

# 地质科技通报

原《地质科技情报》

2022年 第41卷 第4期(总第205期) 2022年7月出版 双月刊 国内外公开发行

## 目 次

### • 资源地质与工程 •

- 塔里木盆地顺北5号走滑断裂带北段超深层裂缝储层的地震属性表征方法研究及应用 ..... 刘军, 龚伟, 黄超, 李伟, 李弘艳, 董晓彬, 蒋恕(1)  
鸟石凹陷M油田低对比度油藏成因机理及渗透率评价 ..... 陈嵘, 胡向阳, 袁伟, 张顺超, 杨毅(12)  
塔中区块高温高压裂缝性气藏封堵层气蚀剪切失效机理 ..... 苏晓明, 吴若宁, 赵常举, 王启任, 袁媛, 熊汉桥(21)  
基于高斯过程回归和高压压汞测定致密砂岩渗透率:以鄂尔多斯盆地长7段致密砂岩为例 ..... 王伟, 许兆林, 李维振, 候涛, 李亚辉, 白云云, 朱玉双(30)  
断陷盆地碳酸盐岩热储勘查及研究:以鱼台凹陷为例 ..... 孟甲, 秦鹏, 史启朋, 谭现锋, 张茜(38)  
塔里木盆地中央隆起带寒武系—奥陶系白云岩成岩相及其地球化学特征 ..... 宁博, 李百强, 吴珍珍, 高建文, 陈斌, 赵月帅, 王锐(46)  
珠江口盆地CO<sub>2</sub>分布特征与成藏机制浅析 ..... 高中亮, 王艳飞, 雷胜兰, 王文勇, 江宁, 姜大朋, 刘军, 李克成(57)  
歧口凹陷中部沙一下亚段异重流沉积识别特征与控制因素分析 ..... 巩天浩, 吴琳娜, 陈思, 潘凯, 余政宏, 张悦辉(69)  
地球物理技术预测莺歌海盆地低孔低渗储层孔隙度 ..... 李芳, 邓勇, 胡林, 周凡(84)  
东非裂谷Albertine盆地上中新统下上统烃源岩地球化学特征与沉积环境 ..... 王珩, 赵红岩, 苏鹏, 邱春光, 宋宇, 杨宇航, 沈传波, 胡守志(91)  
珠江口盆地惠西南地区凝析油轻烃地球化学特征 ..... 杨兴业, 朱俊章, 朱明, 龙祖烈, 熊万林, 郑仰帝, 陈聪(100)  
辽西凸起斜坡区风化壳油气运移特征及控藏作用 ..... 李虹霖, 郭涛, 张如才, 杨传超, 张明升(109)  
珠江口盆地恩平凹陷北部隆起区油气远源富集与主控因素 ..... 吴静(117)  
潜江凹陷盐间页岩油储层孔隙结构分形表征与评价 ..... 孙中良, 王芙蓉, 韩元佳, 侯宇光, 何生, 郑有恒, 吴世强(125)  
砷在金属矿山中的赋存形态及迁移机制 ..... 张晓平, 吴志华, 陈佳木, 张晓军, 刘文浩, 王琳玲, 周森, 齐宇彤, 吴云辉(138)  
黔西北普宜地区富关键金属元素硫铁矿地质、地球化学和S同位素特征及其对成因的约束 ..... 张七道, 肖长源, 李致伟, 李锁明, 孙建勋, 田瑜峰, 李金旺, 李辰(149)  
生物标志化合物对于煤炭产地溯源的指示 ..... 李健成, 李晶, 闫馨友(165)  
贵州织金新华磷矿区风化磷块岩形成条件及风化淋滤富集机制初步研究 ..... 梁坤萍, 程国繁, 覃庆炎, 吴荣, 李斌(172)  
基于磁异常信息的鄂东北四方山地区沉积变质型锰矿找矿预测 ..... 王川, 石文杰, 朱建东, 徐江嫻, 陈松, 李艳军(184)

