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kkinkaid@libertyenviro.com

Gary Kribbs, P.G.
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gakribbs@verizon.net

Jennifer L. O'Reilly, P.G.
 Groundwater & Environmental Svcs, Inc.
joreilly@gesonline.com

Roger D. Moose, P.G.
rdmoose@comcast.net

Ethan Prout, P.G.
 Rettew Associates, Inc.
eproutr@retrew.com

Lawrence F. Roach, P.G.
 Groundwater Sciences Corporation
lroach@groundwatersciences.com

Donald R. Wagner, P.G.
 Stevens & Lee, P.C.
drw@stevenslee.com

James D. Young, P.G.
 EA Engineering, Science, and
 Technology, Inc.
jyoung@eaest.com

General Information:

info@pcpg.org

Can you identify this
feature? See page 7.



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Message from the President

As 2011 nears to a close and along with it my tenure as President of the Pennsylvania Council of Professional Geologists (PCPG), it's a good time to reflect on what PCPG has accomplished for its members and the profession overall. PCPG has had a great year, with networking, education, and advocacy for the professional geologist and environmental scientist at the forefront of our priorities. In addition to networking opportunities and university outreach, we offered 19 full days of continuing education at venues from Philadelphia to Pittsburgh and accommodated over 1100 attendees. We also provided technical comments to several pieces of draft legislation in the General Assembly and provided comments on draft shale gas regulations considered for adoption by the Delaware River Basin Commission. It has been a busy year!



PCPG also implemented an essay-based Scholarship Program for undergraduate and postgraduate college students majoring in geology or related earth resource disciplines. First and second place recipients receive \$1000 and \$400 awards, respectively. More information about this scholarship can be found at www.pcp.org.

Opportunities for networking, education and advocacy will continue to be publicized in our e-mail News Updates, Quarterly Newsletters, and on our website so be sure to check them out.

At the beginning of 2012 President-Elect Louis F. Vittorio, Jr., P.G. of Earth Res Group will assume duties as the new PCPG President. From working with Lou on the Board of Directors and as President-Elect, I know PCPG will have outstanding leadership in 2012.

I have been extremely honored to serve PCPG as President in 2011 and look forward to working with Lou and the PCPG Board to make 2012 another great year for our organization and our membership. I also want wish everyone Happy Holidays and a prosperous New Year!

Regards,

Jeff Leberfinger, P.G.

PCPG President

PCPG Government Affairs Committee Report

-- Donald R. Wagner, P.G., (Government Affairs Committee Chairperson)

As we approach the end of the year, PCPG's Government Affairs Committee is busy tracking numerous proposed environmental bills. This past year, a majority of the bills introduced in the Pennsylvania House and Senate related, in one way or another, to shale gas development. Many of the shale gas related bills have seen little movement and have stagnated in committee. A few of the bills, however, have seen movement and appear likely to be passed in early 2012. Key shale gas related and other environmental legislation are summarized below.

Severance Tax/Gas Impact Fee

Many of you may recall that the budget compromise in July 2010 included a commitment to pass a shale gas severance tax by October 1, 2010, with revenue from the tax to be allocated to the Commonwealth, counties, municipalities and environmental projects. Obviously, that didn't happen and none of the severance tax bills introduced in either the House or the Senate during the 2011 legislative session moved out of committee. The two major bills involving an impact fee and other comprehensive legislative initiatives with respect to shale gas development are Senate Bill 1100 (SB1100) and House Bill 1950 (HB1950).

- [SB1100](#) (Scarnati, R) – Senator Joe Scarnati, president pro tempore of the state Senate, sponsored this legislation and has worked very hard to gain its passage. The bill would establish a reasonable impact fee on gas well operators, increase environmental safeguards, and strengthen shale gas drilling oversight in the Commonwealth. If enacted, SB1100 would establish a per-well impact fee of \$50,000 in the first year of operation, \$40,000 in the second year, \$30,000 in the third year \$20,000 in the fourth through tenth years and \$10,000 in the eleventh through twentieth years. The bill also includes requirements for gathering lines and adds additional protective measures regarding well siting restrictions, substantially increases bond requirements, increases the presumption of liability distance to 3,000 feet, increases setbacks from 200 feet to 500 feet from a building and 1,000 from a drinking water source, all with respect to unconventional wells and provides for some restrictions on local government land use regulation of oil and gas well operations. According to Sen. Scarnati, approximately 55 percent of the fees generated would go to counties and municipalities in the Marcellus Shale region and 45 percent to statewide infrastructure projects, environmental programs and other projects related to natural gas production. Other funds also would be set aside for county conservation districts, firefighter training programs, the Fish and Boat Commission and for funding affordable housing projects. The Senate passed SB1100 on November 15, 2011 and the bill was then referred to the House Finance Committee on November 28, 2011, where it has remained in committee.
- [HB1950](#) (Ellis, R) – is the competing well impact fee legislation in the House and included many similar measures to SB1100, though the bills differed in several respects. The House passed HB1950 on November 17, 2011. The state Senate amended HB1950 by replacing its text with the text of SB1100 and passed the amended bill on December 14, 2011 in a vote of 28-22. The amended HB1950 was then referred to the House Rules Committee on December 14, 2011.

