



# 2012 Minerals Yearbook

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## GABON

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# THE MINERAL INDUSTRY OF GABON

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Gabon's economy was largely dependent on world demand for manganese and petroleum, which were the country's principal mineral export commodities. In 2012, the country ranked fourth among the world's leading producers of manganese, accounting for more than 12% of world production. It also ranked eighth among Africa's leading producers of crude petroleum, accounting for about 3% of African crude petroleum production. Other nonfuel mineral commodities produced in the country included cement and gold. Identified but undeveloped mineral resources included iron ore, niobium (columbium), and phosphate rock (African Development Bank Group, 2011, p. 2; Corathers, 2013; Organization of the Petroleum Exporting Countries, 2013, p. 42).

## Government Policies and Programs

The Government was in the process of revising the country's Mining Code (law No. 05–2000 as amended by law No. 008–2005), but as of yearend 2012, no final draft had been publicly released. Two new state-owned enterprises, Equatorial Mining Co. (EMC) and Gabon Oil Co. (GOC), were created in 2011 to facilitate the development of Gabon's mineral resources and to improve the judicial, financial, and fiscal transparency of the mineral sector. The creation of these enterprises was part of the Government's plan to reform the mineral sector in order to increase state involvement in all mining affairs. The Government also planned to invest \$11 billion during the period 2010 to 2016 to develop energy, port, railway, and road infrastructure projects (Gabon Oil Co., 2011c; International Monetary Fund, 2013, p. 35; Société Equatoriale des Mines, undated a, b).

In November, the Government announced the results of its petroleum and mining sector audits for the period 2007 to 2010; however, it did not submit a final Extractive Industries Transparency Initiative (EITI) validation report to the EITI Board by the deadline of December 9, 2012. To keep Gabon's EITI status, the Government will be required to complete an EITI validation that demonstrates compliance with the 2011 edition of the EITI Rules. Validation is considered to be an essential part of the EITI process, as it holds all implementing countries to the same global standard for transparency in the mineral sector (Extractive Industries Transparency Initiative, 2012; Société Equatoriale des Mines, undated a, b).

## Production

In 2012, Gabon opened its first industrial gold mine, which produced a total of 666 kilograms (kg). Production of metallurgical-grade manganese ore decreased by about 11% to 3.6 million metric tons (Mt) from about 4.1 Mt in 2011. Reported production of crude petroleum decreased slightly by 3.6% to 88.3 million barrels (Mbbbl) from a revised 91.6 Mbbbl in 2011. Petroleum refinery products however, increased by about

20% to 9.9 Mbbbl from a revised 8.2 Mbbbl in 2011. Data on mineral production are in table 1.

## Structure of the Mineral Industry

Most of the mineral industry facilities in Gabon are privately owned, although the Government held minority interests in most mining operations. Table 2 is a list of major mineral industry facilities.

## Mineral Trade

Gabon's exports to the United States were valued at about \$1.9 billion in 2012 compared with \$4.6 billion in 2011. About 91% of these exports was crude petroleum, which was valued at \$1.7 billion, and about 3.6% was nonferrous metals, which were valued at \$67 million. Imports from the United States were valued at about \$319 million in 2012 compared with about \$204 million in 2011. These included nearly \$37 million worth of drilling and oilfield equipment, \$25 million worth of railway transportation equipment, \$7.8 million worth of excavating machinery, \$7.5 million worth of coal and other fuels, \$4.1 million worth of iron and steel products, and \$2.6 million worth of petroleum products. Gabon was the United States' 114th-ranked goods export market and the 67th-ranked supplier of imported goods. The country exported a total of 37.2 Mbbbl of crude petroleum and about 3.3 Mbbbl of petroleum refinery products to the world in 2012 (Office of the United States Trade Representative, 2013; Organization of the Petroleum Exporting Countries, 2013, p. 49; U.S. Census Bureau, 2013a, b).

## Commodity Review

### Metals

**Gold.**—The Bakoudou gold mine began operating during the first quarter of 2012. The mine, which was operated by Managem Group of Morocco (75%), had an annual gold production capacity of 1,400 kg and employed 400 people. The Government held the remaining minority interest (25%) in the mine, which was located about 600 kilometers (km) southeast of the capital city of Libreville. Managem also held a majority interest in the Eteke exploration project in Gabon for which it planned to conduct a scoping study in 2013. The areas of interest within Eteke included the Dango, the Dango-Massima, the Dango West Extension, and the Mobi Dango prospects (Managem Group, 2013, p. 27–28, 33; undated).

