

Los Angeles Basin Section Society of Petroleum Engineers

Recipient of the SPE President's Section Award for Excellence

A Message from the Chair



LASPE Achieves Gold Standard

To start, I would like to welcome you all back after a warm and, for many, an eventful summer. Oil prices may still be low, but our spirit and sense of optimism remains high.

After an intense year of planning for and hosting the 2015 Western Regional Meeting, our Section intends to once again focus on the more immediate interests of our local membership. We start our year with two

meetings in September. Our Long Beach Petroleum Club Forum (WEDNESDAY 9/9) speaker is Robert Sutton, an SPE Distinguished Lecturer, who will speak on the topic of improving (gas) well productivity by the control of liquid loading.

On WEDNESDAY 9/16, we will have our annual joint meeting with the California Conservation Council of Oil & Gas Producers (CCCOGP). This meeting will be held at The Grand (4104 East Willow, Long Beach) and feature Dr. Elmer Dougherty as the luncheon speaker. His timely topic is "The OPEC Outlook and its Impact on the Petroleum Industry" (must RSVP by 9/10 to rschaaf@socal.rr.com). Details about both of these talks are provided in this newsletter. Hopefully you can attend this talk as well as our 9/9 DL presentation.

Before going further, I would like to announce that the LA Basin SPE Section was recognized by SPEI as having met the "Gold Standard" for its outstanding activity during the 2014-15 activity year. Contributing to this recognition was the effort which the Section put forth to host the very successful Western Regional Meeting. Our thanks and appreciation again to all those who helped with the planning & hosting of the meeting – including our student volunteers.

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LASPE Website

<u>connect.spe.org/</u> <u>LosAngelesBasin/Home</u>

LASPE Facebook

Young Professional Facebook

PETROLEUM TECHNOLOGY FORUM, WEDNESDAY SEPTEMBER 9TH

The next Petroleum Technology Forum is "Understanding Liquid Loading Will Improve Well Performance" by Robert Sutton, on September 9th. Details follow on page 3 ...

Cost:
\$25.00 members,
\$30.00 non-members,
Free for 1st 4 students, others \$5 each

Message from the Chair...continued from page 1

Also the Section is pleased to announce the 2015 LA Basin SPE Section Scholarship winners. The Scholarship Committee did a great job selecting the 12 scholarship winners from pool strong applicants. Please take the time to congratulate our winners. Scholarship Awards will be presented to these deserving and dedicated students at our October 13th SPE Forum. We have to thank all those who helped with the various Section Fund Raising events during the past year. Without those funds, these scholarships would not have been possible.



Finally, I call your attention to the SPEI 2015 Annual Technical Conference and Exhibition (ATCE). This premier SPE conference will take place in Houston, September 28 - 30. Here is the link: http://www.spe.org/atce/2015/ Registrations are already open and we hope that you will give serious consideration to attending this meeting. I will be there early to help select the 2016-17 Distinguished Lecturers. We have a really good set of candidate lecturers and I think our Section will be able to select a set of excellent DL talks for its 2016-17 schedule.

Sincerely,
Ted Frankiewicz
SPE LA Basin Section Chair 2014-2015
tfrankiewicz@specservices.com

LASPE Young Professionals

Please join the LASPE Young Professionals for our next planned Social Networking event scheduled for Wednesday, September 23rd, from 5:00 pm to 7:30 pm, EJ Malloy's 3411 E Broadway,Long Beach, CA 90803 Happy Hour is 3-6pm.

We want to thank Weatherford and GE Oil & Gas in advance for sponsorship of the event.

See you there!



FORUM FROM PAGE 1...

PETROLEUM TECHNOLOGY FORUM WEDNESDAY SEPTEMBER 9TH

Understanding Liquid Loading Will Improve Well Performance

by Robert Sutton, Robert P. Sutton Consulting

Abstract

The key take-away: Illustrate that complex well geometries increase the critical velocity requirement and that failure to account for this can result in loss of both production and reserves.

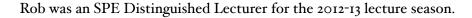
Abstract: Operators of natural gas wells have long used the Turner equations to calculate critical gas velocity to keep gas wells unloaded. The original Turner method was developed for vertical wells with analysis performed using wellhead conditions. However, this methodology is only applicable to high pressure, vertical wells with a simple completion geometry. Modern well design most often employs complex geometries including slant, s-shaped and horizontal well paths as operators seek to reduce costs and the environmental footprint while maximizing the production rate potential. These geometries require special consideration when estimating critical velocity. Wells produced below the critical velocity will develop a static liquid column which can damage the reservoir and impede well productivity. Proper diagnosis of this problem will improve well performance and ultimate recovery.

The purpose of this presentation is to provide an overview of historical techniques for detecting liquid loading and to provide modification to the classical Turner method that address contemporary well designs. The discussions will include recent advances which address the proper evaluation point based on reservoir and well conditions. The talk will also compare the modified Turner methods to the use of multiphase flow pressure drop models for predicting liquid loading and will demonstrate the superiority of using a modified Turner's method to determine critical velocity. Flow loop videos are used to illustrate the result of producing below the critical velocity. Potential improvements will be quantified through field examples for conventional, unconventional and horizontal well applications.

