

ABSTRAK

ANALISA RESERVOAR HIDROKARBON FORMASI TABALAR LAPANGAN “RKD” SUB-CEKUNGAN BERAU CEKUNGAN TARAKAN MENGGUNAKAN DATA SEISMIK 2D DENGAN METODE INVERSI *ACOUSTIC IMPEDANCE*

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Daerah penelitian terletak di Lapangan “RKD”, terletak pada Formasi Tabalar, Sub Cekungan Berau, Cekungan Tarakan mempunyai reservoir berupa batugamping. Tujuan penelitian adalah untuk menganalisa batuan reservoir pada Lapangan “RKD” tersebut.

Analisa menggunakan Seismik Inversi diharapkan memberikan informasi karakteristik reservoir yang terdapat pada Formasi Tabalar. Salah satu metode Seismik Inversi Akustik Impedansi yaitu *sparse spike*. Metode ini baik digunakan pada daerah yang memiliki keterbatasan data sumur. Metode ini sesuai digunakan pada lapangan “RKD” yang hanya menggunakan satu sumur.

Hasil yang ditunjukkan pada analisa crossplot AI vs Gamma Ray dengan *color keys* Resistivitas pada sumur well_12 dianggap sensitif. Dari hasil crossplot tersebut dihasilkan dua zona, yaitu zona *low impedance* dan *high impedance* dengan range nilai *p-impedance* sebesar 33500 ((ft/s)*(g/cc)) – 54000 ((ft/s)*(g/cc)). Zona reservoir diindikasikan dengan *high impedance*, dengan nilai *p-impedance* > 41.500 ((ft/s)*(g/cc)). Keberadaan zona reservoir terletak pada dua zona, zona pertama terletak pada sekitaran Well_12 dan zona kedua berada disebelah barat laut dari zona pertama. Persebaran reservoir bersifat setempat- setempat dikarenakan adanya sesar yang diindikasikan sebagai perangkap.

Kata kunci : Formasi Tabalar, Sub Cekungan Berau, Cekungan Tarakan, Reservoir, Akustik Impedansi, *Sparse Spike*.

ABSTRACT

ANALYSIS HYDROCARBONS RESERVOIR TABALAR FORMATION “RKD” FIELD BERAU SUB BASIN TARAKAN FORMATION USING 2D SEISMIC DATA WITH ACOUSTIC IMPEDANCE INVERSION METHOD

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Research area is located in “RKD” Field of Tabalar Formation, Berau Sub Basin, Tarakan Basin has reservoir be in the form of limestone rock. The purpose of the study was to analysis the reservoir rock in the "RKD" Field.

Analysis of Seismic Inversion is expected to provide information of reservoir characterization in Tabalar Formation. One method of Seismic Acoustic Impedance Inversion is sparse spike. This method is best used in areas that have limited well data. This method is suitable for use in the "RKD" field who only uses one well.

The results of the analysis are shown in crossplot AI vs Gamma Ray with color keys resistivity in well_12 is considered sensitive. From the results of are produced two zone, that are low impedance zone and high impedance zone with the range p-impedance value are 33500 ((ft/s)*(g/cc)) – 54000 ((ft/s)*(g/cc)). Reservoir zone are indicated by the high impedance 41.500 ((ft/s)*(g/cc)). The existence of reservoir zone are lies in two zones, the first zone is located around Well_12 and the second zone is located in the northwest of the first zone. Distribution of reservoir there are locally because of the fault are indicated as a trap.

Keywords : Tabalar Formation, Berau Sub Basin, Reservoir, Tarakan Basin, Reservoir, Acoustic Impedance, Sparse Spike