



2008 Minerals Yearbook

TURKEY

THE MINERAL INDUSTRY OF TURKEY

By Philip M. Mobbs

Turkey had a diverse mineral industry and was a leading producer of barite, bentonite, boron minerals, chromite, feldspar, kaolin, limestone, magnesite, marble, perlite, and pumice. Turkey also was a significant source of value-added processed mineral commodities, such as cement, ceramics, ferrochromium, glass, and steel. The volume of hydrocarbons produced in Turkey was small, but the country was a significant transit corridor for crude oil and natural gas shipments (Papp, 2009, p. 17.25-17.26; World Steel Association, 2009; Angulo, 2010; Bolen, 2010; Cordier, 2010; Crangle, 2010; Kramer, 2010; Miller, 2010; van Oss, 2010; Virta, 2010).

Minerals in the National Economy

The mining and quarrying sector accounted for about 0.80% of the real gross domestic product (GDP) (when calculated at 1998 producers' prices) in 2008, which was slightly up from about 0.76% of the GDP in 2007. The construction sector accounted for 5.90% of the GDP in 2008 compared with 6.49% in 2007 (Türkiye İstatistik Kurumu, 2010b).

Government Policies and Programs

Article 168 of the Constitution (1982) and the Mining Law of June 15, 1985 (Maden Kanunu, law No. 3213), declared that natural resources, such as minerals, belonged to the state and were not considered to be part of the land where they were found. Law No. 5177 of 2004 (the new mining law, which amended the 1985 mining law), the Regulation Concerning the Implementation of the Mining Law (which was issued in 2005), the Mining Activities Permitting Regulation of 2005, and the Law on Boron Minerals, Trona and Asphaltic Mines and Exploitation of Nuclear Energy Raw Materials No. 3971 of February 19, 1994, also regulated mining activity in Turkey. The Government issued licenses to Turkish individuals or legal entities to explore for minerals or operate mines for a specific period of time. The Foreign Direct Investment Law of June 2003 (law No. 4875) authorized foreign investors to establish companies in Turkey that could hold mining rights under the Mining Law.

Maden İşleri Genel Müdürlüğü [General Directorate of Mining Affairs] of the T.C. Enerji ve Tabii Kaynaklar Bakanlığı [Ministry of Energy and Natural Resources] regulated the mining industry. T.C. Çevre ve Orman Bakanlığı [Ministry of Environment and Forestry] enforced the Environmental Law of 1983 (law No. 2872) and the Regulation on Environmental Impact Assessment of December 16, 2003. State-owned Eti Maden İşletmeleri Genel Müdürlüğü retained exclusive rights to explore for and develop boron deposits according to law No. 2840 of 1983.

Petroleum exploration and production were administered by the Ministry of Energy and Natural Resources under the Petroleum Law of 1954 (law No. 6326). The distribution,

export, import, refining, and sale of petroleum were licensed under and regulated by the Petroleum Market Law of 2003 (law No. 5015). The distribution, export, import, and transmission of natural gas were regulated by the Natural Gas Market Law of 2001 (law No. 4646), as amended by law No. 5367 of 2005. The marketing of domestic and imported liquefied petroleum gases was regulated by the Liquefied Petroleum Gases (LPG) Market Law of 2005 (law No. 5307).

Production

Most production data for 2008 are estimated (table 1). Significant increases in production in 2008 were noted for chromium, coke, gasoline, gold, lignite, and nitrogen (ammonia). Notable decreases in production in 2008 were posted for refined copper, ferrochromium, iron ore, strontium, and several refined petroleum products.

Structure of the Mineral Industry

The private sector dominated the country's industrial minerals and metals sectors. In 2008, 874 new mining and quarrying companies were established in Turkey, and 46 mining and quarrying companies were closed. Table 2 lists notable mineral commodity production and processing facilities (Türkiye İstatistik Kurumu, 2009).

Mineral Trade

In 2008, total Turkish exports of goods were valued at about \$132 billion compared with \$107.2 billion in 2007. Of the total exports in 2008, iron and steel accounted for about \$14.9 billion; manufactured articles of iron and steel, \$14.9 billion; mineral fuels, \$7.5 billion; jewelry and precious or semiprecious stones, \$5.3 billion; aluminum and aluminum articles, \$1.8 billion; glass and glassware, \$1 billion; building stone (crude and processed), \$813 million; borates and boron chemicals, more than \$500 million; chromium ore, \$496 million; and copper ore and concentrates, about \$320 million (İstanbul Maden ve Metaller İhracatçı Birlikleri Genel Sekreterliği, undated; Türkiye İstatistik Kurumu, 2010a, table 4).

Total imports were valued at about \$202 billion in 2008, of which mineral fuels accounted for about \$48.3 billion, and iron and steel, about \$23.2 billion. A significant percentage of the iron and steel imports was steel scrap (Türkiye İstatistik Kurumu, 2010a, table 5).

Commodity Review

Metals

Bauxite and Alumina.—Albuck Madencilik San. ve Tic. A.Ş., which had begun mining diasporite at Muğla in 2007,

started another mining operation in the Eskisehir area in 2008. The company planned to ramp up production from the two mines to about 300,000 metric tons per year (t/yr) (Albuck Madencilik San. ve Tic. A.Ş., 2009).

Copper, Gold, and Zinc.—Mining operations at the Kışladag gold mine, which was owned by Eldorado Gold Corp. of Canada, were resumed in March 2008 after being suspended in August 2007 owing to a court injunction related to litigation concerning the mine's environmental certificate. The litigation remained under appeal at yearend. Despite the nearly 3-month suspension of operations at Kışladag, Tüprag Metal Madencilik San. ve Tic. A.Ş., which was a subsidiary of Eldorado, produced about 4,200 kilograms of gold from the open pit mine. In June, Eldorado resumed work at the Efemcukuru underground gold project, which was also subject to a lawsuit concerning the mine's environmental certificate. The decision by the Fourth Administrative Court to deny the litigation to cancel the environmental certificate for Eldorado's Efemcukuru project was appealed by the third-party litigant to the Sixth Department of High Administrative Court, which in turn denied the appeal in January 2009 (Eldorado Gold Corp., 2009, p. 19-21).

In 2008, Çayeli Bakır İşletmeleri A.Ş., which was a subsidiary of Inmet Mining Corp. of Canada, mined 1.1 million metric tons of ore from the Çayeli Mine to produce concentrates containing 47,600 metric tons (t) of zinc and 32,700 t of copper. In March, an injunction resulted in yet another suspension of the development work at the Cerattepe underground copper-zinc mine. In October, the operating licenses for the Cerattepe Mine that were held by Artvin Bakır İşletmeleri A.Ş., which was a subsidiary of Çayeli Bakır İşletmeleri A.Ş., were cancelled by the Rize Administrative Court. The Turkish Ministry of Energy and Natural Resources (and co-defendant Inmet) appealed the decision to cancel the licenses to the Turkish Administrative Supreme Court, Inmet subsequently decided not to proceed with the Cerattepe project (Inmet Mining Corp., 2009, p. A13).

Iron and Steel.—In November, Borçelik Çelik San. ve Tic. A.Ş., which was a joint venture of ArcelorMittal and Borusan Holding A.Ş., started production from a 600,000-t/yr-capacity cold-rolling line at the company's facility near Gemlik. In 2008, Ereğli Demir ve Çelik Fabrikaları T.A.Ş. (Erdemir) completed the rehabilitation of blast furnace no. 1, and İskenderun Demir ve Çelik A.Ş. (Isdemir), which was a subsidiary of Erdemir, commissioned a 3.5-Mt/yr-capacity hot-strip mill. In 2008, Isdemir also commissioned burnt lime plant no. 8 and slab casting machine no. 2 and started production from coke battery no. 6 (Borçelik Çelik San. ve Tic. A.Ş., 2008; İskenderun Demir ve Çelik A.Ş., 2009).

