Echo Resources Limited
ACN 108 513 113

27 November 2017
ASX Announcement
ASX Code: EAR

ECHO GROWS YANDAL ORE RESERVE TO 856,000 OUNCES

HIGHLIGHTS

- Ore Reserve (JORC 2012) of **15.6Mt @ 1.7 g/t containing 856,000 ounces of gold**
- The **Reserve supports an 8.5 year life of mine** based on an assumed throughput rate of 1.8Mtpa through the 100% owned Bronzewing Processing Hub
- The Ore Reserve is contained within detailed pit designs with an **overall waste to ore strip ratio of 6.3:1** and was estimated using a gold price assumption of A$1,600/ounce (US$1,200/oz)
- Reserves form part of ongoing project studies due for completion early 2018
- Studies are expected to include a **staged development approach** with Stage 1 delivering optimum cash flow from **6.3Mt @ 2.0 g/t Au for 407,000 ounces** with a 5.1:1 strip ratio and AISC of A$1,034/oz
- **Echo will continue to focus on identifying additional high-grade ore** to further increase the life of mine plan while exploring for resource extensions and new gold deposits.

Echo Resources Limited (ASX: EAR) ('Echo' or 'the Company') is pleased to announce that ongoing project studies have delivered a JORC 2012 compliant Ore Reserve for the Yandal Gold Project in Western Australia.

JORC Category (2012)	Proved Reserves			Probable Reserves			Total Ore Reserves		
	Tonnes (Mt)	Grade (g/t)	Contained (koz Au)	Tonnes (Mt)	Grade (g/t)	Contained (koz Au)	Tonnes (Mt)	Grade (g/t)	Contained (koz Au)
Julius	1.4	2.2	95	0.1	1.8	8	1.5	2.1	103
Orelia	-	-	-	14.1	1.7	753	14.1	1.7	753
Total	**1.4**	**2.2**	**95**	**14.2**	**1.7**	**761**	**15.6**	**1.7**	**856**

Table 1: Echo Ore Reserves

Notes:
1. The Ore Reserves have been calculated at a gold price of AU$1600/oz and non-mining breakeven cut off grades of 0.6 g/t for the Orelia deposit and 0.8 g/t for the Julius deposit
2. Mining dilution and losses have been included by modelling to a selective mining unit (SMU) with dimensions of 5m x 5m x 5m for the Orelia deposit and 2.5m x 5m x 2.5m for the Julius deposit
3. Figures are rounded to reflect the appropriate level of confidence, apparent errors in totals may occur.

The Ore Reserve is contained solely in the Julius and Orelia deposits and does not include any reserves from Echo's other advanced prospects which include Wimbledon, Lowlands, Shady Well and potential extensions of the Lotus-Orelia system.

The Ore Reserve follows the recent increase in the Yandal Global Resource base and is another positive step in Echo's strategy to capitalise on its 1,600km^2 landholding, in one of Australia's most prolific gold producing greenstone belts, whilst leveraging its 100% ownership of the Bronzewing Processing Hub which only requires A$17 million to be fully refurbished and operational.

Echo's Chief Executive Officer, Simon Coxhell, said *"Our ability to convert our growing resource base into quality mineable reserve ounces is a major step forward for Echo and provides the foundation for our bankable feasibility work, expected to be completed early next year ahead of a development decision.*

"Following our recent oversubscribed capital raising, we are well funded to accelerate our regional and near-mine exploration efforts to continue to grow our Yandal Gold Project. We have a unique opportunity to be able to quickly monetise the reserve base thanks to our 100% ownership of the Bronzewing Processing Hub."

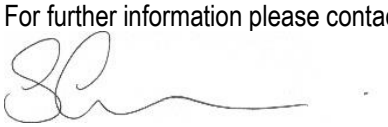
	Stage 1	Stage 1+2
Total Ore (mined)	**6.3Mt @ 2.0g/t for 407koz**	**15.6Mt @ 1.7g/t for 856koz**
Julius Ore (mined)	0.9Mt @ 2.4g/t for 68koz	1.5Mt @ 2.1g/t for 103koz
Orelia Ore (mined)	5.4Mt @ 2.0g/t for 339koz	14.1Mt @ 1.7g/t for 753koz
Life of Mine (LOM)[1]	4 years	8.5 years
LOM Strip Ratio (w:o)	5.1:1	6.3:1
Processing Recovery	92.3%	91.7%
LOM Gold Production[1]	376,000 oz	785,000 oz
Mining Costs[4]	A$24.30/t	A$26.70/t
Ore Haulage[4]	A$3.80/t	A$3.20/t
Processing Costs[4]	A$18.30/t	A$18.20/t
Site G&A[4]	A$4.60/t	A$4.40/t
Sustaining Capital, Royalties[4]	A$4.90/t	A$4.40/t
Mill Refurbishment Capital Cost	A$17M	
Mine Development, First Fill	A$6.2M	
LOM Revenue[4]	A$602 million	A$1,256 million
C1 Cash Cost[4]	A$959/oz	A$1,126/oz
All-in Sustaining Costs (incl Capital)[4]	A$1,034/oz	A$1,171/oz

Table 2: Key Project Economics

1: The Ore Reserves underpinning the above production target have been prepared by a Competent Person or Persons in accordance with the requirements of the JORC (2012) Code. Refer to JORC tables, Qualifications and Competent Persons Statements. Based on assumed throughput of 1.8Mtpa.
2. C1 Cash Cost includes mining, processing operating costs, site administration costs, transport, refining charges.
3. AISC = C1 cash cost, depreciation and amortisation (refurbishment), royalties, sustaining capital costs.
4. Parameters a part of this estimate are further supported by the Julius BFS Announcement dated 17 January 2017. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed.

The staged development approach allows Echo sufficient time to optimise the large pit mine designs and processing options to further improve the economics of the ounces mined from Stage 2 in the later years of the project. In addition, the delineation of any new reserves from outside of the Orelia and Julius deposits would be expected to further improve the life of mine schedule and add to the reserve base and mine life.

For further information please contact:



Simon Coxhell, Chief Executive Officer
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Yandal Gold Project Ore Reserve Estimate – Additional Information

Ore Reserve Estimation Parameters

A summary of the material information used to estimate the Ore Reserve is presented below and disclosed in accordance with the JORC Code 2012 and ASX Listing Rules.

Ore Reserve Overview

The Yandal Gold Project is located approximately 400 kilometres north of Kalgoorlie, Western Australia. The Ore Reserve estimate is contained within two open pitable deposits; the Orelia and Julius gold deposits located 10 and 70 kilometres respectively, by road from the Bronzewing processing hub. The Projects are accessed via Leinster, located 45 kilometres to the west. Both deposits are located on granted mining licences and are 100% owned by Echo.

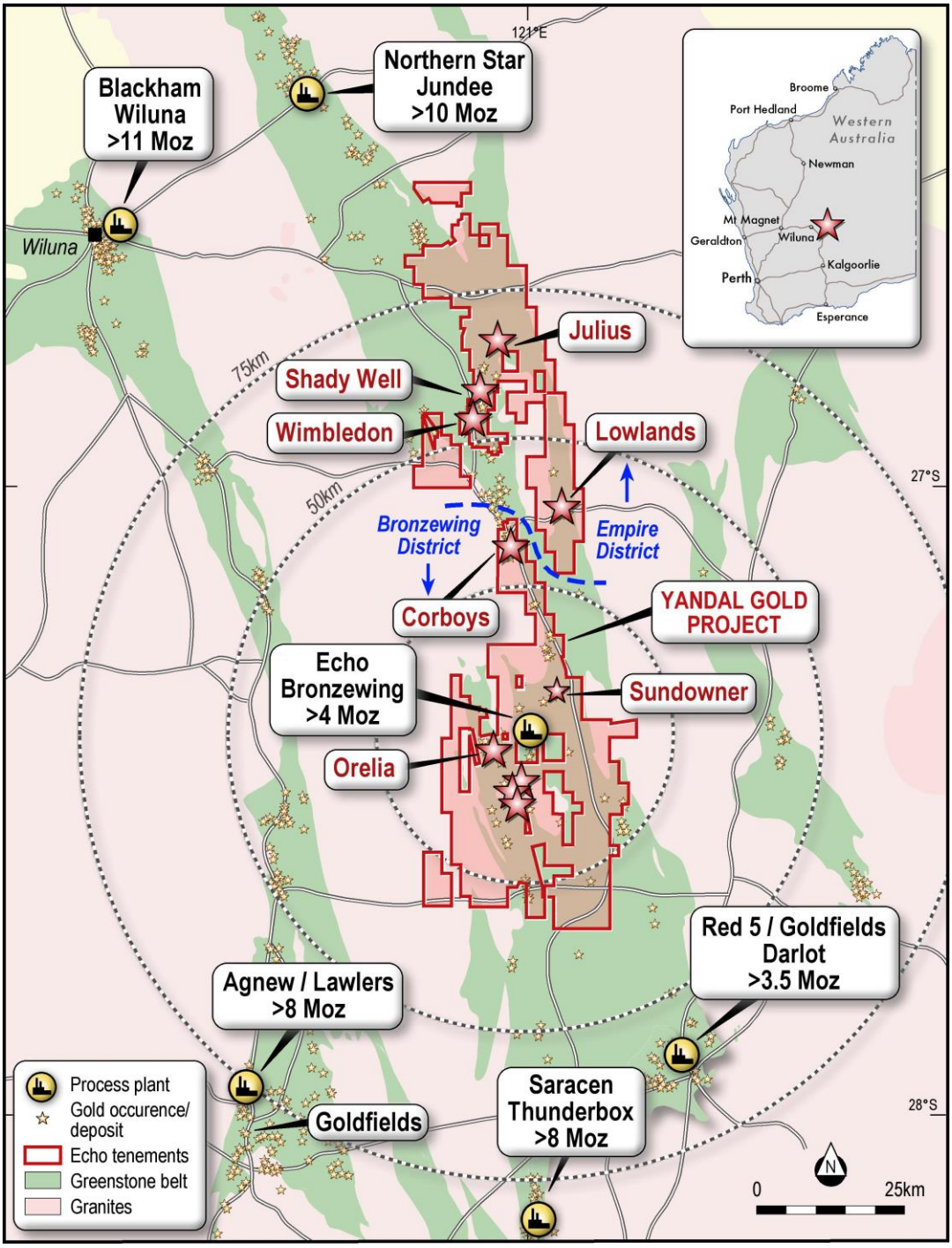

Figure 1: Echo Tenement Plan and Key Projects

The Orelia gold deposit has been previously mined during a number of campaigns from 1988 to 2013 with approximately 400,000 ounces (refer to ASX Announcement dated 1 September 2016) having been produced from the existing open pit to a vertical depth of approximately 100 metres below natural surface. The Julius gold deposit has never been mined.

