

# MACEDONIA

By Walter G. Steblez

The Former Yugoslav Republic of Macedonia (Macedonia) arguably was affected to a greater extent by the crisis and war in the Kosovo Province of Serbia and Montenegro than any of the other neighboring countries. As many as 300,000 refugees from neighboring Kosovo were accommodated in Macedonia with international assistance. Despite the difficulties associated with the crisis in neighboring Kosovo and the global financial crisis stemming from the Asian market collapse in 1998, Macedonia's economy was able to grow by 2.7% compared with that of 1998.

The Government of Macedonia continued to promote the country's transition to a market economy system (International Bank for Reconstruction and Development, 2000). The branches of the country's minerals sector that have been able to attract foreign investment and/or participation included the steel industry [Duferco of Switzerland and Balkan Steel International (BSI)], petroleum refining (Hellenic Petroleum of Greece), and cement manufacturing (Titan Cement of Greece and Holderbank Financiere Glaris of Switzerland).

Macedonia was an important producer of metals, especially copper, ferroalloys, lead, silver, and zinc in the former Yugoslavia. The country's aluminum fabricating industry centered on Alumina A.D. in Skopje. "Bucim" Radovis DM in Radovis was the country's only producer of copper.

According to spokespersons for Jugohrom HEK-Jegunovce, which was a ferroalloy producer, the Kosovo conflict had little if any impact on the plant's operation during the year. The major portion of the plant's raw material inputs came from domestic suppliers, and ferroalloy export sales were channeled through Greece (Metal Bulletin, 1999c). The company no longer produced ferrochromium or silicon metal, and efforts were to be focused on attaining a production of ferrosilicon at a rate of 5,500 metric tons per month. In 1999, about 14,000 metric tons (t) of ferrosilicon was scheduled for export to the United States. The resumption of ferrochromium and silicon metal production was put into abeyance until market conditions improved (Metal Bulletin, 1999a).

The Skopje-based Feni-Rudnici i Industrija za Nikel, Celik, i Antimon (FENI), which produced mainly ferronickel, continued to look for financial backing to restart the company's ferronickel production at its Kavadarci plant, which was suspended partly during the year. Late in the year, discussions about such an arrangement were reported between FENI and Western European interests. The production of nickel in ferronickel was estimated to be about 1,900 t in 1999 (Metal Bulletin, 1999b).

During the conflict in the Balkans, Macedonia's production of hot- and cold-rolled steel diminished to about 30% of capacity immediately following the North Atlantic Treaty Organization's bombing campaign against Serbia and Montenegro. The main reason was the regional dislocation of routine transportation of bulk and other cargoes on the Danube River because a set of destroyed bridges blocked passage. BSI, which operated the hot- and cold-rolling mills (each with a capacity rating of 600,000 t/yr), had to reroute the export of finished products and the import of raw materials to these mills through the port of Thessaloniki in Greece at a cost that carried severe financial burdens (Metal Bulletin, 1999d).

Regional political instability and world market uncertainties combined to make additional foreign investment less than attractive during most of the year. The difficulties that faced Makstil, which was Macedonia's steel plate producer, arose more from depressed market conditions than from the regional conflict. According to Duferco, which was the facility's operator, Makstil normally used the port of Thessaloniki for deliveries and not the Danube (Metal Bulletin, 1999d).

Important investment in Makstil came from the European Bank for Reconstruction and Development in the form of a loan that amounted to about US\$15 million to be used to modernize the company's steelmaking and steel-casting facilities and to restore its 400,000-t/yr plate production capacity. The installation of continuous casting at Makstil also would increase efficiency and abate dust pollution by the plant, which in past years has exceeded established limits (Burget, 1998; European Bank for Reconstruction and Development, 1998).

