

DELIVERING VALUE FROM OPERATIONS, PROJECTS AND TECHNOLOGY

APPROACH

Operational excellence and innovative growth create sustainability as our strategy drives us to create superior value for all stakeholders at our mining operations and projects in the United States, South Africa, Zimbabwe, Canada and Argentina.

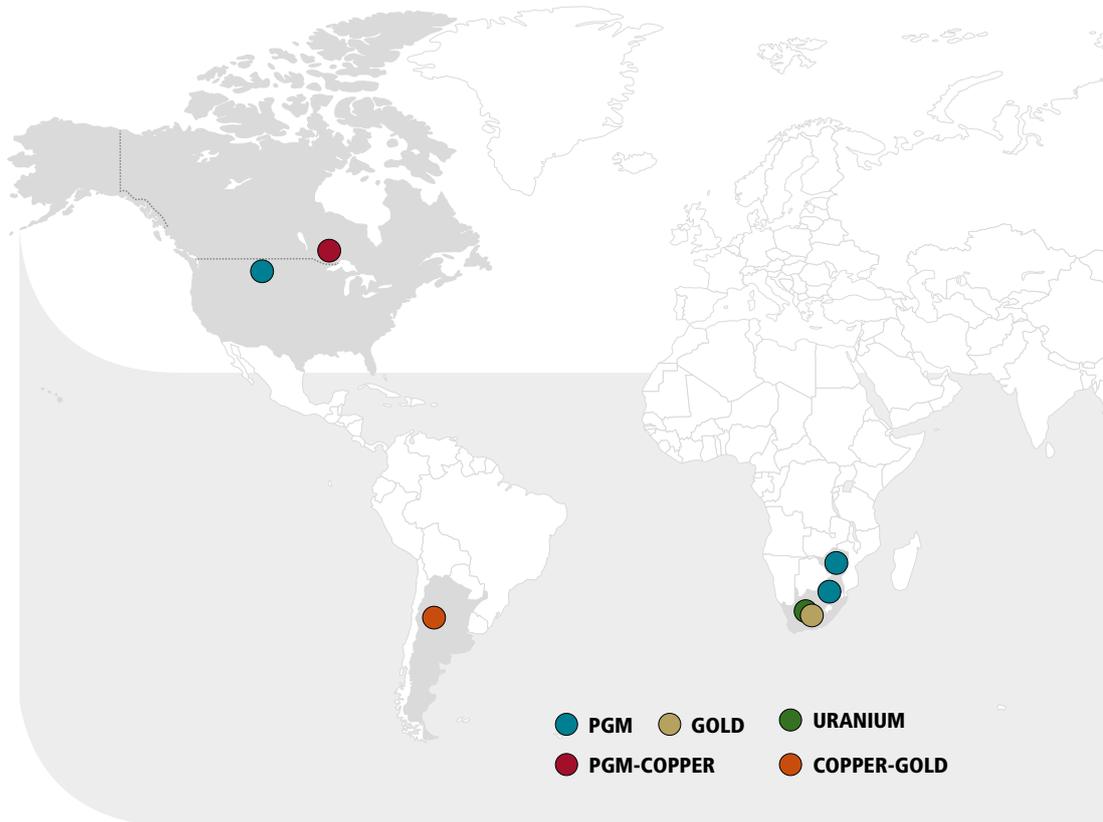
We remain globally competitive yet proudly South African by focusing on commodity and geographical diversification that delivers clear strategic and financial benefits.

IN LINE WITH SUSTAINABLE DEVELOPMENT GOALS

We continue to make progress in aligning our operations and projects with the United Nations (UN) Sustainable Development Goals (SDGs), focusing particularly on Goal 12.



LOCATION OF OUR OPERATIONS AND PROJECTS



UNITED STATES

PGM OPERATIONS

- East Boulder
- Stillwater (including Blitz)

OTHER PROJECTS

- Altar (Argentina)¹
- Marathon (Canada)
- Rio Grande (Argentina)

SOUTHERN AFRICA

PGM OPERATIONS

- Rustenburg
- Kroondal (50%)
- Mimosa (50%)¹
- Platinum Mile (91.7%)¹

PGM PROJECTS

- Hoedspruit (74%)
- Vygenhoek (50%)
- Zondernaam (74%)
- Blue Ridge (50%)²

GOLD OPERATIONS

- Beatrix
- Driefontein
- Kloof
- Cooke²
- DRDGOLD (Ergo and FWGR³) (38%)¹

GOLD PROJECTS

- Burnstone
- SOFS⁴

¹ Non-managed

² Underground operations on care and maintenance

³ Far West Gold Recoveries

⁴ Southern Orange Free State project



DELIVERING VALUE FROM OPERATIONS, PROJECTS AND TECHNOLOGY

CONTINUED

OPERATIONAL PERFORMANCE

Our US and SA PGM operations maintained steady operating performances with revenues benefiting from higher palladium and rhodium prices in 2018, which have continued to strengthen into 2019. The benefits of our well-timed diversification into the PGM sector, as well as our geographical diversification, are clearly evident in the PGM financial results of the segments. The solid operating and financial performance of our PGM operations compensated for challenges experienced by our SA gold operations.

US PGM operations

Our dominant source of earnings is now our US PGM operations, which accounted for approximately 50% of Group adjusted EBITDA in 2018 with the adjusted EBITDA margin for the US PGM operations increasing from 43% in 2017 to 46% in 2018, primarily due to the higher dollar palladium price and strong operational performance. Adjusted EBITDA from the US PGM operations (including the lower margin recycling operations) increased from 23% in 2017 to 26% for 2018.

Mined 2E PGM production for the year of 592,608 2Eoz was towards the upper end of market guidance, reflecting the ongoing build-up of production at Blitz and record production from the East Boulder mine. AISC of US\$677/2Eoz was in line with annual guidance.

