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鄂尔多斯盆地延长组超低渗透砂岩储层微观孔隙结构特征研究

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摘要：

通过物性分析、扫描电镜、铸体薄片、高压压汞技术对鄂尔多斯盆地延长组沿25、庄40、庄19三个区块超低渗透砂岩储层样品进行分析测试，研究其微观孔隙结构特征。研究表明，超低渗透砂岩储层岩石孔隙结构非均质性强，孔隙喉道类型多样是储层渗透性差的主要原因；孔喉分选系数在2.0~2.5之间、变异系数在0.1~0.2之间物性较好；较大孔喉是决定和改善储层渗透性的重要因素，细小孔道对储层储集能力的贡献较大，储层微裂缝较为发育。储层物性参数的差异、孔喉特征参数的差异等，均归因于微观孔隙结构的差异。

关键词：鄂尔多斯盆地 超低渗透砂岩储层 微观孔隙结构 高压压汞 孔喉分选系数 微裂缝

The Research of Micro Pore Structure in Super Low Permeability Sandstone Reservoir of the Yanchang Formation in Ordos Basin

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Abstract:

By the physical property analysis, SEM, casting slice, and the technology of High pressure Hg injection, Super low permeability sandstone samples in Yan 25, Zhuang 40, and Zhuang 19 areas of the Yanchang Formation in Ordos basin were tested, in order to analyze the micro pore structure. The research shows the heterogeneity is intense. The variety of pores and throats are main reasons that the permeability is low.When the sorting coefficient of pore throat is from 2.0 to 2.5 and the coefficient of variation is from 0.1 to 0.2, the reservoir quality is good. The coarse throat is the significant factor for the permeability, and the fine throat is significant to the storage volume. The microfracture is very good. The difference of quality, parameters of pore throat, and so on results of the micro pore structure.

Keywords:Ordos basin super low permeability sandstone reservoir micro pore structure high pressure Hg injection sorting coefficient of pore throat microfracture

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