

2016 Minerals Yearbook

ROMANIA

THE MINERAL INDUSTRY OF ROMANIA

By John R. Matzko

Romania's mineral production was not significant on a world scale in 2016; however, the country had significant mineral resources for hydrocarbons, ferrous and nonferrous metals, precious metals, and salt. In 2016, Romania produced alumina, aluminum, cement, coal, copper ore, gypsum, iron ore, lead, natural gas, petroleum, salt, steel, and zinc (table 1; National Agency for Mineral Resources, 2017).

Minerals in the National Economy

In 2016, Romania's real gross domestic product (GDP) growth rate was 4.8%; the nominal GDP was \$187 billion. The industrial sector contributed 23.1% to the total GDP, and the construction sector contributed 6.0%. Romania's total exports amounted to \$63.6 billion in 2016, which was an increase of 4.9% compared with those of 2015. In 2016, mineral product exports decreased in value to \$2.4 billion,¹ or by 15.1% compared with that of 2015, and they accounted for 3.8% of total exports, by value. Romania's total imports amounted to \$74.6 billion, which was an increase of 6.8% compared with those of 2015. In 2016, mineral product imports decreased in value to \$4.5 billion, or by 5.5% compared with that of 2015, and they accounted for 6.0% of total imports, by value (International Monetary Fund, 2017; National Institute of Statistics, 2017, p. 56, 74, 75).

Production

In 2016, the production of bentonite increased by 60% to 24,999 metric tons (t); secondary aluminum, by almost 18%; alumina by 15%; petroleum refinery products, by 11%; and copper (Cu content of mine output), by 8%. The production of sulfuric acid decreased by an estimated 90% to about 2 t in 2016; nitrogen (N content of ammonia) and manganese (Mn content), by 60% each; construction sand and gravel (unspecified), by 52%; feldspar (mine output), by an estimated 45%; gypsum, by 26%; natural gas (nonassociated), by 12%; and lignite, by about 10% (table 1).

Structure of the Mineral Industry

Table 2 is a list of major mineral-related industrial facilities operating in Romania in 2016.

Commodity Review

Metals

Bauxite and Alumina and Aluminum.—In June, Alro S.A., which was majority owned by Vimetco N.V. of the Netherlands, announced a \$53 million investment program to increase energy

and equipment efficiency. The plan included an increase in the aluminum scrap processing capacity of the company's Eco Cast House facility to 90,000 metric tons per year (t/yr) from the current 32,000 t/yr. The scrap facility provided an alternative source of liquid aluminum to replace some of the energy-intensive electrolytic aluminum production. At yearend 2016, Vimetco employed 3,975 people at its operations in Romania (table 1; Vimetco N.V., 2017, p. 18–20).

Copper and Zinc.—In September, Vast Resources plc of the United Kingdom commissioned a zinc concentrate flotation line at its Manaila Mine and, by the end of the year, had produced 200 t of zinc concentrate at a grade of about 35% Zn. The company also commissioned a third flotation line with the goal of increasing copper production in 2017. In 2016, Vast Resources gained access to the Baita Plai underground polymetallic mine located in Transylvania by a sublicense from the state company Baita SA. Vast reported that its subsidiary, African Consolidated Resources SRL, expected to start mining operations before yearend 2017 (Vast Resources plc, 2016a, p. 41; 2016b; 2017).

Gold.—In August 2016, Carpathian Gold Inc. of Canada announced a name change to Euro Sun Mining Inc. and was focused on advancing the permitting process at its Rovina Valley gold and copper project. The company expected to initiate a feasibility study for the project in 2017. In October 2016, the company received a prospecting permit from Romania's National Agency for Mineral Resources for the Stanija property, which is located about 3 kilometers east of its Rovina Valley mining licensed area. The permit was valid for 3 years (Euro Sun Mining Inc., 2016a, b).

Industrial Minerals

Cement.—In 2016, Romania's cement production decreased by 3.8%, and consumption, by 5.1% compared with that of 2015, owing to a lack of new construction projects during the year. In 2016, the amount of construction work decreased by 4.8% compared with that of 2015. Cembureau (the European Cement Association) expected that Romania's cement consumption in 2017 would likely be similar to that of 2016 or show a small increase (table 2; Cembureau, 2017, p. 13).

Mineral Fuels and Related Materials

Coal.—Complexul Energetic Hunedoara SA had been insolvent in early 2016 and exited out of insolvency in November. In April, Romania's Energy Ministry announced that two unprofitable mines in the Jiu Valley were slated for closure by 2018, leaving only the company's Livezeni and Vulcan Mines operational after 2018. The Ministry also announced that only the Paroseni and the Mintia coal-fired powerplants, which had a total of 385 megawatts of installed capacity, would remain part of the Hunedoara Energy Complex. The company employed

¹Where necessary, values have been converted from euro area euros (EUR) to U.S. dollars (US\$) at an annual average exchange rate of EUR0.9037=US\$1.00 for 2016.

