南襄盆地泌阳凹陷深凹区核三段沉积特征及演化

引用本文：廖纪佳,朱筱敏,董艳蕾,胡廷惠,罗家群,刘桂兰.2012.南襄盆地泌阳凹陷深凹区核三段沉积特征及演化[J].地球学报,33(2):167-175.

DOI：10.3975/cagsb.2012.02.05

作者	单位	E-mail
廖纪佳	中国石油大学(北京)地球科学学院	liaojijia198433@163.com
朱筱敏	中国石油大学(北京)地球科学学院	xmzhu@cup.edu.cn
董艳蕾	中国石油大学(北京)地球科学学院	
胡廷惠	大港油田第三采油厂	
罗家群	河南石油勘探开发研究院	
刘桂兰	河南石油勘探开发研究院	

基金项目:国家973项目“中国西部典型叠合盆地油气成藏机制与分布规律”(编号: 2006CB202300)；国家重大科技专项“大型油气田及煤层气开发”相关专题(编号: 2011ZX05003-004; 2011ZX05009-002-104; 2011ZX05025-005-002)

中文摘要:通过测井、录井、粒度分析资料，结合区域地质资料、前人研究成果、岩心描述和地震反射资料，认为核三段发育辫状河三角洲、近岸水下扇、滑塌浊积扇及湖泊沉积，并进一步识别出5个亚相及6个微相。其中，近岸水下扇发育于研究区西南部和东南部的控边断层处，辫状河三角洲发育于东北部，滑塌浊积扇发育于辫状河三角洲前端的半深湖-深湖区域。近岸水下扇岩性主要为灰白色中、细砾岩，砾石成分复杂，分选差，磨圆程度低。辫状河三角洲发育平行层理、交错层理及冲刷充填构造，垂向上构成间断正韵律，其岩性为浅灰色砾岩、砾质砂岩、砂岩，中-厚层或块状，自然电位曲线和电阻率曲线呈钟形或箱型。辫状河三角洲前缘砂体失稳，产生滑塌，在深湖区形成滑塌浊积扇，其岩性为细砂岩、粉砂岩、泥质粉砂岩，多呈正韵律，发育块状层理、液化变形层理、波状层理及泥岩撕裂屑、槽模、沟模构造等，电测曲线表现为钟形、箱形、漏斗形等。湖泊沉积主要发育于三角洲前缘和近岸水下扇前方的深凹区。从H38-H31研究区经历了水体由深到浅再略加深的沉积演化。

中文关键词:泌阳凹陷 深凹区 核三段 沉积相 沉积特征

Sedimentary Characteristics and Evolution of He-3 Formation in Deep Area of Biyang Sag, Nanxiang Basin

Abstract:Based on logging and particle size analyses in combination with regional geological data, results of previous studies, core observation and seismic reflection data, the authors consider that braided river delta, near-shore subaqueous fan, slump turbidite fans and lacustrine sedimentary facies are developed in the He-3 Formation. On such a basis, five subfacies and six microfacies can be identified. The near-shore subaqueous fan is developed in southwest and southeast margin-controlling faults of the study area, braided river delta is developed in the northeast, and slump turbidite fan is developed at the semi-deep lake-deep lake area in front of braided river delta. The lithology of near-shore subaqueous fan is mainly the medium to fine gray conglomerate characterized by multiple composition, poor sorting and poor roundness. Braided river delta consists of medium-thick gray bedded conglomerate, pebbly sandstone, sandstone with parallel bedding, cross bedding and scour-and-fill structure. Vertically, braided river delta shows disconnected positive rhythm. Spontaneous potential and resistivity curves are bell-shaped or box-shaped. Where the sand of braided river delta front is instable, slump would occur and, at last, the slump turbidite fans would form in deep lake. The lithology of slump turbidite fans includes fine-grained sandstone, siltstone and argillaceous siltstone with positive rhythm, massive bedding, liquefied deformation bedding, wave bedding, mudstone rip-up, flute mold, furrow membrane and other structures. Electric curves show bell, box and funnel shapes. Lacustrine sedimentary facies is mainly developed in the furrow area in front of near-shore subaqueous fan and delta front. The water depth of the study area has experienced the evolution from deep to shallow and then a little deeper in H38-H31 area.

keywords:Biyang sag deep area He-3 Formation sedimentary facies sedimentary characteristics

主管单位：国土资源部 主办单位：中国地质科学院
地址： 北京市西城区百万庄大街26号，中国地质科学院东楼317室 邮编：100037 电话：010-68327396 E-mail： diqiuxb@126.com