



2014 Minerals Yearbook

BURKINA FASO AND CÔTE D'IVOIRE
[ADVANCE RELEASE]

THE MINERAL INDUSTRIES OF BURKINA FASO AND CÔTE D'IVOIRE

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BURKINA FASO

In 2014, Burkina Faso's mineral sector accounted for 8.4% of the country's real gross domestic product (GDP). Gold continued to be the country's most important mineral commodity, accounting for about 66% of total exports and 8.6% of total Government revenue (excluding grants). Burkina Faso produced about 1% of world mined gold in 2013 (the latest year for which revised world gold production data were available). Most gold production came from industrial mining operations although artisanal miners were estimated to have the capacity to produce between 5,000 and 10,000 kilograms (kg) of gold per year; information on gold produced by artisanal miners in 2014 was inadequate to make reliable estimates of output. In 2012, the International Monetary Fund reported that gold production data discrepancies among Burkinabe Government agencies were significant, varying by as much as 6,900 kg. Monitoring artisanal gold mining operations in Burkina Faso continued to be a challenge as these operations were scattered throughout the country in remote areas without much Government oversight (Dayo, Sylla, and Sabo, 2015, p. 5; International Monetary Fund, 2014, p. 14; 2015, p. 25, 27).

Other minerals produced in the country included cement, lead, manganese, silver, and zinc. Dolomite, granite, marble, phosphate rock, salt, sand and gravel, and other construction materials were also produced, but information was inadequate to make reliable estimates of output. Legislation to implement proposed amendments to Burkina Faso's mining law was delayed during the year. The proposed amendments included measures to regulate artisanal mining operations; the purchase, sale, and export of gold in Burkina Faso; and the tax and royalty regimes for gold mining (International Monetary Fund, 2015, p. 5).

On October 30, a state of emergency was declared in the capital city of Ouagadougou after demonstrations to oust the incumbent President turned violent, resulting in the burning of the country's Parliament building, among other acts of vandalism. The President was overthrown on October 31 and an interim Government, which was to oversee a transition to new elections, took office on November 17. Despite this period of civil unrest, gold mining operations in the country were reported to have continued uninterrupted (IAMGOLD Corp., 2014; Lazenby, 2014; Taoko and Cowell, 2014; Taoko, Cowell, and Callimachi, 2014).

Production

Gold production (not including production from artisanal gold mining) increased by 10.7% to 36,199 kg from a revised 32,713 kg in 2013; silver production from the Bonikro Mine increased slightly by 2.3% to 585 kg. It was unclear whether production of manganese ore continued at the Kiere Mine as

information from ACM Corp., the company that operated the mine, was not publicly available as of yearend. Manganese ore production was therefore estimated to have remained at about the same level as the latest year (2011) for which production data were available. Burkina Faso began producing zinc in 2013. Zinc production more than doubled during the year as a result of the ramping up of operations at the Perkoa Mine. Production of lead concentrate was estimated to have increased by about 12% to 2,500 metric tons (t) based on increased production at the Perkoa Mine. Cement production, as reported by the National Institute of Statistics, decreased by 30.5% to 403,000 t. Data on mineral production are in table 1.

Structure of the Mineral Industry

Mining operations in Burkina Faso were privately owned. The Government held a 10% free-carried interest in the majority of these operations. Table 2 is a list of major mineral industry facilities.

Commodity Review

Metals

Gold.—Production of gold from the Inata Mine decreased by about 27% to 2,676 kg of gold in 2014 compared with 3,684 kg in 2013. The decrease in production was attributed to the processing of lower grade oxide ore and lower than expected recovery rates at the processing plant, which was idled for several weeks at the end of the year as a result of a trade union strike. The Inata Mine produced gold dore, which was shipped to South Africa for refining into bullion. London-based Avocet Mining plc, through its subsidiary Société des Mines de Bélahouro S.A, was the company that operated the Inata Mine. Avocet's other mining assets in Burkina Faso included eight gold exploration prospects that were located in the Belahouro district. The company planned to apply for a mining license in 2016 to develop the Souma gold deposit, which is located about 20 kilometers (km) east of the Inata Mine. Based on 2014 market conditions and a gold price assumption of \$1,100 per troy ounce, gold reserves at the Inata Mine were expected to be depleted by 2017 (Avocet Mining plc, 2015, p. 6–7, 13, 68).

