



# 2013 Minerals Yearbook

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## GHANA

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# THE MINERAL INDUSTRY OF GHANA

By Omayra Bermúdez-Lugo

In 2013, Ghana's mineral sector was estimated to have contributed 9.8% to the country's gross domestic product (GDP) compared with 9.5% in 2012, and to have accounted for 14.3% of Government revenues. Gold and petroleum exports alone accounted for about 64% of total export earnings. The increase in the mineral sector's share of the GDP was attributed to increased output in the petroleum industry. The mineral sector's contribution to GDP growth, however, decreased to 11.7% from 16.4% in 2012. Export revenues from crude petroleum increased by 30.5% and generated \$3.9 billion; gold export revenues decreased by 12% and generated about \$5 billion. These revenues of crude petroleum and gold represented about 8% and 10%, respectively, of the country's nominal GDP, which in 2013 was estimated to be \$47.8 billion. Ghana was among the world's top 10 producers of gold and among the world's top 15 producers of rough diamond. Other mineral commodities produced in the country included aluminum, bauxite, cement, crude petroleum, lead, manganese, petroleum products, salt, and silver. In addition to these mineral commodities, Ghana produced a variety of crude construction materials, such as clay, lime, limestone, sand and gravel, and stone. Ghana continued to experience electricity supply shortages, which led to blackouts throughout the country—particularly in the capital city of Accra—in early 2013 (Quandzie, 2013; Bank of Ghana, 2014, p. 18; Ghana Chamber of Mines, 2014; Ghana Statistical Service, 2014, p. 5, 7; International Monetary Fund, 2014; Kimberley Process Rough Diamond Statistics, 2014).

## Minerals in the National Economy

Nonfuel mineral revenue generated by the members of the Ghana Chamber of Mines decreased by 12% to about \$4.8 billion in 2013 from nearly \$5.4 billion in 2012. The decrease in revenue was attributed to the decrease in the international price of gold and to the decrease in rough diamond output. Gold accounted for about 96% of these revenues; manganese, 2.8%; and bauxite and diamond, less than 1% each. Member companies of the Ghana Chamber of Mines employed a total of 17,103 people in 2013, 98% of which were reported to be Ghanaian nationals (Ghana Chamber of Mines, 2014).

## Government Policies and Programs

The legislative framework for the mineral sector in Ghana is the Minerals and Mining Act 703 of 2006. Under the provisions of the law, no person is authorized to conduct reconnaissance, prospecting, exploration, or mining in Ghana unless the person has been granted a mining license. The law establishes that this is regardless of whether the person holds the rights to the land or not. Artisanal and small-scale gold mining by unlicensed foreign nationals as well as by unlicensed Ghanaian nationals continued unabated in the country despite Government efforts to curb these activities. The Ghana Chamber of Mines reported

that the Minerals Commission, which is the Government entity responsible for regulating and managing the use of Ghana's mineral resources and for coordinating Government policy related to them, estimated that small-scale gold mining activities accounted for about 35% of Ghana's total gold output (Ghana Chamber of Mines, 2014, p. 8).

The corporate income tax for mining companies operating in Ghana was 35% and the royalty rate on total revenue earned from the mining of nonfuel minerals was 5%. As of yearend, a proposed new petroleum exploration and production law continued to be under review by the Ghanaian Parliament. Plans to introduce a 10% windfall profit tax on mining companies were put on hold pending further Government consultation with industry stakeholders (PwC Ltd., 2013, p. 23, 26; Wiafe, 2013; Terkper, 2014, p. 7).

## Production

In 2013, manganese production was estimated to have increased by 53% to 533,000 metric tons (t); bauxite production increased by 9.9% to 827,000 t; secondary lead production by 3.9% to 3,076 t; gold production (excluding gold mined by artisanal means) by 1.9% to 88,376 kilograms; and crude petroleum output by 34% to 35.5 million barrels. Rough diamond production was estimated to have decreased by 24.7% to 169,000 carats. The outputs of aluminum and petroleum products were estimated to have remained at about the same levels as those of 2012 because both the country's only aluminum smelter and the Tema petroleum refinery continued to operate below production capacity. Cement production was estimated to have remained at about the same level of 3 million metric tons (Mt). Information on artisanal and small-scale gold production as well as of other industrial minerals used in the construction sector, including output data for clay, lime, limestone, sand and gravel, and stone, was inadequate to make reliable estimates of output. Data on mineral production are in table 1.

