



# ASX QUARTERLY REPORT

## QUARTER ENDING 30 SEPTEMBER 2019

### ASX ANNOUNCEMENT

29<sup>th</sup> October 2019

### BARRA RESOURCES LIMITED

A.B.N. 76 093 396 859

### Corporate Details (Sep 30):

ASX Code: BAR  
Market Cap: \$11.3M @ 2.1c  
Cash: \$928,000

### Issued Capital:

538.89M Ordinary Shares  
38M Options

### Substantial Shareholders:

FMR Investments 15.4%  
Mineral Resources Ltd 10.8%

### DIRECTORS

MD & CEO: Sean Gregory  
Chairman: Gary Berrell  
Non-Exec: Jon Young  
Non-Exec: Grant Mooney

### PROJECTS

Mt Thirsty Co-Ni (50%)  
Coolgardie Au (100%)

### CONTACT DETAILS

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[info@barraresources.com.au](mailto:info@barraresources.com.au)

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West Perth, WA 6005  
T: (08) 9481 3911

### MT THIRSTY COBALT NICKEL PROJECT

- Spring level 2 flora and vegetation survey completed
- SO<sub>2</sub> leaching testwork completed
- Mine planning and tailings engineering underway
- PFS in final stages of engineering

### BURBANKS GOLD PROJECT

- Maiden JORC 2012 Mineral Resource estimate announced for Burbanks North Trend
- Scoping study completed for Burbanks, identifying Mineral Resources suitable for potential economic underground mining
- Further RC drilling now underway at Main Lode

### PHILLIPS FIND GOLD PROJECT

- Tenements at Diablo granted
- With walk-up targets at Diablo and Barra's gold focus narrowing on Burbanks, the Phillips Find Project has been identified as an ideal farm in for a well-funded gold developer

### CORPORATE

- As at the end of the quarter, Barra has \$928,000 in cash
- Research and Development rebate of \$103,000 expected during the current quarter
- Barra to loan Conico up to \$500,000 to facilitate completion of PFS
- Share Purchase Plan offer closed, results to be announced shortly



Figure 1: Barra Project Location Plan

## MT THIRSTY COBALT PROJECT

*(50% Barra, 50% Conico – Mt Thirsty Joint Venture, MTJV)*

The Mt Thirsty Cobalt Nickel Project is located 16km northwest of Norseman, Western Australia (Figures 1 & 2). The project is jointly owned by Barra Resources Limited (Barra, or the Company) and Conico Limited, together the Mt Thirsty Joint Venture (MTJV).

The Project contains the Mt Thirsty Cobalt-Nickel (Co-Ni) Oxide Deposit that has the potential to emerge as a significant cobalt producer.

The Company is progressing a Pre-Feasibility Study (PFS) on the project utilising industry leading consultants led by Amec Foster Wheeler Australia Pty Ltd, trading as Wood.

### ACTIVITIES

#### Mineral Resource Estimate

The Mt Thirsty Mineral Resource was further upgraded during the quarter to 26.9Mt @ 0.12% cobalt and 0.52% nickel (Table 1).

The upgrade was as a result of checks during mine planning and resulted in a useful increase in contained metal of 4.7%.

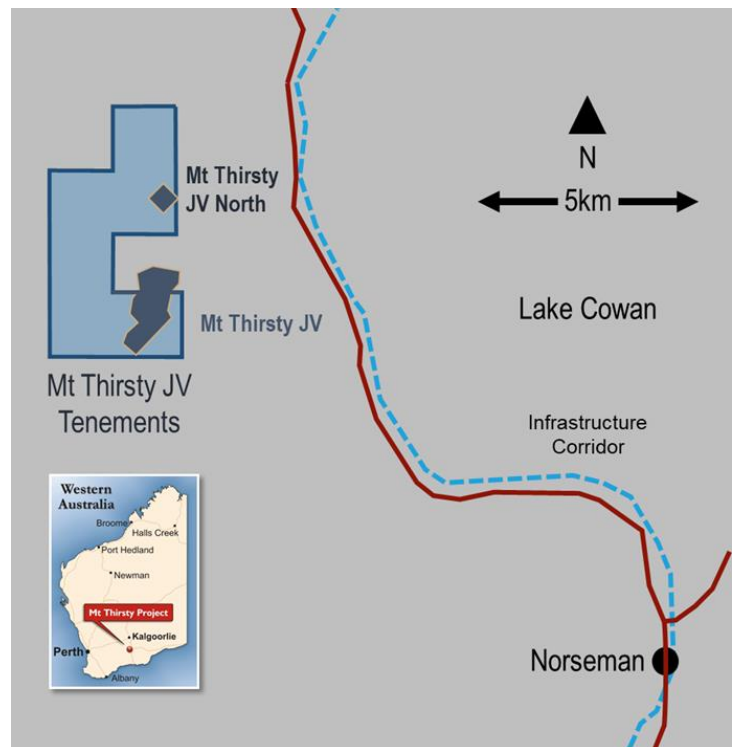


Figure 2 – Mt Thirsty location plan

	Dry Tonnes (Mdt)	Cobalt (%)	Nickel (%)
Mt Thirsty Indicated	22.8	0.121	0.53
Mt Thirsty Inferred	2.5	0.103	0.45
Mt Thirsty Sub Total	25.4	0.119	0.52
Mt Thirsty North (Inferred)	1.5	0.092	0.55
Mt Thirsty Total	26.9	0.117	0.52

Table 1 – Mt Thirsty Mineral Resource Summary (0.06% Co cut off). Previously reported results shown in square brackets. Minor discrepancies in totals due to rounding.

#### Further Metallurgical Testwork

Additional variability leaches were completed at the upper and lower end of the grade ranges expected. 17 variability leaches have now been completed on samples with head grades ranging from 0.03% cobalt to 0.43% cobalt. The variability leaches have confirmed strong correlations between cobalt head grade and cobalt and nickel extraction (Figure 3 and 4). The relationship is logarithmic, with very high extractions at high grades and leaching performance dropping off below the resource cutoff grade of 0.06% cobalt.

The variability leaches are in addition to the 6 bulk leaches, 24 optimisation leaches and 8 beneficiation leaches completed during the PFS and 15 SO<sub>2</sub> leaches in the scoping study, bringing the total number of SO<sub>2</sub> leaches completed to 55, with remarkably consistent performance, giving confidence in the leaching method proposed.

