

### **Corporate Details:**

ASX Code: BAR

Market Cap: \$29.2M (Mar 31) Cash: \$1.9M (Mar 31)

Issued Capital: 423.75 m ordinary shares

Substantial Shareholders: FMR Investments Pty Ltd 19.3%

#### Directors:

Executive Chairman & CEO: Gary Berrell Non-Executive Directors: Grant Mooney Jon Young

Company Secretary: Grant Mooney

### **Contact Details:**

Barra Resources Ltd Ground Floor 6 Thelma Street West Perth, WA 6005 PO Box 1546 West Perth, WA 6872 Phone: (+61 8) 9481 3911 Facsimile: (+61 8) 9481 3283 Email: barraadmin@barraresources.com.au Website: www.barraresources.com.au

### Shareholder Enquiries:

Security Transfer Australia 770 Canning Highway Applecross, WA 6153 Phone: (+61 3) 9628 2200 Facsimile: (+61 8) 9315 2233 Email: registrar@securitytransfer.com.au Website:

www.securitytransfer.com.au

## **Barra Resources Limited** Activity Report for the Quarter Ended 31 March 2017

12 April 2017

### **OVERVIEW**

### MT THIRSTY COBALT PROJECT

- Metallurgical testwork continuing
- Scoping Study targeting completion June quarter
- Aircore drilling planned for late April to follow-up on previous cobalt-nickel intersections on E63/1267

### **BURBANKS GOLD PROJECT**

- 31-hole reverse circulation (RC) drilling program returns excellent results from Main Lode: Best results include:
  - BBRC246 11.0m @ 5.70g/t Au from 44m
  - BBRC231 5.0m @ 9.62g/t Au from 33m
  - BBRC233 5.0m @ 8.65g/t Au from 37m, and
  - BBRC244 5.0m @ 3.70g/t Au from 44m
- Deep RC reconnaissance hole testing Main Lode Deeps starting mid-April
- 10,000m of aircore drilling planned to further test Burbanks North system. Over 1000m strike to be drilled. Approval pending
- Mining Proposal for Burbanks North in progress
- Birthday Gift Mining Area (ASX:KDR 100%) on care and maintenance whilst KDR continues to pursue sale options

## PROJECTS

### MT THIRSTY COBALT PROJECT

(50% Barra; 50% Conico Ltd - Joint Venture) www.mtthirstycobalt.com

### Activities

### Metallurgical Testwork and Scoping Study

This current phase of metallurgical testwork continues and is due for completion during April. The MTJV is in the process of appointing a study manager to coordinate the next phase of the Scoping Study which will focus on flowsheet design and financial modelling. The MTJV is on target to complete the Scoping Study during the June quarter.

#### Forthcoming Aircore Drilling (E63/1267)

A 25-hole aircore (AC) drilling program is planned to follow up several promising Co-Ni intersections discovered beneath a laterite outcrop on the eastern side of E63/1267 in 2015 (Figure 1) *(refer to ASX June Quarterly Report, 2015)*. This area is located approximately 3km north of the Mt Thirsty Joint Venture's (MTJV) Cobalt Oxide Deposit.

Drilling by the Joint Venture in 2015 intersected significant Co-Ni oxide mineralisation in three adjacent holes approximately 50m apart along a single drill traverse with values up to 0.15% Co and 1.26% Ni in a 3m composite sample from 30 to 33m downhole. This drilling indicated that there is potential to delineate further Co-Ni oxide mineralisation beneath the laterite on the eastern side of E63/1267 which could potentially supplement the existing Mt Thirsty Cobalt Oxide Deposit mineral resource on R63/4. Further AC drilling is required to test the extent of this mineralisation beneath the mapped laterite which trends for about 500m along its north-south axis.

A Program of Work has been approved by the Department of Mines and Petroleum and an Aboriginal heritage survey is scheduled for early April with drilling to commence thereafter.

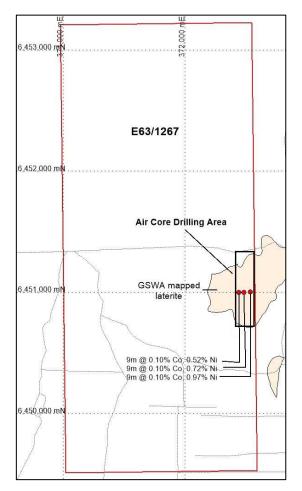


Figure 1: Location of planned AC drilling and previous Co-Ni intersections (red dots) with Co and Ni assay results. Intersections shown are based on 3m composites and are downhole widths (9m downhole is approx. 7.2m true width).

