



GEO NEWS

Newsletter of the Association of Environmental & Engineering Geologists and
American Institute of Professional Geologists, Carolinas Sections



SPRING 2009

Bar scale ~ 5 feet

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SAVE THE DATE! APRIL 9 IN RALEIGH, NC

GEONEWS SPRING 2009

Issue Date: March 21, 2009

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Cover Photo: Courtesy of Dr. Ed Medley. The photo was taken about 1993 at MacKerricher Headlands, MacKerricher State Park near Fort Bragg, Mendocino County, California. The photo is of typical Franciscan Complex melange, and indicates scale independence of block size distributions of a melange at outcrop to millimeter scales. That work is in Dr. Medley's PhD dissertation and in the paper to be presented in Raleigh on April 9, 2009. Note the 5 foot scale bar.

GeoNews is a publication of the Carolinas Section of AEG. There are four issues per year, with deadlines and issue publication dates listed below. We publish news of the profession, technical articles, and job openings.

Deadlines for submittal to GeoNews (can be flexible depending on events)

Spring – deadline March 1, issue date March 21
 Summer – deadline June 1, issue date June 21
 Fall – deadline September 1, issue date September 21
 Winter – deadline December 1, issue date December 21

Deadlines for submittals for the National AEG News:

March issue – January 21
 June issue – April 30
 September issue – July 31
 December issue – October 31

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MESSAGE FROM THE CHAIR*By Rick Kolb, AEG Carolinas Section Chair*

Though it's 18 months away, your section is well into planning AEG's 2010 annual meeting that we will host in Charleston. We have about 25 volunteers so far, have established a blog, have most of the committee chairs, and are planning the social events, field trips and technical sessions. However, we need your help and ideas, and I don't mean just verbal support. We need volunteers to help us make the 2010 meeting AEG's best ever annual meeting. This meeting will be a direct reflection on our section, so we need to make it a good show. I know we have the talent to do this, and that talent is reading this newsletter.

Don't be shy. I urge you to volunteer for a committee for the annual meeting. In addition, by volunteering you probably provide ammunition in your argument to attend the 2010 meeting at your company's expense. After all, they like to see their employees and company name listed in programs and on placards. You don't have to lead a committee, just provide ideas and a set of hands and feet. It doesn't have to take a lot of time. I urge you to contact one of the planning committee members, who are listed on page 6 of this newsletter; we'll tell you where we need help, and you can tell us what you'd like to do. I am sure we can find a place for everyone who volunteers. And that goes for our student members, too. Students provide a lot of assistance in running the meeting (and that looks good on your resume, too).

If you've never been to an annual meeting, I urge you to find out some way to get to the next one in Lake Tahoe on September 23-25, as shown on page 20 of this newsletter. I have been to only two annual meetings, but I promise you that it will exceed your expectations. Just think of getting together with 500-800 geologists; even the side conversations outside of the meeting will be interesting, and then there are all the technical sessions. I have found I can't attend all the talks I want to; there are too many in which I am interested, they conflict sometimes, and then sometimes you get into interesting conversations with other geologists and blow off the talks. You will learn a lot both inside and outside the talks, but more importantly (IMHO) you will meet some GREAT people. Start planting ideas in your boss's mind now about why you need to go. A quick search on Expedia turned up an air fare from Raleigh to Reno on American of only \$330.

At our January section meeting in Charlotte, Xavier Barrett of Trigon/Kleinfelder presented a talk on foundations. In less than an hour he presented about two hours of information; it was a great talk, and my head was overfilled by the time he finished. If you were there, you probably learned a lot about things we see every day but never really think about. Section vice chair Paul Weaver

did a great job setting the meeting up, and it went smoothly. We had almost 70 attendees, including a dozen students and faculty from UNC-Charlotte. However, 70 is the maximum for the room we were in, so we may need to find a new place for our Charlotte meeting next January.

Since everyone seems to like the brewpub idea, our next section meeting on April 9 in Raleigh will be at a new location for us: the Carolina Ale House in Brier Creek. See the announcement on page 4 of this newsletter. Though the Ale House doesn't brew their own beer (Raleigh lacks brewpubs of a size that can hold meetings),

they have a very convenient set of taps right in the area where we will be meeting. We will have the Jahns Lecturer, Ed Medley, as our speaker, who will speak on the challenges of characterizing heterogeneous sub-surfaces. The primary goal of the Jahns Lecturer is to meet students. In his road trip through the Carolinas the week of our meeting, we will keep him busy with visits at the College of Charleston, the University of South Carolina, Appalachian State University, Guilford College and the University of North Carolina at Chapel Hill prior to his arrival in Raleigh for our section meeting.

After Raleigh, he's going up to Virginia Tech for his last presentation before returning home to California. A schedule of his talks is on page 30.

Since I became chair of our section in 2006, I have been preaching to anyone who listens on the importance of involving students in AEG, since they are the future of our profession and AEG. In the fall of 2006, we had three student members. In March 2009, we had over 70 student members. Our efforts have been successful by using several strategies: paying for student memberships, paying for student dinners at our section meetings, offering travel grants to students, bringing the Jahns Lecturer to our section; and lastly, through visits to colleges.

In the 2008/09 academic year, AEG members visited UNC-Chapel Hill, -Charlotte and -Wilmington, NC State and Appalachian State to present talks on geology careers in both the public and private sectors. We visited Chapel Hill and State in the previous academic year, too. I have participated in several of these visits, and I admit I have at least as much fun as the students. The students and faculty have responded enthusiastically, and have asked us to come back the next year. Most of the students don't have any idea what we do or what the professional world is like, and they soak up what we have to tell them. See the article on page 13 of this newsletter for a summary of recent visits.

Likewise, AEG strongly supports interactions with students and established a committee, the Student and Young Professional Support Committee, for that purpose (among others). Last year the SYPS Committee launched the Visiting Professional (VP) program, and our visits are now part of this program. In case you're unaware, the committee also established the "New Geolo-



(Continued from page 3)

gists” Facebook page to interface with students and geologists new to the practice. If you have any interest in meeting with students, let any of the board members know. We are always looking for volunteers. Maybe you could be a VP at your alma mater? We really could use some help in South Carolina, where we have yet to begin VP presentations.

Through these efforts, we hope to have Student Chapters at all the colleges with geology departments in the Carolinas. We have started this process at UNC-Chapel Hill and -Charlotte, NC State, Appalachian, and Guilford (VP presentation to come there). If successful, our section will have more student chapters than any other AEG section, and that doesn’t include our efforts to come at Western Carolina, East Carolina, and Clemson. But it takes active AEG members to continue these interactions with students; we can’t let them simply establish a chapter and not keep up our support.

In that light, Matt Harward of UNC-Charlotte tells us he expects to bring a contingent of geology students to Raleigh for the April meeting, and start a field trip the following day, heading west. He has asked for our help in meeting up with students at NC State and UNC-Chapel Hill, who may be able to host them here and then continue on the field trip with them. It should be a great meeting in April, with an interesting speaker and lots of students. I’ll see you there.

Cheers,

Rick Kolb

AEG Carolinas Section Chair

AEG CAROLINAS APRIL 9, 2009 MEETING

Program: The Least You Should Know About Characterizing Geological Chaos
Speaker: Dr. Ed. Medley, 2009 Jahns Distinguished Lecturer, Geosyntec Consultants
Place: Carolina Ale House at Brier Creek, 7981 Skyland Ridge Parkway, Raleigh
Directions: Map and directions on page 5
Date: Thursday April 9, 2009
Time: 6pm social, 7pm dinner, 8pm speaker
Cost: Member/Non-member \$25
 Students: FREE with student ID
Reservations: Please make reservations with Rick Kolb by Monday, April 6, 2009
 Phone: 919-831-8054;
 E-mail: rakolb@mactec.com

RICHARD H. JAHNS LECTURER, DR. ED MEDLEY, SPEAKS IN RALEIGH APRIL 9

The Spring Dinner Meeting of the Carolinas Section of AEG will feature the 2009 Jahns Distinguished Lecturer, Dr. Ed Medley, of Geosyntec Consultants of Oakland, California. The dinner meeting will be held on Thursday, April 9, 2009, at the Carolina Ale House at Brier Creek, 7981 Skyland Ridge Parkway in Raleigh. Directions are below.



Abstract: “The Least You Should Know About Characterizing Geological Chaos”: Bimrocks (block-in-matrix rocks) are geologically complex mixtures of rocks and soils, such as melanges, fault rocks, and weathered rocks. Bimrocks present major challenges to geopractitioners because successful and economical characterizations of rock and soil mixtures are frustrated by their geological, spatial and mechanical variability. This Lecture presents

broad concepts on characterization, design and construction in bimrocks that have been provocative, yet useful, to geopractitioners around the world.

Bio: Dr. Medley is a Senior Consultant in the Oakland, California office of Geosyntec Consultants, international consultancy renown for innovative solutions to geoengineering and environmental problems. Dr Medley started his career in the Applied Earth Sciences in 1969, and now has over 30 years of unusually varied international experience in geotechnical and geological engineering consulting, mineral exploration prospecting, failure investigation, project management, litigation testifying, academic research, teaching, and lecturing. He has an international reputation for his pioneering research into the engineering and geological characterization of bimrocks (block-in-matrix rocks), complex geological mixtures of rock and soil such as melanges, fault rocks, weathered rocks, tills, and colluvium. Most of Dr. Medley’s professional contributions are at freely available at www.bimrocks.geoengineer.org.

Dr. Medley also has experience evaluating geotechnical/geological engineering vulnerabilities and the causes of civil engineering failures, and has provided testimony for attorneys, insurance companies, contractors, and municipal clients. Projects include investigation of major landslides, rockfall hazards, expansive/collapsing soils, tunnel failures, coastal erosion, sinkholes and other

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ground movements in California, Nevada, District of Columbia, Hawaii, Guam, and Papua New Guinea. Dr. Medley has authored/co-authored about 50 professional contributions, and presented well over 150 professional and academic lectures, Short Courses and MCLE Credit courses. He is licensed as an engineer and geologist in the USA, Canada and the United Kingdom.

