

**PETROPHYSICAL ANALYSIS AT LOW CONTRAST RESISTIVITY
RESERVOIR USING MRIAN (MAGNETIC RESONANCE IMAGING
ANALYSIS) AND DMR (DENSITY MAGNETIC RESONANCE)
METHOD
(Study Case Well #dNa)**

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ABSTRACT

Petrophysical analysis at well “dNa” is difficult if using conventional log only, because it has low contrast resistivity reservoir. The problems raising are fluid identification of the formation.

NMR (nuclear magnetic resonance) technology has more advantages than the conventional well logging. The advantages of NMR technology are its sensitivity of fluid present and not affected with the change of lithology in the formation. On the other side, the disadvantages of NMR technology are its small depth of investigation and affected with gas present. Therefore, to determine good physics parameters, data from conventional log is combining with data with NMR log data. MRIAN method is a method that combine a resistivity log and NMR log, the purpose is to obtaining greater depth of investigation. Whereas DMR method is a method that combine a density log data with NMR log data, the purpose is correcting the NMR porosity at the gas zone and also to obtaining fluid saturation in the invaded zone.

The result of using MRIAN method and DMR method is obtaining three productive reservoir zone at well “dNa with interval porosity 19% - 25%, and water saturation 30% - 60%.

Key words: well log analysis, low contrast resistivity, log NMR, MRIAN, DMR

HALAMAN INI SENGAJA DIKOSONGKAN