In August, United Kingdom-based Amara Mining plc announced the closure of mining operations at the Kalsaka-Sega Mine. Amara's decision to close the mine was attributed to the mine's underperformance in 2013 and 2014, resulting from the decrease in the international price of gold and to issues related to company debt. Stockpiled ore from the Segal pit was being stacked as of yearend and the company expected to recover the remaining gold from heap-leach processing operations within 6 months. The Kalsaka-Sega Mine produced 1,096 kg of gold

in 2014 compared with 1,317 kg in 2013 (Amara Mining plc, 2015, p. 7, 16–17).

The Youga Mine produced a total of 2,381 kg of gold in 2014 compared with 2,782 kg in 2013. Canada-based Endeavour Mining Corp. attributed the 14% decrease in production to the relining of the mill and to a 6-day interruption in operations caused by power outages during the third quarter. Endeavour also held interest in the Houndé gold project, which is located in southwestern Burkina Faso about 250 km from the capital city of Ouagadougou. Proven and probable mineral reserves at Houndé were estimated to be 30.6 million metric tons (Mt) at an average grade of 2.10 grams per metric ton (g/t) gold. As of yearend, the company was in the process of deciding whether to proceed with a plan to develop a mine. A preliminary operational profile estimated average production to be about 5,900 kilograms per year (kg/yr) of gold over a mine life of 10 years (Endeavour Mining Corp., 2015, p. 6, 13–14).

Gold production from the Taparko-Borum Mine increased slightly to 3,484 kg from 3,372 kg in 2013, mainly as a result of higher throughput and recovery rates at the processing plant. Netherlands-based Nord Gold N.V. planned to invest nearly \$3.9 million in exploration and drilling at the Taparko Mine in 2015 and \$3.1 million at the Bissa Mine. Gold production from the Bissa Mine increased by 14% to 7,798 kg in 2014, but was expected to decrease to about 6,200 kg in 2015 owing to the mining of lower grade ore. Gold production from the Essakane Mine increased by about 33% to 11,477 kg compared with 8,616 kg in 2013. The increase in production was mostly the result of the mining of higher grade ore and improved throughput rates at the processing plant following the commissioning of an expansion program during the first quarter of 2014. Canada-based IAMGOLD Corp. expected gold production from the Essakane Mine to range between 11,200 kg and 11,500 kg in 2015 (IAMGOLD Corp., 2015, p. 51–52; Nord Gold N.V., 2015, p. 46–49, 108–109).

Gold production from the Maná Mine increased by nearly 48% to 7,288 kg in 2014 compared with 4,933 kg in 2013. Canada-based Semafo Inc. reported that mining operations were briefly interrupted during the year following a trade union strike in early December. The company expected to produce between 7,600 and 8,600 kg of gold at the Maná Mine in 2015 and to invest \$18 million in exploration (Semafo Inc., 2015, p. 8–9, 26–27).

Other companies exploring for gold in Burkina Faso included Australian companies Boss Resources Ltd., Golden Rim Resources Ltd., Gryphon Minerals Ltd., Middle Island Resources Ltd., Predictive Discovery Ltd., Vital Metals Ltd., and West African Resources Ltd.; Canadian companies Goldrush Resources, and Orezone Gold Corp.; the South African company GoldPlat plc.; and Centamin plc of the United Kingdom.

Manganese.—In May, Timis Corp. of Romania, through its subsidiary Pan African Minerals Ltd. was granted the rights to begin the development of the Tambao manganese deposit in northern Burkina Faso. The project, which would be developed in two phases, was to be financed by Timis in partnership with Dundee Corp. of Canada and CD Capital of the United Kingdom at a cost of \$1 billion (updated from an estimated \$650 million in 2012). The first phase of the project would include the export

of about 1 million metric tons per year (Mt/yr) of manganese ore, the refurbishment of a rail line extending from the capital city of Ouagadougou in central Burkina Faso to the city of Kaya in the northeast, and the construction of a road to connect the planned mine to the rail line. The second phase would include the export of an additional 2 Mt/yr of manganese ore and the extension of the rail line from Kaya to the Tambao deposit in northeastern Burkina Faso (Awoko Newspaper, 2014; Jeune Afrique, 2014; Kable Intelligence Ltd., 2014).

