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# ASX Announcement

12 September 2016

## COWAL E42 DRILLING UPDATE

Evolution Mining Limited (ASX:EVN) ("Evolution" or the "Company") is pleased to provide an update on its E42 Stage H cutback resource definition drilling program at Cowal. Seven diamond drill rigs are currently undertaking surface drilling from the crest of the south-west wall of the E42 pit. The program continues to return excellent results.

In-fill drilling results have confirmed the continuity of mineralisation within the Stage H cutback design. Step-out drill holes have intersected new zones of mineralisation which extend the limits of mineralisation to the south west of E42.

The drill results have intersected broad zones of mineralisation with consistent grades. The occurrence of high-grade intercepts indicates the potential for an increase in the grade of the current mineral resource estimate. Mineralisation remains open down plunge.

New high-grade results include<sup>1</sup>:

- 26m grading 1.47g/t Au from 648m (E42DD1711A)
- 18m grading 3.67g/t Au from 599m (E42DD1711B)
- 62m grading 2.16g/t Au from 530m (E42DD1711D)
- 41m grading 6.46g/t Au from 583m (E42DD1712)
- 64m grading 1.51g/t Au from 631m (E42DD1712)
- 110m grading 1.43g/t Au from 704m (E42DD1712A)
- 14m grading 8.09g/t Au from 610m (E42DD1713)
- 40m grading 2.76g/t Au from 485m (E42DD1714)

Approximately 75% of the resource definition drilling for the Stage H cutback has been completed with 33% of the assay results returned to date. The drill program is scheduled to be completed by the end of October.

As at 31 December 2015 Cowal's Ore Reserves were estimated at 99.4 million tonnes grading 0.89g/t gold for 2.85 million ounces<sup>2</sup>. The resource model will be updated to incorporate the results of the current E42 drill program early in 2017.

Commenting on the results, Evolution's Executive Chairman Jake Klein said:

*"We are becoming increasingly excited about the results this drill program is returning. The scale of this mineralised system is clearly impressive. This drilling further confirms Cowal's position as a long-life, low cost, cornerstone asset within Evolution's portfolio with the potential to underpin our business for the next 15 years and beyond."*

Further information on all reported exploration results included in this release is provided in the Drill Hole Information Summary and JORC Code 2012 Table 1 in Appendix 1 and 2 of this release.

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1. Reported intervals are downhole widths as true widths are not currently known  
2. This information is extracted from the report entitled "Annual Mineral Resources and Ore Reserves Statement" released to ASX on 21 April 2016 and available to view at [www.asx.com.au](http://www.asx.com.au). See Appendix 3 of this release for further details

