

THE MINERAL INDUSTRIES OF THE MIDDLE EAST

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The 15 nations of the Middle East that are covered in this volume encompass an area of more than 6 million square kilometers, which is about two-thirds the size of the United States. In 2001, the total population of the Middle East region was estimated to be about 241 million compared with 278 million for the United States and 6.16 billion for the world. The Middle East has significant reserves of boron minerals, crude oil, natural gas, and phosphate rock. In general, the larger countries of the region (Iran, Oman, Saudi Arabia, Turkey, and Yemen) had significantly more diverse mineral resources than the smaller countries. Iraq was relatively unexplored compared with the other countries in the region.

Acknowledgments

The authors would like to acknowledge and express our sincere appreciation to the following Government agencies for providing minerals production statistics:

- Kingdom of Bahrain—Office of the Assistant Undersecretary for Oil Affairs of the Ministry of Oil;
- Cyprus—Mines Service of the Ministry of Agriculture, Natural Resource, and Environment;
- Arab Republic of Egypt—Central Agency for Public Mobilization and Statistics;
- Sultanate of Oman—Ministry of Commerce and Industry;
- Qatar—Ministry of Energy & Industry and Qatar Petroleum; and
- Turkey—Türkiye Petrolleri A.O.

General Economic Conditions

The economies of most of the region revolved around trade and the exportation of raw and processed mineral commodities, especially the production and processing of crude petroleum and natural gas (table 1). Energy production that used locally produced petroleum and natural gas was an important component of the industrialization of the region. In 2001, according to the International Monetary Fund (2002§¹), the annual change in the gross domestic product (GDP) of the Middle Eastern nations (except Iraq) covered in this section grew at an average of 2.7% compared with 5.2% in 2000 (table 2). The decline was attributed to the slowdown of the global economy (World Bank, 2002§).

Investment Data and Political Risk

State-owned companies dominated the region's mineral industry. In 2001, processing facilities dominated the list of

¹References that include a section twist (§) are found in the Internet References Cited section.

proposed mineral industry projects; the cyclical downturn in international oil prices in 2001 and associated reduced governmental income, however, could result in the postponement of a number of the proposed projects. Proposed investment in the region related to the mineral industry includes new crude oil refineries or expansion of existing refinery capacity in Iran, Iraq, Kuwait, Lebanon, Oman, and Turkey. Natural gas pipelines, gas processing plants, or gas-to-liquid facilities were proposed for Cyprus, Iran, Kuwait, Qatar, Turkey, and the United Arab Emirates (UAE). A petroleum coke plant was planned for the UAE. New ammonia, methanol, or urea plants or plant expansions were proposed for Iran, Kuwait, Oman, Qatar, and the UAE. An alumina refinery was under construction in Iran. Aluminum extrusion facilities were proposed for Qatar, and an aluminum rolling mill was proposed for the UAE. New aluminum smelters or existing smelter capacity expansions were proposed for Bahrain, Oman, Turkey, and the UAE. New iron and steel processing facilities were proposed for Iran, Kuwait, and the UAE. Boric acid, sulfuric acid, and synthetic zeolite plants were proposed for Turkey. A cement factory expansion was planned in Yemen. New bromine facilities were proposed in Jordan. A new gold mine was under construction in Saudi Arabia.

Exploration

Reported industrial mineral and metal exploration activity was concentrated in Iran and Turkey. Exploration and evaluation operations included prospecting for base and precious metals in Cyprus, Iran, Oman, Saudi Arabia, Syria, Turkey, and Yemen (table 2). Hydrocarbon exploration continued in Bahrain, Iran, Iraq, Israel, Jordan, Oman, Qatar, Saudi Arabia, Syria, Turkey, the UAE, and Yemen. Cyprus continued discussions with Egypt concerning exploration of the possible extension of Egyptian natural gas reservoirs into the Cypriot exclusive economic zone and the allocation of any recovered natural gas (table 3).

