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Reservoir Environment Effect on Oil-Water Flow Process In Kirkuk Tertiary Reservoir

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SUMMARY

It is important for the rock samples used in laboratories to have a surface state as close as possible to that found in the reservoir. The natural state of the samples can be either preserved or restored
The present study is experimental results of the oil recovery by imbibition process which made on four core samples of dimension (3.79 cm) in diameter and (6.04-7.54) cm of length, which were cored from large core samples taken from selected intervals of Avanah and Baba domes of the kirkuk tertiary reservoir.
Each core sample was cut along the axial axis, making each core sample consist of two halves and formation water of salinity about (21000 ppm) was injected into the core sample through the simulated fracture and the oil and water production was collected from the other side of the core sample. The formation water was injected at a constant injection rate, which gave a frontal velocity of (1 ft/day).
The results showed that the ultimate recoveries were higher for all core samples at ambient condition tests in comparison with the ultimate recoveries at reservoir conditions tests, the results represent a good qualitative measurement of the wettability of these domes and it was found that all core samples were less water-wet at reservoir condition tests than at ambient condition tests.