



2013 Minerals Yearbook

BULGARIA

THE MINERAL INDUSTRY OF BULGARIA

By Sean Xun

The major raw materials extracted in Bulgaria in 2013 included clays (including bentonite), copper, gypsum, lead, lignite, limestone, salt, sand and gravel, and zinc. The metallurgical sector smelted and refined copper, lead, silver, and zinc; produced crude steel; and processed products. Production quantities of crude oil and natural gas were insignificant (table 1).

Minerals in the National Economy

In 2013, Bulgaria's real gross domestic product (GDP) increased by 0.9% to \$53.1 billion¹ compared with that of 2012. Production value of the mining and quarrying industry was about \$1.79 billion, which accounted for about 4.2% of total production value of industrial enterprises compared with 4.7% in 2012. The production value of basic metal and fabricated metal products (except machinery and equipment) in 2013 was \$6.88 billion, which accounted for about 16.1% of the total production value of industrial enterprises compared with 15.8% in 2012. The number of identified mineral deposits in 2012 (the latest year for which data were available) was 595, which included 206 of metallic minerals, 115 of nonmetallic minerals, 151 of construction materials, 69 of solid fuels, 51 of natural stone materials, and 3 of oil and natural gas. In 2013, about 26,000 people were employed in the mining and quarrying industry compared with 26,200 (revised) in 2012 (Bulgaria Chamber of Mining and Geology, 2013; International Monetary Fund, 2014, p. 54; National Statistical Institute, 2014a, p. 15; 2014c, p. 189, 191; 2014d, p. 103, 321).

Production

In 2013, tellurium metal production increased by 103% to 5,014 kilograms (kg) from 2,472 kg in 2012; zinc, mine output, metal content, by 33% to 11,992 metric tons (t) from 8,995 t (revised); sulfuric acid production, by 23% to 1,352,588 t from 1,100,835 t (revised); silver metal production, by 20% to 55,637 kg from 46,523 kg (revised); manganese, mine output, metal content, by 19% to 12,600 t from 10,600 t; cadmium metal production, by 14% to 411 t from 360 t (revised); and lead, mine output, metal content, by 11% to 15,986 t from 14,366 t (revised).

Natural gas production decreased by 27% to 289 million cubic meters from 396 million cubic meters in 2012; crude steel production, by 18% to 522,000 t from 640,000 t (revised); estimated lignite production, by 18% to 25.5 million metric tons (Mt) from 31 Mt (revised); estimated copper ore, gross weight, by 12% to 25 Mt from about 28 Mt. Data on mineral production are in table 1.

¹Where necessary, values have been converted from Bulgarian leva (BGN) to U.S. dollars (US\$) at an annual average rate of BGN1.47=US\$1.00 for 2013 and BGN1.52=US\$1.00 for 2012.

Structure of the Mineral Industry

Table 2 is a list of major mineral industry facilities.

Mineral Trade

In 2013, the total value of Bulgaria's exports was about \$29.6 billion compared with about \$26.7 billion in 2012. The total value of Bulgaria's imports was about \$34.3 billion compared with \$32.7 billion in 2012. The country's major export trade partners were, in descending order of value, Germany (which received 12.3% of Bulgaria's exports), Turkey (9.0%), Italy (8.6%), and Romania (7.7%). Its major import trade partners were, in descending order of value, Russia (which supplied 18.5% of Bulgaria's imports), Germany (10.8%), Italy (7.4%), and Romania (6.6%) (National Statistical Institute, 2014b).

In 2013, the imports and exports of nonferrous metals and finished products amounted to about \$1.0 billion and \$3.6 billion, respectively. Bulgaria imported 271,176 metric tons (t) of nonferrous metals and exported 632,225 t, with a turnover of 903,401 t and a positive trade balance of 361,049 t. The turnover was 11.9% higher than in 2012, primarily owing to the increase in copper and lead ingot exports. Bulgaria's energy dependence [measured on the basis of British thermal unit (Btu) equivalent] was 37% in 2012; imports accounted for 21% of coal consumption, 99.5% of crude oil consumption, and 83.3% of natural gas consumption (Bulgaria Association of the Metallurgical Industry, 2014, p. 51, 53–54; National Statistical Institute, 2014d, p. 276).