Commodity Review

Historical production of aluminum metal (primary), bauxite, coal (which included anthracite and bituminous), copper ore and metal, gold ore, iron ore, lead ore, lignite, lead metal (primary and secondary), natural gas, petroleum (crude), phosphate rock, silver ore, steel (crude), and zinc ore and metal were compiled as tables 4 to 20. To conform with the list of commodities covered in the Africa, Asia and the Pacific, Europe and Central Eurasia, and Latin America and Canada introduction chapters, no production of secondary aluminum metal, diamond, nickel ore, platinum-group-metal ore, tin ore and metal, and tungsten ore was reported in the Middle East.

The outlook segments of the mineral commodity tables are based on projected trends that could affect current (2001) producing facilities and on planned new facilities that operating companies, consortia, or Governments have projected to come online within indicated timeframes. Projects that have received approval from the company's board of directors would be typical of projects that could develop within the indicated timeframes. Forward-looking information, which includes estimates of future production, exploration and mine development, cost of capital projects, and timing of operations onset are subject to a variety of risks and uncertainties that could cause actual events or results to differ significantly from expected results. Projects listed in the following section are presented as an indication of current (2001) industry plans and are not a USGS prediction of what will happen. The USGS provides no warranty, expressed or implied, as to the accuracy, reliability, or completeness of furnished data and is under no obligation to correct or update any forward-looking statements, whether as a result of new information or as future events take place.

Metals

Increased bauxite production is expected in Iran when the Jajarm alumina plant begins commercial operations. Regional aluminum output is envisioned to increase, augmented in Bahrain with the completion of Aluminium Bahrain's fifth potline, in Iran with the completion of the Bandar Abbas smelter, in Turkey with the expansion of the Seydehisler plant, and in the UAE with the expansion of Dubai Aluminium Company's Jebel Ali's smelter. Mined copper ore in the region was projected to increase when additional output from the Meiduk and the Songon Mines in Iran comes online and when block 1 is developed in Oman. Increased gold production in the region is anticipated with the proposed development of new mines in Iran, Saudi Arabia, and Turkey and the expansion of older mines in Iran and Oman.

Continued expansion of steel plant capacity in Iran is expected to result in a significant growth of crude steel output. The development of the Al-Jabail zinc mine in Yemen and an associated zinc refinery in Saudi Arabia was expected to augment Middle Eastern lead and zinc production.

Industrial Minerals

A significant increase in phosphate rock production capacity was planned for the Shiyada Mine in Jordan.

Mineral Fuels

New foreign direct investment in the Iranian coal industry was expected to result in increased output. With the increased international interest in the development of natural gas resources and markets, the successful offshore natural gas exploration efforts in the Mediterranean Sea and the Persian Gulf, and proposed development of onshore gas resources in Saudi Arabia, natural gas production in the Middle East is expected to increase by about 50% by 2007.

Trade

By September 28, 2001, the international insurance industry had declared much of the region to be exclusion zones from basic war risks insurance. The affected areas included sections of the Arabian Sea, the Gulf of Aden, the Gulf of Aqaba, the Gulf of Oman, the southeastern Mediterranean Sea, the Persian Gulf, and the Red Sea. For ship owners, the base hull war risk premium was increased, and additional insurance premiums were charged for operating in exclusion zones. To cope with the increases, shipping lines imposed a war risk surcharge on ocean shipments in the region.

The region was a major supplier of crude oil and natural gas to Asia and crude oil to the United States. The Middle East region supplied about 29% of the 3.4 billion barrels of crude oil that the United States imported in 2001. Saudi Arabia, which was the leading supplier of crude oil to the United States, provided 588 million barrels (Mbbbl), or 17% of the United States' crude oil imports. Iraq, with exports of 290 Mbbbl to the United States, was in sixth place on the list of the largest crude oil suppliers to the United States. Kuwait, which was the source of nearly 87 Mbbbl crude oil, remained 11th on the list (U.S. Energy Information Administration, 2002).

Reference Cited

U.S. Energy Information Administration, 2002, Table S3—Crude oil and petroleum product imports—1986-present: Petroleum Supply Monthly, December, p. 8-15.

Internet References Cited

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World Bank, 2002, Figure 1.1—World and industrial and developing country GDP growth, 1987-2004, Global Development Finance 2002, accessed July 26, 2003, at URL <http://www.worldbank.org/prospects/gdf2002/vol1-pdf/pdfcharts/ch1charts.pdf>.

