Characteristics of Oil and Gas Distribution in Sedimentary Basins of China

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There are three main zones of oil and gas accumulation in sedimentary basins of China. They are termed east zone, middle zone and west zone separated by two mountain ranges: the Daxinganling-Taihang-Wuyi mountains and Helan-Longmen mountains.

The east zone, including the Songliao-Baihaiwan basins, is dominated by oils generated from the Mesozoic and Cenozoic source rocks. The middle zone exemplified by the Ordos and Sichuan basins is dominated by primarily gas generated from Paleozoic and Mesozoic source rocks. The west zone, such as the Tarim and Junggar basins, is characterized by both oil and gas generated from the Paleozoic, Mesozoic and Cenozoic source rocks. The distribution of oil and gas are primarily within the thrust-and-fold belts in the foreland basins, in the ancient uplifts and slopes in the cratonic basins, and in the uplifts in sedimentary depressions within the rift basins. The favorable hydrocarbon accumulation belts are the uplifts and slopes in the superimposed basins, foreland basins and their thrust-and-fold belts, and in the large stratigraphic traps of deltas and reefs.