THE MINERAL INDUSTRIES OF

JORDAN, LEBANON, AND SYRIA

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JORDAN

In recent years, Jordan has been a major producer and exporter of potash and phosphate rock. It has also produced such industrial minerals as bromine, feldspar, gypsum, kaolin, lime, salt, and silica sand and such building materials as cement, dimension stone, limestone, and marble. Natural gas and petroleum products have been produced for domestic consumption. Deposits of copper, gold, iron, sulfur, and titanium were found in Jordan, and bromine and magnesium occur in the Dead Sea.

In 2002, Jordan's gross domestic product (GDP) amounted to about $20.9 billion at purchasing power parity. The GDP grew by 4.9% in 2002 compared with 4.2% in 2001. In 2002, the output of the manufacturing sector amounted to 14% of the GDP; construction, 3.6%; mining and quarrying, 2.9%; and electricity and water, 2.1% (Central Bank of Jordan, 2003, p. 75, International Monetary Fund, 2003, p. 181, 2003§[1]).

In 2002, total exports were valued at $2.17 billion, $459.1 million of which came from cement, fertilizers, phosphate rock, and potash. Total imports were valued at $4.98 billion. Imports of crude petroleum amounted to $582.4 million; iron and steel products, $173.5 million; and refined petroleum products, $145.3 million (Arab Petroleum Research Center, 2003, p. 206; Central Bank of Jordan, 2003, p. 108, 110).

Commodity Review

Metals

Magnesium.—Jordan Magnesia Company [a subsidiary of the Arab Potash Company (APC)] was building a plant to produce about 50,000 metric tons per year (t/yr) of refractory-grade magnesia and 10,000 t/yr of magnesium hydroxide and other magnesium derivatives from the Dead Sea's resources of magnesium chloride. The $109 million plant was expected to be completed in the second half of 2003 (Arab Potash Company Ltd., 2003, p. 20).

Iron and Steel.—Jordan had rolling mill capacity of 1 million metric tons per year (Mt/yr) and billet capacity of 100,000 t/yr. The domestic steel market suffered from severe overcapacity. In December 2002, the Government dissolved First Steel, which was a marketing cartel that had been established in 2000 to alleviate the problem of overcapacity (Jones, 2002).

The International Iron and Steel Institute (2002, p. 82, 86) estimated that Jordan's imports of semimanufactured and finished steel products amounted to 366,000 t in 2001 compared with 387,000 t in 2000 and 396,000 t in 1996. From 1996 to 2001, Jordan's apparent consumption of crude steel fell to 437,000 t from 462,000 t.

Industrial Minerals

Bromine.—In the fourth quarter of 2002, Jordan Bromine Co. Ltd., which was a joint venture of APC and Kemira Co. of Denmark, started producing bromine and bromine compounds at its plant in Ghor Al-Safi. The capacity for elemental bromine is 50,000 t/yr; tetrabromobisphenol-A (TBBA), 35,000 t/yr; and calcium bromide, 30,000 t/yr. The company planned to start chlorine production at a new facility in 2005. This plant would have the capacity to produce 30,000 t/yr of chlorine, 49,000 t/yr of caustic soda, and 12,000 t/yr of hydrochloric acid (Arab Petroleum Research Center, 2003, p. 204; Arab Potash Company Ltd., 2003, p. 16, 20).

Cement.—Jordan Cement Factories Co. Ltd. had two plants with a combined capacity of 4.5 Mt/yr of cement and 3.8 Mt/yr of clinker. The Arab Company for White Cement Industry operated a plant with a capacity of 130,000 t/yr. In 2002, Jordan's cement production rose to nearly 3.46 million metric tons (Mt) from 3.17 Mt in 2001. Cement consumption rose to 2.4 Mt from 2.2 Mt in 2001. From 1998 to 2002, national cement exports rose to $39.9 million from $22.8 million; cement was exported to Egypt, Eritrea, Nigeria, Sudan, Syria, and Yemen (Central Bank of Jordan, 2003, p. 108; International Cement Review, 2003).

