

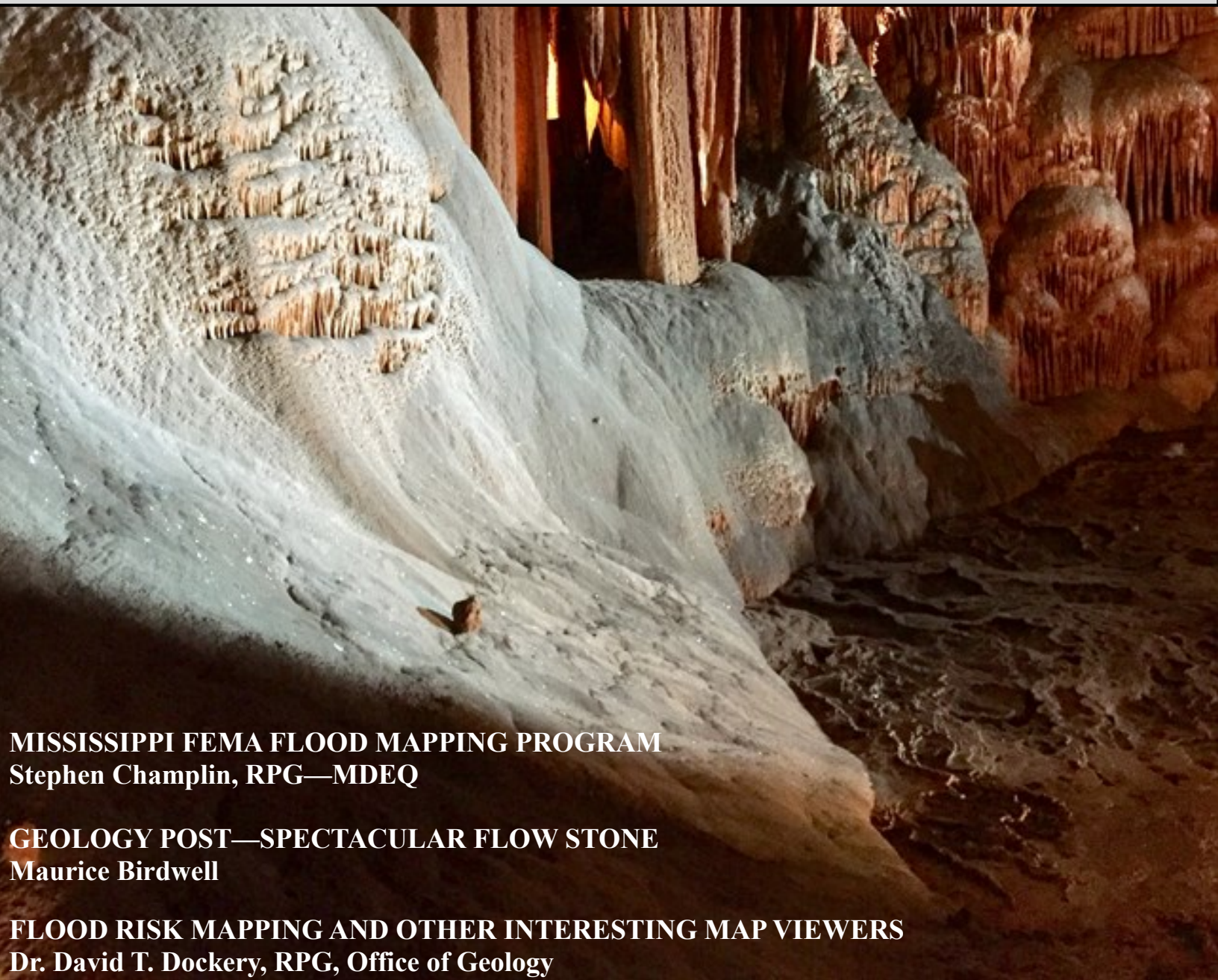
MISSISSIPPI GEOLOGICAL SOCIETY

*e***BULLETIN**

Volume 68

No. 3

November 2019



MISSISSIPPI FEMA FLOOD MAPPING PROGRAM
Stephen Champlin, RPG—MDEQ

GEOLOGY POST—SPECTACULAR FLOW STONE
Maurice Birdwell

FLOOD RISK MAPPING AND OTHER INTERESTING MAP VIEWERS
Dr. David T. Dockery, RPG, Office of Geology



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PRESIDENT'S LETTER

James O. Sparks, RPG



MGS Members,

Our speaker for the October meeting was Jess New, Executive Director of the Mississippi Oil and Gas Board. The MGS would like to thank him for a very informative talk.

Last month I attended the Gulf Coast Association of Geological Societies. At the meeting, the member states presented reports of their activities and financial status. Most of the Societies reported good attendance and a sound financial status. The member societies reported membership between a few hundred to several thousand.

