



2015 Minerals Yearbook

ROMANIA [ADVANCE RELEASE]

THE MINERAL INDUSTRY OF ROMANIA

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Romania's mineral production was not significant on a world scale in 2015; however, the country had potentially significant mineral resources for ferrous and nonferrous metals, precious metals, and salt. After joining the European Union (EU) in 2007, much of the country's metallic ore mining activities for copper, gold, ferroalloys, and zinc stopped or declined because the country's mining and mineral processing facilities did not meet EU standards. Romania's reserves of crude petroleum and natural gas were the fourth and fifth largest, respectively, in Europe. The country had 10 crude petroleum refineries, which provided it with one of the largest refining capacities in Eastern Europe. As of October, however, only four refineries were operational owing to reduced demand for products and international competition. Romania produced principally alumina, primary and secondary aluminum, cement, coal, copper ore, iron ore, lead, and steel (table 1; U.S. Energy Information Administration, 2014; Dudau, 2015, p. 1; National Agency for Mineral Resources, 2016a).

Minerals in the National Economy

Romania's real gross domestic product (GDP) increased by 3.7% in 2015; the nominal GDP was \$177 billion. The industrial sector contributed 23.2% to the total GDP, and the construction sector contributed 7.4%. In 2015, gross industrial production increased by 2.7% compared with that of 2014. The gross production index for manufacturing increased by 3.5%; within this sector, the manufacture of nonmetallic mineral products increased by 24.1%; that of fabricated metal products (except machinery and equipment) increased by 8.7%; and that of basic metals increased by 3.4%. In 2015, mining and quarrying output decreased by 12.5%. Mining of coal and lignite increased by 8.1%, extraction of crude petroleum and natural gas decreased by 0.7%, and mining of metal ores increased by 4.8%. At the end of December 2015, the number of people employed in the mining and quarrying sector was 54,700 compared with 59,300 at the end of December 2014 (National Institute of Statistics, 2015, p. 6, 81; 2016b, p. 52, 64; International Monetary Fund, 2016).

The main law regulating mining activity in Romania was law No. 85/2003 (the Mining Law), which was adopted in 2003, and its implementing rules No. 1208/2003. The Mining Law was amended in 2005, 2007, and 2009. The petroleum sector was regulated by law No. 238/2004 (the Petroleum Law), adopted in 2004, and its implementing rules No. 2075/2004. An environmental impact assessment (EIA) was necessary to acquire a production license. The EIA procedure was regulated by resolution No. 445/2009 and its implementing rules, and the methodology was approved by the Ministry of Environment (Lefter and Iovanesc, 2016; National Agency for Mineral Resources, 2016b, c; Pachiu, Mustaciosu, and Dudau, 2016).

Romania's total exports amounted to EUR54.6 billion (\$60.6 billion)¹ in 2015, which was an increase of 4.1% compared with that of 2014. Exported mineral products were valued at EUR2.6 billion (\$2.9 billion) or 4.7% of total exports by value, of which petroleum products were valued at EUR1.8 billion (\$2 billion). Exported base metals and articles thereof were valued at EUR4.7 billion (\$5.2 billion), or 8.6% of total exports. Romania's total imports amounted to EUR63 billion (\$70 billion), which was an increase of 7.6% compared with that of 2014. Imported mineral products were valued at \$4.9 billion (a decrease of 24% compared with the value in 2014), or 7.0% of total imports by value. Mineral fuels and petroleum constituted about 92% of this category and 6.4% of total imports. Imports of base metals and articles thereof were valued at EUR6.7 billion (\$7.4 billion), or 10.7% of all imports. Romania's main export partners were Germany (which received 19.7% of Romania's exports); Italy (12.4%); France (6.8%); and Hungary (5.4%). In 2015, Romania's exports of base metals and articles thereof to Germany were valued at \$800 million; Italy, \$563 million; Hungary, \$313 million; and France, \$247 million. Romania's main import partners were Germany (which provided 19.8% of Romania's imports), Italy (10.9%), Hungary (7.9%), and France (5.6%) (National Institute of Statistics, 2016a, p. 4, 7, 8, 10, 11, 106–113).

