



## Presentation to analysts and investors at Leonora Operations

Attached is a presentation to analysts and investors attending a site visit today at Leonora Operations, Western Australia.

**Investor Relations**

Mr Rowan Cole

Company Secretary

+61 3 8660 1900

**Media Relations**

Mr Tim Duncan

Hinton & Associates

+61 3 9600 1979

## Gwalia site visit presentation



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

This presentation may contain forward-looking statements that are subject to risk factors associated with exploring for, developing, mining, processing and sale of gold. Forward-looking statements include those containing such words as anticipate, estimates, forecasts, should, will, 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 presentation. Actual results may vary from the information in this presentation. The Company does not make, and this presentation should not be relied upon as, any representation or warranty as to the accuracy, or reasonableness, of such statements or assumptions. Investors are cautioned not to place undue reliance on such statements.

This presentation 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 presentation.

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.

*Financial figures are in Australian dollars unless otherwise noted.*

*Financial year is 1 July to 30 June.*

*This presentation published 13 July 2017*

## Overview of St Barbara

- > Operations
- > Safety

## Gwalia Mine, Leonora, WA

- > History
- > Production
- > Innovation
- > Growth

## Exploration

## Appendices



## ASX 200 Company (SBM), founded 1969

> Shares on issue	497.3 M
> Market Cap <sup>1</sup>	A\$1,398 M
> Ore Reserves June 2016	4.0 Moz <sup>2</sup>
> Mineral Resources June 2016	9.1 Moz <sup>2</sup>

## Consolidated production

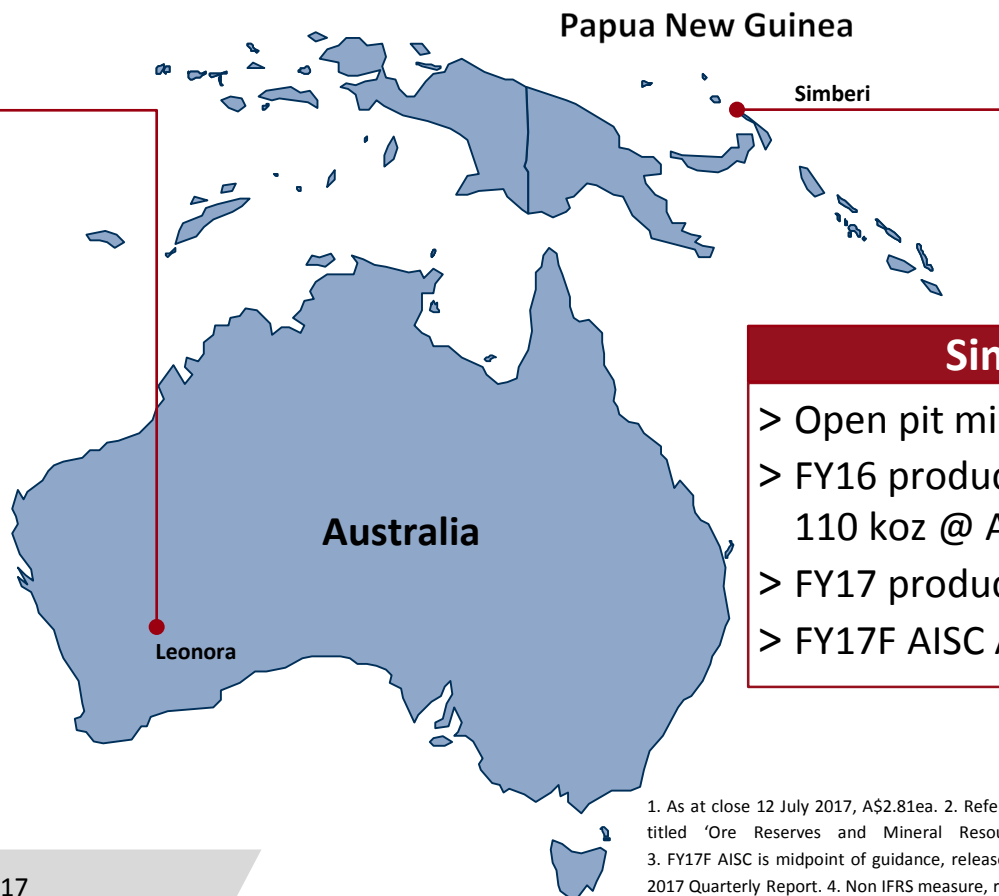
> FY16	387 koz @ AISC <sup>4</sup> A\$933/oz
> FY17	381 koz
> FY17F	AISC A\$960/oz <sup>3</sup>

## Leonora

- > Gwalia underground mine
- > FY16 production 267 koz @ AISC A\$783/oz
- > FY17 production 265 koz
- > FY17F AISC A\$805/oz<sup>3</sup>

## Exploration

- > Greenfields and brownfields exploration portfolio in Australia & PNG
- > Near mine targets
- > JV with Newcrest in PNG

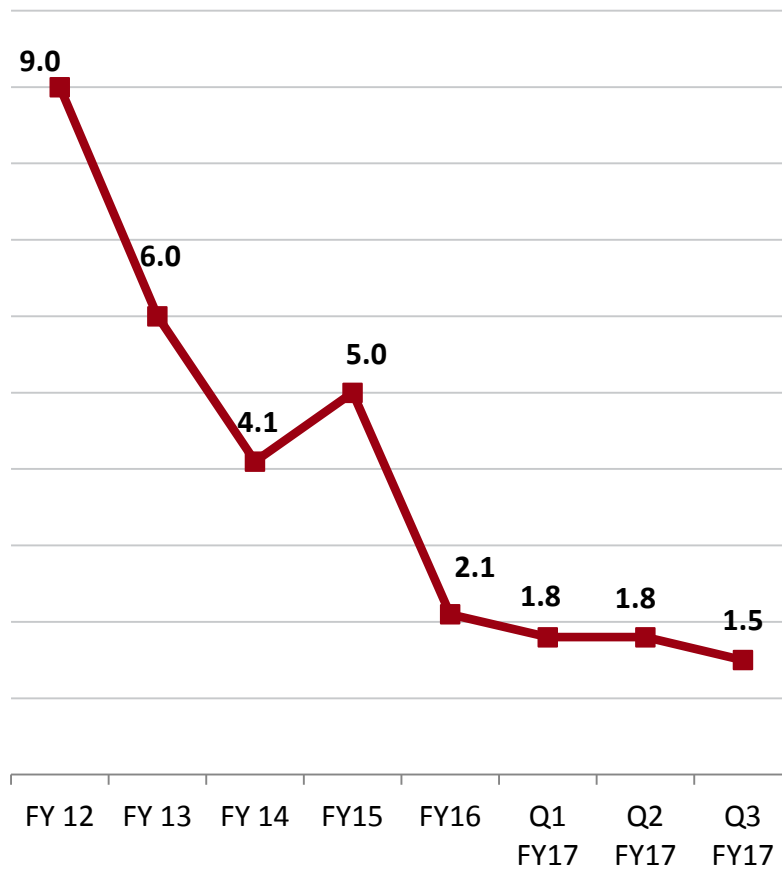


## Simberi

- > Open pit mine
- > FY16 production 110 koz @ AISC A\$1,293/oz
- > FY17 production 116 koz
- > FY17F AISC A\$1,308/oz<sup>3</sup>

1. As at close 12 July 2017, A\$2.81ea. 2. Refer ASX announcement 23 August 2016 titled 'Ore Reserves and Mineral Resources Statements 30 June 2016'. 3. FY17F AISC is midpoint of guidance, released on 20 April 2017 in the Q3 March 2017 Quarterly Report. 4. Non IFRS measure, refer corresponding slide in Appendix

## Total Recordable Injury Frequency Rate<sup>2</sup>

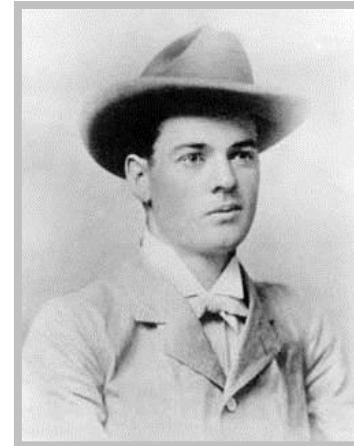
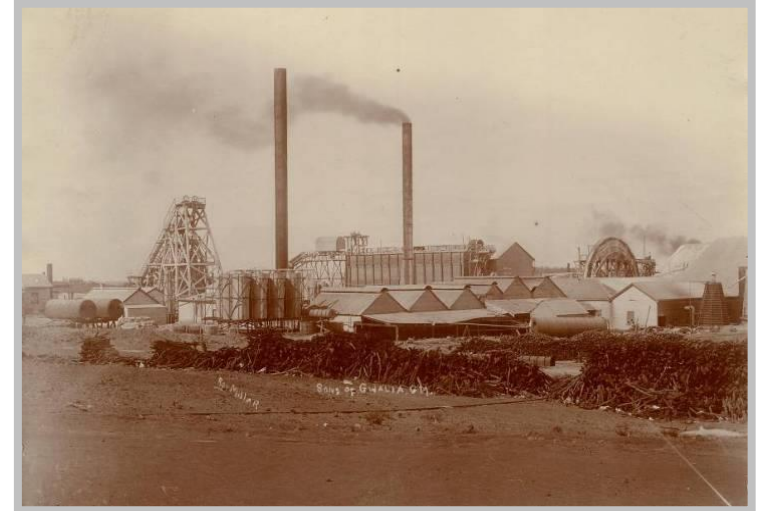


