

MISSISSIPPI GEOLOGICAL SOCIETY

# eBULLETIN

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<b>AAPG</b>	Maurice Birdwell	Independent		(601) 936-6939
<b>GCAGS</b>	Danny Harrelson	U.S. Army R&D		(601) 634-2685

## *Other*

<b>Environmental</b>	John Ryan	Allen		(601) 936-4440
<b>Historian</b>	Stanley King	Independent		(601) 842-3539



# PRESIDENT'S LETTER

*James O. Sparks, RPG*



Hello to all.

MGS/SPE has a special speaker for our February 12<sup>th</sup> meeting. Alex Owens will speak on the “Depositional Model for Lithofacies of the Upper Jurassic Smackover Formation in the Conecuh Embayment, Northeastern Gulf of Mexico: Implications for Petroleum Exploration”. Alex gave this presentation at the 2019 GCAGS meeting in Houston. Alex has a BS from the University of South Alabama and a MS in Geology from the University of Alabama. He currently Executive Vice President of Exploration and Operations for Fletcher Petroleum in Fairhope, Alabama.

In January, I received an email from Tom Bardol (AAPG House of Delegates Member) informing MGS that we have not had a representative at the AAPG annual meeting for the last two meetings. The AAPG Annual Convention will be in Houston June 7-10. If anyone is planning on attending and would like to represent MGS, please let me know.

Hope to see everyone at the February meeting on Wednesday, February 12<sup>th</sup>.

Thanks,

Jimmy

# 2019-2020 MGS MEETING SCHEDULE

When	What/Who	Where
September 12, 2019	Fall BBQ	Jackson Yacht Club-5:30pm
October 10, 2019	Jess New—MSOGB	River Hills – 11:30am
November 14, 2019	Stephen Champlin, RPG MDEQ	River Hills – 11:30am
	<b>Merry Christmas</b>	
January 8, 2020	Steve Walkinshaw—Jackson Gas Rock	River Hills – 11:30am
<b>February 12, 2020</b>	<b>Alex Owen—Smackover Exploration</b>	<b>River Hills – 11:30am</b>
March 11, 2020	TBD	River Hills – 11:30am
April 8, 2020	Boland Scholarship Awards	River Hills – 11:30am
May 13, 2020	Spring Fling	Jackson Yacht Club– 5:30pm



## OFFICERS MEETINGS

September 10, 2019
October 8, 2019
November 12, 2019
January 7, 2020
<b>February 11, 2020</b>
March 10, 2020
April 7, 2020
May 12, 2020

### MILBIRD RESOURCES, LLC

*Oil & Gas Exploration*

#### Maurice N. Birdwell

Managing Partner

AAPG Certified Petroleum Geologist  
Reg. Prof. Geol. Ark. La. Miss. Tex

2043 Oak Ridge Drive  
Pearl, MS 39208

601.936.6939  
mnbirdwell@comcast.net



# FEBRUARY SPEAKER

*Alex Owen*



## **Education**

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08/2015 – 05/2017	<b>Master of Science in Geological Sciences</b> University of Alabama	Tuscaloosa, AL
01/2011 – 06/2014	<b>Bachelor of Science in Geology</b> University of South Alabama	Mobile, AL
08/2008 – 01/2011	<b>High School Diploma</b> Baldwin County High School	Bay Minette, AL

## **Summary of Qualifications**

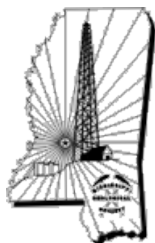
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Oversees all of Fletcher Petroleum's exploration and production acquisitions. Has worked on developing multiple fields in Alabama and Texas while also developing prospects in Mississippi, Louisiana, New Mexico, Oklahoma, Kansas, Florida, and the Gulf of Mexico. Extensively studied the Smackover Formation in SW Alabama while using modern technology and petrophysics to explore for oil and gas.

