



2010 Minerals Yearbook

TURKEY

THE MINERAL INDUSTRY OF TURKEY

By Philip M. Mobbs

Turkey has a long history of mining metal ores and a diverse mineral industry that included the production of more than 60 mineral ores and types of rock. Turkey was the world's leading producer of boron minerals and pumice and was a significant producer of barite, bentonite, chromite, feldspar, kaolin, magnesite, and perlite. The country also was a significant source of value-added processed mineral commodities, such as cement, ferrochromium, 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 (table 1; Mining Journal, 2010; Angulo, 2011; Bolen, 2011; Crangle, 2011; Kramer, 2011; Miller, 2011; Tanner, 2011; van Oss, 2011; Virta, 2011; World Steel Association, 2011; J.F. Papp, Commodity Specialist, National Minerals Information Center, U.S. Geological Survey, written commun., January 23, 2012).

Minerals in the National Economy

Turkey's gross domestic product (GDP) at current prices was \$734.9 billion¹ (about 1,104 billion Turkish lira) in 2010. At constant prices (with a base year of 1998), the real GDP was \$70.4 billion in 2010 compared with about \$62.9 billion in 2009. The mining and quarrying sector accounted for about 1.4% of the GDP (T.C. Enerji ve Tabii Kaynaklar Bakanlığı, 2011; Türkiye İstatistik Kurumu, 2010b, 2011).

Government Policies and Programs

Article 168 of the Constitution (1982) and the Mining Law of June 15, 1985 (Maden Kanunu, law No. 3213) declare that natural resources, such as minerals, belong to the state and are not considered to be part of the land where they were found. The Law on Boron Minerals, Trona and Asphaltic Mines and Exploitation of Nuclear Energy Raw Materials No. 3971 of February 19, 1994, Law No. 5177 of 2004 (which amends the 1985 mining law), the Mining Activities Permitting Regulation of 2005, and the Regulation Concerning the Implementation of the Mining Law (which was issued in 2005), also regulate mining activity in Turkey. The Government issues 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) authorizes foreign investors to establish companies in Turkey that can hold mining rights under the Mining Law.

In 2010, law No. 5995 was enacted on June 24 to address the issuance of environmental permits (which had been suspended after the Constitution Court decision of January 15, 2009, to abolish Article 7 of the Mining Law). Law No. 5995 also

¹Where necessary, values have been converted from Turkish lira (TLY) to U.S. dollars (US\$) at the rate of TLY1.5069=US\$1.00 for 2010, and TLY1.5540=US\$1.00 for 2009.

addresses labor law liabilities and penalties for illegal mine production; increases royalties on the value of gold, platinum, and silver production to 4%; reduces the royalty on the value of produced stone to 1%; and clarifies sand and gravel licensing procedures (Önder, 2010).

The Maden İşleri Genel Müdürlüğü (MIGEM) [General Directorate of Mining Affairs] of the T.C. Enerji ve Tabii Kaynaklar Bakanlığı (ETKB) [Ministry of Energy and Natural Resources] regulates the mining industry. The T.C. Çevre ve Orman Bakanlığı [Ministry of Environment and Forestry] enforces the Environmental Law of 1983 (law No. 2872) and the Regulation on Environmental Impact Assessment of December 16, 2003.

The petroleum sector is regulated by the Enerji İşleri Genel Müdürlüğü [General Directorate of Energy Affairs] of the ETKB under the Petroleum Law of 1954 (law No. 6326). The distribution, export, import, refining, and sale of petroleum are licensed under and regulated by the Petroleum Market Law of 2003 (law No. 5015). The distribution, export, import, and transmission of natural gas are 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 is regulated by the Liquefied Petroleum Gases (LPG) Market Law of 2005 (law No. 5307).

Production

Most of the mineral production volumes for 2010 were estimated (table 1). Significant increases in production were reported for cement, chromite, refined copper, gold, pig iron, most refined petroleum products, and steel. Production increases were inferred from company reports for boron concentrates and refined products.

Structure of the Mineral Industry

The country's industrial minerals and metals were produced mainly by private sector companies, which also produced some coal and hydrocarbons. The Government investment in the mineral industry was estimated to be about 34% of total investment, and was focused on the boron, coal, and petroleum sectors (T.C. Enerji ve Tabii Kaynaklar Bakanlığı, 2011).

Government institutions involved in the mineral sector that were attached to the ETKB included Maden Tetkik ve Arama Genel Müdürlüğü (MTA) [General Directorate of Mineral Research and Exploration], which conducted base geologic and geophysical surveys and mining research; Petrol İşleri Genel Müdürlüğü (PIGM) [General Directorate of Petroleum Affairs], which collected information about petroleum exploration and production activity in Turkey; and Türkiye Atom Enerjisi Kurumu Başkanlığı [Turkish Atomic Energy Authority], which was responsible for policy development and the coordination

and supervision of scientific and technical activities in the nuclear sector.

Related institutions of the ETKB included Boru Hatları İle Petrol Taşıma A.Ş. Genel Müdürlüğü (BOTAS) [Petroleum Pipeline Corp.], which imported, transported, and sold natural gas, and also transported petroleum; Elektrik Üretim A.Ş. Genel Müdürlüğü [General Directorate of Electricity Generation Corp.], which produced electricity; Eti Maden İşletmeleri Genel Müdürlüğü, which retained exclusive rights to explore for and to develop boron deposits according to law No. 2840 of 1983; the Türkiye Kömür İşletmeleri Kurumu Genel Müdürlüğü (TKİ) [General Directorate of Turkish Coal Enterprises], which mined lignite and subbituminous coal; Türkiye Petrolleri Anonim Ortaklığı Genel Müdürlüğü (TPAO) [Turkish Petroleum Corp.], which explored for, produced, marketed, and refined crude oil; and Türkiye Taşkömürü Kurumu Genel Müdürlüğü (TTK) [General Directorate of Turkish Hard Coal Enterprises], which mined anthracite and bituminous coal.

