



2006 Minerals Yearbook

ITALY

THE MINERAL INDUSTRY OF ITALY

By Walter G. Steblez

In 2006, Italy's gross domestic product (GDP) grew by 1.9% compared with that of 2005 and amounted to an estimated \$1.8 trillion; it was the fourth largest economy in the European Union (EU), after Germany, the United Kingdom, and France. The country's economy was complex and highly developed with industry accounting for about 29% of the GDP. Heavy industry comprised facilities for the production of chemicals and iron and steel, for machine building and metal working, and for automotive assembly. These sectors were heavily dependent on imported nonfuel and fuel mineral inputs (U.S. Central Intelligence Agency, 2006). The acquisition of the Lucchini Steel Group by OAO Severstal of Russia was one of the highlights in the country's mineral industry in 2006.

Minerals in the National Economy

Italy's mineral industries produced such metals as copper, iron and steel, lead, and zinc, all important material for the country's manufacturing sector. The raw materials used to produce these and other metals stemmed from imported ores and concentrates and from secondary scrap recovery. The country was also highly import-dependent on mineral fuels; it remained, however, an important world producer of a variety of industrial minerals, which included cement, clays, feldspar, lime, marble, pumice, and sand and gravel.

Government Policies and Programs

The Government continued to play a role in the economy through regulation of ownership of large industrial and financial companies; privatization and regulatory reform in accordance with EU directives, however, had reduced that presence. Italy's basic mining legislation was mining law No. 1443 of July 29, 1927, which gave subsoil ownership of minerals to the state. The reimbursement of the state by mining concessionaires was regulated by law No. 752 of June 10, 1982. Quarrying operations were regulated by law No. 44 of September 1982.

As a member of the EU, Italy's national environmental policy generally is in full accord with established EU environmental laws and regulations. Such disparities between the two sides as definition of terminology (waste) persisted, however, and had bearing on Italy's ferrous and nonferrous metals scrap sector (Ferrigno, 2003). Environmental issues in Italy were focused on three main problem areas—air pollution from industrial emissions, such as sulfur dioxide; water pollution of coastal and inland rivers from industrial and agricultural effluents; and such natural hazards as landslides, avalanches, volcanic eruptions, and land subsidence in Venice (U.S. Central Intelligence Agency, 2006).

In the industrial minerals sector, a new legislative decree that superseded law No. 748/1984, which stipulated the replacement

of all domestic Italian mineral fertilizer grades with those within the parameters of EU standards. Compulsory registration of fertilizer producers and products was specified in the legislation (Fertilizer Week, 2006).

Production

In 2006, the iron and steel sector reported production increases for pig iron and crude steel of about 1% and 9%, respectively, compared with output levels in 2005. During the same period, the nonferrous sector showed mixed results. Aluminum and copper production increased by about 2% and 13%, respectively, compared with that of 2005; the output of lead and zinc metal, however, declined by about 10% each. In the industrial minerals sector, cement output rose by about 7.3% compared with that of 2005. Among mineral fuels, natural gas and petroleum production declined by about 8% and 5%, respectively (table 1).

Structure of the Mineral Industry

Private and mixed public and private entities were the principal owners of Italy's minerals industries. Full Government (public) ownership continued mainly in the mineral fuels sector (table 2).

Mineral Trade

In 2005 (the latest year for which foreign trade data were available), Italy's trade was mainly with other member-countries of the EU. Exports to the EU amounted to more than €173 billion¹ (\$228 billion) and accounted for about 59% of total exports. Imports from the EU amounted to about €175 billion (\$231 billion) and accounted for about 57% of total imports. As a percentage of total exports, the value of fuel and nonfuel minerals constituted about 0.3%. Fuel and nonfuel minerals, however, accounted for more than 14% of the value of total imports. Among imports of mineral fuels and related material, natural gas and oil imports amounted to more than €39 billion (\$51 billion), which was an import increase of about 40% compared with that of 2004 and constituted about 96% of total imports in this category. Imports of metal ores and concentrates amounted to about €1.4 billion (\$1.8 billion), which was an increase of about 38% compared to those of 2004. Imports of industrial minerals amounted to about €1.2 billion (\$1.6 billion), which was an increase of about 3.4% compared with that of 2004 (Istituto Nazionale di Statistica, 2006).

