

Gwalia mine medium and long-term outlook

St Barbara Limited (ASX: SBM) (the “Company”) provides the following medium and long-term outlook for the Gwalia mine.

The Company recently completed a new Life of Mine plan (LoM) to FY 2031 using existing Resources and Reserves¹. The new LoM plan contains a change in mining and haulage methods to suit the deepening mine, and the nature of the existing unmined lodes. The new mining approach, termed Gwalia Mass Extraction (GMX), is assumed to commence in year 4 (FY 2021) of the new LoM plan. GMX is enabled by the Gwalia Extension Project (GEP) that is currently under construction.

While the move to GMX is planned to occur within the 5-year outlook period, the change is primarily focussed on delivering higher production rates and lower unit costs beyond the 5-year outlook. The 5-year outlook remains robust without GMX and this profile is included for information. The new LoM plan, coupled with the current extension project and ongoing further exploration at depth and in the region, indicates that Gwalia will continue to play a pivotal role for St Barbara for the foreseeable future.

St Barbara Managing Director and CEO, Mr Bob Vassie, said “I am pleased to report a strong and profitable five-year outlook for the Gwalia mine. The A\$100 million Gwalia Extension Project is well underway and will start to deliver the benefits once PAF is commissioned this financial year. The adoption of a new approach to mining our orebody will allow the mine to continue strongly past the 5 year outlook period, such that Gwalia will continue to be the cornerstone asset for the Company and provide us with a stable foundation on which to pursue value-adding growth initiatives.”

Gwalia Mass Extraction (GMX)

The Company has completed a Pre-Feasibility Study (PFS) on a proposed change in mining and haulage methods to best suit the Gwalia orebody as it deepens, and to also economically mine more of the lodes in the mining sequence. Essentially this involves a move to “island pillar”² methods for narrower lodes with increased mining rates, and matching that with increased haulage rates by moving to hydraulic hoisting (underground comminution and pumping to surface).

The results of the PFS are very encouraging and indicate an opportunity to convert more of the existing total Mineral Resources into mineable Ore Reserves by increasing mining rates, reducing unit costs and utilising the existing mill capacity. The PFS indicates that geotechnical conditions remain manageable at the proposed depths. Exploration work continues, seeking to further extend Resources, as has occurred in previous years (refer Figure 3). The PFS capex is shown in table 1 below.

A feasibility study of GMX has commenced and will target the provision of information necessary for an investment decision in December 2018. As deep drilling continues to intersect the Gwalia Mine Sequence at depth, the Gwalia Mass Extraction approach offers a way to realise this further potential.

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

2 Mining method whereby a ‘pillar’ of ore is left in place to structurally support the roof of a mining cavity

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Five-Year Outlook

The 5-year production profile from the new LoM plan including the move to GMX is summarised in Table 1 and illustrated in Figure 1 below. The Company expects to maintain similar to existing volume of production during construction of the Gwalia Extension Project (GEP), and then increase mining volume and gold production while the production areas are above 1800 metres below surface (mbs).

The estimates shown in Table 1 are drawn from the new Life of Mine Plan to FY 2031 ($\pm 10\%$ accuracy), the Gwalia Extension Project Feasibility Study ($\pm 10\%$ accuracy) and aspects of the Gwalia Mass Extraction PFS ($\pm 30\%$ accuracy). The Company will continue its business improvement program during the forecast period, which has supported the historical increase in annual production evident in Figure 1. No allowance has been included in the forecast for potential future improvement initiatives.

The anticipated production profile reflects the benefit of increased ventilation provided by GEP, which includes underground crushing from Paste Aggregate Fill (PAF), with the proposed transition to GMX mining in FY21. The additional ventilation announced with GEP on 27 March 2017 will be necessary in the outlook period with GMX, and the associated capex is included in the table.

Average mined grade is expected to remain above the Ore Reserves grade of 7.8 g/t Au³ until FY21. Ore Reserves at 30 June 2017 extended down to 2140 mbs and Mineral Resources extended to 2200 mbs. Grade in year 5 (FY 2022) is impacted by existing lower drilling density at that depth (below 1820 mbs), and additional closer-spaced resource definition drilling is planned before mining commences at that depth. The current deep drilling program, along with drilling of other extensions of the existing orebody, are expected to continue to add to resources and reserves.

Should there be any delay in moving to hydraulic hoisting, the 5 year outlook remains robust as demonstrated by the production profile without hydraulic hoisting, using current mining techniques, in Table 2.

