



# 2006 Minerals Yearbook

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CONGO (BRAZZAVILLE)

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# THE MINERAL INDUSTRY OF CONGO (BRAZZAVILLE)

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The Republic of Congo, which is also known as Congo (Brazzaville), is located in western equatorial Africa. The economy of the country was based largely on the production of petroleum; Congo (Brazzaville) ranked eighth among African crude oil producers in 2006 (BP p.l.c., 2007, p. 8).

The petroleum sector was regulated by the Code des Hydrocarbures (law No. 24-1994). Mining was regulated by the Code Minier (law No. 4-2005). Congo (Brazzaville) was a member of the Gulf of Guinea Commission, which was an intra-Governmental organization dedicated to fostering regional cooperation in the oil sector. Other members of the Commission included representatives from Angola, Cameroon, the Democratic Republic of the Congo [Congo (Kinshasa)], Equatorial Guinea, Gabon, Nigeria, and Sao Tome e Principe.

## Minerals in the National Economy

The petroleum sector was estimated to account for 91% of the country's exports, 86% of Government revenues, and about 64% of the country's gross domestic product. In 2006, total merchandise exports were valued at \$6.4 billion,<sup>1</sup> of which exports of crude oil and liquefied petroleum gas were valued at \$5.8 billion. In 2005, total exports were valued at \$4.9 billion, of which exports of crude oil and liquefied petroleum gas were valued at \$4.3 billion. The increase in the value of exports was attributed to a combination of increased oil production and the increase in international crude oil prices. Official diamond exports effectively have been proscribed since 2004 when Congo (Brazzaville) was removed as a participant in the Kimberley Process. To discourage the trade in conflict diamond, Kimberly Process participant nations (which accounted for about 98% of the international diamond trade) were prohibited from trading diamond with nonparticipant nations (International Monetary Fund, 2007, p. 20, 23).

## Production

In addition to petroleum and natural gas, cement, clays, diamond, gold, lime, sand and gravel, and stone were produced in Congo (Brazzaville). The redevelopment of coastal potash and salt deposits was expected to result in the resumption of production in the near future. Potash production had ceased in 1977 after the underground Holle Mine flooded.

## Structure of the Mineral Industry

The mineral sector was regulated by the *Ministre des Mines, des Industries Minières et de la Géologie*. State-owned *Société Nationale des Pétroles du Congo* (SNPC) managed the

Government's interest in petroleum and natural gas. Subsidiaries of SNPC included *Congolaise de Raffinage* (CORAF), which operated the petroleum refinery, and *Société Nationale de Recherche et d'Exploration Pétrolière* (SNREP), which was SNPC's operations (exploration and production) company.

Total Exploration & Production Congo (a subsidiary of Total S.A. of France) was the major private operator in the petroleum sector of Congo (Brazzaville). Other oilfield operators included Agip Congo S.A. (a subsidiary of Eni S.p.A. of Italy), Likouala S.A. of Congo (Brazzaville), Zetah Maurel & Prom Congo S.A. (a subsidiary of Etablissements Maurel et Prom S.A. of France), and the Perenco Group of France and the United Kingdom.

In 2006, Afren plc of the United Kingdom acquired Heritage Congo Ltd. and Heritage's interest in the La Noubi license. Heritage's 25% interest in the Kouakouala A and B licenses was acquired by former joint-venture partners Burren Energy plc of the United Kingdom and Maurel & Prom.

PA Resources AB of Sweden acquired ADECO Congo BVI Ltd., which held 85% interest in the Marine XIV block. SOCO Exploration and Production Congo, which was a subsidiary of SOCO International plc of the United Kingdom, acquired 75% interest in the Marin XI block, in which SNREP held 15% interest and Africa Oil & Gas Corp, 10%. SOCO subsequently farmed out 18.75% of its interest to Lundin Petroleum AB and 18.75% interest to Raffia Oil S.A.R.L.

## Commodity Review

The increased international mineral commodity prices and the new mining law attracted the interest of international exploration companies to the mineral resources of Congo (Brazzaville). Additional activity in the petroleum sector was noted in 2006, as well as initial prospecting and reconnaissance-stage exploration for diamond and gold. Other mineral occurrences in the country included bauxite, cobalt, copper, iron ore, lead, manganese, nickel, niobium (columbium)-tantalum, peat, silver, tin, tungsten, and zinc (*L'Association "Investir en Zone Franc"*, undated).

