



2012 Minerals Yearbook

BENIN, BURKINA FASO, AND SAO TOME E PRINCIPE

THE MINERAL INDUSTRIES OF BENIN, BURKINA FASO, AND SAO TOME E PRINCIPE

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BENIN

Mining did not play a significant role in Benin's economy. The country produced mostly industrial minerals, which included cement, clay, limestone, marble, and sand and gravel. Gold was also produced in small quantities by artisanal miners. Information on mineral production, with the exception of cement, was inadequate to make reliable estimates of output. Data on cement production are in table 1.

BURKINA FASO

Gold was Burkina Faso's most valuable mineral commodity. In 2012, gold production accounted for 76% of total exports, 19% of Government revenues, and 5.5% of the country's gross domestic product. Although most gold production came from industrial mining operations, artisanal miners were estimated to have produced between 5,000 kilograms (kg) and 10,000 kg of gold during the year. Measuring artisanal gold mining production in Burkina Faso is challenging, as thousands of people were engaged in the sector and artisanal mining operations were scattered throughout the country, in many instances, in remote areas without much Government oversight. The International Monetary Fund reported that gold production data discrepancies among Burkinabe Government agencies were significant and varied by as much as 6,900 kg in 2012 alone. The Government, however, was in the process of establishing a Government committee to compile and crosscheck gold production data from mine site to the point of export. Child labor in the artisanal gold mining sector continued to be a challenge for the Government. The country was likely to begin producing zinc from its first zinc mine, which was expected to be commissioned in 2013, and gold and manganese exploration projects were ongoing. A new Mining Code was also under consideration by Parliament (United Nations Office for the Coordination of Humanitarian Affairs, 2012; International Monetary Fund, 2014, p. 14–15).

In 2012, Burkina Faso was the United States' 184th-ranked goods trading partner, the 171st-ranked goods export market, and the 192d-ranked supplier of goods imports. During the year, Burkina Faso's exports to the United States were valued at about \$2.3 million; however, no significant quantities of minerals or mining-related goods were part of these exports. Imports from the United States were valued at about \$47.3 million compared with \$33.3 million in 2011 and \$46.6 million in 2010. These imports included nearly \$7.6 million worth of excavating machinery; about \$534,000 worth of specialized mining equipment; \$358,000 worth of drilling and oilfield equipment; \$1.5 million worth of chemical fertilizers; \$39,000 worth of iron and steel mill products; and \$21,000 worth of other iron and

steel products (Office of the United States Trade Representative, undated; U.S. Census Bureau, 2013a, b).

Production

Gold production from industrial operations decreased by 12.4% to 27,850 kilograms (kg); however, gold production from artisanal mining was estimated to have increased during the year, reaching between 5,000 and 10,000 kg. Manganese ore production was estimated to be at about the same level as that of 2011 of nearly 50,000 metric tons (t). Data on mineral production are in table 1.

Structure of the Mineral Industry

Table 2 is a list of major mineral industry facilities.

Commodity Review

Metals

Gold.—The Inata Mine, which is located in the Belahouro district about 220 kilometers (km) northeast of the capital city of Ouagadougou, produced a total of 4,205 kg of gold during the year. This represented a 19% decrease in production compared with that of 2011. Avocet Mining plc attributed the decrease in output partly to the unavailability of excavating machinery, which limited access to areas of higher grade ore within the mine's main pit. The Inata Mine produced gold dore, which was shipped to South Africa for refining into bullion. A study to reestimate ore reserves at the Inata Mine was carried out during 2012, and the results of the study were to be announced in early 2013 (Avocet Mining plc, 2013, p. 6–7, 22).

Reserves from the Kalsaka Mine were nearing depletion. In 2012, production from the mine decreased by 25% to 1,665 kg. The decrease was attributable to a 15% reduction in the average head grade processed, to the temporary reduction in recovery from the heap-leach operation caused by the loss of water pressure in the reticulation circuit, and to pit-wall failures caused by heavy rainfall. A new jaw crusher was installed and commissioned during the year and was expected to optimize the processing of higher grade ore. The Kalsaka Mine was owned by Amara Mining plc of the United Kingdom (formerly Cluff Gold plc) (78%) in joint venture with IMARB Indústria Metalúrgica of Brazil (12%), and the Government (10%). In May 2012, Amara acquired the Segá gold project from Orezone Gold Corp. of Canada in order to integrate the project with its Kalsaka mining operation in hopes of extending the Kalsaka Mine life to 2015. The results of a preliminary economic assessment for the Segá project yielded the potential for the

development of an oxide mining operation capable of producing between 1,500 and 1,900 kilograms per year of gold (Amara Mining plc, 2013, p. 10–12, 17–18).

Other companies producing and (or) exploring for gold in the country included Australian companies Ampella Mining Ltd., Boss Resources Ltd., Golden Rim Resources Ltd., Gryphon Minerals Ltd., Middle Island Resources Ltd., Mt. Isa Metals Ltd., Predictive Discovery Ltd., Vital Metals Ltd., and West African Resources Ltd.; Canadian companies Channel Resources Ltd., Endeavour Mining Corp., Goldrush Resources, IAMGOLD Corp., Orezone Gold Corp., and Semafo Inc.; Netherlands-based Nord Gold N.V.; and the South African company GoldPlat plc.

