

## 天然气地球化学

### 鄂尔多斯盆地杭锦旗地区油气地球化学特征研究

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#### 摘要:

杭锦旗地区位于鄂尔多斯盆地北部, 从早古生代至晚古生代早期一直为隆起区, 地层受古地貌的控制, 横向变化大, 后期受燕山期构造活动的改造, 油气藏类型及成因复杂, 勘探难度大。从化探烃类指标浓度及其区域变化、轻烃组成、水文地球化学特征等方面进行研究, 将杭锦旗地区划分为3个烃类异常带, 并结合区域石油地质条件对异常的形成进行了分析, 认为该区: 气源充足, 具备形成大中型天然气藏的物质基础; 砂岩储层普遍发育, 横向分布广泛, 具有良好的天然气储集条件; 后期保存条件较好, 南部优于北部, 有益于油气藏的保存。在综合分析的基础上, 进一步提出了十里加汗—伊13井、什股豪和浩绕召—赵家村—蒋家渠等为研究区下步勘探的3个有利区。

#### 关键词:

## Geochemical Characteristics of Oil and Gas in Hangjinqi Area, Ordos Basin

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#### Abstract:

Hangjinqi area in the northern Ordos basin had been uplifted from the early Paleozoic to the late Paleozoic. The strata were controlled by the paleo-geomorphology, with significant lateral changes, and had been further reformed during Yanshan period by the structural activities. Thus the formation and the types of hydrocarbon reservoirs in this area are more complicated, and these increase difficulties in oil and gas exploration. Three hydrocarbon anomalous zones had been delineated in Hangjinqi area based on the geochemistry features (the concentration values of the hydrocarbon indicators and their regional variations, the light hydrocarbon components and the hydro-geochemical characteristics) of the study area; and the anomaly formation had been analyzed by the geochemical analysis and the petroleum geological condition analysis. The results show that the gas source is abundant in this area, providing the material basis for the formation of the big and medium gas pools; the sand reservoirs develop widely in the lateral direction, providing good conditions for the natural gas accumulation; and the preservation condition in the area is also good, better in the south part than the north, benefiting for the oil and gas pool preservation. As a result, 3 favorable exploration areas had been proposed for further exploration, including Shilijiahan-Well Yi 13 area, Shiguhao area, and Haoraozhao-Zhaojiagou-Jiangjiaqu area.

#### Keywords:

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