

Quarterly Report / Q1 September 2017

- 1Q FY18 production of 98,259 ounces, including a record quarter at Simberi
- All-In Sustaining Cost (AISC) of A\$889 per ounce with FY18 guidance maintained
- Debt free with A\$199 million cash at bank<sup>1</sup> after \$0.06 per share FY17 dividend paid

# **Executive Summary**

# **Operations**

- **Consolidated gold production** for the September 2017 quarter was 98,259 ounces (Q4 Jun: 94,226 ounces).
- **Consolidated All-In Sustaining Cost**<sup>2</sup> (AISC) for the September 2017 quarter was A\$889 per ounce (Q4 Jun: A\$959). The average realised gold price for the September quarter was A\$1,637 per ounce (Q4 Jun: A\$1,715 per ounce).
- Gwalia (Western Australia) gold production for the September 2017 quarter was 64,283 ounces (Q4 Jun: 62,098 ounces) at AISC of A\$816 per ounce (Q4 Jun: A\$798 per ounce). Mined grade for the quarter was 10.7 g/t Au (Q4 Jun: 9.2 g/t Au) with 192 kt milled (Q4 Jun: 226 kt).
- Simberi (PNG) gold production for the September 2017 quarter was a record 33,976 ounces (Q4 Jun: 32,128 ounces). AISC for the quarter was A\$1,027 per ounce (Q4 Jun: A\$1,125 per ounce).

# **Health & Safety**

• St Barbara maintained its record low Total Recordable Injury Frequency Rate (TRIFR), calculated as a rolling 12-month average, of 1.2 in Q1 FY18.

# **Gwalia Extension Project**

- Work on the Gwalia Extension Project continued during the quarter. The Project remains on schedule and within budget.
- The Project commenced in Q3 March 2017, has an overall budget of A\$100 million and is expected to take two and a half to three years to construct. The Project consists of two main components, a ventilation upgrade and paste aggregate fill (PAF) involving mixing paste from surface with waste crushed underground to fill stope cavities.

2 Non IFRS measure, refer append

• Planning to bore multiple shafts concurrently with a view to reducing the overall project timeline is progressing.

# **Exploration**

- **Gwalia** (Western Australia) Activities focused on defining extensions to the Gwalia lode system continued during the quarter, with surface drill programs targeting down-plunge zones.
- Two daughter holes (GWDD18F and GWDD18G) were completed at Gwalia targeting approximately 2,200 metres below surface (mbs), passing through intervals interpreted to represent South Gwalia Series (SGS2).
- Data interpretation of a **3D seismic program** targeting a 15 km<sup>2</sup> area surrounding the Gwalia mine is in progress. The program aims to identify possible Gwalia-like mineralised systems in the nearby area.
- In Q2 FY18, a non-intrusive exploration program will begin in the Horsepaddock Well area north of Gwalia. Previous gravity and near surface drilling indicates potential for a King of the Hills style mineralisation.
- Pinjin (Western Australia) A 564 hole (PJAC0821 to PJAC1384) Aircore drilling program for 24,260 metres was completed during the September 2017 quarter, testing 17 targets. A drill program is planned in the December 2017 quarter to follow-up encouraging results, along with a surface electromagnetic survey to follow-up targets highlighted by the airborne electromagnetic (AEM) survey.
- Back Creek (NSW) A surface Gravity and Passive Seismic survey was completed over areas of interest within Back Creek (EL8214 and EL8530) in central NSW.
- **Tatau Island** (PNG) Final results were received for the diamond drilling on Southwest Tatau Island that were completed during the previous quarter.

Financial information unaudited. No interest bearing debt except for equipment leases amounting to approx. A\$0.3 million. Cash balance includes A\$1.2 million restricted cash.
 Non IFRS measure, refer appendix.

 Option and Farm-in with Newcrest - A regional mapping and rock chip sampling program targeting copper-gold porphyry mineralisation continued through the September 2017 quarter. Diamond drilling of copper-gold porphyry targets is planned to commence early in the December 2017 quarter (see summary on page 8 and details in Figures 7.2 to 7.4).

# Finance (unaudited)

- Total cash at bank at 30 September 2017 was A\$199<sup>1</sup> million (30 June 2017: A\$161 million). In addition, there were 2,538 ounces of gold inventory on hand at 30 September 2017 (30 June 2017: 5,327 ounces).
- The FY17 dividend of 6 cents per share fully franked announced on 7 August 2017 was paid on 28 September 2017. Dividends paid in cash totalled \$25 million, plus 2.1 million new shares issued under the corresponding Dividend Reinvestment Plan.
- The Company generated an operational cash contribution<sup>2</sup> in the September 2017 quarter of A\$86 million (Q4 Jun: A\$73 million).

## Outlook

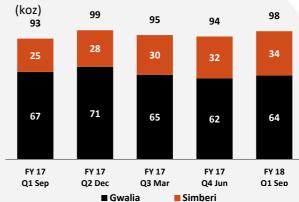
- Guidance for FY18 is maintained and summarised as follows:
  - Forecast Gwalia gold production of between 245,000 and 260,000 ounces at an AISC of between A\$840 and A\$890 per ounce, with sustaining capex of between A\$35 and A\$38 million, plus growth capex of between A\$50 to A\$55 million.
  - Forecast Simberi gold production of between 105,000 and 115,000 ounces at an AISC of between A\$1,260 and A\$1,380 per ounce, with capex of between A\$5 and A\$7 million.
  - Forecast exploration expenditure of between A\$16 and A\$20 million, consisting of:
    - A\$8 to A\$10 million at Gwalia
    - A\$4 to A\$5 million at Pinjin in WA and
    - A\$4 to A\$5 million on the Tabar (Simberi) Island group in PNG<sup>3</sup>.

**Bob Vassie** Managing Director and CEO 17 October 2017

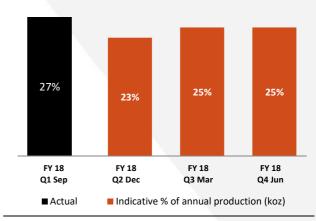
# Consolidated results Quarterly AISC (A\$/oz)



## **Quarterly Gold Production**



Figures displayed to nearest thousand ounces. Reported ounces in associated table.



#### FY18 Production Indicative Quarterly Guidance Profile

## **Quarterly presentation and audio webcast**

Bob Vassie, Managing Director & CEO, will brief analysts and investors on the September 2017 Quarterly Report at 11:00 am Australian Eastern Daylight Time (UTC + 11 hours) on Tuesday 17 October 2017. Participation on the conference call is by personal invitation only.

A live audio webcast will be available on the website at <u>www.stbarbara.com.au/investors/webcast/</u> or by <u>clicking here</u>. The audio webcast is 'listen only' and does not enable questions. The audio webcast will subsequently be made available on the website.

St Barbara Limited Quarterly Report / Q1 September 2017

No interest bearing debt except for equipment leases amounting to approx. A\$0.3 million. Cash balance includes A\$1.2 million restricted cash.

<sup>2</sup> Non-IFRS measure, see cash movements table later in this quarterly report. Corresponds to Operational Cash Flow less sustaining capital, but excludes growth capital of A\$4 million.

<sup>3</sup> Excludes copper-gold porphyry exploration on the Tabar Island Group as part of the option and farm-in agreement with Newcrest.

# **St Barbara Gold Production & Guidance**

Production Summary		Q3 Mar	Q4 Jun	Year	Q1 Sep	Guidance
Consolidated		FY17	FY17	FY17	FY18	FY18 <sup>1</sup>
Production						
Gwalia	oz	64,916	62,098	265,057	64,283	245 to 260 koz
Simberi	OZ	30,430	32,128	116,044	33,976	105 to 115 koz
Consolidated	oz	95,346	94,226	381,101	98,259	350 to 375 koz
						Reserve grade <sup>2</sup>
Mined Grade						
Gwalia	g/t	11.3	9.2	10.7	10.7	7.8
Simberi	g/t	1.14	1.21	1.13	1.21	1.3
Total Cash Operating Costs	<b>3</b> <sup>3</sup>					
Gwalia	A\$/oz	582	668	592	621	n/a
Simberi	A\$/oz	944	1,048	1,092	964	n/a
Consolidated	A\$/oz	697	798	689	740	
All-In Sustaining Cost <sup>3</sup>						
Gwalia	A\$/oz	786	872	785	816	840 to 890
Simberi	A\$/oz	1,025	1,125	1,187	1,027	1,260 to 1,380 <sup>4</sup>
Consolidated	A\$/oz	862	959	907	889	970 to 1,035

1 FY18 guidance announced in Q4 June 2017 Quarterly Report (released 26 July 2017).

2 Ore Reserve grade at 30 June 2017, refer Ore Reserve and Mineral Resources Statement (released 23 August 2017).

3 Non-IFRS measure, refer Appendix.

4 US\$995 to US\$1,090 @ AUD conversion of 0.79 (per FY18 guidance released 26 July 2017).

#### Disclaimer

This report has been prepared by St Barbara Limited ("Company"). The material contained in this report is for information purposes only. This release is not an offer or invitation for subscription or purchase of, or a recommendation in relation to, securities in the Company and neither this release nor anything contained in it shall form the basis of any contract or commitment.

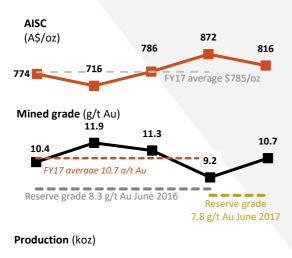
This report contains forward-looking statements that are subject to risk factors associated with exploring for, developing, mining, processing and the sale of gold. Forward-looking statements include those containing such words as anticipate, estimates, forecasts, indicative, should, will, would, expects, plans or similar expressions. Such forward-looking statements are not guarantees of future performance and involve known and unknown risks, uncertainties, assumptions and other important factors, many of which are beyond the control of the Company, and which could cause actual results or trends to differ materially from those expressed in this report. Actual results may vary

from the information in this report. The Company does not make, and this report should not be relied upon as, any representation or warranty as to the accuracy, or reasonableness, of such statements or assumptions. Investors are cautioned not to place undue reliance on such statements.

This report has been prepared by the Company based on information available to it, including information from third parties, and has not been independently verified. No representation or warranty, express or implied, is made as to the fairness, accuracy or completeness of the information or opinions contained in this report.

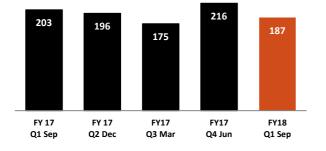
The Company estimates its reserves and resources in accordance with the Australasian Code for Reporting of Identified Mineral Resources and Ore Reserves 2012 Edition ("JORC Code"), which governs such disclosures by companies listed on the Australian Securities Exchange.

## Gwalia, Leonora, WA





Gwalia underground ore mined (kt)



## Operations

- Gwalia gold production for the September quarter was 64,283 ounces (Q4 FY17: 62,098 ounces).
- Average mined grade for Q1 FY18 was 10.7 g/t Au, in line with the FY17 average, but better than expected for the quarter due to the presence of high grade shoots.
- Mined tonnes for Q1 FY18 was 187 kt, consistent with the mine plan. A number of stope access design and task scheduling improvements have reduced stope cycle times by approximately 10%. Key initiatives include simultaneously drilling cable bolt access tunnels and production drill holes, as well as implementing a new paste fill innovation that uses air pressure measurements behind the stope plug, reducing time spent on additional engineering checks. These efficiencies have enabled more resources to be dedicated to various development tasks for the Extension Project and future production.
- AISC was A\$816 per ounce for the September quarter (Q4 Jun: A\$872 per ounce). Q1 FY18 processing costs include \$0.7 million expenditure on planned maintenance of the crushing and milling circuits.
- Sustaining mine development and infrastructure capital expenditure in the September quarter was \$9 million.