### **Background of Mt Thirsty Project and Cobalt Market**

The Mt Thirsty Cobalt Project is located 20km north-northwest of Norseman, Western Australia. Conico Ltd (ASX:CNJ) is the Joint Venture manager.

The Project contains the Mt Thirsty Cobalt Deposit which has the potential to emerge as a significant cobalt supplier. Further information can be found at <u>www.mtthirstycobalt.com</u>. The deposit contains an Indicated Mineral Resource of 16.6Mt @ 0.14% Co, 0.60% Ni and 0.98% Mn and an Inferred Mineral Resource of 15.3Mt @ 0.11% Co, 0.51% Ni and 0.73% Mn; (*The Mt Thirsty Co-Ni Oxide Deposit mineral resource was prepared and first reported in accordance with the JORC Code 2004. It has not been updated since to comply with the JORC Code 2012 on the basis that the information has not materially changed since it was last reported; refer to ASX announcement 8<sup>th</sup> March 2011: "Resource Upgrade Mt Thirsty Cobalt-Nickel Oxide Deposit", available to view at <u>www.barraresources.com.au</u>).* 

As well as the Cobalt Deposit, the Project also hosts primary nickel sulphide (Ni-S) mineralisation with intersections of Ni-S mineralisation up to 6m down-hole @ 3.5% Ni made by the Joint Venture in 2010 (refer to ASX announcement 19<sup>th</sup> May 2010: "High Grade Nickel Sulphides Intersected at Mt Thirsty JV" <sup>1</sup>, available to view at <u>www.barraresources.com.au</u>).

Barra has excellent exposure to the cobalt market through the 50% interest in the Mt Thirsty Cobalt Project.

Demand for cobalt looks very bright as the world becomes more dependent on rechargeable power sources (Figure 2). Innovations with portable electronics and electric vehicle design are adding to this surging demand. However, the battery industry is also competing with demand for cobalt from producers of superalloys, aircraft turbines and chemical industries.

Demand is likely to escalate exponentially with battery production; however, supply is uncertain due to:

- Over 60% of global supply coming from the politically unstable African countries such the Democratic Republic of Congo, Central African Republic and Zambia.
- Cobalt is largely a by-product of copper and nickel mining and there are an increasing number of mine closures and project deferments due to low commodity prices.

With potential supply constraints and surging demand many commentators see pricing pressure as a likely eventuality.

The undeveloped Mt Thirsty Cobalt Project has a significant JORC 2004 reported resource with a potential to have a long mine life. It is close to all necessary infrastructure (rail, road, power, water, and sea port) and, being in a mining orientated state, has the potential to attract a variety of interested parties including end users of cobalt. The Joint Venture partners are working collaboratively to exploit this joint opportunity.

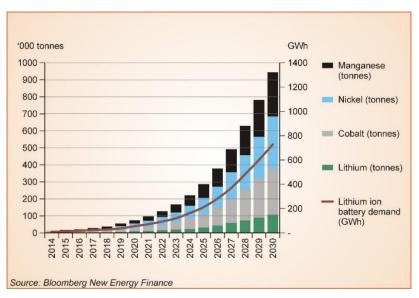


Figure 2: Global lithium-ion battery and materials demand forecast from EV sales, 2015-2030.

<sup>&</sup>lt;sup>1</sup> The Company is not aware of any new information or data that materially affects the information included in the previous announcement and that all of the previous assumptions and technical parameters underpinning the estimates in the previous announcement have not materially changed.

### **BURBANKS GOLD PROJECT (WA)**

(Includes \$25 per ounce Royalty on gold production from within the Birthday Gift Mine Area and 100% rights to Reservation Area within M15/161, Figure 5)

### Activities

### Reservation Area (100% Exploration and Mining Rights – Figure 5)

#### Burbanks North

The Company and its mining partner, FMR Investments Pty Ltd (FMR), are currently compiling a mining proposal for the Burbanks North Deposit. Whilst no decision to mine has been made, an approved mining proposal will provide the partners with an option to commence mining, without delay, when market conditions are more favourable.

