

Springer Series in Geomechanics and Geoengineering

Jia'en Lin *Editor*

Proceedings of the International Field Exploration and Development Conference 2020



Springer

Springer Series in Geomechanics and Geoengineering

Series Editor

Wei Wu, Universität für Bodenkultur, Vienna, Austria

Geomechanics deals with the application of the principle of mechanics to geomaterials including experimental, analytical and numerical investigations into the mechanical, physical, hydraulic and thermal properties of geomaterials as multiphase media. Geoengineering covers a wide range of engineering disciplines related to geomaterials from traditional to emerging areas.

The objective of the book series is to publish monographs, handbooks, workshop proceedings and textbooks. The book series is intended to cover both the state-of-the-art and the recent developments in geomechanics and geoengineering. Besides researchers, the series provides valuable references for engineering practitioners and graduate students.

Indexed by SCOPUS, EI Compendex, INSPEC, SCImago.

More information about this series at <http://www.springer.com/series/8069>

Jia'en Lin
Editor

Proceedings of the International Field Exploration and Development Conference 2020

Editor
Jia'en Lin
College of Petroleum Engineering
Xi'an Shiyou University
Xi'an, Shaanxi, China

ISSN 1866-8755 ISSN 1866-8763 (electronic)
Springer Series in Geomechanics and Geoengineering
ISBN 978-981-16-0762-2 ISBN 978-981-16-0761-5 (eBook)
<https://doi.org/10.1007/978-981-16-0761-5>

© The Editor(s) (if applicable) and The Author(s), under exclusive license
to Springer Nature Singapore Pte Ltd. 2021

This work is subject to copyright. All rights are solely and exclusively licensed by the Publisher, whether the whole or part of the material is concerned, specifically the rights of translation, reprinting, reuse of illustrations, recitation, broadcasting, reproduction on microfilms or in any other physical way, and transmission or information storage and retrieval, electronic adaptation, computer software, or by similar or dissimilar methodology now known or hereafter developed.

The use of general descriptive names, registered names, trademarks, service marks, etc. in this publication does not imply, even in the absence of a specific statement, that such names are exempt from the relevant protective laws and regulations and therefore free for general use.

The publisher, the authors and the editors are safe to assume that the advice and information in this book are believed to be true and accurate at the date of publication. Neither the publisher nor the authors or the editors give a warranty, expressed or implied, with respect to the material contained herein or for any errors or omissions that may have been made. The publisher remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

This Springer imprint is published by the registered company Springer Nature Singapore Pte Ltd.
The registered company address is: 152 Beach Road, #21-01/04 Gateway East, Singapore 189721, Singapore

Contents

A Novel Productivity Calculation Method for Gas Reservoirs of Qixia Formation, Shuangyushi Block, Northwestern Sichuan	1
Ting-ting Wu, Die Hu, Qiu Li, Huan-yi Zhang, and Jun-jie Wang	
Reservoir Characteristics and Controlling Factors of Feixianguan Formation in LuoJiazhai Gas Field, Northeastern Sichuan Basin	11
Wen Li, Yu Luo, Qian Li, Long-xin Li, and Zhan-mei Zhu	
Physicochemical Properties and Injection Timing of JCP-1 Nano Polymer Microspheres	25
Yi Cao, Ling-yi Fan, Xin Xu, and Zhen Liu	
Synthesis and Analysis of Hydrophobic Tail Polymers (SPC16 and SPC18) with Addition of β-CD by Host-Guest Inclusions	37
Allah Bakhsh, Zhang Liang, Yang Hongbin, Kang Wanli, Ren Shaoran, Syed Jamal ud din, and Azizullah Shaikh	
Applications of Aromatic Hydrocarbons to Assess Thermal Maturity and Families of Termit Basin Oils, Niger	46
Bang Liu, Guang-hua Zhai, Ling He, Feng-jun Mao, and Ji-guo Liu	
Simulation Study of Well Deliverability Reduction Due to Sulphur Deposition in Naturally Fractured Carbonate Reservoir	54
Jian-jiang Lv, Minh Vo, and Sheng-kai Duan	
Effective Application of Using a Combination of Wireline Techniques for Well Killing and Tubing Fishing Operations	69
Jian-bo Yuan, Xin Zheng, Vo Minh, Ying Wang, Jun-liang Zhang, and Si-qi Chen	
Improving Gas Reservoir Understanding by Using Deconvolution	80
Minh Van Vo, Yue Yu, and Jiang-jiang Lv	

Sedimentary Cyclicity Interpretation in Triassic Carbonate Fields in Northeastern Sichuan Basin, China	91
San Su, Minh Vo, Qiucheng Ye (Mike), and Changqing Jia	
Sour Gas Field Development with Integrated 3d Reservoir Modeling and Uncertainty Analysis	102
Yue Yu, Minh Van Vo, and Jian-jiang Lv	
Using Machine Learning Techniques for Enhancing Production Forecast in North Malay Basin	114
Truc (Trevor) Doan and Minh Van Vo	
A Potential Economic and Efficient Technology Study for Sustained Casing Pressure Mitigation	122
Xin Zheng, Minh Vo, Jian-bo Yuan, Ying Wang, Jun-liang Zhang, and Li Li	
Study on Waterproof Lock Low Concentration High-Density Fracturing Fluid System and Its Field Application	133
Liwei Wang, Suzhen Li, Zhanwei Yang, Liao Wang, and Xiuling Han	
Synergistic Diverting Acid System and Its Application in Heterogeneous Carbonate Reservoir Stimulation	142
He-wen Zhang, An-le He, Chong Liang, Xue-mei Yan, Hong-ge Jia, Li-xin Wu, Yu-ping Sun, and Hai-bo Li	
The Influence of Faults on the Distribution of Gas and Water in Sulige Gas Field-Take Zhaohuangmiao Area as an Example	151
Lin-hui Shi, Wen Xue, Bo Zhang, Qi-hao Zhao, Lin-shan Chao, and Hon-bo Wan	
High Temperature Resistance and Low-Cost Fracturing Fluid System	158
Gao Ying, Xu Minjie, Wang Liwei, Yang Zhanwei, Shi Yang, Yang Yanli, Han Xiuling, Liu Yuting, and Jiang Yun	
Study on Efficient Reconstruction Technology of Deep Volcanic Rock Reservoirs in the South Dinan Uplift	170
Yang Li, Hua-sheng Chen, Chen-ming He, Shuai Li, Feng Yuan, Tian-xi Yu, and Hai-zheng Jia	
Development of Guar-Based Crosslinked Fracturing Fluid in Flow-Back Water	179
Bao-shan Guan, Yu-ting Liu, Li Liang, and Qian Liu	
Geological Characteristics and Production Performance of a Sandstone-Fractured Basement Composite Reservoir	193
Xin-tao Yuan, Guo-liang Feng, Xue-dong Yang, Jun-tao Zhang, Shi-jie Dou, Jun-qi Tian, Gang Yu, and Kun-shan Zhang	