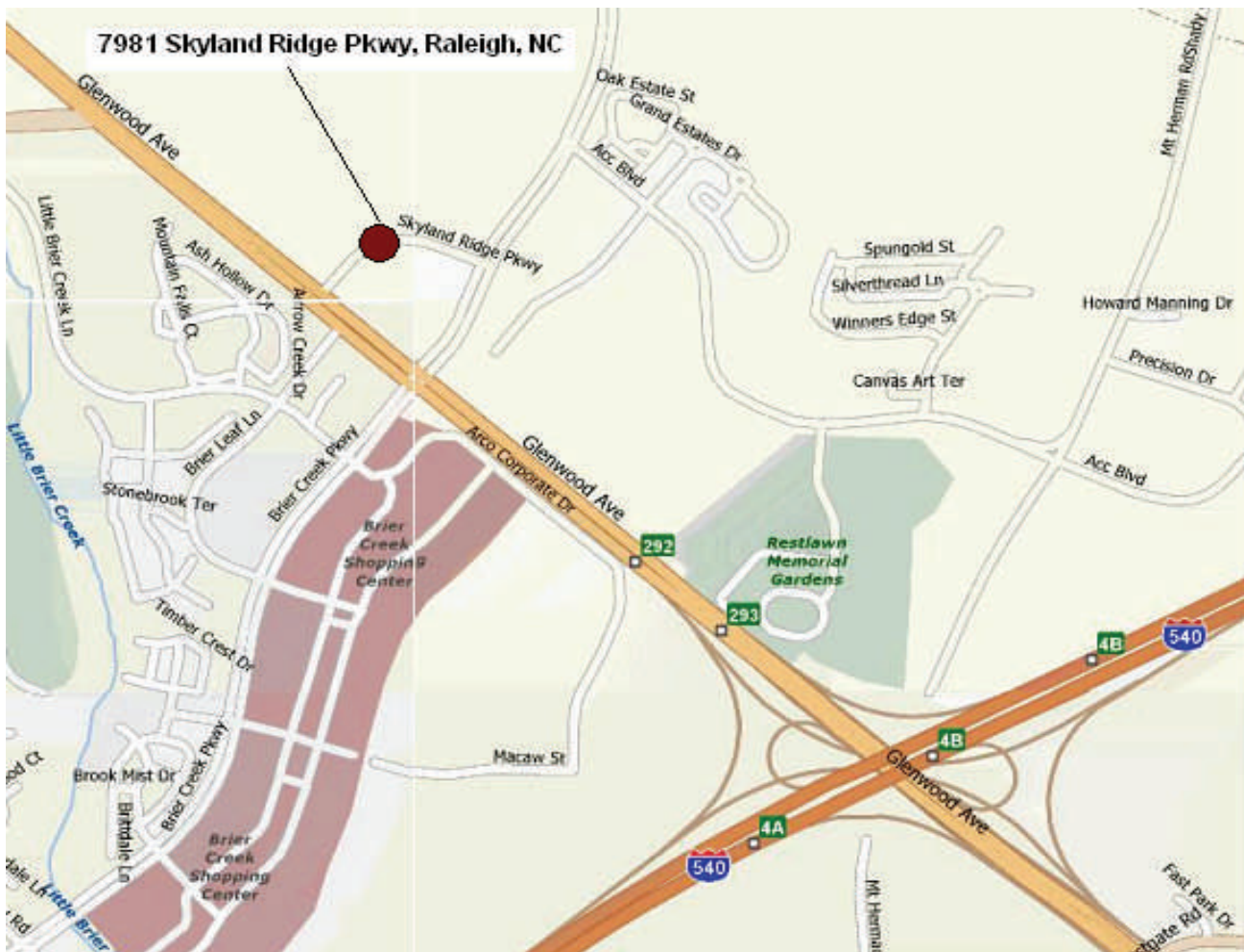
In 1978, Dr. Medley was the first recipient of the Aro A. Aho Memorial Medal for Excellence in Geological Engineering. He was the AEG Marliave Scholar in 1993, awarded for outstanding scholarship in Engineering Geology and Geological Engineering. He was the San Francisco AEG Section Membership Committee Chairman between 1991 and 1993 and the San Francisco Section Short Course Chairman between 1995 and 1996. He has been a member of GSA for many years.

Jahns Distinguished Lecturer: The Richard H. Jahns Distinguished Lecturer is supported by the Association of Environmental & Engineering Geologists and the Geological Society of America. The Association of Environmental & Engineering Geologists and the Engineering Geology Division of the Geological Society of America jointly established the Richard H. Jahns Distinguished

Lectureship in 1988 to commemorate Jahns and to promote student awareness of engineering geology through a series of lectures offered at various locations around the country throughout the year. Richard H. Jahns (1915-1983) was an engineering geologist who had a diverse and distinguished career in academia, consulting, and government.

Dr. Medley will be speaking at several Colleges and Universities while here in the Carolinas; please see the calendar on page 30 for the complete schedule.

Directions: Carolina Ale House at Brier Creek, 7981 Skyland Ridge Parkway in Raleigh. Skyland Ridge Parkway intersects Glenwood Avenue approximately 300 feet north of the traffic light at the main entrance to Brier Creek Commons shopping center, which is located just north of the intersection of I-540 and Glenwood Avenue in northeastern Raleigh. You can see the Ale House from Glenwood Avenue. Coming from the south on Glenwood, turn right onto Skyland Ridge Parkway. Coming from the north on Glenwood, take a left at the traffic light onto Brier Creek Parkway (a right would take you into Brier Creek Commons) and then a left onto Skyland Ridge Parkway.



AEG CAROLINAS TREASURER'S REPORT

By David Duncklee, Treasurer

AEG Carolinas Section Treasurer's Report

December 31, 2008 - February 24, 2009

Balance Carried over

Checking Account	\$2,265.20
Money Market Account	\$15,029.29

INCOME

Dinner Meetings	\$1,295.00
Sponsorships	\$3,842.00
AEG Dues rebates	\$110.00
Defined donations	
AGI Toolkits	
Scholarships	

SUBTOTAL \$5,247.00

EXPENSES

Dinner Meetings	\$2,547.48
Section Beer Glasses	\$0.00
Educational Programs	
AGI Toolkits	\$0.00
Student Memberships	\$425.00
Student Travel Grants	\$0.00
Visiting Professionals	\$49.95
AEG National	
Technical Break Sponsorship	\$500.00

SUBTOTAL \$3,522.43

BALANCE

Checking Account	\$3,989.77
Money Market Account	\$12,042.26
Charleston Planning Account	\$3,000.12

TOTAL **\$19,032.15**

Respectfully Submitted,

David L. Duncklee

Treasurer, AEG Carolinas

2010 ANNUAL AEG MEETING UPDATE AND CALL FOR VOLUNTEERS

By Madelyne Adams

Greetings from the 2010 Meeting Committee! We are hard at work to make your trip to next year's conference in beautiful Charleston, SC the best yet! We will have our special event in a decommissioned aircraft carrier, the U.S.S. Yorktown located in the Charleston Harbor. There will be tours, a catered dinner, music and dancing, and one of the most magnificent views in the city.

Our field trip chairs, Tami Idol and Jenn Bauer, are currently negotiating an all-day field trip to the Savannah River Site prior to the start of the meetings. Don't worry, we haven't forgotten your significant others. We have some amazing day trips in mind to keep them happy and basking in the South Carolina sun!

Of course we always need volunteers. AEG Foundation President, Greg Hempen, is asking for a volunteer to assist with the Silent Auction for the 2009 meeting in Reno, NV. That person could use that experience to help run the silent auction in 2010 (hint, hint.) Anyone who is interested in learning more can check out the various funds at www.aegfoundation.org. In addition, volunteers are needed to help with the planning committee. People are still needed to chair the subcommittees for Short Courses and Symposia.

Likewise, a volunteer is needed to act as Moderator Chair for the speakers acting as moderators for the technical sessions. If you have something to contribute, we welcome volunteers on any committee. The committee descriptions can be found at www.aegcarolinas.org or you may contact Dr. Briget Doyle at doyleb@cofc.edu for more info.

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Committee chairs and helpers are as follows:

AEG Meetings Director: Colorado Events Organizers, Heather Skladanowski

General Chair: Briget Doyle

Field Trip Committee: Co-Chairs: Tami Idol and Jennifer Bauer

Field Trip Guidebook: Jane Gill-Shaler

Finance Manager/Committee: Chair: Rick Kolb

Sponsor Solicitation: Chair: Jane Gill-Shaler

Outstanding Environmental & Engineering Geologic Project Committee: Chair: Raymond Knox

Publicity Committee – Regional: Chair: Gary Rogers

Short Course Committee: Chair: Needed

Teachers Workshop: Chair: Carin Kromm

Special Publication(s) Committee (if any): Chair: needed

Special Activities Committee: Chair: needed

Spouse/Guest Activities and Hospitality Room

Manager/Committee: Chair: Madelyne Adams

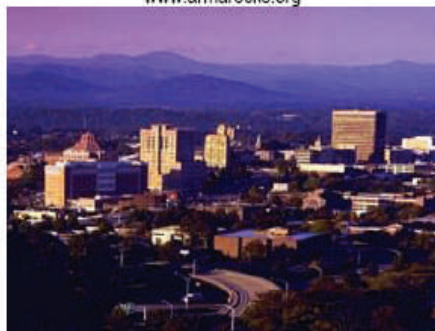
Student Volunteer Coordination: Chair: Norman Levine

Technical Sessions and Symposia Committee: Chair: Paul Weaver

Poster Sessions (can be separate committee): Chair: needed



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GEORAMBLINGS

By Dr. Charles W. Welby

Toward the end of February I ventured westward from Raleigh to the “famed” Bob Hope Airport in Burbank. One-plane service from RDU to Burbank helps avoid the intense traffic around LAX and makes it more convenient to drive northward through the Ridge Basin. The purpose of my trip was to visit friends in Burbank, Taft, and family in Santa Barbara. However, visits to this part of the world always bring forth geologic thoughts. One of the purposes of the trip was to visit the West Kern Oil Museum where artifacts and history of the Midway Sunset Oil Field are on display. The docents who greet you at the door are much more pleasant than the other welcomer, a stuffed, coiled, 30-inch long, rattlesnake with head raised in striking position and representing one of the “hazards” that often greeted those who attended the rigs and wells producing from the field in years gone by. The local paper used to have “body counts” of rattlesnakes dispatched on a daily basis during the summer.

