

Lead

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1999 mineral production: \$117 million
 World rank: Sixth
 1999 exports: \$283 million

Canada	1999	2000 ^e	2001 ^f
	(000 tonnes)		
Mine production	161	153	129
Refined production	263	289	313
Consumption (refined)	68	68	75

^e Estimated; ^f Forecast.

Lead-acid batteries for automotive, industrial and consumer purposes account for 70% of the world's demand for lead. Lead's corrosion-resistant nature also lends itself for applications in sheeting for roofing purposes, while its radiation attenuation properties prevent the emission of harmful radiation from television, video and computer monitors. Certain dispersive or readily bio-available uses, such as lead in gasoline, in piping for drinking water systems, and in household paints, have been or are being phased out in Canada and in certain other countries due to health concerns.

ANNUAL AVERAGE CASH SETTLEMENT PRICES, LONDON METAL EXCHANGE

1996	1997	1998	1999	2000 ^e
(US\$/t)				
774.0	624.0	528.4	502.2	460

^e Estimated.

CANADIAN OVERVIEW

- Late last year, rock stability problems at Cominco Ltd.'s Sullivan mine resulted in lower concentrate production. Subsequent improvements at the mine in the first quarter of 2000 resulted in higher zinc and lead concentrate production. Results are being reviewed at Sullivan to ensure that the mine can be operated on an economic basis until the planned closure date, which is now expected to be December 2001.
- Noranda Inc. ratified new three-year collective agreements with unionized employees at its Brunswick smelter in Belledune, New Brunswick. In 1999, the Brunswick bulk concentrate facility handled some 360 000 t of zinc and lead concentrate. The lead smelter produced more than 100 000 t of lead and custom alloys.

WORLD OVERVIEW

- The Lisheen mine was officially opened in June. An equal joint-venture project between Ivernia West Plc and Anglo American plc, the Lisheen mine, located near Thurles, County Tipperary, Ireland, is the fifth largest zinc and lead mine in the world. The mine is expected to produce 4.83 Mt of zinc and lead concentrate during its 14-year lifespan.
- Pasminco Limited officially opened its new Century mine in Queensland, Australia, in early April and began shipments of lead concentrate in August. The mine is expected to reach its full production rate of 70 000 t/y of lead concentrate by the end of 2001.
- Cominco announced that its U.S. subsidiary, Cominco American Inc., will re-open the Pend Oreille zinc-lead mine near Metaline Falls, Washington. Work on the US\$70 million project began in October and is expected to start production in the third quarter of 2002. Lead and zinc concentrate will be shipped to Cominco's nearby Trail smelter in British Columbia.

- The Doe Run Company announced in mid-April that the company would implement further production cutbacks at its Missouri lead facilities in the United States. Together with the cutbacks announced by the company in January, its production of lead in concentrate was reduced by about 50 000 t.
- U.S. battery manufacturer and lead recycling company, Exide Corporation, completed a deal to acquire GNB Technologies, the global battery business of Pacific Dunlop Limited, for US\$368 million and will now do business as Exide Technologies. GNB supplies about 20% of the North American market for industrial batteries and is also a maker of lead-acid automotive batteries.

LEADING WORLD LEAD PRODUCERS

Producers Lead in Concentrate		Producers Lead Metal	
	2000 ^e		2000 ^e
	(000 tonnes)		(000 tonnes)
Australia	631	United States	1 400
China	560	China	1 000
United States	480	Germany	380
Peru	266	United Kingdom	354
Canada	142	Japan	290
Mexico	138	Canada	289
Sweden	117	France	268

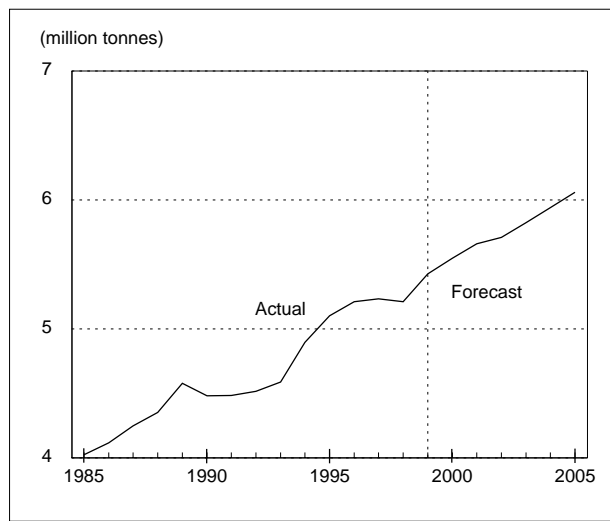
^e Estimated.

CONSUMPTION OUTLOOK

According to the International Lead and Zinc Study Group (ILZSG), world refined lead consumption is expected to rise by 2.8% to 6.4 Mt in 2000, with Western World consumption increasing by 2.1% to 5.6 Mt. The growth in demand is mainly due to strong growth in Asia, particularly China. Demand in Europe and the United States is expected to rise by 1.2%. World demand in 2001 is expected to rise by a further 2.2% to 6.5 Mt. Demand in the West will slow somewhat in 2001, rising by only 1.9% to 5.7 Mt. Demand in the United States is expected to continue at a rate of about 1.4% and in Europe is expected to remain flat.