The Company is awaiting approval to complete up to 10,000m of aircore it has planned to infill and extend Burbanks North mineralised zone. The purpose of the drilling program is two-fold; firstly, to extend the recently defined east lode at Burbanks North within the optimised pit shell design, and secondly, to extend the strike of east and west lode mineralised structures further to the north (Figure 3).

The extensional drilling will initially test over 1,000m of strike on 25m spaced traverses (6750N to 7800N). There exists excellent potential for the discovery of additional oxide deposits along this trend; this has already been demonstrated with multiple intersections of anomalous gold mineralisation (greater than 1.0g/t Au) on previously drilled broad spaced traverses between 6750N to 8000N.

#### Main Lode Gold Mine

The Company recently completed its first phase drilling campaign at Main Lode with great success. A total of 31 RC holes tested the top 100m of the historic Main Lode underground mining environment over an initial strike length of 300m from 5900N to 6200N (*refer to ASX Release dated 14<sup>th</sup> March 2017*). Best results included:

#### BBRC246 11.0m @ 5.70g/t Au from 44m including 8.0m @ 6.66 g/t Au from 47m

#### BBRC231 5.0m @ 9.62g/t Au from 33m

#### BBRC233 5.0m @ 8.65g/t Au from 37m, and

### BBRC244 5.0m @ 3.70g/t Au from 44m

Multiple high-grade gold lodes were intersected within a 10m to 25m wide shear zone over a continuous strike length of 275m with continuity interrupted only by historical mine workings. Mineralisation remains open along strike to the north and down-dip.

In coming weeks, a reconnaissance RC hole will test the depth potential of the mine by targeting an interpreted north-plunging extension to the high-grade system below Level-6 and just north of lowest known mined level, Level-7, about 250m below the surface.

The Main Lode mine area has excellent potential at depth, as evidenced by mining and development to 275m below surface. The mine historically produced approximately 85,900oz @ 18.3g/t Au (Figure 4).

After the completion of the reconnaissance RC hole, the Company will start planning for its next drilling campaign (Phase 2) which will aim to again test the top 100m of the mine environment over the next 300m of strike north of 6200N (Figures 3 and 4, light purple shaded area). Following this campaign, subsequent phases will then aim to test the vertical extent of the mine environment.

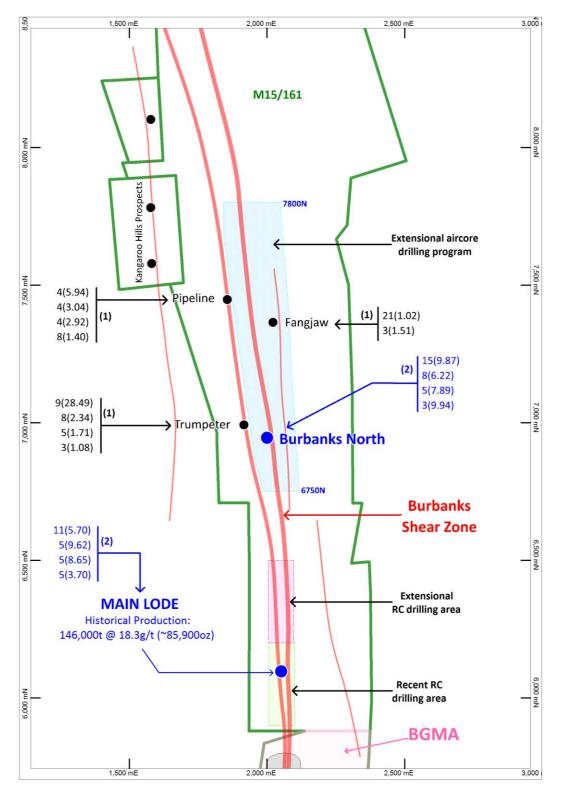


Figure 3: Map showing location of Main Lode, Burbanks North, area to be tested with aircore drilling (light blue shade) and area to be tested with second phase RC drilling (light purple shade) at Main Lode. Deep 'reconnaissance' RC hole will test light green shaded area at about 250m below surface. Significant intersections from previous Barra RC drilling are shown (1) & (2) [Note: 9(28.49) = 9m grading 28.49g/t Au, down-hole width]

- (1) Intersections shown in diagram are from RC drilling by Barra completed between 2008 and 2010 and previously reported in the following ASX Releases which can be viewed at www.barraresources.com.au; 13/09/2010 Follow-up Drilling Results at Trumpeter, 19/03/2008 Burbanks Update, and December 2006 Quarterly Report.
- (2) Intersections shown in diagram are from recent RC drilling by Barra completed between 2016 and 2017 and previously reported in the following ASX Releases which can be viewed at www.barraresources.com.au; 25/08/2016 Excellent Drill Results Move Burbanks North Closer to Production, and 14/03/2017 Successful First Phase Drilling Demonstrates Significant Potential of Main Lode.