Manganese.—In early August, Timis Corp. of Romania, through its subsidiary Pan African Minerals Ltd., won the rights to an exploration license for the Tambao manganese deposit in northeastern Burkina Faso. The expected total investment in the project was estimated to be \$650 million. The license, which also granted Pan African the exclusive right to apply for a mining license for the development of a mine at Tambao, was for a period of 3 years, and the company had the right to renew the license twice for a period of 3 years upon each renewal. Pan African reported that it planned to develop the deposit in two phases. The first phase 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 about 2 Mt/yr of manganese ore and the extension of the rail line from Kaya to the Tambao deposit in the northeast. The company also planned to undertake a feasibility study for the development of a dam on the Beli River. Joint venture partners Wadi Al Rawda Investments LLC of the United Arab Emirates and London-based Weatherly International plc had filed a lawsuit against the Government of Burkina Faso in 2011 for the rights to develop the Tambao deposit. The case was before the International Chamber of Commerce in Paris, and a final decision on the merits of the lawsuit was expected to be announced in 2013 (Jalloh, 2012; London Stock Exchange plc, 2012; Thomson Reuters, 2012).

Zinc.—Glencore International AG of Switzerland was to invest an additional \$40 million in the development of the Perkoa zinc project, which is located in Sanguie Province about 120 kilometers from Ouagadougou. The additional funding was to be used to modify the configuration of the processing plant to accommodate the separate production of lead, silver, and zinc concentrates; to increase plant throughput capacity by 40%; and to add open pit mining capabilities to supplement the planned underground mining operation. Total measured and indicated mineral resources for Perkoa were reported to be 7.15 million metric tons (Mt) at grades of 53.8 grams per metric ton silver, 11.0% zinc, and 0.16% lead. Ore reserves, which were included in the resource estimate, were 6.3 Mt at a grade of 13.9% zinc. The project was being developed in joint venture with Blackthorn Resources Ltd. of Australia and was expected to be commissioned by 2013. Blackthorn also held a number of exploration tenements near Perkoa that were prospective for base metals (Blackthorn Resources Ltd., 2013, p. 6, 12, 31).

Outlook

The outlook for Burkina Faso's gold sector is likely to remain strong as new production from the Bissa gold mine is expected to come online in 2013, and foreign companies continue to invest in gold exploration activities in the country. Future foreign direct investment in the mineral sector, however, will likely be dependent upon changes to the country's mining code.

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SAO TOME E PRINCIPE

Mining did not play a significant role in Sao Tome e Principe's economy. Mineral production was limited to clay and volcanic rock, and information was inadequate to make reliable estimates of output for these commodities. Potential exists for the development of the country's petroleum industry. All other mineral product requirements were imported.

TABLE 1
BENIN AND BURKINA FASO: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

Country and commodity		2008	2009	2010	2011	2012
BENIN ²						
Cement, hydraulic ³	thousand metric tons	1,347	1,315	1,305	1,460	1,390
BURKINA FASO ⁴						
Cement		468,250 ^r	563,406 ^r	587,014 ^r	590,000 ^{r,e}	600,000 ^e
Gold ³	kilograms	6,033	11,581 ⁵	22,939 ⁵	31,774 ⁵	27,850 ⁶
Manganese:						
Ore, processed		--	--	57,355	49,715	50,000 ^e
Mn content ⁶		--	--	25,800	22,400	22,500

⁶Estimated; estimated data are rounded to no more than three significant digits. ^rRevised. -- Zero.

¹Table includes data available through January 29, 2014.

²In addition to the commodities listed, clay, gold, limestone, marble, and sand and gravel are produced, but information is inadequate to make reliable estimates of output.

³Reported figure.

⁴In addition to the commodities listed, dolomite, granite, marble, phosphate rock, salt, sand and gravel and other construction materials are produced, but information is inadequate to make reliable estimates of output.

⁵Does not include production from artisanal mining, which was estimated to fluctuate between 1,600 and 5,000 kilograms per year.

⁶Does not include production from artisanal mining, which was estimated to be between 5,000 and 10,000 kilograms during the year.

TABLE 2
BENIN AND BURKINA FASO: STRUCTURE OF THE MINERAL INDUSTRIES IN 2012

(Metric tons unless otherwise specified)

Country and commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity
BENIN				
Cement		Cimbenin S.A. (HeidelbergCement AG, 52.51%, through its subsidiary Scancem International SA)	Cotonou plant	300,000 cement.
Do.		Onigbolo Cement Co. (OCC) (Dangote Industries Ltd., 43%, and Société des Ciments du Benin, 51%)	Onigbolo plant	600,000 cement.
Do.		Société des Ciments du Benin (Government, 50%, and LaFarge Group, 50%)	do.	700,000 cement.
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	9,800.
Do.	do.	Kalsaka Mining S.A. (Amara Mining plc, 78%; IMARB Indústria Metalúrgica, 12%; Government, 10%)	Kalsaka Mine, 150 kilometers west of Ouagadougou	2,300.
Do.	do.	Semafo Burkina Faso S.A. (Semafo Inc., 90%, and Government, 10%)	Mana Mine, 200 kilometers west of Ouagadougou	5,900.
Do.	do.	Société des Mines de Taparko S.A. (Nord Gold N.V., 90%, and Government, 10%)	Taparko-Boroum Mine, 200 kilometers from Ouagadougou	4,100.
Manganese		Burkina Manganèse S.A. (ACM Corp., 100%)	Kiere Mine, 10 kilometers northeast of Bobo-Dioulasso	60,000 ore.

Do., do. Ditto.