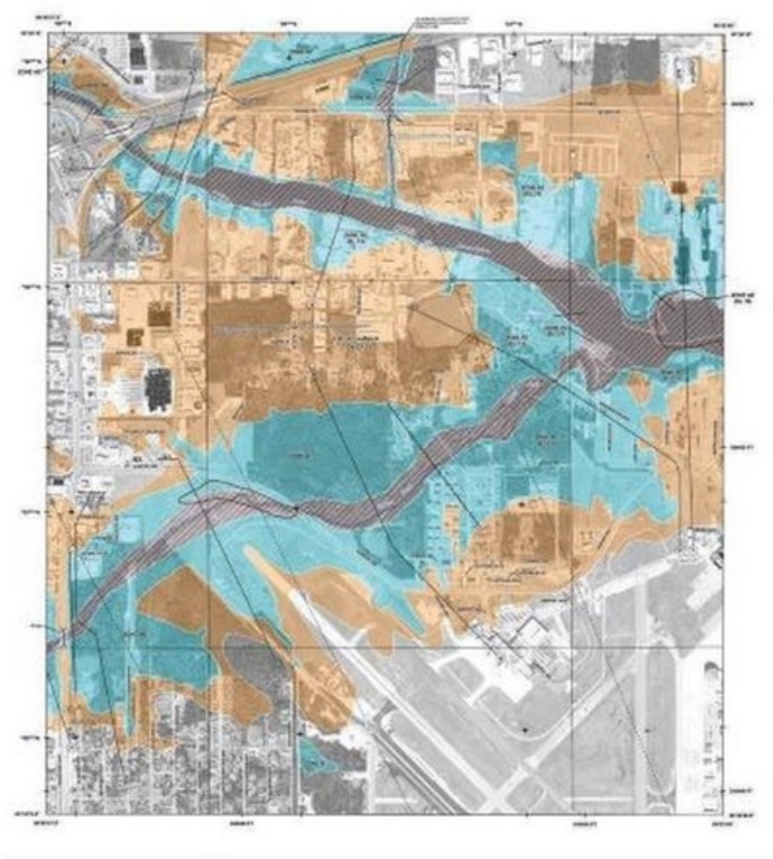
For the November meeting, Steve Champlin will be our speaker. Steve is with MDEQ and is manager of FEMA's flood mapping program. The elevations obtained from the flood maps are used to determine FEMA's Flood Insurance rates and to define high hazard flood zones.

At the October meeting, we had 25 in attendance. I hope we can continue that trend.

I look forward to seeing you at the November 14th meeting at River Hills.

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
TBD	TBD	TBD
January 9, 2020	TBD	River Hills – 11:30am
February 13, 2020	TBD	River Hills – 11:30am
March 12, 2020	TBD	River Hills – 11:30am
April 9, 2020	Boland Scholarship Awards	River Hills – 11:30am
May 14, 2020	Spring Fling	Jackson Yacht Club– 5:30pm



OFFICERS MEETINGS

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



OCTOBER SPEAKER

Stephen Champlin—MDEQ

Stephen D. Champlin, RPG

Born in Anchorage, Alaska, in February 1953. Decided it was too cold, so packed up and moved back to the lower 48 six months later.

Moved to Jackson, MS, with parents in 1956. Graduated from Jackson St. Joseph Highschool, attended MS State Univ. and graduated from the Univ. of Alabama at Tuscaloosa in 1976 with a BS in Geology. Worked for Gulf Oil in Morgan City, LA, and Getty Oil in Houston, TX, working the Gulf of Mexico offshore. Moved back to Jackson in 1980 and worked with family owned oil company and consulted until 1993. Began working at the Office of Geology at MDEQ in the Energy Section. Currently manage the Mississippi Digital Earth Program and the Mississippi FEMA Flood Mapping program since 2003 to present.

Update of the Mississippi FEMA Flood Mapping Program

Mississippi, through a joint effort between the Mississippi Emergency Management Agency (MEMA) and the Mississippi Department of Environmental Quality (MDEQ), is participating with FEMA Region IV as a Mapping State and a Cooperating Technical Partner (CTP). This agreement was signed January 28, 2003.

The purpose of the partnership was for the State of Mississippi to provide the engineering and mapping services to update FEMA's Flood Insurance Rate Maps. These maps are used to determine Flood Insurance Rates and to assist county and local community flood plan managers and planners with permitting new homes and buildings in mapped high hazard flood zones.

The 1st phase - The Flood Map Modernization (Map MOD) in Mississippi. Primary work was to convert FEMA's paper Flood Insurance Rate Maps to digital GIS format on a county-wide basis and where funding permitted add new stream studies. Funding years were 2003 through 2008. As of February 2019 - 100% Statewide Digital FIRMS.

FY2009 - Transition Year from Map MOD to Risk MAP. Seven County DFIRM updates were funded and completed.

