

# 中国地球物理学会 年刊 2000



第十六届年会

武汉 10月20~24日

中国地球物理学会 编  
中国地质大学出版社

# 中国地球物理学会年刊

**2000**

中国地球物理学会 编

中国地质大学出版社

---

## 图书在版编目(CIP)数据

中国地球物理学会年刊 2000/中国地球物理学会编. —武汉:中国地质大学出版社, 2000. 9  
ISBN 7-5625-1570-0

I. 中...

II. 中...

III. 地球物理学-中国-年刊

IV. P3-54

中国地球物理学会年刊 2000

中国地球物理学会 编

责任编辑:高勇群 张晓红

责任校对:杨 霖

技术编辑:阮一飞

出版发行:中国地质大学出版社(武汉市洪山区鲁磨路 31 号)

邮编:430074

电话:(027)87483101

E-mail: cbo @ cug. edu. cn

经 销:全国新华书店

开本:787 mm×1092 mm 1/16

字数:800 千字 印张:25.875

版次:2000 年 9 月第 1 版

印次:2000 年 9 月第 1 次印刷

印刷:湖北地矿印业有限公司

印数:1—1 000 册

ISBN 7-5625-1570-0/P·539

定价:48.00 元

如有印装质量问题请与印刷厂联系调换

# 中国地球物理学会

理 事 长     刘光鼎

副理事长     钟辛生   陈   颀   何继善   周佰修   曾绍金

秘 书 长     朱日祥

---

## 年 刊 编 委 会

主   任     臧绍先

副主任     徐义贤

委   员     黄嘉正   刘   崧   魏修成   牟永光   熊盛青   钟世航  
              陆其鹄   濮祖荫   王培德   宋海斌   曾小苹   李惠民  
              马石庄   杨玉荣   沈   萍   陈晓非   周硕愚

---

# 中国地球物理学会第十六届年会

(武汉 2000.10.20~2000.10.24)

## 地方组织委员会

|      |             |     |     |     |     |     |
|------|-------------|-----|-----|-----|-----|-----|
| 名誉主任 | 许厚泽院士 殷鸿福院士 |     |     |     |     |     |
| 主任   | 王家映         |     |     |     |     |     |
| 副主任  | 戴世昭         | 胡文宝 | 陈以顺 | 肖柏勋 | 陈海弟 | 方志雄 |
|      | 徐义贤         | 吴信才 | 刘成恕 |     |     |     |
| 委员   | 刘 崧         | 刘天佑 | 刘庆生 | 李大心 | 姚 姚 | 潘玉玲 |
|      | 张玉香         | 潘和平 | 陈 超 | 郭东奎 | 杨银湖 | 应晓建 |
|      | 王品忠         | 许刚林 | 高鹏飞 | 傅家灿 | 易 凡 | 藏克军 |
|      | 孙和平         | 胡祥云 | 董浩斌 | 段梅英 |     |     |
| 秘书长  | 徐义贤         |     |     |     |     |     |

## 学术委员会

|     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|
| 主任  | 臧绍先 |     |     |     |     |     |
| 副主任 | 金振民 |     |     |     |     |     |
| 委员  | 王家映 | 罗延钟 | 胡文宝 | 肖柏勋 | 凌 云 | 牟永光 |
|     | 吕庆田 | 程业勋 | 刘宝诚 | 刘振兴 | 陈 颀 | 滕吉文 |
|     | 王家林 | 杨玉荣 | 石耀霖 | 黄绪德 | 黄 瑛 | 钱玉好 |
|     | 徐果明 | 杨文采 |     |     |     |     |

# 中国地球物理学会第十六届年会

(武汉 2000.10.20~2000.10.24)

## 会议领导小组

组 长 刘光鼎

副 组 长 钟辛生 陈 颢 何继善 曾绍金 周佰修 许厚泽  
王家映

成 员 王 水 臧绍先 赵化昆 郑天愉 刘振兴 陈运泰  
刘启元 陈卫东 钱玉好 尹 改 朱日祥

秘 书 长 朱日祥

副秘书长 曲克信 臧绍先 徐义贤

---

# 目 录

## 油气田与煤田地球物理勘探

(负责人:凌云 魏修成 牛滨华)

## Geophysical Exploration for Oil-gas and Coal Field

(Conveners: LING Yun WEI Xiucheng NIU Binhua)

