THE GAMBIA, GUINEA-BISSAU, AND SENEGAL

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THE GAMBIA

In 2002, mining continued to play a minor role in the economy of The Gambia. The principal mineral commodities produced were solely for domestic consumption and included clay, laterite, sand and gravel, and silica sand. Quartz sand deposits have been identified in Abuko, Brufut, and Darsilami in the Greater Banjul area in the west and in Mbankam and Bakendik to the north of The Gambia. Identified heavy-mineral sand resources that contain ilmenite, rutile, and zircon have been estimated to be about 900,000 metric tons (t) (Government of The Gambia, 2003§;[1] Mbendi Information Services (Pty.) Ltd., 2003§). The Gambia's estimated gross domestic product (GDP) (based on purchasing power parity) was $2.6 billion in 2002. As of July 2003, the country's population was estimated to be about 1.5 million (U.S. Central Intelligence Agency, 2003§).

The Geological Unit of the Department of State for Trade, Industry, and Employment is responsible for the administration of the mining sector.

In June, Carnegie Corporation Ltd. of Australia announced that it had entered into a financial and joint-venture agreement with Atlantic Mines to bring the 50,000-t zircon stockpile at Brufut into production. Under the agreement, Atlantic Mines will fund all costs associated with processing and delivering the stockpile material. Carnegie will receive $500,000 worth of shares in Atlantic and 50% of the gross proceeds of the sale of the zircon concentrate. Atlantic will receive reimbursement for all investment costs in the project and will have the option to acquire a 65% interest in the license. Atlantic also agreed to have a processing plant in operation by December (Africa Mining Intelligence, 2002; Carnegie Corporation Ltd., 2002).

The Gambia depended on imported petroleum products to meet its domestic demand. In 2002, the country experienced periodic petroleum shortages mostly owing to limited fuel storage capacity and a lack of foreign exchange. As a result, fuel rationing was implemented during the year (U.S. Energy Information Administration, 2003§). Amerada Hess Corporation of the United States and Fusion Oil and Gas plc of Australia finalized interpretation of the second two-dimensional (2D) seismic survey of the deepwater PPL block. In September 2002, the companies signed a letter of intent by which Amerada Hess will acquire 80% interest in Fusion's PPL exploration license. Fusion Oil will retain the remaining 20% interest. Under the agreement, Amerada Hess will fund all costs related to the acquisition and processing of three-dimensional (3D) seismic data scheduled for 2003 (Fusion Oil and Gas plc, 2002).

In October, the African Development Bank Group approved a $1 million grant to finance an energy study in The Gambia. The study was aimed at developing and promoting the use of renewable energy resources (wind and solar) for the generation of electricity (African Development Bank Group, 2002§).

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GUINEA-BISSAU

Mining did not play a significant role in the economy of Guinea-Bissau in 2002. Mineral production was limited to small-scale construction materials, such as clay, granite, limestone, and sand. Diamond and phosphate rock were among the most promising minerals in the country owing to their potential for economic development. Guinea-Bissau's estimated GDP (based on purchasing power parity) was $1.1 billion in 2002. As of July 2003, the country's population was estimated to be about 1.4 million (U.S. Central Intelligence Agency, 2003§).

[1]References that include a section mark (§) are found in the Internet References Cited sections.

The Ministry of Natural Resources and Energy is responsible for the administration of the mining sector. The Mines and Minerals Act allows a maximum lease size of 10,000 hectares (ha) for exploration and mining, an unlimited area for prospecting licenses, and 1 to 4 ha (contiguous) for artisanal mining. Mining leases are valid for 25 years and can be automatically renewed upon application. Prospecting licenses are granted for 2-year periods with unlimited renewals.

In 2002, Champion Resources Inc. of Canada (CRI) continued its exploration program to test for diamond potential in Guinea-Bissau. The exploration program, which started in 2001, yielded positive results, which suggested that kimberlite and/or lamproite rocks exist within the study area. In 2002, company's efforts were aimed at locating the kimberlite/lamproite source rocks and determining if these were diamond bearing. CRI was granted the exclusive right to evaluate and explore Guinea-Bissau's mineral potential (excluding bauxite and oil and gas) on January 15, 1997. The exclusive license was granted for a period of 2 years. On June 7, 1998, the company invoked the force majeure clause of its agreement owing to civil and political unrest in the country. The company rescinded the notice of force majeure on October 15, 2000, and, consequently, was required to complete the 2-year reconnaissance project by April 15, 2001. In January 2001, CRI was granted a 1-year extension on the obligation. In February 2002, the company was granted another 1-year extension to April 5, 2003 (Champion Resources Inc., 2003, p. 1, p. 14).

