

# OPERATIONS 2018 CONTINUED

## PAPUA NEW GUINEA

### Hidden Valley

		FY18	FY17*	FY16*
<b>Number of employees</b>				
– Permanent		1 295	1 192	
– Contractors		790	881	
Total		2 085	2 073	1 1618
<b>Operational</b>				
Volumes milled	(000t) (metric)	2 499	2 889	1 729
	(000t) (imperial)	2 757	3 186	1 906
Gold produced <sup>2</sup>	(kg)	2 862	2 965	2 257
	(oz)	92 015	95 327	72 565
Gold sold <sup>2</sup>	(kg)	2 763	3 119	2 340
	(oz)	88 833	100 278	75 233
Grade	(g/t)	1.36	1.07	1.31
	(oz/t)	0.039	0.035	0.038
<b>Financial</b>				
Revenue	(Rm)	409	1 500	1 320
	(US\$m)	31	110	91
Average gold price received	(R/kg)	550 956	544 442	564 272
	(US\$/oz)	1 283	1 246	1 210
Cash operating cost	(Rm)	228	1 214	1 082
	(US\$m)	17	89	75
Production profit	(Rm)	175	186	108
	(US\$m)	14	14	7
Capital expenditure <sup>2</sup>	(Rm)	1 563	1 335	121
	(US\$m)	122	98	8
Cash operating cost	(R/kg)	287 028	466 847	479 196
	(US\$/oz)	669	1 068	1 028
All-in sustaining cost	(R/kg)	466 256	543 186	597 398
	(US\$/oz)	1 094	1 241	1 282
<b>Safety</b>				
Number of fatalities		0	0	1
Lost-time injury frequency rate per million hours worked		0	0.52	1.39
<b>Environment</b>				
Electricity consumption	(GWh)	59	53	54
Water consumption – primary activities	(ML)	1 359	1 309	715
Greenhouse gas emissions	(000t CO <sub>2</sub> e)	57	53	55
Intensity data per tonne treated				
– energy		0.02	0.02	0.03
– water		0.54	0.45	0.41
– greenhouse gas emissions		0.02	0.07	0.03
Number of reportable environmental incidents		0	0	0

\* The FY16 key statistics in the table above represent Harmony's 50% interest in the Hidden Valley mine and are not comparable to the FY17 or FY18 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.

<sup>1</sup> Employees of the Hidden Valley joint venture

<sup>2</sup> FY18 gold produced includes 2 068kg (66 499oz) and gold sold 2 021kg (64 976oz) capitalised as part of pre-stripping of stages 5 and 6 (FY17:364kg, 11 713oz), (FY16:nil). Revenue of R1 045 million (US\$85 million) and the associated costs were capitalised during FY18 (FY17: R195 million, US\$14 million).

## Hidden Valley *continued*

### Other salient features

Status of operation	Open-pit mining operation producing gold and silver. The pre-stripping of stage 5 commenced in October 2016. Commercial levels of production achieved in the June 2018 production month.
Life of mine	5 years
Compliance and certification	Mining lease approved by Papua New Guinea authorities

### Mineral reserves as at 30 June 2018 (including Hamata)

Gold	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)
Reserves (metric)	1.9	0.92	2	23.8	1.63	39	25.7	1.58	41
Reserves (imperial)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)
	2.1	0.027	57	26.3	0.048	1 250	28.4	0.046	1 306

The Hidden Valley mine is an open pit gold and silver mine, situated in 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 (FY17).

The major gold and silver deposits of the Morobe goldfield and Hidden Valley are hosted in the Wau Graben. 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 further development of the Hidden Valley-Kaveroi stage 5 and 6 cutbacks. Excellent project delivery was demonstrated at Hidden Valley during the investment phase in the stage 5 and 6 cut backs, achieving an excellent safety performance, expenditure below budget and achieving commercial levels of production within schedule.

The safety performance at Hidden Valley over the investment phase was commendable – zero fatalities and lost-time injuries were achieved in FY18. There were no fatalities in FY17. A culture of zero harm, safety coaching and the use of critical control management are driving the safety performance at Hidden Valley.

The total investment capital amounted to net US\$175 million (planned investment of net US\$180 million, of which US\$68 million was spent in FY17). Commercial levels of production were achieved in the June 2018 month.

A planned major four-month plant and processing shutdown commenced in August 2017. Depleted ore stockpiles and a lack of mined ore to feed the plant necessitated the shutdown, during which extensive upgrades and maintenance were undertaken. This project was completed approximately 15 days ahead of schedule during November 2017.

The operational performance for FY18 and FY17 are not comparable due to the abovementioned plant shutdown.

Total capital expenditure increased by 17% in FY18 to R1 563 million (increased by 24% to US\$122 million).

Stripping of the cutbacks will continue over the next three years. Hidden Valley is expected to produce approximately 180 000oz to 200 000oz of gold and 3Moz of silver annually at an average all-in sustaining cost of US\$950/oz over its remaining life of mine.