eBULLETIN

MISSISSIPPI GEOLOGICAL SOCIETY

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BOLAND SCHOLARSHIP
WINNERS

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MISSISSIPPI STATE UNIVERSITY
NEWS
ROCK HUMOR

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PRESIDENT'S LETTER

Neil Barnes

Greetings!

I hope this finds y'all doing well! While it's the start of summer, for those of us not in school or without school age children at home, this is the simply the hot part of the year. There is a lot going on behind the scenes even while the society appears dormant.

Before I get to the most important part of the letter let me offer one important piece of business. I have mentioned to some in the past and want now to mention it for action next year – I will be recommending that we change the term of our elected officers from the current one year to a two year term. I believe this is useful for two reasons – first it gives continuity of leadership and second it will provide leadership enough time to accomplish multiyear endeavors. Regarding continuity of leadership – in reality it takes a year to figure out what the office requires. If the officer has recently held prior office then it would take a bit less time. Two years would allow the officer to "advance" the office rather than just maintain the office. Two years would also allow projects with a life cycle of more than one year to be complete with consistent leadership. The last reason for proposing this is entirely practical – we are running out of willing candidates. Look at the list of past Presidents. There are a lot of repeats. As I said in an earlier letter, the Society is in transition. That's not a bad thing but it is a challenge. During the coming year I hope this idea can be considered and discussed resulting in adoption of a good plan. Two year terms may not be the best plan. If not, what do you suggest? I am interested in improving the Society not in "getting my way". So, join in the discussion and let's see the better way!

Now to the most important….First, I want to as well as must, thank the elected officers who have so faithfully served these last two years – Joe Johnson, Todd Hines, and Bill Bagnall. You guys signed up for one and were brave enough to hang on for two. You've been a real gift to the Society. Thank you. Thank you. Thank you. To those who have filled unelected positions - Matt Caton, Bulletin Editor and Steve Walkinshaw, Webmaster thank you for your years of service. To say we could get it done without you is an understatement! And you know that better than we do! John Ryan has been a great asset to the leadership team. I particularly appreciate his willingness to help the Society expand our vision for those in the environmental field. Thank you and please don't quit now! Dave Cate continues to provide the Boland Scholarship with leadership. Thank you! (And you are not replaceable!) Maurice Birdwell continues to serve the Society faithfully as our AAPG House of Delegates Representative. Thank you Maurice!

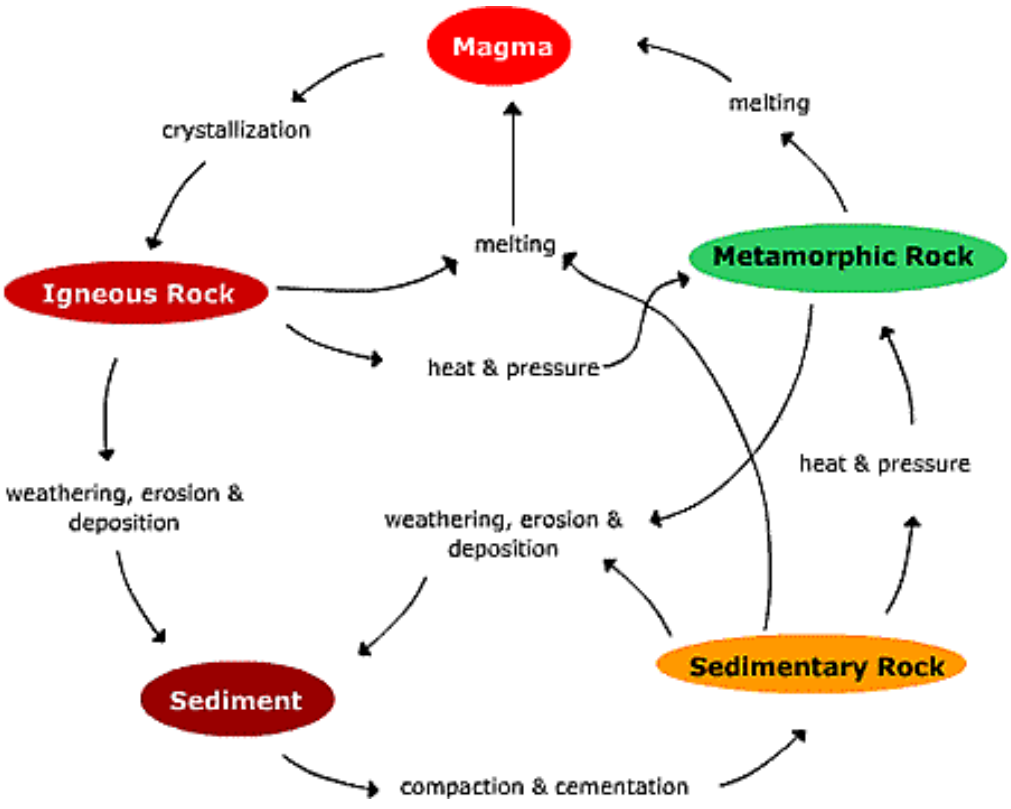
One of our most exciting initiatives is our outreach to the geology-degree granting colleges and universities in the state. This initiative is just beginning and it's been a good beginning. Thank you to the student liaisons – Natalie Samai-Odegaarden at Mississippi State and Jerryl Roberts at Jackson State. Y'all are the first. Thank you for helping us learn on your watch! Thank you also to those who have agreed to serve as professional liaison to the universities – Bob Schneeflock for Millsaps and Tony Stuart for USM. This has been a learning year for me in this effort. I look forward to growing our effort and effectiveness in the future.

And finally, last but not least, my friend and partner in crime, Ezat Heydari. Thank you for your "unreasonably enthusiastic" (my phrase) willingness to serve as First Vice President of our Society. Thank you for your willingness to tolerate my half-baked ideas with enthusiasm and encouragement. I look forward to participating with you in the coming year.
With gratitude for the opportunity to serve such a wonderful organization and group of folks. Thank you all!

Neil

2013-2014 MGS MEETING SCHEDULE

When	What/Who	Where
September 12, 2013	Fall BBQ	Jackson Yacht Club-5:30pm
October 10, 2013	Steve Craft **Recent Activity: Smackover South Alabama**	River Hills – 11:30am
November 22, 2013	**MSOGB**	River Hills – 11:30am
December 14, 2013	MAPL Christmas Party and Dance	Duling Hall, Fondren District 7:00pm
January 9, 2014	John Ryan HydroFracking - Mississippi Operators	River Hills – 11:30am
February 13, 2014	Dr. David Dockery Climate Change	River Hills – 11:30am
March 13, 2014	Dr. Ernest A. Mancini	River Hills – 11:30am
April 10, 2014	Boland Scholarship Awards	River Hills – 11:30am
May 8, 2014	Spring Fling	Jackson Yacht Club– 5:30pm



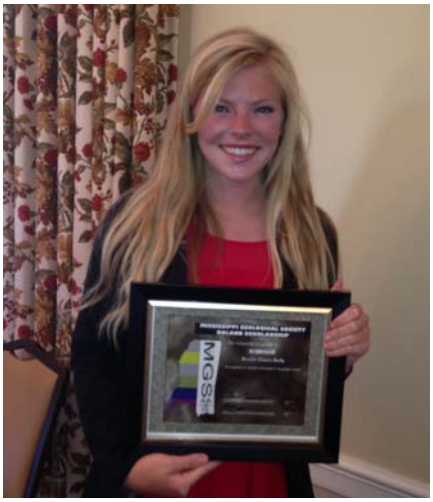
OFFICERS MEETINGS
August 4, 2013
September 10, 2013
October 8, 2013
November 20, 2013
December 12, 2013
January 7, 2014
February 11, 2014
March 11, 2014
April 8, 2014
May 6, 2014

BOLAND SCHOLARSHIP

AWARD WINNERS

MGS Members,

The Mississippi Geological Society awarded its annual Lawrence F. Boland Scholarship to four studentsat the April 10 meeting. This foursome makes a total of 125 students to be honored by the Society foroutstanding scholastic achievements in the Geoscience field since the awards began in 1982-1983. The students were each awarded $1,000 and a framed certificate denoting their achievement.



Emilie Kelly – Mississippi State University. Emilie is from Gulfport, Mississippi and is a Senior to graduate in June, 2014 with a B. S. Degree in Professional Geology. She has an overall GPA of 3.78 and a major GPA of 3.92. She previously attended the University of Mississippi where she maintained a GPA of 3.5. She would like to enter the petroleum business after graduating with graduate school a future possibility. She has made the Chancellor's and Dean's List. She is a member of Chi Omega Sorority, the GSA and several honor societies including Sigma Gamma Epsilon.

Amanda Couch – University of Mississippi. Amanda is from Watertown, Wisconsin and a Senior to graduate in December, 2014 with a B. S. in Geology and a Spanish minor. She has a 3.85 overall GPA and a 4.0 GPA in her Geology major. She plans to pursue a M. S. degree with a current interest in Hydrology. She has made the Chancellors Honor Roll and has received a Soc. of Women's Engineering Scholarship plus outstand student awards in the Geology and Spanish Departments. She is a member of the AEG and currently works with the MMRI in creating an on-line statewide well log data base.

