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Biannual RPSEA Member E-Newsletter

President's Perspective

RPSEA Welcomes New Vice President, Onshore Programs to Team

2012-2014 Draft Annual Plan

Calendar of Events

2011 Small Producer Program and Unconventional Resources Program Release RFPs

Welcome New RPSEA Members/Membership Renewal

RPSEA-Sponsored Research at Southwest Research Institute Receives Best Paper Award

Fellowship/Scholarship Program Recipient Spotlight

Graduate Student Wins Thesis Award for RPSEA-Sponsored Research at NCAR

Ultra-Deepwater Program End of Year Review

Unconventional Resources Program End of Year Review

Small Producer Program End of Year Review

President's Perspective

Another year is coming to a close, and as always, it is helpful to look back before we look forward toward the coming year. Progress in planning and initiating new projects was slower than desired in 2011 for reasons largely related to the refocusing of program effort toward the environmental and safety aspects of oil and gas development associated with the challenging resources that are the targets of our program. Later in this newsletter, the program leaders in each of the programs provide an update on progress in their area. Suffice it to say that things are moving again in each of the areas. We have just completed a round of solicitations in the Ultra-Deepwater, Unconventional Resources and Small Producer Programs.

The 2012-2014 draft Annual Plan that was submitted to NETL last month articulates our vision for the program as we move forward. It includes technology development focused on the key challenges that stand in the way of full utilization of important new energy resources. We continue to believe that the research conducted under this program will be crucial to the development of the unconventional and ultra-deepwater resources that will power our nation into the twenty-first century.

I would like to close by announcing that we are very pleased to have Kent Perry join us as Vice President, Onshore Programs. You can read more about Kent's new role below.

Best wishes to you and yours for the Holiday Season and for the coming New Year.



Bob Siegfried
 President

[Back to Table of Contents](#)

RPSEA Welcomes New Vice President, Onshore Programs to Team

Please welcome Kent Perry as our newest RPSEA employee, who will be taking an expanded role on the RPSEA team as our Vice President, Onshore Programs. Many of you know Kent through his work with Gas Technology Institute (GTI) providing critical support for the unconventional resources program.

As our Vice President for Onshore Programs, he will have primary responsibility for the management of the Unconventional Resources Program and oversight responsibility for the Small Producer Program.

Kent has over 30 years experience in the oil and gas industry. He has specialized in unconventional gas for the last 25 years at GTI, where he has become known as one of the foremost experts on the development of shale gas, tight sands and coalbed methane. He has served as an SPE Distinguished Lecturer on the topic of tight gas sands and participated in several National Petroleum Council studies on gas resources.

Kent earned a BS degree in petroleum engineering from Colorado School of Mines. We are very pleased to have him join the RPSEA team, and we know that you will enjoy working with him in the coming years.

You can reach Kent at kperry@rpsea.org or at 281.690.5522.

[Back to Table of Contents](#)



2012-2014 Draft Annual Plan

RPSEA is required to write a draft Annual Plan (DAP), a component of the Ultra-Deepwater and Unconventional Natural Gas and Other Petroleum Resources Research and Development Program Annual Plan established to the Energy Policy Act of 2005 (EPAct), each year. The DAP is written and submitted by RPSEA and is used as the input for a final Annual Plan that must be approved by the Secretary of Energy each year.

The draft Annual Plan submitted this year covers the period from 2012 to the legislative sunset date in 2014 in order to show how the Program would be managed as that date approaches, while continuing to build a solid foundation for possible future work.

Click here to view RPSEA's [2012-14 Draft Annual Plan](#) on our website.

