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## The Hydrocarbon Accumulation Mechanism of the Dengying Formation of Sinian in Sichuan Basin and Its Exploration Prospects

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The exploration for the Dengying Formation of Sinian in the Sichuan Basin has been about six decades with four stages, as follows: Weiyuan gas field exploration stage, around Sichuan basin exploration stage, Leshan-Longnvshi paleo-uplift exploration stage and now Gaoshiti-Moxi structure belt exploration stage. After the discovery of Weiyuan Gas Field with proved natural gas reserves of  $408.61 \times 10^8 \text{ m}^3$ , Gaoshiti - Moxi structure has a breakthrough recently. This paper documents condition of hydrocarbon accumulation of the Sinian, based on structural evolution and accumulation process. There are significant difference and similarities between the Lower Paleozoic gas reservoir in the Weiyuan-Ziyang area and Gaoshiti-Moxi area. We argued that the Leshan-

Longnvshi palaeo-lift had formed large-scale Palaeo-oil reservoirs, followed by a crack of Palaeo-oil reservoirs to result in Palaeo-gas reservoirs. Himalayan movement superposed the old structure in the Sichuan Basin, and accommodated significant changes in Palaeo gas reservoirs at the same time. There was a short-distance migration of gas reservoir in the Weiyuan Gas Field, however, significant adjustment occurred at the Gaoshiti - Moxi structure. Therefore, the different centers of hydrocarbon accumulation, e.g. gas-generation center, gas-accumulation center and preserving center, that had no significant changes is still important areas of Dengying Formation in the Leshan-Longnvshi paleo-uplift and its periphery(fig.1).

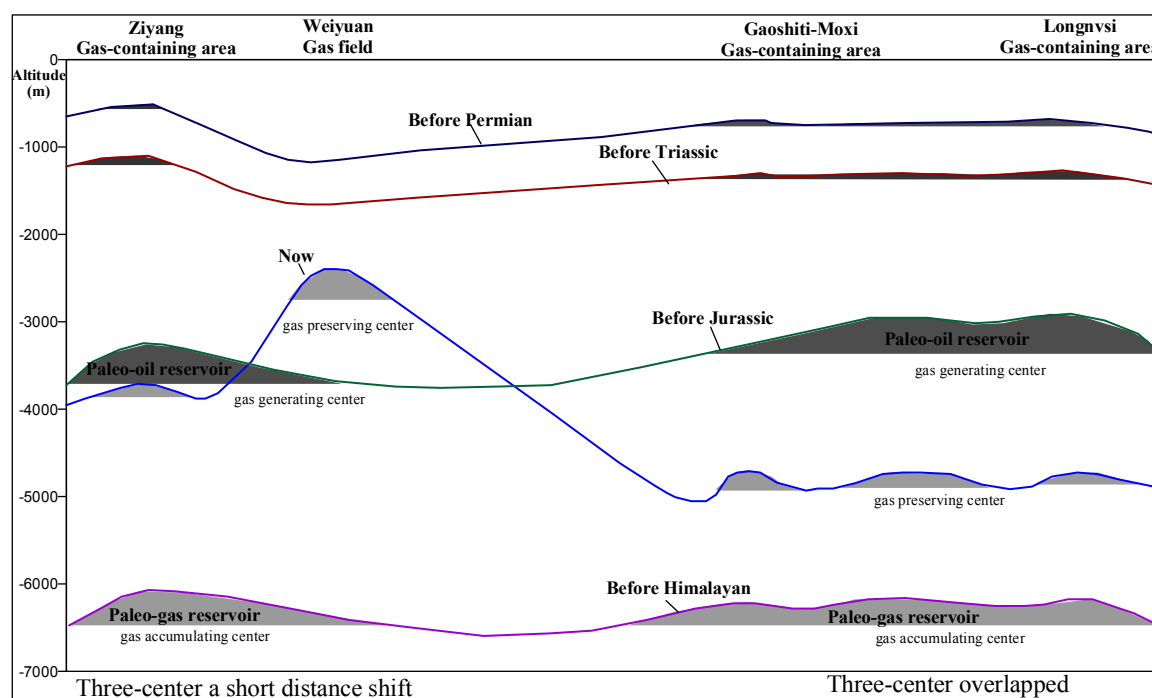


Fig.1. the "three centers" accumulation evolution model map in Weiyuan-Gaoshiti-Moxi area

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