

SARI

Lapangan “FEDE” berada di Subcekungan Palembang Utara, Cekungan Sumatra Selatan. Penelitian ini dilakukan dengan tujuan untuk mengetahui potensi sumberdaya hidrokarbon pada reservoir batupasir “BIA”, Formasi Pendopo, pada Lapangan “FEDE” yang belum pernah dilakukan perhitungan sumberdaya. Fokus penelitian ini adalah dengan melakukan analisis fasies, lingkungan pengendapan, pemodelan reservoir, dan perhitungan sumberdaya hidrokarbon pada reservoir batupasir “BIA”, Formasi Pendopo.

Metode yang dilakukan adalah dengan analisis sumuran, integrasi analisis sumuran dan seismik, serta pemodelan reservoir yang mencakup pemodelan fasies dan pemodelan properti petrofisika.

Pada zona B (MFS3-TS4), terdapat reservoir batupasir “BIA” yang terendapkan pada lingkungan *lower delta plain-delta front* dengan pola *log funnel* dengan fasies yang ditemui yaitu adalah fasies *distributary channel sand*, *fasies distributary mouthbar sand*, dan *delta front platform shale*. Berdasarkan peta struktur kedalaman pada *top reservoir* batupasir “BIA” diketahui morfologi berupa antiklin yang berorientasi baratlaut-tenggara yang berperan sebagai perangkap hidrokarbon serta adanya sesar naik berarah baratlaut-tenggara sebagai jalur migrasi hidrokarbon. Berdasarkan data *Drill Steam Test* (DST) pada sumur Bobcat-1 ditemui adanya *non combustion gas* dengan kontak fluida paling dalam berada pada sumur Everest-2 yaitu pada kedalaman -1239 m TVDSS/-1271 m MD berdasarkan analisis hidrokarbon flagging. Dari perhitungan volumetrik di dapatkan nilai sumberdaya berupa nilai GIIP (*Gas Initial In Place*) sebesar 5.35×10^3 MMSCF.

Kata Kunci : Fasies, Formasi Pendopo, Lingkungan Pengendapan, Sumberdaya Hidrokarbon

ABSTRACT

The "FEDE" Field is located in the Northern Palembang Sub-Basin, South Sumatra Basin. This research was conducted with the aim of assessing the hydrocarbon resource potential of the sandstone reservoir "BIA" in the Pendopo Formation within the "FEDE" Field, where no resource calculations have been previously performed. The research focuses on facies analysis, depositional environments, reservoir modeling, and hydrocarbon resource estimation in the "BIA" sandstone reservoir of the Pendopo Formation.

The method employed includes well analysis, the integration of well and seismic data, as well as reservoir modeling encompassing facies and petrophysical property modeling.

Within Zone B (MFS3-TS4), the "BIA" sandstone reservoir is found to be deposited in a lower delta plain-delta front environment with a log funnel pattern. The encountered facies include distributary channel sand, distributary mouthbar sand, and delta front platform shale. Based on the depth structure map of the top "BIA" sandstone reservoir, an anticlinal morphology oriented northwest-southeast is identified, serving as a hydrocarbon trap. Additionally, a northwest-southeast trending fault is present, which acts as a hydrocarbon migration pathway. The Drill Stem Test (DST) data from the Bobcat-1 well reveals the presence of non-combustion gas, with the deepest fluid contact observed in the Everest-2 well at a depth of -1239 m TVDSS/-1271 m MD according to hydrocarbon flagging analysis. Volumetric calculations yield a Gas Initial In Place (GIIP) value of 5.35×10^3 MMSCF.

Keyword : Facies, Pendopo Formation, Depositional Environment, Hydrocarbon Resources