

SARI

Lapangan “RN” terletak di Cekungan Jawa Barat Utara. Penelitian dilakukan pada *Formasi Upper Baturaja* yang merupakan reservoir batugamping untuk mengetahui zona-zona produktif berdasarkan analisis parameter petrofisika (saturasi air, porositas dan *Vshale*). Tujuan dari penelitian ini yaitu untuk mengetahui zona mana saja sebagai prospek hidrokarbon pada Lapangan “RN” Formasi *Upper Baturaja*.

Secara garis besar terdapat dua metode utama dalam penelitian ini. Kedua metode tersebut antara lain adalah analisis sumuran kualitatif menggunakan data *core*, *mudlog*, dan *wireline log*, serta analisis petrofisika menggunakan *wireline log*, *header log*, data *core*, *mudlog*, dan data perforasi. Metode yang digunakan dalam perhitungan petrofisika adalah metode deterministik. Data log yang digunakan berasal dari sumur pemboran yang berada di Lapangan “RN” dengan jumlah keseluruhan sebanyak 4 sumur.

Berdasarkan analisis kualitatif, pada daerah penelitian didapatkan litofasies berupa *wackestone*, *packstone*, *wackestone-packstone*, *packstone-grainstone*, *mudstone-wackestone*. Fasies yang terbentuk pada daerah penelitian dibagi menjadi 2 yaitu fasies *outer back-reef lagoon* dan *inner back-reef lagoon (Back-reef)* yang diendapkan pada lingkungan laut dangkal. Analisis kuantitatif dilakukan dengan melakukan perhitungan petrofisika pada *Formasi Upper Baturaja* yang terdiri dari 3 zona berdasarkan sekuen stratigrafi dimana didapatkan hasil berupa nilai *cut-off* kandungan serpih sebesar 26 %, porositas efektif dengan sebesar 5 %, saturasi air sebesar 88 %.

Kata Kunci: Cekungan Jawa Barat Utara, Fasies, Formasi Upper Baturaja, Lingkungan Pengendapan, Petrofisika

ABSTRACT

The “RN” Field is located in the North West Java Basin. The study was conducted in the Upper Baturaja Formation which is a limestone reservoir to determine productive zones based on petrophysical parameter analysis (water saturation, porosity and Vshale). The purpose of this study is to determine which zones are hydrocarbon prospects in the “RN” Field of the Upper Baturaja Formation.

Broadly speaking, there are two main methods in this study. The two methods include qualitative well analysis using core, mudlog, and wireline log data, as well as petrophysical analysis using wireline logs, header logs, core data, mudlogs, and perforation data. The method used in petrophysical calculations is the deterministic method. The log data used comes from drilling wells in the “RN” Field with a total of 4 wells.

Based on qualitative analysis, the research area obtained lithofacies in the form of wackestone, packstone, wackestone-packstone, packstone-grainstone, mudstone-wackestone. The facies formed in the research area are divided into 2, namely the outer back-reef lagoon facies and the inner back-reef lagoon (Back-reef) which are deposited in a shallow marine environment. Quantitative analysis was carried out by conducting petrophysical calculations on the Upper Baturaja Formation which consists of 3 zones based on the stratigraphic sequence where the results were obtained in the form of a cut-off value of shale content of 26%, effective porosity of 5%, water saturation of 88%.

Keywords: *North West Java Basin, Facies, Upper Baturaja Formation, Depositional Environment, Petrophysics*

