

## INTISARI

Reservoir Karbonat Formasi Baturaja merupakan target utama dalam eksplorasi dan eksploitasi hidrokarbon pada Cekungan Jawa Barat Utara. Reservoir karbonat memiliki variasi fasies secara lateral dan vertikal yang intensif, dan rentan terhadap diagenesis, sehingga mempunyai tingkat heterogenitas yang lebih tinggi daripada reservoir klastik. Hal ini berimbas pada kondisi reservoir yang sangat dinamis dan menimbulkan problema dalam karakterisasi reservoir, dan *Rock Typing* diyakini menjadi salah satu solusi. *Rock Typing* mempelajari kondisi aktual reservoir, serta membagi dan mengelompokkan satuan-satuan reservoir secara lebih spesifik, berdasarkan pengaruh fasies pengendapan dan diagenesis yang terjadi padanya, serta properti petrofisiknya. Manfaat lain dari *Rock Typing* adalah kemampuannya dalam memprediksi permeabilitas pada *uncored interval*, karena log sumur tidak dapat mengukur permeabilitas batuan. Konsep ini menggunakan pendekatan nilai DRT (*Discrete Rock Type*) dan FZI (*Flow Zone Indicator*) berdasarkan hubungan porositas dan permeabilitas data batu inti. Masing – masing fasies *rock type* akan memiliki hubungan nilai porositas dan permeabilitas yang berbeda untuk pengujian rumusan *permeabilitas transform*. Penyebaran fasies *rock type* pada zona *uncored interval* dan *uncored well* melibatkan karakteristik data *wireline*, berupa: RHOB, NPHI, serta GR. Konsep fasies *rock type* ini juga digunakan dalam upaya penentuan estimasi fasies paleodeposisi dan diagenesis daerah penelitian dengan melibatkan data petrografi. Berdasarkan hasil penelitian, lapangan penelitian memiliki 4 fasies *rock type* : *intraparticle separated vuggy*, *mud - dominated packstone moldic - separated vuggy*, *grain -dominated packstone interconnected vuggy – moldic*, dan *wackestone fracture*. Lingkungan pengendapan lapangan penelitian terbagi menjadi 2 lingkungan pengendapan berupa: *near reef* dan *inter – reef lagoon* dan kisaran lingkungan diagenesis berada di zona freatik air tawar, zona *vadose* dan zona burial.

Kata Kunci: Formasi Baturaja, Fasies *Rock Type*, *Flow Zone Indicator*, Permeabilitas Transform.

## ABSTRACT

*Carbonate reservoir of Baturaja formation is the main target in exploration and exploitation of hydrocarbons in the North West Java Basin. The Carbonate reservoir have intensive varies of lateral and vertical facies, and susceptible to diagenesis so as it has a higher degree of heterogeneity than clastic reservoir. These are have impacted on dinamic reservoir condition and cause problems in reservoir characterization and rock typing is supposed to be the one of the solution. Rock typing, by learns the actual condition of the reservoir, dividing and categorizing reservoir units more specifically, by the impact of facies sedimentation and diagenesis that happened to it, as well as it's petrophysical properties. Another benefit of the rock typing is it's ability to predict permeability of uncored intervals, since well logs can't be. This concept uses DRT (Discrete Rock Type) and FZI (Flow Zone Indicator) value approach, based on the relation of porosity and core stone permeability data. Each facies rock type will have different relation of porosity and permeability values for permeability transform testing formula. Rock type facies dissemination on uncured interval and uncured well zone involve the wireline data characteristics, such as: RHOB, NPHI, and GR. The concept of rock type facies also used to determining the paleodeposisi facies estimation and research area diagenesis involving petrographic data. Based on this research, the VG field has four rock type facies such as: intraparticle separated vuggy, mud - dominated packstone moldic - separated vuggy, grain -dominated packstone interconnected vuggy – moldic and wackestone fracture. Depositional environment of field research has two types of depositional environments such as: near reef and inter - reef lagoon and the the diagenesis environment at freshwater phreatic zone, vadose zone and burial zone.*

**Key words: Baturaja Formation, Rock Type Facies, Flow Zone Indicator, Permeability Transform.**