



2007 Minerals Yearbook

CYPRUS [ADVANCE RELEASE]

THE MINERAL INDUSTRY OF CYPRUS

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There was a strong tradition and culture of mining in Cyprus,¹ although the contribution of mining to the economy was not as important as in the past. Cyprus has a modern mining law that provides security of tenure and right of access to private land for exploration purposes. The sparse vegetation is conducive to outcrop mapping and ground surveys. The country had a well developed infrastructure to support exploration and mining operations. In 2007, the Government initiated a study on reviving the Cypriot mining industry and was encouraging certain types of joint ventures with Turkish Cypriots (EMED Mining Public Ltd., 2007).

Production

Data on mineral production are provided in table 1. The production of bentonite, cement, sand and gravel, and stone dominated the mineral industry of Cyprus. Other mineral commodities produced included common clay for brick and cement manufacture, gypsum, ocher, and umber.

Structure of the Mineral Industry

Table 2 is a list of major mineral industry facilities. The facilities were privately owned.

Commodity Review

Metals

Copper.—EMED Mining Public Ltd. (EMED Mining) was a joint venture of EMED Mining of Cyprus (95%) and Hellenic Copper Mines Ltd. of Cyprus (5%). EMED Mining's exploration areas were centered largely within the Upper Pillow lavas of the Troodos ophiolite complex. The mineralization areas were volcanic-hosted massive sulfide copper deposits under shallow cover material (similar to past copper mines in the complex), three of which exceeded 10 million metric tons (Mt) of ore at grades of between 1% and 4.5% copper (EMED Mining Public Ltd., 2007).

EMED Mining completed a prefeasibility study of its Klirou copper-zinc project at yearend 2006. The study investigated an open pit operation exploiting a portion of an estimated inferred resource of 4.5 Mt at an average grade of 0.41% copper and 0.74% zinc. An independent review of the study was completed in late 2007 by AMC Consultants (UK) Ltd. This review outlined key areas for further work to be done in a full feasibility study, including diamond core drilling and collecting of samples for further metallurgical work, further

assessment of the Mitsero processing plant, and preparation of a metallurgical design for a processing strategy. More feasibility work was planned with the aim of beginning development during 2008 if regulatory permits are granted (Thomson Reuters, 2008).

Industrial Minerals

Gypsum.—Abundant reserves of gypsum are found in Cyprus. Gypsum occurs in two well-defined groups—one is in a narrow arcuate zone that is parallel to the trend of the Kyrenia range in the north of the island and includes the Lapatza gypsum outcrop; the other occurs on the periphery of the Troodos igneous massif. Both of these deposits are of upper Miocene age (Minerals Zone, 2007).

Mineral Fuels

Natural Gas and Petroleum.—The Government opened an offshore licensing round, inviting foreign firms to apply for licenses to explore for natural gas and petroleum in 11 blocks totaling about 70,000 square kilometers in the Mediterranean waters south of Cyprus. The Government had established the Exclusive Economic Zone of the island in accordance with the United Nations Law of the Sea Convention and had adopted the Contiguous Zone Law of 2004 and the Exclusive Economic Zone Law of 2004. The Government stated that five international companies, reported to be from China, Russia, and the United States, had expressed an interest in these blocks. PGS Geophysical Co. of Norway completed a seismic survey and was processing the data (Petroleum Economist, 2007).

In 2007, the European Commission agreed that Cyprus was a sovereign state and had the right to sign international agreements and that the right could not be questioned. Following this finding, the Government stated that Egypt and Lebanon had given assurances that they would go ahead with natural gas and petroleum exploration deals with the island. Cyprus and Lebanon signed an agreement in 2007 to mark out their undersea border to facilitate future exploration. The Government signed a similar agreement with Egypt in 2006. All three countries agreed to jointly exploit potential natural gas and petroleum fields (Alexander's Gas & Oil Connections, 2007).

Outlook

In 2007, industrial infrastructure construction is expected to maintain the domestic demand for cement, gypsum, sand and gravel, and stone. International demand from the cat litter, construction, oilfield drilling fluids, and pigments industries is expected to maintain Cypriot exports of bentonite, gypsum, perlite, and umber. Natural gas and petroleum exploration is expected to continue.

¹Unless specifically stated, all data in this chapter are for the Republic of Cyprus in southern Cyprus because data related to areas of northern Cyprus administered by Turkish Cypriots are sparse or unavailable. The two areas have been separated since 1974.

