



2011 Minerals Yearbook

ANGOLA

THE MINERAL INDUSTRY OF ANGOLA

By Omayra Bermúdez-Lugo

Angola's mineral industry was dominated by diamond and petroleum production. In 2011, Angola's economy grew by 3.4%, but unlike that of recent years, this growth was not driven by increases in petroleum production. Nonetheless, petroleum accounted for 96.2% of exports and 79% of Government revenues. Diamond accounted for about 1.8% of exports, 6.7% of world diamond production by volume, and about 8% of world diamond production by value (Banco Nacional de Angola, 2012, p. 12, 15, 26; Kimberley Process Rough Diamond Statistics, 2012).

Other mineral commodities produced in the country included cement, granite, marble, and salt. Angola had vast mineral resources available for prospecting and development. Undeveloped mineral resources included beryllium, clay, copper, gold, gypsum, iron ore, lead, lignite, manganese, mica, nickel, peat, phosphate rock, quartz, silver, tungsten, uranium, vanadium, wolfram, and zinc.

Government Policies and Programs

A new Mining Code for nonfuel minerals was enacted on September 23, 2011. Under law No. 31/11 of the new Code, the Government will no longer request majority equity in mining projects as was the case with the previous law but rather will retain a minimum 10% free-carried interest in all mining projects. The Code also makes a distinction between minerals qualified as ordinary and those considered by the Government to be strategic. Diamond, gold, and radioactive minerals are designated as strategic minerals under the new law, although the Council of Ministers is also granted the power to qualify other minerals as strategic. The Code also provides for the establishment of mining zones with restricted access of persons and (or) goods. A new Private Investment Law, which would require foreign companies to negotiate all tax benefits, was expected to be enacted soon (Clifford Chance LLP, 2011).

Production

Diamond production as reported by the Kimberley Process decreased slightly to 8.33 million carats compared with 8.36 million carats in 2010. The value of Angola's diamond production in terms of dollars per carat increased by 19.6% to \$139.6 per carat from \$116.75 per carat in 2010. Petroleum production decreased by 7.3% to 637.3 million barrels (Mbbbl) from 687.3 Mbbbl in 2010. Salt production decreased by 20% to 40,000 metric tons (t). Data on mineral production are in table 1 (Kimberley Process Rough Diamond Statistics, 2012).

Structure of the Mineral Industry

Table 2 is a list of major mineral industry facilities.

Mineral Trade

Angola's exports to the United States were valued at \$13.6 billion in 2011 compared with about \$12 billion in 2010. Crude petroleum accounted for about \$12.9 billion of these exports; fuel oil, about \$475 million; petroleum products, \$25.7 million; and gem-quality diamond, about \$168.6 million. The country's total diamond exports by volume increased by 19.4% to 8.56 million carats compared with exports of 7.17 million carats in 2010. Imports from the United States were valued at about \$1.5 billion in 2011 compared with \$1.3 billion in 2010; these included nearly \$208 million in drilling and oilfield equipment, about \$15.3 million in excavating machinery, nearly \$23 million in iron and steel products (not including advanced manufactured products), \$4.4 million in iron and steel mill products, \$4 million in petroleum products, \$909,000 in natural gas liquids, \$645,000 in alumina and aluminum, and \$123,000 in specialized mining equipment (Kimberley Process Rough Diamond Statistics, 2012; U.S. Census Bureau, 2012a, b).

Commodity Review

Metals

Copper.—Geomineira of Angola planned to develop a copper deposit located near the town of Menongue in Kuando Kubango Province. An exploration campaign covering an area of about 22 square kilometers (km²), which was pending Government approval, was scheduled to begin in early 2012. Kuando Kubango Province also was reportedly prospective for diamond, gold, iron ore, mercury, petroleum, and uranium (Fernandes, 2011; Paulino, 2011).

Iron Ore.—The Government planned to re-launch iron ore mining in the communities of Dange-Ya-Menha and Kassala-Kitungo in the district of Kambambe, Kwanza Norte Province, and to reopen the Novo Oeiras iron casting plant, which was closed in 1975. The project was a partnership among Government-owned Empresa Nacional de Ferro de Angola (Ferrangol), Angola Exploration Mining Resources S.A., and Singapore-based DT Group (Agencia Angola Press, 2011a; Roberto, 2011).