Relationship Between Detection Depth and Transmitting Frequency of Transient Electromagnetic Logging Instrument	204
Bo Zhang, De-fu Zang, Shou-wei Zhang, and Xi-wu Chen	
Application of a Step-by-Step Fracturing Technology in Ultra-High Pressure Risk Exploration Wells	217
Xiu-ling Han, Zhan-wei Yang, Liao Wang, Fen Peng, Kan Sun, Ying Gao, and Li-wei Wang	
Development and Application of MFR-I Type Friction Reducer	226
Jun Yang, Zhong-chen Xi, and Dong-dong Ji	
Enhanced Oil Mechanism of WAG in Tight Reservoir	233
Juan Zhang, Cheng-qian Tan, Bang-jun Li, Xue-min Meng, and Wang Jing	
Study on Microscopic Displacement Characteristics of Surfactant Flooding in Extra-Low Permeability Reservoirs Real Sandstone Model	247
Yang-nan Shangguan, Jie Zhang, Yong-hong Wang, Yuan-yuan Lu, Yong-qiang Zhang, Wei-Liang Xiong, Jin-long Yang, and Shu-man Li	
Wells Management Strategy of Life-Cycle System Based on Sulige Gas Field	255
Jin-bu Li, Ji-wu Fan, Wei Zhang, Hui Yang, Hao Liu, Xin Chen, and Bin Fu	
A Single Well Controlled Reserve Calculation Method for Tight Sandstone Gas Reservoir Based on Numerical Well Testing	271
Yan-yan Sun, Suo-bao Jin, Liu Hao, Xiao-min Xue, and Hong-ran Shi	
Simulation Analysis of a New Type of Combined Double Jet Nozzle Flow Field	280
Qi Meng, Gui-tao Du, Shao-gong Zhu, Hai-cheng Li, Xing-liang Song, Min Wang, Dan Guan, Ling Wang, Jing Wang, and Xue-jing Zhang	
Study on Microscopic Displacement Characteristics of Foam Flooding in Extra-low Permeability Reservoirs Real Sandstone Model	291
Yang-nan Shangguan, Min Wang, and Yong-qiang Zhang	
A Method to Evaluate the Damage Caused by the Fracturing Fluid to Reservoirs with Nuclear Magnetic Resonance (NMR) Technology . . .	299
Yuan Liu, Li-wei Wang, Wei-zhi Tuo, Su-zhen Li, Qing Chen, Xiu-ling Han, and Er-peng Li	
Analysis to the Characteristic of Gas Well Production Decline Model in Sulige Gas Field	308
Bo Zhang, Yuan Xue, You Wu, Zhan-hai Yu, Jian-ning Luo, and Jian-hua Su	

New Method for Evaluating the Used Geological Reserves of Low Permeability Sandstone Gas Reservoir	319
Hong-ran Shi, Ya-jun Zhu, Wen-sheng Wang, Zhan-hai Yu, Yan-yan Sun, and Qing-hua Tian	
Study on Dynamic Vibration Characteristics of Drill String in Extended Reach Well	329
Yuan-yuan Shen, Kuan-liang Zhu, Yan Zhou, and Wu-lin Sun	
Study on Remaining Oil Distribution of Single Sand Body in Yan 10 Reservoir in Zhenbei Area, Ordos Basin	340
Shuai Wang, Jin-heng Luo, Sen Li, Liang-guang Deng, and Bin-hu Han	
Technology Research and Development Prospect of the Hydraulic Jet Double-Sealing and Single-Stick Subsection Fracturing Technology	349
Xin Cao, Ya-kui Wen, Gui-xi Liu, Peng-wei Niu, and Wei Zhao	
A New Quantitative Method for Uncertainty Assessment of Bounding Fault	357
Wei Xu, Jing-yun Zou, Lei Fang, and Kai-yuan Chen	
Optimization of Development Well Types for Low Permeability Carbonate Gas Reservoir	365
Yong Wu, Shan Xie, Xiao-long Yang, Yin-chen Zhao, and Wei-bing An	
Research on Gas Well Full Life Cycle Simulation Test System	370
Jing-jing Han, Guang-dong Hou, and Ke-meng Wang	
Evaluation of Erosion Wear Resistance of Soluble Magnesium-Aluminum Alloy	381
Shao-gong Zhu, Peng Wang, Zhi-peng Yang, Qing-hong Zhai, and Yong-quan Xu	
Research on Structural Features and Their Impact on the Development of Shale Oil from the Chang 7 Formation in QingCheng Area of the Ordos Basin	388
Jie Zhang, Jian-ping Liao, Li-gang Huang, Yu-hua Zhao, De-yong Zhao, and Jun Zhu	
Research on Productivity Management of Gas Wells in Low Permeability Carbonate Reservoir	401
Shan Xie, Yang Jiao, Yi-fei Lan, Yong Wu, and Chen-yu Cao	
Water Flooding Characteristics and Adjustments of a Giant Porous Carbonate Oil Field in Iraq	410
Jian Pi	

Application of AVO Fluid Inversion Technology in Yong'an Area of Subei Basin	420
Liang-chao Qu, Li-jiang Duan, Chun-lei Li, and Wen-guang Zhao	
The Production Testing Characteristics of Gas Reservoir in the Middle Permian of Southwest Sichuan	426
Ji-chun Zhou, Xi Li, Hong Yin, Bo Deng, Jian Cao, and Jing Luo	
Well Logging Identification of Tight Reservoir in Shuang229 Block . . .	439
Yi-ping Wu	
A Method of Multi-attribute Reservoir Parameter Prediction: A Case Study of Carbonate Reservoir in the North Caspian Basin	448
Zhen Wang, Yan-kun Wang, Shu-tang Jin, Jun-zhang Zheng, and Shuang Liang	
Effect of Heterogeneity on Injection-Production Dynamic Characteristics of Polymer Flooding in Offshore Fields	455
Wen-Jun Ao, Jin-Jie Tian, Cheng-Sheng Wang, Liang Kan, Bin Chen, Wen Ji, and Yue Hou	
Research and Application of Deep Profile Control and Drive Technology of Graded Combination in High Water Cut Stage of Heterogeneous Reservoir	466
Wen-Jun Ao, Shi-Jia Chen, Bo Huang, Liang Kan, Dong Wang, Ya-Li Wu, and Li-Ping Kong	
Temporary Plugging Performance of an Intelligent Liquid Gel with Magnetorheological Fluid	478
Xiao-dong Si, Ming-liang Luo, Ming-zhong Li, Ming Lei, Yu-ben Ma, and Bo-jing Shi	
A New Method for Determining Abandonment Formation Pressure in Sulige Gas Field	493
La-nian Zheng, Hong-yan An, Jun Yue, Peng-cheng Liu, and Peng Li	
Effects of CO₂ on the Micron-Scale Pore-Fracture Structure and Connectivity in Coals from the Qinshui Basin	504
Shi-qi Liu, Shu-xun Sang, Tian Wang, Yi Du, and Hui-huang Fang	
Preparation and Performance Evaluation of Imbibition-Displacement Microemulsion	522
Qian Liu, Baoshan Guan, Yuting Liu, and Li Liang	
Experimental Investigation of Formation Damage Induced by Completion in Dibeit Tight Condensate Gas Reservoir	533
Su-zhen Li, Xue-fang Yuan, Yu-jin Wan, Liao Wang, Guo-wei Xu, and Wen-tong Fan	

The Development and Field Application of Key Materials for Coupling Profile Control of Injection Well	544
Xiu'li Shao, Zhi'ming Jing, and Yan Gao	
Stratigraphic Horizon Prediction Integrating Wells and Seismic Data Based on Kriging Interpolation	555
Shan-shan Liu	
Experiment Researches of Power Equilibrium Technology for Beam Pumping Unit	562
Xing Qi	
Evaluation of Economic Development Model of Offshore Heavy Oil Thermal Recovery	575
Zheng Wei, Tan Xianhong, Wang Taichao, and Qiu Huixian	
Optimization of Horizontal Well Placement for Cold Production in Extra-Heavy Oil Reservoir	587
Xing-min Li	
The Geological Character and Development Technology in the Western Area of Sulige Gas Field	601
Fu Bin, Zhang Wei, He Anan, and Sun Jinghu	
The Application of Control Degree in Compiling the Field Development Plan of Polymer Flooding	613
Lian Guihui, Zou Wei, Li Yonghui, Zhao Yiqing, and Sun Yunqiang	
A New Method for Stress Sensitivity Evaluation of Tight Sandstone Gas Reservoirs	623
Peng-cheng Liu, Hong-yan An, La-nian Zheng, Jun Yue, and Ming-hui Huo	
Reservoir Forming Characteristics and Main Factors of Productivity of Deep Tight Sandstone in the South of Ordos Basin	631
Xiao-Ling Meng, Yi-Fei Lan, Hong-Bo Zhang, Yong Wu, Xue-Ling Liu, and Shou-Chun Xia	
A Calculation Method for the Time of Pressure Change of Tight Sandstone Gas Well to Reach Seepage Boundary	640
Ming-hui Huo, Yi-fei Lan, Zhan-hai Yu, and Jun Yue	
Experimental Research on the Effect of Residual Oil Saturation on Fire Flooding Development in the Late Stage of Steam Injection . . .	649
Yang Yang, Xiao-qiang Peng, Ji-zhou Zhang, and Hong-yong Hao	
Production Allocation Analysis of Commingle Production Wells in Multi-layer Tight Gas Reservoirs	659
Hai-bo Zhang, Zhi-jun Liu, Jiao-jiao Liu, Qian Liu, and Chao Jia	