Concast A.G. of Switzerland continued work near Biga on a 1.5-Mt/yr-capacity electric-arc-furnace steel plant for İçdaş Demir Çelik Enerji Tersane ve Ulaşım Sanayi A.Ş. The plant was expected to be commissioned in late 2009. İlhan Metalurji A.Ş. began production at its 220,000-t/yr-capacity steel plant. Kocaer Haddecilik San. ve Tic. Limited ŞTI commissioned a third rolling mill. Karabük Demir Çelik San. ve Tic. A.Ş. (Kardemir) commissioned its fourth blast furnace. The new 450,000-t/yr-capacity furnace increased Kardemir's steelmaking capacity to 1.45 Mt/yr. Mega Demir Mamulleri Sanayi ve

Ticaret Limited ŞTI started up a 220,000-t/yr-capacity steel plant in May (Orion Investment Menkul Değerler A.Ş., 2008; Rolmet Makina Pazarlama San.ve Tic. Ltd. ŞTI, 2008; Concast A.G., undated).

In December, the U.S. International Trade Administration revoked the antidumping duty that in 1997 had been imposed on steel concrete-reinforcing bar (rebar) from Turkey. The effective date of the revocation was March 28, 2008 (U.S. International Trade Administration, 2009).

Iron Ore.—In 2008, Hekimhan Madencilik İthalat İhracat San. ve Tic. A.Ş., which was a subsidiary of Kolin İnşaat Turizm San. ve Tic. A.Ş., proposed to install a calcination plant that by 2011 would produce about 1 million metric tons per year (Mt/yr) of calcined siderite sintering dust from 2 Mt/yr of ore. Tests indicated that the iron content of siderite ore from Hekimhan's iron ore mine near Deveci, Malatya Province, could be raised to 56% from 38% after calcination (Hekimhan Madencilik İthalat İhracat San. ve Tic. A.Ş., 2008).

Nickel.—The dramatic decline in nickel prices during the last three quarters of 2008 resulted in the significant slump in nickel exploration activity in Turkey. Aldridge Minerals suspended work on its Murat Dag nickel laterite project and the joint venture of Lydian International Ltd. and Newmont Overseas Exploration Ltd. decided to seek a partner to develop its Muratdag gold-nickel prospect (Aldridge Minerals Inc., 2009, p. 3; London Metal Exchange Ltd., undated).

Industrial Minerals

Boron.—In 2008, Eti Maden İşletmeleri Genel Müdürlüğü expanded operations with the startup of a 45,000-t/yr capacity expansion of the borax decahydrate plant as well as the startup of a 5,000-t/yr-capacity boron oxide plant at Badırma and an anhydrous borax plant at Kirka (Eti Maden İşletmeleri Genel Müdürlüğü, 2009, p. 59-61).

Soda Ash.—Eti Soda Inc., which was a subsidiary of the Ciner Group and Eti Maden, continued construction work on the 1-Mt/yr-capacity soda ash plant at Beypazari. Initial production was scheduled to begin in early 2009, and the plant was expected to reach full production by mid-year. The plant also had the capacity to produce 100,000 t/yr of sodium bicarbonate (Ciner Group, 2009; Eti Maden İşletmeleri Genel Müdürlüğü, 2009, p. 72).

Rio Tinto completed a prefeasibility study of the Kazan trona (soda ash) project in 2008. Rio Tinto's planned trial mining of the soda ash deposit was cancelled when the company decided to withdraw from the soda ash sector and to sell the project (Rio Tinto Group, 2009, p. 64).

Mineral Fuels and Related Materials

Uranium.—In early 2008, Aldridge Minerals Inc. of Canada acquired mineral licenses for properties that had the potential for uranium mineralization. At yearend, ownership of the uranium properties was transferred to Aldridge Uranium Inc., which was a newly-formed company owned by Aldridge Minerals shareholders (Aldridge Minerals Inc., 2009, p. 3-4).

Outlook

Turkey has significant resources of bentonite, boron, lignite, marble, and perlite. Although Turkey has numerous other mineral deposits, most international investor interest is focused on the development of high-value minerals, such as gold (Ersçen, 1989).

Administrative and legal difficulties, such as those that resulted in the former suspension of operations at the Ovacik gold mine; the unexpected delay of permission to construct the Çaldağ nickel mine's heap leach pads and processing plant; and the legal proceedings to cancel previously issued environmental certificates for the Efemcukuru gold development project and the Kışladağ Mine and to cancel the licenses for the Cerattepe copper and zinc project, could adversely influence investment decisions concerning mineral development projects in Turkey.

References Cited

- Albuck Madencilik San. ve Tic. A.Ş., 2009, About us: Albuck Madencilik San. ve Tic. A.Ş. (Accessed August 21, 2009, at <http://www.albuckmining.com>.)
- Aldridge Minerals Inc., 2009, Management's discussion and analysis of financial condition and results of operations—For the three and twelve month period ended November 30, 2008: Vancouver, British Columbia, Canada, Aldridge Minerals Inc., July 29, 17 p.
- Angulo, M.A., 2010, Boron: U.S. Geological Survey Mineral Commodity Summaries 2010, p. 32-33.
- Bolen, W.P., 2010, Perlite: U.S. Geological Survey Mineral Commodity Summaries 2010, p. 116-117.
- Borçelik Çelik San. ve Tic. A.Ş., 2008, Borçelik has completed the investment of 138 million USD: Istanbul, Turkey, Borçelik Çelik San. ve Tic. A.Ş. press release, November, 1 p.
- Ciner Group, 2009, Eti Soda: Ciner Group. (Accessed January 12, 2010, at <http://www.cinergroup.com.tr/companies.php?CID=10&lang=en>.)
- Concast A.G., [undated], IÇDAŞ—Turkey—Minimill designed by Concast: Zurich, Switzerland, Concast A.G., 15 p.
- Cordier, D.J., 2010, Feldspar: U.S. Geological Survey Mineral Commodity Summaries 2010, p. 54-55.
- Crangle, R.D., Jr., 2010, Pumice and pumicite: U.S. Geological Survey Mineral Commodity Summaries 2010, p. 124-125.
- Eldorado Gold Corp., 2009, 2008 annual report: Vancouver, British Columbia, Canada, Eldorado Gold Corp., 87 p.
- Ersçen, Necdet, 1989, Türkiye'nin bilinen maden ve mineraller kanakları [Known ore and mineral resources of Turkey]: Ankara, Turkey, Maden Tetkik ve Arama Genel Müdürlüğü, 108 p.
- Eti Maden İşletmeleri Genel Müdürlüğü, 2009, 2008 Faaliyet raporu [Annual report]: Ankara, Turkey, Eti Maden İşletmeleri Genel Müdürlüğü, 79 p.
- Hekimhan Madencilik İthalat İhracat San. ve Tic. A.Ş., 2008, Deveci siderite iron ore calcination project—Introduction of the mining and project: Hekimhan, Turkey, Hekimhan Madencilik İthalat İhracat San. ve Tic. A.Ş., January, 23 p.
- Inmet Mining Corp., 2009, Annual review 2008: Toronto, Ontario, Canada, Inmet Mining Corp., 132 p.
- İskenderun Demir ve Çelik A.Ş., 2009, İSDEMİR: İskenderun Demir ve Çelik A.Ş. (Accessed August 14, 2009, at http://www.isdemir.com.tr/wps/portal/lut/p.cmd/cs/.ce/7_0_A/.s/7_0_1RN/_s.7_0_A/7_0_1RN.)
- İstanbul Maden ve Metaller İhracatçı Birlikleri Genel Sekreterliği [General Secretariat of Istanbul Mineral and Metals Exporters' Association], [undated], Mal grubu ülke raporu (Türkiye geneli) [Goods group country report (of Turkey)]: Istanbul, Turkey, İstanbul Maden ve Metaller İhracatçı Birlikleri Genel Sekreterliği, 8 p. (Accessed August 26, 2009, at http://test.immib.org.tr/maden/STAT/MAD_MG_ULKE_YIL.pdf.)
- Kramer, D.A., 2010, Magnesium compounds: U.S. Geological Survey Mineral Commodity Summaries 2010, p. 94-95.
- London Metal Exchange Ltd., [undated], Primary nickel price graph: London Metal Exchange Ltd. (Accessed February 18, 2010, at http://www.lme.co.uk/nickel_graphs.asp.)
- Miller, M.M., 2010, Barite: U.S. Geological Survey Mineral Commodity Summaries 2010, p. 24-25.
- Orion Yatırım Menkul Değerler A.Ş., 2008, 9m 08 sonuçları—Türkiye—Kardemir: Istanbul, Turkey, Orion Yatırım Menkul Değerler A.Ş., November 26, 1 p.
- Papp, J.F., 2009, Chromium, in Metals and minerals: U.S. Geological Survey Minerals Yearbook 2007, v. I, p. 17.1-17.28. (Accessed February 19, 2010, at <http://minerals.usgs.gov/minerals/pubs/commodity/chromium/myb1-2007-chrom.pdf>.)
- Rio Tinto Group, 2009, Annual report 2008: London, United Kingdom, and Melbourne, Australia, Rio Tinto Group, 180 p.
- Rolmet Makina Pazarlama San. ve Tic. Ltd. ŞTI, 2008, Electrotherm (India) Ltd: Rolmet Makina Pazarlama San. ve Tic. Ltd. ŞTI. (Accessed August 25, 2009, at <http://www.rolmet.com.tr/machinery.htm>.)
- Türkiye İstatistik Kurumu [Turkish Statistical Institute], 2009, Established and liquidated companies—December 2008 and yearly 2008: Ankara, Turkey, Türkiye İstatistik Kurumu press release no. 14, January 23, Table 1.
- Türkiye İstatistik Kurumu [Turkish Statistical Institute], 2010a, Foreign trade statistics December/2009: Türkiye İstatistik Kurumu press release no. 17, January 29, 11 p.
- Türkiye İstatistik Kurumu [Turkish Statistical Institute], 2010b, Tablo 6—Sabit fiyatlarla gayri safi yurtiçi hasıla içindeki paylan—İktisadi faaliyet kollarına ve 1998 temel fiyatlarına göre—2009-3. dönem [Table 6—Sector share of gross domestic product in constant prices—By kind of economic activity at basic prices at 1998—2009-3d quarter]: Ankara, Turkey, Türkiye İstatistik Kurumu, no. 212, December 10, 15 p.
- U.S. International Trade Administration, 2009, Revocation of antidumping duty order—Certain steel concrete reinforcing bars from Turkey: Federal Register, v. 74, no. 2, January 5, p. 266-267.
- van Oss, H.G., 2010, Cement: U.S. Geological Survey Mineral Commodity Summaries 2010, p. 38-39.
- Virta, R.L., 2010, Clays: U.S. Geological Survey Mineral Commodity Summaries 2010, p. 44-45.
- World Steel Association, 2009, Crude steel statistics total 2008: World Steel Association. (Accessed November 24, 2009, at <http://www.worldsteel.org/?action=stats&type=steel&period=latest&month=13&year=2008>.)

