



2008 Minerals Yearbook

ROMANIA

THE MINERAL INDUSTRY OF ROMANIA

By Mark Brininstool

Romania's mineral production is mainly of regional importance and the industry is dependent on imports of mineral ores and concentrates to produce refined metals. European Union (EU) membership was achieved on January 1, 2007, which prompted the cessation of most metallic ore mining activities and the necessity for some production facilities either to modernize to meet EU standards or close. Membership in the EU could increase access to European markets and create trade opportunities, which could encourage greater production of processed goods if modernization of existing production facilities and investment in new facilities is undertaken.

Minerals in the National Economy

In 2008, Romania's real gross domestic product (GDP) increased by 7.1% compared with the GDP in 2007. The value of industrial production increased by 1.3% and made up about 23% of the GDP in 2007. Exports of base metals and articles of base metals were valued at about \$7,260 million¹ (a 2.5% increase compared with that of 2007) and made up 14.6% of the total value of exports. Exports of mineral products were valued at about \$4,640 million (a 37.6% increase compared with that of 2007) and made up 9.3% of the total value of exports. Exports of iron, pig iron, and steel made up 49.9% of exports of base metals and articles of base metals and 7.3% of the total value of exports. Exports of petroleum products made up 97.7% of the value of exports of mineral products and 9.1% of the value of total exports (National Institute of Statistics, 2009a, p. 5-9; 2009b, p. 134-135).

Imports of mineral products were valued at about \$5,330 million (a 27.7% increase compared with that of 2007) and made up 13.8% of the total value of imports. Imports of base metals and articles of base metals were valued at about \$4,330 million (a 12.3% increase compared with that of 2007) and made up 11.3% of the total value of imports. Imports of fuel and mineral oils made up 90.9% of the value of imports of mineral products and 12.6% of the value of total imports (National Institute of Statistics, 2009a, p. 5-9).

Government Policies and Programs

The Romanian Government's Strategy of the Mining Industry for 2004-2010 outlined the Government's goals of having mining companies operate under free market conditions and of shifting resources to competitive firms. To do this, the Government planned to eliminate subsidies for lignite and metals mining by 2007, close unprofitable mines, and privatize mines that had the potential to operate economically. The Government planned to continue hard coal mining subsidies based on European Commission (EC) directive No. 1407/2002,

which allowed for hard coal subsidies until 2010. The World Bank's Mine Closure, Environment, and Socio-Economic Regeneration Project began in 2004 to reduce the negative environmental and social effects of mine closures. The project was scheduled to continue until the end of May 2010, and provided Romania with a \$120 million loan to help finance technical closures of mine sites and job training and job creation projects. The effect of mine closure policies in 2007 is assumed to be the main reason that mine production of copper, lead, and zinc drastically decreased (table 1; Ministry of the Economy of the Government of Romania, 2004; World Bank, The, 2009).

As part of the strategy to privatize potentially economic mining companies, the Government announced in 2008 that it would auction off 100% of Cupru Min S.A. Abrud, the main activity of which was the mining and processing of copper ore. The offer was later revoked based on the EC's objections to certain aspects of the offer that it felt would have violated the EC's restrictions on granting state aid to industries (Authority for State Assets Recovery of the Government of Romania, The, 2008).

Production

In 2008, the production of silicomanganese decreased by an estimated 63%; pig iron, by an estimated 24%; and crude steel and refined copper decreased by about 19% each. For industrial minerals, the estimated production of caustic soda increased by 37%; gypsum, by 13%; and cement, by 10%. The estimated production of kaolin decreased by 47%, and feldspar, by 44%. Production of coke decreased by 31%.

Structure of the Mineral Industry

Table 2 is a list of major mineral industry facilities.

Commodity Review

Metals

Bauxite and Alumina and Aluminum.—No alumina was produced in 2008 because Alum S.A. remained closed while undergoing modernization, and Cemtrade Oradea, which was shut down in late 2006, also remained closed. Alro S.A., which was Romania's only producer of aluminum, suspended production in one of its six potlines in December. During 2008, the company also released a total of 936 employees (bringing the number of employees at the end of 2008 to 3,392) to reduce costs. Owing to poor market conditions, Alro expected to decrease production by up to 65,000 metric tons in 2009 (Vimetcó N.V., 2008; 2009a, p. 18, 56; 2009b; Central European Aluminum Co., 2009).

