

SEISMOSTRATIGRAPHIC ANALYSIS OF THE EVAPORITE SECTION OF THE CAMAMU-ALMADA BASIN, BRAZIL

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ABSTRACT: There are several tectono-sedimentary similarities in the evolution of the Brazilian east margin basins, but still some basins are not well studied and commercially explored, such as the Camamu-Almada Basin - especially in deep water areas. It is believed that in these regions, the lateral and vertical movement of the evaporitic rocks may have favored the migration of hydrocarbons, creating preferential flow directions, as well as deforming the overlapping layers, creating diverse structures that propitiate the accumulation of hydrocarbons. The study area corresponds to a polygon located in the center-southern portion of the Camamu-Almada Basin, offshore the State of Bahia, Brazil. The Barra Fault System and the Itapuã Fault System separate it from the Recôncavo Basin on the north and the Olivença High separates it from the Jequitinhonha Basin on the South. This work presents a seismic stratigraphic interpretation focusing on the evaporitic rocks, which have never been studied before in this particular area, relating the main features and structures with sedimentary basins situated in the same geotectonic context, and searching for possible plays. The database used for this study is composed of twelve wells and fifty 2D seismic lines and the methodological approach followed the standard procedure of seismostratigraphic interpretation. The first step was the geophysical interpretation of well logs, followed by seismic interpretation, with seismic-well correlation and analysis of complex trace seismic attributes. The results obtained by the seismostratigraphic analysis formed the base for thematic maps that illustrate the spatial arrangement of evaporite deposits in the study area. The maps illustrate the thickening of the evaporites from the proximal to the distal regions and from the north to the south portion of the study area. In the proximal region, the salts present a maximum thickness of 30 ms. In the distal zone there are areas displaying salt inflation, indicated by expressive structures like domes, canopies and diapirs up to 1200 ms thick. However, even in these areas the presence of mini-basins (suggesting salt deflation) can be detected. As conclusions, confronting the general idea of only minor evaporate deposits in the basins of the northeastern Atlantic margin of Brazil and the aforementioned southward thickening of the evaporite deposits, this research has shown the existence of a significant salt body in the south of the Camamu-Almada basin, which may directly influence new hydrocarbon exploration leads for the basin. According to the seismic interpretation, this deposit is extremely deformed, marking salt deflation and salt inflation zones, directly associated with diapirs and mini-basins respectively. This research also suggests that the salt deformation mentioned may have acted creating two main types of hydrocarbon traps in the study area.

KEYWORDS: SALT INTERPRETATION, SEISMIC STRATIGRAPHY, CAMAMU-ALMADA BASIN.