TABLE 1
TURKEY: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

| Commodity | 2004 | 2005 | 2006 | 2007 | 2008 ^c |
|--|---------------------|---------------------|------------------------|------------------------|------------------------|
| METALS | | | | | |
| Aluminum | 60,000 | 60,000 ^e | 60,000 ^e | 65,000 ^e | 65,000 |
| Antimony: ^c | | | | | |
| Ore, mine output: | | | | | |
| Gross weight | 20,107 ² | 28,000 | 25,000 | 28,000 | 30,000 |
| Sb content | 900 | 1,400 | 1,250 | 1,400 | 1,500 |
| Concentrates: | | | | | |
| Gross weight | 3,000 | 5,000 | 4,500 | 5,000 | 5,300 |
| Sb content | 700 | 1,200 | 1,100 | 1,200 | 1,300 |
| Bauxite and alumina | | | | | |
| Bauxite | 365,836 | 475,349 | 771,227 | 343,564 ^r | 350,000 |
| Alumina, gross weight | 169,991 | 112,558 | 150,117 | 163,455 | 160,000 |
| Chromium, gross weight (34% to 43% chromic oxide) ³ | 506,421 | 688,377 | 1,059,900 ^r | 1,678,900 ^r | 1,885,700 ² |
| Copper: | | | | | |
| Mine output, exclusive of pyrite: ⁴ | | | | | |
| Gross weight | 2,356,147 | 2,946,106 | 2,500,000 ^e | 4,000,000 ^e | 4,100,000 |
| Cu content of ore ^c | 49,000 | 54,000 | 46,000 | 81,000 ^r | 83,000 |
| Metal: ^c | | | | | |
| Smelter output, primary and secondary | 34,700 ² | 27,600 | 30,000 | 30,000 | 30,000 |
| Refined | 64,000 | 95,000 | 106,000 | 100,000 ^r | 90,000 |
| Gold ^{e,5} kilograms | 3,260 | 4,170 | 8,040 | 9,920 | 11,100 |
| Iron and steel: | | | | | |
| Iron ore: | | | | | |
| Gross weight thousand metric tons | 4,120 | 4,598 | 3,785 | 4,849 | 3,990 |
| Fe content ^c do. | 2,200 | 2,450 | 2,000 | 2,600 | 2,100 |
| Metal: | | | | | |
| Pig iron and ferroalloys: | | | | | |
| Cast iron ⁶ | 213,210 | 178,395 | 121,956 | 264,808 | 250,000 |
| Crude (pig) iron | 5,835,889 | 6,371,084 | 5,952,106 | 6,235,537 | 6,697,000 ² |
| Ferrochromium | 28,701 | 26,043 | 67,975 | 69,730 | 40,000 |
| Ferrosilicon ^c | -- | 4,000 | 2,000 | 5,000 | 5,000 |
| Steel, crude including castings thousand metric tons | 20,478 | 20,960 | 23,300 ^e | 25,760 ^r | 26,809 ² |
| Lead: | | | | | |
| Mine output, Pb and Pb-Zn ores: | | | | | |
| Gross weight | 407,637 | 366,308 | 279,727 | 684,931 | 700,000 |
| Pb content | 18,650 | 17,000 | 13,000 | 32,000 | 33,000 |
| Concentrates: ^c | | | | | |
| Gross weight | 26,000 | 29,000 | 23,000 | 55,000 | 56,000 |
| Pb content | 17,000 | 15,500 | 12,000 | 20,000 ^r | 20,000 |
| Metal, refined ^c | 6,000 | 6,000 | 6,000 | 6,000 | 6,000 |
| Manganese ore, gross weight ⁷ | 21,204 | 52,273 | 32,144 | 42,033 | 40,000 |
| Mercury | -- | -- | -- | 65 | 60 |
| Molybdenum, ore, gross weight | -- | -- | -- | 185 | 200 |
| Nickel, mine output, Ni content ^c | 40 | 1,000 | 1,500 | -- | -- |
| Silver, mine output, Ag content ⁸ kilograms | 97,000 | 137,560 | 167,340 | 198,000 ² | 180,000 |
| Zinc: ^c | | | | | |
| Mine output, Zn and Cu-Zn ore: | | | | | |
| Gross weight thousand metric tons | 765 ² | 1,000 | 1,500 | 1,800 | 1,800 |
| Zn content do. | 38 | 41 | 69 | 80 | 80 |
| Concentrates: | | | | | |
| Gross weight | 90,000 | 96,000 | 160,000 | 188,000 | 188,000 |
| Zn content | 33,400 | 36,000 | 60,000 | 70,000 | 70,000 |
| INDUSTRIAL MINERALS | | | | | |
| Aluminum sulfate, alunite | -- | -- | 6,683 | 2,511 | 2,500 |
| Barite, crude | 134,504 | 157,179 | 161,993 | 184,041 | 170,000 |
| Boron minerals: | | | | | |
| Run of mine | 2,878,930 | 3,478,784 | 3,955,574 | 4,406,970 | 4,897,869 ² |
| Concentrates | 1,587,992 | 1,824,571 | 1,818,944 | 2,127,812 | 2,139,224 ² |
| Refined borates | 714,538 | 923,253 | 1,021,139 | 1,092,056 | 1,000,000 |

See footnotes at end of table.