Gold.—In September 2007, Gabriel Resources Ltd. of Canada's development of its proposed Rosia Montana gold mine was halted when the Ministry of the Environment and

¹Where necessary, values have been converted from European Union euros (€) to U.S. dollars (US\$) at the rate of €0.68=US\$1.00.

Sustainable Development (the Ministry) suspended further review of the project's environmental impact assessment (EIA). The Ministry cited an invalid legal certificate as the reason for the suspension. Gabriel responded by saying that the Ministry's decision had no basis in Romanian law and, in November 2007, in an effort to restart the EIA review, Gabriel filed a lawsuit against the Ministry. In December 2007, Gabriel announced that it would suspend its project development activities and release much of its staff while waiting for a resolution to the dispute concerning the EIA review. Throughout 2008, the EIA review remained suspended, and in December, the company faced another setback when the Romanian Supreme Court cancelled its Archaeological Discharge Certificate No. 4/2004 (ADC 4). The certificate is required to obtain a construction permit, and Gabriel would need to reapply for a new ADC 4. Gabriel estimated that the project could produce an average of 511,000 troy ounces per year of gold during a 16-year mine life and could make Romania a significant regional producer (Gabriel Resources Ltd., 2007; 2008a, b; 2009, p. 3; Giglio, 2007, p. 1).

Iron and Steel.—In April 2008, OAO Mechel of Russia purchased Ductile Steel from Cyprus-registered Lakewind Ltd. for \$221 million. Ductile had a plant in Otelu Rosu in western Romania that produced billets; it also had a plant in Buzau in eastern Romania that produced only finished goods (and therefore does not appear in table 2). In October, ArcelorMittal cut production at its Galati plant; in November, ArcelorMittal Hunedoara suspended production, Mechel Targoviste suspended production for 1 week, and TMK-Resita announced that it would decrease production by an unspecified amount. The companies all said that the reductions in production and the suspensions of production were a result of reduced demand for steel (Economic Times, The, 2008; Financiarul, 2008; Paxton, 2008).

Lead and Zinc.—Refined lead and zinc metal production remained at about the same level as in 2007, but production in 2009 will most likely decrease owing to market conditions. In late January 2009, Sometra S.A., which was Romania's leading producer of lead metal and the country's only producer of zinc metal, announced that it would temporarily stop production and release 80% of its staff. The company cited financial losses caused by lower prices for lead and zinc as the reason for the shutdown (Zaharia, 2009).

Mineral Fuels

Coal.—Romania's coal production is used mainly to supply thermal powerplants throughout the country. Romania's National Agency of Mineral Resources listed seven companies that hold licenses for lignite production: Asociatia Mina Borod, Complexul Energetic Rovinari S.A., Complexul Energetic Turceni S.A., Ermo Exploatarea Resurselor Minerale Oltenia S.R.L.-Motru, SC Complexul Energetic Craiova S.A., Societatea Nationala a Carunelui Ploiesti, and Societatea Nationala a Lignitului Oltenia S.A. Among these companies, Societatea Nationala a Lignitului Oltenia was the leading producer of lignite, and Societatea Nationala a Carunelui Ploiesti reported production of about 2 million metric tons per year. It was unknown whether Asociatia Mina Borod, Complexul Energetic

Rovinari, Complexul Energetic Turceni, or Ermo Exploatarea Resurselor Minerale Oltenia S.R.L.-Motru produced coal and they are therefore not listed in table 2 (National Agency of Mineral Resources, 2009; Societatea Nationala a Carunelui Ploiesti, 2009).

Outlook

The Government's plans for privatization and restructuring in the mining industry could positively affect metal ore and concentrate production facilities. Production of processed metals is likely to continue, although producers will also be under pressure to modernize facilities to meet EU standards. Foreign investors could be attracted owing to access to the EU markets.

