



# Los Angeles Basin Section Society of Petroleum Engineers

A recipient of SPE President's Award for Section Excellence

## A Message from the Chair

### New Hand takes the Wheel



Dear Fellow SPE Members,

I am both pleased and greatly honored to ascend to the position of the 2011 - 2012 Chairperson of the SPE Los Angeles Basin Section. In last month's Chairperson's message, Mike Utt included my biographical sketch to

introduce me to the membership, but for those of you that were not able to read the article I would like to share a few highlights. I hold a mechanical engineer degree (Ph.D., Rutgers), and have over 30 years experience in the upstream oil and gas industry. I have enjoyed working for both large oil companies, such as ARCO and Unocal, independents like Cities Service, Plains Resources and Breitburn, and services companies including Baker Hughes and my current employer, PTS Laboratories.

Reflecting on these experiences, I feel that over the years I have worked with some outstanding people that I have crisscrossed with over time. Looking back, it is no wonder to me that several of these exceptional people (ex-Unocal) have risen to become Chairs of the LASPE, including our now Junior Past Chair Mike Utt, and Scott McGurk (2006-2007).

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### **PETROLEUM TECHNOLOGY FORUM PROGRAM, OCTOBER 11, 2011**

The next Petroleum Technology Forum will be held on Tuesday, October 11th, 2011 at the Long Beach Petroleum Club. The speakers will be Sam Sarem with SPE update followed by Dr. Eric Withjack from PTS Laboratories. ***Abstract and speaker bio follow on page 3.***

<u>Location:</u>	<u>Time:</u>	<u>Cost:</u>
Long Beach Petroleum Club 3636 Linden Avenue Long Beach, CA 90807	Registration: 11:30 AM Buffet Lunch: 11:30 AM Presentation: 12:00-1:00 PM	\$20.00 members, \$25.00 non-members, Free for students

Message from the Chair...*continued from page 1*

This year we are in the enviable position of having received the prestigious SPE President's Award for Section Excellence two years in a row (2010 and 2011)! These recognitions were achieved through the efforts of many volunteers and support from our membership. The award is based upon, in part, our Section's demonstration of exceptional programs in technology dissemination, communication, membership development, student interaction, and innovation. Our opportunity to "stake our claim" is captured in the Section Annual Report which is filed with SPE headquarters (around June 1st). For me, continuing this recognition by capturing a third President's Award for 2012 is of highest priority. We have set the bar high, especially for ourselves, and reaching this goal depends on the efforts of volunteers that contribute their time and turn ideas into actions.

As the incoming chairperson, I would like to express my personal appreciation to the 2011-2012 Board of Directors, and thank those that have served in the past. In particular, I would like to thank Mike Utt for skillfully "piloting" the ship through the past year, and thank him – in advance – for his continued consultancy on Section matters. A warm welcome is offered to the new board members, Serge Baghdikian, Steve Cheung, Baldev Gill and Adi Varma. I look forward to working with the Board of Directors, committees, young professionals, and student organizations, with strong support of the general membership to ensure a very successful year.

Eric Withjack

Chairperson 2011-2012



FORUM FROM PAGE 1 . . .

**PETROLEUM TECHNOLOGY FORUM OCTOBER 11, 2011**

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**Update on SPE International****Sam Sarem, IPRC & Director, SPEI Western North America Region**

**A brief update on the SPE International will kick off the the meeting followed by Dr. Eric Withjack on X-Ray CT technology.**

**Core Imaging- Twenty Five Years of Equipment, Techniques, and Applications of X-Ray Computed Tomography (CT) for Core Analysis**

**Dr. Eric Withjack, PTS Laboratories (Current LASPE Chairperson)****Abstract:**

Over the past twenty-five years, x-ray CT technology has shaped and advanced core analysis with a momentum similar to that of the growth of the Society of Core Analysts (SCA) itself. From the initial work in early 1984 to the present day, we have seen a dedication of efforts from individuals, and the development of technology that has significantly advanced our understanding of porous media.