[Back to Table of Contents](#)

Calendar of Events

1/24	Ultra-Deepwater Flow Assurance TAC Meeting, Sugar Land, TX
1/24	Ultra-Deepwater Subsea Systems TAC Meeting, Sugar Land, TX
1/25	Ultra-Deepwater Geosciences & Reservoir Engineering TAC Meeting, Sugar Land, TX
1/25	Ultra-Deepwater Floating Facilities and Risers & Systems Engineering TAC Meeting, Sugar Land, TX
1/26	Ultra-Deepwater Drilling, Completions and Interventions TAC Meeting, Sugar Land, TX
1/26	Ultra-Deepwater Environmental, Safety and Regulatory & Metocean TAC Meeting, Sugar Land, TX
2/22-24	NAPE Expo, Houston, TX
4/30-5/3	Offshore Technology Conference 2012, Houston, TX
6/5-7	2012 SPE Unconventional Resources Conference, Pittsburgh, PA

Click here for more information, to register and to view the [complete calendar](#).

2011 Small Producer Program and Unconventional Resources Program Release RFPs

RPSEA announces the release of its 2011 Small Producer Program request for proposals (RFP), anticipating the award of approximately \$10 million in 5 to 12 awards, and its 2011 Unconventional Resources Program RFPs, anticipating the award of approximately \$35 million in 8 to 15 awards, both in oil and natural gas research and development projects.

The projects selected under the 2011 Small Producer Program will focus on unlocking the potential for domestic hydrocarbon resources by enhancing production within existing surface footprints from mature fields, where up to two-thirds of original-oil-in-place is left behind. Proposals in response to this RFP are due February 27, 2012, 4 p.m., Central Time.

The projects selected under the 2011 Unconventional Resources Program will focus on the challenge to safely and responsibly extract the abundant resource of domestic natural gas that lies within our grasp in gas shales and tight sands. Proposals in response to this RFP are due March 6, 2012, 4 p.m., Central Time.

This is RPSEA's fifth year to release RFPs under the Ultra-Deepwater and Unconventional Natural Gas and Other Petroleum Resources Research and Development Program that was established by the Department of Energy pursuant to the Energy Policy Act of 2005. Organizations, which must have a U.S.-based business, are encouraged to submit proposals well in advance of the due date to allow for electronic receipt processing and should review the documents and instructions concerning these proposals without delay on [RPSEA's website](#).

[Back to Table of Contents](#)

Welcome New RPSEA Members/Membership Renewal

RPSEA is proud of its membership base that has grown to more than 175 members in five years. Being a quarterly, two-step process, membership is approved first internally through RPSEA and then by the Secretary of Energy. The Secretary has approved ten new organizations for RPSEA membership, and those organizations are listed below.

American Bureau of Shipping, Texas
American Pioneer Ventures Ltd., New York
BHP Billiton Petroleum, Texas
CDL, Inc., Texas
Fluor Corporation, Texas
Hoerbiger Corporation of America, Inc., Texas
Jet Propulsion Laboratory, California
Kvaerner, Texas
Roxar, Texas
SR2020, Inc., California

RPSEA welcomes each of these organizations and is proud to be affiliated with each one. Please join us in welcoming them to RPSEA! Click here to view a list of all [RPSEA members](#).

As a reminder to current RPSEA members, your financial support, as well as your active participation in the process of formulating and executing the research program, is vital to the RPSEA program now and in the future. Your 2012 membership dues are currently being processed, and we want to remind those who have not yet submitted their dues to please do so at the beginning of the new year.

Advantages of membership include: the eligibility to serve on the Board of Directors and direct the future of RPSEA; participate on advisory committees to focus research priorities; access to technical forum information and results, workshops, member meetings and receptions; advanced information and updates on operational research and RFP solicitations through newsletters, e-mails, reports; and, members-only online access. Also, we have multiple upcoming technology workshops that will be highlighting the results of the cutting-edge research that has been funded under our Program that should not be missed. Members attend such meetings at significantly reduced prices.

If you have any questions about your membership dues and payment, please contact Steve Beach at 281.690.5503 or sbeach@rpsea.org. We appreciate your continuing support.