Production

In 2015, the production of several metal commodities increased compared with that of 2014. The production of manganese ore (gross weight) increased by an estimated 129%; pig iron, by 19%; mined copper, by 12.5%; and alumina, by 12%. Increased production of industrial minerals included that of soda ash (by 20.5%), lime (10.7%), and cement (10.5%). The mineral commodities that had decreases in production compared with that of 2014 were nitrogen as N content of ammonia (which decreased by 72%), sand and gravel (by 48.3%), gypsum (16.2%), bentonite (13.9%), and steel pipes and tubes (13.3%) (table 1).

Structure of the Mineral Industry

In Romania, all mineral resources are owned by the state. The National Agency for Mineral Resources (NAMR) was the principal Government organization with regulatory and supervisory authority in the mining and petroleum sectors. State-owned enterprises continued to dominate in the energy sector, but privatization had been more successful in the industrial mineral sector. At the end of 2013, state-owned

¹Where necessary, values have been converted from euro area euros (EUR) to U.S. dollars (US\$) at an annual average exchange rate of EUR0.9012=US\$1.00 for 2015.

enterprises constituted 44% of the energy sector and 18% of the mining and quarrying sector. The offering of a minority stake in Complexul Energetic Oltenia [Oltenia Energy Complex]—an integrated coal mining and coal-fired power production company) was rescheduled for 2015 but had been postponed, possibly until 2016, owing to legal issues. Table 2 is a list of major mineral-related industrial facilities operating in Romania in 2015 (Marrez, 2015, p. 1, 2; Nuttal, 2015; U.S. Department of State, 2015; National Agency for Mineral Resources, 2016d).

Commodity Review

Metals

Bauxite and Alumina and Aluminum.—Alum S.A. (Alum), which was a subsidiary of Vimetco N.V. of the Netherlands, owned the only alumina refinery in Romania. In 2015, the company's alumina production increased by about 12% to 404,825 metric tons (t) from a revised 362,627 t in 2014. The bauxite used by Alum was provided by Sierra Mineral Holdings 1 Ltd. (a subsidiary of Vimetco in Sierra Leone). The bauxite was refined into calcined alumina at Alum's plant in Tulcea (table 1; Vimetco N.V., 2016, p. 5, 9).

In 2015, primary aluminum produced by Alro S.A. (a subsidiary of Vimetco in Slatina) increased by 3% to 271,356 t from 263,098 t in 2014. The production of processed aluminum at Alro increased to 102,386 t in 2015 from 98,537 t in 2014. The main markets for Vimetco's Romanian production were Germany, Poland, Romania, and Spain, which together accounted for about 84% of sales. Primary aluminum was sold mainly on the Romanian market owing to lower transportation costs. At the end of 2015, Alro signed a \$60 million CAPEX agreement with the Black Sea Trade and Development Bank, which enabled Alro to continue its investment program. The goals of the program were to reduce energy costs, increase operations efficiency, and improve the company's competitiveness. In December, \$15 million was drawn from the loan to complete projects initiated in 2014, which were focused on increasing the percentage of value-added aluminum products in the product mix, such as billets, rods, slabs, plates, sheets, coils, and extruded products. Alro also continued development of its scrap aluminum production facility in 2015 and invested about \$12 million in equipment and technology upgrades. Vimetco employed an average of 3,892 people during the year, which was up slightly from an average of 3,855 people employed in 2014 (table 1; Vimetco N.V., 2016, p. 9, 14–15, 72–73).