Phosphate Rock.—Jordan Phosphate Mines Company (JPMC) produced phosphate rock at four mines. In 2002, phosphate rock production rose to nearly 7.18 Mt from 5.84 Mt in 2001. Production at the Shiyada Mine, which was the largest, amounted to 3.31 Mt. National exports of phosphate rock amounted to $136.2 million compared with $127.6 million in 2001 and $197 million in 1998 (Central Bank of Jordan, 2003, p. 108; Jordan Phosphate Mines Company, undated§a).

[1] References that include a section mark (§) are found in the Internet References Cited sections.

Phosphoric acid was produced by Indo-Jordan Chemicals Company (IJC) and Jordan Fertilizer Industry Company (JFIC). IJC consumed about 850,000 t/yr of phosphate rock and exported its output to India. In 2002, JFIC's production of phosphoric acid rose to 344,000 t from 296,000 t in 2001. About 80% of JFIC's phosphoric acid was consumed in the production of diammonium phosphate (DAP) fertilizer (Arab Petroleum Research Center, 2003, p. 204-205; Middle East North Africa Financial Network, 2003§; Jordan Phosphate Mines Company, undated§b).

JFIC produced 479,000 t of DAP in 2002 compared with 457,000 t in 2001. About 99% of JFIC's DAP sales in 2001 were exports. Nippon Jordan Fertilizer Co. also produced DAP at Aqaba and exported its output to Japan. In 2002, Jordan's exports of fertilizers were $90.3 million compared with $86.2 million in 2001 and $145.8 million in 1998 (Central Bank of Jordan, 2003, p. 108; Middle East North Africa Financial Network, 2003§; Jordan Phosphate Mines Company, undated§b).

Potash.—APC was one of the world's largest potash producers with a capacity of 2.0 Mt/yr. Capacity was expected to increase to 2.4 Mt/yr of potash in 2004. In 2002, exports of potash were $192.7 million compared with $195.1 million in 2001 and $157.4 million in 1998. India accounted for nearly 27% of APC's total potash sales; China, 23%; Malaysia and Singapore, 9%; and Indonesia, 8% (Arab Petroleum Research Center, 2003, p. 203-204; Arab Potash Company Ltd., 2003, p. 16; Central Bank of Jordan, 2003, p. 108).

Kemira Arab Potash Company, which was a joint venture between APC and Kemira, started production at its plant in Aqaba in the fourth quarter of 2002. Capacity amounted to 150,000 t/yr of potassium nitrate fertilizer and 75,000 t/yr of dicalcium phosphate animal feed supplement. Capital investment was expected to reach $113 million (Arab Potash Company Ltd., 2003, p. 20).

Sulfur.—Jordan's production of sulfuric acid rose to 1.8 Mt from 1.65 Mt in 2001. JFIC and IJC produced sulfuric acid from imported sulfur that was sourced from Saudi Arabia and the United Arab Emirates. JFIC's production rose to nearly 1.06 Mt from 920,000 t in 2001 (Middle East North Africa Financial Network, 2003§). In 2001, Jordan consumed about 1.65 Mt of sulfuric acid compared with 1.76 Mt in 2000 and 935,000 t in 1996. More than three quarters of Jordan's sulfuric acid was consumed in the manufacture of fertilizers.

Mineral Fuels

Natural Gas.—National Petroleum Company planned to nearly double domestic natural gas production in 2003 from 269 million cubic meters in 2002 (table 1). The Governments of Cyprus, Egypt, Jordan, Lebanon, and Syria agreed to build a pipeline that would supply Egyptian and Syrian natural gas to Cyprus, Jordan, and Lebanon. Jordan would receive 1 billion cubic meters per year of natural gas starting in early 2005 and 2 billion cubic meters per year starting in 2008 (Arab Petroleum Research Center, 2003, p. 197, 202).

