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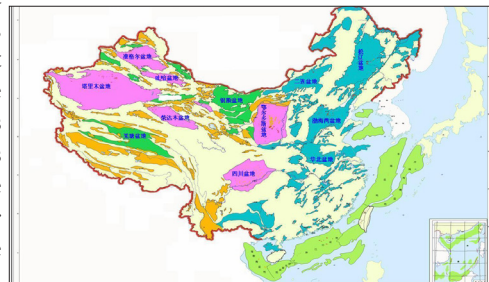
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Types, characteristics, challenges and development technologies of carbonate gas reservoirs in China

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Carbonate gas reservoir in China mainly distributed in Sichuan, Ordos and Tarim Basin and its reservoirs are respectively accounted for 58.57%, 23.28% and 12.99%. Carbonate gas reservoir whose production accounts for about 30% of the total plays an important role in the whole natural gas industry. In China, carbonate reservoir stratum has a wide distribution, ranging from Sinian to Triassic. There is 455×104 km² distribution area including 28 onshore marine basins whose area is 330×104 km² and 22 offshore marine basins whose area is 125×104 km². Compared with sand stone gas reservoirs, carbonate gas reservoirs are facing some questions, such as greater reservoir heterogeneity, more difficult to predict, more complex fluid properties and distribution, greater differences between wells and larger difficult to maintain stable production. Relatively speaking, the level of exploration and development of carbonate gas reservoir in China is low and gas reservoir development lacks effective development technologies. Aiming at enhancing the level of development and strengthening systematic research, the research of type classification, characteristics, challenges and development technologies are very important to the efficient development of carbonate gas reservoirs. Researchers of different professionals have different classification results of carbonate gas reservoir types. At the same time, according to the difference of research focus, different scholars have different classification results. Based on the development practices of past decades and the current development status in accordance with the development characteristics carbonate gas reservoirs in China are divided into four types. These four types include fracture cave, reef flat, weathering crust and layered dolomite carbonate gas reservoirs. Moreover, this paper pointed out the differences in the reservoir genesis, gas reservoir characteristics, and development problems of carbonate gas reservoirs, and put forward some specific development technologies.



Recent Publications:

1. Yan Haijun, He Dongbo, et al. (2016) Paleotopography restoration method and its controlling effect on fluid distribution: A case study of the gas reservoir evaluation stage in Gaoqiao, Ordos Basin. *Acta Petrolei Sinica*; 37(12): 1483-1494.
2. Yan Haijun, Jia Ailin, He Dongbo, Guo Jianlin, Yang Xuefeng, Zhu Zhanmei (2014) Development problems and strategies of reef-shoal carbonate gas reservoir. *Natural Gas Geoscience*; 25(3): 414-422.

Biography

Yan Haijun pursued his BSc degree in Petroleum Engineering from the Northeast Petroleum University and his MS degree from Research Institute of Petroleum Exploration & Development (RIPE), Beijing, China. He has worked in the areas of oil, gas geology and gas development. He is currently the Engineer at the Department of Ordos E&P, RIPE. He is working mainly on gas development. As an Engineer, he has published over 10 papers and 1 book.

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