

**Late Quaternary Depositional Environments of the Canadian
Beaufort Shelf**

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Seismic and borehole data have been studied from the Beaufort Shelf, east of Mackenzie Trough. Three acoustic sequences, separated by unconformities can be recognised from high resolution seismic records. Sequence 1 consists of complex horizontal and progradational reflectors, with variable acoustic penetration. It is bounded above by an unconformity on which two broad valleys are incised to

a depth of 30 m. Sequence 2 has a wedge-like geometry at the margins of these valleys and consists predominantly of oblique progradational reflectors which become sigmoidal towards the centres of the valleys. A second unconformity marks the top of this sequence, although in intervalley areas, it is often impossible to distinguish from the lower unconformity.