



2013 Minerals Yearbook

SERBIA

THE MINERAL INDUSTRY OF SERBIA

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Serbia's mineral industry was dominated by copper, iron and steel, and refined petroleum products. Other mineral and mineral-based commodities produced in the country included cement, coal, gold, lead, natural gas, nitrogen, salt, and selenium.

The Ministry of Natural Resources, Mining and Spatial Planning is the Government agency responsible for the mining sector. The Ministry of Energy, Development and Environmental Protection, through its Oil and Gas Department, is the agency responsible for the oil and gas sector. In 2013, a new Law on Mining and Geological Research was under review. The new law stipulates the establishment of the Geological Institute of Serbia and formulates a Mineral Resources Management Strategy. Under the new law, entities performing mining activities in Serbia would pay fees for the use of mineral deposits and geothermal resources, which included 7% of revenue for hydrocarbons in a liquid and gas state (crude oil and gas) and other natural gases, 5% for all metallic raw materials (for smelting), 5% for nonmetallic raw materials, 3% for all types of coal and oil shale, and 2% for geothermal energy (Ministry of Natural Resources, Mining and Spatial Planning, 2012, 2014; Ministry of Energy, Development and Environmental Protection of Republic of Serbia, 2014).

Minerals in the National Economy

In 2013, Serbia's real gross domestic product (GDP) increased by 2.5% compared with that of 2012. Serbia's mining and quarrying sector accounted for about 2.0% of the GDP. In 2013, 22,188 workers were employed in the mining and quarrying sector, which accounted for about 1.3% of the workforce in the country (Statistical Office of the Republic of Serbia, 2014a, b).

Production

In 2013, secondary refined copper production increased by 31% to 3,234 metric tons (t) from 2,473 t in 2012; selenium production increased by 19% to 15,727 kilograms (kg) from 13,200 kg; lime, by 17% to 279,000 t from 239,000 t; pig iron, by 17% to an estimated 365,000 t from 312,000 t. Copper (gross weight) increased by 16% to 16.7 million metric tons (Mt) from 14.3 Mt; lead ore (gross weight), by 15% to a reported 482,516 t from an estimated 420,000 t; crude steel, by 14% to an estimated 396,000 t from a reported 346,000 t (revised); palladium, by 14% to 25 kg from 22 kg; bituminous coal, by 10% to 155,000 t from 141,000 t; and silver, by 10% to 5,764 kg from 5,224 kg. Platinum production decreased by 33% to 2 kg from 3 kg; sand and gravel, by an estimated 21% to 4.9 million cubic meters from 6.2 million cubic meters; salt, by 17% to 13,704 t from 16,506 t; and cement, by 13% to 1.6 Mt from 1.8 Mt. Data on mineral production are in table 1.

Structure of the Mineral Industry

State-owned Rudarsko Topionicki Bazen Bor (RTB Bor) was the only producer of copper, gold, and silver in the country. Naftna Industrija Srbije a.d. (NIS), which was a joint venture between JSC Gazprom Neft of Russia (56.15%) and the Government (29.87%), was the sole producer of natural gas, petroleum, and refined petroleum products in Serbia. Table 2 is a list of major mineral industry facilities.

At least six companies were engaged in gold and copper exploration in Serbia. These included Canadian companies Avala Resources Ltd., Dunav Resources Ltd., Euromax Resources Ltd., Mundoro Capital Inc., and Reservoir Minerals Inc., as well as Orogen Gold plc of the United Kingdom.

Mineral Trade

In 2013, the total value of Serbia's exports was about \$20.5 billion compared with about \$18.9 billion in 2012. The total value of Serbia's imports was about \$14.6 billion compared with \$11.2 billion in 2012. Crude petroleum and natural gas accounted for about 11% of the total value of Serbia's imports. The country's major export trade partners were, in decreasing order of value, Italy (which received 16.3% of Serbia's exports), Germany (11.9%), Bosnia and Herzegovina (8.1%), Russia (7.3%), Montenegro (5.7%), Romania (5.4%), Macedonia (3.9%), Slovenia (3.3%) and Croatia (2.8%). Its major import trade partners were, in decreasing order of value, Italy (which supplied 11.5% of Serbia's imports), Germany (10.5%), Russia (9.3%), China (7.4%), Hungary (4.9%), Poland (4.7%), Kazakhstan (4.3%), Austria (3.1%), France (2.9%), and Romania (2.8%) (Statistical Office of the Republic of Serbia, 2014b).

In 2013, Serbia's exports to the United States were valued at about \$524 million compared with about \$145 million in 2012; these included about \$22 million in petroleum products. Imports from the United States were valued at about \$142 million in 2013 compared with \$128 million in 2012; these included about \$13 million in drilling and oilfield equipment and about \$480,000 in excavating machinery (U.S. Census Bureau, 2014a, b).

