

MISSISSIPPI GEOLOGICAL SOCIETY

eBULLETIN

Volume 63

No. 7

March 2015



MARCH SPEAKER: DR. EZAT HEYDARI
SEDIMENTARY ROCKS OF GALE CRATER, MARS

MONTHLY ARTICLE: DR. DAVID T. DOCKERY
CAVING IN MISSISSIPPI



www.missgeo.com



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PRESIDENT'S LETTER

Ezat Heydari



Greetings:

February turned out to be a fantastic month. It began with an advisory board meeting of the Mississippi Mineral Resources Institute (MMRI) on the 12th, organized by its esteemed director Dr. Gregg Easson. The meeting was held in Jackson which turned out to be a blessing considering that MGS also had its monthly meeting that day.

As a recent addition to this board I attended the MMRI meeting; and what a pleasure it was. The diversity of board members showed a true desire from Dr. Easson for an unbiased evaluation of his organization. In addition, listening to presentations from MMRI personnel was truly pleasant. Topics were diverse and deliveries were nearly flawless. It included marine research activities (Carol Lutken), seafloor mapping (Marco D'Emidio), marine technical activities (Steven Tidwell), terrestrial research activities (Charles Swann), and geospatial information science and technology activities (Allison Woosley). The depth and capabilities of this Mississippi organization was something to be proud of. MGS wishes them the best and looks forward to see their ride to excellence.

And that was not all. On the same day, MGS had its own monthly meeting. The speaker was Dr. David Dockery from the Mississippi Office of Geology, another organization with remarkable input into the geology of the State. Dr. Dockery's talk was about the structural geology of the state of Mississippi and its impact on oil and gas exploration. The presentation was a delight. Two un-related issues came up. The first was the news that David's book on the Geology of Mississippi will be published soon. Congratulations to the authors for their hard work.

The other issue was the presence of a rift in northern Mississippi. This issue is very intriguing to me and worth future research. Before I could get myself together to do some research on this topic, I received an e-mail from Terry Bryant, one of our members from Memphis. Like me, the rift also attracted Terry's attention, but he had done some work on it. We look forward to additional data or research on this topic.

The events of February clearly showed the strong geological potential of the state, excellence of its geological institutions, and dedications of its geological staff. Add to this the idea-rich, out of the box thinkers of personnel of state's oil and gas community, then we can believe in our truly winning geological community.

I look forward to see you on Thursday.

Regards,

Ezat

2014-2015 MGS MEETING SCHEDULE

When	What/Who	Where
September 11, 2014	Fall BBQ	Jackson Yacht Club-5:30pm
October 9, 2014	John Allen Tuscaloosa Marine Shale	River Hills – 11:30am
November 13, 2014	Carl Fiduk Tectonics and Depositional Episodes of the GOM	River Hills – 11:30am
December 5, 2014	MAPL Christmas Party and Dance	Duling Hall - 7pm
January 8, 2015	Frank Vincent Shallow Oil “Re-Discovery” at Washington Field	River Hills – 11:30am
February 12, 2015	David T. Dockery III, RPG Structural Geology of MS and Oil and Gas Fields	River Hills – 11:30am
March 12, 2015	Dr. Ezat Heydari Sedimentary Rocks of Gale Crater, Mars	River Hills – 11:30am
April 9, 2015	Boland Scholarship Awards	River Hills – 11:30am
May 14, 2015	Spring Fling	Jackson Yacht Club– 5:30pm



OFFICERS MEETINGS

September 4, 2014
October 7, 2014
November 11, 2014
January 6, 2015
February 10, 2015
March 6, 2015
April 7, 2015
May 12, 2015



MARCH SPEAKER

Dr. Ezat Heydari



Dr. Ezat Heydari completed his undergraduate education in Geology at the University of Tehran, Iran in 1974. He received a M.S. degree in Geology from the Penn State University in 1981. His thesis was on structural geology of the Resting Spring Range around the town of Shoshone in southern California. Heydari completed his Ph.D. degree at Louisiana State University in 1990. His dissertation revolved around burial diagenesis of the Smackover Formation in southeastern Mississippi.

He has worked as a research professor at LSU and as a researcher at the Mississippi Office of Geology. He is currently a Professor of Geoscience at Jackson State University.

He is specialized in sedimentology, petrography, low temperature geochemistry, and environmental geology. One of his active research projects include the study of Jurassic strata of the U.S. Gulf Coast in general and the Smackover Formation in particular. He studies reservoir quality, diagenesis, and depositional environments of these strata. Heydari also investigates Permian and Triassic strata in order to determine the cause of this devastating mass extinction about 251 million years ago. He has the honor of being a science team member of the NASA's Mars Science Laboratory (MSL) mission to the planet Mars.

He is the author of about 50 published research papers and over 60 conference presentations. He was Associated Editor of the *Journal of Sedimentary Research* (1997 – 2004), Guest Co-Editor of Special volume of *Tectonophysics* (2008), Guest Co-Editor of a Special Issue in *Global and Planetary Change* (2010), and the reviewer of several texts books including the first edition of the *Environmental Geology Today* (2013), the third edition of *Blue Planet* (2011), and the eight edition of *Physical Science* (2009).

Sedimentary Rocks of Gale Crater, Mars

Abstract. Since its land in Gale Crater, Mars, in August of 2012, the Curiosity Rover has been moving toward its destination, Mt. Sharp, a dome-shaped feature consisting of 5 km of sedimentary rocks at the central part of the Crater. The Rover has so far traveled about 9 km over its 900 Sols journey. The Rover reached the foothills of Mt. Sharp in Sept of 2014.

