

## Quarterly Report / Q2 December FY19

- **Q2 December FY19 production of 89,244 ounces at AISC<sup>1</sup> of A\$1,108 per ounce**
- **FY19 Simberi and consolidated production guidance increased**
- **A\$357 million cash at bank with no debt<sup>2</sup>**

### Executive Summary

#### Operations

- **Consolidated gold production** for the quarter ended 31 December 2018 (Q2 Dec FY19) was 89,244 ounces (Q1 Sep FY19: 98,547 ounces).
- **Consolidated All-In Sustaining Cost<sup>1</sup> (AISC)** for Q2 December FY19 was A\$1,108 per ounce (Q1 Sep FY19: A\$919 per ounce). The average realised gold price for Q2 Dec FY19 was A\$1,722 per ounce (Q1 Sep FY19: A\$1,681 per ounce).
- **Gwalia** (Western Australia) gold production for Q2 December FY19 was 53,257 ounces (Q1 Sep FY19: 62,685 ounces) at AISC of A\$1,081 per ounce (Q1 Sep FY19: A\$833 per ounce). Mined grade for Q2 Dec FY19 was 10.4 g/t Au (Q1 Sep FY19: 12.4 g/t Au) with 172 kt milled (Q1 Sep FY19: 168 kt).
- **Simberi** (PNG) gold production for Q2 December FY19 quarter was 35,987 ounces (Q1 Sep FY19: 35,862 ounces) at AISC of A\$1,146 per ounce (Q1 Sep FY19: A\$1,068 per ounce).

#### Health & Safety

- The Total Recordable Injury Frequency Rate (TRIFR, 12 month moving average) increased from 2.8 at the end of Q1 September FY19 to 2.9 at the end of Q2 December FY19, due to six low severity recordable injuries.

#### Gwalia Extension Project

- The Gwalia Extension Project (GEP) remains on schedule and within budget. The high voltage power cable hole for the Paste Aggregate Fill (PAF) component (crushing of waste underground and mixing with paste for stope filling) is due to be completed in March 2019, followed by the cable drop to 1,440 metres below surface (mbs). The PAF system will be commissioned utilising existing underground power in May and cut over to direct power feed from surface in June FY19. The ventilation shafts and surface ventilation infrastructure are on schedule for commissioning in Q2 December FY20.

#### Gwalia Mass Extraction

- The Gwalia Mass Extraction (GMX) pre-feasibility study announced in February 2018 comprises a new mining method and investment in underground grinding, mixing and hydraulic hoisting (slurry pumping) to lift mining rates, maintain margins and potentially increase production as the Gwalia mine deepens.
- A feasibility study (FS) is underway modelling different configurations of slurry pumping and comminution (milling and grinding) and comparing the valuation and risks to the base-case of continued trucking.
- The feasibility study on GMX is due to be completed in March FY19.

#### Exploration

- **Gwalia Deeps Extension:** The Gwalia Deeps drilling program continued testing southern extensions to the Gwalia lode system at 2,000 mbs with three daughter holes (GWDD16F, GWDD16G and GWDD16H) completed. Significant results were returned from all three intersections of the Gwalia Shear Zone, including:
  - 0.9 m @ 34.4 g/t Au from 1,975 mbs (GWDD16F)
  - 3.6 m @ 10.7 g/t Au from 1,900 mbs (GWDD16G)
  - 1.8 m @ 76.3 g/t Au from 1,967 mbs (GWDD16H)
  - 10.8 m @ 3.6 g/t Au from 2,013 mbs (GWDD16H)
- The results suggest this zone has a greater gold endowment than previously modelled and that the deposit appears to trend progressively shallower and in a southerly plunge from 1600-1800 mbs, rather than the earlier 'straight' conceptual model of Gwalia mineralisation.

<sup>1</sup> Non IFRS measure, refer appendix.

<sup>2</sup> Financial information unaudited. Balance comprises \$174 M cash, \$183 M term deposits (maturing between April 2019 and July 2019) and excludes \$2 M restricted cash.

- **Simberi Island (PNG):** Sulphide drilling results beneath the Sorowar pit seeking to improve the potential for a sulphide gold processing project continue to be positive, indicating significant additional sulphide and oxide mineralisation is present. Significant results relating to 43 additional holes are reported in the exploration section and ancillary tables, including (all intercepts down-hole):
  - 35 m @ 3.11 g/t Au from 67 m (120SORDGC010)
  - 27 m @ 8.92 g/t Au from 94 m (125SORDGC006)
  - 18 m @ 10.86 g/t Au from 62 m (230SORDGC002)
- **Horse-Paddock Well (Leonora, WA):** An RC drilling program consisting of seven holes was undertaken directed at several geophysical targets. Three holes encountered anomalous gold with the most significant results in hole HWRC0007, which intersected a 4 m zone of mineralisation, including 1 m at 7.2 g/t Au, associated with quartz veining and pyrite alteration within sheared mafics from approximately 150 mbs. Follow up drilling is planned for Q3 March FY19.
- **Option and Farm-in with Newcrest:** The first diamond drill hole (BND08) commenced testing the Banesa copper-gold porphyry target on Big Tabar Island in December 2018 (Figure 6.7). The two hole, 2,000 metre diamond drill program is expected to continue through Q3 March FY19.

### Finance (unaudited)

- Total cash at bank and term deposits at 31 December 2018 was A\$357<sup>1</sup> million (30 Sep 2018: A\$350 million), after income tax payments of \$46 million and growth capex of \$13 million.
- The Company generated an operational cash contribution<sup>2</sup> in Q2 December FY19 of A\$76 million (Q1 Sep FY18: A\$79 million).

### Outlook

- Guidance for FY19 has been revised and is summarised as follows:
  - Forecast Gwalia gold production between 245,000 and 255,000 ounces (previously 245,000 and 260,000 ounces) at an AISC of between A\$930 and A\$970 per ounce (previously A\$920 to A\$980 per ounce), with sustaining capex of between A\$45 and A\$50 million (previously A\$50 to A\$55 million), plus growth capex of between A\$60 to A\$65 million (previously A\$60 to A\$64 million). Gwalia sustaining capex includes capital to prepare the mine for GMX, establish dual declines and increase the number of mining fronts. This capex is reflected in the AISC guidance.
  - Forecast Simberi gold production of between 120,000 and 130,000 ounces (previously 105,000 and 115,000 ounces) at an AISC of between A\$1,275 and A\$1,375 per ounce<sup>3</sup> (unchanged), with sustaining capex of between A\$9 and A\$10 million (previously A\$8 and A\$10 million).
  - Forecast exploration expenditure has been revised to between A\$25 and A\$30 million (previously between A\$24 and A\$30 million), comprising:
    - A\$12 to A\$15 million for the Leonora region (which includes Gwalia deep drilling, Gwalia seismic and Gwalia regional)
    - A\$4 to A\$5 million elsewhere in Australia, mainly at Pinjin in WA, and
    - A\$9 to A\$10 million (previously A\$8 to A\$10 million) on the Tabar Island group (inc. Simberi) in PNG.

**Bob Vassie**  
Managing Director and CEO  
23 January 2019

### Quarterly presentation and audio webcast

Bob Vassie, Managing Director & CEO, will brief analysts and investors on the Q2 December FY19 Quarterly Report at 11:00 am Australian Eastern Daylight Time (UTC + 11 hours) on Wednesday 23 January 2019. Participation on the conference call is by personal invitation only.

A live audio webcast will be available on the website at [www.stbarbara.com.au/investors/webcast/](http://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.

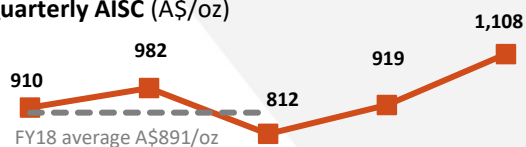
<sup>1</sup> Financial information unaudited. Balance comprises \$174 M cash, \$183 M term deposits (maturing between April 2019 and July 2019) and excludes \$2 M restricted cash.

<sup>2</sup> Non-IFRS measure, see cash movements table later in this quarterly report. Corresponds to Operational Cash Flow less sustaining capital, excludes growth capital of A\$13 M (Q1 Sep: \$11 M).

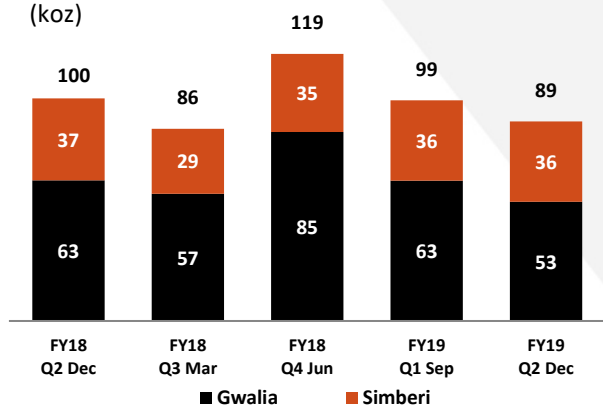
<sup>3</sup> Derived from US\$920 to US\$990 per ounce @ AUD 0.72 (previously US\$960 to US\$1,030 per ounce @ AUD 0.75)

## Consolidated results

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



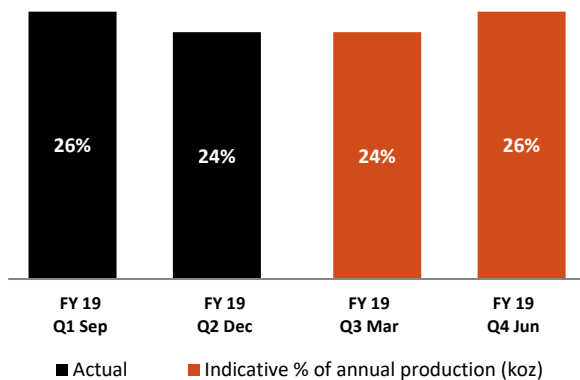
### Quarterly Gold Production (koz)



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

### FY19 Production

#### Indicative Quarterly Guidance Mid-point Profile



## St Barbara Gold Production & Guidance

Production Summary Consolidated		Q4 Jun FY18	Year FY18	Q1 Sep FY19	Q2 Dec FY19	1H FY19	Guidance FY19 <sup>1</sup>
<i>St Barbara's financial year is 1 July to 30 June</i>		<i>Qtr to 30 Jun 2018</i>	<i>Year to 30 June 2018</i>	<i>Qtr to 30 Sep 2018</i>	<i>Qtr to 31 Dec 2018</i>	<i>6 months to 31 Dec 2018</i>	<i>Year to 30 June 2019</i>
<b>Production</b>							
Gwalia	oz	84,537	268,428	62,685	53,257	115,943	245 to 255 koz (prev. 245 to 260)
Simberi	oz	34,899	134,661	35,862	35,987	71,849	120 to 130 koz (prev. 105 to 115)
<b>Consolidated</b>	<b>oz</b>	<b>119,436</b>	<b>403,089</b>	<b>98,547</b>	<b>89,244</b>	<b>187,792</b>	<b>365 to 385 koz</b> (prev. 350 to 375)
<b>Mined Grade</b>							<u>Reserve grade<sup>2</sup></u>
Gwalia	g/t	13.4	12.5	12.4	10.4	11.4	7.5
Simberi	g/t	1.30	1.25	1.29	1.55	1.42	1.3
<b>Total Cash Operating Costs<sup>3</sup></b>							
Gwalia	A\$/oz	530	613	665	806	730	n/a
Simberi	A\$/oz	983	969	952	1,027	990	n/a
<b>Consolidated</b>	<b>A\$/oz</b>	<b>662</b>	<b>732</b>	<b>769</b>	<b>895</b>	<b>829</b>	n/a
<b>All-In Sustaining Cost<sup>3</sup></b>							
Gwalia	A\$/oz	679	802	833	1,081	947	930 to 970 (prev. 920 to 980)
Simberi	A\$/oz	1,135	1,068	1,068	1,146	1,107	1,275 to 1,375 <sup>4</sup> (unchanged)
<b>Consolidated</b>	<b>A\$/oz</b>	<b>812</b>	<b>891</b>	<b>919</b>	<b>1,108</b>	<b>1,008</b>	<b>1,045 to 1,100</b> (prev. 1,030 to 1,100)

### Disclaimer

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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

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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.

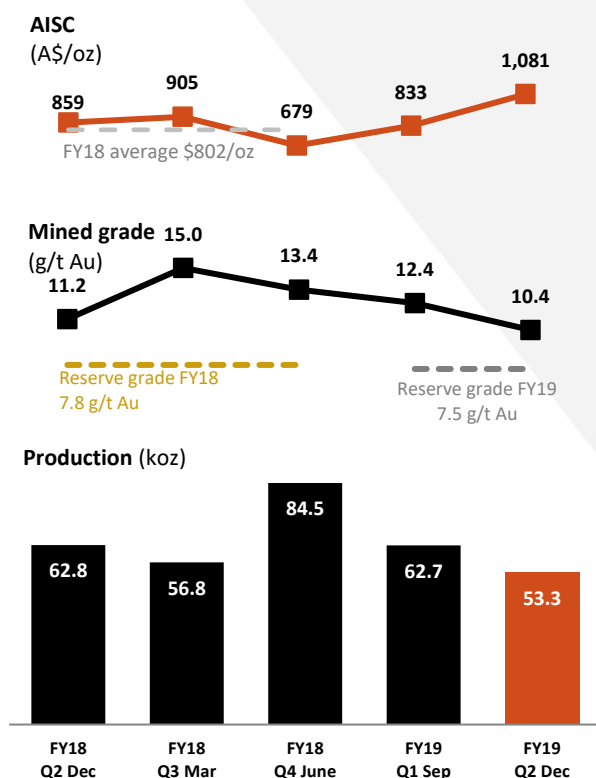
<sup>1</sup> FY19 guidance released 26 July 2018 in Q4 June FY18 Quarterly Report and updated in this report.

<sup>2</sup> Ore Reserve grade at 30 June 2018, refer Ore Reserve and Mineral Resources Statement (released 27 August 2018).

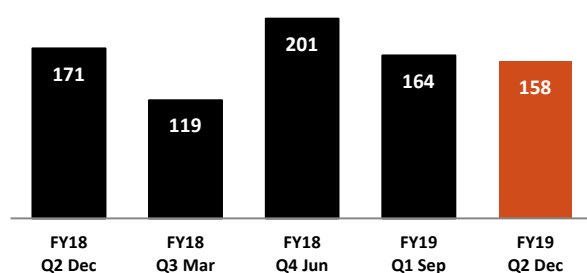
<sup>3</sup> Non-IFRS measure, refer Appendix.

<sup>4</sup> Derived from US\$920 to US\$990 per ounce @ AUD 0.72 (previously US\$960 to US\$1,030 per ounce @ AUD 0.75)

## Gwalia, Leonora, WA



### Gwalia underground ore mined (kt)



## Operations

- As anticipated, Gwalia gold production for Q2 December FY19 was lower at 53,257 ounces (Q1 Sep FY19: 62,685 ounces). Average mined grade for the quarter was 10.4 g/t Au (Q1 Sep FY19: 12.4 g/t Au)
- Ore sourced during the quarter was primarily from stopes in the South West Branch.
- Q2 December FY19 mined volume was 158 kt (Q1 Sep FY19: 164 kt). Gwalia Extension Project (GEP) development and raise boring activities remained at a high level during the quarter. The PAF installation on two concurrent mine levels and raise-boring of two shafts generated significant waste and longer waste haulages. Both projects, together with higher capital development draw on the already constrained ventilation of the mine and impact mined volume.
- Milled volume was 172 kt milled (Q1 Sep FY19: 168 kt), with recovery maintained at 98% (Q1 Sep FY19: 98%).
- AISC increased to A\$1,081 per ounce for Q2 December FY19 (Q1 Sep FY19: A\$833 per ounce), with the increase in unit costs due to lower production and higher development costs.

## Outlook

- FY19 guidance is updated as follows:
  - Production between 245,000 and 255,000 ounces (previously 245,000 to 260,000 ounces)
  - AISC between A\$930 and A\$970 per ounce (previously A\$920 to A\$980 per ounce)
  - Capital expenditure comprising:
    - Sustaining capex: A\$45 to A\$50 million (previously A\$50 to A\$55 million), and
    - Growth capex: A\$60 to A\$65 million (previously A\$60 to A\$64 million) and includes A\$5 to A\$6 million related to GMX studies and preparation works.

Production Summary		Q4 Jun	Q1 Sep	Q2 Dec
Gwalia		FY18	FY19	FY19
Underground ore mined	kt	201	164	158
Grade	g/t	13.4	12.4	10.4
Ore milled <sup>1</sup>	kt	205	168	172
Grade <sup>1</sup>	g/t	13.2	11.8	9.9
Recovery	%	98	98	98%
<b>Gold production</b>	<b>oz</b>	<b>84,537</b>	<b>62,685</b>	<b>53,257</b>
<b>All-In Sustaining Cost <sup>2</sup></b>		A\$ per ounce		
Mining		332	432	511
Processing		91	135	133
Site services		52	75	88
Stripping and ore inventory adjustments		13	(12)	25
		<b>488</b>	<b>630</b>	<b>757</b>
By-product credits		(2)	(1)	(2)
Third party refining & transport		2	2	2
Royalties		42	34	49
<b>Total cash operating costs</b>		<b>530</b>	<b>665</b>	<b>806</b>
less operating development		(58)	(73)	(110)
<b>Adjusted cash operating cost</b>		<b>472</b>	<b>592</b>	<b>696</b>
Corporate and administration		44	51	52
Corporate royalty		25	22	30
Rehabilitation		3	3	4
Operating development		46	64	102
Capitalised mine development		53	82	158
Sustaining capital expenditure		36	19	39
<b>All-In Sustaining Cost (AISC)</b>		<b>679</b>	<b>833</b>	<b>1,081</b>

#### Gwalia Extension Project Expenditure

- Project expenditure to date (all capitalised):
  - FY17 \$8 million
  - FY18 \$32 million
  - FY19
    - Q1 \$10 million
    - Q2 \$12 million
  - Project to date \$62 million
- In addition to GEP, ventilation fans and bulk air cooling will be upgraded in FY20 at a cost of \$15 million (scope increased from previous \$9 million) in anticipation of GMX and mining at greater depth.

