

### **Corporate Details:**

ASX Code: BAR

Market Cap: \$28.9M (Dec 29) Cash: \$2.566M (Dec 31)

#### **Issued Capital:**

473.75 m ordinary shares

#### **Substantial Shareholders:**

FMR Investments Pty Ltd 17.32%

#### **Directors:**

# Chairman:

Gary Berrell

# Managing Director & CEO:

Sean Gregory

#### 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

#### Email:

<u>barraadmin@barraresources.com.au</u> Website:

www.barraresources.com.au

# Shareholder Enquiries:

Security Transfer Australia 770 Canning Highway Applecross, WA 6153

Phone: 1 300 992 916 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 December 2017

30 January 2018

# **OVERVIEW**

# **CORPORATE**

- Acquisition of Coolgardie Mining Company Pty Ltd consolidates 100% ownership of Burbanks Gold Project.
- Appointment of new Managing Director and Chief Executive Officer – Sean Gregory.
- The Company successfully raised \$2.25M via a heavily oversubscribed Share Purchase Plan.

#### MT THIRSTY COBALT PROJECT

- Mt Thirsty Scoping Study returns outstanding financial metrics (base case NPV A\$290M) for simple atmospheric SO<sub>2</sub> flowsheet over 21-year mine life.
- Planning underway for 2018 PFS to test additional flowsheet options with the potential to significantly increase metal recovery and further improve project economics.

#### **BURBANKS GOLD PROJECT**

- Strategic review complete.
- Planning for drilling programs over next 12 months in progress.
- Main Lode, Burbanks North Trend and Kangaroo Hills to be focal point for next 12 months.

#### PHILLIPS FIND GOLD PROJECT

- Strategic review complete.
- Auger geochemistry completed, report from CSA Global pending.
- Planning for drilling programs over next 12 months in progress. The Truth Target Area is the number one priority.

# **CORPORATE**

On 13 November 2017, Barra Resources Limited (Barra) acquired Coolgardie Mining Company Pty Ltd (CMC) and the Birthday Gift mine from Kidman Resources Limited (Kidman) to secure 100% ownership of the entire Burbanks gold project tenements.

On 16 November 2017, Barra announced the appointment of Mr Sean Gregory to the position of Managing Director & Chief Executive Officer. Mr Gregory is a senior resources industry leader with 19 years' experience in developing projects and supporting mining operations with BHP, Murchison Metals and Mineral Resources Limited. The Board sees Mr Gregory as a critical appointment to the management team as the Company enters a new phase of project development, requiring a skill set that can progress asset development to maximise shareholder benefit. Mr Gregory joined the board immediately and commenced part time work for the company in December 2017 as he serves his notice period with his former employer. Mr Gregory commences with Barra in a full-time capacity on 5 February 2018. The appointment of a full-time CEO will also enable a greater promotional effort from Barra, with speaking places already secured at 5 prominent industry and investor conferences during the first half of this 2018.

On 17 November 2017, Barra announced a Share Purchase Plan (SPP) inviting applications from shareholders for up to \$15,000 each to raise \$1M. On 7 December 2017 the SPP closed heavily oversubscribed with applications received for \$3.79M. Due to the overwhelming SPP demand and the ability to fast track work at Mt Thirsty and on the Company's gold assets, the Company agreed to take oversubscriptions of \$1.25M, resulting in the issue of 50 million shares at a price of 4.5 cents per share raising \$2.25M in total. With this healthy cash injection, Barra's cash balance at the end of the quarter stands at \$2.566M.

Refer to Appendix 1 for a list of ASX announcements made during the quarter.

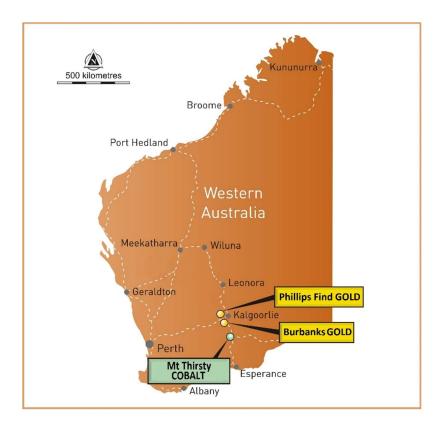


Figure 1: Barra Project Locations

# **PROJECTS**

# MT THIRSTY COBALT PROJECT

(50% Barra; 50% Conico Ltd - Joint Venture)

## **Activities**

# **Scoping Study**

The Mt Thirsty Scoping Study (Study) was released during the quarter (refer to ASX Release dated 5<sup>th</sup> October 2017). The Study confirmed the Mt Thirsty JV's view that the Mt Thirsty Cobalt Project represents a long mine life, low capital and low operating cost mining opportunity.

