



January 2018

## LOS ANGELES BASIN GEOLOGICAL SOCIETY MEETING ANNOUNCEMENT

*January 25 (Thursday) – 11:30 AM*

**Wenli Wang**

**Senior Geomechanics Engineer / Vice President, GeoMechanics Technologies**

### **IDENTIFYING HYDRAULIC FRACTURE GRADIENT FOR DEPLETED FIELDS, COMMON IN LOS ANGELES BASIN**

#### **Abstract**

Hydraulic fracture gradients vary in response to reservoir pressure and near-wellbore pressure changes. Prior California DOGGR regulations suggested that operators use a typical hydraulic fracture gradient of 0.9 psi/foot to establish maximum injection pressure. DOGGR now requires operators to conduct Step Rate Tests to identify fracture gradients dependent on location.

Many oil fields and formations throughout the Los Angeles basin are highly depleted from hydrocarbon production, yet sometimes still contain elevated pressures surrounding injection wells. This may lead to variations in fracture gradient with respect to location and time. Numerical modeling may be applied to anticipate pressure changes, and direct field measurements may be applied to measure fracture gradient.

Ms. Wang's presentation will discuss variations in fracture gradient with reservoir pressure, and the use of analytical and numerical techniques to evaluate fracture gradients. Ms. Wang will also describe the advanced interpretation of step rate tests. Finally, she will discuss injection stimulation for Area of Review and Zones of Endangering Influence estimates.

#### **Speaker's Biography**

Ms. Wenli Wang is a Senior Geomechanics Engineer and Vice President of GeoMechanics Technologies, which provides advanced technical services worldwide and has completed numerous multi-year research contracts for the United States Department of Energy and other large organizations.

Ms. Wang holds a Master of Science degree in Petroleum Engineering from The University of Texas at Austin, and another Master of Science degree, in Engineering Mechanics, from Tsinghua University, Beijing, China. She has more than 10 years of work experience in the oil, gas, and environmental engineering industry. Her technical areas of expertise include reservoir geomechanics, wellbore mechanics, compaction and subsidence analysis, wellbore stability and well failure analysis, waste injection design and management (drill cutting and waste water reinjection), hydraulic fracture model development and simulation, pressure transient analysis, and pore pressure and fracture gradient prediction in deep water environments.

***Please join the LABGS for this  
informative presentation about a topic  
germane to oil production in the  
Los Angeles Basin!***

## Meeting Time, Place, Cost, and Reservations

### When:

**Thursday, January 25, 2018**

### Meeting Agenda

Lunch Served: 11:30 AM to 12:00PM  
Announcements: 11:45 AM to 12:00 PM  
Guest Speaker: 12:00 PM to 12:45 PM  
Questions/Close: 12:45 PM to 1:00 PM

### Place:

**The Grand at Willow Street Conference Center** located at 4101 East Willow Street, Long Beach, CA (562-426-0555). Take Lakewood Boulevard south from the San Diego Freeway (I-405), turn west onto Willow Street, and turn right onto Grand Avenue at the sign for the Center. Park for free in the multi-level garage structure.

### Cost:

Lunch and Speaker: \$25.00 *with reservations*  
\$30.00 *without reservations*  
Retired: \$20.00  
Student: \$5.00

**PAYMENTS IN CASH OR CHECK ONLY**

### Meeting Reservations:

**We encourage you to make your reservations using the LABGS web site, at [www.labgs.org](http://www.labgs.org)**

Otherwise, call Ryan Weller at (562) 637-6019, or e-mail [ryweller@gmail.com](mailto:ryweller@gmail.com).

**Reservations must be made by: 10:00 AM Tuesday January 23<sup>rd</sup> to receive the discount price noted above. As always, walk-ins are welcome.**

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## ANNOUNCEMENTS:

Please let a LABGS Board member know if you have a pertinent announcement.