

14 December 2017 ASX Announcement ASX Code: EAR

# Golden Snag and Julius North drilling cap a successful 2017 exploration program for Echo

# **HIGHLIGHTS**

### **Golden Snag Discovery Drilling**

- Discovery drilling at the greenfields Golden Snag structural target delivers significant intersections over 250 metres of strike, including:
  - o 6 metres @ 7.55 g/t Au from 38 metres (GSAC033, incl. 1m @ 18.37g/t, 1m @ 24.46g/t)
  - o 3 metres @ 5.62 g/t Au from 45 metres (GSAC013, incl. 1m @ 15.92g/t)
  - 1 metre @ 21.79 g/t Au from 63 metres (GSAC005)

## **Julius North Reconnaissance Drilling**

- Reconnaissance aircore drilling was focused 500 metres north of the proposed pit on following up previously identified mineralisation, with a number of promising intersections including:
  - 6 metres @ 4.60 g/t Au from 45 metres (JAC212, incl. 2m @ 13.25g/t)
  - o 6 metres @ 3.40 g/t Au from 51 metres (JAC213, incl. 1m @ 10.46g/t)
- RC drilling will commence January 2018 to test this zone with a specific focus on the untested granite contact in the close vicinity of the latest significant intersections

# Lowlands Infill Fast Tracked following receipt of 1m Composites

- 1 metre results from Lowlands have returned excellent results including:
  - o 16 metres @ 2.04 g/t Au from 22 metres (LLAC010, incl 1m @ 9.97g/t)
  - 8 metres @ 3.51 g/t Au from 30 metres (LLAC007, incl. 1m @ 11.46g/t)
  - o 6 metres @ 4.58 g/t Au from 16 metres (LLAC014, incl. 1m @ 13.84g/t)
  - o 6 metres @ 3.38 g/t Au from 38 metres (LLAC006, incl. 2m @ 7.11g/t)
- Follow-up RC drilling planned for early 2018 to test the extent of the Lowlands gold system.

Echo Resources Limited (ASX: EAR) ('Echo' or 'the Company') is pleased to advise it has rounded out its 2017 Yandal Gold Project exploration program with a further series of positive results as it continues to work towards a potential re-development of the Bronzewing Processing Hub.

Results have been returned from discovery drilling at Golden Snag, reconnaissance drilling at Julius North and detailed 1 metre assays from Lowlands.

The Company is now planning the 2018 field season to build on the success of 2017 where Echo's global Yandal resource base increased to 1.7 million ounces. The Company also delivered an ore reserve of 15.6Mt @ 1.7 g/t Au reserve containing 856,000 ounces for an 8.5-year mine life, which is forming the basis of a Bankable Feasibility Study due for completion early 2018.



Echo's Chief Executive Officer, Simon Coxhell, commented: "The exploration team deserves recognition for what has been a stellar year and we are full of confidence going into 2018. These additional exploration results continue to highlight the prospectivity of our tenement holding in the Yandal greenstone belt, and support our strategy and belief that there is plenty of exploration upside in the region. Our priorities for 2018 are the completion of the Bankable Feasibility Study so we have a pathway to production and continue to expand our resource and reserve base with quality ounces."

