

Major Canadian non-fuel minerals

Copper

The most important properties of copper are its ability to conduct electricity and heat and the ease with which it can be combined with other metals to produce a host of useful alloys. Copper is alloyed to increase its hardness and resistance to corrosion or to make it more workable. The heaviest consumption of copper occurs in the fields of electricity and communications and in the brass industry.

Canada ranks fourth in world copper production. The major producing regions are in Ontario, Quebec, British Columbia and Manitoba.

In its natural state, Canadian copper is frequently associated with other non-ferrous metals such as nickel, zinc, lead and molybdenum. Much of Canada's production comes from deposits in which the average ore-grade is 2 per cent copper, or 20 kilograms of copper *per* tonne of ore.

About 500 000 tonnes of copper are refined in Canada annually. More than half is exported, principally to Europe and the United States. The unrefined copper is also exported, in the form of concentrates, to Japan, Europe and the United States.

Copper smelting and refining will increase in Canada and the proportion of minerals exported in the form of concentrates will decrease. In addition, domestic consumption has increased since copper-bearing metals have been used to advantage in the nuclear energy sector and in the relatively new field of solar energy conversion.

Gold

Gold is best known for its use in jewellery and commemorative coins and medallions. However, it has a number of industrial applications, some of which are highly specialized. Gold and its alloys are commonly used in dentistry, electronics and the aerospace industry. Although it ceased to be used as the official monetary reserve after 1978, its use as a guarantee for loans between countries has increased.

Canada is one of the main producers of this precious metal, ranking third after the Republic of South Africa and the Soviet Union. In 1982, 39 lode-gold mines were being operated by 30 companies. Quebec is now the main gold-producing province, followed by Ontario and British Columbia.

Of the 52 million grams of gold produced annually in Canada, 73 per cent comes from lode-gold mines and placer deposits, and 27 per cent