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## A Message from the Chair

Dear fellow SPE members,



It is a great pleasure and honor for me to communicate with you through this column regarding our section's activities as the new chairperson of the SPE Los Angeles Basin Section. I am also delighted and looking forward to receiving your ideas and inputs on how to make LASPE one of the leading sections, not only in the Western North America Region, but also at the SPE International level. I believe that LASPE with a great history of leadership, dedicated members and volunteers, a broad range of professional expertise, very rich diversity, and major support of our local industry, can achieve this goal. Our section can play an important role in enhancing our industry's image and effectiveness as well as in sustaining our community. This is possible only by your active involvement and participation in section's activities. That is why I am inviting all of you, our section members, to join us at any capacity you can, and get involved with your LASPE Board. You can help us in our efforts by sparing a few hours a month and volunteering to serve on one of the Board's standing committees such as membership, program, community outreach, career guidance, scholarship, young professionals or student activities. You can also make a difference by helping to establish a favorite technical interest group or a professional network. Although volunteering takes time and effort, but the career and personal rewards are innumerable.

Please share the benefits of SPE membership with your colleagues. You may even win valuable prizes as part of the membership recruitment contest, [www.spe.org/recruit](http://www.spe.org/recruit). Our section can benefit significantly from new, enthusiastic, energetic, young professionals who are entering the industry. Please encourage them to join the global YP community and mentor them to get involved with SPE affairs early on. The YP magazine, *The Way Ahead*, available on SPE website is a good source of information for our young colleagues and students interested to pursue careers in the energy industry. Another valuable source of information, especially *continued on next page*

## A Message from the Chair continues

*Message from the Chair continues...*

for outreach and public education, is the SPE's Energy4me ([www.energy4me.org](http://www.energy4me.org)) which can be used for classroom presentation and informing students and teachers. Please consider participating in one of our section many outreach programs.

On some recent news and activities, those of you who attended the 2008 ATCE in Denver, Colorado, September 20-24, have witnessed a very successful conference attended by more than 10,000. The LA Section was well represented in various society workshops and leadership activities, technical sessions and other activities. Thanks to the generosity of LASPE, 10 students from the 2 student chapters (8 from USC and 2 from CSULB) attended the conference. They benefited from many student and young professional activities and interacted with hundreds of SPE student members from all over the world.

Before closing, on behalf of the LASPE Section, I thank our outgoing Chairperson, Brandy Fellers for her dedication, hard work, and the outstanding leadership she provided to the section during 2007-2008. I would also like to thank last year's members of Board of Directors, Section officers, Committee chairs and all volunteers who made last year a very successful one. Special thanks to Rick Finken, Program Committee Chair; Sam Sarem, Treasurer; Rick Reeves, Secretary; Jack Smith, Scholarship Committee Chair; Mike Filbey, Charity Gulf Tournament; Scott Hara and Ed Santiago, Community Outreach, and other volunteers for their great contributions.

In the next month's issue of this newsletter, I will share with you my vision, ideas and goals as well as the new Board of Directors' plans to make LASPE more visible, effective and successful in fulfilling its mission and objectives. The main goal of the Section is to be more beneficial to the membership. So your thoughts and input in this regard are greatly appreciated.

Sincerely,

Jalal Torabzadeh

LASPE Chairperson 2008-2009

## Western Regional Meeting

The SPE Golden Gate Section will be hosting the 2009 SPE Western Regional Meeting at the Double Tree Hotel in San Jose, California, on March 24-26. The theme for the meeting is "New Solution for Maximizing Recovery and Value". If you have any questions regarding our meeting, you can contact: General Chair Jerry Hale [jerryhale@chevron.com](mailto:jerryhale@chevron.com), Laurent Pianelo Vice-Chair [lpnl@chevron.com](mailto:lpnl@chevron.com), Khalid Aziz Program Chair [aziz@stanford.edu](mailto:aziz@stanford.edu), Karlene Kelly, the SPE Staff primary contact [kkelley@spe.org](mailto:kkelley@spe.org)