Here we will track equipment development and techniques that have been successfully applied and modified for the special case of imaging porous media. The early developments in the technology provide a basis and common understanding necessary for subsequent higher-level techniques and applications. The primary focus of this paper is to show how the technology has been applied to both static and dynamic reservoir models, using examples from both the US and the Middle East. We look at how the costs of equipment, data acquisition time, and data size have all influenced how and when the technology was applied economically. We discuss how the information from this visual and quantitative tool can best be handled to integrate its value throughout the workflow from geological description to production enhancement. On another scale, notably of emerging significance, we discuss the "younger" x-ray CT sibling, micro-CT. The rate that this technique is maturing is due in no small part to the lessons learned from the "older" CT technology. Forward looking, we venture forth with our ideas and projections of future applications and developments.

**Bio – Eric Withjack:**

Eric is Vice President of Technology for PTS Laboratories, Inc., where he provides corporate-wide technical leadership for the company. Eric's experiences include Cities Service Oil and Gas, ARCO Oil and Gas, and UNOCAL Corporation, performing reservoir engineering, core analysis, and laboratory studies to optimize oil recovery. While at ARCO and Unocal, his primary research interest focused on the development of x-ray computed tomography and applications for core analysis. Additional experience includes working at Baker Atlas/Geoscience (Houston) developing new down-hole technologies and integrating cross-well seismic with reservoir characterization. Upon returning to So Cal and prior to joining PTS, he performed consulting for Plains Resources, and reservoir engineering for Breitburn Energy. Eric holds a B.S. from Norwich Univ., an M.S. from Syracuse Univ., and a Ph.D. from Rutgers (Mechanical and Aerospace Engineering).

Leila Rashedi Vlasko  
Forum Chairperson  
[lvlasko@betaoffshore.com](mailto:lvlasko@betaoffshore.com)

More Core Analysis for Y'all

Chairperson, Dr. Eric Withjack



Yup – that's your 2011 – 2012 Chairperson up there!

The view can be pretty scary, but you've got to climb aboard, hold on, and enjoy the ride.

The venue is Austin, Texas. The occasion, a cross-professional event – the 2011 International Symposium of the Society of Core Analysts (SCA). At the symposium, I was co-author of a paper celebrating twenty five years of core imaging using x-ray computed tomography (SCA2011-25), and attended a very enlightening workshop on shales. Here I would like to share some of the workshop highlights as they provide helpful insight into working with shales, and are not otherwise available in the referenced technical literature.

The half-day workshop included presentations by oil-industry career veterans like Ted Braun (ExxonMobil, retired), Mark Fleury (IFP Energies Nouvelles) and Joel Walls (Ingrain, Inc.). These specialist – and others – covered topics including coring methods for gas shales, shale characterization, the GRI method of shale core analysis, perspective on shale reservoir engineering, and high resolution 3D digital analysis of shale core material. For me, the information from this workshop somewhat counter-balanced the material I discussed in a previous article on the Monterey Shale (available in the LABSPE on-line Newsletter archives, April 4, 2011). Why counter-balanced? Mainly because the Monterey is geologically a very young oil-rich shale (17 to 5 MY), while the Austin workshop focused on the gas shales such as the Barnett (over 350 MY).

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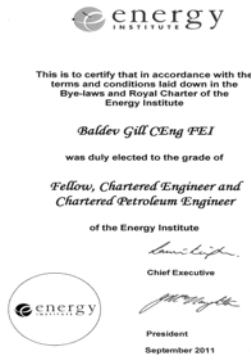
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These highlights are intended to be somewhat of a “heads-up” on techniques and issues in shale coring and core analysis. To start off, Bob Wilson of Nation Oilwell Varco, discussed a specialized core capture tool (core barrel) that is capable of pulling a sealed shale core through the drill pipe – which saves tripping pipe out of the whole.

