

DUANKUAYOUQITIAN



中文核心期刊
中国科技核心期刊
CSCD 来源期刊
河南省一级期刊
美国剑桥科学文摘收录期刊
美国石油文摘 (PA) 收录期刊
美国化学文摘 (CA) 收录期刊

ISSN 1005-8907
CN 41-1219/TE

断块油气田

FAULT-BLOCK OIL & GAS FIELD

Vol.30 No.1
2023.1

ISSN 1005-8907



9 779958 90231

中国石油化工集团有限公司 主管
中国石化集团中原石油勘探局有限公司 主办

目次

非常规油气

岩相组合特征及其对页岩含气性的影响——以涪陵地区凉高山组为例.....刘苗苗,付小平,倪楷 1

胜北洼陷三间房组致密砂岩气藏有利储层特征与成岩相.....付强,肖冬生 9

致密油运聚动力研究——以渤海湾盆地东濮凹陷 Wg4 井沙三中致密油为例.....徐二社,黄娟,鹿坤,蒋宏,周勇水,钱门辉,陶国亮,刘鹏,李志明 17

低渗砂泥交互油藏压裂多裂缝扩展规律.....宋丽阳,王纪伟,刘长印,孙志宇,田宝刚 25

超深层裂缝性致密砂岩气藏储层连通性及开发启示——以塔里木盆地库车坳陷克深 2 气藏为例.....吕志凯,张建业,张永宾,闫炳旭,刘兆龙,李光明 31

页岩储层高性能环保型水基钻井液体系及其环境影响评价.....田文欣,俞浩杰 38

地质勘探

顺北地区流体活动对储层形成的控制作用.....王玉伟,陈红汉,曹自成,云露 44

天文轨道周期调制的海平面变化对生物礁发育的影响——以川东北地区晚二叠世长兴期为例.....李红佼,张廷山,张喜,肖强,高璐彪 52

岩溶古地貌恢复及油气地质意义——以四川盆地泸州地区中二叠统茅口组为例.....冯磊,刘宏,谭磊,夏吉文,伍亚,陈聪,曾云贤,于童 60

鄂尔多斯盆地天环坳陷克里摩里组岩溶型储层特征新认识.....王立新,张茹,王茜,易志伟,曲长伟,陈艳艳,赵先然,吴金龙,李伸专 70

川西南井研地区栖霞组白云岩储层发育主控因素.....李蓉,李素华,石国山,苏成鹏,贾霍甫,林辉 79

大型复杂缓坡带砂体差异富集模式及优质储层预测——以辽中凹陷 LD-A 构造为例.....惠冠洲,郭涛,蒋恕,加东辉,张如才 87

东濮凹陷濮卫地区油气输导特征及精细勘探方向.....李令喜,刘爱永,胡志成,郭国强 96

东濮凹陷现今地温场及地热资源潜力.....涂诗棋,左银辉,周勇水,张超 100

CNN 算法的损失函数优化及在低信噪比资料中的应用.....李辉,阎建国,陈榆桂,孟辉 107

基于模拟退火的曲流河复合点坝建模新方法.....郑昕,束青林,苏朝光,吴胜和,蒋小伟,田媛,岳大力 114

开发工程

基于碳酸盐岩储层裂缝表征与产能描述的开发技术对策——以川西北双鱼石区块栖霞组气藏为例.....蔡珺君,戴瑞瑞,任勇,彭先,李隆新,刘微,王蓓,刘微 120

水驱断块油藏 CO₂ 气顶边水双向驱油封存机理及应用.....尤启东,王智林,林波,葛政俊,徐伟 129

酸化气驱交变载荷对超深层岩石强度及出砂影响.....王亮亮,王杰祥,张鹏,王鹏,陈毅,宋伟 136

合川气田井下节流气井动态分析新方法.....徐建军,李云杰,杨香艳,杜怡鹤 143

弹性作用对驱油用聚合物扩大波及能力的影响.....元福卿,徐辉,宋敏,孙秀芝 149

一种缝洞型油藏井-缝-洞组合的生产数据分析模型.....杜春晖,袁飞宇,李璐,付亚飞,张博文,李尧 154

基于腔体稳定性的盐岩储气库注采方案优化研究.....周军,胡承强,彭井宏,梁光川,黄薪宇,马俊杰,王涛 161

水平井分段多簇压裂暂堵球运移封堵规律.....李婷婷,许文俊,王雷,江枫,张健鹏 168

(责任编辑:郭勇 英文编辑:范海玲)

