

MISSISSIPPI GEOLOGICAL SOCIETY

eBULLETIN

Volume 64

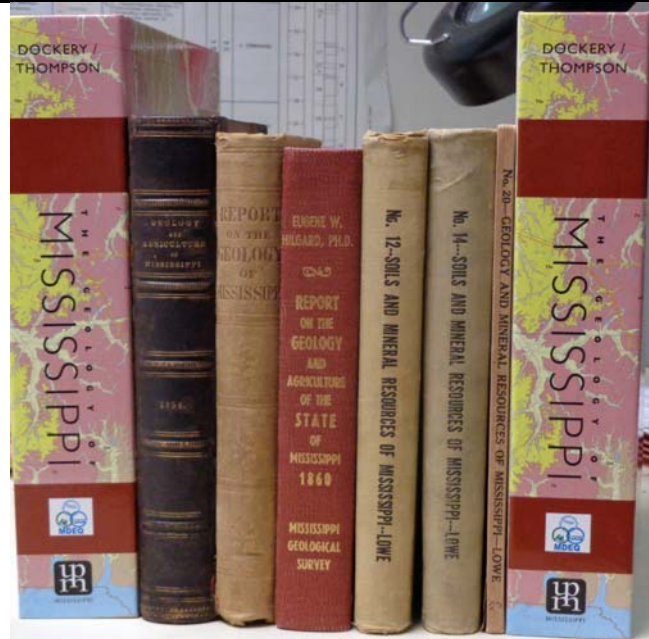
No. 8

April 2016



THE UNIVERSITY OF
SOUTHERN
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BOLAND SCHOLARSHIP AWARDS

GROVER E. MURRAY DISTINGUISHED EDUCATOR AWARD

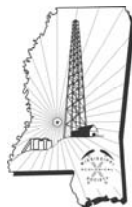
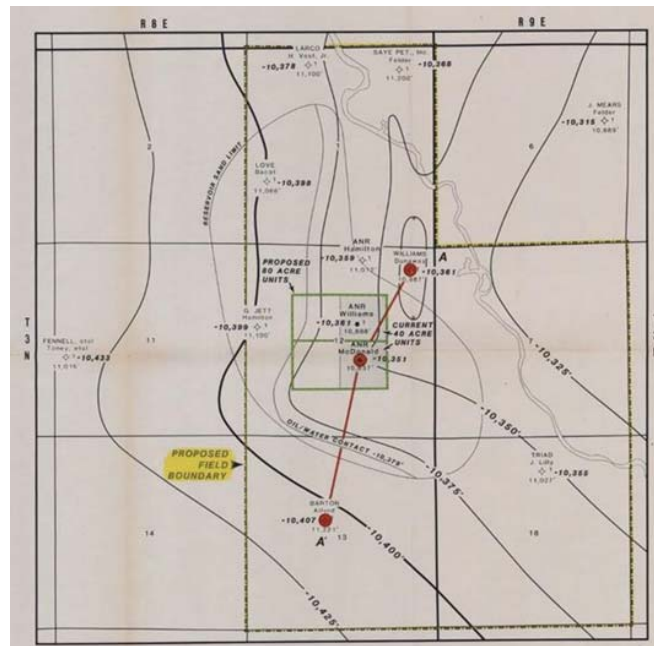
Dr. Brenda Kirkland

PAST & PRESENT PROSPECTS

Friendship Church: Neil Barnes

THE GEOLOGY OF MISSISSIPPI HAS ARRIVED!

Dr. David T. Dockery III, RPG



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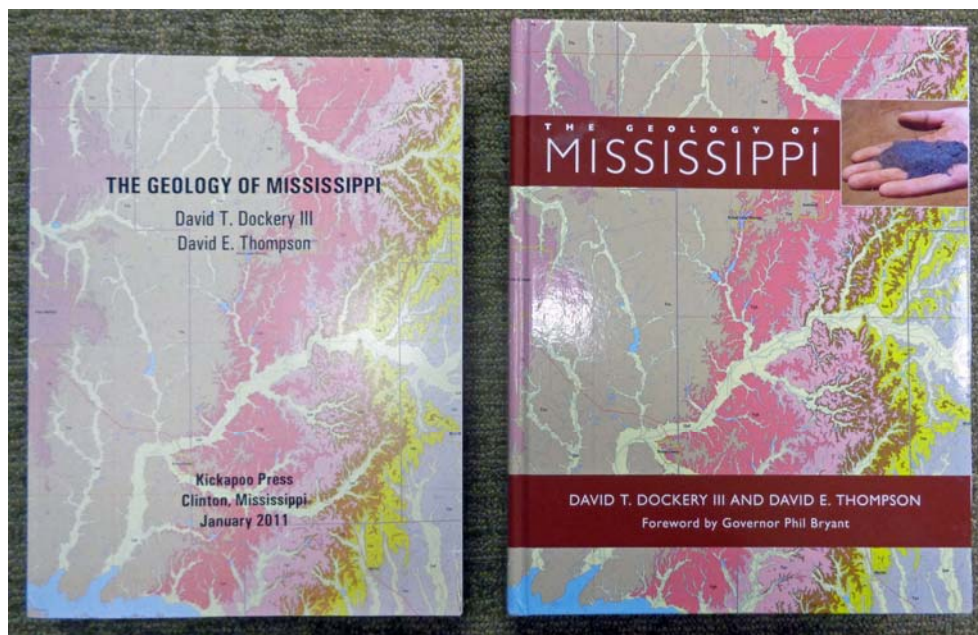
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2015-2016 MGS MEETING SCHEDULE