## **Professional Experience**

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01/2019 – Present	<b>Fletcher Petroleum Corp.</b> -Executive Vice President of Exploration and Operations	Fairhope, AL
04/2017 – 12/2018	<b>Fletcher Petroleum Corp.</b> -Vice President of Exploration	Fairhope, AL
01/2017 - 04/2017	<b>Fletcher Petroleum Corp.</b> -Geologist	Fairhope, AL
11/2015 – 12/2016	<b>Alabama State Oil and Gas Board</b> -Student Assistant	Tuscaloosa, AL
05/2016 - 08/2016	<b>Fletcher Petroleum Corp.</b> -Intern Geologist	Fairhope, AL



# FEBRUARY SPEAKER

*Alex Owen*



**GCAGS**  
**JOURNAL** | A Publication of the  
Gulf Coast Association of  
Geological Societies  
[www.gcags.org](http://www.gcags.org)

## DEPOSITIONAL MODEL FOR LITHOFACIES OF THE UPPER JURASSIC SMACKOVER FORMATION IN THE CONECUH EMBAYMENT, NORTHEASTERN GULF OF MEXICO: IMPLICATIONS FOR PETROLEUM EXPLORATION

Ernest A. Mancini<sup>1</sup>, D. Joe Benson<sup>1</sup>, Berry H. Tew<sup>1,2</sup>,  
Ibrahim Cemen<sup>1</sup>, and Alexander E. Owen<sup>1</sup>

<sup>1</sup>*Center for Sedimentary Basin Studies, Department of Geological Sciences,  
University of Alabama, Tuscaloosa, Alabama 35487, U.S.A.*

<sup>2</sup>*Geological Survey of Alabama and State Oil And Gas Board of Alabama,  
Tuscaloosa, Alabama 35486, U.S.A.*

### ABSTRACT

An integrated well log and core study of the Upper Jurassic Smackover Formation and associated Jurassic lithofacies in the Conechu Embayment, onshore northeastern Gulf of Mexico, has shown that the depositional environments for these updip lithofacies differ from the setting for other updip Upper Jurassic lithofacies in the onshore northeastern Gulf of Mexico. In the Conechu Embayment, Jurassic Louann Salt is absent, Smackover beds directly overlie Upper Jurassic Norphlet deposits, and there is no overlying thick section of Buckner anhydrites as observed in other areas. The transgression of the Smackover sea was over a surface of Norphlet alluvial and fluvial deposits of variable thickness rather than a surface controlled by Norphlet eolian and Louann salt deposition and post-depositional salt movement. Lithofacies in this area consist of progradational subtidal peloidal and ooid grainstone and packstone sand bars deposited in a nearshore moderate-energy carbonate setting as compared to the typical inner ramp lithofacies of high-energy grainstone and packstone shoal and shoreface deposits. Subtidal microbial (thrombolite) buildups discovered in this embayment did not develop on pre-Jurassic high-relief basement structural features and are not overlain by high-energy shoal and shoreface grainstone and packstone lithofacies like the microbial buildups to the west and south of the Conechu Embayment. These subtidal microbial buildups extended landward beyond the depositional limit of the carbonate sand bar complex and are postulated to have developed in a protected, low-energy bay or lagoonal environment within an embayed shoreline. The critical factor for microbial growth was the presence of a hard substrate, and microbial development was mainly controlled by available accommodation space created primarily by a rise in sea level. Black shale beds containing terrestrial-derived herbaceous organic material, including ferns, mosses and conifers, characteristic of a warm humid climate occur in the Conechu Embayment. The presence of a more humid climate relative to areas to the west resulted in an influx of freshwater into the embayment. The introduction of freshwater affected depositional and post-depositional conditions, such that porosity in the reservoir facies is dominated by depositional, primary solution-enlarged, and secondary vuggy pores in the embayment rather than diagenetic intercrystalline dolomite and moldic pores characteristic of reservoirs in the Mississippi Interior Salt Basin. A revised Smackover depositional model that incorporates the implications of these findings on potential petroleum reservoir, source, and seal facies in the Conechu Embayment provides additional petroleum exploration targets for the onshore northeastern Gulf of Mexico.