Petroleum.—Although minimal production at the Hamza oilfield continued in 2002, Jordan depended upon Iraq for most of its supplies of crude petroleum. Imports of crude petroleum increased to $582.4 million from $544.8 million in 2001. The pipeline that would link the Zarqa refinery in Jordan with the al-Haditha oilfield in Iraq was expected to be completed by the end of 2004 (Arab Petroleum Research Center, 2003, p. 192).

Suncor Energy Inc. planned to develop the Lejjun oil shale reserves. The company planned to produce 17,000 barrels per day (bbl/d) in 2006, 67,000 bbl/d in 2011, and 210,000 bbl/d in 2014. In early 2002, Suncor sold its interest in the Lejjun project to a consortium of two Australian companies (Arab Petroleum Research Center, 2003).

Jordan Petroleum Refinery Company (JPRC) operated Jordan's only refinery at Zarqa, which had a nominal capacity of 90,400 bbl/d. The company was expanding the refinery to a capacity of 150,000 bbl/d and reducing the sulfur content of its products; the expansion and upgrades were expected to cost $500 million. Imports of petroleum products rose to $145.3 million from $112.8 million in 2001 (Arab Petroleum Research Center, 2003, p. 192, 206).

Infrastructure

Jordan produced 7,865 gigawatt-hours (GWh) of electricity in 2002, which was an increase from 7,366 GWh in 2001 and 6,570 GWh in 1998. About 11% of Jordan's electricity was generated from natural gas. The country's electricity demand was expected to increase to 10,000 GWh in 2005 and 12,500 GWh in 2010. Installed generating capacity was 1,578 megawatts (MW) in 2001 (Arab Petroleum Research Center, 2003, p. 200; Central Bank of Jordan, 2003, p. 79).

Outlook

Jordan's economy is expected to grow by 3% in 2003 and 5.5% in 2004. The strength of the domestic economy could lead to a higher demand for building materials. Jordan's cement consumption is expected to rise to 2.63 Mt in 2003 from 2.4 Mt in 2002. Domestic sulfuric acid consumption is mostly for fertilizer production; growth is likely to follow the trend of phosphate fertilizers. Most of Jordan's phosphate fertilizer production is exported. The global consumption of phosphate fertilizers is expected to increase by 2.7% per year from 2003 to 2008 (International Cement Review, 2003; International Monetary Fund, 2003, p. 181; Jasinski, 2004, p. 57.4).

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LEBANON

The Lebanese minerals industry continued its historically small contribution to the country's economy. In recent years, Lebanon has been known to produce cement, gypsum, lime, phosphatic fertilizers, phosphoric acid, salt, steel, and sulfuric acid for domestic consumption. Modest deposits of asphalt, coal, and iron ore occur in Lebanon. In 2002, Lebanon's GDP amounted to about $29.3 billion at purchasing power parity. The GDP grew by 2% in 2002 (International Monetary Fund, 2003, p. 181; 2003§).

Commodity Review

Metals

Iron and Steel.—In June 2002, Consolidated Steel Lebanon shut down its rolling mill because of high input costs. The price of imported Ukranian billet rose sharply in 2002; high electricity, fuel, and labor costs posed longer term problems. Consolidated Steel was attempting to find a buyer for the mill (Metal Bulletin, 2002).

The International Iron and Steel Institute (2002, p. 82, 86) estimated that Lebanon's imports of semimanufactured and finished steel products amounted to 705,000 t in 2001 compared with 454,000 t in 2000 and 861,000 t in 1996. From 1996 to 2001, Lebanon's apparent consumption of crude steel fell to 786,000 t from 965,000 t.

