Advertising to date has been limited to product catalogues and company brochures with limited participation in appropriate trade magazines. In general, it is felt that some limited commercial advertising is necessary, but with sales in such a highly specialized and technical field, direct contact is considered essential.

The sales division is located at the refinery site in Port Hope and is headed by the vice-president, refining, assisted by refinery technical personnel who can be made available for technical discussions, trade fair participation, sales trips or promotional work as required.

APPENDIX E

Research and Development

In 1944, when the government assumed control of the company the ore treatment facilities consisted of a gravity-concentration mill at Port Radium and a small radium refinery at Port Hope. The mill was not efficient in the recovery of uranium from medium grade ores, producing a concentrate of 8%-12% U_3O_8 with a recovery of only 65%-70% of the uranium in the ore. Likewise, the refining process in use could not be adapted to the production of nuclear grade uranium, since it was originally designed for the extraction of radium, with uranium recovered only as a bi-product.

The new company immediately began process development work and as a result, has since then, built two efficient ore treatment plants. One of these was a new mill at Port Radium which operated from 1952 until closure in 1960, and the other at Beaverlodge. The Beaverlodge mill has been in operation since 1953. Both plants have recovered uranium in a high grade product. The refinery at Port Hope has been modernized and produces a very substantial tonnage of nuclear grade uranium oxide as well as refined green salt, metal and ceramic UO_2 for reactor fuel. Research to improve process efficiency is carried on continuously.

A brief record of the work performed by the research and development division follows.

Milling Developments

Port Radium

Organized research on metallurgical improvements of the Port Radium operation was initiated in 1945 through the establishment of the "Eldorado Project". A small group of engineers, chemists, physicists and technicians was assembled to work in the laboratories of the bureau of mines in Ottawa and in the field at Port Radium.

The Eldorado project group worked for a year or two on improvements in gravity concentration methods and methods of recovering uranium by electronic sorting and by flotation. Some improvements were made in milling efficiency, but by 1947 it was apparent that a chemical leaching method was essential in order to obtain high recovery from the complex ore and in order to reclaim the large reserves of uranium in stored mill tailings.

During the period 1947 to 1950 intensive research work was carried out at the Ottawa laboratories in order to develop a suitable leaching process. The Eldorado project group was expanded and became the radioactivity division of the mines branch (bureau of mines). Until 1949 the bulk of the division's work concerned Eldorado ores since only few others were interested in uranium.