Mineral Trade

In 2010, total Turkish exports of goods were valued at about \$114 billion compared with \$102 billion in 2009. The rebound in the value of exports from the challenging market conditions of 2009 also was reflected in the value of Turkish mineral commodity exports. Exports of the mining and quarrying sector were valued at about \$2.7 billion in 2010, which was an increase from about \$1.7 billion in 2009 (Türkiye İstatistik Kurumu, 2010a).

Commodity Review

Metals

Bauxite and Alumina and Aluminum.—Eti Alüminyum A.Ş., which was a subsidiary of Cengiz Holding, had increased the Seydisehir alumina plant's production capacity to 400,000 metric tons per year (t/yr) of aluminum hydrate from 200,000 t/yr. The Overseas Private Investment Corp. of the United States approved loans for two Turkish secondary aluminum plants in 2010. DT Metal Geri Kazanım Teknolojileri Sanayi ve Ticaret A.Ş. was awarded a \$30 million loan for the construction of a \$115 million 60,000-t/yr-capacity facility that would melt clean industrial scrap and used beverage cans (UBC). The plant was to be built near Tekirdag, which is located about 125 kilometers west of Istanbul. ST Hurda Metal Oğutme Teknolojileri Sanayi ve Ticaret A.Ş. was awarded a \$75 million loan for the construction of a \$115 million 41,000-t/yr-capacity aluminum scrap and UBC remelt facility that was to be built adjacent to the DT Metal plant. The ST Hurda Metal facility also would include a 5.3-megawatt-capacity electricity generating plant that was to be powered by waste heat from the remelt plant (Overseas Private Investment Corp., 2010a, b; Worldal.com, 2010).

Copper.—Eti Bakir A.Ş., which was a subsidiary of Cengiz Holding, was the leading copper producing company in Turkey. In 2010, Eti Bakir approved the development of the Bakibaba ore body, which was located at a depth of 300 meters (m) to

800 m below the 1-million-metric ton-per-year (Mt/yr)-capacity Kastamonu Kure open pit copper mine (Evans and Mayhew, 2011).

In 2010, Çayeli Bakır İşletmeleri A.Ş., which was a subsidiary of Inmet Mining Corp. of Canada, mined about 1.15 million metric tons (Mt) of ore from the underground Çayeli Mine despite the adverse effect of two ground falls and interruptions to operations owing to ongoing mine rehabilitation work, which in 2010 included the realignment of the headframe. Çayeli produced a copper concentrate that contained 28,200 metric tons (t) of copper, and a zinc concentrate. In 2009, Çayeli recovered about 3% more copper contained in concentrates from a similar tonnage of ore. The decrease in copper recovered in 2010 was attributed to several factors, including a change in the mineralogy of the mined copper ore (Inmet Mining Corp., 2011, p. 18–19).

Demir Export A.Ş., which was a subsidiary of Koç Holding A.Ş., produced and exported a concentrate that contained copper and zinc from the Lahanos Mine in Giresun Province. In 2010, Demir Export produced more than 15,800 t of concentrates (that contained an average of 20% to 22% copper) compared with more than 17,500 t of concentrates produced in 2009. Demir Export also was exploring for copper near its Samli iron mine in Balıkesir Province and planned a drill program at Samli in 2011 (Demir Export A.Ş., undated).

Park Elektrik Üretim Madencilik San. ve Tic. A.Ş. mined copper ore at Siirt Madenkoy and produced a copper concentrate that contained an average of 18% to 20% copper. In 2010, Park produced 37,426 t of copper concentrates compared with 63,138 t in 2009. Production in 2010 was adversely affected by bad weather, which resulted in the suspension of mining operations for about 4 months (Park Elektrik Üretim Madencilik San. ve Tic. A.Ş., 2010, p. 20, 24; 2011, p. 19).

A number of companies initiated exploration drill programs on prospects in 2010 and many companies expected to complete additional drill programs in 2011. As part of an agreement to acquire 65% interest in the Bursa project from Anatolia Minerals Development Ltd. of Canada, Empire Mining Corp. initiated a 4-hole 1,000-m drill program at the Demirtepe prospect. Empire planned additional drilling on the Demirtepe and the Karapınar prospects in 2011 (Empire Mining Corp., 2011, p. 4).

Eurasian Minerals Inc. reviewed previous exploration activity on the Golcuk property, including a reexamination of core recovered from the 13-hole 1,863-m drill program undertaken by Turkmenka Madencilik Sanayi ve Ticaret A.Ş. in 2008. The encouraging results of assays of additional core samples and a soil sampling program led Eurasian Minerals to enter into talks about the divestment of all (or part) of Eurasian Minerals' interest in the Golcuk property (Eurasian Minerals Inc., 2012, p. 28–29).