The 2nd phase – Risk MAP 2010 to present/future. HUC_8 Basin study basis. Currently work was begun on 12 different HUC_8 Basins affecting all or portions of 48 Mississippi Counties.

Mississippi's effective Digital flood data can be viewed on the MDEQ MS-NFHL Web Map Viewer. The link is:

<https://geology.deq.ms.gov/floodmaps/Viewer/>



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
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GEOLOGY POST

Spectacular Flow Stone Blanchard Springs Caverns

Submitted by
Maurice Birdwell





CURRENT PRICES

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

+ WATCHLIST

CREATE ALERT

☀ OPEN

Last Updated: Nov 14, 2019 at 11:23 a.m. EST - Delayed quote

\$ **57.11**

▼ -0.01 -0.02%

SETTLEMENT PRICE 11/13/19
\$57.12

< Advanced Charting 1M \$ % VOL



Natural Gas Continuous Contract

+ WATCHLIST

CREATE ALERT

☀ OPEN

Last Updated: Nov 14, 2019 at 11:24 a.m. EST - Delayed quote

\$ **2.636**

▲ 0.036 1.38%

SETTLEMENT PRICE 11/13/19
\$2.6

< Advanced Charting 1M \$ % VOL



Marketwatch





MONTHLY POST

Dr. David T. Dockery III RPG

FLOOD RISK MAPPING AND OTHER INTERESTING MAP VIEWERS AT MDEQ OFFICE OF GEOLOGY'S WEBSITE

David T. Dockery III, RPG

The following are very useful map viewers supported by the various divisions of MDEQ's Office of Geology.

Geospatial Resources Division: The Geospatial Resources Division, directed by Steve Champlin, supports the Flood Risk Mapping map viewer (figures 1-2) and the Oil and Gas Fields (Energy Library) map viewer, as shown for Clarke County in Figure 3. Recently Barbara Yassin included a LiDAR surface elevation layer and a layer of building footprints in the Flood Risk map viewer, where approximate elevations can be pulled based on LiDAR (Figure 1). It also has the USGS elevation service tool, which will return 3DEP 1/3 arc-second elevation (that is the 10-meter DEM). The Flood Risk map viewer is widely used by the public, flood plain managers, and engineers (see links below).

