SARI

Lapangan 'Merah' merupakan salah satu lapangan minyak dan gas bumi yang berada di Cekungan Sumatra Tengah. Penelitian ini dilakukan pada interval Batupasir 'A' dan 'B' pada Formasi Bekasap yang merupakan zona reservoar di Lapangan 'Merah'. Tujuan penelitian ini adalah untuk menentukan fasies dan lingkungan pengendapan, serta mendapatkan penyebaran fasies Batupasir 'A' dan 'B', Formasi Bekasap. Data yang digunakan dalam penelitian ini, meliputi data log sumur dari sembilan sumur, data batuan inti dari satu sumur, dan data biostratigrafi. Dalam penelitian ini dilakukan analisis, meliputi analisis litofasies, asosiasi fasies, lingkungan pengendapan, elektrofasies, stratigrafi sikuen, serta korelasi stratigrafi sikuen dan pembuatan peta *isochore* penyebaran fasies. Berdasarkan analisis litofasies diperoleh sembilan litofasies dan dua asosiasi fasies pengendapan yakni *sand flat* dan *mud flat*. Berdasarkan analisis elektrofasies diperoleh tiga asosiasi fasies yaitu *tidal sand bar, sand flat,* dan *mud flat*. Lingkungan pengendapan Batupasir 'A' dan 'B' diinterpretasikan pada lingkungan estuarin dominasi pasang surut. Level parasikuen set dari interval penelitian diinterpretasikan berada dalam lingkungan sistem transgresif, dengan Batupasir 'A' dan 'B' dibagi menjadi dua parasikuen, yaitu FS-1 dan FS-2. Distribusi FS-1 terdiri dari fasies *tidal sand bar* dan *mud flat*. Fasies *tidal sand bar* menunjukkan penebalan ke arah barat daya. Distribusi FS-2 terdiri dari fasies *sand flat* dan *mud flat*. Fasies *sand flat* menunjukkan penebalan ke arah utara. Berdasarkan distribusi dari FS-1 dan FS-2, arah pengendapan dari Batupasir 'A' dan 'B' menunjukkan tren dari timur laut ke barat daya, dengan arah ke cekungan menuju barat daya.

Kata Kunci: fasies, lingkungan pengendapan, penyebaran batupasir, Formasi Bekasap, Cekungan Sumatera Tengah

ABSTRACT

'Merah' field is one of the oil and gas fields in the Central Sumatra Basin. This research was carried out in the 'A' and 'B' Sand intervals in the Bekasap Formation which is a reservoir zone in the 'Merah' Field. The aim of this research is to determine the facies and depositional environment, as well as to obtain the facies distribution of the 'A' and 'B' Sand, Bekasap Formation. The data used in this research includes well log data from nine well, core data from one well, and biostratigraphic data. In this research, analysis was carried out, including analysis of lithofacies, facies associations, depositional environment, electrofacies, sequence stratigraphy, as well as sequence stratigraphy correlation and creating isochore maps of facies distribution. Based on lithofacies analysis, nine lithofacies and two depositional facies associations were obtained, namely sand flat and mud flat. Based on electrofacies analysis, three facies associations were obtained, namely tidal sand bar, sand flat, and mud flat. The depositional environment of 'A' and 'B' Sand is interpreted as a tide-dominated estuarine environment. The level of the parasequence set from the research interval is interpreted to be in a transgressive system environment, with 'A' and 'B' Sand divided into two parasequences, namely FS-1 and FS-2. The FS-1 distribution consists of tidal sand bar and mud flat facies. The tidal sand bar facies shows thickening towards the southwest. The FS-2 distribution consists of sand flat and mud flat facies. The sand flat facies shows thickening towards the north. Based on the distribution of FS-1 and FS-2, the deposition direction of 'A' and 'B' Sand shows a trend from northeast to southwest, with a direction in the basin towards the southwest.

Keywords*: facies, depositional environment, sandstone distribution, Bekasap Formation, Central Sumatra Basin*