



2005 Minerals Yearbook

ANGOLA

THE MINERAL INDUSTRY OF ANGOLA

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The Republic of Angola, which is located in southern Africa, is bordered by the Atlantic Ocean to the west, Namibia to the south, the Democratic Republic of the Congo [Congo (Kinshasa)] to the northeast, and Zambia to the east. In 2005, the population was estimated to be about 11.2 million and was growing at an estimated rate of about 1.9%. The country's total land area is about 1,246,700 square kilometers (km²) and includes the enclave of Cabinda in Congo (Kinshasa) (U.S. Central Intelligence Agency, 2005^{§1}). Angola's estimated gross domestic product (GDP) based on purchasing power parity was about \$43.4 billion in 2005, and the per capita GDP based on purchasing power parity was about \$2,800 for the same period. Angola's mineral industry was dominated by diamond and petroleum production. Petroleum production alone accounted for about 51.7% of the GDP, 96% of exports, and 80% of Government revenues (International Monetary Fund, 2006[§]; U.S. Department of State, 2006[§]).

Government Policies and Programs

In 2005, Angola continued to recover from 27 years of civil war. According to the U.S. Department of State, the Angolan Government estimated that about 4.7 million people were internally displaced by the civil war and that since 2002, about 300,000 of the 450,000 externally displaced had returned to the country. National elections for the presidency and for deputies to the National Assembly were scheduled to be held in September 2006 (U.S. Department of State, 2006[§]).

The Ministério de Geologia e Minas is the Government entity responsible for the negotiation of mineral rights contracts, for ensuring the application of mining laws, and for conducting geologic surveys. All mineral rights in Angola belong to the State and all mining and prospecting contracts must be approved by the Council of Ministers (The Diamonds and Human Security Project, 2005). *Corpo Especial de Fiscalização y Segurança de Diamantes* was the Government agency accountable for oversight of the diamond sector; responsibilities included gathering information and tracking exploration, mining, and sales activities of companies in the Angolan diamond industry (The Diamonds and Human Security Project, 2005). *Empresa Nacional de Diamantes de Angola E.P. (Endiama)*, which was the Government-owned diamond company, was responsible for administrating and regulating the diamond sector and was a partner in all diamond ventures. Endiama's subsidiaries included *Sociedade de Comercialização de Diamantes de Angola (Sodiam)*, which was in charge of the marketing, sale, and trade of all diamond produced in Angola and the entity responsible for Kimberley Process compliance; and *Endiama Prospecção e Produção S.A.R.L.*, which oversaw all Endiama's mining and prospecting interests. *Sociedade Nacional de Combustíveis*

de Angola (Sonangol) was the Government-owned company responsible for petroleum exploration and production.

The Government continued with its plan to put an end to informal diamond mining by incorporating artisanal miners into groups that would operate under licenses issued by Endiama. According to the Republic of Angola Embassy in the United Kingdom, about 270,000 foreign nationals involved in illegal diamond mining in the Provinces of Bie, Lunda Norte, Lunda Sul, and Malanje were deported between April 2004 and February 2005. Most of the illegal miners were from Congo (Kinshasa) but also included foreign nationals from other West African countries. The Congolese miners, who had dominated the artisanal sector since the 1990s, had been brought into the country by the National Union for the Total Independence of Angola (UNITA) rebel forces. The Government estimated that an additional 20,000 to 30,000 illegal miners still remained in these areas, in particular in Lunda Norte. Diamond as well as computers, diving suits, electrical pumps, generators, and radios were seized during "Operação Brilhante" (the name that was given to the Government operation to deport these miners) (Republic of Angola Embassy in the United Kingdom, 2005a). The areas from which foreign nationals were forced out were being reoccupied by Angolan *garimpeiros* (the name given to small-scale or artisanal miners). According to The Diamonds and Human Security Project's (DHSP) 2004 annual review on the diamond industry of Angola, nongovernmental organizations had documented death, rape, the forced administration of emetics and laxatives to find diamonds swallowed by miners, forced marches across the border, and the bundling of illegal aliens onto airplanes without their possessions during the execution of *Operação Brilhante*. According to the report, diamond antismuggling initiatives taken by the Government since 2000 have included the training of a specialized diamond squad, gathering intelligence on smuggling rings, and stopping smugglers at the airport. In March 2005, the national police announced that new specialized units were to be created to fight illegal diamond mining (The Diamonds and Human Security Project, 2005, p. 8, 11).