## Metals

**Gold.**—Artisanal miners in the Kele-Mbomo, the Kouilou-Mayonbe, and the Mossendjo-Chaillu areas were responsible for most of Congo (Brazzaville)'s gold production. In 2005, Explo-Mine Ltd. of the Czech Republic completed a placer gold evaluation project. In 2006, *Compagnie Minière du Chaillu*, which was a subsidiary of Mexivada Mining Corp. of Canada, started prospecting on the Malambani permit in the Mayoko greenstone belt, which is located about 370 kilometers (km) northwest of Brazzaville.

**Magnesium.**—Magnesium chloride was expected to be an initial coproduct of the proposed potash plant of MagMetals Inc. that was to be located about 15 km from Pointe Noire in the

<sup>1</sup>Where necessary, values have been converted from Communauté Financière Africaine francs (XAF) to U.S. dollars (US\$) at the average rate of XAF527.7=US\$1.00 for 2005 and XAF522.8=US\$1.00 for 2006.

Kouilou region. In 2006, MagMetals, which was a division of MagIndustries Corp., continued to evaluate the development of a 72,000-metric-ton-per-year (t/yr)-capacity magnesium smelter, which was to be built adjacent to the potash plant, and planned to begin a scoping study of the smelter project in 2007. Initial magnesium metal production was not expected for 2 or 3 years after the start of the construction of the smelter (MagIndustries Corp., 2006).

### Industrial Minerals

**Diamond.**—Artisanal miners in the Kouilou, the Lekoumou, the Likouala, the Niari, and the West Cuvette regions were responsible for most of Congo (Brazzaville)'s diamond production. Terra Insight Corp., which was a subsidiary of CompuPrint, Inc. of the United States, was awarded a contract by Brazza Mining and Resources S.A.R.L. of Congo (Brazzaville) for the evaluation of kimberlite occurrences on the Mokabi permit in the Likouala area by interpreting remote-sensing data acquired by satellite.

**Potash and Salt.**—MagIndustries completed a positive Phase I feasibility study of the potash project on the Makola license area and subsequently initiated a bankable feasibility study (BFS) of the proposed 580,000-t/yr-capacity Kouilou potassium chloride plant. Completion of the BFS was expected in late 2007. MagMinerals Inc., which also was a division of MagIndustries, started a 12-well resource-definition drill program in the license area. The holes were completed as solution mining wells (MagIndustries Corp., 2006; 2007, p. 6-7).

### Mineral Fuels

**Natural Gas.**—Most of the country's hydrocarbons were produced from offshore fields. Most associated natural gas produced in Congo (Brazzaville) was flared because of the lack of gas-gathering infrastructure. Some of the natural gas produced, however, was diverted to be used as fuel at the Djeno power station, which was located south of Pointe Noire; some was reinjected to maintain hydrocarbon reservoir pressure;

and some was stripped of liquids (butane and propane) on the Nkossa offshore barge. MagMinerals proposed to acquire natural gas for use at its potash plant from companies that had previously flared their gas.

**Petroleum.**—New crude oil discoveries drilled by Total in 2006 included the Mobe Marine 2 prospect on the Moho-Bilondo permit and the Aurige Nord prospect on the Mer Très Profonde Sud license. Onshore, Maurel & Prom discovered oil on the Loufika prospect.

### Outlook

The petroleum sector was expected to remain the cornerstone of the country's economy for the immediate future. Test production of the Loufika Field is expected to begin to flow in 2007, initial production from the offshore Moho-Bilondo Field is expected in 2008, and the deepwater Azurite prospect is expected to begin production in 2009. In 2010, national production of crude oil is expected to peak at slightly more than 105 million barrels; however, SNPC projected that by 2013, national production would decline to about 55 million barrels as production exhausts the recoverable reserves of older oilfields (Société Nationale des Pétroles du Congo, 2007).

