

2019 Minerals Yearbook

GREECE [ADVANCE RELEASE]

THE MINERAL INDUSTRY OF GREECE

By Sinan Hastorun

In 2019, Greece was the world's third-ranked perlite and pumice producer, fourth-ranked bentonite producer, and seventh-ranked magnesite producer (not including production from the United States). The country accounted for 21% of world's perlite output; bentonite, 8%; and pumice, 5%; and it was the only producer of huntite in the world. Greece was the leading source of pumice and perlite for the United States, accounting for 93% and 90% of the United States' imports, respectively. The country was also an important source of cement for the United States, accounting for about 15% of the United States' imports. Greece was one of only two European Union (EU) member states along with Finland that mined nickel and along with Austria that produced ferronickel. Greece was also one of only three EU member states with an active nickel smelter (table 1; Nickel Institute, 2019, p. 1; Crangle, 2021; Hatfield, 2021a, b; Merrill, 2021; Simmons, 2021).

Greece had regionally significant resources of metallic minerals, including bauxite, copper, gold, iron, nickel, silver, and zinc and such industrial minerals as bentonite, gypsum, huntite, kaolin, limestone, magnesite, perlite, and pumice. In 2019, Greece held the world's largest reserves of perlite and sixth-largest reserves of magnesite (Tzeferis, 2019; Hatfield, 2021b; Merrill, 2021).

Minerals in the National Economy

Greece's real gross domestic product (GDP) increased by 1.9% in 2019; the nominal GDP was EUR183.4 billion (\$205.4 billion¹). Mining and quarrying accounted for 0.33% of the GDP in 2019 compared with 0.44% in 2018. The manufacture of base metals made up 0.63% of the GDP in 2019 (0.69% in 2018); the manufacture of coke and refined petroleum products, 0.29% (0.49% in 2018); the manufacture of fabricated metal products, 0.64% (unchanged from 2018); and nonmetallic mineral products, 0.45% (0.51% in 2018). Total industrial output, including mining and manufacturing, decreased by 0.6% in 2019. Total mining and quarrying output decreased by 6.6% in 2019; the manufacture of base metals, by 2.9%; the manufacture of coke and refined petroleum products, by 8.6%; and the manufacture of nonmetallic mineral products, by 10.2%. The manufacture of fabricated metal products increased by 1.2% in 2019. About 5,300 workers were employed in the mining sector in Greece in 2019 (Hellenic Statistical Authority, 2020b, c; 2021, p. 28, 29, 76, 77).

Government Policies and Programs

The mining sector in Greece was regulated by the Mining Code of 1973, Legislative Decree 210/1973, as amended in 1976 by L274/1976 and in 2018 by L4512/2018. The quarrying

sector was regulated by L4512/2018 of 2018 on the exploration and exploitation of quarry minerals, which replaced L669/77 of 1977 for the extraction of marbles, ornamental rocks, and industrial minerals and L1428/84 of 1984 and L2115/93 of 1993 for the extraction of aggregates. Field operations for mining and quarrying were regulated by the Mining and Quarrying Works Regulation (KMLE) of 2011. The Greek Ministry of Environment and Energy (YPEN) was responsible for issuing licenses and permits for the extractive sector at the national level (Tzeferis, 2018, p. 3–4).

Production

In 2019, production of huntite increased by 33%; crude magnesite, by 29%; marble, by 21%; silver, by 12%; and pumice, by 10%. The production of crude petroleum and industrial sand and gravel (unspecified) decreased by 35% each; caustic-calcined magnesite, by 33%; fuller's earth, by 31%; dead-burned magnesite and lignite coal, by 29% each; ferronickel, by 24%; nickel, by 22%; residual fuel oil, 21%; gold, by 18%; olivinite, by 14%; and jet fuel and naphthas, by 10% each. Neither kerosene nor tin were produced in Greece in 2019 (table 1; Ministry of Environment & Energy, 2020).

Structure of the Mineral Industry

Most mineral companies in Greece were privately owned. Government ownership was limited to coal, ferronickel, and nickel. The Government held a 55.2% stake in LARCO G.M.M. S.A., which was Greece's sole nickel and ferronickel producer, and a 34.12% stake in Public Power Corp. S.A.-Hellas (PPC) through the Hellenic Corporation of Assets and Participations S.A. (HPAC S.A.), which was Greece's leading lignite producer and electricity generation company (table 2; Koutantou, 2020a; Public Power Corporation S.A.-Hellas, 2020b).