When	What/Who	Where
September 10, 2015	Fall BBQ	Jackson Yacht Club-5:30pm
October 8, 2015	Todd Keifer Energy & Power in MS	River Hills – 11:30am
November 12, 2015	Danny Harrelson Canals & River Cutoffs as a tactic during Vicksburg Campaign of American Civil War	River Hills – 11:30am
December 2015	MAPL Christmas Party—CANCELLED	
January 14, 2016	Lawrence R. Baria Relatively Large Mid-Ramp, Highstand, Microbialite Patch and Fringing Reefs, A New Exploration Play for South Alabama	River Hills – 11:30am
February 11, 2016	Ezat Heydari - Mars Mission Update	River Hills – 11:30am
March 10, 2016	Dr. John Mylroie Paleokarst Reservoirs: Deposition to Dissolution	River Hills – 11:30am
April 14, 2016	Boland Scholarship Awards	River Hills – 11:30am
May 12, 2016	Spring Fling	Jackson Yacht Club– 5:30pm



OFFICERS MEETINGS

September 8, 2015
October 6, 2015
November 10, 2015
January 5, 2016
February 8, 2016
March 8, 2016
April 5, 2016
May 10, 2016



PRESIDENT'S LETTER

Jack Moody



First of all we look forward to the Boland Scholarship lunch meeting this Thursday at River Hills. Five one thousand dollar scholarships will be awarded to outstanding students from the four state universities that grant degrees in geology. I hope to see you there.

Now a few reflections on the changing world these graduates will be facing. My generation faced different challenges but each generation will have its own. Will the up and coming April 17 meeting of OPEC members plus others including Russia see the organization and friends pull together as one man and finally pull back on their record breaking production levels? I'm not reading much optimism out there. We all can see what their strategy has done to the US rig fleet but the US production, while beginning to decline, has been rather resilient under the circumstances. Even before the "green revolution", product prices in the fossil fuel world were unpredictable and subject to huge traumatizing collapses while the worldwide need for energy was huge and growing. The collapses were eventually followed by an aggressive exploration effort as the markets saw the world's energy needs not being met by the greatly reduced surviving oil and gas industry. So the story has been repeated many times. Throughout these ups and downs there never was a challenging alternative technology that could offer the consumers a different energy source that would satisfy their needs at an affordable price. Perhaps that is changing. The oil industry recently began wrestling with a paradigm shift when oil resources were seen as abundant for decades to come rather than a limited natural resource whose decline was upon us as King Hubbard had predicted.

The energy market does have an alternative to fossil fuels and we all have some awareness that they are out there but I doubt many of us know how big the challenge is growing. The alternative electricity technologies, especially wind and solar, are making great strides. In 2015, wind and solar worldwide investment was reported to be 2X that of the ailing oil and gas industry. Remember when computers started and we all marveled how they doubled their memory and speed every two years, we all saw that happen. Well, solar has been doubling every two years since 2000. Wind had a bit of a jump start so it takes wind 4 years to double but that is a big double. So right now they are small players on the national energy producer's scoreboard but they have tremendous momentum and a predictable performance growth.



PRESIDENT'S LETTER

Jack Moody

While they are growing at this speed they have another predictable trend which is reduced cost going forward. Every time global wind industry doubles its power output, its cost goes down 19%. When solar has doubled its cost has gone down 24%. Recent awarded electricity contracts in Morocco and Mexico went to sustainable projects who said they would be able to produce the cheapest electricity, from any source, anywhere in the world. Time will tell if that claim holds but they reflect the vision of industries on the move with the winds at their back. Given enough time to double many more times while their costs continue to plunge will challenge the fossil fuel industry who has the wind hard in their face. We all hear about sweet spots in this or that. For oil the sweet spot has been transportation, especially the automobile. The internal combustion engine (ICE) has been king for a very long time. There is a new kid on the block, electric vehicles (EV) which were given very little credibility at first but are showing some surprising promise. Elon Musk will be offering his Tesla 3 in 2017 for a price of about \$35K and Chevy will offer their new "Bolt". Electric cars chargeable at home and abroad. Tesla's larger car has a range of 250 miles so the EV industry will get their range up to what is needed. I read that the ICE has about 2000 moving parts compared to 20 in the EV. The ICE is 17-21% efficient while the electric motor is 90-95% efficient. Recent studies have reported that all factors added up point to the EV being 10X cheaper to operate. As is the case for solar and wind the cost for EV is predicted to fall 16%/year as the economy of scale kicks in. What a vision these alternative energy folks have and that vision is sold everywhere you turn. The carbon cutting folks seem to have won the field or at least have the winds of change in their favor. As for EV believers, they are so bold as to see 2020 as the tipping point where the market swings in their favor for the long haul. Remember the oil sweet spot, transportation? If the EV can catch on rapidly and enjoy performance and significant cost reduction the challenge will be very serious in the not so distant future. Will this happen? I don't know but it seems to me its chance for success is better than the likelihood of seeing OPEC and friends act as one man. The worldwide oil industry may have more to worry about than their constant fighting among themselves as if the customers have no alternative.

We wish the recent graduates all the success in the world. Geology in all its career paths is a great way to develop your contribution to the times you live in. Best wishes to you from all of us who have run our race and now pass the baton to you.

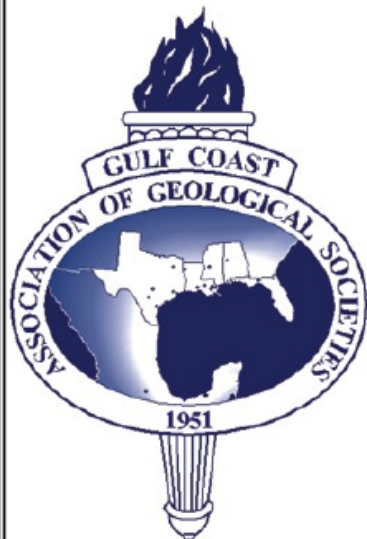
Jack Moody



AAPG

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A Joint Program of AAPG and the AAPG Foundation



Please join us for the

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BOLAND SCHOLARSHIP AWARDS

MGS Members,

This month the Mississippi Geological Society along with the Boland Scholarship Fund would like to honor the most outstanding overall students for the 2015-2016 year.

