

West African Gold Mines

Quarterly Summary to 31 December 2019



For the quarter ending 31 December 2019 reported gold production totalled 2.09 Moz, with Ghana, Burkina Faso and Mali accounting for 76.2% of the production. Newmont's Ahafo mine in Ghana was the largest gold producer with 185,000 oz, followed by Barrick Gold's Loulo mine (180,000 oz) in Mali and Gold Fields' Tarkwa mine (120,900 oz) in Ghana.

The average gold price (London PM Fix) for the quarter was US\$1,482/oz. The average reported All-in Sustaining Costs (AISC) was US\$968/oz and to be considered in the lowest cost quartile an AISC of less than or equal to US\$822/oz was required. The mine with the lowest reported AISC was SEMAFO's Boungou mine in Burkina Faso with an AISC of US\$463/oz, this was followed by Resolute Mining's Mako mine (US\$583/oz) in Senegal and B2Gold's Fekola mine (US\$685/oz) in Mali.

Top 10 Gold Mines by Gold production

Rank	Operation	Country	Principal Owners (Excluding Govt Interests)	Au Produced (oz)	
1	↑1	Ahafo	Ghana	Newmont Corp 90%	185,000
2	↓1	Loulo	Mali	Barrick Gold Corp 80%	180,000
3	-	Tarkwa	Ghana	Gold Fields Ltd 90%	120,900
4	-	Fekola	Mali	B2Gold Corp 80%	119,243
5	↑1	Akyem	Ghana	Newmont Corp 100%	105,000
6	↓1	Essakane	Burkina Faso	IAMGOLD Corp 90%	104,400
7	-	Tasiast	Mauritania	Kinross Gold Corp 100%	102,973
8	↑4	Siguiri	Guinea	AngloGold Ashanti Ltd 85%	68,200
9	-	Tongon	Cote d'Ivoire	Barrick Gold Corporation 89.7%	68,000
10	↑1	Asanko	Ghana	Asanko Gold Inc. 45%; Gold Fields Ltd 45%	66,112

Top 10 Gold Mines by All-In Sustaining Costs

Rank	Operation	Country	Principal Owners (Excluding Govt Interests)	AISC (US\$/oz)	
1	-	Boungou	Burkina Faso	SEMAFO Inc. 90%	463

West African Gold Mines

Quarterly Summary to 31 December 2019



2	↑4	Mako	Senegal	Resolute Mining Ltd 90%	583
3	↑1	Fekola	Mali	B2Gold Corp 80%	685
4	↓2	Ity	Cote d'Ivoire	Endeavour Mining Corp 85%	697
5	↑10	Karma	Burkina Faso	Endeavour Mining Corp 90%	755
6	↓1	Sissingue	Cote d'Ivoire	Perseus Mining Ltd 86%	793
7	↓4	Akyem	Ghana	Newmont Corp 100%	802
8	-	Ahafo	Ghana	Newmont Corp 90%	822
9	↑2	Yanfolila	Mali	Hummingbird Resources Plc 80%	839
10	↓3	Agbaou	Cote d'Ivoire	Endeavour Mining Corp 85%	846