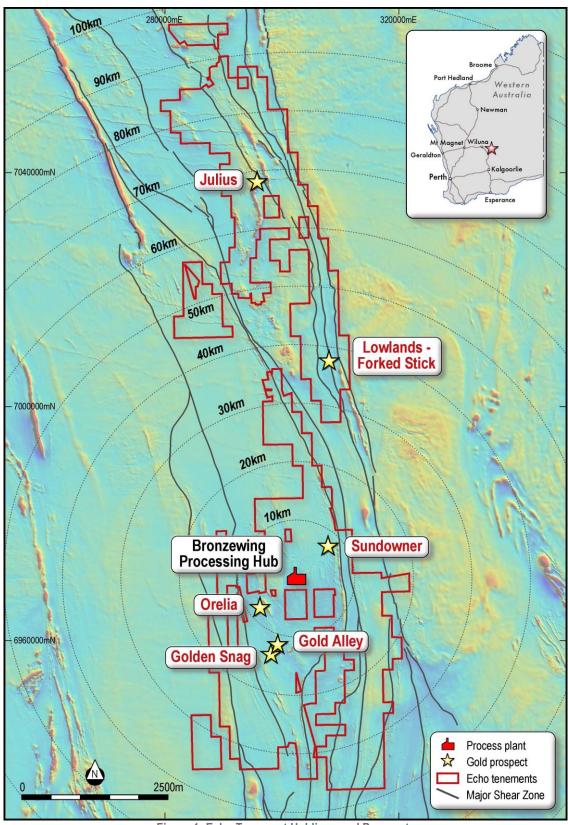


Figure 1: Echo Tenement Holdings and Prospects



# Golden Snag Gold Prospect

The Golden Snag prospect is located 12 kilometres southwest of the Bronzewing processing hub (Figure 1) and was identified through geophysical interpretation and ground reconnaissance. Golden Snag sits along strike from the +1Moz Orelia Deposit, on the dilatant margin of an internal granitoid.

Drilling at the prospect has returned high grade intersections, such as 6 metres @ 7.55 g/t Au from 38 metres, over a strike length of 400 metres within a structural corridor over 300 metres in width.

Auger geochemistry over the area highlighted a strong soil anomaly over which the AC drilling was conducted. 33 AC holes for 1831m were drilled and identified a series of narrow, high-grade veins within a NE-trending structural corridor extending over 250 metres. The best intersections (6m @ 7.55g/t inc. 1m @ 24.46 g/t and 1m @ 18.37 g/t) are located where the NE-trending structure offsets the granite contact, forming a dilatant structural zone. This structure can be traced in the magnetics and its intersection with favourable lithological units and other structures are considered excellent exploration targets. Results from drilling, suggest deeper RC drilling and extensional AC drilling is required to test the vertical and lateral continuity of the newly discovered high-grade veins.

Golden Snag forms part of Echo's strategy to test a number of conceptual targets in the pursuit of the next undiscovered gold deposit in the Yandal Belt.

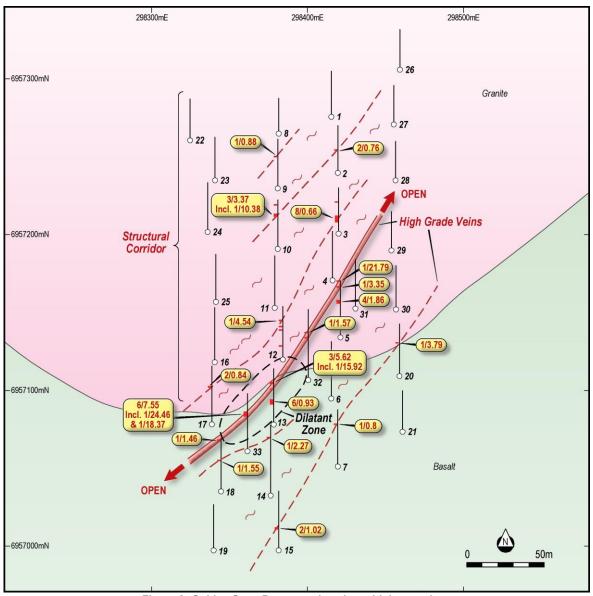


Figure 2: Golden Snag Prospect plan view with key geology



# Julius North Reconnaissance Drilling

A number of aircore holes were completed at the Julius North Gold Prospect, with the overall aim of the drill program to allow the Company to better identify the interpreted granite-greenstone contact which is host to the 335,000-ounce Julius Gold Deposit located 600 metres south. This area of untested contact appears to be the nose of the Julius Granodiorite an interpreted zone of significant dilation located on the contact between the greenstone and granite contact.

