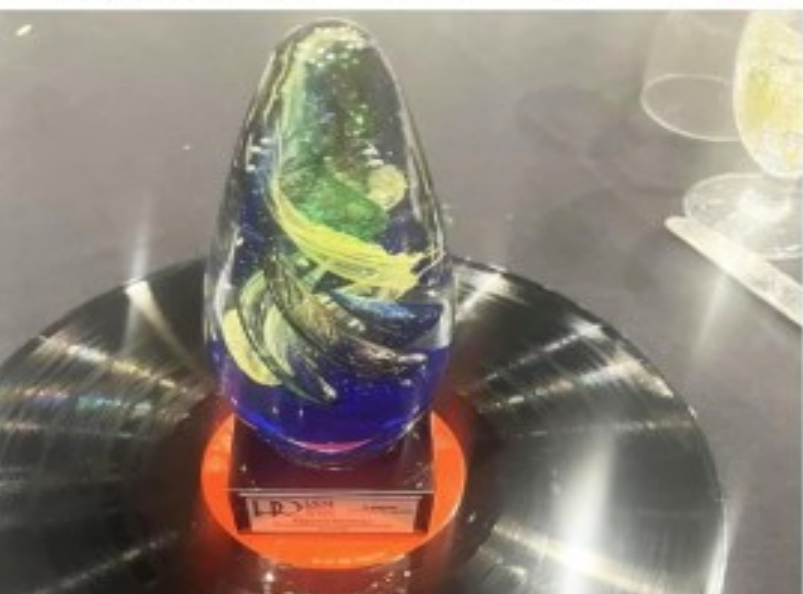


MISSISSIPPI GEOLOGICAL SOCIETY eBULLETIN

Volume 72

No. 2

October 2023



SEPTEMBER SPEAKER

Tim Palmer - MDEQ

MDEQ #FossilFriday Wins Awards and One Geology Post Goes Viral

Dr. David Dockery III, RPG

Monthly Quiz

Steve Walkinshaw



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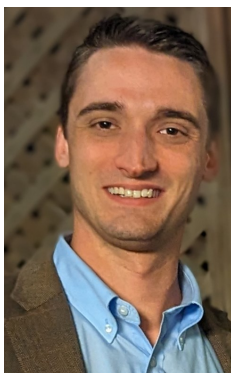
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PRESIDENT'S LETTER



Dear MGS Members,

Is Fall on the Horizon? If the 40-degree mornings are any indication, I think so! We held an MGS Officer's Meeting on 10/10 and discussed several things, but primarily focused on increasing Membership. We have membership forms available at all our events and online. If you have not paid your membership dues, please do so at your earliest convenience. Membership is the fuel of our Society. We have created a Mississippi Geological Society Facebook page to increase our presence on the web. Please view, like and interact. Our lunch meetings at River Hills have had a great turn out thus far, and we have a list of interesting talks on the docket. Your attendance adds to the quality of the monthly meetings. The Fall Barbeque at the Yacht Club will be November 9. More developments in our Society are on the horizon!

Jonathan R. Leard, RPG

MDEQ-Office of Geology

Surface Geology Division

Phone: (601)-961-5352

Website: <https://www.mdeq.ms.gov/geology/work-areas/surface-geology/>



2023-2024 MGS MEETING SCHEDULE

When	What/Who	Where
September 13	Chad Winter - FC&E Engineering	River Hills - 11:30am
October	Tim Palmer	River Hills - 11:30am
November	Fall BBQ	River Hills - 11:30am
December		River Hills - 11:30am
January		River Hills - 11:30am
February		River Hills – 11:30am
March		River Hills – 11:30am
April	TBD	River Hills - 11:30am
TBD	Spring Fling	Jackson Yacht Club

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SEPTEMBER SPEAKER

Tim Palmer MS RPG



“Deep-Basinal Lithium-Rich Brines”

Tim Palmer, M.S., P.G.

