

MISSISSIPPI GEOLOGICAL SOCIETY *e*BULLETIN

Volume 70

No. 5

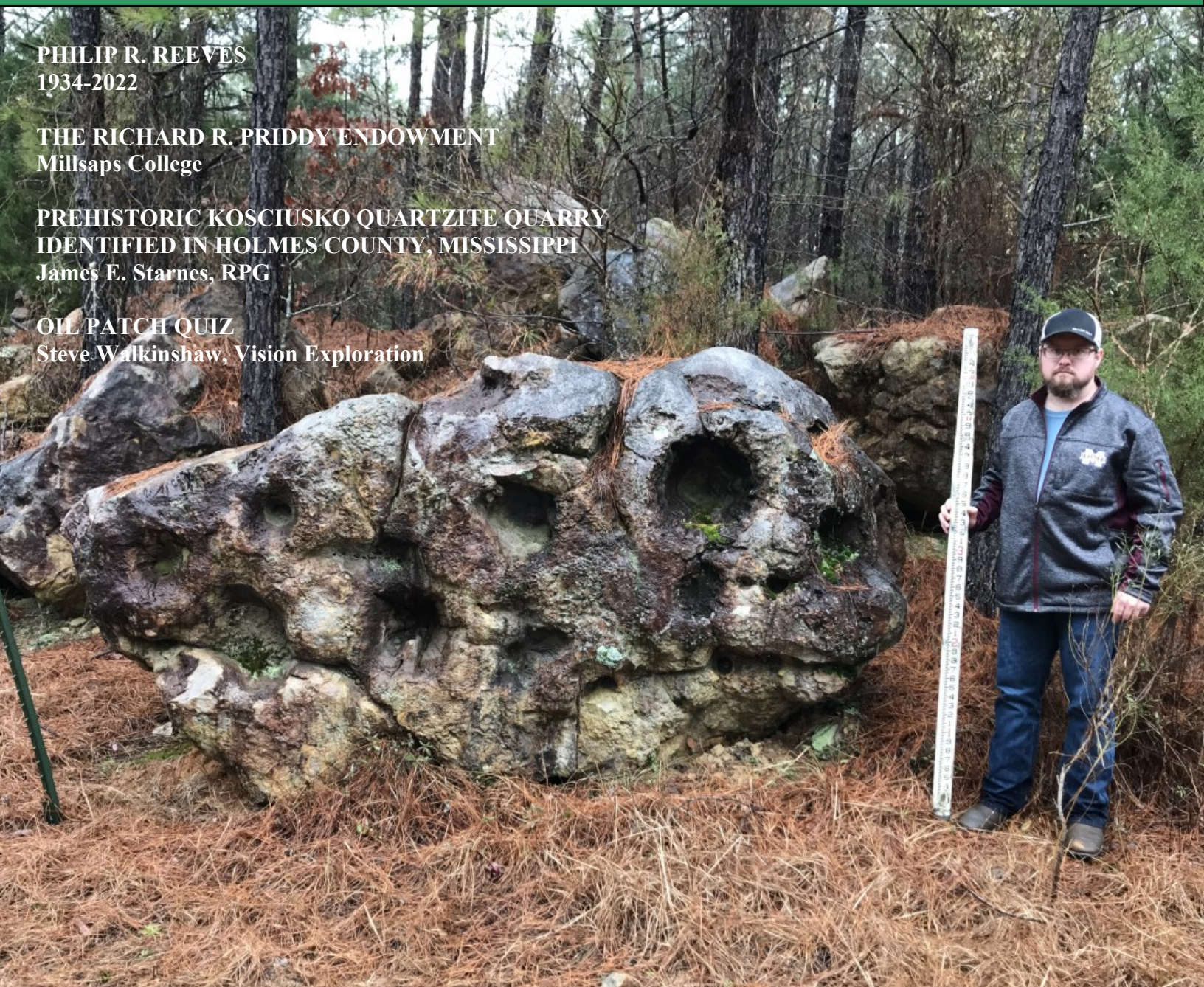
January 2022

PHILIP R. REEVES
1934-2022

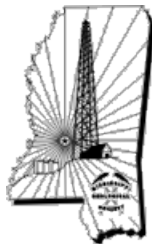
THE RICHARD R. PRIDDY ENDOWMENT
Millsaps College

**PREHISTORIC KOSCIUSKO QUARTZITE QUARRY
IDENTIFIED IN HOLMES COUNTY, MISSISSIPPI**
James E. Starnes, RPG

OIL PATCH QUIZ
Steve Walkinshaw, Vision Exploration



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PRESIDENT'S LETTER

David Snodgrass, MSOGB



MGS Members,

I hope everyone had Merry Christmas I wish you all a Covid-free Happy 2022 !

