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The Mineral Industry of Bulgaria

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The major raw materials extracted in Bulgaria in 2014 included clays, 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).

As of 2014, Bulgaria had been a member of the European Union (EU) for 8 years. The country signed an EU accession treaty in April 2005 and joined in January 2007. Bulgaria's integration into the EU was not smooth. Initially, the country faced tough entry requirements that reflected concerns about transparency in the country's Government and law enforcement. Nevertheless, in 2014 the Finance Minister announced that Bulgaria's net financial gain from 8 years of EU membership amounted to 14.7 billion leva[1] (about $1 billion), which reflected both Bulgaria's contributions to the EU budget and the EU funding provided to the country. It was not clear, however, if the calculations had taken into account either the financial corrections imposed on the country or the economic benefits of being an EU member (British Broadcasting Corp., 2012; Tishkina, 2014; Novinite.com, 2015).

At the beginning of 2013, Bulgaria was involved in two competing gas pipeline projects—the Nabucco and the South Stream. The Nabucco project was canceled in June 2013. The construction of the South Stream pipeline, which was led by Gazprom of Russia, was expected to begin in the summer of 2014, and Bulgaria was supposed to be the first country to begin construction. During 2014, the approval process related to the construction of the South Stream pipeline was delayed several times and was not completed by the EU and the Government of Bulgaria. In December, the President of Russia announced his decision to cancel the South Stream project and to work on a new Turkey Stream project instead. After cancellation of the South Stream pipeline, Bulgaria asked the European Commission (EC) for compensation expenses related to the construction of the pipeline, but the EC did not find sufficient reasons for the compensation (RIA.ru, 2014; British Broadcasting Corp., 2015).

Minerals in the National Economy

In 2014, Bulgaria's real gross domestic product (GDP) increased by 1.6% compared with that of 2013; the nominal GDP was $55.7 billion. The production value of the mining and quarrying industry was about $1.64 billion, which accounted for about 3.9% of the total production value of industrial enterprises compared with 4.1% (revised) in 2013. The production value of basic metal and fabricated metal products (except machinery and equipment) in 2014 was $6.79 billion, which accounted for about 16.2% of the total production value of industrial enterprises compared with 16.0% in 2013. In 2014, the production value of the mining and quarrying sector (in constant 2010 prices) increased by 3.0%, whereas in 2013 the production value of the mining and quarrying sector decreased by 6.3% (National Statistical Institute, 2015a, c).

Production

In 2014, estimated fluorspar production increased by 67%; zinc mine production, by 33%; and crude steel production, by 17%. Primary and secondary copper smelter output increased by 7.5%; output of rolled steel products and estimated production of industrial lime increased by 7.2% and 7.1%, respectively. Silver metal production decreased by 9.8%, cadmium metal production decreased by 7.1%, and petroleum refining decreased by 6.2%. These and other data on mineral production are in table 1.

Structure of the Mineral Industry

Table 2 is a list of major mineral industry facilities.

Mineral Trade

In 2014, the total value of Bulgaria's exports was about $29.3 billion compared with about $29.6 billion in 2013. The total value of Bulgaria's imports was about $34.8 billion compared with $34.3 billion in 2013. Among exported goods, inedible crude materials (excluding fuel) accounted for 7.2% of all exports, and mineral fuels, lubricants, and related materials contributed 13.0% to the value of exports. The country's major export trade partners were, in descending order of value, Germany (which received 12.0% of Bulgaria's exports), Turkey (9.4%), Italy (9.0%), Romania (7.9%), Greece (6.7%), France (4.3%), Belgium (4.2%), Singapore (2.6%), and China and Russia (2.4% each) (National Statistical Institute, 2015b).

Nonfood crude materials (excluding fuel) accounted for 8.4% of Bulgaria's imports, and mineral fuel, lubricants, and related materials accounted for another 20%. Bulgaria's major import trade partners were, in descending order of value, Russia (which supplied 15.2% of Bulgaria's imports), Germany (12.2%), Italy (7.0%), Romania (6.8%), Turkey (5.7%), Greece (5.1%), and Spain (4.9%) (National Statistical Institute, 2015b).