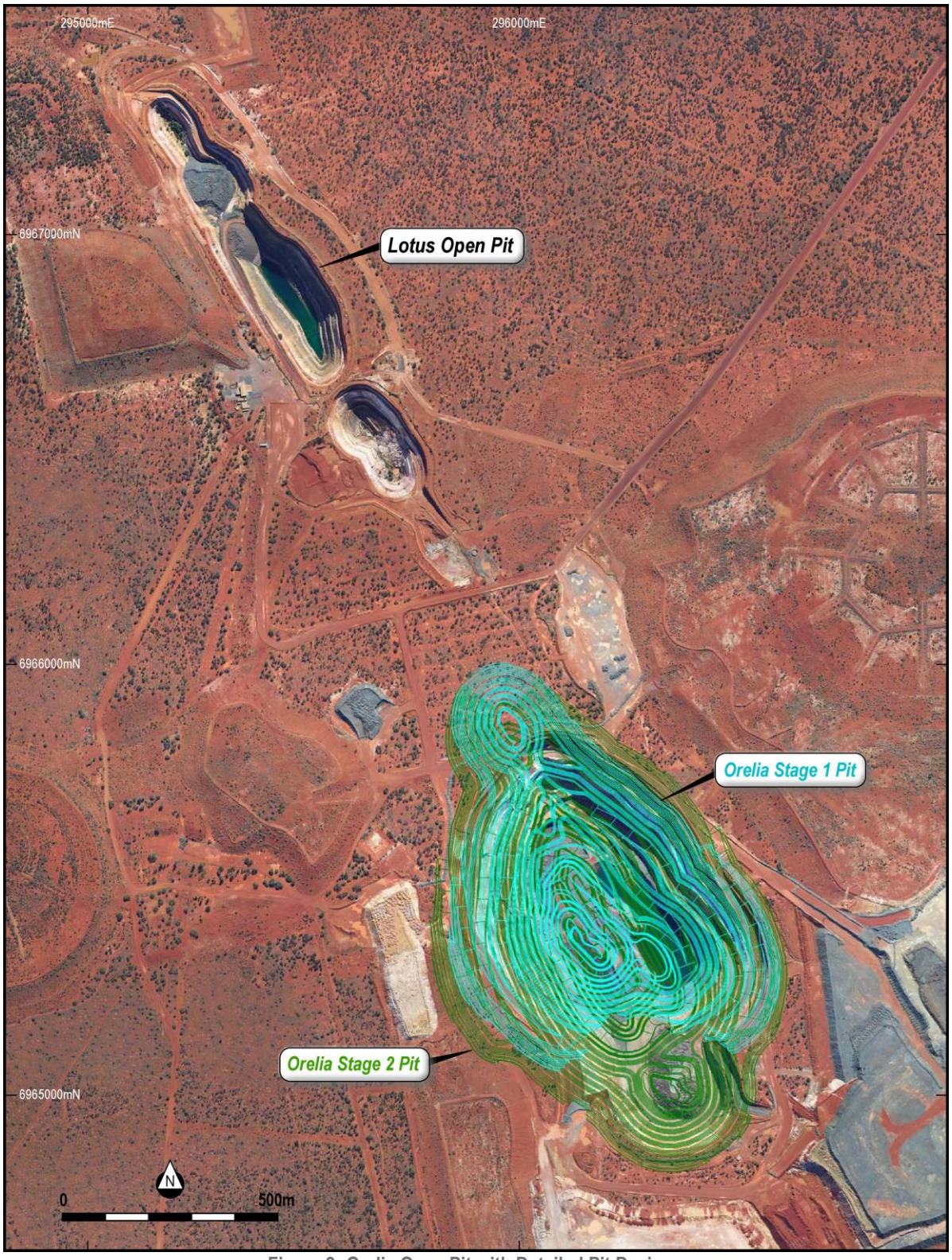

Figure 2: Orelia Open Pit with Detailed Pit Designs

Geology and Geological Interpretation

Orelia Gold Deposit: The main host rocks of mineralisation at Orelia are deformed and altered tholeiitic basalts, concordant dolerite units and felsic to intermediate sedimentary rocks. Cross-cutting felsic to intermediate porphyry dykes intrude the stratigraphy along pre-existing structures. Gold mineralisation typically occurs as southerly plunging ore-shoots along fold hinges as well as at the intersection between steeply-dipping transgressive faults and favourable lithological units.

The gold is associated with the hydrothermal phase of sulphide formation that consists of pyrite-pyrrhotite±chalcopyrite. Gold related alteration consists of biotite-sericite-carbonate altered deformation zones.

A number of shallow trending high grade gold shoots with dimensions of approximately 50 metres in vertical extent and 25 metres in width and extending over 500 metres down plunge. Confidence in the geological interpretation is very good with the latest infill drilling allowing a detailed interpretation of the lithostructural controls on mineralisation. Geological logging and interpretation allows extrapolation of drill intersections between adjacent sections and boundaries are determined by the spatial locations of the various mineralised structures.

Julius Gold Deposit: The Julius Gold Project is located midway between the multi-million-ounce Jundee and Bronzewing gold camps. Julius is a virgin deposit, located underneath a minimum of 8 metres of transported cover and on the margin of a strongly sheared, shallow north-west dipping granite greenstone contact. The deposit is deeply weathered, up to and in excess of 60 metres, and comprises three zones of mineralisation. These zones are an upper pisolitic laterite mineralised zone, sitting on top of a well-developed supergene gold zone, grading down into primary mineralisation characterised by strong shearing, sericite alteration, silicification, minor quartz veining and minor enrichment in sulphides, principally pyrite.

Mining Assumptions

All of the defined mineral resources at the Yandal Project are within an open pit mining environment and of a lode style mineralisation requiring a degree of mining selectivity. The shallow oxide will be able to be mechanically excavated with the deeper primary material requiring drill and blast. Given these conditions, conventional open pit mining techniques using drill and blast with material movement by hydraulic excavator and trucks will be employed. The project scale and selectivity would suit the typical equipment fleet utilised in the West Australian goldfields of 120t class excavators matched to 90t class mine haul trucks. A larger excavator may be utilised for areas of bulk waste in the Orelia pit.

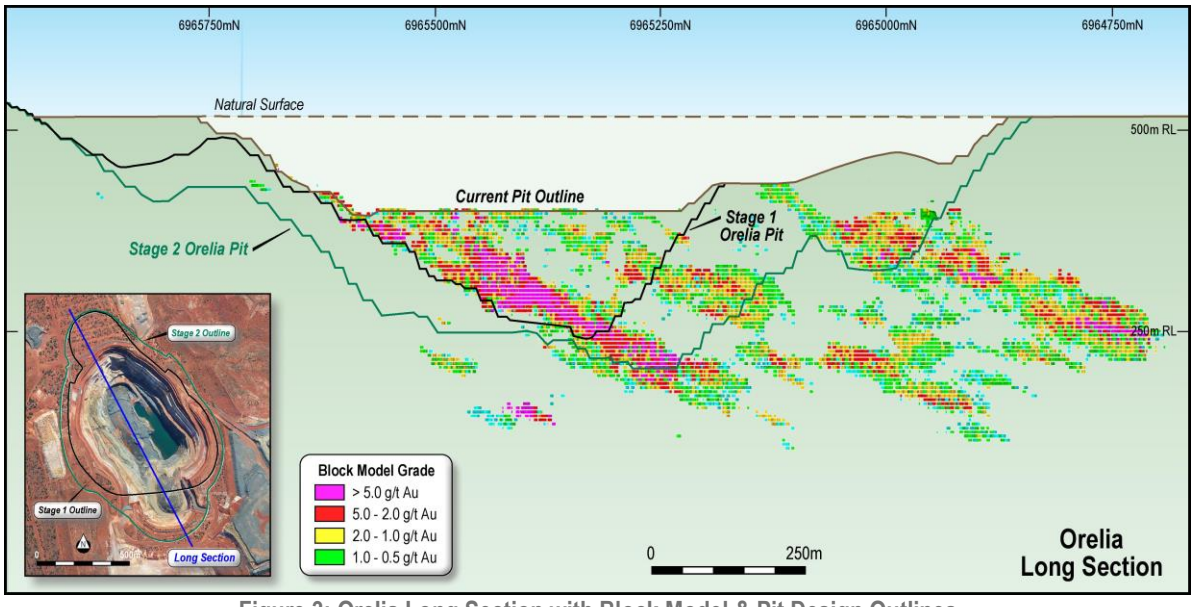

Figure 3: Orelia Long Section with Block Model & Pit Design Outlines

Mining operations will be undertaken by an experienced mining contractor with Echo being responsible for the technical services and supervision of the mining contractor. The mining costs used in the Ore Reserve estimate were sourced from quotations from contractors active in the region.

Ore will be transported from the Julius and Orelia pits to the Bronzewing Plant by a road haulage contractor.

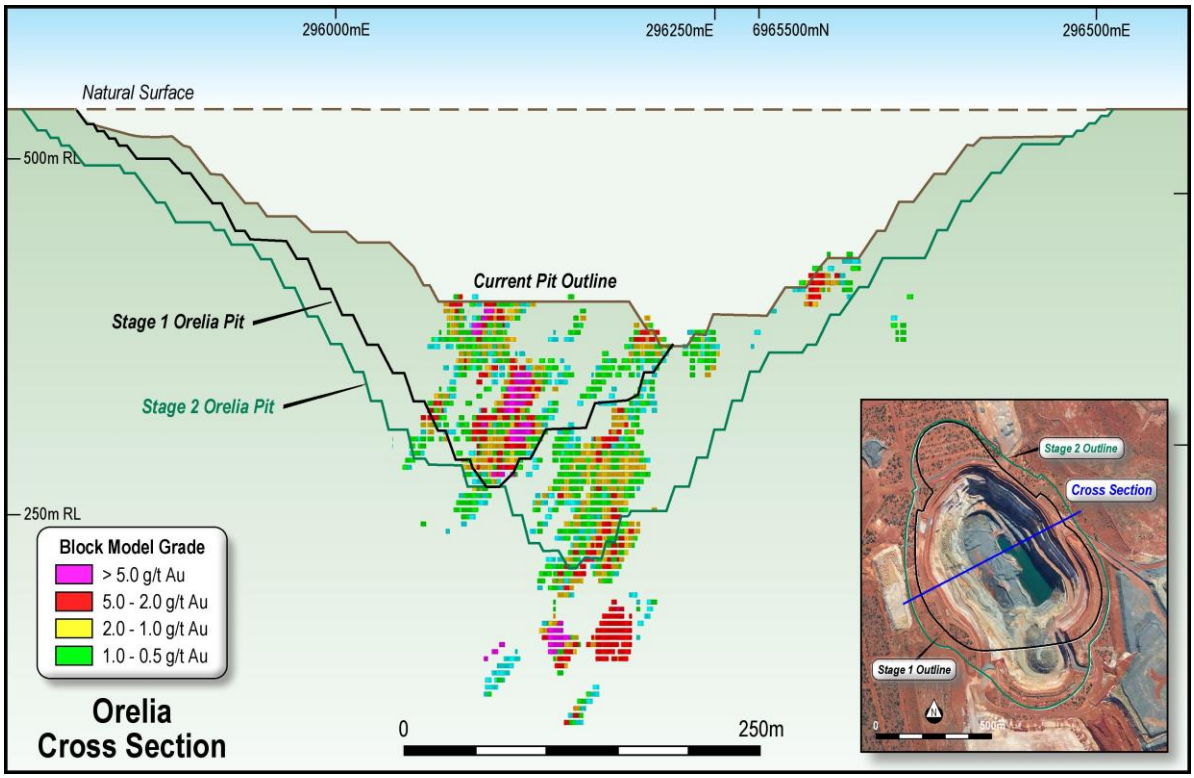

Figure 4: Orelia Cross Section with Block Model & Pit Design Outlines

Mineral Resource Models

The Orelia and Julius Mineral Resource models that formed the basis of the Ore Reserve estimate were produced by Widenbar and Associates previously announced on 7 September 2017 and 23 November 2016 respectively. Please see the ASX announcements for full details.