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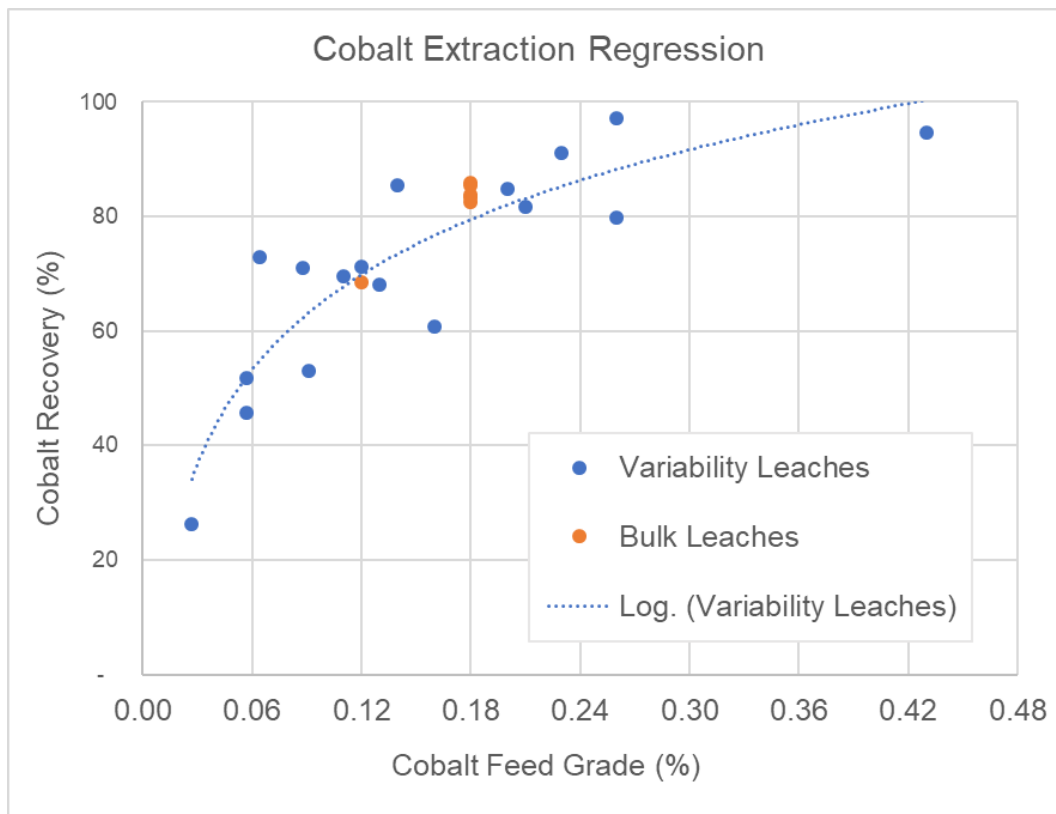


Figure 3 – Cobalt extractions and regressions from variability leaches

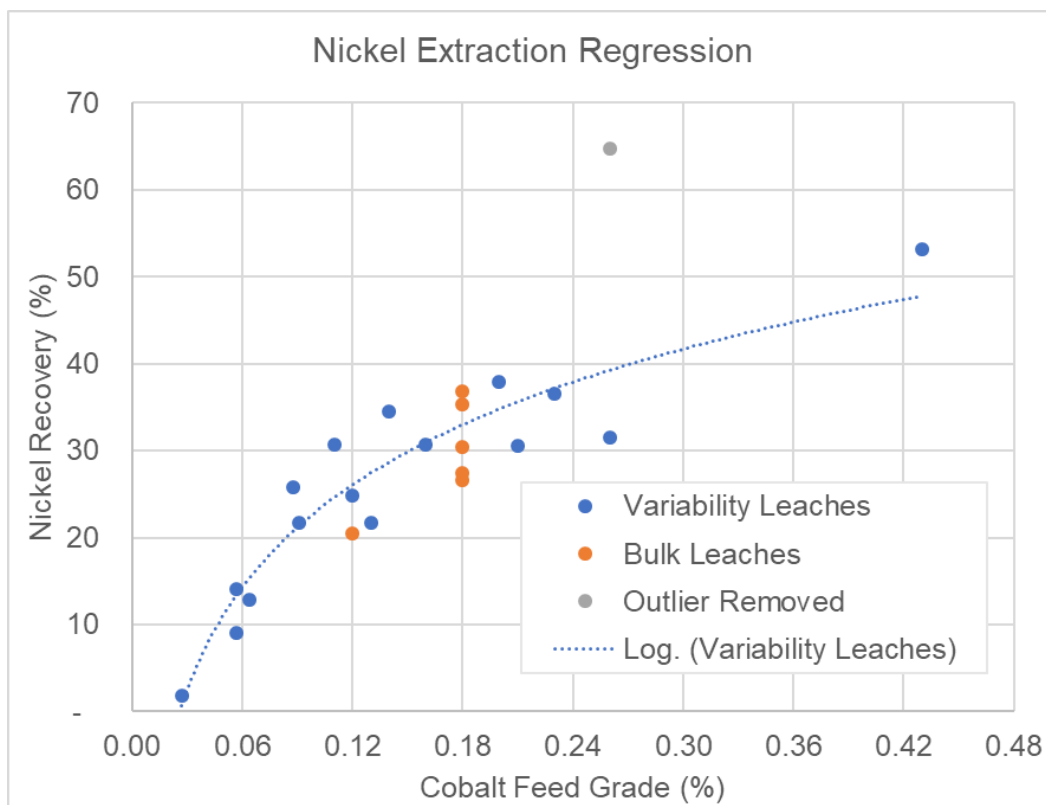


Figure 4 – Nickel extractions and regressions from variability leaches

Bulk Leaches 4,5 and 6 have been completed and the results are shown in Table 2 below.

BL	Test ID	Co extraction (%)	Ni extraction (%)	Fe in sol'n (g/l)
1	HY7334	85.43	30.45	11.7
2	HY7460	82.52	27.38	1.3
3	HY7556	83.36	26.57	2.2
4	HY8147	83.74	36.85	13.0
5	HY8190	85.78	35.30	8.1
6	HY8189 (lower grade)	68.61	20.46	3.0

**Table 2 – Mt Thirsty Bulk Leaches**

Bulk Leaches 1-4 and 6 were completed on the Master Composite (0.18% Co) derived from 2016 Reverse Circulation (RC) drilling using pure SO<sub>2</sub> and O<sub>2</sub> gas to allow the conditions to be accurately optimised. Pleasingly, Bulk Leach 5 using dilute SO<sub>2</sub> gas more typically available in operations delivered the best result yet. Bulk Leach 6 was on a lower grade composite (0.12% Co) derived from 2018 Air Core (AC) drilling that performed as expected based on the variability leaches as plotted on Figures 3 and 4.