TABLE 1
MIDDLE EAST: PRODUCTION OF SELECTED MINERAL COMMODITIES IN 2001 1/ 2/

(Thousand metric tons unless otherwise specified)

Country	Aluminum e/	Boron	Cement, hydraulic e/	Chromite (gross weight)	Gypsum e/	Natural gas	
						Dry (million cubic meters)	Plant liquids (thousand 42-gallon barrels)
Bahrain	510	--	89 3/	--	--	9,285	3,624
Cyprus	--	--	1,369 3/	--	250	--	--
Iran	140	4	24,000	105	11,000	65,000	25,000
Iraq	--	--	2,000	--	--	2,920	4,000
Israel	--	--	6,900	--	133	10	--
Jordan	--	--	3,159 3/	--	163	290	--
Kuwait	--	--	1,600	--	--	9,500	44,300
Lebanon	--	--	2,700	--	2	--	--
Oman	--	--	1,370	30	30 3/	13,400	6,000
Qatar	--	--	1,050	--	--	27,738	26,726
Saudi Arabia	--	--	20,600	--	450	54,900	292,385
Syria	--	--	4,840	--	345	3,900 e/	4,010 e/
Turkey	61	1,500	35,000	390	300	600	--
United Arab Emirates	500	--	6,100	10 e/	90	41,300	80,000
Yemen	--	--	1,400	--	100	--	2,400
Total Middle East 4/	1,210	1,500	112,000	535	12,900	229,000	488,000
World, total e/	24,400	4,620	1,700,000	12,100	104,000	2,460,000	2,330,000 e/
Share of world total, percentage	5	32	7	4	12	9	21
United States	2,637 3/	1,050	90,450 3/ 5/	--	16,300	555,000	682,000

Country	Petroleum, crude							
	Nitrogen, N in ammonia	(thousand 42-gallon barrels) 6/	Phosphate rock (P ₂ O ₅ content)	Potash K ₂ O equivalent	Salt e/	Steel, crude e/	Sulfur e/	
Bahrain	372	13,656	--	--	--	--	--	68 3/
Cyprus	--	--	--	--	--	--	--	--
Iran	1,087	1,350,000	--	--	2,000	6,890	1,350	
Iraq	220 e/	860,000	100 e/	--	300	50	100	
Israel	--	25 e/	1,115 3/	1,774 3/	537	220	39	
Jordan	--	--	1,928 3/	1,180 e/	321	30	--	
Kuwait	420	745,000	--	--	100	--	524	
Lebanon	--	--	--	--	4	--	--	
Oman	--	352,000 e/	--	--	--	--	30	
Qatar	1,159	237,000	--	--	--	908 3/	221 3/	
Saudi Arabia	1,774	2,763,000	--	--	200	3,400	2,350	
Syria	138	194	613 3/	--	106	70	17	
Turkey	50 e/	18,370	--	--	2,100	14,981	156	
United Arab Emirates	350 e/	790,000 e/	--	--	--	70	1,400	
Yemen	--	165,000 e/	--	--	150	--	--	
Total Middle East 4/	5,570 e/	7,290,000	3,760	2,950	5,820	26,600	6,260	
World, total e/	106,000	24,900,000	41,400	26,000	225,000	851,000	57,300	
Share of world total, percentage	5	29	9	11	3	3	11	
United States	9,730 7/	2,120,000	9,230 3/	1,200	44,800 9/	90,084 3/	9,250 3/	

e/ Estimated. -- Negligible or no production.

1/ Table includes data available through February 26, 2003.

2/ Data may be different from that which appear in individual country production tables owing to availability of more current data.

3/ Reported figure.

4/ May not add to totals shown because of independent rounding.

5/ Includes Puerto Rico.

6/ Includes lease condensate.

7/ Synthetic anhydrous ammonia; excludes coke oven byproduct ammonia.

