

Features of the structure of zones of water-oil contacts in carbonate rocks of the Bashkirian stage (using Akanskoye oilfield in the Volga-Ural petroleum and gas province as an example)

Kolchugin A., Morozov V., Korolev E., Eskin A.

Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

The problem of secondary transformation of rocks in the zones of water-oil contacts has been a concern of geologists studying terrigenous and carbonate reservoir rocks. A rather important aspect in studying the zones of water-oil contacts is searching the causes of natural destruction of petroleum reservoirs as formation of zones of ancient and modern water-oil contacts, in particular, in carbonate reservoirs, in fact, is field destruction with the features typical to destruction. These features include specific structural and mineral transformations of rocks as well as changes in properties of fluids contained in the rocks and, first of all, those of oil. The essential structure of the zone of the water-oil contact in deposits of the Bashkirian stage is shown using one of the wells of the Volga-Ural region as an example. Specific structural and mineral characteristics of the zones of water-oil contacts have been established, content of fluids contained in the rocks has been characterized. Common factors of alteration in hydrocarbon content through the section depending on the degree of secondary transformation of rocks have been shown.

<http://dx.doi.org/10.13005/bbra/1452>

Keywords

Carbonate rocks, Petroleum composition, Secondary changes, Water-oil contact