

PCPG Newsletter

Communicating Key Information & Concerns
to Geologists and Environmental Professionals

Issue 2 / 2019

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INSIDE THIS ISSUE...

President's Message	1
Upcoming Events	2
Strategic Objectives.....	2
The Last Ice Age Field Trip.....	3
The PG Seal.....	3-4
The First Marcellus Shale Well	5

MESSAGE FROM THE PRESIDENT

Greetings,

During last year's PCPG strategic planning process, our membership emphasized the importance of supporting, training, and engaging early career geologists and environmental professionals. Employment research reveals that 48 percent of the geoscience workforce will be eligible for retirement in the next decade, leaving a projected shortfall of 90,000 geologists nationwide (Wilson, 2019). This underscores the importance of supporting the next generation of geoscience professionals.

Preparing early-career geoscientists for success is vital for the sustainable development of our workforce and PCPG is here to assist. We are developing courses with new delivery formats that will foster professional skills sometimes missed by traditional academic curricula. We provide service opportunities for junior members who wish to serve on our government affairs, communications, education, and membership committees. And we offer networking events to allow early-career and seasoned professionals to interact and foster mentoring.

We need your help to make this initiative a success. Junior professionals are busy working long hours in the field, are expected to maintain a high billable ratio, and may not feel comfortable asking for time and resources to enroll in professional development courses or participate in networking events. If you are a senior geoscientist, please encourage your staff to take professional development courses, serve on our committees, and participate in networking events. If you are an early-career geologist or environmental professional, now is this time for you to step up to the plate and take an active role in your future and the future of the geoscience profession. Please feel free to reach out to me directly at mhelmke@wcupa.edu to get involved.

Sincerely,

Martin Helmke, Ph.D., P.G.
PCPG President



Wilson, C. 2019. Status of the Geoscience Forkforce 2018. American Geosciences Institute, Alexandria, Virginia, ISBN 978-0-913312-99-5, 163 p.

UPCOMING EVENTS

October 3-5, 2019

84th Annual Field Conference of PA Geologists

Carbondale, PA

October 12-16, 2019

48th Annual 2019 AAPG Eastern Section Meeting

Worthington, OH

February 2020

(Dates to be announced)

Two-Day PG Review Course for the Practicing
Geologists & ASBOG Exam Candidate

Western-PA

February 25, 2020

PCPG Annual Meeting Program, Student Poster
Competition, Networking

Harrisburg, PA

March 9-11, 2020

Pennsylvania Brownfields Conference

State College, PA

*For a complete list of
upcoming events or to register
online, check our*

HOME PAGE *event calendar,
or visit*

PCPG'S COURSES AND EVENTS

web page.

STRATEGIC OBJECTIVES: PCPG PROGRESS REPORT

By Tiffani Doerr, P.G., Strategic Planning Chair

PCPG has contracted with a web developer who is helping us revamp and modernize our website. They will also help PCPG achieve the strategic objective of launching a digital platform by establishing a professional networking platform and providing a platform for webinars.

PCPG has expanded member profile functionality on our website, and we now allow members to incorporate a profile photo, and add career updates. In the near future we plan to build out a search feature for purposes of professional networking with other PCPG members.

We need your help. Visit your PCPG [member record](#), scroll through to make additions or update existing information. You'll need to [login](#). Choose to [edit](#) your profile.

While reviewing your PCPG member record, why not choose a PCPG committee to support, too? We're a volunteer organization and the commitment of time to serve on a committee is minimal, and supports networking with your peers.

Help establish and build this valuable networking resource. [Log in now.](#)

SAVE THE DATE

Tuesday, February 25, 2020

PCPG Annual Meeting

The Central Hotel & Conference Center

Harrisburg, PA

9:30 AM - 4:30 PM

We're expanding to a full day program that will include regulatory updates, education sessions, time to visit the student posters to review and discuss research projects, networking, great food, and door prizes.

Registration opens November 1.

Hotel Rooms: \$89.95++ for the night of Monday, February 24 or Tuesday, February 25. Visit PCPG's [dedicated overnight room reservation page](#) on the hotel's site to make your reservation.

Oh what a day...

Dan A. Billman, P.G., C.P.G., Billman Geologic Consultants, Inc.

On June 14, 2019, PCPG sponsored the fieldtrip, "The Last Ice Age in Western Pennsylvania: A Changing Climate as Seen in the Glacial Landscapes." The fieldtrip was led by past PCPG president Dan Billman and Albert Kollar, Director of Invertebrate Paleontology at the Carnegie Museum, in Pittsburgh, PA. The trip was in and around Moraine State Park and McConnells Mill State Park.

The group of 40 plus geologists visited glacial features including the Jacksonville Esker, West Liberty Bog, and a kame deposit. We visited Slippery Rock Gorge, which was carved by drainage from periglacial lakes, Lake Prouty, Lake Watts and Lake Edmunds.