Zinc.—In April, Switzerland-based Glencore plc acquired Australia-based Blackthorn Resources Ltd.'s 27.3% interest in the Perkoa zinc project. The purchase increased Glencore's interest in the project to 90%. Production of zinc more than doubled to 65,000 t from 32,215 t in 2013; the increase was owing to the ramping-up of operations at Perkoa Mine. As of December 31, 2014, total measured and indicated mineral resources at Perkoa were reported to be 5.7 Mt at a grade of 14% zinc. Ore reserves, which were included in the resource estimate, were 3.8 Mt at a grade of 13% zinc (Swanepoel, 2014; Glencore plc, 2015, p. 2, 25–26).

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CÔTE D'IVOIRE

In 2014, Côte d'Ivoire's mineral sector accounted for 7.2% of the country's GDP, generated \$580 million in revenue, and employed 6,640 people. Mineral commodities produced in Côte d'Ivoire included cement, crude petroleum, crushed stone, gold, manganese, natural gas, petroleum products, sand and gravel, and silver. The country also produced sulfuric acid, but available information was inadequate to make reliable estimates of output. The more than 8-year embargo on rough diamond exports imposed by the United Nations Security Council in 2005, was lifted on April 29. Côte d'Ivoire was a participant in the Extractive Industries Transparency Initiative and the Kimberley Process Certification Scheme. The country was one of the main suppliers of petroleum products to member countries of the Economic Community of West African States (United Nations, 2014; U.S. Department of State, 2014, p. 1; Extractive Industries Transparency Initiative, 2015; Kimberley Process Rough Diamond Statistics, 2015; Yembilina, 2015, p. 4, 6–7).

In 2014, the emergence of the Ebola virus disease (EVD) outbreak in Guinea, Liberia, and Sierra Leone prompted the Ivorian Government to take preventive measures to avoid the spread of the disease within Côte d'Ivoire. These measures included restrictions on the freedom of movement within the

country; the temporary cancellation of commercial flights to and from Côte d'Ivoire; and the temporary closure of the country's borders with Guinea and Liberia. Agricultural and artisanal mining migration corridors linking Côte d'Ivoire to the countries most affected by the EVD outbreak (Guinea, Liberia, and Sierra Leone) were of concern as the historically large number of people transiting through these corridors had the potential to further spread the disease throughout the region (BBC, 2014; Roos, 2014; Yembilina, 2015, p. 8).

On March 24, Côte d'Ivoire's National Assembly enacted a new mining code (law No. 2014–138). Provisions under the code included: (a) an increase in the number of years for which a mining company can hold an exploration license to 4 years (from 3 years in the previous Code), with the option to renew the license twice for a period of 3 years each time; including an extension to this period (not to exceed 2 years) if the company is in the process of completing a feasibility study, (b) a requirement for companies seeking an exploration license to not only demonstrate their technical and financial capability but also to demonstrate the completion of a minimum of two exploration projects prior to its application, including the hiring of an exploration manager with at least 7 years of experience in managing a minimum of at least two mining projects (Republic of Côte d'Ivoire, 2014, p. 8, 11–13).

Under the new law, exploration licenses would be granted for areas no larger than 400 square kilometers (km²) (previously 1,000 km²). The Government would retain the right to a 10% free-carried interest in all mining projects and would also have the right to acquire up to a 15% interest in the company's shares. A windfall profit tax, which had been considered during the early drafting of the code, was not included in the final provisions. Government officials engaged in the mineral sector are prohibited from holding a direct or indirect financial interest in any mining projects and may not hold a mining license until 5 years after the termination of their duties as civil servants (Republic of Côte d'Ivoire, 2014, p. 7–8, 11–13).

