

NOGS LOC

JUNE 2014

Volume 54, Number 12



JUNE 2 - NOGS LUNCHEON

**Presentation: Reflections on a Decade of U.S. Shale Plays: Case Histories
from the Haynesville and Eagle Ford Plays**

Guest Speaker: Arthur "Art" Berman

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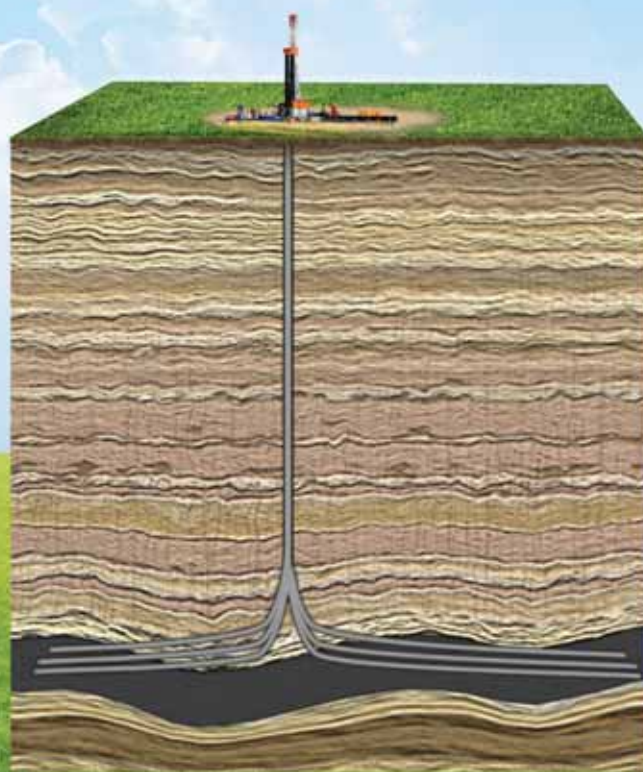
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on the cover

Cover Photo Submitted by: Sheri Richardson

The Wave — North Coyote Buttes, Arizona

"The Wave" is a now famous sandstone rock formation located in the North Coyote Buttes Wilderness Area within the Paria Canyon-Vermilion Cliffs Wilderness, near the Arizona-Utah border. The Wave is a largely wind eroded exposure of large-scale cross-bedded eolian Navajo Sandstone (Jurassic). These huge lithified sand dunes show rhythmic and cyclic laminae, which now form ridges and ribbing as a result of differential erosion.

The Wave was largely unknown as a photographic destination until the late 1990s when it appeared in a German documentary, *Faszination Natur – Seven Seasons* (1996). Since then it has been featured on posters, postcards, books, and calendars.

Due to the popularity and fragile nature of the formation, the BLM limits access to the area to just 20 permits per day. The hike to The Wave is about 6 miles round-trip, but there is no formal trail. Permitted hikers receive a guide sheet from the BLM noting landmarks to guide them to The Wave. Due to the desert climate and remoteness of the area; a hike to The Wave is not to be taken lightly, as there have been a significant number of search and rescue incidents and several deaths due to exposure.

From the Editor



Hello and farewell! This is my last issue as editor of the *NOGS LOG*. It has been a privilege serving NOGS for the past two years. This last year has been an exciting and eventful year for the Society, and I hope everyone has enjoyed reading Volume 54 of the *NOGS LOG*.

I owe the success of this volume to all of our contributors, whether they submitted a cover photo, a monthly article, an item of interest, a special feature, photos of NOGS events, or even just advice and encouragement. Without their great content, I would not have had much to work with. I must thank Al Baker, Tom Bergeon, Arthur Christensen, Carlo Christina, Charley Corona, Bob Douglass, Al Falster, Mike Fein, Duncan Goldthwaite, Chuck Holman, Annette Hudson, Art Johnson, Tom Klekamp, Louis Lemarié, Cyril Lobo, Chris McLindon, Jeffrey Nunn, Tavia Prouhet, Philip Richardson, Peggy Rogers, Bubba Sanchez, Jeff Spencer, Kevin Trosclair, Mary Walther, Roy Walther, Bill Whiting, and Fran Wiseman. Hopefully, I have not forgotten anyone.

I also owe a tremendous thanks to my assistant editors who, with their keen eyes, kept many errors from being published. Thanks to Ed Picou, Tavia Prouhet, Jessica Wold, and Bryan Banks for their invaluable editing skills and advice.

Kristee Brown, of Creative Graphics & Printing, has done a tremendous job in taking everything I've given her and making it not only fit on the page but look great as well. Thanks, Kristee!

It has been a pleasure working with the Board and with so many NOGS members. Thank you!

Please welcome Tavia Prouhet as your new editor. I have no doubt that she will do a great job, for she is an active NOGS member and is passionate about geoscience and education. Remember to send her your cover photos!

One last note of interest – this issue of the *NOGS LOG* is dedicated to Jack Langford. Please see page 28 for a special tribute in his honor.

Sheri Richardson – NOGS LOG Editor

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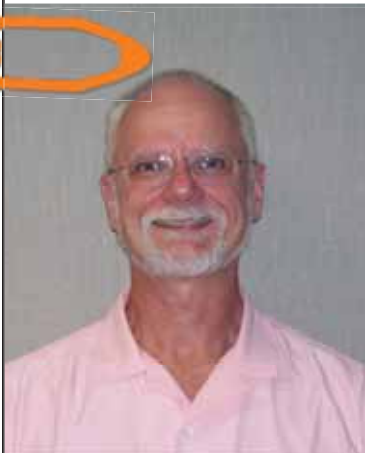
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From the President

PAST EVENTS

I hope everyone had a good time at the NOGS Golf Tournament on April 28. Our efforts helped raise over \$5,000 for the Bill Craig Memorial Scholarship Fund. A big thank you goes to our corporate sponsors and in particular to Diversified Logging, Core Lab, and Weatherford International.

Tim Osborn of NOAA in Lafayette gave an excellent talk at our monthly luncheon on May 5, "Subsidence and Sea-Level Rise: The Impact on the Southeastern Louisiana Coast." His main points were that those of us living in the New Orleans area need to keep in mind that we live in a rapidly subsiding area, that as the metropolitan area continues to sink we will need to raise the sinking levees to maintain our current level of protection, and that the cost of raising the levees will be on us, as we now own them. If we do not tax ourselves to pay for the costs, then we will pay the price with higher flood insurance premiums.

UPCOMING EVENTS

The Monthly Luncheon is June 2 and we will have Art Berman come from Houston to present "Reflections on A Decade of U.S. Shale Plays: Case Histories from the Haynesville and Eagle Ford Plays." It promises to be an excellent overview of the Resource Play in the United States.

This is my last President's Letter. Many people helped me in my term as President and I want to acknowledge them now.

First, I want to thank this year's officers: Kelli Hardesty for arranging our social events, Fran Wiseman for booking an excellent slate of luncheon speakers, Margaret McKinney for keeping excellent records of our meetings, Robert Clark for maintaining the books and monitoring the Society's investments, and Sheri Richardson for her work to create a vibrant *NOGS LOG* every month and for instructing our Editor-elect Tavia Prouhet on how it is done.

Next, I want to thank the Directors, Mike Fein, Bill Whiting, and Jim Zotkiewicz for their guidance and advice about all things NOGS.

Special thanks go to General Chair Art Johnson, Technical Chair George Rhoads, and Social Chair Mary Walther for their work to make the GCAGS Convention in New Orleans last year a success.

Finally, a big thanks to Annette Hudson who provides continuity and makes it all work, and without whom everything would grind to a halt.

