



2015 Minerals Yearbook

GABON [ADVANCE RELEASE]

THE MINERAL INDUSTRY OF GABON

By James J. Barry

In 2015, Gabon's real gross domestic product (GDP) increased at the slightly lower rate of 4% compared with 4.3% in 2014. The economy was largely dependent on world demand for the country's principal mineral export commodities manganese and petroleum, as well as timber. In 2015, the country ranked fourth among the world's leading producers of manganese, accounting for about 12% of world production. The country also ranked 10th among Africa's leading producers of crude petroleum, accounting for about 3% of Africa's crude petroleum production. Other nonfuel mineral commodities produced in the country included cement, clay, crushed stone, diamond, gold, manganese metal, natural gas, petroleum products, sand, and silicomanganese. Identified but undeveloped mineral resources included iron ore, lead, niobium (columbium), phosphate rock, platinum-group metals, tantalum, and zinc (International Monetary Fund, 2016a, p. 4, 36; 2016b, p. 174; Organization of the Petroleum Exporting Countries, 2016, p. 28; Société Équatoriale des Mines, 2016; Corathers, 2017).

Minerals in the National Economy

Starting on May 29, 2015, the mineral sector was governed by the country's new Mining Code, law No. 17/2014, which superseded law No. 05/2000. Under the new Mining Code, all mining activities and operations are covered except for hydrocarbons and water. The new Mining Code was enacted to guarantee the state's share in mining production; promote mining investments; provide incentives for investing in Gabon's mining industry; and ensure compliance with health, safety, and environmental rules. The Ministry of Mines is the Government agency responsible for the oversight of the mining industry, including the development of mining conventions with private interests. Under the new Mining Code, a single individual may hold no more than two exploration permits for diamond and no more than three exploration permits for all other mineral commodities. The Mining Code allows for variability in the duration of mining, depending on the size of the discovery; that is, licenses may be issued for 10 or 25 years and are renewable for 5 or 10 years, respectively. Mining must commence within 5 years of the signing of the mining convention (African Law & Business, 2015).

In September 2014, the country revised the Hydrocarbon Code by promulgating law No. 11/2014, which replaced former law No. 14/1982. The new Hydrocarbon Code regulates the processing of hydrocarbons and other downstream activities, as well as the exploration and production tax regime. Under the new Hydrocarbon Code, the state must hold a 20% interest in production-sharing contracts (PSCs); additionally, Gabon Oil Co. (GOC) has the option to purchase a 15% interest in PSCs for exploration and production, and exploration and extraction phases are given a set period of time. The law also sets the corporate tax rate at 35%, the value-added tax rate at 0%, gives

contract priority to companies incorporated in Gabon, and regulates gas flaring (Linklaters LLP, 2014).

In 2015, exports of crude petroleum and manganese were estimated to account for about 76% and 12% of the total value of exported goods, respectively. Exports of goods were estimated to account for about 43% of the total GDP. Gabon exported a total of 76.7 million barrels (Mbbbl) of crude petroleum in 2015 compared with 82.2 Mbbbl in 2014 and about 3.7 Mbbbl of petroleum refinery products in 2015 compared with about 2.8 Mbbbl in 2014 (International Monetary Fund, 2016a, p. 28; Organization of the Petroleum Exporting Countries, 2016, p. 52, 55).

Production

In 2015, production of metallurgical-grade manganese ore increased slightly to 4.2 million metric tons (Mt) from about 4.1 Mt in 2014. Silicomanganese production increased by about 400% to an estimated 20,000 metric tons (t) from an estimated 4,000 t in 2014. Reported gold production increased by about 29% to 1,301 kilograms (kg) from 1,012 kg in 2014. Cement production decreased by about 12% to an estimated 150,000 t from an estimated 170,000 t in 2014. Reported production of crude petroleum decreased by 1.5% to 83.2 Mbbbl from 84.4 Mbbbl in 2014. Production of petroleum refinery products was estimated to have decreased by about 2% to 7.4 Mbbbl. 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 contains a list of major mineral industry facilities.

