MANAGEMENT'S DISCUSSION AND ANALYSIS OF THE FINANCIAL STATEMENTS (continued)

At the South African operation, power and water made up on average 9% of AIC over the last three years. In 2019, power and water costs made up 11% of AIC.

Gold Fields' South Deep mining operation depends on electrical power generated by the state-owned power provider Eskom which is regulated by the National Energy Regulator of South Africa ("NERSA"). Eskom tariffs are determined through a consultative multi-year price determination ("MYPD") process, with occasional tariff increase adjustments under the NERSA regulated Regulatory Clearing Account ("RCA") mechanism. Eskom financial years are from April to March. During 2018, Eskom submitted their three-year MYPD application to NERSA for 17%, 15% and 15%, applicable to periods 2019 to 2020, 2020 to 2021 and 2021 to 2022, respectively. NERSA then allowed Eskom tariff increases of 9.41%, 8.1% and 5.2%, for Eskom respective financial years 2019 to 2020, 2020 to 2021 and 2021 to 2022. Through the RCA mechanism, Eskom was granted another 4.41% for 2018 to 2019, thus the total applicable tariff increase was 13.82% for this period (2019 to 2020).

Eskom is saddled with an approximate debt of R450 billion and is struggling to generate enough revenue to service this debt and sustainably cover operations. In 2019, Government, as the Eskom shareholder, allocated an additional R23 billion per annum (over a three-year period, for 2019, 2020 and 2021) to Eskom, which NERSA treated as Eskom revenue from operations instead of an equity injection for balance sheet stability, effectively implying the bailout was a tariff subsidy by general tax payers for the benefit of consumers. Eskom has turned to the courts to challenge this, arguing NERSA erred and the bailouts should not be treated as revenue. The implication is that electricity tariffs will likely rise to 16% for the period 2020 to 2021. The court dismissed the urgent nature of the Eskom submission, but has not decided on the merits of the case. It is likely that the courts will agree with Eskom and will instruct NERSA to remedy its decision. At the same time, Eskom has also turned to the courts challenging the previous RCA decision (the 2018/2019 4.41%) and the one-year tariff decision (the 2018/2019 5.23% tariff increase, Eskom applied for 9.9%), arguing again that NERSA erred and Eskom should have been granted a higher increase. Should Eskom win these court cases, electricity tariffs will increase to at least 16% per annum.

At the same time, Eskom coal fired power stations performance continues to deteriorate with an unprecedented stage 6 (the national grid was short of 6GW) declared in December 2019, during the low demand power season. The underperformance is due to operating old power stations with delayed critical mid-life refurbishments, maintenance budgets diversion, allegations of corruption that saw construction of the new power station delayed, significant overspend and loss of critical skills at the generation business unit. During load shedding periods, Eskom burns significant amounts of diesel to run their gas turbines and called on large power users to curtail power demand. The extended use of these gas turbines will lead to Eskom requesting further tariff increases. Current inflation is approximately 5%, thus Eskom's request is three times CPI tariff increases. Further tariff increases may lead to lower power demand as consumers switch to alternate electricity and energy sources, such as renewable energy sources, gas for domestic cooking and solar for water heating. This may further place a significant tariff burden to those remaining on the grid. Government has now acknowledged that Eskom is the single biggest risk to the economy and that the Eskom business model is obsolete. In February 2019, the President of South Africa announced the vertical unbundling of Eskom. This unbundling, while maintaining full-state ownership, is expected to result in the separation of Eskom's generation, transmission and distribution functions, which will require legislative and possibly policy reform. An Eskom policy paper, guiding the unbundling process has been put out, which also serves to enable Eskom to actively participate in the renewable energy space. Gold Fields expects this process will take at least three years to implement causing continued poor reliability of the supply of electricity, instability in prices and a possible increase in the tariff.

West Africa region

In Ghana, Tarkwa and Damang mines are primarily supplied power by an independent power producer with on-site gas turbines through a long-term power purchase agreement. Prior to installation of the on-site turbines, Tarkwa and Damang were supplied power by Volta River Authority ("VRA") and Electricity Company of Ghana ("ECG"), respectively. The supply provided by the VRA and ECG was unreliable and in order to reduce their reliance on power supplied by the VRA and ECG, Tarkwa and Damang entered into a power purchasing agreement with the above independent power producer. Both VRA and ECG now serve as back supply for the Tarkwa and Damang mines, respectively. The independent power supply accounts for some 95% of the electricity consumed at Tarkwa mine and 100% at Damang mine with a 27.5 megawatt power plant at Damang and a 44 megawatt power plant at Tarkwa mine.

While Tarkwa has electricity supplied by an independent power producer, it experienced challenges with frequent power surges from the grid, which caused some delays in the process plant. During 2019, the independent power producer commissioned a 77km buried gas pipeline to supply Tarkwa and Damang with natural gas, instead of trucking in liquid petroleum gas via national roads.

Power and water costs represented on average 7% of AIC at Tarkwa over the last three years, and 5% of AIC during 2019. Over the last three years, power and water costs represented on average 9% of AIC at Damang with 7% in 2019.

Contractor costs represented on average 20% of AIC at Tarkwa over the last three years, and 36% of AIC during 2019. The increase in 2019 at Tarkwa is due to the higher operational tonnes mined during 2019 as well as contractor mining for nine months in 2018 compared to 12 months in 2019. Over the last three years, contractor costs represented on average 23% of

AIC at Damang with 28% in 2019. Following the restructuring concluded in the first half of 2016 in Damang and first quarter of 2018 for Tarkwa, the direct labour cost decreased as all mining and development is performed by outside contractors. Direct labour costs represent on average a further 13% of AIC at Tarkwa over the last three years and 9% in 2019. Over the last three years, direct labour costs represented on average 10% at Damang and 9% in 2019.

South American region

At Cerro Corona, contractor costs represented on average 26% of AIC over the last three years and 24% of AIC during 2019. Direct labour costs represent on average a further 18% of AIC over the last three years and 18% in 2019. Power and water made up on average a further 6% of AIC over the last three years and 5% in 2019.

Australia region

At the Australian operations, mining operations were historically conducted by outside contractors. However, at Agnew, owner mining is conducted at the underground operations, while development is conducted by outside contractors. At St Ives, owner mining is conducted at the underground and surface operations, but development is still conducted by contractors. Over the last three years, total contractor costs represented on average 21% at St Ives and 31% at Agnew of AIC and direct labour costs represented on average a further 13% at St Ives and 15% at Agnew of AIC. In 2019, contractors and direct labour costs represented 25% and 11% at St Ives and 27% and 13% at Agnew, respectively. Power and water made up, on average, a further 6% and 4% of AIC over the last three years and 5% and 4% of AIC in 2019 at St Ives and Agnew, respectively. At Granny Smith, mining operations and development are conducted through owner mining. Over the last three years, contractors and direct labour costs represented, on average, 12% and 21%, respectively, at Granny Smith. In 2019, contractors and direct labour costs represented 8% and 21% at Granny Smith. Power and water made up, on average, a further 6% of AIC over the last three years and 6% of AIC in 2019 at Granny Smith. No such analysis has been performed for Gruyere as the mine was only in commercial levels for quarter four of 2019.

The remainder of Gold Fields' total costs consists primarily of amortisation and depreciation, exploration costs and selling, administration and general and corporate charges.

ALL-IN SUSTAINING AND ALL-IN COSTS

The World Gold Council has worked closely with its member companies to develop definitions for all-in sustaining costs ("AISC") and AIC. The World Gold Council is not a regulatory industry organisation and does not have the authority to develop accounting standards or disclosure requirements. Gold Fields ceased being a member of the World Gold Council in 2014. AISC and AIC are non-IFRS measures. These non-IFRS measures are intended to provide further transparency into the costs associated with producing and selling an ounce of gold. The new standard was released by the World Gold Council on 27 June 2013. It is expected that these metrics will be helpful to investors, governments, local communities and other stakeholders in understanding the economics of gold mining. The AISC incorporates costs related to sustaining current production. The AIC include additional costs which relate to the growth of the Group. AISC, as defined by the World Gold Council, are operating costs plus all costs not already included therein relating to sustaining current production, including sustaining capital expenditure. The value of by-product revenues such as silver and copper is deducted from operating costs as it effectively reduces the cost of gold production. AIC starts with AISC and adds additional costs which relate to the growth of the Group, including non-sustaining capital expenditure and exploration, evaluation and feasibility costs not associated with current operations.

On 14 November 2018, the World Gold Council published an update to its guidance note on the interpretation of all-in sustaining and all-in costs. The note provided additional clarity on what constitutes growth capital expenditure. Gold Fields has considered the new guidance note to ensure the interpretation of the guidelines is consistent with the additional guidance now available and has adopted it prospectively from 1 January 2019. Based on the revised World Gold Council interpretation guidance, all-in sustaining costs for the Group are US$897 per ounce in 2019. One of the benefits of adopting the new standard is closer alignment of our cost reporting with existing practices in our sector.

AISC and AIC are reported on a per ounce of gold basis, net of by-product revenues (as per the World Gold Council definition) as well as on a per ounce of gold equivalent basis, gross of by-product revenues.

An investor should not consider AISC and AIC or operating costs in isolation or as alternatives to operating costs, cash flows from operating activities or any other measure of financial performance presented in accordance with International Financial Reporting Standards ("IFRS"). AISC and AIC as presented in this Annual Financial Report may not be comparable to other similarly titled measures of performance of other companies.

The following tables set out a reconciliation of Gold Fields' cost of sales before gold inventory change and amortisation and depreciation, as calculated in accordance with IFRS (refer to the consolidated financial statements), to its AISC (original interpretation) and AIC (original interpretation) net of by-product revenues per ounce of gold sold for 2019, 2018 and 2017. The following tables also set out AISC (original interpretation) and AIC (original interpretation) gross of by-product revenue on a gold equivalent ounce basis for 2019, 2018 and 2017.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF THE FINANCIAL STATEMENTS (continued)

United States Dollar

	AISC and AIC, net of by-product revenue per ounce of gold											
	For the year ended 31 December 2019											
Figures in millions unless otherwise stated	South Deep	Tarkwa	Damang	Asanko[1]	St Ives	Agnew	Granny Smith	Gruyere 50%	Cerro Corona	Corporate and projects	Total Group including equity accounted joint venture	Total Group excluding equity accounted joint venture
Cost of sales before gold inventory change and amortisation and depreciation	(245.9)	(329.8)	(150.4)	(87.0)	(231.2)	(164.5)	(156.9)	(19.1)	(168.4)	–	(1,553.4)	(1,466.4)
Gold inventory change	3.7	14.4	8.8	(1.4)	2.5	2.6	(0.3)	5.4	6.0	–	41.6	43.0
Royalties	(1.6)	(25.8)	(10.3)	(7.7)	(12.5)	(7.3)	(9.5)	(1.3)	(5.5)	–	(81.4)	(73.7)
Realised gains or losses on commodity cost hedges	–	3.9	1.5	–	1.9	0.6	0.5	–	–	–	8.5	8.5
Community/social responsibility costs	(1.7)	(11.7)	(1.2)	(0.1)	–	–	–	–	(3.4)	–	(18.2)	(18.0)
Non-cash remuneration (share-based payments)	0.8	(3.4)	(1.8)	–	(1.7)	(1.2)	(1.3)	(0.1)	(1.1)	(10.7)	(20.5)	(20.5)
Cash remuneration (long-term employee benefits)	(1.8)	(1.5)	(0.7)	–	(0.9)	(0.6)	(0.7)	(0.1)	(0.4)	(2.4)	(9.1)	(9.1)
Other[6]	–	–	–	–	–	–	–		(4.4)	(0.9)	(5.3)	(5.3)
By-product revenue[2]	0.3	1.6	0.1	0.4	0.6	0.3	0.1	0.1	165.1	–	168.5	168.2
Rehabilitation, amortisation and interest	(0.2)	(4.2)	(1.4)	(0.4)	(4.0)	(1.8)	(1.6)	(0.6)	(5.8)	(0.3)	(20.3)	(19.9)
Sustaining capital expenditure[3]	(33.1)	(125.5)	(5.8)	(19.6)	(98.3)	(76.1)	(72.2)	(5.2)	(56.3)	(2.5)	(494.7)	(475.1)
Lease payments	(0.1)	(15.4)	(7.3)	(8.7)	(6.3)	(4.6)	(11.3)	(2.2)	(1.0)	(8.6)	(65.7)	(57.0)
All-in sustaining costs[4]	(279.7)	(497.2)	(168.6)	(124.5)	(350.0)	(252.8)	(253.3)	(23.0)	(75.4)	(25.3)	(2,050.0)	(1,925.5)
Exploration, feasibility and evaluation costs[5]	–	–	–	(4.2)	–	–	–	–	–	(50.0)	(54.2)	(50.0)
Non-sustaining capital expenditure[3]	–	–	(70.5)	(7.2)	–	–	–	–	–	(66.9)	(144.6)	(137.4)
All-in costs[4]	(279.7)	(497.2)	(239.0)	(136.0)	(350.0)	(252.8)	(253.3)	(23.1)	(75.4)	(142.2)	(2,248.9)	(2,112.9)
Gold only ounces sold ('000oz)	222.1	519.1	208.4	112.0	363.3	219.6	274.8	33.7	159.7	–	2,112.6	2,000.6
All-in sustaining costs	(279.7)	(497.2)	(168.6)	(124.5)	(350.0)	(252.8)	(253.3)	(23.0)	(75.4)	(25.3)	(2,050.0)	(1,925.5)
All-in sustaining costs net of by-product revenue per ounce of gold sold (US$/oz)	1,259	958	809	1,112	963	1,152	922	683	472	–	970	962
All-in costs	(279.7)	(497.2)	(239.0)	(136.0)	(350.0)	(252.8)	(253.3)	(23.1)	(75.4)	(142.2)	(2,248.9)	(2,112.9)
All-in costs net of by-product revenue per ounce of gold sold (US$)	1,259	958	1,147	1,214	963	1,152	922	684	472	–	1,064	1,056

[1] *Equity accounted joint venture.*

[2] *By-product revenue at Cerro Corona relates to copper. For all the other operations, by-product revenue relates to silver.*

[3] *Sustaining capital expenditure represents the majority of capital expenditures at existing operations, including underground mine development costs, ongoing replacement of mine equipment and other capital facilities and other capital expenditures at existing operations and is calculated as total capital expenditure of US$612.5 million per note 43 to the consolidated financial statements, less non-sustaining capital expenditures. Non-sustaining capital expenditures (or growth capital) represent capital expenditures for major growth projects as well as enhancement capital for significant infrastructure improvements at existing operations.*

[4] *This total may not reflect the sum of the line items due to rounding.*

[5] *Includes exploration, feasibility and evaluation and share of equity accounted losses of Far Southeast Gold Resources Incorporated ("FSE").*

[6] *Other includes offshore structure costs and management fees.*

United States Dollar

Figures in millions unless otherwise stated	South Deep	Tarkwa	Damang	Asanko[1]	St Ives	Agnew	Granny Smith	Gruyere 50%	Cerro Corona	Corporate and projects	Total Group including equity accounted joint venture	Total Group excluding equity accounted joint venture
	AISC and AIC, gross of by-product revenue per ounce of gold											
	For the year ended 31 December 2019											
All-in sustaining costs (per table above)	(279.7)	(497.2)	(168.6)	(124.5)	(350.0)	(252.8)	(253.3)	(23.0)	(75.4)	(25.3)	(2,050.0)	(1,925.5)
Add back by-product revenue[2]	(0.3)	(1.6)	(0.1)	(0.4)	(0.6)	(0.3)	(0.1)	(0.1)	(165.1)	–	(168.5)	(168.2)
All-in sustaining costs gross of by-product revenue[3]	(280.0)	(498.8)	(168.7)	(124.9)	(350.6)	(253.1)	(253.4)	(23.1)	(240.4)	(25.3)	(2,218.5)	(2,093.6)
All-in costs (per table above)	(279.7)	(497.2)	(239.0)	(136.0)	(350.0)	(252.8)	(253.3)	(23.1)	(75.4)	(142.2)	(2,248.9)	(2,112.9)
Add back by-product revenue[2]	(0.3)	(1.6)	(0.1)	(0.4)	(0.6)	(0.3)	(0.1)	(0.1)	(165.1)	–	(168.5)	(168.2)
All-in costs gross of by-product revenue[3]	(280.0)	(498.8)	(239.1)	(136.4)	(350.6)	(253.1)	(253.4)	(23.1)	(240.4)	(142.2)	(2,417.4)	(2,281.0)
Gold equivalent ounces sold	222.1	519.1	208.4	112.0	363.3	219.6	274.8	33.7	296.9	–	2,249.8	2,137.8
All-in sustaining costs gross of by-product revenue (US$/equivalent oz)	1,261	961	809	1,115	965	1,153	922	685	810	–	986	979
All-in costs gross of by-product revenue (US$ equivalent oz)	1,261	961	1,148	1,218	965	1,153	922	685	810	–	1,074	1,067

[1] *Equity accounted joint venture.*
[2] *By-product revenue at Cerro Corona relates to copper. For all the other operations, by-product revenue relates to silver.*
[3] *This total may not reflect the sum of the line items due to rounding.*

MANAGEMENT'S DISCUSSION AND ANALYSIS OF THE FINANCIAL STATEMENTS (continued)

United States Dollar

	AISC and AIC, net of by-product revenue per ounce of gold										
	For the year ended 31 December 2018										
Figures in millions unless otherwise stated	South Deep	Tarkwa	Damang	Asanko[1]	St Ives	Agnew	Granny Smith	Cerro Corona	Corporate and projects	Total Group including equity accounted joint venture	Total Group excluding equity accounted joint venture
Cost of sales before gold inventory change and amortisation and depreciation	262.0	298.7	143.5	41.6	200.9	159.7	166.3	160.3	(0.6)	1,432.4	1,390.8
Gold inventory change	9.6	10.1	(19.1)	(4.2)	(14.9)	1.7	1.8	(5.5)	–	(20.4)	(16.2)
Royalties	1.0	21.2	7.3	2.8	11.6	7.4	8.8	5.1	–	65.2	62.5
Realised gains or losses on commodity cost hedges	–	(5.5)	(2.1)	–	(2.9)	(0.9)	(0.8)	–	–	(12.2)	(12.2)
Community/social responsibility costs	1.3	6.7	0.4	–	–	–	–	6.3	–	14.6	14.6
Non-cash remuneration (share-based payments)	4.7	6.7	2.1	–	3.5	2.6	3.1	4.3	10.6	37.5	37.5
Cash remuneration (long-term employee benefits)	0.9	–	0.2	–	0.4	0.1	0.3	(0.4)	(0.5)	1.1	1.1
Other[6]	–	–	–	1.0	–	–	–	1.1	7.9	10.0	9.0
By-product revenue[2]	(0.3)	(0.7)	(0.2)	(0.2)	(0.5)	(0.3)	(0.1)	(169.2)	–	(171.4)	(171.2)
Rehabilitation, amortisation and interest	0.2	5.5	1.3	0.2	4.4	1.5	1.3	3.7	–	18.1	17.9
Sustaining capital expenditure[3]	40.0	156.1	13.5	7.9	127.2	72.8	78.8	33.2	2.2	531.5	523.6
Lease payments	–	–	–	–	1.4	–	–	0.9	–	2.3	2.3
All-in sustaining costs[3]	319.4	498.9	147.0	49.1	331.0	244.7	259.6	39.8	19.6	1,908.9	1,859.8
Exploration, feasibility and evaluation costs[5]	–	–	0.4	–	–	–	–	–	77.8	78.2	78.2
Non-sustaining capital expenditure[2]	18.3	–	125.0	4.9	–	–	–	–	147.1	295.3	290.4
All-in costs[4]	337.7	498.9	272.3	54.0	331.0	244.7	259.6	39.8	244.6	2,282.3	2,228.3
Gold only ounces sold ('000oz)	167.8	524.9	180.8	45.9	367.0	238.5	280.5	141.0	–	1,946.4	1,900.5
All-in sustaining costs	319.4	498.9	147.0	49.1	331.0	244.7	259.6	39.8	19.6	1,908.9	1,859.8
All-in sustaining costs net of by-product revenue per ounce of gold sold (US$/oz)	1,903	951	813	1,069	902	1,026	925	282	–	981	979
All-in costs	337.7	498.9	272.3	54.0	331.0	244.7	259.6	39.8	244.6	2,282.3	2,228.3
All-in costs net of by-product revenue per ounce of gold sold (US$)	2,012	951	1,506	1,175	902	1,026	925	282	–	1,173	1,172

1 *Equity accounted joint venture.*

2 *By-product revenue at Cerro Corona relates to copper. For all the other operations, by-product revenue relates to silver.*

3 *Sustaining capital expenditure represents the majority of capital expenditures at existing operations, including underground mine development costs, ongoing replacement of mine equipment and other capital facilities and other capital expenditures at existing operations and is calculated as total capital expenditure of US$814.2 million per note 43 to the consolidated financial statements, less non-sustaining capital expenditures. Non-sustaining capital expenditures (or growth capital) represent capital expenditures for major growth projects as well as enhancement capital for significant infrastructure improvements at existing operations.*

4 *This total may not reflect the sum of the line items due to rounding.*

5 *Includes exploration, feasibility and evaluation and share of equity accounted losses of Far Southeast Gold Resources Incorporated ("FSE").*

6 *Other includes offshore structure costs and management fees.*

United States Dollar

	AISC and AIC, gross of by-product revenue per ounce of gold										
	For the year ended 31 December 2018										
Figures in millions unless otherwise stated	South Deep	Tarkwa	Damang	Asanko[1]	St Ives	Agnew	Granny Smith	Cerro Corona	Corporate and projects	Total Group including equity accounted joint venture	Total Group excluding equity accounted joint venture
All-in sustaining costs (per table above)	319.4	498.9	147.0	49.1	331.0	244.7	259.6	39.8	19.6	1,908.9	1,859.8
Add back by-product revenue[2]	0.3	0.7	0.2	0.2	0.5	0.3	0.1	169.2	–	171.4	171.2
All-in sustaining costs gross of by-product revenue[3]	319.7	499.6	147.2	49.3	331.5	245.0	259.7	209.0	19.6	2,080.3	2,031.0
All-in costs (per table above)	337.7	498.9	272.3	54.0	331.0	244.7	259.6	39.8	244.6	2,282.3	2,228.3
Add back by-product revenue[2]	0.3	0.7	0.2	0.2	0.5	0.3	0.1	169.2	–	171.4	171.2
All-in costs gross of by-product revenue[3]	338.0	499.6	272.5	54.2	331.5	245.0	259.7	208.9	244.6	2,453.7	2,399.5
Gold equivalent ounces sold	167.8	524.9	180.8	45.9	367.0	238.5	280.5	299.1	–	2,104.5	2,058.6
All-in sustaining costs gross of by-product revenue (US$/equivalent oz)	1,905	952	812	1,073	903	1,027	926	699	–	988	987
All-in costs gross of by-product revenue (US$ equivalent oz)	2,014	952	1,506	1,179	903	1,027	926	699	–	1,166	1,166

[1] *Equity accounted joint venture.*
[2] *By-product revenue at Cerro Corona relates to copper. For all the other operations, by-product revenue relates to silver.*
[3] *This total may not reflect the sum of the line items due to rounding.*

AISC AND AIC (ORIGINAL INTERPRETATION)

AISC net of by-product revenues (including Asanko) decreased by 1% from US$981 per ounce of gold in 2018 to US$970 per ounce of gold in 2019, mainly due to higher gold sold and lower sustaining capital expenditure, partially offset by higher cost of sales before amortisation and depreciation. AIC net of by-product revenues (including Asanko) decreased by 9% from US$1,173 per ounce of gold in 2018 to US$1,064 per ounce of gold in 2019 due to the same reasons as for all-in sustaining costs as well as lower non-sustaining capital expenditure and lower exploration, feasibility and evaluation costs.

AISC net of by-product revenues (excluding Asanko) decreased by 2% from US$979 per ounce of gold in 2018 to US$962 per ounce of gold in 2019, mainly due to higher gold sold and lower sustaining capital expenditure, partially offset by higher cost of sales before amortisation and depreciation. AIC net of by-product revenues (including Asanko) decreased by 10% from US$1,172 per ounce of gold in 2018 to US$1,056 per ounce of gold in 2019 due to the same reasons as for all-in sustaining costs as well as lower non-sustaining capital expenditure and lower exploration, feasibility and evaluation costs.

AISC gross of by-product revenues (including Asanko) decreased marginally from US$988 per ounce of gold in 2018 to US$986 per ounce of gold in 2019, mainly due to higher gold sold and lower sustaining capital expenditure, partially offset by higher cost of sales before amortisation and depreciation. AIC gross of by-product revenues (including Asanko) decreased by 8% from US$1,166 per ounce of gold in 2018 to US$1,074 per ounce of gold in 2019 due to the same reasons as for all-in sustaining costs as well as lower non-sustaining capital expenditure and lower exploration, feasibility and evaluation costs.

AISC gross of by-product revenues (excluding Asanko) decreased by 1% from US$987 per ounce of gold in 2018 to US$979 per ounce of gold in 2019, mainly due to higher gold sold and lower sustaining capital expenditure, partially offset by higher cost of sales before amortisation and depreciation. AIC gross of by-product revenues (excluding Asanko) decreased by 8% from US$1,166 per ounce of gold in 2018 to US$1,067 per ounce of gold in 2019 due to the same reasons as for all-in sustaining costs as well as lower non-sustaining capital expenditure and lower exploration, feasibility and evaluation costs.

