

## 鄂尔多斯白垩系自流水盆地沉积特征、岩性分布与盆地演化规律

[点此下载全文](#)

引用本文: 杨友运,张英利,侯光才.2008.鄂尔多斯白垩系自流水盆地沉积特征、岩性分布与盆地演化规律[J].地球学报,29(4):405-413.

DOI: 10.3975/cagsb.2008.04.02

摘要点击次数: 594

全文下载次数: 733

作者	单位	E-mail
<a href="#">杨友运</a>	<a href="#">西安石油大学, 陕西西安710065</a>	<a href="mailto:xsdyyxx@163.com">xsdyyxx@163.com</a>
<a href="#">张英利</a>	<a href="#">中国地质科学院矿产资源研究所, 北京100037</a>	
<a href="#">侯光才</a>	<a href="#">西安地质矿产研究所, 陕西西安710054</a>	

基金项目:国家“973”项目(编号:2003CB214607);国土资源部“十五”重大项目“鄂尔多斯盆地地下水勘查”(编号:1212010331302)

中文摘要:鄂尔多斯白垩系含水盆地是国内特大型自流水盆地,沉积相和盆地演化是影响含水岩组发育特征以及含水性的重要因素之一。笔者从盆地边界特征、盆地结构、沉积环境以及沉积物特征入手,着重探讨了盆地演化与含水岩组分布规律、含水岩组沉积相与含水性之间的关系。结果发现早白垩世时,盆地以南北向为轴、东西非均衡沉降,盆地结构东缓西不对称。盆内发育的洛河、环河华池和罗汉洞3个主要含水岩组受盆地构造演化和沉积相控制,洛河组最发育,分布面积最广,环河华池组以及罗汉洞组比较局限,同时在盆地西部沉降区分布的地层厚度明显大于周缘抬升带。随盆地沉积环境变化,沿盆缘以冲积扇、河流相和三角洲平原分流河道相砂砾岩和砂岩沉积为主,盆内由风成沙漠相、三角洲前缘相和湖泊相岩和泥岩组成。其中洛河组风成沙漠相砂岩,因产状稳定、覆盖面积广、岩性组分和结构成熟度高、孔渗性能好、杂基和有害可溶组分含量低,顶底板及边界隔挡岩性空间匹配关系好,形成了自流水盆地最理想的含水层。

中文关键词:鄂尔多斯 白垩系 自流水盆地 沉积相 岩性 盆地演化

## Depositional Characteristics, Lithologic Facies Distribution and Evolution Pattern of Cretaceous Artesian Basin in Ordos

**Abstract:** Ordos basin is one of the Cretaceous aquifer basins in China, where sedimentary facies and basin evolution constitute one of the important factors affecting the development of water-bearing formation and water content. Based on boundary features, basin structure, sedimentary environment and sediments of this basin, the authors discussed the relationships between basin evolution and distribution pattern, sedimentary facies of water-bearing formation and water content. It is indicated that, during early Cretaceous, its axis extended from south to north, and its disequilibrium subsidence appeared in E-W direction and its configuration was asymmetrical, being flat-dipping in the east and steeply-inclined in the west. Three main water-bearing formations, namely Luohe formation, Huanhe-Huachi formation and Luohandong formation, were controlled by structural evolution and sedimentary facies. Luohe formation was developed extensively, while Huanhe-Huachi formation and Luohandong formation were distributed locally. Stratigraphic thickness at the center of the subsidence was thicker than that along the uplift zone around Ordos basin. Alluvial fans, river facies and distributary channel the delta front were mostly distributed along the basin margin, whose lithologic characters were mostly sandy conglomerate and sandstone. Thus, aeolian desert facies, delta and lacustrine facies are distributed at the center, whose lithologies were composed of sandstone and mudstone. Among all sedimentary facies, the aeolian desert facies sandstone of Luohe formation constitutes the best water-bearing bed, which is attributed to stable attitude, large distribution area, high textural maturity, high porosity and permeability, low heterocompound and soluble components, and reasonable spatial matching relations of roofs and floors.