THE MINERAL INDUSTRY OF

LIBYA

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About 98% of Libya's foreign exchange revenues were attributed to the hydrocarbon sector, so rising oil prices through 1999 and 2000, coupled with the suspension of United Nations economic sanctions, considerably brightened the country's financial position. Oil revenues were estimated to be $12 billion in 2000 compared with $7 billion in 1999 and $5.5 billion in 1998. Reliable basic economic data were not readily available to make generalizations about the size of Libya's economy (Critchlow, 2001, p. 22; World Bank Group, September 13, 2000, Libya—At a glance, accessed October 24, 2000, at URL http://www.worldbank.org/cgi-bin/sendoff.cgi?page=%2Fdata%2Fcountrydata%2Faag%2Flby_aag.pdf).

Libya was the second largest crude oil producer in Africa after Nigeria. At 29.5 billion barrels, Libya's petroleum reserves were the largest on the African Continent (U.S. Energy Information Administration, July 2001, Libya—Energy overview, Country Analysis Brief, accessed September 14, 2001, at URL http://www.eia.doe.gov/emeu/cabs/libya.pdf).

Government Policies and Programs

Laws that regulated foreign investment in Libya's mineral industry included law 5—the Encouragement of Foreign Capital Investment Law of 1426 (1997), and law 25, the Petroleum Law of 1955. During 2000, the 1999 draft of the proposed Petroleum Investment Law continued to work its way through the Government. The Ministry of Petroleum was abolished and its policy functions absorbed by the National Oil Corp.

In 1999, the United Nations suspended the sanctions that had been imposed on Libya under United Nations Security Council Resolutions 748 of 1992 and 883 of 1993. The United States retained its embargo of Libya, which was first imposed in 1986, under the Libyan Sanctions Regulations (Title 31 Part 550 of the U.S. Code of Federal Regulations) and extended by the Iran and Libya Sanctions Act of 1996 (Public Law 104-172).

The Libyan Government increasingly encouraged foreign investment in petroleum production and processing. In 1999 and 2000, foreign investment in the oil sector increased as the perceived threat of U.S. sanctions appeared to diminish. In May 2000, the Government opened an additional 137 petroleum exploration blocks to foreign investment. The Libyan Government anticipated that European and U.S. oil companies would lobby the U.S. Government to lift its sanctions (Khalaf, 2000).

Commodity Review

With the exception of the subsidized state-owned Libyan Iron and Steel Co. (LISCO), which primarily was supplied by imported raw materials, the nation's nonfuel mineral industry sector made a negligible impact on the economy. The nonfuel mineral sector included the production of ammonia and urea at the Marsa El Brega ammonia plant; the manufacture of cement by the Arabian Cement Co. and the Libyan Cement Co.; the quarrying of clay, gypsum, and limestone near Al Khums, about 90 kilometers (km) northwest of Misurata; the quarrying of limestone and dolomite and production of lime and calcined dolomite for LISCO at As Seddadah, about 125 km southwest of Misurata; and the extraction of salt from the coastal plains near Benghazi and Tripoli.

Iron and Steel.—The Wadi ash Shatti iron ore deposit near Brach, about 65 km north of Sabha and about 650 km south of Misurata, was estimated to contain about 1.6 billion metric tons of (in order of abundance, oolitic hematite, limonite, chamosite, and siderite with a grade range of 30% to 48% iron, Goudarzi, 1970, p. 2, 57, 63-69). Development of the Wadi ash Shatti iron ore resources was contingent on economic ore beneficiation and transportation programs.

The LISCO iron and steel plant at Misurata included two 550,000-metric-ton-per-year (t/yr) Midrex direct-reduction (DR) modules to produce sponge iron (LISCO I), a 650,000-t/yr Midrex DR module to produce hot-briquetted iron (LISCO II), six electric-arc furnaces with a combined capacity of 1.25 million metric tons per year of liquid steel, an 800,000-t/yr bar and rod mill, a 580,400-t/yr hot strip mill, a 140,000-t/yr cold-rolling mill, a 120,000-t/yr light and medium section mill, and an 80,000-t/yr galvanizing line (Libyan Iron and Steel Co., April 14, 2001, Plants, accessed September 13, 2001, at URL http://www.libyansteel.com/plants.htm). Hot-briquetted iron had become a significant Libyan mineral export since the LISCO II plant began production in 1997. About 54% of LISCO's exports (by weight) in 2000 was hot-briquetted iron. Bars and rods shipped to Egypt and Tunisia accounted for about 23% of the company's exports.