CRI continued to seek a partner to develop its 100% owned Farim phosphate deposit. During the year, the company delivered samples of the Farim ore to an established international phosphate producer (not identified) to run pilot-scale test work to produce phosphoric acid. Following favorable test results, CRI began discussions with a North American mining company (not identified) and the phosphate producer with the objective of forming a consortium to develop the Farim project. CRI extended discussions to include an American fertilizer producer (not identified), which was performing independent-check test work on the Farim ore to confirm its level of offtake interest. Resources at Farim have been estimated to exceed 166 million metric tons (Mt) at a grade of about 29% phosphorus pentoxide (P_2O_5), which includes 37 Mt at a grade of about 31% P_2O_5 scheduled for the first 15 years of mine life. The total life of the mine was estimated to be 25 years. CRI's concession for exploration was converted into a mining lease in 1999 following the enactment of the new Mines and Minerals Act. On May 25, 2000, the mining lease was converted into four mining leases that must comply with the size limitations of leases under the new Act. The company also held a 2-year prospecting license that will end on May 25, 2004 (Champion Resources Inc., 2003, p. 1, p. 14).

In 2002, Premier Oil plc of the United Kingdom continued exploration of the Sinapa prospect offshore Guinea-Bissau. The first exploration well, Sinapa-1, was plugged and abandoned with oil shows after two attempts to reach the target. Premier, however, planned to retain its acreage in Guinea-Bissau and was in the process of reviewing seismic data on its holdings to decide on future drilling plans. The company planned to drill two exploration wells on the acreage during the second half of 2003. Petroguin, Guinea-Bissau's national oil company, was completing arrangements to offer the remaining 11 offshore blocks to prospective investors (African Energy, 2002; U.S. Energy Information Administration, 2003§).

In June 2002, Amerada Hess acquired 68% interest in the Croix du Sud block. Agence de Gestion et de Cooperation, which was established in 1995 for the joint development of maritime resources by Guinea-Bissau and Senegal, held a 12% interest in the block; the remaining 20% interest was held by Fusion Oil (U.S. Energy Information Administration, 2003§).

All petroleum products in Guinea-Bissau were imported. Fuel products were distributed by Distribudora de Combustiveis e Lubrificantes and Petrogal, which was a Portuguese oil company that operated in Bissau. The Government-owned Instituto Nacional de Energía was responsible for the generation and transmission of electricity.

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SENEGAL

Phosphate rock production and gold and petroleum exploration continued to dominate Senegal's mineral sector activity in 2002. The country's economy was dominated by agriculture (mostly subsistence crops and groundnuts), fishing, livestock, and phosphate processing. The Government of Senegal planned to increase export earnings by reducing raw phosphate exports and increasing exports of domestically processed phosphates in the form of fertilizers. Senegal's estimated GDP based on purchasing power parity was $16.2 billion in 2002. Exports, which consisted mainly of cotton, fish, peanuts, petroleum products, and phosphate rock, were valued at $1.15 billion. The country's principal export partners were India (18%), France (15.6%), Italy (9%), and Mali (5.9%) (Organisation for Economic Co-operation and Development, 2003§; U.S. Central Intelligence Agency, 2003§). In January, floods that were triggered by heavy off-season rains affected the northern and northwestern parts of the country. Authorities reported 28 deaths, more than 179,000 persons affected, and the loss of about 470,000 head of livestock (Center for International Disaster Information, 2002§). As of July 2003, Senegal's population was estimated to be about 10.6 million (U.S. Central Intelligence Agency, 2003§).