The Company is not aware of any new information or data that materially affects the information included in the relevant market announcements and that all material assumptions and parameters used in the relevant market announcements continue to apply and have not materially changed.

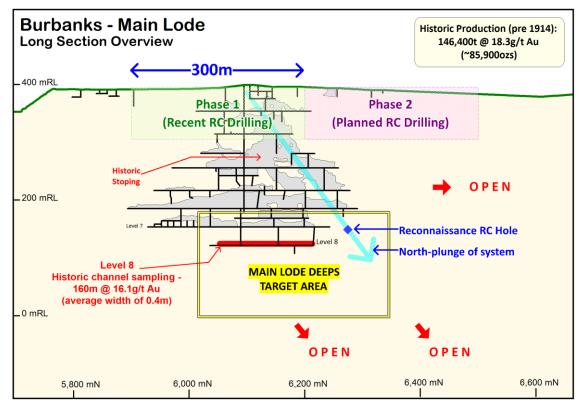


Figure 4: Burbanks Main Lode Gold Mine schematic long section showing historic mining areas (grey shade), plunge of high-grade gold mineralisation and target areas for drilling.

### Birthday Gift Mine Area (BGMA) (Royalty Only)

The BGMA currently remains on care and maintenance as owner and operator, Kidman Resources Limited (ASX: KDR) (Kidman), is still pursuing it options regarding the sale of the BGMA.

KDR's announcement of the sale of its Burbanks Gold Mine affects the Birthday Gift Mining Area (BGMA) only. Barra's rights to the Burbanks mining lease including its royalty over the BGMA and its 100% rights to the Reservation Area will not be affected.

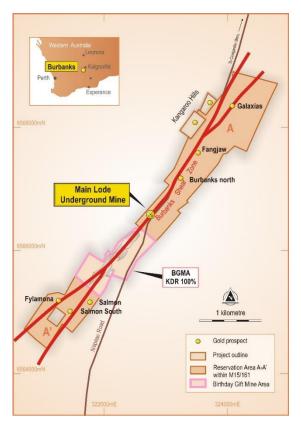


Figure 5: Plan showing Reservation Area (A-A') and BGMA within M15/161.

### **Background of Burbanks Project**

The Burbanks Project is centred 9km southeast of Coolgardie, Western Australia.

The Company holds sole and exclusive exploration and mining rights (Reservation Rights) to certain areas within M15/161 (Figure 5). The Reservation Rights include the historic Main Lode Gold Mine, which has produced 146,000t @ 18.3g/t Au for approximately 85,900ozs of gold between 1885 and 1914, as well as several important prospects including Burbanks North, Pipeline, Fangjaw and Salmon South. The Company also holds (100%) the Kangaroo Hills prospecting licences adjacent to M15/161.

The mining lease, M15/161, is owned by Kidman Resources Limited (ASX:KDR) who operate the Birthday Gift Underground Mine within the Birthday Gift Mining Area (BGMA). In addition to the Reservation Rights, the Company also has a royalty on all gold produced from within the BGMA.

### PHILLIPS FIND GOLD PROJECT (WA)

### (100% Barra\*)

\*except for Carbine South tenements which are held 85% Barra

### **Forthcoming Activities**

### Phillips Find Mining Centre (PFMC)

Following the conclusions and recommendations from the pit mapping program completed by consultant Model Earth Pty Ltd the Company is now planning a significant drilling campaign at the PFMC. The mapping and modelling program by Model Earth provided a better understanding of shoot orientations and identified several new positions to test. Up to 10,000m of RC drilling will test depth extensions below all three existing pits, specifically targeting the poorly tested zone between 100m and 200m below the surface.

Drilling is most likely to commence second half of 2017, following the completion of drilling activities at Burbanks.