Without a consensus on the impact fee legislation, it is likely that amended HB1950 will be referred to a six-person House-Senate conference committee to arrive at a compromise bill that would then face a “yes or no” vote in both the House and the Senate with no amendments permitted. It is likely that the conference committee will take up negotiations in January 2012.

Other Pending Environmental Legislation of Note

- [HB344](#) (Baker, R) – would provide the Pennsylvania Public Utility Commission (“PUC”) with authority for safety inspections of all pipelines subject to federal pipeline safety laws and providing for a registry

(continued on Page 3)



(continued from page 2)

of such pipelines, assessments and fines/penalties for violation of the legislation. The standards to be used would be federal pipeline safety requirements, which would apply to all classes except Class 1 pipelines (i.e., would not apply to natural gas pipelines in sparsely populated rural areas). The House passed HB344 on April 4, 2011 and the Senate passed an amended version of HB344 on December 13, 2011. The amended version was passed by the House on December 15, 2011 and it is on the Governor's desk for signature. It is expected to be signed by the Governor because its provisions were among the recommendations of the Governor's Marcellus Shale Advisory Commission and is supported by the PUC, the U.S. Department of Transportation, the Pennsylvania Consumer Advocate, the Marcellus Shale Coalition, the Pennsylvania Landfill Association, the Pennsylvania Propane Association, the Pennsylvania Independent Oil and Gas Association, the Associated Petroleum Industries of Pennsylvania and the Pennsylvania State Fire Commissioner.

- [HB1054](#) (Musto, R) – would amend the Engineer, Land Surveyor and Geologist Registration Law to provide for a retired licensee status. As originally proposed, the bill would have provided for a retired engineer status. In cooperation with the Professional Engineers and Professional Surveyors associations, PCPG requested that the bill be amended to apply to all licensees, not just engineers. The bill was so modified and the House passed the bill on June 21, 2011. HB1054 received its first consideration in the Senate on September 27, 2011 and was re-referred to the Senate Appropriations Committee on November 14, 2011. PCPG supports the passage of HB1054.
- [HB1855](#) (Miller, R) – would amend Title 27 (Environmental Resources) to provide for water well construction standards. HB1855 would require the EQB to adopt such rules and regulations of the PADEP as it deems necessary for the development of water well constructions standards and for the implementation of the legislation. HB1855 was referred to the House Consumer Affairs Committee on December 7, 2011. PCPG understands that HB1855 would likely have sat in the House Environmental Resources and Energy Committee without being reported out of committee and that Rep. Miller has referred the bill to the House Consumer Affairs Committee. PCPG further understands that the majority chairman of the House Consumer Affairs Committee, Rep. Godshall, is a strong supporter of the legislation. PCPG also notes that the development of water well construction standards was a recommendation of the Governor's Marcellus Shale Advisory Commission. PCPG has long supported the development of water well construction standards and, while PCPG will likely have comments on the text of HB1855, PCPG's Government Affairs Committee looks forward to working with Rep. Miller's office in support of the legislation.
- [HB613](#) (Deasy, D) – providing for the designation and regulation of geologically hazardous areas within the Commonwealth. This bill referred to the House Environmental Resources and Energy Committee on February 10, 2011, where it has remained in committee. This is substantially the same bill that has been introduced in past legislative sessions. PCPG has in the past advised Rep. Deasy that it supports a geologically hazardous areas bill but that the current drafts of the bill, as in the past, require substantial clarification and modification before PCPG will publicly support the legislation.
- [HB1701](#) (Cutler, R) – creates a State Geospatial Coordinating Counsel, an advisory board to provide advice and recommendations to the Governor on geospatial issues, providing for uniformity, data standards, coordination and the efficiency of geospatial policy and technology issues among Federal, State and local government agencies, academic institutions and the private sector. The bill received its first consideration in the House on 12/6/2011.