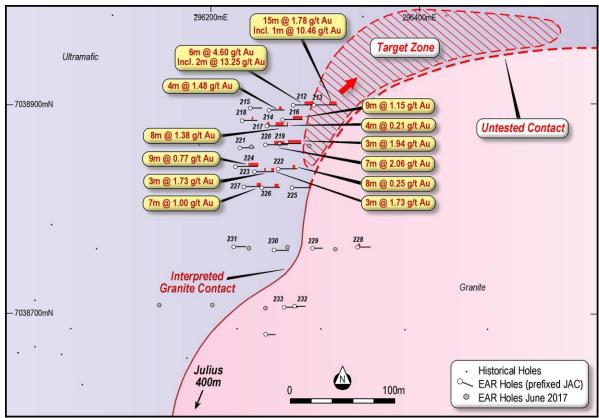


Figure 3: Julius Plan View with target zone

These results indicate the potential for this area to host a similar supergene style of mineralisation that has been observed at other deposits in the Empire District, most notably the Julius Gold Deposit. Although these results are only preliminary we are excited by the potential of the area and an RC drilling program is planned for early 2018 to test the target zone.

## Lowlands Gold Project (70% Echo)

The Company recently received the results from 1 metre assays which reconfirm the results released to ASX on 8 November 2017.

### Key 1 metre intersections include:

- 6 metres @ 3.38 g/t Au from 38 metres (LLAC006, incl. 2m @ 7.11g/t)
- o 8 metres @ 3.51 g/t Au from 30 metres (LLAC007, incl. 1m @ 11.46g/t)
- 16 metres @ 2.04 g/t Au from 22 metres (LLAC010, incl 1m @ 9.97g/t)
- o 6 metres @ 4.58 g/t Au from 16 metres (LLAC014, incl. 1m @ 13.84g/t)

These results highlight the potential to delineate additional Resources and Reserves in the near future which are likely to add to the Echo mine plan. Our mid-term focus is to define additional oxide ore to ultimately be blended with ore from Orelia.



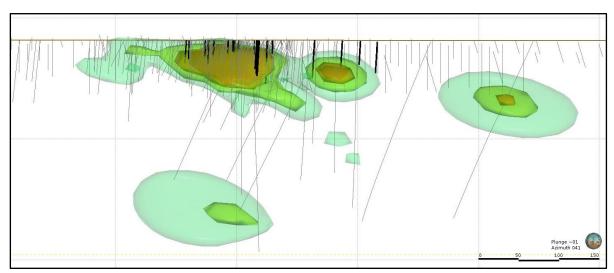


Figure 4: Lowlands Gold Project Leapfrog Long-Section

An RC drilling program is planned for early 2018 to drill out the Lowlands deposit and test for further extensions to known mineralisation.



## **ABOUT ECHO**

#### The Yandal Strategy

Echo's vision is to build a sufficient Resource and reserve base to support a transition into production via the Bronzewing Processing Hub whilst also using cutting edge geophysical and geochemical datasets to identify and test genuine greenfields targets in the search for the next undiscovered gold deposit to build on the current resource and reserve base.

Echo controls the central Yandal greenstone belt through 100% ownership of 1,600km² of highly prospective tenement holdings as well as the 2.0Mtpa Bronzewing Processing Hub and an Ore Reserve base of 856,000 ounces of gold.

The Company has embarked on exploration in two distinct districts, both within trucking distance of Bronzewing. The Company has adopted a three-pronged approach by expanding existing high-grade Resources, following up recent and historical success and using modern tools and smart geology to uncover new significant gold discoveries. Echo is in an enviable position whereby it has a strong project pipeline ranging from prospective greenfields projects, numerous untested geochemical gold targets plus advanced Resources such as Orelia and Julius which have been converted to quality reserves and have additional exploration upside.