The 9% year-on-year increase in the average 2E PGM basket price for the year of US\$1,007/2Eoz, coupled with the strong operating performance, boosted adjusted EBITDA for 2018 to US\$314 million (R4,152 million).

Despite the ongoing rebuild and expansion of the second electric furnace (EF2), the Columbus Metallurgical Complex performed well, processing 619,683oz of mined 2E PGM and 686,592oz of recycled 3E PGM. The recycling division averaged 22.0 tonnes of feed material per day in 2018 in comparison with an average feed rate of 23.9 tonnes per day in 2017.

Capital expenditure of US\$214 million was marginally lower than market guidance of US\$220 million. This capital expenditure is evenly split between sustaining and growth/project capital associated with the ongoing development and production ramp-up from Blitz, which is on schedule with three stope blocks successfully commissioned and in production.

US PGM operations: production and recycling (ounces)

Mined 2E production	2018	2017 ¹
Stillwater	364,167	² 228,268
East Boulder	228,441	148,088
Total mined	592,608	373,356
Recycling 3E³ at Columbus Metallurgical Complex		
PGM fed	686,592	517,148
PGM sold	540,546	377,793
PGM tolled returned	144,172	108,728

¹ May to December 2017

² Includes 7,000 2Eoz produced by Blitz project in 2017 and 40,232 2Eoz in 2018

³ Recycling production includes rhodium

SA PGM operations

The contribution from the SA PGM operations has increased substantially due to the improved rand PGM basket price and solid, sustained operational performance. In 2018, the SA PGM operations contributed 34% of Group adjusted EBITDA, up from 18% in 2017, with the adjusted EBITDA margin increasing year-on-year from 12% to 19%.

Full-year 4E PGM production was 1,175,672oz for the year ended 31 December 2018, exceeding the upper guidance limit.

Kroondal attributable built on the record performance of the previous year increasing the record by 5.8% from the previous year's production to 255,172oz attributable.

Rustenburg was 3.9% lower than the previous year at 778,346oz mainly as result of lower surface production, underground production is in line with the previous year's performance.

Attributable 4E PGM production from Mimosa was up 0.34% from the previous year to 124,576oz another consistent performance despite the turbulent political and economic environment in Zimbabwe.

Platinum Mile Resource was down 9.6% from the previous year to 17,578oz, mainly as a result of the improved recoveries from the Rustenburg operations resulting lower feed grade to Platinum Mile, subsequently Platinum Mile embarked on a plant improvement strategy (see Project section).

The average 4E PGM basket price for the year ended 31 December 2018 of R13,838/4Eoz (US\$1,045/4Eoz) was 10% higher year-on-year.

Adjusted EBITDA for the full year of R2,882 million (US\$218 million) was 81% higher than it was in 2017 with the adjusted EBITDA margin increasing from 12% in 2017 to 19% in 2018.



Mechanised drilling underground at our US PGM operations



Underground at the K6 mine at our SA PGM operations

SA gold operations

Including 1,870kg (60,122oz) from DRDGOLD, total gold production declined by 16% year-on-year to 36,600kg (1,176,600oz), primarily due to the impact of the safety incidents in the first half of the year and other operational disruptions (power cuts at Beatrix, and seismic damage to infrastructure at the Driefontein 1 and Kloof 3 shafts), the AMCU strike in the second half of the year, and the cessation of underground mining at the Cooke operations in late 2017, which accounted for 956kg (30,736oz) or 32% of the reduction.

Gold production (excluding DRDGOLD and the Cooke underground operations) also declined by 16% to 34,676kg (1,114,800oz).

Underground production from the Driefontein operations decreased by 33% year-on-year to 8,952kg (287,800oz) due to repairs to the footwall infrastructure of the Masakhane shaft, following the seismic damage in May 2018 and the impact of the AMCU strike. The footwall infrastructure has been rehabilitated successfully but anticipated production build-up in the area was delayed by the strike.

Gold production from surface sources decreased by 64% to 621kg (20,000oz) due to the depletion of surface reserves and the disposal of the 2 and 3 plants to DRDGOLD. The possible restructuring of specific shafts at Driefontein, and recovery in volumes once the strike has ended, are expected to return the operation to profitability in 2019.

Underground production from the Kloof operations decreased by 13% to 12,933kg (415,800oz) in comparison with 2017. Production volumes decreased by 16%, most notably at 3, 4 and 7 shafts, which were affected by the trauma of safety incidents and the AMCU strike. Surface production increased by 39% to 2,231kg (71,700oz) due to the additional milling capacity as a result of lower underground production, and the decision to process Kloof surface material at the Driefontein and Ezulwini metallurgical processing facilities.

At the Beatrix operations, underground gold production decreased slightly by 6% to 8,291kg (266,600oz), primarily due to the strike that affected production in the fourth quarter. Gold production from surface sources increased by 7% to 246kg (7,900oz) due to a 23% improvement in mined grades to 0.4g/t.

Underground production from the Cooke operations decreased by 97% to 81kg (2,600oz), following cessation of underground operations in November 2017 and final clean-up in December

2017. No underground gold was produced from the Cooke operations other than that from the clean-up of mud dams. Surface gold production increased by 64% to 1,265kg (40,700oz) due to a 26% increase in processed volumes to 4.0Mt due to the inclusion of Dump 38 and the acquisition of third-party material, which resulted in an additional 531kg (17,000oz) of gold for the period under review.