Bulgaria's exports to the United States were valued at about \$514 million in 2013 compared with about \$509 million in 2012. Of this amount, fertilizers accounted for about \$32 million, and finished metal shapes accounted for about \$20 million. Imports from the United States were valued at about \$307 million in 2013 compared with about \$248 million in 2012; these included about \$20 million in petroleum products and \$3.7 million in finished metal shapes (U.S. Census Bureau, 2014a, b).

Commodity Review

Metals

Copper.—Aurubis AG of Germany, through its subsidiary Aurubis Bulgaria AD, owned the country's only copper smelting and refining facility. Aurubis Bulgaria AD, which is located in the town of Pirdop, produced about 354,294 t of anodic copper and 229,604 t of electrolytic copper in 2013 compared with 325,220 t and 226,100 t in 2012, respectively. According to the Bulgaria Association of the Metallurgical Industry, the electrolytic copper produced in Bulgaria accounted for 1.10% of world production. The company processed 1,227,926 t of copper concentrates containing 295,435 t of metal at an average copper

content of 24.06%. The amount of concentrates processed in 2013 was 976,718 t. The share of local concentrates in terms of metal content was 23% in 2013 and 33.4% in 2012. The raw materials for copper production also included 60,320 t of imported scrap metal. Production of sulfuric acid by Aurubis Bulgaria increased by 25.3% from 2012 to 1,234,289 t. In 2013 the company continued to invest in the Pirdop 2014 project, which had a total budget of \$58.7 million. The project would fund environmental upgrades and expand concentrate processing capacity at the plant (Aurubis AG, 2014, p. 88; Bulgaria Association of the Metallurgical Industry, 2014, p. 39–40).

Dundee Precious Metals Inc. of Canada owned and operated the Chelopech underground copper mine, which was located about 70 kilometers (km) east of the capital city of Sofia, through its 100%-owned subsidiary Chelopech Mining EAD. In 2013, the company extracted 2,029,702 t of copper ore. The copper metal contained in the concentrate was about 20,700 t. As of December 31, the measured and indicated resources at the Chelopech Mine were estimated to be 28.72 Mt at a grade of 1.25% copper (359,000 t of contained copper), and the proven and probable reserves were estimated to be 24.04 Mt at a grade of 0.99% copper (238,000 t of contained copper). The copper concentrates produced at the Chelopech Mine were exported to be processed at Dundee's smelter in Tsumeb, Namibia. The smelter processed 101,031 t of concentrate from Chelopech in 2013 (Dundee Precious Metals Inc., 2014a, p. 2, 7, 15, 29; 2014c).

Gold and Silver.—In 2013, gold production from the Chelopech Mine increased by 9% to 4,100 kg from 3,752 kg in 2012. As of December 31, the measured and indicated resources at the Chelopech Mine were estimated to be 28.7 Mt at grades of 4.03 g/t gold and 9.25 g/t silver (116,000 kg of gold and 266,000 kg of silver); the proven and probable reserves were estimated to be 23.9 Mt at grades of 3.26 g/t gold and 7.37 g/t silver (78,100 kg of gold and 176,000 kg of silver). The company expected gold production from Chelopech to be between 3,919 and 4,292 kg in 2014 (Dundee Precious Metals Inc., 2014a, p. 2, 7; 2014b).

Dundee continued with its plan to develop the Krumovgrad gold project in which it owned a 100% interest. The project was located at Ada Tepa, which is about 3 km south of the town of Krumovgrad in southeastern Bulgaria. The measured and indicated resources at the Krumovgrad project were estimated to be 6.9 Mt at grades of 3.86 g/t gold and 2.15 g/t silver (26,700 kg of gold and 14,800 kg of silver); the proven and probable reserves were estimated to be 6.2 Mt at grades of 4.04 g/t gold and 2.22 g/t silver (25,100 kg of gold and 13,800 kg of silver). In 2013, the Administrative Court in Kardzhali ruled twice in favor of the company's attempt to meet the prerequisite for issuance of a construction permit. Commissioning of the project was expected to take place in late 2016 or early 2017 (Dundee Precious Metals Inc., 2014a, p. 8, 49, 50).