United States Dollar

MANAGEMENT'S DISCUSSION AND ANALYSIS OF THE FINANCIAL STATEMENTS (continued)

	AISC and AIC, net of by-product revenue per ounce of gold										
	For the year ended 31 December 2017										
Figures in millions unless otherwise stated	South Deep	Tarkwa	Damang	St Ives	Agnew	Granny Smith	Cerro Corona	Corporate and other	Continuing operations	Darlot	Group
Cost of sales before gold inventory change and amortisation and depreciation	306.3	348.0	121.3	187.6	154.9	156.8	151.2	0.4	1,426.5	46.3	1,472.8
Gold inventory change	(1.5)	(42.0)	0.9	(29.0)	(4.5)	3.6	3.1	–	(69.5)	0.9	(68.6)
Royalties	1.8	21.7	5.5	11.1	7.6	9.0	5.3	–	62.0	1.1	63.1
Realised gains or losses on commodity cost hedges	–	(0.8)	–	(0.3)	(0.1)	(0.1)	–	–	(1.3)	–	(1.3)
Community/social responsibility costs	2.0	11.1	0.4	–	–	–	6.7	–	20.2	–	20.2
Non-cash remuneration (share-based payments)	3.5	4.8	1.3	2.2	1.7	2.1	3.6	7.7	26.8	0.6	27.4
Cash remuneration (long-term employee benefits)	0.5	1.1	0.3	0.7	0.5	0.7	0.7	0.5	5.0	0.1	5.1
Other[5]	–	–	–	–	–	–	1.0	9.8	10.8	–	10.8
By-product revenue[1]	(0.6)	0.9	(0.1)	(0.6)	(0.3)	(0.1)	(177.8)	–	(178.6)	(0.1)	(178.7)
Rehabilitation, amortisation and interest	0.2	7.0	0.7	5.5	2.1	1.2	5.8	–	22.6	0.4	23.0
Sustaining capital expenditure[2]	65.5	180.6	17.2	156.2	73.7	87.0	34.0	2.8	617.0	6.8	623.9
All-in sustaining costs[3]	377.7	532.4	147.5	333.5	235.7	260.1	33.5	21.2	1,938.9	56.1	1,997.8
Exploration, feasibility and evaluation costs[4]	–	–	–	–	–	–	–	59.9	59.9	–	59.9
Non-sustaining capital expenditure[2]	16.9	–	114.9	–	–	–	–	84.7	216.5	–	216.5
All-in costs[3]	394.6	532.4	262.4	333.5	235.7	260.1	33.5	165.8	2,218.1	56.1	2,274.2
Gold only ounces sold ('000oz)	281.8	566.4	143.6	363.9	241.2	290.3	164.7	–	2,051.9	39.2	2,091.1
All-in sustaining costs	377.7	532.4	147.5	333.5	235.7	260.1	33.5	21.2	1,938.9	56.1	1,997.8
All-in sustaining costs net of by-product revenue per ounce of gold sold (US$/oz)	1,340	940	1,027	916	977	896	203	–	945	1,432	955
All-in costs	394.6	532.4	262.4	333.5	235.7	260.1	33.5	165.8	2,218.1	56.1	2,274.2
All-in costs net of by-product revenue per ounce of gold sold (US$)	1,400	940	1,827	916	977	896	203	–	1,081	1,432	1,088

[1] By-product revenue at Cerro Corona relates to copper. For all the other operations, by-product revenue relates to silver.

[2] Sustaining capital expenditure represents the majority of capital expenditures at existing operations, including underground mine development costs, ongoing replacement of mine equipment and other capital facilities and other capital expenditures at existing operations and is calculated as total capital expenditure of US$840.4 million per note 43 to the consolidated financial statements, less non-sustaining capital expenditures. Non-sustaining capital expenditures (or growth capital) represent capital expenditures for major growth projects as well as enhancement capital for significant infrastructure improvements at existing operations.

[3] This total may not reflect the sum of the line items due to rounding.

[4] Includes exploration, feasibility and evaluation and share of equity accounted losses of FSE.

[5] Other includes offshore structure costs and management fees.

United States Dollar

Figures in millions unless otherwise stated	AISC and AIC, gross of by-product revenue per ounce of gold For the year ended 31 December 2017										
	South Deep	Tarkwa	Damang	St Ives	Agnew	Granny Smith	Cerro Corona	Corporate and other	Continuing operations	Darlot	Group
All-in sustaining costs (per table above)	377.7	532.4	147.5	333.5	235.7	260.1	33.5	21.2	1,938.9	56.1	1,997.8
Add back by-product revenue[1]	0.6	(0.9)	0.1	0.6	0.3	0.1	177.8	–	178.6	0.1	178.7
All-in sustaining costs gross of by-product revenue[2]	378.3	531.5	147.6	334.1	236.0	260.3	211.3	21.2	2,117.5	56.2	2,176.5
All-in costs (per table above)	394.6	532.4	262.4	333.5	235.7	260.1	33.5	165.8	2,218.1	56.1	2,274.2
Add back by-product revenue[1]	0.6	(0.9)	0.1	0.6	0.3	0.1	177.8	–	178.6	0.1	178.7
All-in costs gross of by-product revenue[2]	395.2	531.5	262.5	334.1	236.0	260.3	211.3	165.8	2,396.7	56.2	2,452.9
Gold equivalent ounces sold	281.8	566.4	143.6	363.9	241.2	290.3	313.8	–	2,201.1	39.2	2,240.2
All-in sustaining costs gross of by-product revenue (US$/equivalent oz)	1,342	938	1,028	918	978	897	673	–	962	1,435	972
All-in costs gross of by-product revenue (US$/equivalent oz)	1,402	938	1,828	918	978	897	673	–	1,089	1,435	1,095

1 By-product revenue at Cerro Corona relates to copper. For all the other operations, by-product revenue relates to silver.
2 This total may not reflect the sum of the line items due to rounding.

AISC AND AIC – CONTINUING OPERATIONS (ORIGINAL INTERPRETATION)

AISC net of by-product revenues (including Asanko) from continuing operations increased by 4% from US$945 per ounce of gold in 2017 to US$981 per ounce of gold in 2018, mainly due to lower gold sold, partially offset by lower cost of sales before amortisation and depreciation and lower sustaining capital expenditure. AIC net of by-product revenues (including Asanko) from continuing operations increased by 9% from US$1,081 per ounce of gold in 2017 to US$1,173 per ounce of gold in 2018 due to the same reasons as for all-in sustaining costs as well as higher non-sustaining capital expenditure and higher exploration, feasibility and evaluation costs.

AISC net of by-product revenues (excluding Asanko) from continuing operations increased by 4% from US$945 per ounce of gold in 2017 to US$979 per ounce of gold in 2018, mainly due to lower gold sold, partially offset by lower cost of sales before amortisation and depreciation and lower sustaining capital expenditure. AIC net of by-product revenues (including Asanko) from continuing operations increased by 8% from US$1,081 per ounce of gold in 2017 to US$1,172 per ounce of gold in 2018 due to the same reasons as for all-in sustaining costs as well as higher non-sustaining capital expenditure and higher exploration, feasibility and evaluation costs.

AISC gross of by-product revenues (including Asanko) from continuing operations increased by 3% from US$962 per ounce of gold in 2017 to US$988 per ounce of gold in 2018, mainly due to lower gold sold, partially offset by lower cost of sales before amortisation and depreciation and lower sustaining capital expenditure. AIC gross of by-product revenues (including Asanko) from continuing operations increased by 7% from US$1,089 per ounce of gold in 2017 to US$1,166 per ounce of gold in 2018 due to the same reasons as for all-in sustaining costs as well as higher non-sustaining capital expenditure and higher exploration, feasibility and evaluation costs.

AISC gross of by-product revenues (excluding Asanko) from continuing operations increased by 3% from US$962 per ounce of gold in 2017 to US$987 per ounce of gold in 2018, mainly due to lower gold sold, partially offset by lower cost of sales before amortisation and depreciation and lower sustaining capital expenditure. AIC gross of by-product revenues (excluding Asanko) from continuing operations increased by 7% from US$1,089 per ounce of gold in 2017 to US$1,166 per ounce of gold in 2018 due to the same reasons as for all-in sustaining costs as well as higher non-sustaining capital expenditure and higher exploration, feasibility and evaluation costs.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF THE FINANCIAL STATEMENTS (continued)

Adjusted free cash flow and adjusted free cash flow margin ("free cash flow" or "free cash flow margin")

Adjusted free cash flow under the existing LTIP scheme is defined as revenue (excluding by-product revenue) less AIC adjusted for non-cash share-based payments, non-cash long-term employee benefits, exploration, feasibility and evaluation costs outside of existing operations, non-sustaining capital expenditure for growth projects only, realised gains or losses on revenue hedges and taxation paid (excluding royalties).

Adjusted free cash flow margin under the existing LTIP scheme is adjusted free cash flow divided by revenue adjusted for by-product revenue.

The adjusted FCF margin is calculated as follows:

Figures in millions unless otherwise stated	**2019**	2018	2017
Revenue[1]	**2,798.9**	2,406.6	2,632.1
Less: Cash outflow	**(2,208.4)**	(2,032.6)	(2,214.9)
AIC[2]	**(2,112.9)**	(2,228.3)	(2,274.2)
Adjusted for:			
Share-based payments[3]	**20.5**	37.5	27.4
Long-term employee benefits[3]	**9.1**	1.1	5.1
Exploration outside of existing operations[2]	**50.0**	78.2	59.9
Non-sustaining capital expenditure[4]	**137.4**	272.1	196.0
Revenue hedge[5]	**(140.6)**	41.7	12.8
Redemption of Asanko preference shares	**10.0**	–	–
Long-term employee benefits payment	**–**	(17.8)	–
Tax paid from continuing and discontinued operations	**(181.9)**	(217.1)	(241.9)
Adjusted FCF	**590.5**	374.0	417.2
Adjusted FCF margin[6]	**21%**	16%	16%

[1] *Revenue from continuing and discontinued operations less revenue from by-product revenue per AIC calculation (pages 68 to 73), being US$2,967.1 million less US$168.2 million, US$2,577.8 million less US$171.2 million and US$2,810.8 million less US$178.7 million, for 2019, 2018 and 2017, respectively.*

[2] *Per AIC calculation in management discussion and analysis (per pages 67 to 73).*

[3] *Per note 43 of the consolidated financial statements.*

[4] *Includes non-sustaining capital expenditure for growth projects only at Damang and Gruyere.*

[5] *Represents realised hedges on revenue only, excludes unrealised revenue hedges as well as cost hedges.*

[6] *Non-IFRS measures such as adjusted free cash flow margin is the responsibility of the Group's Board of Directors and is presented for illustration purposes only and because of its nature, adjusted free cash flow margin should not be considered a representation of earnings. The adjusted free cash flow margin is used as a key metric in the determination of the long-term incentive plan ("LTIP").*

ROYALTIES

South Africa

The Royalty Act was promulgated on 24 November 2008 and came into operation on 1 March 2010. The Royalty Act imposes a royalty on refined and unrefined minerals payable to the South African government.

The royalty in respect of refined minerals (which include gold and platinum) is calculated by dividing earnings before interest and taxes ("EBIT"), as defined by the Royalty Act, by the product of 12.5 times gross revenue calculated as a percentage, plus an additional 0.5%. EBIT refers to taxable mining income (with certain exceptions such as no deduction for interest payable and foreign exchange losses) before assessed losses but after capital expenditure. A maximum royalty of 5% is levied on refined minerals.

The royalty in respect of unrefined minerals (which include uranium) is calculated by dividing EBIT by the product of nine times gross revenue calculated as a percentage, plus an additional 0.5%. A maximum royalty of 7% is levied on unrefined minerals.

Where unrefined mineral resources (such as uranium) constitute less than 10% in value of the total composite mineral resources, the royalty rate in respect of refined mineral resources may be used for all gross sales and a separate calculation of EBIT for each class of mineral resources is not required. For Gold Fields, this means that currently it will pay a royalty based on the refined minerals royalty calculation as applied to its gross revenue. The rate of royalty tax payable for 2019, 2018 and 2017 was 0.5% of revenue.

Ghana

Minerals are owned by the Republic of Ghana and held in trust by the President. From March 2016, under the terms of the Development Agreement ("DA") entered into with the government of Ghana, Tarkwa and Damang have been subject to a sliding scale for royalty rates, linked to the prevailing gold price. The royalty sliding scale is as follows:

Average gold price			
Low value		High value	Royalty rate
US$0.00	–	US$1,299.99	3.0%
US$1,300.00	–	US$1,449.99	3.5%
US$1,450.00	–	US$2,299.99	4.1%
US$2,300.00	–	Unlimited	5.0%

The rate of royalty tax payable for 2019, 2018 and 2017 based on the above sliding scale was 3.5%, 3.0% and 3.0% on revenue, respectively. Asanko does not have a DA with the government and was subject to a 5% royalty tax rate for 2019 and 2018.

Australia

Royalties are payable to the state based on the amount of gold produced from a mining tenement. Royalties are payable quarterly at a fixed rate of 2.5% of the royalty value of gold sold. The royalty value of gold is the amount of gold produced during the month multiplied by the average gold spot price for the month.

Peru

Royalties are calculated with reference to the operating margin and ranging from 1% (for operating margins less than 10%) to 12% (for operating margins of more than 80%), or 1% of revenue, the highest of both amounts. Cerro Corona's effective royalty rate for 2019, 2018 and 2017 was 3.6%, 4.0% and 4.6% of operating profit, respectively.

Chile

Chile levies a royalty (referred to as the special mining income tax) on all medium to large scale mining operations in Chile. Gold Fields anticipates that its Chilean subsidiary will be treated as a large scale mineral producer. This is because it will produce annual gold equivalent ounces in excess of 50,000 metric tonnes of fine copper. The applicable mining tax percentage is calculated on a sliding scale with reference to the mining operational profit margin. The tax rate is from 5% (for operating margins equal to or less than 35%) to 14% (for operating margins of 85% or more). The mining tax payable is calculated at the applicable tax rate on the net operating income of the Chilean subsidiary. The mining tax is a deductible expense in the calculation of the Chilean corporate tax.

INCOME AND MINING TAXES

Gold Fields tax strategy and policy

The Gold Fields tax strategy is to proactively manage its tax obligations in a transparent, responsible and sustainable manner, acknowledging the differing interests of all stakeholders.

Gold Fields has invested and allocated appropriate resources in the Group tax department to ensure compliance with global tax obligations. The Group does not engage in aggressive tax planning and seeks to maintain professional real-time relationships with the relevant tax authorities. In material or complex matters, the Group would generally seek advance tax rulings, or alternatively obtain external counsel opinion.

Gold Fields has appropriate controls and procedures in place to ensure compliance with relevant tax legislation in all the jurisdictions in which it operates. This includes compliance with Transfer Pricing ("TP") legislation and associated TP documentation requirements, which is governed by the Group TP policy. The Group TP policy is fully compliant with OECD guidelines and is regularly updated and benchmarked by independent experts. Uncertain tax positions are properly evaluated, and reported in terms of IFRIC 23 *Uncertainty over Income Tax Treatments*.

The Group is subject to South African Controlled Foreign Companies ("CFC") tax legislation which is aimed at taxing passive income and capital gains realised by its foreign subsidiaries (to the extent that it was not taxed in the foreign jurisdiction). Therefore, tax avoidance on passive income or capital gains cannot be achieved by shifting such passive income to low or tax haven jurisdictions. The active business income from mining is taxed at source in the relevant jurisdiction where the mining operations are located.

The Group does not embark on intra-group gold sales and only sells its gold (or gold-equivalent product) directly to independent third parties at arm's-length prices – generally at the prevailing gold (or gold-equivalent) spot price.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF THE FINANCIAL STATEMENTS (continued)

The Group has reported its key financial figures on a country-by-country basis from 2017 as required by the South African Revenue Service ("SARS"), such requirement being aligned with OECD guidelines. The country-by-country reports are filed with SARS, which will exchange the information with all the relevant jurisdictions with which it has concluded or negotiated exchange of information agreements.

South Africa

Generally, South Africa imposes tax on the worldwide income (including capital gains) of all of Gold Fields' South African incorporated and tax resident entities. Certain classes of passive income such as interest and royalties, and certain capital gains, derived by Controlled Foreign Companies ("CFC") could be subject to South African tax on a notional imputation basis. CFCs generally constitute a foreign company in which Gold Fields owns or controls more than 50% of the shareholding.

Gold Fields pays taxes on its taxable income generated by its mining and non-mining tax entities. Under South African law, gold mining companies and non-gold mining companies are taxed at different rates. Companies in the Group not carrying on direct gold mining operations are taxed at a statutory rate of 28%.

Gold Fields Operations Limited ("GFO"), and GFI Joint Venture Holdings Proprietary Limited ("GFIJVH"), jointly own the South Deep mine and constitute gold mining companies for South African taxation purposes. These companies are subject to the gold formula on their mining income.

The applicable formula takes the form $Y = 34 - 170/x$

Where:
Y = the tax rate to be determined
x = the ratio of taxable income to the total income (expressed as a percentage)

The effective mining tax rate for GFO and GFIJVH, owners of the South Deep mine, has been calculated at 29% (2018: 29% and 2017: 30%).

Ghana

Ghanaian resident entities are subject to tax on a source basis where income has a source in Ghana, if it accrues in or is derived from Ghana. Under the terms of the Development Agreement ("DA") entered into with the government of Ghana, Tarkwa and Damang are liable to a 32.5% corporate income tax rate. Asanko does not have a DA with the government and is subject to a 35% corporate income tax rate.

Dividends paid by Tarkwa and Damang are subject to an 8% withholding tax rate.

Tarkwa and Damang are allowed to deduct 20% on a straight-line basis for capital allowances on depreciable assets (i.e. over five years). Any capital allowances which are not utilised in a particular year are added to operating losses (if any), thereby increasing operating losses and then carried forward for five years. Any operating losses carried forward are extinguished if not utilised within five years.

The Revenue Administration Act, 2016 (Act 915) became effective on 1 January 2017. Act 915 consolidates the tax administration provisions from the various tax laws (income tax, value added tax, customs) into a single Act and introduces a more stringent tax compliance framework. Act 915 enables taxpayers to offset surpluses and liabilities arising from different tax types. It should be noted that the tax authorities are again expected to release guidance notes to allow taxpayers to fully utilise the offset mechanism.

Australia

Generally, Australia imposes tax on the worldwide income (including capital gains) of all of Gold Fields' Australian incorporated and tax resident entities. The current income tax rate for companies is 30%. Exploration expenditure is deductible in full as incurred and other capital expenditure is generally deductible over the effective lives of the assets acquired. The Australian Uniform Capital Allowance system allows tax deductions for the decline in value of depreciable assets and certain other capital expenditures.

Gold Fields Australia and its eligible related Australian sister companies, together with all wholly owned Australian subsidiaries, have elected to be treated as a tax consolidated group for taxation purposes. As a tax consolidated group, a single tax return is lodged for the Group based on the consolidated results of all companies within the Group.

Withholding tax is payable on dividends, interest and royalties paid by Australian residents to non-residents. In the case of dividend payments to non-residents, withholding tax at a rate of 30% will apply. However, where the recipient of the dividend is a resident of a country with which Australia has concluded a double taxation agreement, the rate of withholding tax is generally limited to between 5% and 15%, depending on the applicable agreement and percentage shareholding. Where dividends are paid out of profits that have been subject to Australian corporate tax there is no withholding tax, regardless of whether a double taxation agreement is in place.

Peru

Peruvian taxes for resident individuals and domiciled corporations are based on their worldwide income, and for non-resident individuals and non-domiciled corporations are based on their Peruvian income source. The general income tax rate applicable to domiciled corporations is 29.5% on taxable income and to non-resident corporations is 30%. The income tax applied to interest paid to non-residents is 4.99%. The dividends tax rate (to residents and non-residents) is 5%. Capital gains are also taxed as ordinary income for domiciled corporations.

Chile

Gold Fields anticipates that its Chilean subsidiary will be subject to the 27% corporate tax rate, and that dividends paid by the Chilean subsidiary to the parent company will be subject to a 35% withholding tax rate, but that the 27% corporate tax paid will fully count as a credit against the withholding tax levied, so that the effective dividend withholding tax rate will approximate 8%.

EXCHANGE RATES

Gold Fields' Australian and South African revenues and costs are very sensitive to the Australian Dollar/US Dollar exchange rate and the Rand/US Dollar exchange rate, because revenues are generated using a gold price denominated in US Dollar, while the costs of the Australian and South African operations are incurred principally in Australian Dollar and Rand, respectively. Depreciation of the Australian Dollar and Rand against the US Dollar reduces Gold Fields' average costs when they are translated into US Dollar, thereby increasing the operating margin of the Australian and South African operations. Conversely, appreciation of the Australian Dollar and Rand results in Australian and South African operating costs being translated into US Dollar at a lower Australian Dollar/US Dollar exchange rate and Rand/US Dollar exchange rate, resulting in higher costs in US Dollar terms and in lower operating margins. The impact on profitability of any change in the value of the Australian Dollar and Rand against the US Dollar can be substantial. Furthermore, the exchange rates obtained when converting US Dollar to Australian Dollar and Rand are set by foreign exchange markets, over which Gold Fields has no control. In 2019, the Rand weakened by 10% against the US Dollar, from an average of R13.20 per US$1.00 in 2018 to R14.46 per US$1.00 in 2019. The Australian Dollar weakened by 7% at an average of A$1.00 per US$0.75 in 2018 to A$1.00 per US$0.70 in 2019.

With respect to its operations in Ghana and Peru, a substantial portion of Gold Fields' operating costs (including wages) are either directly incurred in US Dollar or are translated to US Dollar. Accordingly, fluctuations in the Ghanaian Cedi and Peruvian Nuevo Soles do not materially impact operating results for the Ghana and Peru operations.

During 2018, Gold Fields entered into the following currency forward contracts:

In May 2018, the Australian operations entered into Australian Dollar/US Dollar average rate forwards for a total notional US$96 million for the period January 2019 to December 2019 at an average strike price of 0.7517. In June 2018, further hedges were taken out for a total notional US$60 million for the same period January 2019 to December 2019 at an average strike of 0.7330. In September 2018, further hedges were taken out for a total notional US$100 million for the same period January 2019 to December 2019 at an average strike of 0.7182. In October 2018, further hedges were taken out for the period January 2019 to December 2019 for a notional US$60 million at an average strike of 0.7075. In December 2018, further hedges were taken out for the period January 2019 to December 2019 for a notional US$50 million at an average strike of 0.715.

At 31 December 2019, the mark-to-market value on the hedges was A$nil (US$nil) with a realised loss of A$22 million (US$14 million) for the year ended 31 December 2019.

INFLATION

A period of significant inflation could adversely affect Gold Fields' results and financial condition. Further, over the past several years, production costs, especially wages and electricity costs, have increased considerably. The effect of these increases has adversely affected, and may continue to adversely affect, the profitability of Gold Fields' South Deep operations.

To ensure sustainability and free cash flow generation, reinvesting in and upgrading the Gold Fields portfolio is essential. To achieve this, Gold Fields embarked on a period of reinvestment in 2017 and 2018. 2019 marked the end of the reinvestment programme and having reinvested close to US$1 billion in the business over this period, the Group managed to limit the cash outflow, with minimal impact on the statement of financial position. Given the high levels of capital expenditure, the Group undertook short-term tactical hedging. For further details, refer to pages 201 to 203.

The Group continued rationalising and prioritising capital expenditure without undermining the sustainability of its operations and continued prioritisation of cash generation over production volumes. The Group undertook reductions in labour costs through a retrenchment process in Damang in preparation for rightsizing the Damang reinvestment plan in 2017.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF THE FINANCIAL STATEMENTS (continued)

In 2018, Tarkwa transitioned from owner mining to contractor mining in an attempt to address cost inflation in the region. In addition, the Australian operations implemented a margin improvement project. South Deep completed a large-scale restructuring at the end of 2018, placing the mine on an improved footing from which to build-up production, by removing over R800 million from the cost base and R400 million of capital expenditure with a significantly reduced footprint.

Further, the majority of Gold Fields' costs at the South African operations are in Rand and revenues from gold sales are in US Dollar. Generally, when inflation is high, the Rand potentially devalues thereby increasing Rand revenues and potentially offsetting the increase in costs. However, there can be no guarantee that any cost-saving measures or the effects of any potential devaluation will offset the effects of increased inflation and production costs.

The same applies to the Australian operations with regard to the link between the Australian Dollar and US Dollar. The Peruvian and Ghanaian operations, on the other hand, are affected by inflation without a potential similar effect on revenue proceeds, thereby increasing the impact of inflation on the operating margins.

CAPITAL EXPENDITURES

Gold Fields will continue to be required to make capital investments in both new and existing infrastructure and opportunities and, therefore, management will be required to continue to balance the demands for capital expenditure in the business and allocate Gold Fields' resources in a focused manner to achieve its sustainable growth objectives. Gold Fields expects that its use of available capital resources and allocation of its capital expenditures may shift in future periods as it increases investment in certain of its exploration projects.

Group

Capital expenditure for the Group (excluding Asanko) decreased by 25%, from US$814 million in 2018 (comprising sustaining capital expenditure of US$524 million and growth capital expenditure of US$290 million) to US$613 million in 2019 (comprising sustaining capital expenditure of US$475 million and growth capital expenditure of US$138 million). Set out below are the capital expenditures made by Gold Fields during 2019. Also, refer to "Cash flows from investing activities" section.

The growth capital expenditure (excluding Asanko) of US$138 million in 2019 comprised Damang of US$71 million and Gruyere of A$96 million (US$67 million). The growth capital expenditure of US$290 million in 2018 comprised South Deep of R242 million (US$18 million), Damang of US$125 million, Gruyere of A$180 million (US$134 million) and other growth capital expenditure of US$13 million.

South African operation

Gold Fields spent R479 million (US$33 million) on capital expenditure at South Deep in 2019 and has budgeted approximately R995 million (US$68 million) for capital expenditure at South Deep in 2020. The capital expenditure of R479 million (US$33 million) in 2019 comprised only sustaining capital expenditure. The budgeted capital expenditure of R995 million (US$68 million) comprises sustaining capital expenditure of R775 million (US$53 million) and growth capital expenditure of R220 million (US$15 million).

Ghanaian operations

Gold Fields spent US$126 million on capital expenditure at Tarkwa in 2019 and has budgeted US$150 million for capital expenditure at Tarkwa for 2020. The total spend relates to sustaining capital expenditure.

Gold Fields spent US$76 million on capital expenditure at Damang in 2019 and has budgeted US$18 million of capital expenditure at Damang for 2020. The expenditure of US$76 million in 2019 comprised sustaining capital expenditure of US$5 million and growth capital expenditure of US$71 million. The budgeted capital expenditure of US$18 million comprises sustaining capital expenditure of US$8 million and growth capital expenditure of US$10 million.

Gold Fields spent US$27 million on capital expenditure at Asanko in 2019 and has budgeted US$34 million of capital expenditure at Asanko for 2020. The capital expenditure of US$27 million in 2019 comprised sustaining capital expenditure of US$20 million and growth capital expenditure of US$7 million. The budgeted capital expenditure of US$34 million comprises sustaining capital expenditure of US$23 million and growth capital expenditure of US$11 million.

Peruvian operation

Gold Fields spent US$56 million on capital expenditure at Cerro Corona in 2019 and has budgeted US$55 million for capital expenditure at Cerro Corona for 2020. The total spend in 2019 relates to sustaining capital expenditure. The budgeted capital expenditure of US$55 million comprises sustaining capital expenditure of US$27 million and growth capital expenditure of US$28 million.

Australian operations

Gold Fields spent A$141 million (US$98 million) on capital expenditure at St Ives in 2019 and has budgeted A$105 million (US$72 million) for capital expenditure at St Ives in 2020. The total spend in 2019 relates to sustaining capital expenditure. The budgeted capital expenditure of A$105 million (US$72 million) comprises sustaining capital expenditure of A$83 million (US$57 million) and growth capital expenditure of A$22 million (US$15 million).

Gold Fields spent A$110 million (US$76 million) on capital expenditure at Agnew in 2019 and has budgeted A$75 million (US$52 million) for capital expenditure at Agnew for 2020. The total spend in 2019 relates to sustaining capital expenditure. The budgeted capital expenditure of A$75 million (US$52 million) comprises sustaining capital expenditure of A$55 million (US$38 million) and growth capital expenditure of A$20 million (US$14 million).

