

特种油气藏

TEZHONG YOUQICANG

1994 年创刊(双月刊)

第 17 卷 第 3 期 总第 80 期

2010 年 6 月 25 日出版

技术顾问 马玉龙 主编 张方礼
副主编 赵政超 刘德铸
常务副主编 王威

主管单位 中国石油天然气集团公司
主办单位 中油辽河油田公司
承办单位 辽河油田公司勘探开发研究院
辽河油田公司钻采工艺研究院
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:1504Q
地 址 辽宁省盘锦市辽河油田公司
勘探开发研究院
电 话 0427-7823579;0427-7820262
邮 编 124010
投稿网址 www.sogr.com.cn
电子邮箱 tzyqc@petrochina.com.cn
tzyqc@vip.163.com
刊 号 ISSN 1006-6535 CN 21-1357/TE
广告许可证号 211100100016
定 价 12.00 元/册
责任编辑 刘兆芝 技术编辑 徐云杰
彩页编辑 徐云杰 英文翻译 尚益桁 张冰

SPECIAL OIL & GAS RESERVOIRS

Vol. 17 No. 3 (Sum. No. 80) Jun. 2010

Governing Unit CNPC

Sponsor Liaohe Oilfield Company of PetroChina

Undertaken by E&D Research Institute of Liaohe Oilfield Company of PetroChina
Drilling And Oil Production Technology Research Institute of Liaohe Oilfield Company of PetroChina

Technical Consultant MA Yu-long

Editor in Chief ZHANG Fang-li

Vice Editor in Chief ZHAO Zheng-chao LIU De-zhu

Standing Vice Editor in Chief WANG Wei

Editor & Publisher Editorial Board of Special Oil & Gas Reservoirs

Address E&D Research Institute of Liaohe Oilfield Company, PetroChina, Panjin, Liao-ning, China, 124010

Tel 0427-7823579;0427-7820262

E-mail tzyqc@vip.163.com

tzyqc@petrochina.com.cn

Printing The Press of Liaohe Petroleum Newspaper Office

Overseas Distributor China International Book Trading Corporation P. O. Box 399, Beijing, China (Code No. 1504Q)

Subscription Rate (Overseas) US \$12 per copy

US \$72 per year

目 次

综 述

天然气水合物开采新技术及其工业化开采的制约因素 李芳芳,刘晓栋(1)

低品位储量开发现状及其措施对策 肖武,田世澄(4)

蜡沉积动态模型研究综述 余燕,刘建仪,张迥,虞一洋,陈正龙(10)

地质勘探

松辽盆地青山口组湖相灰岩特征及油气地质意义

杨玉芳,钟建华,黄李荣,司维柳,陈鑫(14)

川西坳陷中段上三叠统须家河组致密气藏超压特征与组合类型划分

李林涛,邓克,张建华(19)

楚雄盆地东山 - 黑井凹陷露头层序地层分析及有利储层分布

边雪梅,齐勋,何青芳,修申成,李秀国(22)

渤海低凸起潜山岩性识别及储集性能预测

曾选萍,茆利,王玉静,杨俊敏(27)

苏里格气田苏 48 区块主力层储集性能研究及评价

李成福,任战利,高改改(31)

全烃地球化学细分狮子沟构造油气源

高生军,李延钩,郭瑞超,王廷栋,陈云富(35)

前进潜山太古宇内幕油藏产能控制因素分析 徐晓光,刘兴周,孙晶莹(38)

北二台地区石炭系火山岩储层控制因素研究

王鹏,罗明高,杜洋,刘浩天,完颜琪琪(41)

绥中 36-1 油田东二下段沉积演化及对油气的控制作用

马平华,邵先杰,霍春亮,赵春明,李武广(45)

鄂尔多斯盆地神木 - 米脂地区上古生界天然气藏压力分布特征

江涛,陈刚,丁超,李振华(48)

鄂尔多斯盆地正宁 - 宜川地区长 8 油层组沉积相研究

范萌萌,李文厚,孙栋,何元方(52)

泌阳凹陷南部陡坡带核三上段沉积相研究

杨雄涛,罗顺社,朱颜,陈小军,胡婷(56)

