#### MISSISSIPPI GEOLOGICAL SOCIETY

# e BULLETIN

Volume 67

No. 9

**May 2019** 





www.missgeo.com

| 2018-2019 MGS MEETING SCHEDULE |  |                            |  |  |
|--------------------------------|--|----------------------------|--|--|
| When                           | What/Who   | Where                      |  |  |
| September 13, 2018             | Fall BBQ   | Jackson Yacht Club-5:30pm  |  |  |
| October 11, 2018               | Ezat Heydari and Kiana McFadden                          | River Hills – 11:30am      |  |  |
| November 8, 2018               | ENERGY & POWER: SUPPLY & DEMAND<br>Todd "Ike" Kiefer     | River Hills – 11:30am      |  |  |
|                                | Merry Christmas  |                            |  |  |
| January 10, 2019               | Dr. James B. Harris—Millsaps College                     | River Hills – 11:30am      |  |  |
| February 7, 2019               | Jeannie Barlow, Ph.D.<br>USGS—Hydrologist                | River Hills – 11:30am      |  |  |
| March 7, 2019                  | Patrick Sullivan<br>Mississippi Energy Institute         | River Hills – 11:30am      |  |  |
| April 11, 2019                 | Boland Scholarship Awards Dustin Johnson Memorial Awards | River Hills – 11:30am      |  |  |
| May 9, 2019                    | Spring Fling   | Jackson Yacht Club- 5:30pm |  |  |



| OFFICERS MEETINGS  |
|--------------------|
| September 11, 2018 |
| October 9, 2018    |
| November 6, 2018   |
| January 8, 2019    |
| February 5, 2019   |
| March 5, 2019      |
| April 9, 2019      |
| May 7, 2019        |



### MGS 2018-2019 BOARD OF DIRECTORS

#### **Officers**

| President          | Dr David Dockery III | MDEQ               | ddockery@mdeq.ms.gov          | (601) 961-5171 |
|--------------------|----------------------|--------------------|-------------------------------|----------------|
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| 2nd Vice President | Joe Johnson          | Spooner Petroleum  | jjohnson@spoonercompanies.com | (601) 969-1831 |
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| Advertising        | Matt Caton           | Tellus Operating   | mcaton@tellusoperating.com    | (601) 898-7444 |
| Editor             | Matt Caton           | Tellus Operating   | mcaton@tellusoperating.com    | (601) 898-7444 |
|                    |                      |                    |                               |                |

#### **Boland Scholarship**

| President | Jimmie Sparks   | MDEQ                  | (601) 355-4530 |
|-----------|-----------------|-----------------------|----------------|
| Secretary | Neil Barnes     | Strong Rock           |                |
| Members   | Joe Johnson     | Spooner Petroleum     | (601) 969-1831 |
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|           | Dave Cate       | Pruet Oil             |                |
|           | David Hancock   | Roundtree             |                |

#### Honorary Membership

| Chairman | Charles H. Williams, Jr. Vaughey & Vaughey | (601) 982-1212 |
|----------|--|----------------|
| Members  | Dave Cate                                  | (601) 718-9397 |
|          | Vaughn Watkins                             | (601) 898-9347 |

#### MGS Representatives

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

#### Other

| Environmental | John Ryan    | Allen       | (601) 936-4440 |
|---------------|--------------|-------------|----------------|
| Historian     | Stanley King | Independent | (601) 842-3539 |



### PRESIDENT'S LETTER

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



In this last President's Letter of the 2018-2019 year for the Mississippi Geological Society, I thank MGS Officers, Vice President Jimmy Sparks, 2<sup>nd</sup> Vice President Joe Johnson, Treasurer Paul Parrish, Bulletin Editor/Advertising Matt Caton, and Webmaster Steve Walkinshaw, for their service. Joe Johnson will not be returning as an officer next year after a long tenure of service, including Treasurer in 2007, 1<sup>st</sup> Vice President in 2008, President in 2009, Editor in 2010-2011, and 2<sup>nd</sup> Vice President in 2012-2019, for a total of 13 straight years. We will be honoring Joe and Bill Bagnall with plaques of appreciation for their service at the Spring Fling this Thursday at the Jackson Yacht Club. Bill served as Treasurer from 2011 through September of 2018, a total of eight years. So, come out to the Spring Fling and help us show our appreciation to Joe and Bill.





### **2019 SPRING FLING SPONSORS**

We also thank the sponsors of the Spring Fling as listed below.