The property of the museum contains the last standing wooden oil rig of the eight thousand or more that once graced the landscape of the Midway Sunset Oilfield area. The museum well was capable of producing a barrel or two of oil per day until recently when it was plugged as a condition of repairing it to make it a part of the museum’s exhibits.

One of the exhibits recently prepared and put on display are fossils from the McKittrick Tar pits. The McKittrick Tar Sands are lesser known than the geologically contemporary La Brea Tar Sands in Los Angeles, one-hundred plus miles to the south. But from them have come a variety of vertebrate fossils including horses and saber tooth tigers as well as rabbits and other small animals.

Fifty years ago the framing of the adit which was used in the late 19th Century and early 20th Century to extract the oil sands for later refining was still visible, and one could observe the heavy crude oozing out of the opening. Today the area of the adit is obscured, and the oil sands are best viewed in a road cut above the location of the initial activity. The oil sand was mined and carried by horse and wagon some seven or eight miles to the south and west where it was refined into kerosene and other products at a spring at the foot of the Temblor Range. The kerosene was then shipped to San Francisco for heating and lighting purposes, and the heavier products were used for road surfacing in general. In later years the springs were used as a water supply for the migrating sheep flocks that moved through this part of California in the spring time, and as a locale for loading the sheep onto trucks for transportation. And somewhere in the family collection of photographs are pictures of people picnicking at or near the site on a sunny

Sunday afternoon in their Sunday best. An interesting place historically. It appears from recent observations that the springs have dried up.

From the area of the tar sands California 58 heads westward and northward eventually across the Temblor Range. The road crosses an area of complex geology which is dominated by the Temblor Formation and overlying Monterey Formation, a widespread siliceous and diatomaceous shale in the California Coast Ranges. As one leaves the McKittrick (the site of a “famous” penny bar) area and heads northward along the base of the Temblor Range, the rolling topography is mostly pasture and rangeland. Some of the slopes show evidence of earth flows; and gullies and gulches of perhaps a wetter time, or that are related to clearing of the scant vegetation, have caused incisions. Atop an isolated hill adjacent to the road lies a family cemetery marked by a metal fence, noting the final resting place of one of the pioneers who settled the area. To the east of the road are scattered oil wells, some still pumping, and others at rest. Farther eastward out into the valley are major fields that have produced for long periods of time and on which new approaches to production of the heavy crude provide additions to the nation’s oil reserves. Much of the production is shallow at depths of 1000 to 2000 ft.

As one drives up CA 58 into the Temblor Range, the intense folding of the Miocene Monterey Formation (diatomaceous siliceous shale) with many minor faults, overturned beds, and all the good things that make a person attuned to structural geology interested, as well as frustrated at times, may be observed, if the narrowness of the road and some of the sharp curves do not distress one. Of passing interest, perhaps, is the fact that the local ground squirrels have constructed burrows into the road cuts, in some cases aligning the burrows along a particular horizon in the Monterey Formation. It was the experience of exploring some of the canyons leading away from the road as well as the road cuts that piqued my initial interest in things geological.

At one point near the crest a drainage box has been constructed, which takes runoff from the road and puts it into a plastic drain pipe that carries the water

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down several hundred feet into a pre-existing gulley. "Strange things" happen when water flows out of a 12-inch pipe that has about a 70 degree inclination from its intake to the discharge point. The lower two-thirds of the gulley show evidence of perhaps as much as a couple of feet of incision into the pre-existing gulley. The drainage improvement did not exist when I first ventured up this road sometime in the Early Ordovician in a Model-T Ford on a Sunday outing, or enjoyed the thrill of a 40 mph coast on a bicycle down the road toward McKittrick.

Some blue moons ago one of my friends spent part of his summer vacation employment by a major oil company helping dig by hand a trench for collecting samples from the Temblor and Monterey formations on the east side of the Temblor Range. The location of the trench lay above the location of a "tight well" drilled by a competing petroleum producing company. What was sought from the samples was information about the producing horizon of the wildcat well. The beds along the eastern edge of the Temblor Range dipped eastward into the area of the trap, and careful sampling of the beds along the Temblor Range and determination of the foraminiferal zones in the samples "told all" to the employer of my friend. So from such investigations arise ideas about other areas that might produce oil and gas,

and the instance might be termed "forensic geology or paleontology." The bugs tell all, perhaps.

Wandering farther along California 58, one eventually enters the Carrizo Plain with its dry land agricultural activities, subdivisions laid out but never developed because of the lack of water supplies, and the scarp of the San Andreas Fault. The scarp is a 20-ft or more rise on the road as one drives westward. On passing across the San Andreas Fault, one moves into the Salinian Block of the western portion of California and the Pacific Plate. The boundary faults of this block are the San Andreas Fault Zone and the Sur-Nacimiento-Rinconada Fault Zone, and the structures found in the La Panza area are undoubtedly related to movements of the Salinian Block within the boundaries of these two rupture zones.

Skirting the northern edge of the Carrizo Plain National Monument, home to a number of endangered species and sites of Native American rock paintings, the road proceeds past Syncline Hill where a fossil locality lies at the base of the Santa Margarita Sandstone. The locality, mentioned in the literature, once contained a number of specimens of *Ostrea gigantea*. For those who like oysters on the half shell, the shells of the specimens are a foot or so long; so there was a lot of "oyster on the half shell."

(Continued on page 10)

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Close to the northern “nose” of Syncline Hill, in a more modern location than when I first ventured into the La Panza Quadrangle, California 58 proceeds to the west-northwest. If one turns where the route to La Panza and the Pozo summit was once the main road, one eventually comes to a dirt road that is impassible to RV and camping trailer vehicles and to “normal” passenger cars during wet weather.

Near where the dirt road begins to climb into the Los Padres National Forest and the headwaters of the Salinas River, stands a house and some outbuildings. I remember (a bit faintly, perhaps) this as the location of a private “museum” of artifacts from the La Panza area, largely a museum of weapons of small scale destruction. One of them was the blood-stained axe head that had been used to dispatch someone’s rival to a piece of property or to support a robbery. Some “fascinating” history of what was once a remote part of the world and which in the late 1800s and early 1900s was an area for placer gold mining.

And so with these last “historical facts” of some of California’s history, I note that Pozo lies east of Santa Margarita and east of the upper limit of the Santa Margarita Reservoir. It should also be noted that this is a recreational area with off-trail roads in the Los Padres National Forest.

A few days later I flew from Santa Barbara to Salt Lake City en route to RDU. The flight path out of Santa Barbara that day took us south of Santa Maria and eastward over the northern end of Carrizo Plain. From the vantage of my window seat the route from the Temblor Range across the Carrizo Plain and around Syncline Hill and to Santa Margarita was laid out through the clouds and haze, and one could see the effects of faulting within the La Panza Quadrangle and some inkling of where the Cretaceous beds underlying the Tertiary sequence outcropped along the eastern edge of the basal granite of the Salinian Block. Some Fun!!

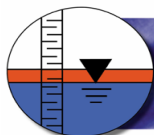
And for a final word, for this quarter’s ramblings (I may have used it before, but it may help the golfers who read this column to have it repeated.):

Local Rule at the Kumpala Golf Club in Uganda: “Player gets relief from hippopotamus footprints.” Perhaps the same rule should apply for crocodile footprints for Floridian golf courses?? Or just the crocodiles themselves??

Charles W. Welby

Dr. Charles W. Welby is a former section chair for AEG and a regular contributor to this newsletter. He may be reached at cww_ral@hotmail.com.

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EDUCATION SECTION

GRADUATION PROJECT MENTORS NEEDED FOR HIGH SCHOOL STUDENTS

By Sarah Yelton, NC DENR

Are you a professional in an environmental or natural resources field? Are you willing to mentor a high school student interested in your area of expertise?

Beginning with the class of 2010, all NC students are required to complete a Graduation Project in order to earn their high school diploma. In an effort to support and encourage students wishing to engage in an environment-related project, the Office of Environmental Education is identifying individuals within North Carolina who have expertise and experience with an environmental topic and who would agree to serve as a mentor if approached by a student or teacher. We currently have 117 environmental mentors listed in 63 counties for topics ranging from agriculture and air to wastewater and wetlands. This is a wonderful opportunity for using your community service leave.

Please fill out the Mentor Survey (http://www.surveymonkey.com/s.aspx?sm=VpG4ySzk0Fe3hvJ6NQBx_2fQ_3d_3d) if you or your organization are interested in mentoring a student in your community on an environment-related graduation project. The information you submit will be reviewed by OEE staff, and with your permission, posted on the OEE

Graduation Project web site, (<http://www.eenorthcarolina.org/gradproject.html>).

