



2013 Minerals Yearbook

ROMANIA

THE MINERAL INDUSTRY OF ROMANIA

By Sean Xun

Romania has the potential for mineral resource development, especially for hydrocarbons (including natural gas and petroleum) and nonferrous and precious metals. The country's mineral production was not globally significant in 2013, however. Romania produced principally alumina, primary and secondary aluminum, cement, coal, copper ore, iron ore, lead, steel, and zinc (table 1).

Minerals in the National Economy

In 2013, Romania's gross domestic product (GDP) increased by 3.5% to \$287.6 billion.¹ The services sector accounted for 59.4% of the GDP; the agricultural sector, 6.4%; and the industrial sector, 34.2%. Gross industrial production increased by 7.8% in 2013, supported by manufacturing (which increased by 9.2%) and by mining and quarrying (2.2%). In manufacturing, the largest increases were in the production of electrical equipment (20.0%) and transportation equipment (17%). The manufacture of basic metals (basic iron and steel, ferroalloys, other first processed iron and steel, and aluminum and aluminum products) decreased by 7.8% (National Institute of Statistics, 2014a, p. 4; U.S. Central Intelligence Agency, 2014).

As of December 2013, the mining and quarrying sector in Romania employed 60,600 people, of which 22,000 worked on the extraction of crude petroleum and natural gas, 19,700 on the mining of coal and lignite, 2,700 on the mining of metal ores, 8,000 on other mining and quarrying, and 8,200 on mining support service activities. Employment in the mining and quarrying sector accounted for 4.8% of the total workforce in industry. In the manufacturing sector, there were 10,900 people working on the manufacture of coke and refined petroleum products, 34,600 on the manufacture of nonmetallic mineral products, and 29,300 on the manufacture of basic metals and fabricated metal products (National Institute of Statistics, 2014b, p. 80).

Government Policies and Programs

The primary legislation governing Romania's mining sector was the Mining Law No. 85/2003 and the Petroleum Law No. 238/2004. The state owns the rights to all mineral resources located in Romania, and the National Agency for Mineral Resources is responsible for regulating the mineral industry, including granting prospecting and exploitation concessions (National Agency for Mineral Resources, 2014).

In July 2013, the Government of Romania adopted a national plan aimed at securing investment commitments of \$14 billion and the creation of more than 50,000 jobs in five strategic investment fields, including the mining sector. Certej and Rosia

Montana, the largest known undeveloped gold project in the country, was one of the seven projects in the mineral resources sector of the plan. Gaining public support and developing new mining legislation are viewed as crucial to the implementation of the national plan and will be the focus of the Government during the next few years (Mining-journal.com, 2014).

Production

In 2013, the commodities that registered production decreases included sulfuric acid (63%); caustic soda (41%); sand and gravel (35%); refined zinc (33%); lead, primary metal, and coal (27% each); nitrogen (26%); rolled steel products (18%); pig iron (16%); steel pipe and tubes and uranium (15% each); secondary aluminum (14%); and gypsum (12%). The commodities that registered production increases in 2013 included bentonite clay (16%); copper, content in concentrate (8%); lead, secondary metal (8%); refinery products (5%); salt, excluding rock salt (5%); and feldspar (5%) (table 1).

Structure of the Mineral Industry

Since joining the European Union (EU) in 2007, Romania had been in transition from a majority Government-owned mineral industry to an industry where the majority of the firms are privately owned. Table 2 is a list of major mineral-related industrial facilities operating in Romania in 2013.

Mineral Trade

In 2013, the value of imported goods amounted to \$81 billion, of which crude petroleum and natural gas accounted for \$5.27 billion; basic metals, \$4.96 billion; fabricated metal products, \$3.86 billion; coke and refined petroleum products, \$2.56 billion; metal ore, \$405 million; coal and lignite, \$118 million; and other mining and quarrying products, \$126 million. The value of exported goods amounted to \$73 billion, of which basic metals accounted for \$4.08 billion; coke and refined petroleum products, \$3.34 billion; fabricated metal products, \$2.16 billion; metal ore, \$86 million; crude petroleum and natural gas, \$45 million; coal and lignite, \$1 million; and other mining and quarrying products, \$53 million. Romania was a net exporter of most of these mineral-related products, with a total trade surplus of \$119 million in the above categories in 2013. Romania's leading export partners were Germany (received 18.6% of total exports), Italy (11.5%), and France (6.8%). Romania's leading import partners were Germany (supplied 18.6% of total imports), Italy (11.0%), and Hungary (8.2%) (National Institute of Statistics, 2014b, p. 78, 79; 2014c, p. 7, 8, 10, 11).