In 2018 (the most recent year for which comprehensive data were available), a total of 621 companies were active in the mining sector. Of these companies, 351 were engaged in quarrying of ornamental and building stone, chalk, gypsum, limestone, and slate; 187, in mining of clays and kaolin and operation of sand and gravel pits; 11, in mining of nonferrous metal ores; 8, in extraction of lignite; 8, in extraction of crude petroleum; 6, in extraction of salt and in mining of chemical and fertilizer minerals; 3, in mining of iron ore; and 45, in other mining operations (Hellenic Statistical Authority, 2020d).

Mineral Trade

Greece's total exports of goods decreased by 4.2% from those of 2018 to \$38 billion in 2019, and total imports, by 2.7% to \$62 billion. Mineral fuels, lubricants, and related materials were the leading export goods category, accounting for about 31.6% of Greece's total exports of goods. Crude materials, including mineral commodities and excluding fuels, accounted for 4.4%

¹Where necessary, values have been converted from euro area euros (EUR) to U.S. dollars (US\$) at an annual average exchange rate of US\$1.00=EUR0.893 for 2019.

of total exports. Mineral fuels, lubricants, and related materials were also the leading import goods category, accounting for about 26.9% of total imports of goods in 2019. Crude materials, including mineral commodities, accounted for 2.5% of Greece's total imports (Hellenic Statistical Authority, 2020a, p. 6, 7, 10).

Commodity Review

Metals

Gold, Lead, Silver, and Zinc.—In 2019, Hellas Gold S.A., a subsidiary of Eldorado Gold Corp. of Canada (95%), reported the receipt of installation permits for its Olympias Mine and Skouries Mine projects from the newly elected Government of Greece. The company had placed the Skouries gold and copper project on care-and-maintenance in December 2018 because the company had not received the requisite permits for the project from the previous Government. The company obtained the requisite permits in 2019 after 7 years from the initial application. The Skouries project was reported to have proven and probable reserves of 118.2 metric tons (t) of gold and 779,000 t of copper, and it had a projected mine life of 23 years (Thomson Reuters, 2019; Eldorado Gold Corp., 2020a, p. 2, 15; 2020c).

In 2019, Hellas Gold mined 174,866 t of ore at the Stratoni Mine, which was a 19% increase compared the amount mined in 2018. The ore grades were estimated to be about 6% lead, 8% zinc, and 157 grams per metric ton (g/t) silver. Hellas Gold produced 37,153 t of lead-silver and zinc concentrate at Stratoni, which was slightly higher than 37,091 t of concentrate produced in 2018. The company sold 39,840 t of concentrate from Stratoni to overseas refineries in 2019, which was an increase of 15% from the amount sold to overseas refineries in 2018. Stratoni was reported to have a remaining life of mine of 3 years based on current proven and probable reserves. The year 2019 was the second year of full commercial operation at the Olympias Mine. Hellas Gold produced 1,164 kilograms (kg) of gold, 19,342 kg of silver, 6,084 t of lead, and 7,784 t of zinc at the Olympias Mine in 2019. The gold grade of the deposit was 6.97 g/t. Gold production at Olympias decreased by 20% in 2019, whereas gold sales from the mine increased by 25%. Hellas Gold sold 1,358 kg of gold (in gold-bearing pyrite-arsenopyrite concentrate form) from Olympias in 2019. The mine was projected to have a mine life of 22 years (Eldorado Gold Corp., 2020a, p. 2, 15; 2020b, d).

Nickel.—In 2019, LARCO extracted 2.01 million metric tons (Mt) of nickeliferous laterite ore compared with 2.12 Mt in 2018. The company produced 14,000 t of nickel in 2019 compared with 18,000 t in 2018. LARCO operated one of the last nickel smelters in the EU where it smelted its own extracted ore for ferronickel production. The company remained one of the leading nickel suppliers regionally; however, the Government was in the process of evaluating the privatization or the liquidation of the company owing to its ongoing financial losses and outstanding debts of more than one-half billion euros, a substantial share of which was owed to its power supplier and minority shareholder PPC. LARCO's ongoing losses were attributed primarily to the low nickel content of the ore as well as the smelter's outdated furnaces and relatively high

electricity costs, which rendered the company internationally uncompetitive. Tenders were planned in 2020–2021 for the sale of the Agios Iannis, Evia, and Kastoria Mines and the Larymna metallurgical plant. In November, the European Commission (EC) announced that it was taking Greece to the European Court of Justice (ECJ) over its failure to recover about \$151 million of what the EC ruled was illegal state aid to LARCO as ordered by the ECJ in 2017 (Koutantou, 2020a–c; Ministry of Environment & Energy, 2020; Psaropoulos, 2020).