I want to leave you with one last thought, something I think we should carry with us in our everyday work and in our everyday life: We are a part of Nature, not apart from Nature. We as geologists intuitively know this to be true as we have studied the Earth, its life forms, and its processes, and we recognize through our studies, our work experience, and our observations of everyday life around us that everything is connected. Most of us NOGS members work in an industry that rightfully and wrongfully has been blamed as an environmental bogeyman, and I would say that every oil related environmental incident occurred because the responsible parties did not know or believe anything bad would happen or did not consider the future consequences of a given action. We should lead by example and encourage the safe exploration and production of oil and gas so that our industry can build a reputation of acting responsibly in the public's interest, our interest; so that we as a society can live well and ensure that our future generations will also live well.

Thank you and goodbye,

Chuck

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UPCOMING Events & Activities

June 2 • NOGS Luncheon

Holiday Inn Downtown Superdome

\$3.00 validated parking in hotel garage

Presentation:

Reflections on a Decade of U.S. Shale Plays: Case Histories from the Haynesville and Eagle Ford Plays

Guest Speaker:

Arthur "Art" Berman

Labyrinth Consulting Services, Inc. • Houston, Texas

See page 9 for Abstract and Biography

HOLIDAY INN DOWNTOWN SUPERDOME

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front desk for location.

Lunch served at 11:30 am

ADMISSION:

With reservation..... \$30.00

Without reservation..... \$35.00

Student Member with reservations..... FREE

June 9-12

SIPES Annual Meeting and Convention

Omni Royal Orleans • New Orleans, LA

For more information, sipes.org/home/convention/

July 7

NOGS Luncheon

Holiday Inn Downtown • New Orleans, LA

For more information, www.nogs.org/calendar/

**VOLUNTEERS
NEEDED!**

June 21

Girl Scouts of Louisiana East STEM Event

Dillard University • New Orleans, LA

Contact Tom Bergeon at tom.bergeon@centuryx.com

**ONE-DAY
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August 5

Dr. John W. Snedden

8:30 am - 3:00 pm • Hilton Riverside • New Orleans, LA

See page 17 for details!

August 5-7

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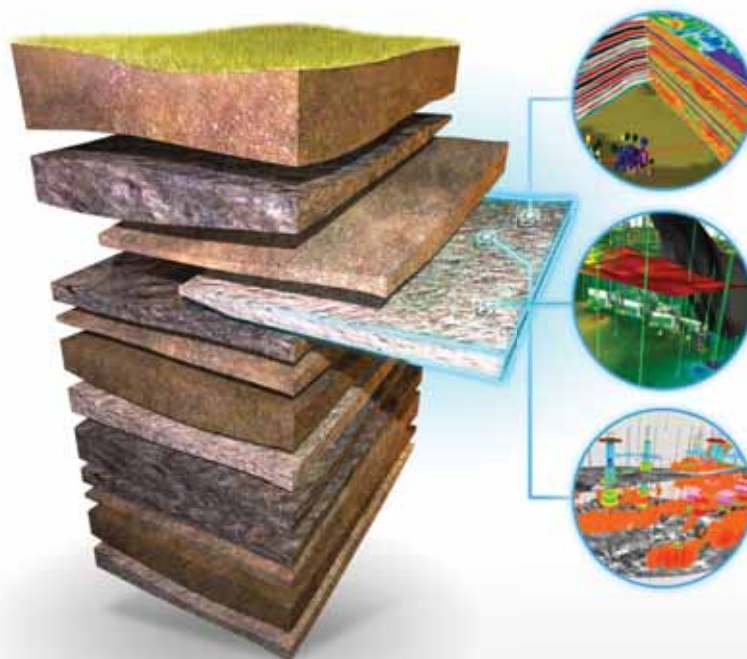
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June 2 NOGS Luncheon Presentation

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Reflections on a Decade of U.S. Shale Plays: Case Histories from the Haynesville and Eagle Ford Plays



Presented by

Arthur E. Berman

Labyrinth Consulting Services, Inc. • Houston, Texas

ABSTRACT

The Barnett, Fayetteville and Haynesville shale gas plays are not profitable at \$4/MMBtu Henry Hub gas prices. There are limited areas of the Marcellus Shale that are commercial at \$4/MMBtu gas prices. The portions of shale gas plays that are potentially commercial at \$6 gas prices represent less than 20% of the total drilled play areas accounting for price uplift from natural gas liquids. Commercial core areas of the Bakken and Eagle Ford shale oil plays similarly consist of less than 20% of the total drilled play areas; these are profitable at \$95/barrel of oil equivalent West Texas Intermediate oil prices.

Shale plays have finite limits to commercial production that can be mapped as relatively discreet fields. Structural geology and correlative natural fracturing is an important factor in most plays. The life cycle of most shale plays is measured in years and not in decades.

While recent natural gas price spikes are clearly related to weather anomalies, they expose supply limits not generally recognized by industry analysts. Gas production has been essentially flat since February 2012 and production growth is now approaching zero. Gas production from conventional reservoirs accounts for approximately 57% of total gas supply and is declining at about 19% annually with few new wells being drilled. Barnett and Haynesville production is declining and Fayetteville and Eagle Ford production is flat. All gas growth is from the Marcellus Shale. Although the United States has abundant gas resources, supply constraints will become more frequent until prices increase and more gas-directed drilling ensues.

BIOGRAPHY

Arthur E. Berman is a geological consultant with thirty-three years of experience in petroleum exploration and production. He currently is consulting for several E&P companies and capital groups in the energy sector. He frequently gives keynote addresses for investment conferences and is interviewed about energy topics on television, radio, and national print and web publications including CNBC, CNN, Platt's Energy Week, BNN, Bloomberg, Platt's, Financial Times, and New York Times.

He is a Director of ASPO-USA (Association for the Study of Peak Oil & Gas USA). He is on the editorial board and a frequent contributor at The Oil Drum, and an associate editor of the AAPG (American Association of Petroleum Geologists) *Bulletin*. He was past Editor of the Houston Geological Society *Bulletin* (2004-2005) and past Vice-President of the Society (2008-2009).

He has published 100 articles on geology, technology, and the petroleum industry during the past 5 years. Publication topics include petroleum exploration, oil and gas price trends and cycles, petroleum play evaluation, sequence stratigraphy, coastal subsidence, earthquakes, tsunamis, and petroleum geopolitics. He has published 11 articles on shale gas plays including the Barnett, Haynesville and Fayetteville.

During the past four years, he has made more than 50 presentations to energy sector boards of directors and executive committees, financial analyst conferences, oil & gas association meetings, and engineering and geological society meetings. He is a guest lecturer at the Rice University Jesse H. Jones Graduate School of Management.

He worked 20 years from Amoco Corporation (now BP) and has been an independent consulting geologist for 12 years.

He has an M.S. (Geology) from the Colorado School of Mines and a B.A. (History) from Amherst College.

THE LUNCHEON RESERVATION DEADLINE IS MAY 29 - CONTACT THE NOGS OFFICE

"And Looking Ahead . . ."

The next luncheon will be held on July 7. Our guest speaker, Dr. Rusty Riese, of Rice University in Houston, Texas, will present "Climate Change: Facts and Fictions." Contact the NOGS office at 561-8980 or use the PayPal link on the NOGS website (www.nogs.org) to make your reservation.

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June						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2 NOGS Luncheon Holiday Inn 11:30 AM	3	4	5	6	7
8	9	10	11	12	13	14
	SIPES Annual Meeting - New Orleans, LA					
15 Father's Day	16	17	18 NOGS Board Meeting	19	20	21 Girl Scouts LA E STEM Event Dillard University
22	23	24	25	26	27	28
29	30					

July						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4 Independence Day	5
6	7 NOGS Luncheon Holiday Inn 11:30 AM	8	9	10	11	12
13	14	15	16 NOGS Board Meeting	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

New Orleans Geological Auxiliary News

"The objective of the Auxiliary is to promote fellowship among the wives of the members of the New Orleans Geological Society and to render assistance to NOGS upon request."

