



# Echo Resources Limited

ACN 108 513 113

27 June 2017  
ASX Announcement  
ASX Code: EAR

## NEW DRILLING CONFIRMS JULIUS EXTENSION

### HIGHLIGHTS

- Results from aircore drilling at Julius returned significant intercepts outside of the Julius BFS proposed open pit boundaries, confirming the potential to substantially increase the Julius reserve base and include:
  - **4 metres @ 13.98 g/t Au** from 48 metres (JAC184)
  - **12 metres @ 2 g/t Au** from 32 metres (JAC178, incl. 4m @ 3.01)
  - **13 metres @ 1.38 g/t Au** from 40 metres (JAC183, incl. 1m @ 9.58)
- In addition, drilling 400 metres to the north of the Julius BFS pit highlights significant mineralisation and the potential to substantially increase the Julius mineralised strike length:
  - **20 metres @ 1.93 g/t Au** from 32 metres (JAC166)
- Follow-up RC drilling is planned at Julius to test the extent of the mineralised system.

Echo Resources Limited (ASX: EAR) ('Echo' or the 'Company') is pleased to release results from recent aircore drilling at the Julius Gold Project ('Julius'). Drilling has yielded outstanding results that are likely to enable an expansion of the Julius open-pit which was proposed in the January 2017 Bankable Feasibility Study ('BFS')<sup>1</sup>.

Julius is currently host to a Resource of 335,000 ounces (5.2Mt @ 2.0g/t Au<sup>2</sup>) of gold contained on the granite-greenstone contact of a late stage granite pluton. Based on our understanding of the controls of known mineralisation this round of drilling targeted extensions to the north of the proposed Julius BFS pit.

Aircore drilling on the granite margin up to 150 metres north of the Julius BFS pit provided encouraging results including 4 metres @ 13.98 g/t Au from 36 metres. This drilling confirmed significant potential for a much larger open pit.

In addition, an intersection of 20 metres @ 1.93 g/t Au from 32 metres was encountered on the mineralised contact approximately 400 metres north of the proposed pit providing great promise for a significant strike extension to Julius.

These results suggest there remains considerable upside at Julius and follow-up RC drilling is planned to test the full extent of the Julius mineralised system.

**For further information please contact:**

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<sup>1</sup> As announced to ASX on 18 January 2017, all material assumptions underpinning the production targets continue to apply and have not materially changed