Industrial Minerals

Cement.—Lebanon's cement factories were owned by Société des Ciments Libanais, which had a capacity of 2.2 Mt/yr; Ciementerie Nationale SAL, 1.6 Mt/yr; and Ciment de Sibline, 1.2 Mt/yr. National cement production fell to about 2.85 Mt from 2.89 Mt in 2001. Cement consumption fell to 2.5 Mt from 2.72 Mt in 2001. The Government's ban on cement imports was scheduled to expire in 2005 (International Cement Review, 2003).

Phosphate Rock.—Lebanon imported phosphate rock from Syria to produce phosphoric acid and such fertilizers as triple superphosphate (TSP). From 1998 to 2002, production of phosphoric acid rose to 150,000 t from 90,000 t (table 1).

Sulfur.—Lebanon produced sulfuric acid from imported sulfur, which was sourced from Russia and Saudi Arabia. In 2002, production increased by 20%. From 1996 to 2001, Lebanon's consumption of sulfuric acid increased to 400,000 t from 207,000 t; more than three-quarters was consumed in the production of fertilizers.

Mineral Fuels

Natural Gas.—In December 2001, the Governments of Lebanon and Syria signed an agreement in which Syria would supply natural gas to Lebanese powerplants. In 2003, Lebanon was expected to start importing natural gas from Syria. Imports would start out at about 550 million cubic meters per year and rise to nearly 1.28 billion cubic meters per year (Arab Petroleum Research Center, 2003).

Petroleum.—Because Lebanon has no known petroleum reserves, the country relies on imports for its energy requirements. In 2001, the value of imported petroleum products amounted to $1.01 billion compared with $1.14 billion in 2000 and $810 million in 1999. Nearly 36.6 million barrels of petroleum products were imported in 2001; of that total, residual fuel oil accounted for 32%; diesel fuel, 31%; gasoline, 28%; and others, 9% (Arab Petroleum Research Center, 2003).

Infrastructure

In 2002, Lebanon's production of electricity rose to 10,193 GWh from 9,437 GWh in 2001. Fossil fuels accounted for 91% of the electricity generated, and hydroelectric power, 9%. Lebanon's installed generating capacity was 2,200 MW at the beginning of 2001, although effective operating capacity was estimated to be no more than 1,285 MW. In 2002, Electricité du Liban (EdL) was forced to ration electricity because of insufficient transmission networks (Arab Petroleum Research Center, 2003).

EdL estimated that the rising demand for electricity and the decommissioning of the 331-MW Jieh and 65-MW Al Haricha powerplants would necessitate the installation of 750 MW of new capacity by 2005. In 2002, the Lebanese Parliament approved the partial privatization of EdL (Arab Petroleum Research Center, 2003).

Lebanon's transportation network comprised about 7,300 km of roads, of which 6,200 km was paved. Railroad track totaled 399 km, most of which was damaged during the civil war. The country had 72 km of crude oil pipelines, but none were operational. Ports and harbors were Antilyas, Batroun, Beirut, Chekka, El Mina, Ez Zahrani, Jbail, Jounie, Naqoura, Sidon, Tripoli, and Tyre.

Outlook

The International Monetary Fund (2003, p. 181) predicted that Lebanon's GDP would grow by 2% in 2003 and 3% in 2004. Lebanon's cement consumption is expected to remain unchanged in 2003 (International Cement Review, 2003). Sulfuric acid consumption is mostly for fertilizer production; growth is likely to follow the trend of phosphate fertilizers. More information on the global market outlook for phosphate fertilizers can be found in the section on Jordan.

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SYRIA

The Middle Eastern nation of Syria was a producer of dimension stone, fertilizers, gravel, industrial minerals, natural gas, oil, sand, and semimanufactured goods. Industrial minerals produced in recent years included gypsum, phosphate rock, salt, silica sand, and sulfur. Semimanufactured goods included cement, glass, phosphoric acid, steel, and sulfuric acid.

Syria's 2002 GDP at purchasing power parity was estimated to be $60.6 billion. The GDP increased by 2.7% after rising by 7.2% in 2001. Mineral fuels and lubricants accounted for 54% of national exports in 2001 (International Monetary Fund, 2003, p. 181; 2003§).

