THE MINERAL INDUSTRY OF

ROMANIA

By Walter G. Steblez

The performance of Romania's economy continued to diminish as the gross domestic product declined by 7.3% in 1998. At the same time, industrial output fell by 17%, more than twice that registered in 1997. Romania's production of metals (aluminum, copper, lead and zinc, manganese, and steel and ferroalloys), industrial minerals, and mineral fuels was mainly of regional importance. In the metals sector, reported production results for 1998 showed losses for copper, lead, and zinc that ranged from 3% for primary and secondary zinc to 22% for mine production of lead. (See table 1.)

Transition to a market economy system remained a top priority for the Government, which adopted a new mining law, to be administered under the auspices of the National Agency for Mineral Resources, in September 1998 to encourage private investment in the mining sector by domestic and foreign companies. The agency will issue licenses to commercial entities to mine in designated areas for up to 20 years. According to the law's provisions, because all minerals are designated as state property, such permits for exploration, development, and exploitation are required. The new law, however, does not distinguish between Romanian and foreign commercial entities (Mining Journal, 1999).

In 1998, an evaluation of Romania's operational mines by the World Bank found many of the facilities to be uneconomical. This resulted in a decision by the Government of Romania to withdraw subsidies to failing operations. Instead of continuing subsidies, the Government planned to raise the level of exploration for minerals that would be of economic importance (Mining Journal, 1999). Before state-owned enterprises could be privatized, they would have to be restructured as commercial companies. By 2005, the Government would eliminate 64,000 mining jobs (Industrial Minerals, 1997). By October 1997, 40,000 miners had accepted redundancy status and would be given severance pay equivalent to 12 months of average wages (Reuters Limited, 1997).

Major commercial developments during the year included the sale of majority interest in the lead and zinc smelter in Copsa Mica to Mytilineos S.A. of Greece. The transaction involved the sale of more than 60% of the stock valued at about $20 million. The lead and zinc smelter would require about $10 million in investment for modernization.

The current law on environmental protection was adopted in 1995. The sections pertaining directly to the minerals industry are Articles 14, 16, and 48. Article 14 describes the obligations of new and former owners with respect to restoring environmental quality. Article 16 relates to the proscription of imports of raw or processed waste with the exception of those categories of waste that constitute a useful secondary resource of raw materials. Article 48 established procedures for monitoring the quality of soil and subsoil, which included plans for territorial development, exploratory drilling, geologic and hydrogeologic prospecting, and mining extraction activities.

References Cited

Industrial Minerals, 1997, Romanian miners redundant: Industrial Minerals, no. 361, October, p. 107.

Mining Journal, 1999, Romania: Mining Journal Mining Annual Review, v. 332, no. 8537, June 25, p. 40-41.

Reuters Limited, 1997, Romania to speed up reforms in the mining sector: Reuters Limited, September 4, 2 p.

TABLE 1
ROMANIA: PRODUCTION OF MINERAL COMMODITIES 1/ 2/

(Metric tons unless otherwise specified)

