THE MINERAL INDUSTRY OF

CYPRUS

By Bernadette Michalski¹

The nation's mineral industry was dominated by copper and, to a lesser extent, an extensive range of nonmetallic minerals. About 250 quarries were in operation producing such materials as aggregates, building stone, clay, crushed limestone, gypsum, and sand and gravel for local use and bentonite, gypsum, ocher, and umber for export. The value of mining and quarrying products in 1998 was approximately \$130 million,² more than two-thirds of which was attributed to the copper operations and the hydraulic cement industry. (See table 1.)

Cyprus' main trading partner was the European Union, accounting for about 49% of all imports and 29% of all exports (Central Bank of Cyprus, Cyprus in brief—The economy, accessed on July 10, 1998, at URL http://www.centralbank.gov.cy/cyprus/the-econ.html).

The Mines Service of the Ministry of Agriculture Natural Resources and Environment administers mineral operations under the Mines and Quarries (Regulation) Law, Chapter 270, 1959; the Mines and Quarries Regulations, 1958-79; the Petroleum (Production) Law, 1974; and the Cyprus Standard and Control of Quality Law, 1975. Mining operations in Cyprus have been owned and operated privately under leases and licenses issued by the Mines Service since 1958. Royalties on extracted mineral commodities ranged from 1% to 5%. The Economic Geology Section of the Geological Survey Department is responsible for mineral exploration programs and the evaluation of the country's resources. The Environmental Service is responsible for coordinating the environmental efforts of the Government departments.

In response to growing requirements for tourist facilities and infrastructure development, Cyprus Cement Co. Ltd. was formed in the mid-1950's, followed in the mid-1960's by the Vassiliko Cement Co. Ltd., a subsidiary of the Hellenic Mining Co. Vassiliko Cement Co. Ltd. captured 63% of the domestic market and exports to Egypt, Israel, Lebanon, and Syria. The company's export loading facilities can accept bulk tankers of up to 18.6 meters draft. Loading capacity ranges from 4,000 to 6,000 metric tons per day.

The Hellenic Copper Mines Ltd. (Hellenic Mining Co., 44%; Oxiana Resources NL of Australia, 43.7%; Mid-East Mining,

Turkish Cypriot area are sparse or unavailable.

5%; Sterina Kimatiki, 4.15%; and the Hellenic Bank, 3.15%) was conducting a solvent extraction and electrowinning project at the Skouriotissa copper mine. Capacity level of 8,000 metric

tons per year (t/yr) of 99.999% copper cathode was attained in 1998. Virtually all production was exported. Ore reserves at the Skouriotissa Mine's Phoenix deposit were initially calculated to be 9.2 million metric tons (Mt) of ore averaging 0.78% copper and 6 Mt averaging 0.31% copper. Succeeding exploration efforts have suggested a doubling of the initial reserve estimate and prompted the company to consider increasing output to 10,000 t/yr of cathode. A feasibility study for expansion to 20,000 t/yr was also under consideration (Mining Journal, 1998b).

The Hellenic Mining Co. of Cyprus formed a joint venture with Oxiana Resources NL of Australia to explore for base and precious metals in Cyprus. The agreement secured access for Oxiana to priority targets in historic copper and gold mining areas of Cyprus. Three gold prospects—Alestos, Red Hill, and Tourounja—have outcropping alteration and mineralization typical of epithermal gold systems. The prospects are slated for drill testing (Mining Journal, 1998a).

Three specialized oil terminals—Larnaca, Dhekelia, and Moni—serviced the nation's energy trade.

The Cyprus Petroleum Refinery, Ltd., planned to build an isomerization unit to produce about 250,000 barrels per year of unleaded gasoline at its Larnaca refinery by the end of 1999. The refinery used Iraqi Kirkuk crude, which was blended with Russia's Urals light to compensate for its high-sulfur content. The new unit will replace current imports from Israel and Greece.

References Cited

Mining Journal, 1998a, Cypriot blessing: Mining Journal [London], v. 331, no. 8491, July 31, p. 76.

——1998b, Cyprus: Mining Journal [London] Special Supplement, v. 330, no. 8485, June 19, p.28.

Major Source of Information

Mines Service

Ministry of Agriculture, Natural Resources and Environment Nicosia, Cyprus

¹Deceased.

²Where necessary, values have been converted from Cypriot pounds (C^) to U.S. dollars at the rate of C£0.49=US\$1.00. Unless specifically stated, all data in this chapter are for the southern Greek-administered area because data related to the

${\bf TABLE~1}$ CYPRUS: PRODUCTION OF MINERAL COMMODITIES 1/2/

(Thousand metric tons unless otherwise specified)

Commodity		1994	1995	1996	1997 e/	1998 e/
METALS	metric tons			1 400	4,435 4/	4,920 4/
Copper cathode 3/ INDUSTRIAL MIN				1,499	4,435 4/	4,920 4/
Cement, hydraulic	NEKALS	1.044	1,021	1.000	910 r/	1,200
Clays:		1,044	1,021	1,000	910 1/	1,200
Bentonite	metric tons	50,441	71,773	70,927	101,000 r/	140,000 4/
Other:	metre tons		71,773	70,727	101,000 1/	110,000 1/
For brick and tile manufacture		475	407	400 e/	350	380
For cement manufacture e/		375	350	350	340 r/	370 4/
Total		850	757	750	690	750
Gypsum:						
Crude	metric tons	180,000	133,208	150,468	222,000	270,000 4/
Calcined	do.	4,000	4,000 e/	4,000 e/	4,000	4,000
Lime, hydrated	do.	5,525	5,530	6,000 r/e/	6,000 r/	5,500 4/
Stone, sand, and gravel:						
Limestone, crushed (Havara)		3,000 e/	3,200	3,000 e/	3,000	3,000
Marble e/		25 r/	25 r/	25 r/	20 4/	8 4/
Marl, for cement production		1,600	2,000	1,600 e/	1,500	1,900 4/
Sand and gravel e/ 5/		6,000	6,000	6,000	6,500	7,600
Building stone		1,436	974	800	690 r/	100 4/
Umber	metric tons	9,000 e/	5,415	4,604	6,000 r/	5,000
MINERAL FUELS AND RELA	ATED MATERIALS					
Petroleum refinery products:						
Liquefied petroleum gases	thousand 42-gallon barrels	350	375	375 e/	375	375
Gasoline	do.	900	900	900 e/	900	900
Kerosene and jet fuel e/	do.	400	400	400	400	400
Distillate fuel oil	do.	2,450	2,300	2,300 e/	2,300	2,300
Residual fuel oil	do.	2,500 e/	2,500	2,500 e/	2,500	2,500
Other	do.	200 e/	300	300 e/	300	300
Total	do.	6,800	6,775	6,775 e/	6,775	6,775

e/ Estimated. r/ Revised.

^{1/} Table includes data available through May 15, 1999.

^{2/} Mineral production data from the northern Turkish-occupied section of the country are not included in this table because available information is inadequate to make reliable estimates of output levels.

^{3/} Hellenic Mining Co. ceased copper cementation operations from Skouriotissa Mine talings in 1993. Activity resumed in July 1996 when a solvent extraction-electrowinning plant, designed to produce 8,000 metric tons per year was commissioned.

^{4/} Reported figure.

^{5/} Includes crushed aggregate.