#### Outlook

- FY18 guidance is unchanged:
  - Production of between 245,000 and 260,000 ounces
  - AISC of between A\$840 and A\$890 per ounce
  - Capital expenditure comprising:
    - Sustaining capex: \$35 to \$38 million and
    - Growth capex: \$50 to \$55 million.

#### Gwalia animation fly-through

 An animated video of the Gwalia underground mine is available for viewing via our website at <u>www.stbarbara.com.au/investors/image-gallery/video-gallery/</u>

Production Summary		Q3 Mar	Q4 Jun	Q1 Sep
Gwalia		FY17	FY17	FY18
Underground ore mined	kt	175	216	187
Grade	g/t	11.3	9.2	10.7
Ore milled <sup>1</sup>	kt	186	226	192
Grade <sup>1</sup>	g/t	11.2	8.8	11.0
Recovery	%	97	97	97
Gold production	oz	64,916	62,098	64,283
			<i>k</i>	
All-In Sustaining Cost <sup>2</sup>			\$ per oun	
Mining		347 114	393 152	374 128
Processing Site services		58	72	128 60
Stripping and ore inventory		21	11	17
adjustments		21	11	1/
aujustments		540	628	579
By-product credits		(2)	(2)	(2)
Third party refining & transport		(2)	(2)	2
Royalties		42	40	42
Total cash operating costs		582	668	621
less operating development		(62)	(88)	(79)
Adjusted cash operating cost	-	520	580	542
Corporate and administration		49	54	45
Corporate and administration		25	24	25
Rehabilitation		4	3	3
Capitalised mine & op				
development		175	178	176
Sustaining capital expenditure		13	33	25
All-In Sustaining Cost (AISC)		786	872	816

## **Gwalia Extension Project - progress**

 Work on the Gwalia Extension Project continued during the quarter. The Project remains on schedule and within budget.

## **Project Description**

- The St Barbara Board approved capital expenditure relating to the Gwalia Extension Project, as announced 27 March 2017.
- The Project has an overall budget of A\$100 million and is planned to take two and a half to three years to construct<sup>3</sup> The Project consists of two main components, a ventilation upgrade and paste aggregate fill (PAF).

## Project Update

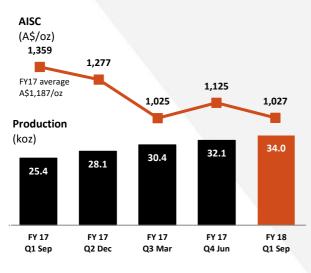
- The principal project activities in the September quarter were engineering design work, contracting, drilling of the new HV cable drop, road building, underground development and preparation of the raisebore sites, including pressure grouting to isolate the planned shaft from the water table. All these activities are ongoing in Q2.
- Planning around boring multiple shafts concurrently with a view to reducing the overall project timeline is progressing.
- A\$4 million project expenditure was incurred and capitalised in the September quarter.
- Cumulative project expenditure:
  - FY17 \$8 million (capitalised)
  - Q1 FY18 \$4 million (capitalised)

Gwalia Extensio	on Project Summary
Сарех	A\$100 million
Construction period	<ul><li> 2.5 to 3 years</li><li> PAF completed in first year</li></ul>
Works	
Ventilation upgrade	<ul> <li>Ventilation shafts, power &amp; cooling</li> <li>Supports mining to at least 2,000 mbs in FY 2024<sup>4</sup></li> <li>Approx. 80% of project budget</li> </ul>
Paste Aggregate Fill (PAF)	<ul> <li>Underground waste crushing, paste and aggregate fill mixing and pumping</li> <li>Increase trucking efficiency</li> <li>Improve stope cycle times</li> <li>Reduce impact of vent shaft construction on production</li> <li>Approx. 20% of project budget</li> </ul>

- 1 Includes Gwalia mineralised waste
- 2 Non-IFRS measure, refer Appendix
- 3 Commenced in the March guarter 2017

Ore Reserves at 30 June 2017 extend down to 2,140 mbs, refer to Ore Reserves and Mineral Resources Statement as at 30 June 2017.

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## Simberi, Papua New Guinea

#### Operations

- Simberi gold production for the September quarter was a record 33,976 ounces. The result was primarily due to:
  - Record mill throughput of 971 kt
  - Ongoing recovery improvements, increasing the result for the quarter to 86%.
- Total material moved (waste and ore) for the quarter was 3.54 Mt.
- Average mined grade for the quarter was 1.21 g/t Au while feed to the mill averaged 1.27 g/t Au.
- All In Sustaining Cost (AISC) was A\$1,027 per ounce for the quarter (Q4 Jun A\$1,125 per ounce).
- Improved recovery is related to capital and maintenance improvements in FY17 and an ongoing targeted per-pit recovery strategy where historical recovery performance variance between ore-sources is taken into account with daily management of process metallurgy.



Production Summary		Q3 Mar	Q4 Jun	Q1 Sep
Simberi		FY17	FY17	FY18
Ore & waste mined	kt	3 <i>,</i> 536	3,287	3,541
Ore mined	kt	1,037	1,064	988
Grade	g/t	1.14	1.21	1.21
Ore milled	kt	918	881	971
Grade	g/t	1.20	1.35	1.27
Recovery	%	85	84	86
Gold production	oz	30,430	32,128	33,976
All-In Sustaining Cost <sup>1</sup>		AŚ	per ounce	
Mining		344	388	338
Processing		335	394	366
Site services		216	223	218
		895	1,005	922
By-product credits		-	(2)	(2)
Third party refining &		10	7	7
transport				
Royalties		39	38	37
Total cash operating costs		944	1,048	964
Corporate and		49		45
administration			54	
Rehabilitation		16	13	13
		4.6		_
Sustaining capital expenditure		16	10	5
All-In Sustaining Cost (AISC)		1,025	1,125	1,027

1 Non-IFRS measure, refer Appendix

## Outlook

- FY18 guidance is unchanged:
  - Production of between 105,000 and 115,000 ounces
  - AISC of between A\$1,260 and A\$1,380 per ounce (US\$995 to US\$1,090 per ounce converted at AUD/USD of 0.79)
  - Capex of A\$5 to A\$7 million (US\$4 to US\$5 million).

## **Exploration – Results September 2017 Quarter**

#### **Gwalia Exploration Program, Leonora WA**

- **Gwalia Deeps Extension:** The Gwalia Deeps drilling program continued with the successful completion of two new daughter drill holes.
- Daughter holes GWDD18F and GWDD18G aimed to provide data allowing the extension of the Inferred Resource to 2,200 mbs. The holes entered the Mine Sequence at depths between 2,175 and 2,265 mbs and passed through intervals interpreted to represent South Gwalia Series (SGS2), contained within a broader mineralised shear zone.
- Significant intercepts from these holes are indicated below (all intercepts referenced as metres below surface), with full details set out in Figures 2.0 to 2.2 and Table 1 in the Exploration Figures and Tables appendix.

GWDD18F:

• SGS2 11.6 m @ 1.8 g/t Au (2,265 mbs)

GWDD18G:

- SGS2 12.2 m @ 2.0 g/t Au (2,237 mbs)
- Daughter hole GWDD18H continued to be drilled through the quarter and at the end of the reporting period had reached a downhole depth of 2,050 m.
- The drilling program is planned to continue in the December quarter targeting the interval between 2,100 to 2,200 mbs, as well as a deeper hole directed at 2,600 mbs.
- Gwalia Seismic Reflection Program: Data interpretation of a 3D seismic program targeting a 15 km<sup>2</sup> area surrounding Gwalia Mine has commenced and is yielding encouraging indications that the deposit hosting shear zone continues to be present further down-plunge and along strike to the north and south of known positions. Detailed modelling of seismic data, incorporating key structural information from underground mapping and surface drilling is anticipated to identify high value targets during the December 2017 quarter.
- Gwalia Intermediates Drilling: Results from nine underground drill holes have been received to complete the first phase of a program directed at extending the currently understood limits of the Gwalia mineralised system further up-plunge and to the north of a position located approximately 1,065 mbs. Work is now underway to prepare a resource model covering these extensions and is expected to be finalised in the December 2017 quarter, potentially increasing Resources in the shallower part of the Gwalia lode system.
- Significant intercepts from the holes are presented below showing horizontal downhole intercepts. Full details are set out in Figure 2.0. 3.0 and Table 2 in the Exploration Figures and Tables appendix.
  - UGD2522 3.8 m @ 5.4 g/t Au from 62.2 m

- UGD2526 2.2 m @ 24.5 g/t Au from 135.9 m
- UGD2528 2.8 m @ 8.4 g/t Au from 100.3 m
- UGD2539 2.0 m @ 6.6 g/t Au from 138.2 m, and
   2.2m @ 4.5 g/t Au from 161.1 m

#### Pinjin Project, Yilgarn WA

- Exploration continued on the Pinjin project within the Yilgarn Province, WA. The Pinjin Project is located 150 km northeast of Kalgoorlie, comprising a large tenement package of 20 exploration licences (1,434 km<sup>2</sup>) for 485 blocks (Figure 5.0).
- An Aircore drilling program comprising 564 holes (PJAC0821 to PJAC1384) for 24,260 metres was completed in September 2017. The drilling tested 17 geophysical and bedrock geochemical targets. Results have been received (all intercepts downhole, details in Figure 5.1 and Table 3) including:
  - PJAC0822 4m @ 0.8 g/t Au from 107m (EOH)
  - PJAC0899 1m @ 3.0 g/t Au from 48m (EOH)
  - PJAC1099 1m @ 6.6 g/t Au from 111m (EOH)
  - PJAC1118 3m @ 0.8 g/t Au from 96m
- A 3,000 metre Reverse Circulation (RC) and a 10,000 metre Aircore drill program are planned in the December 2017 quarter to follow-up encouraging Aircore results.
- A 1,012 line kilometre airborne Electromagnetic (AEM) survey completed in June 2017 over 11 targets was successful in defining potential bedrock sulphide conductors (Figure 5.2). A surface Electromagnetic survey is planned to commence in the December 2017 quarter to further evaluate targets and constrain their position to guide any potential drilling.
- A 330km<sup>2</sup> ground Gravity survey was completed in July 2017 over several western Pinjin tenements (Figure 5.2). The survey assisted in mapping geological trends through cover on and around Lake Rebecca.

#### Back Creek, NSW (EL 8214 and EL 8530)

 A 79 line kilometre surface Gravity and Passive Seismic survey was completed over selected areas of interest within Back Creek (EL8214 and EL8530) in central NSW (Figure 6.0).

# Simberi, Tatau & Tabar Islands, Papua New Guinea (ML 136 and EL 609)

- On Simberi Island (Figure 7.0), a detailed pit mapping program and multi-element geochemical review commenced to better define controls on oxide and sulphide ore within ML136.
- Exploration continued on EL609 at Tatau Island during the September quarter (Figure 7.0). Detailed creek mapping and rock chip sampling were completed on central Tatau targeting

the Kupo, Talik, Talik North, Talik Northwest and Daramba North prospects. Final results were received for drilling at the Mt Siro prospect.

• EL609 was renewed by the PNG government on 13 September 2017 (Figure 7.0).