## Structure of the Mineral Industry

The Ministry of Lands and Natural Resources (MLNR), through the Geological Survey Department (GSD), the Minerals Commission, and Precious Minerals Marketing Co. Ltd. (PMMC), oversees all aspects of Ghana's mineral sector. The GSD is responsible for providing reliable and up-to-date geologic information and serves as the repository for the country's geoscientific data. Through its Inspectorate Division, the Minerals Commission institutes and enforces environmental, health, and safety standards in the country's mines and ensures that mining companies and all mining-related activities comply with Ghana's mining and mineral law. The PMMC is responsible for promoting the country's precious minerals and jewelry industry. Ghana National

Petroleum Corp. (GNPC), through the Petroleum Commission, is responsible for the exploration, development, and production of Ghana's hydrocarbon resources. Ghana National Gas Company (GNGC) is responsible for the development of the country's natural gas resources as well as processing and distributing natural gas from foreign sources. Table 2 is a list of major mineral industry facilities.

### Mineral Trade

The Bank of Ghana reported that Ghana's total export earnings were affected by the energy crisis experienced by the country during the first half of 2013 and by the decrease in the international price of its key mineral commodities (Bank of Ghana, 2014, p. 9, 17–18). Total merchandise export receipts amounted to nearly \$13.8 billion in 2013 compared with nearly \$13.5 billion in 2012. Owing to higher levels of output, petroleum export revenues increased despite the decrease in the international price of crude petroleum. Crude petroleum exports accounted for about 28% of total export receipts, which amounted to nearly \$3.9 billion, an increase from about \$3 billion in 2012. Exports of bauxite increased by 9.9% to 826,994 t and generated \$32.9 million in revenue compared with \$28.5 million in 2012. Exports of manganese increased by 35% to about 2 Mt and generated about \$135.5 million. Exports of diamond decreased by 28.9% to 160,535 carats and generated \$7.4 million in revenue; the average price per carat of these exports decreased by 12.5% to \$46.27 from \$52.91 in 2012 (Bank of Ghana, 2014, p. 21; Ghana Chamber of Mines, 2014, p. 7; Kimberley Process Rough Diamond Statistics, 2014).

Table 1 provides data on the principal mineral commodities produced in Ghana from 2009 to 2013, and table 2 provides a list of major mineral industry facilities in 2013. More-extensive coverage of the mineral sector of Ghana can be found in the 2011 and 2012 U.S. Geological Survey Minerals Yearbook, volume III, Area Reports—International—Africa and the Middle East, which are available on the Internet at <http://minerals.usgs.gov/minerals/pubs/country/africa.html#gh>.

### References Cited

- Bank of Ghana, 2014, Annual report 2013: Accra, Ghana, Bank of Ghana, 95 p. (Accessed October 13, 2014, at [http://www.bog.gov.gh/index.php?option=com\\_content&view=article&id=1734%20Annual-report-2013&catid=102%20Annual-reports&Itemid=172](http://www.bog.gov.gh/index.php?option=com_content&view=article&id=1734%20Annual-report-2013&catid=102%20Annual-reports&Itemid=172).)
- Ghana Chamber of Mines, 2014, Performance of the mining industry in 2013: Accra, Ghana, Ghana Chamber of Mines, 10 p. (Accessed October 12, 2013, at [http://ghanachamberofmines.org/media/publications/Performance\\_of\\_the\\_Mining\\_Industry\\_in\\_2013.pdf](http://ghanachamberofmines.org/media/publications/Performance_of_the_Mining_Industry_in_2013.pdf).)
- Ghana Statistical Service, 2014, Gross domestic product 2014: Accra, Ghana, Ghana Statistical Service, April 9, 9 p. (Accessed May 14, 2014, at [http://www.statsghana.gov.gh/docfiles/GDP/GDP\\_2014.pdf](http://www.statsghana.gov.gh/docfiles/GDP/GDP_2014.pdf).)
- International Monetary Fund, 2014, Ghana—5. Report for selected countries and subjects: Washington, DC, International Monetary Fund World Economic Outlook Database, October. (Accessed December 1, 2014, at <http://www.imf.org/external/pubs/ft/weo/2014/02/weodata/weorept.aspx?sy=2013&ey=2014&scsm=1&ssd=1&sort=country&ds=.&br=1&c=652&s=NGDPD&grp=0&a=&pr1.x=29&pr1.y=10>.)
- Kimberley Process Rough Diamond Statistics, 2014, Annual global summary—2013 production, imports, exports, and KPC counts: Kimberley Process Rough Diamond Statistics, July 1, 1 p. (Accessed October 12, 2014, at [https://kimberleyprocessstatistics.org/static/pdfs/public\\_statistics/2013/2013GlobalSummary.pdf](https://kimberleyprocessstatistics.org/static/pdfs/public_statistics/2013/2013GlobalSummary.pdf).)
- PwC Ltd., 2013, Charting tax trends in Ghana: Accra, Ghana, PwC Ltd., 58 p. (Accessed August 7, 2014, at [https://www.pwc.com/en\\_GH/gh/assets/pdf/ghana-tax-facts-and-figures-2013-brochure.pdf](https://www.pwc.com/en_GH/gh/assets/pdf/ghana-tax-facts-and-figures-2013-brochure.pdf).)
- Quandzie, Ekow, 2013, Energy crisis partly slows business optimism in Ghana—BoG: Ghana Business News, May 23. (Accessed July 10, 2014, at <https://www.ghanabusinessnews.com/2013/05/23/energy-crisis-partly-slows-business-optimism-in-ghana-bog/>.)
- Terkper, S.E., 2014, 2013 annual report on the petroleum funds: Accra, Ghana, Ministry of Finance, 25 p. (Accessed July 10, 2014, at [http://www.mofep.gov.gh/sites/default/files/reports/2013\\_Annual\\_Petroleum\\_Report.pdf](http://www.mofep.gov.gh/sites/default/files/reports/2013_Annual_Petroleum_Report.pdf).)
- Wiafe, George, 2013, Government halts implementation of windfall tax on profits of mining firms: Accra, Ghana, Joy Business, November 8. (Accessed July 10, 2014, at <http://www.myjoyonline.com/business/2013/November-8th/govt-halts-implementation-of-windfall-tax-on-profits-of-mining-firms.php>.)