CONTENTS

UNCONVENTIONAL OIL AND GAS

Characteristics of lithofacies combinations and its influence on shale gas-bearing property: a case study of the Lianggaoshan Formation in Fuling areaLIU Miaomiao, FU Xiaoping, NI Kai	1
Favorable reservoir characteristics and diagenetic facies of tight sandstone gas reservoir of Sanjianfang Formation in Shengbei Subsag..... FU Qiang, XIAO Dongsheng	9
The driving force study of tight oil migration and accumulation: a case study of the tight oil in Es ₃ ² Formation in well Wg4 of Dongpu Sag, Bohai Bay BasinXU Ershe, HUANG Juan, LU Kun, JIANG Hong , ZHOU Yongshui, QIAN Menhui, TAO Guoliang, LIU Peng, LI Zhiming	17
Multi-fractures propagation law of low permeability sand shale interbed oil reservoirs fracturing..... SONG Liyang, WANG Jiwei, LIU Changyin, SUN Zhiyu, TIAN Baogang	25
Reservoir connectivity of ultra-deep fractured tight sandstone gas reservoir and development enlightenment: taking Keshen 2 gas reservoir in Kuqa Depression of Tarim Basin as an example.....LYU Zhikai, ZHANG Jianye, ZHANG Yongbin, YAN Bingxu, LIU Zhaolong, LI Guangming	31
High performance and environment-friendly water-based drilling fluid for shale reservoir and its environmental impact assessment.....TIAN Wenxin, YU Haojie	38

PETROLEUM GEOLOGY AND EXPLORATION

Controlling effects of fluid activity on reservoir formation in Shunbei area.....WANG Yuwei, CHEN Honghan, CAO Zicheng, YUN Lu	44
Effects of sea level change modulated by astronomical orbital period on organic reefs development: a case study of Late Permian Changxing in Northeast Sichuan LI Hongjiao, ZHANG Tingshan, ZHANG Xi, XIAO Qiang, GAO Lubiao	52
Karst paleogeomorphology restoration and hydrocarbon geological significance: a case study of Middle Permian Maokou Formation in Luzhou area of Sichuan BasinFENG Lei, LIU Hong, TAN Lei, XIA Jiwen, WU Ya, CHEN Cong, ZENG Yunxian, YU Tong	60
New understanding on karst reservoir characteristics of Kelimoli Formation in Tianhuan Depression, Ordos BasinWANG Lixin, ZHANG Ru, WANG Han, YI Zhiwei, QU Changwei, CHEN Yanyan, ZHAO Xianran, WU Jinlong, LI Shenzhuan	70
Main controlling factors of dolomite reservoir development of Qixia Formation in Jingyan area, southwestern Sichuan Basin..... LI Rong, LI Suhua, SHI Guoshan, SU Chengpeng, JIA Huofu, LIN Hui	79
Differential enrichment model of sand body and high quality reservoir prediction in large complex gentle slope zone: a case study of LD-A structure, Liaozhong Sag.....HUI Guanzhou, GUO Tao, JIANG Shu, JIA Donghui, ZHANG Ruca	87
Hydrocarbon transport features and fine exploration directions in Puwei region of Dongpu SagLI Lingxi, LIU Aiyong, HU Zhicheng, GUO Guoqiang	96
Present geothermal field and geothermal resource potential of the Dongpu Sag.....TU Shiqi, ZUO Yinhui, ZHOU Yongshui, ZHANG Chao	100
Optimization of loss function in CNN algorithm and its application in low signal-to-noise ratio dataLI Hui, YAN Jianguo, CHEN Yugui, MENG Hui	107
A new modeling method of meandering river complex point bars based on simulated annealingZHENG Xin, SHU Qinglin, SU Chaoguang, WU Shenghe, JIANG Xiaowei, TIAN Yuan, YUE Dali	114

