



## 2009 Ore Reserves and Mineral Resources Statements

### Summary

St Barbara Limited Ore Reserves as at 30 June 2009 were 13.9 million tonnes at 5.8 grams per tonne of gold containing 2.6 million ounces (2008: 19.3 million tonnes @ 5.0 g/t for 3.1 million ounces). The gold price assumed in Ore Reserve calculations was \$1,075 per ounce for fiscal year 2010 production and \$850 per ounce thereafter (fiscal year 2009 production: \$950 per ounce and \$800 per ounce thereafter).

St Barbara Limited Mineral Resources including Ore Reserves at 30 June 2009 were 102.7 million tonnes @ 2.9 g/t for 9.5 million ounces (2008: 126.6 million tonnes @ 2.6 g/t for 10.6 million ounces).

Statements of Ore Reserves and Mineral Resources as at 30 June 2009 are attached as Table 1 and Table 2.

### Ore Reserves Statement

Ore Reserves have been estimated having regard to:

- The Company's strategic focus on higher margin ore sources
- The cost impact of reverting to campaign milling at both Leonora and Southern Cross Operations
- Improved geological interpretations from grade control drilling.

As a consequence:

- Reserves underground at Tower Hill have increased by 15 koz ("thousands of ounces of gold")
- At Marvel Loch Underground the cut-off grade has increased and the number of ounces has reduced but the overall grade has increased to 3.8 g/t (2008: 3.2 g/t)
- Ore Reserves for open pits at Kailis, Leonora (2008: 67 koz) and Aquarius at Transvaal, Southern Cross (2008: 38 koz) have been removed.

### Analysis of movement

		koz
	Reserves at 30 June 2008	3,065
Add	<ul style="list-style-type: none"> <li>• Increase through improved interpretation</li> </ul>	17
Less	<ul style="list-style-type: none"> <li>• Depletion through ore production</li> <li>• Uneconomic open pits</li> <li>• Interpretation and design changes (incorporating higher cut-off grades)</li> </ul>	(297) (105) (106)
	Reserves at 30 June 2009	2,574

## Ore Reserve Statement June 2009

Region	Proved			Probable			Total		
	kt	g/t	Koz	kt	g/t	Koz	kt	g/t	Koz
<b>Southern Cross</b>									
Marvel Loch	470	3.7	56	1,810	3.8	221	2,280	3.8	277
Nevoria West				500	3.0	48	500	2.9	48
Nevoria Underground				1,790	3.7	210	1,790	3.7	210
Other	320	2.5	26	1,130	0.8	30	1,450	1.2	56
Total Southern Cross	780	3.3	82	5,230	3.0	509	6,010	3.1	591
<b>Leonora</b>									
Gwalia Deeps				5,630	9.1	1,640	5,630	9.1	1,643
Tower Hill				2,240	4.7	338	2,240	4.7	338
Other				30	1.8	2	30	1.8	2
Total Leonora	0	0	0	7,900	7.8	1,980	7,900	7.8	1,983
Total All Regions	780	3.3	82	13,130	5.9	2,489	13,910	5.8	2,574

Table 1

### Notes

- 1) These Reserves have been compiled and estimated under the direction of Mr Peter Fairfield and Mr Jacobus Kirsten.
- 2) The Ore Reserves estimates used a gold price of \$1075 / oz for forecast FY10 production and \$850 / oz for ounces to be mined thereafter
- 3) All numbers have been rounded to tonnes (10,000) and ounces (1,000), this may result in some rounding discrepancies.
- 4) Other relates to surface stockpiles valued at \$1075/oz.

## Mineral Resource Statement

Changes to the open pit mining and ore processing cost models for both Southern Cross and Leonora and the associated increase in marginal cut-off grades have impacted significantly on resources for the Kailis, Tower Hill and GVG-South Burbidge projects, all of which have a substantial component of low grade mineralisation. The Tower Hill Mineral Resource reduced by 606koz.

Changes to cut off grades have contributed to the increase in the overall Mineral Resource grade from 2.6 g/t to 2.9 g/t. All other significant changes to Mineral Resources resulted from mining depletion and re-evaluation of Mineral Resources within updated \$1,200/oz open pit optimisation shells. Significant additional Mineral Resources have been established at Jaccoletti, Ruapehu and at Edwards Find (+220 koz).

## Mineral Resource Statement – June 2009

Region	Project	Measured			Indicated			Inferred			Total		
		Tonnes (k)	Au g/t	k oz	Tonnes (k)	Au g/t	k oz	Tonnes (k)	Au g/t	k oz	Tonnes (k)	Au g/t	k oz
Southern Cross	Marvel Loch	740	4.5	108	3,190	4.4	451	950	3.7	113	4,880	4.3	672
	Nevoria	0	0.0	0	3,520	3.8	426	560	4.1	74	4,080	3.8	500
	Transvaal	0	0.0	0	1,630	4.8	249	1,800	4.9	286	3,430	4.9	535
	Jaccolletti	0	0.0	0	0	0.0	0	720	5.4	126	720	5.4	126
	Other (8)	270	2.8	24	3,560	2.4	278	3,140	2.6	266	6,970	2.5	568
Total Southern Cross		1,010	4.1	132	11,900	3.7	1,404	7,170	3.8	865	20,080	3.7	2,401
Leonora	Gwalia Deeps	0	0.0	0	10,050	8.7	2,799	1,810	11.9	693	11,860	9.2	3,492
	Gwalia Int & West Lode	0	0.0	0	10	6.2	2	1,260	6.0	244	1,270	6.0	246
	Tarmoola	12,000	0.9	347	46,000	1.2	1,775	0	0.0	0	58,000	1.1	2,122
	Tower Hill	0	0.0	0	4,750	4.7	716	330	4.3	46	5,080	4.7	762
	Other (9)	990	1.0	33	2,670	1.3	114	2,720	3.2	284	6,380	2.1	431
Total Leonora		12,990	0.9	380	63,480	2.6	5,406	6,120	6.4	1,267	82,590	2.7	7,053
Total All Regions		14,000	1.1	512	75,380	2.8	6,810	13,290	5.0	2,132	102,670	2.9	9,454