[Back to Table of Contents](#)

RPSEA-Sponsored Research at Southwest Research Institute Receives Best Paper Award



A paper based on research funded by RPSEA and conducted by RPSEA member Southwest Research Institute (SwRI) received a 2010 Best Paper Award at this year's OMAE2011 International Conference on Ocean, Offshore and Arctic Engineering, held June 19-24 in Rotterdam, The Netherlands. The award-winning paper is "The Effect of Cyclic Loading on Corrosion-Fatigue Crack Growth in High Strength Riser Materials," authored by SwRI staff members Program Director Dr. Stephen J. Hudak, Jr., Senior Research Engineer James H. Feiger, and Research Engineer Jason A. Paton (currently at Ascension Orthopedics, Inc. in Austin TX). The paper was presented at OMAE2010, held in Shanghai, China, in June 2010.

Risers are crucial elements of offshore structures because they transfer all hydrocarbons onto and off of the host structures, while at the same time are subjected to significant cyclic loading from wave-induced hull motions, as well as current-generated vortex-induced vibrations. As the quest for offshore oil and gas moves into deeper water, new higher-strength riser materials are needed to withstand these harsh environments.

RPSEA-sponsored research under a 2007 Ultra-Deepwater Program award, 07121-1403, is providing the first-ever assessment of the corrosion-fatigue capabilities in these new materials. SwRI engineers and scientists are performing long-term fatigue experiments at specially designed facilities at SwRI's headquarters in San Antonio. Five different steels and a titanium alloy are being subjected to fatigue loading while simultaneously being exposed to rigorously controlled offshore environments, including sour brine and seawater with cathodic protection. This new corrosion-fatigue information will enable more realistic design trade studies by offshore operators, and thereby contribute to safer, more reliable, and more environmentally sustainable ultra-deepwater oil and gas development in the Gulf of Mexico, as well as around the world.

As part of the project's technology transfer plan, initial results were published at OMAE2010, sponsored by the American Society of Mechanical Engineers (ASME). The paper was subsequently selected as the best paper of the conference's Materials Symposium. This is Dr. Hudak's second Best Paper Award at OMAE Conferences in the past three years. In 2008, he received an award for a paper he coauthored with colleagues Jaime Buitrago of ExxonMobil-Upstream Research Company, Houston, and David Baxter of The Welding Institute, Cambridge, England, on research sponsored by ExxonMobil. Congratulations, Southwest Research Institute!

Photo Caption:

Presentation of the Best Paper Award at OMAE2011 in Rotterdam, Netherlands; shown in the picture are from right to left: 1) Dr. Christina Wang, OMAE Honors and Awards Committee Chairperson from the American Bureau of Shipping, Houston, Texas, 2) Dr. Hudak, lead author and award recipient from Southwest Research Institute, San Antonio, Texas, 3) Prof. Segen Estefen, OMAE Symposium Coordinator from Laboratorio de Tecnologia, Rio de Janeiro, Brazil, and 4) Prof. Carlos Guedes Soares, OMAE International Scientific Advisory Committee from Technical University of Lisbon, Portugal.

[Back to Table of Contents](#)

Fellowship/Scholarship Program Recipient Spotlight

RPSEA created the Fellowship/Scholarship Program to establish long-term, industry/education partnerships. RPSEA members Schlumberger Limited and Strata Production Company designate financial resources through RPSEA to award multiple scholarships to the following member universities: Colorado School of Mines, Louisiana State University, New Mexico Institute of Mining and Technology, Stanford University, Texas A&M University, The University of Texas at Austin, The University of Oklahoma and West Virginia University. The most promising students with studies relevant to the oil and gas industry are awarded fellowships to help with their education and/or research activities. Through private funding from these two members, \$240,000 is established for these member universities to provide much needed support for 16 students per year for three years.

The RPSEA Fellowship Program was funded through generous contributions from members Schlumberger Limited and Strata Production Company. Those contributions have now been fully allocated, and new fellowships cannot be granted without additional member support. Please contact Steve Beach for more information if your company is interested in sponsoring a RPSEA fellowship.



Colorado School of Mines graduate Robert Amerman, Ph.D., was awarded a fellowship through the Fellowship/Scholarship Program for the 2004-05 academic year. RPSEA spotlights Dr. Amerman in the following interview, while wishing him success at Noble Energy, Inc.