Optimization of Water Avoidance Height in Horizontal Wells in Carbonate Bottom Water Gas Reservoirs	671
Huai-long Chen, Hai-dong Shi, Chun-qiu Guo, Yue Zheng, Wei Ding, Ji-li Yang, Mu-wei Cheng, Peng-yu Chen, and Yu-zhong Xing	
Evaluation of Heterogeneity of Fracture-Pore Type Carbonate Reservoirs—Taking BP Gas Reservoir in the Amu Darya Right Bank Area in Turkmenistan as an Example	678
Huai-long Chen, Mu-wei Cheng, Guang-yao Wen, Yu-zhong Xing, Chun-qiu Guo, Hai-dong Shi, and Peng-yu Chen	
Optimization of Operating Parameters in Canadian Oil Sands SAGD Process Using Genetic Algorithm	690
Guang-yue Liang, Shang-qí Liu, Yang Liu, and Jiu-ning Zhou	
A New Method for Depicting the Three-Dimensional Shape of the Steam Chamber	700
Xiao-mei Li, Yong-hui Li, Yan Wang, Wei Zou, Shi-yao Lv, and Zhen-hua Yao	
Sequence Stratigraphy, Depositional System, and Hydrocarbon Prospectivity of the Third Rifting-Sagging Cycle in Muglad Basin	708
Guang-cheng Hu, Hong-jun Wang, Ming-sheng Lv, Zhi Li, and Ji-guo Liu	
The Research Progress and Prospect of CNPC Well Control Technology for Oil and Gas Wells	726
Fangwei Luo, Tao Sun, Yiwen Luo, Heguang Zheng, and Shengping Kuang	
Study on Basement Lithology Identification Method in Bongor Basin, Chad	740
Qiao-feng Liang, Quan Zou, Yan-li Shi, Ye-bo Du, Yu-hua Wang, Zhi-yun Yuan, and Ying Hu	
Hongshan Strike-Slip Inversion Structures and Petroleum Exploration of Qaidam Basin	748
Gui-hong Wang, Zhi-yong Chen, Chuan-min Zhou, Xue-song Ma, Yong-shu Zhang, Xiang-rong Wang, and Ming Zhang	
Adaptability Evaluation of Horizontal Well Development in Shenmu Multi-layer Tight Gas Reservoir	761
Jiao-jiao Liu, De-long Wang, Ye Wang, and Hai-bo Zhang	
The Study of Using Measured Power Curve to Derive Dynamometer Card Based on Calibration Method	775
Xing Qi, Hong-liang Gong, Cheng-lei Yu, Xiang-long Gao, Yan-an Sun, Chun-long Sun, Yu Hou, Yang Wang, and Qiao-Ling Dong	

Genetic Classification and Hydrocarbon Potentiality of Passive Rift Basins	784
Zhi Li, Xiao-hua Pan, Lun-kun Wan, Zhi-feng Ji, Ji-guo Liu, and Zi Yang	
Horizontal Length Optimization of Cold Production with Horizontal Wells in Extra-Heavy Oil Reservoirs	802
Zhao-peng Yang, Xing-min Li, Zhang-cong Liu, Yang Shen, and Xiao-xing Shi	
Research on the Mechanism of Wellbore Instability of Oil Shale in Raoyang Sag and Water-Based Anti-sloughing Drilling Fluid	811
Xiuying Wang, Jing You, Bin Zhang, Jingjing Zhang, Gewei Han, and Tianqing Zuo	
Types and Distribution of Lower Silurian Gas-Bearing Shales in Pengshui Area of Southeast Sichuan Basin, China	820
Ping Xiong, Wang-shui Hu, and Qi-ji Fu	
Frictional Characteristics of Tight Sandstone and Its Influence on Hydraulic Fracture Propagation	829
Tao Wu, Yu-feng Li, Wei Yan, Xin Huang, Su-tao Ye, Hao Yang, Ji-yu Chen, and Jian-shu Wu	
Pore Structure Characterization Using Fractal Theory and 3D Digital Core	837
Jian-peng Zhao, Hui Chen, and Ning Li	
Magnetic Field Focusing Array for Nondestructive Evaluation of Oil and Gas Well Casings	845
Liu Changzan, Dang Bo, Yang Ling, Guo Rui, and Dang Ruihong	
Multiple-Eccentric-Sensor-Based Borehole Transient Electromagnetic System for Nondestructive Evaluation of Oil and Gas Well Casings . . .	856
Ling Yang, Rui-rong Dang, Chang-zan Liu, Bo Dang, and Dan Li	
Research and Application of Stimulated Zones Cement Squeezes Technology for Horizontal Well—Taking Well CQ52 as an Example	869
Zhong-chen Xi	
High Efficiency Oil Extraction Equipment with Ultra-long Stroke and Ultra-low Speed and a Kind of Technology of Exploiting Double Wells with One Motor	877
Ming-yuan Xi	
Water Invasion Modeling and Development Strategies in Complex Naturally Fracture Bottom-Water-Drive Gas Reservoir	885
Chen Pengyu, Mao Zhenyu, Cheng Muwei, Xing Yuzhong, Shi Haidong, Li Xin, Kuang Ming, and Yang Xinzhou	

Evaluation Method of Test Productivity and Reasonable Allocation for Long Horizontal Wells in Deep-Water Faulted Sandstone Oilfield in West Africa	902
Zhi-wang Yuan, Li Yang, Ying-chun Zhang, Xu Zhang, Yi-hua Gao, and Bao-quan Yang	
Study on the Rules of Action of Microorganism in Tar Sand Oil	910
Cheng-cheng Chu, Chuan-jin Yao, Guan Wang, Xin Ma, Ping Song, and Guang-lun Lei	
Formation Conditions and Distribution of Pre-salt Carbonate Reservoirs in Amu Darya Basin	924
Huai-long Chen, Liang-jie Zhang, Hong-jun Wang, Hou-qin Zhu, Zhen-hua Bai, and Guang-yao Wen	
Study on Optimal Volumetric Fracturing Design of Horizontal Tight Oil Wells in E_3^2 Pre-salt Reservoir in Yingxi Area, Qaidam Basin	938
Gui-qi Xie, Hai Lin, You-yu Wan, Youg-xia Pu, Xin-yuan Feng, Shi-duo Liu, and Yong Liu	
The Application of Bridge Plug Perforation Combined Operation Technology in Changqing Oilfield	955
Gang Xie, Hong-min He, Yong Hu, Yong-lu Fu, and Li-xiang Cui	
A Two-Phase Flow Model to Predict Productivity of Fractured Horizontal Wells	970
Yu Huang and Gang Liu	
A Rate Decline Model of Composite Reservoir with Threshold Pressure Gradient	984
Yu Huang and Gang Liu	
Physical Simulation of Depleted Exploitation for Yingxi E_3^2 Carbonate Reservoir in Qaidam Basin	1001
Xiang-rong Luo, Penggang Huang, Haijun Wang, Qian-hong Pan, Pengfei Zhang, Xiao-juan Ren, Jin Tian, and Shuai Zhao	
The Study of Water Hammer Fracture Technology	1009
Ping Chen, Wei-dong Su, and Cheng-cai Duan	
Fracturing Spacing Optimization Study of Tight Oil Horizontal Well Based on Induced Stress Field	1017
Jia-wei Ren, Qi-hong Feng, Xian-min Zhang, and Ze-hao Xie	
Equivalent Capacitance-Resistance Model Used to Determinate Interwell Connectivity	1030
Yu-run Li, Qi-hong Feng, Sen Wang, and Chao-xu Qin	