<sup>2</sup> As announced to ASX on 23 November 2016

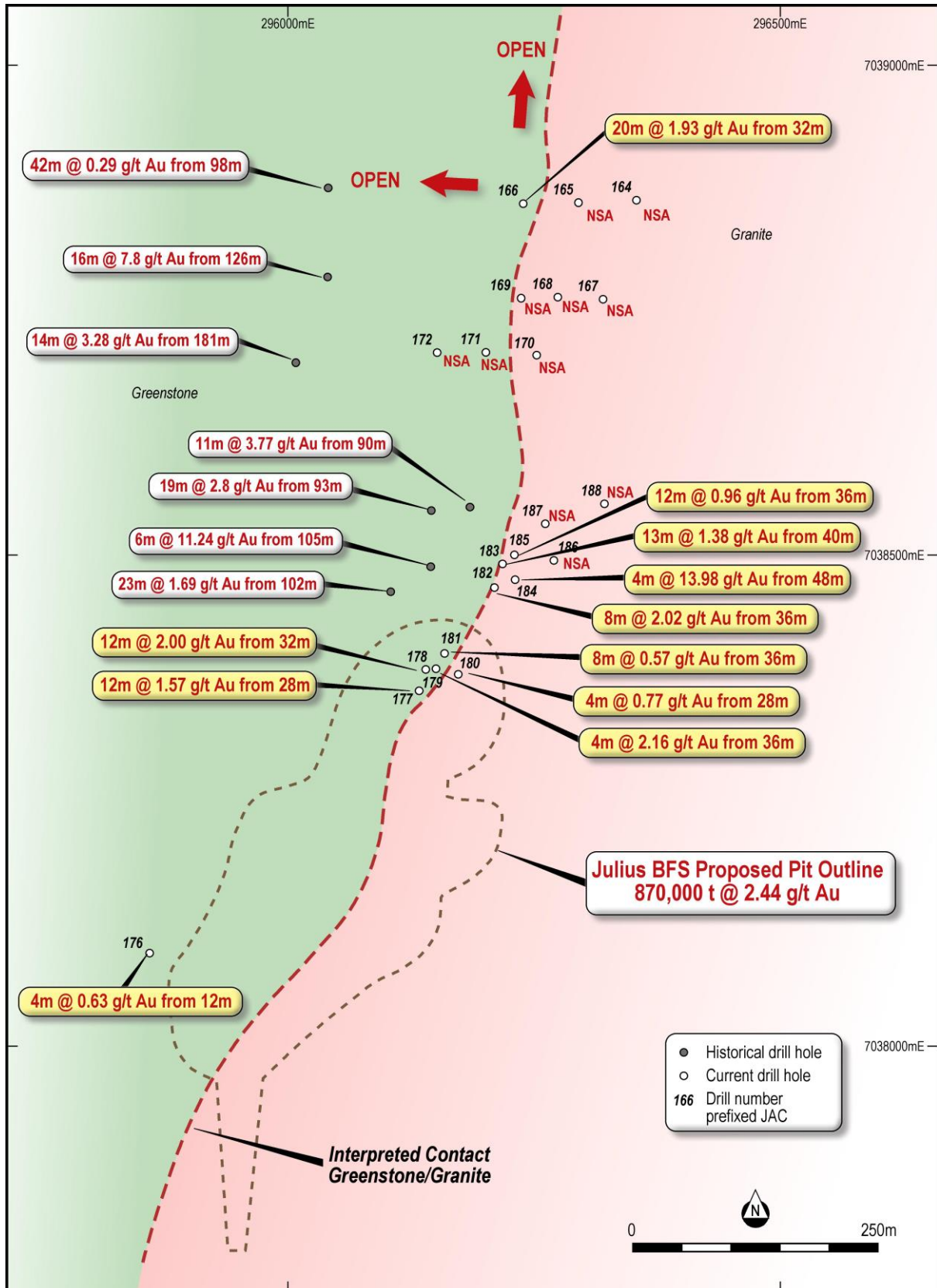


Figure 1: Julius extensional drilling and proposed BFS (Jan'17) pit outline

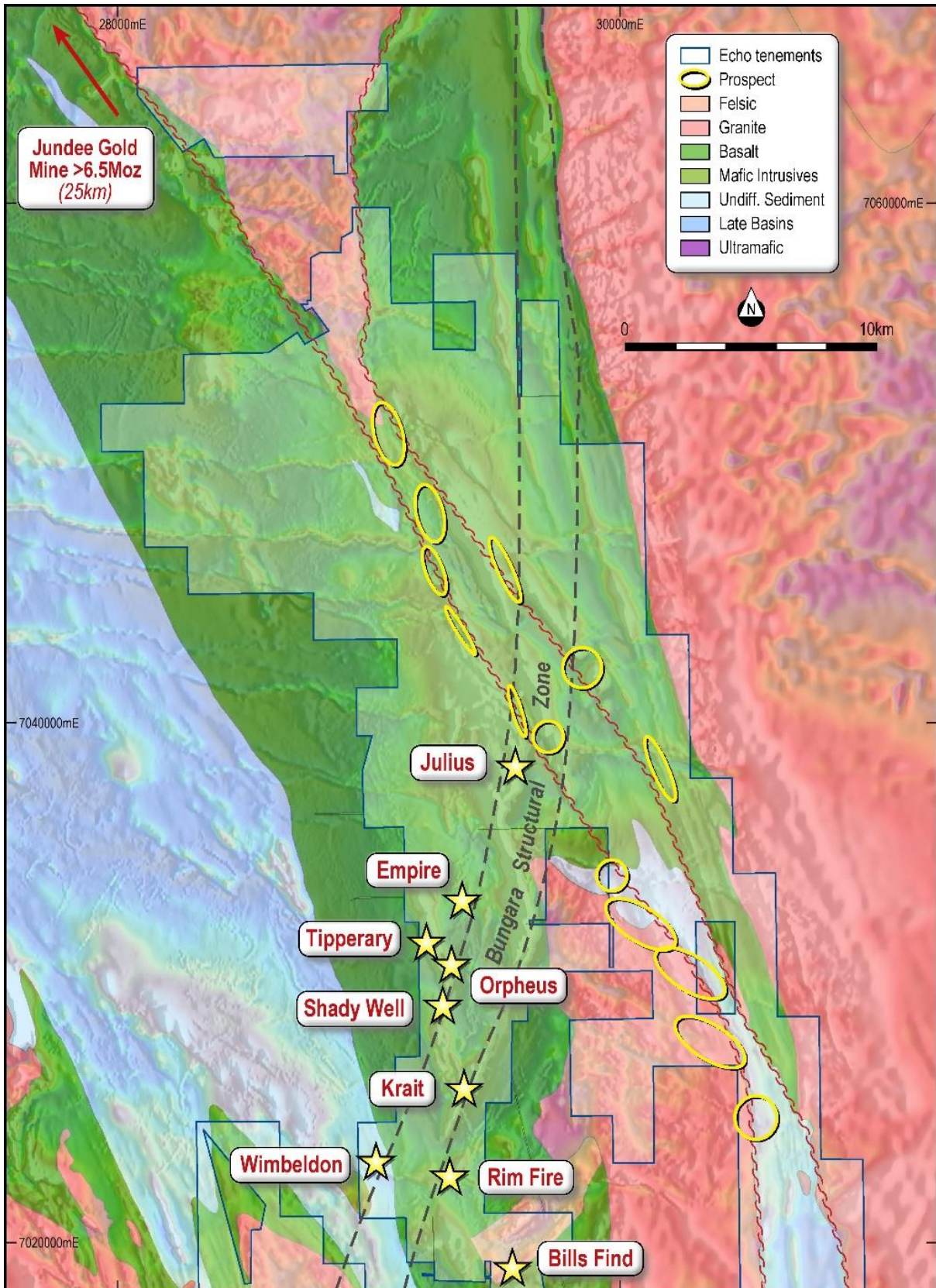


Figure 2: Empire District Magnetic Prospectivity & Project Locations



## Appendix 1: Detailed Results

(note: all results are 4m composites)

Hole	From	To	Width	Grade (g/t Au)	Easting	Northing	Total Depth	RL	Dip	Azimuth
JAC164	NSR				296355	7038862	40	521	-70	90
JAC165	NSR				296295	7038860	34	521	-70	90
JAC166	24	28	4	0.55	296239	7038859	66	521	-70	90
JAC166	32	52	20	1.93	296239	7038859	66	521	-70	90
JAC167	NSR				296320	7038761	40	521	-70	90
JAC168	NSR				296274	7038763	39	520	-70	90
JAC169	NSR				296237	7038762	51	521	-70	90
JAC170	NSR				296253	7038704	43	521	-70	90
JAC171	NSR				296202	7038707	41	522	-70	90
JAC172	NSR				296151	7038707	46	521	-70	90
JAC173	NSR				297310	7037847	20	527	-90	0
JAC174	NSR				297315	7037894	22	527	-60	90
JAC175	NSR				297313	7037951	22	526	-60	90
JAC176	12	16	4	0.63	295860	7038094	67	521	-70	90
JAC176	40	44	4	0.44	296134	7038361	67	519	-90	0
