

NOGS LOG

NOVEMBER 2016

Volume 57, Number 5



NOVEMBER 7 - NOGS LUNCHEON

Presentation: Application of Global Outcrop Belts to Exploration and
Field Extension in the Deep Water Gulf of Mexico

Guest Speaker: Jonathan R. Rotzien, Ph.D.

Basin Dynamics, LLC • Houston, Texas

SOCIETY FOR EARTH & ENVIRONMENTAL SCIENCES
UNIVERSITY OF NEW ORLEANS//////////

NOV
11
////////

THE 42ND ANNUAL MINERAL AUCTION

hosted by Second Line Brewing



7pm-till



433 N. Bernadette Street
New Orleans, LA 70119



SOCIETY FOR EARTH AND
ENVIRONMENTAL SCIENCES

Minerals, fossils, jewelry and much more!



Published monthly by the New Orleans Geological Society.
This issue was sent to press on October 27, 2016.

Interested in contributing to the NOGS LOG? Please submit items by the 1st Friday of the month to nogseditor@gmail.com. Advertising requests should contact the NOGS office at info@nogs.org.

IN THIS ISSUE

Regular Features:

On The Cover.....	3
From the Editor.....	3
From the President.....	5
NOGS Officers / Contacts.....	6
Upcoming Events & Activities.....	7
NOGS Luncheon Presentation.....	8
Calendar of Events: November & December.....	11
NOGA News.....	12
Drill Bits.....	18
On the Rocks.....	27
NOGS Memorial Foundation.....	29
FONO Fund.....	29

Special Features:

42nd Annual Mineral Auction.....	2
New 2016 Ad Rates!.....	4
NOGS Goes BIG - Girl Scouts & Geology.....	15
2016 B.I.G. Photo Collage.....	16
NOGS - The Early Years - N.O. Times-Picayune.....	20
GCAGS September 2016 Convention Photos.....	22
NABG: Making Diversity More Than A Buzzword.....	24
Call For Volunteers.....	28
2017 ASBOG Exam Information.....	30
2016 NOGS Holiday Christmas Party.....	31



From the Editor

By the time this issue goes to press, we will be days away from Election Day 2016. Though the message it is oft repeated on cable, print, and social media, I remind each NOGS member of the vital necessity of taking the time to vote and uphold our political process on Tuesday, November 8th. Not only do we address the challenge of electing a new U.S. President, but Louisiana faces a Congressional Primary on that day as well as six proposed amendments to the Louisiana Constitution. In light of the heavy local and national coverage dedicated to the presidential race, many of the regional and state level elections that most directly impact our community received only passing attention in the sphere of public discussion. So I encourage you to take the time to research issues and candidates further down on the ballot before you walk into the voting booth this month. The NOGS community represents a wide spectrum of political thoughts, creeds, and experiences, and I implore every member to take this opportunity to take action on those beliefs by making an informed vote.

Laura
Laura Sorey, Editor



Contact:
Annette Hudson
info@nogs.org

2016 ADVERTISING RATES

The New Orleans Geological Society was formed in 1941, with an initial membership of only 55. It has always been an active professional society and presently has a membership of 500.

AD SIZE	2015 RATE	NEW 2016 RATE!
Full Page (7.5"x10")	\$3500	\$1750
Half Page (3.75"x10" or 7.5"x5")	\$1850	\$925
Quarter Page (3.75"x5" or 7.5"x2.5")	\$1000	\$500
Eighth Page (3.75"x2.5")	\$600	\$300
Twelfth Page (3.75"x1.65")	\$375	\$188
Note Size (3.75"x.75")	\$120	\$60



PREMIUM LOCATIONS

Inside Front Cover.....	+30%
Opposite President's Page.....	+20%
Opposite Oral Abstract.....	+20%
Inside Back Cover	+30%
Outside Back Cover	+40%



LOUISIANA BOARD OF PROFESSIONAL GEOSCIENTISTS



APPLY FOR A LICENSE



ASBOG TESTING



REVIEW THE REQUIREMENTS

www.lbopg.org

PROTECTING OUR NATURAL RESOURCES

Our mission is to protect the public health, safety, and welfare and to guard the state's natural resources with regard to environmental and civil projects where a geoscientific review and evaluation is required in the making of recommendations of any geoscientific components of said projects.



President

As part of my duties as President, I give a yearly summary of the activities of NOGS at the Gulf Coast Association of Geological Societies (GCAGS) Annual Board Meeting. The meeting is held at the GCAGS Annual Convention which was in Corpus Christi this year. I focused on NOGS actions to educate its members, university level geology students, and young people. The report I presented, which is summarized below, was very well received and showed NOGS to be one of the most active societies in the Gulf Coast region.

Pre-College Geology Education - Last year, NOGS made a financial commitment of \$50,000 over a period of ten years to both the Louisiana Children's Museum and the Children's Museum of St. Tammany Parish. In April, NOGS and the LCM presented the annual SuperSaurus Saturday, with almost 1,000 children attending. Also in April, NOGS was part of a team put together by PIPE (Petroleum Industry Promoting Education) that taught students about the formation and development of an oil field at the "Hands On" STEM Day. The event, which was held at the stadium of the New Orleans Zephyrs baseball team, attracted over 6,000 students from fifty schools. Throughout the year, NOGS members made presentations at elementary and secondary schools in the greater New Orleans area using our travelling fossil kits and rock and mineral kits.

In February, NOGS members again acted as judges at the Greater New Orleans Science and Engineering Fair for junior and senior high school students. Our May luncheon featured an oral presentation by two high school students and a poster by a junior high school student, all of whom had placed first in Earth Science at the Fair. In September, NOGS took part in the "Believe in Girls" event promoting girls interest in STEM subjects. Several women NOGS members served as role models for the 1,400 girls who attended.

University Activities - In October, NOGS awarded scholarships totaling \$30,000 to junior, senior, and graduate students studying geology at Louisiana State University, the University of New Orleans, and Tulane University. Attendance at NOGS monthly luncheon technical presentations is free to students thanks to the

donations of our members. In March, NOGS donated \$2,000 to the Imperial Barrel Award. In April, the UNO team mentored by a NOGS member won the Gulf Coast IBA Competition.

Professional Activities - In November, the NOGS Board approved the sponsorship of a major technical project which uses shallow seismic data to assess the impact of active surface faults, buried channels, and subsidence on coastal restoration projects. NOGS plans to collate these studies into an atlas of surface faults and predictive subsidence maps for use by both governmental and corporate entities in their infrastructure project assessments. The project has gotten off to a fast start with keen interest shown by corporate, university, and governmental groups.

In December, the NOGS Holiday Christmas Party was held at the home of a longtime member and was a very well-attended and enjoyable affair. NOGS also sponsored two other events: a Spring Social gathering in March at the Second Line Brewing Company, co-hosted with SPE-Delta Section, focused on attracting young professionals; and the annual NOGS Fall Kickoff Party at Rock-n-Bowl in September. In April, NOGS partnered with the Petroleum Landman's Association of New Orleans to sponsor our Annual Golf Tournament.

NOGS co-sponsored the 20th Annual Deepwater Symposium held on August 16-18 at the Marriott Hotel in New Orleans. NOGS also hosted a short course on August 16th presented by Dr. Mark Rowan entitled "Structure and Salt Tectonics of the Gulf of Mexico."

All of the activities listed above were the result of our members giving their time and talents to help make NOGS a vibrant, active organization. Many thanks to all of them.

Please remember that this year's NOGS Holiday Christmas Party will be held on Friday, December 16 at the home of Kathy and Mark McRae from 7-10 pm. The cost is a very reasonable \$35 for members and \$25 for students. My wife and I went for the first time last year and had a very good time.

Lastly, I hope you all have a safe and very happy Thanksgiving.

Al Melillo



NOGS Office

Office Manager: Annette Hudson

Phone: 504-561-8980 • Email: info@nogs.org • Website: www.nogs.org

The office is located at 810 Union Street, Suite 300, New Orleans, LA 70112.

Correspondence and all luncheon reservations should be sent to the above address.



BOARD OF DIRECTORS

		Company	Phone	E-mail
President	Al Melillo	Retired - Chevron	504-491-0683	allanmelillo@bellsouth.net
Vice President	Alex Janevski	Shell	504-425-6214	gregory.janevski@shell.com
Secretary	Bill Haworth	Retired - chevron	985-502-8184	hwdrock@aol.com
Treasurer	Margaret McKinney	TGS	504-524-3450	margaret.mckinney@tgs.com
President-Elect	Kathy Haggar	Riparian Inc.	225-953-1076	kathy_riparian@bellsouth.net
Editor	Laura Sorey		601-421-3352	nogseditor@gmail.com
Director 2017	J. David Cope	Rising Natural Resources LLC	504-214-6754	greatmre@aol.com
Director 2018	Brenda Reilly		504-430-4240	brendaereilly@hotmail.com
Director 2019	Jennifer Connolly	Shell	504-425-6411	jennifer.connolly@shell.com

COMMITTEE

	Chairperson			
AAPG Delegates	William M. Whiting	Consultant	504-947-8495	bootscon@aol.com
AAPG Student Chapter	Austin McGlannan	LSU	786-877-2040	amcglan2@tigers.lsu.edu
AAPG Student Chapter	Tushar Bishnoi	Tulane University		tbishnoi@tulane.edu
AAPG Student Chapter	Joshua Flathers	UNO	504-952-6437	jrlfathe@uno.edu
Advertising-Log	TBD			
Auditing	David E. Reiter	Stone Energy Corporation	504-593-3623	reiterde@stoneenergy.com
Awards	Michael N. Fein		504-717-6465	lfeinmn1@cox.net
Ballot	Margaret McKinney	TGS	504-524-3450	margaret.mckinney@tgs.com
Best Paper	Bay Salmeron	Chevron	832-854-6431	bay.salmeron@chevron.com
Entertainment	Kathy Haggar	Riparian Inc.	225-953-1076	kathy_riparian@bellsouth.net
Environmental	Daisy Pate	Pontchartrain Partners	504-862-1775	daisy.pate@gmail.com
External Affairs	TBD			
Finance and Investment	Margaret McKinney	TGS	504-524-3450	margaret.mckinney@tgs.com
Historical	Edward B. Picou, Jr.	Consultant	504-529-5155	epicou@bellsouth.net
Membership/Directory	TBD			
New Geoscientists (NGNO)	Jeremy Prouhet	Chevron	985-773-6927	Jeremy.Prouhet@chevron.com
Nominating	Jim Zotkiewicz	Zot Oil & Gas	504-799-1648	jimzot38@zotoil.com
Non-Technical Education	Duncan Goldthwaite	Consultant	504-887-4377	DGldthwt@aol.com
Office Operations	David E. Reiter	Stone Energy Corporation	504-593-3623	reiterde@stoneenergy.com
Publications Sales	Edward B. Picou, Jr.	Consultant	504-529-5155	epicou@bellsouth.net
School Outreach	Thomas C. Bergeon	Upstream Exploration	504-832-3772	tom.bergeon@upstreamexp.com
Special Projects	TBD			

