
APPLIED HIGH DEFINITION SEISMIC STRATIGRAPHY: CONTINENTAL SLOPE, NORTHERN GULF OF MEXICO

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ABSTRACT

The sequence stratigraphy encompassing the past half-million years is revealed in detail through interpretation of high definition seismic reflection profiles. Routinely acquired for engineering surveys, high frequency multifold seismic recordings allow analysis of system tract geometries associated with relative changes in sea level and spatial variations in sedimentary sources on the upper slope of the northern Gulf of Mexico. Individual stratigraphic sequences are correlative with fluctuations in sea level based upon oxygen isotope paleotemperature profiles, while the system tract geometries define specific depositional accumulations and environments.

The interpretation of high resolution (HRG) and high definition (HDG) seismic data should greatly assist in the exploration of hydrocarbon reservoirs by providing seismic stratigraphic models for Recent sedimentary deposits and associated depositional environments on the continental slope, northern Gulf of Mexico.

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