Lead and Zinc.—In 2013, according to the Bulgaria Association of the Metallurgical Industry, lead production in Bulgaria accounted for about 0.81% of world production. Concentrates containing 60,917 t of lead were processed. The share of local concentrates increased to 26.2% from 25.2% in 2012. About 12,341 t of imported scrap materials

were used for lead production. Zinc production in Bulgaria accounted for about 0.59% of world production. Concentrates containing 66,894 t of zinc were processed. The share of local concentrates increased to 17.9% from 16.1% in 2012. About 11,363 t of imported scrap materials were used for zinc production (Bulgaria Association of the Metallurgical Industry, 2014, p. 41–44).

KCM AD produced 71,668 t of lead and 75,830 t of zinc in 2013, which accounted for about 79% of lead production and 100% of zinc production in Bulgaria. Production in 2012 was 68,438 t of lead and 73,558 t (revised) of zinc. In December, Sofia-based Harmony 2012 Ltd. announced that construction work at the site of bankrupt Lead and Zinc Complex Plc was expected to begin in June 2014. The plan was to build a modern lead and zinc smelter by reconstructing the buildings and replacing all the equipment (Novinite.com, 2013; Bulgaria Association of the Metallurgical Industry, 2014, p. 41, 43).

Industrial Minerals

Cement.—In Bulgaria, cement was produced by four companies—Devnya Cement AD, Holcim (Bulgaria) AD, Vulkan Cement S.A., and Zlatna Panega Cement AD. These companies had a combined cement production capacity of 5.7 million metric tons per year (Mt/yr). Devnya Cement and Vulkan Cement, with a production capacity of 2 Mt/yr and 0.5 Mt/yr, respectively, were owned by Italcementi Group of Italy and employed 349 in 2013 compared with 359 in 2012. Italcementi Group's cement and clinker sales volumes in Bulgaria increased by 5.6% from 2012 owing to exports stimulated by construction for the Winter Olympics in Russia. In 2013, a wind farm in Bulgaria provided 20% of the electricity for the local cement plant. Holcim Bulgaria AD, which was owned by Holcim Ltd. of Switzerland, had an annual capacity of 1.7 Mt and 453 employees in 2013. It operated the Beli Izvor cement plant, the Sofia and Plovdiv Zlatna aggregate plant, and the Plovdiv ready-mix concrete plant. Zlatna Panega Cement AD, which was owned by the Greek company Titan Group, had an annual capacity of 1.5 Mt and employed 453 in 2013. The plant increased the use of alternative fuels in the cement production process to 20.6% in 2013 from 16.1% in 2012 (Holcim Group, 2014, p. 243, 252; Italcementi Group, 2014, p. 51, 331, 340; Titan Group, 2014, p. 48, 62).

Mineral Fuels and Related Materials

Coal.—State-owned Bulgarian Energy Holding EAD, through its subsidiary Mini Maritsa Iztok EAD (Mini Maritsa), held 100% interest in the Troyanovo-1, Troyanovo-3, and Troyanovo-North mines. In 2013, Mini Maritsa produced 25,467,875 t of lignite coal. Troyanovo-1 Mine produced 10,384,937 t; Troyanovo-North Mine 7,966,257 t; and Troyanovo-3 Mine 7,116,681 t. Sales to thermal powerplants accounted for about 98.3% of total production; the balance was used for briquetting. These powerplants generated more than 35% of the electricity in the country, and 100% of domestic briquet production was based on lignite produced by Mini Maritsa. The average number of employees in 2013 was 7,030. The area of the

complex was about 240 square kilometers. As of December 31, proved and probable reserves at Mini Maritsa were estimated to be about 920 Mt and 660 Mt, respectively. In 2012, output from the Mini Maritsa mines accounted for 96.2% of national lignite production; other producers of lignite coal included the Beli Breg (1.7%), the Stanyantsi (1.7%), and the Chukurovo Mines (0.5%) (Bulgaria Ministry of Economy, Energy and Tourism, 2013, p. 10; Mini Maritsa Iztok EAD, 2014, p. 10, 11, 17–19, 27).