#### Gwalia Extension Project (GEP)

##### Project Description

- The Gwalia Extension Project was announced on 27 March 2017, has an overall budget of A\$100 million, and is expected to be completed in Q2 December FY20.
- The Project consists of two main components, a ventilation upgrade and paste aggregate fill (PAF). PAF involves mixing paste from surface with waste crushed underground to fill stope cavities.

##### Project Update

- Work on the Gwalia Extension Project continued during the quarter. The overall project remains on schedule and within budget.
- During Q2 December FY19 construction of the underground crushing and mixing 'PAF' infrastructure continued. The crushing circuit on the 1420 level PAF chamber is nearing completion. Development on the 1460 level is complete, with civil work well advanced. The high voltage power cable hole for the PAF component is due to be completed in March, followed by the cable drop to 1,440 mbs. The PAF system will be commissioned utilising existing underground power in May and cut over to direct power feed from surface in June FY19.
- The second surface raisebore hole is well advanced and the first underground raisebore has commenced reaming and is progressing on schedule. Development to enable the commencement of the second underground raisebore is nearing completion.

#### Gwalia Extension Project Summary

<b>Announced</b>	<ul style="list-style-type: none"> <li>27 March 2017</li> </ul>
<b>Status</b>	<ul style="list-style-type: none"> <li>Under construction</li> </ul>
<b>Capex</b>	<ul style="list-style-type: none"> <li>A\$100 million</li> </ul>
<b>Construction period</b>	<ul style="list-style-type: none"> <li>Commenced Q3 Mar FY17</li> <li>Anticipated completion Q2 Dec FY20</li> <li>PAF completion due Q4 June FY19</li> </ul>
<b>Key components</b>	
<b>Ventilation upgrade</b>	<ul style="list-style-type: none"> <li>Ventilation shafts, power &amp; cooling</li> <li>Supports mining to at least 2,000 mbs in FY 2024<sup>3</sup></li> <li>Approx. 80% of project budget</li> </ul>
<b>Paste Aggregate Fill (PAF)</b>	<ul style="list-style-type: none"> <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>

<sup>1</sup> Includes Gwalia mineralised waste

<sup>2</sup> Non-IFRS measure, refer Appendix

<sup>3</sup> Ore Reserves at 30 June 2018 extend down to 2,140 mbs, refer to Ore Reserves and Mineral Resources Statement as at 30 June 2018



## Gwalia Mass Extraction (GMX)

- The Gwalia Mass Extraction (GMX) study was announced on 21 February 2018 and consists of a pre-feasibility study (PFS) for a change in mining method and material handling at Gwalia below 1800 mbs (from approximately FY22 onwards). GMX supports a revised Life of Mine (LOM) Plan to FY31 using published Resources and Reserves at that time<sup>1</sup>, including anticipated mining of 500 koz of Inferred Resources<sup>2</sup> beyond FY22.
- In the PFS a new mining method and investment in underground crushing, mixing and hydraulic hoisting (slurry pumping) is used to lift mining rates, maintain margins and potentially increase production as the Gwalia mine deepens and grade declines.
- A feasibility study (FS) is underway modelling different configurations of slurry pumping and comminution (milling and grinding), comprising:
  - The initial PFS plan utilising two stage crushing with HPGR<sup>3</sup> underground at depth, along with positive displacement pumps underground.
  - Pump on the surface with three chamber pipe displacement feeder underground, allowing pumping of a coarser slurry.
- The FS will assess the valuation and risk of the alternate designs, including the base-case of continued trucking, and select the preferred alternative for detailed design and construction.
- The feasibility study on GMX is due to be completed in March 2019.
- Expenditure on GMX in FY19 to date (all capitalised):
  - Q1 September \$1 M
  - Q2 December \$1 M

Gwalia Mass Extraction PFS Summary		
Study milestones	<ul style="list-style-type: none"><li>• Pre-Feasibility study (PFS) announced 21 February 2018</li><li>• PFS updated 26 July 2018</li><li>• Feasibility study due Q3 March FY19</li></ul>	
Status	Prefeasibility Study <sup>4</sup>	
Capex	A\$100 million <sup>4</sup>	
Key Components		
Underground crushing of ore and hydraulic hoist	<u>Alternative 1</u>	<u>Alternative 2</u>
	<ul style="list-style-type: none"><li>• 2 stage crushing and high-pressure grinding rolls underground (indicative 2 to 5 mm particle size)</li><li>• Mixing 50/50 ore with water and pumping to surface</li><li>• Pumps underground</li></ul>	<ul style="list-style-type: none"><li>• 3 stage crushing underground (indicative 5 to 20 mm particle size)</li><li>• Mixing 25% ore 75% water and pumping to surface</li><li>• Pump on surface</li></ul>
New mining method – Island pillar <sup>5</sup>	<ul style="list-style-type: none"><li>• Applied selectively in thinner, low grade areas</li><li>• Provides greater seismic stability</li><li>• Allows longer strike length</li><li>• Ability to mine thinner lodes productively</li></ul>	
Overall	<ul style="list-style-type: none"><li>• Increase mining rate to potentially 1.4 Mtpa</li><li>• Supports mine-life to FY31</li></ul>	

1 Ore Reserve and Mineral Resources Statement at 30 June 2017 (released 23 August 2017).

2 Inferred Resources per Ore Reserves and Mineral Resources Statements as at 30 June 2017 released 23 August 2017. There is a low level of geological confidence associated with inferred mineral resources and there is no certainty that further exploration work will

result in the determination of indicated mineral resources or that the production target will be realised.

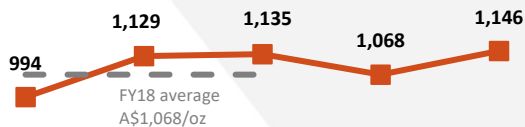
3 High pressure grinding rolls

4 PFS level of accuracy, +/- 30%, per announcement 21 February 2018.

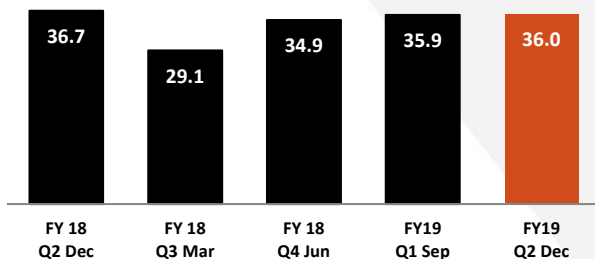
5 Mining method whereby a 'pillar' of ore is left in place to structurally support the roof of a mining cavity

## Simberi, Papua New Guinea

AISC  
(A\$/oz)



Production  
(koz)



### Operations

- Simberi gold production for Q2 December FY19 was 35,987 ounces (Q1 Sep FY19: 35,862 ounces).
- Milled grade at 1.64 g/t Au was a third consecutive quarter record, driven by mining in higher grade zones in the Sorowar and Pigibo mine sequence.
- Q2 December FY19 recovery was a record 88%, up 2 percentage points on Q1 September FY19 quarter.
- All In Sustaining Cost (AISC) for Q2 December FY19 was A\$1,146 per ounce (Q1 Sep FY19: A\$1,068 per ounce), due to increased processing costs arising from unplanned outages in the Aerial Rope Conveyor ('Ropecon') and ball mill. The weaker Australian dollar also had a negative impact on AISC. The strong grade and existing stockpiles limited the impact on production.
- Drilling beneath the Sorowar pit seeking to improve the financial case for a potential sulphide gold processing investment continued to generate positive results. The overall interpretation of the results to date indicate that significant additional sulphide and oxide mineralisation is present. Significant results relating to 43 additional holes are reported in the exploration section and ancillary tables, including (all intercepts down-hole):
  - 35 m @ 3.11 g/t Au from 67 m (120SORDGC010)
  - 27 m @ 8.92 g/t Au from 94 m (125SORDGC006)
  - 18 m @ 10.86 g/t Au from 62 m (230SORDGC002)
- The increased density drilling (30 m x 30 m) required to inform the updated Sulphide PFS is expected to be completed in Q3 March FY19.

- In early Q3 March FY19 the processing plant will undergo a planned 100 hour operational and maintenance shutdown involving a SAG mill reline, deep sea tailings pipeline inspection, leach tank hopper replacement, apron feeder pulley replacement, de-silting of the process pond and repairs on rubber liners.
- In addition the Ropecon will be shut for approximately 6 weeks in Q3 March FY19 whilst replacement ropes are installed. However, processing operations are planned to continue throughout this period from ore stockpile material.

Production Summary		Q4 Jun	Q1 Sep	Q2 Dec
Simberi		FY18	FY19	FY19
Ore & waste mined	kt	3,432	3,042	3,334
Ore mined	kt	1,158	1,078	993
Grade	g/t	1.30	1.29	1.55
Ore milled	kt	805	875	778
Grade	g/t	1.45	1.48	1.64
Recovery	%	83	86	88
<b>Gold production</b>	<b>oz</b>	<b>34,899</b>	<b>35,862</b>	<b>35,987</b>
<b>All-In Sustaining Cost<sup>1</sup></b>		<b>A\$ per ounce</b>		
Mining		374	351	347
Processing		370	353	429
Site services		205	202	210
		<b>949</b>	<b>906</b>	<b>986</b>
By-product credits		(6)	(6)	(6)
Third party refining & transport		8	8	8
Royalties		32	44	39
<b>Total cash operating costs</b>		<b>983</b>	<b>952</b>	<b>1,027</b>
Corporate and administration		44	51	52
Rehabilitation		17	19	20
Sustaining capital expenditure		91	46	47
<b>All-In Sustaining Cost (AISC)</b>		<b>1,135</b>	<b>1,068</b>	<b>1,146</b>

### Outlook

FY19 guidance is updated as follows:

- Production of between 120,000 and 130,000 ounces (previously 105,000 to 115,000 ounces)
- AISC of between A\$1,275 and A\$1,375 per ounce<sup>2</sup> (unchanged)
- Sustaining capex of A\$9 to A\$10 million (previously A\$8 to A\$10 million).

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

<sup>2</sup> Derived from US\$920 to US\$990 per ounce @ AUD 0.72 (previously US\$960 to US\$1,030 per ounce @ AUD 0.75)



- AISC guidance has not been reduced despite the anticipated increase in production due to increased costs during the plant shut down and Ropecon maintenance in Q3 March FY 19, and a weakening exchange rate against the US\$<sup>1</sup>.

## Exploration – Results Q2 December FY19

### Gwalia Exploration Program, Leonora WA

- **Gwalia Deeps Extension:** The Gwalia Deeps drilling program continued with the completion of daughter holes GWDD16F, GWDD16G and GWDD16H. These drill holes were designed to test the theorised shallowing and southerly extensions to the Gwalia deposit at approximately 2,000 mbs. The holes entered the Mine Sequence at depths between 2,030 and 2,060 mbs and passed through intervals interpreted to represent Main Lode, South West Branch and South Gwalia Series (SGS2), contained within a broader mineralised shear zone.
- Significant intercepts from these holes are indicated below with full details set out in Figures 1.0 to 1.3 and Table 1 in the Exploration Figures and Tables appendix (all intercepts downhole).

#### GWDD16F:

- 1.8 m @ 7.3 g/t Au from 1,981 m
- 0.8 m @ 3.8 g/t Au from 2,031 m
- 2.7 m @ 1.3 g/t Au from 2,042 m
- 0.9 m @ 34.4 g/t Au from 2,093 m

#### GWDD16G:

- 3.6 m @ 10.7 g/t Au from 2,031 m
- 7.5 m @ 0.3 g/t Au from 2,047 m
- 4.7 m @ 3.6 g/t Au from 2,106 m

#### GWDD16H:

- 0.3 m @ 13.6 g/t Au from 1,994 m
- 1.8 m @ 76.3 g/t Au from 2,062 m
- 6.4 m @ 5.2 g/t Au from 2,070 m
- 10.8 m @ 3.6 g/t Au from 2,105 m

- New daughter hole GWDD16I has commenced and at the end of the period had reached a downhole depth of 1,481 m.
- **Gwalia Seismic Program:** A new parent hole (GWDD22) testing a target area identified from 3D seismic data, located approximately 1 km south of underground development, was completed to a downhole depth of 1,139 m. GWDD22 passed through the target area and intersected approximately 88 m of alteration and veined material interpreted as the southern extension of the Gwalia Shear Zone.

- Data from further 2D and 3D seismic surveys, located to the north and south of the Mine respectively, are being modelled to identify any new high value targets within the enlarged survey area surrounding Gwalia Mine.

- **Horse-Paddock Well, Leonora WA:** Following results obtained from the Induced Polarisation (IP) and Sub Audio Magnetic (SAM) surveys conducted at Horse-Paddock Well an RC drilling program comprising seven drill holes (HWRC0001 – 7) was completed to depths of approximately 240 mbs.

- Anomalous gold values were returned from three holes with the most significant recorded in HWRC0007. Follow-up drilling is planned for Q3 March FY19. Further details are set out in Figures 2.0 and 2.1 and Table 2 in the Exploration Figures and Tables appendix, including the following significant downhole intercept.

#### HWRC0007:

- 1.0 m @ 7.2 g/t Au from 150 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 19 exploration licences (1,131 km<sup>2</sup>) for 404 blocks (Figure 3.0).
- The final assay results were received for the remaining 296 holes (PJAC1913 to PJAC2208) from a 348 hole (PJAC1861 to PJAC2208), 14,021 metre lake aircore drilling program that was completed in Q1 September FY19 (Figures 3.0 to 3.2 and Table 3). The program tested five targets under Lake Rebecca, including Graham's Find, the Mulgabbie trend and three geophysical targets.
- A 242 hole aircore drill program (PJAC2209 to PJAC2450) for 15,133 metres that commenced in August was completed in October 2018 (Figures 3.0 to 3.5). The drill program tested 9 targets, including follow-up drilling at four current geochemical targets (Yindi SE, Middle Tank, Mulgabbie Trend South and Old Homestead) and five new geophysical targets previously undrilled by St Barbara (Bosses Dam in Yindi SE, Old Airstrip, B Tank North, B Tank Southwest and Foley's East). Drilling at five of the targets returned encouraging results that will require follow-up work (Figures 3.1, 3.3 to 3.4 and Table 3).
- A 16 hole RC drill program (PJRC0058 to PJRC0073) for 3,203 metres was completed in November. The program was designed to follow-up anomalous aircore results from previous drilling campaigns. The program tested five targets, including Old Homestead, Mulgabbie Trend North, Mulgabbie Trend South, Yindi SE and an Historic Soil Anomaly. Preliminary composite assay results were received in December. Best results were returned from Mulgabbie Trend

<sup>1</sup> Spot AUD/USD FX rates: 30 Jun 2018: 0.7391, 30 Sep 2018: 0.7222, 31 Dec 2018: 0.7058 ([www.rba.gov.au](http://www.rba.gov.au)).

South (all intercepts downhole, details in Figures 3.0 to 3.1, 3.3 to 3.5 and Table 4) including:

- PJRC0071: 8 m @ 1.1 g/t Au from 40 m, including 4 m @ 1.4 g/t Au from 44 m
- A 93 hole aircore drill program (PJAC2451 to PJAC2543) for 5,596 metres was completed in December. The program tested five geochemical targets (Old Homestead, Mulgabbie Trend North, Mulgabbie Trend South and Bosses Dam in Yindi SE) and one geophysical target (Far East). Preliminary composite assay results were received for the first 34 holes of the program (Figures 3.1, 3.3 and 3.5).
- Follow-up land based and lake aircore drilling is currently being planned for H2 FY19. An exploration review and targeting study will be conducted over the Pinjin project in Q3 March FY19.
- Licence E28/2234 was subject to its sixth year compulsory partial surrender. Ground was selected for surrender where systematic exploration testing did not define bedrock geochemical anomalies warranting further work.

#### Lake Wells Gold Project, Yilgarn WA

- St Barbara Limited entered into an Earn-In and Joint Venture with Australian Potash Limited covering tenements at the Lake Wells Gold Project in October 2018. The Lake Wells Gold Project is located approximately 150 km northeast of Laverton, Western Australia. A 500 hole aircore drill program for 23,500 metres testing 13 targets is expected to commence in late Q3 March or early Q4 June FY19 (Figure 4.0).

#### Back Creek, NSW

- Subject to access, diamond drilling of one northern target in EL 8530 is expected to commence in Q3 March FY19 (Figure 5.0).

#### Simberi, Tatau & Tabar Islands, Papua New Guinea

- **Simberi Island (PNG):** Results from drilling beneath the Sorowar pit seeking to improve the financial case for a potential sulphide gold processing investment continue to be positive (Figures 6.0 to 6.5). The overall interpretation of the results to date indicates an improvement in the gold endowment of this zone, including additional sulphide and oxide reserves. Significant results relating to 43 additional holes are reported in the exploration section and ancillary tables, including (all intercepts down-hole):
  - 35 m @ 3.11 g/t Au from 67 m (120SORDGC010)
  - 27 m @ 8.92 g/t Au from 94 m (125SORDGC006)
  - 18 m @ 10.86 g/t Au from 62 m (230SORDGC002)

- Also on Simberi Island (Figure 6.0), diamond drilling continued to test potential high-grade gold sulphide targets within ML136. Three diamond drill holes (SDH377 to SDH379) were completed with one hole (SDH380) in progress for 844 metres drilled during Q2 December FY19 testing two targets (Figure 6.6). Assay results are pending.
- The assay results were received for two diamond drill holes (SDH375 and SDH376) that were completed for 1,449 metres during Q1 September FY19 testing for porphyry copper - gold mineralisation below the Pigiput open cut (Figure 6.6 and Table 6). SDH375 was drilled to a final depth of 729 m to test for mineralisation approximately 200 metres to the southeast of the first hole SDH371. SDH376 was drilled to a final depth of 720 metres depth to test for mineralisation approximately 225 metres to the northeast of the first hole SDH371. SDH375 returned no significant results. SDH376 returned some wide, but low grade gold intercepts associated with potassic altered hydrothermal breccia (Table 6). The best results received to date, returned from the first porphyry hole SDH371 were associated with the only intercept of brecciated, potassic altered feldspar porphyry.
- Exploration continued on EL609 on Tatau and Big Tabar Islands during Q2 December FY19. Work focussed on the execution of surface sampling (trenching and soil sampling) for St Barbara and commencing drilling at Banesa as part of the Newcrest Option and Farm-in.

