



2011 Minerals Yearbook

MACEDONIA

THE MINERAL INDUSTRY OF MACEDONIA

By Mark Brininstool

Macedonia produced a number of metals, including ferroalloys, steel, and mine output of lead and zinc, as well as industrial minerals and lignite. Petroleum was imported and processed at the country's sole domestic refinery. Production of mineral products was not significant on either a world or regional scale, but metal commodities were a relatively important source of export revenue for Macedonia (table 1).

Minerals in the National Economy

Macedonia's real gross domestic product (GDP) increased by 3.0% compared with the GDP in 2010. In 2010 (the latest year for which data were available), manufacturing made up 12.6% of the GDP and mining and quarrying made up only 1.5%. In 2010, mineral fuels, lubricants, and related materials made up about 21% of the value of Macedonian imports and 8% of the value of exports. Macedonia's State Statistical Office listed ferronickel, flat-rolled steel products, and petroleum products as three of the country's five most significant export items, but data concerning the value of the trade of these goods in 2011 were not available (Republic of Macedonia State Statistical Office, 2012a, p. 30; 2012b, p. 5; 2012c, p. 1–2).

Production

Production of ferrosilicon increased by 87%; silicomanganese, by 38%; crude steel and steel semimanufactures, by 32% each; cement, ferronickel, and lignite, by 20% each; marl, by 15%; gypsum, by 14%; clay and sintered dolomite, by 13% each; and agglomerated dolomite, by 11%. Output of sand and gravel decreased by 97%; talc, by 58%; pumice and related materials, by 49%; crushed and broken stone, by 20%; and dimension stone and petroleum refinery products, by 18% each. No ferromanganese was produced from 2009 through 2011 because Skopski Leguri DOOEL halted production owing to market conditions. Production could restart in the future if market conditions improve. Solway Group had been developing a \$15 million solvent extraction-electrowinning (SX-EW) operation at its Bucim Mine and was thought to have begun refined copper production in 2011. A small amount of production was estimated for 2011, but the company reported that the new SX-EW facility would be able to produce up to 3,500 metric tons per year (t/yr) of copper when full capacity is reached (Metal Bulletin, 2012; Solway Group, 2012).

Structure of the Mineral Industry

In 2010, Camelot Group based in Hong Kong purchased Metal Invest EFT and took over ownership of the ferroalloys plant at Jegunovce. After the change in ownership, the name

of the plant was changed to Jugohrom Ferroalloys DOO Jegunovce. The production capacity at Jugohrom was reduced to 66,000 t/yr in table 2 based on new information available on the company's Web site. Macedonia's only producer of lead and zinc metal, MHK Zletovo, halted production in 2003 or 2004 after bankruptcy proceedings were initiated. In 2009, Metrudhem DOOEL purchased MHK Zletovo for €2.25 million, and in 2011, Metrudhem announced that it wanted to restart production at the plant within the next 3 years. Residents of Veles, where the plant is located, protested against the possibility of the reopening of the plant owing to concerns about pollution, which had been a significant problem before the plant halted production. At the end of 2011, it was not clear whether the plant would reopen or not. Table 2 is a list of major mineral industry facilities (Casule, 2007; Marusic, 2011; Jugohrom Ferroalloys DOO Jegunovce, 2012).

Outlook

Macedonia's mineral commodity production will most likely remain modest. World economic conditions could have a significant effect on Macedonia's mineral industry owing to foreign demand for metals and petroleum products. The level of lignite production will most likely remain relatively constant to maintain electricity production.

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TABLE 1
MACEDONIA: PRODUCTION OF MINERAL COMMODITIES¹

(Metric tons unless otherwise specified)

