

## Quarterly Report / Q1 September 2016

- > Increased cash flow from operations drives further debt reduction
- > Encouraging exploration results in WA and PNG
- > Record safety performance

## **Executive Summary**

## Operations

- Consolidated gold production for the September 2016 quarter was 92,547 ounces (Q4 Jun: 92,033 ounces).
- Consolidated All-In Sustaining Cost<sup>1</sup> (AISC) was A\$935 per ounce (Q4 Jun: A\$960 per ounce). The average realised gold price for the quarter was A\$1,737 per ounce (Q4 Jun: A\$1,680 per ounce). Consistent production, low costs and the higher realised gold price resulted in cash contribution from operations<sup>2</sup> for the quarter of A\$83 million (Q4 Jun: A\$69 million).
- Swalia (Western Australia) gold production for the quarter was 67,118 ounces (Q4 Jun: 65,098 ounces) at AISC of A\$774 per ounce (Q4 Jun: A\$836 per ounce). Mined grade for the quarter was 10.4 g/t Au (Q4 Jun: 9.3 g/t Au) with 215 kt milled (Q4 Jun: 233 kt).
- Simberi (PNG) gold production for the quarter was 25,429 ounces (Q4 Jun: 26,935 ounces), exceeding the target 100,000 ounces p.a. run rate for the sixth consecutive quarter. AISC was A\$1,359 per ounce (Q4 Jun: A\$1,266 per ounce).

## **Health & Safety**

> The Company-wide Total Recordable Injury Frequency Rate (TRIFR), calculated as a rolling 12 month average, fell to a new record low of 1.8 to 30 September 2016 (Q4 Jun: 2.1).

## **Exploration**

- > Gwalia (Leonora) WA Two drilling programs are targeting extensions to the Gwalia lode system.
- The continued Gwalia Deeps drilling program focussing on extensions below 2,000 metres below surface (mbs) saw the completion of daughter hole GWDD18A, which entered the Mine Sequence at a depth of approximately 2,100 mbs and passed through over 50m of Mine Sequence. Two mineralised intervals interpreted to represent extensions of South West Branch (SWB) and South Gwalia Series (SGS) lodes were encountered.
- > A program commenced during the quarter targeting northern extensions of the Gwalia Lode system between 1,600 and 1,700 mbs from surface. Two daughter holes GWDD10A and 10B were drilled from an existing parent

hole GWDD10 and successfully intersected 30m and 70m respectively of mineralised Mine Sequence. The position of these intersections confirms the presence of Hangingwall Lode which had only previously been encountered during historic mining above 1,100 mbs.

- > Pinjin Project (Yilgarn) WA A 28,645 metre aircore drilling program for 514 holes was completed during the September 2016 quarter with encouraging early stage results. The program tested 16 bedrock geochemical and geophysical targets (see summary on page 9 and details in Figures 4.0-4.2 and Table 3). Follow-up Aircore and Reverse Circulation drilling is planned to take place during the next two quarters.
- Simberi PNG Results for the last five holes of a ten hole diamond drill program on ML136 targeting high grade trench results at Bekou South were received (details in Figure 6.0 and Table 4), including for SDH369 (all intercepts downhole):
  - 10m @ 5.4 g/t Au from 3m, including
  - 5m @ 10.2 g/t Au (oxide + transition) from 8m,
  - 23m @ 2.4 g/t Au (transition + sulphide) from 24m, and
  - 11m @ 5.8 g/t Au (sulphide) from 66m, including
  - 6m @ 10.1 g/t Au (sulphide) from 67m
- > Tatau Island PNG A 530 metre diamond drill hole was completed at the Mt Letam gold-copper porphyry prospect targeting a geophysical anomaly (Figure 7.0). Assay results are pending.
- > Trenching, mapping and drilling commenced at Southwest Tatau Island, during the September 2016 quarter, targeting high grade sulphide-oxide gold mineralisation (see summary on page 10 and details in Figure 8.0). Results were received for the first 24 trenches including:
- > TATTR178 30m @ 3.4 g/t Au, including

15m @ 5.7 g/t Au

- > TATTR180 15m @ 4.7 g/t Au
- > Grid soil sampling over six copper-gold porphyry targets located in central Tatau Island will commence during the December 2016 quarter (Figure 5.0).

<sup>1</sup> Non-IFRS measure, refer Appendix

<sup>2</sup> Non-IFRS measure, refer cash movement table on page 12

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## **Gwalia Ventilation Study**

- > Truck haulage with additional ventilation was identified in June 2016 as the preferred long term materials movement solution for Gwalia, facilitating mining below 1,800 mbs. Additional ventilation also removes the constraint on the number of trucks in the mine.
- > As announced with the full year results in August, a ventilation PFS was completed during the quarter and a feasibility study is underway to compare the preferred alternative against a 'do nothing' base case (see page 6 for details). An investment decision is anticipated in December 2016.

#### **Simberi Strategic Review**

- > The strategic review announced in February 2016 of St Barbara's PNG assets, including the Simberi mine, has progressed during the quarter.
- > The purpose of the strategic review is to determine how best to maximise shareholder value from the Simberi assets.
- > Options under consideration include:
  - > continued ownership, exploration and development
  - > potential joint venture arrangements, and
  - > divestment of some or all of the assets.
- Confidential discussions are in progress with a number of third parties regarding a variety of options. An outcome is anticipated during Q2 December 2016.
- > In the meantime Simberi continues to operate at its target 100,000 ounce per annum run rate.

#### Finance (unaudited)

- Consistent production, low costs and a higher realised gold price resulted in cash contribution from operations<sup>1</sup> for the quarter of A\$83 million (Q4 Jun: A\$69 million). Total cash at bank increased by A\$17 million during the quarter to approximately A\$154 million<sup>2</sup> at 30 September 2016 (30 June 2016: A\$137 million) after debt repayments in July 2016 of A\$56 million.
- > As announced on Monday 3 October 2016, a further US\$55 million in aggregate principal of Senior Secured Notes (equivalent to approximately A\$75 million including principal repayment, 3.3% redemption premium and accrued interest) will be repurchased on 31 October 2016, with US\$73 million of the Notes remaining on issue at that time. The Company expects its cash balance to exceed the remaining debt in the December 2016 quarter.

#### Outlook

- Guidance for FY17 is unchanged and summarised as follows:
  - Forecast Gwalia (Leonora) gold production of between 245,000 and 265,000 ounces at an AISC of between A\$850 and A\$910 per ounce, with sustaining capex of between A\$30 and A\$35 million, plus growth capex of between A\$10 to A\$12 million.
  - Forecast Simberi gold production of between 95,000 and 105,000 ounces at an AISC of between A\$1,330 and A\$1,490 per ounce (derived from AISC in Simberi's functional currency of between US\$1,000 to US\$1,120 per ounce), with capex of between A\$5 and A\$6 million.
  - Forecast exploration expenditure of between A\$18 and A\$22 million, consisting of:
    - > A\$10 to A\$12 million at Gwalia
    - > A\$8 to A\$10 million spilt approximately 30% at Pinjin in WA and 70% on the Simberi Island group in PNG.

**Bob Vassie** Managing Director and CEO 19 October 2016

# Presentation on quarterly report and audio webcast

Bob Vassie, Managing Director & CEO, will brief analysts and institutional investors on the September 2016 Quarterly Report at 11:00 am Australian Eastern Daylight Time (UTC + 11 hours) on Wednesday 19 October 2016. Participation on the conference call is by personal invitation only.

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

2 Financial information unaudited

<sup>1</sup> Non-IFRS measure, refer cash movement table on page 12

## **St Barbara Gold Production & Guidance**

Production Summary		Q3 Mar	Q4 Jun	Year	Q1 Sep	Guidance
Consolidated		FY16	FY16	FY16	FY17	<b>FY17</b> <sup>3</sup>
Production						
Gwalia	oz	66,147	65,098	267,166	67,118	245 to 265 koz
King of the Hills <sup>4</sup>	oz	-	-	9,112	-	-
Simberi	oz	25,433	26,935	110,286	25,429	95 to 105 koz
Consolidated	oz	91,580	92,033	386,564	92,547	340 to 370 koz
Mined Grade						Reserve grade <sup>2</sup>
Gwalia	g/t	10.2	9.3	9.3	10.4	8.3
Simberi	g/t	1.35	1.18	1.26	1.05	1.3
Total Cash Operating Co	osts <sup>1</sup>					
Gwalia	\$/oz	587	638	609	580	n/a
King of the Hills <sup>4</sup>	\$/oz	-	-	893	-	-
Simberi	\$/oz	1,198	1,164	1,143	1,247	n/a
Consolidated	\$/oz	757	792	768	763	
All-In Sustaining Cost <sup>1</sup>						
Gwalia	\$/oz	770	836	783	774	850 to 910
King of the Hills <sup>4</sup>	\$/oz	-	-	964	-	-
Simberi	\$/oz	1,404	1,266	1,293	1,359	1,330 to 1,490
Consolidated	\$/oz	947	960	933	935	985 to 1,075

[1] Non-IFRS measure, refer Appendix.