Unfortunately, there is nothing new to report this month. Due to the Omicron Variant, we are once again waiting on the return of our monthly luncheons at the River Hills Country Club. Please stay safe, stay tuned and enjoy the bulletin. For now, take care.

Sincerely,

David H. Snodgrass

2021-2022 MGS MEETING SCHEDULE

When	What/Who	Where
September	Fall BBQ	Cancelled
October	Cancelled	Cancelled
November	TBD	Cancelled
December 8	SPE Distinguished Lecturer	Online - 11:30am
January	TBD	River Hills - 11:30am
February	TBD	River Hills – 11:30am
March	TBD	River Hills – 11:30am
April	TBD	River Hills - 11:30am
May	Boland Scholarship Awards	TBD

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[illegible]

TBD



PHILIP RANDOLPH REEVES

1934-2022

PHILIP RANDOLPH REEVES

Philip Randolph Reeves, our beloved "Papa", of Jackson, Mississippi went to his eternal home with Jesus on Wednesday, January 12, 2022, at the age of 87. After a battle with cancer, Philip died peacefully at home surrounded by family.

Philip was born at home in a rural community known as Shiloh located in northern Louisiana on August 1, 1934, to James Melton Reeves and Betty Barham Reeves. Philip's birth came as a surprise to his "older" parents so much that his mother was embarrassed and did not take him to town until he was one year old. His five older siblings loved and doted on him as if he was their own child and his best friends growing up were his nieces and nephews, which he adored.

Philip attended Bernice High School where he was known for extraordinary left-handed pitching ability. During this time, he met his lifelong sweetheart, Barbara (Ford) and they were married on July 2, 1955. Philip went on to attend Louisiana Tech University and graduated with a degree in Petroleum Geology. Philip and Barbara set up housekeeping in an eight-foot-wide trailer as he began his oil and gas career with Hycalog as a well logger. After a number of years, Philip began working for Cities Service Oil Company and later Hughes Eastern Oil and Gas Exploration as the head of the geology department. Philip retired from Hughes Eastern in 1991 and continued independent geology work for many years. He was a longtime active member of the Mississippi Geological Society.

Philip and Barbara were longtime members of Broadmoor Baptist Church where he served in many leadership capacities including Chair of the Deacons. Philip was instrumental in the move of Broadmoor to its current location in Madison, Mississippi as the Chair of Building Committee. In recent years, Philip and Barbara were led to attend First Presbyterian Church of Jackson, where they are current members. In addition to active church members, Philip and Barbara loved to travel spend time with family and friends and ballroom dance.

Philip is preceded in death by his mother and father, James and Betty Reeves, brothers James Reeves (infant), John David Reeves, and sisters, Vivian Reeves Sutton, Mollie Reeves Richardson, Doris Reeves Melton, and Merle Reeves DeLeary. He is survived by his wife, Barbara, son, Philip M. Reeves (Stephanie), daughters, Kimi (Frank) Fancher and Candon (John) Garbo, grandchildren Madelyn (Thomas) Harris, Parkes Fancher, Reeves (Elizabeth) Fancher, Conner (Erica) Reeves, Mollie (Josh) Oller, Reagan Reeves, Camille (Matthew) Maly, Alex (Matt) Richards, Barron Garbo and Hill Garbo. He is also survived by thirteen great-grandchildren, Ryals, Thacker, Brown, Sadie, Lily, Mille, Vivian, Samuel, Mattie, Griffin, Larkin, Margot, Nell with number fourteen expected in May. Philip's love for his family ran deep and only second to his love for Jesus Christ his Savior.