NOGS LOG STAFF

Editor	Laura Sorey		601-421-3352	nogseditor@gmail.com
Editor-Elect	Sassan Mouri	Chevron	985-773-7225	smouri@chevron.com
Auxiliary	NOGA Officers and Directors	NOGA		
Drill Bits	Al Baker	Beacon Exploration, LLC	504-836-2710	ABaker1006@aol.com
Drill Bits	Carlo C. Christina	Retired (C & R Expl. Inc.)		carlocc398@aol.com
Drill Bits	Kevin Trosclair	BOEM	504-202-7997	kevintrosclair@gmail.com
Staff Photographer	Arthur Christensen	Shalimar Consulting	985-893-2013	arthur_shalimar@yahoo.com
Layout / Printing	Kristee Brown	Creative Graphics & Printing, LLC	985-626-5223	kpbrown@bellsouth.net
Webmaster	Charles Miller	OCSBBS Website	504-439-3164	cmiller@ocsbbs.com

NOGS AUXILIARY

Officers		Phone	Directors	Year	Phone
President	Trudy Corona	504-737-6101	Linda Pierce	2016-18	504-393-7365
Vice-President	Margie Conatser	504-469-2496	Genny Melillo	2016-18	985-725-1553
Secretary	Trez Marie Zotkiewicz	504-831-3023	Alma Dunlap	2015-17	504-737-2678
Treasurer	Judy Lemarié	504-393-8659	Jean Jones	2015-17	504-738-8091
Parliamentarian	Camille Yeldell	504-835-7467			
Member-at-Large	Mary Walther	504-392-9332			



November 7 • NOGS Luncheon

Holiday Inn Downtown Superdome

\$3.00 validated parking in hotel garage

Presentation:

Application of Global Outcrop Belts to Exploration and Field Extension in the Deep Water Gulf of Mexico

Guest Speaker:

Jonathan R. Rotzien, Ph.D.

Basin Dynamics, LLC • Houston, Texas

See pages 8 & 9 for Abstract and Biography

HOLIDAY INN DOWNTOWN SUPERDOME

Check with concierge or
front desk for location.

Lunch served at 11:30 am

ADMISSION:

With reservation..... \$30.00

Without reservation \$35.00

Student Member with reservations..... FREE

November 9

Greater New Orleans Joint Society Luncheon

11:00 a.m. • New Orleans Marriott • New Orleans, LA

For more information, visit:

www.api-delta-org/media/36377/api_2016_joint_society_luncheon_both_pages.pdf

December 5

NOGS Luncheon

Speaker: Hays Town, Jr.

Topic: Preservation of the Baton Rouge Aquifer

11:30 a.m. • Holiday Inn Superdome • New Orleans, LA

For more info and reservations, contact: annette@nogs.org or 504-561-8980

November 11

42nd Annual UNO Mineral Auction

7:00 p.m. - till

Second Line Brewing • 433 N. Bernadette St. • New Orleans, LA

For more information, see inside front cover of this issue

December 16

NOGS Holiday Christmas Party

7:00 p.m. to 10: p.m.

Home of Catherine & Mark McRae • 1347 Moss St. • New Orleans, LA

\$35 per member • \$25 per student

See inside back cover of this issue for more information.

NOGS CONTACT LIST

Continued from previous page

MEMORIAL FOUNDATION

BOARD OF TRUSTEES

2015-2016	Chairman	David E. Reiter
2015-2016	Secretary	Al Melillo
2016-2017	Trustee	J. David Cope
2016-2017	Trustee	Tom Klekamp
2017-2018	Trustee	Chuck Holman
2017-2018	Trustee	Al Baker
2018-2019	Trustee	Kelli Hardesty
2018-2019	Trustee	William M. Whiting

Company

Stone Energy Corporation
Retired - Chevron
Rising Natural Resources LLC
Amber Resources LLC
Beacon Exploration, LLC
ERM
Consultant

Phone

504-593-3623
504-491-0683
504-214-6754
985-630-2480
504-975-6735
504-836-2710
504-846-9245
504-947-8495

E-mail

reiterde@stoneenergy.com
allanmelillo@bellsouth.net
greatmre@aol.com
ekle1959@gmail.com
charleswholman@bellsouth.net
abaker1006@aol.com
kelli.hardesty@erm.com
bootscon@aol.com

AAPG DELEGATES

Term Ends

2017	Elizabeth McDade	McMoRan Exploration Company	504-582-4510	elizabeth_mcdade@fmi.com
2017(a)	G. Alex Janevski	Shell	504-425-6214	gregory.janevski@shell.com
2018	Art Johnson	Hydrate Energy International	504-220-6208	artjohnson51@hotmail.com
2018	William M. Whiting	Consultant	504-947-8495	bootscon@aol.com
2018(a)	Dave Balcer	Chevron	985-773-6725	dbalcer@chevron.com
2018(a)	Earl Cumming	Reservoir Frameworks LLC	985-630-6898	earlcumming@bellsouth.net

Nov. 7 NOGS Luncheon Presentation

☆☆☆ at the Holiday Inn Superdome ☆☆☆

Application of Global Outcrop Belts to Exploration and Field Extension in the Deep Water Gulf of Mexico

Presented by

Jonathan R. Rotzien, Ph.D.

Basin Dynamics, LLC • Houston, Texas

ABSTRACT

Exploration and field extension wells drilled in the Gulf of Mexico continue to face key geologic risks including reservoir presence and reservoir deliverability. In particular, the deep water Paleogene Wilcox Formation shows a broad spectrum of lithofacies, depositional architecture, and reservoir quality over a stratigraphic interval exceeding 6000 ft in the thickest parts of the trend. Further, a number of industry-sponsored studies have argued that the depositional environment for this formation ranges from traditional leveed channels, to sandstone-rich lobes that lack distributary channels and conform to the shape of the underlying topography, to sandstone-poor overbank deposits that likely represent deep water background sedimentation. Clearly, there is room to enhance the understanding of the sedimentology, stratigraphic architecture, and reservoir characterization of target intervals in this trend.

One of the methods to better understand the uncertainty in Gulf of Mexico petroleum reservoirs is via the study of global outcrop analogues. This presentation features segments of three of the most thoroughly studied and classic deep water outcrop belts from the Carboniferous West Clare Basin, Ireland, to the Paleogene basins of Southeast France, to the Cretaceous Great Valley Group of California, to highlight the stratigraphic complexities and similarities of each system to the Gulf of Mexico. The history of exploration into these turbidite-dominated outcrops began well over a half century ago and inspired the famous work that led to the identification of Bouma and Lowe division terminology. Today, these systems remain relevant as reservoir analogues for petroleum provinces and will continue to be useful for years as the nature of industry challenges evolve.

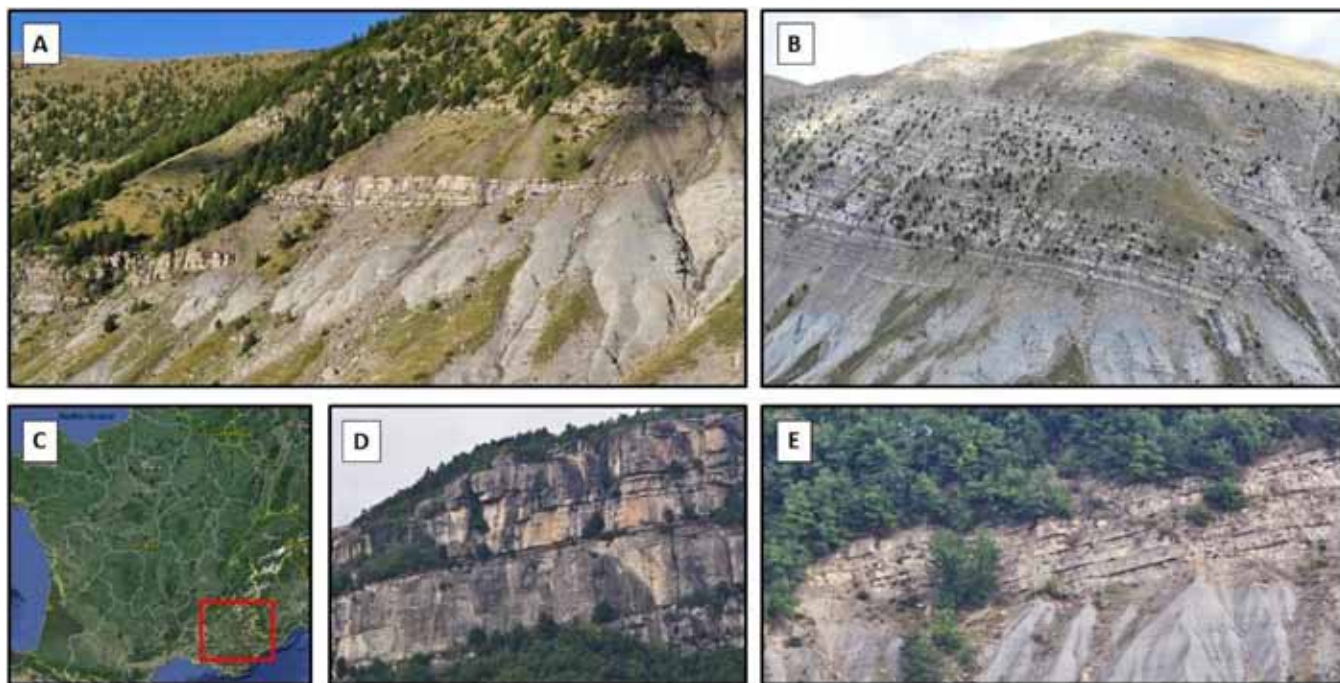


Figure 1. Depositional architecture and a variety of deep water sandstone margins exposed in the Eocene Annot Sandstone, Southeast France. A) Southern margin of Le Sommet de Denjuan showing three overbank splays that onlap blue marl at the basin margin, B) northern margin of Le Sommet de Denjuan showing a frontal splay complex overlain by a channel complex, C) study area for the Annot Sandstone in Southeast France highlighted by the red box, D) sandstone-on-standstone channel margin, part of a larger feeder channel complex above the town of Annot, and E) laterally continuous turbidite packages that onlap a steeply dipping basin margin ($>10^\circ$) near the village of Braux.

