ABSTRAK

KARAKTERISASI ZONA PENYEBARAN RESERVOAR BATUPASIR FORMASI GUMAI MENGGUNAKAN ANALISA INVERSI AKUSTIK IMPEDANSI MODEL BASED, LAPANGAN "CENDANA", SUB CEKUNGAN JAMBI

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Telahdilakukanpenelitianpadalapangan "Cendana" yang merupakansalahsatulapangan yang dikelolaoleh PT.PERTAMINA EP. UBEP JAMBI.Penelitianinidilakukanuntukmengetahuikarakterisasireservoarbatupasirpa daFormasiGumai , sub Cekungan Jambi dengan menggunakan analisa inversi *model based.* Data yang digunakan data *seismic post- stack* 3D, satu buah sumur ARS01, dan data marker. *Horizon* yang digunakan yaitu *horizon* YE10, YE11 dan YE12. Seismikinversiakustikimpedansi (AI) *model based*diperolehdenganmelakukan proses ekstraksi *wavelet* yang kemudian melakukan *well seismic tie*, selanjutnya melakukan *picking horizon* dan *picking fault* di sekitar sumur penelitian kemudian dilanjutkan membuat model awal. Model awal kemudian dilakukan analisa pra-inversi dan dilakukan *seismic* inversi. Hasil inversi AI di*slice* pada masing-masing *horizon* untuk mendapatkan penyebaran nilai akusik impedansi dan porositas di sekitar sumur pada lapangan "Cendana". Berdasarkan hasil analisa pada masing-masing *horizon* diperoleh dua reservoar, yaitu reservoar A pada *horizon* YE10 diperoleh nilai akustik impedansi 6918 - 8510 (m/s)*(g/cc) danporositas 21,46-20,72 PU, reservoar B pada*horizon*YE11dan YE-12 nilaiakustikimpedansi 7980 - 9837 (m/s)*(g/cc) danporositasberkisar 20,76 – 19,38 PU.Sehingga untuk persebaran reservoar relatifberarahtimurlaut – baratdaya, beradapada daerahtinggianantiklindanberada di sekitarsesar.

Kata kunci : Reservoar, AkustikImpedansi, Porositas

ABSTRACT

CHARACTERIZATIONDISTRIBUTION ZONE SANDSTONE RESERVOIR GUMAI FORMATION USED ANALYSIS OF ACOUSTIC IMPEDANCE MODEL BASED, "CENDANA"FIELD , JAMBI SUB BASIN

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It has been studied in the "Cendana" field is one of the fields operated by PT. Pertamina EP UBEP JAMBI. The study was conducted to characterize the GumaiFormation sandstone reservoir by using acoustic impedance inversion analysis model based.This research uses seismic data 3D Post-Stack, 1 exploration well ARS01, and marker data. The horizon which use in the research was horizon YE10, horizon YE11 and horizon YE12. Seismic inversion of acoustic impedance (AI) model based obtained by wavelet extraction process and perform well seismic tie and then picking horizon and picking fault around the well of research and then to make the initial modeling. Early models later in the analysis of pre - inversion and seismic inversion AI performed using a model-based inversionThe result of AI inversion was slice on horizon at Gumai Formation to distribution on the value of acoustic impedance (AI) and porosity around the well at "Cendana" field. Based on the analysis of each reservoir horizons get 2 reservoir. Distribution value of acoustic impedance (AI) in the reservoir A in the horizon YE10 acoustic impedansi 6918 - 8510 (m/s)(g/cc) with a porosity of21,46-20,72 PU, reservoir B in horizon YE11 and YE12acoustic impedansi7980 - 9837 (m/s)*(g/cc) with a porosity of20,76 –19,38 and to distribution the reservoir relative northeast - southwest, in anticline area and around the fault.*

Keywords: Reservoar Analysis, Acoustic Impedance (AI), Porosity