<https://geology.deq.ms.gov/floodmaps/Viewer/default.html>

<http://geology.deq.ms.gov/energy/>

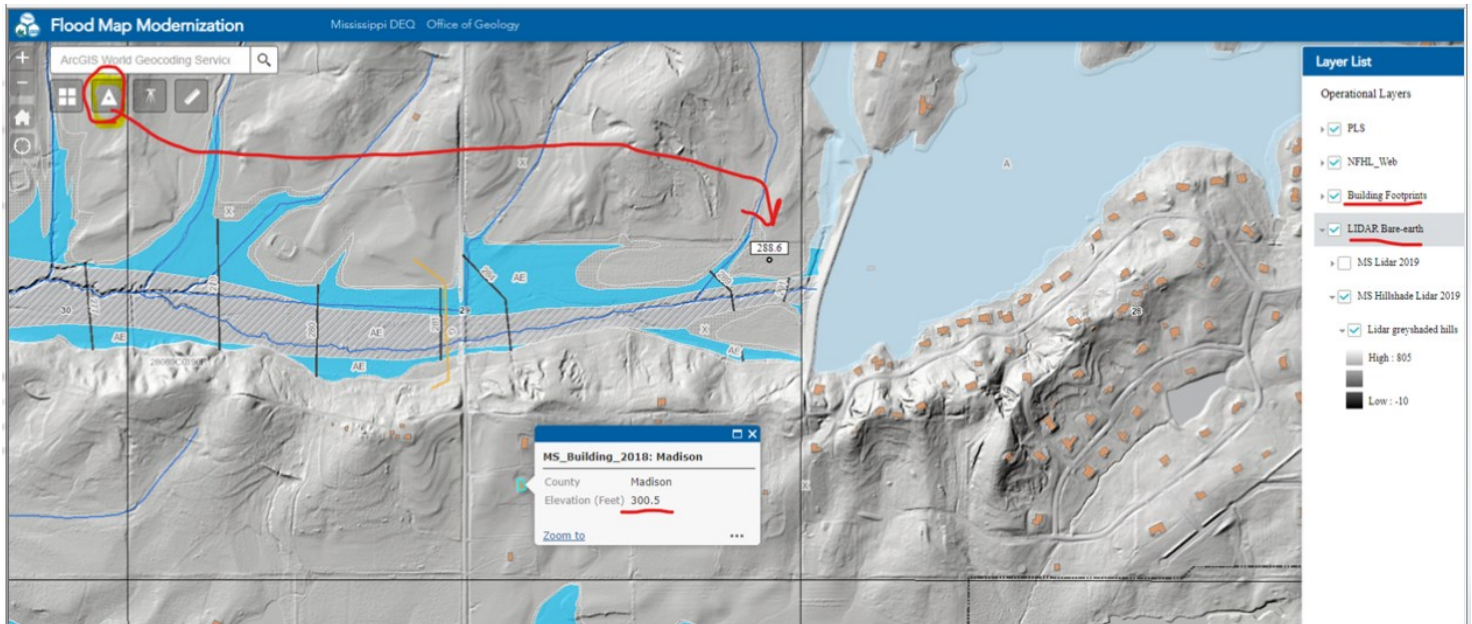


Figure 1



MONTHLY POST

Dr. David T. Dockery III RPG

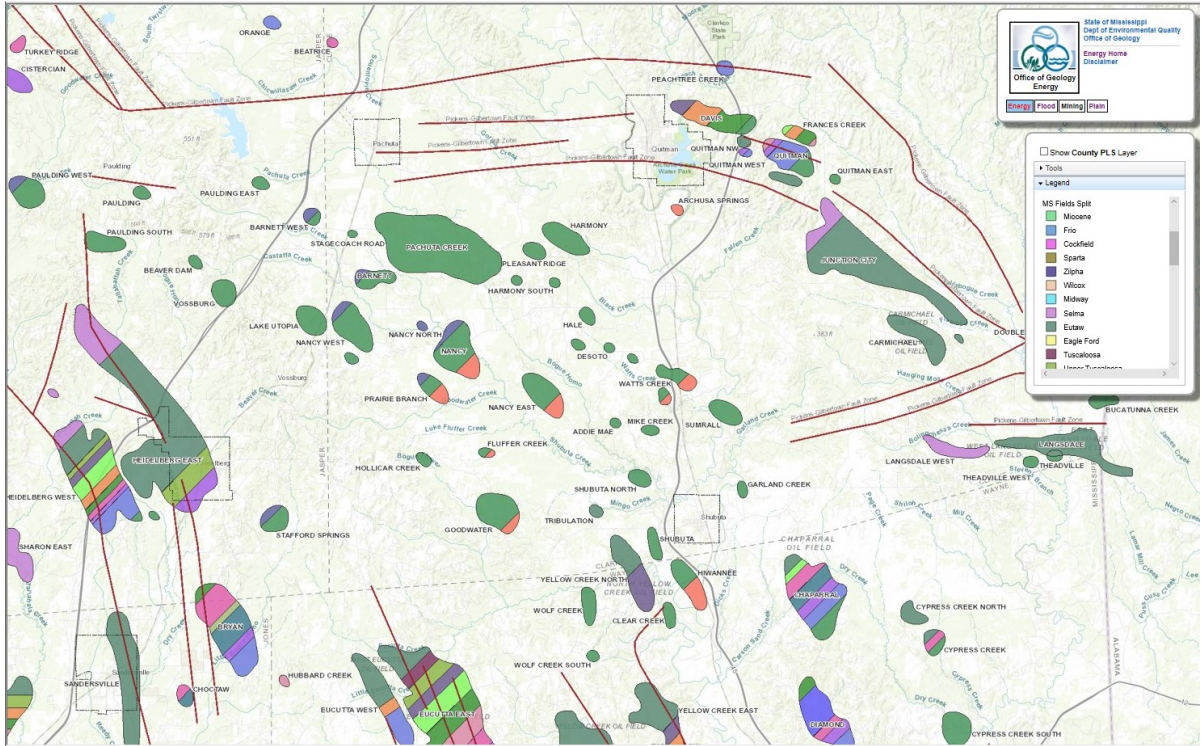


Figure 3

Environmental Geology Division: The Environmental Division, directed by Paul Parrish, has a Bore Hole map viewer, with records of over 10,000 water wells and test holes, that is widely used by drilling contractors. Figure 4 shows the concentration of bore hole records in the Jackson Metro area. The Bore Hole map viewer link is below.