JORC Category (2012)	Measured			Indicated			Total M+I		
	Tonnes (Mt)	Grade (g/t)	Contained (koz Au)	Tonnes (Mt)	Grade (g/t)	Contained (koz Au)	Tonnes (Mt)	Grade (g/t)	Contained (koz Au)
Julius	1.8	2.1	124	1.6	1.3	68	3.4	1.8	192
Orelia	-	-	-	14.1	2.2	980	14.1	2.2	980
Total	**1.8**	**2.1**	**124**	**15.7**	**2.1**	**1,048**	**17.5**	**2.1**	**1,172**

Table 3: Resource Breakdown

Note: For full details of Mineral Resource estimates refer to Appendix 1. Echo is not aware of any new information or data that materially affects the information included in the resource announcements identified above.

For the Julius deposit, to enable the resource estimation to be utilized for pit optimization it was first regularized to a selective mining unit (SMU) of 5 m along strike (North-South), 2.5 m across strike (East-West) and 2.5 m vertical applicable to the proposed fleet size and mining methodology. The regularization of the block model results in diluted grades as weighted average gold grades are calculated for the blocks. Ore losses will occur where a block contains a small proportion of mineralized material and the resultant weighted average block grade falls below the cut-off grade. No further dilution or ore losses were applied to the model.

For the Orelia deposit, the Mineral Resource Model has been interpolated within broad envelopes which were generated using an Indicator Modelling technique based on a broad mineralisation envelope at a 0.1 gm/t Au cut-off with an internal higher-grade envelope at 0.8 gm/t Au indicator threshold. An SMU size of 5m x 5m x 5m was assumed, and grades were interpolated directly into 5m x 5m x 5m blocks within the two envelopes. There are no interpreted wireframes to constrain the model with hard boundaries and there is internal low grade and waste

data within the two domains. There are no sub cells following boundaries and thus the model can be considered equivalent to a re-blocked diluted model. As such, no further dilution or ore losses were applied to the model.

Geotechnical Parameters

The Ore Reserve the subject of this release is contained within two large simple open pitable gold deposits. For the Julius deposit, the results of the geotechnical investigation carried out by an independent geotechnical expert for the January 2017 Feasibility study were applied. The resulting overall pit slopes when pit ramps were allowed for are shown in the table below.

Pit Wall	North	East	South	West
Overall Slope Angle Above Top of Fresh Rock	43	36	43	43
Overall Slope Angle Below Top of Fresh Rock	56	49	56	56

Table 4: Julius Pit Wall Slopes

For the Orelia deposit a number of geotechnical assessments have been carried out by independent experts. When the outcomes of these assessments were applied with an allowance for ramp access, the overall pit slopes shown below resulted.

Pit Wall	East				West			
Depth from Surface (m)	0-30	30-70	70-190	>190	0-30	30-70	70-190	>190
Overall Slope Angle (deg)	24	33	41	49	24	33	45	52

Table 5: Orelia Pit Wall Slopes

Pit Design and Schedule

Detailed pit designs have been completed for the Julius and Orelia deposits. The designs were based on the parameters from the geotechnical assessments, ramp widths of 22 m and minimum mining widths of 20 m. A staged approach will be taken to the mine development with three pit stages designed for both the Julius and Orelia deposits.

The pit staging aims to exploit the highest value, lowest strip ore in the earlier stages of mining. The schedule has been predicated on providing sufficient ore to the mill to ensure it is run at capacity while being constrained by mining fleet capacity and practical development and vertical advance rates.

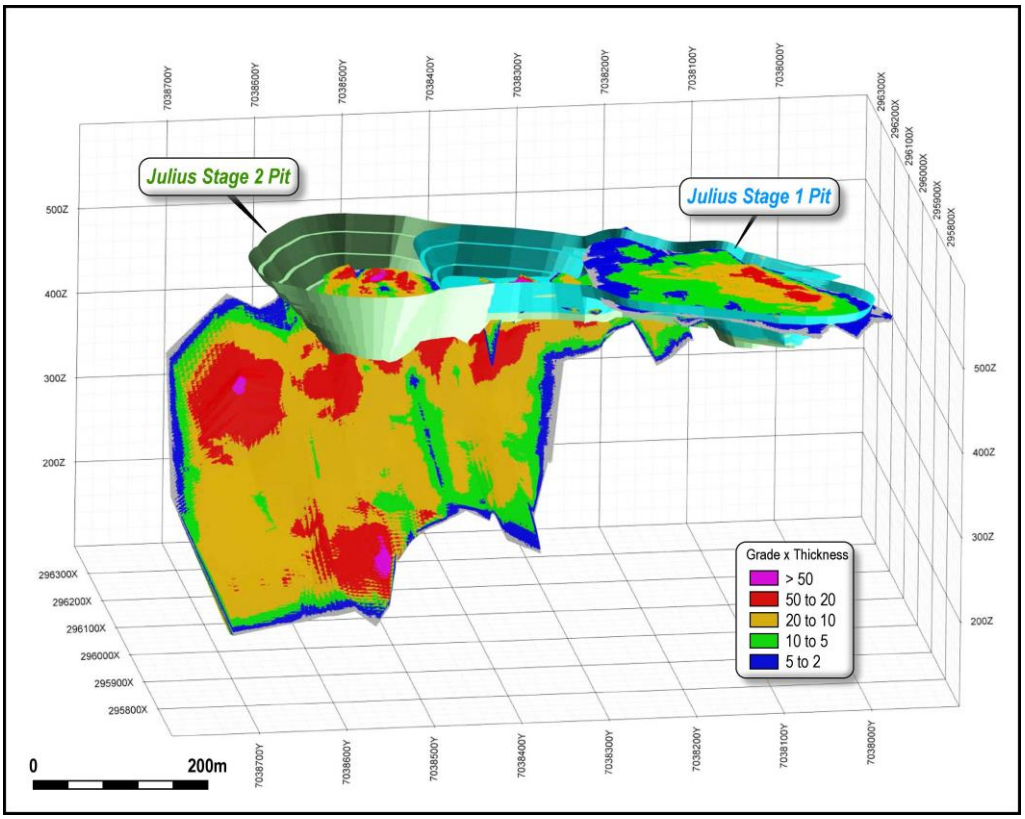

Figure 5: Julius Gold Deposit 3D Orthogonal Image with Pit Designs (looking east)

Metallurgical & Processing Assumptions

The Julius Gold Project Bankable Feasibility Study published in January 2017 established the production pathway for ore mined from Echo's tenements being processed through the refurbished Bronzewing treatment plant. The Bronzewing plant utilizes a conventional comminution and CIL processing path and has a capacity of up to 2.0Mtpa.

The Bronzewing plant has a two-stage crushing circuit, followed by SAG/Ball mill with installed pebble crusher. The comminution circuit includes gravity extraction, followed by CIL and carbon elution circuits. It is a conventional flowsheet for a gold ore treatment plant.

Julius ore metallurgical characterisation was completed and reported in the Bankable Feasibility Study with excellent recoveries and leaching kinetics. Ore from the Orelia open pit has previously been treated through the Bronzewing plant. Samples from the 2017 Orelia resource drilling were submitted to commercial laboratories for metallurgical test work to confirm that the gold recovery and ore physical properties were in line with historical processing performance. The results for Orelia ore were consistent with the historical data for gold recovery and ore physical properties.

The characterisation established that both Julius and Orelia ore are amenable to treatment through conventional CIP/CIL plant flowsheets with an installed gravity circuit with estimated recoveries of 92%. The Bronzewing plant flowsheet and installed equipment is well suited to treating the Julius and Orelia ore. Based on modelling results, a throughput rate of 1.8Mtpa t/hr was selected for the reserve processing capacity when treating Julius and Orelia ore blends. This rate is consistent with the Julius and Orelia mine production rates.

The ore characterisation results for Julius and Orelia are presented in the table below.

Aspect	Orelia	Julius	Orelia and Julius Ore blend to mill
Nature	Free Milling	Free Milling	Free Milling
Ore Grade g/t	2.10	2.40	2.15
Moisture Content %	1.80	10.00	5.90
Ore SG	2.90	2.50 Laterite 2.02 Oxide	2.60
Gravity Gold Recovery	30%	30%	30%
Crushing Work Index kWhr/t	7.7	-	-
Abrasion Index	0.1213	0.0014 Laterite 0.0012 Oxide	-
Bond Ball Mill Work Index kWhr/t	16.7	19.6 Laterite 12.8 Oxide	17.0
Gravity/Leach Recovery at P80 125 um	92%	92%	92%
CN Consumption kg/t	0.75 - 1.00	0.75 - 1.00	0.75 - 1.00
Lime Consumption - Site Water kg/t	0.7	2.5	2.5
Oxygen Injection	0.8m^3/tonne	0.8m^3/tonne	0.8m^3/tonne

Table 6: Comminution & Recovery Test Work Summary

Capital costs for process plant refurbishment and infrastructure are estimated in Australian dollars at an exchange rate of A$1:US$0.75. To determine the economic and technical viability of Ore Reserves all key capital cost estimates for processing plant refurbishment and infrastructure, mining and sustaining capital are estimated at +/- 20% accuracy. Capital costs have been estimated at $22.6 million for plant refurbishment including the crushing circuit, along with mine establishment at both Julius and Orelia. Echo currently holds approximately

A$15 million in cash and equivalents and has a market capitalisation well above the capital cost requirement for the project and accordingly it is confident the Company will be able to finance the project.

Work Area	Estimate (A$)
Julius mine infrastructure setup	$258,715
Haul road establishment	$3,994,285
Accommodation village maintenance	$252,000
Infrastructure setup	$285,000
Administration	$519,050
Bronzewing plant refurbishment	$16,386,812
Consumables and first fill	$377,010
Owners Costs	$478,560
Total	**$22,551,432**

Table 7: Capital Cost Summary

Metallurgical test work for the Orelia and Julius ores confirmed the reagent consumption rates for the ore processing. Unit consumption rates for major consumables used for process cost modelling were - cyanide 0.8kg/t, lime 2.50kg/t and grinding media 0.5kg/t.

Tailings will be disposed of in the licenced in-pit tailings storage facility, which has sufficient capacity to store at least a further 12Mt of tailings.

Infrastructure

There is existing road access to the Bronzewing plant, the Orelia deposit and the Julius mine site. The Bronzewing facilities include an unsealed airstrip suitable for propeller aircraft which is approximately 1.5 hours flying time from Perth. The all-weather Leinster airstrip is also an option.

All major infrastructure to support the operations is in place and includes:

- All electricity network and power station infrastructure, available for a suitable contract power supplier;
- Minimum tailings storage capacity of 12Mt in the depleted Discovery Pit, located approximately 1.7 km SW of the plant.
- The Bronzewing site administration, warehouse and workshop buildings remain in place.
- Suitable site office and accommodation facilities will be provided at the Julius mine site, by relocation of spare transportable buildings from Bronzewing;
- Ore haulage from the Julius mine to the Bronzewing plant will be undertaken on purposely constructed sections of private haul road and also utilising upgraded sections of the Barwidgee road. The total haul road length is approximately 73 km;
- The Bronzewing site includes an accommodation village suitable for housing up to 200 people in its current configuration.
- Raw water can be sourced from a licenced borefield and disused open pits with pipework currently in place.

Cost & Economic Assumptions

Processing Costs were developed from the Mintrex cost estimate methodology utilised in the BFS for processing Julius Ore. Unit processing costs were estimated to be $18.24 per tonne at a treatment rate of 1.8Mtpa.