### • 环境地质与水文地质 •

- 百色盆地渐新世古植被与古气候 ..... 韦一, 杨兵, 邓会娟(197)  
晚泥盆世大陆风化作用增强及其海洋环境效应:来自华南碳酸盐岩锶同位素的制约 ..... 邓发亮, 刘希军, 余红霞, 杨锋, 袁永海(207)  
湖南锡矿山锑矿区水环境中DOM三维荧光特征及其对锑污染的指示意义 ..... 李琬钰, 周建伟, 贾晓岑, 唐沛东(215)  
纳米塑料颗粒在饱和多孔介质中的迁移规律 ..... 叶芯瑶, 吴鸣, 胡晓农, 程洲, 莫测辉(225)  
湘江沟头地表和深部地质约束的水系侵蚀能力差异及袭夺预测分析 ..... 王晶, 徐亚东, 林晓, 彭绍勇, 史元润, 朱云海(234)  
S<sup>2-</sup>对河砂吸附的影响及其作用机理 ..... 杜海玲, 单慧媚, 陈辉, 彭三曦, 黄健(241)

### • 工程地质与地质灾害 •

- 建筑用海砂资源开发利用适宜性评价初探:以琼州海峡东口为例 ..... 章茂刚, 杨朝云, 黄仕锐, 朱超祁, 全长亮, 龙根元, 林明智(249)  
基于滚刀破岩特性的岩石顶管迎面阻力计算模型 ..... 徐天硕, 王乐, 刘锴鑫, 周雨恒, 马保松, 张鹏(259)  
基于室内大型剪切试验及工程地质类比法的弃渣场抗剪强度参数综合取值与稳定性研究 ..... 汪继平, 汤罗圣, 黄璇, 王云安(266)  
矿渣类颗粒介质结构对力链发展规律的影响 ..... 陆敏凤, 唐朝晖, 柴波, 宁可, 祝洁雯, 方熠(274)  
大足石刻宝顶山砂岩毛细水迁移特性影响因素 ..... 宋佳航, 严绍军, 项伟, 刘建辉, 赵岗, 蒋思维(282)

### • 新技术新方法 •

- 帕隆藏布江中游地壳剥露特征 ..... 涂继耀, 季建清, 钟大赉, 周晶(292)  
四维地震驱动的深海浊积岩油藏地质模型更新方法及应用:以安哥拉PU油田为例 ..... 赵巍, 张文彪, 李蒙, 赵华伟, 陆文明, 廉培庆(301)  
黔北地区窄陡型向斜页岩气水平井地质导向技术对策 ..... 吴松, 于继良, 徐尚, 蓝宝锋, 李龙, 李刚权(309)  
基于红外光谱的煤炭产地溯源技术研究 ..... 林阳, 李晶, 夏文豪(317)

主 编: 王华 副 主 编: 甘义群 李长冬 姜涛 孙自永 刘江霞

编辑部主任: 刘江霞 责任编辑: 彭兴芳

期刊基本参数:CN42-1904/P \* 1982 \* b \* A4 \* 328 \* zh \* P \* ¥25.00 \* 1000 \* 34 \* 2022-07

# BULLETIN OF GEOLOGICAL SCIENCE AND TECHNOLOGY

(Bimonthly)

