

SPHERES OF INFLUENCE

A QUARTERLY NEWSLETTER FOR DEG – JUNE 2012

Issue 4 of the Spheres of Influence By Douglas C. Peters, DEG President 2011-2012

As my tenure as President of DEG winds down, ending on June 30, I wanted to take this opportunity to thank all the DEG members and leaders with whom I have had the opportunity to interact this year. We have worked this year to keep DEG active, visible within AAPG, and as relevant to the members as possible. The Executive Committee has overlaps between years via our President-Elect, President, and Past President rotation, and two-year terms for the Editor and Secretary-Treasurer, so we have the opportunity for continuity of efforts over multiple years as well.

The campaign to advance Associates to Active Members, originated by Past-President Mary Harris and spearheaded by her and President-Elect Tom Temples, has worked well. We are close to getting back to the 750-member mark for having full voting status on the AAPG Advisory Committee, which helps determine association-wide policy, AAPG officer candidates, and AAPG awards, among other topics. We need to keep pushing for getting all qualified Associates to apply for Active status because membership fluctuates from year to year and we need as many stalwart supporters as possible to stay well over that 750 level. So please consider applying to change status if you are an Associate member and encourage others to join DEG from among your colleagues who already are AAPG members.



I also want to encourage all members to make this *Spheres of Influence* e-newsletter “yours” by taking part in submitting material for it. Everyone has the opportunity to submit photos of geoscience interest such as in this issue. We are always looking for new “Rants” on topics (environmental, policy, geoscience, and more) of current interest to DEG members and the geosciences community in general. The Rant in this issue addresses a topic often heard that we all need to get more involved in dissemination of facts and counteracting opinion and pseudo-science based policy making efforts and attempts to pass regulations not soundly grounded on reality.

Given that this is the fourth issue of the newsletter, you now have a year’s worth of issues to give you ideas on what has been published and what can be included in the e-newsletter. As I have mentioned before, we hope you have found it interesting and useful to some degree. Now carry on and take your part in keeping the issues interesting and useful to all members by contributing what you can on its content! Also please take part in DEG events when you are able, such as the Geoscience Technology Workshop on hydraulic fracturing in August and sessions and special events at AAPG meetings. We are working to expand our special events efforts both within AAPG and jointly with other technical societies to help our members broaden their expertise and understanding of energy industry environmental issues whenever we can do so.

Message from the Editor-In-Chief: Kristin M. Carter, P.G.

Be on the lookout for the June 2012 issue of Environmental Geosciences in the next few weeks. We will be featuring two technical papers – one domestic and one international – associated with the fields of aqueous and stable carbon isotope geochemistry. Odoh et al. explore the geochemical characteristics of shallow groundwater aquifers situated in a fractured shale formation in Nigeria, and Saba and Boehm present their forensic study of a gas storage field in Kansas.

Kristin M. Carter, Editor-In-Chief

Division of Environmental Geosciences Mission Statement and Purpose:

EDUCATING the membership of AAPG and the general public about important issues that affect petroleum energy minerals exploration and production.

- **COMMUNICATING** to the general public and government agencies the Association’s commitment to protect the environment while developing the world’s natural resources in a responsible manner.
- **APPLYING** the expertise developed in the petroleum/energy minerals industries and hydrogeology to resolve environmental problems.
- **PROMOTING** environmental self-regulation within the petroleum/energy minerals industries.
- **PROVIDING** relevant educational opportunities and services for professional development of the AAPG membership through seminars and conferences in environmental geosciences, hydrogeology, and related fields.



