

ENVIRONMENTAL AND STRATIGRAPHICAL ZONATION OF THE
OLIGOCENE AND MIOCENE OFF NOVA SCOTIA
AND NEWFOUNDLAND

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Foraminiferal faunas in cuttings and side wall cores from seven wells and in dredge hauls from the Gully were used to interpret the Oligocene and Miocene biostratigraphy and paleoecology of the Atlantic Continental Margin off Nova Scotia and Newfoundland. The planktonic foraminiferal assemblages represent at least the Oligocene *Globigerina ampliapertura* (Zone N.1), *Globigerina angulisuturalis*/*Globorotalia opima opima* (Zone No.2) and *Globigerina angulisuturalis* (Zone N.3) zones; the Lower Miocene *Catapsydrax stainforthi*, *Globigerinatella insueta*-*Globigerinita dissimilis*, zone (Zone N.6), the Middle Miocene *Orbulina suturalis*/*Globorotalia peripheroronda*, *Globorotalia peripherocuta*, *Globorotalia praefohsi*, *Globorotalia fohsi*, *Sphaeriodinellopsis subdehiscens*/*Globigerina druryi* zones (Zones N.9 to N.13); and the Upper Miocene *Globorotalia acostaensis*/*G. merotumida*, *Globorotalia tumida plesiotumida* zones (Zones N.16 to N.17). The benthonic foraminifera indicate deposition in moderately warm to cool temperate waters of neritic (infralittoral) to bathyal depths. The environment of deposition varied from an outer shelf/slope environment during the Oligocene to an inner/outer shelf environment in the Miocene.

The stratigraphic sequences present are the result of differential preservation. Less than one half of Middle Eocene to Miocene time is represented by the preserved sequences. Hiatuses of approximately 12 m.y. and 6½ m.y. separate the Middle Eocene (Zones P.10 to P.13) and Oligocene (Zone N.1) and the Oligocene (Zone N.3) and Middle Miocene (Zones N.9 to N.13) respectively. An hiatus of 3½ m.y. separates the Middle Miocene (Zones N.9 to N.13) and Upper Miocene (Zones N.16 to N.17).