Study on Optimization and Performance Evaluation of Plugging Adjustment in Heavy Oil Compound Flooding Technology	1043
Tian-tian Yu, Ming-jia Liu, Wan-gang Zheng, Lu-shan Wang, Yan-bin Cao, Hai-shun Feng, Fei Wang, Shao-qun He, and Ai-fen Li	
Optimization of the Shut-in Testing Time in Low-Permeability Reservoir	1053
Xing-guo Jiang	
Exploration and Research on Effective Fracturing Technology of Injection Well in Low Permeability Reservoir	1062
Pu-guo Liu	
A Method for Determining Reasonable Producing Pressure Drop of Gas Wells Considering Water Control Factors	1071
Rui-lan Luo, Qing-yan Mei, Ji-chen Yu, Yin-li Chen, Lin Zhang, and Yi Zhao	
Contribution Accumulation Conditions and Exploration Prospect of Basement Rock Formation, the Central Paleo-Uplift Belt in Northern Songliao Basin	1085
Jing Li, Xue-feng Bai, Xue-feng Wang, and Chun-yu Ma	
Application of Four Neutron Logging in Formation Evaluation	1094
Zhen-tao Gao, Hui Li, Jing-fei Wang, Yu-wei Fu, Yi Ding, Gui-xian Chen, Jian Deng, and Wei Du	
Identification of Cretaceous Napo Fm M1ss Sandstone Pinch-Out and its Petroleum Geological Significance in Oriente Basin	1105
Zhong-zhen Ma, Yu-bing Zhou, Zuo-ji Tian, and Yuan Tian	
Research and Application of Fine Temporary Blocking Acidification Balance Profile Control Technology for Water Injection Well	1116
Fei Chen, Long Chai, and Bo Bai	
Cause Analysis and Prevention of Casing Damage in X Oilfield	1125
Hong-tian Yao	
Study on the Influence of Reservoir and Production Parameters on Reorientation Fracture	1132
Xiao-ming Sun	
Study and Application of Seismic Sedimentology in Paleogeomorphology Restoration	1142
Xu Li, Ya-bin Guo, Lin-ke Zhang, Bin-hua Guo, and Jin-fu Li	
Water Production Prediction in Tight and Low Pressure Gas Wells Considering the Dynamic Change of Gas-Water Permeability Relationship	1154
Wei-ping Ouyang, Yun-yi Zhang, and Mian Zhang	

Pilot Field Test of Surfactant Flooding in Thin and Poor Reservoirs . . .	1167
Yun-fei Zhao, Yan-jun Fang, Fu-lin Wang, Yu-shuang Zhao, and Gang Wang	
Multi-attribute Comprehensive Prediction of Thin Sand and Mudstone Reservoirs in the Slope Belt of the Orient Basin in South America	1173
Yubing Zhou, Zhongzhen Ma, Dandan Wang, and Jingcheng Lin	
Adaptability of Equation of State and Viscosity Model to Bohai Crude Oil	1184
Hao Wu	
Long Lake Oil Sand SAGD History Matching Research	1195
Hao Wu, Xin-guang Liu, Ji Tian, Qiang Zheng, Chuan Lu, and Tai-chao Wang	
Study and Application of Intermittent Volume Fracturing Technology for Tight Reservoirs	1204
Huan Liu, Xiaoming Chi, and Weiping Ouyang	
Genetic Mechanism of High Quality Glutenite Reservoirs: A Case Study of the Upper Urho Formation of Permian, Zhongguai - Mahu Area of Junggar Basin	1215
Yong-ping Ma, Guo-dong Wang, Lin-jun Huang, Han Zhang, Shu-xin Pan, Yong-qiang Qu, and Juan-juan Guo	
Theoretical Study on Factors Affecting Water Injection Development in Thick Sandstone Reservoir	1235
Xiang-ling Li, Xue-rui Zheng, Shu-yong Hu, Kang Xiao, and Jun-tao Zhang	
High-Resolution Sequence Stratigraphy in the Member of Prosopis I in Baobab N Oilfield, Chad	1245
Cheng Lei, Xiangling Li, Xianbing Li, Fang Liu, Qing-yan Xu, and Jinlin Zhang	
Experimental Study for the Effects of Water Salinity and Injection Rate on Low Salinity Water Flooding in Sandstone	1255
Li Chang-yong, Pi Jian, Su Wen-bo, and Zhang Yu	
Differential Adjustment Technology in the Mid-Later Development Stage of Oversea Stratified Sandstone Oilfield	1263
Qizhi Huang, Changlin Liao, Ruifeng Wang, Min Feng, Chujuan Kang, Xuanyu Yang, and Wangmin	
A Method to Extract the Key Influence Factors on Well Performance in the Duvernay Shale Gas Formation	1273
Ping Wang, Li Liu, Hailiang Fan, Xiang-Wen Kong, and Liang-Chao Qu	

An Experimental Comparison of CO₂ Huff-N-Puff Process in Shale and Tight Reservoirs	1289
Lv Wei, Dong Ming-zhe, Gong Hou-jian, Li Ya-jun, and Zhu Chao-fan	
Determination of Subdivided Layer Fracturing for Low-Permeability and Thin Interbedded Reservoirs in Y Oil Field	1302
Zhi-yong Li	
Reasonable Water Injection Pressure of Buried Hill Fractured Reservoir Considering Stress Sensitive Effect	1310
Kang Xiao, Li Xiang-ling, Xue-rui Zheng, and Xian-bing Li	
Control of Fault Related Folds on Fracture Development in Kuqa Depression, Tarim Basin	1325
Yong-zhong Zhang, Jian-wei Feng, Bao-hua Chang, Zhao-long Liu, and Zhen-hua Guo	
Improved Oil Recovery in Vuggy-Fractured Carbonate Reservoirs—Breakthroughs and Key Technologies from Tarim Field	1340
Wen-ting Yue, Yi Wang, Zuo-qian Wang, and Yu-wen Chang	
Study on Fine Identification Method of Dominant Channel in Low Permeability Fractured Reservoirs	1354
Cheng-long Li	
Improved Oil Recovery in Volcanic Reservoirs—Development and Key Technologies from Junggar Basin	1365
Wen-ting Yue, Yi Wang, Zuo-qian Wang, and Yu-wen Chang	
Optimization of Conversion Timing from Cold Production to CSS in Extra-Heavy Oil Reservoir	1376
Yin Yin	
High Temperature Deep Wells Fracturing Technology in Qaidam Basin	1383
Xin-yuan Feng, Chun-yu Li, Yong Liu, Cheng-juan Zhang, Gui-qí Xie, Li Zhang, En-dong Zhao, and Ying Fu	
Comprehensive Evaluation and Modeling of the W Oilfield Reservoir in the Timan–Pechora Basin	1394
Jue Hou, Ya-ping Lin, and Bo-biao Liu	
Research on Reasonable Development Method of Layered Gas Cap Reservoir with Small Dip Angle	1401
Xue-mei Zeng, Jia-yi Wu, Bai-song Liu, Hui Li, Li-ying Zhang, Xiao-nan Zhou, Hai-tao Wang, and Hai-long Cui	