TABLE 1—Continued
TURKEY: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

| Commodity | 2004 | 2005 | 2006 | 2007 | 2008 ^c |
|--|----------------------|----------------------|----------------------|------------------------|---------------------|
| INDUSTRIAL MINERALS—Continued | | | | | |
| Cement, hydraulic thousand metric tons | 38,796 | 42,787 | 47,977 | 49,553 ^r | 51,432 |
| Clays: | | | | | |
| Bentonite | 1,281,468 | 501,142 | 1,134,251 | 1,742,487 | 1,600,000 |
| Kaolin | 536,008 | 908,862 | 1,064,107 | 914,117 | 900,000 |
| Other | 3,626,625 | 1,962,072 | 3,034,560 | 2,871,145 | 2,900,000 |
| Diatomite | 1,324 | 44,122 | 45,420 | 33,135 | 30,000 |
| Emery | 7,902 | 9,378 | 13,899 | 19,108 | 19,000 |
| Feldspar, run of mine | 1,983,336 | 2,331,971 | 5,771,892 | 6,548,796 | 6,500,000 |
| Glass, crude thousand metric tons | 1,229 | 1,058 | 1,600 ^e | 1,900 ^e | 1,900 |
| Graphite, run of mine ^e | 1,000 | 100 | 300 | 400 | 400 |
| Gypsum | 2,300,703 | 3,500,864 | 4,369,771 | 3,241,177 | 3,000,000 |
| Lime ^{e,9} thousand metric tons | 3,400 | 3,400 | 3,600 | 3,600 | 3,600 |
| Magnesium, magnesite, run of mine | 3,732,952 | 2,372,206 | 2,088,033 | 2,100,000 ^e | 2,100,000 |
| Mica: | | | | | |
| Illite | -- | -- | 27,898 | 57,774 | 55,000 |
| Other | 321 | 3,584 | -- | 3,313 | 3,000 |
| Nitrogen, N content of ammonia | 329,444 | 304,617 | 91,665 | -- | 50,000 |
| Olivine | 71,396 | 94,439 | 191,298 | 145,839 | 150,000 |
| Peat | 62,108 | 71,749 | 185,944 | 145,403 | 150,000 |
| Perlite, run of mine | 133,829 | 156,935 | 260,000 ^e | 270,000 ^e | 270,000 |
| Pumice | 1,035,975 | 1,860,037 | 3,515,644 | 3,995,423 | 4,000,000 |
| Pyrites, cupreous, gross weight | 765,432 | 800,000 ^e | 900,000 ^e | 900,000 ^e | 900,000 |
| Sepiolite, meerschaum ^e kilograms | 150 | 170 | 130 | 50 | 50 |
| Silica sand, gross weight | 2,073,725 | 1,729,525 | 2,608,260 | 4,997,694 | 5,000,000 |
| Sodium compounds: | | | | | |
| Salt, NaCl, all types thousand metric tons | 2,158 | 2,253 | 2,800 ^e | 1,500 ^e | 1,500 |
| Soda ash, trona do. | 846 | 869 | 891 | 947 | 950 |
| Sodium sulfate, concentrates | 523,285 | 809,187 | 226,014 | 1,120,968 | 1,100,000 |
| Stone: | | | | | |
| Dolomite | 2,109,362 | 10,636,615 | 14,621,691 | 15,672,171 | 15,000,000 |
| Granite | 125,030 | 160,930 | 320,069 | 252,354 | 250,000 |
| Limestone, other than for cement thousand metric tons | 30,963 | 12,271 | 5,876 | 7,171 | 7,200 |
| Marble cubic meters | 668,996 | 1,578,730 | 1,855,740 | 2,801,757 | 2,800,000 |
| Onyx do. | 57 | 451 | 2,578 | 5,663 | 5,700 |
| Quartz and quartzite | 16,765,177 | 1,466,533 | 1,871,887 | 2,146,969 | 2,100,000 |
| Travertine cubic meters | 601,068 | 696,545 | 1,017,672 | 995,065 | 1,000,000 |
| Strontium minerals, celestite: ^e | | | | | |
| Run of mine | 127,947 ² | 30,100 ² | 10,500 | 6,700 | 2,600 |
| Concentrates | 77,000 | 18,000 | 6,300 | 4,200 | 1,600 |
| Sulfur: ^e | | | | | |
| Byproduct: | | | | | |
| Petroleum | 49,000 ² | 54,000 ² | 69,000 | 86,000 | 86,000 |
| Other | 19,000 | 20,000 | 20,000 | 20,000 | 20,000 |
| S content of pyrites | 20,000 | 20,000 | 20,000 | 20,000 | 20,000 |
| Total | 88,000 | 94,000 | 109,000 | 126,000 | 126,000 |
| Talc | 8,233 | 8,775 | 4,969 | 12,722 | 12,000 |
| Titanium minerals, rutile, gross weight | 4,900 | 12 ^e | -- | 20 | 20 |
| Zeolite | 192,240 | 249,572 | 121,014 | 104,138 | 100,000 |
| MINERAL FUELS AND RELATED MATERIALS | | | | | |
| Asphalt, natural | 738,915 | 905,838 ^r | 474,523 ^r | 781,649 ^r | 750,000 |
| Carbon black | 32,686 | 26,820 | 51,788 | 40,379 | 40,000 |
| Coal: | | | | | |
| Hard coal, run of mine thousand metric tons | 2,843 | 3,050 | 3,071 | 3,233 | 3,343 ² |
| Lignite, run of mine do. | 43,754 | 55,626 | 61,006 | 70,606 | 85,953 ² |
| Coke and semicoke do. | 2,855 | 2,800 ^e | 3,261 | 3,337 | 4,063 ² |
| Gas, natural, marketed thousand cubic meters | 344,196 | 483,525 | 306,136 | 287,501 | 300,000 |

See footnotes at end of table.

TABLE 1—Continued
TURKEY: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

| Commodity | 2004 | 2005 | 2006 | 2007 | 2008 ^c | |
|---|----------------------------|----------------------|---------------------|---------|---------------------|---------|
| MINERAL FUELS AND RELATED MATERIALS—Continued | | | | | | |
| Petroleum: | | | | | | |
| Crude | thousand 42-gallon barrels | 16,270 | 16,500 ^e | 15,300 | 15,000 ^e | 14,700 |
| Refinery products: ^e | | | | | | |
| Liquefied petroleum gas | do. | 8,340 ³ | 8,900 | 9,300 | 8,800 | 8,900 |
| Gasoline | do. | 27,350 ³ | 30,300 | 30,800 | 33,900 | 37,700 |
| Naphtha | do. | 12,700 ³ | 11,500 | 11,500 | 7,200 | 4,600 |
| Jet fuel and Kerosene | do. | 14,340 ³ | 15,924 | 17,100 | 20,500 | 22,400 |
| Distillate fuel oil ¹⁰ | do. | 53,660 ³ | 56,400 | 56,800 | 53,000 | 49,000 |
| Lubricants | do. | 2,050 ³ | 2,400 | 2,300 | 2,100 | 1,800 |
| Residual fuel oil | do. | 40,270 ³ | 42,100 | 38,600 | 36,200 | 31,700 |
| Asphalt | do. | 8,430 ³ | 10,700 | 13,400 | 13,900 | 13,600 |
| Unspecified ¹¹ | do. | 3,610 ³ | 1,050 | 5,300 | 5,300 | 2,500 |
| Total | do. | 170,750 ³ | 179,000 | 185,000 | 181,000 | 172,000 |

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

¹Table includes data available through February 17, 2010. In addition to the commodities listed, large quantities of construction materials (clay, and sand and gravel) are quarried. Also mined are basalt, diabase, sandstone, serpentine, and slate for building stone; gypsum and limestone for cement manufacture; and garnet, iron oxide pigment, and tungsten, but available information is inadequate to make estimates of output.

²Reported figure.

³Approximately 70% of gross production is salable product.

