#### THE MINERAL INDUSTRY OF

# **CYPRUS**

### By Philip M. Mobbs

In 2001, the mineral industry of Cyprus¹ was dominated by the production of bentonite, cement, copper, and refined petroleum products. Other mineral commodities produced included clay, gypsum, sand and gravel, and stone for local use and gypsum, ocher, and umber for export. In 2001, exports of minerals and industrial products of mineral origin were valued at about \$18 million.² Total domestic exports (excluding shipstores) were valued at \$366 million. Imports of fuels for local consumption were valued at about \$415 million (Statistical Service of Cyprus, 2002a§³). Mineral exports and imports transited through the ports of Larnaca, Limassol, and Vassiliko or the petroleum products terminals at Dhekelia, Larnaca, and Moni.

In 2001, Cyprus' gross domestic product was estimated to be \$9.2 billion (Statistical Service of Cyprus, 2002b§). The census released in October 2001 tallied a population of 689,471. The Turkish Cypriot population was estimated to be about 88,000.

#### **Government Policies and Programs**

The Mines Service of the Ministry of Agricultural, Natural Resources, and Environment administered mineral operations under the Mines and Quarries (Regulation) Law, Chapter 270, 1959; the Mines and Quarries Regulations, 1958-79; and the Cyprus Standard and Control of Quality Law, 1975. Royalties on extracted mineral commodities ranged from 1% to 5%. The Ministry's Geological Survey Department was responsible for mineral exploration programs and the evaluation of the country's resources. The Environmental Service was responsible for coordinating the environmental efforts of the Government departments. The Republic of Cyprus Press and Information Office (2001§) reported that the preparation of a geological map of northern Cyprus by Maden Tetkik ve Arama Genel Müdürlügü of Turkey was underway.

#### **Commodity Review**

Copper and Gold.—Hellenic Copper Mines Ltd., which was a consortium whose members included Hellenic Mining Company of Cyprus; Mytilineos Holdings S.A. of Greece; and Oxiana Europe Ltd. of the Channel Islands (a subsidiary of Oxiana Resources NL of Australia) operated the Skouriotissa copper mine. In 2001, the Hellenic Copper mined 850,936 metric tons (t) of high-grade copper ore (0.60% Cu) and

863,716 t of low-grade ore (0.29% Cu). Copper cathode production was 5,176 t in 2001 compared with 5,197 t in 2000 (Oxiana Resources NL, 2002, p. 10).

In 2001, Eastern Mediterranean Minerals (Cyprus) Ltd. (EMM), which was a joint venture of Oxiana Europe (60%) and Hellenic Mining (40%) continued exploration for base metals associated with volcanogenic massive sulfide deposits in the Troodos Ophiolite Complex. EMM reprocessed geophysical data and drilled on the Klirou and the Shia-Mathiatis prospects.

Lead.— After complaints about smoke and stench from the Nemitsas Foundry near Limassol, the Government had the foundry emissions, the residents of Omonia and Zakaki, and the area around the foundry tested for heavy-metal contaminants. The investigation revealed that the foundry conformed with European Union particulate matter emissions standards and that lead levels in local residents blood were "well below" accepted thresholds for blood-lead concentrations. The foundry was given until February 2002 (later extended to May) to resolve other pollution problems (Tukker and others, 2001, p. 19-20; Demetriou, 2001§; Matthew, 2002§).

Natural Gas and Petroleum.—In 2001, the Government held talks with Egypt and Syria about oil and natural gas exploration in the eastern Mediterranean Sea and construction of a \$250 million natural gas pipeline to Cyprus from Syria (Alexander's Gas & Oil Connections, 2001§). The pipeline proposal meshed with Government plans to have the powerplants of the Electricity Authority of Cyprus switch to burning natural gas instead of residual fuel oil by 2006. The Turkish Cypriot administration also expressed interest in offshore hydrocarbon exploration.

#### **References Cited**

Oxiana Resources NL, 2002, Annual report: Melbourne, Australia, Oxiana Resources NL, 44 p.

Tukker, Arnold, Buikst, Harrie, van Oers, Lauran, and van der Voet, Ester, 2001, Risks to health and the environment related to the use of lead in products: Delft, Netherlands, Nederlandse Organisatie voor toegepastnatuurwetenschappelijk onderzoek, TNO Report STB-01-29, 102 p.

#### **Internet References Cited**

Alexander's Gas & Oil Connections, 2001, Cyprus, Syria and Egypt to decide on probing gas and oil reserves, accessed November 26, 2001, at URL http://www.gasandoil.com/ goc/news/nte14725.htm.

Demetriou, Melina, Cyprus Mail, 2001 (October 19), Nemitas report 'a whitewash,' accessed June 11, 2002, via URL http://www.cyprusmail.com/October/19/.