## The Bronzewing District

The Bronzewing district is an area within a 40km radius of Bronzewing and contains the Orelia gold deposit as well as a number of other highly prospective targets. Recent work has delivered positive results from depth extension work beneath the existing Orelia open pit as well as the potential that Orelia and the nearby Calista and Cumberland gold zones are developing into a large mineralised gold system. The latest Orelia Reserve estimate of 14.1Mt at 1.7g/t Au for 753,000 ounces supports this concept and operating scenario.

The Orelia system has the potential to extend to great depths in the same way the nearby Lotus gold deposit was historically mined to a depth of 500 vertical metres (and is still open at depth) and produced 387,000 ounces from 2.2Mt at 5.5g/t Au<sup>1</sup>.

Recent auger geochemical sampling at key areas in the Bronzewing district have also revealed a number of strong gold-in-soil anomalies that require follow-up testing.

## The Empire District

The Empire District covers an area 40-80km north of the Bronzewing Processing Hub and contains the Julius gold deposit, which will provide a key plank in any production re-start following a positive Bankable Feasibility Study result in January 2017. Results from recent aircore drilling at Julius have delivered highly encouraging results located to the north that may enable an expansion of the Julius open pit which currently hosts a Resource of 335,000 ounces (5.2Mt @ 2.0g/t Au) and Ore Reserve of 103,000 ounces (1.5Mt @ 2.1g/t Au)<sup>2</sup>.

In addition, results from work at the nearby Lowlands, Wimbledon and Shady Well Prospects have highlighted the potential for new open pit operations. At the Tipperary gold prospect, located between Wimbledon and Julius, drilling has highlighted a large low-grade gold system and coupled to historical drilling have outlined gold mineralisation over 300 metres of strike length.

An active exploration program will continue to explore for new gold deposits and evaluate known gold systems with the aim of adding to the current gold Resources and ultimately economic Reserves.

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<sup>&</sup>lt;sup>1</sup> Refer to MKO Announcement dated 1 September 2016

<sup>&</sup>lt;sup>2</sup> Refer to Appendix 1



# **Appendix 1: Mineral Resource & Ore Reserve Estimates**

#### Echo Mineral Resource Estimates<sup>7</sup>

(Ownership, Cut-off)		Measure	d		Indicate	ed		Inferred			Total	
	Tonnes	Grade	Ounces	Tonnes	Grade	Ounces	Tonnes	Grade	Ounces	Tonnes	Grade	Ounces
	(Mt)	(g/t Au)	(Au)	(Mt)	(g/t Au)	(Au)	(Mt)	(g/t Au)	(Au)	(Mt)	(g/t Au)	(Au)
Julius <sup>4 (100%, 0.8)</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
Regional <sup>5 (100%, 0.5)</sup>							2.8	1.5	134,925	2.8	1.5	134,925
Corboys <sup>3 (100%, 1.0)</sup>				1.7	1.8	96,992	0.5	1.8	28,739	2.2	1.8	125,731
Orelia <sup>4 (100%, 1.0)</sup>				14.1	2.2	980,000	1.8	1.7	100,000	15.9	2.1	1,080,000
Woorana North <sup>2 (100%, 0.5)</sup>				0.3	1.4	13,811				0.3	1.4	13,811
Woorana South 2 (100%, 0.5)				0.1	1.0	3,129				0.1	1.0	3,129
Fat Lady <sup>1,2 (70%, 0.5)</sup>				0.7	0.9	19,669				0.7	0.9	19,669
Mt Joel 4800N <sup>1,2 (70%, 0.5)</sup>				0.2	1.7	10,643				0.2	1.7	10,643
Total Mineral Resources	1.8	2.1	124,227	18.7	2.0	1,192,033	6.9	1.8	406,655	27.4	2.0	1,722,915