The last event of the 2013-2014 Auxiliary year was a wonderful luncheon at the New Orleans Country Club on May 14th. Officers for the 2014-2015 year were installed and outgoing Board members were given a grateful thank you for their many contributions to such a successful year. Beverly Christina and Camille Yeldell provided us once again with an Installation Luncheon to remember. Look forward to picture coverage in next month's *NOGS LOG*.

I looked over the past year's events to pick out some outstanding things to highlight and found that they were all very enjoyable and very successful in attendance and a good time was had by everyone.

This coming year will be our 60th anniversary and the new Board is already making plans to make it really fun. If you would like to be a member, please fill out the application below to make sure your name is in the fall yearbook. You won't want to miss any of the exciting upcoming functions.

The Spring Social on April 5th, at the home of Ann and Louis Gilbert, had thirty-nine happy, well-fed participants. Chairmen Beverly Kastler, Linda Peirce, and Earleen Rodan, along with hosts Ann and Louis Gilbert, were pictured in last month's *NOGS LOG*. Here are a few additional pictures of other participants.

Peggy Rogers, *NOGS LOG*



Ana Cerniglia, Arthur Cerniglia



*Mary Ellis Hasseltine, Mike Fein,
Debra Fein, George Hasseltine*

New Orleans Geological Auxiliary Membership Application

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Address _____ Home Phone _____
City, State, Zip _____ Email _____
Spouse's Company _____ DUES: \$25.00

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Submitted by Tavia Prouhet

Jessica L. Barnes joins NOGS as a new member. She is currently a geophysicist for Chevron in Covington. She earned her BS in geology from Louisiana State University (2009) and MS in geophysics from the University of Hawaii at Manoa (2013). Jessica enjoys all watersports and outdoor activities and is interested in the Entertainment Committee of NOGS.

Erin V. Brenneman, Geoscientist at Chevron, joins NOGS as an active member. Erin earned her BS from the University of Arizona (2006) and MS from Indiana University (2009) in geosciences. She is interested in the School Outreach and New Geoscientists Committees of NOGS and is an active member of SGS.

Shara L. Clark joins NOGS as a student member from the University of New Orleans. She is also a student member of AAPG. Shara is interested in participating in the AAPG Student Chapter and Field Trip Committees of NOGS. She is currently pursuing a career change from Information Technology and Cyber Security in the defense industry to Geoscience in the oil and gas industry.

Christine F. Cornwell is a geologist with Chevron and joins as a new active member. Christine earned her BS at Virginia Tech in geology and biology (2010) and her MS in geology from the University of Kansas (2012).

David B. Cross is currently a graduate student at the University of New Orleans and is an active member of AAPG and GSA. He earned his BS from the University of Kentucky in geology (2012) and expects to complete an MS in geology from the University of New Orleans in 2015. David has previously worked for the NAGT/USGS as an intern.

Laura M. Dalton is a management geophysicist working in the reserves section of resource evaluation for the Bureau of Ocean Energy Management (BOEM) in New Orleans. She joins NOGS as an active member. Laura received both her BS (2009) and MS (2012) degrees from the University of Mississippi in geology.

Richard P. Kessler is a geophysicist with BOEM. Richard earned his BS from Texas A&M University in geology (2009) and MS in geology from the University of Louisiana at Lafayette (2011).

Monique T. Mitchell is a reinstated member of NOGS. She is a geophysicist with BOEM. Monique earned her BS in geology (2001) and MS in geophysics (2008) from the University of New Orleans. She is currently working as a geoscientist in the reserves section.

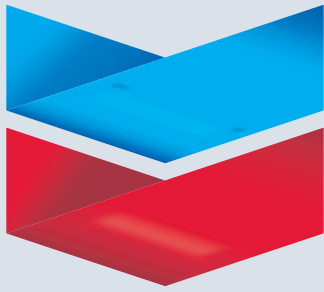
Cuong H. Nguyen is geophysicist working for Chevron and joins NOGS as an active member. Cuong earned his PhD from Azerbaijan Institute of Petroleum and Chemistry.

Henry W. Shurlds, Partner and Senior Research Consultant of Onesource Professional Search, joins NOGS as an active member. Henry has 22 years of experience with Mobil Oil and 8 years in executive search and placement in the exploration and production industry. He has a BS in petroleum engineering from Mississippi State University (1979) and an MBA from Tulane University (1999).

John R. Skinner, Geophysicist with BOEM, re-joins NOGS as an active member. John earned his BS in geology from Edinboro University (1972), MS in geophysics from the University of Oklahoma (1976), and PhD from the University of Bradford (UK) also in geophysics (1989).

Arslan M. Tashmukhambetov, Geophysicist for LLOG Exploration, earned his MS in Physics (2005) from the University of Louisiana at Lafayette and a PhD (2010) from the University of New Orleans, also in physics. Arslan joins NOGS as an active member and is a current member of ASA and SEG.

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Delta
Chapter

August 12, 2014

Technical Meeting

TUSCALOOSA & HAYNESVILLE SHAPE PLAYS

Speaker - Charlotte Batson
Batson & Company

Internationally-recognized expert on shale oil and gas from work as a petroleum engineer in oil and gas exploration and development, as well as presentations, publications, and a wide variety of projects. She serves on the Advisory Council for the Trent Lott National Center for Economic Development and Entrepreneurship, has served as a contract Influencer in the Future of Energy by Shell Group on LinkedIn, and was appointed in 2009 to the Mississippi Energy Policy Institute (MEPI) by Gov. Haley Barbour. She is frequently requested to speak on shale-related topics, and is a regular contributor to the "Energy Matters" radio show on KFVR AM 550. Recent speaking engagements include the Transfield Worley Leading Practice Forum (TW LPF) 2013 in Brisbane and the 4th Shale Gas Southern Africa Summit in Cape Town, South Africa.

11:30 - Doors Open - 12:00 - Program begins
Le Pavillon Hotel, 833 Poydras Street, New Orleans, LA