In 2014, Bulgaria exported 858,300 metric tons (t) of rolled ferrous metals and imported 1,161,300 t of rolled ferrous metals. Bulgaria was a net exporter of scrap ferrous metals, having exported 399,000 t of scrap; its imports of scrap metal totaled 115,500 t. In 2014, Bulgaria was importing finished ferrous metal products, in particular seamless pipes, in preparation for the construction of the South Stream pipeline. Imports of finished metal articles increased by 130% to 664,200 t in 2014 from 288,500 t in 2013; exports of finished

[1] Where necessary, values have been converted from Bulgarian leva (BGN) to U.S. dollars (US$) at an average annual exchange rate of BGN1.474=US$1.00 for 2014 and BGN1.474=US$1.00 for 2013 and from euro area euros (EUR) to U.S. dollars at an average annual exchange rate of EUR0.732=U.S$1.00 for 2013.

metal articles were lower, yet continued to increase as they had during the past 5 years. In 2014, Bulgaria exports of finished ferrous products totaled 132,900 t, which was an 11.9% increase from the total in 2013 (Bulgarian Association of the Metallurgical Industry, 2015).

In 2014, Bulgaria exported a total of 643,846 t of nonferrous metals, finished products, and scrap, which was valued at 5,012 million leva (about $3,400 million). Compared with exports in 2013, the physical amount of exports increased by 1.8% in 2014, but the total value of exported products decreased by 5.7% owing to lower commodity prices for nonferrous metals. The nonferrous metals sector retained its strong export orientation—about 87.5% of the output was exported. In 2014, Bulgaria imported 260,231 t of nonferrous metals that was valued at 1,451.3 million leva (about $984 million) (Bulgarian Association of the Metallurgical Industry, 2015).

Commodity Review

Metals

Copper.—Aurubis AG of Germany, through its subsidiary Aurubis Bulgaria AD, owned the country's only copper smelting and refining facility, which is located in the town of Pirdop. The company produced 381,024 t of anodic copper and 233,274 t of electrolytic copper in 2014 compared with 354,294 t and 229,604 t, respectively, in 2013. The company processed 1,165,484 t of copper concentrates containing 293,718 t of copper at an average copper content of 25.2%. The amount of concentrates processed in 2013 was 976,718 t. The raw materials for copper production also included 62,280 t of scrap metal. In September 2014, Aurubis announced that it was planning to invest 75 million euros (about $95.7 million) in its Pirdop plant. Of that amount, $25 million euros was earmarked for renovation projects in 2015, and the remainder of the money would be spent in 2016. In November, a new environmentally friendly rainwater treatment plant developed by Aurubis Bulgaria was unveiled. The development of the plant cost 6.3 million euros (about $8 million), and it was the third water treatment plant at the Pirdop facility, in addition to facilities designed to treat industrial and residential water. During its years in Bulgaria, Aurubis reportedly invested more than 1 billion leva ($680 million) and created more than 800 jobs (BTA.bg, 2014; Novinite.com, 2014; Aurubis AG, 2016).

Dundee Precious Metals Inc. of Canada (Dundee) owned and operated the Chelopech underground copper mine, which is located about 70 kilometers (km) east of the capital city of Sofia, through its 100%-owned subsidiary Chelopech Mining EAD. In 2014, the company extracted 20,100 t (44.3 million pounds) of copper in copper concentrate, which was a 3% decrease compared with production in 2013, because of lower recovery rates. In 2014, the copper head grade was 1.2%. Dundee acquired Chelopech in 2003, and since that time had quadrupled ore production to 2 million metric tons per year (Mt/yr), as well as improved technology and management practices at the mine. The copper concentrates produced at the Chelopech Mine were exported to be processed at Dundee's smelter in Tsumeb, Namibia (Dundee Precious Metals Inc., 2015).