桩海地区断裂特征及断裂演化模式 钟建华,张鹏,冯斌,钱钦(61)

油藏工程

测算稠油经济采收率的 LB 经验法 刘斌(64)

中深厚层稠油油藏火烧油层试验研究 柴利文,金兆勋(67)

喇嘛甸油田北区块萨 III-4 - 10 油层高浓度聚合物驱数值模拟研究

张平,王磊,唐放,高明,郭守国(70)

变形三重介质低渗透油藏双渗流动模型 刘文超,张世明,刘晓燕,王君(73)

缝洞型碳酸盐岩油藏三维三相数值模拟新方法 康志江,张杰(77)

干 12 块稠油油藏转氮气泡沫驱研究

殷方好,刘慧卿,杨晓莉,雄梅,张辉(80)

利用水平井合采底水河道型油藏产能分析 赵文琪,王晓冬,黄钢(83)

深层低渗透储层压裂裂缝处理技术

王益维,张士诚,李宗田,李凤霞,牟善波(87)

高温自生气泡沫室内实验研究 蒲春生,石道渝,秦国伟,郭庆(90)

塔南凹陷铜钵庙组与南屯组储层敏感性分析 张湘娟(93)

轻油注空气静态低温氧化实验研究 刘遥,刘易非,陈艳,张永成(96)

水平井开采中后期降黏助排技术研究 蔡小明,柳荣伟,赵金妹(99)

化学驱相对渗透率曲线特征 卫敏,李奔,李卉,曹仁义(101)

钻采工程

水平井压裂裂缝缝高影响因素及控制方法研究

曲占庆,范菲,胡高群,张秀芹(104)

高温超深井泥固井封窜材料的研究与应用 陈渊(108)

疏松砂岩油藏水平井不均匀射孔技术探讨 汪亨林,龚雪峰,马童辉(112)

松辽盆地扶余油层南部人工裂缝高度主控因素分析

魏了超,孙兆旭,魏兆言(116)

期刊基本参数:CN21-1357/TE * 1994 * b * A4 * 128 * zh * P * ¥12.00 * 4500 * 33 * 2010-6

SPECIAL OIL & GAS RESERVOIRS

Vol. 17 No. 3 (Sum. No. 80) Jun. 2010

CONTENTS

Summary

New technology of gas hydrate recovery and constraints on commercial recovery *LI Fang - fang, LIU Xiao - dong(1)*

Current status of low - grade reserves and the countermeasures *XIAO Wu, TIAN Shi - cheng(4)*

An overview of dynamic model study on wax deposit *YU Yan, LIU Jian - yi, ZHANG Jiong, YU Yi - yang, CHEN Zheng - long(10)*

Geologic Exploration

Lacustrine limestone characteristics and its petroleum geology implication in Qingshankou formation of Songliao Basin *YANG Yu - fang, ZHONG Jian - hua, HUANG Li - rong, SI Wei - liu, CHEN Xin(14)*

Overpressure characteristics and classification of the tight gas reservoirs in upper Triassic Xujiache formation in the middle section of west Sichuan Depression, China *LI Lin - tao, DENG Ke, ZHANG Jian - hua(19)*

Analysis of outcrop sequence stratigraphy and distribution of favorable reservoirs in Dongshan - Hejing Sag of Chuxiong Basin *BIAN Xue - mei, QI Xun, HE Qing - fang, XIU Shen - cheng, LI Xiu - guo(22)*

Buried hill lithology identification and reservoir quality forecast in Bonan low uplift *ZENG Xuan - ping, MAO Li, WANG Yu - jing, YANG Jun - min(27)*

Research and evaluation of principal reservoir properties in Su - 48 block of Sulige gas field *LI Cheng - fu, REN Zhan - li, GAO Gai - gai(31)*

Hydrocarbon source scrutinized by total hydrocarbon geochemistry for Shizigou structure in western Qaidam Basin *GAO Sheng - jun, LI Yan - jun, GUO Rui - chao, WANG Ting - dong, CHEN Yun - fu(35)*

Control factors on Archaeozoic reservoir productivity in Qianjin buried hill *XU Xiao - guang, LIU Xing - zhong, SUN Jing - ying(38)*

