



November
2011

*Salt Lake
Petroleum Section*

Luncheon Meeting

Rock Mechanics in Barefoot Horizontal Open-Holes

The Salt Lake Section of the Society of Petroleum Engineers will host a meeting on **Thursday, November 10, 2011** at the Energy & Geoscience Institute (EGI), located at 423 Wakara Way, Suite 300, Salt Lake City, 84108. A map is provided at the end of this meeting announcement.

Rico Ramos with ConocoPhillips will be the Distinguished Lecturer.

Participants should plan on gathering and paying for lunch starting at 11:30 a.m.; the presentation starts at noon. The cost is \$15.00 for members and guests, complimentary for students. If you plan to attend please RSVP to John McLennan, email: jmclennan@egi.utah.edu or (801) 587-7925 by close-of-business on Wednesday, November 9, 2011. Please try to adhere to the deadline for reservations in order to keep costs down.

Abstract:

Barefoot open-holes are petroleum wells that are unsupported. The wells have no tubular liners (cemented pipe), no gravel-packs, and no screens. Barefoot horizontal wells are the riskiest well-completion technique because wellbore collapse could plug the entire well. An example of its successful implementation is in the Alpine Reservoir in Alaska, where barefoot horizontal wells are the sole means of production. At 7000 ft deep, the wells, with lengths of 1500 to 5000 ft, must remain open at all times, through intersections with faults, fractures, out-of-zone shale-breaks, and unconformities. The wells are more prone to formation-damage because of low-permeability of less than 200 mD.

Geomechanics played an important role in successful implementation of barefoot wells by assessing the risks, analyzing the in-situ stresses, the strength of the sandstone reservoir, and the effect of water-flooding. Rock tensile and compressive strengths and borehole collapse pressure were compared before and after water-weakening. Hydraulic fractures could easily be induced unintentionally because of wells aligned with tectonic horizontal stress. The low temperature of cold injection brines also enhances propagation of hydraulic-thermal fractures. All of these rock geomechanical factors were identified then used to the field's advantage. From the original 1999 plan with 2 drill pads only, today Alpine has expanded to 4-drill pads,



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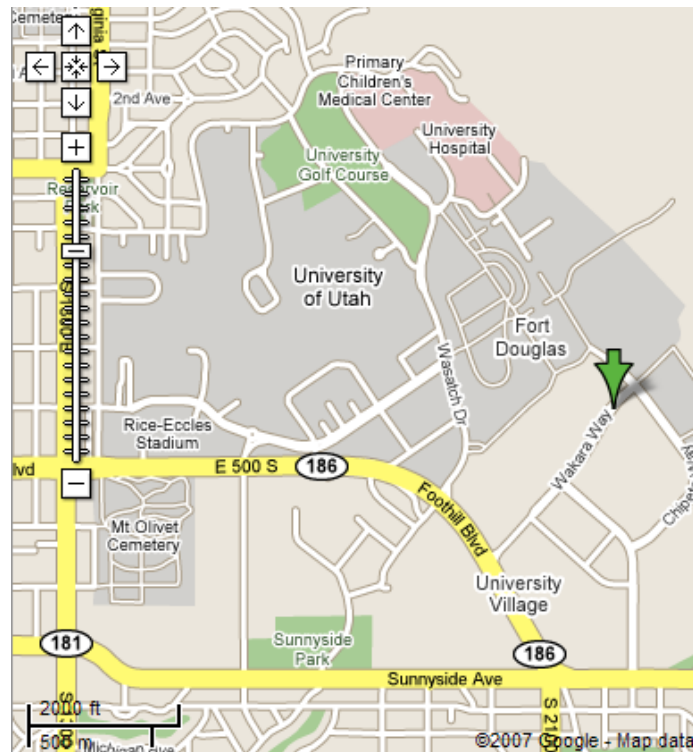
with a 5th in planning stage. To date, the field has produced more than 3 million barrels of oil, all via barefoot, horizontal wells with an aggregate length of over 100,000 ft.

Biography:

Rico G. Ramos is a Principal Engineer in ConocoPhillips's Upstream Technology, Reservoir Laboratories, Bartlesville, OK. He graduated from the University of Utah in 1974 MS Mining Engineering, and pursued graduate studies in 1975-76. He has been with ConocoPhillips for the past 11 years, and previously with ARCO for 23 years. He is a Member of the Board of Directors of the American Rock Mechanics Association, the SPE Editorial Board for Formation Evaluation, and recently received SPE's 2010 Distinguished Service, Mid-Continental North America. (He also serves as an Adjunct Professor, Department of Chemical Engineering, University of Utah.)