The impact of the 16% decline in production year-on-year is evident in the 15% increase in AISC for 2018 to R557,530/kg (US\$1,309/oz) although cost of sales before amortisation and depreciation (including DRDGOLD and the Cooke underground operations) remained flat year-on-year. The significant fixed overhead cost component (over 80% of operating costs) for the SA gold operations makes costs very sensitive to production volume changes and, as a result, unit costs such as AISC invariably increase with reductions in production volumes.

The average received rand gold price for 2018 of R535,929/kg (US\$1,259/oz), which was flat year-on-year, combined with the significant decline in production, resulted in adjusted EBITDA from our SA gold operations declining to R1,362 million (US\$103 million) from R5,309 million (US\$399 million) in 2017.

“Our successful commodity and geographic diversification is evident in our results”



Shaft headgears at the Driefontein SA gold operations

DELIVERING VALUE FROM OPERATIONS, PROJECTS AND TECHNOLOGY

CONTINUED

SA and US PGM operations (2018)

		Total PGM operations	SA PGM operations					US PGM operations
			Total	Kroondal	Mimosa	Platinum Mile	Rustenburg	Stillwater
Production (attributable)¹								
Ore milled	000t	27,180	25,841	3,865	1,402	7,712	12,862	1,339
Underground	000t	13,720	12,381	3,865	1,402	0	7,114	1,339
Surface	000t	13,460	13,460	0	0	7,712	5,748	0
Plant head grade	g/t	2.65	2.01	2.48	3.56	0.63	2.52	15.01
Underground	g/t	4.40	3.25	2.48	3.56	0	3.60	15.01
Surface	g/t	0.87	0.87	0	0	0.63	1.19	0
Plant recoveries	%	76.34	70.40	82.65	77.59	11.19	74.59	91.29
Underground	%	86.24	83.60	82.65	77.59	0	85.13	91.29
Surface	%	25.23	25.23	0	0	11.19	35.22	0
Yield	g/t	2.02	1.42	2.05	2.76	0.07	1.88	13.77
Underground	g/t	3.79	2.71	2.05	2.76	0	3.06	13.77
Surface	g/t	0.22	0.22	0	0	0.07	0.42	0
PGM production (4E/2E)	000oz	1,768	1,176	255	125	18	778	593
Underground	000oz	1,673	1,080	255	125	0	701	593
Surface	000oz	95	95	0	0	18	78	0
PGM sales (4E/2E)	000oz	1,770	1,176	255	125	18	778	594
Price and costs²								
Average PGM basket price received ³	R/oz	13,657	13,838	14,203	13,525	13,618	13,723	13,337
	US\$/oz	1,031	1,045	1,072	1,021	1,028	1,036	1,007
Adjusted EBITDA margin ⁴	%	23	19	22	33	22	18	46
All-in sustaining cost ⁵	R/oz	9,904	⁷ 10,417	9,849	9,069	8,676	10,642	8,994
	US\$/oz	748	⁷ 787	744	685	655	804	677
All-in cost ⁵	R/oz	10,897	⁷ 10,472	9,849	9,069	11,924	10,643	11,651
	US\$/oz	823	⁷ 791	744	685	900	804	880
Capital expenditure								
Ore reserve development	Rm	1,477	⁷ 478	0	0	0	478	999
Sustaining capital	Rm	725	⁷ 464	141	171	10	314	260
Growth projects ⁶	Rm	1,632	⁷ 58	0	0	57	1	1,574
Total	Rm	3,833	1,000	141	171	67	792	2,833
	US\$m	290	76	11	13	5	60	214

Average exchange rate in 2018 was R13.24/US\$

Figures may not tally as they are rounded independently

The US PGM operations' underground production is converted to metric tonnes and kilograms, and performance is translated into South African rand. In addition to the US PGM operations' underground production, recycled material is treated, which is excluded from the statistics

¹ Kroondal and Mimosa represent 50% attributable production while Platinum Mile is 91.7% owned and 100% incorporated

² The Group and total SA PGM operations' unit cost benchmarks exclude the financial results of Mimosa, which is equity accounted, and excluded from revenue and cost of sales

³ The average PGM basket price is the PGM revenue per 4E/2E ounce prior to a purchase-of-concentrate adjustment

⁴ Adjusted EBITDA margin is calculated by dividing adjusted EBITDA by revenue

⁵ All-in cost excludes income tax, costs associated with merger and acquisition activities, working capital, impairments, financing costs, one-time severance charges and items needed to normalise earnings. All-in cost is made up of All-in sustaining cost, as the cost to sustain current operations and presented as a sub-total in the All-in cost calculation, together with corporate and major capital expenditure associated with growth. All-in sustaining cost per ounce (and kilogram) and All-in cost per ounce (and kilogram) are calculated by dividing the All-in sustaining cost and All-in cost respectively, in a period, by the total 4E/2E PGM production in the same period.

⁶ The US PGM operations' growth project expenditure in 2018 was R71 million (US\$5 million) – the majority of which related to the Altar and Marathon projects

⁷ Excludes Mimosa due to it being equity accounted

SA and US PGM operations (2017)

