MISSISSIPPI GEOLOGICAL SOCIETY

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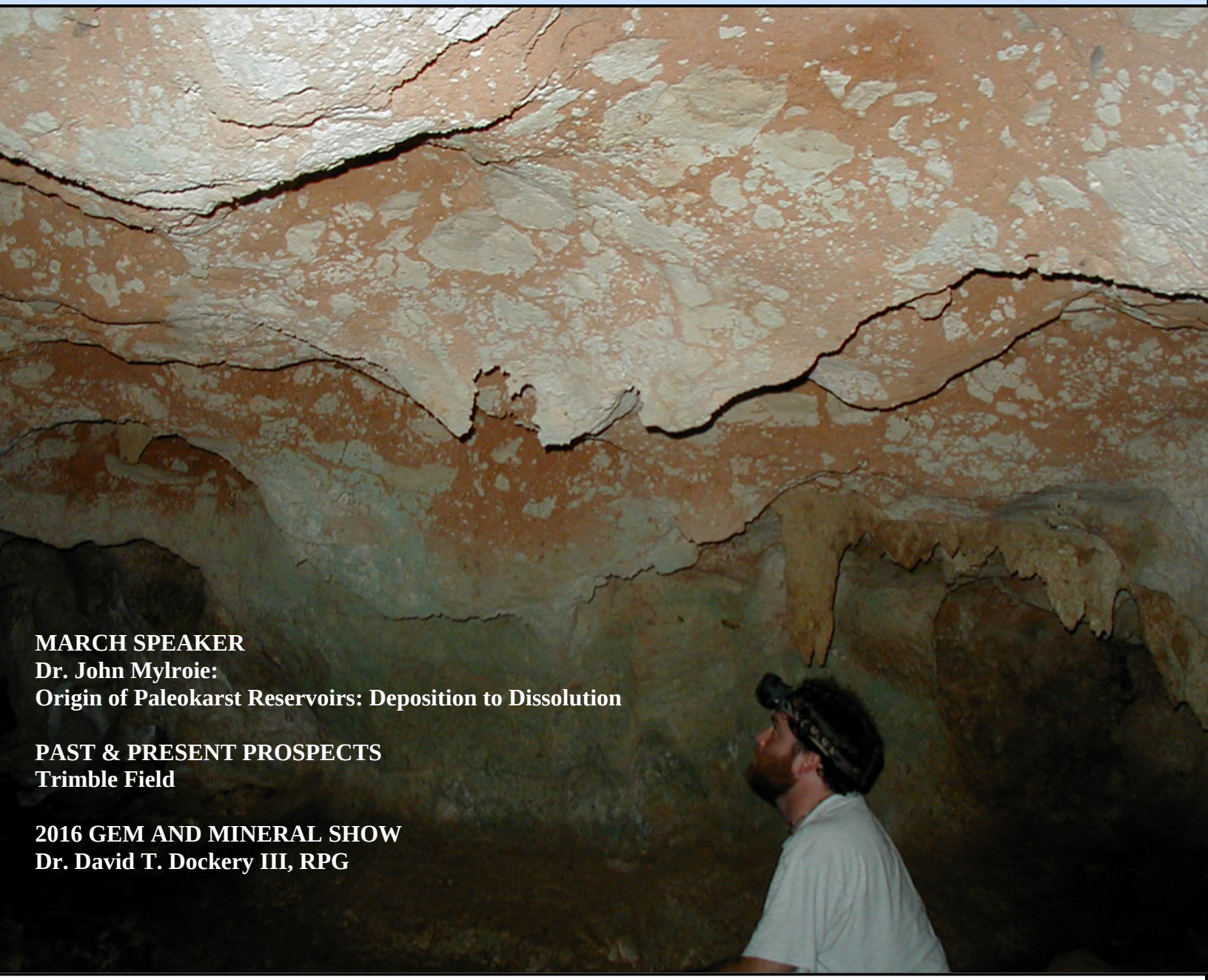

MARCH SPEAKER
Dr. John Mylroie:
Origin of Paleokarst Reservoirs: Deposition to Dissolution

PAST & PRESENT PROSPECTS
Trimble Field

2016 GEM AND MINERAL SHOW
Dr. David T. Dockery III, RPG

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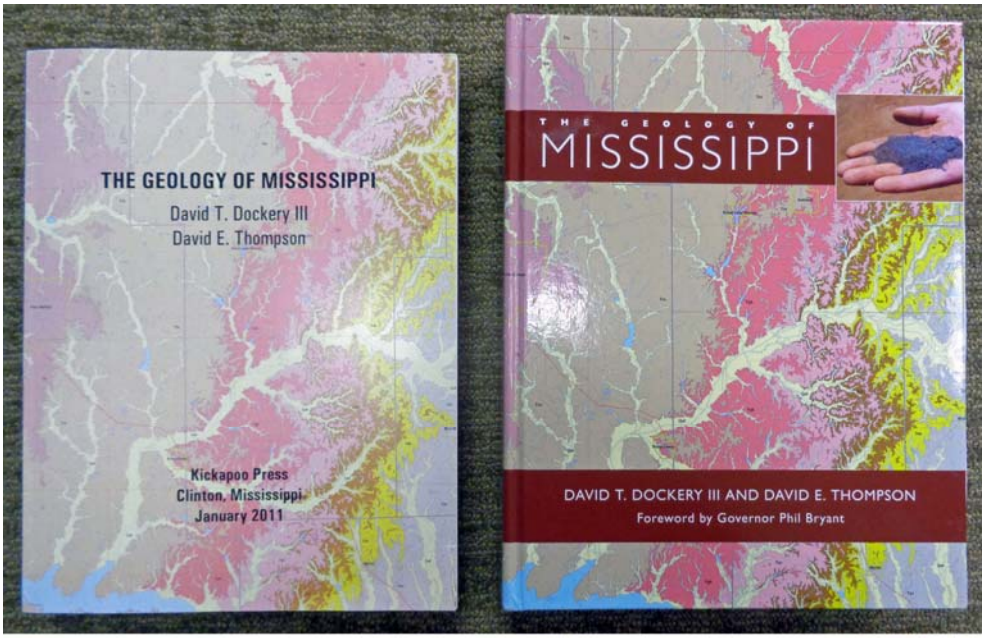
2015-2016 MGS MEETING SCHEDULE