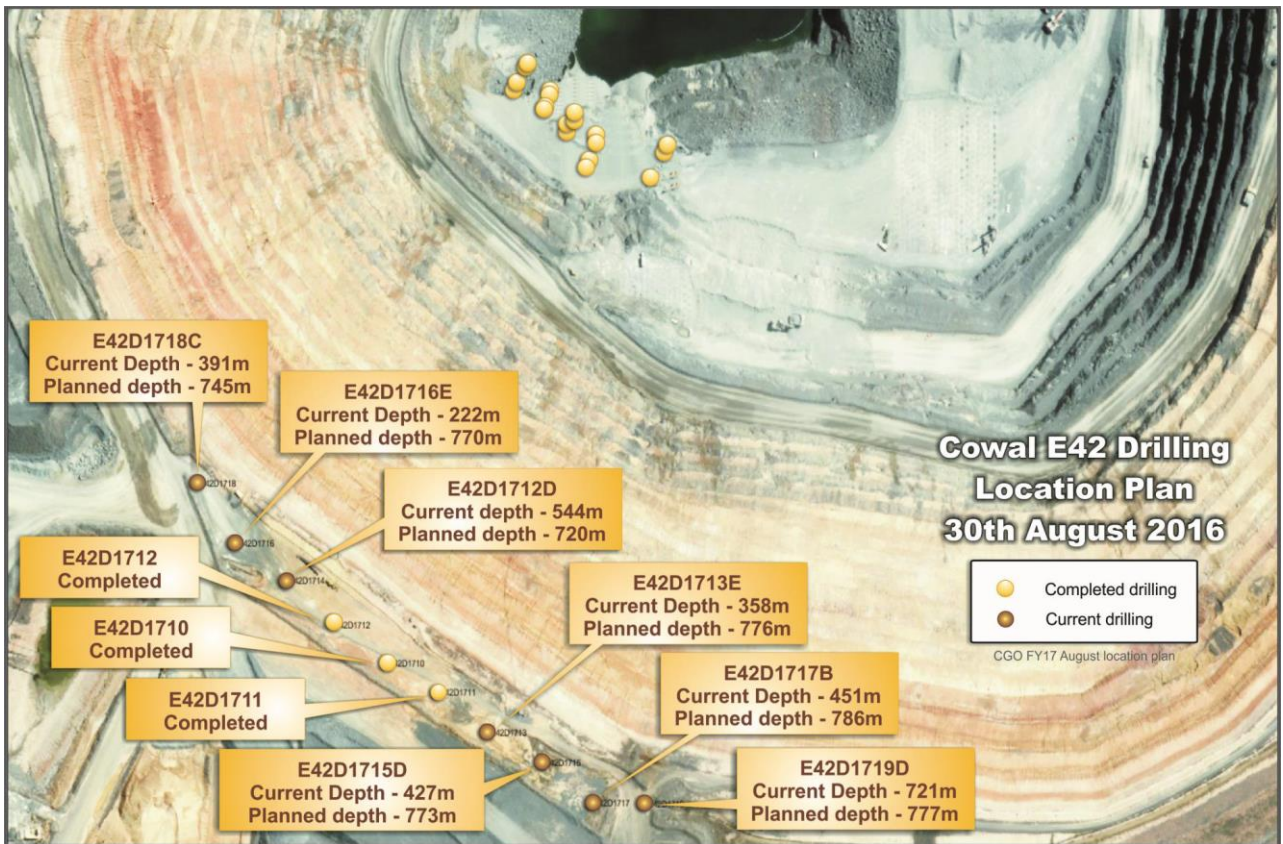


Figure 1: Cowal E42 drill hole location plan

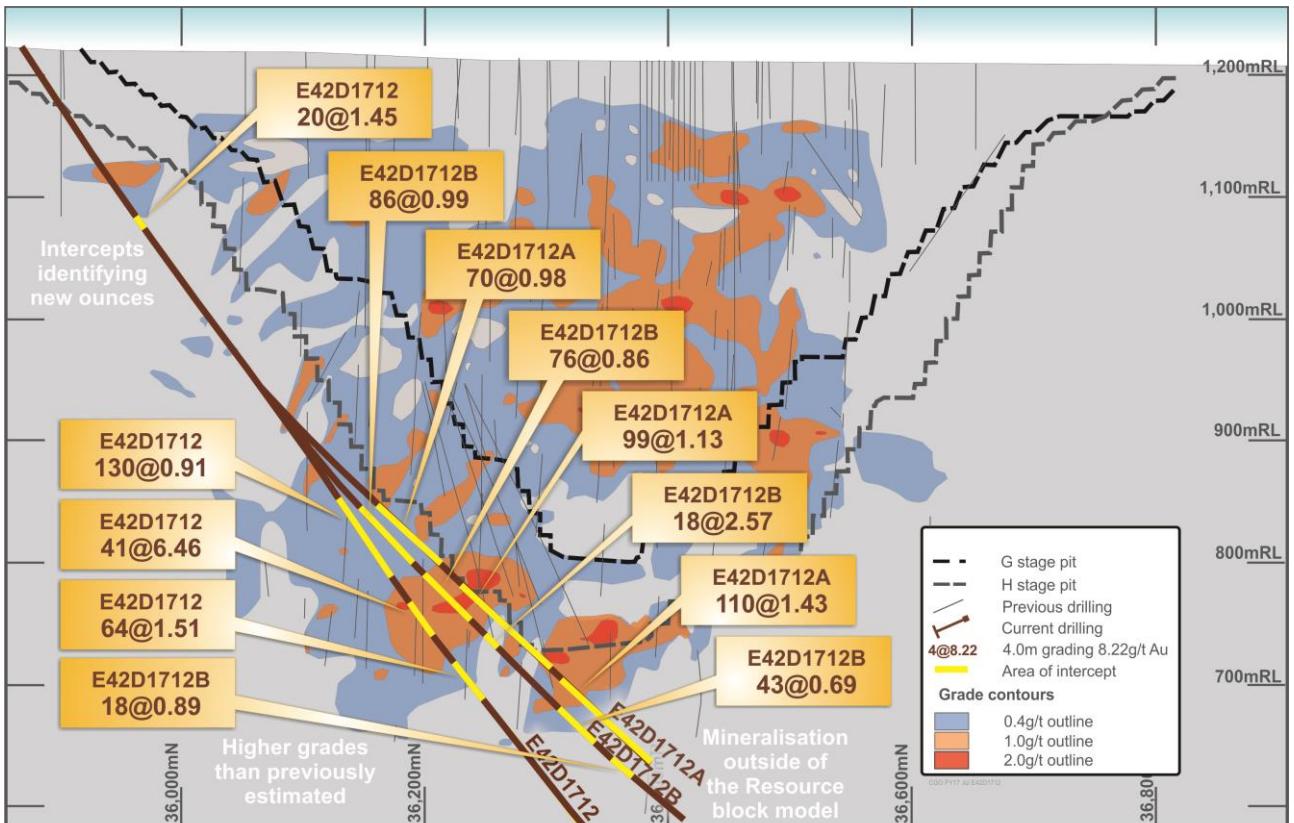


Figure 2: Schematic section of E42D1712 showing model contours and areas of mineralisation intersected outside the model



## **About Evolution Mining**

Evolution Mining is a leading, growth-focussed Australian gold miner. Following the sale of Pajingo, Evolution will operate six wholly-owned mines – Cowal in New South Wales; Mt Carlton, Mt Rawdon, and Cracow, in Queensland; and Mungari and Edna May in Western Australia. On 24 August 2016, Evolution announced that it was acquiring an economic interest in the Ernest Henry copper-gold operations in Queensland.

In FY16 Evolution produced 803,476 ounces of gold at an AISC of A\$1,014 per ounce generating a net mine cash flow of A\$428.2 million.

Following completion of the Pajingo sale and assuming completion of the acquisition of an economic interest in Ernest Henry, Evolution has revised FY17 Group gold production guidance to 800,000 – 860,000 ounces at an AISC of A\$900 – A\$960 per ounce.

## **Competent Person Statement**

The information in this report that relates to Cowal Exploration Results is based on work compiled by Joseph Booth who is employed on a full-time basis by Evolution Mining Limited and is a member of the Australasian Institute of Mining and Metallurgy. Mr Booth has sufficient experience which is relevant to the style of mineralisation and types of deposits under consideration and to the activity which he has undertaken to