|                                                                                              |                                                |
|----------------------------------------------------------------------------------------------|------------------------------------------------|
| 一种新的二进小波变换自适应反褶积方法.....                                                                      | 董恩清 刘贵忠等(1)                                    |
| New Adaptive Deconvolution via Dyadic Wavelet Transform .....                                |                                                |
| .....                                                                                        | DONG Enqing LIU Guizhong <i>et al.</i> (1)     |
| 地震道多尺度反演.....                                                                                | 张玉芬 罗延钟等(2)                                    |
| Seismic Trace Multi-Scale Inversion .....                                                    | ZHANG Yufen LUO Yanzhong <i>et al.</i> (2)     |
| 地震资料处理和地震信号.....                                                                             | 吴顺和 李跃刚等(3)                                    |
| The Seismic Data Processing and Seismic Signals .....                                        | WU Shunhe LI Yuegang <i>et al.</i> (3)         |
| 叠前压制噪声方法研究与应用.....                                                                           | 赵 波(4)                                         |
| The New Approaches and Their Applications on Pre-stack Noise Attenuation .....               |                                                |
| .....                                                                                        | ZHAO Bo(4)                                     |
| 虚反射信息的现场处理、显示与分析 .....                                                                       | 王广智 杨汝超等(5)                                    |
| The Field Preprocessing, Display and Analysis of Seismic Ghosting Information .....          |                                                |
| .....                                                                                        | WANG Guangzhi YANG Ruchao <i>et al.</i> (5)    |
| 一种确定地震子波长度的方法.....                                                                           | 张广智 印兴耀等(6)                                    |
| An Approach to Compute the Length of Seismic Wavelet .....                                   |                                                |
| .....                                                                                        | ZHANG Guangzhi YIN Xingyao <i>et al.</i> (6)   |
| 三维折射波静校正新方法.....                                                                             | 张建中 周熙襄等(7)                                    |
| A New Method for 3D Refraction Statics .....                                                 |                                                |
| .....                                                                                        | ZHANG Jianzhong ZHOU Xixiang <i>et al.</i> (7) |
| 环境噪声的统计特性分析.....                                                                             | 曹思远 蔡志光等(8)                                    |
| Analysis of Statistic Attributes in Field Seismic Environment Noise .....                    |                                                |
| .....                                                                                        | CAO Siyuan CAI Zhiguang <i>et al.</i> (8)      |
| 不同接收条件下地震信号的统计特性.....                                                                        | 曹思远 蔡志光等(9)                                    |
| Analysis of Statistic Attributes in Seismic Signal Observed under Different Conditions ..... |                                                |
| .....                                                                                        | CAO Siyuan CAI Zhiguang <i>et al.</i> (9)      |
| 用小波反演预测去噪技术提高地震资料的信噪比 .....                                                                  | 张繁昌 印兴耀等(10)                                   |
| Improving Signal-to-Noise Ratio of Seismic Data by Wavelet Inversion Approach .....          |                                                |
| .....                                                                                        | ZHANG Fanchang YIN Xingyao <i>et al.</i> (10)  |
| 分频混合模拟合零炮检距剖面 .....                                                                          | 李晓昉 陈丽梅等(11)                                   |

|                                                                                                                                                                                                              |                                                 |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| Hybrid Norm Method with Frequency Division to Fit Zero Offset Section .....                                                                                                                                  | LI Xiaofang CHEN Limei <i>et al.</i> (11)       |
| 基于不叠加的海上高分辨率地震资料处理及效果 .....                                                                                                                                                                                  | 温书亮 何汉漪等 (12)                                   |
| High Resolution Seismic Data Processing Technology Based on Non-stack and Its Appli-<br>cation .....                                                                                                         | WEN Shuliang HE Hanyi <i>et al.</i> (12)        |
| 大炮检距二维射线正演的必要性与实现 .....                                                                                                                                                                                      | 周亚同 吴建军等 (13)                                   |
| The Necessity and Realization of 2D Large-offset Ray Forward Modeling .....                                                                                                                                  | ZHOU Yatong WU Jianjun <i>et al.</i> (13)       |
| 基于小波神经网络的边缘检测在地震资料处理中的应用 .....                                                                                                                                                                               | 高美娟 田景文等 (14)                                   |
| The Application of Wavelet Neural Network Edge Detection to Seismic Data Processing<br>.....                                                                                                                 | GAO Meijuan TIAN Jingwen <i>et al.</i> (14)     |
| 虚拟现实技术及其在地震勘探中应用探讨 .....                                                                                                                                                                                     | 高美娟 田景文 (15)                                    |
| A Study of Virtual Reality Technique and Its Application in Seismic Exploration .....                                                                                                                        | GAO Meijuan TIAN Jingwen (15)                   |
| 黄土塬煤炭地震勘探技术方法研究 .....                                                                                                                                                                                        | 朱芳香 王中锋等 (16)                                   |
| Study on Seismic Exploration Techniques in the Loess Plateau .....                                                                                                                                           | ZHU Fangxiang WANG Zhongfeng <i>et al.</i> (16) |
| 利用多频点技术探测顶底板含水构造埋深问题的尝试 .....                                                                                                                                                                                | 王信文 张仲礼等 (17)                                   |
| Use the Multi-frequency Technique to Detect Water-bearer Structure in the Roof and<br>Floor of Coal Seam .....                                                                                               | WANG Xinwen ZHANG Zhongli <i>et al.</i> (17)    |
| 煤矿工作面顶底板导含水构造探测新装备——DTS-I 型防爆音频电穿透仪 .....                                                                                                                                                                    | 张仲礼 王信文等 (18)                                   |
| A New Type Geophysical Instrument Specially Used for Detecting Water Bearing Struc-<br>ture in Roof and Floor of Coal Seam—DTS-I Explosion-proof Low Frequency Ele-<br>ctrical Transmission Instrument ..... | ZHANG Zhongli WANG Xinwen <i>et al.</i> (18)    |
| 电场差分法理论研究 .....                                                                                                                                                                                              | 刘 崧 薛继安等 (19)                                   |
| A Theoretical Study of Differentially-normalized Electrical Prospecting Method .....                                                                                                                         | LIU Song XUE Ji'an <i>et al.</i> (19)           |
| 油气藏自然电位法勘探技术研究 .....                                                                                                                                                                                         | 王君恒 (20)                                        |
| Study on Self-potential Detection Principle of Oil/gas Reservoir .....                                                                                                                                       | WANG Junheng (20)                               |
| 分布式智能化高密度电法仪的特点及应用 .....                                                                                                                                                                                     | 董浩斌 王传雷等 (21)                                   |
| The Characteristics and Application of Distributed Intelligent Multi-electrodes Resis-<br>tivity Imaging System .....                                                                                        | DONG Haobin WANG Chuanlei <i>et al.</i> (21)    |
| 24 位 A/D 转换技术及其在地球物理中的应用 .....                                                                                                                                                                               | 董浩斌 周东祥 (22)                                    |
| 24-bit ADC Technology and Its Application in Geophysics .....                                                                                                                                                | DONG Haobin ZHOU Dongxiang (22)                 |
| 弹性波对多孔介质电导率的瞬态影响 .....                                                                                                                                                                                       | 李 丽 陶 果等 (23)                                   |
| Instantaneous Effects of Elastic Waves on Conductivity of Porous Media .....                                                                                                                                 | LI Li TAO Guo <i>et al.</i> (23)                |
| 辽河油田低电阻率油气层机理研究及在海南 3 块的应用 .....                                                                                                                                                                             | 赵继文 李 瑞等 (24)                                   |