Environmental mentors are especially needed to work with students in the following counties: Alexander, Alleghany, Bertie, Bladen, Brunswick, Camden, Cherokee, Chowan, Clay, Cleveland, Currituck, Davie, Duplin, Edgecombe, Gates, Graham, Greene, Halifax, Hertford, Hyde, Jackson, Jones, Lenoir, Lincoln, Macon, Martin, Nash, Northampton, Pamlico, Pasquotank, Pender, Perquimans, Polk, Surry, Swain, Washington, Watauga

According to the NC Department of Public Instruction, a graduation project mentor is a community and/or faculty member who has expertise and experience with the project topic and accepts the following responsibilities:

- Allocates time and makes arrangements to work with the student on the project.
- Provides suggestions and advice to the student on applicable aspects of the research paper, product, portfolio, and oral presentation.
- Provides accurate and honest verification of the student's work.
- Serves as a support and resource to the student in all stages of the graduation project process.
- Signs and returns all required forms.

Anyone from the community who is 21 years of age or older and is considered to be an expert in the field a student is researching for the project may serve as a graduation project mentor. Mentors must follow the school or school system's volunteering/mentoring policies and approval procedures, which varies across the state. Please check with the student's school to find out what policies are in place if approached to act as a mentor. Although the actual time commitment will vary by project and student needs, mentors should be committed to supporting students through the end stages of their project.

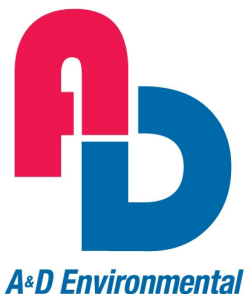
Sarah Yelton is the PreK-12 Environmental Education Program Manager, Office of Environmental Education, NC Department of Environment and Natural Resources. She may be reached for comment at 919.733.0711



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EDUCATION SECTION

PDH V. CEU

From PDHOnline, with permission

What's in an acronym? **Professional Development Hour (PDH)** is one hour of instruction, presentation or study. The term PDH is commonly used in the engineering community. The maximum PDH for a seminar that starts at 8 a.m. and ends at 5 p.m. with an hour lunch is eight (8). Short breaks are permissible as long as a minimum of 50 minutes of presentation/participation/study per hour is undertaken. If there are no breaks, or there are breaks of less than 10 minutes per hour, no additional time may be claimed. PDH cannot exceed the actual contact clock hours. Round off PDH to the nearest half hour.

Continuing Education Unit (CEU) is a recognized unit for continuing education and training. One CEU is awarded for each 10 contact hours of instruction or study. When a sponsor of PDH activities fully follows the requirements of the International Association for Continuing Education and Training (IACET) in awarding CEU's, 10 PDHs will be credited for 1 CEU. However, some organizations may advertise CEU credit without having met the requirements of the IACET. In addition, some organizations report one CEU of credit for each contact hour of instruction, which is equivalent to one PDH only. <http://www.pdhonline.org/>

APRIL 16 ANADARKO STUDENT RESEARCH SYMPOSIUM NEEDS JUDGES AND AWARDS

The 7th Annual Anadarko Student Research Symposium will be held all day Thursday, April 16th at the Friday Center at University of North Carolina, Chapel Hill. The Symposium will run from 9 am to 4, with an award ceremony at 4:30 pm. Drew Coleman, the convener, is in need of judges and awards for this important showcase for student projects and research.

The Anadarko Symposium provides an opportunity for students to discuss their research with peers, faculty and industry leaders in a friendly and professional forum. Anadarko will pick up the bill for lunch and offer cash prizes for the best presentations and/or posters.

All students, from undergraduates on up, are invited to participate. Graduate students and undergraduate honors candidates are required to participate. Undergraduates engaged in senior independent research are also strongly encouraged to participate. All students, faculty and staff are invited to attend.

For more information, or to donate your time and expertise as a judge, contact Drew Coleman, dcoleman@unc.edu.

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EDUCATION SECTION

VISITING PROFESSIONALS PRESENTATIONS AT FOUR UNIVERSITIES

By Rick Kolb, AEG Carolinas Section Chair

Carolinas Section members made organized visits to Appalachian State, and UNC-Wilmington, -Chapel Hill and -Charlotte in the first quarter of 2009. These presentations are part of AEG's Visiting Professional program (details on the AEG website), whereby members visit colleges and talk, in our case, about careers in geology. Our section has encouraged members to contact colleges and arrange visits, and during the past academic year these efforts have come to fruition.

Typically groups of three to five professionals from both the public and private sectors visit the colleges. Each person talks for 15 to 20 minutes about their geology careers, how they got where they were, and advice for students. Everyone has a good time. Our goal is to conduct an annual visit to each university in the Carolinas that has a geology program. We have yet to visit Guilford, Western Carolina and East Carolina, but we're working on vis-

its there, too. Interested in participating? Contact anyone on the board.

The paragraphs below summarize our visits from the first quarter of 2009.

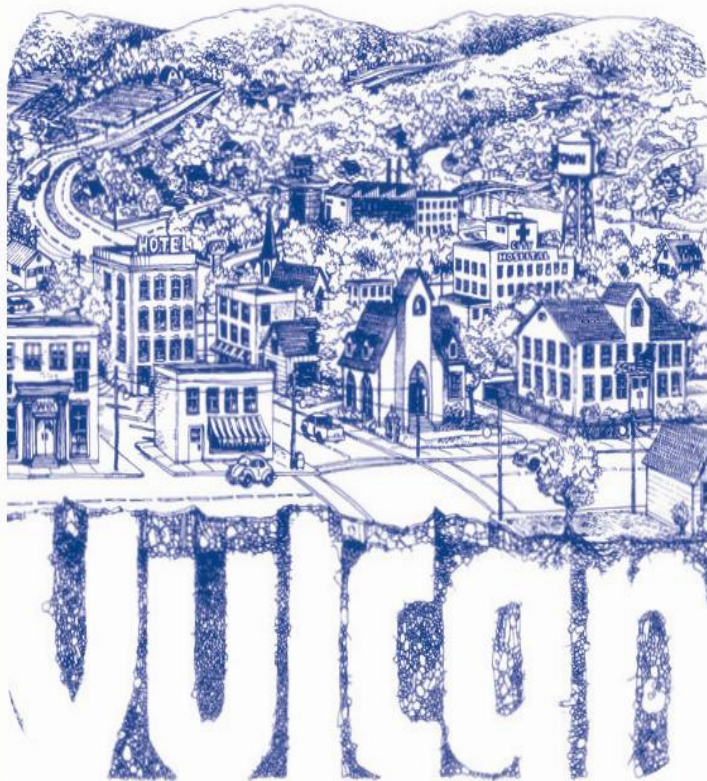
UNC-Wilmington, by Gary Rogers

UNC-Wilmington Shocked by News from Working Geologists! Three gainfully employed geologists visited UNC-Wilmington on January 21, 2009 to talk with students and professors at one of their departmental seminars. Dr. Nancy Grindley and Dr. Eric Henry were our gracious hosts and lured about 35 students into the room with several boxes of hot pizza. The presenters were **Brad Worley**, L.G. (Project Geological Engineer with NCDOT), **Chris Pruneau**, P.G. (Senior Principal, Wilmington Office Manager, MACTEC Engineering and Consulting, Inc.), and **Gary Rogers**, P.G. (Senior Associate, Schnabel Engineering).

We each gave our summary of what we have done as "practicing" geologists and talked about various career paths and areas of specialization. The various subjects included geotechnical investigations for foundation design on new/relocated bridges and/or roadways; hydrogeology

(Continued on page 14)

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EDUCATION SECTION

(Continued from page 13)

and engineering geology for environmental, tunnel, dam, and power projects; and hydrogeology applied to contamination assessment/remediation and siting studies for nuclear energy projects.

We also talked at length about what non-technical skills are required to get your first job and succeed in the profession. Skills such as logging soils and rock, being able and willing to work in the heat and ticks, having the people skills to get grumpy drillers to do what needs to be done, and to go the extra mile required of a professional.

(Note: The latest issues of *AEG News* [December 2008 and March 2009] feature a two part series on careers in geology, "Thoughts on a Career in Geology," by Gary Rogers.)

UNC-Chapel Hill, by Rick Kolb

We made our second trip to Chapel Hill on January 29, 2009 (first trip was in fall of 2007). Presenters this time were **Jim Simons**, Carolina alumnus and State Geologist; **Brad Worley** of the North Carolina Department of Transportation; **Ann Borden** of Solutions IES; **Ned Billington** of Schnabel Engineering and **Rick Kolb** of MACTEC Engineering. We presented to approximately

30 students and faculty, and also provided pizza as an incentive to attend. Our meeting was arranged with enthusiasm by **Jackie Ratner**, president of UNC's geology club. We had quite a few questions after our presentations but we had to vacate the classroom for a class that followed our presentations. About 15 students joined the presenters at Top of the Hill for a few beers and further conversations.

Appalachian State, by Paul Weaver

On February 13, 2009, a group of professionals from the Carolinas Section of AEG held a seminar at Appalachian State University on careers in Geology. Representing AEG were **Jennifer Bauer** of the NC Geological Survey, **Rick Lockamy** of the North Carolina Department of Transportation, **Kristen Lloyd** of MACTEC Engineering, and **Paul Weaver** of Trigon/Kleinfelder. The seminar began with the SYPS Committee Powerpoint presentation followed by a short presentation from the professionals about what they do as geologists in the "real world" and what they wish they had been told when they were still students. The seminar was attended by 23 students and 3 professors. Some of the questions asked by the students covered subjects such as "Should I go to graduate school?", "What type of pay can I expect as a geologist?",

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EDUCATION SECTION

(Continued from page 14)

“Is geophysics important in the modern working world of geologists?”, “Are internships available?”, and “Is there reciprocity with Licensure?”.

The seminar was followed by an informal social during which time the students could ask the visiting professionals questions that may not have wanted to ask in front of the group, or that they may not have thought of during the formal question and answer session. The meeting was thoroughly enjoyed by the students and professionals, and we hope that similar sessions at other universities prove to be as worthwhile for both the students and professionals as this meeting at ASU proved to be.