qualify as a Competent Person as defined in the JORC Code 2012. Mr Booth consents to the inclusion in this report of the matters based on his information in the form and context in which it appears including sampling, analytical and test data underlying the results.

## Appendix 1 – Drill Hole Information Summary

Hole	Hole Type	Northing MGA (m)	Easting MGA (m)	RL AHD (m)	Hole Depth (m)	Dip MGA	Azi MGA	From (m)	Interval <sup>1</sup> (m)	Au (g/t)
E42D1710D	DDH	6277642.6	537462.09	56.70	727.19	-37	26.5	291	7	0.83
								339	6	0.74
								350	9	1.10
								573	7	1.08
								607	9	2.44
								620	13	0.47
								650	6	1.86
								679	5	0.70
								702	13	1.48
								E42D1711A	DDH	6277773.7
558	5	1.46								
566	4	1.06								
578	31	1.02								
636	7	1.36								
648	26	1.47								
701	7	0.96								
E42D1711B	DDH	6277719.8	537562	-109.71	843.47	-45	26	411	7	0.68
								456	4	0.57
								540	21	1.04
								575	16	0.78
								599	18	3.67
								667	6	1.68
								699	8	0.72
E42D1711D	DDH	6277643.6	537518.59	-2.88	612.86	-49.5	31	745	9	2.06
								350	80	0.70
								437	18	1.11
								478	13	1.23
								514	4	0.40
								530	62	2.16
E42D1711E	DDH	6277672.5	537535.01	-38.58	825.15	-39	23	601	11.9	1.82
								366	18	1.11
								390	13	0.57
								409	24	0.69
								490	11	0.45
								517	74	1.12
								601	5	2.05
								612	47	1.07
E42D1712	DDH	6277548.6	537359.15	212.74	840.7	-54	25	668	48	1.46
								729	19	3.68
								755	5	1.00
								768	30	1.66
								98	5	0.43
								179	20	1.45
								212	9	0.65

