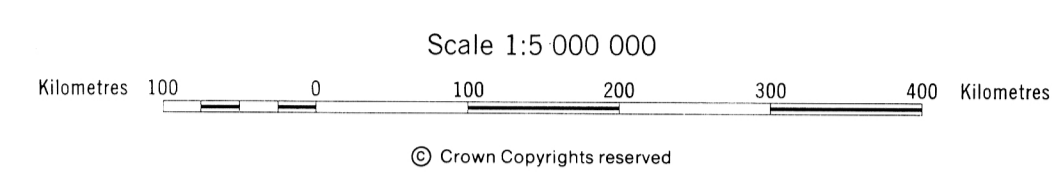


GEOLOGICAL SURVEY OF CANADA  
DEPARTMENT OF ENERGY, MINES AND RESOURCES

# QUATERNARY GEOLOGY: OFFSHORE EASTERN CANADA



Lambert Conformal Conic Projection Standard parallels 49°N and 77°N

Geology of southeast Canadian margin by G.B. Fader; Labrador Shelf by H. Josenhans; Baffin Shelf by B. MacLean and D. Praeg; other specific geologic interpretations by C.F.M. Lewis, C.L. Amos, M.A. Best, G.D.M. Cameron. Maps compiled by M.A. Best and G.D.M. Cameron, Geomarine Associates, Ltd. Scientific authority D.J.W. Piper.

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Published References

**Gulf of Maine, Bay of Fundy, Scotian Shelf, Gulf of St. Lawrence**

DRAPEAU, G. and KING, L.H., 1972  
Surficial geology of the Yarmouth-Browns Bank map area. Marine Science Paper 3, Geological Survey of Canada Paper 72-24, 6 p.

FADER, G.B., 1984  
A geological and geophysical study of the northeast channel, Georges Bank and Georges Basin areas of the Gulf of Maine. Geonautics Ltd. report submitted to the Geological Survey of Canada, 3 volumes, Geological Survey of Canada Open File Report 978.

FADER, G.B., KING, L.H. and JOSEPHANS, H.W., 1984  
Surficial geology of the Laurentian Channel and the western Grand Banks of Newfoundland; Marine Science Paper 21, Geological Survey of Canada Paper 81-22, 37 p.

FADER, G.B., KING, L.H. and MACLEAN, B., 1977  
Surficial geology of the eastern Gulf of Maine and Bay of Fundy, Marine Science Paper 19, Geological Survey of Canada Paper 76-17, 23 p.

KING, L.H., 1970  
Surficial geology of the Halifax-Sable Island map area; Marine Science Paper 1, 16 p.

KRANCK, K., 1971  
Surficial geology of the Northumberland Strait; Marine Science Paper 5, Geological Survey of Canada Paper 71-53, 10 p.

LORING, D.H. and NOTA, D.J.G., 1973  
Morphology and sediments of the Gulf of St. Lawrence; Bulletin of the Fisheries Research Board of Canada, no. 82, 147 p.

MACLEAN, B. and KING, L.H., 1971  
Surficial geology of the Banquereau and Misaine Bank map areas; Marine Science Paper 7, Geological Survey of Canada Paper 71-52, 19 p.

MACLEAN, B., FADER, G.B. and KING, L.H., 1977  
Surficial geology of the Canso Bank and adjacent areas; Marine Science Paper 20, Geological Survey of Canada Paper 76-15, 11 p.

**Grand Banks of Newfoundland, Northeast Newfoundland Shelf**

BARRIE, J.V., LEWIS, C.F.M., FADER, G.B. and KING, L.H., 1984  
Seabed processes on the northeastern Grand Banks of Newfoundland; modern reworking of relict sediments; Marine Geology, 37, p. 209-227.

DALE, C.T. and HOWORTH, R.T., 1979  
High resolution reflection seismology studies on late Quaternary sediments of the northeastern Newfoundland continental shelf; in Current Research, Part B, Geological Survey of Canada Paper 79-1B, p. 357-364.

DUNSIGER, A.D., CHARL, T.R., FADER, G.B., PETERS, G.R., SIMPKIN, P.G. and ZELINSKI, A., 1981  
Ocean sediments - a study relating geophysical, geotechnical and acoustic properties; Canadian Geotechnical Journal, v. 18, no. 4, p. 492-501.

FADER, G.B., KING, L.H. and JOSEPHANS, H.W., 1984  
Surficial geology of the Laurentian Channel and the western Grand Banks of Newfoundland; Marine Science Paper 21, Geological Survey of Canada Paper 81-22, 37 p.