Longer Term Outlook – Beyond 5 Years

The Gwalia Mass Extraction PFS has shown that it is possible to operate the mine in such a way as to extract the Mineral Resource faster and at a lower cost, which is anticipated to convert more of the current identified 5,087 koz Mineral Resource⁴ (which extends down to 2200 mbs) into mineable Ore Reserves. The LoM schedule past five years to FY 2031 anticipates mining 500 koz of Inferred Resources⁵. The PFS indicates that this approach could deliver production of at least 200 koz per year from FY 2023 to FY 2029 and avoid a low-volume production tail. It is anticipated that mining will continue below 1820 mbs and the five-year outlook period using current trucking or the proposed hydraulic hoisting, depending on the outcome of the proposed Gwalia Mass Extraction feasibility study.

In parallel with the work on optimising the Gwalia orebody, work on regional exploration nearby to the deposit and along the 1,300 km² tenements along trend to the north will be accelerated to identify any other opportunities. This includes drilling of the three new nearby targets identified by the recent 3D Seismic program.

The projections represent management's best estimates of future operating results and are not guarantees of future performance, as described more fully in the disclaimer later in this announcement.

3 Ore Reserve grade at 30 June 2017, refer Ore Reserves and Mineral Resources Statements released 23 August 2017

4 Ore Reserves and Mineral Resources Statements as at 30 June 2017 released 23 August 2017

5 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.

Table 1: 5-year key metrics (with hydraulic hoisting)

Gwalia Key Metrics		Guidance	Outlook			
		FY18F	FY19	FY20	FY21	FY22
Underground ore mined	kt	700	820	940	1,150	1,400
Mined grade	g/t Au	11.7	9.8	8.1	7.7	6.7
Gold Production	koz	250-260	250	240	280	290
AISC	A\$/oz	840-880	920	930	720	650
Capital expenditure	A\$M					
• Sustaining		35-40	40	35	50	40
• Growth (GEP)		50-55	37	5	0	0
• GMX (PFS)			40	60		
• GEP additional ventilation ⁶				15	10	7
Anticipated lowest mining depth in FY	mbs	1620	1700	1740	1780	1820

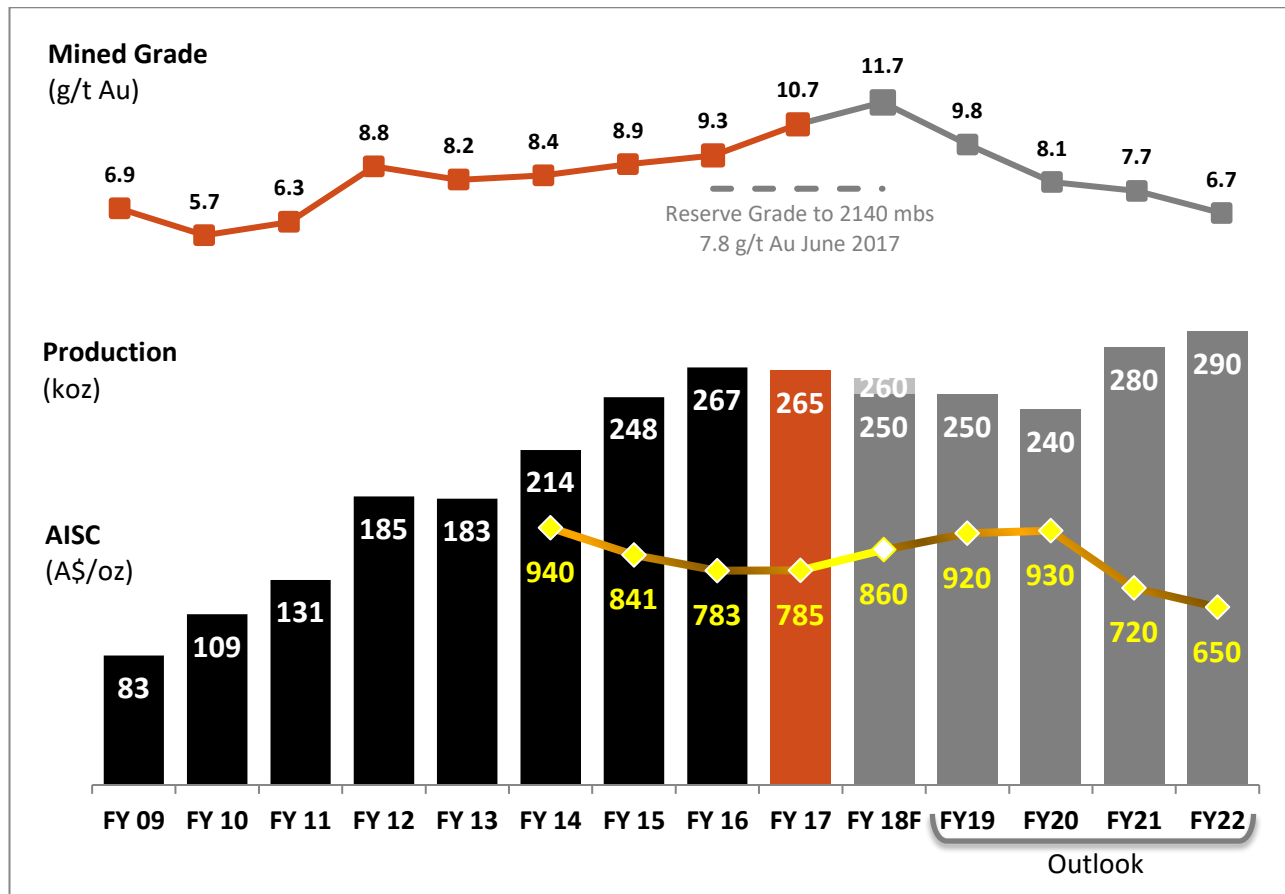
Outlook projections are mid-point estimates with anticipated range $\pm 5\%$.