Hydrocarbons.—Oil and gas exploration activity was expected to increase rapidly as international oil companies flocked to Libya. Given the extensive underexplored areas in the country, the potential exists for a number of significant discoveries (Rusk, 2000). In 2000, the Repsol YPF Group of Spain (32%), the TotalElfFina Group of France (24%), OMV Exploration & Production Ltd. (24%), and Saga Petroleum Mabruk (20%) announced the A-1 exploration well on block NC-186 was a hydrocarbon discovery. Sirte Oil Co. reportedly made a 13-billion-cubic-meter-per-year natural gas discovery in the Sirte Basin (Africa Energy Intelligence, 2000a, b).

In 1999, Agip North Africa B.V. and National Oil Corp. of Libya agreed to pursue the development of two natural gas fields in western Libya—the C structure on offshore block NC-41, which is about 110 km north of Tripoli in 180 meters of water, and the Wafa prospect on block NC-169, which is about 550 km southwest of Tripoli. Condensate and gas pipelines from the two fields will be laid to transport gas and liquids to the Melitah gas plant, which was under construction between Sabratha and Zuara, and is about 80 km west of Tripoli. The

Green Stream export gas pipeline was to be built to Gela, Sicily, through which the partners proposed to export to Sicily about 8 billion cubic meters per year of natural gas and dedicate about 2 billion cubic meters per year to the domestic Libyan market (Eni S.p.A., 1999; Eni S.p.A., [undated], Libya, accessed September 17, 2001, at URL http://www.eni.it/english/mondo/africa/libia.html). A 2.8-billion-cubic-meter-per-year gas plant was under construction as part of Sirte Oil's expansion of the Attahady gas facilities (Stell, 2000).

In 2000, Red Sea Oil Corp.'s En Naga North and West oil prospect on block NC-177 was declared by the Government to be commercial and, therefore, eligible for development. Lundin Oil AB subsequently acquired Red Sea Oil.

The renovation of the 120,000-barrel-per-day Azzawiya refinery continued. A reformer was being installed to improve the quality and to increase the volume of produced gasoline and diesel fuel (Oil & Gas Journal, 2000).

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TABLE 1
LIBYA: PRODUCTION OF MINERAL COMMODITIES 1/ 2/

(Thousand metric tons unless otherwise specified)

Commodity 3/		1996	1997	1998 e/	1999 e/	2000 e/
Cement, hydraulic		3,550	2,524	3,000	3,000	3,000
Gas, natural:						
Gross	million cubic meters	12,640	12,910	12,600	12,400	12,000
Dry	do.	6,420	6,570	6,360	6,200	6,100
Gypsum e/		175	125	150	150	175
Iron and steel:						
Metal:						
Direct-reduced iron 4/		862	990	1,010 5/	1,330 5/	1,500 5/
Crude steel		863	897	925 5/	945 5/	1,055 5/
Lime e/		260	275	275	270	270
Nitrogen:						
N content of ammonia		545	536	545 r/	552 r/	552 5/
N content of urea		399	383	408 r/	386 r/	407 5/
Petroleum:						
Crude	thousand 42-gallon barrels	529,000 r/ e/	544,000 r/ e/	540,000 r/	520,000 r/	538,000
Refinery products:						
Gasoline	do.	16,000	16,200 e/	16,800 r/	10,000	12,000
Kerosene and jet fuel	do.	14,200	14,300 e/	12,700 r/	7,000	8,400
Distillate fuel oil	do.	31,400	31,500 e/	31,800 r/	20,000	24,000
Residual fuel oil	do.	35,400	35,500 e/	33,600 r/	25,000	30,000
Other	do.	18,000	18,000 e/	20,000 r/	13,000	15,600
Total	do.	115,000	116,000 e/	115,000 r/	75,000	90,000
Salt e/		30	30	30	30	40
Sulfur, byproduct of petroleum and natural gas e/		13	13	13	13	13

e/ Estimated. r/ Revised.

1/ Table includes data available through September 11, 2001.

2/ Estimated data are rounded to no more than three significant digits; may not add to totals shown.

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

4/ Includes hot briquetted iron.

5/ Reported figure.