



楼章华, 朱蓉, 金爱民, 李梅. 沉积盆地地下水与油气成藏—保存关系[J]. 地质学报, 2009, 83(8): 1188-1194

沉积盆地地下水与油气成藏—保存关系 [点此下载全文](#)

[楼章华](#) [朱蓉](#) [金爱民](#) [李梅](#)

浙江大学, 浙江大学, 浙江大学, 浙江大学

基金项目: 国家自然科学基金项目(面上项目, 重点项目, 重大项目)

DOI:

摘要点击次数: 378

全文下载次数: 287

摘要:

含油气沉积盆地地下水动力场可以划分为: ①泥岩压实水离心流; ②大气水下渗向心流; ③(层间)越流、局部水动力单元类型。通常盆地边缘大气水不对称下渗, 发育向心流, 中央凹陷区以泥岩为主的砂泥岩地层压实流与地层压实离心流汇合, 发育越流泄水。沉积盆地地下水动力场演化和地下水成因控制了地下水化学场的分布过程中, 地下水浓缩、盐化, 在越流泄水区形成高浓缩、高盐化地下水。泥岩压实离心流是沉积盆地油气运移的主心流过程中, 由于岩性、地层、断层等圈闭使得部分油气在运移过程中聚集; 在地下水越流泄水过程中有利于油进过程中, 早期聚集的油气可能部分被破坏, 此外也可能在特定的地质条件下形成水动力和部分岩性、地层、圈

关键词: [油田地下水化学](#) [油田地下水动力](#) [油气成藏动力学](#) [油气保存条件](#)

Relationship between Groundwater and Hydrocarbon Accumulation-Preservation in Sedimentary Basins
[Fulltext](#)

[Lou Zhanghua](#) [Zhu Rong](#) [Jin Aimin](#) [Li Mei](#)

Zhejiang University, Zhejiang University, Zhejiang University, Zhejiang University

Fund Project:

Abstract:

Hydrodynamic units in a petroliferous sedimentary basin can be categorized as follows: ①compaction-driven centrifugal flow, ②relief-driven centripetal flow, ③ cross-formational flow with/without evaporation and ④ meteoric water infiltrates asymmetrically in the margin of basin and centripetal flow develops. The area of centrifugal flow caused by mudstone-compacted water. Centrifugal flow and centripetal flow cross-formational flow. The distributions of hydrochemistry field are controlled by the hydrodynamic formation mechanism of groundwater in sedimentary basins. The groundwater concentrated in the cross-formational flow results in relatively higher concentration. Centrifugal flow driven by sediment compaction is the main flow of oil-gas migration and accumulation in the sedimentary basins. During the process of centrifugal flow, the oil and gas gathered due to the lithology, stratum, fault and so on. The cross-formational flow area is favorable for enrichment. During the process of centripetal flow, the oil and gas accumulated previously may be destroyed by dynamic trap or lithologic trap, stratigraphic trap and fault trap under certain geological conditions.

Keywords: [hydrodynamics of groundwater](#) [hydrochemistry of groundwater](#) [hydrocarbon accumulation and preservation conditions](#)