THE MINERAL INDUSTRY OF

NORTH KOREA

By Chin S. Kuo

North Korea's gross domestic product has contracted by 30% in the last 6 years, or by an average of 3% to 4% per year during the 1990's (Far Eastern Economic Review, 1998). A collapsing economy combined with two consecutive years of flooding and a severe drought had aggravated the chronic food shortages in the country. About 74% of North Korea's population of 23 million relied on the food rationing system. The system from the farms broke down at 5 of the country's 10 distribution centers because they had run out of food. Despite severe food shortages, North Korea backed out of a deal to buy wheat grain from Cargill Inc. of the United States in exchange for zinc (Washington Post, 1997a). The country was to trade 4,400 metric tons (t) of zinc for 20,000 t of wheat. Serious infrastructure problems in North Korea limited the availability of bartering materials. The free economic and trade zone at Rajin-Songbong in northeastern North Korea continued to attract little interest from foreign investors.

The United States pledged a total of $52 million in food aid to famine-stricken North Korea. The 100,000-t shipment of food in July was intended for children and the elderly (Far Eastern Economic Review, 1997c). The European Union's (EU) humanitarian aid program sent 155,000 t of food aid, including rice, vegetable oil, beans, and other basic supplies, worth $69 million to North Korea. Another $15 million program of food aid by the EU was specifically for North Korean children. The country expressed interest in joining the Asian Development Bank and the World Bank/International Monetary Fund. The key motivation for North Korea was to be able to access aid funds and soft loans.

For almost half a century, North Korea had depended on the loyalty of overseas Koreans for badly needed hard currency, investment, technology transfers, and even skilled manpower. The financial pipeline helped keep the North Korean economy afloat with cash and capital goods each year. Remittances in 1997 were expected to decrease to about $47.6 million (Far Eastern Economic Review, 1997a). Donghae Trading Co. in Japan accounted for about 30% of Japan's trade with North Korea, which amounted to $518 million in 1996. Korea-Japan Export-Import Co., also in Japan, imported machinery and construction equipment for North Korea.

The country's metal exports to the Republic of Korea continued the declining trend. On the basis of the available data, metal exports, such as gold, iron products, lead, silver, and zinc, decreased 22% in the first quarter of 1997 compared with the same quarter in 1996. The share of metals in total exports declined to 49% in the first quarter of 1997. The reduction in exports was caused by low output in North Korea owing to power shortages, equipment failures, and the breakdown of the state distribution system to provide food rations to workers. Increased absenteeism and reduced productivity were common among mine workers.

Black markets were flourishing in North Korea (Far Eastern Economic Review, 1997b). Staples, such as maize, could be bought without ration limits. Cross-border trade with China provided illicit food purchases. In June, the Government approved the setting up of open-air free markets in major cities along the border with China. At Wonjong, North Koreans bartered fish products and scrap iron for Chinese grain. At Hyesan, workers tore apart factory machinery to trade for food at the border, and many cut cable lines for copper to sell in China. Elsewhere, demand for food was only met by the sprouting underground markets.

Stanton Group of the United States and Sungri Petrochemical Co. signed a contract in September 1996 for a joint-venture project in the Rajin-Songbong free economic and trade zone to cut the cost of fuel oil. Stanton Group planned to spend $18 million to refurbish an existing oil refinery (Journal of Commerce, 1997).

Charged with building a safe nuclear reactor for North Korea, the U.S.-led Korea Peninsula Energy Development Organization (Kedo) discussed emergency services for personnel who would work on the two light water nuclear reactors at the Shinpo coastal construction site near Kumho. The Government broke ground on the $5 billion energy project in August (Washington Post, 1997b). Construction startup was expected before the end of 1997. The EU would contribute $112 million to Kedo during the next 5 years. The Republic of Korea and Japan were financing most of the reactor project. The United States had already contributed from $80 million to $90 million. The purpose of the internationally funded project to build two 1,000-megawatt nuclear power reactors was to produce electricity. Because these reactors could take as long as 10 years to build, North Korea would receive 500,000 metric tons per year of fuel oil to relieve the country from its energy shortages. The country's oil imports had declined an estimated 1.5 million metric tons since 1989. As a result, North Korean industry was operating at an estimated 30% of its capacity.

