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POSSIBILITY PROVED OF SHIPPING OIL FROM ARCTIC

The Minister of Public Works, Mr. Arthur Laing, announced on November 2 that according to a detailed report prepared by his Department, suitable sites for the construction of marine oil-shipping terminals existed at several locations on Canada's Arctic coast.

The study, known as the Herschel Island report, had been undertaken at the request of the Department of Indian Affairs and Northern Development. The Treasury Board had earlier authorized the expenditure of \$500,000 on an engineering feasibility study for a marine oil terminal in the vicinity of Herschel Island, Yukon Territory, to accommodate large tankers on a year-round schedule. The study received the full co-operation of other government departments and agencies, as well as the assistance of the oil industry.

The study took advantage of the vast store of information on the physical characteristics of the Arctic region already in the possession of government departments that included some findings of vital significance to any attempt to establish a marine oil terminal in Arctic waters. Such was the quantity and usefulness of this information that the study was completed with an expenditure of only half the allotted funds.

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Four sites, two east and two west of the Mackenzie River delta, are regarded as suitable locations for marine oil terminals.

Two in the Herschel Island area are Herschel Basin, whose usefulness is limited by shallow water in the approaches, and Babbage Bight, some 20 miles to the south. The other sites discussed in the report are Horton River and Clapperton Island, both south of Amundsen Gulf.

The cost of such a terminal would be about \$80 million – about four times that of the one to be built at Come By Chance, Newfoundland, by the Department of Public Works (which also built the super-tanker terminal at Point Tupper, Nova Scotia).

CONSTRUCTION DANGERS

Some of the complicating factors that have to be taken into consideration in the construction of an offshore marine terminal in the Arctic are:

(a) The recent discovery that Arctic permafrost extends out to sea under the ocean bed, which must be taken into account in laying underwater pipelines or building foundations in offshore structures.

(b) The existence of scour trenches, caused by drifting ice islands, and old ice-pressure ridge remnants, as much as 60 feet deep and hundreds of feet wide near otherwise suitable sites for marine terminals. (Such trenches indicate that pipelines laid below the sea in these areas could be destroyed by drifting ice, even if the water were 100 feet deep. This is one of the factors militating against the construction of marine terminals on the north coast of Alaska, where large tankers would have to load a minimum of 30 miles offshore.)

(c) The fact that the area under study lies within one subject to severe earthquakes, necessitating rugged construction even beyond that suited to the difficult Arctic environment.