

THE MINERAL INDUSTRY OF

QATAR

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Although the burgeoning natural gas and petrochemical industries will soon diminish the role of petroleum revenues in the Qatari economy, oil accounted for nearly 80% of total exports, 62% of Government revenues, and 38% of the gross domestic product in 1998. The 35% decline in crude oil prices, although partially offset by increased volume, had an adverse effect on the economy, causing several projects to be postponed (Middle East Economic Digest, 1998b).

The Qatar Steel Company, Ltd. (QASCO), achieved record production in 1998 while the output of cement maintained a steady pace.

The country's major trading partners were Brazil, the European Union, the Gulf Cooperation Council (GCC) nations, India, Japan, the Republic of Korea, and the United States. Qatar imported pelletized iron ore from Bahrain and raw materials for the steel and construction industries from the European Community, Japan, and the United States. Other imports from the United States included aluminum semimanufactures; heavy machinery; nonferrous metals, such as copper and copper alloys; power-generating machinery and equipment; vehicles; and zinc and zinc alloys. Almost all the output (90%) from QASCO was exported, mostly to the GCC countries.

A 240,000-metric-ton-per-year (t/yr)-capacity aluminum smelter, a joint venture between Qatar and Norsk Hydro ASA of Norway, was anticipated by 2002. A second-stage expansion would raise capacity to 470,000 t/yr in 2004 (Platt's Metals Week, 1998).

Qatar Hot Briquetted Iron Company Ltd. was on schedule in the development of a 2-million-metric-ton-per-year (Mt/yr)-capacity, \$400 million hot-molded briquetted iron plant to be inaugurated by the second half of 2000. QASCO held 31% equity; Gulf Investment Co., National Industries Co. of Kuwait, and Duferco International Investment Co. Ltd., the Swiss-Italian trading house, each held 16.33%; and Qatar Industrial Manufacturing Co. and Qatar Shipping Co. each held 10%. Duferco will purchase 60% of production, and QASCO, the manager of the project, and National Industries Co. of Kuwait will take 20% each. Ore supply contracts for the plant were signed with Companhia Vale do Rio Doce of Brazil and Luossavarra-Kiirunavaara AB of Sweden (Metal Bulletin, 1998).

The Government, through Qatar General Petroleum Corp. (QGPC), was involved in two major liquefied natural gas (LNG) ventures with foreign partners; both were at Ras Laffan, the nearest landfall to the offshore North Field. Qatar

Liquefied Gas Co., the first venture, was owned by QGPC (65%), Total SA of France and Mobil Oil Corp. of the United States (10% each), and Marubeni Corp. and Mitsui & Co. of Japan (7.5% each). The first 2-Mt/yr-capacity train was commissioned in 1996; the second, in early 1997; and the third will be commissioned in 1999 (Oil & Gas Journal, 1997; Arab Petroleum Research Center, 1999, p. 334-338).

Ras Laffan LNG Co. (RASGAS), the second LNG venture, was owned by QGPC (66.5%), Mobil (26.5%), Itochu Corp. of Japan (4%), and Nissho Iwai Corp. of Japan (3%). RASGAS was developing a 5-Mt/yr-capacity LNG plant at Ras Laffan. Construction of the first two 2.5-Mt/yr-capacity trains was completed by yearend 1998 (Middle East Economic Digest, 1998a). An agreement was concluded with Korea Gas Corp. to double the volume of LNG exports initiated in an earlier agreement to 4.8 Mt/yr from 2.4 Mt/yr during a 25-year period. The agreement called for 600,000 metric tons of LNG to be delivered in 1999, and increasing to the contractual maximum of 4.8 million metric tons in 2002. In September 1998, RASGAS was awarded a 20- to 25-year contract for 7.5 Mt/yr to Petronet LNG of India.

The oil price slump caused some delays in the installation of permanent gas production facilities at Al-Shaheen Field. The tenders for the Dukhan Field gas lift project also were put on hold. Crude oil production increased significantly to an average of 695,000 barrels per day (bbl/d) in 1998 compared with 658,000 bbl/d in 1997 and 510,000 bbl/d in 1996. Increased output from Al-Shaheen and the newly commissioned Al Khaleej Field accounted for the rapid rise in production. Al-Shaheen, operated by Mærsk Oil Qatar AS, a subsidiary of Mærsk Olie og Gas AS of Denmark, produced around 100,000 bbl/d. Mærsk planned to increase production to 150,000 bbl/d by 2000. Located in Block 5, about 70 kilometers off Qatar's northeastern coast, Al-Shaheen produced a sour 29° to 33° API crude oil with 1.7% to 2% sulfur. Upon the installation of a gas-gathering system, the field was expected to produce approximately 3.5 billion cubic meters per day of associated gas (Arab Petroleum Research Center, 1999, p. 321, 327-328, and 330).

