

to the all-time high of 1957. Other leading Free World producers in terms of production capacity percentage were New Caledonia (13 p.c.), Cuba (12 p.c.) and the United States (3 p.c.). Figures on the nickel production of the Union of Soviet Socialist Republics are not released but it is estimated to be 50,000 to 55,000 tons annually. Canada possesses the world's major nickel sulphide deposits. They have been the main source of the world nickel output for many years though in recent years production from lateritic nickel ores, especially those of Cuba and New Caledonia, has increased. Lateritic nickel deposits are relatively common compared with sulphide deposits and countries such as Cuba, the Dominican Republic, the Philippines and the Dutch East Indies have large reserves. Lateritic ores are treated chemically in contrast with the pyrometallurgical treatment of most Canadian sulphide ores. Production from lateritics can be expected to offer increasing competition to production from Canadian sulphide deposits.

The Canadian nickel industry is dominated by the mining and smelting operations of the Sudbury, Ont., district where the International Nickel Company of Canada Limited and Falconbridge Nickel Mines Limited have their mines and plants. International Nickel has five mines: the Creighton, Frood-Stobie, Garson, Levack and Murray. It has smelters at Copper Cliff and Coniston, the main product being nickel oxide sinter and by-products, copper, cobalt, the platinum metals, gold and silver, selenium, iron ore and sulphur. The sinter is used directly in industry or shipped to the Port Colborne, Ont., refinery where it is reduced, cast into anodes and either electrolytically refined or shipped to the company's Clydach refinery in the United Kingdom for reduction to metal. A newer method of treatment, in partial production, is the direct electrolysis of artificial sulphide anodes. In 1959 International Nickel's production capacity was 165,000 tons of refined nickel. Falconbridge Nickel Mines Limited obtains its ore from its Falconbridge, East and McKim mines in the Falconbridge area and from the Hardy, Longvack and Fecunis mines in the Onaping area. Concentrates are smelted at Falconbridge, producing a nickel-copper matte which is shipped to the company's refinery at Kristiansand, Norway. Falconbridge completed a large expansion program by the end of 1959 which raised its annual production capacity to 31,500 tons of nickel.

Sherritt Gordon Mines Limited has mining operations at Lynn Lake in northern Manitoba and a refinery at Fort Saskatchewan, Alta. The refinery employs a pressurized ammonia leach process and also treats custom ore concentrates shipped from North Rankin Nickel Mines Limited at Rankin Inlet on the west shore of Hudson Bay and from Giant Nickel Mines Limited near Hope, B.C. The Sherritt Gordon refinery has a capacity of 13,750 tons of nickel a year.

The outstanding current development in the Canadian nickel industry is the International Nickel Company's program at Thompson in northern Manitoba. This operation will be in production in 1961 at a rated capacity of 37,500 tons of nickel a year. The town of Thompson will be completely modern, designed for an initial population of 8,000 people and equipped with hospital and schools. The Thompson mine will have an initial daily capacity of 6,000 tons. A concentrator, a smelter and a refinery to produce electrolytic nickel are under construction. Ore reserves have not been released, though an official statement foresees sufficient ore for at least 100 years of production. Other important developments include the reopening of International Nickel's Crean Hill mine and further diamond drilling on the Strathcona deposit owned by Falconbridge. Both of these operations are in the Sudbury area. The Crean Hill mine is being prepared for production and, following the 1959 exploratory work at the Strathcona deposit, mine development work may be undertaken.

The ore reserves in the Sudbury area in 1958 were 264,628,000 tons for the mines of International Nickel and 43,892,750 tons for Falconbridge. Reserves of the Thompson mine in Manitoba are indicated to be approximately 200,000,000 tons, bringing the total for Canada to some 500,000,000 tons. Canada's position as the world's leading producer of nickel is therefore assured for many years to come.