

阿尔金山索尔库里北盆地沉积与构造演化

陈正乐¹, 白彦飞², 陈柏林¹, 王小凤¹, 陈宣华¹, 刘健¹

(1.中国地质科学院地质力学研究所, 北京 100081;

2.水利部山西水利水电科学研究院, 山西 太原 030024)

摘要: 索尔库里北盆地位于阿尔金山中段, 盆地的形成和演化与阿尔金断裂的走滑作用密切相关。根据野外地质填图的结果, 通过沉积相、沉积环境的研究, 在盆地内部划分出早第四纪七个泉组砾岩层, 并将盆地新生代的沉积划分为两大序列: 下部为渐新世下干柴沟组、中新世上干柴沟组、油砂山组序列, 沉积相从底部的冲积扇、洪积扇向上逐渐变化为断陷湖盆相, 再变化为冲积扇、洪积扇相, 为一个完整的断陷湖盆的发生—发展—消亡的序列; 上部为早第四纪七个泉组序列, 为冲积扇、洪积扇沉积。结合盆地沉积充填过程和构造变形分析, 建立了盆地多阶段的构造演化模式, 进而探讨了盆地的形成演化与新生代阿尔金断裂带走滑作用过程之间的动力学联系。

关键词: 阿尔金山; 索尔库里北盆地; 沉积特征; 构造演化; 阿尔金断裂

中图分类号: P 534.61 **文献标识码:** A **文章编号:** 1671-2552 (2003) 06-0405-07

Sedimentation and tectonic evolution of the north Xorkol basin in the Altyn Tagh Range

CHEN Zhengle¹, BAI Yanfei², WANG Xiaofeng¹, CHEN Bailin¹, CHEN Xuanhua¹, LIU Jian¹

(1. Institute of Geomechanics, Chinese Academy of Geological Sciences, Beijing 100081, China;

2. Shanxi Hydroelectric Investigation and Design Institute, MWR, Taiyuan 030024, Shanxi, China)

Abstract: The north Xorkol basin is located in the central segment of the Altyn Tagh (Altun) Range. Its formation and evolution is closely related to the strike-slip movement of the Altyn Tagh fault. Mainly on the basis of our geological mapping in 2001 and a study of the sedimentary facies and environment, the conglomerate bed of the early Quaternary Qigequan Formation is distinguished and the Cenozoic sedimentary strata in this basin are divided into two sequences: the lower sequence consists of the Oligocene Lower Ganchaigou Formation, Miocene Upper Ganchaigou Formation and Lower Youshashan Formation and the sedimentary facies changes gradually from the alluvial and diluvial fan facies at the base upward to the down-faulted lake basin facies in the middle and then again to the alluvial and diluvial fan facies at the top, forming a complete sequence of generation-development-extinction of a down-faulted lake basin; the upper sequence is the Early Quaternary Qigequan sequence, consisting mainly of alluvial and diluvial fan deposits. A model of multi-stage tectonic evolution has been constructed in combination the process of deposition and filling of the basin and an analysis of tectonic deformation and then the dynamic relation between the formation and evolution of the basin and the strike-slip process of the Cenozoic Altyn Tagh fault is discussed.

Key words: north Xorkol basin; sedimentary characteristics; tectonic evolution; Altyn Tagh Range.