Commodity Review

Metals

Copper.—In 2012, RTB Bor announced the reopening of the Cerovo Mine, which was closed in 2002. The open pit mine is located 15 kilometers (km) northwest of Bor and had estimated ore reserves of about 150 Mt at an average grade of 0.35% copper. The company expected initial production at the Cerovo Mine to be 2.5 million metric tons per year (Mt/yr) of ore, which would increase to 5.5 Mt/yr after 2015. In early April, RTB Bor

reported that the excavation of the “T” ore body, which was located in the Jama underground mine, was completed. The company excavated 219,763 t of ore, which produced about 8,600 t of copper at a lower content of 4%. The company also reported two new discovered ore bodies “T1” and “T2”, which are also located at Jama, with estimated ore reserves of about 700,000 t at an average grade of 1.7% copper. Excavation works are underway at “T1” and “T2”. Construction of a new smelter and sulfuric acid plant were underway and were expected to be completed by 2014. The new smelter would have a production capacity of 80,000 metric tons per year (t/yr) of copper anode. In 2011, RTB Bor awarded the contract for the modernization of its existing copper smelting complex to SCN-Lavalin Group Inc. of Canada (SCN-Lavalin Group Inc., 2011; Rudarsko Topionicki Bazen Bor, 2012, 2013a–c; Serbia Energy, 2013).

Gold.—Avala Resources held copper and gold exploration licenses for the Timok gold project, which is located about 270 km southeast of the capital city of Belgrade. In October, a technical report and mineral resource estimates were completed by AMC Consultants Ltd. of the United Kingdom. Total inferred mineral resources at the Bigar Hill, the Korkan, and the Kraku Pester deposits were estimated to be 8.7 Mt at an average grade of 1.3 grams per metric ton (g/t) gold using a cutoff grade of 0.6 g/t gold and inferred mineral resources were estimated to be 46.3 Mt at an average grade of 1.56 g/t gold. A preliminary economic assessment was underway and was expected to be completed by the first quarter of 2014 (AMC Consultants Ltd., 2013, p. 1, 8; Avala Resources Ltd., 2014, p. 3).

Iron and Steel.—State-owned Zelezara Smederevo d.o.o. was the only steel producer in Serbia. As of 2012, the Government was seeking to prevent any job losses and intended to find a new strategic partner for Zelezara Smederevo. In October 2012, the Government, through Serbia’s Ministry of Finance and Economy, opened a second public invitation for a new strategic partner and for further developments of the Zelezara Smederevo plant. In March 2013, the Government announced that it would restart operations at Zelezara Smederevo, after the second public invitation expired without bids and the employees agreed to a 20% wage cut. In April, the 2.2-Mt/yr-capacity steel plant restarted production at one of its two blast furnaces. The company expected to produce about 70,000 metric tons per month of steel at the plant located in Smederevo, which had more than 5,000 employees (Savic, 2013a, b; Scekcic, 2013; Veljovic, 2013).

Industrial Minerals

Lithium and Boron.—Rio Tinto plc of the United Kingdom held 100% interest in the Jadar lithium-borate project, which is located about 100 km from the capital city of Belgrade in western Serbia. As of yearend 2013, total mineral resources at Jadar were estimated to be 118 Mt of ore at an average grade of 1.6% lithium oxide and 18 Mt of inferred resources of borates. A prefeasibility study was underway (Rio Tinto Minerals plc, 2011; Rio Tinto plc, 2014, p. 219, 221).

Erin Ventures Inc. of Canada held 100% interest in the Piskanja boron deposit, which is located about 160 km south of the capital city of Belgrade. In November, a technical report and

mineral resource estimates were completed by SRK Exploration Services Ltd. of the United Kingdom. Indicated mineral resources were estimated to be 5.6 Mt at an average grade of 30.8% boron trioxide (B_2O_3) with a cutoff grade of 12% B_2O_3 , and inferred mineral resources were estimated to be 6.2 Mt at an average grade of 28.8% B_2O_3 with a cutoff grade of 12% B_2O_3 . A preliminary economic assessment would be conducted by SRK Exploration Services and was expected to be completed by the second quarter of 2014. Exploration works were underway, and a feasibility study was expected to begin by early 2014 (SRK Exploration Services Ltd., 2013, p. 3–4; Erin Ventures Inc., 2014a, b).

In January 2013, Erin Ventures received an exploration license for an additional territory within the Jarandol basin, which is adjacent to the Piskanja deposit and the Pobrdje boron mine (which was operated by the Government). The license covered an area of about 35 square kilometers and was valid until yearend 2015. In December, the company announced the completion of its phase 1 exploration program in the Jarandol basin, which included mineralogy and petrology studies, photogeology and remote sensing studies, and reinterpretation of the geologic maps. The phase 2 program was expected to begin by early 2014 (Erin Ventures Inc., 2013).