The core is captured in a split liner and processed on-site in a portable core-processing lab. Segments of the core can be quickly removed and placed in desorption bombs for gas content evaluation. The Gas Research Institute (GRI) method of shale analysis, as discussed by Ted Braun, is considered the industry standard. Ted presented a summary of the method, and some of the pitfalls and idiosyncrasies of working in the core analysis laboratory for over 30 years. He mentioned that the users of shale core analyses data are to be cautioned that there are no industry-wide standards for determination of shale properties, and the GRI method of one lab is not necessarily the same as the GRI method of another ... and probably neither are the results. Comparisons of different laboratory methods to characterize shale properties were made by Pierre Boulin, IFP. This discussion focused on the details of laboratory methods, but stressed the complexity of mechanisms and measurement uncertainties when characterizing shale material having permeabilities in the nanodarcy range. A shale reservoir engineering perspective was presented by Betty Jenks, Encana. Quickly said, economic forecasting is done by simulation, and reservoir models require rock characterization – especially permeability for life cycle forecasting. The two approaches for shale permeability analysis are in stark contrast: use a shale plug (typically 1” long X 1” diameter) and spend weeks analyzing it, or crush it into small pieces (e.g., 20/20 mesh sieve) and obtain results in a few hours. As explained by Quentin Fisher (Leeds University) both methods use a gas pressure pulse applied to a sample and “back-out” the permeability by modeling the pressure decay with time. The crushed sample test can not be done under reservoir stress, so there is a trade-off to consider. Digital modeling of shales, as discussed by Joel Walls (Ingrain, Inc.), can provide calculated engineering and geological properties. The digital-modeling workflow includes high resolution micro-CT scanning of a small sample to build a 3D virtual model of the pore structure. Based on this, digital rock physics can be used to arrive at porosity, permeability, relative permeabilities and flow modeling.

As I have mentioned previously, many members of the SPE have cross-alliance memberships with other societies in support of their specialty interests. The Austin SCA symposium was attended by approximately 275 engineers, students, and scientists involved in core analysis research and the oil & gas sector. I personally believe that active participation in a few select societies can be of great benefit to both individual growth and that of the different organizations, and encourage each of you to expand your professional depth through such rewarding associations. It is also another avenue for technology sharing and participation outside of our Section, a category that we are judged on in our annual report to the SPE!

## Technical Reservoir Engineer from Long Beach Gas & Oil and SPE Member Elected to Chartered Petroleum Engineer and Fellow



Baldev S. Gill, was elected to Chartered Engineer, by the UK Engineering Council with special designation of Chartered Petroleum Engineer by the Energy Institute (EI) in London. In addition he was elected to Fellow of the Energy Institute, the highest professional title bestowed upon an engineer and given typically to those that have the highest technical skills, commercial acumen and innovative thinking.

A Royal Chartered membership organization, the EI supports over 14,000 individuals and 300 companies across 100 countries, serving society with independence, professionalism and a wealth of expertise in energy matters. The Energy Institute consists of 2460 chartered engineers and 1766 Fellows of the Institute. Fellows are frequently called upon to provide expert white papers to assist the Institute in delivering energy solutions to industry and government.

Chartered Engineers (CEng): are characterized by their ability to develop appropriate solutions to engineering problems, using new or existing technologies, through innovation, creativity and change. They might develop and apply new technologies, promote advanced designs and design methods, introduce new and more efficient production techniques, marketing and construction concepts, or pioneer new engineering services and management methods. Chartered Engineers are variously engaged in technical and commercial leadership and possess effective interpersonal skills.

Fellow (FED): Fellow is the most senior grade of membership for energy professionals and is an internationally recognized and highly respected symbol of excellence and career distinction. As a Fellow of the Energy Institute, you will have at least five years' experience in positions of senior responsibility in an energy-related role and operate at a senior level to oversee and pioneer new techniques, services and concepts through innovation, creativity and change. You are likely to hold an Honours Degree and/or postgraduate qualification, or an assessed academic equivalent.

Mr. Gill stated, "I am honored by these awards and thank the United Kingdom Engineering Council and the Energy Institute in London for these awards and election".

## **SPE Distinguished Member Award to Jalal Torabzadeh**



Professor Jalal Torabzadeh, Professor of Mechanical and Aerospace Engineering and the Coordinator of the Mechanical and Petroleum Engineering programs at California State University Long Beach, has been selected to receive the Society of Petroleum Engineers Distinguished Member Award. Dr. Torabzadeh is a very active member of LASPE, and is also the faculty advisor of the CSULB Student Chapter of SPE.

