



钻探工程

DRILLING ENGINEERING

原《探矿工程(岩土钻掘工程)》

ISSN 2096-9686

CN 10-1730/TD

2022

第49卷第**3**期
(总第431期)

Vol. 49 No. 3

(SUM No. 431)

特别关注

第一届探矿工程青年论文大赛专辑

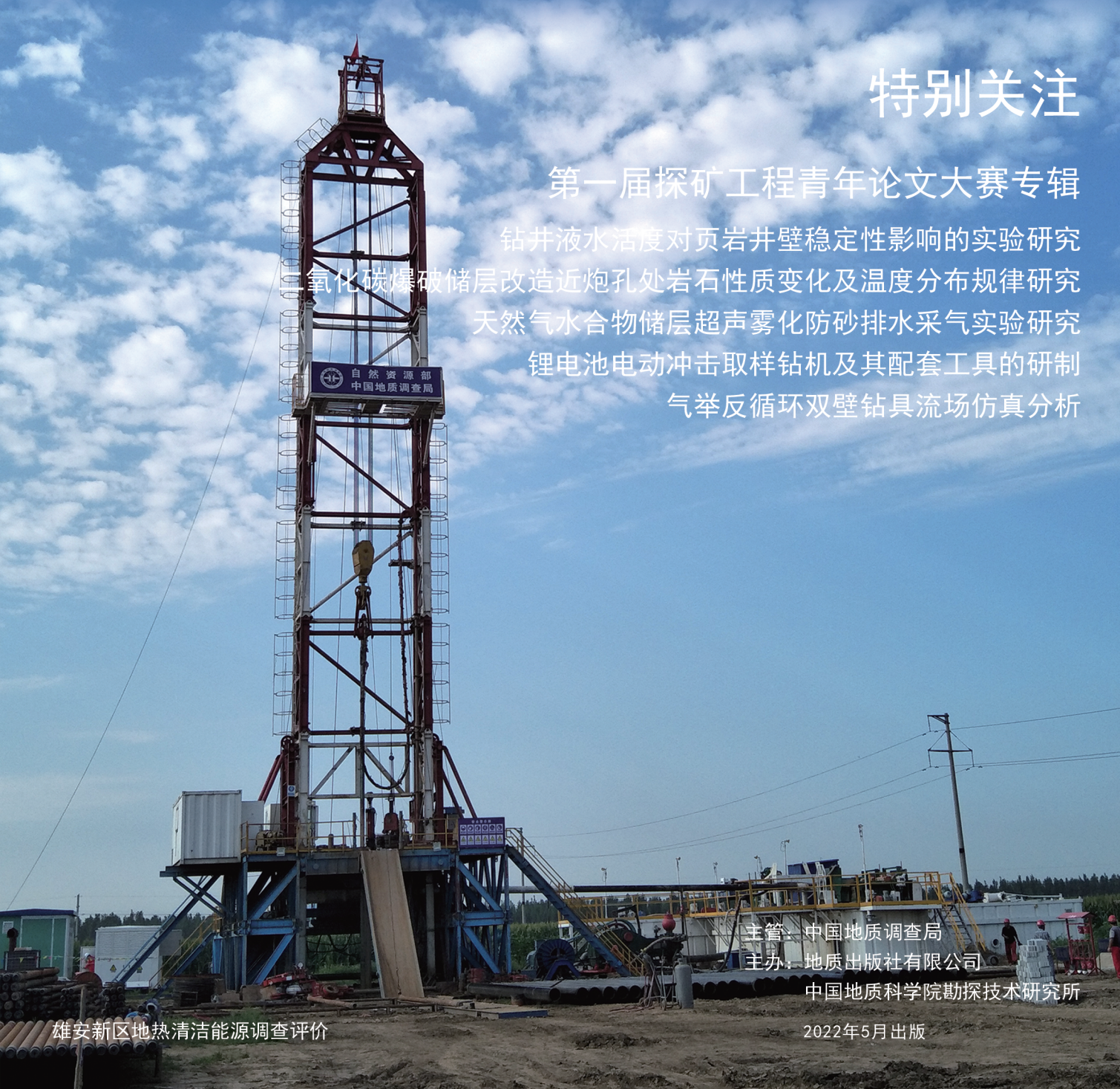
钻井液水活度对页岩井壁稳定性影响的实验研究

二氧化碳爆破储层改造近炮孔处岩石性质变化及温度分布规律研究

天然气水合物储层超声雾化防砂排水采气实验研究

锂电池电动冲击取样钻机及其配套工具的研制

气举反循环双壁钻具流场仿真分析



主管：中国地质调查局
主办：地质出版社有限公司
中国地质科学院勘探技术研究所

雄安新区地热清洁能源调查评价

2022年5月出版

钻探工程

2022年第49卷第3期(总第431期)