Table 2: 5-year key metrics (without hydraulic hoisting)

Gwalia Key Metrics		Guidance	Outlook			
		FY18F	FY19	FY20	FY21	FY22
Underground ore mined	kt	700	820	950	1,000	1,180
Mined grade	g/t Au	11.7	9.7	7.9	8.3	6.5
Gold Production	koz	250-260	250	240	260	240
AISC	A\$/oz	840-880	920	930	920	880
Capital expenditure	A\$M					
• Sustaining		35-40	40	35	45	30
• Growth (GEP)		50-55	37	5	0	0
Anticipated lowest mining depth in FY	mbs	1620	1660	1720	1760	1820

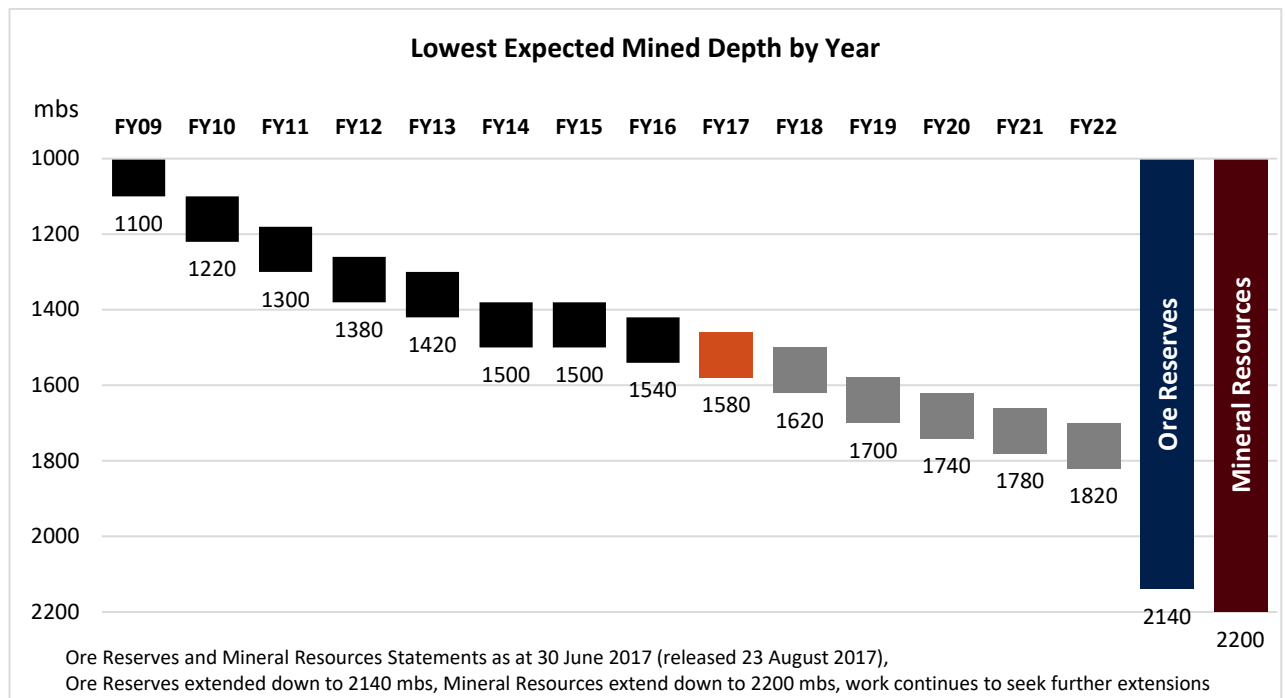
Outlook projections are mid-point estimates with anticipated range $\pm 5\%$.