The U.S. Department of State reported that the Invest in Côte d'Ivoire (ICI) forum, which attracted more than 2,000 participants to the capital city of Abidjan in February, generated about \$900 million in investment pledges to the country including investments in the mineral sector. The African Development Bank Group reported that a total of 140 mineral exploration permits were granted in the country in 2014 (U.S. Department of State, 2014, p. 1; Yembilina, 2015, p. 4).

Production

Reported production of most mineral commodities increased during the year. This included manganese ore production, which increased by about 49% and gold production, which increased by nearly 36%. Reported cement production data was based on exports of hydraulic cement, which in 2014 were reported to be 193,148 t. Production of hydrocarbons was estimated. Data on mineral production are in table 1.

Structure of the Mineral Industry

Most mining operations in Côte d'Ivoire, with the exception of the country's only petroleum refinery, were privately owned.

The Government held the right to a 10% free-carried interest in all mining operations in the country. Table 2 is a list of major mineral industry facilities.

Commodity Review

Metals

Gold.—Industrial gold production in Côte d'Ivoire came from the Agbaou, the Bonikro, the Ity, and the Tongon Mines. Gold was also produced throughout the country by artisanal miners. The Agbaou Mine produced its first commercial gold on January 27. Production for the year (4,565 kg) was above company output projections for 2014, mostly owing to the processing of higher than expected ore grades and mill throughput, which resulted in improved recovery rates at the processing plant. A reverse-circulation drilling program aimed at confirming the extension of identified areas of gold mineralization and testing identified gold target zones was completed in October. Endeavour Mining Corp. reported investing \$2.1 million in exploration at Agbaou during the year. The Agbaou Mine was expected to produce between 4,600 and 4,800 kg of gold in 2015 (Endeavour Mining Corp., 2015, p. 1, 3, 6, 9).

Randgold Resources Ltd. of the United Kingdom reported that production of gold at the Tongon Mine decreased by 2.8% to 7,064 kg owing to the processing of lower grade ore. Phase 1 of an upgrade program to improve gold recovery rates at the flotation circuit was completed during the year and the final phase was expected to be completed by the end of the first quarter of 2015. The mining of ore and waste from the NZ pit was expected to ramp up during the second quarter of 2015 and mining as a whole to be temporarily suspended during the third quarter owing to maintenance related to the dewatering of a mining pit and to resume during the fourth quarter. One of the main pits at the Tongon Mine lies within a catchment area of an old river system. After the rainy season, the pit must be dewatered before operations resume in the dry season. The installation of a new crushing circuit was also underway and was expected to ramp up mill tonnage throughput to 4.3 Mt/yr in 2015. The Tongon Mine employed a total of 1,703 people in 2014; about 95% of these employees were Ivorian nationals (Randgold Resources Ltd., 2015, p. 46–53).

In March, Amara Mining plc announced the completion of a preliminary economic assessment (PEA) for the Yaoure gold project. Indicated resources were estimated to be 106 Mt at an average grade of 1.29 g/t gold and inferred resources to be 63 Mt at an average grade of 1.19 g/t gold. The results of a metallurgical test work program carried out during the year were to be released in December 2015 in conjunction with the results of a preliminary feasibility study for the project. Amara owned 100% interest in Yaoure through its subsidiary Amara Mining Côte d'Ivoire SARL (Amara Mining plc, 2015, p. 6–10).

On January 24, Luxembourg-based La Mancha Resources Inc. increased its interest in the Ity Mine to 55% from 45.9%, after acquiring a 9.1% interest in the mine from Société pour le Développement Minier (SODEMI). The remaining interest in the Ity Mine was held by SODEMI (30%), the Government (10%), and Didier Drogba Group (5%). The Ity Mine produced

a total of 2,519 kg of gold in 2014 compared with 2,787 kg in 2013 (La Mancha Resources Inc, 2014).

