

PERFORMANCE BY OPERATION continued

South Africa – surface operation Phoenix (tailings retreatment)

		FY21	FY20	FY19
Number of employees				
– Permanent		86	83	87
– Contractors		247	261	249
Total		333	344	336
Operational				
Volumes milled	(000t) (metric)	6 190	6 227	6 133
	(000t) (imperial)	6 827	6 866	6 762
Gold produced	(kg)	779	818	756
	(oz)	25 046	26 299	24 306
Gold sold	(kg)	777	823	750
	(oz)	24 982	26 459	24 113
Grade	(g/t)	0.126	0.131	0.123
	(oz/t)	0.004	0.004	0.004
Productivity	(g/TEC)	375.24	385.12	185.84
Financial				
Revenue	(Rm)	620	589	433
	(US\$m)	40	38	31
Average gold price received	(R/kg)	798 310	715 787	577 889
	(US\$/oz)	1 612	1 421	1 268
Cash operating cost	(Rm)	396	363	344
	(US\$m)	26	23	24
Production profit	(Rm)	227	223	92
	(US\$m)	15	14	7
Capital expenditure	(Rm)	4	7	6
	(US\$m)	–	–	–
Operating free cash flow ¹	(Rm)	221	219	83
	(US\$m)	14	14	7
Cash operating cost	(R/kg)	508 162	443 972	455 370
	(US\$/oz)	1 026	882	999
All-in sustaining cost	(R/kg)	511 946	453 937	462 579
	(US\$/oz)	1 034	901	1 015
Average exchange rate	(R/US\$)	15.40	15.66	14.18
Safety				
Number of fatalities		–	–	–
Lost-time injury frequency rate	per million hours worked	–	–	–
Environment				
Electricity consumption	(GWh)	41	40	41
Water consumption – primary activities	(Ml)	305	320	304
Greenhouse gas emissions	(000tCO ₂ e)	43	43	37
Intensity data per tonne treated				
– Energy		0.01	0.01	0.007
– Water		0.05	0.05	0.05
– Greenhouse gas emissions		0.01	0.01	0.006
Number of reportable environmental incidents		1	–	1

¹ Operating free cash flow = revenue – cash operating cost – capital expenditure as per operating results.

Phoenix (tailings retreatment) continued

Other salient features	
Status of operation	Tailings retreatment
Life-of-mine	Seven years

Mineral Reserve estimates at 30 June 2021

Reserves (metric)	Proved			Probable			Total		
	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)	Tonnes (Mt)	Grade (g/t)	Gold (000kg)
	42.6	0.28	12	–	–	–	42.6	0.28	12
Reserves (imperial)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)
	46.9	0.008	385	–	–	–	46.9	0.008	385

Overview of operations

Phoenix is a tailings retreatment operation in Virginia, Free State.

It retreats tailings from Harmony's tailings storage facilities in the Free State region to extract any residual gold, using the Zaaiploats plant. It is 100% owned by the black economic empowerment company, Tswelopele Beneficiation Operation Proprietary Limited, of which Harmony is a 76% shareholder.

Operating performance FY21

With its safety performance intact, Phoenix continued to improve its operating performance by increasing volumes processed and containing costs.

Gold production decreased 5% to 779kg (25 046oz) (FY20: 818kg, 26 299oz), mainly due to a 1% decrease in volumes of ore processed to 6.19 million tonnes and 4% decrease in recovered grade to 0.126g/t (FY20: 0.131g/t). Lower gold production was offset by the 12% rise in average gold price received to R798 310/kg (FY20: R715 787/kg), resulting in a 5% increase in revenue to R620 million (FY20: R589 million).

All-in sustaining unit costs rose 13% to R511 946/kg (FY20: R453 937/kg). Capital expenditure for FY21 decreased 43% to R4 million (FY20: R7 million) after replacing a 2km leach pipe in the prior year to reduce pipe failures and improve plant efficiencies.

Operational success depends on maintaining plant efficiency and reducing pump and pipe failures (adequate spillage control).

Outlook for FY22

The aim is to finish feasibility work on identifying the optimum second-source feed for processing given that the current feed is nearing the end of its life. Another focus will be to investigate the possibility of boosting gold recovery by reducing residence time in processing.