[2] Ore Reserve grade at 30 June 2016, refer Ore Reserve and Mineral Resources Statement (released 23 August 2016).

[3] FY17 guidance announced in Q4 June 2016 quarterly report (released 19 July 2016).

[4] King of the Hills ceased mining in April 2015 and ceased processing in September 2015. It was sold in October 2015 (refer ASX announcement 16 October 2015).

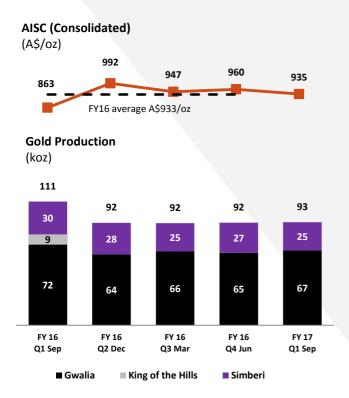
#### Disclaimer

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.

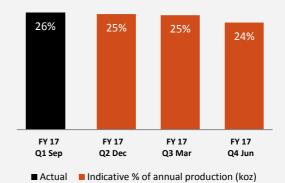
This report has been prepared by the Company based on information available to it, including information from third parties, and has not been independently verified. No representation or warranty, express or implied, is made as to the fairness, accuracy or completeness of the information or opinions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



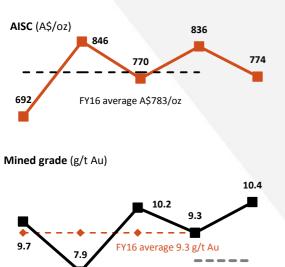
Figures displayed to nearest thousand ounces. Reported ounces in associated table

FY17 Production Indicative Quarterly Guidance Profile



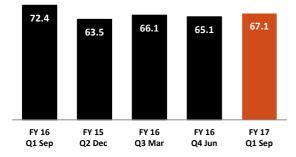
St Barbara Limited Quarterly Report / Q1 September 2016

## Gwalia, Leonora, WA



Reserve grade 8.3 g/t Au June 2016

Production (koz)



#### Operations

- > Gwalia gold production for the September 2016 quarter (Q1 FY17) was 67,118 ounces (Q4 Jun: 65,098 ounces), consistent with annual guidance.
- > Average mined grade for the quarter was 10.4 g/t Au (Q4 Jun: 9.3 g/t Au), which was higher than grade control drilling modelling predicted due to improved stope control with reduced dilution and the presence of high grade shoots.
- > All In Sustaining Cost (AISC) was A\$774 per ounce for the quarter (Q4 Jun: A\$836 per ounce), an improvement on the previous quarter primarily due to the higher grade mined and lower volume processed.
- > International mining equipment manufacturer Atlas Copco has recently completed a three month trial at Gwalia of its latest underground mining truck, the MT65, undertaken in conjunction with underground mining contractor Byrnecut.
  - > The trials indicate the MT65 can reliably haul an approximately 10% higher payload at slightly increased speed and fuel efficiency than the existing MT6020 trucks.

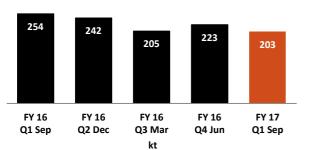
#### Outlook

- > FY17 guidance is maintained as follows:
  - > Production of between 245,000 and 265,000 ounces
  - > AISC of between A\$850 and A\$910 per ounce
  - > Capital expenditure comprising:
    - > Sustaining capex: \$30 to \$35 million, plus
    - > Growth capex: \$10 to \$12 million
- > Annual guidance is maintained, as scheduled grade for the remaining quarters is lower than achieved this quarter, and volumes in Q3 March 2017 and Q4 June 2017 may be impacted by development for the proposed new ventilation shafts (should an investment decision be made).

Production Summary		Q3 Mar	Q4 Jun	Q1 Sep
Gwalia		FY16	FY16	FY17
Underground ore mined	kt	205	223	203
Grade	g/t	10.2	9.3	10.4
Ore milled <sup>[1]</sup>	kt	210	233	215
Grade <sup>[1]</sup>	g/t	10.1	9.0	10.0
Recovery	%	97	97	97
Gold production	oz	66,147	65,098	67,118
All-In Sustaining Cost <sup>[2]</sup>		A	\$ per ounc	e
Mining		379	408	373
Processing		116	123	109
Site services		54	69	55
Stripping and ore inventory		(3)	(3)	2
adjustments				
	-	546	597	539
By-product credits		(2)	(2)	(2)
Third party refining & transp	ort	1	1	1
Royalties		42	42	42
Total cash operating costs	-	587	638	580
less operating development		(50)	(63)	(82)
Adjusted cash operating cost		537	575	498
Corporate and administratio	n	49	51	53
Corporate royalty		25	26	25
Rehabilitation		3	3	4
On-site exploration		-	-	-
Capitalised mine & op				
development		139	135	163
Sustaining capital expenditur	re _	17	46	31
All-In Sustaining Cost (AISC)		770	836	774

[1] Includes Gwalia mineralised waste

[2] Non-IFRS measure, refer Appendix

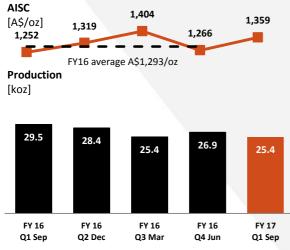


#### Gwalia underground ore mined

#### **Gwalia Growth Projects – Ventilation Upgrade Study**

- > Truck haulage with additional ventilation was identified in June 2016 as the preferred long term materials movement solution for Gwalia, facilitating mining below 1,800 mbs. Additional ventilation also removes the constraint on the number of trucks in the mine.
- > As announced with the full year results in August, a ventilation PFS was completed during the quarter and a feasibility study will now compare the following options (all figures approximate at +/-20% study accuracy):
  - Increase ventilation infrastructure (on surface) and install two 4.5m ventilation shafts to 1,500 mbs in two sections, project capex \$65 million, allows mining to at least 2,000 mbs and extendable to 2,200 mbs with additional \$10 million capex<sup>1</sup>
  - 'Do nothing', project capex \$nil, allows mining to base of 2016 Reserve at a reduced rate per annum
- The Gwalia life of mine plan used for the 2016 Ore Reserves and Mineral Resources includes capital expenditure for the proposed ventilation upgrade.
- As a consequence of incorporating the proposed ventilation upgrade, Reserves and Resources at 30 June 2016 increased by 297 koz and 938 koz respectively below 1,740 mbs, and the mine plan was extended from 1,740 mbs to 1,940 mbs (in FY24).
- > An investment decision is anticipated in Q2 December 2016. The current indicative project timeline involves detailed engineering, preliminary work (including underground development) and procurement to Q4 June 2017, with shaft construction to commence in earnest in Q1 September 2017, and a construction period of two to two and half years.

The project metrics are based on the PFS and subject to the assumptions contained therein. The results may change as the feasibility studies progress.



Production Summary		Q3 Mar	Q4 Jun	Q1 Sep
Simberi		FY16	FY16	FY17
Total ore & waste	kt	2,348	2,527	3,550
mined				
Ore mined	kt	723	856	972
Grade	g/t	1.35	1.18	1.05
Ore milled	kt	743	881	967
Grade	g/t	1.3	1.17	1.06
Recovery	%	79	81	77
Gold production	oz	25,433	26,935	25,429
All-In Sustaining Cost [1]		Α	\$ per ounce	
Mining		371	401	443
Processing		512	460	479
Site services		266	258	274
Stripping and ore inventor	у	-	-	-
adjustments	_			
		1,149	1,119	1,196
By-product credits		-	-	
Third party refining &		12	11	11
transport			24	
Royalties	_	37	34	40
Total cash operating costs	;	1,198	1,164	1,247
Corporate and administrat	ion	49	51	53
Corporate royalty		-	-	-
Rehabilitation		16	14	20
On-site exploration		-	-	-
Capitalised mine & op development		-	-	-
Sustaining capital expenditure		141	37	39

Simberi, Papua New Guinea

Operations

- Simberi produced 25,429 ounces of gold during the > quarter, exceeding the 100,000 ounces p.a. target run rate for the sixth consecutive quarter.
- Simberi cash contribution was \$19 million<sup>1</sup> for the quarter, > resulting from consistent operational performance, low capital expenditure, and gold sales for the quarter of 30,585 ounces due to the timing of gold shipments. The average gold price for the quarter was US\$1,334 per ounce (Q4 June: US\$1,257 per ounce).
- Record results in throughput offset declines in grade and > recovery.
  - > Total material moved for the guarter was a new record at 3.6 million tonnes, exceeding the previous record of 2.6 Mt in the September 2015 quarter by 38%. The increase was due to improved equipment utilisation and more efficient pit layouts.
  - The aerial rope conveyor achieved a new record of > 670 kt for the quarter following maintenance measures undertaken in late FY16. Scheduled maintenance in the December guarter is expected to further increase capacity.
  - Ore milled was a new record by 10%, with 967 kt processed for the quarter (Q4 Jun: 881 kt, also the previous record).
- Mining from the new Pigibo pit impacted overall results. >
  - > Grade and recovery for Pigibo were lower than from Pigiput and Sorowar.
  - The upper areas of this pit comprised ore with low > density, adversely impacting the quantity of ore processed. It is anticipated that the low density ore has now been mined out.
- During the quarter there was a strong focus on removing > waste, both at Pigibo and in accessing other new mining areas. The higher strip ratio that resulted (2.7:1 compared with a 2:1 average over previous six quarters) impacted mining costs and AISC.

