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**ECHO RESOURCES LIMITED**

Euroz Conference Presentation  
March 2019  
ASX | EAR

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# Corporate snapshot

## Capital structure

ASX ticker	EAR
Share price (12 March 2019)	A\$0.21
Ordinary shares on issue	551 M
Market capitalisation (undiluted)	A\$116 M
Cash (1 March 2019)	A\$5 M
Debt	A\$0 M
Liquidity (avg. daily traded shares)	1.4 M
1 year turnover	70%

## Major shareholders

Northern Star Resources	22.5%
Directors and management	3.0%
<i>Top 20 shareholders</i>	<i>60%</i>

## Recent share price performance



# A highly experienced Board



## Barry Bolitho

Chairman

- 40 Years as a mining professional
- Commissioned and managed a number of gold operations
- Executive / Director of a number of ASX and TSX listed companies



## Victor Rajasooriar

Managing Director & CEO

- Mining Engineer with 20+ years experience, technical and operations, UG and OP
- Previously COO of Barmingo and senior roles with Newmont and Gold Fields
- Worked in the Goldfields and Yandal region



## Anthony McIntosh

Non-Executive Director

- Investment banking background
- Experience in investor relations and strategic planning
- Well established network of stockbroking and fund managers



## Alan Thom

Non-Executive Director

- Mining Engineer with 20+ years mining experience
- Significant experience in Northern Goldfields (Bronzewing, Jundee and Wiluna)
- Currently Northern Star's Principal – Business Development



## Robin Dean

Non-Executive Director

- 30+ years of experience in banking, project finance and hedging
- Previous CEO of listed ASX companies including St Barbara Mines Ltd
- Director of a number of ASX listed companies



## Mark Hanlon

Non-Executive Director

- 20+ Years of commercial and merchant banking experience
- Executive experience in mining, mining services, electricity, paper & insurance
- Director of a number of ASX listed companies

# Focussed, driven management team



## Wayne Foote

### Project Manager

- Mining Engineer – 30+ years experience
- Carried out numerous feasibility studies, commissioned and managed new operations
- Previous senior roles with Gold Road Resources, Crusader Resources, B2 Gold and Resolute



## Travis Craig

### General Manager - Geology

- Geologist – 25+ years experience
- Considerable experience with targeting and developing deeper resources such as KCGM's Super Pit, Telfer and Gwalia Deeps
- Previously Chief Geologist for Maáden (+5Moz gold deposit), and held senior roles with Minjar, Sons of Gwalia and LaMancha



## Richard Hill

### CFO

- 20+ years in resource finance
- Experienced in feasibility studies, project construction, development and operations
- Previously senior roles with Egan Street, Millennium, Adamus and Newmont



## John Zimmerman

### Registered Manager

- Metallurgist – 12+ years experience
- Experienced in operational and project management, including plant refurbishment and commissioning
- Previously with Minjar, Hanking and St Barbara



## Simon Coyle

### Mining Manager

- Mining Engineer - 15+ years of experience
- Operational management experience with contractor based mining and owner operator
- Previously with Consolidated Minerals and KCGM



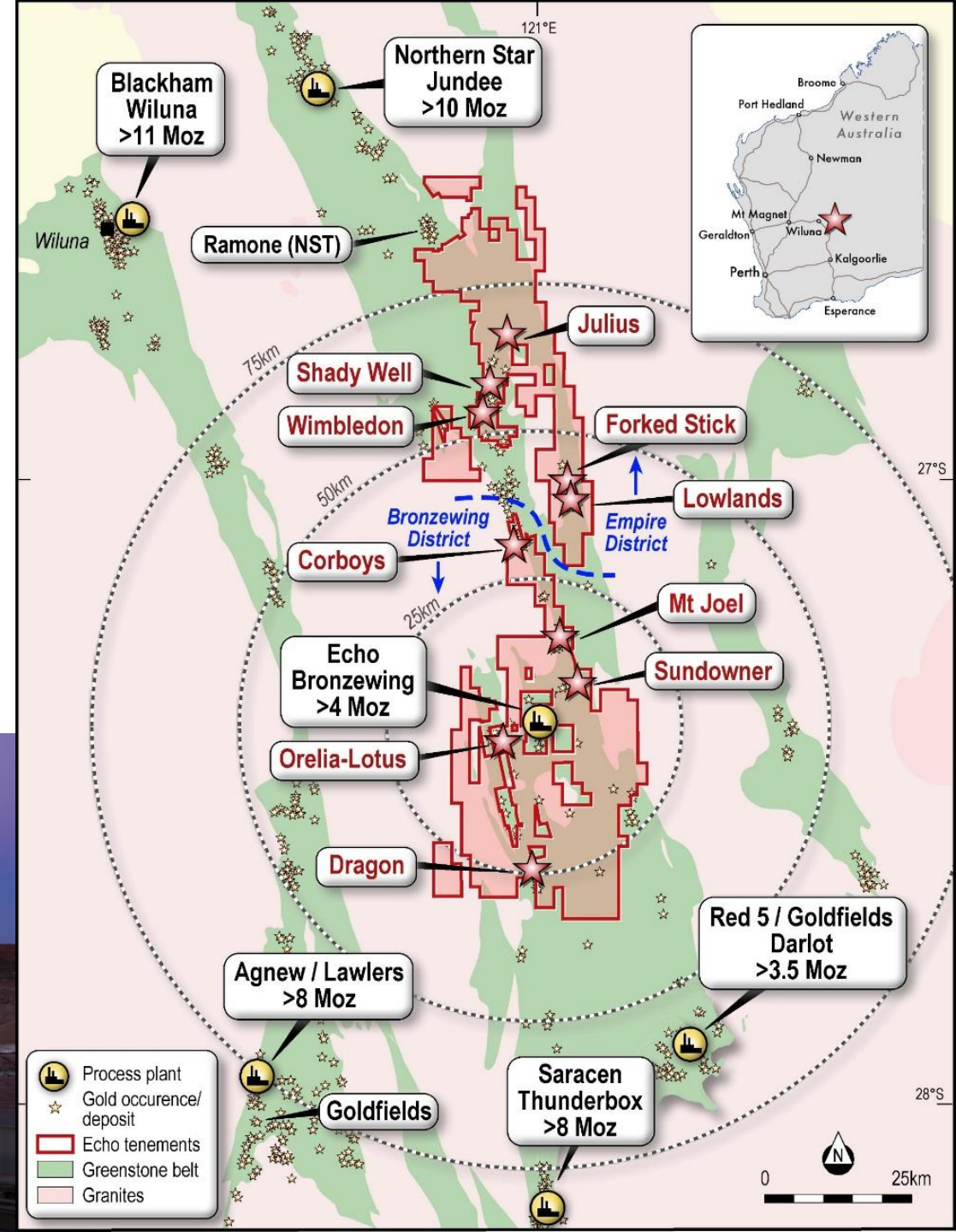
## Kate Stoney

### GM Finance and Company Secretary

- Accountant – 10+ years experience
- Experience in cost control, Pronto and project management
- Previously Company Secretary for a number of ASX listed companies

# Yandal Gold Project overview

- Highly endowed greenstone belt
- Operationally active, prolific gold production region
- Large (1,600km<sup>2</sup>), highly prospective land holding
- 1.7 Moz gold resource and growing
- 100% ownership of existing 2Mtpa Bronzewing plant
- Other key operating infrastructure in place
- Pending Revised BFS completion