Industrial Minerals

Cement.—Greece's cement sector consisted of three integrated cement companies with a total installed production capacity of 15.1 million metric tons per year (Mt/yr) in eight plants. Heracles General Cement S.A. (a subsidiary of LafargeHolcim Ltd. of Switzerland), which had a cement production capacity of 7.1 Mt/yr, was the leading cement producer in Greece. TITAN Group, which was the leading cement producer in southeastern Europe, was the second-ranked producer in Greece and had a total capacity of 6.98 Mt/yr. TITAN was also the leading operator in aggregates and ready-mix concrete (RMC) in Greece (table 2; International Cement Review, 2021; TITAN Group, 2021, p. 6, 8, 24).

In July, Heracles signed an electricity agreement with PPC. The 3-year deal with the power company would start at the end of 2020 and include a 10% increase in the electricity rate. The agreement was part of Greece's Greenpass policy mandating partial renewable energy use (Global Cement, 2019).

TITAN Group operated 28 RMC plants, 27 quarries, 8 terminals, 3 cement plants, 1 grinding plant, and 1 dry mortar plant in Greece and Western Europe. The company reported that its performance improved in Greece in 2019 owing to a modest increase in demand. TITAN's cement exports from Greece continued to be substantial, and the United States remained the company's largest cement export market. The company's clinker exports decreased in 2019 because of rising operation costs associated with compliance with regulations regarding CO₂ emission (TITAN Group, 2020, p. 12, 13, 24; 2021, p. 24).

Magnesium Compounds (Magnesite).—Terna Mag S.A., which was a wholly-owned subsidiary of Gek Terna Group, extracted ore from world-class magnesite deposits from four mines in the northern part of Euboea Island in the Aegean Sea. Total reserves of these deposits were about 15 Mt. The company produced high-purity caustic-calcined magnesia and dead-burned magnesia products. Through in situ beneficiation in Gerorema and Kakovas and calcination in Mantoudi on Euboea Island, Terna Mag produced a wide range of products with magnesium oxide content of up to 97% (Tsontakis, 2015, p. 5–8; Terna Mag S.A., 2020).

Mineral Fuels

Coal.—Greece was the fifth-ranked producer of lignite coal in the EU, accounting for a 9% share of production after Germany, Poland, Czechia, and Bulgaria in 2019. Lignite was primarily extracted by PPC from its mines in Megalopolis and West Macedonia for use by the company's powerplants. In 2019, Greece's lignite output decreased to 27.3 Mt, of which 25.6 Mt

came from PPC mines. PPC's lignite production decreased by 26% in 2019. About 2 Mt of lignite output was from small, independently owned mines. Lignite's share in electricity generation decreased by about 30% to account for 20% of the total in 2019. Greece's imports of lower priced electricity from Bulgaria, Italy, North Macedonia, and Turkey increased by 56%. Although the country had met 70% of its electricity consumption from domestic sources as recently as 2013, it had since become heavily dependent on imports of petroleum, natural gas, and electricity for its power supply. Domestic sources supplied only one-half of Greece's electricity consumption in 2019, and this proportion was expected to decrease further to 43% in 2020. Only three of PPC's twelve lignite-fired powerplants remained in operation as of yearend 2019 (Euracoal, 2020, p. 6–7; Public Power Corporation S.A.-Hellas, 2020a).

Outlook

Greece is expected to remain a globally significant producer of bentonite, magnesite, perlite, and pumice. The country may remain a regionally significant producer of aluminum and lignite coal, although output of these mineral commodities is expected to decrease further. The lignite production plan for 2020 envisions a decrease in output to 21.9 Mt. The production of nickel and ferronickel is likely to decrease substantially or may cease altogether as a result of LARCO's anticipated restructuring and possible closure. Gold, lead, silver, and zinc production may increase if Eldorado Gold is able to increase output at its Olympias and Stratoni Mines as envisioned and if the company commences operations at its Skouries project (Euracoal, 2020, p. 7).