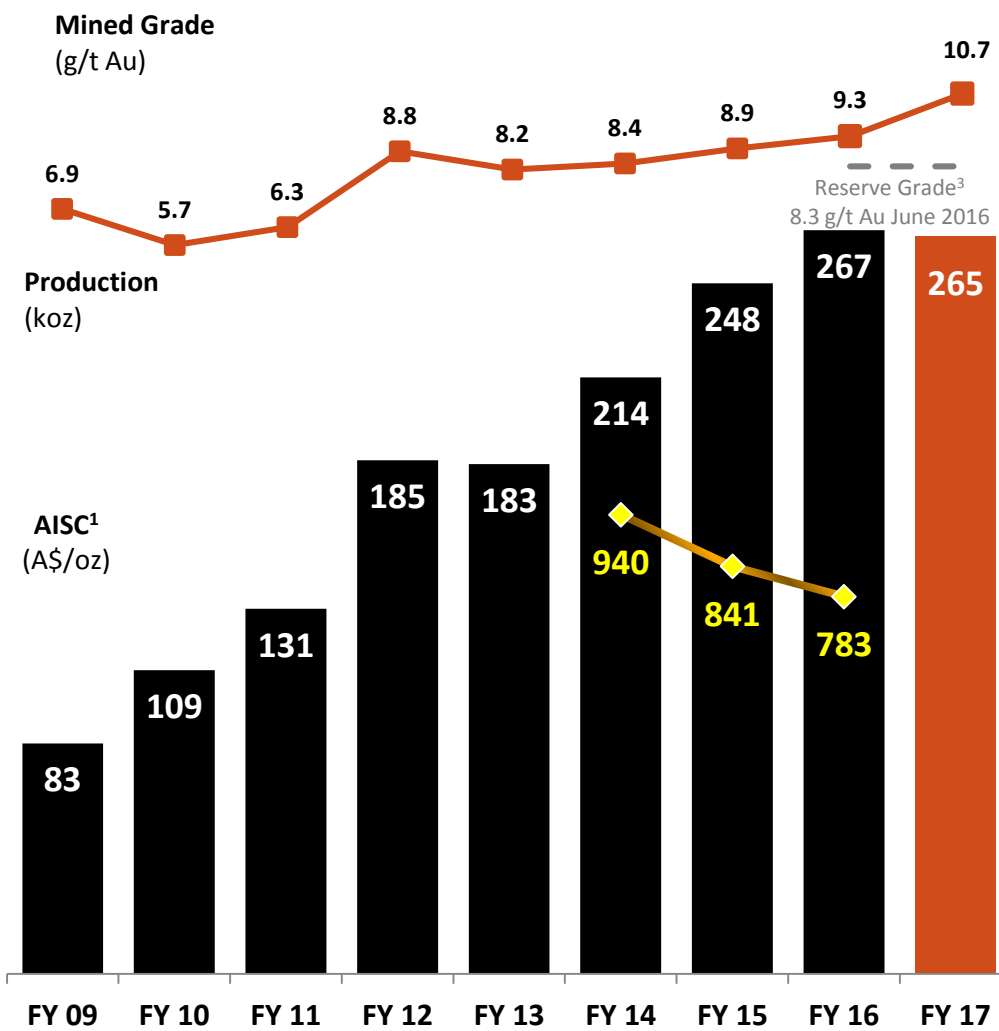
### Safety performance

- > Record low TRIFR<sup>1</sup> of 1.5 continued to 31 March 2017
- > Gwalia Emergency Response Team overall winners for the second year running in CMEWA Underground Mine Emergency Response Competition<sup>3</sup>

1. Total Recordable Injury Frequency Rate (12 month avg)  
2. TRIFR includes Pacific Operations from September 2012  
3. The Chamber of Minerals and Energy Western Australia, 5-7 November 2016, Kalgoorlie

- > From surface outcrop (first mined 1896) to current workings is approx. 3.5 km 'straight line' along shear
- > Herbert Hoover was the initial Gwalia mine manager (1897-1898), later a US President (1929-1933), noted angle of deposit – took mining underground via underlay shaft (forerunner of decline)
- > One of few world deposits mined for over 100 years





## FY17 production

- > Production 265 koz
- > Mined grade 10.7 g/t Au

## FY17 cost guidance<sup>2</sup>

- > Cost guidance @ AISC A\$795-  
A\$815/oz

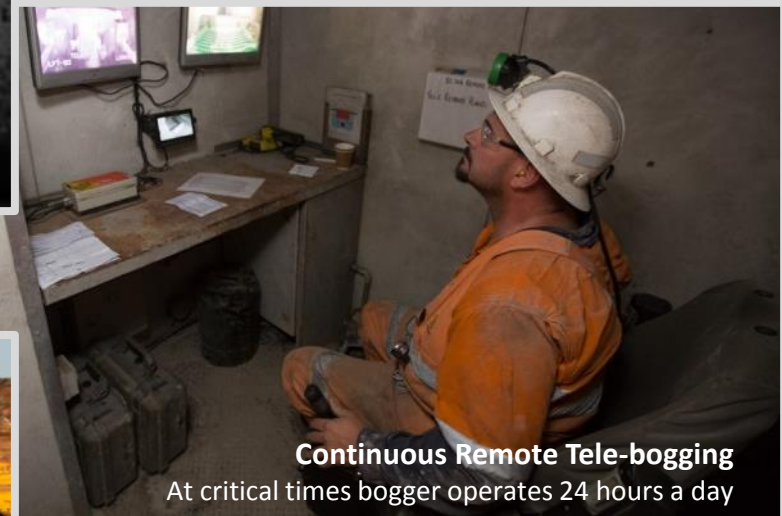
1. AISC is a Non-IFRS measure, refer appendix
2. FY17F cost guidance provided in the Q3 Mar 2017 Quarterly Report, released 20 April 2017. Actual cost to be reported in June quarterly report, anticipated release on 26 July 2017.
3. June 2016 Reserve grade 8.3 g/t Au, refer ASX announcement released 23 August 2016 titled 'Ore Reserves and Mineral Resources Statements 30 June 2016'.

# Recent productivity improvements



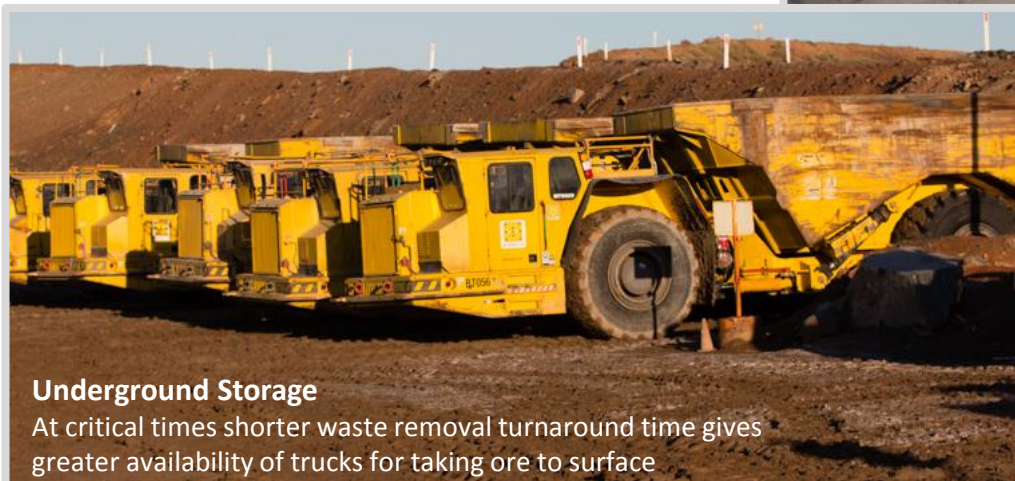
## Ore passes

Allows bogger to work constantly, independent of ore trucks, removes ore from fired stopes more rapidly, allowing paste-filling and adjacent stopes to be fired earlier