On its path from the Bradbury landing site to its present location at Pahrump Hills, Curiosity examined, analyzed, and sampled a variety of rocks and soils (regoliths) in the search for potential habitable environments on Mars. Targets were imaged by a variety cameras including MAHLI, MastCam, and MARDI, and were analyzed by an incredibly powerful analytical payload including ChemMin, APXS, ChemCam, and SAM.

The presentation will provide a summary of Curiosity's findings on its journey. The talk will concentrate primarily on rock targets investigated by the Rover. This includes rock types, their textural variations, compositional differences, and chemical anomalies. Potential environmental interpretations will also be presented.

You Are Invited to a
Shreveport Geological Society
Continuing Education Event

"Salt Tectonics of Interior Salt Basins"

by: Mark Rowan

When: April 2, 2015

Where: Petroleum Club Shreveport

15th Floor 8:30am to 5:00pm

\$90.00 per person, includes materials and meal

Limited to first 70 Paid Reservations by March 27th

RSVP: Miles McDowell

401 Edwards St., Ste 1601 Shreveport, LA 71101

318-227-8668 milesm@sklarexploration.com

Make checks payable to Shreveport Geological Society or go to www.SGS1.org



AAPG

Advancing the World of Petroleum Geosciences™

New Training, New Solutions for Tough Times

Reservoir Characterization and Production Properties of Source Rock Reservoirs

23-24 March 2015 | Tulsa



This is an introductory course in shale reservoir evaluation. It includes reservoir geology in terms of depositional facies, mineralogy, fractures and rock type delineation. Organic geochemistry of shale reservoirs is presented in terms of organic content, Kerogen types, maturity, hydrocarbon generation and secondary porosity development.

[Register Today](#)

Description and Interpretation of Shale Facies

25-26 March 2015 | Tulsa



This course is an introduction to the heterogeneous nature of shales and mudstones and provides guidance on how to work effectively with these complex lithologies. Through a combination of lectures that explain fundamental concepts and hands-on exercises that utilize shale slabs and test specimens, theory and practice are brought together for a deeper learning experience.

[Register Today](#)

**Coming 19 March: New e-symposium
by Stephen Cossey on the geology of Mexico**



SEMINAR

CARBONATES APPLIED TO HYDROCARBON EXPLORATION AND EXPLOITATION

March 23-27, 2015

WHERE: Hilton University of Houston Hotel, Houston, Texas.

COST: \$2795 (Unchanged from 2014)

INSTRUCTOR: JEFFREY J. DRAVIS (Consultant - Dravis Interests, Inc., Houston)

FOR: Geologists, Geophysicists, Reservoir Engineers, Log Analysts and Managers.

GOAL: After this seminar, each delegate will be able to describe and classify typical carbonate rocks, interpret facies relationships, delineate stratigraphic sequences and correlate facies within them, evaluate reservoir quality in limestones and dolomites, and better understand subsurface carbonate plays and reservoirs. This is an excellent refresher course.

This five-day, in-house seminar introduces participants to established principles of carbonate sedimentology applied to hydrocarbon exploration and development geology. Using a highly acclaimed, hands-on and rock-based approach, each participant learns to describe typical carbonate rocks, delineate facies and sequences, evaluate reservoir quality, relate carbonates to log and seismic expression, better predict play relationships in the subsurface, and construct a time-stratigraphic facies framework essential for both accurate regional correlation of carbonate sequences and zonation of carbonate reservoirs. Lectures are reinforced with exercises and problems keyed to 10 identical sample rock sets, each containing 56 representative samples from around the world. A core problem with logs, based on a real exploration target, further reinforces principles presented in this seminar. A 750+ page notebook, with color copies of all power point slides shown in lectures, accompanies the course, as well as a reference book with pictures of samples used in various exercises. This seminar has been presented to industry over 100 times!

INSTRUCTOR'S QUALIFICATIONS

Jeffrey J. Dravis (Ph D) is a technical consultant and instructor in carbonate geology with more than 35 years of worldwide industry and field experience in all aspects of applied modern and ancient carbonate geology. This experience includes 8 years with Exxon Production Research Company where he headed up Exxon's worldwide training efforts in carbonates. Since 1987, he has taught over 200 basic and advanced carbonate seminars.

Past consulting projects (>130 in number) include reservoir studies in Texas (Paleozoic & Mesozoic), Devonian of W. Canada and Russia, Jurassic and Cretaceous of Gulf of Mexico, and Cretaceous of Tunisia; and exploration studies in the Jurassic and Cretaceous of the U.S. Gulf Coast, including Jurassic Smackover/Haynesville and Cretaceous James Lime, Edwards, Glen Rose, Austin Chalk/Buda/Eagleford Limestones, Devonian/Mississippian of W. Canada, Permian of west Texas and Thailand, Pennsylvanian of Four Corners region, and Mesozoic of western and northern Africa. See web site for details.



MGS MONTHLY COLUMN

David T. Dockery III, RPG

CAVING IN MISSISSIPPI

David T. Dockery III, Office of Geology

Mississippi is not known for its caves but does have some fifty small to modest-size caves. Even so, the state did have a caving club in the 1970s and 1980s named the Southern Mississippi Grotto. This club was founded on March 22, 1973, at Hattiesburg, Mississippi, and was an affiliated member of the National Speleological Society. The club published its own newsletter: *MUD – Mississippi Underground Dispatch*. *MUD* had a publication run through ten volumes from October 1974 to the fall of 1983. The Southern Mississippi Grotto had 30 members in July of 1975, included the following seven members who worked for the Mississippi Geological Survey: Michael Bograd, Sarah Childress, David Dockery (summer help), Jackson Harper, John Marble, James May, and David Williamson. Club members made caving trips in surrounding states as well as in Mississippi, and some explored caves worldwide, from rappelling down a thousand-foot-deep sinkhole in Mexico (and climbing back out) to exploring caves in Europe. The membership held high cave ethics, always picking up litter, never disturbing animals or defacing cave walls or formations, and never giving away the locations of caves to the general public.