Gold operations That Report All-In Sustaining Costs

AISC Rank	Operation	Country	Principal Owners (Excluding Govt Interests)	Au Produced (oz)	AISC (US\$/oz)
1	Boungou	Burkina Faso	SEMAFO Inc. 90%	24,900	463
2	Mako	Senegal	Resolute Mining Ltd 90%	42,997	583
3	Fekola	Mali	B2Gold Corp 80%	119,243	685
4	Ity	Cote d'Ivoire	Endeavour Mining Corp 85%	60,000	697
5	Karma	Burkina Faso	Endeavour Mining Corp 90%	27,247	755
6	Sissingue	Cote d'Ivoire	Perseus Mining Ltd 86%	20,905	793
7	Akyem	Ghana	Newmont Corp 100%	105,000	802
8	Ahafo	Ghana	Newmont Corp 90%	185,000	822
9	Yanfolila	Mali	Hummingbird Resources Plc 80%	33,892	839
10	Agbaou	Cote d'Ivoire	Endeavour Mining Corp 85%	35,017	846
11	Sabodala	Senegal	Terenga Gold Corp 90%	54,539	849
12	Tongon	Cote d'Ivoire	Barrick Gold Corp 89.7%	68,000	867
13	Hounde	Burkina Faso	Endeavour Mining Corp 90%	55,005	878
14	Mana	Burkina Faso	SEMAFO Inc. 90%	45,000	914
15	Yaramoko	Burkina Faso	Roxgold Inc. 90%	41,162	914
16	Loulo	Mali	Barrick Gold Corp 80%	180,000	917
17	Wahgnion	Burkina Faso	Terenga Gold Corp 90%	36,539	950
18	Sadiola Hill	Mali	AngloGold Ashanti Ltd 41%; IAMGOLD Corp 41%	31,707	956
19	Wassa	Ghana	Golden Star Resources Ltd 90%	41,335	959
20	Asanko	Ghana	Asanko Gold Inc. 45%; Gold Fields Ltd 45%	66,112	969



West African Gold Mines

Quarterly Summary to 31 December 2019



AISC Rank	Operation	Country	Principal Owners (Excluding Govt Interests)	Au Produced (oz)	AISC (US\$/oz)
21	Tarkwa	Ghana	Gold Fields Ltd 90%	120,900	989
22	Essakane	Burkina Faso	IAMGOLD Corp 90%	104,400	1,006
23	Edikan	Ghana	Perseus Mining Ltd 90%	48,250	1,035
24	Iduapriem	Ghana	AngloGold Ashanti Ltd 100%	66,000	1,040
25	Morila	Mali	AngloGold Ashanti Ltd 40%; Barrick Gold Corp 40%	15,000	1,063
26	Damang	Ghana	Gold Fields Ltd 90%	46,900	1,149
27	Siguiri	Guinea	AngloGold Ashanti Ltd 85%	68,200	1,210
28	Syama	Mali	Resolute Mining Ltd 80%	46,945	1,908
29	Prestea	Ghana	Golden Star Resources Ltd 90%	11,336	2,202

Notes: Sadiola Hill's AISC is the weighted average of AngloGold Ashanti Ltd's and IAMGOLD Corp's AISC; Morila's AISC is the weighted average of AngloGold Ashanti Ltd's and Barrick Gold Corp's AISC.

Gold Operations That Do Not Report AISC

Rank	Operation	Country	Principal Owners (Excluding Govt Interests)	Au Produced (oz)
1	Tasiast	Mauritania	Kinross Gold Corporation 100%	102,973
2	Chirano	Ghana	Kinross Gold Corporation 90%	48,984
3	Lefa	Guinea	Nord Gold SE 100%	46,300
4	Bissa	Burkina Faso	Nord Gold SE 90%;	33,100
5	Bouly	Burkina Faso	Nord Gold SE 90%	23,900
6	Taparko	Burkina Faso	Nord Gold SE 90%	21,500
7	Nampala	Mali	Robex Resources Inc. 90%	17,361
8	Obuasi	Ghana	AngloGold Ashanti Limited 100%	2,000
9	Youga	Burkina Faso	Avesoro Resources Inc. 90%	NA
10	Bea Mountain	Liberia	Avesoro Resources Inc. 90%	NA
11	Tabakoto	Mali	BCM Investments Ltd 80%	NA
12	Bonikro	Cote d'Ivoire	LGL Mines CI SA 89.9%	NA
13	Nzema	Ghana	BCM Investments Ltd 90%	NA

Notes: Robex Resources' usually reports AISC but had not at the time of the preparation of this report. BCM International Ltd is a private company, which recently purchased the Nzema mine and do not report quarterly production results. LGL Mines CI SA a private company purchased the Bonikro mine from Newcrest Mining Ltd. BCM Investments Ltd is a private company, which purchased the Tabakoto mine from Endeavour Mining Corp.

Data Sources: Data was sourced from company quarterly reports, cost curve created by Aurum Analytics.

