



New York and New England Petroleum SPE Section 4th Quarter 2012 Newsletter

Volume 1, Issue 4

December 18th, 2012

From the Chair

Dear NYNE SPE Section Members,

We have come to the end of a great year for our Section. 2012 has been a transition year, and the best time for all of us to reshape this organization and make it more meaningful. It has been very encouraging to see more involvement from our members kindly offering speakers, venues, and suggestions for new types of events. With the help of our generous volunteers we are taking steps in revitalizing our SPE Section. I urge you to step up to the challenge to make the most of our resources; there are plenty of volunteer opportunities to serve in SPE.

We have received great feedback from section members. One of our challenges is our geographical spread. We appreciate it is difficult to travel 2, 3 or 4 hours for a one hour presentation. We had our first webinar on October 18th, and we are trying to make our activities a daylong event to encourage more

people to take a professional training day. Furthermore, in 2013 we will host events in other locations in the New York and New England area.

The first such event will take place at the Battelle Memorial Institute in Duxbury, Massachusetts on January 14th. This will be a full day event featuring SPE Distinguished Lecturer Dr. Ezekwe from Devon Energy, followed by presentations by Battelle and tours of the research center in Duxbury and Bluefin Robotics in Quincy.

We are also partnering with Yale University Climate and Energy Institute to organize our first New York and New England One-Day Symposium on Unconventional Resources, with a focus on Research Frontiers. This event will take place on March 5th at Yale University in New Haven, Connecticut. We will have presentations from industry and academia on all aspects of unconventional resource development: characterization, hy-

draulic fracturing design and monitoring, production, and the environment.

SPE gives us an opportunity to network with other professionals in the area, and our Section membership has a great diversity of expertise in all aspects of the energy industry. So don't miss on the 2013 activities to meet your fellow SPE members and stay current in industry trends.

Wishing you a happy and warm holiday season and a very successful 2013,



Soraya S. Betancourt
NYNE Petroleum SPE Section Chairperson.

What Do You Need to Stay Ahead in This Rapidly Changing Industry?

2012 Accomplishments

1. Launched new board of officers in Jan – introduced officers via BIOs in 1st Qtr Newsletter
2. Quarterly Newsletter redesigned to focus on SPE member profile, interests, Section individual member BIOs, Member innovations and upcoming events
3. Redesigned our section web site to meet new corporate template
4. Hosted visit by new SPE Global President to gain his forward vision for SPE and how the NYNE section can be aligned.

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We strive to keep our events for the most part free or low cost and accessible to all members. For this we are very grateful to the generosity of our sponsors: Schlumberger, Battelle Memorial Institute, and Yale University Climate and Energy Institute.



Jim Stevens—SPE NYNE Technology Transfer Chairperson and Newsletter Editor

NYNE Section Goals for 2013:

1. Activation of existing members and expansion of member base.
2. Gain member feedback to the board to target areas of interest in section activities and speaker programs.
3. Speed the networking of section and SPE worldwide members in finding expertise and professional mentors.



Dr. Nnaemeka Ezekwe
SPE Distinguished Lecturer
Monday January 14th 2013

New York and New England Petroleum SPE Section

2013 Calendar of Events

Monday Jan 14, 2013
Duxbury, Massachusetts
Battelle Technology Day
10:00 AM—3:00 PM

- “Advances in Reservoir Management Technologies” Dr. Nnaemeka Ezekwe (SPE DL)
- “Hydrocarbon Fingerprinting and Forensics for Oil Spills” Battelle
- Battelle Duxbury Lab Tour
- Plant Tour of Bluefin Robotics (Quincy, MA)

Tuesday Mar 05, 2013
New Haven, Connecticut
Unconventional Energy Resources Symposium: Research Frontiers
8:30 AM—5:30 PM

Key Note Speaker:
Dr. Mark Pearson (SPE DL)
“Hydraulic Fracturing of Horizontal Wells – Realizing the Paradigm Shift that has been 30 Years in Development”

Monday May 6th, 2013
Cambridge, Massachusetts

Charles Fox (SPE DL)
“Carbon Capture and Storage SWOT Analysis, Will We Implement the CCS Solution?”

More information at <http://connect.spe.org/NewYorkandNewEnglandPetroleum>

Dr. Nnaemeka Ezekwe SPE Distinguished Lecturer (DL)

Nnaemeka Ezekwe holds B.S., M.S., and Ph.D. degrees in chemical and petroleum engineering, and an MBA degree, all from the University of Kansas. At the University of Kansas, he was a research associate at the Kurata Thermodynamics Laboratory.