References Cited

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TABLE 1
CYPRUS: PRODUCTION OF MINERAL COMMODITIES¹

(Thousand metric tons unless otherwise specified)

Commodity ²	2003	2004	2005	2006	2007 ^c
Cement, hydraulic	1,637	1,689	1,805	1,786	1,873 ³
Clays:					
Bentonite metric tons	144,859	155,717	172,366	150,620	154,655 ³
Other:					
For brick and tile manufacture	350	425	443	400 ^c	476 ³
For cement manufacture	550	565	600	540	620
Total	900	990	1,043	940 ^c	1,096 ³
Copper, refined metric tons	2,552	1,240	--	880	1,012 ³
Gypsum, crude ⁴ do.	300,000	255,000	210,000	264,000	304,000
Lime, hydrated do.	13,370	13,990	16,589	12,715 ^r	13,497 ³
Petroleum refinery products: ⁵					
Liquefied petroleum gases thousand 42-gallon barrels	330	102	--	--	--
Gasoline do.	1,242	336	--	--	--
Kerosene and jet fuel do.	301	80	--	--	--
Distillate fuel oil do.	2,437	657	--	--	--
Residual fuel oil do.	2,411	774	--	--	--
Asphalt and bitumen do.	194	42	--	--	--
Other do.	--	--	--	--	--
Total do.	6,916	1,991	--	--	--
Sand and stone:					
Limestone, crushed (Havara)	1,000	1,200	1,000	700	700
Marble	2	1	2	1	1
Marl, for cement production	2,220	2,290	2,450	2,210	2,540
Sand and gravel ⁶	10,700	11,600	12,064	12,199	13,129 ³
Building stone ⁷	103	105	51	57	60
Sulfur ^e metric tons	1,300	300	--	--	--
Umber do.	5,500	5,205	5,088	5,757 ^r	4,363 ³

^eEstimated; estimated data are rounded to no more than three significant digits; may not add to totals shown. ^rRevised. do. Ditto. -- Zero.

¹Table includes data available through June 30, 2008.

²In addition to the commodities listed, small quantities of the mineral pigments ocher and terra verte are mined intermittently. Mineral production data from areas of northern Cyprus that are administered by Turkish Cypriots and production of fertilizers, perlite, and secondary metals from scrap are not included in this table because available information is inadequate to make reliable estimates of output.

³Reported sources of data include company annual reports, the Mines Service, and the Statistical Service of Cyprus.

⁴About 4,000 metric tons per year of gypsum was calcined.

⁵Refinery closed in April 2004. Petroleum refinery products are rounded to the nearest thousand barrels; may not add to totals shown.

⁶Includes crushed aggregate.

⁷Includes crude, semifinished, and worked stone.

TABLE 2
CYPRUS: STRUCTURE OF THE MINERAL INDUSTRY IN 2007

(Metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Aluminum:			
Secondary	A & E Aluminium Recycling Ltd.	Nicosia	NA
Semimanufactures	Muskita Aluminum Industries Ltd.	Extrusion presses, Limassol	18,000
Cement	Vassiliko Cement Works Ltd.	Vassiliko	1,260,000
Do.	Cyprus Cement Co. Ltd.	Moni	400,000
Do.	Bogaz Endustri ve Madencilik	Near Famagusta, Northern Cyprus	150,000
Clay, bentonite	Peletico Penta Ltd.	Mines at Pentakomo and Troulli	NA
Do.	Hellenic Mining Co.	Nicosia	NA
Do.	Drapia Mining Co. Ltd.	Drapia, Monagroulli, and Parsata	(1)
Do.	Oryktako Ltd.	Mine at Kato Moni and processing plant at Malounda	10,000
Do.	C & A Quarries Ltd.	NA	NA
Copper, cathode	Hellenic Copper Mines Ltd.	Skouriotissa	(2)
Gypsum	Peletico Ltd.	Quarry and processing plant at Aradipou, near Larnaca	NA
Do.	Zeiplast Chemical Industries Ltd.	Near Moni	NA
Perlite	Peletico Ltd.	Expanded perlite facility at Larnaka	NA
Do.	Zeiplast Chemical Industries Ltd.	Expanded perlite facility at Moni	NA
Petroleum, crude	Cyprus Petroleum Refinery Ltd.	Larnaca	(3)
Steel, semimanufactures	B.M.S. Metal Pipes Industries Ltd.	Tube and pipe mill, Paphos	15,000

Do. Ditto. NA Not available.

¹Inactive.

²Production ceased in January 2005.

³Refinery closed in April 2004. Conversion of the facility to a petroleum product storage terminal that began in 2004 was ongoing.