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Tuesday, August 5

Speaker:
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Senior Research Scientist
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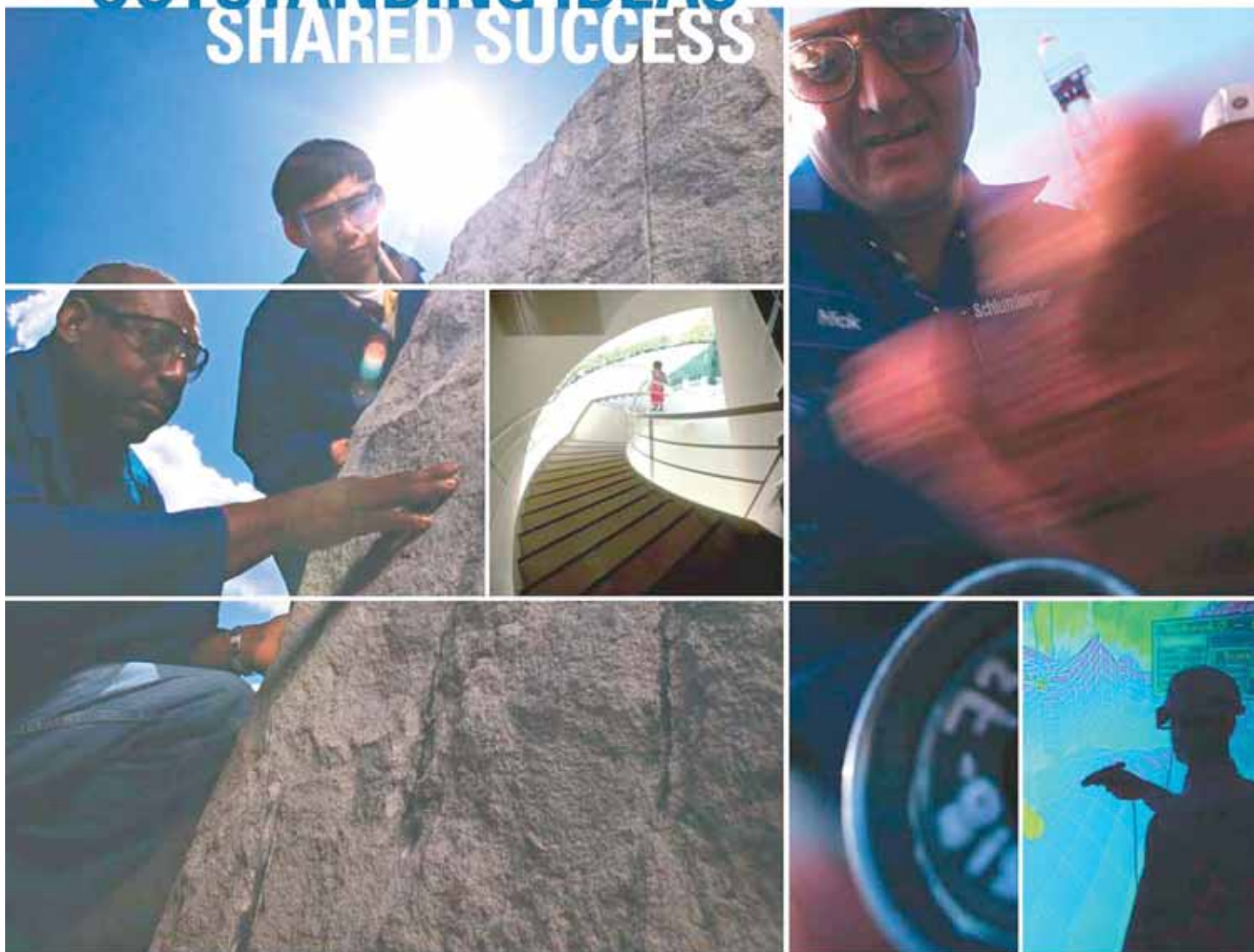
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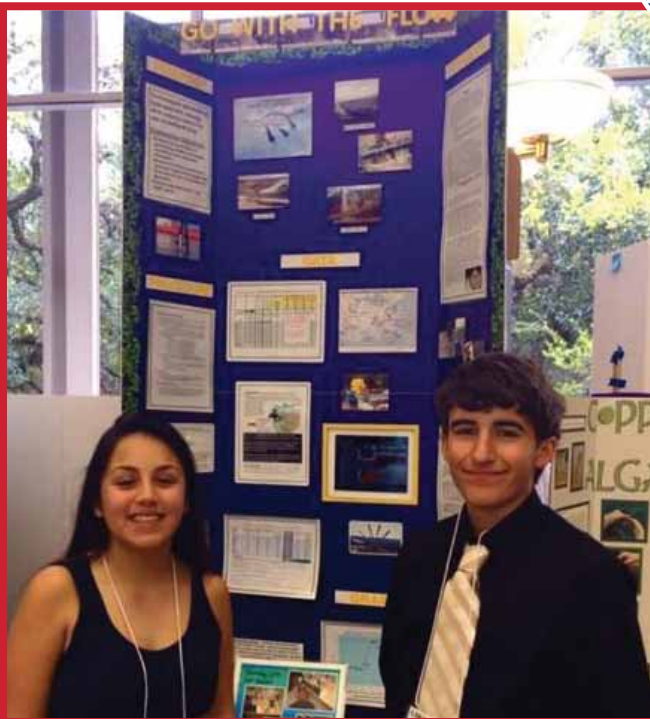
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May 2014 Luncheon

In addition to our monthly speaker, the May luncheon featured our Region IX Science Fair 1st place winners and their teachers.



Scott Hawkins, 1st place Junior Division, Christian Brothers School, with his teacher, Br. Laurence Konersmann



Joshua Hartley and Alexis Lang, 1st place Senior Division, John Curtis Christian School, with teacher Cathy Boucvalt

These photos, courtesy of Cathy Boucvalt, were shown in the pre-luncheon slideshow. Joshua and Alexis were unable to attend the May Luncheon as they were at the 7th ISWEEEP Project Olympiad in Houston.

PHOTOS COURTESY OF TOM KLEKAMP

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COMMITTEES NEED YOU!

Boy Scouts/Girl Scouts Committee:

A Chairman is needed.

This committee promotes and supports the Scouting movement and assists in all matters pertaining to geology, including the Geology Merit Badge Program. If you're interested, please contact Bill Whiting at Bootscon@aol.com or info@nogs.org. If there are any Eagle Scouts looking to assist in this worthy cause, it would be greatly appreciated.

Sponsorship Committee:

A Chairman is needed.

This committee secures funding from sponsors to help finance various activities of the Society. This committee also ensures that sponsors are thanked and adequately recognized for their generosity.

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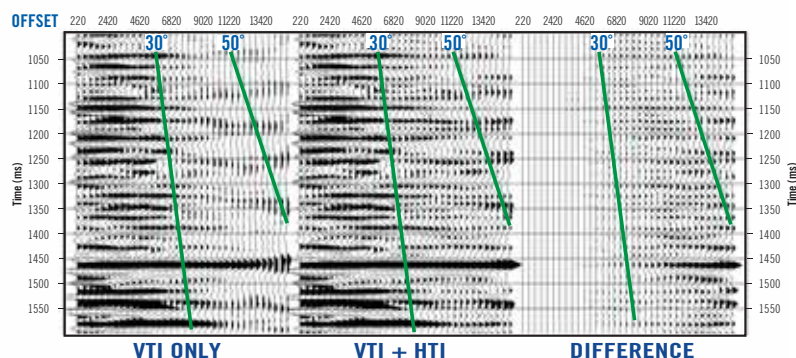
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Data from West Texas. Approximately 1% HTI Anisotropy.

Download the White Paper at:
www.globalgeophysical.com/InversionReadyGathers

South Louisiana and Offshore Gulf of Mexico Exploration and Production Activities

LAFAYETTE DISTRICT, ONSHORE AREA

By Carlo C. Christina

During the month of April, 38 permits to drill were issued by the Office of Conservation, Lafayette District, Onshore Area and Offshore Area.

NEW LOCATIONS

In **Atchafalaya Bay Field, (A)**, in St. Mary Parish, Apache will drill the #4 SL 20035 to a projected depth of 19,700 feet to test the deep Cib op sands. The bottom hole will be located 2,300 feet from the discovery well, and will be drilled 1,000 feet deeper to test the deep productive sands which are present in wells drilled to the south. It is also located 3,000 feet from the #3 SL 20035, which is currently drilling below 18,000 feet, to its projected depth of 19,750 feet. (247824)

Atchafalaya Bay Field now has 7 completed wells which are producing more than 115 million cubic feet of gas per day. For the past 2 years this field has been the largest gas producing field in south Louisiana, and the total field production continues to climb.