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TABLE 1
ROMANIA: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

Commodity ²	2004	2005	2006	2007	2008
METALS					
Alumina, calcined, gross weight	559,307	688,829	622,083	23,097	--
Aluminum:					
Primary	222,347	239,000 ^r	255,800 ^r	262,505 ^r	264,752
Secondary	6,506	7,109	10,524	11,674	13,000 ^e
Total	228,853	246,109	266,324	274,179	277,752 ^e
Copper:					
Mine output, Cu content of concentrate	18,767	15,000	12,132	2,213	--
Metal:					
Smelter:					
Primary	-- ^r	--	--	--	--
Secondary ^e	-- ^r	-- ^r	-- ^r	-- ^r	--
Total	-- ^r	-- ^r	-- ^r	-- ^r	--
Refined:					
Primary	21,562	18,739	18,600	15,589	12,000
Secondary ^e	3,000	2,000	3,000	3,000	3,000
Total ^e	24,600 ^r	20,700 ^r	21,600 ^r	18,600 ^r	15,000
Gold, mine output, Au content ^e	400	400	400	400	400
kilograms					
Iron and steel:					
Iron ore:					
Gross weight	275	265	123	45 ^e	--
thousand metric tons					
Metal content	74	69	40	11	--
do.					
Metal:					
Pig iron	4,244	4,098	3,946	3,923	3,000 ^e
do.					
Ferroalloys, electric furnace:					
Ferrochromium	--	--	--	--	6,000 ^e
Ferromanganese	191	18,625	3,329	--	--
Silicomanganese	194,754	100,957	53,085	26,868	10,000 ^e
Total	194,945	119,582	56,414	26,868	16,000 ^e
Steel, crude	6,077	6,280	6,266	6,261	5,060
thousand metric tons					
Finished products:					
Pipes and tubes	486	529	580	620 ^{r,e}	400 ^e
do.					
Rolled products	5,191	5,196	5,696	5,589 ^r	4,500 ^e
do.					
Lead:					
Mine output, Pb content of concentrate	18,297	11,610	6,269	1,000 ^r	--
Smelter, primary ^e	19,000	12,000	7,000	800	--
Refined:					
Primary	32,590	32,903	29,130	34,368	34,000 ^e
Secondary ^e	5,000	5,000	5,000	5,000	5,000
Total	37,590	37,903	34,130	39,368	39,000

See footnotes at end of table.

TABLE 1—Continued
ROMANIA: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

Commodity ²	2004	2005	2006	2007	2008
METALS—Continued					
Manganese, concentrate:					
Gross weight ^e thousand metric tons	65	65	65	55	50
Mn content do.	16	14	13	11 ^e	10 ^e
Silver, mine output, Ag content ^c	18	15	18	18	18
Zinc:					
Mine output, Zn content of concentrate	23,599	13,784	8,052	1,000 ^r	--
Metal, refined, primary and secondary	52,746	57,000	43,705	58,000 ^r	60,000
INDUSTRIAL MINERALS					
Barite, processed	--	--	--	--	--
Cement, hydraulic thousand metric tons	6,239	7,032	8,252	10,000 ^{r,e}	11,000 ^e
Clays:					
Bentonite, marketable	22,337	20,226	21,165	16,911 ^r	16,600 ^e
Kaolin, marketable	22,337	20,266	11,063	7,576 ^r	4,000 ^e
Diatomite	20,626	1,017	1,719	2,000 ^{r,e}	-- ^e
Feldspar	60,924	74,920	33,100	45,000 ^{r,e}	25,000 ^e
Fluorspar ^e	15,000	15,000	15,000	15,000	15,000
Graphite	395	478	--	--	-- ^e
Gypsum thousand metric tons	490	502	615	707	800 ^e
Lime do.	1,978	1,791	1,942	2,000 ^{r,e}	2,000 ^e
Nitrogen, N content of ammonia ^e do.	1,182 ³	1,300	1,300	1,300	1,300
Pyrites, gross weight ^e do.	70	70	70	70	70
Salt:					
Rock do.	43	46	47	51	50 ^e
Other do.	2,357	2,374	2,574	2,424	2,400 ^e
Total do.	2,400	2,420	2,621	2,475	2,450 ^e
Sand and gravel do.	3,900 ^r	2,421 ^r	2,421 ^r	5,000 ^{r,e}	5,000 ^e
Sodium compounds:					
Caustic soda do.	414	443	477	475 ^e	650 ^e
Soda ash, manufactured, 100% Na ₂ CO ₂ basis do.	398	346	453	453	450 ^e
Sulfur, byproduct, all sources ^c do.	200	200	--	--	--
Sulfuric acid	28,000	11,000	5,000 ^e	--	--
Talc	10,000 ^e	10,000 ^e	2,967	1,513	1,500 ^e
MINERAL FUELS AND RELATED MATERIALS					
Coal:					
Anthracite and bituminous thousand metric tons	3,016	3,079	2,587	2,500 ^e	2,500 ^e
Brown do.	112	52	63	100 ^{r,e}	150 ^e
Lignite do.	31,479	31,070	34,791	35,418	35,000 ^e
Total do.	34,607	34,201	37,441	38,000 ^{r,e}	37,700 ^e
Coke, metallurgical do.	1,573	1,777	1,790	1,557	1,080
Gas, natural, gross:					
Associated million cubic meters	1,267	1,220	1,088	1,123	1,150 ^e
Nonassociated do.	12,023	11,252	10,854	10,858	10,500 ^e
Total do.	13,290	12,472	11,942	11,981	11,700 ^e
Petroleum: ^e					
Crude ⁴ thousand 42-gallon barrels	41,000	39,100 ^r	35,900 ^r	34,100 ^r	34,100
Refinery products ⁵ do.	99,000 ^r	111,000 ^r	106,000 ^r	109,000 ^r	112,000

