

THE EXPERIMENTAL STUDY OF GAS SLIPPAGE EFFECTS IN COAL-BED METHANE RESERVOIR

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Summary

Gas slippage effects is the first time found by Kundt and Warburg, Muskat for the first time applied gas flow in porous media theory to the development of oil and gas fields, it marks gas slippage effect theoretical research possible to achieve low permeability gas reservoirs industrialized mining. In recent years, our country scholars used the theoretical analysis and experimental research methods to low permeability gas reservoirs of slippage effects, to achieve low permeability gas reservoirs industrialization mining provide a theoretical basis, as for coal-bed methane reservoir gas slippage effects study is extremely rare. So this article carries out the experimental methodology to study Northeast China coal samples, analyses slippage permeability influence to gas permeability in diversity confining pressure and pore pressure, analyses the saturation water state the low permeability coal gas slippage effects changing law, finds the beneficial effects of the confining pressure that slippage effect of different low permeability gas reservoir permeability, verifies of the low permeability coal gas slippage effect exists universality. In order to understand the internal structure of coal and coal-bed methane slippage flow in coal seams establishes a foundation. The experiment results have significant theory value to carry out coal-bed methane industrialization exploits with hypotonic reservoir.

