

## SARI

Lapangan “MFS”, yang berlokasi di Blok Jabung, Sub-Cekungan Jambi, Cekungan Sumatera Selatan, merupakan salah satu lapangan migas yang dioperasikan PetroChina International Jabung Ltd., dengan salah satu target eksplorasi pada Formasi Talang Akar. Pengembangan studi lapangan pada Formasi Talang Akar yang umur Miosen Awal penting dilakukan dengan analisis sikuen stratigrafi guna memberikan gambaran persebaran asosiasi litofasies serta lingkungan pengendapan secara vertikal maupun lateral. Oleh sebab itu, penelitian ini bertujuan untuk menentukan fasies, lingkungan pengendapan dan sikuen stratigrafi yang berkembang di interval penelitian serta mengetahui persebaran interval Batupasir O di Formasi Talang Akar Lapangan “MFS”. Pendekatan sikuen stratigrafi digunakan dalam penelitian ini dengan integrasi data seismik 3D, *well log*, data *core*, data petrografi *core*, data paleontologi, dan data *mudlog*. Penelitian dimulai dengan analisis fasies dan lingkungan pengendapan. Secara umum, fasies yang terbentuk di daerah penelitian berupa fasies batupasir konglomeratan dengan sisipan batulempung, fasies perselingan batupasir dan batulempung dengan sisipan batubara menghalus ke atas, fasies batupasir sisipan batulempung mengkasar ke atas, fasies perselingan batupasir batulempung menghalus ke atas, fasies batulempung sisipan batupasir agradasi, fasies batulempung sisipan batupasir mengkasar ke atas, fasies batupasir menghalus ke atas dengan asosiasi fasies berupa *fluvial channel*, *delta plain*, *delta front*, *distributary channel*, *prodelta*, dan *distributary mouthbar* pada lingkungan pengendapan sungai hingga delta. Sikuen stratigrafi yang berkembang di Lapangan “MFS” tersusun atas tiga sikuen, dua belas parasikuen, tiga batas sikuen, serta tiga bidang genang air maksimal. Penelitian dilanjutkan dengan penentuan sebaran Batupasir O Formasi Talang Akar. Secara umum, Batupasir O Formasi Talang Akar dibatasi oleh SB 2 di bagian bawah dan MFS 2 di bagian atas, pada *transgressive system tract* serta lingkungan pengendapan *distributary mouthbar*. Persebaran lateral Batupasir O Formasi Talang Akar tersebar merata dengan ketebalan 6-60 ft yang semakin menebal ke arah barat daya dari arah timur laut. serta terpotong beberapa sesar *NNW-trending* dan *NE trending*.

**Kata kunci:** Sikuen Stratigrafi, Fasies, Lingkungan Pengendapan, Interval Batupasir O, Formasi Talang Akar, Blok Jabung, Cekungan Sumatera Selatan.

## ABSTRACT

*The “MFS” field, which is located in the Jabung Block, Jambi Sub-Basin, South Sumatera Basin, is one of the oil and gas fields that operated by PetroChina International Jabung Ltd., with one of the exploration targets being the Talang Akar Formation. The development of field studies in the Early Miocene Talang Akar Formation is still needed to do with stratigraphic sequence concept to provide an overview of the distribution of lithofacies and the depositional environment vertically and laterally. Therefore, this study aims to determine the facies, depositional environment and stratigraphic sequences that developed in the research interval and to determine the distribution of ‘Batupasir O’ intervals in the Talang Akar Formation in the “MFS” Field. The stratigraphic sequence approach is used in this study by integrating 3D seismic data, well logs, core data, petrographic core data, paleontology data, and mudlog data. The research started with facies analysis and depositional environment. In general, the facies formed in the study area are conglomeratic sandstone with intercalated claystone facies, fining upward interbedded sandstone and claystone with intercalated coal facies, coarsening upward sandstone with intercalated claystone facies, fining upward interbedded sandstone and claystone facies, aggradating claystone with intercalated sandstone facies, coarsening upward claystone with intercalated sandstone facies, and fining up sandstone facies; with facies association fluvial channel, delta plain, delta front, distributary channel, prodelta, and distributary mouthbar in fluvial to deltaic depositional environment. The stratigraphic sequences of the “MFS” Field are composed of three sequences, twelve parasquences, three sequences boundaries, and three maximum flooding surface. The research was continued by determining the distribution of ‘Batupasir O’ in the Talang Akar Formation. In general, the ‘Batupasir O’ of the Talang Akar Formation is bounded by SB 2 at the bottom and MFS 2 at the top, in the transgressive system tract as well as the distributional mouthbar depositional environment. The lateral distribution of the ‘Batupasir O’ of the Talang Akar Formation is evenly distributed with a thickness of 6-60 ft which is getting thicker towards the southwest from the northeast. It is also intersected by several NNW-trending and NE trending faults.*

**Keyword:** *Sequence Stratigraphy, Facies, Depositional Environment, Batupasir O Interval, Talang Akar Formation, Jabung Block, South Sumatera Basin.*