Investigation into the Mechanism of Conductive Oil-gas Bed in Liaohe Oilfield and

- Application in Hainan Block 3 ..... ZHAO Jiwen LI Rui *et al.* (24)
- 用逐次寻极二分法对测井曲线进行自动分层 ..... 张二华 费 琪 (25)
- Automatic Stratification of Logging Curve with the Successive Maximum-seeking Two-way Classification ..... ZHANG Erhua FEI Qi (25)
- 非零偏 VSP 技术在辽河油田的应用 ..... 张振国 张德伟 (26)
- Offset VSP Technique Applied in Liaohe Oil Field .....  
..... ZHANG Zhenguo ZHANG Dewei (26)
- 改进非零 VSP 观测的一种新方法 ..... 张振国 (27)
- A New Method for Improving Offset VSP ..... ZHANG Zhenguo (27)
- 电磁测深高分辨率处理方法及效果 ..... 苏鸿尧 何展翔 (28)
- Method and Effect for MT High-resolution ..... SU Hongyao HE Zhanxiang (28)
- 多分量地震数据的叠前 Kirchhoff 深度偏移 ..... 杜丽英 王 赟等 (29)
- Pre-stack Depth Migration of Multi-Component with Kirchhoff Integral Equation ...  
..... DU Liying WANG Yun *et al.* (29)
- 三分量地震数据采集中的微动信号监控 ..... 杨德义 王 赟等 (30)
- Control the Micro-vibration in Seismic Sampling .....  
..... YANG Deyi WANG Yun *et al.* (30)
- 三维三分量地震资料交互处理系统 PSD3 的研制 ..... 冯太林 张学工等 (31)
- The Development of 3D3C Data Processing System PSD3 .....  
..... FENG Tailin ZHANG Xuegong *et al.* (31)
- 三维转换波地震资料 CCP 道集快速抽取 ..... 冯太林 张学工等 (32)
- The Quick CCP Gathering of 3D Converted Wave Seismic Data .....  
..... FENG Tailin ZHANG Xuegong *et al.* (32)
- 多次覆盖地震记录中的折射波成像 ..... 冯太林 张学工等 (33)
- Refracted Waves Imaging of Multi-fold Seismic Recordings .....  
..... FENG Tailin ZHANG Xuegong *et al.* (33)
- 发展三分量反射的矢量波场分离技术 ..... 姚 陈 (34)
- To Develop Technique of Vector Wave Field Separation for 3C Reflection .....  
..... YAO Chen (34)
- 油田开发地震动态监测问题研究 ..... 姚 陈 郝重涛 (35)
- Study Seismic Dynamic Supervision in Oil Field Exploitation .....  
..... YAO Chen HAO Chongtao (35)
- Kirchhoff-型有限孔径反偏移的基本理论 ..... 孙建国 (36)
- A Basic Theory of Limited Aperture Demigration of Kirchhoff-type ..... SUN Jianguo (36)
- 有限孔径多分量真振幅偏移 ..... 孙建国 (37)
- Multi-component True-amplitude Migration with Limited Aperture ..... SUN Jianguo (37)
- 三维复杂结构的整体迭代射线追踪法 ..... 高尔根 蒋先艺等 (38)
- Total-iterative Ray Tracing Method for 3D Complex Media .....  
..... GAO Ergen JIANG Xianyi *et al.* (38)

