

Application of Waterflooding Technique in Petroleum Reservoir

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Abstract : Hydrocarbon resources are important for the redevelopment and sustainable progress of Afghanistan's infrastructure. This paper aim is to increase the oil recovery of Hitervian reservoir of Angut oil field in north part of Afghanistan by an easy and available method, which is Buckley-Leveret frontal displacement theory. In this paper oil displacement by water that takes placed by injecting water into the under laying petroleum reservoir which called waterflooding technique is investigated. The theory is investigated in a laboratory experiment first then applied in Angut oil field which is now under the operation of a private petroleum company. Based on this study oil recovery of Angut oil field, residual oil saturation, Buckle-Leveret saturation and FBL is determined.

Keywords : waterflooding technique, two phase fluid flow, Buckley-Leveret, petroleum engineering

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