# Short plant lead time

- Detailed plant refurbishment scope done by Mintrex
- MACA Interquip have verified scope/price estimates multiple times
- Approximately 6 month lead time from green light to operational readiness
- High confidence in capital estimate for plant refurbishment
- Proven process flowsheet (detailed Orelia processing history)
- Only minor equipment changes required
- High potential for smooth recommissioning and rapid ramp-up
- Major equipment spares on site (eg ball mill motor, mill pinion)



# Excellent existing infrastructure

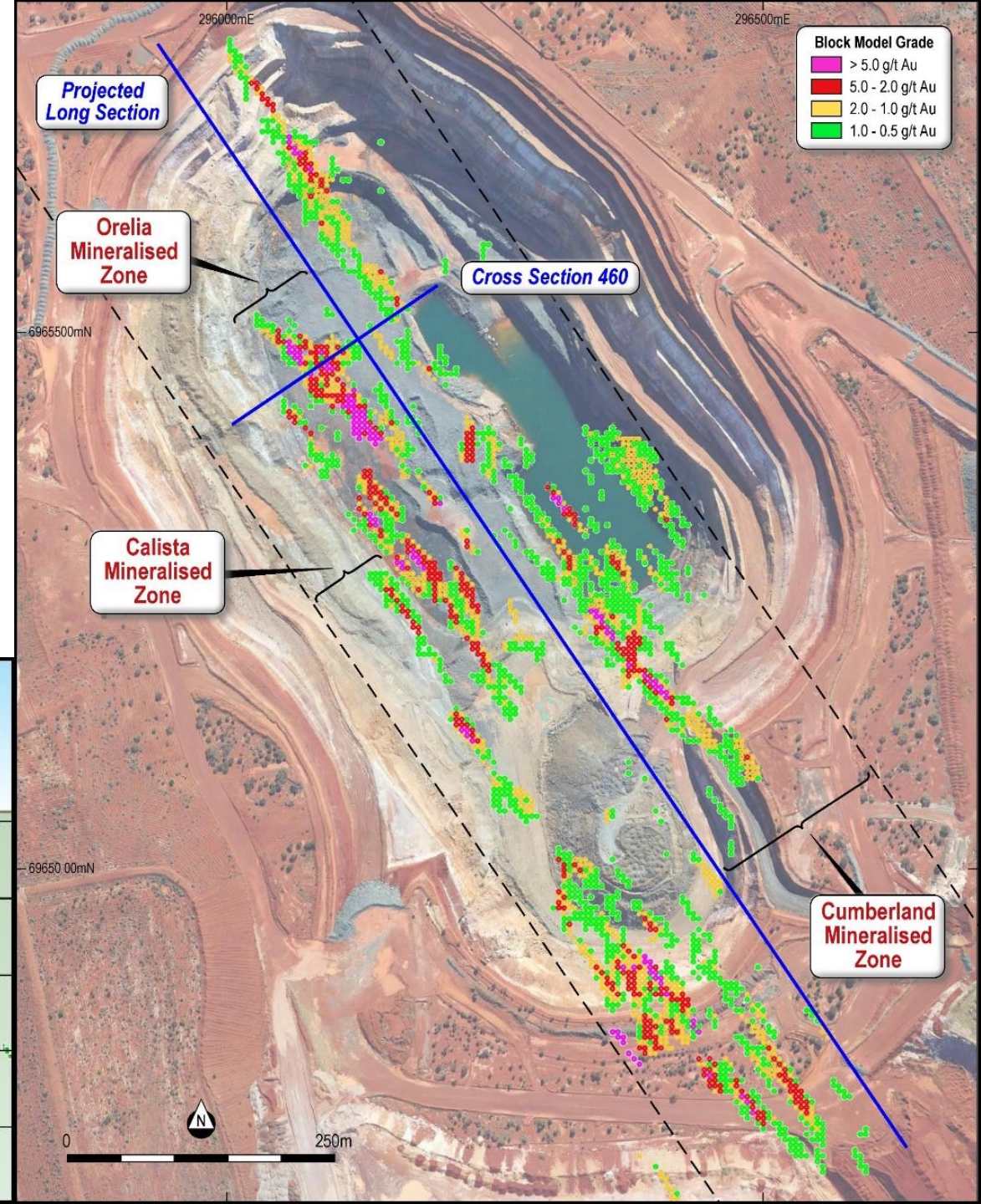
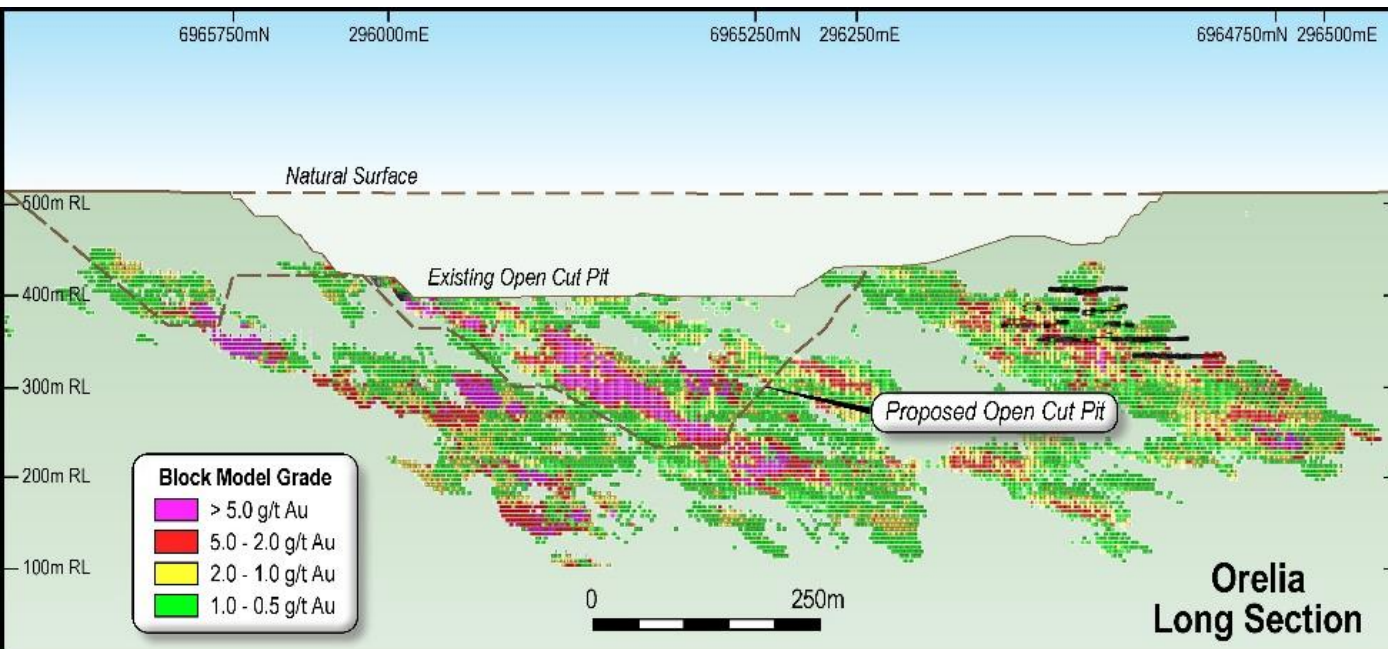
- High-quality 240 person accommodation camp, kitchen and wet mess recently refurbished
- Electrical reticulation and power station infrastructure
- All surface road infrastructure in place and haul road construction from Julius well advanced
- Large-capacity, fully permitted tailings storage facility
- 2,000m laterite airstrip
- Borefield infrastructure
- New microwave comms link under construction
- Existing offices, workshops and warehouse





