

# ALABAMA BOARD OF LICENSURE FOR PROFESSIONAL GEOLOGISTS



# THE ALABAMA GEOLOGIST

WINTER 2012 EDITION

ELECTRONIC VERSION

ABLPG

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## FROM THE CHAIRPERSON...

*Marsha Andrews, Board Chair*

On behalf of the Alabama Board of Licensure for Professional Geologists, I would like to thank all the licensees for making 2012 a very successful year. Through the efforts of our Board members, the administrative staff and the licensees, there were several major milestones reached in 2012.

The long awaited on-line registration was at last complete (see article on Page 3). The development of this system took many months, but the system is now in place and functional. Dr. David King led this effort and spent many hours working with the developer on this application. I would like to encourage members to utilize this system and to also provide feedback to the Board and Administrative staff on areas that could use improvement. It is anticipated after some period of use and feedback from renewals that changes to make the system more functional may be needed. Please provide this feedback, as this will be the guidance needed for improvement.

Last year also saw the first Board sponsored Continuing Education event, which was held in Birmingham during April (see article on Page 3). This event was created to assist licensees in obtaining the necessary continuing education credits required for renewal. The Board continually monitors the availability of such events and felt there was a need to sponsor such an event. The economic climate of the past several years has had an impact on the number and geographic availability of appropriate events. The Licensure Board felt that such an event would be a welcomed addition to the limited opportunities in our geographic area, and thus the event was undertaken. I would like to thank Roger Chapman, Richard Esposito, Keith Warren and his staff for their hard work organizing this event and making it a success. The Board is also pleased to announce that a similar event will be sponsored in **April 2013** (please see announcements on Board's website).

The Board approved at the September 20<sup>th</sup> meeting the addition of professional affiliation service for continuing education credit. Licensees are eligible for up to 8 hours per renewal period for documented participation in professional affiliations, planning meetings and Board Service. These changes are posted on the Board website and members are encouraged to utilize this new CEU activity if applicable. The Board also would like to encourage the submission of appropriate CEU event notices for posting on the website. Please forward appropriate events to the Administrative Staff.

The Board would also like to remind licensees that it is their obligation to report unlicensed practice of Geology in the State. As licensed professionals, it is our duty to ensure the public welfare by reporting unlicensed activity. By ensuring that practicing professionals are properly licensed, we meet this obligation and also uphold the value of our licenses. The complaint form is available online and the administrative staff is available to assist.

In closing, the Board looks forward to serving the licensees and making 2013 another success. Please feel free to contact any Board members or Keith Warren, Executive Secretary, with any concerns, ideas or issues. Contact information is available on the Board's website (also see list to the left).

## BOARD MEETINGS

10:00 a.m. - Thursdays

Board Conference Room

2777 Zeld Road, Montgomery AL 36106

[www.algeobd.alabama.gov](http://www.algeobd.alabama.gov)

## 2013 SCHEDULE

JANUARY 17TH

APRIL 18TH

JULY 25TH

OCTOBER 10TH

## Geological Education Today

By: Dr. David T. King, Jr.

What is and is not in the typical BS degree in geology and how that relates to the ASBOG fundamentals exam and professional licensure in general is an important issue for all of us to understand.<sup>1</sup> But, with a better understanding, also comes concerns about the future of our profession.

First of all, why should geological education today matter to anyone? Well, there are several reasons, including (1) hiring young professionals who have the proper credentials, (2) moving new employees toward licensure, and (3) insuring the future health of our profession. Let's take a look at what Alabama law requires for geological licensure. The law says an LPG must have a geology or engineering geology degree with 30 hours of courses in geology. There is no legal specific about B.S. or B.A. Within those 30 hours, there are six specific, mandatory classes – physical geology, historical geology, mineralogy, structural geology, stratigraphy, and field camp. All other geology classes are considered electives that are needed only for the purpose of making the total geology classes rise to 30 hours. You might wonder why state law specifies these six mandatory classes. Here are some good reasons: Physical Geology provides basic introduction to the subject and may be the only class that a student takes in which certain topics are covered (i.e., topics missing entirely from upper level elective geology classes – for example, geomorphology); Historical Geology provides basic information about geological time and fossils; Mineralogy provides basic information about Earth materials and is the basis for petrology; Structural Geology provides basic information about defects in the Earth's crust and attitudes of planar geological features; Stratigraphy provides basic information about the most common surficial materials; and Field camp teaches a student how to think like a geologist and work outdoors with natural materials and provides experiences in writing and map making. Other elective courses mentioned in state law as pertinent to the geology degree but not required for licensure include petrology, paleontology, geomorphology, sedimentary petrology, and "geology electives."

