

## RINGKASAN

### **ANALISA PERBANDINGAN METODE PEMBAGIAN *ROCK TYPING* LAPANGAN “BTR” LAPISAN “IH-1” DAN “IH-2” TERHADAP PROSES *HISTORY MATCHING***

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Lapangan “BTR” yang telah dikembangkan sejak September 1997 hingga Januari 2021. Lapangan ini terdiri dari 4 sumur produksi minyak yang terdiri dari dua lapisan yaitu Lapisan “IH-1” dan Lapisan “IH-2”. OOIP pada kedua lapisan tersebut sebesar 13.27 MMSTB dengan kumulatif produksi pada Januari 2021 sebesar 3.2 MMSTB dan *recovery factor* sebesar 24.11%. Tujuan utama dari studi ini adalah menyajikan hasil perbandingan atas penerapan tiga metode, yaitu metode *conventional*, metode *pore geometry structure* dan metode *flow zone index*.

Tahapan pengerjaan diawali dengan persiapan data berupa model statis reservoir, data karakteristik reservoir, dan data produksi. Pengolahan data *routine core analysis* (RCAL) dan *special core analysis* (SCAL) dilakukan dengan menggunakan metode *conventional*, metode *pore geometry structure* (PGS) dan metode *flow zone index* (FZI) kemudian pengolahan data PVT fluida reservoir dilakukan dan dilanjutkan dengan proses inisialisasi dan *first history matching* pada masing-masing metode pembagian *rock typing*. Langkah terakhir yaitu *history matching* menggunakan metode terpilih.

Metode pembagian *rock typing* yang paling cocok untuk Lapangan “BTR” adalah metode *pore geometry structure* (PGS). Metode ini merupakan metode yang paling mendekati *matching* pada saat *first run history matching* dengan *mismatch liquid* sebesar 7,5%, *oil* sebesar 80%, *water* sebesar 30% dan *gas* sebesar 40%.

Kata kunci: *Rock Typing*, *Pore Geometry Structure*, *Conventional*, *Flow Zone Index*

## **ABSTRACT**

### **COMPARATIVE ANALYSIS OF ROCK TYPING METHODS OF “BTR” FIELD “IH-1” AND “IH-2” LAYERS ON HISTORY MATCHING PROCESS.**

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*The “BTR” field was developed from September 1997 to January 2021. This field consists of 4 oil production wells consisting of two layers, namely the “IH 1” layer and the “IH-2” layer. The OOIP in both layers is 13.27 MMSTB with cumulative production in January 2021 of 3.2 MMSTB and a recovery factor of 24.11%. The main objective of this study that describes results of comparison of the application of three methods, including the conventional method, the pore geometry structure method and the flow zone index method.*

*The work began with data preparation in the form of reservoir static model, reservoir characteristic data, and production data. Processing of routine core analysis (RCAL) and special core analysis (SCAL) data was carried out using the conventional method, pore geometry structure (PGS) method and flow zone index (FZI) method, then processing of reservoir fluid PVT data was carried out and continued with the initialization process and first history matching on each rock typing division method. The last step is history matching using the selected method.*

*The most suitable rock typing division methods for the “BTR” field is the pore geometry structure (PGS) method. This method is the closest matching method during first run history matching with mismatch liquid of 7.5%, oil of 80%, water of 30% and gas of 40%.*

*Keywords: Rock Typing, Pore Geometry Structure, Conventional, Flow Zone Index*