1 Non-IFRS measure, refer cash movement table on page 12

[1] Non-IFRS measure, refer Appendix



#### Outlook

> FY17 guidance is maintained as follows:

- > Production of between 95,000 and 105,000 ounces
- > AISC of between A\$1,330 and A\$1,490 per ounce (derived from AISC in Simberi's functional currency of between US\$1,000 to US\$1,120)
- Capex of between A\$5 and A\$6 million (US\$4 to US\$5 million).

#### **Strategic Review of PNG assets**

- > The strategic review announced in February 2016 of St Barbara's PNG assets, including the Simberi mine, has progressed during the quarter.
- > The purpose of the strategic review is to determine how best to maximise shareholder value from the Simberi assets
- > Options under consideration include:
  - > continued ownership, exploration and development
  - > potential joint venture arrangements, and
  - > divestment of some or all of the assets.
- Confidential discussions are in progress with a number of third parties regarding a variety of options. An outcome is anticipated during Q2 December 2016.
- > In the meantime Simberi continues to operate at its target 100,000 ounce per annum run rate.

## **Exploration – Results September Quarter**

#### Gwalia Deep Drilling Program, Leonora WA

- > Resource extension drilling at Gwalia has continued with the objective of increasing the Gwalia Mineral Resource at depth.
- The surface drilling program continued, targeting extensions to the Gwalia lode system below 2,000 mbs. The program led to an extension of reserves and resource (announced in the 2016 Ore Reserves and Mineral Resources Statement released on 23 August 2016) and continued with the successful completion of daughter hole GWDD18A, which intersected the Mine Sequence at a depth of approximately 2,100 mbs and the commencement of daughter hole GWDD18B.
- > 2,000 to 2,200 mbs Drill hole GWDD18A intersected 50m of Mine Sequence containing two intervals of mineralisation interpreted to represent extensions of South West Branch (SWB) and South Gwalia Series (SGS). No adverse geotechnical conditions were noted. Significant intercepts are indicated below with full details set out in Figures 2.0 2.3 and Table 1 in the Exploration Figures and Tables appendix.

GWDD18A:

>	SWB	3.1m @ 7.3 g/t Au from 2,287m
>	SGS	8.1m @ 6.6 g/t Au from 2,328m
	including:	3.9m @ 12.3 g/t Au from 2,328m

- Following the completion of drill hole GWDD18A drilling of a daughter hole GWDD18B commenced. At the end of the reporting period GWDD18B has reached a downhole depth of 1,900m.
- Northern Extension A surface drilling program targeting northern extensions to South West Branch between 1,600 to 1,700 mbs commenced with the completion of two holes from surface utilising historic parent holes intending to test the possible north eastern edge of mineralisation.
- > Drill hole GWDD10A successfully intersected 30m of mineralised Mine Sequence. Within the Mine Sequence were two intervals of mineralisation interpreted to represent extensions of Hangingwall Lode (HWL) and Main Lode (ML). Drill hole GWDD10B intersected 70m of mineralised Mine Sequence at a downhole depth of 1,620m, interpreted to be HWL (details in Figure 3.0 and Table 2):

GWDD10A:

>	HWL	1.7m @ 4.4 g/t Au from 1,618m
>	ML	1.3m @ 2.3 g/t Au from 1,626m

GWDD10B:

>	HWL	4.5m @ 6.5 g/t Au from 1,616m
	including	0.8m @ 32.3 g/t Au from 1,620m

- Following the completion of drill hole GWDD10B, drilling of a new daughter hole GWDD10C commenced. At the end of the reporting period GWDD10C has reached a downhole depth of 1,474m.
- > While historic mining of Hangingwall Lode has occurred above 1,100mbs, this drilling confirms its likely depth extension into areas much closer to current development. Remaining planned drilling will aid in interpretation but both lodes plus South West Branch are considered open to the north (refer figure 3.0).
- Swalia Seismic Reflection Exploration Program Further evaluation of extensions to the Gwalia Shear Zone will be undertaken through a seismic geophysical program. The program will utilise sensors placed at strategic positions within recently completed surface drill holes GWDD11N, GWDD17E and GWDD18. This program of work is expected to be carried out during the December 2016 quarter. Refer to Schematic diagram Figure 2.3 in the Exploration Figures and Tables appendix.

#### 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 (1,358 km<sup>2</sup>) for 485 blocks (Figure 4.0).
- > An aircore drilling program comprising 514 holes (PJAC001 to PJAC284; PJAC286 to PJAC515) for 28,645 metres was completed in the September 2016 quarter. The drilling targeted 16 bedrock geochemical and geophysical targets. Results have been received for the remaining holes PJAC286 to PJAC515 (all intercepts downhole, details in Figure 4.2 and Table 3) including:
  - > PJAC331 2m @ 4.9 g/t Au from 51m, including 1m @ 7.9 g/t Au from 51m

- > PJAC389 1m @ 3.0 g/t Au from 62m
- > The encouraging early stage results (Figure 4.2) are scheduled to be followed-up with additional Aircore and Reverse Circulation drilling planned during the next two quarters.

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

- > On Simberi Island (Figure 5.0), final results for a drilling program at Bekou South on ML136 were received.
- > Exploration continued on EL609 at Tatau Island during the September quarter (Figure 5.0). Drilling was completed at the Mt Letam Au-Cu porphyry prospect. Trenching and drilling commenced at Southwest Tatau targeting several Au prospects.

#### **Bekou South**

- > A 10 hole (SDH361 to 370) diamond drill program for 684m was completed at Bekou South during the June quarter targeting high grade trench results. Results for the final five holes (SDH366 to SDH370) were received and are highlighted in Figure 6.1 and Table 4. Best results include (all intercepts are downhole):
- > SDH367 16m @ 2.6 g/t Au (sulphide) from 18m
- > SDH368 15m @ 4.1 g/t Au (oxide + transition) from 0m, including
  - 3m @ 17.9 g/t Au from 12m
- > SDH369 10m @ 5.4 g/t Au from 3m, including

5m @ 10.2 g/t Au (oxide + transition) from 8m,

23m @ 2.4 g/t Au (transition + sulphide) from 24m, and

11m @ 5.8 g/t Au (sulphide) from 66m, inc.

6m @ 10.1 g/t Au (sulphide) from 67m

> The inclusion of Bekou South in the oxide mining life will be considered subject to the Strategic Review.

#### Tatau Island

- > A single 530 metre diamond drill hole (TTD061) was completed at the Mt Letam Au-Cu porphyry prospect (Figure 7.0). The diamond drill hole targeted a 400m to 600m wide zone of chargeability and overlapping resistivity defined by historical Induced Polarisation (IP) and Controlled Source Audio-frequency Magnetotellurics (CSAMT) surveys. Drilling intersected 180 metres of predominantly moderate to strong phyllic altered dolerite from 300 metres depth, containing ≥2% disseminated sulphides (locally up to 5%). Assay results are pending. An historical (1990) diamond drill hole RC1100D located approximately 150 metres to the south west testing part of the anomaly returned 172m @ 0.4 g/t Au and approximately 0.1% Cu from 262m to end of hole, including 4m @ 11.2 g/t Au and 0.9% Cu from 364m.
- > A trenching program was designed at Southwest Tatau to identify the number and determine the strike length of potential narrow high grade mineralised trends. 30 trenches (TATTR177 to TATTR206) were completed during the September quarter for 2,472 metres and 471 samples. The trench sampling results received for TATTR177 to TATTR200 are highlighted in Figure 8.0 and include:
- > TATTR178 30m @ 3.4 g/t Au, including

15m @ 5.7 g/t Au

> TATTR179 15m @ 3.2 g/t Au, including 5m @ 8.4 g/t Au  > TATTR180 15m @ 4.7 g/t Au, including 5m @ 10.6 g/t Au
 > TATTR186 15m @ 3.4 g/t Au, including 5m @ 5.1 g/t Au
 > TATTR195 20m @ 2.5m g/t Au, including 10m @ 4.5 g/t Au
 > TATTR196 20m @ 2.9 g/t Au, including

5m @ 9.6 g/t Au

> A 2,000m diamond drill program targeting narrow, highgrade, sulphide-oxide gold targets at Southwest Tatau commenced during September 2016. To date, a single drill hole (TTD062) was completed for 119 metres. Assay results are pending.

