



# 2013 Minerals Yearbook

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## CYPRUS

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# THE MINERAL INDUSTRY OF CYPRUS

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Cyprus is a moderately developed, politically divided island country that is strategically located in the Eastern Mediterranean region between Europe, the Middle East, and North Africa. The third largest island in the Mediterranean Sea, Cyprus is situated 71 kilometers (km) south of Turkey and 105 km west of Syria. In years past, the mineral industry of Cyprus produced asbestos fibers, chromite, copper, gold, and iron pyrites; however, of these mineral commodities, only copper was actively mined in 2013, as production of others largely ceased after the division of the island in 1974. The mineral resources of Cyprus<sup>1</sup> include asbestos, bentonite, copper, crushed limestone (known locally as havara), gypsum, lime, marble, sand and gravel, and umber, which is an iron oxide pigment. The island accounted for about 1.5% of world bentonite production in 2013. The mining and quarrying sector as a whole accounted for a minor percentage of national economic output, and the sector continued its long-term decline—a trend that was exacerbated by the worsening economic recession following the banking crisis of spring 2013. On the other hand, exploration for metals (such as copper, gold, and zinc) and mineral fuels (particularly natural gas) offshore was increasing (Encyclopedia of the Nations, 2014; International Monetary Fund, 2014; Mines Service, 2014a; Virta, 2014, p. 45; Statistical Service, 2015c).

Cyprus had no onshore resources of mineral fuels. In 2013, however, significant natural gas deposits were identified at the Aphrodite gasfield offshore southern Cyprus. Following the Aphrodite discovery, a number of foreign companies obtained licenses for offshore hydrocarbon exploration in the Cyprus Exclusive Economic Zone (EEZ), which is located in the Levant Basin province of the eastern Mediterranean Sea; further exploration was to be undertaken in 2014 (Kliari and Kouppas, 2014, p. 95, 96).

## Minerals in the National Economy

In 2013, Cyprus's real gross domestic product (GDP) decreased by 5.4% compared with that of 2012; this was a higher rate of contraction in the economy than during the previous years of the country's ongoing recession that began in 2009. The nominal GDP was \$21.9 billion in 2013, which was down from \$22.8 billion in 2012. The broad-based economic recession in Cyprus intensified in the wake of the banking crisis in March that required a financial bailout from the European Central Bank (ECB), the European Commission (EC), and the International Monetary Fund (IMF). As a result, all components of domestic demand except net exports showed decreases, including private consumption, inventories, and investments. The economy was forecasted to contract further in 2014,

<sup>1</sup>Unless specifically stated, all data in this chapter are for the Republic of Cyprus, which is located in the southern part of Cyprus, because data related to northern Cyprus, which is administered by Turkish Cypriots, were sparse or unavailable. The two areas have been politically separated since 1974.

although at a lower rate of 3.2% (Central Bank of Cyprus, 2014; European Commission, 2014a, b; International Monetary Fund, 2014, p. 7–18; World Bank, The, 2014).

All sectors of the economy, including the mineral sector, contracted at a higher rate than in previous years owing to the economic crisis of 2013. The gross value added (in constant dollars) by the mining and quarrying sector was EUR15.3 million (\$19.5 million)<sup>2</sup> in 2013, which was a decrease of 31% compared with the gross value added of EUR22.2 million (\$27.4 million) in 2012. The gross value added of the manufacturing sector decreased by 9.8% to EUR741 million (\$946.4 million) in 2013 from EUR821.4 million (\$1.015 billion) in 2012. The share of mining and quarrying as a percentage of the country's total value added decreased to 0.10% in 2013 from 0.15% in 2012, whereas that of manufacturing decreased to 5.3% from 5.6% in 2012 (Statistical Service, 2015c).

In 2013, the gross value added (in current dollars) by the manufacturing sector amounted to EUR846.1 million (\$1.08 billion). Within the manufacturing sector, the value added by the manufacture of other nonmetallic mineral products was EUR81.6 million (\$104.2 million) in 2013, accounting for about 6% of the total gross value added by the sector; the manufacture of fabricated metal products, except machinery and equipment, was EUR77.8 million (\$99.4 million), or 6% of the sector total; the manufacture of base metals, EUR22.4 million (\$28.6 million), or 2% of the sector total; and the manufacture of chemicals and chemical products, EUR23 million (\$29.4 million), or 2% of the sector total (Statistical Service, 2014).