⁴Copper mines produce a copper concentrate (of about 22% Cu) and a cupreous pyrite concentrate (of about 0.7% Cu). Copper is not recovered from the cupreous pyrite concentrate.

⁵Data include estimated content of Turkish copper refinery tankhouse slimes.

⁶Series formerly carried as pig iron.

⁷Does not include manganiferous iron ore from the Deveci Mine, production of which amounts to several hundred thousand metric tons per year and has a manganese content of between 3% and 5%.

⁸Includes estimated content of base-metals-refinery tankhouse slimes.

⁹Estimated sales only.

¹⁰Diesel fuel (gasoil) and special heating oil.

¹¹Includes refinery fuel and losses.

TABLE 2
TURKEY: STRUCTURE OF THE MINERAL INDUSTRY IN 2008

(Thousand metric tons unless otherwise specified)

| Commodity | Major operating companies and major equity owners | Location of main facilities | Annual capacity |
|-----------------------------|--|---|-----------------|
| Aluminum, metal | Eti Alüminyum A.Ş. (Cengiz Holding) | Smelter at Seydisehir, Konya Province | 65 |
| Bauxite and alumina: | | | |
| Alumina | do. | Refinery at Seydisehir, Konya Province | 200 |
| Bauxite | do. | Mines near Madenli, about 25 kilometers south of Seydisehir, Konya Province | 500 |
| Do. | Albuck Madencilik San. ve Tic. A.Ş. | Mine near Cırıpı, Mugla Province | NA |
| Do. | do. | Mine near Mihalıccık, Eskisehir Province | NA |
| Boron: | | | |
| Concentrate and ground ore | Bigadiç Bor İşletme Müdürlüğü (Eti Maden İşletmeleri Genel Müdürlüğü) (Government) | Three open pit mines at Bigadic, Balıkesir Province | 650 |
| Do. | Emet Bor İşletme Müdürlüğü (Eti Maden İşletmeleri Genel Müdürlüğü) (Government) | Espey Mine, Emet, Kutahya Province | 500 |
| Do. | do. | Hisarcık Mine, Emet, Kutahya Province | 500 |
| Do. | Kestelek Bor İşletme Müdürlüğü (Eti Maden İşletmeleri Genel Müdürlüğü) (Government) | Kestelek Mine, Bursa Province | 100 |
| Do. | Kırka Bor İşletme Müdürlüğü (Eti Maden İşletmeleri Genel Müdürlüğü) (Government) | Mine at Kırka, Eskisehir Province | 800 |
| Refined borates | Bandırma Bor ve Asit Fabrikaları İşletme Müdürlüğü, (Eti Maden İşletmeleri Genel Müdürlüğü) (Government) | Plant at Bandırma, Balıkesir Province | 100 |
| Do. | Emet Bor İşletme Müdürlüğü (Eti Maden İşletmeleri Genel Müdürlüğü) (Government) | Boric acid plant, Emet, Kutahya Province | 100 |
| Do. | Kırka Bor İşletme Müdürlüğü (Eti Maden İşletmeleri Genel Müdürlüğü) (Government) | Plant at Kırka, Eskisehir Province | 600 |
| Cement: | | | |
| Gray portland | Adana Çimento Sanayii ve Ticaret A.Ş. (Ordu Yardımlaşma Kurumu (OYAK) Çimento Grubu, 57%) | Adana, Adana Province | 3,400 |
| Do. | do. | Iskenderun grinding plant, Iskenderun, Hatay Province | 1,000 |
| Do. | Afyon Çimento Sanayii Ticaret A.Ş. (Ciments Français S.A., 77%) | Afyon, Afyon Province | 550 |
| Do. | Akçansa Çimento Sanayi ve Ticaret A.Ş. (HeidelbergCement AG, 40%, and Sabancı Holding A.Ş., 40%) | Buyukcekmece plant, Buyukcekmece, Istanbul Province | 2,800 |
| Do. | do. | Canakkale plant, about 11 kilometers northwest of Ezine, Canakkale Province | 3,500 |
| Do. | do. | Ladik plant, Ladik, Samsun Province | 1,050 |
| Do. | AS Çimento Sanayi ve Ticaret A.Ş. | Bucak, Burdur Province | 6,500 |
| Do. | Aşkale Çimento Sanayi ve Ticaret A.Ş. | Trabzon plant, Degirmendere, Trabzon Province | 800 |
| Do. | do. | Askale, Erzurum Province | 720 |
| Do. | Bakırçay Çimento Sanayii ve Ticaret A.Ş. (Kars Çimento San. ve Tic. A.Ş., 98%) | Poyracık, near Kınık, Izmir Province | 12 |
| Do. | Bartın Çimento Sanayii ve Ticaret A.Ş. (Sanko Holding A.Ş.) | Bartın plant, Bartın Province | 400 |
| Do. | Baştaş Çimento Sanayii A.Ş. (Vicat Group, 85%) | Elmadag, Ankara Province | 1,500 |
| Do. | Batıçim Batı Anadolu Çimento Sanayii A.Ş. (Orascom Construction Industries, 23%) | Bornova, Izmir Province | 1,600 |
| Do. | Batsöke Söke Çimento Sanayii ve Ticaret A.Ş. (Batıçim Batı Anadolu Çimento Sanayii A.Ş., 75%) | Soke, Aydın Province | 1,300 |
| Do. | Bolu Çimento Sanayii A.Ş. (Ordu Yardımlaşma Kurumu (OYAK) Çimento Grubu, 52%) | About 14 kilometers east of Bolu, Bolu Province | 2,200 |
| Do. | do. | Ankara grinding plant, Kazan, Ankara Province | 800 |
| Do. | Bursa Çimento Sanayii ve Ticaret A.Ş. (Bursa Çimento Fabrikası A.Ş., 98%) | Kestel, Bursa Province | 2,850 |
| Do. | Çimentaş İzmir Çimento Fabrikası Türk A.Ş. (Intercem SA, 67%, and Cementir Holding SpA, 29%) | Isıkent, Izmir Province | 2,600 |
| Do. | do. | Trakya plant, Lalapasa, Edirne Province | 1,300 |
| Do. | Çimko Adıyaman Çimento ve Beton Sanayii ve Ticaret A.Ş. (Çimko Çimento ve Beton Sanayii Ticaret A.Ş.) | About 18 kilometers southwest of Adıyaman, Adıyaman Province | 1,350 |

See footnotes at end of table.

TABLE 2—Continued
TURKEY: STRUCTURE OF THE MINERAL INDUSTRY IN 2008

(Thousand metric tons unless otherwise specified)