Despite decades of research, two important questions have not been solved using the deep water outcrops in Ireland, France, and California. Using a core drilled through these outcrops, (1) can depositional environment be distinguished and lateral bed continuity be estimated using a process sedimentology approach, and (2) can deep water sandstone margins be recognized and predicted? These questions address reservoir extent and reservoir quality using common core data that would be acquired in a routine drilling program. Characterization of high resolution stratigraphic data

including grain size, sedimentary process, bed thickness, and bed length from previously unpublished sections in each system reveals the range of solutions to both questions as well as the applicability of the data in quantifying geologic risk and reducing uncertainty in modern Gulf of Mexico drilling programs. Additionally, these results provide useful insights for assessing performance of petroleum reservoirs in comparable siliciclastic strata, both within the Gulf of Mexico and more generally.

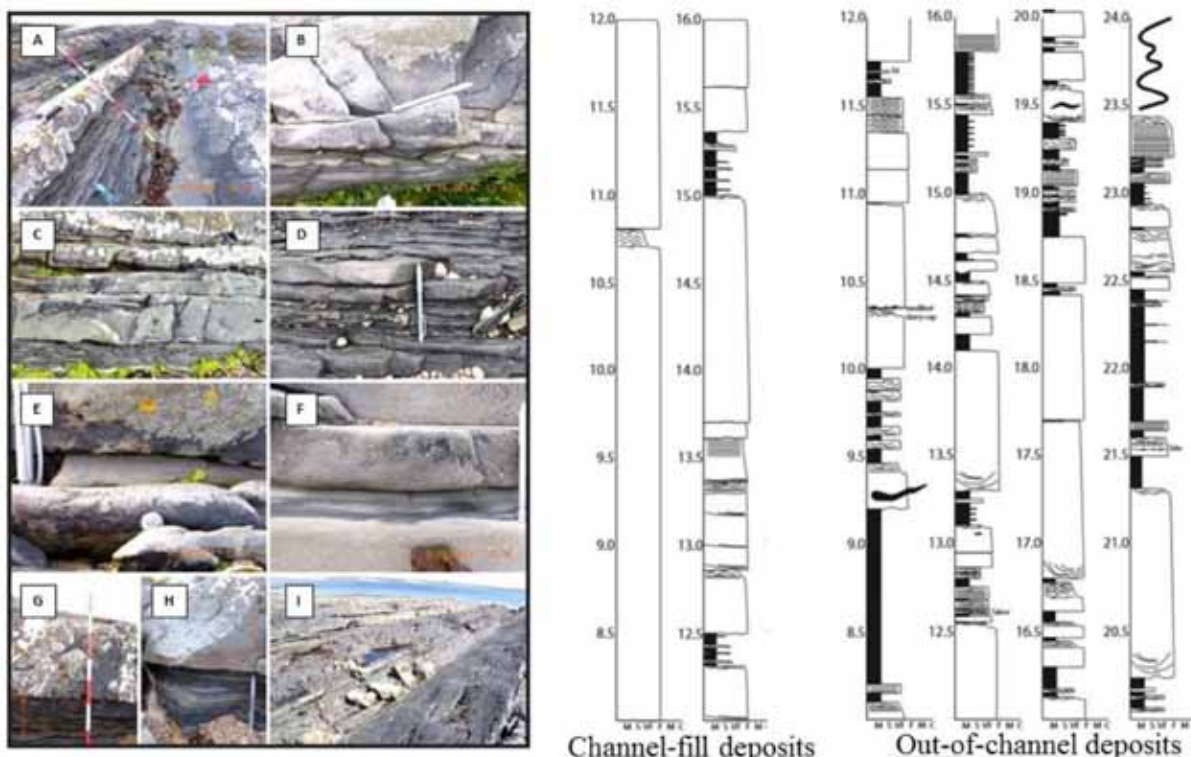


Figure 2. Photographs of Pennsylvanian Ross Sandstone beds in the vicinity of Rinevilla, County Clare, Ireland, and sample measured sections of channelized (8 m interval above middle) and non-channelized (16 m interval above right) intervals. The main lithofacies include thick-bedded sandstone, medium- to thin-bedded sandstone and mudstone, and mudstone. Some of the thick mudstone intervals show evidence of remobilization and deposition due to slumping or mass-transport processes. The majority of sandstone intervals exhibit diverse sedimentary structures, and include partial Bouma Ta-e sequences, as well as M and H divisions representing deposition via transitional flow. This observation implies a significant reinterpretation of the flows that deposited these beds, because historic research suggests these beds were deposited strictly via direct suspension sedimentation and do not show evidence for traction sedimentation. Red and white intervals on scale are 20 centimeters.

BIOGRAPHY



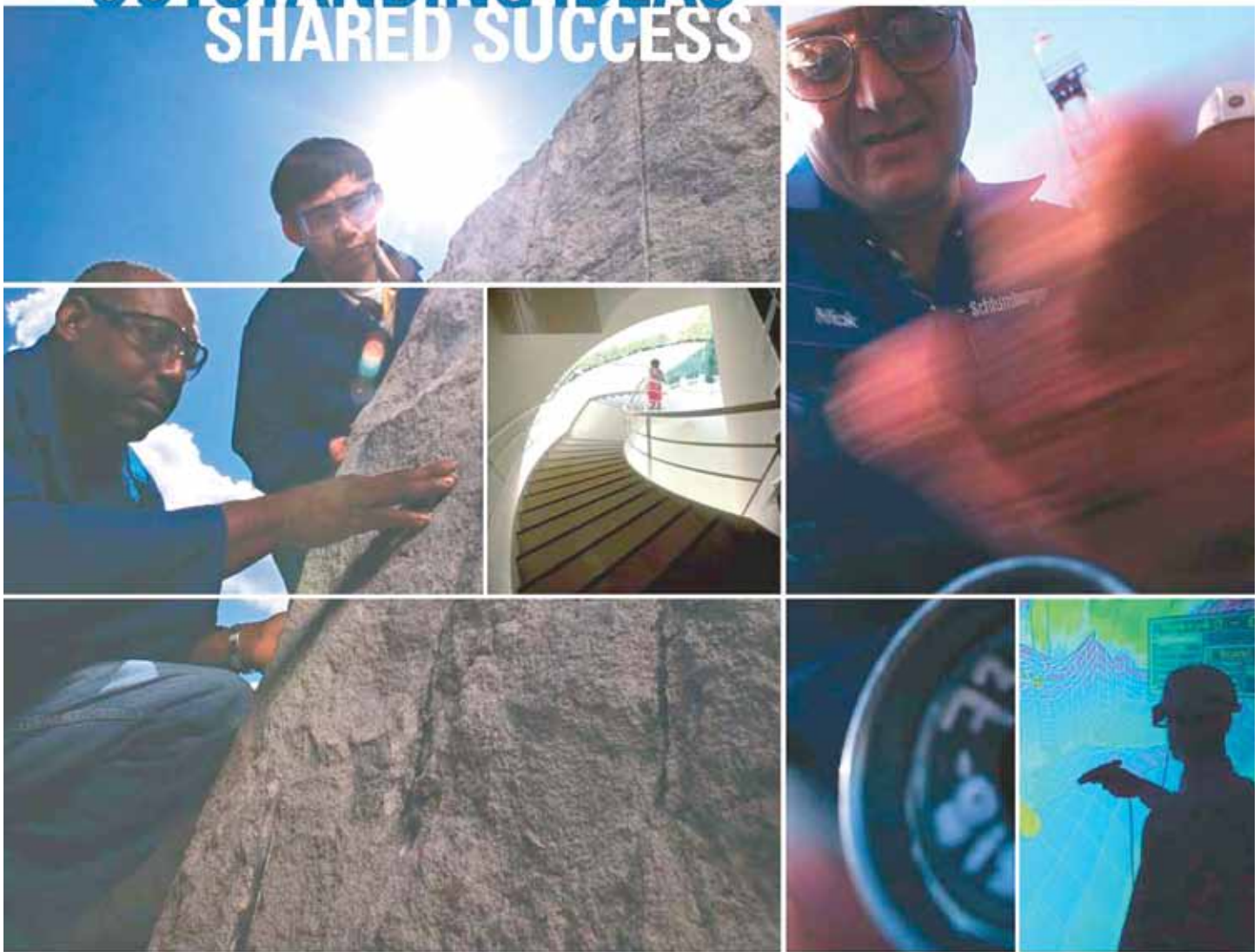
Dr. Jon Rotzien is president of Basin Dynamics, LLC. His expertise is the sedimentology and stratigraphy of deepwater depositional systems, basin analysis, and source-to-sink sediment transfer. Jon aims to solve key challenges in the exploration and production of petroleum, including reservoir presence and quality forecasting in frontier basins, and reservoir connectivity, distribution, and deliverability. Prior to his present position at Basin Dynamics, he was an exploration and appraisal geoscientist at BP. He received a Ph.D. in Geological and Environmental Sciences from Stanford University and a B.A. degree in Geology from Colorado College. He has published peer-reviewed research papers and scientific conference proceedings pertaining to reservoir quality, reservoir characterization, petroleum geology, sequence stratigraphy, process sedimentology, basin analysis, and geophysics.

THE NOV. LUNCHEON RESERVATION DEADLINE IS NOV. 4 - CONTACT THE NOGS OFFICE

"And Looking Ahead . . ."

The next luncheon will be held on December 5. Our guest speaker, Hays Town, Jr. of Town Construction Company (retired), will present *Preservation of the Baton Rouge Aquifer*. Contact the NOGS office at 504-561-8980 or use the PayPal link at www.nogs.org to make your reservation.