<https://geology.deq.ms.gov/environmental/viewer/index.html>

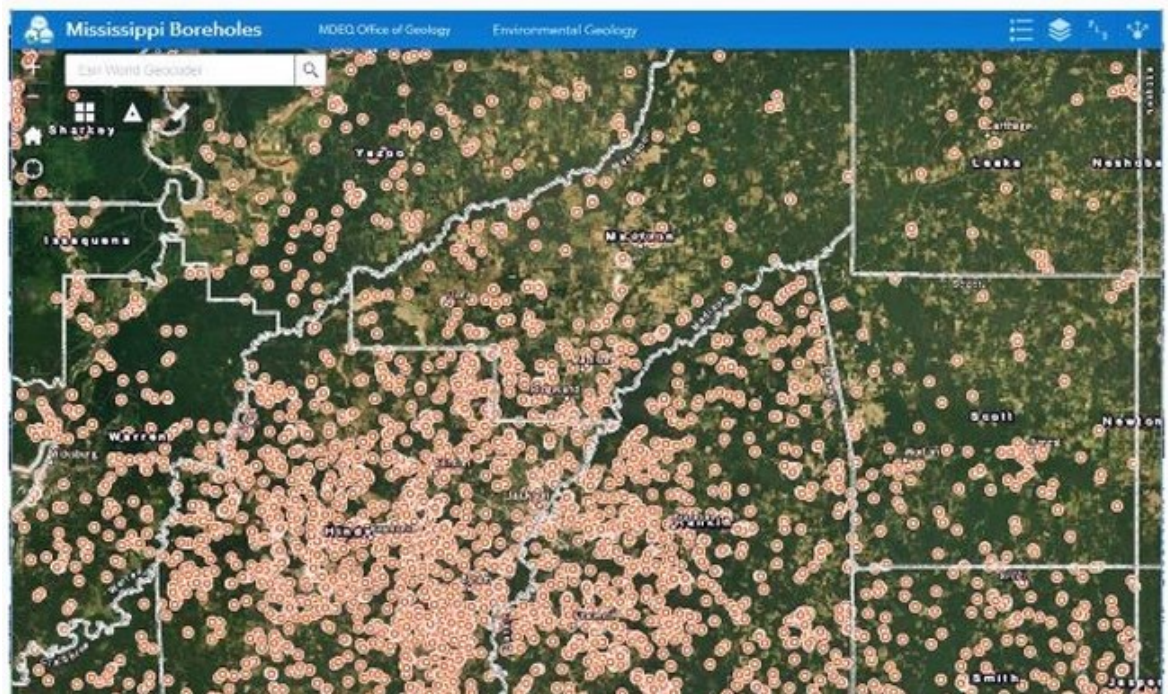


Figure 4



MONTHLY POST

Dr. David T. Dockery III RPG

Recently Andrew Newcomb has plugged our Bore Hole data into a 3D modeling program with color-coded top-of-formation datum planes. Figure 5 uses the software to take us underground in eastern Rankin County near the top of the Cockfield Formation. Looking west we see datum planes, in ascending order, with the Vicksburg Group top in green, the Forest Hill Formation in orange, the Yazoo Clay in blue, the Cockfield Formation in orange, and the Cook Mountain Formation in purple. The orange Cockfield top rises over the Jackson Dome like a cumulus cloud through a stratified cloud deck.