Each year, the Boland Scholarship awards 1 student from each institution a check that rewards students for their hard work and dedication to the Geosciences and their community.

Congratulations to this years winners.

We look forward to seeing you at the meeting.

Best Regards,

Matt Caton



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AAPG

Dr. Brenda Kirkland



GROVER E. MURRAY DISTINGUISHED EDUCATOR AWARD

Dr. Brenda Kirkland, Associate Professor of Geology at Mississippi State University will be receive the Grover E. Murray Distinguished Educator Award in June from the American Association of Petroleum Geologists at its upcoming meeting in Calgary, Canada. This award was established in 1993 and is given annually in recognition of the recipient's "contributions to the teaching of students, guidance of student research, research and scientific publications, university and community activities, and involvement in the activities of scientific/professional organizations." Many familiar and notable geologists have received this recognition such as James Lee Wilson, Gerald Friedman, L. L. Sloss, Robert Polk, Peter Vail, Ernest Mancini, and Clyde Moore to name a few.

Dr. Kirkland has been the energy behind the MSU geology students' presence at AAPG's Annual Convention and Exhibition, their participation in AAPG's Imperial Barrel Award competition. She invests herself tirelessly in her profession and students and is well deserving of this prestigious award. AAPG is to be commended for their recognition of her with this award. Our profession is blessed to have her. Please make a point to congratulate her on this recognition.

CONFERENCE DATE & LOCATION

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Hotel Monteleone is a four-star luxury New Orleans hotel in the French Quarter. The hotel includes the only high-rise building in the interior French Quarter and is well known for its Carousel Piano Bar & Lounge, a rotating bar.

Conference group room rate is \$179++/night. Reservation deadline is September 30, 2016.



Conference Contacts

Conference Chairs

Kerry L. Sublette, The University of Tulsa
Sarkeys Professor of Environmental Engineering
Departments of Chemical Engineering and Geosciences
Phone: (918) 631-3085; Fax: 631-3268 • E-mail: kerry-sublette@utulsa.edu

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Apr 11, 2016 11:14 a.m.

Quotes are delayed by 10 min

Previous close **\$ 39.72**

Day low **\$39.25** Day high **\$40.75**

Open: 39.72

52 week low **\$29.85** 52 week high **\$65.39**

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Volume **66,358**

Apr 11, 2016 11:16 a.m.

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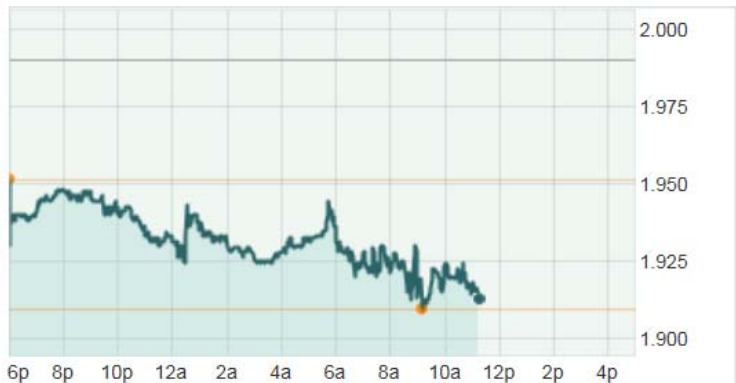
Day low **\$1.91** Day high **\$1.95**

Open: 1.95

52 week low **\$1.73** 52 week high **\$3.17**

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PAST & PRESENT PROSPECTS

Friendship Church

Friendship Church Pike County, Mississippi

The discovery of Friendship Church Field was the culmination of regional and local research. The drilling of the wildcat well was propelled forward by the question, “How could it not be there?”

I hadn't been in Mississippi long when I took up the challenge of finding another lower Tuscaloosa field. This was during a bit of a resurgence in lower Tuscaloosa exploration. Shell had shot a considerable 2D seismic grid and had discovered Olive Field in Amite and Pike Counties. Lower Tuscaloosa sands apparently could be seen in good 2D seismic data. But it happened that we didn't have any good 2D seismic data, or any seismic data for that matter!

Recognizing the economics of a “nice” oil field at moderate depths in Mississippi prompted a regional subsurface project. This was during a time when individuals could directly access the well and log files of the Mississippi Oil & Gas Board. I spent several weeks in those files copying on legal size paper all of the correlation logs (1” and 2”) available across the Lower Tuscaloosa. Of course, paper maps and logs were the “high tech” of the day.

Having gathered this very simple data set the next chore was to correlate the logs and understanding the trapping dynamics. Focus was given to the existing fields because of the abundance of data. What made this a bit challenging was the presence of several stacked sand systems in very close vertical and often horizontal proximity. It was challenging to consistently discriminate between two systems that might only be 10' vertically separated. Each sand system had it's a unique distribution. It seemed that usually the uppermost system in an area was productive. So this was important!

In addition to the work of correlating logs, publication research related to lower Tuscaloosa depositional systems was important. The literature indicated that the depositional system in this particular area was a lower flood plain fluvial system. Following this determination more research was done to assess various physical parameters of lower flood plain fluvial systems, particularly the channel depth to meander width ratios. A paper was found which described a very shallow point bar system containing substantial control. Mrs. Carolyn Woodley, then librarian for the Office of Geology provided critical support in this and many other literature searches. This was before the internet and librarians often held the keys to the goldmine of published literature.