There are many other environmental bills that have been introduced in either the Senate or the House that PCPG's Government Affairs Committee is tracking, but it would be inefficient to provide a detailed description of each such bill in this update. PCPG encourages its membership to participate in government affairs and we invite our members to submit comments, suggestions or questions on any of the above-referenced bills or any other environmental bill that you have an interest in to our Government Affairs Committee Chairperson Don Wagner, P.G. ([Don Wagner e-mail](#)).



PCPG Sponsors Photo Contest

-- Communications Committee

To all geology and photography enthusiasts out there, PCPG invites you to enter our first-ever Geology Photo Contest. Entries can be submitted until January 19, 2012. If entering please read the full list of rules and terms found on the PCPG website before submitting photos. By submitting an entry, each contestant agrees to the rules of the contest. Entries received will be posted on the PCPG website and members will vote to determine the winner in each category. Voting will take place from January 31, 2012 to March 31, 2012. An overall winner will be chosen from the winners of each category by the PCPG Board of Directors and the winners will be announced in the June 2012 PCPG Newsletter.

Eligibility: Anyone can enter the contest; however, only PCPG members can vote to determine the winners. The picture must be taken within Pennsylvania in an effort to highlight PA geology.

What to enter: Submission should be digital photographic images of a subject matter that represents one of the following five categories: Geomorphology, Paleontology, Structural Geology, Sedimentology/Stratigraphy, and Mineralogy.

How to enter: Details of entry can be found on-line at www.PCPG.org/photocontest2012.

Prizes: A PCPG thermal travel cup and \$20 gas card will be given to the winner of each individual category. The overall winner will receive free enrollment for a single-day PCPG course in 2012.

Contact us: Please email any questions concerning this contest to photocontest@PCPG.org

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A New Tool for Your Tool Box – The Smart Phone!

-- Richard Hazenstab, P.G. (York County Solid Waste Authority)

As you prepare for a day in the field, one of the items on your equipment list is your cell phone. Most of us are lost without it, especially today when many phones are used for much more than making a call. With the availability of applications or “apps” our phones are getting “smarter” and have become a valuable tool in our everyday lives. The following offers a small snippet of smart phone apps that make life a little easier for the geologist.

The most popular smart phones are the Apple iPhone and those running Google’s Android operating system. In addition, the tablet computer (iPad, Touch Pad and many more) is providing a larger platform for these operating systems and has propelled the development of new and more innovative apps. There are apps developed specifically for the geologist and many general apps that can support our work. Unfortunately, most if the apps I found are made for the iPhone and iPad.

Have you ever been driving through a road cut on your way to a site and wished you had your Brunton to grab a quick strike and dip? That will never be a problem again if you install [Strike and Dip](#) by Hunt Mountain Software available on iTunes for \$4.99. It also gives the lat/long and approximate elevation!! For the Android there is the [eGEO Compass](#) or the [Rocklogger](#).

There are many apps available to aid in mapping and field logs. PCPG President-Elect Louis Vittorio, P.G. recommends several FREE Android apps, including: [GPS Averaging](#), which records your average coordinates within 1 meter; [My Tracks](#), which records your exact traverse from beginning to end and plots on Google maps; and also [Google Maps w/Navigation](#).

Looking for data from a USGS stream gage? [FloodWatch](#) by D5G Technology, LLC, presents the most recent and historical river heights, precipitation totals, and flood stage data from USGS gages, and it’s FREE. Logging a well? [iGeoLog by MangoCreations](#) is an iPhone App for drawing geological sections in the field (\$3.99). A broad geology app for the iPhone is [Terraphone](#) which integrates satellite maps with mineralogy, stratigraphy, fossils and geographic features. The cost for this app is \$12.99. But if you really want to impress your friends then the [Wonders of Geology](#) is a must have. Photographer and geologist Michael Collier combines award winning photography with beautifully written text to describe fundamental geologic processes.

If you want to keep up with ‘what’s shaking’ then you will want the FREE QuakeZones app on your iPhone. It provides current (within several minutes) and historic (back to 1973) data on earthquakes from around the globe. And what geologist would be without a pocket geologic time scale? iPhone has the perfect app for this: [geotimescale](#).