OUTSTANDING IDEAS SHARED SUCCESS



WHAT CAN MILLIONS OF IDEAS, thousands of patents, and hundreds of nationalities deliver? Success. Listening to the ideas of our clients and colleagues around the globe has made Schlumberger the world's leading technical services company. Your experiences are catalysts for our innovation.

Schlumberger invests in a worldwide community of research and development centers—from Boston to Dhahran, Beijing to Moscow, Stavanger to Cambridge—encouraging our brightest minds to find new ways to improve efficiency, productivity, and safety, every day.

Through our commitment to technology research and the support of our global network of local experts, Schlumberger is leading the way into the future.

www.slb.com

Schlumberger



CALENDAR OF EVENTS: NOVEMBER — DECEMBER 2016

If you know of upcoming seminars or academic events that may be of interest to our members, please email the event details to Laura Sorey at nogseditor@gmail.com to be included in the monthly calendar.

2016	EVENT	LOCATION	CONTACT / INFO
4 Nov	Tulane Seminar Series Gregory Holk "A Stable Isotope Exploration of Tectonic Controls on Crustal-Scale Hydrogeology: Faults as Superhighways of Crustal Fluid Flow" Cal State LB	Noon Room 108 - Jones Hall	www2.tulane.edu/sse/eens/events-and-seminars/seminars/index.cfm
4 Nov	LSU Lecture Series Nicole Gaspirini "The Role of Climate and Weathering on Bedrock River Incision in Hawaii" Tulane University	3:30 pm LSU Baton Rouge E137 Howe-Russell-Kniffen	www.lsu.edu/science/geology/seminars/item72050.php
7 Nov	NOGS Luncheon Jonathan R. Rotzien, Ph.D. Basin Dynamics, LLC "Application of Global Outcrop Belts to Exploration and Field Extension in the Deepwater Gulf of Mexico"	Holiday Inn Superdome	annette@nogs.org or 504-561-8980
8 Nov	<i>Election Day</i>		
9 Nov	Greater New Orleans Joint Society Luncheon	11:00 am New Orleans Marriott	wwwapi-delta.org/media/36377/api_2016_joint_society_luncheon_both_pages.pdf
11 Nov	Tulane Seminar Series Steve Goodman "Coastal Dynamics in a Land of Superlatives - the Ganges-Brahmaputra Tidal Delta Plain" Vanderbilt University	Noon Room 108 - Jones Hall	www2.tulane.edu/sse/eens/events-and-seminars/seminars/index.cfm
11 Nov	BRGS Luncheon	Baton Rouge Mike Anderson's Seafood	lisapultz@cox.net
11 Nov	LSU Lecture Series Georgios Tsofilas Topic: TBA University of Kansas	3:30 pm LSU Baton Rouge E137 Howe-Russell-Kniffen	www.lsu.edu/science/geology/seminars/item72050.php
18 Nov	Tulane Seminar Series William Amidon "Cretaceous Passive Margin Rejuvenation in Eastern North America: Part of Something Bigger?" Middlebury College	Noon Room 108 - Jones Hall	www2.tulane.edu/sse/eens/events-and-seminars/seminars/index.cfm
18 Nov	LSU Lecture Series Carl Richter Topic: TBA University Louisiana Lafayette	3:30 pm LSU Baton Rouge E137 Howe-Russell-Kniffen	www.lsu.edu/science/geology/seminars/item72050.php
24 Nov	<i>Thanksgiving Day</i>		
5 Dec	NOGS Luncheon Hays Town, Jr. Town Construction Co. (retired) Preservation of the Baton Rouge Aquifer	Holiday Inn Superdome	annette@nogs.org or 504-561-8980
8-9 Dec	Perkins-Rosen Research Conference "Mesozoic of the Gulf Rim and Beyond: New Progress in the Science and Exploration of the Gulf of Mexico Basin"	Houston, Texas	www.gcssepm.org
16 Dec	NOGS Holiday Christmas Party	1347 Moss Street New Orleans, LA	See inside back cover of this issue for more details.
25 Dec	<i>Christmas Day</i>		

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 2016-2017 year of the New Orleans Geological Auxiliary has begun. The year started off with a delicious luncheon on September 14th at the home of Beverly and Everett Kastler. Those in attendance enjoyed a wonderful variety of salads and desserts beautifully presented by Beverly and her co-chair Linda Peirce. A highlight of the luncheon was "catching up" with each other about summer travels and family.

The Auxiliary's next event will be on Wednesday, November 9th at Cafe'b on Metairie Road, a Ralph Brennan's restaurant featuring Chef Michael Uddo!



Peggy Rodgers and Trez Zotkiewicz

include not only Cafe'B but also Ralph's on the Park and Café Adelaide! And...if that's not enough to entice you to join us, there will be a Spring Social on Saturday March 25th at the home of Trez and Jim Zotkiewicz that will most certainly be an extra special night. The NOGA Auxiliary would love to welcome you to the group!

Linda Peirce, Director



Hostesses: Beverly Kastler and Linda Peirce



Enjoying the September Luncheon: Loretto Stephens, Camille Yeldell, Trudy Carona, and Margie Conatser

New Orleans Geological Auxiliary Membership Application

Name _____ Spouse's Name _____
Address _____ Home Phone _____
City, State, Zip _____ Cell Phone _____
Spouse's Company _____ Email _____

Dues: \$25 payable to New Orleans Geological Auxiliary
Please mail to Judy Lemarié, Treasurer, #2 Yosemite Dr., New Orleans, LA 70131



Drill with confidence.

Diversified Well Logging, LLC brings the accuracy and expertise only a company with over sixty years in the oil and gas industry can deliver. We are your eyes and ears in the field, especially when it comes to deep water or high pressure, high temperature areas.

DWL offers 24-hour formation evaluation. We provide secure and customized real-time data communication, in-house research and development, and 24/7 on-call support for our equipment and our engineers.

Whether you have a 10-day job or a 110-day job, we provide the specialized attention you require. **Our experience means you can be confident in the safety and performance of your well.**



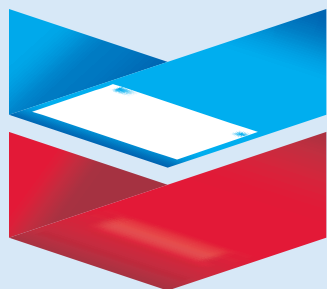
- *Formation Evaluation*
- *Geosteering*
- *Drilling Optimization*
- *Real-time Data Transmission*
- *Early Kick Detection*



 **DIVERSIFIED**
WELL LOGGING, LLC

Serving the Oil and Gas Industry for Over 60 Years

Chevron



100 Northpark Blvd.
Covington, LA 70433

(985) 773-6000

LLDG

exploration



Covington Office

1001 Ochsner Blvd., Suite 200
Covington, Louisiana 70433

p: 985.801.4300

f: 985.801.4796

Houston Office

CityCentre Three
842 W Sam Houston Pkwy N
Suite 600

Houston, Texas 77024

p: 281.752.1100

f: 281.752.1199

Scott Office

814 S. Frontage Rd.
Scott, LA 70583

p: 337.408.4000

f: 337.408.4049

www.llog.com



LaBay

Exploration Co., L.L.C.

1070 A West Causeway Approach
Mandeville, Louisiana 70471

Office (985) 951-2012
Fax (985) 951-2055

www.labayexploration.com

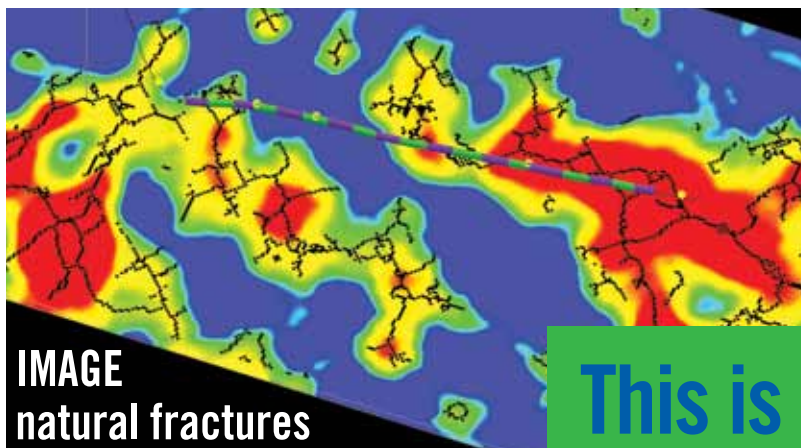
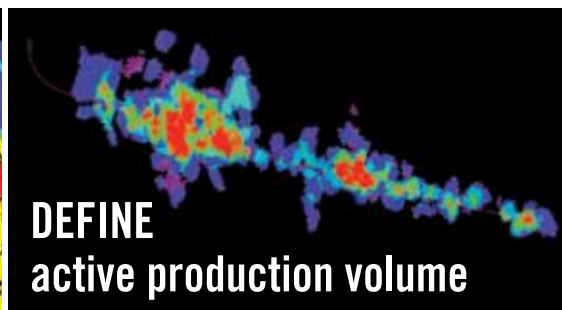
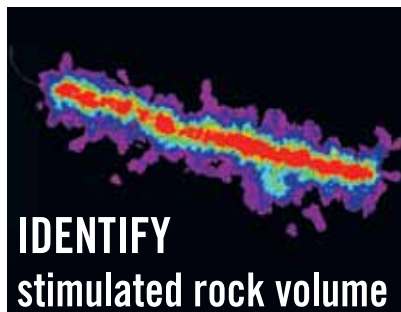


IMAGE
natural fractures

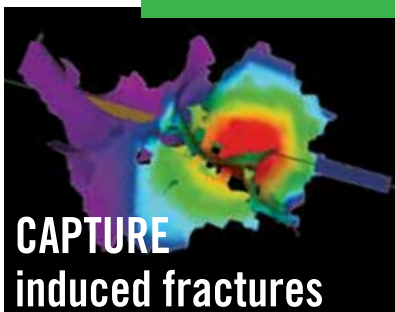


DEFINE
active production volume

This is AMBIENT Seismic.