One key paper in the discovery process was “Significance of Lower Tuscaloosa Sand Patterns in Southwest Mississippi” written by Harold Karges and published in the 1962 GCAGS *Transactions*. What made this paper so important was that Mr. Karges published his interpretation of the relevant Lower Tuscaloosa pay sand at Little Creek Field (FIGURE 1). I read this paper early in the discovery process and was most curious about the scale of what appeared to be his point bars. The mapping detail he provided allowed me to construct an interpretation positing point bars with meander loops of about one mile in diameter within the meander belt.



PAST & PRESENT PROSPECTS

Friendship Church

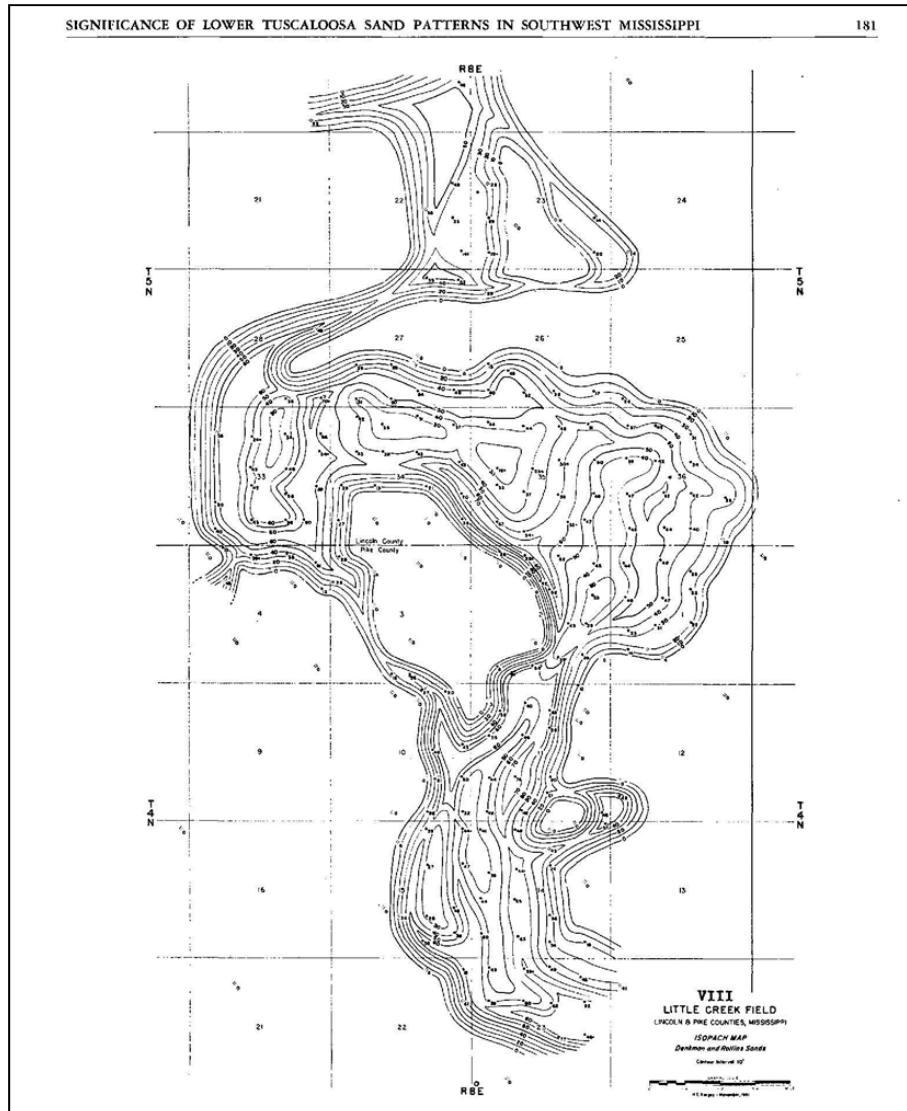


FIGURE 1: Little Creek Field Sand Isopach, Harold Karges, 1962 GCAGS *Transactions*

Having done literature research, correlated all the available logs, evaluated existing fields, and understanding that the principal traps were likely to be stratigraphically trapped point bars, the focus became to identify the location of a new stratigraphic accumulation. Two elements could be searched for – a reservoir and a properly timed structure. Other elements such as hydrocarbon source and migration could only be postulated. However, these elements were proven effective in the immediate area and were not considered a substantial risk.

The Lower Tuscaloosa fluvial systems in this area were deposited on a stable platform which allowed tracking of the key fluvial systems across long distances. The Little Creek Lower Tuscaloosa Pay Sand could be mapped in both directions (updip to the north and downdip to the south). There was certainly no necessity that this particular fluvial system continued to indefinitely in both directions so positive evidence of its presence was important.

Having tracked the fluvial system approximately 10 miles further to the south the question was where did the sand system intersect a relevant structural feature. There was evidence of a structural ridge with a minor but mappable nose that the fluvial trend crossed about four miles south of Little Creek. There was the prospect!