Hole	Hole Type	Northing MGA (m)	Easting MGA (m)	RL AHD (m)	Hole Depth (m)	Dip MGA	Azi MGA	From (m)	Interval <sup>1</sup> (m)	Au (g/t)
								295	5	0.85
								363	8	1.06
								400	5	0.55
								442	130	0.91
								583	41	6.46
								631	64	1.51
								721	9	0.61
								739	53	0.57
E42D1712A	DDH	6277748.2	537469.29	-68.5	852.46	-43	27	469	6	0.77
								486	70	0.98
								581	99	1.13
								690	4	0.77
								704	110	1.43
E42D1712B	DDH	6277741.5	537465.55	-60.60	896.71	-46	30	363	8	0.98
								473	86	0.99
								566	76	0.86
								648	18	2.57
								672	8	0.40
								706	8	0.53
								721	23	0.83
								750	8	0.94
								767	43	0.69
								829	18	0.89
								870	5	0.62
E42D1713	DDH	6277472.9	537489.74	212.08	820.59	-55	25	305	6	2.79
								358	9	2.08
								374	6	0.53
								416	9	0.72
								445	14	1.54
								471	5	1.38
								512	9	0.89
								560	4	1.49
								578	4	1.57
								593	4	0.54
								607	6	1.20
								645	6	1.63
								716	24	2.68
								751	5	2.12
								778	20	0.67
								549	14	0.89
								577	5	7.63
								610	14	8.09
								632	6	1.83
								669	23	0.99
								726	4	0.43
								738	9	0.52
								754	5	0.47
								790	16	0.74
E42D1714	DDH	6277580.4	537321.2	212.8	707.3	-55	25	246	8	0.57
								273	9	0.68
								296	3	0.41
								363	26	0.43
								432	16	0.81
								464	4	2.96
								485	40	2.76
								551	5	0.53

Hole	Hole Type	Northing MGA (m)	Easting MGA (m)	RL AHD (m)	Hole Depth (m)	Dip MGA	Azi MGA	From (m)	Interval <sup>1</sup> (m)	Au (g/t)
								578	26	1.77
								611	3	0.85
E42D1715	DDH	6277447	537533.05	212.22	846.48	-55	24	106	3	0.60
								137	6	1.55
								275	4	0.45
								324	7	4.22
								402	12	1.11
								423	20	0.57
								489	10	1.98
								505	3	0.94
								522	10	0.96
								540	11	0.67
								592	27	1.63
								636	19	0.47
								683	5	0.44
								722	20	3.33
								760	11	1.29
								779	9	1.81
E42D1716	DDH	6277610.2	537281.6	213.183	678.5	-55	24	348	24	2.35
								403	119	0.73
								532	4	1.86
								545	9	0.46
								560	29	0.65
								601	23	1.09
								637	14	0.44
E42D1716A	DDH	6277879.7	537406.41	-171.363	763.94	-46	29	489	9	2.31
								521	11	0.41
								541	8	0.69
								555	30	0.71
								591	48	0.97
								647	6	0.62
								755	8.9	0.63