## Continuous Remote Tele-bogging

At critical times bogger operates 24 hours a day



## Underground Storage

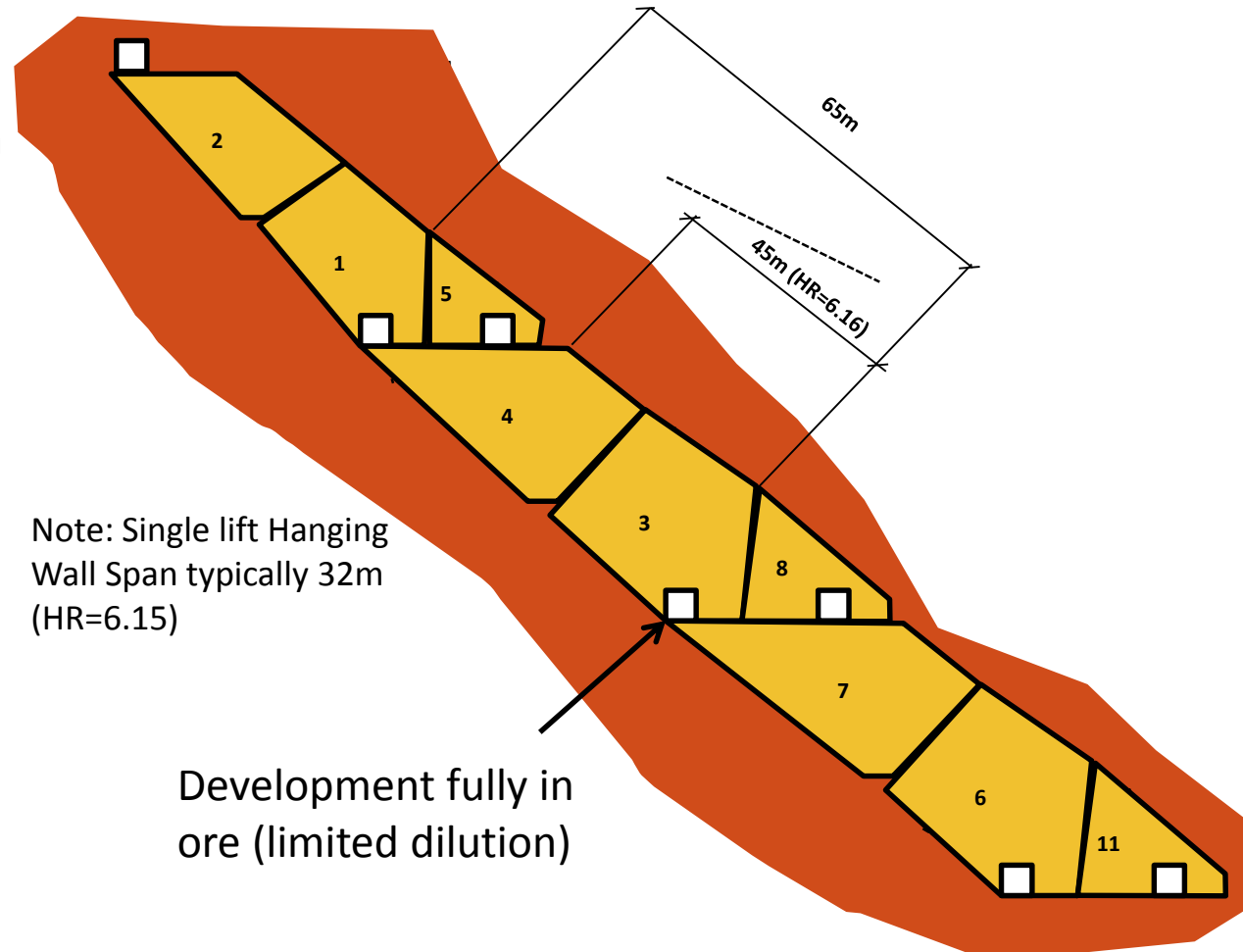
At critical times shorter waste removal turnaround time gives greater availability of trucks for taking ore to surface

## Mining method

- > Long hole stoping with fill
- > North & South access on two dual lift levels gives 4 mining areas
- > Greater percentage of free bogging increases productivity of each stope
- > Sill drives fully in ore – reduces development dilution
- > Production drilling parallel to hanging-wall to reduce blast induced dilution

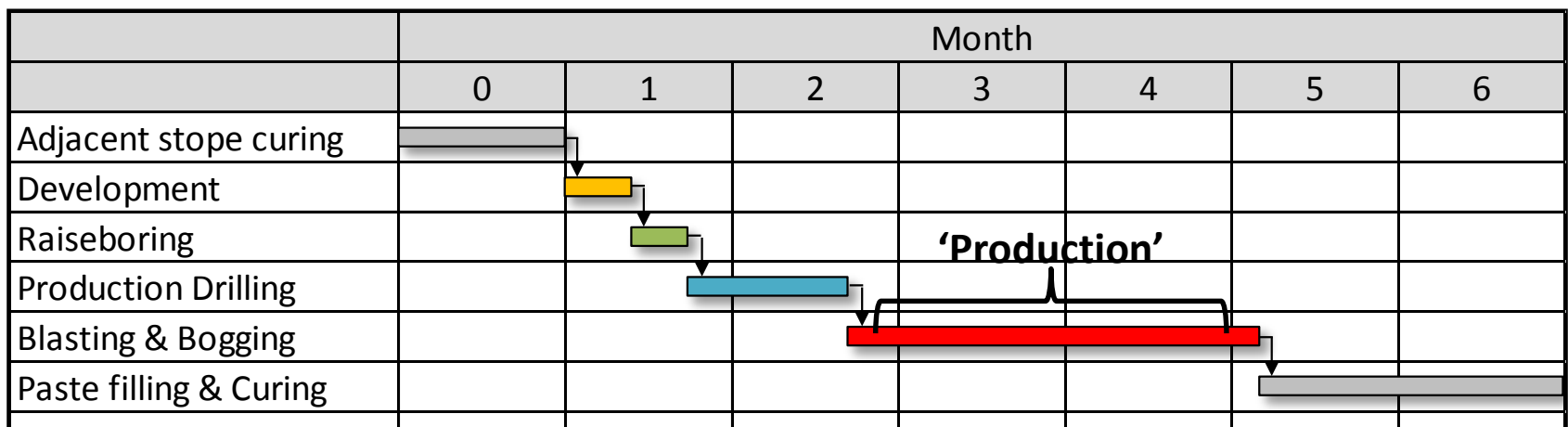
## Dual Lift Stopping in SWB

mining sequence manages the hanging wall



## Stope Cycle Time – 6 months per stope

- > ‘Bogging’ (extracting ore from the stope) represents just under 50% of stope cycle time
- > Filling and curing around 30% of stope cycle time
- > Adjacent stopes (beside, above, below) cannot be developed until curing complete
- > The maximum numbers of stopes ‘in cycle’ is four (on three levels)
- > Approximately 2 stopes ‘in production’ (blasting and bogging) at all times means overall production rate influenced by draw-point productivity (which is current focus of business improvement activity)
- > Mining commences on a new level (approx. 40 metres depth) approx. each 12 months
- > Commence with ‘centre slot’ on new level