Commodity		1994	1995	1996	1997	1998 e/
METALS						
Aluminum:						
Bauxite, gross weight		184,100	175,000	174,500	127,450	135,200 3/
Alumina, calcined, gross weight		301,576	322,774	260,637	281,636	250,226 3/
Ingot including alloys:						
Primary		119,600	140,500	140,874	162,987	174,038 3/
Secondary		2,814	3,446	3,678	2,042	2,000
Total		122,414	143,946	144,552	165,029	176,038
Bismuth, mine output, Bi content e/		40	40	40	40	40
Cadmium metal, smelter		4	5	5	5	2
Copper:						
Mine output, Cu content of concentrate		26,034	24,520	24,434	23,190	18,871 3/
Metal:						
Smelter:						
Primary		23,499	23,355	32,622	25,024	18,708 3/
Secondary e/		1,000	1,000	1,000	1,000	1,000
Total		24,499	24,355	33,565	26,024	19,708
Refined:						
Primary		22,113	22,013	29,305 r/	22,912 r/	21,028 3/
Secondary e/		4,600 3/	5,000	5,000	4,000	2,000
Total		26,713	27,013	34,305 r/	26,912 r/	23,028
Gold, mine output, Au content e	kilograms	4,000 3/	4,000	4,000	3,500	3,500
Iron and steel:						
Iron ore:						
Gross weight	thousand tons	951	565	860 r/	565 r.	600
Metal content	do.	198	147	140	147 r/	155
Metal:						
Pig iron	do.	3,496	4,203	4,025	4,557	5,000
Ferroalloys:						
Ferrochromium		3,885	15,053	9,650	950	850 3/
Ferrosilicon		28,385	19,320	23,827	9,620	10,000
Ferromanganese		31,295	28,410	20,150	11,505	12,000
Ferrosilicomanganese		35,215	57,149	78,590	62,570	60,000
Silicon metal e/		300	300	300	300	300
Steel, crude	thousand tons	5,800	6,557	6,082	6,674	6,400 3/
Semimanufactures:						
Pipes and tubes	do.	472	546	591	633	600
Rolled products	do.	4,510	4,959	4,479	4,804	4,500
Lead:						
Mine output, Pb content of concentrate		23,838	23,194	21,356	19,447 r/	15,144 3/
Smelter, primary e/		12,000	12,000	12,000	10,000	10,000
Refined: e/						
Primary		22,000	22,000	20,000	18,000 r/	20,000
Secondary		4,000	4,000	4,000	4,000	4,000
Total		26,000	26,000	24,000	22,000 r/	24,000
Manganese:						
Ore, gross weight	thousand tons	137	130	150 e/	100 e/	100,000
Concentrate: 4/						
Gross weight	do.	108	104	104	68	70
Mn content	do.	28	27	26	17	20
Silver, mine output, Ag content		70	60	60 e/	60 e/	60
Zinc:						
Mine output, Zn content of concentrate		35,357	34,730	32,082	31,737 r/	25,620 3/
Metal, smelter, primary and secondary		18,520 r/	28,331 r/	28,162 r/	30,226 r/	29,427 3/
INDUSTRIAL MINERALS						
Barite, processed		29,274	18,169	12,541	12,729	12,000
Cement, hydraulic	thousand tons	6,676	6,842	6,956	7,298	7,000

See footnotes at end of table.

TABLE 1--Continued
ROMANIA: PRODUCTION OF MINERAL COMMODITIES 1/ 2/

(Metric tons unless otherwise specified)

