

THERMAL EVOLUTION OF THE OFFSHORE SOUTHERN CAMPOS BASIN.

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This work was carried out to better understand the thermal evolution of the Continental Rise and Abyssal Plane areas of the Southern Campos basin, along a regional seismic line, considering the complexities that arise when the salt structural evolution is a major player in the geologic history of an area. We made use of a 2-D geologic modelling package, which allows a realistic reconstruction of the geology and consequently, thermal history, of an area. Gravimetric and Magnetometric data allowed to constrain the amount of stretching and depth to the basement. Well data in the Continental Platform were also used in the study. A uniform McKenzie Model was presumed for the 2-D heat flow history. The salt (Late Aptian) restoration was based on the assumption that salt volume was conserved along the section and that the salt depocenter would be located over the depocenter for the Early Aptian sequence, thinning to a 200m thick salt in the western limit of the cross-section and to zero in the eastern limit. The salt was restored back to previous geologic times by first displacing the mass of the salt domes and finally the regional salt mass. The results show that the salt distribution evolution was the main geological parameter controlling the thermal evolution of the pre-salt sediments. Its impact in the post salt sediments was minor. However the burial history showed an interesting thermal difference between the area under the present day Continental Platform and the one under the Continental Rise and Abyssal Plane.