For sixteen years, he worked as a production engineer, senior staff reservoir engineer, reservoir engineering supervisor, and manager of reservoir evaluation and development for Bechtel Petroleum Operations at Elk Hills Petroleum Reserve on a variety of projects that include pressure maintenance, gas cycling, waterflooding, light oil steam flood, reservoir depletion

plans, and development and implementation of reservoir management strategies. Later, he joined Pennzoil Exploration and Production Company as a senior petroleum engineer advisor responsible for providing technical guidance on domestic projects in the Gulf of Mexico and the Permian Basin, and worldwide projects in the Caspian Sea, Egypt, Equatorial Guinea, and Venezuela.

As a senior reservoir engineer advisor at Devon Energy Corporation, he led pioneering reservoir engineering analyses on the appraisal and development of several Lower Tertiary deep-water reservoirs in the Gulf of Mexico, and later worked

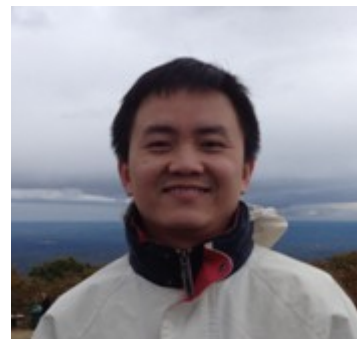
on the appraisal of world class reservoirs in Angola and Brazil.

Nnaemeka has served as a technical editor for SPE Reservoir Evaluation and Engineering Journal, and was an SPE Distinguished Lecturer in 2004-2005. As an SPE Distinguished Lecturer, he spoke on reservoir management strategies and practices to audiences in 33 countries in Africa, Asia, Europe, the Middle East, and North and South America. He has published numerous technical papers on chemical and petroleum engineering topics. Nnaemeka is a registered professional engineer in California and Texas.

Section Member Spotlight—Harry Luo

Through Isoproppant LLC, Harry Luo works independently on improving the effectiveness of hydraulic fracturing by focusing on the mechano-chemical aspects of proppants and fracturing fluids. He is also interested in the environmental aspects (especially water) of fracturing operations. From 2010 to 2012 he led the technical service, market development and logistic implementation in the Bakken field for a Chinese ceramic proppant manufacturer. During 2005-2010, he worked on research and

development of fracturing materials and methods at Halliburton's Technology Center in Duncan, OK, where he co-discovered proppant diagenesis. He co-authored 7 technical papers and 10 patents/patent applications on hydraulic fracturing and ceramic materials. He is a technical reviewer for SPE Reservoir Evaluation & Engineering and Ceramics International. Harry holds a PhD degree on piezoelectric ceramics from Drexel University in 2005.



Dr. Harry Luo
SPE NYNE Section Member
harry@isoproppant.com

January 14th 2013 SPE DL at Battelle Duxbury

We are happy to announce that, thanks to the generosity of Battelle Memorial Institute, our next SPE event will be held at the Battelle Duxbury, Massachusetts Facility on January 14th, 2013.

Our SPE Distinguished Lecturer (DL) will be Dr. Nnaemeka Ezekwe from Devon Energy presenting "Advances in Reservoir Monitoring Technologies". In addition to our DL, we will also have a presentation by Battelle on "Hydrocarbon Fingerprinting and Forensics Related to Oil Spills", a lab tour of the Battelle Duxbury facility, and a visit to Bluefin Robotics in Quincy, a plant that manufactures Autonomous Underwater Vehicles and a wholly owned subsidiary of Battelle. For more information on Battelle and Bluefin Robotics, please visit their websites:

<http://www.battelle.org/about-us>,
and
<http://www.bluefinrobotics.com/>.

This is a very exciting event and first of its kind for our section. We thank deeply Mr. John McArdle at Battelle for organizing it. Space is **limited** so register soon.