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

In an energy rich world it will be interesting to see how competing energy sectors fair over the coming years. Politics has imposed its will in the market for nearly 8 years and the changes have been dramatic in some cases. The "dirtiest" fossil fuel, coal, has been hammered into a worldwide recession largely due to the regulator defined excessive release of atmospheric warming plant food (CO_2). One unintended consequence is the plant kingdom is yielding more food for human kind. The earth is warming as it has for every interglacial period but this one is different due to the industrial revolution which took a natural atmospheric system and added here-to-fore sequestered carbon back into the atmosphere. How big an influence the added carbon will have is the basis for all the claims so confidently proclaimed by human induced climate change supporters. The politics of this situation are delicious for power hungry leaders at all levels. They can cry the sky is falling and TV will play it, radicals for change will run with it, it is an easy story to sell in the name of modern science. I think there has been added to the slow progress of the scientific method a modern injection of media hype with its moment of fame and a current religious like belief in the theory of the hour. There is now a generation so sold on their pet theories whether they be man caused global warming, social justice, or numerous other causes that these people will not tolerate any message that challenges or even encourages thoughtful consideration of alternative views. College professors have been run out of Dodge because they didn't agree with the views of some of these outspoken cause believers in the student body! All of the above is context when I am reflecting on how I missed seeing and reacting to the current price collapse in oil and gas. The signs were out there that a significant change was coming, so big it would be a paradigm shift on the availability of energy in the future. The world is currently wrestling with the new idea that there is plenty of future energy related resources to be developed if the price is right. For those of us that are in the oil and gas exploration business it would be helpful to know how this new paradigm will play out for our industry. I think I'll be as successful at seeing this coming business cycle as I have been the last two big ones. I would however like to plant some food for thought in hopes some of my smarter friends can add insight as to these elements of the puzzle.

Today energy demand is growing and so is energy efficiency. We have more cars driving more miles in the US but fuel efficiency holds or reduces fuel demand. This trend shows no signs of turning around. In fact it could greatly increase if electric cars gain significantly in market share. Don't think of electric cars and hybrids as dull, silly, golf-cartish efforts to save the planet. Tesla has proven their family sedans can go fast, zero to 60 in 3.2 sec. and far, 208 to 270 miles/charge. Ferrari and Porsche's fastest cars are hybrids hitting zero to 62 mph in 3 sec. and 2.6 sec. respectively. We are in the early development of electric vehicles but it is looking promising to those who wish to wean themselves of as much fossil fuel as possible. Transportation is the big market for crude oil in the US so it seems reasonable to assume demand will hold or go down slightly in terms of volumes. Current volumes needed for the US

PRESIDENT'S LETTER

Jack Moody

market are almost 7 billion barrels /yr. Hybrids and electric cars are a very small percent of car sales, especially with gasoline prices so low, so the US is committed to oil for the long haul.

The current administration has done all it could to promote clean electricity. Wind and solar have world wide application and the deployment of both are moving forward. The goal of being able to produce electricity from these fuel free sources at or less cost than the competing fossil fuels may actually happen. Photovoltaics are becoming cheaper and more efficient. Some major producers are approaching 25% sunlight to electricity efficiency. Considering that Silicon Valley is solidly in the corner with renewables and these are the biggest corporations in the US it seems like things are headed toward a modified energy future. If technology in the renewable world keeps making steady progress, cost keep declining, and it being near pollution free during generation adds more value to it by society, it will displace some fossil fuels in electric generation in favorably located markets. While the renewable technologies are promising the scale of generation needed is so big that these advances will take time to dominate if ever they can. The state of Iowa now produces 28.7% of its electricity from wind. The energy Information Agency, who I think does a pretty good job of keeping their heads screwed on, thinks that by 2040 renewables may contribute as much as 18% to the electricity generation of the US. In 2013 they contributed 12.87%. The current tax incentives that our republican congress has agreed to fund will extend through 2019. Evidently the tax credits are generous enough to keep the renewable industries moving forward at a pace they like. When and if the US ever decides or is forced to live within its means the pace of expansion may slow. In the meantime the US can brag that we are the biggest producer of wind generated electricity in the world.

So what can these facts tell us about the future of oil and gas exploration? We still have time as an industry for many more boom and bust cycles. If EIA is close to right, the natural gas use in electric generation will increase 5% by 2040. The new petrochemical plants locating in the US because of low natural gas prices and plentiful resources will add further demand for natural gas. The future looks promising for natural gas and the price will be what it will be. Explorationist will adjust to the price and get on with the hunt whenever the numbers work. The world of oil is an international affair with a self-centered cartel still trying to play the market for their maximum benefit. Technology has intervened from within the US such that oil is now viewed as a plentiful resource into the future barring major disruptions to existing production. There will be a price range that gets settled upon and the exploration business will learn how to live with it.

For geologists as mature as myself, we may not be around for the next price boom but the younger geologists will have the fun of future booms and their painful busts. Students graduating who can eventually get their feet in the door of exploration companies will enjoy the thrill of the hunt. The rest of the graduates will find careers that may be very enjoyable and personally rewarding without the roller coaster ups and downs that attend our business. For now deals are beginning to sell and oil prices are rising so why not hope that the worst is over.