Total industry employment decreased by 10.2% to 31,947 workers in 2013 from 35,579 workers in 2012. Of this total, mining and quarrying, along with electricity supply, employed 1,823 workers in 2013, which was a decrease of 7% from the 1,959 workers employed in the two sectors in 2012. Manufacturing employed 28,538 workers, which was down by 10.6% from the 31,933 workers employed in 2012. Within the manufacturing sector, the manufacture of fabricated metal products, except machinery and equipment, employed 3,515 workers (which was down from 4,061 in 2012); the manufacture of other nonmetallic mineral products, 2,109 workers (down from 2,562 in 2012); the manufacture of chemicals and chemical products, 665 workers (down from 749); and the manufacture of base metals, 324 workers (down from 365) (Statistical Service, 2014).

## Government Policies and Programs

The Hydrocarbon Prospection, Exploration and Exploitation Law of 2007 and Hydrocarbon Regulations of 2007 and 2009

<sup>2</sup>Where necessary, values have been converted from euro area euros (EUR) to U.S. dollars (US\$) at an average annual exchange rate of EUR0.809=US\$1.00 for 2012 and EUR0.783=US\$1.00 for 2013. All values are nominal (that is, at current prices), unless otherwise stated.

govern hydrocarbon exploration and extraction activities in Cyprus. These two acts were passed in accordance with EC Directive 94/22/EC of May 30, 1994, which requires member countries to set forth the conditions under which hydrocarbon prospecting, exploration, and production authorizations (licenses) will be granted and to establish a framework for nondiscriminatory access to such activities. According to the legislation, a prospecting license is granted for up to 1 year, an exploration license for up to 3 years, and an exploitation license for up to 25 years. The state is the owner of any resources discovered, and the holder of the authorization is deemed a contractor or service provider (Ashurst Law, 2012; Demetriou and Demetriou, 2013, p. 5; Sofokleous and Toffoloni, 2014).

The Government has taken steps to reduce the country's energy dependence on petroleum imports by encouraging the development of Cyprus's offshore hydrocarbon resources. Cyprus's new energy policy envisions a gradual shift of the island's energy supply from imported fuel oil to domestically produced natural gas and solar power. The Government planned to build a liquefied natural gas (LNG) terminal in Vasilikos on the southern coast of the island for liquefaction and subsequent exporting of natural gas. The prospective \$10 billion investment would be the most expensive investment project ever to have been undertaken in Cyprus (Honore, 2014, p. 90; Kliari and Kouppas, 2014, p. 95).

The Government's new multipronged energy policy seeks first to increase the country's competitiveness by reducing the cost of energy on the island, particularly the cost of electricity used by businesses. Second, the policy seeks to shift the country away from imported fuel oil to domestically produced natural gas for power generation to help reduce Cyprus's sizable external trade deficit and dependence on energy imports. Third, the policy includes plans for major investments to be made for the liquefaction, storage, and transportation of natural gas, which could provide a significant boost to Cyprus's economy through new construction activity and employment (Reed, 2013; European Commission, 2014a; Kliari and Kouppas, 2014, p. 95, 96).

## Production

In 2013, Cyprus's production of most mineral commodities decreased. Bentonite production remained relatively steady. Cyprus's mineral industry had already been in decline since the 1970s owing to various economic and political factors, including the exhaustion of the large copper and iron pyrites ore bodies once found on the island; the cessation of mineral extraction in important mining areas (such as Xeros-Lefka-Mavrovoun on the northern part of the island) since the armed conflict of 1974; the substitution of iron pyrites production by the production of sulfuric acid; the restriction of asbestos products on the world market; and increases in production costs in Cyprus without proportional increases in the international sale prices of metals. The worsening economic situation of 2012 and 2013 caused a further reduction in mining and quarrying output by reducing mineral financing and demand (Anastasiades, 2012).

The Skouriotissa copper mine, which is located in the Nicosia district in central Cyprus, was the only active mine on the island

in 2013. Copper cathodes (99.99% purity) was Cyprus's main mineral commodity produced. Extensive quarrying of ore bodies of limestone, marble, marl, building stone, and other industrial minerals was undertaken across the island. A total of 129 quarries were producing various materials, particularly for use by the construction industry. Of these quarries, about 45 were in the final stages of operation or were in the reclamation phase (Mines Service, 2014a, b).