Conservatively, the PFS will average the extractions from Bulk Leach 3 and Bulk Leach 5 as there is only one test using dilute SO<sub>2</sub>. This also moderates the nickel extraction to reflect the economic target of leaching to a maximum concentration of 5 g/l iron.

The bulk leach extractions selected have been used to adjust the regressions charted in Figures 3 and 4. This results in an increase in cobalt extraction of about 6% which fairly represents the gains made during optimisation between the variability leaches and the bulk leaches. The nickel recoveries will be adjusted 6% downwards using the same method and reflective of the excess iron leaching that occurred in the variability leaches.

Primary and secondary neutralisation tests have all been completed without any significant losses of payable metals. Mixed Sulphide Precipitation testwork is now the only metallurgical test work outstanding. It is hoped that the working assumption of 4% losses at this step can be significantly bettered.

### **Mine Planning**

Mine planning studies have locked down the preferred Whittle shell based on the regressions above and preliminary operating cost estimates, which shows good utilisation of the available Mineral Resources. Detailed pit designs have commenced, and scheduling will follow.

### **Tailings Studies**

A tailings sample has undergone testing with results showing that the tailings settle slowly, leading the preferred solution towards a downstream twin-cell tailings dam. Mine waste will be directed to construct the tailings dam walls as required.

### **Land Access**

Following on from the Spring 2018 Level 1 Flora and Fauna survey, a Level 2 Flora and Vegetation survey was completed by Spectrum Ecology during September 2019. The survey did not identify any rare plants or animals and will be suitable to support approvals for the project.

Granted tenure, land access agreements and program of works approvals are now in place for water search drilling for the project.

Tenement applications for mining, roads and infrastructure are also moving through the process towards grant.

Discussion are continuing with the Ngadju Traditional Owners towards a Native Title agreement.

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### **Cobalt-Nickel Market**

Barra's progressive work packages are being undertaken against a backdrop of volatile commodity price movements with Gold soaring above A\$2,200 per ounce and Nickel to a healthy US\$16,000 per tonne. However, Cobalt has suffered a precipitous fall from as high as \$95,000 per tonne in March 2018 to as low as \$26,000 per tonne in August 2019. With recent mine closures announced by Glencore in the Democratic Republic of Congo, we believe this has signaled the bottom of the market and we have seen a 38% rally in the cobalt price over the last 8 weeks to US\$36,000 per tonne today. On 8<sup>th</sup> September 2019, Citi Bank published their comprehensive "Electric Vehicle Metals & Equities Outlook" which picked cobalt as the commodity most leveraged into the electric vehicle revolution. They have forecast in their base case that cobalt prices will further double to US\$70,000 per tonne into the long-term. Our share price is heavily geared towards the cobalt price recovery underway and predicted to continue.

Many commentators have now identified nickel as a commodity to watch during 2019. Nickel LME inventory levels halved from approximately 400,000t to 200,000t during 2018 and have further halved to less than 100,000t in 2019. Growth in use of stainless steel has been strong, and when the demand from the battery industry is overlaid, nickel demand is expected to outstrip supply.

The fundamentals of the cobalt and nickel markets connected to electric vehicle uptake remains as compelling as ever. EVvolumes.com report that year-to-date-August plug-in vehicles sales in the world's largest car market, China, are up 44% year on year. There is some pullback from the planned reduction in government subsidies, but 2019 is still forecast as 1.5-1.6 million electric vehicle sales in China, a 33% increase on 2018 calendar year.

Longer term, the fundamentals of the cobalt and nickel markets remain exceptional with very few high-quality projects such as Mt Thirsty being expected to be available to meet the demand driven by electric vehicles.

### **Next Steps**

Final Mixed Sulphide precipitation test work is underway. Wood are completing their capital and operating cost estimation. Golder are designing the tailings dam for the project and Snowden are scheduling the mine plan. All technical work is targeting completion by Christmas 2019, with report writing and study publication anticipated in Q1 2020.

## BURBANKS GOLD PROJECT

(100% Barra)

### ACTIVITIES

Barra's 100% owned Burbanks Gold Project is located just 9 km south of Coolgardie in Western Australia (Figure 4).

#### Mineral Resource Estimates

Following the successful 2019 drilling at Burbanks North, Barra engaged BM Geological Services to estimate a maiden JORC 2012 Inferred Mineral Resource for the deposit.

The July 2019 resource is estimated as 359,998 tonnes at 1.76 g/t Au for 20,359 ounces gold at a 1.0 g/t lower cut-off. (Refer to ASX Announcement 2/8/19) for full details of the Mineral Resource.

The maiden Mineral Resource for Burbanks North is another milestone for Barra. It adds an additional 16% of Mineral Resources to our Global Mineral Resource which now stands at 145,700 Oz (Table 3).

The company also took the opportunity to review and restate the Birthday Gift and Christmas Mineral Resource on Company letterhead (Refer ASX announcement 23/9/19). No changes since Mining Plus completed the estimate for Kidman Resources were required. This restatement was required under the ASX listing rules and provided a firm platform for the Burbanks scoping study.