Gold Fields spent A$104 million (US$72 million) on capital expenditure at Granny Smith in 2019 and has budgeted A$110 million (US$76 million) for capital expenditure at Granny Smith for 2020. The total spend in 2019 relates to sustaining capital expenditure. The budgeted capital expenditure of A$110 million (US$76 million) comprises sustaining capital expenditure of A$67 million (US$46 million) and growth capital expenditure of A$43 million (US$30 million).

Gold Fields spent A$104 million (US$72 million) on capital expenditure at the Gruyere Gold project in 2019 and has budgeted A$41 million (US$28 million) for capital expenditure for 2020. The expenditure of A$104 million (US$72 million) in 2019 comprised sustaining capital expenditure of A$8 million (US$5 million) and growth capital expenditure of A$96 million (US$67 million). The budgeted capital expenditure of A$41 million (US$28 million) comprises sustaining capital expenditure of A$40 million (US$27 million) and growth capital of A$1 million (US$1 million).

The actual capital expenditure for the future periods noted above may be different from the amounts set out above and the amount of actual capital expenditure will depend on a number of factors, such as production volumes, the price of gold, copper and other minerals mined by Gold Fields and general economic conditions. Some of the factors are outside of the control of Gold Fields.

SIGNIFICANT ACCOUNTING JUDGEMENTS AND ESTIMATES

Gold Fields' significant accounting policies are more fully described in the accounting policies to its consolidated financial statements included in this Annual Financial Report. Some of Gold Fields' accounting policies require the application of significant judgements and estimates by management that can affect the amounts reported in the consolidated financial statements. By their nature, these judgements are subject to a degree of uncertainty and are based on Gold Fields' historical experience, terms of existing contracts, management's view on trends in the gold mining industry, information from outside sources and other assumptions that Gold Fields considers to be reasonable under the circumstances. Actual results could differ from these estimates under different assumptions or conditions. Refer to the accounting policies, pages 131 to 151, to the consolidated financial statements included elsewhere in this Annual Financial Report for the more significant areas requiring the use of management judgements and estimates.

RESULTS FOR THE PERIOD – YEARS ENDED 31 DECEMBER 2019 AND 31 DECEMBER 2018

Profit/(loss) attributable to owners of the parent for the Group was a profit of US$162 million (or US$0.20 per share) in 2019 compared to a loss of US$348 million (or US$0.42 per share) for 2018.

The reasons for this increase are discussed below.

Revenue

Revenue increased by 15% from US$2,578 million in 2018 to US$2,967 million in 2019. The increase in revenue of US$389 million was due to the higher gold price and higher gold sold.

The average US Dollar gold price achieved by the Group increased by 11% from US$1,252 per equivalent ounce in 2018 to US$1,388 per equivalent ounce in 2019. The average Rand gold price increased by 24% from R531,253 per kilogram in 2018 to R659,111 per kilogram in 2019. The average Australian Dollar gold price increased by 18% from A$1,694 per ounce in 2018 to A$2,007 per ounce in 2019. The average US Dollar gold price for the Ghanaian operations (including Asanko) increased by 9% from US$1,265 per ounce in 2018 to US$1,384 per ounce in 2019 and the average US Dollar gold price for the Ghanaian operations (excluding Asanko) increased by 9% from US$1,270 per ounce in 2018 to US$1,387 per ounce in 2019. The average equivalent US Dollar gold price, net of treatment and refining charges, for Cerro Corona increased by 14% from US$1,174 per equivalent ounce in 2018 to US$1,344 per equivalent ounce in 2019. The average US Dollar/Rand exchange rate weakened by 10% from R13.20 in 2018 to R14.46 in 2019. The average Australian/US Dollar exchange rate weakened by 7% from A$1.00 = US$0.75 in 2018 to A$1.00 = US$0.70 in 2019.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF THE FINANCIAL STATEMENTS (continued)

Gold sales from operations (excluding Asanko) increased by 4% from 2,058,600 equivalent ounces in 2018 to 2,137,800 equivalent ounces in 2019. Gold sales at the South African operation increased by 32% from 5,220 kilograms (167,800 ounces) in 2018 to 6,907 kilograms (222,100 ounces) in 2019. Gold sales at the Ghanaian operations (excluding Asanko) increased by 3% from 705,700 ounces in 2018 to 727,500 ounces in 2019. Gold equivalent sales at the Peruvian operation (Cerro Corona) decreased by 1% from 299,100 equivalent ounces in 2018 to 296,900 equivalent ounces in 2019. At the Australian operations, gold sales increased by 1% from 885,900 ounces in 2018 to 891,400 ounces in 2019. As a general rule, Gold Fields sells all the gold it produces.

	2019			2018		
	Revenue US$ million	**Gold sold '000oz**	**Gold produced '000oz**	Revenue US$ million	Gold sold '000oz	Gold produced '000oz
South Deep	**314.8**	**222.1**	**222.1**	210.1	167.8	157.1
Tarkwa	**720.4**	**519.1**	**519.1**	666.9	524.9	524.9
Damang	**288.3**	**208.4**	**208.4**	229.0	180.8	180.8
Asanko[1]	**153.3**	**112.0**	**113.0**	54.9	45.9	44.5
Cerro Corona	**399.0**	**296.9**	**292.7**	351.0	299.1	314.1
St Ives	**505.0**	**363.3**	**370.6**	464.7	367.0	366.9
Agnew	**304.6**	**219.6**	**219.4**	301.1	238.5	239.1
Granny Smith	**383.8**	**274.8**	**274.8**	355.0	280.5	280.4
Gruyere – 50%	**51.2**	**33.7**	**49.5**	–	–	–
Total Group (including Asanko)	**3,120.4**	**2,249.8**	**2,269.5**	2,632.7	2,104.5	2,107.8
Total Group (excluding Asanko)	**2,967.1**	**2,137.8**	**2,156.5**	2,577.8	2,058.6	2,063.2

[1] *Equity accounted joint venture. Included above for information only, not included in revenue for the Group.*

At South Deep in South Africa, gold sales increased by 32% from 5,220 kilograms (167,800 ounces) in 2018 to 6,907 kilograms (222,100 ounces) in 2019 due to an increase in both volumes and grade mined.

At the Ghanaian operations, gold sales at Tarkwa decreased by 1% from 524,900 ounces in 2018 to 519,100 ounces in 2019. Damang's gold sales increased by 15% from 180,800 ounces in 2018 to 208,400 ounces in 2019 mainly due to higher grade and tonnes treated. Gold sales at Asanko amounted to 45,900 ounces for the five months ended December 2018 compared to 112.0 ounces for the 12 months ended December 2019 (Asanko is an equity accounted joint venture and not included in the Group or Ghanaian operation's figures).

At Cerro Corona in Peru, copper sales increased by 2% from 30,742 tonnes in 2018 to 31,452 tonnes in 2019 mainly due to timing of shipments. Gold sales increased by 13% from 141,041 ounces in 2018 to 159,706 ounces in 2019 due to higher gold production and timing of shipments. Gold equivalent sales decreased by 1% from 299,100 ounces in 2018 to 296,900 ounces in 2019 mainly due to lower copper/gold price ratio.

At the Australian operations, gold sales at St Ives decreased by 1% from 367,000 ounces in 2018 to 363,300 ounces in 2019. At Agnew, gold sales decreased by 8% from 238,500 ounces in 2018 to 219,600 ounces in 2019 due to decreased grade of ore mined and processed. At Granny Smith, gold sales decreased by 2% from 280,500 ounces in 2018 to 274,800 ounces in 2019 due to a decrease in tonnes mined and processed. Gruyere commenced production during 2019, with first gold produced in June 2019 and sold in July 2019. Commercial levels of production were achieved at the end of September, with gold sold prior to this date being capitalised to the construction capital. Gold sales for Gruyere amounted to 33,700 ounces for the three months (October to December 2019) in which Gruyere was in commercial levels of production.

Cost of sales

Cost of sales, which comprises cost of sales before gold inventory change and amortisation and depreciation, gold inventory change and amortisation and depreciation, decreased marginally from US$2,043 million in 2018 to US$2,034 million in 2019. The reasons for this decrease are described below.

Cost of sales before gold inventory change and amortisation and depreciation

Cost of sales before gold inventory change and amortisation and depreciation increased by 5% from US$1,391 million in 2018 to US$1,467 million in 2019.

At South Deep in South Africa, cost of sales before gold inventory change and amortisation and depreciation increased by 3% from R3,459 million (US$262 million) in 2018 to R3,556 million (US$246 million) in 2019. This increase of R97 million was mainly due to higher production.

At the Ghanaian operations (excluding Asanko), cost of sales before gold inventory change and amortisation and depreciation increased by 9% from US$442 million in 2018 to US$480 million in 2019. At Tarkwa, cost of sales before gold inventory change and amortisation and depreciation increased by 10% from US$299 million in 2018 to US$330 million in 2019 due to higher mining costs in line with higher operational tonnes mined. At Damang, cost of sales before gold inventory change and amortisation and depreciation increased by 4% from US$144 million in 2018 to US$150 million in 2019 mainly due to higher operating tonnes mined. At Asanko, cost of sales before gold inventory change and amortisation and depreciation amounted to US$42 million for the five months ended December 2018 compared to US$89 million for the 12 months ended December 2019 (Asanko is an equity accounted joint venture and not included in the Group or Ghanaian regional figures).

At Cerro Corona in Peru, cost of sales before gold inventory change and amortisation and depreciation increased by 5% from US$160 million in 2018 to US$168 million in 2019. The higher cost was due to higher process plant maintenance cost due to ageing and ore hardness, higher workers' participation due to higher profit and higher labour expenses resulting from the close out of the union labour agreement.

At the Australian operations, cost of sales before gold inventory change and amortisation and depreciation increased by 17% from A$705 million (US$527 million) in 2018 to A$822 million (US$572 million) in 2019. At St Ives, cost of sales before gold inventory change and amortisation and depreciation increased by 24% from A$269 million (US$201 million) in 2018 to A$333 million (US$232 million) in 2019 mainly due to increased mining cost as a result of increased ore tonnes mined at Invincible underground mine and Neptune open pit and increased processing maintenance cost. At Agnew, cost of sales before gold inventory change and amortisation and depreciation increased by 11% from A$214 million (US$160 million) in 2018 to A$237 million (US$165 million) in 2019 mainly due to increased mining cost at Waroonga as a result of increased tonnes mined. At Granny Smith, cost of sales before gold inventory change and amortisation and depreciation increased by 1% from A$223 million (US$166 million) in 2018 to A$226 million (US$157 million) in 2019. Cost of sales before gold inventory change and amortisation and depreciation for Gruyere amounted to A$28 million (US$19 million) for the three months (October to December 2019) in which Gruyere was in commercial levels of production.

Gold inventory change

The gold inventory credit to costs of US$43 million in 2019 compared with US$16 million in 2018.

At South Deep, the gold inventory credit to costs of R54 million (US$4 million) in 2019 compared with a charge to costs of R127 million (US$10 million) in 2018, due to a buildup of gold in circuit in 2019 compared with a drawdown of gold in circuit at the end of 2018.

At Tarkwa, the gold inventory credit to costs of US$14 million in 2019 compared with a charge to costs of US$10 million in 2018. In 2018 more lower grade ore was stockpiled and medium grade ore was processed. In 2019, higher ore volumes were mined and more medium grade ore was stockpiled compared to 2018.

At Damang, the gold inventory credit to costs of US$9 million in 2019 compared with US$19 million in 2018, due to a lower buildup of stockpiles in 2019 compared to 2018.

At Asanko, the gold inventory charge to costs of US$2 million for the 12 months ended December 2019 compared with a credit to costs of US$4 million for the five months ended December 2018 (Asanko is an equity accounted joint venture and not included in the Group or Ghanaian operation's figures).

At Cerro Corona, the gold inventory credit to costs remained flat at US$6 million in 2019, due to a continued buildup of stockpiles in line with the new life extension plan in which ore will be stockpiled for the first few years until the in-pit tailings process commences.

At St Ives, the credit to costs of A$4 million (US$3 million) in 2019 compared with A$20 million (US$15 million) in 2018, both due to a buildup of stockpiles.

At Agnew, the credit to costs of A$4 million (US$3 million) in 2019 compared with a charge to costs of A$2 million (US$2 million) in 2018, due to a buildup of stockpiles in 2019 compared to a drawdown of stockpiles in 2018.

At Granny Smith, the charge to costs of A$1 million (US$nil) in 2019 compared to A$3 million (US$2 million) in 2018, both due to a drawdown of stockpiles.

At Gruyere, the credit to costs amounted to A$8 million (US$5 million) for the three months (October to December 2019) in which Gruyere was in commercial levels of production. This was due to a buildup of gold in circuit.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF THE FINANCIAL STATEMENTS (continued)

Amortisation and depreciation

Amortisation and depreciation is calculated on the units-of-production method and is based on current gold production as a percentage of total expected gold production over the lives of the different mines based on proved and probable reserves.

The table below depicts the changes from 31 December 2018 to 31 December 2019 for proved and probable managed gold and equivalent reserves and for the life-of-mine for each operation and the resulting impact on the amortisation charge in 2019. The amortisation in 2019 was based on the reserves as at 31 December 2018. The life-of-mine information is based on the operations' strategic plans, adjusted for proved and probable reserve balances. In basic terms, amortisation is calculated using the life-of-mine for each operation, which is based on: (1) the proved and probable reserves for the operation at the start of the relevant year (which are taken to be the same as at the end of the prior fiscal year and using reserves); and (2) the amount of gold produced by the operation during the year. The ore reserve statement as at 31 December 2019 became effective on 1 January 2020.

	Proved and probable mineral reserves as of			Life-of-mine		Amortisation for the year ended	
	31 December 2019 '000oz	31 December 2018 '000oz	31 December 2017 '000oz	**31 December 2019 years**	31 December 2018 years	**31 December 2019 US$ million**	31 December 2018 US$ million
South Africa region							
South Deep[1]	**32,800**	32,800	37,400	**75**	75	**32.9**	48.9
West Africa region							
Tarkwa[2]	**5,900**	5,800	5,900	**14**	14	**181.8**	168.3
Damang[3]	**1,300**	1,600	1,700	**6**	7	**53.9**	99.9
Asanko[4]	**1,200**	–	–	**10**			
South America region							
Cerro Corona[5]	**3,000**	3,400	3,700	**13**	12	**92.6**	81.8
Salares Norte	**4,000**	4,049	–	**11.5**	11.5	**–**	–
Australia region							
St Ives	**2,300**	1,700	1,600	**9**	7	**105.0**	146.2
Agnew	**800**	600	500	**4**	4	**62.9**	75.0
Granny Smith	**2,100**	2,200	2,200	**13**	12	**55.4**	44.6
Gruyere[6]	**1,800**	1,900	1,900	**11**	12	**14.5**	–
Corporate and other	**–**	–	–	**–**	–	**11.0**	3.7
Total reserves[7]	**55,200**	54,049	54,900			**610.0**	668.4

[1] *As of 31 December 2017, 31 December 2018 and 31 December 2019, 91.0%, 90.8% and 90.7% of mineral reserves amounting to 34.023 million ounces, 29.772 million ounces and 29.763 million ounces of gold, respectively, were attributable to Gold Fields, with the remainder attributable to future non-controlling shareholders in the South Deep operation in terms of the South Deep BEE transaction.*

[2] *As of 31 December 2017, 31 December 2018 and 31 December 2019, 90% of mineral reserves amounting to 5.315 million ounces, 5.200 million ounces and 5.305 million ounces of gold, respectively, were attributable to Gold Fields, with the remainder attributable to non-controlling shareholders in the Tarkwa operation.*

[3] *As of 31 December 2017, 31 December 2018 and 31 December 2019, 90% of mineral reserves amounting to 1.555 million ounces, 1.454 million ounces and 1.214 million ounces of gold, respectively, were attributable to Gold Fields, with the remainder attributable to non-controlling shareholders in the Damang operation.*

[4] *As of 31 December 2019, mineral reserves at Asanko represent the 50% portion managed by Gold Fields.*

[5] *As of 31 December 2017, 31 December 2018 and 31 December 2019, 99.53% of mineral reserves amounting to 3.710 million ounces, 3.342 million ounces and 2.984 million ounces of equivalent gold were attributable to Gold Fields, with the remainder attributable to non-controlling shareholders in the Cerro Corona operation.*

[6] *As of 31 December 2017, 31 December 2018 and 31 December 2019, mineral reserves at Gruyere represent the 50% portion attributable to Gold Fields only.*

[7] *As of 31 December 2017, 31 December 2018 and 31 December 2019, reserves of 50.787 million ounces, 50.258 million ounces and 52.384 million ounces of equivalent gold, respectively, were attributable to Gold Fields, with the remainder attributable to non-controlling shareholders in the Ghanaian and Peruvian operations.*

Amortisation and depreciation decreased by 9% from US$668 million in 2018 to US$610 million in 2019.

At South Deep in South Africa, amortisation and depreciation decreased by 26% from R646 million (US$49 million) in 2018 to R476 million (US$33 million) in 2019 mainly due to the impairment of the South Deep cash-generating unit in June 2018, as well as lower capital expenditure in 2019.

At the Ghanaian operations (excluding Asanko), amortisation and depreciation decreased by 12% from US$268 million in 2018 to US$236 million in 2019. Tarkwa increased by 8% from US$168 million in 2018 to US$182 million in 2019 mainly due to an increase in ounces mined. Damang decreased by 46% from US$100 million in 2018 to US$54 million in 2019 mainly due to the completion of the Amoanda pit in H1 2019. Amortisation and depreciation at the Amoanda pit decreased from US$68 million in 2018 to US$4 million in 2019. At Asanko, the amortisation and depreciation amounted US$43 million for the 12 months ended December 2019 compared to US$16 million for the five months ended December 2018 (Asanko is an equity accounted joint venture and not included in the Group or Ghanaian operation's figures).

At Cerro Corona in Peru, amortisation and depreciation increased by 13% from US$82 million in 2018 to US$93 million in 2019. This increase was mainly due to higher capital expenditure and higher ounces mined.

At the Australian operations, amortisation and depreciation decreased by 4% from A$356 million (US$266 million) in 2018 to A$342 million (US$238 million) in 2019. At St Ives, amortisation and depreciation decreased by 23% from A$196 million (US$146 million) in 2018 to A$151 million (US$105 million) in 2019 due to a decrease in ounces mined. At Agnew, amortisation and depreciation decreased by 10% from A$100 million (US$75 million) in 2018 to A$90 million (US$63 million) in 2019 due to an increase in ore reserves in 2019, resulting in a lower amortisation rate per ounce. At Granny Smith, amortisation and depreciation increased by 33% from A$60 million (US$45 million) in 2018 to A$80 million (US$55 million) in 2019 mainly due to depreciation of assets capitalised in line with the adoption of IFRS 16. At Gruyere, amortisation and depreciation amounted to A$21 million (US$15 million) for the three months (October to December 2019) in which Gruyere was in commercial levels of production.

All-in sustaining and total all-in costs

The following table sets out for each operation and the Group, total gold sales in ounces, all-in sustaining costs and total all-in costs, net of by-product revenue, in US$/oz for 2019 and 2018:

	2019			2018		
Figures in thousands unless otherwise stated	**Gold only ounces sold**	**All-in sustaining costs – US$/oz**	**Total all-in costs – US$/oz**	Gold only ounces sold	All-in sustaining costs – US$/oz	Total all-in costs – US$/oz
South Deep	**222.1**	**1,259**	**1,259**	167.8	1,903	2,012
South African operation	**222.1**	**1,259**	**1,259**	167.8	1,903	2,012
Tarkwa	**519.1**	**958**	**958**	524.9	951	951
Damang	**208.4**	**809**	**1,147**	180.8	813	1,506
Asanko[1]	**112.0**	**1,112**	**1,214**	45.9	1,069	1,175
Ghanaian operations	**839.5**	**942**	**1,039**	751.6	926	1,098
Cerro Corona[2]	**159.7**	**472**	**472**	141.0	282	282
Peruvian operation	**159.7**	**472**	**472**	141.0	282	282
St Ives	**363.3**	**963**	**963**	367.0	902	902
Agnew	**219.6**	**1,152**	**1,152**	238.5	1,026	1,026
Granny Smith	**274.8**	**922**	**922**	280.5	925	925
Gruyere – 50%	**33.7**	**683**	**684**	–	–	–
Australian operations	**891.4**	**986**	**986**	885.9	943	943
Total Group (including Asanko)	**2,112.9**	**970**	**1,064**	1,946.4	981	1,173
Total Group (excluding Asanko)	**2,000.6**	**962**	**1,056**	1,900.5	979	1,172

All-in costs are calculated in accordance with the World Gold Council Industry standard. Refer to pages 67 to 73 for detailed calculations and discussion of non-IFRS measures.

[1] Equity accounted joint venture.

[2] Gold sold at Cerro Corona excludes copper equivalents of 137,194 ounces in 2018 and 158,100 ounces in 2018.

Figures above may not add as they are rounded independently.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF THE FINANCIAL STATEMENTS (continued)

AISC and AIC (original interpretation)

AISC net of by-product revenues (including Asanko) decreased by 1% from US$981 per ounce of gold in 2018 to US$970 per ounce of gold in 2019, mainly due to higher gold sold and lower sustaining capital expenditure, partially offset by higher cost of sales before amortisation and depreciation. AIC net of by-product revenues (including Asanko) decreased by 9% from US$1,173 per ounce of gold in 2018 to US$1,064 per ounce of gold in 2019 due to the same reasons as for all-in sustaining costs as well as lower non-sustaining capital expenditure and lower exploration, feasibility and evaluation costs.

AISC net of by-product revenues (excluding Asanko) decreased by 2% from US$979 per ounce of gold in 2018 to US$962 per ounce of gold in 2019, mainly due to higher gold sold and lower sustaining capital expenditure, partially offset by higher cost of sales before amortisation and depreciation. AIC net of by-product revenues (excluding Asanko) decreased by 10% from US$1,172 per ounce of gold in 2018 to US$1,056 per ounce of gold in 2019 due to the same reasons as for all-in sustaining costs as well as higher non-sustaining capital expenditure and higher exploration, feasibility and evaluation costs.

At South Deep in South Africa, all-in sustaining costs decreased by 28% from R807,688 per kilogram (US$1,903 per ounce) in 2018 to R585,482 per kilogram (US$1,259 per ounce) in 2019 mainly due to higher gold sold, lower sustaining capital expenditure and lower cost of sales before amortisation and depreciation. The total all-in cost decreased by 31% from R854,049 per kilogram (US$2,012 per ounce) in 2018 to R585,482 per kilogram (US$1,259 per ounce) in 2019 due to the same reasons as for all-in sustaining costs as well as temporary postponement of non-sustaining capital expenditure.

At the Ghanaian operations, all-in sustaining costs increased by 2% from US$926 per ounce in 2018 to US$942 per ounce in 2019 and total all-in cost decreased by 5% from US$1,098 per ounce in 2018 to US$1,039 per ounce in 2019 as the project capital at Damang rolled off. Asanko was included for 12 months in 2019 and five months in 2018. At Tarkwa, all-in sustaining costs and total all-in costs increased by 1% from US$951 per ounce in 2018 to US$958 per ounce in 2019 due to lower gold sold, partially offset by lower capital expenditure. At Damang, all-in sustaining costs decreased marginally from US$813 per ounce in 2018 to US$809 per ounce in 2019 due to higher gold sold, partially offset by higher cost of sales before amortisation and depreciation. All-in costs decreased by 24% from US$1,506 per ounce in 2018 to US$1,147 per ounce in 2018 due to the same reasons as for all-in sustaining cost and lower non-sustaining capital. At Asanko, all-in sustaining costs and total all-in cost for the five months ended December 2018 was US$1,069 per ounce and US$1,175 per ounce, respectively and for the 12 months ended December 2019 was US$1,112 per ounce and US$1,214 per ounce, respectively.

At Cerro Corona in Peru, all-in sustaining costs and total all-in costs increased by 67% from US$282 per ounce in 2018 to US$472 per ounce in 2019 mainly due to lower by-product credits, higher capital expenditures and higher cost of sales before amortisation and depreciation. All-in sustaining costs and total all-in cost per equivalent ounce increased by 16% from US$699 per equivalent ounce in 2018 to US$810 per equivalent ounce in 2019 mainly due to the same reasons as above as well as lower equivalent ounces sold.

At the Australian operations, all-in sustaining costs and total all-in costs increased by 12% from A$1,262 per ounce (US$943 per ounce) in 2018 to A$1,418 per ounce (US$986 per ounce) in 2019 due to lower ounces sold (part of Gruyere production for the year was capitalised) and higher cost of sales before amortisation and depreciation, partially offset by lower sustaining capital expenditure. At St Ives, all-in sustaining costs and total all-in costs increased by 15% from A$1,207 per ounce (US$902 per ounce) in 2018 to A$1,385 per ounce (US$963 per ounce) in 2019 due to higher cost of sales before amortisation and depreciation, partially offset by lower capital expenditure. At Agnew, all-in sustaining costs and total all-in costs increased by 21% from A$1,374 per ounce (US$1,026 per ounce) in 2018 to A$1,656 per ounce (US$1,152 per ounce) in 2019 due to lower gold sold, higher cost of sales before amortisation and depreciation and higher capital expenditure. At Granny Smith, all-in sustaining costs and total all-in costs increased by 7% from A$1,239 per ounce (US$925 per ounce) in 2018 to A$1,325 per ounce (US$922 per ounce) in 2019, mainly due to lower gold sold. At Gruyere, all-in sustaining costs and total all-in cost for the three months (October to December 2019) in which Gruyere was in commercial levels of production was A$983 per ounce (US$683 per ounce) and A$983 per ounce (US$684 per ounce), respectively.

Investment income

Income from investments decreased by 13% from US$8 million in 2018 to US$7 million in 2019. The decrease was mainly due to lower interest rates in 2019.

The investment income in 2019 of US$7 million comprised US$1 million interest on monies invested in the South African rehabilitation trust fund and US$6 million interest on other cash and cash equivalent balances.

The investment income in 2018 of US$8 million comprised US$1 million interest on monies invested in the South African rehabilitation trust fund and US$7 million interest on other cash and cash equivalent balances.

Interest received on the South African rehabilitation trust fund remained flat at US$1 million.

Interest on other cash balances decreased by 14% from US$7 million in 2018 to US$6 million in 2019 mainly due to lower interest rates in 2019.

Finance expense

Finance expense increased by 16% from US$88 million in 2018 to US$102 million in 2019.

The finance expense of US$102 million in 2019 comprised US$12 million relating to the accretion of the environmental rehabilitation liability, US$1 million relating to the unwinding of the silicosis provision, US$18 million lease interest and US$114 million on various Group borrowings, partially offset by borrowing costs capitalised of US$43 million.

The finance expense of US$88 million in 2018 comprised US$12 million relating to the accretion of the environmental rehabilitation liability, US$2 million relating to the unwinding of the silicosis provision and US$92 million on various Group borrowings, partially offset by borrowing costs capitalised of US$18 million.