¹Where necessary, values have been converted from euro area euros (EUR) to U.S. dollars (US\$) at an average annual rate of EUR0.68=US\$1.00 for 2013 and EUR0.72=US\$1.00 for 2012.

Commodity Review

Metals

Bauxite and Alumina and Aluminum.—Alum S.A. (Alum), which was owned by Vimetco N.V. (Vimetco), was the only alumina refinery in Romania. In 2013, Alum produced 391,000 metric tons (t) of alumina compared with 414,000 t in 2012. Bauxite was supplied by Sierra Mineral Holdings 1 Ltd., a subsidiary of Vimetco in Sierra Leone. The alumina produced at Alum was supplied to Alro S.A. (Alro), a subsidiary of Vimetco in Slatina, Romania. Alro was one of the principal producers of primary aluminum in Europe. In 2013, Alro produced 250,000 t of primary aluminum. The processed aluminum production at Alro increased to 93,000 t in 2013 from 86,500 t in 2012. In 2013, Alro exported more than 74% of its total production to the European Union, the United States, and Asia (Vimetco N.V., 2014, p. 14, 15, 108).

In 2013, Vimetco's operation in Romania faced a challenging situation due to high energy costs and high taxes for renewable energy support (which was the highest in EU). The company had invested more than \$100 million in energy-efficiency projects during the past 9 years. Electricity consumption for the aluminum production process was 10% lower in 2013 than in 2003, and natural gas usage was about 30% lower. The company was expected to continue to upgrade equipment and train employees to improve its operating efficiency in 2014 (Vimetco N.V., 2014, p. 14, 15).

Copper.—The Cupru Min Rosia Poieni Mine in Abrud was the largest copper mine in Romania. According to the owner, S.C. Cupru Min S.A., the mine had an estimated total of 1,000 million metric tons (Mt) of copper ore grading 0.36% copper and 1.8% sulfur. The capacity of the mine was 9 million metric tons per year (Mt/yr) of ore extraction, and could be expanded to 15 Mt/yr. In May 2013, the Government of Romania announced that it would select a partner for the consolidation of the mine prior to privatization. The partner was expected to invest about \$294 million in production and environmental programs and would receive in exchange copper ore from the mine until the financial investment was repaid. As a result of this partnership, the output of the mine was expected to increase to 18,000 metric tons per year (t/yr) of copper (Intellinews, 2013; S.C. Cupru Min S.A., 2014).

Gold.—In November 2013, a parliamentary commission that was appointed to review the gold mine project at Rosia Montana decided to reject the proposal from Gabriel Resources Ltd. of Canada, leaving the fate of one of the largest undeveloped gold deposits in Europe unclear after 10 years of assessment. The project was wholly owned by Rosia Montana Gold Corp., in which Gabriel Resources had an 80.69% interest and the Government of Romania held the remaining interest. The estimated proven reserves of the project had grades of 1.63 grams per metric ton (g/t) gold and 9.01 g/t silver and contained 184,000 kilograms (kg) of gold and 1,104,000 kg of silver. Probable reserves had grades of 1.27 g/t gold and 4.55 g/t silver and contained 131,000 kg of gold and 467,000 kg of silver. The company estimated that the project could produce an average of 15,100 kilograms per year (kg/yr) of gold and 52,800 kg/yr of silver during a 16-year mine life, which

would make Romania a significant European gold producer. Gabriel Resources claimed that the project could bring in up to \$40 billion of income to the Government of Romania. The project, however, faced increasing opposition from environmental and community groups, which was the reason for the parliamentary commission's decision in November (Els, 2013; Gabriel Resources Ltd., 2014, p. 51, 58, 61).