Mining in Senegal is regulated by the Ministère des Mines, de l'Energie et de l'Hydraulique. The Direction des Mines et de la Géologie is responsible for the mining sector, and the Direction de l'Energie is responsible for the energy sector. Senegal's

Mining Code provides the following types of mining titles: an exploitation permit, an exploration permit, a mining concession, and a prospecting permit. Exploitation permits are granted for 5 years and can be renewed for an additional 5 years. Exploration permits are granted for a period of 4 years and can be renewed twice; each renewal is for 3 years. Mining concessions are granted for a maximum of 25 years and can be renewed for an additional 25 years. Prospecting permits are granted by the Director of Mines on areas not covered by exploration or exploitation permits. The petitioner for an exploration permit must enter into a mining agreement with the Government, which is negotiated on a case-by-case basis (Mining Journal, 2002).

Hydrocarbon exploration and production is regulated by law No. 98-05 of January 8, 1998. Under the law, a hydrocarbon prospecting authorization may be granted in areas not covered by a hydrocarbon exploitation license or a service contract for a term not to exceed 2 years. Several prospecting authorizations may be granted simultaneously in the same area. The prospecting authorization does not confer to its holder any right or privilege as to the acquisition of a hydrocarbon exploitation license or a service contract or for the extraction or disposal of any hydrocarbons that may be discovered during the prospecting work. A hydrocarbon exploration permit may be renewed twice by decree for a duration not to exceed 3 years. The second renewal period may be extended by decree for the duration necessary for the completion of the evaluation of a discovery. The holder of the permit may be granted, under the conditions set forth in the convention, a holding period not to exceed 3 years for liquid hydrocarbons and 8 years for gaseous hydrocarbons. The holder of an exploration permit may be authorized, if requested, to exploit the producing wells on a temporary basis for a maximum period of 2 years. The hydrocarbon exploitation concession is granted by decree and confers its holder the exclusive right to carry out all the petroleum operations. The hydrocarbon exploitation concession is granted for a term not to exceed 25 years, which may be extended by decree for a maximum period of 10 years and is renewable once (Société des Petroles du Senegal, 2003§).

Gold production in 2002 was 600 kilograms. Significant reserves of gold have been reported at Sabodala within the Sabodala belt. Randgold Resources Ltd., which had signed an exploration convention with the Government of Senegal in 2001, concluded the exploration work at the Kanoumering property south of the Sabodala Mine. As a result, three promising gold targets were identified in the region. New works were focused on developing mineralization models and followup field programs. The company planned to spend about $7 million to $10 million per year on exploration during the next 4 years (African Mining, 2002a, b; Mining Journal, 2002).

IAMGOLD Corp. of Canada continued exploration work on the Bambadji and Daorala-Boto permits in eastern Senegal. Five separate gold showings and geochemical and geophysical targets at Daorala-Boto were tested by core, reverse circulation, and rotary air blast drilling in 2002. The company announced that only two of the five drill targets provided encouraging results. The two showings were scheduled to be tested by further drilling during the first half of 2003. Testing at Boto 5, which had provided the best drill results in previous campaigns, showed no significant mineralization. The drilling programs were not completed owing to the onset of the rainy season in July (IAMGOLD Corp., 2002, 2003; Afrol News, 2002§).

In June, IAMGOLD conducted a drilling program to test other geochemical and geophysical targets at the Daorala-Boto permit. A new gold showing hosted in an iron-oxide-rich sediment and granitoid environment was outlined within the permit. Followup drilling was scheduled for 2003. IAMGOLD invested of $1.1 million on exploration in Senegal in 2002 (IAMGOLD Corp., 2003).

In October, Fortesa International plc. of the United States began natural gas production from the Gadiaga Development Area. Production at Gadiaga totaled about 56,600 cubic meters per day (reported as 2 million cubic feet per day). Fortesa held a 70% interest in Gadiaga; the remaining 30% was held by Société des Petroles du Senegal, which was Senegal's national oil company. Fortesa applied for a license for the adjoining Kayar offshore field. Senegal's natural gas reserves, which were estimated to be about 3 billion cubic meters (reported as 106 billion cubic feet), are located primarily onshore (Schlumberger Ltd., 2002§; U.S. Energy Information Administration, 2003§).