## LA SPE Petroleum Technology Forum - October 14, 2008

### “POWERWAVE™ – INJECTION TECHNOLOGY”; For Secondary Recovery Waterfloods and CO<sub>2</sub> Floods

The next Petroleum Technology Forum will be held on Tuesday, October 14, 2008 at the Long Beach Petroleum Club, 636 Linden Avenue, Long Beach, CA 90807. John Warren, of Wavefront Technologies, will present “POWERWAVE – INJECTION TECHNOLOGY”; For Secondary Recovery Waterfloods and CO<sub>2</sub> Floods. A complete abstract and bio follows.

| <u>Location:</u>  | <u>Time:</u>  | <u>Cost:</u>                           |
|---|---|--|
| Long Beach Petroleum Club<br>3636 Linden Avenue<br>Long Beach, CA 90807 | Registration: 11:30 AM<br>Buffet Lunch: 12:00 noon<br>Presentation: 12:20-1:00 PM | \$20.00 members,<br>Free for students. |

In the oil industry, any progress in technologies designed to enhance production is most commonly based on empirical discoveries, and only later followed by attempts to develop a consistent physical theory to explain, analyze and predict field behavior. However, in 1997, a group of scientists and engineers sought to change that mindset. Through a series of laboratory tests utilizing a rigorous theory, this group developed a new fluid flow enhancement technology known as the Powerwave™ Process. Powerwave™ is an injection technology wherein, with each impulse, a volume of liquid is introduced through a casing or tubing and is forced at high accelerations by downhole devices into the reservoir. The injected fluid then increases the porosity, pressure, permeability, saturation and homogenization of an ever-increasing coherent volume of the porous media through porosity dilation (expansion of the pore throat).

Powerwave™ is modeled after the effects of earthquakes on the pores in rocks to stimulate the flow of oil. The technology allows oil producers to tap into mature oil fields in addition to wells that are not producing as well as they should. As early as the 1950s, earthquakes were observed to affect fluid levels in oil wells. Increases leading to enhanced flow were often reported. It was also observed that water/oil ratios changed during an earthquake swarm – sequences of nearby earthquakes striking in a short period of time with no single earthquake serving as the main shock. Wells with initially large water/oil ratios were observed to have lower post-earthquake swarm water/oil ratios and vice versa in wells with initially low water/oil ratios. As a rule, beneficial effects decreased over time following a seismic event.

Earthquakes and explosions are also known to affect underground fluid flow. Large well level fluctuations occurred in the Canadian and American Prairies from 24 to 36 hours after the 1964 Alaska earthquake, long after seismic waves had passed. These effects have been reported for different depths and reservoir conditions and led to the concept of seismic excitation for flow enhancement in the oil industry.

To increase oil recovery, many field attempts in the United States, Russia and China (among others) have been made to induce and couple seismic waves as a method for secondary oil recovery during traditional oilfield waterflooding – a method of secondary recovery in which water is injected into the reservoir formation to displace residual oil. In theory, vibratory forces are thought to promote the movement of oil by diminishing capillary forces – in other words, changes in permeability, viscosity and capillary entry pressure – thereby reducing adhesion between the rock and fluids. This causes trapped oil to be liberated and flow with the CO<sub>2</sub> or waterflood.

***Implementation of Powerwave™ Technology in Injection Wells has resulted in no less than an immediate 40% injectivity index increase and as high as 9 fold.***

#### **Speaker: John Warren**

John Warren heads Wavefront's U.S. operations with more than 18 years of industry experience that includes product line management, research and development management and business development leadership. Prior to his current position with Wavefront, Warren held several technical, sales and managerial positions in multiple locations around the world, including positions in West Africa and Norway. His work and experience earned him the coveted Harts Award in 2004. Warren received a bachelor of science in mechanical engineering from Colorado State University and is recognized as one of the industry's foremost experts in conformance applications.

Katherine Anderson, Katherine\_Anderson@oxy.com

## LA SPE Petroleum Technology Forum - September Report

### Forum Report – September 17, 2008

The 2008-09 program year kick off was a special joint meeting with the Conservation Committee of California Oil and Gas Producers at the Grand Conference Centre in Long Beach. Nearly 100 members, friends and guests of SPE and CCCOGP attended. Following the normal CCCOGP Business Meeting, two excellent talks were presented. First, SPE Past President Arlie Skov reviewed “US Energy Needs: Fossil Fuels or Renewables?” Following a short break, SPE Distinguished Lecturer Ken R. Brown of the Alberta Research Council presented his excellent talk, “The EOR Kiss of Death - It Was a Technical Success but an Economic Failure!”