Let's hope so. Jack Moody

CONFERENCE DATE & LOCATION

November 8-10, 2016 • New Orleans, LA
214 Royal Street • New Orleans, LA
504-523-3341

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.

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ACTION ALERT

Send Comments by April 8

Bureau of Land Management (BLM) Proposing New Rule To Reduce Venting and Flaring of Natural Gas

The BLM is proposing new regulations to reduce waste of natural gas from venting, flaring and leaks during oil and natural gas production activities on onshore federal and Indian leases. The regulations would also clarify when produced gas lost through venting, flaring or leaks is subject to royalties, and when oil and gas production used on site would be royalty-free.

The rule would set limits on the volumes of gas flared by production wells and require a pre-drilling plan for gas capture as part of an Application for Permit to Drill.

The rule would also require operators to establish semiannual leak detection and repair programs for wellsites and compressor stations.

Comments are due by April 8, 2016.

FEBRUARY SPEAKER

Dr. John Mylroie

Dr. John E. Mylroie
Professor Emeritus of Geology
Mississippi State University

BIO

John was raised in upstate New York, and graduated Phi Beta Kappa from Syracuse University with a degree in Zoology in 1971 (where he met his wife and colleague, Joan). After a stint in the US Navy, and a few years as a lab technician at SUNY Albany, he enrolled in the geology program at Rensselaer Polytechnic Institute, graduating with a PhD in Geology in 1977. After eight years as a faculty member at Murray State University, he became Department Head of the now Department of Geociences at Mississippi State University for a four year term (1985-1989), retiring with emeritus status in 2014. A Fellow of both the Explorers Club, and the Geological Society of America, he is the founding president of the Karst Waters Institute, and received the Science Award (2000) and Honorary Member Award (2008) from the National Speleological Society for lifetime contributions to cave and karst science. He has consulted for Total, ExxonMobil, and ConocoPhilips regarding paleokarst reservoirs. With over 250 journal publications, and several books, his field work has taken him and Joan to 25 different countries around the world.

Origin of Paleokarst Reservoirs: Deposition to Dissolution

Paleokarst reservoirs are highly prized as their megaporosity creates both high volume and high recovery potential. Successful location and exploitation of these reservoirs requires understanding how dissolutional processes created and organized the void structure. Paleokarst has two major forms: exposure surfaces with dissolutional porosity called epikarst, and caves formed beneath those exposure surfaces. Traditionally, paleokarst has been viewed as buried cave systems that formed coupled to the surface hydrology (called epigenic) in old, diagenetically mature or telogenetic carbonates. Recent work has demonstrated that much paleokarst forms early in young, or eogenetic carbonates, in locations proximal to the site of carbonate deposition, buffered from surface hydrology (called flank margin caves). Paleokarst can also form at depth as hypogenic caves, by fluid mixing, sometimes involving exotic biogeochemistry. Once buried to depth, the caves become unstable as result of geostatic loading, and undergo collapse episodes that form a breccia with a much greater footprint then the original void. The orientation and configuration of the caves, and their subsequent breccias, depends on the initial mode of formation. Development of paleokarst reservoirs requires delineating the possible flow pathways to avoid segmenting the reservoir during production.

CURRENT PRICES

Crude Oil - Electronic Apr 2016

Set Aler

NMN: CLJ6

OVERVIEW | CHARTS | HISTORICAL QUOTES

Countdown to close

$37.89 ↑

Change	+1.97 +5.48%
Volume	613,079
	Mar 7, 2016 2:58 p.m.
	Quotes are delayed by 10 min
Previous close	$ 35.92
Day low	Day high
$36.09	$38.11
Open: 36.20	
52 week low	52 week high
$28.74	$65.71

Compare: Indexes ▾ Add

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Natural Gas - Electronic Apr 2016

Set Ale

NMN: NGJ16

OVERVIEW | CHARTS | HISTORICAL QUOTES

Countdown to close

$1.69 ↑

Change	+0.03 +1.68%
Volume	144,124
	Mar 7, 2016, 2:59 p.m.
	Quotes are delayed by 10 min
Previous close	$ 1.67
Day low	Day high
$1.61	$1.74
Open: 1.63	
52 week low	52 week high
$1.61	$3.19

Compare: Indexes ▾ Add

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PAST & PRESENT PROSPECTS

Trimble Field

The following oilfield story was first told at the 40th annual meeting of GCAGS in Lafayette, LA in 1990. It came in second place for best paper that year.

EXPLORATION *(from Oil and Gas Journal, 1990)*

Trimble field, Miss.: 100 bcf of bypassed, low resistivity Cretaceous Eutaw pay at 7,000 ft

Philip L. Cook Jr.
Cook Energy Inc.
Jackson, Miss.

Robert D. Schneeflock
John D. Bush
John C. Marble
Paramount Petroleum Co.
Jackson, Miss.

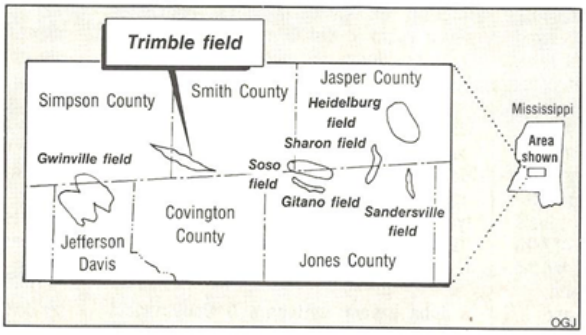
The Upper Cretaceous Eutaw formation of Mississippi has produced almost 2 tcf of gas since its initial discovery at Gwinville field in 1944.

Prior to Trimble field, the last major Eutaw gas discovery in the state was Maxie-Pistol Ridge field in 1951.