Production of gold from the Bonikro Mine increased by 18.3% to 3,202 kg compared with 2,706 kg in 2013 mostly owing to the mining of higher grade ore and higher mill throughput at the processing plant. Newcrest Mining Ltd.'s exploration activities in 2014 focused on the Hiré gold deposit, which is located about 10 km southeast of the Bonikro Mine (Newcrest Mining Ltd., 2015a, p. 19–20, 27; 2015b, p. 6–7).

The United Nations Group of Experts on Côte d'Ivoire (GoE) reported that in December 2014, the Government evicted hundreds of artisanal gold miners from 148 illegal gold mining sites in the central and northern parts of the country. Many artisanal miners, however, were reported to have reoccupied some of the areas (areas not specified) from which they were evicted. Gold mining pits dug by artisanal miners near the village of Gamina in the Daloa Region were reported to reach up to 60 meters in depth and to host unsafe interconnecting shafts and tunnels. A total of 15,800 artisanal miners were reported to be actively mining gold in this area. About 80% of these miners were foreign nationals mostly from Burkina Faso, Guinea, and Mali. Most artisanal gold mining operations at Gamina were reported to be carried out at night. The GoE reported that children, incentivized by a \$4.20 per day salary, were also actively involved in mining operations. Most local villagers were reported to have abandoned farming activities, which payed about \$1.68 per day for the more lucrative gold mining activities, which payed between \$5.80 and \$8.40 per day. Artisanal miners in the Gamina area, which used cyanide and mercury to recover gold, were estimated to produce about 2,500 kg/yr of gold (United Nations Security Council, 2015, p. 33–34, 37).

Unauthorized artisanal gold mining operations were also observed by the GoE in the Bouna Region in areas formerly contracted to the mining company Ampella Mining Ltd.; most of these artisanal gold miners were reported to be Burkinabe nationals. Artisanal gold was reported to be smuggled from Côte d'Ivoire into the city of Gaoua in Burkina Faso by road. The main corridor used for gold-smuggling activities was reported to be the road connecting Bouna to Doropo and Doropo to Galgouli in Burkina Faso and Kalamon to Kpéré (United Nations Security Council, 2015, p. 37).

Iron Ore.—Tata Steel Ltd. of India continued to explore for iron ore at its Mt. Gao and Mt. Nimba concession areas. In October 2013, Tata Steel had announced that it planned to commission a 20-Mt/yr iron ore mine by 2016, and that production was to be supplied to its steel plants in the Netherlands and the United Kingdom. In 2014, the company reported it was in the process of finalizing exploration and feasibility studies for the Mt. Gao and the Mt. Nimba projects but detailed information on the status of these projects was not available in the company's public records as of yearend 2014 (India Today, 2013; Tata Steel Ltd., 2015).

Nickel.—Sama Resources Inc. of Canada, through its wholly owned subsidiary Sama Nickel Côte d'Ivoire SARL, continued to explore for nickel at the Samapleu and Yepleu concession areas, which were also prospective for copper and palladium mineralization. A Canadian National Instrument 43-101 resource estimate carried out in 2013, outlined indicated

mineral resources to be 14.1 Mt at an average grade of 0.24% nickel and 0.20% copper and inferred mineral resources to be 26.5 Mt at a grade of 0.24% nickel and 0.18% copper. On September 2, 2014, Sama Resources announced the discovery of a new area prospective for nickel and copper mineralization, which is located about 9 km from the Samapleu concession. An aerial electromagnetic and magnetic survey for the area was carried out in 2013, and a geologic mapping program was underway (Sama Resources Inc., 2014; 2015, p. 6).

Industrial Minerals

Cement.—In August, Limak Group of Turkey (51%) signed a \$50 million joint-venture agreement with Afrikbat S.A. of Côte d'Ivoire (49%) for the development of a cement manufacturing industrial complex. The complex, which consisted of the construction of a 1-Mt/yr cement plant and a 1 million cubic meter per year concrete batch plant, would be located in the capital city of Abidjan. The complex would be operated by Limak Africa S.A. The construction of the complex was expected to be completed by September 2015 (Mieu, 2014).

