

Aplikasi atribut seismik dan sifat fisik batuan untuk pemodelan reservoir a pada formasi ledok di lapangan x blok cepu = applied seismic attributes and rock property for modeling reservoir a at ledok formation in field x block CEPU

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Abstrak

[ABSTRAK

Aplikasi atribut seismik 3D dan sifat fisik batuan telah dapat memodelkan reservoir A Formasi Ledok Lapangan X Blok Cepu. Beberapa atribut seismik yang sesuai untuk mengidentifikasi penyebaran reservoir dilapangan ini adalah root mean square (rms), sweetness, dan impedansi akustik relatif. Dimana ketiga atribut seismik tersebut memperlihatkan suatu anomali amplitudo berupa bright spot yang diidentifikasi sebagai reservoir A dan memperlihatkan pola penyebaran berarah selatan-utara. Fasies reservoir A yang merupakan batugamping pasiran adalah reservoir yang sangat baik dalam menyimpan hidrokarbon gas dengan porositas 19% dan saturasi air sebesar 40%. Adanya faktor ketidakpastian dalam penentuan batas penyebaran reservoir A dari atribut seismik, model reservoir A di bagi menjadi tiga bagian yaitu perkiraan optimis (P90), perkiraan sedang (P50) dan perkiraan pesimis (P10). Keberadaan hidrokarbon gas di Lapangan X dikontrol oleh suatu perangkap stratigrafi bukan perangkap struktur hal ini terlihat dari tidak adanya tutupan (klosur). Berdasarkan sebaran reservoir melalui integrasi atribut seismik, properti batuan dan model reservoir diusulkan 4 (empat) sumur pemboran untuk mengembangkan lapangan gas X.

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ABSTRACT

Application of 3D seismic attributes and physical properties of reservoir rocks have been to model the formation Ledok A Field X Cepu Block. The seismic attributes, which can be used to identify distribution of the reservoir in this field were the root mean square (rms), sweetness, and relative acoustic impedance. The attributes of the seismic amplitude anomaly shows a bright spot in the form identified as reservoirs A and show the pattern of northsouth trending deployment. A reservoir facies which is a sandy limestone reservoir was very good at keeping a hydrocarbon gas with 19% porosity and water saturation of 40%. The existence of uncertainty in the determination of reservoir distribution limit of seismic attributes. A reservoir model was divided into three parts, optimistic estimate (P90), moderate estimate (P50) and pesimistic estimate (P10). The existence of hydrocarbon gases in field X in was control by a stratigraphic traps compared to traps structure as seen from the absence of cover (closur). Based on integration of seismic attributes, rock properties and reservoir model proposed four (4) wells drilling to develop the gas field X.;Application of 3D seismic attributes and physical properties of reservoir rocks have been to model the formation Ledok A Field X Cepu Block. The seismic attributes, which can be used

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