GEOLOGY POST

THE RICHARD R. PRIDDY ENDOWMENT

HELP A STUDENT ATTEND SUMMER FIELD CAMP! The Richard R. Priddy Endowment has been created specifically to provide funding for students to attend Summer Field Camp. Field camp is required for all Millsaps Geoscience majors, and most scholarships typically do not cover these costs. The Endowment honors the late Dr. Richard Priddy who was Chair of the Millsaps Department of Geology from 1946 to 1972.

Gifts are tax-deductible. Checks can be made out to Millsaps College with Richard R. Priddy Endowed Scholarship Fund in the memo and mailed to:

Millsaps College
Office of Institutional Advancement
1701 N. State Street
Jackson, MS 39201

You can also donate online to
www.mbench.org/annualfund. Under *Area of Support*
please check *Other* and in the *Note* field enter Richard R.
Priddy Endowed Scholarship Fund.



Dr. Richard R. Priddy

This solicitation is submitted by Millsaps Geoscience alumni, Rev. Torrey Curtis ('67), Steve Franks ('68), Wayne Upchurch ('68), Clayton Breland ('70), and David Williamson ('72). We are not official representatives of Millsaps College.



MGS SCHOLARSHIP AWARDS

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 2021-2022 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



MONTHLY POST

James E. Starnes, RPG

Outcrops of actual solid rocks always grab our attention while working as geologists in the coastal plain. Just recently, I received a phone call to examine one. It is an area for which we published a geologic map just a few years ago. Therefore, I knew what I was likely to encounter in the Claiborne age geology exposed at the surface in the area.

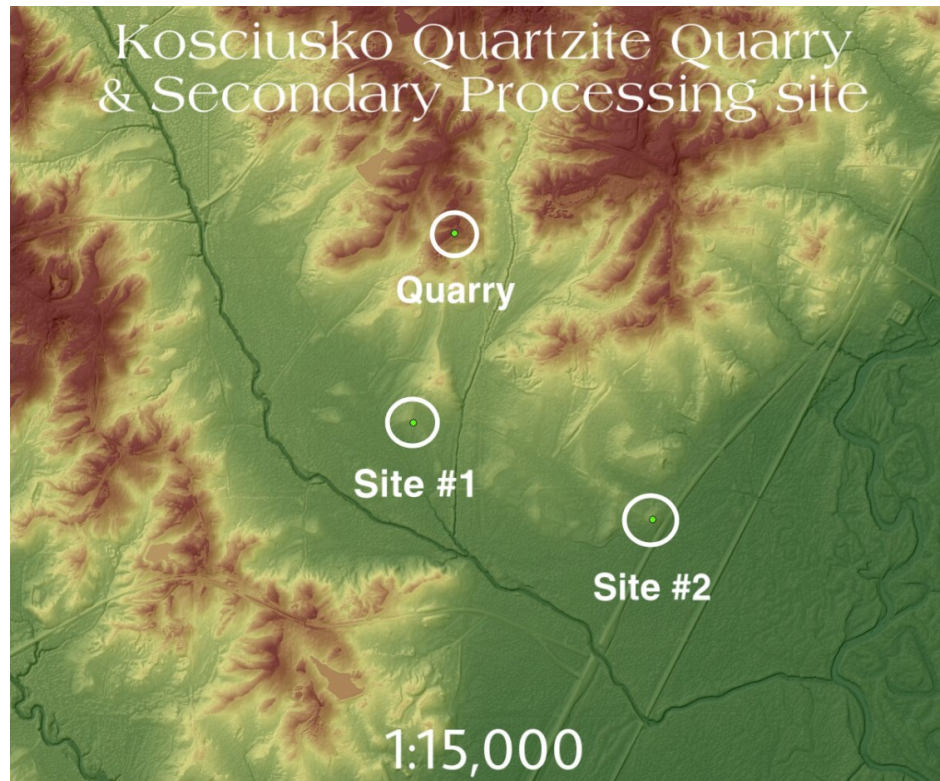
When I first arrived, I met a knowledgeable and avid fossil hunter, Christopher Michael Rego. Christopher had stumbled upon the outcrop while searching for an elusive marine mollusk fossil-bearing deposit (known as greensands) in the Middle Eocene age Winona Formation. The greensands of the Winona Formation are from a mineral, a silicate of iron, called glauconite. Instead of fossils, Christopher had found a spectacular outcrop of the geologically younger unit, the Kosciusko Formation. This large outcrop contains lithic-quality orthoquartzite, excellent for the manufacture of stone tools by prehistoric peoples in Mississippi. As a result of this outcrop investigation, we recorded what may be the first extensive prehistoric Kosciusko Quartzite quarry, if not the first one at all to ever be recorded.





