The Mineral Industry of Libya

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Libya's mineral and mineral-based commodity production included ammonia, cement, clay, dolomite, gypsum, limestone, lime, methanol, natural gas, petroleum, salt, sand, steel, stone, sulfur, and urea. Production of crude oil and natural gas, while of regional importance, has languished; oil production in 2004 was less than one-half of the volume that was produced in 1970. The oil sector had been adversely affected by sanctions initially imposed on Libya by the United States (U.S.) Government in the 1980s.

Libya was the 3d leading crude oil producer in Africa after Nigeria and Algeria, and the 16th leading oil producer in the world. Most of the produced oil was exported. International demand for oil and interest in funding natural gas collection and transportation infrastructure, coupled with the termination of economic sanctions by the United States in 2004 and the United Nations in 2003, were expected to revive the Libyan hydrocarbon sector. In 2004, the nation's natural gas reserves were about 1.5 trillion cubic meters, which ranked Libya fourth in Africa after Algeria, Nigeria, and Egypt. Libya's proven oil reserves were about 39.1 billion barrels, which were the largest on the African continent and which ranked the country ninth in the world in proven oil reserves (BP p.l.c., 2005, p. 4, 6, 20).

According to the International Monetary Fund (2005§[1]), the gross domestic product (GDP) based on purchasing power parity was estimated to be $61 billion in 2004 and the GDP per capita based on purchasing power parity was $10,769. In 2003 (the last year for which data were available), 61.2% of the nominal GDP at factor cost was attributed to oil production and 1.1% was credited to mining. Natural gas and oil accounted for 96.6% of the value of total exports and 85.6% of Government revenue. About 2.7% of the labor force was engaged in oil and gas production, and 2%, in mining and quarrying (Elhage and others, 2005, p. 4, 6, 11, 22).

Government Policies and Programs

In 2004, the Government reestablished the Ministry of Energy. The National Oil Co. of Libya (NOC) had been in charge of the country's hydrocarbon sector since 2000, when the Ministry was originally abolished. NOC unveiled a new production-sharing agreement for the eight exploration blocks offered for licensing in 2004. Most licenses issued previously under the 1955 hydrocarbon law had been awarded after direct negotiations between the oil companies and the NOC.

In February, the U.S. Government authorized organizations that had retained rights to presanction operations in Libya (such as the oil concessions of the Oasis Group and Occidental Petroleum Corp.) to negotiate their return to Libya. In April, the U.S. Government eased sanctions, which lifted travel restrictions and authorized the purchase of crude oil from Libya and, in September, rescinded most of its remaining trade sanctions on Libya and authorized the importation of petroleum products refined in Libya (Newcomb, 2004; U.S. Office of Foreign Assets Control, 2004).

Commodity Review

Industrial Minerals

Cement.—Construction of the 4,200-metric-ton-per-day (t/d)-capacity cement clinker plant for the Arab Union Contracting Co. was completed in 2004. Commissioning began in December and commercial production was expected to begin in mid-2005 (FLSmidth A/S, 2005§).

Mineral Fuels

Natural Gas.—Most natural gas production in Libya was associated with crude oil production. In October, Eni S.p.A. of Italy and NOC began initial production from the Wafa Field, which was located in onshore Block NC-169A, and began natural gas shipments through Greenstream pipeline to Gela, Sicily, from Mellitah, Libya. Additional gas was to be supplied to the Greenstream pipeline from the Bahr Essalam Field, which was located in offshore Block NC-41, where production was expected to begin in 2005 (U.S. Securities and Exchange Commission, 2005, p. 21).

The development of the Bahr Essalam and the Wafa Fields, which were part of Eni's Western Libya Gas Project, and the development of the natural gas export pipeline represented a shift in Libyan Government emphasis from oilfield development to a mix of natural gas and oilfield projects. Previously, natural gas exports had been limited to exports of liquefied natural gas (LNG). The sole LNG plant at Marsa el Brega, which was operated by Sirte Oil Co. for Production and Processing of Oil and Gas, processed about 900 million cubic meters per year, or about 700,000 metric tons per year, of natural gas (Mena Report, 2005§).

Petroleum.—In January, production began from the Elephant Field onshore Block NC-174 in the Murzuq Basin. Eni S.p.A. of Italy (33.3% equity interest) operated the field for joint-venture partners NOC (33.3%), Korea National Oil Co. (16.67%), SK Corp of Korea (8.33%), Majuko Enterprise, Ltd. of Korea (5%), and Daesung Industrial Co. Ltd. of Korea (3.3%). The field was expected to produce 150,000 barrels per day when fully operational in 2007 (U.S. Securities and Exchange Commission, 2005, p. 21).

In June, a Repsol YPF-operated joint venture, which included Norsk Hydro ASA of Norway, OMV AG of Austria, and Total S.A. of France, began production from the D Field on Block

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

NC-186. The joint venture had initiated production from the A Field on the same block in 2003.