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TABLE 1
GREECE: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons, gross weight, unless otherwise specified)

Commodity ²	2015	2016	2017	2018	2019
METALS					
Aluminum:					
Bauxite ³	1,831,660	1,880,000	1,927,000	1,559,359 ^r	1,492,000
Alumina, Al ₂ O ₃ equivalent	806,500	820,800	821,000	827,000	820,000
Metal, primary	179,420	181,190	181,630	187,465 ^r	182,100
Ferroalloys, ferronickel:					
Gross weight	89,130	87,880 ^r	86,140	80,700 ^c	61,500 ^c
Ni content	17,113	17,071	16,781	15,720	11,974
Gold, mine, Au content kilograms	465	109	822	2,839	2,333
Iron ore, mine:					
Gross weight	2,340,000	2,209,000	2,284,000	2,115,000	2,200,000 ^c
Fe content	580,000	547,000	566,000	524,000	524,000 ^c
Iron and steel, steel:					
Raw steel thousand metric tons	910	1,158	1,359	1,464	1,367
Products, semimanufactured do.	875	1,100 ^c	1,200 ^c	1,600 ^{r, c}	1,500 ^c
Lead, mine, Pb content	9,200	11,300	8,700	9,800	10,500
Nickel, mine, laterite ore, Ni content thousand metric tons	20	19	19	18	14
Silver, mine, Ag content kilograms	25,170	29,409	23,967	25,237	28,161
Tin, smelter, secondary	--	--	50 ^c	50 ^c	--
Zinc, mine, Zn content	14,900 ^c	18,900 ^c	18,300	20,300	21,800
INDUSTRIAL MINERALS					
Cement, hydraulic thousand metric tons	5,289	6,540	6,246	6,580	6,470 ^c
Clay:					
Bentonite:					
Crude	1,123,320	883,220	1,100,000	1,365,374 ^r	1,300,000
Processed	807,550	787,000	880,000	824,000	840,500
Fuller's earth, attapulgite, crude	107,740	44,500	54,280	53,300	36,700
Gypsum, mine, including anhydrite	649,280	778,000	855,000	827,300 ^r	840,000
Magnesite:					
Caustic-calcined	86,800	89,780	95,400	112,174 ^r	75,330
Crude ore	383,230	460,000	590,000	425,882 ^r	550,000
Dead-burned	20,220	20,840	21,900	22,784	16,109
Huntite	15,660	23,220	13,500	12,600	16,800
Nitrogen, ammonia, N content	119,000	75,000	130,000	120,000	120,000 ^c
Perlite:					
Crude	890,670	921,410	700,000	790,412 ^r	719,000
Screened	625,000	790,000	690,000	568,737 ^r	560,000
Pumice and related minerals:					
Pozzolan, santorin earth	153,070	117,010	114,000	92,000	90,000
Pumice	580,960	659,000	840,000	842,355 ^r	930,000
Salt, all types	121,537	158,020	160,000 ^c	160,000 ^c	160,000 ^c
Sand and gravel, industrial, unspecified	75,320	141,500	77,000	79,500 ^r	51,421
Stone:					
Crushed, limestone	21,632	25,500	26,000 ^c	31,000 ^{r, c}	30,000 ^c
Dimension, marble ⁴ thousand metric tons	1,664	1,890	2,172	2,498	3,012
Size and shape unspecified:					
Calcium carbonate	384,000	380,000 ^c	400,000 ^c	410,000 ^c	400,000 ^c
Olivinite	23,020	24,890	29,000	29,071 ^r	25,000
Pozzolan, santorin earth	153,070	110,000	114,000	92,000	90,000
Sulfur, byproduct, mixed sulfide ore, S content	155,000	190,000	326,100	395,000	400,000 ^c
MINERAL FUELS AND RELATED MATERIALS					
Coal, lignite thousand metric tons	46,308	32,675	37,410	36,574 ^r	26,000
Natural gas thousand cubic meters	4,379	8,555	8,249	11,531 ^r	11,000 ^c

See footnotes at end of table.

TABLE 1—Continued
GREECE: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons, gross weight, unless otherwise specified)

Commodity ²	2015	2016	2017	2018	2019	
MINERAL FUELS AND RELATED MATERIALS—Continued						
Petroleum:						
Crude	thousand 42-gallon barrels	533	1,272	1,023	1,844	1,204
Refinery:						
Distillate fuel oil	do.	77,353	79,829 ^r	80,546	81,874 ^r	76,502
Gasoline	do.	39,332	44,092 ^r	45,132	45,644 ^r	43,059
Jet fuel	do.	16,486 ^r	18,461 ^r	19,278	24,868 ^r	22,323
Kerosene	do.	8	-- ^r	--	--	--
Liquefied petroleum gas	do.	8,155	9,558 ^r	9,709	9,825 ^r	9,292
Naphtha	do.	12,092	13,621 ^r	13,284	14,755 ^r	13,308
Residual fuel oil	do.	39,221	42,497 ^r	48,563	45,267 ^r	35,732
Total	do.	193,000	208,000 ^r	217,000	222,000 ^r	200,000

^eEstimated. ^rRevised. do. Ditto. -- Zero.