Other companies exploring for gold in Gabon included GoldStone Resources Ltd. of Jersey [United Kingdom] and Silver Bull Resources Inc. of Canada. GoldStone was in the process of completing drilling programs for its Ngoutou exploration concession area in east-central Gabon and for its Oyem exploration concession area in northern Gabon. Silver Bull was carrying out exploration activities at its Ndjole

concession east of Libreville (GoldStone Resources Ltd., 2012a, b; Silver Bull Resources Inc., 2012).

**Iron Ore.**—During the year, the Government decided to put on hold and reassess the contract for the development of the Belinga iron ore deposit, citing lack of progress in developing the project by China National Machinery and Equipment Import & Export Corp. (CMEC). CMEC had obtained the rights to the Belinga deposit in 2006 through a competitive bidding process in which Vale S.A. (formerly Companhia Vale do Rio Doce) of Brazil and Sinosteel Corp. of China had also participated. The commissioning of the project was dependent upon the development of major infrastructure to support mining operations, including the construction of a 560-km-long extension to the Trans-Gabon railway, which would be used to transport the ore from Belinga to Santa Clara Port, and the construction of two hydroelectric powerplants, which would supply electricity to the mine. The Government planned to conclude its audit in 2014 (Dittgen, 2011, p. 9–11; Bhal, 2012; Thomson Reuters, 2012).

Volta Mining Ltd. of Australia, through its 80% share in Volta Iron SA, was granted a license to explore for iron ore at the Mbombo project. The project is located southwest of the undeveloped Belinga iron ore deposit in northern Gabon about 25 km from the town of Booue. Volta's exploration license was valid for 3 years but could be renewed twice for an additional period of 3 years each time to a maximum of 9 years. The company was in the process of conducting an aeromagnetic survey of prospective areas within the project to further define its exploration targets. The project has access to the deepwater Port of Owendo by way of the Trans-Gabon railway and can also be accessed by road through the use of the N4 national highway. Volta planned to carry out a reconnaissance drilling program during the first quarter of 2013 (Volta Mining Ltd., 2013, p. 13–14).

**Manganese.**—Eramet International S.A. of France, which operated the Moanda Mine through its subsidiary Compagnie Minière de l'Ogooué S.A. (Comilog) reported that it did not meet its production target of 4 Mt for 2012 owing to the malfunctioning of loading equipment at Owendo Port and to technical problems with its rail transport facilities, which resulted in the loss of 4 weeks of production. The company continued to work on the development of the Moanda Metallurgical Complex (MMC), which it expected to have online by early 2014, and on the renewal of a segment of the Trans-Gabon rail network. The MMC, which would be located within the premises of the Moanda Mine, would include a metal production plant with a capacity to produce 20,000 metric tons per year (t/yr) of manganese metal and 65,000 t/yr of silicomanganese metal. Eramet was also in the process of building a mining and metallurgical school to train local engineers and technicians. About 98% of Moanda Mine employees were reportedly Gabonese nationals, and the opening of the MMC was expected to create 400 additional jobs (Eramet Group, 2013, p. 10, 12, 18–19, 47).

Citic Dameng Holdings Ltd. (DAMENG) of China through its subsidiary Compagnie Industrielle et Commerciale des Mines de Huazhou (CICMHZ), completed the construction of a 3.5-km-long road connecting the Bembele Mine site to the national road and of a segment of railway linking the Ndjole City

transfer station to the Trans-Gabon railway. The Bembele Mine is located in the town of Ndjole in northwestern Gabon's Moyen-Ogooue Province. In 2012, the mine produced a total of 447,000 metric tons (t) of manganese ore at an average grade of 30.46% manganese and a total of 326,000 t of manganese concentrate at an average grade of 32.07%. CICMHZ planned to export the manganese ore produced at Bembele to customers in China. The mine employed 200 people (Citic Dameng Holdings Ltd., 2013, p. 2, 36).

In early 2012, BHP Billiton and the Government of Gabon were working on the details of an agreement whereby BHP would develop a 300,000-t/yr manganese mine in Franceville. By yearend, however, BHP reported that the project would be placed under review owing to the company's inability to conclude key agreements with the Government. The details of these agreements were not disclosed (BHP Billiton, 2013, p. 35).

### *Industrial Minerals*

**Cement.**—HeidelbergCement Group of Germany, which held a 70.46% interest in Société des Ciments du Gabon (Cimgabon), was the country's only cement producer. The company's monopoly of the cement sector in Gabon could come to an end with the construction of a new cement plant by Dangote Cement of Nigeria, however. Dangote, through its subsidiary Dangote Industries Gabon S.A., announced plans to build a 1.5-million-metric-ton-per-year cement grinding plant. The plant, which was scheduled to be commissioned by the third quarter of 2014, would have the capacity to produce 3,000 metric tons per day of clinker. The project would also include the construction of a 30-megawatt-capacity coal-fired powerplant to supply electricity to the operation (Dangote Cement plc, 2013, p. 19; undated)

**Rare Earths.**—In addition to mining manganese in Gabon, Eramet explored for rare-earth elements at the Maboumine carbonatite complex. The deposit was reportedly also prospective for niobium, tantalum, and uranium. In 2012, the company was looking into the possibility of developing a hydrometallurgical process to mine these minerals. For this project, it planned to build a pilot plant about 50 km from Lambarene in 2015. Construction of the pilot plant was contingent, however, upon the return of positive laboratory test results from samples sent to France for analysis (Eramet Group, 2013, p. 39).

