

CSCD来源期刊(C库)
中文核心期刊
中国科技核心期刊
RCCSE中国核心学术期刊
北方期刊优秀奖
辽宁省优秀期刊一等奖

俄罗斯《文摘杂志》(AJ)收录
英国《科学文摘》(SA)收录
美国《石油文摘》(PA)收录
美国《化学文摘》(CA)收录
美国《剑桥科学文摘》(CSA)收录
万方数据库收录

ISSN 1006-6535
CN 21-1357/TE



特种油气藏

TEZHONG YOUQICANG

SPECIAL OIL & GAS RESERVOIRS

NO. 5 2020



ISSN 1006-6535



10>

9 771006 653200

第27卷 第5期 Vol.27 No.5

主管:中国石油天然气集团有限公司

主办:中国石油天然气股份有限公司辽河油田分公司

特种油气藏

目 次

1994 年创刊(双月刊)
第 27 卷 第 5 期 总第 142 期
2020 年 10 月 25 日出版

编委会主任 万 军

主 编 李晓光
副主编 武 豪 胡英杰 王 威

主管单位	中国石油天然气集团有限公司
主办单位	中国石油天然气股份有限公司辽河油田分公司
承办单位	辽河油田分公司勘探开发研究院
编辑出版	《特种油气藏》编辑部
印 刷	辽河石油报印刷厂
发行范围	国内外公开发行
国内发行	辽宁省盘锦市邮政局 邮发代号:8-173
国外发行	中国国际图书贸易总公司 (北京 399 信箱) 国外代号:BM1504
地 址	辽宁省盘锦市辽河油田分公司 勘探开发研究院
电 话	0427-7823579;0427-7820262
邮 编	124010
投稿网址	www.sogr.com.cn
中国标准连 续出版物号	ISSN 1006-6535 CN 21-1357/TE
广告许可 证 号	211100100026
定 价	26.00 元 / 册
责任编辑	林树龙 技术编辑 朱雅楠
彩页编辑	孟凡勤 英文翻译 北京太科石油信息咨询服务公司

SPECIAL OIL & GAS RESERVOIRS

Vol.27 No.5(Sum.No.142)Oct.2020

Superintended by CNPC

Sponsored by Liaohe Oilfield Company of PetroChina

Organized by E&D Research Institute of Liaohe Oilfield
Company of PetroChina

Editor in Chief LI Xiaoguang

Associate Editor in Chief Wu Yi, Hu Yingjie, Wang Wei

Edited & Published by Editorial Office of Special
Oil & Gas Reservoirs

Address E&D Research Institute of Liaohe Oilfield Company,
PetroChina,Panjin,Liaoning,China,124010

Tel 0427-7823579 0427-7820262

Printing The Press of Liaohe Petroleum Newspaper Office

Overseas Distribution China International Book Trading
Corporation P.O.Box 399,Beijing,China
(Code, No.BM1504)

Subscription Rate(Overseas) US \$26 per copy
US \$156 per year

综述

- 中国东北地区古生界油气前景展望 康玉柱,王纪伟(1)

地质勘探

- 川东地区台洼边缘二叠系生物礁滩储层特征及控制因素 蒋裕强,刁志龙,徐昌海,冯亮,谷一凡,易娟子(7)
- 东西伯利亚地台文德系海陆过渡相沉积特征及开发潜力 张宇焜,杨烁,郭晓,王帅,王晖,宋来明(14)
- 渤海湾盆地秦皇岛 32-X 油田决口扇储层的沉积特征与区分标准 陈薪凯,陈程,汪虎(22)

莺琼结合部气烟囱群地震响应特征

- 宋瑞有,胡林,黄义文,胡潜伟,侯静娴(30)

古近系陡坡扇构造 – 岩性复合圈闭识别与储层刻画技术及应用

- 杨东升,赵志刚,徐建永,刘志峰,李楠(38)
- 乌夏南斜坡带上组沉积微相及演化特征研究 涂智杰(45)

微生物地球化学勘探技术在黄土塬地貌区油气勘探中的应用

- 曹军,周进松,银晓,李园园,刘鹏,丁力,梁永兴(53)
- 冀中坳陷北部奥陶系储层形成机理与分布模式

- 赵文龙,韩春元,严梦颖,乔博,罗静,薛辉,郭惠平(61)

