

Prime Minister Mackenzie King made public the Canadian counterpart of this pledge. The history-making Ogdensburg Declaration followed in August 1940. At a meeting between Mr. King and Mr. Roosevelt at Ogdensburg, New York, a six-sentence, unsigned press release was issued that literally altered the course of Canadian-U.S. history. For the first time, Canada and the United States became informal allies.

In addition, the first organizational component of the Canadian-U.S. defence relation, the Permanent Joint Board on Defence (PJBD), was created. As its name implies, the PJBD was intended to be permanent rather than to exist just for the duration of the war. The Ogdensburg Declaration therefore constituted the initial step in general Canadian-U.S. defence co-operation. The April 1941 Hyde Park Agreement was both an economic extension of Ogdensburg and an initial step in what was to become an economic defence co-operation of extraordinary interdependence. From these initial steps sprang a host of wartime joint Canadian-U.S. committees and boards, and unprecedented co-operation and co-ordination during the War.

### Looking to Arctic

The second period, that of preliminary contacts concerning air defence, lasted roughly from 1946 to 1949. At a 1946 meeting, the PJBD prepared its first major postwar recommendation, in which the need for some form of protection regarding the then undefended Arctic was emphasized. This plan was preparatory in nature, its object being a larger measure of co-ordination rather than combined commands and integrated forces. However, it did call for the construction of defence, meteorological and communication stations across the Canadian North for the purpose of gathering information and training in Arctic and sub-Arctic conditions. The Canadian Government was unresponsive to this plan. Also, early in 1946, a military exercise called "Muskox" was carried out, consisting of a mechanized force moving some 3,000 miles through Arctic Canada. U.S. observers and some American materiel were involved, and the results of the whole experience and tests of equipment were made available to both nations.

During this same period, U.S. B-29 aircraft conducted experiments over Arctic Canada in the use of the long-range navigation system. In 1947 an announcement was made in the House of Commons concerning Canadian-U.S. collaboration in

the maintenance of weather-stations in the Arctic. These stations would be operated by an equal number of personnel from the Canadian Meteorological Service and the U.S. Weather Bureau. At the same time, postwar history was beginning to acquire a momentum that was as unsettling as it was to become demanding. In 1948, the Soviets exhibited the Tu-4 long-range bomber during their May Day parade, and the following year detonated their first nuclear device.

The third phase of NORAD's antecedents was a period of close Canadian-U.S. air-defence co-operation that began in 1950 and continued through the establishment of NORAD. The year 1951 witnessed "Project Charles," a U.S. study involving unofficial Canadian participation. Although this study did not recommend Arctic warning systems, it did emphasize the importance of additional warning-time. The year 1952 was marked by the formation of the Lincoln Summer Study Group; another was a U.S. endeavour involving Canadian participation. This study group recommended a distant-early-warning system. Initially, this recommendation was not accepted, but the August 1953 Soviet thermonuclear test provided an awesome impetus, culminating in an October 1953 statement by President Dwight D. Eisenhower while he was in Ottawa: "The threat is present. The measures of defence have been thoroughly studied by official bodies of both countries . . . . Now is the time for action on all agreed measures."

### Three warning lines

Meanwhile, construction had begun on warning lines, of which there were to be three: the Pine Tree Line, the Mid-Canada Line or McGill Fence, and the Distant Early Warning Line (DEW Line). In operation by 1954, the Pine Tree Line ran for most of its length along the Canadian-U.S. border. It was originally a U.S. project, but was extended into Canada by an agreement of August 1951. The Mid-Canada Line, which came into operation in 1951, ran from Labrador to British Columbia, roughly along the 55th Parallel. It was a Canadian project in design, construction, financing and operation. This warning line was largely a product of the Canadian Defence Research Board. Finally, the DEW Line, located about 1,400 miles north of the Canadian-U.S. border and running from Baffin Island to Alaska, came into operation in 1957, and was subsequently extended. Although the DEW Line is suffering from obsolescence, it continues to provide Canada and the U.S. with a 5,000-mile "radar fence" backed up by a

*Plan emphasized need for form of protection in Arctic area*