### *Mineral Fuels*

**Petroleum.**—In 2012, Gabon produced a total of 242,000 barrels per day (bbl/d) of crude petroleum compared with 251,000 bbl/d in 2011 and 252,400 bbl/d in 2010. The Organization of the Petroleum Exporting Countries estimated Gabon's total proven crude oil reserves to be 2 billion barrels. During the year, Gabon Oil signed its first petroleum production-sharing agreement with the Government. The agreement was for the operation of the Remboué II oilfield, which Switzerland-based Addax Petroleum had relinquished in 2009. GOC would hold an 80% interest in the oilfield and the Government would hold the remaining 20%. GOC managed

the Government's participation in 28 petroleum production blocks and 39 petroleum exploration blocks both onshore and offshore Gabon. A total of six active oil rigs were operating in the country (Gabon Oil Co., 2011a, b; 2012; Organization of the Petroleum Exporting Countries, 2013, p. 22, 25).

In January, the Government signed a letter of intent with SK Energy of the Republic of Korea for the construction of a new oil refinery to be located on Mandji Island, which is a peninsula located just outside of Port-Gentil. Port Gentil is the center of Gabon's petroleum industry. It hosts a deepwater port and the Gabonese Refining Co. (SOGARA) and is the country headquarters for several petroleum companies operating in the country. The new refinery will replace the aging SOGARA refinery. SOGARA was built in 1967 and was capable of processing only 9% of the petroleum produced in Gabon; the remaining 91% of production was exported. The planned new refinery would have a processing capacity of 50,000 bbl/d, which is more than twice SOGARA's current production of 21,000 bbl/d. At least one-half of the production, which was expected to be mostly diesel, would be consumed domestically and the other one-half was to be exported, mostly as heavy fuel oil for the European market. The cost of the project was estimated to be \$1 billion, and it was to be financed jointly by the Government of Gabon and SK Energy, through the support of the Korean International Cooperation Agency. OLAM International of Singapore was in charge of the construction of the refinery (Clotey, 2012; LeGabon.org, 2012).

## Outlook

Mineral sector reform and planned infrastructure investments through 2016 aimed at developing the country's port, railway, and road networks are likely to attract foreign direct investment to the Gabon. This investment, however, will be dependent upon the Government's ability to define the country's legislative framework clearly with regard to the mining sector through the enactment of the proposed new Mining Code. Although Gabon will soon benefit from new cement, gold, and manganese revenues, the petroleum sector is likely to remain the driving force of the economy in the short run. Planned infrastructure projects will likely increase consumption of construction materials, such as cement, crushed stone, and sand and gravel. The development of iron ore resources is likely to remain on hold beyond 2013 following the Government's decision to temporarily suspend the Belinga project.

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

Commodity <sup>2</sup>		2008	2009	2010	2011	2012
Cement and clinker:						
Cement, hydraulic <sup>3</sup>	metric tons	230,000	250,000	200,000	200,000	220,000
Clinker <sup>4</sup>	do.	190,000	200,000	160,000	160,000	160,000
Gold	kilograms	--	--	--	--	666 <sup>4</sup>
Manganese: <sup>5</sup>						
Metallurgical-grade ore, gross weight	thousand metric tons	3,248 <sup>r</sup>	1,992	3,201	4,070	3,637
Mn content of ore	do.	1,559 <sup>r</sup>	881	1,416	1,858 <sup>r</sup>	1,650
Natural gas, gross <sup>c</sup>	million cubic meters	187	-- <sup>r</sup>	-- <sup>r</sup>	-- <sup>r</sup>	-- <sup>r</sup>
Petroleum:						
Crude <sup>6</sup>	thousand 42-gallon barrels	87,454 <sup>r</sup>	86,724 <sup>r</sup>	92,126 <sup>r</sup>	91,615 <sup>r</sup>	88,330
Refinery products <sup>6</sup>	do.	6,607 <sup>r</sup>	4,891 <sup>r</sup>	6,570 <sup>r</sup>	8,249 <sup>r</sup>	9,928

<sup>c</sup>Estimated; estimated data are rounded to no more than three significant digits. <sup>r</sup>Revised. do. Ditto. -- Zero.