Wednesday, October 11, 2023

11:30 am Lunch/ 12:00pm Discussion

**The River Hills Club
Jackson, Mississippi**

Abstract:

To date, the primary focus of exploration and academic endeavor with respect to lithium-rich brine deposits has been on Cenozoic geothermal fluid flow and leaching in closed continental basins (e.g., Clayton Valley, McDermitt Caldera, and Salar de Atacama) sourced by rhyolitic magmas. However, high salinity brines (>350,000 ppm TDS) trapped in sedimentary basins concentrated by the deposition of basin wide marine evaporites and water-rock interaction provide an unexplored resource for lithium-rich brines. For example, the hydrocarbon producing rocks of the Upper Jurassic in the northern Gulf of Mexico are known to contain lithium-rich brines.

Biography:

Tim Palmer is a geologist and U.S. Navy vet, with over 10 years of professional experience. Currently, Tim works in the Surface Mapping Division at the Mississippi Geological Survey. Prior to serving the survey, Tim was the Senior Geologist for USA Rare Earth focused on the exploration and development of heavy rare earth elements and lithium at its flagship property Round Top.



CURRENT PRICES

Market Watch

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

[+ WATCHLIST](#)

☀ OPEN

Last Updated: Oct 11, 2023 at 9:54 a.m. EDT - Delayed quote

\$ **84.68**

▼ -1.29 -1.50%

SETTLEMENT PRICE 10/10/2023

\$85.97



Natural Gas Continuous Contract

[+ WATCHLIST](#)

☀ OPEN

Last Updated: Oct 11, 2023 at 9:55 a.m. EDT - Delayed quote

\$ **3.266**

▼ -0.116 -3.43%

SETTLEMENT PRICE 10/10/2023

\$3.382





832-731-7468

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Petroleum Geologist

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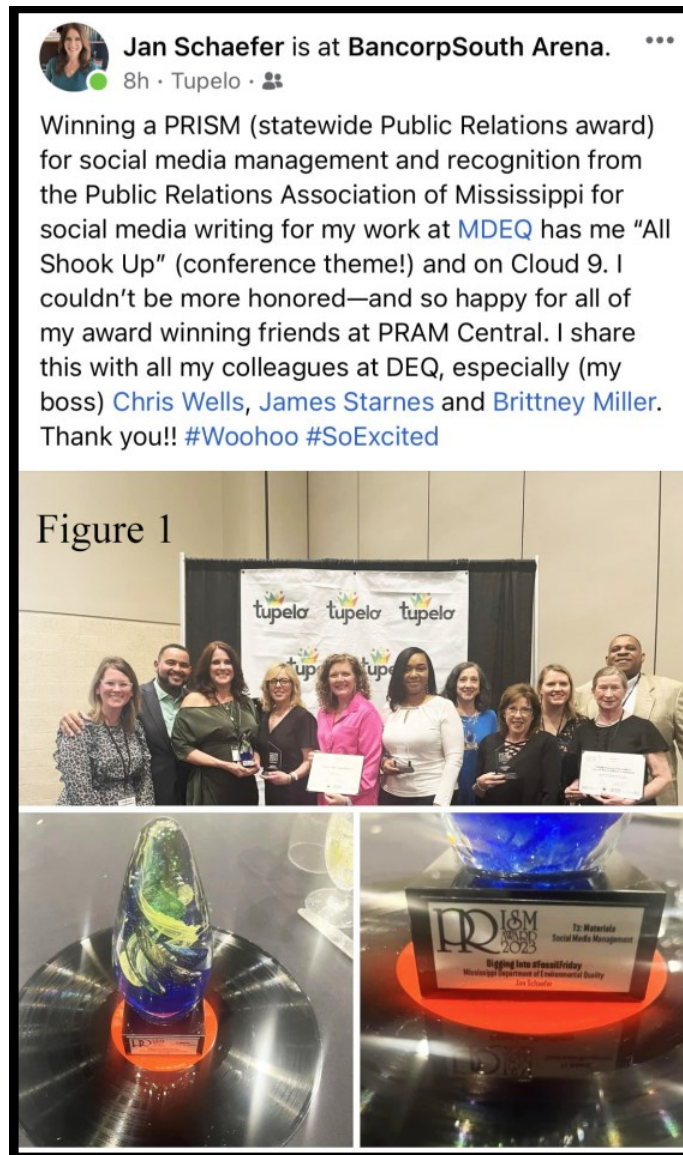