In February 2005, the Government of Angola signed a series of cooperation agreements with China on economic and technical cooperation, energy resources, infrastructure, and minerals. In addition, Sonangol and China Petroleum and Chemical Corporation (Sinopec) signed agreements for the long-term supply of petroleum between the two countries, the joint appraisal of Block 3, and the joint use of Angola's new petroleum refinery. China also granted Angola a \$6.3 million interest-free loan (Republic of Angola Embassy in the United Kingdom, 2005e).

In April, the Government announced that many national and foreign investors were interested in developing the country's copper resources from the Mavoio Mines in Uije, in restarting iron ore production from the Cassinga Mines in Huila Province, in developing manganese resources in Kwanza Norte, and in

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

increasing production of granite, marble, and ornamental stones throughout the country (Republic of Angola Embassy in the United Kingdom, 2005j).

In May, the Government signed a financial agreement for the repayment of a \$950 million debt to Brazil. Brazil was to lend another \$580 million to Angola for a period of 3 years, which was to be guaranteed by the supply of 20,000 barrels per day of petroleum (bbl/d) to Brazil. The Governments of Angola and Brazil also signed cooperation agreements in the areas of geology and mining (Republic of Angola Embassy in the United Kingdom, 2005i).

Structure of the Mineral Industry

The major foreign companies that operated joint ventures with Endiama in the diamond sector were Almazny Rossii-Sakha Joint Stock Company (ALROSA S.A.) of Russia, BHP Billiton World Exploration Inc., Daumonty Financing Company B.V. of Israel (which is part of the Lev Leviev Group of Israel), the De Beers Group of South Africa, New Millenium Resources N.L., Odebrecht Mining Services Inc. (Odebrecht) of Brazil, Petra Diamonds Ltd. of South Africa, and Trans Hex Group Ltd. of South Africa. The major international companies that operated in the petroleum sector included BP p.l.c., Chevron Corp., Exxon Mobil Corp., Norsk Hydro ASA, and Total S.A.

Trade

According to the U.S. Department of State (2006§), Angola is the second largest trading partner of the United States in sub-Saharan Africa. Angola's exports to the United States were valued at about \$8.5 billion in 2005 compared with about \$4.5 billion in 2004; of this amount, about \$8.2 billion was crude petroleum and about \$57.6 million was gem-quality diamond. Imports from the United States were valued at about \$928 million in 2005 compared with about \$594 million in 2004; these included nearly \$611 million in drilling and oilfield equipment (U.S. Census Bureau, 2006a§, b§).

Commodity Review

Metals

Iron and Steel.—In January, the Angolan Government signed a management contract with Chung Fong Holding Company (CFHC) of China to restart production at the National Steelworks factory, which had been idle since 2000. The company began installing equipment at the factory in 2005. The cost of relaunching the country's steel plant was estimated to be \$28 million; CFHC's contract was for 15 years. Ownership during the relaunching phase of the project will be CFHC (51%) and the Government (49%) (Republic of Angola Embassy in the United Kingdom, 2005p).

Industrial Minerals

Cement.—Cement in Angola was produced by two companies, Nova Cimangola S.A. (Cimangola) and Companhia

de Cimento do Lobito S.A. (Secil-Lobito). The Cimangola cement plant, which was located in Luanda, had an annual production capacity of 700,000 metric tons per year (t/yr) of cement and 540,000 t/yr of clinker and was owned by Cimentos de Portugal, SGPS, S.A. (CIMPOR) (49%), the Government (39.8%), and Banco Africano de Investimentos (9.5%). The Secil-Lobito plant, which was located in the city of Lobito, Benguela Province, had an annual production capacity of 250,000 t/yr of cement and was owned by TecnoSecil Investimentos e Participações SARL of Portugal (TecnoSecil) (51%) and the Government (49%). Cimangola was to invest \$200 million for the construction of a new clinker furnace to reduce its dependence on imported clinker. Cimangola's demand for clinker is about 60,000 metric tons per month (t/m). In October 2005, Cimangola commissioned its fifth cement mill. With the commissioning of this new mill, the company expected to increase cement production capacity to about 1.4 million metric tons per year (Mt/yr) in 2006 (Noticias Lusofanas, 2005§).

