New PTTC Board, New Chairman

Jerry Anderson has been a PTTC Regional Lead Organization (RLO) Director since 2007. As Executive Director of the Conservation Committee of California Oil and Gas Producers (CCCOGP) located in Bakersfield, CA, Anderson was eager to bring the effective and efficient technology transfer events long associated with PTTC to his area. Jerry and the CCCOGP Board recognized the benefit of the PTTC program to its members, the oil and gas industry, and agencies associated with the industry.

When PTTC entered into its newest phase of leadership by its RLOs in November 2012, Anderson’s success in the West Coast Region and his keen business sense made him a natural fit to be elected PTTC’s newest Chairman of the Board of Directors. As Chair, Jerry has been thrust into seeing PTTC become a more active and self-sustaining organization, heavily focused on bringing cost-effective technology workshops to the nation’s independent oil and gas producers. The PTTC goal to provide a forum for transfer of technology and best-practices within the producer community is being accomplished by a professional staff, strong regional organizations, and a dedicated Board.

Anderson’s work with CCCOGP began in 1999 and he quickly learned the challenges and satisfaction of supporting an organization and a Board of Directors that had ambitious goals and a mission to serve. CCCOGP, with over 250 producer, consultant and service company members, works directly with the California DOGGR in making recommendations of Maximum Efficient Rates of oil and gas production to the State Oil and Gas Supervisor. Prior to his position with CCCOGP, Anderson worked for Texaco and Monterey Resources in various engineering roles. He is also an independent oil and gas producer in California, which allows him the knowledge of industry needs, a unique advantage for PTTC’s mission.

Anderson was introduced to PTTC by past Chairman and PTTC supporter, Chris Hall, after funding and technical changes ended PTTC’s long relationship with University of Southern California. PTTC was in the process of executing a new Department of Energy contract at that time, and needed a strong organization that could handle PTTC’s mission to support the oil and gas industry with a fluctuating federal fund offering. Anderson was willing to take on that challenge and has flourished in the West Coast region. Jerry has seen first-hand what can be accomplished from the PTTC program in his own workshops. This year he expects a diverse group of over 1000 attendees at quality workshops, acquiring industry knowledge they can implement in their positions.

Unconventional Resources Helping America

For decades the American public has come to expect low-cost, abundant energy, but has not really been aware of how or where this energy comes from. The Arab Oil Embargo of 1973 was the first jolt to the public that made people realize that conventional energy could be threatened. Since the 1990s unconventional oil and gas resources have become the byword in the petroleum industry, but except for local regions experiencing booms the public was still unaware of where their energy came from. National Geographic’s lead article for March 2013, America Strikes Oil - the Promise and Risk of Fracking, demonstrates that how energy is produced has finally reached the attention of the public. Overall the article attempts to give a fair view of the pros and cons in hydraulic fracturing and the economic benefits of producing our abundant unconventional oil and gas resources.

Unconventional resources have created jobs in many hard pressed states, generated millions of dollars in local, state and federal taxes and royalties; created vast expansion in infrastructure from processing plants, to roads and housing, improved the economy, improved our national security, and brought the public to a new awareness of environmental concerns. The petroleum industry’s innovative technologies for oil and gas development are reducing the footprint of operations; making development safer, creating better transportation facilities, and reducing the risk both to workers, land owners and citizens concerned about their drinking water and air quality.

Conferences and workshops large and small, regional to national are all addressing Unconventional Resources. How can you get the most from these opportunities? The audiences are becoming very savvy and selective and conference providers need to emphasize how their workshop or conference will help you with the bottom dollar and improve the public image of oil and gas development. One way PTTC helps is by providing low-cost workshops with well known experts as the speakers.

Continued on page 2
Continued from page 1

One trend I have observed in conferences and forums is forward thinking. We all want to learn what is going on in the industry and which technologies and plays may work best for our particular size operations and the cyclic nature of our industry. A recent forum on the Eagle Ford addressed the issue of how to plan for the future downturn while making the most of the current boom.