TABLE 2
MIDDLE EAST: 2001 GROSS DOMESTIC PRODUCT AT PURCHASING POWER PARITY, POPULATION,
AND AREAL EXTENT

Country	Gross domestic product (GDP) at purchasing power parity 1/ (billions)	Estimated population 2/ (millions)	Area 3/ (square kilometers)
Bahrain	\$8.4	0.6	665
Cyprus	10.2	0.8	9,250
Iran	426.0	66.1	1,648,000
Iraq	59.0	23.3	437,072
Israel	121.9	9.1	26,990
Jordan	21.6	5.2	92,300
Kuwait	30.9	2.0	17,820
Lebanon	18.8	3.6	10,400
Oman	21.5	2.6	212,460
Qatar	16.3	0.8	11,437
Saudi Arabia	241.0	22.8	1,960,582
Syria	54.2	16.7	185,180
Turkey	443.0	66.5	780,580
United Arab Emirates	51.0	2.4	82,880
Yemen	14.8	18.1	527,970
Total	1,539	241	6,003,586
United States	10,082	278	9,269,091
World	47,000	6,157	510,072,000

1/ Source: U.S. Central Intelligence Agency, World Factbook 2002, accessed February 4, 2003, at URL <http://www.cia.gov/cia/publications/factbook/fields/2001.html>. For information on the difference between nominal, purchasing power parity, and real GDP, please refer to URL <http://www.cia.gov/cia/publications/factbook/docs/notesandrefs.html#2001>.

2/ Sources: U.S. Central Intelligence Agency, World Factbook 2001, accessed February 4, 2003, at URL <http://www.bartleby.com/151/20.html>, <http://www.bartleby.com/151/65.html>, <http://www.bartleby.com/151/89.html>, <http://www.bartleby.com/151/116.html>, <http://www.bartleby.com/151/117.html>, <http://www.bartleby.com/151/119.html>, <http://www.bartleby.com/151/127.html>, <http://www.bartleby.com/151/135.html>, <http://www.bartleby.com/151/139.html>, <http://www.bartleby.com/151/184.html>, <http://www.bartleby.com/151/199.html>, <http://www.bartleby.com/151/212.html>, <http://www.bartleby.com/151/233.html>, <http://www.bartleby.com/151/244.html>, <http://www.bartleby.com/151/250.html>, <http://www.bartleby.com/151/252.htm>, <http://www.bartleby.com/151/261.html>, <http://www.bartleby.com/151/263.html>, and <http://www.bartleby.com/151/264.html>.

3/ Source: U.S. Central Intelligence Agency, World Factbook 2002, accessed February 4, 2003, at URL <http://www.odci.gov/cia/publications/factbook/fields/2147.html>

TABLE 3
SELECTED MIDDLE EAST EXPLORATION ACTIVITY IN 2001 1/

Country	Prospect	Commodity	Companies	Resource notes 2/	Exploration notes
Cyprus	Shia-Mathiatis	Cu, Zn, Au	Eastern Mediterranean Minerals (Cyprus) Ltd.	Data not available	Preliminary drilling and reprocessed historical data.
Iran	Agh Darreh	Au	Pouya Zarcan Agh Darreh Co.	3.46 Mt at a grade of 3.9 g/t Au	Continued exploration program.
Do.	Kuh-e-Lar	Cu, Mo, Au	National Iranian Copper Industries Co. and Zarcan Minerals Inc.	Data not available	Do.
Do.	Mediabad	Zn, Pb, Ag	Iran Mines and Mineral Industry Development and Renovation Organization, Itok GmbH, and Union Capital Ltd.	217.9 Mt at a grade of 7.2% Zn, 2.34% Pb, and 51 g/t Ag	Prefeasibility study completed.
Oman	Block 1	Cu, Au	National Mining Co.	3 Mt at a grade of 2% Cu	Continued exploration program.
Turkey	Çöpler (also known as Çükürdere)	Cu, Au	Anatolia Minerals Development Ltd. and Rio Tinto Mining & Exploration Ltd.	Data not available	Mapping, sampling, and drilling.
Do.	Kabatas	Cu, Au	do.	do.	Five drill holes were cored.
Do.	Karagöz	Au	do.	do.	Soil geochemistry survey, some drilling.
Do.	Kisladag	Au	Tuprag Metal Madencilik San. Ve Tic. Ltd. Sti.	126 Mt at a grade of 1.2 g/t Au	Prefeasibility study completed. Drilling continued.
Do.	Lucky Star/ Zavikoy	Zn, Pb, Ag	Odyssey Resources Ltd.	Data not available	Magnetic, electromagnetic, ground geophysical, and stream sediment geochemical surveys completed. Resumed diamond drilling.
Do.	Tunceli	Cu, Au	Anatolia Minerals Development Ltd. and Rio Tinto Mining & Exploration Ltd.	do.	Aeromagnetic, geochemical, and surface geophysical surveys.
Yemen	Al Jabali	Zn, Pb, Ag	Anglo American plc, Ansan Wikfs Hadramaut Ltd., and ZincOx Resources plc	9.4 Mt at a grade of 10.8% Zn, 2.3% Pb, and 76.8 g/t Ag	Feasibility study under way.