PAST & PRESENT PROSPECTS

Friendship Church

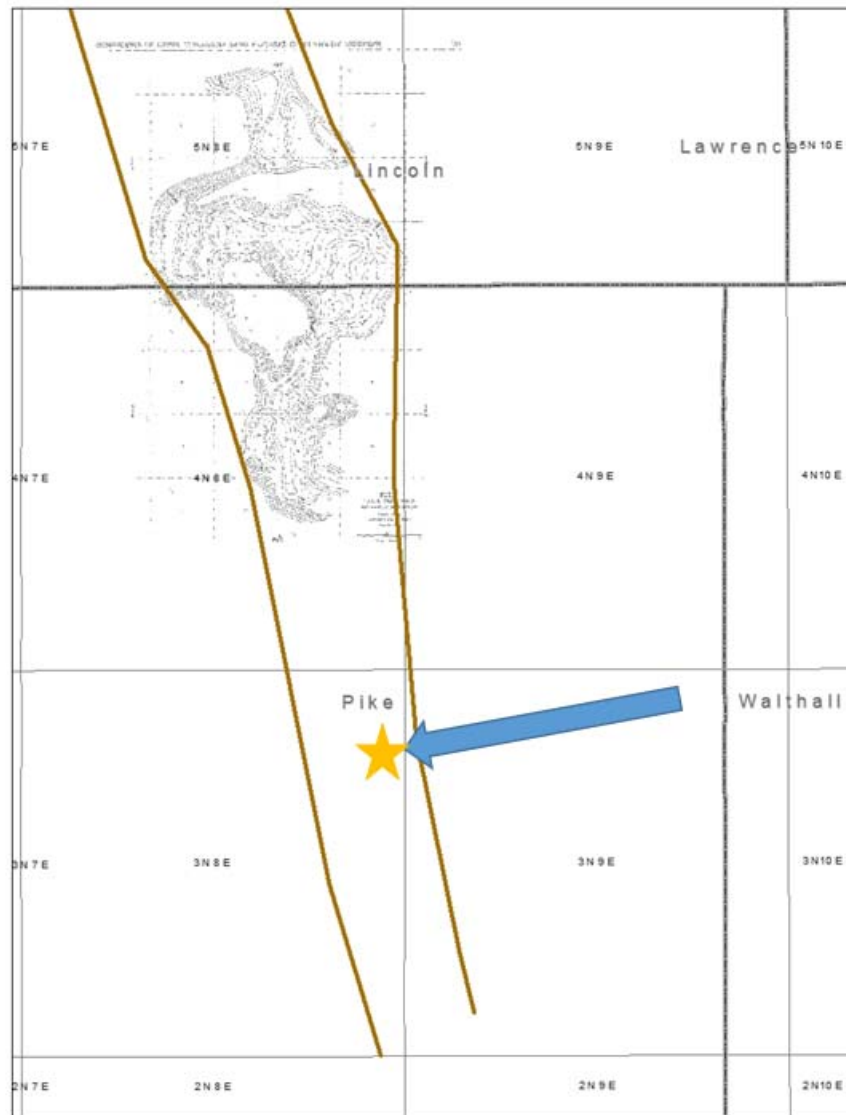


FIGURE 2: Sand Trend (area between the brown lines), Structural Axis (blue arrow), and Prospect (star)

What evidence was there that an accumulation might be found? The sand trended over the structural nose. What evidence was there that the structural ridge was properly timed? Dinan Field, a Lower Tuscaloosa field, was present on this structural feature. It had been charged with hydrocarbons in the Lower Tuscaloosa (a different sand system). This evidence substantially reduced the risk of an improperly timed structural component. The reservoir sand and the top and lateral seals have been in place since initial deposition. It was a very simple idea – the reservoir and top and lateral seals have been present from the beginning, there was evidence of proper hydrocarbon sourcing, timing and migration. It had to be there, right? Fortunately, it was. The ANR Production Company # 1 C. R.

McDonald was drilled in late 1984 and was completed on New Year's Eve 1983 for 624 BOPD + 66 MCFG and no water. (As I recall that was a 24 hour extrapolation of a 3 hour test. It started making water almost immediately.) To date the field has made 930 MBO, 203 MMCFG, and 5.3 MMBW from 7 wells. Below is an exhibit from a unit hearing showing some early wells.