BOLAND SCHOLARSHIP

AWARD WINNERS

Catherine Henry – Millsaps College. Catherine is from Houston, Texas and a Senior to graduate in May, 2014 with a B. S. Degree in Geology. She has an overall GPA of 3.27 and a 3.59 GPA in her Geology major. She plans on attending graduate school with a current interest in the petroleum field. She has received the Wendell B. Johnson Memorial Award and the Dudley Hughes Internship Award and currently interns at Jura-Search doing petroleum exploration. She also tutors introductory students at Millsaps. She is a member of the GSA and American Society of Microbiology.

Hunter Newman – University of Southern Mississippi. Hunter is from Jackson, Mississippi by way of Atlanta, Georgia. He is a Senior to graduate in December, 2014 with a B. S. Degree in Geology. He has an overall GPA of 3.8 and a 4.0 GPA in his major. He previously received a B. A. degree in Business from the University of Mississippi. He plans to pursue a M. S. degree with a primary interest in exploration geology. He has made the President's List and has received a NASA Space Grant. He has traveled through Southeast Asia where he taught English to pre-school through adults in Thailand.

DUSTIN JOHNSON MEMORIAL AWARD

WINNER

The Dustin Johnson Memorial Award

In addition to the Boland Scholarship Awards, the MGS has established another award to be given each year to recognize a student for extraordinary achievements and determined efforts in the pursuit of a Geoscience career outside the strict Boland Scholarship scholastic requirements . This award is to be known as **The Dustin Johnson Memorial Award** in honor of Dustin Johnson, a Geoscience major at Mississippi State University, who lost his life in 2013 just short of receiving his degree.

The inaugural recipient is **Chester Ray "Chet" Ferguson II** from Millsaps College. He received $500 and a framed certificate denoting the award. He is a senior to receive his B. S. Degree in Geology in May, 2014. Chet is a father and grandfather who graduated from Kosciusko High School in 1988 and Holmes CC in 2004. After high school, he had to forego college to help his family out. He entered the timber business as a tree cutter and eventually built this experience into his own successful Ferguson Thinning business. Chet developed physical and medical conditions that forced him to give up this business and he then formed a smaller business, Ferguson Excavations. As his condition worsened, he also had to leave this business at which time he entered Millsaps College to obtain his geology degree. He has done so in good standing and the MGS is pleased to award him the inaugural Dustin Johnson Memorial Award in recognition of his determined achievements in the face of much adversity.

Ezat Heydari (left) & Chester Ray "Chet" Ferguson II (right)

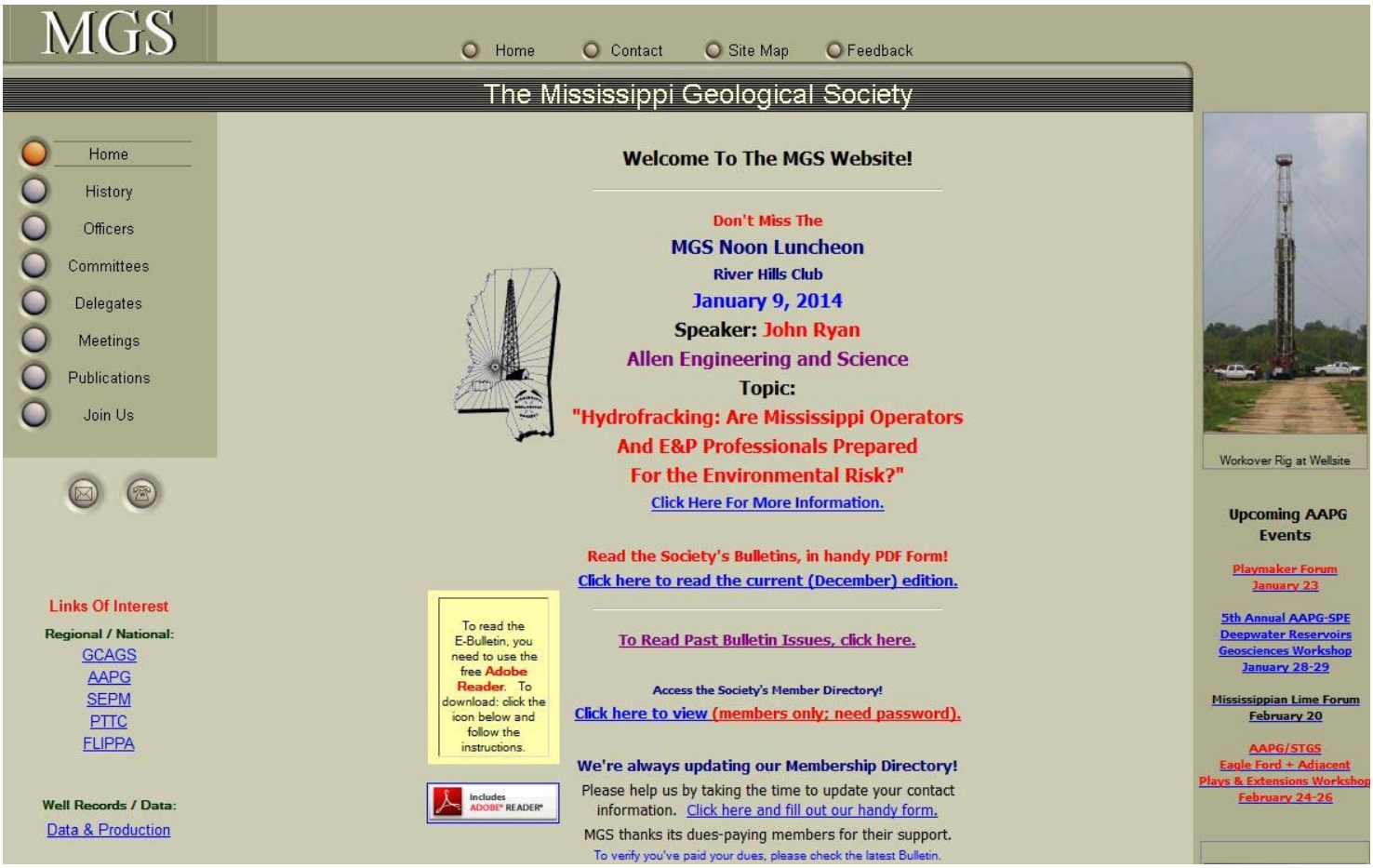
NEWS

MGS WEBSITE

Members

Please take the time to visit us on our website. You can view current and previous bulletins, update your address, access local and regional organizations, well records/data, oil and gas boards, neighboring societies and upcoming events. There are also several links to interesting articles and papers.

www.missgeo.com



JACKSON STATE UNIVERSITY

EARTH SYSTEM SCIENCE DEGREE

Ezat Heydari
Dept. of Physics, Atmospheric Science, and Geoscience
Jackson State University

ezat.heydari@jsums.edu

Jackson State University (JSU) is one of the first, if not the first, Historically Black College and University (HBCU) to establish a comprehensive degree program in Earth System Science. The program was initiated and designed by JSU's faculty members in 2003. Its curriculum was approved by the University committees in 2006 and by the Mississippi's Institute of Higher Learning in 2008.

Earth System Science (ESS) is a relatively new discipline which views Earth as a system consisting of four inter-related domains: Geosphere (solids), Hydrosphere (liquids), Atmosphere (gases), and Biosphere (life). ESS advocates an understanding of all of Earth's domains because it believes that a change in one affects all others.

ESS is within the College of Science, Engineering, and Technology. Therefore, ESS students are required the same basic science courses as those majoring in Chemistry, Physics, or Biology. These include two semesters of calculus, chemistry, physics, biology and their respective laboratories.

ESS curriculum offers courses for understanding of the Geosphere, the Hydrosphere, and the Atmosphere. Geosphere-related courses include Earth and Space Science, Earth History, Sedimentary Environments, Mineralogy – Petrology, Structural Geology, Global Change, Environmental Geology, and their related labs. Hydrosphere-related courses include Hydrology, Oceanography, Marine Science, and Geochemistry. Atmosphere-related courses include Meteorology, Climatology, and Astronomy. Other required courses are Geographic Information System (GIS) and computer programming.

ESS program has two major goals: to educate and graduate Earth Science students at a major HBCU, and to enhance Earth Science knowledge of general student population particularly those majoring in elementary and middle school education through its introductory Earth Science courses. It also provides workshops for in-service K-12 teachers and Middle School students.

ESS program has labs for sample processing, petrological studies, and sedimentological investigations. It also houses a Burker D-8 powder X-Ray Diffraction instrument. All necessary funds for the purchase of samples, instrumentations, equipments, and teaching aids were generated through grants from external, out of state funding agencies.

MONTHLY COLUMN

Dr. David T. Dockery III

SURFACE GEOLOGY MAPS AND AQUIFER RECHARGE

Geologists with MDEQ's Office of Geology (OG) and Office of Land and Water Resources (OLWR) coordinate work when it comes to mapping surface geology and creating cross sections to make sure that MDEQ's surface geology maps and groundwater models match. Recently we had a farewell party for OLWR groundwater modeler, Pat Mason (Figure 1), after 15 years of service. During Pat's tenure with the agency, OG's Surface Geology Division geologists and OLWR geologists were given adjacent work spaces in the old office at Southport Center ("the Far Side") and later in the new third-floor offices in the 700 Building. It was a coordination that created a synergy, an interaction that produced an effect greater than the sum of the individual offices, and allowed for peer review across office divisions.