Pontid Madencilik Sanayi ve Ticaret Limited Şti., which was a subsidiary of Greater Pontides Exploration B.V. of the Netherlands [a joint venture of European Goldfields Ltd. of Canada (51% interest) and Ariana Resources PLC of the United Kingdom (49% interest)], completed a drill program on the Ardala copper-gold prospect on the Greater Pontides Project in northeastern Turkey. Additional drilling at Ardala was planned for 2011. Centerra Gold Inc. of Canada funded a

4-hole 1,078-m drill program for the Bakir Tepe joint venture with KEFI Minerals Plc of the United Kingdom, but by yearend, Centerra withdrew from the joint venture owing to contract requirements (KEFI Minerals Plc, 2011, p. 17).

Truva Bakir Maden İşletmeleri A.Ş., which was a joint venture of Teck Madencilik Sanayi ve Ticaret Limited A.Ş. (60%) and Fronteer Investment Inc. of the Cayman Islands [United Kingdom] (40%), completed a 9,199-m drill program on the Halilaga property. Additional drilling was scheduled for 2011, and Pilot Gold Inc. of Canada (formerly 7703627 Canada Inc.) was expected to acquire Fronteer Investment's interest in Truva. In 2010, Teck Madencilik completed a 2,564-m drill program on the Hasancelebi prospect. Additional drilling on the project was expected in 2011. Teck Madencilik was earning 51% interest in the Hasancelebi project from Stratex International plc of the United Kingdom. The Aydeniz Group started a 1,200-m drill program late in 2010 as part of an agreement to earn a 55% interest in the Muratdere project from Stratex (Pilot Gold Inc., 2011, p. 4, 38–39; Stratex International plc, 2011, p. 9).

Anatolia Minerals and Avoca Resources Ltd. of Australia initiated a merger, which was expected to be completed in 2011. The resultant organization was to be called Alacer Gold Corp. In 2010, Anatolia Minerals again limited its exploration activity on the Cevizlidere and the Karakartal copper projects to focus on the development of the Copler gold mine in Turkey. Anatolia Minerals was the operator of the Cevizlidere and the Karakartal projects for its joint-venture partner Lydia Maden İşletmeleri A.Ş. (or Lidya Madencilik Sanayi ve Ticaret A.Ş.), which changed its name from Çalık Maden İşletmeleri A.Ş. in 2010. Minor exploration activity had been conducted on the Cevizlidere project since it last was drilled in 2005 and on the Karakartal prospect since it last was drilled in 2008 (Kociumbas and Page, 2009, p. 38; Lechner, 2009, p. 20; Alacer Gold Corp., 2011, p. 5).

NiCo Mining Ltd. of Canada acquired Red Crescent Resources Ltd. of Barbados (RCRB) in 2010; the combined enterprise was named Red Crescent Resources Ltd. Red Crescent controlled Red Crescent Resources Holding A.Ş, which held an 80% interest in RCR Bakır Madencilik İthalat İhracat Ticaret ve Sanayi Limited Şti. In 2010, RCR Bakır negotiated to acquire interest in the Sivas copper property, which the company proposed to drill in 2011 (Red Crescent Resources Ltd., 2011a., p. 2; b, p. 5).

The lack of available funding resulted in limited exploration activity on several copper properties. Nuinsco Resources Ltd. of Canada proposed that exploration on the Berta and the Elmalaan projects resume in 2011. Xstrata Copper Canada, which was a unit of Xstrata plc of Switzerland, held a 50% interest in the Berta joint venture and held the right to reacquire a 50% interest in the Elmalaan prospect.

Yeni Anadolu Mineral Madencilik Sanayi ve Ticaret Limited Şti., which was a subsidiary of Alacer Gold, held the rights to the Sarp copper property, which was located in northwestern Turkey near the Bulgarian border. Valhalla Resources, (Cyprus) Ltd., which was a subsidiary of Valhalla Resources Ltd. of Canada, was earning a 65% interest in the Sarp property, which included the Derekoy, the İkiztepe, and the Sukrupasa copper

prospects. Valhalla proposed to resume exploration at Sarp in 2011.

Nickel.—Meta Nikel Kobalt A.Ş. of Turkey (a subsidiary of Meta Madencilik Limited Şti.) operated the Yunusemre open pit nickel mine in Eskisehir Province, which had started production in 2009. Between 2003 and 2008, the company also mined 230,000 t of nickel ore from the Gordes Mine in Manisa Province, of which 150,000 t of ore had been exported and 80,000 t had been stockpiled. Meta Nikel Kobalt proposed to build a processing plant at the Gordes facility and had completed an environmental impact assessment for and a feasibility study of the plant (Meta Nikel Kobalt A.Ş., undated).

With the 2010 amendment to the mining law, European Nickel PLC of the United Kingdom initiated proceedings for the Government to reissue a forestry permit for the Caldag Mine. Development operations at the mine had been suspended in 2007 pending the receipt of the permit. In 2010, European Nickel and Rusina Mining MNL of Australia merged; the new company focused its attention on developing a nickel project in the Philippines. The Caldag Mine subsequently was placed on care-and-maintenance status (European Nickel PLC, 2010a, b).