Tatau Island

• A 22 hole, 2,275 metre diamond drill program targeting narrow, high-grade, sulphide-oxide gold targets was completed at Southwest Tatau in the June 2017 quarter. Assay results for the remaining two diamond drill holes (TTD082 and TTD083) drilled at the Mt Siro prospect were returned and are highlighted in Figure 7.1 and Table 4. Results for Southwest Tatau drilling continue to be reviewed and modelled during December 2017 quarter.

#### Option and Farm-in with Newcrest,

## Tatau & Tabar Islands, Papua New Guinea

- The St Barbara group (through its wholly owned PNG subsidiary Nord Australex Nominees (PNG) Ltd) entered into an Option and Farm-in Agreement with Newcrest PNG Exploration Limited (a wholly owned subsidiary of Newcrest Mining Limited) in November 2016 for copper-gold porphyry exploration within EL609 and EL2462 on nearby Tatau and Big Tabar Islands.
- A creek mapping, rock chip sampling and trenching program designed to follow-up potential porphyry copper - gold targets highlighted by the soil sampling program covering 36 km<sup>2</sup> of central Tatau Island continued during the September 2017 quarter. 801 rock chip samples were collected during the September quarter 2017. To date, 1,164 rock samples were collected over Tatau Island during 45 line kilometres of creek mapping (Figures 7.2 to 7.4). Prospects covered by mapping and rock chip sampling include Kupo, Talik, Talik North, Talik Northwest and Daramba North.
- Results from the surface sampling program received to date highlight the Talik North porphyry prospect as a priority drill target (Figures 7.2 and 7.3). A coincident copper molybdenum anomaly in soil and rock chip samples is associated with a 2.3 x 1.6 km magnetic low interpreted to represent an area of magnetite destruction associated with mapped early potassic alteration overprinted by later moderate to strong phyllic alteration. Subject to access, diamond drilling is expected to commence early in the December 2017 quarter.

## Expenditure September Quarter (unaudited)

• Expenditure on mineral exploration is shown below:

	<u>Q1 Sep</u> <u>2017</u>	
	A\$ million	
Australia	1.0	(expensed)
Pacific	0.8	(expensed)
Gwalia Deep Drilling	1.2	(capitalised)
	3.0	

The map below shows current and planned target areas for

**Exploration – December 2017 Quarter** 

- the December 2017 quarter.
  Exploration in the December 2017 quarter (Q2 FY18) will focus on:
  - **Gwalia Deeps** Below 2,000 mbs Completion of the current phase and commencement of a subsequent Gwalia Deeps drilling directed at establishing a Indicated Mineral Resource down to 2,200 mbs.
  - **Gwalia Deeps** 2,600 mbs commencement of a surface parent hole directed at the potential down-plunge extension of the Gwalia deposit to 2,600 mbs.
  - Evaluate the results of 3D seismic data over the Greater Gwalia area to identify extensions to the lode system and other potential occurrences of Gwalia-style mineralisation for drill targeting.
  - Conduct further extensions of the 3D seismic coverage of the Greater Gwalia area to the north and south.
  - Conduct IP and SAM geophysical surveys at Horsepaddock Well with the aim of identifying King of the Hills style mineralisation. Previous exploration activities in the Horsepaddock Well area, culminating in detailed gravity completed in 2006, have highlighted the potential for a granite-intrusive type of deposit to be present under a thin cover of ultramafics. Recent improvements in the depth penetration of IP and SAM (Induced Polarisation and Sub-Audio Magnetic) make these electrical techniques particularly suitable to identify disseminated sulphides to depths of 100 – 200m known to be associated with most of the deposits occurring in the Leonora Province.
  - Assessment of the results from the 564 hole Aircore drilling program completed at **Pinjin** to determine targets that warrant follow-up Aircore or RC drilling.
  - Completion of a 3,000 metre Reverse Circulation (RC) and 10,000 metre Aircore drill program at Pinjin following up encouraging Aircore results.

- Commencement of a surface Electromagnetic survey at **Pinjin** over targets highlighted from the airborne Electromagnetic (AEM) survey.
- Assessment of the results of the surface Gravity and Passive Seismic surveys at **Back Creek** (EL8214 and EL8530) and design follow-up Aircore drilling if warranted.
- As part of the Newcrest option period work program, continuing the regional soil, rock chip sampling and reconnaissance mapping over copper-gold porphyry targets on **Tatau and Big Tabar Islands**. Further, interpretation of the results from the regional multielement geochemical surveys to determine additional potential diamond drill targets.
- As part of the Newcrest option period work program, and subject to access, commence diamond drilling of the Talik North copper-molybdenum porphyry target on Tatau Island.
- Subject to access, continuing the soil, rock chip sampling, reconnaissance mapping and trenching over gold targets on Tatau Island.



# **Health & Safety**

• St Barbara maintained its record low Total Recordable Injury Frequency Rate (TRIFR) of 1.2 in Q1 FY18.

## Finance (unaudited)

- 101,970 ounces of gold were sold in the September quarter, at an average realised gold price of A\$1,637 per ounce (Q4 Jun: 91,065 ounces at A\$1,715 per ounce).
- Total cash at bank at 30 September 2017 was A\$199<sup>1</sup> million (30 June 2017: A\$161 million) after payment of the \$0.06 per share FY17 dividend. In addition, there was 2,538 ounces of gold inventory on hand at 30 September 2017 (30 June 2017: 5,327 ounces).
- The Company generated an operational cash contribution<sup>2</sup> in the September 2017 quarter of A\$86 million (Q4 Jun: A\$73 million). Cash movements for the September 2017 quarter are summarised in the following table:

Cash movements & balance A\$M (unaudited)	Q3 Mar FY17	Q4 Jun FY17	Q1 Sep FY18
Leonora - operating cash flow <sup>3</sup>	67	53	62
Leonora - growth capital	(2)	(4)	(4)
Simberi - operating cash flow <sup>3</sup>	244	20	24
Rehabilitation , land management & project costs	(1)	-	-
Corporate costs	(5)	(5)	(4)
Corporate royalties	(2)	(2)	(2)
Exploration <sup>5</sup>	(6)	(4)	(3)
Investments <sup>6</sup>	(2)	(3)	(1)
Proceeds from other receivables <sup>7</sup>	-	3	-
Working capital movement	(5)	4	(10) <sup>8</sup>
Cash flows before finance costs	68	62	62
Net interest and finance costs	(2)	-	1
Dividends paid	-	-	(25)
US debt repayment	(54)	-	-
Net movement for period	12	62	38
Cash balance at start of quarter	87	99	161
Cash balance at end of quarter	99	161	199

- 6 Comprises \$1.5 million investment in Catalyst in Q3 March 2017 and \$0.7 million in Q1 FY18, \$3.3 million investment in Peel Q4 June 2017.
- 7 Proceeds from King of the Hills deferred payment received in June 2017.

8 The working capital movement in Q1 FY18 was mainly attributable to repayment of creditors, and is expected to substantially reverse over the balance of FY18.

<sup>1</sup> No interest bearing debt except for equipment leases amounting to approx. A\$0.3 million. Cash balance includes A\$1.2 million restricted cash.

<sup>2</sup> Non-IFRS measure, see cash movements table this page. Corresponds to Operational Cash Flow less sustaining capital, but excludes growth capital of A\$4 million.

<sup>3</sup> Net of sustaining capex

<sup>4</sup> As at 31 December 2016 there was 6,311 ounces of gold at Simberi that was shipped on 1 January 2017

<sup>5</sup> Includes Gwalia deep drilling

- The FY17 dividend of 6 cents per share fully franked announced on 7 August 2017 was paid on 28 September 2017. Dividends paid in cash totalled \$25 million, plus 2.1 million new shares issued under the corresponding Dividend Reinvestment Plan (DRP). 901 shareholders (9% of all shareholders), holding 99.5 million shares (19% of issued capital), participated in the DRP, which conserved \$6 million in cash.
- Hedging in place in relation to FY18 comprises:
  - 38,000 ounces to be delivered in monthly instalments between October 2017 and June 2018 at A\$1,725 per ounce (this hedge initially for 50,000 ounces, announced 12 April 2017).
  - 38,000 ounces to be delivered in monthly instalments between October 2017 and June 2018 at A\$1,730 per ounce (this hedge initially for 50,000 ounces, announced 1 June 2017).
- The Company notes that, subsequent to the end of the September 2017 quarter, the Western Australia State Parliament formally disallowed a proposal by the Government earlier in September to increase the gold royalty rate by 50 per cent, from 2.5% to 3.75%. At a gold price of A\$1,600 per ounce, this would have added \$20 per ounce to the cost of production, and would have represented an annual impost of approximately \$5.5 million based on FY17 WA gold revenue of \$441 million.

## Corporate

Notice of St Barbara's 2017 Annual General Meeting will be issued on 20 October 2017 and includes full details of the Annual General Meeting to be held at 11:00 am on Wednesday 29 November 2017 in Melbourne.

## **Share Capital**

Issued shares	
Opening balance 30 Jun 2017	497,331,095
Issued 23 Aug 2017 <sup>1</sup>	15,953,028
Issued 28 Sep 2017 <sup>2</sup>	2,143,069
Closing balance 30 Sep 2017	515,427,192
Unlisted employee rights	
Opening balance 30 Jun 2017	5,051,333
Issued	nil
Closing balance 30 Sep 2017	5,051,333
Comprises rights expiring:	
30 June 2018	3,974,617
30 June 2019	1,076,716
Closing balance 30 Sep 2017	5,051,333

## **Scheduled Future Reporting**

<u>Date</u>	Report
29 November	Annual General Meeting (Melbourne)
Late January	December 2017 Quarterly Report
Late February	Half Year Financial Report

Dates are tentative and subject to change.

<sup>1</sup> Refer corresponding ASX Appendix 3B for details, shares issued to satisfy the vesting of Performance Rights

<sup>2</sup> Refer corresponding ASX Appendix 3B for details, shares issued under Dividend Reinvestment Plan

# **Corporate Directory**

St Barbara Limited ABN 36 009 165 066

## **Board of Directors**

Tim Netscher	Non-Executive Chairman
Bob Vassie	Managing Director & CEO
Kerry Gleeson	Non-Executive Director
David Moroney	Non-Executive Director

## Executives

Bob Vassie	Managing Director & CEO
Garth Campbell-Cowan	Chief Financial Officer
Rowan Cole	Company Secretary

## **Registered Office**

Level 10, 432 St Kilda Road

Melbourne Victoria 3004 Australia	

Telephone	+61 3 8660 1900
Facsimile	+61 3 8660 1999
Email	info@stbarbara.com.au
Website	www.stbarbara.com.au

Australian Securities Exchange (ASX) Listing code "SBM"

American Depositary Receipts (ADR OTC code "STBMY") through BNY Mellon,

www.adrbnymellon.com/dr\_profile.jsp?cusip=852278100

Financial figures are in Australian dollars (unless otherwise noted).

Financial year commences 1 July and ends 30 June.

