

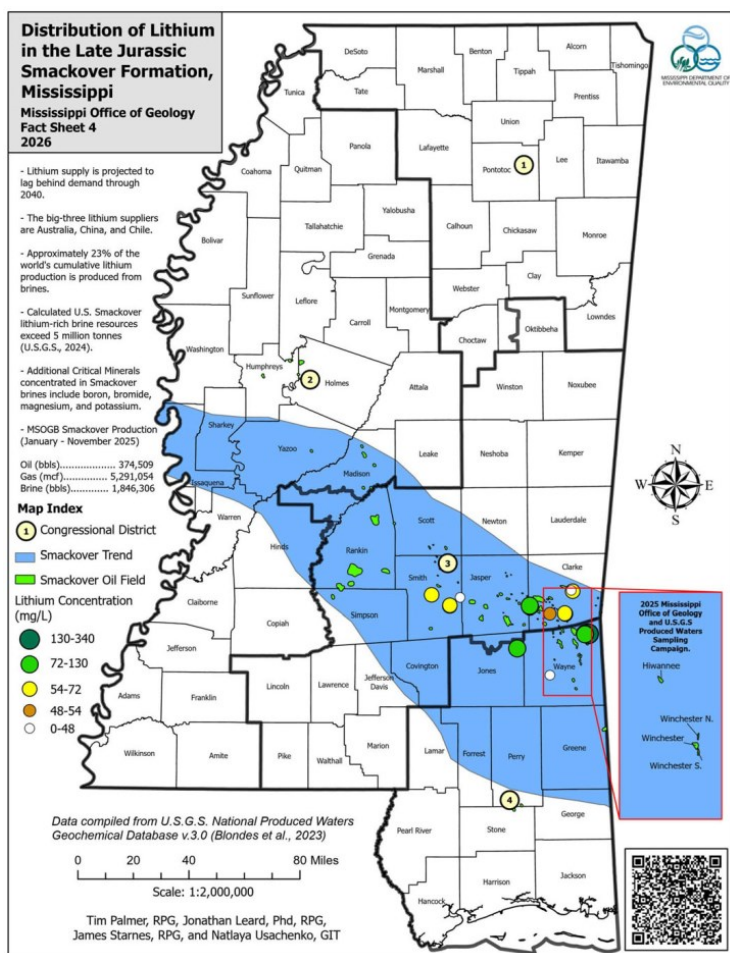
MISSISSIPPI GEOLOGICAL SOCIETY

eBULLETIN

Volume 74

No. 6

February 2026



FOSSIL WHALES IN MISSISSIPPI

Natalia Usachenko - MDEQ

2026 MISSISSIPPI NATURAL RESOURCES SUMMIT

Dr. David Dockery III, RPG



www.missgeo.com



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2025-2026 MGS MEETING SCHEDULE

When	What/Who	Where
September 10	Howard Duhom - Viking Engineering	River Hills - 11:30am
October 8	Ashley Little - IperionX	River Hills - 11:30am
November 12	SPE Sporting Clay Shoot	Providence Hill Farm
December 10	Randy Seright - Polymer Flooding - SPE	River Hills - 11:30am
January 14	Reza Fard - NOV Tuboscope	River Hills - 11:30am
February 11	Natalia Usachenko - Fossil Whales in Mississippi	River Hills – 11:30am
March 11		River Hills – 11:30am
April 8		River Hills - 11:30am
May 13		River Hills - 11:30am
TBD	Spring Fling	TBD

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TBD



PRESIDENT'S LETTER



Dear MGS Members,

I hope everyone has thawed out from the recent polar blast that swept across Mississippi. Our February speaker will be **Natalya Usachenko** from the Office of Geology.

On Thursday, January 29, 2026, I attended the mid-year GCAGS Board Meeting, where we appointed **Mike Erpenbeck** and **Bryan Guzman** as Treasurer and Vice President, respectively

I am pleased to announce that the Board has unanimously approved a new profit-sharing structure for the **GeoGulf Convention: 50% to the Society, 40% to the host society or societies, and 10% distributed evenly among member societies.**

While this is wonderful news, two actions are necessary to maintain the financial health of our Society:

1. Members are encouraged to pay their membership dues immediately, and
2. Our main money market account needs to be transferred into an equities account so that the Society can move from operating at a loss to generating potential gains.

GeoGulf 2026 Updates Early registration is now open, and early-bird rates expire **February 28**. The room block is currently at approximately **50%** of the required number.

Field Trips – Sunday, March 22 • Wax Lake Delta • Baton Rouge Faults • Salt Dome

Short Courses • Salt Tectonics • Seismic QI • PG Exam Prep and Ethics

Luncheons 75th Anniversary Luncheon – March 24 Presentations by: • Jeff Spencer – GCAGS History • James Willis – GCAGS Publications • Charles Sternbach – Society Synergy and Volunteerism

All Convention Luncheon – March 25 Speaker to be announced.