Figure 1. Left, Jim Hoffmann describes Pat Mason's (at left) exceptional work at the Office of Land and Water Resources. Right, flowers and food at Pat's farewell party, February 19, 2014; Janice Alewine and Ethan Broadfoot in foreground.

In her time at MDEQ, Pat Mason created a Mississippi River Alluvial aquifer model that incorporated surface geology mapping. Pat was one of a select group willing to be the geologist on an MDEQ drill-rig test-hole site, and catch samples (a really muddy job). One of Pat's early jobs as a geologist was in California, where her company drilled large holes along the coastal bluffs to look for shear surfaces that might lead to landslides. In fact, they would lower Pat down the hole on a cable to record the geology as she descended to the bottom. On one occasion, a colleague declined to enter a hole after looking down and seeing a small "shelf" had formed because the slide had shifted.

MONTHLY COLUMN

Dr. David T. Dockery III

When MDEQ's James MacLellan needed an eyewitness account for his article on "Designing for the Flood--Dams and Extreme Weather Events" in the November 2009 issue of *Environmental News*, he turned to Pat Mason. Pat was a geologist on an oil-exploration drill rig near Houston, Texas, on July 24, 1979, when Tropical Storm Claudette came ashore and stalled, dumping 42 inches of rain in a 24-hour period. MacLellan wrote, "I talked to her about the experience and she told me about how the crew kept going out to keep the rig running and the site pumped out during the storm, but there were times when all they could do was to take shelter in the trailers because the rain was coming down so hard."

When a fossil whale was discovered in the Yazoo Clay at Clearview Landfill in Scott County, MDEQ's Surface Geology Division and workers with the Mississippi Museum of Natural Science heeded the call to excavate the specimen. Among those who helped were Pat Mason and her husband John. Pat even wrote an exceptionally-good Celtic seagoing song about the excavation. Mississippi Public Broadcasting featured the excavation, Pat's song, and an interview with Pat on *Mississippi Outdoors*.

Pat was quick to recognize that alluvial fans observed by James Starnes and David Thompson along the eastern margin of the Mississippi River Alluvial Plain were an important source of recharge for the Alluvial aquifer. Alluvial fans are better known in desert basins within mountainous regions, where they are a recognized source of recharge for basin aquifers. Both David Thompson (Figure 2) and James Starnes have mapped alluvial fans, respectively, in the northern and southern region of the Mississippi Delta.

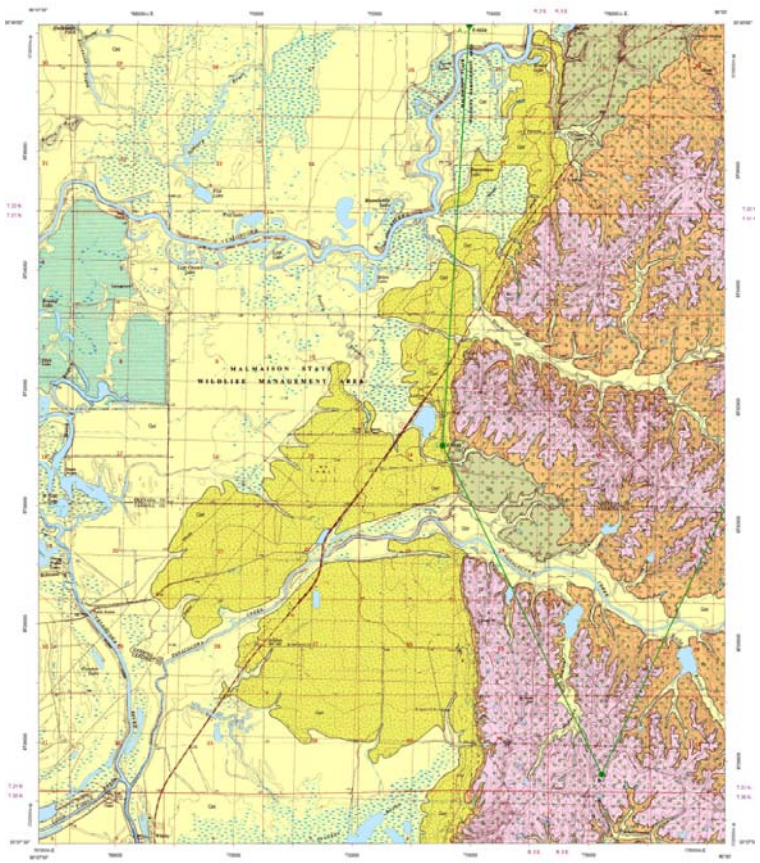


Figure 2. The Avalon 7.5-Minute Geologic Map by David Thompson, 2010. A large alluvial fan in northern Carroll County has been cut in half by Potacocowa Creek.

MONTHLY COLUMN

Dr. David T. Dockery III

An important moment in modeling the Alluvial aquifer came while reviewing test holes drilled by the Office of Geology for Charlotte Bryant-Byrd through a compound alluvial fan in east Carroll County. Rather than being just a surficial feature, the fan had deep roots and multiple stages that interfingered with the Mississippi River Alluvial aquifer (Figure 3). Pat's Mississippi River Alluvial aquifer model, including the alluvial fan contribution, was published in the Proceedings of the 2010 Mississippi Water Resources Conference.

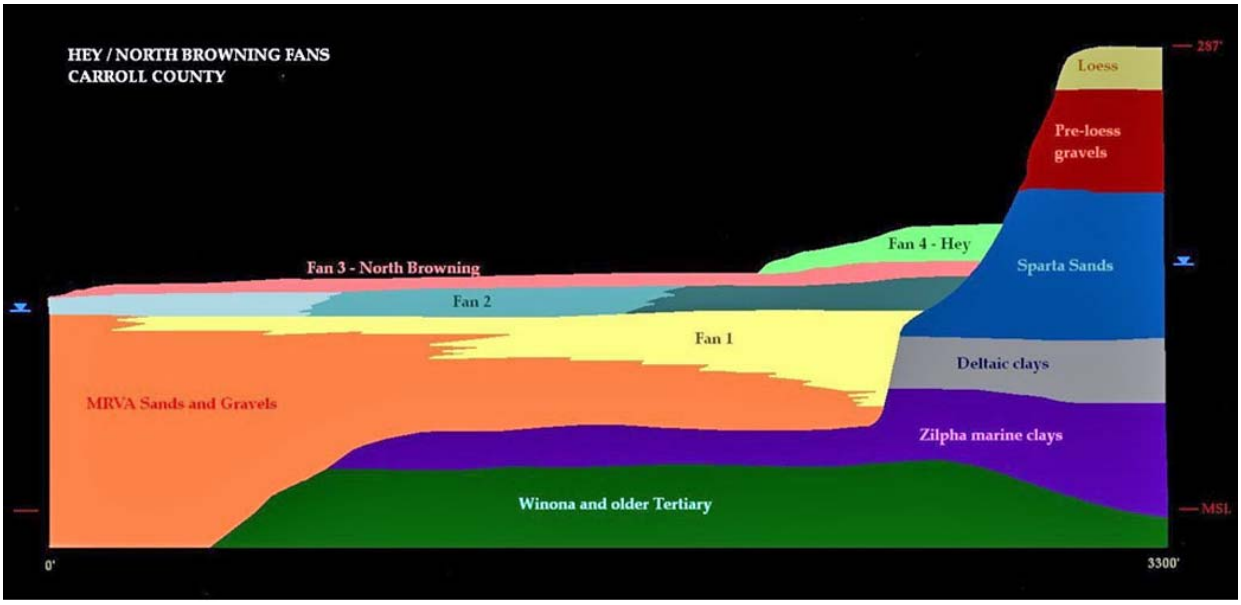


Figure 3. A compound alluvial fan along the bluffline in Carroll County, Mississippi. Tertiary bedrock formations are on the right (east) side; the Mississippi River Alluvial aquifer sands and gravels are on the left (west) side, and the alluvial fan components interfinger in the middle (from Pat Mason).

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MONTHLY ARTICLE

Submitted by: Randy Bissell

Global Warming Causes People

By Randy Bissell

The "why" and the disclaimer.

Please read that title again, "Global Warming Causes People." It is a little different than the rhetoric we've been hearing the last decade or so. In the following sentences, I will attempt to add insight to the association between human activity and the global temperature shift by flipping the relationship over and examining the correlation anew.

It is not my intention to deny or diminish the actuality of global climate change or the contribution to accelerating global warming by man's use of fossil fuels and industrial production of "greenhouse gases." However, I would suggest that many doomsayers might *over-represent* the certainty of their most pessimistic predictions. Likewise, it is unwise for the naysayers to *ignore the impact* that humans have on the climate without sober reflection on the costs and benefits of our technological, environmental, and population trajectories.

Here goes.

