



Lapangan 'Geram' berada di Cekungan Sumatra Tengah yang merupakan salah satu cekungan penghasil hidrokarbon terbesar di Indonesia. Penelitian ini difokuskan pada Parasikuen 'P' dan 'Q' Formasi Bekasap yang sebelumnya belum banyak diteliti, dengan tujuan untuk menentukan fasies, lingkungan pengendapan, serta penyebarannya menggunakan pendekatan sikuen stratigrafi. Data yang digunakan terdiri atas 28 data log sumur, 3 data batuan inti dengan panjang total 138,7 ft, serta peta struktur bawah permukaan. Metode analisis meliputi litofasies, elektrofases, interpretasi lingkungan pengendapan, analisis sikuen stratigrafi, korelasi sumur, pembuatan peta *isochore*, dan rekonstruksi lingkungan pengendapan. Hasil penelitian menunjukkan tiga asosiasi fasies utama, yaitu *mud flat*, *tidal channel*, dan *tidal sand bar* yang didukung oleh keberadaan bioturbasi *Planolites*, *Thalassinoides*, dan *Skolithos*. Lingkungan pengendapan Parasikuen 'P' dan 'Q' diinterpretasikan sebagai estuarin dominasi pasang surut dalam sistem transgresif. Penyebaran fasies Parasikuen 'P' meliputi *mud flat* di timur laut dan barat laut, *tidal channel* serta *tidal sand bar* dengan orientasi timur laut–barat daya. Sementara itu, fasies Parasikuen 'Q' terdiri atas *mud flat* di timur laut dan barat laut, *tidal channel* di timur laut–tenggara, serta *tidal sand bar* di barat laut–barat daya. Secara umum, arah pengendapan kedua parasikuen menunjukkan tren dari timur laut ke barat daya.

Kata kunci: Lapangan 'Geram', Cekungan Sumatra Tengah, Parasikuen 'P' dan 'Q', Formasi Bekasap, fasies



The 'Geram' Field is located in the Central Sumatra Basin, which is one of the largest hydrocarbon-producing basins in Indonesia. This study focuses on Parasequences 'P' and 'Q' of the Bekasap Formation, which have not been extensively studied, with the objective of identifying facies, depositional environments, and their distribution using a sequence stratigraphic approach. The dataset consists of 28 well logs, 3 core samples with a total length of 138.7 ft, and a subsurface structural map. The analytical methods applied include lithofacies analysis, electrofacies analysis, depositional environment interpretation, sequence stratigraphy analysis, well correlation, isochore mapping, and depositional environment reconstruction. The results indicate three main facies associations, namely mud flat, tidal channel, and tidal sand bar, supported by the presence of bioturbation structures such as Planolites, Thalassinoides, and Skolithos. The depositional environment of Parasequences 'P' and 'Q' is interpreted as a tide-dominated estuary within a transgressive system. The facies distribution of Parasequence 'P' consists of mud flat in the northeast and northwest, with tidal channel and tidal sand bar oriented northeast–southwest. In contrast, the facies distribution of Parasequence 'Q' includes mud flat in the northeast and northwest, tidal channel in the northeast and southeast, and tidal sand bar in the northwest and southwest. Overall, the depositional trend of both parasequences shows a northeast to southwest orientation.

Keywords: 'Geram' Field, Central Sumatra Basin, Parasequences 'P' and 'Q', Bekasap Formation, facies