

## ABSTRACT

### SAND RESERVOIR CHARACTERIZATION USING SEISMIC ATTRIBUTES AND LOG INTERPRETATION INFIELD "T", SOUTHERN SUB-BASIN, EAST JAVABASIN

By

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Amplitude and frequency are the seismic signal that is commonly used to obtain reservoir information. RMS amplitude is the root of the amount of energy in the time domain or simply, the average of amplitude. RMS amplitude is very sensitive to extreme value and may also be useful for tracking changes in lithology and spreading horizontally. Instantaneous frequency gives information about seismic waves that make frequency changes, for example absorption effect, fractures and thickness of deposition system. Attenuation of seismic waves, when passing through the gas reservoir can be detected as a decrease of frequency. Interpretation of log data used to know reservoir vertically characterization. In the Field "T", there are three wells with gamma ray, LLD, NPHI, and RHOB log data.

Based on interpretation of log data, it is known that the reservoir zone is permeable zones, based on the low value of gamma rays. Separation existence between the density-neutron log and resistivity values more than 100 ( $\mu\text{s}/\text{f}$ ) on T1 indicates gas content, T2 has resistivity value 20-100 ( $\mu\text{s}/\text{f}$ ) indicate the presence of oil, and T3 has resistivity values more than 100 ( $\mu\text{s}/\text{f}$ ) indicate the presence of gas. Distribution of high RMS amplitude anomalies in the study area leads from the Northeast to the Southwest with value 0,4-0,7, and low frequencies value, 0-15 Hz.

Keywords: seismic attributes, RMS amplitude, instantaneous frequency, log interpretation, reservoir