PAST & PRESENT PROSPECTS

Friendship Church

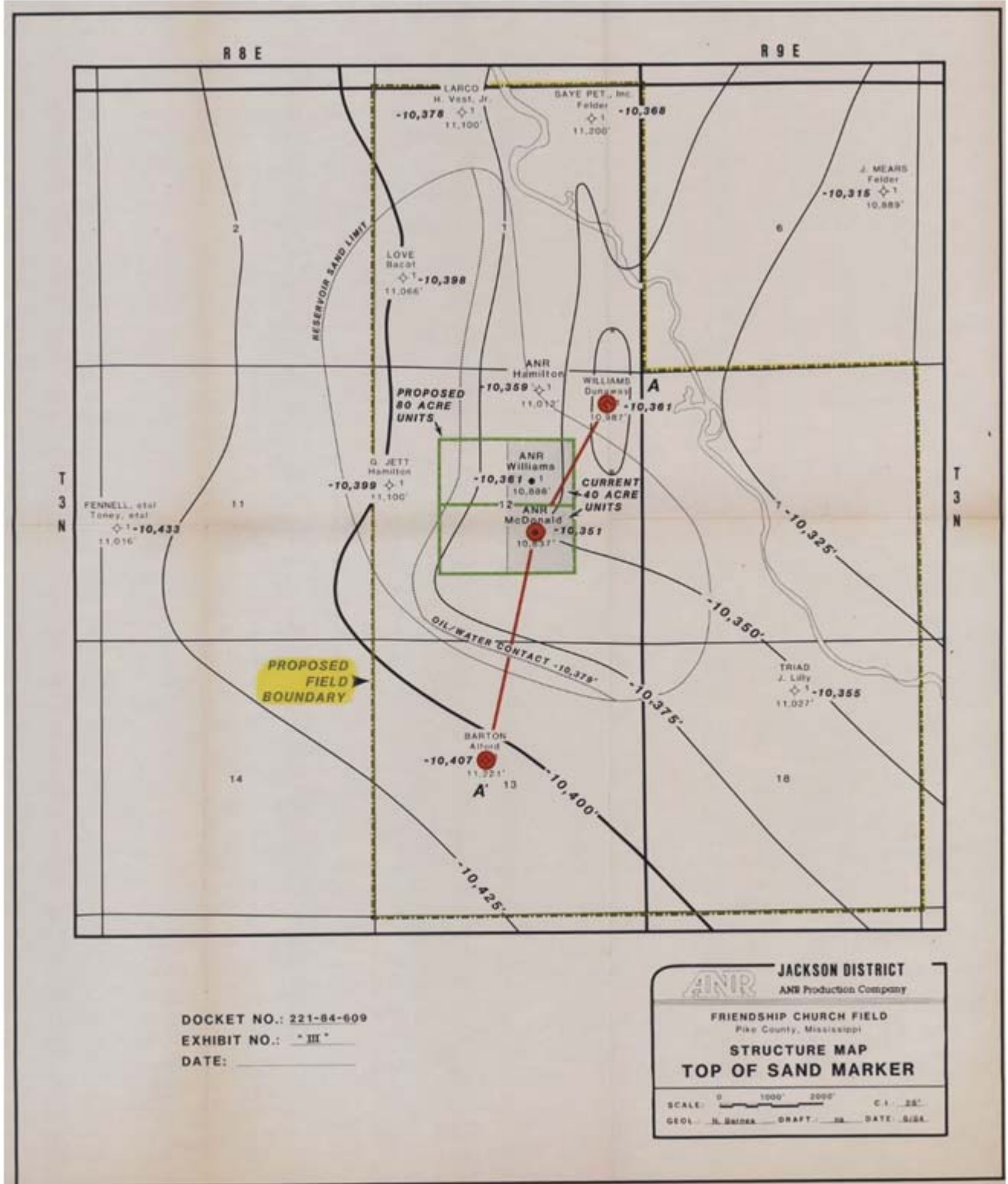


FIGURE 3: Exhibit from 1984 Mississippi Oil & Gas Board unitization hearing showing early field wells



PAST & PRESENT PROSPECTS

Friendship Church

Several key lessons were learned in the process of developing this field. One was tactical and simple – you can't always believe the log measurements. The measured log depths of one of the early wells drilled in the field appeared to be thirty feet high to what was reasonable. The logging company insisted their log measurements were correct. However, this would have required a substantial difference in oil water contact and a structural "pinnacle" versus the consistent regional structure. Strapping out of the hole indicated that the log depths were off. Later another operator was reported to have a similar problem with this particular logging unit. It turned out that the logging unit was in error. Something about the magnetic marker used for depth calibration was in error.

The other lesson was more costly. As in Little Creek Field, the fluvial sands at Friendship Church Field showed classic loss of sand from the top down toward the thalweg. Although updip was to the east, early wells indicated that the channel was toward the east as well. Was there going to be sand present further east and if so, did the top of the reservoir fall faster than the structure increased to the east? The company decided that it didn't want to take this chance so it did not drill an eastward field extension. Some years later, after the lease block had expired, another operator decided it was worth the risk to drill the eastward extension well and find out. That well turned out to be the best well in the field. The sand was fully present and it was structurally updip. What was the moral of that story? If you're willing to take the wildcat risk, you should not get overly risk averse in delineating the extent of the discovery!

The Geology of Mississippi

David T. Dockery III and David E. Thompson
Foreword by Governor Phil Bryant

The Geology of Mississippi is an encyclopedic work by authors with extensive experience in Mississippi's surface geology mapping program. It brings together published work, unpublished work from agency files, and the authors' experience, both in personal field work and in collaboration with experts from around the world.

With over a thousand images, the voluminous text relates ways in which Mississippi's geology has contributed to the understanding of global events, such as the extinction of the dinosaurs and the first occurrence of tiny primates. Fossil illustrations include Devonian trilobites, Mississippian scale trees, Pennsylvanian brachiopods, Cretaceous dinosaur bones, Paleocene lignite and petrified wood, Eocene seashells and the excavation of fossil whales, Oligocene marine fossils and rare land mammal finds, Miocene plants and animals, Paleozoic marine fossils, and the bones of giant ice-age mammals. The text is arranged by geologic age.

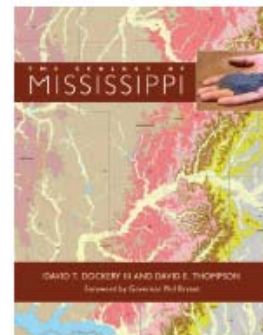
Economic minerals cited in the book include oil and gas (both methane and carbon dioxide), lignite, dimension stone, crushed stone, sand and gravel, various clay deposits, limestone, and potential economic deposits of bauxite, heavy minerals, and iron ore. Groundwater is Mississippi's most valuable natural resource and supplies over 90 percent of the state's public and industrial water supply and most of the state's irrigation supply for agriculture and catfish ponds. Mississippi's surface geology causes the state's fertile and not-so-fertile soil types responsible for foundation and infrastructure substrates that range from stable to failure-prone due to expansive clays. Finally, *The Geology of Mississippi*, coupled with site-specific surface geologic maps, provides information for the wise use of land and the environmental protection of the state's resources.

David T. Dockery III, Clinton, Mississippi, is a registered professional geologist and the Surface Geology Division Director for the Mississippi Department of Environmental Quality. His work has appeared in *Mississippi Geology*, *Palaios: Nature, Paläontologie*, and *Compass*, among others. **David E. Thompson**, Jackson, Mississippi, is a registered professional geologist and supervising geologist in the Surface Geology Division at the Mississippi Department of Environmental Quality. His work has appeared in *Geological Society of America*, *Journal of the Mississippi Academy of Sciences*, and *Mississippi Geology*, among others.