## References Cited

- Burget, Phillip, 1998, Makstil gets EBRD loan: AMM Steel News, November 27, 3 p.
- European Bank for Reconstruction and Development, 1998, Makstil, FYR Macedonia project summary: European Bank for Reconstruction and Development, December 1, 1 p.
- International Bank for Reconstruction and Development, International Finance Corporation, 2000, FYR Macedonia *in* Country assistance strategy progress report: International Bank for Reconstruction and Development, R2000-80, no. IFC/R2000-79, May 17, p. 4-7.
- Metal Bulletin, 1999a, Eastern Europe's FeSi producers take stock: Metal Bulletin, no. 8416, October 11, p. 16.
- 1999b, Fenimak finance: Metal Bulletin, no. 8429, November 25, p. 17.
- 1999c, Jugochrom is unaffected by Balkan war: Metal Bulletin, no. 8365, April 8, p. 7.
- 1999d, War forces Skopje mills to scale back production: Metal Bulletin, no. 8374, May 10, p. 23.

TABLE 1  
MACEDONIA: ESTIMATED PRODUCTION OF MINERAL COMMODITIES 1/ 2/

(Metric tons unless otherwise specified)

Commodity 3/ METALS	1995	1996	1997	1998	1999
Aluminum, metal, ingot, primary and secondary	3,700 4/	4,000	4,000	5,850 r/ 4/	5,000
Cadmium, smelter output kilograms	74 4/	85 4/	100	100	100
Chromite:					
Ore, gross weight	5,000	5,000	5,000	--	--
Concentrate (produced largely from imported ores)	3,000	3,000	3,000	--	--
Copper, mine and concentrator output:					
Ore, gross weight thousand tons	2,000	2,000	2,000	2,000	2,000
Cu content of ore	8,560 4/	8,484 4/	8,000	9,100 r/	9,100
Concentrate, gross weight	20,000	20,000	20,000	20,000	20,000
Concentrate, Cu content	6,000	13,500	13,000	9,100	9,000
Gold kilograms	760 4/	752 4/	650	700	700
Iron and steel:					
Iron ore:					
Gross weight	20,000	20,000	20,000	20,000	20,000
Fe content of ore	1,000	1,000	1,000	1,000	1,000
Concentrate	15,000	15,000	15,000	15,000	15,000
Pellets	10,000	10,000	10,000	10,000	10,000
Agglomerate	5,000	5,000	5,000	5,000	5,000
Metal:					
Ferroalloys:					
Ferrosilicon	57,200 4/	57,220 4/	55,000	96,700 r/	63,000
Silicon	1,000	1,000	1,000	1,000	--
Total	71,165 4/	69,900	64,400	107,200 r/ 4/	68,000 4/
Steel, crude	33,000	27,000	30,000	-- r/	-- 4/
Semimanufactures	65,000	65,000	60,000	65,000 r/	60,000
Lead:					
Mine output:					
Ore gross weight (Pb-Zn ore)	900,000	846,244 4/	850,000	867,182 r/ 4/	670,000
Pb content	29,000	27,000	28,000	26,000	26,000 4/
Concentrate, gross weight	17,000	16,885 4/	17,000	14,328 r/ 4/	11,000
Primary and secondary:					
Smelter	23,000	23,000	20,000	20,000	20,000
Refined	30,000	30,000	28,000	28,415 r/ 4/	18,000
Nickel, metal, Ni content of FeNi	3,500	3,000	5,300 r/	5,800 r/	1,900 4/
Silver kilograms	25,000	20,000	20,000	20,000	15,000
Zinc:					
Concentrate	15,000	15,017 4/	15,000	14,328 r/ 4/	8,000
Metal:					
Refined, primary and secondary:					
Smelter	7,000	7,000	7,000	7,000	7,000
Electrolytic	21,335 4/	38,000	53,000	57,162 r/ 4/	48,000 4/
INDUSTRIAL MINERALS					
Cement thousand tons	524 4/	491 4/	500 4/	461 r/ 4/	520 4/
Clays, bentonite	30,000	30,000	30,000	30,000	30,000
Diatomite	5,000	5,000	5,000	5,000	5,000
Feldspar	--	--	--	8,137 r/ 4/	11,000
Gypsum:					
Crude	30,000	25,000	25,000	25,000	25,000
Calcined	5,000	5,000	5,000	5,000	5,000
Lime	20,000	20,000	10,000 r/	924 r/	-- 4/
Pumice and related materials, volcanic tuff	75,000	75,000	100,000	100,000	150,000
Sand and gravel, excluding glass sand thousand cubic meters	130	130	130	130	150
Stone, excluding quartz and quartzite, dimension, crude:					
Ornamental square meters	192,300 4/	186,783 4/	190,000	190,000	200,000
Crushed and brown, n.e.s. thousand cubic meters	400	400	400	400	400
Other cubic meters	12,100 4/	10,000	10,000	10,000	10,000
Sulfur, byproduct of metallurgy thousand tons	6	6	6	6	6