		Total PGM operations	SA PGM operations					US PGM operations
			Total	Kroondal	Mimosa	Platinum Mile	Rustenburg	Stillwater
Production (attributable)¹								
Ore milled	000t	27,051	26,196	3,778	1,385	8,050	12,983	855
Underground	000t	13,116	12,261	3,778	1,385	0	7,098	855
Surface	000t	13,935	13,935	0	0	8,050	5,885	0
Plant head grade	g/t	2.50	2.09	2.42	3.58	0.65	2.72	15.01
Underground	g/t	4.06	3.30	2.42	3.58	0	3.70	15.01
Surface	g/t	1.02	1.02	0	0	0.65	1.52	0
Plant recoveries	%	72.37	68.06	81.91	77.87	11.62	71.41	90.95
Underground	%	85.22	83.42	81.91	77.87	0	84.99	90.95
Surface	%	24.25	24.25	0	0	11.62	31.58	
Yield	g/t	1.81	1.42	1.99	2.79	0.08	1.94	13.69
Underground	g/t	3.46	2.75	1.99	2.79	0	3.15	13.69
Surface	g/t	0.25	0.25	0	0	0.08	0.48	
PGM production (4E/2E)	000oz	1,571	1,194	241	124	19	810	376
Underground	000oz	1,460	1,084	241	124	0	719	376
Surface	000oz	110	110	0	0	19	91	
PGM sales (4E/2E)	000oz	1,550	1,194	241	124	19	810	355
Price and costs²								
Average PGM basket price received ³	R/oz	12,477	12,534	12,564	12,572	12,679	12,505	12,330
	US\$/oz	938	942	944	945	953	940	927
Adjusted EBITDA margin ⁴	%	17	12	15	31	27	11	43
All-in sustaining cost ⁵	R/oz	9,959	⁷ 10,399	10,176	9,781	6,696	10,554	8,707
	US\$/oz	748	⁷ 782	765	735	503	793	651
All-in cost ⁵	R/oz	10,582	⁷ 10,401	10,176	9,781	6,815	10,554	11,097
	US\$/oz	795	⁷ 782	765	735	512	793	821
Capital expenditure								
Ore reserve development	Rm	1,004	⁷ 465	0	0	0	465	539
Sustaining capital	Rm	572	⁷ 568	191	223	11	366	227
Growth projects ⁶	Rm	891	⁷ 2	0	0	2	0	⁶ 888
Total	Rm	2,466	1,035	191	223	13	831	1,654
	US\$m	202	78	14	17	1	62	124

Average exchange rate in 2017 was R13.31/US\$

Figures may not tally as they are rounded independently

The US PGM operations' underground production is converted to metric tonnes and kilograms, and performance is translated into South African rand. In addition to the US PGM operations' underground production, recycled material is treated, which is excluded from the statistics shown

¹ Kroondal and Mimosa represent 50% attributable production while Platinum Mile is 91.7% owned and 100% incorporated

² The Group and total SA PGM operations' unit cost benchmarks exclude the financial results of Mimosa, which is equity accounted, and excluded from revenue and cost of sales

³ The average PGM basket price is the PGM revenue per 4E/2E ounce prior to a purchase-of-concentrate adjustment

⁴ Adjusted EBITDA margin is calculated by dividing adjusted EBITDA by revenue

⁵ All-in cost excludes income tax, costs associated with merger and acquisition activities, working capital, impairments, financing costs, one-time severance charges and items needed to normalise earnings. All-in cost is made up of All-in sustaining cost, as the cost to sustain current operations and presented as a sub-total in the All-in cost calculation, together with corporate and major capital expenditure associated with growth. All-in sustaining cost per ounce (and kilogram) and All-in cost per ounce (and kilogram) are calculated by dividing the All-in sustaining cost and All-in cost respectively, in a period, by the total 4E/2E PGM production in the same period.

⁶ The US PGM operations' corporate project expenditure in 2017 was R40 million (US\$3 million) – the majority of which related to the Altar and Marathon projects

⁷ Excludes Mimosa due to it being equity accounted

DELIVERING VALUE FROM OPERATIONS, PROJECTS AND TECHNOLOGY

CONTINUED

SA gold operations (2018)

	Unit	Total	Driefontein	Kloof	Beatrix	Cooke	DRDGOLD
Production							
Ore milled	000t	27,199	3,143	7,108	2,952	4,092	9,904
Underground	000t	5,811	1,634	1,821	2,282	74	0
Surface	000t	21,388	1,509	5,287	670	4018	9,904
Yield	g/t	1.35	3.05	2.13	2.89	0.33	0.19
Underground	g/t	5.21	5.48	7.11	3.63	1.08	0
Surface	g/t	0.30	0.41	0.44	0.37	0.33	0.19
Gold production	kg	36,600	9,573	15,253	8,536	1,394	1,844
	000oz	1,177	308	490	275	45	59
Underground	kg	30,263	8,952	12,940	8,291	80	0
	000oz	973	288	416	267	3	0
Surface	kg	6,337	621	2,313	245	1,314	1,844
	000oz	204	20	72	8	42	59
Gold sales	kg	36,489	9,573	15,164	8,536	1,346	1,870
	000oz	1,173	308	488	275	43	60
Price and costs							
Gold price received	R/kg	535,929	533,918	536,250	539,046	550,223	560,160
	US\$/oz	1,259	1,254	1,259	1,266	1,292	1,316
Adjusted EBITDA margin ¹	%	7	(13)	21	14	(50)	3
All-in sustaining cost ²	R/kg	557,530	707,375	489,587	521,884	476,003	569,893
	US\$/oz	1,309	1,661	1,150	1,226	1,118	1,338
All-in cost ²	R/kg	583,409	707,417	498,938	522,083	476,003	732,086
	US\$/oz	1,370	1,661	1,172	1,226	1,118	1,719
Capital expenditure							
Ore reserve development	Rm	2,054	817	840	397	0	0
Sustaining capital	Rm	546	228	221	83	0	15
Growth projects ³	Rm	648	1	142	2	0	303
Total	Rm	3,248	1,046	1,202	481	0	318
	US\$m	245	79	91	36	0	24

Average exchange rate in 2018 was R13.24/US\$

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¹ Adjusted EBITDA margin is calculated by dividing adjusted EBITDA by revenue

² All-in cost excludes income tax, costs associated with merger and acquisition activities, working capital, impairments, financing costs, one-time severance charges and items needed to normalise earnings. All-in cost is made up of All-in sustaining cost, as the cost to sustain current operations and presented as a sub-total in the All-in cost calculation, together with corporate and major capital expenditure associated with growth. All-in sustaining cost per kilogram (and ounce) and All-in cost per kilogram (and ounce) are calculated by dividing the All-in sustaining cost and All-in cost, respectively, in a period by the total gold sold in the same period.