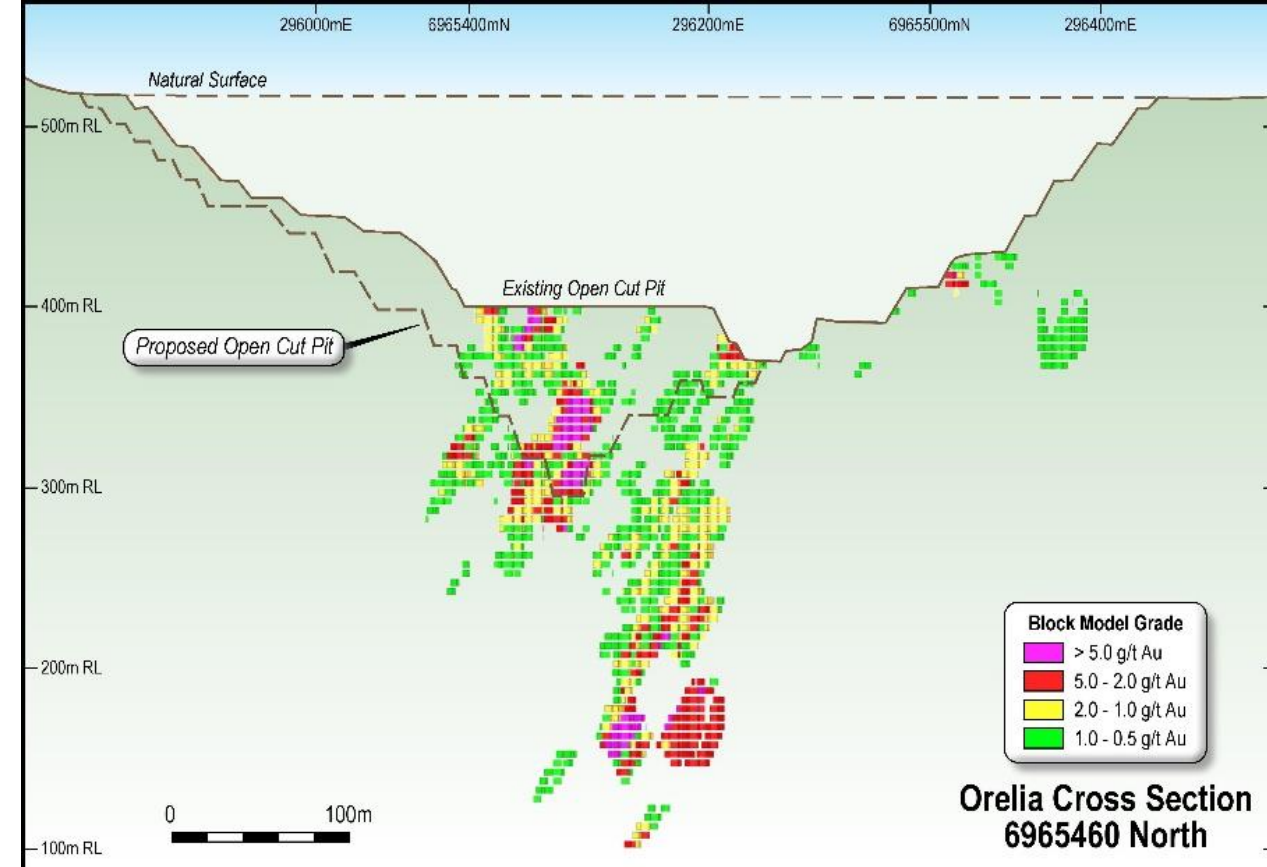
# Yandal Revised BFS Status

- All key government permits received for Orelia and Julius
- Preferred contractor status for plant refurbishment and mining contracts issued to MACA Interquip and MACA
- Revised BFS to be released this quarter
- Independent Technical Expert (ITE) review
- Project finance process well advanced



# Increased rigour and derisking

- Detailed mine scheduling and optimisation
- Pit redesigns to increase mining efficiency
- More conservative approach to mining dilution and powder factors
- Comminution testwork on fresh Orelia ore
- Detailed project implementation plan and risk assessment
- Optimised capital and operating cost estimates



# Echo exploration strategy

## 1. Brownfield exploration

- ▶ Near mine extensional targets
- ▶ Build total resources north of 2Moz

## 2. Greenfield exploration

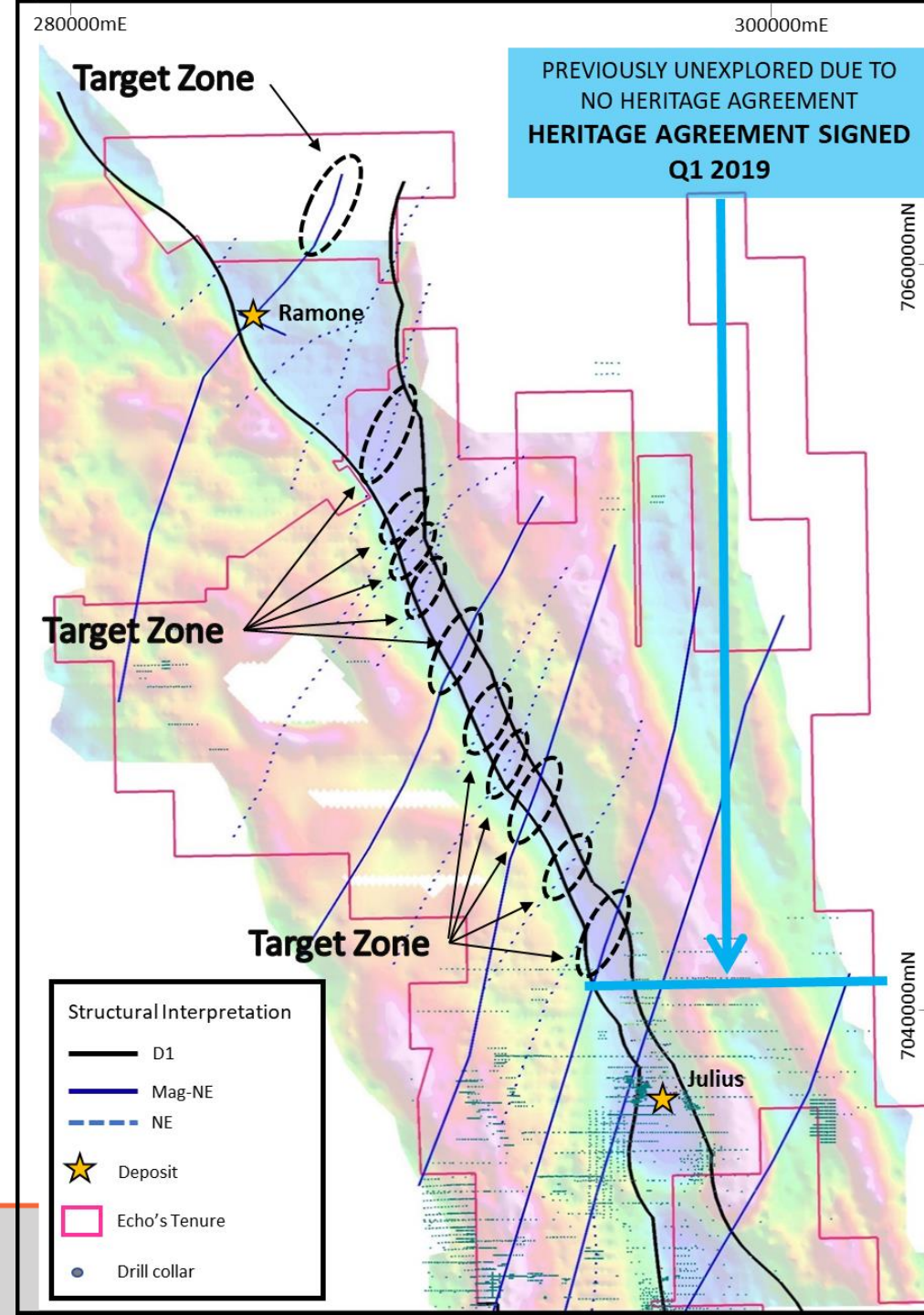
- ▶ Hadrian Trend
- ▶ Bronzewing UG
- ▶ Lotus UG
- ▶ Mt Joel – Cyclonix – Sundowner (70% Echo)