UNC-Charlotte, by Rick Kolb

We went to Charlotte on February 18, 2009. Presenters were **Rebecca Latham** of the North Carolina Geological Survey; **John Rogers** of the North Carolina De-

partment of Transportation; **Malcolm Schaeffer** of HDR/DTA, and **Rick Kolb** of MACTEC Engineering. We presented to approximately 50 students and faculty, and again provided pizza as an incentive to attend. One of the professors gave out extra credit for his geology 101 students to attend. Maybe we enticed some new majors? Our meeting was arranged by **Matt Harward** of UNC-C's geology club. As in Chapel Hill, we had a lot of questions after our presentations but we had to vacate the classroom for a class that followed our presentations. About 20 students and faculty joined the presenters at Flying Saucer afterwards for a few beers and further conversations.

Rick Kolb is AEG Carolinas Section Chair and member of AEG's Student and Young Professional Support Committee. He may be reached at RA-Kolb@MACTEC.com.

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Photo Credit: Paul Puxer, Photo Charlotte



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Monday and Tuesday, May 4 and 5, 2009

Hilton Raleigh-Durham Airport at Research Triangle Park, Durham, North Carolina

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SHORT COURSE
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Costs are below. Please mail your registration check made out to AEG – Carolinas, c/o David Duncklee, Treasurer, Duncklee and Dunham, 511 Keisler Drive, Suite 102, Cary, NC 27518.

Questions? Call Gary Rogers at (336) 274-9456 or email at grogers@schnebel-eng.com.

▼ OVERVIEW

This is an introductory geochemistry course for scientists and engineers working in the fields of soil and groundwater site characterization, contamination, and remediation. It is designed to provide a thorough understanding of the principles of geochemistry as applied to water/rock interactions, with a focus on site characterization and contaminant fate and transport.

Basic chemical interactions occurring between water and soil/aquifer material that determine the composition of natural water and affect the migration of contaminants will be covered. Data collection, presentation, and interpretation of results will be discussed. Examples that illustrate the concepts are described throughout the class.

A basic knowledge of water/rock chemical reactions is necessary to understand the natural system and how the composition of groundwater evolves along its flowpath in the subsurface. Geochemistry is also necessary to evaluate the natural attenuation of organic contaminants and to design remediation methods to remove or immobilize inorganic contaminants (metals and non-metals) in the subsurface.

This course provides an introduction to the important geochemical processes that affect the dissolved constituents of groundwater. These processes include solution complexation reactions, solution/gas interactions, mineral dissolution/precipitation, oxidation/reduction, and adsorption/desorption.

To understand the importance of these processes at a particular site, sufficient groundwater and solid-phase data must be collected. Therefore, this class will include a discussion of data-collection requirements and quality assurance of the data.

Throughout the course, the application of geochemical site characterization and data evaluation will be presented with the goal of applying this information to contaminant fate-and-transport modeling and remediation-system design.

▼ WHO SHOULD ATTEND

- Geologists and environmental scientists involved with site characterization and contamination assessment;
- Environmental engineers involved with remediation design at contaminated sites;
- Hydrologists working with contaminant fate and transport;
- Project managers at environmental consulting firms;
- Government Agency regulatory staff;
- Representatives from industries with sites requiring contaminant characterization and remediation.

▼ **CEUs** CEUs (Continuing Education Units) 16 hours.

▼ COST

Cost of this two-day short course is \$250 before April 15, 2009 and \$300 after. Vendor booths are available at a cost of \$300 for AEG sponsors and \$400 for non-sponsors, and include one participant registration. The short course includes lunches, morning and afternoon drinks and snacks, and a course manual for later reference. Students and teachers may attend at a reduced price of \$150.

A block of hotel rooms has been reserved at the Hilton Raleigh-Durham Airport (RDU) at Research Triangle Park at \$95 per night plus tax for government employees and \$149 per night plus tax for all others. Hotel reservations must be made by April 15, 2009 for this rate.

▼ DIRECTIONS

The AEG Carolinas geochemistry short course will be held at the Hilton RDU at Research Triangle Park at 4810 Page Creek Lane, Durham, NC 27703. (919) 941-6000.

From Downtown Raleigh take Interstate 40W. Take Exit #282 (Page Rd.) At bottom of exit, turn right and go through the first stop light. After the light, make the first

right onto Creekstone Drive (Sleep Inn is at the same turn). Follow the driveway to Hilton RDU entrance.

From Downtown Durham take Interstate 40E. Take Exit #282 (Page Rd.). At bottom of exit, turn right and make an immediate right onto Creekstone Drive (Sleep Inn is at the same turn). Follow the driveway to Hilton RDU entrance.

▼ INSTRUCTOR BIO

Bill Deutsch holds a B.S. and M.S. in geological sciences from the University of Washington, Seattle. He has worked for Battelle in applied research for 12 years and as a consultant with Woodward-Clyde/URS (15 years) and Jacobs Engineering (2 years). His project experience includes environmental assessments and investigations of landfills, refineries, pesticides plants, military bases, mines and mills, federal weapons facilities and a wide variety of additional

industrial sites. In addition, he has participated in remedial designs of sites contaminated with metals, radionuclides, pesticides, solvents, petroleum hydrocarbons and ordnance compounds. Since 1985, Bill has instructed more than 100 courses on groundwater geochemistry and geochemical modeling. He is the author of *Groundwater Geochemistry*, published by CRC Press, and is a senior geochemist in the Battelle Pacific Northwest Division.

▼ PRELIMINARY SCHEDULE AND AGENDA

Day 1 - Geochemical Processes

- 8:00-10:00 **The Geochemical System, Chemical Reactions, and Data Collection Requirements**
 - o Definitions, Concentration Units
 - o Solution Electrical Balance
 - o Trilinear Diagrams
- 10:15-12:00 **Gas Phase Reactions and the Carbonate System**
 - o Henry's Law
 - o Partial Pressure
 - o Solution Speciation
 - o pH
- 12:00 Noon **Lunch**
- 1:00-3:00 **Mineral Dissolution/Precipitation**
 - o Chemical Equilibrium
 - o Mineral Solubility
 - o Solution Factors affecting Solubility
 - o Reactive Minerals
- 3:15-5:00 **Oxidation/Reduction Reactions**
 - o Electron Transfer
 - o Acid Mine Drainage
 - o Landfill Environment
 - o Eh Measurement

Day 2 - Contaminant Fate and Transport

- 8:00-9:30 **Adsorption/Desorption Reactions**
 - o Surface Complexation
 - o Kds and other Isotherms
 - o Retardation Factor
 - o Solid Phase Adsorption Characterization
- 9:45-11:30 **Geochemical Processes Controlling Fate and Transport of Inorganic Contaminants**
 - o Natural Attenuation
 - o Adsorption/Desorption Effects
 - o Mineral Precipitation/Dissolution Effects
 - o Limitations on Natural Attenuation
 - o Conservative Contaminants
- 11:30-12:30 **Lunch**
- 12:30-2:15 **Contaminant Fate and Transport Modeling**
 - o Conceptual Geochemical Site Models
 - o Computer Codes for Geochemical Modeling
 - o Examples (P_{CO_2} and pH, calcite solubility, arsenic adsorption)
- 2:30-4:00 **Class Exercise on Site Characterization and Contaminant Transport**

AEG Carolinas Section
c/o David Duncklee
Duncklee & Dunham
511 Keisler Drive, Suite 102
Cary, NC 27518

MARCH 28 SCIENCE FAIR STILL NEEDS JUDGES

Email from Beth Harris

The NC Science and Engineering Fair still needs a few more judges for the State Fair Saturday, March 28 at Meredith College. We particularly need people with engineering and environmental engineering backgrounds. Please contact **Eleanor Hasse** eehasse@bellsouth.net if you are interested in helping.

CALL FOR PAPERS, AEG 2009 ANNUAL MTG., TAHOE

The Association of Environmental and Engineering Geologists will host its 2009 Annual Meeting in beautiful Lake Tahoe - Sept. 21 to 26, 2009. You are invited to submit a one-page abstract by April 1st. For abstract submission instructions, visit the AEG website at: www.aegweb.org or use the following links for more information: http://www.aegweb.org/files/public/Microsoft_Word_AEG_Call_for_Abstracts_Website.pdf http://www.aegweb.org/files/public/2nd_email_blast_document.pdf

AGI RELEASES GEOSCIENCE WORKFORCE DATA POWERPOINTS

Press Release from AGI

The American Geological Institute has posted a PowerPoint presentation of all 147 graphs and charts published in the Status of the Geoscience Workforce Report (SGW), which was released in February of 2009. Demographics by age, race, gender, and industry type; student and research funding statistics; commodity pricing, the GDP of the geosciences and more, are all graphed in an easy to use format. AGI is releasing this resource to assist members of the geosciences community in preparing presentations to their colleagues and other stakeholders about the issues and opportunities in the geosciences. These slides may be used freely with proper citation.. To view this presentation and the complete report, go to <http://www.agiweb.org/workforce/reports.html>.

The American Geological Institute is a nonprofit federation of 45 geoscientific and professional associations that represents more than 120,000 geologists, geophysicists and other earth scientists. .

For more information, contact Leila Gonzales lmg@agiweb.org or go to the AGI website, www.agiweb.org.



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ABOUT OUR MEMBERS: David Duncklee, AEG Carolinas Treasurer

After moving to NC at 12 years of age from my birthplace in Allentown, PA, I attended school in Fayetteville, graduating from Douglas Byrd High School in 1976. After a two-year stint at NCSU in Engineering, I attended and graduated from Wake Technical College with a degree in business data processing and almost became a computer programmer. However, a correspondence course in geology, with papers graded by Dr. Charles Welby at NCSU, captured my interest and I returned to NCSU as a geology major, graduating with a B.S. in 1983. (Ed: See Dr. Welby's column on page 8 of this issue).