More general (but very useful) apps available include good scientific calculators. For the Android, I like the free app, [RealCalc Scientific Calculator](#) by Quartic Software. The iPhone comes equipped with an excellent calculator. Of course you would not want to be caught without a [Flashlight](#) which is an app for the iPhone. Search the [Android marketplace](#) for its own version of a flashlight but be careful, some apps will limit the brightness depending on your screen settings. Forgot your camera? No problem. The new iPhone 4s has an 8 megapixel camera and HD video recorder (*I know, this is not an app but still a necessary tool*).

If you know of any “must have” apps, please e-mail information about them to PCPG Communication Committee Chairperson, Kelly Kinkaid ([Kelly e-mail](#)). We’d like share a list of useful apps with our members on our website in the near future.



Field Conference of Pennsylvania Geologists 2011

- Gary Kribbs, P.G. (PCPG Board Member, AEON Geoscience, Inc.)

From September 29 through October 1, 2011, many PCPG members were among the more than 100 attendees at the 76th annual Field Conference of Pennsylvania Geologists (FCOPG). This year, the Field Conference was located in extreme southwestern Pennsylvania, with a "base camp" in Washington, PA. Returning to this area after 46 years, the 1965 Field Guide provided a foundation for the conference; however, the new Field Guide showed that a geologist's work is never done. Although the western PA weather was not the most pleasant, the beauty of southwestern PA's rolling countryside was magnificent.



Photo Above: At the Grave Creek Burial Mound Helen Delano tosses an atlatl while Don Zuch waits his turn and others look on.



Photo Above: Slope stability issues are brought "home" at stop #5 in McMechan, WV.

Based on my conversations with other attendees, it appeared that this Field Conference sparked a new or different outlook on the depositional environments and soils patterns of the bituminous coal of the region in many of those that attended.

Information on next year's Field Conference of Pennsylvania Geologists is already available on the FCOPG website: <http://FCOPG.org>



Photo Above: Attendees waiting to attack an outcrop of well developed paleosols at stop #7.



UPCOMING EVENTS

January 19, 2012

Noon – 6:00PM

**PCPG Annual Meeting
& Networking Event**
Grantville, PA

January 25, 2012

Remote Sensing
Malvern, PA

January 26 – 27, 2012

PGWA Winter Conference
Grantville, PA
www.pgwa.org

February 2 - 3, 2012

PG Review Course
Mars, PA

March 7, 2012

**Shale Gas Seminar Series:
Basic Tools for
Shale Exploration**
Mars, PA

Don't forget to check the
"Courses & Events" link on
PCPG's [home page](#)
frequently for up to date
information on upcoming
educational opportunities.

PCPG Education Committee Update

-- Jennifer L. O'Reilly, P.G. (PCPG Education Committee Chairperson)

The PCPG Education Committee would like to wish everyone a Happy Holidays and extend our best wishes for a healthy and prosperous New Year! Thank you to all of the course instructors and participants for an outstanding lineup of seminars in 2011. We have wrapped up our calendar of events for this year and we are well into the process of rolling out the 2012 education schedule.

Looking toward the first quarter of 2012, we will kick things off with PCPG's Annual Meeting on January 19 (Holiday Inn Harrisburg-Hershey, Grantville, PA), and coupled with that we have set up several guest speakers. The distinguished panel of speakers will provide updates on current PA Geological Survey activities, information regarding the application for and renewal of P.G. licenses, an update on DEP activities and DCNR's role in the shale gas plays in PA. Additional details on the speakers and topics for this event are provided on page 12. We hope to see you there!

Additional first quarter 2012 educational opportunities include the Remote Sensing course (taught by former PA State Geologist Jay Parrish, P.G.) in Malvern on January 25, PCPG's annual two-day PG Review course in Mars, PA on February 2-3, and PCPG's Shale Gas Seminar Series Event 2 (taught by Lindell Bridges), titled "Basic Tools for Shale Exploration," also in Mars, PA. Looking ahead into 2012, our schedule will include Rock Slope Stability, the roll-out of PCPG's new Marcellus Toolkit series, the groundwater sampling course, and an additional session of the Act 2 Toolkit course, "Soil Gas & Vapor Intrusion." We will also be expanding our Act 2 Toolkit series to include a seminar on Report Drafting, geared toward providing junior staff and entry level staff with technically sound report writing skills that work within the framework of PA regulations.