## 3. Target generation

- ▶ Build the pipeline via new target identification

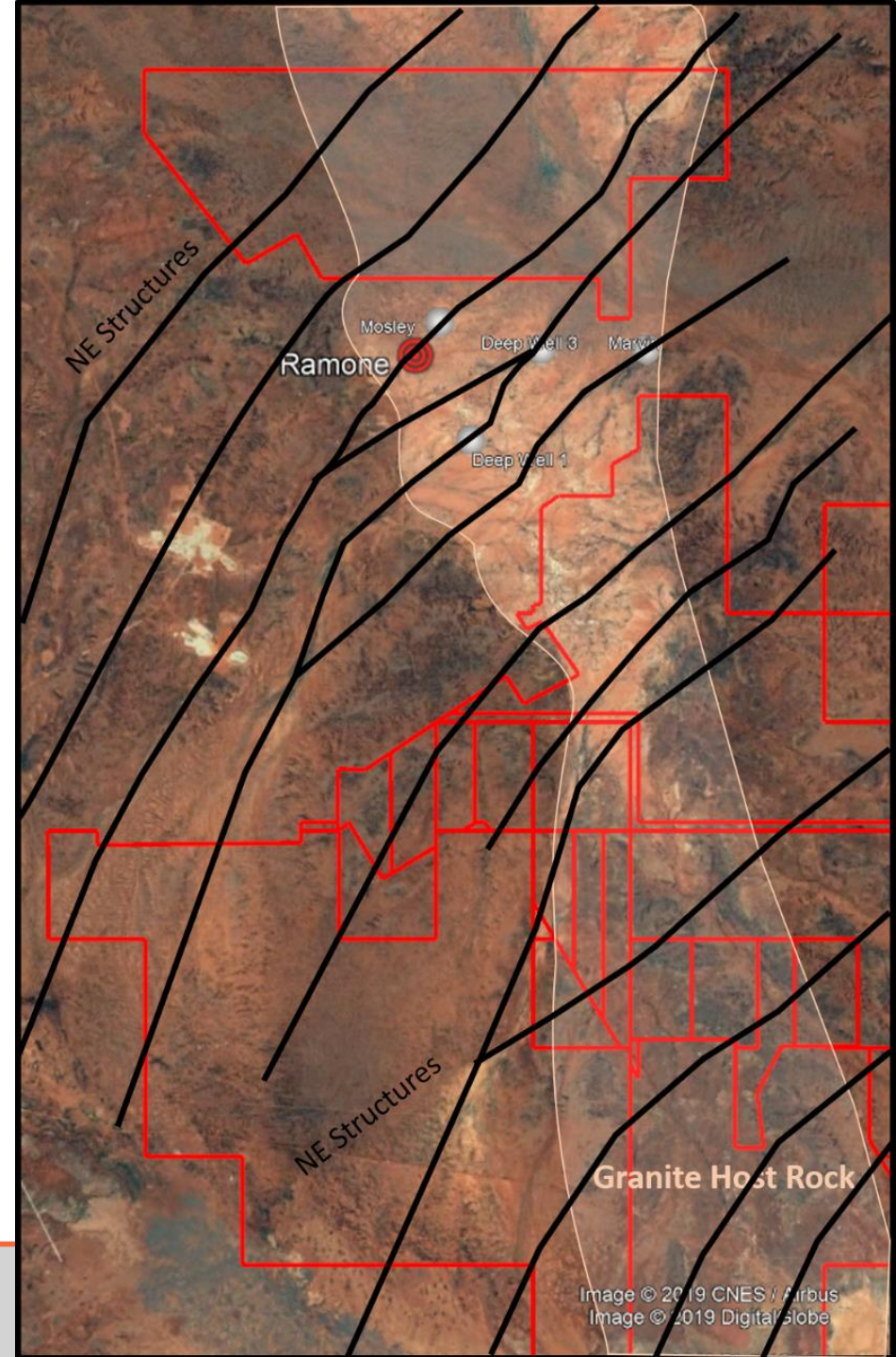
# Greenfield exploration – Hadrian Trend

- 20km corridor extending from Julius deposit in the south to Northern Star's Ramone deposit in the north
- Layer of cover masks underlying geology
- Recent ground gravity work highlights corridor gravity low, interpreted as a major shear zone intruded by granitic bodies
- Critical to define the geochemistry and integrate this with a broader litho-structural framework
- First pass geochemical sampling of historical drill spoils
- 2D inversion modelling of gravity data indicates the corridor is subvertical to steeply west dipping
- Further geochemical sampling planned along with a higher resolution geophysical survey
- Developing drill ready targets