	1.6Mtpa (195 t/hr)		1.8Mtpa (210 t/hr)		2.0Mtpa (240 t/hr)	
Activity	A$p.a	A$/t	A$p.a	A$/t	A$p.a	A$/t
Labour	6,486,200	$4.05	6,486,200	$3.60	6,486,200	$3.24
Maintenance (fixed)	1,829,300	$1.14	1,829,300	$1.02	1,829,300	$0.91
Mobile Equipment	2,035,353	$1.27	2,289,772	$1.27	2,544,191	$1.27
Power	9,860,000	$6.16	11,092,500	$6.16	12,016,875	$6.01
Consumables	8,098,768	$5.06	9,111,114	$5.06	10,123,460	$5.06
Maintenance (variable)	1,802,880	$1.13	2,028,240	$1.13	2,253,600	$1.13
Total	**30,112,501**	**$18.82**	**32,837,126**	**$18.24**	**35,253,626**	**$17.63**

Table 8: Processing Cost Estimates

Social & Environmental

As Bronzewing has a previous operating history and was last operating in 2013, the required licences and approvals were in existence with some still remaining current. Reactivation of these approvals is considered relatively straightforward. There appears to be no environmental impediments to the Project proceeding.

Approval	Status
1. Mining Proposals - Julius (DMIRS)	ML 53/1099 granted June 2017
2. Julius Land Access Native Title Agreement	Completed
3. State Deed for Granting of M53/1099	Completed & granted
4. Clearing Permit - Julius project	7422/1 granted
5. EPA 1986 Licence L8358/2009/2	Held for Bronzewing, currently on C&M status
6. Licence to Take Water (DoW) – 3.75 MkL p.a.	Held for Bronzewing operation
7. Project Management Plan (DMIRS)	Being prepared for submission when required
8. Julius Haul Road Clearing Permit	Approval expected late 2017
9. Julius Haul Road Mining Proposal	Will be submitted to align with construction timing
10. Water Abstraction Licences	Julius and Bronzewing licenses in place
11. Orelia Mining Proposal	Being prepared for submission when required

Table 9: Approvals Status

Yandal Project Study

The January 2017 Julius Bankable Feasibility Study (R*efer to ASX Announcement dated 17 January 2017. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and, in the case of reporting of Mineral Resources and results of the BFS that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed. The Company confirms that the form and context in which any Competent Person's findings are presented have not been materially modified from the original market announcement*) which supports parameters forming part of this Ore Reserve estimate will be updated to incorporate pertinent aspects of the Orelia mining and processing parameters with the updated study expected to be completed in early 2018. In addition, updated mining costs have been sought from a number of contractors and have been incorporated as a part of the cost assumptions used for this Ore Reserve estimate.

The Ore Reserve has been completed on the basis of the ongoing Feasibility Study which is being completed. Outstanding components of the study are not considered to have a material impact on the Ore Reserve. Material assumptions (social and environmental, mining, processing, infrastructure and economic) are being considered as a part of the Feasibility Study to date and during the Ore Reserve estimation process. All operational aspects

utilise conventional technology which is widely utilised in the industry and all inputs are technically achievable, providing the basis of a technically and economically viable project.

In parallel the Company will continue to assess optimal funding solutions for the restart of operations at Bronzewing, while continuing with its active exploration and resource development activities.

A drill programme is planned at Orelia with the aim of converting a large proportion of the higher-grade Resource from indicated to measured thereby resulting in an enhanced Proven Ore Reserve.

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 1,600km^2 of highly prospective tenement holdings as well as the 2.0Mtpa Bronzewing Processing Hub.

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. A development option incorporating a "Superpit' concept followed by the possible establishment of a higher-grade underground mining opportunity is envisaged. The latest Orelia Resource estimate of 15.9Mt at 2.1g/t Au for 1.1 Million 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[1].

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)[2].

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.

[1] Refer to MKO Announcement dated 1 September 2016
[2] Refer to Appendix 1

Appendix 1: Mineral Resource & Ore Reserve Estimates

Echo Mineral Resource Estimates[7]

(Ownership, Cut-off)	Measured			Indicated			Inferred			Total		
	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[4 (100%, 0.8)]	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[5 (100%, 0.5)]							2.8	1.5	134,925	2.8	1.5	134,925
Corboys[3 (100%, 1.0)]				1.7	1.8	96,992	0.5	1.8	28,739	2.2	1.8	125,731
Orelia[4 (100%, 1.0)]				14.1	2.2	980,000	1.8	1.7	100,000	15.9	2.1	1,080,000
Woorana North[2 (100%, 0.5)]				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[1,2 (70%, 0.5)]				0.7	0.9	19,669				0.7	0.9	19,669
Mt Joel 4800N[1,2 (70%, 0.5)]				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 (Mt)	Grade (g/t Au)	Ounces (Au)	Tonnes (Mt)	Grade (g/t Au)	Ounces (Au)	Tonnes (Mt)	Grade (g/t Au)	Ounces (Au)
Orelia[6 (100%, 0.6)]				14.1	1.7	753,000	14.1	1.7	753,000
Julius[6 (100%, 0.8)]	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.*
5. *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 see the body of this announcement. Echo Resources Limited is not aware of any new information or data that materially affects the information included and all material assumptions and technical parameters underpinning the Ore Reserve estimate continue to apply and have not materially changed.*
7. *Mineral Resources are inclusive of Ore Reserves.*

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 report relating to Resource Estimation is based on information compiled by Mr Lynn Widenbar, a consultant of Echo Resources Limited, who is a member of the Australasian Institute of Mining and Metallurgy. The information in this announcement that relates to Exploration Results and metallurgical considerations is based on information compiled by Simon Coxhell, a Director of Echo Resources and a member of the Australasian Institute of Mining and Metallurgy. Both have 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 Widenbar and 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.

The information in this announcement that relates to ore reserves is based on, and fairly represents, information and supporting documentation prepared by Mr Stuart Cruickshanks, an independent specialist mining consultant. Mr Cruickshanks is a Fellow of the Australian Institute of Mining and Metallurgy. Mr Cruickshanks has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is 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 (the JORC Code). Mr Cruickshanks has reviewed the contents of this news release and consents to the inclusion in this announcement of all technical statements based on his information in the form and context in which they appear.

Cautionary Statement

The Ore Reserve estimate referred to in this announcement is based on a Proved and Probable Ore Reserve derived from Measured and Indicated Resources. No inferred Resource material has been included in the estimation of Reserves. The Company advises that Proved and Probable Ore Reserves provides 100% of the total tonnage. There is no dependence on non-Ore Reserve material. No Inferred Mineral Resource material is included in the life of mine plan. Echo has concluded it has reasonable basis for providing the forward looking statements included in this announcement. The detailed reasons for that conclusion are outlined throughout this announcement and Material Assumptions are disclosed.

References in this announcement to the January 2017 Julius Bankable Feasibility Study is a reference to the Company's ASX Announcement dated 17 January 2017. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and, in the case of reporting of Mineral Resources and results of the BFS that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed. The Company confirms that the form and context in which any Competent Person's findings are presented have not been materially modified from the original market announcement.

JORC Code, 2012 Edition

Orelia Gold Deposit

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections)

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *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.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *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.*	• 2016- Drilling at Orelia has comprised a total of 26 RC holes for 2597 metres, and 6 diamond holes for 1209 metres. • Historical drilling at Orelia completed principally between 1988-2004 and targeted in the current Resource area (and further to the north at Lotus) comprised a total of 426 diamond holes for 120,926 metres • For the recent RC drilling (ORC001→)RC026) Approximately 20kg of sample was collected from each metre, with approximately 2kg samples, collected via the onboard cone splitter, sampled for analysis. • For the recent NQ diamond drilling samples consisted of halved NQ diamond core with approximately 0.5-2kg of sample collected. Sampling was conducted to geology to ensure samples did not overlap important geological breaks. Sampling was conducted with a minimum sample length of 0.3m and a maximum sample length of 1.2m. • All Drill hole collar locations were recorded by RTK GPS with an accuracy of +/- 0.25 metres • Analysis was conducted by submitting the 0.5-2kg sample whole for preparation by crushing, drying and pulverising at Intertek-Genalysis Laboratories. A 50g pulp was analysed at Intertek-Genalysis laboratories, Kalgoorlie, for gold analysis via Fire Assay/ICP-OES. Multi element geochemistry was also conducted. • For the historical diamond drilling a variety of different diamond core sizes (NQ, HQ, PQ) have been used. Various past authors have summarised the techniques and sampling used and it is considered the drilling and sampling methods are consistent with industry standard practices of the time, with the recent drilling by Echo validating and confirming a significant portion of the previous work conducted.
Drilling techniques	• *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.).*	• RC drilling (5 ¼ inch face sampling hammer) from pit surface • NQ Triple Tube from pit surface (78 mm) • For the historical drilling, NQ, HQ and PQ, both from various levels of the open pit and from outside the open pit at natural surface.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *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.*	• Drill sample returns as recorded were considered excellent. • There is insufficient data available at the present stage to evaluate potential sampling bias.
Logging	• *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.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.* • *The total length and percentage of the relevant intersections logged.*	• 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. • Rock chip boxes of all sample intervals were collected. All samples were logged. • Diamond ore was logged in detail, photographed wet and dry, RQDs, structural measurements on all completed. Core was orientated where possible. • All drilling was logged.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *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.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• NQ diamond core was sawn in half along orientation lines or cut lines marked by the geologist in the field. • Sample preparation for all recent samples follows industry best practice and was undertaken by Intertek in Perth where they were crushed, dried and pulverised to produce a sub sample for analysis. • Sample preparation involving oven drying, fine crushing to 95% passing 4mm, followed by rotary splitting and pulverisation to 85% passing 75 microns. • QC for sub sampling follows Echo's and Intertek procedures. • Field duplicates were taken at a rate of 1:40. • Blanks were inserted at a rate of 1:40 • Standards were inserted at a rate of 1:40. • Sample sizes are considered appropriate to the grain size of the material being sampled.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times,*	• The methods are considered appropriate to the style of mineralisation. Extractions are considered near total. • No geophysical tools were used to determine any element concentrations at this stage. • Laboratory QA/QC involves the use of internal lab standards using certified reference material, blanks, splits and duplicates as part of the in

	calibrations factors applied and their derivation, etc. • *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.*	house procedures. Repeat and duplicate analysis for samples shows that the precision of analytical methods is within acceptable limits.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• The Company's Geologist has visually reviewed the samples collected. • The historical data had been established and verified by Maxwells Geoservices in 2005, and regenerated by CSA Global as part of their QA/QC work on behalf of Echo's established management systems. • Data and related information is stored in a validated Access, Mapinfo or Micromine database. Data has been visually checked for import errors. • No adjustments to assay data have been made.
Location of data points	• *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.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• All drillholes have been located by DGPS with precision of sample locations considered +/-0.25m. • Location grid of plans and cross sections and coordinates in this release 2016 samples use MGA94, Z51 datum. • Topographic data was assigned based on a DTM of the Orelia opening surface, dated April 2013.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *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.* • *Whether sample compositing has been applied.*	• The holes are nominally spaced on a 10-20 metre (E-W spacing) with hole spacing along each section ranging from 10-20 metres spacing along each section line. • Data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for Mineral Resource estimation procedures. • Sample compositing has occurred on a small number of samples (4 metre composite samples) outside of the interpreted main mineralized zone.
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *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.*	• The orientation of sampling is considered adequate and there is not enough data to determine bias if any. • Mineralised outcrop strikes north west and dips steeply to moderately to the west, south west. High grade shoots with a dominant 30 degree plunge to the south west have been identified. Drilling was orthogonal to this apparent strike and comprised principally angled drill holes.
Sample security	• *The measures taken to ensure sample security.*	• 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.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• Numerous reviews and audits of the historical sampling techniques and data validation has been undertaken by many groups over the years, including Snowdens, RSG, Coffeys and Widenbar and Associates, with no major concerns identified.

Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *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.* • *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.*	• The Orelia gold deposit is situated within M36/146 and is 100% owned by MKO Mines Pty Ltd, a subsidiary of Echo Resources Ltd. • The tenement is in good standing • No impediments to operating on the permit are known to exist.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• Gold production began at Orelia-Cockburn in 1991 by Arimco Mining Pty Ltd, who had previously operated under the name of Australian Resources Limited, who were subsequently purchased by Great Central Mines. Normandy Mining acquired Great Central Mines in 1998 who acquired the Orelia-Cockburn mine at the same time, although it had closed only a short time previously. • The Orelia-Cockburn operations were continued under the ownership of Normandy Mining until 2002 when Newmont Mining acquired the whole package. View Resources acquired the operation in 2004 and began developing an open pit and underground mine that took in a number of ore bodies including Orelia-Cockburn, but the low price of gold and the shortage of capital forced the closure of the project in early 2008. • Navigator (Bronzewing) Pty Ltd, completed the purchase from the administrators in September 2009 and they re-commissioned the processing plant in April 2010, with production continuing until 2013.

Criteria	JORC Code explanation	Commentary
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The main host rocks of mineralisation at Orelia-Cockburn are deformed and altered tholeiitic basalts, and intermediate to felsic volcaniclastic rocks. Gold mineralisation typically occurs as; 1) southerly plunging ore-shoots, either at the intersection between steeply-dipping transgressive faults and favourable lithological units, 2) along fold hinges, and 3) on lithological contacts. At Orelia-Cockburn, gold values are not necessarily associated with total sulphide content. In sedimentary lithologies, much of the sulphide is considered primary and is unrelated to the gold. The gold is associated with the hydrothermal phase of sulphide formation, that consists of pyrite-pyrrhotite±chalcopyrite. Gold related alteration consists of biotite-sericite-carbonate altered deformation zones.
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 drill holes:* o *easting and northing of the drill hole collar* o *elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar* o *dip and azimuth of the hole* o *down hole length and interception depth* o *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.*	• 2016- Drilling at Orelia has comprised a total of 26 RC holes for 2597 metres, and 6 diamond holes for 1209 metres. • Historical drilling at Orelia completed principally between 1992-2002 and targeted in the current resource area (and further to the north at Lotus) comprised a total of 426 diamond holes for 120,926 metres • For the recent RC drilling (ORC001→)RC026) Approximately 20kg of sample was collected from each metre, with approximately 2kg samples, collected via the onboard cone splitter, sampled for analysis. • For the recent NQ diamond drilling samples consisted of halved NQ diamond core with approximately 0.5-2kg of sample collected. Sampling was conducted to geology to ensure samples did not overlap important geological breaks. Sampling was conducted with a minimum sample length of 0.3m and a maximum sample length of 1.2m. • All Drill hole collar locations were recorded by RTK GPS with an accuracy of +/- 0.25 metres • A complete copy of all drillhole collars in not required, as the level of detail is provided in the plans and sections provided.
Data aggregation methods	• *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.* • *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.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• No averaging or aggregation techniques have been applied. • No top cuts have been applied to exploration results. • No metal equivalent values are used in this report. • During the modelling, various statistical methods have been used to investigate top cuts for the interpolation process. A top cut of 40 g/t Au has been adopted for the resource model. • The difference between the cut and uncut grades is approximately 10%.
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *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').*	• The orientation or geometry of the mineralised zones strikes in a north westerly direction and dips moderately to steeply to the west-southwest with a strong 30° plunge to the south.
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 Echo's gold results and full details are in the tables reported.
Balanced reporting	• *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.*	• All results for the target economic mineral being gold have been reported.
Other substantive exploration data	• *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.*	• Previous work by many others has included RC and diamond drilling, mining, mapping, and Resource estimation. In 2006 a Resource of 11.7 MT @ 1.8 g/t was estimated by RSG. • Mining via open pit methods by various operators has typically returned grades of between 1.3→5.1 g/t over an intermittent 8 years of mining at Orelia and Lotus.

Criteria	JORC Code explanation	Commentary
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• Future RC and diamond and aircore drilling is being considered to further evaluate the Orelia Gold Deposit. • The potential to define an underground mining operation and a large open pit is considered high. • Refer to maps in main body of report for potential target areas.

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• Data was provided as a validated Micromine Database and was digitally imported into Micromine software. Validation routines were run to confirm validity of all data. • Analytical results have all been electronically merged to avoid any transcription errors.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• No site visit has been undertaken by the Competent Person, as little relevant information is available on site and the Competent Person is familiar with the type of gold deposit under consideration and has previously estimated Resources at the deposit in 2009.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• The confidence in the geological interpretation is very good, with the latest infill drilling allowing a detailed interpretation. • Geological logging and interpretation allows extrapolation of drill intersections between adjacent sections. • Alternative interpretations would result in similar tonnage and grade estimation techniques. • Geological boundaries are determined by the spatial locations of the various mineralised structures. • Mineralisation confined to individual wireframes, supergene and fresh material individually assessed. Oxidation profiles established and assigned into the model.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• The extent and orientation of the Resources at Orelia are illustrated in the diagrams in the body of this release. The mineralisation plunges at approximately 20° towards 150 °. The Resource extends over a strike length of approximately 1,500m, has a lateral extent of 400m and extends to a vertical depth of 400 metres. .

Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.*
	• *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.*
	• *The assumptions made regarding recovery of by-products.*
	• *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).*
	• *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.*
	• *Any assumptions behind modelling of selective mining units.*
	• *Any assumptions about correlation between variables.*
	• *Description of how the geological interpretation was used to control the resource estimates.*
	• *Discussion of basis for using or not using grade cutting or capping.*
	• *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*
		• Grade estimation using an Ordinary Kriging methodology has been applied to all Resources.
		• An Indicator Model at 0.1 gm/t Au cutoff was used to define a broad mineralisation envelope. An Indicator Model using a 0.8 gm/t Au cutoff was used to define a high grade mineralisation envelope to constrain the extrapolation of high grade zones.
		• Variography was carried out to define the variogram models for Ordinary Kriging interpolation.
		• All estimation was carried out in Micromine 2016 (64-bit SP3) software.
		• Due to the close-spaced drilling, the block models were constructed using a 5m (E) by 5m (N) by 5m (Z) block size, constrained by a series of individual wireframes, with sub-cells to 1m x 1m x 0.5m to accurately represent wireframe shapes.
		• Block size is generally half the sample spacing or greater in areas of infill drilling, and typically one quarter in wider spaced drilling areas.
		• No deleterious elements have been identified
		• No assumptions regarding recovery of byproducts have been made
		• Search ellipsoids use multiple passes to ensure blocks are filled in areas with sparser drilling. The first pass used an ellipse of 15m x 50 x 25m, with the long axis oriented down-plunge. A second pass used a search of 25m x 65m x 35m.
		• High grade domains and low grade envelope were separately modeled.
		• Sample data was composited to 1m down-hole composites, while honouring breaks in mineralised zone interpretation.
		• The geological interpretation which was used to guide search ellipse orientations and indicator models was based on knowledge gained from historical open cut and underground mining.
		• Top cut analysis was carried out, using a combination of inflection points on log probability plots, outliers on log histograms and the effect of top cuts on cut mean and coefficient of variation. A top cut of 40 gm/t Au has been applied.
		• Validation was carried out in a number of ways, including
		  ○ Visual inspection section, plan and 3D
		  ○ Swathe plot validation
		  ○ Model vs composite statistics
		  ○ ID2 vs OK model checks

Criteria	JORC Code explanation	Commentary
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages are estimated on a dry basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• Nominal downhole cut-off of 0.1 g/t Au has been used to define the a broad mineralised envelope, while a cutoff of 0.8 gm/t Au is used to define high grade domains. • The Resource is reported at arrange of cutoffs from 0.5 gm/t Au to 1 gm/t Au. • Final cutoffs will be determined following pit optimisation and economic studies.
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	• The Resources defined to date would potentially be amenable to simple open pit mining. .
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• Metallurgical test work has suggested excellent gold recoveries, via conventional CIP/CIL gold treatment. • Test work to date has shown that the gold mineralisation is amenable to conventional recoveries via gravity and leaching with approximately 30% of the total gold content recovered via gravity separation and mercury amalgamation. • A total gold recovery of 91->94% was achieved, which is consistent with previous recoveries from the Orelia deposit through the Bronzewing mill, during previous treatment regimes. • The gold extraction was good with +92% of the gold recovered by gravity separation followed by 18-24 hours of cyanide leaching.
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• The Orelia open pit was last mined in April 2013. All relevant permits have been complied with and an updated Mining Proposal will be lodged following final pit design and scheduling. The open pit is on a granted mining lease last operated 3.5 years ago. No impediment to mining and ore processing is envisaged and an updated design is due in the coming months.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• Bulk density/specific gravity have been assigned based on testwork (Archimedes Method) of material of various geological and mineralisation types. The following densities are applied to the Resource model. • Systematic ISBD have been completed in the past at Orelia via the Archimedes method (108 determinations) based on a range of ore types and rock types. ISBDs of ore have ranged 2.64 to 3.51 with a mean of 2.86 t/bcm. It is believed the average ISBD (2.70) used for the Orelia ore may be slightly conservative. • Base of oxidation and top of fresh digital terrain models were constructed and assigned into the bock model.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• The Mineral Resources have been classified as Indicated and Inferred based on drill spacing and geological continuity. • The Resource model uses a classification scheme based upon drill hole spacing plus block estimation parameters, including kriging variance, number of composites in search ellipsoid informing the block cell and average distance of data to block centroid. • The results of the Mineral Resource Estimation reflect the views of the Competent Person.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• Echo Resources personnel have reviewed the block model relative to the drilling data and considers the estimate to be an accurate reflection of the gold mineralisation at Orelia.
Discussion of relative	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent*	• The relative accuracy of the Mineral Resource is reflected in the reporting of the Mineral Resource as being in line with the guidelines of the 2012 JORC.