| Commodity | Major operating companies and major equity owners | Location of main facilities | Annual capacity |
|-------------------------|---|---|--------------------|
| Cement—Continued: | | | |
| Gray portland—Continued | Çimko Çimento Kahramanmaraş Narlı Fabrikası (Çimko Çimento ve Beton Sanayii Ticaret A.Ş.) | Narlı plant, Narlı, Kahramanmaraş Province | 3,300 |
| Do. | Cimpor Yibitaş Çimento Sanayii ve Ticaret A.Ş. (Cimpor Internacional, SGPS, S.A., 99%) | Corum plant, Corum, Corum Province | 950 |
| Do. | do. | Hasanoglan grinding plant, Hasanoglan, Hasanoglan Province | 725 |
| Do. | do. | Nevşehir grinding plant, Kalaba, Nevşehir Province | 300 ^e |
| Do. | do. | Samsun grinding plant, about 6 kilometers west of Samsun, Samsun Province | 300 ^e |
| Do. | do. | Sivas plant, Sivas, Sivas Province | 615 |
| Do. | do. | Yozgat plant, Saraykoy, Yozgat Province | 800 |
| Do. | Çimsa Çimento Sanayii ve Ticaret A.Ş. (Sabancı Holding A.Ş., 47%) | Ankara grinding plant, Lalahan, Ankara Province | 230 |
| Do. | do. | About 20 kilometers northwest of Eskisehir, Eskisehir Province | 1,800 |
| Do. | do. | Near Agirnas, Kayseri Province | 1,000 |
| Do. | do. | Mersin plant, Yenitaskent, Mersin Province | 2,300 |
| Do. | do. | Nigde plant, Nigde, Nigde Province | 1,200 |
| Do. | Denizli Çimento Sanayi ve Ticaret A.Ş. (CRH plc, 50%, and Eren Holding A.Ş., 50%) | About 5 kilometers northwest of Kaklik, Denizli Province | 2,500 |
| Do. | Elazığ Çimento A.Ş. (Kars Çimento Sanayii ve Ticaret A.Ş., 93.55%; Cimentas A.Ş., 6.17%; Bakırçay Çimento Sanayii ve Ticaret A.Ş., 0.27%) | Elazığ, Elazığ Province | 900 |
| Do. | Göлтаş Göller Bölgesi Çimento Sanayii ve Ticaret A.Ş. (Sadecib S.A., 34%, and Göl Yatırım Holding A.Ş., 28%) | About 15 kilometers north-northwest of Isparta, Isparta Province | 2,900 |
| Do. | Kars Çimento Sanayii ve Ticaret A.Ş. (Cimentas A.Ş., 58%, and Alfacem Srl, 40%) | Bozkale, Kars Province | 600 |
| Do. | Konya Çimento Sanayii A.Ş. (Vicat Group, 81%) | Konya, Konya Province | 1,600 |
| Do. | Lafarge Aslan Çimento A.Ş. (Financiere Lafarge S.A., 97%) | Darica plant, Gebze, Kocaeli Province | 2,880 |
| Do. | Lafarge Ereğli Çimento Sanayii ve Ticaret A.Ş. (Lafarge Aslan Çimento A.Ş., 50%) | Karadeniz Ereğli plant, Kemer, Zonguldak Province | 300 |
| Do. | Lafarge Van Çimento A.Ş. (Lafarge S.A., 99.99%) | Edremit, Van Province | 600 |
| Do. | Limak Kurtalan Çimento Sanayii ve Ticaret A.Ş. (Limak Şirketler Grubu) | Sanlıurfa plant, about 14 kilometers north-northwest of Sanlıurfa, Sanlıurfa Province | 1,400 |
| Do. | do. | Gaziantep plant, Gaziantep (Sehit Kamil), Gaziantep Province | 1,400 |
| Do. | do. | Kurtalan plant, Kurtalan, Siirt Province | 1,140 |
| Do. | Limak Madencilik Yapı Çimento Sanayii ve Ticaret A.Ş. (Limak Şirketler Grubu) | Ergani plant, Ergani, Diyarbakir Province | 1,400 |
| Do. | Limak - İstaç İnşaat Sanayi ve Ticaret A.Ş. | Bitlis plant, Bitlis Province | 525 |
| Do. | Mardin Çimento Sanayii ve Ticaret A.Ş. (Ordu Yardımlaşma Kurumu (OYAK) Çimento Grubu, 56%) | About 6 kilometers northeast of Mardin, Mardin Province | 2,000 |
| Do. | Nuh Çimento Sanayi A.Ş. (Nuh Ticaret ve Sanayi A.Ş., 43%) | Hereke, Kocaeli Province | 5,817 |
| Do. | Set Çimento Sanayi ve Ticaret A.Ş. (Set Çimento Group) | Ambarlı grinding plant, Buyukcekmece, Istanbul Province | 1,200 |
| Do. | do. | Ankara plant, Ankara, Ankara Province | 1,300 |
| Do. | do. | Trakya plant, Pınarhisar, Kırklareli Province | 800 |
| Do. | do. | Balikesir, Balikesir Province | 500 |
| Do. | Traçim Çimento Sanayii ve Ticaret A.Ş. (Soyak Holding A.Ş. and TBS Taşıma Beton A.Ş.) | Evrencik, Vise, Kırklareli Province | 2,000 |
| Do. | Ünye Çimento Sanayi ve Ticaret A.Ş. (Ordu Yardımlaşma Kurumu (OYAK) Çimento Grubu, 51%, and Nuh Çimento Sanayi A.Ş., 39%) | Unye, Ordu Province | 2,600 |
| Slag | KarÇimsa Çimento Sanayii ve Ticaret A.Ş. (Akçansa Çimento Sanayi ve Ticaret A.Ş.) | Karabuk, Karabuk Province | 200 |
| White | Adana Çimento Sanayii ve Ticaret A.Ş. (Ordu Yardımlaşma Kurumu (OYAK) Çimento Grubu, 57%) | Adana, Adana Province | 325 |
| Do. | Çimsa Çimento Sanayii ve Ticaret A.Ş. (Sabancı Holding A.Ş., 47%) | Mersin plant, Yenitaskent, Mersin Province | 1,000 ^e |

See footnotes at end of table.

TABLE 2—Continued
TURKEY: STRUCTURE OF THE MINERAL INDUSTRY IN 2008

(Thousand metric tons unless otherwise specified)

| Commodity | Major operating companies and major equity owners | | Location of main facilities | Annual capacity |
|--------------------------|---|--|--|--------------------|
| Coal: | | | | |
| Anthracite | Armutçuk Taşkömürü İşletme Müessesesi [Türkiye Taşkömürü Kurumu Genel Müdürlüğü (T.T.K.)] (Government) | | Armutçuk Mine, Armutçuk, Eregli Province | 400 |
| Do. | Amasra Taşkömürü İşletme Müessesesi [Türkiye Taşkömürü Kurumu Genel Müdürlüğü (T.T.K.)] (Government) | | Amasra Mine, Amasra, Bartın Province | 300 |
| Do. | Karadon Taşkömürü İşletme Müessesesi [Türkiye Taşkömürü Kurumu Genel Müdürlüğü (T.T.K.)] (Government) | | Karadon Mine, Kilimli, Zonguldak Province | 450 |
| Do. | Kozllu Taşkömürü İşletme Müessesesi [Türkiye Taşkömürü Kurumu Genel Müdürlüğü (T.T.K.)] (Government) | | Kozlu Mine, Kozlu, Zonguldak Province | 600 |
| Do. | Üzülmöz Taşkömürü İşletme Müessesesi [Türkiye Taşkömürü Kurumu Genel Müdürlüğü (T.T.K.)] (Government) | | Uzulmez Mine, Asma, Zonguldak Province | 500 |
| Lignite ¹ | Bursa Linyitleri İşletmesi Müdürlüğü [Türkiye Kömür İşletmeleri Kurumu (TKI)] (Government) | | Bursa lignite facility, Orhaneli, Bursa Province | 1,000 |
| Do. | Çan Linyitleri İşletmesi Müdürlüğü [Türkiye Kömür İşletmeleri Kurumu (TKI)] (Government) | | Can lignite facility, Can, Canakkale Province | 1,800 |
| Do. | Ege Linyitleri İşletmesi Müessesesi Müdürlüğü [Türkiye Kömür İşletmeleri Kurumu (TKI)] (Government) | | Soma Mine, Soma, Manisa Province | 10,500 |
| Do. | Garp Linyitleri İşletmesi Müessesesi Müdürlüğü [Türkiye Kömür İşletmeleri Kurumu (TKI)] (Government) | | Tuncbilek mining center, Tavsanlı, Kutahya Province | 7,000 |
| Do. | Güney Ege Linyitleri İşletmesi Müessesesi Müdürlüğü [Türkiye Kömür İşletmeleri Kurumu (TKI)] (Government) | | South Aegean lignite facility, Yatagan, Muğla Province | 4,900 |
| Do. | Ilgın Linyitleri İşletmesi Müdürlüğü [Türkiye Kömür İşletmeleri Kurumu (TKI)] (Government) | | Ilgın lignite facility, Ilgın, Konya Province | 300 |
| Do. | Seyitömer Linyitleri İşletmesi Müessesesi Müdürlüğü [Türkiye Kömür İşletmeleri Kurumu (TKI)] (Government) | | Seyitomer lignite facility, Seyitomer, Kutahya Province | 8,000 |
| Do. | Yeniköy Linyitleri İşletmesi Müdürlüğü [Türkiye Kömür İşletmeleri Kurumu (TKI)] (Government) | | Yeniköy lignite facility, Oren (Milas), Muğla Province | 8,500 |
| Copper: | | | | |
| Concentrate, Cu content | Çayeli Bakır İşletmeleri A.Ş. (Inmet Mining Corp., 100%) | | Cayeli Mine, near Cayeli, Rize Province | 37 |
| Do. | Eti Bakır A.Ş. (Cengiz Holding, 100%) | | Kastamonu Kure facility (three open pit and one underground mines), 50 kilometers north of Kastamonu, Kastamonu Province | 23 |
| Do. | do. | | Murgul facility (three open pit mines, including the Anayatak and the Çakmakkaya Mines), Murgul, Artvin Province | 20 |
| Anode | Karadeniz Bakır İşletmeleri (Cengiz Holding) | | KBI smelter, Tekkekoy, Samsun Province | 38 |
| Ferrochrome, high-carbon | Eti Krom A.Ş. (Yıldırım Holding A.Ş.) | | About 55 kilometers east of Elazığ, Elazığ Province | 150 |
| Fertilizer: | | | | |
| Ammonium nitrate | Kütahya Gübre Sanayii A.Ş. (Yıldız Yatırım Holding A.Ş.) | | Kutahya, Kütahya Province | 344 |
| Diammonium phosphate | Samsun Gübre Fabrikası [Türkiye Gübre Sanayii A.Ş. (TÜGSAŞ)] | | Tekkekoy, Samsun Province | 227 |
| Do. | Ege Gübre Sanayii A.Ş. | | Aliaga, İzmir Province | 165 |
| Do. | İstanbul Gübre Sanayi A.Ş. (IGSAŞ), (Yıldız Yatırım Holding A.Ş.) | | Korfez, Kocaeli Province | 240 |
| Mono-ammonium phosphate | Ege Gübre Sanayii A.Ş. | | Aliaga, İzmir Province | 130 |
| Gold, ore, kilograms | Koza Altın İşletmeleri A.Ş. | | Ovacık Mine, Ovacık, Muğla Province | 6,000 |
| Au content | do. | do. | Mastra Mine, near Demirkaynak, Gumushane Province | 5,000 |
| Do. | do. | do. | Havran Mine, Balıkesir Province | 3,000 |
| Do. | do. | Tüprağ Metal Madencilik Sanayi ve Ticaret A.Ş. (Eldorado Gold Corp., 100%) | Kisladag Mine, Katranlı, Usak Province | 7,500 |
| Iron and steel: | | | | |
| Iron ore | Erdemir Madencilik Sanayi ve Ticaret A.Ş. (Ereğli Demir ve Çelik Fabrikaları T.A.Ş.) (Erdemir) | | Fourteen mines in the Divriği area, Sivas Province | 2,500 |
| Do. | Hekimhan Madencilik İthalat İhracat Sanayi ve Ticaret A.Ş. (Kolin İnşaat Turizm Sanayi ve Ticaret A.Ş.) | | About 22 kilometers northeast of Hekimhan (formerly the Deveci Mine), Malatya Province | 2,000 ² |

