in quantities varying from 0.001% to 0.067% and zinc concentrates contain up to 0.7% cadmium. The largest mine production comes from Kidd Creek mine of Texasgulf Canada near Timmins, Ont., followed by the Geco mine of Noranda Mines at Manitouwadge, Ont. Other important producers are Cominco Ltd. in British Columbia, Hudson Bay Mining and Smelting in Saskatchewan and Manitoba, the Noranda group of companies in Ontario, Quebec and New Brunswick, Pine Point Mines Ltd. in the Northwest Territories and Cyprus Anvil Mining Corp. in Yukon.

Metallic cadmium is recovered as a byproduct at the electrolytic zinc plants of Cominco at Trail, BC, Hudson Bay Mining and Smelting at Flin Flon, Man., Canadian Electrolytic Zinc Ltd. at Valleyfield, Que., and Texasgulf Canada near Timmins, Ont.

## 12.3.14 Tungsten

The only producer of tungsten concentrates is Canada Tungsten Mining Corp. Ltd. Its mine in the Northwest Territories produced some 2.8 million kilograms of tungsten trioxide in concentrate in 1978. This increase of almost 30% over 1977 was primarily due to higher recovery rates in the mill and a better grade of ore from the mine. An expansion program, started in 1977 and aimed at doubling the company's capacity by 1979, was completed on schedule. In mid-year AMAX Inc. increased its interest in Canada Tungsten from 49 to 65% by purchasing an additional 800,000 shares.

Billiton Exploration Canada Ltd. completed a feasibility study on the tungsten-molybdenum-bismuth orebody at Burnt Hill, NB. Billiton and Brunswick Tin Mines Ltd. will participate equally in bringing the property into production should the final results of the study warrant development. AMAX Exploration, Inc., wholly owned subsidiary of AMAX Inc., identified a scheelite deposit in the MacMillan Ross area of the Northwest Territories with possible reserves of 30 million tonnes averaging 0.9% tungsten, possibly the largest known single deposit in the world. While AMAX Exploration completed several studies on the feasibility of developing the deposit, there was no indication when development could begin.

## 12.4 Industrial minerals

## 12.4.1 Asbestos

Canadian shipments of asbestos fibre were 1.38 million tonnes valued at \$602 million in 1978, compared to 1.52 million tonnes valued at \$563 million in 1977. All Canadian production consists of chrysotile and in 1977 more than 80% came from Quebec, 6% each from British Columbia and Yukon, 5% from Newfoundland, and less than 1% from Ontario.

Canada is the world's largest exporter of asbestos, shipping over 90% of its production to more than 70 countries. The United States is the largest market, accounting for nearly 40% of Canadian exports, followed by the Federal Republic of Germany, Japan and the United Kingdom. These four countries consumed over 60% of Canadian exports, which totalled about 1.4 million tonnes in 1978.

World demand for asbestos fibre is expected to increase slowly during the next several years, mainly on the basis of growth in developing countries. Most companies continued to allocate large capital expenditures for modernization programs and environmental improvements to allow compliance with stricter regulations applying to the marketplace and outside air emissions.

An act to create a Quebec Crown corporation Société nationale de l'amiante (SNA), was assented to in May 1978 in the Quebec National Assembly. Authorized capitalization of SNA will be \$250 million to implement the government's direct participation in the asbestos mining industry. A planned \$250 million will be set aside for purchase of Asbestos Corp. Ltd. (ACL) to transform into finished products from 10 to 12% of the fibre produced in Quebec; to start new product research and development; to undertake joint ventures with other asbestos mining and manufacturing companies; and to evaluate new mining projects.

Economic evaluation continued at two major prospective producers in Quebec. These are the Abitibi Asbestos Mining Co. Ltd. property north of Amos, Que., being