1. Reported intervals are downhole widths as true widths are not currently known.

## Appendix 2 – JORC Code 2012 Assessment and Reporting Criteria

### Section 1: Sampling Techniques and Data

Criteria	Commentary
<i>Sampling techniques</i>	<p>Reported holes consist of directional diamond core drilling. Diamond drill holes were positioned strategically to provide even spaced coverage, infill gaps in the existing drill data set and test extensions of known lodes/mineralised structures. Collar and down hole surveys were utilised to accurately record final locations. Industry standard sampling, assaying and QA/QC practices were applied to all holes.</p> <p>HQ drill core was halved with a diamond saw in 1 m intervals, irrespective of geological contacts. Oxide material that was too soft and friable to be cut with a diamond saw was split with a chisel. Core was cut to preserve the bottom of hole orientation mark and the top half of core sent for analysis to ensure no bias is introduced. NQ drill core was whole core sampled. Sample preparation was conducted by SGS West Wyalong and consisted of: Drying in the oven at 105°C; crushing in a jaw crusher; fine crushing in a Boyd crusher to 2-3mm; rotary splitting a 3kg assay sub-sample if the sample is too large for the LM5 mill; pulverising in the LM5 mill to nominal; 90% passing 75 µm; and a 50g fire assay charge was taken with an atomic absorption (AA) finish. The detection limit was 0.01 g/t Au.</p>
<i>Drilling techniques</i>	<p>Parent holes were drilled to full depth with HQ. Daughter holes were drilled NQ. Core has been oriented using Act RD2 Reflex orientation tool.</p>
<i>Drill sample recovery</i>	<p>Provisions are made in the drilling contract to ensure that hole deviation is minimised and core sample recovery is maximised. This is monitored by a geologist on a hole by hole basis. Core recovery is recorded in the database. There are no significant core loss or sample recovery issues. Core is reoriented and marked up at 1m intervals. Measurements of recovered core are made and reconciled to the driller's depth blocks, and if necessary, to the driller's rod counts. There is no apparent relationship between core-loss and grade.</p>
<i>Sub-sampling techniques and sample preparation</i>	<p>HQ diamond core is cut with a diamond saw or chisel. Core is cut to preserve the bottom of hole orientation mark and the top half of core is always sent for analysis to ensure no bias is introduced. NQ Core is whole core sampled. In 2003 Analytical Solutions Ltd conducted a Review of Sample Preparation, Assay and Quality Control Procedures for Cowal Gold Project. This study, combined with respective operating company policy and standards (North Ltd, Homestake, Barrick and Evolution) formed the framework for the sampling, assaying and QA/QC protocols used at Cowal to ensure appropriate and representative sampling. Results per interval are reviewed for half core samples and if unexpected or anomalous assays are returned an additional quarter core may be submitted for assay.</p>
<i>Quality of assay data and laboratory tests</i>	<p>SGS West Wyalong acts as the Primary Laboratory and ALS Orange conducts independent Umpire checks. Both labs operate to international standards and procedures and take part in the Geostatistical Round Robin inter-laboratory test survey. The Cowal QA/QC program comprises blanks, Certified Reference Material (CRM), inter-laboratory duplicate checks, and grind checks. 1 in 30 fine crush residue samples has an assay duplicate. 1 in 20 pulp residue samples has an assay duplicate. Wet screen grind checks are performed on 1 in 20 pulp residue samples. A blank is submitted 1 in every 38 samples, CRM's are submitted 1 in every 20 samples. The frequency of repeat assays is set at 1 in 30 samples. All sample numbers, including standards and duplicates, are pre-assigned by a QA/QC Administrator and given to the sampler on a sample sheet. The QA/QC Administrator monitors the assay results for non-compliance and requests action when necessary. Batches with CRM's that are outside the <math>\pm 2SD</math> acceptance criteria are re-assayed until acceptable results are returned. Material used for blanks is uncertified, sourced locally, comprising fine river gravel which has been determined to be below detection limit. A single blank is submitted every 38 samples. Results are reviewed by the QA/QC Administrator upon receipt for non-compliances. Any assay value greater than 0.1 g/t Au will result in a notice to the laboratory. Blank assays above 0.20 g/t Au result in re-assay of the entire batch. The duplicate assays (Au2) are taken by the laboratory during the subsampling at the crushing and pulverisation stages. The results were analysed using scatter plots and relative percentage difference (RPD) plots. Repeat assays represent approx. 10% of total samples assayed. Typically there is a large variance at the lower grades which is common for low grade gold deposits, however, the variance decreases to less than 10% for grades above 0.40 g/t Au, which is the cut-off grade used at Cowal.</p> <p>Approximately 5% of the pulps, representing a range of expected grades, are submitted to an umpire assay laboratory (ALS Orange) to check for repeatability and precision. Analysis of the data shows that the Principal Laboratory is performing to an acceptable level.</p>
<i>Verification of sampling and assaying</i>	<p>No dedicated twinning drilling has been conducted for this drill program. Cowal uses DataShed software system to maintain the database. Digital assay results are loaded directly into the database. The software performs verification checks including checking for missing sample numbers, matching sample numbers, changes in sampling codes, inconsistent "from-to" entries, and missing fields. Results are not entered into the database until the QA/QC Administrator approves of the results. A QA/QC report is completed for each drill hole and filed with the log, assay sheet, and other appropriate data. Only the Senior Project Geologist and Database Manager have administrator rights to the database. Others can use and sort the database but not save or delete data.</p>

