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**Recognition and deepening application practice of multi-reservoir and permeable body in complex gas reservoir**

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In view of the insufficient combination of production performance of complex gas reservoirs and numerical simulation of gas reservoirs, this paper introduces a multi-reservoir and permeability identification technology, and uses typical curves of modern production instability analysis to carry out multi-reservoir and permeability identification and numerical simulation application research of complex gas reservoirs. From the point of view of gas reservoir development dynamics, quantitative history fitting and unitary multi-reservoir and permeability body of gas reservoir numerical simulation are realized, which improves the accuracy of gas reservoir numerical simulation research and solves the difficult problem that the research results of gas reservoir numerical simulation can not be applied to field production. According to the characteristics of gas reservoir numerical simulation, the reservoir permeability unit is introduced and quantified in three levels. The historical fitting of gas reservoir numerical simulation is increased from simple empirical process to quantitative process, which improves the reliability of gas reservoir numerical simulation research. This method has been applied to the overall water control of the Carboniferous gas reservoir in Chayuansi structure in northeastern Sichuan, and remarkable results have been achieved in practice.

**Biography**

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