# **Shareholder Enquiries**

Computershare Investor Services Pty Ltd	
GPO Box 2975	
Melbourne Victoria 3001 Australia	
Telephone (within Australia)	1300 653 935
Telephone (international)	+61 3 9415 4356
Facsimile	+61 3 9473 2500
www-au.computershare.com/investor	

American Depositary Receipt enquires: BNY Mellon Depositary Receipts www.bnymellon.com/shareowner

# **Investor Relations**

Substantial Shareholders	% of Holdings <sup>1</sup>
Van Eck Associates Corporation	9.7%
M&G Investment Management Ltd	7.3%
Vinva Investment Management	5.2%

<sup>1</sup> As notified by the substantial shareholders to 16 October 2017

# Appendix

# **Non-IFRS Measures**

- The Company supplements its financial information reporting determined under International Financial Reporting Standards (IFRS) with certain non-IFRS financial measures, including cash operating costs and All-In Sustaining Cost. We believe that these measures provide additional meaningful information to assist management, investors and analysts in understanding the financial results and assessing our prospects for future performance.
- Cash Operating Costs are calculated according to common mining industry practice using The Gold Institute (USA) Production Cost Standard (1999 revision).
- All-In Sustaining Cost (AISC) is based on Cash Operating Costs, and adds items relevant to sustaining production. It includes some, but not all, of the components identified in World Gold Council's Guidance Note on Non-GAAP Metrics - All-In Sustaining Costs and All-In Costs (June 2013).
  - AISC is calculated on gold production in the quarter.
  - For underground mines, amortisation of operating development is adjusted from "Total Cash Operating Costs" in order to avoid duplication with cash expended on operating development in the period contained within the "Mine & Operating Development" line item.
  - Rehabilitation is calculated as the amortisation of the rehabilitation provision on a straight-line basis over the estimated life of mine.

## **Competent Persons Statement**

#### **Exploration Results**

- The information in this report that relates to Exploration Results for Simberi and Pinjin is based on information compiled by Dr Roger Mustard, who is a Member of The Australasian Institute of Mining and Metallurgy. Dr Mustard is a full-time employee of St Barbara and has sufficient experience 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'. Dr Mustard 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 Results for Gwalia and the Leonora region is based on information compiled by Mr Robert Love, who is a Fellow of The Australasian Institute of Mining and Metallurgy. Mr Love is a full-time employee of St Barbara and has sufficient experience 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'. Mr Love consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

#### **Mineral Resource and Ore Reserve Estimates**

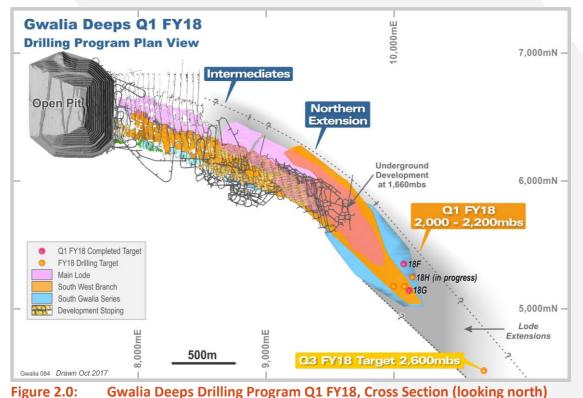
- The information in this report that relates to Mineral Resources or Ore Reserves is extracted from the report titled 'Ore Reserves and Mineral Resources Statements 30 June 2017' released to the Australian Securities Exchange (ASX) on 23 August 2017 and available to view at www.stbarbara.com.au and for which Competent Persons' consents were obtained. Each Competent Person's consent remain in place for subsequent releases by the Company of the same information in the same form and context, until the consent is withdrawn or replaced by a subsequent report and accompanying consent.
- The Company confirms that it is not aware of any new information or data that materially affects the information included in the original ASX announcement released on 23 August 2017 and, in the case of estimates of Mineral Resources or Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the original ASX announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original ASX announcement.
- Full details are contained in the ASX release dated 23 August 2017 'Ore Reserves and Mineral Resources Statements 30 June 2017' available at www.stbarbara.com.au.

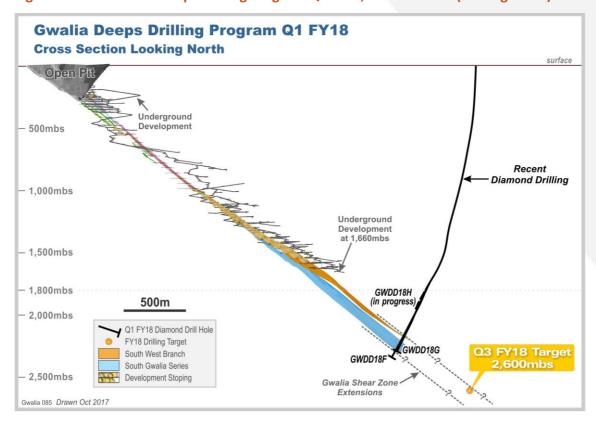


Quarterly Report / Q1 September 2017

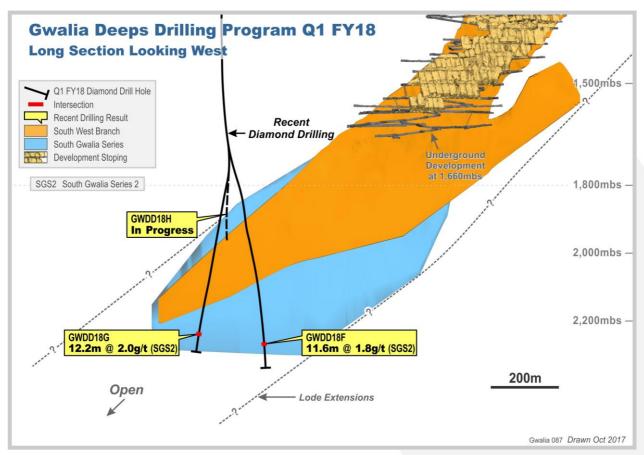
# **Exploration Figures and Tables**



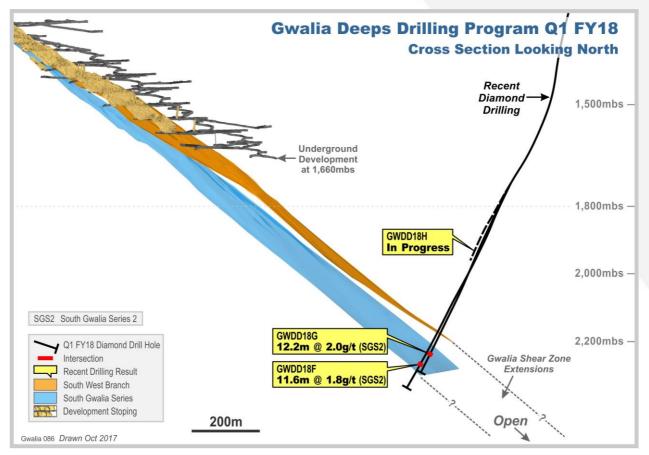




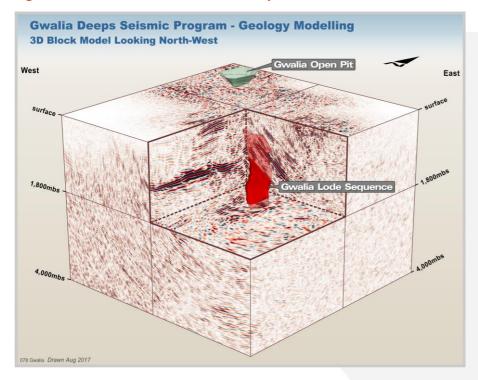




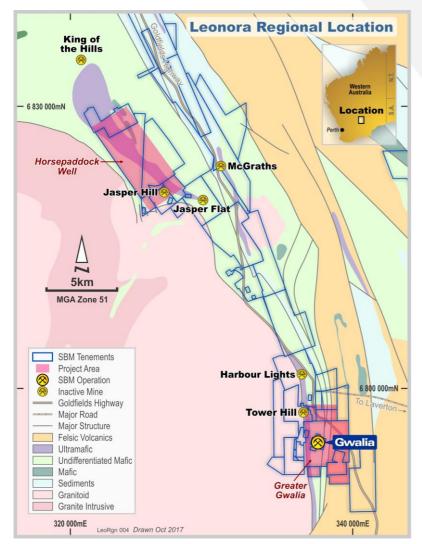


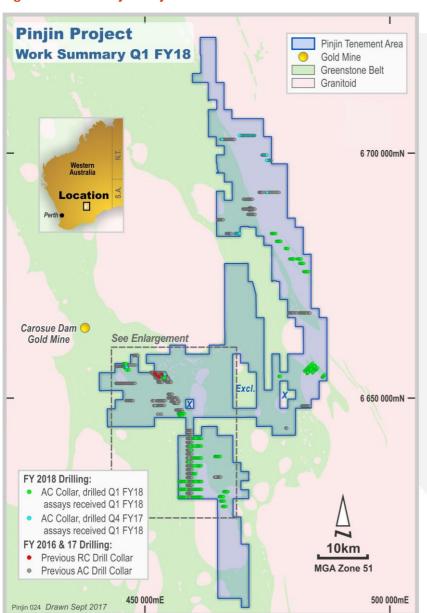


# Figure 3.0: Gwalia 3D Seismic Survey



# Figure 4.0 Horse Paddock Well – Q2 FY18





# Figure 5.0: Pinjin Project Aircore and Reverse Circulation Drilling Location Map

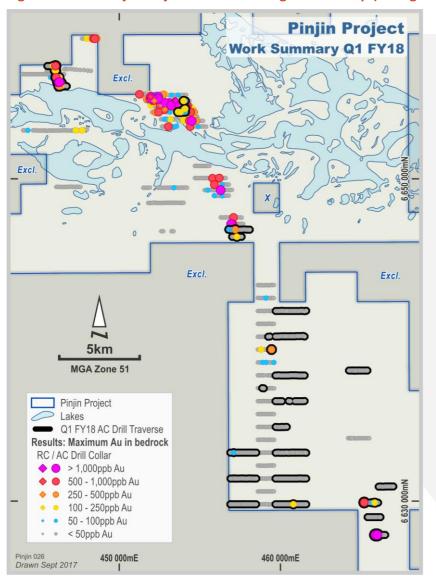
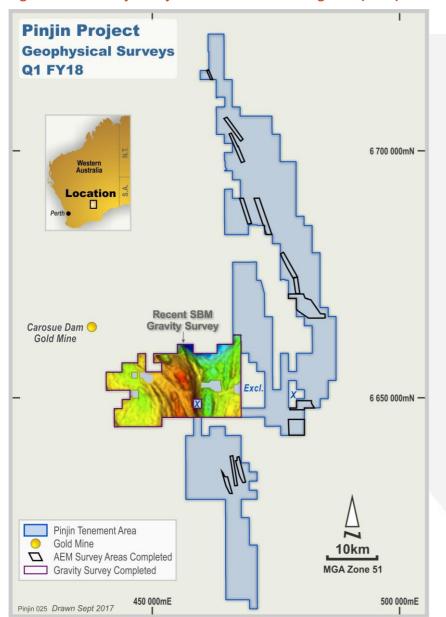
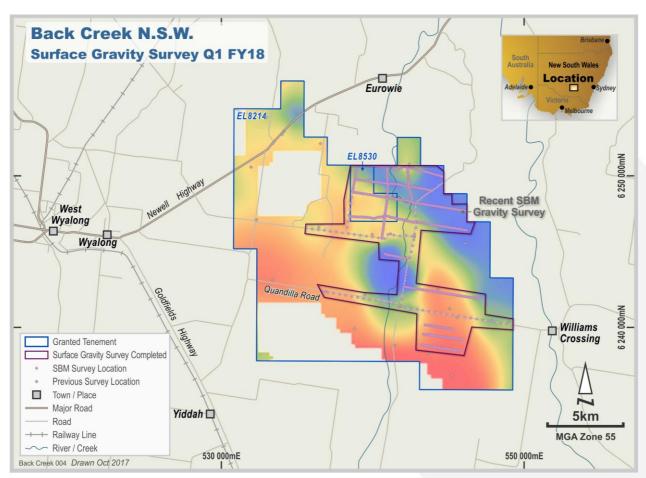


