SEG CALL FOR ABSTRACTS 2025 3rd SEG Borehole Geophysics Technologies Workshop 10-12 October 2025 | Xi'an, China

WORKSHOP DESCRIPTION

Borehole geophysical measurements provide the essential data for connecting measurements between the earth surface, within the borehole, and in the laboratory. In conjunction with the concepts and principles from rock physics, geology, geophysics, and other disciplines, borehole geophysical techniques are used to optimize reservoir imaging and determine physical properties of reservoir rocks and fluids. Borehole geophysics is an indispensable component in oil and gas exploration, development, and production, and is gaining momentum in new energy applications and sustainability development. The industry today faces challenges from unconventional reservoirs such as shale gas/oil, tight sands, and fractured carbonates, while borehole geophysical technologies and solutions are being advanced. This workshop provides a forum for demonstrating and discussing these advancements, emphasizing the application and integration of logging, borehole, crosswell, and surface seismic data.

This workshop will focus on four key areas, (1) Accurate and more effective borehole geophysics methods and modeling, (2) High resolution seismic and VSP imaging around and away from borehole, microseismic monitoring, (3) wireline logging and reservoir characterization, and (4) DAS applications and advanced development of borehole geophysics.

TECHNICAL TOPICS

The topics of the workshop include:

- ◆ Rock physics Rock physics models for carbonates, fractured rocks and unconventionals; quantitative interpretations; experimental rock physics; digital rock physics;
- ♦ Well logging Accurate P- and S-velocity measurement, reservoir characterization and formation evaluation, fracture detection and characterization, seismic-well data integration;
- ◆ Borehole acoustic and seismic High resolution imaging around and between wells, time-lapse monitoring, well-seismic tie, VSP, crosswell seismic, understanding of hydraulic fracturing, evaluation, and monitoring;
- ♦ New instrument, concepts, and innovative technology distribute acoustics sensing (DAS), advances in rock physics, innovative ethodology/technology in all rock physics/geophysics disciplines.





CALL FOR ABSTRACT SUBJECTS

1. Sustainable Borehole Geophysical Data Acquisition

- © Enhance data acquisition efficiency and reduce environmental impact.
- © Use eco-friendly energy sources and advanced downhole sensors for cleaner operations.

2. Vertical Seismic Profiling and Crosswell Seismic

- Apply DAS and 3C-geophone array for improved VSP imaging and data quality.
- ◎ Integrate seismic while drilling techniques for real-time insights and safer operations.

3. Time-lapse VSP Monitoring

- ◎ Monitor diverse energy sources including geothermal and carbon storage with advanced VSP.
- Advanced AVO, Anisotropy, and Inversion Techniques.

4. Rock physics and In-situ measurements for accurate subsurface characterization

- © Comprehensive Microseismic and Passive Seismic Analysis.
- Assess structural integrity and monitor induced fracturing in various geological settings.
- New methods for rock solid and fluid characterization.

5. Acoustic Measurement Integration

 Bridge the gap between different seismic scales and improve deep sonic imaging.

6. Electrical and Electromagnetic Measurement Integration

© Bridge the gap between different electrical and electromagnetic measurements.

7. Downhole and lab NMR Measurement

Methods and applications for diverse rock types.

8. Big Data Management in Borehole Geophysics

© Enhance data integration and processing with cloud computing and automation.

9. Integration with Other Surface and Downhole Measurements

 \bigcirc Case studies of integration of borehole geophysics with other geophysical methods for solve reservoir development issues/problems.

10. Joint Borehole and Surface Geophysical Data Acquisition and Processing

- O Joint acquisition of borehole seismic and surface seismic data.
- O Joint inversion and imaging of borehole seismic and 3-D surface seismic data.
- O Apply borehole data to improve surface seismic data quality.

GENERAL CO-CHAIRS

Arthur Cheng, Society of Exploration Geophysicists

GENERAL TECHNICAL CO-CHAIRS

Bao Chen, China National Logging Corporation

Xiuming Wang, Institute of Acoustics, Chinese Academy of Sciences

Yu Gang, BGP Inc., CNPC

TECHNICAL COMMITTEE MEMBERS

To be added.

Hong Cao, BGP Inc., CNPC

Xiaomin Tang, China University of Petroleum (East China)

Yiqiao Song, Harvard University



ABSTRACT FORMAT

Max 2-page abstract.

- Abstracts should include sufficient details for the committee to judge the quality of the work submitted.
- Abstracts can be a minimum of 1 page, text plus 1 figure, with a maximum of 2 pages.
- Abstracts should be on 8.5 x 11 inch paper size, text in Roman font, stay 1 inch clear of the page margins and submitted in PDF format.
- Title should be one or two lines, at the top of the page, in bold font, and size 12 point.
- Authors should be listed in Roman italic font, size 10 point, and located just below the title.

