PERFORMANCE BY OPERATION continued

Papua New Guinea Hidden Valley

		FY21	FY20	FY19
Number of employees				
– Permanent		1 474	1 434	1 391
– Contractors		754	748	709
Total		2 228	2 182	2 100
Operational				
Volumes milled	(000t) (metric)	3 420	3 906	3 886
	(000t) (imperial)	3 772	4 307	4 285
Gold produced	(kg)	4 689	4 872	6 222
	(oz)	150 755	156 639	200 042
Gold sold	(kg)	4 755	4 949	6 192
	(oz)	152 876	159 113	199 077
Grade	(g/t)	1.37	1.25	1.6
	(oz/t)	0.040	0.036	0.047
Financial				
Revenue	(Rm)	4 028	3 748	3 591
	(US\$m)	262	239	253
Average gold price received	(R/kg)	847 027	757 348	579 902
	(US\$/oz)	1 711	1 504	1 272
Cash operating cost	(Rm)	1 670	1 696	1 371
	(US\$m)	108	108	97
Production profit	(Rm)	2 309	2 109	2 229
	(US\$m)	150	134	157
Capital expenditure	(Rm)	1 260	959	1 591
	(US\$m)	82	61	112
Operating free cash flow ¹	(Rm)	1 117	871	573
	(US\$m)	73	56	40
Cash operating cost	(R/kg)	356 233	348 054	220 323
	(US\$/oz)	719	691	483
All-in sustaining cost	(R/kg)	677 659	562 648	497 399
	(US\$/oz)	1 383	1 120	1 090
Average exchange rate	(R/US\$)	15.40	15.66	14.18
Safety				
Number of fatalities		-	_	-
Lost-time injury frequency rate	per million hours worked	-	0.68	0.35
Environment				
Electricity consumption	(GWh)	103	120	117
Water consumption – primary activities	(MI)	1 983	1 810	1 827
Greenhouse gas emissions	(000tCO ₂ e)	158	165	208
Intensity data per tonne treated				
– Energy		0.03	0.04	0.03
– Water		0.58	0.46	0.47
 Greenhouse gas emissions 		0.05	0.04	0.05
Number of reportable environmental incidents	-	7	2	

¹ Operating free cash flow = revenue – cash operating cost – capital expenditure ± impact of run-of-mine costs as per operating results.

Hidden Valley continued

Other salient features					
Status of operation	Open-pit mining operation producing gold and silver (by-product).				
Life-of-mine	Six years				

Mineral Reserve estimates at 30 June 2021

	Proved			Probable			Total		
Reserves (metric)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)
	3.4	0.95	3	19.9	1.59	32	23.3	1.50	35
Reserves (imperial)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)
	3.7	0.028	103	21.9	0.046	1 016	25.6	0.044	1 119

Overview of operations

The Hidden Valley Mine is an open-pit gold and silver operation, in Morobe Province, Papua New Guinea, some 210km north-west of Port Moresby. The mine is located at elevations of 2 800m to 1 700m above sea level in steep mountainous and forested terrain that receives around 3m of rainfall per year. The major gold and silver deposits of Hidden Valley are in the Morobe Granodiorite of the Wau Graben.

Crushed ore is conveyed from the pit via a 5.5km overland pipe conveyor and treated at the Hidden Valley processing plant, using a two-stage crushing circuit followed by a semi-autogenous grinding mill, gravity, counter current decantation/Merril Crowe circuit for silver and a carbon-in-leach circuit for gold.

Operating performance FY21

Hidden Valley's safety performance is among the best in the industry, with a fifth consecutive year of zero fatalities and over three million fatality-free shifts in FY21. This is testament to the culture of zero harm, safety coaching and leadership, as well as the use of critical control management that has been embedded operationally to drive safety.

The 14-day mill stoppage in January 2021, caused by a fault in the mill's electronic management system, together with the impact of Covid-19-related travel restrictions and operational constraints, impacted production. Volumes milled decreased 12% to 3.4 million tonnes (FY20: 3.9 million tonnes), although recovered grade improved 10% to 1.37g/t (FY20: 1.25g/t). Gold production declined 4% to 4 689kg (150 755oz) (FY20: 4 872kg, 156 639oz) and generated operating free cash flow of R1 117 million. This makes it the group's third-largest contributor to operating free cash flow in FY21, just behind the newly acquired Mponeng. The 12% rise in average gold price received to R847 027/kg (FY20: R757 348/kg) increased revenue by 8% to R4 028 million (FY20: R3 748 million). The all-in sustaining unit cost rose 20% to R677 659/kg (US\$1 383/oz) (FY20: R562 648/kg, US\$1 120/oz) due to:

- Lower gold production as a result of lower ore processed as the mine transitioned between various stages of the open-pit
- Higher total capital expenditure for plant maintenance and optimisation.

A prefeasibility study for the life-of-mine extension has been completed, which considered a two-year mine life extension and annual gold production of around 190 000oz. This study progressed to feasibility stage by the end of FY20 and was completed in FY21. A renewal of the mining lease to support a proposed mine life extension by two years was obtained.

Outlook for FY22

The key focus in FY22 will be to safely mine the current cutback to produce 153 000oz to 161 000oz, while beginning the next planned pushback of the main Hidden Valley pit.