A forum on Ohio’s Utica/Point Pleasant Shale pointed out the infrastructure limitations when a boom occurs. Gathering lines, processing facilities, and local and regional planning have been undergoing a rapid transformation and should catch up with production in 2014. The State of Ohio has been bombarded by opinions on what they should do to protect their resources, their clean air, water and health, and how much they should or should not tax industry. The need to replace old, limited, or non-existent infrastructure and update regulations has hit states from North Dakota south to Texas and east to Pennsylvania and New York. Reports vary from lack of housing, deteriorating road conditions, difficult state and federal regulations, and water issues to local hostility.

PTTC’s five regions discuss a broad spectrum of historical topics and future plans and demonstrate that development of unconventional resources has helped independent operators grow, increased business for service companies and raised employment in states that really needed the economic boost. The Eastern region focuses on the Marcellus and Utica shales and will host PTTC’s booth at AAPG in Pittsburgh in May in the heart of these unconventional plays.

The Midwest region recently held a very successful workshop on horizontal drilling in mature basins, and will be involved with planning workshops on new state environmental regulations and proposed taxes. The Midcontinent region is again hosting the KU TORP conference. Emphasis is on expanding the Midcontinent region with keynote speakers; Scott Tinker from The University of Texas, and premier economist and KU alumni, Michael Economides.

The Rocky Mountain region discusses the regional changes in PTTC and the value of partnerships with regional and national organizations. The Rockies, Futures in Energy Program reminds us of the cyclic nature of the petroleum industry while introducing junior and high school students to energy perspectives. The West Coast region demonstrates the value of PTTC workshops as training grounds for new people coming into the industry and updates for current professionals by introducing new technologies and methods to produce mature reservoirs. ☏

PTTC’s affordable regional workshops connect independent oil and gas producers with information about various upstream solutions. For further information, please call the direct contacts listed below. Check PTTC’s online calendar (www.pttc.org/national_calendar.htm) frequently as changes do occur.

APRIL 2013
4/17 West Coast: Hydraulic Fracturing Workshop -- Long Beach, CA.
4/18 West Coast: Hydraulic Fracturing Workshop -- Bakersfield, CA.
4/23 Rocky Mountain: 2013 Spring Symposium: Making Money with Science (RMAG) -- Denver, CO.

MAY 2013
5/14 West Coast: BOPE Workshop -- Bakersfield, CA.
5/16 West Coast: BOPE Workshop -- Ventura, CA.
5/21-23 Rocky Mountain: How to Find Bypassed Pay in Old Wells Using DST Data -- Golden, CO.
5/28-30 Midcontinent: RPSEA Ultra-Deepwater TAC Meetings -- Houston, TX.

JUNE 2013
6/25 West Coast: Controlling Formation Pressure -- Bakersfield, CA.
6/25-26 Midcontinent: KU TORP Technology Transfer 2-Day Summer Workshop -- Wichita, KS.
6/26 West Coast: Controlling Formation Pressure -- Long Beach, CA.
6/27 Midcontinent: RPSEA Onshore Production Conference: Technological Keys to Enhance Production Operations -- Wichita, KS.

JULY 2013
7/16 West Coast: Controlling Formation Pressure -- Long Beach, CA.
7/18 West Coast: Controlling Formation Pressure -- Bakersfield, CA.
7/9 Rocky Mountain: Petroleum Geology for Non-Geologists -- Golden, CO.
7/10 Rocky Mountain: Petroleum Geology for Non-Engineers -- Golden, CO.

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West Coast Region

The West Coast PTTC program is actively coordinating 16 workshops for 2013, with additional ones scheduled as topics and instructors are established. The program is administered by Jerry Anderson, the West Coast PTTC director, and Chair of PTTC, and Dan Tuttle the training coordinator. Full day workshops are held throughout California in locations as Sacramento, Bakersfield, Ventura and Long Beach. The programs are well attended with individuals from oil and gas companies, regulatory agencies, consultants, and service providers.

The California oil and gas industry is made up of over 400 active oil and gas producers producing 540,000 bopd. The mean production of the California producers is 16 bopd. The State’s largest fields are generally mature fields dominated by enhance recovery operated by the larger oil companies. The smaller fields are dominated by the independents with primary production. The attendees for these workshops represent a diverse group of individuals.

Federal, state and local agencies provide a large portion of the workshop attendances. BLM, BSEE, BOEM, California State Lands Commission, California Division of Oil, Gas and Geothermal Resources (DOGGR), and City and County agencies frequently attend.

