

عنوان مقاله:

Study of Bonding Strength at Salt-cement Interface During Cementation of Salt Layers

محل انتشار:

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خلاصه مقاله:

Cement has been used for decades in the industry to serve various important functions inside oil and gas wells. Due to the complications and variations in the geological and technical conditions of a well, various cement compositions are designed and utilized in different world regions. Many hydrocarbon reservoirs are covered by thick salt formations, which are considered problematic and costly to be drilled and cemented. Cement slurry, as a water based solution, interacts with salt rock, as a result of which cement properties are changed that consequently may jeopardize well integrity across salt formations and successful exploitation of beneath hydrocarbon reservoirs. In this study, based on experimental and industrial experiences, a cement composition is developed that meet the requirements of cementation in salt layers. Experimental investigations are conducted on the bonding strength at the salt-cement interface, as the bonding strength is considered as one of the factors that significantly affect overall cement efficiency in providing well integrity. Results confirm the effectiveness of the developed composition for cementation of salt layers.

کلمات کلیدی:

Oil Well Cement, halite, Portland Cement, water to cement ratio

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