Research and Application of Intelligent Management and Control Technology for Deliquification in Low Production Gas Wells in Tight Gas Fields	1412
Zheng-yan Zhao, Wei Tian, Yong Chen, and Xiong-xiong Wang	
Optimization of Multi-stage Massive Refracturing Technology of Damaged-Casing Wells	1421
Shao-gong Zhu, Meng Cai, Bo-rui Li, Peng Wang, Peng-fei Tang, Xiang-bin Liu, and Jing Wang	
Application of Super-Trace Residual Statics Technology in Sichuan Dual Complex Low SNR Seismic Data	1431
Yi Bao, Guang-da Lu, Cheng Wang, Jiang-yun Pei, Jia-yi Wu, and Li-na Wang	
Optimization Method of Production System for Intermittent Wells in Tight Sandstone Gas Reservoir	1443
Hui-hui Liu, Yue-hua Cui, Lili Liu, Zhikun Xu, and You Wu	
Application of Non-uniform Coherent Noise Suppression Technique in MTZ Area	1455
Hong-wei Deng, Hong-wei Zhong, Yi Bao, Wei Xu, Hong-xu Wang, and Zhi-ming Zhang	
Application of Gathers Illumination Compensation Optimization Technology Based on Hessian Matrix in Daqing Oilfield	1462
Yi Bao, Cheng Wang, Shu-min Chen, Jiang-yun Pei, Shan Wang, and Hong-wei Deng	
Coal Ply Distributions and Quantitative Prediction in Tipton Gas Field	1472
Yong Yang, Ai-fang Bie, Han-yu Bie, Ming Zhang, Ze-hong Cui, and Xiao-yan Liu	
The Establishment of Numerical Well Testing Modeling and Sensitivity Analysis in Fractured Basement Reservoir	1485
Xue-rui Zheng, Rui-feng Wang, Jun-tao Zhang, Xian-bing Li, and Dong-meng Qu	
Sedimentary Facies of T Structure in J Block of South Sumatra Basin, Indonesia	1499
Hou-qin Zhu, Zeng-hui Li, Yu-xia Ma, and Zhen-hua Bai	
The Analysis on Factors Affecting Fracture Network Fracturing in Low Permeability Oilfield	1507
Dian-xu Zhang, Chuang Zhang, Liang-wei Sun, Gui-tao Du, Guo-bin Jiang, Hong-liang Guo, Rui Song, Hong-liang Zhou, and Weiwei Zhang	

Analysis of Production Characteristics of Reservoirs with Different Fluid Properties and Adjustment Strategies	1517
Jian Liu, Mei Qi, Xiang-lin Xu, Zhan-xiang Lei, Wen Chen, Yun-bo Li, Zhao-peng Yang, Bin Han, Yu-peng Li, Li-kun Xu, Yuan Tian, and Jian Chen	
Simulation Analysis and Structural Optimization of Anchoring Performance of Slip Type Downhole Choke	1528
Meng Li	
Research and Application of Sanding Management Techniques in Oil Region H	1535
Han Yu	
Influence of Normal Coal and Deformed Coal on Isosteric Enthalpy of Desorption	1543
Xue-mei Zhang, Dong Li, Qing-hua Ma, and Jing-yuan Hao	
Numerical Simulation of Critical Depth of Methane Adsorption in Middle-Rank Coal	1552
Qing-hua Ma, Dong Li, Xue-mei Zhang, and Jing-yuan Hao	
Study on Influencing Factors of Alkali ASP Formulation	1560
Chun-tian Liu, Xin-xin Li, Zhi-rui Song, Yue Zhang, and An-jun Li	
Controlling Effects of Paleogeomorphology on Limestone Gas Reservoir of Marine–continent Transitional Facies: –A Case Study from Taiyuan Formation in Eastern Ordos Basin	1568
Xun-xun Fu, Wei-bo Zhao, Xiao-peng Liu, Yani Jia, and Yan Liu	
Estimation of Net Oil and Gas Reserves and Sensitivity Analysis on the Technical Service Contract Fiscal Model – A Case Study on Zubair Oilfield, Iraq	1576
Gui-fang Fa, Yi-meng Zhu, Hua Yang, and Zhi-yu Li	
The Research and Application of a New Interpretation Chart—Taking the Ordovician Majiagou Formation in the Eastern Ordos Basin as an Example	1588
Lei Zhao, Jian-liang Xu, Yan-xiang Zeng, Wan-cai Nie, Xie Tang, Yong-cheng Mou, and Xin-jun Wang	
Entitlement Reserves Assessment Under Buy-Back and Technical Risk Service Contract in Middle-East Region	1597
Yan-jing Yi, Jie Yi, Xin-jun Shao, Hua Yang, Rui-e Yuan, Zhong-sheng Wang, Gui-fang Fa, Ming-jun Xia, and Zhi-yu Li	
Research and Field Test on Intelligent Injection of Mixed Natural Gas Hydrate Inhibitors	1605
Qiang Li, Zhen-zhong Fan, Meng Cai, Wen-hai Ma, Qiang Yang, Pin-gang Ma, and Jing-qin Wang	

Reservoir Elaborate Description and Development Countermeasures of Western Lungu Area, Tarim Basin	1615
Lei Zhang, Jiao-ying Bi, Guang-jian Dan, Ming Zhang, Xiao Luo, Yi-ren Chen, and Shun-lai Yan	
Using Forward Modeling Analyses the Development Features of Carbonate Paleo-Subterranean River System	1623
Guang-jian Dan, Jiao-ying Bi, Pei-jun Wang, Liang-liang Zhang, Lei Zhang, Xiang-wen Li, Chun-yang Wang, and Ming Zhang	
Research on Water-Washing Characteristics in Different Flooding Modes of Dominant Reservoir in LaSaXing Oilfield	1635
Jia-yi Wu	
Development and Application of the Premium Reservoir Prediction Method for the Dengying Formation in the Gaoshiti Area, Sichuan Basin, China	1646
Xin-yu Li, Shi-hai Bao, Jing Zhang, and Hai-Jun Yan	
The Application of Illumination Compensation Technique in Solving the Shallow Imaging Problem of Irregular Acquisition Area	1658
Yi Bao	
Research and Application for Small-Scale, Non-coarsening Numerical Simulation Technology in Late Ultra-high Water Cut Stage	1667
Wei Zhu, Yu-hang He, Zhi-qiang Wang, Jia-yi Wu, Qing-yu Wang, and Ru-bin Li	
A Waterflooding Multiplier-Based Method for Evaluating Waterflooding Process and Effect	1678
Chen Xi, Zhang Aiqing, Wang Zuoqian, Wei Qing, and Liu Baolei	
Application of VSP Seismic Steering While Drilling Technology in Halahatang Area, Tarim Basin	1693
Yi-ren Chen, Xiang-wen Li, Jiao-ying Bi, Tao Wang, Hong-bo Zhou, Lei Zhang, Guang-jian Dan, Ming Zhang, and Guang-qing Zhang	
Design and Analysis of Gas-Liquid Hydrocyclone in the Wellbore of Single Well Injection-Production Technology	1701
Li Feng, Gao Jin-ming, Xing Lei, and Qiao Yi	
Reservoir Characteristics and Main Controlling Factors in Mixed Sedimentary Background: A Case Study from Asmari Formation of N Oilfield, Middle East.	1713
Long Wang, Juan He, Jun'e Ni, Shuo Yi, Xinglong Wang, Futing Sun, and Changyong Li	
Data-Driven Weighted Adaptive Multiple Suppression Method and Its Application of Songliao Basin	1726
Lei Feng	