**Table 2**

Notes General

- 1) Mineral Resources updated during the '08/'09 Financial Year have been estimated using economic cut-off grades and mining optimisations based on a \$1,200/oz gold price.
- 2) These Mineral Resources have been compiled and estimated under the direction of Mr Ben Bartlett
- 3) The Tower Hill Mineral Resource estimate is calculated using a 0.8g/t cut-off within an optimised \$1,200 pit shell, and a 3.2g/t cut-off grade below the optimised pit shell.
- 4) The Transvaal Mineral Resource estimate is calculated using a graduated cut off grade of 0.5 to 0.9g/t in oxide and 0.7 to 1.0g/t in fresh within an optimised \$1,200 pit shell and a 2.6g/t cut-off grade below the optimised pit shell.
- 5) Mineral Resource variances compared to the June '08 Mineral Resource Statement are primarily attributed to mining depletion, cut-off grade changes, re-evaluation at \$1,200/oz gold price optimisation designs and some re-interpretation of the resources. Notable variances are Southern Cross: Cornishman (-34,000oz), Ruapehu (+55,000oz); Jaccolletti (+126,000oz); Edwards Find, North Edwards & Tamarin (+40,000oz); Marvel Loch (-159,000 oz); Nevoria (-65,000 oz); GVG/Sth Burbidge (-166,000 oz); Transvaal (-120,000oz) and at Leonora: Tower Hill (-605,000oz); Kailis and Trump; (-108,000oz) and Gwalia (-100,000oz).
- 6) Mineral Resources carried over unchanged from June'08 include Southern Cross; Axehandle (130,000 oz); Yilgarn Star (82,000 oz) and at Leonora: Gwalia Intermediates (238,000 oz); Tarmoola Pit and Stockpile (2.15 Moz); and Harbour Lights (270,000 oz). Resource reviews for all of these resources along with Nevoria, Transvaal and Edwards Find are planned during the current 2010 financial year. Combined these resources total 72 Mt @ 1.6 g/t for 3.7 Moz or 39% of the Company's Mineral Resource Inventory.
- 7) All numbers have been rounded to tonnes (10,000) and ounces (1,000) and this may result in some rounding discrepancies.
- 8) Southern Cross Other comprises 13 resources including: Axehandle, GVG Lode 1, Edwards Find, North Edwards Find, Tamarin, Cornishman, New Zealand Gully, Ruapehu, GVG South Bronco, Various Stockpiles (Measured), Redwing and Yilgarn Star.

- 9) Leonora Other comprises 8 resources including: McGraths, Kailis, Harbour Lights, Tarmoola s/pile, Royal Arthur Bore, Rainbow (Measured), Gwalia and Tower Hill ROM s/piles
- 10) A number of Mineral Resource estimates were updated by consultant firms for St Barbara Ltd (SBM). The following deposits were updated by Runge Ltd (formerly) Resource Evaluations Pty Ltd : Gwalia Deeps (Below Dyke), Nevoria, GVG – Sth Burbidge and Transvaal. Updates to Axehandle were completed by Coffey Mining Ltd and updates to Kailis by Ray Varley.
- 11) Mineral Resource updates completed by the Company include: Gwalia Deeps (Above Dyke), Gwalia upper West Lode, Tower Hill, Marvel Loch UG, Mercury, Edwards Find, Ruapehu/New Zealand Gully and Jaccoletti. All the remaining Mineral Resources remain unchanged to the June 2008 estimates.

### Competent Persons Statement

References to Mineral Resources contained in this report have been compiled under the supervision of Mr Ben Bartlett. Mr Bartlett is a Member of the Australasian Institute of Mining and Metallurgy and is a full time employee of the Company Mr Bartlett has sufficient experience relevant to the style of mineralisation, type of deposit under consideration and to the activity being undertaken to qualify as Competent Person as defined in the 2004 edition of the 'Australasian Code for Reporting of Mineral Resources and Ore Reserves'. Mr Bartlett consents to the inclusion in the report of the matters based on their information in the form and context in which they appear.

References to Ore Reserves presented in this document have been produced in accordance with the Australasian Code for Reporting of Mineral Resources and Ore Reserves, December 2004 (JORC Code) under the supervision of Mr Peter Fairfield and Mr Jacobus Kirsten. Mr Fairfield and Mr Kirsten are Members of the Australasian Institute of Mining and Metallurgy and full time employees of the Company. Mr Fairfield and Mr Kirsten have sufficient experience relevant to the style of mineralisation, type of deposit under consideration and to the activity being undertaken to qualify as Competent Persons as defined in the JORC Code. Mr Fairfield and Mr Kirsten consent to the inclusion in this document of the matters based on their information in the form and context in which it appears.



**Tim Lehany**  
**Managing Director & CEO**

**Note: Dollar amounts shown are Australian Dollars**