Biography

Rob Sutton is a petroleum consultant in Houston, Texas. He started his 35 year career with Marathon Oil Company in their Gulf Coast Offshore District in 1978. He moved to Marathon's Denver Technology Center in 1985 where he worked in the Reservoir Management Department and developed Marathon's in-house nodal analysis software. He moved with the technology organization to Houston in 2001 and retired from Marathon in 2014.

Rob received a BS in Petroleum Engineering from Marietta College. He also holds an MS in Petroleum Engineering from the University of Louisiana at Lafayette. He has authored 27 papers for SPE along with 10 journal publications. He wrote the chapter on oil PVT correlations in the recently updated Petroleum Engineering Handbook as well as coauthored a chapter in Gas Well Deliquification. Rob received SPE's 2014 Production and Operations Award.





LASPE/CCCOGP JOINT MEETING, WEDNESDAY SEPT 16TH

Location:	<u>Time:</u>	<u>Cost:</u>
Grand Event Center	Registration: 11:30 AM	\$25.00 members,
4104 East Willow	Buffet Lunch: 11:30 AM	\$30.00 non-members,
Long Beach, CA	Presentation: 12:00 Noon	\$15.00 students

Please RSVP by 9/10 to rschaaf@socal.rr.com

OPEC Outlook and Its Impact to the Oil Industry

Dr. Elmer Dougherty President, Maraco Inc.

Abstract

OPEC still has a large influence on the oil industry. Actions taken by OPEC always affect oil supply and depending upon demand oil price will move up or down finding a balance. Dr. Dougherty will touch on a project he directed at USC 35 years ago that developed for OPEC a model appropriately called OWEM (OPEC World Energy Model). Based on statistical analysis of the past, OWEM's equations predict how OPEC's production volume affects world economic behavior and oil demand and price changes. OPEC still uses OWEM's descendents on generating its annual WOO (World Oil Outlook). He will also talk about the changes in OPEC's current response to worldwide oil production increases, why their strategy has changed, and significant factors that will influence future behavior.

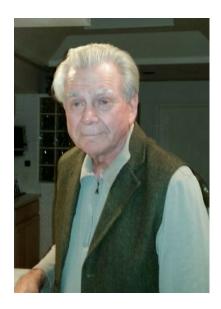
Biography

Dr. Dougherty is Emeritus Professor of USC (24 years Petroleum and Chemical Engineering). His industry experience includes Chevron, Esso, Dow Chemical, and Union Carbide. His BS is from Kansas University where he was recently inducted into its Chemical/Petroleum Engineering Hall of Fame. His MS and PhD in Chemical Engineering are from University of Illinois.

Dr. Elmer Dougherty is founder and President of Maraco. Maraco develops and applies software to analyze and optimize oil and gas development and operations. In addition to Maraco, he founded D2 Computing & Scientific Software. He has consulted in Australia (Santos), The Netherlands (EBN, TOTAL), Indonesia (TOTAL), Saudi Arabia (Aramco), Kuwait (Kuwait Oil), Libya (Oasis), and Iran (Consortium).

Dr. Dougherty is a Distinguished Member of the SPE, receiving its J.J. Arps Award, Ferguson Medal and Regional Service Award (Los Angeles). He has coauthored over 50 technical papers. SPE recently conferred the distinction of Legion of Honor Member to the Professor for his career-long service to the petroleum industry and the petroleum engineering profession. Dr. Dougherty has more than 50 years of continuous membership in the Society of Petroleum Engineers.

RSVPs are a must for this meeting. Please contact LASPE's Program Chair, Robert Schaaf (<u>rschaaf@socal.rr.com</u>) by September 10th to make your reservation.



LASPE SCHOLARSHIPS AWARDED

Dear fellow LASPE members, it is the board of director's pleasure to announce the 2015-2016 scholarship recipients. Our goal was to promote local interest in up and coming talent who will be the future of our industry. We want to encourage students to pursue science and engineering curriculums and to increase their awareness of career opportunities in the petroleum industry.

We want to thank all of the companies, members and contributors who participate in our events, workshops and activities. These activities and the funds generated are the lifeblood of our program that enables us to award scholarships to deserving students for years.

Again, congratulations to the awardees. We will award the scholarships at our annual scholarship awards ceremony and lunch on October 13th at the Long Beach Petroleum Club.

