

# THE MINERAL INDUSTRY OF BAHRAIN

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About 22 islands comprise the Kingdom of Bahrain. The archipelago, which is located in the Gulf of Bahrain between Qatar and Saudi Arabia, has a total land area of about 665 square kilometers and supported a population of more than 689,000. Of the total population, 33% was employed, and 28% was younger than 15. In 2003, the gross domestic product (GDP) based on purchasing power parity was estimated to be about \$12.61 billion<sup>1</sup> and the GDP per capita based on purchasing power parity was estimated to have increased to \$16,722 (Bahrain Monetary Agency, 2004a, p. 6-7; International Monetary Fund, 2004<sup>2</sup>).

Revenue associated with the production of crude oil formed an integral segment of the economies of the countries of the Arabian Peninsula, which included Bahrain. In 2003, the oil sector accounted for about 15.7% of Bahrain's real GDP and oil revenues accounted for about 73% of Government income. In Bahrain, the aluminum sector also figured prominently in the country's mineral economy (Bahrain Monetary Agency, 2004b, p. 5-6).

## Trade

Of the country's total export earnings in 2003 of about \$6.6 billion, Bahraini exports of crude oil and refined petroleum products were valued at about \$4.7 billion. In 2002, oil exports were valued at about \$4 billion; other mineral exports included base metals (valued at about \$911 million), urea (\$64 million), and methanol (\$44 million). In 2002, total national imports were valued at about \$5.39 billion (Bahrain Monetary Agency, 2004c, p. 30; Kingdom of Bahrain, 2004<sup>3</sup>).

## Commodity Review

### Metals

**Aluminum.**—Aluminium Bahrain B.S.C. (ALBA) began construction of a fifth aluminum potline at Sitra in 2003; completion was scheduled for 2005. The \$1.7 billion 336-pot line 5 would have a nominal capacity of 307,000 metric tons per year (t/yr). ALBA also installed a \$23 million flue-gas-desulfurization plant at the 450,000-t/yr coke-calciner plant and proposed to add 24 pots to the aluminum smelter's line 4. When completed, the 23,000-t/yr expansion of line 4 would

increase the plant's total smelting capacity to 850,000 t/yr. A 307,000-t/yr line 6 also was under consideration. In September, Alcoa Inc. signed a memorandum of understanding with the Government of Bahrain that would allow Alcoa to acquire 26% equity interest in ALBA (Middle East North Africa Financial Network, Inc., 2003<sup>4</sup>; Reuters, 2003<sup>5</sup>; Aluminium Bahrain B.S.C., 2004a<sup>6</sup>, b<sup>7</sup>).

### Mineral Fuels

**Petroleum.**—Crude oil production from the Ahwali Field (also known as the Bahrain Field) dropped in 2003 to 13.7 million barrels (Mbbbl) compared with 13.8 Mbbbl in 2002, and was augmented by 73.8 Mbbbl from Bahrain Petroleum Co. B.S.C. (Closed)'s (Bapco) Abu Sa'afa Field, which was offshore Saudi Arabia. Bahrain exported the production from the Abu Sa'afa Field. In June, the Governments of Bahrain and Saudi Arabia agreed to fund a \$1.2 billion expansion of the Abu Sa'afa Field to 300,000 barrels per day (bb/d) from about 200,000 bbl/d. Bahrain would retain the right to sell one-half of the increased production from the field (ABQ Zawya Ltd., 2003<sup>8</sup>).

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Reuters, 2003, Alcoa to acquire stake in Aluminium Bahrain smelter; will provide long-term alumina supply, accessed September 15, 2003, via URL <http://home.businesswire.com>.

<sup>1</sup>Where necessary, values have been converted from Bahraini dinars (BhD) to U.S. dollars (US\$) at the rate of BhD0.377=US\$1.00.

<sup>2</sup>References that include a section mark (§) are found in the Internet References Cited section.

TABLE 1  
BAHRAIN: PRODUCTION OF MINERAL COMMODITIES<sup>1</sup>

(Metric tons unless otherwise specified)

Commodity <sup>2</sup>	1999	2000	2001	2002	2003 <sup>c</sup>
Aluminum, smelter output, primary metal	502,663	509,038	522,749 <sup>r</sup>	518,924	531,991 <sup>3</sup>
Cement	156,100	88,806	88,700	66,986	70,000
Gas, natural:					
Gross million cubic meters	11,470	11,500 <sup>e</sup>	12,018	12,154	12,305 <sup>3</sup>
Dry do.	8,789	8,966	9,285	9,429	9,500
Methanol	421,946	370,000	412,122	405,763	410,000
Natural gas plant liquids:					
Propane thousand 42-gallon barrels	1,144	1,055	1,058	1,099	1,100
Butane do.	1,005	955	968	961	960
Naphtha do.	1,683	1,626	1,598	1,610	1,600
Nitrogen, N content of ammonia	369,500	349,900	372,000	377,400	311,900
Petroleum:					
Crude thousand 42-gallon barrels	13,670	13,766	13,656	13,800	13,720 <sup>3</sup>
Refinery products:					
Liquefied petroleum gas do.	335	346	353	350 <sup>e</sup>	350
Gasoline do.	6,756	7,090	6,182	6,500 <sup>e</sup>	7,000
Jet fuel do.	9,520 <sup>e</sup>	9,450 <sup>e</sup>	15,497	16,000 <sup>e</sup>	16,000
Kerosene do.	9,000 <sup>e</sup>	9,000 <sup>e</sup>	2,777	3,000 <sup>e</sup>	5,000
Distillate fuel oil do.	30,000 <sup>e</sup>	21,278	17,188	18,000 <sup>e</sup>	20,000
Residual fuel oil do.	22,066	29,000	25,000 <sup>e</sup>	26,000 <sup>e</sup>	29,000
Other <sup>c</sup> do.	16,700	17,600 <sup>r</sup>	21,000 <sup>r</sup>	21,200 <sup>r,e</sup>	15,000
Total <sup>3</sup> do.	94,400	93,737 <sup>r</sup>	87,765 <sup>r</sup>	91,122 <sup>r</sup>	92,350 <sup>3</sup>
Sulfur	66,500 <sup>e</sup>	61,590	67,480	67,381	67,500

<sup>e</sup>Estimated; estimated data are rounded to no more than three significant digits and may not add to totals shown. <sup>r</sup>Revised.

<sup>1</sup>Table includes data available through September 27, 2004.

<sup>2</sup>In addition, iron ore was pelleted and exported for use by direct reduction plants. Pellets were produced from imported iron ore. Since 1998, granular urea has been produced from locally produced ammonia.

<sup>3</sup>Reported figure.