

Development work continued on a rare metal deposit that includes columbium and tantalum near Great Slave Lake, NWT. A feasibility and marketing study is scheduled for completion in 1987.

**Tantalum.** Production of tantalum at Bernic Lake, Man. remained suspended in 1985 and 1986 due to high inventories and low market prices. Small shipments, however, were made from existing stockpiles. The mine was the world's largest supplier of tantalum concentrate prior to its shutdown in 1982.

**Cadmium.** Metallic cadmium is recovered as a byproduct at electrolytic zinc plants at Trail, BC, Flin Flon, Man., Timmins, Ont. and Valleyfield, Que. Total capacity of these plants to produce primary cadmium metal is 1 800 tonnes per year. Cadmium is used mainly for coating iron and steel products to protect them against oxidation and to give them a desirable aesthetic appearance. Other major uses are in pigments, chemicals and rechargeable batteries.

Production in all forms decreased from 1 605 t, valued at \$7.8 million in 1984, to an estimated 1 421 t valued at \$5.4 million in 1986. Most zinc ores in Canada and zinc concentrates contain recoverable cadmium. The largest production comes from mines in Ontario, British Columbia and Northwest Territories.

**Tungsten.** Canada produced 1 200 t of tungsten in ores and concentrate in 1986 compared to 3 005 t in 1985. This reduction was due to the closure of the mining corporation at Tungsten, NWT, in May 1986, as a result of labour problems, weak markets and low prices. The Tungsten, NWT mine was the only remaining producer of tungsten in Canada. Development of the tungsten deposit at Mactung, located 200 km to the north of Tungsten has been delayed.

**Tin.** Until recently, Canada was regarded principally as a tin consumer rather than a tin producer, although small amounts of tin concentrate were recovered as a byproduct of base metal mining at Kimberley, BC.

Canada relies on imports for its tin metal requirements except for small amounts recovered from recycled solders and detinning, and in primary tin lead alloys production. Consumption had been falling for several years but this trend was reversed in 1984 when consumption grew by almost 20% to 4 076 t. Increased consumption was especially noted in tin plate produced by two large Canadian steelmakers. Consumption dropped slightly in the last two years.

Canada's first major tin mine started production at East Kemptville, NS in 1986, reaching

full capacity in September. Production at the mine totalled about 2 375 t of tin contained in concentrate.

Unfortunately, tin prices collapsed early in 1986, following the cessation of price-stabilizing measures of the International Tin Council in October 1985. Following this collapse, ownership of the Nova Scotia mine was handed to the banks that had financed the project. Although operations are continuing, a decision on the future of the mine has not yet been announced.

Shortly after it became clear in March 1986 that a negotiated settlement could not be reached to end the tin crisis, tin prices fell from an average of US\$5.65 in 1985 to US\$2.40/lb. In October, however, prices showed some strength and closed the year just below US\$3.00/lb. This was an unexpected improvement given poor market fundamentals.

#### 10.4 Non-metallics

**Asbestos.** Canada ranked second after the USSR in world asbestos production in 1986 and accounted for less than 20% of world output. Canadian shipments of asbestos fibre were 640 000 t valued at \$300.6 million, continuing a downtrend since 1979 when shipments were 1.49 million tonnes valued at \$607 million. All Canadian production consists of chrysotile asbestos and in 1986 about 80% was from Quebec, 13% from British Columbia and 7% from Newfoundland.

Canada is the world's largest exporter of asbestos, shipping about 95% of its production to more than 70 countries. The United States and Japan are the largest markets, accounting for more than one-third of Canadian exports.

General weakness in markets persists because of product substitution, competition from other asbestos producers and adverse publicity arising mainly from health hazards associated with past exposure to asbestos dust in the workplace.

The International Labour Organization, representing about 140 countries, voted overwhelmingly in favour of the international convention on safety in the use of asbestos. This marks an important turning point in the international controversy over asbestos use as it serves to emphasize that, with proper controls and regulations, chrysotile asbestos can be used safely.

Future demand for asbestos will depend mainly on the degree to which world public opinion regards asbestos as a continuing health problem, and the Canadian asbestos industry's ability to meet competition by further reducing production costs.