|                                                                                                                                        |                                                  |
|----------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
| 三维声波方程正演的高阶差分格式及其数值频散关系 .....                                                                                                          | 何兵寿 魏修成等(39)                                     |
| The high-order Difference Scheme and Its Numerical Dispersion Relation of 3D Acoustic<br>Wave Equation .....                           | HE Bingshou WEI Xiucheng <i>et al.</i> (39)      |
| 改进的 Dirac 方程偏移算法 .....                                                                                                                 | 石殿祥(40)                                          |
| An Improvement on Seismic Depth Migration with Dirac Equation .....                                                                    | SHI Dianxiang(40)                                |
| 稳定的 Born 近似叠前深度偏移方法 .....                                                                                                              | 陈生昌 曹竟忠等(41)                                     |
| Prestack Depth Migration Method with Stable Born Approximation .....                                                                   | CHEN Shengchang CAO Jingzhong <i>et al.</i> (41) |
| 广义相位屏法叠前深度偏移 .....                                                                                                                     | 张文生 张关泉(42)                                      |
| Prestack Depth Migration Using the Generalized Phase-screen Method .....                                                               | ZHANG Wensheng ZHANG Guanquan(42)                |
| 探地雷达资料的有限元偏移研究 .....                                                                                                                   | 底青云 王妙月(43)                                      |
| The Attenuated Radar Wave Migration with Finite Element Method .....                                                                   | DI Qingyun WANG Miaoyue(43)                      |
| 叠层和裂隙介质条件下反射纵波的叠加剖面特征 .....                                                                                                            | 郝重涛 姚 陈(44)                                      |
| Characteristics of P-wave Stacking Profile from Reflection in PTL and EDA .....                                                        | HAO Chongtao YAO Chen(44)                        |
| 三维地震勘探物理模型的研究 .....                                                                                                                    | 魏建新 狄邦让等(45)                                     |
| Physical Modeling Studies for 3D Seismic Survey .....                                                                                  | WEI Jianxin DI Bangrang <i>et al.</i> (45)       |
| TI 介质中的地震波传播特性 .....                                                                                                                   | 苑书金 董敏煜等(46)                                     |
| The Propagation Characteristic of Seismic Wave in Transverse Isotropic Medium .....                                                    | YUAN Shujin DONG Minyu <i>et al.</i> (46)        |
| TI 介质中的反射波旅行时分析 .....                                                                                                                  | 苑书金 董敏煜等(47)                                     |
| Reflection Traveltimes Analysis for Transverse Isotropic Medium .....                                                                  | YUAN Shujin DONG Minyu <i>et al.</i> (47)        |
| 利用纵波方位速度检测裂缝方法探讨 .....                                                                                                                 | 范国章(48)                                          |
| Fracture Detection Using Azimuthal Variation of P-wave Velocity .....                                                                  | FAN Guozhang(48)                                 |
| 井约束地震资料压力预测及其在东营凹陷的应用 .....                                                                                                            | 张世晖 刘天佑(49)                                      |
| Predicting of Anomalous Formation Pressure with Seismic Data on Logging Constraint<br>and the Application at Dongying Depression ..... | ZHANG Shihui LIU Tianyou(49)                     |
| 能源与地震难题一并解决的研究及实验 .....                                                                                                                | 游永雄(50)                                          |
| On Research and Experimentation in Solving the Difficult Question of the Energy and<br>Quake .....                                     | YOU Yongxiong(50)                                |
| 三维相干体提取方法及应用研究 .....                                                                                                                   | 王永刚 张军华等(51)                                     |
| The Research of 3D Coherence Cube Acquisition Method and Its Application .....                                                         | WANG Yonggang ZHANG Junhua <i>et al.</i> (51)    |

柯坪地区构造性质及找油气远景 ..... 张德润 王觉富等(52)  
Tectonic Characteristics and Oil-gas Exploration Future of Keping Area .....  
..... ZHANG Derun WANG Juefu *et al.* (52)  
多波 AVO 研究与岩性分析 ..... 张广娟 胡天跃(53)  
Multi-component AVO Study and Lithology Analysis .....  
..... ZHANG Guangjuan HU Tianyue(53)  
随时间推移地震勘探处理方法研究 ..... 凌云 高军等(54)  
Study of Data Processing for Time-lapse Seismics .....  
..... LING Yun GAO Jun *et al.* (54)  
测井响应特征研究 ..... 周小鹰 董宁(55)  
Study for the Characteristics of Well Log Response .....  
..... ZHOU Xiaoying DONG Ning(55)  
与自由界面有关的多次波的波场模拟 ..... 牛滨华 沈操等(56)  
Surface-related Multiples Modeling ..... NIU Binhua SHEN Cao *et al.* (56)  
用自适应滤波消除与自由界面有关的多次波 ..... 沈操 牛滨华等(57)  
Surface-related Multiple Attenuation with an Adaptive Filter .....  
..... SHEN Cao NIU Binhua *et al.* (57)  
TI 介质纵波能量反射叠加剖面的地震学含义 ..... 姚陈(58)  
Stacking Profile of P-wave Energy Reflection from TI Anisotropy and Its Implication  
..... YAO Chen(58)  
Prestack Kirchhoff Depth Migration of Crosswell Seismic Data .....  
..... YU Gang(59)

油气储层预测和描述

(负责人:黄绪德 牟永光 陈小宏)

Prediction and Description of Oil and Gas Reservoir

(Conveners:HUANG Xude MOU Yongguang CHEN Xiaohong)

模式识别法地震储层预测中训练样本研究 ..... 陈遵德 贺振华等(60)  
On Study of Training Samples in Seismic-reservoir Prediction with Pattern Recognition  
..... CHEN Zunde HE Zhenhua *et al.* (60)  
地震旋回分析方法在识别特殊岩性油藏中的应用 ..... 王永刚 张军华(61)  
The Application of Sedimentary Cycle Time-frequency Analysis in Recognizing the  
Special Lithologic Reservoirs ..... WANG Yonggang ZHANG Junhua(61)  
基于演化神经网络训练的储层参数预测方法 ..... 彭真明 竺知新等(62)  
The Method of Reservoir Parameters Prediction Based on Evolutionary Artificial Neural  
Networks Learning ..... PENG Zhenming ZHU Zhixin *et al.* (62)  
地震资料解释中模式识别方法的应用研究 ..... 曾锐 王润秋等(63)  
The Application Study of Pattern Recognition Method in Seismic Data Interpretation

