

Northwest Territories. The value of mineral production in 1973 increased to \$165.5 million from \$120.3 million in 1972. Metallic minerals accounted for almost all of the total. Zinc, lead, gold and silver comprised 52.9%, 19.5%, 14.7% and 8.3%, respectively, of the total mineral output. Crude oil and natural gas are of considerable potential value.

Yukon Territory. The value of production increased to \$150.7 million compared to \$106.8 million in 1972. Zinc, lead, silver, copper and asbestos made up 40.6%, 25.2%, 10.2%, 9.8% and 9.2%, respectively. Output is not large by national standards but is increasing rapidly.

12.1.2 Metals

Copper. Canadian mine production of recoverable copper amounted to 908,241 tons valued at \$1,157.5 million in 1973 (Table 12.9). Canada produced 10.8% of the world's copper and ranks as the third largest producer. World mine production of copper increased 6% over the previous year, with all major producers except Zambia and Japan registering increases. Canadian exports of copper concentrates increased 28% while exports of refined copper declined slightly. Domestic consumption of copper rose by 11%, still within the levels of the past eight years.

Copper and nickel-copper ores were smelted at five locations in Canada at the end of 1973. The International Nickel Company of Canada, Limited (INCO) continued to operate an oxygen flash smelter at Copper Cliff, Ont. Falconbridge Nickel Mines Limited operated a smelter at Falconbridge, Ont., treating nickel-copper concentrates. Ores and concentrates from most mines in the Atlantic provinces, Quebec and Ontario were processed at the Noranda smelter of Noranda Mines, Limited or at the Murdochville smelter of Gaspé Copper Mines, Limited, both in Quebec. Major expansion programs were under way or being completed, at both the Noranda and Murdochville smelters. At Murdochville, smelter capacity will be raised by 27,000 tons of anode copper a year. A 300,000 ton-a-year sulphuric acid plant is under construction and some of the acid produced will be used to leach copper from low-grade oxide ores from the Copper Mountain mine. At Noranda the smelter was expanded by the construction of a Noranda continuous smelting process reactor capable of producing 55,000 tons a year of blister copper in one furnace directly from concentrates. Operation of the reactor began early in 1973. Hudson Bay Mining and Smelting Co., Limited operates a smelter at Flin Flon, Man. Hudson Bay plans to produce anode copper instead of blister copper and has commenced the erection of an 825-ft smokestack to improve the dispersion of sulphur gases.

Electrolytic copper refineries were operated by INCO at Copper Cliff and by Canadian Copper Refiners Limited (CCR) a subsidiary of Noranda Mines, Limited, at Montreal East, Que. INCO's copper refining capacity at Copper Cliff was increased 10% by the installation of an electrowinning circuit to recover copper as a by-product from the new nickel refinery. Canadian Copper Refiners Limited completed an expansion raising its capacity to 480,000 tons of refined copper a year, making CCR the world's largest copper refinery.

Two small copper-zinc producing mines were reopened in eastern Canada; one large copper-zinc mine, a small copper mine and two copper-nickel mines began production in 1973. The largest mine to be opened was the 10,000 ton-a-day Ruttan mine of Sherritt Gordon Mines, Limited, in Manitoba. Two small copper-zinc mines and two copper-nickel mines closed during 1973. High metal prices have prolonged the life of several mines, one of which is Noranda's famous Horne mine.

Production declined 4% in the Atlantic provinces, 11% in Quebec, 1% in Ontario, and 19% in Saskatchewan. There was a major shift westward in copper mining capacity as production increased 19% in Manitoba and 50% in British Columbia.

Few new mines were scheduled for production in 1974, because of low copper prices of 1971-72, anticipated excess production capacity in the world, temporary saturation of the Japanese market for copper concentrates, and a slowdown in exploration in Canada.

Copper production in Newfoundland in 1973 totalled 8,647 tons valued at \$11.0 million from two mines, one of which was closed by a seven-month strike during the year. In New Brunswick copper production was 10,310 tons valued at \$13.2 million from four mines; two of these recommenced production late in the year. In Quebec production declined slightly to 157,841 tons valued at \$198.2 million from 176,432 tons valued at \$201.4 million in 1972. About 30 mines were operated during 1973, the main centres of production being Rouyn-Noranda, Val d'Or, Matagami, Chibougamau, Murdochville and Stratford Centre. A strike at Madeleine Mines Ltd., adversely affected production.