Figure 5.1: Pinjin Project Aircore Drilling Results Map (Enlargement) – maximum gold in bedrock



# Figure 5.2: Pinjin Project Airborne Electromagnetic (AEM) Location and Surface Gravity Survey Map







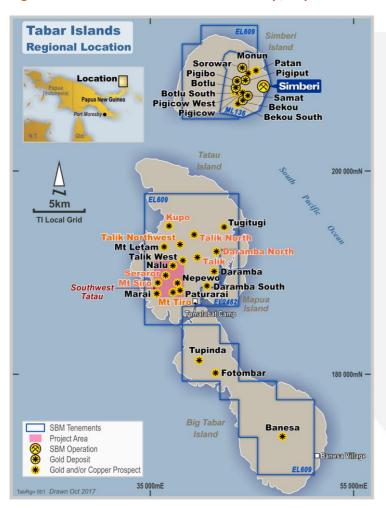
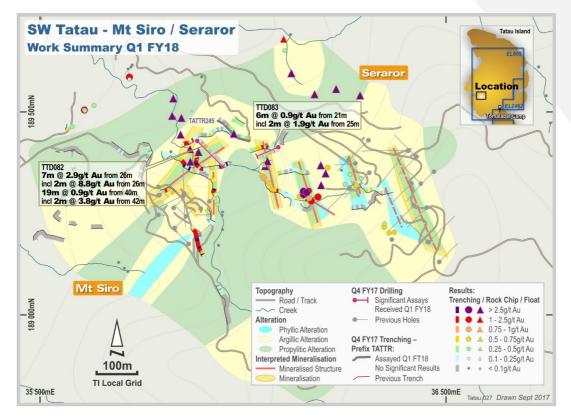
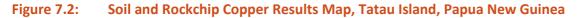
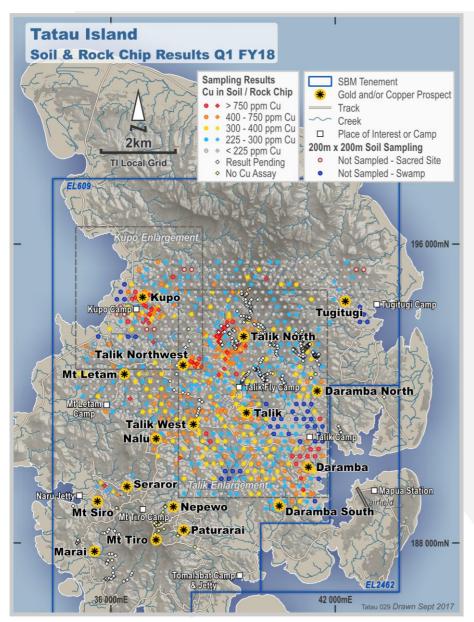


Figure 7.1: Mt Siro and Seraror Drill Location Map, Tatau Island, Papua New Guinea







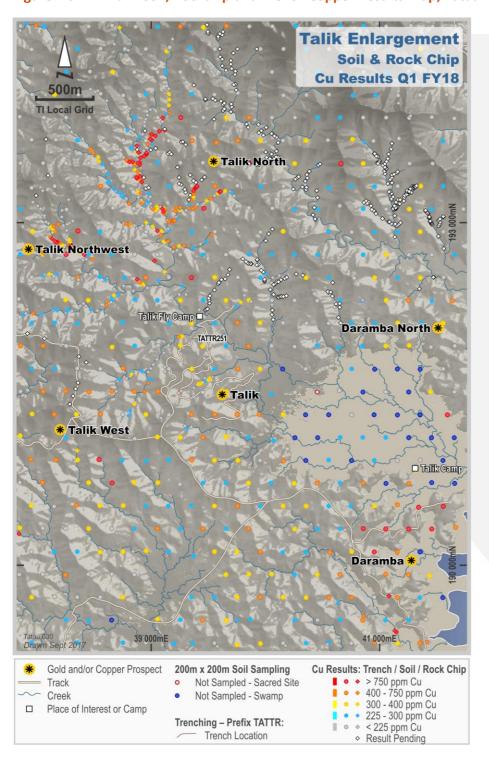


Figure 7.3: Talik Soil, Rockchip and Trench Copper Results Map, Tatau Island, Papua New Guinea

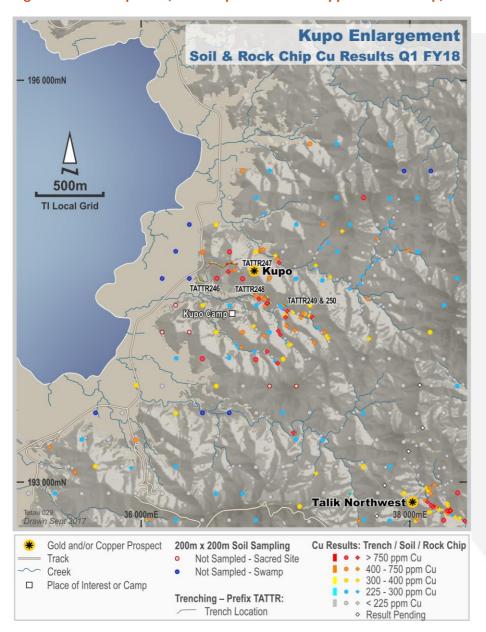


Figure 7.4: Kupo Soil, Rockchip and Trench Copper Results Map, Tatau Island, Papua New Guinea

# Table 1: Gwalia Deeps Significant Intercepts– Leonora Operations, Gwalia Mine

Hole Id		Down-hole Mineralised Intersection								
Hole Id	North m	East m	RL m			Dip/ Azimuth degrees	From m	To m	Interval m	Gold grade g/t Au
GWDD18F	5351	10114	3115	2260	SGS	-70/279	2392.4	2404.0	11.6	1.8
						including	2393.1	2398.0	4.9	3.4
GWDD18G	5159	10142	3143	2232	SGS	-62/251	2350.7	2362.9	12.2	2.0

NOTES:

High grade cuts have not been applied.

Dip and Azimuth angles estimated at intercept depth.

Coordinates and Azimuth referenced to Gwalia Local Mine Grid

Reported intercepts are all down hole lengths.

Numbers have been rounded to one significant figure.

# Table 2: Gwalia Intermediates Significant Intercepts– Leonora Operations, Gwalia Mine

		Down-hole Mineralised Intersection								
Hole Id	North m	East m	RL m			Dip/ Azimuth degrees	From m	To m	Interval m	Gold grade g/t Au
UGD2521	6381	8609	4322	1058	MNL	1/258	86.6	89.2	1.6	11.5
UGD2522	6386	8638	4288	1092	MNL2	-25/255	62.2	66.8	3.8	5.4
UGD2526	6521	8680	4228	1152	MNL2	-31/322	135.9	137.4	2.2	24.5
UGD2527	6467	8697	4242	1138	MNL	-36/311	117.1	117.7	0.5	80.5
UGD2528	6545	8528	4359	1021	MNL2	11/310	100.3	109.5	2.8	8.4
UGD2533	6510	8589	4316	1064	MNL2	-30/328	28.0	31.3	2.4	7.9
UGD2539	6491	8756	4198	1182	MNL	-52/353	138.2	142.5	2.0	6.6
	6506	8755	4179	1201	MNL2	-52/353	161.1	167.4	2.2	4.5
UGD2540	6476	8785	4156	1224	MNL2	-68/10	145.7	148.4	3.5	4.3
UGD2541	6407	8680	4264	1116	MNL	-28/272	98.0	101.0	2.8	5

NOTES:

High grade cuts have not been applied.

Dip and Azimuth angles estimated at intercept depth.

Coordinates and Azimuth referenced to Gwalia Local Mine Grid

Reported intercepts are estimated true widths.

Numbers have been rounded to one significant figure.

# Table 3: Pinjin Aircore Significant Intercepts – Yilgarn, WA

	North East RL Dip/					vn-hole d Intersecti	on		
Hole Id	m	m	m	Azimuth degrees	Total Depth	From m	To m	Interval m	Gold grade Au ppb
PJAC0822	6702798	465749	354	-90/0	127	107	111	4	842
PJAC0899	6656000	446250	332	-60/270	49	48	49	1	3020
PJAC0900	6656000	446300	332	-60/270	50	33	34	1	1340
						42	43	1	597
PJAC0901	6656000	446350	332	-60/270	52	28	29	1	671
PJAC0905	6656295	446100	332	-60/270	42	41	42	1	545
PJAC0921	6657000	446050	350	-60/270	59	52	53	1	989
PJAC1099	6627902	465896	400	-60/270	112	111	112	1	6550
PJAC1100	6627903	466003	400	-60/270	70	69	70	1	1150
PJAC1118	6629906	465198	400	-60/270	100	96	99	3	812

NOTES:

Coordinates and Azimuth referenced to MGA94 zone 51 Grid. Reported intercepts are all down hole lengths.

# Table 4: Southwest Tatau Significant Intercepts – Tatau Island, Papua New Guinea

	North	East	RL	Dip/	Total	Total			wn-hole ed Intersect	ion
Hole Id	m	m	m	Azimuth degrees	Depth	Lode	From m	To m	Interval m	Gold grade g/t Au
TTD082 (Mt Siro)	189430	35887	38.0	-60 / 135	176.6	SU	26	33	7.0	2.9
including						SU	26	27	2.0	8.8
						SU	40	59	19.0	0.9
including						SU	42	44	2.0	3.8
TTD083 (Mt Siro)	189414	36087	64.0	-60 / 250	118.5	TR	21	27	6.0	0.9
including						TR	25	27	2.0	1.9

NOTES:

Coordinates and Azimuth referenced to Tabar Island Grid (TIG). Reported intercepts are all down hole lengths.