Commodity Review

Metals

Gold.—The Bakoudou gold mine, which was operated by Ressources Golden Grams (a wholly owned subsidiary of Managem Group of Morocco) produced 1,301 kg of gold compared with 1,012 kg in 2014. The gold mine had an annual gold production capacity of 1,400 kg and employed 400 people. The Government held a 25% minority interest in the mine, which was located about 600 kilometers (km) southeast of the capital city of Libreville. Managem continued exploration work on the Eteke project in the Mouila region. Managem set a target date of 2018 to begin mining the estimated 22,000 kg of gold contained at Eteke (Managem Group, 2012, 2016; CDG Capital Bourse, 2015; Ambassade de France du Gabon, 2016).

Through the state-owned mining company Société Équatoriale des Mines (SEM), the country was attempting to develop four gold deposits and to capture a larger amount of the estimated

660 kg of gold produced by artisanal miners. SEM planned a drilling campaign at the Camp 6 project in Ogooue-Ivindo Province to update the site's resource estimate. SEM had other exploration activities underway at the Kolissen and Mavenza projects in the Moyen-Ogooue Province and the Lombo Bouenguidi project in Ogooue-Lolo Province (Mining Review, 2015; Ambassade de France du Gabon, 2016).

Iron Ore.—IronRidge Resources Ltd. (a subsidiary of Assore Ltd. of South Africa, DGR Global Ltd. of Australia, and Sumitomo Corp. of Japan) held exploration permits for the following three iron ore projects: Belinga Sud, Tchibanga, and Tchibanga Nord. The Belinga Sud permit covers an area of 1,976 square kilometers (km²) south of the Belinga iron ore deposit in the northeastern part of the country. The Tchibanga and Tchibanga Nord—adjacent permits located in southeastern Gabon—covered a total area of 3,376 km² and hosted the Mont Pele prospect. IronRidge continued exploration of the Tchibanga and Tchibanga Nord permits, including mapping, sampling, and completion of a ground-penetrating radar program to establish deposit depth. Additionally, IronRidge applied for another exploration license for the Tchibanga Sud site (IronRidge Resources Ltd., 2016, p. 2, 4–5).

In 2015, several iron ore projects were explored in Gabon. Apollo Minerals Ltd. of Australia entered into a joint venture with Zoradox Ltd. of Cyprus to explore the Kango North Iron Project. The Kango North Iron Project is located in Estuarie Province about 110 km from Libreville. Waratah Gabon S.A. (a wholly owned subsidiary of Waratah Resources Ltd. of Australia) held an exploration permit for the Mekambo-Est Iron Ore Project and was in the process of renewing the license. The Mebaga Iron Ore project, which was a direct-shipping iron ore project located in northern Gabon, was impaired by Keras Resources Plc of Australia, formerly Ferrex PLC, as a result of iron ore prices dropping as low as \$40 per metric ton (Apollo Minerals Ltd., 2015, p. 8; Waratah Resources Ltd., 2015, p. 9; Keras Resources Plc, 2016, p. 9).

Manganese.—ERAMET International S.A. of France, which operated the Moanda Mine through its subsidiary Compagnie Minière de l'Ogooué S.A. (Comilog), reported record production of 3.9 Mt of manganese ore in 2015, compared with 3.5 Mt in 2014. The increased production was attributed to progress made on both the mine and the Trans-Gabon railway. The railway was undergoing a 7-year modernization program that would increase the quantity of ore shipped on the 648-km track from the Moanda Mine to the Port of Owendo. The Moanda Metallurgical Complex (MMC) had the capacity to produce 20,000 metric tons per year (t/yr) of manganese metal and 65,000 t/yr of silicomanganese metal. In 2015, MMC completed its first full year of production of silicomanganese metal, producing about 20,000 t of silicomanganese. In February, a second plant, designed to produce manganese metal through electrolysis, was completed and produced 2,000 t of manganese metal for the year. The production was about 10% of annual capacity, as the company had been working to resolve problems with equipment and actual production did not commence until the second half of the year (Compagnie Minière de l'Ogooué S.A., 2016, p. 24–25; ERAMET Group, 2016a, p. 11; 2016b).