Industrial Minerals

Boron.—Eti Maden İşletmeleri Genel Müdürlüğü processed 4.4 Mt of ore to recover 2.2 Mt of boron concentrates and produced 1.4 Mt of boron chemicals and products. In terms of B₂O₃ content, Eti Maden's boron chemicals and product sales were 755,523 t in 2010 compared with 506,965 t in 2009 and 684,292 t in 2008. During the past several years, company sales had shifted to 95% chemicals and 5% concentrate in 2010 from 65% chemicals and 35% concentrate at the start of the decade. Eti Maden planned to expand its boron products capacity to 1,705,000 t from 1,365,000 t in 2010 with the expected completion of a 240,000-t/yr-capacity borax pentahydrate plant and a 100,000-t/yr increase of boric acid capacity in 2011. Additional proposed capacity-expansion projects included construction of a 550,000-t/yr-capacity sulfuric acid plant and a 500,000-t/yr-capacity boric acid plant at Emet, and construction of the company's fifth borax pentahydrate plant, which was to be built at Kirka (Eti Maden İşletmeleri Genel Müdürlüğü, 2011, p. 9, 39, 57).

Soda Ash.—The Beypazari plant of Eti Soda Inc., which was a subsidiary of the Ciner Grubu (74% interest) and Eti Maden (26% interest), produced soda ash at its full 1-Mt/yr capacity in 2010. Eti Soda initiated studies of expanding the plant's capacity to 1.5 Mt/yr. Soda Sanayii A.Ş. completed a 200,000-t/yr expansion of the production capacity at its Mersin soda ash plant and produced about 1 Mt of soda ash in 2010 (Soda Sanayii A.Ş., 2011, p. 9; Ciner Grubu, undated).

Outlook

Turkey has identified resources of a number of minerals. Most mining activity is performed by mining subsidiaries of domestic conglomerates, construction companies, metal and mineral traders, or small family-owned companies. Although international investor interest in the Turkish mineral industry

is increasing, most of the interest remains focused on the development of metals. The surge in exploration for metals by domestic and international companies may result in notable increases in metal ore production in the future (Ersçen, 1989).

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TABLE 1
TURKEY: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

Commodity	2006	2007	2008 ^e	2009 ^e	2010 ^e
METALS					
Aluminum ^c	60,000	65,000	65,000	35,000	65,000
Antimony: ^c					
Ore, mine output:					
Gross weight	25,000	28,000	50,357 ²	24,917 ²	31,000
Sb content	1,250	1,400	2,700 ^r	1,400 ^r	1,700
Concentrates:					
Gross weight	4,500	5,000	10,000	5,000	6,000
Sb content	1,100	1,200	2,400	1,200	1,500
Bauxite and alumina:					
Bauxite	771,227	1,264,933 ²	818,928 ²	1,473,181 ²	1,500,000
Alumina, gross weight	150,117	163,455	160,000	80,000	160,000
Chromium, gross weight (34% to 43% chromic oxide) ³	1,059,900	1,678,900	1,885,700 ²	1,573,993 ²	1,904,461 ²
Copper:					
Mine output, exclusive of pyrite: ⁴					
Gross weight	4,293,530 ²	4,806,198 ²	6,166,035 ²	6,470,475 ²	6,000,000
Cu content of ore	70,000 ^e	81,000 ^e	100,000	105,000	97,000
Metal:					
Smelter output, primary and secondary	30,000 ^e	30,000 ^e	30,000	--	--
Refined	106,000 ^e	100,000 ^e	88,000	33,000	47,000
Gold ⁵	8,040	9,920	11,016 ²	14,469 ²	17,000
Iron and steel:					
Iron ore:					
Gross weight	3,785	4,849	4,697 ²	4,170 ²	5,188 ²
Fe content ^c	2,000	2,600	2,500	2,200	2,700
Metal:					
Pig iron and ferroalloys:					
Cast iron ⁶	121,956	264,808	250,000	250,000	250,000
Crude (pig) iron	5,952,106	6,235,537	6,697,000 ²	6,913,325 ²	7,676,592 ²
Ferrochromium	67,975	69,730	79,840 ²	41,028 ^{r,2}	65,000
Ferrosilicon ^c	2,000	5,000	4,500	4,000	4,000
Steel, crude including castings	23,300 ^e	25,760	26,809 ²	25,304 ²	29,030 ²
Lead:					
Mine output, Pb and Pb-Zn ores:					
Gross weight	279,727	684,931	565,374 ²	599,705 ²	800,000
Pb content	13,000	32,000	25,000	26,000	35,000
Concentrates: ^c					
Gross weight	23,000	55,000	44,000	45,000	65,000
Pb content	11,000 ^r	28,000 ^r	22,000 ^r	23,000 ^r	32,000
Metal, refined ^c	6,000	6,000	6,000	6,000	6,000
Manganese ore, gross weight ⁷	32,144	42,033	51,703 ²	141,246 ²	140,000
Mercury	--	65	-- ²	-- ²	--
Molybdenum, ore, gross weight	--	185	25 ²	-- ²	--
Nickel, mine output, Ni content ^c	1,500	500 ^r	500 ^r	100 ^r	400
Silver, mine output, Ag content ⁸	167,340	198,000 ²	294,000 ²	351,600 ²	350,000
Zinc: ^c					
Mine output, Zn and Cu-Zn ore:					
Gross weight	2,500 ^r	2,000 ^r	2,600 ^r	2,800 ^r	4,000
Zn content	290 ^r	230 ^r	300 ^r	320 ^r	460
Concentrates:					
Gross weight	700,000 ^r	600,000 ^r	700,000 ^r	750,000 ^r	1,100,000
Zn content	250,000 ^r	200,000 ^r	255,000 ^r	275,000 ^r	400,000
INDUSTRIAL MINERALS					
Aluminum sulfate, alunite	6,683	2,511	15,324 ²	2,068 ²	2,000
Barite, crude	161,993	184,041	482,740 ²	213,187 ²	250,000
Boron minerals:					
Run of mine	3,955,574	4,406,970	4,897,869 ²	3,923,494 ²	4,442,918 ²
Concentrates	1,818,944	2,127,812	2,139,224 ²	1,800,000	2,200,000
Refined borates	1,021,139	1,092,056	1,300,000	1,000,000	1,400,000

See footnotes at end of table.