Material	Density
In-pit Fill	2.00
Oxide	1.80
Transitional	2.20
Fresh Waste	2.60
Fresh Mineralised	2.70

Criteria	JORC Code explanation	Commentary
accuracy/ confidence	*Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• The statement relates to global estimates of tonnes and grade, with reference made to Resources above a certain cut-off that are intended to assist mining studies. • A block model was produced of the previously mined mineralisation and reconciled well with previous production data from the total Orelia open pit, the results from this are presented below. **ORELIA MINED RESOURCE with ORE LOSS and DILUTION** CUTOFF | TONNES | AuCut | Aucut Oz 1.00 | 7,521,047 | 1.76 | 424,981 0.90 | 8,521,059 | 1.64 | 449,364 0.80 | 9,652,078 | 1.53 | 474,062 0.70 | 11,028,066 | 1.41 | 500,537 0.60 | 12,771,253 | 1.29 | 529,618 0.50 | 14,871,966 | 1.17 | 559,211

Section 4 Estimation and Reporting of Ore Reserves

(Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	• *Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.* • *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*	• The ore Reserve estimate has been based on the following Mineral Resource estimate as announced to ASX by Echo on 7 September 2017 (15.9Mt @ 2.1g/t Au), see Section 3 JORC Table above. • The Mineral Resource for Orelia has been reported inclusive of the Ore Reserve estimation stated here.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• Stuart Cruickshanks visited site in March 2017. During this visit the various deposit areas were inspected with particular interest in access evaluation and practical consideration for mining of open pit in the local terrain. Diamond core of the mineralised zones were also inspected to inform assumptions on selectivity of mining.
Study status	• *The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.* • *The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.*	• Work to a Feasibility Study level based on refurbishing the Bronzewing CIL processing plant has been undertaken in order to enable the Mineral Resources to be converted to Ore Reserves stated here. • The study was carried out internally and externally using consultants when appropriate.
Cut-off parameters	• *The basis of the cut-off grade(s) or quality parameters applied.*	• Cut-off is calculated as part of the mine optimisation evaluation and equates to 0.60g/t Au. • The cut-off grades used in the estimation of this Ore Reserve is the non-mining, break-even gold grade taking into account mining recovery and dilution, metallurgical recovery, site operating costs, royalties and revenues.
Mining factors or assumptions	• *The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).* • *The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.* • *The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.* • *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).* • *The mining dilution factors used.* • *The mining recovery factors used.* • *Any minimum mining widths used.* • *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.* • *The infrastructure requirements of the selected mining methods.*	• Appropriate factors determined during the course of the Feasibility study were applied to the Mineral Resources by Lerchs Grossman optimization methodology. Detailed pit designs were then carried out on the selected optimized pit shells and Ore Reserves reported from these designs. • Conventional open pit mining techniques using drill and blast with material movement by hydraulic excavator and trucks will be employed. The project scale and selectivity would suit 120 t – 250 t class excavators in a backhoe configuration matched to 95 t class mine haul trucks and applicable ancillary equipment. To suit this sized equipment a bench height of 5m has been adopted. The benches will be excavated on 2 x 2.5 m high flitches, for blasted material this will be 2 x 3 m high flitches when swell is accounted for. Geotechnical assessments of open pit mining of the Orelia pit have been carried out by Peter O'Bryan and Associates. The assessment provided base case wall design parameters for open pit mining evaluation. • Grade control sample collection by reverse circulation drilling has been allowed for in the Feasibility Study. • To estimate the mining loss and dilution for the Mineral Resources ore reserves block models were prepared by averaging the grades of the ore and non-ore proportions across model block volumes for all elements reported in the resource model. This has effectively diluted the ore with the adjacent non-ore blocks and so simulating mining dilution based on the parent block sizes 5m x 5m x 5m (X x Y x Z) for the Orelia deposit.

Criteria	JORC Code explanation	Commentary
		• All gold grades reported in this estimate refer to these diluted grades. Mining ore losses result from blocks with small ore proportions which are effectively diluted to the extent that the average grade is below the economic cut off of the reported Ore Reserves. • No Inferred Mineral Resources have been used in the studies. All Inferred Mineral Resources are treated as waste in the mining studies. • Infrastructure to support the mining operations has been allowed for. This includes: - Mine haul roads and access roads - ROM Stock piles area adjacent to the pit exits - Haulage roads from the pits to the process plant - Waste rock dumps - Mine services area including workshop, warehouse, offices, and fuel storage and dispensing. - Diesel power generation - Mine accommodation village - Surface water management and pit dewatering infrastructure
Metallurgical factors or assumptions	• *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.* • *Whether the metallurgical process is well-tested technology or novel in nature.* • *The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.* • *Any assumptions or allowances made for deleterious elements.* • *The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.* • *For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?*	• The feasibility study has been based on conventional CIL process which is well proven technology. The project is based on refurbishing the Bronzewing plant which has proven operating history including processing ore from the Orelia deposit. • In addition to historical metallurgical and process plant operating history, a Feasibility level metallurgical test work programme has been undertaken. • Metallurgical samples representing know mineralogical domains, grade ranges and oxidation profiles have been included are deemed to be representative of the projects deposits. • No deleterious elements have been detected. • For the Orelia deposit, historical performance from processing has been used in addition to samples sourced from diamond core.
Environmental	• *The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.*	• Environmental and Social Impact Assessment has been completed for a project. • The Orelia open pit is located on a granted mining lease and was previously mined in 2013 however the mine is currently on 'care and maintenance', and an updated project management plan and mining proposal is currently being prepared and no impediments to the restarting of mining are known to exist.
Infrastructure	• *The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.*	• The Feasibility study has estimated the cost to upgrade/install the necessary infrastructure to support the project. This Includes: - Upgrading access roads - Water collection via surface water runoff collection from large catchment, pit dewatering and groundwater bores, and a storage dam - Power supply by diesel generators - Processing plant and Tailings storage facility. - Accommodation village, offices and other necessary buildings • A majority of the infrastructure exists and is in good working order at the Bronzewing site.
Costs	• *The derivation of, or assumptions made, regarding projected capital costs in the study.* • *The methodology used to estimate operating costs.* • *Allowances made for the content of deleterious elements.* • *The source of exchange rates used in the study.* • *Derivation of transportation charges.* • *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.* • *The allowances made for royalties payable, both Government and private.*	• Capital costs for the process plant and associated infrastructure have been estimated to the required level of accuracy for a Feasibility Study by Mintrex Pty Ltd. Capital costs for mining related infrastructure have been source from quotations and tendered rates sourced from contract mining companies active in the West Australian goldfields. • Process and general and administration operating costs were developed by Mintrex Pty Ltd. Costs were estimated from first principles based on reagent consumptions and consumable usage rates determined from test work. Power cost estimate is based diesel generators. Labour rates were benchmarked against existing operations. • Mining operating costs were sourced from quotations and tendered rates received from mining contracting companies active in Western Australia. • Transportation and refining charges have been accounted for. • Government Royalties are payable as per the Mining Code of Western Australia. A royalty of 2.5% is payable on revenue, with a further 3% privately held NSR royalty is payable on ore processed

Criteria	JORC Code explanation	Commentary
		through the Bronzewing Mill.
Revenue factors	• *The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.* • *The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.*	• No factors were applied in the application of the metal prices stated in the above section. • The head grades as reported in these estimates were not factored. Mining dilution and recoveries were taken into account as modelled/discussed elsewhere in this statement and as such no further factors were considered appropriate and were therefore not applied • A gold price of AU$1600/oz based on analyst consensus has been used for the Ore Reserve estimate.
Market assessment	• *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.* • *A customer and competitor analysis along with the identification of likely market windows for the product.* • *Price and volume forecasts and the basis for these forecasts.* • *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.*	• The product of this mine is a precious metal and the stated methodology of applying the metal price is considered to be adequate and appropriate. No major market factors are anticipated or known at the time of reporting, to provide a reason for adjusting this assumption.
Economic	• *The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.* • *NPV ranges and sensitivity to variations in the significant assumptions and inputs.*	• Inputs to the economic analysis were: - Mine production schedule, including gold production schedule, produced as part of the Feasibility study. - Mine operating costs, process operating costs and general and administrative costs as stated above. - Gold price as stated above. - Applicable royalties and taxes and duties per the mining code of Western Australia - Discount rate of 8% • The Project's sensitivity to various inputs were also investigated. The Project is most sensitive to gold price. However the project value remained positive up to a 20% reduction in gold price.
Social	• *The status of agreements with key stakeholders and matters leading to social licence to operate.*	• Consultation and engagement has occurred with the local community, appropriate land councils and shire councils in the area, and along with the DMIRS.
Other	• *To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:* • *Any identified material naturally occurring risks.* • *The status of material legal agreements and marketing arrangements.* • *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.*	• To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves: • No material naturally occurring risks have been identified to the Project. • Gold produced from the Orelia gold deposit will be sold on the spot market, to the extent that any possible future hedging obligations have been repaid. • A royalty of 2.5% is payable to the Western Australian state government and a 3% is payable to third parties. • The Orelia open pit is located on a granted mining lease and was previously mined in 2013 however the mine is currently on 'care and maintenance', and an updated project management plan and mining proposal is currently being prepared.
Classification	• *The basis for the classification of the Ore Reserves into varying confidence categories.* • *Whether the result appropriately reflects the Competent Person's view of the deposit.* • *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	• Ore Reserves which have been reported as Probable have been derived directly from the Mineral resource classified at the Indicated level of confidence. • No Mineral Resources classified at the Inferred level of confidence are included in these estimated Ore Reserves. • The Competent Person is satisfied that the stated Ore Reserve classification reflects the outcome of the technical and economic studies
Audits or reviews	• *The results of any audits or reviews of Ore Reserve estimates.*	• No audits or reviews of Ore Reserve estimates have been undertaken to date.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors*	• In the estimating of these Ore Reserves, the confidence levels as expressed in the Mineral Resource estimates have been accepted in the respective resource classification categories. • The Ore Reserves estimates relate to global estimates in the conversion of Mineral Resources to Ore Reserves, due largely to the spacing of the drill data on which the estimates are based, relative to the intended local selectivity of the mining operations. • Accuracy and confidence of modifying factors are generally consistent with the current level of this study. The modifying factors

Criteria	JORC Code explanation	Commentary
	which could affect the relative accuracy and confidence of the estimate. • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.* • *It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	applied in the estimation of the Ore Reserves are considered to be of a sufficiently high level of confidence not to have a material impact on the viability of the estimated Ore Reserves.

Julius Gold Deposit

Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections)

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *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.* • *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *Aspects of the determination of mineralisation that are Material to the Public Report.* • *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.*	• 2006-2015 Drilling at Julius has comprised a total of 225 RC holes for 27.703 metres, 32 aircore holes for 1529 meters and 6 diamond holes for 1262 metres. • More Recent exploration at the Julius Gold Deposit comprised aircore drilling of 67 holes for 2,879 metres, 53 RC holes for 5113 metres and 9 HQ triple tube diamond holes for 481 metres. Approximately 2-4kg of sample was collected from each metre for analysis by riffle splitting of the aircore sample interval collected via the rig cyclone. Onboard cone splitter for the RC and half diamond core for the HQ drilling. • Samples were 2 kilogram samples from the drill spoils collected. Drill hole collar locations were recorded by handheld GPS survey with accuracy +/-2 metres. • Analysis was conducted by submitting the 2kg sample whole for preparation by crushing, drying and pulverising at Nagrom Laboratories for gold analysis via Fire Assay/ICP. • A number of 4 metre composites were also collected in areas outside of the interpreted mineralised intervals.
Drilling techniques	• *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.).*	• Aircore drilling (4 inch), predominantly blade bit with hammer at the bottom of a number of holes, as required below the base of oxidation (>50 metres vertical depth). • RC drilling (5 ¼ inch face sampling hammer) from surface • HQ Triple Tube from surface (78 mm)
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.* • *Measures taken to maximise sample recovery and ensure representative nature of the samples.* • *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.*	• Drill sample returns as recorded were considered excellent . • There is insufficient data available at the present stage to evaluate potential sampling bias.
Logging	• *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.* • *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.* • *The total length and percentage of the relevant intersections logged.*	• 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. • Rock chip boxes of all sample intervals were collected. All samples were logged. • HQ core was logged in detail, photographed wet and dry, RQDs, structural measurements on all completed. Core was orientated where possible. • All drilling was logged.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.* • *For all sample types, the nature, quality and appropriateness of the sample preparation technique.*	• HQ diamond core was sent to ALS where it was sawn in half along orientation lines or cut lines marked by the geologist in the field. • Sample preparation for all recent samples follows industry best practice and was undertaken by Nagrom Laboratories in Perth where they were crushed, dried and pulverised to produce a sub sample for analysis.