¹Values have been converted from the Euro (€) to U.S. dollars (\$) at a rate of €0.76=US\$1.00 for 2006.

Commodity Review

Metals

Aluminum and Bauxite and Alumina.—In 2006, Italy's output of primary and secondary aluminum increased by about 0.7% and 1.7%, respectively (table 1). The country's chief producers of alumina and primary aluminum were Alcoa Italia S.p.A. and Eurallumina S.p.A. In August, Eurallumina was acquired by UC Rusal, which was a major Russian producer of aluminum. Rusal purchased 56.2% of Eurallumina's stock from Rio Tinto plc of the United Kingdom. Eurallumina's alumina refinery in the Porto Vesme Industrial Area in southwestern Sardinia produced metallurgical-grade alumina and aluminum hydrate for domestic consumption by Alcoa's primary aluminum smelter in the same area and for export (Rio Tinto plc, 2006; UC Rusal, 2006a, b).

Copper.—KME Group S.p.A. (a major European refiner and fabricator of copper headquartered in Florence) conducted its operations within Italy under its subsidiary Europa Matalli S.p.A. at Barga and at Scrivia. Copper and copper semimanufactures were the main products at these locations. Italy imported small amounts of copper concentrate and relied mainly on scrap recovery and imports. In 2006, refined primary and secondary copper production increased by about 13%.

Gold.—Midyear 2006, Sargold Resource Corp. of Canada finalized the acquisition of Sardinia Gold Mines S.p.A. (SGM) from Medoro Resources Ltd. Sargold received 90% of SGM's shares for about €1 million (\$1.32 million). Sargold also acquired a 75% interest in SGM Ricerche S.p.A. (also for about \$1.32 million), which held major interests in the Monte Ollastedu gold exploration project (Sargold Resource Corp., 2006c). By yearend, Sargold held the largest share of gold exploration and development assets in Sardinia; they included the Furtei, the Monte Ollastedu, and the Osilo properties (Sargold Resource Corp., 2006b).

The Furtei deposit was worked until 2003 by the Furtei Gold Mine; the company beneficiated about 400,000 metric tons per year (t/yr) of ore. Sargold indicated that the mine and beneficiation plant were well maintained; plans to restart operations were under review during the year. The deposit holds strata-bound mineralization of Tertiary age and was estimated to contain a resource of 584,000 troy ounces of gold. Additional gold deposits had been delineated by SGM in the Furtei region, which Sargold reportedly planned to explore further. Sargold also planned to conduct exploration for gold at the Monte Ollastedu and the Osilo properties (Sargold Resource Corp., 2006a).

In late 2006, Adroit Resources Inc. of Vancouver, British Columbia, Canada, conducted exploration for gold in the southern Tuscany area. Adroit explored 10 properties, which covered an area of about 6,400 hectares (15,815 acres), to validate the presence of Carlin-type epithermal gold (Adroit Resources Inc., 2006).

Iron and Steel.—Italy remained a major European producer and consumer of pig iron and crude and finished steels. In 2006, the output of pig iron and crude steel increased by about 1%

and 9%, respectively, compared with that of 2005 (table 1). In 2005 (the latest year for which comparable iron and steel data were available), Italy produced more than 11.4 million metric tons (Mt) of pig iron and more than 29 Mt of crude steel, which placed the country as the third ranked pig iron producer in Europe [excluding the Commonwealth of Independent States (CIS)] after Germany and France, and the second ranked producer of crude steel after Germany. Italy's apparent consumption of crude steel ranked the country second in Europe (excluding the CIS) after Germany. Italy's apparent consumption of finished steel amounted to more than 31 Mt, which was the second largest consumption level in Europe and Central Eurasia, after Germany (International Iron and Steel Institute, 2006, p. 3, 10, 77, 80, 83).