MONTHLY POST

James E. Starnes, RPG



Very little is known about the quarrying activities of Kosciusko Quartzite; however, we do know that Kosciusko Quartzite was utilized almost exclusively in the Early Archaic Period with the Pine Tree type points (8,500 to 8,000 years BP) and then again in the Woodland Period with the Collins type points (AD 500 to 1,000). Projectile points and other artifacts made from Kosciusko are found on archaeological sites from our Delta Region across Mississippi east to the Alabama line. Additionally, during the outcome investigation, the land manager for the property also showed us two nearby archaeological sites where he and the landowner had collected artifacts from. From just the initial study of the material exposed at the surface, both sites are most certainly Kosciusko Quartzite secondary processing sites directly related to quarrying activity at the outcrop. The first site seemed to be dominated by Kosciusko Quartzite debitage (waste material left from processing rock) and broken chert hammerstones (used to reduce the rock). The chert gravel hammerstones are not natural to the area and were transported to the site from the Pre-loess Terrace Gravels that outcrop several miles to the west. The second archaeological site we studied was a little further from the quarry than the first and was located adjacent to the nearby river floodplain. This second site seemed to have a similar assemblage to the first but with an increase in chert flakes suggesting an even broader array of activities that were conducted on the site in addition to the processing of Kosciusko Quartzite. Site cards will be submitted to the site file at the Mississippi Department of Archives and History on all three sites for the scientific record and future study. A return trip is currently being planned to record both the landowner's and the land manager's collections from the sites to hopefully come up with some more diagnostics to paint a broader picture for our understanding of elusive Kosciusko Quartzite quarrying activities for the archaeological record.



MONTHLY POST

James E. Starnes, RPG





CURRENT PRICES

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

[+ WATCHLIST](#)

☀ OPEN

Last Updated: Jan 19, 2022 9:30 a.m. EST - Delayed quote

\$ **86.38**

▲ 0.95 1.11%

SETTLEMENT PRICE 01/18/2022

\$85.43



Natural Gas Continuous Contract

[+ WATCHLIST](#)

☀ OPEN

Last Updated: Jan 19, 2022 at 9:30 a.m. EST - Delayed quote

\$ **4.061**

▲ 0.013 0.32%

SETTLEMENT PRICE 01/18/2022

\$4.048



Marketwatch



MONTHLY QUIZ

Steve Walkinshaw

OIL PATCH QUIZ

Oil patch quiz time. Oil was first extracted in this country ~250 years ago. Ninety years later, it was produced here on a commercial basis. For many years this country led its region in oil production.

A recent deepwater gas discovery, made ~102 miles offshore in water about 3,000 feet deep, encountered about 237 feet of gas pay and preliminary estimates are that the field has between 1.5 to 3 TCF of gas in place. Although a large grid of 3D seismic data was subsequently acquired, followed by the drilling of six more exploratory or appraisal wells in the 5,940 square-mile concession, the operator and its domestic partner have not yet announced a final investment decision ("FID") regarding the development of this recent gas discovery.

Several source rocks within this country are being studied or tested for their potential as unconventional resources, as domestic conventional oil production continues to decline. High hopes remain for the commercial development of the country's offshore sector.