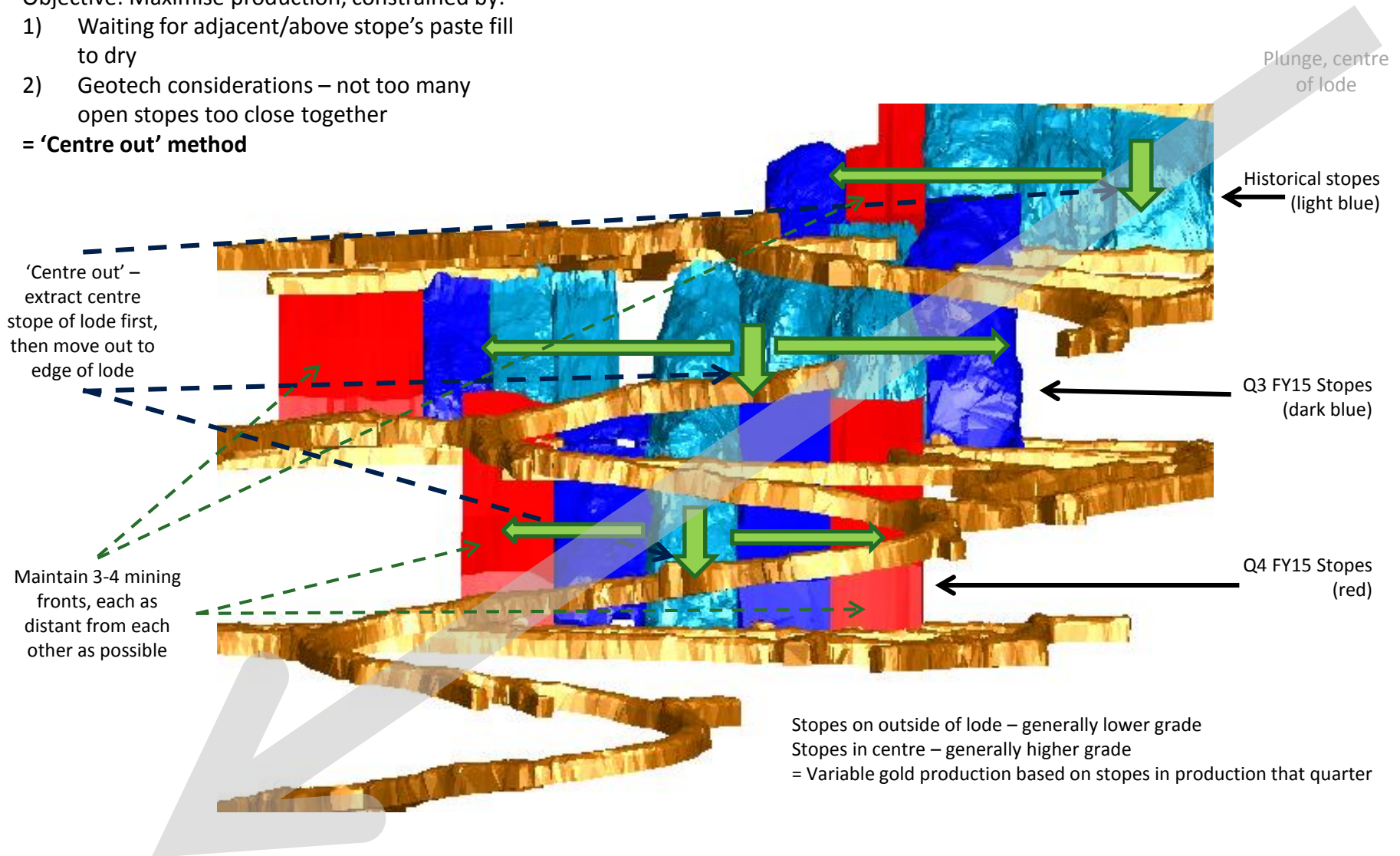


# Gwalia Production Profile – ‘Centre out’ method

Objective: Maximise production, constrained by:

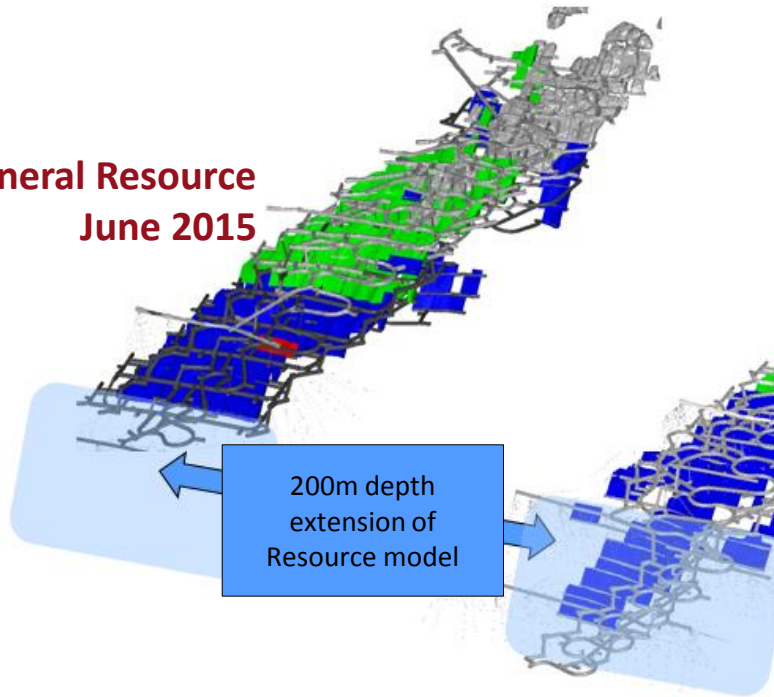
- 1) Waiting for adjacent/above stope's paste fill to dry
- 2) Geotech considerations – not too many open stopes too close together

= ‘Centre out’ method



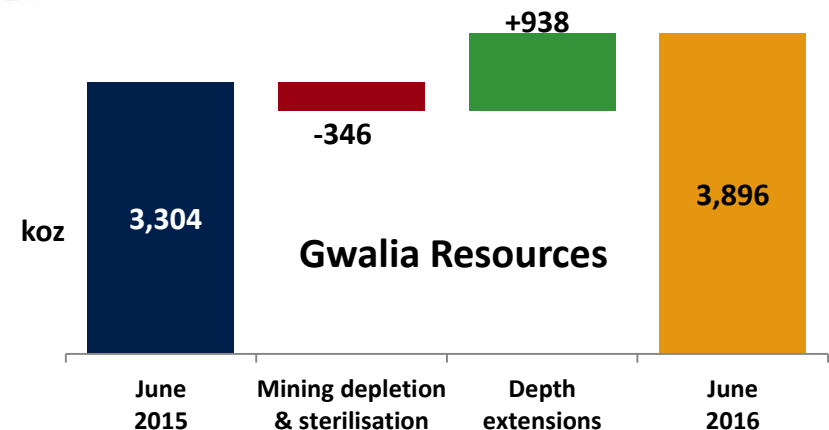
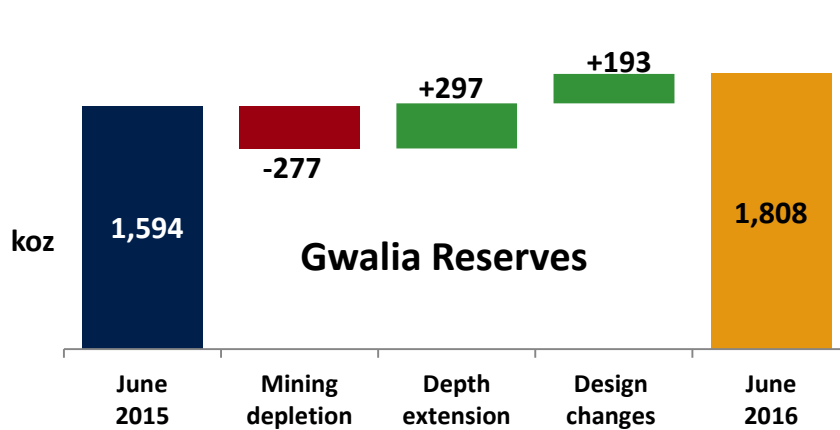
# Upgrade to Gwalia Resources & Reserves