IDENTIFY
stimulated rock volume



CAPTURE
induced fractures

For more information:

www.globalgeophysical.com/AMBIENT or
Contact us at AMBIENT@globalgeophysical.com

Global Geophysical's innovative approach to ambient seismic provides direct imaging of acoustic activity in the subsurface. This allows us to identify areas or zones that are acoustically active due to natural fractures, hydraulic stimulation or production-related activities. Our ambient seismic results can be presented as 3D attributes, as discrete volumes of acoustic activity or as Tomographic Fracture ImagesSM.

Global Geophysical Services
+1 713-972-9200 www.globalgeophysical.com



NOGS Goes BIG - Girl Scouts and Geology

On September 24th over 800 Girl Scouts and over 150 leaders converged on Southeastern University's campus for a great day of fun and learning. Over thirty science related fields were present and our seventeen enthusiastic volunteers were able to demonstrate major aspects of the oil industry and geology. This event is an ideal setting to learn with hands on displays and many concepts conveyed. This is the fourth year that NOGS has been involved the Girls Scouts "BIG" Believe In Girls event.

Being able to see women role models in our field is a big plus for the girls to aspire to.



This year we were joined for the first time by the **Society of Petroleum Engineers Delta Chapter**. **Lauren Woitha** of **Chevron** ran a drilling display which the girls enjoyed. **Lisa Kennedy**, our ever faithful Southeastern Geophysical Society long-term collaborator, brought her seismograph and earthquake station materials.

This event always brings together a wide range of volunteers from our profession, colleges, and environmental geologists. Our college volunteers included **Tonya Goehring** from **Tulane** and her 5-year-old daughter **Claire**. Also active were **Erin Varner**, **Elizabeth Levy**, and **Anna Thorson** from **LSU**. On

the environmental side, **Anna Strimas** from **Annunciation Environmental** and **Libby Cornell** from **Limitless Vistas** brought their insights to the girls. **Stephanie Welch**, a **Southeastern** geology teacher, joined us for the second time with her husband, biostratigrapher **Vann Smith**. Petroleum geologists and geophysicists included **Amy Sullivan** and **Caitlin Altomare** from **Shell**, **Tonya Richardson** from **Chevron**, and **Liz McDade**. The girls walked through stations on

how oil's properties and formation, generated their own anticlines, tested porosity and learned about reservoirs and seals, how oil migrates and how an oil field is formed. For the finishing touches, **Dave Cope** brought his 3D seismic workstation to demonstrate to the girls how we map out the oil fields.

This is one of our most effective NOGS outreach programs

despite everyone's voices going hoarse after a few hours trying to talk over all the girls' energetic voices. A few of our volunteers opted to switch into NASA space suits by the time the event ended. For those who would like to educate any time all year round our NOGS oil industry materials are available to check out and take to classrooms.



girl scouts
louisiana east





South Louisiana and Offshore Gulf of Mexico Exploration and Production Activities

LAFAYETTE DISTRICT, ONSHORE AREA

By Kevin Trosclair and Carlo C. Christina

The Baker-Hughes United States rig count for the week of September 30 was 522 rigs, up 33 rigs from the prior month. Rig activity in the U.S. has gradually increase from a low of 404 rigs in May of this year. The Louisiana rig count (not including the OCS) continued a downward trend averaging 23 rigs for the month of September, down 3 rigs compared to last month and down from 42 rigs one year ago.

North Louisiana Rigs: 15

South Louisiana Rigs: 8

Land 4

Inland Waters 4

The Office of Conservation, Lafayette District, Onshore Area, issued 4 permits to drill during the month of July compared to 7 permits last month and 8 permits one year ago. New locations of interest are reported below:

NEW LOCATIONS

In Beauregard Parish, **Little Barnes Creek Field**, (A), Key Operating Co. has re-permitted the #1 Crosby Land, (SN 249800), to test the Cockfield sands at a depth of 8500 feet. The well will be drilled in Sec. 36, 4S-9W.

Hilcorp Energy will drill its #19 Ludeau-Hass, (SN 249806), in **Ville Platte Field**, (B), in Evangeline Parish. The well will be drilled to 12,450 feet, or to a true vertical depth of 6230 feet at a location 3522 feet from the surface location in Sec. 44- 3S-2E, on the extreme southwest flank of the field.

In Jefferson Parish, **West Lake Pontchartrain East Block 41 Field**, (C), Clovelly Oil has permitted the #3 SL 5568, (SN 249803), to test the 7600 Sand at a proposed total depth of 7825 feet. The well is located in the lake approximately 4 miles west of the Lake Pontchartrain Causeway Bridge and 1 mile north of the Treasure Chest Casino.

COMPLETIONS

Ponderosa Oil & Gas has completed the #1 Cannonburg Plantation, (SN 249585), in **Laurel Ridge Field**, (D), Iberville Parish. The well was completed in the Camerina Sand flowing 178 BCPD and 2100 MCFD thru perforations 10,680 to 10,690 feet. The well was drilled to a total depth of 10,780 feet in Sec.4, 10S-14E.

In Pointe Coupee Parish, **Bayou Latenache Field**, (E), Pennington Operating Co. has completed its #1 Kean, (SN 249587), as gas

well in the Wilcox flowing 400 MCFD and 70 BCPD through perforations 11,736 to 11,746 feet. It was drilled to a total depth of 14,340 feet in Sec.19, 5S-7E, as reported in the June LOG.

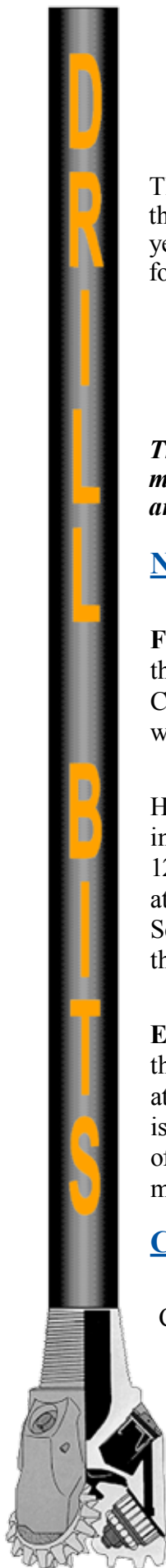
LLOX has completed the #2 SL 21345, (SN 249555), in **Manila Village Field**, (F), in Jefferson Parish. It flowed 77 BOPD and 1003 MCFD through perforations 13,332 to 13,348 feet. The well was drilled to a total depth of 13,924 feet in Sec. 35, 18S-24E.

In December 2015 LLOX permitted the #1 Rathborne, (SN 249458), as a wildcat in St. Charles Parish and has completed it as a new discovery and placed it in **Northwest Boutte Field**, (G), flowing 254 BCPD and 4108 MCFD. It was drilled to a total depth of 12,933 feet in a directional hole located 6122 feet from the surface location in Sec 43, 13S-21E. It was completed through perforations 12,595 to 12,675 feet, or 10,476 to 10,542 feet, true vertical depth, in the Gheens Sand. As reported in the February *NOGS LOG*, the nearest production is 3 miles to the southwest in Boutte Field.

OFFSHORE GULF OF MEXICO SHELF AND DEEPWATER ACTIVITIES

by Al Baker

During **September 2016**, the **BOEM** approved **70** Gulf of Mexico drilling permits. Of these, **7**





WELL	SONRIS 5/N	FIELD
A	249800	LITTLE BARNES CREEK
B	249806	VILLE PLATTE
C	249803	WEST LAKE PONTCHATRAIN
		EAST BLOCK 41

COMPLETIONS

WELL	SONRIS S/N	FIELD
D	249585	LAUREL RIDGE
E	249587	BAYOU LATENACHE
F	249555	MANILLA VILLAGE
G	249458	NORTHWEST BOUTTE

CCC

stands at **70.8%**. The marketed rig supply number is **3** less than last month, and the contracted rig supply number is also **3** less than last month. In contrast, the September 2015 fleet utilization rate stood at 63.6% (versus 46.6% today) with 75 out of the 118 rigs under contract.

As of September 30th, **BakerHughes** indicated that there were **21** active mobile offshore rigs in the Gulf of Mexico, which is **61.8%** of the rigs under contract mentioned above. This active rigs number is **4** more than reported last month. Of the 21 rigs, **3** are located on the **shelf** and **18** are situated in **deepwater**. The current active rigs count compares to 29 active rigs during the same period last year, representing a **27.6%** drop (minus 8 rigs) in yearly rig activity.

As of September 30th, the **BakerHughes** total U.S. rig count stood at **522** rigs **down 73%** from the **September 26, 2014 high** of **1931** rigs. At this time a year ago, the rig count stood at 809 rigs. Of the current 522 rigs, **425** are **oil rigs** and **96** are **gas rigs**.

No news of significance was reported during September.

NEW ORLEANS GEOLOGICAL SOCIETY THE EARLY YEARS - THE TIMES-PICAYUNE

Jeff Spencer – GCAGS Historian and NOGS member
spencerj320@gmail.com

The NOGS website includes a section, “History and Highlights.” The earliest three entries are the American Association of Petroleum Geologists 1930 (15th) and 1938 (23rd) conventions, both held in New Orleans, and the formation of the New Orleans Geological Society in 1941.

The March 16 and 19, 1930 editions of *The Times-Picayune* included articles about the first AAPG annual convention to be held in New Orleans, March 20-23. “City to become big oil center, expert predicts” was the headline from the March 19th edition. The “expert” was J. Elmer Thomas of Fort Worth, the chairman of a committee established by the United States Secretary of the Interior “to analyze the petroleum demand for 1930.” Thomas stated that there were forty salt domes within a seventy-five mile radius of New Orleans, many discovered within the previous few years. He also stated that when the AAPG committee had selected New Orleans as a convention locality, many members had commented that it would be the first time a “non-oil” town had been chosen. “We had selected New Orleans because of its historical interest and convention city fame, but the discoveries made in this section since then, brings our meeting back into oil territory.”

The 1930 convention was held at the Roosevelt Hotel. “Close to 100 papers are being offered, so that concurrent sessions will be necessary.” In addition to Gulf Coast and other domestic areas of interest, a “foreign petroleum geology” session included presentations about France, Persia, and Russia. There was a pre-

convention salt dome fieldtrip and the opening session would be opened by Tulane University president, Dr. A.B. Dinwiddie. In addition to the technical sessions, plans included a women’s luncheon, a golf tournament, an “illustrated” evening lecture on active volcanoes, and a buffet dance (*The Times-Picayune*, March 16, 1930). During the convention, Sidney Powers of Tulsa was elected as the new AAPG president, succeeding J.Y. Snyder of Shreveport.