Copper.—The state-owned company Cupru Min Abrud S.A. operated the Rosia Poieni Mine, which was the leading copper mine in Romania. The Rosia Poieni Mine is located in the Metalliferi Mountains of northern Romania. Estimated reserves at the porphyry copper deposit were 900 million metric tons (Mt) to 1 billion metric tons (Gt) of copper ore with a reported average grade of 0.36% Cu; this deposit accounted for 60% of the copper reserves in the country. After undergoing a restructuring process, Cupru Min Abrud planned to invest RON21.7 million² (\$5.4 million) in the mine

²Where necessary, values have been converted from Romanian leu (RON) to U.S. dollars (US\$) at an annual average exchange rate of RON4.00263=US\$1.00 for 2015.

in 2015, which would include a new line of froth flotation cells that would double the company's production capacity by 2018 and enrich the copper concentrate from the current 21% to about 25%; the capacity in 2015 was 36,000 to 48,000 metric tons per year of copper concentrate. The company also owned quarries in the area for production of andesite and limestone, and it had about 530 employees in 2015 (Els, 2011; Alba24.ro, 2014; Radut, 2015).

In July 2015, Vast Resources plc of the United Kingdom acquired a 50.1% interest in Sinarom Mining Group SA, which was a domestic company that operated the Manaila open pit copper-zinc mine in Suceava County. Commercial mining operations under the control of Vast Resources began in August and, at the end of September, the company announced that it had concluded a maiden sale of 450 t of copper concentrate with a grade of 21.2%. Work was underway to install an additional flotation line for lead and zinc to separate them from the copper concentrate and improve the quality and quantity of the concentrates. The implied mine life was predicted by the company to exceed 11 years at a rate of 30,000 metric tons per month. Total Joint Ore Reserves Committee (JORC)-compliant indicated and inferred mineral resources at the open pit were 2.6 Mt at grades of 1.0% Cu, 0.9% Zn, and 0.4% Pb at a 0.25% Cu cutoff grade. Planned phase 2 and phase 3 operations were to be underground mines, in which total JORC-compliant indicated and inferred mineral resources were 310,000 t at grades of 1.7% Cu, 0.5% Zn, and 0.4% Pb at a 1.0% Cu cutoff grade. The company employed an average of 66 people during 2015 (Vast Resources plc, 2015b, c; 2016, p. 2, 4, 35).

Vast Resources also held an 80% interest in the Baita Plai underground polymetallic mine located in the Apuseni Mountains. The mine was put on care-and-maintenance status in 2013 owing to lack of investment and modernization, which rendered the mine uneconomic. The company estimated that the mine contained 1.8 Mt of polymetallic "ore" containing copper, gold, lead, molybdenum, silver, tungsten, and zinc. At the end of the year, the company was working to obtain the license to redevelop the mine (Vast Resources plc, 2015a).

Gold.—Eldorado Gold Corp. of Canada completed a feasibility study in May at its Certej gold and silver project, located in the Apuseni Mountains, in which it held an 80.5% interest. The company reported total measured and indicated mineral resources at the end of December as 90 Mt grading 1.4 grams per metric ton (g/t) gold and 9 g/t silver. The resources contain about 126 t of gold and 796 t of silver. Proven and probable reserves were estimated to be 44.3 Mt grading 1.69 g/t gold and 11 g/t silver. The reserves contain about 75 t of gold and 484 t of silver. The company estimated average annual production of about 4,350 kilograms (kg) of gold and about 25,800 kg of silver and a mine life of 15 years (Eldorado Gold Corp., 2016a; 2016b, p. 2).

Gabriel Resources Ltd. of Canada announced in July that it had filed a request for arbitration before the World Bank's International Centre for Settlement of Investment Disputes (ICSID) against Romania. The dispute centered on the development of the Rosia Montana gold and silver project in which Gabriel Resources held an 80.69% interest. The remaining 19.31% was held by state-owned Minvest RM.

The rights to develop and operate the project had been granted in June 1999, but implementation had been blocked by the Government. The company reported measured and indicated mineral resources of 513 Mt grading 1.04 g/t gold and 5 g/t silver; the resources contained about 533 t of gold and 2,523 t of silver. Proven and probable reserves were estimated to be 215 Mt grading 1.46 g/t gold and 6.88 g/t silver and containing about 314 t of gold and 1,481 t of silver (Gabriel Resources Ltd., 2015; 2016, p. 15, 16, 22, 23).