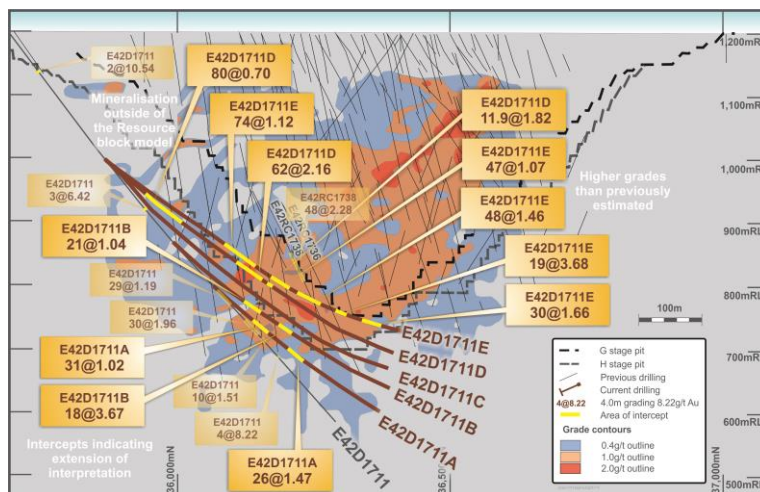
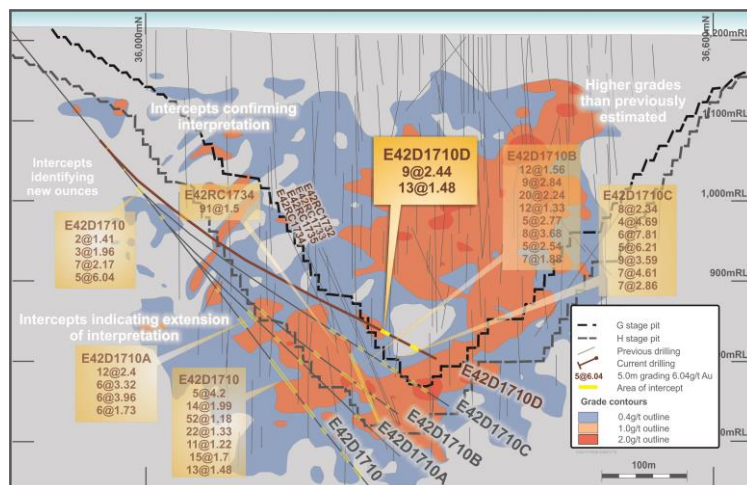
Criteria	Commentary
<i>Location of data points</i>	All drill hole collars were surveyed using high definition DGPS. All drill holes were surveyed using a downhole survey camera. The first survey reading was approximately 18m from surface, then at 30m intervals and, finally, at the end of each hole. To ensure correct steering of directional holes gyro surveys are run routinely at 100m intervals, as well as following all wedging/navigational cuts and on completion of each drill hole. The Gyro tool was referenced to the accurate surface surveyed position of each hole collar. Gyro survey readings were taken at 10m intervals on the way down to the base of each hole ("in run") and at 10m intervals back to surface ("out run"). The results of these two surveys were then compared and a final survey produced if there was "closure" between surveys. The Gyro results were entered into the drill hole database without conversion or smoothing. An aerial survey was flown during 2003 by AAM Hatch. This digital data has been combined with surveyed drill hole collar positions and other features (tracks, lake shoreline) to create a digital terrain model (DTM). The survey was last updated in late 2014. In 2004, Cowal implemented a new mine grid system with the assistance of AAM Hatch. The current mine grid system covers all areas within the ML and ELs at Cowal with six digits.
<i>Data spacing and distribution</i>	The program from which this hole is a part of consists of 10 Parent holes with an average of 5 daughter holes each. Parent holes are spaced at 50m intervals, with daughter holes designed to achieve a 50m spacing at the target zone. All drilling is sampled at 1m intervals down hole.
<i>Orientation of data in relation to geological structure</i>	Parent holes were drilled at nominally 55 degrees dip and daughter holes flatten as they progress. Parent holes were designed to optimise intersection angles, and nominally intersect perpendicular to mineralisation. There is no apparent bias in terms of the drill orientation that has been noted to date.
<i>Sample security</i>	Drill contractors are issued with drill instructions by an Evolution geologist. The sheet provides drill hole names, details, sample requirements, and depths for each drill hole. Drill hole sample bags are pre-numbered. The drill holes are sampled by Evolution personnel who prepare sample submission sheets. The submission sheet is then emailed to the laboratory with a unique submission number assigned. This then allows individual drill holes to be tracked. An SGS West Wyalong (SGS) representative collects the samples from site twice daily, however, if samples are being sent to ALS Orange, PJ & NA Freighters are used to collect the samples from site and deliver them to the laboratory. Upon arrival, the laboratory sorts each crate and compares the received samples with the supplied submission sheet. The laboratory assigns a unique batch number and dispatches a reconciliation sheet for each submission via email. The reconciliation sheet is checked and any issues addressed. The new batch name and dispatch information is entered into the tracking sheet. The laboratory processes each batch separately and tracks all samples through the laboratory utilising the LIMS system. Upon completion, the laboratory emails Standard Industry Format (SIF) files with the results for each batch to Evolution personnel. The assay batch files are checked against the tracking spreadsheet and processed. The drill plan is marked off showing completed drill holes. Any sample or QA/QC issues with the results are tracked and resolved with the laboratory.
<i>Audits or reviews</i>	QA/QC Audits of the Primary SGS West Wyalong Laboratory are carried out on an approximately quarterly basis and for the Umpire ASL Orange Laboratory approximately on a six monthly basis. Any issues are noted and agreed remedial actions assigned and dated for completion. Numerous internal audits of the database and systems have been undertaken by site geologists and company technical groups from North Ltd, Homestake and Barrick and Evolution. External audits were conducted in 2003 by RMI and QCS Ltd. and in 2011 and 2014 review and validation was conducted by RPA. Minor validation errors associated with the migration of historic databases to Datashed were identified and remediated. Recent audits have found no significant issues with data management systems or data quality.