The environmental rehabilitation liability accretion expense remained flat at US$12 million in 2018.

The unwinding of the silicosis provision decreased by 50% from US$2 million in 2018 to US$1 million in 2019 due to a change in the expected timing of the cash flows, as well as an increase in the discount rate.

The interest expense on lease liability of US$18 million relates to the adoption of IFRS 16 *Leases* in 2019.

Below is an analysis of the components making up the interest on the various Group borrowings, stated on a comparative basis:

	United States Dollar	
Figures in millions unless otherwise stated	**2019**	2018
Interest on borrowings to fund capital expenditure and operating costs at the South African operation	**7**	9
Interest on US$1 billion notes issue	**36**	43
Interest on US$500 million 5-year notes issue	**16**	–
Interest on US$500 million 10-year notes issue	**18**	–
Interest on US$100 million revolving senior secured credit facility	**3**	4
Interest on US$150 million revolving senior secured credit facility	**4**	3
Interest on A$500 million syndicated revolving credit facility	**12**	–
Interest on US$1,290 million term loan and revolving credit facilities	**17**	31
Other interest charges	**1**	2
	114	92

Interest on borrowings to fund capital expenditure and operating costs at the South African operation decreased from US$9 million in 2018 to US$7 million in 2019 due to repayments of South African borrowings in 2019.

Interest on the US$1 billion notes issue decreased from US$43 million in 2018 to US$36 million in 2019 due to the buy-back of US$250 million of the outstanding notes on 24 May 2019.

On 9 May 2019, Gold Fields successfully concluded the raising of two new bonds, a US$500 million five-year notes issue and a US$500 million 10-year notes issue, raising a total of US$1 billion. Interest on the US$500 million five-year notes issue and US$500 million 10-year notes issue amounted to US$16 million and US$18 million in 2019, respectively.

Interest on the US$100 million term revolving senior secured credit facility decreased from US$4 million in 2018 to US$3 million in 2019 due to the repayment of the facility during 2019.

Interest on the US$150 million revolving senior secured credit facility increased marginally from US$3 million in 2018 to US$4 million in 2019.

Interest on the A$500 million syndicated revolving credit facility was US$12 million in 2019.

Interest on the US$1,290 million term loan and revolving credit facilities decreased from US$31 million in 2018 to US$17 million in 2019 due to the repayment of the facilities in 2019.

Capitalised interest increased by 139% from US$18 million in 2018 to US$43 million in 2019 due to higher interest capitalised as a result of higher carrying values at Damang and Gruyere. This interest was capitalised in terms of IAS 23 *Borrowing Costs*. IAS 23 requires capitalisation of borrowing costs whenever general or specific borrowings are used to finance qualifying projects. The qualifying projects in 2019 were the Damang reinvestment project (US$20 million) and the Gruyere project (US$23 million). The qualifying projects in 2018 were the Damang reinvestment project (US$10 million) and the Gruyere project (US$8 million). An average interest capitalisation rate of 6.2% (2018: 5.9%) was applied.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF THE FINANCIAL STATEMENTS (continued)

(Loss)/gain on financial instruments

The loss on financial instruments of US$238 million in 2019 compared with a gain of US$21 million in 2018.

	United States Dollar	
Figures in millions unless otherwise stated	**2019**	2018
South Deep gold hedge	**(26)**	(3)
Ghana gold hedge	**(37)**	22
Ghana oil hedge	**2**	2
Peru copper hedge	**–**	9
Australia gold hedge	**(179)**	(5)
Australia oil hedge	**2**	1
Australia foreign currency hedge	**(7)**	(9)
Maverix warrants – gain on fair value	**4**	4
Gain on fair value on disposal of Maverix	**3**	–
	(238)	21

In 2019, the US$238 million comprised US$245 million losses on hedges and a US$7 million gain on the mark-to-market of Maverix warrants. The US$245 million included US$132 million realised losses and US$113 million unrealised losses. The realised losses of US$132 million comprised losses realised on the South Deep gold hedge of R220 million (US$15 million), the Australian gold hedge of A$163 million (US$113 million) and the Australian currency hedge of A$22 million (US$14 million), partially offset by gains made on the Ghana oil hedge of US$5 million, Ghana gold hedge of US$2 million and Australian oil hedge of A$4 million (US$3 million).

The unrealised losses of US$113 million comprised losses on the South Deep gold hedge of R153 million (US$11 million), the Ghana gold hedge US$39 million, the Australian gold hedge of A$94 million (US$66 million), the Ghana oil hedge of US$3 million and Australian oil hedge of A$1 million (US$1 million), partially offset by a gain on Australian currency hedge of A$12 million (US$7 million).

South Deep gold hedge

Between October 2018 and January 2019, South Deep entered into cash-settled average rate forwards for a total of 112,613 ounces for the period June 2019 to December 2019 at an average strike rate of R617,000 per kilogram.

In June 2019, a total of 200,000 ounces of the expected production for 2020 for South Deep was hedged for the period January 2020 to December 2020 using cash-settled zero cost collars (100,000 ounces) and average rate forwards (100,000 ounces). The average strike price is R660,000 per kilogram on the floor and R727,000 per kilogram on the cap. The average strike price is R681,400 per kilogram on the forwards.

At 31 December 2019, the mark-to-market value on the hedge was negative R176 million (US$13 million) (2018: R23 million (US$2 million)) with a realised loss of R220 million (US$15 million) (2018: gain of R117 million (US$9 million) for the year ended 31 December 2019.

Ghana gold hedge

In January 2018 and April 2018, a total of 488,900 ounces of the expected production for the Ghanaian region was hedged for the period January 2018 to December 2018 using zero-cost collars. The average strike prices are US$1,300 per ounce on the floor and US$1,418 per ounce on the cap.

In June 2019, a total of 275,000 ounces of the expected production for 2020 for the Ghanaian region was hedged for the period January 2020 to December 2020 using cash-settled zero-cost collars (175,000 ounces) and average rate forwards (100,000 ounces). The average strike prices are US$1,364 per ounce on the floor and US$1,449 per ounce on the cap. The average strike price on the forwards is US$1,382 per ounce.

Subsequent to 30 June 2019, 100,000 ounces of the expected production for the Ghanaian region was hedged for the period January 2020 to December 2020 using cash-settled zero cost collars. The average strike prices are US$1,400 per ounce on the floor and US$1,557 per ounce on the cap.

At 31 December 2019, the mark-to market value on the hedge was negative US$36 million (2018: positive US$2 million) with a realised gain of US$2 million (2018: US$20 million) for the year ended 31 December 2019.

Ghana oil hedge

In May 2017 and June 2017, the Ghanaian operations entered into fixed price ICE Gasoil cash-settled swap transaction for a total of 125.8 million litres of diesel for the period June 2017 to December 2019. The average swap price is US$457.2 per metric tonne (equivalent US$61.4 per barrel). At the time of the transactions, the average Brent swap equivalent over the tenure was US$49.8 per barrel.

In June 2019, fixed price ICE Gasoil cash-settled swap transactions were entered into for a total of 123.2 million litres of diesel for the period January 2020 to December 2022 based on 50% of usage over the specified period. The average swap price is US$575 per metric tonne (equivalent to US$75.8 per barrel). At the time of the transactions, the average Brent swap equivalent over the tenor was US$59.2 per barrel.

At 31 December 2019, the mark-to-market value on the hedge was a US$nil (2018: US$3 million) with a realised gain of US$5 million (2018: US$8 million).

Peru copper hedge

In November 2017, zero-cost collars were entered into for the period January 2018 to December 2018. A total volume of 29,400 tonnes was hedged, at an average floor price of US$6,600 per tonne and an average cap price of US$7,431 per tonne.

At 31 December 2019, the mark-to-market valuation of the hedge was a US$nil (2018: positive of US$1 million), with a realised gain of US$nil (2018: US$5 million).

Australia gold hedge

In February 2018, the Australian operations entered into Asian swaps (Asian swaps are options where the payoff is determined by the average monthly gold price over the option period) for the period June 2018 to December 2018 for a total of 221,000 ounces of gold. The average strike price on the swaps was A$1,714 per ounce. In March 2018, the Australian operations entered into zero-cost collars for the period April 2018 to December 2018 for a total of 452,800 ounces of gold. The average strike prices are A$1,703 per ounce on the floor and US$1,767 per ounce on the cap.

In December 2018, additional Asian swaps were entered into for the period January 2019 to December 2019 for a notional 283,000 ounces of gold at an average strike price of A$1,751 per ounce. In December 2018, additional zero-cost collars were executed for the period January 2019 to December 2019 for a notional 173,000 ounces of gold with a strike price on the floor at A$1,720 per ounce and the strike price on the cap at A$1,789 per ounce.

In January 2019, zero-cost collars were executed for the period January 2019 to December 2019 for a notional 456,000 ounces of gold with a strike price on the floor at A$1,800 per ounce and the strike price on the cap at A$1,869 per ounce.

In June 2019, a total of 480,000 ounces of the expected production for 2020 for the Australian region was hedged for the period January 2020 to December 2020 using cash-settled zero-cost collars (270,000 ounces) and average rate forwards (210,000 ounces). The average strike prices are A$1,933 per ounce on the floor and A$2,014 on the cap. The average strike price on the forwards is A$1,957 per ounce.

At 31 December 2019, the mark-to-market value on the hedges was negative A$111 million (US$78 million) (2018: A$18 million (US$12 million)) with a realised loss of A$163 million (US$113 million) (2018: gain of A$11 million (US$8 million)) for the year ended 31 December 2019.

Australia oil hedge

In May 2017 and June 2017, the Australian operations entered into fixed price Singapore 10ppm Gasoil cash-settled swap transactions for a total of 77.5 million litres of diesel for the period June 2017 to December 2019. The average swap price is US$61.2 per barrel. At the time of the transactions, the average Brent swap equivalent over the tenure was US$49.9 per barrel.

In June 2019, fixed price Singapore 10ppm Gasoil cash-settled swap transactions were entered into for a total of 75.0 million litres of diesel for the period January 2020 to December 2022 based on 50% of usage over the specified period. The average swap price is US$74.0 per barrel. At the time of the transactions, the average Brent swap equivalent over the tenor was US$57.4 per barrel.

At 31 December 2019, the mark-to-market value on the hedge was a positive A$1 million (US$1 million) (2018: A$3 million (US$2 million)) with a realised gain of A$4 million (US$3 million) (2018: A$6 million (US$5 million)).

Australia foreign currency hedge

In May 2018, the Australian operations entered into Australian Dollar/US Dollar average rate forwards for a total notional US$96 million for the period January 2019 to December 2019 at an average strike price of 0.7517. In June 2018, further hedges were taken out for a total notional US$60 million for the same period January 2019 to December 2019 at an average strike of 0.7330. In September 2018, further hedges were taken out for a total notional US$100 million for the same period January 2019 to December 2019 at an average strike of 0.7182. In October 2018, further hedges were taken out for the period January 2019 to December 2019 for a notional US$60 million at an average strike of 0.7075. In December 2018, further hedges were taken out for the period January 2019 to December 2019 for a notional US$50 million at an average strike of 0.715.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF THE FINANCIAL STATEMENTS (continued)

At 31 December 2019, the mark-to-market value on the hedges was A$nil (US$nil) (2018: A$12 million (US$9 million)) with a realised loss of A$22 million (US$14 million) (2018: A$nil (US$nil)) for the year ended 31 December 2019.

Foreign exchange (loss)/gain

The foreign exchange loss of US$5 million in 2019 compared with a gain of US$6 million.

These gains or losses on foreign exchange related to the conversion of offshore cash holdings into their functional currencies. The exchange loss of US$5 million was mainly due to the release of the foreign exchange reserve on disposal of subsidiary, while the exchange gain of US$6 million was due to the strengthening of the Ghanaian Cedi and the weakening of the Australian Dollar.

Other costs, net

Other costs, net increased by 51% from US$45 million in 2018 to US$68 million in 2019.

The costs in 2019 are mainly made up of:

- Social contributions and sponsorships of US$18 million;
- Offshore structure costs of US$17 million;
- Loss on buy-back on notes of US$5 million:
- Damang contract termination costs of US$13 million; and
- Rehabilitation expense of US$13 million as a result of changes in estimates relating to the provision for environmental rehabilitation costs recognised in profit or loss.

The costs in 2018 are mainly made up of:

- Social contributions and sponsorships of US$15 million;
- Offshore structure costs of US$16 million;
- Corporate-related costs of US$5 million;
- Loss on sale of inventory of US$9 million; and
- Rehabilitation income of US$1 million as a result of changes in estimates relating to the provision for environmental rehabilitation costs recognised in profit or loss.

Share-based payments

Gold Fields recognises the cost of share options granted (share-based payments) in terms of IFRS 2 *Share-based Payment*.

The Group grants share options and restricted shares to executive directors, certain officers and employees under the Gold Fields Limited 2012 Share Plan amended. Gold Fields has adopted appropriate valuation models (Black-Scholes and Monte Carlo simulation) to fair value share-based payments. The value of the equity-settled instruments is determined at the grant date of the options and depending on the rules of the plan expensed on a straight-line basis over a three-year vesting period, adjusted for forfeitures as appropriate.

From 2018 onwards, only Executive Committee members (including regional Executive Committee members) receive awards under the Gold Fields Limited 2012 Share Plan amended, while senior and middle management receive awards under the revised Long-Term Incentive Plan ("LTIP").

Share-based payments decreased by 45% from US$38 million in 2018 to US$21 million in 2019 mainly due to the awards from 2018 onwards being granted to the Executive Committee members only. The corresponding entry for the share-based payment expense was the share-based payment reserve within shareholders' equity.

Long-term incentive plan expense

Gold Fields recognises the long-term incentive plan expense in terms of IAS 19 *Employee Benefits*.

On 1 March 2014, the Remuneration Committee approved the Gold Fields Limited Long-Term Cash Incentive Plan ("LTIP"). The plan provided for executive directors, certain officers and employees to receive a cash award, conditional on the achievement of specified performance conditions relating to total shareholder return and free cash flow margin. The conditions were assessed over the performance cycle which runs over three calendar years. The expected timing of the cash outflows in respect of each grant was at the end of three years after the original award was made. The last award under this plan was made in 2015.

From 2018 onwards, Executive Committee members (including regional Executive Committee members) receive awards under the Gold Fields Limited 2012 Share Plan amended, while senior and middle management receive awards under the revised LTIP. The performance conditions of the revised LTIP are approved annually by the Remuneration Committee. The expected timing of the cash outflows in respect of each grant is at the end of three years after the original award was made.

The LTIP expense increased by 800% from US$1 million in 2018 to US$9 million in 2019 due to awards being granted to senior and middle management from 2018 onwards.

Exploration expense

The exploration expense decreased by 19% from US$104 million in 2018 to US$84 million in 2019.

	United States Dollar	
Figures in millions unless otherwise stated	**2019**	2018
Australia	**30**	38
Salares Norte	**49**	61
Exploration office costs	**5**	5
Total exploration expense	**84**	104

In 2019, Australia spent US$59 million on exploration of which US$30 million was expensed in the income statement.

In 2018, Australia spent US$64 million on exploration of which US$38 million was expensed in the income statement.

Share of results of equity accounted investees, net of taxation

Share of results of equity accounted investees, net of taxation was a loss of US$13 million in 2018 compared to a profit of US$3 million in 2019.

During 2019 and 2018, Gold Fields equity accounted for Far South East Resources Incorporated ("FSE"), Maverix Metals Incorporated ("Maverix") and Asanko Gold Inc ("Asanko").

FSE's share of results of equity accounted investees, net of taxation decreased from a loss of US$13 million in 2018 to a loss of US$1 million in 2019, mainly due to the US$12 million write-off of deferred costs and other non-recoverable amounts in 2018.

In March 2018, Gold Fields entered into an agreement to form an incorporated joint venture with Asanko Gold. In the deal which became unconditional on 31 July 2018, Gold Fields acquired 45% of Asanko Gold Ghana Limited ("AGGL"), the former Asanko subsidiary that owns the Asanko Gold mine, with the government of Ghana continuing to retain a 10% free carried interest in AGGL. The share of results of equity accounted investees, net of taxation for Asanko, was a profit of US$4 million in 2019 compared to a loss of US$1 million in 2018.

Maverix's share of results of equity accounted investees, net of taxation decreased from a profit of US$1 million in 2018 to US$nil in 2019, representing nil% (2018: 19.9%) shareholding. The decrease is due to the sale of Maverix during 2019 (refer below for further details).

Profit on disposal of Maverix Metals Incorporated

Profit on disposal of Maverix Metals amounted to US$15 million in 2019.

In line with its key strategic objective of paying down its debt, Gold Fields Limited disposed of its shareholding in Maverix during the year ended 31 December 2019. The sale of the shares, processed through a series of private market transactions, raised US$67 million in cash. After the first transaction, Maverix no longer met the definition of an associate and it was reclassified as a listed investment. A profit on disposal of US$15 million was recognised comprising a profit on disposal of associate of US$34 million, partially offset by a loss on derecognition of the investment in Maverix designated at fair value through profit or loss of US$19 million.

Restructuring costs

Restructuring costs decreased by 99% from US$114 million in 2018 to US$1 million in 2019. The cost in 2019 relates mainly to separation packages at South Deep and Tarkwa and the cost in 2018 relates mainly to separation packages at South Deep (US$11 million), Damang (US$14 million) and Tarkwa (US$89 million) (related to the conversion from owner to contractor mining implemented in 2018).

Silicosis settlement costs

Silicosis settlement costs decreased by 60% from a reversal of costs of US$5 million in 2018 and to a reversal of costs of US$2 million in 2019.

A consolidated application was brought against several South African mining companies, including Gold Fields, for certification of a class action on behalf of current or former mineworkers (and their dependants) who have allegedly contracted silicosis and/or tuberculosis while working for one or more of the mining companies listed in the application (refer to note 25.2 and 35 of the consolidated financial statements for further details).

During 2019 and 2018, reversal of costs of US$2 million and US$5 million, respectively, related to a change in the expected timing of the cash flows and an increase in the discount rate.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF THE FINANCIAL STATEMENTS (continued)

Gain on acquisition of Asanko

On 29 March 2018, the Group entered into certain definitive agreements (the "JV Transaction") with Asanko Gold Inc. pursuant to which, among other things:

- Gold Fields and Asanko will each own a 45% interest in Asanko Gold Ghana Limited ("AGGL"), the former Asanko subsidiary that owns the Asanko Gold mine, with the government of Ghana continuing to retain a 10% free-carried interest in AGGL (the "Joint Arrangement");
- Gold Fields and Asanko will each own a 50% interest in Adansi Gold Company Ghana Limited ("Adansi Ghana"), the Asanko subsidiary that currently owns a number of the Company's exploration licences; and
- Gold Fields and Asanko will each acquire a 50% interest in a newly formed entity (Shika Group Finance Limited ("JV Finco")).

On 20 June 2018, Gold Fields and Asanko received approval of the JV Transaction from the Ghanaian Minister of Lands and Natural Resources and the JV transaction closed on 31 July 2018 once all conditions precedent were met.

In consideration for its interests in the Joint Arrangement, Gold Fields contributed US$165 million in 2018, representing its initial US$165 million redeemable share investment in JV Finco, as well as its initial US$nil equity investments in AGGL, Adansi Ghana and JV Finco, respectively. An additional US$20 million was invested in the redeemable preference shares during 2019.

Recognition and measurement

Gold Fields and Asanko have joint control and the Asanko transaction is structured as a separate vehicle and the Group has a residual interest in the net assets of Asanko. Accordingly, the Group has classified its interest in Asanko as a joint venture.

Fair value measured

There were no changes in 2019 to the provisional purchase price allocation performed at the time of acquisition of Asanko, therefore the purchase price allocation is considered final.

Consideration transferred

The following table summarises the acquisition date fair value of the consideration transferred:

Figures in millions unless otherwise stated	United States Dollar
2018	
Cash for Asanko redeemable preference shares and equity	165
Total consideration paid	165

An additional US$20 million was invested in the redeemable preference shares in 2019.

Gain on acquisition of Asanko

The gain on acquisition was determined as follows:

Figures in millions unless otherwise stated	United States Dollar
2018	
Total fair value of assets acquired	217
Consideration transferred	(165)
Gain on acquisition	52

The redeemable preference shares have the following conditions:

- Redeemable at the option of the issuer at par value; and
- Non-interest-bearing.

The redeemable preference shares were recognised as an investment in an equity financial instrument measured at fair value through other comprehensive income. The key assumptions used to determine the fair value of the redeemable preference shares of US$130 million at acquisition were as follows:

Par value of the preference shares	US$/165.0 million
Market-related interest rate	7.85%
Expected redemption period – 2020 to 2023	5 years

- The key assumptions used to determine the fair value of the net identifiable assets acquired were as follows:

US$ gold price – 2018 to 2019	US$1,200/oz
US$ gold price – 2020 onwards	US$1,300/oz
Discount rate	10.27%
Life-of-mine – 2019 to 2030	12 years

- The excess of the fair value of the identifiable net assets acquired over the consideration is recognised immediately in profit or loss as a gain on acquisition. The injection of capital into Asanko Gold Mine for an equity stake represented a favourable deal for Gold Fields, as Asanko needed to refinance the debt of Asanko Gold Mine, resulting in a gain on acquisition.

Impairment, net of reversal of impairment of investments and assets

Impairment, net of reversal of impairment of investments and assets decreased by 98% from US$520 million in 2018 to US$10 million in 2019.

	United States Dollar	
Figures in millions unless otherwise stated	**2019**	2018
Cerro Corona redundant assets	**–**	2
South Deep cash-generating unit – goodwill	**–**	72
South Deep cash-generating unit – other assets	**–**	410
FSE	**10**	37
	10	520

The impairment charge of US$10 million in 2019 relate mainly to the net impairment of FSE. The impairment of FSE was based on the fair value less cost of disposal of the investment which was indirectly derived from the market value of Lepanto Consolidated Mining Company.

The impairment charge of US$520 million in 2018 comprises:

- US$2 million impairment of redundant assets at Cerro Corona;
- US$482 million cash-generating unit impairment at South Deep. US$72 million of the impairment was firstly allocated to goodwill and the remainder of US$410 million to other assets. The impairment calculation was performed in June 2018 and given that impairment indicators still existed at 31 December 2018, a further assessment was performed. The recoverable amount at 31 December 2018 is R21.2 billion (US$1.4 billion). There were no further impairments at 31 December 2018 using the following assumptions:
  - Gold price of R525,000 per kilogram for 2019 and R550,000 per kilogram thereafter;
  - Resource price of US$17 per ounce at a Rand/US$ exchange rate of R14.63;
  - Resource ounces of 24.5 million ounces;
  - Life-of-mine of 75 years; and
  - Discount rate of 13.5% nominal.
- US$37 million impairment of FSE. The impairment of FSE was based on the fair value less cost of disposal of the investment which was indirectly derived from the market value of Lepanto Consolidated Mining Company.

Profit/(loss) on disposal of assets

Loss of US$52 million in 2018 compared to a profit on disposal of assets was US$1 million in 2019.

Profit on disposal of assets of US$1 million in 2019 related mainly to the sale of redundant assets at South Deep, Ghana and Australia.

Loss on disposal of assets of US$52 million in 2018 related mainly to the losses of US$38 million on the sale of mining fleet and heavy machinery equipment and inventory at Tarkwa as part of the transition to contractor mining and a loss of US$15 million on the sale of APP.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF THE FINANCIAL STATEMENTS (continued)

Royalties

Royalties increased by 17% from US$63 million in 2018 to US$74 million in 2019 and are made up as follows:

	United States Dollar	
Figures in millions unless otherwise stated	**2019**	2018
South Africa	**2**	1
Ghana	**36**	29
Peru	**5**	5
Australia	**31**	28
	74	63

The royalty in South Africa increased by 100% from US$1 million in 2018 to US$2 million in 2019 due to an increase in revenue in 2019.

The royalty in Ghana increased by 24% from US$29 million in 2018 to US$36 million in 2019 due to an increase in revenue and an increase in the royalty rate in 2019.

The royalty in Peru remained flat at US$5 million.

The royalty in Australia increased by 11% from US$28 million in 2018 to US$31 million in 2019 due to an increase in revenue in 2019.

Mining and income tax

Mining and income tax was an income of US$66 million in 2018 compared to a charge of US$176 million in 2019.

The table below indicates Gold Fields' effective tax rate in 2019 and 2018:

	United States Dollar	
Figures in millions unless otherwise stated	**2019**	2018
Income and mining tax credit/(charge) (US$ million)	**(176)**	66
Effective tax rate (%)	**50.3**	16.0

In 2019, the effective tax rate of 50.3% was higher than the maximum South African mining statutory tax rate of 34% mainly due to the tax effect of the following:

- US$18 million adjustment to reflect the actual realised company tax rates in South Africa and offshore;
- US$1 million of non-taxable share of results of equity accounted investees, net of taxation;
- US$1 million non-taxable fair value gain on Maverix warrants; and
- US$5 million non-taxable profit on disposal of Maverix.

The above were offset by the following tax effected charges:

- US$24 million non-deductible charges comprising share-based payments (US$7 million) and exploration expense (US$17 million);
- US$3 million recognised on impairment of FSE;
- US$30 million non-deductible interest paid;
- US$3 million dividend withholding tax;
- US$11 million of net non-deductible expenditure and non-taxable income;
- US$5 million deferred tax on unremitted earnings at Tarkwa and Cerro Corona;
- US$7 million of various Peruvian non-deductible expenses; and
- US$3 million deferred tax assets not recognised at Cerro Corona.

In 2018, the effective tax rate of 16.0% was lower than the maximum South African mining statutory tax rate of 34% mainly due to the tax effect of the following:

- US$18 million non-taxable gain on acquisition of Asanko;
- US$1 million non-taxable fair value gain on Maverix warrants;
- US$1 million non-taxable profit on dilution of Gold Fields' interest in Maverix warrants;
- US$7 million deferred tax assets recognised at Damang; and
- US$70 million additional capital allowances recognised at South Deep.

The above were offset by the following tax effected charges:

- US$7 million adjustment to reflect the actual realised company tax rates in South Africa and offshore;
- US$35 million non-deductible charges comprising share-based payments (US$13 million) and exploration expense (US$22 million);
- US$13 million and US$24 million deferred tax assets not recognised on impairment of FSE and South Deep goodwill, respectively;
- US$26 million non-deductible interest paid;
- US$5 million of non-deductible share of results of equity accounted investees, net of taxation;
- US$16 million dividend withholding tax;
- US$15 million deferred tax assets not recognised at Cerro Corona;
- US$8 million of net non-deductible expenditure and non-taxable income;
- US$1 million deferred tax raised on unremitted earnings at Tarkwa and Cerro Corona;
- US$1 million deferred tax movement on Peruvian Nuevo Sol devaluation against US Dollar;
- US$8 million of various Peruvian non-deductible expenses; and
- US$11 million deferred tax release on change of tax rate at South Deep.