We hope to see you at one of our upcoming seminars. If you have any questions or suggestions for courses or events, please feel free to email me ([Jen O'Reilly E-mail](#)). For more information or to register for upcoming courses, please link on the "Courses and Events" tab of our [home page](#).

GUESS THE FEATURE

The image (from the PaGS photo gallery) was taken at the Eastern Industries, Inc. Whitehall Quarry in Lehigh County. These folds are part of the Musconetcong Nappe within the Reading Prong nappe megasystem. The light-colored dolomite deformed mainly by flexural slip, while the dark-colored limestone beds deformed by flow. This location was Stop 5 of the 1999 Field Conference of Pennsylvania Geologists. More images of interesting PA geologic features can be viewed on the PaGS [Photo Gallery website](#).



An Interview with... Brendan O'Donnell, P.G. and Matthew T. Bruckner, P.G.

- Ethan E. Prout, P.G. (PCPG Board Member, RETTEW Associates, Inc.)

As a regular feature to our quarterly newsletter, the PCPG Communications Committee interviews geologists in Pennsylvania. This quarter we interviewed two geologists employed at RETTEW Associates, Inc. that have had their careers take interesting moves from the due diligence, environmental investigation and cleanup world to the current shale-gas industry that is growing in the Commonwealth. As they (and myself) can attest to – the fast-paced, challenging nature of the industry, as well as the chance to apply traditional, core geologic practice to our work has been refreshing and enjoyable.



Photos above: Matthew T. Bruckner, P.G. (left) and Brendan O'Donnell, P.G. (right).

Q. What piqued your interest in geology; when did you know you would enter geology?

Brendan: My interest in geology started when I was a kid, collecting fossils with my dad who's a biology teacher and amateur paleontologist. A former student and friend of my father's happened to be a geologist for an environmental consulting firm. He accompanied us on collecting trips, and became a good friend and somewhat of a mentor as I was growing up. I was also a caver when I was younger, which was inspired by one of my high school teachers who taught a geomorphology class at my high school. This all lead to my consideration of geology as a career. I've always had a genuine interest in science, and geology seemed to be a field where I had a strong interest and where there were viable careers.

Matt: I've always had an interest in science, particularly geology. The first college I attended did not have any earth science or geology major programs, so I entered into the business program and received a B.A. in Marketing. During this time, I took as many geology and earth science electives as I could and really enjoyed them. When I graduated and entered the workforce, I was not satisfied at all working in sales. As a result, I re-evaluated what I wanted to do with my life and realized that geology was an exciting field to pursue, so I enrolled in a local university's geology program.

Q. What is your education? Where did you study geology? What has been your work experience?

Brendan: I earned a B.S. in Geology from the University of Pittsburgh at Johnstown. My career experience has consisted of working for various Pennsylvania environmental consulting and engineering firms from my time at an internship in college until now. Most of my work has been environmental site investigation and remediation, as well as water resources development. I've been fortunate to work on a broad spectrum of projects that took me to various terrains across Pennsylvania, the mid-west, and the east coast. I've also been fortunate to work with a variety of interesting people and companies that have helped build my experience and skills, as well as provide an understanding of different professional perspectives and disciplines within the business.

Matt: As mentioned above, I earned a B.A. in Marketing before earning a B.S. in Geology from Millersville University, in Lancaster County, Pennsylvania. My career experience began with an internship with a local geophysical consulting firm. Since graduation, my experience has consisted of working for several environmental consulting and engineering firms. My work has mainly been focused on environmental site investigation and remediation, including mold and asbestos surveys. I have worked in several states (PA, CT, NY, MI, IN, WV, NJ, and OH) for a wide variety of projects, which have helped to broaden my geologic, environmental, regulatory and professional experience.

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Q. How has the shale gas industry re-ignited your career? How did you make this move?

Brendan: The shale gas industry has brought many new and different project opportunities and challenges to the consulting and engineering firms of Pennsylvania. For me, learning new things and working through new and different challenges that have evolved with the shale gas industry has been exciting. It has certainly helped re-ignite my interest and motivation in my career as a geologist. My involvement with the shale gas industry took off in 2010 when I joined RETTEW Associates, Inc., a company that took early risks to adapt and serve the shale gas industry. RETTEW's early involvement and reputation in the shale gas industry was a big factor that attracted me to them. With a background in hydrogeology, the majority of my shale gas work has been related to all aspects of water sourcing for the industry. Shale gas has also given me the opportunity to work on some very interesting, geology-intensive "pet" projects, that wouldn't arise in the traditional environmental/water supply business.