Expenditure September Quarter (unaudited)

Expenditure on mineral exploration is shown below:

	<u>Q1 Sep 2016</u>	
	A\$ million	
Australia	0.6	(expensed)
Pacific	1.6	(expensed)
Gwalia Deep Drilling	1.2	(capitalised)
Total	3.4	_
		-

#### **Exploration - December 2016 Quarter**

> The map below shows current and planned target areas for the December 2016 quarter (Q2 FY17).



- > Exploration in the December 2016 quarter (Q2 FY17) will focus on:
  - > Gwalia Deeps Below 2,000 mbs Continuation of the Gwalia Deeps drilling program on a target area located between 2,000 – 2,200 mbs.
  - Continuing the surface drilling program targeting Gwalia Northern Extensions between 1,400 and 1,600 mbs.
  - > Undertake a 2D seismic traverse over the Gwalia deposit utilising sensors (geophones) placed at deep positions within surface drill holes. As well as exploration, this will serve the purpose for testing and calibration prior to wider exploration using a new 3D seismic survey method, starting in the greater Gwalia area, in the December 2016 quarter (Q2 FY17).
  - Further interpret the results of the major aircore drilling program at **Pinjin**, and design follow-up aircore and Reverse Circulation drilling programs planned to commence during the next two quarters.
  - Interpret results of TTD061 drill hole completed at Mt Letam, Tatau Island.
  - Continue trenching, mapping and diamond drilling on
     Southwest Tatau Island targeting higher grade sulphide-oxide potential.
  - Subject to weather, complete an airborne LiDAR (Light Detection and Ranging) survey over part or all of Tatau and Big Tabar Islands to generate an accurate and detailed digital terrain model.
  - Commence grid based regional soil sampling over six gold-copper porphyry targets on Tatau Island, to be analysed for a suite of multi-elements.
  - Complete an airborne aeromagnetic survey over Back Creek EL8214 in central NSW.

#### Health & Safety

- > The Company-wide Total Recordable Injury Frequency Rate (TRIFR), calculated as a rolling 12 month average, decreased from 2.1 at 30 June 2016 to a record low 1.8 for the twelve months ended 30 September 2016.
- > The continued improvements to safety performance can be attributed to a greater focus on field based safety interactions, and ongoing monitoring and communication of lessons learned from previous incidents.

## Finance (unaudited)

- > 93,893 ounces of gold were sold in the September quarter, at an average realised gold price of A\$1,737 per ounce (Q4 Jun: 89,023 ounces at A\$1,680 per ounce).
- > Cash at bank at 30 September 2016 was \$154 million after total payments during the quarter of A\$56 million for the US\$40 million Notes buy back in July 2016.

- > Total interest bearing liabilities at 30 September 2016 were A\$169 million (30 June 2016: A\$229 million), which comprised US\$168 million senior secured notes and A\$1 million of lease liabilities. A\$/US\$ exchange rate at 30 September 2016 was 0.7674<sup>1</sup> (30 Jun 2016: 0.7452).
- > As announced on 3 October 2016, the Company will repurchase a further US\$55 million in aggregate principal of its US 144A Senior Secured Notes on 31 October 2016. The Notes will be repurchased at a 3.3% premium to par value, which is the optional redemption price effective from October 2016. Net payments for the repurchase are anticipated to amount to approximately US\$57 million (approx. A\$75 million), consisting of principal repayment, premium and accrued interest.
- > Combined, the two Note repurchases of US\$40 million in July and US\$55 million in October will reduce future interest expense by approximately US\$8 million (A\$11 million) per annum.
- > By 31 October 2016, St Barbara will have repurchased a cumulative US\$177 million in aggregate principal of the original US\$250 million of Notes issued by St Barbara in March 2013, with US\$73 million of the Notes remaining on issue at that time. The Company intends to use excess cash to extinguish the remaining Notes during the balance of FY17.
- > The Company expects its cash balance to exceed the remaining debt in the December 2016 quarter.
- > Hedging in place at the date of this quarterly report comprises:
  - > 26,000 ounces of gold forward contracts to be delivered in monthly instalments between October and December 2016 at US\$1,260 per ounce (this hedge announced 18 March 2016)
  - > 50,000 ounces of gold forward contracts to be delivered in monthly instalments between January and June 2017 at US\$1,338 per ounce (this hedge announced 4 July 2016).
  - > These two hedges reduce US dollar gold price risk associated with repayment of the remaining US Senior Secured Notes, and the remaining ounces to be delivered represent less than 30% of anticipated gold production for the remainder of FY17.

<sup>1</sup> Reuters

> Cash movements for the September 2016 quarter are summarised in the following table:

Cash movements & balance A\$M (unaudited)	Q3 Mar FY16	Q4 Jun FY16	Q1 Sep FY17
Leonora - operating cash flow <sup>[1]</sup>	63	60	64
Simberi - operating cash flow <sup>[1]</sup>	8	9	19
Rehabilitation , land	(1)	-	(1)
management & corporate capex			
Corporate costs	(4)	(4)	(4)
Corporate royalties	(2)	(2)	(2)
Exploration <sup>[2]</sup>	(3)	(5)	(3)
Working capital movement	(9)	3	2
Cash flows before finance costs	52	61	75
Net interest and finance costs	(1)	(10)	(2)
US debt repayment	(37)	(28)	(56)
Net movement for quarter	14	23	17
Cash balance at start of quarter	100	114	137
Cash balance at end of quarter	114	137	154

Senior Secured Notes US\$		US\$M
>	Issued March 2013	250
>	Repurchased FY15	(54)
>	Repurchased FY16	<u>(28)</u>
>	Balance remaining at 30 June 2016	<u>168</u>
>	Repurchased Q1 Sep 2016	<u>(40)</u>
>	Balance remaining at 30 Sep 2016	<u>128</u>
>	Repurchase due 31 Oct 2016	<u>(55)</u>
>	Balance anticipated at 31 Oct 2016	<u>73</u>
>	Coupon	8.875% p.a.
>	Redemption date	15 April 2018
>	S&P rating	В
>	Moody's rating	B2

## Corporate

> Notice of St Barbara's 2016 Annual General Meeting will be issued on 21 October 2016, and includes full details of the Annual General Meeting to be held on Wednesday 30 November 2016 in Melbourne.

#### Share Capital

Issued shares	
Opening balance 30 June 2016	495,102,525
Issued 25 Aug 2016 (employee rights vested) <sup>3</sup>	2,228,570
Closing balance 30 Sep 2016	497,331,095
Unlisted employee rights	
Opening balance 30 June 2016	24,034,288
Issued	Nil
Vested <sup>3</sup>	(2,228,570)
Lapsed <sup>3</sup>	(1,878,073)
Closing balance 30 Sep 2016	19,927,645
Comprises rights expiring:	
30 June 2017	15,953,028
30 June 2018	3,974,617
Closing balance 30 Sep 2016	19,927,645

#### ASX & ADR

The Company's shares are listed on ASX (ASX:SBM) and through American Depositary Receipts (ADR OTC: STBMY) traded in the USA.

## **Scheduled Future Reporting**

<u>Date</u>	Report
30 November	Annual General Meeting (Melbourne)
Late January	December 2016 Quarterly Report
Late February	Half Year Financial Report

[Dates are tentative and subject to change]

1 Net of sustaining capex

2 Includes Gwalia deep drilling

3 Refer ASX Appendix 3B released 25 August 2016

## **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

## **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 Contact**

Rowan Cole, Company Secretary	+ 61 3 8660 1900
Substantial Shareholders	% of Holdings <sup>1</sup>
Van Eck Associates Corporation	17.4%
M&G Investment Management Ltd	8.4%
Hunter Hall Investment Management Ltd	5.4%
Vinva Investment Management	5.2%

<sup>1</sup> As notified by the substantial shareholders to 30 September 2016

#### 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.

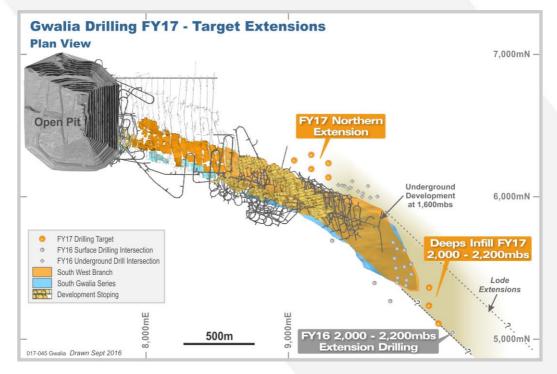
#### **Mineral Resource and Ore Reserve Estimates**

- > 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 2016' released to the Australian Securities Exchange (ASX) on 23 August 2016 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 2016 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.
- Competent Person Mr Tim Richards is entitled to participate in St Barbara's long term incentive plan, details of which are most recently included in the 2016 Directors' and Financial Report released to the ASX on 23 August 2016. In 2014 increase in Ore Reserves was one of the performance measures under that plan.
- Full details are contained in the ASX release dated 22 August 2016 'Ore Reserves and Mineral Resources Statements 30 June 2016' available at www.stbarbara.com.au.