Diamond.—Côte d'Ivoire was in the process of adopting legislation to restructure its diamond sector. A Kimberley Process Certification Scheme review visit, which was aimed at assessing the progress made in the implementation of the country's post-embargo plan for the diamond sector, was scheduled for March 2015. The GoE reported that as of yearend, the number of registered diamond miners, financiers, and other stakeholders in the diamond sector had increased only marginally since the lifting of the embargo (United Nations Security Council, 2015, p. 3–4, 32).

The establishment of legally registered diamond buying houses in the country, which is an integral part of establishing a transparent chain of custody for rough diamonds, was delayed. The GoE reported that rough diamond produced in Seguela was being smuggled into Guinea. The disruptions created by the EVD outbreak were reported to have contributed to the lack of internal controls within Guinea's rough diamond supply chain, which potentially created loopholes by which Ivorian diamonds—now devoid of legal trading limitations—reached international markets, circumventing the Ivorian Customs Authority and thereby depriving the Government of revenue from the industry (United Nations Security Council, 2015, p. 32–33).

Minerals Fuels

Petroleum.—Canadian Natural Resources Ltd. (CNR), which operated the Baobab (57.61%) and Espoir (58.67%) oilfields offshore Côte d'Ivoire, held a 60% operating interest in offshore exploration Block CI–12 and a 36% nonoperating interest in offshore Block CI–514. In 2014, the company contracted a drilling rig and commissioned a 10-well drilling program for the Espoir oilfield. Petroleum production from the first well was expected by the end of the first quarter of 2015. The company also planned to begin a well drilling program for the Baobab oilfield and for Block CI–514 in 2015. Light petroleum was discovered at Block CI–514 in 2014 and drilling and exploratory well data were being appraised. A second

exploratory well for the block was to be drilled during the second quarter of 2015. A three-dimensional seismic survey was completed for Block CI–12 and the data were being evaluated. CNR operated the Baobab oilfield in partnership with Svenska Petroleum Exploration AB (27.39%) and PETROCI (15%), and the Espoir oilfield in partnership with Tullow Oil plc (21.33%), and PETROCI (20%) (Canadian Natural Resources Ltd., 2015, p. 36, 43).

In October, London-based Tullow Oil plc sold its interest in Block CI–103 to Texas-based Anadarko Petroleum Corp. (Anadarko). In addition to Block CI–103 (65%), Anadarko held an operating working interest in Blocks CI–515 (45%), CI–516 (45%), CI–528 (90%), and CI–529 (90%). In 2014, Anadarko continued to work on the appraisal of the Cretaceous Paon discovery in Block CI–103 and on the drilling of the Paon–3AR well. As of yearend, Anadarko was in discussions with the Government to determine appraisal drilling activities for 2015. The Morue prospect in Block CI–516 and the Saumon prospect in Block CI–515 were drilled during the year but were determined to be noneconomic (Anadarko Petroleum Corp., 2015, p. 12; Tullow Oil plc, 2015, p. 53).

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TABLE 1
BURKINA FASO AND CÔTE D'IVOIRE: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

Country and Commodity		2010	2011	2012	2013	2014
BURKINA FASO ²						
Cement		587,014	590,000 ^e	658,595	579,928	403,000
Gold ³	kilograms	22,939	31,774	28,939	32,713 ^r	36,200
Lead:						
Pb concentrate produced from ore (45% Pb)		--	--	--	2,236	2,500 ^e
Pb content of concentrate		--	--	--	1,017	1,100 ^e
Manganese:						
Ore, processed		57,355	49,715	50,000 ^e	50,000 ^e	50,000 ^e
Mn content ^e		25,800	22,400	24,800	22,500	22,500 ^e
Silver, Ag content of Pb concentrate	kilograms	--	--	--	14,541	14,000 ^e
Zinc:						
Zn concentrate produced from ore (50% to 51% Zn)		--	--	--	63,648	130,000 ^e
Zn content of concentrate		--	--	--	32,215	65,000
CÔTE D'IVOIRE ⁴						
Cement ⁵		188,800	98,900	78,000	77,563 ^r	193,148
Diamond ⁶		--	--	--	--	1,074
Gold, mine output, Au content ⁷	kilograms	5,310	11,009 ^r	10,943 ^r	12,758 ^r	17,350
Manganese ore:						
Gross weight ⁸		87,400	43,600	100,400	220,300	328,400
Mn content (43% to 45% Mn)		39,330	19,620	45,200	99,100	147,800
Natural gas	million cubic meters	1,666	1,632	1,780	1,700 ^e	1,800 ^e
Petroleum:						
Crude	thousand 42-gallon barrels	14,562	12,391	10,770	9,141	7,000 ^e
Refinery products	do.	20,400	20,000 ^e	25,000 ^e	25,000 ^e	25,000 ^e
Silver	kilograms	200 ^e	200 ^{r,e}	410 ^r	572 ^r	585
Stone, crushed, granite	thousand metric tons	1,095 ⁹	1,100 ^e	1,460 ¹⁰	1,500 ^e	1,500 ^e

