



118年12月4日 星期二

[首页](#) | [期刊介绍](#) | [期刊影响](#) | [编委会](#) | [投稿须知](#) | [期刊订阅](#) | [联系我们](#) | [内网地址](#) | [English](#)

石油学报 » 2015, Vol. 36 » Issue (5): 533-545 DOI: 10.7623/syxb201505002

[地质勘探](#)
[最新目录](#) | [下期目录](#) | [过刊浏览](#) | [高级检索](#)
[« 前一篇](#) | [后一篇 »](#)

边缘海构造旋回控制南海深水区油气成藏

张功成¹, 屈红军², 刘世翔¹, 谢晓军¹, 赵钊¹, 沈怀磊¹

1. 中海油研究总院 北京 100028;
2. 西北大学地质学系 陕西西安 710069

Tectonic cycle of marginal sea controlled the hydrocarbon accumulation in deep-water areas of South China Sea

Zhang Gongcheng¹, Qu Hongjun², Liu Shixiang¹, Xie Xiaojun¹, Zhao Zhao¹, Shen Huailei¹

1. CNOOC Research Institute, Beijing 100028, China;
2. Department of Geology, Northwest University, Shaanxi Xi'an 710069, China

[摘要](#)[图/表](#)[参考文献\(0\)](#)[相关文章\(15\)](#)全文: [PDF](#) (6918 KB) [HTML](#) (1 KB)输出: [BibTeX](#) | [EndNote](#) (RIS)

摘要

南海边缘海构造旋回包括古南海形成与萎缩及新南海形成与萎缩2个旋回。边缘海构造旋回控制南海深水区盆地分布与性质,南海北部为被动大陆边缘裂谷盆地,南沙地块区盆地为漂移裂谷盆地,南部为复合型活动大陆边缘挤压盆地,西部为转换大陆边缘剪切拉张盆地,东部为俯冲大陆边缘增生楔盆地,深水区盆地主要分布在陆坡区和南沙地块上。边缘海构造旋回控制南海深水区主力烃源岩发育与类型,南海北部大陆边缘深水区发育始新世陆相、渐新世早期海陆过渡相、渐新世晚期海相3套烃源岩;南沙漂移裂谷盆地发育晚白垩世—早渐新世1套陆源海相烃源岩;南海南部大陆边缘深水区发育渐新世、早中新世和中新世3套海陆过渡相烃源岩;南海西部大陆边缘深水区发育渐新世、早中新世、中新世3套海陆过渡相烃源岩。边缘海构造旋回控制南海深水区大型储集体的形成,南海北部深水区发育4套储集体以深海扇为主,南沙地块发育2套储集体以三角洲与生物礁为主,南海南部以深水扇和生物礁为主;在大河入海口前缘的区域形成大型水道砂体等碎屑岩储集体,在隆起区形成生物礁滩。边缘海旋回控制深水区储盖组合,南海北部大陆边缘深水区油气成藏组合主要为渐新统一上新统,南沙地块区主要为始新统一渐新统下部,南海南部大陆边缘深水区成藏组合为渐新统一上新统,南海西部大陆边缘深水区成藏组合为渐新统一中新统。南海深水区主要油气藏类型与构造圈闭、深水扇及生物礁相关。南海深水区成盆、成烃、成藏特征受控于边缘海构造旋回,油气勘探潜力巨大。

关键词 : 边缘海构造旋回, 盆地类型, 烃源岩, 深水扇, 生物礁, 生烃凹陷, 成藏组合, 深水区

Abstract :

