

ABSTRAK

PENGARUH TEKTONIK LOKAL DAN *EUSTASY* TERHADAP RUANG AKOMODASI PADA INTERVAL TERSIER, AREA PENDOPO – TEBING, CEKUNGAN SUMATERA SELATAN

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Lokasi penelitian berada di area Tebing – Pendopo yang termasuk dalam Cekungan Sumatra Selatan (SSB). Cekungan ini merupakan salah satu *basin* produktif yang terbentuk dari interaksi lempeng eurasia dan lempeng australia pada pra-tercier hingga terciar yang sudah memproduksi lebih dari 100 lapangan minyak dan gas bumi. Pemahaman tentang tektonik dibutuhkan untuk keperluan eksplorasi dalam menentukan potensi *petroleum system*. Tujuan dari penelitian yaitu untuk identifikasi tektonostratigrafi dan *petroleum system* daerah penelitian menggunakan metode *well comparison* yang menghubungkan *subsidence* dengan data *eustasy* (Haq et.al, 1987) dan didukung data biostratigrafi, data *mudlog*, data *wireline log* dan data petrografi. Penelitian dilakukan menggunakan 2 sumur. Dari hasil analisis menunjukkan lingkungan pengendapan di daerah Tebing – Pendopo yaitu *supralittoral-littoral*, *Inner Sublittoral*, *middle Sublittoral*, delta, *littoral – Outer Neritic*, *middle neritic – outer neritic*, dan *middle neritic – upper bathyal*. Hasil analisis *Tectono-eustatic* menunjukkan, ruang akomodasi pada cekungan Sumatra Selatan dipengaruhi oleh kombinasi antara penurunan muka laut global (*eustasy*) dan *subsidence*. Pada interval Oligosen – Miosen terjadi fase transgresif dengan puncak pada Miosen awal. Kemudian terjadi *sea level drop* yang diiringi dengan *rapid deposition* (fase regresif) sehingga menghasilkan sikuen progradasi. Sistem *petroleum* pada daerah penelitian yaitu *Reservoir* berada pada Formasi Talangakar dan Formasi Baturaja, serta *Seal Rock* berada di Formasi Gumai.

Kata kunci: Analisis Tektono-Eustatic, Cekungan Sumatra Selatan, Sikuen Stratigrafi

ABSTRACT

THE IMPACT OF LOCAL TECTONICS AND EUSTASY TO ACCOMODATION SPACE TERTIARY INTERVAL, TEBING – PENDOPO AREA, SOUTH SUMATRA BASIN

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The study area is located in the Tebing–Pendopo region within the South Sumatra Basin (SSB). This basin is one of the most productive hydrocarbon basins in Indonesia, formed as a result of the interaction between the Eurasian Plate and the Indo-Australian Plate from the Pre-Tertiary to the Tertiary, and has produced more than 100 oil and gas fields to date. A comprehensive understanding of tectonics is essential in hydrocarbon exploration to evaluate the potential of the petroleum system. The objective of this study is to identify the tectonostratigraphy and petroleum system of the research area using a well comparison method that integrates basin subsidence analysis with the global eustatic sea-level curve of Haq et al. (1987), supported by biostratigraphic data, mudlog data and petrographic data. The analysis is based on two wells. The results indicate that the depositional environments in the Tebing–Pendopo area range from supralittoral–littoral, inner sublittoral, middle sublittoral, deltaic, littoral–outer neritic, middle neritic–outer neritic, to middle neritic–upper bathyal settings. Tectono-eustatic analysis shows that accommodation space in the South Sumatra Basin was controlled by the combined influence of global sea-level fluctuations (eustasy) and basin subsidence. During the Oligocene–Early Miocene, a transgressive phase occurred, reaching its maximum in the Early Miocene. This was followed by a sea-level fall accompanied by rapid sedimentation during a regressive phase, resulting in progradational sequences. The petroleum system in the study area consists of source rocks in the Lahat Formation, reservoirs within the Talang Akar and Baturaja Formations, and seal rocks provided by the Gumai Formation.

Keywords: *Tectono-eustatic Analysis, South Sumatra Basin, Sequence Stratigraphy*