Over the long term, lead demand is expected to maintain an average annual growth rate of 1.5-2.0%. The battery sector will continue to account for most of the growth, with the newly industrialized nations of Southeast Asia expected to continue to record the most rapid growth as the vehicle population expands.

**Figure 1
Western World Lead Consumption, 1985-2005**

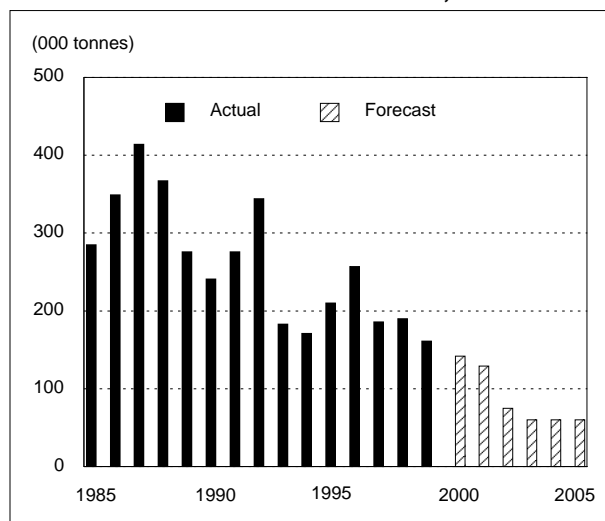


Source: Natural Resources Canada.

CANADIAN PRODUCTION OUTLOOK

In 2000, Canadian mine production of lead is expected to be 142 000 t, down 12% from 1999. The decrease primarily reflects the loss in production from Noranda's Heath Steele mine, where operations were closed in October 1999. Mine output is forecast to continue to decline in 2001 to 129 000 t. Mine output is also expected to continue to decline over the next few years as older mines close, unless additional reserves are found at existing mines or through new

**Figure 2
Canadian Mine Production of Lead, 1985-2005**



Source: Natural Resources Canada.

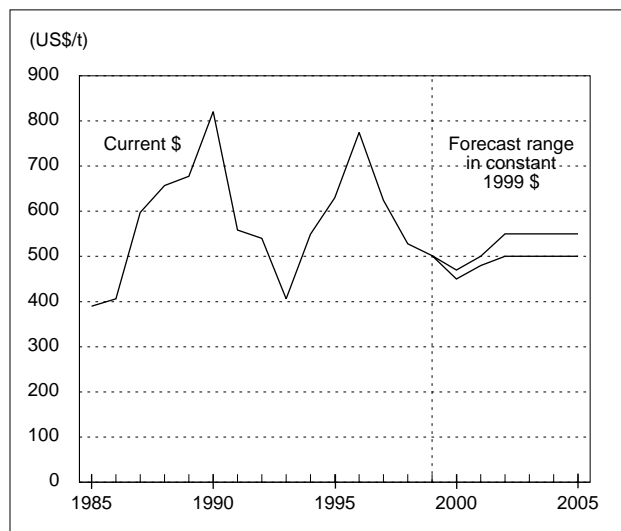
discoveries. Lead metal production is expected to increase by about 10% to 289 000 t in 2000 from 263 000 t in 1999. Metal output is forecast to continue to rise to 313 000 t in 2001.

PRICE OUTLOOK

The LME cash settlement price for lead maintained a downward trend, mirroring the steady rise in stocks through the first half of the year, falling from a peak of US\$493/t in January to a low of \$399/t in April, the lowest price for the year to date. As prices fell, cuts in mine production, aggressive buying by China, and reduced availability of scrap quickly turned a balanced market into a deficit. To meet consumer demand, stocks began to follow a steady decline in late May and early June from a peak of just under 209 000 t. As a result, prices began to recover and reached a peak of US\$515.00/t in late September. The recovery, however, came to an abrupt end in early October when a large volume of hidden stocks suddenly made an appearance, rising from 57 000 t to 157 000 t in a matter of one week. Prices subsequently fell back, trading between US\$475 and \$500/t by the end of October.

For 2001, the lead market, according to information gathered by the members countries of the ILZSG, is expected to result in a small surplus. It was recognized, however, that the predicted rise in lead metal output was somewhat dependent on the availability of sufficient concentrate supplies in the West. As the ILZSG forecasts indicate that lead concentrate supplies will not be sufficient next year, it is likely that present lead metal output targets will not be achieved. Cash prices are expected to average between US\$480 and \$490/t. In the longer term, prices are expected to average between US\$500 and \$550/t to the year 2005.

Figure 3
Lead Prices, 1985-2005
Annual LME Settlement



Source: Natural Resources Canada.

Note: Information in this article was current as of November 10, 2000.

NOTE TO READERS

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