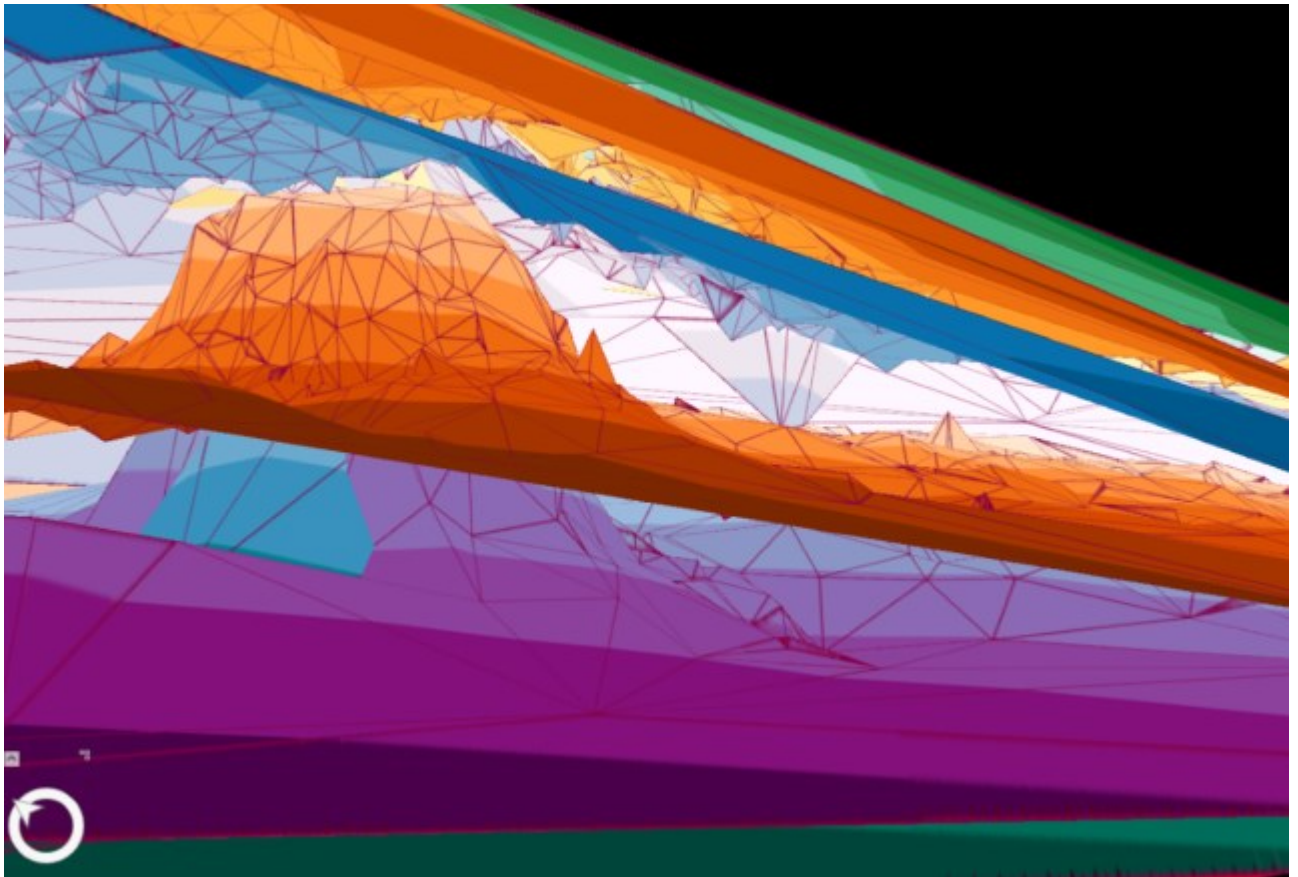


Figure 5



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Dr. David T. Dockery III RPG

Mining and Reclamation Division: The Mining and Reclamation Division, directed by James Matheny, supports a Mining map viewer, as shown in Figure 6 and with the link below. This map viewer also contains building footprints and LiDAR as provided by Barbara Yassin.