Dr. Torabzadeh has authored and co-authored more than 30 technical papers and textbook chapters. He has been the principal and co-principal investigator of several research projects funded by the US Department of Energy, Southern California Gas Company, Chevron Petroleum Technology Co. A recognized expert in the field of enhanced oil and gas recovery, he has been a consultant, a lecturer, and an advisor to several national and international oil companies, research centers, and universities.

Established in 1983, the Distinguished Member award recognizes SPE members who achieve distinction deemed worthy of special recognition. This award acknowledges members who have attained eminence in the petroleum industry or the academic community, or who have made significant contributions to SPE. Professor Torabzadeh will receive the award at the SPE's Annual Technical Conference and Exhibition in Denver in early November.

## **Dr. Ted Frankiewicz Joins SPE Distinguished Lecturer Committee**

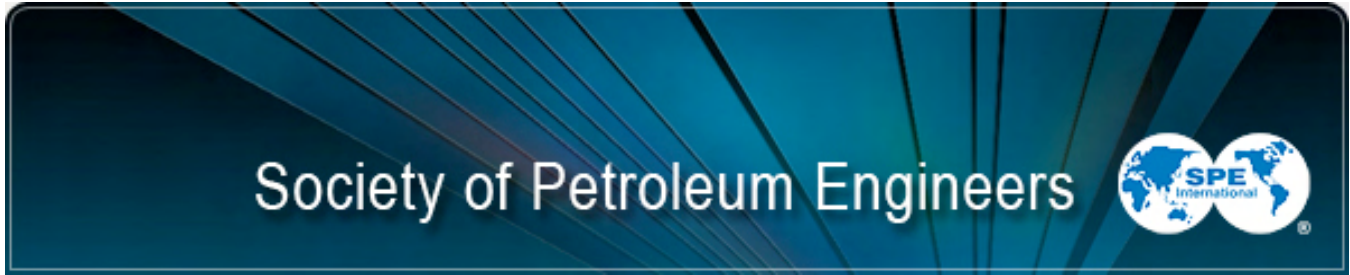


LASPE member Ted Frankiewicz has accepted a membership on the SPE committee for the Distinguished Lecturer Program.

Each year, SPE selects a group of around 30 individuals who are experts in their field and capable speakers to share their expertise with SPE members through visits to local sections. The individuals are nominated by their peers, and selection by the Distinguished Lecturer Committee is recognition of their expertise.

During the 2009-2010 program year, Dr. Frankiewicz toured the world with as a Distinguished Lecturer himself, with a talk titled, "Diagnosing and Resolving Produced Water Chemical and Mechanical Problems."

Ted Frankiewicz has more than 30 years' experience with Occidental Petroleum, Unocal Corp., Natco Group, and, currently, SPEC Services. He has a Ph.D. degree in physical chemistry from the University of Chicago, holds 15 patents, and has written more than 25 professional publications. At Unocal, he was responsible for developing the water treatment systems that were installed in the Gulf of Thailand to remove mercury and arsenic as well as residual oil from produced water. At Natco Group he developed an effective vertical column flotation vessel design and used CFD to diagnose problems with existing water treatment equipment, as well as designed new equipment. His combined expertise in oilfield chemistry, the design of process equipment, and the development of process systems has provided him with unique insights into the issues that challenge operators as their water production and water treatment costs escalate over time.



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**LASPE BOARD MEETING MINUTES**  
**BOARD OF DIRECTORS MEETING, SEPTEMBER 21, 2011**

**Attendance:**

Mike Utt, Jr. Past Section Chair  
Vanessa Perez, Sr. Past Section Chair  
Rick Finken, Treasurer  
Robert Visser, Assistant Treasurer 2011  
Craig Webster, Scholarships, Board Member 2013  
Devon Shay, Student Chapters Liaison  
Scott Hara, 2010 WNAR Co-Chairperson  
Rachel Spitz, Secretary  
Nazee Heda, Visitor