**Gwalia Mineral Resource  
June 2015**

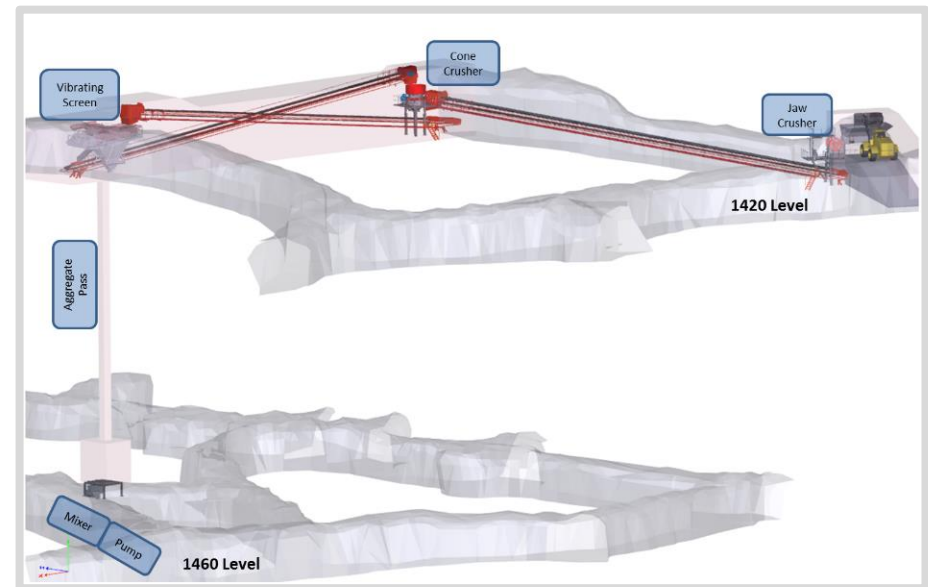
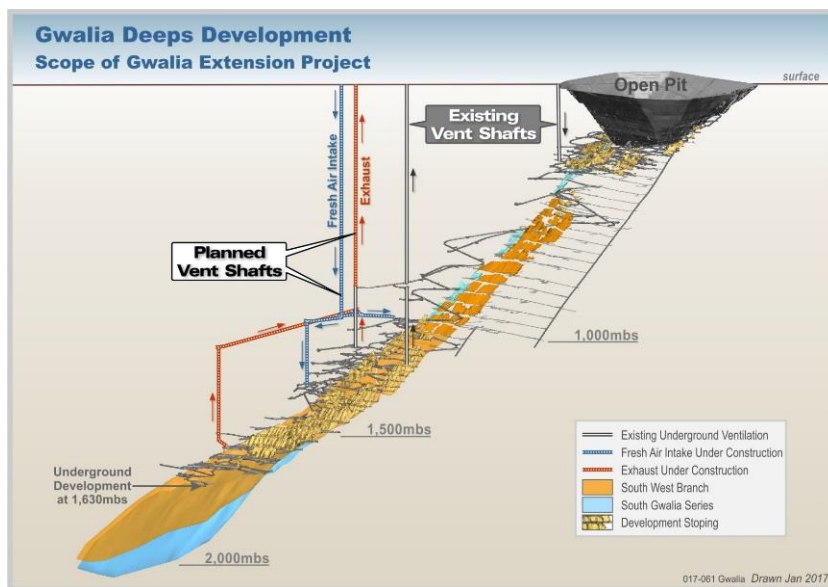


**Gwalia Mineral Resource  
June 2016**

■ Measured  
■ Indicated  
■ Inferred



- > Gwalia Extension Project **capex approved**<sup>1</sup>
- > Detailed budget and execution plan confirm that the project will generate a robust financial return and **extend mining at Gwalia to at least 2,000 mbs**<sup>2</sup>
- > Provides foundation for **potential further extensions**
- > Budget of **A\$100 million** and will take **two and half to three years** to construct



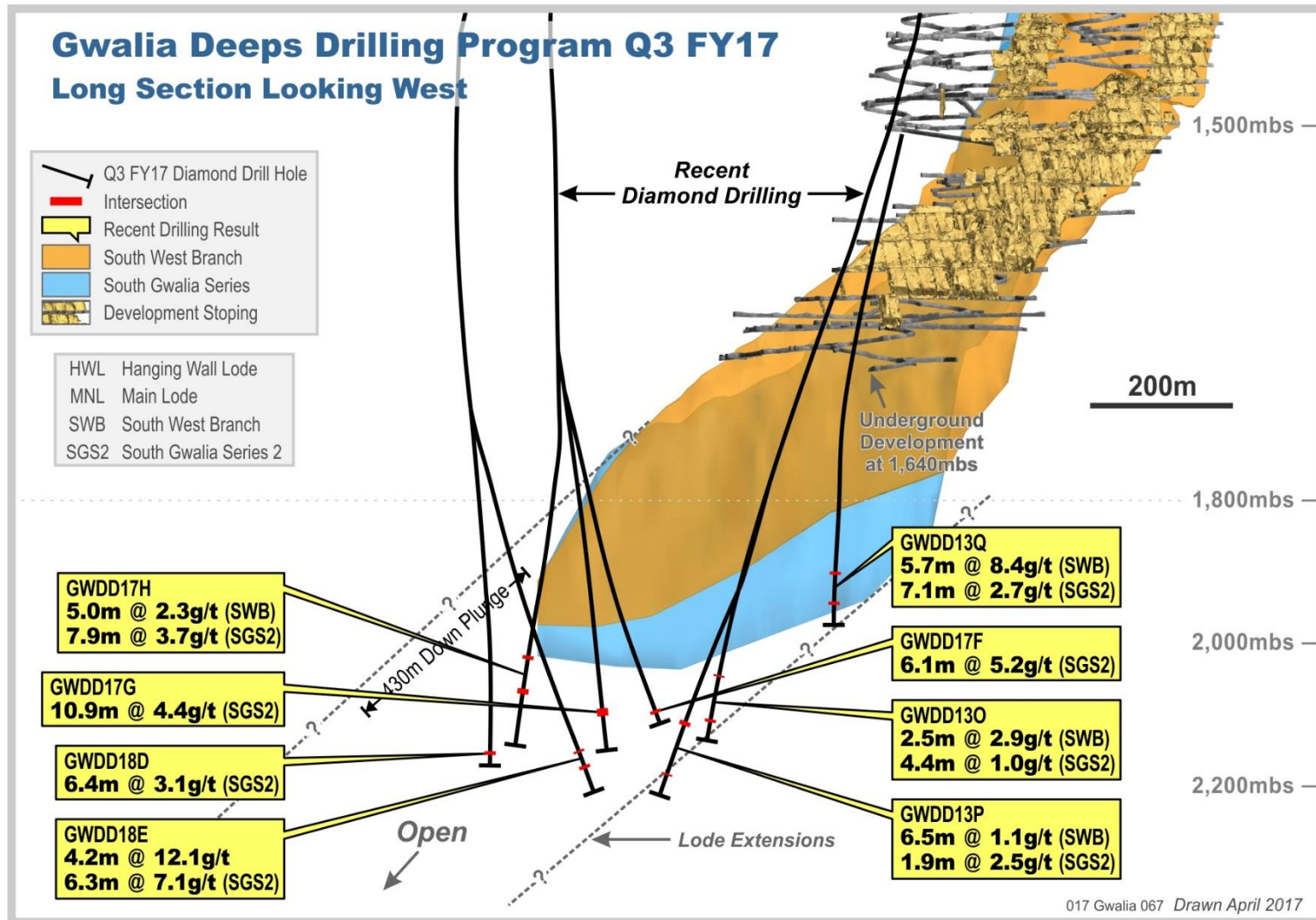
1. Details contained in ASX announcement 27 March 2017 'Gwalia Extension Project approved'
2. Ore Reserves at 30 June 2016 extend down to 1,940 mbs, Annual Mineral Resources and Ore Reserves Report at 30 June 2016, available at [www.stbarbara.com.au](http://www.stbarbara.com.au)

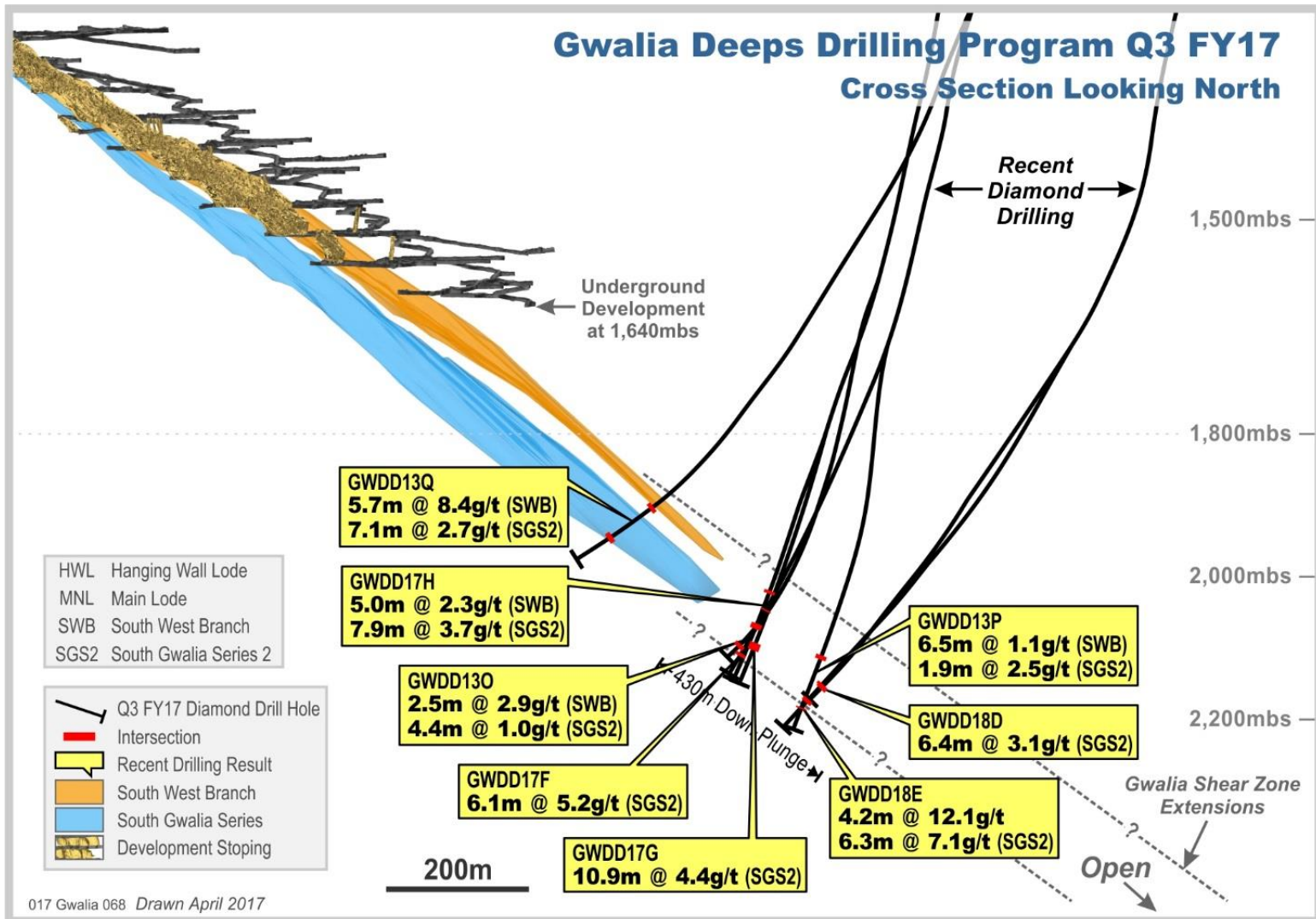
### **Gwalia Seismic Reflection Program**