Natural Gas.—In October, Petroceltic International Plc of Ireland, through its subsidiary Melrose Resources Bulgaria EOOD, operated three gas-producing fields and one future development, which was located in shallow water offshore of Bulgaria in the Black Sea. The combined production of the Galata, Kaliakra, and Kavarna gasfields was about 289 million cubic meters compared with 396 million cubic meters in 2012. The decrease was attributed to a decrease in production at the Kaliakra field in the first half of 2013. The production well suffered from an increasing level of water production. The company decided to complete a replacement well and to shut down the existing well. The original discovery well, Kaliakra-1, was selected for use as the replacement well. In September, the new well was flow tested at rates in excess of 340,000 cubic meters per day. As of the end of 2013, the reserves at the Galata field and the Kaliakra field were estimated to be 2.2 billion cubic meters and 894 million cubic meters, respectively. During the year, the company applied for a 2-year extension for the Galata exploration concession. As of the end of 2013, the request was still under evaluation by the Council of Ministers. The company was the only domestic producer of natural gas and provided 15% of the gas consumed in Bulgaria in 2013 compared with 17% in 2012 (Petroceltic International Plc, 2013, p. 23; 2014, p. 26–28).

Petroleum.—LUKOIL Oil Co. of Russia, through its subsidiary LUKOIL Neftochim Burgas AD, owned and operated the Burgas refinery. The refinery had a capacity of about 70 million barrels per year. In May 2012, LUKOIL started the construction of a heavy residue hydrocracking complex at Burgas. The first stage of the project included the construction of a 2.5 Mt/yr vacuum residue hydrocracker plant at a cost of about \$1.5 billion. The first stage of the project was expected to be completed by January 2015. As of December 31, it was reported that 76% of the total construction work for the complex had been completed and 58% of the equipment had been installed (LUKOIL Neftochim Burgas AD, 2012a, b; 2014).

Outlook

Bulgaria's GDP rate of growth was forecasted to be 1.6% for 2014 and 2.5% for 2015 (International Monetary Fund, 2014, p. 54). Production of Bulgaria's mineral commodities depends mainly on the domestic and European economic outlook. Construction at the Burgas complex may increase the production of refined petroleum products significantly in the short run. Nonferrous production is expected to remain at a modest rate of growth. Coal mining will continue to suffer from low coal prices in the world market and further production decreases are likely in the short term. Oil and gas production will remain insignificant in terms of economic value considering

the challenges at current natural gas production fields and the lack of oil and shale gas exploration activities.