### Auger Geochemistry

A new auger geochemical sampling program has been proposed following a recommendation by CSA Global Consultants and based on review of the existing auger geochemical dataset and results of an orientation survey completed late 2015.

The auger sampling program is scheduled to commence during the September quarter, after which the identification and prioritisation of targets will be compiled in preparation for drill testing. The sampling program will focus on the broader project area (outside of the PFMC).

### **Background of Phillips Find Project**

The Phillips Find Project is centred 50km north-northwest 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 32,839 ounces of gold has been produced between 1998 and December 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, aeromagnetic interpretation and drilling.

The most recent mining activity at the PFMC was the Newminster open-pit which was mined in two stages between January 2013 and September 2015. A total of 111,082t @ 2.52g/t Au was mined producing 9,018oz of gold. With open-pit mining now complete at Newminster, the Company is now focussed on advancing the underground potential of the PFMC with the aim developing a viable medium to long-term underground mining operation.

### **BITTER BORE COBALT PROJECT (WA)**

(Option to acquire 100%)

### Activities

Following the site reconnaissance conducted during December five samples, collected from limited remnant drill chip spoils, were analysed for oxide cobalt mineralisation. No significant cobalt mineralisation was returned from siliceous limonite material.

As previously stated, the Company is looking for Mt Thirsty type cobalt-manganese mineralisation potentially amenable to treatment process being pursued at Mt Thirsty. Historical records suggest that this type of mineralisation does exist in the Bitter Bore Project area. The Company does not believe the results from the sampling reflect the prospectivity of the project due to the lack of available material that could be sampled.

Further work is required and this is likely to involve the need to drill some RC holes to properly assess the projects potential.

SampleID	Northing	Easting	Ni %	Co %	Fe %	Mn ppm	Si %	Sc ppm	Comments
XP03717	6650621	310218	0.354	0.035	3.91	9860	40.7	7.7	Drill spoil; siliceous limonite/caprock
XP03718	6650743	310337	0.238	0.015	40.4	780	9.43	19	Drill spoil; siliceous limonite/caprock
XP03719	6650746	310453	0.362	0.032	17	650	27.2	5.7	Drill spoil; siliceous limonite/caprock
XP03720	6650687	310403	0.315	0.039	13.4	3140	30.7	21.9	Drill spoil; siliceous limonite/caprock
XP03721	6650623	310339	0.339	0.021	6.71	2150	34	6.6	Drill spoil; siliceous limonite/caprock

Table 1: RC drill chip spoil sample results from Bitter Bore. Note: Northing and Easting are GDA94, MGA Zone 51 coordinates

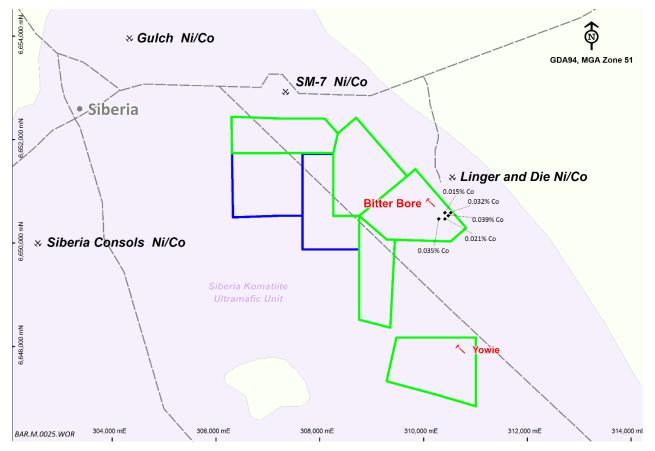


Figure 6: Plan showing location of drill chip spoil samples and cobalt results at Bitter Bore. Green tenements are subject to Bitter Bore Option Agreement, blue tenements are recent tenement applications by Barra (100%).

## TENEMENTS

The following tenement changes occurred during the quarter (see Appendix 1 for Tenement Listing at end of report):

- Tenements P16/2399, P16/2400, P16/2403, P16/2404, P16/2405, P16/2406 and P16/2408 were surrendered at Phillips Find.
- Tenements P16/2989, P16/2990, P16/2991, P16/2992, P16/2993, P16/2994 and P16/2995 were granted at Phillips Find.
- Tenements E63/1790 and P63/2405 were granted at Mt Thirsty.

