



Seismic interpretation of the sedimentation systems, structural geology and stratigraphic of the Chicxulub crater, carbonate platform of Yucatan, Mexico.

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In order to describe the structural and stratigraphic features of the Chicxulub crater, was performed the present work of seismic interpretation, seismic attributes and generation of 3D surfaces.

Load data it was performed in SEG-Y format, to display a total of 19 seismic reflection profiles were worked at domain time; the corresponding interpretation was carried out by separating five packages with textural differences, for this separation were used five horizons with seismic response representing the base of these packages, the correlation of horizons was made for all lines, creating composed lines so that all profiles were interpret together at intersections for form a grid. Multiple fault zones, were interpreted with the help of seismic attributes, like RMS amplitude, complex trace analysis, gradient of the trace and cosine phase.

Was obtained the structural and stratigraphic interpretation , 3D models of the surfaces interpreted with which it is possible to observe the morphology of the base of the basin, it is controlled by the effect of the impact that formed the crater, has the features as a multi-ring crater.

Shallower horizons shows that the topography of the base of the crater continues to affect the upper relief, which tends to be horizontal as it approaches the surface but is modeled by themselves sedimentary processes of the carbonate platform of Yucatán; packages below the base of the crater show the characteristics that own carbonated breccia, product the rupture of the material at impact, the material was deposited in a chaotic way, at this level we found the faults and fractures zone.