

OPERATIONAL PERFORMANCE

PAPUA NEW GUINEA

Hidden Valley

		FY17*	FY16*	FY15*
Number of employees				
– Permanent		1 192		
– Contractors		881		
Total		2 073	1 168	1 257
Operational				
Volumes milled	(000t) (metric)	2 889	1 729	1 825
	(000t) (imperial)	3 186	1 906	2 012
Gold produced ²	(kg)	2 965	2 257	2 943
	(oz)	95 327	72 565	94 619
Gold sold ²	(kg)	3 119	2 340	3 003
	(oz)	100 278	75 233	96 548
Grade	(g/t)	1.07	1.31	1.61
	(oz/t)	0.035	0.038	0.047
Financial				
Revenue	(Rm)	1 500	1 320	1 346
	(US\$m)	110	91	118
Average gold price received	(R/kg)	544 442	564 272	448 322
	(US\$/oz)	1 246	1 210	1 218
Cash operating cost	(Rm)	1 214	1 082	1 153
	(US\$m)	89	75	101
Production profit/(loss)	(Rm)	186	108	203
	(US\$m)	14	7	18
Capital expenditure ³	(Rm)	1 335	121	357
	(US\$m)	98	8	31
Cash operating cost	(R/kg)	466 847	479 196	391 774
	(US\$/oz)	1 068	1 028	1 065
All-in sustaining cost	(R/kg)	543 186	597 398	514 690
	(US\$/oz)	1 241	1 282	1 395
Safety				
Number of fatalities		0	1	1
Lost-time injury frequency rate per million hours worked		0.52	1.39	0.28
Environment				
Electricity consumption	(GWh)	53	54	48
Water consumption – primary activities	(ML)	1 309	715	722
Greenhouse gas emissions	(000t CO ₂ e)	53	55	0
Intensity data per tonne treated				
– energy		0.02	0.03	0.03
– water		0.45	0.41	0.39
– greenhouse gas emissions		0.07	0.03	0
Number of reportable environmental incidents		0	0	1

* The FY16 and FY15 key statistics in the table above represent Harmony's 50% interest in the Hidden Valley mine and are not comparable to the FY17 results. Following Harmony's acquisition of the remaining 50% of Hidden Valley in October 2016, Hidden Valley has been accounted for at 100% from the end of October 2016

¹ Employees of the Hidden Valley joint venture

² FY17 gold produced and gold sold includes 364kg (11 713oz) capitalised as part of pre-stripping of stages 5 and 6 (FY16:nil), (FY15:nil). Revenue of R195 million (US\$14 million) and the associated costs were capitalised

³ Figures for FY15 restated to include capitalised stripping activities

Hidden Valley *continued*

Other salient features

Status of operation	Open-pit mining operation producing gold and silver. Post the acquisition in full, the stage 5 and 6 cutback investment is underway; commercial levels of production scheduled for the last quarter of FY18
Life of mine	6 years
Compliance and certification	Mining lease approved by Papua New Guinea authorities

Mineral reserves as at 30 June 2017 (including Hamata)

Gold Reserves (metric)	Proved reserves			Probable reserves			Total mineral reserves		
	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)
	0.5	1.04	0.4	25.7	1.65	43	26.2	1.63	43
Gold Reserves (imperial)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)
	0.6	0.030	17	28.4	0.048	1 370	29.0	0.048	1 387

The Hidden Valley mine is an open pit gold and silver mine, situated in the highly prospective area of the Morobe Province in Papua New Guinea, some 210km northwest of Port Moresby. Harmony increased its interest in Hidden Valley to 100% by acquiring the remaining 50% in October 2016.

The major gold and silver deposits of the Morobe goldfield and Hidden Valley are hosted in the Wau Graben. The operational pits are Hidden Valley-Kaveroi and Hamata, located approximately 6km apart. Ore mined is treated at the Hidden Valley processing plant.

The acquisition of full ownership of Hidden Valley followed the decision to invest primarily in the development of the Hidden Valley-Kaveroi stage 5 and 6 cutbacks. The investment in Hidden Valley has the potential to contribute approximately 180 000oz gold per annum to Harmony's production profile, at an all-in sustaining cost of less than US\$950/oz. The total investment capital will be net US\$180 million, of which US\$68 million was spent in FY17 with expenditure of an estimated US\$110 million planned for FY18. Commercial levels of production are expected to be achieved in the June quarter of FY18.

A planned major four-month shutdown commenced in August 2017. Depleted ore stockpiles and a lack of mined ore to feed the plant have necessitated the shutdown, during which extensive upgrades and maintenance will be undertaken.

During FY17, the mine processed ore from the Hamata pit and stockpiles until June 2017 which resulted in the 18% decrease in grade year on year to 1.07g/t (0.035oz/t).

The lost-time injury frequency rate improved significantly in FY17 to 0.52 per million hours worked from 1.39 in FY16. There were no fatalities in FY17 (FY16: one). A culture of safe behaviour and the use of critical control equipment are driving improved safety performance.

Ore milled in the process plant increased by 67% to 2.9 million tonnes (3.2 million tons), gold production rose by 31% year-on-year to 2 965kg (95 327oz), resulting in an increase in revenue of 14% to R1 500 million (an increase of 21% to US\$110 million). Cash operating costs increased by 12% to R1 214 million (19% increase to US\$89 million). These increases are mainly attributable to Harmony's increased stake in Hidden Valley.

Capital expenditure increased by 1 003% in FY17 to R1 335 million (increased by 1 125% to US\$98 million). In order to support waste strip mining and improve production, a significant investment was made in additional and replacement mining equipment.