

THE MINERAL INDUSTRY OF

NEPAL

By Chin S. Kuo

In a spillover from the East Asian currency turmoil, Nepal experienced an economic recession in 1998. The country's economic planners projected the gross domestic product to expand by 5% in fiscal year 1998-99, and the consumer price index to rise at an annual rate of 13% (Far Eastern Economic Review, 1998). A budget deficit of \$325.9 million was realized for the fiscal year. The Government hoped to raise \$79.32 million additional revenue from proposed new taxes and full implementation of the value-added tax and administrative reforms. Tariffs were increased for petroleum products but lowered for fertilizers.

The balance of payments recorded a surplus, with foreign exchange reserves worth \$94 million. The decline in gold imports was the major cause for the decrease in overall imports. Nepal was a net importer of minerals mainly in the form of finished products such as aluminum, cement, coal, copper, fertilizer, gold, gypsum, iron and steel, lead, salt, silver, and zinc, from India, Japan, and other countries of East Asia and South Asia. Some indigenous raw and finished materials, such as beryl, corundum, garnet, marble, natural aggregates, quartz, talc, and tourmaline, were exported to China, Hong Kong, India, Singapore, and Thailand.

Industrial investment grew by around 6%. The Asian Development Bank had approved \$622 million to fund 24 projects and would link future levels of assistance to the effective use of the funds and the country's economic growth. Foreign aid accounted for \$114 million. Japan was Nepal's major aid donor, followed by Germany, India, and the United Kingdom. Foreign investment incentives include the exemption of income tax in the mineral industries for a period of 7 years from the date of commencement of production and the ownership of up to 100% by foreign companies in large- and medium-scale industries.

Nepal's Mines and Mineral Act 2050 was approved in 1994 and has the following features: (1) the Government can award mineral exploration and exploitation to competent parties and be the shareholder or joint venture partner with foreign parties; (2) royalties are fixed on the basis of grade and mineral production; (3) the Government reserves the right of exploration for specific strategic minerals; (4) environmental protection, rehabilitation and conservation of mineral deposits are monitored by the Government; and (5) a mineral development center can be established by the parties.

Traders in Nepal protested the Government imposition of a 10% value-added tax on goods and services, citing the tax would complicate record-keeping. The value-added tax would raise \$78 million in revenue. Later, the Government agreed that businesses with annual turnover of less than \$66,000

would be exempt from applying the tax and keeping records.

Nepal has a variety of mineral resources, mostly industrial minerals. Some were still being explored while others were being exploited. Economic mineral deposits included construction materials, dolomite, iron ore, limestone, natural gas, pyrite, silica sand, and talc. Mineral occurrences of cobalt, copper, placer gold, lead, and zinc were found in many parts of the country. Mining of limestone, magnesite, marble, and talc were the main mineral industries. (*See table 1.*) Small-scale operations consisted of clay, coal, copper, natural gas, peat, salt, sand and gravel, and semiprecious stones such as aquamarine, beryl, garnet, ruby, and tourmaline.

The Department of Mines and Geology carried out prospecting work at Phakuwa in the Sankhuwasabha district where a lead-zinc mineralization zone extended for 1,300 meters (m) along strike and had an average thickness of 1 m. Nepal Metal Co. Ltd. was engaged in the development of a lead-zinc mine at Ganesh Himal in the Rasuwa district.

Nepal's cement demand continued to increase and the country had to import cement in excess of 50% of demand from India. Total production capacity was 695,000 metric tons per year (t/yr) of cement. Capacity utilization at cement production plants was low at around 50%. Three Government-controlled cement plants accounted for a total capacity of 661,000 t/yr. Udayapur Cement had a capacity of 277,000 t/yr, Hetauda Cement at 264,000 t/yr, and Himal Cement at 120,000 t/yr. Three small privately owned cement plants made up the balance of 34,000 t/yr. The Government planned to privatize its three plants.

A 50-kilometer-long phosphate rock belt was found, extending from Dhikgad of the Baitadi district to Tarugad of the Bajhang district in western Nepal. The phosphate rock horizon of from 0.7 m to 4.7 m thick was reported to contain 5% to 32% P₂O₅ (Ministry of Industry, Foreign Investment Board, Mineral Resources, accessed March 11, 1999, at URL <http://www.info-nepal.com/fips/index.html>).

Geologic and geophysical investigations, particularly the aeromagnetic and seismic surveys carried out by the Department of Mines and Geology, indicated that the Siwalik range and the Terai belt were potential prospective areas for petroleum. A drillhole was completed in Block 10 in eastern Nepal and technical information on the block was upgraded by seismic surveys with the assistance of Petro-Canada. The Government invited multinational companies to participate in petroleum exploration.

Enron Corp. of the United States withdrew its bid for a \$6 billion hydropower project, citing the power and financial market slowdown. In 1996, the company had proposed

building a dam on the Karnali River in western Nepal to produce 10,800 megawatts (MW) of hydropower for export to China and India. It also had planned to build transmission lines across the Himalayas to supply power to China. In 1995, the World Bank abandoned plans to lend \$175 million for the \$1 billion Arun III hydroelectric project. Four hydroelectric projects—the 144-MW Kaligandaki, the 6.2-MW Puwa Khola, the 36-MW Bhote Koshi, and the 60-MW Khimti Khola—were delayed. Only 10% of Nepal's population of 21 million had electricity. The Government allocated \$558.3 million for medium-sized hydroelectric projects, including the \$19 million, 7.5-MW Indrawati hydroelectric project, which was started in 1998.

Reference Cited

Far Eastern Economic Review, 1998, Economic Monitor—Nepal: Far Eastern Economic Review, v. 161, no. 49, December 3, p. 75.

Major Source of Information

Ministry of Industry
Department of Mines and Geology
Lainchaur, Kathmandu, Nepal
Telephone: 977-1-414740
Fax: 977-1-414806

TABLE 1
NEPAL: PRODUCTION OF MINERAL COMMODITIES 1/

(Metric tons unless otherwise specified)

Commodity 2/	1994 e/	1995 e/	1996	1997	1998 e/
Cement	315,514 3/	326,839 3/	309,466	360,000 e/	330,000
Clay, red	8,000	9,000	1,000	5,129	5,000
Coal:					
Bituminous	1,200	1,200	5,979	8,163	8,000
Lignite	4,000	4,000	200	785	800
Total	5,200	5,200	6,179	8,948	8,800
Copper ore: e/					
Gross weight	22	20	-- r/	-- r/	--
Cu content	2	2	-- r/	-- r/	--
Gemstones:					
Quartz kilograms	5,000	5,000	1,500	3,000	2,500
Tourmaline do.	--	--	(4/)	(4/)	(4/)
Total do.	5,000	5,000	1,500	3,000	2,500
Lime, agricultural	25,000	25,000	13,000	26,000 e/	25,000
Magnesia, dead-burned e/	--	15,000	25,000	25,000	26,000
Salt thousand tons	7 3/	7 3/	7	7	8
Stone					
Limestone	350,000	370,000	488,800	368,666	380,000
Marble:					
Chips	300	500	548	636	650
Slab, cut square meters	28,000	25,000	688,841	769,400	750,000
Craggy do.	3,000	3,000	2,690	5,400	4,500
Quartzite e/ do.	2,500	2,600	2,600	2,600	2,700
Talc	1,500	1,500	5,323	6,809	6,500

e/ Estimated. r/ Revised.

1/ Table includes data available through April 20, 1999.

2/ In addition to the commodities listed, 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.

3/ Reported figure.

4/ Less than 1/2 unit.