# LEONORA - JORC Code, 2012 Edition – Table 1

## **Contents**

Drilling:

Section 1 Sampling Techniques and Data

Section 2 Reporting of Exploration Results

## Drilling - Section 1 Sampling Techniques and Data

Criteria in this section a Criteria		nmentar											
Sampling techniques	•	length u	inless a s is subn	significant nitted for a	2 diamond o geological fe sample analy	ature warra	ants a change	e from this	standard u	nit. The up	oper or rig	ht-hand si	ide of
Drilling techniques	•				Q2 (50.6mm e is orientate					oeen surve	eyed using	a single	shot
Drill sample recovery			recovery		orientated a ess than 100		•			•			
Logging		distribut	tions. V nonitore	alidation d through	primarily for l of geological n regular pee	data is cor							
Sub-sampling techniques and sample preparation	•			-	a core saw be mm followed	-		-	-		e entire sar	nple is cru	ished
Quality of assay data and laboratory tests	•	<ul> <li>SBM samples were analysed for gold using fire assay with a 50g charge and analysis by flame Atomic Absorption Spectrometry (AAS). QC includes insertion of 3 commercial standards (1 per 20 samples), barren material used for blank control samples, use of barren flush material between designated high grade samples during the pulverising stage, re- numbered sample pulp residues re-submitted to original laboratory, and sample pulp residues submitted to accredited umpire laboratory, submission of residual (duplicate) half core from ore intervals. The analysis of gold was sound and re- analysis of pulps showed acceptable repeatability with no significant bias.</li> </ul>											
Verification of sampling and assaying	•		nd dowr	n hole surv	electronicall vey data are								
Location of data points	•	pick up the hole All coor	the colla e is in pr dinates	ar by placi ogress by and Azimu	re recorded ng a survey i surveying the ith are specif s detailed be	od into the drill rods i ied in using	hole to mean the hole.	asure azimi	uth and dip	. This proc	ess may al	so occur v	while
		Grid	Azimuth	MGAE 1	MGAN 1	MGAE 2	MGAN 2	GridE 1	GridN 1	GridE 2	GridN 2	Rotation	Scale
	S	SGMG Sons of Swalia ine Grid	15.13	337371.157	6800342.586	340246.451	6799408.751	7200.281	6987.844	10219.711	6836. 814	344.522	1
Data spacing and distribution	•		•	•	on an appro ntinuity for a		n x 80m belo	w 1620 me	tres below	surface Dr	illing data	is sufficie	ent to
Orientation of data in relation to geological structure	•	Samplin	g is perp	pendicular	to lode orier	ntations and	l is sound ba	sed on pas	t productio	n and unde	erground r	napping.	
Sample security	•	approve	ed contr	actors to	proved contr the compan reparation an	y's secure							
Audits or reviews	•	laborato	ory inspe	ections are	gging and sar conducted b icant issues v	y SBM pers	onnel. Inspec						

# Drilling - Section 2 Reporting of Exploration Results

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

Criteria	Commentary
Mineral tenement and land tenure status	• SBM has 100% ownership of the two tenements M37/25 and M37/333 over the Gwalia deposit.
Exploration done by other parties	Western Mining Corporation (WMC) and Sons of Gwalia (SGW), have previously completed deep diamond drilling below 1,100 metres below surface
Geology	• Gold mineralisation occurs as a number of stepped, moderately east dipping, foliation parallel lodes within strongly potassic altered mafic rocks which extend over a strike length of approximately 500 metres and to a vertical depth of at least 2,200 metres below surface. The deposit exhibits significant down-plunge continuity but is interrupted at approximately 1,200 metres below surface (mbs) by a cross cutting post-mineralisation doleritic dyke, with a horizontal width of approximately 30 metres.
Drill hole Information	• Drill hole information is included in intercept table outlining mid-point co-ordinates including vertical hole depth and composited mineralized intercepts lengths and depth.
Data aggregation methods	• Down hole intercepts are reported as length weighted averages. No high grade cut is applied.
Relationship between mineralisation widths and intercept lengths	• Down hole length is reported for all holes; true width is not immediately known until further drilling is completed and the orebody modelled.
Diagrams	Appropriate diagrams are included within the body of the report
Balanced reporting	Details of all holes material to Exploration Results have been reported in the intercept table.
Other substantive exploration data	These holes test the deepest limits of mineralisation and no other data is available
Further Work	Further exploration drill holes are planned
Balanced reporting	Details of all holes material to Exploration Results have been reported in the intercept table.
Other substantive exploration data	Data is included in the body of the report
Further Work	Follow-up drilling is planned and is discussed in the body of the report

# PINJIN - JORC Code, 2012 Edition – Table 1

## Contents

Drilling: Section 1 Sampling Techniques and Data

Section 2 Reporting of Exploration Results

## Drilling - Section 1 Sampling Techniques and Data

Criteria	to the succeeding section.) Commentary
Sampling techniques	• Sampling was conducted via Aircore drilling on 50m or 100m spacing with line spacing's of 400m, 800m or as
	<ul> <li>individual lines. Where possible all holes were drilled to blade refusal.</li> <li>Aircore samples were collected from a rig-mounted cyclone by bucket and were then placed directly on the</li> </ul>
	ground in rows of ten.
	<ul> <li>Aircore Drill spoil was sampled with a scoop to generate 4m composite samples of approximately 3kg.</li> <li>The 3kg composite samples were submitted to Bureau Veritas Minerals Pty Ltd, Perth where they were sorted and dried, crushed to 10mm and pulverized to -75μm. A 40g charge of pulverized sample was then digested with aqua regia with a gold analysis by ICP-MS to a detection limit of 1ppb. The same digested sample was also tested for arsenic by ICP-AES to 1ppm detection limit.</li> </ul>
	<ul> <li>Composite samples that return anomalous Au values were subsampled on a metre by metre basis. These samples were submitted to Bureau Veritas Minerals Pty Ltd, Perth where they were sorted and dried, crushed to 10mm and pulverized to -75µm. A 40g charge of pulverized sample was then analyzed for Au, Pd &amp; Pt by Fire Assay with</li> </ul>
	an ICP finish to a detection limit of 1ppb.
	<ul> <li>Representative specimens of end of hole rock chips were stored in plastic chip trays for future reference.</li> <li>The EOH Aircore samples as well as a selection of RC samples were submitted to Genalysis and were prepared in the same manner. A 10g charge of pulverized sample was then digested by four acid digestion with analysis by the Scott Halley technique (ICP-OES &amp; ICP-MS to ultra-trace levels) via 4A/OM20 method for 60 elements (Ag, Al, As, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cs, Cu, Dy, Er, Eu, Fe, Ga, Gd, Ge, Hf, Ho, Ln, K, La, Li, Lu, Mg, Mn, Mo, Na, Nb, Nd, Ni, P, Pb, Pr, Rb, Re, S, Sb, Sc, Se, Sm, Sn, Sr, Ta, Tb, Te, Th, Ti, TI, Tm, U, V, W, Y, Yb, Zn &amp; Zr).</li> </ul>
	<ul> <li>Anomalous RC composite samples are sub-sampled using previously completed one metre samples collected by the rigs cone splitter system. These were submitted to Bureau Veritas Minerals Pty Ltd, Perth where they were sorted and dried, crushed to 10mm and pulverized to -75µm. A 40g charge of pulverized sample was then analyzed for Au by Fire Assay with an ICP finish to a detection limit of 1ppb.</li> </ul>
Drilling techniques	<ul> <li>Aircore drilling was carried out using a three and a half inch blade bit to refusal, generally at the fresh rock interface. Drilling was carried out by Raglan Drilling who utilised a truck mounted R/A 180 Rig with 750 cfm and 350 psi.</li> </ul>
Drill sample recovery	<ul> <li>Sample recoveries and condition (wet/dry) were not recorded.</li> <li>The drill cyclone and sample buckets were cleaned regularly, in particular after wet ground was encountered. The cyclone was also cleaned several times during the course of each hole and after the completion of each hole.</li> </ul>
Logging	<ul> <li>All drill holes were logged in full for lithology, alteration, weathering/regolith and colour.</li> <li>Aircore logging is both qualitative and quantitative.</li> </ul>
Sub-sampling techniques	<ul> <li>Aircore samples were collected as both dry and wet samples using a sample scoop.</li> </ul>
and sample preparation	• All Aircore composite samples were sorted, dried, crushed and pulverized to produce a 40g charge prior to fire assay.
	<ul> <li>Aircore samples were collected at 1m intervals and composited in 4m samples using a scoop to sample individual metre samples.</li> </ul>
	• QC procedures for 4m composite sampling involved the insertion of certified reference material, field duplicates and blanks at a ratio of 1:50.
	Bureau Veritas inserted certified standards and replicates and lab repeats.
Quality of assay data and laboratory tests	<ul> <li>The composite samples used a 40g charge with an aqua regia digest which is considered appropriate for analysis o the regolith dominated sample medium.</li> </ul>
	<ul> <li>Certified reference material was inserted into the sample stream at a ratio of 1:50.</li> <li>Field duplicates and blanks were inserted at a ratio of 1:50.</li> </ul>
	Bureau Veritas inserted certified standards and replicates and lab repeats.
Verification of sampling and assaying	<ul> <li>Primary geological and sampling data were recorded into made for purposed excel spreadsheets. Data was then transferred into the St Barbara corporate DataShed database where it was validated by an experienced database geologist.</li> <li>No adjustments to assay data were made.</li> </ul>
Location of data points	<ul> <li>Prior to drilling, all holes were marked out using a handheld GPS with ±3m accuracy for easting, northings and ±10m elevation. Upon completion of the program all holes were resurveyed using a dGPS with decimetre accuracy</li> </ul>
	<ul><li>to determine the final collar positions.</li><li>No downhole surveys were conducted on Aircore holes.</li></ul>
	All locations were captured in MGA94 zone 51 grid.
Data spacing and distribution	<ul> <li>Aircore drilling was conducted on 50m or 100m drill spacing's and a line spacing of 400m, 800m or as individual lines.</li> </ul>
	• Aircore results reported are based on the 1m Fire Assay re-splits of original 4m composite samples.

Criteria	Commentary
Orientation of data in relation to geological structure	<ul> <li>The majority of Aircore drill holes had a dip and azimuth of -60/270. Holes were drilled vertically in areas were transported cover made drilling difficult. Due to the early stage of the project there is not yet an exact understanding of the primary orientation of mineralisation.</li> </ul>
Sample security	<ul> <li>Only trained and experienced contractors and company personnel were allowed to collect the samples; all samples were held within a secure company location before dispatch to Bureau Veritas in Perth for Au analysis.</li> </ul>
Audits or reviews	No audits or reviews of sampling protocols have been completed.

# Drilling - Section 2 Reporting of Exploration Results

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

Criteria	Commentary
Mineral tenement and land tenure status	<ul> <li>SBM has 100% ownership of the 20 tenements comprising the Pinjin Project. These include: E28/2234, E28/2283, E28/2284, E31/0999, E31/1000, E31/1005, E31/1007, E39/1718, E28/2218, E28/2245, E28/2250, E28/2264, E28/2357, E28/2375, E28/2445, E31/1056, E31/1082, E28/2246, E28/2247 and E28/2494.</li> </ul>
Exploration done by other parties	<ul> <li>There have been numerous historical holders of the project area which covers over ~1,358 square kilometres.</li> <li>Exploration has been conducted by numerous companies including but not limited to Newmont Pty Ltd, Endeavour Minerals, WMC, Goldfields Exploration Pty Ltd, Anglo American, Gutnick Resources, Carpentaria Exploration Company, BHP, Uranez, Placer Exploration Ltd, Jacksons Minerals Limited, Anglo Australian Resources, Troy Resources NL, Saracen, Hawthorn Resources and Renaissance Minerals Limited.</li> </ul>
Geology	<ul> <li>SBM is targeting Archean orogenic gold mineralisation near major regional faults.</li> <li>The tenement package covers Archaean greenstones within the highly prospective Eastern Goldfields Province of the Yilgarn Craton. The Pinjin project covers portions of the prospective Laverton and Keith-Kilkenny Tectonic Zones which pass through the eastern and western portions respectively.</li> </ul>
Drill hole Information	<ul> <li>Drill hole information for holes returning significant results have been reported in the intercept table. Included in the intercept table are collar position obtained by dGPS pickup, hole dip and azimuth acquired from hand held compass and clinometer, composited mineralised intercepts lengths and depth as well as hole depth. Metres below surface (mbs) for intercepts were calculated for the start of the intercept.</li> </ul>
Data aggregation methods	<ul> <li>Broad down hole intercepts are reported as length weighted averages using a cut-off of 500ppb Au. Such intercepts may include material below cut-off but no more than 5 sequential meters of such material and except where the average drops below the cut-off. Selvage is only included where its average grade exceeds 500 ppb Au.</li> <li>No high grade cut is applied.</li> <li>No metal equivalent values are used for reporting exploration results.</li> </ul>
Relationship between mineralisation widths and intercept lengths	• Down hole length is reported for all holes; true width is not known as the orientation of mineralisation is not fully understood.
Other substantive exploration data	Included in the body of the report.
Diagrams	Diagrams show all drill holes material and immaterial to Exploration Results.
Balanced reporting	• Details of all holes material to Exploration Results have been reported in the intercept table, and all other drill holes drilled during the reporting period are highlighted on diagrams included in the report.
Other substantive exploration data	Data is included in the body of the report.
Further Work	• Further exploration aircore drill holes are planned and are discussed in the body of the report.

