عنوان مقاله:

Compositional Simulation of the VAPEX process in High pressure Heavy Oil Reservoirs

محل انتشار:

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خلاصه مقاله:

The VAPEX process, a solvent analogue of steam assisted gravity drainage, has attracted considerable attention as a recovery method for heavy oil. The vapor extraction process may be suitable for the recovery of huge resources available in the form of highly viscous heavy oil. Vaporized hydrocarbon solvents are used to reduce the viscosity; the diluted oil drains by gravity. Low energy consumption, less environmental pollution, in situ upgrading, lower capital costs, etc. make the process superior to the currently used thermal processes. In this work, the VAPEX process is introduced as an enhanced oil recovery process for non-fractured single porosity model. For application of this process sensitivity analysis on solvent injection rate and diffusion coefficients were done. The results showed that this process can also be applicable for high pressure system with some consideration on type of a solvent and optimum solvent injection fate.

کلمات کلیدی:

solvent analogue; vapor extracion; diffusion coefficient; heavy oil; enhanced oil recovery; gravity drainage