A typical cave exploration trip was made in July of 1975 to Muddy Ridge Cave and Spider Lead Cave in northeastern Mississippi. This event began with a road trip in a “hippy” van and included an overnight stay in a shanty camp site (named Camp Benton) (Figure 1).



Figure 1. Caving road trip in van (left) and shanty camp site at “Camp Benton.” Pictures were taken in July of 1975.



MGS MONTHLY COLUMN

David T. Dockery III, RPG

The first day of exploration was the mapping of Muddy Ridge Cave in a location called “The Land of Caves,” a series of caves developed in the Early Paleocene Chalybeate Limestone of the Clayton Formation. In this area, a person walking through a field of kudzu could suddenly drop out of sight in a 15 or 20-foot-deep sinkhole. Caves here formed in stages as follows: (1) development of solution caverns in limestone, (2) removal of overburden and truncation of limestone by erosion, (3) lowering of the water table and collapse of the cavern roof to form sinkholes, (4) drainage of the sinkhole along the basal contact of the limestone to form passageways, (5) collapse of rock layers in the cave roof and vertical enlargement of passages. Figure 2 shows a sinkhole upslope of Muddy Ridge Cave that drains into the cave’s passageways and another sinkhole further upslope that is full of water and is not yet connected to the cave system.

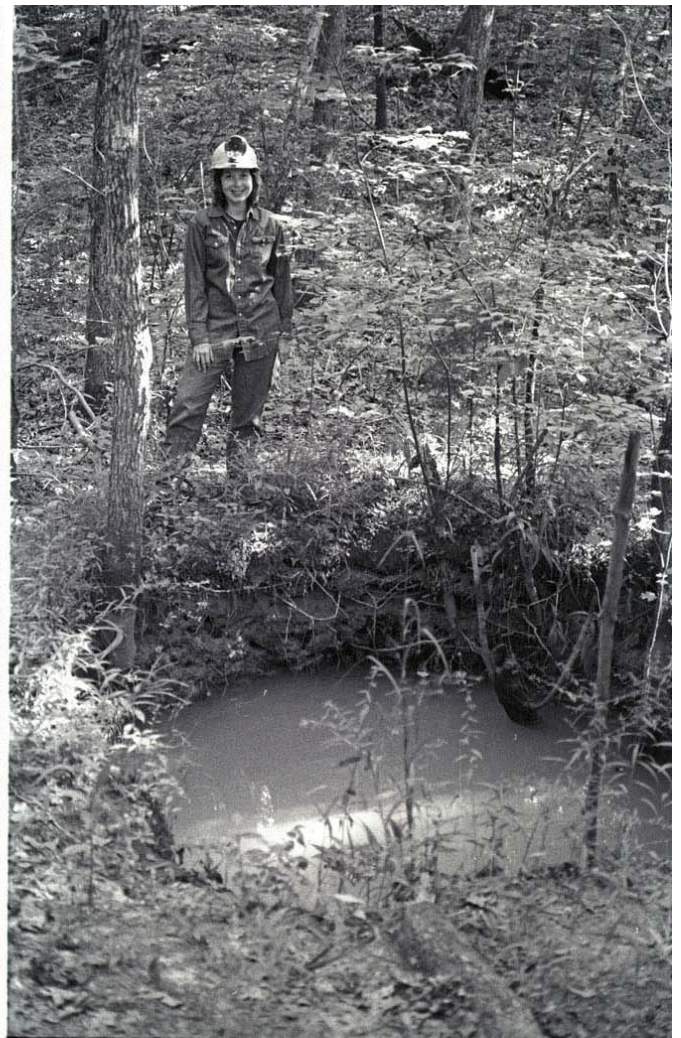


Figure 2. Wil Howie in a dry sinkhole (left) and Suzie Long at a water-filled sinkhole (right) above Muddy Ridge Cave. Pictures were taken in July of 1975.



MGS MONTHLY COLUMN

David T. Dockery III, RPG

Figure 3 illustrates the mouth of Muddy Ridge Cave and David Williamson as he maps the cave's main passage with a tape and compass.

