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苏北盆地漆潼凹陷油气运聚模式 [点此下载全文](#)

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摘要:

通过对苏北盆地漆潼凹陷不同构造带部分具代表性油藏原油的饱和烃、芳烃生物标志物和吡咯类含氮化合物分布特征的分析, 结合油区构造研究和油源对比成果, 讨论了研究区油气的运移方向与运聚模式。结果表明, 研究区不同构造带原油中吡咯类含氮化合物分馏效应存在差别, 处于断阶带南侧的成熟原油运移效应明显, 来源于其西北侧的侏罗系阜宁组二段烃源岩; 断阶带北侧的原油运移分馏效应较差, 推测其主要来源于北侧的储家楼次凹阜宁组二段烃源岩, 以短距离侧向运移为主; 内斜坡带原油主要来自于储家楼深凹阜宁组二段烃源岩, 沿其构造带上倾方向自西南到东北方向, 含氮化合物分馏效应明显; 坡垒带与外斜坡带阜宁组三段原油成熟度偏低, 吡咯类含氮化合物浓度较高, 原油自东北向西南方向以短距离运移为主, 主要来自于深凹的低熟烃源岩。不同构造带的油气成藏模式也不一致, 断阶带为阶梯状断块油气聚集模式, 内斜坡带与坡垒带主要分布受断层控制的断块—岩性油藏, 外斜坡带为反向正断层叠块控油模式。

关键词: [含氮化合物](#) [油气运移方向](#) [成藏模式](#) [漆潼凹陷](#) [苏北盆地](#)

Petroleum Migration and Accumulation in Qintong Sag, North Jiangsu Basin [Download Fulltext](#)

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Abstract:

Based on the geochemical characteristics of n alkanes, steranes, terpanes and the distribution of pyrrolic nitrogen compounds of non hydrocarbons which can be utilized as parameters in evaluating the migrated oils, refering to results of structural study and oil source comparison, petroleum migration and accumulation of the Qintong sag, North Jiangsu basin, are discussed in this paper. The results are as follows: (1) The pyrrolic nitrogen compounds of crude oils in different structural belts reveal significant and dissimilar fractionation effect, which reflects the oil—source correlation distinctly: the high mature oils from the south fault belt migrated obviously, which are generated by the source rock of the 2nd Member(Ef2), Funing Formation, Eocene, in the Yudu subsag; while the oils from the north part reflect slight fractional effect, suggesting that it migrated in a short distance, is generated by the source rock of the 2nd Member(Ef2), Funing Formation, Eocene, in the Chujialou subsag and also mingled by oils from the source rock of the Paleogene Taizhou Formation. (2) The migrating fraction of the crude oils located in internal slope belts is significant, which migrated along structural belts updip direction from southwest to northeast, was generated by the source rock of the 2nd Member(Ef2), Funing Formation, in the Chujialou deep subsag. (3) The Ef3 oil in the external slope and horst belt has lower maturity and higher concentration of pyrrolic nitrogen compounds, mainly migrated from northeast to southwest, is generated from lower mature source rocks in deep sag. (4) The oil accumulation models are different among three structural belts. In fault belts, the crude oil is accumulated in step shaped fault block, and internal slope and horst belt are distributed by fault—lithologic reservoirs. The lower mature oils is accumulated in external slope's horst and controlled by opposite directional fault.

Keywords: [pyrrolic nitrogen compounds](#) [migration of oil](#) [accumulation models](#) [Qintong sag](#) [North Jiangsu basin](#)

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