6,300 people in 2016 (Bernovici, 2016; Nineoclock, 2016; European Association for Coal and Lignite, 2017, p. 41–42).

Petroleum and Refinery Products.—At yearend 2016, four crude petroleum refineries were in operation in Romania. The Petromidia refinery at Navodari and the Vega refinery near Ploiesti were operated by Rompetrol Rafinarie S.A., which was owned by KMG International N.V. (KMGI). The Petrobrazi refinery near Ploiesti was operated by OMV Petrom S.A., and OAO Lukoil of Russia operated the Petrotel-Lukoil refinery, also located near Ploiesti. In December, CEFC China Energy Co. Ltd. of China agreed to acquire 51% of KMGI as part of a joint venture. The agreement called for CEFC's support to expand KMGI's refining capacity to 10 million metric tons per year and investment in the Petromidia refinery. The transaction was expected to be completed in the first half of 2017 (Brelsford, 2016; OMV Petrom S.A., 2017, p. 38, 39).

Outlook

Romania had one of the fastest growing economies in Europe in 2016, and the economy is expected to continue its strong growth into the near future. Real GDP growth is anticipated to be 4.2% in 2017 and 3.4% in 2018, as reported by the International Monetary Fund. Several companies planned to expand their production by continuing investments and improvements in their mining and processing facilities to increase efficiencies and reduce costs. Copper production is expected to increase as mining commences at the Baita Plai project by yearend 2017. Work on several gold projects continued to progress but remained stalled at Gabriel Resources Ltd.'s Rosia Montana project. Coal production will continue to decrease, and only two bituminous coal mines are expected to be operational in the Jiu Valley after 2018 (European Association for Coal and Lignite, 2017, p. 42; International Monetary Fund, 2017).

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TABLE 1
ROMANIA: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons, gross weight, unless otherwise specified)

Commodity ²		2012	2013	2014	2015	2016
METALS						
Aluminum:						
Alumina, calcined		414,000	391,000	362,627	404,825	467,031
Metal:						
Primary		248,600 ^r	250,200 ^r	263,098	271,356	272,507
Secondary		16,955	14,531	8,200	9,264 ^r	10,900
Copper, mine production, Cu content ^e	thousand metric tons	6,500 ^r	7,800 ^r	8,200 ^r	8,800 ^r	9,500
Iron and steel:						
Pig iron	do.	1,467	1,604	1,631	1,983 ^r	1,972
Raw steel	do.	3,417	3,071	3,193	3,423 ^r	3,384
Products:						
Pipes and tubes	do.	781	664	789	689 ^r	629
Rolled	do.	3,467	2,845	3,171	3,321 ^r	3,264
Lead, refinery production:						
Primary ^e		1,500	1,100	1,300	1,300	1,300
Secondary		13,200 ^r	14,000 ^e	12,000 ^e	12,000 ^{r,e}	11,000
Manganese:						
Mine production, ore:						
Gross weight	thousand metric tons	9	21	29 ^r	20 ^r	7
Mn content ^e	do.	2	5	7 ^r	5 ^r	2
Silicomanganese	do.	17 ^e	--	--	--	--
Zinc, smelter production, primary and secondary		330	220	90	200 ^r	200 ^e
INDUSTRIAL MINERALS						
Cement, hydraulic	thousand metric tons	8,223 ^r	7,451 ^r	7,621 ^r	8,356 ^r	8,038
Clay and shale, marketable:						
Bentonite		18,127	21,051	19,171	15,612 ^r	24,999
Kaolin		--	32,722	30,638	30,000 ^{r,e}	30,000 ^e
Feldspar, mine production ^e		6,500	6,800	9,200	8,200 ^r	4,500
Gypsum	thousand metric tons	765	676	807	840 ^r	620
Lime	do.	1,708	1,698	1,723	1,907	1,951
Nitrogen, N content, ammonia ^e	do.	115	85	100	30 ^r	12
Salt: ^e						
Rock	do.	40	40	47	50	52
Other	do.	2,200	2,200	2,000	2,100 ^r	2,000
Sand and gravel, construction, unspecified	do.	5,015	3,244	6,422	7,492 ^r	3,571
Soda ash, synthetic, 100% Na ₂ CO ₃ basis ^e	do.	430	430	420	505	516
Sodium compounds, caustic soda	do.	292	171	202	209	215
Sulfur compounds, sulfuric acid	do.	400	150	270	20 ^r	2
Talc and related materials, talc	do.	13	--	--	--	-- ^e
MINERAL FUELS AND RELATED MATERIALS						
Coal, lignite	thousand metric tons	33,902	24,723	23,485	25,483 ^r	22,976
Natural gas:						
Associated	million cubic meters	1,150	1,161	1,196	1,228 ^r	1,236
Nonassociated	do.	9,783	9,810	9,858	9,862 ^r	8,654
Petroleum:						
Crude ³	thousand 42-gallon barrels	29,000 ^r	29,900 ^r	29,700 ^r	29,300 ^r	27,700
Refinery products ⁴	do.	78,500 ^r	82,600 ^r	76,400 ^r	81,800 ^r	90,600
Uranium, mine production, U content, ore ^e		90	80	77	77	77

^eEstimated. ^rRevised. do. Ditto. -- Zero.