Important transactions during the year in Italy's iron and steel sector included the acquisition in October of controlling shares in Lucchini by Severstal, which followed Severstal's acquisition of Lucchini's stock throughout the preceding year (Helmer, 2007; OAO Severstal, 2007). In 2005, Russia's other major steel producer, Evraz Holding, acquired controlling interest (75% equity) in Italy's Palini e Bertoli S.p.A. iron and steel works, which was a 500,000-t/yr steel rolling operation that would process Evraz's steel slabs (Kommersant, 2005).

As part of a divestiture agreement of specified EU-based steel assets, Arcelor Mittal agreed to the sale of Travi e Profilati di Pallanzo (rolling mill) and San Zeno Acciai (electric arc furnace steel plant) in northern Italy. The divestiture agreement was one of the conditions set by the EU for Mittal Steel N.V.'s acquisition of Arcelor S.A. earlier in the year (Arcelor Mittal, 2006).

Lead and Zinc.—In 2006, Italy's output of refined lead (primary and secondary) and zinc (primary) declined by 9.7% and 9.9%, respectively. Because domestic mine production of lead and zinc (located in Sardinia) was minor, Italy depended on imports of lead and zinc ores and concentrates. Italy imported most of its requirements for lead and zinc concentrates; a minor amount of lead and zinc concentrate, however, was produced in Sardinia. Glencore International AG of Switzerland remained the country's principal processor (smelter and refiner) of lead and zinc (table 2).

Industrial Minerals

In 2006, Italy remained a leading European and global producer of such industrial minerals as bromine (among top 13 world producers), pumice (27% of world output), feldspar (19% of world output), bentonite (4% of world output), cement (2% of world output), lime (2% of world output), and gypsum (1% of world output) (Founie, 2007a, b; Lyday, 2007; Miller, 2007; Potter, 2007; van Oss, 2007; Virta, 2007). Industrial minerals for which there were insufficient domestic resources and had to be imported (main supplier indicated) included ball clay, barite (Ukraine), chamotte (Germany), fluorspar (China), kaolin (United States), magnesite (Turkey), mica (China), and talc (China) (Wilson, 2007).

In December, Pumex S.p.A., which was the world's leading producer of pumice and pumice products, reportedly ceased mining operations. Pumex operations were located in Lipari

off the northwest coast of Sicily—an island that in 2000 became part of the Aeolian island group that was declared a World Heritage Site by the United Nations Educational, Scientific, and Cultural Organization (UNESCO). Company spokespersons indicated that operations were to continue through processing stocks, which were sufficient for about 12 months. Mining operations would resume when inconsistencies between environmental and commercial policies were resolved (Industrial Minerals, 2007).

Mineral Fuels and Other Sources of Energy

Coal.—Although no coal production was reported for 2006, Carbosulcis S.p.A., which was a Sardinian Government-owned coal-mining enterprise, reached an agreement in November with Enel S.p.A. that called for Carbosulcis to provide 1.1 Mt of coal to Enel within 3 years. Enel was Italy's largest power company; Carbosulcis was the country's only coal mining enterprise; it had coal reserves estimated to amount to 600 Mt (Carbosulcis S.p.A., 2006).

Natural Gas and Petroleum.—In 2006, Italy's output of natural gas and petroleum declined by about 8.2% and 5.0%, respectively, compared with that of 2005. The country was not well-endowed with hydrocarbons and imported as much as 80% of its total domestic needs of gas and oil. Italy's natural gas reserves were estimated to be 16 billion cubic meters, and its petroleum reserves were estimated to be 100 Mt (table 1; BP p.l.c., 2007).