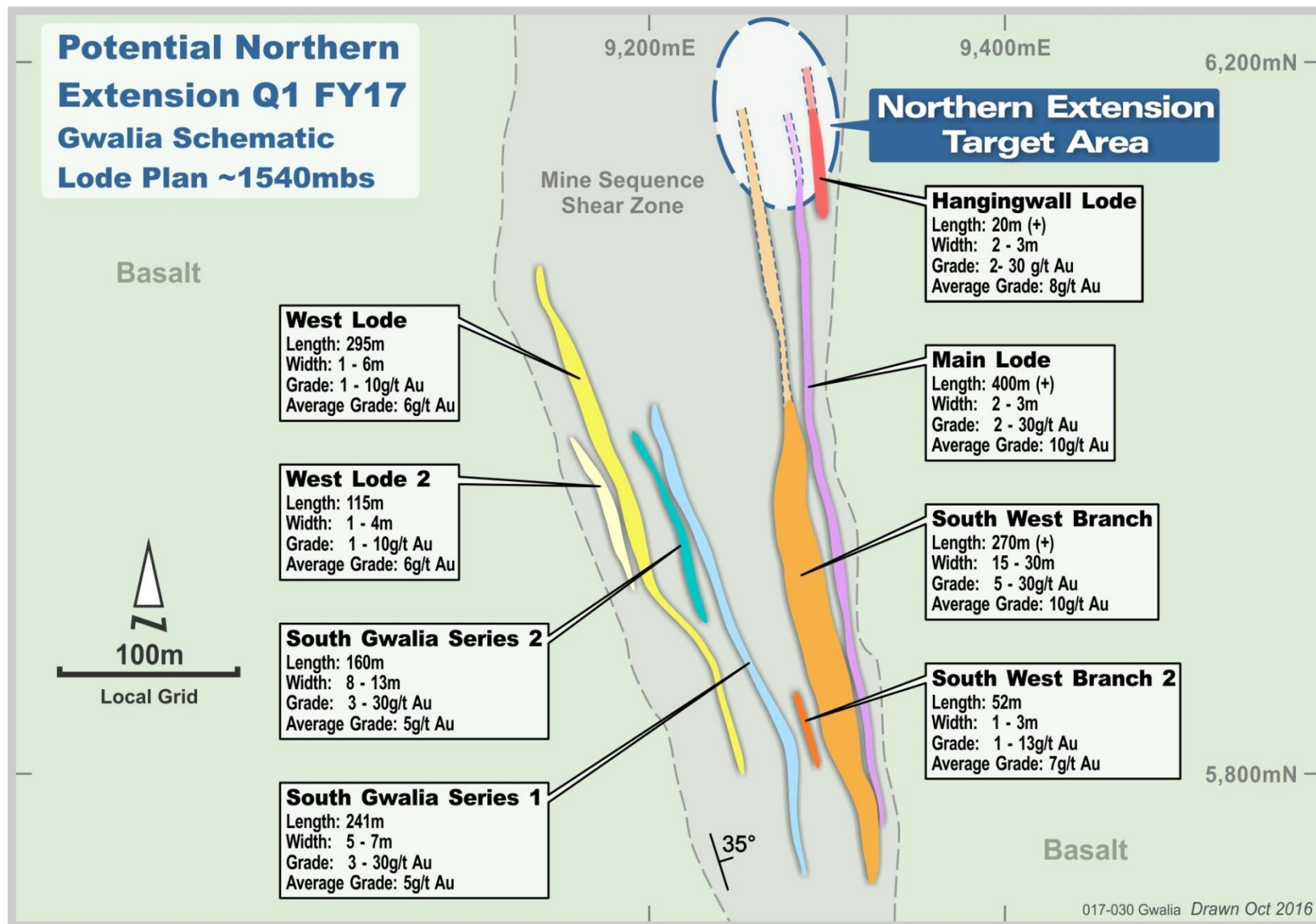
- > A full evaluation of extensions to the Gwalia Shear Zone will be undertaken during Q4 June 2017
- > The survey will aim to identify extensions to the lode system and other potential occurrences of Gwalia style mineralisation
- > One of the larger precious metal seismic surveys undertaken in Australia (15 km<sup>2</sup>)

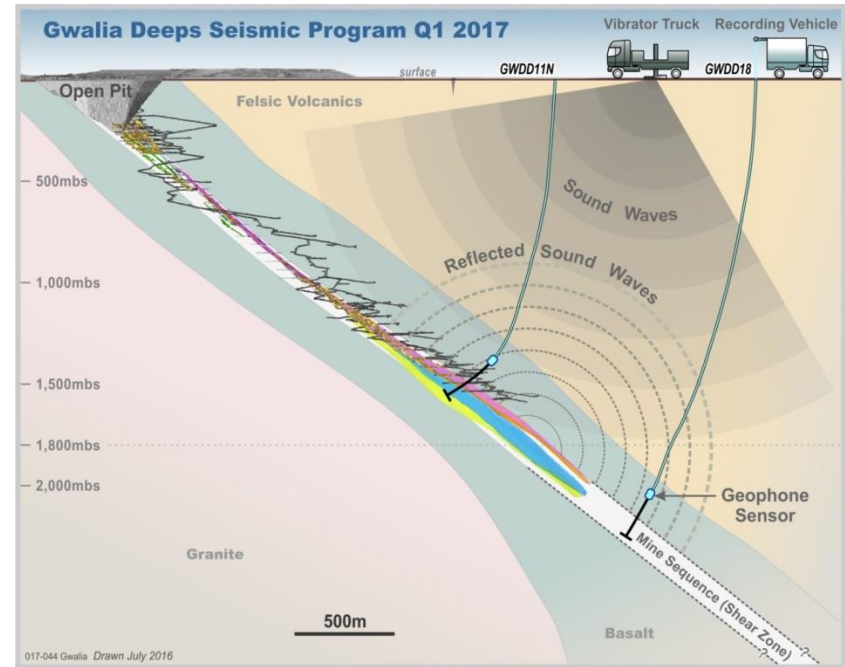
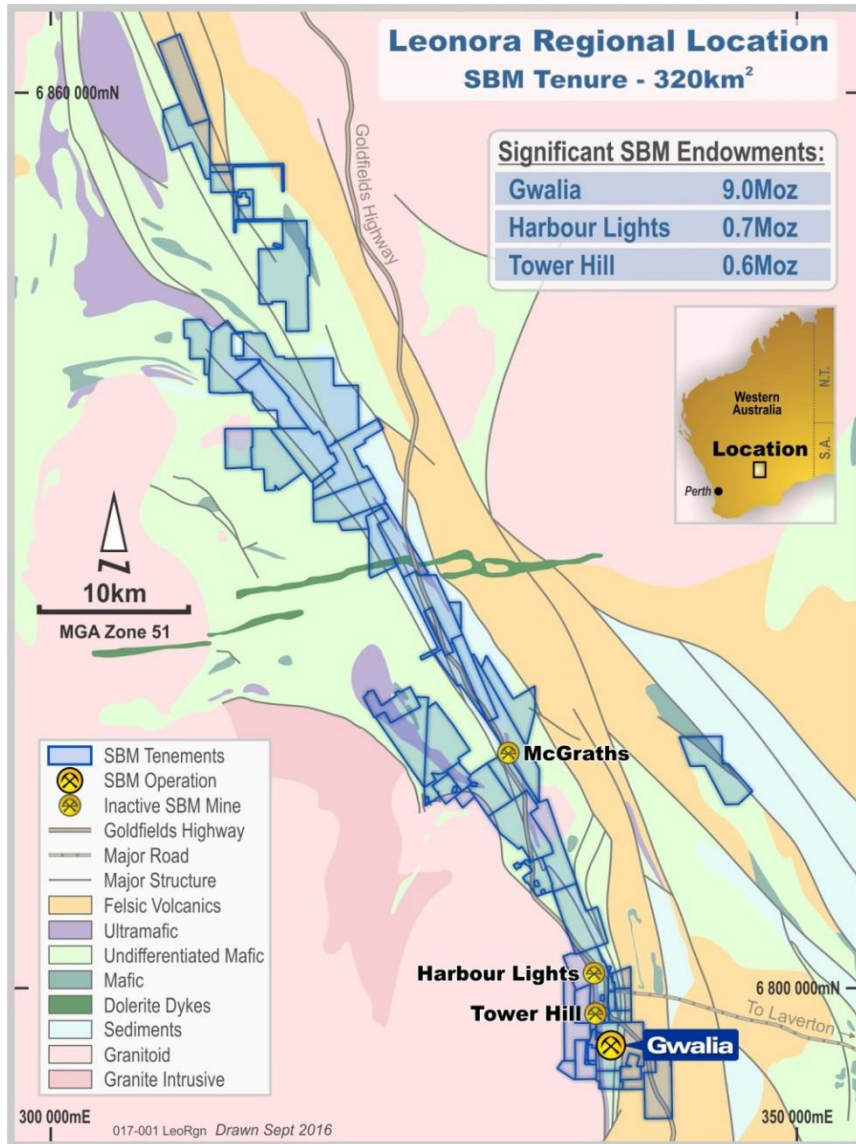
### **Gwalia Deeps Extension – Resource drilling 2,000 to 2,200 mbs**