¹Table includes data available through September 28, 2020. All data are reported unless otherwise noted. Totals and estimated data are rounded to no more than three significant digits; may not add to totals shown.

²In addition to the commodities listed, barite, copper, dolomite, lignite briquets, manganese, and other crude construction materials may have been produced, but available information is inadequate to make reliable estimates of output.

³Dry bauxite equivalent of crude ore.

⁴Converted from cubic meters to metric tons using a conversion factor of 2.56.

TABLE 2
GREECE: STRUCTURE OF THE MINERAL INDUSTRY IN 2019

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners		Location of main facilities	Annual capacity
Alumina, Al ₂ O ₃	Aluminium of Greece S.A. (Mytilineos Holdings S.A.)		Agios Nikolaos, Boeotia area	820
Aluminum	do.		do.	182
Barite, BaSO ₄	Imerys S.A.		Mines at Adamas, Milos Island	NA
Bauxite	Delphi-Distomon S.A. (Mytilineos Holdings S.A.)		Mines at Amfissa and Distomon	630
Do.	Elmin Bauxites S.A. (Imerys S.A.)		Mines at Aga Marina, Lamia	500
Do.	European Bauxites S.A. (Imerys S.A.)		Mines at Amfissa and Distomon, plants at Phocis and Itea	2,000
Bentonite:				
Crude	Imerys S.A.		Mines at Adamas, Milos Island	1,000
Do.	Mediterranean Bentonite Co. S.A. (Industria Chimica Mineraria S.p.A.)		Surface mines on Milos Island	20
Do.	Mykobar Mining Co. S.A. (Silver & Baryte Ores Mining Co. S.A.)		Mines at Adamas, Milos Island	300
Do.	do.		Plants at Adamas, Milos Island	200
Processed	Imerys S.A.		Plant at Voudia Bay, Milos Island	900
Cement	Halyps Cement S.A. (HeidelbergCement Group)		Paralia Aspropyrgos plant, Athens	1,000
Do.	Heracles General Cement S.A. (LafargeHolcim Ltd.)		Plant at Volos, Thessaly	4,900
Do.	do.		Plant at Milaki, South Evia	2,200
Do.	TITAN Cement Co. S.A. (TITAN Group)		Kamari plant, West Attica	2,900
Do.	do.		Drepano Achaia plant, Patras	1,900
Do.	do.		Nea Efkarpia Thessaloniki plant, Macedonia	1,650
Do.	do.		Elefsis plant, Elefsina, Athens area	400
Do.	do.		Elefsis white cement plant, Elefsina, Athens area	130
Coal, lignite	Public Power Corp. S.A.-Hellas (PPC) [Hellenic Corporation of Assets and Participations S.A. (HCAP S.A.), 34.12%; Hellenic Republic Asset Development Fund, 17%; PPC Pension Funds, 3.93%; other investors, 44.95%]		Megalopolis and West Macedonia Mines	50,000
Do.	Small, independent mining companies		West Macedonia	2,000
Ferroalloys, ferronickel, Ni content	LARCO G.M.M. S.A. [Government, 55.2%; National Bank of Greece, 33.4%; Public Power Corp. S.A.-Hellas (PPC), 11.4%]		Larymna metallurgical plant, Phthiotis	25
Gold:				
Au in concentrate	kilograms	Hellas Gold S.A. (Eldorado Gold Corp., 95%, and Aktor, 5%)	Olympias Mine, Halkidiki Peninsula	3,000 °
Metal		Nikias Gold S.A.	Athens	NA
Gypsum		Lava Mining and Quarrying Co. S.A.	Altsi, Crete Island	300
Do.		TITAN Cement Co. S.A. (TITAN Group)	do.	280
Huntite and (or) hydromagnesite		Microfine S.A.	Mines in Kozani Basin	100
Lead, Pb in concentrate		Hellas Gold S.A. (Eldorado Gold Corp., 95%, and Aktor, 5%)	Olympias Mine, Halkidiki Peninsula	7 °
Do.		do.	Stratoni Mine, Halkidiki Peninsula	11 °
Magnesite, concentrate		Grecian Magnesite S.A. (GM)	Mine and production facilities at Chalkidiki on Halkidiki Peninsula and in Yerakini	250
Do.		Terna Mag S.A. (Gek Terna Group, 100%)	Two underground mines in Gerorema, two open pit mines in Kakavos, two facilities in Gerorema and Kakavos, Euboea Island	120
Do.		do.	Mantoudi calcination plant, Euboea Island	60

See footnotes at end of table.