³ Growth project expenditure in 2018 was R201 million (US\$15 million) – the majority of which was related to the Burnstone project

SA gold operations (2017)

	Unit	Total	Driefontein	Kloof	Beatrix	Cooke
Production						
Ore milled	000t	19,030	6,042	5,844	3,515	3,722
Underground	000t	7,575	2,137	2,177	2,737	524
Surface	000t	11,455	3,905	3,667	778	3,198
Yield	g/t	2.29	2.48	2.86	2.59	0.83
Underground	g/t	5.19	6.21	6.81	3.24	4.46
Surface	g/t	0.38	0.45	0.45	0.30	0.24
Gold production	kg	43,634	15,004	16,432	9,091	3,107
	000oz	1,403	482	528	292	100
Underground	kg	39,285	13,262	14,826	8,859	2,338
	000oz	1,263	426	477	285	75
Surface	kg	4,349	1,742	1,606	232	769
	000oz	140	56	52	8	25
Gold sales	kg	43,763	15,088	16,466	9,091	3,118
	000oz	1,407	485	529	292	100
Price and costs						
Gold price received	R/kg	536,378	535,319	537,167	536,333	537,684
	US\$/oz	1,254	1,251	1,256	1,254	1,257
Adjusted EBITDA margin ¹	%	23	23	34	19	(31)
All-in sustaining cost ²	R/kg	482,693	487,951	430,572	502,761	673,445
	US\$/oz	1,128	1,141	1,007	1,175	1,574
All-in cost ²	R/kg	501,620	490,893	439,506	503,036	677,197
	US\$/oz	1,173	1,148	1,027	1,176	1,583
Capital expenditure						
Ore reserve development	Rm	2,288	876	876	482	54
Sustaining capital	Rm	531	235	210	63	9
Growth projects ³	Rm	591	44	147	1	12
Total	Rm	3,410	1,156	1,234	546	74
	US\$m	256	87	93	41	6

Average exchange rate in 2017 was R13.31/US\$

Figures may not tally as they are rounded independently

¹ Adjusted EBITDA margin is calculated by dividing adjusted EBITDA by revenue

² All-in cost excludes income tax, costs associated with merger and acquisition activities, working capital, impairments, financing costs, one-time severance charges and items needed to normalise earnings. All-in cost is made up of All-in sustaining cost, as the cost to sustain current operations and presented as a sub-total in the All-in cost calculation, together with corporate and major capital expenditure associated with growth. All-in sustaining cost per kilogram (and ounce) and All-in cost per kilogram (and ounce) are calculated by dividing the All-in sustaining cost and All-in cost, respectively, in a period by the total gold sold in the same period.

³ Growth project expenditure in 2017 was R402 million (US\$30 million) – the majority of which was related to the Burnstone project

DELIVERING VALUE FROM OPERATIONS, PROJECTS AND TECHNOLOGY

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FUTURE FOCUS

The Group is poised to benefit from the sharp increase in precious metals prices in the first three months of 2019, particularly palladium and rhodium, and most recently a recovery in the platinum price, which are well supported by robust fundamentals.

Mined 2E PGM production from the US PGM operations is forecast at between 645,000oz and 675,000oz due to continued production build-up from Blitz. AISC is forecast to be between US\$690/2Eoz and US\$730/2Eoz, an increase range of 2% to 8% versus 2018's reported AISC of US\$677/2Eoz. This anticipated increase is largely attributed to maintenance equipment capital spend at Stillwater and increased royalties and taxes as a result of higher prevailing US\$ PGM prices. Unit cash operating cost, which is calculated before these specific items, is expected to decline year-on-year as lower cost production from Blitz supplements stable production from Stillwater West and East Boulder. Total capital spend for the year is guided at between US\$235 million and US\$245 million. Approximately half of this anticipated spend is growth capital, including expenditure on the Fill the Mill (FTM) project.

From the SA PGM operations, 4E PGM production in 2019 is forecast at 1.0Moz – 1.1Moz with AISC between R12,500/4Eoz and R13,200/4Eoz (US\$922/4Eoz and US\$974/4Eoz), reflecting the transition to the toll processing arrangement. Capital expenditure is forecast at R1,400 million (US\$103 million), including approximately R230 million (US\$17 million) of project capital, excluding Mimosa. The dollar costs are based on an average exchange rate of R13.55/US\$.

DRDGOLD has been fully consolidated into Group operating and financial results from 1 August 2018 but, at this stage, we can report that guidance for our SA gold operations will be available only once the protracted AMCU strike has been terminated and the restructuring process has been completed.

FILL THE MILL GROWTH PROJECT

The Fill the Mill (FTM) project, a low capital-investment, high-return, growth project at the US PGM operations is expected to deliver approximately 40,000oz of annual 2E PGM production, over an expected 10-year period from late 2020, through incremental expansion of mining and certain support facilities at East Boulder and the Columbus Metallurgical Complex.

Incremental project capital is approximately US\$19 million (excluding additional operating costs) over two years until first production.



An employee at our US PGM operations

PROJECTS

Refer to *Sibanye-Stillwater Mineral Resources and Mineral Reserves Report 2018* for details on each project

Expenditure on organic growth projects in 2018 was R2,279 million (US\$172 million) in comparison with R1,482 million (US\$111 million) in 2017.

Our projects are reviewed, evaluated and ranked every year in line with our strategic planning in order to determine execution priority and thus ensure highest capital efficiency for the entire portfolio.

