THE MINERAL INDUSTRY OF

CONGO (BRAZZAVILLE)

By George J. Coakley

The Republic of Congo [Congo (Brazzaville)] is located in equatorial central Africa between the Democratic Republic of the Congo [Congo (Kinshasa)] and Gabon and has an area of 342,000 square kilometers (km^2). In 2000, the area supported a population of more than 2.83 million, with a gross domestic product per capita of $1,530, based on 1999 purchasing power parity data (U.S. Central Intelligence Agency, 2000, The world factbook 2000—Republic of the Congo, accessed February 26, 2001, at URL http://www.odci.gov/cia/publications/factbook/geos/cf.html). Following the implementation of a formal cease-fire between the Government and resistance forces in January, the civil war, which began in 1997 and significantly damaged the economy and the land-based infrastructure, appeared to be at an end. The economy continued to be based largely on crude oil. Oil exports in 1999 (the last year for which trade data were available) declined to $850 million from $1.3 billion in 1998; owing to the sharp increase in oil prices, however, 2000 revenues are expected to be considerably higher. The value of all exports in 1999 was $1.7 billion.

Government Policy and Legislation

Investment is governed by the Investment Code of 1992 and the Hydrocarbon Law 24/94 of August 23, 1994, which regulates the terms of production-sharing agreements. The Hydrocarbon Law reduced taxes on crude oil production to 12% from 17.5% with the state-owned Societe Nationale des Petroles du Congo (SNPC; formerly Hydro-Congo) participating in a 31% profit sharing on all production. Mining legislation is based on Decree No. 29/62 of June 1962, as amended by Decree No. 23/82 of July 7, 1982, and Decree No. 86/814 of June 11, 1986. In general, mining has been carried out by the state or through state-owned joint ventures. Prior to the breakout of the civil war in 1997, a new mining code was presented to the National Assembly and Senate for consideration but apparently was not acted on.

Commodity Review

Cement.—Scancem International ANS of Norway (55%) signed an agreement with the Government (45%) to reopen the Loutete cement plant near Brazzaville, which was damaged during the civil war. Scancem, which withdrew from the country in 1996, will establish a new company, Les Ciments du Congo, to run the plant. The Loutete factory had a production capacity of 250,000 metric tons per year (t/yr), or about 50% of domestic requirements. The balance was imported from Congo (Kinshasa) and Gabon (Daily Mail and Guardian, October 2, 1999, Business briefs—Congo cements Norwegian deal, accessed April 10, 2001, at URL http://www.mg.co.za/mg/za/archive/99oct/02oct-business.html).

Copper, Lead, and Zinc.—AfriOre Ltd. of Canada held exploration permits on the Boko Songo copper prospect and the Yanga Koubanza lead-zinc-copper prospect, both of which are about 200 kilometers (km) west of Brazzaville. Although the company was not active in the Congo during 2000, it continued to seek potential joint-venture partners. Prefeasibility studies by AfriOre had identified 5.5 million metric tons (Mt) of carbonate-hosted ore at a grade of 7.95% lead, 6.97% zinc, and 1.87% copper at a 14% lead-equivalent cutoff at Yanga Koubanza and 2 Mt at a grade of 4.5% copper at Boko Songho. The company also reported locating high-grade copper mineralization at four other drilled prospects (AfriOre Ltd., 2000, Base metals, accessed April 10, 2001, at URL http://www.afriore.ocm/metals.htm).

Gold.—In November, Arena Gold Resources Inc. of Canada signed an agreement, subject to completion of its due diligence evaluation, to acquire a minimum 15% interest in the Yangadou gold mine in the Sangha Region from S.E.M.I., S.A., which was a Congo (Brazzaville) corporation. S.E.M.I. was owned (70%) by United Gold Finance International (Arena Gold Resources Inc., 2000).

Magnesium.—Significant resources of magnesium in the Makola and the Youbi magnesium salt evaporite deposits in the Kouilou region were being evaluated for development by Magnesium Alloy Corp. (MAC) of Canada. The $514 million Kouilou project would produce 60,000 t/yr of primary magnesium metal and high-purity magnesium alloys; a 2004 startup was planned. As a byproduct of the magnesium operation, salt, potash, and possibly chlorine also would be produced. Magnesium metal is used in castings and wrought products and in aluminum-based alloys used in automobiles, packaging, and other applications. In November, MAC presented to the Government the results of a technical feasibility study conducted by Salzgitter Anlagenbau GmbH of Germany. The study was based on solution mining of the these large magnesium salt deposits, which contained primarily tachyhydrite (9.4% magnesium) and carnallite (8.8% magnesium), and the use of a proven magnesium-extraction technology that had been developed by the Russian National Aluminum and Magnesium Institute and the Ukrainian Titanium Institute (Magnesium Alloy Corp., November 21, 2000, Kouilou magnesium project progress report, accessed April 2, 2001, at URL http://www.magnesiumalloy.ca/press/001121.htm). In September, MAC signed an agreement with AES Sirocco Ltd. of the United States to conduct a feasibility study on the energy component of the Kouilou project. If the project financing is obtained, then AES will be responsible for the financing, construction, and operation of the electrical power plant (Magnesium Alloy Corp., September 12, 2000, AES joins Kouilou magnesium project as power partner, accessed April 2, 2001, at URL http://www.magnesiumalloy.ca/press/ 000912.htm). A solution-mining well field of approximately 5 km^2 would be sufficient to supply the magnesium-extraction plant for 20 to 25 years. The energyintensive extraction process will require approximately 120 megawatts of electrical power and up to 120 million cubic meters per year of natural gas. MAC had an option to develop a hydroelectric dam 75 km north of the proposed plant on the Kouilou River or to draw on excess power from the Inga Dam in Congo (Kinshasa). Discussions were also underway on developing local gas reserves for the project. A detailed description of the Kouilou project is available at the company website at URL http://www.magnesiumalloy.ca/project/index.html.