TABLE 1  
GHANA: PRODUCTION OF MINERAL COMMODITIES<sup>1</sup>

(Thousand metric tons unless otherwise specified)

Commodity <sup>2</sup>	2009 <sup>e</sup>	2010	2011	2012	2013
Aluminum, primary	--	--	40 <sup>e</sup>	40 <sup>e</sup>	40 <sup>e</sup>
Bauxite, gross weight <sup>3</sup>	490	595	400	753	827
Cement, hydraulic <sup>e,4</sup>	1,800	2,100	2,500 <sup>r</sup>	3,000	3,000
Diamond <sup>5</sup> thousand carats	376	334	302	233	169
Gold, mine output, Au content kilograms	79,883 <sup>6,7</sup>	76,332 <sup>8</sup>	82,920 <sup>9</sup>	86,699 <sup>7</sup>	88,376 <sup>7</sup>
Lead, secondary <sup>10</sup> metric tons	--	NA	2,403	2,961	3,076
Manganese: <sup>11</sup>					
Gross weight	882 <sup>6</sup>	1,529	1,729	1,244	1,912
Mn content <sup>e</sup>	248 <sup>6</sup>	426	484	348	533
Petroleum:					
Crude thousand 42-gallon barrels	--	2,050 <sup>e</sup>	24,196	26,429	35,500 <sup>e,12</sup>
Refinery products <sup>e</sup> do.	8,000	10,000	10,000	10,000	10,000
Salt	250	85	100 <sup>e</sup>	100 <sup>e</sup>	100 <sup>e</sup>
Silver, Ag content of exported dore kilograms	3,928 <sup>6</sup>	3,313	3,088	3,200 <sup>r,e</sup>	3,300 <sup>e</sup>

<sup>e</sup>Estimated; estimated data are rounded to no more than three significant digits. <sup>r</sup>Revised. do Ditto. NA Not available. -- Zero.

<sup>1</sup>Table includes data available through December 31, 2014.

<sup>2</sup>In addition to the commodities listed, a variety of crude construction materials (clays, lime, limestone, sand and gravel, and stone) are produced. Output of these commodities is not reported, however, and information is inadequate to make reliable estimates of output.

<sup>3</sup>Figure based on bauxite shipments as reported by the Ghana Chamber of Mines.

<sup>4</sup>All from imported clinker.

<sup>5</sup>Reported by the Kimberley Process Certification Scheme.

<sup>6</sup>Reported figure.

<sup>7</sup>Does not include artisanal and small-scale mining output.

<sup>8</sup>Does not include artisanal and small-scale output, which in 2010 was estimated to be more than 25,000 kilograms.

<sup>9</sup>Does not include artisanal and small-scale output, which in 2011 was estimated to be more than 30,000 kilograms.

<sup>10</sup>Reported data are for fiscal year beginning on March 31 of the year indicated.

<sup>11</sup>Source: International Manganese Institute.

<sup>12</sup>Estimate based on preliminary data reported by the Ministry of Finance.

