ABSTRACT

CHARACTERIZATION OF CARBONAT RESERVOIR WITH INVERSION METHOD OF ACOUSTIC IMPEDANCE (AI) IN THE FIELD “TA” NGRAYONG AND BULU FORMATIONS EAST JAVA BASINS

By
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Acoustic Impedance inversion method is a geophysical method that is used to find out the lithologi rocks on the specific areas below the surface of the earth. Research done on formation of Ngrayong and formation of Bulu, the field “TA”, the East Java Basins in domination by the presence of carbonate. Analysis petrofisika parameters (porosity, p-wave, and density) are approached with AI will facilitate interpretation. Acoustic Impedance inversion in general will give an overview of geology of the subsurface is more detail than conventional seismic. The research of modeling method using Model Based inversion with seismic data 2D post stack with fitted data logging measurement results directly in the field as well as the results of such a derivative of gamma ray log, density log, neutron porosity log (NPHI), resistivity log, p-wave log, SP log, p-impedance, data marker, information along with area. Crossplot analysis result has been done can be seen that there is tendency of the research on the area of carbonate reservoir with inset shale and sand. Based on the results of acoustic impedance inversion can be seen that the carbonate reservoir rock has value of AI 6299–7735 ((m/s)*(gr/cm³)) while in the well of ADE-1 on the formation of Bulu has a value of AI 27027–34935 ((ft/s)*(gr/cm³)).

Keyword : Acoustic Impedance, Wavelet, Marker, Reservoir characterization, carbonat, Technique inversion