Directions:

423 Wakara Way, Suite 300
Salt Lake City, Utah 84108



2011 UGA golf tournament was another great success!

Fifty-seven golfers in 15 teams played Saturday, 10 September 2011 at Wing Pointe Golf Course in Salt Lake City during the annual UGA/SPE/SME scholarship golf tournament. We had perfect weather, a delicious gourmet lunch, and a fine time was had by all.

\$2500 was raised for each of the three local geologic-based societies! We had six Tournament Sponsors, six Hole Sponsors, and five Prize Sponsors to help us achieve this level of support. Thank you to all sponsors, and all players!

Tournament low-score first place winners were Team #18A (John and Robert Adamson, Mike Sleem, and David Durham) with a score of 62 (10 under par). Second place was Team #1B (Mike Pinnell, Byron Wixom, Jim McGregor, and Emily Beers), also at 62. Third place team (random drawing) was Team #14A (Bob Johnson, Dale Johnson, Tim Stein, and Jeff Mitchell). Women's long-drive contest winner was Mary Adamson; women's closest-to-the-pin winner was Julie Jacobson. Men's long-drive contest winner was Alex Reynoso; men's closest-to-the-pin contest winner was Dave Daniels. Way to go to all!

A special "thank you" is extended to all our **Tournament Sponsors:**

Anadarko Petroleum Corporation
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And a big thanks also to our **Hole Sponsors:**

Boart Longyear
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And, to our **Prize Sponsors, a final thank you:**

Ron Carlson
Marjorie Chan
Bob Schafer
Key Energy Services
Major Drilling
Patara Oil and Gas
DSI Mining and Tunneling Americas

Thanks to all the SPE golfers who played.

Dustin Doucet
SPE golf chair

The 2011 Annual SPE/SME/UGA
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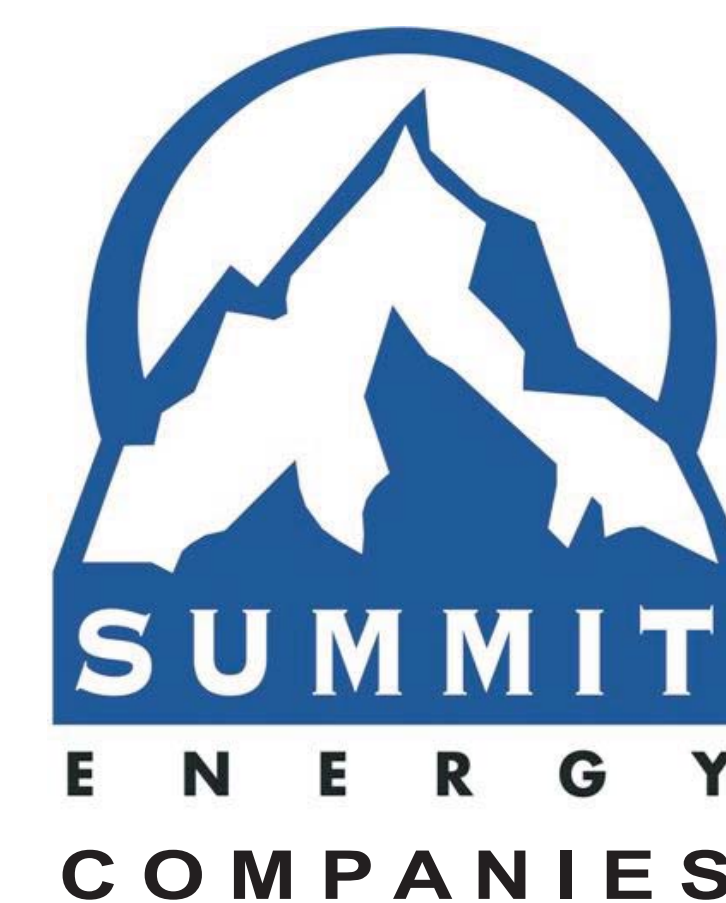


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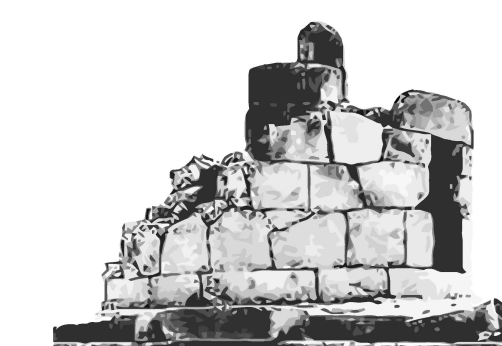
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