### Gold Level Sponsors

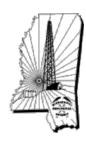
Pruett Oil Company, LLC. Venture Oil and Gas, Inc.

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Roundtree and Associates, Inc. Blair and Bondurant, P.A.

### **Bronze Level Sponsors**

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### **SCHOLARSHIP AWARDS**

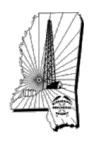
#### **CONGRATULATIONS TO THIS YEAR'S WINNERS!**

Kelly Truax - Mississippi State University Jordan Johnson - University of Mississippi Sydney Kennedy - University of Southern Mississippi Cooper Scott Cearley - Millsaps College Emily Welch - Mississippi State University Amber Morgan - University of Southern Mississippi

The winners were selected from an outstanding group of nominees. All nominees were selected by the facility of each College or University.

The award for each scholarship is \$1,000.00 and was presented at the Thursday, April 11<sup>th</sup> meeting at River Hills Club at 11:30.









#### Kelly Truax, Mississippi State University

Kelly is a senior from Starkville with a cumulative 3.97 GPA and a 4.0 GPA in Geology. While at State, she has been on the President's List every semester. She also received a B.F.A. in Acting from Missouri State University.







#### Jordan Johnson, University of Mississippi

Jordan is a Senior from Hanceville, Alabama, with a cumulative 3.7 GPA and a 4.0 GPA in Geological Engineering. She will graduate in May of 2019.







#### Sydney Kennedy, University of Southern Mississippi

Sydney is a Senior from Decatur, MS with a cumulative 4.0 GPA and 4.0 GPA in Geology. While at USM, she has been on the President's List every semester.



# MILLSAPS COLLEGE



#### Cooper Scott Cearley, Millsaps College

Cooper is a Senior from Dallas, TX with a cumulative 3.3 GPA and a 3.9 GPA in Geology. His emphasis is in the field of Geophysics. He will receive his BS in May of 2019. He also has a minor in Math.



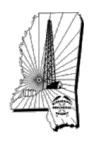
### **DUSTIN JOHNSON MEMORIAL AWARD**





#### Emily Welch, Mississippi State University

Emily is a Senior from Columbia, MS and will receive her BS in Geology in 2019.



### **DUSTIN JOHNSON MEMORIAL AWARD**





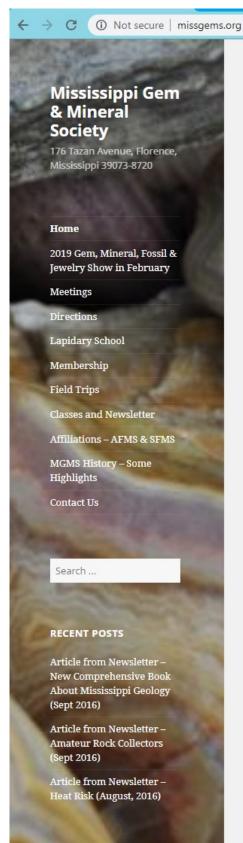
Amber Morgan, University of Southern Mississippi

Amber is a Junior from Poplarville, MS and will receive her BS in Geology in 2019.



### **NEWS**

### MS Gem and Mineral Society



#### Home

The Mississippi Gem and Mineral Society (MGMS) was established to promote knowledge and the enjoyment of activities related to the earth sciences. MGMS activities focus on rocks, minerals, fossils, lapidary arts, and jewelry making.

It's amazing how diverse this rock hobby is. There's something for every interest and its a hobby that the entire family can enjoy together.

Visitors are always welcome to join us at one of our regular meetings held at our MGMS Lapidary School. We're located just a few miles south of the capitol city of Jackson at 176 Tazan Avenue, Florence, Mississippi.











### **CURRENT PRICES**





Marketwatch





### **MONTHLY POST**

### Dr. David T. Dockery lll RPG

#### THE MISSISSIPPI DIGITAL EARTH MODEL (MDEM)

David T. Dockery III, RPG, Barbara Yassin, GIS Analyst

The Mississippi Department of Environmental Quality, Office of Geology, Geospatial Resource Division (Steve Champlin, Division Director) is responsible for the Mississippi Digital Earth Model (MDEM) and work plans associated with it. MDEM is defined as a three-dimensional representation of natural and man-made features of Mississippi including the seven framework data elements defined by the Federal Geographic Data Committee (FGDC) – geodetic control, digital orthophotography, digital elevation model and contours, property ownership, hydrography, transportation, and governmental boundaries. MDEQ completed the original MDEM Conceptual Development Plan in 2002. MDEQ Office of Geology hosted recent meetings concerning the development of a scalable MDEM prototype website to optimize the use of MDEM data which has been developed to date and to utilize the best available technologies to expand public accessibility of MDEM data.