Evaluation of Fracture Complexity Based on Large Physical Model Experiment	1734
Ye Zhang	
Study on the Influence Law of Gas Testing System on the Proppant Flowback	1744
Hai-tao Wang, Yong-ping Zhang, Xu Wei, Hao Zhang, Yu Liu, Da-wei Deng, and Sen-hao Wu	
Effect of Gas Reservoir Pressure Depletion on Capillary Pressure	1753
Wang Lin	
Comparative Study on Three Reserves Evaluation Systems of Russia, SPE-PRMS and SEC—Taking the Reserve Evaluation of the Yuluboqin Block in the Eastern Siberian Basin of Russia as an Example	1762
Fengxue Xu	
Analysis of Meandering River Architecture Based on Physical Simulation of Sedimentation	1771
Jia-yi Wu, Yu-hang He, Zhi-qiang Wang, Chun-sheng Zhang, and Xue-cong Gai	
Experimental Study on a Water-Soluble Rubber Cylinder Based on Thermosetting Polyester Polyurethane Popolymer	1783
Xu Dekui, Wang Fengshan, Lin Zhongchao, Sun Jiang, Jason Ren, Li Qingzhong, Zheng Bing, and Wang Qisheng	
Application of Big Data Analysis Technology in Risk Exploration Block C	1793
Hong-wei Li	
Study of Geology-Engineering Integration Fracturing Design Based on Material Point Method	1800
Dong-xu Li, Xian-jun Wang, Yu Sun, Wei Wang, and Ming-yong Gu	
Experimental Investigation on Gas Injection Timing and Gas-Liquid Ratio in Foamy Oil Recreation Process	1811
Xing-min Li	
Study on Erosion Performance of Separate Layer Fracturing and Monitoring Positioning Mechanism in Gas Well	1822
Meng Cai, Jun-jie Xing, Jun-liang Li, En-cheng Wu, and Shu-tao Lu	
The Experimental Research on CO₂-rock-fluid Interactions in Extra-Low Permeability Reservoirs of Ordos Basin	1831
Jie Zhang, Yang-nan Shangguan, Yong-hong Wang, Guo-wei Yuan, Yong-qiang Zhang, Wei-liang Xiong, Guang-ming Yu, and Xin-hui Lei	

Adopting Full Dynamic Color Palette Technology to Fulfill the High-Precision Prediction on Coal Seam Distribution	1839
Ming Zhang, Jietang Lv, Hongjun Wang, Yong Yang, Zehong Cui, and Guihong Wang	
Establishment of Cement Sheath Channeling Model and Experimental Study on the Laws of Channeling Sealing	1846
Xiang-bin Liu, Li Wang, Guang Shi, Chen-yu Wu, and Guo Li	
Simulation Experiment Research on Quantitative Analysis of Affecting Factor on Multi-fractures Horizontal Well Productivity	1860
Xue-song Lin	
Irreducible Water Saturation Calculation Method Research Based on Fractal Theory	1869
Ya Li, Ji-ping Wang, Jing-zhe Guo, and Te-bo Yang	
Recovery Rate and Influencing Factors of Volcanic Gas Reservoir in Xushen Gas Field	1878
Baohua Wang	
Research and Application of Quantitative Prediction Technology for Coalbed Methane in the Eastern Ordos	1888
Lin-ke Zhang, Ya-bin Guo, Xu Li, Jin-fu Li, Qing Gao, and Wen-li Luo	
Study on Numerical Simulation Method and Remaining Oil Distribution of Horizontal Well in Low Permeability and Thin Reservoir	1898
Wang Li	
Discussion on the Relationship Between Test Oil Well and Development Well Production of Putaohua Reservoir in the SZ Region	1909
Yuan Ji, Qing-bin Zhang, Xing-quan Liu, Yun-hua Cui, Xian Wu, and Zhi-qiang Zhao	
Prediction Method of Fracturing Well Pressure in Low Permeability Reservoir Based on Two-Phase Elliptical Percolation	1921
Jingwei Zhu, Yunyan Liu, and Dianjun Yang	
Study on Optimizing the Fracture Spacing in Horizontal Well of Low Permeability	1933
Hai-jun Zhang, Ze-jia Yang, and Bai-xue Chen	
Practice and Understanding of Well Completion Technology Using Coiled Tubing with Preset Cable	1947
Li Liang, Hong-tao Chi, and Bai-xue Chen	

Seismic Attributes Expression and the Sedimentary Evolution of Bio-clastic Limestone Mound-Shoal Complex, Lower Cretaceous Period in Southern Iraq	1954
Teng-fei Lin, Zhen-yong Xu, Yue-feng Yan, Ming-sheng Feng, Xue-ling Wang, Zhong-yuan Tian, Xing-fang Liu, Xin Li, Jin Jia, and Chao Yang	
Research and Application of Large Scale Multi-stage Fracturing Technology for Vertical Wells in Low Permeability Complex Fault Block Oilfield	1966
Jin-you Wang, Ban Li, Xiao-chuan Zhnag, Hong-yan Zhang, and Lin Li	
Development and Application of Experimental System for Horizontal Well Separate Layer Stimulation Technology	1974
Hong-yan Zhang, Jin-you Wang, Chun-hui Zhang, Jian-hua Xie, Qing-bo Mao, Yi Zhang, Su Huang, Mu-lin Cheng, and Xiu-hong Chen	
The Preparation, Evaluation and Application of a New Complex Corrosion Inhibitor with High Temperature Resistance at 200 °C for Acidizing	1984
Xing-de Zhang, Chen-zhi Hang, Li Wu, Yan Zhang, and Qu Zhang	
Direct Numerical Simulation of a Mixed-Media Model for Efficient Developing Shale Gas Reservoirs	1993
Ning Li and Lin Yan	
Steady-State Productivity Equation for Partially Perforated Vertical Wells in Multi-layer Heterogeneous Oil Reservoir	2010
Chang-yong Li, Jian Pi, Yu Zhang, Cheng-xiang Qi, and Guang-fu Zhai	
Study on the Numerical Simulation Method of the Layered Deep Profile Control in Thick Reservoir	2020
Ling-ling Chen, De-lin Gai, Zhen-bao Gang, Xu-ying Wang, and Quan Zhou	
Control of Overflowing-Lost Circulation During Well Drilling in Ultra-Deep Carbonate Sulfur Oil and Gas Reservoir	2027
Shuang Liang, Wenyong Sun, Xitian Shi, Fangyu Luo, and Xuliang Zhang	
Determination of Cutoff of Effective Porosity of Callovian-Oxfordian Carbonate Rocks in Central Block B in the Amu Darya Right Bank Area	2041
Mu-wei Cheng, Yu-zhong Xing, Chun-qiu Guo, Hai-dong Shi, and Peng-yu Chen	
Design and Study of Downhole Oil Droplet Coalescer in Single-Well Injection-Production System	2053
Minghu Jiang, Yi Qiao, Lei Xing, Li-xin Zhao, Jin-ming Gao, and Jin-yu Li	

The Development and Performance of a New Type of Environment Friendly None-Flowback Retarded Acid	2065
Jing Wang, Jian-xun Meng, Xiang-bin Liu, Qing-guo Wang, and Xin-yue Zhang	
Transient Simulation Analysis of Coiled Tubing Gas Lift in Deep Volcanic Gas Wells	2076
Hong-tao Zhang, Meng Cai, Wen-hai Ma, Pin-gang Ma, and Nan Li	
Application of Research on Regional Basic Geological Law in Exploration and Reserves Increase of Jurassic Oil Reservoir in Yanwu Area, Ordos Basin	2084
Jing-zhe Guo, Ya Li, Zhi-wei Liu, Bin-hu Han, and Shuai Wang	
A Five-Linear Anomalous-Diffusion Model for Fractured Horizontal Well in Fractal Tight Oil Reservoir	2098
Xiang-dong Xing, Qi-hong Feng, Wei Zhang, and Sen Wang	
Method of Recovery Prediction by CO₂ Flooding Characteristic Curve in Ultra-low Permeability Reservoir	2119
Xin Wang	
New Method of Gas and Water Layer Identification of Low Permeability Carbonate Gas Reservoir	2128
Yue-hua Cui, Yi-fei Lan, Hui-hui Liu, Jin-cheng Wang, Xiao-ling Meng, and Zhun-bei Wang	
Low Resistivity Pay Zones Evaluation in South Sumatra Basin, Indonesia: In Integrated Method	2144
Ming Li, Guo Liang Hong, Yuxia Ma, Zhenhua Bai, and Guangcheng Hu	
Optimization Design of Liquid Carbon Dioxide Fracturing String	2153
Wei-shi Zheng, Huan Tan, and Jin-jin Han	
New Temporary Plugging Agent Used in Re-Fracturing Technology of Tight Gas Reservoir	2159
Yan-hong Li, Hong-xing Xu, and Lu Li	
Quantitative Azimuthal AVO Detection Method for Oil and Gas Analysis of Deep Buried Fractured-Vuggy Reservoir	2167
Xiang-wen Li, Jing-ye Li, Yong-lei Liu, Pei-ling Ma, Jiao-ying Bi, Xing-wang Zhang, Yi-ren Chen, Chun-zi Jia, and Zi-ao Wang	
Segmented Well Inflow Control with Intelligent Completions: A Comparative Study	2178
Zhong Cheng, Liang Zhang, Xiao-long Yu, Ning Li, Zhou-zheng Hao, Xiang-xiang Ding, Jia-xuan Gao, and Jie Cao	