Ferrangol continued with its plans to redevelop the Cassinga iron ore mine, which it expected to open in 2013. The mine would have a production capacity of 3 million metric tons per year (Mt/yr) of iron ore concentrate. Ferrangol also planned to build two steel plants in Huila Province, which would have a joint production capacity of 400,000 metric tons per year (t/yr). About 34 million metric tons (Mt) of reserves at a grade of 44% iron and 1 billion metric tons of reserves at a grade of 30% iron were estimated to remain at Cassinga. The development of the mine was also to include the mining of the Cassala-Kitungo deposits, which were estimated to contain 200 Mt of reserves at a grade of 25% to 35% iron. The Cassinga Mine is located in

the Jamba district in southern Huila Province (Macauhub News Agency, 2011a).

Industrial Minerals

Cement.—Angola had an estimated cement deficit of 4.2 Mt/yr. To meet its domestic demand, it imported cement and clinker from China, Namibia, and South Africa. Despite delays in bringing online new projects in 2010 and 2011, cement production in Angola was likely to increase significantly in the next 3 to 5 years. New production was to come from plant expansions and new production at Nova Cimangola S.A. (Cimangola) and at Companhia de Cimento do Lobito S.A. (Secil-Lobito) and from a new cement plant to be built by Palanca Cimentos S.A. (Agencia Angola Press, 2011b).

The Secil-Lobito project was to include the construction of a 650,000-t/yr cement plant and a 500,000-t/yr of clinker facility. The project was put on hold reportedly pending internal negotiations among Secil-Lobito's shareholders concerning the project's financing and mounting contracts for the construction of the plant, among other things (Kalia, 2010; Secil-Companhia Geral de Cal e Cimento, S.A., 2012, p. 33, 182–183).

On March 28, Cimangola opened its new 600,000-t/yr cement mill, which increased the company's cement production capacity to 1.8 Mt/yr from 1.2 Mt/yr of cement. The company also planned to build a new 2-Mt/yr cement plant at a cost of \$365 million. The new Cimangola plant was expected to come online in 2013 and would employ about 300 people (Kalia, 2011; World Construction Network, 2011).

The construction of Cimentos Palanca S.A.'s new cement plant in Lobito was pending Government approval of an environmental impact assessment study. In December, Sinoma International Engineering Co. Ltd. of China was granted the contract to build the plant at a cost of \$257.4 million. The company expected to complete construction work by 2014. Cimentos Palanca S.A. was owned by a consortium of Camargo Correa Cimentos of Brazil and ESCOM S.A. of Portugal (30% each) and Gema Group of Angola (40%). Once in operation, the plant would have a production capacity of 1.6 Mt/yr, and it was expected to generate about 1,300 jobs (Agencia Angola Press, 2011c; Macauhub News Agency, 2011c; Thomson Reuters, 2011; Grupo Camargo Correia S.A., 2012, p. 15).

Diamond.—The Catoca Mine produced nearly 6.7 million carats of diamond, which represented about 80% of Angola's total diamond output in 2011. Diamond from the Catoca Mine was exported mainly to China and India (Macauhub News Agency, 2012).

Trans Hex Group Ltd. of South Africa held interest in the Luarica Mine (35%), the Somiluana Mine (33%) Mine, and the Fucauma Mine (32%). In 2011 the Fucauma and the Luarica Mines were under a care and maintenance program. The Somiluana Mine, which is located about 1,000 kilometers (km) northeast of Luanda in Lunda Norte Province, began production in June 2010. From June 2010 to March 2011, the mine produced a total of 27,662 carats, and plans to expand production further were underway. Government-owned Empresa Nacional de Diamantes de Angola E.P. (ENDIAMA) held a 39% interest in the mine, and the remaining interest was held by private Angolan

investors. Trans Hex expected to produce 42,000 carats in 2012 (Trans Hex Group Ltd., 2012, p. 5, 11, 24–25).

During the year, the DeBeers Group invested \$31 million in resource evaluation of the Mulepe-1 kimberlite pipe in Angola. Phase 1 of the DeBeers exploration campaign for evaluation of the Mulepe-1 resource was expected to be completed by the end of the first quarter of 2012. The company held about 3,000 km² under concession and carried out exploration activities in the Lunda Northeast concession where it discovered an additional three kimberlite pipes, bringing the total number of kimberlite discoveries by the company in Angola to 117. The company planned to conduct deposit-phase diamond grade testing on 22 of these pipes to determine their economic viability (De Beers Group, 2012, p. 9).

