

THE MIDDLE EAST

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The production and processing of crude petroleum and natural gas were the dominant segments of the economies of many of the nations of the Middle East covered in this section. The surge of international crude oil prices during 2000 financially benefited the major oil-producing countries (table 1).

The Middle East region contains an estimated population of 231 million people in an area of 9.7 million square kilometers compared with a population of 282 million people in an area of 9.2 million square kilometers for the United States. The gross domestic product of the Middle East region was estimated to be \$789 billion in 2000 compared with \$10 trillion for the United States and \$31 trillion for the world.

Trade

In 2000, the United States imported 3.3 billion barrels of crude oil, of which the Middle East region supplied about 27%. Saudi Arabia, which was the leading supplier, provided 556 million barrels (Mbbbl), or 17% of the United States' crude oil imports. Iraq, with exports of 226 Mbbbl to the United States, jumped to 6th place on the list of the largest crude oil suppliers to the United States, whereas Kuwait, which was the source of 96 Mbbbl crude oil imports, dropped to 11th on the list (U.S. Energy Information Administration, 2001).

Exploration Highlights

Industrial mineral and metal exploration activity was concentrated in Iran and Turkey (D.R. Wilburn, U.S. Geological Survey, written commun., 2001). Exploration and evaluation operations included prospecting for base and precious metals in Cyprus, Iran, Oman, Saudi Arabia, Turkey, and Yemen. Hydrocarbon exploration continued in Bahrain, Iran, Iraq, Israel, Jordan, Oman, Qatar, Saudi Arabia, Syria, Turkey, the United Arab Emirates, and Yemen. Cyprus initiated discussions with Egypt concerning the possible extension of Egyptian natural gas reservoirs into the Cypriot exclusive economic zone and the allocation of any recovered natural gas.

Mineral Operations Update

In 2000, Aluminium Bahrain B.S.C. continued construction of a coke-calcining plant. Bahrain Petroleum Co., B.S.C.

(closed), continued the upgrade of its oil refinery at Sitra, Bahrain. In Israel, Dead Sea Works Ltd. completed the expansion of its potash production capacity, and Hakurnas Lead Works Ltd. doubled the capacity of its lead plant. The construction of Jordan Bromine Co. Ltd.'s bromine plant and Jordan Magnesite Co.'s magnesite plant was underway in Jordan. Oman Liquefied Natural Gas L.L.C.'s liquefied natural gas (LNG) plant came online at Qalhat, Oman, and Ras Laffan Liquefied Natural Gas Co.'s second LNG train came online at Ras Laffan, Qatar. Saudi Arabian Fertilizer Co. began production at its third ammonia and urea plant. In the United Arab Emirates, the expansion of the Ruwais oil refinery of Abu Dhabi Oil Refining Co. was completed.

Outlook

In a number of nations in the region, high prices received for exported crude oil and petroleum products during 2000 allowed Governments to earmark funds for the development or reevaluation of a number of deferred mineral industry projects. Ammonia and urea plant expansions were proposed in Iran, Kuwait, Oman, Qatar, and Saudi Arabia; expansion of cement production capacities, in Iran and Kuwait; LNG projects, in Qatar and Yemen; new oil refineries, in Oman, Syria, and Yemen; and renovation of the Larnaca oil refinery, in Cyprus. Other proposed projects in the region included the development of a chromite mine, copper mines, ferrochrome plants, ferrosilicon plants, a direct-reduced iron plant, a zinc smelter, and steel plant and zinc smelter expansions in Iran; the construction of an aluminum smelter in Oman; and the development of the Az Zabirah bauxite, the Al Jalamid phosphate, and the Zaghat magnesite deposits in Saudi Arabia. Any significant decline in world oil prices would result in reduced Government income and could result in the suspension of progress on many of the diversified mineral projects listed above.

Reference Cited

U.S. Energy Information Administration, 2001, Table S3—Crude oil and petroleum product imports—1986-present: U.S. Energy Information Administration Petroleum Supply Monthly, October, p. 8-15.