Commodity Review

Metals

Iron and Steel.—In June 2002, Joud International started production at the Joudco Steel plant in Lattakia. Joudco was a rolling mill with a capacity of 150,000 t/yr. Saudi and Syrian financiers provided the funds for Arab Steel Co., which was a rolling mill with a capacity of 250,000 t/yr. Arab Steel was expected to start production by the end of 2002. A third plant in Tartous was reported to have opened in early 2002. Billet for these mills was imported from Turkey and Ukraine (Metal Bulletin, 2002).

The International Iron and Steel Institute (2002, p. 82, 86) estimated that Syria's imports of semimanufactured and finished steel products amounted to 1.31 Mt in 2001, which was an increase from nearly 1.07 Mt in 2000 and 389,000 t in 1996. From 1996 to 2001, Syria's apparent consumption of crude steel rose to 1.53 Mt from 505,000 t.

Industrial Minerals

Cement.—Seven state-owned but independently operated companies within the General Organization for Cement and Building Materials (GOCBM) produced cement from nine plants that had a combined capacity of 5.45 Mt/yr. Cement production amounted to about 5.2 Mt in 2002. National cement consumption was estimated to have risen to 4.9 Mt from 4.8 Mt in 2001 and 4.2 Mt in 2000 because of higher spending on communications, power, transport, and water. (International Cement Review, 2003).

The GOCBM planned to increase national cement production capacity to 8 Mt/yr by 2006. In early 2002, construction started on a plant in Hama that would have a capacity of 1 Mt/yr. The plant was expected to be completed in 2005 at a cost of $197 million. The Ministry of Industry announced plans to build another factory at a cost of $200 million that would have a capacity of 1.5 Mt/yr. The Government licensed the construction of a plant in Damascus to be funded by Egyptian, Saudi, and Syrian investors. This plant was expected to cost $250 million and to have a capacity of 3 Mt/yr. Increases in production capacity were expected to serve export markets (International Cement Review, 2003).

Nitrogen.—In 2002, General Fertilizer Company (GFC) [a subsidiary of the General Establishment for Chemical Industries (GECI)] increased ammonia production to 142,800 t from 138,400 t in 2001. GFC also produced urea and such nitrogenous fertilizers as ammonium nitrate and calcium nitrate for domestic consumption.

Phosphate Rock.—General Company for Phosphate and Mines produced 2.48 Mt of phosphate rock compared with 2.04 Mt in 2001. Phosphate rock was consumed by GFC's phosphoric acid and TSP fertilizer plants in Homs. More than two-thirds of Syria's phosphate rock output was exported in 2002.

Sulfur.—The GECI operated a plant in Homs that produced sulfur as a byproduct of oil refining. Syria's consumption of sulfuric acid amounted to 239,000 t in 2001 compared with 318,000 t in 2000 and 222,000 t in 1996. About two-thirds of Syria's sulfuric acid was consumed in the manufacture of fertilizers.

Mineral Fuels

Natural Gas.—Syria's proven natural gas reserves were estimated to be about 240 billion cubic meters. The country's gas-processing plants at Deir ez-Zor, Jbeisseh, Omar, Palmyra, and Suwaidiyah had the ability to process 10.65 billion cubic meters per year of gas. The production of marketable natural gas rose to about 5.8 billion cubic meters from 3.5 billion cubic meters in 1998; nearly 73% of gross natural gas was marketable in 2002. The Government expected marketable natural gas production to rise to about 12.8 billion cubic meters in the next few years (Arab Petroleum Research Center, 2003, p. 440-443; Radler, 2002, p. 115).