<sup>1</sup>Table includes data available through November 15, 2013.

<sup>2</sup>In addition to the commodities listed, artisanal diamond, artisanal gold, clay, crushed stone, and sand may also be produced, but information is inadequate to make reliable estimates of output.

<sup>3</sup>Includes cement produced from imported clinker.

<sup>4</sup>Represents production from the Bakoudou Mine only.

<sup>5</sup>As reported by the International Manganese Institute.

<sup>6</sup>As reported by the Organization of the Petroleum Exporting Countries.

TABLE 2  
GABON: STRUCTURE OF THE MINERAL INDUSTRY IN 2012

(Metric tons unless otherwise specified)

Commodity		Major operating companies and and major equity owners	Location of main facilities	Annual capacity
Cement		Société des Ciments du Gabon (Cimgabon) (HeidelbergCement AG through Scancem International ANS, 70.46%)	Cement-grinding plant at Owendo, south of Libreville	240,000.
Do.		do.	Cement-grinding plant at Franceville, southeastern Gabon	170,000.
Clinker		do.	Clinker plant at N'Toum, 40 kilometers east of Libreville	300,000.
Gold	kilograms	Managem Group, 75%, and Government 25%	Bakoudou Mine, 600 kilometers southeast of Libreville	1,400.
Do.	do.	Artisanal miners	Eteke region	300 to 700.
Manganese		Compagnie Minière de l'Ogooué S.A. (Comilog) (Eramet International S.A., 67.25%; Government, 25.4%; other, 7.35%)	Open pit mine at Moanda	4,000,000 ore, gross weight.
Do.		do.	Sintering plant	600,000.
Do.		Compagnie Industrielle et Commerciale des Mines de Huazhou (CICMHZ) [Citic Dameng Holdings Ltd. (DAMENG)]	Bembele Mine, town of Ndjole in Moyen-Ogooue Province	500,000 ore.
Petroleum:				
Crude	thousand 42-gallon barrels	China Petrochemical Corp. (Sinopec) through Addax Petroleum Corp., 92%	Remboue oilfield	NA.
Do.	do.	China Petrochemical Corp. (Sinopec) through Addax Petroleum Corp., 92.5%, and Tullow Oil plc, 3.75%	Obangue oilfield	1,800.
Do.	do.	do.	Tsiengui oilfield	1,800.
Do.	do.	China Petrochemical Corp. (Sinopec) through Addax Petroleum Corp., 31.36%; Vaalco Energy Inc., operator, 28.07%; Sasol Petroleum International, 27.75%; Sojitz Corp., 2.98%; PetroEnergy Resources Corp., 2.34%; Tullow Oil plc, 7.5%	Etame marine block, offshore: Avouma oilfield	2,400.
Do.	do.	do.	South Tchibala	NA.
Do.	do.	do.	Ebouri oilfield	NA.
Do.	do.	do.	Etame oilfield	6,570.
Do.	do.	Bowleven plc, 100%	EOV Block	NA.
Do.	do.	Maurel & Prom S.A., 100%	Banio	NA.
Do.	do.	Maurel & Prom S.A., 85%; AIC-Petrofi Ltd., 7.5%; Tullow Oil plc, 7.5%	Onal	NA.
Do.	do.	do.	Omko	NA.
Do.	do.	Perenco Group, 56.25%; Tullow Oil plc, 25%; Orange-Nassau Energie B.V. (18.75%)	Tchatamba Marin oilfield	NA.
Do.	do.	do.	Tchatamba West oilfield	NA.
Do.	do.	do.	Tchatamba South oilfield	NA.
Do.	do.	Royal Dutch Shell plc, 94.3%	Toucan	NA.
Do.	do.	Total Gabon S.A., 100%	Anguille	NA.
Do.	do.	do.	Gonelle	NA.
Do.	do.	do.	Torpille	NA.
Do.	do.	Total Gabon S.A., 57.5%	Avocette	NA.
Do.	do.	Total Gabon S.A., 50%	Baudroie Nord	NA.
Do.	do.	Total Gabon S.A., 47.5%, and Royal Dutch Shell plc, 52.5%	Rabi Kounga	NA.
Do.	do.	Total Gabon S.A., 40%, and Royal Dutch Shell plc, 60%	Atora	NA.
Do.	do.	Total Gabon S.A., 50%, and Vaalco Energy Inc., 50%	Mutamba Iroru	NA.
Do.	do.	Gabon Oil Co., 80%; Government 20%	Remboue II	NA.
Refinery products	do.	Société Gabonaise de Raffinage (Total Gabon S.A., 58%; Government, 25%; other, 17%)	Port Gentil	7,700.

Do., do. Ditto. NA Not available.