Vol. 41 No. 4 Jul. 2022

## CONTENTS

- Seismic attribute characteristics of an ultradep deep fractured-reservoir in the northern section of Shunbei No. 5 strike-slip fault zone in Tarim Basin ..... Liu Jun, Gong Wei, Huang Chao, Li Wei, Li Hongyan, Dong Xiaobin, Jiang Shu (1)  
Genetic mechanism and permeability evaluation of low contrast oil reservoirs in M Oilfield of Wushi Sag ..... Chen Rong, Hu Xiangyang, Yuan Wei, Zhang Shunchao, Yang Yi (12)  
Failure mechanism of cavitation-induced shear of the plugging layer in high-temperature high-pressure fractured gas reservoirs in the Tazhong block, NW China ..... Su Xiaoming, Wu Ruoning, Zhao Changju, Wang Qiren, Yuan Yuan, Xiong Hanqiao (21)  
Determination of permeability in tight sandstone reservoirs using Gaussian process regression and high-pressure porosimetry: A case study of the Member-7 of Yanchang Formation in the Jiyuan area of the Ordos Basin ..... Wang Wei, Xu Zhaolin, Li Weizhen, Hou Tao, Li Yahui, Bai Yunyun, Zhu Yushuang (30)  
Exploration and study on carbonate thermal reservoirs in fault basins: A case from Yutai Sag ..... Meng Jia, Qin Peng, Shi Qipeng, Tan Xianfeng, Zhang Xi (38)  
Diagenetic facies of dolomite and geochemical characteristics across the Cambrian-Ordovician transitions in the Central Uplift Zone, Tarim Basin ..... Ning Bo, Li Baiqiang, Wu Zhenzhen, Gao Jianwen, Chen Bin, Zhao Yueshuai, Wang Rui (46)  
Distribution characteristics and accumulation mechanism of carbon dioxide gas reservoirs in the Pearl River Mouth Basin ..... Gao Zhongliang, Wang Yanfei, Lei Shenglan, Wang Wenlong, Jiang Ning, Jiang Dapeng, Liu Jun, Li Kecheng (57)  
Sedimentary characteristics and controlling factors of hyperpycnic flow in the Lower Shahejie Formation of Qikou Sag, Bohai Bay Basin ..... Gong Tianhao, Wu Linna, Chen Si, Pan Kai, Yu Zhenghong, Zhang Yuehui (69)  
Porosity prediction by geophysics technology at low-porosity and low-permeability reservoir of the Yinggehai Basin ..... Li Fang, Deng Yong, Hu Lin, Zhou Fan (84)  
Geochemical characteristics and sedimentary environment of upper Miocene-lower Pliocene source rocks in the Albertine Basin, East African Rift Valley ..... Wang Heng, Zhao Hongyan, Su Peng, Qiu Chunguang, Song Yu, Yang Yuhang, Shen Chuanbo, Hu Shouzhi (91)  
Geochemical characteristics of light hydrocarbons in condensate oil from the southwestern Huizhou of the Pearl River Mouth Basin ..... Yang Xingye, Zhu Junzhang, Zhu Ming, Long Zulie, Xiong Wanlin, Zheng Yangdi, Chen Cong (100)  
Hydrocarbon migration characteristics and its controlling effect on hydrocarbon accumulation of weathering crust in slope area of Liaozi Uplift ..... Li Honglin, Guo Tao, Zhang Rucai, Yang Chuanchao, Zhang Mingsheng (109)  
Key factors of far-source hydrocarbon enrichment in the northern uplift area of Enping Sag in Pearl River Mouth Basin ..... Wu Jing (117)  
Characterization and evaluation of fractal dimension of intersalt shale oil reservoirs in Qianjiang Depression ..... Sun Zhongliang, Wang Furong, Han Yuanjia, Hou Yuguang, He Sheng, Zheng Youheng, Wu Shiqiang (125)  
Occurrence state and migration mechanism of arsenic in metal mines ..... Zhang Xiaoping, Wu Zihua, Chen Jiamu, Zhang Xiaojun, Liu Wenhao, Wang Linling, Zhou Miao, Qi Yutong, Wu Yunhui (138)  
Geological, geochemical and sulfur isotopic characteristics of critical metal-enriched pyritic ore in the Puyi area, northwest Guizhou Province: Constraints on the genesis of the deposit ..... Zhang Qidao, Xiao Changyuan, Li Zhiwei, Li Suoming, Sun Jianxun, Tian Yuseng, Li Jinwang, Li Cheng (149)  