Maps are of great importance to geologists, engineers, and the public at large. Figure 1 is a map of a tract of land in Hinds County near Edwards, Mississippi.



Figure 1. Hinds County property near Edwards, Mississippi, outlined in yellow.



### **MONTHLY POST**

### Dr. David T. Dockery lll RPG

The property owner asked if we had more recent imagery than presented on this map (property lines in yellow), which he purchased from a map company. To answer that question, Barbara Yassin with our Geospatial Resources Division had to reverse engineer the map to find where the layers came from. The orthoimagery was left on and assumed to be from the National Agricultural Imagery Program (NAIP). The latest NAIP orthoimagery in Hinds County was from 2016. At middle right, Barb was able to match the 2016 NAIP orthoimagery with that of the map by matching cows (appear as small dots), standing in the same places, in both the left and right frames (Figure 2).

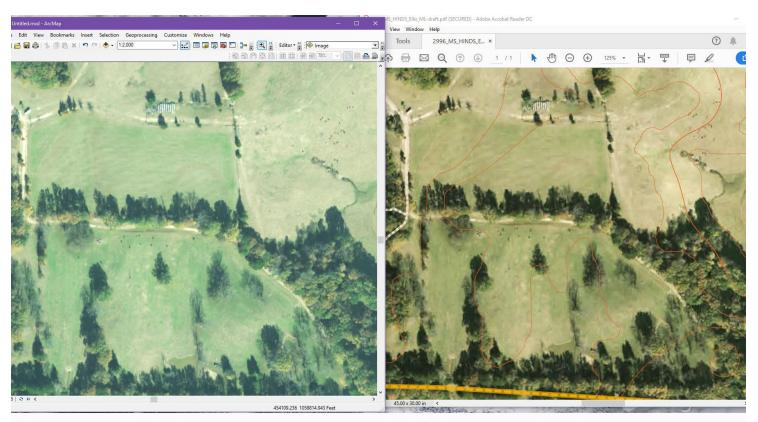


Figure 2. 2016 NAIP orthoimagery matched with that on purchased map at right, even to the placement of standing cattle.



### **MONTHLY POST**

### Dr. David T. Dockery lll RPG

In Figure 3, Barb showed the difference between available MDEM 1-foot LiDAR contours (left frame) and those of the map (right frame). All our data and the data of the purchased map layers are available for free at the MARIS website <a href="https://www.maris.state.ms.us/">https://www.maris.state.ms.us/</a>.

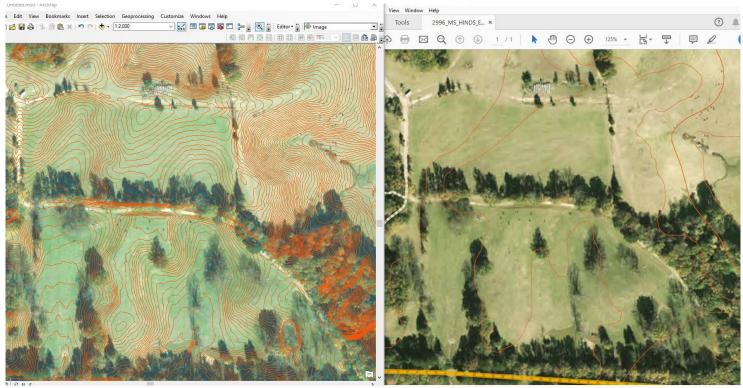
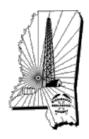


Figure 3. One-foot LiDAR contours at left compared to ten-foot contours of purchased map on right.



### **GEOLOGY POST**

#### **ARTICLES, PAPERS or NEWS?**

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

I am looking for more content from the industry and our schools.

Submissions can include anything from professional papers, thesis abstracts, job opportunities, 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 <a href="http://tapestry.usgs.gov">http://tapestry.usgs.gov</a> 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 <a href="http://www.tnris.state.tx.us/digital.htm">http://www.tnris.state.tx.us/digital.htm</a> 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 <a href="http://store.usgs.gov/b2c\_usgs/b2c/start/(xcm=r3standardpitrex\_prd)/.do">http://store.usgs.gov/b2c\_usgs/b2c/start/(xcm=r3standardpitrex\_prd)/.do</a> go to this webpage and look on the extreme right side to the box titled TOPO MAPS <a href="https://doi.org/10.2007/DOWNLOAD">DOWNLOAD</a> 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.