NOGS 1941

“Opening lecture meeting set by geologists here.” The first lecture meeting of the newly organized New Orleans Geological Society will be held November 3, it was announced Saturday by George W. Schneider, president. A speaker and place for the meeting will be announced later, he said. Other officers of the club, elected at a recent meeting, are R.A. Steinmayer, professor of geology at Tulane University, vice-president and Harluf C. Peterson, secretary-treasurer. The club is the first professional geology group ever organized in New Orleans, and followed the recent influx of petroleum geologists, geophysicists and other technologists, according to Mr. Steinmayer. Its membership will be open to all geologists and scientists in connected fields, as well as to advance geology students. Its interests will lie chiefly in aspects of geology related to petroleum and other minerals, Mr. Steinmayer said. Members will be expected to engage in research and present papers on their finding, while lecturers in geology will speak to the group on various occasions (*The Times-Picayune*, October 26, 1941). In the November 2nd and 4th editions of the newspaper, more information was provided about the first NOGS dinner lecture. Urban Hughes, a consulting geologist from Jackson, Mississippi, spoke on “Outline of Mississippi Geology.” Cyril K. Moresi was the NOGS “chairman of the program committee” and the dinner program took place at 7:30 p.m. at the St. Charles Hotel.

The following month, the dinner meeting was held at the same time and location. The December 1st dinner speaker was Dr. Paul Weaver, a Houston geophysicist, “who has





engaged in geophysical work for 20 years, especially in the Gulf coast area." No title was mentioned for the presentation (*The Times-Picayune*, November 28, 1941).

NOGS 1942

The January 1942 dinner would have been on the 5th, keeping with the first Monday of the month. No pre-announcement or post-dinner report has been located in *The Times-Picayune* archives. The February 1st dinner meeting speaker was Dr. R.J. Russell, professor of geology at Louisiana State University. The title of the presentation was "Loess deposits of the Lower Mississippi Valley." The March 2nd dinner presentation was by Tom McGlothlin, Jackson, Mississippi, titled, "The general stratigraphy of Mississippi." The April 6th dinner presentation was by William L. Horner, titled, "Measurable reservoir characteristics as a basis for spacing and development." The May 4th dinner meeting was held at Arnaud's, but a title and speaker has not been found in the newspaper archives. The announcement of this May dinner did mention that it would be "the last regular monthly meeting of the season prior to adjournment for the summer." A NOGS social event, a Friday evening dance on the steamer, Capitol, was held on May 22 at 9:00 p.m.

The only additional NOGS 1942 dinner meeting announcement found in the archives was for a November 16 meeting. Dr. C.E. Zobell, director of the Scripps Institute of Oceanography, La Jolla, California, spoke on, "The Importance of Micro-organisms as Geological Agents" at 7:00 pm at the St. Charles Hotel.

Dr. Zobell also planned to "obtain specimens of micro-organisms from the shores of Lake Pontchartrain in connection with his research into the study of the relation between the organisms and the origin of oil" (*The Times-Picayune*, November 14, 1941).

NOGS 1943 & 1944

Only a few announcements were located in *The Times-Picayune* for the War years of 1943 & 1944. There was not a consistent meeting day of the week.

2-4-1943: Professor Lewis B. Kellum, University of Michigan, "The Geological History of North Central Mexico and its Bearing on Petroleum Exploration" - Thursday, St. Charles Hotel.

3-1-1943: L.P. Teas, consulting geologist, Houston, "on travels in South America" - Monday, St. Charles Hotel.

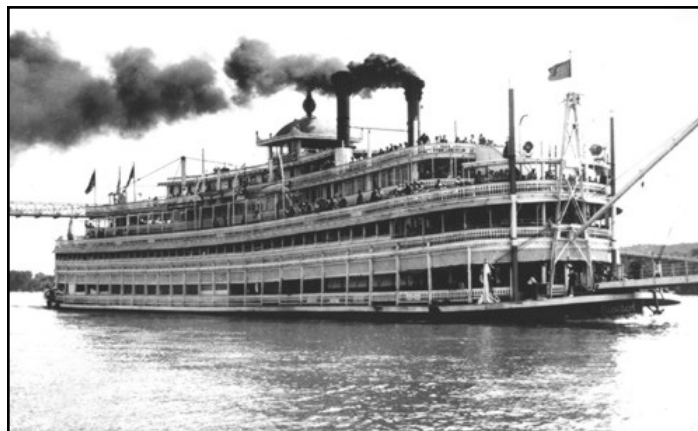
10-12-1943: J.P. Fox, "Oilfields of the Dutch Indies," - Tuesday, St. Charles Hotel.

11-1943: G. Frederick Shepard & Gordon I. Atwater: "Application of Drilling Time Charts to Geological Problems in the Gulf Coast." No location mentioned.

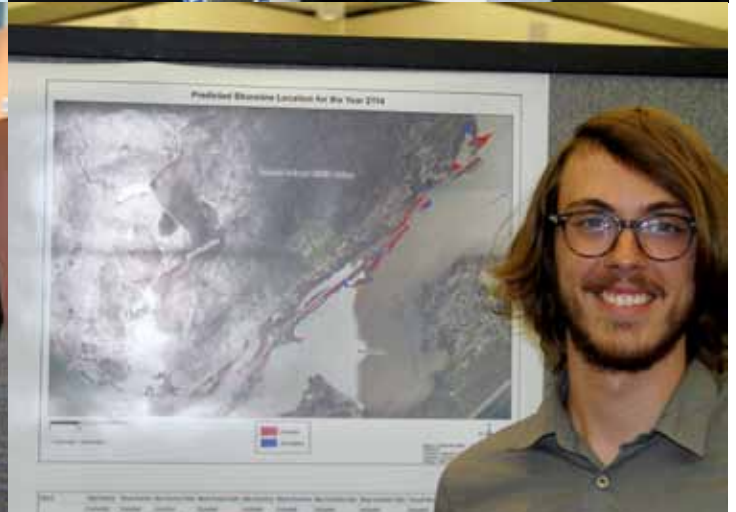
1-14-1944: Dr. Sam Knight, University of Wyoming, "Origin and Growth of the Rocky Mountains," - Friday, Tulane University.

2-24-1944: Dr. George S. Hume, geologist for the oil controller of Canada, "Petroleum Developments and Prospects in Northwestern Canada," Thursday, St Charles Hotel.

4-5-1944: Rupert Craze, research engineer, Houston. No title given, but the topic was increased production and efficient operations from Louisiana, Texas, and New Mexico oil fields since Pearl Harbor, Monday, St. Charles Hotel.



The Capitol: Built in 1879 at Cincinnati, OH. Originally named PITTSBURGH. Rebuilt in 1896 at Dubuque, IA and renamed DUBUQUE and ran for the Diamond Jo Line. Streckfus took her over after she sank in 1901. She was converted by Streckfus into an excursion boat in 1920 at Keokuk, IA and finished out at Davenport, IA. and renamed CAPITOL. Dismantled at St. Louis, 1945.
Photo credit: <http://steamboats.com/museum/jc.html#jc4>





Photos by Arthur Christensen



NABG: Making Diversity More than a Buzzword

By Laura Sorey

It's to be expected that any geological conference or meeting of merit would put forward a program consisting of technical topics of interest, a key-note speaker or two, a venue for student presenters, and perhaps one or two plugs for the organization's outreach program of choice. On the surface, the September meeting of the National Association of Black Geoscientists (NABG) Annual Technical Conference certainly featured all of these things. However, I can definitively state that no other geological conference I've ever attended has done so with such compelling energy and clear sense of purpose as I experienced at the NABG.

Founded in Houston in 1981 to inform minority students about career opportunities in the geosciences, the charter members expressed some initial concern at explicitly calling it a black organization as recounted by founding members Reggie Spiller, John Leftwich, and Mike Carroll during this year's conference. The three men describe how the discussion on the merits of coming up with a more innocuous name was decided by the realization that whenever people looked at the skin tone of the individuals in the room, they were obviously going to know the organization was about. People unlikely to support the organization were going to remain unsupportive regardless of names, but by expressly embracing the explicit label of "black geoscientists" these geologists could enable supporters to better understand the NABG's objectives.

NABG president Jerome Murphy further elaborates on these objectives of supporting a minority community within the geosciences. During our interview, Murphy points out the heavy student representation at the ninety-two attendee conference. Although twenty-two different colleges and universities were represented in

the mix, the majority of students were either students or alumni of Fort Valley State University (FVSU), an HBCU near Macon, Georgia. The large presence of a relatively small school with limited name-recognition outside the HBCU community at this conference is no coincidence. In fact, FVSU represents the crux of NABG's efforts towards creating career opportunities for academically gifted students from underserved minorities. Each of these students, as well as many of the professionals, within NABG are participants in the Cooperative Developmental Energy Program (CDEP) at FVSU.

Founded by Dr. Issac Crumley in 1993, CDEP is a dual-degree scholarship program in partnership with Georgia Tech, the University of Nevada-Las Vegas, Penn State, the University of Texas-Austin, the University of Texas Pan American, and the University of Arkansas where students attend FVSU for three years to major in mathematics, chemistry, or biology. After attaining their Bachelor of Science from FVSU, students transfer to a partner school for two years for a second Bachelor's degree in either engineering, health physics, or the geosciences. Along with a partner program that targets students beginning in middle school, CDEP represents a pipeline of continuity for minority students to learn about and eventually join technical communities like the geoscientists where racial minorities remain severely underrepresented. According to Dr. Crumley, CDEP alone is responsible for 10-15% of all the black geoscience graduates in the US since 2009. A number that shows the CDEP and NABG's ability to punch far above their weight in working towards their goal of strengthening the community of black geoscientists.