MONTHLY POST

Dr. David Dockery III RPG

MDEQ Office of Geology #FossilFriday Wins Awards and One Geology Post Goes Viral
David Dockery, RPG

On April 4, 2023, MDEQ's Public Relations Director, Jan Schaefer, won a PRISM (Statewide Public Relations Award) for social media Management and recognition from the Public Relations Association of Mississippi for social media writing for her work at MDEQ, in particular her research on James Starnes' #FossilFriday outreach (Figure 1). When I asked Jan if there was something that put her over the top? She said: "Yes! I did a quantitative data analysis of our Fossil Friday posts before and after implementing a strategy aimed at increasing reach. The minimum results showed we at least doubled reach and interactions such as likes/comments/shares AND we increased link clicks by 500%. Could not have done it without the support of our administration and Office of Geology! I really appreciate you and your team! Thank you!"





MONTHLY POST

Dr. David Dockery III RPG

On September 12, 2023, Jan's social media writing on #FossilFriday won two regional awards (Figure 2). The plaque on the first award reads "T3: Tactical Materials//Writing. Jan Schaefer. Mississippi Department of Environmental Quality. Digging Into #FossilFriday." When I asked about the awards, Jan said, "These awards were given by the Southern Public Relations Federation comprised of Public Relations practitioners in Alabama, Louisiana, Florida, and Mississippi. We received an Award of Excellence (second highest regional honor) and a coveted Lantern Award (the highest regional honor). Thank you so much for letting me be a part of this beautiful geologically inspired #FossilFriday journey!"