- > Eight daughter holes targeting below 2,000 mbs completed successfully, results consistent with previous quarters
- > Three further holes underway at end of quarter







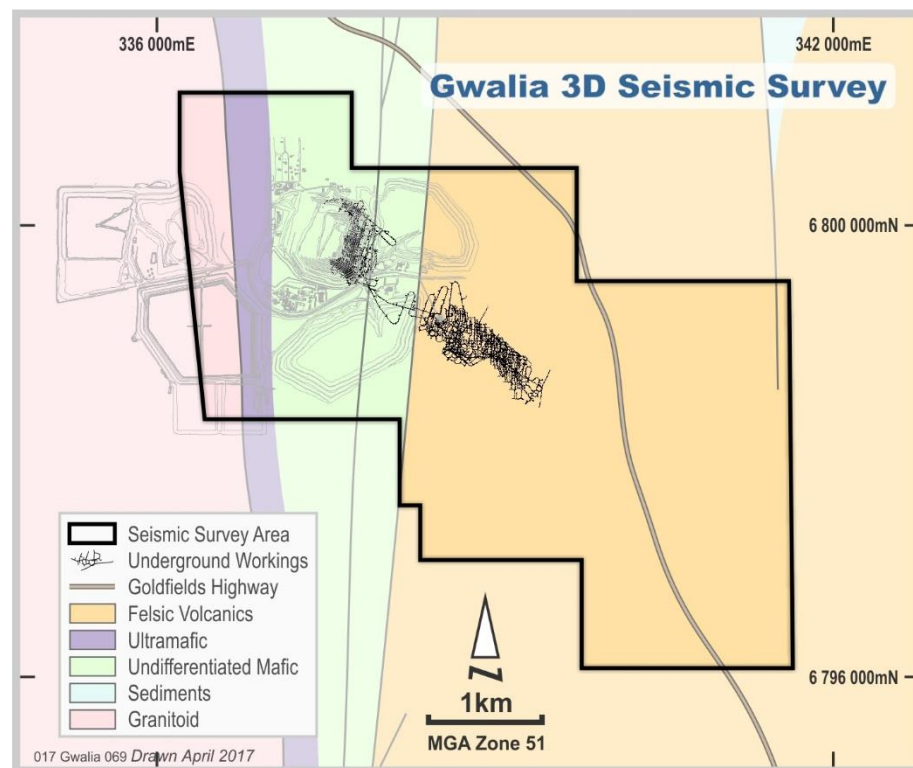


- > Explore reflecting sound waves off mineral formations
- > Used successfully by other regional gold miners
- > 2D Gwalia program via down-hole sensors complete.
- > Greater Gwalia 3D program in progress

# Gwalia – Q4 Planned seismic survey



Receiving phones and vibe truck, April 2017



Q4 June 2017 Gwalia seismic survey 15km<sup>2</sup>



## St Barbara

- > Responsible for
  - > Planning
  - > Processing
  - > Procurement
  - > Commercial
- > Approx. 150 employees, mostly FIFO

## Leonora facilities

- > 1.2 Mtpa plant
- > 250 bed camp

## ByrneCut – contract mining

- > ByrneCut is part of Gwalia's success
- > Started at Gwalia in Sep 2012
- > Alliance agreement from Sep 2013
- > Approx. 200 employees
- > Fleet: inc.
  - > 5 drill rigs
  - > 4 loaders
  - > 10 trucks
    - > 8 Atlas Copco MT6020s (60t)
    - > 2 Atlas Copco MT65s (65t)

## Other contractors

- > Approx. 80 contractors involved as required

**Strategy** Targeted investment in early to advanced stage gold exploration through earn in arrangements, joint ventures or direct equity investments

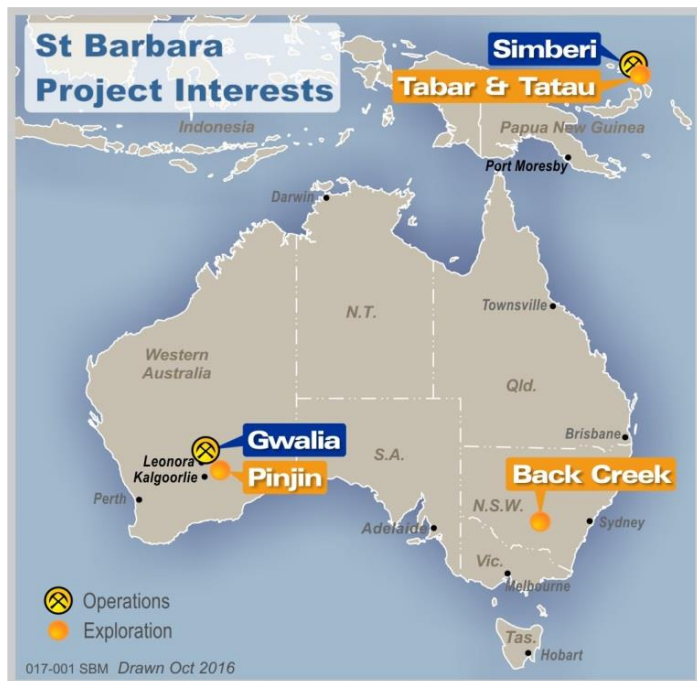
## Catalyst Metals Limited

- > A\$1.5 million investment in Catalyst Metals Limited for 5% interest
- > Landholdings in Victoria

## Peel Mining Limited

- > A\$3.3 million investment in Peel Mining Limited for 10% interest
- > Landholdings in New South Wales (Cobar) and Western Australia





## Pinjin, WA

- > Final results from 3,239 metre RC drill program received
- > A 305 hole Aircore drill program completed
- > A 965 line km Airborne Electromagnetic (AEM) survey will be conducted in the June 2017 quarter
- > A 330 km<sup>2</sup> Ground Gravity Survey will also commence in the quarter

## Tatau Island, PNG

- > Detailed topographic map of Tatau Island was generated from the airborne LiDAR (light detection and ranging) survey conducted during the December 2016 quarter
- > A 43 line km ground magnetic survey completed
- > A diamond drill program at Southwest Tatau continued through the quarter

## Back Creek, NSW

- > Data processing and image generation from the previous airborne magnetic survey completed