In 2003, Syria was expected to start exporting natural gas to Lebanon. Exports would start out at about 550 million cubic meters per year and rise to nearly 1.28 billion cubic meters per year. In November 2002, the Governments of Cyprus and Syria signed an agreement in which Syria was to supply Cyprus with 1.1 billion cubic meters per year of natural gas. The gas would be supplied by an underwater pipeline that was part of the regional Arab gasline to transport gas from Egypt to Jordan, Lebanon, and Syria (Arab Petroleum Research Center, 2003, p. 444).

Petroleum.—Syria's production of crude petroleum fell to about 508,300 bbl/d from 518,300 bbl/d in 2001. Al-Furat Petroleum Company (AFPC) produced about 280,000 bbl/d of light crude in 2002. AFPC's largest fields, which were located mostly in the Deir ez-Zor region, were al-Izba, al-Thayyem, al-Ward, Jarnof/Saban, Maleh/Azraq, Omar, Omar North, Sijan, and Tanak. AFPC planned to increase production to 300,000 bbl/d in 2003 (Arab Petroleum Research Center, 2003, p. 434).

The state-owned Syrian Petroleum Company (SPC) produced heavy crude at Jbeisseh and from the northern fields in the Suwaidiyah-Karatchok area. SPC's production amounted to 130,000 bbl/d in 2002; the company planned to restore output to 150,000 bbl/d by building enhanced oil recovery facilities. The Deir ez-Zor Petroleum Company, which was a joint venture between SPC and TotalFinaElf, produced about 50,000 bbl/d in 2001 (Arab Petroleum Research Center, 2003, p. 434).

Syria's petroleum product refining capacity amounted to 242,000 bbl/d. In late 2002, the Government announced that feasibility studies to upgrade the Banias and Homs refineries and to build a third refinery at Deir ez-Zor were underway. The upgrades were considered to be necessary because of the imbalance of refinery products. The refineries produced surpluses of fuel oil, gasoline, and naptha that were exported, but Syria had to import diesel fuel to meet domestic demand (Arab Petroleum Research Center, 2003, p. 438).

Domestic consumption of crude petroleum by Syria's refineries ranged from 230,000 to 235,000 bbl/d. From about 265,000 to 270,000 bbl/d of crude petroleum was available for export. In 2002, actual exports amounted to about 420,000 bbl/d because of transshipment of Iraqi petroleum in contravention of the United Nations sanctions on Iraq. Syria acknowledged its breach of the sanctions in 2002 (Arab Petroleum Research Center, 2003, p. 426, 438-439).

Infrastructure

At the beginning of 2003, total installed Syrian electric generating capacity amounted to about 7,500 MW. Domestic capacity exceeded demand; Syria had 1,600 to 2,000 MW of capacity of electricity available for export. The demand for electricity was projected to rise by 7% per year through 2010. The Government planned to increase capacity by 3,000 MW from 2004 to 2010, and by an additional 5,000 MW by 2020. Natural-gas-fired plants accounted for more than 25% of electricity generated, and hydroelectric plants, about 10%. The hydroelectric plants were operating significantly below their nominal capacity (Arab Petroleum Research Center, 2003, p. 444).

Outlook

The International Monetary Fund (2003, p. 181) predicted that Syria's GDP would grow by 1% in 2003 and 2.9% in 2004. Syria's demand for cement is expected to rise to 5 Mt in 2003 from 4.9 Mt in 2002; short-term increases in domestic cement consumption are expected to be modest. Higher production of cement for export markets could lead to greater output of gypsum and limestone. Syria's sulfuric acid consumption is mostly for fertilizer production; growth is likely to follow the trend of phosphate fertilizers. More information on the global market outlook for phosphate fertilizers can be found in the section on Jordan.

