

# THE MINERAL INDUSTRY OF CÔTE D'IVOIRE

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The production of gold and diamonds predominated the mineral industry of Côte d'Ivoire in 1994. Primarily an agrarian economy, Côte d'Ivoire has a mineral industry that contributes less than 2% to the Nation's gross domestic product (GDP). The estimated 1993 GDP was \$21 billion, the last year for which data were available.<sup>2</sup> As of yearend 1994, the mining, exploration, and development of gold deposits were the primary focus for the minerals industry. The 50% devaluation of the Communauté Financière Africaine franc and concomitant social unrest continued to place pressure on the new Government. In an effort to stabilize the economy, financial assistance has been provided by the International Monetary Fund and the World Bank. Additionally, public sector expenditures were expected to be reduced in 1995. Côte d'Ivoire's primary exports are cocoa and coffee. Typically, mineral commodities account for only about 14% of the country's total exports. Approximately 84% of these mineral exports are refined petroleum products from imported stocks. Mineral resources in Côte d'Ivoire are considerable, particularly in variety, as is the geology that hosts these deposits. In addition to gold and diamonds, which are currently the targets of exploration, other minerals found in Côte d'Ivoire include cobalt, copper, ilmenite, iron ore, manganese, monazite, rutile, tin, and tungsten. (See table 1.)

The Government actively encourages the responsible development of the country's mineral resources. The basic mining law of Côte d'Ivoire was the Mining Code (Law No. 64-249) of July 3, 1964. In 1994, a newly drafted mining law had been presented to the parliament for examination, with approval expected in 1995. The new law was designed to attract new mining investment, expedite applications for exploration and concessions, and reaffirm the Government's ownership of subsurface resources.

Several amendments had been added through 1990 to the Petroleum Code (Law No. 70-849) of August 3, 1970. The Government recently reduced its income tax rate for the petroleum industry from 50% to 35% to encourage offshore exploration activities.

As of yearend 1994, an exploration permit was valid for 7 years, with one extension. Mining rights are in effect for the commercial life of an operation. In 1993, the value-added tax for extracted gold and diamonds had been reduced from 5% to 3%. No export tax exists for metals or ores.

The Government's Ministry of Mining and Energy holds the primary role of mineral development in Côte d'Ivoire. The

Ministry of Mining and Energy has 100% equity ownership in the parastatal (companies or agencies owned or controlled wholly or partly by the government) Société pour le Développement Minier (SODEMI). SODEMI promotes the exploration and exploitation of mineral resources other than hydrocarbons in the country. La Société Nationale d'Opérations Pétrolières de la Côte d'Ivoire (PETROCI) is the parastatal charged with managing the hydrocarbons sector.

A variety of foreign companies remained active in Côte d'Ivoire and include Australia's BHP Minerals, and Canada's Eden Roc Mineral Corp., Falconbridge Ltd., Hyder Gold Inc., Marshall Minerals Corp., and Trillion Resources Ltd. Additionally, Gencor of South Africa also was active in the country.

In Côte d'Ivoire, gold was predominantly mined by two foreign companies in joint ventures with SODEMI. The first company, Société des Mines d'Afema (SOMIAF), is an equity joint venture between SODEMI (32%) and Eden Roc Mineral Corp. of Canada (68%). Eden Roc Mineral Corp. was 58%-owned by Canada's Marshall Minerals Corp. SOMIAF operates the open pit Aniuri Mine, utilizing heap-leach recovery, 120 kilometers (km) east of Abidjan. Production commenced in 1992, with SOMIAF reporting output for 1994 at about 77.8 kilograms (kg) per month. Two additional open-pit operations will reportedly be developed in 1995. Exploratory drilling revealed greater gold reserves in 1994. SOMIAF reported gold reserves of 4.4 million metric tons (Mmt) averaging 2.9 grams per metric ton (g/mt) of oxide ore and 6.3 Mmt averaging 5.1 g/mt of sulfide ore. The second gold operation, another open pit gold mine 90 km southwest of Man and operated by Société des Mines d'Ity (SMI), has been in production since 1991. SMI has equity ownership by SODEMI (60%) and France's Cie. Française des Mines (40%). The lateritic ores are heap leached and contain 15 metric tons (mt) of gold with the ore averaging 7 g/mt. Artisanal gold activity exists in Côte d'Ivoire, but production figures and smuggling are clandestine and unreported. Additionally, diamond mining within the country is almost entirely artisanal.

Beginning in 1993, Canada's Trillion Resources Ltd. and Falconbridge Ltd. had signed a joint-venture agreement with SODEMI for a 3-year exploration program in the Biankouma nickel deposits in western Côte d'Ivoire. The equity venture breakdown is Falconbridge Ltd. (60%), Trillion Resources Ltd. (15%), and SODEMI (25%). Falconbridge Ltd. reported

in 1994 that the drilling program underway had revealed a total reserve of 110 Mmt of ore averaging approximately 2% nickel within 7 lateritic ore bodies. Of the total reserve, one of the deposits hosts about 59 Mmt averaging 2% nickel. Falconbridge Ltd. hoped to construct an open pit mine and ferronickel refinery by 1996.

Côte d'Ivoire's petroleum production has declined in recent years. However, according to Africa Energy and Mining of January 11, 1995, United Meridian Corp. of the United States was expected to continue with the development of the offshore Lion and Panthere oil and natural gas fields. Crude petroleum production of 20,000 barrels per day (bbl/d) by 1995, and 500 million cubic meters of natural gas by 1997

were expected from these fields. The natural gas will eventually supply a 165-megawatt gas turbine power plant outside Abidjan. Additionally, a consortium of French and U.S. companies, in conjunction with PETROCI, was continuing with the development of the offshore Foxtrot natural gasfield. Total throughput refining capacity at Côte d'Ivoire's sole petroleum refinery is 50,000 bbl/d.

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<sup>1</sup>Text prepared June 1995.

<sup>2</sup>Where necessary, values have been converted from Communauté Financière Africaine francs (CFAF) to U.S. dollars at the rate of CFAF555.20=US\$1.00.

TABLE 1  
COTE D'IVOIRE: PRODUCTION OF MINERAL COMMODITIES 1/ 2/

(Metric tons unless otherwise specified)

Commodity 3/		1990	1991	1992	1993	1994 e/
Cement 4/	thousand metric tons	500	500	510	500	500
Diamond e/ 5/	carats	12,000	15,000	15,000	15,000	15,000
Gold 5/	kilograms	20	1,100	1,500	1,500	1,500
<b>Petroleum:</b>						
Crude	thousand 42-gallon barrels	770	730	300	--	--
<b>Refinery products: e/</b>						
Motor gasoline	do.	1,800	1,800	1,800	1,800	1,800
Kerosene and jet fuel	do.	1,600	1,600	1,600	1,600	1,600
Distillate fuel oil	do.	3,700	3,700	3,700	3,700	3,700
Residual fuel oil	do.	2,800	2,800	2,800	2,800	2,800
Liquefied petroleum gas	do.	175	175	175	170	170
Other	do.	200	200	200	200	200
Total	do.	10,300	10,300	10,300	10,300	10,300

e/ Estimated.

1/ Previously published and 1994 data are rounded by the U.S. Bureau of Mines to three significant digits; may not add to totals shown.

2/ Includes data available through June 1995.

3/ In addition to the commodities listed, Côte d'Ivoire produces clays, stone, sand and gravel, and crushed granite for local construction purposes. Information is inadequate to make reliable estimates of output levels.

4/ Output based entirely on imported clinker.

5/ Does not include artisanal production smuggled out of the country.