2022年5月出版

双月刊

目次

【能源资源钻采】

- 钻井液水活度对页岩井壁稳定性影响的实验研究——以秀山龙马溪组页岩为例 杨现禹, 蔡记华, 蒋国盛, 石彦平, 陈书雅(1)
- 二氧化碳爆破储层改造近炮孔处岩石性质变化及温度分布规律研究 郑君, 樊涛, 窦斌, 吴天予(13)
- 天然气水合物储层超声雾化防砂排水采气实验研究 罗强, 刘志辉, 宁伏龙, 窦晓峰, 刘志超(23)
- 雄安新区D21地热勘探井钻探施工技术及其成果 李红梅, 王雷浩, 殷邈(29)
- 重庆市秀山县ZK2地热井定向井段钻进工艺 陈俊松, 尚亚军, 杨建军, 孙宇(37)

【钻探装备】

- 锂电池电动冲击取样钻机及其配套工具的研制 岳永东, 谭春亮, 卢倩, 郭强, 林广利(44)
- 基于Unity3D的岩心钻机模拟实训平台研究 任启伟, 赵远, 孟义泉, 陈剑铭(51)
- 基于Workbench的声频钻机动力头隔振特性分析 马志鹏, 王瑜, 吴浩, 孔令镨, 孙允旺, 刘宝林(60)
- 车装全液压钻机桅杆模态分析及拓扑优化 杜焱森, 和国磊, 冯起赠, 赵远, 师敏, 宋志彬, 朱芝同, 刘晓林, 许本冲, 秦如雷, 马汉臣, 伍晓龙, 高鹏举, 汤小仁, 王晓赛(70)
- 单机械手夹持状态下钻杆运移平稳性分析 李昊轩, 王清岩, 金赠伍, 李苓豪, 郭乃铭(76)

【地质钻探】

- 气举反循环双壁钻具流场仿真分析 伍晓龙, 冯钰琦, 杜焱森, 高鹏举, 赵远, 王晓赛, 汤小仁, 王庆晓(83)
- 双孕镶金刚石钻头跟套管连续钻进机构设计及模拟分析 王金龙, 高科, 张宗正, 赵研, 谢晓波(92)
- 西藏甲玛3000米科学深钻施工技术 田志超, 翟育峰, 林彬, 刘振新, 马云超, 王超(100)
- 南岭科学钻探NLSD-1孔防斜及纠斜技术 程红文, 朱恒银, 刘兵(109)
- 水力割刀在岩心钻探烧钻事故处理中的应用 段晓, 皮建伟, 顾科伟, 杨可(118)

【民生地质】

- 封隔器式膨胀管护壁技术研发与应用 冯建月, 叶成明, 王营超, 李小杰, 解伟(123)
- 砂卵石地层非开挖顶管施工地表沉降控制研究 温继伟, 岳金帅, 项天, 张营旭, 唐方杰, 张杰, 胡萍(130)
- 玄武岩纤维堵漏体系在高海拔非开挖钻进中的应用研究 周生伟, 孙平贺, 苏卫锋, 周梦迪, 夏余宏焯, 周明明, 左雷彬, 王李昌(139)
- 浅层地热能地下换热系统适宜性评价与优化设计——以郑州市浅层地热能示范工程为例 卢玮, 尚永升, 申云飞(146)
- 中空螺旋半合管直推取样建井工艺在污染场地调查中的应用研究 王青薇, 尹业新, 王水, 王何琦, 王瑜, 钟道旭(154)

DRILLING ENGINEERING

Vol.49 No.3 (SUM No.431)