Iron and Steel.—In February 2013, Mechel OAO (Mechel) of Russia announced that it had signed a series of agreements to dispose of its Romanian steel assets, including Ductil Steel Mechel, Mechel Campia Turzii S.A., Mechel Targoviste S.A., Mechel East Europe Metallurgical Division SRL, and Laminorul S.A. and to sell them to Romania's Invest Nikarom SRL, which was a privately held Romanian group. These facilities had been acquired by Mechel between 2002 and 2010 at a total cost of \$216 million. The total capacity of the disposed assets was 1.76 Mt/yr of rolled products, wire, and special steels. Production at these facilities was temporarily suspended, and necessary measures were taken to retain operational capability and to conduct maintenance work. According to Mechel, the transaction was aligned with the company's strategic plan to develop its core business as a leading metallurgical coal producer, while divesting noncore businesses that were losing money currently and were expected to continue to do so for the foreseeable future (Mechel OAO, 2013; Oil and Gas, Metals and Mining News, 2013).

Industrial Minerals

Cement.—Holcim Ltd. of Switzerland operated a cement production facility in Romania through its subsidiary Holcim (Romania) S.A. As of 2013, Holcim (Romania) had 798 employees and production capacity of 6.1 Mt/yr. HeidelbergCement AG of Germany owned cement production facilities in Romania through its subsidiary Carpatcement Holding S.A., which, as of 2013, had production capacity of 6.0 Mt/yr and 745 employees. Lafarge Ciment S.A. of France had two cement plants and one grinding plant in Romania, which had a combined cement production capacity of 4.9 Mt/yr and about a 31% share of the domestic market. In 2013, the company's cement sales in Romania decreased by 16% from 2012 owing to decreased infrastructure spending and a competitive environment (HeidelbergCement AG, 2014a, p. 278, 2014b; Holcim Ltd., 2014, p. 243, 252; Lafarge S.A., 2014, p. 33, 38, 52, F72).

Mineral Fuels and Related Materials

Coal.—As of 2012, Romania's hard coal (bituminous) resources were estimated to be 2,435 Mt, and its lignite resources were estimated to be 9,640 Mt. The production of hard coal and lignite had been decreasing in the past 3 years owing to complex geologic conditions, high land acquisition costs, and high operational costs. In 2013, Romania produced 22.9 Mt of lignite and 1.8 Mt of hard coal compared with 32.1 Mt and 1.9 Mt, respectively, in 2012. The number of workers in the coal industry decreased to 19,700 in 2013 from 21,000 in 2012 and

22,300 in 2010 (European Association for Coal and Lignite, 2013, p. 18, 20, 42, 43).

During 2012 and 2013, the coal industry had undergone some restructuring processes, driven by the Government, to reduce costs by vertically integrating mining operations with powerplants. In May 2012, the state-owned lignite company Societatea Națională a Lignitului Oltenia merged with three energy companies (Complexul Energetic Craiova, Complexul Energetic Rovinari, and Complexul Energetic Turceni) to form Complexul Energetic Oltenia. In July 2013, the hard coal producer Societatea Națională a Huilei Petroșani was absorbed by state-owned power generator Complexul Energetic Hunedoara (Capital, 2013; European Association for Coal and Lignite, 2013, p. 43; Complexul Energetic Oltenia S.A., 2014).

Petroleum.—As of January 1, 2014, Romania's proved reserves of crude oil were estimated to be 600 million barrels (Mbbbl), which were the fourth largest in Europe. The proved reserves of natural gas were estimated to be 3.7 trillion cubic meters, which were the fifth largest in Europe. In 2013, Romania produced 29.7 Mbbbl of crude oil and about 11 billion cubic meters of natural gas, of which about 1.2 billion cubic meters was associated petroleum gas. The production of natural gas has been flat during the past 5 years. The country imported 39.5 Mbbbl of crude oil and about 1.4 billion cubic meters of natural gas in 2013. The imported crude oil was consumed by refineries, which required more than two times the domestic crude production (National Institute of Statistics, 2014a, p. 86; U.S. Energy Information Administration, 2014).

S.C. OMV Petrom S.A. (Petrom) was the largest oil and gas group in southeastern Europe. Its business segments included crude oil and natural gas exploration and production, power generation, refining, and marketing. In 2013, Petrom accounted for 100% of the crude oil production and about 50% of the natural gas production in Romania. The intensive drilling and workover program counterbalanced the natural decline in production in 2013, resulting in a 3% increase in crude oil production compared with that of 2012. The refinery segment of Petrom processed 28 Mbbbl of crude oil in 2013, which represented an increase of 20% compared with that of 2012. The company's refinery utilization rate increased to 90% in 2013 from 73% in 2012. The decreased utilization rate in 2012 was owing to the 6-week planned refinery shutdown. In 2013, Petrom's overall production increased in Romania for the first time since privatization of the company. As of December 2013, Petrom's proven reserves in Romania were estimated to be 369.6 Mbbbl of crude oil and 51.7 billion cubic meters of natural gas. In 2013, the company's exploration effort was focused on offshore initiatives and additional licensing award opportunities in the areas adjacent to the Neptun block (S.C. OMV Petrom S.A., 2014, p. 9, 26, 28, 31, 34, 35, 36).