In May, NAMR granted Samax Romania SRL (a wholly owned subsidiary of Carpathian Gold Inc. of Canada) a 20-year mining license for its Rovina Valley gold and copper project. The license was the first one issued for metals in Romania without the association of a state-owned enterprise. The company reported that it would update its preliminary economic assessment of 2010 (Jamasmie, 2015).

Iron and Steel.—Invest Nikarom SRL purchased the heavily indebted Braila, Campia Turzii, Otelu Rosu, and Targoviste steel plants from Mechel OAO in 2013. The plants remained under the indirect control of Mechel because of the large debts owed by the companies to Mechel. The Otelu Rosu plant was put up for auction in August, with a starting price of 37.7 million euros (\$41.8 million). In September, a bid of 16 million euros (\$17.8 million) was submitted by the domestic company Argirom International SA but was rejected by the Russian owners as too small, and the auction process was to continue. The Otelu Rosu plant manufactured wire rods, wire mesh, galvanized wire, and derivatives (Bernovici, 2015a, b; Ductil Steel SA, 2016).

In 2015, ArcelorMittal Galati planned to invest 40 million euros (\$44 million) in upgrades to its steel plant to reduce production costs and increase efficiency. The investments were part of a continuing program to reduce energy consumption by 15% during the next several years. Nevertheless, the company ended the year with a loss of 66 million euros (\$73 million). The Galati plant produced steel plates, hot-rolled coils, cold-rolled coils, and galvanized coils and sheets (ArcelorMittal, 2015a, b; 2016; Business Review, 2015; Rosca, 2016).

Industrial Minerals

Cement.—The leading cement producers in Romania were HeidelbergCement Romania S.A., which had plants at Bicaz, Fieni, and Deva; Holcim Romania S.A., which had plants at Alesd, Campulung, and Turda; and CRH Ciment Romania S.A., which had plants at Hoghiz and Medgidia. Lafarge S.A.'s holdings in Romania were to be sold in 2015 as part of the company's divestments under the terms of the merger with Holcim Ltd. In July, Lafarge S.A. and Holcim Ltd. completed their merger to form LafargeHolcim Ltd. At the end of July, CRH plc of Ireland completed a majority acquisition of Lafarge's Romania operations, which included the cement plants at Hoghiz and Medgidia, as well as aggregates and ready-mix concrete operations (Bazavan, 2015; Dolapchieva, 2015; CRH plc, 2016, p. 45, 46, 230).

In late 2015, HeidelbergCement AG of Germany completed the merger of the three companies that it owned in Romania. Carpatcement Cement Holding SA, Carpat Beton SRL, and Carpat Agregate SA were merged under

HeidelbergCement Romania SA. In total, HeidelbergCement owned 3 cement plants, 6 aggregate deposits, 7 quarries, and 19 concrete plants in Romania (Global Cement, 2015).

Mineral Fuels and Related Materials

Coal.—Complexul Energetic Oltenia [Oltenia Energy Complex], which was owned by the Government, was the largest lignite mining company in Romania. Complexul Energetic Hunedoara [Hunedoara Energy Complex], which was also owned by the Government, produced hard coal and was in insolvency in 2015. The production of brown coal and lignite in Romania increased by 8.4% to 25.5 Mt in 2015 from 23.5 Mt in 2014. Romania produced about 24.0 Mt of lignite and 1.3 Mt of hard coal in 2015. All the country's coal and lignite output was used for heat and power generation in coal-fired thermal powerplants. Romania's lignite resources were estimated to be 11.6 Gt, with proven reserves of 986 Mt. Most of the country's lignite deposits were located in the Oltenia mining basin in southwestern Romania, and more than 80% of these could be exploited by open pit methods. Deposits in most of the remaining areas were uneconomical and mining there had ceased. It was estimated that the leased lignite reserves could be exploited for another 15 years at a production level of about 30 million metric tons per year (Mt/yr). Romania's hard coal resources were estimated to be 2.2 Gt, of which 592 Mt was commercially exploitable within current lease areas. The majority of the hard coal deposits were located in the Jiu Valley coal basin of southwestern Romania. The hard coal deposits could be exploited for 36 years at the current production level of about 1.5 Mt/yr. Hard coal production did not meet domestic demand and Romania imported more than 1.2 Mt of coal in 2015 (National Institute of Statistics, 2015, p. 84; Stanciu, 2015; European Association for Coal and Lignite, 2016, p. 9, 15, 16).

