

SALT TECTONICS AND PLEISTOCENE STRATIGRAPHY
ON THE CONTINENTAL SLOPE OF
THE NORTHERN GULF OF MEXICO

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ABSTRACT

During a sparker and core drill program conducted by Shell, salt was cored on ten prominent structures on the continental slope. Combined with seismic data, results of this study confirm previous views that the Gulf Coast salt basin extends into the Sigsbee deep. Broad salt swells and pillows are typical structures of the continental slope. The Sigsbee scarp appears to be the surface expression of a salt wall. A zone of active down-to-the-ocean faults follows the Texas shelf edge. They appear to be related to the flow of salt at depth away from the advancing clastic wedge.

Upper Cretaceous through Holocene deep-water sediments were cored on the continental slope. East of Brownsville the salt is overlain by red beds of unknown age. Core holes at the shelf edge encountered deltaic and shoreline deposits of the Pleistocene low-sea-level stages. Submarine slides and turbidity currents carried sediments down the slope and filled deep synclinal basins between the salt uplifts.