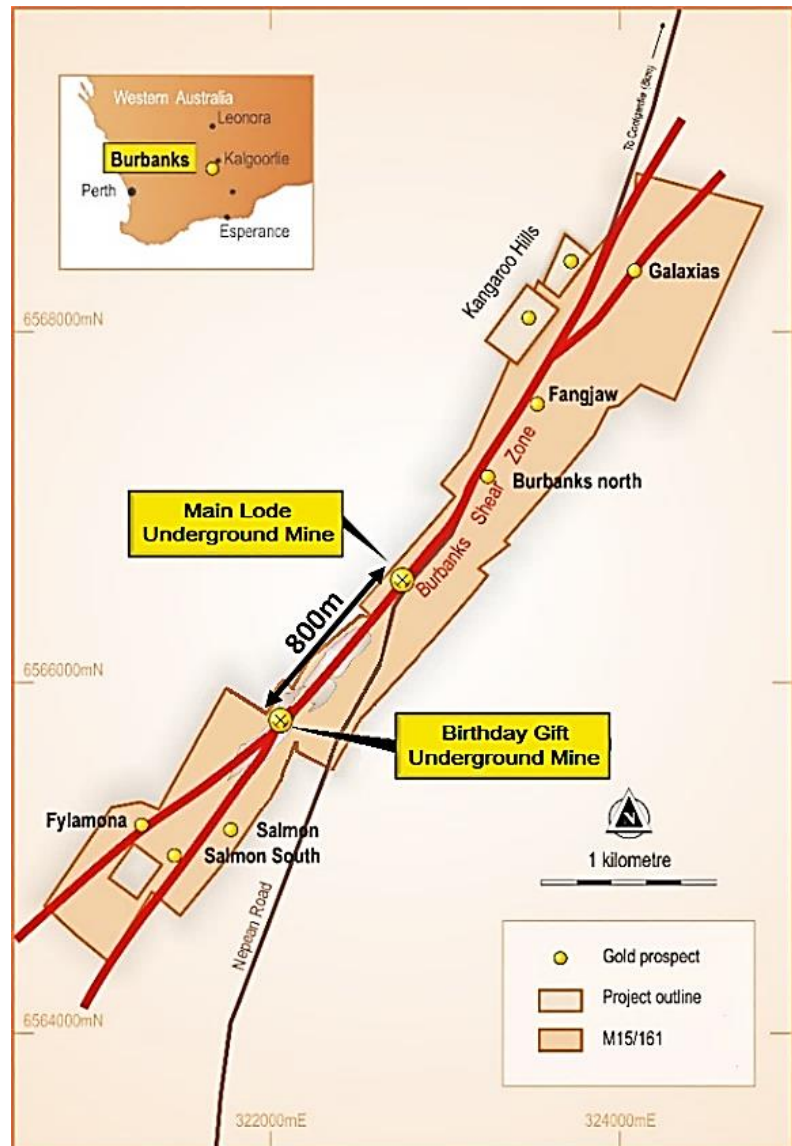


Figure 4 – Burbanks Location Plan

Deposit	Cut-Off g/t Au	Indicated			Inferred			Total		
		kt	Grade g/t Au	Ounces	kt	Grade g/t Au	Ounces	kt	Grade g/t Au	Ounces
Christmas Open Pit	1.0	5	6.2	1,100	4	7.8	1,050	9.7	6.9	2,150
Birthday Gift Underground Mine	2.5	180	6.0	34,750	325	5.6	58,500	505	5.7	93,250
Main Lode Deposit	1.0	106	2.8	9,700	254	2.5	20,200	360	2.6	29,900
Burbanks North	1.0				360	1.8	20,400	360	1.8	20,400
<b>Total</b>	<b>1.0/2.5</b>	<b>291</b>	<b>4.9</b>	<b>45,550</b>	<b>943</b>	<b>3.3</b>	<b>100,150</b>	<b>1235</b>	<b>3.7</b>	<b>145,700</b>

All tonnages reported are dry metric tonnes. Minor discrepancies may occur due to rounding to appropriate figures. For full details of the Birthday Gift and Christmas Pit Mineral Resources, refer to ASX:BAR release dated 23/9/19. For full details of the Main Lode Resource, refer to ASX:BAR Release dated 30/10/18.

Table 3 – Burbanks Global Mineral Resources

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## Burbanks Mining Study

Snowden Mining Industry Consultants completed a scoping study on the Burbanks project during the quarter.

Optimisation of the available Mineral Resources at A\$2,000/oz gold price identified that underground mining was the preferred method over open-pit mining. Four areas were identified for shallow underground mining; the Hadfield and Dahmu lodes within the Birthday Gift Gold Mine and the areas North and South of the historic Main Lode Gold Mine (Figure 5).



**Figure 5 – Long section showing areas identified for mining. Dahmu Lode shown in purple, Hadfield Lode in red and Main Lode in green (north and south of historic stopping shown in grey)**

Within the areas identified for mining, Main Lode South and Dahmu Lode have a majority of Indicated Resources identified for mining. Main Lode North and Hadfield Lode however have a high proportion of Inferred Mineral Resources. There is a low level of geological confidence associated with Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated Mineral Resources. Given the proportion of Inferred Resources to Indicated Resources captured within the Study, full financial metrics of the Study have not been released to market (in accordance with regulatory requirements).

Other lodes at Tailor, Eastern and Jesson within the Birthday Gift Mineral Resource may also be suitable for future mining, however these were excluded from this study as the focus was on easily accessible ounces. The previous mine operator identified Dahmu and Hadfield as the priority target. Further potential exists in the other lodes to be the subject of further studies in due course.

The project benefits from a fast track approvals pathway as it is on a pre-Native Title granted mining lease with some approvals already in place.

The study leverages the existing infrastructure available on the site, in the town of Coolgardie only 8km to the north, and assumes toll milling at any one of several nearby mills.

No capital expenditure is required other than modest working capital to fund underground development launched from the existing open pit and underground workings approvals already in place.

Barra has identified that the most likely development scenario would involve partnering under a right-to-mine agreement similar to those previously successfully implemented by the Company. An information memorandum and data room has been made available to a few select and likely partners. If Barra elected to pursue mining in its own right, additional funds would need to be raised to fund the working capital and de-risk the project through additional drilling and studies. Funding of this magnitude is expected to be available through normal capital market channels. With fast tracked approvals, in-fill drilling, further studies, partnering and/or funding a timeframe for development and production could be as soon as 2020.

### Main Lode Drilling

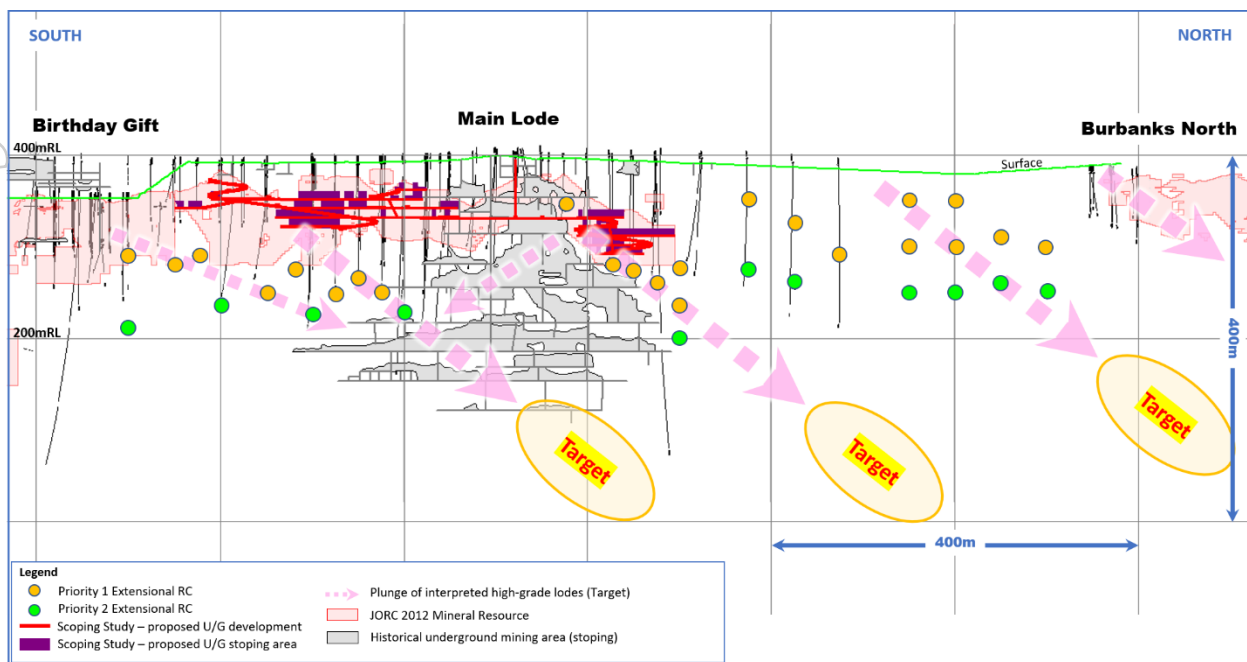
Subsequent to the quarter end, RC drilling has recommenced at Main Lode. The RC drilling program underway has two key objectives:

Firstly, the drilling is aimed at deepening existing Mineral Resources between the historic Main Lode and Birthday Gift Gold Mines from the current depth of up to 100m below surface to 200m below surface (Figure 6).

Secondly, the drilling is aimed to connect these Mineral Resources with Burbanks North, thereby confirming a

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continuous 2km of mineralised strike length (Figure 6).



**Figure 6 – Long section of Main Lode showing existing stopes, drill holes and Mineral Resource and planned drill holes targeting northerly mineralisation plunges**

In both cases, we will be applying our recently advanced geological and economic understanding of the deposits. This understanding has been informed by the recent scoping study (refer ASX announcement 23/9/19) which identified the Mineral Resources between the historical gold mines at Main Lode and Birthday gift as the highest priority area for potentially economic mining.

Interim results of the current drilling program are expected in December 2019.

## PHILLIPS FIND GOLD PROJECT

(100% Barra)

### ACTIVITIES

Barra's 100% owned Phillips Find Gold Project is located 50km north of Coolgardie Western Australia.

The project covers over 10 kilometres in strike of prospective greenstone stratigraphy and includes the Phillips Find Mining Centre (PFMC) where approximately 33,000oz of gold was produced between 1998 and 2015 from three open-pit operations; Bacchus Gift, Newhaven and Newminster. Exploration potential within the project is excellent with numerous targets defined by auger geochemical anomalism, mapping and drilling.

Tenements have now been granted at Diablo, a highly prospective target under shallow alluvial cover, not dissimilar to the Truth prospect which was successfully tested by Barra in 2018. Diablo is now a walk-up target that is ready to drill.

With Burbanks clearly a higher priority for Barra with short and long-term opportunities, and therefore demanding a greater part of Barra's gold budget, Barra has identified that Phillips Find would be most suitable for a farm out. A farm out would allow Barra to direct its gold budget to Burbanks and still participate in the excellent exploration upside available at Phillips Find.

Phillips Find would be an ideal target for a well-funded gold producer or developer to farm into by funding drilling programs to earn a majority interest in the project. Barra will commence marketing this opportunity to nearby tenement holders, mill operators and mine operators.



## CORPORATE

### **Conico Loan Agreement**

To facilitate the completion of the final stage of the Mt Thirsty Project Pre Feasibility Study ("Phase 3"), Meteore Metals Pty Ltd (a wholly owned subsidiary of Conico Ltd) and Barra Resources Ltd ("Barra") entered into a loan agreement on 28<sup>th</sup> October 2019 pursuant to which Barra will lend Meteore Metals Pty Ltd up to \$500,000 or further amount as agreed, for a term of 3 years ("Term").

The loan is conditional upon the Joint Venture management committee approving the program and budget of estimated expenditure for Phase 3 within five business days of the date of execution of the loan agreement (or such later date as the parties may agree).

The loan will be drawn down by Meteore Metals Pty Ltd in tranches as and when the Manager of the Joint Venture requests a contribution from the joint venture participants to fund Stage 3 expenditure, with the loan funds being applied by Meteore Metals Pty Ltd in payment of its contribution.

The first drawdown will occur as soon as the loan agreement becomes unconditional for \$85,375, being Meteore Metals Pty Ltd's contribution towards the \$170,749 (incl GST ) of Phase 3 expenditure incurred to date.

Interest will be charged at 5% per annum calculated daily on amounts drawn down and will be capitalised into the loan annually in arrears.

The loan may be repaid early in cash at Conico's election.

The loan must be repaid:

- (a) in full immediately upon the occurrence of a prescribed event of default under the loan agreement;
- (b) if, Meteore Metals Pty Ltd transfers its interest in the Joint Venture, or there is a trade sale by or change of control of Conico or Meteore Metals Pty Ltd, in full within 14 days of the relevant event occurring;
- (c) if the final LME Cobalt Price on a day on which the London Metal Exchange is open for trading (Trading Day) is greater than or equal to US\$60,000 per tonne for 15 consecutive Trading Days at any time during the Term, in full within 90 days thereof (unless Conico (or any of its subsidiaries, including Meteore Metals Pty Ltd) has been unable, despite use of reasonable endeavours, to raise an amount equal to the aggregate of \$1,000,000 plus the outstanding amount of the loan and all accrued interest ("Minimum Capital Amount") prior to the expiration of this 90 day period);
- (d) if the aggregate net amount of any and all capital raisings conducted by Conico (and its subsidiaries) during the Term is greater than \$1,000,000, in full or (if a lesser amount) in part by an amount equal to 20% of such Conico capital raisings above an aggregate of \$1,000,000, within 7 days of receipt of cleared funds;
- (e) in full at the end of the Term, if the loan has not already been repaid, provided that if Conico has not raised more than the Minimum Capital Amount and repaying the loan would see Conico's cash balance fall below \$500,000, Meteore Metals Pty Ltd may, at its discretion, cause the loan and accrued interest (or part thereof ) to be repaid in Conico shares at a 10 day weighted average price.

### **Barra Funding**

As at the end of the quarter, Barra has \$928,000 in cash. This will be supplemented by a research and development refund of \$103,000 expected during the current quarter.

Additionally, Barra is presently raising money via a Share Purchase Plan (SPP). The Share Purchase Plan closed at 5pm WST Friday 25<sup>th</sup> October 2019. The results are being collated and will be released to the market shortly.

Collectively, these funds will be sufficient to complete the Mt Thirsty Pre-Feasibility Study and execute the drilling program presently underway at Burbanks.



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**SEAN GREGORY**

Managing Director & CEO

Please refer to our recently updated website for background information on each of Barra's projects.

