

## CHAPTER 10

# MINES AND MINERALS

### 10.1 Canada's mineral industry

Canada leads the world in value of mineral exports and ranks fourth among the diversified mineral producers in non-fuel mineral production, behind the Soviet Union, the United States and South Africa. The mineral industry continues to be a major factor in Canada's economic development. The industry is highly diversified with over 60 different mineral commodities produced. It is also widely distributed regionally, with exploration and mining activities being carried out in all regions of Canada.

On a volume basis, Canada is a world leader in the production of many minerals. It is first in uranium and zinc; second in nickel, asbestos, gypsum, potash, elemental sulphur and titanium; and is among the top five producers of aluminum, cadmium, cobalt, copper, gold, lead, molybdenum, silver and the platinum group metals. Except for a few minerals such as bauxite, chromium, manganese, phosphate and tin, Canada produces most of its mineral requirements.

In 1987, the value of production by the Canadian mining industry was \$16.1 billion (excluding coal, oil and natural gas). Approximately 80% of this production was destined for export markets. The United States, Japan and Western Europe are Canada's major trading partners.

#### 10.1.1 Sectors of production

The Canadian mineral industry is generally divided into four sectors: metallic minerals, non-metallic minerals, structural materials and mineral fuels. The first three of these sectors are presented in this chapter; the information in this chapter excludes mineral fuels. The mineral industry is also described in terms of stages of activity: exploration, mining and milling; metallurgical extraction; minerals and metals-based semi-fabricating; and metals-based manufacturing.

*The mineral fuels sector, which is comprised of coal, oil, natural gas and uranium, appears in Chapter 11, Energy.*

The total value of mineral production (metallics, non-metallics and structurals) in Canada was \$16.1

billion in 1987 compared to \$13.7 billion in 1986, an increase of 17.5%. Metallic minerals accounted for \$10.9 billion in 1987 or 67.9% of the total; non-metallic minerals accounted for \$2.5 billion or 15.4% of the total; and structural materials represented \$2.6 billion or 16.4% of the total.

On a regional basis, Ontario accounted for the largest share of the total value of mineral production in 1987, at 34.7%; followed by Quebec, 15.7%; British Columbia, 11.6%; Saskatchewan, 8.4%; Alberta, 5.9%; and Manitoba, 5.7%. The remaining 18.0% was spread among the other four provinces and two territories.

In terms of real output measured by Gross Domestic Product (GDP) by industry at factor cost at 1981 prices (a measure of the value of output by the industry), the GDP of the total mineral industry was \$21.8 billion in 1987 compared to \$20.9 billion in 1986, an increase of 4.5%. GDP of the mining sector in 1987 was \$7.6 billion, an increase of 9.3% over 1986. GDP in the primary metal industries (including non-ferrous smelters and refineries and the crude steel industries) was \$4.6 billion in 1987, an increase of 7.9% over the previous year. For the metallic and non-metallic semi-fabricating and fabricating industries, GDP increased by 8.9% to \$9.2 billion in 1987. The minerals sector overall accounted for about 5.6% of total GDP at factor cost.

Rising prices and sustained productivity increases resulted in a much improved performance for Canada's mineral industry in 1987 compared to 1986. The price increases reflected tighter global supply of minerals as the mine closures and smelter rationalizations of the past five years brought production more in line with demand.

Total employment in the minerals sector was approximately 375,000 in 1987, an increase of 1.8% over 1986. While employment in metal mining and non-metal mining dropped marginally from the 1986 levels, all other sectors of activity showed gains. Employment in the mining sector overall (metal mines, non-metal mines and structural materials) was approximately 64,000. Employment in smelting and refining and the