

عنوان مقاله:

Effect of Wettability on Capillary Pressure and Relative Permeability by SCAL Experimental Data

محل انتشار:

کنگره ملی کاوش نفت و گاز - تولید صیانتی (سال: 1388)

تعداد صفحات اصل مقاله: 10

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خلاصه مقاله:

Capillary pressure and relative permeability have been measured in core plugs at stronglywaterwet, moderatelywaterwet and nearlyneutralwet conditions. Plug wettability was selectively altered by aging at Swi, in crude oil at an elevated temperature for selected periods of time. This procedure reproducibly produced the desired wettability while keeping the pore network structure and the imbibition rate and endpoint. However, it did not reduce the total movable oil, i.e. imbibition plus forced displacement. In fact, the total movable oil generally increased slightly with reduced water wettability, however, at the cost of higher differential pressures. Reduced water wettability also lowered the drainage threshold pressure. Repeated imbibition tests on individual plugs indicated that the wettability alteration was permanent, even after the steady state relative permeability tests.

کلمات کلیدی:

Wettability-Capillary Pressure-Relative Permeability-SCAL

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