Major issues in the oil and gas sector included plans to put the Tempa Rossa oilfield in the southern Apennines into production by 2010; petroleum would be extracted from six wells, of which five had been drilled by 2006. At full capacity, output at Tempa Rossa was envisaged to amount to about 50,000 barrels per day of petroleum, which would be transported to the Toranto refinery by pipeline. Total S.A. of France held 50% of Tempe Rossa's shares; Exxon Mobil Corp. and Royal Dutch Shell plc each held 25% (Petroleum Economist, 2006b). In midyear, Eni S.p.A. of Italy obtained government approval to develop the Guendalina and the Tea gasfields in the northern Adriatic area. Eni and Mediterranean Oil & Gas Plc of the United Kingdom owned 80% and 20% interest in the project, respectively (Petroleum Economist, 2006a). In April, Italy and Tunisia signed an agreement to expand the capacity of the pipeline that carried natural gas from Algeria to Italy through Tunisia. The project, which was valued at about \$400 million, would raise the pipeline carrying capacity to 33.9 billion cubic meters per year from 27.4 billion cubic meters per year (Alexander's Gas & Oil Connections, 2006).

Nuclear Energy.—In September, Metex Resources Ltd. of Australia announced plans to explore for uranium in Lombardy. Deposits that were estimated to hold inferred resources of 870,000 metric tons of ore (0.15% U₃O₈) were discovered in the 1960s. The company submitted an application for an exploration license to the Lombardy government, which, in response to pressure from local groups, placed a moratorium on processing the application. The area covered by Metex's exploration license application was about 291 hectares (719 acres) near Valgolio (Metex Resources Ltd., 2006).

Outlook

Italy is expected to continue to be a major producer of consumer and producer durables and to continue to rely on imported and recycled mineral raw materials. The country is likely to continue to rely on major imports of mineral fuels, despite some anticipated increases in domestic production from new deposits coming onstream in the near term.

References Cited

- Adroit Resources Inc., 2006, Adroit updated Tuscany gold projects: Vancouver, British Columbia, Canada, Adroit Resources press release, October 3, 2 p.
- Alexander's Gas & Oil Connections, 2006, Tunisia and Italy sign gas pipeline deals: Alexander's Gas & Oil Connections, v. 11, no. 8, April 20, 1 p.
- Arcelor Mittal, 2006, Arcelor Mittal announces sale of Italian long carbon steel products: Rotterdam, Netherlands, Arcelor Mittal press release, December 13, 2 p.
- BP p.l.c., 2007, BP statistical review of world energy: London, United Kingdom, BP p.l.c., June, 48 p.
- Carbosulcis S.p.A., 2006, Ripartenza delle attivita' produttive: Sardinia, Italy, Carbosulcis, S.p.A. press release, November, 1 p.
- Ferrigno, Robert, 2003, A case study on the implementation of EU environmental legislation—Italy: Brussels, Belgium, European Environmental Bureau, March, 4 p.
- Fertilizer Week, 2006, Italy revises fertilizer trade regulation: Fertilizer Week, v. 20, no. 7, May 26, p. 3.
- Founie, Alan, 2007a, Gypsum: U.S. Geological Survey Mineral Commodity Summaries 2007, p. 74–75.
- Founie, Alan, 2007b, Pumice: U.S. Geological Survey Mineral Commodity Summaries 2007, p. 126–127.
- Helmer, John, 2007, Mayday, mayday—Steelmaker Severstal reveals \$6 billion bank deposit: Johannesburg, South Africa, Mineweb Holdings Ltd., May 10, 3 p.
- Industrial Minerals, 2007, Lipari pumice mine closes amidst protest: Industrial Minerals, no. 472, p. 13.
- Istituto Nazionale di Statistica, 2006, Annuario statistico Italiano 2006: Rome, Italy, Istituto Nazionale di Statistica, 825 p.
- International Iron and Steel Institute, 2006, Statistical yearbook 2006: Brussels, Belgium, International Iron and Steel Institute, December 14, 108 p.
- Kommersant, 2005, Evrazholding buys Italian arrears to get access to rolled market: Kommersant, [Moscow, Russia], August 15, p. 1.
- Lyday, P.A., 2007, Bromine: U.S. Geological Survey Mineral Commodity Summaries 2007, p. 36–37.
- Metex Resources Ltd., 2006, March 2007 quarterly report: West Perth, Australia, Metex Resources Ltd., March, 18 p.
- Miller, M.M., 2007, Lime: U.S. Geological Survey Mineral Commodity Summaries 2007, p. 94–95.
- OAO Severstal, 2007, Consolidated condensed interim statement for the three months ended March 31, 2007: Moscow, Russia, OAO Severstal, March 31, 11 p.
- Petroleum Economist, 2006a, Western Europe—Italy: Petroleum Economist, v. 73, no. 6, p. 47.
- Petroleum Economist, 2006b, Western Europe—Italy: Petroleum Economist, v. 73, no. 11, p. 40.
- Potter, M.J., 2007, Feldspar: U.S. Geological Survey Mineral Commodity Summaries 2007, p. 58–59.
- Rio Tinto plc, 2006, Sale of Eurallumina interest: London, United Kingdom, Rio Tinto plc press release PR 494g, August 17, 1 p.
- Sargold Resource Corp., 2006a, Furtei Gold Mines S.p.A.: Vancouver, British Columbia, Canada, Sargold Resource Corp. press release, December 28, 2 p.
- Sargold Resource Corp., 2006b, Sargold and Medoro amend agreement: Vancouver, British Columbia, Canada, Sargold Resource Corp. press release, May 29, 2 p.
- Sargold Resource Corp., 2006c, Sargold completes agreement with Medoro Resources: Vancouver, British Columbia, Canada, Sargold Resource Corp. press release, August, 22, 3 p.
- UC Rusal, 2006a, Rusal acquires 56.2% stake in Eurallumina refinery: Moscow, Russia, UC Rusal press release, November 3, 2 p.

