THE MINERAL INDUSTRY OF

LIBYA

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Because Libya lacked substantial industrial diversification, nearly 95% of its revenues were attributed to the hydrocarbon sector. The country's financial position worsened considerably in 1998 owing to falling oil prices. Es Sider (36.5 °API gravity) crude oil averaged $12.52 per barrel in 1998, down from $18.99 per barrel in 1997. Oil revenues were just $5,520 million in 1998. Despite U.S. sanctions, foreign investment in the oil sector continued, particularly from European companies. Libya's petroleum reserves were the largest on the African Continent but remained underexploited. Libya was, however, the second largest crude oil producer in Africa, following Nigeria. With the exception of the heavily subsidized Libyan Iron and Steel Co. (LISCO), which was supplied by imported raw materials, the nation's nonfuel mineral industry sector offered little contribution to the economy. Nonfuel mineral output was confined to the extraction of salt from the coastal plains near Benghazi and Tripoli and the quarrying of clay, gypsum, and limestone near Al Khums. LISCO's iron and steel complex was operating at about three-fourths of its design capacity of 1.2 million metric tons per year (Mt/yr). (See table 1.)

In 1998, Libya exported about 110,000 barrels per day (bbl/d) of crude oil and products to Morocco and Tunisia under barter deals. Total crude oil exports have averaged from 1.0 to 1.2 million barrels per day for the past 6 years. Italy remained Libya's largest single market, absorbing more than 40% of Libyan crude exports. A new export grade at 43° API gravity and 0.07% sulfur was introduced in September 1998. The crude was derived from Es Shahara Field in Block NC-115 in the Murzuk Basin, operated by the Repsol Group of Spain.

The major undeveloped mineral resource in the country was the Wadi Shatti iron ore deposit. The deposit consists of three horizons, the upper and lower comprising 375 million metric tons (Mt) of nonmagnetic iron ore at 48% Fe and the middle horizon comprising 420 Mt of magnetic iron ore at 55% Fe. The deposit is shallow dipping and amenable to open pit mining (Mining Journal, 1999).

The LISCO iron and steel plant at Misurata included two 550,000-metric-ton-per-year (t/yr) Midrex direct reduction (DR) modules, six electric furnaces with a combined capacity of 1.25 Mt/yr, and a 140,000-t/yr cold-rolling mill. Although the plant had been operating at below capacity, construction of a third DR module with a 650,000-t/yr capacity was completed in 1998.

Cement manufacture was the sole domain of two parastatals—the Arabian Cement Co. and the Libyan Cement Co. Arabian Cement operated four plants—El Mergeb with a 330,000-t/yr capacity, and Souk, El Khamis, and Lebda each with a 1-M/yr capacity. Libyan Cement operated the El Hawari cement plant at Benghazi and the El Fatayeh Cement Factory at Derna, each with a 1-M/yr capacity. Production satisfied most domestic requirements, and very little surplus was available for export; on average, capacity utilization was 50%.

Repsol began to export from its Murzuk acreage in mid-1998. Initial production from the field was 75,000 bbl/d, rising to 125,000 bbl/d by yearend and 200,000 bbl/d by the first quarter of 1999. The field was owned by Repsol, Austria's OMV Aktiengesellschaft, France's Total S.A., and Libya's National Oil Co. (Middle East Economic Digest, 1998). Lasmo plc of the United Kingdom reported that its Elephant Field discovery, which is also in the Murzuk Basin, could have oil reserves of more than 500 million barrels. On the basis of drilling of its first and second appraisal wells, the company hoped to be in production by 1999.

Red Sea Oil Corp. discovered the En Naga North and the En Naga West Fields in 1998. Initial production was expected in 2000 when En Naga North will come on-stream. Peak output will be about 30,000 bbl/d and can be sustained for 3 to 4 years (Arab Petroleum Research Center, 1999, p. 258).

The five domestic refineries had a nominal capacity of 342,000 bbl/d. In addition, Libya's European refineries in Germany, Italy, and Switzerland had a combined refining capacity of 300,000 bbl/d (Arab Petroleum Research Center, 1999, p. 259). Libya ran distribution networks in these countries, as well as in the Czech Republic, Hungary, the Netherlands, Slovakia, and Spain.

Libya has been politically isolated for the past 15 years. Limited exploration activities and development activities have shown promise in the past few years. Without sufficient foreign investment, however, the much-needed enhanced recovery operations in older fields will limit petroleum output and, thus, the economy of Libya.

References Cited

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Middle East Economic Digest, 1998, Libya: Middle East Economic Digest, v. 42, no. 30, July 24, p. 16.

Mining Journal, 1999, Libya: Mining Journal, v. 332, no. 8515, January 22, p. 65.

TABLE 1
LIBYA: PRODUCTION OF MINERAL COMMODITIES 1/

(Thousand metric tons unless otherwise specified)

Commodity 2/		1994	1995	1996	1997	1998 e/
Cement, hydraulic		3,800 r/	3,210	3,550	2,524 r/	3,000
Gas, natural:						
Gross	million cubic meters	12,510 3/	12,460 3/	12,640 3/	12,910 3/	13,000
Dry	do.	6,390 3/	6,345 3/	6,420 3/	6,570 3/	6,650
Gypsum e/		180	160 r/	175 r/	125 r/	150
Iron and steel:						
Metal:						
Direct-reduced iron		852	963	862	990	1,200
Crude steel		874	909	863	897	925 3/
Lime e/		260	260	260	275	275
Nitrogen:						
N content of ammonia		350	534	545	536	540
N content of urea		347	409	399	383	385
Petroleum:						
Crude	thousand 42-gallon barrels	507,313	509,175	511,000	516,475	502,970 3/
Refinery products:						
Gasoline	do.	16,000	15,500	16,000	16,200	16,200
Kerosene and jet fuel	do.	13,800	13,700	14,200	14,300	14,300
Distillate fuel oil	do.	29,600	29,000	31,400	31,500	31,500
Residual fuel oil	do.	32,500	32,000	35,400	35,500	35,500
Other	do.	10,200	10,500	18,000	18,000	18,000
Total	do.	102,100	100,700	115,000	115,500	115,500
Salt		30	30	30	30	30
Sulfur, byproduct of petroleum and natural gas e/		13	13	13	13	13

e/ Estimated. r/ Revised.

1/ Table includes data available through December 1, 1999.

2/ In addition to the commodities listed, a variety of brick, construction stone, and tile was produced, but available information was inadequate to make reliable estimates of output levels. Natural gas liquids were also produced but were blended with crude petroleum and were reported as part of that total.

3/ Reported figure.