

**CARBONATE RESERVOIR ANALYSIS  
IN SALAWATI BASIN, MARE FIELD, KAIS FORMATION  
USING SEISMIC AI INVERSION BASED MODEL AND  
SPECTRAL DECOMPOSITION**

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**ABSTRACT**

*Kais Formation is one of the reservoir rock in Salawati Basin. The purpose of this research was to determine the boundaries of the reef, determine the spread of the acoustic impedance values and determine areas of hydrocarbon prospects in Mare Field, Kais Formation.*

*Spectral decomposition has used in this research to view distribution of reservoir rocks boundaries. Using this frequency from seismic wave through to the reservoir rocks. Distribution of reservoir rocks can be viewed. For the next step, acoustic impedance seismic inversion analysis has used to get some information about porosity and presence of fluid from reservoir.*

*Limestone boundary with circle viewed after the processing data. Result of analysis was the AI distribution value from NW – SE which was reservoir AI value about 20,000 – 30,000 (ft/s)\*(g/cc). Both of the body reef show that the prospect as a hidrocarbon field was the reef located on the north east because have the lower AI value.*

**Key words :** *Kais Formation, acoustic impedance, Spectral Decomposition.*