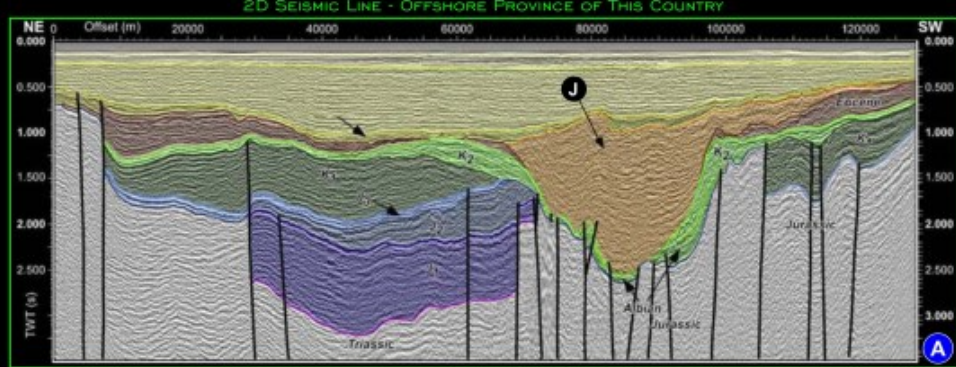
This country boasts a refining capacity that far exceeds domestic demand (over 500,000 barrels per day).



MONTHLY QUIZ

Steve Walkinshaw

OIL PATCH QUIZ



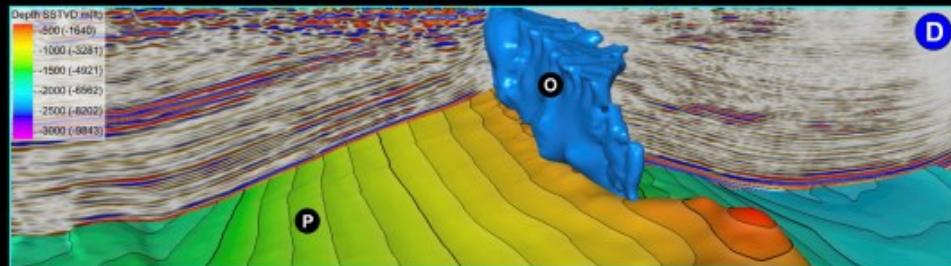
PRODUCED IN SOME PIPELINES HERE



OUTCROP OF SOURCE ROCKS IN NEIGHBORING COUNTRY



3D SEISMIC / 3D MODEL OF ELONGATE SALT DIAPIRIC BODY IN THIS COUNTRY



SURFACE FEATURE



THIN SECTION



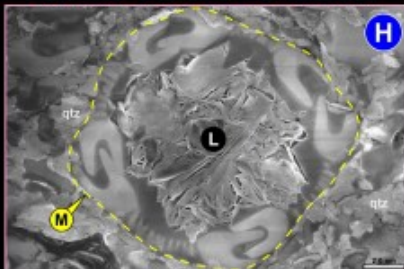
DRILLSHIP THAT DRILLED OFFSHORE DISCOVERY



THIN SECTION - SOURCE ROCK (OUTSIDE OF THIS COUNTRY)



SEM IMAGE - BITUMINOUS MARL (OLIGOCENE)



FULL CREDIT FOR THE SOURCE OF THESE IMAGES TO BE PROVIDED ONCE THE QUIZ HAS BEEN SOLVED



MONTHLY QUIZ

Steve Walkinshaw

Questions...

Part 1: What country am I referring to?

Part 2: What's the name of the basin located in the central region of this country?

Part 3: What is the platform south of this basin called?

Part 4: What is the name of the basin located in the western margin of this country?

Part 5: This country's offshore province is located in what body of water?

Part 6: See Image "A", a long, strike-oriented 2D line located just offshore. (a) What is the name of the syncline labeled "J"? (b) What is the age of the (orange-colored) sediments that filled the syncline?

Part 7: What is labeled "K" in Image "B"?

Part 8: See Image "C". What one word best describes the depositional environment of the outcropped shales seen in the photo?

Part 9: See Image "D". Salt body "O" is unrelated to the mapped horizon "P". What one word best describes salt body "O" in the context of its original deposition and location?

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Part 11: See Image "F". What are labeled "U"?

Part 12: See Image "G". (a) What is the name of this country's recent deepwater gas discovery? (b) What company is the operator?

Part 13: See Image "H". What relict structure is outlined by the yellow dashed line labeled "M"?

Part 14: See Image "H". What clay is labeled "L"?

Part 15: See Image "I". What is labeled "N"?

Bonus:

Part 16: Where was the first refinery built here (in what city)?

Part 17: What oil & gas company is the domestic partner of the operator that drilled the recent deepwater gas discovery?

