

# LIBYA

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After the suspension of United Nations economic sanctions in 1999, there was a general expectation that a significant increase in international investment in the mineral industry of Libya would be forthcoming. This expectation ceased in August 2001 when the U.S. Congress continued economic sanctions with the passage of Public Law 107-24 (the ILSA Extension Act of 2001), which extended the Iran and Libya Sanctions Act of 1996 through 2006. Citizens and organizations of the United States were prohibited from exporting or importing most goods and services to Libya. The sanctions also were to apply to any non-American business association; company; corporation; governmental entity operating as a business enterprise; nongovernmental entity, organization, or group; partnership; society; or trust; and any parent, subsidiary, successor to any of the above business entities that invested more than \$20 million per year in the development of Libyan petroleum resources. The United States had banned imports of Libyan crude oil with Presidential Proclamation 4907 in 1982 and had originally imposed an embargo on Libya in 1986 and enforced it under the Libyan sanctions regulations (31 CFR part 550).

In 2001, the country had a population estimated to be about 5.2 million. The fall in international oil prices adversely affected the Libyan economy. According to the International Monetary Fund (2002<sup>1</sup>), the nominal gross domestic product of this North African nation dropped to \$28.6 billion in 2001 from \$34.9 billion in 2000. The hydrocarbon sector accounted for about 98% of Libya's foreign exchange revenues.

Libya's petroleum reserves, which were estimated to be about 29.5 billion barrels, were the largest on the African continent (U.S. Energy Information Administration, 2002). Libya was the second largest crude oil producer in Africa after Nigeria; however, exports of Libyan crude oil and petroleum products to the United States had ceased in 1982. Natural gas reserves were estimated to be about 1.31 trillion cubic meters and were relatively undeveloped compared with those of other countries in the North African region (Quinlan, 2002).

## Government Policies and Programs

Laws that regulated foreign investment in Libya's mineral industry included law 5 [Encouragement of Foreign Capital Investment Law of 1426 (1997)] and law 25 (Petroleum Law of 1955). In 2000, the Ministry of Energy had been disbanded. Its duties had been transferred to National Oil Corp. (NOC) (Townsend, 2002).

## Commodity Review

With the exception of 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 Arabian Cement Co. and Libyan Cement Co.; the quarrying of clay, gypsum, and limestone near Al Khums; the quarrying of limestone and dolomite and the production of lime and calcined dolomite for LISCO at As Seddah; and the extraction of salt from the coastal plains near Benghazi and Tripoli.

The Government proposed a number of state company projects for which joint ventures would be considered. These included investment in a \$250 million, 100,000-metric-ton-per-year (t/yr)-capacity glass plant, which would use local raw materials; an expansion of Arab Cement Co.'s Libda (\$242 million) and Zliten (\$169 million) cement plants; an expansion of Libyan Cement Co.'s Fataih cement plant (\$166 million); a \$28 million sodium silicate plant; a \$20 million modification of the LISCO electric arc furnace; the construction and installation of a \$17 million ladle furnace for LISCO; a \$5 million, 1,500-t/yr rock wool plant; and a \$3.8 million, 24,000-t/yr salt refinery. The Government also was promoting the development of a number of mineral deposits, which included clay, gypsum, iron, lead, salt, sodium carbonate, and stone (General Industrialization Corp., 2002a§-c§).

In 2001, with the extension of U.S. sanctions, the decline in international oil prices, and the deferred consideration of a new petroleum law, the anticipated surge in oil and natural gas exploration activity failed to materialize. Still, oil and gas exploration by international oil companies was expected to increase significantly, given the extensive underexplored areas in the country (Rusk, 2000). Negotiations continued for the exploration of the blocks that had been offered to investors in 2000.

**Natural Gas.**—Agip Nord Africa B.V. (a subsidiary of Eni S.p.A. of Italy) and state-enterprise NOC of Libya continued the development of two natural gas fields in western Libya—the C structure on offshore block NC-41 and the Wafa prospect on block NC-169. Total project investment was projected to be \$4.5 billion (Townsend, 2002). In 2001, drilling began on the onshore Wafa prospect, and the design of three 270-metric-ton-per-day sulfur recovery units for the Melitah gas treatment plant was completed (Middle East Economic Digest, 2001c). The project was scheduled to deliver 8 billion cubic meters per year to Europe by mid-2004 (Quinlan, 2002).

**Oil.**—In 2001, contracts awarded for the development of offshore block NC-137 included a \$54 million contract for the engineering, procurement, installation in 90 meters of water, and construction of a steel jacket; a 35,000 barrel-per-day

<sup>1</sup>References that include a section twist (§) are found in the Internet References Cited section.