Murphy, himself a CDEP graduate of Fort Valley, discusses the relationship between HBCU's and young

black students as well as the necessity of exposing students to the academic subjects that many might not learn about in high school. According to Murphy an HBCU often appeals to students from smaller, rural towns who would benefit from a more supportive learning environment that meets students where they are and helps them mature without compromising the academic rigor of the program. And for black students from towns in the rural South where race underlies many of the interactions of daily life, an HBCU may be the first place they go where they can see leaders and mentors who look like them. After spending a few years at FVSU, students reap the benefits of an HBCU experience while honing their skills and building academic expertise with their first degree until they transfer to a partner school to focus on degree programs not historically associated with HBCU's. All the while, NABG supports students financially through scholarships and professionally through meetings like the technical conference.

While attending the conference, I was struck by one of the phrases I encountered repeatedly in my conversations with attendees: "safe space." In the heightened political environment of today, safe space (fairly or unfairly) takes on a buzzword status that courts controversy with its deployment. However, when Murphy uses the term it's clear that he means something different than what's argued about in newspaper editorials. He doesn't envision a safe space that softens technical demands or preserves student egos at the cost of intellectual growth but rather one that facilitates constructive criticism strengthened by empathy between mentor and student. One where a freshman chemistry major from a HBCU in rural Georgia can present a technical research poster one-on-one to an ExxonMobil manager who will listen and

then respond in the way that your favorite professor would after you pitch a research proposal. A response of pragmatism underlain by technical competence and professional expertise. To so many younger students, technical conferences are an obstacle to be hurdled, but it becomes clear that for the students here, NABG is a touchstone event to help them grow and develop their skills as researchers and presenters. It also generates a high retention rate where many of the students who benefitted from this safe space in the past come back to teach those same technical lessons to the students of today. This collaborative effort paid off well during two days of presentations where students and professionals alike impressed with the high quality of their technical work and their ability to communicate that work clearly and effectively. It further benefits the organization in the long run by cultivating close ties amongst attendees that lends the conference a family reunion-like atmosphere during informal moments, even amongst first-time attendees.

Though I was certainly impressed by the technical presentations I saw and enjoyed the chance to network with members of the geologic community I might not have met otherwise, I left the conference most strongly impacted by the student-oriented outreach which every member of NABG is rightly proud of. The CDEP pipeline, the depth of NABG's commitment to reaching students, and their successes at building sustainable inroads for diversity of thought, race, and background within the geologic community stand as compelling examples of how a small group of people can change so much for so many people. If the academic and professional successes of their students are a credit to NABG as an organization, then it holds true that the successes of NABG are a credit to our profession as geoscientists.



STRENGTH IN RESOURCES

Our history is rooted in exploration success in the natural resources business. With a growing portfolio of high-potential oil and gas targets, our future grows brighter.

www.fcx.com



FCX
LISTED
NYSE

SEI[®]

STRATEGIC SPECULATIVE SEISMIC SURVEYS
GEOPHYSICAL DATA MARKETING & MANAGEMENT

LET US HELP YOU FIND ONE
WWW.SEISMICEXCHANGE.COM

NEW ORLEANS
DALLAS
HOUSTON
DENVER
TULSA

SEISMIC EXCHANGE, INC.
201 ST. CHARLES AVENUE SUITE 4300
NEW ORLEANS, LOUISIANA 70170-4300
PHONE: (504) 581-7153 FAX (504) 581-9591

The Great Earth Science Race



In the late 1950s and early 1960s the U.S. and Russia were not only having a space race, but they were having a less publicized Earth Science race.

Teams were created by both countries to drill as deep as possible into the Earth's crust. The Americans began with an all too clever code name for the project, "Project Mohole." The project was located off the Pacific coast of Mexico led by the American Miscellaneous Society and funded by the National Science Foundation. Due to lack of funding, the American's ended Project Mohole in 1966. More to come on the enigmatic American Miscellaneous Society in a future *NOGS LOG*.

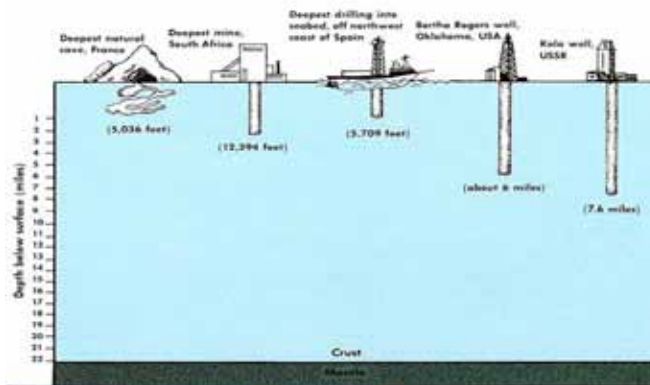
The Russians, on the other hand, had success on multiple fronts. First, they had a stellar project name, Kola Superdeep Borehole, drilled in Murmansk, Russia. Second, they begin drilling in 1970 and completed the well in 1994. It took the project team 24 years to drill the well to a depth of 12,261 meters (40,226 feet) or 7.6 miles.

The Kola Superdeep Borehole provided valuable data, which included observations of the Earth's crust. Including one of the more surprising findings, the absence of the "Conrad Discontinuity." Seismic reflections around the globe had suggested a transition from granite to basalt at around 3-6 km below the surface. Instead, the granite extended beyond 7.5 miles leading scientist to the conclusion that the seismic reflections were due to a metamorphic change in the rock and not a change in rock type.

Additionally, the Kola Superdeep Borehole encountered rock saturated with groundwater many miles deeper than they expected. The theory behind the presence of groundwater was attributed to hydrogen and oxygen atoms being squeezed out of the rock due to intense pressure. The groundwater was encountered deep, suggesting it had no migration pathways to reach the surface due to impermeable layers above.

The Kola Superdeep borehole continued to make additional discoveries including the detection of biological activity in rocks more than 2 billion years old. Clear evidence came in the form of microscopic fossils of twenty-four species of single cell marine plants or plankton. These fossils were found in organic compounds and intact despite the high pressures and temperatures at deeper depths.

And finally, in the early 1990s one last mystery was encountered. Unexpected high temperatures were encountered. The temperature gradient remained predictable to a depth of about 10,000 feet or ~1.8 miles. The final bottom hole temperature recorded was 356°F which was well above the normal temperature expected of 212°F expected at this depth. The combination of a decrease in rock density, high porosity, high permeability, and high temperatures caused the rocks to behave more like plastic which caused the Russians to stop drilling.



REFERENCES

- <http://www.atlasobscura.com/places/kola-superdeep-borehole>
- <http://www.zmescience.com/science/geology/drilling-to-the-mantle-6-unexpected-discoveries-from-the-worlds-deepest-well/>
- <http://www.sonicacts.com/portal-new/image.php?id=85&s=large>

Collarini Energy Staffing Inc.

Facilities • Drilling • Production • Reservoir Engineering
Land and Legal • Geosciences • Information Technology
Health and Safety • Management • Supply Chain
Accounting • Administrative Support



Full-Time and Temporary Personnel

Energy Trading • Civil Engineering • Executives
Human Resources • Instrument and Electrical
Engineering • Marine Engineering • Project Management
Technical Writing • Sales and Marketing

1500 S. Dairy Ashford Road, Suite 350, Houston, Texas 77077

Telephone: (832) 251-0533

www.collarini.com



610 E. Rutland St.
Covington, LA 70433
985.898.3577

Eric C. Broadbridge
Raymond W. Stephens
J. Daryl Gambrell

ROCK SOLID SERVICE



Geological
Geophysical
Land
Drafting & Graphics

516 Maryland Avenue
Metairie, LA 70003
(504) 481-7291
E-Mail: geodraft@bellsouth.net
Website: www.geodraftinc.com

SIPES

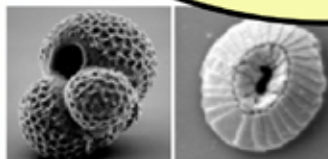
*Society of Independent Petroleum
Earth Scientists*

New Orleans Chapter



For membership info. Contact:
Eric Broadbridge - eric@northcoastoil.com
504-884-0049 www.sipesneworleans.org

DOMESTIC AND INTERNATIONAL BIOSTRATIGRAPHIC SERVICES



6619 Fleur de Lis Drive
New Orleans, LA 70124
(504) 488-3711

www.paleodata.com



Complete wellsite paleo services

Supported offshore GoM and
onshore LA paleo databases

Integrated foram/nannofossil
analyses

In-house sample preparation
lab for quality-monitoring
and efficiency

Comprehensive depositional
history study of the Gulf Basin
based on 200,000+ well data
analysis



NOGS

NEEDS YOUR ACTIVE
MEMBERSHIP IN
AAPG!

RENEW OR JOIN TODAY!

CALL FOR VOLUNTEERS!

John Curtis Christian School is seeking volunteers to serve as judges for the **2016 Junior Science Fair on November 29th** and the **Senior Science Fair on December 13th**. Both events will be held at 9:00 a.m. If interested in volunteering, contact Mike Fein at 1feinmn1@cox.net.

THE NEW ORLEANS GEOLOGICAL SOCIETY MEMORIAL FOUNDATION, INC.

The Memorial Foundation is an IRS Tax Exempt Code #501(c)(3) organization. The Federal I.D. is 72-1220999. Please consider making a donation to the Foundation. Your individual support in any amount will help meet the IRS Guidelines for our Foundation. Thanks!

\$10,000

Gibbet Hill Foundation

*In Memory of Steve & Marion Millendorf, William J. Prutzman,
Roger G. Vincent, Ron Youngblood and Uno Numella*

\$2,000

Mr. James A. Hartman

In Memory of Rudolph B. "Rudy" Siegert

Mr. Armour C. Winslow

*In Memory of Rita Menzel Winslow
and Lawrence C. Menconi*

\$500

Mr. Thomas C. Bergeon

*In Memory of J.W. Coltrane
Children's Museum Initiative*

Kathy Rush and Charles Holman

\$250 to \$499

Mr. Jack G. Bryant

*In Memory of Gene Brumbaugh, Dick Edmund,
A.T. Green, John Petrocco & Robert W. Sabaté*

Mr. Carlo C. Christina

*In Memory of Al Gilreath
In Memory of Raymond W. "Ray" Stephens, Jr.*

Mr. Dan E. Hudson

In Memory of Raymond W. "Ray" Stephens, Jr.

Mr. Edward B. Picou, Jr.