1/ Abbreviations used in this table include the following: Ag--silver, Au--gold, Cu--copper, Mo--molybdenum, Pb--lead, and Zn--zinc. Abbreviations used for units of measurement include the following: g/t--grams per metric ton and Mt--million metric tons.

2/ Resources reported where available based on data from various public sources. Data were not verified by the U.S. Geological Survey. Resources may include measured, indicated, and inferred resources.

TABLE 4
MIDDLE EAST: HISTORIC AND PROJECTED BAUXITE MINE PRODUCTION, 1990-2007 1/

(Metric tons)

Country	1990	1995	2000	2001	2002 e/	2003 e/	2005 e/	2007 e/
Iran	100,000 e/	148,000	400,000 e/	400,000 e/	400,000	400,000	500,000	550,000
Turkey	773,000	232,278	458,537	242,000	300,000	400,000	400,000	300,000
Total	873,000	380,000	859,000	642,000	700,000	800,000	900,000	850,000

e/ Estimated.

1/ Estimated data and totals are rounded to no more than three significant digits; may not add to totals shown.

TABLE 5
MIDDLE EAST: HISTORIC AND PROJECTED PRIMARY ALUMINUM METAL PRODUCTION, 1990-2007 1/

(Metric tons)

Country	1990	1995	2000	2001	2002 e/	2003 e/	2005 e/	2007 e/
Bahrain	213,000	450,709	509,038	510,000	517,000	517,000	520,000	750,000
Iran	60,000	119,400	140,000	140,000	130,000	150,000	150,000	200,000
Turkey	61,000	61,514	61,000	61,000	62,000	62,000	110,000	110,000
United Arab Emirates	174,000	247,400	470,000	500,000	536,000	540,000	600,000	700,000
Total	508,000	879,000	1,180,000	1,210,000	1,240,000	1,270,000	1,380,000	1,760,000

e/ Estimated.

1/ Estimated data and totals are rounded to no more than three significant digits; may not add to totals shown.

TABLE 6
MIDDLE EAST: HISTORIC AND PROJECTED ANTHRACITE AND BITUMINOUS COAL PRODUCTION, 1990-2007 1/

(Thousand metric tons)

Country	1990	1995	2000	2001	2002 e/	2003 e/	2005 e/	2007 e/
Iran	1,440	1,640	1,815	2,000	2,000	2,000	2,500	2,500
Turkey	5,630	3,377	3,330	3,300	3,300	3,000	3,000	2,000
Total	7,070	5,020	5,150	5,300	5,300	5,000	5,500	4,500

e/ Estimated.

1/ Estimated data and totals are rounded to no more than three significant digits; may not add to totals shown.

TABLE 7
MIDDLE EAST: HISTORIC AND PROJECTED LIGNITE PRODUCTION, 1990-2007 1/

(Thousand metric tons)

Country	1990	1995	2000	2001	2002 e/	2003 e/	2005 e/	2007 e/
Turkey	46,900	56,031	61,315	60,000	60,000	60,000	65,000	65,000
Total	46,900	56,000	61,300	60,000	60,000	60,000	65,000	65,000

e/ Estimated.

1/ Estimated data and totals are rounded to no more than three significant digits; may not add to totals shown.

TABLE 8
MIDDLE EAST: HISTORIC AND PROJECTED COPPER MINE PRODUCTION, 1990-2007 1/ 2/

(Thousand metric tons of metal content of ore)

Country	1990	1995	2000	2001	2002 e/	2003 e/	2005 e/	2007 e/
Cyprus	--	--	11	8	8	8	8	8
Iran	79	120 e/	138 e/	144	145	145	160	160
Oman	14	--	--	--	--	--	2	10
Saudi Arabia	1	1	1	1	1	1	1	--
Turkey	40	40	76	52	64	60	60	55
Total	134	161	226	205	218	214	230	230

e/ Estimated. -- Negligible or no production.