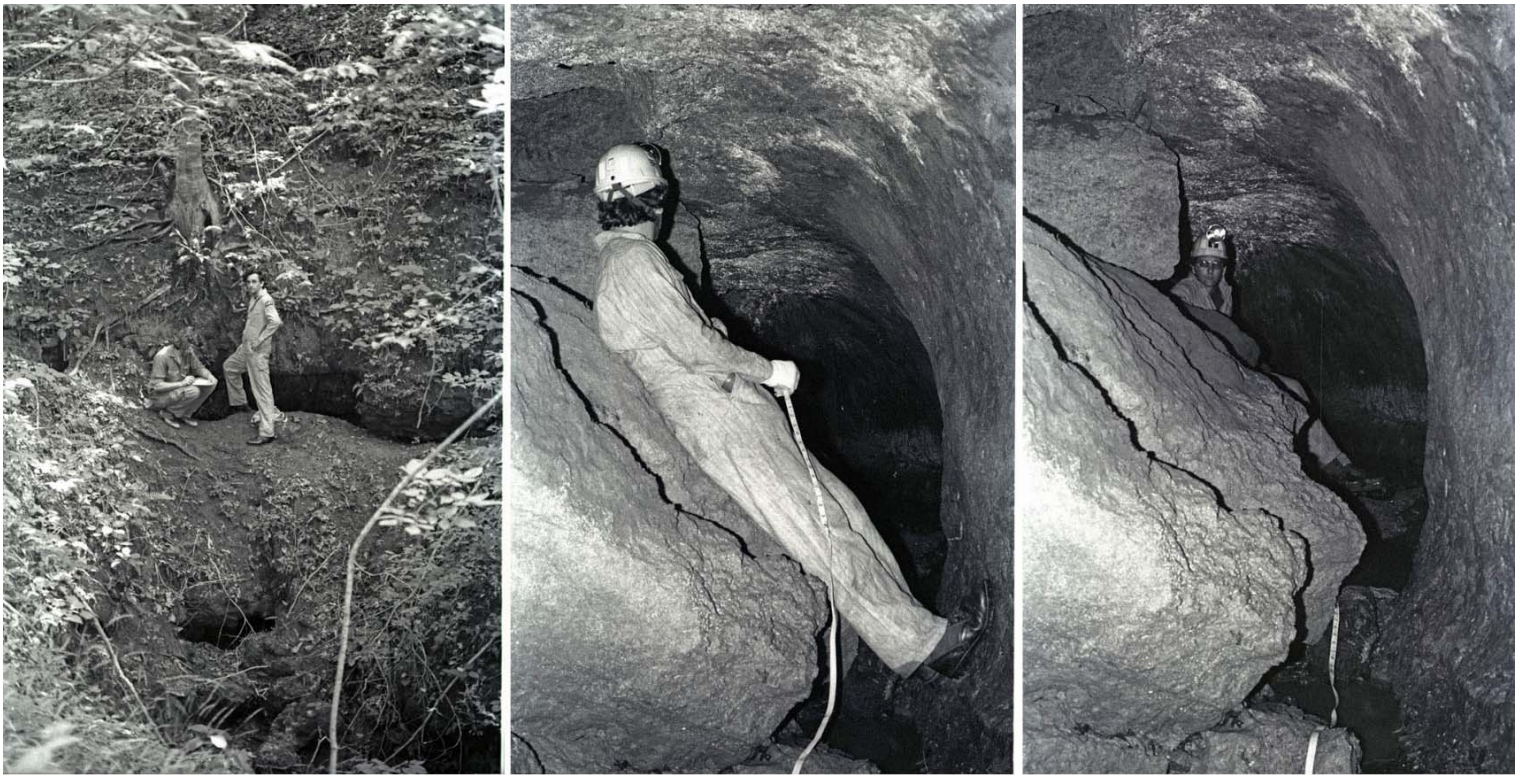


Figure 3. Wil Howie (taking notes) and David Williamson at the entrance of Muddy Ridge Cave (left) and David Williamson surveying the cave passages with a tape and compass (middle and right). Pictures were taken in July of 1975.



MGS MONTHLY COLUMN

David T. Dockery III, RPG

Figure 4 shows Michael Bograd and Wil Howie in different parts of the cave.