UC Rusal, 2006b, Eurallumina: Moscow, Russia, UC Rusal press release, December 31, 2 p.
 U.S. Central Intelligence Agency, 2006, Italy, *in* World factbook 2006: U.S. Central Intelligence Agency, January 1, 709 p.
 van Oss, H.G., 2007, Cement: U.S. Geological Survey Mineral Commodity Summaries 2007, p. 40–41.

Virta, R.L., 2007, Clays: U.S. Geological Survey Mineral Commodity Summaries 2007, p. 46–47.
 Wilson, Ian, 2007, Minerals of Italy—Built to last: Industrial Minerals, no. 479, August, p. 32–33.

TABLE 1
 ITALY: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

Commodity	2002	2003	2004	2005	2006 ^e
METALS					
Aluminum:					
Alumina, calcined basis	1,010,000 ^e	1,021,000 ^r	1,064,000 ^r	1,109,457 ^r	1,100,000
Bauxite ^e	3,431 ^{r,2}	-- ^r	-- ^r	300	--
Metal:					
Primary	190,000 ^r	191,400 ^r	195,400	192,900	194,200 ²
Secondary	591,300 ^r	594,000	619,000	654,100	665,500 ²
Total	781,300 ^r	785,400 ^r	814,400	847,000	859,700 ²
Antimony, oxides, gross weight ³	-- ^r	-- ^r	-- ^r	-- ^r	--
Bismuth, metal ^e	5	5	5	5	5
Cadmium, metal, smelter	362 ^r	22	--	--	--
Copper, metal, refined, all kinds ^e	32,400	26,700 ²	33,600	32,200	36,400 ²
Gold, mine output, Au content kilograms	631	100 ^{r,e}	-- ^r	-- ^r	--
Iron and steel, metal:					
Pig iron thousand metric tons	9,736	10,604 ^r	10,664 ^r	11,423 ^r	11,535 ²
Ferrous alloys, electric furnace:^e					
Ferromanganese	40,000	40,000	40,000	40,000	40,000
Ferrosilicon	12,000	12,000	12,000	12,000	10,000
Silicomanganese	80,000	100,000 ^r	100,000 ^r	100,000 ^r	100,000
Silicon metal	-- ^r	-- ^r	--	--	--
Other	10,000	10,000	10,000	10,000	10,000
Total	142,000 ^r	162,000 ^r	162,000 ^r	162,000 ^r	160,000
Steel, crude thousand metric tons	25,930	26,832	28,317 ^r	29,061 ^r	31,550 ²
Lead:					
Mine output, Pb content ^e	3,073 ^{r,2}	2,621 ^{r,2}	800 ^r	800 ^r	800
Metal, refined:					
Primary	41,000 ^e	16,000 ^e	40,000	49,500	34,600 ²
Secondary	152,000 ^e	198,000 ^e	162,000	161,500	155,900 ²
Total	193,000 ^e	214,000	202,000	211,000	190,500 ²
Manganese, mine output, Mn content	867 ^r	763 ^r	714 ^r	600 ^{r,e}	600
Silver, mine output, Ag content ^e kilograms	1,000 ^r	1,000 ^r	200 ^r	100 ^r	100
Zinc, metal, primary	175,800	123,100	118,000 ^e	121,200 ^r	109,200 ²
INDUSTRIAL MINERALS					
Barite	10,215	12,214	9,698 ^r	4,722 ^r	5,000
Bromine ^e	300	300	300	300	300
Cement, hydraulic thousand metric tons	41,722 ^r	43,580 ^r	45,343 ^r	40,284 ^r	43,234 ²
Clays, crude:					
Common clay do.	4,053	3,808	3,858	3,651	3,937 ²
Bentonite do.	463	474	475 ^r	446 ^r	470 ²
Refractory excluding kaolinitic earth do.	2,219 ^r	2,639	1,375 ^r	1,310 ^r	1,964 ²
Ball clay do.	1,129	691	568	539	550
Fuller's earth ^e do.	25 ^{r,2}	3 ^{r,2}	3 ^r	3	3
Kaolin do.	215 ^r	257 ^r	247 ^r	250	470 ²
Kaolinitic earth do.	-- ^r	-- ^r	-- ^r	-- ^r	--