SPHERES OF INFLUENCE

Special Announcements:

DEG Comments Solicited on Shale Gas Fracturing- Deadline is 25 May 2012

GTW: Hydraulic Fracturing: New Controversies and Key Plays, 13 – 15 August 2012

FEATURED BIOGRAPHY:

Mr. Gerald C. Blount – Current DEG At Large Representative

Mr. Gerald C. Blount joined the AAPG in 1984 while at the University of Idaho. During that time he was the president for the AAPG student chapter. When DEG was formed in 1992 he joined and was involved in committees as a charter member. Mr. Blount is a Principal Technical Advisor at the Department of Energy (DOE) Savannah River Site with Savannah River Nuclear Solutions (SRNS), where he develops technical strategies for soil and groundwater remediation projects. Gerald has over 30 years' experience performing technical roles in mining, industrial minerals, and large environmental clean-up projects. His environmental clean-up specialization is in in-situ groundwater remediation for radionuclides, metals, and volatile organic

compounds. Mr. Blount has interest in carbon dioxide capture and sequestration (CCS) technologies, and is the primary inventor of several patented post combustion carbon capture technologies. His main interest is in reducing the cost of capture so that anthropogenic CO₂ can be made economic for use in enhanced oil recovery.



Awards

Special congratulations to the following DEG Honors and Awards recipients at the ACE 2012 in Long Beach, California:

2010 ACE Awards

- **Best Poster (New Orleans 2010)**
Daniele Palombi (male), **Tyler E. Hauck**, S. Bachu: "Geological and Hydrogeological Site Characterization for Saline Aquifer CO₂ Storage in the Redwater Leduc Reef, Alberta, Canada"
- **Bernhold M. "Bruno" Hanson, Best Paper (New Orleans 2010)**
Gareth Johnson, Bernhard Mayer, Maurice Shevalier, M. Nightingale, I. Hutcheon: "Application of Stable Isotope Techniques to Monitor CO₂ Storage at the Pembina Cardium CO₂ Monitoring Pilot, Alberta, Canada"

2011 ACE Awards

- **Best Poster (Houston 2011)**
Anatoly Melnik, Benjamin J. Rostron: "Petroleum Hydrogeology of Southwestern Saskatchewan"
- **Bernhold M. "Bruno" Hanson Award, Best Paper (Houston 2011)**
David R. Cole, Michael F. Morea, B. Mack Kennedy: "Geochemical Monitoring During the CO₂ Injection Test at Lost Hill, California"
- **DEG Certificates of Merit**
Craig M. Dingler: for service to AAPG and the DEG as Houston ACE Vice-Chair
Kristin M. Carter: for *Spheres of Influence*, the DEG newsletter
Danielle L. Deemer: for *Spheres of Influence*, the DEG newsletter

DEG Honors

- **Public Outreach:**
Anthony W. Gorody – In recognition for efforts and accomplishments in the promotion and presentation of Environmental Concerns and Subjects to the General Public.
- **Teaching Award:**
Thomas E. Jordan for excellence and dedication to instructing others in Geology and Geophysics
- **Honorary membership**
Mary K. Harris 2010-2011 DEG Past President
In recognition of her constant and effective contribution of time, service and devotion to the science and profession of environmental geoscience and to the American Association of Petroleum Geologists' Division of Environmental Geosciences.

THE RANT: FACT VS OPINION

How do we manage fact-based versus opinion-based information distribution with environmental geoscience matters?

I can't speak for everyone here, but I can speak for what I've been noticing lately within the oil and gas industry and media reporting- the increasingly popular and controversial matter known as hydraulic fracturing (or "fracing", as some like to refer to it) becoming a media obsession. I read about it in the newspapers, see commercials about it, hear radio programs about it, I will even get to see a movie about it starring Hollywood actors that apparently know more about this than the completions engineers I work with. As I watch and listen more closely to the information getting disseminated by the media, I get most frustrated about the lack of factual information that's reported. So much of it is opinion, or opinion-based information. There isn't a lack of scientific information out there that provides fact-based data, so why isn't the media getting involved in the many data-driven reports and technically charged workshops that counter a lot of the false information that is out there? This is my dilemma in approaching the topic of fact versus opinion. Somehow, opinion is getting misrepresented as fact. There are two aspects to this- how does this happen, and how can it be fixed?

How Does This Happen?