#### Echo Ore Reserves

(Ownership, Cut-off)		Proved			Probable			Total		
	Tonnes	Grade	Ounces	Tonnes	Grade	Ounces	Tonnes	Grade	Ounces	
	(Mt)	(g/t Au)	(Au)	(Mt)	(g/t Au)	(Au)	(Mt)	(g/t Au)	(Au)	
Orelia 6 (100%, 0.6)				14.1	1.7	753,000	14.1	1.7	753,000	
Julius <sup>6 (100%, 0.8)</sup>	1.4	2.2	95,000	0.1	1.8	8,000	1.5	2.1	103,000	
Total Ore Reserves	1.4	2.2	95,000	14.2	1.7	761,000	15.6	1.7	856,000	

#### Notes:

- 1. Resources are adjusted for Echo's 70% ownership interest
- 2. Resources estimated by CoxsRocks (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. Echo 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.
- 3. 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. Echo 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.
- 4. 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 & 7 September 2017. 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, 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.
- 6. Reserve estimated by Mr Stuart Cruickshanks (refer to Competent Persons Statements) in accordance with JORC Code 2012, for full details of the Ore Reserve estimate refer to the Echo Resources Limited announcement to ASX on 27 November 2017. 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 Ore Reserve estimate in the previous announcement continue to apply and have not materially changed.
- 7. Mineral Resources are inclusive of Ore Reserves.



# Appendix 2: Detailed Results Gold Alley Gold Prospect

Hole	From	То	Width	Grade (g/t Au)	Easting	Northing	RL	Total Depth	Dip	Azimuth
GAAC001	57	58	1	1.06	299208	6958660	538	65	-55	90
GAAC002		No Significan	t Intersection		299168	6958661	548	63	-55	90
GAAC003	67	70	3	0.89	299125	6958662	534	75	-55	90
GAAC004	34	35	1	3.74	299092	6958656	532	61	-55	90
GAAC005-6	-6 No Significant Intersection									
GAAC007	32	37	5	1.10	299134	6958577	535	52	-55	90
GAAC008	65	67	2	0.55	299091	6958576	533	71	-55	90
GAAC009-10		No Significan	t Intersection							
GAAC011	29	30	1	1.15	299133	6958500	534	58	-55	90
GAA012-14		No Significan	t Intersection							
GAAC015	39	41	2	1.02	299090	6958337	531	51	-55	90
GAAC016-26		No Significan	t Intersection							
GAAC027	44	45	1	2.37	299235	6958422	535	44	-55	90
GAAC028-31		No Significan	t Intersection	_						

# Golden Snag Gold Prospect

Hole	From	То	Width	Grade (g/t Au)	Easting	Northing	RL	Total Depth	Dip	Azimuth
GSAC001		No Significan	t Intersection		298416	6957276	522	51	-55	90
GSAC002	24	26	2	0.76	299193	6958422	535	62	-55	90
GSAC003	12	20	8	0.66	298420	6957240	521	53	-55	0
GSAC004		No Significan	t Intersection		298416	6957171	523	55	-55	0
GSAC005	38	44	4	1.89	298420	6957201	521	52	-55	0
GSAC005	56	57	1	3.35	298420	6957201	521	52	-55	0
GSAC005	63	64	1	21.79	298420	6957201	521	52	-55	0
GSAC006		No Significan	t Intersection		298421	6957134	521	64	-55	0
GSAC007	47	48	1	0.80	298415	6957095	521	63	-55	0
GSAC008		No Significan	t Intersection		298382	6957265	523	40	-55	0
GSAC009	35	36	1	0.88	298419	6957051	521	64	-55	0
GSAC010	36	39	3	3.97	298381	6957230	520	54	-55	0
including	36	37	1	10.38	298381	6957230	520	54	-55	0
GSAC011		No Significan	t Intersection		298379	6957153	526	59	-55	0
GSAC012	43	44	1	4.54	298381	6957191	521	56	-55	0
GSA013	22	28	6	0.93	298384	6957120	521	59	-55	0
GSAC013	45	48	3	5.62	298384	6957120	521	59	-55	0
including	47	48	1	15.92	298384	6957120	521	59	-55	0
GSAC014	65	66	1	2.27	298378	6957078	521	63	-55	0
GSAC015	24	26	2	1.02	298381	6956997	522	57	-55	0
GSAC016		No Significan	t Intersection							
GSAC017	41	43	2	0.84	298340	6957118	521	62	-55	0
GSAC018	34	35	1	1.55	298338	6957078	521	66	-55	0
GSAC019		No Significan	t Intersection		298339	6956997	525	52	-55	0
GSAC020	37	38	1	3.79	298344	6957035	521	59	-55	0
GSA021-31	No Significant Intersection									
GSAC032	52	53	1	1.57	298400	6957107	521	56	-55	0
GSAC033	38	44	6	7.55	298361	6957061	521	65	-55	0
including	38	39	1	18.37	298361	6957061	521	65	-55	0
including	43	44	1	24.46	298361	6957061	521	65	-55	0