Uranium.—Romania was one of the last European countries in which uranium was actively mined in 2013. The average mine production in Romania during the past 5 years was about 80 t of uranium content. In 2013, all production was from the deposit in Crucea, which was operated by the state-owned company Compania Națională a Uraniului. The mine had been in operation for 30 years; the ore was expected to be exhausted and the mine to be closed in 2015. Another mine, in Baita, Bihor County,

which was opened in the 1950s and had been a major source of uranium for the Soviet Union, was closed in 2009. In September 2013, the Ministry of Economy of Romania announced that a new mine would be opened near Grinties, Neamt County. The Government planned to invest about \$130 million in developing the mine and expected mine output to be 124,000 t/yr of ore during a 9-year mine life. Romania had a nuclear powerplant (two reactors) in operation and the Government was searching for foreign funds to build two more reactors (Stroe, 2014; World Nuclear Association, 2014).

Outlook

Romania's mineral industry is expected to continue with the privatization and restructuring process that is intended to improve efficiency and profitability. In the short term, compulsory investments in upgrading facilities to meet EU standards and the high taxes to support renewable energy projects will be challenges for the mining industry in Romania. Production will likely decrease because international demand for the country's mineral products, particularly the demand from EU countries, has not shown signs of increasing. Although mining is one of the five strategic investment sectors for which the Government would like to secure investment commitments and create jobs in Romania, the lack of public support (as demonstrated in the Certej and Rosia Montana gold project) and the lack of supporting mining legislation represent significant uncertainties for the implementation of the plan.

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TABLE 1
ROMANIA: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

Commodity ²	2009	2010	2011	2012	2013
METALS					
Alumina, calcined, gross weight	44,000	450,000 ^e	520,000 ^e	414,000 ^r	391,000
Aluminum:					
Primary	201,000	240,000 ^e	262,000 ^e	250,000 ^{r,e}	250,000 ^e
Secondary	10,544	18,282	23,970 ^r	16,955 ^r	14,531
Total	212,000 ^e	258,000 ^e	286,000 ^{r,e}	267,000 ^{r,e}	265,000 ^e
Copper:					
Mine output, Cu content of concentrate ^e	1,000	5,000	6,500	6,300 ^r	6,800
Metal, refined:					
Primary	3,000	3,000	--	--	--
Secondary ^e	1,000	1,000	--	--	--
Total ^e	4,000	4,000	--	--	--
Gold, mine output, Au content ^e	400	400	--	--	--
kilograms					
Iron and steel:					
Metal:					
Pig iron	1,575	1,726	1,595	1,580 ^r	1,330
thousand metric tons					
Ferroalloys, electric furnace:					
Ferrochromium ^e	15,000	14,000	--	--	--
Silicomanganese ^e	--	20,000	31,000	17,000 ^r	--
Total ^e	15,000	34,000	31,000	17,000 ^r	--
Steel, crude	2,761	3,724	3,811	3,292 ^r	2,985
thousand metric tons					
Finished products: ^e					
Pipes and tubes	450	678	799	781 ^{r,3}	664 ³
do.					
Rolled products	2,800	3,762 ³	4,061 ³	3,472 ³	2,845 ³
do.					
Lead, refined:					
Primary	9,000	11,000	6,500	1,500 ^{r,e}	1,100 ^e
Secondary	4,000 ^r	4,000 ^r	7,000 ^r	13,000 ^r	14,000
Total	13,000 ^r	15,000 ^r	13,500 ^r	14,500 ^{r,e}	15,100 ^e
Manganese, ore: ^e					
Gross weight	15	--	--	5 ^r	--
thousand metric tons					
Mn content	3	--	1 ^r	1 ^r	--
do.					
Silver, mine output, Ag content ^e	18	--	--	--	--
Zinc metal, refined, primary and secondary	300	200	220	330 ^r	220
INDUSTRIAL MINERALS					
Cement, hydraulic	7,800 ^e	7,000	7,846	8,223 ^r	7,451
thousand metric tons					
Clays:					
Bentonite, marketable	13,756	20,000 ^e	18,008	18,127 ^r	21,051
Kaolin, marketable	1,000 ^e	500	--	--	--
Feldspar ^e	14,000	5,500	2,500	6,500 ^r	6,800
Fluorspar ^e	15,000	15,000	--	--	--
Graphite	20,000 ^e	7,000	--	--	--
Gypsum	600	600 ^e	834	765 ^r	676
thousand metric tons					
Lime ^e	1,600	1,700	1,679 ³	1,708 ³	1,698 ³
do.					
Nitrogen, N content of ammonia ^e	40	80	160	115	85
do.					
Salt: ^e					
Rock	40	40	40	40	40
do.					
Other	2,000	2,400	2,500	2,200	2,300
do.					
Total	2,040	2,440	2,540	2,240	2,340
do.					
Sand and gravel ^e	3,000	2,700	5,873 ³	5,015 ^{r,3}	3,244 ³
do.					
Sodium compounds:					
Caustic soda ^e	300	300	540	292 ^{r,3}	171 ³
do.					
Soda ash, 100% Na ₂ CO ₃ basis	400 ^e	350	420	430 ^e	430 ^e
do.					
Sulfuric acid ^e	500	383	2,100	410 ^r	150
Talc ^e	500	307	100	1 ^r	-- ³

