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Study of reservoir properties of carbonate rocks based on analysis of reservoir quality index

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Abstract

The article presents the reservoir properties of carbonate rocks by analyzing the factors that characterize the filtration cell reservoir rocks: reservoir quality index, free fluid index, flow zone indicator. These factors are usually used for clastic reservoirs in order to isolate the flow units - rock volume has certain geological and petrophysical properties, as well as a unified hydraulics. It was believed that such a definition for the carbonate rocks is problematic. However, studies have shown the possibility of allocating the flow units in the carbonate deposits subject to the provision of good reservoir rocks and determination of litho-genetic type of carbonate rocks. For the analysis considered several litho-genetic types. It was found that the best collectors are limestone bioclastic-zoogene type. The coefficients revealed the Flow Units in all productive carbonate deposits considered deposits. Allocation of volumes of rocks possessing common hydraulics allows more correctly carry out operational activities.

Keywords

Carbonate reservoir, Flow zone indicator, Free fluid index, Limestone bioclastic-zoogene, Reservoir quality index