed by rotary splitting and pulverisation to 85% passing 75 microns.</li> <li>QC for sub sampling follows Intertek-Genalysis procedures.</li> <li>No field duplicates were taken.</li> <li>No Blanks were inserted.</li> <li>No Standards were inserted.</li> <li>Sample sizes are considered appropriate to the grain size of the material being sampled.</li> </ul>
Quality of assay data and	<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> </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</li> </ul>





Criteria	JORC Code explanation	Commentary
<i>laboratory tests</i>	<ul style="list-style-type: none"> <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>	<p>concentrations at this stage.</p> <ul style="list-style-type: none"> <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>
<i>Verification of sampling and assaying</i>	<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 and field assistant has visually reviewed the samples collected.</li> <li>No twin holes drilled</li> <li>Data and related information is stored in a validated Mapinfo or Micromine database. Data has been visually checked for import errors.</li> <li>No adjustments to assay data have been made.</li> </ul>
<i>Location of data points</i>	<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>All sample locations have been located by GPS with precision of sample locations considered +/-2m.</li> <li>Location grid of plans and coordinates in this release 2016 samples use MGA94, Z51 datum.</li> <li>No Topographic data was used .</li> </ul>
<i>Data spacing and distribution</i>	<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 samples are nominally spaced on a 50 metre (E-W spacing) with sample spacing along each section on a 100 metres spacing along each line.</li> <li>Data spacing and distribution is sufficient to establish the likely trends of anomalous gold.</li> <li>No Sample compositing has occurred.</li> </ul>
<i>Orientation of data in relation to geological structure</i>	<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.</li> <li>Mineralised outcrop strikes north-north-west. Sampling was orthogonal to this apparent strike.</li> </ul>
<i>Sample security</i>	<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 Genalysis for preparation and analysis. Whilst in storage, they are kept in a locked yard. Tracking sheets are used track the progress of batches of samples.</li> </ul>
<i>Audits or reviews</i>	<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
<i>Mineral tenement and land tenure status</i>	<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 area soil sampled is located on granted mining and exploration leases located approximately 12 and 30 kilometres south of the Bronzewing Processing Hub, located in the central Yandal Greenstone Belt and is 100% owned by Echo Resources Ltd. A third party net smelter royalty of 1.5% applies in respect of all gold processed through the Bronzewing Processing Hub minerals produced from the tenement.</li> <li>The tenements are in good standing</li> <li>No impediments to operating on the permit are known to exist.</li> </ul>
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>The area soil sampled has previously been drilled by Newmont (and others). A number of significant results have been returned. Echo Resources soil sampling covers the trend of the known mineralization.</li> </ul>





Criteria	JORC Code explanation	Commentary
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 area consists of variable shallow overburden, sub outcropping principally mafic rocks, with minor sediments. Gold mineralization in the area is often found on sheared contact zones and associated with sulphides, shearing and minor quartz veining and zones of silicification.</li> </ul>
Drill hole Information	<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>• Shallow geochemical auger sampling was completed</li> </ul>
Data aggregation methods	<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>
Relationship between mineralisation widths and intercept lengths	<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 north-northwesterly direction and dips variably to the east and west.</li> </ul>
Diagrams	<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.</li> </ul>
Balanced reporting	<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>
Other substantive exploration data	<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>• Previous work by others has highlighted anomalous gold intersections in RAB, aircore and RC drilling in the vicinity of the recent soil sampling area.</li> </ul>
Further work	<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, diamond and aircore drilling is being considered to further evaluate these gold in soil anomalies.</li> <li>• Refer to maps in main body of report for potential target areas.</li> </ul>