# SIMBERI - JORC Code, 2012 Edition – Table 1

## Contents

Drilling:	Section 1 Sampling Techniques and Data
	Section 2 Reporting of Exploration Results
Trenching:	Section 1 Sampling Techniques and Data
	Section 2 Reporting of Exploration Results
Surface Sampling:	Section 1 Sampling Techniques and Data
	Section 2 Reporting of Exploration Results

## Drilling - Section 1 Sampling Techniques and Data

Criteria	Commentary				
Sampling techniques	<ul> <li>Diamond Drilling - Sampled using PQ (85mm), HQ (63.5mm) or HQ3 (61.1mm) and on occasion NQ2 (50.5mm) or NQ3 (45mm) sized core using standard triple tubes. Half core was sampled on nominal 1-metre intervals with the upper or left - hand side of the core prepped on-site to produce a 200gm pulp sample. A 50gm charge was then extracted from the 200gm pulp for Au fire assay and ICP - AES base metal analysis.</li> </ul>				
Drilling techniques	<ul> <li>Diamond Drilling comprised PQ (85mm), HQ (63.5mm) or HQ3 (61.1mm) and on occasion NQ2 (50.5mm) or NQ3 (45mm) core recovered using 1.5m to 3m barrels. When ground conditions permit, an ACT Digital Core Orientation Instrument was used by the contractor to orientate the core.</li> </ul>				
Drill sample recovery	<ul> <li>Diamond drilling recovery percentages were measured by comparing actual meters recovered per drill run versus meters measured on the core blocks. Recoveries averaged over &gt;90% with increased core loss present in fault zones and zones of strong alteration. No relationship exists between sample recovery and grade.</li> </ul>				
Logging	<ul> <li>Diamond holes are qualitatively geologically logged for lithology, structure and alteration and qualitatively and quantitatively logged for veining and sulphides. Diamond holes are geotechnically logged with the following attributes qualitatively recorded - strength, infill material, weathering and shape. Whole core together with half core, were photographed when wet.</li> <li>All holes are fully logged.</li> </ul>				
Sub-sampling techniques and sample preparation	<ul> <li>Diamond core was sampled largely on 1 metre intervals. Core was cut with the upper or left-hand side of the core routinely submitted for total pulverisation (85% passing 75 µm). Quality control of sub-sampling consisted of insertion of blank control samples and coarse reject duplicates, both at a ratio of 1:20 samples. The samples were fully prepared at the company's on-site sample preparation facility on Simberi Island with 200g pulps sent to ALS Laboratory in Townsville.</li> </ul>				
0 10 1 1	Pulp residues are stored in Townsville for future re-assay if required.				
Quality of assay data and laboratory tests	<ul> <li>Half Core samples were analysed for gold using fire assay with a 50g charge and analysis by flame atomic absorption spectrometry (Au-AA26 method). Additional elements (Ag, As, Cu, Fe, Mo, Pb, S, Sb and Zn) were analysed by Aqua Regia digestion using Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES) via method ME-ICP41. QC included insertion of certified reference material (1 in 20); insertion of in-house blank control material (1 in 20); and the insertion of reject residues (1 in 20). QAQC results were assessed as each laboratory batch was received and again on a quarterly basis. Results indicate that pulveriser bowls were adequately cleaned between samples.</li> <li>ALS Townsville inserted certified standards and replicates and lab repeats.</li> </ul>				
Verification of sampling and assaying	<ul> <li>Sampling data is recorded electronically which ensures only valid non-overlapping data can be recorded. Assay and downhole survey data are subsequently merged electronically. All drill data is stored in a SQL database on secure company server. No twin holes have been completed.</li> </ul>				
Location of data points	<ul> <li>All Simberi Island collars were surveyed by in-house surveyors using DGPS using Tabar Island Grid (TIG) which is based on WGS84 ellipsoid and is GPS compatible. Tatau and Tabar Island collars were surveyed by hand held GPS. All holes were downhole surveyed using either a Reflex or Ranger single shot camera with the first reading at about 15m and then approximately every 30m increments to the bottom-of-the hole.</li> </ul>				
Data spacing and distribution	• Drilling data is not yet sufficient to establish continuity of the lodes and therefore the drill spacing is irregular and broad spaced.				
Orientation of data in relation to geological structure	<ul> <li>Where surface mapping and sampling has contributed to understanding of outcropping geological structures, drilling and sampling has been undertaken orthogonal to the mapped structure.</li> </ul>				
Sample security	<ul> <li>Only company personnel or approved contractors are allowed on drill sites; drill core is only removed from drill site to secure core logging/processing facility within the gated exploration core yard; core is promptly logged, cut and prepped on site. The 200gm pulps are then consigned to ALS in Townsville for Au and multi-element analysis.</li> </ul>				
Audits or reviews	<ul> <li>No audits or reviews of sampling protocols have been completed.</li> </ul>				

# Drilling - Section 2 Reporting of Exploration Results

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

Criteria	Commentary
Mineral tenement and land tenure status	<ul> <li>SBM has 100% ownership of the three tenements over the Simberi Islands; ML136 on Simberi Island, EL609 which covers the remaining area of Simberi Island, as well as Tatau Island and Big Tabar Island and 4 sub-block EL2462 which covers part of Tatau and Mapua Island.</li> </ul>
Exploration done by other parties	<ul> <li>CRA, BHP, Tabar JV (Kennecott, Nord Australex and Niugini Mining), Nord Pacific, Barrick and Allied Gold have all previously worked in this area. Nord Pacific followed by Allied Gold was instrumental in the discovery and delineation of the 5 main oxide and sulphide deposits at Simberi.</li> </ul>
Geology	<ul> <li>The Simberi gold deposits are low sulphidation, intrusion related adularia-sericite epithermal gold deposits. The dominant host rocks for mineralisation are andesites, volcaniclastics and lesser porphyries. Gold mineralisation is generally associated with sulphides or iron oxides occurring within a variety of fractures, such as simple fracture in- fills, single vein coatings and crackle brecciation in the more competent andesite units, along andesite/polymict breccia contact margins as well as sulphide disseminations. On Tatau and Big Tabar Islands, located immediately south of Simberi, potential also exists for porphyry Cu-Au, epithermal quartz Au-Ag and carbonate-base metal Au mineralisation.</li> </ul>
Drill hole Information	<ul> <li>Drill hole information is included in intercept table outlining collar position obtained by DGPS pickup, hole dip and azimuth acquired from a downhole surveying camera as discussed in section 1, composited mineralized intercepts lengths and depth as well as hole depth.</li> </ul>
Data aggregation methods	<ul> <li>Broad down hole intercepts are reported as length weighted averages using a cut-off of 0.5 g/t Au and a minimum grade*length of 5gmpt. Such intercepts may include material below cut-off but no more than 5 sequential meters of such material and except where the average drops below the cut-off. Selvage is only included where its average grade exceeds 0.5 g/t Au.</li> <li>Using the same criteria for included sub-grade, supplementary cut-offs, of 2.5g/t Au, 5.0g/t Au and 10g/t Au, may be used to highlight higher grade zones and spikes within the broader aggregated interval. Single assays intervals are reported only where ≥5.0g/t Au and ≥1m down hole. In core holes, core loss is assigned zero grade. No high grade cut is applied.</li> <li>No metal equivalent values are used for reporting exploration results.</li> </ul>
Relationship between mineralisation widths and intercept lengths	<ul> <li>Down hole length is reported for all holes; true width is not known as the orientation of the orebody is not fully understood.</li> </ul>
Diagrams	Diagrams show all drill holes material and immaterial to Exploration Results.
Balanced reporting	• Details of all holes material to Exploration Results have been reported in the intercept table, and all other drill holes drilled during the reporting period are highlighted on diagrams included in the report.
Other substantive exploration data	• Included in the body of the report. Core holes are routinely measured for bulk density determinations to be used for potential future resource modelling.
Further work	Included in the body of the report.

# Trenching - Section 1 Sampling Techniques and Data

1	Criteria	in this	section	apply	/ to all	succeeding	sections.	۱
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Criteria	Commentary
Sampling techniques	<ul> <li>Sampling of trenches was done over measured intervals of between 1 and 5 meters dependent on geology. A geo- pick was used to collect a continuous channel sample from the trench faces across the designated interval with the samples collected in calico bags.</li> </ul>
Trenching/Benching techniques	• Trenches were created by both hand and mechanical techniques. Hand trenches were dug using spades, crowbars and shovels to depths of between 1 and 2 meters. Creek channel sampling is conducted in the same manner as trenches, where continuous exposure of bedrock is made by hand clearing of vegetation and cover. Mechanised trenches were dug by an excavator exposing up to 5 meters of trench wall.
Drill sample recovery	• N/A
Logging / Mapping	All trenches were qualitatively geologically mapped for lithology, structure and alteration.
Sub-sampling techniques and sample preparation	<ul> <li>Southwest Tatau trench samples (3 to 5kg) were prepped on-site (jaw crushed, disk mill pulverised and then split) to produce a 200g pulp sample.</li> <li>The Southwest Tatau samples (Mt Siro and Seraror) are routinely submitted for total pulverisation (85% passing &lt;75 µm) at the company onsite sample preparation facility on Simberi Island.</li> <li>For Soutwest Tatau samples 200g pulps are sent to St Barbara's Simberi Laboratory where a 25g sub-sample is taken.</li> <li>Kupo and Talik trench samples (2 to 4kg) were taken to a restricted area at the company's on-site sample preparation facility on Simberi Island and dried in a dedicated oven at low Temperature (60°C) for 24 hours to reduce weight for transport. Prior to 1st August 2017, the whole Kupo and Talik trench samples were sent to ALS Laboratory in Brisbane for sample preparation and analysis. Samples were sterilised at Steritech Pty Ltd, an irradiation facility in Brisbane. Since 1st August 2017, all trench samples associated with the Newcrest option and farm-in agreement work program (Kupo and Talik) are sent to Intertek Lae (PNG) for sample preparation and analysis.</li> <li>At ALS, sample preparation involves drying, jaw crush to 95% passing -4.75mm, pulverise in LM5 or LM2 to a minimum 85% passing -106um.</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>The Southwest Tatau samples (Mt Siro and Seraror) were analysed for gold at the Simberi Lab using Aqua Regia digestion with a 25g charge and analysis by Atomic Absorption Spectrometry.</li> <li>The Southwest Tatau sample QC included the insertion of two in house blanks at the start of each batch of trench samples, the insertion of certified gold standards (1:100) as well as the collection of field duplicates (1:100). No multi-element analyses were completed.</li> <li>Prior to 1st August 2017, the Kupo and Talik sample pulps were analysed for Au via 30g Fire Assay and AAS finish (Au-AA21 method) and then multi-elements (Ag, Al, As, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cs, Cu, Fe, Ga, Ge, Hf, In, K, La, Li, Mg, Mn, Mo, Na, Nb, Ni, P, Pb, Rb, Re, S, Sb, Sc, Se, Sn, Sr, Ta, Te, Th, Ti, Tl, U, V, W, Y, Zn and Zr) via multi acid digest with HF (GEO-4A01 method) and Inductively Coupled Plasma Mass Spectroscopy (ICPMS) via (MEMS61L method).</li> <li>Since 1st August 2017, all trench samples associated with the Newcrest option and farm-in agreement work program (Kupo and Talik) were analysed for Au via 50g Fire Assay and AAS finish (FA50/AA method) and then multi-elements (Ag, Al, As, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cs, Cu, Fe, Ga, Ge, Hf, In, K, La, Li, Mg, Mn, Mo, Na, Nb, Ni, P, Pb, Rb, Re, S, Sb, Sc, Se, Sn, Sr, Ta, Te, Th, Ti, Tl, U, V, W, Y, Zn and Zr) via 4 acid digest with HF (4A method) and Inductively Coupled Plasma Optical Emission Spectroscopy (ICP-OES) or Inductively Coupled Plasma Mass Spectroscopy (ICP-MS via (OM10 method).</li> <li>The Kupo and Talik sample QC included the insertion of certified copper - gold Standards (OREAS45d, OREAS45e) into the sample sequence so that 5% of samples (1 in 20) are a standard.</li> </ul>
Verification of sampling and assaying	• Sampling data is recorded electronically which ensures only valid non-overlapping data can be recorded. Assay and trench survey data are subsequently merged electronically. All data is stored in a SQL database on secure company server.
Location of data points	<ul> <li>All trenches were initially surveyed by a handheld GPS to capture the trench start point. The GPS used the Tabar Island Grid (TIG) which is based on WGS84 ellipsoid. The path of the trench from the initial start point to the end was surveyed by Tape &amp; Compass method. Trench interval coordinates were then generated using basic trigonometry.</li> <li>Selected recent trenches have been picked up using dGPS WGS84 zone 56.</li> </ul>
Data spacing and distribution	Trench data spacing is irregular and broad spaced.
Orientation of data in relation to geological structure	<ul> <li>Where preceding surface mapping and sampling of trenches has contributed to understanding of outcropping geological structures, trenching and sampling has been undertaken to extend the strike length of the mapped structure. However, in many of the areas the lode orientation is poorly understood.</li> </ul>
Sample security	<ul> <li>Only company personnel or approved contractors are allowed on trench sites; trench samples are only removed from site to secure core logging/processing facility within the gated exploration core yard; samples are promptly logged, cut and prepped on site.</li> </ul>