In 2013, the production of marl increased by 58% compared with that of 2012; clays for cement manufacture, by 55%; and umber and ocher, by 18%. Building stone production decreased by 91%; marble, granules, and chippings, by 77%; crushed limestone (known locally as havara), by 72%; sand and gravel, by 38%; clays for brick and tile manufacture, by 35%; hydrated lime, by 18%; hydraulic cement, by 17%; and copper, by 16%. No mineral fuels were produced onshore or offshore (table 1).

## Structure of the Mineral Industry

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

## Mineral Trade

The main mineral exports of Cyprus were bentonite, building stone, cement, clinker for cement, copper, gypsum, lime, plasters, and umber and ocher. The cumulative exports of copper cathodes from 1996 to 2013 were reported to be 56,500 metric tons (t). Exports of copper cathodes in 2013 decreased by 19% to 3,631 t from 4,328 t in 2012. Exports of clinker for cement, which was a new export commodity since 2012, were 807,041 t in 2013, which was up significantly from the 23,363 t exported in 2012. Gypsum exports were estimated to be 170,000 t; bentonite, 150,000 t; umber and ocher, 6,000 t; and building stone, 3,000 t (Mines Service, 2014a, c).

Cyprus was almost entirely dependent on mineral fuel imports to meet its energy needs. In 2011 (the latest year for which data were available), 95% of the country's energy supply was provided by petroleum products, which were 100% imported. As a result, Cyprus's energy trade deficit, which was equal to 7.5% of the GDP, was the second highest deficit among the 28 member states of the EU after Malta (European Commission, 2013, p. 154; Honore, 2014, p. 90).

In 2013, Cyprus's imports continued to exceed its exports by a wide margin, although the trade deficit declined substantially owing to both an increase in exports and a decrease in imports. Total exports increased by 13.3% to EUR1.61 billion (\$2.06 billion) in 2013 from EUR1.42 billion (\$1.76 billion) in 2012, whereas total imports decreased by 15.6% to EUR4.83 billion (\$6.17 billion) from EUR5.74 billion (\$7.40 billion) in 2012. As a result, the country's trade deficit decreased by 25.5% to EUR3.22 billion (\$4.11 billion) in 2013 from EUR4.32 billion (\$5.34 billion) in 2012. Fuels and lubricants continued to be the second-ranked category of Cyprus's imports, accounting for 28.1% of all imports in 2013. This share, however, was down from 29.2% in 2012. Among exports, industrial products of mineral origin accounted for 4.5% of total exports, which was

down from 5.5% in 2012. Mineral commodities accounted for only 0.9% of Cyprus's exports, which was unchanged from 2012 (Statistical Service, 2015a).

Other EU member states continued to account for the bulk of Cyprus's trade, commanding a 69.5% share of its imports and a 43.6% share of its exports. Cyprus's principal trading partners included, in descending order, Greece (which received 16.7% of Cyprus's exports), the United Kingdom (13.0%), Israel (3.8%), the United States (3.6%), Germany (2.5%), Egypt (2.3%), and China (2.0%) for exports. Its main sources of imports were, in descending order, Greece (which provided 23.3% of Cyprus's imports), Israel (13.5%), Italy (7.0%), Germany (6.6%), the United Kingdom (6.4%), France (6.2%), and the Netherlands (6.1%). The United States accounted for only 1.4% of Cyprus's imports (Statistical Service, 2015b).

In 2013, Cyprus's exports to the United States were valued at \$43.5 million. These exports included, in descending order of value, \$1,145,000 in sulfur and nonmetallic minerals; \$59,000 in stone, sand, and cement; \$28,000 in finished metal shapes; and \$21,000 in organic chemicals. Cyprus's imports from the United States were valued at \$143.2 million. These imports included, in descending order of value, \$15 million in fuel oil, \$1.2 million in chemicals, \$621,000 in iron and steel products, \$493,000 in petroleum products, and \$456,000 in finished metal shapes (U.S. Census Bureau, 2014a, b).

