ABSTRACT

Hydrocarbon reservoir identification research was conducted in the North Sumatra area of the North Sumatra Basin. The North Sumatra Basin has several formations and this research focuses on the Baong Formation and Belumai Formation. To find out the depositional environment and the distribution of facies, a time and depth structure map is needed, so that it can image the state of the earth's subsurface structure. By using the time to depth conversion method $V = V0 = Vint$, the results of the visualization of the depth structure map to determine the potential of hydrocarbons. In the research of depth structure map modeling, obtained from the well seismic tie process and picking horizon or seismic trajectory continuity for 3D seismic interpretation to consider geological structure, amplitude continuity, and seismic polarity. The depth structure map of the Baong formation has a value of (200 - 1800) meters, with the interpretation of oil prospects at a depth of (500 - 750) meters and the actual depth results of the Belumai formation with a depth value of (300 - 1600) meters, with the interpretation of oil prospects at a depth of (2000 - 2400) meters.

Keywords : North Sumatra Basin, Velocity Model, Picking Horizon, Depth Structure Map