In 2005, TecnoSecil announced that it planned to invest \$80 million for the construction of a new 550,000-t/yr cement plant and clinker furnace at Lobito. The company planned in the long run to further increase capacity to between 1.5 Mt/yr and 2 Mt/yr and to become Angola's leading cement producer (allAfrica.com, 2005§; Embaixada da Republica de Angola em Portugal, 2005§).

Diamond.—According to reports by The Diamonds and Human Security Project (2005, p. 2), only 40% of Angola's estimated diamond resources has been prospected; new prospecting activities were expected to provide a clearer picture of the country's remaining alluvial resources and of the viability of the country's many kimberlite pipes. Alluvial diamond reserves were estimated to be 40 million carats in 2000, although these were also estimated to have decreased significantly in recent years owing to the increase in artisanal mining.

Alluvial and eluvial diamond deposits occur in the Provinces of Cunene, Huambo Bie, Kuando Kubango, Kwanza Sul, Lunda, Malange, Moxico Huila, and Uige. In the northern provinces, diamond deposits extend into Congo (Kinshasa). Other deposits are thought to occur in the coast and offshore, but these areas had not been prospected as of yearend 2005. About 700 kimberlite pipes containing reserves of about 50 million carats are known to exist in the country (The Diamonds and Human Security Project, 2005, p. 2).

Sociedade Mineira de Catoca Ltda. (SMC), which was the country's leading diamond producer, owned Catoca Mine. SMC was a joint venture among Endiama (32.8%), ALROSA (32.8%), Daumonty (18%), and Odebrecht (16.4%). About 3,200 people were employed by SMC, 2,900 of which were Angolan nationals. Reserve estimates at Catoca were reported to be 271 Mt of ore containing about 190 million carats of diamond (Sociedade Mineira de Catoca Ltda., 2005, p. 7-9, 29; Empresa Nacional de Diamantes de Angola, 2006§).

Sociedade de Desenvolvimento Mineiro de Angola S.A.R.L. (SDM) operated the Luzamba project, which is located in the Cuango Valley. The Luzamba project hosted the single largest alluvial operation in Angola; mining operations at Luzamba Mine were expected to last until 2006. SDM, which was a

50-50 joint venture between Endiama and Odebrecht, planned to develop another alluvial deposit at Muanga in southern Cuango Valley and to begin kimberlite prospecting (The Diamonds and Human Security Project, 2005, p. 6).

The Government announced that areas previously occupied by illegal miners were now opened to licensed companies and that, through Endiama, it planned to develop a 7,000-carat-per-year mine in the Camanjanja area in Lunda Norte Province. During the year, Endiama established a partnership with Hong Kong-based China International Fund Limited to prospect for, mine, polish, and market diamond, and to produce jewelry (Republic of Angola Embassy in the United Kingdom, 2005g, h).

In December 2004, Petra Diamonds Limited signed a joint-venture agreement with BHP Billiton World Exploration for the development of the Alto Cuilo diamond project, which is located in northeastern Angola about 700 kilometers (km) southeast of Luanda. In 2005, BHP committed to fund all exploration on the project concession area. During the year, the kimberlite exploration program led to the discovery of four kimberlitic material anomalies; as a result, a second drill rig was mobilized to the area later in the year. The companies planned to continue with their drilling program in 2006. Petra's other interests in Angola included the Medio Kwanza concession, which is located west of Alto Cuilo, and the Muriège concession, which is located east of Alto Cuilo (Petra Diamonds Limited, 2006, p. 5, 12-13).

ALROSA planned to open a diamond treating plant in Luo, Lunda Norte Province. The company was also interested in exploring for other minerals in Angola and was in the process of building a hydroelectric dam, which will be located 20 km from Saurimo (the capital of Lunda Sul Province). The dam was to initially produce electricity to be supplied to the Catoca diamond project (Republic of Angola Embassy in the United Kingdom, 2005n).

On June 17, De Beers and Endiama signed a \$10 million diamond prospecting agreement under which De Beers will explore for kimberlites in a 3,000-km² area in Lunda Norte. De Beers had a 5-year legal dispute with the Government of Angola over a 1991 diamond contract, which included a \$50 million loan to develop mines in the Cuango area. Fifteen months into the contract, the Cuango mines were occupied by UNITA guerrillas and, owing to the absence of a force majeure clause in the contract, interest on the loan remained payable. Under the new agreement, the \$50 million repayment was to be transformed into investment in the new project. The new contract stated that a new joint venture was to be formed between De Beers and Endiama for the sale of any discovered diamond. Ownership in the new joint venture was to be Endiama, 51% and De Beers, 49%. The Republic of Angola Embassy in the United Kingdom reported that the agreement marked the end of another dispute between De Beers and the Government, which began in 2000 after the Government suspended contracts for the sale or purchase of diamond as part of the restructuring of the sector and the subsequent establishment of Sodiam as the sole authority to market diamond in the country (Republic of Angola Embassy in the United Kingdom, 2005f; The Diamonds and Human Security Project, 2005, p. 7).