## Section 2: Reporting of Exploration Results

Criteria	Commentary
<i>Mineral tenement and land tenure status</i>	The Cowal Mine is located on the western side of Lake Cowal in central New South Wales, approximately 38 km north of West Wyalong and 350 km west of Sydney. Drilling documented in this report was undertaken on ML1535 This Leases are wholly owned by Evolution Mining Ltd. and CGO has all required operational, environmental and heritage permits and approvals for the work conducted on the Lease. There are not any other known significant factors or risks that may affect access, title, or the right or ability to perform further work programs on the Lease.
<i>Exploration done by other parties</i>	The Cowal region has been subject to various exploration and drilling programs by GeoPeko, North Ltd., Rio Tinto Ltd., Homestake and Barrick.
<i>Geology</i>	The Cowal gold deposits (E41, E42, E46, Galway and Regal) occur within the 40 km long by 15 km wide Ordovician Lake Cowal Volcanic Complex, east of the Gilmore Fault Zone within the eastern portion of the Lachlan Fold Belt. The gold deposits at Cowal are structurally hosted, epithermal to mesothermal gold deposits occurring within and marginal to a 230 m thick dioritic to gabbroic sill intruding trachy-andesitic volcanoclastic rocks and lavas. The overall structure of the gold deposits is complex but in general consists of a faulted antiform that plunges shallowly to the north-northeast. The deposits are aligned along a north-south orientated corridor with bounding faults, the Booberoi Fault on the western side and the Reflector Fault on the eastern side (the Gold Corridor).
<i>Drill hole Information</i>	See Drill Hole Information Summary table provided in previous slides



Criteria	Commentary
Data aggregation methods	Significant intercepts have been calculated based on a minimum interval length of 3m, max internal waste of 5m and a minimum grade of 0.4g/t Au.
Relationship between mineralisation widths and intercept lengths	Drilling has been oriented to intercept perpendicular to mineralisation and as such results reported as nominally true widths
Diagrams	Schematic sections of E52D1710 and E52D1711 showing model contours and areas of mineralisation intersected outside the model are provided below and further diagrams are provided in the body of the document.