#### Option and Farm-in with Newcrest, Tatau & Tabar Islands, Papua New Guinea

- The St Barbara group (through its wholly owned PNG subsidiary Nord Australix 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.
- Two diamond drill holes for a total of 2,000 metres are planned to test the Banesa copper - gold porphyry prospect on Big Tabar Island. Access to the first drill pad was completed using excavators during Q2 December FY19. The first drill hole BND08 commenced in late December 2018 and is currently at 69 metres depth (Figure 6.7). Drilling is expected to continue through Q3 March and part of Q4 June FY19.
- To date, a total of four diamond drill holes and one part hole have been completed as part of the Newcrest Option and Farm-in at Talik North (TTD084 to TTD086), Kupo (TTD087) and Banesa (BND08 ongoing) for a combined 3,320 metres.

## Expenditure Q2 December FY19 (unaudited)

Expenditure on mineral exploration is shown below:

	<u>Q1 Sep</u> <u>FY19</u>	<u>Q2 Dec</u> <u>FY19</u>	
	A\$ million		
Australia	2.1	2.4	(expensed)
Pacific	1.7	1.1	(expensed)
Gwalia	1.7	1.6	(capitalised)
	<b>5.5</b>	<b>5.1</b>	

## Planned Exploration – Q3 March FY19

The map below shows current and planned target areas for Q3 March FY19.



Exploration in Q3 March FY19 will focus on:

### • Greater Gwalia

- 2,000 – 2,200 mbs: Complete drilling of two daughter holes (GWDD16H and GWDD16I) and parent hole GWDD23 to investigate the southern strike extension of the Gwalia lode system.

### • Leonora Region

- Horse-Paddock Well: Second phase RC drilling program to follow up on drilling results from Q2 December FY19 and test high priority Geophysical targets.
- RC drilling programs to test Geophysical anomalies in the Whistler (17 km north of Gwalia Mine) and Jessie Alma (0.5 km west of Gwalia Mine) prospect areas.

- Sub-Audio Magnetics (SAM) and Induced Polarisation (IP) work program in the Trevor Bore, Kailis East and Gwalia North prospect areas.

### • Pinjin

- Assess the results of the 16 hole, 3,203 metre Pinjin Reverse Circulation (RC) drilling program testing the best six gold in bedrock aircore anomalies.
- Upon receipt of final assays, assess the results of the 93 hole, 5,596 metre Pinjin Aircore (AC) drilling program.
- Design AC and RC drilling programs to follow up on anomalous results from recent drilling.

### • Lake Wells

- Prepare access to allow the 500 hole, 23,500 metre Lake Wells aircore drilling program to commence in late Q3 March or early Q4 June FY19.

### • Back Creek (NSW)

- Subject to access, commence a single vertical diamond drill hole testing a magnetic anomaly within EL 8530 in Q3 March FY19.

### • Simberi Island

- Ongoing campaign of increased density RC drilling focused on the Sorowar mining area.
- Continue diamond drill testing of potential high-grade gold sulphide targets on ML136, Simberi Island.
- Upon receipt of final assays, assess the results of the three holes (SDH377 to SDH379) completed testing high-grade gold sulphide targets within ML136.

### • Tabar Islands (St Barbara)

- Subject to access, continuing the soil, rock chip sampling, reconnaissance mapping and trenching over gold and copper-gold targets on Tatau and Big Tabar Islands.

### • Tabar Islands (Newcrest option agreement)

- As part of the Newcrest option period work program, continue diamond drilling at the Banesa gold - copper porphyry target on Big Tabar Island.

## Exploration Investments

- One component of the Company's growth strategy is targeted investments in early to advanced stage exploration through earn-in arrangements, joint ventures or direct equity investments.

- At the date of this report, St Barbara holds the following investments in Australian explorers<sup>1</sup>:

<a href="#">Catalyst Metals Limited</a> (ASX:CYL)	16%
<a href="#">Duketon Mining Limited</a> (ASX:DKM)	12%
<a href="#">Peel Mining Limited</a> (ASX:PEX)	18%
<a href="#">Prodigy Gold</a> (ASX:PRX)	10%

- In Q2 Dec FY19, St Barbara entered into an Earn-in and Joint Venture with Australian Potash Limited (ASX: APC), covering tenements at the Lake Wells Gold Project. Under the agreement, St Barbara can earn a 70% interest in the project through total expenditure of \$7.0 million.

### Health & Safety

- The Total Recordable Injury Frequency Rate (TRIFR, 12 month moving average) increased from 2.8 at the end of Q1 September FY19 to 2.9 at the end of Q2 December FY19, due to six recordable injuries.
- The six injuries were relatively minor, with two occurring in the camp and all the individuals involved returned to full duties.
- The Company has run various 'line of fire' hand safety focused training programs, most recently in late 2018. The focus in addressing the current increase in these types of injuries has broadened to improved training for supervisors as well as a review of incident investigation procedures to ensure the effectiveness of preventative measures. These programs are designed to ensure an understanding and awareness of underlying causes and contributing factors to eliminate low severity recordable injuries.

### Corporate

- As announced previously, the Board appointed Stef Loader as a Non-Executive Director effective 1 November 2018. Full details are available in the corresponding ASX announcement dated 23 October 2018, available at [stbarbara.com.au/investors/announcements/](http://stbarbara.com.au/investors/announcements/)

### Scheduled Future Reporting

Date	Report
20 February	Half Year Report
	Interim dividend announcement (dividend policy and history at <a href="http://stbarbara.com.au/investors/dividend/">stbarbara.com.au/investors/dividend/</a> )
18 April	Q3 March FY19 Quarterly Report
Dates are tentative and subject to change	

### Share Capital

<b>Issued shares</b>	
Opening balance 30 Sep 2018	<b>524,290,599</b>
Issued	nil
<b>Closing balance 31 Dec 2018</b>	<b>524,290,599</b>
<b>Unlisted employee rights</b>	
Opening balance 30 Sep 2018	<b>2,288,528</b>
Issued <sup>2</sup>	772,785
Exercised as shares	nil
Lapsed <sup>3</sup>	(92,224)
<b>Closing balance 31 Dec 2018</b>	<b>2,969,089</b>
Comprises rights expiring:	
30 June 2019 <sup>4</sup>	1,028,427
30 June 2020 <sup>5</sup>	1,175,059
30 June 2021 <sup>6</sup>	765,603
<b>Closing balance 31 Dec 2018</b>	<b>2,969,089</b>

1 Shareholdings as notified by St Barbara in substantial holder notices  
2 ASX Appendix 3B 24 Oct 2018 and 21 Dec 2018  
3 ASX Appendix 3B 24 Oct 2018 and 21 Dec 2018

4 If these rights do not vest at 2019, they may be retested at 2020 and 2021  
5 If these rights do not vest at 2020, they may be retested at 2021 and 2022  
6 These rights are not subject to retesting

## Finance (unaudited)

- 97,283 ounces of gold were sold in Q2 December FY19, at an average realised gold price of A\$1,722 per ounce (Q1 Sept FY19: 97,447 ounces at A\$1,681 per ounce).
- Total cash at bank and term deposits at 31 December 2018 was A\$357 million<sup>1</sup> (30 September 2018: A\$350 million) after growth capex of \$13 million, income tax payments of \$46 million and \$2 million investments.
- The Company generated an operational cash contribution<sup>2</sup> in Q2 December FY19 of A\$76 million (Q1 Sep FY19: A\$79 million). Cash movements for FY19 are summarised in the following table:

Cash movements & balance A\$M (unaudited)	Q4 Jun FY18	Q1 Sep FY19	Q2 Dec FY19
Leonora - operating cash flow <sup>3</sup>	93	45	53
Simberi - operating cash flow <sup>3</sup>	12	34	23
Operational cash contribution	105	79	76
Leonora - growth capital	(10)	(11)	(13)
Rehabilitation , land management & project costs	(1)	(2)	(2)
Corporate costs <sup>4</sup>	(5)	(8)	(4)
Corporate royalties	(2)	(1)	(2)
Exploration <sup>5</sup>	(4)	(6)	(5)
Investments <sup>6</sup>	(4)	(4)	(2)
Income tax payments	(7)	(6)	(46)
Working capital movement <sup>7</sup>	9	(9)	3
Cash flows before finance costs	81	32	5
Net interest income	1	3	2
Dividends paid	-	(28)	-
Net movement for period	82	7	7
Cash balance at start of quarter	262	343	350
<b>Cash balance at end of quarter</b>	<b>343</b>	<b>350</b>	<b>357</b>
Closing balance excludes restricted cash	1	1	2

- Hedging in place at the date of this report comprises:

<b>FY19:</b>	<b>44,000</b> ounces of forward gold contracts to be delivered in monthly instalments between February and June 2019 at <b>A\$1,750</b> per ounce (remaining FY19 component of original 100,000 ounce hedges announced 7 and 19 February 2018 and 7 March 2018).
<b>FY20:</b>	<b>50,000</b> ounces of forward gold contracts to be delivered in monthly instalments between July and December 2019 at <b>A\$1,750</b> per ounce (FY20 component of hedges announced 7 and 19 February 2018 and 7 March 2018). <b>24,000</b> ounces of forward gold contracts to be delivered in monthly instalments between January and June 2020 at <b>A\$1,809</b> per ounce (FY20 component of hedge announced 26 October 2018). <b>24,000</b> ounces of forward gold contracts to be delivered in monthly instalments between January and June 2020 at <b>US\$1,300</b> per ounce (FY20 component of hedge announced 10 December 2018).
<b>FY21:</b>	<b>26,000</b> ounces of forward gold contracts to be delivered in monthly instalments between July and December 2020 at <b>A\$1,809</b> per ounce (FY21 component of hedge announced 26 October 2018). <b>26,000</b> ounces of forward gold contracts to be delivered in monthly instalments between July and December 2020 at <b>US\$1,300</b> per ounce (FY21 component of hedge announced 10 December 2018).

1 Financial information unaudited. Balance comprises \$174 M cash and \$183 M term deposits (maturing between April 2019 and July 2019), excludes \$2 M restricted cash.  
2 Non-IFRS measure, see cash movements table this page. Corresponds to Operational Cash Flow less sustaining capital, but excludes growth capital of \$13 million.  
3 Net of sustaining capex  
4 Cash corporate costs in Q1 Sep FY19 include payment of short term incentives for employees (inc. key management personnel) accrued at 30 June 2018  
5 Includes Gwalia deep drilling  
6 Refer 'Explorations Investments' earlier in this report  
7 Working capital movement in Q2 December FY19 was predominantly due to a reduction in gold receivables



## 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  
Stef Loader ..... 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](mailto:info@stbarbara.com.au)  
Website ..... [www.stbarbara.com.au](http://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](http://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](http://www-au.computershare.com/investor)

American Depositary Receipt enquires:

BNY Mellon Depositary Receipts  
[www.bnymellon.com/shareowner](http://www.bnymellon.com/shareowner)

## Investor Relations

David Cotterell, Manager Investor Relations ..... +61 3 8660 1959  
Rowan Cole, Company Secretary ..... +61 3 8660 1900

## Substantial Shareholders

	% of Holdings <sup>1</sup>
Van Eck Associates Corporation	13.3%
Vinva Investment Management	5.2%

<sup>1</sup> As notified by the substantial shareholders to 22 January 2019



## 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, Pinjin and Back Creek 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 2018' released to the Australian Securities Exchange (ASX) on 27 August 2018 and available to view at [www.stbarbara.com.au](http://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 27 August 2018 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 27 August 2018 'Ore Reserves and Mineral Resources Statements 30 June 2018' available at [www.stbarbara.com.au](http://www.stbarbara.com.au).

Exploration Figures and Tables

Figure 1.0: Leonora: Gwalia Deeps Drilling Program Q2 FY19, Plan View

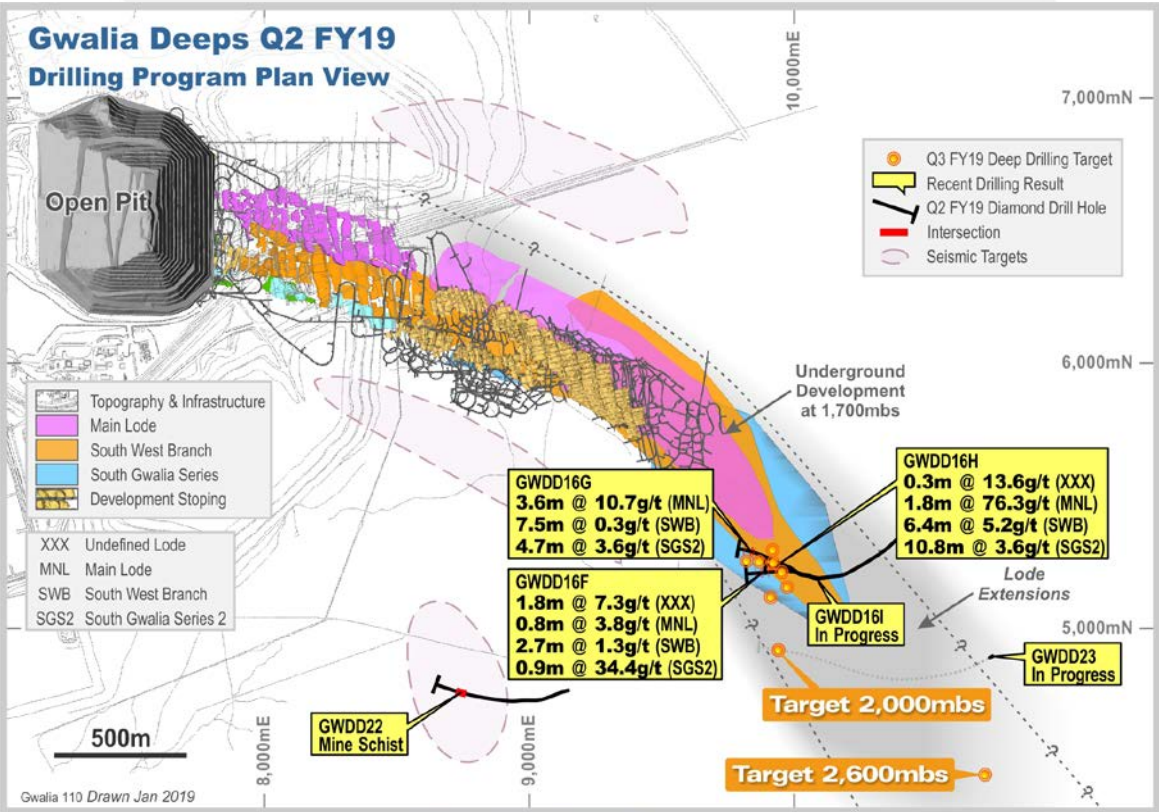


Figure 1.1: Gwalia Deeps Drilling Program Q2 FY19, Cross Section (looking north)

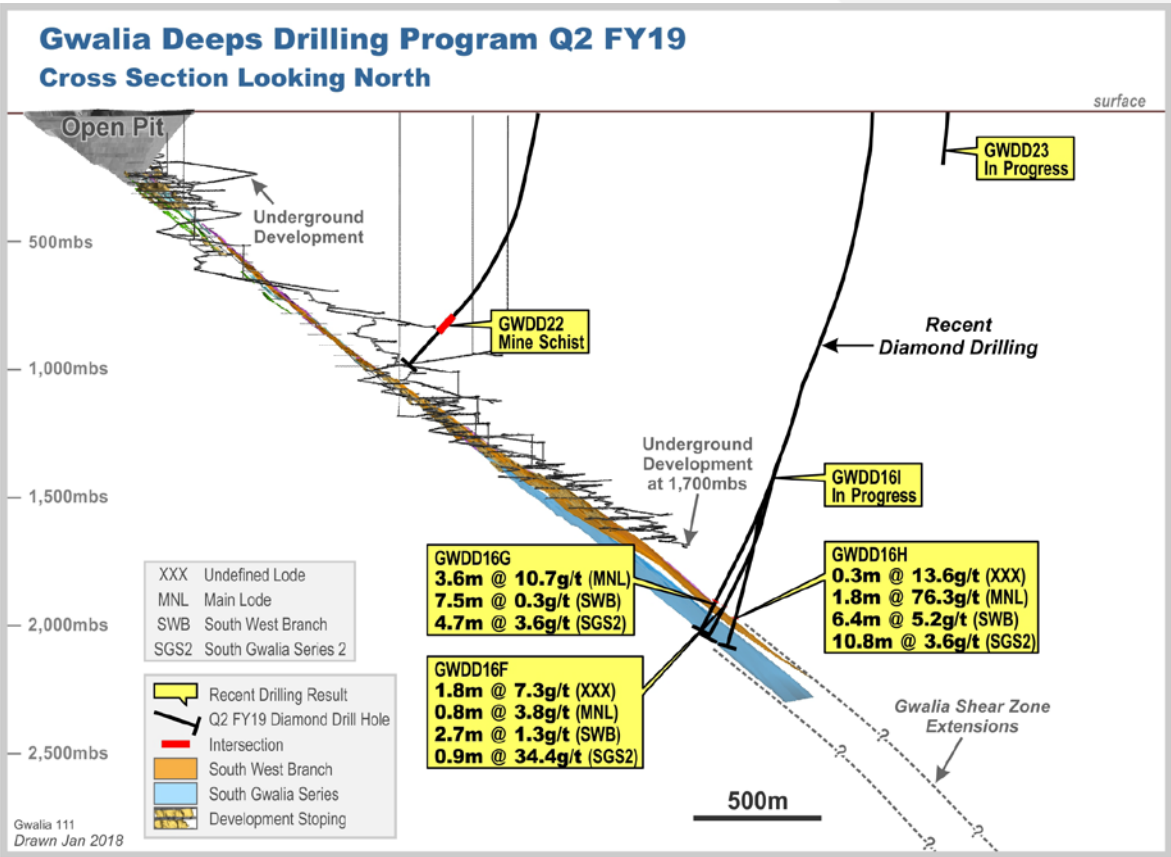


Figure 1.2: Gwalia Deeps Drilling Program Q2 FY19 Results, Long Section (looking west)