Petroleum.—The leading hydrocarbon producers in Romania were S.C. OMV Petrom S.A., and Societatea Nationala de Gaze Naturale Romgaz S.A. (SNGN Romgaz), which was primarily a gas exploration, production, and storage company. Petrom was the largest integrated petroleum and gas group in southeastern Europe; it operated 232 commercial petroleum and natural gas fields in Romania. In 2015, Petrom produced about 28.6 million barrels (Mbbbl) of crude petroleum, including condensate, in Romania, which was almost the entire amount of the country's crude petroleum production. The 2015 production level was slightly less than that for 2014. The company also produced 5.27 billion cubic meters of natural gas, which was only slightly less than that of 2014 and which was approximately one-half of the country's natural gas production. Offshore production accounted for approximately 7% of petroleum production and 25% of natural gas production. At the end of December, proved reserves were 341.8 Mbbbl of crude petroleum, including condensate, and 43.3 billion cubic meters of natural gas. Crude petroleum produced by OMV Petrom was refined primarily at the company's Petrobrazi refinery (OMV Petrom S.A., 2016, p. 7, 18, 22, 24, 25, 27).

In 2015, Romgaz produced 5.6 billion cubic meters of gas, which was a slight decrease of 1.8% compared with that of 2014. The company also produced 10,947 t of gas condensate, which was an increase of 151% from 2014.

The increase was owing to previous discoveries that were brought into production in 2015. In October, Romgaz reported that work was completed on an exploration well in the EX 30 Trident Block in the Romanian section of the Black Sea, which resulted in the discovery of a major gasfield. Since 2011, exploration activity in this block had been carried out by OAO Lukoil (the operator) under a concession agreement with the Government. Concession holders were Lukoil (72% interest), PanAtlantic Petroleum (18%), and Romgaz (10%) (Societatea Nationala de Gaze Naturale Romgaz S.A., 2016, p. 4, 6).

As of October, only 4 of the 10 crude petroleum refineries in the country were still operating owing to overcapacity, reduced demand for products, and international competition. The refineries in operation were the Petromidia refinery at Navodari on the Black Sea, operated by Rompetrol; OMV Petrom's Petrobrazi refinery, located south of Ploiesti; Lukoil's Petrotel refinery, located east of Ploiesti; and Rompetrol's Vega refinery, located north of Ploiesti (Dudau, 2015, p. 1).

Outlook

Romania's economic growth is expected to remain strong in 2016. The real GDP growth was 3.7% in 2015 and is projected to be about 4.2% in 2016. Weak global commodity prices in 2015 reduced production in the mining and quarrying sector by 12.5%, but output is expected to recover gradually. Vast Resources started production of copper concentrates in August and planned to introduce flotation lines to recover lead and zinc, which is expected to increase the country's output of these mineral commodities in future years. CupruMin Abrud planned investments to double its copper production by 2018. The Rovina Valley and Certej gold projects were moving forward, but the Rosa Montana project remained stalled owing to the lack of public support and of Government progress on favorable mining legislation. OMV Petrom estimated that gas demand would continue to be flat in 2016, and that refinery output would decrease owing to continued overcapacity in European markets and reduced demand (International Monetary Fund, 2016; OMV Petrom 2016, p. 20, 21, 51).