1. What was the name of your project?

I received the RPSEA funds when I was pursuing an M.S. degree. My project at the time was an outcrop study of deepwater mass-transport deposits in the Permian Cutoff Formation, Delaware and Guadalupe Mountains, west Texas. My RPSEA funds were used entirely on this effort. As I approached completion of my M.S. degree, I decided to convert my M.S. to a Ph.D. In doing so, I expanded the scope of my west Texas study and added an outcrop study of deepwater mass-transport deposits in the Cretaceous Gosau Group, Northern Calcareous Alps, Austria. The total dissertation comprised three stand-alone papers, two of which were focused on the west Texas study, along with an introduction and conclusion that compared and synthesized data from the two study areas.

My Ph.D. dissertation was titled, "Deepwater Mass-Transport Deposits: Structure, Stratigraphy, and Implications for Basin Evolution." One of the three component papers, focusing on the west Texas study and funded in large part by the RPSEA scholarship, has been published. Bibliographic information for that paper is as follows:

Amerman, R., E. P. Nelson, M.H. Gardner, and B. Trudgill, 2011, Submarine mass-transport deposits of the Permian Cutoff Formation, west Texas, U.S.A.: Internal architecture and controls on overlying reservoir sand deposition, in: Shipp, R.C., P. Weimer, and H.W. Posamentier, eds., Mass-Transport Deposits in Deepwater Settings, SEPM Special Publication 96, SEPM (Society for Sedimentary Geology), Tulsa, Oklahoma, pp. 235–267.

In the near future, I hope to submit for publication two additional papers based on my dissertation, one of which would be focused on the regional stratigraphic significance of the west Texas study, which was in large part funded by the RPSEA scholarship.

2. Where did your project take place?

Department of Geology and Geological Engineering, Colorado School of Mines, Golden, Colorado

3. What was your degree and major and when did you graduate?

Ph.D. (Geology), May 2009

4. What was the time frame spent on the entire project?

My research began in earnest in 2004 and my dissertation was completed in early 2009.

5. Why did you pick this focus for your project?

I am interested in both structure and stratigraphy and their interaction, and the study of mass-transport deposits involves all of these disciplines. More importantly, I enjoy the challenge of working in areas where little is known. Very little work had been done previously in the basinal Cutoff Formation.

6. What were the major accomplishments of your project?

The results of the project suggest that the preexisting bathymetry and degree of lateral confinement of a depositional basin affect the lateral and vertical distribution and the internal and external characteristics of deepwater mass-transport deposit, as well as the intervening and overlying undeformed sediments, in a predictable manner. In turn, the distribution and characteristics of mass-transport deposits could be used to predict the distribution and thickness of reservoir intervals and location of stratigraphic traps. These relationships also differ predictably between basins that were or were not undergoing syndepositional tectonism.

7. How did RPSEA help you achieve your project goals?

The RPSEA scholarship was absolutely critical in achieving my project goals. Without it, the initiation of my project would have been delayed at least a year and the project would probably have been reduced in scope and/or significantly changed in its focus.

8. How have you grown both personally and professionally from your fellowship with RPSEA?

Prior to entering graduate studies at the Colorado School of Mines, I had a successful career in business banking and commercial real estate finance. My dream of turning my hobby and love of geology into a second career was realized in large part due to the RPSEA scholarship. It has been an amazing experience to have this dream come true!

9. What are you doing today?

I am currently a Geologist II in the Unconventional New Ventures team at the Denver, Colorado office of Noble Energy, Inc. I am exploring for continuous hydrocarbon accumulations onshore North America.

[Back to Table of Contents](#)

Graduate Student Wins Thesis Award for RPSEA-Sponsored Research at NCAR



One of the goals of RPSEA is to aid students in graduate studies and prepare them to enter into industry as a valuable asset. Asuka Suzuki-Parker is one such graduate student from Georgia Institute of Technology who joined RPSEA Principal Investigator Dr. Greg Holland's research team at the National Center for Atmospheric Research (NCAR) to complete her doctoral thesis from work done on the "Effect of Global Warming on Hurricane Activity in the North Atlantic" project. This hurricane tracking project is a 2007 Ultra-Deepwater Program award, 07121-1801, that supported Asuka's role on the project.