Analysis of Affecting Factors of Cold Production of Extra Heavy Oil with Horizontal Wells in Block M	2185
Yang Shen, Xing-min Li, Zhao-peng Yang, and Xiao-xing Shi	
Application of Automatic History Matching in Field Injection and Production Deployment	2192
Zhi-wei Wang	
Numerical Simulation of Waterflooding Mechanism in Fractured-Vuggy Reservoir Based on Phase-Field Method	2203
Guang Lu, Yu-long Zhao, Xu-yang Zhang, and Xiao-ping Tao	
Intelligent Reservoir Diagnosis Method Based on BP Neural Network	2215
Si-yi Wang, Yong-ling Zou, Zhao-cai Ren, Lei Song, and Yan-qin Liu	
Fine Geological Guidance Technology of Horizontal Wells in Tight Sandstone Gas Reservoirs	2225
Shi-xiang Fei, Hui-hui Liu, Yue-hua Cui, Hua Wang, Xue-ling Liu, and Shou-chun Xia	
Study on Artificial Fracture Monitoring Technology of Coalbed Methane Reservoir Based on Microseismic Events Attribute	2237
Liu Bo, Wei Lu-lu, Wang Fei, and Wei Zheng-da	
Study on the Technology of Imbibition in Ultra-low Permeability Reservoir	2243
Ya-fei Hu, Bao-zhu Li, Zhi-ying Wu, Jian-feng Hou, and Huan-huan Peng	
Study on the Detection Technology of Curable Coating Proppant in Fracturing	2255
Gui Zheng, Hai-jiang Fu, Jin-ping Qiu, Yang Xuan, Ming-xi Feng, Kai-qiang Zhao, Di Zhao, Yan-ling Liu, Jian-ge Li, and Hong Xue	
Study on Physical Simulation Experiment of Dynamic Sand Transportation in Complex Fractures	2265
Zhiying Wu, Yafei Hu, Baoping Lu, and Tingxue Jiang	
The Study of Multi-method Synergistic Characterization of Heterogeneous Gas Reservoir Boundary in Sulige Gas Field	2276
Chen Zhang, Jinbu Li, Qinghua Tian, Zhe Xiong, Shuai Chen, and Lei Jiang	
Experimental Study on Key Factors of CO₂ Huff and Puff in Tight Oil Reservoir	2286
Jiu-mu Zhou, Yi-ling Wang, Jian-guang Wei, Xiao-feng Zhou, and Jiang-tao Li	

Application of Fuzzy Analytic Hierarchy Process in the Optimization of Unproduced Reserves	2296
Gang Wang	
Sand Body Microfacies Types and Single Sand Body Division in Sandy Braided River Reservoirs: A Case Study from Yan10 Member in the H303-6 Well Area, Southwestern Ordos Basin, China	2306
Yong-gang Zhao, Lei Li, Liu-qi Shi, Zheng-jie Wang, Lu-yan Yang, and Zhi-wei Wang	
Methods for Studying Optimal Fracturing Timing Selection About Large Well Spacing Polymer Flooding in Heterogeneous Reservoirs . . .	2321
Yu-zhu Wu	
Research Status and Development Trend of Clean Operation Technology in Domestic Onshore Oilfield	2331
Fei Yao, Yu-xue Sun, Dekui Xu, Yu-chuan Liu, Peng-cheng Wang, Xiao-hui Han, Xiao-jing Zhang, and Ming Huang	
Evaluation of Cyclic Steam Injection with Carbon Dioxide Enhanced Oil Recovery from Extra Heavy Oil Reservoir	2343
Zhang-cong Liu, Chang-chun Chen, Zhao-peng Yang, Xing-min Li, Yang Shen, and Xiao-xing Shi	
Analysis of the Remaining Exploration Potential in Tamsag Basin	2351
Zhi-yang Nie	
Control of Sequence Stratigraphic Characteristics on Sedimentary Evolution of Fan Delta—Taking St Formation of S Oilfield as an Example	2359
Zhi-qiang Wang, Shuai Shao, Xue-cong Gai, and Jing-yi Zhang	
The Optimization Strategy of Gravity Assisted Gas Drainage in Mature Oil Field Based on Experiment Design and Response Surface Methodology	2369
Chao Yang, Mei Qi, Si-yu Yang, You-jing Wang, Hui He, Zhen-yong Xu, Bei-wei Luo, and Jin Jia	
Characteristics of Rimmed Shelf-type Carbonate Platform with Large Tidal Channel: A Case Study for a Oilfield, Middle East.	2391
Yu-mei Liu, Jun-chang Dong, Wei-jun Wang, and Teng-fei Lin	
Controlling Factors Analysis and Risk Assessment of Casing Damage	2398
Fanzhong Kong, Ang Gao, Yanan Shi, Yue Dai, Dezhao Zhao, Zhenjun Shao, and Juan Du	
Molecular Simulation of Water Effect on Oil Transport in Montmorillonite Nanopore of Shale	2408
Wei Zhang, Qi-hong Feng, Sen Wang, Xiang-dong Xing, and Jia-wei Ren	

Characteristics of Oil and Gas Accumulation Combinations and Accumulation Rules in Large Basins in the Persian Gulf	2418
Da-wang Liu, Wen-qi Zhang, Yang Yang, Fei Gu, Ruo-jing Dong, and Yu-ning Wang	
Study on Hybrid Volume Fracturing and Its Application of High Clay Carbonate Shale Oil Reservoirs	2431
Xue-wei Liu, Gui-fu Duan, Chun-ming He, and Gang Wu	
Common Angle Gather Illumination Compensation Technology Based on Spatial Contribution Estimation	2442
Xue-cong Gai	
The Study and Practice of Green and Efficient Self-flowing Water Injection in Offshore Oilfield	2450
Qiang Zhang, Wei-ying Yao, Chao Ma, Kai Chen, and Hai-yong Zhang	
Suitability Determination Method for Drilling Thickness of Bottom-Water Layer in Gas Reservoir	2456
Hui Deng	
Seismic Geological Modeling Study on Tight Sandstone Gas Reservoir in Ordos Basin	2468
Xin-ning Zou, Jin-bu Li, Bin Fu, and Hao Jin-mei	
Application of Comprehensive Optimisation Strategy for Waterflooding Development Using Horizontal Wells in Thin Carbonates	2480
Dandan Hu, Limin Zhao, Songhao Hu, Qian Yao Li, Rui Guo, and Yuanbing Wu	
Reservoir Production Optimal Control Using Parameterization Method and General Upscaling Stochastic Approximation Algorithm	2490
Zhan-xiang Lei, Bao-quan Zeng, Bin Wang, Fei Huang, Yong-bo Shi, Mu-zhen Zhang, Tai-lai Qu, Hui Xu, and Shu-cheng Wu	
Application of Seismic Guide Drilling Technology for Ultra-Deep Buried Carbonate Reservoir	2504
Bo Xu, Jia-yuan Liu, Yong-lei Liu, Xiong-fei Wang, Yang Yang, Hao-chen Zhang, Lei Dou, and Hong Zeng	
Optimization of Field Development Plan for Thermal Recovery Method in Strong Bottom Water Aquifer Reservoir – Bohai × Pilot Zone as an Example	2514
Zhuo-lin Li	
Characteristics of Karstification in the Penecontemporaneous Period in Majiagou Formation, Ordovician, Sulige Gas Field	2526
Qing-hua Tian	