<http://geology.deq.ms.gov/mining/viewer/>

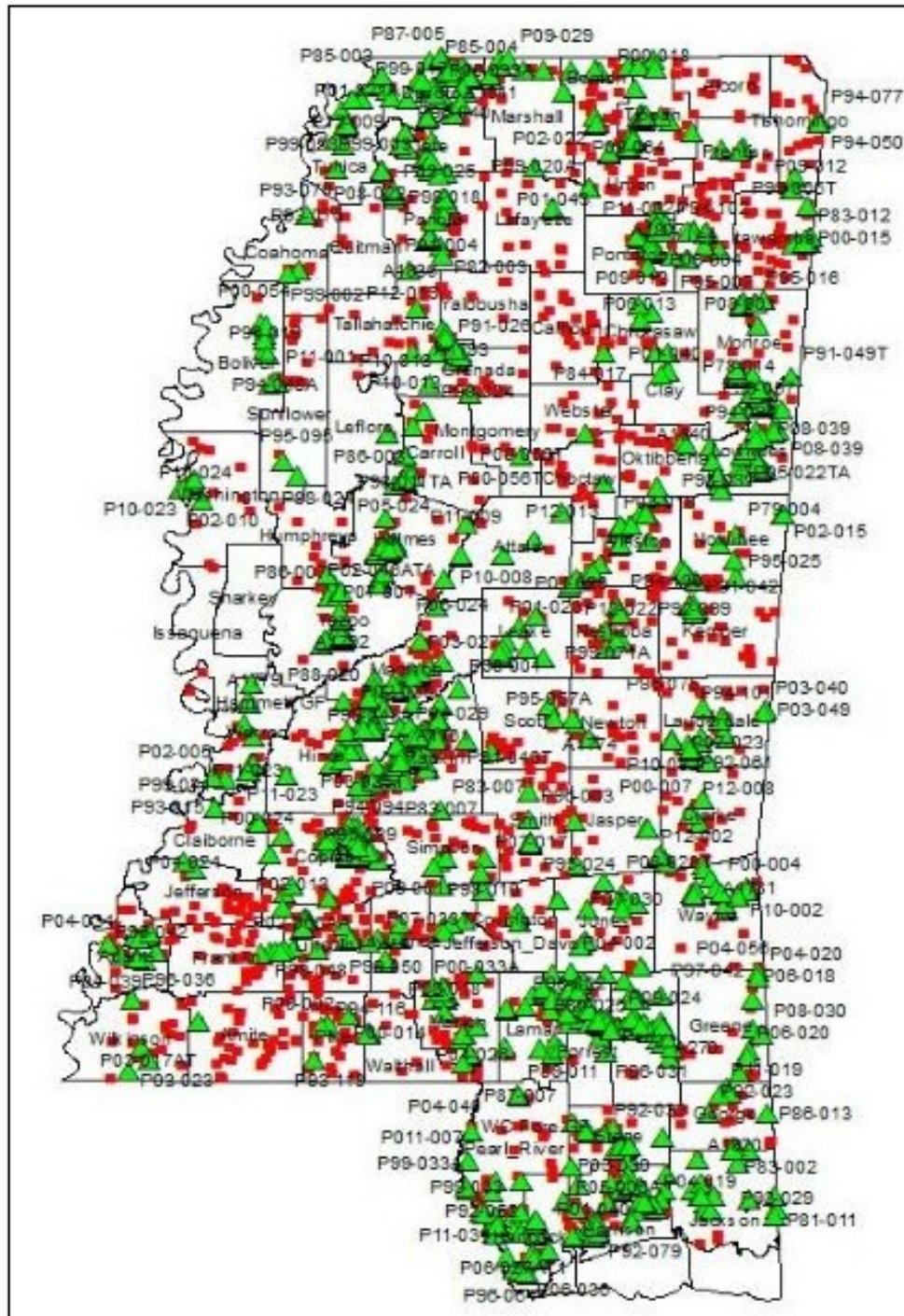


Figure 6



MONTHLY POST

Dr. David T. Dockery III RPG

The U.S. Department of Interior's Office of Surface Mining, Reclamation, and Enforcement (OSMRE) now has the Mississippi lignite mines on their nationwide mining database "GeoMine." Figure 7 shows the Red Hill mine in Choctaw County on the map viewer; the link is below.

<https://geomine.osmre.gov/>

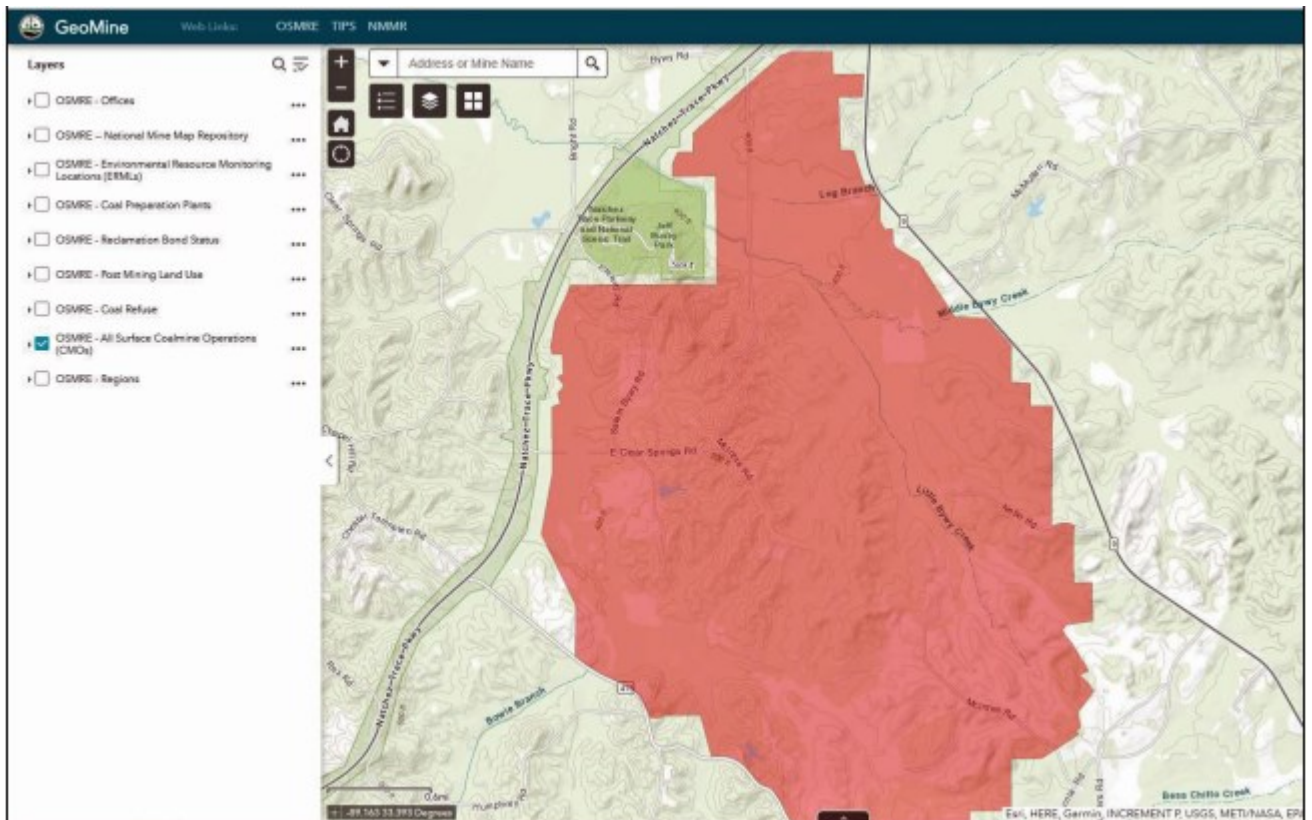


Figure 7

Surface Geology Division: The Surface Geology Division, directed by James Starnes, supports our publication and geologic maps on our Office of Geology website. Geological 7.5-minute quadrangle maps published in cooperation with the USGS STATEMAP program are shown in Figure 8 and are available on the USGS Mapview map viewer at the link below. Figure 9 is a portion of the USGS [Mapview](https://ngmdb.usgs.gov/mapview/) map viewer with the northern and central part of Mississippi and surrounding states. Each red-outlined rectangle on the state represents a 7.5-minute geologic quadrangle map published in the cooperative STATEMAP effort. There are a lot of these quadrangles in Mississippi as compared to the neighboring states.