Technical Program • 82 oral presentations • 21 poster presentations • Planned expansion of the student poster session with an upcoming call for abstracts • A few oral presentation slots remain open, and members are encouraged to help fill them with invitees.



FEBRUARY SPEAKER



“Fossil Whales in Mississippi”

**Natalia Usachenko
MDEQ**

Wednesday, February 11, 2026

11:30 am Lunch/ 12:00pm Discussion

**The River Hills Club
Jackson, Mississippi**



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Vice-President Exploration

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CURRENT PRICES

Market Watch

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

[+ Watchlist](#)

☀ OPEN

Last Updated: Feb 11, 2026 at 9:55 a.m. EST - Delayed quote

\$ **65.62**

▲ 1.66 2.60%

SETTLEMENT PRICE 02/10/2026

\$63.96



Natural Gas Continuous Contract

[+ Watchlist](#)

☀ OPEN

Last Updated: Feb 11, 2026 at 9:56 a.m. EST - Delayed quote

\$ **3.128**

▲ 0.013 0.42%

SETTLEMENT PRICE 02/10/2026

\$3.115





MISSISSIPPI OFFICE OF GEOLOGY

New Publications

The Mississippi Office of Geology is pleased to announce the publication of the following maps for the month of December

[OF-356 Geologic Map of the Bovina Quadrangle Hinds and Warren Counties, Mississippi](#)

[Native Lithic Materials of Mississippi](#)

[OF-349 Geologic Map of the Sharon Southeast Quadrangle Rankin, Madison, and Scott Counties, Mississippi](#)

[OF-348 Geologic Map of the Shoccoe Quadrangle Madison and Rankin Counties, Mississippi](#)

[OF-347 Geologic Map of the Canton Quadrangle Madison County, Mississippi](#)





MONTHLY POST

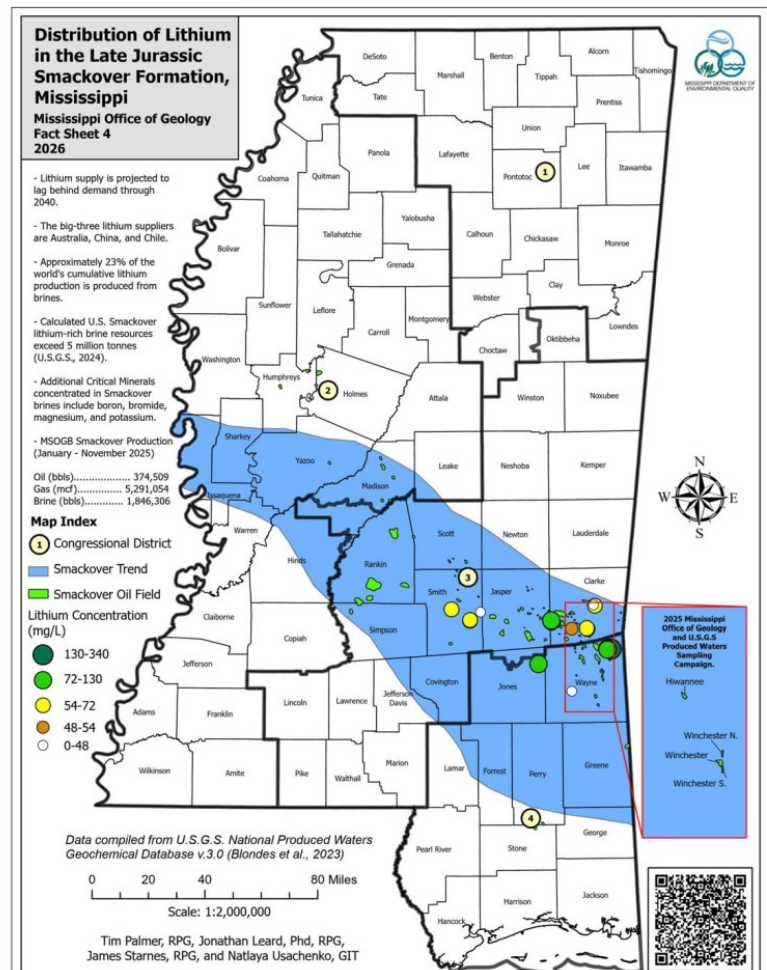
Dr. David Dockery III RPG

2026 MISSISSIPPI NATURAL RESOURCES SUMMIT

David T. Dockery III, RPG

The Mississippi Natural Resources Summit included a select group with interests and expertise in lithium resources in Smackover production water. The meeting, sponsored by the Mississippi Development Authority and led by Joe Hagerman, was at the Wesin Hotel from 9:00 am until noon lunch. The agenda (Figure 1 at left) was obsolete by meeting time. As Hagerman explained in an email the day before the meeting, the meeting would be discussion-based and composed of two sessions. Session 1 was to help the state understand industry needs, in terms of science and technology, that Mississippi's scientists, geologists, and academic institutions can deliver. Tim Palmer and I spoke on those issues. Our Fact Sheet on the "Distribution of Lithium in the Late Jurassic Smackover Formation, Mississippi" was presented at the meeting (Figure 1 at right).