Balanced reporting	Significant intercepts reported are a sub-set of the entire data. Only those areas where significant mineralisation was previously unknown, poorly defined, or of low confidence have been selected for this report. Results in this report are from seven parent holes (E42D1711, E42D1712, E42D1713, E42D1714, E42D1715, E42D1716) and 9 subsequent daughter holes (E42D1710D, E42D1711A, E42D1711B, E42D1711D, E42D1711E, E42D1712A, E42D1712B, E42D1713E, E42D1716A). The remaining daughter holes are awaiting assay results at the time of reporting.
Other substantive exploration data	No other substantive data was collected during the report period.
Further work	This drilling is currently in progress and further work will be determined following review of the completed program.

## Appendix 3 – Evolution Ore Reserves December 2015

Gold			Proved			Probable			Total Reserve			Competent Person
Project	Type	Cut-Off	Tonnes (Mt)	Gold Grade (g/t)	Gold Metal (koz)	Tonnes (Mt)	Gold Grade (g/t)	Gold Metal (koz)	Tonnes (Mt)	Gold Grade (g/t)	Gold Metal (koz)	
Cowal <sup>1</sup>	Open pit	0.40	39.93	0.71	906	59.47	1.02	1,941	99.40	0.89	2,848	1
Cracow <sup>1</sup>	Underground	3.50	0.50	6.11	98	0.56	5.12	92	1.06	5.59	190	2
Pajingo <sup>1</sup>	Underground	3.30	0.17	6.82	37	0.39	5.60	70	0.55	5.97	107	2
Edna May <sup>1</sup>	Open pit	0.50	-	-	-	8.32	1.00	269	8.32	1.00	269	3
Edna May <sup>1</sup>	Underground	2.50	-	-	-	1.34	4.69	202	1.34	4.69	202	2
Edna May <sup>1</sup>	Total		-	-	-	9.66	1.51	471	9.66	1.51	471	
Mt Carlton <sup>1</sup>	Open pit	0.80	-	-	-	4.62	4.78	709	4.62	4.78	709	4
Mt Rawdon <sup>1</sup>	Open pit	0.30	0.51	0.53	9	33.92	0.78	855	34.43	0.78	864	5
Mungari <sup>1</sup>	Underground	2.90	1.42	5.57	254	0.57	5.60	103	1.99	5.58	357	
Mungari <sup>1</sup>	Open pit	0.70	0.65	1.00	21	5.28	1.69	288	5.93	1.62	309	
Mungari <sup>1</sup>	Total		2.07	4.13	275	5.85	2.07	390	7.92	2.610	665	6
<b>Total</b>			<b>43.18</b>	<b>0.95</b>	<b>1,325</b>	<b>114.47</b>	<b>1.23</b>	<b>4,528</b>	<b>157.64</b>	<b>1.15</b>	<b>5,853</b>	

Full details Of Evolution's Mineral Resources and Ore Reserves are provided in the report entitled "Annual Mineral Resources and Ore Reserve Statement 2015" released to ASX on 21 April 2016 which is available to view at [www.evolutionmining.com.au](http://www.evolutionmining.com.au)

Data is reported to significant figures to reflect appropriate precision and may not sum precisely due to rounding

<sup>1</sup>Includes stockpiles

Due to depletion of A39 at Mt Carlton and lower grade Ag, Cu for remaining resource at Mt Carlton, the 2014 Mineral Resources and Ore Reserves statement has been reported in gold ounces

The Cowal mine was acquired on 24 July 2015 and the Mungari assets on 24 August 2015

The Company confirms that it is not aware of any new information or data that materially affects the information included in the Report and that all material assumptions and technical parameters underpinning the estimates in the Report continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Persons' findings are presented have not been materially modified from the Report

Group Ore Reserve Competent Person Notes refer to: 1. Jason Floyd; 2. Ian Patterson; 3. Guy Davies; 4. Tony Wallace; 5. Ross McLellan; 6. Matt Varvari