Numerical Study on Interlayer Interference in Different Types of Coal-Bearing Strata	2541
Yin-hua Liu, Hui-jun Fang, Xue-jie Xing, Yu-bin Wang, Liang Zhang, Chang-hua Yang, Zhi-hua Zhang, and Wen-tao Ma	
Study on Gas Injection Huff and Puff in Fuyu Tight Oil with Vertical Well Network Fracturing in Daqing Oil Field	2561
Zhong-bao Wu, Gao Lin, Dai Xu, Yi-qun Yan, and Zi-yi Xu	
Quantitative Characterization of Rock Type of Pore Type Bioclastic Limestone Reservoir in Middle East	2579
Gen-jiu Wang, Xiang Xin, and Xu Jie	
Study on Stress Corrosion Cracking of Super 13Cr in High-Concentration Calcium Chloride Brine	2591
Ying Gao, Minjie Xu, Zhan-wei Yang, Li-wei Wang, Yang Shi, Xiu-ling Han, and Xiang-dong Li	
Strategies for Potential Tapping of Remaining Oil in Sandstone Reservoir Based on Flow Unit Research	2602
Jincai Wang, Zhaolun, Zifei Fan, Angang Zhang, Jun He, Xiangzhong Zhang, Ning Feng, and Linlu Li	
Study on Well Pattern Infilling of Low Permeability Reservoir Based on the Distribution of Remaining Oil and Waterflood Front	2609
Chao Li, Jiao-sheng Zhang, Xi-qun Tan, De-sheng Li, and Yan-mei Zhang	
Sandbody Genesis and Hydrocarbon Accumulation Mechanism of Beach-Bar of Tongbomiao Formation in Tanan Depression	2618
Zong-lun Sha, Li-wei Sui, Bao-quan Song, Hong-fu Jiang, Wen-lu Yang, Quan Wen, Jin-hao Nan, and Xiao-hai Zhang	
Investigation of Fracture Height Growth in Multiple-Layered Rock from Lab Test to Field Diagnosis in Unconventional Reservoirs	2630
Haifeng Fu, Xinquan Zheng, Bo Cai, Tiancheng Liang, Nailong Xiu, Yuzhong Yan, Yunzhi Liu, and Yaoyao Duan	
Integrated Technology in the Hydraulic Fracturing of the Shallow Metamorphic Rock in Archean Stratum – A Case Study	2648
Shuai Li, Chun-ming He, Yue-bin Gao, and Yang Li	
Microstructure of Diverting Acids of Variable Viscosity	2656
Chuan Sun, Chen-zhi Huang, Chuan Wang, Shuang Liu, and Qi Li	
Study on the Formation Mechanism of Complex Fracture Network of Temporary Plugging Construction Technology	2668
Lin Hou, Yi-min Chen, Yuan-yuan Wang, Ting-ting Zhang, and Xiang-yi Yi	

Development Effect Evaluation of Commingled Production of Banded Reservoirs by a Horizontal Well	2680
Wen-qi Zhao, Meng Sun, Shu-qin Wang, Lun Zhao, Feng-jun Hao, Li Chen, and Gang Ma	
Study on Potential Exploitation by Restimulation of Deep Tight Gas Condensate Reservoir	2689
Li-wei Wang, Xiu-ling Han, Min Jia, Su-zhen Li, and Ying Gao	
Characteristics of Gas-Water Two-Phase Flow in the Presence of Fracturing Fluid—Take Sulige Gas Field as an Example	2699
Xue-ling Liu, Zhen-zhen Qiang, Shi-xiang Fei, Yue-hua Cui, Shou-chun Xia, Jin-cheng Wang, Meng Xiao-ling, and Zhunbei Wang	
Fine Characterization of the Tidal-Controlled Delta Sedimentary System: Taking the Lower Part of the Cretaceous Tanopqin Formation of the ST Gas Field in the Western Siberian Basin as an Example	2708
Ye-fei Chen, Kong-chou Li, Jun Ni, and Yong-hua Wang	
Quality Control and Validation of 3D Static Model of Multi-fault Cutting and Low Permeability Reservoir	2720
Peng Yu and Fu-lin Yang	
Remote Sensing Study on the Deposition of Modern Coarse-Grain Fans in Bosten Lake, Yanqi Basin	2728
Hong-ying Zhou	
Study on the Potential of Enhanced Oil Recovery by Polymer Flooding in Low-Viscosity Sandstone Reservoirs with Extremely High Water Cut	2743
Xiang-zhong Zhang, Lun Zhao, Li Chen, Jin-cai Wang, and Xiang-an Yue	
Q-P Method for Reservoir Energy Analysis	2750
Tian-yi Sun, Shuai Wu, and Yan Cong	
Prediction of Thin Sand Body in Tight Reservoir by Well Seismic Combination	2759
Jie Wang, Feng Zhang, Min Zhang, Sheng Zhang, Wei Li, and Yao Lu	
Structural Integrity Analysis of Perforated Cement Ring	2766
Shuai Shao and Jin-fu Zhang	
Study on the Deep Profile Control Technology of the Overall Block in P Reservoir	2778
Jian-zhao Liu	

Study on Control Technology of Carbon Dioxide Flooding Gas Channeling in Low Permeability Reservoir	2786
Shijiang Ding, Liping Wang, Minghui Li, Wenqin Zhang, Hui Liu, and Jingwei Sun	
The Asphaltene Stability Evaluation and Artificial Lift Timing Analysis for B Oilfield, Iraq	2795
Yu Zhang, Chang-yong Li, Jian Pi, and Chen Li	
Integrated Development Strategy and Case Studies of Over-Pressured Carbonate Reservoirs Containing with H₂S	2807
Dandan Hu, Yuanbing Wu, Songhao Hu, Mingsheng Feng, and Siying Hao	
Deep Learning 3D Inversion of Subsurface Target Based on Multinary Electromagnetic Data	2816
Hong-fei Tan, Wei-qin Li, Juan Xu, and Guo-an Wei	
Numerical Analysis of Casing Deformation Under Cluster Well Spatial Fracturing	2826
Jianjun Wang, Feipeng Jia, Shangyu Yang, Haijun He, Nan Zhao, and Le Zhang	
Study on the Law and Influencing Factors of Proppant Settling in Fracturing Fluid	2834
Zhiying Wu, Yafei Hu, Baoping Lu, and Tingxue Jiang	
New and Successful Field Application of Water Plugging in Thick Oil Layer Using Positioning Balanced Fracturing Technology	2843
Bing Xu, Xin Wang, Xiang-bin Liu, Qing-guo Wang, and Wen-jiang Chen	
Feasibility Analysis of Nanoparticles Enhanced In-Situ Microwave Thermal Recovery of Shale Oil	2864
Meng Peng, Weiqin Li, Lei Lin, Hongfei Tan, Guo-an Wei, and Juan Xu	
Fine Injection-Production Adjustment Study on Binary Flooding for Changqing Low Permeability Reservoirs	2875
Guo-wei Yuan, Yang-nan Shangguan, Yong-hong Wang, Yuan-yuan Lu, Yong-qiang Zhang, Wei-liang Xiong, Jin-long Yang, and Shu-man Li	
Feasibility Study on Demodulation of Down-Hole EM-WRT Considering Clutter and Carrier Phase Shift Based on CNN	2884
Lei Lin, Wei-qin Li, Meng Peng, Hong-fei Tan, Guo-an Wei, and Juan Xu	
Suppressing Method of the External Interference Waves for “Two Widths and One Height” Seismic Data in Songliao Basin	2894
Zhong-hua Zhao	