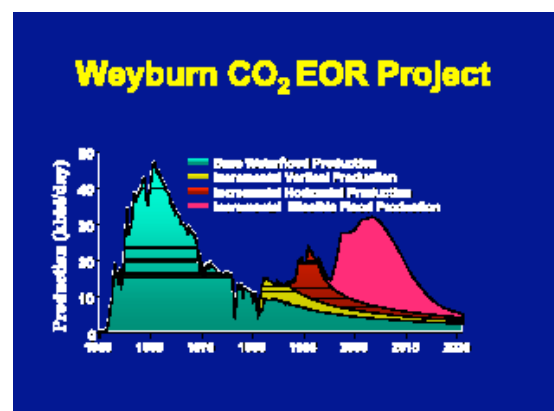


Arlie Skov started the program by pointing out that before 1840, the US used only renewable forms of energy: wood, biomass, wind and water. After 1840, first coal, then oil and gas, fueled the Industrial Revolution. By 1950, fossil fuels supplied over 90% of US energy needs. The oil price and supply shocks of the 70's disrupted the US economy, and reduced energy use. With the return of low oil prices in 1986, the US economy again stabilized with US energy consumption increasing at one percent per year. Today's focus is on the increased use of renewables, but unfortunately they cannot meet all our needs. For the foreseeable future, continued and more innovative use of fossil fuels is essential. Arlie's talk was full of very interesting with some eye-opening energy statistics. One of the most memorable is that although the two darlings of renewable energy, ethanol and wind power, have increased 300+% and 700+% percent respectively during the last 10 years, all renewables have actually decreased in output because of the reduction in hydroelectric output of over 30% over the same time period.

Ken Brown focused on the practical business aspects of CO<sub>2</sub> enhanced oil recovery projects. Worldwide, there are some 125 active CO<sub>2</sub> projects producing over 285 mbopd. Projects in the USA account for well over 80% of the total. There is great potential in CO<sub>2</sub> EOR, but the key to success is paying attention to the details necessary for a successful project. Ken used his experience at the Weyburn project in Alberta to highlight how that project successfully dealt with technical issues, hard and soft business issues, the several issues of the project's owners, government issues, economic value issues, operational and finally, societal issues. In summary, all aspects must be skillfully handled and economically exploited to extract value. Understanding all business risks and the measures that must be taken to quantify and minimize them will go a long way to ensuring your project is both a technical and an economic success.

Both Ken's and Arlie's presentations are available on [www.laspe.org](http://www.laspe.org).

Rick Finken, [Richard\\_Finken@longbeach.gov](mailto:Richard_Finken@longbeach.gov)



### LA Basin Young Professional SPE at

The logo for ATCE 2008, featuring the text "ATCE 2008" in white, bold, sans-serif font, followed by two white chevron symbols (») pointing to the right. The entire logo is set against a dark red rectangular background.

A Young Professional Session was held during 2008 SPE Annual Technical Conference and Exhibition (ATCE) at Denver, Colorado. Los Angeles Basin YPSPE was represented by Candra Janova to attend the program. The session focused on uncertainty and risk analysis in the oil and gas industry. More than 50 young professionals from all around the globe joined the 4-hour session at the Colorado Convention Center.

After receiving lecture titled “Risky Business: Decision Making with Uncertainty” from industry and academic speakers, young professionals split into work groups. Each of the young professionals took a different role and position in a fictitious oil company such as geologist, reservoir/production/drilling/facilities engineer, or business analyst. A field in DJ Basin, Colorado was the main interest. Geology, reservoir, production, and oil price data and information of this field and its analogous were available. Based on a pre-determined dataset of this field, these groups were required to create a development plan for a field it is considering purchasing. The board of directors needed a rough idea so that they could decide whether to write the check and for how much.

