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Water Injection in One of the Southern Iranian Oil Field, a Case Study

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Abstract : Seawater injection and produced water re-injection are presently the most commonly used approach to enhanced recovery. The dominant factors for total oil recovery are the reservoir temperature, reservoir pressure, crude oil and water composition. In this study, the production under water injection in Soroosh, one of the southern Iranian heavy oil field has been simulated (the fluid properties are focused). In order to reveal the dominant factors in this production process, the sensitivity analysis has been done for the following effective factors, fluid viscosity, initial water saturation, gravity force and injection well strategy. It is crystal clear that the study of the dominant factors in production processes will help the engineers to design the best production mechanisms in our numerous hydrocarbon reservoirs.

Keywords : water injection, initial water saturation, oil viscosity, gravity force, injection well strategy
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