See footnotes at end of table.

TABLE 1—Continued
ITALY: ESTIMATED PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

Commodity	2002	2003	2004	2005	2006 ^c
INDUSTRIAL MINERALS—Continued					
Diatomite ^c	25,000	25,000	25,000	25,000	25,000
Feldspar thousand metric tons	3,159 ^r	2,972 ^r	3,251 ^r	3,335 ^r	4,019 ²
Fluorspar	53,260 ^r	26,387 ^r	17,915 ^r	15,000 ^r	15,000
Gypsum thousand metric tons	2,638 ^r	1,784 ^r	1,616 ^r	2,356 ^r	2,860 ²
Lime, hydrated, hydraulic, and quicklime do.	5,500 ^r	5,510 ^r	5,982 ^r	5,894 ^r	5,800
Magnesia thousand metric tons	300	444	350	371	348 ²
Nitrogen, N content of ammonia do.	391	475	532	525	500
Perlite ^c	60,000	60,000	60,000	60,000	60,000
Pigments, mineral, iron oxides, natural ^c	500	500	500	500	500
Pumice and related materials:					
Pumice thousand metric tons	25 ^r	25 ^r	27 ^r	28 ^r	30
Pozzolan ^c do.	4,000	4,000	4,000	4,000	4,000
Salt do.	3,947 ^r	2,128 ^r	3,174 ^r	3,613 ^r	3,438 ²
Sand and gravel thousand metric tons	200,777 ^r	212,169 ^r	176,252 ^r	206,149 ^r	210,000
Silica sand do.	13,853 ^r	12,656 ^r	12,791 ^r	13,492 ^r	14,000
Sodium compounds, n.e.s.: ^{c,4}					
Soda ash do.	100	100	100	100	100
Sodium sulfate do.	125	125	125	125	125
Stone:					
Calcareous:					
Alabaster ^c do.	5,000 ^r	5,000 ^r	7,215 ^{r,2}	7,000 ^r	7,000
Chalk do.	302 ^r	474 ^r	330 ^r	312 ^r	228 ²
Dolomite do.	1,942 ^r	2,046 ^r	2,213 ^r	2,092 ^r	2,192 ²
Marble and travertine, crude do.	4,819 ^r	4,396 ^r	5,155 ^r	5,061 ^r	4,687 ²
Limestone for lime and cement do.	46,045 ^r	28,633 ^r	40,000 ^r	42,390 ^r	41,255 ²
Granite do.	1,581 ^r	2,288 ^r	2,637 ^r	2,651 ^r	1,894 ²
Sandstone do.	372 ^r	353 ^r	369 ^r	362 ^r	397 ²
Slate do.	136 ^r	150 ^r	143 ^r	138 ^r	220 ²
Crushed and broken ⁵ do.	46,512 ^r	44,562 ^r	54,195 ^r	61,640 ^r	60,000
Sulfur:					
From metallurgy do.	142	127	113	92	90
From hydrocarbons do.	560	565	575	650	650
Talc and related materials	125,040 ^r	122,849 ^r	111,887 ^r	112,781 ^r	146,942 ²
MINERAL FUELS AND RELATED MATERIALS					
Asphalt and bituminous rock, natural thousand metric tons	2,000 ^r	955 ^r	1,807 ^r	1,900 ^r	1,807 ²
Coal:					
Lignite do.	10	10	--	--	--
Subbituminous, Sulcis coal	5	--	--	--	--
Coke, metallurgical ^c thousand metric tons	4,064 ³	4,500	4,500	4,000 ^r	4,000
Gas, natural million cubic meters	14,623 ^r	13,885 ^r	12,961 ^r	11,977 ^r	11,000 ²
Natural gas liquids ^c thousand 42-gallon barrels	350	350	350	350	350
Petroleum:					
Crude:					
As reported	5,531,000	5,570,000	5,445,000	6,100,000	5,800,000 ²
Converted thousand 42-gallon barrels	28,208 ^r	28,407 ^r	27,670 ^r	31,110 ^r	29,600
Refinery products ^c do.	737,000	650,000 ^r	650,000 ^r	650,000 ^r	650,000

