

Characteristics of Chinese Lithostratigraphic Reservoir Traps and Future Exploration

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Chinese lithostratigraphic reservoirs have been widely developed in four types of sedimentary basins including (1) rift basins, (2) depression basins, (3) foreland basins, and (4) cratonic marine basins; and three types of reservoirs (e.g. siliciclastic, carbonate and volcanic). This paper attempts to synthesize the formation mechanisms and distribution characters of these lithostratigraphic reservoirs in continental petroleum basins from four aspects namely (1) reservoir development and evolution, (2) origin of the trap development and distribution, (3) reservoir-forming dynamics, and (4) distribution patterns of oil and gas of different basin types and prediction of the favorable exploration plays.

In the past three years, the proven numbers of Chinese lithostratigraphic reservoirs have accounted for approximately 60% of the total proven reserves. We predict that the additional numbers of such play types may account for up to 50% of the total additional proven petroleum reserves in China.