

2008 Minerals Yearbook

EQUATORIAL GUINEA

THE MINERAL INDUSTRY OF EQUATORIAL GUINEA

By Philip M. Mobbs

Offshore oil and natural gas production dominated Equatorial Guinea's mineral industry. In 2007, which was the latest year for which data were available, hydrocarbons [crude oil and derivatives, such as liquefied petroleum gas (LPG)] accounted for about 85% of the country's nominal gross domestic product. In 2008, Equatorial Guinea ranked seventh (based on production volume) of all African crude oil producers (BP p.l.c., 2009, p. 8; Stotsky and others, 2009, p. 2).

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.

Most of Equatorial Guinea's mineral-related production, which included crude oil, liquefied natural gas (LNG), methanol, and natural gas condensate, was exported. Clay, gravel, sand, and volcanic rock output was used by the domestic construction sector, and some of the LPG output was consumed locally.

Production

The country's mineral sector was based on the production of mineral fuels, such as condensate, crude oil, and natural gas that were produced from offshore fields. Natural gas production from the Alba field was processed at the Alba plant (which was a facility located at Punta Europa on Bioko Island) where the condensate and LPG were stripped from the wet gas stream; the remaining dry gas was piped to the adjacent methanol and LNG facilities. Natural gas compressed to liquefied natural gas, processed to produce methanol, or used as a rig or plant fuel increased by 23% in 2008 compared with that of 2007, whereas methanol production was estimated to have dropped by about 29% (table 1).

Marketed natural gas production continued to increase in 2008 as the LNG plant completed a full year of operations. Prior to the commissioning of the LNG Train 1 in 2007, excess natural gas from the Alba field was reinjected into the gasfield and natural gas from the oilfields was flared or reinjected for oilfield reservoir pressure maintenance.

Crude oil production from the Zafiro field on Block B, which was the country's major oilfield and was operated by Mobil Equatorial Guinea Inc., declined by about 12% in 2008. Production from the Ceiba field and the Okume Complex on Block G, which were operated by Hess Equatorial Guinea Inc., increased by about 29% in 2008 and exceeded the oilfields' combined nominal design capacity, although production was expected to decline by about 12% in 2009 (table 2; Tullow Oil plc, 2009, p. 6).

Structure of the Mineral Industry

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 LNG, LPG, and methanol. The Hydrocarbon Law allowed both GEPetrol and Sonagas to increase their carried interest in petroleum exploration and development projects to no less than 20%. Under the law, expenditures associated with hydrocarbon exploration or production would be funded by the other joint-venture partners until the Government converted its carried interest in a contract area to a participating interest.

In 2008, GEPetrol acquired a 23.75% participating interest in the Zafiro oilfield from Devon Energy Corp. of the United States, which had acquired the interest in the Zafiro operations in 2003 when it merged with Ocean Energy Inc. GEPetrol also acquired Devon's interest in the contracts for Blocks C and P, which were at the exploration stage.

Commodity Review

Mineral Fuels

Natural Gas.—Development of a 4.4-million-metric-tonper-year (Mt/yr)-capacity LNG plant at Punta Europa remained under evaluation by partners Marathon Equatorial Guinea Production Ltd. of the Cayman Islands (35%), Sonagas (30%), Mitsui & Co. Ltd. of Japan (8.5%), Marubeni Corp. of Japan (6.5%), E.On Ruhrgas of Germany (5%), and Union Fenosa S.A. of Spain (5%). The new LNG train would be adjacent to the 3.7-Mt/yr-capacity LNG plant that was completed in 2007 by Equatorial Guinea LNG Holdings Ltd., which was a joint venture led by Marathon (Quinlan, 2008).

A group composed of African Gas Development Corp. of South Africa, Gasol plc of the United Kingdom, and Sonagas sought to obtain the rights to gather and sell natural gas that was being flared from the Zafiro field. Gasol had proposed to gather and liquefy natural gas from fields in several countries across the Gulf of Guinea. Initial LNG production was planned to begin in 2014 (Gasol plc, 2009, p. 24).