US PGM projects

BLITZ

The Blitz section, a significant expansion project currently under development, started ore production in 2017 and produced 40,232 oz in 2018 as part of the Stillwater mine. The current section is accessed by a 580m-deep shaft and five portals.

The Blitz project will expand the Stillwater mine 6,000m to the east of the existing mining operations (refer to schematic below). All primary development in the Blitz area will be 5m high by 5m wide, which will significantly reduce underground support personnel per tonne mined. The average Blitz reserve grade is 24g/t with localised stoping (ore) areas in excess of 30g/t.

The Blitz project is expected to add an additional 300,000 2E PGM ounces to the existing Stillwater and East Boulder production by 2021/2022. Planned production expansion in the Blitz project area requires accelerated manpower hiring, expansion of concentrator capacity and shorten permitting time lines for tailings expansion.

MARATHON

During 2018, at the Marathon PGM-copper project, approximately 10km north of Marathon, Ontario, adjacent to the Trans-Canada Highway 17 on the north-east shore of Lake Superior, geological prospecting mapping and trench sampling continued at the Boyer zone where surface mineralisation was extended by 800m. In addition, a passive seismic survey was completed over the Marathon property (1,024 geophones) as a project funded by the Horizon 2020 European Union research and innovation programme. The data is currently being processed with a view to locating high-velocity zones that correlate with massive sulphide high-grade feeders at Marathon. The gravity survey line (6,000m) was also surveyed in 2018 across a seismic high-velocity zone to verify higher density. Baseline environmental stream sampling and a community relations programme continued at the same time.

SA PGM operations

CHROME OPTIMISATION

A chrome spiral recovery plant currently exists at the Waterval UG2 concentrator to treat flotation tails. In order to improve chrome recovery, fine fraction chrome recovery technology trade-off studies were conducted in 2018. The trade-off studies concluded that a reflux classifier was the preferred technology solution. The chrome optimisation project introduces two modular reflux classifiers to increase the recovery of chrome in the -75 micron tailings fraction. The project envisages the recovery of an additional 10,000 tpm of chrome concentrate equivalent to 20% of current production.

A contracting company, Linhleko Projects, will recover the chromite concentrate in terms of an outcome-based business model

and the SA PGM operations will initially account for the contract as a finance lease that will be reflected as a right of use asset and finance lease liability (considered to be debt) of approximately R230 million. Sibanye-Stillwater will not directly fund the project but will pay for the plant in terms of an outcome-based business model that is related to actual chrome production. The project is expected to be commissioned in Q4 2019.

PLATINUM MILE RECOVERY FLOTATION EXPANSION PROJECT

The aim of the Platinum Mile recovery flotation expansion project is to increase throughput by 520m³ and retention time from eight minutes to 24 minutes thereby significantly improving 4PGE recovery.

The increased rougher retention time resulted in an overall plant recovery of about 2%.

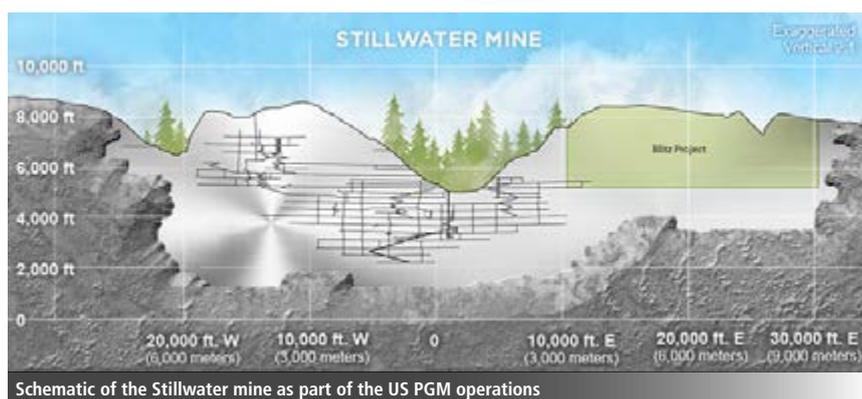
Earthworks for the rougher cell expansion to the Platinum Mile recovery flotation expansion project commenced on 23 January 2018 and the project was commissioned during Q4 2018 for a capital cost of R60 million.

SA gold projects

BURNSTONE

The Burnstone project is a shallow to intermediate depth gold mining project near Balfour in Mpumalanga, 80km north-west of Johannesburg. The Burnstone development project was purchased by Sibanye-Stillwater in 2014. The project feasibility study that was prepared was independently reviewed in 2015 and finance was approved in 2016 with development starting in 2016. As from commencement of development in 2016 to May 2018, 12,368 metres of development had been completed which includes seven reef raises that are production ready.

The capital approved for the Burnstone project during 2018 was R442.0 million. On completion of a detailed engineering design, the project capital provision approved for 2018 was reduced to R417.6 million in order to deliver new infrastructure on a just in time basis with an expected expenditure of R198.0 million by end December 2018. Development was stopped in May 2018, due to a capital preservation exercise. The operational requirements subsequently focused on the establishment of underground engineering infrastructure in preparation for mining production in 2021.



Schematic of the Stillwater mine as part of the US PGM operations

DELIVERING VALUE FROM OPERATIONS, PROJECTS AND TECHNOLOGY

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The Burnstone project focus for 2019 is to continue establishing underground engineering infrastructure in preparation for expected mining production commencing in 2021. The Burnstone 2019 operational plan project capital provision of R125 million has been allocated to complete the required engineering infrastructure to support mining production from 2021.

SOUTHERN ORANGE FREE STATE

Sibanye-Stillwater acquired the Southern Orange Free State (SOFS) project (which includes the Bloemhoek and De Bron Merriespruit projects) near Virginia in the Free State in 2014 through the acquisition of Witwatersrand Consolidated Gold Resources (Wits Gold).