Consequently, the Trimble discovery is the most important shallow gas find in the Interior Salt basin in nearly 40 years. Trimble field will

Fig. 1

S. Mississippi Eutaw fields



tivity in a renewed Eutaw play in Mississippi.

Field history

Gas was discovered at Trimble in December 1988

indicates the trap at Trimble field to be a faulted structural closure that is related to an underlying deep-seated salt anticline.

The upthrown Eutaw reser-

and Simpson counties (Fig. 1).

Initial exploration of the Eutaw trend in Mississippi dates to the mid-1940s and led to the discovery of four major fields by the end of 1951.

The first, Gwinville field, was discovered in 1944 and has proven to be an impressive Eutaw find with cumulative production approaching 1.2 tcf. This was followed by the discovery of Soso field in 1945 (118 bcf), Sharon field in 1949 (31 bcf), and Maxie-Pistol Ridge field in 1951 (181 bcf).

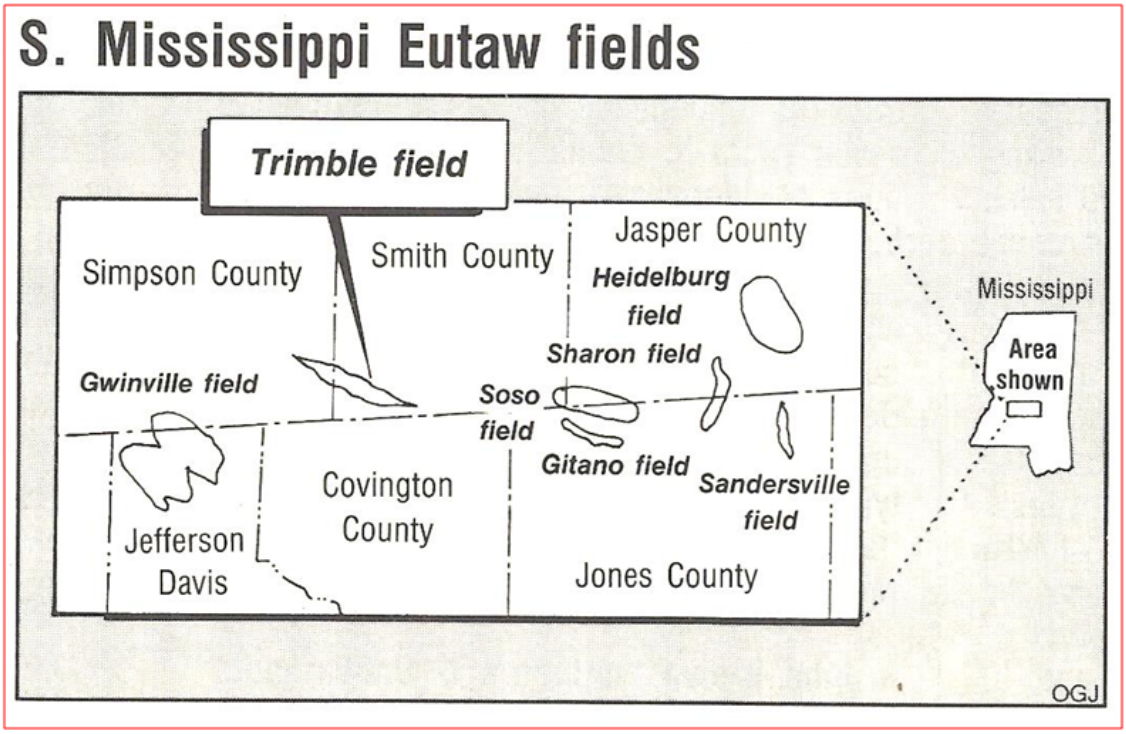
To date, the Eutaw formation in Mississippi has produced more than 1.82 tcf of gas. Prominent Mississippi Eutaw oil fields such as Heidelburg, Eucutta, and Yellow

I'm sitting in my office slowly going broke when the phone rings. It's Phil Cook. He and Stan Theling have "Cooked" up this great prospect and they want me to lease it and sell it for them.

PAST & PRESENT PROSPECTS

Trimble Field

Phil showed me where Ultramar had unexpectedly discovered Eutaw gas during the re-completion of an EPA permitted salt water disposal well at Gitano in northwest Jones County.
Phil and Stan had mapped a seven mile long faulted nose to the West in Smith and Simpson Counties.