Now married, after briefly attending graduate school in geophysics, it was obvious it was time to go to work, and I was fortunate to be hired during a poor economic climate by Mr. Jack Amar of S&ME in Charlotte. Geotechnical subsurface evaluations kept me busy for two years in Charlotte until my first leaking underground storage tank project piqued my interest in the ground water and environmental field. A transfer to the S&ME Environmental Services office in Cary, NC was an exciting change for me, allowing me to work with and learn from several exceptional environmental engineers and hydrogeologists including Bryson Trexler and Jim Narkunas. Also, Pam and I started to have a family.



After 4 ½ years with S&ME, with the environmental field expanding quickly, I joined Phil Rahn at Aquaterra where I worked with a terrific team of geologists and hydrogeologists for 8 years in their Cary office. Interestingly, a few other graduates from the NCSU '83 geology class also worked with Aquaterra. The opportunities and my co-workers at Aquaterra were tremendous. In addition to growing at work, my wife Pam and I continued to grow our family, but decided five children, three girls and two boys, was enough after all.

In 1996, the bug to take a big chance and start a new firm was too great to pass up. So, with our two youngest still in diapers, and Pam working as a nurse at Wake Medical Center at all kinds of odd hours, Tom Dunham and I took a big risk and started Duncklee & Dunham. We got off to a very good start and have never looked back, and are about to enter our 14th year. We have been very fortunate to have so many terrific employees work with us over the years; several of them who we have worked with since the S&ME and Aquaterra days, too. Furthermore, Tom and I continue to make an excellent team; we have similar philosophies in general, but different key interests in running the company, which means we do not overlap duties, and together make a good team.

Pam has been able to stay at home and devote her time and energy raising the kids. The three oldest are in college, one in graduate school, another considering law school, the third thinking of environmental science or computers. The two youngest are doing well at school, too, while being fascinated with the Jonas Brothers.




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Last Call for Papers - Abstracts due April 1st

AEG - will host its 2009 Annual Meeting in beautiful Lake Tahoe - Sept. 21 to 26, 2009.

You are invited to submit a one-page abstract by April 1st. For abstract submission instructions, visit the AEG website or use the following link: <http://www.aegweb.org/files/public/Microsoft Word AEG Call for Abstracts Website.pdf>

Technical Sessions include:

Geologic Hazards

Earthquake, Seismic Hazards and their Mitigation
Paleoseismology and Faulting
Landsliding and their Mitigation
Subsidence and Fissuring due to Withdrawal

Geologic Characterizations

Rock Mass Characterizations, Rock Mechanics
Soil Characterizations, Expansive Soils, Liquefaction
Construction Materials Investigations

Geologic Studies for Engineering Structures

Dams
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Professional Education and Practice

History of Engineering Geology
Future of Engineering Geology
Business of EG Practice
Regulatory Practice
Geologic Education
Professional Registration

Environmental Hazards

Contaminate Geology and its Remediation
Mining Reclamation
Naturally Occurring Environmental Hazards & their Remediation

Environmental and Resource Protection

Groundwater Resource Characterization, Conjunctive Use
Coastal Geology
Surficial Geology, Watershed Restoration, Wetlands, Sedimentation, Erosion
Fluvial Geomorphology

Geologic Investigations and Reporting

Field Investigation, Mapping
Geophysics
Computer Applications, GIS
Geo-visualizations Techniques

For registration information, visit www.aegweb.org
For more information, contact Heather at 1.877.236.0411 or meetings@aegweb.org

AEG Awards Committee Solicitation for Nominations for 2009

The AEG Awards committee is soliciting nominations for the three awards for which our committee is responsible. The Awards are: Claire P. Holdredge Award, Floyd T. Johnston Service Award, and the Douglas R. Piteau Outstanding Young Member Award. Please consider making a nomination. There are many deserving members, but they must be nominated for consideration. Send nominations to the Committee Chair (Roz Munro) for the Awards Committee to evaluate. The AEG Awards Committee consists of: Rosalind Munro (Chair), Jessica Humble, and Kenneth Neal.

1. The Claire P. Holdredge Award is presented for a publication within the previous five years by an AEG Member that is judged to be an outstanding contribution to the Environmental & Engineering Geology Profession. Nominations for this award are made by the membership at large to the Awards Committee. Please submit a nomination with the name(s) of the AEG publication member (s), the title of the publication, and the publisher information.

2. The Floyd T. Johnston Service Award is presented to an AEG Member for outstanding active and

faithful service to the Association over a minimum period of nine years to coincide with Floyd's tenure as Executive Director. Contemporary Board members are not eligible until one year after leaving office. Nominations for this award are made by the membership at large to the Awards Committee. For nominations to be valid, they must be endorsed by three members having different AEG Section affiliations. Please submit a nomination with the nominee endorsed by the required three members from different AEG Sections.

3. The Douglas R. Piteau Outstanding Young Member Award is given presented to an AEG Member who is age 35 or under (who is not 36 until January 1 in the year following the Annual Meeting at which the Award is given) and has excelled, either singly or in combination, in the areas of Technical Accomplishment, Service to the Association, and/or Service to the Environmental & Engineering Geology Profession. Please submit your nomination, or a nomination by your AEG Section. Each AEG Section may choose and publicize the name of an individual deserving of the Award and nominate that individual to the Award Committee.

All Award nominations must be submitted to the AEG Awards Committee by March 31st. All nominations for the Awards must be supported by descriptions of the individual's accomplishments and/or service to the industry or publication's merit (as appropriate to the award). The AEG Awards Committee, at its discretion, selects the final candidates from the nominees for each Award. Then the AEG Awards Committee forwards the Award selection recommendations to the President for confirmation. Please send or email your nomination to the Awards Committee Chair at the address below.

Rosalind Munro, Chair
e-mail: rmunro@mactec.com
(323) 889-5366
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5628 E. Slauson Avenue, Los Angeles, CA 90040



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JOB OPPORTUNITIES

Geologist wanted at MACTEC Wilmington

Live at the beach!! MACTEC's Wilmington office is looking for geologists:

Position: Degreed Geologists, 2 to 8 years experience in subsurface and hydrogeological investigations for environmental and geotechnical projects.

Salary: Commensurate with experience

Send or email resume to:

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5710 Oleander Drive

Wilmington, NC 28411

Attention: Chris Pruneau

Phone 910 452-1185

email: jcpruneau@mactec.com

BUSINESS DEVELOPMENT/PROJECT MANAGER

The Raleigh branch office of Environmental Products and Services of Vermont, Inc. is recruiting for an experienced individual to serve as a Business Development/Project Manager. Experience in environmental and industrial services is a must. The salary for this position is negotiable. EP&S of Vt., Inc. provides a variety of environmental services---24 Hr. Emergency Spill Response, UST/AST removal, Hazardous and Non-Hazardous waste disposal, Vacuum truck services, Industrial cleaning, Abatement, and more. Our primary clients are in the private sector---manufacturing, distribution, transportation, and consulting. Qualified candidates can forward a resume to Peter Marotta via email at pmarotta@epsofvermont.com. Faxed resumes can be sent to 919-852-1997.

Peter Marotta, Branch Manager

EP&S of Vermont, Inc.

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Raleigh, NC 27607

919-852-3595

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Carin Kromm, clkromm@mactec.com

MACTEC is headquartered in Atlanta and is a leading consulting firm that provides engineering, environmental, and construction services. MACTEC has over 3,000 employees in 80 U.S. locations and has offices in Asheville, Charlotte, Greensboro, Research Triangle Park, Raleigh and Wilmington, North Carolina and in Greenville and Columbia, South Carolina.

ANNOUNCEMENTS

Soil Solutions Changes Name to Evo Corp.

Soil Solutions, Inc. announced Nov. 20 the re-naming and new branding of the company as Evo Corporation. The new name and associated marketing materials were unveiled for employees recently at the company's Styers Ferry, N.C., location.

The company, founded in 1991, created a reputation as a soil remediation and environmental services company. The company's patented and innovative Mobile Steam Distillation (TM) process has been the cornerstone of its growth over the past few years. Building on that reputation, the company is now touting a more diversified portfolio that includes industrial hydroblasting and de-commissioning services, land-related restoration and clearing, waste management services, and the associated transportation of both hazardous and non-hazardous materials.

"We recognized several years ago that the range of services needed for an environmentally based company were expanding," said Tom Hammett, chief executive officer. "We have been working to broaden our expertise and services, and the new name and branding communicates both the evolution of our company and the progressive nature of how we approach our business."

(Continued on page 23)



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ENVIRONMENTAL AND GEOTECHNICAL DRILLING SERVICES

(Continued from page 22)

45th Forum -Geology of Industrial Minerals Postponed

It is our unfortunate responsibility to inform you that the 45th Forum on the Geology of Industrial Minerals will be postponed for one year. This will not present a problem since no sponsor was on the agenda for 2010. The economic situation here in the US has forced many of our regular attendees to notify us they cannot attend. An e-mail solicitation disclosed that only one out of three of our loyal members is planning to participate. We have also had corporate sponsors notify us that they will not be able to provide financial support this year. It is our hope that the situation will have improved in time for a 2010 meeting. The technical program has received numerous excellent offerings for papers describing the minerals industry of Pennsylvania, as well as other US states and several countries. We will be contacting these authors in the hope they can make their presentation in the summer of 2010.

Thank you for your interest in and support of the Forum. Past Forums have provided wonderful opportunities for members of our industry to meet and exchange information and ideas. We plan to continue that legacy next year. We will maintain the website to post information as it is developed. Please check periodically for updates. <http://45thindustrialminerals.org/>

G. Robert Ganis, Ph. D., Consulting Geologist

David Hopkins, LWB Refractories

George E.W. Love, P.G., PA Geological Survey
Lane Schultz, Ph. D., Consulting Geologist
Randy Van Scyoc, P.E., VP, Operations, Valley Quarries, Inc.

