عنوان مقاله:

Simulation Study of Relative Permeability Hysteresis on Immiscible Water Alternating Gas (IWAG) Injection in Naturally Fractured Reservoirs

محل انتشار:

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خلاصه مقاله:

Relative permeability dependence on saturation path/history signal in Immiscible Water Alternating Gas (IWAG) process more than any otherfluid flow in the reservoirs because of its repetitive flow reversal. Theflow reversal processes like IWAG injection, impose hysteresis effect in performance of fluids flow. Some authors pointed out that simulation ofIWAG injection needs applying three-phase rather than two-phase hysteresis models because they consider both non-wetting phase trapping and further mobility reduction in subsequent cycles, while the two- phase models ignore the later that. Most of the related previous works involve single porosity models and less study conducted in fractured reservoirs. In this paper detail analysis of relative permeability hysteresis models of IWAG injection is performed in a fractured model. We find that there is striking disparity in simulation results depending on sort of fracture modeling (dual permeability or dual porosity) and also whether a hysteretic or a non-hysteretic model .is employed

کلمات کلیدی:

Immiscible Water Alternating Gas Injection (IWAG); Relative permeability Hysteresis; dual porosity; dual permeability; flow reversal