Phosphate Rock.—Minbos Resources Ltd. of Australia held a 50% interest in the Cabinda phosphate project, which was located within the company's 2,000-km² exploration concession area in Cabinda Province. The project comprised the Cacata deposit, which was under development, and the Chibueté, the Chivovo, the Mongo, the Tando, and the Ueca phosphate exploration areas. The company reported a total resource estimate for the project, which included all six areas under concession, to be 304 Mt at an average grade of 11.5% P₂O₅. Minbos was in the process of evaluating the economic viability of developing the Cacata deposit as a standalone open pit mine. Indicated resources for Cacata were reported to be 33.9 Mt at an average grade of 15.75% P₂O₅. If the mine is developed, Minbos planned to transport phosphate ore on a newly asphalted road to the coastal port town of Cacongo, which is located about 80 km from the Cacata deposit. The Cacongo Port would require the construction of a new jetty, however. Preliminary estimates by Minbos set production at 1.25 Mt/yr and an operating mine life of more than 10 years (Minbos Resources Ltd., 2012, p. 4–5).

Mineral Fuels

Natural Gas.—Natural gas was expected to drive economic growth in Angola in 2012 following the commissioning of the Angola Liquefied Natural Gas Project (ALNG). The project consisted of the construction of a 5.2-Mt/yr liquefied natural gas plant in Soyo by 2012. In late 2011, Chevron Corp. of the United States, which was one of the companies in charge of developing the project, announced that work was on schedule and that the project was expected to be completed by the second quarter of 2012. The project also included the construction of a 500-km-long high-pressure pipeline that would deliver gas to the plant from offshore blocks. Some economic analysts expected that natural gas production would contribute about \$1 billion to Angola's export revenues, help the country reduce its dependence on petroleum, and guarantee the country's membership in the Gas Exporting Countries Forum. The ALNG was a joint venture of Chevron (36.4%), Sociedad Nacional de Combustiveis de Angola (Sonangol) (22.8%), BP p.l.c. of the United Kingdom (13.6%), Eni S.p.A. of Italy (13.6%), and Total S.A. of France (13.6%). The United States was expected to be the main export market for the natural gas produced by the ALNG (Angolahub, 2011; Macauhub News Agency, 2011d; Chevron Corp., 2012).

Petroleum.—Angola was a member of the Organization of the Petroleum Exporting Countries. The country produced petroleum from both onshore and offshore deposits, including offshore the enclave of Cabinda. International petroleum companies operating in Angola included BP, Chevron, Eni, Exxon Mobil Corp. of the United States, and Total.

In December, BP, which held interest in deepwater Blocks 15, 17, and 18, was granted participating interest in five new deepwater exploration and production blocks offshore Angola. This included a 50% interest in Blocks 19 and 24; a nonoperating interest in Blocks 20 (20%) and 25 (15%), which were located in the Kwanza and Benguela Basins, respectively; and a 40% interest in Block 26, which was located in the Benguela Basin. Petroleo Brasileiro S.A. of Brazil, which was the operator of Block 26 and also held a 40% interest, planned to start drilling test wells on the block's pre-salt layer in 2012. During the second quarter of 2011, BP's Greater Plutonio oilfield underwent a 40-day planned maintenance shutdown, and on August 24, the Pazflor deepwater oilfield, which is located in Block 17, began producing petroleum. The Pazflor oilfield was expected to produce 220,000 barrels per day of petroleum from the Acacia, the Hortensia, the Perpetua, and the Zinia fields (Macauhub News Agency, 2011b; BP p.l.c, 2012, p. 85).

BP also held a 13.6% interest in Angola's first liquefied natural gas (LNG) project, which was expected to receive about 1 billion cubic feet per day of associated gas from the company's offshore producing blocks. The LNG plant, which was expected to begin operations in 2012, would produce 5.2 Mt/yr of gross LNG and related gas liquids products (BP p.l.c, 2012, p. 88).

Outlook

Angola is expected to achieve a GDP growth rate of 8.2% in 2012, driven mostly by the fuels sector, in particular upon commissioning of the Soyo LNG plant and the Pazflor deepwater oilfield. Increases in capital expenditure of nearly \$16 billion in the construction sector are also expected for 2012 as infrastructure projects continue and new projects in the energy sector begin. Among these projects are the construction of 10 thermal-electric powerplants and of railway segments to connect the Benguela Port to Angola's neighboring countries, the rehabilitation and construction of new roads, and the construction of a new international airport (Organisation for Economic Co-operation and Development, The, 2012, p. 4–5). If projects to increase cement production capacity are completed as planned, Angola is likely to meet its domestic demand for cement by 2015, and perhaps begin exporting its cement surplus.