<u>http://antwrp.gsfc.nasa.gov/apod/astropix.html</u> 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

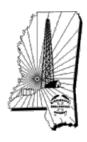
http://terra.nasa.gov/gallery/ More here

<u>www.ermapper.com</u> 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.

<u>http://terrasrver.com/</u> 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

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Stewart W. Welch\*

Julius Ridgeway

Dr. David T. Dockery III

<sup>\*</sup> deceased

#### MEMBERSHIP APPLICATION / RENEWAL FORM

### MISSISSIPPI GEOLOGICAL SOCIETY P.O. BOX 422, JACKSON, MISSISSIPPI 39205-0422

#### 2018-2019

Membership year is June through May

| New Membership (\$20/yr)      | Renewal (\$20/yr) St       | tudent (FREE)       | Associate (\$20/yr) |
|-------------------------------|----------------------------|---------------------|---------------------|
| Boland Scholarship Fund       | d Donation \$              | Total Amount Enclos | sed \$              |
|                               |                            |                     |                     |
| Last Name:                    | First:                     |                     | MI:                 |
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| E-mail Address:               |                            |                     |                     |
| College/University Attended:  | :                          |                     |                     |
| Degree(s) Obtained and Year   | r(s) Awarded:              |                     |                     |
| Professional Associations, Co | ertifications, & Licenses: |                     |                     |

#### MGS ADVERTISING ORDER FORM

#### **September 2018 – May 2019**

#### I. Bulletin Advertisements:

| Size                             | Rate/Year | Amt. Remitted |
|----------------------------------|-----------|---------------|
| 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):

| Type of Web Page Ad       | Rate/Year | Amt. Remitted |
|---------------------------|-----------|---------------|
| Front Page Sponsor        |           |               |
| (Banner Ad – limit of 5)  | \$500     | \$            |
| Second Page Banner Ad     | \$250     | \$            |
| Professional Listing/Link | \$100     | \$            |

(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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#### Maurice N. Birdwell

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

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mnbirdwell@comcast.net



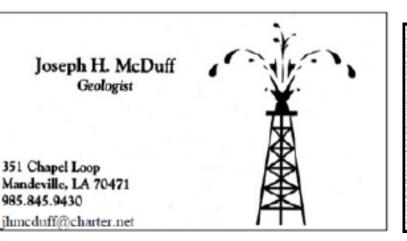
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| 1939-1940 Heriry N. Toler 1974 1975 W. E. "Gene" To       | ulan         |
| 1940-1941 Orban B. Hugnes                                 | ylor.        |
| 1941-1942 J. Tom McGlothlin 1975-1976 Jerry E. Zoble      |              |
| 1942-1943 Dave C. Harrell                                 |              |
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| 1944-1945 L. R. McFarland 1978-1979 Les Aultman           |              |
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| 1946-1947 Frederic F. Mellen 1980-1981 Marshall Kern      |              |
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| 1948-1949 Robert D. Sprague 1983- 1984 Charles H. Willia  | ims          |
| 1949-1950 E. T. ""Mike" Monsour 1984- 1985 C. Kip Ferns   |              |
| 1950-1951 J. Tate Clark 1985-1986 Steven S. Walkin        |              |
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| 1951-1952 George W. Field 1987-1988 Harry Spooner         |              |
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| 1953-1954 Wilbur H. Knight 1989-1990 Stan Galicki         |              |
| 1954-1955 A. Ed Blanton 1990-1991 E. James Files, J       |              |
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| 1956-1957 Ben Ploch 1992-1993 Michael Noone/S             | Stanley King |
| 1957-1958 Emil Monsour 1993-1994 Brian Sims               |              |
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| 1961-1962 Xavier M. Franscogna 1997-1998 George B. Vockro | oth          |
| 1962-1963 Robert B. Ross 1998-1999 Rick L. Ericksen       |              |
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| 1964-1965 James F. Bollman 2001-2002 Andrew T. Sylte      |              |
| 1965-1966 Sankey L. Blanton 2002-2003 Aaron Lasker        |              |
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| 1971-1972 Larry Boland 2008-2009 Lisa Ivshin              |              |
| 1972-1973 Charles Barton 2009-2010 Joe Johnson            |              |
| 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                                   |              |