## CORPORATE

### **Recent Announcements**

Date	Announcement		
16/03/2017	Appendix 3B		
14/03/2017	Half Yearly Report and Accounts		
14/03/2017	High Grade Gold Demonstrates Main Lode Potential		
22/02/2017	Mt Thirsty Cobalt Project Update		
31/01/2017	Quarterly Cashflow Report		
18/01/2017	Quarterly Activities Report		

Jerrell

GARY BERRELL Executive Chairman



Project Location Map

## APPENDIX

### **TENEMENT LISTING**

Tenement           M15/161           P15/5249           P15/5412           E63/1267           E63/4           P24/4532	Project Burbanks	Location WA WA	End of Quarter 0 100	Acquired Subje	Disposed ct to Reservat	Comments ion Rights and Royalty only (Figure 2)
P15/5249 P15/5412 E63/1267 E63/1790 P16/2045 R63/4	Burbanks			Subje	CI IO RESEIVAT	
P15/5412 E63/1267 E63/1790 P16/2045 R63/4	DUIDANKS	VVA				g
E63/1267 E63/1790 P16/2045 R63/4		WA	100			
E63/1790 P16/2045 R63/4		WA	50			
P16/2045 R63/4	ity .	WA	50			Granted
R63/4	Mt Thirsty	WA	50			Granted
	F	WA	50			Glanted
		WA	0			Option to acquire 100%
P24/4571	0	WA	0			Option to acquire 100%
P24/4984	ore	WA	0			Option to acquire 100%
P24/4993	ъ Б	WA	0			Option to acquire 100%
P24/4994	Bitter Bore	WA	0			Option to acquire 100%
P24/5176	B	WA	100			Application
E24/207		WA	100			Application
M16/130		WA	100			
M16/133		WA	100			
M16/168		WA	100			
M16/171		WA	100			
M16/242		WA	100			
M16/258		WA	100			
P16/2399		WA			100	
P16/2400		WA			100	
P16/2401		WA	100			
P16/2403		WA			100	
P16/2404		WA			100	
P16/2405		WA			100	
P16/2406		WA			100	
P16/2407	_	WA			100	
P16/2408 P16/2578	ind	WA WA	100		100	
P16/2578 P16/2702	Phillips Find	WA	100 100			
P16/2702 P16/2785	ğ	WA	100			
P16/2786	inc	WA	100			
P16/2422	<u> </u>	WA	85			
P16/2423		WA	85			
P16/2424		WA	85			15% - Hayes Mining Pty Ltd
P16/2425		WA	85			
P16/2989		WA	100			Granted
P16/2990		WA	100			Granted
P16/2991		WA	100			Granted
P16/2992		WA	100			Granted
P16/2993		WA	100			Granted
P16/2994		WA	100			Granted
P16/2995		WA	100			Granted
M16/550		WA	100			Application (over P16/2407)
M16/551		WA	100			Application (over P16/2401)
M16/552		WA	85			Application (over P16/2422-2425)
E30/333		WA	0			
M30/43		WA	0	ļ		
M30/60		WA	0	ļ		
M30/84		WA	0	ļ		
M30/97		WA	0	ļ		
M30/98		WA	0	ļ		
M30/127	>	WA	0	ļ		
M30/133	Riverina Nickel JV	WA	0			
M30/182	cké	WA	0	4		
P30/1074	Ż	WA	0	4	30% Inte	erest in Nickel Rights Only
P30/1111	ina	WA	0			
P30/1112	/eri	WA	0	{		
P30/1113	Riv	WA	0	4		
P30/1114		WA	0	4		
P30/1115		WA	0	{		
P30/1116		WA	0	{		
		WA	0			
P30/1117						
		WA WA	0			

#### Abbreviations

AC=Aircore, Au=gold, Co=cobalt, DEC=Department of Environment and Conservation, DD=Diamond, DMP=Department of Mines and Petroleum, g=grams, g/t=grams per tonne, kg=kilograms, km=kilometres, lb/s=pound/s, LME=London Metal Exchange, It=litre, m=metres, min=minutes, ml=millilitre, mm=millimetre, Mn=manganese, Mt=million tonnes, Ni=nickel, oz/ozs=ounce/s, pH=measure (1-10) of acidity (1 acid, 7 neutral, 10 basic), ppb=parts per billion, ppm=parts per million, RAB=Rotary Air Blast, RC=Reverse Circulation, RL=Reduced Level, t=tonnes, tpa=tonnes per annum μm=micro metres, @= grading, %=percent, °C=degrees celsius.