May 2022

Bimonthly

CONTENTS

Experimental study on the effect of water activity of drilling fluid on shale wellbore stability—Taking Xiushan Longmaxi shale as an example	YANG Xianyu, CAI Jihua, JIANG Guosheng, SHI Yanping, CHEN Shuya (1)
Rock property change and temperature distribution near blasting holes in carbon dioxide blasting reservoir treatment	ZHENG Jun, FAN Tao, DOU Bin, WU Tianyu (13)
Sand control and water drainage by ultrasonic atomization for gas recovery from hydrate reservoirs	LUO Qiang, LIU Zhihui, NING Fulong, DOU Xiaofeng, LIU Zhichao (23)
Drilling technology for D21 geothermal exploration well in Xiong'an New Area	LI Hongmei, WANG Leihao, YIN Miao (29)
Drilling process for the directional section of ZK2 geothermal well in Xiushan county, Chongqing	CHEN Junsong, SHANG Yajun, YANG Jianjun, SUN Yu (37)
Development of the lithium battery-driven impact sampling drill and complete accessories	YUE Yongdong, TAN Chunliang, LU Qian, GUO Qiang, LIN Guangli (44)
Research on core drill simulation training platform based on Unity3D	REN Qiwei, ZHAO Yuan, MENG Yiquan, CHEN Jianming (51)
Analysis of vibration isolation characteristics of the sonic drill power head based on Workbench	MA Zhipeng, WANG Yu, WU Hao, KONG Lingrong, SUN Yunwang, LIU Baolin (60)
Modal analysis and topology optimization of the mast of truck-mounted all-hydraulic rig	DU Yaosen, HE Guolei, FENG Qizeng, ZHAO Yuan, SHI Min, SONG Zhibin, ZHU Zhitong, LIU Xiaolin, XU Benchong, QIN Rulei, MA Hanchen, WU Xiaolong, GAO Pengju, TANG Xiaoren, WANG Xiaosai (70)
Analysis of smooth movement of drill pipes clamped with a single manipulator	LI Haoxuan, WANG Qingyan, JIN Zengwu, LI Linghao, GUO Naiming (76)
Simulation analysis of the flow field of the air lift reverse circulation dual wall drill tool	WU Xiaolong, FENG Yuqi, DU Yaosen, GAO Pengju, ZHAO Yuan, WANG Xiaosai, TANG Xiaoren, WANG Qingxiao (83)
Design and simulation of a continuous casing drilling mechanism with twin impregnated diamond bits	WANG Jinlong, GAO Ke, ZHANG Zongzheng, ZHAO Yan, XIE Xiaobo (92)
Drilling technology for 3000m deep scientific drilling in Jiama, Tibet	TIAN Zhichao, ZHAI Yufeng, LIN Bin, LIU Zhenxin, MA Yunchao, WANG Chao (100)
Deviation prevention and correction technology for NLS-1 hole of Nanling Scientific Drilling	CHENG Hongwen, ZHU Hengyin, LIU Bing (109)
Application of the hydraulic cutter in the treatment of bit burning in core drilling	DUAN Xiao, PI Jianwei, GU Kewei, YANG Ke (118)
Development and application of the packer-activated expandable tubular technology for well wall protection	FENG Jianyue, YE Chengming, WANG Yingchao, LI Xiaojie, XIE Wei (123)
Research on ground subsidence control in trenchless pipe jacking in sandy gravel formation	WEN Jiwei, YUE Jinshuai, XIANG Tian, ZHANG Yingxu, TANG Fangjie, ZHANG Jie, HU Ping (130)
Use of basalt fiber drilling fluid in trenchless works at high altitudes	ZHOU Shengwei, SUN Pinghe, SU Weifeng, ZHOU Mengdi, XIA Yuhongye, ZHOU Mingming, ZUO Leibin, WANG Lichang (139)
Suitability evaluation and optimization design of the shallow geothermal energy underground heat exchange system—Taking Zhengzhou shallow geothermal energy demonstration project as an example	LU Wei, SHANG Yongsheng, SHEN Yunfei (146)
Application of direct push sampling and well drilling technology with the hollow auger split-tube in contaminated site investigation	WANG Qingwei, YIN Yexin, WANG Shui, WANG Heqi, WANG Yu, ZHONG Daoxu (154)

Sponsored: Geological Publishing House Co., Ltd.

Institute of Exploration Techniques, CAGS

Published: Editorial Office of Drilling Engineering

(No.26 Baiwanzhuang, Beijing Postcode: 100037 E-mail: tkgc@mail.cgs.gov.cn)

Chief Editor: XIE Wenwei

International Distribution: China National Publishing Industry Trading Corporation (P.O.Box 782, Beijing)