Our team identified associated risk and uncertainty of the field before going further into technical analysis. After estimating a reasonable oil in place and recovery factor based on available data, our team projected the remaining reserves and ultimate recovery based on primary and potential secondary production. Development and depletion plan were proposed. Combination of associated capital and operating expense with remaining reserves were used to estimate present value of the field. The session concluded with the our work group defending the plans in front of board of directors and other audiences.

In the evening of young professionals reception, it was announced that our team had won the challenge. Board of directors were pleased with our technical analysis and “buy” recommendation. Gift card was presented to each team member.

This fall, YPSPE has plan to organize a social and networking activity. If you have any ideas/suggestions for anything related to LASPE Young Professionals, please contact Candra Janova at [candra\\_janova@oxy.com](mailto:candra_janova@oxy.com).

Thank you,  
Candra Janova  
LA YPSPE Liaison and Chairperson

## Support AP Geology High School Classes

### Help Support AP Geology High School Classes

Members and Friends of LASPE:

Believe it or not, there are dozens of AP high school courses offered, including environmental sciences, but not one for geology. Several years ago a nation-wide survey was sent out to the high schools and colleges to see if there was an interest in proceeding with an AP Geology class. The survey was very well received but The College Board\* decided not to pursue it as they stated that they have too many sciences and need to expand on other subjects. When you review the list of AP courses\*\*, I think you will agree that an AP Geology course is more relevant than many of the current offerings, especially with our energy situation. I have been working with Mr. Mike Phillipow, who teaches two courses of geology at Long Beach Polytechnic High School. His students are engaged in a full spectrum of a true college geology class including lessons on logging, log correlations, faulting, sand deposition, tsunamis, field trips to our Wilmington Field operations and to geologic sites showing outcrops, landslides and formation deformation. He is an excellent teacher who recently won the AAPG Teacher of the Year award. LASPE provides him an annual grant to cover most of his lab work and field trips.

An AP Geology class would encourage our best and brightest students throughout the country to learn more about earth sciences and maybe consider a career in our industry. Mr. Phillipow and another high school geology teacher have developed curriculums that are based on college-level classes and would jump at the chance to propose a lab-based AP Geology curriculum for consideration by The College Board. He believes that many of the best students generally give priority to taking AP classes and will not consider taking a regular science (geology) class, no matter how interesting or practical. We are seeing direct benefits from Mike's efforts. One of his honors students was a high school summer intern for me and she later interned for Oxy. She is on the verge of getting her Geology degree at UC Santa Barbara. I understand another of his students interned for Oxy this past summer.

I have contacted Mr. Barry Russell, CEO of the Independent Petroleum Association of America (IPAA), to request his help in convincing The College Board to approve an AP Geology course. He is considering this request and is interested in getting industry feedback. Please write a short note to Barry this week at [brussell@ipaa.org](mailto:brussell@ipaa.org) that supports creating an AP Geology class.

Scott Hara  
Chief Reservoir Engineer  
Tidelands Oil Production Company / Occidental Petroleum  
[scott\\_hara@oxy.com](mailto:scott_hara@oxy.com)

\*The College Board ( the company which handles the SAT and AP tests ) contact info:  
<http://www.collegeboard.com>