## **DISCLAIMER**

*The interpretations and conclusions reached in this report are based on current geological theory and the best evidence available to the authors at the time of writing. It is the nature of all scientific conclusions that they are founded on an assessment of probabilities and, however high these probabilities might be, they make no claim for complete certainty. Any economic decisions that might be taken based on interpretations or conclusions contained in this report will therefore carry an element of risk.*

*This report contains forward-looking statements that involve a number of risks and uncertainties. These forward-looking statements are expressed in good faith and believed to have a reasonable basis. These statements reflect current expectations, intentions or strategies regarding the future and assumptions based on currently available information. Should one or more of the risks or uncertainties materialise, or should underlying assumptions prove incorrect, actual results may vary from the expectations, intentions and strategies described in this report. No obligation is assumed to update forward-looking statements if these beliefs, opinions and estimates should change or to reflect other future developments.*

## **COMPETENT PERSONS' STATEMENTS**

*The information in this report which relates to Exploration Targets, Exploration Results and Mineral Resources for the Phillips Find and Burbanks Gold Projects is based on and fairly represents information compiled by Mr Gary Harvey who is a Member of the Australian Institute of Geoscientists and a full-time employee of Barra Resources Ltd. Mr Harvey consents to the inclusion in the report of the matters based on his information in the form and context in which it appears. Mr Harvey holds shares in Barra Resources Ltd.*

*The information in this report which relates to Mineral Resources at Main Lode and Burbanks North is based on information compiled by Mr Andrew Bewsher full-time employee of BM Geological Services Pty Ltd who is a Member of the Australian Institute of Geoscientists.*

*The information in this report which relates to Mineral Resources at Birthday Gift and Christmas Pit is based on information compiled by Mr Richard Buerger, a full-time employee of Mining Plus Pty Ltd who is a Member of the Australian Institute of Geoscientists.*

*The information in this report that relates to Exploration Results for the Mt Thirsty Cobalt-Nickel Project is based on and fairly represents information compiled by Michael J Glasson, a Competent Person who is a member of the Australian Institute of Geoscientists. Mr Glasson is an employee of Tasman Resources Ltd and in this capacity acts as part time consultant to Conico Ltd and the MTJV.*

*The information in this report which relates to the metallurgical test-work for Exploration Results for the Mt Thirsty Cobalt-Nickel Project is based on and fairly represents information compiled by Mr Dean David who is a Member of the Australian Institute of Mining and Metallurgy and a full-time employee of Wood. Mr David consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

*The information in this report which relates to Mineral Resources at Mt Thirsty Cobalt-Nickel Project is based on information provided to and compiled by Mr David Reid, a Competent Person who is a full-time employee of Golder Associates Pty Ltd, and a Member of the Australasian Institute of Mining and Metallurgy.*

*Messer's Harvey, Bewsher, Buerger, Glasson, David, and Reid have sufficient relevant experience to the style of mineralisation and type of deposits under consideration and to the activity for which they are undertaking to qualify as a Competent Person as defined in the JORC Code (2012 Edition).*

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

## APPENDIX 1 - ASX ANNOUNCEMENTS DURING THE QUARTER

Date	Announcement
2 August, 2019	<a href="#">Burbanks Gold Resource Upgrade Initiates Mining Study</a>
9 September, 2019	<a href="#">Mt Thirsty Resource Upgrade</a>
11 September, 2019	<a href="#">Annual Report to Shareholders</a>
23 September, 2019	<a href="#">Birthday Gift Mineral Resource Statement</a>
23 September, 2019	<a href="#">Burbanks Gold Project Positive scoping study</a>
24 September, 2019	<a href="#">Share Purchase Plan to Advance Projects</a>
24 September, 2019	<a href="#">Letter from Managing Director</a>
24 September, 2019	<a href="#">Share Purchase Plan Details</a>
2 October, 2019	<a href="#">Notice of Annual General Meeting - Proxy Form</a>
11 October, 2019	<a href="#">Reminder Share Purchase Plan Closing Soon</a>
18 October, 2019	<a href="#">Share Purchase Plan Offer Extended</a>
21 October, 2019	<a href="#">Drilling Underway at Burbanks Gold Mine</a>

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## APPENDIX 2 – TENEMENT LISTING

Prospecting licences were granted at Diablo within the Phillips Find project during the quarter.

Tenement	Project	Location	Change in Interest (%) during Quarter		
			End of Quarter	Acquired	Disposed
E63/1267	Mt Thirsty	WA	50		
E63/1790		WA	50		
P16/2045		WA	50		
R63/4		WA	50		
M15/161	Burbanks	WA	100		
P15/5249		WA	100		
P15/5412		WA	100		
M16/130	Phillips Find	WA	100		
M16/133		WA	100		
M16/168		WA	100		
M16/171		WA	100		
M16/242		WA	100		
M16/258		WA	100		
M16/550		WA	100		
P16/2702		WA	100		
P16/2785		WA	100		
P16/2786		WA	100		
P16/2985		WA	100		
P16/2986		WA	100		
P16/2987		WA	100		
P16/2988		WA	100		
P16/2989		WA	100		
P16/2990		WA	100		
P16/2991		WA	100		
P16/2992		WA	100		
P16/2998		WA	100		
P16/2999		WA	100		
P16/3037		WA	100		
P16/3038		WA	100		
P16/3039		WA	100		
P16/3040		WA	100		
P16/3041		WA	100		
P16/3042		WA	100		
P16/3043		WA	100		
P16/3084		WA	85	85	
P16/3085		WA	85	85	
P16/3086		WA	85	85	
P16/3087		WA	85	85	