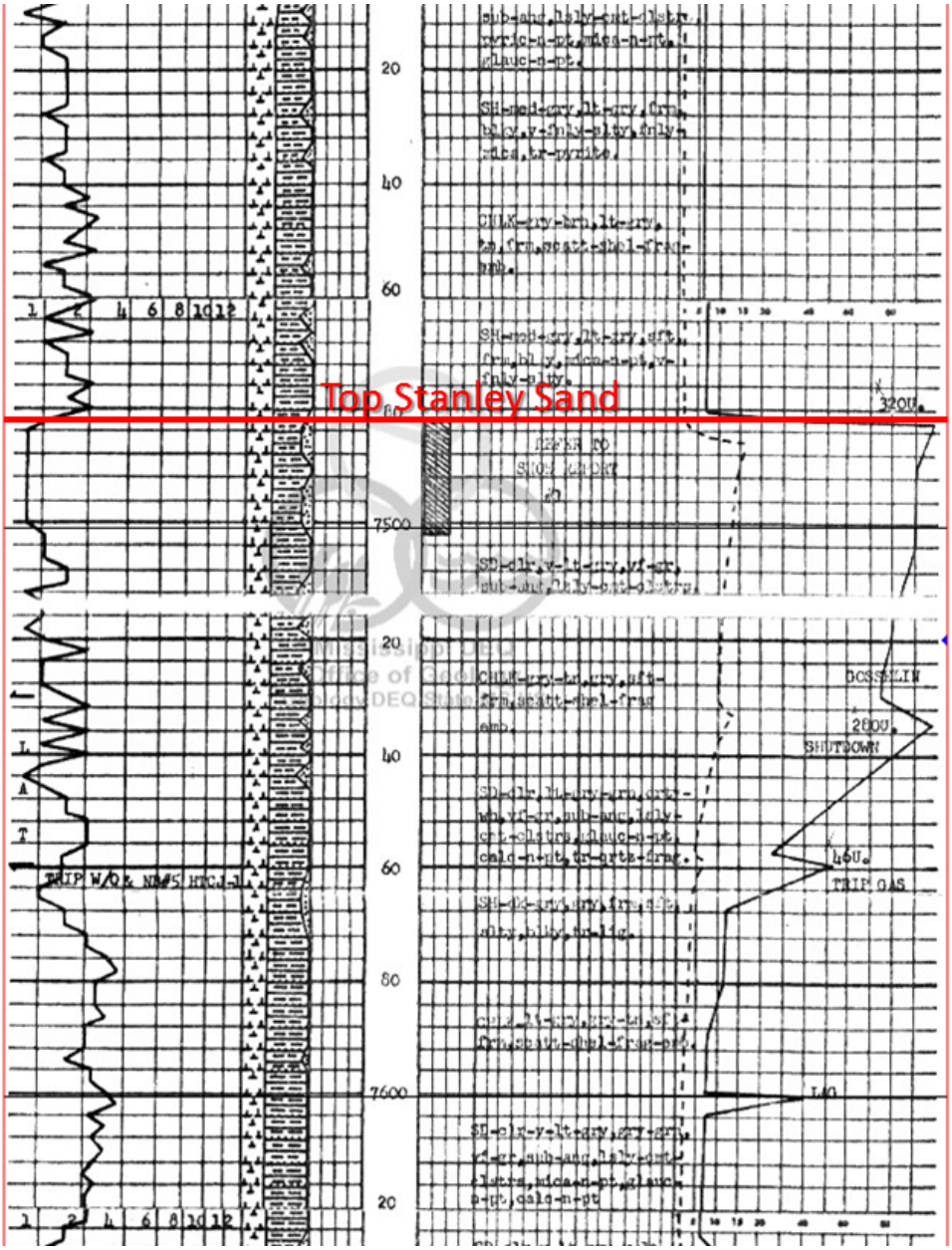
*I said "s**t Phil, have you been drinking again? there's two dry holes right where you want to drill and they calculate wet!" I didn't think I could sell this to anybody who would want to drill between two dry holes on the same structure. A persistent Phil , along with John Marble and John Bush eventually convinced me that we could sell it because of the strong gas shows in one of the two dry holes. It wasn't easy, but sell it we did.*

PAST & PRESENT PROSPECTS

Trimble Field

THE MUD LOG SHOW

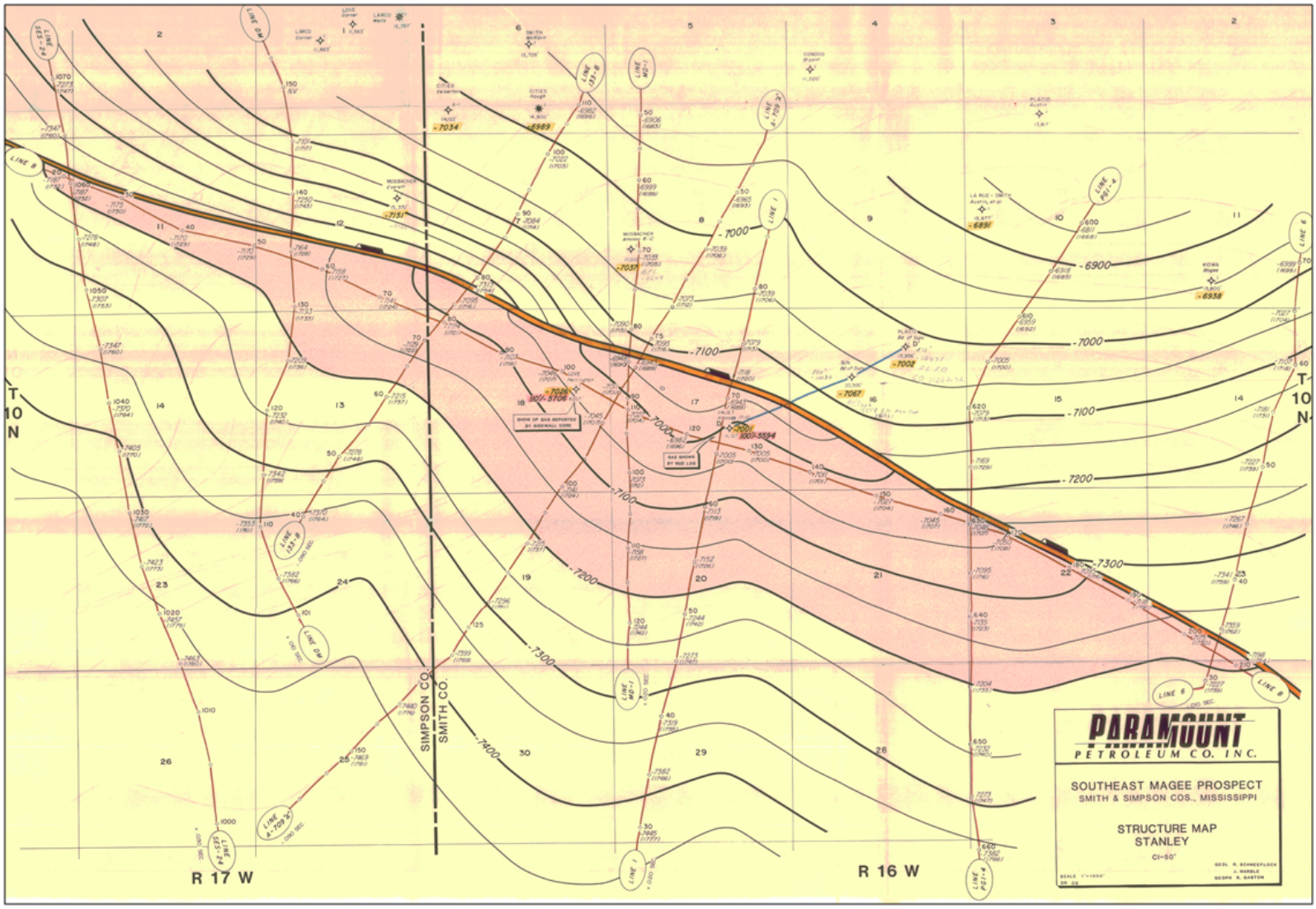
As a condition of doing this deal, I challenged Phil with the task of coming up with the mud logs from the two dry holes already on the structure. Only one well had a mud log run over this section.
When Phil brought me this log, the deal conditions were met. We put landmen in the field the next day.
A week later, another company who was backing Joe McDuff showed up only to find the prospect mostly already leased (sorry Joe).