^eEstimated; estimated data are rounded to no more than three significant digits. ^rRevised. do Ditto. -- Zero.

¹Table includes data available through December 31, 2015.

²In addition to the commodities listed, dolomite, granite, marble, phosphate rock, salt, sand and gravel, and other construction materials were produced, but available information was inadequate to make reliable estimates of output.

³Does not include production from artisanal mining, which was estimated to fluctuate between 1,000 and 10,000 kilograms per year.

⁴In addition to the commodities listed, sand and gravel (93,200 cubic meters in 2010, which was the latest year for which reported data were available) and sulfuric acid were produced, but available information was inadequate to make reliable estimates of output.

⁵Based on reported exports of hydraulic cement.

⁶Reported by the Kimberley Process Certification Scheme.

⁷Does not include production from artisanal mining.

⁸Reported by the International Manganese Institute.

⁹Reported by the Ministry of Mines, Petroleum, and Energy.

¹⁰Reported by the Chamber of Mines of Côte d'Ivoire.

TABLE 2
BURKINA FASO AND CÔTE D'IVOIRE: STRUCTURE OF THE MINERAL INDUSTRIES IN 2014

(Metric tons unless otherwise specified)

Country and commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity
BURKINA FASO				
Cement		Diamond Cement Burkina S.A. (West African Cement S.A.)	Ouagadougou	700,000.
Gold	kilograms	Société des Mines de Bélahouro S.A. (Avocet Mining plc, 90%, and Government, 10%)	Inata Mine, 220 kilometers north of Ouagadougou	5,200.
Do.	do.	Burkina Mining Company S.A. (Endeavour Mining Corp., 90%, and Government, 10%)	Youga Mine, 180 kilometers southeast of Ouagadougou	3,100.
Do.	do.	Essakane S.A. (IAMGOLD Corp., 90%, and Government, 10%)	Essakane Mine, 330 kilometers northeast of Ouagadougou	12,000.
Do.	do.	Kalsaka Mining S.A. (Amara Mining plc, 78%; IMARB Indústria Metalúrgica, 12%; Government, 10%) and Seguénega Mining S.A. (Amara Mining plc, 90%, Government, 10%)	Kalsaka-Sega Mine, 150 kilometers west of Ouagadougou	2,300. ¹
Do.	do.	Semafo Burkina Faso S.A. (Semafo Inc., 90%, and Government, 10%)	Mana Mine, 200 kilometers west of Ouagadougou	7,300.
Do.	do.	Société des Mines de Taparko S.A. (Nord Gold N.V., 90%, and Government, 10%)	Taparko-Boroum Mine, 200 kilometers northeast of Ouagadougou	4,100.
Do.	do.	Bissa Gold S.A. (Nord Gold N.V., 90%, and Government, 10%)	Bissa Mine, 85 kilometers north of Ouagadougou	8,000.
Do.	do.	Pinsapo Gold S.A. (Pinsapo Group AG)	Sassa-1 small-scale mine, Passore Province	NA.
Do.	do.	Artisanal gold miners	Various locations throughout Burkina Faso	5,000 to 10,000.
Lead		Glencore plc, 90%, and Government, 10%	Perkoa Mine, 120 kilometers west of Ouagadougou	1,100.
Manganese		ACM Corp. (Burkina Manganèse S.A., 100%)	Kiere Mine, 20 kilometers northeast of Houndé, Tuy Province	60,000 ore.
