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Model for treatment of oil reservoirs with polymer-dispersed systems

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Abstract

© 2015 Springer Science+Business Media New York. We present a new mathematical model for oil displacement by water from formations using polymer-dispersed systems. It is based on the classical two-phase filtration model: the Buckley-Leverett model. The closing relations are obtained using pore and particle size distribution functions. The model takes into account such effects as narrowing and blocking of pore channels as polymer particles move through them, and also mass exchange processes.

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Keywords

Dispersed particles, Filtration, Particle size distribution function, Polymer, Pore size distribution function