

# 2013 Minerals Yearbook

**CONGO (BRAZZAVILLE)** 

# THE MINERAL INDUSTRY OF CONGO (BRAZZAVILLE)

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The economy of the Republic of the Congo, also known as Congo (Brazzaville), was based primarily on the production of crude oil, which in 2013 was estimated to account for about 58% of the nominal gross domestic product. In 2012 (the latest year for which appropriate data were available), the oil industry accounted for about 74% of Government revenue, and mining, about 0.04%. International interest in the development of the nonfuel mineral resources of Congo (Brazzaville) has increased in recent years, and much of the focus of multinational mining companies was on the country's gold, iron ore, limestone, and potash resources (Extractive Industries Transparency Initiative, 2013, p. 9; International Monetary Fund, 2014, p. 20).

# **Production**

Most of the country's hydrocarbons were produced from offshore fields, but much of the natural gas produced was flared because of the lack of gas-gathering infrastructure. According to BP p.l.c., Congo (Brazzaville) ranked seventh in terms of the volume of crude oil production among African crude oil producers in 2013. Estimates of crude oil production in Congo (Brazzaville) for 2013 by BP were higher than data reported by the Ministère des Hydrocarbures.

Cement production was estimated to have increased in 2013 with the startup of the Forspak International Congo S.A.R.L. plant at Dolisie. Diamond production statistics obtained from the Kimberley Process Certification Scheme (KPCS) indicated that output increased by about 10% in 2013 compared with that of 2012 (table 1; Bouiti-Viaudo, 2014; BP p.l.c., 2014, p. 10; Kimberley Process Certification Scheme, 2014).

# **Structure of the Mineral Industry**

The mineral sector is under the jurisdiction of the Ministère des Mines et de la Géologie. Mining is regulated by the Code Minier (law No. 4–2005), which requires that a Congolese company operate exploitation licenses. Article 100 of the code entitles the Government to a free (carried) equity interest of not less than 10% in mining operations. Decree No. 2007–274 sets the conditions for prospecting, exploration, and exploitation of minerals, and Decree No. 2007–293 addresses quarrying issues. The Ministère du Tourisme et de l'Environnement reviews environmental assessments of mineral development projects. Congo (Brazzaville) was a participant in the KPCS and became a compliant country of the Extractive Industries Transparency Initiative in 2013 (Extractive Industries Transparency Initiative, 2013, p. 2).

Artisanal miners dominated the diamond and gold mining sectors. Small-scale domestic operations quarried construction materials, such as gravel, sand, and stone, although multinational cement companies had started to develop the country's limestone

resources and international construction companies had obtained a number of quarrying permits for sand and stone to support infrastructure construction projects. About 70 mining companies were exploring or prospecting for nonfuel minerals in Congo (Brazzaville). Much of the international mining companies' exploration activity was for gold, iron ore, and potash. A few mineral projects were at an advanced stage of development.

The Ministère des Hydrocarbures oversees activity in the hydrocarbon sector. The sector is regulated by the Code des Hydrocarbures (law No. 24–1994). Procedures for awarding oil and gas exploitation licenses are set out in Decree No. 2008–15. State-owned Société Nationale des Pétroles du Congo (SNPC) manages the Government's interest in petroleum production and refining and natural gas production and processing. International oil companies operate many of the oilfields (table 2).

## **Commodity Review**

#### Metals

Iron Ore.—Iron ore exploration took place primarily in the Invindo Massif area, which is located in the Cuvette-Ouest and the Sangha Departments in northwestern Congo (Brazzaville), and in the Massif du Chaillu area, which is located in the Lekoumou and the Niari Departments in southwestern Congo (Brazzaville).

In 2013, Core Mining Congo S.A.R.L., which was a subsidiary of Core Mining Ltd. of the United Kingdom, received a mining permit for the Avima project in the Sangha Department. Core Mining planned to begin iron ore production by 2015 at a rate of about 3 million metric tons per year (Mt/yr) of direct-shipping ore, which was expected to have a grade of more than 59% iron. The ore would be trucked to the Ogooue River at Booue, Gabon, and then barged to Port Gentil, Gabon, for shipment overseas (Core Mining Ltd., 2013, undated).