Instead of assuming that climate change is fundamentally *caused* by humans, I would assert that human technological advancements, cultural progress, and population increases have been caused by, or perhaps better said "facilitated by," increases in global temperature over the last 12,000 years. Furthermore, I might assert that any recent human contribution to that temperature rise has a *possibility* of improving worldwide climatic conditions necessary for sustainable population growth and spurring technological progress.

Likewise, if one accepts that a recently warming globe in geologic terms has contributed to the habitability of the planet by *homo sapiens* (us), then we might also consider that any significant decrease in average global temperature or a reversal of sea level due to polar ice cap expansion would result in a human catastrophe of much greater proportion than the projected increases in temperature and rising sea level.

Finding a level sea?

The geologic strata on our planet record innumerable oscillations in sea level through time. The magnitude and scale of these events are reflected in continental geomorphology. This is not simply a scientist's perspective. Biblical creationists must also account for the "gatherings of water and ground" and Noah's flood from Genesis. Evolutionists and creationists may disagree on everything else scientific, and likewise, everything sacred. But everyone can agree there is little precedent in science or Holy Scripture for a belief wherein sea level remains constant beyond the span of a few hundreds or thousands of years.

MONTHLY ARTICLE

Submitted by: Randy Bissell

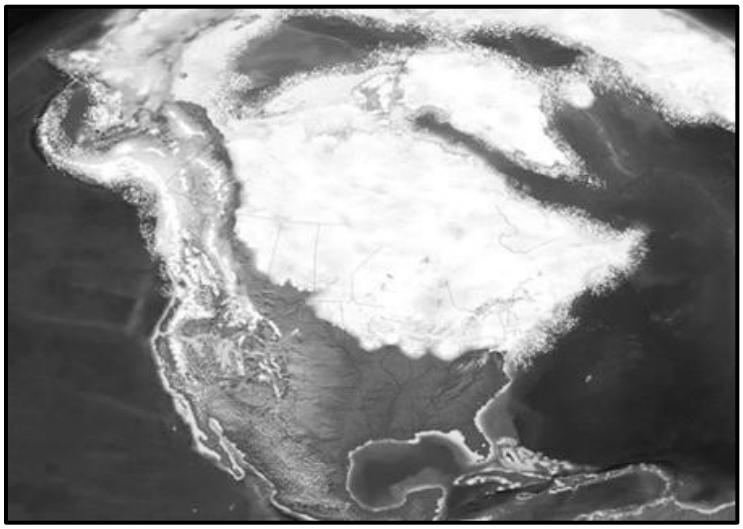
So, our circumstance is sea level rising or sea level falling. It is a ridiculous position that we expect sea level to remain constant. No matter the cause, sea level never stays at any level very long. "Sea level" as a permanent datum is actually a silly notion.

Getting a bigger tank.

Now, let's consider the guppies multiplying in my fish tank for a moment. I have always heard that a fish tank can support 1 inch of fishes for every gallon of tank. Using that reasoning, my 20 gallon tank should support 20 inches of guppies, nose-to-tail. That'd be about 40 adult fish. To sustain a population above that, I'd need a bigger tank.

When I was recently in New York City, I showed my family the glacially striated outcrops in Central Park. I pointed out to my elderly aunt that there was, but just a few thousand years ago, hundreds of feet of glacial ice covering New York – a polar ice cap extensive across the North American continent and terminating in the northern tier of the United States. Today 1.6 million people live on Manhattan Island. Could that number of people have been living there 12,000 years ago on top of that ice? Could there be a New York City? Toronto? Chicago? That would seem impossible with all that ice at those locations!

A Summer Day in North America 12,000 Years Ago



Where is New York? Chicago? Washington? Toronto?
(figure source: http://www.nature.com/news/evidence-found-for-planet-cooling-asteroid-1.13661)

Global warming causes people.

Yes, the idea is that simple. Global warming has given us a bigger tank or, in our case, more land mass to work with. With the reduction of the area of the northern polar ice cap we end up with more land mass in climatic bands that are advantageous to the proliferation of *homo sapiens*. Growing wheat in the northern plain states and Canada would have been impossible when the ground was frozen-solid year around or under a mile of ice. The migration of the temperate climate bands northward over centuries have opened up arable lands for important

food crops and livestock. In step, man has perfected agriculture and livestock production. The inverted wedge-shape and the distribution of the largest landmasses in the Northern Hemisphere have increased the potential areas for cultivation and habitation. Bottom line: more land, better climate to sustain more people.

Let's cool things down.

I am old enough to remember how everyone reacted when we experienced the North American cold snap in the 1970's. To save us from cooling climate change, scientists have proposed spreading coal dust on the polar ice caps to help melt the ice and warm the Earth. Are we smart enough to meddle with the key factors that hold Earth within the narrow envelope of habitability? Tampering with the earth's climatic controls is like my guppies trying to manipulate the temperature of their tank. They have contributed to conditions, yes, but they have little control and even less understanding of their "climate."

But what if we woke up tomorrow and the sea reversed its rise? I think we've already established that there is no precedent for a stable sea level. It's either going up or going down. So, what are the implications of a *falling* sea level, a cooling climate, and growing ice caps? What happens when fresh water gets pulled from the atmosphere to build glaciers and polar ice caps – remembering too that cool air carries less rain-making moisture? What happens to ocean ports and coastlines and reefs? How could a cooling trend be stopped?

When things cool down, what happens to the northern plains as the breadbasket of the world? What's going to happen with less bread? Or with less land to cultivate or inhabit? What if I took 20% of the water from my fish tank? Or fed my fish with 20% less food? I'll tell you what would happen -- fewer guppies.

Who benefits?

I am reminded of an account in Martin Dugard's great book, The Last Voyage of Columbus, of how shipwrecked Christopher Columbus manipulated the natives of Jamaica into giving his crew food by telling them that he, Columbus, would have his god blot out the moon as their punishment for neglecting their guests. You see, Columbus was an experienced astronomer and he was quite familiar with the upcoming predicted eclipse of the moon. Having demonstrated the consequences of their sins at the height of the eclipse, the chiefs swore their continued allegiance to Columbus and began delivering food that night. To show his god's power and grace, the moon was restored.

When I speak with regular folks, many students and friends, about heady and interesting things such as sea level variations and the history of the earth, it comes as a surprise to the non- scientific that the sea is more characteristically rising or falling rather than remaining constant. With a little patient explanation, it is easy to convince them that sea level variation is the norm and the rise we're experiencing has been occurring for millennia. Sea level today is nowhere near its historical maximum. Sadly, the study of earth science is often neglected in

our high schools. It would thus seem that an absence of basic scientific knowledge amongst our general population serves its nefarious purposes.

Could it be that commonplace ignorance of relevant earth history serves those who might manipulate others into paying tributes based in fear? Just like Columbus, could I profit or become powerful by convincing the natives that they have *caused* a natural calamity that is, in fact, simply a natural *phenomenon*? Are there people doing that today?

Conclusions.

1) Before any meaningful discussions and suggestions of remedies for our present state of accelerated warming, we must consider the longer view of history. The crucible of human existence, planet Earth, is delicately balanced in orbit, chemistry, and energy (and geologic history) which results in a complex system called "climate." Tampering with any key element of our condition may jeopardize the narrow envelope of our existence. Some might argue that human release of CO_2 in the last 150 years *is* tampering with the system. Others might say that we should recognize the brevity of our perspective, as we are the guppies in the tank or as the comedian George Carlin said, "fleas" on the "dog."

2) Our misguided "solutions" might have unintended and woeful consequences. Some solutions may even be proposed simply to exploit the situation to enrich and empower the few. Every suggested fix has some climatic, social, economic, and environmental impact. Remember that exploitation of power and control is a pretty big part of our human nature.

3) Without global warming, fewer of us would have been born (my friends, my wife, and my children). If the climate had not warmed over these last 12,000 years or if this warming cycle had ended early, we wouldn't be here. I didn't get to pick when I was born. But I am glad I was born and lived in an age when the climate is warming. You and I are products of this age – of this longstanding process. I feel fortunate and blessed to be alive in *this* time – to see, to learn, to love, to think, to drive my car.

4) Global warming causes people. Without global warming these many centuries, I believe the few humans might all still be huddled in their cave, gnawing mammoth bones, wondering why they have to walk everywhere, and grunting about why Uncle Ned has such a prominent brow.

**Randy Bissell is an amateur philosopher and professional geologist experiencing the rising sea level and warming climate in Corpus Christi, Texas. Feedback, comments, and criticisms regarding this essay can be directed to **bissellr@swbell.net* - *Please subject emails: Global Warming Causes People*

Other Sources and Inspirations:
Christian, David, 2011, The History of our World in 18 Minutes, www.ted.com/talks/david_christian_big_history.html

Carlin, George, 2009, George Carlin on the Environment, www.youtube.com/watch?v=EjmtSkl53h4

Dugard, Martin, 2005, The Last Voyage of Columbus: Being the Epic Tale of the Great Captain's Fourth Expedition, Including Accounts of Swordfight, Mutiny, Shipwreck, Gold, War, Hurricane, and Discovery, Little Brown and Company. 320 p.

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BAR #: _____ STATE: _____

DO YOU PLAN TO ATTEND THE ICEBREAKER ON THURSDAY EVENING?

