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Reservoir pressure variation in tight oil calculation process

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Due to the successful of Bakken oilfield in the USA, tight oil, as an unconventional petroleum resource, is becoming topic at the forefront of the worldwide oil and gas exploration and development, focused by big companies over the world. The tight reservoir exploration first requires understanding about the possession of filling pressure as well as the occurrence mechanism, also the study about the two-phase flow mechanism of the oil and water in tight reservoir. Internationally, mechanism for the formation of a tight oil reservoir is still in the exploratory stage, especially the lack of research about the possession of filling pressure mechanism. The difficulty of the problem is that the filling pressure to determine and quantify the possession. On this basis, the research about the possession of filling pressure under the migration characteristics of the tight oil. In this study, it is assumed unconventional oil expansion force accumulation mechanism as generally considered, taking into account the oil and water phases in the accumulation process, focusing on research into the tight reservoir pressure in the accumulation process distribution changes. The tight oil reservoirs by physical modeling and numerical simulation methods, revealed the main driving force, established a process seepage computational model of tight oil reservoirs can be used to predict the oil aturation.

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