SouthernEra Diamonds Inc. (18%) of Canada in joint venture with Minex Lda. (38%), Endiama (37%), and S.A.R.L. Comica (7%) were given Government approval to form a company under the name of Camafuca Sociedade Mineira Lda. The newly formed company was granted a mining license to develop the primary kimberlite deposits associated with the country's Camafuca-Camazambo kimberlite pipes. The deposits are located in the Lunda Norte Province in northwestern Angola about 20 km southeast of the town of Lucapa. SouthernEra estimated total inferred mineral resources to be about 210 million cubic meters at an average grade of 0.111 carat per cubic meter containing about 23 million carats of diamond (SouthernEra Diamonds Inc., 2006, p. 2-3, 18).

Trans Hex held a 35% interest in Luarica Mine and a 32% interest in Fucauma Mine, which are located in northeastern Angola. Luarica Mine, which began production in 2003, produced 96,000 carats of diamond in 2005. The company planned to upgrade the plant at Luarica and to increase production capacity to 14,000 carats per month by 2006 at a cost of \$6 million. The Fucauma Mine began operating in August 2005 and produced a total of 83,000 carats during the year. The Fucauma plant had a diamond production capacity of 120,000 carats per year. Trans Hex also held interest in the Gango and the Luana exploration concessions. Gango was at an early exploration stage with bulk sampling of the kimberlite expected by the third quarter of 2005. At Luana, dredge sampling was completed in 2004, and evaluation bulk sampling was expected by the third quarter of 2005 (Trans Hex Group Ltd., 2006, p. 13, 16).

Angola Resources Pty. Ltd. (a subsidiary of New Millenium Resources Ltd.) reported that production had begun at its Rio Lapi Garimpo alluvial mine in April 2005. New Millenium held a 34% interest in the Rio Lapi mine in joint venture with Endiama (51%), and Mombo Lda. (15%). No diamond production figures were reported during the year. The mine was expected to produce about 10,000 carats per month during the first 5 months of operation; production was then to be increased to about 20,000 carats per month. The expected life of the mine was 6.5 years. New Millenium was in negotiations with the Government to also acquire a kimberlite asset in Angola. The company held an exploration license for the C9 kimberlite concession (New Millenium Resources Ltd., 2006, p. 5-7; The Diamonds and Human Security Project, 2005, p. 7).

In December, Namakwa Diamond Company NL of Australia signed a memorandum of understanding with Angolan-based Tecmad-Mining Services SARL (Tecmad) for the exclusive right to evaluate and present a development and operating plan to mine the Camutue associated diamond deposits in Lunda Norte Province. The Camutue associated deposits are located about 10 km east of the town of Lucapa. Tecmad was entitled to a 60% interest in the profits of the operations of the concession under a consortium agreement with Endiama. The Camutue concession included a kimberlite cluster of at least nine kimberlite pipes, two of which had been mined in the past; these kimberlite pipes were not included in the operating agreement. Upon demonstrating technical capabilities through the mining of the associated deposits, Namakwa will have the opportunity to negotiate an agreement to explore and acquire an interest in the kimberlite cluster. According to company reports, the Camutue

kimberlite pipes were discovered in 1958 and were mined by open pit methods from 1961 to 1974. During this period, about 3.8 million metric tons (Mt) of ore was processed and about 333,700 carats was recovered (Namakwa Diamond Company NL, 2005).

Angola inaugurated its first diamond cutting and polishing factory in 2005. The Angola Polishing Diamond SA factory was a joint venture among Sodiam (48%), Lev Leviev Diamonds (LLD) (47%), and Projem, a local consortium (5%). The factory had a processing capacity of \$30 million worth of diamond and will employ about 600 people, 40 of which will be diamond cutters. The diamond cutters were being trained in Namibia and were afterwards to train the factory's future diamond cutters, which Endiama reported will be hired among Angola's mutilated and disabled citizens. The factory was built in 10 months at a cost of \$10 million (Endiama Hoje, 2005, p. 11; UN Office for the Coordination of Humanitarian Affairs, 2005§).