TABLE 1—Continued
TURKEY: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

Commodity	2006	2007	2008 ^e	2009 ^e	2010 ^e
INDUSTRIAL MINERALS—Continued					
Cement, hydraulic thousand metric tons	47,977	49,553	51,432 ²	53,973 ^{r,2}	62,737 ²
Clays:					
Bentonite	1,134,251	1,742,487	1,553,588 ²	932,487 ²	900,000
Kaolin	1,064,107	914,117	792,044 ²	727,649 ²	711,493 ²
Other	3,034,560	2,871,145	3,261,379 ²	2,412,609 ²	2,700,000
Diatomite	45,420	33,135	62,685 ²	27,634 ²	30,000
Emery	13,899	19,108	57,722 ²	28,198 ²	30,000
Feldspar, run of mine	5,771,892	6,548,796	6,767,500 ²	4,212,547 ²	5,000,000
Fluorite	--	--	2,931 ²	3,756 ²	4,000
Glass, crude ^e thousand metric tons	1,600	1,900	2,300	1,800	2,000
Graphite, run of mine ^e	-- ²	-- ²	3,236 ²	2,400 ²	3,000
Gypsum	4,369,771	3,241,177	7,338,127 ²	4,369,589 ²	4,000,000
Lime ^{e,9} thousand metric tons	3,800 ^r	4,000 ^r	4,000 ^r	3,800 ^{r,2}	4,300
Magnesium, magnesite, run of mine	2,088,033	802,406 ²	677,784 ²	861,180 ²	1,000,000
Mica:					
Illite	27,898	57,774	61,577 ²	36,509 ²	40,000
Other	--	3,313	8,392 ²	4,172 ²	4,500
Nepheline syenite	--	400	--	759 ²	1,000
Nitrogen, N content of ammonia	91,665	--	50,000	100,000	200,000
Obsidian	--	226	--	19	20
Olivine	191,298	145,839	170,631 ²	168,567 ²	170,000
Peat	185,944	145,403	113,112 ²	65,315 ²	70,000
Perlite, run of mine	474,966 ²	478,579 ²	551,266 ²	522,832 ²	530,000
Phosphate rock	1,300 ^e	1,300 ^e	1,000	1,000	1,100
Pumice	3,515,644	3,995,423	3,449,733 ²	4,322,543 ²	4,000,000
Pyrites, cupreous, gross weight	63,674 ²	109,100 ²	116,091 ²	124,130 ²	125,000
Quartz and quartzite	1,871,887	2,146,969	1,762,972 ²	1,943,877 ²	2,000,000
Sepiolite (meerschaum) and palygorskite (attapulgit) ¹⁰	19,242 ²	36,402 ²	3,724 ²	3,448 ²	3,200
Silica (quartz) sand, gross weight	2,608,260	4,997,694	2,422,587 ²	4,499,154 ²	4,000,000
Sodium compounds:					
Salt, NaCl, all types thousand metric tons	4,225 ²	2,366 ²	2,472 ²	3,768 ²	4,000
Soda ash, trona do.	891	947	949 ²	1,079 ²	2,000
Sodium sulfate, concentrates	226,014	1,120,968	961,295 ²	4,592,014 ²	5,000,000
Stone:					
Basalt	2,485,956	4,115,184	3,307,107	1,908,544 ²	2,000,000
Dolomite	14,621,691	15,672,171	16,440,257 ²	11,152,094 ²	11,000,000
Granite	320,069	252,354	367,959 ²	324,718 ²	350,000
Limestone, other than for cement thousand metric tons	5,876	7,171	7,200	7,000	7,200
Marble cubic meters	1,855,740	2,801,757	2,262,537 ²	2,715,601 ²	3,000,000
Onyx do.	2,578	5,663	2,145 ²	2,322 ²	2,300
Travertine do.	1,017,672	995,065	759,118 ²	1,002,866 ²	3,000,000
Strontium minerals, celestite: ^e					
Run of mine	10,500	6,700	2,600	--	--
Concentrates	6,300	4,200	1,600	--	--
Sulfur: ^e					
Byproduct:					
Petroleum	69,000	65,000	63,000	45,000	50,000
Other	20,000	20,000	20,000	--	--
S content of pyrites	30,000	50,000	55,000	60,000	60,000
Total	119,000	135,000	138,000	105,000	110,000
Talc	4,969	12,722	3,364 ²	6,887 ²	8,000
Titanium minerals, rutile, gross weight	--	20	20	4,000 ²	8,000
Zeolite	121,014	104,138	107,951 ²	141,728 ²	150,000
MINERAL FUELS AND RELATED MATERIALS					
Asphalt, natural	474,523	781,649	750,000	750,000	780,000
Carbon black	51,788	40,379	40,000	30,000	30,000

See footnotes at end of table.