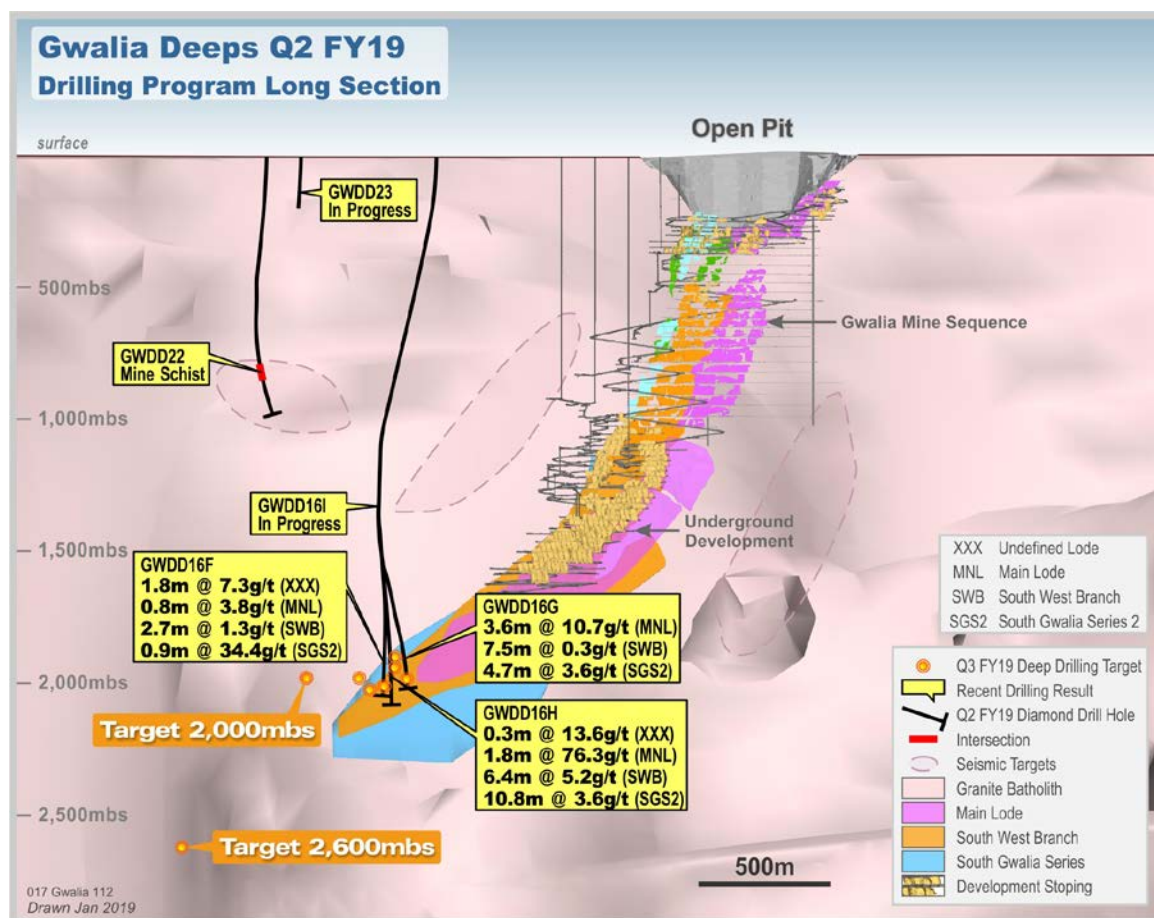


Figure 1.3: Gwalia Deeps Drilling Program Q2 FY19 Results, Long Section (looking west)

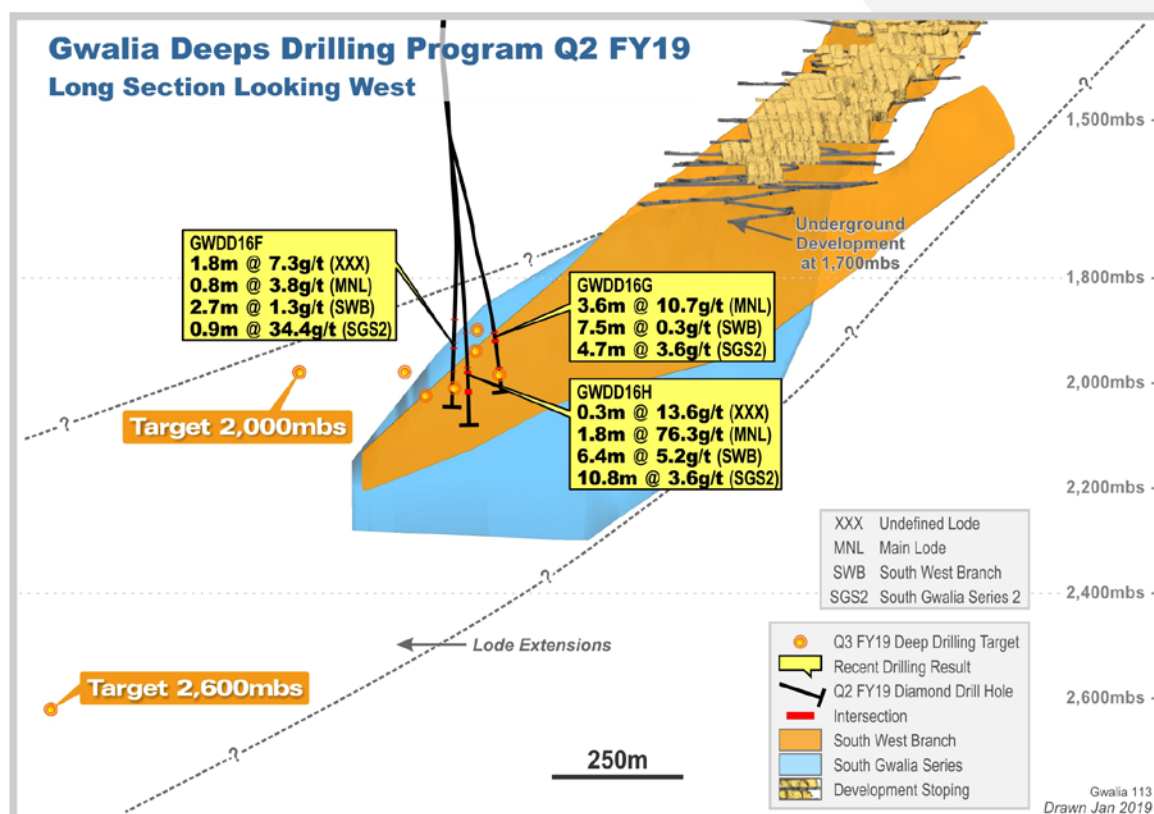




Figure 2.0: Horse Paddock Well Project Location Map

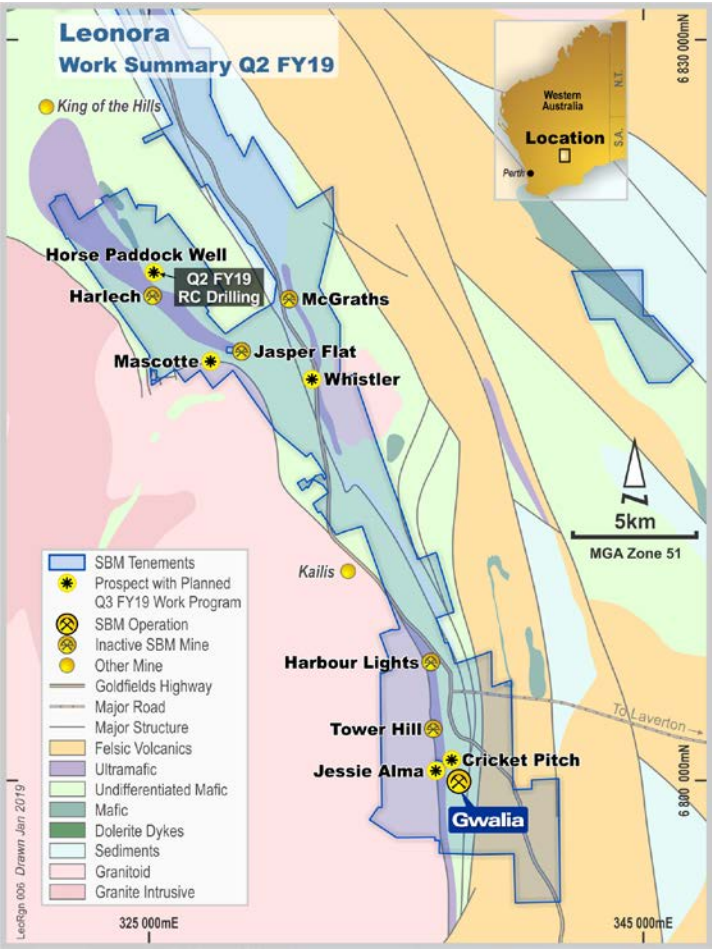
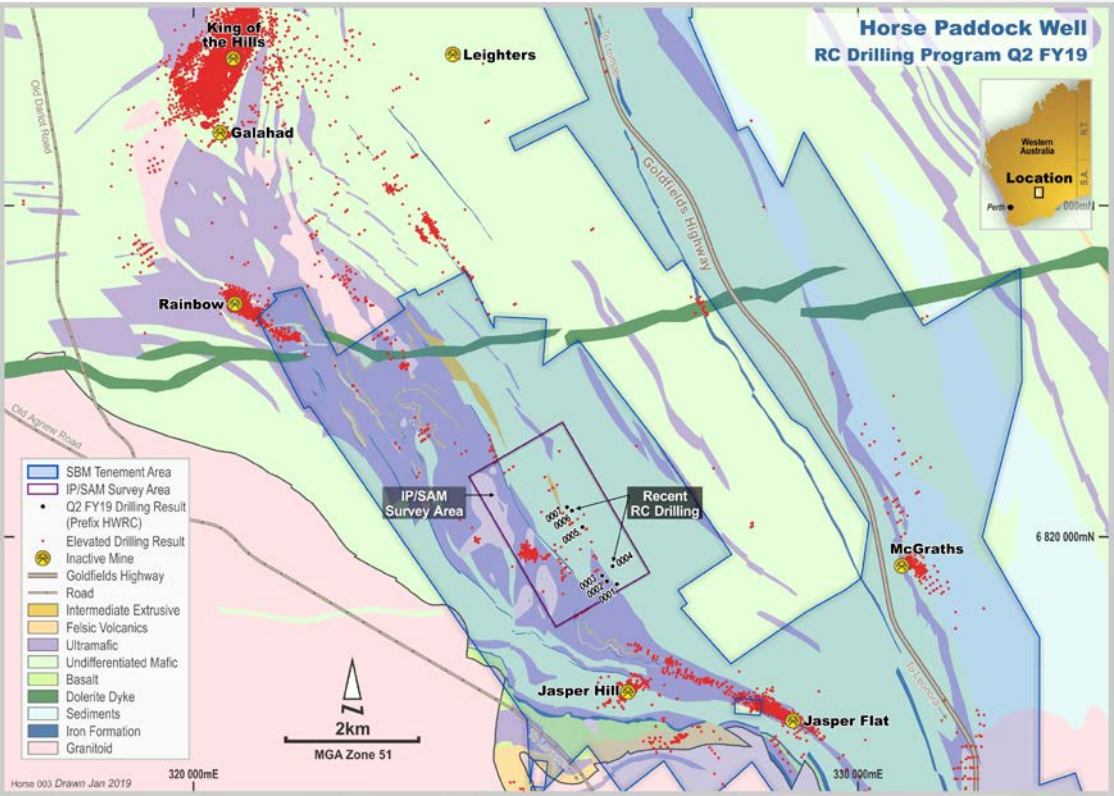
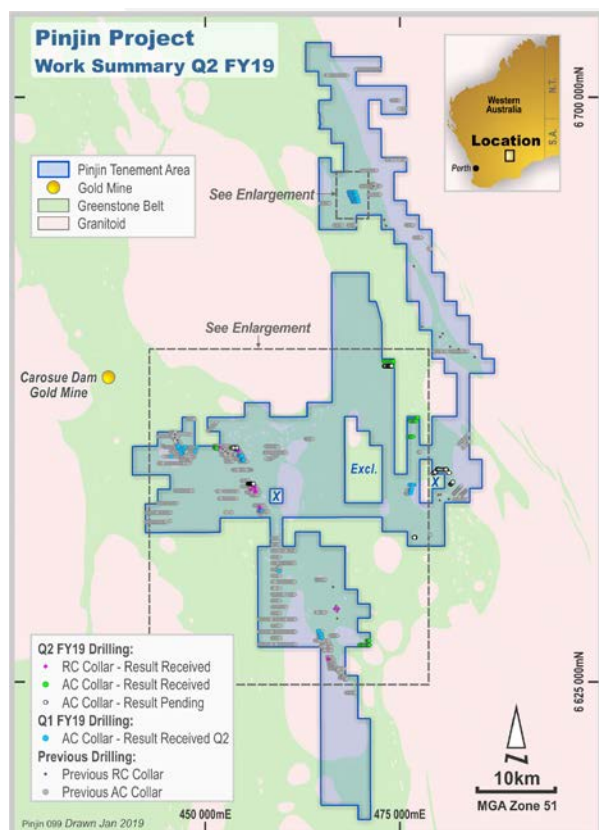


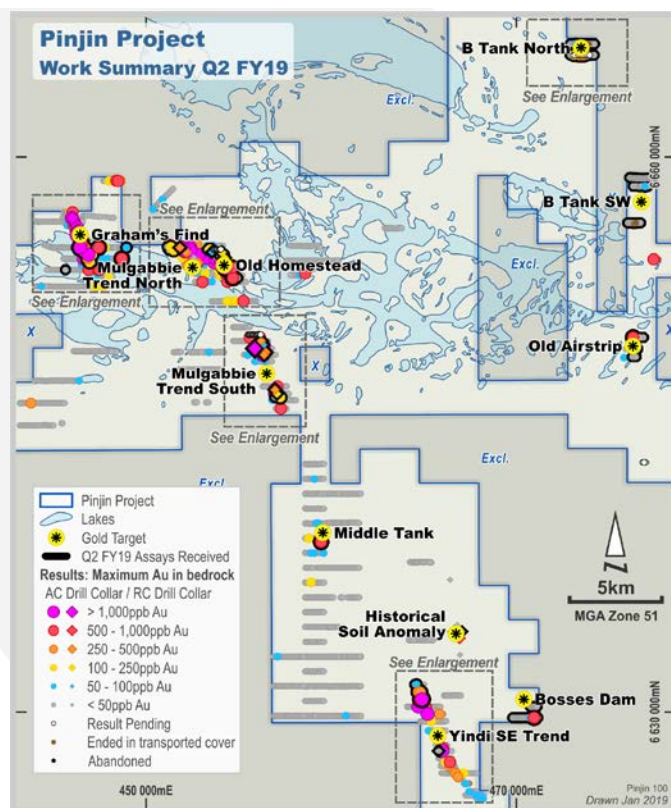
Figure 2.1: Horse Paddock Well Reverse Circulation Drilling Program Q2 FY19, Plan View



**Figure 3.0: Pinjin Project Aircore and Reverse Circulation Drilling Location Map**



**Figure 3.1: Pinjin Project Drilling Results Map (Enlargement) – maximum gold in bedrock**



**Figure 3.2: Graham's Find Drilling Results Map (Enlargement) – maximum gold in bedrock**

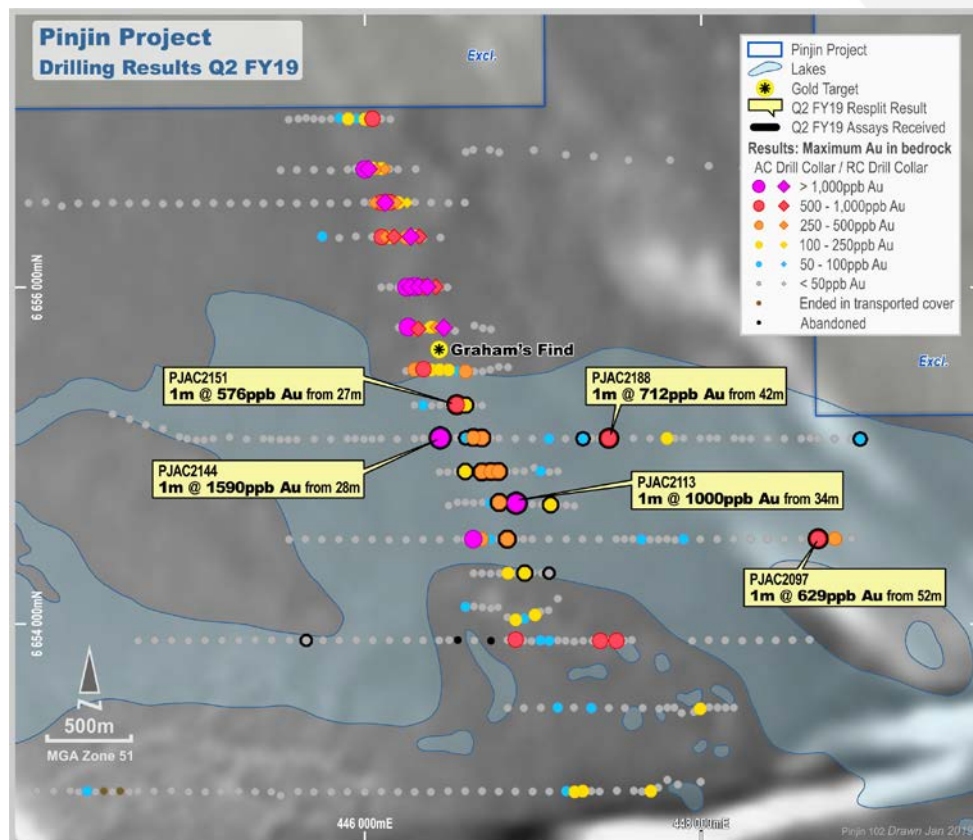




Figure 3.3: Mulgabbie Trend North Drilling Results Map (Enlargement) – maximum gold in bedrock

