Deteksi patahan menggunakan atribut ant tracking pada studi kasus lapangan gulf of mexico = Fault detection using ant tracking attribut on case study gulf of mexico area

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Abstrak

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Telah dilakukan penelitian untuk mendeteksi sebuah patahan dengan metode Ant-tracking, penelitian ini dilakukan karena identifikasi sebuah patahan bukanlah perkara yang mudah. Pada penelitian ini data yang diolah dan dimodelkan adalah data dari lapangan Gulf of Mexico. Dipilihnya metode attribut ant-tracking karena telah terbukti dapat memudahkan dalam menganalisa sebuah patahan. Sebelum proses Ant-tracking dilakukan terlebih dahulu dilakukan proses Seismic Conditioning dengan Structural Smoothing agar diperoleh data yang baik serta untuk mereduksi noise-noise yang tidak diinginkan. Hasil penelitian menunjukkan segmentasi patahan yaitu patahan mayor sejumlah dua buah serta delapan patahan minor. Patahan ini dapat terjadi juga terkait dengan struktur pada lapangan Gulf of Mexico yang merupakan endapan dari kumpulan lapisan terrigenous miring yang menebal ke arah teluk. Struktur yang diciptakan oleh sejarah panjang tektonik gravitasi (sesar tumbuh) yang saling berpengaruh terhadap endapan garam dan batulumpur overpressured. Perkembangan luas dari endapan - endapan overpressured meningkatkan produktivitas dari potensi reservoir.
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ABSTRACT
The study has been to detect a fault with ant-tracking method. This research conducted to identify a fault is not an easy matter. This research data is processed and modeled from the Gulf of Mexico field data. Ant-tracking attribute method was chosen because it has proven to be easier to analyze a fault. Before the ant-tracking implemented, seismic conditioning process with structural smoothing applied first, in order to obtain good data as well as to reduce unwanted noises. The reseach show fault segmentation results, two major faults and eight minor faults. This fault can also occur related to the subsurface structure Gulf of Mexico which is a collection of layers of terrigenous sediment thickened tilted the bay. Structure created by a long history of tectonic gravity (growth faults) that affect the salt domes and the overpressured shale. Comprehensive development of overpressured sediments increases the productivity of the reservoir potential, The study has been to detect a fault with ant-tracking method. This research conducted to identify a fault is not an easy matter. This research data is processed and modeled from the Gulf of Mexico field data. Ant-tracking attribute method was chosen because it has proven to be easier to analyze a fault. Before the ant-tracking implemented, seismic conditioning process with structural smoothing applied first, in order to obtain good data as well as to reduce unwanted noises. The reseach show fault segmentation results, two major faults and eight minor faults. This fault can also occur related to the subsurface structure Gulf of Mexico which is a collection of layers of terrigenous sediment thickened tilted the bay. Structure created by a long history of tectonic gravity (growth faults) that affect the salt domes and the overpressured shale. Comprehensive development of overpressured sediments increases the productivity of the reservoir potential]