Sincerely,

Brian Tran

SPE Scholarship Chairman on behalf of the LASPE Scholarship Committee

The scholarships and awards recipients:

High School Scholarships: Two scholarships of \$1,000 each. These were available for high school students accepted into an accredited four year program pursuing a technical degree field. Recipients:

Evan Nguyen, accepted into Vanderbilt University

Erika Li-Shen Wakatake, accepted into the University of Washington, Seattle

Undergraduate Scholarships: Three scholarships of \$1,000 each. These were available for regional undergraduate college students pursuing petroleum engineering or geology, chemical, civil, mechanical, environmental or related engineering curriculums. Recipients:

Leilani Rebolledo of the University of Southern California – B.S. Mechanical Engineering Melissa Gillette of San Diego State University - B.S. Mechanical Engineering Timothy White of the University of California, Irvine - B.S. Chemical Engineering

Masters Scholarships: Five scholarships of \$1,000 each were available for the top Masters Students pursuing studies or conducting research in energy and petroleum related subjects. Recipients:

Cuiting Qi of the University of Southern California – M.S. Petroleum Engineering Karthik Balaji of the University of Southern California - M.S. Petroleum Engineering Ke Li of the University of Southern California - M.S. Petroleum Engineering Kevin Qi of the University of Southern California - M.S. Petroleum Engineering Khush Desai of the University of Southern California - M.S. Petroleum Engineering

Graduate Student Awards of Excellence: Two Graduate Student Awards for Excellence of \$1,500 each for the most outstanding contribution to the Oil & Gas industry. Recipients:

Seyed Mehran Hosseini of the University of Southern California – PhD Petroleum Engineering Siavash Hakim Elahi of the University of Southern California – PhD Petroleum Engineering

SPE STUDENT CHAPTER NEWS

USC SPE Chapter Activities

Viterbi School of Engineering New Students - 2015

On August 20, 2015 at the USC EQuad, the USC SPE student chapter officers took part in the welcoming luncheon organized by the Viterbi School of Engineering for all incoming students. Our chapter had set up an information booth with a poster of our organization's activities along with a few rock samples, crude oil samples, and a drill bit.



SPE Student Chapter Information Booth



Chapter's Executive Board Interacting with the new students

Once the new students were done with lunch and other icebreaking activities, they were given the chance to visit and sign-up with representatives of various engineering organizations. The USC SPE student booth chapter definitely attracted the attention of many curious students who were interested to learn more about the field of petroleum

engineering and also of the oil and gas industry in general. Our chapter's executive board members had a wonderful experience in sharing their knowledge by answering all sorts of questions and even clarifying a few general misconceptions about the oil and gas industry. They seemed convinced with the organization's commitment.

USC SPE STUDENT CHAPTER CONTINUES...

In the end, a number of new undergraduate and graduate students signed up student members of our SPE chapter. Interestingly we had the new members from diverse engineering disciplines such as chemical engineering, mechanical engineering, industrial engineering, computer science and even biomedical engineering. The new sign-ups totaled 55 students. We will be inviting these new members to all our activities. We are looking forward to organizing successful events with the new and continuing student members.

SPWLA 56th Annual Symposium

From July 18-22, 2015 at Long Beach Convention Center, SPWLA held its 56th Annual Symposium. USC SPE Executive board would like to convey our regards to Dr. Donald G. Hill, organizer of the student paper competition for giving us the opportunity to volunteer for the event.

Moustafa Badawy, Cutting Qi, Wennan Long, Di Chai represented USC in the Masters category of the contest. We would like to congratulate Wennan Long and Di Chai for winning the second place for their paper on "Pseudo density log generation using artificial neural network".

Attending ATCE Meeting

A significant number of the SPE Chapter student members at USC are requesting partial travel support to attend the ATCE in Houston, TX. The USC SPE Chapter officers are super busy to solicit support from various individuals and organization to keep the momentum high and allow these students to experience the professional development they can gain by attending the ACE during last days of September, 2015. At this convention, we will also be receiving the Gold Standard award that our SPE Chapter earned in 2015.

Miss Leilani Rebolledoand Mr. Pannayod Kritsadativud who respectively were the first place winners of the BS and MS Divisions at the SPE North America Western Regional paper contest in April 2015, have been invited to present their papers at the International competition. We certainly wish them success in representing our students.

SELECTED SPE UPCOMING EVENTS 2015 - 2016

Date	Title		
September 9* - WEDNESDAY -	Understanding Liquid Loading Will Improve Well Performance Robert Sutton Robert P. Sutton Consulting		
September 16 - WEDNESDAY -	JOINT MEETING with Conservation Committee of California Oil and Gas Producers Meeting will be at The Grand in Long Beach and will feature a speaker on the vagaries of oil & gas demand and & supply (must RSVP by 9/10 to rschaaf@socal.rr.com)		
September 28-30	SPE Annual Technical Conference & Exhibition (ATCE) http://www.spe.org/atce/2015/		
October 13 *	Scholarship Award Presentation at monthly LASPE meeting		
	Note: * LASPE Board meeting starts at 10:30 a.m. and all members are welcome to observe		

DEADLINES FOR NEWSLETTER ARTICLE SUBMISSION

Month	1st Submission Call	Last Submission Call	No Submissions Accepted After	Newsletter Publish Date
October	9/14/15	9/22/15	9/28/15	10/1/15
November	10/19/15	10/26/15	10/30/15	11/2/15
December	11/16/15	11/23/15	11/28/15	12/1/15
January	12/21/15	121/28/15	12/30/15	1/2/16
February	1/17/16	1/25/16	1/29/16	2/1/16
March	2/15/16	2/22/16	2/26/16	2/1/16
April	3/21/16	3/28/16	3/30/16	4/1/16
May	4/18/16	4/25/16	4/29/16	5/2/16
June	5/16/16	5/23/16	5/30/16	6/1/16

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