Citic Dameng Holdings Ltd. (DAMENG) of China, through its subsidiary Compagnie Industrielle et Commerciale des Mines de Huazhou (CICMHZ), operated the Bembele Mine. In 2015, manganese ore production decreased to 316,000 t at an average grade of 30.7% manganese compared with 2014 production of 591,000 t of ore at an average grade of 31.1%. Owing to the depressed steel market, CICMHZ temporarily halted production at the end of 2015 until the market improved. CICMHZ exported manganese ore produced at Bembele to customers in China and India. The company continued to make improvements to the roads between the Bembele Mine and the Ndjole transit station in order to complete the transportation logistic system from Bembele to the Port of Owendo (Citic Dameng Holdings Ltd., 2016, p. 38, 56, 58).

Industrial Minerals

Cement.—In 2015, Gabon's two cement plants produced at only 35% of capacity, resulting in an estimated production decrease of about 12%. The decreased production was largely attributable to downward price pressures imposed on the market from less expensive cement imported from China. Ciments de l'Afrique (CIMAF) had anticipated opening a new 500,000-t/yr cement plant in Owendo in August 2015; however, there had been no reports of the plant operating by yearend. The addition of the plant would increase Gabon's total cement capacity to more than 900,000 t/yr, giving the country the ability to meet domestic demand for cement, which was about 700,000 t/yr. CIMAF had begun an exploration study to determine if the limestone quarry was sufficiently large to reopen the nearby Ntoum plant, which had been closed since April 2014 (tables 1, 2; Oxford Business Group, The, 2015a, b).

Rare Earths.—In 2015, the company Maboumine, which was an indirect subsidiary of ERAMET, ceased development of the Maboumine rare-earth deposit, which was located about 50 km from Lambarene in Moyen-Ogooue Province. In addition to rare earths, the deposit was reported to contain niobium, tantalum, and uranium. ERAMET did not have sufficient revenue to continue financing the project. The company had planned to develop a hydrometallurgical process and a pilot plant to process and separate these minerals from the mined ore (ERAMET Group, 2014; Esteban, 2015).

Mineral Fuels

Petroleum.—In 2015, Gabon produced a total of 227,900 barrels per day (bbl/d) of crude petroleum compared with 231,300 bbl/d in 2014. The Organization of the Petroleum Exporting Countries estimated Gabon's total proven crude petroleum reserves to be 2 billion barrels. In 2015, Total Gabon S.A. (a subsidiary of Total S.A. of France), brought four more wells into production as part of the company's redevelopment of the Anguille field. In total, 18 of the 21 wells had been put into production, giving the Anguille field a total capacity of 20,000 bbl/d in 2015 (Organization of the Petroleum Exporting Countries, 2016, p. 22, 28; Total Gabon, S.A., 2016, p. 4).

Outlook

Gabon continued to show its commitment to diversifying its economy, particularly with the enactment of a new Mining Code. Given that the price of crude petroleum remained low through 2015, the Government is likely to continue to encourage investment in the country's other natural resources. Additionally, Gabon will soon benefit from new cement, gold, and manganese revenues, and there are still untapped petroleum resources that may be exploited. The potential development of the Belinga iron ore deposit and the planned development of the Maboumine rare-earth deposit by ERAMET will require significant investment in infrastructure and trained labor. Planned infrastructure projects will likely increase consumption of construction materials. Gabon faces several internal and external challenges to the successful diversification and growth of its mineral sector. Internally, although a lack of infrastructure and a trained labor force continues to be a limiting factor for investment and growth in the mining sector, the rehabilitation of the country's ports, railway, and road networks will be vital to mining sector growth. Externally, cyclical world commodity prices could hinder planned investment in the mineral sector.

