

EXPERIMENTAL INVESTIGATION OF DIFFERENT IMMISCIBLE WATER ALTERNATING GAS (IWAG) SCHEMES TOWARDS OPTIMIZATION OF DISPLACEMENT EFFICIENCY

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The world continues to rely heavily on hydrocarbon resources for energy. While the demand for these resources is steadily rising, the discovery of new reserves is becoming more challenging. Therefore new ways of enhancing recovery from matured and producing reservoirs must be found in order to recover more oil from these reservoirs. Recently, there has been greater interest in enhanced oil recovery techniques that can improve overall recovery by increasing both the displacement efficiency and the sweep efficiency. This study seeks to investigate, at laboratory conditions, the improvement in ultimate oil recovery when immiscible water alternating gas (IWAG) injection is used as an enhanced recovery method. Synthetic brine simulating formation water from offshore will be prepared and three WAG injection tests each preceded by either water or gas injection will be carried out on three sandstone core plugs in the laboratory. The expected results from this research showed the amount of additional recovery of original oil in place (OOIP) using IWAG injection after secondary water or gas injection

Biography

Abdollah Esmaeili works in National Iranian Oil Company (N.I.O.C). I work in this company as a senior petroleum engineer and I have a permanent position in this company. My experience in this company from beginning to now is 28 years. Furthermore, I teach petroleum engineering courses in universities of Iran and international universities worldwide. I have attended in several scientific international conferences as speaker and lead several international scientific workshops and master classes worldwide publications.

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