乌石凹陷东区构造演化特征及中浅层油气富集规律研究

- 胡林,金秋月,杨希冰,胡德胜,卢梅(68)

莱州湾凹陷垦利 16 油田混源油定量判断及勘探前景分析

- 刘庆顺,杨海风,郭涛,温宏雷,李果营(74)

黔北正安区块牛栏组基于叠后地震属性的多尺度裂缝预测

- 蓝宝锋,黄艺,张福,李刚权,刘婷,张金川(81)

歧口凹陷断裂密集带形成演化特征及油气富集差异研究

- 刘世瑞,王有功,刘海涛,于爱暄(88)

油藏工程

储气库碳酸盐岩裂隙微粒运移实验模拟

- 游利军,邵佳新,王都,王汉,康毅力,陈明君(94)

双重介质复合数值试井技术在缝洞性礁灰岩底水油藏中的应用

- 杨勇,谢日彬,闫正和,孙常伟,李小东(100)

大庆油田四次采油凝胶颗粒 + 聚合物驱技术研究

- 陈文林(106)

特低渗油藏水驱后二氧化碳气水交替驱见效特征

- 雷欣慧,郑自刚,余光明,张康(113)

基于模糊 C 均值聚类与 Bayes 判别的致密油储层分类评价

- 王伟,康胜松,高峰,郭粉转,张亮(118)

水淹稠油油藏火驱开发受效特征研究

- 才业(125)

基于动量方程的页岩气体扩散能力表征模型与实验研究

- 陈璐,胡志明,熊伟,杨航,端祥刚,常进(132)

钻采工程

GW-CP194-80M 型煤层气双保压取心工具研制及现场试验

- 朱庆忠,苏雪峰,杨立文,苏洋,罗军(139)

水平井环空预设多级井底控锥增油实验

- 王海栋,刘义坤,孟文波,张崇(145)

直读测调偏心恒流配水器研制

- 肖国华,黄晓蒙,李会杰,关海峰(151)

深水浅部水合物储层水平井井筒温度计算模型

- 董胜伟,王子健,曹飞,李英杰,张爱霞,程万(157)

苏里格气田有节流器气井临界携液参数沿井深分布规律

- 王瑞,魏美集,胡改星,姜东兴,居迎军,张宁生(162)

深层脆性页岩力学性能及井壁稳定性研究

- 韩正波,刘厚彬,张靖涛,杨华建,沈欣宇,阳强(167)

期刊基本参数:CN 21-1357/TE*1994*b*A4*176*zh*P*¥26.00*2000*26*2020-10

SPECIAL OIL & GAS RESERVOIRS

Vol.27 No.5(Sum.No.142)Oct.2020

CONTENTS

Summary

- Prospect of Paleozoic Oil and Gas in Northeast China Kang Yuzhu, Wang Jiwei(1)