References Cited

- Aurubis AG, 2014, Annual report 2012/13 In motion: Hamburg, Germany, Aurubis AG, 198 p. (Accessed October 27, 2014, at http://www.aurubis.com/fileadmin/media/documents/en/Geschaeftsberichte_Quartalsberichte/Annual_Report_2012_13.pdf.)
- Bulgaria Association of the Metallurgical Industry, 2014, Metallurgy in Bulgaria 2013: Sofia, Bulgaria, Bulgaria Association of the Metallurgical Industry, 62 p. (Accessed October 29, 2014, at http://www.bembg.com/downloads/ENG%20GODISHNIK_ENG_f820c79e9620e76220e5d22a2d386293.pdf.)
- Bulgaria Chamber of Mining and Geology, 2013, Mining industry in Bulgaria: Sofia, Bulgaria, Bulgaria Chamber of Mining and Geology Annual Newsletter,, 6 p. (Accessed October 30, 2014, at http://www.bmgk-bg.org/content/fm/14/699/4_BMGK_EN.pdf.)
- Bulgaria Ministry of Economy, Energy and Tourism, 2013, Bulletin on the state and development on the energy sector in the Republic of Bulgaria: Sofia, Bulgaria, Ministry of Economy, Energy and Tourism, 15 p. (Accessed October 28, 2014, at http://www.mi.govtment.bg/files/useruploads/files/buletin_energy_2013_en.pdf.)
- Dundee Precious Metals Inc., 2014a, Annual report 2013—We succeed because we care: Toronto, Ontario, Canada, Dundee Precious Metals Inc., 138 p. (Accessed October 29, 2014, at http://www.dundeprecious.com/files/annual_report/2013%20DUNDEE%20ANNUAL%20REPORT.pdf.)
- Dundee Precious Metals Inc., 2014b, Recent developments: Dundee Precious Metals Inc. (Accessed October 28, 2014, at <http://www.dundeprecious.com/English/operations/producing-mines/Chelopech/recent-developments/default.aspx>.)
- Dundee Precious Metals Inc., 2014c, Tsumeb smelter: Dundee Precious Metals Inc. (Accessed October 30, 2014, at <http://www.dundeprecious.com/English/operations/processing/tsumeb-smelter/default.aspx>.)
- Holcim Group, 2014, Annual report 2013—On the move: Jona, Switzerland, Holcim Group, 264 p. (Accessed October 29, 2014, at http://www.holcim.com/uploads/CORP/Holcim_GB2013_Web_en.pdf.)
- International Monetary Fund, 2014, World economic outlook—Recovery strengthens, remains uneven: Washington, DC, International Monetary Fund, April, 216 p. (Accessed October 27, 2014, at <http://www.imf.org/external/pubs/ft/weo/2014/01/pdf/text.pdf>.)
- Italcementi Group, 2014, 2013 annual report: Bergamo, Italy, Italcementi S.p.A., April, 362 p. (Accessed October 28, 2014, at http://www.italcementigroup.com/NR/rdonlyres/7327B17B-1A21-4C0C-9DAF-CA06E0561AC1/0/ANNUALREPORT_2013_ITC5finalversion.pdf.)
- LUKOIL Neftochim Burgas AD, 2012a, LUKOIL invested 1.5 billion USD in LUKOIL Neftochim Burgas: LUKOIL Neftochim Burgas AD press release, January 25. (Accessed October 29, 2014, at <http://www.neftochim.bg/en/press-center/press-releases/lukoil-invested-1,-5-billion-usd-in-lukoil-neftochim-burgas.html>.)
- LUKOIL Neftochim Burgas AD, 2012b, The President of LUKOIL Oil Company V. Alekperov and the Prime Minister of Bulgaria B. Borisov marked the commencement of the construction of vacuum residue hydrocracking complex: LUKOIL Neftochim Burgas AD press release, May 31. (Accessed October 30, 2014, at <http://www.neftochim.bg/en/press-center/press-releases/the-president-of-lukoil-oil-company-v.-alekperov-and-the-prime-minister-of-bulgaria-b.-borisov.html>.)
- LUKOIL Neftochim Burgas AD, 2014, LUKOIL Neftochim Burgas AD reported the performance results for 2013: LUKOIL Neftochim Burgas AD press release, January 29. (Accessed October 28, 2014, at <http://www.neftochim.bg/en/press-center/press-releases/lukoil-neftochim-burgas-ad-reported-the-performance-results-for-2013.html>.)
- Mini Maritsa Iztok EAD, 2014, Annual report 2013: Radnevo, Bulgaria, Mini Maritsa Iztok EAD, January 30, 40 p. (Accessed October 29, 2014, at http://www.marica-iztok.com/files/profile/file_140_bg.pdf.)
- National Statistical Institute, 2014a, Bulgaria 2014: Sofia, Bulgaria, Republic of Bulgaria National Statistical Institute, June 5, 60 p. (Accessed October 30, 2014, at http://statlib.nsi.bg:8181/isisbgstat/ssp/fulltext.asp?content=FullIT/FullOpen/8_2013_2014.pdf.)
- National Statistical Institute, 2014b, Exports, imports and trade balance by groups of countries and main partner countries of Bulgaria in 2012 and 2013: Sofia, Bulgaria, Republic of Bulgaria National Statistical Institute, September 12. (Accessed October 29, 2014, at http://www.nsi.bg/sites/default/files/files/data/timeseries/fTrade_1.1.2.2_en.xls.)