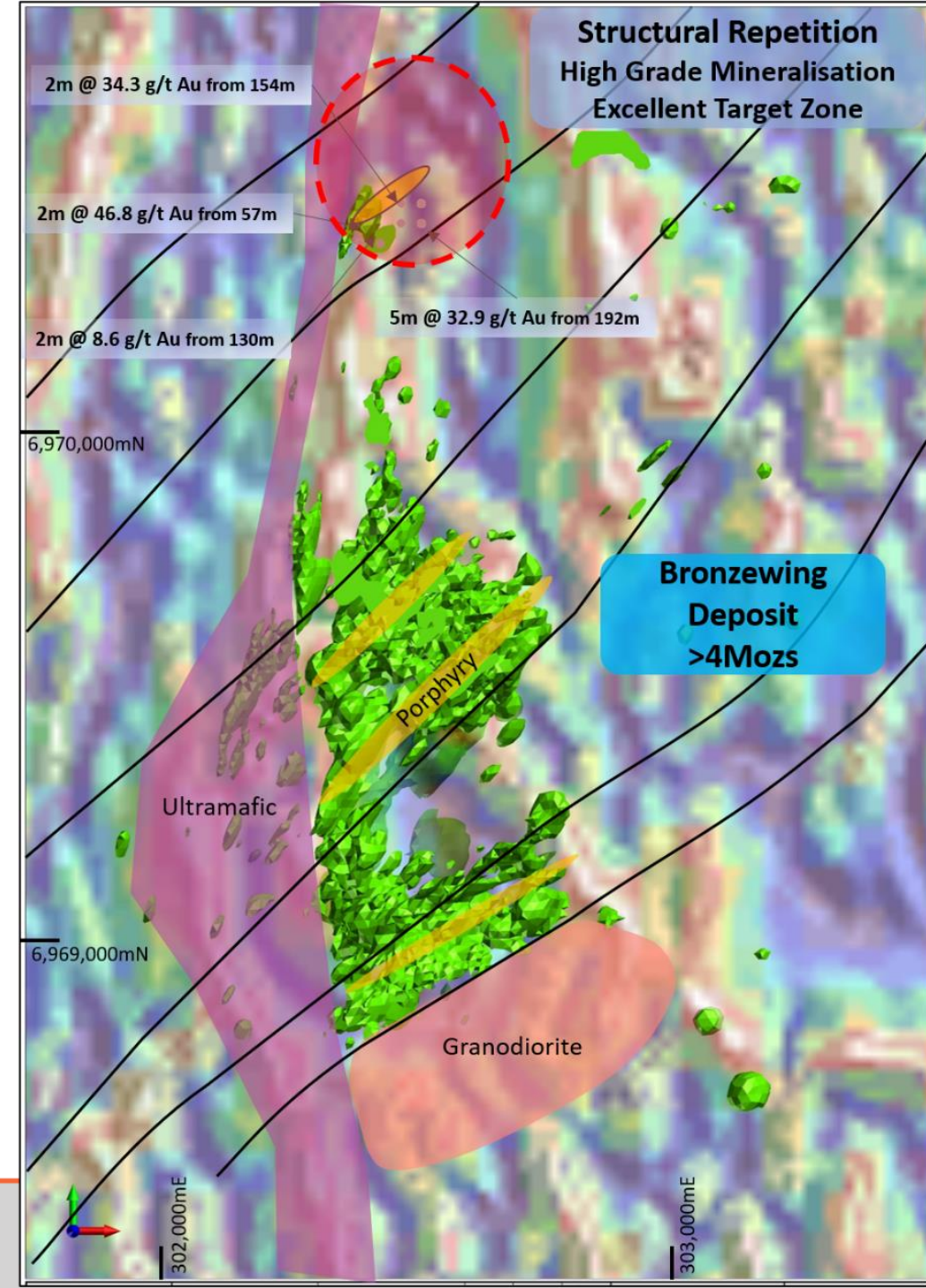
# Greenfield exploration – Hadrian Trend

- Importance of the north-east (NE) structures
- The Hadrian Trend is defined by a granite host rock that is transgressed by a series of NE structures
- Northern Star's deposits (Ramone, Deep Well 1, Deep Well 2, Deep Well 3, Mosley & Marvin) are all located proximal to these NE structures that transgress the Granite Host Rock
- Echo has significant tenement holdings over the Granite Host Rock with numerous NE structures
- Prime target zones for drill testing



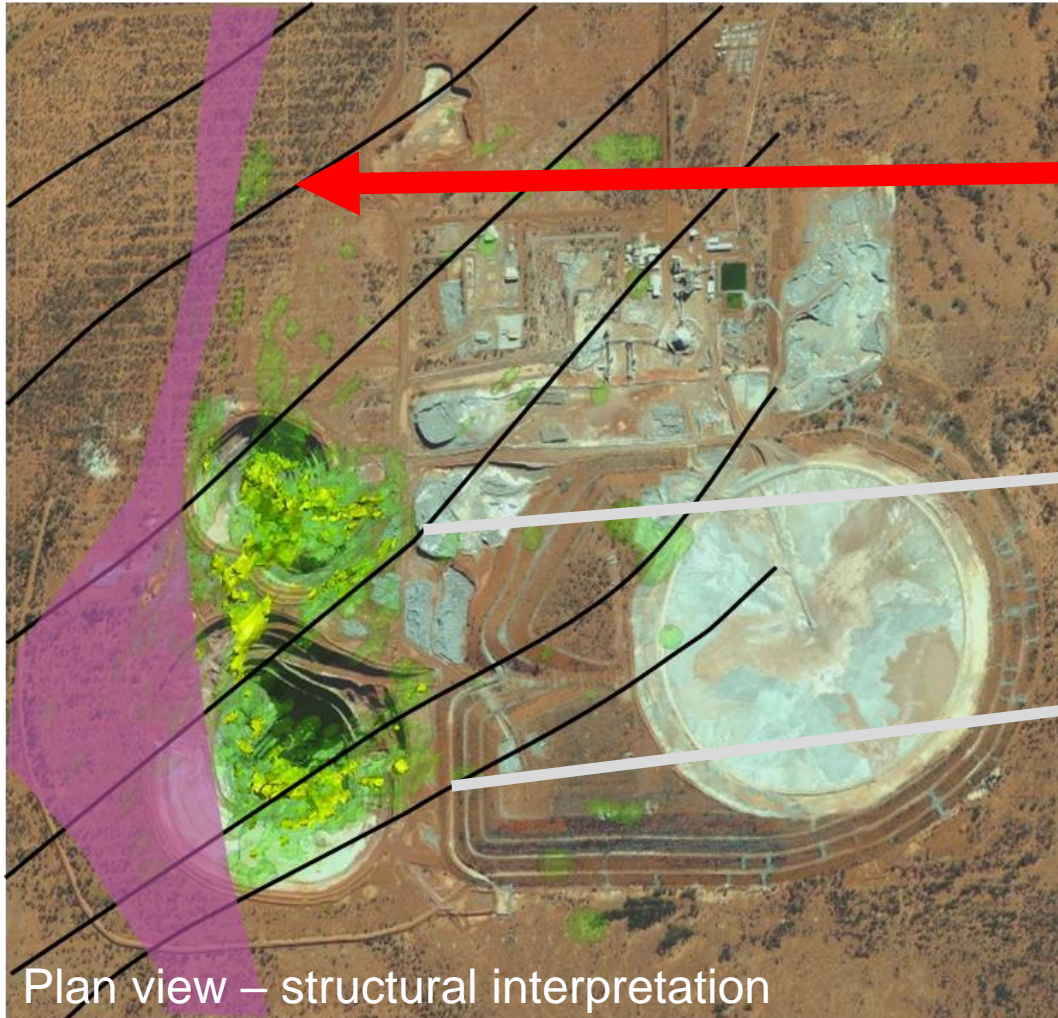
# Greenfield exploration – Bronzewing

- Located in the immediate Bronzewing process plant area
- A highly structurally controlled zone of mineralisation
- Gold endowment of >4Mozs
- Bronzewing UG mined at 10 g/t
- Geological understanding advanced
- Controlling structures and lithologies identified
- Potential structural and geological repetition to the north
- High-grade drill results returned from this target zone