Commodity ²	2007	2008	2009	2010	2011	
METALS						
Copper, mine and concentrator output:						
Ore, gross weight	thousand metric tons	4,109	4,240	3,767	4,199 ^r	4,118
Concentrate:						
Gross weight		33,467	38,337	35,430	37,678 ^r	35,976
Cu content ^e		7,400	8,400	7,600	7,900	7,900
Metal, refined		--	--	--	--	300 ^e
Iron and steel:						
Ferroalloys:						
Ferromanganese		--	12,623	--	-- ^r	--
Ferronickel (23% Ni), gross weight ^e		66,600	65,300	52,200	62,700 ^r	75,200
Ferrosilicon		34,215	42,674	7,657	30,044 ^r	56,167
Silicomanganese		70,472	54,931	--	36,705 ^r	50,756
Total		171,287 ^r	175,528 ^r	59,857 ^r	129,449 ^r	182,123
Steel:						
Crude, secondary		371,930	252,461	276,215	292,126	386,000
Semimanufactures		366,076	252,946	270,397	291,886 ^r	385,816
Lead, mine output, concentrate, Pb content		29,000	35,000 ^r	38,000 ^r	40,000 ^r	40,000
Nickel, Ni content of FeNi		15,321	15,026	12,000	14,413 ^r	17,292
Zinc, mine output, concentrate, Zn content		24,000	29,000	35,000	35,000	36,000
INDUSTRIAL MINERALS						
Cement	thousand metric tons	945	916	909	820 ^r	981
Clays, bentonite		35,234	22,890	15,350	12,798 ^r	14,466
Dolomite:						
Agglomerated		3,337	4,179	3,814	4,748 ^r	5,249
Not frayed, not calcined		96,723	75,855	78,523	116,290 ^r	125,700
Sintered		19,351	23,933	21,607	24,989 ^r	28,251
Feldspar, crude		32,814	28,920	19,377	23,188 ^r	25,032
Gypsum, crude		255,500	242,400	154,550	143,118 ^r	162,984
Lime		7,517	--	2,713	2,700 ^e	2,700 ^e
Limestone flux		848,498	827,100	694,968	953,190 ^r	1,016,765
Marl		1,112,870	1,083,830	560,170	749,750 ^r	861,666
Pumice and related materials, volcanic tuff		80,910	103,476	113,064	113,323 ^r	57,356
Sand and gravel, excluding glass sand	cubic meters	30,020	39,559	30,631	40,493 ^r	1,357
Silica sands (quartz sands or industrial sands)		151,000 ^{r,e}	132,000 ^{r,e}	112,106 ^r	116,079 ^r	125,949
Stone, excluding quartz and quartzite:						
Crushed and broken	cubic meters	58,369	33,023	59,715 ^r	130,105 ^r	104,209
Dimension, crude		60,271	71,819	69,082	78,603	64,320
Talc, crude		1,775	977	682 ^r	1,292 ^r	547
MINERAL FUELS AND RELATED MATERIALS						
Lignite	thousand metric tons	6,569	7,746	7,454	6,583 ^r	7,902
Petroleum, refinery products ^{e,3}	thousand 42-gallon barrels	8,300	8,300	7,700	6,600 ^r	5,400

^eEstimated, data are rounded to no more than three significant digits; may not add to totals shown. ^rRevised. -- Zero.

¹Table includes data available through June 6, 2012.

²In addition to commodities listed, secondary aluminum in small amounts, common clay, diatomite, and gold contained in copper concentrate also are thought to have been produced, but available information is inadequate to make reliable estimates of output.

³Figures were converted to barrels from production in thousand metric tons, which was reported as the following: 2007—1,042; 2008—1,036; 2009—963; 2010—829 (revised); 2011—680.

TABLE 2
MACEDONIA: STRUCTURE OF THE MINERAL INDUSTRY IN 2011

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies and major equity owners	Location of main facilities	Annual capacity
Cement	Usje Cementarnica AD (Titan S.A., 95%)	Plant at Skopje	1,000 ^e
Copper:			
Ore	Solway Investment Group Ltd.	Mine and mill at Bucim, west of Radovis	4,000
Metal	do.	Solvent extraction and electrowinning plant at Bucim, west of Radovis	3,000
Ferroalloys:			
Ferrosilicon	Jugohrom Ferroalloys DOO (Camelot Group)	Plant at Jegunovce	66
Silicomanganese	Skopski Leguri DOOEL	Plant at Skopje	56
Ferromanganese	do.	do.	66
Ferronickel, Ni content of ferronickel	Feni Industries (Cunico Resources)	Ferronickel plant at Kavadarci	22 ^e
Gold, mine output, Au in copper concentrate	Bucim Mine (Solway Investment Group Ltd.)	Mine and mill at Bucim, west of Radovis	NA
Lead, metal	MHK Zletovo (Metrudhem DOOEL)	Imperial smelter and refinery at Veles	NA ¹
Lead-zinc, concentrate	Sasa Mine (Solway Investment Group Ltd.)	Mill at Sasa, north of Makedonska Kamenica	NA
Lead-zinc ore	do.	Mine at Sasa, north of Makedonska Kamenica	1,000 ^e
Do.	Zletovo Mine (Indo Minerals and Metals DOOEL)	Mine and mill near Probistip	NA
Do.	Toranica Mine (Indo Minerals and Metals DOOEL)	Mine near Dolga Livada	NA
Lignite	AD ELEM (state owned)	Mine at Suvodol	6,500
Do.	do.	Mine at Oslomej	1,000
Do.	do.	Star Rudnik Mine at Oslomej	310 ^e
Do.	do.	Brod-Gneotino Mine, south of Suvodol near Brod	NA ²
Nickel, ore	Feni Industries (Cunico Resources)	Opencast mine at Rzanovo, 32 kilometers south of Kavadarci	NA
Petroleum, refined	42-gallon barrels OKTA A.D. Skopje (EL.P.ET Balkanike, 81.51%)	Oil refinery at Skopje	20,000 ^e
Steel, crude, secondary	Makstil A.D. Skopje (Duferco Group, 62%)	Plant at Skopje	360
Zinc, metal	MHK Zletovo (Metrudhem DOOEL)	Imperial smelter and refinery at Veles	NA ¹

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

¹MHK Zletovo, Macedonia's only producer of lead and zinc metal, was idled in 2003 or 2004 after bankruptcy proceedings were initiated. Attempts have been made to restart the plant since it was closed, but so far none of these attempts has been successful.

²In 2009 (the latest year for which data were available), the Brod-Gneotino Mine remained under development and did not produce any coal. AD ELEM expected the mine to have production capacity of 2,000,000 metric tons per year when development is complete.