In Alabama, the six mandatory geology classes mentioned above are all included in a typical baccalaureate geology degree,<sup>2</sup> *but not all states' geology programs require these six classes anymore.* In fact, it may surprise you that all of these classes and many others in geology are "endangered" at many colleges and universities these days (more on this below). Whether these six classes were available at a student's alma mater or not, if a geologist seeks licensure in Alabama and presents a transcript lacking any of these classes, he or she *does not get an Alabama LPG license* (neither by exam nor by reciprocity).

Another important thing to know about B.S. degrees in geology these days is that geology B.S. degrees, like most university degrees, have about 20% fewer total credit hours than similarly named degrees given as recently as 10 to 15 years ago. Nearly all universities have cut down on the number of credit hours required for all undergraduate degrees. The effect of this is that a typical undergraduate student is less likely (even unlikely?) to have taken any extra geology or geology-related classes. There are almost no free electives in undergraduate degrees these days.

[Continued on page 4]

<sup>1</sup>For a comparative table showing what is and is not required for the B.S. degree in geology at Auburn, the B.A., B.S., and B.S. in geology degrees at the U. of Alabama, and the B.S. in Earth Science at the U. of South Alabama, please contact the author.

<sup>2</sup>Of concern is that the University of South Alabama does not require Historical Geology for the BS in Earth Science degree and that the B.A. in geology from the University of Alabama does not require mineralogy, structural geology, stratigraphy, or field camp. However, the two B.S. degrees in geology from the U. of A. require these classes.

### Little Cedar Creek Just Keeps on Getting Larger By Roger M. Chapman

With an oil column of over 700 feet and over 110 wells drilled to-date, many of which have been successful in finding oil, the Little Cedar Creek field keeps on providing success for several operators. Located in rural Conecuh County, Alabama, near Evergreen, this is one field that lay undiscovered for years after the Smackover formation was first drilled and became known as a reservoir that contains commercial hydrocarbons. The field has produced over 15 million barrels of oil and continues to be the state's largest producing oil field. Discovered in 1994 by Hunt Oil Company with the drilling of the Cedar Creek Land and Timber 30-1 well, the second successful well did not follow until 2001 when Midroc Operating acquired the Hunt well and offset it successfully with a well in the adjoining section 19 that tested at a Rate of 250 BOPD. Since that time, one good well after the other has been drilled and today, there are over 100 productive wells and new ones are being added each month. [continued on page 6]

## LICENSE INFORMATION

When the Board was created by the Legislature in 1995 and began the grandfather licensing period, there were well over 1,000 license holders. Unfortunately as time progressed, many of those licensees did not renew for one reason or another. The Board stabilized over the course of those years with numbers from approximately 500 to 600 licensees.

The Board continues to review requirements regarding continuing education and have made several adjustments to the guidelines. The Board does understand the additional expense of this requirement, especially during these current economic times. The Board hosted a free continuing education seminar in Birmingham this past year and will be conducting another seminar this year as well (April 22, 2013— register at [www.algeobd.alabama.gov](http://www.algeobd.alabama.gov)). The Board has plans to continue these annual seminars at no costs to the licensee for as long as it is financially feasible. If you have any suggestions regarding maintaining licensees for the Board, please do not hesitate to email those to the Board office at [geology@warrenandco.com](mailto:geology@warrenandco.com).

