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2011 Minerals Yearbook

EQUATORIAL GUINEA

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The Mineral Industry of Equatorial Guinea

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Offshore oil and natural gas production dominated Equatorial Guinea's mineral industry. Most of the country's hydrocarbon production was exported, although some of the liquefied petroleum gas (LPG) output was consumed locally. Mined clay, gravel, sand, and volcanic rock were used by the domestic construction sector.

Mineral resources are the property of the Government. Mineral exploration and production activity are governed by law No. 9/2006, which is the Mining Law, and law No. 8/2006, which is the Hydrocarbon Law. Contracts for hydrocarbon exploration and production are administered by the Ministerio de Minas, Industria y Energia. Law No. 7/2003 and amendments form the Environmental Law.

Production

Data for most of Equatorial Guinea's mineral production were estimated. In 2011, notable increases were estimated for the production of methanol and natural gas. Data on estimated mineral commodity production are in table 1.

Structure of the Mineral Industry

Crude oil and natural gas were produced from offshore fields. Hydrocarbon exploration and production activity was governed by production-sharing contracts held by joint ventures of international oil companies and the Government. Guinea Ecuatorial de Petróleos (GEPetrol), which was the national oil company, operated some exploration-stage production-sharing contracts and managed the state's interest in other crude oil exploration and production contracts. Sociedad Nacional de Gas de Guinea Ecuatorial (Sonagas), which was the Government's natural gas company, managed the Government's interest in products derived from natural gas output, such as liquefied natural gas (LNG), LPG, and methanol. In 2011, crude oil production began from the Aseng field, which was operated by Noble Energy Inc. of the United States.

Commodity Review

Metals

In May, Brilliant Mining Corp. acquired Ivory Resources Inc. of the Cayman Islands, which held the rights to acquire mining contracts from the Government of Equatorial Guinea upon the completion of an airborne geophysical survey. Brilliant Mining subsequently changed its name to Brilliant Resources Inc. In December, Fugro Airborne Services Corp. completed a 68,000-line-kilometer airborne geophysical survey for Brilliant. A final report on the survey was expected to be delivered to the Government by mid-2012 (Brilliant Resources Inc., 2012, p. 1–2).

Mineral Fuels

Natural Gas and Petroleum.—Exxon Mobil Corp. of the United States reported that crude oil production from the Zafiro field on Block B decreased by about 15% compared with that of 2010. The continued decrease was attributed to the depletion of the producing reservoirs. In 2011, Mobil Equatorial Guinea Inc., which was a subsidiary of ExxonMobil, completed an 8-well infill drilling program that resulted in the addition of more than 25 million barrels (Mbbl) of crude oil reserves, and continued discussions with the Government about the development of the field's natural gas resources. The original agreement for SONAF G.E. S.A. (a joint venture of Gasol plc of the United Kingdom and Sonagas) to collect, process, and sell natural gas from Block B was amended in 2011; instead of producing LNG and LPG, Sonagas planned to establish an ammonia and urea plant that would use natural gas produced by Mobil Equatorial Guinea from the Zafiro field (Gasol plc, 2011; Exxon Mobil Corp., 2012, p. 34; Ministry of Mines, Industry and Energy, 2012).

In 2011, Hess Corp. (2012, p. 3) of the United States reported a 21% decrease in crude oil output from the Ceiba field and the Okume complex. In December, the Akom North well was completed and tied back to the Okume complex; initial production was expected to begin in January 2012. Hess planned to workover three wells and to drill an additional eight wells at Ceiba to increase the field's output. Additional infill drilling was planned for the Okume complex in 2013 (Tullow Oil plc, 2012, p. 55).

Natural gas from the Alba field was piped to the industrial complex at Punta Europa, where liquid hydrocarbons (condensate) and LPG were extracted at the Alba plant. The adjacent LNG plant and the methanol plant processed portions of the resultant dry gas. Any remaining gas was piped back to the Alba field and reinjected. Marathon Oil Corp. (2012, p. 17) of the United States reported that in 2011, the sale of condensate from the Alba natural gas field remained about 22 Mbbl and that the volume of natural gas sold to the LNG and methanol plants increased by 9% in 2011 compared with that of 2010.

In 2011, Noble Energy Inc. of the United States connected the five production wells and the three water-injection wells that composed the Aseng field (formerly the Benita prospect) on Block I to a 120,000-barrel-per-day (bbl/d)-capacity floating production, storage, and offloading vessel, which was operated by GEPsing Ltd. (a joint venture of SBM Offshore N.V. of the Netherlands and GEPetrol). Noble also successfully drilled the Diega well on Block I. On Block O, Noble discovered additional oil with the Alen 1-G1 well on the Carla prospect in 2011 and planned to develop the Alen condensate and natural gas project (formerly the Belinda prospect) in 2013 (Noble Energy Inc., 2012, p. 11–12).

The Government awarded a project management services contract to KBR, Inc. of the United States for Equatorial Guinea's first crude oil refinery. The 20,000-bbl/d-capacity refinery was to be built at Mbini. The Ministry of Mines, Industry and Energy signed a memorandum of understanding that addressed the proposed LNG Train 2 integrated project. Companies involved in the project included 3G Holding Ltd.; Equatorial Guinea LNG Holdings Ltd.; the joint venture partners that held the production-sharing contracts for Blocks I, O, and R; and Sonagas (KBR, Inc., 2011; Ministry of Mines, Industry and Energy, 2011).

