

THE MINERAL INDUSTRY OF ISRAEL

By Bernadette Michalski

Israel's indigenous mineral industry is based on the extraction of evaporites from the Dead Sea, phosphate rock mining, the manufacture of cement and fertilizers, and the production of minor quantities of crude oil and natural gas. Israel is the world's second largest producer of bromine and bromine compounds, the third largest producer of potash, and the seventh largest producer of phosphate rock. Mineral processing, based on imported raw materials, includes the cutting and polishing of gemstones, the refining of crude oil and the production of crude steel. Domestic mineral fuel production represents less than 1% of the Nation's energy requirements. (*See table 1.*) The source of imported crude oil is, for the most part, Mexico, while the bulk of coal imports are derived from South Africa. Imported crude oil and petroleum products accounted for nearly two-thirds of total energy requirements, while coal accounted for the remaining one third. Virtually all electric power is coal-based and required the import of 7.5 million metric tons (Mt) of coal in 1995. Imports are expected to climb to 11.5 Mt after the year 2000 when two new 560 MW powerplants come online in Ashkelon, according to Israel's National Coal Supply Corp.

Israel processes a number of imported raw materials for reexport. Israel does not mine diamonds but cuts and polishes imported rough diamonds and gemstones. Most of its diamonds are purchased through the De Beers' Central Selling Organization. The diamond cutting and polishing trade alone accounted for about one-fifth of the value of total imports and about one-fourth of the value of total exports. The United States remains as Israel's key trade partner. Exports to the United States were polished diamonds, other

gemstones, and metals. Imports from the United States included transportation equipment, chemicals, jet fuel, rough diamonds and precious stones.

The Government was still the principal owner of most of the country's mineral-related industries. The diamond cutting and polishing industry were privately owned as were the cement and potassium nitrate manufactures.

Israel's infrastructure includes ports at Ashdod, Elat, and Haifa. A total of 708 kilometers (km) of pipelines transport crude oil from the Port of Elat, on the Gulf of Aqaba, to the Haifa and Ashdod oil refineries with combined refining capacity of 220,000 barrels per day (bbl/d). There are 89 km of natural gas pipelines and 290 km of pipelines carrying refined petroleum products. About 85% of the traffic on Israel's 594-km rail system was involved in the transport of potash and phosphate materials from the Dead Sea and the Negev Desert to the Ports of Ashdod and Haifa.

Israel's mineral industry is expected to remain export-oriented and continue to fluctuate with world commodity prices. Trends to export higher-valued mineral products, such as custom fertilizers, technical-grade chemicals, and other specialty items, are expected to continue.

Major Source of Information

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TABLE 1
ISRAEL: PRODUCTION OF MINERAL COMMODITIES 1/

(Metric tons unless otherwise specified)

Commodity 2/	1991	1992	1993	1994	1995 e/
METALS					
Iron and steel, steel, crude	90,000 r/	109,000 r/	120,000 r/	100,000 e/	100,000
INDUSTRIAL MINERALS					
Bromine:					
Elemental	135,000	135,000	130,000	130,000 e/	130,000
Compounds	125,000	125,000	121,000	121,000 e/	121,000
Cement, hydraulic	thousand tons 3,550 e/	3,500	3,500	3,500 e/	3,500
Clays:					
Flint clays	30,000	30,000	40,000	40,000 e/	40,000
Kaolin	53,000	53,000	40,000	40,000 e/	40,000
Other	3,000	3,000	8,500	8,500 e/	8,500
Fertilizer materials, manufactured:					
Nitrogenous, N content of ammonia and urea	33,800	33,800	38,743	38,000 e/	38,000
Phosphatic, P content	23,500	23,400	30,363	30,300 e/	30,300
Potassic, K content	18,600	18,600	16,007	16,000 e/	16,000
Gypsum e/	25,721 r/ 3/	47,663 r/ 3/	48,000 r/	48,000 r/	48,000
Lime e/	208,000	208,000	210,000	210,000	210,000
Magnesia, Mg content	38,600	38,600	42,223	42,200 e/	42,200
Phosphate rock:					
Beneficiated	thousand tons 3,370	3,595	3,680 r/	3,961 r/	4,063 3/
P2O5 content	do. 1,070	1,125	1,148 r/	1,232 r/	1,264 3/
Potash, K2O equivalent	do. 1,320	1,296	1,309	1,260 r/	1,232
Salt, marketed (mainly marine)	do. 1,115	1,102 r/	1,123	1,120 e/	1,500
Sand:					
Glass sand	do. 60,000	100,000	83,000	83,000 e/	83,000
Other e/	do. 6,400 3/	7,012	7,063	7,060 e/	7,060
Sodium and potassium compounds, caustic soda e/	32,200 3/	32,200	32,200	32,200	32,200
Stone: e/					
Crushed	thousand tons 17,100 3/	17,100	31,515	31,500	31,500
Dimension, marble	do. 12,000 3/	12,000	12,000	12,000	12,000
Sulfur:					
Byproduct from petroleum e/	do. 66	60	60	60	60
Sulfuric acid	do. 136	130	130	130 e/	130
MINERAL FUELS AND RELATED MATERIALS					
Gas, natural: e/					
Gross	thousand cubic meters do. 32,300	22,600 r/	19,800 r/	19,000 r/	18,000
Dry	do. 32,300	22,600 r/	19,800 r/	19,000 r/	18,000
Petroleum:					
Crude	thousand 42-gallon barrels 82	70 r/	56 r/	37 r/	36
Refinery products:					
Gasoline	do. 10,900 r/	15,300 r/	18,500 r/	19,000 r/	19,200
Kerosene and jet fuel	do. 6,200 r/	6,200 r/	5,300 r/	5,200 r/	5,300
Distillate fuel oil	do. 16,400 r/	18,800 r/	21,000 r/	20,500 r/	21,000
Residual fuel oil	do. 20,075 r/	24,350 r/	28,500 r/	28,000 r/	29,000
Other	do. 4,400 r/	10,500 r/	13,200 r/	13,000 r/	13,200
Total	do. 57,975 r/	75,150 r/	86,500 r/	85,700 r/	87,700

e/ Estimated. r/ Revised.

1/ Table includes data available through May 15, 1996.

2/ In addition to the commodities listed, a variety of other crude construction materials are produced, but available information is inadequate to make reliable estimates of output levels.

3/ Reported figure.