## JORC CODE, 2012 EDITION – TABLE 1 REPORT

### SECTION 1 SAMPLING TECHNIQUES AND DATA

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul style="list-style-type: none"> <li>Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg '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 (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul style="list-style-type: none"> <li>1m samples were split and collected at the drill rig.</li> <li>The remainder of the drill cuttings were immediately bagged and sealed in air tight bags to minimise drying and agglomeration of the clays. These samples were later used for compositing and metallurgical test-work.</li> <li>The split samples were then dried and pulverised and a 40gm sub sample analysed for Co, Ni, Mn, Zn, Mg, Al &amp; Fe using a four-acid digest with an ICP OES finish.</li> </ul>
Drilling techniques	<ul style="list-style-type: none"> <li>Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc).</li> </ul>	<ul style="list-style-type: none"> <li>RC drilling was completed with a 165mm face sampling hammer.</li> <li>AC Drilling was completed with a 102mm blade bit. The cuttings are lifted to the surface up the inner tube of the drill bit in the same manner as RC drilling.</li> <li>All drilling was above the water table and there was no water injection used.</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.</li> </ul>	<ul style="list-style-type: none"> <li>Sample recovery was generally excellent in dry powdery clay which hosts the upper portion of the mineralisation. Any intervals with obvious poorer sample recovery were recorded in the logs. These were mostly in greenish puggy clay sections beneath the oxidised zone in the lower portion of the deposit.</li> <li>The cyclone was cleaned between each six metre rod (RC) and three metre rod (AC) and every metre for wet samples; riffle splitters were cleaned as required. There is no obvious relationship between grade and sample recovery. Most of the material drilled is strongly weathered, soft and fine grained. No significant sample bias is expected to have occurred due to preferential loss of fine/coarse material.</li> </ul>
Logging	<ul style="list-style-type: none"> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>Logging is conducted in detail at the drill site by the site geologist, who routinely records weathering, lithology, alteration, mineralisation, or any other relevant features. It is considered to be logged at a level of detail to support appropriate Mineral Resource estimation and mining studies.</li> <li>All holes were logged in the field by MTJV geologists who have a long association and familiarity with the deposit.</li> <li>Logging is qualitative in nature.</li> <li>The entire length of each hole was logged in 1m intervals.</li> </ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and</li> </ul>	<ul style="list-style-type: none"> <li>All RC drill chips were split with a rotary splitter. The remaining sample was bagged and placed on the ground.</li> <li>Sample preparation followed industry standard practice of drying, coarse crushing to -6mm, before</li> </ul>

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Criteria	JORC Code explanation	Commentary
	<p><i>appropriateness of the sample preparation technique.</i></p> <ul style="list-style-type: none"> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<p>pulverising to 90% passing 75 micron.</p> <ul style="list-style-type: none"> <li>To meet QAQC requirements duplicates were placed at irregular intervals in the sample stream, usually one or two duplicates per drill hole (approximately every 20-40m). For the RC drilling certified blanks (OREAS 24P) were placed in the sample stream at the rate of 1 in 100, at each hundredth sample. Additionally, two different certified standards were used in the sample stream (OREAS 72A and OREAS 162) at the rate of 2 standards per 100 samples. These were placed at the 25th and 75th number of every hundred samples.</li> <li>The Co values in the blank samples were higher than the provided values however they are below 80 ppm; comparatively low compared to the estimated resource values and therefore within acceptable ranges for blank samples. Overall there were only a small number of outliers in the duplicates collected and therefore the duplicate results are also considered satisfactory.</li> <li>Material being sampled is generally fine grained, and a 2-3kg sample from each metre is considered adequate.</li> </ul>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul style="list-style-type: none"> <li>Samples were crushed and pulverised, and analysed for Co, Ni, Mn, Zn, Mg, Al &amp; Fe using a four acid digest with an ICP OES finish (method AD02-ICP) by Bureau Veritas' Perth laboratory. These procedures are considered appropriate for the elements and style of mineralisation. Analysis is considered total.</li> <li>No geophysical tools have been used.</li> <li>The internal laboratory QAQC procedures included analysing its own suite of internal standards and blanks within every sample batch and also adding sample duplicates.</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul style="list-style-type: none"> <li>Significant intersections are determined by company personnel and checked internally.</li> <li>A limited number of twinned RC holes and AC holes twinned by Sonic Core (SC) holes have been drilled. 5 of the 6 RC holes and the 3 AC holes are twins previous AC holes. Analysis of paired data representing AC and SC samples with proximity of approximately 5 m or less has given at least preliminary indications that some AC samples are yielding higher Co and Mn values than corresponding samples derived from SC. Population statistics however show the reverse and AC statistics are slightly lower grade on average than RC and SC.</li> <li>Individual sample numbers are generated and matched on site with down hole depths. Sample numbers are then used to match assays when received from the laboratory. Verification of data is managed and checked by company personnel with extensive experience. All data is stored electronically, with industry standard systems and backups.</li> <li>Data is not subject to any adjustments.</li> </ul>
Location of data points	<ul style="list-style-type: none"> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul style="list-style-type: none"> <li>Collar locations were determined by hand held GPS and are accurate to approximately +/- 5m.</li> <li>The grid system used is AGD84; AMG Zone 51 to match a previously established grid. A DTM and 2.5m spaced topographic contours have been prepared from ortho-photomaps and hole RLs are measured from these. This topographic control is considered quite adequate for the current purposes.</li> </ul>

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Data spacing and distribution	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>All holes were sampled and assayed in 1m intervals and no other compositing has been applied during sample collection and assay laboratory preparation.</li> </ul>
Orientation of data in relation to geological structure	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul style="list-style-type: none"> <li>The mineralisation is mostly contained within a flat lying weathering blanket and vertical holes achieve unbiased sampling in most cases.</li> <li>The mineralisation is mostly contained within a flat lying weathering blanket and vertical holes achieve unbiased sampling in most cases.</li> </ul>
Sample security	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>Samples were either taken directly from the drill site to the laboratory in Kalgoorlie or delivered to a dedicated cartage contractor in Norseman by company employees and or contractors.</li> </ul>
Audits or reviews	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>No audits or reviews were carried out for this metallurgical drilling as it is not considered warranted at this stage.</li> </ul>

## SECTION 2 REPORTING OF EXPLORATION RESULTS

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul style="list-style-type: none"> <li>The exploration results relate to the Mt Thirsty Project, located approximately 16km north west of Norseman, Western Australia. The tenements are owned 50:50 (Mt Thirsty Joint Venture, MTJV) by Conico Ltd (through its subsidiary Meteore Metals Pty Ltd) and Barra Resources Ltd. The project includes Retention Licence R63/4, Exploration Licences E63/1267, and E63/1790 and Prospecting Licence P63/2045. Mining Lease applications have been lodged over R63/4 and E63/1267 and a General Purpose Lease application over E63/1790 and P63/2045. The exploration results referred to in this announcement are located on R63/4.</li> <li>A NSR royalty is payable to a third party on any production from R63/4. The tenements lie within the Ngadjju native title claim (WC99/002), and agreements between the claimants and the tenement holders are designed to protect Aboriginal heritage sites and facilitate access. There are no historical or wilderness sites or national parks or known environmental settings that affect the Mt Thirsty Project although the project area is located within the Great Western Woodlands.</li> <li>Meteore/Barra have secured tenure over the project area and there are no known impediments to obtaining a licence to operate in the area.</li> </ul>
Exploration done by other parties	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>The Mt Thirsty area was explored for nickel sulphide mineralisation in the late sixties and early seventies by Anaconda, Union Miniere, CRA, WMC/CNGC and others. Although no significant sulphide discoveries were made during that time, limonitic nickel/cobalt mineralisation was encountered but not followed up. In the 1990's Resolute-Samantha discovered high grade cobalt mineralisation in the oxidised profile above an orthocumulate peridotite. This oxide mineralisation is the subject of this announcement.</li> </ul>
Geology	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>The Mt Thirsty Cobalt deposit mineralisation has developed as a result of weathering of ultramafic (peridotite) rocks located at the southern end of the Archaean Norseman - Wiluna greenstone belt. Most of the Co and some of the Ni mineralisation is associated with manganese oxides which have formed in the weathering profile.</li> </ul>
Drill hole Information	<ul style="list-style-type: none"> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information</li> </ul>	<ul style="list-style-type: none"> <li>Test work during the scoping study was completed on a master composite made up from Reverse Circulation (RC) drill samples from six holes collected in November 2016 (refer ASX Quarterly Report for December Quarter 2016). The master composite was made up of a blend of approximately half upper saprolite domain (upper) and half lower saprolite domain (lower) at grades representative</li> </ul>