## Commodity Review

### Metals

**Copper.**—Copper exploration in Cyprus was centered on the Troodos ophiolite complex. All copper deposits in Cyprus that had been identified as of 2013 were volcanogenic massive sulfide (VMS) deposits that were under shallow cover rocks. EMED Mining Public Ltd. (EMED) was a Cyprus-based mineral development and exploration company that was focused on conducting exploration to justify the commencement of a full feasibility study for the Klirou copper-zinc prospect located 20 km southwest of Nicosia. According to the preliminary feasibility study completed in 2007, EMED reported inferred resources of 6.6 million metric tons of 0.7% copper equivalent, excluding associated gold. Contained metal estimates in Klirou were 18,500 t of copper and 53,600 t of zinc. The company had conducted only low-cost exploration and evaluation since then, however. At the end of 2013, EMED reported that the company continued to hold the relevant tenements and was seeking joint-venture partners in order to proceed to the next stage of the project. The company was also negatively affected by the banking crisis in March 2013, but reported that it had only limited financial exposure to the bank restructuring in Cyprus, which imposed a levy on bank deposits and limited capital outflows (EMED Mining Public Ltd., 2007; 2013; 2014, p. 12).

The only copper mining and processing activity in operation on the island in 2013 was Hellenic Copper Mines Ltd.'s operation at Skouriotissa. The Skouriotissa Mine, which was considered to be the world's longest producing copper mine, had a reported annual capacity of 8,000 t of copper cathodes. Since 1996, the Skouriotissa facility produced 99.99% pure copper metal cathodes

by applying the leaching-solvent extraction-electrowinning method, which is a hydrometallurgical process that uses water to separate the metal from the waste. In 2012, the mine's production reportedly reached a cumulative production milestone of 50,000 t (Anastasiades, 2012; Topf, 2012; Hellenic Copper Mines Ltd., 2013).

**Gold.**—Northern Lion Gold Corp. of Canada continued to explore for gold in the Troodos complex and held six permits across southern Cyprus. The company held the permits for the Asproyia and the Evloimeni project areas jointly with SES Sweden AB of Sweden. In May, Northern Lion entered into a binding agreement with Centerra Gold (KB) Inc. of Canada whereby Centerra had the option to own up to 70% interest in the company's exploration permits in the Larnaca and the Paphos districts. In October, Northern Lion and Centerra announced that a ground geophysical survey had been completed and that a diamond drill program would begin. The planned 1,500-meter (m) drill program would test several prospective target areas in the Larnaca and the Paphos districts where Northern Lion had previously discovered gold and substantial sulfide mineralization. In July 2012, drill holes at the Pano Lefkara permit area in the Larnaca district had intersected 3 m of mineralization grading 4.98 grams per metric ton (g/t) gold, 29.6 g/t silver, 3.75% copper, and 2.47% zinc (Northern Lion Gold Corp., 2013a–c).

BMG Resources Ltd. of Australia continued to explore for gold and copper in the Troodos Mountains, where it held 15 exploration and reconnaissance licenses covering 133 square kilometers. In April, the company acquired the Treasure copper and gold project, which comprised four separate areas—Black Pine, Kalavassos, Kambia, and Vrechia. During 2013, BMG drilled Black Pine for copper-gold-nickel-cobalt sulfides and reported grades of between 0.66% and 4.15% copper, 0.28 g/t and 4.2 g/t gold, and 0.05% and 0.15% cobalt in the area. BMG planned to prospect at the Kalavassos property for copper and the Kambia property for copper, gold, silver, and zinc; and to conduct drilling at the Vrechia property for copper and zinc in 2014 (BMG Resources Ltd., 2014a–e).

### Industrial Minerals

In 2013, quarrying was conducted to obtain materials for use mainly in domestic construction. Fourteen firms were engaged in the production of crushed limestone (havra); 12, limestone aggregates; 10, diabase aggregates; 9, bricks and tiles; 8, building stone; 6, bentonite; 4, umber; 3, fine aggregates; 2, armor stone; and 1 each, ocher, gypsum, and crushed marble. Nearly all were small-scale producers (Mines Service, 2014a).

**Cement.**—Vassiliko Cement Works Public Co. Ltd. was the major producer and distributor of cement and clinker in Cyprus. The company produced several types of cement—ordinary portland cement, low-alkali sulfate-resistant portland cement, portland composite cement, and white low-alkali limestone cement. Vassiliko Cement also had a presence in the ready-mix concrete market and the quarrying sector through its subsidiaries (Vassiliko Cement Works Public Co. Ltd., 2013).