See footnotes at end of table.

TABLE 2—Continued
TURKEY: STRUCTURE OF THE MINERAL INDUSTRY IN 2008

(Thousand metric tons unless otherwise specified)

| Commodity | Major operating companies and major equity owners | Location of main facilities | Annual capacity |
|---------------------------|---|---|-----------------|
| Iron and steel—Continued: | | | |
| Steel: | | | |
| Crude | Asil Çelik A.Ş. | Plant south of Orhangazi, Bursa Province | 485 |
| Do. | Bilecik Demir Çelik Sanayi ve Ticaret A.Ş. (Global Yatırım Holding A.Ş., 40%) | Bilecik, Bilecik Province | 240 |
| Do. | Çebitaş Demir Çelik Endüstrisi A.Ş. | Aliaga, İzmir Province | 700 |
| Do. | Çelik Makina Sanayi ve Ticaret A.Ş. (ÇEMTAŞ) | Bursa, Bursa Province | 155 |
| Do. | CER Çelik Endüstrisi A.Ş. | Plant at Bornova, İzmir Province | 850 |
| Do. | Çolakoğlu Metalurji A.Ş. | Dilovası, Kocaeli Province | 3,000 |
| Do. | Diler Demir Çelik Endüstrisi ve Ticaret A.Ş. | do. | 1,200 |
| Do. | Ege Çelik Endüstrisi Sanayi ve Ticaret A.Ş. | Aliaga, İzmir Province | 2,000 |
| Do. | Ekinciler Holding A.Ş. | About 10 kilometers north of İskenderun, Hatay Province | 1,000 |
| Do. | Erege Metal Demir Çelik Sanayi ve Ticaret A.Ş. | Aliaga, İzmir Province | 720 |
| Do. | Ereğli Demir ve Çelik Fabrikaları T.A.Ş. (Erdemir) (Ataer Holding A.Ş., 49.29%, and ArcelorMittal, 24.99%) | Karadeniz Ereğli, Zonguldak Province | 3,400 |
| Do. | Habaş Sinai ve Tibbi Gazlar İstihsal Endüstrisi A.S. (Habaş Topluluğu) | Aliaga, İzmir Province | 3,000 |
| Do. | İçdaş Demir Çelik Enerji Tersane ve Ulaşım Sanayi A.Ş. | İstanbul (Gunesli), Istanbul Province | 1,000 |
| Do. | do. | About 25 kilometers north of Biga, Canakkale Province | 1,500 |
| Do. | İlhan Metalurji A.Ş. | Toprakkale, Osmaniye Province | 220 |
| Do. | İskenderun Demir ve Çelik A.Ş. (Isdemir) [Ereğli Demir ve Çelik Fabrikaları T.A.Ş. (Erdemir), 92%] | İskenderun, Hatay Province | 2,850 |
| Do. | İzmir Demir Çelik Sanayi A.Ş. (IDÇ) | Aliaga, İzmir Province | 1,320 |
| Do. | Kaptan Demir Çelik Endüstrisi ve Ticaret A.Ş. | Marmara Ereğlisi, Tekirdag Province | 1,400 |
| Do. | Karabük Demir Çelik Sanayi ve Ticaret A.Ş. (Kardemir) (Kardemir retirement group, 68%, and Kardemir employees, 21%) | Karabuk, Karabuk Province | 1,450 |
| Do. | Kroman Çelik Sanayii A.Ş. | Cayırova, Kocaeli Province | 1,250 |
| Do. | Makina ve Kimya Endüstrisi Kurumu Genel Müdürlüğü (MKEK) | Kırıkkale, Kırıkkale Province | 60 |
| Do. | Mega Demir Mamulleri Sanayi ve Ticaret Ltd. ŞTI | North of İskenderun, Hatay Province | 220 |
| Do. | Nursan Metalurji A.Ş. | Payas, Hatay Province | 1,100 |
| Do. | Sivas Demir Çelik İşletmeleri A.Ş. (Sidemir) | About 20 kilometers south of Sivas, Sivas Province | 350 |
| Do. | Yazıcı Demir Çelik Endüstrisi ve Ticaret A.Ş. (Diler Demir Çelik Endüstrisi ve Ticaret A.Ş.) | Karabuk, Karabuk Province | 900 |
| Do. | Yeşilyurt Demir Çelik A.Ş. | Tekkeköy, Samsun Province | 1,300 |
| Rolled products | Asil Çelik A.Ş. | Rolling mill south of Orhangazi, Bursa Province | 200 |
| Do. | Borçelik Çelik Sanayii ve Ticaret A.Ş. (ArcelorMittal and Borusan Holding A.Ş.) | Near Gemlik, Bursa Province | 1,600 |
| Do. | Çebitaş Demir Çelik Endüstrisi A.Ş.; | Aliaga, İzmir Province | 600 |
| Do. | Çelik Makina Sanayi ve Ticaret A.Ş. (ÇEMTAŞ) | Bursa, Bursa Province | 230 |
| Do. | CER Çelik Endüstrisi A.Ş. | Rolling mill at Bornova, İzmir Province | 300 |
| Do. | Çolakoğlu Metalurji A.Ş. | Dilovası, Kocaeli Province | 750 |
| Do. | Demirsan Haddencilik Sanayi ve Ticaret A.Ş. | do. | NA |
| Do. | Diler Demir Çelik Endüstrisi ve Ticaret A.Ş. | do. | 800 |
| Do. | Ege Çelik Endüstrisi Sanayi ve Ticaret A.Ş. | Aliaga, İzmir Province | 1,200 |
| Do. | Ekinciler Holding A.Ş. | About 10 kilometers north of İskenderun, Hatay Province | 1,100 |
| Do. | Erege Metal Demir Çelik Sanayi ve Ticaret A.Ş. | Aliaga, İzmir Province | 400 |
| Do. | Ereğli Demir ve Çelik Fabrikaları T.A.Ş. (Erdemir) (Ataer Holding A.Ş., 49.29%, and ArcelorMittal, 24.99%) | Karadeniz Ereğli, Zonguldak Province | 8,800 |
| Do. | Habaş Sinai ve Tibbi Gazlar İstihsal Endüstrisi A.S. (Habaş Topluluğu) | Aliaga, İzmir Province | NA |
| Do. | İçdaş Demir Çelik Enerji Tersane ve Ulaşım Sanayi A.Ş. | İstanbul (Gunesli), Istanbul Province | 1,500 |
| Do. | do. | About 25 kilometers north of Biga, Canakkale Province | 1,500 |
| Do. | Intermet A.S.Ş. | 2 rolling mills, Istanbul, Istanbul Province | 600 |
| Do. | İskenderun Demir ve Çelik A.Ş. (Isdemir) [Ereğli Demir ve Çelik Fabrikaları T.A.Ş. (Erdemir), 92%] | İskenderun, Hatay Province | 3,500 |