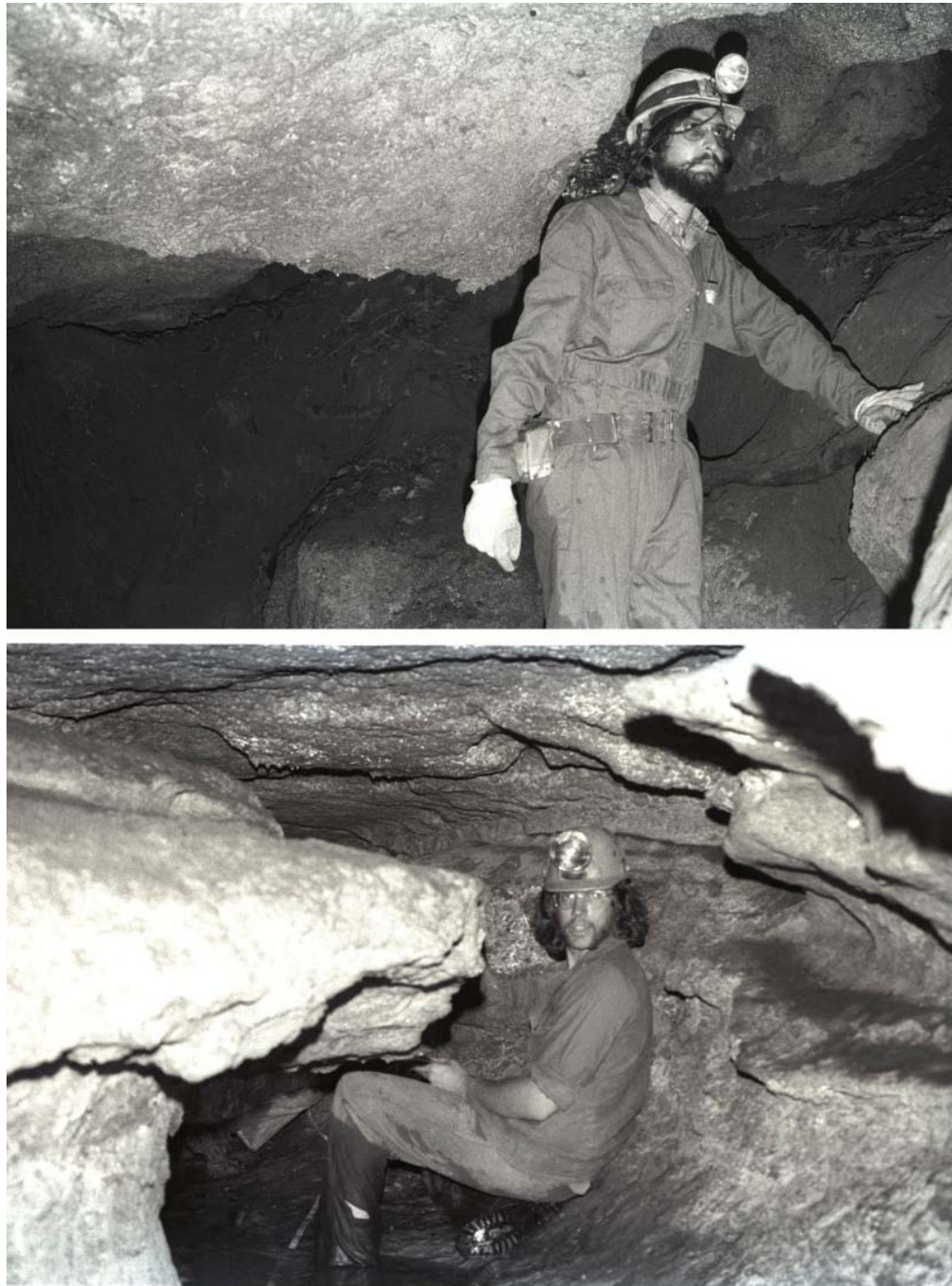


Figure 4. Michael Bograd (top) and Wil Howie (bottom) in Muddy Ridge Cave. Pictures were taken in July of 1975.



MGS MONTHLY COLUMN

David T. Dockery III, RPG

Living in the darkness of the cave were salamanders and cave crickets (Figure 5).



Figure 5. Cave salamanders (top and middle) and cave crickets (bottom) in Muddy Ridge Cave. Pictures were taken in July of 1975.



MGS MONTHLY COLUMN

David T. Dockery III, RPG

After breaking Camp Benton on the second day, we explored Spider Lead Cave. Spider Lead Cave is different from most caves in that it was developed in sandstone and not limestone. The entrance sloped down about ten feet to a small room of two to three feet in height. Two passages lead from this room. One was an eighty-foot-long passage straight ahead, measuring three feet in height and 5 feet wide. At the end of eighty feet, the passage continued but was constricted so that we could not go further. The second passage was located to the right with a tight crawl of about twenty feet through a horizontal slit that tapered to an edge on each side and was just large enough in the middle for us to wiggle through with our hard hats off. Beyond the constriction was a room of five to ten feet in width and five to six feet in height.

Figure 6 shows: (1) the entrance to Spider Lead Cave, (2) the first room with passages leading straight ahead and to the right, and (3) the passageway to the right beyond the “slit constriction.”

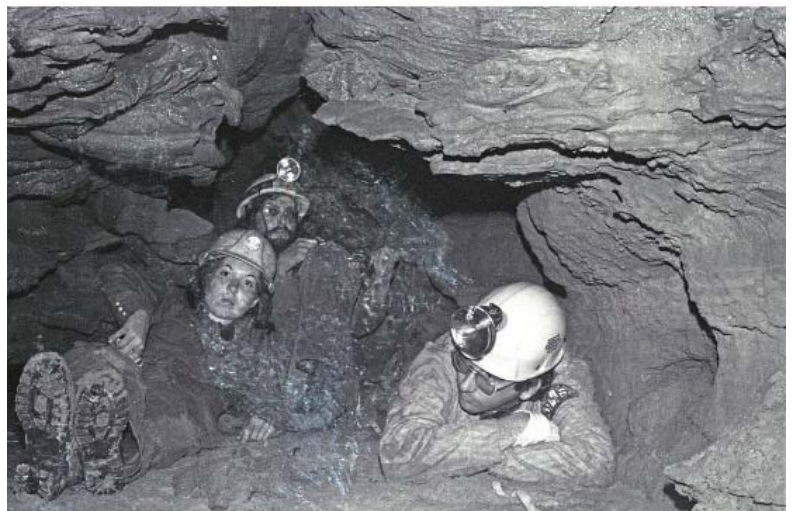


Figure 6. Spider Lead Cave entrance (top), first room (middle) and room after constriction in the right passage (bottom). The ghostly faces in the bottom picture are from damage to the negative when developed. Pictures were taken in July of 1975.



MGS MONTHLY COLUMN

David T. Dockery III, RPG

On the way out of the cave, I had to pass the “slit constriction” again. Looking at it in the light of my hardhat lantern, I knew I could never fit through that space, and if I couldn’t fit through it, everyone behind me was trapped. There was no one on the outside who would know our predicament. I had to deny my eyes and wiggle through the constriction just as I had done when entering the cave. Figure 7 is a group shot (with the camera set on a timer) taken after the exploration of Spider Lead Cave. I don’t have an update on everyone, but of those listed in the caption: (1) David Williamson is now a geologic consultant; (2) I’m still with the Geological Survey (i.e. Office of Geology), (3) Wil Howie, who called his vehicle “Church” so that he could tell his mother he was in church on Sunday, is now a minister in Oxford, Mississippi, and (4) Michael Bograd is the MOG director and State Geologist and is married to Linda, who he met at a Southern Mississippi Grotto meeting.



Figure 7. Southern Mississippi Grotto members after exploring Spider Lead Cave. From left to right are David Williamson, David Dockery, Suzie Long, Wil Howie, and Michael Bograd. Picture was taken in July of 1975.



