



# 2009 Minerals Yearbook

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**CYPRUS [ADVANCE RELEASE]**

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# THE MINERAL INDUSTRY OF CYPRUS

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There was a long history and strong culture of mining in Cyprus;<sup>1</sup> however, mining made only a small contribution (0.2%) to the national economy in 2009. The mineral resources of the island included asbestos, chromite, copper, gypsum, lime, sand and stone, and umber. Cyprus' mining law provides security of tenure and right of access to private land for exploration purposes.

The Mines Service of the Ministry of Agriculture, 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. The Ministry's Geological Survey Department was responsible for the mineral exploration programs and the evaluation of the country's mineral resources.

In 2008 (the latest year for which data were available), the value of the mining and quarrying sectors increased by 14.3% compared with that of the previous year. It was estimated that the value added of the sector increased to euros (€) 59.7 million (\$87.2 million)<sup>2</sup> in 2008 from €2.2 million (\$76.2 million) in 2007 (Statistical Service of the Republic of Cyprus, 2009).

Cyprus' accession as a full member of the European Union (EU) on May 1, 2004, and its membership in the European Exchange Rate Mechanism (Eurozone) became effective on January 1, 2008. On that day, the Government replaced the Cyprus pound (C£) with the euro. In 2009, the Cyprus pound could be exchanged only at the country's banks (U.S. Department of State, 2009).

International trade was important to the economy of Cyprus. On the production side, the lack of energy resources that the industry required for the production of heavy goods and the lack of raw materials necessitated the importation of these commodities. On the demand side, exports were vital to supply the aggregate demand for Cypriot agricultural production, manufactured products, and mineral commodities. The EU and the neighboring Middle Eastern countries absorbed the majority of Cyprus' exports (PriceWaterhouseCoopers, 2009).

U.S. exports to Cyprus in 2009 totaled \$161 million and included drilling and oilfield equipment, \$2,590,000; precious metals, \$1,662,000; petroleum products, \$1,621,000; iron and steel products, \$258,000; and gem diamond, \$36,000. U.S. imports from Cyprus totaled \$53 million and included sulfur and nonmetallic minerals, \$325,000, and materials handling equipment, \$27,000. Mineral exports and imports were transmitted through the Ports of Larnaca, Limassol, and Vassiliki or through the petroleum products terminals at Dhekelia, Larnaca, and Moni (U.S. Census Bureau, 2009).

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<sup>1</sup>Unless 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.

<sup>2</sup>Where necessary, values have been converted from European Union euros (€) to U.S. dollars (US\$) at a rate of €1.00=US\$1.46.

## Production

Data on mineral production are in table 1. Bentonite, cement, sand and gravel, and stone were the major mineral commodities produced by the mineral industry of Cyprus. Other mineral commodities produced included common clay for brick and cement manufacture, gypsum, ocher, and umber. Cement production decreased by 22.6% compared with production in 2008 (table 1).

## Structure of the Mineral Industry

Table 2 is a list of major mineral industry facilities and their locations. All facilities were privately owned.

## Commodity Review

### Metals

**Copper.**—EMED Mining Public Ltd. completed a prefeasibility study on its Klirou copper-zinc property, which is located about 20 kilometers southwest of Nicosia. Using historic and recent drill hole data, EMED Mining estimated that the deposit contained inferred reserves of 4.5 million metric tons (Mt) of copper ore at a grade of 0.41% copper containing 18,500 metric tons (t) of contained copper and zinc ore at a grade of 0.74% zinc containing 33,400 t of contained zinc. The Klirou deposit extends from the surface to about 200 meters (m) below the surface and is potentially minable by open pit methods. EMED Mining planned to increase these resources by infill and step-out drilling. EMED Mining was exploring primarily for nonoutcropping volcanic massive sulfide (VMS) deposits largely within the Upper Pillow Lavas of the Troodos Complex (Siemens AE Greece, 2009).

### Industrial Minerals

**Cement.**—Siemens AE Greece was awarded a contract to supply the electrical and automation equipment for a new kiln line and cement line at Vassiliko Cement Works Public Company Ltd. (VCW). An energy monitoring system integrated with the process control system would constantly monitor energy consumption at the plant. The cost was expected to be about \$20 million, and the new line was expected to go onstream in January 2011. The new clinker production unit at Vassilikoill would have a production capacity of 2.4 million metric tons per year and would replace three existing lines in the plant. VCW was the only cement producer on Cyprus since the company's merger with Cyprus Cement Co. in 2007 (Siemens AE Greece, 2009).

## Mineral Fuels

**Natural Gas and Petroleum.**—Cyprus produced no natural gas or petroleum in 2009. The National Oil Corp. of Libya announced that it was interested in investing in natural gas and petroleum deposits off southern Cyprus and planned to participate in the next round of licensing there. The Government launched an initial licensing round in 2007 for 11 blocks covering 51,000 square kilometers and planned to hold a second licensing round in the near future. Also, Libya was interested in participating in a planned energy infrastructure project that would involve construction of a facility housing crude oil facilities and a liquefied natural gas regasification terminal (Watkins, 2009).