AE Drilling Busy with New Projects

Mark Lassiter of A.E. Drilling Services just sent a note that they are currently busy with a number of different projects, including a rock coring project via barge in the Tennessee River in Knoxville for a utility tunnel; a large bedrock monitoring well project at a NASA facility on Lake Erie in Ohio; and several reagent injection projects in the Carolinas. AE has also completed several projects recently with their new Geoprobe 8040 rig, which involved deep DPT well installation. The 8040 is capable of installing 2 inch diameter wells to depth via DPT creating no IDW. A.E. Drilling Services, LLC has been providing national clientele high quality environmental, geotechnical, mineral exploration, geothermal, and water supply drilling services since 1969. They are located at Two United Way, Greenville, SC 29607, and their website is www.aedrilling.com.

Contact information is:

Mark Lassiter, P.G., President, A E Drilling Services, LLC, 2 United Way, Greenville, SC 29607

Ph: (864) 288-1986, Fax: (864) 288-2272, Cell: (864)

(Continued on page 24)



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(Continued from page 23)

979-4082, mlassiter@aedrilling.com AE Drilling is an AEG Carolinas Silver Sponsor.

ENCO announces addition to staff in Cary

ENCO is pleased to announce the addition of Mr. Bill Scott to our Project Management Team at the Cary (RDU) NC facility. ENCO have also added Virginia and Florida Drinking Water Certifications to complement our North Carolina Drinking Water Certifications.

With four operational centers and 100+ employees, ENCO currently provides analytical services to over 600 different industrial, consulting and government customers throughout the Southeast. More information may be found at <http://encolabs.com>. Enco is an AEG Carolinas Silver Sponsor.

North Carolina Geological Survey Recognized in DENR Secretary's State of the Environment Report

The North Carolina Geological Survey (NCGS) is recognized four times in the Department of Environment and Natural Resources (DENR) Secretary's State of the Environment Report. The report is a beautifully designed publication, with many items of interest. NCGS is mentioned in Chapter 2, "Gorgeous Gorges;" Chapter 3, "Mapping Landslides;" Chapter 11, "The Risk Takers;" and Chapter 20, "Hurricanes Frances and Ivan, 2004." Our own Jennifer Bauer is shown with her teammates in the field. The entire document may be found at enr.state.nc.us/html/SOEReport2008.htm. It takes a minute to download the chapters, but it is well worth it.

KB Labs announces new billing and shipping address

KB Labs, an AEG Carolinas Silver Sponsor, recently announced a new address for shipping and billing. The new address is KB Labs, Inc., 25132 SW 1st Avenue, Newberry, FL 32669. KB provides SCDHEC, NCDENR, and NELAP certified mobile laboratory services and membrane interface probe direct-sensing technology. For more information, contact Todd Romero at toddr@kbmobilelabs.com or 352 367 0073.

PASSAGES: John "Jack" Hird *From AIPG Press Release*

John "Jack" Hird November 29, 2008

Mr. John M. "Jack" Hird, age 75, a resident of 306 Alderson Rd. Washington, NC died November 29, 2008 at his home.

Mr. Hird was born in Simcoe, Ontario, Canada on December 18, 1932 to the late James C. and Averil Minerva Meek Hird. On November 19, 1960, he married Karen Estelle Ryty, who survives. He graduated from high school in Simcoe, Ontario, Canada. He then went on to Haileybury School of Mines, and subsequently to Michigan Tech where he received his degree in Geological Engineering. He was a Geological Engineer with Allied Chemical from 1958 to 1965 and for Texasgulf, Inc. from 1965 until his retirement in 1993.



Jack served as the Mine Superintendent and Mine Manager of the massive Texas gulf Lee Creek phosphate mine in **Aurora, North Carolina** from 1974 until 1993. At the Aurora facility, he managed many major expansions for the mining operations. Some of the more notable projects he supervised included controlling groundwater, developing improvements for phosphate beneficiation, commissioning overburden dredging, upgrading phosphate ore pumping systems and conducting phosphate ore reserve exploration. He was a past-member of the Society for Mining, Metallurgy and Exploration (SME), the American Institute of Professional Geologists (AIPG) and the East Carolina Engineers Club.

Survivors include: his wife Karen Ryty Hird; one son, John Steven Hird of Rockport, Texas; two daughters, Suzanne Marie Hall and husband Scott of Washington, Julie Christine Cox and husband Tom of Greenville; one brother, Keith Hird of Kincardine, Ontario, Canada and five grandchildren.

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AEG CAROLINAS SECTION – SPONSOR INFORMATION

The Carolinas Section of AEG supports many of its activities with financial assistance provided by our sponsors. Our activities include quarterly meetings, periodic field trips and seminars, a quarterly newsletter, and email announcements about our meetings and geoscience related activities. In addition, we donate educational resources to science teachers.

We offer several levels of sponsorship, but they all have one goal: to keep the sponsor's name in front of our members and to bring you business. We have a real commitment to connecting our sponsors to potential buyers and will do all we can to help you build your business. Most of our members are practicing professionals with responsibility for selecting subcontractors, so our group is a great place to find new customers and to catch up with existing customers in an informal setting.

Our sponsors provide financial support that allows us to have reasonably priced dinner meetings, host seminars and short courses, provide student memberships and discounted dinner meeting costs for students, underwrite the cost of newsletters and our web site, and support science education in our schools. All costs listed below are per year and begin on January 1.

Silver Sponsor (\$250):

GeoNews Newsletter: Business card size ad (2" high x 3-1/2" wide), four times per year.

Meetings: Listing on a Sponsor Poster, located at sign-in table. Verbal acknowledgement by name in Chairman's introductory comments.

Meeting Exhibits: Space for tabletop display at one meeting. Cost of meeting waived for one person on the exhibit date.

Email Announcements: Listing of your company name on each AEG Carolinas Section email announcement (our email list is currently over 1,000 people)

Web Page: Acknowledgement on the AEG Carolinas Section

Web Page, www.aegcarolinas.org.

Gold Sponsor (\$375):

GeoNews Newsletter: Quarter-Page ad (4-1/2" high x 3-1/2" wide), four times per year.

Meetings: Listing on a Sponsor Poster, located at sign in table. Verbal acknowledgement by name in Chairman's introductory comments.

Meeting Exhibits: Space for tabletop display at two meetings. Cost of meeting waived for one person on the exhibit date.

Email Announcements: Listing of your company name on each AEG Carolinas Section email announcement

Web Page: Acknowledgement on the AEG Carolinas Section

Web Page, www.aegcarolinas.org.

Platinum Sponsor (\$500):

GeoNews Newsletter: Half-page ad (4-1/2" high x 7" wide), four times per year.

Meetings: Listing on a Sponsor Poster, located at sign in table. Verbal acknowledgement by name in Chairman's introductory comments.

Meeting Exhibit: Space for tabletop display at three meetings. Cost of meeting waived for one person on the exhibit date.

Email Announcements: Listing of your company name on each AEG - Carolinas Section email announcement

Web Page: Acknowledgement on the AEG Carolinas Section

Web Page, www.aegcarolinas.org.

GeoNews Newsletter Sponsorship Only

Businesses or individuals can also advertise in GeoNews without being a full sponsor. The annual rates for advertising in GeoNews are as follows:

Business Card	\$ 40.00
Quarter Page	\$ 60.00
Half Page	\$ 100.00
Full Page	\$ 200.00

Please complete the form below and mail with your check to AEG Carolinas. Please call or email if you have any questions (contact information and address are below).

AEG Carolinas Section Sponsorship Form

Please begin our sponsorship of the Carolinas Section of the Association of Environmental and Engineering Geologists. Our level of sponsorship is:

_____ Platinum Section Sponsorship, \$500/year

_____ Gold Section Sponsorship, \$375/year

_____ Silver Section Sponsorship, \$250/year

_____ GeoNews Newsletter Sponsor Only (see above)

Name: _____

Address: _____

Phone: _____ Fax: _____

Contact Person: _____

Email: _____

Website URL: _____

Date of Payment: _____

A paragraph about your business _____

Please enclose a check and a business card or camera-ready ad. If digital files of the ads are available, please provide them in jpg, pdf, or doc. Email ads to Newsletter Editor, janehgill@aol.com.

MAKE CHECK OUT TO AEG CAROLINAS

Snail mail form and payment to:

AEG Carolinas, c/o Jane Gill-Shaler

1636 West Lexington Ave., High Point, NC 27262

For more information, email JaneHGill@aol.com

(Modified March 20, 2009)

MEMBER BENEFITS

Networking, with colleagues at meetings, through technical publications and on the AEG web page, is a valuable professional development benefit because it allows a member to:

- ♦ Broaden and update technical, practical, and business knowledge.
- ♦ Keep career paths open by assuring that the value, utility and scope of engineering geology is recognized in the scientific, technical, legal, and regulatory arenas.
- ♦ Explore numerous opportunities for career enhancement through contacts at technical meetings and in continuing education programs.
- ♦ Influence the profession of environmental and engineering geology as it serves society and as it is regulated.
- ♦ Establish the standards of the profession.

§§§§§§§§§§§§§§

AEG members receive our quarterly professional journal, *Environmental and Engineering Geoscience* and six-issues of the *AEG NEWS* as a regular dues benefit.

Members also enjoy a 20% "member discount" on all special publications, registration fees at meetings, short courses, and field trips.

PROFESSIONAL DEVELOPMENT

AEG -- Serving Professionals in Environmental, Ground-Water and Engineering Geology since 1957

- ♦ AEG sponsors workshops and short courses for which official Continuing Education Units are offered.
- ♦ AEG encourages its members to participate in activities of mutual interest with other societies and organizations.
- ♦ The annual Richard H. Jahns Distinguished Lecturer in Engineering Geology is co-sponsored by AEG and the GSA Engineering Geology Division.
- ♦ AEG members make presentations and lead field trips for students at all levels.
- ♦ AEG's Technical and Professional Practice Committees keep the Association in a position of influence through their wide-ranging activities.
- ♦ AEG's 25 Sections and 20 Student Chapters provide educational and networking opportunities for members through regular meetings, field trips and local newsletters.
- ♦ Students compete for scholarships and awards, and interact with practicing professionals.
- ♦ Short courses, field trips, and technical sessions provide opportunities for AEG members to enhance their professional practice.
- ♦ International members are found in more than 20 countries and Designated Correspondents enhance technology transfer among more than a dozen countries.