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The Geology of Mississippi

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MONTHLY POST

Dr. David T. Dockery III RPG

THE GEOLOGY OF MISSISSIPPI HAS ARRIVED

David T. Dockery III, RPG

The due date for the shipment of 2066 books from Singapore to the University Press of Mississippi warehouse in Pennsylvania was Easter Sunday, March 27, 2016. The first we heard of pre-order deliveries was from a fossil whale enthusiast in New Jersey who called James Starnes to tell that his book came in; he had asked when this would happen several times to us and to UPM. Then Stan Thieling told us that his copy arrived well packed. Mark Puckett of Alabama emailed that the book looked great and to tell us that he was selected as the new Chairman of the Geology and Geography Department at USM. Two hundred copies were ordered from the Pennsylvania warehouse for distribution from the Office of Geology Publication Sales Office on the first floor of the 700 North State Street Building in Jackson.

So, if you haven't already ordered your copy, now is the time. If you are not interested in a reference book on the state's geology, then you can buy two for use as bookends. The book has enough mass to stand upright on its own and to hold upright those books next to it. Figure 1 shows two copies of *The Geology of Mississippi* serving as bookends to hold up, from left to right, (1) the *Geology of Alabama* by Adams, Butts, Stephenson, and Cooke, 1926, (2) the *Geology of Tennessee* by Safford, 1869, (3) the *Geology of Louisiana* by Harris and Veatch, 1899, and (4) the *Geology of Florida* by Cooke, 1945.

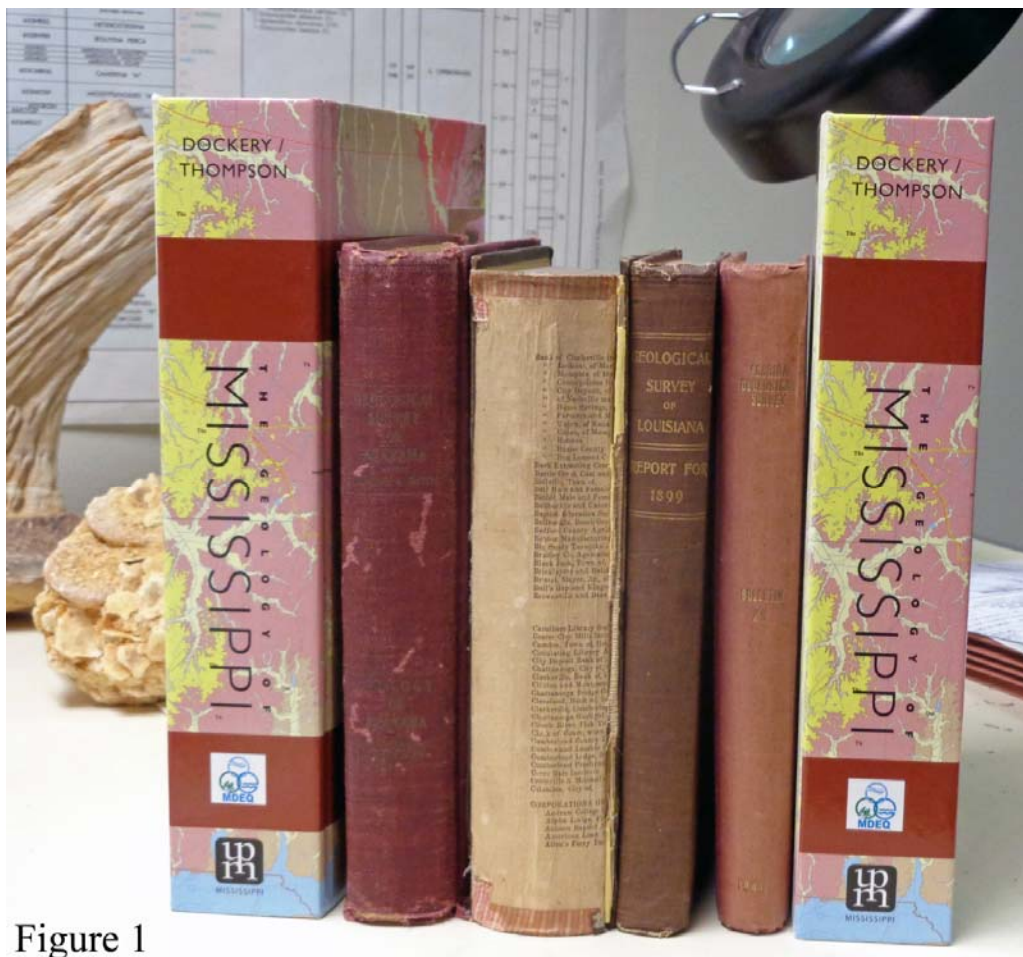


Figure 1



MONTHLY POST

Dr. David T. Dockery III RPG

If you are only interested in the geology of Mississippi, then, in Figure 2, the bookends hold up: (1) the *Report on the Agriculture and Geology of Mississippi* by Wailes, 1854, (2) the *Preliminary Report on the Geology and Agriculture of The State of Mississippi* by Harper, 1857, (3) the *Report on the Geology and Agriculture of the State of Mississippi* by Hilgard, 1860, (4) *Mississippi. Its Geology, Geography, Soils and Mineral Resources* by Lowe, 1915, (5) *Mississippi. Its Geology, Geography, Soils and Mineral Resources. A Revision with Additions of Bulletin No. 12* by Lowe, 1919, and (6) *Geology and Mineral Resources of Mississippi* by Lowe, 1925. After the 151-page work of Lowe in 1925, the hot off the press 2016 volume is the newest book on the state's geology after a hiatus of 91 years.