Gold and Silver.—In 2014, gold production from the Chelopech Mine decreased by 6% to 3,870 kilograms (kg) (124,371 troy ounces). The production decrease was attributed to a lower gold recovery rate, which was partially offset by higher gold grades and higher volumes of ore processed. Recovery rates were lower in 2014 than in 2013 owing to the treatment of increased volumes of ore characterized by a higher sulfur-to-copper ratio than originally anticipated. Additionally, the introduction of pretreatment for the new pyrite flotation circuit had an unexpected negative effect on the recovery of copper and gold. Optimization work, which was completed in July, returned copper recovery rates to their original levels, but the gold recovery rates remained below their original rates. In 2014, the pyrite recovery project was the latest project to be completed at Chelopech; it was designed to capture a portion of the unrecovered gold contained in the pyrite minerals that previously were not processed. After the completion of the pyrite project (the pyrite recovery circuits were completed in the first quarter of 2014), Dundee was able to produce up to 260,000 metric tons per year (t/yr) of gold-bearing pyrite concentrate containing up to 1,560 kg, or 50,000 troy ounces, of gold. Following the commissioning of the pyrite recovery circuits, 1,130 kg (36,466 troy ounces) of gold contained in pyrite concentrate was produced. Dundee reported that, as a result of this project, the gold recovery rate at Chelopech increased to approximately 70%. In 2014, Dundee produced 7,340 kg (235,983 troy ounces) of silver, which was an 8% increase compared with the quantity produced in 2013. The increase in silver production was attributed to higher silver grades and the higher volume of ores processed but was partially offset by a lower silver recovery rate. Based on data available at yearend, Dundee planned to continue mining Chelopech through at least 2025, but expected to continue extending the life of the mine through in-mine exploration (Dundee Precious Metals Inc., 2015).

Dundee continued with its plan to develop the Krumovgrad open pit gold project, which it wholly owned. The project was located at Ada Tepa, which is about 3 km south of the town of Krumovgrad in southeastern Bulgaria. As of December 31, 2013, the proven and probable reserves of the two zones at the Krumovgrad deposit were estimated to be 25,100 kg (807,000 troy ounces) of gold and 13,800 kg (443,000 troy ounces) of silver; total resources of the deposit were 26,700 kg (859,000 troy ounces) of gold and 14,800 kg (477,000 troy ounces) of silver. Commissioning of the project was expected to take place in late 2016 or early 2017, and the total cost of mine construction was estimated to be $164 million. Dundee expected to produce about 2,640 kilograms per year (kg/yr) (85,000 troy ounces per year) of gold for at least 8 years. In 2009, Dundee received the Government certificate for the Krumovgrad discovery, and in 2011, it received approval of the environmental impact assessment for the project. As of 2014, Dundee was still awaiting the permits and the approvals from local authorities for mine construction (Mineral.ru, 2014; Dundee Precious Metals Inc., 2015).

Lead and Zinc.—In September 2012, Harmony 2012 Ltd., which was registered in the Virgin Islands, announced that it had purchased the heavily indebted lead and zinc plant

OTZK Kardzhali for 8.6 million leva (about $5.8 million). In December 2013, the company reported that construction work at the site of the bankrupt OTZK Kardzhali was expected to begin in June 2014. The company asked that the local authorities issue all required construction permits as soon as possible. The plan was to build a modern lead and zinc smelter by reconstructing the buildings and replacing all the equipment. Harmony 2012 provided assurances that the new plant would adhere to environmental standards and feature modern technology (Novinite.com, 2012, 2013).

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 6.2 Mt/yr. Devnya Cement and Vulkan Cement, which had production capacities of 2.5 Mt/yr and 0.5 Mt/yr, respectively, were owned by Italcementi Group of Italy. Holcim Bulgaria AD, which was owned by Holcim Ltd. of Switzerland, had an capacity of 1.7 Mt/yr. Holcim operated the Beli Izvor cement plant, the Sofia and the Plovdiv Zlatna aggregate plants, and the Plovdiv and the Sofia ready-mix concrete plants. Zlatna Panega Cement AD, which was owned by the Greek company Titan Group, had an annual capacity of 1.5 Mt (Holcim Group Bulgaria, 2016; Italcementi Group, 2016; Titan Group, 2016).