Matt: I took a position with a Lancaster-based consulting firm in the fall of 2008. One of the major reasons I accepted the position was the fact that the firm was just entering into the early stages of permitting within the Marcellus Shale Play. Since then, I have worked almost exclusively on shale gas projects, which has allowed me the opportunity to manage water sourcing, wetland permitting, survey, land development, environmental engineering, environmental investigations, and geotechnical projects. As a direct result of this work, I have been exposed to a great array of associated fields and professionals that I would not have had otherwise learned about in such a short amount of time.

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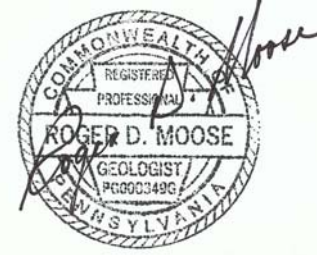
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When do I Seal Geologic Work Products?

-- Roger D. Moose, P.G. (PCPG Board Member, Alces, LLC a SDVOB.)



The Pennsylvania State Registration Board for Professional Engineers, Land Surveyors, and Geologists (The Board) issued rules for use of registrant's seals at Section 37.59 of the Act.

- The rules include provisions that a registrant may use his or her seal only while the license is valid and the work was prepared or under the direct supervision of the registrant.
- The seal and signature of the registrant shall be prominently displayed on the first page of all final or complete documents to a client for the client's record or when a registrant submits final or complete documents to public or government agencies for final review.
- When multiple registrants share responsibility or contribute to a document, each registrant's seal shall appear on the first page of the document, or on the first page of the work prepared or under the direct supervision of each registrant.
- The signature shall be applied near or across the seal, but not in a location that obliterates the registration number.
- In the case of a temporary permit issued to a registrant of another state, the registrant shall use his home state seal, and a copy of the temporary permit to work.

The Pennsylvania State Department of Environmental Protection (PADEP) has also developed a *Policy on Meeting the Requirements of the 1996 Amendments to Engineer, Land Surveyor and Geologist Registration Law*, which can be found at:

<http://www.elibrary.dep.state.pa.us/dsweb/Get/Document-48580/012-2000-001.pdf>

This Policy was written to guide Department reviewers through a framework for PADEP's administrative discretion. Its purpose is "...to notify persons practicing geology in the Commonwealth that they must be registered with the Commonwealth," and to establish "...procedures on who to submit properly prepared documents for Departmental review." Department staff will make their determination of whether submittals require the seal and, if not sealed, "...whether the geologic work is incidental or not."

Permit Modules are required for many PADEP submittals. These modules are in the process of revision to incorporate a professional certification statement that includes the following language:

"By affixing my seal to this application (document), I am certifying that the information is true and correct. I further certify I am licensed to practice in the Commonwealth of Pennsylvania and that it is within my professional expertise to verify the correctness of the information."

The PADEP is relying on self-policing of the profession and reporting by the public at large, under The Board's Code of Ethics. The policy states that they will not evaluate the professional's specific abilities or "...if the geology is incidental to the project." It notes that incidental geologic work is not defined by The Board. However, *"If a professional is not qualified and repeatedly submits information to the Department, the Department may forward the name of the individual to the Board for appropriate action."*

The PADEP has also created an Appendix to this Policy entitled, *Submittals Which May Require Registered Professional Geologists Seals*, which can be found at:

<http://www.elibrary.dep.state.pa.us/dsweb/Get/Document-48579/012-2000-001%20Appendix.pdf>.



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Q. What do you enjoy most about working in geology?

Brendan: I like the variety of projects and disciplines, and the chance to get out of the office and in the woods every once in a while.

Matt: I enjoy the variability of projects, which allows me to work both in the office and in the field, and to further my knowledge, not only within my own field, but how it applies to other fields.

Q. What have you found the most rewarding...and the most challenging?

Brendan: Most rewarding – Being a part of successful projects and providing a good product and needed services. Most challenging – 1) Balancing science and quality work with budget, business, deadlines, and politics, 2) Dealing with “challenging” parties involved in the projects (you know who you are), and 3) Explaining to my friends and family what I do, as it seems most people have very little understanding of what lies beneath the surface.