TABLE 1
MIDDLE EAST: PRODUCTION OF SELECTED MINERAL COMMODITIES IN 2000 1/ 2/

(Thousand metric tons unless otherwise specified)

Country	Alumi- num e/	Boron	Cement, hydraulic e/	Chromite	Copper, mine Cu content	Gypsum e/	Natural gas	
							Plant liquids (thousand 42-gallon barrels)	Dry (million cubic meters)
Bahrain	509 3/	--	89 3/	--	--	--	3,636	8,966
Cyprus	--	--	1,398 3/	--	11	138 3/	--	--
Iran	140	4	23,880 3/	310 4/	138	11,000	25,000	55,000
Iraq	--	--	2,000	--	--	--	4,000	3,000
Israel	--	--	6,600	--	--	46	--	9
Jordan	--	--	2,640 3/	--	--	158 3/	--	287
Kuwait	--	--	2,000	--	--	--	38,000	9,500
Lebanon	--	--	3,200	--	--	2	--	--
Oman	--	--	1,720	15	--	132 3/	6,000	8,000
Qatar	--	--	1,050	--	--	--	22,000	26,000
Saudi Arabia	--	--	18,107 3/	--	1 e/	400	285,008	58,870
Syria	--	--	4,830	--	--	363	3,000 e/	6,200 e/
Turkey	60	1,450	35,825 3/	546	76 e/	303 3/	--	612
United Arab Emirates	470	--	6,100	60 e/	--	90	110,000	39,000
Yemen	--	--	1,400	--	--	100	2,400	--
Total Middle East 5/	1,180	1,450	111,000	930	226	12,700	499,000	215,000
Total world	24,000	4,220	1,640,000	14,400	13,200	106,000	2,250,000 e/	2,420,000
Share of world total, percentage	5	34	7	6	2	12	22	9
United States	3,668 3/	1,070	89,510 3/	--	1,440	19,500 3/	698,000 e/	555,600
			Petroleum, crude	Phosphate rock e/ (gross weight)	Potash, K ₂ O equivalent e/	Salt e/	Steel, crude e/	Sulfur e/
Country	Nitrogen, N in ammonia	(thousand 42- gallon barrels) 6/						
Bahrain	350	13,766	--	--	--	--	--	66
Cyprus	--	--	--	--	--	--	--	--
Iran	965	1,360,000	--	--	1,600	6,600	1,350	
Iraq	220 e/	930,000	1,000	--	300	200	250	
Israel	--	32 e/	4,110 7/	1,710	863	285	31	
Jordan	--	--	5,458 3/	1,160	311 3/	-- 3/	--	
Kuwait	410	800,000	--	--	100	--	600	
Lebanon	--	--	--	--	4	--	--	
Oman	--	330,000 e/	--	--	--	--	30	
Qatar	1,097	254,000 e/	--	--	--	729 3/	150	
Saudi Arabia	1,743	3,360,000	--	--	200	2,973 3/	2,101 3/	
Syria	91	194	2,166 3/	--	150	70	30	
Turkey	53 e/	19,783	--	--	2,126 3/	14,325 3/	200	
United Arab Emirates	384	900,000 e/	--	--	--	--	1,120 3/	
Yemen	--	167,000 e/	--	--	150	--	--	
Total Middle East 5/	5,310 e/	8,130,000	12,700	2,870	5,800	25,200	5,900	
Total world	109,000	28,100,000	133,000	25,400	214,000	846,000	57,200	
Share of world total, percentage	5	29	10	11	3	3	10	
United States	12,300 8/	3,306,000	38,600 3/	1,300	45,600 9/	102,000	10,300 3/	

e/ Estimated. -- Zero.

1/ Table includes data available through October 31, 2001.

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

3/ Reported figure.

4/ Concentrate.

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

6/ Includes lease condensate.

7/ Beneficiated.

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

9/ Includes Puerto Rico.