|                                                                                       |               |                             |      |
|---------------------------------------------------------------------------------------|---------------|-----------------------------|------|
| .....                                                                                 | ZENG Rui      | WANG Runqiu <i>et al.</i>   | (63) |
| 薄互层油藏时间推移地震资料处理分析 .....                                                               | 陈小宏           | 易维启                         | (64) |
| Processing and Analyses of Time-lapse Seismic Data for Thin Interbed Reservoir .....  |               |                             |      |
| .....                                                                                 | CHEN Xiaohong | YI Weiqi                    | (64) |
| 克里金技术在地震属性与储层参数转换中的应用 .....                                                           | 张军华           | 王永刚等                        | (65) |
| The Application of Kriging Techniques in the Transform from Seismic Attribute to Res- |               |                             |      |
| ervoir Characteristic Value .....                                                     | ZHANG Junhua  | WANG Yonggang <i>et al.</i> | (65) |
| 非线性地震信息油气检测 .....                                                                     | 安鸿伟           | 李正文等                        | (66) |
| Oil & Gas Detection Using Nonlinear Seismic Information .....                         |               |                             |      |
| .....                                                                                 | AN Hongwei    | LI Zhengwen <i>et al.</i>   | (66) |
| 复杂小断块油田油藏描述技术 .....                                                                   | 白兴盈           | 张玉体                         | (67) |
| Description Techniques of Oil-gas Reservoir for Minor Complicated Fault Blocks .....  |               |                             |      |
| .....                                                                                 | BAI Xingying  | ZHANG Yuti                  | (67) |
| 新疆塔北地区油气藏储层预测技术研究 .....                                                               | 边西燕           | 董宁等                         | (68) |
| Prediction Method of Petroleum Reservoir in the XIN JIANG Survey .....                |               |                             |      |
| .....                                                                                 | BIAN Xiyan    | DONG Ning <i>et al.</i>     | (68) |
| 松辽盆地储层及含油气性预测 .....                                                                   | 董宁            | 周小鹰等                        | (69) |
| Prediction of the Reservoir and Presence of Petroleum and Gas in Songliao Basin ..... |               |                             |      |
| .....                                                                                 | DONG Ning     | ZHOU Xiaoying <i>et al.</i> | (69) |
| 沉积微相与储集层孔隙结构关系研究 .....                                                                | 孙宏智           |                             | (70) |
| Study on the Relation between Sedimentary Micro-facies and Pore Structure of Reservo- |               |                             |      |
| irs .....                                                                             | SUN Hongzhi   |                             | (70) |
| 薄互储层参数预测方法研究 .....                                                                    | 高美娟           | 田景文等                        | (71) |
| Study on the Prediction Methods of Thin Interbedded Reservoir Parameter .....         |               |                             |      |
| .....                                                                                 | GAO Meijuan   | TIAN Jingwen <i>et al.</i>  | (71) |
| 关于 Biot 理论中快纵波动力协调问题的讨论 .....                                                         | 胡恒山           | 王克协                         | (72) |
| A Note on Dynamic Compatibility of the Fast Compressional Wave .....                  |               |                             |      |
| .....                                                                                 | HU Hengshan   | WANG Kexie                  | (72) |
| 克希霍夫型叠前深度偏移孔径的计算方法 .....                                                              | 王润秋           |                             | (73) |
| The Computation Method for Aperture of Kirchhoff-type Prestack Depth Migration        |               |                             |      |
| .....                                                                                 | WANG Runqiu   |                             | (73) |
| 地震记录中的非线性特征分析 .....                                                                   | 彭真明           | 刘克文等                        | (74) |
| The Nonlinear Characteristic Analysis of Seismic Records .....                        |               |                             |      |
| .....                                                                                 | PENG Zhenming | LIU Kewen <i>et al.</i>     | (74) |
| 应用联合时频分析的迭代时变滤波方法进行地震信号去噪 .....                                                       | 董恩清           | 刘贵忠等                        | (75) |
| A Denoising Method of Seismic Data Based on Iterative Time-variant Filter of Joint    |               |                             |      |
| Time-frequency Analysis .....                                                         | DONG Enqing   | LIU Guizhong <i>et al.</i>  | (75) |
| 委内瑞拉卡拉高莱斯三维工区断裂特征再认识 .....                                                            | 张研            |                             | (76) |
| Reinterpretation of Faults in the 3D Seismic Block at Caracoles, Venezuela .....      |               |                             |      |
| .....                                                                                 | ZHANG Yan     |                             | (76) |