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TABLE 1
ANGOLA: ESTIMATED PRODUCTION OF MINERAL COMMODITIES^{1,2}

Commodity	2007	2008	2009	2010	2011	
INDUSTRIAL MINERALS						
Cement:						
Hydraulic	thousand metric tons	1,400	1,780	1,800	1,500	1,500
Clinker	do.	500	500	500	500	500
Diamond ^{3,4,5}	thousand carats	9,702	8,907	13,828	8,362 ^r	8,329
Granite	cubic meters	46,000 ³	50,000	50,000	50,000	50,000
Gypsum	metric tons	--	--	120,000	200,000	200,000
Marble	cubic meters	100	100	100	100	100
Salt	metric tons	35,000	35,000	35,000	50,000 ^r	40,000
MINERAL FUELS AND RELATED MATERIALS						
Petroleum:						
Crude ^{3,6}	thousand 42-gallon barrels	614,660 ^r	693,865 ^r	665,760 ^r	687,295 ^r	637,290
Refinery products ⁷	do.	13,000	13,000	13,700 ^r	15,000 ^r	15,000

^rRevised. do. Ditto. -- Zero.

¹Estimated data are rounded to no more than three significant digits.

²Table includes data available through January 11, 2013.

³Reported figure.

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

⁵Source: Kimberley Process Certification Scheme.

⁶Source: BP p.l.c.

⁷Includes asphalt and bitumen.

TABLE 2
ANGOLA: STRUCTURE OF THE MINERAL INDUSTRY IN 2011

(Metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity
Cement		Companhia de Cimento do Lobito S.A. (Secil-Lobito) (TecnoSecil Investimentos e Participações SARL, 51%, and Government, 49%)	Lobito, Benguela Province	250,000.
Do.		Nova Cimangola S.A. (Government, 89%, and private investors, 11%)	Luanda	1,800,000; 540,000 clinker.
Diamond	thousand carats	Associação em Participação Chitotolo [Empresa Nacional de Diamantes de Angola (ENDIAMA), 45%; ITM Mining Ltd., 40%; LUMANHE Lda., 15%]	Chitotolo alluvial mine, 95 kilometers southeast of Dundo	28.
Do.	do.	Empresa Nacional de Diamantes de Angola E.P. (ENDIAMA), 51%; New Millenium Resources Ltd., 34%; Mombo Lda., 15%	Rio Lapi Mine, 45 kilometers northeast of Saurimo, Lunda Sul Province	240.
Do.	do.	Luó-Sociedade Mineira do Camatchia-Camagico [Empresa Nacional de Diamantes de Angola E.P. (ENDIAMA) and Espirito Santo Group]	Lunda Norte Province	18.
Do.	do.	Sociedade de Desenvolvimento Mineiro de Angola S.A.R.L. (SDM) [Empresa Nacional de Diamantes de Angola E.P. (ENDIAMA), 50%, and Odebrecht Mining Services Inc., 50%]	Luzamba alluvial mine, Cuango Valley, Lunda Norte	70.
Do.	do.	Sociedade Mineira de Catoca Lda. [Empresa Nacional de Diamantes de Angola E.P. (ENDIAMA), 32.8%; ALROSA S.A., 32.8%; Daumonty Financing Co. B.V., 18%; Odebrecht Mining Services Inc., 16.4%]	Catoca kimberlite mine, 36 kilometers south of Saurimo, Lunda Sul Province	6,500.
Do.	do.	Sociedade Mineira do Cuango [Empresa Nacional de Diamantes de Angola E.P. (ENDIAMA), 41%; ITM Mining Ltd., 38%; LUMANHE Lda., 21%]	Cuango alluvial mine, Cuango Valley, Lunda Norte Province	31.
Do.	do.	Sociedade Mineira do Lucapa Ltd. [Empresa Nacional de Diamantes de Angola E.P. (ENDIAMA), 51%, and Sociedade Portuguesa de Empreendimentos, 49%]	Mufuto Norte alluvial mine	25.
Do.	do.	Sociedade Mineira do Lucapa Ltd. (SME) [Empresa Nacional de Diamantes de Angola E.P. (ENDIAMA), 51%, and Sociedade Portuguesa de Empreendimentos, 49%], LUMANHE Lda., and ITM Mining Ltd.	Calonda alluvial mine, Lucapa, Lunda Norte Province	27.
Do.	do.	Trans Hex Group Ltd., 32%, and Empresa Nacional de Diamantes de Angola E.P. (ENDIAMA), 40%	Fucauma Mine, northeastern Angola	120. ¹
Do.	do.	Trans Hex Group Ltd., 35%, and Empresa Nacional de Diamantes de Angola E.P. (ENDIAMA), 40%	Luarica Mine, northeastern Angola	90. ¹
Do.	do.	Trans Hex Group Ltd., 33%, and Empresa Nacional de Diamantes de Angola E.P. (ENDIAMA), 40%	Somiluana Mine, northeastern Angola	42.
Gypsum	thousand metric tons	Fábrica de Gesso do Sumbe	Gypsum plant, city of Sumbe, Cuanza Sul Province	200.
Petroleum	thousand 42-gallon barrels per day	AP Moller-Maersk A/S, 50%; Occidental Petroleum Corp., 30%; Sociedade Nacional de Combustíveis de Angola (Sonangol), 20%	Block 8, offshore	NA.
Do.	do.	AP Moller-Maersk A/S, 50%; Sociedade Nacional de Combustíveis de Angola (Sonangol), 20%; Devon Energy Corp., 15%; Odebrecht S.A., 15%	Block 16, offshore	NA.
Do.	do.	AP Moller-Maersk A/S, 50%; Occidental Petroleum Corp., 30%; Sociedade Nacional de Combustíveis de Angola (Sonangol), 20%	Block 23, offshore	NA.
Do.	do.	BP p.l.c., 50%, and Sonangol-Sinopec International, 50%	Block 18, offshore	240.
Do.	do.	BP p.l.c., 26.67%; Exxon Mobil Corp., 25%; Sociedade Nacional de Combustíveis de Angola (Sonangol), 20%; Statoil ASA, 13.33%; Marathon Oil Corp., 10%; Total S.A., 5%	Block 31, offshore	150.
Do.	do.	Chevron Corp., 31%; Eni S.p.A., 20%; Sociedade Nacional de Combustíveis de Angola (Sonangol), 20%; Total S.A., 20%; Galp Energía, 9%	Block 14, offshore	100.
Do.	do.	Canadian Natural Resources, 100%	Block 4, Kiame field, offshore	NA.

