

引用本文:

张春贺, 乔德武, 李世臻, 张颖, 杨辉, 胡来东, 尚应军, 徐雷良, 柴继堂, 谭捍东, 刘劲松. 复杂地区油气地球物理勘探技术集成[J]. 地球物理学报, 2011, V54(2): 374-387, DOI: 10.3969/j.issn.0001-5733.2011.02.014

ZHANG Chun-He, QIAO De-Wu, LI Shi-Zhen, ZHANG Ying, YANG Hui, HU Lai-Dong, SHANG Ying-Jun, XU Lei-Liang, CHAI Ji-Tang, TAN Han-Dong, LIU Jin-Song. Integration of oil and gas geophysical exploration technologies for geologically complex areas. Chinese J. Geophys. (in Chinese), 2011, V54(2): 374-387, DOI: 10.3969/j.issn.0001-5733.2011.02.014

复杂地区油气地球物理勘探技术集成

张春贺¹, 乔德武¹, 李世臻^{1,5}, 张颖², 杨辉², 胡来东³, 尚应军³, 徐雷良³, 柴继堂⁴, 谭捍东⁵, 刘劲松^{6*}

1. 国土资源部油气资源战略研究中心, 北京 100034;
2. 中国石油勘探开发研究院, 北京 100083;
3. 中国石化胜利油田有限公司地球物理勘探开发公司, 东营 257100;
4. 中海石油(中国)有限公司湛江分公司, 湛江 524057;
5. 中国地质大学(北京), 北京 100083;
6. 中国科学院地质与地球物理研究所, 北京 100029

Integration of oil and gas geophysical exploration technologies for geologically complex areas

ZHANG Chun-He¹, QIAO De-Wu¹, LI Shi-Zhen^{1,5}, ZHANG Ying², YANG Hui², HU Lai-Dong³, SHANG Ying-Jun³, XU Lei-Liang³, CHAI Ji-Tang⁴, TAN Han-Dong⁵, LIU Jin-Song^{6*}

1. Strategic Research Center for Oil and Gas, Ministry of Land and Resources, Beijing 100034, China;
2. Research Institute of Petroleum Exploration and Development, CNPC, Beijing 100083, China;
3. Geophysical Exploration and Development Company of Shengli Oil field, SINOPEC, Dongying 257100, China;
4. Zhanjiang Branch of CNOOC Ltd., Zhanjiang 524057, China;
5. China University of Geosciences(Beijing), Beijing 100083, China;
6. Institute of Geology and Geophysics, Chinese Academy of Science, Beijing 100029, China

摘要

参考文献

相关文章

Download: PDF (1386KB) HTML 1KB Export: BibTeX or EndNote (RIS) Supporting Info

摘要 随着我国油气勘探程度的不断提高,勘探难度不断加大.全国油气资源战略选区调查与评价项目历经六年,通过对深水海域、西部复杂山地、西藏高原、南方碳酸盐岩、火山岩覆盖区等几类典型地球物理勘探久攻不克的复杂地区开展地震、重磁电、综合地球物理勘探联合攻关,以及天然地震层析成像攻关实验,取得了长足进步,直接带动获得了一批有价值的油气勘探发现和成果,形成了针对深水海域的长电缆地震勘探技术、适用于西部复杂山地和南方碳酸盐岩裸露区的宽线地震勘探技术、高原地震调查技术、复杂地区三维重磁电勘探技术、针对火山岩覆盖区和南方碳酸盐岩裸露区的综合地球物理勘探技术、可应用于复杂山地的天然地震层析成像技术等六项地球物理勘探技术攻关集成.本文介绍了全国油气资源战略选区调查与评价项目所取得的这六项地球物理勘探技术攻关成果.提出了今后在复杂地区开展油气地球物理勘探工作的有关思路.

关键词: 深水海域 复杂山地 西藏高原 南方碳酸盐岩 火山岩覆盖区 地震勘探 重磁电勘探 综合地球物理勘探 天然地震层析成像

Abstract: With the increasing effort on hydrocarbon exploration in China, more and more challenges are faced in exploration. The State Project of Strategic Area Survey and Evaluation for Oil and gas Resources has been carried out for 6 years. Under the support of this project, researches on seismic survey, gravity-magnetic-electric survey, and comprehensive geophysical exploration have been performed in several typical geologically complex areas where traditional geophysical exploration methods have been encountering great difficulties for long time. These areas include deep-water seas, western complex mountainous regions, Tibet plateau, carbonate outcrop in the south and volcanic regions. In addition, significant progresses have been made in development of micro-seismic tomography technology. Development of these technologies brings in a large quantity of valuable exploration findings. In total, the following six geophysical exploration technologies have been developed successfully: long-cable seismic profiling exploration technology for deep-water sea, wide-line seismic profiling exploration technology for western complex mountainous area and the areas in south China with carbonate outcrop, plateau seismic survey technology, 3D gravity-magnetic-electric survey technology for complex areas, comprehensive geophysical exploration technology for volcanic areas and southern areas with carbonate outcrop, and natural seismic tomography technology for complex mountainous areas. This paper gives a description of these new technologies developed in The State Project of Strategic Area Survey and Evaluation for oil and gas Resources, and puts forward the ideas for geophysical exploration in geologically complex areas in the near future.

Service

- 把本文推荐给朋友
- 加入我的书架
- 加入引用管理器
- Email Alert
- RSS

作者相关文章

- 张春贺
- 乔德武
- 李世臻
- 张颖
- 杨辉
- 胡来东
- 尚应军
- 徐雷良
- 柴继堂
- 谭捍东
- 刘劲松

Keywords: Deep-water sea Complex mountainous area Tibetan plateau Carbonate outcrop in south China
Volcanic area Seismic survey Gravity-magnetic-electric survey Comprehensive geophysical exploration
Micro-seismic tomography

Received 2011-01-12;

Fund:

国家油气专项《全国油气资源战略选区调查与评价》资助.

Corresponding Authors: 乔德武,男,1954年生,研究员,1988年于中国地质科学院获得博士学位,从事构造地质及油气资源战略调查研究工作. E-mail: qiaodewu@263.net Email: qiaodewu@263.net

About author: 张春贺,男,1966年生,教授级高级工程师,从事地球物理勘探研究工作. E-mail: chunhezh@gmail.com

链接本文:

<http://www.geophy.cn/CN/10.3969/j.issn.0001-5733.2011.02.014> 或 <http://www.geophy.cn/CN/Y2011/V54/I2/374>

Copyright 2010 by 地球物理学报