|                                                                                                                            |                                                 |
|----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| 温度、压力与油气成藏、分布关系 .....                                                                                                      | 刘丽峰(77)                                         |
| The Relationship between Temperature, Pressure and the Formation, Distribution of Oil Traps .....                          | LIU Lifeng(77)                                  |
| 多波勘探中的陷阱 .....                                                                                                             | 於文辉 张丽琴等(78)                                    |
| Trap in Multi-wave Prospecting .....                                                                                       | YU Wenhui ZHANG Liqing <i>et al.</i> (78)       |
| 多分量地震数据处理中的抽道集 .....                                                                                                       | 王 赟 于光明等(79)                                    |
| Sorting Traces in Converted Wave Processing ...                                                                            | WANG Yun YU Guangming <i>et al.</i> (79)        |
| 测井与地震联合反演中的数据匹配和转换问题讨论 .....                                                                                               | 张学庆 肖慈珣等(80)                                    |
| Discussion on the Problems of Data Matching and Conversion in the Inversion in Combining Seismic and Logging .....         | ZHANG Xueqing XIAO Chixun <i>et al.</i> (80)    |
| 感应测井自适应反褶积处理与地层参数的提取方法 .....                                                                                               | 李曙光 杨善德(81)                                     |
| The Adaptive Deconvolution of Induction Logging and the Method of Extracting Formation Parameters .....                    | LI Shuguang YANG Shande(81)                     |
| 高频电磁波测井资料的反演方法与目标函数研究 .....                                                                                                | 张美玲 邢光龙等(82)                                    |
| An Inversion Method of High Frequency Electromagnetic Wave Logging and Study of the Inversion's Objective Functional ..... | ZHANG Meiling XING Guanglong <i>et al.</i> (82) |
| 高频电磁波测井的灵敏度分析与特征识别 .....                                                                                                   | 邢光龙 冯庆国等(83)                                    |
| The Sensitivity Analysis and Characteristic Recognition for High frequency Electromagnetic Wave Logging .....              | XING Guanglong FENG Qingguo <i>et al.</i> (83)  |
| 岩石声频散实验研究中的一些问题 .....                                                                                                      | 张元中 楚泽涵等(84)                                    |
| Some Aspects of the Experiment Research of Acoustic Dispersion of the Rock .....                                           | ZHANG Yuanzhong CHU Zehan <i>et al.</i> (84)    |
| 声波测井仪器发展评述 .....                                                                                                           | 薛 梅 楚泽涵(85)                                     |
| The Development and Evaluation of Acoustic Well Logging Tools .....                                                        | XUE Mei CHU Zehan(85)                           |
| 对声波固井质量解释评价若干问题的探讨 .....                                                                                                   | 薛 梅 楚泽涵等(86)                                    |
| The Discussion on Some Problems in Appraising Cement Bonding .....                                                         | XUE Mei CHU Zehan <i>et al.</i> (86)            |
| 大陆科学钻探预先导孔中短源距声波资料处理 .....                                                                                                 | 李 铭 楚泽涵等(87)                                    |
| Short Space Sonic Data Processing in VB of Continental Scientific Drilling .....                                           | LI Ming CHU Zehan <i>et al.</i> (87)            |
| 黄骅坳陷第三系砂岩弹性波参数的超声波实验研究 .....                                                                                               | 毛宁波 彭大均(88)                                     |
| The Ultrasonic Experiment of Elastic Wave Parameters of Huanghua Depression Tertiary Sandstone .....                       | MAO Ningbo PENG Dajun(88)                       |
| 21 世纪矿产资源勘探开发与可持续发展 .....                                                                                                  | 李艳丽 楚泽涵(89)                                     |
| Exploration and Exploitation of Mineral Resources and Sustainable Development in 21st Century .....                        | LI Yanli CHU Zehan(89)                          |
| 油井内流体非稳定流动分析模型 .....                                                                                                       | 吴锡令 王界益(90)                                     |
| Unsteady Flow Analysis Model for Oil Well .....                                                                            | WU Xiling WANG Jieyi(90)                        |

|                                                                                                                                          |                                            |
|------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
| 大庆油田储层渗透率分布概型特征的地质解释 .....                                                                                                               | 卢颖忠 楚泽涵等(91)                               |
| Geological Interpretation on the Feature of the Probability Distribution Types of the<br>Reservoir Permeability in Daqing Oilfield ..... | LU Yingzhong CHU Zehan <i>et al.</i> (91)  |
| 生产测井多井资料井间对比方法研究 .....                                                                                                                   | 赵 亮 吴锡令(92)                                |
| Study on the Method of Multiwell Correlation Using Production Logging Data .....                                                         | ..... ZHAO Liang WU Xiling(92)             |
| 多参数判别分析技术在解决油田高阻水层问题中的应用 .....                                                                                                           | 孙宏智 李晓辉(93)                                |
| The Application of the Multi-Parameters Distinguishing Method on the High-resistivity<br>Water Beds' Recognition .....                   | SUN Hongzhi LI Xiaohui(93)                 |
| 变质岩裂缝性储层测井孔、渗评价模型 .....                                                                                                                  | 黄 飞 张晓燕等(94)                               |
| The Evaluating Model of Porosity and Permeability for Fractured Metamorphics Reser-<br>voir .....                                        | HUANG Fei ZHANG Xiaoyan <i>et al.</i> (94) |

## 金属与非金属矿勘查技术及成果

(负责人:吕庆田 王艳君 熊盛青)

### Geophysical Exploration for Metal and Non-metal

(Conveners: LU Qingtian WANG Yanjun XIONG Shengqing)

|                                                                                                                                |                                                       |
|--------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| 改进的模拟退火法在 3D 重磁位场反演中的应用 .....                                                                                                  | 黄临平(95)                                               |
| The Application of Improved Simulated Annealing Algorithm for 3D Potential Field<br>Inversion .....                            | HUANG Linping(95)                                     |
| 复杂重磁异常的多阶段决策最优化反演 .....                                                                                                        | 刘天佑 朱立新(96)                                           |
| The Inversion of Complex Gravity and Magnetic Anomalies with the Multi-stage Deci-<br>sion Optimization Inversion Method ..... | LIU Tianyou ZHU Lixin(96)                             |
| 以成矿年代学为基础的磁法勘查新技术的试验研究 .....                                                                                                   | 郭友钊 郝国江(97)                                           |
| A Study on New Technical Magnetic Prospecting Based on Ore-forming Chronology<br>.....                                         | GUO Youzhao HAO Guojiang(97)                          |
| 磁充电法应用软件系统研究 .....                                                                                                             | 赵连锋 严忠琼等(98)                                          |
| A Software System Study on Application of Magnetic Mise-à-la-masse Method .....                                                | ..... ZHAO Lianfeng YAN Zhongqiong <i>et al.</i> (98) |
| 朱棣文及其同事研制的原子干涉重力仪简介 .....                                                                                                      | 张昌达(99)                                               |
| A Brief Explanation of the Atom Interferometry Gravimeter Developed by Steven Chu<br>and His Colleagues .....                  | ZHANG Changda(99)                                     |
| 可地浸砂岩型铀矿床找矿新方法 .....                                                                                                           | 万 骏 叶树林等(100)                                         |
| The New Method for Finding Sandstone Type Uranium .....                                                                        | ..... WAN Jun YE Sulin <i>et al.</i> (100)            |
| 时间谱电阻率法的野外数据去噪处理 .....                                                                                                         | 昌彦君 罗延钟(101)                                          |
| Noise Suppression on Field Data of Time Spectral Resistivity Method .....                                                      | ..... CHANG Yanjun LUO Yanzhong(101)                  |

