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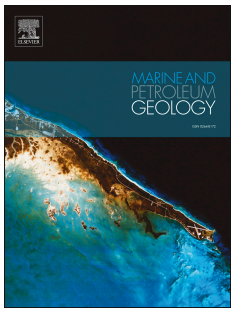

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Hydrocarbon charging and accumulation history in the Niudong Buried Hill Field in the Baxian Depression, eastern China

Xianzheng Zhao[1], Liuping Zhang[2*], Fengming Jin[1], Quan Wang[1], Guoping Bai[3], Zhaoyang Li[2] and Jian Wang[1]

[1] Huabei Oilfield Company of PetroChina, Renqiu, Hebei 062552, China.

[2] Key Laboratory of Petroleum Resource, Institute of Geology and Geophysics, Chinese Academy of Science, Beijing 100029, China.

[3]State Key Laboratory of Petroleum Resources and Prospecting, China University of Petroleum, Beijing 102249, China.

Abstract

The Niudong Buried Hill Field, which lies in the Baxian Depression of the Bohai Bay Basin, is the deepest oil / gas accumulation in eastern China. Its Precambrian dolomite reservoir occurs at burial depths of 5860 m to 6027 m. This paper attempts to document the hydrocarbon charging and accumulation history in this field, which could greatly enhance the understanding of the mechanisms for the formation of deep hydrocarbon accumulations. Our previous study of oil trapped in fluid inclusions has demonstrated that the ratio parameters of the fluorescence spectral intensities at 425 nm and 433 nm ($Q_{425/433}$ ratio), and at 419 nm and 429 nm ($Q_{419/429}$ ratio) can be more effective for revealing hydrocarbon charging history than the previously-used fluorescence parameters such as Lambda max and red/green quotient as well as fluorescence colors. The hydrocarbon charging and accumulation history in the Niudong Buried Hill Field was studied with

[*]Corresponding author. Tel.: 86 10 82998272; fax: 86 10 6201 0846.
E-mail address: lpzhang_int@sina.com (L. Zhang).