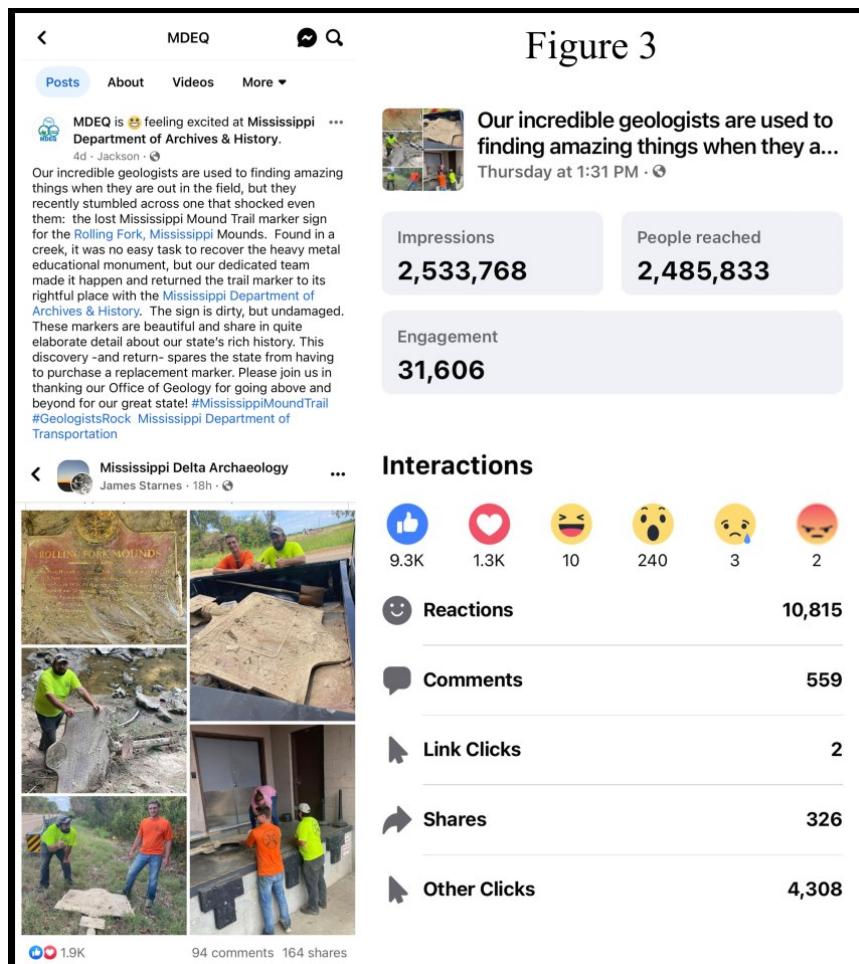




MONTHLY POST

Dr. David Dockery III RPG

It's not surprising that Jan is enthusiastic about our geology posts, which reach a large audience. One of her recent geology posts went viral (Figure 3). The post text reads: "Our incredible geologists are used to finding amazing things when they are out in the field, but they recently stumbled across one that shocked even them: the lost Mississippi Mound Trail marker sign for the Rolling Fork, Mississippi Mounds. Found in a creek, it was no easy task to recover the heavy metal educational monument, but our dedicated team made it happen and returned the trail marker to its rightful place with the Mississippi Department of Archives & History. The sign is dirty, but undamaged. These markers are beautiful and share in quite elaborate detail about our state's rich history. Please join us in thanking our Office of Geology for going above and beyond for our great state! #MississippiMoundTrail #GeologistsRock Mississippi Department of Transportation."



The "Our incredible geologists" in Jan's post are James Starnes, Jonathan Leard (MGS President), and Tim Palmer (MGS Vice President). According to a social media marketing expert, "Most people assume something is viral when it touches 100k mark." But he believes the count should be the right people. So, he would consider a post viral if it has reached 1000 people but more than 90% are relevant to the post. For MDEQ, everyone is relevant to our post so over two million people reached within a week (posted Thursday September 21 at 1:31 pm to the tally on Thursday morning September 28) is certainly "going viral."



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.

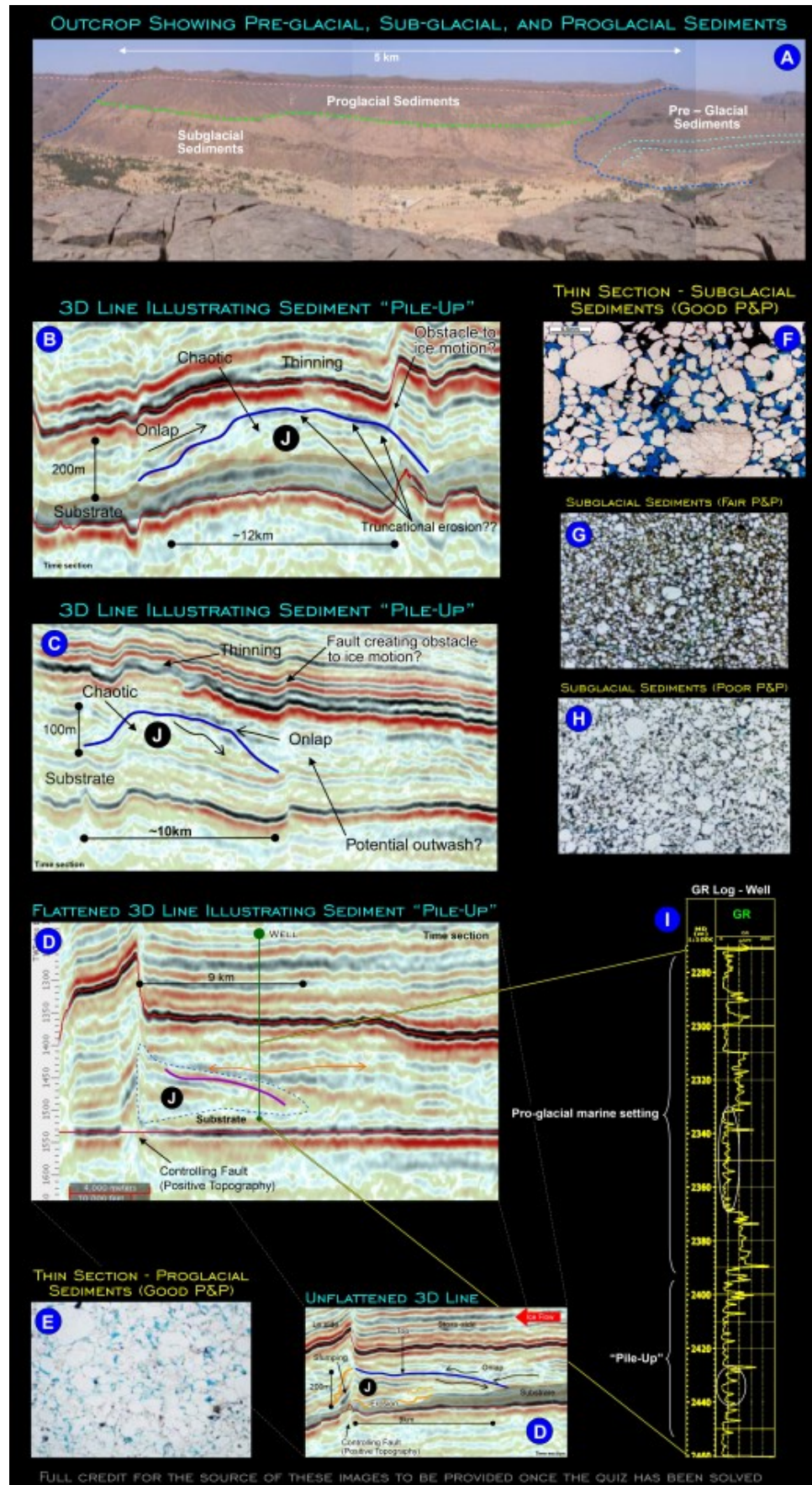
<http://terraserver.com/> Go here to download free aerial photo images that can be plotted under your digital land and well data. Images down to 1 meter resolution, searchable by Lat Long coordinate. Useful for resolving well location questions.