- National Statistical Institute, 2014c, Statistical reference book 2014: Sofia, Bulgaria, Republic of Bulgaria National Statistical Institute, June 18, 271 p. (Accessed October 29, 2014, at http://statlib.nsi.bg:8181/isisbgstat/ssp/fulltext.asp?content=/FullIT/FulltOpen/SRB_ENG_7_2013_2014.pdf.)
- National Statistical Institute, 2014d, Statistical yearbook 2013: Sofia, Bulgaria, Republic of Bulgaria National Statistical Institute, May 23, 676 p. (Accessed October 29, 2014, at http://statlib.nsi.bg:8181/isisbgstat/ssp/fulltext.asp?content=/FullIT/FulltOpen/SG_2013_2014.pdf.)
- Novinite.com, 2013, Construction of zinc plant in Bulgaria's Kardzhali to start in 2014: Novinite JSC, December 7. (Accessed October 28, 2014, at <http://www.novinite.com/articles/156232/Construction+of+Zinc+Plant+in+Bulgaria%27s+Kardzhali+to+Start+in+2014>.)
- Petroceltic International Plc, 2013, Annual report and accounts 2012—Exploration development production growth: Dublin, Ireland, Petroceltic International Plc, 105 p. (Accessed October 29, 2014, at http://www.petroceltic.annualreport12.com/AR_2012.pdf.)
- Petroceltic International Plc, 2014, Annual report and accounts 2013: Dublin, Ireland, Petroceltic International Plc, 120 p. (Accessed October 27, 2014, at <http://www.petroceltic.com/~media/Files/P/Petroceltic-V2/Annual%20Reports/pdf/ar-2013.pdf>.)
- Titan Group, 2014, Integrated annual report 2013: Titan Group, 88 p. (Accessed October 30, 2014, at http://sharrcem.com/wp-content/uploads/2014/10/TITAN_ANNUAL_2013_ONLINE_REPORT.pdf.)
- U.S. Census Bureau, 2014a, U.S. exports to Bulgaria by 5-digit end-use code 2004–2013: U.S. Census Bureau. (Accessed October 29, 2014, at <http://www.census.gov/foreign-trade/statistics/product/enduse/exports/c4870.html>.)
- U.S. Census Bureau, 2014b, U.S. imports from Bulgaria by 5-digit end-use code 2004–2013: U.S. Census Bureau. (Accessed October 29, 2014, at <http://www.census.gov/foreign-trade/statistics/product/enduse/imports/c4870.html>.)

TABLE 1
BULGARIA: PRODUCTION OF MINERAL COMMODITIES¹
(Metric tons unless otherwise specified)

Commodity ²		2009	2010	2011	2012	2013
METALS						
Aluminum, metal, secondary		8,933 ^r	15,680 ^r	17,212 ^r	15,615 ^r	15,682
Bismuth, metal	kilograms	--	2,179 ^r	4,191 ^r	-- ^r	--
Cadmium, metal, smelter		507 ^r	457 ^r	428 ^r	360 ^r	411
Copper:						
Ore:						
Gross weight	thousand metric tons	26,936	27,581	28,214	28,300 ^e	25,000 ^e
Concentrate, Cu content		82,229 ^r	81,009 ^r	84,535 ^r	78,653 ^r	75,307
Metal, primary and secondary:						
Smelter		300,800	286,668 ^r	338,300	325,220 ^r	354,294
Refined, electrolytically		196,900	215,100	226,100	226,100	229,604
Gold, in concentrate	kilograms	4,482	4,489 ^r	5,302 ^r	7,058 ^r	7,385
Iron and steel:						
Metal:						
Ferroalloys ^e	thousand metric tons	3 ³	--	--	--	--
Steel, crude	do.	726	744	834	640 ^r	522
Rolled products	do.	969 ^r	896 ^r	1,115 ^r	818 ^r	874
Lead:						
Mine output, Pb content		12,703 ^r	12,136 ^r	10,121 ^r	14,366 ^r	15,986
Metal, refined, primary and secondary		99,483 ^r	99,116 ^r	90,933 ^r	86,156 ^r	90,742
Manganese ore: ⁴						
Gross weight		28,500	131,600	149,400	37,900	45,000
Mn content		8,000	36,900	41,800	10,600	12,600
Silver, metal	kilograms	39,997 ^r	27,538 ^r	32,144 ^r	46,523 ^r	55,637
Tellurium, metal	do.	3,000	2,468	4,872	2,472	5,014
Zinc:						
Mine output, Zn content		8,799 ^r	8,171 ^r	8,604 ^r	8,995 ^r	11,992
Metal, refined, primary and secondary		92,676 ^r	91,372 ^r	90,083 ^r	73,558 ^r	75,830
INDUSTRIAL MINERALS						
Barite ore, run-of-mine ^e		14,300	350	120	--	--
Cement, hydraulic	thousand metric tons	2,662	1,966	1,882	1,803 ^r	1,800 ^e
Clays:						
Bentonite	do.	108	100 ^e	54	78	80 ^e
Kaolin, raw		696,460 ^r	700,088 ^r	727,968 ^r	1,007,547 ^r	1,000,000 ^e
Fluorspar ^e		--	--	31,800	32,000	32,000
Gypsum and anhydrite, crude	thousand metric tons	128	110	115	114	110 ^e
Lime, industrial	do.	950	1,309	1,495	1,425 ^r	1,400 ^e
Limestone ^e	do.	3,000	5,000	5,000	5,800 ^r	6,000
Nitrogen, N content of ammonia ^e	do.	180 ^r	260 ^r	380 ^r	320	320
Perlite	do.	15	--	--	4	5 ^e

