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GEOLOGICAL SURVEY OF CANADA
COMMISSION GÉOLOGIQUE DU CANADA

Seismic Stratigraphy of Unconsolidated Sediments in the Central Strait of Georgia: Hornby Island to Roberts Bank

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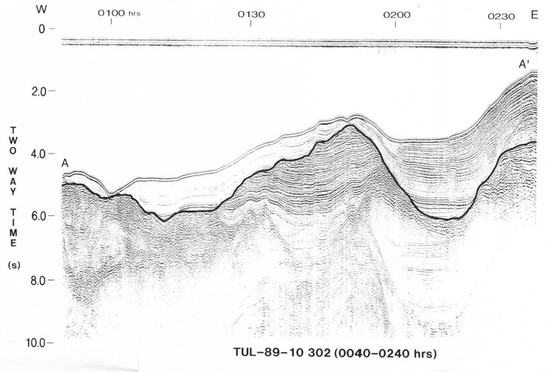
Open File 2350

MORPHOLOGY OF THE GLACIATED SEAFLOOR (LATE WISCONSINAN)

This time structure contour map of the glaciated seafloor depicts the base of the layered reflector facies, which is the youngest ice-erosional surface cutting a variety of unconsolidated sediments and bedrock. (See heavy line on seismic section.) The contour interval is 100 ms from 0 to 800 ms. There is a distortion inherent in viewing this time map as a depth map. Where the low, basinal areas are overlain by sediment that has a velocity greater than seawater, (eg. where there is 200 ms of silts out of 800 ms total) the lows are approximately 5% deeper than the contours suggest. This is a paleogeomorphic map at the retreat of the Fraser Glaciation, and also a basal contour map for the Wisconsinan ice sheet at its climax. The geomorphology is dominated by banks previously eroded into drumlins (Halibut, McCall, Fraser Ridge) and by troughs formed by the keels of southeastwards flowing valley glaciers during the early part of the Wisconsinan advance (Ballenas, Thormanby). The erosional form of this surface has been little modified by subsequent processes. Wisconsinan deposits are typically less than 50 ms (60 metres) suggesting that there is no extensive deep water facies equivalent to the Quadra Sand.



TUL–89–10 302 (0040–0240 hrs)

Kilometres 5 0 5 10 15
Nautical Miles 5 0 5 10
Statute Miles 5 0 5 10 15

SCALE 1 : 125,000