Yes _____ No _____

Advance registration (by April 30) is $150.00 (includes icebreaker on Thursday evening and lunch on Friday). Late registration (May 1 or later) is $200.00. Icebreaker only is $15.00. Make check payable to Mississippi Oil & Gas Law Seminar and mail to:

Mississippi Oil & Gas Law Seminar
Post Office Box 321423
Jackson, MS 39232

Fifteenth Triennial
Mississippi Oil & Gas Law Seminar

Friday, May 9, 2014
HILTON JACKSON
1001 East County Line Road
Jackson, Mississippi 39211

SEMINAR PROGRAM & SCHEDULE

7:45 - 8:30 a.m. REGISTRATION (refreshments provided)

8:30 - 8:45 a.m. WELCOME AND OPENING REMARKS
Michelle Ivshin Seminar Co-Chair -- Representing Mississippi Oil & Gas Lawyers Association
George Weathersby Seminar Co-Chair -- Representing Mississippi Association of Petroleum Landmen

8:45 - 9:30 a.m. Recent Developments in Mississippi Oil and Gas Law
Troy Odom Troy is a partner with the firm of Blair & Bondurant, P.A. Troy graduated from Southern Miss in 1998 and Ole Miss School of Law (cum laude) in 2002. Troy maintains a general chancery practice, focusing on real property litigation in both State and Federal Courts, natural resource law, title work, and probate. Troy is a past President of the Miss. Oil and Gas Lawyers Association and past Associate Director of the Miss. Association of Petroleum Landmen. Troy recently authored *Of Lignite Mining and the Rights of Surface Owners*, 30 Miss. C. L. Rev. 473 (2012).

9:30 - 10:00 a.m. Recent Developments in Alabama Oil and Gas Law
John Tyra John practices oil and gas law in Tuscaloosa, Ala. He is a graduate of the University of Alabama (B.S. 1975; J.D. 1980). His practice includes all aspects of oil, gas and energy law including conducting record title searches, rendering drilling and division order title opinions, litigation, and regulatory proceedings before the Alabama State Oil and Gas Board. John is admitted to practice in Alabama and Mississippi. He is a member of the Alabama, Mississippi and Tuscaloosa County Bar Associations, and has served as Chairman of the Oil, Gas and Mineral Law Section of the Alabama State Bar. John is a frequent speaker at oil and gas law seminars.

10:00 - 10:15 a.m. MORNING BREAK (refreshments provided)

10:15 -10:45 a.m. Recent Regulatory & Legal Developments at the Mississippi State Oil & Gas Board
Howard Leach Howard graduated from Ole Miss with a B. A. Degree in English and a J.D. from the Ole Miss Law School. While in law school he was a member of the Miss. Law Journal. Following graduation from law school, Mr. Leach clerked for Justice Robert G. Gillespie and Justice Thomas P. Brady, Jr. of the Miss. Supreme Court. Mr. Leach was commissioned a 2nd Lieutenant in the United States Army upon graduation from Ole Miss. He was honorably discharged with the rank of Captain. Following military service, Mr. Leach joined the legal department of Shell Oil Co. where he specialized in administrative law and legislative matters. He thereafter joined the law firm of Armstrong, Thomas, Leach, Lampton & Arledge. Since May 2009 he has served as the attorney for the Miss. State Oil & Gas Board. Mr. Leach is licensed to practice before the U.S. Supreme Court, the U.S. Court of Appeals (5th Cir.), the U.S. District Court (S.D. Miss.) and the Miss. Supreme Court.

10:45 - 11:45 a.m. BLM Overview -- Leasing & Operating on Federal Lands
Ken Adams Ken is the owner of Kenneth R. Adams and Associates, Energy Consultants L.L.C. He is a graduate of University of Florida with B.S. in Geology in 1974 and B.A. in Geography in 1976. Ken retired in 2008 from the BLM as Assistant Field Manager, Mineral Resources Division, Jackson Field Office. While employed at the BLM, Ken oversaw mineral production from federal lands in 11 Southeastern states. His duties included long term planning, leasing oversight, NEPA document preparation and compliance, permitting, inspection and enforcement of mineral operations, production verification and approving production sharing agreements.

11:45 - 1:15 p.m. LUNCH **(provided in Penthouse of Hilton)**
Keynote Speaker U.S. Shale Plays and How We Arrived at the Tuscaloosa Marine Shale Play
Bret Hammett **(Senior Vice President Exploration Manager with Goodrich Petroleum)**

1:15 - 2:00 p.m. Working around Old Production
2:00 - 2:45 p.m. Preferential Rights, JOAs and AMIs
Glen Bush Glen is a shareholder and founding partner of Copeland Cook Taylor & Bush, P.A. He has practiced in the area of oil and gas law for 36 years. His practice in the oil and gas industry has included providing title opinions, representing clients in title disputes and other oil and gas related litigation, and providing regulatory and transactional representation. He is admitted before Miss. State and Federal Courts, the U.S. Court of Appeals (Fifth Circuit), and Ala. State and Federal Courts (Northern District). Mr. Bush received his J.D. degree from the University of Miss. (1977), a M.A. degree in Organic Chemistry from the University of Texas (1971), and a B.S. degree from Miss. College (1967). He is an active member of the Miss. Bar, Ala. Bar, Miss. Oil and Gas Lawyers Assn., Miss. Assn. of Petroleum Landmen, and American Assn. of Professional Landmen.
Glenn Taylor Glenn is a shareholder and founding partner of Copeland, Cook, Taylor & Bush, P.A. He has practiced in the area of oil and gas law for over 37 years. His practice includes oil and gas law, commercial litigation, commercial law and environmental law. He is admitted before the Miss. state courts, Miss. Federal Courts, Fifth Federal Circuit and the U.S. Supreme Court. He is a member of The Miss. Bar, Miss. Oil and Gas Lawyers Assn., Miss. Assn. of Petroleum Landmen and American Assn. of Professional Landmen and American Bar Assn. Glenn received his J.D. in 1975 from the University of Miss. School of Law, where he was associate editor of Miss. Law Journal. He clerked with the Miss. Supreme Court (1975-1976). Mr. Taylor authored *Legal Issues Arising From Blowouts Of Oil & Gas Wells*, Twelfth Triennial MS Oil & Gas Law Seminar (2005); *The Excess Gas Market: Recent Legal Problems Precipitated by Excess Gas Deliverability and Applicable Regulatory Provisions*, 35th Annual Inst. on Oil & Gas Law and Taxation and was co-author of *Appeals to the Mississippi Supreme Court*, 48 Miss. Law Journal.
John Geary John is a shareholder of Copeland, Cook, Taylor & Bush, P.A. He focuses his practice largely on the oil and gas industry, providing title opinions and representing clients in title disputes, regulatory matters, eminent domain and other real property matters. He also represents clients in commercial transactions, including financial agreements and commercial and private real estate transactions. Mr. Geary holds degrees from Vanderbilt University and Fuller Theological Seminary, and earned his law degree from the University of Miss. He serves as Associate Director of the Miss. Assn. of Petroleum Landmen and is an active member of the Miss. Oil and Gas Lawyers Assn. and the American Assn. of Professional Landmen. He is admitted to practice in all state and federal courts in Miss. and the U.S. Court of Appeals (Fifth Circuit).

2:45 – 3:00 p.m. AFTERNOON BREAK (refreshments provided)

3:00 - 3:45 p.m. Geology -- The Lower Smackover Brown Dense Lime Trend
Steve Walkinshaw Steve is a graduate of Millsaps College and is President of Vision Exploration LLC, based in Madison, MS. He began his full-time career in the oil business in 1981, serving as District Geologist for Hughes Eastern Corp. for nine years. In 1989 Steve founded and managed Cougar Exploration, a successful business unit of Paramount Petroleum (acquired by Nuevo Energy in 1992). He remained with Nuevo until 1996, after which he was invited by Dudley Hughes to return as Exploration Manager of Hughes-Rawls International (HRI). In 2000, Steve left HRI and founded Vision Exploration, which over the course of thirteen years has become one of the most active independents in Miss. He has many oil and gas discoveries and successful field redevelopment projects to his credit.

3:45 - 4:45 p.m. Current Issues in Legal Ethics in the Oil & Gas Context
Donald Campbell Donald is an assistant professor of law at Miss. College School of Law, where he teaches Property; Land Use and Planning; Ethics and Professional Responsibility; Environmental Law; and Construction Law. He received his undergraduate degree from University of Southern Miss., and his J.D. from Miss. College. He is author of several articles and co-author of two treatises on legal and judicial ethics in Miss. (with Jeffrey Jackson) entitled *Professional Responsibility for Mississippi Lawyers and Commentary on Judicial Ethics in Mississippi*. Professor Campbell has served as a clerk for Judge Leslie Southwick on the U.S. Court of Appeals (5th Circuit). He has served as a member of the Committee on Common Interest Communities for the Real Property Section of the Miss. Bar and the Reporter for the Miss. Code of Judicial Conduct Study Committee.

4:45 p.m. CLOSING REMARKS AND ADJOURNMENT

MISSISSIPPI STATE UNIVERSITY

MSU News

Updates

The schedule for Brown Bag talks given in the Department of Geosciences at Mississippi State University is listed below. These short talks are given on Fridays during lunchtime by students, professors, and industry experts in the geosciences field.