In 2011, the West Coast PTTC began discussing future workshops with the DOGGR. These workshops were considered introductory courses for new personnel or refresher for existing personnel. Potential agendas were developed with DOGGR personnel and adjusted as necessary for presentation to petroleum industry personnel. These workshops provide basic information, sample problems that are reviewed during the presentation, and take home problems mostly directed at DOGGR personnel. Following these workshops, the instructors are able to use the DOGGR video conference centers to discuss the workshop and take home problems or other questions posed by the various offices.

During 2012, we listed various potential workshops and asked for feedback. Utilizing those comments and suggestions, we began organizing the 2013 schedule to include cementing, petroleum geology, hydraulic fracturing, BOPE specifications, controlling formation pressure, and fishing operations. We are continuing to pursue Geographic Information Systems (digital mapping), California Regional Geology, source rock, Area of Review for UIC projects, and hydrology workshops. Some of these topics may occur in 2014, depending upon instructors.

Two of our most popular instructors, Dr. Jan Gillespie from California State University, Bakersfield, and Val Lerma with Orchard E&P, LLC, have been requested to develop additional workshops within their respective fields of expertise. Halliburton, Schlumberger and Weatherford have provided instructors for several of our workshops. We anticipate having over 1,000 industry and agency personnel attend our 2013 workshops.

The West Coast PTTC has also developed relationship and workshops with professional organizations. In 2010 as part of the SPE Western Regional meetings in Anaheim, California the West Coast PTTC working with the LASPE put on nine workshops at the meetings. Again in 2011 as part of the SPE Western Regional meetings in Anchorage, Alaska the West Coast PTTC working with the Alaska SPE put on six workshops.

As we move forward in our planning for future workshops, we are utilizing suggestions to schedule workshops and providing quality instruction to the petroleum industry and related agencies.

Rocky Mountain Region

In 2013, the Rocky Mountain Region of PTTC will be celebrating 18 years of service to the local geologic and engineering community. Last year, PTTC Rockies provided 16 workshops to approximately 700 people. We continued our close relationship with the Rocky Mountain Association of Geologists (RMAG) as well as the Montana Geological Society (MGS) by assisting in the promotion and production of successful workshops. PTTC Rockies actively participated in the RMS-AAPG meeting in Grand Junction, providing a workshop titled “The Petrophysics of Unconventional Resources.” Our region has worked closely with the Research Partnership to Secure Energy for America (RPSEA) to provide access to timely research funded by the Department of Energy (DOE).

The Rocky Mountain Region has been deeply involved in the structural changes with the National PTTC organization over the past year transitioning from six to five regions. The five directors serve as board members, along with two industry representatives. The primary goal for these changes is to move PTTC toward a self-sustaining model. Because the Rocky Mountain region has been a leader in pushing for a self-sustaining model for the national organization, Dr. Mary Carr was chosen along with Jeremy Viscomi as the new Co-Executive Directors for PTTC.

We are in the process of evaluating ways to provide technology transfer for their DOE to provide technology transfer for their high-caliber research studies.

The energy business has suffered several boom and bust cycles of the past few decades due to the fluctuating price of oil. This has produced an uneven age distribution within the industry, with many of the longer term workers getting ready to retire. The Futures in Energy program was established to introduce high school juniors and seniors to the oil and gas business and encourage them to think about careers in this field. The program takes students from outcrops to drilling rigs giving them an opportunity to experience many aspects of the industry. After a couple of year’s hiatus, Futures in Energy will return to the Colorado School of Mines on June 17-21, 2013 with openings for 20 students. In past years the Rocky Mountain PTTC has enjoyed the support of many volunteers and sponsors involved with the Futures in Energy program. For more information on how to contribute to the 2013 Futures in Energy program, visit our regional website at www.pttcrockies.org. Interested parties can also download a sponsorship form directly.

“How to Find Bypassed Pay in Old Wells Using DST Data” is an example of the type of workshop that PTTC Rockies produces. It will take place from May 21 to May 23, 2013 at the Colorado School of Mines. This course is a non-numerical introduction to understanding Drill Stem Tests (DST) and DST pressure charts, focusing on pattern recognition and practical “quick look” techniques. It is designed for geologists, engineers & technicians who encounter or utilize DST results and reports in their exploration & production decisions and is particularly appropriate for those prospecting for bypassed pay using logs and geology, who may wish to verify their conclusions from the DST.