Granite.—The Government estimated that the number of companies involved in the extraction of industrial minerals in the Huila Province had increased to 17 in 2005 from 4 in 2001. The Huila Province produced more than 500 cubic meters per day of black granite. Granite exports alone generated about \$4 million. Granite was exported to Canada, Japan, Panama, Portugal, South Africa, and Spain (Republic of Angola Embassy in the United Kingdom, 2005c).

Other.—Mayfair Mining and Minerals Inc. (70%) in joint venture with Bepigma Lda, a private Angolan company, was granted a license to develop the Ucuva pegmatite complex in Bengo Province. The license covers an area of 1,369 km². Mayfair will prospect the area for beryl-related minerals, including aquamarine, alexandrite, emerald, and chrysoberyl. The company reported that the area is also prospective for beryllium, columbium (niobium), copper, and zinc. The terms of the agreement with Bepigma included a 2-year work program and an investment of up to \$2.25 million during 3 years (Mayfair Mining & Minerals Inc., 2005).

Mineral Fuels

Petroleum and Natural Gas.—Petroleum is produced offshore the enclave of Cabinda, offshore in the Kwanza Basin north of Luanda, offshore the country's northern coast, and onshore around the city of Soyo. According to Sonangol, more than 200 exploration and appraisal wells have been drilled in Angola since 1990 (Sonangol E.P., 2005§). Deepwater exploration began in 1991 with the leasing of Block 16, followed by the leases of Blocks 14, 15, 17, 18, and 20. As of the beginning of 2000, a total of 29 offshore and onshore blocks had been licensed to 30 companies; the first floating production, storage, and offloading rig came online in August 2004.

The U.S. Energy Information Administration (2006§), estimated that proven petroleum reserves in Angola, which was sub-Saharan Africa's second ranked petroleum producer after Nigeria, have tripled since 1999 to an estimated 5.4 billion barrels. Daily production was expected to increase to 2 million barrels per day (Mbbbl/d) by 2008 from 1.25 Mbbbl/d in 2005 owing to the expected coming onstream of new offshore production from deepwater Blocks 14, 15, 17, and 18. Most

of Angola's petroleum was exported to the United States and China; on average, only 60,000 bbl/d were consumed domestically in 2005 (The Angola LNG Project, 2006§; U.S. Energy Information Administration, 2006§).

In November 2004, China Sonangol International Holding (CSIH), a Hong Kong-based subsidiary of Sonangol, signed a letter of intent with Government-owned Energía Argentina S.A. (Enarsa) for the investment of \$5 billion for 5 years to cooperate on offshore prospecting and exploration in Argentina. CSIH and Enarsa discussed the possibility of establishing a partnership to develop petroleum resources in other countries (not specified) as well as to jointly develop any concessions that Enarsa could acquire in the future. No further developments concerning the status of prospecting and exploration activities were reported in 2005 (Movimiento por la Recuperacion de la Energia Nacional Orientadora, 2004§; Voice of America, 2005§).

In January, Chevron, through its subsidiary Cabinda Gulf Oil Company Ltd. (CGO), announced the beginning of petroleum production from the Bomboco field. The Bomboco field, which is located on Block 0 offshore Malongo, Cabinda Province, was expected to reach an average production of 30,000 bbl/d. The first condensate (light oil) from Bomboco was processed at the company's Sanha processing facilities. The facilities, which are located about 37 km offshore and directly above the Sanha oilfield, served as a hub for the processing of natural gas from surrounding oilfields, crude petroleum, condensate (light petroleum), and liquefied petroleum gas (a mixture of butane and propane). The combined production from the Sanha facilities, which included production from the Bomboco field was expected to reach an estimated 100,000 bbl/d by 2007. Block 0 was operated by Chevron (39.2%) and the remaining partners in the joint venture were Sonangol (41%), Total (10%), and Eni Angola Exploration B.V. (9.8%) (ChevronTexaco Corp., 2005b, c).

In March, Angola's Council of Ministers passed a draft resolution on tax incentives for the second phase of the Angola LNG Project (ALNGP), which is to be built in Soyo, Zaire Province, in the northern part of the country. The project is expected to cost about \$4 billion (Republic of Angola Embassy in the United Kingdom, 2005k).