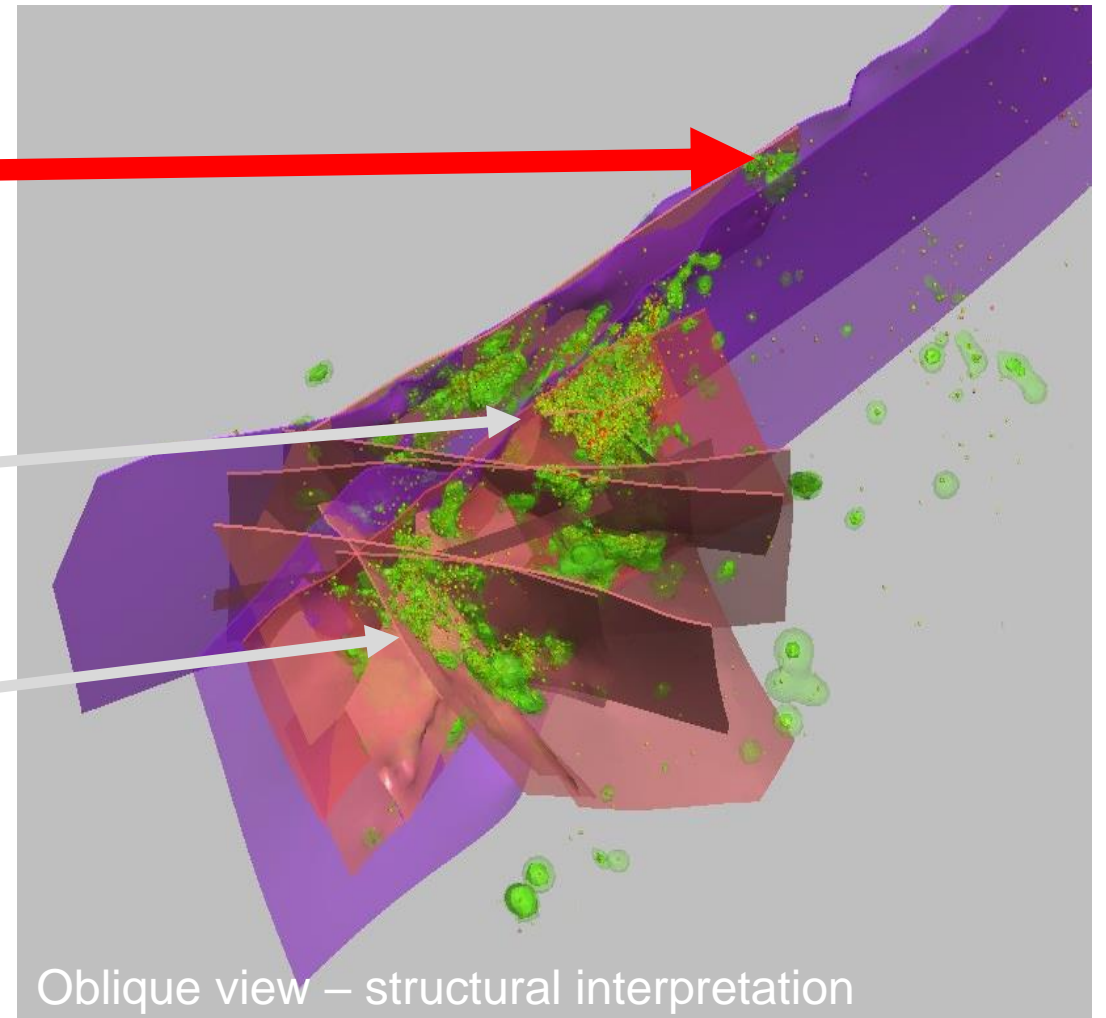


# Greenfield exploration – Bronzewing

Significant NE structures controlling minerology at Bronzewing

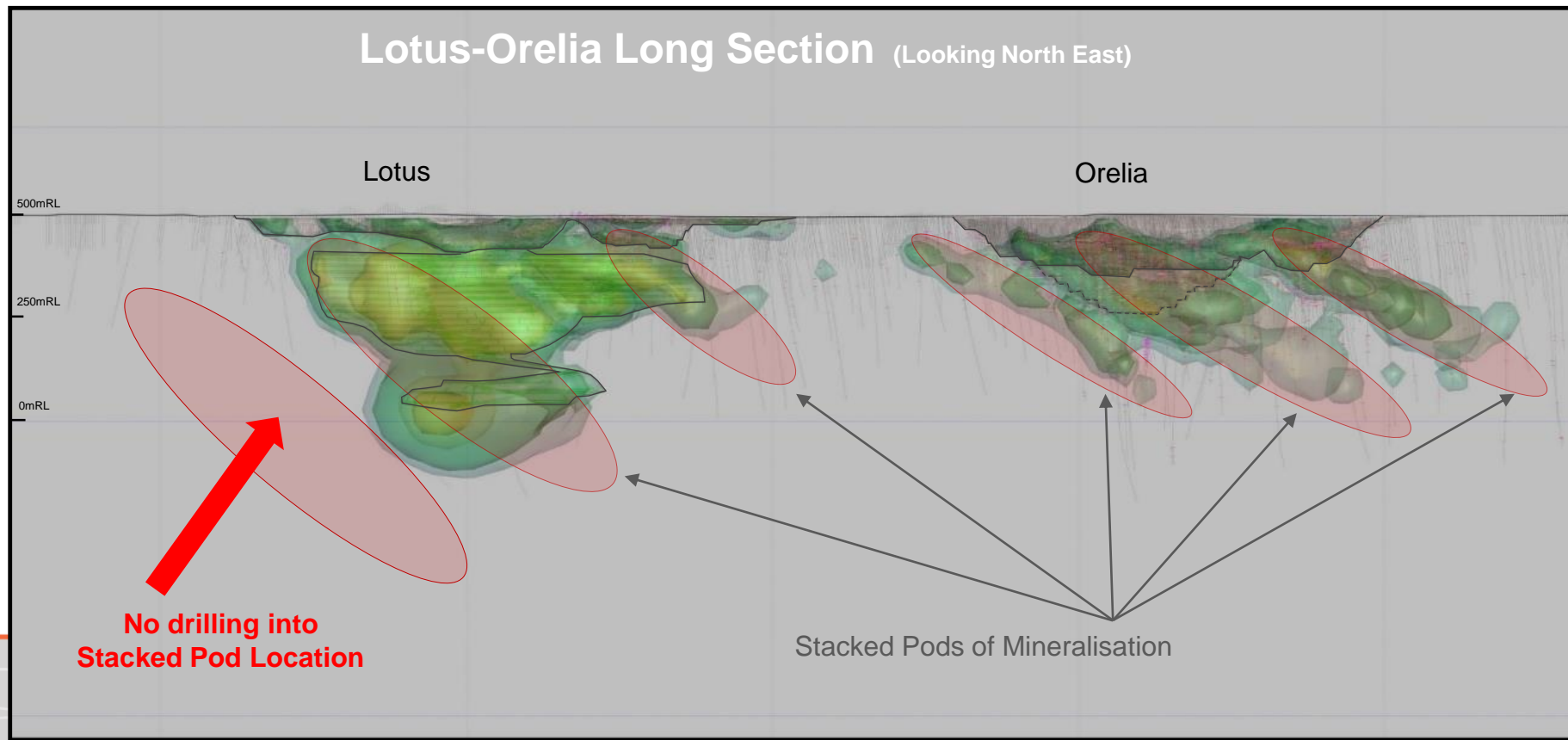


TARGET



# Greenfield exploration – Lotus

- Lotus deposit forms part of the Lotus-Orelia mineralised system
- +3km strike and previously mined down to 500m below surface (Lotus UG was 5 g/t)
- Series of stacked mineralised pods for both deposits
- No drilling under lower stacked pod at Lotus – prime target area for drill testing