In December 2012, Vassiliko Cement announced the completion of its facility modernization project and the

activation of a new 6,000-metric-ton-per-day clinker line. The modernization would reduce the facility's power consumption by 15% and its CO<sub>2</sub> emissions by 17%. The company reported an increase in total revenues for 2013 despite the continuing decrease in domestic demand. Owing to the intensifying recession in Cyprus and the shrinking of the domestic construction sector, Vassiliko Cement expanded its sales in overseas markets (International Cement Review, 2012; Vassiliko Cement Works Public Co. Ltd., 2014, p. 12).

**Clay and Shale.**—Peletico Penta Ltd. was the leading processor of industrial minerals and the leading manufacturer of paints and construction materials in Cyprus. The company's operations consisted of mines at Pentacomo and Troulli and a bentonite processing plant at Pentacomo. The Pentacomo plant was the first in the world to produce bentonite bars through the dry compaction method, which activated bentonite without the use of soda and with less energy. Particles of the byproducts (collected dust) of the mining process were used as raw materials, which also decreased production costs (Eco-Innovation Observatory, 2013; Peletico Penta Ltd., 2013).

### **Mineral Fuels**

**Natural Gas and Petroleum.**—Cyprus did not produce natural gas or petroleum in 2013, but offshore hydrocarbon reserves were identified to the south of Cyprus. Noble Energy Inc. of the United States discovered substantial natural gas reserves at the Aphrodite gasfield in December 2011 and potential oil reserves in Block 12 in December 2013. Cyprus National Hydrocarbons Co. (CNHC) estimated gas reserves within the six licensed blocks to be up to 1,133 billion cubic meters, whereas the U.S. Geological Survey estimated the total mean volume of gas in the entire Levant Basin, which included the EEZ of Israel to the east, to be 3,455 billion cubic meters (U.S. Geological Survey, 2010; Demetriou and Demetriou, 2013, p. 5).

In October 2013, Noble Energy revised its estimated resource range of natural gas at the Aphrodite gasfield to be between 102 billion and 170 billion cubic meters from its 2011 estimate of between 142 billion and 227 billion cubic meters. In December, Delek Drilling L.P. and Avner Oil & Gas Exploration L.P. of Israel, which were Noble Energy's partners in drilling, announced the estimated reserves to be 116 billion cubic meters, which was revised down from their previous estimate of 147 billion cubic meters (Thomson Reuters, 2013; Sofokleous and Toffoloni, 2014).

In December, Noble Energy reported up to 1.5 billion barrels (Gbbbl) of gross unrisks petroleum potential in its Block 12 concession. According to seismic surveys, the deepwater strata between Cyprus and Israel could contain up to 3 Gbbbl of petroleum, with one-half of the total located in Cyprus's territorial waters. The company indicated that it planned to proceed first with the development of natural gas reserves at the Aphrodite gasfield, however (Cyprus Mail, 2013; Hazou, 2013).

In January 2013, the Eni-KOGAS consortium (a joint venture of Eni S.p.A. of Italy and KOGAS of the Republic of Korea) obtained exploration licenses for Blocks 2, 3, and 9 offshore Cyprus through the second round of bidding launched by the

Government in May 2012. In February 2013, Total E&P of France announced that it had been awarded authorizations for Blocks 10 and 11 as part of the second bidding round. Eni-KOGAS was expected to begin exploratory drilling in 2014, whereas Total indicated that it expected to drill in 2015 following the completion of seismic surveys (Chausheva, 2013; Sofokleous and Toffoloni, 2014).

In October 2013, the Government and Total signed a memorandum of understanding on the proposed LNG plant to be built in Vasilikos. The two sides agreed to cooperate on studying the feasibility of the onshore LNG plant, which the Government indicated was its preferred option for the liquefaction, storage, and exporting of Cyprus's natural gas reserves. A project by Vitol Tanks Terminals International (VTTI) to build a modern energy complex in Vasilikos was already underway. Phase I of the VTTI project, which was expected to be completed by early 2014, involved building storage capacity of 357,000 cubic meters and a transshipment terminal. Phase II would increase the terminal's storage capacity to 643,000 cubic meters by the end of 2014 (Offshore Energy Today, 2013; U.S. Energy Information Administration, 2013, p. 23, 24).