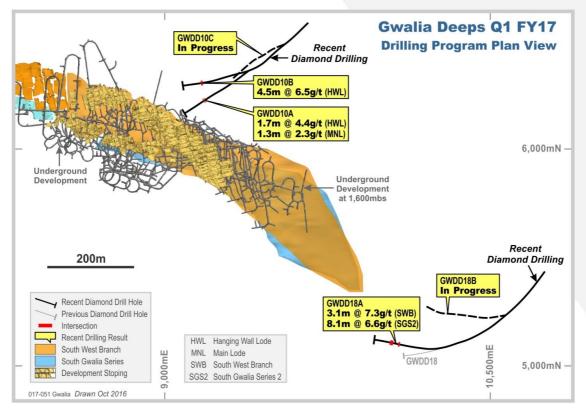
Quarterly Report / Q1 September 2016

## **Exploration Figures and Tables**



## Figure 1.0: Leonora: Summary of Gwalia Extension Drilling, Plan View





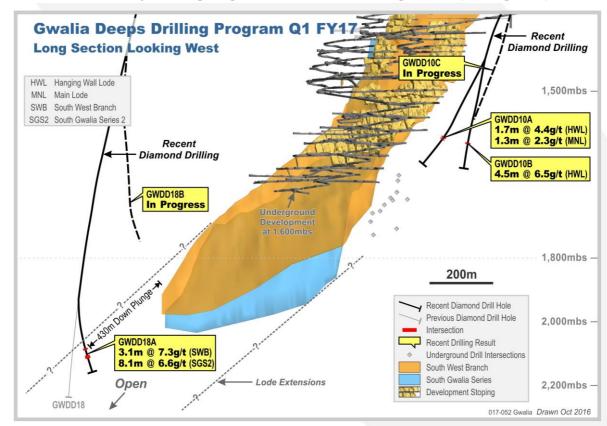
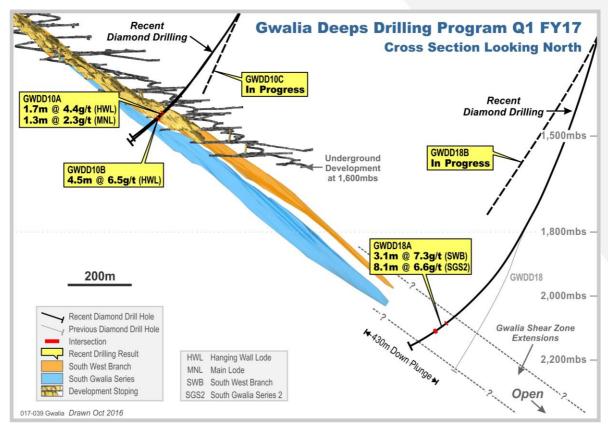
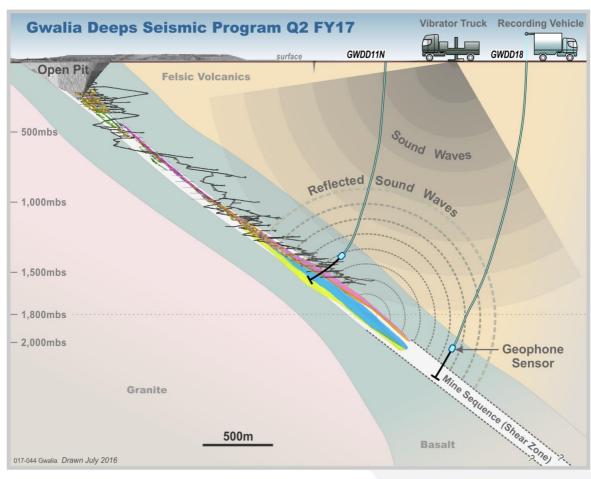


Figure 2.1: Gwalia Deeps Drilling Program Q1 FY17 Results, Long Section (looking west)

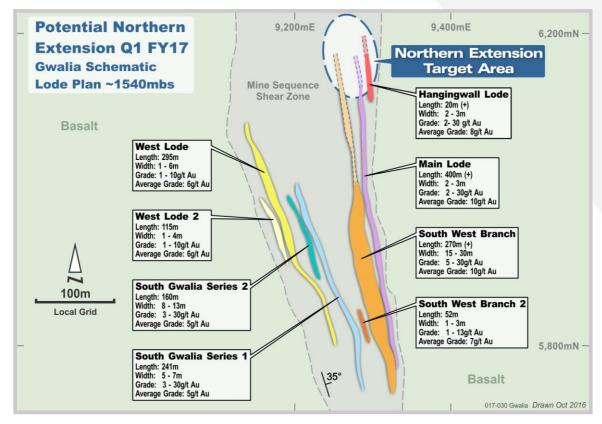
Figure 2.2: Gwalia Deeps Drilling Program Q1 FY17 Results, Cross Section (looking north)

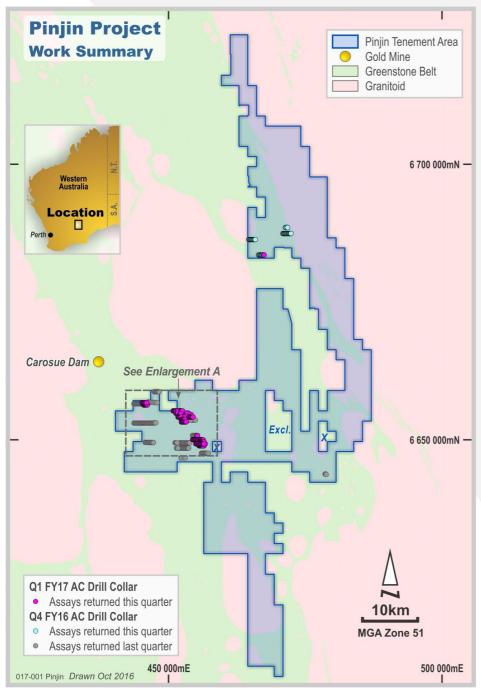






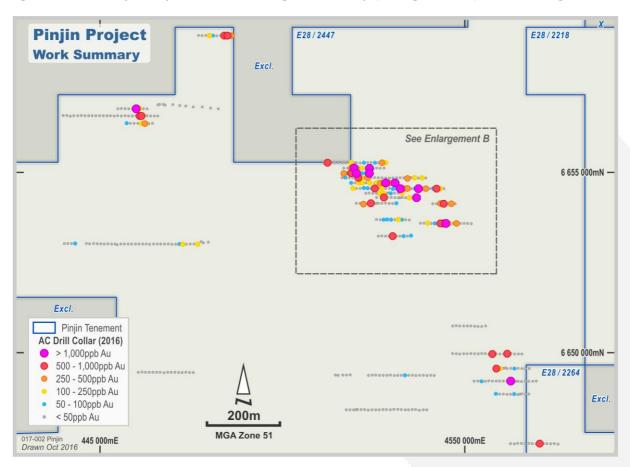
## Figure 3.0: Gwalia schematic Lode plan ~1540 – Northern Extension



