



秦勇, 姜波, 王继尧, 吴财芳, 傅雪海, 韦重韬, 侯泉林, 据宜文. 沁水盆地煤层气构造动力条件耦合控藏效应[J]. 地质学报, 2008, 82(10): 1355-1362

沁水盆地煤层气构造动力条件耦合控藏效应 [点此下载全文](#)

[秦勇](#) [姜波](#) [王继尧](#) [吴财芳](#) [傅雪海](#) [韦重韬](#) [侯泉林](#) [据宜文](#)

中国矿业大学资源与地球科学学院, 江苏徐州, 221008; 中国矿业大学资源与地球科学学院, 江苏徐州, 221008; 中国矿业大学资源与地球科学学院, 江苏徐州, 221008; 中国矿业大学资源与地球科学学院, 江苏徐州, 221008; 中国矿业大学资源与地球科学学院, 江苏徐州, 221008; 中国矿业大学资源与地球科学学院, 江苏徐州, 221008; 中国矿业大学资源与地球科学学院, 江苏徐州, 221008; 中国矿业大学资源与地球科学学院, 江苏徐州, 221008; 中国矿业大学资源与地球科学学院, 江苏徐州, 221008; 中国矿业大学资源与地球科学学院, 江苏徐州, 221008

基金项目: 国家“973”项目(编号2002CB211704)、“863”项目(编号2006AA06Z231)和国家自然科学基金重点项目(编号40730422)资助成果

DOI:

摘要点击次数: 204

全文下载次数: 59

摘要:

构造动力条件涵盖诸多要素, 综合分析这些要素与煤层气成藏效应之间关系, 是全面认识构造动力条件控藏效应的基础。为此, 本文采用盆地分析、构造应力场模拟、镜质组光性组构、构造曲率等方法, 分析了盆地构造演化、构造应力场、盆内构造分异、煤储层构造变动等与煤层气成藏效应之间关系, 探讨了有利于煤层气富集高渗条件发育的构造动力特点。研究表明: 燕山期是控制煤层气成藏的关键时期, 该期NW-SE向近水平挤压构造应力场作用下形成的次级褶曲和高角度正断层, 奠定了盆地煤层气赋存规律的总体格局, 使NNE-NE向次级褶曲成为主要的控气构造类型; 构造动力通过煤储层改造程度对煤储层渗透性发育特点的控制, 不仅体现于镜质组光性指示面形态及其空间展布特征, 也使得中等程度的构造主曲率可能提供最有利于煤层气渗流的构造条件, 导致现代构造应力场高主应力差有利于煤层渗透率的发育。耦合分析认为, 沁水盆地煤层气成藏效应取决于上述构造动力学因素之间的合理配置, 南部仰起端的阳城北、中南部西段的安泽—沁水、中部西侧的沁源周围、东部中段的武乡西北等4个地段, 可能存在有利于煤层气成藏的构造动力学条件。

关键词: [煤层气成藏](#) [构造动力条件](#) [耦合控制](#)

Coupling Control of Tectonic Dynamical Conditions to Coalbed Methane Reservoir Formation in the Qinshui Basin, Shanxi, China [Download Fulltext](#)

[QIN Yong](#) [JIANG Bo](#) [WANG Jiyao](#) [WU Cai fang](#) [FU Xuehai](#) [WEI Chongtao](#) [HOU Quanlin](#) [JU Yiwen](#)

School of Mineral Resources and Geoscience, China University of Mining & Technology, Xuzhou, Jiangsu, 221008; School of Mineral Resources and Geoscience, China University of Mining & Technology, Xuzhou, Jiangsu, 221008; School of Mineral Resources and Geoscience, China University of Mining & Technology, Xuzhou, Jiangsu, 221008; School of Mineral Resources and Geoscience, China University of Mining & Technology, Xuzhou, Jiangsu, 221008; School of Mineral Resources and Geoscience, China University of Mining & Technology, Xuzhou, Jiangsu, 221008; School of Mineral Resources and Geoscience, China University of Mining & Technology, Xuzhou, Jiangsu, 221008; School of Mineral Resources and Geoscience, China University of Mining & Technology, Xuzhou, Jiangsu, 221008; School of Mineral Resources and Geoscience, China University of Mining & Technology, Xuzhou, Jiangsu, 221008; School of Mineral Resources and Geoscience, China University of Mining & Technology, Xuzhou, Jiangsu, 221008; School of Mineral Resources and Geoscience, China University of Mining & Technology, Xuzhou, Jiangsu, 221008

Fund Project:

Abstract:

Tectonic dynamical conditions include many factors, and it is the basic to understand the CBM (coalbed methane) reservoir controlling effect of tectonic dynamical conditions that the correlations between the factors and the CBM reservoir formation are analyzed comprehensively. Thus, based on some methods such as basin analysis, tectonic stress field simulation, vitrinite optical fabric and structural curvature, the paper analyzed the correlations of the basin evolution, tectonic stress field, structure differentiation and tectonic coalbed alteration corresponding to CBM reservoir formation effect, and discussed the tectonic dynamical characteristics affording the favorable occurrence of CBM enrichment and high permeability districts. The results indicate that the Yanshanian movement was a key stage to control the CBM reservoir formation, during which the general pattern of the CBM occurrence in the basin was established under the control of the secondary folds and high angle normal faults derived from the tectonic stress field with the main compressive stress of approximately horizontal NW-SE orientation, that is to say, the NNE-NE secondary folds are major CBM controlled structure in the basin. The control of the tectonic dynamics to the coal reservoir permeability is not only materialized by the occurrence of the vitrinite optical indicating faces, but also might be why the middle structural main curvature value and high main stress difference are most propitious to the occurrence of the CBM reservoirs with high permeability. The CBM pooling effect in the Qinshui basin depended on the reasonable matching among the above mentioned tectonic dynamical factors, by which it is predicted that there might exist the tectonic dynamical conditions that favor the CBM reservoir formation in four districts including the northern Yangcheng, Anze Qinshui, Qinyuan and Wuxiang.

Keywords: [CBM reservoir formation](#) [tectonic dynamical condition](#) [coupling control](#)

[查看全文](#) [查看/发表评论](#) [下载PDF阅读器](#)



