ABSTRACT

Research on reservoir distribution analysis using the Acoustic Impedance (AI) method was carried out in the Sunda Basin of the Java Sea. The Acoustic Impedance (AI) seismic reflection method is one of the seismic reflection techniques used to identify rock layers with hydrocarbon potential, determine lithology types, measure porosity, and map lithology in reservoir areas. The Sunda Basin itself has several diverse formations, but in this study, the main focus of the formation is on the Baturaja Formation to describe the analysis of the distribution of reservoirs beneath surface earth. Seismic data is used as input and well data is used as control to generate an acoustic impedance model that can identify the lithology of the formation. There are three lithologies obtained from this study, namely sandstone, claystone, and carbonate rock. Based on seismic inversion analysis, the impedance value obtained from sandstone is in the range of 3754-9216 ((m/s)(g/cc)). The acoustic impedance value obtained from clay rock (shale) is in the range of 9713-12196 ((m/s)*(g/cc)). The results of this research can provide an overview of the quality of reservoirs in the research area, as well as the potential of hydrocarbons contained in them.*

Keywords: ***Acoustic Impedance, Sunda Basin, Baturaja Formation, Seismic Inversion***