NCAR is proud to announce her thesis derived from working on the project has won a Springer Thesis Prize. The award recognizes outstanding Ph.D. research from around the world and across the physical sciences. Internationally top-ranked research institutes select their best thesis annually for publication in this series. Nominated and endorsed by two recognized specialists, each thesis is chosen for its scientific excellence and impact on research. It provides an accredited documentation of the valuable contributions made by today's younger generation of scientists.

The content of the series is available to millions of readers worldwide, and, in addition to profiting from this broad dissemination, the author of each thesis is rewarded with a cash prize equivalent to a 500 Euro monetary award and publication in the Springer EBook program. Congratulations, Asuka!

[Back to Table of Contents](#)

Ultra-Deepwater Program Year in Review **by Vice President, Ultra-Deepwater James Pappas**

As the first complete year of my job as Ultra-Deepwater (UDW) Vice President culminates, in a nutshell all I have to say is “WHEW!” Not really. There’s a lot more than one word that goes into the rollercoaster ride that RPSEA has been through and the changes that have occurred. It all started with the Deepwater Horizon incident in 2010, which I’m sure has affected most of us. Former RPSEA Board Chair Dr. Steve Holditch put it best when he said, “our world has changed,” and he didn’t mean it was going to get any easier. From that tragedy which included lives lost, millions of dollars in damage and billions in subsequent lost revenues, came an unprecedented scrutiny upon our business by the U.S. federal authorities. And RPSEA, like it or not, was sitting squarely in the middle of the briar patch. I think it is safe to now say that not even the events following the Exxon Valdez spill can match the sweeping changes that have been thrust upon the offshore oil and gas business since April 20, 2010.

While the former MMS struggled to find out what went wrong and how to address the American public’s anger toward our industry and its overseers, the entire offshore industry came to a standstill. The U.S. Department of Energy (DOE), the body that oversees RPSEA’s Section 999 Program, offered its support to the U.S. Department of the Interior. Hearings and testimonies were held on Capitol Hill, including one very memorable one for me, and follow-up meetings with Congressional members and staffs, as well as with DOE, the Ocean Energy Safety Committee, and other federal authorities and representatives continue to this day. Interviews have been held ad nauseam, in RPSEA’s case mostly to inform the public about the facts by dissuading rumors and innuendos and to put faces in front of people so that they could see that we aren’t bad people – we are just as concerned, humane, and upset about what happened as everyone else. The difference is that we in our industry can and must do something to ensure it does not happen again.

As a result, the 2010 ultra-deepwater requests for proposals (RFP) review underwent a scrupulous review to redirect the program toward safety and environmental issues. This process slowed the RFP process by six months and resulted in RFP releases in the second quarter of 2011. As I write this review, RPSEA has recommended several projects to DOE for award and just recently received proposals for several other RFPs. As of December 1, 2011, we have [six approved 2010 projects](#). You can find these in the [2012-2014 draft Annual Plan \(DAP\)](#). Thus, restructuring the UDW program direction and receiving approval from DOE on projects that address safety or environment is a major accomplishment in the past year.

In the mean time, we have asked and received expert advice regarding 2011 project ideas from many volunteer members of our UDW Technical Advisory Committees (TACs). These ideas were generated with the 2011 RPSEA draft Annual Plan’s ultra-deepwater chapter direction. With the leadership of our TAC chairs, we have narrowed down the lists of ideas to a more manageable size. Our UDW Program Advisory Committee (PAC) is analyzing the recommendations and will further prioritize the project ideas, from which we will prepare statements of work for DOE consideration.

The development of the UDW section of the 2012-2014 DAP has been another major undertaking that will increase the understanding of safety and environmental aspects of our research projects by the public, as well as help the oil and gas industry to improve its reputation. From the standpoint of the oil and gas industry in general and most of the RPSEA members more specifically, we have a better understanding of public need and perception. In the 2012–2014 DAP, RPSEA successfully integrated the UDW technical needs, which have been developed through our mission, with safety and environmental sustainability directives, expressed topic goals.