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TABLE 1  
CONGO (BRAZZAVILLE): ESTIMATED PRODUCTION OF MINERAL COMMODITIES<sup>1,2</sup>

Commodity <sup>3</sup>		2002	2003	2004	2005	2006
Cement	metric tons	--	--	--	100,000	100,000
Diamond	carats	25,000	30,000	50,000	50,000	50,000
Gold, mine output, Au content	kilograms	100 <sup>r</sup>	175 <sup>r</sup>	160 <sup>r</sup>	120 <sup>r</sup>	100
Lime	metric tons	390	390	400	400	400
Liquid petroleum gas, propane	thousand 42-gallon barrels	3,000	1,900	919 <sup>4</sup>	766 <sup>4</sup>	2,960 <sup>4</sup>
Petroleum:						
Crude	do.	94,170 <sup>4</sup>	81,646 <sup>4</sup>	82,069 <sup>4</sup>	92,550 <sup>4</sup>	93,261 <sup>4</sup>
Refined	do.	2,800	2,700	2,700	3,000	3,500

<sup>r</sup>Revised. -- Zero.

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

<sup>2</sup>Table includes data available through August 20, 2007.

<sup>3</sup>Crude construction materials (for example, clay, sand and gravel, and stone) were produced, but information is inadequate to make estimates of output. Natural gas is also produced, but output is flared, reinjected, or vented.

<sup>4</sup>Reported figure.

TABLE 2  
CONGO (BRAZZAVILLE): STRUCTURE OF THE MINERAL INDUSTRY IN 2006

(Thousand 42-gallon barrels unless otherwise specified)

Commodity		Major operating companies and and major equity owners	Location of main facilities	Annual capacity <sup>c</sup>
Cement	metric tons	Société Nouvelle des Ciments du Congo (Société National Chinoise des travaux des ponts et chaussées, 56%, and Government, 44%)	Loutete	250,000
Diamond	carats	Artisanal production	Kouilou, Lekoumou, Likouala, Niari, and West Cuvette regions	50,000
Gold	kilograms	do.	Various locations	100
Liquefied petroleum gas		Total Exploration & Production Congo, 51%; Chevron Overseas (Congo) Ltd., 20%; Société Nationale des Pétroles du Congo, 15%; Energy Africa Congo Ltd., 4%	Nkossa Field, offshore	3,000
<b>Petroleum:</b>				
Crude		do.	do.	25,000
Do.		Total Exploration & Production Congo, 65%, and Agip Congo S.A., 35%	Kombi, Likalala, Tchibeli, and Tchibouela Fields offshore	25,000
Do.		Zetah Maurel & Prom Congo S.A., 48.6%; Tacoma Resources Ltd., 30.6%; Energy Africa Congo Ltd., 11%; Société Nationale des Pétroles du Congo, 8.8%	M'Boundi Field, onshore	20,000
Do.		Agip Congo S.A., 35.75%; Société Nationale des Pétroles du Congo, 35%; Chevron Overseas (Congo) Ltd., 29.25%	Kitina Field, offshore	15,000
Do.		Agip Congo S.A., 65%, and Total Exploration & Production Congo, 35%	Zatchi Field, offshore	12,000
Do.		Total Exploration & Production Congo, 55.25%; Agip Congo S.A., 29.75%; Société Nationale des Pétroles du Congo, 15%	Sendji and Yanga Fields, offshore	9,500
Do.		Agip Congo S.A., 65%; and Société Nationale des Pétroles du Congo, 35%	Djambala, Foukanda, and Mwafi Fields, offshore	7,300
Do.		Congorep (Perenco Group, 51%, and Société Nationale des Pétroles du Congo, 49%)	Emeraude and Yombo Fields, offshore	6,500
Do.		CMS NOMECO Congo [Société Nationale de Recherches et Production, 50%; Perenco Group, 25%; Nuevo Congo Co., 18.75%; Kuwait Foreign Petroleum Exploration Co. (K.S.C.), 6.25%]	Youmbo Field, offshore	6,100
Do.		Likouala S.A., 65%, and Agip Congo S.A., 35%	Likouala Field, offshore	3,800
Do.		Total Exploration & Production Congo, 65%, and Agip Congo S.A., 35%	Tchendo Field, offshore	3,000
Do.		Zetah Maurel & Prom Congo S.A., 66.67%, and Tacoma Resources Ltd., 33.3%	Kouakouala Field, onshore	500
Do.		Société Africaine Oil Corp.	Pointe-Indienne Field, onshore	50
Refined products		Congolaise de Raffinage (Société Nationale des Pétroles du Congo, 100%)	Pointe Noire	7,400

<sup>c</sup>Estimated; estimated data are rounded to no more than three significant digits.