TABLE 2—Continued
GREECE: STRUCTURE OF THE MINERAL INDUSTRY IN 2019

(Thousand metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity
Manganese, battery-grade MnO ₂		Eleusis Bauxite Mines Mining, Industrial and Shipping S.A. [National Bank of Greece (OAE)]	Plant in Nevrokopi, Drama	10
Natural gas	thousand cubic meters per day	Kavala Oil S.A. (Energean Oil and Gas S.A.)	South Kavala gasfield, east of Thasos Island	31 ^e
Nickel, ore		LARCO G.M.M. S.A. [Government, 55.2%; National Bank of Greece, 33.4%; Public Power Corp. S.A.-Hellas (PPC), 11.4%]	Agios Ioannis Mine, Evia Mine, at Neo Kokkino near Larymna; and Kastoria Mine, near border with Albania	2,500
Nitrogen, N content of ammonia		Phosphoric Fertilizers S.A.	Nea Karvall, Kavala	150
Perlite		Imerys S.A.	Mines on Milos Islands; plant at Pireaus	650
Do.		Otavi Minen Hellas S.A. (Otavi Minen AG)	Milos Island	150
Petroleum:				
Crude	42-gallon barrels per day	Kavala Oil S.A. (Energean Oil and Gas S.A.)	Prinos offshore oilfield, east of Thassos Island	4,000 ^e
Do.	do.	do.	Prinos North offshore oilfield, east of Thassos Island	1,000 ^e
Refined	do.	Hellenic Petroleum S.A.	Refinery at Aspropyrgos, Athens	148,000
Do.	do.	do.	Elefsina, West Attica	100,000
Do.	do.	do.	Thessaloniki	93,000
Do.	do.	Motor Oil (Hellas) Corinth Refineries S.A.	Agioi Theodoroi, Corinth	185,000
Pozzolan (Santorin earth)		Lava Mining and Quarrying Co. (Heracles General Cement Co.)	Quarry at Xylokeratia, Milos Island	800
Do.		TITAN Cement Co. S.A. (TITAN Group)	do.	300
Pumice		Lava Mining and Quarrying Co. (Heracles General Cement Co.)	Quarry on Yali Island	1,000
Silica, quartz (microcrystalline)		do.	Adamas, Milos Island	150
Silver, Ag in concentrate	kilograms	Hellas Gold S.A. (Eldorado Gold Corp., 95%, and Aktor, 5%)	Olympias Mine, Halkidiki Peninsula	20,000 ^e
Do.	do.	do.	Stratoni Mine, Halkidiki Peninsula	28,000 ^e
Steel:				
Raw		Hellenic Halyvourgia	Aspropyrgos plant, West Attica	400
Do.		do.	Velestino plant, Volos	700
Do.		Halyvourgiki S.A.	Eleusis plant, West Attica	1,200
Do.		Hellenic Steel Co. S.A.	Thessaloniki plant, Macedonia	1,000
Products		Corinth Pipeworks S.A. (CPW)	Thisvi plant, Viotia, near Athens	800
Do.		Hellenic Halyvourgia	Volos rolling mill and wire mesh plant, Volos	600
Do.		Sidenor Steel Products Manufacturing S.A.	Thessaaloniki plant, Macedonia, and Almyros plant, Magnesia	2,800
Stone, marble, slab and tile		Aghia Marina Marble Ltd.	Quarries in northern Greece	NA
Do.		Gourlis Group	Quarries at Levadia, Neurokopi, and Tiseo	NA
Do.		Michelakis Marble S.A.	Quarry at Kavala	NA
Zinc, mine, Zn in concentrate		Hellas Gold S.A. (Eldorado Gold Corp., 95%, and Aktor, 5%)	Olympias Mine, Halkidiki Peninsula	8 ^e
Do.		do.	Stratoni Mine, Halkidiki Peninsula	14 ^e

^eEstimated. Do., do. Ditto. NA Not available.