Profit/(loss) for the year

As a result of the factors discussed above, a profit of US$175 million in 2019 compared to a loss of US$345 million in 2018.

Profit/(loss) attributable to owners of the parent

A profit attributable to owners of the parent of US$162 million in 2019 compared to a loss of US$348 million in 2018.

Profit attributable to non-controlling interests

Profit attributable to non-controlling interests increased by 333% from US$3 million in 2018 to US$13 million in 2019.

The non-controlling interest consists of Gold Fields Ghana (Tarkwa) and Abosso Goldfields (Damang) at 10% each at the end of 2019 and 2018 and Gold Fields La Cima (Cerro Corona) at 0.47% at the end of 2019 and 2018.

The amount making up the non-controlling interest is shown below:

	2019	2018	**2019**	2018
	Minority interest Effective*	Minority interest Effective*	**US$ million**	US$ million
Gold Fields Ghana Limited – Tarkwa	**10.0%**	10.0%	**10**	4
Abosso Goldfields – Damang	**10.0%**	10.0%	**3**	(1)
Gold Fields La Cima – Cerro Corona	**0.47%**	0.47%	**–**	–
			13	3

* *Average for the year.*

Basic earnings/(loss) per share

As a result of the above, Gold Fields earnings of US$0.20 per share in 2019 compared to a loss per share of US$0.42 in 2018.

RESULTS FOR THE PERIOD – YEARS ENDED 31 DECEMBER 2018 AND 31 DECEMBER 2017

Loss attributable to owners of the parent for the Group was US$348 million (or US$0.42 per share) for 2018 compared to US$19 million (or US$0.02 per share) for 2017.

Loss attributable to owners of the parent for continuing operations was US$348 million (or US$0.42 per share) for 2018 compared to US$32 million (or US$0.04 per share) for 2017.

Profit attributable to discontinued operation, Darlot, was US$nil for 2018 compared to US$13 million (or US$0.02 per share) for 2017.

The reasons for this increase in loss are discussed below.

CONTINUING OPERATIONS

Revenue

Revenue from continuing operations decreased by 7% from US$2,762 million in 2017 to US$2,578 million in 2018. The decrease in revenue of US$184 million was due to lower ounces sold.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF THE FINANCIAL STATEMENTS (continued)

The average US Dollar gold price achieved by the Group decreased marginally from US$1,255 per equivalent ounce in 2017 to US$1,252 per equivalent ounce in 2018. The average Rand gold price decreased by 1% from R538,344 per kilogram to R531,253 per kilogram. The average Australian Dollar gold price increased by 3% from A$1,640 per ounce to A$1,694 per ounce. The average US Dollar gold price for the Ghanaian operations (including Asanko) increased by 1% from US$1,255 per ounce in 2017 to US$1,265 per ounce in 2018 and the average US Dollar gold price for the Ghanaian operations (excluding Asanko) increased by 1% from US$1,255 per ounce in 2017 to US$1,270 per ounce in 2018. The average equivalent US Dollar gold price, net of treatment and refining charges, for Cerro Corona decreased by 6% from US$1,252 per equivalent ounce in 2017 to US$1,174 per equivalent ounce in 2018. The average US Dollar/Rand exchange rate strengthened by 1% from R13.33 in 2017 to R13.20 in 2018. The average Australian/US Dollar exchange rate weakened by 3% from A$1.00 = US$0.77 in 2017 to A$1.00 = US$0.75 in 2018.

Gold sales from continuing operations (excluding Asanko) decreased by 6% from 2,201,100 equivalent ounces in 2017 to 2,058,600 equivalent ounces in 2018. Gold sales at the South African operation decreased by 40% from 8,766 kilograms (281,800 ounces) in 2017 to 5,220 kilograms (167,800 ounces) in 2018. Gold sales at the Ghanaian operations (excluding Asanko) decreased by 1% from 710,000 ounces in 2017 to 705,700 ounces in 2018. Gold equivalent sales at the Peruvian operation (Cerro Corona) decreased by 5% from 313,800 equivalent ounces in 2017 to 299,100 equivalent ounces in 2018. At the Australian operations, gold sales decreased by 1% from 895,400 ounces in 2017 to 885,900 ounces in 2018. As a general rule, Gold Fields sells all the gold it produces.

	2018			2017		
Figures in million unless otherwise stated	Revenue US$ million	Gold sold '000oz	Gold produced '000oz	Revenue US$ million	Gold sold '000oz	Gold produced '000oz
South Deep	210.1	167.8	157.1	354.1	281.8	281.3
Tarkwa	666.9	524.9	524.9	710.8	566.4	566.4
Damang	229.0	180.8	180.8	180.3	143.6	143.6
Asanko[1]	54.9	45.9	44.5	–	–	–
Cerro Corona	351.0	299.1	314.1	392.9	313.8	306.7
St Ives	464.7	367.0	366.9	457.3	363.9	363.9
Agnew	301.1	238.5	239.1	302.6	241.2	241.2
Granny Smith	355.0	280.5	280.4	363.8	290.3	290.3
Continuing operations (including Asanko)	2,632.7	2,104.5	2,107.8	2,761.8	2,201.1	2,193.3
Continuing operations (excluding Asanko)	2,577.8	2,058.6	2,063.2	2,761.8	2,201.1	2,193.3

[1] *Equity accounted joint venture. Included above for information only, not included in revenue for the Group.*

At South Deep in South Africa, gold sales decreased by 40% from 8,766 kilograms (281,800 ounces) in 2017 to 5,220 kilograms (167,800 ounces) in 2018 due to decreased volumes and grades. This was mainly due to the industrial action, the restructuring process as well as the fatal accident, further exacerbated by poor ground conditions in the high grade areas of the mine.

At the Ghanaian operations, gold sales at Tarkwa decreased by 7% from 566,400 ounces in 2017 to 524,900 ounces in 2018 due to lower volumes mined in line with the 2018 planned strategy to reduce mining and optimise margins and cash flow. Damang's gold sales increased by 26% from 143,600 ounces in 2017 to 180,800 ounces in 2018 mainly due to higher head grade and yield. Gold sales at Asanko amounted to 45,900 ounces for the five months ended December 2018 (Asanko is an equity accounted joint venture and not included in the Group or Ghanaian operation's figures).

At Cerro Corona in Peru, copper sales increased by 1% from 30,377 tonnes in 2017 to 30,742 tonnes in 2018 mainly due to higher copper production as a result of higher copper head grade. Gold sales decreased by 14% from 164,715 ounces in 2017 to 141,041 ounces in 2018 due to lower gold production and timing of shipments. Gold equivalent sales decreased by 5% from 313,800 ounces in 2017 to 299,100 ounces in 2018 as a result of lower gold sold and higher copper price relative to the gold price (price factor).

At the Australian operations, gold sales at St Ives increased by 1% marginally from 363,900 ounces in 2017 to 367,000 ounces in 2018. At Agnew, gold sales decreased by 1% from 241,200 ounces in 2017 to 238,500 ounces in 2018 mainly due to decreased ore processed. At Granny Smith, gold sales decreased by 3% from 290,300 ounces in 2017 to 280,500 ounces in 2018 due to lower grades mined.

Cost of sales

Cost of sales, which comprises cost of sales before gold inventory change and amortisation and depreciation, gold inventory change and amortisation and depreciation, decreased by 3% from US$2,105 million in 2017 to US$2,043 million in 2018. The reasons for this decrease are described below.

Cost of sales before gold inventory change and amortisation and depreciation

Cost of sales before gold inventory change and amortisation and depreciation from continuing operations decreased by 3% from US$1,427 million in 2017 to US$1,391 million in 2018.

At South Deep in South Africa, cost of sales before gold inventory change and amortisation and depreciation decreased by 15% from R4,083 million (US$306 million) in 2017 to R3,459 million (US$262 million) in 2018. This decrease of R624 million was mainly due to lower production exacerbated by the industrial action, lower expenditure on consumables, contractors, labour and utility costs.

At the Ghanaian operations (excluding Asanko), cost of sales before gold inventory change and amortisation and depreciation decreased by 6% from US$469 million in 2017 to US$442 million in 2018. At Tarkwa, cost of sales before gold inventory change and amortisation and depreciation decreased by 14% from US$348 million in 2017 to US$299 million in 2018 due to lower mining costs in line with lower operational tonnes mined. At Damang, cost of sales before gold inventory change and amortisation and depreciation increased by 19% from US$121 million in 2017 to US$144 million in 2018 mainly due to higher operating tonnes mined. Cost of sales before gold inventory change and amortisation and depreciation at Asanko amounted to US$42 million for the five months ended December 2018 (Asanko is an equity accounted joint venture and not included in the Group or Ghanaian regional figures).

At Cerro Corona in Peru, cost of sales before gold inventory change and amortisation and depreciation increased by 6% from US$151 million in 2017 to US$160 million in 2018, mainly due to higher tonnes mined in 2018.

At the Australian operations, cost of sales before gold inventory change and amortisation and depreciation increased by 8% from A$653 million (US$499 million) in 2017 to A$705 million (US$527 million) in 2018. At St Ives, cost of sales before gold inventory change and amortisation and depreciation increased by 10% from A$245 million (US$188 million) in 2017 to A$269 million (US$201 million) in 2018 mainly due to increased underground mining cost as a result of increased ore tonnes mined at Invincible, less cheaper open-pit tonnes mined and increased processing maintenance cost. At Agnew, cost of sales before gold inventory change and amortisation and depreciation increased by 5% from A$203 million (US$155 million) in 2017 to A$214 million (US$160 million) in 2018 mainly due to increased mining cost at Waroonga as a result of increased ground support and paste fill. At Granny Smith, cost of sales before gold inventory change and amortisation and depreciation increased by 9% from A$205 million (US$157 million) in 2017 to A$223 million (US$166 million) in 2018 mainly due to increased mining cost as a result of mining deeper zones.

Gold inventory change

The gold inventory credit to costs from continuing operations of US$16 million in 2018 compared with US$70 million in 2017.

At South Deep, the gold inventory charge to costs of R127 million (US$10 million) in 2018 compared with a credit to costs of R21 million (US$2 million) in 2017, due to a drawdown of gold in circuit at the end of 2018 compared with a buildup of gold in circuit in 2017.

At Tarkwa, the gold inventory charge to costs of US$10 million in 2018 compared with a credit to cost of US$42 million in 2017. In 2017, higher volumes were mined and more medium grade ore was stockpiled compared to 2018. In 2018 more lower grade ore was stockpiled and medium grade ore was processed.

At Damang, the gold inventory credit to costs of US$19 million in 2018 compared with a charge to costs of US$1 million in 2017, due to a buildup of stockpiles in 2018 compared to a drawdown in 2017.

At Asanko, the gold inventory credit to costs amounted to US$4 million for the five months ended December 2018 (Asanko is an equity accounted joint venture and not included in the Group or Ghanaian operation's figures).

At Cerro Corona, the gold inventory credit to costs of US$6 million in 2018 compared to a charge to costs of US$3 million in 2017, due to a buildup of concentrate inventory in 2018 compared a drawdown of concentrate inventory in 2017.

At St Ives, the credit to costs of A$20 million (US$15 million) in 2018 compared with A$38 million (US$29 million) in 2017, both due to a buildup of stockpiles.

At Agnew, the charge to costs of A$2 million (US$2 million) in 2018 compared with a credit costs of A$6 million (US$5 million) in 2017, due to a drawdown of stockpiles in 2018 compared to a buildup of stockpiles in 2017.

At Granny Smith, the charge to costs of A$3 million (US$2 million) in 2018 compared to A$5 million (US$4 million) in 2017, both due to a drawdown of stockpiles.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF THE FINANCIAL STATEMENTS (continued)

Amortisation and depreciation

Amortisation and depreciation are calculated on the units-of-production method and is based on current gold production as a percentage of total expected gold production over the lives of the different mines based on proved and probable reserves.

The table below depicts the changes from 31 December 2017 to 31 December 2018 for proved and probable managed gold and equivalent reserves and for the life-of-mine for each operation and the resulting impact on the amortisation charge in 2018. The amortisation in 2018 was based on the reserves as at 31 December 2017. The life-of-mine information is based on the operations' strategic plans, adjusted for proved and probable reserve balances. In basic terms, amortisation is calculated using the life-of-mine for each operation, which is based on: (1) the proved and probable reserves for the operation at the start of the relevant year (which are taken to be the same as at the end of the prior fiscal year and using reserves); and (2) the amount of gold produced by the operation during the year. The ore reserve statement as at 31 December 2018 became effective on 1 January 2019.

	Proved and probable mineral reserves as of			Life-of-mine		Amortisation for the year ended	
Figures in million unless otherwise stated	31 December 2018 '000oz	31 December 2017 '000oz	31 December 2016 '000oz	31 December 2018 years	31 December 2017 years	31 December 2018 US$ million	31 December 2017 US$ million
South Africa region							
South Deep[1]	32,800	37,400	37,300	75	78	48.9	74.2
West Africa region							
Tarkwa[2]	5,800	5,900	6,100	14	14	168.3	220.0
Damang[3]	1,600	1,700	1,700	7	8	99.9	22.3
South America region							
Cerro Corona[4]	3,400	3,700	2,400	12	13	81.8	130.9
Salares Norte	4,049	–	–	11.5	–	–	–
Australia region							
St Ives	1,700	1,600	1,700	7	5	146.2	172.3
Agnew/Lawlers	600	500	500	4	4	75.0	82.3
Granny Smith	2,200	2,200	1,700	12	11	44.6	43.5
Gruyere[5]	1,900	1,900	1,800	12	13	–	–
Corporate and other	–	–	–	–	–	3.7	2.7
Total reserves continuing operations[6]	54,049	54,900	53,200			668.4	748.1

[1] As of 31 December 2016, 31 December 2017 and 31 December 2018, 91.3%, 91.0% and 90.8% of mineral reserves amounting to 34.072 million ounces, 34.023 million ounces and 29.772 million ounces of gold, respectively, were attributable to Gold Fields, with the remainder attributable to future non-controlling shareholders in the South Deep operation in terms of the South Deep BEE transaction.

[2] As of 31 December 2016, 31 December 2017 and 31 December 2018, 90% of mineral reserves amounting to 5.473 million ounces, 5.315 million ounces and 5.200 million ounces of gold, respectively, were attributable to Gold Fields, with the remainder attributable to non-controlling shareholders in the Tarkwa operation.

[3] As of 31 December 2016, 31 December 2017 and 31 December 2018, 90% of mineral reserves amounting to 1.506 million ounces, 1.555 million ounces and 1.454 million ounces of gold, respectively, were attributable to Gold Fields, with the remainder attributable to non-controlling shareholders in the Damang operation.

[4] As of 31 December 2016, 31 December 2017 and 31 December 2018, 99.53% of mineral reserves amounting to 2.356 million ounces, 3.710 million ounces and 3.342 million ounces of equivalent gold were attributable to Gold Fields, with the remainder attributable to non-controlling shareholders in the Cerro Corona operation.

[5] As of 31 December 2017 and 31 December 2018 mineral reserves at Gruyere represent the 50% portion attributable to Gold Fields only.

[6] As of 31 December 2016, 31 December 2017 and 31 December 2018 reserves of 49.172 million ounces, 50.787 million ounces and 50.258 million ounces of equivalent gold, respectively, were attributable to Gold Fields, with the remainder attributable to non-controlling shareholders in the Ghanaian and Peruvian operations.

Amortisation and depreciation from the continuing operations decreased by 11% from US$748 million in 2017 to US$668 million in 2018.

At South Deep in South Africa, amortisation and depreciation decreased by 35% from R989 million (US$74 million) in 2017 to R646 million (US$49 million) in 2018 mainly due to a decrease in production and lower equipment purchases.

At the Ghanaian operations (excluding Asanko), amortisation and depreciation increased by 11% from US$242 million in 2017 to US$268 million in 2018. Tarkwa decreased by 24% from US$220 million in 2017 to US$168 million in 2018 mainly due to a decrease in ounces mined combined with the transition from owner mining to contractor mining, resulting in a decrease in mining fleet. Damang increased by 355% from US$22 million in 2017 to US$100 million in 2018, mainly due to increased ounces mined from the higher cost Amoanda pit in line with the reinvestment plan. At Asanko, the amortisation and depreciation amounted to US$16 million for the five months ended December 2018 (Asanko is an equity accounted joint venture and not included in the Group or Ghanaian operation's figures).

At Cerro Corona in Peru, amortisation and depreciation decreased by 37% from US$131 million in 2017 to US$82 million in 2018. This decrease was mainly due to the increase in reserves at Cerro Corona in line with the life extension from 2023 to 2030.

At the Australian operations, amortisation and depreciation decreased by 8% from A$388 million (US$298 million) in 2017 to A$356 million (US$266 million). At St Ives, amortisation and depreciation decreased by 12% from A$223 million (US$172 million) in 2017 to A$196 million (A$146 million) in 2018 due to a decrease in ounces mined. At Agnew, amortisation and depreciation decreased by 7% from A$108 million (US$82 million) in 2017 to A$100 million (US$75 million) in 2018 due to an increase in ore reserves at Waroonga mine in 2018, resulting in a lower amortisation rate per ounce. At Granny Smith, amortisation and depreciation increased by 5% from A$57 million (US$44 million) in 2017 to A$60 million (US$45 million) in 2018 due to depreciation of new mining equipment bought at the beginning of 2018, compared to mostly fully depreciated equipment utilised in 2017.

All-in sustaining and total all-in costs (original interpretation)

The following table sets out for each operation and the Group, total gold sales in ounces, all-in sustaining costs and total all-in costs, net of by-product revenue, in US$/oz for 2018 and 2017:

	2018			2017		
Figures in thousands unless otherwise stated	Gold only ounces sold	All-in sustaining costs – US$/oz	Total all-in costs – US$/oz	Gold only ounces sold	All-in sustaining costs – US$/oz	Total all-in costs – US$/oz
South Deep	167.8	1,903	2,012	281.8	1,340	1,400
South African operation	167.8	1,903	2,012	281.8	1,340	1,400
Tarkwa	524.9	951	951	566.4	940	940
Damang	180.8	813	1,506	143.6	1,027	1,827
Asanko[1]	45.9	1,069	1,175	–	–	–
Ghanaian operations	751.6	926	1,098	710.0	958	1,119
Cerro Corona[2]	141.0	282	282	164.7	203	203
Peruvian operation	141.0	282	282	164.7	203	203
St Ives	367.0	902	902	363.9	916	916
Agnew	238.5	1,026	1,026	241.2	977	977
Granny Smith	280.5	925	925	290.3	896	896
Australian operations	885.9	943	943	895.4	926	926
Continuing operations (including Asanko)	1,946.4	981	1,173	2,051.9	945	1,081
Continuing operations (excluding Asanko)	1,900.5	979	1,172	2,051.9	945	1,081

All-in costs are calculated in accordance with the World Gold Council Industry standard. Refer to pages 67 to 73 for detailed calculations and discussion of non-IFRS measures.

[1] Equity accounted joint venture.

[2] Gold sold at Cerro Corona excludes copper equivalents of 158,100 ounces in 2018 and 149,100 ounces in 2017.

Figures above may not add as they are rounded independently.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF THE FINANCIAL STATEMENTS (continued)

AISC and AIC

AISC net of by-product revenues (including Asanko) from continuing operations increased by 4% from US$945 per ounce of gold in 2017 to US$981 per ounce of gold in 2018, mainly due to lower gold sold, partially offset by lower cost of sales before amortisation and depreciation and lower sustaining capital expenditure. AIC net of by-product revenues (including Asanko) from continuing operations increased by 9% from US$1,081 per ounce of gold in 2017 to US$1,173 per ounce of gold in 2018 due to the same reasons as for all-in sustaining costs as well as higher non-sustaining capital expenditure and higher exploration, feasibility and evaluation costs.

AISC net of by-product revenues (excluding Asanko) from continuing operations increased by 4% from US$945 per ounce of gold in 2017 to US$979 per ounce of gold in 2018, mainly due to lower gold sold, partially offset by lower cost of sales before amortisation and depreciation and lower sustaining capital expenditure. AIC net of by-product revenues (including Asanko) from continuing operations increased by 8% from US$1,081 per ounce of gold in 2017 to US$1,172 per ounce of gold in 2018 due to the same reasons as for all-in sustaining costs as well as higher non-sustaining capital expenditure and higher non-sustaining capital expenditure and higher exploration, feasibility and evaluation costs.

At South Deep in South Africa, all-in sustaining costs increased by 41% from R574,406 per kilogram (US$1,340 per ounce) in 2017 to R807,688 per kilogram (US$1,903 per ounce) in 2018 mainly due to lower gold sold, partially offset by lower cost of sales before amortisation and depreciation and lower sustaining capital expenditure. The total all-in cost increased by 42% from R600,109 per kilogram (US$1,400 per ounce) in 2017 to R854,049 per kilogram (US$2,012 per ounce) in 2018 due to the same reasons as for all-in sustaining costs as well as higher non-sustaining capital expenditure.

At the Ghanaian operations, all-in sustaining costs decreased by 3% from US$958 per ounce in 2017 to US$926 per ounce in 2018 mainly due to higher gold sold and lower sustaining capital expenditure, partially offset by higher cost of sales before amortisation and depreciation. Results for Asanko were included for five months in 2018. Total all-in cost decreased by 2% from US$1,119 per ounce in 2017 to US$1,098 per ounce in 2018 due to the same reasons as for all-in sustaining costs and higher non-sustaining capital expenditure of US$125 million on the Damang reinvestment project and US$5 million at Asanko. At Tarkwa, all-in sustaining costs and total all-in costs increased by 1% from US$940 per ounce in 2017 to US$951 per ounce in 2018 due to higher cost of sales before amortisation and depreciation and lower gold sold, partially offset by lower capital expenditure. At Damang, all-in sustaining costs decreased by 21% from US$1,027 per ounce in 2017 to US$813 per ounce in 2018 due to higher gold sold and lower sustaining capital expenditure, partially offset by higher cost of sales before amortisation and depreciation. All-in costs decreased by 18% from US$1,827 per ounce in 2017 to US$1,506 per ounce in 2018 due to the same reasons as for all-in sustaining cost, partially offset by increased non-sustaining capital expenditure. At Asanko, all-in sustaining costs and total all-in cost for the five months ended December 2018 was US$1,069 per ounce and US$1,175 per ounce, respectively.

At Cerro Corona in Peru, all-in sustaining costs and total all-in costs increased by 39% from US$203 per ounce in 2017 to US$282 per ounce in 2018 mainly due to lower gold sold, lower by-product credits and higher cost of sales before amortisation and depreciation, partially offset by lower capital expenditure. All-in sustaining costs and total all-in cost per equivalent ounce increased by 4% from US$673 per equivalent ounce in 2017 to US$699 per equivalent ounce in 2018 mainly due to the same reasons as above as well as lower equivalent ounces sold.

At the Australian operations, all-in sustaining costs and total all-in costs increased by 4% from A$1,210 per ounce (US$926 per ounce) in 2017 to A$1,262 per ounce (US$943 per ounce) in 2018, mainly due to higher cost of sales before amortisation and depreciation and lower gold sold, partially offset by lower capital expenditure. At St Ives, all-in sustaining costs and total all-in costs increased by 1% from A$1,198 per ounce (US$916 per ounce) in 2017 to A$1,207 per ounce (US$902 per ounce) in 2018 due to higher cost of sales before amortisation and depreciation, partially offset by higher gold sold and lower capital expenditure. At Agnew, all-in sustaining costs and total all-in costs increased by 8% from A$1,276 per ounce (US$977 per ounce) in 2017 to A$1,374 per ounce (US$1,026 per ounce) in 2018 due to higher cost of sales before amortisation and depreciation, higher capital expenditure and lower gold sold. At Granny Smith, all-in sustaining costs and total all-in costs increased by 6% from A$1,171 per ounce (US$896 per ounce) in 2017 to A$1,239 per ounce (US$925 per ounce) in 2018, mainly due to higher cost of sales before amortisation and depreciation and lower gold sold, partially offset by lower capital expenditure.

Investment income

Income from investments increased by 33% from US$6 million in 2017 to US$8 million in 2018. The increase was mainly due to higher cash balances at the international operations in 2018.

The investment income in 2018 of US$8 million comprised US$1 million interest on monies invested in the South African rehabilitation trust fund and US$7 million interest on other cash and cash equivalent balances.

The investment income in 2017 of US$6 million comprised US$1 million interest on monies invested in the South African rehabilitation trust fund and US$5 million interest on other cash and cash equivalent balances.

Interest received on the South African rehabilitation trust fund remained flat at US$1 million.

Interest on other cash balances increased by 40% from US$5 million in 2017 to US$7 million in 2018 mainly due to higher cash balances at the international operations in 2018.

Finance expense

Finance expense increased by 9% from US$81 million in 2017 to US$88 million in 2018.

The finance expense of US$88 million in 2018 comprised US$12 million relating to the accretion of the environmental rehabilitation liability, US$2 million relating to the unwinding of the silicosis provision and US$92 million on various Group borrowings, partially offset by borrowing costs capitalised of US$18 million.

The finance expense of US$81 million in 2017 comprised US$12 million relating to the accretion of the environmental rehabilitation liability, US$1 million relating to the unwinding of the silicosis provision and US$91 million on various Group borrowings, partially offset by borrowing costs capitalised of US$23 million.

The environmental rehabilitation liability accretion expense remained flat at US$12 million in 2018.

Capitalised interest decreased by 22% from US$23 million in 2017 to US$18 million in 2018 due to South Deep no longer meeting the definition of a qualifying project for capitalisation of interest, partially offset by higher interest capitalised due to higher carrying values at Damang and Gruyere. This interest was capitalised in terms of IAS 23 *Borrowing Costs*. IAS 23 requires capitalisation of borrowing costs whenever general borrowings are used to finance qualifying projects. The qualifying projects in 2018 were the Damang reinvestment project (US$10 million) and the Gruyere project (US$8 million). The qualifying projects in 2017 were South Deep (US$20 million), Damang (US$2 million) and Gruyere (US$1 million). An average interest capitalisation rate of 5.9% (2017: 5.3%) was applied.

Below is an analysis of the components making up the interest on the various Group borrowings, stated on a comparative basis:

	United States Dollar	
Figures in millions unless otherwise stated	2018	2017
Interest on borrowings to fund capital expenditure and operating costs at the South African operation	*9*	12
Interest on US$1 billion notes issue	*43*	43
Interest on US$70 million revolving senior secured credit facility	*–*	1
Interest on US$100 million revolving senior secured credit facility	*4*	2
Interest on US$150 million revolving senior secured credit facility (old)	*–*	2
Interest on US$150 million revolving senior secured credit facility (new)	*3*	1
Interest on US$1,290 million term loan and revolving credit facilities	*31*	27
Other interest charges	*2*	3
	92	91

Interest on borrowings to fund capital expenditure and operating costs at the South African operation decreased from US$12 million in 2017 to US$9 million in 2018 due to repayments of South African borrowings in 2018.