See footnotes at end of table.

TABLE 1—Continued
ROMANIA: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

Commodity ²	2009	2010	2011	2012	2013
MINERAL FUELS AND RELATED MATERIALS					
Coal, brown and lignite ^e thousand metric tons	30,000	30,000	35,000	33,902 ^{r,3}	24,723 ³
Coke, metallurgical do.	320	--	--	--	--
Gas, natural, gross:					
Associated million cubic meters	1,000 ^e	1,161	1,166	1,150	1,161
Nonassociated do.	9,860	9,694	9,733	9,783	9,810
Total do.	10,860	10,855	10,899	10,933	10,971
Petroleum: ^e					
Crude ⁴ thousand 42-gallon barrels	33,700	33,000	31,000	28,800 ^r	29,700
Refinery products ⁵ do.	97,300	95,000	79,000	78,500 ^r	82,600
Uranium, U ₃ O ₈ content ^e	88	90 ^r	90 ^r	106 ^r	90

^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 December 23, 2014.

²In addition to the commodities listed, a variety of construction materials are produced; antimony, asbestos, bismuth, and pyrites may have been produced; however, available information is inadequate to make reliable estimates of output.

³Reported figure.

⁴Figures converted to barrels from production in metric tons, which was reported as the following: 2009—4,494,000; 2010—4,490,000 (estimate); 2011—4,000,000 (estimate); 2012—3,860,000; and 2013—3,984,000.

⁵Figures converted to barrels from production in metric tons, which was reported as the following: 2009—12,165,000; 2010—12,000,000 (estimate); 2011—10,000,000 (estimate); 2012—9,883,000; and 2013—10,402,000.

