

## ABSTRAK

Cekungan Sumatra Selatan merupakan peringkat kedua untuk produksi hidrokarbon di Indonesia setelah Cekungan Kutai dihitung dari total produksinya (Syamsuddin, *et al.*, 2009). Cekungan Sumatra Selatan tersusun atas beberapa formasi, salah satunya adalah Formasi Air Benakat. Formasi Air Benakat dicirikan dengan litologi berupa batuan sedimen klastik yakni batupasir yang merupakan batuan reservoir. Salah satu upaya untuk mengetahui persebaran batupasir yang memiliki peran sebagai batuan reservoir adalah perlu adanya analisis bawah permukaan untuk mengkaji kembali fasies dan lingkungan pengendapan yang berkembang.

Dalam penelitian ini, terdapat tiga metode yang digunakan. Secara garis besar metode tersebut tersebut antara lain analisis sumuran kualitatif menggunakan data *core*, data *mudlog* dan *wireline log*, kemudian analisis integrasi data sumur dan seismik 2D, serta melakukan persebaran fasies batuan reservoir secara dua dimensi.

Terdapat tiga litologi yang diidentifikasi menggunakan data *wireline log*, *mudlog*, dan data *core* yaitu berupa batupasir, serpih, dan batubara. Fasies lingkungan pengendapan pada daerah penelitian diidentifikasi masuk kedalam fasies *distributary channel*, *interdistributary bays*, dan *creavasse splay* yang termasuk kedalam lingkungan pengendapan *lower delta plain* yang sudah dipengaruhi oleh proses pasang surut. Terdapat tiga batas marker pada daerah penelitian yaitu *sequence boundary*, *transgressive surface*, dan *maximum flooding surface*. Berdasarkan hasil interpretasi pada daerah penelitian arah pengendapan material sedimen relatif barat laut – tenggara. Terdapat tiga zona reservoir batupasir yang diinterpretasikan diendapkan pada fasies *distributary channel*.

**Kata Kunci :** Cekungan Sumatra Selatan, *Distributary Channel*, Fasies ,Formasi Air Benakat, *Lower Delta Plain*

## **ABSTRACT**

*The South Sumatra Basin is ranked second for hydrocarbon production in Indonesia after the Kutai Basin, calculated from its total production (Syamsuddin, et al., 2009). The South Sumatra Basin is composed of several formations, one of which is the Air Benakat Formation. The Air Benakat Formation is characterized by lithology in the form of clastic sedimentary rock, namely sandstone, which is a reservoir rock. One effort to determine the distribution of sandstone which has a role as reservoir rock is the need for subsurface analysis to review the facies and depositional environment that developed.*

*In this research, three methods were used. In general, these methods include qualitative well analysis using core data, mudlog and wireline log data, then integrated analysis of well and 2D seismic data, as well as carrying out the distribution of reservoir rock facies in two dimensions.*

*There are three lithologies identified using wireline log, mudlog and core data, namely sandstone, shale and coal. The depositional environmental facies in the study area were identified as belonging to the distributary channel, interdistributary bays, and crevasse splay facies which are included in the lower delta plain depositional environment which has been influenced by tidal processes. There are three marker boundaries in the research area, namely sequence boundary, transgressive surface, and maximum flooding surface. Based on the interpretation results in the research area, the direction of deposition of sedimentary material is relatively northwest - southeast. There are three sandstone reservoir zones which are interpreted to be deposited in the distributary channel facies.*

**Keywords:** *South Sumatra Basin, Distributary Channel, Facies, Air Benakat Formation, Lower Delta Plain*