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## Regional Compilation of Seismic Stratigraphy and Structure of the Mexican Sector of the Gulf of Mexico

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### ABSTRACT

We have compiled 20,000 km of digital seismic data and several wells over a region of approximately 700,000 km<sup>2</sup> to improve better the correlation of the Mexican sector of the Gulf of Mexico (MGOM) with the better studied and more explored U.S. sector. This grid of regional 2D lines—collected by the University of Texas in the 1970s along with published seismic transects collected by PEMEX—includes seismic lines we have digitized using SEG-Y converter software. Using this combined digital database, we interpreted 20 surfaces ranging in age from Late Jurassic to Recent. Seismic and well data from the eastern and southeastern shelf of Mexico published from PEMEX allow for improved correlation of shelfal units with shelf and deep basinal units of the MGOM now deformed by the Mexican Ridges passive-margin foldbelt. Eastern Mexico margin data show that listric normal growth faults terminate downslope on toe thrusts and folds of the deepwater Mexican Ridges. Ages of units show that the Mexican Ridges initiated in post-Middle Miocene time and postdate the Paleogene Laramide deformational phase. Seismic facies of Late Eocene and Oligocene units show a sequence of clastic materials linked to an earlier uplift and erosional event in central Mexico. We have incorporated a dense seismic grid around the Chicxulub Crater on the Yucatan Platform area and correlated these units that may include possible K-T ejecta reservoir facies within the deepwater sequences in the adjacent MGOM.