### **Outlook**

In the wake of the economic crisis of March 2013, Cyprus's economy is forecasted to contract further in 2014. Mining and quarrying output is expected to continue its recent double-digit decline, as the shrinking of the construction sector continues to reduce the demand for industrial minerals on the island. The exploration of copper and gold deposits by EMED and BMG Resources are in their early stages of development and are not expected to increase metal production on the island in the near future. The ongoing uncertainty regarding bank deposits and capital controls are likely to reduce foreign investment in Cyprus's mineral sector and to slow exploration and extraction activity. The ongoing offshore hydrocarbon exploration has the potential to turn Cyprus into a medium-sized mineral fuels producer and to enhance its energy security through domestic production of natural gas and, to a lesser extent, petroleum. Hydrocarbon extraction from the Aphrodite gasfield and other offshore blocks is not expected to begin until 2020 at the earliest, however, and it is unclear whether Cyprus's reserves are sufficient to make onshore LNG processing and exporting economically feasible. The unresolved geopolitical conflict between Cyprus and Turkey concerning the delimitation of the EEZ's in the Eastern Mediterranean Sea may discourage foreign investment in the drilling, storage, and transportation of natural gas and petroleum and further delay the development of Cyprus's mineral fuel reserves (Henderson; 2013; Shiryaevskaya, 2013; U.S. Energy Information Administration, 2013; International Monetary Fund, 2014).

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

(Thousand metric tons unless otherwise specified)

Commodity <sup>2</sup>	2009	2010	2011	2012	2013
<b>METALS</b>					
Copper, refined metric tons	2,380	2,595	3,660	4,328	3,631
<b>INDUSTRIAL MINERALS</b>					
Cement, hydraulic	1,481	1,329 <sup>r</sup>	1,207	1,026 <sup>r</sup>	855
Clays:					
Bentonite metric tons	152,722	162,969 <sup>r</sup>	160,625	160,180	158,386
Other:					
For brick and tile manufacture	295 <sup>r</sup>	210	160	120	78
For cement manufacture	495 <sup>r</sup>	445	405	375	582
Total	790 <sup>r</sup>	655	565	495	660
Clinker for cement	--	--	--	23	807
Gypsum:					
Crude do.	313,000 <sup>r</sup>	333,000 <sup>r</sup>	335,000	327,800	315,000
Calcined do.	4,000	4,100	4,877	4,523	3,679
Total do.	317,000	337,100	339,877	332,323	318,679
Lime, hydrated do.	11,731 <sup>r</sup>	9,915 <sup>r</sup>	9,824	4,551	3,730
Sand and stone:					
Havara and filling materials do.	610 <sup>r</sup>	250 <sup>r</sup>	165	64	18
Marble, granules and chippings	400	1,195	1,900	3,920	900
Marl	2,010 <sup>r</sup>	1,805	1,640	1,500	2,363
Sand and gravel <sup>3</sup>	11,468	12,981	11,826	7,308	4,561
Stone, building <sup>4</sup>	87 <sup>r</sup>	128 <sup>r</sup>	84	89	8
Umber and ocher metric tons	1,605	4,125	3,219	3,394	4,016
Umber and ocher, for cement do.	48,630 <sup>r</sup>	52,039	61,553	37,957	57,294

<sup>r</sup>Revised. do. Ditto. -- Zero.

<sup>1</sup>Table includes data available through October 9, 2014.

<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>Includes crushed aggregate.

<sup>4</sup>Includes crude, semifinished, and worked stone.

TABLE 2  
CYPRUS: STRUCTURE OF THE MINERAL INDUSTRY IN 2013

(Metric tons)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Aluminum, semimanufactures	Muskita Aluminum Industries Ltd.	Plant at Limassol	22,000
Cement	Vassiliko Cement Works Public Co. Ltd. (Church of Cyprus, 26%; Italcementi Group, 25%; Cyprus Cement Public Co. Ltd., 25%)	Plant at Vassiliko, 5 quarries in the area	2,400,000
Do.	Cyprus Cement Public Co. Ltd.	Plant at Moni	430,000
Clay, bentonite	Peletico Penta Ltd.	Mines at Pentakomo and Troulli, plant at Pentakomo	NA
Do.	Hellenic Mining Co.	Nicosia	NA
Do.	Oryktako Ltd.	Mine at Kato Moni and processing plant at Malounda	10,000
Copper, refined	Hellenic Copper Mines Ltd.	Skouriotissa	8,000
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
Steel, semimanufactures	B.M.S. Metal Pipes Industries Ltd.	Tube and pipe mill, Paphos	15,000

Do. Ditto. NA Not available.