Interest on the US$1 billion notes issue remained flat at US$43 million in 2018.

Interest on the US$70 million senior secured revolving credit facility decreased from US$1 million in 2017 to US$nil in 2018. The decrease is due to the US$70 million revolving senior secured credit facility being cancelled and refinanced through the US$100 million revolving senior secured credit facility on 21 July 2017. Interest on the US$100 million term revolving senior secured credit facility increased from US$2 million in 2017 to US$4 million in 2018. The increase is due to the interest charge being for five months in 2017 compared to 12 months in 2018.

Interest on the US$150 million revolving senior secured credit facility (old) decreased from US$2 million in 2017 to US$nil in 2018. The decrease is due to the US$150 million revolving senior secured credit facility being cancelled and refinanced through the US$150 million revolving senior secured credit facility (new) on 22 September 2017. Interest on the US$150 million revolving senior secured credit facility (new) increased from US$1 million in 2017 to US$3 million in 2018. The increase is due to interest charge being for three months in 2017 compared to 12 months in 2018.

Interest on the US$1,290 million term loan and revolving credit facilities increased from US$27 million in 2017 to US$31 million in 2018 due to drawdowns in 2018.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF THE FINANCIAL STATEMENTS (continued)

Gain on financial instruments

The gain on financial instruments decreased by 38% from US$34 million in 2017 to US$21 million in 2018.

	United States Dollar	
Figures in millions unless otherwise stated	2018	2017
South Deep gold hedge	(3)	11
Ghana gold hedge	22	–
Ghana oil hedge	2	9
Peru copper hedge	9	(6)
Australia gold hedge	(5)	15
Australia oil hedge	1	5
Australia foreign currency hedge	(9)	–
Maverix warrants – gain on fair value	4	–
	21	34

South Deep gold hedge

In November 2017, South Deep entered into zero-cost collars for the period January 2018 to December 2018 for 63,996 ounces of gold. The strike prices are R600,000 per kilogram on the floor and R665,621 per kilogram on the cap.

At 31 December 2018, the marked-to-market value of the hedge was a positive R5 million (US$nil), with a realised gain of R117 million (US$9 million).

In October 2018 and November 2018, average rate forwards were entered into for the period September 2019 to December 2019 for a total of 69,543 ounces at an average strike price of R615,103 per kilogram.

At 31 December 2018, the marked-to-market value was a negative R29 million (US$2.0 million).

Subsequent to year end, additional rate forwards were taken out for a further 30,072 ounces at an average strike price of R620,000 per kilogram. In summary, the rate forwards taken out for South Deep for 2019 are for 99,615 ounces of gold in total at an average strike price of R616,581 per kilogram.

Ghana gold hedge

In January 2018 and April 2018, a total of 488,900 ounces of the expected production for the Ghanaian region was hedged for the period January 2018 to December 2018 using zero-cost collars. The average strike prices are US$1,300 per ounce on the floor and US$1,418 per ounce on the cap.

At 31 December 2018, the marked-to-market value on the hedge was a positive US$2 million, with a realised gain of US$20 million.

Ghana oil hedge

In May 2017 and June 2017, the Ghanaian operations entered into fixed price ICE Gasoil cash settled swap transaction for a total of 125.8 million litres of diesel for the period June 2017 to December 2019. The average swap price is US$457.2 per metric tonne (equivalent US$61.4 per barrel). At the time of the transactions, the average Brent swap equivalent over the tenure was US$49.8 per barrel.

At 31 December 2018, the marked-to-market value on the hedge was a positive US$3 million, with a realised gain of US$8 million.

Peru copper hedge

In November 2017, further zero-cost collars were entered into for the period January 2018 to December 2018. A total volume of 29,400 tonnes was hedged, at an average floor price of US$6,600 per tonne and an average cap price of US$7,431 per tonne.

At 31 December 2018, the marked-to-market value on the hedge was a positive US$1 million, with a realised gain of US$5 million.

Australia gold hedge

In February 2018, the Australian operations entered into Asian swaps (Asian swaps are options where the payoff is determined by the average monthly gold price over the option period) for the period June 2018 to December 2018 for a total of 221,000 ounces of gold. The average strike price on the swaps was A$1,714 per ounce. In March 2018, the Australian operations entered into zero-cost collars for the period April 2018 to December 2018 for a total of 452,800 ounces of gold. The average strike prices are A$1,703 per ounce on the floor and US$1,767 per ounce on the cap.

The realised gain on the above Asian swaps and zero-cost collars was A$11 million (US$8 million).

In December 2018, additional Asian swaps were entered into for the period January 2019 to December 2019 for a notional 283,000 ounces of gold at an average strike price of A$1,751 per ounce.

At 31 December 2018, the marked-to-market value on the above hedges was a negative A$12 million (US$8 million).

In December 2018, additional zero-cost collars were executed for the period January 2019 to December 2019 for a notional 173,000 ounces of gold with a strike price on the floor at A$1,720 per ounce and the strike price on the cap at A$1,789 per ounce.

At 31 December 2018, the marked-to-market value on the hedge was a negative A$6 million (US$4 million).

Subsequent to year end, additional zero-cost collars were executed for the period January 2019 to December 2019 for a notional 456,000 ounces of gold with a strike price on the floor at A$1,800 per ounce and the strike price on the cap at A$1,869 per ounce. In summary, the zero-cost collars taken out for Australia for 2019 are for 629,000 ounces of gold in total with a strike price on the floor at A$1,778 per ounce and a strike price on the cap at A$1,847 per ounce and Asian swaps of 283,000 ounces of gold with an average strike price of A$1,751 per ounce.

Australia oil hedge

In May 2017 and June 2017, the Australian operations entered into fixed price Singapore 10ppm Gasoil cash-settled swap transactions for a total of 77.5 million litres of diesel for the period June 2017 to December 2019. The average swap price is US$61.15 per barrel. At the time of the transactions, the average Brent swap equivalent over the tenure was US$49.92 per barrel.

At 31 December 2017, the marked-to-market value on the hedge was a positive A$3 million (US$2 million) with a realised gain of A$6 million (US$5 million).

Australia foreign currency hedge

In May 2018, the Australian operations entered into Australian Dollar/US Dollar average rate forwards for a total notional US$96 million for the period January 2019 to December 2019 at an average strike price of 0.7517. In June 2018, further hedges were taken out for a total notional US$60 million for the same period January 2019 to December 2019 at an average strike of 0.7330. In September 2018, further hedges were taken out for a total notional US$100 million for the same period January 2019 to December 2019 at an average strike of 0.7182. In October 2018, further hedges were taken out for the period January 2019 to December 2019 for a notional US$60 million at an average strike of 0.7075. In December 2018, further hedges were taken out for the period January 2019 to December 2019 for a notional US$50 million at an average strike of 0.715.

At 31 December 2018, the marked-to-market value on the hedge was a negative A$12 million (US$9 million).

Foreign exchange loss

The foreign exchange gain of US$6 million in 2018 compared with a loss of US$4 million in 2017.

These gains or losses on foreign exchange related to the conversion of offshore cash holdings into their functional currencies. The exchange gain of US$6 million was due to the strengthening of the Ghanaian Cedi and the weakening of the Australian Dollar, while the exchange loss of US$4 million was due to the weakening of the Ghanaian Cedi and the strengthening of the Australian Dollar.

Other costs, net

Other costs, net increased by 137% from US$19 million in 2017 to US$45 million in 2018.

The costs in 2018 are mainly made up of:

- Social contributions and sponsorships of US$15 million;
- Offshore structure costs of US$16 million;
- Corporate-related costs of US$5 million;
- Loss on sale of inventory of US$9 million; and
- Rehabilitation income of US$1 million as a result of changes in estimates relating to the provision for environmental rehabilitation costs recognised in profit or loss.

The costs in 2017 are mainly made up of:

- Social contributions and sponsorships of US$20 million;
- Offshore structure costs of US$11 million;
- Corporate-related costs of US$1 million; and
- Rehabilitation income of US$14 million as a result of changes in estimates relating to the provision for environmental rehabilitation costs recognised in profit or loss.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF THE FINANCIAL STATEMENTS (continued)

Share-based payments

Gold Fields recognises the cost of share options granted (share-based payments) in terms of IFRS 2 *Share-based Payment*.

Gold Fields has adopted appropriate valuation models (Black-Scholes and Monte Carlo simulation) to fair value share-based payments. The value of the share options is determined at the grant date of the options and depending on the rules of the plan expensed on a straight-line basis over a three-year vesting period, adjusted for forfeitures as appropriate.

Share-based payments increased by 41% from US$27 million in 2017 to US$38 million in 2018. The corresponding entry for the share-based payment expense was the share-based payment reserve within shareholders' equity.

The charge in 2018 related to a new allocation in 2018 in addition to the 2017 and 2016 allocations. The charge in 2017 related only to the 2017 and 2016 allocations.

Long-term incentive plan expense

Gold Fields recognises the long-term incentive plan expense in terms of IAS 19 *Employee Benefits*.

On 1 March 2014, the Remuneration Committee approved the Gold Fields Limited Long-Term Incentive Plan ("LTIP"). The plan provided for executive directors, certain officers and employees to receive a cash award, conditional on the achievement of specified performance conditions relating to total shareholder return and free cash flow margin. The conditions were assessed over the performance cycle which runs over three calendar years. The expected timing of the cash outflows in respect of each grant was at the end of three years after the original award was made. The last award under this plan was made in 2015.

From 2018 onwards, Executive Committee members (including regional Executive Committee members) receive awards under the Gold Fields Limited 2012 Share Plan amended, while senior and middle management receive awards under the revised LTIP. The performance conditions of the revised LTIP are approved annually by the Remuneration Committee. The expected timing of the cash outflows in respect of each grant is at the end of three years after the original award was made.

No allocations were made under the LTIP in 2017.

The LTIP expense decreased by 80% from US$5 million in 2017 to US$1 million in 2018 due to negative marked-to-market adjustments of the plan.

Exploration expense

The exploration expense decreased by 5% from US$110 million in 2017 to US$104 million in 2018.

	United States Dollar	
Figures in millions unless otherwise stated	2018	2017
Australia	38	52
Salares Norte	61	53
Arctic Platinum Project ("APP")	–	1
Exploration office costs	5	4
Total exploration expense	104	110

In 2018, Australia spent US$64 million on exploration of which US$38 million was expensed in the income statement.

In 2017, Australia spent US$75 million on exploration of which US$52 million was expensed in the income statement.

Share of results of equity accounted investees, net of taxation

Share of results of equity accounted investees, net of taxation increased from a loss of US$1 million in 2017 to a loss of US$13 million in 2018.

During 2018, Gold Fields equity accounted for Far South East Resources Incorporated ("FSE"), Maverix Metals Incorporated ("Maverix") and Asanko Gold Inc ("Asanko"). During 2017, Gold Fields accounted for FSE and Maverix.

FSE's share of results of equity accounted investees, net of taxation increased from a loss of US$1 million in 2017 to a loss of US$13 million in 2018, mainly due to the US$12 million write-off of deferred costs and other non-recoverable amounts.

Maverix's share of results of equity accounted investees, net of taxation increased from US$nil for 2017 to a profit of US$1 million in 2018, representing 19.9% (2017: 27.9%) shareholding.

In March 2018, Gold Fields entered into an agreement to form an incorporated joint venture with Asanko Gold. In the deal which became unconditional on 31 July 2018, Gold Fields acquired 45% of Asanko Gold Ghana Limited ("AGGL"), the Asanko subsidiary that owns the Asanko Gold mine, with the government of Ghana continuing to retain a 10% free carried interest in AGGL. The share of results of equity accounted investees, net of taxation for Asanko, was a loss of US$1 million in 2018.

Restructuring costs
Restructuring costs increased from US$9 million in 2017 to US$114 million in 2018. The cost in 2018 relates mainly to separation packages at South Deep (US$11 million), Damang (US$14 million) and Tarkwa (US$89 million) (related to the conversion from owner to contractor mining implemented in 2018) and the cost in 2017 relates mainly to separation packages at South Deep (US$2 million), Damang (US$2 million) (related to the conversion from owner to contractor mining implemented in 2017) and Tarkwa (US$5 million).

Silicosis settlement costs
Silicosis settlement costs related to a reversal of costs of US$5 million in 2018 compared to costs of US$30 million in 2017.

A consolidated application was brought against several South African mining companies, including Gold Fields, for certification of a class action on behalf of current or former mineworkers (and their dependants) who have allegedly contracted silicosis and/or tuberculosis while working for one or more of the mining companies listed in the application.

During 2017, as a result of the ongoing work of the Working Group (refer to note 35 of the consolidated financial statements for further details) and engagements with affected stakeholders since 31 December 2016, Gold Fields provided an amount of US$30 million for its share of the estimated cost in relation to the Working Group of a possible settlement of the class action claims and related costs.

During 2018, reversal of costs of US$5 million related to a change in the expected timing of the cash flows.

Gain on acquisition of Asanko
On 29 March 2018, the Group entered into certain definitive agreements (the "JV Transaction") with Asanko Gold Inc. pursuant to which, among other things:
- Gold Fields and Asanko will each own a 45% interest in Asanko Gold Ghana Limited ("AGGL"), the Asanko subsidiary that currently owns the Asanko Gold mine, with the government of Ghana continuing to retain a 10% free-carried interest in AGGL (the "Joint Arrangement");
- Gold Fields and Asanko will each own a 50% interest in Adansi Gold Company Ghana Limited ("Adansi Ghana"), the Asanko subsidiary that currently owns a number of the Company's exploration licences; and
- Gold Fields and Asanko will each acquire a 50% interest in a newly formed entity (Shika Group Finance Limited ("JV Finco")).

On 20 June 2018, Gold Fields and Asanko received approval of the JV transaction from the Ghanaian Minister of Lands and Natural Resources and the JV transaction closed on 31 July 2018 once all conditions precedent were met.

In consideration for its interests in the Joint Arrangement, Gold Fields contributed US$165 million, representing its initial US$165 million redeemable share investment in JV Finco, as well as its initial US$nil equity investments in AGGL, Adansi Ghana and JV Finco, respectively. An additional US$20.0 million will be invested in the redeemable preference shares on an agreed Esaase development milestone, but in any event no later than 31 December 2019.

Recognition and measurement
Gold Fields and Asanko have joint control and the Asanko transaction is structured as a separate vehicle and the Group has a residual interest in the net assets of Asanko. Accordingly, the Group has classified its interest in Asanko as a joint venture.

Fair value measured on a provisional basis
The fair value of identifiable net assets acquired has been performed on a provisional basis, using the acquisition life-of-mine model, pending completion of review and sign off of the life-of-mine model, including the Reserves and Resources, by the Group Competent Person. Any changes to the acquisition life-of-mine model and/or Reserves and Resources could result in a material change to the cash flows used to determine the fair value of the identifiable net assets acquired.

If new information is obtained, within one year from the date of acquisition, about facts and circumstances that existed at the date of acquisition about the life-of-mine and adjustments are required to be made to the provisional fair values of the identifiable net assets, or if any additional provisions that existed at the date of acquisition are identified, then the accounting for the acquisition will be revised.

Consideration transferred
The following table summarises the acquisition date fair value of the consideration transferred:

Figures in millions unless otherwise stated	United States Dollar
2018	
Cash for Asanko redeemable preference shares and equity	165
Total consideration paid	165

MANAGEMENT'S DISCUSSION AND ANALYSIS OF THE FINANCIAL STATEMENTS (continued)

Gain on acquisition of Asanko

The gain on acquisition was determined as follows:

Figures in millions unless otherwise stated	United States Dollar
2018	
Total fair value of assets acquired	217
Consideration transferred	(165)
Gain on acquisition	52

The redeemable preference shares have the following conditions:

- Redeemable at the option of the issuer at par value; and
- Non-interest-bearing.

The redeemable preference shares were recognised as an investment in an equity financial instrument measured at fair value through other comprehensive income. The key assumptions used to determine the fair value of the redeemable preference shares of US$130 million at acquisition were as follows:

Par value of the preference shares	US$/165.0 million
Market-related interest rate	7.85%
Expected redemption period – 2020 to 2023	5 years

- The key assumptions used to determine the fair value of the net identifiable assets acquired were as follows:

US$ gold price – 2018 to 2019	US$1,200/oz
US$ gold price – 2020 onwards	US$ 1,300/oz
Discount rate	10.27%
Life-of-mine – 2019 to 2030	12 years

- The excess of the fair value of the identifiable net assets acquired over the consideration is recognised immediately in profit or loss as a gain on acquisition. The injection of capital into Asanko Gold Mine for an equity stake represented a favourable deal for Gold Fields, as Asanko needed to refinance the debt of Asanko Gold Mine, resulting in a gain on acquisition.

Impairment, net of reversal of impairment of investments and assets

Impairment, net of reversal of impairment of investments and assets increased by 160% from US$200 million in 2017 to US$520 million in 2018.

	United States Dollar	
Figures in millions unless otherwise stated	2018	2017
Cerro Corona redundant assets	2	1
Tarkwa mining fleet	–	7
Damang Rex pit assets	–	4
South Deep cash-generating unit – goodwill	72	278
South Deep cash-generating unit – other assets	410	–
Listed and unlisted investments	–	4
Cerro Corona cash-generating unit – other assets	–	(53)
APP	–	(39)
FSE	37	–
	520	200

The impairment charge of US$520 million in 2018 comprises:

- US$2 million impairment of redundant assets at Cerro Corona;
- US$482 million cash-generating unit impairment at South Deep. US$72 million of the impairment was firstly allocated to goodwill and the remainder of US$410 million to other assets. The impairment calculation was performed in June 2018 and given that impairment indicators still existed at 31 December 2018, a further assessment was performed. The recoverable amount at 31 December 2018 is R21.2 billion (US$1.4 billion). There were no further impairments at 31 December 2018 using the following assumptions:
  - Gold price of R525,000 per kilogram for 2019 and R550,000 per kilogram thereafter;
  - Resource price of US$17 per ounce at a Rand/US$ exchange rate of R14.63;
  - Resource ounces of 24.5 million ounces;
  - Life-of-mine of 75 years; and
  - Discount rate of 13.5% nominal.
- US$37 million impairment of FSE. The impairment of FSE was based on the fair value less cost of disposal of the investment which was indirectly derived from the market value of Lepanto Consolidated Mining Company.

The impairment charge of US$200 million in 2017 comprises:

- US$1 million impairment of redundant assets at Cerro Corona;
- US$7 million asset specific impairment at Tarkwa, relating to aged, high maintenance and low effectiveness mining fleet that is no longer used;
- US$4 million asset specific impairment at Damang, relating to all assets at the Rex pit. Following a series of optimisations, the extensional drilling, completed in 2017, failed to deliver sufficient tonnages at viable grades to warrant further work;
- US$278 million cash-generating unit impairment at South Deep, the impairment is due to a reduction in the gold price assumptions, a lower resource price and a deferral of production. The main assumptions used were:
  - Gold price of R525,000 per kilogram;
  - Resource price of US$17 per ounce at a Rand/US$ exchange rate of R12.58;
  - Resource ounces of 29.0 million ounces;
  - Life-of-mine of 77 years; and
  - Discount rate of 13.5% nominal.
- US$4 million impairment of listed and unlisted investments.

The above were partially offset by the following reversal of impairments:

- US$53 million reversal of cash-generating unit impairment at Cerro Corona. The reversal of the impairment is due to a higher net present value due to the completion of a pre-feasibility study in 2017 extending the life-of-mine from 2023 to 2030 by optimising the tailings density and increasing the tailings capacity by using in-pit tailings after mining activities end. The main assumptions used were:
  - Gold price of US$1,200 per ounce for 2018 and US$1,300 per ounce for 2019 onwards;
  - Copper price of US$2.50 per pound for 2018 and US$2.80 per pound for 2019 onwards;
  - Resource price of US$41 per ounce;
  - Life-of-mine of 13 years; and
  - Discount rate of 4.8%.
- US$39 million reversal of APP impairment. During 2017, active marketing activities continued for APP and as a result, a sale agreement was completed comprising a purchase offer of US$40 million cash and a 2% net smelter refiner royalty on all metals. As a result, the impairment previously recorded, was reversed up to the value of the selling price.

(Loss)/profit on disposal of assets

Profit on disposal of assets was US$4 million in 2017 compared to a loss of US$52 million in 2018.

Loss on disposal of assets of US$52 million in 2018 related mainly to the losses of US$38 million on the sale of mining fleet and heavy machinery equipment and inventory at Tarkwa as part of the transition to contractor mining and a loss of US$15 million on the sale of APP.

Profit on disposal of assets of US$4 million in 2017 related mainly to the sale of redundant assets at Agnew and Tarkwa.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF THE FINANCIAL STATEMENTS (continued)

Royalties

Royalties increased by 2% from US$62 million in 2017 to US$63 million in 2018 and are made up as follows:

	United States Dollar	
Figures in millions unless otherwise stated	2018	2017
South Africa	1	2
Ghana	29	27
Peru	5	5
Australia	28	28
	63	62

The royalty in South Africa decreased by 50% from US$2 million in 2017 to US$1 million in 2018 due to a decrease in revenue in 2018.

The royalty in Ghana increased by 7% from US$27 million in 2017 to US$29 million in 2018 due to an increase in revenue in 2018.

The royalty in Peru remained flat at US$5 million.

The royalty in Australia remained flat at US$28 million.

Mining and income tax

Mining and income tax was a charge of US$173 million in 2017 compared to an income of US$66 million in 2018.

The table below indicates Gold Fields' effective tax rate in 2018 and 2017:

	United States Dollar	
Figures in millions unless otherwise stated	2018	2017
Income and mining tax credit/(charge) (US$ million)	66	(173)
Effective tax rate (%)	16.0	113.6

In 2018, the effective tax rate of 16.0% was lower than the maximum South African mining statutory tax rate of 34% mainly due to the tax effect of the following:

- US$18 million non-taxable gain on acquisition of Asanko;
- US$1 million non-taxable fair value gain on Maverix warrants;
- US$1 million non-taxable profit on dilution of Gold Fields' interest in Maverix warrants;
- US$7 million deferred tax assets recognised at Damang; and
- US$70 million additional capital allowances recognised at South Deep.

The above were offset by the following tax effected charges:

- US$7 million adjustment to reflect the actual realised company tax rates in South Africa and offshore;
- US$35 million non-deductible charges comprising share-based payments (US$13 million) and exploration expense (US$22 million);
- US$13 million and US$24 million deferred tax assets not recognised on impairment of FSE and South Deep goodwill, respectively;
- US$26 million non-deductible interest paid;
- US$5 million of non-deductible share of results of equity accounted Investees, net of taxation;
- US$16 million dividend withholding tax;
- US$15 million deferred tax assets not recognised at Cerro Corona;
- US$8 million of net non-deductible expenditure and non-taxable income;
- US$1 million deferred tax raised on unremitted earnings at Tarkwa and Cerro Corona;
- US$1 million deferred tax movement on Peruvian Nuevo Sol devaluation against the US Dollar;
- US$8 million of various Peruvian non-deductible expenses; and
- US$11 million deferred tax release on change of tax rate at South Deep.

In 2017, the effective tax rate of 113.6% was higher than the maximum South African mining statutory tax rate of 34% mainly due to the tax effect of the following:

- US$19 million adjustment to reflect the actual realised company tax rates in South Africa and offshore;
- US$13 million deferred tax assets not recognised on reversal of impairment of APP;
- US$5 million deferred tax movement on Peruvian Nuevo Sol devaluation against US Dollar;
- US$7 million utilisation of tax losses not previously recognised at Damang; and
- US$20 million deferred tax assets recognised at Cerro Corona and Damang.

The above were offset by the following tax effected charges:

- US$29 million non-deductible charges comprising share-based payments (US$9 million) and exploration expense (US$20 million);
- US$24 million non-deductible interest paid;
- US$95 million impairment of South Deep goodwill;
- US$13 million deferred tax assets not recognised at Cerro Corona and Damang;
- US$5 million of net non-deductible expenditure and non-taxable income;
- US$10 million deferred tax raised on unremitted earnings at Tarkwa; and
- US$5 million of various Peruvian non-deductible expenses.

Loss from continuing operations

As a result of the factors discussed above, a loss from continuing operations increased from US$21 million in 2017 to US$345 million in 2018.

Profit from discontinued operations, net of tax

Profit from discontinued operations decreased from US$13 million in 2017 to US$nil in 2018 due to the disposal of Darlot in 2017.

Loss for the year – continuing and discontinued operations

Loss for the year increased from US$8 million in 2017 to US$345 million in 2018.

Loss attributable to owners of the parent

Loss attributable to owners of the parent increased from US$19 million in 2017 to US$348 million in 2018.

The loss attributable to owners of the parent of US$348 million in 2018 comprised US$348 million loss attributable to owners of the parent from continuing operations and US$nil attributable to owners of the parent from discontinued operations.

The loss attributable to owners of the parent of US$19 million in 2017 comprised US$32 million loss attributable to owners of the parent from continuing operations and US$13 million profit attributable to owners of the parent from discontinued operations.

Profit attributable to non-controlling interests

Profit attributable to non-controlling interests decreased by 73% from US$11 million in 2017 to US$3 million in 2018.

The non-controlling interest consists of Gold Fields Ghana (Tarkwa) and Abosso Goldfields (Damang) at 10% each at the end of 2018 and 2017 and Gold Fields La Cima (Cerro Corona) at 0.47% at the end of 2018 and 2017.

The amount making up the non-controlling interest is shown below:

	2018	2017	2018	2017
	Minority interest Effective*	Minority interest Effective*	US$ million	US$ million
Gold Fields Ghana Limited – Tarkwa	10.0%	10.0%	4	9
Abosso Goldfields – Damang	10.0%	10.0%	(1)	2
Gold Fields La Cima – Cerro Corona	0.47%	0.47%	–	–
			3	11

* *Average for the year.*

MANAGEMENT'S DISCUSSION AND ANALYSIS OF THE FINANCIAL STATEMENTS (continued)

Loss per share from continuing operations

As a result of the above, Gold Fields loss per share increased from US$0.04 per share in 2017 to US$0.42 per share in 2018.

Earnings per share from discontinued operations

Earnings per share from discontinued operation decreased from US$0.02 per share in 2017 to US$nil in 2018.

LIQUIDITY AND CAPITAL RESOURCES – YEARS ENDED 31 DECEMBER 2019 AND 31 DECEMBER 2018

CASH RESOURCES

Cash flows from operating activities

Cash inflows from operating activities increased by 49% (US$276 million) from US$569 million[1] in 2018 to US$845 million in 2019. The items comprising these are discussed below.

The increase of US$276 million was due to:

Figures in millions unless otherwise stated	United States Dollar
Increase in cash generated from operations due to higher gold sold and higher gold price	305
Decrease in investment in working capital	7
Silicosis payment	(5)
Increase in interest paid mainly due to adoption of IFRS 16 *Leases*	(41)
Increase in royalties paid	(7)
Decrease in taxes paid	9
Decrease in dividends paid due to lower dividends paid to non-controlling interests	8
	276

Dividends paid decreased from US$57 million in 2018 to US$49 million in 2019. The dividends paid of US$49 million in 2019 comprised dividends paid to ordinary shareholders of US$46 million, dividends paid to non-controlling interests in Ghana and Peru of US$2 million and South Deep BEE dividend of US$1 million.

