

(e) Technological Factors

Canada is considered to have the western world's most modern zinc processing facilities and lowest production costs. Cominco, C&I and Kidd Creek fall into this category. The U.S. zinc processing plants are becoming out-dated, and are among the highest cost producers in the world; a number of them have shut down. Cominco and Kidd Creek also use a state-of-the-art (Sheritt Gordon) hydrometallurgical process to produce a significant portion of their zinc production and, not incidentally, sulphur production rather than sulphur dioxide.

The two Canadian lead smelters still use the out-dated sinter/blast Furnace process. This in itself is not the major reason for Canada's being among the highest cost producers, as almost all world producers use a similar process. New technology would bring Canada to a position of leadership in world technology and to the lowest operating cost position.

The Russian-developed Kivcet process, the German-American QSL process and the Finnish-developed Outokumpu flash-smelting methods for lead extraction are not yet in commercial production anywhere. BMS, BMS in Australia, several processors in Germany and China, and one Canadian producer are known to be considering them. A large pilot-plant based on the Kivcet process has been constructed by the Bolivian government but there is no record of its having been operated. Considerations holding back installation are the high capital cost, which is in the order of several hundred million dollars for a world-scale plant, in an environment of low cash flows, and low potential profitability for any lead smelter (even these new ones) in the medium term.

There are no barriers to obtaining these new technologies from abroad through technology/licensing arrangements. The implications of this significant technological change will likely include a scale-up of capacity, a decrease in employment, and a solution to the hygiene problem in the work-place. The first companies to adopt these processes will have a markedly enhanced chance of survival. Some companies must go out of business in the medium term.

(f) Other Factors

Canadian lead production input costs are most sensitive to changes in the cost of labour, followed by costs of coke and raw materials. Energy cost is not as influential a factor. Canadian zinc production input costs are most sensitive to changes in the cost of energy, followed by the cost of labour.

In the present climate of decreasing interest rates, two major industries-housing and construction, and automotive - could improve and create increased demands for, and prices of, lead and zinc and products such as batteries, galvanized steel, pipes, paints, etc. Of course, the opposite would occur if interest rates were to increase. Lower rates would be a boon to Canadian companies, most of whom sell large quantities of lead and zinc concentrates to custom smelters around the world. The effect in the short term would probably not be as beneficial for the Canadian smelters and refiners because they are already operating at high capacity: in 1984 lead was at 84%, and zinc was at 103%. In mid-1985, Cominco and Noranda announced 10% reductions in zinc production for the remainder of 1985. Also, producing more lead would probably not increase operating profit because there is little or no margin between production cost and selling price. The above effects are related to operations. There would be significant non-operating benefits of lower interest rates for Canadian producers.

At least one Canadian union has accepted a zero wage increase recently whereas several large U.S. unions have accepted significant reductions in hourly wages.