PAST & PRESENT PROSPECTS

Trimble Field

Original sales map of what became Trimble field constructed by John Marble and Bob Gaston.

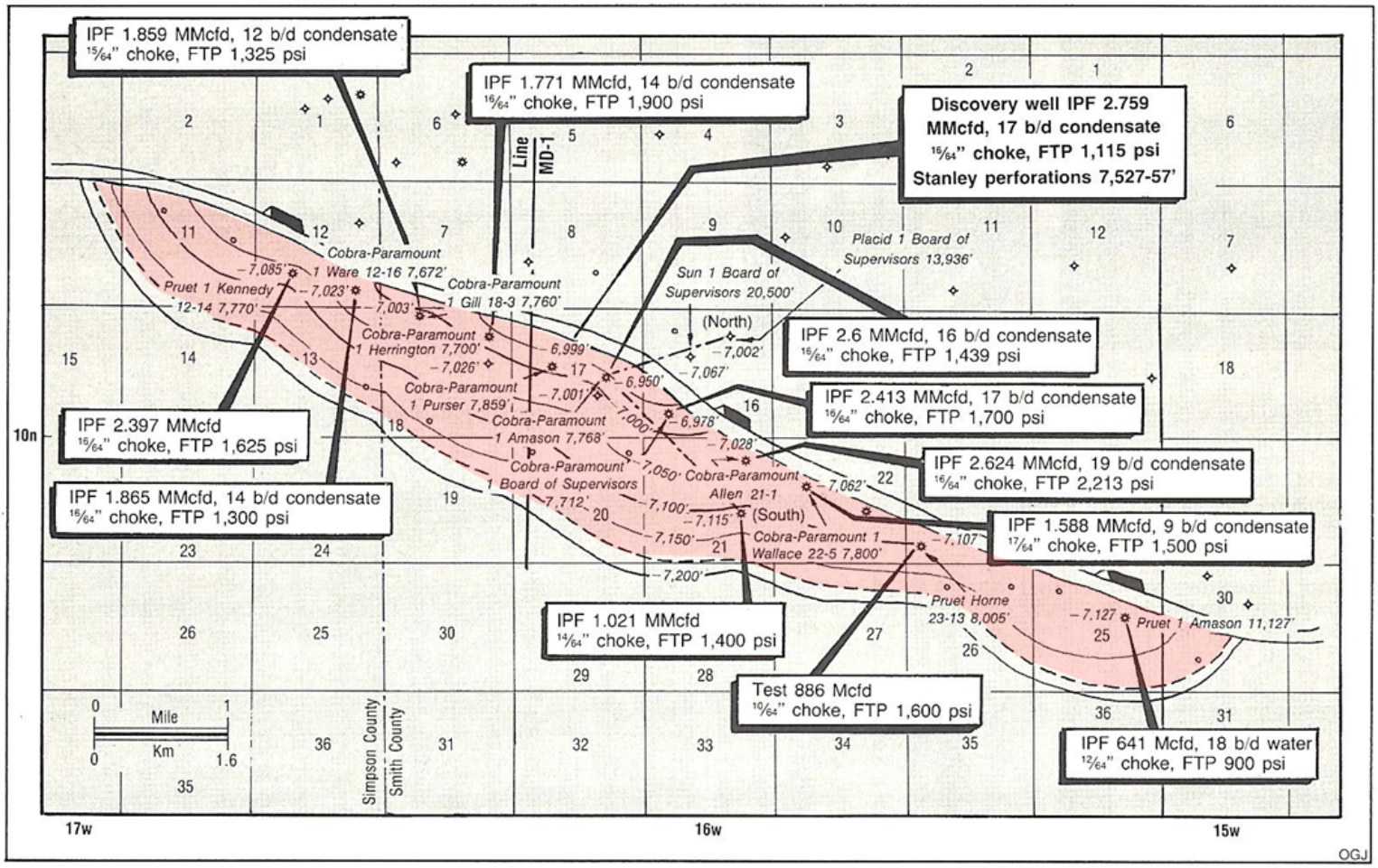


PAST & PRESENT PROSPECTS

Trimble Field

The field drilled out just like they had it mapped.