The base case employs an atmospheric agitated leaching process, using Sulphur Dioxide (SO<sub>2</sub>) as the preferred reagent, to extract 73% of the cobalt and 21.5% of the nickel. Approximately 6,000t of a mixed sulphide product will be produced each year from 1.5Mtpa of feed.

For a modest capital outlay of \$A212M (including A\$34M contingency), with an operating cost of A\$43/t of feed, metal pricing of US\$72,000/t for cobalt and US\$15,500/t for nickel, and a foreign exchange rate of 0.74 USD/AUD, the base case delivers a very healthy NPV of A\$290M.

Since completion of the scoping study the cobalt price has risen over one third from around \$US60,000 per tonne to around \$US80,000/tonne. Forecast future increases in the cobalt price would obviously have a positive impact on project economics.

The Mt Thirsty JV is now planning the Pre-Feasibility Study (PFS) for the project. The PFS will test several additional flow sheet options, all of which have the potential to significantly increase metal recovery and further improve the project economics.

The Research & Development work being conducted by the Mt Thirsty JV has led to a claim being lodged with Ausindustry for the Mt Thirsty metallurgical process development work. Assuming successful, Barra will receive a \$41,656 refund from the ATO.

# **Background of Mt Thirsty Project**

The Mt Thirsty Cobalt Project is located 20km north-northwest of Norseman, Western Australia (Figure 1). The Project contains the Mt Thirsty Cobalt Deposit (Table 1) which has the potential to emerge as a significant cobalt supplier over an estimated 21-year mine life. Barra has excellent exposure to the cobalt market through its 50% interest in the Mt Thirsty Cobalt Project.

In addition to the Cobalt Deposit, the Project also hosts primary nickel sulphide (Ni-S) mineralisation.

Mt Thirsty Cobalt Deposit Mineral Resource (using a cut-off grade of 0.06% Co)						
	Tonnes	Cobalt (Co) (%)	Nickel (Ni) (%)	Manganese (Mn) (%)		
Indicated	16,600,000	0.14	0.60	0.98		
Inferred	15,340,000	0.11	0.51	0.73		
<b>Total Mineral Resource</b>	31,940,000	0.13	0.55	0.86		

**Table 1: Mt Thirsty Cobalt Deposit Mineral Resource** 

The Mt Thirsty Cobalt 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 8th March 2011: "Resource Upgrade Mt Thirsty Cobalt-Nickel Oxide Deposit": available to view at <a href="www.barraresources.com.au">www.barraresources.com.au</a>). 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 announcement dated 8th March 2011 have not materially changed.

The great advantages of Mt Thirsty compared to other potential cobalt operations is the nature of the resource, being a flat lying, continuous and thick deposit starting from near surface to around 70 metres below surface. Due to intense oxidation, the deposit is very soft, fine grained and low in silica. Furthermore, the mineralogy of the Mt Thirsty deposit lends itself to high recoveries of Cobalt at atmospheric conditions.

Given Mt Thirsty's ideal positioning close to infrastructure including power and port access in Western Australia, the Joint Venture remains confident Mt Thirsty has the potential to become a major supplier to the burgeoning battery supply chain.

# **BURBANKS GOLD PROJECT (WA)**

(100% Barra)

# **Birthday Gift Acquisition**

The acquisition of CMC gives Barra full title to mining lease M15/161 covering the Burbanks deposit within the Birthday Gift Mine Area (BGMA), which contains a JORC 2012 compliant Mineral Resource of 95,400 ounces of gold (Table 2).

Barra paid KDR an upfront fee of \$121,000 and will pay a royalty of \$20 per ounce of gold for the first 55,000 ounces of gold sold from the BGMA. The deal sees ownership return to Barra where it has more recently been exploring under an exclusive rights agreement to certain parts of the mining lease while not directly owning the lease or the Burbanks deposit. Barra views the deal as extremely positive in that it now provides the Company with access to 100% of the potential shallow and depth mineralisation, including the existing decline access which may prove pivotal to any future mining operation at the nearby Main Lode deposit and allowing the Company to embark on a clear and focused program to exploit the entire Burbanks mineral system unrestricted.