In recent years, Qatar has initiated a number of new policies to increase oil production, to locate additional oil reserves before existing reserves become too expensive to recover, and to invest in advanced oil recovery systems to extend the life of existing fields. One such policy has been the improvement in the terms of exploration and production contracts and production-sharing agreements. During the next several years,

¹Deceased.

\$27 billion will be invested to expand hydrocarbon production capacities in Qatar's upstream and downstream sectors. Of the \$27 billion, more than half, or about \$17.8 billion, will come from foreign companies (Arab Petroleum Research Center, 1999, p. 327-328 and 334-341).

Proven reserves of crude oil are considered to be between 3.7 billion and 5 billion barrels. Natural gas reserves are estimated to be 8.5 trillion cubic meters. The bulk of the reserve, or 6.8 trillion cubic meters, is nonassociated gas from the North Field (Arab Petroleum Research Center, 1999, p. 317).

Qatar had an electric generation capacity of 2,025 megawatts (MW). In March 1998, the Qatari Government took a small step towards privatizing its power sector. The Ministry of Electricity and Water, which controlled virtually all the country's powerplants, agreed to transfer operation and maintenance responsibilities of the Ras Abu Fontas-B plant to the Qatar Electricity & Water Company (QEW), which was controlled by local investors (57%) and the Government (43%). The plant was the country's largest and newest power and water-desalination plant. It had an electric generation capacity of 650 MW and water output of 33 million gallons per day. The operation and maintenance responsibilities were transferred to QEW in July 1998 (Arab Petroleum Research Center, 1999, p. 342-343).

The North Field natural gas projects continue to be given top priority, and if they attain their full development by 2010, as planned, they should underwrite Qatar's economic well being through the next century. Other mineral industry projects may be in a more-tenuous position in the near term as Government

oil revenues decline owing to low world oil prices.

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Major Sources of Information

- Qatar General Petroleum Corp.
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TABLE 1
QATAR: PRODUCTION OF MINERAL COMMODITIES 1/

(Metric tons unless otherwise specified)

Commodity 2/	1994	1995	1996	1997	1998 e/
Cement, hydraulic	469,502	475,380	690,000	700,000 e/	700,000
Gas, natural:					
Gross million cubic meters	18,300	18,800	18,950	24,210 r/	27,000
Dry do.	13,500	13,600	13,700	1,790 r/	21,500
Iron and steel, metal:					
Direct-reduced iron thousand tons	610	622	632	570	706 3/
Steel, crude do.	572	614	626	616	646 3/
Semimanufactures:					
Billet do.	610	606	617	608	637 3/
Bars do.	600	601	601	596	597 3/
Natural gas liquids e/ thousand 42-gallon barrels	18,200	18,500	21,000	22,000 3/	22,000 3/
Nitrogen:					
N content of ammonia	646,055	653,462	635,027	942,500 r/	579,000 3/
N content of urea	394,600	407,500	715,000 r/	670,000 r/	777,000 3/
Petroleum:					
Crude thousand 42-gallon barrels	138,200	142,300	186,150	236,885 r/	254,040 3/
Refinery products:					
Gasoline do.	4,661	4,441	3,942	4,000 e/	4,000
Kerosene do.	3,377	3,217	3,321	3,350 e/	3,350
Distillate fuel oil do.	5,480	5,126	6,997	7,000 e/	7,000
Residual fuel oil do.	6,278	6,064	6,860	6,900 e/	6,900
Other do.	1,000	900	1,100	1,100 e/	1,100
Total do.	20,796	19,748	22,220	22,350 e/	22,350
Stone, limestone e/ thousand tons	900	900	900	900	900
Sulfur e/	62,000	50,000	45,000	65,000	65,000
Urea	858,000	886,000 e/	870,000	875,000 e/	875,000

e/ Estimated. r/ Revised.

1/ Table includes data available through March 16, 2000.

2/ In addition to commodities listed, clays, gypsum, and sand and gravel for construction purposes are produced, but available information is inadequate to make reliable estimates of output levels.

3/ Reported figure.