1/ Estimated data and totals are rounded to no more than three significant digits; may not add to totals shown.

2/ Copper content of mined ore (gross weight).

TABLE 9
MIDDLE EAST: HISTORIC AND PROJECTED REFINED COPPER METAL PRODUCTION, 1990-2007 1/ 2/

(Metric tons)

Country	1990	1995	2000	2001	2002 e/	2003 e/	2005 e/	2007 e/
Cyprus 3/	--	--	5,197	5,176	5,000	5,200	5,200	5,100
Iran	47,800	90,400	132,000	132,000	130,000	135,000	200,000	240,000
Oman	12,000	33,900	24,281	24,000	23,000	25,000	25,000	30,000
Turkey	84,200	100,300	78,000	78,000	75,000	80,000	80,000	80,000
Total	144,000	225,000	240,000	239,000	233,000	245,000	260,000	265,000

e/ Estimated. -- Negligible or no production.

1/ Estimated data and totals are rounded to no more than three significant digits; may not add to totals shown.

2/ May include secondary production.

3/ Production from Cyprus is electrowon.

TABLE 10
MIDDLE EAST: HISTORIC AND PROJECTED GOLD MINE PRODUCTION, 1990-2007 1/

(Kilograms of metal content of ore)

Country	1990	1995	2000	2001	2002 e/	2003 e/	2005 e/	2007 e/
Iran	500	630	765	770	(2/)	(2/)	(2/)	(2/)
Oman	54	591	597	604	(2/)	(2/)	(2/)	(2/)
Saudi Arabia	3,540	8,080	3,800	5,000	(2/)	(2/)	(2/)	(2/)
Turkey	1,010	1,200	500	500	(2/)	(2/)	(2/)	(2/)
Other	XX	XX	XX	XX	7,500	7,500	9,000	14,000
Total	5,100	10,500	6,100	7,270	7,500	7,500	9,000	14,000

e/ Estimated. XX Not applicable.

1/ Estimated data and totals are rounded to no more than three significant digits; may not add to totals shown.

2/ Included in "Other."

TABLE 11
MIDDLE EAST: ESTIMATED HISTORIC AND PROJECTED IRON ORE MINE PRODUCTION, 1990-2007 1/

(Thousand metric tons of metal content of ore)

Country	1990	1995	2000	2001	2002 e/	2003 e/	2005 e/	2007 e/
Iran	1,800	4,500	5,500	5,900	6,000	6,000	6,200	6,200
Turkey	2,690 2/	2,750	2,450	2,400	2,400	2,500	2,500	2,500
Total	4,490	7,250	7,950	8,300	8,400	8,500	8,700	8,700

e/ Estimated.

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

2/ Reported.

TABLE 12
MIDDLE EAST: HISTORIC AND PROJECTED STEEL PRODUCTION, 1990-2007 1/

(Thousand metric tons)

Country	1990	1995	2000	2001	2002 e/	2003 e/	2005 e/	2007 e/
Iran	1,425	4,696	6,600	6,890	7,321 2/	7,500	10,000	14,500
Iraq e/	150	300	50	50	50	50	200	200
Israel e/	144	200	270	220	150	150	150	150
Jordan e/	179 2/	30	30	30	30	30	30	30
Qatar	580	614 e/	744	910	1,027 2/	1,100	1,100	1,100
Saudi Arabia	1,833	2,451	2,973	3,413	3,556 2/	3,500	3,500	3,500
Syria e/	76 2/	70	70	70	70	70	70	70
Turkey	9,322	12,744	14,325	14,981	16,472	16,500	16,500	16,500
United Arab Emirates	--	--	--	--	--	--	--	400
Total	13,700	21,100	25,100	26,600	28,700	28,900	31,500	36,500

e/ Estimated. -- Negligible or no production.

1/ Estimated data and totals are rounded to no more than three significant digits; may not add to totals shown.

2/ Reported figure.