TABLE 2
SELECTED MIDDLE EAST EXPLORATION ACTIVITY IN 2000

Country	Prospect	Commodity	Companies	Resource notes 1/	Exploration notes
Cyprus	Alestos	Gold	Eastern Mediterranean Minerals (Cyprus) Ltd.	NA	Completed rock chip sampling and preliminary drilling programs.
Do.	Klirou	Zinc, copper, gold	do.	420,000 metric tons grading 1.3% zinc, 1.1% copper, and 1 gram per metric ton gold	Reprocessed geophysical data.
Do.	Red Hills	Gold	do.	NA	Completed preliminary drilling program.
Do.	Shia-New Shia-Mathiatis	Copper, zinc, gold	do.	do.	Completed airborne geophysics, stream geochemistry survey, and preliminary drilling program.
Iran	Agh Darreh	Gold	Minerals Exporting Co. of Iran and Zarcan Minerals Inc.	5.2 million metric tons grading 4.68 grams per metric ton gold	Prefeasibility study and phase I (159 holes, 6,643.6 meters) of a 2-year reverse circulation drill program completed in 2000.
Do.	Kuh-e-Lar	Copper, gold, molybdenum	National Iranian Copper Industries Co. and Zarcan Minerals Inc.	NA	Twenty nine hole reverse circulation drilling and reconnaissance rock sampling programs underway in 2000.
Do.	Mediabab	Zinc, lead, silver	Iran Mines and Mineral Industry Development and Renovation Organization, Itok GmbH, and Union Capital Ltd.	217.9 million metric tons grading 7.2% zinc, 2.34% lead, and 51 grams per metric ton gold	Prefeasibility study underway.
Oman	Ghuzayn	Copper	Metal Mining Agency Japan	NA	Continued exploration proposed.
Do.	Washihi	Copper, gold	National Mining Co.	3.35 million metric tons grading 0.79% copper and 0.29 grams per metric ton gold	Do.
Saudi Arabia	Bulghah	Gold	Saudi Company for Precious Metals	33 million metric tons grading 1.1 grams per metric ton gold	Completed feasibility study.
Turkey	Cukurdere	Copper, gold	Anatolia Minerals Development Ltd. and Rio Tinto Mining & Exploration Ltd.	NA	Channel sampling program completed. Drilling program proposed.
Do.	Efemcukuru	Gold	Tuprag Metal Madencilik San. Ve Tic. Ltd. Sti.	2.5 million metric tons grading 13.71 grams per metric ton gold	Pursued permits. Prefeasibility study completed in 1999.
Do.	Kabatas	Copper, gold	Anatolia Minerals Development Ltd. and Rio Tinto Mining & Exploration Ltd.	NA	Drilling, sampling, and trenching programs planned.
Do.	Karacam	Nickel	do.	NA	Drilling program planned.
Do.	Kaymaz	Gold	Tuprag Metal Madencilik San. Ve Tic. Ltd. Sti.	1.1 million metric tons grading 6.25 grams per metric ton gold	Awaited outcome of third party lawsuit concerning permits issued by the Ministry of Environment. Studied ore processing options. Prefeasibility study completed in 1997.
Do.	Kemaliya	Copper, gold	Anatolia Minerals Development Ltd. and Tuprag Metal Madencilik San. Ve Tic. Ltd. Sti.	NA	Drilling program planned.
Do.	Kisladag	Gold	Tuprag Metal Madencilik San. Ve Tic. Ltd. Sti.	126 million metric tons grading 1.2 grams per metric ton gold	Extensive drilling, production process scoping study, and metallurgical testwork completed in 2000. Plan prefeasibility study and environmental impact assessment.
Do.	Lucky Star	Zinc, lead, silver	Odyssey Resources Ltd.	NA	Stream sediment sampling and 2-hole preliminary diamond drilling program completed. Geophysical survey planned.
Do.	Uckapili	Gold	Anatolia Minerals Development Ltd. and Rio Tinto Mining & Exploration Ltd.	NA	Drilling program planned.
Do.	Yahyali	Zinc, lead, silver	Anatolia Minerals Development Ltd. and Cominco Madencilik Sanayi A.S.	NA	Exploration proposed.
Yemen	Al Hariqah	Gold	Canada Mountain Minerals (Yemen) Ltd.	NA	Completed drilling program. Plan to analyze soil and stream samples.
Do.	Al Jabali	Zinc, lead, silver	Anglo American plc, Ansan Wikfs Hadramaut Ltd., and ZincOx Resources plc	9.4 million metric tons grading 10.8% zinc, 2.3% lead, and 76.8 grams per metric ton gold	Completed preliminary reverse circulation and diamond drilling.
Do.	Suwar	Copper, nickel, cobalt	Canada Mountain Minerals (Yemen) Ltd. and Falconbridge International (Investments) Ltd.	NA	Completed a 15-hole 3,095 meter drilling program in 2000.

NA Not available.

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