^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 29, 2010.

²In addition to the commodities listed, a variety of construction materials are produced; antimony and asbestos may have been produced; molybdenum may have been produced as a byproduct of copper from 1988 on; and small amounts of bismuth may have been produced; however, available information is inadequate to make reliable estimates of output.

³Reported figure.

⁴Figures estimated based on reported production of 5,465,000 metric tons (t) in 2004; 5,212,000 t in 2005; 4,777,000 t in 2006; 4,540,000 t in 2007; and 4,540,000 t in 2008.

⁵Figures estimated based on reported production of 12,371,000 t in 2004; 13,890,000 t in 2005; 13,237,000 t in 2006; 13,648,000 t in 2007; and 13,974,000 t in 2008.

TABLE 2
ROMANIA: 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
Alumina	Cemtrade Oradea (Part of CEAC Group)	Plant at Oradea, near Hungarian border	250
Do.	Alum S.A. (99.4% controlled, directly or indirectly, by Vimetco NV)	Plant at Tulcea, Danube Delta	600
Aluminum:			
Primary	Alro S.A. (88% controlled, directly or indirectly, by Vimetco NV)	Slatina, 120 kilometers west of Bucharest	265
Secondary	Neferal S.A. (Member of Metanef Group)	Bucharest	NA
Cement	Holcim (Romania) S.A. (Holcim, 100%)	Plants at Alesd, Campulung, and Turda	4,700
Do.	Carpatcement Holding S.A. (HeidelbergCement, 99%)	Plant at Bicaz, northeastern Romania	1,600
Do.	do.	Plant at Fieni, 90 kilometers northwest of Bucharest	1,650
Do.	do.	Plant at Deva, western Romania	1,650
Do.	Lafarge Ciment (Lafarge S.A., 78%)	Plants at Hoghiz and Medgidia	4,500
Coal:			
Bituminous	Compania Nationala a Huilei-Petrosani (Government)	7 mines located near Petrosani	3,500
Lignite	Societatea Nationala a Lignitului Oltenia (Government)	Tismania I-II, Garla-Rovinari Est, and Pinoasa opencast mines at Rovinari	8,000
Do.	do.	Rosia, Pesteana Nord, and Pesteana Sud-Urdari opencast mines at Balteni	6,900
Do.	do.	Udari underground mine at Udari	300
Do.	do.	Jilt Sud and Jilt Nord opencast mines at Matasari	7,000
Do.	do.	Dragotesti underground mine at Matasari	600
Do.	do.	Lupoia and Rosiuta opencast mines at Motru	5,000
Do.	do.	Plostina, Horasti, and Lupoia underground mines at Motru	1,600
Do.	do.	Seciuri, Oltet, Berbesti-Vest, and Panga opencast mines near Berbesti	2,000
Do.	do.	Albeni underground mine at Bolbocesti	555
Do.	do.	Husnicioara-Vest opencast mine near Drobeta Turnu Severin	2,500
Do.	do.	Zegujani underground mine about 18 kilometers northeast of Drobeta Turnu Severin	600
Do.	Societatea Nationala a Carbului Ploiesti (Government)	8 mines located near Campulung, Baraolt City, Sarmasag, Popesti Commune, Comanesti Commune, Filipestii de Padure Commune, Sotanga Commune, and Borsec City	3,000
Do.	SC Complexul Energetic Craiova SA (Ministry of Economy, 73%)	Prigaria Mine	1,000
Coke	ArcelorMittal Galati (ArcelorMittal, 100%)	Galati, north of Brail, near the Ukrainian border	2,100
Copper:			
Ore (concentrate, Cu content)	Compania Nationala REMIN S.A., Compania Nationala Mininvest, and Moldomin S.A. (all controlled by the Government)	Baia Mare, Baia Sprie, and Cavnic Mines, in northwestern area near the Ukrainian border; Rosia Montana, Noud, Borsa Balan, and Lesul Ursului Mines, in east-west arc along Carpathian range; Rosia Poieni Mine; Moldova Noua	27
Metal	Cuprom S.A. Baia Mare	Smelter and electrolytic refinery at Baia Mare	40
Ferroalloys	S.C. Feral s.r.l. Tulcea	Complex at Tulcea	NA
Iron ore	Compania Nationala Mininvest (Government)	Mining complex at Hunedoara, in west-central Romania	1,320
Do.	do.	Resita Mining Complex, southwestern Romania	660
Do.	do.	Napoca-Cluj Mining Complex, northwestern Romania on the Somesul River	990