Influencing factors of the Carboniferous volcanic reservoirs in Beisantai area of east Junggar Basin *WANG Peng, LUO Ming - Gao, DU Yang, LIU Hao - tian, WANYAN Qi - qi(41)*

Sedimentary evolution and its control action on hydrocarbon in lower Ed₂ formation in Suizhong 36 - 1 oilfield, Bohai Sea *MA Ping - hua, SHAO Xian - jie, HUO Chun - liang, ZHAO Chun - ming, LI Wu - guang(45)*

Pressure distribution in upper Paleozoic gas reservoirs in Shenmu - Mizhi area of Ordos Basin *JIANG Tao, CHEN Gang, DING Chao, LI Zhen - hua(48)*

Sedimentary facies of Chang 8 oil unit in Zhengning - Yichuan area of Ordos Basin *FAN Meng - meng, LI Wen - hou, SUN Dong, HE Yuan - fang(52)*

Sedimentary facies of upper Eh3 on the south steep slope zone of Biyang depression *YANG Xiong - tao, LUO Shun - she, ZHU Yan, CHEN Xiao - jun, HU Ting(56)*

Fracture characteristics and evolution model of Zhuanghai area *ZHONG Jian - hua, ZHANG Peng, FENG Bin, QIAN Qin(61)*

Reservoir Engineering

LB empirical method of estimating economic recovery of heavy oil *LIU Bin(64)*

Pilot study of in situ combustion for mid - deep thick heavy oil reservoir *CHAI Li - wen, JIN Zhao - xun(67)*

Numerical study of high concentration polymer flooding for Sa III 4 - 10 reservoir of the Beibei block in Lamadian oilfield *ZHANG ping, WANG Lei, TANG Fang, GAO Ming, GUO Shou - guo(70)*

Dual - percolation model of low permeability reservoir with deformed triple media *LIU Wen - chao, ZHANG Shi - ming, LIU Xiao - yan, WANG Jun(73)*

A new method of 3D 3 - phase numerical simulation for fractured - vuggy carbonate reservoir *KANG Zhi - jiang, ZHANG Jie(77)*

Study on converting to nitrogen foam flooding for heavy oil reservoirs in Qian12 block of Liaohe oilfield *YIN Fang - hao, LIU Hui - qing, YANG Xiao - li, XIONG Mei, ZHANG Hui(80)*

Productivity analysis of commingling production by horizontal well for channel reservoirs with bottom water *ZHAO Wen - qi, WANG Xiao - dong, HUANG Gang(83)*

Induced fracture treating technology for deep low permeability reservoirs *WANG Yi - wei, ZHANG Shi - cheng, LI Zong - tian, LI Feng - xia, MU Shan - bo(87)*

Experimental study on high - temperature self - generated gases foam *PU Chun - sheng, SHI Dao - han, QIN Guo - wei, GUO - Qing(90)*

Reservoir sensitivity analysis of Tongbomiao and Nantun formations in Tanan depression *ZHANG Xiang - juan(93)*

Experimental study on static low temperature oxidation of light oil with injected air *LIU Yao, LIU Yi - fei, CHEN Yan, ZHANG Yong - cheng(96)*

Study on viscosity reduction and cleanup additive technology in mid - late recovery stage of horizontal wells *WEI Xiao - ming, LIU Rong - wei, ZHAO Jin - shu(99)*

Characteristics of relative permeability curve in chemical flooding *WEI Min, LI Ben, LI Hui, CAO Ren - yi(101)*

Drilling & Production Engineering

Influence factors on fracture height and the control measures of horizontal well fracturing *QU Zhan - qing, FAN Fei, HU Gao - qun, ZHANG Xiu - qin(104)*

Research and application of nanometer sealing material for cementing high temperature ultra deep well *CHEN Yuan(108)*

An approach to uneven perforation in horizontal wells of unconsolidated sandstone reservoir *WANG Xiang - lin, GONG Xue - feng, MA Tong - hui(112)*

Analysis of the main controlling factors on artificial fracture height in south Fuyu reservoir of Songliao Basin *WEI Zi - chao, SUN Zhao - xu, WEI Zhao - yan(116)*