Geologic Exploration

- Characteristics and Controlling Factors of Permian Reef Beach Reservoir in Platform–Depression Margin of Eastern Sichuan Basin Jiang Yuqiang, Diao Zhilong, Xu Changhai, Feng Liang, Gu Yifan, Yi Juanzi(7)
- Sedimentary Characteristics and Development Potential of Vendian Transitional Facies in East Siberian Platform Zhang Yukun, Yang Shuo, Guo Xiao, Wang Shuai, Wang Hui, Song Laiming(14)
- Sedimentary Characteristics and Distinguishing Criteria of Crevasse Splay Reservoir in QHD 32-X Oilfield, Bohai Bay Basin Chen Xinkai, Chen Cheng, Wang Hu(22)
- Seismic Response Characteristics of Gas Chimneys in Junction Region of Yinggehai–Qiongdongnan Basins Song Ruiyou, Hu Lin, Huang Yiwen, Hu Qianwei, Hou Jingxian(30)
- Technology and Application of Structural–Lithologic Trap Identification and Reservoir Characterization of Paleogene Steep Slope Fans Yang Dongsheng, Zhao Zhigang, Xu Jianyong, Liu Zhifeng, Li Nan(38)
- Sedimentary Microfacies and Evolution Characteristics of Keshang Formation in Wuxia South Slope Tu Zhijie(45)
- Application of Microbial Geochemical Exploration Technology in Oil and Gas Exploration in Loess Tableland Regions Cao Jun, Zhou Jinsong, Yin Xiao, Li Yuanyuan, Liu Peng, Ding Li, Liang Yongxing(53)
- Formation Mechanism and Distribution Models of Ordovician Reservoirs in Northern Jizhong Depression Zhao Wenlong, Han Chunyuan, Yan Mengying, Qiao Bo, Luo Jing, Xue Hui, Guo Huiping(61)
- Structure Evolution and Middle–Shallow Hydrocarbon Enrichment Patterns in the Eastern Wushi Sag Hu Lin, Jin Qiuyue, Yang Xibing, Hu Desheng, Lu Mei(68)
- Quantitative Judgment and Exploration Prospect Analysis of the Mixed–Source Oil of Kenli 16 Oilfield in Laizhouwan Sag Liu Qingshun, Yang Haifeng, Guo Tao, Wen Honglei, Li Guoying(74)
- Multi–scale Fracture Prediction of Shiniulan Formation in Zheng'an Block of Northern Guizhou Province Based on Post–stack Seismic Attributes Lan Baofeng, Huang Yi, Zhang Fu, Li Gangquan, Liu Ting, Zhang Jinchuan(81)
- Study on the Formation and Evolution Characteristics and Hydrocarbon Enrichment Difference of Fault Concentrated Zones in Qikou Sag Liu Shirui, Wang Yougong, Liu Haitao, Yu Aixuan(88)

Reservoir Engineering

- Physical Simulation of Carbonate Particle Migration in Gas Storage You Lijun, Shao Jiaxin, Wang Du, Wang Han, Kang Yili, Chen Mingjun(94)
- Application of dual–media compound numerical well test technology in fractured reef limestone reservoirs with bottom water Yang Yong, Xie Ribin, Yan Zhenghe, Sun Changwei, Li Xiaodong(100)
- Research on Gel Particles + Polymer Flooding Technology for Quaternary Oil Recovery in Daqing Oilfield Chen Wenlin(106)
- Response Characteristics of Gas–water Alternate Flooding with CO₂ after Water Flooding in Ultra–low Permeability Reservoirs Lei Xinhui, Zheng Zigang, Yu Guangming, Zhang Kang(113)
- Classification and Evaluation of Tight Oil Reservoirs Based on Fuzzy C–Means Clustering and Bayes Discrimination Wang Wei, Kang Shengsong, Gao Feng, Guo Fenzhuan, Zhang Liang(118)
- Study on the Response Characteristics of Fire Flooding in Water–flooded Heavy Oil Reservoirs Cai Ye(125)
- Characterization Model and Experimental Study of Shale Gas Diffusion Capacity Based on Momentum Equation Chen Lu, Hu Zhiming, Xiong Wei, Yang Hang, Duan Xianggang, Chang Jin(132)

Drilling & Production Engineering

- Development and Field Test of GW–CP194–80M CBM Dual–Pressure Coring Tool Zhu Qingzhong, Su Xuefeng, Yang Liwen, Su Yang, Luo Jun(139)
- Experiment on Controlling Cone and Increasing Oil with Preset Multi–stage Bottoms in Horizontal Well Annulus Wang Haidong, Liu Yikun, Meng Wenbo, Zhang Chong(145)
- Development of Direct–reading Measurement–adjustment Eccentric Constant–flow Water Distributor Xiao Guohua, Huang Xiaomeng, Li Huijie, Guan Haifeng(151)
- Wellbore Temperature Calculation Model for Horizontal Wells in Shallow Hydrate Reservoirs in Deep Water Dong Shengwei, Wang Zijian, Cao Fei, Li Yingjie, Zhang Aixia, Cheng Wan(157)
- The Distribution Law of Critical Liquid–carrying Parameters along the Depth of the Gas Wells with Restrictor in Sulige Gas Field Wang Rui, Wei Meiji, Hu Gaixing, Jiang Dongxing, Ju Yingjun, Zhang Ningsheng(162)
- Research on the Mechanical Properties and Borehole Stability of Deep Brittle Shale Han Zhengbo, Liu Houbin, Zhang Jingtao, Yang Huajian, Shen Xinyu, Yang Qiang(167)