TABLE 1—Continued
TURKEY: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

Commodity	2006	2007	2008 ^e	2009 ^e	2010 ^e	
MINERAL FUELS AND RELATED MATERIALS—Continued						
Coal:						
Hard coal, run of mine	thousand metric tons	3,071	3,233	3,343 ²	3,774 ²	3,667 ²
Lignite, run of mine	do.	61,006	70,606	85,953 ²	82,263 ²	74,437 ²
Coke and semicoke	do.	3,261	3,337	4,063 ²	4,000	3,900
Gas, natural, marketed	thousand cubic meters	306,136	287,501	894,667 ^{r,2}	660,391 ^{r,2}	625,713 ²
Petroleum:						
Crude	thousand 42-gallon barrels	15,300	15,000 ^e	15,200	17,000 ^r	17,800
Refinery products: ^e						
Liquefied petroleum gas	do.	9,300	8,800	8,900	7,200	7,900
Gasoline	do.	30,800	33,900	37,700	30,000	33,000
Naphtha	do.	11,500	7,200	4,600	3,700	4,000
Jet fuel and kerosene	do.	17,100	20,500	22,400	15,900	21,000
Distillate fuel oil ¹¹	do.	56,800	53,000	49,000	35,200	36,600
Lubricants	do.	2,300	2,100	1,800	1,700	2,200
Residual fuel oil	do.	38,600	36,200	31,700	13,800	16,000
Asphalt	do.	13,400	13,900	13,600	12,200	16,900
Unspecified ¹²	do.	5,300	5,300	2,500	2,600	5,300
Total	do.	185,000	181,000	172,000	122,000	143,000

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

¹Table includes data available through January 20, 2012. In addition to the commodities listed, large quantities of construction materials (sand and gravel) are quarried. Also mined are diabase, sandstone, serpentine, and slate for building stone; gypsum and limestone for cement manufacture; and cobalt, garnet, iron oxide pigment, and tungsten, but available information is inadequate to make reliable 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.

¹⁰Entry for sepiolite (meerschaum) and palygorskite (attapulgitite), which are magnesium aluminum silicates, formerly included only sepiolite production of 170 kilograms (kg) in 2005, 130 kg in 2006, 50 kilograms in 2007, and 50 kilograms in 2008.

¹¹Diesel fuel (gasoil) and special heating oil.

¹²Includes refinery fuel and losses.

TABLE 2
TURKEY: STRUCTURE OF THE MINERAL INDUSTRY IN 2010

(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
Antimony ore	Özdemir Antimuan Maden Limited Şti.	Near Turhal, Tokat Province	NA
Bauxite and alumina:			
Alumina	do.	Refinery at Seydisehir, Konya Province	400
Bauxite	do.	Mines near Madenli, about 25 kilometers south of Seydisehir, Konya Province	500
Do.	Demireller Tarım Madencilik Petrol Sanayi ve Ticaret Limited Şti.	Mines near Arslankoy, Mersin Province	500
Do.	Albuck Madencilik San. ve Tic. A.Ş.	Mine near Cirpi, Mugla Province	NA
Do.	do.	Mine near Mihaliccik, Eskisehir Province	NA
Boron:			
Concentrate and ground ore	Bigadiç Bor İşletme Müdürlüğü (Eti Maden İşletmeleri Genel Müdürlüğü) (Government)	Three open pit mines at Bigadic, Balikesir Province	650
Do.	Emet Bor İşletme Müdürlüğü (Eti Maden İşletmeleri Genel Müdürlüğü) (Government)	Espey Mine, Emet, Kutahya Province	500
Do.	do.	Hisarcik 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, Balikesir 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, Afyonkarahisar 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.	Aslan Çimento A.Ş. [Ordu Yardımlaşma Kurumu (OYAK) Çimento Grubu, 97%]	Darica plant, Gebze, Kocaeli Province	2,880
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%)	Poyracik, near Kinik, 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.	Batısöke Söke Çimento Sanayii ve Ticaret A.Ş. (Batıçim Batı Anadolu Çimento Sanayii A.Ş., 75%)	Soke, Aydin 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. (Intercecm SA, 67%, and Cementir Holding SpA, 29%)	Isikkent, Izmir Province	2,600
Do.	do.	Trakya plant, Lalapasa, Edirne Province	1,300

See footnotes at end of table.

TABLE 2—Continued
TURKEY: STRUCTURE OF THE MINERAL INDUSTRY IN 2010

(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 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
Do.	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, Ankara 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.S., 50%)	About 5 kilometers northwest of Kaklık, 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%)	Elazig, Elazig Province	900
Do.	Ereğli Çimento Sanayii ve Ticaret A.Ş. [Ordu Yardımlaşma Kurumu (OYAK) Çimento Grubu, 50%]	Karadeniz Ereğli plant, Kemer, Zonguldak Province	300
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 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)	Sanliurfa plant, about 14 kilometers north-northwest of Sanliurfa, Sanliurfa 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.	Balıkesir, Balıkesir Province	500
Do.	Traçim Çimento Sanayii ve Ticaret A.Ş. (Soyak Holding A.Ş. and TBS Taşıma Beton A.Ş.)	Evrencik, Vişne, 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%]	Ünye, Ordu Province	2,600
Slag	KarÇimsa Çimento Sanayii ve Ticaret A.Ş. (Akçansa Çimento Sanayi ve Ticaret A.Ş.)	Karabuk, Karabuk Province	200

See footnotes at end of table.