#### 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 on the basis of interpretations or conclusions contained in this report will therefore carry an element of risk.

It should not be assumed that the reported Exploration Results will result, with further exploration, in the definition of a Mineral Resource.

#### **Competent Persons Statement**

The information in this report which relates to Exploration Targets, Exploration Results and Mineral Resources for the Phillips Find and Burbanks 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 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 Harvey 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 that relates to Exploration Targets, Exploration Results and Mineral Resources for the Mt Thirsty Project is based on and fairly represents information compiled by Michael J Glasson and Robert N Smith, Competent Persons who are members of the Australian Institute of Geoscientists. Mr Glasson and Mr Smith are employees of Tasman Resources Ltd and in this capacity act as part time consultants to Conico Ltd. Mr Glasson and Mr Smith hold shares in Conico Ltd. Mr Glasson and Mr Smith have sufficient experience which is relevant to the style of mineralisation and type of the deposits under consideration and to the activity being undertaking to qualify as Competent Persons as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Glasson and Mr Smith consent to the inclusion in the report of the matters based on their information in the form and context in which it appears.

#### Forward Looking Statements Disclaimer

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.

# THE FOLLOWING TABLES ARE PROVIDED TO ENSURE COMPLIANCE WITH THE JORC CODE (2012 EDITION) FOR THE REPORTING OF EXPLORATION RESULTS.

### **BITTER BORE SAMPLING**

### SECTION 1 – SAMPLING TECHNIQUES AND DATA

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

Criteria	JORC Code explanation	Commentary
Sampling techniques Drilling techniques	<ul> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 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.</li> <li>Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-</li> </ul>	<ul> <li>Spoil Sampling: 500-3kg of random sample was collected from any remnant drill chip piles laid directly on the ground at the sites of various historical drillhole locations. Were possible, samples were only collected from limonitic material likely to host cobalt mineralisation</li> <li>Each sample location (Northing and Easting) was recorded by handheld GPS. A brief sample description and additional comments as necessary were recorded at every sample location. All sampling protocols remained constant throughout the program.</li> <li>500g – 3kg samples were collected and placed inside calico sample bags and sent to Bureau Veritas Assay Laboratory in Perth, WA for sample preparation and analysis.</li> <li>In the laboratory, samples are crushed and pulverised then cast using a flux with added sodium nitrate to form a glass bead. The glass bead was then analysed using X-Ray Fluorescence Spectrometry to determine for Ni, Co, Fe, Mn, and Si. Scandium is determined by fusing the glass bead then analysing with Laser Ablation ICP-MS.</li> </ul>
Drill sample	<ul> <li>sampling bit or other type, whether core is oriented and if so, by what method, etc.).</li> <li>Method of recording and assessing core and chip</li> </ul>	• n/a
recovery	<ul> <li>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>	
Logging	<ul> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul> <li>Spoil samples have been described geologically but not to a level suitable for inclusion in any Mineral Resource Estimation, mining or metallurgical studies</li> <li>Logging of spoil samples is qualitative in nature. Samples are logged for lithology and sometimes logged for colour, texture, weathering, minerals and alteration. An overall sample description and general comment on location is also included.</li> <li>Logging was restricted to describing only the spoil sample collected for analysis.</li> </ul>
Sub-sampling techniques and sample	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary</li> </ul>	<ul> <li>n/a</li> <li>Spoil samples were collected from remnant drill</li> </ul>