The workshop will be given by Hugh Reid, an instructor who has 25 years experience in the industry. Potential registrants can find more information on this workshop at the PTTC Rockies website, or sign up directly on Eventbrite.
Midcontinent Region

Independent operators in the Midcontinent have been busier than ever. The Mississippi Lime play in Oklahoma and Kansas has been one of the hotter plays recently, however activity in Eagle Ford and Permian Basin continues to grow as operators embrace new technologies and optimize existing best practices. As all this activity continues, one of the original university sites that was instrumental in the development of PTTC is gearing up for a biennial tradition that has lasted for almost forty years.

The University of Kansas Tertiary Oil Recovery Project is hosting its 20th Improved Oil recovery conference in Wichita, Kansas. The first KU TORP IOR conference began in October of 1975 with an aim of providing technology topics and best practices to independent operators working in the region. During that first year topics included, Kansas Oil for Enhanced Recovery – A Resource Appraisal, given by the Kansas Geological survey; Mobility Control Processes, given by Paul Willhite; and an Economical Method for Increasing Oil Recovery from Waterfloods given by Dow Chemical to name a few. Since those early days the KU TORP IOR conference has continued to provide the latest in research, emerging technologies and best practices for independent operators.

Midwest Region

Midwest PTTC 2013: The Midwest PTTC office and resource center, located at the Illinois State Geological Survey in Champaign, IL, is coordinated by Joan Crockett, Geologist. “Horizontal Drilling in Mature Basins” held on March 5, 2013, preceding the Illinois Oil and Gas Association Annual Convention attracted 150 people. Dr. Tim Carr of West Virginia University, presented on evaluation of candidate horizontal reservoirs harkening back to DOE-funded work in Kansas, while bringing us up-to-date on current understanding of the evolution of horizontal drilling. Robert “Bo” McCue, Sunburst Consulting, addressed geo-steering to avoid pitfalls and how to anticipate geological conditions. Three speakers from the Indiana, Kentucky, and Illinois Geological Surveys (Maria Mastalerz, David Harris, and Joan Crockett) discussed updates and trends in horizontal drilling in the Illinois Basin. The workshop concluded with a widely-anticipated presentation of case studies by Bill Bandy of Pioneer Oil. Pioneer is one of the leaders in Illinois Basin’s growing horizontal production operations.

Midwest PTTC works with local industry, state agencies, petroleum organizations, service companies, businesses and state surveys—all these groups help keep the program lively, educational and meaningful.

What is new in the Illinois Basin? For the past two years, the mature central Illinois Basin has caught on fire with mineral leasing interest drawing companies from across the U.S., Canada and beyond. The lure of in-situ oil shale, spurred on by other Devonian shale plays across the U.S., and the possibilities of horizontal drilling in plays analogous to highly successful plays in the “Miss Lime” in other basins, and the further opportunities for horizontal infill drilling in sands with bottom water drive are all drawing attention to the mature Illinois Basin.

On the horizon? Watch for the State of Illinois to grapple with high volume fracture legislation, drilling and completion rules, regulations, and severance tax issues in the near future—things are unfolding quickly, with the cooperation of stakeholders in petroleum, environmental groups, lawmakers, business groups and scientists. Watch for updates to Indiana’s recent higher-volume multiple zone hydraulic fracturing successes, and keep an eye on western Kentucky and Tennessee. These are interesting times in the Midwest.

Midwest PTTC is not just Illinois, Indiana, and western Kentucky; we are growing and evolving, and we seek to expand our reach in the region further south. Come visit at ISGS, work with our well records, core and sample collections, explore the resource center for papers and references, and get input on who to contact in other states for information. Contact Joan Crockett at jcrockett@illinois.edu or (217) 333-6630 to help find answers to your petroleum information needs. We are working on developing new workshops and appreciate your suggestions and feedback, and we are always glad to add new names to our workshop mailing list.