In 2013, Exxaro Resources Ltd. of South Africa acquired 100% of the issued shares of DMC Iron Congo S.A.R.L., which was developing the Mayoko-Lekoumou project. In mid-2013, the project, which is located in the Niari Department and included the Lekoumou, the Mayoko, and the Ngoubou-Ngoubou iron ore prospects, was placed on hold pending the finalization of the mining convention and the shipping agreements with the Port of Pointe Noire and the Chemin de Fer Congo-Océan railway system. The mining convention was expected to specify the royalty rate to be imposed on the mineral production, any foreign exchange controls that would apply to the proceeds of the sale of mineral production, other fiscal rights and responsibilities, taxation terms, and the stipulations for the company's access to infrastructure (Equatorial Resources Ltd., 2014b; Exxaro Resources Ltd., 2014).

In 2012, Equatorial Resources Ltd. of Australia completed an environmental and social impact assessment, and in 2013, a mineral resource estimate and a scoping study on the Mayoko-

<sup>&</sup>lt;sup>1</sup>Deceased.

Moussondji project in southwestern Congo (Brazzaville). Total indicated and inferred resources were 917 million metric tons (Mt) at a grade of 31.4% iron. Congo Mining Ltd., which was Equatorial Resources' domestic subsidiary, submitted a development plan to the Government for the Mayoko-Moussondji project. Congo Mining also signed convention agreements for the Moussondji-Fer Est and the Moussondji-Fer Ouest licenses and completed a drilling program on the Balondo prospect in Sangha Department (Equatorial Resources Ltd., 2014a, p. 1–9).

Mining Projects Development Congo S.A. (MPD Congo), which was a subsidiary of the joint venture of Glencore Xstrata plc of Switzerland and Zanaga Iron Ore Company Ltd. of the United Kingdom, continued work on the Zanaga iron ore project, which is located about 300 kilometers (km) northeast of Pointe Noire in Lekoumou Department. MPD Congo expected to complete a bankable feasibility study for the project in 2014 (Zanaga Iron Ore Company Ltd., 2014, p. 1).

Sundance Resources Ltd. of Australia significantly advanced the Mbalam-Nabeba iron ore project, which consisted of the Mbalam prospect in Cameroon and the Nabeba prospect in Sangha Department, Congo (Brazzaville). In 2013, a mining permit was issued for the Nabeba prospect. Sundance continued discussions with contractors concerning construction and financing proposals for port and rail infrastructure, evaluated a number of proposals for the funding and construction of an ore-processing plant, and continued negotiations for the sale of equity in the mine or the project and for iron ore take-or-pay contracts. The project was expected to have an iron-ore-production capacity of 35 Mt/yr (Sundance Resources Ltd., 2014, p. 1–5).

Equamineral S.A., which was a subsidiary of Equamineral Holdings Ltd. of Australia, continued exploration of the Oyabi permit in Cuvette-Ouest Department. Waratah Resources Ltd. of Australia announced its intent to divest its Congolese iron ore assets, which included the Okanabora exploration license in Cuvette-Ouest Department (Waratah Resources Ltd., 2014).

### **Industrial Minerals**

Cement.—In 2013, Société Nouvelle des Ciments du Congo (SONOCC) continued work on the expansion of the Loutete plant to 300,000 metric tons per year (t/yr) capacity from about 210,000 t/yr. In November, Forspak International Congo S.A.R.L. started production from its 300,000-t/yr-capacity cement plant at Dolisie (Service Économique de Brazzaville, 2012a, b; Kitina, 2014).

In 2014, Dangote Group of Nigeria expected to complete the construction of a planned 1.5-Mt/yr-capacity cement plant at Madingou, which is located about 190 km east of Brazzaville. Diamond Cement Congo S.A., which is a subsidiary of West African Cement S.A. of Ghana, was building a 600,000-t/yr-capacity cement plant at Mindouli, which is located about 100 km east of Brazzaville. Initial production was scheduled to begin in early 2015. Also in 2015, initial production was expected to begin from a planned 500,000-t/yr-capacity cement plant that Ciments de l'Afrique of Morocco proposed to build at

Makola, which is located about 5 km northeast of Hinda (Africa Impact Group, 2014; Myouanzi, 2014; Oye, 2014).