Silver	kilograms	Glencore plc, 90%, and Government, 10%	Perkoa Mine, 120 kilometers west of Ouagadougou	15,000.
Zinc		do.	do.	65,000.
CÔTE D'IVOIRE				
Cement		Société des Ciments d'Abidjan (Amida Group)	Abidjan plant	750,000.
Do.		Société des Ciments du Sud-Ouest	San Pedro	100,000.
Do.		Société de Ciments et Matériaux (Holcim Ltd.)	Grinding plant at Abidjan	1,200,000.
		Ciments d'Afrique (CIMAFA)	Youpougon industrial zone, 15 kilometers east of Abidjan	500,000.
Gold	kilograms	Agbaou Gold Operations S.A. (Endeavour Mining Corp., 85%; Government, 15%)	Agbaou Mine, 200 kilometers northwest of Abidjan	4,800
Do.	do.	LGL Mines CI SA (Newcrest Mining Ltd., 89.9%; Government, 10%; minority shareholder 0.1%)	Bonikro Mine, 240 kilometers northwest of Abidjan	5,000.
Do.	do.	Société des Mines d'Ity (La Mancha Resources Inc., 55%; Société pour le Développement Minier (SODEMI), 30%; Government, 10%; Didier Drogba Group, 5%)	Ity Mine, 480 kilometers northwest of Abidjan	1,900.
Do.	do.	Société des Mines de Tongon SA (Randgold Resources Ltd., 89%; Government, 10%; local Ivorian company, 1%)	Tongon Mine, northern Côte d'Ivoire, 55 kilometers south of the border with Mali	9,000.
Manganese		Compagnie Minière du Littoral [Société pour le Développement Minier de la Côte d'Ivoire (SODEMI), 51%; China National Geological and Mining Corp., 39%; private interests, 10%]	Lauzoua-Mokta Mine, 180 kilometers west of Abidjan	300,000.

See footnotes at end of table.

TABLE 2—Continued
 BURKINA FASO AND CÔTE D'IVOIRE: STRUCTURE OF THE MINERAL INDUSTRIES IN 2014

(Metric tons unless otherwise specified)

Country and commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity
Manganese—Continued		Taurian Manganese & Ferro Alloy (Dharni Sampda Private Ltd.)	Bondoukou Mine	NA.
Natural gas	million cubic meters	Société Nationale d'Operations Pétrolières de la Côte d'Ivoire (PETROCI), 40%; Foxtrot International LDC, 27.30%	Block CI-27	1,600.
Do.	do.	Société Nationale d'Operations Pétrolières de la Côte d'Ivoire (PETROCI), 68.1%, and Compagnie Ivoirien du Pétrole et des Mines (CIPEM), 31.9%	Block CI-11, Panthere natural gas field	250.
Petroleum, crude	thousand 42-gallon barrels	Canadian Natural Resources Ltd., 57.61%; Svenska Petroleum Exploration AB, 27.39%; Société Nationale d'Operations Pétrolières de la Côte d'Ivoire (PETROCI), 15%	Block CI-40, Baobab oilfield, offshore	17,520.
Do.	do.	Canadian Natural Resources Ltd., 58.67%; Tullow Oil plc, 21.33%; Société Nationale d'Operations Pétrolières de la Côte d'Ivoire (PETROCI), 20%	Block CI-26, Espoir oilfield (East and West), offshore	6,700.
Do.	do.	Société Nationale d'Operations Pétrolières de la Côte d'Ivoire (PETROCI), 68.1%, and Compagnie Ivoirienne du Pétrole et des Mines (CIPEM), 31.9%	Block CI-11, Lion oilfield	1,500.
Petroleum products	42-gallon barrels per day	Société Ivoirienne de Raffinage (Government, 100%)	Abidjan	60,000.

Do., do. Ditto. NA Not available.

¹Mine closed on August 5, 2014.