**Downhole Tools – Challenges, Opportunities, and Value in High-Pressure/High-Temperature Applications**

This Society of Petroleum Engineers Workshop will explore challenges and opportunities related to the use of downhole tools and processes in high-pressure/high-temperature (HP/HT) applications. Materials innovations are often the keys to unlocking new frontiers, but the future of HP/HT will depend upon opportunities in promising new technologies and adaptation to evolving regulations. Panel discussions will focus on consensus themes identified by the workshop attendees each day.

This event will feature case-study presentations on applications of precision tools and processes in HP/HT environments and keynote addresses by industry experts on operator and rig contractor challenges. Directions for future research will be discussed as well.

**COMMITTEE MEMBERS**

**Chairperson**  
Doug Lehr  
Baker Hughes

Grant Affleck  
Weatherford

Paul Agosta  
Baker Hughes

Dave Barrow  
Chevron

**Jesse Constantine**  
ConocoPhilips

**Jim Goodson**  
Baker Hughes

Francisco Pineda  
Delta Screens

Angel Reyes  
Maersk Oil

Alexander Slocum  
MIT
Downhole Tools – Challenges, Opportunities, and Value in High-Pressure/High-Temperature Applications

TECHNICAL AGENDA

MONDAY, 19 OCTOBER
1730-1900 | Welcome Reception
Promenade Lawn

TUESDAY, 20 OCTOBER
All technical sessions are located in the Mainsail Ballroom
0700-0800 | Registration and Continental Breakfast
Mainsail Foyer/Prefunction Corridor
0800-0830 | Chairperson’s Welcome and Keynote Address

0830-1000 | Session 1: Materials Technology
Session Chairs: Paul Agosta, Baker Hughes
David Gerrard
- Presentation 1: Materials Selection, Integrity, and Assessment Advances for HP/HT Oil and Gas Applications
  Christopher Carlton, Chevron
- Presentation 2: Flowforming of High Strength Corrosion Resistant Alloys
  Njall Stefansson, ATI
- Presentation 3: PAEK’s for HP/HT Conditions - One Size Does Not Fit All
  Geoff Small, Victrex

1000-1030 | Coffee Break
Mainsail Foyer

1030-1200 | Session 2: Promising Technologies
Session Chairs: Jim Goodson, Baker Hughes
Angel Reyes, Maersk Oil
- Presentation 1: The Electro-Pulse Drilling System – An Innovative Tool That Drills Hard Rock Faster
  Goepfert Christophe, ITHPP
- Presentation 2: ExPhite – The Next-Generation HP/HT Seal Material Development
  Zach Xu, Baker Hughes
- Presentation 3: Microwave-Induced Welding of Carbon Nanotube-Thermoplastic Interfaces for Enhanced Mechanical Strength
  Micah J. Green, Texas A&M University

1200-1330 | Lunch Presentation: A Blowout Preventor (BOP) Back-Up System – The Hampering Active Wellbore Kit (HAWK)
Dr. Folkers Rojas
Grand Ballroom AB

1330-1500 | Session 3: Promising Technologies and Processes in the HP/HT World
Session Chairs: Grant Affleck, Weatherford
Dave Barrow, Chevron
- Presentation 1: Bureau of Safety and Environmental Enforcement (BSEE) Approval Processes for HP/HT Projects
  Russell Hoshman, BSEE Gulf of Mexico
- Presentation 2: A Manufacturer’s Perspective on HP/HT Standards From a Subsea Point of View – API Specification 17D and 17TRB
  Brian Skeels, FMC Technologies / FTO Services
- Presentation 3: Overview of API Standards Activity on HP/HT
  Austin Freeman, BP

1500-1530 | Coffee Break
Mainsail Foyer

1530-1700 | Session 4: Panel Discussion
Moderator: Doug Lehr, Baker Hughes
The panel will speak regarding two or three consensus themes as identified by the attendees that day.

1700-1830 | Networking Reception
Conferee Lounge

WEDNESDAY, 21 OCTOBER
0700-0800 | Continental Breakfast
Mainsail Foyer/Prefunction Corridor
0800-0830 | Keynote Address: Where is the Industry in Subsea Intervention and Decommissioning?
Bruce Crager, Endeavor Management

0830-1000 | Session 5: Sand Control for High Pressure Applications
Session Chairs: Francisco Pineda, Delta Screens
Doug Lehr, Baker Hughes
- **Presentation 1:** Application of Inflow Control Devices (ICD) in HP/HT Environment  
  Nicholas Carrejo, Baker Hughes

- **Presentation 2:** HP/HT Challenges in Downhole Tool Design  
  Jim Filas, Schlumberger

- **Open Discussion**

1000-1030 | Coffee Break  
Mainsail Foyer

1030-1200 | **Session 6: Plug and Abandonment – Permanent and Temporary**  
Session Chairs: Alex Slocum, MIT  
Doug Lehr, Baker Hughes

- **Presentation 1:** Permanent Well Barriers for HP/HT Wells and Permanent Abandonment  
  Babajide Jagunna, Baker Hughes

- **Presentation 2:** Subsea Decommissioning Issues Needing Industry Collaboration  
  Bruce Crager, Endeavor Management

- **Presentation 3:** Riserless Plug and Abandonment of Subsea Wells  
  Martial Burguières, Wild Well Control

1200-1300 | Lunch  
Grand Ballroom AB

1300-1430 | **Session 7: Downhole Information Management**  
Session Chairs: Jesse Constantine, ConocoPhillips  
Grant Affleck, Weatherford

- **Presentation 1:** Extreme Temperature Logging-While-Drilling (LWD) Tools  
  Weatherford

- **Presentation 2:** How “Big Data” Can Better Illuminate the Challenges and Risk of HP/HT Drilling  
  Tony Worthen or Fred Neilson, Drill Cool

- **Presentation 3:** HP/HT Qualification of Fiber-Optic and Quartz Sensing Systems Drive Increased Reliability  
  Dean Lehner, Weatherford

1430-1500 | Coffee Break  
Mainsail Foyer

1500-1600 | **Session 8: Panel Discussion**  
Moderator: Doug Lehr, Baker Hughes
The panel will speak regarding two or three consensus themes as identified by the attendees that day.

1600-1630 | Closing Remarks

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About Society of Petroleum Engineers
The Society of Petroleum Engineers (SPE) is a not-for-profit professional association for members engaging in oil and gas E&P, providing resources for technical knowledge. Income from this event will be invested back into SPE to support many other member programs. Scholarships, certification, the Distinguished Lecturer program, and SPE’s energy education program Energy4me are just a few examples.

Accessibility
Our events and functions are accessible to all attendees with wheelchairs. If you require special arrangements, please contact our staff at the registration desk.

Alcohol Policy
SPE recognizes the legitimate serving of alcoholic beverages in the process of conducting business and social activities. We also recognize that the use and consumption of alcohol carries with it the requirement for all attendees to consume those beverages responsibly.

Commercialism
In remaining consistent with workshop objectives and SPE guidelines, commercialism in presentations will not be permitted. Company logos should be used only to indicate the affiliation of the presenter(s).

Continuing Education Units
Attendees will receive 1.6 CEUs. One CEU equals 10 contact hours of participation. CEUs will be awarded through SPE Professional Development for participation and completion of SPE workshop. A permanent record of a participant’s involvement and awarding of CEUs will be maintained by SPE.

Documentation
Following the workshop a url containing released copies of the workshop presentations will be available to all attendees.