Sonangol and BP announced their sixth petroleum discovery on Block 31. The oilfield, named Ceres 1, follows the discovery of Plutao, Saturno, Marte, Venus, and Palas. The partners in the block were BP (26.67%), Esso Exploration and Production Angola (25%), Sonangol (20%), Statoil Angola (13.33%), Marathon Petroleum Angola (10%), and Tapa Limited (5%). BP expected Blocks 18 and 31 to begin new production in 2007 and 2009. With the addition in production of these two blocks to the already producing Blocks 15 and 17, the company expected to produce about 400,000 bbl/d by 2010 (Republic of Angola Embassy in the United Kingdom, 2005d, o).

In June, a new deepwater petroleum discovery was made in Block 32. During a test phase, the well, named Gengibre 1, produced 4,724 bbl/d of petroleum. The partners in the block were Marathon Oil Company (30%), Total E & P Angola (30%), Sonangol (20%), Esso Exploration and Production Angola (15%), and Petrogal (5%) (Republic of Angola Embassy in the United Kingdom, 2005q).

Proven natural gas reserves in Angola have been estimated to be 45.3 billion cubic meters (reported as 1.6 trillion cubic feet). About 85% of the natural gas produced in the country was flared and the remainder was reinjected to help in the recovery of petroleum or processed to produce liquefied petroleum gas. To reduce the flaring of natural gas, the Government (22.8%), in joint venture with Chevron (36.4%), BP (13.6%), ExxonMobil (13.6%), and Total (13.6%), planned to convert the associated natural gas from the production of petroleum in Blocks 0, 15, 17, 18, and future ultra deep water blocks to liquefied natural gas (LNG) for export. Under the ALNGP, as the project is known, the Government and its joint-venture partners planned to transport natural gas via pipeline to an LNG plant onshore for conditioning and extraction of natural gas liquids before converting to LNG (ChevronTexaco Corp., 2005a, d; The Angola LNG Project, 2006§; U.S. Energy Information Administration, 2006§).

Infrastructure

In 2005, the Government approved a \$190 million program for the rehabilitation of the country's main highways, which was aimed at repairing about 1,200 km of road by 2006 (Republic of Angola Embassy in the United Kingdom, 2005r, p. 2).

Plans to rehabilitate the Benguela railway were underway in 2005. The railway, which runs from the Atlantic coast to Angola's eastern border, was expected to be fully rehabilitated by August 2007 at a cost \$330.5 million. The tender for the project was granted to China International Fund Limited. About 50 trains per day were expected to transit through the railway and would have the capacity to carry about 4 million passengers and 20 million metric tons per day of goods. The rehabilitation of the Mocamedes railway was also underway and scheduled to be completed by August 2007 at a cost of \$1.2 billion. The Mocamedes railway runs from Namibe on Angola's southeastern Atlantic coast, through Lubango and Matala in Huila Province, to Menongue in the southeastern part of the country (Republic of Angola Embassy in the United Kingdom, 2005b). In March, railway equipment worth \$17 million was to be supplied by India. The Government of Angola signed five agreements with India on the training of railway personnel, operations material, company management, the supply of equipment, and the rehabilitation of workshops for the Mocamedes project (Republic of Angola Embassy in the United Kingdom, 2005e, i).

On November 8, a new hydroelectric dam (the Capanda dam) was inaugurated in Malanje Province. The dam was built at a cost of \$2.6 million and was to provide electricity for 6 million people in the Provinces of Bengo, Kwanza Norte, Kwanza Sul, Luanda, and Malanje. The final phase of the project was to be completed in the second half of 2007. Upon completion, the dam will produce about 520 megawatts (Republic of Angola Embassy in the United Kingdom, 2005m).

Outlook

National reconciliation, reintegration, and reconstruction of the country after more than 25 years of civil war were finally

underway in 2005. Economic prosperity in Angola is likely to rely greatly on the development of the country's two most important mineral resources—diamond and petroleum. Interest in assessing the country's undeveloped mineral resources, such as copper, gemstones, iron, and platinum group metals, has begun to develop among foreign companies. The Government is taking steps to continue with the restructuring of the diamond sector. The creation of Sodiam; plans to incorporate artisanal diamond miners into groups that would operate under Government-issued licenses; the deportation of foreign nationals engaged in illegal diamond mining; the expansion of the formal sector by granting foreign companies the right to prospect, explore, and develop mining projects in joint venture with Endiama; and the establishment of the country's first diamond cutting and polishing factory suggest that, in the long run, the country is likely to develop a competitive diamond industry in the region. Although in the short run, most diamond production will come from alluvial deposits, in the longer run, most production will come from the mining of kimberlite pipes.