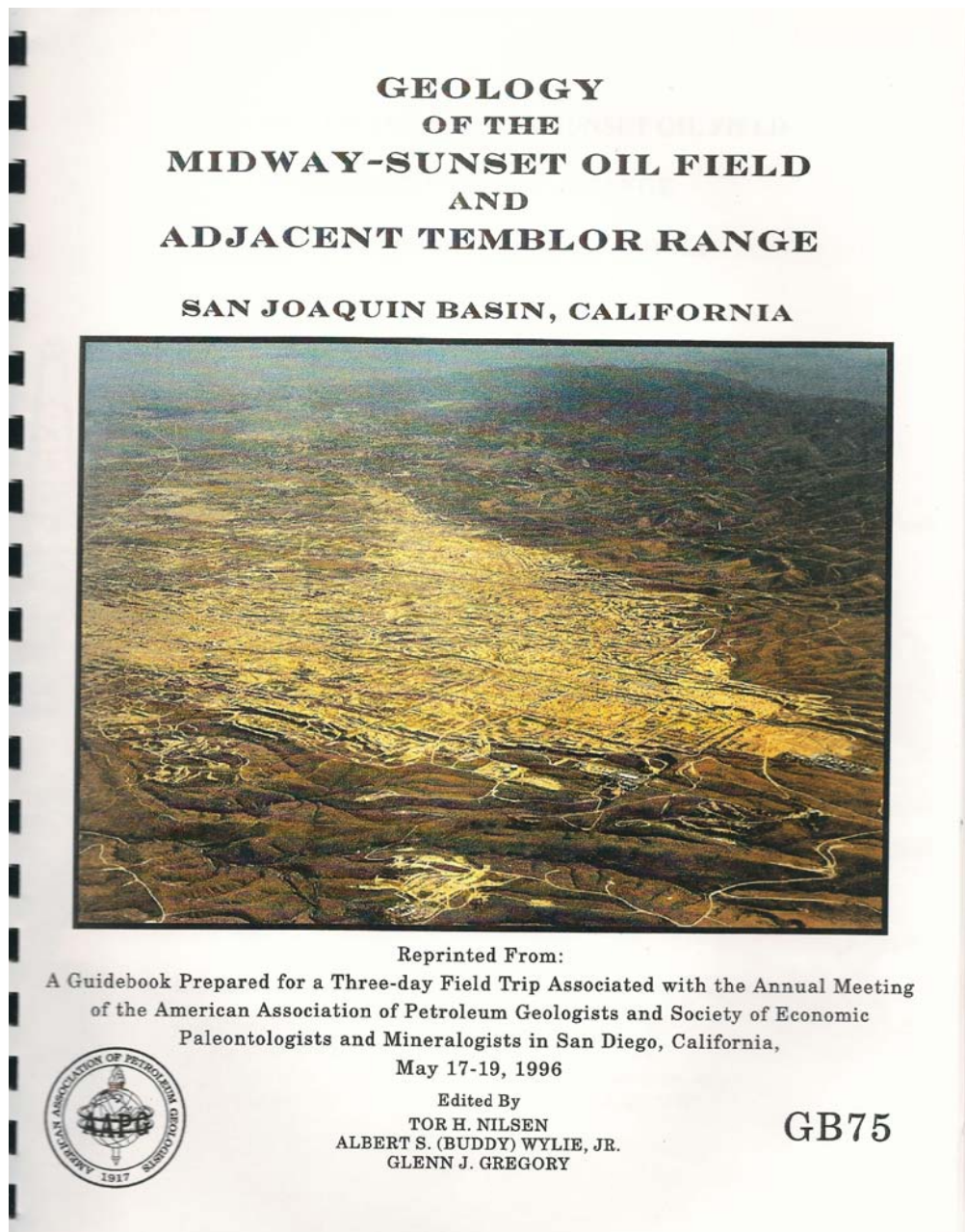
GEOLOGY POST

Robert Gaston

MGS Members,

I am in the process of going through things from the past. There was a time when I worked a good bit of California Geology. This is an excellent guidebook for someone who is interested in California geology or someone who wants to make a trip out there and do a field trip on their own. If you know of anyone in our MGS group who might be interested, please let me know and I will give this to them. It is full of geologic maps, cross sections, thin sections and reports along with the field trip information. Thanks.

Contact the MGS Editor if interested





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



IN MEMORIAM

Gene Brumbaugh 1924-2015

A Celebration of Life Service
In Memory of



Gene Brumbaugh
October 6, 1924 - January 23, 2015

February 2, 2015
10:30 a.m.
Azalea Trace Auditorium



IN MEMORIAM

Gene Burumbaugh 1924-2015

Gene grew up in Altoona, PA and attended Juniata College in Huntingdon, PA graduating with degrees in Physics and Mathematics. He met fellow classmate Miriam in a physics lab where her father was the professor. College was interrupted when he enlisted in the Navy during World War II as an Aviation Cadet in Pensacola. He returned to college and served in the student senate and as captain of the basketball team. He also pursued graduate work at the University of Colorado.

Gene joined Shell Oil Company in California in 1946 working on seismic crews in California and Montana. He supervised crew operations and interpretation in Wyoming, Utah, Colorado, Oklahoma, and Arkansas. Beginning in 1968, he worked in New Orleans focusing on Gulf of Mexico onshore and offshore and Atlantic offshore. After retiring from Shell, Gene was a consulting geophysicist for 30 years providing services ranging from data acquisition and processing to structural and stratigraphic interpretations using 3D computer software. He also served as an expert witness in legal proceedings.