In 2014, cement consumption in Bulgaria increased by 5% compared with a 1% decrease in 2013. The private construction sector started a revival in 2014 owing to lower interest rates for loans than in 2013, and the prices for residential housing increased by 3%. Also, there was a slight increase in infrastructure projects because of the end of the EU funding cycle. Although cement plants in Bulgaria operated much below their capacity, they continued to upgrade and to prepare for an increase in demand. In October, Devnya Cement launched a new $160 million euro ($219 million) production line with the capacity to produce 1.5 Mt/yr of cement. The revamp of the Devnya (Varna) plant began in 2012, and all elements of the new construction were planned to be fully operational in 2015. The new facility included a dry line, which had the capacity to produce 4,000 metric tons per day of clinker. The new line would have improved energy efficiency and would be able to use refuse-derived fuel and biomass. Devnya Cement, which was acquired by Italcementi in 1998, is located at the Black Sea port city of Varna. The proximity of the plant to the Port of Varna West provided access to countries located on the Black Sea and on the eastern part of the Mediterranean Sea (Andreevska, 2014; Italcementi Group, 2014; European Cement Association, The, 2015).

Mineral Fuels

Petroleum.—LUKOIL Oil Co. (LUKOIL) of Russia, through its subsidiary LUKOIL Neftochim Burgas AD, owned and operated the Burgas refinery, which is located on the Black Sea and is 15 km from the city of Burgas; it was the only oil refinery in Bulgaria. The refinery had a capacity of 9.8 Mt/yr (71.5 million barrels per year) and specialized in the production of fuel, petrochemicals, and polymers. About 60% of the refinery's output was exported to neighboring Balkan countries and Turkey. According to the news agency Novinite, LUKOIL Neftochim Burgas AD was the largest industrial enterprise in Bulgaria, and its revenue in 2014 exceeded 3.3 billion euros ($4.2 billion). Starting in 2009, all products produced at the Burgas refinery were compliant with the Euro 5 emission standards. In 2012, LUKOIL started the construction of a heavy residue hydrocracking complex at Burgas, which would be the 10th such unit in the world and the 1st in Eastern Europe. The project would allow LUKOIL to increase its production of Euro 5-compliant diesel by 1.2 Mt/yr and to halt production of high-sulfur fuel oil. 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. In 2014, LUKOIL completed an installation for processing sulfur and a natural gas pipeline for the project. In January, the company reported that it was able to secure a $570 million 10-year loan from a consortium of international banks to finance the completion of the modernization. The first stage of the project was expected to be completed by January 2015 (Kennedy, 2014; Oil&Gas Eurasia, 2015; Thomson Reuters, 2015; Lukoil.ru, 2016).

Outlook

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. Mining of copper, gold, and silver is likely to increase modestly. Nonferrous production is expected to remain at a modest rate of growth. Oil and gas production are expected to remain economically insignificant considering the current challenges at natural gas production fields and the lack of oil and shale gas exploration activities.

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TABLE 1
BULGARIA: PRODUCTION OF MINERAL COMMODITIES[1]

(Metric tons unless otherwise specified)