The department will wholeheartedly like to thank Erik Larson for the wonderful job he has done over the past academic year scheduling the roster and organizing speakers for the Brown Bag. His volunteerism, quirky humor, astuteness, and last but not least his signature pocket full of pens will be missed around the department. He will be graduating with his PhD in Earth and Atmospheric Science this semester and moving on to greener pastures in Ohio where, he will be an Assistant Professor of Geology at Shawnee State University. His dissertation focused on the formation of conduit caves, blue holes and whitings in the Bahamas and the global carbon budget as related to karst processes. If anyone requires his professional opinion or would like to discuss his work, Erik can be contacted via his new email at elarson@shawnee.edu.

Brown Bag talks will commence in the Fall semester. Natalie Odegaarden can be contacted at nao23@msstate.edu if you are interested in giving a presentation.

April 25th – Mississippi Geological Society, Steve Walkinshaw: The Lower Smackover Brown Dense Lime Trend
May 8th – Last Day of Final Exams

.....Summer Vacation.....

As the Spring semester winds down, I want to wish all the outgoing geology and GIS students best of luck in their future endeavors. I would especially like to congratulate the following graduating students:

Master's Level

Benjamin Breland: M.S. in Geology (Petroleum Industry)
Max Cooper: M.S. Geology
Jonathon Geroux: M.S. in Geology (Environmental/Petroleum Industry)
Orry Lawrence: M.S. in Geology (Geology/GIS)
Nathan Owen: M.S. in Geospatial Tech (GIS)
Nicole Ridlen: M.S. in Geology
Kent Sparrow: M.S. in Geospatial Tech (GIS)
Brandon Sylvester: M.S. in Geospatial Tech (GIS)
Ryan Travis: M.S. in Geology (Petroleum Industry)
Lucy Tettah: M.S. in Geospatial Tech (GIS)
Lance Watkins: M.S. in Geospatial Tech (GIS)

Ph.D Level

Patricia Kambesis: Ph.D Geology
Erik Larson: Ph.D Geology

MISSISSIPPI STATE UNIVERSITY

Congratulations Emilie Claire Kelly on being the 2014 Boland Scholarship recipient! She received a one thousand dollar cheque and a plaque to commemorate this achievement. The Boland Scholarship is given out each year through the Mississippi Geological Society to one student from each Mississippi academic institution who display strong scholastic abilities. The award ceremony was held at the River Hills Country Club in Jackson. Dr. Cooke, the Interim Head of Geosciences at MSU, attended the event and pledged his continued support to geologist in the department in any way he can in order to enhance their education thus making them more competitive when they enter the work force.

From the left, Neil Barnes (President of the MGS), Claire Kelly (Boland Scholarship recipient), Natalie Odegaarden (liaison/MSU News writer) and, Dr. Bill Cooke (Interim Head of the Geosciences Department at MSU) at the award ceremony.

Claire is a well-rounded, hard-working and resourceful individual. She is a native Mississippian who grew up in Gulfport and spends her free time on the water sailing and fishing. She also gives back to the community through her volunteer work with Habitat for Humanity and the Leap Frog Tutoring Program. She has made the dean and chancellor's list on many occasions and is a member of numerous honor societies due to her academic capabilities, which is reflected in her high program GPA of 3.92 and 3.78 overall. Furthermore, she recently wrote the ASBOG exam and passed. Her future plans after completing her field camp in Dillion, Montana in order to graduate with a Bachelor of Science in Professional Geology, is to acquire an entry-level position with an oil or oil service company and gain relevant work experience in order to make an informed decision about graduate school.

The Dustin Johnson Memorial Award was given out for the first time this year in honor of Dustin Johnson, who we remember fondly as a fine young man. A sincere thank you to his family and the contributors who made this fund possible. The award went to Chet Ferguson from Millsaps College.

The Geosciences Department at Mississippi State University has set the goal of obtaining six workstations so that courses such as Sedimentology, Structural Geology, and a new IBA course can include exercises using industry software. These lab exercises will be designed to give students hands-on experience with real software and real data sets. Financial contributions to this effort can be made through the MSU Foundation, http://msufoundation.com/s/811/give/start.aspx. Please designate in the memo line for the Geosciences Technology Fund. Inquiries regarding donations of data suitable for beginning students can be directed to Dr. Brenda Kirkland at BLK39@msstate.edu.

STATE
TODAY. TOMORROW. FOREVER

MISSISSIPPI STATE UNIVERSITY

Interesting

Abstract

Polyacrylamide Gels, Microelectrodes, and Centrifugation-Colorimetric Measures: A comparison of porewater analysis methodologies.

GEROUX, *Jonathon, jmg366@gmail.com, Darrel Schmitz, Schmitz@ra.msstate.edu, Curry Templeton, currytempleton@gmail.com, Mississippi State University, Department of Geoscience; Karen S. McNeal, Karen.mcneal@ncsu.edu North Carolina State University, Department of Marine, Earth and Atmospheric Science*

Sediment diagenesis and associated redox environments are import for understanding elemental cycles, chemical fate, transport, storage, and estuarine behavior and response to external stressors (e.g., nutrient loads, hypoxia, and other contaminants). Monitoring and measuring redox reactive porewater chemical species is important for understanding modern sediment diagenetic behavior; however such work can be difficult. Ex-situ methods for porewater analysis are often employed, such as the retrieval of core samples and subsequent porewater analysis using microelectrode and/or removal of porewaters using centrifugation and measurement via colorimetric methods. Ideally, ex-situ methods will mimic in-situ conditions, will not introduce error, disturbance, or contamination to the analyte of interest, and extraction times will be expedient. However, polyacrylamide gels can be deployed in-situ and used to capture specific ions of interest through diffusive gradients in thin film (DGT) eliminating these potential uncertainties. DGTs must equilibrate with the sediments before analysis can be completed. Once the specific ions are captured by the DGTs they are locked to the binding layer of the gel, and colorimetric analysis can be conducted to provide an accurate sediment depth profile. This study reports on a laboratory refinement and field recovery study of the DGT method for specific retrieval of H_2S, Mn^{2+}, and Fe^{2+} at 2 cm sediment depth intervals. Field deployment was conducted in Bay St Louis, Mississippi at multiple locations to compare recovery and accuracy of these analytes as measured via traditional methods (e.g., the use of solid state microelectrodes and porewater extraction via centrifugation) and the DGT method. Results indicate that the DGT method recovery is 78% in the laboratory experiments and field results align with traditional methods. As such, we recommend the DGT method as a reasonable alternative to traditional geochemical methods for porewater measurement of dissolved H_2S, Mn^{2+} and Fe^{2+}.

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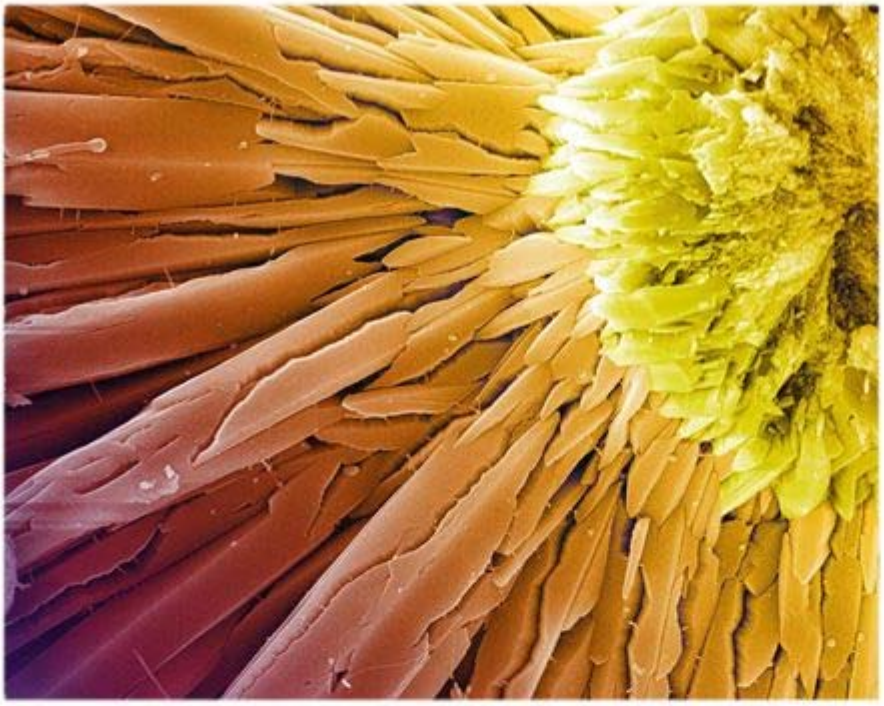
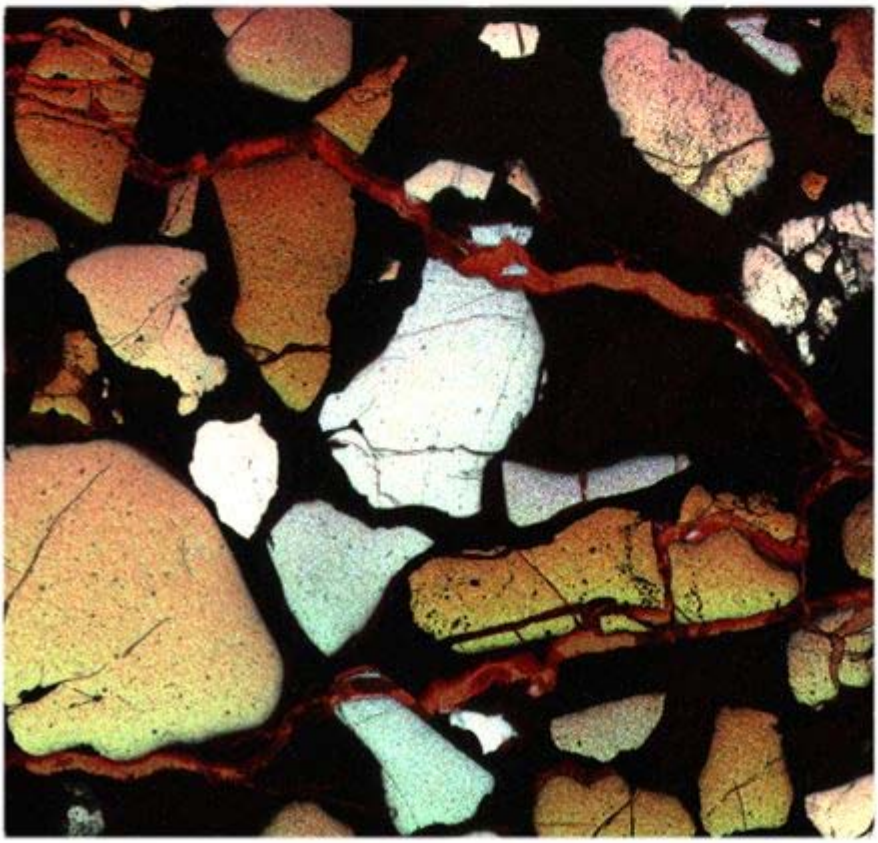