# Trenching - Section 2 Reporting of Exploration Results

Criteria	Commentary
Mineral tenement and land tenure status	• SBM has 100% ownership of the three tenements over the Simberi Islands; ML136 on Simberi Island, EL609 which covers the remaining area of Simberi Island, as well as Tatau Island and Big Tabar Island and 4 sub-block EL2462 which covers part of Tatau and Mapua Island.
Exploration done by other parties	CRA, BHP, Tabar JV (Kennecott, Nord Australex and Niugini Mining), Nord Pacific, Barrick and Allied Gold have all previously worked in this area. Nord Pacific followed by Allied Gold was instrumental in the discovery and delineation of the 5 main oxide and sulphide deposits at Simberi.
Geology	• The Simberi gold deposits are low sulphidation, intrusion related adularia-sericite epithermal gold deposits. The dominant host rocks for mineralisation are andesites, volcanoclastics and lesser porphyries. Gold mineralisation is generally associated with sulphides or iron oxides occurring within a variety of fractures, such as simple fracture infills, single vein coatings and crackle brecciation in the more competent andesite units, along andesite/polymict breccia contact margins as well as sulphide disseminations. On Tatau and Big Tabar Islands, located immediately south of Simberi, potential also exists for porphyry Cu-Au, epithermal quartz Au-Ag and carbonate-base metal Au mineralisation.
Trench/Bench Information	Included in the report text and annotated on diagrams.
Data aggregation methods	<ul> <li>Broad trench intercepts are reported as length weighted averages using a cut-off of 0.5 g/t Au and a minimum grade*length of 5gmpt. Such intercepts may include material below cut-off but no more than 5 sequential meters of such material and except where the average drops below the cut-off. Selvage is only included where its average grade exceeds 0.5 g/t Au.</li> <li>Using the same criteria for included sub-grade, supplementary cut-offs, of 2.5g/t Au, 5.0g/t Au and 10g/t Au, may be used to highlight higher grade zones and spikes within the broader aggregated interval. Single assays intervals are reported only where ≥1.0g/t and ≥5m trench length is intercepted. No high grade cut is applied.</li> </ul>
Relationship between mineralisation widths and intercept lengths	• Trench intercepts are sampled along the length of the trench and are reported for all trenches; true width is not reported.
Diagrams	Diagrams show all trenches material and immaterial to Exploration Results.
Balanced reporting	Details of all trenches material to Exploration Results have been reported in the text, and all other trenches dug during the reporting period are highlighted on diagrams included in the report.
Other substantive exploration data	Included in the body of the report.
Further work	Included in the body of the report.

# Surface Sampling - Section 1 Sampling Techniques and Data

Criteria in this section apply to Criteria	Commentary
Sampling techniques	<ul> <li>For the regional soil survey, samples were collected by first removing organic litter from the surface. A hand auger was then used to collect a C-horizon sample from typically between 140cm to 190cm depth. Sampling teams were supervised by a geologist who determined the depth of the sample collected. A bulk sample of ≥2kg was then collected in a calico bag. A reference sample of soil and any weathered rock fragments is placed in a plastic chip tray for ASD analysis.</li> <li>Rock chip samples (2 to 5kg) were cleaned of any organic material and placed in a calico bag. A small reference rock chip sample is placed in a plastic chip tray for ASD analysis.</li> </ul>
Drilling techniques	• N/A
Drill sample recovery	• N/A
Logging	<ul> <li>All rock chip and float were qualitatively logged for lithology, alteration, weathering and colour.</li> <li>Regional soil sample sites were recorded for land use, vegetation type, slope (degrees) and slope direction. For regional soil samples, the depth (from, to) collected was recorded in centimetres. Regional soil samples were logged for regolith (weathering) type, colour, tone and moisture content by a geologist. A digital photograph is taken showing the soil profile laid out and the location of the sample material highlighted.</li> </ul>
Sub-sampling techniques and sample preparation	<ul> <li>Rock chip, float and soil samples collected were taken to a restricted area at the company's on-site sample preparation facility on Simberi Island and dried in a dedicated oven at low Temperature (60°C) for 24 hours to reduce weight for transport.</li> <li>Since 1st August 2017, all surface samples associated with the Newcrest option and farm-in agreement work program are sent to Intertek in Lae (PNG) for sample preparation and analysis.</li> <li>All surface samples not associated with the Newcrest option and farm-in agreement work program are sent to analysis. Samples were first sterilised at Steritech Pty Ltd, an irradiation facility in Brisbane.</li> <li>At ALS, sample preparation involves drying, jaw crush to 70% passing -6mm, pulverise in LM5 or LM2 to a minimum 85% passing -75um.</li> <li>At Intertek, sample preparation involves drying, jaw crush to 95% passing -4.75mm, pulverise in LM5 or LM2 to a minimum 95% passing -106um.</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>Regional soil and rock chip samples were prepared and analysed by ALS Brisbane and ALS Townsville. Samples were coarse crushed, dried at 105°C, whole sample pulverised (85% passing 75 microns) and then riffle split. Pulps were analysed for Au via 30g Fire Assay and AAS finish (Au-AA21 method) and then multi-elements (Ag, Al, As, Ba, Be, Bi Ca, Cd, Ce, Co, Cr, Cs, Cu, Fe, Ga, Ge, Hf, In, K, La, Li, Mg, Mn, Mo, Na, Nb, Ni, P, Pb, Rb, Re, S, Sb, Sc, Se, Sn, Sr, Ta Te, Th, Ti, Tl, U, V, W, Y, Zn and Zr) via multi acid digest with HF (GEO-4A01 method) and Inductively Coupled Plasma Mass Spectroscopy (ICPMS) via (MEMS61L method).</li> <li>Since 1st August 2017, all surface samples associated with the Newcrest option and farm-in agreement wor program were prepared and analysed by Intertek Lae and Intertek Townsville. Samples were analysed for Au via 50 Fire Assay and AAS finish (FA50/AA method) and then multi-elements (Ag, Al, As, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cs Cu, Fe, Ga, Ge, Hf, In, K, La, Li, Mg, Mn, Mo, Na, Nb, Ni, P, Pb, Rb, Re, S, Sb, Sc, Se, Sn, Sr, Ta, Te, Th, Ti, Tl, U, V, W, Y Zn and Zr) via 4 acid digest with HF (4A method) and Inductively Coupled Plasma Optical Emission Spectroscopy (ICP OES) or Inductively Coupled Plasma Mass Spectroscopy (ICP-MS) via (OM10 method).</li> <li>Regional soil sample field duplicates are collected in the field while collecting the original sample. Field duplicates are collected so that 5% of samples (1 in 20) are a standard.</li> <li>For rock chip sample QC, Standards (OREAS45d, OREAS45e) are inserted into the sample sequence so that 5% of samples (1 in 20) are a standard.</li> </ul>
Verification of sampling and assaying	• N/A
Location of data points	• All regional soil and rock chip sampling sites were surveyed by a hand held GPS for Easting, Northing and RL using WGS84.
Data spacing and distribution	<ul> <li>Regional soil sample sites are located on a 200m x 200m off-set grid. Subject to results, follow-up soil samples may be collected on 100m x 100m spacing in selected areas. In some areas samples cannot be collected due to the presence of sacred sites or swamps.</li> <li>Rock chip sample locations are dictated by the presence of outcrop and are usually restricted to creeks, cliffs and breaks in slope.</li> </ul>
Orientation of data in relation to geological structure	• N/A
Sample security	Only trained company personnel were allowed to collect the samples. All samples were held within a secure

# Surface Sampling - Section 2 Reporting of Exploration Results

Criteria	Commentary
Mineral tenement and land tenure status	• SBM has 100% ownership of the three tenements over the Simberi Islands; ML136 on Simberi Island, EL609 which covers the remaining area of Simberi Island, as well as Tatau Island and Big Tabar Island and 4 sub-block EL2462 which covers part of Tatau and Mapua Island.
Exploration done by other parties	CRA, BHP, Tabar JV (Kennecott, Nord Australex and Niugini Mining), Nord Pacific, Barrick and Allied Gold have all previously worked in this area. Nord Pacific followed by Allied Gold was instrumental in the discovery and delineation of the 5 main oxide and sulphide deposits at Simberi.
Geology	<ul> <li>The Simberi gold deposits are low sulphidation, intrusion related adularia-sericite epithermal gold deposits. The dominant host rocks for mineralisation are andesites, volcaniclastics and lesser porphyries. Gold mineralisation is generally associated with sulphides or iron oxides occurring within a variety of fractures, such as simple fracture in- fills, single vein coatings and crackle brecciation in the more competent andesite units, along andesite/polymict breccia contact margins as well as sulphide disseminations. On Tatau and Big Tabar Islands, located immediately south of Simberi, potential also exists for porphyry Cu-Au, epithermal quartz Au-Ag and carbonate-base metal Au mineralisation.</li> </ul>
Drill hole Information	• N/A
Data aggregation methods	• N/A
Relationship between mineralisation widths and intercept lengths	• N/A
Diagrams	Figures show all sample sites material and immaterial to Exploration Results.
Balanced reporting	All rock chip, float and soils sample locations with any significant results are shown in Figures.
Other substantive exploration data	Included in the body of the report.
Further work	Included in the body of the report.

# End of report