Commodity		1994	1995	1996	1997	1998 e/
INDUSTRIAL MINERALS--Continued						
Clays:						
Bentonite:						
Run of mine e/		100,000	100,000	100,000	60,000	60,000
Marketable		41,056	42,277	43,543	27,133	25,000
Kaolin:						
Run of mine e/		150,000	150,000	145,000	90,000	90,000
Marketable		47,566	49,024	45,200	29,169	30,000
Diatomite		34,858	49,790	56,906	23,880	30,000
Feldspar		31,123	30,920	34,975	25,962	30,000
Fluorspar e/		15,000	15,000	15,000	15,000	15,000
Graphite		2,335	2,179	2,931	2,563	2,500
Gypsum	thousand tons	124	111	91	79	80
Lime	do.	1,621	1,763	1,748	1,599	1,600
Nitrogen, N content of ammonia	do.	--	1,000	1,000 e/	1,000	1,000
Pyrites, gross weight	do.	350	250	250 e/	250 e/	250
Salt:						
Rock salt	do.	892	669	808	254	300
Other	do.	1,310	1,820	1,881	2,369	2,000
Total	do.	2,202	2,489	2,689	2,623	2,300
Sand and gravel	do.	831	901	907	711	800
Sodium compounds, n.e.s.:						
Caustic soda	do.	298	383	326	322	350
Soda ash, manufactured, 100	do.	449	504	537	548	500
Sulfur:						
S content of pyrites	do.	148	97	42	52	50
Byproduct, all sources e/	do.	200	200	200	200	200
Total e/	do.	348	297	242	252	250
Sulfuric acid	do.	491	477	422	330	300
Talc		8,952	9,976	10,248	7,578	8,000
MINERAL FUELS AND RELATED MATERIALS						
Carbon black		19,325	21,555	26,023	21,400	22,000
Coal, washed:						
Anthracite and bituminous:						
For coke and semicoke pro	thousand tons	444	349	312	324	300
For other uses	do.	921	800 e/	10	10	10
Brown	do.	--	--	1,000	692	700
Lignite	do.	39,182	39,979	40,546	32,281	35,000
Total	do.	40,547	41,128	41,868	33,307	36,010
Coke:						
Metallurgical	do.	2,664	3,164	2,948	3,110	3,000
Other	do.	--	220	1	1	1
Total	do.	2,664	3,384	2,949	3,111	3,001
Fuel briquets (from brown coal)	do.	71	--	-- 3/	--	--
Gas, natural, gross:						
Associated	million cubic meters	1,499	1,410	1,361	1,245	1,300
Nonassociated	do.	18,099	17,606	16,801	14,671	15,000
Total	do.	19,598	19,016	18,162	15,916 r/	16,300
Petroleum:						
Crude:						
As reported	thousand tons	6,737	6,717	6,626	6,515	6,500
Converted	thousand 42-gallon barrels	50,460	50,270	49,400	48,760	48,000
Refinery products e/	do.	115,200	145,000	132,000	125,000	125,000

e/ Estimated. r/ Revised.

1/ Includes data available through March 2000.

2/ In addition to the commodities listed, antimony, asbestos, and a variety of crude construction materials are produced, and molybdenum may have been produced as a byproduct of copper beginning in 1988; output is not reported quantitatively, and available information is inadequate to make reliable estimates of output levels.

3/ Reported figure.

4/ Estimated series were based on published data on concentrate production.