# Appendix 2: Detailed Results (cont) Lowlands & Forked Stick Gold Projects

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Hole	From	То	Width	Grade (g/t Au)	Easting	Northing	RL	Total Depth	Dip	Azimuth
LLAC001		No Significan	t Intersection		308121	7007490	488	44	-60	35
LLAC002	29	30	1	1.77	308102	7007500	487	33	-60	35
LLAC003	27	28	1	0.87	308087	7007517	487	53	-60	35
LLAC004	24	28	4	3.20	308057	7007535	488	53	-60	35
including	26	27	1	10.89	308057	7007535	488	53	-60	35
LLAC005		No Significan	t Intersection		308028	7007581	437	17	-60	35
LLAC006	38	44	6	3.38	308033	7007597	488	57	-70	35
including	42	44	2	7.11	308033	7007597	488	57	-70	35
LLAC007	19	22	3	3.92	308028	7007616	488	48	-80	35
LLAC007	30	38	8	3.51	308028	7007616	488	48	-80	35
including	36	37	1	11.46	308028	7007616	488	48	-80	35
LLAC008	17	18	1	3.77	308021	7007637	488	18	-70	35
LLAC009	15	19	4	0.77	308011	7007633	488	23	-60	35
LLAC010	22	38	16	2.04	308004	7007637	488	38	-60	35
Including	24	25	1	9.97	308004	7007637	488	38	-60	35
LLAC011		No Significan	t Intersection		308003	7007627	489	14	-60	35
LLAC012	23	30	7	1.31	307990	7007648	488	43	-60	35
LLAC013	21	22	1	19.58	307974	7007640	488	42	-70	35
LLAC013	34	38	4	2.03	307974	7007640	488	42	-70	35
LLAC014	16	22	6	4.58	307983	7007656	488	36	-70	35
including	18	19	1	13.84	307983	7007656	488	36	-70	35
LLAC014	25	31	6	2.53	307983	7007656	488	36	-70	35
including	26	27	1	10.03	307983	7007656	488	36	-70	35
LLAC015		No Significan	t Intersection		307956	7007656	488	23	-70	35
LLAC016	22	26	4	1.14	307961	7007667	488	32	-60	35
LLAC017-19		No Significan	t Intersection							
FSAC001-3		No Significan	t Intersection							
FSAC004	13	14	1	0.54	306520	7009850	492	16	-60	315
FSAC005		No Significan	t Intersection		306525	7009843	492	13	-60	315
FSAC006	10	19	9	1.62	306508	7009854	492	31	-60	315
including	15	16	1	8.06	306508	7009854	492	31	-60	315
FSAC007	4	7	3	3.81	306508	7009832	492	16	-60	315
including	5	6	1	8.30	306508	7009832	492	16	-60	315
FSAC008-9		No Significan	t Intersection							