See footnotes at end of table.

TABLE 2—Continued
ANGOLA: STRUCTURE OF THE MINERAL INDUSTRY IN 2011

(Metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity
Petroleum— Continued	thousand 42-gallon barrels per day	China Petroleum and Chemical Corp., 40%; Petróleo Brasileiro S.A., 30%; Sociedade Nacional de Combustíveis de Angola (Sonangol), 20%; Falcon Oil Holding Angola S.A., 5%; Gema Group Angola, 5%	Block 18/06, offshore	NA.
Do.	do.	Eni S.p.A., 35%; Sonangol-Sinopec International, 20%; Sociedade Nacional de Combustíveis de Angola (Sonangol); 15% Total S.A., 15%; Falcon Oil Holding Angola S.A., 5%; Petróleo Brasileiro S.A., 5%; Statoil ASA, 5%	Block 15/06, offshore	NA.
Do.	do.	Eni S.p.A., 50%; Total S.A., 25%; Galp Energía, 10%; Ina-Industrija Nafta, 7.5%	Block 1, offshore	NA.
Do.	do.	Exxon Mobil Corp., 45%; Sociedade Nacional de Combustíveis de Angola (Sonangol), 20%; Total S.A., 15%; Falcon Oil Holding Angola S.A., 10%; Galp Energía, 5%; Naphtha-Israel Petroleum Corp. Ltd., 5%	Block 33, offshore	NA.
Do.	do.	Exxon Mobil Corp., 40%; BP p.l.c., 26.67%; Eni S.p.A., 20%; Statoil ASA, 13.33%	Block 15, offshore	700.
Do.	do.	do.	Block 17, offshore	NA.
Do.	do.	Petróleo Brasileiro S.A., 80%, and Sociedade Nacional de Combustíveis de Angola (Sonangol), 20%	Block 26, offshore	NA.
Do.	do.	Petróleos Brasileiros S.A., 40%; Sociedade Nacional de Combustíveis de Angola (Sonangol), 20%; InterOil Exploration & Production ASA, 20%; Falcon Oil Holding Angola S.A., 10%; Initial Oil, 10%	Block 6, offshore	NA.
Do.	do.	Roc Oil Co. Ltd., 60%; Force Petroleum Group Ltd., 20%; Sociedade Nacional de Combustíveis de Angola (Sonangol), 20%	Cabinda South, onshore	NA.
Do.	do.	Sociedade Nacional de Combustíveis de Angola (Sonangol), 100%	Area A (Kwanza), onshore	NA.
Do.	do.	do.	Block 3, Canuka field, offshore	NA.
Do.	do.	do.	Block 4, Kiabo field, offshore	NA.
Do.	do.	Sociedade Nacional de Combustíveis de Angola (Sonangol), 83.6%, and Chevron Corp., 16.4%	Area B (Soyo), onshore	NA.
Do.	do.	Sociedade Nacional de Combustíveis de Angola (Sonangol), 41%; Chevron Corp., 39.2%; Total S.A., 10%; Eni S.p.A., 9.8%	Block 0, offshore Cabinda	340.
Do.	do.	Sociedade Nacional de Combustíveis de Angola (Sonangol), 52.5%; Petróleo Brasileiro S.A., 27.5%; Chevron Corp., 20%	Block 2/85, offshore	NA.
Do.	do.	Sociedade Nacional de Combustíveis de Angola (Sonangol), 70%, and Sociedade Petrolífera Angolana, 30%	Block 2/05, offshore	NA.
Do.	do.	Sociedade Nacional de Combustíveis de Angola (Sonangol), 50%; Statoil ASA, 20%; Angola Consulting Resources, 15%; Sociedade Petrolífera Angolana, 15%	Block 4/05, Gimboa field, offshore	60.
Do.	do.	Sociedade Nacional de Combustíveis de Angola (Sonangol), 90%, and Sociedade Petrolífera Angolana, 15%	Block 3/05, Bufalo, Impala, Impala SE Pacassa, and Palanca fields, offshore	NA.
Do.	do.	Sociedade Nacional de Combustíveis de Angola (Sonangol), 51%; Soco Cabinda Lda., 17%; Teikoku Oil Co., 17%; Angola Consulting Resources, 15%	Cabinda North, onshore	NA.
Do.	do.	Statoil ASA, 50%; Petróleo Brasileiro S.A., 30%; Sociedade Nacional de Combustíveis de Angola (Sonangol), 20%	Block 34, offshore	NA.