In Terrebonne Parish, **Four League Bay Field, (B)**, Hilcorp Energy will drill the #2 AO327 to a true vertical depth of 15,892 feet in Sec. 9, 20S-13E, or 2,000 feet deeper than the nearest producing well. The proposed well is located approximately 1 mile southwest of the #1 LL&E, which was completed flowing 10,498 MCFD from the 13,800 Sand. This well has produced more than 9 billion cubic feet of gas in only 22 months, or an average of 13,700 million cubic feet per day. (247805)

GCER Onshore will drill the #1 SL 1249, its first well on the old State Lease which was taken in June 1949 by Texaco, paying \$21.26 per acre with one-eighth royalty, for a lease containing 4,949 acres. The lease has been held by production since that time. The proposed well is located in **Caillou Island Field, (C)**, in Terrebonne Parish, 1 mile south of the nearest production. It will be drilled to a proposed depth of 17,327 feet. (247880)

Hilcorp Energy has permitted the #13 SL 2856, also located in **Caillou Island Field, (D)**, in Terrebonne Parish, 23S-19E. It is located on the extreme northwest flank of the field and 3½ miles northwest of the previously reported GCER well. Hilcorp will drill to a proposed depth of 19,419 feet. (247838)

Halcón Resources has permitted its first Tuscaloosa Marine Shale well in Louisiana in **Spillman Field, (E)**, West Feliciana Parish, and will drill the #1 Walker H in Sec. 46, 1S-2W, to a total depth of 20,800 feet. It is located approximately 2 miles northeast of the Goodrich #1 Murphy 63 H, which has produced more than 65,000 BOE in 19 months. (247865)

Halcón has reported that it will drill 6 TMS wells in the play within the next 3 months.

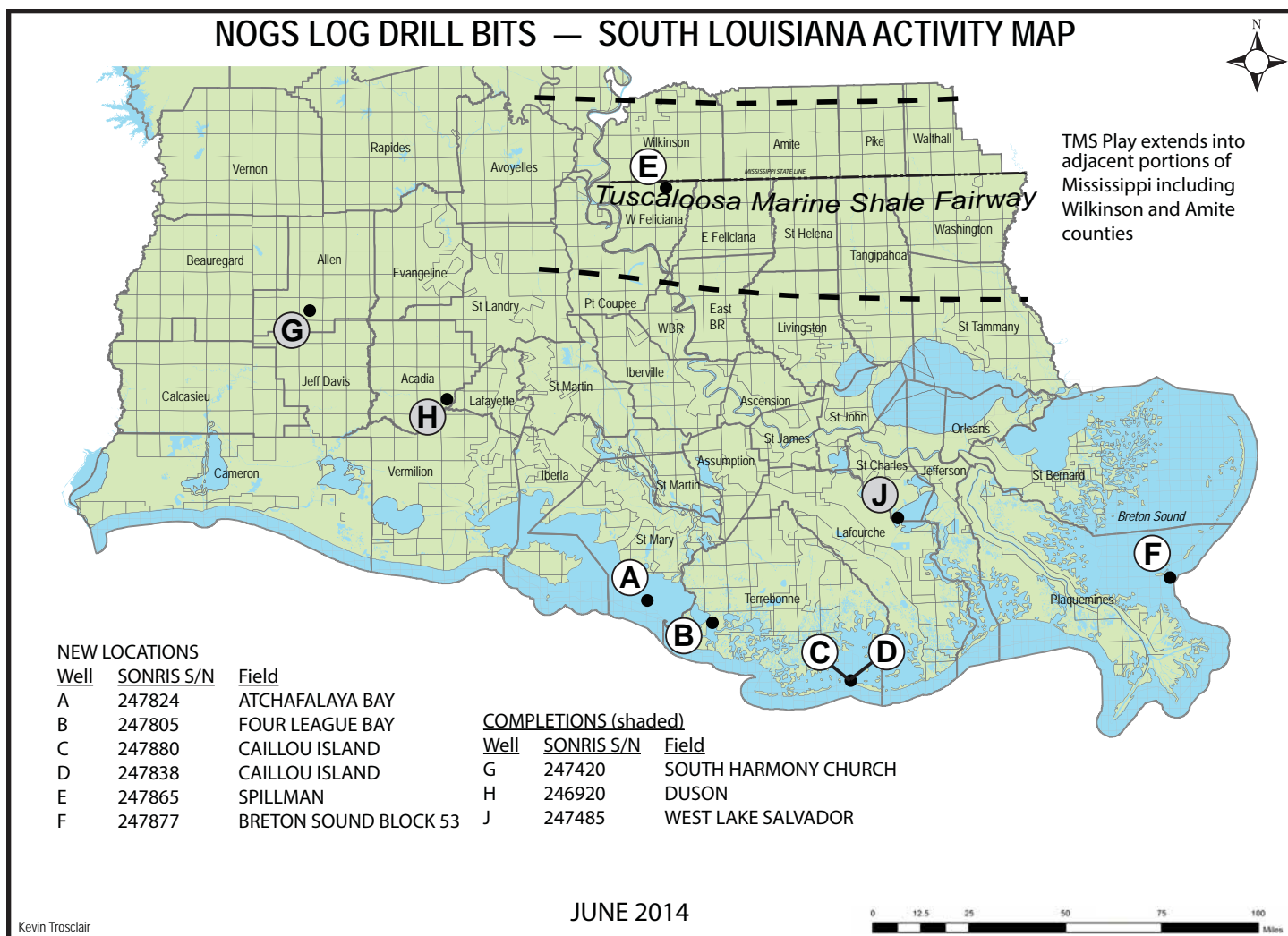
In **Breton Sound Block 53 Field, (F)**, Offshore Plaquemines Parish, Century Exploration will drill the #2 SL 17860 to a projected depth of 12,000 feet. It is located 1 mile north of production. (247877)

COMPLETIONS

In Allen Parish, **South Harmony Church Field, (G)**, Hilcorp Energy has completed the #2 Findley as a gas well in the Upper Wilcox Sand flowing 1133 MCFD and 181 BCD through perforations 12,808 to 12,828 feet. The well was drilled to a depth of 12,965 feet in Sec. 15, 6S-5W. (247420)

Forza Operating has completed its #1 Leger as a gas well in **Duson Field, (H)**, Acadia Parish in the Het lime. It was completed flowing 1800 MCFD and 5 BCD through perforations 10,000





to 10,006 feet. The well was drilled in Sec. 20, 10S-2E, to a total depth of 13,700 feet seeking Bol mex production, but was plugged back for the completion in the Het lime. (246920)

In St. Charles Parish, **West Lake Salvador Field**, (J), Tri-C Resources has completed the #3-ALT SL 20626 as an oil well flowing 456 BOPD in the Cris I Sand, through perforations 12,695 to 12,738 feet. The well was drilled in 16S-21E to a total depth of 13,698 feet. (247485)

West Lake Salvador Field is one of the most significant discoveries in South Louisiana in the past 3 years and now has 6 producing oil wells and 6 producing gas wells, with continued drilling activity in the field. To date, the field has produced more than 1 million barrels of oil and 7 billion cubic feet of gas.

Note: My most loyal reader of the Drill Bits column passed away recently. I will miss my friend, Jack Langford.

OFFSHORE GULF OF MEXICO SHELF AND DEEPWATER ACTIVITIES

by Al Baker

During April 2014, the BOEM approved **112** Gulf of Mexico drilling permits. Of these, **42** were for shelf wells, and **70** were for deepwater wells. Of the total number of permits, there were **9 new well permits** issued. These included **6 shelf** (2 exploratory and 4 development), and **3 deepwater** (3 exploratory and 0 development) **new well permits**.

On the shelf, the two new well permits were granted to **EPL Oil & Gas** for their **Main Pass 151 #2** exploratory well and their **West Delta 29 #J-2** development well. In addition, **Castex Offshore** also received two new well permits for their **South Marsh Island 57 #1** exploratory well and their **South Marsh Island 87 #I-2** development

well. The other two development well permits were issued to **Fieldwood Energy** for their **Eugene Island 187 #2** well and to **GoMex Energy Offshore** for their **Vermilion 282 #D-4** well.

In deepwater, the 2 exploratory new well permits were awarded to **Anadarko Petroleum** for their **Green Canyon 682 #2** and **Green Canyon 859 #2** wells. In addition, **Chevron U.S.A.** was awarded an exploratory new well permit to drill their **Keathley Canyon 736 #3** well.