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

¹Table includes data available through June 2007.

²Reported figure.

³Antimony content is 83% of gross weight.

⁴Not elsewhere specified.

⁵Output of limestone and serpentine for dimension stone is included with "Stone: Crushed and broken." In addition to the commodities listed, a variety of other dimension stone was produced and previously listed, but available general information was inadequate to make continued reliable estimates of output.

TABLE 2
ITALY: STRUCTURE OF THE MINERAL INDUSTRY IN 2006

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Alumina	Eurallumina S.p.A. (UC Rusal, 56.2%)	Plant at Portoscuso, Sardinia	1,000
Aluminum	Alcoa Italia S.p.A. (Alcoa Inc., 100%)	Smelters at Porto Vesme, Sardinia, and Fusina, near Venice	188
Asbestos	Amiantifera di Balangero S.p.A.	Mine at Balangero, near Turin	100
Barite	Bariosarda S.p.A. (Ente Mineraria Sarda)	Barega and Mont 'Ega Mines on Sardinia	100
Do.	Edem S.p.A. (Government)	Mines at Val di Castello, Lucca	20
Do.	Edemsarda S.p.A. (Soc. Imprese Industriali)	Mines at Su Benatzu, Sto. Stefano, and Peppixeddu, Sardinia	20
Do.	Società Mineraria Baritina S.p.A.	Mines at Marigolek, Monte Elto, and Primaluna, near Milan	20
Bauxite	Sardabauxiti S.p.A. (Cogein S.p.A., 40%; Comtec S.p.A., 40%; Icofin Co., 20%)	Mine at Olmedo, Sardinia	350
Bentonite	Industria Chimica Carlo Laviosa S.p.A.	Mines and plant on Sardinia and a plant near Pisa	250
Cement	52 companies, of which the largest are:		
Do.	Italcementi Fabbriche Riunite Cemento S.p.A.	18 plants, of which the largest are Calusco, Monselice, and Collefero	15,000
Do.	Buzzi Unicem Group	11 plants, of which Guidonia, Lugagnano, Morano, Piacenza, S'Arcangelo di Romagna, and Settimello are the largest	9,000
Do.	Cementerie del Tirreno S.p.A.	6 plants at Arquata Scivia, Livorno, Maddaloni, Napoli, Spoleto, and Taranto	5,300
Copper:			
Refined	Società Metalli Italia S.p.A.	Refinery at Porto Marghera	60
Refined, secondary	Europametalli - LMI S.p.A.	Refinery at Fornaci di Barga	24
Do.	Sitindustrie S.p.A.	Refinery at Pieve Vergonte	22
Feldspar	At least 5 companies, of which the largest are:		1,500
Do.	Maffei S.p.A.	Surface mines at Pinzolo and Campiglia	(200)
Do.	do.	Underground mine at Vipiteno	(300)
Do.	Miniera di Fragne S.p.A.	Surface mine at Alagna Valsesia	(60)
Do.	Sabbie Silicee Fossanova S.p.A.	Surface mine at Fossanova	(30)