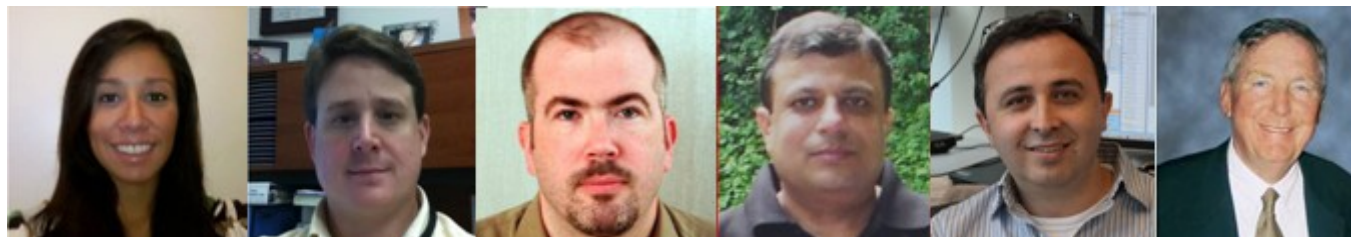
More information at <http://connect.spe.org/NewYorkandNewEnglandPetroleum>

Event Agenda

- 10:00am Arrival to Battelle in Duxbury, MA
- 10:15am "Hydrocarbon Fingerprinting and Forensics for Investigating Oil Spills" Battelle
- 11:00am "Advances in Reservoir Management Technologies", N. Ezekwe
- 12:00pm Lunch (courtesy of Battelle)
- 1:00pm Tour of the Battelle Duxbury Facility
- 2:00pm Depart from Duxbury
- 2:30pm Arrival to Bluefin Robotics in Quincy, MA for a plant tour



397 WASHINGTON ST.,
DUXBURY, MA 02332



SPE NYNE Section Board Members (from left to right) Alyssa Charsky, Dan Tilmont, Bill Bailey, Deepak Datye, Bilgin Altundas and David Donohue.

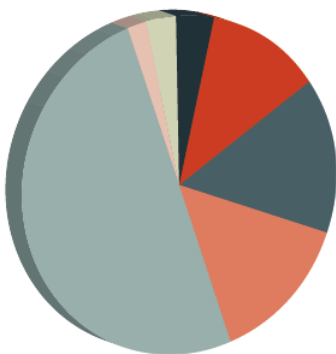
SPE Distinguished Lecture "Advances in Reservoir Monitoring Technologies" Dr. Nnaemeka Ezekwe, Devon Energy Corporation January, 14th, 2013

"SPE began 2012 with a record 104,762 members, with student membership representing the largest growth. The overall membership doubled in just the past 10 years growing on an average of 4.7% each year."

A link to the 2012 SPE Annual Report is available in our Section website

Professional Membership by Region

75,395 members in
123 countries
187 sections



4% ● Africa
12% ● Asia Pacific
15% ● Europe
14% ● Middle East
50% ● North America
2% ● Russia and Caspian
3% ● South America and Caribbean

Technologies for optimization of reservoir management strategies have made significant advances in the areas of real-time reservoir monitoring, interval flow control, and downhole flow measurements. The petroleum industry has moved closer to real-time reservoir management by combining applications of these revolutionary technologies to improve economic recovery of hydrocarbons.

Installations of downhole sensors and inflow control devices with communication links in many wells have created a new class of smart/intelligent wells. Smart/Intelligent wells are equipped with devices that enable remote monitoring, control, and transmission of data from multiple zones thereby optimizing reservoir performance and reducing intervention costs.

The five technological advances are: 1. Down-hole Sensors (DHS). 2. Down-hole Control Devices (DCD). 3. Well Architecture. 4. Field-wide Monitoring. 5. Data Acquisition, Transmission, Assimilation and Utilization. DHS are devices that can be installed to monitor, measure, and transmit data on fluid flow, fluid properties, and other well performance data. DHS include permanent pressure and temperature gauges, distributed temperature and pressure sensors, sand production sensors, seismic sensors, and single/multiphase flow meters. DCD are used to segment the productive interval of the well to achieve zonal control of inflow or

outflow of fluids without need for remedial action. The two main types of DCD are interval control valves and inflow control devices.

Advances in drilling and completion technology have led to the development of wells with complex architecture. Long reach horizontal wells and multilateral wells are employed in the optimized production of numerous reservoirs. Field wide monitoring of reservoir performance has advanced with the application of 4D seismic surveys. 4D seismic technologies are used to allocate and target injected fluids, optimize location of infill wells, and maximize recovery. Advancements of these technologies have created huge reservoir data that must be transmitted, integrated, and assimilated for close-loop reservoir management applications.

These technologies are adaptable to the five principles of reservoir management, namely: 1. Conservation of reservoir energy. 2. Early application of simple strategies. 3. Sustained and systematic collection of data. 4. Implementation of improved technologies. 5. Long term retention of staff in multi-disciplinary teams. This presentation provides field examples to illustrate application of the new technologies in concert with these five principles of reservoir management.