TABLE 2  
GHANA: STRUCTURE OF THE MINERAL INDUSTRY IN 2013

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities <sup>1</sup>	Annual capacity
Aluminum	Volta Aluminum Co. Ltd. (VALCO) (Government, 100%)	Aluminum smelter at Tema	200.
Bauxite	Ghana Bauxite Company Ltd. (GBCL) (Bosai Minerals Group Co. Ltd., 80%, and Government, 20%)	Bauxite mine at Awaso	830.
Cement	Ghana Cement Company Ltd. (GHACEM) (HeidelbergCement AG, 93.1%)	Clinker grinding plant at Takoradi	1,200.
Do.	do.	Clinker grinding plant at Tema	2,200.
Do.	Diamond Cement Ghana Ltd.	Cement plant at Aflao <sup>2</sup>	600.
Do.	Savanna Cement Company Ltd. (SAVACEM) and Diamond Cement Ghana Ltd.	Town of Buipe, Central Gonja District	350.
Diamond	thousand carats Great Consolidated Diamond Ghana Ltd. (Government, 100%)	Placer mine at Akwatia, Birim Valley	360.
Do.	do. Artisanal diamond miners	Birim Valley	500 to 900.

See footnotes at end of table.

TABLE 2—Continued  
GHANA: STRUCTURE OF THE MINERAL INDUSTRY IN 2013

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners		Location of main facilities <sup>1</sup>	Annual capacity
Gold	kilograms	AngloGold Ashanti Ltd., 100%	Obuasi surface and underground mine, 60 km south of Kumasi	17,000.
Do.	do.	do.	Iduapriem Mine, 70 km north of Takoradi	8,800.
Do.	do.	Noble Mineral Resources	Bibiani Mine, 250 km northwest of Accra	3,400.
Do.	do.	Golden Star (Bogoso/Prestea) Ltd. (Golden Star Resources Ltd., 90%, and Government, 10%)	Bogoso/Prestea open pit mine, 300 km west of Accra	7,300.
Do.	do.	Golden Star (Wassa) Ltd. (GSWL) (Golden Star Resources Ltd., 90%, and Government, 10%)	Wassa Mine, 30 km northwest of Tarkwa	7,000.
Do.	do.	do.	Father Brown Mine, 35 km from the town of Bogosu; 80 km south of the Wassa Mine	3,000.
Do.	do.	Gold Fields Ltd., 90%, and Government, 10%	Tarkwa open pit mine and carbon-in-leach and heap-leach plants, 300 km west of Accra	21,800.
Do.	do.	do.	Damang Mine and carbon-in-leach plant, 360 km west of Accra	6,000.
Do.	do.	Newmont Mining Corp., 100%	Ahafo Mine, 290 km northwest of Accra, Brong Ahafo region	17,100.
Do.	do.	do.	Akyem Mine	14,000.
Do.	do.	Endeavour Mining Corp., 90%, and Government, 10%	Nzema Mine, 280 km west of Accra, East municipal district	3,100.
Do.	do.	Chirano Gold Mine Ltd. (Kinross Gold Corp., 90%, and Government, 10%)	Chirano Mine, 100 km southwest of Kumasi, southwestern Ghana	9,000.
Do.	do.	Perseus Mining (Ghana) Ltd. (Perseus Mining Ltd., 90%)	Edikan gold mine	7,200.
Do.	do.	Artisanal and small-scale gold miners	Throughout Ghana	>10,000.
Lead, secondary		Gravita Ghana Ltd. (Gravita India Ltd.)	Tema	6.
Limestone and lime		Carmeuse Lime Products (Ghana) Ltd. (Carmeuse SA)	Takoradi	NA.
Manganese ore		Ghana Manganese Company Ltd. (Ghana International Manganese Co., 90%, and Government, 10%)	Open pit mine at Nsuta-Wassaw, Western region	1,500.
Petroleum, crude	thousand 42-gallon barrels	Tullow Oil plc, 34.71%; Anadarko Petroleum Corp., 23.49%; Kosmos Energy LLC, 23.49%; Ghana National Petroleum Corp. (GNPC), 13.75%; Sabre Oil & Gas Holdings Ltd., 2.81%; E.O. Group Ltd., 1.75%	Jubilee oilfield, 60 km offshore	43,800.
Petroleum products	do.	Tema Oil Refinery (Government, 100%)	Refinery at Tema	16,425.
Salt		Panbros Salt Industry Ltd.	Salt pan at Mendskrom, near Accra	250.
Do.		Elmina Salt Producers Association	Artisanal salt pan mining near Elmina	NA.

Do., do. Ditto. NA Not available. > More than.

<sup>1</sup>Abbreviations used for units of measure include the following: km kilometer.

<sup>2</sup>Used imported clinker.