### THE MINERAL INDUSTRY OF

# IRAQ

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The mineral industry of Iraq was dominated by the production of hydrocarbons. The United Nations (U.N.) trade embargo (U.N. Security Council Resolution 661) imposed on Iraq after its 1990 invasion of Kuwait nominally restricted trade with Iraq. Although resumption of official Iraqi crude oil exports had been authorized under U.N. Security Council Resolution 986 (known as the Oil for Humanitarian Aid Agreement or the oil-for-food program) in 1996, illegal exports reportedly were rampant (Corzine, 2000). In 1999, the oil-for-food program was renewed, extended, and modified by Resolutions 1242, 1266, 1275, 1280, and 1284. Resolution 1284 eliminated the ceiling on the value of oil exports that had been raised to \$5.3 billion per 180-day period under Resolution 1153 of February 1998. Nonfuel mineral production-principally cement, phosphate rock, salt, steel, and sulfur-was limited to satisfying domestic consumption. By using the purchasing power parity calculation, the gross domestic product for the Iraqi centrally planned economy was estimated to be \$59.9 billion in 1999 (U.S. Central Intelligence Agency, 2000, Iraq—World factbook, accessed October 23, 2000, at URL http://www.odci.gov/cia/ publications/factbook/geos/iz.html).

Iraq produced crude oil from only 15 oilfields. Nearly 60 evaluated petroleum prospects remained undeveloped. Production in 1999 was about 915 million barrels (Mbbl) based on a reported daily average production of 2.507 Mbbl (Organization of the Petroleum Exporting Countries, [undated], Table 4—OPEC crude oil production according to secondary sources—OPEC 1999 annual report, accessed October 23, 2000, at URL http://www.opec.org/193.81.181.14/xxx1/ WebUpdateFiles/AR1999.pdf).

During 1999, about 2 million barrels per day (Mbbl/d) of Iraqi crude oil was exported via the Ceyhan oil terminal at Yumurtalık, Turkey, on the Mediterranean Sea, and the port of Mina al-Bakr, Iraq, on the Arabian Gulf. Iraq also officially shipped about 90,000 barrels per day (bbl/d) of crude oil and products to Jordan by truck under U.N. approval. In addition to official oil exports, about 100,000 bbl/d of crude oil and petroleum products reportedly were smuggled out of the region via Dubai, India, Iran, Pakistan, and Turkey (Arab Petroleum Research Center, 2000, p. 178).

In 1999, an average of 725,000 bbl/d of Iraqi crude oil was exported to the United States, which accounted for about 8% of total U.S. crude oil imports. This volume continued a trend of increasing U.S. imports from Iraq with an average of 336,000 bbl/d imported in 1998, 89,000 bbl/d in 1997, and 1,000 bbl/d in 1996. Iraq was the United States' fifth largest crude oil supplier, following Saudi Arabia, Mexico, Canada, and Venezuela (U.S. Energy Information Administration, 2000, p. 46-53).

The Iraqi Ministry of Oil placed total proven crude oil reserves at 112 billion barrels and natural gas reserves at 3.1 trillion cubic meters (Arab Petroleum Research Center, 1999, p. 160, 173). The Government projected that it would take 6 to 8 years after the U.N. embargo is lifted to reach a target production capacity of 6 Mbbl/d (Oil & Gas Journal, 2000). Actual production could be subject to quotas by the Organization of the Petroleum Exporting Countries.

For more extensive coverage of the mineral industry of Iraq, see the 1998 Minerals Yearbook, volume III, Mineral Industries of Africa and the Middle East.

#### **References Cited**

Arab Petroleum Research Center, 1999, Iraq: Arab Oil & Gas Directory—1999, p. 154-182.

- \_\_\_\_\_2000, Iraq: Arab Oil & Gas Directory—2000, p. 155-188.
- Corzine, Robert, 2000, The merchants of Baghdad find their way round sanctions: Financial Times [London], February 22, p. 8.

Oil & Gas Journal, 2000, The opening of Iraq—Post-sanctions Iraqi oil—Its effects on world oil prices: Oil & Gas Journal, v. 98., no. 3, February 14, p. 41-43.

U.S. Energy Information Administration, 2000, Petroleum supply monthly: U.S. Department of Energy, September, 181 p.

# TABLE 1 IRAQ: ESTIMATED PRODUCTION OF MINERAL COMMODITIES 1/2/

#### (Thousand metric tons unless otherwise specified)

Commodity 3/		1995	1996	1997	1998	1999
METALS	1					
Steel, crude		300	300	200	200	200
INDUSTRIAL MI	NERALS					
Cement, hydraulic		2,108 4/	1,600	1,700	2,000	2,000
Nitrogen, N content of ammonia		500	500	500	450	450
Phosphate rock:						
Beneficiated 5/		1,000	1,000	1,000	1,000	1,000
Phosphorus pentoxide content		300	300	300	300	300
Salt		250	250	250	250	300
Sulfur, elemental:						
Native, frasch		200 r/	250	250	250	250
Byproduct 6/		50 r/	50 r/	50 r/	50 r/	50
Total		250 r/	300 r/	300 r/	300 r/	300
MINERAL FUELS AND RE	LATED MATERIALS					
Gas, natural:						
Gross	million cubic meters	3,500	3,480 4/	3,800 r/	6,000	7,000
Dry	do.	3,000	3,240 4/	3,000 r/	3,000 r/	2,800
Natural gas plant liquids	thousansd 42-gallon barrels	10,000	10,000	10,000	8,000	3,000
Petroleum:						
Crude (including lease condensate)	do.	205,000 4/	213,000 4/	433,000 4/	750,000 4/	915,000
Refinery products	do.	170,000 r/	170,000 r/	175,000 r/	180,000 r/	125,000

r/ Revised.

1/ Includes data available through October 25, 2000.

2/ Estimated data are rounded to no more than three significant digits.

3/ In addition to commodities listed, the following also were produced but information is inadequate to estimate output: clay and/or shale for cement (about 0.4 metric ton per metric ton of finished cement); clays for ceramics and refractories; gypsum for cement, plaster, mortar, and other products; limestone for cement (about 1.3 metric tons per metric ton of finished cement), lime, and construction stone; industrial sand for foundry use and glass manufacture; uranium and fluorine compounds from phosphate rock processing; and other construction materials (e.g., clays for brick and tile, sand and gravel, and stone). 4/ Reported figure.

5/ Estimated to contain 30% phosphorous pentoxide.

6/ Presumably from petroleum and natural gas processing.