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	<p>for all Material drill holes:</p> <ul style="list-style-type: none"> <li>o easting and northing of the drill hole collar</li> <li>o elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>o dip and azimuth of the hole</li> <li>o down hole length and interception depth</li> <li>o hole length.</li> </ul> <p>• 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.</p>	<p>of the most important early years of the mine plan.</p> <ul style="list-style-type: none"> <li>• Over the entire Mineral Resource, the upper domain accounts for 13% and the lower domain accounts for 87% of the available tonnes. As part of this PFS, composites for the upper and lower domains at grades representative of the early years in the mine plan have been blended from these same RC samples from 2016.</li> <li>• Additionally, three Air Core (AC) drill holes were drilled in August 2018 to collect fresh samples for beneficiation test work. These samples were also blended into upper and lower composites, although at grades representative of the overall Mineral Resource averages for those domains.</li> </ul> <table border="1"> <thead> <tr> <th>Hole ID</th> <th>Date Drilled</th> <th>Easting</th> <th>Northing</th> <th>RL (m)</th> <th>Depth (m)</th> <th>Composite Intervals (m)</th> </tr> </thead> <tbody> <tr> <td>MTRC036</td> <td>20/11/2016</td> <td>372162</td> <td>6447455</td> <td>378</td> <td>54</td> <td>18-42</td> </tr> <tr> <td>MTRC037</td> <td>19/11/2016</td> <td>372244</td> <td>6447455</td> <td>376</td> <td>30</td> <td>13-30</td> </tr> <tr> <td>MTRC038</td> <td>19/11/2016</td> <td>372349</td> <td>6447457</td> <td>369</td> <td>35</td> <td>14-28</td> </tr> <tr> <td>MTRC039</td> <td>20/11/2016</td> <td>371956</td> <td>6447000</td> <td>382</td> <td>40</td> <td>14-34</td> </tr> <tr> <td>MTRC040</td> <td>20/11/2016</td> <td>372115</td> <td>6447001</td> <td>393</td> <td>40</td> <td>30-36</td> </tr> <tr> <td>MTRC041</td> <td>20/11/2016</td> <td>372295</td> <td>6446999</td> <td>381</td> <td>35</td> <td>23-32</td> </tr> <tr> <td>MTAC798</td> <td>14/08/18</td> <td>372300</td> <td>6447251</td> <td>377</td> <td>30</td> <td>3-5 8-10 16-26</td> </tr> <tr> <td>MTAC799</td> <td>14/08/18</td> <td>372121</td> <td>6446846</td> <td>392</td> <td>60</td> <td>35-48 54-56</td> </tr> <tr> <td>MTAC801</td> <td>14/08/18</td> <td>371754</td> <td>6447056</td> <td>375</td> <td>35</td> <td>23-34</td> </tr> </tbody> </table> <p>Table – Drill holes used in the sample composites. All holes are vertical. Grid AGD84 Zone 51.</p>	Hole ID	Date Drilled	Easting	Northing	RL (m)	Depth (m)	Composite Intervals (m)	MTRC036	20/11/2016	372162	6447455	378	54	18-42	MTRC037	19/11/2016	372244	6447455	376	30	13-30	MTRC038	19/11/2016	372349	6447457	369	35	14-28	MTRC039	20/11/2016	371956	6447000	382	40	14-34	MTRC040	20/11/2016	372115	6447001	393	40	30-36	MTRC041	20/11/2016	372295	6446999	381	35	23-32	MTAC798	14/08/18	372300	6447251	377	30	3-5 8-10 16-26	MTAC799	14/08/18	372121	6446846	392	60	35-48 54-56	MTAC801	14/08/18	371754	6447056	375	35	23-34
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Data aggregation methods	<ul style="list-style-type: none"> <li>• In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>• Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>• The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul style="list-style-type: none"> <li>• Not applicable.</li> <li>• No equivalent values are used.</li> </ul>																																																																						
Relationship between mineralisation widths and intercept lengths	<ul style="list-style-type: none"> <li>• These relationships are particularly important in the reporting of Exploration Results.</li> <li>• If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>• If it is not known and only</li> </ul>	<ul style="list-style-type: none"> <li>• As the mineralised envelope is generally flat lying and nearly all holes were drilled vertically; down hole width is mostly considered to be true width.</li> </ul>																																																																						



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	<p>the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').</p>	
Diagrams	<ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>All diagrams contained in this document are generated from spatial data displayed in industry standard mining and GIS packages.</li> </ul>
Balanced reporting	<ul style="list-style-type: none"> <li>Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable.</li> </ul>
Other substantive exploration data	<ul style="list-style-type: none"> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li> </ul>	<ul style="list-style-type: none"> <li>The variability leach composite sub-samples were approximately 850g on a dry solids basis mixed at 40% solids with synthetic hypersaline water. SO<sub>2</sub> was the reagent used and no acid was added. Leaches were conducted at 70 degrees C for 24 hours.</li> <li>The bulk leach composite sub-samples were approximately 15-20kg on a dry solids basis mixed at 40% solids with synthetic hypersaline water. SO<sub>2</sub> was the main reagent used and no acid was added. Leaches were conducted at temperatures ranging from 70-90 degrees C for 24-36 hours.</li> <li>Leach extraction results are reported as metal in residue vs feed.</li> <li>Leach extraction results are reported prior to losses expected in solution neutralisation, CCD washing and precipitation. For the scoping study, final product recoveries of 73.0% for cobalt and 21.5% were calculated from leach extractions of 79.5% and 25.6% respectively. For the PFS, losses of less than 4% are targeted subject to test-work outcomes.</li> </ul>
Further work	<ul style="list-style-type: none"> <li>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul style="list-style-type: none"> <li>The Mt Thirsty deposit is presently the subject of a PFS.</li> <li>Further test-work will include thickening and solid-liquid separation tests, tailing test-work as well as additional variability leaches.</li> <li>The PFS is nearing completion</li> </ul>

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