

## عنوان مقاله:

Influence of Geological and Technological Parameters on Effectiveness of Hydrochloric Acid Treatment of Carbonate Reservoirs

## محل انتشار:

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## خلاصه مقاله:

Hydrochloric acid treatment is the most common oil production stimulation treatment to date. Yet, most of operations fail to deliver the targeted results. For a more competent design of acid treatment of carbonate reservoirs, flow studies on core samples are conducted preliminary to determine the most effective acid composition and the technology of its injection into formation. The authors believe that, at present, processing of flow research results is incorrect, as not all parameters are taken into account when making recommendations. This study examined the influence of geological and technological parameters on effectiveness of hydrochloric acid treatment. In the course of studies using the flow unit and X-ray tomography, a number of factors have been identified that affect the outcome of the treatment. The volume of acid composition required to create a highly conductive channel in a core sample is a parameter using which it is possible to conduct a comparative analysis of effectiveness of the acid compositions under test and the methods of their injection. Therefore, exactly this parameter is used as a core in this paper, based on which the authors have derived an integrated indicator that provides for the most reliable evaluation of the flow study results. Using this indicator, it is possible to provide more competent recommendations as to the choice of acid compositions and the technology of oilfield hydrochloric acid treatments, which will provide the greatest effect of the planned operations to enhance oil recovery.

## کلمات کلیدی:

Carbonate Deposits, Correlation Dependencies, Flow Studies, Hydrochloric Acid Treatment, Stimulation of Oil Production, Tomographic Research

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