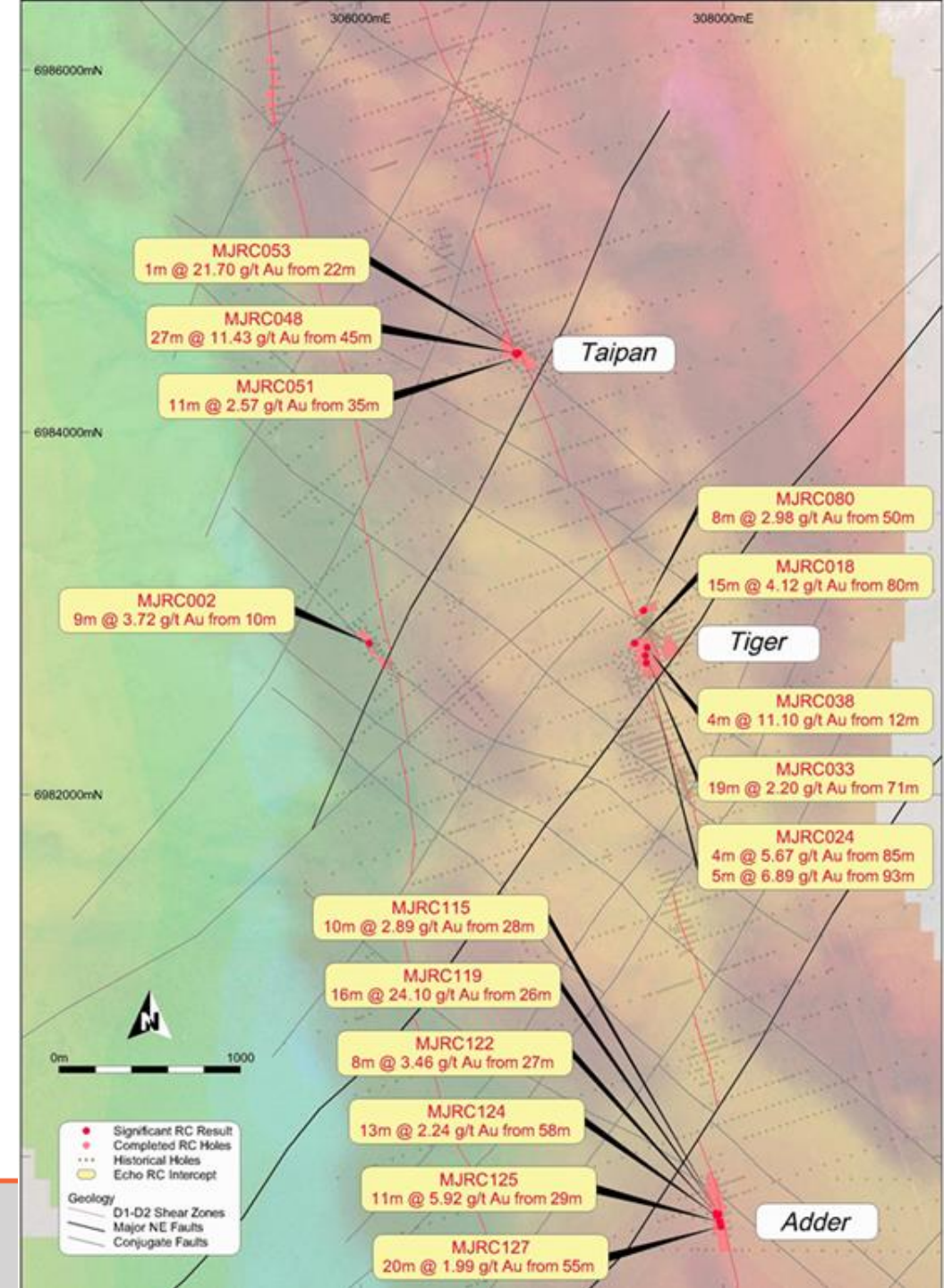




# Recent exploration at Mt Joel (70%)

- 15 kilometres NNE of Bronzewing plant
- RC drilling program (Dec 2018 – Jan 2019) returned outstanding results
  - 16m @ 24.10 g/t Au from 26m (MJRC119)
  - 27m @ 11.43 g/t Au from 45m (MJRC048)
  - 4m @ 11.10 g/t Au from 12m (MJRC038)
  - 11m @ 5.92 g/t Au from 29m (MJRC125)
  - 15m @ 4.12 g/t Au from 80m (MJRC018)
  - 9m @ 3.72 g/t Au from 10m (MJRC002)
  - 8m @ 3.46 g/t Au from 27m (MJRC122)
  - 4m @ 5.67 g/t Au from 85m AND
  - 5m @ 6.89 g/t Au from 93m (MJRC024)

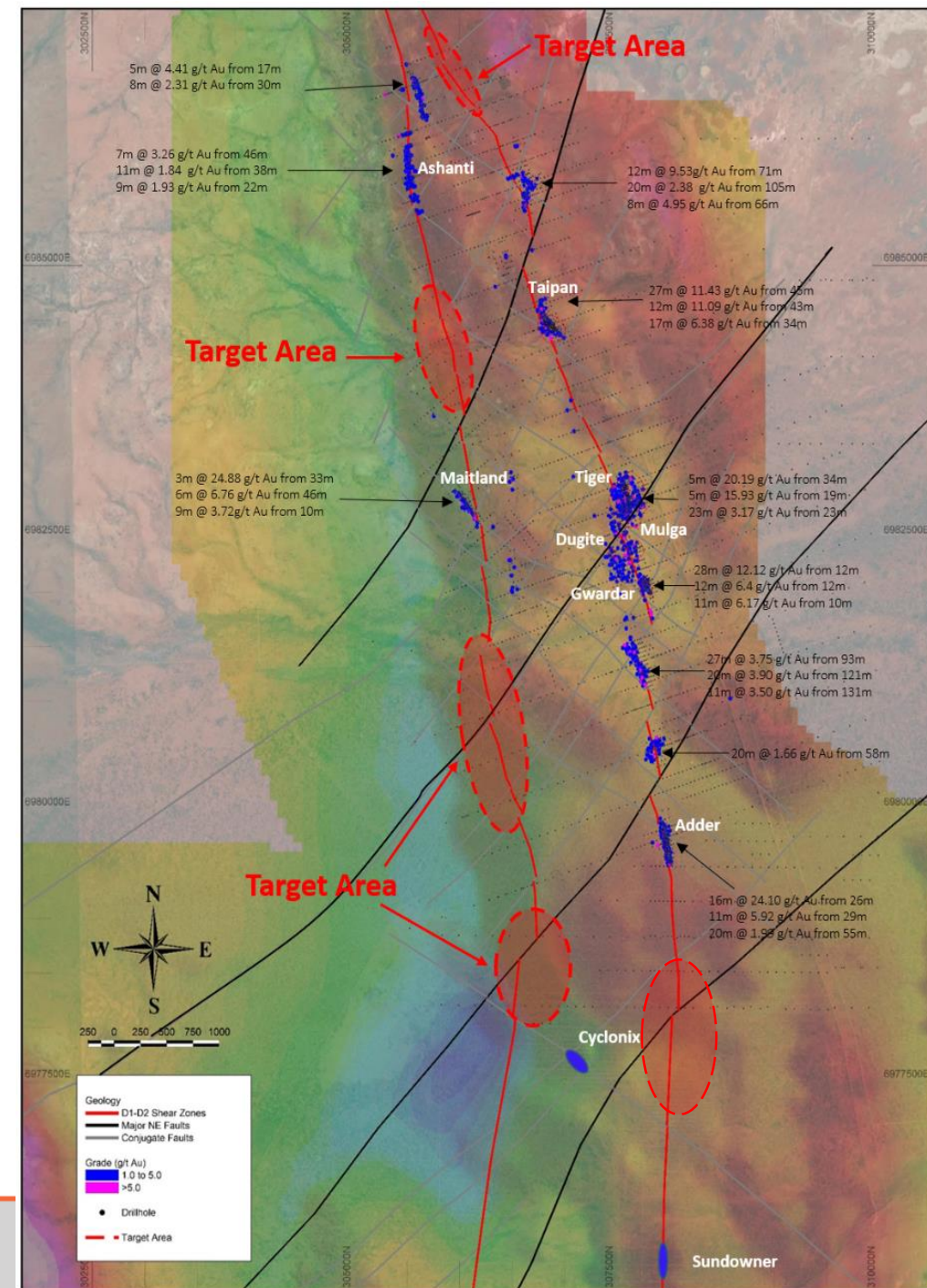
Mt Joel Prospect Map (Bouguer Gravity Image)