Indication of biomarkers for coal origin traceability ..... Li Jiancheng, Li Jing, Yan Xinyou (165)  
A preliminary study on the formation conditions and weathering leaching enrichment mechanism of secondary phosphorite in the Xinhua phosphate mining area, Zijin, Guizhou ..... Liang Kunping, Cheng Guofan, Qin Qingyan, Wu Rong, Li Bin (172)  
Prospecting of sedimentary-metamorphic type manganese deposits in the Sifangshan area, northeastern Hubei Province: Insight from magnetic anomaly information ..... Wang Chuan, Shi Wenjie, Zhu Jiandong, Xu Jiangyan, Chen Song, Li Yanjun (184)  
Paleovegetation and paleoclimate in the Baise Basin during Oligocene ..... Wei Yi, Yang Bing, Deng Huijuan (197)  
Enhanced continental weathering and its marine environmental effects in the late Devonian: Constraints from strontium isotopes of carbonate rocks in South China ..... Deng Faliang, Liu Xijun, Yu Hongxia, Yang Feng, Yuan Yonghai (207)  
EEMs characteristics of dissolved organic matter in water environment and its implications for antimony contamination in antimony mine of Xikuangshan, Hunan Province ..... Li Wanyu, Zhou Jianwei, Jia Xiaocen, Tang Peidong (215)  
Migration mechanism of nanoplastic particles in saturated porous media ..... Ye Xinyao, Wu Ming, Hu Xiaonong, Cheng Zhou, Mo Cehui (225)  
Analysis on difference of erosion capacity and river capture prediction in the head of the Xiangjiang tributary constrained by surface and deep geological information ..... Wang Jing, Xu Yadong, Lin Xiao, Peng Shaoyong, Shi Yuanrun, Zhu Yunhai (234)  
Effects of  $S^{2-}$  on arsenic adsorption to river sand and its mechanisms ..... Du Hailing, Shan Huimei, Chen Hui, Peng Sanxi, Huang Jian (241)  
Suitability evaluation of the exploitation and utilization of marine sand resources for construction: Taking the east exit of Qiongzhou Strait as an example ..... Qin Maogang, Yang Chaoyun, Huang Shirui, Zhu Chaoqi, Tong Changliang, Long Genyuan, Lin Mingzhi (249)  
A calculation model for the head-on resistance of rock pipe jacking based on the rock breaking characteristics of the disc cutter ..... Xu Tianshuo, Wang Le, Liu Kaixin, Zhou Yuheng, Ma Baosong, Zhang Peng (259)  
Determination of shear strength parameters and stability analysis of waste disposal area using laboratory large-scale shear testing and engineering geologic analogy method ..... Wang Jiping, Tang Luosheng, Huang Xuan, Wang Yun'an (266)  
Granule structure influences on force chain development in the slag medium ..... Lu Minfeng, Tang Zhaohui, Chai Bo, Ning Ke, Zhu Jiewen, Fang Yi (274)  
Influencing factors of capillary water migration characteristics of the sandstones in Baoding Mountain, Dazu Stone Carvings ..... Song Jiahang, Yan Shaojun, Xiang Wei, Liu Jianhui, Zhao Gang, Jiang Siwei (282)  
Crust erosion characteristics in the middle reach of the Purlung Tsangpo River ..... Tu Jiyao, Ji Jianqing, Zhong Dalai, Zhou Jing (292)  
Updating and application for a reservoir geological model of deep-water turbidites: A case study of a 4D seismic survey from the PU Oilfield in Angola ..... Zhao Wei, Zhang Wenbiao, Li Meng, Zhao Huawei, Lu Wenming, Lian Peiqing (301)  
Shale gas horizontal well geosteering technologies and countermeasures research in narrow and steep syncline formations of northern Guizhou area ..... Wu Song, Yu Jiliang, Xu Shang, Lan Baofeng, Li Long, Li Gangquan (309)  
Study on coal origin traceability technology based on infrared spectrum ..... Lin Yang, Li Jing, Xia Wenhao (317)