- 安徽省区域岩石物性(密度)参数模型构建及地学意义..... 陈有明 戴 峰(102)  
 Construction of Regional Rock Density Model and Geological Meaning in Anhui .....  
 ..... CHEN Youming DAI Feng(102)  
 安徽皖南重磁场特征与构造矿产关系..... 王晓莺 王建伟(103)  
 The Relations between Gravity and Magnetic Field Features, Structure and Ore in the  
 South of Anhui ..... WANG Xiaoying WANG Jianwei(103)  
 皖浙赣碰撞造山带的莫霍面特征分析..... 刘同庆 高尔根等(104)  
 The Collisional Orogenic Belt at the Juncture of Anhui-Zhejiang-Jiangxi Provinces  
 Moho Character Analysis ..... LIU Tongqing GAO Ergen *et al.* (104)  
 航空物探在新疆雅满苏地区岩性构造填图中的应用..... 梁月明 黄旭钊等(105)  
 The Application of Aero-geophysical Survey in Geological Mapping of Yamansu Area  
 in Xinjiang ..... LIANG Yueming HUANG Xuzhao *et al.* (105)  
 兰坪构造盆地航磁弱缓异常带的发现及其地质意义..... 王德发 乔春贵(106)  
 The Discovery of Weak Aeromagnetic Anomaly Belt in Lanping Tectonic Basin and Its  
 Geological Meaning ..... WANG Defa QIAO Chungui(106)  
 呷村火山岩型块状硫化物矿床(VHMS)的综合勘察模式 ..... 吕庆田 侯增谦等(107)  
 The Exploration Model for Volcanic-hosted Massive Sulfide Deposit, Gacun, South-  
 west "Three River" Area ..... LU Qingtian HOU Zengqian *et al.* (107)

## 水资源、环境、工程勘察及工程质量监测 中的地球物理技术与方法

(负责人:程业勳 钟世航 钱玉好)

### Geophysical Technology and Methods in Hydrologic, Environmental, Engineering Investigation and Engineering Quality Monitoring

(Conveners: CHENG Yexun ZHONG Shihang Qian Yuhao)

- 高密度电阻率法在探测堤坝蚁穴中的应用研究..... 张国鸿 程乃福等(108)  
 An Application & Study of High Density Measurement Method of Resistivity to Detect  
 the Ant Hole in Dike-dam ..... ZHANG Guohong CHENG Naifu *et al.* (108)  
 CSAMT 法在北京市地下热水探测中的应用 ..... 王 若 石昆法等(109)  
 The Application of CSAMT Method in Exploring Underground Heat Water in Beijing  
 ..... WANG Ruo SHI Kunfa *et al.* (109)  
 高密度电阻率方法对堤坝隐患的探索..... 底青云 王妙月(110)  
 Dam Exploration with High Density Resistivity Method .....  
 ..... DI Qingyun WANG Miaoyue(110)  
 用双滤膜法测定环境氡析出率..... 杨亚新 吴亚梅等(111)  
 Surveying Environmental Radon-222 Exhalation with Double-filter Method .....

|                                                                                                                                  |                                              |
|----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|
| .....                                                                                                                            | YANG Yaxin WU Yamei <i>et al.</i> (111)      |
| 住宅区环境氡危害调查研究.....                                                                                                                | 刘庆成 万 俊等(112)                                |
| The Investigating Research of Environmental Radon in Residential Region .....                                                    |                                              |
| .....                                                                                                                            | LIU Qingcheng WAN Jun <i>et al.</i> (112)    |
| 反射系数法作高分辨率水文地质勘察.....                                                                                                            | 万兆昌(113)                                     |
| Using Reflecting Coefficient Method in High-definition Hydro-geological Exploration .....                                        |                                              |
| .....                                                                                                                            | WAN Zhaochang(113)                           |
| 提高隧道折射波法探测精度的方法.....                                                                                                             | 方根显(114)                                     |
| The Method of Improving Refraction Explore Precision in Tunnel-engineering Explor-<br>ation .....                                | FANG Genxian(114)                            |
| 测井技术在某核电厂工程地质勘察中的应用.....                                                                                                         | 潘显军 曹俊兴(115)                                 |
| The Application of Logging Methods in a Nuclear Power Plant Engineering Geological<br>Investigation .....                        | PAN Xianjun CAO Junxing(115)                 |
| 一种计算层状介质瑞利面波频散函数的新方法.....                                                                                                        | 凡友华 肖柏勋等(116)                                |
| A New Method of Computing Dispersion Function of Rayleigh Wave in Multilayered<br>Media .....                                    | FAN Youhua XIAO Boxun <i>et al.</i> (116)    |
| 多层含水系统地下水开采—地面沉降模型研究——以苏州为例.....                                                                                                 | 裴顺平 陈崇希(117)                                 |
| Research on Multilayered Aquifer System Groundwater Exploitation-Land Subsidence<br>—Suzhou as an Example .....                  | PEI Shunping CHEN Chongxi(117)               |
| 186km 探地雷达测线检测朔黄铁路 45 座隧道衬砌 .....                                                                                                | 钟世航 王 荣等(118)                                |
| Examining Quality of 45 Tunnels in Shuo-huang Railway Line by Georadar .....                                                     |                                              |
| .....                                                                                                                            | ZHONG Shihang WANG Rong <i>et al.</i> (118)  |
| 探地雷达在岩溶探测中的应用.....                                                                                                               | 莫 撼 邓居智(119)                                 |
| The Application of GPR to Karst Detection .....                                                                                  | MO Han DENG Juzhi(119)                       |
| 综合电法在温州市蒲州新闻消力池上的应用.....                                                                                                         | 邓居智 莫 撼(120)                                 |
| The Application of Synthetically Electrical Prospect in Puzhou New River Tax Sta-<br>tion's Subduction Force Pool .....          | DENG Juzhi MO Han(120)                       |
| 浅谈物探方法在隧道勘查中确定构造倾向和深度的应用.....                                                                                                    | 龚育龄 汤洪志(121)                                 |
| Discuss on the Application of Geophysical Methods to Define the Trend and Depth of<br>Structures in Tunnel Prospect .....        | GONG Yuling TANG Hongzhi(121)                |
| 江底沉船的勘察及打捞质量检测.....                                                                                                              | 王传雷 陈 超等(122)                                |
| The Interpretation of High Precision Magnetometry at Water Surface of Sunk Ships<br>Area near Madang Fort in Yangtze River ..... |                                              |
| .....                                                                                                                            | WANG Chuanglei CHEN Chao <i>et al.</i> (122) |
| 世界地热研究与开发的现状.....                                                                                                                | 张季生 吴功建(123)                                 |
| The Status of Geothermal Research and Development around the World .....                                                         |                                              |
| .....                                                                                                                            | ZHANG Jisheng WU Gongjian(123)               |
| 井间地震走时层析成像多尺度逼近遗传进化反演方法.....                                                                                                     | 裴正林 余钦范(124)                                 |
| Crosshole Seismic Traveltime Tomographic Method by Multiscale Evolutionary Progr-<br>amming Algorithm .....                      | PEI Zhenglin YU Qinfan(124)                  |