# BOLAND SCHOLARSHIP WATCH

Faculty & Students,

This is a new year and the Mississippi Geological Society along with the Boland Scholarship Fund would like to remind you that we want to honor the most outstanding overall students for the 2019-2020 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



THE UNIVERSITY OF  
SOUTHERN  
MISSISSIPPI

MILLSAPS  
COLLEGE



# CURRENT PRICES

## Crude Oil WTI (NYM \$/bbl) Front Month

+ WATCHLIST

CREATE ALERT

☀ OPEN

Last Updated: Feb 10, 2020 at 10:53 a.m. EST - Delayed quote

\$ **50.18**

▼ -0.14 -0.28%

SETTLEMENT PRICE 02/07/20  
\$50.32



## Natural Gas Continuous Contract

+ WATCHLIST

CREATE ALERT

☀ OPEN

Last Updated: Feb 10, 2020 at 10:54 a.m. EST - Delayed quote

\$ **1.789**

▼ -0.069 -3.71%

SETTLEMENT PRICE 02/07/20  
\$1.858



Marketwatch







# MONTHLY POST

## *Dr. David T. Dockery III RPG*

### GLACIAL ARTIFACTS IN MISSISSIPPI

In John McPhee's book *Irons in the Fire*, there is a chapter on forensic geology entitled *The Gravel Page*. This chapter begins with McPhee's desk filled with "petri dishes full of Platte River pebbles." These were collected when he was on a Platte River gravel bar in Nebraska "near the river's right bank, not far from the hundredth meridian." McPhee was traveling with Karen Kleinspehn, a sedimentologist and a graduate student at Princeton at the time. The obvious source of pebbles on the gravel bar was the Laramie Range of the Wyoming Rockies. This explained the many bright-pink pebbles of the Sherman Granite, but did not explain the source of a graphic granite pebble. The only possible source of this stone was beyond the present watershed, carried by some ancient and abandoned river course.

Like McPhee and Kleinspehn, James Starnes and Jonathan Leard of MDEQ Office of Geology's Surface Geology Division are sleuthing the sources of pebbles, cobbles, and boulders in Mississippi's pre-loess terrace deposits, a perched terrace of the ancient Mississippi-Ohio River system. Recently the Ohio Geological Survey was tasked to look into helping preserve the Glacial Grooves on Kelley's Island in Lake Erie. These grooves "were uncovered by Dr. Richard P. Goldthwaite of The Ohio State University in the early 1970s" and "reflect one of the best-known examples of erosion by glacial processes in the country." The Kelley's Island grooves are shown in Figure 1. While we have no glacial grooves in Mississippi, we do have some glacially faceted stones that may have cut those grooves.



Figure 1



## MONTHLY POST

*Dr. David T. Dockery III RPG*

Figure 2 shows a recently collected glacially faceted and striated pebble.