**Proceedings:**

- 1.0 The meeting was called to order at 10:35 AM.
- 2.0 The proposed agenda was approved.
- 3.0 The minutes of the May, June, and August, 2011, as published in the LASPE Newsletter, were approved.
- 4.0 Reports:
  - 4.01 Treasurer's Report – Rick Finken: Budget: income exceeded expenses by about \$350. The report was approved.
  - 4.02 Banking Resolution – Rick Finken: There was an unexpected overdraft on the Section's account from the CSULB Student Section. Robert Visser motioned to remove the student section leader from the account, Vanessa Perez seconded the motion. All were in favor.
- 5.0 New Business:
  - 5.01 Discussion of terms for incoming Board members – Vanessa Perez The following Board Members were elected: Adi Varma, Board Member 2011-2014; Baldev Gill, Board Member 2011-2012; Serge Baghdikian, Board Member 2011-2014; and Dr. Steve Cheung Board Member 2011-2013. Two of the positions are less than the 3 year term due to two board members leaving prior to the termination of their term. Eric Withjack will ascend to the 2011-2012 Chair position.

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**...LASPE BOARD MEETING MINUTES CONTINUES**

5.02 Support of USC and CSULB Student Chapter officers to ATCE in Denver – Mike Utt (Requested: \$2,500 for 5 from USC and \$1,000 for 2 from CSULB). This motion was approved by all.

5.03 Financial Support of Student Chapters – Devon Shay: In addition to Section 5.2, a reminder that students are always considered guests (no charge) at the LASPE Section forums.

6.0 Section Activities:

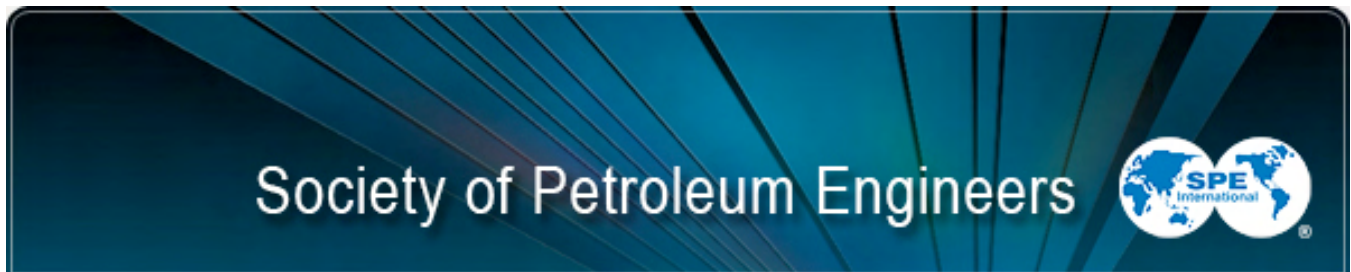
6.01 LASPE attendance at ATCE Foundation Luncheon – Suggestions were made that we send Student Chapter Presidents to the luncheon if they are welcome.

6.02 Any other items of immediate interest only – summaries postponed to October meeting.

6.02.1 Outreach: Scott Hara – Discussed ideas for continuation of outreach programs. Elementary school participation, read-ins, etc.

6.02.2 Outreach: Nazee Heda – Suggested scheduling discussions on the Oil and Gas Industry for the general public. Mike Utt suggested local clubs as a good place to start.

7.0 The meeting was adjourned at 11:30 AM.



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## POSITION OFFERED



### Senior Production Engineer – LA Basin

E&B Natural Resources has an opening for a Senior Production Engineer. E&B is a privately held, growing independent E&P company ([www.ebresources.com](http://www.ebresources.com)). Our California operations are located in Kern County of the San Joaquin Valley, Santa Barbara and San Luis Obispo Counties of the Cuyama Valley and Los Angeles County. We are seeking an experienced Production Engineer to take the engineering lead in various key assets in the Los Angeles Basin for the company. Operations experience on deeper, highly deviated, long reach wells is desirable.

If you are a result oriented, self motivated individual that enjoys working in a team environment, we welcome you to apply for this position.

E&B offers a generous company benefit package that includes medical, dental and vision insurance coverage, short and long-term disability, life insurance, matching 401(k) plan, quarterly bonus program, paid vacation and holidays, and a choice of auto allowance or company vehicle.

A BS or MS degree in Petroleum Engineering is preferred. Other related engineering disciplines qualify. In making application, please include base salary requirements. E.O.E.

Place inquiries/resume to: Christy Swatzell, Human Resources Manager  
[cswatzell@ebresources.com](mailto:cswatzell@ebresources.com) (661) 679-1716  
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