TABLE 2
ROMANIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2013

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Alumina	Alum S.A. (Vimetco N.V., 86.98%)	Plant at Tulcea, Danube Delta	600
Aluminum:			
Primary	Alro S.A. (Vimetco N.V., 87.50%)	Slatina, 120 kilometers west of Bucharest	265
Secondary	Neferal S.A. (member of Metanef Group)	Bucharest	NA
Cement	Holcim (Romania) S.A. (Holcim Ltd., 99.7%)	Plants at Alesd, Campulung, and Turda	6,100
Do.	Carpatcement Holding S.A. (HeidelbergCement AG, 99%)	Plant at Bicaz, northeastern Romania	3,000
Do.	do.	Plant at Fieni, 90 kilometers northwest of Bucharest	1,500
Do.	do.	Plant at Deva, western Romania	1,500
Do.	Lafarge Ciment S.A. (Lafarge S.A., 98.56%)	Plants at Hoghiz and Medgidia	4,900
Coal:			
Bituminous	Complexul Energetic Hunedoara (Government)	7 mines located near Petrosani	3,500 ^e
Lignite	Complexul Energetic Oltenia (Government)	Tismana I-II, Garla-Rovinari Est, and Pinoasa opencast mines at Rovinari	8,000 ^e
Do.	do.	Rosia, Pesteana Nord, and Pesteana Sud-Udari opencast mines at Balteni	6,900 ^e
Do.	do.	Udari underground mine at Udari	300 ^e
Do.	do.	Jilt Sud and Jilt Nord opencast mines at Matasari	7,000 ^e
Do.	do.	Dragotesti underground mine at Matasari	600 ^e
Do.	do.	Lupoia and Rosiuta opencast mines at Motru	5,000 ^e
Do.	do.	Plotina, Horasti, and Lupoia underground mines at Motru	1,600 ^e
Do.	do.	Seciuri, Oltet, Berbesti-Vest, and Panga opencast mines near Berbesti	2,000 ^e
Do.	do.	Albeni underground mine at Bolbocesti	555 ^e
Do.	do.	Husnicioara-Vest opencast mine near Drobeta Turnu Severin	2,500 ^e
Do.	do.	Zegujani underground mine about 18 kilometers northeast of Drobeta Turnu Severin	600 ^e
Do.	Societatea Nationala a Carbonei 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 ^e
Do.	SC Complexul Energetic Craiova SA (Ministry of Economy, 73%)	Prigaria Mine	1,000 ^e
Coke	ArcelorMittal Galati (ArcelorMittal, 99.7%)	Galati, north of Brail	2,100
Copper, ore	S.C. Cupru Min S.A., REMIN S.A., Compania Nationala Minvest, and Moldomin S.A. (Government)	Borsa Balan, Rosia Poieni Mine; Moldova Noua	9,000
Ferroalloys, ferrochromium	S.C. Feral s.r.l.	Complex at Tulcea	280 ¹
Iron ore	Compania Nationala Minvest SA (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
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	Neferal S.A. (Member of Metanef Group)	Bucharest	25

See footnotes at end of table.

TABLE 2—Continued
ROMANIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2013

(Thousand metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity
Natural gas	million cubic meters	SNGN Romgaz S.A. (Ministry of Economy, 70%; Fondul Proprietatea, 14.99%; free float, 15%)	Operated more than 150 reservoirs in Moldova, Muntenia, and Transylvania regions	5,500 ^e
Do.	do.	S.C. OMV Petrom S.A. [OMV AG, 51.01%; Ministry of Economy, 20.64%; Property Fund S.A. (Government), 18.99%]	Approximately 250 commercial oil and gas fields located in southern and western Romania and offshore in the Black Sea	5,500 ^e
Petroleum:				
Crude		do.	do.	5,000 ^e
Refined		do.	Arpechim refinery, just south of Ploiesti	3,500
Do.		do.	Petrobrazi refinery, just south of Ploiesti	4,500
Do.		Rompetrol Rafinaria S.A. (Rompetrol Group)	Refinery at Navodari	4,500
Do.		Vega Ploiesti Refinery (Rompetrol Group)	Refinery just north of Ploiesti	500
Do.		S.C. RAFO S.A.	Refinery at Onesti	3,000 ^e
Do.		S.C. Petrotel S.A. (OAO Lukoil)	Refinery just east of Ploiesti	2,400
Do.		Astra Refinery	Refinery in Ploiesti	700
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, 99.7%)	Galati, north of Brail	4,500 ^e
Do.		ArcelorMittal Hunedoara (ArcelorMittal, 96.4%)	Hunedoara, west-central Romania, near Calan	NA
Do.		S.C. Silcotub S.A. (Tenaris S.A., 100%)	Calarasi in southeastern Romania	470
Do.		S.C. TMK-Resita S.A. (OAO TMK, 100%)	Resita in southwestern Romania	450
Do.		Mechel Targoviste (Invest Nikarom SRL)	Targoviste	630 ^{e,2}
Do.		Mechel Campia Turzii SA (Invest Nikarom SRL)	Campia Turzii, northwestern Romania	300 ^{e,2}
Do.		Ductil Steel (Invest Nikarom SRL)	Otelu Rosu in southwestern Romania	400 ^{e,2}
Uranium, U ₃ O ₈ content	metric tons	Compania Nationala a Uraniului (Government)	Suceava County	110 ^e
Zinc, ore		Compania Nationala REMIN S.A. (Government)	Vetel Mine, near Deva	45

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

¹Facility was not active in 2013.

²Production was suspended in 2013.