Trimble field Eutaw Stanley sand structure *(from Oil and Gas Journal, 1990)*



PAST & PRESENT PROSPECTS

Trimble Field

Sidebar

The Trimble discovery had more than just the usual excitement.
Susan and I were on our way back from Houston one night and I had the location for the discovery well dialed into the Loran in my plane.
The plan was for me to fly over the well and John Bush would signal me with a flashlight if the well looked good and then I would land at the nearby McGee airport and he would pick us up and give us a ride to the well.
I dropped down and could see John waving his flashlight enthusiastically, so I figured ; game on.
I had found the well and John just fine but I couldn't find the airport because their rotating Beacon was out of service.
I circled around at low altitude at night for a while before finally getting the runway lights to come on.
I landed and was met by John and a host of blue lights.
Apparently my search for the airport had attracted some attention that got the sheriff out of bed .
The sheriff and his posse thought they were going to make a huge drug bust.
They sure were disappointed when all they could find in the plane were some bags of ski clothes we had purchased in Houston.
They followed us all the way to the location to make sure.
No problem- the sheriff was just doing his job.

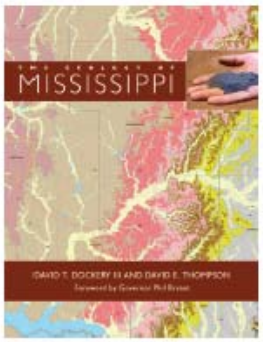
The Geology of Mississippi

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 word.

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.



The first comprehensive treatment of the state's fascinating geological history

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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MONTHLY POST

Dr. David T. Dockery lll RPG

BRINGING FAMILY TO THE ANNUAL GEM AND MINERAL SHOW
David T. Dockery III, RPG

The 57 Annual Gem and Mineral Show, sponsored by the Mississippi Gem and Mineral Society, met in the Trade Mart Building in Jackson on February 27-28, 2016. The event drew dealers from many states with tables full of rocks, minerals, gems, jewelry, and fossils for sale and educational exhibits by the Mississippi Gem and Mineral Society and others. With so much to see (and buy), what a wonderful time to bring family to an event with the very things that led us to our profession as geologists in the first place. This is especially true for children, who by nature love rocks and fossils and dinosaurs and such. The Rock Show is a time to keep their interest going before they outgrow it in the pursuit of social status and girls and boys (rocks are a lot safer). Many members of the Mississippi Geological Society get this. Figure 1 (at left) shows Jack Moody with his granddaughter Vivien Stevens. The same figure at right shows Maurice Birdwell with his granddaughter Jilian Hollman.

Figure 1. Left, Jack Moody and granddaughter Vivien Stevens. Right, Maurice Birdwell and granddaughter Jilian Hollman at the Mississippi Gem and Mineral Society's 57th Annual Gem and Mineral Show.

James Starnes brought his whole family, including wife Laurie and daughters Abbie and Gracie (Figure 2 at left). Abbie and Gracie are on the Sunkist Swim Team. They helped Sunkist win the state meet in Tupelo and continue to the regional meet in Atlanta. Mary Dockery brought her first cousin Judy and Judy's husband George Johnson from Lake Odessa, Michigan (Figure 2 at right).

Figure 2. Left, James and Laurie Starnes with daughters Abby (left) and Gracie (right). Right, Judy and George Johnson of Lake Odessa, Michigan, at the Mississippi Gem and Mineral Society's annual Gem and Mineral Show.

MONTHLY POST

Dr. David T. Dockery lll RPG

MDEQ's Office of Geology and the geology departments at the University of Mississippi, Mississippi State University, and the University of Southern Mississippi staffed booths at the Rock Show to share their programs with the public. Besides the public, previous employees and students often come by to visit. Figure 3 at left shows Nina Ghaffari, a student in my fall 2015 Physical Geology class at Hinds C.C. Rankin Campus and her friend. At right in that figure is Alex Aguilar, a Millsaps student in my spring 2010 Invertebrate Paleontology class, with his children.

Figure 3. Left, Hinds C.C. student Nina Ghaffari and friend. Right, former Millsaps student Alex Aguilar and his children at the Mississippi Gem and Mineral Society's annual Gem and Mineral Show.

Alex's brother Drez was in my spring 2011 Geology of Mississippi class for which 20 locally printed copies of a soft-cover book on *The Geology of Mississippi* (685 pages and 1071 figures) were published. This book is shown in Figure 4 next to a revised hard-cover publication with a professional edit, design, layout, and index as published jointly by the University Press of Mississippi and the Department of Environmental Quality at 751 pages and 1099 figures (an early arrival by FedEx).