The tectonic cycle of marginal sea in South China Sea(SCS) includes two cycles which are formation and contraction of Proto-SCS and Neo-SCS. The distribution and features of deep-water basins in SCS are controlled by tectonic cycle of marginal sea. The north of SCS is an extensional basin on passive continental margin, while the Nansha block is a drifting rift basin, and the south is a foreland basin on subduction continental margin, the west is a transtensional basin on transform continental margin, the east is an accretionary wedge basin on subduction continental margin, and the deep-water basins are distributed mainly in the slope zone and Nansha block. The development and types of major source rocks in deep-water areas are dominated by the tectonic cycle of marginal sea. There are three sets of source rocks in deep-water areas of the northern continental margin in SCS, and they are Eocene terrestrial facies, the early Oligocene transitional facies and marine facies in late Oligocene marine facies. Three sets of transitional facies are noticed in deep-water areas of both the southern continental margin in SCS, and they are Oligocene, early Miocene and middle Miocene. The distribution of the main reservoir rocks which mainly developed in Oligocene and Pliocene are also dominated by the tectonic cycle of marginal sea, and they are clastic reservoir rocks that are formed in firth, underwater incised valley and frontal area of the slope, and then became biological reef in the uplift area. The reservoir assemblages in deep-water areas of the northern and the southern continental margin in SCS are present in Oligocene-Pliocene, while the ones in Nansha block are Eocene-lower Oligocene, the ones in the western continental margin are Oligocene-Miocene. The types of reservoir in abyssal zone consists of structural trap, deep-water fan and reef, so there is great potential for exploration in deep-water areas of SCS.

Key words : tectonic cycle of marginal sea types of the basin hydrocarbon source rocks deep-water fan organic reef the hydrocarbon-generation sag the reservoir-forming assemblages deep water area

收稿日期: 2014-09-26

中图分类号: TE122

基金资助:

国家重点基础研究发展计划(973)项目"南海深水盆地油气资源形成与分布基础性研究"(2009CB219400)、国家重大科技专项"海洋深水区油气勘探关键技术"(2008ZX05025,2011ZX05025)、国土资源部全国油气资源战略选区调查与评价项目"南海北部陆坡深水海域油气资源战略调查及评价"(XQ-2004-05)、"南海北部深水区天然气资源战略调查及评价"(XQ-2007-05)资助。

通讯作者: 张功成,男,1966年1月生,1988年获西北大学学士学位,1994年获中国地质大学(北京)博士学位,现为中海油研究总院勘探研究院总地质师、教授级高级工程师,主要从事石油地质综合研究与管理工作。
Email: zhanggch@cnooc.com.cn E-mail: zhanggch@cnooc.com.cn

作者简介: 张功成,男,1966年1月生,1988年获西北大学学士学位,1994年获中国地质大学(北京)博士学位,现为中海油研究总院勘探研究院总地质师、教授级高级工程师,主要从事石油地质综合研究与管理工作。
Email: zhanggch@cnooc.com.cn

引用本文:

服务

- ▶ [把本文推荐给朋友](#)
- ▶ [加入我的书架](#)
- ▶ [加入引用管理器](#)
- ▶ [E-mail Alert](#)
- ▶ [RSS](#)

作者相关文章

- ▶ [张功成](#)
- ▶ [屈红军](#)
- ▶ [刘世翔](#)
- ▶ [谢晓军](#)
- ▶ [赵钊](#)
- ▶ [沈怀磊](#)

张功成, 屈红军, 刘世翔, 谢晓军, 赵钊, 沈怀磊. 边缘海构造旋回控制南海深水区油气成藏[J]. 石油学报, 2015, 36(5): 533-545.
Zhang Gongcheng, Qu Hongjun, Liu Shixiang, Xie Xiaojun, Zhao Zhao, Shen Huailei. Tectonic cycle of marginal sea controlled the hydrocarbon accumulation in deep-water areas of South China Sea[J]. Acta Petrolei Sinica, 2015, 36(5): 533-545.

链接本文:

<http://www.syx-b-cps.com.cn/CN/10.7623/syxb201505002> 或 <http://www.syx-b-cps.com.cn/CN/Y2015/V36/I5/533>

版权所有 © 2013 《石油学报》编辑部

通讯地址: 北京市西城区六铺炕街6号 (100724)

电话: 62067137(收稿查询), 010-62067128(期刊发行、地质勘探栏目编辑), 62067139(油田开发、石油工程栏目编辑)

E-mail: syxb@cnpc.com.cn(编辑部), syxb3@cnpc.com.cn(收稿及稿件查询), syxb5@cnpc.com.cn(地质勘探栏目编辑), syxb7@cnpc.com.cn(油田开发栏目编辑),
syxb8@cnpc.com.cn(石油工程栏目编辑), syxb4@cnpc.com.cn(期刊发行)

本系统由北京玛格泰克科技发展有限公司设计开发 技术支持: support@magtech.com.cn

京ICP备13000890号-1