The dividends paid of US$57 million in 2018 comprised dividends paid to ordinary shareholders of US$45 million, dividends paid to non-controlling interests in Ghana and Peru of US$10 million and South Deep BEE dividend of US$2 million.

Cash flows from investing activities

Cash outflows from investing activities decreased by 50% (US$440 million) from US$887 million in 2018 to US$447 million in 2019.

The decrease of US$440 million was due to:

Figures in millions unless otherwise stated	United States Dollar
Decrease in additions to property, plant and equipment	201
Decrease in proceeds on disposal of property, plant and equipment	(75)
Purchase of Asanko Gold	145
Decrease in purchase of investments	13
Redemption of Asanko preference shares – 2019	10
Proceeds on disposal of subsidiary – 2019	6
Proceeds on disposal of Maverix – 2019	67
Increase in proceeds on disposal of investments	112
Proceeds on disposal of APP – 2018	(40)
Decrease in environmental trust funds and rehabilitation payments	1
	440

[1] *Refer to note 42 of the consolidated financial statements for further details of the restatement.*

Additions to property, plant and equipment

Capital expenditure decreased by 25% from US$814 million in 2018 to US$613 million in 2019.

United States Dollar

	2019			2018		
Figures in million unless otherwise stated	**Sustaining capital**	**Growth capital**	**Total capital**	Sustaining capital	Growth capital	Total capital
South Deep	**33**	**—**	**33**	40	18	58
South African region	**33**	**—**	**33**	40	18	58
Tarkwa	**126**	**—**	**126**	156	—	156
Damang	**5**	**71**	**76**	14	125	139
Asanko[1]	**20**	**7**	**27**	8	5	13
Ghanaian region	**151**	**78**	**229**	178	130	308
Cerro Corona	**56**	**—**	**56**	33	—	33
South American region	**56**	**—**	**56**	33	—	33
St Ives	**98**	**—**	**98**	127	—	127
Agnew	**76**	**—**	**76**	73	—	73
Granny Smith	**72**	**—**	**72**	79	—	79
Gruyere – 50%	**5**	**67**	**72**	—	134	134
Australian operations	**251**	**67**	**318**	279	—	413
Other	**4**	**—**	**4**	2	13	15
Capital expenditure (including Asanko)	**495**	**145**	**640**	532	295	827
Capital expenditure (excluding Asanko)	**475**	**138**	**613**	524	290	814

[1] *Equity accounted joint venture.*

Capital expenditure at South Deep in South Africa decreased by 38% from R770 million (US$58 million) in 2018 to R479 million (US$33 million) in 2019. The capital expenditure of R479 million (US$33 million) in 2019 comprised only sustaining capital expenditure. The capital expenditure of R770 million (US$58 million) in 2018 comprised R528 million (US$40 million) sustaining capital and R242 million (US$18 million) growth capital.

- This decrease was driven by the decrease in non-sustaining capital expenditure, which was communicated as part of the restructuring at the end of 2018 with the temporary suspension of New Mine development in 2019.

Capital expenditure at the Ghanaian operations (excluding Asanko) decreased by 32% from US$295 million in 2018 to US$202 million in 2019:

- Tarkwa decreased by 19% from US$156 million in 2018 to US$126 million in 2019 mainly due to the lower capital waste stripping expenditure in line with the 2019 plan. All capital related to sustaining capital;
- Damang decreased by 45% from US$139 million in 2018 to US$76 million in 2019 due to lower capital waste tonnes mined. The capital expenditure of US$76 million in 2019 comprised US$5 million sustaining capital and US$71 million growth capital. The capital expenditure of US$139 million in 2018 comprised US$14 million sustaining capital and US$125 million growth capital; and
- Asanko incurred total capital expenditure of US$13 million for the five months ended December 2018 compared to US$27 million for the 12 months ended December 2019. The capital expenditure of US$27 million in 2019 comprised US$20 million sustaining capital expenditure and US$7 million growth capital. The capital expenditure of US$13 million in 2018 comprised sustaining capital expenditure of US$8 million and non-sustaining capital expenditure of US$5 million. (Asanko is an equity accounted joint venture and not included in the Group or Ghanaian operation's figures.)

MANAGEMENT'S DISCUSSION AND ANALYSIS OF THE FINANCIAL STATEMENTS (continued)

Capital expenditure at Cerro Corona in Peru increased by 70% from US$33 million in 2018 to US$56 million in 2019. All capital related to sustaining capital:

- The increase was due to higher expenditure resulting from the new waste storage facility construction and infrastructure relocation (access roads, blasting supplies warehouse, general warehouse, etc) expenses for the life extension plan.

Capital expenditure at the Australian operations decreased by 17% from A$553 million (US$413 million) in 2018 to A$458 million (US$318 million) in 2019:

- St Ives decreased by 17% from A$170 million (US$127 million) in 2018 to A$141 million (US$98 million) in 2019 due to reduced stripping at the open pits combined with lower spend on mining infrastructure in 2019. All capital related to sustaining capital;
- Agnew increased by 11% from A$98 million (US$73 million) in 2018 to A$109 million (US$76 million) in 2019. Additional expenditure was incurred in 2019 to establish the new accommodation village with A$32 million spent on the village in 2019 compared to A$8 million in 2018. The additional expenditure was partially offset by lower capital development in 2019 following the completion of the first phase of development of the Waroonga North complex early in the year. All capital related to sustaining capital;
- Granny Smith decreased by 1% from A$105 million (US$79 million) in 2018 to A$104 million (US$72 million) in 2019. The majority of capital expenditure related to development and infrastructure at the Wallaby mine, exploration and the development of a paste plant and associated infrastructure. All capital related to sustaining capital; and
- Capital expenditure at Gruyere decreased by 42% from A$180 million (US$134 million) in 2018 to A$104 million (US$72 million) in 2019 due to the completion of the construction project. The capital expenditure of A$104 million (US$72 million) in 2019 comprised A$8 million (US$5 million) sustaining capital and A$96 million (US$67 million) growth capital. The capital expenditure of A$180 million (US$134 million) in 2018 related only to growth capital.

Proceeds on disposal of property, plant and equipment

Proceeds on the disposal of property, plant and equipment decreased by 95% from US$79 million in 2018 to US$4 million in 2019. In 2019, the proceeds related mainly to the disposal of various redundant assets. In 2018, the proceeds related mainly to the disposal of fleet in Tarkwa of US$73 million as part of the conversion to contractor mining and the balance related to the sale of various redundant assets.

Purchase of Asanko Gold

Purchase of Asanko decreased by 88% from US$165 million in 2018 to US$20 million in 2019. Purchase of Asanko of US$165 million in 2018 related to the JV transaction with Asanko which was completed on 31 July 2018. Gold Fields acquired a 50% stake in Asanko's 90% interest in the Asanko Gold Mine in Ghana. Purchase of Asanko of US$20 million in 2019 related to the additional purchase of preference share in accordance with the JV transaction.

Purchase of investments

Investment purchases decreased by 63% from US$19 million in 2018 to US$7 million in 2019.

The purchase of investments of US$7 million in 2019 comprised:

Figures in millions unless otherwise stated	**United States Dollar**
Chakana Copper	**7**

The purchase of investments of US$19 million in 2018 comprised:

Figures in millions unless otherwise stated	United States Dollar
Asanko Gold Inc	18
Lefroy Exploration Limited	1
	19

Redemption of Asanko preference shares

Redemption of Asanko preference shares amounted to US$10 million in 2019.

Proceeds on disposal of subsidiary

Proceeds on disposal of subsidiary amounted to US$6 million in 2019 and related to the sale of Norperuna.

Proceeds on disposal of Maverix

Proceeds on disposal of Maverix amounted to US$67 million in 2019 and related to the sale of the Group's 19.9% holding in the Toronto-listed gold and royalty streaming company Maverix.

Proceeds on disposal of investments

Proceeds on the disposal of investments increased by 112% from US$1 million in 2018 to US$113 million in 2019.

The proceeds on disposal of investments of US$113 million in 2019 comprised:

Figures in millions unless otherwise stated	**United States Dollar**
Red 5 Limited	**21**
Gold Road Resources Limited	**85**
Hummingbird Resources PLC	**6**
	113

The proceeds on disposal of investments of US$1 million in 2018 related to the disposal of various investments.

Proceeds on disposal of APP

On 24 January 2018, Gold Fields sold APP to a Finnish subsidiary of private equity fund CD Capital Natural Resources Fund III for US$40 million.

Contributions to environmental trust funds

The contributions to environmental trust fund decreased by 13% from US$8 million in 2018 to US$7 million in 2019.

The contributions to environmental trust funds of US$7 million in 2019 comprised:

Figures in millions unless otherwise stated	**United States Dollar**
South Deep mine environmental trust fund	**1**
Tarkwa mine environmental trust fund	**6**
	7

The contributions to environmental trust funds of US$8 million in 2018 comprised:

Figures in millions unless otherwise stated	United States Dollar
South Deep mine environmental trust fund	1
Tarkwa mine environmental trust fund	7
	8

Cash flows from financing activities

Cash inflows from financing activities was an outflow of US$105 million in 2019 compared to an inflow of US$152 million[1] in 2018. The items comprising these numbers are discussed below.

The movement of US$257 million was due to:

Figures in millions unless otherwise stated	**United States Dollar**
Increase in loans raised	**848**
Increase in loans repaid	**(1,069)**
Increase in payment of lease liability	**(36)**
	257

[1] *Refer to note 42 of the consolidated financial statements for further details of the restatement.*

MANAGEMENT'S DISCUSSION AND ANALYSIS OF THE FINANCIAL STATEMENTS (continued)

Loans raised

Loans raised increased by 123% from US$690 million[1] in 2018 to US$1,538 million in 2019.

The US$1,538 million loans raised in 2019 comprised:

Figures in millions unless otherwise stated	**United States Dollar**
US$500 million 5-year notes issue[2]	**496**
US$500 million 10-year notes issue[2]	**496**
US$1,290 million term loan and revolving credit facilities	**434**
R500 million Standard Bank revolving credit facility	**21**
Short-term Rand uncommitted credit facilities	**91**
	1,538

[1] *Refer to note 42 of the consolidated financial statements for further details of the restatement.*

Credit facilities financing and refinancing

[2] *On 9 May 2019, Gold Fields successfully concluded the raising of two new bonds, a US$500 million five-year notes issue with a coupon of 5.125% and a US$500 million 10-year notes issue with a coupon of 6.125%, raising a total of US$1 billion at an average coupon of 5.625%.*

The US$690 million loans raised in 2018 comprised:

Figures in millions unless otherwise stated	United States Dollar Restated[1]
A$500 million syndicated revolving credit facility	120
US$1,290 million term loan and revolving credit facilities	383
R1,500 million Nedbank revolving credit facility	21
R500 million Standard Bank revolving credit facility[2]	14
R500 million Absa Bank revolving credit facility[3]	36
Short-term Rand uncommitted credit facilities	116
	690

[1] *Refer to note 42 of the consolidated financial statements for further details of the restatement.*

Credit facilities financing and refinancing

[2] *On 27 March 2017, Gold Fields Operations Limited and GFI Joint Venture Holdings Proprietary Limited entered into a R500 million revolving credit facility with the Standard Bank of South Africa Limited which became available on 31 March 2017. The purpose of this facility was to fund (i) capital expenditure of the Gold Fields group, and (ii) general corporate and working capital requirements of the Gold Fields group. The final maturity date of this facility is three years from the financial close date, namely 31 March 2020. The Group only drew down under this facility in 2018.*

[3] *On 27 March 2017, Gold Fields Operations Limited and GFI Joint Venture Holdings Proprietary Limited entered into a R500 million revolving credit facility with Absa Bank Limited which became available on 31 March 2017. The purpose of this facility was to fund (i) capital expenditure of the Gold Fields group, and (ii) general corporate and working capital requirements of the Gold Fields group. The final maturity date of this facility is three years from the financial close date, namely 31 March 2020. The Group only drew down under this facility in 2018.*

Loans repaid

Loans repaid increased by 199% from US$536 million[1] in 2018 to US$1,604 million in 2019.

The US$1,604 million loans repaid in 2019 comprised:

Figures in millions unless otherwise stated	**United States Dollar**
US$1 billion notes issue – buy-back of US$250 million notes[2]	**255**
US$100 million revolving credit facility	**45**
A$500 million syndicated revolving credit facility	**144**
US$1,290 million term loan and revolving credit facility	**906**
R500 million Standard Bank revolving credit facility	**35**
R500 million Absa Bank revolving credit facility	**35**
Short-term Rand uncommitted credit facilities	**184**
	1,604

[1] *Refer to note 42 of the consolidated financial statements for further details of the restatement.*

[2] *On 27 May 2019, Gold Fields announced the successful buy back of US$250 million of the outstanding 2020 notes at 102% of par as compared with a premium of 101.73% of par at the close of business on 24 May 2019. The buy-back of the notes was financed with the proceeds of the raising of two new bonds, the five-year notes and the 10-year notes. The Group recognised a loss of US$5.0 million on the buy-back of the 2020 notes.*

The US$536 million loans repaid in 2018 comprised:

Figures in millions unless otherwise stated	United States Dollar Restated[1]
US$1,290 million term loan and revolving credit facility	291
R1,500 million Nedbank revolving credit facility	108
Short-term Rand uncommitted credit facilities	137
	536

[1] *Refer to note 42 of the consolidated financial statements for further details of the restatement.*

Payment of lease liabilities

Payment of lease liabilities increased by 1167% from US$3 million in 2018 to US$38 million in 2019. The increase related to the adoption of IFRS 16 *Leases* in 2019.

Net cash generated/(utilised)

As a result of the above, net cash generated of US$294 million in 2019 compared to net cash utilised of US$167 million[1] in 2018.

Cash and cash equivalents increased by 134% from US$220 million[1] at 31 December 2018 to US$515 million at 31 December 2019.

Cash flow from operating activities less net capital expenditure, environmental payments, lease payments and redemption of Asanko preference shares ("net cash flow")

This is a measure that management uses to measure the cash generated by the core business. Cash flow from operating activities less net capital expenditure, environmental payments, lease payments and redemption of Asanko preference shares is defined as net cash from operations adjusted for South Deep BEE dividend, additions to property, plant and equipment, proceeds on disposal of property, plant and equipment, environmental trust funds payments, lease payments and redemption of Asanko preference shares per the statement of cash flows.

The cash inflow of US$249 million in 2019 compared to an outflow of US$122 million[1] in 2018. The main reasons for the increase was that net cash from operations increased by 43% from US$626 million[1] in 2018 to US$894 million in 2019 mainly due to higher gold sold and higher gold prices. Additions to property, plant and equipment decreased by 25% from US$814 million in 2018 to US$613 million in 2019 due to a decrease in capital across all operations.

Below is a table reconciling the cash flow from operating activities less net capital expenditure, environmental payments, lease payments and redemption of Asanko preference shares to the statement of cash flows.

	United States Dollar	
Figures in millions unless otherwise stated	**2019**	2018 Restated[1]
Net cash from operations	**894**	626
South Deep BEE dividend	**(1)**	(2)
Additions to property, plant and equipment	**(613)**	(814)
Proceeds on disposal of property, plant and equipment	**4**	79
Environmental trust funds and rehabilitation payments	**(7)**	(8)
Lease payments	**(38)**	(3)
Redemption of Asanko preference shares	**10**	-
Cash flow from operating activities less net capital expenditure, environmental payments, lease payments and redemption of Asanko preference shares	**249**	(122)

[1] *Refer to note 42 of the consolidated financial statements for further details of the restatement.*

MANAGEMENT'S DISCUSSION AND ANALYSIS OF THE FINANCIAL STATEMENTS (continued)

Below is a table providing a breakdown of how the cash was generated/(utilised) by the Group.

	United States Dollar	
Figures in millions unless otherwise stated	**2019**	2018 Restated[1]
Net cash generated by mines before growth capital	**552**	345
Damang growth capital	**(71)**	(125)
South Deep growth capital	**–**	(18)
Gruyere growth capital[2]	**(67)**	–
Net cash generated after growth capital	**414**	202
Gruyere project capital[2]	**–**	–
Salares Norte	**(55)**	–
Other exploration	**(5)**	(5)
Interest paid by corporate entities[3]	**(86)**	(77)
Other corporate costs and South Deep BEE dividend	**(19)**	(31)
Cash flow from operating activities less net capital expenditure, environmental payments, lease payments and redemption of Asanko preference shares	**249**	(122)

[1] *Refer to note 42 of the consolidated financial statements for further details of the restatement.*

[2] *The Gruyere project was successfully completed during 2019, with first gold produced in June 2019. Commercial levels of production were achieved at the end of September 2019 and was included in the Australian operations from that date.*

[3] *Does not agree to interest paid per the cash flow of US$132 million (2018: US$91 million) due to interest paid by the mines reflected under net cash generated by mines before growth capital.*

LIQUIDITY AND CAPITAL RESOURCES – YEARS ENDED 31 DECEMBER 2018 AND 31 DECEMBER 2017

CASH RESOURCES

Cash flows from operating activities

Cash inflows from operating activities decreased by 22% from US$732 million[1] in 2017 to US$569 million[1] in 2018. The items comprising these are discussed below.

CONTINUING OPERATIONS

Cash generated by continuing operations decreased by 22% from US$725 million[1] in 2017 to US$569 million[1] in 2018.

The decrease of US$156 million was due to:

Figures in millions unless otherwise stated	United States Dollar Restated[1]
Decrease in cash generated from operations due to lower gold sold and higher restructuring costs	(289)
Increase in interest received due to higher cash balances	2
Decrease in investment in working capital[2]	58
Decrease in taxes paid	59
Decrease in dividends paid due to lower normalised earnings, partially offset by higher dividends paid to non-controlling interests	14
	(156)

[1] *Refer to note 42 of the consolidated financial statements for further details of the restatement.*

[2] *In 2017, A$78 million (US$60 million) payment was made in respect of the deferred portion of the purchase price of the Group's 50% share of the Gruyere Gold project.*

Dividends paid decreased from US$71 million in 2017 to US$57 million in 2018. The dividends paid of US$57 million in 2018 comprised dividends paid to ordinary shareholders of US$45 million, dividends paid to non-controlling interests in Ghana and Peru of US$10 million and South Deep BEE dividend of US$2 million.

The dividends paid of US$71 million in 2017 comprised dividends paid to ordinary shareholders of US$63 million, dividends paid/advanced to non-controlling interests in Ghana and Peru of US$6 million and South Deep BEE dividend of US$2 million.

DISCONTINUED OPERATIONS

Cash generated by discontinued operations decreased from US$7 million in 2017 to US$nil in 2018 due to the sale of Darlot in 2017.

Cash flows from investing activities

Cash outflows from investing activities decreased by 2% from US$909 million in 2017 to US$887 million in 2018.

CONTINUING OPERATIONS

Cash utilised in continuing operations decreased by 2% from US$902 million in 2017 to US$887 million in 2018.

The decrease of US$15 million was due to:

Figures in millions unless otherwise stated	United States Dollar
Decrease in additions to property, plant and equipment	19
Increase in proceeds on disposal of property, plant and equipment	56
Purchase of Asanko Gold joint venture investment	(165)
Decrease in purchase of investments	61
Increase in proceeds on disposal of investments	1
Proceeds on disposal of APP – 2018	40
Proceeds on disposal of Darlot – 2017	(5)
Decrease in environmental trust funds and rehabilitation payments	9
	15

Additions to property, plant and equipment

Capital expenditure increased by 2% from US$834 million in 2017 to US$814 million in 2018.

United States Dollar

	2018			2017		
Figures in million unless otherwise stated	Sustaining capital	Growth capital	Total capital	Sustaining capital	Growth capital	Total capital
South Deep	40	18	58	66	17	82
South African region	40	18	58	66	17	82
Tarkwa	156	—	156	181	—	181
Damang	14	125	139	17	115	132
Asanko[1]	8	5	13	—	—	—
Ghanaian region	178	130	308	198	115	313
Cerro Corona	33	—	33	34	—	34
South American region	33	—	33	34	—	34
St Ives	127	—	127	156	—	156
Agnew/Lawlers	73	—	73	74	—	74
Granny Smith	79	—	79	87	—	87
Australian region	279	—	279	317	—	317
Gruyere	—	134	134	—	81	81
Other	2	13	15	3	4	7
Capital expenditure (including Asanko)	532	295	827	617	217	834
Capital expenditure (excluding Asanko)	524	290	814	617	217	834

[1] *Equity accounted joint venture.*

MANAGEMENT'S DISCUSSION AND ANALYSIS OF THE FINANCIAL STATEMENTS (continued)

Capital expenditure at South Deep in South Africa decreased by 30% from R1,099 million (US$82 million) in 2017 to R770 million (US$58 million) in 2018. The capital expenditure of R770 million (US$58 million) in 2018 comprised R528 million (US$40 million) sustaining capital and R242 million (US$18 million) growth capital. The capital expenditure of R1,099 million (US$82 million) in 2017 comprised R874 million (US$66 million) sustaining capital and R225 million (US$17 million) growth capital.

- This decrease was due to lower spending on fleet and surface infrastructure, partially offset by higher expenditure on new mine development infrastructure and more metres developed compared to 2017.

Capital expenditure at the Ghanaian operations (excluding Asanko) decreased by 6% from US$313 million in 2017 to US$295 million in 2018:

- Tarkwa decreased by 14% from US$181 million in 2017 to US$156 million in 2018 mainly due to the lower expenditure on mining fleet as a consequence of the conversion from owner mining to contractor mining. All capital related to sustaining capital;
- Damang increased by 5% from US$132 million in 2017 to US$139 million in 2018 with the majority spent on waste stripping due to the reinvestment project. The capital expenditure of US$139 million in 2018 comprised US$14 million sustaining capital and US$125 million growth capital. The capital expenditure of US$132 million in 2017 comprised US$17 million sustaining capital and US$115 million growth capital; and
- Asanko incurred total capital expenditure of US$13 million for the five months ended December 2018 comprising sustaining capital expenditure of US$8 million and non-sustaining capital expenditure of US$5 million. Non-sustaining capital expenditure included construction of the haul road and other expenditure related to the Esaase project, which commenced production in early 2019. (Asanko is an equity accounted joint venture and not included in the Group or Ghanaian operation's figures.)

Capital expenditure at Cerro Corona in Peru decreased by 3% from US$34 million in 2017 to US$33 million in 2018. All capital related to sustaining capital:

- The decrease is due to lower expenditure on the tailings dam and waste storage facilities.

Capital expenditure at the Australian operations decreased by 10% from A$414 million (US$317 million) in 2017 to A$373 million (US$279 million):

- St Ives decreased by 17% from A$204 million (US$156 million) to A$170 million (US$127 million) in 2018 mainly due to lower capital development in the open pits following completion of mining activities at Invincible open pit stage 5 (A$54 million/ US$41 million), partially offset by increased capital development at the new Invincible underground mine (A$25 million/ US$19 million);
- Agnew/Lawlers increased by 2% from A$96 million (US$74 million) to A$98 million (US$73 million) in 2018. Capital expenditure in 2018 included A$7 million (US$5 million) for the new camp. All capital related to sustaining capital; and
- Granny Smith decreased by 8% from A$114 million (US$87 million) to A$105 million (US$79 million) in 2018 due to the completion of the VR8 ventilation shaft in 2017. The majority of capital expenditure related to development and infrastructure at the Wallaby mine, exploration and the development of a paste plant and associated infrastructure. All capital related to sustaining capital.

Capital expenditure at Gruyere increased by 70% from A$106 million (US$81 million) to A$180 million (US$134 million) due to project construction activities. All capital related to growth capital.

Proceeds on disposal of property, plant and equipment

Proceeds on the disposal of property, plant and equipment increased by 243% from US$23 million in 2017 to US$79 million in 2018. In 2018, the proceeds related mainly to the disposal of fleet in Tarkwa of US$73 million as part of the conversion to contractor mining and the balance related to the sale of various redundant assets. In 2017, the proceeds related mainly to the disposal of fleet in Damang of US$17 million and the balance related to the sale of various redundant assets.

Purchase of Asanko Gold joint venture investment

Purchase of Asanko of US$165 million in 2018 related to the JV transaction with Asanko which was completed on 31 July 2018. Gold Fields acquired a 50% stake in Asanko's 90% interest in the Asanko Gold Mine in Ghana.

Purchase of investments

Investment purchases decreased by 76% from US$80 million in 2017 to US$19 million in 2018.

The purchase of investments of US$19 million in 2018 comprised:

Figures in millions unless otherwise stated	United States Dollar
Asanko Gold Inc	18
Lefroy Exploration Limited	1
	19

The purchase of investments of US$80 million in 2017 comprised:

Figures in millions unless otherwise stated	United States Dollar
Red 5 Limited	5
Cardinal Resources Limited	20
Gold Road Resources Limited	55
	80

Proceeds on disposal of investments

Proceeds on the disposal of investments increased by 100% from US$nil in 2017 to US$1 million in 2018.

The proceeds on disposal of investments of US$1 million in 2018 related to the disposal of various investments.

Proceeds on disposal of APP

On 24 January 2018, Gold Fields sold APP to a Finnish subsidiary of private equity fund CD Capital Natural Resources Fund III for US$40 million.

Proceeds on disposal of Darlot

In 2017, Gold Fields sold the Darlot mine in Western Australia, through a wholly owned subsidiary, to ASX-listed Red 5 Limited ("Red 5") for a total consideration of A$18.5 million, comprising A$12 million in cash and 130 million Red 5 shares. The cash component was made up of an upfront amount of A$7 million (US$5 million) which could be converted into participation in a Red 5 rights issue and A$5 million deferred for up to 24 months. The deferred consideration may be taken as additional shares in Red 5 or as cash at Gold Fields' election. The gain on disposal of Darlot was A$31 million (US$24 million).

The sale of Darlot was completed on 2 October 2017. Gold Fields received the relevant cash consideration of US$5 million and converted it into participation in a rights issue, as well as the issue of the Red 5 shares as part of the consideration. Gold Fields participated in a rights issue by Red 5 and received 117 million additional shares valued at A$6 million (US$5 million). Gold Fields has a 19.9% shareholding in Red 5 with a market value of A$15 million (US$11 million).

Contributions to environmental trust funds

The contributions to environmental trust fund decreased by 53% from US$17 million in 2017 to US$8 million in 2018.