The petroleum sector, however, will continue to be the dominant sector in both the short and the long runs. Angola's economy is likely to continue to depend greatly on petroleum production in particular given the significant number of petroleum discoveries made in the past few years, which have tripled proven reserves to an estimated 5.4 billion barrels. Angola is likely to remain sub-Saharan Africa's second ranked petroleum producer and one of the 10 leading suppliers of crude petroleum to the United States. With production expected to increase to 2 Mbbl/d by 2008, the petroleum sector is likely to continue to be the main contributor to the national economy in the near future. Reconstruction efforts, which include the rehabilitation of roads and bridges, the refurbishing of railways, and the construction of powerplants, also add to the country's ability to reinforce infrastructure that will support future mining activities and attract foreign direct investment. The signing of cooperation agreements in geology and mining with such countries as Brazil and China, the return of De Beers as a diamond prospector in the country, the relaunching of the country's steel production plant, and plans to increase cement production capacity at the country's two cement plants also suggest the Government's commitment to further develop Angola's mineral industry. The large number of landmines that remain in the country will, however, continue to limit geologic fieldwork in some localities.

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TABLE 1
ANGOLA: PRODUCTION OF MINERAL COMMODITIES¹

Commodity		2001	2002	2003	2004	2005
INDUSTRIAL MINERALS						
Cement:^c						
Hydraulic	thousand metric tons	550 ²	597 ²	700	740	800
Clinker	do.	480 ²	452 ²	480	480	500
Diamond ^{3,4}	thousand carats	5,159	5,022	5,700	6,100	7,000
Granite ^c	thousand cubic meters	1,500	1,500	1,500	1,500	1,500
Marble ^c	do.	100	100	100	100	100
Salt ^c	metric tons	30,000	30,000	30,000	30,000	30,000
MINERAL FUELS AND RELATED MATERIALS						
Petroleum:^c						
Crude	thousand 42-gallon barrels	270,100	329,600	321,200	383,250 ^{r,2}	456,250 ²
Refinery products ⁵	do.	14,000	14,000	14,000	14,000	14,000

^cEstimated; estimated data are rounded to no more than three significant digits. ^rRevised.

¹Table includes data available through November 2, 2006.

²Reported figure.

³Does not include smuggled production.

⁴Production was approximately 90% gem and 10% industrial grade.

⁵Includes asphalt and bitumen.

TABLE 2
ANGOLA: STRUCTURE OF THE MINERAL INDUSTRY IN 2005

(Metric tons unless otherwise specified)

Commodity		Major operating companies	Location of main facilities	Annual capacity
Cement		Nova Cimangola S.A.(Cimentos de Portugal SPGS S.A., 49%; Government, 39.8%; Banco Africano de Investimentos, 9.5%)	Luanda	700,000; 540,000 clinker.
Do.		Companhia de Cimento do Lobito (TecnoSecil Investimentos e Participações SARL, 51%, and Government, 49%)	City of Lobito, Benguela Province	250,000.
Diamond	thousand carats	Sociedade Mineira de Catoca Ltda. (Endiama EP., 32.8%; ALROSA S.A., 32.8%; Daumonty Financing Company B.V., 18%; Odebrecht Mining Services Inc., 16.4%)	Catoca Mine, Lunda Sul Province, 36 kilometers south of Saurimo	6,500.
Do.	do.	Endiama EP., 51%; New Millenium Resources Ltd., 34%; Mombo Lda., 15%	Rio Lapi Mine, 45 kilometers northeast of Saurimo, Lunda Sul Province	240.
Do.	do.	Trans Hex Group Ltd., 35%, and Endiama EP., 40%	Fucauma Mine, northeastern Angola	120.
Do.	do.	Trans Hex Group Ltd., 32%, and Endiama EP., 40%	Luarica Mine, northeastern Angola	NA.
Do.	do.	Sociedade de Desenvolvimento Mineiro de Angola S.A.R.L. (Government, 50%, and Odebrecht Mining Services Inc., 50%)	Luzamba alluvial mine, Cuango Valley	NA.
Steel		Chung Fong Holding Company, 51%, and Government, 49%	Relaunching of steel plant. Under development	NA.

NA Not available.