The main idea that SPE members can take away from this lecture is that new technologies are available that could significantly improve hydrocarbon recovery from new and brown fields by incorporating these technologies in their reservoir management strategies.

Member News

On October 18th David Jacoby from Boston Strategies International www.bostonstrategies.com gave us an excellent overview of Supply Chain Management focused to the specific needs of the Oil and Gas Industry. David emphasized the lessons to be learned from past major accidents and how to incorporate risk management into supply chain design.



October 18th Section Meeting in Cambridge—Summary

1. Bill Bailey (Treasurer) gave a very informative overview of our section budget and history of the NYNE Section
2. Jim Stevens (Technology Transfer Chairperson) asked us to send him information for our quarterly newsletter. Please send him company profiles, your bios, innovations (short note on any topic you have been working on that you can share with the community), and white papers that you could share with other section members in the website. Take advantage of this opportunity to advertise your company and yourself!
3. Alyssa Charsky (Internet Chairperson) reminded us to create professional profiles in the SPE website. (see page 6). It is straightforward to import your LinkedIn profile. The membership directory has easy access from our section webpage and you can find contact information for other section members.
4. David Donohue (Continuing Education Chairperson) suggested hosting a one-day symposium on a given topic: e.g.: unconventional resources.
5. Noon time meetings: Len Andersen, indicated that noon time meetings make it more convenient for him to travel from and to New York on the same day. For people travelling, venues close to public transportation are preferable.
6. Harry Luo suggested creating a study group focusing on Hydraulic Fracturing (great idea!). Hopefully emails will be coming out soon with invitations, objectives, topics of study, and, possibly, meeting times. For more information contact Harry at harry@isoproppant.com
7. Harold Leslie suggested having a geology field trip. The closest 'petroleum industry' location would be the Utica Shale in upstate New York. Suggestions and volunteers for organizing this event (in the spring, maybe?) are most welcome.

Unconventional Energy Resources Symposium

Research Frontiers

March 5th 2013

8:30 AM– 6:00 PM

Yale University, New Haven, Connecticut

The Yale Climate and Energy Institute

Society of Petroleum Engineers



New York and New England
Petroleum Section



Technical Program

Asset Characterization

Hydraulic Fracturing

Production Mechanisms

Environment

Key Note Speaker

C. Mark Pearson, president of Liberty Resources LLC

<http://connect.spe.org/NewYorkandNewEnglandPetroleum/>

Create Your Professional Profile in the SPE Website!


It is straightforward to import your LinkedIn profile. The membership directory has easy access from our section webpage. Login with your SPE credentials from <http://connect.spe.org/NewYorkandNewEnglandPetroleum> and click on “complete my profile” on the upper right corner of the page.

While you are at it, join our LinkedIn Group: [New York and New England Petroleum SPE Section](#)



Dr. Bilgin Altundas

Profile
My Postings
My Shared Files
My Blog



You and Bilgin have no contacts in common

Schlumberger
 Sr Research Scientist
 Cambridge, MA
 United States
 02139

Current SPE Activities:
 New York & New England Petroleum Section, New York & New England Petroleum Section Officers

[Add Bilgin as contact](#)
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Job History
[Schlumberger](#)
[Schlumberger-Doll Research](#)

Job Title
[Sr Research Scientist](#)

Primary Company
[Schlumberger](#)

State
[Massachusetts](#)

Bio

I am a senior research scientist with 10 years of experience in the oil & gas industries in the area of modeling and simulation. I have over 20 publications, a book chapter on FMM and hold 3 US patents. Currently I am an editor of peer reviewed Open Journal of Applied Sciences. I am also a board member in SPE-New York and New England Section. I am driven by scientific curiosity and engineering needs. Over the years, I have conducted research on accurate and petrophysically consistent multiphysics mathematical models, workflows and inversion on monitoring flow in porous media, and quantification of the spatial distribution of reservoir fluid. Currently, I am working on methods and monitoring techniques applied to Enhanced Oil Recovery.

Social Media Sites

[in](#) [Link to me on LinkedIn®](#)

Honors and Awards

Andrew Mellon Predoctoral Fellowships
[University of Pittsburgh](#)
 2001

Education

University of Pittsburgh
 Ph.D
 1996 To 2002

COMING AUGUST 20-22, 2013



Call for Papers Deadline

Showcase your own and your company's latest and most innovative technology at our premier technical conference. **The Deadline to submit papers is January 13, 2013.**

<http://www.erm-2013.org/>