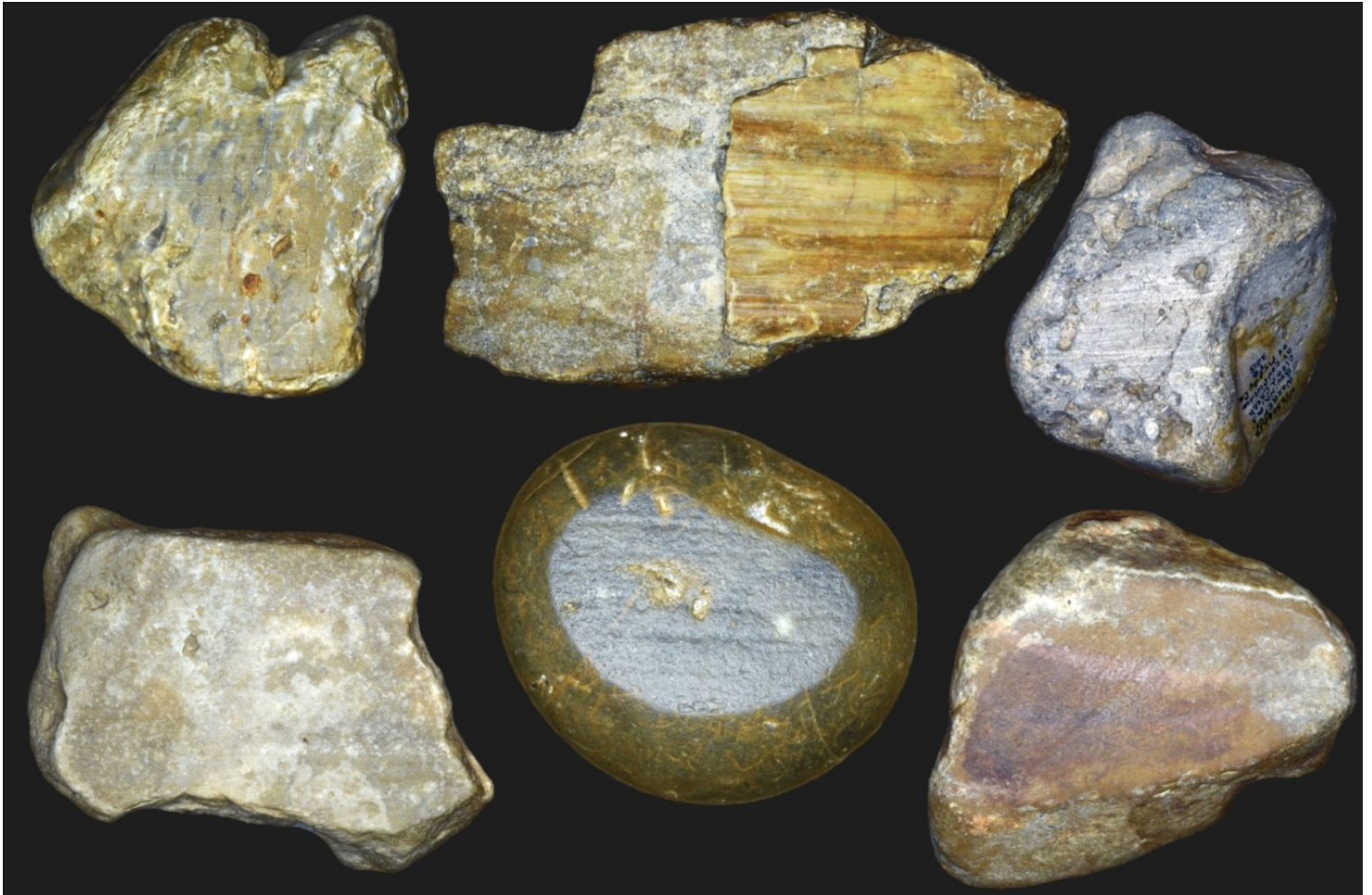




## MONTHLY POST

*Dr. David T. Dockery III RPG*

A collection of such pebbles from Mississippi is shown in figure 3. So, when you are creek walking in the Loess Hills or visit a gravel pit in that area, keep your eyes open for faceted straightened pebbles and share your finds with us.





# 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](mailto: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](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](http://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](http://www.ermapper.com) They have a great free downloadable viewer for TIFF and other graphic files called ER Viewer.

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

<http://terraserver.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/gpnl/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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**Julius Ridgeway**

**Dr. David T. Dockery III**

**\* deceased**

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**MISSISSIPPI GEOLOGICAL SOCIETY**

**P.O. BOX 422, JACKSON, MISSISSIPPI 39205-0422**

**2019-2020**

Membership year is June through May

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Boland Scholarship Fund Donation \$ \_\_\_\_\_ Total Amount Enclosed \$ \_\_\_\_\_

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Degree(s) Obtained and Year(s) Awarded: \_\_\_\_\_

Professional Associations, Certifications, & Licenses: \_\_\_\_\_

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### I. Bulletin Advertisements:

<u>Size</u>	<u>Rate/Year</u>	<u>Amt. Remitted</u>
Full Page Ad (6" x 8")	\$500	\$ _____
1/2 Page Ad (6" x 4")	\$300	\$ _____
1/4 Page Ad (3" x 4")	\$200	\$ _____
Business Card Ad (1 1/2" x 3")	\$100	\$ _____
Professional Listing (1/2" x 3")	\$ 50	\$ _____

### II. Web Page Advertisements (www.missgeo.com):

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(Note: Please contact Steve Walkinshaw at (601) 607-3227 or mail@visionexploration.com for details concerning placing your ad on the MGS web site.)

**Total Remitted** \$ \_\_\_\_\_

Please make checks payable to the Mississippi Geological Society. If you have any questions, contact Matt Caton at (601) 898-7444 or mcaton@tellusoperating.com





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		2010-2011	Brian Sims
		2011-2012	Stanley King
		2012-2013	Jim Files
		2013-2014	Neil Barnes
		2014-2015	Ezat Heydari
		2015-2016	Jack Moody
		2016-2017	Cragin Knox
		2017-2018	David Hancock
		2018-2019	Dr. David Dockery