Matt: Most rewarding – To apply my knowledge and expertise to best solve problems for clients that result in cost and time savings, and provide them with what they need. Most challenging – Striking the right balance between work and family life has always been a challenge, and doubly so working within the ultra-fast paced world of the shale gas industry.

Q. Any advice for young and upcoming geologists?

Brendan: Be open to comments and critique of your work and welcome the opinions of others. Otherwise you’ll impede your learning, and without the help of others’ experience, you’re bound to make some big mistakes.

Matt: Be willing to accept and take on any work or role thrown at you; nothing is beneath you. Be proactive, strive to improve yourself by learning from both peers and managers, and most importantly, find a mentor who will help you grow both technically and professionally.

10 PDH's for only \$160



Pennsylvania Ground Water Association's 2012 Winter Conference

Harrisburg/Hershey Holiday Inn in Grantville, PA
at Exit 80 on I-81 (16 miles from Harrisburg)

THURSDAY JANUARY 26, 2012

8:00 am – 1:30 pm **REGISTRATION OPEN**

11:00 am – 7:30 pm **EXHIBIT HALL OPEN**

11:30 pm – 12:30 pm **LUNCH ON YOUR OWN**

12:30 – 1:30 pm **Keynote Address: Overcoming the Growth Barriers in the Geothermal Industry**
by Todd Giddings, Ph.D., P.G., Todd Giddings and Associates, Inc.

1:30 – 2:30 pm **Water Quality in Residential Water Wells Located near Marcellus Gas Wells** by Bryan Swistock, PSU Extension

2:30 – 3:30 pm **Overview of Shell's Groundwater Protection and Stray Gas Mitigation Program in PA** by Bryce J. McKee, Shell Appalachia

3:30 – 4:30 pm **What Should be in the New Legislation for Residential Water Well Construction Standards?**
A Workshop to discuss the key elements and to receive your input.

4:30 pm – 7:30 pm **RECEPTION & SCHOLARSHIP AUCTION in the Exhibit Hall**

FRIDAY JANUARY 27, 2012

7:30 am – 9:00 am **BREAKFAST** (provided)
and **General Membership Meeting**

9:00 – 10:00 am **On-Site Treatment and Disposal of Muddy Geothermal Drilling Water** by Todd Giddings, Ph.D., P.G., Todd Giddings and Assoc., Inc.

10:00 – 11:00 am **Water Resource Management for Marcellus Natural Gas Operations** by Dave Yoxthelmer, P.G., PSU Extension

11:00 – 11:30 pm **Drilling a Large Diameter Top Hole**
by Todd Giddings, Ph.D., P.G., Todd Giddings and Associates, Inc.

11:30 – 12:00 pm **Job-Site Successes Treating Muddy Geothermal Drilling Water with a Polymer**
by David Powell, CWD/PI, Edward Powell Pump & Well Drilling

12:00 pm – 1:00 pm **LUNCH** (provided)

1:00 – 2:00 pm **Proper Silica Selection for Geothermal Loop Installation**
by Todd Tannehill, CETCO, Inc.

2:00 – 3:00 pm **PEXa vs. HDPE Pipe Thermal Performance Comparison**
by Todd Giddings, Ph.D., P.G., Todd Giddings and Associates, Inc.

3:00 – 4:00 pm **Geothermal Drilling and Grouting**
by Dennis Duty & Jeff Quinn, Baroid Industrial Drilling Products

4:00 pm **CONFERENCE ADJOURNS**

Go to www.pgwa.org
for more information, and to print a registration form
to mail **before January 13, 2012.**

The Holiday Inn Harrisburg/Hershey (in Grantville) has a block of discounted sleeping rooms at \$89 until January 11, 2012. Call (717) 469-0661 to make your hotel reservation today!

www.pgwa.org



PCPG's Annual Meeting Plans Finalized

-- Louis F. Vittorio, Jr., P.G. (PCPG President -Elect)

This past year has seen much progress at PCPG with a full schedule continuing education (CE) seminars, outreach opportunities and networking events having been successfully completed. Considering CE seminars alone - nineteen events were held hosting over 1100 attendees at venues from Philadelphia to Pittsburgh. To cap off last year's achievements and kick-off 2012, PCPG is holding our Annual Membership Meeting on **Thursday, January 19, 2012** at 12:00 PM in the Holiday Inn Harrisburg-Hershey in Grantville, PA. Join your fellow members for lunch and an afternoon of top notch speaker presentations. A wrap-up of PCPG's business for 2011 will be provided along with the results of the Board of Director elections and appointment of PCPG's President-elect for 2012.