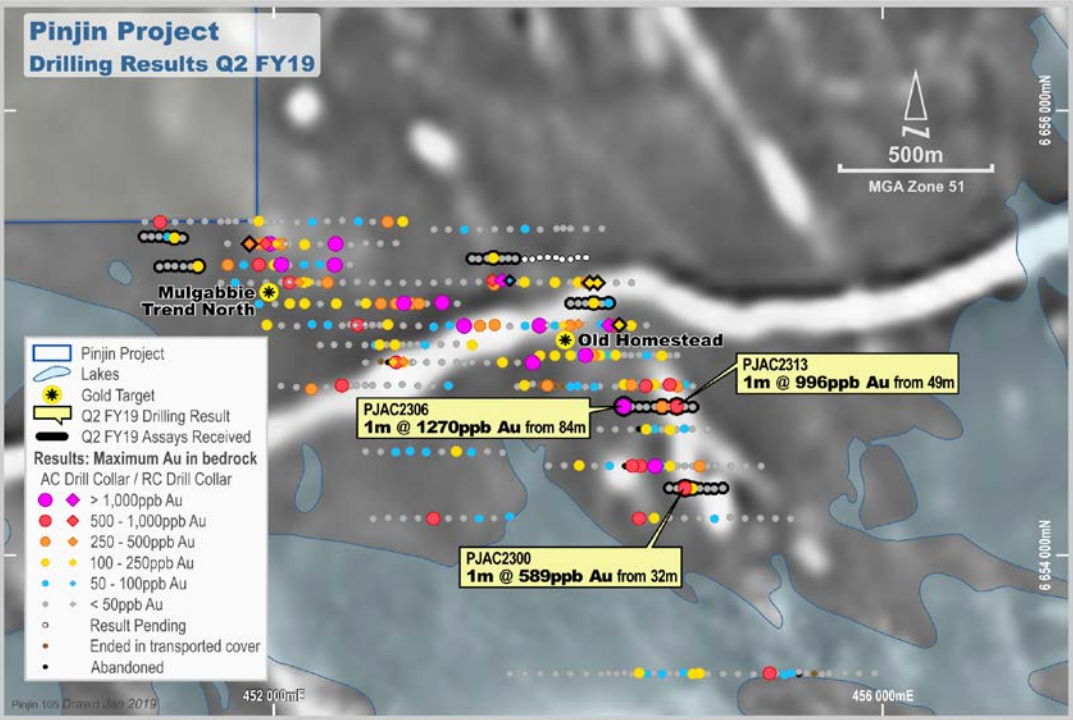


Figure 3.4: Yindi Southeast Drilling Results Map (Enlargement) – maximum gold in bedrock

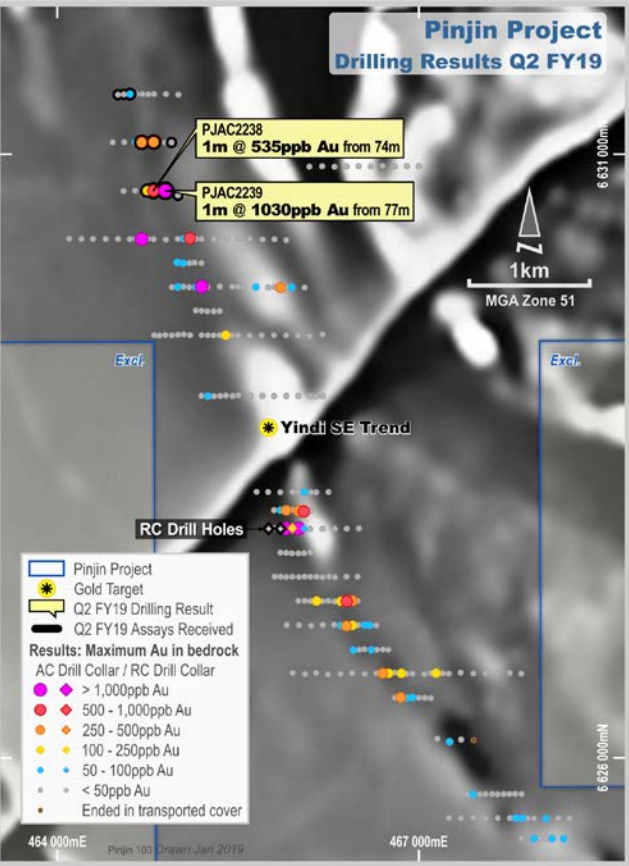


Figure 3.5: Mulgabbie Trend South Drilling Results Map (Enlargement) – maximum gold in bedrock

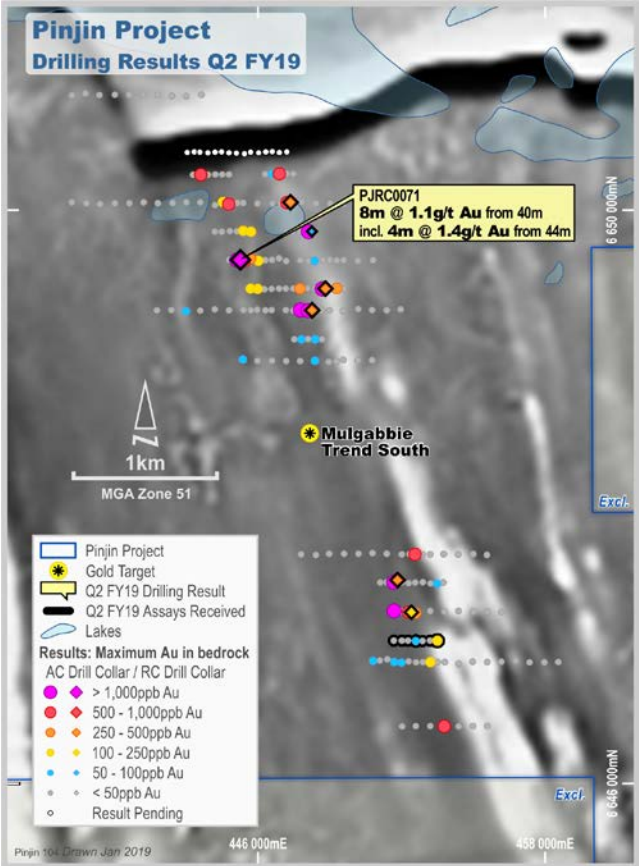




Figure 4.0: Lake Wells Planned Aircore Drilling Map

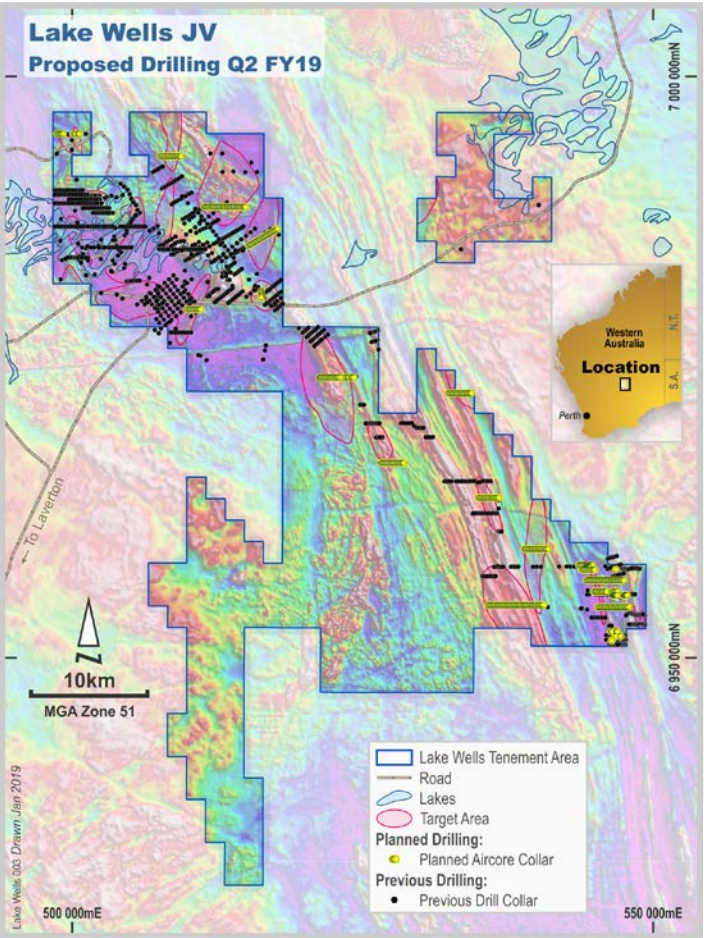
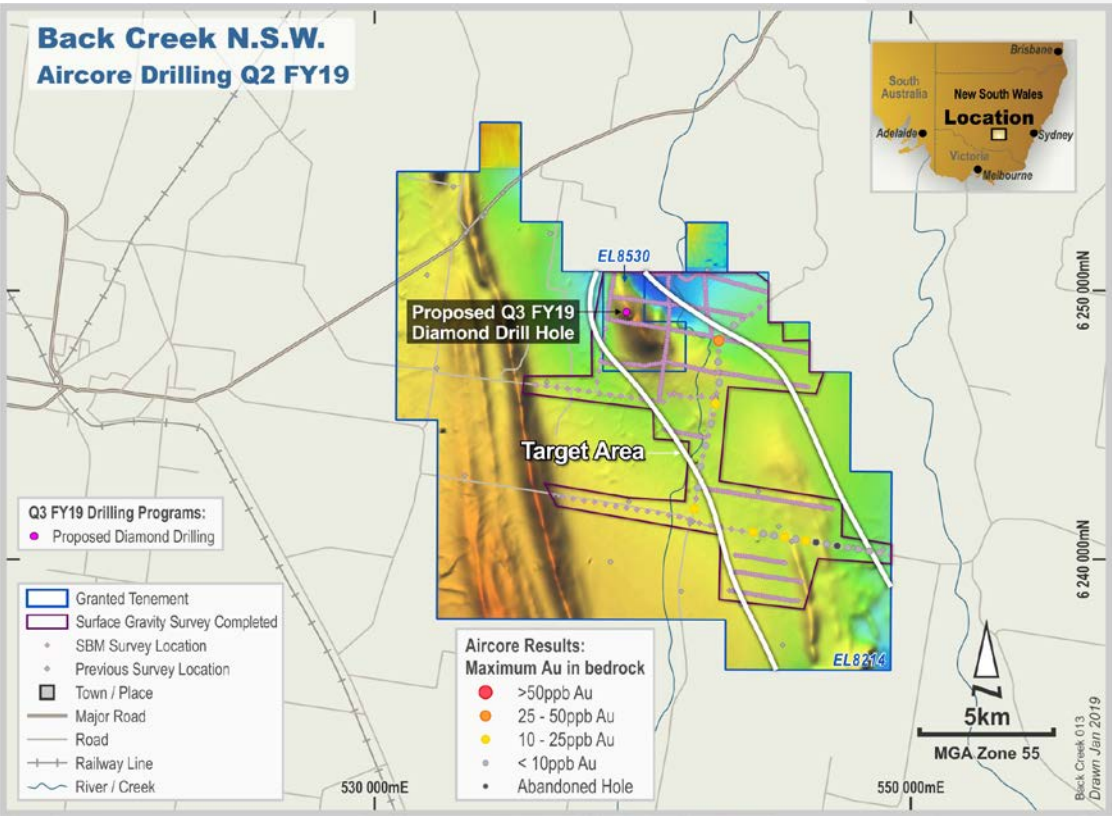


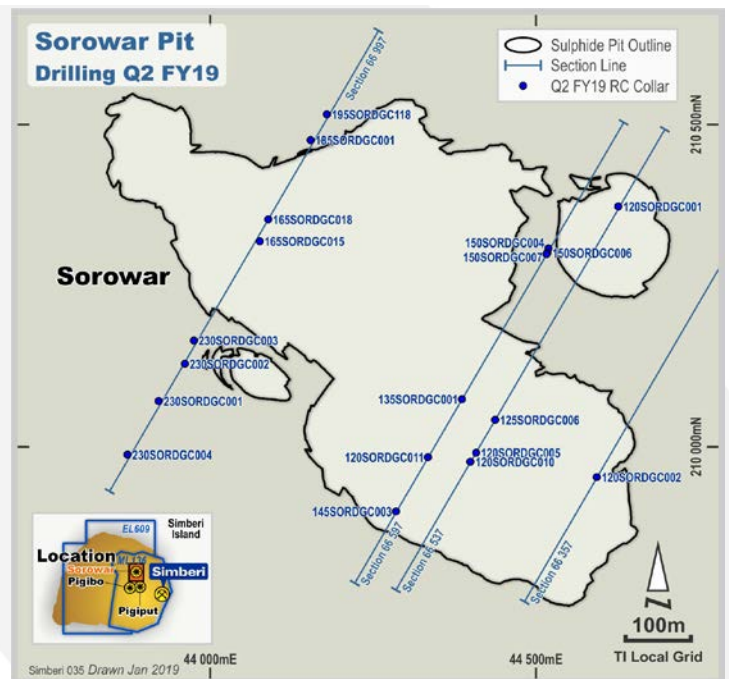
Figure 5.0: Back Creek Proposed Diamond Drill Hole Map



**Figure 6.0: Tabar Islands Location Map, Papua New Guinea**



**Figure 6.1: Location of Sorowar Sulphide Drill Cross Sections, Simberi Island, Papua New Guinea**



**Figure 6.2: Sorowar Sulphide Drill Cross Section (66,357), Simberi Island, Papua New Guinea**

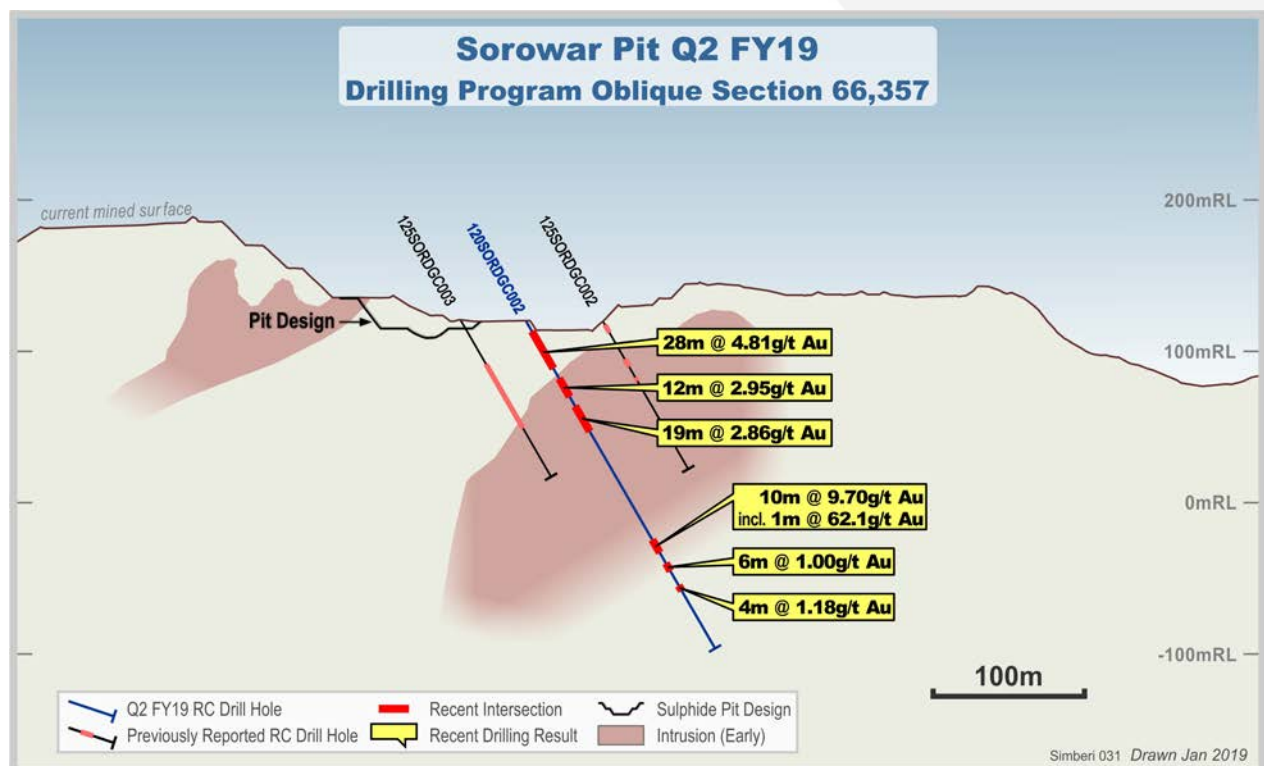




Figure 6.3: Sorowar Sulphide Drill Cross Section (66,537), Simberi Island, Papua New Guinea

