THE MINERAL INDUSTRY OF

SENEGAL, THE GAMBIA, AND GUINEA BISSAU

By Thomas P. Dolley¹

Senegal

In 1994, a lack of sufficient infrastructure and significant foreign investment continued to hamper mineral sector development in Senegal. Though accounting for less than 2% of the gross domestic product (GDP), Senegal's mining industry contributed to the country's export earnings. Senegal's estimated GDP for 1993, the last year for which data were available, was about \$11.3 billion.² Phosphate rock, fertilizers, and phosphoric acid continued to dominate mineral industry production in Senegal in 1994.

Mining legislation in Senegal consisted of the Mining Code, Law No. 88-06, adopted on August 26, 1988. The Petroleum Code was based on Law No. 86-13 of April 14, 1986, with a revision in 1988. The investment code, Law No. 87-25 of July 30, 1987, augmented the existing mining legislation.

An unreported, but modest, amount of gold was produced in Senegal by artisanal miners. Australia's Paget Mining Ltd. paid \$250,000 in late 1993 to take a major option in the Sabodala gold prospect in Senegal. Under an agreement with France's Bureau de Recherches Géologiques et Minières (BRGM), Paget Mining Ltd. may acquire a 50.7% equity in Société Minérale Sabodala, the company that operated the gold concession. Paget also may acquire further options on the prospect from the Government. As of 1994, Paget indicated a measured resource of more than 2.8 million metric tons (Mmt) grading 3.7 grams per metric ton gold. Additionally, the greenstone belt hosting the deposit, which extends into Mali, has been a prolific gold producer for centuries. Paget estimated the project development costs to be \$18 million to sustain a 500,000 metric-ton-per-year mine producing 1,866 kilograms per year of gold.

Societe des Mines de Fer du Senegal Oriental (MIFERSO) was a parastatal (company or agency owned or controlled wholly or partly by the government) charged with the development of the Faleme iron ore deposits in the southeastern portion of Senegal. MIFERSO had equity ownership by the Government (28%), BRGM (24%), Germany's Krupp (24%), and AGEM of Canada (24%). The Government had stated a certified iron ore resource of 100 Mmt of hematite, with an estimated development cost of \$295 million. By yearend 1994, no mine or infrastructure

development had taken place at Faleme.

The Government was an equity partner in virtually all mining activities. The structure of Senegal's mineral industry was dominated by four principal companies. Compagnie Sénégalaise des Phosphates de Taïba mined phosphate. Société Sénégalaise des Phosphates des Thiès produced phosphate, attapulgite, and aluminum phosphate, reported as clinker. Industries Chimiques du Sénégal (ICS) operated a fertilizer complex with respective production capacities of 560,000 mt/a of sulfuric acid and 400,000 mt/a of phosphoric acid. Société Africaine de Raffinerie was equity owned by various foreign petroleum products distributors and the Government. The sole refinery near Dakar had the monopoly on all crude oil imports and refining. Petrosen was a parastatal delegated with mineral fuel development and regulation in addition to selling a small amount of natural gas. The mining industry of Senegal employed more than 2,500 persons.

Additional deposits of phosphate rock have been identified in northeastern Senegal with estimated reserves of 40 Mmt. These deposits were expected to remain unexploited under current phosphate market conditions. Other minerals identified by the Government included copper, diamond, diatomite, titanium, and uranium. Hydrocarbon production in Senegal was negligible; however, the petroleum geology of the country was not fully understood.

The Nation's railroad infrastructure consisted of 1,034 kilometers (km) of 1-meter-gauge track, all single line except for 70 km of double-track line from Dakar to Thiès. The major seaport was at Dakar. (See table 1.)

The Gambia

The Gambia had no significant mineral industry in 1994. The Gambian economy was dominated by agriculture and tourism; however, a military coup during the year interrupted revenue from those sectors. Clays for bricks, laterite, sand and gravel, and cockle shells were exploited for domestic construction needs. Other identified mineral resources in the Gambia included glass sand deposits and titaniferous sands.

Guinea-Bissau

Guinea-Bissau had no significant mineral industry in 1994. The country's economy was dominated by agriculture with some small-scale mining to meet domestic construction needs. Resources of bauxite and phosphate exist in the country, but were of low grade.

Major Sources of Information

Direction des Mines et de la Géologie B.P. 1238 Dakar, Senegal The Ministry of Economic Planning and Industrial Development, Central Bank Building Banjul, The Gambia

¹Text prepared Aug. 1995.

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

 ${\bf TABLE~1}$ SENEGAL: PRODUCTION OF MINERAL COMMODITIES 1/ 2/

Commodity 3/		1990	1991	1992	1993	1994 e/
Cement, hydraulic	metric tons	470,000	503,000	601,000	590,000	590,000
Clays: Fuller's earth (attapulgite)	do.	115,000	129,000	112,000	119,000	119,000
Petroleum:						
Crude	thousand 42-gallon barrels	8	4	4	4	4_
Refinery products:						
Gasoline	do.	2,520	2,120	787	780	780
Kerosene and jet fuel	do.	682	644	710	710	710
Distillate fuel oil	do.	2,060	1,370	3,000	3,000	3,000
Residual fuel oil e/	do.	1,500	1,300	1,000	1,000	1,000
Other	do.	32	55	52	50	50
Refinery fuel and losses	do.	209	193	217	210	210
Total e/	do.	7,000	5,690	5,770	5,750	5,750
Phosphate rock and related products:						
Crude:						
Aluminum phosphate e/	thousand metric tons	127	92	75	29	29
Calcium phosphate	do.	2,150	1,740	2,280	1,670	1,670
Manufactured:						
Aluminum phosphate, dehydrated	do.	91	66	54	21	21
Phosphoric acid	do.	228	302	288	274	274
Calcium phosphate-based fertilizers	do.	173	171	169	160	160
Other	do.	1	1	1	1	1
Salt	metric tons	92,000	102,000	110,000	117,000	117,000

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 Aug. 1995.

^{3/} In addition to the commodities listed, Senegal produced clays, sand and gravel, and stone for local construction purposes, limestone for cement, minor artisanal gold, and natural gas for electricity generation. Information is inadequate to make reliable estimates of output levels.