A third major accomplishment of the UDW Program for 2011 has to do with the performance of many of its projects. While we are proud of the fact that the projects that have been selected are highly complex and require the input of members who are subject matter experts, it is the accomplishments resulting from the project work that will lead to improved processes and innovations to better enable industry to safely and efficiently find and produce oil and gas that are true measures of value. To date, 15 UDW projects have been completed. The RPSEA website contains the results of this work in the form of final technical reports, complete with recommendations, additional plans and the like. A total of eight projects were completed in 2011 and can be found on RPSEA’s website and in the 2012-2014 DAP.

[Back to Table of Contents](#)

Unconventional Resources Program Year in Review **by Acting Vice President, Unconventional Onshore Bob Siegfried**

Concern over shale gas development, coupled with a general increase in public awareness of oil and gas safety issues triggered by the 2010 Macondo accident, has had an impact on the initiation of new projects in the Unconventional Resources Program for 2011. Fortunately, we have a strong ongoing program consisting of 38 projects, of which six are technically complete. Information regarding the completed and ongoing projects can be found in the [2012-2012 draft Annual Plan](#), which has been submitted to the U.S. Department of Energy (DOE).

While 2011 got off to a strong start with the selection of eight project [recommendations](#) for the 2010 program year, DOE approval of these selections was delayed while we prepared the information necessary to show how these projects were aligned with the administration’s environment and safety goals. While we were working with DOE on the approval for the 2010 selections, the DOE [2011 Annual Plan](#) was being written, based on input from our 2011 draft Annual Plan, the federal Unconventional Resources Technical Advisory Committee and other stakeholders that wanted to be sure that the 2011 program addresses the key public concerns associated with shale gas development in the U.S. We all recognize that in order to take full advantage of the energy endowment associated with shale gas, public concerns will need to be addressed, and a rigorous and focused technology development program can be a key component of improving public acceptance of shale gas.

As fall approached, the 2010 selections were approved along with an Annual Plan on which the 2011 solicitations would be based. We began preparing a draft Annual Plan that would cover the period from 2012 through the current sunset date of the program in 2014, while simultaneously working on the 2011 program year solicitation. The 2012-2014 draft Annual Plan was submitted to DOE in November. The 2011 solicitation, which reflects the environment and safety emphasis of the 2011 Annual Plan while maintaining a strong focus on technology development, was recently released.

While 2011 has been a difficult year in terms of getting all stakeholders on board with a refocused program, we feel that we are well positioned to move forward with a program that will have a real impact on the successful development of the domestic unconventional gas resources that will dramatically change the energy supply picture in the U.S.

[Back to Table of Contents](#)

Small Producer Program Year in Review **by Manager, Small Producer Charlotte Schroeder**

In 2011, the Small Producer Program kicked off the year by increasing the membership of the Small Producer Advisory Committee (SPAC) to twelve members, formerly called the Research Advisory Committee or RAG. The SPAC contributed valuable guidance for input into the 2012-2014 draft Annual Plan and for input into the 2011 request for proposals, which was released December 13, 2011.

The Small Producer Program is under the umbrella of the Unconventional Resources Program and, as such, has also been refocused to address industry environmental and safety concerns. Fortunately, we have a strong ongoing program consisting of 19 projects, of which three are technically complete. Information regarding the completed and ongoing projects can be found in the [2012-2014 draft Annual Plan](#), which has been submitted to the Department of Energy. (DOE)

2011 began with the selection of three project recommendations for the 2010 program year. DOE approval of these selections was delayed while we prepared the information necessary to show how these projects were aligned with the administration’s environment and safety goals. The contract negotiations for those projects are nearing completion with kickoffs anticipated in early 2012.

We are looking forward to a productive 2012 with the closing of the 2011 solicitation in February 2012 and the ensuing addition of projects to our portfolio.

[Back to Table of Contents](#)