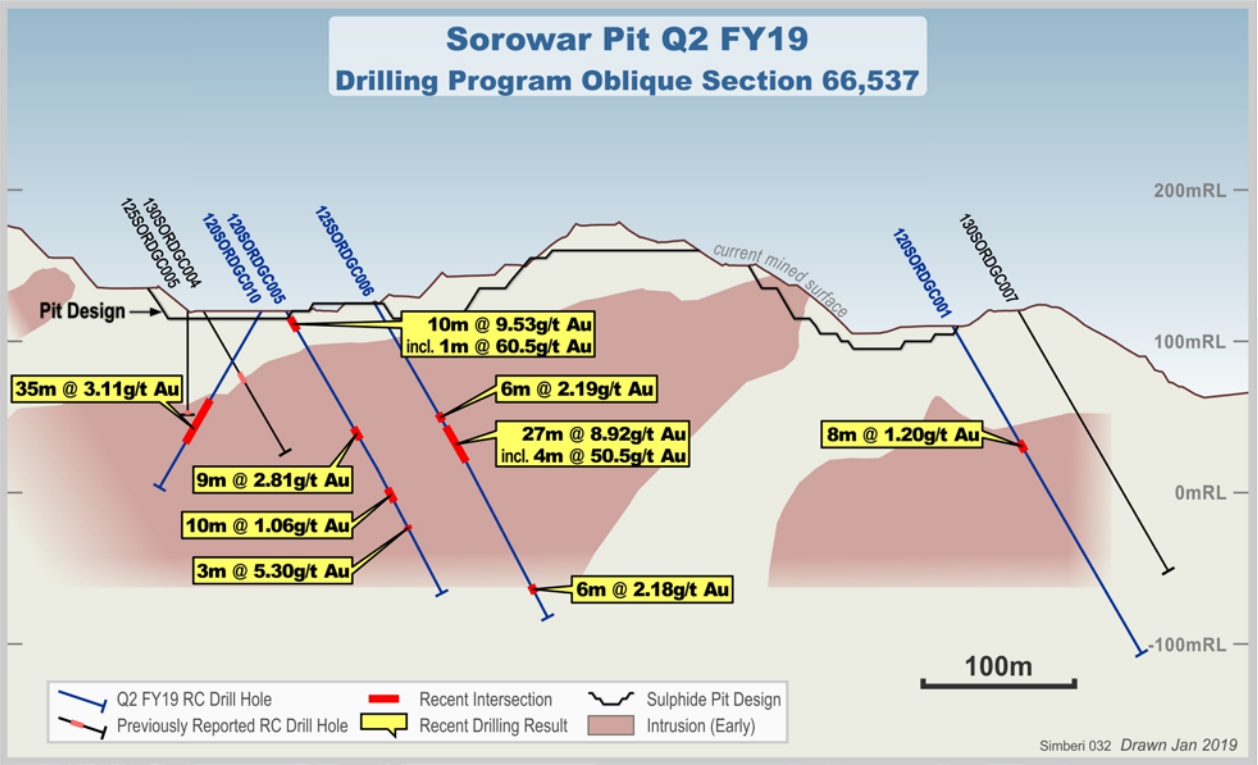


Figure 6.4: Sorowar Sulphide Drill Cross Section (66,597), Simberi Island, Papua New Guinea

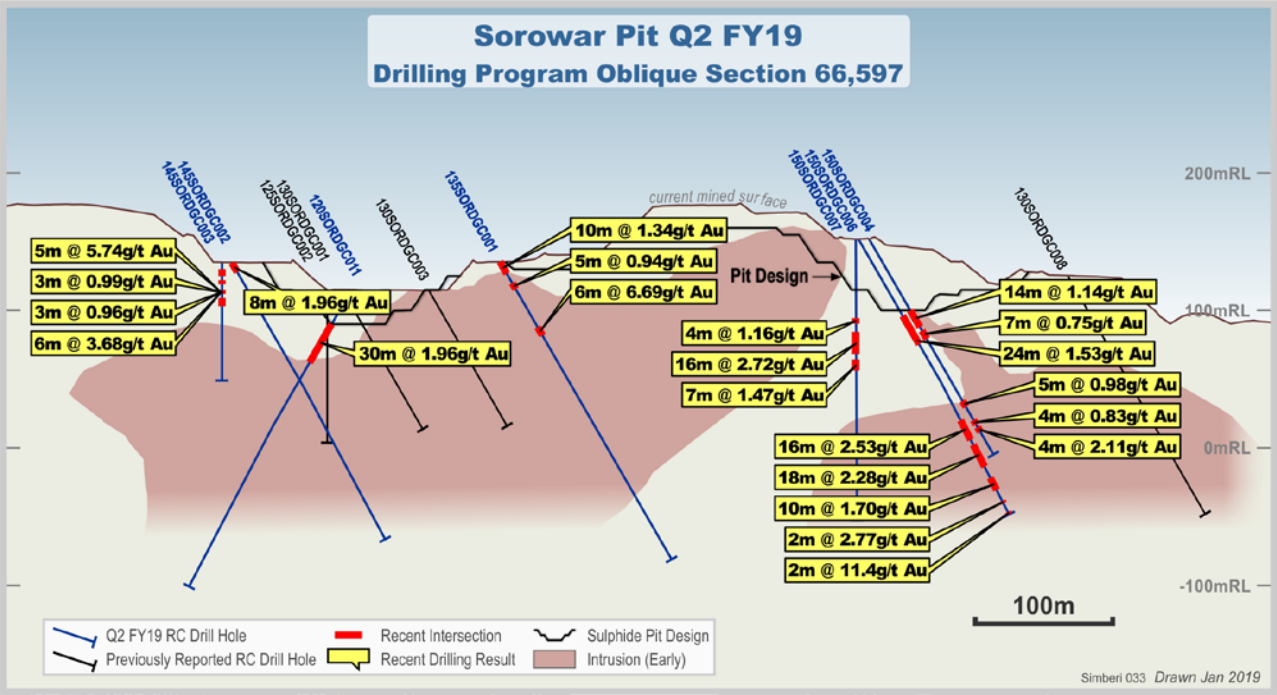


Figure 6.5: Sorowar Sulphide Drill Cross Section (66,997), Simberi Island, Papua New Guinea

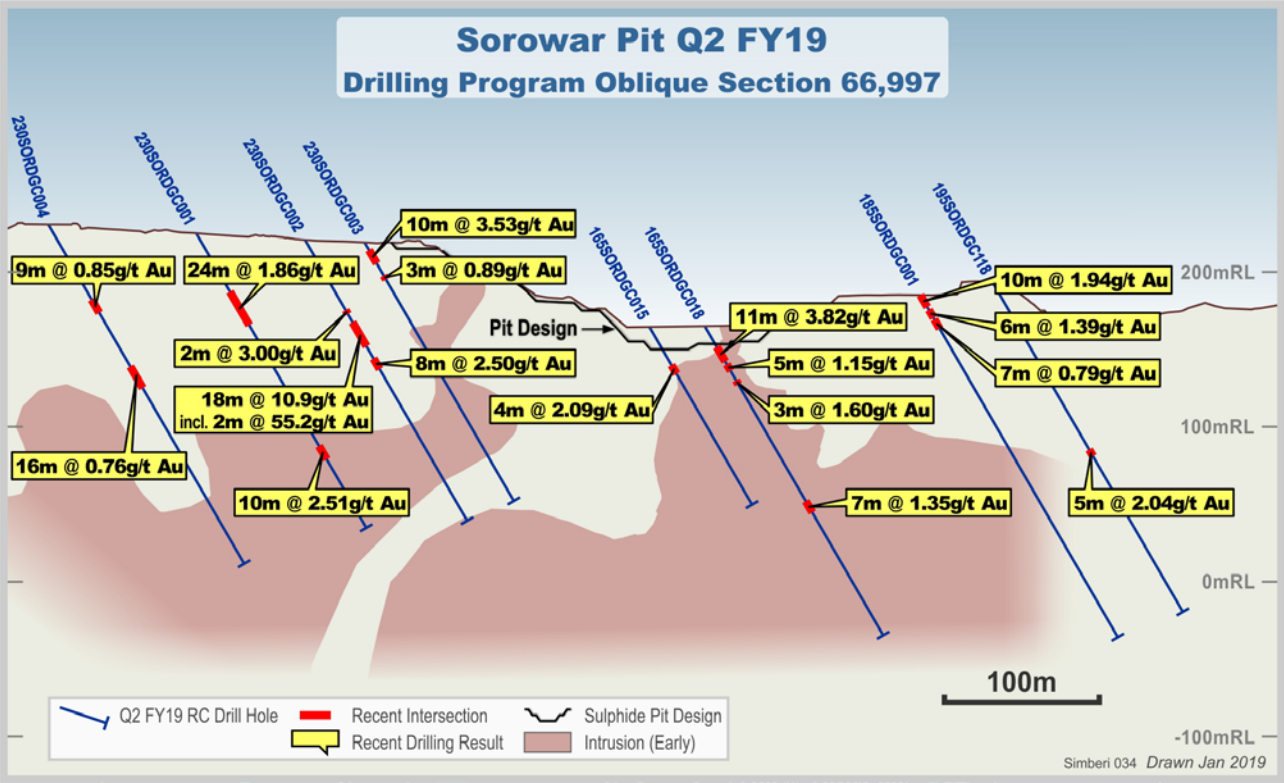


Figure 6.6: Simberi ML136 Drill Location Map, Simberi Island, Papua New Guinea

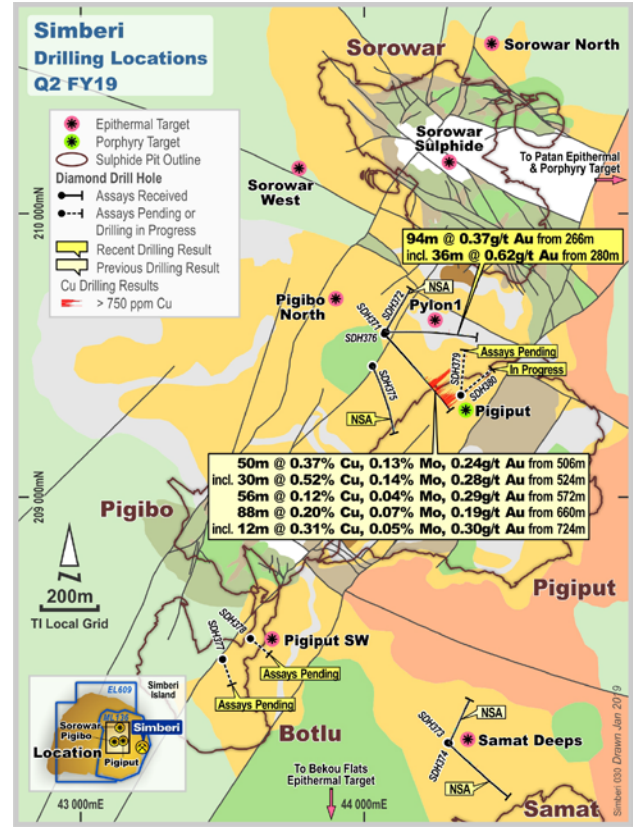
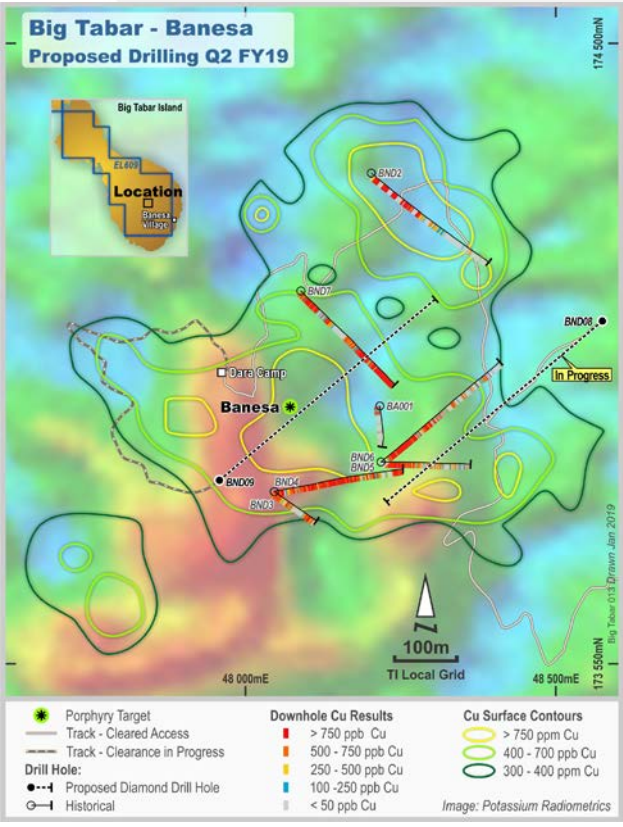


Figure 6.7: Banesa Drill Location Map, Big Tabar Island, Papua New Guinea



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

Hole Id	Down-hole Mineralised Intersection									
	North	East	RL	Metres Below Surface	Lode	Dip/ Azimuth	From	To	Interval	Gold grade
	m	m	m			degrees	m	m	m	g/t Au
GWDD16F	5,215.0	9,899.8	3,500.2	1,874.8	XXX	-63/266	1,980.5	1,982.3	1.8	7.3
GWDD16F	5,213.7	9,877.4	3,456.1	1,918.9	MNL	-62/266	2,030.5	2,031.3	0.8	3.8
GWDD16F	5,213.3	9,871.7	3,445.0	1,930.0	SWB	-63/266	2,042.0	2,044.7	2.7	1.3
GWDD16F	5,211.8	9,848.8	3,400.3	1,974.7	SGS2	-63/265	2,093.2	2,094.0	0.9	34.4
GWDD16G	5,290.4	9,842.9	3,475.0	1,900.0	MNL	-62/287	2,031.1	2,034.7	3.6	10.7
GWDD16G	5,292.8	9,835.0	3,459.2	1,915.9	SWB	-63/286	2,047.0	2,054.5	7.5	0.3
GWDD16G	5,299.4	9,809.5	3,407.9	1,967.1	SGS2	-62/283	2,106.0	2,110.7	4.7	3.6
GWDD16H	5,236.4	9,937.4	3,474.3	1,900.7	XXX	-76/276	1,994.2	1,994.5	0.3	13.6
GWDD16H	5,239.6	9,919.7	3,408.5	1,966.6	MNL	-74/279	2,061.7	2,063.5	1.8	76.3
GWDD16H	5,240.1	9,916.9	3,398.5	1,976.5	SWB	-74/278	2,069.8	2,076.1	6.4	5.2
GWDD16H	5,241.3	9,906.7	3,362.2	2,012.8	SGS2	-74/274	2,105.2	2,116.1	10.8	3.6

## 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: Horse Paddock Well Significant Intercepts – Leonora, WA**

Hole Id	North	East	RL	Dip/ Azimuth	Total Depth	Down-hole Mineralised Intersection			
	m	m	m	degrees	m	From	To	Interval	Gold grade
						m	m	m	Au g/t
HWRC0007	6,820,473.3	325,618.8	400.4	-75/236	186	150	151	1.0	7.2

## NOTES:

Coordinates and Azimuth referenced to MGA94 zone 51 Grid.

Reported intercepts are all down hole lengths.

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

Hole Id	North	East	RL	Dip/ Azimuth	Total Depth	Down-hole Mineralised Intersection				
	m	m	m	degrees	m	From	To	Interval	Gold grade	Comments <sup>1</sup>
						m	m	m	Au ppb	
PJAC2097	448,699	6,654,502	350.0	-90/000	54	52	53	1	629	OX
PJAC2113	446,901	6,654,714	350.0	-90/000	48	34	35	1	1,000	TR
PJAC2144	446,451	6,655,104	350.0	-90/000	48	28	29	1	1,590	OX
PJAC2151	446,551	6,655,298	350.0	-90/000	33	27	28	1	576	TR
PJAC2188	447,454	6,655,100	350.0	-90/000	48	42	43	1	712	TR
PJAC2210	470,948	6,629,701	393.5	-60/271	54	53	54	1	624	OX
PJAC2238	464,797	6,630,698	426.9	-60/271	83	74	75	1	535	TR
PJAC2239	464,896	6,630,698	429.9	-60/271	93	77	78	1	1030	OX
PJAC2258	459,449	6,639,199	383.1	-60/271	63	31	32	1	759	OX
PJAC2279	476,299	6,650,240	332.2	-90/001	63	50	51	1	845	OX

<sup>1</sup> OX: oxide, SU: sulphide, TR: transitional material, EOH: end of hole

Hole Id	North	East	RL	Dip/ Azimuth	Total Depth	Down-hole Mineralised Intersection				
	m	m	m	degrees	m	From	To	Interval	Gold grade	Comments <sup>1</sup>
						m	m	m	Au ppb	
PJAC2280*	476,352	6,650,243	332.5	-90/001	84	64	65	1	582	OX
PJAC2300	454,700	6,653,453	331.2	-60/271	36	32	33	1	589	OX
PJAC2306	454,297	6,654,004	379.0	-60/271	87	84	85	1	1,270	TR
PJAC2313	454,647	6,654,002	334.8	-60/270	58	49	50	1	996	OX
PJAC2420*	476,443	6,656,436	333.7	-60/272	100	99	100	1	1,700	OX
PJAC2430*	473,593	6,665,500	342.9	-60/270	98	84	88	4	913	OX
PJAC2441*	473,295	6,666,100	342.1	-60/272	101	100	101	1	513	OX

NOTES:

Coordinates and Azimuth referenced to MGA94 zone 51 Grid.

Reported intercepts are all down hole lengths.

\* is in transported material.

**Table 4: Pinjin RC Significant Intercepts – Yilgarn, WA**

Hole Id	North	East	RL	Dip/ Azimuth	Total Depth	Down-hole Mineralised Intersection				
	m	m	m	degrees	m	From	To	Interval	Gold grade	Comments <sup>1</sup>
						m	m	m	Au g/t	
PJRC0071	455,876	6,649,651	335.3	-64/272	132	40	48	8	1.1	OX
<i>including</i>						44	48	4	1.4	OX

NOTES:

Coordinates and Azimuth referenced to MGA94 zone 51 Grid.