Figure 2



MSU GRADUATE STUDENTS

Research Projects: MS & PhD



Student		Advisor	Project
Tyler Berry	MS	Schmitz	Depositional Systems Analysis of the Kosciusko Formation in Central Mississippi
Curt Burbach	MS	Clary	Ichnofossils (trackways) and informal education interpretation
Victoria Cheek	MS	Dash	Effects of Land Use and Land Cover on the Water Quality of Ross Barnett Reservoir
Young Woo Cho	PhD	Clary	Three dimensional visualization and geo-tourism
Brandon Crabtree	MS	Schmitz	Water Resources in Oktibbeha District
Maelhur Derkota	MS	Dash	Satellite data assisted visualization of ocean acidification
Julia Domenech	PhD	Clary	Water quality in Ventura City, California
Jeremy Foote	MS	Schmitz	Changes in water Red Hills Ecoplex
Brittany Garner	PhD	Gabitov	Proxies for oceanic O2 content (experimental)
Patrick Jordan	MS	Kirkland	A Subsurface Study Of The Texas Panhandle Granite Wash, Anadarko Basin
Danielle Merrit	NS	Skarke	Analysis of suspended particulate matter in the Mississippi Sound using MODIS imagery
Jonney Mitchell	MS	Gabitov	Trace elements in carbonate minerals
Joseph Mitchell	PhD	Kirkland	Diagenetic alteration of mussel shells at archeological sites
Asa Mullenex	MS	Skarke	Role of antecedent geology on coastal morphology in the Grand Bay area
Glenn Myrich	MS	Clary	Pre-Sandy and post-Sandy survey of dollos in an area on the eastern seaboard
Aleksandra Novak	MS	Gabitov	Geochemical response of <i>Pocillopora damicornis</i> coral to changes in temperature, salinity, and oxygen isotopic composition of modern seawater
Lauren Parker	MS	Schmitz	Hydrogeology - undetermined
Mark Powers	PhD	Clary	Inquiry-based field methods
Caitlin Roby	MS	Skarke	Classification and geospatial indexing of Deep sea video data
Claire Rose	MS	Clary	Mississippi River Valley Alluvial Aquifer. Claire, employed by the USGS, has sampled sediment and water for Arsenic and Phosphorus, and is comparing these numbers (spatial distribution) to the earlier 1999 Geochemical Survey of Mississippi.
Sannan Sabidhaman	PhD	Dash	Ocean Biogeochemistry of Ocean acidification
Natalie Samai	MS	Kirkland	A Petrographic Analysis of the Microbial Thrombolite Buildup in the Oxfordian Smackover Formation, Little Cedar Creek Field, Alabama.
Saurar Sidural	PhD	Dash	Remote Sensing of Harmful Algal Blooms
Shatrugan Singh	PhD	Dash	Biogeochemistry of Mississippi Coastal and lacustrine Estuary waters
Taryn Smith	MS	Schmitz	Surface mapping Vicksburg Military Park Quadrangle
Keith Tischler	PhD	Kirkland	The Influence of Microbial Processes and Organic Matter in the Genesis of Complex Carbonate Facies and Lithologies, in the Sacramento Mountains, New Mexico
Jeremy Weremeichik	PhD	Gabitov	Magnesium in carbonate minerals related to paleoclimate (Geochemical response of aragonite under the influence of subaqueous pressures, The effect of growth rate on uranium partitioning between calcite and fluid, Mg/Ca ratios in synthetic low-magnesium calcite: an experimental investigation)

Rotary Rig Count

4/8/2016



Location	Week	+/-	Week Ago	+/-	Year Ago
Land	414	-6	420	-537	951
Inland Waters	4	0	4	0	4
Offshore	25	-1	26	-8	33
United States Total	443	-7	450	-545	988
Gulf Of Mexico	24	0	24	-7	31
Canada	41	-8	49	-58	99
North America	484	-15	499	-603	1087
U.S. Breakout Information	This Week	+/-	Last Week	+/-	Year Ago
Oil	354	-8	362	-406	760
Gas	89	1	88	-136	225
Miscellaneous	0	0	0	-3	3
Directional	52	3	49	-38	90
Horizontal	341	-5	346	-429	770
Vertical	50	-5	55	-78	128
Canada Breakout Information	This Week	+/-	Last Week	+/-	Year Ago
Oil	8	-3	11	-12	20
Gas	33	-5	38	-46	79
Miscellaneous	0	0	0	0	0
Major State Variances	This Week	+/-	Last Week	+/-	Year Ago
Alaska	8	-1	9	-5	13
Arkansas	0	0	0	-9	9
California	4	-1	5	-11	15
Colorado	17	0	17	-19	36
Kansas	5	-1	6	-8	13
Louisiana	47	0	47	-20	67
New Mexico	17	1	16	-30	47
North Dakota	27	-2	29	-61	88
Ohio	12	2	10	-14	26
Oklahoma	63	2	61	-61	124
Pennsylvania	17	0	17	-33	50
Texas	197	-7	204	-230	427
Utah	2	0	2	-6	8
West Virginia	12	0	12	-10	22
Wyoming	9	0	9	-18	27
Major Basin Variances	This Week	+/-	Last Week	+/-	Year Ago
Ardmore Woodford	2	0	2	-7	9
Arkoma Woodford	4	0	4	-1	5
Barnett	4	-2	6	-2	6
Cana Woodford	32	2	30	-6	38
DJ-Niobrara	15	0	15	-13	28
Eagle Ford	43	1	42	-82	125
Fayetteville	0	0	0	-7	7
Granite Wash	4	0	4	-18	22
Haynesville	12	-2	14	-15	27
Marcellus	29	0	29	-41	70
Mississippian	5	0	5	-35	40
Permian	142	-3	145	-122	264
Utica	12	2	10	-16	28
Williston	27	-2	29	-62	89



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GEOLOGY POST

ARTICLES, PAPERS or NEWS?

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

I am adding a dedicated section that includes 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 & Regards,

Matt Caton
Editor

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.

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<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.



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