Answers at end of Bulletin



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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(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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1978-1979	Les Aultman	2019-2020	James O. Sparks
1979-1980	Philip R. Reeves	2020-2021	David Snodgrass



MONTHLY QUIZ

Steve Walkinshaw

ANSWERS

Alright! This quiz focused on the country where many "Firsts" occurred in the oil industry, including: first country to officially record oil production; first oil refinery; and first city illuminated with kerosene street lamps (all occurring in 1857).

Here's the quiz recap:

Part 1: What country am I referring to? Romania

Part 2: What's the name of the basin located in the central region of this country? the Transylvania Basin

Part 3: What is the platform south of this basin called? the Moesian Platform

Part 4: What is the name of the basin located in the western margin of this country? the Pannonian Basin

Part 5: This country's offshore province is located in what body of water? the (Western) Black Sea

Part 6: See Image "A", a long, strike-oriented 2D line located just offshore. (a) What is the name of the syncline labeled "J"? (b) What is the age of the (orange-colored) sediments that filled the syncline? (a) the Histria Depression, (b) Oligocene

Part 7: What is labeled "K" in Image "B"? gas hydrates that formed / solidified within a pipeline

Part 8: See Image "C". What one word best describes the depositional environment of the outcropped shales seen in the photo? anoxic

Part 9: See Image "D". Salt body "O" is unrelated to the mapped horizon "P". What one word best describes salt body "O" in the context of its original deposition and location? detached (also allochthonous in form)

Part 10: See Image "E". What is responsible for the formation of the feature labeled "Q"? the melting of gas hydrates within thawing permafrost, leading to the subsequent and often explosive release of methane

Part 11: See Image "F". What are labeled "U"? tubular bioturbation caused by the burrowing of small worms or nematodes

Part 12: See Image "G". (a) What is the name of this country's recent deepwater gas discovery? (b) What company is the operator? (a) Domino-1 (Neptun Deep), (b) ExxonMobil

Part 13: See Image "H". What relict structure is outlined by the yellow dashed line labeled "M"? a coccolith

Part 14: See Image "H". What clay is labeled "L"? smectite

Part 15: See Image "I". What is labeled "N"? a phosphatic fish bone

Part 16: Where was the first refinery built here (in what city)? Ploesti

Part 17: What oil & gas company is the domestic partner of the operator that drilled the recent deepwater gas discovery? OMV Petrom



MONTHLY QUIZ

Steve Walkinshaw

CREDITS

Image "A": "Petroleum Systems of Romania" (Csaba Krézsek), Search and Discovery Article #10349 (2011)

Images "B" and "E": "Methane Hydrates as a Tertiary Methane Source in the Transylvanian Basin" (Z. Unger, D. LeClair, and I. Györfi), Search and Discovery Article #11307 (2020)

Image "C": "Occurrence of Upper Jurassic–Lower Cretaceous black organic-rich pelitic sediments as targets for unconventional hydrocarbon exploration in the Outer Carpathians and adjacent part of the Alps" (Andrzej S. Iączka, Jan Golonka, Nestor Oszczypko, Marek Cieszkowski, Tadeusz Słomka, and Irena Matyasik), AAPG Bulletin, v. 98, no. 10 (October 2014), pp. 1967–1994

Image "D": "Understanding salt in orogenic settings: The evolution of ideas in the Romanian Carpathians" (Dan Mircea Tamas, Zsolt Schlöder, Csaba Krézsek, Silviu Man, and Sorin Filipescu), AAPG Bulletin, v. 102, no. 6 (June 2018), pp. 941–958

Images "F" and "H": "A Hierarchy of Current-Produced Bedforms in a Source Rock from the Eastern Carpathians Points to Predominant Bedload Deposition of an Organic-Rich Mudstone" (Crina Miclaus and Juergen Schieber), Search and Discovery Article #51006 (2014)

Image "G": "Romania: Black Sea Gas Discovery", GEO ExPro APRIL 2012, page 94

Image "I": "Mudrocks: Siltstones, Mudstones, Claystones and Shales, Memoir 109: A Color Guide to the Petrography of Sandstones, Siltstones, Shales and Associated Rocks, 2014; Chapter 8, Mudrocks", AAPG, page 199