DEVELOPMENT ENGINEERING

Development technical countermeasures based on fracture characterization and productivity description of carbonate reservoir: taking Qixia Formation gas reservoir of Shuangyushi block in northwest Sichuan Basin as an exampleCAI Junjun, DAI Ruirui, REN Yong, PENG Xian, LI Longxin, LIU Wei1, WANG Bei, LIU Wei	120
Mechanisms of CO ₂ gas cap and edge water bidirectional flooding and sequestration in water flooded fault-block reservoir and application.....YOU Qidong, WANG Zhilin, LIN Bo, GE Zhengjun, XU Wei	129
Influence of acidification, gas flooding and alternating load on rock strength and sand production in ultra-deep wells.....WANG Liangliang, WANG Jiexiang, ZHANG Peng, WANG Peng, CHEN Yi, SONG Wei	136
A new method for performance analysis of downhole throttling gas wells in Hechuan gas field XU Jianjun, LI Yunjie, YANG Xiangyan, DU Yihe	143
The influence of elasticity on the sweep efficiency of polymer for oil displacement.....YUAN Fuqing, XU Hui, SONG Min, SUN Xiuzhi	149
A production data analysis model of wellbore-fracture-cave combination in fractured vuggy reservoir.....DU Chunhui, YUAN Feiyu, LI Lu, FU Yafei, ZHANG Bowen, LI Yao	154
Optimization of injection and production scheme of salt gas storage based on cavity stability.....ZHOU Jun, HU Chengqiang, PENG Jinghong, LIANG Guangchuan, HUANG Xinyu, MA Junjie, WANG Tao	161
Temporary plugging ball migration and plugging law of staged multi-cluster fracturing in horizontal wells.....LI Tingting, XU Wenjun, WANG Lei, JIANG Feng, ZHANG Jianpeng	168

《断块油气田》第四届编辑委员会

主任：王志刚

副主任：朱伟林 蔡希源 金之钧 李 阳 赵文智 王寿平

特邀院士编委（按姓氏笔画排序）：

杨文采 张国伟 贾承造 康玉柱 戴金星

编委会委员（按姓氏笔画排序）：

马永生 马新华 王中华 王生朗 王寿平 王志刚 王良书 毛凤鸣 孔凡群 邓 军 邓瑞健
付 广 印兴耀 冯建辉 毕义泉 毕建霞 吕新华 朱伟林 朱筱敏 任玉林 刘 伟 刘 斌
刘玉琳 刘池阳 杜志敏 杨文采 杨树锋 李 阳 李存贵 吴信荣 何治亮 宋子齐 张 勇
张中伟 张庆生 张来斌 张昌民 张国伟 张洪安 张峭楠 张善文 张强德 陈万江 陈宗林
呼舜兴 罗晓容 国殿斌 金之钧 周立宏 周延军 孟卫工 赵化廷 赵文智 赵贤正 胡群爱
袁向春 耿师江 贾承造 徐卫东 谈玉明 黄泽贵 常学军 康玉柱 董月霞 韩保清 傅 强
焦大庆 舒尚文 曾大乾 蔡希源 蔡其新 潘 懋 戴金星

主 编：张庆生

常务副主编：张洪安

副 主 编：徐深谋

断块油气田

Duankuai Youqitian

（双月刊 1994 年创刊）

第 30 卷 第 1 期（总第 175 期）2023 年 1 月 25 日出版

FAULT-BLOCK OIL & GAS FIELD

（Bimonthly, Started in 1994）

Vol.30 No.1

Published on Jan. 25, 2023

主管单位 中国石油化工集团有限公司

主办单位 中国石化集团中原石油勘探局有限公司

主 编 张庆生

常务副主编 张洪安

副 主 编 徐深谋

编辑出版 《断块油气田》编辑部

地 址 河南省濮阳市华龙区中原东路 360 号

邮 编 457001

电 话 0393-4820093

网 址 www.dkyqt.com

E - mail dkyqt@vip.163.com

印 刷 河南濮阳中原石油报社彩色印刷厂

国内发行 河南省邮政局

邮发代号 36-351

国外发行 中国国际图书贸易总公司

北京 399 信箱 邮编 100044

广告经营许可证号 4109004000001

Responsible Institution: China Petrochemical Corporation

Sponsor: Zhongyuan Petroleum Exploration Bureau Co., Ltd., SINOPEC

Chief Editor: Zhang Qingsheng

Vice-standing Chief Editor: Zhang Hongan

Vice Chief Editor: Xu Shenmou

Publisher: Editorial Department of Fault-Block Oil & Gas Field

Address: No.360, East Zhongyuan Road, Puyang, Henan, China

Postcode: 457001

Tel: 86-393-4820093

Web Address: <http://www.dkyqt.com>

E-mail: dkyqt@vip.163.com

Domestic Distributor: Post Office of Henan Province

Overseas Distributor: China International Book Trading Corporation,

P. O. Box 399, Beijing 100044, P. R. China

Ad. Licence: 4109004000001

国际标准连续出版物号 ISSN 1005-8907

国内统一连续出版物号 CN 41-1219/TE

定价：国内 60 元 / 国外 20 美元