TABLE 13
MIDDLE EAST: HISTORIC AND PROJECTED LEAD MINE PRODUCTION, 1990-2007 1/

(Metric tons of metal content of ore)

Country	1990	1995	2000	2001	2002 e/	2003 e/	2005 e/	2007 e/
Iran	11,000	15,900	15,000	15,000	15,000	15,000	15,000	15,000
Saudi Arabia	250	50	50	60	60	60	50	50
Turkey	18,000	10,376	17,270	18,000	18,000	18,000	18,000	18,000
Yemen	--	--	--	--	--	--	--	5,000
Total	29,300	26,300	32,300	33,100	33,100	33,000	33,000	38,000

e/ Estimated. -- Negligible or no production.

1/ Estimated data and totals are rounded to no more than three significant digits; may not add to totals shown.

TABLE 14
MIDDLE EAST: HISTORIC AND PROJECTED PRIMARY AND SECONDARY REFINED LEAD PRODUCTION, 1990-2007 1/

(Metric tons)

Country	1990	1995	2000	2001	2002 e/	2003 e/	2005 e/	2007 e/
Iran e/	10,000	45,200	47,000	50,000	50,000	50,000	50,000	50,000
Israel	--	8,200	13,000	20,000	22,000	25,000	25,000	25,000
Turkey e/	9,000	4,000	4,000	4,000	4,000	4,000	4,000	4,000
Total	19,000	57,400	64,000	74,000	76,000	79,000	79,000	79,000

e/ Estimated. -- Negligible or no production.

1/ Estimated data and totals are rounded to no more than three significant digits; may not add to totals shown.

TABLE 15
MIDDLE EAST: HISTORIC AND PROJECTED NATURAL GAS PRODUCTION, 1990-2007 1/

(Million cubic meters of dry gas)

Country	1990	1995	2000	2001	2002 e/	2003 e/	2005 e/	2007 e/
Bahrain	6,000	7,205	11,500	12,100	12,000	12,000	12,000	12,000
Iran	23,800	36,600	57,800	65,000	70,000	80,000	100,000	125,000
Iraq	4,200	3,000	3,000	2,920	3,000	3,000	3,000	3,000
Israel	40	21	10	10	10	10	1,800	1,800
Jordan	--	30	287	290	270	270	540	540
Kuwait	5,200	9,280	9,600	9,500	9,500	9,500	9,500	9,500
Oman	3,000	3,015	12,020	13,400	13,500	14,000	15,000	15,000
Qatar	6,090	13,600	26,141	27,738	30,000	30,000	35,000	60,000
Saudi Arabia	30,800	38,030	58,870	54,900	55,000	60,000	70,000	75,000
Syria	1,200	2,900	3,886	3,900	5,700	5,700	7,300	7,300
Turkey	212	182	612	600	600	600	500	500
United Arab Emirates	23,800	31,320	39,800	41,300	40,000	40,000	40,000	40,000
Yemen 2/	--	--	--	--	--	--	--	--
Total	104,000	145,000	224,000	232,000	240,000	255,000	295,000	350,000

e/ Estimated. -- Negligible or no production.

1/ Estimated data and totals are rounded to no more than three significant digits; may not add to totals shown.

2/ Most natural gas produced in Yemen was stripped of liquids and reinjected.

TABLE 16
MIDDLE EAST: HISTORIC AND PROJECTED CRUDE PETROLEUM (INCLUDING CONDENSATE) PRODUCTION, 1990-2007 1/

(Thousand 42-gallon barrels)

Country	1990	1995	2000	2001	2002 e/	2003 e/	2005 e/	2007 e/
Bahrain	15,900	14,468	13,776	13,656	13,500	13,400	13,500	13,500
Iran	1,130,000	1,329,700	1,360,000	1,350,000	1,250,000	1,300,000	1,300,000	1,400,000
Iraq	745,000	205,000	937,000	860,000	733,000	700,000	800,000	900,000
Israel	94	36	25	25	26	26	26	26
Jordan	116	20	15	15	15	15	15	15
Kuwait	428,000	752,265	766,000	745,000	690,000	690,000	700,000	700,000
Oman	250,000	311,300	340,000	352,000	330,000	350,000	350,000	350,000
Qatar	148,044	142,300	231,000	237,000	237,000	235,000	235,000	235,000
Saudi Arabia	2,350,000	3,004,300	2,847,000	2,763,000	2,750,000	2,800,000	3,000,000	3,000,000
Syria	140,000	222,650	199,843	194,000	185,000	194,000	194,000	194,000
Turkey	26,600	24,124	19,873	18,370	18,000	17,000	15,000	15,000
United Arab Emirates	773,000	800,500	815,000	790,000	725,000	725,000	750,000	750,000
Yemen	73,000	125,925	167,000	165,000	160,000	160,000	170,000	170,000
Total	6,080,000	6,930,000	7,700,000	7,490,000	7,090,000	7,170,000	7,500,000	7,700,000