Petroleum.—In September 1999, the assets of the Elf Aquitaine Group of France were merged with TotalFina of France. During 2000, the new company TotalFinaElf S.A. was the major operator in the petroleum sector and had a 60% share in Congo (Brazzaville)'s total crude production of 265,000 barrels per day (bbl/d). TotalFinaElf was operator of the Haute Mer permit and held a 51% production sharing interest. Other partners included Chevron Corp. of the United States (30%), SNPC (15%), and Energy Africa Ltd. of South Africa (4%). TotalFinaElf operated eight oilfields, all but one offshore; the Nkossa Field, which was the largest, produced about 70,000 bbl/d and had remaining recoverable reserves of 500 million barrels (Mbbl) of oil. TotalFina Elf began producing at a rate of 40,000 bbl/d from the new Kombi and Likalala fields within the Pointe Noire Grand Fond permit and expected to invest $135 million to develop four other small fields by 2004. Total national reserves were reported to be 1.5 billion barrels of oil and more than 90 million cubic meters of natural gas. All gas output, however, was vented or flared owing to a lack of extraction and distribution infrastructure (U.S. Energy Information Administration, October 2000, Country analysis briefs—Congo (Brazzaville), accessed April 12, 2001, at URL http://www.eia.doe.gov/emeu/cabs/congo.html). TotalFinaElf held minority interest and was operator in two other deepwater exploration permit areas, the Mer Profonde Sud and Mer Profonde Nord (MPN), where it hoped to expand the successful drilling of recently discovered deepwater oilfields just to the south in Angolan waters. In May, it announced its first discovery, Andromede Marine-1, in nearly 1,900-meter-deep water within the MPN block. The Andromede Marine-1 field tested at the rate of 7,000 bbl/d of high grade oil (TotalFinaElf S.A., 2000). Ente Nazionale Idrocarburi (ENI) of Italy (30%) and ExxonMobil Corp. (30%) also held interests in the MPN block.

ENI, which was the second largest producer, accounted for 27% of total production, or about 67,000 bbl/d of oil from three oilfields within the Pointe Noire Grand Fond permit area. A fourth field, Tchibeli, started production in 2000. ENI had two oilfields under development. The Foukanda field, in which ENI held a 65% interest, was expected to be in production during 2001 at a peak rate of 14,000 bbl/d and at a cost of approximately $128 million. The Mwafi field contained 40 Mbbl of oil equivalent and was expected to cost $80 million. Production was expected to start at a rate of 6,150 bbl/d in 2001 and to increase to a peak of 13,850 bbl/d by 2002. ENI expected oil production to average 78,000 bbl/d between 2001 and 2004 (Ente Nazionale Idrocarburi, 2000, ENI fact book 2000—Exploration and production—West Africa, accessed April 1, 2001, at URL http://www.eni.it/english/notizie/rapporti/fact_00/2_exploration_00.pdf).

In March 2000, the Congolaise de Raffinage (CORAF) oil refinery (controlled by SNPC) resumed production following a 2-year closure that resulted from the civil war. CORAF had a design capacity of 21,000 bbl/d but had operated at only about half capacity prior to the war (Alexander's Gas and Oil Connections, 2000).

Outlook

The year 2000 saw the beginning of the long process of restoring the Government, establishing a national dialogue, adopting a new constitution, and the resettlement of more than 800,000 people displaced during the war. The sharp upturn in oil prices and related revenues to the state along with renewed efforts to finance a major magnesium development suggested that the minerals sector could be a catalyst for economic renewal of the country.

References Cited

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Major Source of Information

Ministère des Hydrocarbures et des Mines
Service des Mines et de la Geologie
B.P. 2124
Brazzaville, Republic of Congo
Telephone: (242) 83 58 73
Fax: (242) 83 62 43

TABLE 1
CONGO (BRAZZAVILLE): PRODUCTION OF MINERAL COMMODITIES 1/

Commodity 2/		1996	1997	1998	1999	2000 e/
Cement, hydraulic	thousand metric tons	43	20	--	--	20
Gold, mine output, Au content e/	kilograms	10	10	10	10	10
Lime e/	metric tons	390	390	390	390	390
Liquid petroleum gas (propane)	thousand 42-gallon barrels	75 r/	3,912 r/	4,384 r/	4,918	5,000
Petroleum, crude	do.	73,485 r/	85,424 r/	90,499 r/	93,951	96,700
Petroleum, refined 3/	do.	1,877	1,355	--	--	1,200

e/ Estimated. r/ Revised. -- Zero.

1/ Includes data available through April 2001.

2/ Natural gas is also produced, but all is vented or flared.

3/ Oil refinery ceased operations at yearend 1997 and reopened April 2000.