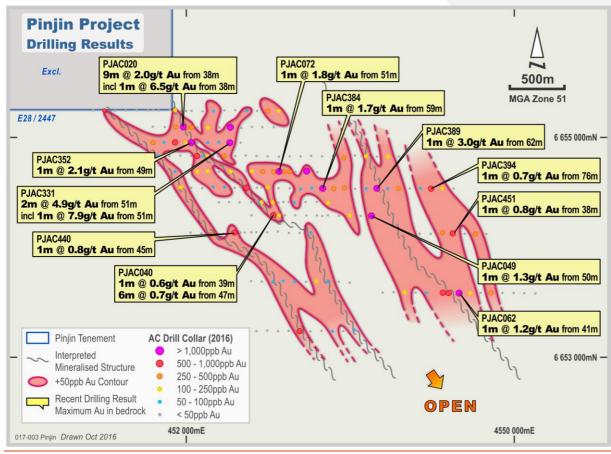








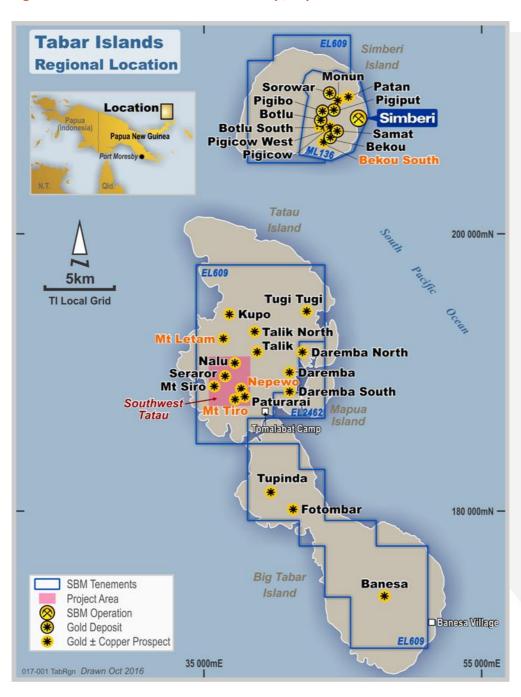
### Figure 4.2: Pinjin Project Aircore Drilling Results Map (Enlargement B) - contour of maximum gold in bedrock



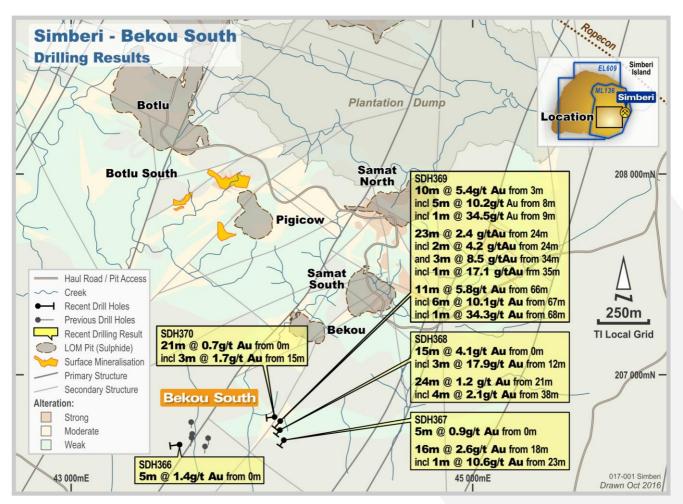
St Barbara Limited Quarterly Report / Q1 September 2016

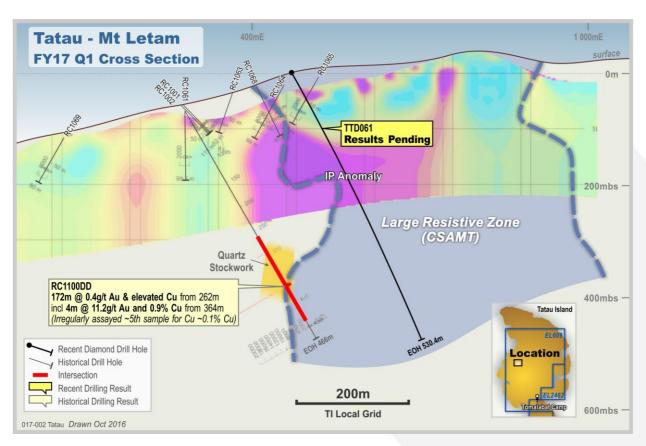
Exploration Figures and tables v

Figure 5.0: Tabar Islands Location Map, Papua New Guinea



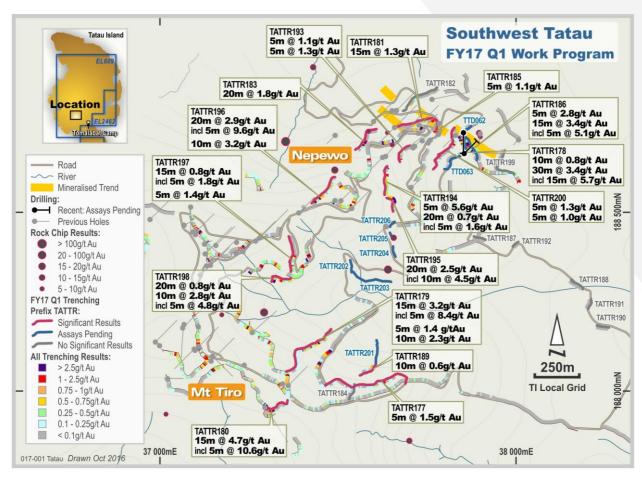








## Figure 8.0: Southwest Tatau Trench and Drill Location Map, Tatau Island, Papua New Guinea



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

Hole Id		Down-hole Mineralised Intersection								
Hole lu	North m	East m	RL m	Metres Below Surface	Lode	Dip/ Azimuth degrees	From m	To m	Interval m	Gold grade g/t Au
GWDD18A	5,100	10,078	3,269	2,096	SWB	-37/283	2,286.9	2,290.0	3.1	7.3
GWDD18A	5,107	10,044	3,244	2,122	SGS	-34/282	2,327.8	2,335.9	8.1	6.6
						including	2,327.8	2,331.2	3.9	12.3

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.

## Table 2: Northern Extension Significant Intercepts- Leonora Operations, Gwalia Mine

Hole Id		Down-hole Mineralised Intersection								
Hole lu	North m	East m	RL m	Metres Below Surface	Lode	Dip/ Azimuth degrees	From m	To m	Interval m	Gold grade g/t Au
GWDD10A	6,224	9,185	3,930	1,445	HWL	-37/236	1,617.8	1,619.5	1.7	4.4
GWDD10A	6,220	9,180	3,925	1,450	ML	-37/236	1,626.1	1,627.0	1.3	2.3
GWDD10B	6,303	9,170	3,912	1,462	HWL	-42/261	1,615.7	1,620.1	4.5	6.5

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 width.

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

	North	Fast	ы			Down-hole				
Hole Id	North	East	RL	Dip/	Total	Mineralised Intersection				
	m m M Azimuth degrees	Depth	From m	To m	Interval m	grade Au ppb				
PJAC008	6658703	448411	343	-60/270	61	54	56	2	727	
PJAC009	6658700	448500	343	-60/270	59	40	42	2	605	
PJAC018 <sup>#</sup>	6655099	452406	339	-60/270	66	44	45	1	1140	
PJAC020	6655101	451976	339	-60/270	67	38	47	9	1965	
including <sup>#</sup>		<u> </u>				38	39	1	6450	
PJAC033	6654703	453106	327	-90/360	59	50	51	1	1230	
PJAC040	6654304	452803	325	-90/360	55	39	40	1	585	
						47	53	6	653	
PJAC049 <sup>#</sup>	6654299	453700	325	-90/360	56	50	51	1	1330	
PJAC058 <sup>#^</sup>	6653603	454106	323	-90/360	59	47	48	1	1540	
PJAC059 <sup>^</sup>	6653603	454205	324	-90/360	54	45	46	1	906	
PJAC061	6653600	454408	324	-90/360	68	53	54	1	786	
PJAC062 <sup>#</sup>	6653600	454505	325	-90/360	77	41	42	1	1210	
PJAC070	6653604	454355	324	-60/270	59	53	54	1	843	
PJAC072 <sup>#</sup>	6654699	452853	326	-60/270	59	51	52	1	1840	
PJAC094	6656500	446098	353	-60/270	47	35	36	1	726	
						44	45	1	620	
PJAC178	6647600	457096	337	-60/270	44	34	35	1	542	
PJAC263	6688601	471545	342	-60/270	79	77	78	1	4730	
PJAC300	6656500	446153	360	-60/270	41	28	29	1	790	
PJAC306	6656692	446002	359	-60/270	59	33	34	1	1430	
PJAC311	6655245	451252	356	-60/270	56	41	42	1	695	
PJAC326	6654959	451902	356	-60/270	80	51	52	1	614	
PJAC327 <sup>^</sup>	6654956	452002	355	-60/270	62	53	54	1	1560	
PJAC331 <sup>^</sup>	6654958	452400	356	-60/270	68	45	46	1	1330	
						51	53	2	4895	
including						51	52	1	7880	
PJAC335 <sup>^</sup>	6654834	451849	356	-60/270	77	42	43	1	539	
PJAC338 <sup>^</sup>	6654834	452151	356	-90/360	56	44	45	1	594	
						47	49	2	760	
PJAC341^^	6654837	452103	357	-90/360	56	47	54	7	3507	
Including^						47	48	1	11500	
PJAC350 <sup>^</sup>	6655252	451900	355	-60/270	68	52	53	1	733	
PJAC352	6654959	452047	355	-60/270	67	49	50	1	2140	
PJAC366	6650040	455793	370	-60/270	77	59	60	1	545	
PJAC370	6650051	456200	341	-60/270	67	40	41	1	573	
PJAC377	6654551	452556	348	-60/270	71	69	71	2	708	
PJAC380 <sup>^</sup>	6654547	452849	352	-60/270	71	62	63	1	507	