Gene was an active member of the International Society of Exploration Geophysicists (SEG). He served as its President, First Vice-President, Technical Program Chairman and General Program chairman of international meetings. He served as President and Vice-President of the Southeastern Geophysical Society and was an active member of the American Association of Petroleum Geologists, Society of Independent Professional Earth Scientists, European Association of Geoscientists and Engineers, and New Orleans Geological Society. Gene published articles in the Southwestern Legal Foundation Transactions, the Society of Exploration China Transactions, and was responsible for the section on seismic exploration in An Introduction to Central Gulf Coast Geology.

Gene and Mim enjoyed good times with family and friends in the many places they lived due to his transfers with Shell Oil. They loved to entertain family and friends whether it was a trip to Pensacola Beach, a New Orleans Saints game, Mardi Gras, dining in the French Quarter, or just relaxing at home with music and enjoying good conversation. Gene was always up for an adventure. He loved to learn something new and make new friends. Gene and Mim traveled extensively all over the world. He was an inspiration and mentor to many young people. His enthusiasm for life and fun loving demeanor endeared him to all.

Gene is survived by his wife, Mim, of 68 years, two daughters, Cindy and Debbie, their husbands, two grandchildren, two great-grandchildren, and by numerous nephews and nieces.



AAPG

Advancing the World of Petroleum Geosciences™

AAPG Wiki Announces June 2015 Wiki Write Off Competition!

AAPG's inaugural Wiki Write Off competition ended in December 2014 with the Universitas Gadjah Mada AAPG student chapter winning \$500 for its entry, "[Well log analysis for reservoir characterization](#)."

Your chapter could be next!

The rules are simple. Your group submits five original wiki articles to AAPG's Wiki by 30 June. [Tell us about it](#). The AAPG Wiki Advisory Board and Senior Associate Editor Board will select the best article, and the winner will be announced in July 2015.



[Wiki Write Off Competition](#)

[AAPG's Wiki](#)

[Previous Entries](#)



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Power Plays: Geothermal Energy in Oil and Gas Fields

Conference Workshop
May 18-20, 2015
SMU Campus in Dallas, Texas

The SMU Geothermal Lab is hosting our 7th international energy conference and workshop, *Power Plays: Geothermal Energy in Oil and Gas Fields*, on May 18-20, 2015 on the SMU Campus.

Over 200 individuals in field operations, project development, technology, finance, engineering and resource assessment from the geothermal, oil, gas and renewable energy sectors are expected to attend.

The conference goal is to connect attendees with the knowledge, technical expertise and equipment options they need to successfully transition existing oil or gas fields into an electricity-generating system. This year our focus broadens to include geophysical exploration topics.

Topics of discussion include power generation from flare gas, waste-heat, and geothermal fluids, along with research updates on induced seismicity, onshore and offshore thermal maturation, Play Fairway Analysis and basin modeling. SMU researchers will present results from their Fall 2014 Eastern North American Margin Community Seismic Experiment (ENAM CSE) research. In addition, equipment such as one-well systems, desalination and other new technologies will be explored.

A pre-conference workshop on May 18th, **A Primer on Geothermal Energy Resources**, provides a focused introduction for those new to the geothermal and energy communities. Four Continuing Education Credits are provided. The workshop is limited to the first 50 registrants to provide a classroom atmosphere with ample time for questions and answers.

The conference details are:

Name: *Power Plays: Geothermal Energy in Oil and Gas Fields*
Date: Workshop May 18; Conference May 19-20, 2015
Location: SMU Campus, Dallas, Texas
Website: <http://www.smu.edu/Dedman/Academics/Programs/GeothermalLab/Conference>
Contact: Maria Richards, mrichard@smu.edu, 214-768-1975



FINAL REMINDER

2015 CAICOS PLATFORM SEMINAR

Our Carbonate Field Seminar to Caicos Platform is sufficiently subscribed and will run from April 26 until May 4, 2015. There are still some spaces available. The registration deadline is March 13, 2015.

The registration fee for this seminar is being discounted to \$5000/person. Extra discounts are available for two or more people from the same company.

For more information, and a registration form, see <http://dravisinterests.com/advancedcarb.htm>

Or, contact me at jdravi@rice.edu for a brochure, which will be emailed to you.

This seminar is highly regarded and popular because of the outstanding Holocene and Pleistocene geology observable on this platform, and its direct applications to hydrocarbon exploration and development geology. You are exposed to a series of newer alternative models for carbonate sedimentation and early diagenesis that are related to stronger trade winds. These wind effects explain carbonate play development in ancient settings historically downplayed from a reservoir standpoint. These winds do not blow as strongly in the spring, which is why we run this seminar at this time.

We utilize modern, fast boats to get from one locality to another. This saves time and makes examination of the Holocene environments much more efficient than in many other modern carbonate settings. Pleistocene exposures of reefal and oolitic facies are superb (in fact, world-class), and facilitate your transition from modern environments to the rock record. For each facies, we discuss applications to ancient reservoirs and plays and bring in appropriate subsurface case studies. Along with an overflight in an air-conditioned, twin-engine, 30-seat plane, each participant obtains a scale perspective, which is critical for mapping or play evaluation in the subsurface.

We have presented this seminar 69 times since 1988, and conducted most of the pioneering research on this platform.

