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柴达木盆地中深层混积岩储层形成机制

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摘要:

通过岩心观测、普通薄片、铸体薄片、扫描电镜、电子探针和岩石物性等分析,系统阐述了柴达木盆地典型中深层(西北区南翼山构造 E_2-N_1)混积岩的岩石学、储集空间/物性和成岩作用等特征,在此基础上讨论了储层形成机制.结果表明,混积岩以(泥质)泥晶灰岩、钙质含量较高的砂岩和粉砂岩及其混积岩为主;储集空间以溶蚀改造的裂缝和粒间溶蚀孔隙为特征,物性总体表现为低孔-特低孔、超低渗-非渗透;有利于形成储层的成岩作用是溶蚀和构造裂缝作用;储层形成机制可归纳为"岩性是基础,裂缝是条件,溶蚀是关键".这可为区域中深层混积岩储层,乃至陆相湖泊混合沉积储层的研究与油气勘探开发提供借鉴与参考.

英文摘要:

The features of lithology, reservoir space and porosity/permeability, and diagenesis of the middle-deep mixed rock sequences in the Nanyishan area of northwestern Qaidam basin were revealed by relatively comprehensive observations of core, rock thin-section, casting thin-section and scanning electronic microscope, and by conduction of electronic probe micro-analysis and physical property. The reservoir forming mechanism was further addressed based on the features. It is showed that the rocks are composed mainly of (muddy) micrite limestone, sandstone with relatively high content of calcium components and fine-grained sandstone. For the reservoir space, solution-altered fractures and intergranular solution pores were generally found. As a result, the formation physical property is characterized by a low to extremely low porosity and extremely low to non permeability. With respect to the diagenesis, the type favourable for reservoir formation mainly includes solution and structural fracturing. According to these results, the reservoir forming mechanism was suggested, with the lithology, fracture and dissolution being fundamental, conditional and key respectively. Thus, the understandings provide valuable information for the study and petroleum exploration/exploitation of regional and elsewhere lacustrine mixed rock reservoir.

关键词: [混积岩](#) [储层](#) [形成机制](#) [溶蚀](#) [裂缝](#) [南翼山](#) [柴达木盆地](#)

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