Visit PTTC at the Annual Convention (AAPG “ACE”) in Pittsburgh this May, where we celebrate PTTC’s 20th Anniversary of meeting the petroleum tech transfer needs. Midwest PTTC has been part of PTTC from the start, and we hope the PTTC Anniversary brings you to our booth to meet old friends and new faces. If you are going to ACE, please stop by!
Twenty years of success, in spite of numerous obstacles, and PTTC is still going strong, reorganized into a leaner, meaner, more efficient organization dedicated to transferring the latest upstream technology and information to independent producers.

That’s our battle cry in 2013 as we prepare to celebrate the 20th anniversary of the founding of PTTC. The many successes during our storied past, our current reorganization structure, and our plans for moving forward will be on display in Pittsburgh from May 19-22 when AAPG’s Eastern Section hosts the 2013 American Association of Petroleum Geologists (AAPG) Annual Conference & Exhibition (ACE ‘13).

PTTC will have an exhibit booth at ACE ’13, designed primarily to ensure independents that PTTC is alive and well and plans to remain that way for years to come. The display also will emphasize the milestone 20th anniversary of the founding of PTTC, and we in the Eastern Region encourage all past PTTC Board members, Producer Advisory Group Members (PAGs) and Regional Lead Organization (RLO) Directors to drop by to share their stories and meet those who have chosen to carry on for them. The exhibit booth, number 2142 near the AAPG Center, will make a great meeting place, as well as a venue to drop off and receive messages, for old PTTC “alumni.”

The Eastern Region Director also has been heavily involved in planning the various components of ACE ’13, primarily as the Energy Minerals Division (EMD) Vice Chair for the meeting. The local host committee has organized a strong program with more than 100 oral and poster sessions, 15 field trips and 15 short courses on a wide variety of topics. The Appalachian Basin, the nation’s oldest producing province, is enjoying an incredible rebirth, primarily due to the emergence of the Marcellus Shale as perhaps the world’s largest gas field, and the potential of the deeper, and more extensive, Utica Shale to produce gas and liquids. And Pittsburgh is at the very heart of this activity. It should prove to be an exciting meeting.

So, if you want to take a closer look at our past, by taking a field trip to the Drake well, or become more informed about our present and future, through numerous shale sessions, short courses and field trips to New York, Ohio, Pennsylvania, Kentucky and West Virginia, plan to attend ACE ’13 – and don’t forget to visit us at booth 2142.

The prolific production from eastern shales from the Upper Devonian Huron Shale down through the Middle Devonian Marcellus to the Upper Ordovician Utica Shale has given pause to those who ponder questions such as, now that we have it, what do we do with it, and do we have enough to hope that we can achieve energy security? These are the subjects of public forums on April 4 at Carnegie Mellon University (Shale Gas: Implications for America’s Regional Manufacturing Economics) and Washington & Jefferson College in Washington, PA (U.S. Energy Security: How Do We Get There?). In addition, Dave McCurdy, President and CEO of the American Gas Association, will be the featured speaker when the West Virginia University Law School hosts “Natural Gas as the Bridge to Sustainability and Economic Growth,” on April 24th in Morgantown. Everyone, it seems, is becoming involved in shales – and technology transfer.

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RPSEA ONSHORE PRODUCTION CONFERENCE
TECHNOLOGICAL KEYS TO ENHANCE PRODUCTION OPERATIONS

Selected Research Projects

Wichita, Kansas

June 27, 2013

RPSEA has an active research program with a current portfolio of projects all targeting technology that will benefit the onshore producing community. This conference offers an ideal opportunity to hear the latest perspectives and exchange ideas with industry experts.

Technology Topics:

- Produced Water Handling
- Enhanced Oil Recovery
- Production Enhancement

The event will take place the day after the TORP 2 day workshop. There is a $50 fee for this event separate from the TORP event. Registration is required, www.rpsea.org.
Ernest Moniz Nominated for U.S. Secretary of Energy

On February 20, 2013 the White House announced the nomination of Ernest Moniz for the post of U.S. Secretary of Energy. President Obama’s choice is a physicist at the Massachusetts Institute of Technology (MIT). Moniz received a PhD from Stanford University in 1972 in theoretical physics and has served at MIT since 1973. He has previous experience in Washington, having served as associate director of science in the Office of Science and Technology Policy from 1995-1997 under President Clinton. Moniz also served as under-secretary of energy in the U.S. Department of Energy from 1998-2002.