Commodity[2]		2010	2011	2012	2013	2014
METALS						
Aluminum, metal, secondary		12,257 r	10,263 r	--	--	--
Bismuth, metal	kilograms	2,179	4,191	--	--	--
Cadmium, metal, smelter		457	428	360	411	382
Copper:						
Ore:						
Gross weight	thousand metric tons	27,581	28,214	26,700 r	25,600 r	24,600 e
Concentrate, Cu content		81,009	84,535	78,653	75,307	72,419
Metal, primary and secondary:						
Smelter		286,668	338,300	325,220	354,294	381,024
Refined, electrolytically		215,100	226,100	226,100	229,604	233,274
Gold, in concentrate	kilograms	4,489	5,302	7,058	7,385	7,000 e
Iron and steel:						
Metal:						
Steel, crude	thousand metric tons	737 r	835 r	641 r	523 r	612
Rolled products	do.	896	1,115	818	874	937
Lead:						
Mine output, Pb content		12,136	10,121	14,366	15,986	15,461
Metal, refined, primary and secondary		99,116	90,933	86,156	90,742	93,394
Manganese ore:[3]						
Gross weight		131,600	149,400	37,900	45,000	45,000 e
Mn content		36,900	41,800	10,600	12,600	12,600 e
Silver, metal	kilograms	27,538	32,144	46,523	55,637	50,200
Tellurium, metal	do.	2,468	4,872	2,472	5,014	4,932
Zinc:						
Mine output, Zn content		8,799 r	8,171 r	8,604 r	8,995 r	11,992
Metal, refined, primary and secondary		91,372	90,083	73,558	75,830	76,293
INDUSTRIAL MINERALS						
Barite ore, run-of-mine[e]		350	120	--	--	--
Cement, hydraulic	thousand metric tons	1,966	1,882	1,803	1,812 r	1,850 e
Clays:						
Bentonite	do.	100 e	54	78	80 e	80 e
Kaolin, raw		700,088	728,003 r	1,006,239 r	877,086 r	900,000 e
Fluorspar[e]		--	--	12,000 r	12,000 r	20,000 e
Gypsum and anhydrite, crude	thousand metric tons	110	115	114	110 e	115 e
Lime, industrial	do.	1,309	1,495	1,425	1,400 e	1,500
Limestone[e]	do.	5,000	5,000	5,800	5,200 r	5,200 e
Nitrogen, N content of ammonia[e]	do.	260	380	320	320	330 e
Perlite	do.	--	--	4	5 e	5 e
Salt, all types	do.	1,900	2,200	2,100	2,100 e	2,200 e
Sand and gravel	do.	7,653	6,776	6,213	6,530 r	6,600 e
Silica, quartz sand[e]	do.	660	660	660	660	680
Sulfuric acid		1,075,617	1,203,454	1,100,835	1,352,588	1,400,000 e
Vermiculite[e]		3,000	15,000	18,600	18,600	19,000
MINERAL FUELS AND RELATED MATERIALS						
Coal, marketable:						
Bituminous	thousand metric tons	3,000 r	2,400 r	2,300 r	2,100 r	2,000 e
Lignite	do.	27,200 r	34,500	31,000	26,400 r	26,000 e
Total	do.	30,200 r	36,900 r	33,300 r	28,500 r	28,000 e
Natural gas, marketed	million cubic meters	74	443	396	289	278
Petroleum:[4]						
Crude	thousand 42-gallon barrels	169	161	170	170 e	170 e
Refinery products	do.	43,400 r	42,400 r	46,400 r	46,600 r	43,700

See footnotes at end of table.

TABLE 1—Continued
BULGARIA: PRODUCTION OF MINERAL COMMODITIES[1]

[e]Estimated; estimated data are rounded to no more than three significant digits; may not add to totals shown. [r]Revised. do. Ditto. -- Zero.
[1]Table includes data available through January 6, 2016.
[2]In addition to the mineral commodities listed, a variety of metals and industrial minerals, including calcinate sodium carbonate, feldspar, refractory clays, sulfur, tin, and zeolites may have been produced, but available information was inadequate to make reliable estimates of output.
[3]Reported by the International Manganese Institute.
[4]Figures were converted to barrels from thousand metric tons. Production of crude oil, by year, was reported as follows (in thousand metric tons): 2010—23; 2011—22; 2012—23; 2013—23; and 2014—23. Production of refined products, by year, was reported as follows (in thousand metric tons): 2010—5,950; 2011—5,810; 2012—6,350; 2013—6,380; and 2014—5,990.

TABLE 2
BULGARIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2014

(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	2,500.
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	NA.
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	Chiprovtzi Mine (Solvay S.A.)	Chiprovtzi, 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 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 2014

(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	thousand 42-gallon barrels	LUKOIL Neftochim Burgas 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.

Do., do. Ditto. NA Not available.
[1]Suspended.
[2]No gas production in 2013.