See footnotes at end of table.

TABLE 1—Continued
BULGARIA: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

Commodity ²		2009	2010	2011	2012	2013
INDUSTRIAL MINERALS—Continued						
Salt, all types	thousand metric tons	1,300	1,900	2,200	2,100	2,100 ^c
Sand and gravel	do.	7,817	7,653	6,776	6,213 ^r	6,500 ^c
Silica, quartz sand ^e	do.	657 ³	660	660	660	660
Sulfuric acid		1,152,580 ^r	1,075,617 ^r	1,203,454 ^r	1,100,835 ^r	1,352,588
Vermiculite ^c		--	3,000	15,000	18,600	18,600
MINERAL FUELS AND RELATED MATERIALS						
Coal, marketable. ^c						
Bituminous	thousand metric tons	23 ³	26	14	7 ^r	6
Brown	do.	2,244 ³	2,200	2,300	2,300	2,000
Lignite	do.	25,015 ³	27,500	34,500	31,000 ^r	25,468 ³
Total	do.	27,282 ³	29,700	36,800	33,400 ^r	27,500
Natural gas, marketed	million cubic meters	17	74	443	396	289
Petroleum. ⁵						
Crude	thousand 42-gallon barrels	176	169	161	170	170 ^c
Refinery products ^e	do.	50,000	43,000	45,000	49,400	49,300

^cEstimated; 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 29, 2014.

²In addition to the mineral commodities listed, a variety of metals and industrial minerals, including calcinate sodium carbonate, refractory clays, sulfur, tin, feldspar, and zeolites may have been produced, but available information is inadequate to make reliable estimates of output.

³Reported figure.

⁴Reported by the International Manganese Institute.

⁵Figures were converted to barrels from thousand metric tons. Production of crude oil, by year, was reported as follows (in thousand metric tons): 2009—24; 2010—23; 2011—22; and 2012—23. Production of refined products, by year, was reported as follows (in thousand metric tons): 2009—6,255; 2010—5,417; 2011—5,615; 2012—6,171; and 2013—6,167.