Reported intercepts are all down hole lengths.

**Table 5: Sorowar Significant Intercepts – Simberi Island, Papua New Guinea**

Hole Id	North	East	RL	Dip/ Azimuth	Total Depth	Down-hole Mineralised Intersection				
	m	m	M	degrees	m	From	To	Interval	Gold grade	Comments <sup>1</sup>
						m	m	m	g/t Au	
120SORDGC001	210,373	44,626	110	-60/030	200	88	96	8	1.20	SU
120SORDGC002	209,953	44,593	120	-60/030	250	8	36	28	4.81	OX, TR
						45	57	12	2.95	SU
						65	84	19	2.86	SU
						167	177	10	9.70	SU
<i>Including</i>						171	172	1	62.1	SU
						185	191	6	1.00	SU
						202	206	4	1.18	SU
120SORDGC004	209,963	44,461	120	-60/030	186	176	181	5	4.54	SU
120SORDGC005	209,991	44,408	120	-60/030	213	5	15	10	9.53	OX
<i>Including</i>						9	10	1	60.5	OX
						89	98	9	2.81	SU
						135	145	10	1.06	SU
						163	166	3	5.3	SU
120SORDGC007	209,917	44,503	120	-60/030	102	43	49	6	0.98	SU
120SORDGC008	209,953	44,526	120	-60/030	111	No Significant Results				
120SORDGC009	209,954	44,459	120	-60/030	252	No Significant Results				

1 OX: oxide, SU: sulphide, TR: transitional material, EOH: end of hole



Hole Id	North	East	RL	Dip/ Azimuth	Total Depth	Down-hole Mineralised Intersection				
	m	m	M	degrees	m	From	To	Interval	Gold grade	Comments <sup>1</sup>
						m	m	m	g/t Au	
120SORDGC010	209,977	44,399	120	-60/030	135	67	102	35	3.11	SU
120SORDGC011	209,984	44,334	120	-60/030	252	35	65	30	1.96	SU
125SORDGC005	210,015	44,491	125	-60/030	229	70	74	4	1.13	OX
						105	108	3	1.02	SU
125SORDGC006	210,042	44,437	125	-60/030	237	84	90	6	2.19	OX
						94	121	27	8.92	OX,SU
<i>Including</i>						102	106	4	50.5	OX
						213	219	6	2.18	SU
130SORDGC007	210,410	44,649	120	-60/030	199	No Significant Results				
135SORDGC001	210,074	44,386	137	-60/030	252	2	12	10	1.34	OX
						20	25	5	0.94	OX
						57	63	6	6.69	OX,TR
140SORDGC001	210,070	44,687	135	-60/030	252	95	102	7	2.09	SU
						130	138	8	6.17	SU
						143	151	8	2.32	SU
						160	170	10	2.24	SU
						172	174	2	2.46	SU
						232	240	8	4.12	SU
145SORDGC001	210,393	44,501	141	-60/030	132	56	73	17	1.65	OX
						80	88	8	2.20	SU
						92	99	7	3.50	SU
145SORDGC002	209,901	44,286	144	-60/030	241	11	19	8	1.96	OX,TR
145SORDGC003	209,900	44,285	144	-90/000	96	14	19	5	5.74	OX
						22	25	3	0.99	SU
						29	30	3	0.96	SU
						35	41	6	3.68	SU
145SORDGC004	210,001	44,274	145	-60/030	252	No Significant Results				
150SORDGC003	210,331	44,463	153	-60/030	146	No Significant Results				
150SORDGC004	210,308	44,519	153	-60/030	182	61	75	14	1.14	OX,TR,SU
						78	85	7	0.75	SU
						137	142	5	0.98	SU
						153	157	4	0.83	SU
						159	163	4	2.11	SU
150SORDGC006	210,301	44,517	152	-60/030	229	65	89	24	1.53	OX,TR,SU
						152	168	16	2.53	SU
						172	190	18	2.28	SU
						199	209	10	1.70	SU
						218	220	2	2.77	SU
						227	229	2	11.36	EOH, SU
150SORDGC007	210,299	44,516	152	-90/000	205	58	62	4	1.16	SU
						68	84	16	2.72	TR,SU

1 OX: oxide, SU: sulphide, TR: transitional material, EOH: end of hole

Hole Id	North	East	RL	Dip/ Azimuth	Total Depth	Down-hole Mineralised Intersection				
	m	m	M	degrees	m	From	To	Interval	Gold grade	Comments <sup>1</sup>
						m	m	m	g/t Au	
						89	96	7	1.47	OX,TR
150SORDGC008	210,114	44,340	150	-60/030	252	31	35	4	1.88	OX
						195	197	2	5.94	SU
160SORDGC001	210,276	44,362	160	-60/030	243	58	67	9	3.75	OX,TR
						129	131	2	3.16	TR
						240	243	3	7.07	EOH, SU
160SORDGC002	210,335	44,260	160	-60/030	228	35	38	3	2.87	SU
						57	64	7	3.52	SU
						66	68	2	3.43	SU
						111	117	6	0.84	SU
						120	125	5	6.33	SU
160SORDGC003	210,303	44,303	157	-60/030	251	72	75	3	2.31	TR
						80	84	4	1.47	SU
160SORDGC004	210,320	44,180	160	-60/030	246	No Significant Results				
160SORDGC005	210,192	44,178	160	-60/030	210	197	210	13	2.10	EOH, SU
160SORDGC006	210,327	44,140	160	-60/030	252	65	70	5	1.02	SU
						133	141	8	1.61	SU
165SORDGC015	210,319	44,076	165	-60/030	133	29	34	4	2.09	TR
165SORDGC018	210,353	44,089	165	-60/030	230	15	26	11	3.82	TR
						28	33	5	1.15	OX,SU
						40	43	3	1.60	OX,TR,SU
						131	138	7	1.35	SU
185SORDGC001	210,476	44,154	186	-60/030	256	0	10	10	1.94	OX
						12	18	6	1.39	OX,TR
						19	26	7	0.79	SU
185SORDGC002	210,437	44,197	185	-60/030	252	No Significant Results				
185SORDGC003	210,462	44,264	185	-60/030	252	80	84	4	1.51	OX,TR
185SORDGC004	210,519	43,973	185	-60/030	252	63	68	5	0.78	OX
185SORDGC005	210,468	43,944	186	-60/030	252	74	90	16	3.67	OX
						97	100	3	0.86	SU
						246	249	3	2.70	SU
185SORDGC006	210,496	44,353	183	-60/030	252	No Significant Results				
195SORDGC117	210,479	44,225	195	-60/030	193	No Significant Results				
195SORDGC118	210,516	44,179	194	-60/030	246	125	130	5	2.04	SU
230SORDGC001	210,071	43,921	225	-60/030	220	45	69	24	1.86	SU
						159	169	10	2.51	SU
230SORDGC002	210,129	43,961	221	-60/030	210	54	56	2	3.00	OX
						62	80	18	10.86	OX
Including						70	72	2	55.2	OX
						89	97	8	2.50	OX
230SORDGC003	210,165	43,975	219	-60/030	193	6	16	10	3.53	OX

1 OX: oxide, SU: sulphide, TR: transitional material, EOH: end of hole

Hole Id	North	East	RL	Dip/ Azimuth	Total Depth	Down-hole Mineralised Intersection				
	m	m	M	degrees	m	From	To	Interval	Gold grade	Comments <sup>1</sup>
						m	m	m	g/t Au	
						25	28	3	0.89	OX
230SORDGC004	209,988	43,873	231	-60/030	253	56	65	9	0.85	SU
						106	122	16	0.76	SU

NOTES:

Azimuth referenced to Tabar Island Grid (TIG).

Reported intercepts are all down hole lengths.

OX: oxide, SU: sulphide, TR: transitional material

**Table 6: Simberi Significant Intercepts – Simberi Island, Papua New Guinea**

Hole Id	North	East	RL	Dip/ Azimuth	Total Depth	Down-hole Mineralised Intersection					
	m	m	m	degrees	m	From	To	Interval	Gold grade	Molybdenum grade	Copper grade
						m	m	m	g/t Au	% Mo	% Cu
SDH375 (Pigiput)	209,462	44,029	172.0	-67/152	729.3	No Significant Results					
SDH376 (Pigiput)	209,582	44,078	144.0	-60/090	720.2	266	360	94	0.37	NSR	NSR
<i>including</i>						280	316	36	0.62	NSR	NSR

NOTES:

Coordinates and Azimuth referenced to Tabar Island Grid (TIG).

Reported intercepts are all down hole lengths.

1 OX: oxide, SU: sulphide, TR: transitional material, EOH: end of hole

**Contents**

<b>Gwalia Deeps Drilling:</b>	Section 1 Sampling Techniques and Data
	Section 2 Reporting of Exploration Results
<b>Horse Paddock Well Drilling:</b>	Section 1 Sampling Techniques and Data
	Section 2 Reporting of Exploration Results

**Gwalia Deeps Drilling - Section 1 Sampling Techniques and Data**

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

Criteria	Commentary																								
Sampling techniques	<ul style="list-style-type: none"><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	<ul style="list-style-type: none"><li>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.</li></ul>																								
Drill sample recovery	<ul style="list-style-type: none"><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 style="list-style-type: none"><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 style="list-style-type: none"><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 style="list-style-type: none"><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	<ul style="list-style-type: none"><li>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.</li></ul>																								
Location of data points	<div><ul style="list-style-type: none"><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><table><tr><th>Grid</th><th>Azimuth</th><th>MGAE 1</th><th>MGAN 1</th><th>MGAE 2</th><th>MGAN 2</th><th>GridE 1</th><th>GridN 1</th><th>GridE 2</th><th>GridN 2</th><th>Rotation</th><th>Scale</th></tr><tr><td>LE_SGMG Sons of Gwalia Mine Grid</td><td>15.13</td><td>337371.157</td><td>6800342.586</td><td>340246.451</td><td>6799408.751</td><td>7200.281</td><td>6987.844</td><td>10219.711</td><td>6836.814</td><td>344.522</td><td>1</td></tr></table></div>	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	15.13	337371.157	6800342.586	340246.451	6799408.751	7200.281	6987.844	10219.711	6836.814	344.522	1
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	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	<ul style="list-style-type: none"><li>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.</li></ul>																								
Orientation of data in relation to geological structure	<ul style="list-style-type: none"><li>Sampling is perpendicular to lode orientations and is sound-based on past production and underground mapping.</li></ul>																								
Sample security	<ul style="list-style-type: none"><li>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.</li></ul>																								
Audits or reviews	<ul style="list-style-type: none"><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>																								

## **Gwalia Deeps Drilling - Section 2 Reporting of Exploration Results**

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

<b>Criteria</b>	<b>Commentary</b>
<b><i>Mineral tenement and land tenure status</i></b>	<ul style="list-style-type: none"><li>• SBM has 100% ownership of the two tenements M37/25 and M37/333 over the Gwalia deposit.</li></ul>
<b><i>Exploration done by other parties</i></b>	<ul style="list-style-type: none"><li>• Western Mining Corporation (WMC) and Sons of Gwalia (SGW), have previously completed deep diamond drilling below 1,100 metres below surface.</li></ul>
<b><i>Geology</i></b>	<ul style="list-style-type: none"><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>
<b><i>Drill hole Information</i></b>	<ul style="list-style-type: none"><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>
<b><i>Data aggregation methods</i></b>	<ul style="list-style-type: none"><li>• Down hole intercepts are reported as length weighted averages. No high grade cut is applied.</li></ul>
<b><i>Relationship between mineralisation widths and intercept lengths</i></b>	<ul style="list-style-type: none"><li>• Down hole length is reported for all holes; true width is not immediately known until further drilling is completed and the orebody modelled.</li></ul>
<b><i>Diagrams</i></b>	<ul style="list-style-type: none"><li>• Appropriate diagrams are included within the body of the report.</li></ul>
<b><i>Balanced reporting</i></b>	<ul style="list-style-type: none"><li>• Details of all holes material to Exploration Results have been reported in the intercept table.</li></ul>
<b><i>Other substantive exploration data</i></b>	<ul style="list-style-type: none"><li>• These holes test the deepest limits and extents of mineralisation and no other data is available.</li></ul>
<b><i>Further Work</i></b>	<ul style="list-style-type: none"><li>• Further exploration drill holes are planned.</li></ul>
<b><i>Balanced reporting</i></b>	<ul style="list-style-type: none"><li>• Details of all holes material to Exploration Results have been reported in the intercept table.</li></ul>
<b><i>Other substantive exploration data</i></b>	<ul style="list-style-type: none"><li>• Data is included in the body of the report.</li></ul>
<b><i>Further Work</i></b>	<ul style="list-style-type: none"><li>• Follow-up drilling is planned and is discussed in the body of the report.</li></ul>

## Horse Paddock Well Drilling - Section 1 Sampling Techniques and Data

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

Criteria	Commentary
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>Sampling was conducted via Reverse Circulation drilling.</li> <li>One metre samples were generated by a rig-mounted cyclone splitter and collected in calico bags.</li> <li>Samples were transported to the on-site laboratory at the Gwalia mine for compositing. A rotary splitter was used to split the original sample into two portions. One portion was used to prepare a three metre composite sample (approximately 3 kg), the other portion retained for one metre analysis.</li> <li>Composite samples were submitted to SGS laboratory in Kalgoorlie for fire assay with a 50 g charge and analysis by Flame Atomic Absorption Spectrometry (FFA505 method).</li> <li>Zones of anomalous composite results were selected for one metre assays. One metre samples were submitted to SGS Laboratory in Perth for fire assay with a 30 g charge analysed for gold by Flame Atomic Absorption Spectrometry (FFA303 method), and a 0.2 g-20 ml charge was digested by four acid digest and analysed by combined ICP-AES and ICP-MS (ICP40Q and IMS40Q method) testing for 61 elements (Ag, Al, As, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cs, Cu, Dy, Er, Eu, Fe, Ga, Gd, Hf, Ho, In, K, La, Li, Lu, Mg, Mn, Mo, Na, Nb, Nd, Ni, P, Pb, Pr, Rb, S, Sb, Sc, Se, Sm, Sn, Sr, Ta, Tb, Te, Th, Ti, Tl, Tm, U, V, W, Y, Yb, Zn, Zr).</li> <li>Representative specimens from every metre were sieved, cleaned and stored in plastic chip trays for future reference.</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>RC drilling was carried out using a 150 mm hammer bit. Drilling was completed by Raglan Drilling who utilised a truck mounted Schramm T660 rig with 1150 cfm and 350 psi.</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>RC sample recovery and condition (wet/dry) were routinely 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>
<b>Logging</b>	<ul style="list-style-type: none"> <li>All drill holes were logged in full for lithology, alteration, veining, weathering/regolith and colour.</li> <li>All logging is qualitative.</li> </ul>
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>Samples received by SGS laboratories in Perth and Kalgoorlie were sorted, dried, followed by complete pulverisation (90% passing -75 µm).</li> </ul>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>Sample charge sizes of 50 g for composites and 30 g for one metre samples analysed by fire assay is considered appropriate for the sample medium (predominantly fresh rock).</li> <li>Certified reference material was inserted into the sample stream at a ratio of 1:50.</li> <li>SGS Laboratories inserted certified standards, blanks and replicates and lab repeats.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>Primary geological and sampling data were recorded into made for purpose excel spreadsheets, peer reviewed and validated by exploration geologists.</li> <li>Data was then transferred into the St Barbara corporate DataShed database where it was further validated by an experienced database geologist.</li> <li>No adjustments to assay data were made.</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>Prior to drilling, all holes were marked out using a handheld GPS with ±3 m accuracy for easting, northings and ±10 m elevation.</li> <li>Upon completion of the program all holes were surveyed by the Gwalia mine surveyors using a Leica GS16 base and rover system to determine the final collar positions in MGA94 Zone 51 grid.</li> <li>Downhole surveys were taken by the drilling contractor at 30 m intervals utilising a single shot Reflex camera referencing magnetic grid.</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>Drilling targeted individual geophysical targets and was not designed on a pattern spacing grid.</li> <li>No historic drilling had been completed in the immediate vicinity of the holes drilled in this program.</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>The regional stratigraphy strikes NNW and dips approximately 30 degrees to the NE.</li> <li>Drill hole dip was typically -65 or -75 degrees, with three holes drilled vertically.</li> <li>Drill hole orientation was consistent with historic drilling completed over the prospect, drilled towards the west (270 degrees azimuth) on the Horse Paddock Well local grid (Local Grid: Magnetic Grid + 34.37)</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>Company personnel or approved contractors only allowed on drill sites; drill samples are only removed from drill site by company employees and transported to the company's secure processing facility. Processed samples are consigned to accredited laboratories for sample preparation and analysis.</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>Logging and sampling data was peer reviewed in-house by SBM geologists.</li> </ul>



## **Horse Paddock Well Drilling - Section 2 Reporting of Exploration Results**

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

<b>Criteria</b>	<b>Commentary</b>
<b><i>Mineral tenement and land tenure status</i></b>	<ul style="list-style-type: none"><li>• SBM has 100% ownership of the tenement M37/587 in which the drilling was completed.</li></ul>
<b><i>Exploration done by other parties</i></b>	<ul style="list-style-type: none"><li>• Numerous shallow workings exist in the project area.</li><li>• Exploration activities including RAB drilling, soil sampling and geophysics by groups such as Esso, City Resources and Sons of Gwalia.</li><li>• Sons of Gwalia undertook shallow (10 m deep) open pit mining of the oxide/lateritic material at the Harlech deposit within the project area.</li></ul>
<b><i>Geology</i></b>	<ul style="list-style-type: none"><li>• Project area is located in the Leonora area of the Norseman-Wiluna Archean greenstone.</li><li>• The project lies between the Mt George Shear Zone to the east, and the Raeside Batholith/greenstone contact to the west.</li><li>• Project area hosts a sequence of basalts, talc-carbonate schists, gabbroic/doleritic sills and interflow sediments. The sequence is intruded by granitoids and E-W oriented dolerite dykes.</li></ul>
<b><i>Drill hole Information</i></b>	<ul style="list-style-type: none"><li>• Drill hole information for holes returning significant results have been reported in the intercept table outlining the collar co-ordinates and includes drilled depth, hole dip and azimuth and composited mineralised intercept lengths and depth.</li></ul>
<b><i>Data aggregation methods</i></b>	<ul style="list-style-type: none"><li>• Down hole intercepts are reported as length weighted averages.</li><li>• No high grade cut is applied.</li></ul>
<b><i>Relationship between mineralisation widths and intercept lengths</i></b>	<ul style="list-style-type: none"><li>• Down hole length is reported for all holes; true width is not known as the orientation of mineralisation is not fully understood.</li></ul>
<b><i>Diagrams</i></b>	<ul style="list-style-type: none"><li>• Appropriate diagrams are included within the body of the report.</li></ul>
<b><i>Balanced reporting</i></b>	<ul style="list-style-type: none"><li>• Details of all holes material to Exploration Results have been reported in the intercept table.</li></ul>
<b><i>Other substantive exploration data</i></b>	<ul style="list-style-type: none"><li>• Data is included in the body of the report.</li></ul>
<b><i>Further Work</i></b>	<ul style="list-style-type: none"><li>• Further exploration drill holes are planned.</li></ul>
<b><i>Balanced reporting</i></b>	<ul style="list-style-type: none"><li>• Details of all holes material to Exploration Results have been reported in the intercept table.</li></ul>
<b><i>Other substantive exploration data</i></b>	<ul style="list-style-type: none"><li>• Data is included in the body of the report.</li></ul>

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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 to the succeeding section.)