Gold	kilograms Sargold Resources plc.	Furtei Mine near Cagliari, Sardinia	1,400
Gypsum	Fassa S.r.l.	Plant at Moncalvo, Asti	90
Lead, metal	Glencore International AG	Refinery at San Gavino, Sardinia	100
Do.	do.	Kivcet smelter and Imperial smelter at Porto Vesme, Sardinia	80
Lignite	Ente Nazionale per l'Energia Electrica	Surface mine at Santa Barbara (closed)	1,000
Lime	Unicale S.p.A.	Plants in Lombardy region	500
Magnesium, metal	Società Italiana Magnesio S.p.A.	Plant at Bolzano	8
Marble	A number of companies, of which the largest include:		2,000
Do.	Mineraria Marittima Srl	Quarries in the Carrara and Massa areas	(500)
Do.	Industria dei Marmi Vicentini S.p.A.	do.	(300)
Do.	Figaia S.p.A.	do.	(100)
Nitrogen, N content of ammonia	Hydro Agri S.p.A.	Plant at Ferrara	410
Petroleum:			
Crude	Ente Nazionale Idrocarburi (Government, 100%)	Oilfields: offshore Sicily, in the Adriatic Sea, and onshore in Po River Valley	90
Refined	thousand 42-gallon barrels per day do.	About 30 refineries	2,000
Potash, ore	Industria Sali Otassici e Affini per Azione S.p.A.	Underground mines at Corvillo, Pasquasia, Racalmuto, and San Cataldo, Sicily (closed)	1,300

TABLE 2—Continued
 ITALY: STRUCTURE OF THE MINERAL INDUSTRY IN 2006

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Potash, ore—Continued:	Sta. Italiana Sali Alcalini S.p.A. (Italkali)	Underground mines at Casteltermini and Pasquasia, Sicily	700
Pumice	Pumex S.p.A.	Quarries, Lipari Island, north of Sicily	600
Do.	Sta. Siciliana per l'Industria ed il Commercio della Pomice di Lipari S.p.A. (Italpomice S.p.A.)	do.	200
Pyrite	Nuova Solmine S.p.A.	Underground mines at Campiano and Niccioleta	900
Salt, rock	Sta Italiana Sali Alcalini S.p.A. (Italkahi)	Underground mines at Petralia, Racalmuto, and Realmonte, Sicily	4,000
Do.	Solvay S.p.A.	Underground mines at Buriano, Ponteginori, and Querceto, Tuscany	2,000
Steel	Ilva S.p.A. (Riva Group)	5 steel plants, the largest of which is Taranto (1,500)	4,000
Do.	Riva Acciaio S.p.A. (Riva Group)	7 steel plants	7,000
Do.	Acciaierie e Ferriere Vicentine Beltrame S.p.A. (AFV-Beltrame S.p.A.)	Steel plant at Vicenza	1,000
Talc	Luzenac Val Chisone S.p.A.	Mines at Pinerolo, near Turin, and at Orani, Sardinia	120
Do.	Talco Sardegna S.p.A.	Mine at Orani, Sardinia	20
Zinc, metal	Glencore International AG	Plant at Porto Vesme, Sardinia	120
Do.	Pertulosa Sud S.p.A.	Plant at Crotone, Calabria	100