

Formation and Deformation of Ordos Cratonic Basin and Foreland Basin, Mid-Continent, China

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Ordos Basin is located on the North China Plate. It experienced three major evolution periods: the Paleozoic craton basin evolution period; the Mesozoic foreland basin evolution period; and the Cenozoic graben period. It is a compound basin. The initial subsidence of Ordos craton in earlier Paleozoic time is synchronous with the continental rifting and the extension of the continental margin. It filled with detritus rock-carbonate carbonate sediments, and evaporate sediments. The weathered residuum reservoir was formed which is the major production zone of the giant gas field. During the late Paleozoic time, the sedimentary facies was changed from neritic and shore facies to inland lacustrine facies, which are formed the good reservoirs. During the Mesozoic time, accompany with the fold-thrust loading, the lacustrine delta depositional systems were developed in foreland basin. The reservoirs were formed in the frontier of the delta system. During the relaxation phase, the incised valleys were filled with superimposed sand bodies, which were formed the paleogeomorphic reservoirs.