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TABLE 1

JORDAN, LEBANON, AND SYRIA: PRODUCTION OF MINERAL COMMODITIES [1, 2]

(Metric tons unless otherwise specified)

Country and commodity		1998	1999	2000	2001[e]	2002[e]
JORDAN						
Bromine:						
Elemental		--	--	--	-- [3]	5,000
Compounds		--	--	--	-- [3]	8,000
Cement, hydraulic	thousand tons	2,650	2,687	2,640	3,173 [r, 3]	3,455 [3]
Clay:						
Common clay		590,897	450,178	199,468	206,000	223,000
Kaolin		78,000	34,040	36,795	38,000	41,100
Zeolite tuff		NA	13,086	9,797	10,100	10,900
Feldspar		4,008	1,000	11,112	11,500	12,400
Gypsum		175,807	244,920	157,868	163,000	176,000
Lime[e]		4,064 [3]	4,100 [r]	4,100 [r]	4,900 [r]	5,500
Natural gas, gross	million cubic meters	264	282	287	290	269
Petroleum:						
Crude	42-gallon barrels	14,543	14,600 [e]	14,600 [3]	14,600 [3]	14,600 [3]
Refinery products:						
Liquefied petroleum gas	thousand 42-gallon barrels	1,660	1,505	1,684	1,750	1,720
Gasoline	do.	5,429	4,685	4,957	5,160	5,070
Jet fuel	do.	245	1,722	1,950	2,030	2,000
Kerosene	do.	1,517	1,382	1,991	2,070	2,030
Distillate fuel oil	do.	6,882	8,222	10,001	10,400	10,200
Residual fuel oil	do.	7,105	--	--	--	--
Asphalt	do.	783	830	688	690	680
Total	do.	23,621	18,346	21,271	22,100	21,700
Phosphate:						
Phosphate rock, mine output:						
Gross weight	thousand tons	5,925	6,014	5,526	5,843 [3]	7,179 [3]
P_2O_5 content	do.	1,955	1,924	1,824	1,928 [3]	2,340
P_2O_5 equivalent:						
Phosphatic fertilizers		579,835	613,821	409,149	435,000	459,000
Diammonium phosphate		346,900	313,000	197,000	255,600 [3]	267,300 [3]
Phosphoric acid		598,000 [r]	587,400 [r]	543,000 [r]	482,100 [r, 3]	594,000 [3]
Potassium:						
Potash:						
Crude salts	thousand tons	1,527	1,800	1,936	1,963 [3]	1,956 [3]
K_2O equivalent	do.	916	1,080	1,162 [r]	1,178 [r, 3]	1,174 [3]
Potassium nitrate		--	--	--	-- [3]	15,000
Salt		263,314	279,135	311,189	321,000	347,000
Sand, silica	cubic meters	NA	52,224	47,218	49,000	53,000
Steel:						
Crude[e]		30,000	30,000	30,000	30,000	30,000
Semimanufactured		325,000	300,000	270,000	330,000	270,000
Stone:						
Dimension, worked	thousand meters	6,205	6,303	3,508	3,500 [r]	3,500
Gravel and crushed rock	thousand cubic meters	NA	12,180	10,381	10,400 [r]	10,400
Limestone	do.	8,031	8,000	8,000	8,000 [r]	8,000
Marble	cubic meters	134,670	10,250	21,575	21,600 [r]	21,600
Sulfuric acid:						
Gross weight	thousand tons	1,680	1,804	1,761	1,653 [r, 3]	1,803 [3]
S content	do.	549	590	576	540 [r, 3]	589 [3]
LEBANON						
Cement, hydraulic	thousand tons	3,316	2,714	2,808	2,890 [r, 3]	2,852 [3]
Gypsum[e]		1,900 [r]	1,600 [r]	1,700 [r]	1,600 [r]	1,700
Iron and steel, metal, semimanufactures		70,000	55,000	80,000	80,000	40,000
Lime[e]		14,000	14,000 [r]	14,000 [r]	14,000 [r]	14,000
P_2O_5 equivalent:						
Phosphatic fertilizers		70,000	30,000	15,000	20,000 [r, 3]	30,000 [3]
Phosphoric acid		90,000	100,000	122,000	135,000 [r, 3]	150,000 [3]

See footnotes at end of table.