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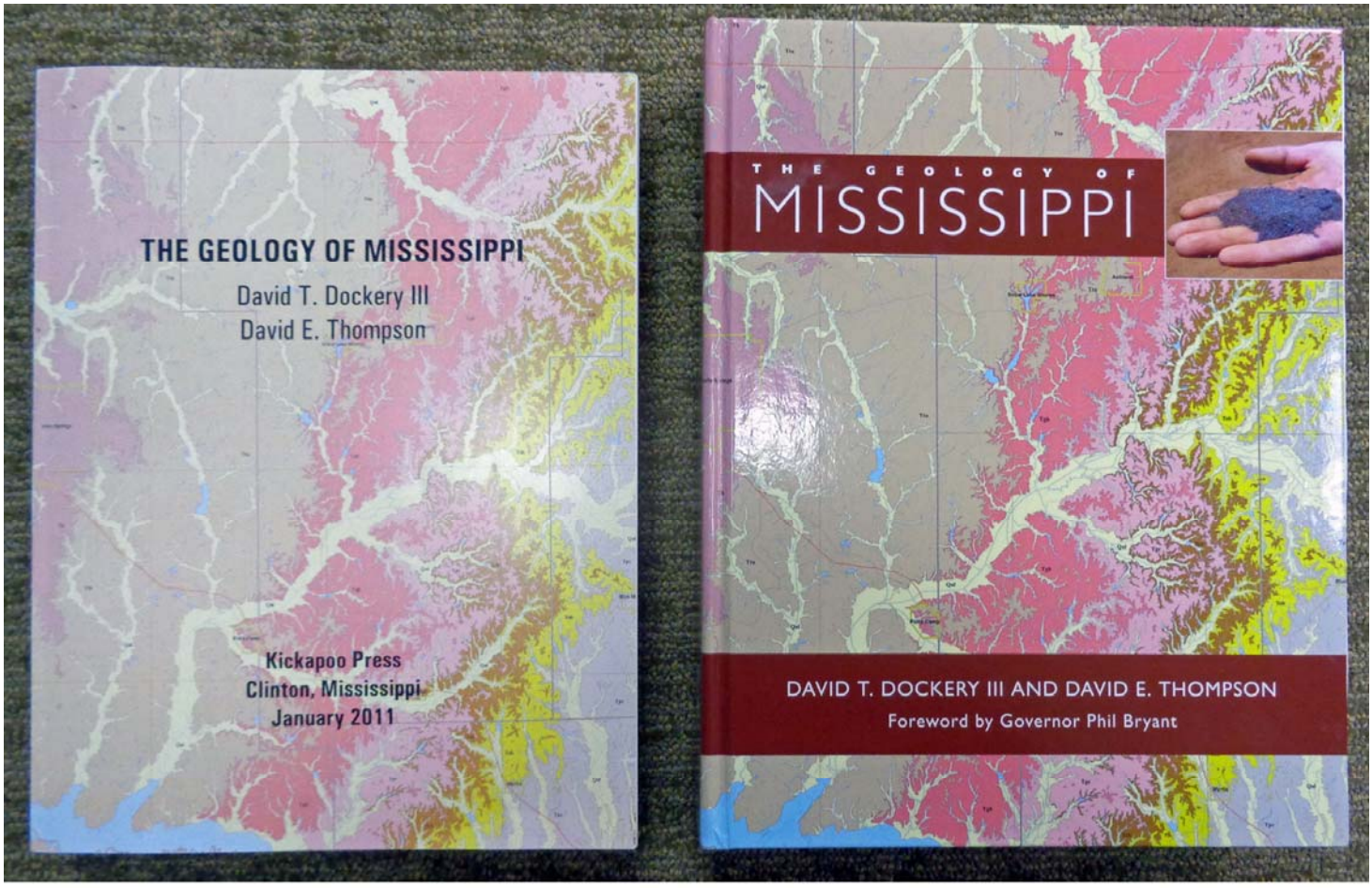

Figure 4. The 2011 paperback edition of *The Geology of Mississippi* and the 2016 edition of *The Geology of Mississippi* by University Press of Mississippi and Mississippi Department of Environmental Quality.

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 *Pocillopora damicornis* 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)

BOLAND SCHOLARSHIP WATCH

Faculty & Students,

Next 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.

We look forward to a great year and hope to see you at our monthly meetings.

Best Regards,

Matt Caton
Editor

MISSISSIPPI STATE

The University of Mississippi

THE UNIVERSITY OF SOUTHERN MISSISSIPPI

MILLSAPS COLLEGE

Rotary Rig Count
3/4/2016

BAKER HUGHES

Location	Week	+/-	Week Ago	+/-	Year Ago
Land	463	-10	473	-670	1133
Inland Waters	2	0	2	-6	8
Offshore	24	-3	27	-27	51
United States Total	489	-13	502	-703	1192
Gulf Of Mexico	24	-3	27	-25	49
Canada	129	-46	175	-171	300
North America	618	-59	677	-874	1492
U.S. Breakout Information	**This Week**	**+/-**	**Last Week**	**+/-**	**Year Ago**
Oil	392	-8	400	-530	922
Gas	97	-5	102	-171	268
Miscellaneous	0	0	0	-2	2
Directional	42	-5	47	-78	120
Horizontal	389	-8	397	-506	895
Vertical	58	0	58	-119	177
Canada Breakout Information	**This Week**	**+/-**	**Last Week**	**+/-**	**Year Ago**
Oil	50	-33	83	-100	150
Gas	79	-13	92	-71	150
Miscellaneous	0	0	0	0	0
Major State Variances	**This Week**	**+/-**	**Last Week**	**+/-**	**Year Ago**
Alaska	12	1	11	0	12
Arkansas	0	0	0	-11	11
California	6	0	6	-8	14
Colorado	17	-2	19	-22	39
Kansas	7	0	7	-8	15
Louisiana	46	-1	47	-54	100
New Mexico	17	-1	18	-44	61
North Dakota	33	-3	36	-72	105
Ohio	12	0	12	-23	35
Oklahoma	70	-3	73	-69	139
Pennsylvania	16	0	16	-31	47
Texas	227	-4	231	-311	538
Utah	0	0	0	-9	9
West Virginia	12	-1	13	-5	17
Wyoming	9	0	9	-23	32
Major Basin Variances	**This Week**	**+/-**	**Last Week**	**+/-**	**Year Ago**
Ardmore Woodford	2	0	2	-4	6
Arkoma Woodford	4	0	4	-1	5
Barnett	4	0	4	-5	9
Cana Woodford	37	1	36	0	37
DJ-Niobrara	15	-1	16	-19	34
Eagle Ford	46	-1	47	-103	149
Fayetteville	0	0	0	-9	9
Granite Wash	10	1	9	-22	32
Haynesville	15	1	14	-23	38
Marcellus	28	-1	29	-34	62
Mississippian	7	-1	8	-37	44
Permian	158	-6	164	-175	333
Utica	12	0	12	-25	37
Williston	33	-3	36	-75	108

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Thank you for your generous contributions to the Boland Scholarship Fund

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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.

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.

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