¹Table includes data available through December 15, 2017. All data are reported unless otherwise noted. Estimated data are rounded to no more than three significant digits.

²In addition to the commodities listed, antimony, asbestos, bismuth, manganese, pyrite, zinc concentrate, and a variety of construction materials may have been produced in Romania, 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: 2012—3,860,000; 2013—3,984,000; 2014—3,963,000; 2015—3,902,000; and 2016—3,686,000.

⁴Figures converted to barrels from production in metric tons, which was reported as the following: 2012—9,883,000; 2013—10,402,000; 2014—9,674,000; 2015—10,352,000; and 2016—11,409,000.

TABLE 2
ROMANIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2016

(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%)	Refinery at Tulcea, Danube Delta	600
Aluminum:			
Primary	Alro S.A. (Vimetco N.V., 87.50%)	Slatina, 120 kilometers west of Bucharest	265
Secondary	do.	Eco Cast House, smelting facility at Slatina	32
Do.	Neferal S.A. (member of Metanef Group)	Bucharest	NA
Cement	CRH Ciment (Romania) S.A. (CRH plc, 98.62%)	Plants at Hoghiz and Medgidia	4,900
Do.	HeidelbergCement Romania SA (HeidelbergCement AG, 100%)	Plant at Tasca, northeastern Romania	3,000
Do.	do.	Plant at Fieni, 90 kilometers northwest of Bucharest	2,500
Do.	do.	Chiscadaga plant near Deva, western Romania	1,650
Do.	Holcim (Romania) S.A. (LafargeHolcim Ltd., 99.7%)	Plants at Alesd, Campulung, and Turda	6,000
Coal:			
Anthracite and bituminous	Complexul Energetic Hunedoara SA (Government)	7 mines located near Petrosani	3,500 °
Lignite	Complexul Energetic Oltenia (Ministry of Economy, 77.15%, and Fondul Proprietatea, 21.56%)	Tismana I-II, Garla-Rovinari Est, and Pinoasa opencast mines at Rovinari	8,000 °
Do.	do.	Rosia, Pesteana Nord, and Pesteana Sud-Udari 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.	Lupoaia and Rosiuta opencast mines at Motru	5,000 °
Do.	do.	Plostina, Horasti, and Lupoaia 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 Carbunelui Ploiesti (Government)	8 mines located near Campulung, Baraolt City, Sarneasag, 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 °
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
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	SNGN Romgaz S.A. (Ministry of Energy, 70%, and free float, 30%)	Operated more than 150 reservoirs in Moldova, Muntenia, and Transylvania regions
Do.	do.	S.C. OMV Petrom S.A. [OMV AG, 51.01%; Ministry of Energy 20.64%; Property Fund S.A. (Government), 12.57%; free float, 15.78%]	Approximately 230 commercial oil and gas fields located in southern and western Romania and offshore in the Black Sea

See footnotes at end of table.

TABLE 2—Continued
ROMANIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2016

(Thousand metric tons unless otherwise specified)

Commodity		Major operating companies and major equity owners	Location of main facilities	Annual capacity
Petroleum:				
Crude	thousand 42-gallon barrels	OMV Petrom S.A. [OMV AG, 51.01%; Ministry of Energy 20.64%; Property Fund S.A. (Government), 12.57%; free float, 15.78%]	Approximately 230 commercial oil and gas fields located in southern and western Romania and offshore in the Black Sea	37,500 ^e
Petroleum products	do.	do.	Petrobrazi refinery, just south of Ploiesti	35,700
Do.	do.	Rompotrol Rafinarie S.A. (KMG International N.V. (KMGI), 54.63%, and Ministry of Energy, 44.69%)	Petromidia refinery at Navodari (Constanza)	39,700
Do.	do.	do.	Vega refinery near Ploiesti	3,970
Do.	do.	S.C. Petrotel–Lukoil S.A. (OAO Lukoil)	Refinery just east of Ploiesti	21,400
Do.	do.	Omnimpex Group Rafinaria Steaua Romana S.A.	Refinery at Campina, north of Bucharest	7,940 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.		Cos Targoviste (Invest Nikarom SRL)	Targoviste	575 ¹
Do.		Mechel Campia Turzii SA (Invest Nikarom SRL)	Campia Turzii, northwestern Romania	385 ¹
Do.		Ductil Steel SA (Invest Nikarom SRL)	Otelu Rosu in southwestern Romania	300 ¹
Uranium	metric tons	Compania Nationala a Uraniului (Government)	Suceava County	110 ^e

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

¹Not in production in 2016.