<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.



MONTHLY POST

Steve Walkinshaw





MONTHLY POST

Steve Walkinshaw

Oil patch quiz time. A shallow, highly karsted carbonate reservoir filled with very heavy crude, tar and bitumen is trapped atop a prolific field in this country (see panels "A" through "H"). Excluding large vugs, matrix porosity range is 10% to 37% and permeability ranges from 1 md to 1 darcy.

This reservoir is often compared to a carbonate reservoir in another country that is also relatively shallow and highly karsted (see panels "I" through "N"). The analogous reservoir is estimated to harbor 300 to 574 billion barrels of bitumen in place.

A new production method was recently attempted here; it had previously been implemented in the analogous field ("K").

Questions...

Part 1: What field am I referring to?

Part 2: What country?

Part 3: What's the (a) name and (b) age of the reservoir?

Part 4: Is the karsting of this reservoir considered mostly epigenic or hypogenic?

Part 5: What's the informal name of its topseal?

Part 6: What's the (a) name and (b) age of the underlying reservoir "O"?

Part 7: What's the (a) name and (b) age of the analogous reservoir "N"?

Part 8: In what country is it located?

Part 9: Was the karsting of "N" mostly epigenic or hypogenic?

Bonus:

Part 10: What production method is illustrated in "K"?

Part 11: What company operates field "E"?



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2023-2024

Membership year is June through May

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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	\$ _____
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Professional Listing (1/2" x 3")	\$ 50	\$ _____

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

<u>Type of Web Page Ad</u>	<u>Rate/Year</u>	<u>Amt. Remitted</u>
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 \$ _____

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1977-1978	Sarah Childress	2018-2019	Dr. David Dockery
1978-1979	Les Aultman	2019-2020	James O. Sparks
1979-1980	Philip R. Reeves	2020-2023	David Snodgrass



Monthly Post

Steve Walkinshaw

ANSWERS

Part 1: What field am I referring to? Alawi Field

Part 2: What country? Bahrain

Part 3: What's the (a) name and (b) age of the reservoir? (a) Aruma Formation, (b) Maastrichtian (Upper Cretaceous)

Part 4: Is the karsting of this reservoir considered mostly epigenic or hypogenic? epigenic

Part 5: What's the informal name of its topseal? the Black Shale

Part 6: What's the (a) name and (b) age of the underlying reservoir "O"? Khuff Formation, Middle to Late Permian

Part 7: What's the (a) name and (b) age of the analogous reservoir "N"? (a) Grosmont Formation, (b) Upper Devonian

Part 8: In what country is it located? Canada (Alberta)

Part 9: Was the karsting of "N" mostly epigenic or hypogenic? While both clearly occurred, it appears most of the severe early karstification was probably hypogenic

Part 10: What production method is illustrated in "K"? steam EOR; SAGD stacked horizontal steam injector - heavy oil producer pair

Part 11: What company operates field "E"? Tatweer Petroleum