Mineral Resource Inventory for the Burbanks Deposit – 30 <sup>th</sup> June 2016							
Area	Cut-Off	Indicated			Inferred		
Alea	Cut-On	Tonnes	Grade	Ounces	Tonnes	Grade	Ounces
Christmas Open Pit	1.0	5,700	6.2	1,100	4,000	7.8	1,050
Burbanks Underground Mine	2.5	180,000	6.0	34,750	325,000	5.6	58,500
Total Resource	1.0/2.5	185,700	6.0	35,850	329,000	5.6	59,550

Table 2: Birthday Gift Mine (Burbanks Deposit) Mineral Resource Inventory (as at 30June 2016)

The information in this release that relates to the estimation of the Burbanks Deposit Mineral Resource has been extracted from Kidman Resources Limited's 2016 Annual Report to shareholders, available to view at <a href="https://www.kidmanresources.com.au">www.kidmanresources.com.au</a>. The Company is not aware of any new information or data that materially affects the information included in the previous report and that all of the previous assumptions and technical parameters underpinning the estimates in Kidman's 2016 Annual Report have not materially changed.

# **Activities**

#### Gold Strategy Update

The Company continued its portfolio review process aimed at refining and building on the current gold strategy. The Company engaged Geologist Allan Kneeshaw, a highly regarded independent expert consultant, to assist in a comprehensive geological assessment and strategic review of its Burbanks and Phillips Find gold projects. The review involved the evaluation of historic and current exploration drilling and mining datasets including geological and resource modelling, aeromagnetic, new mapping, and recent mine production data.

The outcome of the review so far has included the identification, ranking and prioritization of target areas to be fed into the development of an updated strategy to explore these target areas with a clear focus on the discovery, delineation and delivery of resources to potentially underpin the establishment of a medium- to long-term mining operation at Burbanks.

# **Drilling Programs**

In line with the identified strategy, the Company is currently in the process of planning exploration programs for the next 12-months which will include the continuation of the aircore drilling program at Burbanks North and the Burbanks North trend, following up reverse circulation drilling at Main Lode, and new programs aimed at testing key targets at Kangaroo Hills.



Figure 2: Burbanks Project plan.

# **Background of Burbanks Project**

The Burbanks Project is centred ~9km southeast of Coolgardie, Western Australia. The Project comprises 3 tenements including M15/161, and covers the Burbanks Mining Centre and over 5 kilometres of the Burbanks Shear, the most significant gold producing structure within the Coolgardie Goldfield.

The Burbanks Mining Centre comprises the underground Birthday Gift Mine (encompassing Lady Robinson, Christmas, Far East and Tom's Pits) and the Main Lode Mine 900 metres to the north of Birthday Gift (Figure 2). Over 400,000 ounces of gold was produced from underground and modern open-pit/underground operations between 1885 and 1999, predominantly from above 140 metres below the surface (2,800 ounces per vertical metre).

The Birthday Gift Mine produced 204,000t grading 27.4g/t Au for 180,000oz with peak production between 1897 and 1903. Production was from above 120m below surface, with a shaft and some level development to a depth of 275m below surface; at 27.4 g/t Au, Birthday Gift represents one of the richest goldmines in the Eastern Goldfields of Western Australia. Main Lode produced 146,000t grading 18.3g/t for 85,900oz to a depth of 275m below surface between 1885 and 1914.

Barra originally acquired M15/161 in 2000 and following successful drilling campaigns established a maiden JORC 2004 indicated and inferred resource at Birthday Gift of 517,000t grading 4.45g/t Au for 74,000oz (ASX:BAR Release dated 27/06/06). Underground mining commenced in 2006 and Barra produced 232,200t grading 3.3g/t Au for 24,900oz from the Birthday Gift underground mine. Mining ceased in mid-2007 and extensive underground diamond drilling was undertaken to firm up and extend unmined areas between Level 4 (current extent of recent mine activity) and the historic Level 7, 170m below recent mining areas. Along Level 7, historic strike drive sampling in the 1950's produced two pay runs of 30m length at 1.5m true width grading 17.2g/t Au and 90m length at 1.2m true width grading 13.0g/t Au; No historical mining has ever taken place at these depths.

Excellent drilling results were encountered at depth at Birthday Gift above and below Level 7, including a stunning 4.69m @ 462.10g/t Au (incl. 0.21m @ 10,300g/t Au) (ASX:BAR Release dated 21/12/2007) and 5.97m @ 39.75g/t (incl. 0.5m @ 468.6g/t Au), 6.05m @ 27.07g/t Au, 3.45m @ 16.50g/t Au, 4.00m @ 9.56g/t Au and 9.11m @ 5.20g/t Au (ASX:BAR Release dated 15/11/2007).

Following the economic downturn in 2008, Barra entered a tribute mining agreement with Blue Tiger Mines Pty Ltd (BTM) and mining recommenced at Birthday Gift. During the period of tribute mining between June 2009 and November 2011, BTM produced 45,700t @ 4.5g/t Au for 6,620oz. In 2013, Barra sold the mining lease to BTM for \$2M and a gold royalty with Barra retaining sole and exclusive rights to the all the area outside of a restricted zone around the Birthday Gift mine area.