<https://ngmdb.usgs.gov/mapview/>



MONTHLY POST

Dr. David T. Dockery III RPG

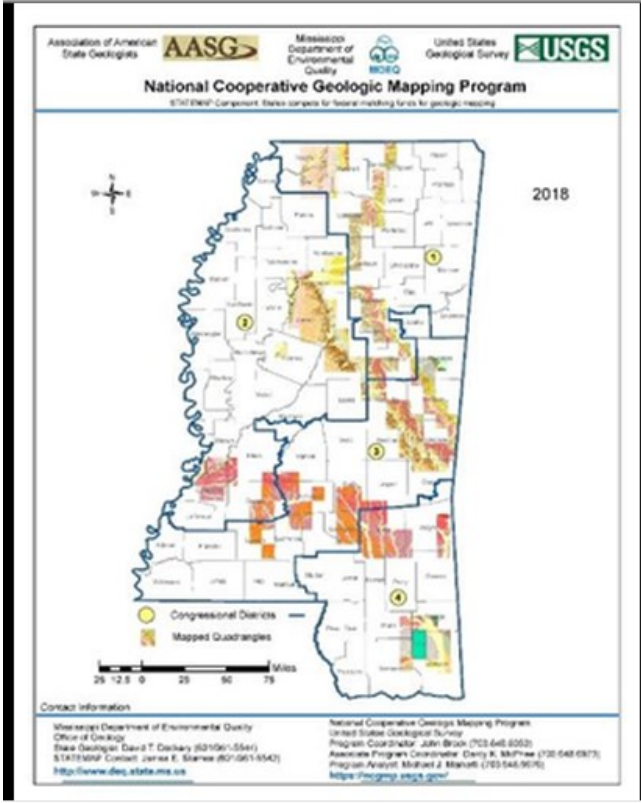


Figure 8

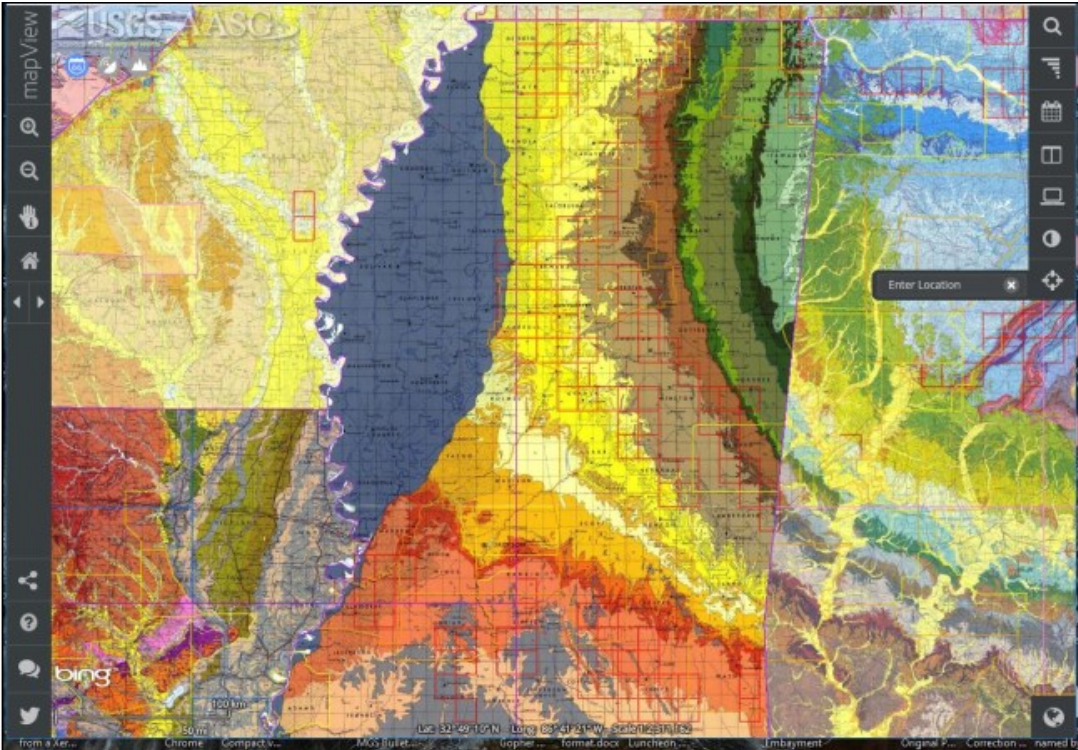


Figure 9



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](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/gallery/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://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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2019-2020

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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.)

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		2012-2013	Jim Files
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