As a geologic aside, the group visited the Muddy Creek Oilfield Exhibition at Moraine State Park. The Friends Group of Moraine, McConnells Mill and Jennings State Parks (3MJC) ran the Bessemer Gas Engine for us. This engine was used to pump numerous wells in the field, producing oil from the Late Devonian, Berea Sandstone.

It was a beautiful day to be in the field with a great group of geologists. Hopefully you can make the next PCPG fieldtrip.



THE PRACTICE OF GEOLOGY AND THE PG SEAL

Thomas D. Gillespie, P.G., Gilmore Associates, Inc.

If you are a registered Professional Geologist licensed to practice geology by the Pennsylvania Department of State (DOS), your responsibilities and liabilities as a PG are governed by the Pennsylvania State Registration Board for Professional Engineers, Land Surveyors and Geologists (the Board) operating under the jurisdiction of the Governor's Office in the Executive Branch through the Bureau of Professional and Occupational Affairs. The Board is responsible for administering and at times revising the "Engineer, Land Surveyor and Geologist Registration Law" (Act of May 23, 1945, P.L. 913, No. 367 Cl. 63, as Revised in 2012 (Act 367)) and implementing regulations in Title 49 of the Pennsylvania Code, Professional and Vocational Standards, Department of State, Chapter 37, State Board of Professional Engineers, Land Surveyors and Geologists (updated 2014).

The statute and regulations are unambiguous that when you sign and seal any document, you assume legal responsibility for its contents. No-one else; no agency or any party other than the DOS, has any jurisdiction over your license, your professional findings, interpretations or conclusions. When you sign and seal any document you assume legal responsibility for its content and you are prohibited from including any work that was not prepared by persons under your direct supervision or about whose qualifications you are not wholly aware. Moreover, the statute and regulations are likewise clear that all persons, including individual regulatory reviewers, are:

Continued on Page 4

PRACTICE *Continued from Page 3*

- Legally prohibited from inserting themselves into your Practice of Geology if they are not similarly licensed;
- Legally required, if they are licensed themselves, and if they require modifications to your documents as a condition of approval, to assume partial responsibility for their input by sealing those portions of your document they modify or require to be modified and they thereby assume partial responsibility for the findings, interpretations, recommendations and outcomes.

The law states that you must use your seal whenever you practice geology:

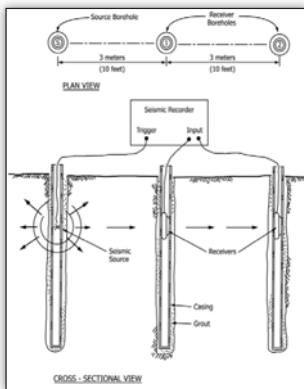
"When a [Professional Geologist] issues final or complete documents to a client for the client's records, or when a registrant submits final or complete documents to public or governmental agencies for final review, the seal and signature of the registrant who prepared or who directed and controlled the preparation of the documents, along with the date of issuance, shall be prominently displayed on the first page of all documents. Facsimile seals shall appear on all subsequent pages of plans or plats."

According to the statute, you actively Practice Geology even when you: simply refer to yourself as a geologist; hand out a business card on which you use the letters PG; communicate on letterhead or sign your name with the same PG suffix; if your company advertises you either publicly or in proposals or other correspondence as being a licensed geologist. Even if you are simply "holding yourself out as able to perform work recognized to be geology" (also defined in the statute) you are practicing geology, as defined. And, if you are practicing geology, you must use your seal.

When you use your seal, you "finalize" your work product pursuant to the authority and responsibilities designated only to a person duly licensed by the Department of State to Practice Geology. No other person not under the direct supervision of the licensee can make or require to be made any modifications to the geologic components of your work, except in a case wherein you decide that suggested modifications result in greater public protection than your original work, in which case you then must re-prepare the work under your direct supervision, and you must sign and seal the revised work product as the legally responsible licensee.



ARM Geophysics solves complex problems and challenges by integrating expertise from Geophysics, Geology, Hydrogeology, Soil Science, Geotechnical and Civil Engineering.

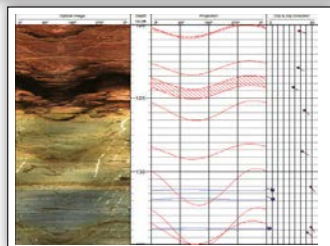


Poisson's Ratio, Shear Modulus, Young's Modulus

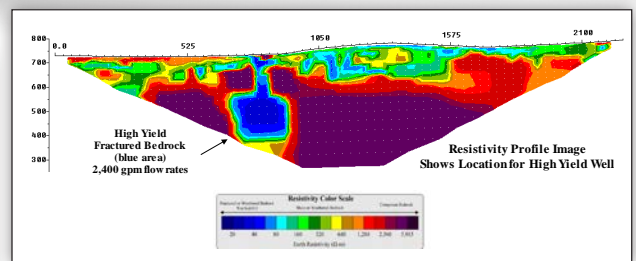
**Cross-Hole Seismic/
Geotechnical Support**

ARM Geophysics has multiple borehole logging systems readily available to help with your next project:

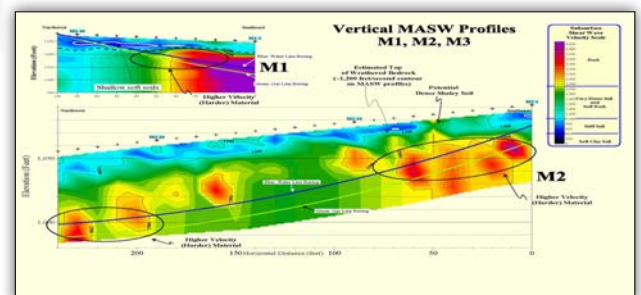
- Truck-mounted Logging Systems
- Portable Logging Systems
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- Formation Resistivity
- Three-Arm Caliper
- Heat Pulse Flow Meter
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CARNEGIE MUSEUM OF NATURAL HISTORY

June 25, 2019

Ms. Rose M. Jeffries
Administrator
Pennsylvania Council of Professional Geologists
116 Forest Drive
Camp Hill, PA 17011

Dear Ms. Jeffries:

Thank you so much for the Pennsylvania Council of Professional Geologists' gift of \$1,250 to Carnegie Museum of Natural History. Your contribution supports Patrons and *lauradanae* Supporters (PA/S). With the assistance of Albert Kollar, PA/S presents its members with inspiring, enriching paleontological programming and information.

The museum's collections and scientific expertise make it one of the most important natural history museums in the world. It is only through the support of friends in the community that we are able to move forward in our ability to offer more progressive exhibitions and programming to our audiences. In supporting this initiative, you have made a vital investment in our mission to inspire an understanding of natural heritage, communicate the interdependence of humanity and nature, and advocate for the protection of the earth and its inhabitants.

Again, thank you for your generous support.

Sincerely,

Nicolas P. Gaudreau
Advancement Director
Carnegie Museum of Natural History
4400 Forbes Avenue
Pittsburgh, PA 15213
Phone: 412.578.2628
Email: GaudreauN@carnegiemnh.org

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ONE OF THE FOUR CARNEGIE MUSEUMS OF PITTSBURGH

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THE FIRST MARCELLUS SHALE WELL: A HISTORY LESSON

(Reprinted/edited with permission of the Pennsylvania Independent Oil and Gas Association (PIOGA))
<https://pioga.org/>



PIOGA often has a trivia question as part of its email newsletter. PIOGA asked the membership for the name of the first Marcellus Shale well drilled in Pennsylvania. The generally accepted answer is Range Resources' Renz #1 well in Washington County. PIOGA Emeritus member Steve Rupert (and retired western Pennsylvania petroleum geologist) contacted PIOGA to set the record straight. Here's what he had to say:

Unfortunately, your answer of the Renz #1 being the first Marcellus Shale well drilled in PA is incorrect. Since my group at Range Resources drilled that well, I know. The Renz #1 was originally drilled as a Trenton-Black River exploratory well, then subsequently treated in the Salina Group formation, then tested in the Lockport, then the Oriskany Sandstone. Finally, after producing poorly from the Oriskany for nearly a year, Bill Zagorsky, VP of Geology, proposed a massive hydraulic fracturing treatment similar to those being utilized in the Barnett of Texas. From there, the rest is history.

However, the first targeted modern Marcellus Shale wells I am aware of were drilled by John Best (also a petroleum geologist), in the 1980s in Washington County, PA. The results were not spectacular, since the volume of water used was way less than that used on the Renz #1. I believe those wells are still producing today.

Steve reached out to John Best for further information, and John replied: John Best drilled the Washington County wells, vertically in Marcellus Shale, for a client, Independent Exploration Company, in about 1980. They drilled five wells total through the Marcellus in 1982. W.J. Lydic, Inc. was the contract operator of the wells. Two of the wells could not be completed due to casing problems. The Ward #1, Hunter #1 and Johnson #1 were all hydraulically fractured in the Marcellus Shale. The job sizes were about 50,000-60,000 gallons of water with a 35% CO₂ assist and 40,000-45,000 pounds of sand (this completion is much smaller than today's hydraulic fracture treatments in horizontal wells). Lydic tried a straight nitrogen frac on the Johnson #1 first, but the treating pressure was too high.

...the first targeted modern Marcellus Shale wells...were drilled by John Best (also a petroleum geologist), in the 1980s in Washington County, PA

John Best bought all three wells in about 1990 and produced them until they were sold about 1 1/2 years ago. John did a refracture treatment on the Johnson #1 well in about 2003 with about 100,000 gallons of "slickwater" and sand. All three wells are still producing.

DEADLINE FOR OUR NEXT NEWSLETTER IS OCTOBER 24, 2019

For more information, contact our PCPG Newsletter Editor and Communications Committee Chairperson - John Torrence, P.G., by **Email** or telephone at 609-932-7090.

2019 PCPG MEMBER SPONSORSHIP RATE

(Rates are listed as amount per issue)

Size	Commitment:	1x	4x
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(Rates are listed as amount per issue)

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