A microbial precipitate (travertine) from hot springs near Viterbo, Italy. Precipitation starts with little balls or organic matter and anhedral crystals in the upper right corner of the photo and continues as the beautiful euhedral crystals that make up the "sun rays" (image taken by Maggie Corely and colorized by Maggie George).



Sandstone cemented by iron oxide. Similar deposits were mined as iron ore during the Civil War. The image was taken with a confocal microscope, which uses laser light causing the organic particles in the fractures to luminesce red. The iron oxide cement is opaque, and the quartz look really cool. Samples were taken from an outcrop northwest of Philadelphia, Mississippi (image taken by undergraduate students from Delta State University and MSU working together on research).

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ROCK HUMOR

Rock Humor

"I don't drink water, because if water can erode rock, think what it can do to flesh."-Jarod Kintz.

1. What country did the U.S. import most of its crude oil from in 2005?
A. Saudi Arabia
B. Mexico
C. Canada
D. Venezuela

2. What is a hydrocarbon?
A. A chemical containing water
B. A molecule with carbon and hydrogen
C. A non-polluting fossil fuel
D. A compound produced at hydroelectric plants

3. What event was most responsible for the increase in oil prices in 1974?
A. Exxon Valdez disaster
B. Arab Oil Embargo
C. Iran-Iraq War
D. Formation of OPEC

4. What kinds of rocks usually contain crude oil and natural gas?
A. Sedimentary
B. Igneous
C. Metamorphic
D. Low porosity formations

5. Which of the following crude oils has the highest specific gravity?
A. West Texas Intermediate 32 API
B. North Sea Brent 38 API
C. Alaskan North Slope 27 API
D. California Kern River 13 API

6. What is the world's largest oil company?
A. Aramco
B. BP
C. ExxonMobil
D. Royal Dutch/Shell

7. What percent of the crude oil processed in a typical US refinery is converted into gasoline?
A. 25%
B. 35%
C. 45%
D. 55%

8. The U.S. oil and gas industry had its birth with what famous discovery?
A. Spindletop
B. Titusville
C. Prudhoe Bay
D. Daisy Bradford

9. Why is natural gas processed?
A. To separate crude oil from natural gas
B. To increase the heating value of the dry gas
C. To remove impurities and recover natural gas liquids
D. To increase octane number of the dry gas

10. Which country was the world's largest gas producer in 2005?
A. Saudi Arabia
B. United States
C. Russian Federation
D. Iran

11. Which of the following countries was not a founding member of OPEC?
A. Kuwait
B. Iran
C. Iraq
D. Libya

12. How much oil is recovered from a water drive oil reservoir?
A. 15-20%
B. 25-30%
C. 35-40%
D. 45-50%

MISSISSIPPI STATE UNIVERSITY

13. What is the leading non-gasoline product sold in C-stores?
A. Soft drinks
B. Tobacco
C. Alcoholic beverages
D. Milk

14. What is a wireline log used for?
A. Record conversations between oil company executives
B. Estimate the sulfur content of the oil
C. Transmit seismic information
D. Determine the salt water content of the rock

15. Where does the U.S. import most of its LNG from?
A. Algeria
B. Egypt
C. Trinidad & Tobago
D. Venezuela

16. Which of the following is not a drilling geometry?
A. Horizontal
B. Vertical
C. Open Hole
D. Deviated

17. What is an interface?
A. The zone between two different products in a pipeline
B. Pay at the pump technology
C. The space between grains of sand in a formation
D. The zone between two hydrocarbon layers

18. What is drilling mud used for?
A. Ballast on drillships
B. Stabilize the drilling rig to prevent shifting and listing
C. Control downhole pressure and remove cuttings
D. Prevent natural gas from seeping back into the formation

19. Offshore operations are conducted using all of the following structures or equipment except:
A. Tension Leg
B. Jackups
C. Semisubmersibles
D. Geophones

20. Spindletop well was located in a field formed by what trapping mechanism?
A. Anticline
B. Pinchout
C. Salt Dome
D. Fault

21. What is waterflooding used for?
A. Recover additional gas from tight sands reservoirs
B. Recover additional oil from tanker spills
C. Recover additional oil from reservoirs
D. Recover additional gas from aquifers

22. For what fuel is the freeze point a critical property?
A. Jet Fuel
B. Gasoline
C. Diesel Fuel
D. Home Heating Oil

Answers:

1C	12D
2B	13B
3B	14D
4A	15C
5D	16C
6A	17A
7C	18C
8B	19D
9C	20C
10C	21C
11D	22A

GRADUATE STUDENTS

The following is a preliminary list of current graduate students and their thesis work. I would encourage you to offer your knowledge and expertise and help our future geologists gain the experience they need as they move forward in their careers.

Name: David Luke Thompson
Email: dlt168@msstate.edu
Phone: 601-750-5497
Career Goal: mining industries and/or economic geology industries
Thesis Title: "Stratigraphy, Environments of Deposition, and Mineralogical Characterization of Heavy Minerals from Selected Cretaceous Formations of the Northern Mississippi Embayment"

Name: Ryan Travis
Email: rtravis1123@gmail.com and rwt85@msstate.edu
Phone: 214-796-2443
Career Goal: Hydrocarbon Industry
Thesis Title: Void Collapse as Related to Dissolution Megaporosity.
I am developing new collapse equations, based off of Loucks' (1999) Cave Collapse Model, to better understand and model paleokarst reservoirs.
I am also working on an ongoing research project with Dr. Jon Sumrall utilizing petrographic and geochemical tools to understand the diagenetic history of a paleosol collapse breccia on Aruba.

Name: Michael Brooke
Phone: 601-594-6309
Email: jmb374@msstate.edu
Thesis Title: A Sequence Stratigraphy of the Haynesville/ Bossier interval in Jefferson County, MS using SEM analysis.
Interested in someone who has worked in the newer shale plays. Also information about the Burkley-Phillips #1 well will be greatly appreciated.

Name: Natalie Odegaarden
Phone: 601-826-3903
Email: nao23@msstate.edu and napsamai@yahoo.com
I would like to focus my thesis on the Smackover Formation in the Jay Field. I need help locating a core and logs in order to perform correlation, sequence stratigraphy, depositional environment and thin section analysis to name a few.

Name: Claire E. Babineaux
Email: ceb445@msstate.edu and clairegeobx@gmail.com
Thesis Title: Glass cullet as an alternative aggregate for beaches: an ecological compatibility and public opinion survey. Area of research: Coastal processes-- The research I do focuses on the ecological compatibility of glass cullet to natural beach sand. I will simulate a natural beach environment and determine what grows naturally on sand. Then I will simulate a beach environment in which the composition is 100% glass cullet and determine what will grow naturally on the glass cullet as compared to natural sand. During this process, I will also be monitoring how coastal grasses and native biota within each of the simulated environments in order to determine whether it is affected. Sample will be taken and analyzed using microscopes and SEM. I will also be doing a public opinion survey to determine whether the general public will accept glass on the beaches in areas in which they live or visit in Mississippi.

Name: Courtney Killian
Email: ck695@msstate.edu
Phone: 724-549-3544
My thesis will be geared towards hydrology, groundwater and surface water interactions.

GEOLOGY POST

ARTICLES, PAPERS or NEWS?