# Ore Reserves Summary as at 30 June 2016



Project	Proved			Probable			Total		
	Tonnes (k)	Au g/t	koz	Tonnes (k)	Au g/t	koz	Tonnes (k)	Au g/t	koz
Gwalia (WA)	2,286	9.6	702	4,510	7.6	1,105	6,795	8.3	1,808
Tower Hill (WA)	-	-	-	2,572	3.7	306	2,572	3.7	306
Simberi Oxide (PNG)	4,687	1.3	194	9,407	1.3	381	14,094	1.3	576
Simberi Sulphide (PNG)	154	3.0	14	13,402	3.0	1,307	13,556	3.0	1,321
<b>Total All Projects</b>	<b>7,127</b>	<b>4.0</b>	<b>910</b>	<b>29,891</b>	<b>3.2</b>	<b>3,099</b>	<b>37,017</b>	<b>3.4</b>	<b>4,011</b>

## Notes

- Ore Reserves are based on a gold price of Gwalia (A\$1,350/oz), Tower Hill (A\$1,250/oz), Simberi (US\$1200/oz)
- Mineral Resources are reported inclusive of Ore Reserves.
- Data is rounded to thousands of tonnes and thousands of ounces. Discrepancies in totals may occur due to rounding.
- Details relating to each of the estimates are contained in the 2016 Annual Mineral Resource and Ore Reserve Report at [www.stbarbara.com.au/exploration/Ore-Reserves-mineral-resources/](http://www.stbarbara.com.au/exploration/Ore-Reserves-mineral-resources/)

Competent Person Mr Tim Richards is entitled to participate in St Barbara's long term incentive plan, details of which are included in the 2016 directors' and Financial Report released to the ASX on 23 August 2016. Increase in Ore Reserves was one of the performance measures under that plan until 30 June 2016. No incentive was paid in financial year 2016 under this performance measure.

Full details are contained in the ASX release dated 23 August 2016 'Ore Reserves and Mineral Resources Statements 30 June 2016' available at [www.stbarbara.com.au](http://www.stbarbara.com.au).

# Mineral Resources Summary as at 30 June 2016



Project	Measured			Indicated			Inferred			Total		
	Tonnes (k)	Au g/t	koz	Tonnes (k)	Au g/t	koz	Tonnes (k)	Au g/t	koz	Tonnes (k)	Au g/t	koz
<b>Gwalia (WA)</b>	4,951	7.7	1,232	11,773	6.8	2,584	570	4.4	80	17,294	7.0	3,896
<b>Tower Hill (WA)</b>	-	-	-	4,604	3.9	574	489	3.3	51	5,093	3.8	625
<b>Simberi Oxide (PNG)</b>	6,817	1.1	232	16,686	1.0	532	5,925	1.0	187	29,428	1.0	951
<b>Simberi Sulphide (PNG)</b>	1,583	1.2	58	46,382	1.7	2,543	19,885	1.6	1,003	67,850	1.7	3,607
<b>Total All Projects</b>	<b>13,351</b>	<b>3.5</b>	<b>1,522</b>	<b>79,445</b>	<b>2.4</b>	<b>6,233</b>	<b>26,869</b>	<b>1.5</b>	<b>1,321</b>	<b>119,665</b>	<b>2.4</b>	<b>9,079</b>

## Notes

1. Mineral Resources are reported inclusive of Ore Reserves
2. Cut-off Grades Leonora: Gwalia Deeps (2.5 g/t Au), Tower Hill (2.5 g/t Au), Simberi Oxide (0.4 g/t Au), Simberi Sulphide (0.6 g/t Au)
3. Simberi Mineral Resources are reported constrained by a US\$1,800/oz pit shell
4. Data is rounded to thousands of tonnes and thousands of ounces. Discrepancies in totals may occur due to rounding.
5. Details relating to each of the estimates are contained in the 2016 Annual Mineral Resource and Ore Reserve Report at [www.stbarbara.com.au/exploration/Ore-Reserves-mineral-resources/](http://www.stbarbara.com.au/exploration/Ore-Reserves-mineral-resources/)

Full details are contained in the ASX release dated 23 August 2016 'Ore Reserves and Mineral Resources Statements' 30 June 2016' available at [www.stbarbara.com.au](http://www.stbarbara.com.au).



**Tim Netscher**  
Chairman– Non Executive

*Appointed Director February 2014*

*Appointed Chairman July 2015*

Mr Netscher is an experienced international mining executive with extensive operational, project development, and transactional experience and expertise in senior executive management roles. Mr Netscher's experience covers a wide range of resources including nickel, coal, iron ore, uranium and gold and regions including Africa, Asia and Australia. Mr Netscher is a director of ASX listed Gold Road Resources Limited and Western Areas Limited.



**Bob Vassie**  
Managing Director and CEO

*Appointed July 2014*

Mr Vassie is a mining engineer with over 30 years international mining industry experience, including 18 years with Rio Tinto in a range of senior management roles. He has particular experience in operations management, resource development strategy, mine planning, feasibility studies, business improvement, corporate restructuring, and strategic procurement.



**David Moroney**  
Director– Non Executive

*Appointed March 2015*

Mr Moroney is an experienced finance executive with more than 20 years' experience in senior corporate finance roles, including 15 years in the mining industry, and extensive international work experience with strong skills in finance, strategic planning, governance, risk management and leadership.

Mr Moroney is an independent non-executive director of non-ASX listed Geraldton Fishermen's Co-operative Ltd and WA Super, Western Australia's largest public offer superannuation fund.



**Kerry Gleeson**  
Director– Non Executive

*Appointed May 2015*

Ms Gleeson is an experienced corporate executive with over 20 years boardroom and senior management experience across Australia, UK and the US, in a variety of industries including mining, agriculture, chemicals, logistics and manufacturing. A qualified lawyer in both UK and Australia, she has significant expertise in complex corporate finance and transactional matters, and in corporate governance in Australian and international businesses.



## **Bob Vassie**

### Managing Director and CEO

*Appointed 2014*

Mr Vassie is a mining engineer with over 30 years international mining industry experience, including as Managing Director and CEO of Inova Resources Limited (formerly Ivanhoe Australia Limited) and 18 years with Rio Tinto in a range of senior management roles.

He has particular experience in operations management, resource development strategy, mine planning, feasibility studies, business improvement, corporate restructuring, and strategic procurement.



## **Garth Campbell-Cowan**

### Chief Financial Officer

*Joined 2006*

Garth is a Chartered Accountant with 30 years experience in finance and management positions across a number of different industries. Garth is responsible for the Group's Finance function, covering financial reporting and accounting, treasury, taxation, business analysis, capital management, procurement and information technology.

Prior to joining St Barbara, he was Director of Corporate Accounting at Telstra and has held senior finance leadership roles with WMC, Newcrest Mining and ANZ.

## Exploration Results

The information in this presentation that relates to Exploration Results for Simberi and Pinjin is based on information compiled by Dr Roger Mustard, who is a Member of The Australasian Institute of Mining and Metallurgy. Dr Mustard is a full-time employee of St Barbara and has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Dr Mustard consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this presentation 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 presentation that relates to Mineral Resources or Ore Reserves is extracted from the report titled 'Ore Reserves and Mineral Resources Statements 30 June 2016' released to the Australian Securities Exchange (ASX) on 23 August 2016 and available to view at [www.stbarbara.com.au](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 23 August 2016 and, in the case of estimates of Mineral Resources or Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the original ASX announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original ASX announcement.

Competent Person Tim Richards is entitled to participate in St Barbara's long term incentive plan, details of which are included in the 2016 Directors' and Financial Report released to the ASX on 23 August 2016

*Full details are contained in the ASX release dated 23 August 2016 'Ore Reserves and Mineral Resources Statements 30 June 2016' available at [www.stbarbara.com.au](http://www.stbarbara.com.au).*

# Non-IFRS Measures

We supplement our financial information reporting determined under International Financial Reporting Standards (IFRS) with certain non-IFRS financial measures, including cash operating costs. We believe that these measures provide meaningful information to assist management, investors and analysts in understanding our financial results and assessing our prospects for future performance.

- Cash operating costs** > Calculated according to common mining industry practice using The Gold Institute (USA) Production Cost Standard (1999 revision).  
Refer most recent quarterly report available at [www.stbarbara.com.au](http://www.stbarbara.com.au) for example
- All-In Sustaining Cost** > All-In Sustaining Cost 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).  
Refer most recent quarterly report available at [www.stbarbara.com.au](http://www.stbarbara.com.au) for example
- Net-cash** > Net-cash equivalent to cash and cash equivalents less current and non-current interest bearing borrowings
- Net-debt** > Net-debt equivalent to current and non-current interest bearing borrowings less cash and cash equivalents

**Alistair Reid**

Manager Investor Relations

T: +61 3 8660 1900

E: [info@stbarbara.com.au](mailto:info@stbarbara.com.au)