At yearend, Az Zawiya Oil Refinery Co. continued negotiations with Uhde GmbH of Germany on the long-proposed upgrade of the Az Zawiya refinery.

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TABLE 1
LIBYA: PRODUCTION OF MINERAL COMMODITIES[1]

(Thousand metric tons unless otherwise specified)

Commodity[2]		2000	2001	2002	2003	2004[e]
Cement, hydraulic[e]		3,000	3,000	3,300	3,300	3,500
Gas, natural:						
Gross	million cubic meters	11,000	11,500 r	11,100 r	10,300 r	11,000
Dry	do.	5,900 r	6,200 r	6,200 r	6,400 r	7,000
Gypsum[e]		175	150	150	150	175
Iron and steel, metal:						
Direct-reduced iron[3]		1,500	1,090	1,170	1,340	1,580 [4]
Crude steel		1,055	846	886	1,007 r	1,026 [4]
Lime[e]		270	250	250	250	250
Methanol		685	570	680	727	730
Nitrogen:						
N content of ammonia		552	495	533	577	577
N content of urea		407	365	400	425	425
Petroleum:						
Crude[e]	thousand 42-gallon barrels	538,000	520,000	502,000	543,000	587,000
Refinery products:[4]						
Liquefied petroleum gas	do.	1,800	1,900	1,400	2,300	2,300
Gasoline	do.	6,500 r	6,500 r	6,100 r	7,300 r	7,300
Naptha	do.	21,700	19,900	19,300	21,200	21,200
Kerosene and jet fuel	do.	12,100 r	12,000 r	11,800 r	12,400 r	12,400
Distillate fuel oil	do.	29,800 r	27,900 r	25,000 r	28,100 r	28,100
Residual fuel oil	do.	46,900 r	40,300 r	39,200 r	41,600 r	41,600
Total	do.	118,800 r	108,500 r	102,800 r	112,900 r	113,000
Salt[e]		40	40	40	40	40
Sulfur, byproduct of petroleum and natural gas[e]		13	15	15	15	15

[e]Estimated; estimated data are rounded to no more than three significant digits; may not add to totals shown. [r]Revised.

[1]Table includes data available through August 2005.

[2]In addition to the commodities listed, a variety of clay, dolomite, limestone, sand, and crushed construction stone was produced, and natron (soda ash) may have been produced, but available information is inadequate to make estimates of output levels. Natural gas liquids also were produced but were blended with crude petroleum and reported as part of that total.

[3]Includes hot-briquetted iron.

[4]Reported figure.

TABLE 2
LIBYA: STRUCTURE OF THE MINERAL INDUSTRY IN 2004

(Thousand metric tons unless otherwise specified)

Commodity		Major operating companies	Location of main facilities	Annual capacity
Cement:		Libyan Cement Co. (Government)	Benghazi	1,500
Do.		Arab Union Contracting Co.	Zliten	1,200 [1]
Do.		Arab Cement Co. (Government)	Homs 2, Lebda	1,000
Do.		do.	Souk el Khamis, Tripoli	1,000
Do.		do.	Zliten	1,000
Do.		Libyan Cement Co. (Government)	El Fataih, Derna	1,000
Do.		do.	El Hawari	400
Do.		Arab Cement Co. (Government)	Homs 1, El Margueb	300
Iron and steel:				
Iron:				
Hot briquetted iron		Libyan Iron and Steel Co. (Government)	Misurata	650
Sponge iron		do.	do.	1,100
Steel:				
Crude		do.	do.	1,250
Rolled:				
Bar and rod		do.	do.	800
Cold-rolled srip		do.	do.	140
Hot-rolled strip		do.	do.	580
Methanol		Sirte Oil Co. for Production and Processing of Oil and Gas (National Oil Co. of Libya)	Marsa el Brega	365
Natural gas, liquefied		do.	do.	700
Nitrogen:				
Ammonia		do.	do.	803
Urea		do.	do.	1,041
Petroleum:				
Crude	thousand 42-gallon barrels per day	National Oil Co. of Libya in joint venture or under production-sharing agreements with Agip Oil Co. Ltd., Norsk Hydro ASA, OMV AG, Petro-Canada, Repsol YPF, Total S.A., and Wintershall AG; and subsidiary companies of National Oil Co. of Libya, which included Arabian Gulf Oil Co., Sirte Oil Co. for Production and Processing of Oil and Gas, Waha Oil Co., and Zueitina Oil Co.	Cyrenaica, Ghadames, Murzuq, and Sirte basins and offshore	1,609
Refined	do.	Ras Lanuf Oil and Gas Processing Co. (National Oil Co. of Libya)	Ras Lanuf	220
Do.	do.	Az Zawiya Oil Refining Co. (National Oil Co. of Libya)	Az Zawiya	120
Do.	do.	Arabian Gulf Oil Co. (National Oil Co. of Libya)	Tobruk	20
Do.	do.	do.	Sarir	10
Do.	do.	National Oil Co. of Libya	Marsa el Brega	8

[1]Construction completed. Production to begin in 2005.