TABLE 2
BULGARIA: 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
Bentonite, mine output	S&B Industrial Minerals AD	Kardjali		NA.
Cadmium	KCM A.D. (KCM 2000 Group)	Plovdiv		NA.
Do.	Lead and Zinc Complex Plc. (LZC) (Harmony 2012 Ltd., 50%)	Kardzhali		NA. ¹
Cement	Devnya Cement AD (Italcementi Group)	Devnya		2,000.
Do.	Vulkan Cement S.A. (Italcementi Group)	Dimitrovgrad		500.
Do.	Holcim (Bulgaria) AD (Holcim Ltd., 100%)	Beli Izvor		1,700.
Do.	Zlatna Panega Cement AD (Titan Group)	Zlatna Panega		1,500.
Coal:				
Bituminous	Balkan 2000 Mines EAD	Southeastern of Tvarditsa, Sliven District		NA.
Brown	Otkrit Vagledobiv Mines EAD	Pernik coal basin, southwest of Sofia		NA.
Do.	Vagledobiv Bobov Dol EOOD	Bobov Dol coalfield		NA.
Do.	Other small producers	Cherno More Mine in the Black Sea coalfield and Vitren Mine in Katrishte deposit		NA.
Lignite	Mini Maritsa Iztok EAD (state-owned Bulgarian Energy Holding EAD)	East Maritsa coal basin near Radnevo		3,500.
Do.	Other small producers	Beli Breg, Chukurovo, and Stanyantsi Mines		200. ^e
Copper:				
Concentrate, Cu content	Assarel-Medet JSC	Panagurishte, Pazardzhik District		50.
Do.	Ellatzite-Med AD (Geotechmin Co.)	Mine 8 kilometers south of Etropole, and concentrator near Mirkovo village		45.
Do.	Chelopech Mining EAD (Dundee Precious Metals Inc., 100%)	Chelopech		21.
Do.	Bradtze	Malko Turnovo		2.
Do.	Burgaskii Mines Ltd.	Zidorovo Mine at Burgas, near the Black Sea		1.
Metal:				
Smelter	Aurubis Bulgaria AD (Aurubis AG, 99.8%)	Pirdop		330.
Refinery	do.	do.		230.
Fluorspar	metric tons	Chiprovtsi Mine (Solvay S.A.)	Chiprovtsi, Montana Province	50,000.
Gold, in concentrate	kilograms	Chelopech Mining EAD (Dundee Precious Metals Inc., 100%)	Chelopech	4,000.
Do.	do.	Ellatzite-Med AD (Geotechmin Co.)	Mine 8 kilometers south of Etropole and concentrator near Mirkovo village	NA.
Do.	do.	KCM A.D. (KCM 2000 Group)	Plovdiv	NA.
Kaolin, mine output		Kaolin A.D.	Senovo, Rousse District	NA.
Lead-zinc:				
Concentrate, Pb-Zn content	metric tons	Gorubso AD (KCM 2000 Group and Minstroy Holding A.D.)	Kardjali	5,700 Pb, 5,500 Zn.
Do.	do.	Rudmetal JSC	Dimov Dol Mine, near Rudozem	2,900 Pb, 1,900 Zn.
Metal:				
Lead, refined		KCM A.D. (KCM 2000 Group)	Plovdiv	65.
Do.		Lead and Zinc Complex Plc. (LZC) (Harmony 2012 Ltd., 50%)	Kardzhali	33. ¹
Zinc, smelter		KCM A.D. (KCM 2000 Group)	Plovdiv	80.
Do.		Lead and Zinc Complex Plc. (LZC) (Harmony 2012 Ltd., 50%)	Kardzhali	28. ¹
Manganese ore		Obrochishte Mine (Euromangan AD)	Tsarkva village, 10 kilometers west of Balchik	NA.

See footnotes at end of table.

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

(Thousand metric tons unless otherwise specified)

Commodity		Major operating companies	Location of main facilities	Annual capacity
Natural gas	million cubic meters	Melrose Resources Bulgaria EOOD (Petroceltic International Plc)	Galata, Kaliakra, and Kavarna fields, in the Black Sea off the coast of Varna	400.
Do.	do.	Oil and Gas Exploration and Production Plc.	Bhutan, Bulgarevo, Dolni Dubnik, Durankulak, Marionov Geran, Selanovtzi, and Staroseltzi fields	NA. ²
Perlite, mine output		S&B Industrial Minerals AD	Kardjali	NA.
Petroleum:				
Crude		Oil and Gas Exploration and Production Plc.	Bardarski Geran, Dolni Dubnik, Dolni Lukovit, Gorni Dubnik, Tjulenovo, Selanovtzi, Staroseltzi, and other oilfields	200.
Refined	42-gallon thousand barrels	LUKOIL Neftochim Bourgas AD (LUKOIL Oil Co.)	Refinery at Burgas	70,000.
Silver:				
In concentrate	kilograms	Chelopech Mining EAD (Dundee Precious Metals Inc., 100%)	Chelopech	18,000.
Metal	do.	KCM A.D. (KCM 2000 Group)	Plovdiv	55,000.
Steel, crude		Stomana Industry S.A. (Sidenor S.A., 100%)	Pernik	800.
Vermiculite, crude		Wolff and Muller Minerals Bulgaria OOD	Near Sofia	20.
Zeolites, mine output		S&B Industrial Minerals AD	Kardjali	NA.

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

¹Suspended.

²No gas production in 2013.