Between 2014 and 2017, BTM and later Kidman Resources Limited (ASX:KDR), produced a combined 14,322oz of gold. Barra re-acquired the mining lease in December 2017 for \$121,000 and a \$20 per ounce royalty for the next 55,000 ounces mined.

# PHILLIPS FIND GOLD PROJECT (WA)

(100% Barra)

# **Activities**

### Gold Strategy Update

Consultant geologist Allan Kneeshaw's review of the Company's gold exploration portfolio discussed previously also included a strategic review of the Company's Phillips Find Project.

### **Drilling Programs**

In line with the identified strategy, the Company is currently in the process of planning exploration programs for the next 12-months aimed at testing the newly identified Truth target area, about 5km north-northwest of the Phillips Find Mining Centre.

Following recent detailed mapping by consultant Model Earth, the Truth target area was considered to be highly prospective because of the interplay between thrust faults, folds and thick units of dolerite highlighting zones of structural complexity. The recent work by Model Earth represents a new interpretation on the structure and geology in the northern area of the Phillips Find Project.

# Auger Geochemistry

The Company is awaiting a final report by CSA Global on the results of the recently completed auger geochemical sampling program during the period. 1,089 samples were collected and analysed for a comprehensive suite of elements.

# **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 approximately 33,000 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 producing approximately 9,000oz 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.

# **TENEMENTS**

The following tenement changes occurred during the quarter (see Appendix 2 for Tenement Listing at end of report):

 Phillips Find: Prospecting licences P16/2401, P16/2422-2425 expired during the period due to overlying applications for mining lease being found null and void following a High Court of Australia decision in the matter of Forrest and Forrest v Wilson and ors [2017] HCA 30.

The Company has applied for new mining lease applications over the former area of P16/2401, P16/2422-2425.

Burbanks: Mining lease 15/161 was acquired via the acquisition of Coolgardie Mining Company Pty Ltd.

**SEAN GREGORY** 

Managing Director & CEO

Sely

#### 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 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.

# **APPENDIX 1**

# **ASX ANNOUNCEMENTS DURING THE QUARTER**

Date	Announcement
29/12/2017	Change of Director's Interest Notice (x3)
20/12/2017	Purchase of Coolgardie Mining Company Update
11/12/2017	Share Purchase Plan Closes Heavily Oversubscribed
27/11/2017	Chairman's Letter
20/11/2017	Cleansing Notice - Share Purchase Plan
20/11/2017	Mt Thirsty Cobalt Project Research Report
17/11/2017	Share Purchase Plan Document
17/11/2017	Share Purchase Plan - Chairman's Letter
17/11/2017	Share Purchase Plan funds Cobalt & Gold work
16/11/2017	Initial Director's Interest Notice
16/11/2017	Change of Director's Interest Notice
16/11/2017	Results of Annual General Meeting
16/11/2017	AGM Presentation
16/11/2017	Appointment of Managing Director & CEO
13/11/2017	Barra Secures Birthday Gift Mine
30/10/2017	Quarterly Cashflow Report
30/10/2017	Quarterly Activities Report
10/10/2017	Annual Report to shareholders
5/10/2017	Mt Thirsty Cobalt Project Scoping Study
4/10/2017	Notice of Annual General Meeting/Proxy Form

# **APPENDIX 2**

# **TENEMENT LISTING**

Tama/	Due!		Change in Interest (%) during Quarter			Com
Tenement Proj	Project	Location	End of Quarter	Acquired	Disposed	Comments
M15/161		WA	100	100		
P15/5249	Burbanks	WA	100			
P15/5412		WA	100			
E63/1267	Mt Thirsty	WA	50			
E63/1790		WA	50			
P16/2045		WA	50			
R63/4		WA	50			
M16/130		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			
P16/2401	1	WA	0		100	Expired
P16/2422		WA	0		85	·
P16/2423	1	WA	0		85	
P16/2424	1	WA	0		85	Expired
P16/2425		WA	0		85	
P16/2702		WA	100			
P16/2785		WA	100			
P16/2786		WA	100			
P16/2985	1 _	WA	100			
P16/2986	i ii	WA	100			
P16/2987	l sd	WA	100			
P16/2988	Phillips Find	WA	100			
P16/2989		WA	100			
P16/2990		WA	100			
P16/2991		WA	100			
P16/2992		WA	100			
P16/2993		WA	100			
P16/2994	1	WA	100			
P16/2995		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			