As of January 15, 2013, the Board's current numbers are as follows:

Total Licensed	559
In-State	229
Out of State	330
Temporary	1
GIT's	2

### 2012 Sunset Review

The Board successfully completed another Sunset Review period which happens every four years. Once the Sunset Committee holds their annual administrative meeting, they will introduce legislation in the 2013 Legislative Session to continue the Board for four more years. The Examiners of Public Accounts conducts an audit of Board Records to ensure compliance with regulations and guidelines of the State of Alabama. The report issued by the Examiners of Public Accounts only listed one significant issue for the Board to address. As you are probably aware, the legislature passed the Beason-Hammon Alabama Taxpayer and Citizen Protection Act of 2011 which requires the Board to register with the United States Department of Homeland Security and confirm citizenship or documents for applicants or licensees to be allowed to work in the State of Alabama. The Board has not finalized the registration with Homeland Security but has started the process. As you can imagine, the department handling the registrations is quite backlogged and approval is being issued very slowly. You will notice certain questions and documents required with your future renewals. If you have any questions, please do not hesitate to contact the office. The Board is very pleased with the excellent audit report and continuance of the Board of Licensure for Professional Geologists for an additional four years.

### 2012 Board Sponsored Continuing Education Event Gets Excellent Reviews

*By: Richard Esposito, Ph.D.*

For several years now it has been brought to the attention of the Board that securing the necessary continuing education credits, required for license renewal, has been more and more difficult. Part of this problem is the result of employers limiting non-essential travel including training and continued education. Let's also face the fact that there are not that many local opportunities, and the timing may not conveniently fit into everyone's busy schedule.

Even members of the Board, as Alabama LPGs, we face the same challenges. The Board wants all Alabama LPGs to benefit from the continuing education experience and considers continuing education an important part of ongoing professional development. It should not be financially burdensome and the content should be a beneficial use of everyone's time. For this reason, the Board took on the challenge to develop a trial-run board sponsored continuing education event and, best of all, at no expense to registered Alabama LPGs. As many of you are aware, we held this event this past April 16<sup>th</sup> at the Birmingham Marriott on Grandview Parkway. We are excited to announce that the event was attended by over 165 Alabama LPGs from 5 different States in the Southeast. We want to thank everyone for attending and look forward to seeing those 8 Professional Development Hours (PDHs) on the attendees' license renewal applications. [Continued on page 6]

### On-line License Renewal Applications

The Board has worked for some time with Alabama Interactive (e-Government Provider for the State of Alabama) to develop and launch an on-line renewal application for the convenience of licensees. This application is now available on the Board's web site at [www.algeobd.alabama.gov](http://www.algeobd.alabama.gov).

This application will allow you to pay by credit card, debit card or e-check along with a small convenience fee. This is a new process for the Board and your comments are extremely important so if there are parts of the process you do not like or see where we could improve, please email the Board your comments at [geology@warrenandco.com](mailto:geology@warrenandco.com).

### Geological Education Today (Continued from Page 2):

If a student is not required to take a geology class like geochemistry, geophysics, GIS, etc., there are strong odds are that he or she will not have taken it. After 32 years of advising students, I can tell you honestly that even though I strongly advise students to take elective geology classes that I know will help them in their careers; some do not choose to follow that advice and there is nothing that a geology advisor like me can do about it. It is very important for all employers to look carefully at an applicant's academic transcripts and to call that person's undergraduate advisor if there are any questions about courses taken. I also can tell you that few employers ever call about a student's background or even for a professional reference.

What does ASBOG require for its fundamentals exam? I am referring to the 'FG exam' that most students should take during their senior year or shortly after graduation. And, what is required for the PG (the practice exam)? Table 1 shows the ASBOG requirements ("content domains" or courses that ASBOG assumes geology students will have taken) and the percent weights on both the Fundamentals and the Practice exams. There are some notes on the corresponding geology courses offered in Alabama in this table as well. You should take note that about one-half of the weight of all the "content domains" on the ASBOG exams *are not part of the required curriculum at Alabama universities* offering B.S. degrees in geology (Auburn, U. Alabama, and U. South Alabama). When you consider that Alabama universities are generally much more "traditional" and old-fashioned (or "slow to change") regarding geology curricula versus other universities around the U.S., you might start to wonder what goes on elsewhere. Your concern would be justified. Many universities outside Alabama are not teaching courses or not requiring courses that are part of the targeted ASBOG exam format. I have written about this in a previous ABLPG newsletter calling this the "ASBOG disconnect." These are the two things I have specifically complained about: (1) ASBOG does not understand that modern geology degree programs are much more limited than those in the 1950s to the 1990s and that students do not take all the geology classes that may be needed to pass the fundamentals (or these classes may not be taught anymore where the students are studying); and (2) ASBOG does not go out into the geology department community and seek input or a better understanding of modern geology education. But there is also another problem here that is of greater concern than ASBOG missing the mark with their exams – that is the *problem of geology programs moving away from traditional courses*, which are still needed on the job to do basic geological work. This is the "endangered" status for many geology classes that I mentioned above.