JAC177	28	40	12	1.57	296134	7038361	68	519	-90	0
JAC177	56	68	12	0.87	296140	7038384	68	519	-90	0
JAC178	32	44	12	2.00	296140	7038384	57	519	-90	0
JAC178	52	57	5	0.66	296150	7038384	57	519	-90	0
JAC179	36	40	4	2.16	296150	7038384	50	519	-90	0
JAC180	28	32	4	0.77	296173	7038379	53	519	-90	0
JAC181	12	16	4	0.41	296159	7038400	60	518	-90	0
JAC181	36	44	8	0.57	296159	7038400	60	518	-90	0
JAC181	56	60	4	1.53	296159	7038400	60	518	-90	0
JAC182	36	44	8	2.02	296210	7038467	50	519	-90	0
JAC183	40	53	13	1.38	296218	7038491	53	519	-90	0
JAC184	48	52	4	13.98	296230	7038500	54	519	-90	0
JAC185	36	48	12	0.96	296231	7038475	50	519	-90	0
JAC186	NSR				296270	7038494	37	514	-90	0
JAC187	NSR				296261	7038532	45	518	-90	0
JAC188	4	8	4	0.43	296322	7038552	45	522	-90	0
JAC188	40	44	4	0.44	296322	7038552	45	522	-90	0
JAC189	NSR				297277	7037962	35	513	-60	50
JAC190	NSR				297300	7037900	26	522	-60	50
JAC191	NSR				297369	7037873	27	525	-60	50



## 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 the industry in which it operates. 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 is no guarantee of future performance.