FADER, G.B. and KING, L.H., 1981  
A reconnaissance study of the surficial geology of the Grand Banks of Newfoundland; in Current Research, Part A, Geological Survey of Canada Paper 81-1A, p. 45-56.

GRABOVSKY, N.A., 1966  
Geomorphology of the ocean floor in the Grand Newfoundland Bank area; Oceanology, v. 6, p. 228-237.

GRANT, A.C., 1972  
The continental margin off Labrador and Eastern Newfoundland - morphology and geology; Canadian Journal of Earth Sciences, v. 9, p. 1394-1430.

KING, L.H. and FADER, G.B., 1981  
Seabed conditions east of the Avalon Peninsula to the Virgin Rocks; Geological Survey of Canada Open File Report 723, 5 p.

MILLER, R.O., MACNAB, R., AMOS, C.L., and FADER, G.B., 1982  
Canadian east coast multiparameter surveys, 1982; in Current Research, Part B, Geological Survey of Canada Paper 83-1B, p. 331-334.

JOSEPHANS, H.W., 1983  
Evidence of pre-late Wisconsinan glaciations on Labrador Shelf - Cartwright Saddle region; Canadian Journal of Earth Sciences, v. 20, no. 2, p. 225-235.

STEWART, J. McG., 1974  
Hamilton Bank, Labrador: surficial sediments; Geological Survey of Canada, Open File Report 230, 51 p.

VAN DER LINDEN, W.J., FILLON, R.H. and MONAHAN, D., 1976  
Hamilton Bank, Labrador margin: origin and evolution of a glaciated shelf; Marine Science Paper 14, Geological Survey of Canada Paper 75-40, 31 p.

**Davis Strait, Baffin Shelf, Lancaster Sound, Jones Sound**

MACLEAN, B., 1985  
Geology of the Baffin Island Shelf: in Quaternary environments, eastern Arctic Canada, Baffin Bay and west Greenland, J.T. Andrews (ed.), George, Allen and Unwin, Ltd., London.

PRAEG, D.B., MACLEAN, B., HARDY, I.A., and MUIE, P.J., 1985  
Quaternary geology of the southeast Baffin Island continental shelf, N.W.T., Geological Survey of Canada Paper 85-1A.

Region	Sediments Strongly Influenced by Ice Sheets		Sediments Showing Little or No Influence by Ice Sheets		
	1	2	3	4	5
	Lithology				
Gulf of Maine Bay of Fundy Scotian Shelf	Scottian Shelf Drift 100m	Emerald Silt 140m	Sambro Sand 20m generally a veneer	Lahave Clay 70m	Sable Island Sand and Gravel 60m, generally a veneer
Northumberland Strait	Pomquet drift 40m	Milagash mud 15m Harry Island sediment 80m	Bictouche sand and gravel (in water depths 60-80m) 10m generally a veneer	Pugwash mud 20m	Egmont sand Bictouche sand and gravel (in water depths 60-80m) 35m
Gulf of St. Lawrence	FORMATION NAMES NOT ASSIGNED				
Grand Banks of Newfoundland	Grand Banks Drift 60m	Emerald Silt 90m	Sambro Sand 10m, generally a veneer	Lahave Clay 30m	Grand Banks Sand 20m, generally a veneer
Northeast Newfoundland Shelf	FORMATION NAMES NOT ASSIGNED				
Labrador Shelf	Labrador Shelf Drift 300m	50m Geovik Silt	Sioraq Sand 10m, generally a veneer	Mikkog Clay 30m	
Baffin Shelf	Baffin Shelf Drift 300m	Davis Strait Silt 70m		Tiniktartug Silt and Clay 10m	Resolution Island Lag 50cm
Age	Mostly Wisconsinan. Probably some earlier tills on North-east Newfoundland Labrador and Baffin shelves		Mid-late Wisconsinan	Late Wisconsinan Sub-littoral deposits off south-east Canada	Latest Wisconsinan to Holocene

**LEGEND**

- International boundary
- Interpreted geological boundary
- Major moraine
- Seaward limit of known till occurrences

Recommended citation:  
Atlantic Geoscience Centre  
1985. Quaternary Geology, Offshore Eastern Canada.  
Geological Survey of Canada,  
Open File 1142, scale 1:5 000 000

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**1142**  
GEOLOGICAL SURVEY OF CANADA  
COMMISSION GEOLOGIQUE DU CANADA  
OTTAWA  
1985

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