Several other joint ventures of international oil companies were exploring for hydrocarbons offshore Equatorial Guinea. These included Afex Global Ltd. of Bermuda; Glencore Exploration EG Ltd., which was a subsidiary of Glencore International plc of Switzerland; Lukoil Overseas Holding Ltd., which was a subsidiary of OAO Lukoil of Russia; Ophir Energy plc of the United Kingdom; Santa Isabel Petroleum Company Ltd., which was a subsidiary of CNOOC Ltd. of China; SK Innovation Company Ltd. of the Republic of Korea; Starc Ltd. of Bermuda; and Vanco Corisco Deep Ltd. and Vanco Energy Overseas Ltd., which were subsidiaries of Vanco Energy Company, Inc. of the United States.

Outlook

In the past two decades, improved deepwater production technology, increased petroleum exploration, and the international demand for crude oil and natural gas have transformed the area around Equatorial Guinea into a notable hydrocarbon region. The international demand for LNG and methanol have provided the impetus for the development of the infrastructure necessary to produce and process natural gas, despite the very limited local market. Petroleum production from Equatorial Guinea is expected to continue to decline in the short term, but the development of known hydrocarbon discoveries has the potential to offset the decline partially by 2013.

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TABLE 1
EQUATORIAL GUINEA: ESTIMATED PRODUCTION OF MINERAL COMMODITIES[1, 2]

(Thousand 42-gallon barrels unless otherwise specified)

Commodity[3]		2007	2008	2009	2010	2011
Gold	kilograms	200	200	200	200	200
Liquefied petroleum gas		8,022 [4]	8,000	8,000	4,000 [r]	4,000
Methanol	metric tons	1,098,000 [4]	795,000	960,000	850,000 [r]	1,000,000
Natural gas[5]	million cubic meters	4,100	6,800	7,900	6,500	7,200
Petroleum, crude and condensate		128,100 [4]	127,600 [4]	90,000	77,000 [r]	72,000

[r]Revised.
[1]Estimated data are rounded to no more than three significant digits.
[2]Table includes data available through May 18, 2012.
[3]In addition to the commodities listed, Equatorial Guinea presumably produced a variety of crude construction materials (clay, gravel, and sand), and may have produced cement, but available information is inadequate to make reliable estimates of output.
[4]Reported figure.
[5]Represents sales. At Alba field, liquid hydrocarbons were removed from gross natural gas production; unsold gas was reinjected into the reservoir for pressure maintenance. Produced natural gas from other offshore fields was flared or reinjected.

TABLE 2
EQUATORIAL GUINEA: STRUCTURE OF THE MINERAL INDUSTRY IN 2011

(Thousand 42-gallon barrels unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity
Gold	kilograms	Artisanal placer operations	Aconibe, Coro, and Mongomo	500
Liquefied natural gas	metric tons	Equatorial Guinea LNG Holdings Ltd. [Marathon Equatorial Guinea Production Ltd., 60%; Sociedad Nacional de Gas de Guinea Ecuatorial (Sonagas), 25%; Mitsui & Co. Ltd., 8.5%; Marubeni Corp., 6.5%]	Punta Europa	3,700,000
Liquefied petroleum gas		Alba Plant LLC [Marathon Oil Co., 52%; Noble Energy Equatorial Guinea Ltd., 28%; Sociedad Nacional de Gas de Guinea Ecuatorial (Sonagas), 20%]	do.	6,000,000
Methanol	metric tons	Atlantic Methanol Production Co. L.L.C. [Marathon Equatorial Guinea Methanol Ltd., 45%; Samedan Methanol, 45%; Sociedad Nacional de Gas de Guinea Ecuatorial (Sonagas), 10%]	do.	1,100,000
Natural gas	million cubic meters	Joint venture of Marathon Oil Co., 63%; Noble Energy Equatorial Guinea Ltd., 34%; Guinea Ecuatorial de Petróleos (GEPetrol), 3%	Alba field, Alba Block	8,000
Petroleum:				
Condensate		do.	do.	18,000
Crude		Joint venture of Hess Equatorial Guinea, Inc., 80.75%; Tullow Equatorial Guinea Ltd., 14.25%; Guinea Ecuatorial de Petróleos (GEPetrol), 5%	Ceiba field, Block G	12,500
Do.		do.	Okume Complex (includes the Akom North,[1] the Ebano, the Elon, the Okume, and the Oveng reservoirs), Block G	20,000
Do.		Joint venture of Mobil Equatorial Guinea Inc., 71.25%, and Guinea Ecuatorial de Petróleos (GEPetrol), 28.75%	Zafiro field, Block B	102,000
Do.		Joint venture of Noble Energy Inc., 38%; Atlas Petroleum International Ltd., 27.55%; Glencore Exploration (EG) Ltd., 23.75%; Osborne Resources Ltd.,[2] 5.7%; Guinea Ecuatorial de Petróleos (GEPetrol), 5%	Aseng field, Block I	4,300

Do., do. Ditto.
[1]Initial well in the Akom North reservoir was completed in December 2011; initial production began in January 2012.
[2]A subsidiary of PA Resources AB.