The De Bron Merriespruit project was at feasibility stage and an application for a new mining right over the SOFS project area was submitted to the Department of Mineral Resources in terms of Section 22 of the Mineral and Petroleum Resources Development Act. The SOFS mining right was granted in February 2014 and executed on 14 June 2017. The right expires on 13 June 2040.

A feasibility study on Bloemhoek, which began in 2016, is expected to be finalised in 2019. If the project is approved, the development is expected to enter the Bloemhoek project area from Beatrix 3 shaft in 2021. The Bloemhoek and De Bron Merriespruit projects envisage using existing Beatrix support infrastructure in order to limit the amount of capital funding required to reach production phase.

FAR WEST GOLD RECOVERIES

In August 2018, the sale of selected surface assets to DRDGOLD was concluded. Select West Rand Tailings Retreatment Project (WRTRP) assets were traded for 38.05% of all DRDGOLD shares. DRDGOLD's gold reserves increased by approximately 83% from 3.28Moz to 6.00Moz following the transaction.

Renamed Far West Gold Recoveries, 30km west of Johannesburg, this project, which is now in operation, includes historic tailings storage facilities over an area of 412.3ha with a combined Mineral Reserve estimate of 246Mt at an average grade of 0.344g/t gold for a total gold content of 2.72Moz.

DRDGOLD commissioned a "reduced" Phase 1 of the Far West Gold Recoveries project, with the pumping of reclaimed tailings from the Driefontein 5 tailings facility into the upgraded Driefontein 2 carbon-in-leach (CIL) circuit. The project is on track to process the designed 500 000tpm in Q1 2019.

DRDGOLD intends developing the assets into a large-scale 1.2Mtpm, 20-year operation that will reclaim gold in a phased approach.

KLOOF OPTIMISATION PROJECT

The extension project at Kloof's 4 shaft, to access the area between 45 and 47 levels, progressed to a point just below 46 level in 2018. Development will continue to 47 level.

In addition, the Kloof 8 shaft expansion project, designed to increase current production levels at 8 shaft, was approved in 2018 and will be fully operational by 2020.

The Kloof integration project, designed to optimise operating shafts and close redundant infrastructure, also began in 2018. This project will significantly decrease operating costs.

Other projects

ALTAR

On 5 November 2018, Sibanye-Stillwater concluded a transaction with Regulus Resources and a newly formed subsidiary of Regulus, Aldebaran Resources creating a strategic partnership to unlock value at the Altar copper-gold project in the province of San Juan, Argentina, 180km west of the city of San Juan.

During 2018, Regulus Resources spun out its Argentine assets, including the Rio Grande project, into a newly formed company, Aldebaran Resources, which has entered into a joint venture and option agreement with Stillwater Canada (an indirect subsidiary of Sibanye-Stillwater) to acquire up to an 80% interest in Peregrine Metals, a wholly owned subsidiary of Sibanye-Stillwater, which owns the Altar copper-gold project.

A drill programme to test the deep extensions down to 1,500m depth of the Quebrada de la Mina (QDM)-radio-porphry, Altar East and Altar Central was conducted in 2018. The core drilling programme of 4,923m was completed with

three new holes and one drillhole extension with maximum depths of 1,540m from surface. In addition, work continued on extension of the QDM ground magnetic survey, the talus fine geochemical survey and surface prospecting.

In terms of the agreement, Sibanye-Stillwater will retain a direct interest in the Altar project of either 40% or 20% (should Aldebaran Resources exercise its additional earn-in option), as well as indirect exposure to all Aldebaran assets (including the Rio Grande project) through its 19.9% shareholding in Aldebaran Resources.

The Rio Grande project (owned and managed by Aldebaran Resources) is an iron oxide copper-gold type, copper-gold exploration stage project in north-western Argentina, approximately 1,400km north-west of Buenos Aires. Lindero, a Fortuna Silver property, 10km from Rio Grande with a similar type of mineral deposit, began development in 2018 and initial production is expected in 2019.



Altar project (Argentina)

TECHNOLOGY AND INNOVATION

STRATEGY DEVELOPMENTS IN 2018

The Technology and Innovation department has transformed in terms of its research and development focus, corporate and regional alignment strategies and management of internal and external initiatives, ensuring that the resourcing of initiatives remains aligned with the growth and transformation of the organisation.

Technology and Innovation is now contained within the Group Technical function with the intention of implementing a comprehensive and cohesive global technology and innovation strategy that will be implemented by appropriate structures in each geography. The focus will be on value creation through three key tiers, namely:

- The strategic long-term tier will operate from a global perspective and manage the consolidation of long-term internal initiatives and strategies that have global relevance, such as the digital transformation theme. The strategic tier will also be responsible for external research and development initiatives and partnerships with research institutions.
- The medium-term tactical tier will operate from a regional or commodity-specific perspective and be responsible for technology and innovation initiatives within the relevant geography or commodity. The tactical tier will manage programmes that form part of the strategic tier's portfolio of initiatives, establish centres of excellence for themes that have global relevance or adopt technologies that have been proven in alternate regional or commodity specific centres of excellence. The tactical tier will also be responsible for implementing technology and innovation culture and change frameworks that are developed by the strategic tier, ensuring a common global technology and innovation identity.
- The short-term executional tier will maintain focus on implementing quick-win initiatives as well as continuous improvement programmes that are supplemented by technology.

Sibanye-Stillwater supports projects and programmes that contribute to the sustainability of the organisation through measurable improvement of the following:

- Safety
- Environmental performance
- Organisational and operational efficiencies, yielding maximum return on capital employed
- Operational transparency, creating greater insight and enabling more proactive management
- Education, training and skills
- Our ability to support secondary industries with sectoral transfer of skills, equipment and technology

Sibanye-Stillwater continues to drive technology and innovation as a strategic imperative.