Mineral Fuels

Natural Gas and Petroleum.—NIS operated the Novi Sad and the Pancevo refineries with a combined production capacity of 7.3 Mt/yr. In 2012, NIS completed a modernization project at its Pancevo refinery. The refinery would produce only EURO–5 standard gasoline and diesel with sulfur content of less than 10 parts per million [in accordance with the EU environmental requirements]. During the year, NIS reported that it had received approval for the construction of a new base oil plant at Novi Sad, which was part of the second stage of the company’s modernization project. The project included a \$100 million investment in equipment and technology. The new base oil plant would have a production capacity of about 180,000 t/yr. After the modernization, the production process at Novi Sad would be fully compliant with the EU environmental requirements and would produce medium distillates for use at the Pancevo refinery (Naftna Industrija Srbije a.d., 2012; 2014a, p. 7, 26, 53; 2014b).

Outlook

Serbia forecast GDP growth at a rate of 1.0% for 2014 (International Monetary Fund, 2014, p. 54). The modernization and expansion plans by RTB Bor and at the NIS refinery are expected to strengthen the mineral industry in the short run. In the longer run, new projects in the nonfuel mineral sector, such as possible development of boron, copper, gold, and lithium deposits, are likely to provide a significant source of revenue to the Government and a boost to the GDP. Plans to rehabilitate the country’s infrastructure (including railways, roads, water supply, and wastewater treatment plants) are likely to attract increased foreign direct investment in the mineral sector and to increase interest in nonfuel mineral prospecting.

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TABLE 2
SERBIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2013

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity holders	Location of main facilities	Annual capacity	
Antimony:				
Ores and concentrates	Farmakom M.B.	Mines and mills near Zajaca	NA	
Metal	do.	Smelter at Zajaca	NA	
Cement	Beocinska Fabrika Cementa (Lafarge S.A., 100%)	Plant at Beocin	2,000	
Do.	Holcim (Srbija) a.d. (Holcim Ltd., 100%)	Plant at Popovac	1,400	
Do.	Cementara Kosjeric a.d. (Titan Group, 100%)	Plant at Kosjeric	750	
Coal:				
Bituminous	JP PEU Resavica	Ibarski Rudnici Mines near Baljevac and Vrska Cuka Mines	70 ^e	
Brown coal	do.	Underground mines near Resavica, Bogdinac, Bogovina, Krepoljin, and Stavalj	400 ^e	
Lignite	MB Kolubara Ltd. (Electric Power Industry of Serbia)	Opencast mines: Field B, Field D, Veliki Crljeni, and Tamnava West near Vreoci	31,000	
Do.	TPPs-OCMs Kostolac Ltd. (Electric Power Industry of Serbia)	Opencast mine at Drmno near Kostolac	8,500	
Do.	JP PEU Resavica	Underground mine at Lubnica	60 ^e	
Copper:				
Mine production, Cu content of concentrate	Rudarsko Topionicki Bazen Bor (RTB Bor) (Government owned)	Mine Cerovo at Bor	5	
Do.	do.	Jama Mine and mill at Bor	8	
Do.	do.	Mine and mill at Majdanpek	30	
Do.	do.	Mine and mill at Veliki Krivelj	20	
Metal	do.	Smelter at Bor	170	
Do.	do.	Electrolytic refinery at Bor	170	
Lead, metal, secondary	Farmakom M.B.	Smelter at Zajaca	NA	
Lead-zinc ore	Contango d.o.o.	Mine and mill at Rudnik	250 ^e	
Do.	NA	Grot Mine near Vranje	300 ^e	
Do.	Farmakom M.B.	Mines at Rajiceva Gora, Ravnaja, and Veliki Cip	350 ^e	
Do.	Mineco Group	Mine at Veliki Majdan, near Ljubovija	60 ^e	
Lime	Jelen Do a.d. (Nexe Grupa)	Plant in Jelen Dol, west of Cacak	90	
Do.	Zelezara Smederevo d.o.o.	Plant at Kucevo	NA	
Do.	Ravnaja AD	Plant at Mali Zvornik	NA	
Magnesite, concentrate	Magnohrom d.o.o.	Mines near Kraljevo	NA	
Magnesium:				
Mine (byproduct of dolomite mining)	MG Serbien d.o.o.	Bela Stena, near Baljevac	NA	
Metal:				
Primary	do.	do.	8,500	
Secondary	do.	do.	12,000	
Natural gas	million cubic meters	Naftna Industrija Srbije a.d. (NIS) (JSC Gazprom Neft, 56.15%, and Government, 29.87%)	Gas is produced from wells located throughout northern Serbia	600 ^e
Petroleum:				
Crude	thousand 42-gallon barrels per day	do.	Crude petroleum produced mainly in northeastern Serbia	24 ^e
Refined	do.	do.	Refinery at Pancevo	4,800
Do.	do.	do.	Refinery at Novi Sad	2,500
Pig iron	do.	do.	Two blast furnaces at Smederevo	NA
Steel, crude	do.	do.	Plant at Smederevo	2,200
Zinc, metal	do.	do.	Electrolytic plant at Sabac	30

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