**Phosphate Rock.**—Cominco Resources S.A., which was a subsidiary of Cominco Resources Ltd. of the United Kingdom, continued work on the development of a mine near Hinda, which is located about 37 km northeast of Pointe Noire. A 2013 prefeasibility study estimated that the Hinda project's ore reserves were 433 Mt at a grade of 10.5% phosphorus pentoxide (P<sub>2</sub>O<sub>5</sub>). The study also projected a 26-year mine life, with the phosphate rock output of 4 Mt/yr upgraded to 32% P<sub>2</sub>O<sub>5</sub>. Cominco expected to complete a definitive feasibility study of the Hinda project in 2014. Initial production could begin as soon as 2016 with a positive investment decision (Cominco Resources Ltd., 2014, p. 18, 37).

**Potash.**—In 2013, MagIndustries Corp. of Canada secured financing for the development of the Mengo potash project and signed a number of construction and engineering contracts. MagIndustries started clearing and leveling the plant site for a proposed 1.2-Mt/yr-capacity processing facility. Initial production could begin as soon as 2016, subject to the availability of financing (MagIndustries Corp., 2014a, p. 2; 2014b, p. 1–5).

In 2013, Sintoukola Potash S.A., in which Elemental Minerals Ltd. of Australia held a 93% equity interest, was awarded a mining license for the Sintoukola potash project, which is located about 55 km northwest of Pointe Noire. The project's environmental and social impact assessment was approved by the Ministère du Tourisme et de l'Environnement. At midyear 2013, Elemental Minerals suspended work on the project's bankable feasibility study to concentrate on negotiations with Dingyi Group Investment Ltd. of Bermuda, which had proposed in April to acquire Elemental Minerals (Elemental Minerals Ltd., 2013a, b; 2014).

In February, African Potash Ltd. of Guernsey [United Kingdom] acquired 70% indirect interest in Société des Potasses et des Mines S.A., which held the Lake Dinga potash exploration permit. African Potash planned to start an exploration program at Lake Dinga in 2014. Holle Potash Corp. of Canada, through its subsidiaries Holle Potash African Holding Ltd. and Holle Potash (Republic of Congo) Ltd. of the United Kingdom, held 100% interest in Afrimines S.A. of Congo (Brazzaville). Afrimines expected to begin a drilling program on the Tchitondi potash and salt exploration permits in 2014 (African Potash Ltd., undated).

# Outlook

Despite the continued decrease in production from the older oilfields, the petroleum sector is expected to remain the cornerstone of Congo (Brazzaville)'s economy for the short-term future, in part because of new deepwater oilfields coming onstream. Crude oil output is expected to peak again in 2017, after which time oil production is projected to resume an annual decrease in the 2%- to 10%-per-year range. Multinational cement companies have begun to develop the country's limestone resources to produce cement. Congo (Brazzaville)'s cement production capacity is expected to be significantly increased in the next 3 to 4 years, and the country is likely to become a cement exporter. Development of iron ore deposits and the redevelopment of coastal potash deposits are expected

to lead to further diversification of the national economy and to begin to ease the country from its dependence on petroleum. The decrease in iron ore and potash prices in 2013, however, is expected to slow the progress of the iron ore and potash projects (Bousso, 2013; Stringer, 2014).

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CONGO (BRAZZAVILLE)—2013

 $\label{table 1} TABLE~1$  CONGO (BRAZZAVILLE): ESTIMATED PRODUCTION OF MINERAL COMMODITIES  $^{1,2}$ 

Commodity <sup>3</sup>		2009	2010	2011	2012	2013
Cement	metric tons	110,000	80,000	70,000	150,000	170,000
Diamond <sup>4</sup>	carats	68,000	381,242	76,548	51,588	56,495
Gold, mine output, Au content	kilograms	100	150	150	150	150
Liquid petroleum gas <sup>5</sup>	thousand 42-gallon barrels	2,469 4	1,300	1,400	1,400	1,300
Petroleum:						
Crude <sup>4</sup>	do.	99,348	107,000	108,000	99,000	88,338
Refined	do.	3,000	4,000 r	3,000 r	2,500 r	2,500

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<sup>&</sup>lt;sup>1</sup>Estimated data are rounded to no more than three significant digits.

<sup>&</sup>lt;sup>2</sup>Table includes data available through October 9, 2014.

<sup>&</sup>lt;sup>3</sup>In addition to the commodities listed, copper ore, crude construction materials (for example, clay, sand and gravel, and stone), lead ore, lime, limestone for cement, and zinc ore were produced, but available information is inadequate to make reliable estimates of output. Natural gas was also produced, but output was flared, reinjected, or vented.

<sup>&</sup>lt;sup>4</sup>Reported figure.

<sup>&</sup>lt;sup>5</sup>Includes butane and propane.