Key technology and innovation partnerships and initiatives

MANDELA MINING PRECINCT

The Mandela Mining Precinct, an outcome of the government-supported Mining Phakisa process, and previously referred to as the Mining Precincts' Innovation Hub, was formally opened on the 14 September 2018 by our CEO Neal Froneman in his capacity as Vice President of the Minerals Council South Africa. The opening was attended by the Minister of Science and Technology as well as the Minister of Mineral Resources.

The Mandela Mining Precinct's research agenda progressed well in 2018 and is expected to deliver tangible value in various forms in 2019.

The Mandela Mining Precinct creates a space for researchers from various institutions and organisations to collaborate and work together, enabling greater access to researchers and mining staff. The function of the precinct is to co-ordinate research activities towards the revitalisation of South Africa's mining operations through the development of next-generation mining systems.

"We continue to drive technology and innovation as a strategic imperative."



A student works with DigiMine at the University of the Witwatersrand (Wits) in Johannesburg, South Africa

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SIBANYE-STILLWATER DIGITAL MINING LABORATORY

The Sibanye-Stillwater and the University of the Witwatersrand (Wits) Mining Institute's (WMI) Digital Mining Laboratory (DigiMine), the result of a long-term commitment by Sibanye-Stillwater to relevant research institutions in South Africa, was officially launched in 2018. The WMI and DigiMine have demonstrated their ability to add value from a fundamental and applied research perspective and Sibanye-Stillwater has elected to provide an additional R10 million annually for the next three years. The funding is in line with a provision of the stream finance arrangement. The funding will be directed to five core focus areas:

- Fast-tracking of WMI-initiated technologies and prototypes through DigiMine, in partnership with the Wits Siemens Solutions Laboratory
- Fast-tracking of mine seismicity research
- Enhancing the sustainability of the WMI and DigiMine
- Enhancing the delivery structure for the research and development agenda
- The creation of the Sibanye-Stillwater Health and Safety DNA project

Sibanye-Stillwater's total investment in tertiary institutions is now R20 million per annum, inclusive of the aforementioned, the original R5 million commitment to DigiMine and a R5 million investment in the University of Johannesburg's mining engineering faculty, which is being used to establish complimentary infrastructure that supports Sibanye-Stillwater's long-term research and development strategy.



DIGITAL TRANSFORMATION

Thematically, digital transformation is the only strategic technology pillar that is applicable to all aspects of the organisation. As such, a dedicated functional and governing committee, comprised of relevant representation from Group Technical, and the SA and US operations, has been established. The digital transformation steering committee forms the fundamental base of the digital transformation initiative and is suitably resourced with an agile, multi-disciplinary team that will be focusing on value realisation across the entire mining value chain.

During the establishment of the initiative, it became apparent that there is significant value in leveraging external expertise in order to fast track ideation and prioritisation of key strategic aspects of the process and initiatives. Consequently, Sibanye-Stillwater has established an advisory panel of globally renowned disruptors from various industries and institutions. The value of the advisory committee has been immediate and they have contributed substantially to the current state of the initiative by accelerating our understanding of the theme.

The vision of Sibanye-Stillwater's digital transformation initiative is to enhance value creation through digitalisation to create a prescriptive data-driven organisation, effective in the safe, sustainable and responsible extraction and beneficiation of our resources.

With the above in place, Sibanye-Stillwater has developed a digital transformation strategy that is aligned with that of the organisation. In addition, most of the SA operations' teams have begun the execution of the strategy and technological road map development with the Stillwater operations planned for early 2019. The key deliverable for 2019 will be a long-term programme that aims to create an integrated, transparent insightful, concise, prescriptive, effective and safe operating organisation. In addition, several immediate high-value initiatives have been identified and initiated with the expectation of relative value realisation in the first half of 2019.

ADVANCED TRANSPORT AND MACHINERY PROGRAMME

Significant advancement was made towards understanding the application of newly developed battery technology in mobile assets, namely locomotives and trackless

mobile machinery. Two separate prototypes for battery and diesel locomotives have progressed well and are showing promising results. While there have been several technical difficulties, solutions to the difficulties are in the process of being completed. Both prototypes are expected to enter production trials in the first half of 2019 with the intention of finalising a commercial variant for implementation by the end of 2019.

Furthermore, significant opportunity has been identified in applying analytics and deep learning algorithms to information that resides in manual reports and numerous digital systems, installed on fixed and mobile machinery, to improve overall equipment and processing effectiveness. In 2017, Sibanye-Stillwater ran a data consolidation and advanced analytics project that sought to understand the value of this in the process efficiency environment. The outcome of the initiative was in line with general research on the subject and the model suggested that there was the potential for as much as 1%-2% recovery improvement at the processing plant in question (research notes 1.5%-2.5%).

As such, the initiative has been progressed to operational proof of concept, in addition to two separate initiatives for overall equipment efficiency on trackless mobile machinery and locomotives, with results expected in the first half of 2019.

STOPE MECHANISATION AND CURRENT MINING IMPROVEMENT PROGRAMME

Sibanye-Stillwater's ongoing organisational diversification requires that continuous re-ranking of technology and innovation initiatives is performed to ensure that each initiative is still relevant in terms of impact, cost and complexity, reserve applicability and interdependence. During a revision of all technology and innovation initiatives in the Group, the decision was made to temporarily suspend stope mechanisation and current mining improvement projects in lieu of the progress made with the digital transformation programme.

Sibanye-Stillwater will continue to maintain a robust pipeline of prospective projects for implementation as and when resources become available to do so.