See footnotes at end of table.

TABLE 2—Continued
ANGOLA: STRUCTURE OF THE MINERAL INDUSTRY IN 2011

(Metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity
Petroleum— Continued	thousand 42-gallon barrels per day	Total S.A., 50%; Eni S.p.A., 15%; Sociedade Nacional de Combustíveis de Angola (Sonangol), 6.25%	Block 3/91, Oombo field, offshore	NA.
Do.	do.	Total S.A., 50%; Eni S.p.A., 15%; Sociedade Nacional de Combustíveis de Angola (Sonangol), 6.25%; Ajoco Exploration Company Ltd., 12.5%; Ina-Industrija Nafte, 5%	Block 3/85, Cobo and Pambe fields, offshore	NA.
Do.	do.	Total S.A., 30%; Marathon Oil Corp., 30%; Sociedade de Combustíveis de Angola (Sonangol), 20%; Exxon Mobil Corp., 15%; Galp Energia, 5%	Block 32, offshore	NA.
Do.	do.	Total S.A., 30%; Sociedade Nacional de Combustíveis de Angola (Sonangol) 30%; Sonangol-Sinopec International, 27.5%; Angola Consulting Resources, 5%; Falcon Oil Holding Angola, S.A., 5%; Partex (Angola) Corp., 2.5%	Block 17/06, offshore	NA.
Do.	do.	Total S.A., 40%; Statoil ASA, 23.33%; Exxon Mobil Corp., 20%; BP p.l.c., 16.67%	Block 17, offshore	700.
Do.	do.	Tullow Oil plc., 50%; Sociedade Nacional de Combustíveis de Angola (Sonangol), 20%; Prodoil SARL, 20%; Force Petroleum Group Ltd., 10%	Block 1/06, offshore	NA.
Do.	do.	Vaalco Energy Inc., 40%; InterOil Exploration & Production ASA, 40%; Sociedade Nacional de Combustíveis de Angola (Sonangol), 20%	Block 5, offshore	NA.
Petroleum refinery products	do.	Fina Petróleos de Angola (Total S.A., 64.1%, and Government, 34%)	Refinery	14,600.
Do.	do.	Grupo Ferpinta	Two pipe mills at Viana, 30 kilometers east of Luanda	6,000.

Do., do. Ditto. NA Not available.

¹The mine was under a care and maintenance program in 2011.