

## SARI

Lokasi penelitian berada pada lapangan minyak lepas pantai bagian dari Blok Anambas di Cekungan Natuna Barat, Kep. Riau, sekitar 300 kilometer di sebelah barat dari Pulau Natuna dengan luas area  $\pm 1.320 \text{ km}^2$ . Penelitian dilakukan dengan tujuan untuk menentukan zona reservoir prospek, fasies, lingkungan pengendapan, serta penyebaran, ketebalan dan geometri dari reservoir prospek tersebut. Metodologi yang digunakan adalah pengintegrasian data – data *well log*, inti batuan (*core*) dan data seismik 2D, serta data pendamping seperti data petrografi dan data produksi *drill stem test* (DST). Pada penelitian ini, terdapat dua buah zona reservoir prospek yang menjadi target, yaitu zona reservoir A (A1, A2 dan A3) dari Formasi *Upper Gabus* dan zona reservoir B dari Formasi *Lower Arang*. Reservoir tersebut merupakan bagian dari fasies *mixed flats* dan *tidal sand bar* pada lingkungan pengendapan *tidal flat* karena dijumpai kehadiran beberapa penciri aktivitas pasang surut seperti struktur sedimen *lenticular*, *wavy* dan *flaser bedding*, serta *ichnofasies Glossifungites*. Berdasarkan analisis data log, reservoir B lebih tebal daripada reservoir A. Ketebalan masing – masing reservoir secara umum relatif sama yaitu semakin menebal ke arah NE. Geometri dari reservoir A dan B berbentuk memanjang (*elongate*) dengan orientasi NW-SE. Penelitian ini masih merupakan tahap awal dari kegiatan eksplorasi dan produksi migas, sehingga dibutuhkan penelitian lebih lanjut agar dapat digunakan sebagai analogi dalam penentuan titik produksi.

Kata Kunci : Anambas, *Lower Arang*, *Upper Gabus*, *tidal flats*, Cekungan Natuna Barat.

### *Abstract*

*This research takes place at off shore oil field as a part of Anambas Block in West Natuna Basin, Kepulauan Riau Province approximately 300 km west of Natuna Island which covers the area of 1.320 km<sup>2</sup>. The aims of this research are to determine lithology facies, sedimentation environment which lead to distribution, thickness, and the geometry of prospect reservoir. Various data such as well log, core, and seismic 2D are combined and integrated in this research. Additional data like thin-section and drill stem test (DST) data are also used as well. There are 2 prospect reservoirs are found in this area of study which potentially become drilling target. Those reservoirs specifically are Reservoir Zone A (A1, A2, A3), as parts of Upper Gabus Formation and Reservoir Zone B, as parts of Lower Arang Formation. Those reservoirs (Zone A and B) are parts of mixed flats and tidal sand bar facies in tidal flat sedimentation environment. This statement is concluded by the present of typical tidal activity sediment structures, such as lenticular, wavy, and flaser bedding. Ichnofacies glossifungites also is also present as well. Based on log data analysis, Reservoir Zone B is thicker than Reservoir Zone A all combined, but both reservoir zones show the same pattern which is thicker Northward. Both reservoir zones also have a typical elongate geometry with NW-SE orientation. This research is still an early step of oil and gas exploration-production stage, as of further research could be used as an analogy to determine production drill-hole target.*

*Keyword : Anambas, Lower Arang, Upper Gabus, tidal flats, West Natuna Basin.*