Criteria	JORC Code explanation	Commentary
	• *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.* • *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.* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• Sample preparation involving oven drying, fine crushing to 95% passing 4mm, followed by rotary splitting and pulverisation to 85% passing 75 microns. • QC for sub sampling follows Nagrom procedures. • Field duplicates were taken at a rate of 1:30. • Blanks were inserted at a rate of 1:30 • Standards were inserted at a rate of 1:30. • Sample sizes are considered appropriate to the grain size of the material being sampled.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.* • *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.* • *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.*	• The methods are considered appropriate to the style of mineralisation. Extractions are considered near total. • No geophysical tools were used to determine any element concentrations at this stage. • 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.
Verification of sampling and assaying	• *The verification of significant intersections by either independent or alternative company personnel.* • *The use of twinned holes.* • *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* • *Discuss any adjustment to assay data.*	• The Company's Geologist has visually reviewed the samples collected. • 4 HQ diamond twin holes drilled • Data and related information is stored in a validated Mapinfo or Micromine database. Data has been visually checked for import errors. • No adjustments to assay data have been made.
Location of data points	• *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.* • *Specification of the grid system used.* • *Quality and adequacy of topographic control.*	• All drillholes have been located by DGPS with precision of sample locations considered +/-1m. • Location grid of plans and cross sections and coordinates in this release 2016 samples use MGA94, Z51 datum. • Topographic data was assigned based on a DTM of the Julius opening surface..
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.* • *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.* • *Whether sample compositing has been applied.*	• The holes are nominally spaced on a 10-20 metre (E-W spacing) with hole spacing along each section ranging from 10-20 metres spacing along each section line. • Data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for Mineral Resource estimation procedures. • Sample compositing has occurred on a small number of samples (4 metre composite samples) outside of the interpreted main mineralized zone. .
Orientation of data in relation to geological structure	• *Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.* • *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.*	• The orientation of sampling is considered adequate and there is not enough data to determine bias if any. • Mineralised outcrop strikes north-north-east. Drilling was orthogonal to this apparent strike and comprised vertical drill holes. The flat lying laterite also trends in this orientation and the vertical drilling completed is considered entirely appropriate for this style of mineralization.
Sample security	• *The measures taken to ensure sample security.*	• Chain of custody is managed by the Company and samples are transported to the laboratory via Company staff with samples safely consigned to Nagrom 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.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	• No review or audit of sampling techniques or data compilation has been undertaken at this stage.

Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	• *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.* • *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.*	• The Julius Gold Deposit is located within E53/1042 located in the northern Yandal Greenstone Belt and is 100% owned by Echo Resources Ltd. The tenement is located in the Wiluna Native Title Claim Group (WC99/24). 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. • The tenement is in good standing • No impediments to operating on the permit are known to exist.

Criteria	JORC Code explanation	Commentary
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	• The Julius deposit area was initially located by Newmont based on shallow results. Echo Resources subsequently completed RC drilling which defined the extent of the resource as understood today.
Geology	• *Deposit type, geological setting and style of mineralisation.*	• The Julius Gold Deposit consists of a flat lying gold rich laterite zone which is located between 10-15 metres vertical depth and overlain by indurated barren transported sands and silts. . This is underlain by clay rich supergene gold mineralisation and at depth primary gold mineralization associated with silica, quartz veining and sulphide development. The mineralisation is largely focused on a shallow west-northwest dipping granite/greenstone contact (principally ultramafic lithologies).

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 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.*
		• 2006-2015 Drilling at Julius has comprised a total of 225 RC holes for 27.703 metres, 32 aircore holes for 1529 meters and 6 diamond holes for 1262 metres.
		• More recently (2016) a total of 67 aircore drillholes for 2879 metres, 53 RC holes for 5113 metres and 9 HQ triple tube holes for 481 metres were drilled on a global nominal 10-20 metre centres, focused on the mineralized contact zone and laterite gold mineralized zone in the vicinity of the granite-greenstone contact. Full drillhole details for the results received to date have been previously provided in various ASX announcements along with appropriate maps and plans.

Data aggregation methods	• *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.* • *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.* • *The assumptions used for any reporting of metal equivalent values should be clearly stated.*	• No averaging or aggregation techniques have been applied. • No top cuts have been applied to exploration results. • No metal equivalent values are used in this report.
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* • *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').*	• The orientation or geometry of the mineralised zones strikes in a north-northeastly direction and dips in a shallow manner to the west-northwest. The laterite is flat lying and overlies this contact zone, with the drilling largely interpreted to be orthogonal to strike.
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	• *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.*	• All results for the target economic mineral being gold have been reported.
Other substantive exploration data	• *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.*	• Previous work by Echo has highlighted a gold resource of 4Mt @ 1.69 g/t Au at Julius. Metallurgical work suggests excellent gold recoveries are likely through a conventional CIP/CIL gold plant. There are at least two of these in the district within trucking distance of Julius.
Further work	• *The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).* • *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	• Future RC, diamond and aircore drilling is being considered to further evaluate the Julius Gold Deposit. • Refer to maps in main body of report for potential target areas.

Section 3 Estimation and Reporting of Mineral Resources

(Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	• *Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.* • *Data validation procedures used.*	• Data was provided as a validated Micromine Database and was digitally imported into Micromine software. Validation routines were run to confirm validity of all data. • Analytical results have all been electronically merged to avoid any transcription errors.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• No site visit has been undertaken by the Competent Person, as little relevant information is available on site and the Competent Person is familiar with the type of gold deposit under consideration. Diamond core and aircore and RC chip boxes have been reviewed. Drilling techniques and methods have been reviewed.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	• The confidence in the geological interpretation is very good, with the latest infill drilling allowing a detailed interpretation. • Geological logging and interpretation allows extrapolation of drill intersections between adjacent sections. • Alternative interpretations would result in similar tonnage and grade estimation techniques. • Geological boundaries are determined by the spatial locations of the various mineralised structures. • Flat lying laterite gold mineralisation confined to individual wireframes, supergene and fresh material individually assessed. Oxidation profiles established and assigned into the model.
Dimensions	• *The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.*	• The mineralisation dips shallowly (maximum 30-45º) but variably to the west and ranges from 6m to 30m thick. A shallow plunge to the northwest is suggested based on drilling to date. The resource extends over approximately 850 metres of strike and extends to a vertical depth of 250 metres. .

Estimation and modelling techniques	• *The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.*
	• *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.*
	• *The assumptions made regarding recovery of by-products.*
	• *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).*
	• *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.*
	• *Any assumptions behind modelling of selective mining units.*
	• *Any assumptions about correlation between variables.*
	• *Description of how the geological interpretation was used to control the resource estimates.*
	• *Discussion of basis for using or not using grade cutting or capping.*
	• *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*
		• Grade estimation using an Ordinary Kriging methodology has been applied to all Resources. A series of wireframes has been used to subset and constrain the data points used in the interpolation and only individual grades from individual wireframes were used.
		• Variography was carried out on four major zones to define the variogram models for Ordinary Kriging interpolation.
		• All estimation was carried out in Micromine 2016 (64-bit SP3) software.
		• The block models were constructed using a 5m (E) by 10m (N) by 2.5m (Z) block size, constrained by a series of individual wireframes, with sub-cells to 1m x 1m x 0.5m to accurately represent wireframe shapes.
		• Block size is generally half the sample spacing or greater in areas of infill drilling, and typically one quarter in wider spaced drilling areas.
		• No deleterious elements have been identified
		• No assumptions regarding recovery of byproducts have been made
		• An unfolding (or flattening) methodology has been used in the interpolation; this obviates the need for varying search ellipses with dip, with all searches being horizontal, and oriented along the strike direction of each mineralised zone.
		• Search ellipsoids use multiple passes to ensure blocks are filled in areas with sparser drilling. Sizes of searches are based on Kriging Neighbourhood Analysis and are covered in detail in the body of the accompanying report.
		• Sample data was composited to 1m down-hole composites, while honouring breaks in mineralised zone interpretation.
		• The geological interpretation follows a shallow dipping contact zone between a granite to the east and an ultramafic/mafic to the west. Strong shearing accompanies the contact and gold mineralisation.
		• Geological interpretation was carried out of the mineralised zones; consistent, generally shallow-dipping mineralised structures with 1-12m true thickness were interpreted.
		• Top cut analysis was carried out on each mineralised zone, using a combination of inflection points on log probability plots, outliers on log histograms and the effect of top cuts on cut mean and coefficient of variation.
		• Validation was carried out in a number of ways, including
		  ○ Visual inspection section, plan and 3D
		  ○ Swathe plot validation
		  ○ Model vs composite statistics
		  ○ ID2 vs OK model checks

Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	• Tonnages are estimated on a dry basis.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	• A nominal downhole cut-off of 0.5 g/t Au has been used to define the mineralised zones. The basis of the 0.5 g/t Au cutoff is an economic

Criteria	JORC Code explanation	Commentary
		analysis coupled to mining dilution considerations. The cut-off corresponds reasonably well with the mineralised shear zone contact zone between the mafic and granite contact.
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.*	• The resources defined to date would potentially be amenable to simple open pit mining. • The shallow dip of the mineralisation, coupled to the extensive near surface laterite mineralisation lends itself to open pit mining with a relatively low stripping ratio.
Metallurgical factors or assumptions	• *The basis for assumptions or predictions regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.*	• Metallurgical testwork has suggested excellent gold recoveries, via conventional CIP/CIL gold treatment. • Test work to date has shown that the gold mineralisation is amenable to conventional recoveries via gravity and leaching with approximately 33.2% of the total gold content recovered via gravity separation and mercury amalgamation. • A very high total gold recovery of 98.6% was achieved. • The gold extraction was very fast with 95.4% of the gold recovered by gravity separation followed by only 2 hours of cyanide leaching.
Environmental factors or assumptions	• *Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.*	• Environmental studies have been completed and a Mining Proposal and Mine Closure Plan have been lodged and approved by the DMIRS. A clearing permit has been granted. The general Yandal area is well known for gold mining and no environmental impediments are expected.
Bulk density	• *Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.* • *The bulk density for bulk material must have been measured by methods that adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.* • *Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.*	• Bulk density/specific gravity have been assigned based on testwork (Archimedes Method) of material of various geological and mineralisation types. The following densities are applied to the resource model. • ALS completed the Bulk Density determinations based on weight in water/weight in air, after wax coating of the diamond core samples. • Base of oxidation, top of fresh and a silcrete digital terrain models were constructed and assigned into the bock model, for both waste and ore.
Classification	• *The basis for the classification of the Mineral Resources into varying confidence categories.* • *Whether appropriate account has been taken of all relevant factors (ie relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).* • *Whether the result appropriately reflects the Competent Person's view of the deposit.*	• The Mineral Resources have been classified as Measured, Indicated and Inferred based on the drill spacing and geological continuity at the various deposits. • The Resource model uses a classification scheme based upon drill hole spacing plus block estimation parameters, including kriging variance, number of composites in search ellipsoid informing the block cell and average distance of data to block centroid. • The results of the Mineral Resource Estimation reflect the views of the Competent Person.
Audits or reviews	• *The results of any audits or reviews of Mineral Resource estimates.*	• Echo Resources personnel have reviewed the block model relative to the drilling data and considers the estimate to be an accurate reflection of the gold mineralisation at Julius.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the*	• The relative accuracy of the Mineral Resource is reflected in the reporting of the Mineral Resource as being in line with the guidelines of the 2012 JORC. • The statement relates to global estimates of tonnes and grade, with reference made to resources above a certain cut-off that are intended to assist mining studies. • No production data is available for comparisons.