\*\*AP Test list: <http://www.collegeboard.com/student/testing/ap/subjects.html>

## LA SPE Board Meeting Minutes

### **LASPE Board Meeting Minutes September 2008**

- 1) Board meeting held by conference call on September 3, 2008. Meeting called to order at 4 pm. Present for the call were: Brandy Fellers, Mike Utt, Sam Sarem, Rudy Weibel, Scott Hara, Vanessa Perez, Jalal Torabzadeh, Rick Finken, and Rick Reeves.
- 2) Funding Local SPE Student Chapters to Attend ATCE – USC has requested \$4000 for 8 members to attend ATCE in Denver, CO, September 21-24. CSULB would also like to send two people (\$1000 for two). Mike Utt made a motion to approve the total funding amount of \$5000, which was seconded and approved by the Board.
- 3) Vanessa Perez proposed looking into the formation of an outreach program targeted at local elementary schools for oil and gas education. The thought is that the program will provide presentations, video, and books, most likely to 3<sup>rd</sup> and 4<sup>th</sup> graders, starting with Signal Hill, Caesar Chavez, International, Lowell, and Burroughs elementary schools in Long Beach area. It was agreed to explore this proposal.
- 4) Future Scientists and Engineers of America (FSEA) – LASPE has a budget of \$3750 to support FSEA programs. Jalal made a motion to spread the funding to 5 schools (\$750/school). Sam and Scott added that any school accepting the money must do a petroleum-related experiment and host a talk by a member of SPE, to be stated clearly in the award letter. This motion was approved. The motion was then amended to earmark \$750 each to two schools (Mabel Paine and Glen Knoll) and divide the remaining \$2250 among the five schools.
- 5) High School Energy Day – Scott Hara proposed to have an energy day for local high schools, to be held at CSULB. The proposal would involve poster sessions about energy in general, with an emphasis on oil and gas. Scott proposed reallocating the \$3000 COMET funding to pay for buses, teachers, and food; however, since the reallocated amount would not be enough to cover costs, Scott also proposed approaching operations and service companies about participation and sponsorship. Mike Utt motioned to reallocate the COMET money into the proposal, which the Board approved. Scott will now look for additional sponsors.
- 6) Meeting adjourned at 5 pm.

Rick Reeves, Rick\_Reeves@oxy.com

## Positions Available



Chevron Corporation is one of the world's leading energy companies. Headquartered in San Ramon, California, and conducting business in approximately 180 countries, the company is engaged in every aspect of the oil and natural gas industry, including exploration and production; refining, marketing and transportation; chemicals manufacturing and sales; and power generation. Chevron Corporation is one of the world's leading energy companies. Headquartered in San Ramon, California, and conducting business in approximately 180 countries, the company is engaged in every aspect of the oil and natural gas industry, including exploration and production; refining, marketing and transportation; chemicals manufacturing and sales; and power generation.

Chevron North America Exploration and Production Company is accepting online applications for the following locations:

### Anchorage, Alaska

- Petroleum Engineer – Cook Inlet Gas Asset Development (#006410723)
- Production Engineer – Cook Inlet (#00649656)
- Reservoir Engineer – Cook Inlet (#00649658)

### Bakersfield, California

- Coalinga Reservoir Engineer (#006411015)
- iField Project Engineer – (#006411044; #006411119)
- Kern River Production Engineer (#006410401)
- Kern River Senior Production Engineer (#00649597)
- Kern River Infills & Expansions Reservoir Engineer (#006411156)
- Kern River Water Impacted Reserves – Reservoir Engineer (00649729)
- Midway Sunset Petroleum Engineer (#006411049)
- Midway Sunset Senior Reservoir Engineer (#006411047)
- PE - Heavy Oil Thermal Completions Specialist (#03229763)
- PE - Heavy Oil Well Workover & Completion Specialist (#03229765)
- PE – Heavy Oil – Well Management & Surveillance Specialist (#032210847)
- Reservoir Engineer – Kettleman (#00649736)
- Reservoir Engineer – San Ardo (#0064110146)
- Reservoir Engineer Heavy Oil Heat Thermal Simulation Specialist (#03229886)

### Rangely, Colorado

- Rangely Reservoir Engineer (#006410707)

### Lafayette, Louisiana

- Asset Development Reservoir Engineer (#00649737)
- Reservoir Engineer – Deepwater Asset Development in Covington, LA (#006411170)

Relocation may be considered within Chevron parameters.

Interested candidates apply on-line to Job URL: [http://careers.chevron.com/search\\_jobs/](http://careers.chevron.com/search_jobs/)

Company URL: [www.chevron.com](http://www.chevron.com)



## Services Offered

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Acquisition and Divestitures**

**Scott W. McGurk**  
**Petroleum Engineering Consultant**  
**LA Basin SPE Jr. Past Chairman**  
**714-403-9839**  
**LOVESM @ IX.NETCOM.COM**

**DAVID B. DEL MAR**  
**Consulting Petroleum Geologist**  
**California Registered Geologist #634**

**Development - Thermal EOR - Property Reviews**

2027 Park Drive  
Los Angeles, CA 90026

C (323) 219-3804  
H (323) 664-3358  
dbdelmar@earthlink.net

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