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TABLE 1
ROMANIA: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

Commodity ²	2011	2012	2013	2014	2015
METALS					
Alumina, calcined, gross weight	484,000 ^r	414,000	391,000	362,627 ^r	404,825
Aluminum:					
Primary	261,000 ^{e,r}	249,000 ^e	250,000 ^e	263,098 ^r	271,356
Secondary	23,970	16,955	14,531	8,200 ^r	8,200
Total ^e	285,000 ^r	266,000	265,000	271,000 ^r	280,000
Copper, mine output, Cu content of concentrate	6,355 ^r	5,902 ^r	6,700 ^r	7,200 ^r	8,100 ^e
Iron and steel:					
Metal:					
Pig iron thousand metric tons	1,593 ^r	1,467 ^r	1,604 ^r	1,631	1,940
Ferroalloys, electric furnace, silicomanganese ^e	31,000	17,000	--	--	--
Steel, crude thousand metric tons	3,811 ^r	3,417 ^r	3,071 ^r	3,193 ^r	3,346
Finished products:					
Pipes and tubes do.	820 ^r	781	664	789 ^r	684
Rolled products do.	4,073 ^r	3,467 ^r	2,845	3,171 ^r	3,328
Lead, refined:					
Primary	6,500	1,500 ^e	1,100 ^e	1,300 ^r	1,300
Secondary	6,747 ^r	14,668 ^r	14,000	12,000	13,000
Total	13,247 ^r	16,168 ^r	15,100 ^e	13,300 ^r	14,300
Manganese, ore: ^e					
Gross weight thousand metric tons	3 ^r	9 ^r	21 ^r	17 ^r	39
Mn content do.	1	2 ^r	5	4 ^r	9
Zinc metal, refined, primary and secondary	220	330	220	90 ^r	--
INDUSTRIAL MINERALS					
Cement, hydraulic thousand metric tons	7,850 ^r	8,220 ^r	7,450 ^r	7,620 ^r	8,420
Clay:					
Bentonite, marketable	18,008	18,127	21,051	19,171 ^r	16,511
Kaolin, marketable	--	--	32,722 ^r	30,638 ^r	31,000 ^e
Feldspar ^e	2,500	6,500	6,800	9,200 ^r	9,100
Gypsum thousand metric tons	834	765	676	807 ^r	676
Lime do.	1,679	1,708	1,698	1,723 ^r	1,907
Nitrogen, N content of ammonia ^e do.	160	115	85	100 ^r	28
Salt: ^e					
Rock do.	40	40	40	47 ^r	50
Other do.	2,500	2,200	2,200	2,000 ^r	2,080
Total do.	2,540	2,240	2,240	2,050 ^r	2,130
Sand and gravel do.	5,873	5,015	3,244	6,422 ^r	3,323
Sodium compounds:					
Caustic soda do.	540 ^e	292	171	202 ^r	209
Soda ash, 100% Na ₂ CO ₃ basis ^e do.	420	430	430	420 ^r	505
Sulfuric acid ^e	2,100	400 ^r	150	270 ^r	10
Talc	131 ^r	13 ^r	--	--	--

See footnotes at end of table.

TABLE 1—Continued
ROMANIA: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

Commodity ²	2011	2012	2013	2014	2015	
MINERAL FUELS AND RELATED MATERIALS						
Coal, brown and lignite	thousand metric tons	35,000 ^e	33,902	24,723	23,485 ^r	25,452
Natural gas, gross:						
Associated	million cubic meters	1,166	1,150	1,161	1,196 ^r	1,240
Nonassociated	do.	9,733	9,783	9,810	9,858 ^r	9,348
Total	do.	10,899	10,933	10,971	11,054 ^r	10,588
Petroleum: ^e						
Crude ³	thousand 42-gallon barrels	31,000	28,800	29,700	29,500 ^r	28,700
Refinery products ⁴	do.	79,000	78,500	82,600	76,400 ^r	81,800
Uranium, U ₃ O ₈ content ^e		90	106	90	90	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 October 7, 2016.

