

Copper was produced at a number of mines in Ontario in 1973, the main operations being the nickel-copper mines of the Sudbury district copper-zinc and copper mines near Timmins, and copper-zinc mines near Manitouwadge. Producers' shipments amounted to 287,324 tons valued at \$365.3 million compared to 289,723 tons valued at \$293.5 million in 1972.

Production in Manitoba and Saskatchewan was 81,557 tons valued at \$104.1 million. The major producer was Hudson Bay Mining and Smelting Co., Limited, which produced copper in the Flin Flon and Snow Lake areas. Sherritt Gordon Mines, Limited at Lynn Lake, and INCO at Thompson were the other main producers. The Ruttan mine of Sherritt Gordon Mines, Limited was the only new Canadian producer to begin operations in Manitoba in 1973.

Production of copper in British Columbia in 1973 amounted to 350,099 tons valued at \$446.7 million compared to 233,506 tons valued at \$237.8 million in 1972. Most of the production in British Columbia comes from large open-pit mines.

Production in the Yukon Territory increased substantially in 1973. Whitehorse Copper Mines Ltd., resumed production from the new Little Chief mine in December 1972. Hudson-Yukon Mining Co., Limited produced copper during 1972, but operations were suspended in 1973 because of geological problems. In the Northwest Territories copper is produced principally as a by-product of silver mining operations.

**Nickel.** Canadian production of nickel in 1973 amounted to 274,527 tons valued at \$813.1 million. The nickel market began to improve in the last half of 1972 and this improvement continued throughout 1973. World production of nickel increased 4.7%; Canadian production increased 6.0% compared with the previous year (Table 12.10). Consumption of nickel in the non-communist world was about 560,000 tons compared with 470,000 tons in 1972. The large inventories that had been accumulated by major nickel producers were gradually reduced to a normal supply by the end of 1973.

At Sudbury, Ont., The International Nickel Company of Canada, Limited (INCO) commenced production at its new nickel refinery. The new refinery is expected to reach its full designed annual capacity of 50,000 tons of nickel pellets and 12,500 tons of nickel powder in 1974. It uses INCO's top-blown rotary converter and pressure carbonyl process. The refinery produces pellets of 99.97% nickel and powder of 99.8% purity. Both INCO and Falconbridge Nickel Mines Limited, Canada's second largest producer, increased production in 1973 over that of 1972.

Three new nickel-copper mines began production during 1973. In the Sudbury area one Falconbridge mine and one INCO mine started production. The Langmuir mine, a joint Noranda Mines, Limited-INCO venture, near Timmins, Ont., began operations in June 1973. The Langmuir mine has a 700 ton-a-day concentrator and ships its concentrates to the Copper Cliff smelter. The Wellgreen nickel-copper mine at Kluane Lake, YT, closed in July 1973 after a year's production because underground development revealed major mining difficulties.

**Iron ore** shipments in 1973 increased 23% to 47,511,797 tons compared with the figure for the previous year of 38,745,917 tons (Table 12.11). Production at iron ore mines amounted to 49,419,972 tons. The small excess of production over shipments was used to replenish stocks. The value of the shipments increased 24% to \$606,106,000. All iron ore figures quoted in this text refer to long ton units (2,240 lb).

Iron ore was produced by 15 companies at 16 locations, with nine operations in Ontario, two in British Columbia, two in Quebec, two in Labrador and one in Quebec-Labrador. Estimated production capacity at the end of 1973 was 63 million tons of iron ore, of which 31 million tons was iron pellet capacity.

Newfoundland (Labrador) is the largest iron ore producing province and recorded a large increase in shipments of 5,740,471 tons or 35% compared with the previous year. In Quebec production increased 2,137,931 tons or 20%. The Iron Ore Company of Canada (IOC), the largest Canadian producer, experienced an increase in shipments of about 50% over the previous year, when operations had been hampered by protracted labour problems. Shipments from the three major facilities of IOC in 1973 attained 20,386,000 tons. IOC's expansion of the Carol Lake concentrator to 22 million tons a year and construction of a six million ton-a-year pellet plant at Sept Îles was completed in 1973. However problems experienced in the metallurgical feed, shortage of key components and skilled maintenance personnel precluded the efficient operation of these new facilities in 1973. Quebec Cartier Mining Company (QCM)