If authors plan to publish abstracts in SEG Library after the workshop, the submissions must follow the SEG Abstract Template and the copyright transfer letter should be confirmed after the workshop.

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NOTE: The mechanical recording of any portion of the SEG workshop in any form (photographic, electronic, etc.) is strictly prohibited. Printed reference to the workshop presentations or discussions is not permitted without the consent of the parties involved. All participants are requested to omit public reference to the workshop proceedings in any published work or oral presentation. Only registrants are permitted to attend workshop sessions. Each participant agrees to these regulations when application is accepted, as indicated by his or her signature on this form.	
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ORGANIZER



IMPORTANT DATE

Call for Abstracts Opens: 1 May 2025 Call for Abstracts Closes: 1 July 2025 Early Registration Opens: 1 August 2025



主办单位



会议背景

井孔中的地球物理测量为我们提供了衔接地表、井下、及实验室不可或缺的重要数据,与地质和岩石物理学等相关学科的原理和方法相结合,用于优化和解释油藏构造,确定储层岩性和流体的物理属性,在石油天然气勘探开发及新能源应用和可持续发展中的重要性日益增加。当前油气行业面临页岩油气、致密砂岩油气、裂缝油藏等非常规油气藏等方面的挑战。在应对这些挑战的过程中,井孔地球物理学的方法和技术取得了相当的进展。 本次研讨会旨在讨论和展现这些进展,以增进井孔地球物理学方法在井中、井间和地面地震等测量数据处理解释上的综合应用。

研讨会将包括四个主题:

- (1) 更为精确和全面的井孔地球物理测量、分析、油藏构造模型和解释方法;
- (2) 近井及远井的高分辨率成像,井中微地震监测;
- (3) 电缆测井及油藏描述:
- (4) 井震数据综合应用最新进展。

研讨专题

研讨会的专题包括:

- ◆ 岩石物理——碳酸盐岩、含裂缝岩石和非常规油气藏的岩石物理参数测量; 岩石物理模型; 定量解释; 实验岩石物理; 数字岩石物理;
- ◆ 测井——纵、横波速的精确测量;油藏描述和地层评价;裂缝检测与描述; 井震数据综合应用;
- ◆ 测井声学与地震学——井周和井间高分辨率成像,时移监测,井震结合, 垂 直地震剖面,井间地震,水力压裂微地震监测与评估;
- ◆ 新工具、新概念与创新技术——分布式光纤声波检测技术,岩石物理进展, 岩石物 理和地球物理学科中的创新方法和技术。



征稿方向

1.可持续井孔地球物理数据采集

- ◎ 提升数据采集效率,降低环境足迹
- ◎ 采用环保型能源与先进井下传感器实现绿色作业

2.垂直地震剖面与井间地震技术

- ◎ 应用分布式光纤声波传感(DAS)与三分量检 波器阵列优化VSP成像质量
- ◎ 集成随钻地震技术实现实时地层解析与作业安全

3.时移VSP动态监测

- ◎ 基于先进VSP技术实现地热、碳封存等多能源 系统监测
- ◎ 集成AVO分析、各向异性解析与反演技术体系

4.岩石物理与用于精细地层表征的原位测量

- ◎ 实施微地震/被动地震综合解析
- ◎ 评估地质体完整性,监测复杂地层压裂动态
- ◎ 岩石固体与流体表征新方法

5.声波测量数据融合

◎ 实现多尺度地震数据衔接,提升深部声波成像精度

6.电磁测量数据融合

◎ 构建电法-电磁法数据协同分析体系

7.井下与实验室核磁共振测量

◎ 针对不同岩石类型的方法及应用

8.井孔地球物理大数据管理

◎ 基于云计算与自动化技术实现数据智能整合处理

9.多源地球物理数据融合

◎ 井-地地球物理联合攻关解决储层开发难题的工程 案例

10.井-地联合采集与处理

- ◎ 实施井中地震与地面地震同步采集
- ◎ 开展井地地震数据联合反演与三维成像
- ◎ 利用井孔数据提升地面地震资料品质

大会主席

郑传汉, SEG国际勘探地球物理学家学会

技术主席

陈 宝,中国石油集团测井有限公司

王秀明,中国科学院声学研究所

余 刚,中国石油集团东方地球物理勘探有限责任公司

技术委员会

(名单待定)

曹 宏,中国石油集团东方地球物理勘探有限责任公司

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- 摘要应包含足够详细的内容,以便技术/审稿委员会能够评判所提交研究成果的论文质量。
- 摘要文章篇幅为1-2页,最少为 1 页 (包含文字及 1 幅图表),最多为 2 页。
- 摘要应采用 8.5×11 英寸的纸张尺寸,罗马字体,距离页面边缘至少 1 英寸,并且以 PDF 格式提交。
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重要日期:

摘要征集开始日期为: 2025年5月1日 摘要征集截止日期为: 2025年7月1日 会议注册开始日期为: 2025年8月1日

