60th U.S. ROCK MECHANICS / GEOMECHANICS SYMPOSIUM

TUCSON, AZ, 20-24 JUNE 2026

Workshop: full day Sunday, June 21, 2026

Do you know all the available ***borehole measurements*** *for calibrating and constraining your* ***geomechanical earth model?***

Survey course reviewing borehole tool measurements available to estimate hard numbers for a geomechanical earth model.

Bring laptop for optional use of *Vinland* software on public data.

Introduction and incentive
- Inputs needed for Geomechanical model building
- What can be measured from the borehole? Methods, tools.
- What are the borehole conditions that are different from core or surface studies?

Formation testing
- Treating pressure analysis (ISIP, shut in pressure decline using sqrt time and g-function plots)
- DFIT vs Micro / Mini Frac
- Before and after logging with Acoustics and Borehole Imagers
- Interpretation of min and max stress
- Production flow, pressure communication, depletion

Borehole Acoustics
- Monopole, Dipole, Quadrupole, Stoneley propagation physics
- Rock mechanical properties (moduli, dynamic vs. static)
- Pore pressure models
- Porosity estimation
- Acoustics for lithology and gas ID
- Stress induced HTI anisotropy (Stress direction, magnitudes)
- Impact of VTI anisotropy
- Wellbore deviation effects on acoustics
- Microseismic fracture mapping
- Micro-deformation downhole
- Fiber optic measurements

Borehole imaging
- Breakout and Drilling induced fractures
- Natural Fractures, identification and measurement
- Whole core images
- Borehole shape analysis
- Wellbore deviation effects

Instructors

From the Society of Petrophysicists and Well Log Analysts (SPWLA), Special Interest Groups (SIG) for Acoustics, Borehole Imaging, and Formation Testing:

Javier Franquet, Baker Hughes

is the Global Formation Evaluation and Testing Director at Baker Hughes' GaffneyCline energy advisory. He brings more than 30 years of experience in petroleum applied geomechanics and formation evaluation across conventional and unconventional reservoirs, with a career spanning wireline product development, Middle East Geoscience operations, and global technical sales in production enhancement. Javier has authored over 65 technical publications, primarily in microfrac testing, holds four U.S. patents in downhole stress measurement, and coauthored the geomechanics chapter of *Unconventional Reservoir Development* (Ahmed & Meehan, 2016). He served as an SPE Distinguished Lecturer in 2020–2021 and is currently a member of the SPE Distinguished Lecturer Committee for the 2025–2027 term.

Philip Tracadas, Halliburton

is a geoscientist subject matter expert specializing in Borehole Acoustics at Halliburton. He brings 20 years of industry experience on various topics including acoustic processing algorithms. From 2013-2016 he served as Associate Editor for Acoustics at SPWLA's *Petrophysics* journal. In 2024, he was a Distinguished Speaker for SPWLA after authoring 10 papers and granted 8 patents.

Bernd Ruehlicke, Eriksfiord

President of Eriksfiord, Inc. part of the Eriksfiord group, a geoscience provider with focus on image/sonic log based geological processing and interpretation and geomechanical studies. Bernd contributed to most of the geological applications modules of Recall (Halliburton) during his time at Z&S. At PGS and Landmark, he built the interface between the Petrobank (Oracle) database and Recall, and worked as DevLead on R&D projects such as the Java DecisionSpace platform. He has published papers on the use of Eigenvectors and symmetry axes in geological interpretations of image logs. He is the author of *Vinland*, a geomechanical analysis tool based primarily on image logs. Bernd holds a BS in Computer Science and MS in Mathematics from Aarhus University, Denmark. He has an MBA from the University of Houston-Victoria. Bernd has previously served as President of the SPWLA Houston Chapter 2022-24. SPWLA Distinguished speaker for 2021-22.