# Appendix 2: Detailed Results (cont) Julius North & Sundowner Gold Prospects

Hole	From	То	Width	Grade (g/t Au)	Easting	Northing	RL	Total Depth	Dip	Azimuth
SDAC001	34	41	7	1.62	307982	6975765	486	45	-70	90
SDAC002	42	45	3	2.72	308014	6975727	486	52	-70	90
SDAC003-4		No Significan	t Intersection							
SDAC005	34	35	1	0.57	307979	6975689	486	43	-70	90
SDAC006	50	55	5	1.34	308005	6975624	486	56	-70	90
SDAC007		No Significan	t Intersection		307983	6975622	488	51	-70	90
SDAC008	40	42	2	3.21	307905	6975608	486	73	-70	90
SDAC008	47	63	16	1.65	307905	6975608	486	73	-70	90
including	47	49	2	4.89	307905	6975608	486	73	-70	90
SDAC009	46	47	1	1.12	307910	6975586	486	56	-70	90
SDAC010	10	13	3	1.73	307893	6975584	486	77	-70	90
SDAC011	13	20	7	0.93	308020	6975566	486	56	-70	90
SDAC011	38	40	2	2.73	308020	6975566	486	56	-70	90
SDAC012-13		No Significan	t Intersection	•						
SDAC014	37	44	7	1.08	307899	6975569	486	53	-70	90
SDAC015-16		No Significan	t Intersection							
SDAC017	36	38	2	3.55	307903	6975549	486	41	-70	90
SDAC018	11	12	1	1.28	307883	6975550	486	61	-70	90
SDAC019	36	37	1	0.85	307901	6975530	486	40	-70	90
JAC192-211		No Significan	t Intersection	•						
JAC212	45	51	6	4.60	296279	7038899	513	63	-70	90
including	45	47	2	13.25	296279	7038899	513	63	-70	90
JAC213	51	57	6	3.40	296299	7038899	513	66	-70	90
including	54	55	1	10.46	296299	7038899	513	66	-70	90
JAC214	30	34	4	1.48	296256	7038894	512	44	-70	90
JAC215		No Significan	t Intersection	•	296238	7038896	512	34	-70	90
JAC216	48	57	9	1.15	296269	7038885	513	57	-70	90
JAC217	26	34	8	1.38	296254	7038879	512	60	-70	90
JAC218	29	30	1	0.52	296230	7038884	512	44	-70	90
JAC219	31	34	3	1.94	296266	7038862	513	62	-70	90
JAC220	25	32	7	2.06	296253	7038861	513	63	-70	90
JAC220	42	49	7	1.76	296253	7038861	513	63	-70	90
JAC221		No Significan	t Intersection		296228	7038858	512	43	-70	90
JAC222	35	36	1	2.26	296265	7038838	513	54	-70	90
JAC223	29	32	3	1.73	296242	7038835	513	56	-70	90
JAC224	39	48	9	0.77	296224	7038840	512	64	-70	90
JAC225	49	52	3	0.96	296278	7038820	514	54	-70	90
JAC226	39	40	1	2.04	296249	7038820	513	50	-70	90
JAC227	38	45	7	0.98	296232	7038821	513	50	-70	90
JAC228	3	6	3	0.65	296341	7038763	514	37	-70	90
JAC229-237		No Significan	t Intersection							
JAC238	11	15	4	0.72	295916	7038202	513	49	-90	0
JAC239	34	37	3	0.73	295915	7038230	513	37	-90	0

Note: collar details are not included for holes which are not material and do not contain assay results above cut-off.



### Forward Looking Statements

This announcement includes certain 'forward looking statements'. All statements, other than statements of historical fact, are forward looking statements that involve various risks and uncertainties. There can be no assurances that such statements will prove accurate, and actual results and future events could differ materially from those anticipated in such statements. Such information contained herein represents management's best judgement as of the date hereof based on information currently available. The Company does not assume any obligation to update any forward-looking statement.