MEMBERSHIP APPLICATION

ASSOCIATION OF ENVIRONMENTAL & ENGINEERING GEOLOGISTS



The Association of Environmental & Engineering Geologists (AEG) is an international, non-profit scientific and technical society, whose 3,000 members include geologists specializing in engineering geology, environmental geology, and ground-water geology as well as other professionals in affiliated fields such as civil and mining engineering, land-use planning, public policy and education.

Through its technical and professional activities, AEG strives to promote the value and importance of geologic practice in:

- ♦ detecting, containing, and remediating contaminated soil and ground water;
- ♦ recognizing and mitigating hazardous geologic processes to promote public safety and welfare; and
- ♦ siting, planning, designing, constructing, and maintaining engineered works.

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APPLICATION FORM

Please complete this form and mail it with your Annual Dues payment to the Association processing. New member applicants do not pay Section dues for their initial year of membership.

Name: _____ (Please print your name as you would like it shown on your membership certificate.)

PREFERRED ADDRESS: _____

WORK PHONE: _____ FAX: _____

PREFERRED E-MAIL: _____

Second Address: _____

Home Phone: _____

DESIRED CLASS OF MEMBERSHIP: _____ ANNUAL DUES AMOUNT: _____

CERTIFICATION:

(Signature)

My signature attests that, to the best of my knowledge, I meet the academic and practice requirements for the membership class I have requested and that all entries on this application are true and correct. I also authorize AEG to charge my credit card for the dues payment, if I selected the credit card payment option.

☐ Enclosed is my check for the amount of Annual Dues of \$ _____

Credit Card Payment Option

☐ Discover ☐ Master Card ☐ Visa

Amount of Dues to be charged to my card = \$ _____

Card Number: _____ Expiration Date: _____

SUBMISSION: Send this form with your check or credit card authorization to:
Association of Environmental & Engineering Geologists, PO Box 460518, Denver, CO 80246
Phone: 303-757-2926; FAX: 303-757-2960; AEG Web: www.aegweb.org

MEMBERSHIP REQUIREMENTS

MEMBER: Applicants for Member Class shall hold a degree in geology, engineering geology or geological engineering, or a degree in a related professional field with 30 semester-hours of credit in the geosciences. In addition an applicant shall be practicing in the field of Engineering Geology, Environmental Geology or Hydrogeology. Annual Dues for new (first-time) Members = \$75.00 per year for the first year of membership. Otherwise Annual Dues = \$115.00. Applicants who qualify for Member Class, but are engaged in full-time teaching at the Primary or Secondary (K-12) level are eligible for Teacher Status (Annual Dues = \$35.00).

AFFILIATE: Applicants for Affiliate Member Class shall be scientists or engineers who work with engineering geologists; teachers engaged in middle-school and high school Earth Science education; or persons interested in engineering geology. Annual Dues = \$75.00 (Teacher Dues = \$35.00)

STUDENT: Applicants for Student Member Class shall be full-time students enrolled in an academic program in the geosciences or in a related field in engineering. Annual Dues = \$25.00

INTERNATIONAL: Applicants shall hold the same requirements as for Member Class, but may select from the following dues schedule: \$35, which includes the *Environmental and Engineering Geology Journal*; \$45 with the *Journal*, the *Annual Directory* and the *Annual Meeting Abstracts*; or \$55 with the *Journal*, *Annual Directory*, *Annual Meeting Abstracts* and the *AEG News*.

AEG memberships are based on calendar year. Applications received after October 1 will be entered for following calendar year.

CALENDAR OF EVENTS - 2009

Geological Events in the Carolinas

Courtesy of AEG Carolinas Section – www.aegcarolinas.org. Last updated March 21, 2009

Send updates/corrections to Ben Draper, Benjamin_Draper@golder.com

Meeting Date, Time, and Location are Subject to Change – Please Verify Prior to the Meeting

Date: March 30-31, 2009

Event: 8th Annual Gas Shales Conference

Location: Marriott Quorum at Galleria, Dallas, Texas

Contact: Peter Duncan-President (888-777-1707)

Estimated PDH (professional development hours): Unknown

Date: April 2-4, 2009

Event: Clemson Hydrogeology Symposium

Location: Clemson, SC

Cost: \$140

Contact: <http://www.ces.clemson.edu/hydro/symposium/forms/participant.html>

Estimated PDH: Unknown

Date: April 9, 2009

Event: AEG Carolinas Spring Meeting, featuring Dr. Ed Medley, Richard Jahns Lecturer

Location: Carolina Ale House, Raleigh, NC (see page 4 for directions and reservations)

Cost: \$140

Contact: Rick Kolb, RAKolb@MACTAC.com

Est. PDH: Unknown

Date: May 4-5, 2009

Event: AEG Short Course, Principles of Soil and Groundwater

Location: Hilton Raleigh-Durham Airport at Research Triangle Park, Durham, NC

Cost: \$250 before April 15, \$300 after April 15

Contact: Gary Rogers, grogers@schabel-eng.com, or Dave Dunklee, dave@dunkleedunham.com

Estimated PDH: 16

Date: May 18-22, 2009

Event: NCSU Wetland Delineation and Jurisdictional Determination: Post Rapanos-Carabell

Location: Raleigh/New Bern, NC

Cost: \$895

Contact: <http://www.ces.ncsu.edu/nreos/forest/feop/wetlands/index.html>

Estimated PDH: Unknown

Date: June 18-19, 2009

Event: Groundwater Professionals of North Carolina (GWPNC) Summer Meeting & Golf Tournament

Location:

Contact: Chris Hay-President (chay@kleinfelder.com)

Estimated PDH: Unknown

Date: June 28- July 1, 2009

Event: ARMA - 43rd U.S. Rock Mechanics Symposium

Location: Asheville Renaissance Hotel, Asheville, North Carolina

Contact: <http://www.armsymposium.org/>

Estimated PDH: Unknown

CALENDAR OF EVENTS - 2009

Geological Events in the Carolinas

Courtesy of AEG Carolinas Section – www.aegcarolinas.org. Last updated March 21, 2009

Send updates/corrections to Ben Draper, Benjamin_Draper@golder.com

Meeting Date, Time, and Location are Subject to Change – Please Verify Prior to the Meeting

Date: August 2, 2009

Event: ASBOG - Reg Review Course

Location: Raleigh, North Carolina

Time: 8:00-4:00 pm

Cost: \$445 (AEG Member)

Contact: <http://www.regreview.com/summer2009courses.html>

Estimated PDH: Unknown

Date: September 14-18, 2009

Event: NCSU Wetland Delineation and Jurisdictional Determination: Post Rapanos-Carabell

Location: Raleigh/New Bern, NC

Cost: \$895

Contact: <http://www.ces.ncsu.edu/nreos/forest/feop/wetlands/index.html>

Estimated PDH: Unknown

Date: September 21-26, 2009

Event: AEG Annual Meeting

Location: Lake Tahoe, California

Contact: www.aegweb.org

Estimated PDH: Unknown

Date: October 18-21, 2009

Event: Geological Society of America Annual Meeting

Location: Portland, Oregon

Contact: <http://www.geosociety.org/meetings/>

Estimated PDH: Unknown

*Schedule for Jahns Lecturer Ed Medley
Carolinas Section Visit
April 2009*

Date	Route	Overnight	Responsibility	Talk Topic
Sunday, April 5	Fly to Charleston, arriving on AA 3507 at 4:35 PM	Overnight in Charleston	Briget Doyle to arrange accommodations at College of Charleston	N/A
Monday, April 6, morning	Present at College of Charleston at 11 AM	N/A	Briget Doyle to drive Ed from Charleston to Columbia	Sea Cliff Incident
Monday, April 6, afternoon	Be driven to Columbia after presenting at C of C, present at the University of South Carolina at 4 PM	Overnight in Columbia	Raymond Knox will arrange meeting at USC and overnight accommodations	Of Elephants, Earthquakes, Caves.....
Tuesday, April 7	Be driven to Boone, present at Appalachian State University at 4 PM	Overnight in Boone	Raymond Knox and Jenn Bauer will provide transport from Columbia to Boone (pass off Ed in Hendersonville), Jenn to arrange meeting at Appalachian and overnight accommodations	Of Elephants, Earthquakes, Caves.....
Wednesday, April 8	Be driven to Greensboro, present at Guilford College at 2 PM	Overnight in Greensboro (first of two nights)	Carin Kromm to provide transport from Boone to Greensboro, arrange meeting at Guilford and overnight accommodations in Greensboro for Wednesday and Thursday nights	Of Elephants, Earthquakes, Caves.....
Thursday, April 9	Be driven to Chapel Hill, present at UNC at 11 AM, have lunch w/ faculty and students, then present at our section meeting	Overnight in Greensboro (second night)	Carin Kromm to provide transport from Greensboro to Chapel Hill, stay with Ed and Rick Kolb while at Chapel Hill, then take him to Raleigh for the evening section meeting. Gary Rogers to take Ed back to Greensboro after the meeting.	UNC- Of Elephants, Earthquakes, Caves..... Section Meeting- Bimrocks
Friday, April 10	Be driven from Greensboro to Blacksburg	Overnight in Blacksburg	Alex Rutledge to provide transport to Blacksburg, VT professor to provide overnight accommodation in Blacksburg	N/A
Saturday, April 11	Fly home to Oakland	None	Ed's taking care of this part	N/A

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