What that trend will ultimately do to our profession is a disturbing thought. For example, what good is a geology degree with no instruction in (1) microscopic petrology (i.e., hand-specimen only petrology ... more like the 19<sup>th</sup> century), (2) use of a Brunton compass for structural geology and mapping, (3) field methods at field camp or any field experience of any kind, or (4) basic knowledge of fossils or even about Earth history? Whether or not you think your new employee should know how to identify fossils or not, would you not expect them to know about relative ages of strata and the geological time scale? This is the direction that many geology programs outside of Alabama are taking. Is Alabama going to be far behind in this trend?

Higher education administrators talk to each other all the time and changes they make at their campuses tend to mimic other universities' restructuring efforts that have been deemed successful. These changes come from the top down (and, even though they should have a say, geology faculties do not necessarily have any say in these changes). What happens at one university system tends to propagate to others. [Continued on page 5]

**REMINDER!**

#### Have You Moved or Has Your E-mail Changed Recently?

Please notify Hope Paulene by e-mail or call her with updated information:

E-mail us: [geology@warrenandco.com](mailto:geology@warrenandco.com) OR  
Call: 334-420-7236

#### Mark Your Calendar:

April 22, 2013

**FREE!**

- CE Seminar (Prattville, AL)
- NO registration fee (Board Sponsored)
- Register NOW
- DEADLINE: 4-12-2013
- Registration Information and Agenda (see [www.algeobd.alabama.gov](http://www.algeobd.alabama.gov))

**Geological Education Today** (Continued from Page 4):

**Table 1. Content domains, exam weights and comments:**

ASBOG content domain:	FG exam:	PG exam:	Comments?
General and Field Geology	20	21	Both classes required by Alabama licensure law
Mineralogy, Petrology, and Geochemistry	11	5	Mineralogy only required by law; petrology required at Alabama universities; geochemistry is an elective
Sedimentology, Stratigraphy, and Paleontology	12	5	Stratigraphy only is required by our licensure law; sedimentology may be included in stratigraphy (e.g., U. Ala.); paleontology may not be required
Geomorphology, Surficial Processes, and Quaternary Geology	13	8	Not required by law and generally not part of geology degrees in Alabama
Structure, Tectonics, and Seismology	11	9	Structure only required by our licensure law
Hydrology	11	19	Not required by our licensure law; an elective class
Engineering Geology	11	17	Not required by our licensure law; an elective class or not offered
Economic Geology and Energy Resources	11	16	Neither required by our licensure law; may be an elective or electives at Alabama universities

For a glimpse of the possible future, I recommend reading a recent opinion article by the president of Arizona State University Michael Crow in *Scientific American* (Oct. 2012). His article is titled "The best way to teach today's hyperconnected students is to get rid of the departments of geology and biology."<sup>3</sup> Crow has been hailed as a visionary leader for "guiding the transformation of ASU into one of the nation's leading public metropolitan research universities, an institution that combines the highest levels of academic excellence, inclusiveness to a broad demographic, and maximum societal impact – a model (Crow) terms the 'New American University.'<sup>4</sup> At ASU, there is no traditional B.S. in geology anymore. And, ASU courses like historical geology, paleontology, or field camp are not taught anymore. The new hyperconnected ASU B.S. degree in 'Earth and Space Exploration' requires classes like (1) Introduction to Exploration, (2) Earth, Solar System, and Universe, and (3) Geology Colloquium. Electives include 12 courses, only 3 of which are required. Among these are mineralogy, petrology and structural geology, but there are 9 other classes to choose from (e.g., Astrobiology). At ASU, an alternative degree for the "hyperconnected" geology student of the future is the B.A. in 'Earth and Environmental Sciences,' which requires courses called (1) Introduction to Geology, (2) Dynamic Earth, (3) Oceans, Carbon, and Climate, and (4) Earth's Critical Zones. Also, students can choose two classes from optional courses like Habitable World, Water Planet, and Dangerous World. Do you understand what these students actually know when they get out of ASU? Are you ready for the future? (continued on Page 7)

<sup>3</sup>Thanks to fellow board member Jim Heller for bringing this article to my attention.