(bbl/d)-capacity production platform; and a \$32 million agreement to provide facilities associated with a 900,000-barrel storage capacity floating, production, storage, and offloading vessel and a mooring system. The operator, Cie. des Petroles Total Libye, and partners NOC and Wintershall AG of Germany expected initial production of crude oil to begin in 2003 (Middle East Economic Digest, 2001b).

Work progressed on the planned 50,000-bbl/d-capacity Elephant Field on block NC-174. Development costs were estimated to be \$500 million (Middle East Economic Digest, 2001a). Eni, which acquired Lasmo plc (the former operator) in January 2001, was the operator of the block. Other participants in the block included Agip Nord Africa B.V. and a consortium of Korean companies, which included the Daesung Group, Daewoo International Corp., Hyundai Corp., Korea Petroleum Development Corp., and the Majuko Group. Initial production is expected in 2003.

In a surprise move, Lundin Oil AB sold its 25% interest in the En Naga prospects on block NC-177 to Petro-Canada. NOC held the other 75% interest in the block. Lundin had acquired its stake in the project in 2000, shortly after the Government declared that the block was eligible for development. Three of five planned development wells were completed in 2001, and production (about 14,000 bbl/d) was expected to begin in 2002 (Petro-Canada, 2002, p. 3).

In March 2001, NOC announced it was reviewing the concessions of the Oasis Group (Amerada Hess Corp., Conoco Inc., and Marathon Oil Corp.). Oasis Group and Occidental Petroleum Corp. had been forced to withdraw from Libya in 1986 with the imposition of sanctions by the United States. In May 2001, Wintershall reportedly was interested in acquiring drilling rights on the Oasis Group concessions (Middle East Economic Digest, 2001d). In September, the Government gave the American members of Oasis Group 12 months (from September 2001) to return to work on their concessions, which were originally scheduled to expire in 2005. The Group's concessions had been maintained since 1986 by Waha Oil (a subsidiary of NOC).

The \$250 million renovation of the 120,000-bbl/d Az Zawiyah refinery continued (Oil & Gas Journal, 2000; Africa Energy Intelligence, 2001). Additional information on the oil and gas sector can be found in the U.S. Energy Information Administration's July 2002 country analysis brief for Libya at URL <http://www.eia.doe.gov/emeu/cabs/libya.pdf>.

## Infrastructure

The Governments of Egypt and Libya proposed to establish Arab Company for Oil and Gas Pipelines. The new company would be charged to build a pipeline system to transport Libyan

crude oil to Egypt and Egyptian natural gas to Libya (Organization of Petroleum Exporting Countries, 2001). Libya also planned to build a rail system along the northern coast to connect Musaid in the east with Ras Ajdar in the west.

Construction of the rail network was expected to consume 500,000 metric tons (t) of concrete sleepers and 370,000 t of steel rail. A feasibility study was underway for a spur rail line extending inland, south from Sirte (Middle East Economic Digest, 2001e).

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

(Thousand metric tons unless otherwise specified)

Commodity 3/	1997	1998	1999	2000	2001
Cement, hydraulic	2,524 4/	3,000	3,000	3,000	3,000
Gas, natural:					
Gross million cubic meters	12,910 4/	12,600	12,400	12,000	12,000
Dry do.	6,570 4/	5,800 r/	5,500 r/	5,400 r/	5,400
Gypsum	125	150	150	175	150
Iron and steel, metal:					
Direct-reduced iron 4/ 5/	990	1,010	1,330	1,500	1,090
Crude steel	897 4/	925 4/	945 4/	1,055 4/	900
Lime	275	275	270	270	250
Nitrogen: 4/					
N content of ammonia	536	545	552	552	495
N content of urea	383	408	386	407	365
Petroleum:					
Crude thousand 42-gallon barrels	544,000	540,000	520,000	538,000	520,000
Refinery products:					
Gasoline do.	16,200	16,800	10,000	12,000	12,000
Kerosene and jet fuel do.	14,300	12,700	7,000	8,400	8,400
Distillate fuel oil do.	31,500	31,800	20,000	24,000	24,000
Residual fuel oil do.	35,500	33,600	25,000	30,000	30,000
Other do.	18,000	20,000	13,000	15,600	15,600
Total do.	116,000	115,000	75,000	90,000	90,000
Salt	30	30	30	40	40
Sulfur, byproduct of petroleum and natural gas	13	13	13	13	15

r/ Revised.

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

2/ Table includes data available through September 23, 2002.

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 also were produced but were blended with crude petroleum and reported as part of that total.

4/ Reported figure.

5/ Includes hot briquetted iron.