

PERFORMANCE BY OPERATION continued

South Africa – underground operation Moab Khotsong

		FY21	FY20	FY19
Number of employees				
– Permanent		5 369	5 343	5 421
– Contractors		840	1 086	1 036
Total		6 209	6 551	6 457
Operational				
Volumes milled	(000t) (metric)	903	746	970
	(000t) (imperial)	995	822	1 069
Gold produced	(kg)	7 166	6 592	7 928
	(oz)	230 391	211 938	254 891
Gold sold	(kg)	7 095	6 799	7 794
	(oz)	228 109	218 592	250 583
Grade	(g/t)	7.94	8.84	8.17
	(oz/t)	0.232	0.258	0.238
Productivity	(g/TEC)	109.73	102.76	120.67
Development results				
– Total metres		6981	8 815	10 472
– Reef metres		1 144	1 173	1 202
– Capital metres		2 070	1 363	1 432
Financial				
Revenue	(Rm)	6 048	5 008	4 470
	(US\$m)	393	320	315
Average gold price received	(R/kg)	852 392	736 533	573 522
	(US\$/oz)	1 722	1 463	1 258
Cash operating cost	(Rm)	3 846	3 283	3 167
	(US\$m)	250	210	223
Production profit	(Rm)	2 206	1 664	1 369
	(US\$m)	144	106	96
Capital expenditure	(Rm)	633	498	559
	(US\$m)	41	32	39
Operating free cash flow ¹	(Rm)	1 569	1 228	745
	(US\$m)	102	78	53
Cash operating cost	(R/kg)	536 710	497 953	399 414
	(US\$/oz)	1 084	989	876
All-in sustaining cost	(R/kg)	626 795	566 942	477 581
	(US\$/oz)	1 266	1 126	1 048
Average exchange rate	(R/US\$)	15.40	15.66	14.18
Safety				
Number of fatalities		1	1	1
Lost-time injury frequency rate	per million hours worked	7.92	7.95	9.75
Environment²				
Electricity consumption	(GWh)	757	738	766
Water consumption – primary activities	(MI)	6 191	5 975	6 898
Greenhouse gas emissions	(000tCO ₂ e)	903	784	700
Intensity data per tonne treated				
– Energy		0.84	0.99	0.79
– Water		6.86	8.01	7.11
– Greenhouse gas emissions		0.87	0.81	0.72
Number of reportable environmental incidents ³		1	–	–
Community				
Local economic development	(Rm)	10	22	19
Training and development	(Rm)	58	56	48

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

² Note: figures include Nufcor.

³ Figures include reportable incidents in Zaaiplaats.

Moab Khotsong continued

Other salient features	
Status of operation	Steady-state operation with a growth project
Life-of-mine	24 years (including Zaaiplaats)
Nameplate hoisting capacity (per month)	160 000 tonnes (176 000 tons)
Compliance and certification	<ul style="list-style-type: none"> • New order mining right • ISO 14001.

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)
	2.9	7.77	23	12.3	8.89	109	15.2	8.67	132
Reserves (imperial)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)	Tons (Mt)	Grade (oz/t)	Gold (000oz)
	3.2	0.227	727	13.6	0.259	3 518	16.8	0.253	4 245

Overview of operations

Moab Khotsong is a deep-level mine near the towns of Orkney and Klerksdorp, some 180km south-west of Johannesburg. The mine, which began producing in 2003, was acquired from AngloGold Ashanti Limited in March 2018.

Mining is based on a scattered mining method, together with an integrated backfill support system that incorporates bracket pillars. The geology at Moab Khotsong is structurally complex, with large fault-loss areas between the three mining areas (top mine (Great Nologwa), middle mine and lower mine (growth project and Zaaiplaats project in execution phase)). The mine exploits the Vaal Reef as its primary orebody. The economic reef horizons are mined between 1 791m and 3 052m below surface. Ore mined is processed at the Great Nologwa gold plant. The plant uses the reverse gold leach method, with gold and uranium being recovered through gold cyanide and acid uranium leaching.

Operating performance FY21

We deeply regret to report that one employee lost his life in a mining-related incident in FY21. World best practice standards have been implemented, a risk management approach is being embedded, and learnings from the incident are being applied to improve the safety performance at Moab Khotsong. Refer to **Safety and health** in the **ESG report** for more on causes of injury and management's safety approach.

The volume of ore milled increased 21% to 903 000 tonnes (FY20: 746 000 tonnes), mainly due to re-accessing the operation's highest-grade section for the full year after it was affected by seismic activity in FY20 and had to be rehabilitated. Gold production rose 9% to 7 166kg (230 391oz) (FY20: 6 592kg, 211 938oz) despite a 10% decrease in underground grade recovered to 7.94g/t (FY20: 8.84g/t), offset by higher productivity and improved mining efficiencies given no interruptions due to national lockdowns.

The mine is the group's second-largest gold operation (contributing 15% of total production) and the largest contributor to operating free cash flow. Revenue increased 21% to R6 048 million (FY20: R5 008 million), mainly due to the average gold price received rising 16% to R852 392/kg (FY20: R736 533/kg). Cash operating costs were 17% higher at R3 846 million (FY20: R3 283 million), mainly due to wages and electricity tariff increases. Capital expenditure rose 27% to R633 million (FY20: R498 million), mainly for ongoing development that includes infrastructure to extract and mine the pillar in Great Nologwa. Operating cash free flows of R1 569 million were recorded in FY21 compared to R1 228 million in FY20, reflecting a higher increase in revenue versus a marginal increase in capital and operating costs.

A notable outcome of FY21 was the completion of the Great Nologwa pillar extraction feasibility study. This went onto project-implementation stage, with construction of the second 73-76 level rock-transfer system completed and commissioned in the third quarter and handed over to production. Harmony has extensive pillar-mining expertise which is being used to develop the infrastructure for extracting and mining the pillar.

Outlook for FY22

With 24 years' (including Zaaiplaats) life-of-mine left, the focus in FY22 will be to improve our safety performance; increase mining face lengths and achieve the reserve grade. Planned capital expenditure for FY22 related to the Zaaiplaats project will be R537 million. The project is expected produce 7 000kg (225 000oz) per annum at a grade of 9g/t and should reach full production by FY32.