*In Memory of Phillip "Phil" Beron, Jr.,
Rudolph B. "Rudy" Siegert, and
Raymond W. "Ray" Stephens, Jr.*

Mr. Burton Smart II

In Memory of Rudolph B. "Rudy" Siegert

Mr. Jack M. Thorson

*In Memory of Raymond W. "Ray"
Stephens, Jr.*

UP TO \$249

Mr. Woods W. Allen, Jr.

In Memory of William C. Ward

Mr. Robert J. Ardell

*In Memory of Rudolph B. "Rudy" Siegert
& Raymond W. "Ray" Stephens, Jr.*

Mr. Maurice N. Birdwell

In Memory of Lester Coon

Mr. James Bourg

In Memory of Raymond W. "Ray" Stephens, Jr.

Mr. Hilary James Brook

Mr. Jack G. Bryant

*In Memory of Jaser N. Rafidi,
Rudolph B. "Rudy" Siegert and
Raymond W. "Ray" Stephens, Jr.*

Mr. Rob Burnett

Mr. Joe W. Burns

In Memory of Rudolph B. "Rudy" Siegert

Mr. F. Robert Bussey

In Memory of Rudolph B. "Rudy" Siegert

Ms. J. Sybil Callaway

Chevron Humankind Matching Funds

Mr. Arthur F. Christensen

Mr. and Mrs. Carlo C. Christina

*In Memory of Philip "Phil" Beron, Jr.,
In Memory of Rudolph B. "Rudy" Siegert*

Mr. M. Key Clarke

In Memory of Raymond W. "Ray" Stephens, Jr.

Trudy & Charles Corona

*In Memory of Jaser N. Rafidi, Robert T. Sellars,
Rudolph B. "Rudy" Siegert and
Raymond W. "Ray" Stephens, Jr.*

Mr. Merle J. Duplantis

Dr. Brooks B. Ellwood, Ph.D.

Mr. Lawrence B. Eustis

In Memory of Rudolph B. "Rudy" Siegert

Mr. Michael N. Fein

Mr. Kenneth Huffman

Mr. Jeff Jandegian

*In Memory of Ronnie Youngblood
and Dr. William W. Craig*

Mr. Philip W. Johnson

Mr. Paul Jurik

*In Memory of Thomas A. Cullinan
In Memory of Rudolph B. "Rudy" Siegert*

Mr. Thomas Klekamp

In Memory of Raymond W. "Ray" Stephens, Jr.

Mr. Roger D. Linder

In Memory of Raymond W. "Ray" Stephens, Jr.

Mr. Cyril Lobo

Ms. Jeannie F. Mallick

Ms. Margaret M. McKinney

Ms. Catherine D. McRae

Mr. Paul C. McWilliams

Mr. Jack Fye Minor

In Memory of Raymond W. "Ray" Stephens, Jr.

Mr. Robert G. Murphy

*In Memory of Jaser N. Rafidi
In Memory of Rudolph B. "Rudy" Siegert*

New Orleans Geological Auxiliary

*In Memory of Dot Edmund
In Memory of Peggy M. Campbell*

Mr. Richard A. Olsen

Mrs. Teresa O'Neill

In Memory of Brian J. O'Neill

Ms. Belinda Peace

In Memory of Rudolph B. "Rudy" Siegert

Mr. William S. Peirce

Mr. Edward B. Picou, Jr.

*In Memory of T. Wayne Campbell,
and "Jack" Dunlap, Jr.*

Mr. John C. Scheldt

*In Memory of Raymond W. "Ray" Stephens, Jr.
In Memory of Dr. William W. Craig*

Shell Matching Funds

Dr. J. O. Snowden

Ms. Betsy M. Strachan Suppes

In Memory of Hubert C. Skinner

Ms. Candace V. Strahan

*In Memory of Raymond W. "Ray" Stephens, Jr.,
and James R. Strahan for The Bill Craig Fund*

Ms. Linda D. Tomlin

In Memory of Rudolph B. "Rudy" Siegert

Mr. Larry E. Tucker

In Memory of Rudolph B. "Rudy" Siegert

Mr. William M. Whiting

Ms. Frances A. Wiseman

*In Memory of Steve Widdicombe
In Memory Carl Grieshaber*

Mr. James W. Yeldell, Jr.

In Memory of Raymond W. "Ray" Stephens, Jr.

FONO FUND

The FONO Fund accepts contributions that are invested and the income dedicated to assure sufficient financial resources will always be available to maintain the NOGS business office. Contributors are reminded that donations to the FONO Fund are not covered by the IRS 501(c)(3) tax exempt classification and should be reported as a business expense on your IRS tax report.

UP TO \$249

Mr. David E. Balcer

Mr. Joseph E. Boudreaux

Ms. J. Sybil Callaway

Mr. Anthony Carollo, Jr.

Mr. Joseph E. Christensen

Mr. Richard P. Colomes

Mr. Michael A. Danahy

Mr. M. R. "Bob" Douglass

Mr. Merle J. Duplantis

Mr. Dwight Easterly

Mr. Michael N. Fein

Mr. Duncan Goldthwaite

Mr. Kenneth Huffman

Mr. Paul Jurik

Mr. Tom Klekamp

Mr. James R. Landrem

Ms. Jeannie F. Mallick

Mr. George M. Markey, Jr.

Ms. Margaret M. McKinney

Mr. Richard A. Olsen

Mr. Bay Salmeron

Mr. Bryan P. Stephens

Mr. Roy C. Walther

Mr. William M. Whiting

Ms. Frances A. Wiseman

Contributions for both funds through October 7, 2016.
Donations are listed for one year.

<p>ANSYTHE Donald I. Andrews 504-887-3432</p> 	<p>C & R EXPLORATION, INC. Carlo C. Christina Lawrence G. Ringham</p>
<p>THE BOEBEL COMPANY Oil and Gas Investments New Orleans, LA 70153 (504) 866-4313</p>	<p>CLASSEN EXPLORATION, INC. James S. Classen Looking for close in deals P.O. Box 140637 Bus. (208) 854-1037 Boise, ID 83714 Fax (208) 854-1029 classenllc@msn.com</p>
<p>BOO-KER OIL & GAS CORP. Gray S. Parker 826 Union, Suite 300 Bus. (504) 581-2430 New Orleans, LA 70112 Fax (504) 566-4785</p>	<p>D-O-R ENGINEERING, INC. 3-D and Geoscience Services 6161 Perkins Rd. Bus. (225) 765-1914 P.O. Box 80812 Baton Rouge, LA 70898</p>
<p>NOGS <i>Thanks Our Sponsors for Their Support!</i> \$2,500</p>	<p>EDWARD B. PICOU, JR. Consulting Micropaleontologist - Retired 228 St. Charles Ave., Suite 1330 C Bus. (504) 529-5155 New Orleans, LA 70130 Res. (504) 282-3096</p>
<p> Chevron  Diversified Well Logging  Seitel \$1,000</p>	<p> GEOLOGY ENVIRONMENTAL MANAGEMENT GEM Consulting, LTD Michael Louis Merritt admin@gemconsultingltd.com</p>
<p> Hydrate Energy International  ION Geoventures  LaBay Exploration Co. LLC  Paleo Data Inc</p>	<p>PHELPS GEOSCIENCE LLC Onshore Gulf of Mexico Geology and Geophysics Prospect Generation and Evaluation Houston, TX jsfphelps@yahoo.com (281) 398-5208</p> <p>ROY C. WALTHER Petroleum Geologist 2421 Prancer Street Bus. (504) 392-8513 New Orleans, LA 70131 Res. (504) 392-9332</p> <p> STONE ENERGY www.StoneEnergy.com 625 E. Kaliste Saloom Lafayette, LA 70508 16800 Greenspoint Dr., Suite 225-S Houston, TX 77060 1100 Poydras St., Suite 1050 New Orleans, LA 70163</p> <p>ZOT OIL & GAS, LLC Jim Zotkiewicz Consulting, Evaluation, and Prospect Generation Metairie, LA 70002 Bus. 504.799.1648 Email: jimzot38@zotoil.com</p>

2017 ASBOG Exam Information



The Louisiana Board of Professional Geoscientists will proctor the ASBOG Fundamentals of Geology and Practice of Geology exams on March 17, 2017.

LBOPG must receive your application (including references and official transcripts) for GIT certificate or PG License for approval by the board when they meet on December 13.

The LBOPG Proctoring/Verification Application and Fee must be received by LBOPG by **December 31** in order to sit for the **March 17** exam. Note: you must have a pending GIT certificate or PG license application and relevant fees submitted prior to submitting the application for proctoring.



Holiday Christmas Party

**FRIDAY
DECEMBER 16, 2016
7:00 - 10:00 p.m.**

Home of
Catherine and Mark McRae
facing Bayou St. John
1347 Moss Street
New Orleans, Louisiana

**\$35 per member
\$25 per student**

More details to come in December issue.



NEW ORLEANS GEOLOGICAL SOCIETY

810 Union Street, Suite 300
New Orleans, LA 70112-1430



PRSRT STD
U.S. POSTAGE
PAID
GPI

www.nogs.org



**MARINE PROPERTIES, LLC
BERKSHIRE EXPLORATION CO.**

MONTE C. SHALETT, CPL, PRESIDENT

3030 Lausatz Street
Metairie, LA 70001-5924

BUS. (504) 831-7779
FAX (504) 831-8315

PCI

Paleo Control, Inc.

Houston, Texas
713-849-0044

Drilling Wells, Studies and Data Base

Loyd Tuttle

Frio, SE Texas

Bob Liska

Wilcox, S and SE Texas

Jim Thorpe

Miocene and Cam-Miogyp



creative graphics & printing, llc

Proudly designing and printing the NOGS LOG since 2012!

Specializing in design and printing for the oil and gas industry and their affiliates.

ID Tags • Numbered Raffle Tickets • Banners • Signs • Posters

Letterhead • Envelopes • Business Cards • Postcards • Newsletters • Custom Forms

Logo Design • Push Cards • Table Tent Cards • Custom Invitations • Magnetic Signs & Business Cards

T-Shirts • Cups • Coozies • Pens • Hats & Caps • Coasters • USB Drives

Full Service, Custom Graphic Design & Printing!

985.626.5223 • 985.630.7824 • kpbrown@bellsouth.net
or contact annette@nogs.org