	North	East	RL					wn-hole ed Intersecti	on
Hole Id	m	m	m	Dip/ Azimuth degrees	Total Depth	From m	To m	Interval m	Gold grade Au ppb
PJAC382 <sup>^</sup>	6654540	453051	354	-60/270	67	49	50	1	908
PJAC384	6654547	453253	357	-60/270	68	59	60	1	1660
PJAC385 <sup>^</sup>	6654546	453354	333	-60/270	65	58	59	1	4870
PJAC389	6654550	453747	333	-60/270	66	62	63	1	3010
PJAC391 <sup>^</sup>	6654550	453948	333	-60/270	72	60	61	1	721
^						64	65	1	603
PJAC394	6654549	454243	329	-60/270	81	76	77	1	745
PJAC406 <sup>^</sup>	6654843	453345	334	-60/270	95	38	40	2	1269
PJAC421	6654417	452598	333	-90/360	53	38	40	2	883
PJAC440	6654143	452446	332	-90/360	53	45	46	1	764
PJAC451	6654142	454443	336	-60/270	77	38	39	1	796
						41	42	1	560
						58	59	1	644
PJAC456	6654145	452600	336	-90/360	44	36	37	1	978
PJAC469	6653247	453048	336	-60/270	89	59	61	2	627
PJAC475	6649643	455901	340	-60/270	87	82	83	1	698
PJAC495	6649303	456294	335	-60/270	58	33	34	1	1510

NOTES:

Coordinates and Azimuth referenced to MGA94 zone 51 Grid.

Reported intercepts are all down hole lengths.

# - previously reported in June 2016 quarterly report.

^ - transported, ^^ combined transported and in-situ, otherwise in-situ.

Table 4:	Bekou South Significant Intercepts – Simberi Island, Papua New Guinea
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	North	East	RL	Dip/	Total	Lada	Down-hole Mineralised Intersection					
Hole Id	m	m	m	Azimuth degrees	Depth	Lode	From m	To m	Interval m	Gold grade g/t Au		
SDH366	206647	43535	23.3	-55 / 275	83.5	ОХ	0	5	5	1.4		
SDH367	206679	44059	8.3	-55 / 226	62.0	ОХ	0	5	5	0.9		
						SU	18	34	16	2.6		
including						SU	23	24	1	10.6		
SDH368	206720	44037	22.4	-55 / 235	52.0	OX,TR	0	15	15	4.1		
including						OX,TR	12	15	3	17.9		
						TR,SU	21	45	24	1.2		
including						SU	38	42	4	2.1		
SDH369	206765	44045	26.9	-56 / 237	78.8	OX,TR	3	13	10	5.4		
including						OX,TR	8	13	5	10.2		
including						ОХ	9	10	1	34.5		
						TR,SU	24	47	23	2.4		
including						TR	24	26	2	4.2		
and						TR,SU	34	37	3	8.5		
including						SU	35	36	1	17.1		
						SU	66	77	11	5.8		
including						SU	67	73	6	10.1		
including						SU	68	69	1	34.3		
SDH370	206789	44000	28.0	-56 / 272	77.0	OX,TR	0	21	21	0.7		
including						TR	15	18	3	1.7		

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	apply to all succeeding sections.)						
Criteria	Commentary						
Sampling techniques	<ul> <li>Half-core sampling of NQ2 diamond drilling with boundaries defined geologically. Samples are mostly one metre in length unless a significant geological feature warrants a change from this standard unit. The upper or right-hand side of the core is submitted for sample analysis, with each one metre of half core providing between 2.5 – 3 kg of material as an assay sample.</li> </ul>						
Drilling techniques	• Diamond drilling using NQ2 (50.6mm) sized core (standard tubes). Holes have been surveyed using a single shot electronic camera. All core is orientated using a Reflex ACT II RD orientation tool.						
Drill sample recovery	<ul> <li>Core is metre marked and orientated and checked against drillers blocks to ensure that any core loss is accounted for.</li> <li>Sample recovery is rarely less than 100%. Where minor core loss does occur it is due to drilling conditions and not ground conditions.</li> </ul>						
Logging	<ul> <li>All SBM holes are logged primarily for lithology, alteration and vein type/intensity which are key to modelling gold grade distributions. Validation of geological data is controlled via the use of library codes and reliability and consistency of data is monitored through regular peer review.</li> <li>All logging is qualitative.</li> </ul>						
Sub-sampling techniques and sample preparation	<ul> <li>SBM half core is cut using a core saw before being sent to SGS laboratory in Kalgoorlie where the entire sample is crushed to achieve particle size &lt;4mm followed by complete pulverisation (90% passing 75 μm).</li> </ul>						
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	• Sampling data is recorded electronically in spread sheets which ensure only valid non-overlapping data can be recorded. Assay and down hole survey data are subsequently merged electronically. All drill data is stored in a SQL database on secure company server.						
Location of data points	<ul> <li>Collars for surface holes are recorded by DGPS. Upon completion of underground drill holes an authorised surveyor will pick up the collar by placing a survey rod into the hole to measure azimuth and dip. This process may also occur while the hole is in progress by surveying the drill rods in the hole.</li> <li>All coordinates and Azimuth are specified in using the Gwalia Local Mine Grid (LE_SGMG). The two-point transformation of MGA_51 to LE_SGMG is detailed below:</li> </ul>						
	Grid Azimuth MGAE 1 MGAN 1 MGAE 2 MGAN 2 GridE 1 GridN 1 GridE 2 GridN 2 Rotation Scale						
	LE_SGMG Sons of Gwalia Mine Grid						
Data spacing and distribution	• Surface drilling is spaced on an approximate 60m x 80m below 1620 metres below surface Drilling data is sufficient to establish down plunge continuity for all lodes.						
Orientation of data in relation to geological structure	<ul> <li>Sampling is perpendicular to lode orientations and is sound based on past production and underground mapping.</li> </ul>						
Sample security	Company personnel or approved contractors only allowed on drill sites; drill samples are only removed from drill site by approved contractors to the company's secure core logging/processing facility; cut core is consigned to accredited laboratories for sample preparation and analysis.						
Audits or reviews	<ul> <li>Regular reviews of core logging and sampling are completed through SBM mentoring and auditing. Additionally, regular laboratory inspections are conducted by SBM personnel. Inspections are documented electronically and stored on secure company server. No significant issues were identified.</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	• SBM has 100% ownership of the two tenements M37/25 and M37/333 over the Gwalia deposit.
Exploration done by other parties	<ul> <li>Western Mining Corporation (WMC) and Sons of Gwalia (SGW), have previously completed deep diamond drilling below 1,100 metres below surface</li> </ul>
Geology	<ul> <li>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.</li> </ul>
Drill hole Information	<ul> <li>Drill hole information is included in intercept table outlining mid-point co-ordinates including vertical hole depth and composited mineralized intercepts lengths and depth.</li> </ul>
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 in this section apply Criteria Sampling techniques	<ul> <li>Sompling was conducted via Aircore drilling on 50m, 100m, or 200m drilling spacing with line spacing's of 400m, 1000m or as 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 ground in rows of ten.</li> <li>Drill spoil was sampled with a scoop to generate 4m composite samples of approximately 3kg. An additional end of hole multi-element sample was taken from each hole that reached blade refusal in Archaean bedrock.</li> <li>Representative specimens of end of hole rock chips were stored in plastic chip trays for future reference.</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 also tested for arsenic by ICP-AES to 1ppm detection limit.</li> <li>Composite samples that return anomalous Au values were subsampled on a metre by metre basis. These samples were submitted to Bureau Verita Minerals Pty Ltd, Peth where basis. These samples were submitted to Bureau Veritas Minerals Pty Ltd, Peth by Fire Assay with an ICP finish to a detection limit of 1ppb.</li> </ul>
	<ul> <li>The EOH Aircore 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, Tl, Tm, U, V, W, Y, Yb, Zn &amp; Zr). A separate 50g charge of pulverized sample was then analyzed for Au by Fire Assay with an MS finish to a detection limit of 1ppb.</li> </ul>
Drilling techniques	• 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 Challenge Drilling who utilised a Challenger R/A 150 Rig with 750 cfm and 350 psi.
Drill sample recovery	<ul> <li>Sample recoveries were considered good, but quantitatively 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 and sample preparation	<ul> <li>Aircore samples were collected as both dry and wet samples using a sample scoop.</li> <li>All Aircore composite samples were sorted, dried, crushed and pulverized to produce a 40g charge prior to digestion by aqua regia.</li> <li>All Aircore 1m re-split samples were sorted, dried, crushed and pulverized to produce a 40g charge prior to analyses by Fire Assay with ICP finish.</li> <li>EOH samples were sorted, dried, crushed and pulverized to produce a 10g charge for digestion by four acid digest (multi element) and a 50g charge for analyses by Fire Assay with MS finish (Au).</li> <li>Aircore samples were collected at 1m intervals and composited in 4m samples using a scoop to sample individual metre samples. Im re-splits were also sampled using the scoop method.</li> <li>QC procedures for 4m composite and 1m re-split samples involved the use of certified reference material at a ratio of 1:50. No field duplicates or blanks were inserted into the sample stream.</li> <li>EOH samples inserted certified standards and replicates and lab repeats.</li> <li>Genalysis inserted certified standards, blanks and lab repeats.</li> </ul>
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 of the regolith dominated sample medium.</li> <li>EOH samples using non Au analytical methods underwent a complete four acid digest.</li> <li>The Au analytical method for 1m re-split and EOH samples used 40g &amp; 50g fire assay techniques respectively which are appropriate to detect Au mineralisation.</li> <li>Certified reference material was inserted into the sample stream at a ratio of 1:50.</li> <li>No field duplicates were taken and no blanks were inserted.</li> <li>Bureau Veritas inserted certified standards and replicates and lab repeats.</li> <li>Genalysis inserted certified standards, blanks and lab repeats.</li> </ul>
Verification of sampling and assaying	<ul> <li>Primary geological and sampling data were recorded in hard copy before being digitised into made for purposed excers 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>All drill collars were surveyed by a handheld GPS with accuracy of ±3m for easting and northings, and ±10m for elevation coordinates.</li> <li>All locations were captured in MGA94 zone 51 grid.</li> </ul>