Figure 1: Grade, Production and All-In Sustaining Cost (with GMX)



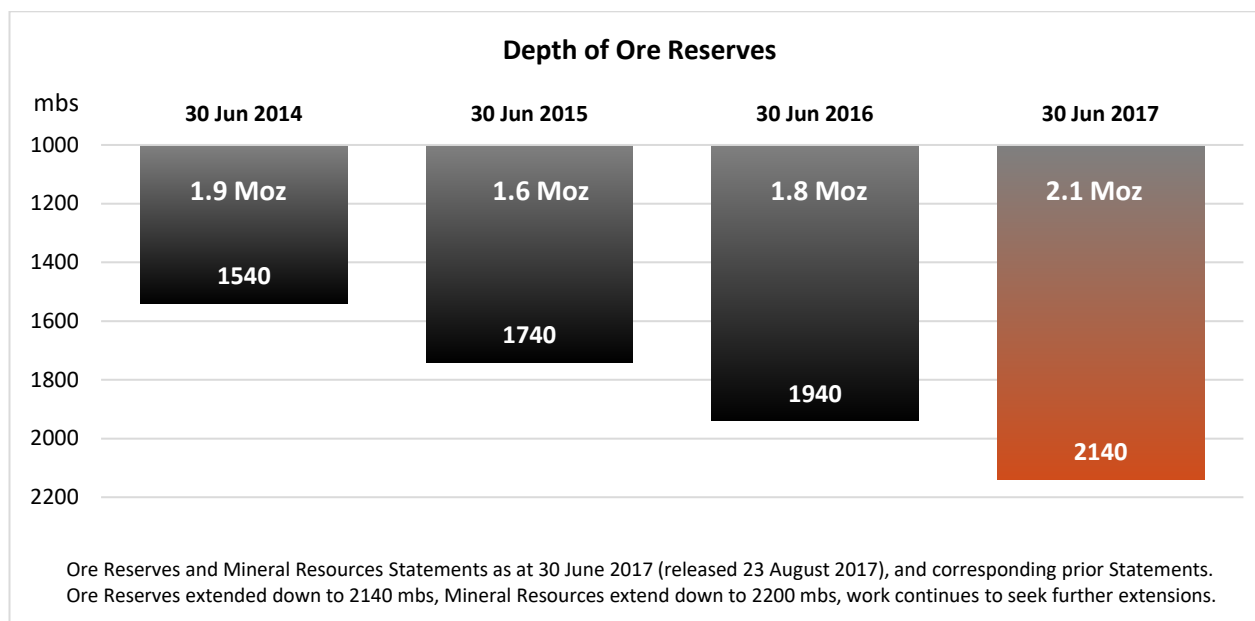
Outlook projections are mid-point estimates with anticipated range $\pm 5\%$.

Figure 2: Lowest Expected Mined Depth



Ore Reserves and Mineral Resources Statements as at 30 June 2017 (released 23 August 2017),
 Ore Reserves extended down to 2140 mbs, Mineral Resources extend down to 2200 mbs, work continues to seek further extensions

Figure 3: Depth of Ore Reserves



Disclaimer

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This announcement 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 announcement. Actual results may vary from the information in this announcement. The Company does not make, and this announcement 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 announcement 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 announcement.

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.

Competent Persons Statement

Mineral Resource and Ore Reserve Estimates

The information in this report that relates to Mineral Resources or Ore Reserves is extracted from the report titled ‘Ore Reserves and Mineral Resources Statements 30 June 2017’ released to the Australian Securities Exchange (ASX) on 23 August 2017 and available to view at www.stbarbara.com.au and for which Competent Persons’ consents were obtained. Each Competent Person’s consent remain in place for subsequent releases by the Company of the same information in the same form and context, until the consent is withdrawn or replaced by a subsequent report and accompanying consent.



The Company confirms that it is not aware of any new information or data that materially affects the information included in the original ASX announcement released on 23 August 2017 and, in the case of estimates of Mineral Resources or Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the original ASX announcement continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original ASX announcement.

Full details are contained in the ASX release dated 23 August 2017 'Ore Reserves and Mineral Resources Statements 30 June 2017' available at www.stbarbara.com.au.