See footnotes at end of table.

TABLE 2—Continued
TURKEY: STRUCTURE OF THE MINERAL INDUSTRY IN 2008

(Thousand metric tons unless otherwise specified)

| Commodity | Major operating companies and major equity owners | | Location of main facilities | Annual capacity |
|--------------------------------|---|---|---|--------------------|
| Iron and steel—Continued: | | | | |
| Steel—Continued: | | | | |
| Rolled products—Continued | İzmir Demir Çelik Sanayi A.Ş. - (İDÇ) | | Aliaga, Izmir Province | 900 |
| Do. | Kaptan Demir Çelik Endüstrisi ve Ticaret A.Ş. | | Marmara Ereglisi, Tekirdag Province | 700 |
| Do. | do. | | Corlu, Tekirdag Province | 200 |
| Do. | do. | | Karabuk, Karabuk Province | 100 |
| Do. | Karabük Demir Çelik Sanayi ve Ticaret A.Ş. (Kardemir) (Kardemir retirement group, 68%, and Kardemir employees, 21%) | | do. | 700 |
| Do. | Kar-demir Haddecilik Sanayi ve Ticaret Ltd. ŞTI | | Aliaga, Izmir Province | 700 |
| Do. | Kocaeli Haddecilik Sanayi ve Ticaret Ltd. ŞTI. (Kocaeli Grubu) | | do. | 600 |
| Do. | do. | | Denizli, Denizli Province | 100 |
| Do. | Kroman Çelik Sanayii A.Ş. | | Bar and profile mill at Cayirova, Kocaeli Province | 200 |
| Do. | Kürüm Demir Sanayi Dış Ticaret A.Ş. | | Gebze, Kocaeli Province | 445 |
| Do. | Nursan Haddecilik A.Ş. | | Payas, Hatay Province | 500 |
| Do. | Özefe Demir Sanayi ve Tic. A.Ş. (Efesan Demir Sanayi ve Ticaret A.Ş.) | | Bar mills at Alibeykoy, İstanbul Province | 250 |
| Do. | Özkan Demir Sanayi A.Ş. | | Aliaga, Izmir Province | 500 |
| Do. | Sivas Demir Çelik İşletmeleri A.Ş. (Sidemir) | | About 20 kilometers south of Sivas, Sivas Province | 450 |
| Do. | Sözer Demir Çelik A.Ş. | | Aliaga, Izmir Province | 220 |
| Do. | Yazıcı Demir Çelik Endüstrisi ve Ticaret A.Ş. (Diler Demir Çelik Endüstrisi ve Ticaret A.Ş.) | | Karabuk, Karabuk Province | 1,024 |
| Do. | Yeşilyurt Demir Çelik A.Ş. | | Tekkekoy, Samsun Province | 720 |
| Liquefied natural gas | million cubic meters | Boru Hatları İle Petrol Taşıma A.Ş. (Botaş) (Government) | Botas Marmara Ereglisi re-gasification terminal, Sultankoy, Tekirdag Province | 6,500 |
| Do. | do. | EgeGas LNG (Çolakoğlu Group, 100%) | Aliaga re-gasification terminal, Aliaga, Izmir Province | 6,000 |
| Magnesite, dead-burned | | Kümaş Kutahya Manyezit İşletmeleri A.Ş. (Zeyinoğlu Holding A.Ş.) | Kutahya, Kutahya Province | 185 |
| Nickel, ore, metal content | | Sardes Nikel Madencilik A.Ş. (European Nickel PLC) | Caldag Mine, about 25 kilometers north of Turgutlu, Manisa Province | 20 |
| Nitrogen, N content of ammonia | | Istanbul Gubre Sanayi A.Ş. (IGSAŞ) (Yıldız Yatırım Holding A.Ş.) | Korfez, Kocaeli Province | 326 |
| Do. | | Gemlik Gübre Sanayii A.Ş. [Türkiye Gübre Sanayii A.Ş. (TÜGSAŞ)] | Gemlik, Bursa Province | 270 |
| Petroleum, refined products | thousand 42-gallon barrels per day | Türkiye Petrol Rafinerileri A. Ş. (Tüpras) (Enerji Yatırımları A.S., 51%) | Izmir refinery, Aliaga, Izmir Province | 78,650 |
| Do. | do. | do. | Izmit refinery, Izmit, Kocaeli Province | 78,650 |
| Do. | do. | do. | Kırıkkale refinery, Kırıkkale, Kırıkkale Province | 55,000 |
| Do. | do. | do. | Batman refinery, Batman, Batman Province | 12,100 |
| Do. | do. | Ersan Petrol Sanayii A.Ş. (Sayer Group, 100%) | Narli refinery, Narli, Kahramanmaraş Province | 1,330 ³ |
| Silver, ore | metric tons | Eti Gümüş A.Ş. (Yıldızlar SSS Holding) | Gumuskoç, Kutahya Province | 198 |
| Soda ash | | Eti Soda Inc. [Ciner Grubu, 74%, and Eti Maden İşletmeleri Genel Müdürlüğü (Government), 26%] | Beypazarı trona mine and soda ash plant, Beypazarı, Ankara Province | 1,000 ⁴ |
| Do. | | Soda Sanayii A.Ş. [Türkiye Şişe ve Cam Fabrikaları A.Ş. (ŞİŞECAM)] | Kazanlı, Mersin Province | 950 |
| Sulfur | | Türkiye Petrol Rafinerileri A. Ş. (Tüpras) (Enerji Yatırımları A.S., 51%) | Izmir refinery. Aliaga, Izmir Province | NA |
| Do. | | do. | Izmit refinery Izmit, Kocaeli Province | NA |
| Do. | | do. | Kırıkkale refinery, Kırıkkale, Kırıkkale Province | NA |
| Sulfuric acid | | Bandırma Bor ve Asit Fabrikaları İşletme Müdürlüğü (Eti Maden İşletmeleri Genel Müdürlüğü) (Government) | Plant at Bandırma, Balıkesir Province | 240 |

⁶Estimated. Do., do. Ditto. NA Not available.

¹Includes subbituminous coal.

²Planned expansion by 2011.

³Inactive

⁴Under construction.