Criteria	Commentary
<i>Sampling techniques</i>	<ul style="list-style-type: none"> <li>Sampling was conducted via Aircore and RC drilling. Aircore drill holes were on 50 m or 100 m spacing with line spacing ranging between 200 m and 600 m or as individual scout lines. RC holes were not designed on any regular spacing.</li> <li>Samples were collected from a rig-mounted cyclone by bucket and were then placed directly on the ground in neat rows of between ten and fifty (depending on hole depth).</li> <li>Drill spoil was sampled with a scoop to 4 m composite samples of approximately 3 kg.</li> <li>During RC drilling one meter samples were also generated by the rigs cone splitter system and collected in calico bags, these were left on the ground on top of the corresponding meter of drill spoil. One meter samples are submitted for assaying based on the results of the initial 4m composite sampling.</li> <li>The 3kg Aircore composites were submitted to Bureau Veritas Minerals Pty Ltd - Perth where they were sorted and dried, crushed to 10 mm and pulverised to -75 µm. A 40 g charge of pulverised sample was then digested with aqua regia with a gold analysis by ICP-MS to a detection limit of 1 ppb. The same digested sample was also tested for arsenic by ICP-AES to 1ppm detection limit.</li> <li>Anomalous Aircore composite samples (&gt;100ppb Au) were subsampled on a metre by metre basis using an aluminium scoop. These samples were submitted to Bureau Veritas Minerals Pty Ltd- Perth where they were sorted and dried, crushed to 10mm and pulverised to -75 µm. A 40 g charge of pulverised sample was then analysed for Au, Pd &amp; Pt by Fire Assay with an ICP-AES finish to a detection limit of 1 ppb.</li> <li>Anomalous RC composite samples (&gt;100 ppb) were subsampled using the previously collected one metre samples from the rigs cone splitter system. These were submitted to Bureau Veritas Minerals Pty Ltd - Perth where they were sorted and dried, crushed to 10 mm and pulverised to -75 µm. A 40 g charge of pulverised sample was then analysed for Au by Fire Assay with an ICP-AES finish to a detection limit of 1 ppb.</li> <li>Representative specimens from end of hole Aircore rock chips were stored in plastic chip trays for future reference. For RC drilling a representative specimen of every meter was 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 as those samples submitted to Bureau Veritas. A 10g charge of pulverised 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).</li> </ul>
<i>Drilling techniques</i>	<ul style="list-style-type: none"> <li>Aircore drilling was carried out by an 85 mm bit. All holes were drilled to refusal which was generally at the fresh rock interface. Drilling was carried out by Raglan Drilling, who utilised two separate Aircore rigs; a truck mounted R/A 180 Rig with 750 cfm and 350 psi and a track mounted lake rig with 750 cfm and 350 psi.</li> <li>RC drilling was carried out using 140 to 145 mm hammer bits. Drilling was completed by Raglan Drilling who utilised a truck mounted SCHRAMM T685W rig with Sullair 1150/350 on board air.</li> </ul>
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> <li>Sample recoveries and condition (wet/dry) were routinely 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>
<i>Logging</i>	<ul style="list-style-type: none"> <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>
<i>Sub-sampling techniques and sample preparation</i>	<ul style="list-style-type: none"> <li>Aircore and RC samples were collected as both dry and wet samples using a sample scoop.</li> <li>All composite samples were sorted, dried, crushed and pulverised to produce a 40g charge prior to fire assay.</li> <li>Samples were collected at 1 m intervals and composited in 4 m samples using a scoop to sample individual metre samples.</li> <li>QC procedures for composite sampling involved the insertion of certified reference material, field duplicates and blanks at ratios of 1:50.</li> <li>Bureau Veritas inserted certified standards, replicates and lab repeats.</li> </ul>
<i>Quality of assay data and laboratory tests</i>	<ul style="list-style-type: none"> <li>The Aircore composite samples used a 40 g charge with an aqua regia digest which is considered appropriate for analysis of the regolith dominated sample medium.</li> <li>The RC composite samples used a 40 g charge for fire assay which is considered appropriate for gold mineralisation in fresh rock material.</li> <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> <li>Bureau Veritas inserted certified standards, replicates and lab repeats.</li> </ul>

Criteria	Commentary
<i>Verification of sampling and assaying</i>	<ul style="list-style-type: none"> <li>Primary geological and sampling data were recorded into made for purpose 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>
<i>Location of data points</i>	<ul style="list-style-type: none"> <li>Prior to drilling, all holes were marked out using a handheld GPS with <math>\pm 3</math> m accuracy for easting, northings and <math>\pm 10</math> m elevation. Upon completion of the program all holes were resurveyed using a DGPS with decimetre accuracy to determine the final collar positions.</li> <li>No downhole surveys were conducted on Aircore holes.</li> <li>RC holes PJRC0058 to PJRC0061 were surveyed downhole by Raglan drilling who captured dip/azimuth readings at 60 m intervals using a Reflex single shot camera tool.</li> <li>RC holes PJRC0062 to PJRC0073 were surveyed downhole by Raglan drilling who captured dip/azimuth readings at 20 intervals using a Reflex gyro tool. The gyro tool provides True North Azimuth.</li> <li>All locations were captured in MGA94 zone 51 grid.</li> </ul>
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <li>Aircore drill holes were on 50 m or 100 m spacings with line spacing's ranging between 200 m and 600 m or as individual scout lines.</li> <li>RC holes were not designed on any regular spacing.</li> <li>Reported Aircore and RC results are based on the 1 m Fire Assay re-splits of original 4 m composite samples or the original composite sampling.</li> </ul>
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <li>The majority of Aircore drill holes had a dip and azimuth of -60/270. AC holes were drilled vertically in areas were transported cover made drilling difficult. AC drill traverses were designed perpendicular to the regional structures known to control mineralisation. This was either east – west or northeast – southwest.</li> <li>The majority of RC holes had a dip and azimuth of -60/270 or -60/090 which is broadly perpendicular to the regional trends.</li> </ul>
<i>Sample security</i>	<ul style="list-style-type: none"> <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>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <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
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <li>SBM has 100% ownership of the 19 tenements comprising the Pinjin Project. These include: E28/2234, E28/2283, E28/2284, E31/0999, E31/1000, E31/1005, E31/1007, 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>
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <li>There have been numerous historical holders of the project area which covers over ~1,131 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>
<i>Geology</i>	<ul style="list-style-type: none"> <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>
<i>Drill hole Information</i>	<ul style="list-style-type: none"> <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>
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> <li>Broad down hole intercepts are reported as length weighted averages using a cut-off of 500 ppb Au. Such intercepts may include material below cut-off but no more than 1 sequential meter of such material and except where the average drops below the cut-off. Supplementary grades of &gt; 1000 ppb Au are used to highlight higher grades zones within the broader zone.</li> <li>No high grade cut is applied.</li> <li>No metal equivalent values are used for reporting exploration results.</li> </ul>
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> <li>Down hole length is reported for all holes; true width is not known as the orientation of mineralisation is not fully understood.</li> </ul>
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li>Included in the body of the report.</li> </ul>
<i>Diagrams</i>	<ul style="list-style-type: none"> <li>Diagrams show all drill holes material and immaterial to Exploration Results.</li> </ul>
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <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>
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li>Data is included in the body of the report.</li> </ul>
<i>Further Work</i>	<ul style="list-style-type: none"> <li>Further exploration Aircore and RC drill holes are planned and are discussed in the body of the report.</li> </ul>

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

(Criteria in this section apply to the succeeding section.)

Criteria	Commentary
<i>Sampling techniques</i>	<ul style="list-style-type: none"> <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 or quarter core was sampled on nominal 1 or 2-metre intervals with the upper or left - hand side of the core collected for sample preparation. For PQ diameter core a further cut was completed, whereby quarter core is submitted to provide a practical sample size.</li> <li>Half core or quarter core was dispatched to the ITS PNG Ltd (Lae) sample preparation facility with 250g pulps sent to Intertek Laboratory in Perth. Pulp residuals are stored in (Lae) for six months following assay.</li> <li>RC Drilling at Sorowar - One meter samples were generated by the rigs cyclone splitter system by collection in calico bags. One meter calico bag samples are then submitted for assay. Samples were fully prepared at the company's on-site sample preparation facility on Simberi Island with 200g pulps sent to SGS Laboratory in Townsville. Pulp residues are stored in Townsville for future re-assay if required.</li> </ul>
<i>Drilling techniques</i>	<ul style="list-style-type: none"> <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. Drilling was completed by Quest Exploration Drilling (QED). When ground conditions permit, an ACT Digital Core Orientation Instrument was used by the contractor to orientate the core.</li> <li>RC drilling at Sorowar was carried out using 140 to 145mm hammer bits. Drilling was completed by Quest Exploration Drilling (QED) who utilised a track mounted SCHRAMM 685 rig coupled to an auxiliary compressor/booster unit. A limited number of holes were drilled using a DML 45 drill, also coupled to the auxiliary compressor/booster unit.</li> </ul>
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> <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.</li> <li>RC drilling recoveries and condition (wet/dry) were routinely recorded. 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>
<i>Logging</i>	<ul style="list-style-type: none"> <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 dry and wet.</li> <li>RC drilling chips were sieved, cleaned and stored in plastic chip trays for logging and future reference.</li> <li>All holes are fully logged.</li> </ul>
<i>Sub-sampling techniques and sample preparation</i>	<ul style="list-style-type: none"> <li>All diamond drill core associated with St Barbara work program was half cut with the upper or left-hand side submitted for assay. For PQ diameter core a further cut was completed, whereby quarter core is submitted to provide a practical sample size. All samples were sent to ITS PNG Ltd (Lae) sample preparation facility, where preparation involves drying, jaw crush to 95% passing -4.75mm, pulverise in LM5 or LM2 to a minimum 95% passing -106um, with 250g pulps sent to Intertek Laboratory in Perth. Pulp residuals are stored in Lae for six months following assay. Quality control of sub-sampling consisted of insertion of blank control samples and coarse reject duplicates, both at a ratio of 1:20 samples.</li> <li>All diamond drill core samples associated with the Newcrest option and farm-in agreement work program diamond core was sampled on 2 metre intervals. For HQ and NQ diameters, core was cut in half with the upper or left-hand side of the core routinely submitted. For PQ diameter core a further cut was completed, whereby quarter core is submitted to provide a practical sample size. Quality control of sub-sampling consisted of insertion of blank control samples and coarse reject duplicates, both at a ratio of 1:20 samples. All samples were sent to ITS PNG Ltd (Lae) sample preparation facility, where preparation involves drying, jaw crush to 95% passing - 4.75mm, pulverise in LM5 or LM2 to a minimum 95% passing -106um, with 250g pulps sent to Intertek Laboratory in Perth.</li> <li>All Sorowar reverse circulation rock chip samples were fully prepared at the company's on-site sample preparation facility on Simberi Island. Preparation involved drying, jaw crush to 70% passing -6mm, pulverise in LM5 or LM2 to a minimum 85% passing -75um, with 200g pulps sent to SGS Laboratory in Townsville. Pulp residues are stored in Townsville for future re-assay if required.</li> </ul>



Criteria	Commentary
<i>Quality of assay data and laboratory tests</i>	<ul style="list-style-type: none"> <li>All diamond drill samples associated with the Newcrest option and farm-in agreement work program and the St Barbara work program (excluding the Sorowar RC drill samples) were sent to Intertek for analysis. Half or quarter core samples were analysed for Au via 50g Fire Assay ICP and AAS finish (FA50/ICP OE04 method) for low detection sample or 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). 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>All reverse circulation rock chips from Sorowar drilling were analysed for gold using fire assay with a 50g charge and analysis by flame atomic absorption spectrometry (FAA505 method) at SGS, Townsville; and then multi-elements (Ag, As, Ca, Cu, Mo, Pb, S, Sb, Zn) via 4 acid digest (DIG41Q method) and Inductively Coupled Plasma Atomic Emission Spectroscopy ICP-AES via (ICP41Q method).</li> <li>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>Intertek Perth, SGS Townsville and ALS Townsville inserted certified standards and replicates and lab repeats.</li> </ul>
<i>Verification of sampling and assaying</i>	<ul style="list-style-type: none"> <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>
<i>Location of data points</i>	<ul style="list-style-type: none"> <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 initially by hand held GPS and by DGPS after hole completion. All holes were downhole surveyed using either a Reflex or Ranger single shot camera with the first reading at about 18m and then approximately every 30m increments to the bottom-of-the hole.</li> </ul>
<i>Data spacing and distribution</i>	<ul style="list-style-type: none"> <li>Drilling data is not yet sufficient to establish continuity of the lodes and therefore the drill spacing is irregular and broad spaced.</li> <li>At Sorowar pit, the RC drilling targeting sulphide gold mineralisation is drilled on an approximate 60m by 60m spacing.</li> </ul>
<i>Orientation of data in relation to geological structure</i>	<ul style="list-style-type: none"> <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> <li>At Sorowar pit, the RC drilling targeting sulphide gold mineralisation is optimised with holes drilled at 60° dip towards the northeast where possible to test the interpreted main northwest striking orientation to mineralisation. Limited RC holes are drilled in a vertical orientation when access is restricted.</li> </ul>
<i>Sample security</i>	<ul style="list-style-type: none"> <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 samples sent to Intertek are stored in locked and guarded storage facilities until receipted at the Laboratory.</li> </ul>
<i>Audits or reviews</i>	<ul style="list-style-type: none"> <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
<i>Mineral tenement and land tenure status</i>	<ul style="list-style-type: none"> <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>
<i>Exploration done by other parties</i>	<ul style="list-style-type: none"> <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>
<i>Geology</i>	<ul style="list-style-type: none"> <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.</li> <li>On Tatau and Big Tabar Islands, located immediately south of Simberi, porphyry Cu-Au, epithermal quartz Au-Ag and carbonate-base metal Au mineralisation is present.</li> <li>On Simberi Island, Diamond and RC drilling is being conducted on the Simberi ML136 testing for epithermal sulphide gold potential.</li> <li>Diamond drilling is being conducted at Simberi Island on the Simberi ML136 at depth below Pigiput pit and on Big Tabar Island at Banesa Prospect testing for porphyry Cu-Au mineralisation.</li> </ul>
<i>Drill hole Information</i>	<ul style="list-style-type: none"> <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 mineralised intercepts lengths and depth as well as hole depth.</li> </ul>
<i>Data aggregation methods</i>	<ul style="list-style-type: none"> <li>For gold only epithermal mineralisation, 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. 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 <math>\geq 5.0\text{g/t Au}</math> and <math>\geq 1\text{m}</math> down hole.</li> <li>For porphyry copper-gold mineralisation, broad downhole intercepts are reported as length weighted averages using a cut-off of 0.1% Cu and a minimum length of 20m with up to 10m of sequential internal dilution. Supplementary cut-offs of <math>&gt; 1\%</math> Cu may be reported. Au and Cu grades are reported. Anomalous Au grades may also be reported independently where <math>\text{Au} &gt; 0.1 \text{ g/t}</math> and/or <math>&gt; 0.5 \text{ g/t Au}</math> using above minimum width and internal dilution criteria.</li> <li>For both mineralised styles, core loss is assigned the same grade as the sample grade; no high grade cut is applied; grades are reported to two significant figures and no metal equivalent values are used for reporting exploration results.</li> </ul>
<i>Relationship between mineralisation widths and intercept lengths</i>	<ul style="list-style-type: none"> <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>
<i>Diagrams</i>	<ul style="list-style-type: none"> <li>Diagrams show all drill holes material and immaterial to Exploration Results.</li> </ul>
<i>Balanced reporting</i>	<ul style="list-style-type: none"> <li>Details of all holes material to Exploration Results will be reported in intercept tables, and all other drill holes drilled during the reporting period are highlighted on diagrams included in the report.</li> </ul>
<i>Other substantive exploration data</i>	<ul style="list-style-type: none"> <li>Included in the body of the report. Core holes are routinely measured for bulk density determinations to be used for potential future resource modelling.</li> </ul>
<i>Further work</i>	<ul style="list-style-type: none"> <li>Included in the body of the report.</li> </ul>

## End of report