عنوان مقاله:

A Comprehensive Review of Low Salinity Waterflooding in Sandstone/Carbonate Reservoirs: From Theory to Practice

محل انتشار:

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خلاصه مقاله:

The low salinity waterflooding (LSW) technique has become one of the mostimportant research topics in the oil industry because of its possible advantagesfor improving oil recovery compared to conventional seawater injection.Researchers have proposed several mechanisms for the LSW process in theliterature; however, there is no consensus on a single main mechanism for thelow salinity effect on oil recovery. Because of the latter, there are few modelsfor LSW and especially for carbonates due to their heterogeneity andcomplexity. In this paper, we present a comprehensive review on low salinitywater injection for both sandstones and carbonates. This review includesdescriptions of laboratory works, underlying mechanisms and field-scale pilotsin sandstones and carbonates. List of recommendations and conclusions areprovided based on this vast literature review. This paper can be used as .a guidefor starting or implementing lab-scale and field-scale projects on low salinitywater injections

کلمات کلیدی:

Low salinity waterflooding, Enhanced oil recovery, Sandstone reservoirs, Carbonate reservoirs, Wettability alteration