Matthew, Jennie, 2002 (January 22), Anger at new extension for Nemitsas foundry, accessed March 6, 2002, at URL http://www.cyprus-mail.com/January/22/news7.htm.

Republic of Cyprus Press and Information Office, 2001 (March 1), News item

<sup>&</sup>lt;sup>1</sup>Unless specifically stated, all data in this chapter are for the Republic of Cyprus in southern Cyprus because data related to the Turkish-controlled areas of northern Cyprus are sparse or unavailable.

<sup>&</sup>lt;sup>2</sup>Where necessary, values have been converted from Cypriot pounds to U.S. dollars at the rate of Cy£0.6397=US\$1.00.

<sup>&</sup>lt;sup>3</sup>References that include a section twist (§) are found in the Internet References Cited section.

02—Report on underground exploration of water and mineral resources in occupied Cyprus, accessed June 13, 2002, at URL http://www.hri.org/news/cyprus.tcpr/ 2001/01-03-27.tcpr.html.

Statistical Service of Cyprus, 2002a (May 5), Foreign trade, accessed June 11,

Statistical Service of Cyprus, 2002a (May 5), Foreign trade, accessed June 11, 2002, at URL http://kypros.org/DSR/ key\_figures/foreign\_trade/ foreign\_trade.htm.

Statistical Service of Cyprus, 2002b (April 12), National accounts, accessed June 11, 2002, at URL http://kypros.org/ DSR/key\_figures/national/annual.htm.

#### **Major Sources of Information**

Mines Service

Ministry of Agriculture, Natural Resources and Environment

1422 Nicosia

Cyprus

Telephone: +357-2-309283 Facsimile: +357-2-316872 Statistical Service of Cyprus 13, Andreas Araouzos St.

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## TABLE 1 CYPRUS: PRODUCTION OF MINERAL COMMODITIES 1/2/3/

(Thousand metric tons unless otherwise specified)

Commodity	1997		1998		1999	2000		2001	p/
Cement, hydraulic	910		1,207		1,157	1,398		1,369	
Clays:									
Bentonite metric tons	98,700		121,850		138,853	167,500	r/	126,600	
Other:									
For brick and tile manufacture	350	e/	380	e/	350	285	r/	300	
For cement manufacture	340	e/	370	e/	360	450	r/	440	
Total	690	e/	750	e/	710	735	r/	740	
Copper, refined metric tons	4,435		4,936		5,004	5,197		5,176	
Gypsum, crude 4/ do.	234,300		296,800		181,546	260,000	r/	250,000	
Lime, hydrated do.	6,000	e/	5,500	e/	6,000	6,800		9,400	
Petroleum refinery products									
Liquefied petroleum gases thousand 42-gallon barrels	367		344		393	345		359	
Gasoline do.	1,199		1,208		1,263	1,289		1,277	
Kerosene and jet fuel do.	195		212		238	285		288	
Distillate fuel oil do.	2,725	r/	2,849	r/	3,069 r	/ 3,027	r/	2,911	
Residual fuel oil do.	2,803	r/	2,929	r/	3,292 r	/ 3,274	r/	3,156	
Asphalt and Bitumen do.	207		208		206	207		239	
Other do.	2		20		22	16		19	
Total do.	7,499	r/	7,770	r/	8,482 r	/ 8,443	r/	8,248	
Stone, sand, gravel:									
Limestone, crushed (Havara) e/	2,000	r/	2,000	r/	2,000 r	/ 1,800	5/	1,500	5/
Marble	25		7		2	2		2	
Marl, for cement production	1,500		1,900		1,600	1,800		1,780	
Sand and gravel 6/	6,990	r/	8,400	r/	8,500 r		r/	9,300	
Building stone 7/	28		40		63	80	r/	55	
Sulfur e/ metric tons	1,400		1,400		1,400	1,400		1,400	
Umber do.	7,120		6,056		9,169	7,500	r/	7,800	

e/ Estimated. p/ Preliminary. r/ Revised.

<sup>1/</sup> Table includes data available through July 8, 2002.

<sup>2/</sup> Small quantities of the mineral pigments ocher and terra verte are mined intermittently. Mineral production data from the northern Turkish-occupied section of the country and production of secondary metals from scrap are not included in this table because available information is inadequate to make estimates of output.

<sup>3/</sup> Sources of data include company annual reports, the Mines Service, and the Statistical Service of Cyprus. Estimated data are rounded to no more than three significant figures.

<sup>4/</sup> About 4,000 metric tons per year of gypsum was calcined.

<sup>5/</sup> Reported figure.

<sup>6/</sup> Includes crushed aggregate.

<sup>7/</sup> Includes crude, semifinished, and worked stone.