If you have any questions, or need more information, do not hesitate to contact me at 713-667-9844, or through my website web site at: <http://www.dravisinterests.com>

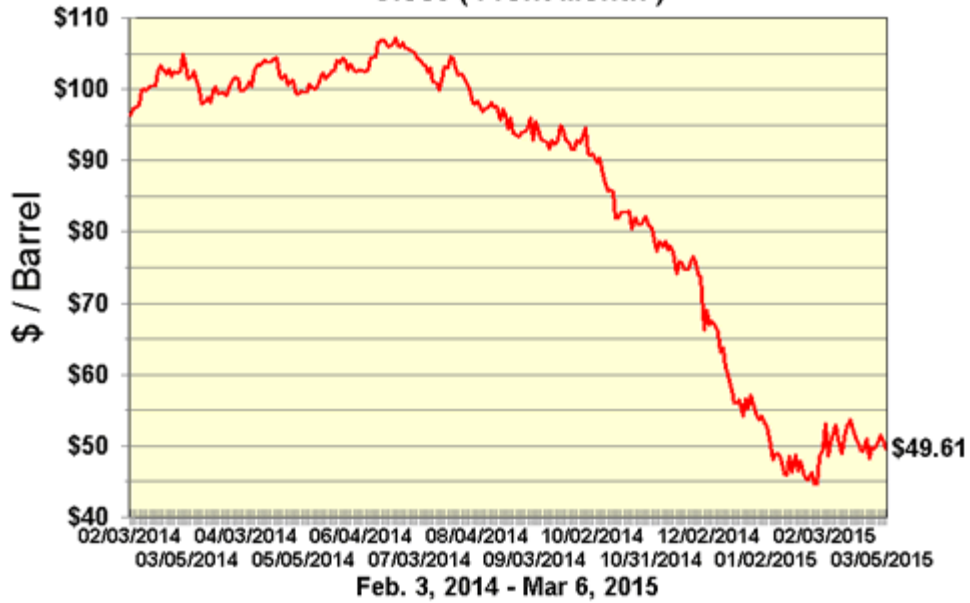
If this seminar is of interest, I would appreciate your circulating this information to other interested colleagues within your company. Thanks so much.

Jeff Dravis



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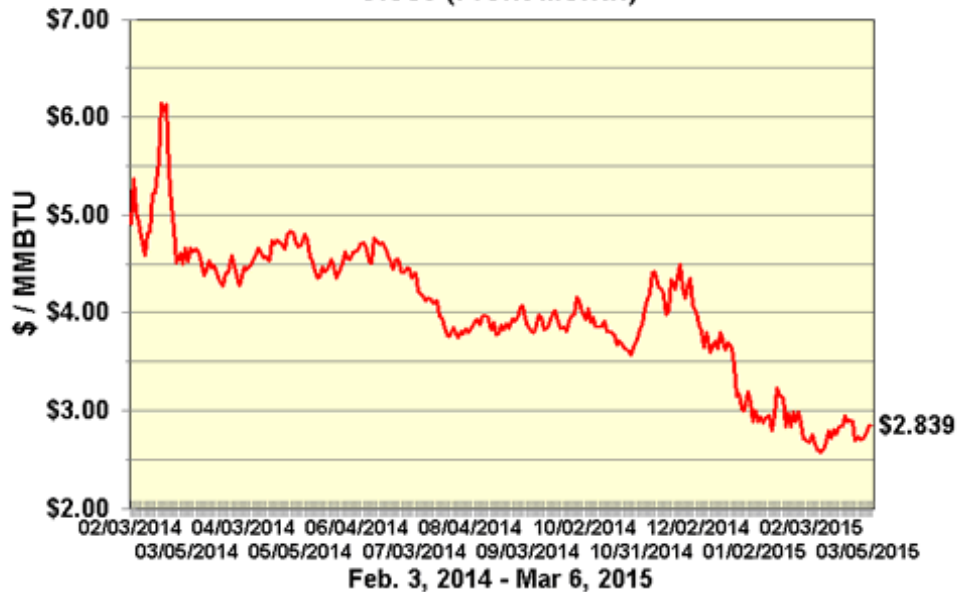
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CALL FOR PAPERS
65th GCAGS Convention
September 19-22, 2015 •
George R. Brown center
Houston, Texas



New Oil and Gas Discoveries
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GOM Shelf and Onshore Plays
Salt Tectonics and Traps
Mexico and Caribbean Plays
Geophysical Technology
Gulf of Mexico Deepwater
Environmental Geology
Coastal Geology and Surface Impact
Geology-Geophysics-Engineering
Portfolio Management
Climate/ Public Awareness Issues

To participate in the 2015 GCAGS Convention
Oral and Poster presentations

An abstract of up to 250 words should be submitted no later than **December 13, 2014** to Technical Program Chair, Linda Sternbach (linda.sternbach@gmail.com).

After notification of acceptance on **January 20, 2015**, authors submit extended abstracts (1-2 pages) or full papers up to 12 pages to the GCAGS Transactions by **February 20, 2015** to GCAGS Transactions Editor, Steve Levine.

Full instructions for manuscript submissions will be posted online at www.gcags2015.com.

Publish your work in the upcoming GCAGS Journal !!
(a new peer-reviewed journal of Gulf Coast Geoscience).

Instructions: An extended abstract of at least 600 words, including 1–2 representative figures, Should be submitted by **December 2, 2014** to Journal Editor, Barry Katz (BarryKatz@chevron.com).

After acceptance, a full manuscript must be submitted by **March 24, 2015**.

Full instructions for manuscript submissions will be posted online at www.gcags2015.com.



BOLAND SCHOLARSHIP WATCH

Faculty & Students,

This year is almost over 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 2014-2015 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



BOLAND SCHOLARSHIP FUND

Thank you to the following sponsors for their generous donations to the Boland Scholarship Fund!

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George T. Smith

Jack Douglas

Chris Franks

I. Meade Hufford

Maurice Birdwell

Charlie Williams

Jim Michael



2014-2015 MGS MEMBERS

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Mark Wyatt

* This list is updated on a monthly basis.
Please contact Bill Bagnall if you have any questions.

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/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/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.



MGS HONORARY MEMBERS

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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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