## Outlook

In 2009, domestic industrial infrastructure construction is expected to continue to be the main source of domestic demand for cement, gypsum, sand and gravel, and stone. International demand is expected to continue to support Cypriot exports of

bentonite, gypsum, perlite, and umber. The construction industry is expected to continue to be important to the economy. Natural gas and petroleum exploration is expected to continue.

## References Cited

- PriceWaterhouseCoopers, 2009, Foreign trade: PriceWaterhouseCoopers. (Accessed March 21, 2010, at <http://info.industry.siemens.com/press/Details.aspx?pressArticleId=1890>.)
- Siemens AE Greece, 2009, Siemens supplies equipment for new kiln line and cement mill on Cyprus: Siemens AE Greece. (Accessed May 12, 2009, at <http://www.pressreleasepoint.com/siemens-supplies-equipment-new-kiln-line-and-cement-mill-cyprus>.)
- Statistical Service of the Republic of Cyprus, 2009, Industrial statistics, 2008: Statistical Service of the Republic of Cyprus. (Accessed September 10, 2009, at <http://www.mof.gov.cy/mof/cystat/statistics.nsf/ALL2D5A4D3DCE7347C3C22576190030>.)
- U.S. Census Bureau, 2009, Foreign trade statistics: U.S. Census Bureau. (Accessed March 11, 2010, at <http://www.census.gov/foreign-trade/balance/c4910.html>.)
- U.S. Department of State, 2009, Background note—Cyprus: U.S. Department of State. (Accessed September 30, 2009, at <http://www.state.gov/r/pa/ei/bgn/5376.htm>.)
- Watkins, Eric, 2009, Libya seeks to invest in exploration offshore Cyprus: Oil & Gas Journal, v. 107, issue 16, April 27, p. 29.

TABLE 1  
CYPRUS: PRODUCTION OF MINERAL COMMODITIES<sup>1</sup>

(Thousand metric tons unless otherwise specified)

Commodity <sup>2</sup>	2005	2006	2007	2008	2009 <sup>c</sup>
Cement, hydraulic	1,805	1,786	1,873	2,211	1,481 <sup>3</sup>
Clays:					
Bentonite metric tons	172,366	150,620	154,655	155,125	152,722 <sup>3</sup>
Other:					
For brick and tile manufacture	443	400 <sup>e</sup>	476	490	480
For cement manufacture	600	540	620	635	400 <sup>3</sup>
Total	1,043	940 <sup>e</sup>	1,096	1,125	880
Copper, refined metric tons	--	880	3,012	2,986	3,000
Gypsum, crude <sup>4</sup> do.	210,000	264,000	304,000	405,500	317,000
Lime, hydrated do.	16,589	12,715	13,497	14,285	12,000 <sup>3</sup>
Sand and stone:					
Limestone, crushed (Havara)	1,000	700	875	766	800
Marble, granules and chippings metric tons	200	100	800	550	400
Marl, for cement production	2,450	2,210	2,540	2,595 <sup>3</sup>	2,600
Sand and gravel <sup>5</sup>	12,064	12,199	13,129	14,174	15,000
Building stone <sup>6</sup>	51	57	38	71	60
Umbur metric tons	5,088	5,757	4,363	4,471	4,363 <sup>3</sup>

<sup>c</sup>Estimated; estimated data are rounded to no more than three significant digits; may not add to totals shown. do. Ditto. -- Zero.

<sup>1</sup>Table includes data available through March 31, 2010.

<sup>2</sup>In 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 the 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.

<sup>3</sup>Reported sources of data include the Mines Service and the Statistical Service of Cyprus.

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

<sup>5</sup>Includes crushed aggregate.

<sup>6</sup>Includes crude, semifinished, and worked stone.

TABLE 2  
CYPRUS: STRUCTURE OF THE MINERAL INDUSTRY IN 2009

(Metric tons unless otherwise specified)

Commodity	Major operating companies and 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	(1)	
Gypsum	Peletico Ltd.	Quarry and processing plant at Aradipou, near Larnaca	NA	
Do.	Zeiplast Chemical Industries Ltd.	Near Moni	NA	
Do.	Various	Eledhio and Tichni	NA	
Perlite	Peletico Ltd.	Expanded perlite facility at Larnaka	NA	
Do.	Zeiplast Chemical Industries Ltd.	Expanded perlite facility at Moni	NA	
Refined petroleum products	thousand 42-gallon barrels	Cyprus Oil Terminal Ltd.	Larnaca storage facility	150
Steel, semimanufactures	B.M.S. Metal Pipes Industries Ltd.	Tube and pipe mill, Paphos	15,000	

Do. Ditto. NA Not available.

<sup>1</sup>Inactive in 2008.