Material	Density
Fresh Mineralised	2.6
Transition Mineralised	2.4
Oxide Mineralised	1.8
Silcrete Domain	2.2
Laterite Mineralised	2.4
Waste > 500m RL	2.1

Criteria	JORC Code explanation	Commentary
	procedures used. • *These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	

Section 4 Estimation and Reporting of Ore Reserves

(Criteria listed in section 1, and where relevant in sections 2 and 3, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral Resource estimate for conversion to Ore Reserves	• *Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.* • *Clear statement as to whether the Mineral Resources are reported additional to, or inclusive of, the Ore Reserves.*	• The ore Reserve estimate has been based on the follow Mineral Resource estimate as announced to ASX on 23 November 2016 (5.2Mt @ 2.0g/t Au), see Section 3 JORC Table above. • The Mineral Resources for both the deposits have been reported inclusive of the Ore Reserves estimated and stated here.
Site visits	• *Comment on any site visits undertaken by the Competent Person and the outcome of those visits.* • *If no site visits have been undertaken indicate why this is the case.*	• Stuart Cruickshanks has visited site in March 2017. During this visit the various deposit areas were inspected with particular interest in access evaluation and practical consideration for mining of open pit in the local terrain. Diamond core of the mineralised zones were also inspected to inform assumptions on selectivity of mining.
Study status	• *The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.* • *The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable and economically viable, and that material Modifying Factors have been considered.*	• Work to a Feasibility Study level based on refurbishing the Bronzewing CIL processing plant has been undertaken in order to enable the Mineral Resources to be converted to Ore Reserves stated here. • The study was carried out internally and externally using consultants when appropriate.
Cut-off parameters	• *The basis of the cut-off grade(s) or quality parameters applied.*	• Cut-off is calculated as part of the mine optimisation evaluation and equates to 0.80g/t Au. The cut-off grades used in the estimation of these Ore Reserves is the non-mining, break-even gold grade taking into account mining recovery and dilution, metallurgical recovery, site operating costs, royalties and revenues.
Mining factors or assumptions	• *The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).* • *The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.* • *The assumptions made regarding geotechnical parameters (eg pit slopes, stope sizes, etc), grade control and pre-production drilling.* • *The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).* • *The mining dilution factors used.* • *The mining recovery factors used.* • *Any minimum mining widths used.* • *The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.* • *The infrastructure requirements of the selected mining methods.*	• Appropriate factors determined during the course of the Feasibility study were applied to the Mineral Resources by Lerchs Grossman optimization methodology. Detailed pit designs were then carried out on the selected optimized pit shells and Ore Reserves reported from these designs. • Conventional open pit mining techniques using drill and blast with material movement by hydraulic excavator and trucks will be employed. The project scale and selectivity would suit 120 t – 250 t class excavators in a backhoe configuration matched to 95 t class mine haul trucks and applicable ancillary equipment. To suit this sized equipment a bench height of 5m has been adopted. The benches will be excavated on 2 x 2.5 m high flitches, for blasted material this will be 2 x 3 m high flitches when swell is accounted for. Geotechnical assessments of open pit mining of the Julius pit have been carried out by independent consultant, Tim Green. The assessment provided base case wall design parameters for open pit mining evaluation. • Grade control sample collection by reverse circulation drilling has been allowed for in the Feasibility Study. • To estimate the mining loss and dilution for the Mineral Resources ore reserves block models were prepared by averaging the grades of the ore and non-ore proportions across model block volumes for all elements reported in the resource model. This has effectively diluted the ore with the adjacent non-ore blocks and so simulating mining dilution based on the parent block sizes 2.5m x 5m x 2.5m for the Julius deposit. • All gold grades reported in this estimate refer to these diluted grades. Mining ore losses result from blocks with small ore proportions which are effectively diluted to the extent that the average grade is below the economic cut off of the reported Ore Reserves. • No Inferred Mineral Resources have been used in the studies. All Inferred Mineral Resources are treated as waste in the mining studies. • Infrastructure to support the mining operations has been allowed for. This includes: - Mine haul roads and access roads - ROM Stock piles area adjacent to the pit exits - Haulage roads from the pits to the process plant - Waste rock dumps - Mine services area including workshop, warehouse, offices, and fuel storage and dispensing. - Diesel power generation - Mine accommodation village - Surface water management and pit dewatering infrastructure

Criteria	JORC Code explanation	Commentary
Metallurgical factors or assumptions	• *The metallurgical process proposed and the appropriateness of that process to the style of mineralisation.* • *Whether the metallurgical process is well-tested technology or novel in nature.* • *The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.* • *Any assumptions or allowances made for deleterious elements.* • *The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.* • *For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?*	• The feasibility study has been based on conventional CIL process which is well proven technology. The project is based on refurbishing the Bronzewing plant which has proven operating history including processing ore from the Orelia deposit. • Well tested existing metallurgical technology and in addition to historical metallurgical and process plant operating history, Feasibility level metallurgical test work programme has been undertaken. • Metallurgical samples representing know mineralogical domains, grade ranges and oxidation profiles have been included are deemed to be representative of the Julius deposit. • No deleterious elements have been detected. • For the Julius deposit, no bulk sampling has been undertaken - all samples have been source from diamond drill core as is appropriate for this style of mineralization.
Environmental	• *The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of potential sites, status of design options considered and, where applicable, the status of approvals for process residue storage and waste dumps should be reported.*	• A Mining Proposal, Mine Closure Plan and Clearing permit has been approved by the DMIRS. • Waste rock is typically non-acid forming. • No tailings will be stored on site. • Environmental and Social Impact Assessment has been completed for the project.
Infrastructure	• *The existence of appropriate infrastructure: availability of land for plant development, power, water, transportation (particularly for bulk commodities), labour, accommodation; or the ease with which the infrastructure can be provided, or accessed.*	• The Feasibility study has estimated the cost to upgrade/install the necessary infrastructure to support the project. This Includes: - Upgrading access roads - Water collection via surface water runoff collection from large catchment, pit dewatering and groundwater bores, and a storage dam - Power supply by diesel generators - Processing plant and Tailings storage facility. - Accommodation village, offices and other necessary buildings • A majority of the infrastructure exists and is in good working order at the Bronzewing site.
Costs	• *The derivation of, or assumptions made, regarding projected capital costs in the study.* • *The methodology used to estimate operating costs.* • *Allowances made for the content of deleterious elements.* • *The source of exchange rates used in the study.* • *Derivation of transportation charges.* • *The basis for forecasting or source of treatment and refining charges, penalties for failure to meet specification, etc.* • *The allowances made for royalties payable, both Government and private.*	• Capital costs for the process plant and associated infrastructure have been estimated to the required level of accuracy for a Feasibility Study by Mintrex Pty Ltd. Capital costs for mining related infrastructure have been source from quotations and tendered rates sourced from contract mining companies active in the West Australian goldfields. • Process and general and administration operating costs were developed by Mintrex Pty Ltd. Costs were estimated from first principles based on reagent consumptions and consumable usage rates determined from test work. Power cost estimate is based diesel generators. Labour rates were benchmarked against existing operations. • Mining operating costs were sourced from quotations and tendered rates received from mining contracting companies active in Western Australia. • Transportation and refining charges have been accounted for. Government Royalties are payable as per the Mining Code of Western Australia. A royalty of 2.5% is payable on revenue, with a further 3.6% privately held NSR royalty is payable on ore processed through the Bronzewing Mill.
Revenue factors	• *The derivation of, or assumptions made regarding revenue factors including head grade, metal or commodity price(s) exchange rates, transportation and treatment charges, penalties, net smelter returns, etc.* • *The derivation of assumptions made of metal or commodity price(s), for the principal metals, minerals and co-products.*	• No factors were applied in the application of the metal prices stated in the above section. • The head grades as reported in these estimates were not factored. Mining dilution and recoveries were taken into account as modelled/discussed elsewhere in this statement and as such no further factors were considered appropriate and were therefore not applied • A gold price of AU$1600/oz based on analyst consensus has been used for the Ore Reserve estimate.
Market assessment	• *The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.* • *A customer and competitor analysis along with the identification of likely market windows for the product.* • *Price and volume forecasts and the basis for these forecasts.* • *For industrial minerals the customer specification, testing and acceptance requirements prior to a supply contract.*	• The product of this mine is a precious metal and the stated methodology of applying the metal price is considered to be adequate and appropriate. No major market factors are anticipated or known at the time of reporting, to provide a reason for adjusting this assumption.
Economic	• *The inputs to the economic analysis to produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimated inflation, discount rate, etc.* • *NPV ranges and sensitivity to variations in the significant*	• Inputs to the economic analysis were: - Mine production schedule, including gold production schedule, produced as part of the Feasibility study. - Mine operating costs, process operating costs and general and administrative costs as stated above.

Criteria	JORC Code explanation	Commentary
	assumptions and inputs.	- Gold price as stated above. - Applicable royalties and taxes and duties per the mining code of Western Australia - Discount rate of 8% The Project's sensitivity to various inputs were also investigated. The Project is most sensitive to gold price. However the project value remained positive up to a 20% reduction in gold price.
Social	• *The status of agreements with key stakeholders and matters leading to social licence to operate.*	• Stakeholders have been consulted • Land Access Native Title Agreement and State Deed has been signed.
Other	• *To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves:* • *Any identified material naturally occurring risks.* • *The status of material legal agreements and marketing arrangements.* • *The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary Government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent.*	• To the extent relevant, the impact of the following on the project and/or on the estimation and classification of the Ore Reserves: • No material naturally occurring risks have been identified to the Project. • Gold produced from the Julius gold deposit will be sold on the spot market, to the extent that any possible future hedging obligations have been repaid. • A royalty of 2.5% is payable to the Western Australian state government and a 3.6% is payable to third parties. • The Julius deposit is located on a granted mining lease and a project management plan and mining proposal have been submitted to the DMP and have been approved. • Discussions are ongoing with regards the most favorable ore haulage route.
Classification	• *The basis for the classification of the Ore Reserves into varying confidence categories.* • *Whether the result appropriately reflects the Competent Person's view of the deposit.* • *The proportion of Probable Ore Reserves that have been derived from Measured Mineral Resources (if any).*	• Ore Reserves which have been reported as Proved have been derived directly from the Mineral resource classified at the Measured level of confidence. • Ore Reserves which have been reported as Probable have been derived directly from the Mineral resource classified at the Indicated level of confidence. • No Mineral Resources classified at the Inferred level of confidence are included in these estimated Ore Reserves. Approximately 90% of probable ore reserves have been derived from measured ore resources. • The Competent Person is satisfied that the stated Ore Reserve classification reflects the outcome of the technical and economic studies
Audits or reviews	• *The results of any audits or reviews of Ore Reserve estimates.*	• Internal audits and reviews of Ore Reserve estimates have been undertaken to date and there have been no issues identified.
Discussion of relative accuracy/ confidence	• *Where appropriate a statement of the relative accuracy and confidence level in the Ore Reserve estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the reserve within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors which could affect the relative accuracy and confidence of the estimate.* • *The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.* • *Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage.* • *It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.*	• In the estimating of these Ore Reserves, the confidence levels as expressed in the Mineral Resource estimates have been accepted in the respective resource classification categories. • The Ore Reserves estimates relate to global estimates in the conversion of Mineral Resources to Ore Reserves, due largely to the spacing of the drill data on which the estimates are based, relative to the intended local selectivity of the mining operations. • Accuracy and confidence of modifying factors are generally consistent with the current level of this study. The modifying factors applied in the estimation of the Ore Reserves are considered to be of a sufficiently high level of confidence not to have a material impact on the viability of the estimated Ore Reserves.