At MIT, Moniz has supported “nuclear power and the use of natural gas as a bridge to future energy economy based on renewables.” Moniz commented in a meeting at the University of Texas, Austin in December 2012 that natural gas “is part of our solution, at least for some time.” He has spoken out against banning hydraulic fracturing in the past, a stance that has environmentalists opposed to his nomination. President Obama said of the nomination, “Ernie knows that we can produce more energy and grow our economy while still taking care of our air, our water and our climate.” Moniz will succeed Steven Chu as Secretary of Energy following Senate approval.


Snow Fences Increase Available Water for Ice Roads

On March 6, 2013, the National Energy Technology Laboratory released the success of research by the University of Alaska, Fairbanks on the use of artificial barriers to increase water supplies on the North Slope. The DOE-funded project has demonstrated that snow fences can create artificial barriers trapping winter snow and significantly increasing the amount of fresh water supplies in Arctic lakes. The cost is much less than bringing water from more distant lakes and is an environmentally sound development of Alaska’s natural resources. The additional water can be used to build ice roads for oil and gas exploration and development. The new water resource can also augment water needed for remote villages. The snow fences increase the amount of snow near the lakes that provide spring snow melt to recharge the lakes on the North Slope.

Construction of ice roads is vital to environmentally friendly oil and gas development, but uses 1 to 1.5 million gallons of water per mile of six inch thick ice road base. During the three years of testing and monitoring the impact of snow fences to retain and compact snow to increase water supplies, the researchers found that snow fences increased the volume of local lakes by 25-30%. “The snow-drift and additional-water estimates from the snow-barrier project are now being incorporated into the water-balance model of the North Slope Decision Support System (NSDSS), which is being developed by another research group at University of Alaska Fairbanks with support from the Office of Fossil Energy and NETL.”


RPSEA Projects Researching Factors that Impact Oil and Gas Shale Recovery

NETL has funded a number of research projects that stress improved understanding of oil and gas shales, hydraulic fracturing and improved recovery. The goal of these projects is to enhance energy production from shale reservoirs while operating in an environmentally friendly and responsible manner. The objectives of several of the ongoing projects are summarized.

Sustaining Fracture Area and Conductivity of Gas Shale Reservoirs for Enhancing Long-Term Production and Recovery; Texas A&M University. The goal of this research is to better understand the causes of loss of fracture area and fracture conductivity and determine how to mitigate the loss of production from shales resulting from reduced fractures. The three year project studied the reservoir properties in the Barnett, Haynesville and Marcellus shale gas plays. Eclipse simulation software was used to study rock permeability and drainage factors and make predictions on fractures. The tests showed that “fines plugging the pore space are the main cause of fracture conductivity impairment.” Changes in conductivity in secondary fractures have a greater impact on gas production than conductivity changes in primary fractures.

A Geomechanical Model for Gas Shales Based on the Integration Measurements and Petrophysical Data from the Greater Marcellus Gas System: Pennsylvania State University. The project principal investigator, Terry Engelder is one of the top experts on the Marcellus shale and environmental ramifications of development in Pennsylvania. The objectives of the project were to study stress profiles in three Marcellus wells using a full suite of log and core petrophysical data, and develop a geomechanical model for stimulations to enhance Marcellus well performance. The Marcellus reservoir wells studied are in Devonian age Hamilton Group rocks of the Allegheny region in northeast Pennsylvania. Range Resources partnered in the project and provided well access. Stress tests on the core will provide information on how to better plan hydraulic fracture operations.

Enhanced Oil Recovery from the Bakken Shale Using Surfactant Imbibition Coupled with Gravity Drainage; University of North Dakota. The goal of the research is to determine how surfactant solutions can alter wettability of the Bakken shale to increase recovery through imbibition and gravity drainage. After testing, four surfactant formulations were selected for further testing in Bakken wells. Core analysis from three wells found that there is an optimal surfactant concentration, brine salinity, sodium metaborate concentration and hardness level for each well and understanding the reservoir components was important to increased recovery through imbibition.

Additional information on these projects can be found on NETL’s website, www.netl.doe.gov, and will be presented at RPSEA and PTTC sponsored workshops throughout the year.

DOE Digest
Rocky Mountain PTTC in Action

Past Futures in Energy students visit the Pinedale Anticline to see an actively drilling well.