<sup>4</sup>[http://en.wikipedia.org/wiki/Michael\\_M.\\_Crow](http://en.wikipedia.org/wiki/Michael_M._Crow)

**MONDAY, APRIL 22, 2013.....more info available**

EVENT: Free 8-hour Continuing Education Seminar  
(charge for lunch)

SPONSORED BY: Alabama Board of Licensure for Professional Geologists

REGISTRATION DEADLINE: April 12, 2013



**BOARD-SPONSORED CONTINUING EDUCATION PROGRAM**

[continued from page 3]:

**With all this said, we have decided to make this an annual event, which we will again offer on April 22, 2013. Once again it will be offered to Alabama LPG's , with no registration fee; however, lunch will be at attendee's expense.**

We received lots of input on how we can improve the event from content to schedule and we believe those comments will make your continued education experience in 2013 even better. The Board would like to acknowledge Roger Chapman (Smackco, Ltd.) for sponsoring the 2012 event. We also want to thank all the speakers who participated including: Dr. Nick Tew, Alabama State Geologist, Dr. Jack Pashin, Geological Survey of Alabama, Mr. Kelly Bailey, Vulcan Materials, Dr. Andy Rindsberg, University of West Alabama, Mr. Brian Hutchison, EPS of Vermont, Dr. Marlon Cook, Geological Survey of Alabama and Dr. David M. King, Auburn University Department of Geology.

Beyond this event, there are many types of Continuing Education activities approved by the Board including (1) Formal educational activities; (2) Formal activities of professional societies, agencies and organizations; (3) Field trips; (4) Regulatory and safety related training, internet seminars and courses, and in-house activities; and (5) Oral and written technical contributions. Please find more information on each of these activities on the Board's website under the category of Continuing Education Guidelines (see Administrative Code, Section 364-X-13-.02 (5) and (6)).

I would also like to point out that the event was a great opportunity to see old friends, make new friends, and to network. After all, it was the largest gathering of Alabama geologists in the history of the earth. Now be honest, no self respecting geologist would pass up the opportunity to be involved in breaking that record this year.

**See Board's website regarding 2013 registration information!**

Submitted by: Dr. Richard Esposito, Board Member

**LITTLE CEDAR CREEK OIL FIELD Just Keeps on Getting Larger**

[continued from page 2]

Over 75 conventional cores have been take in the field so far and the trap is stratigraphic, not structural and it has two separate pay zones or reservoirs. One is an ooid grainstone facies and the other is a thrombolite bindstone reef facies. Both of these zones are predominately limestone, not dolomite, as is the case in most Smackover fields in Alabama.

The average completion of the last 20+ wells is 270 BOPD and 250 MCFD. The field continues to be developed in an east-northeast direction from the discovery well and currently has 5 rigs running in the field area. While no official estimate of recoverable oil reserves exists yet, many believe the number will be in the 25 to 30 mill barrel range. Finding such significant reserves at a depth of 11,000 feet makes this play one that has attracted a lot of attention to Alabama. With the BP problems in the gulf, many companies are looking to the on-shore oil play as the best way to take advantage of \$100 per barrel oil. Alabama is hot in more ways than one, and the end of this play may be a long time in the future.