The speaker slate for the afternoon includes DEP Secretary **Michael Krancer**, a DCNR Deputy Secretary, PA State Geologist **George Love**, P.G., and PA Licensing Board President **Thomas Gillespie**, P.G. Following the keynote address of Secretary Krancer, the afternoon speakers will address our membership with the following informative presentations (approximately 2.5 PDHs can be logged):

- PCPG Board and Executive Committee Members - *2011 In Review, Governmental Affairs Report, Reports of Committee, Board of Directors Election Results, and President-elect appointment;*
- George E. Love, P.G. - *Overview and Results of Current Geological Survey Activities in Pennsylvania;*
- Thomas Gillespie, P.G. - *Critical Information for Application and Renewal of PG Licenses;*
- DCNR Deputy Secretary - *DCNR's Role Under the Current Administration and in the Ongoing Shale Gas Play.*

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Recap of the First in a Series of PCPG Shale Gas Seminars

- Jeff Leberfinger, P.G. (PCPG President)

On October 19, 2011 in Monroeville, PA, PCPG presented the first in a series of planned Shale Gas Seminars to over 100 attendees. This first seminar was entitled, *Geology, Development, Production and the Future*.

The distinguished panel of speakers included representatives from industry, academia and government, including Dr. Terry Engelder (Penn State), Dr. John Harper (PaGS), Christopher Willan and Scott McCallum from EQT Production, Bob Garland from Universal Well Services, and George E. Love, P.G., our State Geologist.

The speakers provided presentations on several key aspects of the shale gas plays, including stratigraphic interpretation of the Marcellus Shale, hydraulic fracturing, gas well depletion curves, and the use and availability of geological resources in Pennsylvania.



Photograph Above: PCPG President-Elect Louis F. Vittorio welcomes attendees to the conference.



Photograph at Left: Conference speakers John Harper, Terry Engelder and George Love pose for a quick picture.



Photograph Above: Bob Garland in deep discussion with an attendee Maurice Deul.

Rounding out the program was a look to the future and discussion of the potential of the Utica Shale play. Attendees received an e-mail link to a page where you can download many of the presentations from this highly informative day.

Also joining us for a brief address was newly appointed Secretary of the Commonwealth, Carol Aichele. Secretary Aichele oversees professional licensing and she provided insight on the

Department of State under Governor Corbett's administration.

The second event in the Shale Gas Seminar Series, *Basic Tools for Shale Exploration*, is scheduled for March 7, 2012 in Mars, PA. The instructor for this second event will be highly regarded shale exploration geologist Lindell Bridges, Exploration Vice President for Realm Energy International. Check the PCPG website <http://www.pcp.org/courses&events> for more details on the course and instructor.



Photograph Above: Secretary Aichele discusses the day with Dr. Engelder and other attendees.



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Door prize giveaways (including the grand prize of an **Apple iPad2** (16 GB w/Wi-Fi!)) and a networking event will follow this event, providing a chance to catch-up with your colleagues in a relaxed setting.

Last year's meeting was a great success and we are planning a similar fun and informative affair this year (open to members and non-members alike). Be sure to register now at www.pcpge.org to come out and meet some new friends, get reacquainted with your colleagues and find out what PCPG has been doing to advance the professional practice of Geology.

I look forward to seeing you in Grantville on January 19th.

DEADLINE FOR 1st QUARTER 2012 NEWSLETTER IS MARCH 1, 2012

For more information, contact our PCPG Newsletter Editor and Communications Committee Chairperson, Kelly Lee Kinkaid, P.G., by [E-mail](mailto:kelly@pcpg.org) or by telephone at 610-375-9301.

2012 PCPG MEMBER AD RATES

(Rates are listed as amount per issue)

Size	Commitment:	1x	4x
1/2 Page		\$225	\$150
1/4 Page		\$140	\$95
Business Card (H or V)		\$75	\$50

2012 PCPG NON-MEMBER AD RATES

(Rates are listed as amount per issue)

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1/2 Page		\$300	\$240
1/4 Page		\$185	\$150
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