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TABLE 1
GABON: PRODUCTION OF MINERAL COMMODITIES¹

Commodity ²	2011	2012	2013	2014	2015	
Cement and clinker:						
Cement, hydraulic ³	metric tons	225,700	200,000 ^{r,e}	170,000 ^{r,e}	170,000 ^{r,e}	150,000 ^e
Clinker ^e	do.	160,000	160,000	160,000	155,000	160,000
Gold ⁴	kilograms	--	666	1,136	1,012	1,301
Manganese: ⁵						
Metallurgical-grade ore, gross weight	thousand metric tons	4,070	3,637	4,297	4,080	4,184
Mn content of ore	do.	1,858	1,650	1,967	1,863	2,010
Manganese metal	metric tons	--	--	--	--	2,000
Silicomanganese	do.	--	--	--	4,000 ^e	20,000 ^e
Natural gas ⁶	million cubic meters	373	384	420	420 ^e	410 ^e
Petroleum:						
Crude ⁷	thousand 42-gallon barrels	91,615	88,330	85,447	84,425	83,184
Refinery products: ⁶						
Liquefied petroleum gas	do.	174	186	197	200 ^e	200 ^e
Gasoline	do.	819	862	913	915 ^e	900 ^e
Gas oil ⁸	do.	2,228	2,355	2,490	2,490 ^e	2,400 ^e
Kerosene	do.	224	240	255	255 ^e	250 ^e
Jet kerosene	do.	515	547	579	580 ^e	550 ^e
Residual fuel oil	do.	2,784	2,937	3,110	3,110 ^e	3,100 ^e
Total	do.	6,744	7,126	7,544	7,550 ^e	7,400 ^e

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

¹Table includes data available through July 1, 2016.

²In addition to the commodities listed, clay, crushed stone, diamond, gold produced by artisanal miners, and sand may also have been produced, but available information was inadequate to make reliable estimates of output.

³Includes cement produced from imported clinker.

⁴Represents production from the Bakoudou Mine only. Additionally, an estimated 660 kilograms of gold was produced annually by artisanal miners.

⁵As reported by the International Manganese Institute.

⁶As reported by the International Energy Agency.

⁷As reported by the Organization of the Petroleum Exporting Countries.

⁸Diesel fuel containing more than 0.001% sulfur.

TABLE 2
GABON: STRUCTURE OF THE MINERAL INDUSTRY IN 2015

(Metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Cement	Société des Ciments du Gabon S.A. (Cimgabon) [Ciments de l'Afrique (CIMAF), 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 Ressources Golden Grams (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., 63.7%; Government, 28.9%; Formang Holding, 7%; other, 0.4%)	Open pit mine at Moanda	4,680,000 ore, gross weight.
Do.	do.	Sintering plant	600,000.

See footnotes at end of table.

TABLE 2—Continued
GABON: STRUCTURE OF THE MINERAL INDUSTRY IN 2015

(Metric tons unless otherwise specified)

Commodity		Major operating companies and and major equity owners	Location of main facilities	Annual capacity
Manganese—Continued		Compagnie Industrielle et Commerciale des Mines de Huazhou (CICMHZ) [Citic Dameng Holdings Ltd. (DAMENG), 51%, and Ningbo Huazhou Mining Investment Co, 49%]	Bembele Mine, town of Ndjole in Moyen-Ogooue Province	500,000 ore.
Manganese metal		Compagnie Minière de l'Ogooué S.A. (Comilog) (Eramet International S.A., 63.7%; Government, 28.9%; Formang Holding, 7%; other, 0.4%)	Plant at Moanda	20,000.
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., 88.75%, and Tullow Oil plc, 3.75%	Obangue oilfield	1,800.
Do.	do.	do.	Tsienguï 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, including: 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.	Perenco Group, 100%	EOV Block	NA.
Do.	do.	Maurel & Prom S.A., 100%	Banio	NA.
Do.	do.	Maurel & Prom S.A., 80%; Government, 12.5%; Tullow Oil plc, 7.5%	Onal	NA.
Do.	do.	do.	Omko	NA.
Do.	do.	Perenco Group, 56.25%; Tullow Oil plc, 25%; Oranje-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	7,300.
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%, and Government, 20%	Remboue II	NA.
Refinery products	million cubic meters	Société Gabonaise de Raffinage S.A. (Total Gabon S.A., 58%; Government, 25%; other, 17%)	Port Gentil	8,800.
Silicomanganese		Compagnie Minière de l'Ogooué S.A. (Comilog) (Eramet International S.A., 63.7%; Government, 28.9%; Formang Holding, 7%; other, 0.4%)	Plant at Moanda	65,000.

Do., do. Ditto. NA Not available.