

Methods of fighting against scale build-up at the tuymazy deposit

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Abstract

© Research India Publications 2015. During the oil production continuous scale build-up takes place by using any operation modes. Increases the pump wear on the working faces, presence of non-organic salts and results in seize of the shaft of electrical centrifugal pump (ECP) and plunger of the subsurface pump, impeller damage. Under these conditions of operation of the mechanized well stock the turnaround is reduced significantly. This is why fighting against scale build-up and prevention of formation thereof is essential. In practice, the main task is identification of the composition and location of salt deposits - the first step is removal thereof and design of efficient methods. Inhibitor removal time in some measure depends on the rate of absorption of salt deposits inhibitor on the productive stratum surface. At the same time the slower its desorption from the formation is and the higher the adsorption of the inhibiting matter is the more efficient and long-lasting is scaling prevention. Scaling prevention is achieved with the use of inhibitors at optimum dosages the values of which in formation water are determined by content of salt-forming ions Ca^{2+} and Mg^{2+} -. On the basis of results of experimental works performed on analysis of efficiency of scaling for waters of different ion composition an inhibitor is selected and its optimum dosage is determined.

Keywords

Force fields, Inhibitors, Oil production, Scale build-up