Criteria	JORC Code explanation	Commentary
	<ul> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all subsampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul> <li>All sample preparation of spoil samples follows industry best practice, involving oven drying (110°C) where necessary, crushing and pulverising (~90% less than 75µm).</li> <li>Sub-sampling will only occur if the sample is &gt;3kg. Oversized samples are crushed to &lt;3mm and split down to 3kg using a rotary or riffle splitter. Samples are then pulverized and homogenized in LM5 Ring Mills and ground to ensure &gt;90% passes 75µm.</li> <li>No field duplicates were collected.</li> <li>The sample size is considered appropriate for reconnaissance exploration.</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.</li> </ul>	<ul> <li>Fused Bead XRF and Laser Ablation is a recommended method for the analysis of oxide nickel laterite material to determining the total mineral content of a sample.</li> <li>No field analysis tool was used.</li> <li>Laboratory QA/QC controls during the analysis process include duplicates for reproducibility, blank samples for contamination and standards for bias.</li> </ul>
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	<ul> <li>Significant intersections are verified and signed off by the Exploration Manager for Barra Resources who is also a Competent Person.</li> <li>n/a</li> <li>Geological logging was originally captured on paper, scanned and sent to the company's consultant database administrator (RoreData) for entry directly into the database via a validation process. Sampling, collar, and laboratory assay data is captured electronically and also sent to RoreData. All original data is stored and backed-up by Barra. The official database is stored by RoreData, a copy of which is uploaded to Barra's server for geologists use. Uploaded data is reviewed and verified by the geologist responsible for the data collection.</li> <li>No adjustments or calibrations were made to any assay data reported.</li> </ul>
Location of data points	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>Drillhole collar locations are surveyed before and after by a qualified surveyor using sophisticated DGPS with a nominal accuracy of +/- 0.05m for north, east and RL (elevation)</li> <li>Northing and Easting coordinates are quoted using MGA Zone 51 (GDA94) coordinate system.</li> <li>Level of topographic control offered using handheld GPS is considered sufficient for this level of field work.</li> </ul>
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>Samples were collected from random locations based on material being available for sampling.</li> <li>No sample compositing has been applied.</li> </ul>

Criteria	JORC Code explanation	Commentary
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul> <li>Sampling locations were random. Sample bias is not a consideration due to the reconnaissance nature of sampling.</li> <li>n/a</li> </ul>
Sample security	• The measures taken to ensure sample security.	<ul> <li>Samples for analysis were tagged and recorded instantly and delivered to the laboratory at the end of the program.</li> </ul>
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	<ul> <li>No audits or reviews have been conducted on sampling techniques and data at this stage.</li> </ul>

### SECTION 2 – REPORTING OF EXPLORATION RESULTS

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

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<ul> <li>The work described was undertaken on P24/4984. Barra Resources Limited has an option to acquire 100% of P24/4984 and other tenements within the Bitter Bore Project area including P24/4993-4994, 4532 and 4971. The 'Option' tenements are held by Zetek Resources P/L and Western Resources P/L.</li> <li>There are no native title claims over the project area</li> <li>The tenements are in good standing.</li> </ul>
Exploration done by other parties	<ul> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul> <li>Previous exploration in the area has been conducted by OMG Cawse Pty Ltd. Intersections of cobalt up to 10m grading 0.21% Co have previously been intersected on P24/4984.</li> <li>OMG Cawse reported a nickel laterite Inferred Mineral Resource (Non JORC 2012) (&gt;= 0.50% Ni) in 2004.</li> <li>No exploration for enriched cobalt resources has previously been carried out on the project area.</li> </ul>
Geology	<ul> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	• The project area is located over the Siberia Komatiite ultramafic within the Kalgoorlie Terrane of the Norseman-Wiluna greenstone belt. Concentrations of nickel-cobalt mineralisation occurs within the oxidised profile of the ultramafic unit and primarily associated with limonite, silica and manganese wad.
Drill hole Information	<ul> <li>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:         <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>If the exclusion of this information is justified on the basis that the information is not Material and</li> </ul>	<ul> <li>Sampling information for the samples discussed in this report is listed in Table 1 in the context of this report.</li> <li>All material data has been periodically released to the ASX on these dates: 14/11/2016, December 2016 Quarterly Report.</li> <li>No information has been excluded.</li> </ul>

Criteria	JORC Code explanation	Commentary
	this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.	
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	<ul> <li>No cut-off grades have been applied</li> <li>No aggregation has been applied</li> <li>No metal equivalent values have been used for the reporting of these exploration results.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').</li> </ul>	<ul> <li>The relationship between mineralisation widths and intercept length is unknown</li> <li>n/a</li> <li>n/a</li> </ul>
Diagrams	<ul> <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> <li>Appropriate diagrams have been included in the body of this report.</li> </ul>
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 exploration results have been reported.
Other substantive exploration data	<ul> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li> </ul>	• All relevant data has been included in this report.
Further work	<ul> <li>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	<ul> <li>Further work has been discussed in the context of this report and may include: RC drilling to obtain new and more representative samples of any potential accumulation of cobalt mineralisation.</li> </ul>