TABLE 1--Continued

JORDAN, LEBANON, AND SYRIA: PRODUCTION OF MINERAL COMMODITIES [1, 2]

(Metric tons unless otherwise specified)

Country and commodity		1998	1999	2000	2001e	2002e
LEBANON--Continued						
Salt[e]		3,500	3,500	3,500	3,500	3,500
Sulfuric acid:						
Gross weight		262,000	249,000	400,000 r	400,000 r, 3	480,000 3
S content		85,600	81,400	131,000 r	131,000 r, 3	157,000 3
SYRIA						
Cement, hydraulic	thousand tons	4,607	4,781	4,252 r	5,200 r	5,200
Gas, natural:						
Gross	million cubic meters	6,600 e	6,947	6,934	7,100 3	8,000
Dry	do.	3,500 e	3,676	3,886	4,000	5,800
Gypsum		325,000	394,000	333,000	345,000	345,000
Natural gas liquids:						
Propane	thousand 42-gallon barrels	570 e	500	511	525 r	760
Butane	do.	1,880 e	1,630	1,666	1,710 r	2,480
Pentanes	do.	50 e	43	44	45 r	65
Total	do.	2,500 e, r	2,173 r	2,221 r	2,280 r	3,300
Nitrogen:						
N content of ammonia		129,200	111,800	91,100	138,400 3	142,800 3
N content of urea		79,600	73,400	56,600	97,700 3	101,000
Petroleum:						
Crude	thousand 42-gallon barrels	208,467	210,000	199,843	189,180 r, 3	185,530 3
Refinery products:						
Liquefied petroleum gas	do.	2,215	1,571	1,633	1,700 r	1,700
Gasoline	do.	11,785	10,076	8,678	9,200 r	9,200
Naphtha	do.	1,710	3,156	4,419	4,700 r	4,700
Jet fuel	do.	2,029	2,218	1,457	1,500 r	1,500
Kerosene	do.	1,546	742	742	800 r	800
Distillate fuel oil	do.	30,772	31,704	33,176	35,200 r	35,200
Residual fuel oil	do.	34,978	28,201	27,467	29,200 r	29,200
Asphalt	do.	1,900	2,513	2,332	2,500 r	2,500
Other	do.	2,000	826	826	900 r	900
Total	do.	88,935	81,007	80,730	85,700 r	85,700
Phosphate:						
Phosphate rock, mine output:						
Gross weight	thousand tons	2,496	2,084	2,166	2,043 3	2,483 3
P_2O_5 content	do.	765	635	646	613 3	745
P_2O_5 equivalent:						
Phosphatic fertilizers		96,500	66,100	112,700	69,100 r	122,800 3
Phosphoric acid		75,400	52,800	88,800	56,600 r	102,000 3
Salt		178,000	104,335	106,130	106,000	106,000
Steel:						
Crude[e]		70,000	70,000	70,000	70,000	70,000
Semimanufactured		80,000	85,000	60,000	60,000	300,000
Stone:						
Dimension stone	thousand tons	155 e	154	140	150	150
Dolomite, refractory grade	do.	2,860 e	2,856	4,912	5,000	5,000
Gravel and crushed rock	do.	6,550 e	6,546	5,549	6,000	6,000
Sand, construction	thousand cubic meters	560 e	556	395	450	450
Sand, industrial	thousand tons	870 e	869	813	840	840
Volcanic tuff	do.	NA	510	507	550	550
Sulfur						
Byproduct of petroleum and natural gas		10,000 e	11,730	16,660	16,400 r	16,100
Sulfuric acid:						
Gross weight		256,000	193,000	318,000	239,000 r	344,000 3
S content		83,700	63,100	104,000	78,000 r	112,000 3

[e]Estimated. [r]Revised. NA not available. -- Zero.

[1]Table includes data available through February 13, 2004.

[2]Estimated data are rounded to no more than three significant digits; may not add to totals shown.

[3]Reported figure.