TABLE 2
ROMANIA: STRUCTURE OF THE MINERAL INDUSTRY IN 1998

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies (Government-owned unless otherwise specified)	Location of main facilities	Annual capacity
Alumina	Soc Com Alor SA	Plant at Oradea, near Hungarian border	250.
Do.	Soc Com Alor SA (51% owned by the Balli Group of the United Kingdom and the Bayrakter Co. of Turkey)	Plant at Tulcea, Danube Delta	400.
Aluminum, primary	Alro SA (Slatina Aluminium Enterprise)	120 kilometers west of Bucharest	270.
Barite	Ministry of Industry	Ortra mine, Rosia Montana, southwest of Cluj	100.
Bauxite	do.	Oradea-Dobresti Mining Complex, near Hungarian border	350.
Cement	Cimentul SA Turda	Plant at Turda, 600 kilometers from port of Constanta	cement: 1,360, clinker: 850.
Do.	Cimentul SA Cimus	Plant at Cimpulung, about 500 kilometers from port of Constanta	cement: 2,200, clinker: 1,360.
Do.	Moldocim SA Bicaz	Plant at Bicaz, about 450 kilometers from port of Constanta	cement: 3,100, clinker: 1,520.
Do.	Romcif SA Fieni	Plant at Fieni, about 420 kilometers from port of Constanta	cement: 1,600, clinker: 960.
Do.	Romcim SA	Plant at Alesd, 812 kilometers from port of Constanta	cement: 3,500, clinker: 2,120.
Do.	do.	Plant at Hoghiz, 437 kilometers from port of Constanta	cement: 2,200, clinker: 1,520.
Do.	do.	Medgidia plant, about 35 kilometers west of Constanta	cement:: 3,500 clinker: 1,980.
Do.	do.	Plant at Jiu, about 533 kilometers from the port of Constanta	cement: 3,000, clinker: 2,045.
Coal:			
Bituminous	Ministry of Industry	Valea Jiului Mining Complex, near Hunedoara	10,400.
Lignite	Ministry of Industry, Oltenia Mining Complex, including Rovinari Mining Enterprise	Jiu Valley, Oltenia County, north of Craiova	20,300.
Do.	Ploesti Mining Complex	About 50 kilometers north of Bucharest	8,700.
Copper:			
Ore (concentrate)	Ministry of Industry, Department of Nonferrous Metals	Baia Mare, Baia-Sprie, and Cavnic mines, northwestern area near the Ukrainian border; Rosia Montana, Noud, Borsa Balan, and Lesul-Ursului Mines--in east-west arc along Carpathian range; Rosia Poieni Mine; and Moldova Noua Mine, southwest near Danubian border with Yugoslavia	180.
Metal	Intreprinderea Metalurgica de Metale Neferoase	Outokumpu Oy flash smelter and electrolytic refinery at Baia Mare in the northwestern area, near Ukrainian border	35.
Do.	do.	Zlatna smelter and refinery, Apuseni, northwest Romania	13.
Ferroalloys	Ferom-Joint Stock Co.	Complex at Tulcea	280.
Iron ore	Ministry of Industry	Mining complex at Hunedoara, in west-central Romania	1,320.
Do.	do.	Resita Mining Complex, southwestern Romania, near Yugoslav border	660.
Do.	do.	Napoca-Cluj Mining Complex, northwestern Romania on Somesul River	990.
Lead in ore	Ministry of Industry	Baia Mare Mine, near Ukrainian and Hungarian borders	24.
Do.	do.	Balan Mine, 50 kilometers southwest of Piatra Neamt	10.
Lead metal	Metallurgical Enterprise for Nonferrous Metals	Imperial Smelter at Copsa Mica, central Romania, on Tirnava Mare River	42.
Natural gas million cubic feet	Ministry of Petroleum and Gas	Tirgu Mures Field at Tirgu Mures, north-central Romania	996,000.
Do.	Ministry of Industry, Department of Energy	Ploesti Field, 50 kilometers north of Bucharest	249,000.
Petroleum, crude	do.	Ploesti-Teleajen, Pitesti, and Tirgoviste Fields, in Prahova Valley around Bucharest; Bacau Field at Bacau, east-central Romania near Siretul River; and West Carpathian Field, southeastern Carpathian Mountains, between west bank of the Olt River and Tirgu Jiu	250,000.
Petroleum, refined	do.	Refineries at Brazil, Pitesti, Onesti, Barcau, Borzesti, Brasov, Cimpina, Darmanesti, Oradea, Ploesti, Teleajen, and Navodari	664,000.

TABLE 2--Continued
ROMANIA: STRUCTURE OF THE MINERAL INDUSTRY IN 1998

(Thousand metric tons unless otherwise specified)

Commodity	Major operating companies (Government-owned unless otherwise specified)	Location of main facilities	Annual capacity
Steel	EAsteel Siderurgica Romana SA Otel Rosu	Caras-Severin, southeastern region, near Yugoslav border	400.
Do.	SC Industrie Sarmei SA	Campia Turzii, Cluj, northwestern Romania	300.
Do.	Sidex SA Galati	Danube River, north of Brail, near the Ukrainian border	10,000.
Do.	Siderurgica SA Hunedoara	West-central Romania, near Calan	2,135.
Do.	CSR SA Resita	Southwestern Romania, about 20 kilometers southwest of Caransebes	1,200.
Do.	Siderica SA Calarasi	Near the Bulgarian border close to Danube River	2,200.
Do.	COST SA Targoviste	Targoviste, Dimbovita, near Bucharest	1,100.
Zinc in ore	Ministry of Industry, Baia Mare	Baia Mare Mine, near Ukrainian and Hungarian borders	60.
Zinc metal	Ministry of Industry, Metallurgical Enterprise for Nonferrous Metals	Imperial Smelter at Copsa Mica, Tirnava River, central Romania	66.