Neither Echo or any of its 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>	<ul style="list-style-type: none"> <li>Recent exploration in at the Julius Gold Deposit has comprised aircore drilling of 28 holes for 1,241 metres.</li> <li>Initially, and relating to this ASX release, 4 metre composite samples were collected from all drilling</li> <li>4 metre composite samples consist of ~2 kilogram samples, collected via spear from the drill spoils.</li> <li>One metre samples were collected for follow up analysis. For the 1m samples approximately 2kg of material collected from each metre by riffle splitting of the sample interval collected via the rig cyclone.</li> <li>Drill hole collar locations were recorded by handheld GPS survey with accuracy +/-2 metres.</li> <li>Analysis was conducted by submitting the 2kg sample whole for preparation by crushing, drying and pulverising at Intertek/Genalysis Laboratories for gold analysis via aqua regia/ICP-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>Aircore drilling with a 4-inch blade bit. Drilling was conducted until blade refusal.</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> </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 was sampled-aircore drilling only.</li> <li>Sample preparation for all samples follows industry best practice and was undertaken by Genalysis/Intertek Laboratories in Perth 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 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>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>
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>All drillholes have been located by handheld GPS with precision of sample locations considered +/-2m.</li> <li>Location grid of plans and cross sections and coordinates in this release use MGA94, Z51 datum.</li> <li>Topographic data was assigned based on a DTM of the Empire district.</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 20 metre (E-W spacing) with hole spacing along each section ranging from 15 metres spacing along each section line.</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 all samples in this release (4 metre composite samples).</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.</li> <li>Interpreted lithologies strike north-north-west. Drilling was approximately orthogonal to this apparent strike and comprised angled l drill holes.</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 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>
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 Empire District is located within the central Yandal Greenstone Belt. The Empire District covers a number of 100% owned granted mining leases held by Echo Resources Ltd. Newmont Yandal Operations has the right to buy back a 60% interest in any gold discovery containing aggregate Inferred Mineral Resources of at least 2 million ounces of gold. A third-party net smelter royalty of 1.5% applies in respect of all minerals produced from the tenement.</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>Exploration in the Empire district has been completed by Asarco, Chevron, Newmont and others. Anomalous RAB, aircore and RC drilling in the area by previous operators have been returned.</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>Highly oxidized/weathered greenstones, sediments and intrusive felsic rocks, with quartz veining with minor sulphides.</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</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>A total of 28 drillholes for 1,241 metres were drilled at Julius on nominal 20 metre centres and focused on the oxide zone.</li> <li>Full Drillhole details for the results from 28 holes are provided in this announcement.</li> <li>Appropriate maps and plans also accompany this</li> </ul>



Criteria	JORC Code explanation	Commentary
	<p><i>sea level in metres) of the drill hole collar</i></p> <ul style="list-style-type: none"> <li>○ <i>dip and azimuth of the hole</i></li> <li>○ <i>down hole length and interception depth</i></li> <li>○ <i>hole length.</i></li> </ul> <ul style="list-style-type: none"> <li>● <i>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.</i></li> </ul>	<p>announcement.</p>
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> <li>● <i>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.</i></li> <li>● <i>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.</i></li> <li>● <i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i></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>● <i>These relationships are particularly important in the reporting of Exploration Results.</i></li> <li>● <i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i></li> <li>● <i>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').</i></li> </ul>	<ul style="list-style-type: none"> <li>● The orientation or geometry of the mineralised zones strikes in a north-northwest direction and dips steeply to the east.</li> <li>● True width is variable and further work to clarify is required.</li> </ul>
<i>Diagrams</i>	<ul style="list-style-type: none"> <li>● <i>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.</i></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>● <i>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.</i></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>● <i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>● Previous work in the district by others has estimated total gold resources within the Empire District to total ~100,00 ounces.</li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li>● <i>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</i></li> <li>● <i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i></li> </ul>	<ul style="list-style-type: none"> <li>● Future RC, diamond and aircore drilling is being considered to further evaluate the significant results returned.</li> <li>● Refer to maps in main body of report for potential target areas.</li> </ul>