On April 25th, IHS-Petrodata reported that the Gulf of Mexico mobile offshore rig supply stood at **113**. The marketed rig supply consisted of **87** rigs, of which **81** were under contract. The contracted versus total rig supply utilization rate is **71.7%**, while the marketed contracted versus marketed supply utilization rate stands at **93.1%**. The total marketed and contracted rig supply figures reflect an increase of 1 rig each compared to those figures reported last month. In contrast, the April 2013 fleet utilization rate stood at 72.9% with 78 out of the 111 rigs under contract.

On April 25th, BakerHughes indicated that there were **54** active mobile offshore rigs in the Gulf, which is **66.7%** of the rigs under contract mentioned above. This active rigs number is **4** more than reported last month. The current active rigs count compares to 49 active rigs during the same period last year, representing a **10.2%** increase in yearly activity.

On April 15th, the **BOEM** announced that the **Western Gulf of Mexico OCS Sale 238** will be held in New Orleans on August 20, 2014. According to the BOEM press release, Sale 238 will include approximately 3,992 blocks, covering roughly 21.4 million acres, located from nine to 250 miles offshore, in water depths ranging from 16 to more than 10,975 feet (5 to 3,346 meters). BOEM plans to offer blocks located, or partially located, within the three statute mile U.S.-Mexico Boundary Area subject to the terms of the U.S.-Mexico Transboundary Hydrocarbon Agreement. BOEM estimates the proposed lease sale could result in the production of 116 to 200 million barrels of oil and 538 to 938 billion cubic feet of natural gas.

Lower Tuscaloosa Trend: Request for Information

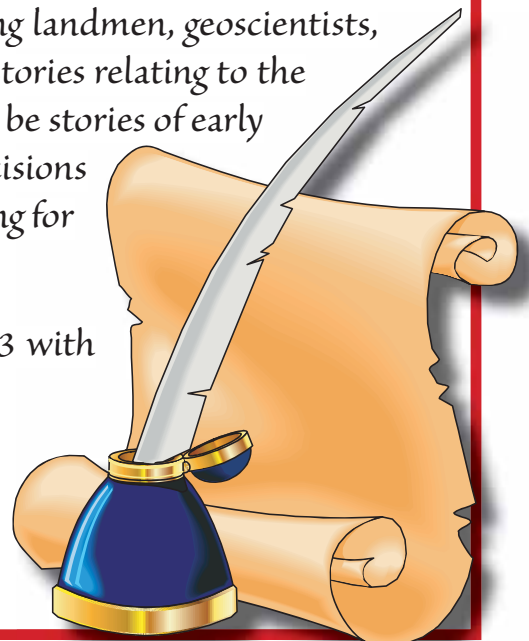
I am the Historian for the Gulf Coast Association of Geological Societies (GCAGS). My current history project is a 40th anniversary paper, or possibly a more ambitious publication, on the Lower Tuscaloosa Trend of South Louisiana.

This project will not be a technical paper, but instead a collection of “recollections” of those who worked the trend in the early days. I am contacting landmen, geoscientists, engineers, and others, soliciting a few paragraphs or pages of stories relating to the early exploration and discoveries within the trend. These can be stories of early well-sitting, key events, seismic activity, leasing, important decisions at meetings, technological breakthroughs, etc. I am also looking for photographs and newspaper articles.

Please contact me at spencerj320@gmail.com or 281-731-5823 with any questions or if you can help with this endeavor.

All the best,

Jeff Spencer



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Dedication to John C. "Jack" Langford

The Board of Directors of the New Orleans Geological Society hereby dedicates this edition of the NOGS LOG to the memory of John C. "Jack" Langford, longtime member of the Society.

Jack passed away on March 21, 2014. **He served the Society for more than 56 years in many capacities, including President.** He received the Society's highest honor when he was named co-recipient of the dedication in the 2005 GCAGS Transactions.

Jack will always be remembered for his dedication: to his family, to his church, to the New Orleans Geological Society, and to the Navy mates who served with him on the *U.S.S. Rupertus*.

The dedication below has been edited from the original as printed in the 2005 GCAGS Transactions.

John C. Langford

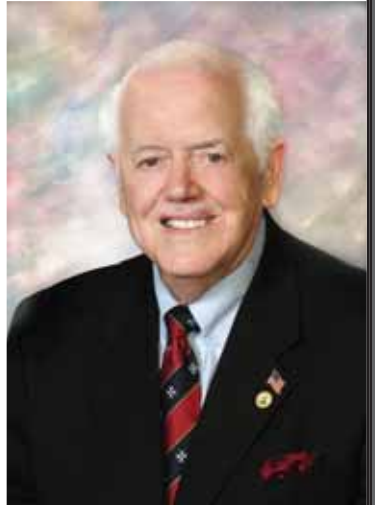
It is fitting and appropriate that one of the individuals to whom the Transactions are dedicated be John C. "Jack" Langford. Jack spent his lifetime in service to the geological community of the Gulf Coast of the United States and other parts of the World. He was active in the New Orleans Geological Society and the Gulf Coast Association of Geological Societies.

Jack was born in Algiers, Louisiana, and educated in the public schools of Jefferson Parish. Jack graduated from L. H. Marrero High School which was consolidated with Gretna and Westwego high schools to form West Jefferson High School in the nineteen fifties. After graduation from high school Jack served as a radar man in the Pacific aboard the *U.S.S. Rupertus*. Upon his discharge from the Navy, Jack entered Louisiana State University and received a B.S. in Petroleum Engineering in 1953.

Mr. Langford became an active member of the New Orleans Geological Society in 1958. Jack was a gracious, outgoing, friend of many, so he immediately became active in the Society serving on and chairing numerous committees. He had been elected Treasurer, Vice President, President Elect, and President of the Society. **He received the Outstanding Service Award of the Society in 1987 and was awarded Honorary Life Membership in 1993.** As membership chairman in 1987, Jack led the drive which took the membership to an all-time high of 1500 members, a number that has never been eclipsed. At the same time Jack chaired the Photo Directory Committee and personally took the photos of many of the members that he had recruited to join the Society. During Jack's term as President, 1991-92, NOGS celebrated its 50th anniversary. Jack made that year a special one for all the members by publishing a Golden Anniversary edition of the Membership Directory chronicling photos, events, and people through the fifty years of the Society. Jack also served as Chairman of the Memorial Foundation and as an Officer and Director of the first Board of Directors of the Corporation.

Mr. Langford provided outstanding leadership and service to the Gulf Coast Association of Geological Societies having served as Entertainment Chairman for the 1971 Convention, Publicity Chairman for the 1988 Convention and General Chairman for the successful 1997 Convention. His organization and management of the 1997 Convention is fondly remembered by all who participated and attended the Convention. **The GCAGS awarded him a Distinguished Service Award in 1997 and presented him Honorary Membership status in 1998.** Jack also served as Exhibits Chairman for the 2005 GCAGS Convention which was cancelled due to Hurricane Katrina.

Jack's professional career began with his employment by Subsurface Evaluation Company in 1953. In 1963 he and Bill Meredith formed Langford and Meredith Laboratories which became Langford and Meredith Hycalog well logging and was merged into the Analysts in 1973. Based upon Jack's recommendation the Analysts opened an office in London and he was named Managing Director. Jack and his family lived in London from 1973 to 1977. In 1977 he was transferred to Houston where he became General Manager for Frontier, Canada, Central America and South America. Jack and his family returned to New Orleans in 1984 and in 1985 he retired from the Analysts/Schlumberger and formed JCL Services. In addition to his consulting business, Jack also had a successful real estate career with Latter and Blum.



