

Husdon Bay Project: Sub-Bottom Profiling

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distribution in these areas. This earlier work by Leslie and the writer is summarized in PELLETIER (in press). A highly oxidized upper layer conforms to areas occupied by highly oxygenated waters which are found over the shoal and peripheral areas of the bay. A faunal zonation also occurs, as reported by LESLIE (1965).

Bedrock studies supported by geochemical investigations, photographs and bathymetric records indicate the major portion of Hudson Bay to be underlain by Paleozoic carbonate rocks. The eastern portion from the Ottawa Islands and Belcher Islands to the mainland, and the western portion between Churchill and Chesterfield Inlet are underlain by Precambrian volcanic rocks, quartzites, siltstones and carbonate rocks. This has been reported by LESLIE and PELLETIER (1965), and in abstract form by the writer to the International Oceanographic Congress (Moscow, 1966).

References cited

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Approximately 1125 miles of sub-bottom reflection profiling were completed as part of the Hudson Bay Project, from July to September, 1965. This program was designed to examine the thickness and lithology of unconsolidated bottom sediment in Hudson Bay, the configuration of the sub-bottom bedrock surface, and bedrock lithology and structure.

Along the tracks surveyed, this profiling method was successful in determining contacts between Precambrian and Paleozoic rocks, and in defining the attitude of the Paleozoic strata. The maximum accumulation of bottom sediment recorded was in the order of 30 metres.

The interpretation of these recordings is continuing in conjunction with examination of the echo-sounding records of CSS Hudson and M/V Theron, and the sediment samples collected from these vessels.