TABLE 2—Continued
TURKEY: STRUCTURE OF THE MINERAL INDUSTRY IN 2010

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Cement—Continued:			
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
Coal:			
Anthracite	Armutçuk Taskömrü İşletme Müessesesi [Türkiye Taşkömrü Kurumu Genel Müdürlüğü (T.T.K.)] (Government)	Armutçuk Mine, Kandilli, Zonguldak Province	400
Do.	Amasra Taskömrü İşletme Müessesesi [Türkiye Taşkömrü Kurumu Genel Müdürlüğü (T.T.K.)] (Government)	Amasra Mine, Amasra, Bartın Province	300
Do.	Karadon Taskömrü İşletme Müessesesi [Türkiye Taşkömrü Kurumu Genel Müdürlüğü (T.T.K.)] (Government)	Karadon Mine, Kilimli, Zonguldak Province	450
Do.	Kozlu Taskömrü İşletme Müessesesi [Türkiye Taşkömrü Kurumu Genel Müdürlüğü (T.T.K.)] (Government)	Kozlu Mine, Kozlu, Zonguldak Province	600
Do.	Üzülmez Taskömrü İşletme Müessesesi [Türkiye Taşkömrü Kurumu Genel Müdürlüğü (T.T.K.)] (Government)	Uzulmez Mine, Asma, Zonguldak Province	500
Lignite ¹	Bursa Linyitleri İşletmesi Müdürlüğü [Türkiye Kömür İşletmeleri Kurumu (TKİ)] (Government)	Bursa lignite facility, Orhaneli, Bursa Province	1,000
Do.	Çan Linyitleri İşletmesi Müdürlüğü [Türkiye Kömür İşletmeleri Kurumu (TKİ)] (Government)	Can lignite facility, Can, Canakkale Province	1,800
Do.	Ege Linyitleri İşletmesi Müessesesi Müdürlüğü [Türkiye Kömür İşletmeleri Kurumu (TKİ)] (Government)	Soma Mine, Soma, Manisa Province	10,500
Do.	Garp Linyitleri İşletmesi Müessesesi Müdürlüğü [Türkiye Kömür İşletmeleri Kurumu (TKİ)] (Government)	Tuncbilek mining center, Tavşanlı, Kutahya Province	7,000
Do.	Güney Ege Linyitleri İşletmesi Müessesesi Müdürlüğü [Türkiye Kömür İşletmeleri Kurumu (TKİ)] (Government)	South Aegean lignite facility, Yatagan, Muğla Province	4,900
Do.	İlgin Linyitleri İşletmesi Müdürlüğü [Türkiye Kömür İşletmeleri Kurumu (TKİ)] (Government)	İlgin lignite facility, Ilgin, Konya Province	300
Do.	Seyitömer Linyitleri İşletmesi Müessesesi Müdürlüğü [Türkiye Kömür İşletmeleri Kurumu (TKİ)] (Government)	Seyitömer lignite facility, Seyitömer, Kutahya Province	8,000
Do.	Yeniköy Linyitleri İşletmesi Müdürlüğü [Türkiye Kömür İşletmeleri Kurumu (TKİ)] (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 Çakmakçaya Mines), Murgul, Artvin Province	20
Do.	Park Elektrik Üretim Madencilik San. ve Tic. A. Ş.	Siirt Madenkoy	20
Do.	Demir Export A.Ş. (Koç Holding A.Ş.)	Lahanos Mine, Giresun Province	4
Anode (blister)	Karadeniz Bakır İşletmeleri (KBI) (Cengiz Holding)	KBI smelter, Tekkekoy, Samsun Province	38
Cathode	Sarkuysan Elektrolitik Bakır San. ve Tic. A.Ş.	Darica, Kocaeli Province	200
Do.	Er-Bakır Elektrolitik Bakır Mamulleri A.Ş.	Denizli, Denizli Province	200
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, Kutahya 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. (ATP İnşaat ve Ticaret A.Ş., 60%, and Koza İpek Holding A.Ş., 40%)	Ovacık Mine, Ovacık, Muğla Province	6,000
Au content	do.	Mastra Mine, near Demirkaynak, Gumushane Province	5,000
Do.	do.	Havran Mine, Balıkesir Province	3,000

See footnotes at end of table.