Petroleum.—In December, a subsidiary of Noble Energy Inc. of the United States submitted a development plan for the Benita prospect on Block I. If the Government were to approve the plan in 2009, initial production from the proposed Benita oilfield could begin as early as 2012 (Noble Energy Inc., 2009, p. 11). In 2007, Pioneer Natural Resources Equatorial Guinea Ltd. of the Cayman Islands entered into arbitration proceedings with joint-venture partners Atlas Petroleum International Ltd. of Nigeria, Roc Oil (Equatorial Guinea) Co. (which was a subsidiary of Roc Oil Company Ltd. of Australia), and Osborn Resources Ltd. (which was a subsidiary of PA Resources AB of Sweden) concerning their obligations regarding a proposed second exploration well on Block H. In 2008, Pioneer's 50% interest in the exploration joint venture was distributed to the other partners (PA Resources AB, 2008).

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 existing and proposed LNG plants and the production and export of commodities associated with natural gas, such as LPG and methanol, have provided the impetus for the development of the infrastructure necessary to capture natural gas, although the local market for the gas is very limited. Despite the decline in international oil prices in late 2008, several exploration wells were scheduled to be drilled. In 2009 and 2010, new exploration wells are expected to be drilled on Blocks B, H, O, R, and S. Crude oil production from Equatorial Guinea is expected to continue to decrease in the short term, but hydrocarbon discoveries on Blocks B, I, O, and P have the potential to offset the decline partially by 2013.

References Cited

- BP p.l.c., 2009, Statistical review of world energy: London, United Kingdom, BP p.l.c., June, 45 p.
- Gasol plc, 2009, Corporate presentation: London, United Kingdom, Gasol plc, March, 44 p.
- Noble Energy Inc., 2009, Form 10-K—2008: U.S. Securities and Exchange Commission, 114 p.
- Quinlan, Martin, 2008, Plenty more from Africa: Petroleum Economist, v. 75, no. 11, November, p. 19-20.
- PA Resources AB, 2008, Settlement of dispute regarding Block H in Equatorial Guinea: Stockholm, Sweden, PA Resources AB, September 17, 2 p.
- Stotsky, J., Alichi, A., Gaertner, M., and Milkov, D., 2009, Statistical appendix: Washington DC, International Monetary Fund Country Report No. 09/98, March, 19 p.
- Tullow Oil plc, 2009, Trading statement and operational update: London, United Kingdom, Tullow Oil plc, January 21, 10 p.

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

(Thousand 42-gallon barrels unless otherwise specified)

Commodity ³		2004	2005	2006	2007	2008
Gold	kilograms	150	200	200	200	200
Liquefied petroleum gas		875	3,035 4	7,562 4	8,022 4	8,000
Methanol	metric tons	913,000	1,110,000	752,000	1,098,000 4	775,000
Natural gas						
Gross	million cubic meters	1,390	2,300	2,000	2,300	2,500
Net ⁵	do.	473 4	678 ⁴	438 4	1,369 4	1,685 4
Petroleum, crude and condensate		128,000	131,000	125,000	127,000	120,000
1 510						

do. Ditto.

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

²Table includes data available through October 28, 2009.

³In addition to the commodities listed, Equatorial Guinea presumably produced a variety of crude construction materials (clay, gravel, and sand), but available information is inadequate to make reliable estimates of output.

⁴Reported figure.

⁵Includes natural gas that was compressed to liquefied natural gas, used to produce methanol by Atlantic Methanol Production Company L.L.C., or used as rig or processing plant fuel.

TABLE 2 EQUATORIAL GUINEA: STRUCTURE OF THE MINERAL INDUSTRY IN 2008

(42-gallon barrels unless otherwise specified)

Camm	adity	Main an antia and an in an it and an	Landian af main facilities	Annual	
Comm	5	Major operating companies and major equity owners	Location of main facilities	capacity 500	
Gold	kilograms	Artisanal placer operations	Aconibe, Coro, and Mongomo		
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 ga	IS	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%; Samedan of North Africa Inc., 34%; Guinea Ecuatorial de Petróleos (GEPetrol), 3%	Alba field, Alba Block	2,300	
Petroleum:					
Condensate		do.	do.	16,800,000	
Crude		Joint venture of Mobil Equatorial Guinea Inc., 71.25%, and Guinea Ecuatorial de Petróleos (GEPetrol), 28.75%	Zafiro field, Block B	102,000,000	
Do.		Joint venture of Hess Equatorial Guinea, Inc., 80.75%; Energy Africa Equatorial Guinea Ltd., 14.25%; Guinea Ecuatorial de Petróleos (GEPetrol), 5%	Ceiba field, Block G	12,500,000	
Do.		do.	Okume Complex (includes the Ebano, the Elon, the Okume, and the Oveng reservoirs), Block G	12,000,000	

Do., do. Ditto.