²In addition to the commodities listed, a variety of construction materials were produced. Andesite, antimony, asbestos, bismuth, refined copper, gold, ferrochromium, fluorspar, graphite, iron ores, lead ores, limestone, pyrite, and zinc ores may have been produced, but available information was inadequate to make reliable estimates of output.

³Figures converted to barrels from production in metric tons, which was reported as the following: 2011—4,000,000 (estimate); 2012—3,860,000; 2013—3,984,000; 2014—3,963,000; and 2015—3,851,000.

⁴Figures converted to barrels from production in metric tons, which was reported as the following: 2011—10,000,000 (estimate); 2012—9,883,000; 2013—10,402,000; 2014—9,674,000; and 2015—10,352,000.

TABLE 2
ROMANIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2015

(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. (LafargeHolcim Ltd., 99.7%)	Plants at Alesd, Campulung, and Turda	6,100	
Do.	HeidelbergCement Romania SA (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.	CRH Ciment (Romania) S.A. (CRH plc, 98.62%)	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.	Plostina, 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 Carunelui 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	
Copper, ore	S.C. Cupru Min S.A., REMIN S.A., Compania Nationala Mininvest, and Moldomin S.A. (Government)	Borsa Balan, Rosia Poieni Mine; Moldova Noua	9,000	
Do.	Sinarom Mining Group SA (Vast Resources plc, 50.1%)	Manaila Mine, Suceava County	240	
Ferroalloys, ferrochromium	S.C. Feral s.r.l.	Complex at Tulcea	280 ¹	
Lead, metal	Neferal S.A. (Member of Metanef Group)	Bucharest	25	
Natural gas	million cubic meters meters	Societatea Nationala de Gaze Naturale Romgaz S.A. (SNGN Romgaz) (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 Energy 20.64%; Property Fund S.A. (Government), 18.99%]	Approximately 2,300 commercial oil and gas fields located in southern and western Romania and offshore in the Black Sea	5,500 ^e

See footnotes at end of table.

TABLE 2—Continued
ROMANIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2015

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Petroleum:			
Crude	S.C. OMV Petrom S.A. [OMV AG, 51.01%; Ministry of Energy 20.64%; Property Fund S.A. (Government), 18.99%]	Approximately 2,300 commercial oil and gas fields located in southern and western Romania and offshore in the Black Sea	5,000 ^e
Refined	do.	Arpechim refinery, just south of Ploiesti	3,500 ¹
Do.	do.	Petrobrazi refinery, just south of Ploiesti	4,500
Do.	Rompetrol Rafinarie S.A. (Rompetrol Group)	Petromidia refinery at Navodari (Constanza)	5,000
Do.	Vega Ploiesti Refinery (Rompetrol Group)	Refinery just north of Ploiesti	500
Do.	S.C. RAFO S.A.	Refinery at Onesti	3,500 ^{e,1}
Do.	S.C. Petrotel S.A. (OAO Lukoil)	Refinery, just east of Ploiesti	2,400
Do.	Astra Refinery	Refinery in Ploiesti	700 ¹
Do.	SC Ecodiesel SRL Suplacu de Barcau	Refinery at Suplacu de Barcau	700 ^{e,1}
Do.	Darmanesti refinery	Refinery at Darmanesti in eastern Romania	600 ¹
Do.	Omnimpex Group Rafinaria Steaua Romana S.A.	Refinery at Campina, north of Bucharest	1,000 ¹
Steel	ArcelorMittal Galati (ArcelorMittal, 99.7%)	Galati, north of Brail	6,000
Do.	ArcelorMittal Hunedoara (ArcelorMittal, 96.4%)	Hunedoara, west-central Romania, near Calan	800
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	575 ¹
Do.	Mechel Campia Turzii SA (Invest Nikarom SRL)	Campia Turzii in northwestern Romania	385 ¹
Do.	Ductil Steel SA (Invest Nikarom SRL)	Otelu Rosu in southwestern Romania	300 ¹
Uranium, metric tons U ₃ O ₈ content	Compania Nationala a Uraniului (Government)	Suceava County	110 ^e

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

¹Not in production in 2015.