Figure 1





MONTHLY POST

Dr. David Dockery III RPG

The second session focused on industry needs, which would start with a discussion of what Arkansas accomplished. The main speaker on that subject was Steve Walkinshaw, owner of Vision Exploration in Mississippi. Steve was not listed as a speaker on the agenda as shown above, but he and Tim Palmer were the only subject experts in the room. In Figure 2 at left, Tim Palmer is speaking, and at right, seated at the table, from left to right, are Tim Palmer, Jonathan Leard, Steve Walkinshaw, and Michael Bograd (former Office of Geology Director). Another agenda change was that Bill Cork spoke on behalf of the governor at the meeting.

Figure 2



In Figure 3 at left, Joe Hagerman addresses the crowd, and at right, Bill Cork is speaking.

Figure 3





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Figure 4 shows the MDEQ Office of Geology display at the meeting in two views, top and bottom. The *Geologic Map of Mississippi* is displayed at top left and the *Economic Minerals Map of Mississippi* is at top right. The table display, as shown in different views at top and bottom, included the state fossil (a fossil whale skull cast of the species *Zygorhiza kochii*), state stone (petrified wood), a collection box of Mississippi's mineral resources, books old and new on the geology of Mississippi, and the drill bit that discovered Tinsley Oil Field.





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In Figure 5, I am standing with David Miller, an oil and gas landman. I was his resident assistant in Duggar Hall his freshman year at Mississippi State University. I reminded him of some of the things that happened on our hall, and he remembered them. At right in the figure is a picture of the meeting taken from a back corner.





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The following, produced by Tim Palmer, Jonathan Leard, and James Starnes was sent out by Joe Hagerman as a Summit “read ahead.”

Geological Characterization of The Smackover Formation: The Mississippi subsurface is characterized by the **Smackover Formation**, a Jurassic-age carbonate sequence extending across the Gulf Coast Basin. This formation hosts high-salinity, deep-basinal brines with anomalous concentrations of lithium (Li), boron (B), bromide (Br), magnesium (Mg), and potassium (K). Geochemical analysis indicates that, and concentrations in these reservoirs significantly exceed current economic thresholds for industrial extraction. Unlike traditional hard rock spodumene mining or massive solar evaporation ponds, these brines represent a “liquid ore” body that can be accessed via existing wellbore infrastructure.

Resource Assessment and Historical Data Analysis: An analysis of Mississippi’s petroleum production data (1975–2015) reveals a massive, unrecovered mineral resource. During standard oil and gas operations, vast quantities of formation water were produced as a byproduct.

Estimated Inventory: Approximately **12.5 million metric tons (Mt)** of lithium were brought to the surface and subsequently reinjected into disposal wells over a 40-year period.

Asset Repurposing: These historical saltwater disposal (SWD) systems and depleted reservoirs now serve as the primary targets for mineral recovery, turning a legacy liability into a strategic feedstock.

Engineering and Extraction Technology - Direct Lithium Extraction (DLE): The feasibility of unlocking these resources is driven by advancements in **Direct Lithium Extraction (DLE)** technologies. From a civil and chemical engineering perspective, DLE offers several advantages over conventional methods:

Reduced Footprint: Eliminates the need for vast evaporation ponds, significantly reducing land use and environmental impact.

Accelerated Processing: Shortens the production cycle from months (evaporation) to hours (selective ion exchange or adsorption).

Reinjection Integrity: The process allows for the spent brine to be reinjected into the original formation, maintaining reservoir pressure and minimizing subsidence risks.

Multi-Source Potentials of Lignite and Heavy Minerals: Beyond basinal brines, Mississippi’s surficial and near-surface geology offers secondary pathways for critical mineral development:

Lignite Deposits: Active research is evaluating Mississippi’s extensive lignite coal beds as potential feedstocks for lithium-ion battery components.

Clays and Heavy Minerals: Mapping by the **Office of Geology** has identified mineralized clay deposits that could supplement the domestic supply chain for battery anodes and cathodes.

This Effort Is a National Security Imperative: Securing a domestic supply of lithium is no longer merely an economic goal; it is a national security requirement. Mississippi’s unique combination of high-grade geological resources and mature industrial infrastructure positions the state to be a primary contributor to U.S. energy independence.



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 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:

mcaton13@yahoo.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/owersofl0/>

<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://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/gpnmf/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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2025-2026

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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 \$ _____

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