Joint GRC-SPE Workshop

High Temperature Well Cementing

March 30 - April 1, San Diego, California, USA

More information at
https://cement.mygeoenergynow.org/
GRC/SPE Workshop: High-Temperature Well Cementing and Integrity

Exploring Geothermal and Oil and Gas Synergies

The joint workshop will enable both the geothermal and oil & gas industries to share their experiences, technologies, technical procedures and best practices on this important aspect of well completion. The workshop will highlight cement formulae and slurry blends, placement methods, remedial procedures and result evaluations. Case studies will be discussed and analyzed. All drilling personnel, both geothermal and oil & gas drilling and production engineers, well-site supervisors, cementing engineers and interested personnel are welcome to attend and participate.

Agenda

Monday 30 March

7:30-8:30  Registration Check-in
Continental Breakfast

8:30-8:45  Chairperson's Welcome and Introduction
Louis Capuano, Jr. and Todd Zahacy

8:45-10:00  OPENING PANEL SESSION
Moderators: Louis Capuano Jr., and Todd Zahacy
Panelists: Steve Pye, Daniel Bour, Bob Swanson and/or Jeff Spence.

10:00-10:30  Coffee Break

10:30-12:00  SESSION 1: The Function of Cement in Well Construction
Chairs: Susan Petty and Kyriacos Agapiou

  1. Technical Challenges for Cementing Super-Hot Geothermal Wells
     Presenter: Daniel Bour
  2. California Division of Oil, Gas, and Geothermal Resources’ Geothermal Regulations
     Presenter: Jack Collender
  3. A discussion on casing-cement bonding at elevated temperatures and its implications to well integrity
     Presenter: Catalin Teodoriu

12:00-13:00  Lunch

More information at https://cement.mygeoenergynow.org
13:00-14:30  SESSION 2: Slurry Blends
Chairs: Hamid Najafi and Jeff Spence

1. A Review of Thermally Responsive Cement Case Studies
   Presenter: Nicolas Droger
2. Hexagonal Boron Nitride Reinforced Multifunctional Well Cement for Extreme Environments
   Presenter: Rouzbeh Shahsavari
3. Mitigating Strength Retrogression Using Tailored Cement Designs
   Presenter: Sam Lewis

14:30-15:00  Coffee Break

15:00-16:30  SESSION 3: HT/HP Cements
Chairs: Giorgia Bettin and Axel-Pierre Bois

1. Extended Surface Batch Mix Cement Slurry For HPHT Drill-in Liner In Depleted Reservoirs
   Presenter: Martin Herriot
2. Evaluation of Cement/Casing & Cement/Rock Bond Integrity during Well Operations
   Presenter: Abdelfattah Lamik
3. Cement strength with silica
   Presenter: Arpita Bathija

• Alternate: Cement Replacement System for HP-HT High Stress Applications
  Presenter: Daniel Bour

17:00-18:30  Reception

Tuesday 31 March

7:00-8:00  Continental Breakfast

8:00-9:30  SESSION 4: Placement Procedures
Chairs: Steve Pye and Ramon Viso

1. Proper centralization for optimum cement coverage and long-term wellbore integrity in hot and corrosive drilling environments
   Presenter: Rafael Hernandez
2. Managing challenging loss zones in high temperature applications; fallback and lost circulation
   Presenter: Simon Iremonger

More information at https://cement.mygeoenergynow.org
3. Duvernay Formation Thermal -Low Rheology-Variable Densities Cement Design For Long, Production Casing: Case History
Presenter: Afshin Ahmady

9:30-10:00 Coffee Break

10:00-11:30 SESSION 5: Other Uses of Cement/Research and Development
Chairs: Marc Brennen and Mileva Radonjic

1. Graphene Enhanced Wellbore Cement
Presenter: Mercy Achang
2. Methods for improving cement performance and integrity in thermal wells
Presenter: Simon Iremonger
3. Self-Repairing Polymer-Modified Wellbore Cements with High Thermal and Chemical Stability for Enhanced Geothermal Systems
Presenter: Carlos A. Fernandez

11:30-12:30 Lunch

12:30-14:00 SESSION 6: Problems and Solutions
Chairs: Bob Pilko and Catalin Teodoriu

1. Experimental method development to evaluate cements at elevated pressure and temperature
Presenter: Stephen J. Bauer
2. Reservoir Depletion Needs to be Included in Top of Cement Selection to Prevent Leakage
Presenter: Jarrett Wise
3. Shear Bond Strength of Oil Well Cement in Carbonic Acid Environment and the Effects of Pressure and Temperature
Presenter: Catalin Teodoriu

14:30-15:00 Coffee Break

15:00-16:30 SESSION 7: What is needed for future cement blends and cement placement technologies
Chairs: Mileva Radonjic and Daniel Bour

1. Designing robust barrier materials: Learning the lessons of nature
Presenter: Mercy Achang
2. Smart Expandable Fiber Additive to Improve Zonal Isolation in Geothermal Wells
Presenter: Arash Dahi Taleghani
Presenter: Yunxing Lu

More information at https://cement.mygeoenergynow.org
Wednesday 1 April

7:00-8:00  Continental Breakfast

8:00-19:30  SESSION 8: Case Histories and Past Experiences
Chairs: Pablo Gutierrez and Carlos Fernandez

1. Non-Portland Cement Slurry Development and Application for Ultrahigh-Temperature Geothermal Well with Supercritical Conditions (SPE-190974-MS)
   Presenter: Guido Di Martini
2. Two-Stage Cementing Operations in the Salton Sea Geothermal Field (A Case Study)
   Presenter: William (Billy) Thomas
3. Enhanced Mechanical Property Cement Improves Surface and Intermediate Casing Cement Bond Logs, Post-Drill Out
   Presenter: Kristin Kutchak

10:00-10:30  Coffee Break

10:30-12:00  SESSION 9: Conclusion
Moderator - Susan Petty
Panelists - Bob Pilko and Catalin Teodoriu

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