ATTENTION!!!!! Industry, Professors and Students:

I would like to add more content from the industry and our schools.

Submissions can include anything from professional papers, thesis abstracts, job opportunities to pictures. Anything!!!!

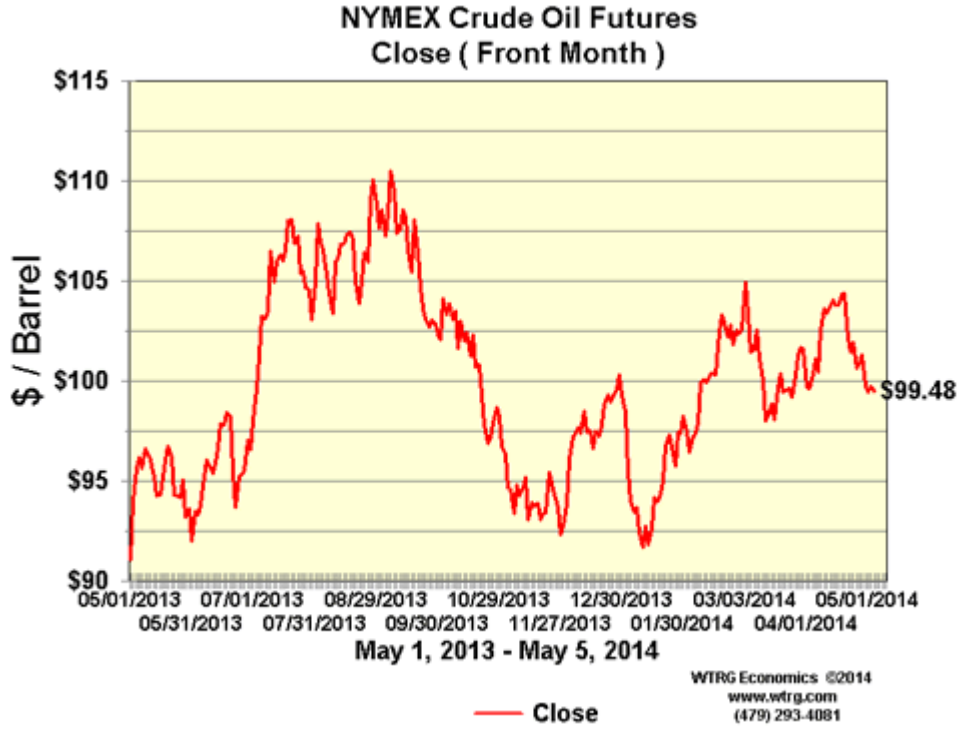
If you have any information or news you would like to share with the Society **PLEASE** email them to the MGS Editor at:

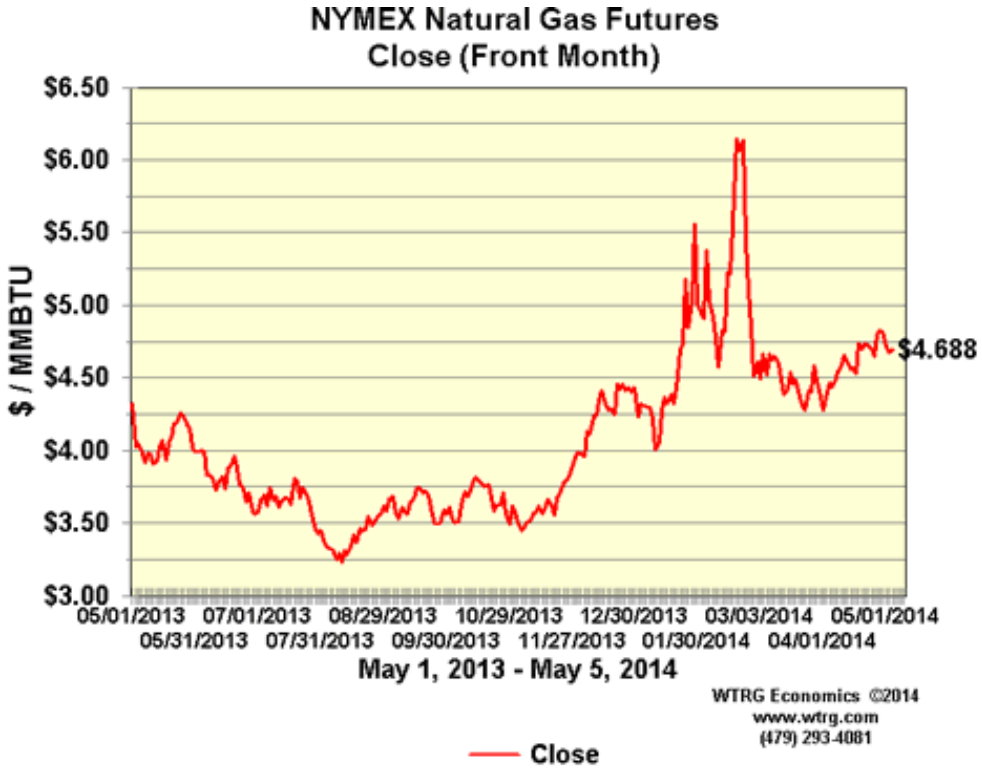
mcaton@tellusoperating.com

Thanks,

Matt Caton
Editor

CURRENT PRICES





BOLAND SCHOLARSHIP DONATIONS

Many thanks to the following people for there generous donations to the Boland Scholarship Fund.

A special thanks to those of you who donated in memory of Dustin Johnson

George T. Smith
Randy Bissell
Maurice Birdwell
Keith Gourgues
Joseph McDuff
Jim Michael
Christopher Franks
Terry Bryant
I. Meade Hufford
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Robert Gaston
Chris & Nora Michael
Carolyn Morrison
Thomas & Ruth Ann Allen
Jim & Ro Thomas
Foote Oil & Gas Properties LLC
Ed Hollingsworth
Daniel Olson
Hilary & Mary B. Zimmerman

If you would like to make a donation please see Bill Bagnall at the monthly meeting or you can mail to the following address:

Mississippi Geological Society
PO Box 422
Jackson, MS 39205

GEO LINK POST

USGS TAPESTRY OF TIME AND TERRAIN http://tapestry.usgs.gov The CCGS is donating to all of the 5th and 6th grade schools in the Coastal Bend. Check it out—it is a spectacular map. You might want a framed one for your own office. The one in my office has glass and a metal frame, and it cost $400 and it does not look as good as the ones we are giving to the schools. Call Owen 510-6224 if you want one for your office for $150. Duncan, Mike, Chris, Dave, Bob Randy, Seb., Kevin, Ken, Craig, Patrick, Robert.

FREE TEXAS TOPO'S http://www.tnris.state.tx.us/digital.htm these are TIFF files from your state government that can be downloaded and printed. You can add them to SMT by converting them first in Globalmapper. Other digital data as well.

FREE NATIONAL TOPO'S http://store.usgs.gov/b2c_usgs/b2c/start/(xcm=r3standardpitrex_prd)/.do go to this webpage and look on the extreme right side to the box titled TOPO MAPS DOWNLOAD TOPO MAPS FREE.

http://www.geographynetwork.com/ Go here and try their top 5 map services. My favorite is 'USGS Elevation Date.' Zoom in on your favorite places and see great shaded relief images. One of my favorites is the Great Sand Dunes National Park in south central Colorado. Nice Dunes.

http://antwrp.gsfc.nasa.gov/apod/astropix.html Astronomy picture of the day — awesome. I click this page everyday.

http://www.spacimaging.com/gallery/ioweek/iow.htm Amazing satellite images. Check out the gallery.

http://www.ngdc.noaa.gov/seg/topo/globegal.shtml More great maps to share with kids and students.

www.geo.org Don't forget we have our own web page.

http://micro.magneet.fsu.edu/primer/java/scienceoptiscu/owersof10/

http://asterweb.jpl.nasa.gov/galery/default.htm Great satellite images of volcanoes

http://terra.nasa.gov/gallery/ More here

www.ermapper.com They have a great free downloadable viewer for TIFF and other graphic files called ER Viewer.

www.drillinginfo.com This is an incredible (subscription) well and completion data service for independents. Can be demo'ed for free.

http://terrasrver.com/ Go here to download free aerial photo images that can be plotted under your digital land and well data. Images down to 1 meter resolution, searchable by Lat Long coordinate. Useful for resolving well location questions.

http://www.fs.fed.us/gpnf/volcanocams/msh/ This is a live cam of Mt. St. Helens refreshed every 5 minutes. At the bottom are old videos of past eruptions in this cycle. It is worth a watch especially now.

MGS HONORARY MEMBERS

Esther Applin*	**Paul Applin***	**Lawrence F. Boland***
Verne Culbertson *	**H. Leroy Francis***	**Jim Furrh***
David C. Harrell*	**Oleta R. Harrell***	**Ralph Hines**
Dudley J. Hughes	**Urban B. Hughes***	**Wendell B. Johnson ***
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Winnie McGlammery*	**Thomas McGlothin***	**Frederic F. Mellen***
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P.O. BOX 422, JACKSON, MISSISSIPPI 39205-0422

2013-2014

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September 2013 – May 2014

I. Bulletin Advertisements:

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