See footnotes at end of table.

TABLE 2—Continued
ROMANIA: 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
Lead:				
In ore		Compania Nationala REMIN S.A. (Government)	Baia Mare Mine, near Ukrainian and Hungarian borders	12
Do.		Compania Nationala Minvest (Government)	Vetel Mine, near Deva	5
Metal		Sometra S.A. (Mytilineos Holdings S.A., 93%)	Imperial smelter at Copsa Mica, central Romania	18
Do.		Neferal S.A. (Member of Metanef Group)	Bucharest	25
Natural gas	million cubic meters	SNGN Romgaz S.A. (Romanian Ministry of Economy, 85.01%, and Fondul Proprietatea, 14.99%)	Operated more than 150 reservoirs in Transylvania, Moldova, and Muntenia regions	NA
Do.	do.	S.C. OMV Petrom S.A. [OMV AG, 51.01%; Romanian Ministry of Economy, 20.64%; Property Fund S.A. (Government), 20.11%]	Approximately 270 commercial oilfields and gasfields located in southern and western Romania and offshore in the Black Sea	NA
Petroleum:				
Crude		do.	do.	NA
Refined		do.	Arpechim Refinery, just south of Pitesti	3,500
Do.		do.	Petrobrazii Refinery, 5 kilometers south of Ploiesti	4,500
Do.		Romp petrol Rafinarie S.A. (Romp petrol Group)	Refinery at Navodari	4,500
Do.		Vega Ploiesti Refinery (Romp petrol Group)	Refinery just north of Ploiesti	500
Do.		S.C. RAFO S.A.	Refinery at Onesti	3,000
Do.		S.C. PETROTEL-LUKOIL S.A.	Refinery just east of Ploiesti	2,400
Do.		Astra Refinery	Refinery in Ploiesti	NA
Do.		Refinaria Petrolsub Suplacu de Barcau	Refinery at Suplacu de Barcau	NA
Do.		Darmanesti Refinery	Refinery at Darmanesti in eastern Romania	NA
Steel		ArcelorMittal Galati (ArcelorMittal, 100%)	Galati, north of Brail, near the Ukrainian border	4,500
Do.		ArcelorMittal Hunedoara (ArcelorMittal, 100%)	West-central Romania, near Calan	2,000
Do.		S.C. Donasid S.A. (Tenaris S.A., 99%)	Calarasi in southeastern Romania	470
Do.		TMK-Resita (OAO TMK, 99.5%)	Resita in southwestern Romania	450
Do.		Mechel Targoviste (OAO Mechel)	Targoviste, Dimbovita, near Bucharest	630
Do.		Mechel Campia Turzii SA (OAO Mechel)	Campia Turzii, Cluj, northwestern Romania	300
Do.		Ductil Steel (OAO Mechel)	Otelu Rosu in southwestern Romania	400
Zinc:				
In ore		Compania Nationala Minvest (Government)	Baia Mare, near Ukrainian and Hungarian borders	12
Do.		Compania Nationala REMIN S.A. (Government)	Vetel Mine, near Deva	45
Metal		Sometra S.A. (Mytilineos Holdings S.A., 93%)	Imperial Smelter at Copsa Mica	62

Do., do. Ditto. NA Not available.