Even with Jack's active professional career, he donated his time and services to various civic and religious organizations in the New Orleans area. He served as Vice President and President of the Kiwanis club and managed and supervised a summer camp for underprivileged youth. He was a member of the Governing School Board of Saint Charles Catholic High School for three years and had been a Trustee and past Chairman on the Administrative Council of Saint Charles United Methodist Church. **Jack and his wife, the former Beverly Mahoney, raised three lovely daughters, and had five grandchildren and three great-grandchildren.**

Charles J. Corona
2005 GCAGS Transactions

Jack Langford, Beverly Langford, and Ed Picou pictured at the 2006 GCAGS Convention in Lafayette, LA. Jack and Ed were presented awards for the 2005 GCAGS Transactions Dedication and a copy of the Transactions.

Memories of Jack

"Each speaker for the NOGS monthly meeting received a stone paperweight with an attached NOGS name tag stating the date and speaker's name. It was Jack who acquired the stone, had it cut to size, and attached the name tag and felt base. He spent many hours completing each speaker's gift. He also prepared these as parting gifts for outgoing officers of the Society." - Carlo Christina

"We all remember Jack's many years of service to NOGS. I will also remember his personal gifts to those he worked with and had fun with at social events. I'm sure he was most proud of the daughters he and Beverly left for us. Thank you, Jack." - Pat Williamson

"Jack meant a great deal to me. He was my mentor when I chaired the 2005 GCAGS Annual Meeting. We spent many hours together discussing every detail for planning a successful geologic convention. Naturally, when your name gets around as a volunteer, more 'opportunities' to volunteer come in which are difficult to turn down, no matter



The Langford family at One Hyde Park Street, Their residence in London – Dec. 1973

how overextended you may be. I was explaining this to Jack during one of our meetings. Jack took a yellow sticky note, wrote 'Just say NO' on it, and then stuck it on the wall next to my desk chair. I can't say he ever heeded that advice." – Jim Zotkiewicz

"A tribute to an old, valued and trusted friend who I have admired, respected, appreciated, and known for many years, both professionally and socially. I gave him his first job when he went out on his own, and have always truly appreciated his business professionalism, integrity, and work ethic, along with his continued invaluable support of both NOGS and NOGA. Our profession and industry, together with his wonderful family and many friends, will sorely miss but fondly remember this outstanding man." – Don Andrews

"I loved Jack, but I can think of no words that can adequately describe his uniqueness." - Will Conatser

"Jack was always a wonderful and caring friend. I will miss his smile and wonderful personality. His generosity and support of NOGA and NOGS were unbelievable. He will be missed by all." - Carol Andrews

"Jack will be remembered for many things: His love, respect and devotion for Beverly, and for the London taxi he brought back when the family returned from several years in England." - Alma Dunlap

"Jack was a funny and charming gentleman who was always supportive of the Auxiliary." - Beverly Kastler

"Jack was a dear and thoughtful friend. From wherever in the world he traveled and worked, he would send souvenirs or mementos – sand from the desert, a Snow Owl carving from Alaska." – Beverly Christina

"Jack was a dear and enduring friend whose friendship I will truly miss." - Bob Douglass

"Jack was always thinking of NOGS, steering us to be a fun organization, too. He instigated many social events and will be sadly missed." - Tom Klekamp

"I met Jack as a young geologist just out of school. I will always remember his ever-present smile, his words of encouragement, and that he was always willing to help in any situation. It was an honor to know him." – Scott Wainwright

"I was honored to serve on the NOGS Board of Directors with Jack. He was a fine man and was very generous with his great smile. We will miss him and his dedication to NOGS." - Fran Wiseman

"I remember sharing a betting hole with Jack at a NOGS Golf Tournament. The tee off location was very close to a private home and it wasn't too long before Jack was engaged in a conversation with the owners and invited into their home. Partly the realtor in Jack and the other his wonderful outgoing nature, I doubt if he really knew a stranger." - Bill Whiting

"Jack went out of his way to meet and spend time with new members. He had a real love for the geologic community and encouraging others. Jack will be greatly missed." - Tom Bergeon

"I was honored to have met Jack. He always had a great advice along with a funny story. Jack always gave me a smile no matter how hard the day was going. His continued presence with NOGS inspired me carry on the NOGS torch and encourage the younger generation to participate. He will be missed, but knowing Jack, his spirit will not have a reason to miss anymore NOGS events." – Bay Salmeron

"It was Jack Langford that initially managed all of the correspondence and acquired the 501(c)3 status for the Memorial Foundation. In addition, he hired me 23 years ago, and I'm still here." – Annette Hudson

"The one thing that I remember most about Jack was his ability to turn out a superlative product regardless of the obstacles that may have confronted him. In all matters, he was a true optimist." – Ed Picou

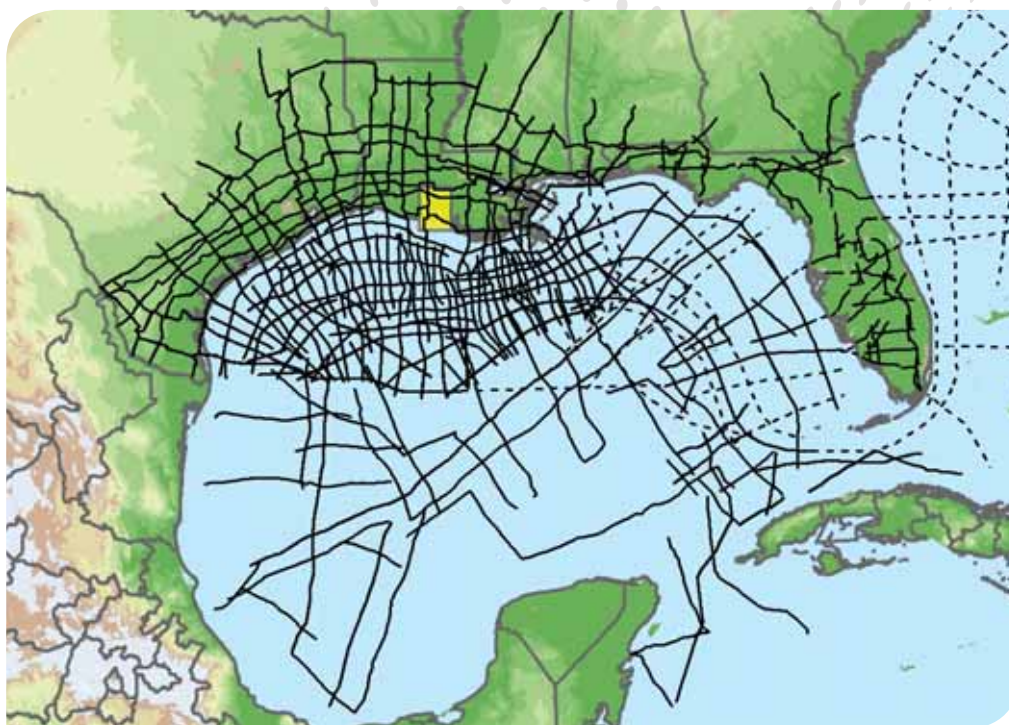
"It is always easy to complain. It is much harder to recognize in our own busy minds that someone either did as expected, or went above and beyond, and the effect that had on our day or week. As I said to Jack's daughters, their Dad taught me that it never hurt to praise, to thank, to recognize achievement. I have been NOGS Awards Chairman for over 30 years, but Jack was the champion of recognition. We spent a lot of cash on plaques the year he was President; but the lesson I learned and adapted from Jack, was to keep praising and thanking people. Now I find myself sending emails and making phone calls to

companies to let them know an employee did a good job – not just complain to a company when something went a little wrong, but to let them know that I appreciate when things go right. Thanks, Jack." – Mike Fein



"I miss seeing Jack's smiling face. Over the years, I don't think there was a person who brightened an event more than Jack. His presence and vitality always made me happy to see him. While I can't recall working with Jack, I always felt he was a good friend. Like many NOGS members who were before me, he welcomed me into the Society." - Monte Shalett

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Submitted by Sheri Richardson

Reuters.com – Allison Martell

“Freeport to buy Apache assets in Gulf of Mexico.” May 8, 2014 8:16am EDT

<http://www.reuters.com/article/2014/05/08/freeport-mc-apache-idUSL2N0NU0IB20140508>

Freeport-McMoRan Copper & Gold Inc. said on Thursday its oil and gas subsidiary has agreed to buy \$1.4 billion of Apache Corp's assets in the Gulf of Mexico.