# TABLE 2 CONGO (BRAZZAVILLE): STRUCTURE OF THE MINERAL INDUSTRY IN 2013

(Thousand 42-gallon barrels unless otherwise specified)

Commodity Cement metric tons		Major operating companies and	Location of	Annual capacity <sup>e</sup> 300,000
		and major equity owners	main facilities	
Cement Do.	do.	FORSPAK International Congo S.A.R.L. Société Nouvelle des Ciments du Congo (SONOCC) (Société	Dolisie Loutete	210,000
D0.	do.	National Chinoisedes Travaux des Ponts et Chaussées, 56%,	Loutete	210,000
Copper	and Government, 44%)  do. Société de Recherche et d'Exploitation Minière S.A. (SOREMI) (Gerald Metals, Inc., 90%, and Government, 10%)		Grande Mines, Boko Songo	NA
Diamond	carats	Artisanal production	Kouilou, Lekoumou, Likouala, Niari, and West Cuvette Departments	400,000
Gold	kilograms	do.	Various locations	150
Liquefied petroleum gas Tota		Total Exploration & Production Congo, 53.5%; Chevron Overseas (Congo) Ltd., 31.5%; Société Nationale des Pétroles du Congo (SNPC), 15%	Nkossa platform, offshore	3,000
Petroleum:				
Crude		Eni Congo S.A., 90%	Awa/Paloukou field, offshore	4,000
Do.		Murphy Oil Corp., 50%; PA Resources AB, 35%; Société Nationale des Pétroles du Congo (SNPC), 15%	Azurite field, offshore	(1
Do.		Eni Congo S.A., 65%, and Société Nationale des Pétroles du Congo (SNPC), 49%	Djambala, Foukanda, and Mwafi fields, offshore	7,300
Do.		Congorep [Perenco Group, 51%, and Société Nationale des Pétroles du Congo (SNPC), 49%]	Emeraude field, offshore	8,000
Do.		Eni Congo S.A., 100%	Ikalou and Ikalou Sud fields, offshore	3,000
Do.		Eni Congo S.A., 65%, and Société Nationale des Pétroles du Congo (SNPC), 35%	Kitina field, offshore	15,000
Do.		Total Exploration & Production Congo, 65%, and Eni Congo S.A., 35%	Kombi, Libondo, Likalala Tchibeli, and Tchibouela fields, offshore	25,000
Do.		Eni Congo S.A., 75%	Kouakouala field, onshore	NA
Do.		Congorep [Perenco Group, 51%, and Société Nationale des Pétroles du Congo (SNPC), 49%], 65%, and Eni Congo S.A., 35%	Likouala field, offshore	5,000
Do.		Eni Congo S.A., 50%, and Total Exploration & Production Congo, 50%	Loango field, offshore	6,500
Do.		Eni Congo S.A., 85%	Loufika and Zingali fields, onshore	NA
Do.		Eni Congo S.A., 83%, and Tullow Oil plc, 11%	M'Boundi field, onshore	20,000
Do.		Total Exploration & Production Congo, 53.5%; Chevron Overseas (Congo) Ltd., 31.5%; Société Nationale des Pétroles du Congo (SNPC), 15%	Moho-Bilondo field, offshore	32,000
Do.		do.	Nkossa and Nsoko fields, offshore	18,000
Do.		Total Exploration & Production Congo, 55.25%; Eni Congo S.A., 29.75%; Société Nationale des Pétroles du Congo (SNPC), 15%	Sendji and Yanga fields, offshore	9,500
Do.		Total Exploration & Production Congo, 65%, and Eni Congo S.A., 35%	Tchendo field, offshore	3,000
Do.		CMS NOMECO Congo [Société Nationale de Recherche et d'Exploration Pétrolière, 50%; Perenco Group, 25%; Nuevo Congo Co., 18.75%; Kuwait Foreign Petroleum Exploration Co. (K.S.C.), 6.25%]	Yombo field, offshore	3,600
Do.		Eni Congo S.A., 65%, and Total Exploration & Production Congo, 35%	Zatchi field, offshore	7,600
Refined prod			Pointe Noire	7,600

<sup>&</sup>lt;sup>e</sup>Estimated; estimated data are rounded to no more than three significant digits. Do., do. Ditto. NA Not available. <sup>1</sup>Production ceased in 2013. Field abandonment underway.

CONGO (BRAZZAVILLE)-2013 13.5