

of nickel which make it useful in a wide range of applications. The major use is in stainless steels, which accounts for close to 50% of consumption, followed by nickel-base alloys, electroplating, alloy steels, foundry products and copper-based alloys. Nickel is extensively used as an alloying agent and is a component in approximately 3,000 different alloys.

**Gold.** Canadian gold production in 1986 was estimated at 104 655 kg with a value of \$1.7 billion, compared with 87 562 kg valued at \$1.2 billion in 1985 and 83 446 kg valued at \$1.3 billion in 1984. The reduction in value against the increase in production in 1985 reflects the drop in gold price during that year.

Gold production in Canada has been increasing since 1980 (at 50 000 kg) when the price of gold hit record levels and averaged US\$614 (Cdn\$718) per ounce. After that period, the price of gold declined to US\$360 (Cdn\$466) in 1984, US\$317 (Cdn\$433) in 1985 and US\$368 (Cdn\$509) in 1986, but it remained high enough to encourage additions to Canadian production each year.

Canada has traditionally ranked third in world gold production, well behind South Africa and the Soviet Union. In 1986, production in the United States was expected to surpass that of Canada by about 10 000 kg.

The largest source of new gold production in Canada is the Hemlo region of northern Ontario. The deposit was discovered in 1981 and has resulted in the development of three separate gold mines. The three mines are expected to reach full capacity by 1989, at which time annual production in excess of 25 000 kg is expected.

In 1985, Ontario became the country's largest producer and unless major discoveries are made in other provinces it will remain so for at least the next 20 years. Quebec ranks second while the Northwest Territories has replaced British Columbia in third place. Newfoundland and Saskatchewan are both expected to become significant gold producers in the near future as mines now under development reach the production stage.

Gold production comes from three sources: gold mines, base metal mines and placer operations, which account for 77%, 19% and 4% of the country's production, respectively. Gold has been produced in every province and territory except Prince Edward Island. At the end of 1986, there were 41 gold mines in Canada.

Much of Canada's gold production is sold in the form of the gold maple leaf bullion coin. Sales of the coin reached a high in 1985 of

55 000 kg (1.8 million ounces), or nearly 65% of the country's gold production. The gold maple leaf coin is made only from Canadian mined gold and is 99.99% pure. There are four different sizes, namely the one, half, quarter and tenth ounce with face values of \$50, \$20, \$10 and \$5, respectively. Since the maple leaf coin was introduced in 1979, more than 248 828 kg (8 million ounces) of Canadian gold have been sold in that form.

The majority of Canadian mined gold is refined at the Royal Canadian Mint in Ottawa, with smaller amounts being refined at Montreal, Que. and at Burlington and Toronto in Ontario.

**Zinc.** Canada is the world's largest producer and trader of zinc, providing about 25% of all zinc consumed in the western world. Western world zinc production and consumption in recent years has reflected the state of the world economy. World mine production has increased steadily since 1981. Canadian mine output in 1986 was 1.06 million tonnes compared with 1.1 million tonnes in 1981. Production of refined zinc reached a high of 692 000 t in 1985, but dropped during 1986 to 570 000 t because of an extended strike and planned shutdowns. Consumption of refined zinc was 143 000 t in 1986, little changed from that of the previous years. Zinc is used mainly for galvanizing (43%), in brass (22%), diecasting alloys (15%) and semi-manufactures and chemicals accounting for the balance.

Four electrolytic zinc refineries in Canada have a total annual capacity of 705 000 t. Cominco Ltd. at Trail, BC is Canada's largest, followed by Canadian Electrolytic Zinc Limited at Valleyfield, Que., Falconbridge Limited at Timmins, Ont. and Hudson Bay Mining and Smelting Co., Limited at Flin Flon, Man. All smelters, except that at Flin Flon, have completed modernization and expansion programs in recent years, the most recent being Falconbridge.

Zinc is produced in approximately 25 mines in Canada, all of which also produce as co-products or byproducts, lead, copper or both as well as gold and silver. Ontario is the largest zinc mining province, accounting for just over 28% of Canadian production. Other important producers are the Northwest Territories (26%), New Brunswick (16%), British Columbia (13%) and Quebec (4%).

The Canadian industry is suffering from worldwide mining and smelting overcapacity and many mines have been forced to reduce or suspend production. A large mine at Faro, Yukon that suspended production in 1982 was reopened under new ownership in 1986.