

ABSTRACT

ANALYSIS ACOUSTIC IMPEDANCE INVERSION (AI) AND ELASTIC IMPEDANCE INVERSION (EI) FOR IDENTIFICATION RESERVOIR SANDSTONES AND HYDROCARBON FLUID IN TALANGAKAR FORMATION, “R” FIELD, NORTH WEST JAVA BASIN

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“R” Field is one of the potential hydrocarbon field which produces from sandstones reservoir of Talangakar Formation in North West Java Basin. Acoustic impedance and elastic impedance used to identify distribution of lithology and fluid in layer Z.2260 Talangakar Formation.

Elastic Impedance can determine the presence of hydrocarbon fluid because using S wave parameters, while Acoustic Impedance is effective for identification of lithology because using P wave parameters. Processing of Acoustic Impedance and Elastic Impedance using Sparse Spike methods.

This study using Inversion Acoustic Impedance, Inversion Elastic Impedance near stack, Inversion Elastic Impedance far stack. Analytical result of Acoustic Impedance mapping show that the sandstone lithology of the target zone has an value 8200 – 11400 ((m/s). (gr/cc)). Sandstone spreading area in Z.2260 layer reservoir is oriented to Northwest-Southeast direction. Partial stack is divided into a Elastic Impedance near stack angle of 0⁰-13⁰ and Elastic Impedance far stack angle of 14⁰-27⁰. Integration time structure map, Acoustic Impedance slice map and Elastic Impedance slice maps obtain 2 zone hydrocarbon prospects.

Keywords : Talangakar Formation, Seismic Inversion, Acoustic Impedance, Elastic Impedance