### **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

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# JORC Code, 2012 Edition

# Section 1 Sampling Techniques and Data (Criteria in this section apply to all succeeding sections)

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Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <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 30g 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> <li>Recent exploration at the Golda Alley, Golden Snag, Lowlands, Julius, Forked Stick, Sundowner and Julius prospects has comprised aircore drilling of 177 holes for 8,584 metres.</li> <li>Initially, 4 metre composite samples were collected from all drilling with 1 metre re-splits sent for assay based on the results of the 4 metre composite analyses.</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 composite 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> <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>	Aircore drilling with a 4-inch blade bit. Drilling was conducted until blade refusal.
Drill sample recovery	<ul> <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> <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> <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> <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> <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> <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 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 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>Sample sizes are considered appropriate to the grain size of the material being sampled.</li> </ul>
Quality of assay data and laboratory tests	<ul> <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)</li> </ul>	<ul> <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>



	and precision have been established.	
Verification of sampling and assaying	<ul> <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> <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 Micromine and access 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> <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> <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 Yandal district.</li> </ul>
Data spacing and distribution	<ul> <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> <li>The holes have been variably spaced. A nominal hole spacing between 10-40 metre (E-W spacing) and a line spacing ranging up to 80 metres between each section line have been used.</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> <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> <li>The orientation of sampling is considered adequate and there is not enough data to determine bias if any.</li> <li>Interpreted lithologies generally strike north-west. Drilling was approximately orthogonal to this apparent strike and comprised angled I drill holes.</li> </ul>
Sample security	The measures taken to ensure sample security.	<ul> <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> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul> <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> <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> <li>The Golda Alley, Golden Snag, Lowlands, Julius, Forked Stick, Sundowner and Julius prospects are located within the central Yandal Greenstone Belt. The prospects sit on a number of 100% owned, granted mining and exploration leases held by Echo Resources Ltd, except Lowlands which is contained within an exploration lease which is 70% owned by Echo. 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 tenements are in good standing</li> <li>No impediments to operating on the permit are known to exist.</li> </ul>
Exploration done by other parties	<ul> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul> <li>Exploration in the Yandal district has been completed by Great Central Mines, Normandy, Newmont and others. Anomalous RAB, aircore and RC drilling in the area by previous operators have been returned.</li> </ul>
Geology	<ul> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul> <li>Highly oxidized/weathered greenstones, sediments and intrusive felsic rocks, with quartz veining with minor sulphides.</li> </ul>
Drill hole Information	A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material	<ul> <li>A total of 177 aircore drillholes for 8,584 metres were drilled at Golda Alley, Golden Snag, Lowlands, Julius, Forked Stick, Sundowner and Julius which focused primarily on the oxide</li> </ul>



Criteria	JORC Code explanation	Commentary
	drill holes:     easting and northing of the drill hole collar     elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar     dip and azimuth of the hole     down hole length and interception depth     hole length.  If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	<ul> <li>zone. 19 holes for 711 metres were drilled at Lowlands on a 10 x 20 metre spacing. 33 holes for 1,831 metres were drilled at Golden Snag on a 40 x 80 metre spacing. 9 holes for 171 metres were drilled at Forked Stick on a 10 x 20 metre spacing. 47 holes for 2,238 metres were drilled at Julius on 20 x 40 metre spacings.</li> <li>Full Drillhole details for the results from 69 holes are provided in this announcement.</li> <li>Appropriate maps and plans also accompany this announcement.</li> </ul>
Data aggregation methods	<ul> <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> <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> <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> <li>The orientation or geometry of the mineralised zones; strikes WNW and dips shallowly SW at Lowlands, strikes NE-SW and is steeply dipping at Golden Snag.</li> <li>True width is variable and further work to clarify is required.</li> </ul>
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	Appropriate maps are included in main body of report with gold results and full details are in the tables reported.
Balanced reporting	<ul> <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>	All results for the target economic mineral being gold have been reported.
Other substantive exploration data	<ul> <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> <li>Previous work in the district by others has estimated total gold resources within the Empire District to total ~100,00 ounces.</li> </ul>
Further work	<ul> <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> <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>