Freeport announced a separate deal on Wednesday to sell assets in the Eagle Ford shale field in Texas to Encana Corp for \$3.1 billion.

Fuelfix.com - Jennifer A. Dlouhy

“Gulf’s bounty commands attention amid shale drilling boom.” May 4, 2014 at 6:00 am

<http://fuelfix.com/blog/2014/05/04/gulfs-bounty-draws-drillbits-through-miles-of-water-millions-of-years/>

Seven decades after oil companies first bored wells beneath the Gulf of Mexico, it retains its allure, as recent discoveries tempt the industry with the prospect of pulling crude from 200-million-year-old rock buried miles below the seafloor.

The Gulf’s appeal is so strong that it anchors many oil companies’ portfolios, despite an onshore drilling boom that is putting rigs to work from North Dakota to West Texas. “This basin keeps reinventing itself,” said University of Texas Austin geologist John Snedden. “We keep finding new plays. And that’s why everybody’s here.”

And while offshore wells can be at least 30 times more expensive than the ones on land, they promise bigger yields — with production that can span decades — in contrast to what some energy analysts describe as the “drilling treadmill” necessary to keep oil flowing from onshore shale plays.

Companies from around the world are active in the Gulf, employing more than 40 mobile drilling units to work on projects stretching hundreds of miles from the coast. That reflects a resurgence in Gulf action. The drilling level now is higher than before the slowdown prompted by the deadly 2010 blowout of BP’s Macondo well that killed 11 workers and spilled oil for three months.

Technological innovations are helping to unlock untapped areas of the Gulf — and even allowing companies to breathe new life into old projects. For instance, BP is adding new wells to tap still-unrecovered resources around its Thunder Horse and Atlantis platforms. And Shell is working to link its 100-million-barrel Cardamom field to its Auger facility, 20 years after that platform first debuted in the Gulf. Shell expects Cardamom production to add 50,000 barrels of oil equivalent in daily production.

“It’s a story of opening up new frontiers,” said John Hollowell, an executive vice president at Shell Oil Co.—the Houston-based U.S. arm of Royal Dutch Shell.

“The combination of continued advancements in technology and innovation, combined with attractive new frontiers to open up new opportunities for oil and gas development make the Gulf of Mexico a place of attractive investment now and well into the future.”

The industry is exploiting advances in seismic equipment and supercomputing power that make it possible to see through salt deposits to once-invisible layers beneath and generate detailed maps of the geology.

Many deep-water Gulf wells have plumbed the Miocene play, a relatively porous layer of the earth’s crust formed up to 24 million years ago. Recent Miocene projects have focused on oil-bearing rock below a canopy of underground salt. But oil companies also are investing more in the Lower Tertiary, deposited during the older Paleogene period of the earth’s geological history and located even farther underground.

Also beckoning is the Jurassic Norphlet formation — 200 million-year old sediment where Shell is appraising recent discoveries, and where Murphy Oil is drilling its Titan wildcat well in hopes of unlocking a potential 200-million-barrel resource.

Onshore shale production requires pulling oil out of impermeable rocks with hydraulic fracturing, using sand, water and other fluids under pressure to create fissures underground. Gulf wells, so far, generally have tapped into more porous sediment and large pools formed from biological deposits tens of millions of years ago. Such projects can keep delivering oil long after the wells are bored.

Unconventional, dense onshore shale, by contrast, often requires continual drilling and fracturing to keep the crude flowing. That cycle may be unsustainable, especially if oil prices decline, said Rebecca Fitz, senior director of upstream strategy and completion for IHS Energy.

“You have to drill to produce,” Fitz said. “Some companies have told me the only way you make money is if you stop drilling, but then production decreases.”



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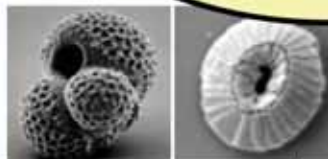
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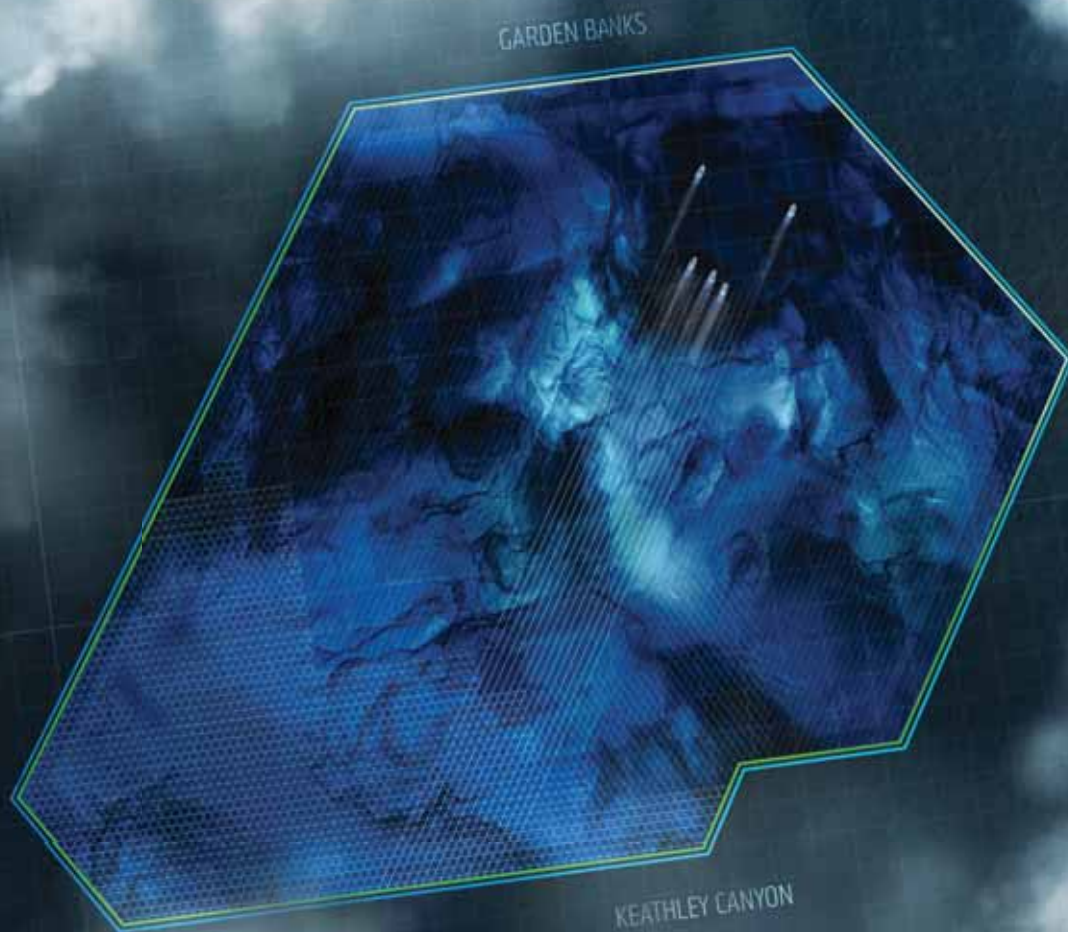


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