The contributions to environmental trust funds of US$8 million in 2018 comprised:

Figures in millions unless otherwise stated	United States Dollar
South Deep mine environmental trust fund	1
Tarkwa mine environmental trust fund	7
	8

MANAGEMENT'S DISCUSSION AND ANALYSIS OF THE FINANCIAL STATEMENTS (continued)

The contributions to environmental trust funds of US$17 million in 2017 comprised:

Figures in millions unless otherwise stated	United States Dollar
South Deep mine environmental trust fund	3
Tarkwa mine environmental trust fund	6
Ongoing rehabilitation payments[1]	8
	17

[1] *Ongoing rehabilitation payments were allocated to cash flows from operating activities in 2018.*

DISCONTINUED OPERATIONS

Cash utilised in discontinued operations decreased by 100% from US$7 million in 2017 to US$nil in 2018 due to the sale of Darlot in 2017.

Cash flows from financing activities

Cash inflows from financing activities increased by 79% from US$85 million[1] in 2017 to US$152 million[1] in 2018. The items comprising these numbers are discussed below.

CONTINUING OPERATIONS

Cash generated by continuing operations increased by 79% from US$85 million[1] in 2017 to US$152 million[1] in 2018.

The increase of US$67 million was due to:

Figures in millions unless otherwise stated	United States Dollar
Decrease in loans raised	(97)
Decrease in loans repaid	167
Increase in payment of finance lease liability	(3)
	67

[1] *Refer to note 42 of the consolidated financial statements for further details of the restatement.*

Loans raised

Loans raised decreased by 12% from US$788 million[1] in 2017 to US$690 million[1] in 2018.

The US$690 million loans raised in 2018 comprised:

Figures in millions unless otherwise stated	United States Dollar Restated[1]
A$500 million syndicated revolving credit facility	120
US$1,290 million term loan and revolving credit facilities	383
R1,500 million Nedbank revolving credit facility	21
R500 million Standard Bank revolving credit facility[2]	14
R500 million Absa revolving credit facility[3]	36
Short-term Rand uncommitted credit facilities	116
	690

[1] *Refer to note 42 of the consolidated financial statements for further details of the restatement.*

Credit facilities financing and refinancing:

[2] *On 27 March 2017, Gold Fields Operations Limited and GFI Joint Venture Holdings Proprietary Limited entered into a R500 million revolving credit facility with the Standard Bank of South Africa Limited which became available on 31 March 2017. The purpose of this facility was to fund (i) capital expenditure of the Gold Fields group, and (ii) general corporate and working requirements of the Gold Fields group. The final maturity date of this facility is three years from the financial close date, namely 31 March 2020. The Group only drew down under this facility in 2018.*

[3] *On 27 March 2017, Gold Fields Operations Limited and GFI Joint Venture Holdings Proprietary Limited entered into a R500 million revolving credit facility with Absa Bank Limited which became available on 31 March 2017. The purpose of this facility was to fund (i) capital expenditure of the Gold Fields group, and (ii) general corporate and working requirements of the Gold Fields group. The final maturity date of this facility is three years from the financial close date, namely 31 March 2020. The Group only drew down under this facility in 2018.*

The US$788 million loans raised in 2017 comprised:

Figures in millions unless otherwise stated	United States Dollar Restated[1]
US$150 million revolving senior secured credit facility – new[2]	84
US$100 million revolving senior secured credit facility[3]	45
A$500 million syndicated revolving credit facility[4]	237
US$1,290 million term loan and revolving credit facilities	73
R1,500 million Nedbank revolving credit facility	79
Short-term Rand uncommitted credit facilities	270
	788

[1] *Refer to note 42 of the consolidated financial statements for further details.*

Credit facilities financing and refinancing:

[2] *On 19 September 2017, Gold Fields La Cima S.A. entered into a US$150 million revolving senior secured credit facility with Banco de Crédito del Perú and Scotiabank Perú S.A.A. which became available on 20 September 2017. The purpose of this facility was (i) to refinance the US$200 million revolving senior secured credit facility; (ii) to finance the working capital requirements of the borrower; and (iii) for the general corporate purposes of the borrower. The final maturity date of this facility is three years from the date of the agreement, namely 19 September 2020.*

[3] *On 12 June 2017, Gold Fields Ghana Limited and Abosso Goldfields Limited entered into a US$100 million senior secured revolving credit facility with the Standard Bank of South Africa Limited (acting through its Isle of Man branch) which became available on 17 July 2017. The purpose of this facility was (i) to refinance the outstanding balance of US$45 million under the US$70 million senior secured revolving credit facility (which matured on 17 July 2017); (ii) to finance working capital requirements; (iii) for general corporate purposes; and (iv) for capital expenditure purposes of each borrower. The final maturity date of this facility is three years from the financial close date, namely 17 July 2020.*

[4] *On 24 May 2017, Gruyere Holdings entered into a A$500 million revolving credit facility which became available on 13 June 2017 with a syndicate of international banks and financial institutions. The purpose of this facility is to finance capital expenditure in respect of the Gruyere Gold project and to fund general working capital requirements. The final maturity date of this facility is three years from the agreement date, namely 13 June 2020.*

Loans repaid

Loans repaid decreased by 24% from US$703 million[1] in 2017 to US$536 million[1] in 2018.

The US$536 million loans repaid in 2018 comprised:

Figures in millions unless otherwise stated	United States Dollar Restated[1]
US$1,290 million term loan and revolving credit facility	291
R1,500 million Nedbank revolving credit facility	108
Short-term Rand uncommitted credit facilities	137
	536

[1] *Refer to note 42 of the consolidated financial statements for further details of the restatement.*

The US$703 million loans repaid in 2017 comprised:

Figures in millions unless otherwise stated	United States Dollar Restated[1]
US$150 million revolving senior secured credit facility – old	82
US$70 million revolving senior secured credit facility	45
US$1,290 million term loan and revolving credit facility	352
Short-term Rand uncommitted credit facilities	224
	703

[1] *Refer to note 42 of the consolidated financial statements for further details of the restatement.*

MANAGEMENT'S DISCUSSION AND ANALYSIS OF THE FINANCIAL STATEMENTS (continued)

Payment of finance lease liabilities

The US$3 million payment in 2018 related mainly to the power purchase agreements entered into at Gruyere and Granny Smith.

DISCONTINUED OPERATIONS

Cash generated by discontinued operations was US$nil in 2018 and 2017.

Net cash utilised

As a result of the above, net cash utilised increased by 82% from US$92 million[1] in 2017 to US$167 million[1] in 2018.

Cash and cash equivalents decreased by 44% from US$394 million[1] at 31 December 2017 to US$220 million[1] at 31 December 2018.

Cash flow from operating activities less net capital expenditure, environmental payments and lease payments ("net cash flow")

This is a measure that management uses to measure the cash generated by the core business. Cash flow from operating activities less net capital expenditure, environmental payments and lease payments is defined as net cash from operations adjusted for South Deep BEE dividend, additions to property, plant and equipment, proceeds on disposal of property, plant and equipment, environmental trust funds payments and lease payments per the statement of cash flows.

The cash outflow increased from US$33 million in 2017 to US$122 million in 2018. The main reasons for the increase was that net cash from operations decreased from US$796 million in 2017 to US$626 million in 2018 mainly due to lower gold sold, higher restructuring costs, partially offset by lower taxes paid and lower investment in working capital. Additions to property plant and equipment decreased from US$834 million in 2017 to US$814 million in 2018 due to a decrease in sustaining capital across all operations, partially offset by an increase in growth capital, being growth capital at Damang of US$125 million (2017: US$115 million), the growth capital at South Deep of US$18 million (2017: US$17 million) and Gruyere project capital of US$134 million (2017: US$81 million).

Below is a table reconciling the cash flow from operating activities less net capital expenditure, environmental payments and finance lease payments to the statement of cash flows.

	United States Dollar	
Figures in millions unless otherwise stated	2018 Restated[1]	2017 Restated[1]
Net cash from operations	626	796
South Deep BEE dividend	(2)	(1)
Additions to property, plant and equipment	(814)	(834)
Proceeds on disposal of property, plant and equipment	79	23
Environmental trust funds and rehabilitation payments	(8)	(17)
Lease payments	(3)	–
Cash flow from operating activities less net capital expenditure, environmental payments and lease payments	(122)	(33)

[1] *Refer to note 42 of the consolidated financial statements for further details of the restatement.*

Below is a table providing a breakdown of how the cash was utilised by the Group.

United States Dollar Figures in millions unless otherwise stated	2018 Restated[1]	2017 Restated[1]
Net cash generated by mines before growth capital	345	410
Damang growth capital	(125)	(115)
South Deep growth capital	(18)	(17)
Net cash generated after growth capital	202	278
Gruyere project capital	(134)	(81)
Gruyere deferred payment and stamp duty	–	(60)
Salares Norte	(77)	(53)
Other exploration	(5)	(5)
Interest paid by corporate entities[2]	(77)	(72)
Other corporate costs and South Deep BEE dividend	(31)	(40)
Cash flow from operating activities less net capital expenditure, environmental payments and lease payments	(122)	(33)

[1] *Refer to note 42 of the consolidated financial statements for further details.*

[2] *Does not agree to interest paid per the cash flow of US$91 million due to interest paid by the mines reflected under net cash generated by mines before growth capital.*

STATEMENT OF FINANCIAL POSITION

Borrowings

Total debt (short and long-term borrowings) decreased from US$1,907 million[1] at 31 December 2018 to US$1,846 million at 31 December 2019. Net debt (pre-IFRS 16) is defined as total borrowing less cash and cash equivalents. Net debt (post-IFRS 16) is defined as total borrowing plus lease liabilities less cash and cash equivalents. Net debt (pre-IFRS 16) decreased from US$1,687 million[1] at 31 December 2018 to US$1,331 million as a result of lower debt and higher cash balances. Net debt (post-IFRS 16) amounted to US$1,664 million in 2019.

The Group monitors capital using the ratio of net debt to adjusted EBITDA and takes into account the adoption of IFRS 16. Adjusted EBITDA is defined as profit or loss for the year adjusted for interest, taxation, amortisation and depreciation and certain other costs. For external borrowings entered into before 1 January 2019, the definition of adjusted EBITDA is as defined in the US$1,290 million term loan and revolving credit facilities agreement. For external borrowings entered into after 1 January 2019, the definition of adjusted EBITDA is as defined in the US$1,200 million term loan and revolving credit facilities agreement. The Group's long-term target is a ratio of net debt to adjusted EBITDA of one times or lower. The bank covenants on external borrowings entered into before 1 January 2019 require a net debt to adjusted EBITDA ratio of 2.5 or below and the ratio is measured based on amounts in United States Dollar. The bank covenants on external borrowings entered into after 1 January 2019 takes into account the adoption of IFRS 16 and require a net debt to adjusted EBITDA ratio of 3.5 or below and the ratio is measured based on amounts in United States Dollar. Net debt to adjusted EBITDA (IFRS 16 impact excluded) at 31 December 2019 was 1.08 (2018: 1.52). Net debt to adjusted EBITDA (IFRS 16 impact included) at 31 December 2019 was 1.29. Refer to note 39 of the consolidated financial statements for further details including the reconciliation of profit/(loss) for the year to adjusted EBITDA.

Provisions

Long-term provisions increased from US$320 million in 2018 to US$391 million in 2019 and included the following.

United States Dollar Figures in millions unless otherwise stated	**2019**	2018
Provision for environmental rehabilitation costs	**370**	290
Silicosis settlement costs	**17**	25
Other provisions	**4**	5
Total long-term provisions	**391**	320

[1] *Refer to note 42 of the consolidated financial statements for further details of the restatement.*

MANAGEMENT'S DISCUSSION AND ANALYSIS OF THE FINANCIAL STATEMENTS (continued)

Provision for environmental rehabilitation costs

The amount provided for environmental rehabilitation costs increased from US$290 million at 31 December 2018 to US$370 million at 31 December 2019. The increase is due to the increase of the gross environmental rehabilitation costs at all the operations in 2019. This provision represents the present value of closure, rehabilitation and other environmental obligations up to 31 December 2019. This provision is updated annually to take account of inflation, the time value of money and any new environmental obligations incurred.

The inflation and range of discount rates applied in 2019 and 2018 for each region are shown in the table below:

	South Africa	Ghana	Australia	Peru	Chile
Inflation rates					
2019	**5.4%**	**2.5%**	**2.5%**	**2.5%**	**2.5%**
2018	5.5%	2.2%	2.5%	2.2%	2.2%
Discount rates					
2019	**10.3%**	**7.7% – 7.9%**	**1.2% – 1.6%**	**3.0%**	**2.6%**
2018	10.0%	10.3%	2.3 – 2.5%	4.2%	3.6%

The interest charge remained flat at US$12 million.

Adjustments for new disturbances and changes in environmental legislation during 2019 and 2018, after applying the above inflation and discount rates were:

	United States Dollar	
Figures in millions unless otherwise stated	**2019**	2018
Ghana	**22**	(9)
Australia	**41**	22
Peru	**17**	10
Total	**80**	23

The South African and Ghanaian operations contribute to a dedicated environmental trust fund and a dedicated bank account, respectively, to provide financing for final closure and rehabilitation costs. The amount invested in the fund is shown as a non-current asset in the financial statements and increased from US$61 million at 31 December 2018 to US$70 million at 31 December 2019. The increase is mainly as a result of contributions amounting to US$7 million and interest income of US$1 million. The South African and Ghanaian operations are required to contribute annually to the trust fund over the remaining lives of the mines, to ensure that sufficient funds are available to discharge commitments for future rehabilitation costs.

Silicosis settlement costs provision

The principal health risks associated with Gold Fields' mining operations in South Africa arise from occupational exposure to silica dust, noise, heat and certain hazardous chemicals. The most significant occupational diseases affecting Gold Fields' workforce include lung diseases (such as silicosis, tuberculosis, a combination of the two and chronic obstructive airways disease ("COAD") as well as noise-induced hearing loss ("NIHL")).

A consolidated application was brought against several South African mining companies, including Gold Fields, for certification of a class action on behalf of current or former mineworkers (and their dependants) who have allegedly contracted silicosis and/or tuberculosis while working for one or more of the mining companies listed in the application.

On 3 May 2018, the Gold Working Group (comprising African Rainbow Minerals, Anglo American SA, AngloGold Ashanti, Gold Fields, Harmony and Sibanye-Stillwater) (the "GWG Parties") concluded a settlement agreement (the "Settlement Agreement") with the attorneys representing claimants in the silicosis and tuberculosis class action litigation. The Settlement Agreement provides meaningful compensation to all eligible workers suffering from silicosis and/or tuberculosis who worked in the GWG Parties' mines from 12 March 1965 to the effective date of the Settlement Agreement.

A full bench of the High Court, Gauteng Local Division, approved the Settlement Agreement on 26 July 2019 ("Approval Order"). The Settlement Agreement and Approval Order contained two suspensive conditions, which have subsequently been fulfilled and, in accordance with the provisions of the Settlement Agreement and the Approval Order, the Settlement Agreement has become effective on 10 December 2019.

Gold Fields has provided for the estimated cost of the class action settlement based on actuarial assessments and the provisions of the Settlement Agreement. At 31 December 2019, the total provision for Gold Fields' share of the settlement of the class action claims and related costs amounts to US$21 million (R297 million) (2018: US$25 million (R368 million)) of which US$4 million (R64 million) (2018: US$nil (Rnil)) was classified as current and US$17 million (US$233 million) (2018: US$25 million (R368 million)) as non-current. The nominal value of this provision is US$29 million (R408 million) at 31 December 2019.

The assumptions that were made in the determination of the provision include silicosis prevalence rates, estimated settlement per claimant, benefit take-up rates and disease progression rates. A discount rate of 10.08% (2018: 8.74%) was used, based on government bonds with similar terms to the anticipated settlements.

Details of the silicosis settlement can be found on the website www.silicosissettlement.co.za and the Facebook page https://www.facebook.com/silicosissettlement.

The ultimate outcome of this matter however remains uncertain, with the number of eligible workers successfully submitting claims and receiving compensation being uncertain. The provision is consequently subject to adjustment in the future. Refer to notes 25.2 and 35 of the consolidated financial statements for further details.

Other long-term provisions

Other long-term provisions decreased from US$5 million at 31 December 2018 to US$4 million at 31 December 2019.

Credit facilities

At 31 December 2019, the Group had unutilised committed banking facilities available under the following facilities, details of which are discussed in note 24:

- US$1,200 million available under the US$1,200 million revolving credit facilities;
- US$67 million available under the US$150 million revolving senior secured credit facility;
- US$100 million available under the US$100 million senior secured revolving credit facility;
- A$260 million (US$182 million) under the A$500 million syndicated revolving credit facility;
- R1,500 million (US$107 million) available under the R1,500 million Nedbank revolving credit facility;
- R500 million (US$36 million) available under the R500 million Absa Bank revolving credit facility; and
- R500 million (US$36 million) available under the R500 million Standard Bank revolving credit facility.

Substantial contractual arrangements for uncommitted borrowing facilities are maintained with several banking counterparties to meet the Group's normal contingency funding requirements.

As of the date of this report, the Group was not in default under the terms of any of its outstanding credit facilities.

US$1,200 million revolving credit facility

On 25 July 2019, Gold Fields Orogen Holding (BVI) Limited and Gold Fields Ghana Holdings (BVI) Limited entered into a US$1,200 million revolving credit facilities agreement, with a syndicate of international banks and financial institutions. The new facilities which became effective on the same day comprise two tranches:

- US$600 million 3+1+1 (two 1-year extension options subject to bank consent) year revolving credit facility ("RCF") – at a margin of 1.45% over Libor; and
- US$600 million 5+1+1 (two 1-year extension options subject to bank consent) year revolving credit facility ("RCF") – at a margin of 1.70% over Libor.

US$1 billion notes issue

In addition, the Company holds US$148.0 million principal amount of the US$1 billion notes issue (the "notes"), which it repurchased in 2016 and which can be resold (in whole or in part) subject to market conditions. There is no guarantee, however, that the notes can be resold at a price satisfactory to the Company or at all. In accordance with the terms and conditions of the notes, any such resale would need to take place outside the United States in reliance on Regulation S under the U.S. Securities Act of 1933.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF THE FINANCIAL STATEMENTS (continued)

Contractual obligations and commitments as at 31 December 2019

	United States Dollar			
	Payments due by period			
Figures in millions unless otherwise stated	Total	Within one year	Between one and five years	After five years
Borrowings				
US$1 billion notes issue				
Capital[1]	602.4	602.4	—	—
Interest	23.0	23.0	—	—
US$500 million 5-year notes issue				
Capital[1]	500.0	—	500.0	—
Interest	112.2	25.6	86.6	—
US$500 million 10-year notes issue				
Capital[1]	500.0	—	—	500.0
Interest	287.1	30.6	122.5	134.0
US$150 million revolving senior secured credit facility				
Capital	83.5	83.5	—	—
Interest	1.8	1.8	—	—
A$500 million syndicated revolving credit facility				
Capital	168.5	—	168.5	—
Interest	7.7	5.5	2.2	—
Other obligations				
Finance lease liability	447.4	63.9	178.2	205.3
Environmental obligations[2]	436.3	11.9	28.4	396.0
Trade and other payables	385.3	385.3	—	—
Gold, copper and foreign exchange derivatives	127.6	127.6	—	—
South Deep dividend	8.5	1.4	3.8	3.3
Total contractual obligations	**3,691.3**	**1,362.5**	**1,090.2**	**1,238.6**

[1] *The capital amounts of the US$1 billion notes issue, US$500 million 5-year notes issue and the US$500 10-year notes issue in the table above represent the principal amounts to be repaid and differ from the carrying values presented in the statement of financial position due to the unwinding of transaction costs capitalised at inception.*

[2] *Gold Fields makes full provision for all environmental obligations based on the net present value of the estimated cost of restoring the environmental disturbance that has occurred up to the reporting date. Management believes that the provisions made for environmental obligations are adequate to cover the expected volume of such obligations.*

	United States Dollar			
	Amounts of commitments expiring by period			
Figures in millions unless otherwise stated	Total	Within one year	Between one and five years	After five years
Commitments				
Guarantees[1]	—	—	—	—
Capital expenditure	43.8	43.8	—	—
Total commitments	**43.8**	**43.8**	—	—

[1] *Guarantees consist of numerous obligations. Guarantees consisting of US$195.8 million committed to guarantee Gold Fields' environmental and other obligations with respect to its South African, Peruvian, Ghanaian and Australian operations are fully provided for under the provision for environmental rehabilitation and certain lease liabilities and are not included in the amount above.*

Working capital

Following its going concern assessment performed, which takes into account the 2020 operational plan, net debt position and unutilised loan facilities, management believes that Gold Fields' working capital resources, by way of internal sources and banking facilities, are sufficient to fund Gold Fields' currently foreseeable future business requirements.

Off-balance sheet items

At 31 December 2019, Gold Fields had no material off-balance sheet items except for as disclosed under guarantees and capital commitments.

INFORMATION COMMUNICATION AND TECHNOLOGY ("ICT")

ICT at Gold Fields remains focused on being a strategic enablement partner to the overall Gold Fields business. ICT ensures that the technology adopted across the Group remains relevant in enabling the business in executing the business strategy and operational plans. ICT further ensures that adequate protection of our technology and information assets is embedded in the business.

For 2019, ICT has delivered on the following key objectives:

- Maintaining ICT governance and achieving operational targets;
- Ensuring key systems and infrastructure availability;
- Progressing the implementation of the approved ICT digital strategy to enable the foundational elements of the digital mine of the future;
- Enhancing the Group's cyber security posture including the achievement of the ISO 27001 Information Security Management Standard certification;
- Maintaining sound financial management and sustaining cost savings; and
- Managing the delivery of strategic projects.

Gold Fields' vision to be the global leader in sustainable gold mining requires the adaptability to respond to the rapidly changing technology environment. This is achieved through ensuring the foundational elements of the mine of the future are in place across the various operations. Following the establishment of the Innovation and Technology vision and the approval of the Gold Fields ICT digital strategy, ICT conducted various strategic programmes across the Group to progress the implementation of the ICT digital strategy as follows:

- Digital infrastructure: Laying the foundation of an infrastructure to enable a connected mine and facilitate the successful flow of data. An initial assessment of the current ICT infrastructure across the regions commenced with the outcome being a digital infrastructure roadmap for each region;
- Information Technology ("IT") and Operational Technology ("OT") convergence: Enabling the convergence of information and operational technology under a unified architecture, standards, governance and cyber security framework. An assessment of the OT environment is under way which aims to identify and prioritise areas for convergence;
- Data analytics: Creating the platform for the use of data to move from a data driven to an insights driven organisation. Selected data analytics initiatives were concluded with further use case being defined for each of the regions; and
- Cyber security: Ensuring the protection of information and assets. The Security Event and Incident Management ("SEIM") system as well as associated cyber security monitoring was implemented and embedded across the Group and continues to be enhanced to remain relevant to the changing threat landscape. In addition, the entire Group including all operations have been certified against the ISO 27001 standard, making Gold Fields the world's first mining organisation to achieve this certification. Further, to strengthen the Group's cyber security posture, the implementation of an intelligent cyber threat detection and monitoring solution across all operations was completed.

Gold Fields' ICT operating and delivery model which is based on industry best practice was enhanced to position ICT to effectively deliver on the digital strategy. This operating model enables ICT to focus on business imperatives and business support, while the non-core services are outsourced. The operating model enhancements and delivery against key strategic targets for 2019 mitigated key technology risks and exposed technology opportunities to enable the rapid deployment of digital technologies.

INTERNAL CONTROL OVER FINANCIAL REPORTING

Gold Fields' management is responsible for establishing and maintaining adequate internal control over financial reporting. The Securities Exchange Act of 1934 defines internal control over financial reporting in Rule 13a-15(f) and 15d-15(f) as a process designed by, or under the supervision of, the Company's principal executive and principal financial officers, and effected by the Company's Board of Directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with International Financial Reporting Standards, as issued by the International Accounting Standards Board, and includes those policies and procedures that:

- Pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company;
- Provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with International Financial Reporting Standards, as issued by the International Accounting Standards Board, and that receipts and expenditures of the Company are being made only in accordance with authorisations of management and directors of the Company; and
- Provide reasonable assurance regarding prevention or timely detection of unauthorised acquisition, use or disposition of the Company's assets that could have a material effect on the consolidated financial statements.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF THE FINANCIAL STATEMENTS (continued)

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Gold Fields' management assessed the effectiveness of its internal control over financial reporting as of 31 December 2019. In making this assessment, Gold Fields' management used the criteria established in Internal Control-Integrated Framework (2013) issued by the Committee of Sponsoring Organisations of the Treadway Commission. The results of this assessment are outlined below:

During 2019, management identified a material weakness in the internal control over financial reporting related to the recording of transactions between cost close (the date the general ledger was closed for reporting purposes) and calendar year-end. The control deficiencies were caused by an inadequate evaluation of the risk that transactions, including cash payments and receipts, could occur between the cost close date and 31 December which could have a material impact, both individually and in aggregate, on financial statement captions and disclosures. Consequently, management failed to design and implement appropriate controls to address this risk. Management's controls only focused on transactions that occurred outside the normal course of business, and did not consider potentially material transactions that occurred in the normal course of business between the cost close and 31 December of the relevant years. The cost close dates were 21 December 2018 and 22 December 2017, respectively. The Company has concluded that its internal control over financial reporting was not effective as of 31 December 2018 and, accordingly, its disclosure controls and procedures were not effective as of 31 December 2018.

These deficiencies in internal control over financial reporting resulted in restatements to a number of financial statement captions within the statements of financial position and cash flows as described in note 42 to the consolidated financial statements. The error was corrected by restating each of the affected financial statement items from prior periods.

Remediation efforts

The deficiencies in management's internal control over financial reporting, which gave rise to the material weakness described above, have been remediated as of 31 December 2019. Management designed, implemented and tested specific controls to identify and account for material transactions in the normal course of business between cost close and calendar year-end.

Conclusion on effectiveness of controls as of 31 December 2019

Based upon its assessment, Gold Fields management concluded that, as of 31 December 2019, its internal control over financial reporting is effective based upon the criteria set out in the COSO framework.

TREND AND OUTLOOK

Attributable equivalent gold production for the Group for 2020 is expected to be between 2.275 million ounces and 2.315 million ounces. AISC is expected to be between US$920 per ounce and US$940 per ounce. AIC is planned to be between US$1,035 per ounce and US$1,055 per ounce. If we exclude expenditure on Salares Norte, AIC for the Group is expected to be between US$975 per ounce and US$995 per ounce. These expectations assume exchange rates of R/US$:14.50 and A$/US$:0.69.

Capital expenditure for the Group is planned at US$630 million. Sustaining capital expenditure for the Group is planned at US$406 million and growth capital expenditure is planned at US$224 million. The US$224 million growth capital expenditure comprises US$60 million for the Australian region, US$10 million for Damang, US$15 million for South Deep and US$111 million for Salares Norte. Due to the revised WGC interpretation on AISC certain capital expenditure has been reclassified from sustaining capital to growth capital (primarily for Australia and Cerro Corona). The capital expenditure above excludes the Group's share of Asanko's total expenditure of US$34 million for 2020.

Paul Schmidt
Chief Financial Officer

30 March 2020