References Cited

Far Eastern Economic Review, 1997a, Disillusioned donors: Far Eastern Economic Review, December 4, p. 28.
———1997b, Underground lifeline: Far Eastern Economic Review, July 10, p. 75.
———1997c, U.S. promises food: Far Eastern Economic Review, July 24, p. 13.
———1998, Asia 1998 Yearbook: Far Eastern Economic Review, p. 141.
Journal of Commerce, 1997, U.S. firm gets nod for N. Korea venture: Journal of Commerce, April 21, p. 9A.
Washington Post, 1997a, N. Korea drops trade of zinc for U.S. wheat: Washington Post, June 6, p. A30.

———1997b, N. Korea initiates huge energy project: Washington Post, August 20, p. A18.

Major Sources of Information

Central Institute of Mining Industry
Pyongyang, North Korea

TABLE 1
NORTH KOREA: ESTIMATED PRODUCTION OF MINERAL COMMODITIES 1/

(Metric tons unless otherwise specified)

Commodity 2/		1993	1994	1995	1996	1997
METALS						
Cadmium metal, smelter		100	100	100	100	100
Copper:						
Mine output, Cu content		16,000	16,000	16,000	16,000	15,000
Metal:						
Smelter:						
Primary		23,000	23,000	24,000	24,000	24,000
Secondary		5,000	5,000	5,000	5,000	5,000
Total		28,000	28,000	29,000	29,000	29,000
Refined:						
Primary		22,000	22,000	22,000	23,000	23,000
Secondary		5,000	5,000	5,000	5,000	5,000
Total		27,000	27,000	27,000	28,000	28,000
Gold, mine output, Au content	kilograms	5,000	5,000	5,000	5,000	5,000
Iron and steel:						
Iron ore and concentrate, marketable:						
Gross weight	thousand tons	10,500	11,000	11,000	11,000	10,000
Fe content	do.	4,900	4,900	5,100	5,100	4,900
Metal:						
Pig iron	do.	6,600	6,600	6,600	6,600	6,600
Ferroalloys, unspecified	do.	120	120	120	120	110
Steel, crude	do.	8,100	8,100	8,100	8,100	8,100
Lead:						
Mine output, Pb content		80,000	80,000	80,000	80,000 r/	75,000
Metal:						
Smelter, primary only		70,000	70,000	70,000	65,000	65,000
Refined:						
Primary		75,000	75,000	75,000	75,000	75,000
Secondary		5,000	5,000	5,000	5,000	5,000
Total		80,000	80,000	80,000	80,000	80,000
Silver, mine output, Ag content		50	50	50	50	50
Tungsten, mine output, W content		1,000	900	900	900	900
Zinc:						
Mine output, Zn content		210,000	210,000	210,000	210,000	210,000
Metal, primary		200,000	200,000	200,000	200,000	200,000
INDUSTRIAL MINERALS						
Barite		110,000	110,000	120,000	110,000	120,000
Cement, hydraulic	thousand tons	17,000	17,000	17,000	17,000	17,000
Fluorspar		41,000	40,000	40,000	39,000	39,000
Graphite		38,000	38,000	40,000	40,000	40,000
Magnesite, crude	thousand tons	1,600	1,600	1,600	1,600	1,600
Nitrogen, N content of ammonia	do.	600	600	600	600	600
Phosphate rock		510,000	510,000	520,000	520,000	520,000
Salt, all types		590,000	600,000	600,000	590,000	590,000
Sulfur	thousand tons	240	250	250	250	260
Talc, soapstone, pyrophyllite		180,000	180,000	180,000	180,000	180,000
MINERAL FUELS AND RELATED MATERIALS						
Coal:						
Anthracite	thousand tons	71,000	70,000	71,000	70,000	70,000
Lignite	do.	21,000	20,000	20,000	20,000	20,000
Total	do.	92,000	90,000	91,000	90,000	90,000
Coke	do.	3,000	3,000	3,000	2,900	2,900
Petroleum refinery products:						
Gasoline	thousand 42-gallon barrels	8,600	8,600	8,600	8,500	8,500
Jet fuel and kerosene	do.	1,800	1,800	1,800	1,700	1,700
Distillate fuel oil	do.	7,800	7,900	7,800	7,700	7,700
Residual fuel oil	do.	4,300	4,300	4,200	4,200	4,100
Refinery fuel and other products	do.	2,400	2,400	2,400	2,300	2,300
Total	do.	24,900	25,000	24,800	24,400	24,300

r/ Revised.

1/ Table includes data available through August 6, 1998.

2/ In addition to the commodities listed, crude construction materials, such as sand and gravel and other varieties of stone, presumably are produced, but available information is inadequate to make reliable estimates of output levels.