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Changes in mineral skeleton of oil reservoir in course of water flooding

Krinari G., Rakhmatulina Y.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

To optimize oil production technologies it must be taking into account the extent and causes of secondary changes in mineral skeleton of rocks as a result of technological or natural water flooding. It is shown that in the course of technological water flooding of the area occupied by water and oil do not have clear boundaries, and the decay of particles secondary micas on individual nanoblocks with large shared surface and high surface charge begins in predominantly of saturated oil reservoir area. The filtration of water and oil in natural porous medium arise percolation effects, that is confirmed experimentally. The results obtained should be considered to optimize oil production technologies, increase production and reduce the water cut.

Keywords

Micas, Mixed layer illite-smectite, Oil bearing rocks