e/ Estimated.

1/ Estimated data and totals are rounded to no more than three significant digits; may not add to totals shown.

TABLE 17
MIDDLE EAST: HISTORIC AND PROJECTED PHOSPHATE ROCK PRODUCTION, 1990-2007 1/

(Thousand metric tons of P₂O₅ content of ore)

Country	1990 e/	1995	2000	2001	2002 e/	2003 e/	2005 e/	2007 e/
Iraq e/	270	300	200	100	100	100	200	200
Israel	1,104	1,264	1,305	1,115	1,100	1,250	1,250	1,250
Jordan	2,010	1,655	1,824	1,928	2,300	2,300	2,300	2,450
Syria	511	477	646	613	720	720	720	720
Total	3,900	3,700	3,980	3,760	4,220	4,370	4,470	4,620

e/ Estimated.

1/ Estimated data and totals are rounded to no more than three significant digits; may not add to totals shown.

TABLE 18
MIDDLE EAST: HISTORIC AND PROJECTED SILVER MINE PRODUCTION, 1990-2007 1/

(Kilograms of metal content of ore)

Country	1990	1995	2000	2001	2002 e/	2003 e/	2005 e/	2007 e/
Iran e/	38,000	60,000	22,000	22,000	(2/)	(2/)	(2/)	(2/)
Oman	3,000	100 e/	4,894	3,153	(2/)	(2/)	(2/)	(2/)
Saudi Arabia	16,200	16,900 e/	9,300	15,000	(2/)	(2/)	(2/)	(2/)
Turkey e/	52,500	70,000	110,000	110,000	(2/)	(2/)	(2/)	(2/)
Other	XX	XX	XX	XX	145,000	142,000	144,000	148,000
Total	110,000	147,000	146,000	150,000	145,000	142,000	144,000	148,000

e/ Estimated. XX Not Applicable.

1/ Estimated data and totals are rounded to no more than three significant digits; may not add to totals shown.

2/ Included in "Other."

TABLE 19
MIDDLE EAST: HISTORIC AND PROJECTED ZINC MINE PRODUCTION, 1990-2007 1/

(Metric tons of metal content of ore)

Country	1990	1995	2000	2001	2002 e/	2003 e/	2005 e/	2007 e/
Iran	29,000 e/	145,100	85,000	85,000	87,000	90,000	100,000	100,000
Saudi Arabia	2,470	500 e/	3,000	3,300	3,400	3,500	--	--
Turkey	39,000	9,118	39	37	35	40	50	60
Yemen	--	--	--	--	--	--	--	60,000
Total	70,500	155,000	88,000	88,300	90,400	93,500	100,000	160,000

e/ Estimated. -- Negligible or no production.

1/ Estimated data and totals are rounded to no more than three significant digits; may not add to totals shown.

TABLE 20
MIDDLE EAST: HISTORIC AND PROJECTED ZINC METAL PRODUCTION, 1990-2007 1/

(Metric tons)

Country	1990	1995	2000	2001	2002 e/	2003 e/	2005 e/	2007 e/
Iran	--	--	50,000	50,000	50,000	60,000	75,000	75,000
Saudi Arabia	--	--	--	--	--	--	--	50,000
Turkey	21,100	17,050	33,179	--	--	--	--	--
Total	21,100	17,100	83,200	50,000	50,000	60,000	75,000	125,000

e/ Estimated. -- Negligible or no production.

1/ Estimated data and totals are rounded to no more than three significant digits; may not add to totals shown.