|                                                                                                                                        |                                                 |
|----------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|
| 探地雷达在综合地下管网(隐蔽设施)探测中的应用.....                                                                                                           | 何 辉 刘陈生(125)                                    |
| Ground Penetrating Radar Applied in Synthetic Pipe Net (Covert Establishment) Detecting .....                                          | HE Hui LIU Chensheng(125)                       |
| 二维频谱任意截取法滤波消除探地雷达地面干扰波.....                                                                                                            | 余海忠 刘陈生(126)                                    |
| Removal of Back Reflector from GPR Profile by Random Resecting of 2D Spectra .....                                                     | YU Haizhong LIU Chensheng(126)                  |
| 堤坝渗漏探测的动态模拟实验及结果分析.....                                                                                                                | 刘占永 王传雷(127)                                    |
| Dynamic Imitating Experiment and Result Analyzing of Exploring for Dyke Seepage .....                                                  | LIU Zhanyong WANG Chuanlei(127)                 |
| 武汉市司法学校地面塌陷的地球物理勘察及地质成因分析.....                                                                                                         | 徐天吉 王传雷(128)                                    |
| The Geophysical Exploration and Inference of Origin in Geology in the Surface Subside-<br>dence of the Judicial Academy in Wuhan ..... | XU Tianji WANG Chuanlei(128)                    |
| 基桩受荷前后应力波反射法实例分析及其应用效果.....                                                                                                            | 苏鸿尧 曾俊容等(129)                                   |
| Analysis and Effect on Method of Stress Wave Reflection's Example about to Base Pile<br>Accepted Dead Load Test .....                  | SU Hongyao ZENG Junrong <i>et al.</i> (129)     |
| 地球物理技术在地质灾害调查和监测中的应用.....                                                                                                              | 何雪洲(130)                                        |
| The Application of Geophysical Methods for Hazard Geology Survey and Monitor .....                                                     | HE Xuezhou(130)                                 |
| 极地冰芯记录揭示的全球气候环境变化的趋势和影响 .....                                                                                                          | 康建成 JOUZEL J 等(131)                             |
| The Ice Core Records Show the Tendency of Global Change .....                                                                          | KANG Jiancheng JOUZEL J <i>et al.</i> (131)     |
| 地面核磁共振找水信号的正演计算结果及其应用.....                                                                                                             | 潘玉玲 尹成勇(132)                                    |
| Forward Problem Calculation Results of Surface NMR Signal Detecting Groundwater<br>and Their Applications .....                        | PAN Yuling YIN Chengyong(132)                   |
| 地面核磁共振方法找水与传统电法找水的对比研究.....                                                                                                            | 李振宇 潘玉玲(133)                                    |
| Comparative Research on Detecting Groundwater with Surface NMR and Traditional<br>Electrical Prospecting Methods .....                 | LI Zhenyu PAN Yuling(133)                       |
| 瑞利面波法在高等级公路路基质量检测中的应用.....                                                                                                             | 刘江平 张友明等(134)                                   |
| The Application of Rayleigh Surface Wave Method in the Quality Detection of Autor-<br>oute's Groundwork .....                          | LIU Jiangping ZHANG Youming <i>et al.</i> (134) |
| 探地雷达回波信号处理和速度估计方法的研究.....                                                                                                              | 张安学 陈文超等(135)                                   |
| Studies on GPR Signal Processing and Velocity Estimation Methods .....                                                                 | ZHANG Anxue CHEN Wenchao <i>et al.</i> (135)    |
| 防渗墙质量检测中的综合浅层地震技术.....                                                                                                                 | 刘江平 杨永清等(136)                                   |
| The Synthetic Shallow Layer Seismic Technology in the Quality Detection of the Leak-<br>age-proofing Wall .....                        | LIU Jiangping YANG Yongqing <i>et al.</i> (136) |
| 航空磁测在核电站选址中的应用.....                                                                                                                    | 徐 昆 黄旭钊(137)                                    |
| The Application of Aeromagnetic Information in Selecting the Site of Nuclear Power                                                     |                                                 |