Australian companies Roc Oil Co. Ltd. and Woodside Petroleum Ltd. decided to let the production-sharing contract for the Casamance blocks I, II, and III offshore Senegal lapse when its term expired on December 31, 2002. The decision was made after reprocessing 3,000 kilometers (km) of 2D seismic data and carrying out a 1,500-km 2D seismic survey during the past 3 years (Roc Oil Co. Ltd., 2002; U.S. Energy Information Administration, 2003§).

An international tender to seek a new investor willing to acquire a 51% interest in Senegal's national electricity company, Societe Nationale d'Electricite (SENELEC), was announced in July 2001. Vivendi Environnement of France was the company selected. The privatization, however, came to a halt in 2002 following Vivendi's inability to raise the initial $59.3 million required to acquire SENELEC's equity. As a result, Vivendi's takeover was cancelled and talks began with AES Corporation of the United States. AES was also unable to raise the required capital, and the Government announced the end of the privatization process in July 2002. The World Bank had disbursed the final installment of its energy sector adjustment credit to Senegal in December 2001. The $45 million installment was to be used to support the privatization process of SENELEC before management was to be handed over to Vivendi. SENELEC was responsible for generating, transmitting, and distributing the majority of Senegal's electricity (Africa Energy Intelligence, 2002a-c).

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TABLE 1
THE GAMBIA AND SENEGAL: PRODUCTION OF MINERAL COMMODITIES [1]

(Thousand metric tons unless otherwise specified)

Country and commodity		1998	1999	2000	2001	2002
THE GAMBIA[2]						
Clay		1,200 e	1,520	1,960	2,000 e	2,000 e
Silica sand	metric tons	270	173	170	170 e	170 e
SENEGAL[3]						
Basalt[4]		NA	NA	NA	NA	116
Cement, hydraulic		1,000 e	1,000	1,000	1,000 e	2,150
Clay[4]		NA	NA	NA	NA	19
Clays, Fuller's earth (attapulgite)		80 e	136	131	130	176
Gold[e, 5]	kilograms	550	550	550	550	600 [6]
Laterites[4]		NA	NA	NA	NA	112
Limestone[4]		NA	NA	NA	NA	1,461
Natural gas[e]	thousand cubic meters	56,000	56,000	56,000	56,000	3,368 [6]
Petroleum:[e]						
Crude oil	thousand 42-gallon barrels	1	1	1	1	--
Refinery products	do.	6,000	6,000	6,000	6,000	6,000
Phosphate rock and related products:						
Calcium phosphate-based fertilizers		224 r	178 r	155 r	203 r	201
Crude rock:						
Aluminum phosphate		20 e	31	182	190 e	4
Calcium phosphate		1,478	2,000	2,000	1,700 e	2,000
Phosphoric acid		333 r	299 r	295	359 r	581
Sand[4]		NA	NA	NA	NA	860
Salt		139	130	130	130	130 e

[e]Estimated; estimated data are rounded to no more than three significant digits. [r]Revised. NA Not available. -- Zero.

[1]Table includes data available through March 4, 2004.

[2]In addition to the commodities listed, The Gambia also produced a variety of construction materials (laterite, sand, and shell), but information is inadequate to make reliable estimates of output levels.

[3]In addition to the commodities listed, Senegal also produced sand and gravel, and stone for local construction purposes and limestone for cement, but information is inadequate to make reliable estimates of output levels.

[4]Numbers converted from cubic meters to metric tons. Specific gravity, in grams per cubic meter--basalt, 2.8; clay, 2.55; laterites, 2.55; limestone, 2.6; and sand, 2.6.

[5]Government estimate of unreported production of artisanal gold.

[6]Reported figure.

TABLE 2
SENEGAL: STRUCTURE OF THE MINERAL INDUSTRY IN 2002

(Thousand metric tons)

Commodity	Major operating companies and major equity owners	Location of mine facilities	Annual capacity
Cement	Les Ciments du Sahek S.A. of Senegal (private, 100%)	Kirène plant	600
Do.	Société Ouest Africaine des Ciments (private, 100%)	Rufisque plant	1,600
Phosphate rock	Compagnie Senegalaise des Phosphates de Taiba (Government, 100%)	Taiba Mine	2,000
Petroleum products	Société Africaine de Raffinage (private, 100%)	Dakar refinery	1,000