TABLE 2—Continued
TURKEY: STRUCTURE OF THE MINERAL INDUSTRY IN 2010

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Gold, ore, kilograms	Tüprağ Metal Madencilik Sanayi ve Ticaret A.Ş. (Eldorado Gold Corp., 100%)	Kisladag Mine, Katranci, Usak Province	7,500
Au content—Continued			
Do.	Pomzaexport Madencilik San. ve Tic. A.Ş.	Sardes placer mine, Manisa Province	NA
Iron and steel:			
Iron ore	Erdemir Madencilik Sanayi ve Ticaret A.Ş. (Ereğli Demir ve Çelik Fabrikalari T.A.Ş.) (Erdemir)	Fourteen mines in the Divrigi 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
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, Izmir Province	750
Do.	Çelik Makina Sanayi ve Ticaret A.Ş. (ÇEMTAŞ)	Bursa, Bursa Province	174
Do.	CER Çelik Endüstrisi A.Ş.	Plant at Bornova, Izmir Province	850
Do.	Çolakoğlu Metalurji A.Ş.	Dilovasi, Kocaeli Province	3,200
Do.	Diler Demir Çelik Endüstrisi ve Ticaret A.Ş.	do.	1,500
Do.	Ege Çelik Endüstrisi Sanayi ve Ticaret A.Ş.	Aliaga, Izmir Province	2,000
Do.	Ekinciler Holding A.Ş.	About 10 kilometers north of Iskenderun, Hatay Province	1,000
Do.	Erege Metal Demir Çelik Sanayi ve Ticaret A.Ş.	Aliaga, Izmir Province	720
Do.	Ereğli Demir ve Çelik Fabrikalari T.A.Ş. (Erdemir) (Ataer Holding A.Ş., 49.29%, and ArcelorMittal, 24.99%)	Karadeniz Ereğli, Zonguldak Province	3,800
Do.	Habaş Sınai ve Tibbi Gazlar İstihsal Endüstrisi A.S. (Habaş Topluluğu)	Aliaga, Izmir Province	3,000
Do.	İçdaş Demir Çelik Enerji Tersane ve Ulaşım Sanayi A.Ş.	Istanbul (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. (İsdemir) [Ereğli Demir ve Çelik Fabrikalari T.A.Ş. (Erdemir), 92%]	İskenderun, Hatay Province	4,000
Do.	İzmir Demir Çelik Sanayi A.Ş. (İDÇ)	Aliaga, Izmir Province	1,320
Do.	Kaptan Demir Çelik Endüstrisi ve Ticaret A.Ş.	Marmara Ereglisi, 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	1,500
Do.	Kroman Çelik Sanayii A.Ş.	Cayirova, Kocaeli Province	1,250
Do.	Makina ve Kimya Endüstrisi Kurumu Genel Müdürlüğü (MKEK)	Kirikkale, Kirikkale Province	60
Do.	Mega Demir Mamulleri Sanayi ve Ticaret Ltd. ŞTI	North of Iskenderun, 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.	Tosyalı Demir Çelik Sanayi A.Ş. (Tosyalı Holding A.Ş.)	İskenderun, Hatay Province	NA
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, Izmir 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, Izmir Province	300
Do.	Çolakoğlu Metalurji A.Ş.	Dilovasi, 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, Izmir Province	1,200
Do.	Ekinciler Holding A.Ş.	About 10 kilometers north of Iskenderun, Hatay Province	1,100

See footnotes at end of table.

TABLE 2—Continued
TURKEY: STRUCTURE OF THE MINERAL INDUSTRY IN 2010

(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—Continued	Erege Metal Demir Çelik Sanayi ve Ticaret A.Ş.	Aliaga, Izmir 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 Sınai ve Tibbi Gazlar İstihsal Endustrisi A.S. (Habaş Topluluğu)	Aliaga, Izmir Province	NA	
Do.	İçdaş Demir Çelik Enerji Tersane ve Ulaşım Sanayi A.Ş.	Istanbul (Gunesli), Istanbul Province	1,500	
Do.	do.	About 25 kilometers north of Biga, Canakkale Province	1,500	
Do.	Intermet A.Ş.	Two rolling mills, Istanbul, Istanbul Province	600	
Do.	İskenderun Demir ve Çelik A.Ş. (Isdemir) [Ereğli Demir ve Çelik Fabrikaları T.A.Ş. (Erdemir), 92%]	Iskenderun, Hatay Province	3,500	
Do.	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.	Kocaer Haddecilik Sanayi ve Ticaret Ltd. ŞTI. (Kocaer 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, Istanbul 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 regasification terminal, Sultankoy, Tekirdag Province	6,500
Do.	do.	EgeGas LNG (Çolakoğlu Group, 100%)	Aliaga regasification terminal, Aliaga, Izmir Province	6,000
Magnesite, dead-burned		Kümaş Kütahya Manyezit İşletmeleri A.Ş. (Zeytinoğlu 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.	Kirikkale refinery, Kirikkale, Kirikkale 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)	Gumuskoy, Kutahya Province	198

See footnotes at end of table.

TABLE 2—Continued
TURKEY: STRUCTURE OF THE MINERAL INDUSTRY IN 2010

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Soda ash	Eti Soda Inc. [Ciner Grubu, 74%, and Eti Maden İşletmeleri Genel Müdürlüğü (Government), 26%]	Beypazari trona mine and soda ash plant, Beypazari, Ankara Province	1,000 ⁴
Do.	Soda Sanayii A.Ş. [Türkiye Şişe ve Cam Fabrikaları A.Ş. (ŞİŞECAM)]	Kazanli, Mersin Province	1,150
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.	Kirikkale refinery, Kirikkale, Kirikkale Province	NA
Sulfuric acid	Bandırma Bor ve Asit Fabrikaları İşletme Müdürlüğü (Eti Maden İşletmeleri Genel Müdürlüğü) (Government)	Plant at Bandırma, Balıkesir Province	240
Zinc concentrate, Zn content	Çayeli Bakır İşletmeleri A.Ş. (Inmet Mining Corp., 100%)	Cayeli Mine, near Cayeli, Rize Province	52
Do.	Meskan Ölmez Madencilik Harfiyat İnşaat yol Yapım Petrol Ürünleri İthalat İhracat Nakliye Taahüt San. ve Tic.	Mines in Hakkari Province	20
Do.	Silvermet Inc.	Iskenderun, Hatay Province	12
Do.	Dedeman Madencilik Tic. ve San. A.Ş.	The Delikkaya and the Yesil Hisar Cadirkaya Mines, Kayseri Province	10
Do.	Çankkale Madencilik Limited Şti.	Koru Mine, Canakkale Province	5
Do.	Elkin Maden Tic. ve San. A.Ş.	Mines in Hakkari Province	NA
Do.	Seyitoğlu Madencilik A.Ş.	do.	NA

⁰Estimated. Do., do. Ditto. NA Not available.

¹Includes subbituminous coal.

²Planned expansion by 2011.

³Inactive.

⁴Under construction.