# Greenfield exploration – Mt Joel to Cyclonix and Sundowner

- 15 kilometres NNE of Bronzewing plant
- Two regional D1-D2 Shear Zones hosting numerous deposits proximal to the NE structures
- Western D1-D2 Shear Zone very under explored
- On the Eastern D1-D2 Shear Zone there is a target zone north and to the south of the known mineralisation
- Numerous target zones with significant potential

Mt Joel – Cyclonix – Sundowner Prospect Map (Bouguer Gravity Image)



# Echo and the Yandal Gold Project

An aerial photograph of a large-scale open-pit gold mine. The mine is characterized by numerous terraced levels of reddish-brown earth and rock, forming a complex, bowl-like structure. In the center of the mine, there is a large, circular cyanide tank filled with a bright green liquid. The surrounding landscape is arid and hilly, with sparse vegetation and some infrastructure like roads and tracks visible. The overall scene depicts a major industrial mining operation in a rugged, natural setting.

Prolific and highly operationally active gold belt

1.7Moz resource base and growing

Extensive, high potential exploration pipeline

Bronzewing processing plant and extensive surface infrastructure

Low capital intensity and short lead time development

Revised BFS completion this quarter

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# APPENDICES

# Global Mineral Resources & Reserves

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

(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 <sup>4</sup> (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 <sup>5</sup> (100%, 0.5)							2.8	1.5	134,925	2.8	1.5	134,925
Corboys <sup>3</sup> (100%, 1.0)				1.7	1.8	96,992	0.5	1.8	28,739	2.2	1.8	125,731
Orelia <sup>4</sup> (100%, 1.0)	2.8	2.6	237,000	11.2	2.0	732,000	1.9	1.7	101,000	15.9	2.1	1,070,000
Woorana North <sup>2</sup> (100%, 0.5)				0.3	1.4	13,811				0.3	1.4	13,811
Woorana South <sup>2</sup> (100%, 0.5)				0.1	1.0	3,129				0.1	1.0	3,129
Fat Lady <sup>1,2</sup> (70%, 0.5)				0.7	0.9	19,669				0.7	0.9	19,669
Mt Joel 4800N <sup>1,2</sup> (70%, 0.5)				0.2	1.7	10,643				0.2	1.7	10,643
<b>Total Mineral Resources</b>	<b>4.6</b>	<b>2.4</b>	<b>361,227</b>	<b>15.8</b>	<b>1.9</b>	<b>944,033</b>	<b>7.0</b>	<b>1.8</b>	<b>407,655</b>	<b>27.4</b>	<b>1.9</b>	<b>1,712,915</b>

## 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 <sup>6</sup> (100%, 0.6)	2.4	2.4	179,264	11.0	1.5	531,000	13.3	1.7	710,031
Julius <sup>6</sup> (100%, 0.8)	1.5	2.1	96,747	0.2	1.7	8,000	1.6	2.0	105,034
<b>Total Ore Reserves</b>	<b>3.8</b>	<b>2.2</b>	<b>276,012</b>	<b>11.1</b>	<b>1.5</b>	<b>539,000</b>	<b>14.9</b>	<b>1.7</b>	<b>815,065</b>

### Notes:

- Resources are adjusted for Echo's 70% ownership interest
- Resources estimated by Coxrocks (refer to Competent Persons Statements) in accordance with JORC Code 2012. For full Mineral Resource estimate details refer to the Metaliko Resources Limited announcement to ASX on 1 September 2016. 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.
- 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.
- 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 7 September 2017 & 14 June 2018. Echo Resources Limited is not aware of any new information or data that materially affects the information included the previous announcement, and all material assumptions and technical parameters underpinning mineral resource estimates in the previous announcement continue to apply and have not materially changed.
- Resource estimates include Bills Find, Shady Well, Orpheus, Empire & Tipperary Well and were estimated by Golders (refer to Competent Persons Statements) in accordance with JORC Code 2004, for full details of the Mineral Resource estimates refer to the Echo Resources Limited prospectus released to ASX on 10 April 2006.
- Reserve estimated by Mr Stuart Cruickshanks (refer to Competent Persons Statements) in accordance with JORC Code 2012, for full details of the Ore Reserve estimate refer to the Echo Resources Limited announcement to ASX on 6 August 2018. Echo Resources Limited is not aware of any new information or data that materially affects the information included the previous announcement, and all material assumptions and technical parameters underpinning Ore Reserve estimate in the previous announcement continue to apply and have not materially changed.
- Mineral Resources are inclusive of Ore Reserves, rounding errors may occur

# Competent Persons Statements

The information in this presentation relating to Julius and Orelia 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 at Julius and Orelia 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 consent to the inclusion in the presentation of the matters based on the information in the form and context in which it appears.

The information in this presentation relating to Echo’s exploration activities and exploration potential at Julius, Orelia, Woorana North, Woorana South, Fat Lady and Mt Joel Mineral Resource estimates is based on information compiled by Mr Simon Coxhell, a Director of Echo Resources Limited, who is a member of the Australasian Institute of Mining and Metallurgy. He has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that 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’. Mr Coxhell consents to the inclusion in the presentation of the matters based on the information in the form and context in which it appears.

The information in this presentation relating to Echo’s Regional Mineral Resource estimates is based on information compiled by Stephen Godfrey, a full-time employee of the independent geological consulting group Golder Associates Pty Ltd. He has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the ‘Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves’. Mr Godfrey consents to the inclusion in the presentation of the matters based on the information in the form and context in which it appears.

The information in this presentation relating to Echo’s Corboys Deposit Mineral Resource estimate is based on information compiled by Andrew James Hawker, a Competent Person who is a Member or Fellow of the Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists. Mr Hawker is the Principle Geologist employed by HGS Australia. He has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that 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’. Mr Hawker consents to the inclusion in the presentation of the matters based on the information in the form and context in which it appears.

The information in this presentation 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 presentation and consents to the inclusion in this presentation of all technical statements based on his information in the form and context in which they appear.