

Karakterisasi reservoir migas lapangan Boonsville menggunakan kombinasi inversi seismik dan geostatistik = Characterization of Boonsville oil and gas field reservoir using combination of seismic inversion and geostatistic method

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Abstrak

Karakterisasi Reservoir pada Lapangan Migas ?Boonsville? telah dilakukan menggunakan metode inversi seismik dan metode geostatistik. Kedua teknik tersebut saling melengkapi dimana metode inversi seismik mengacu pada data seismik sedangkan metode geostatistik mengacu pada data sumur. Dengan mengintegrasikan konsep inversi seismik dan geostatistik dapat dipetakan distribusi reservoir secara lateral. Pada studi ini, teknik inversi seismik yang digunakan adalah teknik inversi "Model Based" sedangkan teknik geostatistik yang digunakan adalah teknik "Kriging" dan "Co-Kriging". Teknik integrasi ini diaplikasikan pada data seismik 3D yang memiliki cakupan 133 inline (74 - 206), dan 97 xline (105 - 201). Data sumur yang digunakan adalah tujuh sumur yang memiliki log densitas dan log sonic. Hasil integrasi kedua teknik tersebut memperlihatkan pola persebaran reservoir dengan trend berarah dari barat daya ke timur laut.

Reservoir characterization of ?Boonsville? Oil and Gas field has been carried out using seismic inversion and geostatistic method. These methods are completing each other, in which seismic inversion method is referring to seismic data, while geostatistic method is referring to well data. By integrating both seismic inversion and geostatistic methods, lateral reservoir distribution map could be generated.

In this study, the seismic inversion is performed by using "Model Based" inversion algorithm, while the geostatistic is carried out by using "Kriging" and "Co- Kriging" technique. This integrating technique is applied to 3D seismic data, which consists of 133 inline (74 - 206), and 97 xline (105 - 201). The well data set consists of seven wells, which is completed by sonic and density log. The result of both methods are showing reservoir distribution trend on south-west to north-east direction.