Submitted by: Roger M. Chapman, Board Member

REMINDER: Continuing Education Seminar on April 22, 2013 — free registration at [www.algeobd.alabama.gov](http://www.algeobd.alabama.gov)

**CONGRATULATIONS!!!**

**To Our Newest PG's!**

David Scott Marks --#1321  
 Samuel P. Beckum--#1323  
 Lisa M. Clark--#1324  
 Joyce Sattler Dunkin--#1325  
 Jochen A. Floesser--#1326  
 Trenton M. Godwin--#1327  
 K. Jay Hornsby--#1328  
 Lauren Petty--#1329  
 Robert Wyrick--#1330  
 Harry Stephen Wild, Jr.--#1331  
 Philip L. Glover--#1332

Jason Heberling--#1335  
 Michael A. Klidzejs--#1336  
 Martin A. Smith--#1337  
 Andrew J. Grimmke--#1338  
 Robert L. Atkins--#1339  
 Kenneth J. Gendron--#1340  
 Travis A. Paris--#1341  
 John S. Catches--#1342  
 Benjamin D. Grove, Jr.--#1343  
 Gay Nell Gutierrez--#1344  
 Roger E. Marlin--#1345

**To Our Newest GIT's!**

Kirk Ellison--#1322G  
 Robert A. Tootle--#1333G

**Passed the ASBOG Exam**

**FUNDAMENTALS OF GEOLOGY**

Elizabeth Ann Dyer  
 Gregory Bryce Dyer  
 Travis Andrew Foy  
 Wesley Philip Henson  
 Charles Hoffman  
 Roger Eugene Marlin  
 Marcus L. Miller  
 Michael Gilbert Natter  
 Dianne Palmore  
 Ross Thomas Tucker

**PRACTICE OF GEOLOGY**

Justin Fancher Robert Monreal  
 Roger Eugene Marlin

**CONGRATULATIONS!!!**

### Geological Education Today (Continued from Page 5):

Here are my specific concerns about the fate of traditional geology classes, which I think are "endangered" by modern trends. These are listed by topic and here are the Alabama mandatory classes for licensure: Physical geology (being replaced by "sexy" new classes with less content (e.g., Earth Systems and Earth and Man); Historical geology (low enrollments may force this class out, and there is the same old push back against organic evolution and fossils); Mineralogy (requires chemistry, which may be out of geology curricula in the new version of the future); Structural geology (limited to geology majors and may face limited enrollment issues; Stratigraphy (no longer considered "important" in many departments of geology and seems to be too "old school"); and Field Camp (a very costly class for many universities; difficult to justify; considered "old school" by some administrators; liability issues and interpersonal issues may cause concerns). Here are the Alabama suggested elective classes for licensure: Geochemistry (many majors avoid this key class because it is "too hard" or they are not required to take prerequisite chemistry course or did not do well in them); Paleontology (not considered important by some industries who advise academic departments and by some administrators who see this as a class associated with the evolution "controversy"); Geomorphology (most geology departments do not have this expertise or this course is taught by geographers who are not geology-oriented); Engineering geology (no longer required by most civil engineering programs, so the low numbers ended this as a course that geology majors could also take); and Geophysics (many majors avoid this because it is "hard" and time-consuming; equipment is costly and hard to maintain; requires expertise that not all geology departments have these days). Courses that may be doing well at some universities but may get pulled down into the abyss with the demise of geology programs in general include hydrogeology (can always go over to an engineering program from geology!), economic geology (usually specific to mining interests, which are not always popular in our NIMBY world), and Geographic information systems (GIS, the "must have" class of the new millennium; usually taught by geography programs, which may or may not be geology-oriented).

Some geology programs in the U.S. have closed or are closing, and others are changing (like at ASU) with the times we live in. What is driving all this? Here are some factors. Geology has no accrediting agency to push against efforts to reduce, merge, or eliminate geology departments. Geology is not well supported by industry, even though some of the wealthiest corporations on the planet employ geologists in critical roles. Geology enrollments - while slightly increasing at present - are low compared to other sciences and the research funding for geology is very low. Geology is not well regarded as a physical science in some places. Geology has come under attack from outside forces and budget cuts. (Subjects like evolution and climate change have taken a toll.) Geology was largely eliminated from public schools by the NCLB law, so even fewer public school students than ever even know about our science. Geologists have been rather conservative in their public approach or have neglected their profession and its needs.

Submitted by: Dr. David T. King, Jr., *Board Member*

### Have You Moved or Has Your E-mail Changed Recently?

Please notify Hope Paulene by e-mail or call her with updated information:

E-mail us: [geology@warrenandco.com](mailto:geology@warrenandco.com) OR Call: 334-420-7236



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