

## عنوان مقاله:

Liquid Repellency in Gas Condensate Reservoirs Using Different Chemical Treatment Agents

## محل انتشار:

چهارمین کنفرانس بین المللی دوسالانه نفت، گاز و پتروشیمی (سال: 1401)

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## خلاصه مقاله:

Gas condensate productivity is decreased by liquid blockage when the reservoir pressure near the wellbore falls below the dew point. Among various techniques to overcome liquid blockage, wettability changing is the most promising method. In this study, we investigate the ability of different chemical solutions to change the wettability of two rock types, including carbonate and synthetic rocks. Contact angle measurement was performed to evaluate the effect of the treating process. It was concluded that COUPSYL@WRS nanofluid, PTFE solution, hydrophobic SiO<sub>2</sub> nanoparticles + PDMS solutions could change the water contact angle and produced water repellency condition, while none of the used solutions could change the condensate contact angle. It was also shown that by increasing SiO<sub>2</sub> nanoparticle concentration from 0 to 2 wt%, the water contact angle increased from 117 to 155, which is the most effective solution in the wettability alteration process.

## کلمات کلیدی:

Gas condensate; Liquid repellency, chemical treatment, wettability alteration

## لینک ثابت مقاله در پایگاه سیویلیکا:

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