Criteria	Commentary
Data spacing and distribution	• Aircore drilling was conducted on 50m, 100m or 200m drill spacing's and a line spacing of 400m, 1000m or as individual lines.
	Aircore results reported are based on and 1m re-splits of the original 4m composite.
Orientation of data in relation to geological structure	<ul> <li>The drilling comprised a mix of inclined and vertical holes. Inclined holes were drilled with a dip and azimuth of -60/270 to test the interpreted east dipping stratigraphy. Due to the early stage of the project there is not yet any understand of the primary orientation of mineralisation.</li> <li>Given the nature of Aircore drilling into the regolith profile, any sampling bias is considered minimal as the drilling seldom penetrated more than a few metres into fresh rock.</li> </ul>
Sample security	• Only trained company personnel were allowed to collect the samples; all samples were held within a secure company location before dispatch to Bureau Veritas or Genalysis in Perth for Au and multi-element analysis.
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	• 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.
Exploration done by other parties	<ul> <li>There has 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 GPS 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 with intercepts above 1000 ppb Au highlighted. Such intercepts may include internal material below cut-off but no more than 2 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 is discussed in the body of the report.

## SIMBERI - JORC Code, 2012 Edition – Table 1

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

#### Drilling - Section 1 Sampling Techniques and Data

(Criteria in this section apply to the succeeding section.)	
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> <li>Pulp residues are stored in Townsville for future re-assay if required.</li> </ul>
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. Base metals were analysed by Aqua Regia digestion using Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES). 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. Overall, the analysis of gold was sound.</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 (RC holes reported in this period are still pending pickup by dGPS). 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	• Where surface mapping and sampling has contributed to understanding of outcropping geological structures, drilling and sampling has been undertaken orthogonal to the mapped structure.
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-base metal 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.)
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Criteria	Commentary
Mineral tenement and land tenure status	<ul> <li>SBM has 100% ownership of the two tenements over the Simberi Islands; ML136 on Simberi Island, and EL609 which covers the remaining area of Simberi Island, as well as Tatau Island and Big Tabar Island. A 4 sub-block ELA2462 is under application.</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 were 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, volcanoclastics 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. Metres below surface (Mbs) for intercepts were calculated by measuring the distance between the midpoint of the intercept and a Lidar survey based topographic surface.</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	<ul> <li>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.</li> </ul>
Other substantive exploration data	<ul> <li>Included in the body of the report. Core holes are routinely measured for bulk density determinations to be used for future resource modelling.</li> </ul>
Further work	Included in the body of the report.

## Trenching - Section 1 Sampling Techniques and Data

Criteria	Commentary
Sampling techniques	• 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. Samples (3 to 5kg) were prepped on-site (jaw crushed, disk mill pulverised and then split) to produce a 200g pulp sample. A 25g charge was then extracted from the pulp for Au analyses by Aqua Regia digestion followed by an Atomic Absorption Spectroscopy (AAS) instrument finish.
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 or dozer 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>Samples are routinely submitted for total pulverisation (85% passing &lt;75 μm) at the company onsite sample preparation facility on Simberi Island.</li> <li>200g pulps are sent to St Barbara's Simberi Laboratory where a 25g sub-sample is taken.</li> <li>For Banesa trench samples, the 200g pulps were sent to ALS, Townsville for analysis.</li> </ul>
Quality of assay data and laboratory tests	<ul> <li>The Mine Lease samples 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 West Simberi and Banesa samples were analysed for gold at ALS (Townsville) via 50g fire assay and AAS finish (Method Au26). At Banesa, Cu, Ag, As, Fe, Mo, Pb, S, Sb and Zn were analysed via Nitric Aqua Regia Digestion and ICP-AES Finish (Method ME-ICP41).</li> <li>QC included the insertion of two in house blanks at the start of each batch of trench samples, the insertion of certified copper-gold standards (1:100) as well as the collection of field duplicates (1:100).</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.</li> </ul>
Data spacing and distribution	Trench data spacing is irregular and broad spaced.
Orientation of data in relation to geological structure	• 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.
Sample security	• 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-base metal analysis.
Audits or reviews	No audits or reviews of sampling protocols have been completed.

## Trenching - Section 2 Reporting of Exploration Results

Criteria	Commentary
Mineral tenement and land tenure status	• SBM has 100% ownership of the two tenements over the Simberi Islands; ML136 on Simberi Island, and EL609 which covers the remaining area of Simberi Island, as well as Tatau Island and Big Tabar Island. A 4 sub-block ELA2462 is under application.
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 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.
Trench/Bench Information	Included in the report text and annotated on diagrams.
Data aggregation methods	<ul> <li>Broad trench intercepts are spikes within the broader aggregated interval 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> <li>At Banesa, the same method is applied to aggregate gold grades using a 0.5 g/t cut-off grade and minimum grade*length of 5gmpt with no more than 5m of internal dilution and similar selvage restrictions. Within the corresponding Au intercept, Cu grades are reported if above 0.1% Cu. For defining copper intercepts a minimum of 0.1% Cu cut-off grade over 5m is used to define copper aggregated intervals with the corresponding gold grade reported where it is above 0.1g/t Au. Gold grades below this are not reported. Such intercepts may include material below cut-off but no more than 10 sequential meters of such material and except where the average drops below the cut-off. Selvage is only included where its average grade exceeds 0.1 %Cu. Supplementary copper grades above 0.2% Cu and/or 0.5 g/t Au are used to highlight higher gold or copper grade zones within the broad zone. 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	• 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	Commentary
Sampling techniques	<ul> <li>Soil samples were collected by first digging through the organic A horizon until the B horizon was reached (Approximately 40cm depth). A bulk sample of approximately 3kg was then collected in a calico bag.</li> </ul>
Drilling techniques	• N/A
Drill sample recovery	• N/A
Logging	• All rock chip, float and soil samples were qualitatively logged for lithology, alteration, weathering and colour.
Sub-sampling techniques and sample preparation	Rock chip, float and soil 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 for analysis.
Quality of assay data and laboratory tests	<ul> <li>Rock chip, float and soil samples were analysed for gold by ALS Townsville using Aqua Regia digestion with a 50g charge and analysis by Inductively Coupled Plasma Mass Spectroscopy. Base metals were analysed using Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES). QC included insertion of field duplicates (1:100) and low level gold standards (1:100).</li> </ul>
Verification of sampling and assaying	• N/A
Location of data points	• All sampling sites were surveyed by a hand held GPS using Tabar Island Grid (TIG) which is based on WGS84 ellipsoid and is GPS compatible.
Data spacing and distribution	• The sampling programs were designed to test the West Simberi catchment areas such that further stages of exploration could be planned.
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 compan building before dispatch to ALS in Townsville for Au-base metal analysis.
Audits or reviews	No audits or reviews of sampling protocols have been completed.

## Surface Sampling - 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 over the Simberi Islands; ML136 on Simberi Island, and EL609 which covers the remaining area of Simberi Island, as well as Tatau Island and Big Tabar Island. A 4 sub-block ELA2462 is under application.
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, volcanoclastics 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 trench 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