The media plays a central role in this. Perhaps data-driven information isn't exciting enough to hold the general attention of the general public, and the end result is reporting focused on the most sensational version of the topic- flammable water faucets, deformed chickens, catastrophic earth quakes, and contaminated rivers and lakes to name a few. I absolutely want to understand the validity of these phenomena, and if valid, fix them. Though as I read more about each, I realize there is very little data to support the claims, and as I search harder, there is scientific reporting that refutes the claims. This leads me to the next question- how can it be fixed?

How Can It Be Fixed?

The media has the opportunity to play a central role in this. But I think we, the technical people working these issues with the factual data, need to drive this as much as possible. So if the media continues to focus on sensational versions of the topic, then perhaps we need to find ways to make the fact-based data more exciting and palatable to the media and general public. Perhaps persistency in getting the media involved in fact-based study results and workshops would help both educate and disseminate information. Perhaps contacting our local media to make sure they know who the fact-based scientific community is - i.e., make sure they know who to go to for fair and balanced reporting.

So, take all of this as a grain of salt if you will, but this is my opinion on fact-based versus opinion-based information distribution, at least with respect to the hot topic of the moment, hydraulic fracturing.

Anonymous Submission from an AAPG member

ACE 2013 UPDATE

Planning is underway for ACE 2013 May meeting in Pittsburgh, PA. For DEG, the following people are diligently working to provide an exciting DEG program:

DEG Vice Chair: Kristin Carter
DEG Technical Program Chair: Danielle Deemer
DEG Short Courses Chair: Tom Jordan
DEG Awards/Judging Chair: William Murray
DEG Field Trips Chair: Katie Schmid

Look for more details regarding next year's ACE in upcoming issues of SOI. If anyone has any suggestions or would like to provide assistance, please let Kristin Carter or Danielle Deemer know.

BEAUTY IN GEOLOGY

Conglomerate and Volcanic Outcrop, La Paz, Mexico
Submitted by Kyle Barrie, Geologist,
Talisman Energy USA

La Paz, Mexico is part of the broad plateaus and mesas in Baja California Sur. These rocks were formed as a result of volcanism associated with the passing of the East Pacific Rise under the continent and the beginning of the opening of the Gulf of California.

Pictured on the left is an outcrop of very fine-grained sand overlain by a basalt flow. Pictured on the right is an outcrop comprised of a basal course conglomerate layer overlain by a very fine-grained sand.



View of Petit Piton Mountain, Saint Lucia
submitted by Danielle Deemer, Team Lead Geology
and Geophysics, Talisman Energy USA

The Petit Piton is one of two volcanic plugs located in Piton Bay near Soufriere on the southwestern coast of Saint Lucia. The Petit Piton is the smaller of the two volcanic plugs at 2461 ft in height, and the larger Gros Piton (south of Petit Piton) is 2619 ft in height. Both are situated very near the current Soufriere Volcanic Center, where there are active sulfur springs from current mild volcanic activity. The pitons are dated at 230 – 290 thousand years (Gros Piton) and 260 thousand years (Petit Piton), and are part of a World Heritage Site.

Links of Interest

<http://www.aapg.org/>
<http://deg.aapg.org/>
<http://eg.geoscienceworld.org/>
<http://www.dcnr.state.pa.us/index.aspx>
<http://geology.about.com/>
<http://www.netl.doe.gov/>
<http://www.geosociety.org/>
<http://water.epa.gov/type/groundwater/uic/class2/hydraulicfracturing/index.cfm>
<http://marcelluscoalition.org/home/>
http://www.netl.doe.gov/technologies/carbon_seq/refshelf/atlas/
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<http://www.oil150.com/about-oil/appalachian-natural-gas-timeline/>
<http://www.epa.gov/>
<http://energytomorrow.org/energy/hydraulic-fracturing/>
<http://www.epa.gov/hydraulicfracture/>

We welcome your articles, comments and feedback for this quarterly Newsletter publication.

Kristin Carter, DEG Editor-In-Chief

Submissions deadline for 1st Quarter Issue: July 15, 2012
Submit to kr Carter@state.pa.us



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