See footnotes at end of table.

TABLE 1--Continued  
 MACEDONIA: ESTIMATED PRODUCTION OF MINERAL COMMODITIES 1/ 2/

(Metric tons unless otherwise specified)

Commodity 3/	1995	1996	1997	1998	1999	
INDUSTRIAL MINERALS--Continued						
Talc:						
Crude	16,500	10,000	10,000	10,000	10,000	
Washed	8,000	7,000	7,000	7,000	7,000	
MINERAL FUELS AND RELATED MATERIALS						
Lignite	thousand tons	7,991 r/ 4/	7,887 r/ 4/	7,165 r/ 4/	7,500 r/	7,500
Petroleum refinery products	thousand 42-gallon barrels	8,000	6,000 r/	6,000 r/	6,000	6,000

r/ Revised. -- Zero.

1/ Estimated data are rounded to no more than three significant digits; may not add to totals shown.

2/ Table includes data available through May 2000.

3/ In addition to commodities listed, common clay also is produced, but available information was inadequate to make reliable estimates of output levels.

4/ Reported figure.

TABLE 2  
 MACEDONIA: STRUCTURE OF THE MINERAL INDUSTRY IN 1999

(Thousand metric tons)

Commodity	Major operating companies	Location of main facilities	Annual capacity e/
Cement	Azbestcementsa "Usje" Preduzece za Proizvodnju Cementa	Plant at Skopje	2,190
Chromite, concentrate	Jugohrom, Hemijsko-Elektrometakurski Kombinat (HEK)	Concentrator at Radusa	150
Copper	"Bucim" Radovis DM	Mine and mill at Bucim, near Radovis	7,000
Ferroalloys	Jugohrom, Hemijsko-Elektrometalurski Kombinat (HEK)-Jegunovce	Plant at Jegunovce	80
Iron ore	Skopje, Rudnici i Zeljezarnica Skopje	Mines at Tajmiste, Demir Hisar, and Damjan	1,000
Lead-zinc ore	Prepobotuvacki, Kombinat Zletovo-Sasa: Sase, Rudnici za Olovo i Cink	Mine and mill near Kamenica	300
Do.	Zletovo, Rudnici za Olovo i Cink	Mine and mill near Probistip	700
Lead metal	Zletovo, Topilnica za Cink i Olovo	Imperial smelter at Titov Veles	40
Do.	do.	Refinery at Titov Veles	40
Nickel: 1/			
Ore	Feni-Rudnici i Industrija za Nikel, Celik i Antimon	Mine and open cast mine near Kavadarci	2,300
Metal	do.	Ferronickel plant at Kavadarci	161
Pig iron	Skopje, Rudnici i Zeljezarnica Skopje	Five Elkem electric furnaces at Skopje	430
Steel, crude	do.	Plant at Skopje	980
Zinc metal	Zletovo, Topilnica za Cink i Olovo	Imperial Smelter Titov Veles	65

e/ Estimated.

1/ Nickel in ferronickel.