

NOGS LOG

JUNE 2015

Volume 55, Number 12

JUNE 8 - NOGS LUNCHEON

Presentation: Predictive Organization of Deep-Water Lobes

Guest Speaker: Jacob Covault, Ph.D.

Chevron Clastic Stratigraphy R&D • Houston Texas



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Submitted by: Tavia Prouhet, *NOGS LOG* Editor



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As we get ready for summer, those of us with young families work the calendar and look for things to keep the little ones busy during these months. Those without children, I imagine, also look for sun-filled activities during this time. Recently there have been several emails coming out from a variety of earth science related foundations highlighting Earth Science week. Among some of the activities for that week are International Earth Cache Day, No Child Left Inside Day, and Geologic Map Day. I thought, why wait? The summer is a PERFECT occasion to celebrate all of these in to our family life!

If you haven't tried Geocaching and aren't familiar with "Earth Caching," yet love mapping and geology, you are in for a treat. Geocaching according to <https://www.geocaching.com>, "is a real-world, outdoor treasure hunting game using GPS-enabled devices. Participants navigate to a specific set of GPS coordinates and then attempt to find the geocache (container) hidden at that location" and Earth caching employs the same method but instead of looking for a hidden object, takes you to a beautiful and often rarely know location on our planet.

Another fun activity for my young family includes trekking out on vacations. My 5-year-old says one of his favorite activities is going on trips. To help inspire a sense of place and spatial thinking, I like to print out a map of the US with the route highlighted. As we travel the route, I have him color the states we cross. He learns to appreciate space and where we are going.

Hopefully as you plan out your summer, I hope you enjoy some sunshine and beautiful geology. Take the chance to share some of that love with your family. Go "cache" and keep alive the paper map!

Information collected from: <https://www.geocaching.com/guide/default.aspx>



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This issue was sent to press on May 20, 2015.

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
Geocaching and Earth Caching	2
From the Editor	3
From the President	5
NOGS Officers / Contacts	6
Upcoming Events & Activities	7
NOGS Luncheon Presentation	9
June & July Calendars	12
NOGA News	13
Drill Bits	22
Info Tidbits	26
NOGS Memorial Foundation	29
FONO Fund	29

Special Features:

SuperScience Saturday	15
SuperScience Saturday Photo Collage	16-17
2015 GNO Science & Engineering Fair	18
NOGS 2015 Annual Golf Tournament Photo Collage	20-21

on the cover

Cover Photo Submitted by Michael Murat

Fort Walton Beach — Okaloosa Island, Florida

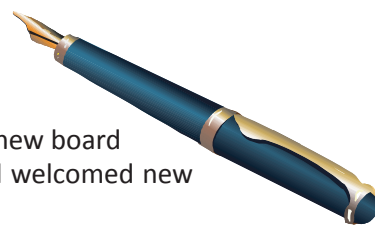
This picture was taken at sunrise at Fort Walton Beach, Florida. The beach is quiet and tranquil early in the morning before the arrival of the beach-goers. Florida's Gulf Coast is well known for its white sand beaches and is a popular tourist destination.

Okaloosa Island is the eastern portion of Santa Rosa Island, a 40-mile-long barrier island in the Gulf of Mexico on Florida's northern panhandle coast. The beach sand is a homogenous, well-sorted, high percentage quartz that likely originated in the Appalachians, was carried by rivers, deposited and reworked in the Gulf into today's white sand beach.



Michael Murat on the beach, taken by Brian Bothner from the balcony of his beach-front condo.

From the Editor



Welcome to summer in Southeast Louisiana!

As the summer brings with it transition to our Society. We will transition to our new board members in July. This year we have enjoyed new social events, great technical talks and welcomed new members to NOGS.

Hopefully as you plan out your summer, I hope you enjoy some sunshine and beautiful geology. Take the chance to share some of that love with your family, go "cache" and keep alive the paper map!

As this is my last *NOGS LOG* as Editor, I want to extend a sincere thank you to the folks behind the scenes, working hard to have the issue arrive at your doorstep. Thanks to our Drill Bits columnists: Carlo Christina and Al Baker; to Kevin Trosclair for his Drill Bits maps; Peggy Rogers for her reporting on NOGA. Arthur Christensen was our meetings and events photographer. Tom Klekamp and Ed Picou, the *LOG* would never have gotten out the door without your hard work. Brian Banks, Jessica Wold, and Sheri Richardson—thank you for the proofing and error catching you go through each month—you could have been English majors. Thanks to Kristee Brown, our publisher and artist, who took all our articles, maps and photos and made everything look slick. Finally, a huge thank you to our advertisers—without their support the *NOGS LOG* simply would not be.

Jana L. Prouhet - **NOGS LOG Editor**

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From the President

We have made it through another successful year with your NOGS Board faithfully and diligently serving out the 2014-2015 term. There were numerous opportunities this year in which our Board made decisions that kept us active in the community and furthered our mission. I am grateful for everything they provided during the term, but if I had to describe our Board this is what comes to mind: forward-

thinking, passionate, discerning, thoughtful, persistent, driven, creative, supportive, diverse, encouraging...the list could go on and on.

It is also members like each of you that make the organization. The work of planning and hosting the Board does would be in vain if our members didn't show up to participate and support our events. A select number of you even chair committees and more, are committee members. It takes all these roles to make NOGS the strong and prominent society that our community and we have come to know. Our NOGA is also a valued component to our society's success as they have consistently assisted us with the Deepwater Technical Symposium, Christmas Holiday Party, and other society events, as well as include us on a number of their events.

And where would we be without Annette?! That is a thought I don't like to imagine because it's not a pretty image. Accomplishing everything she does seems an enigma. We are grateful for her knowledge of how our Society works; for her dedication to ensuring everything gets done; for her passion to continually serve our Society at a high level.

As you can see it takes everyone to make NOGS the success that we are, and we cannot lose our momentum.

Thanks to all who were supportive and encouraging during my presidency as it has been an honor to serve each of you at this level, but please know it's the people mentioned above that are the real rock stars! On to the next Board...

NOGS Office

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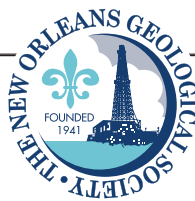
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June 8 • NOGS Luncheon

Holiday Inn Downtown Superdome

\$3.00 validated parking in hotel garage

Presentation:

Predictive Organization of Deep-Water Lobes

Guest Speaker:

Jacob Covault, Ph.D.

Chevron Clastic Stratigraphy R&D • Houston, Texas

See page 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

June 11

Women's Energy Network Luncheon

Abacus Restaurant • Lafayette, LA

For more information, www.womensenergynetwork.org

June 16-17

Data Driven Production Optimization Workshop

Double Tree by Hilton • Houston, TX

For more information, www.upstreamintel.com

June 11

2015 International Upstream Energy Conference

Royal Sonesta • Houston, TX

For more information, www.utcle.org/conferences

June 22

PLANO Luncheon

Ralph's on the Park • New Orleans, LA

For more information, www.planoweb.org

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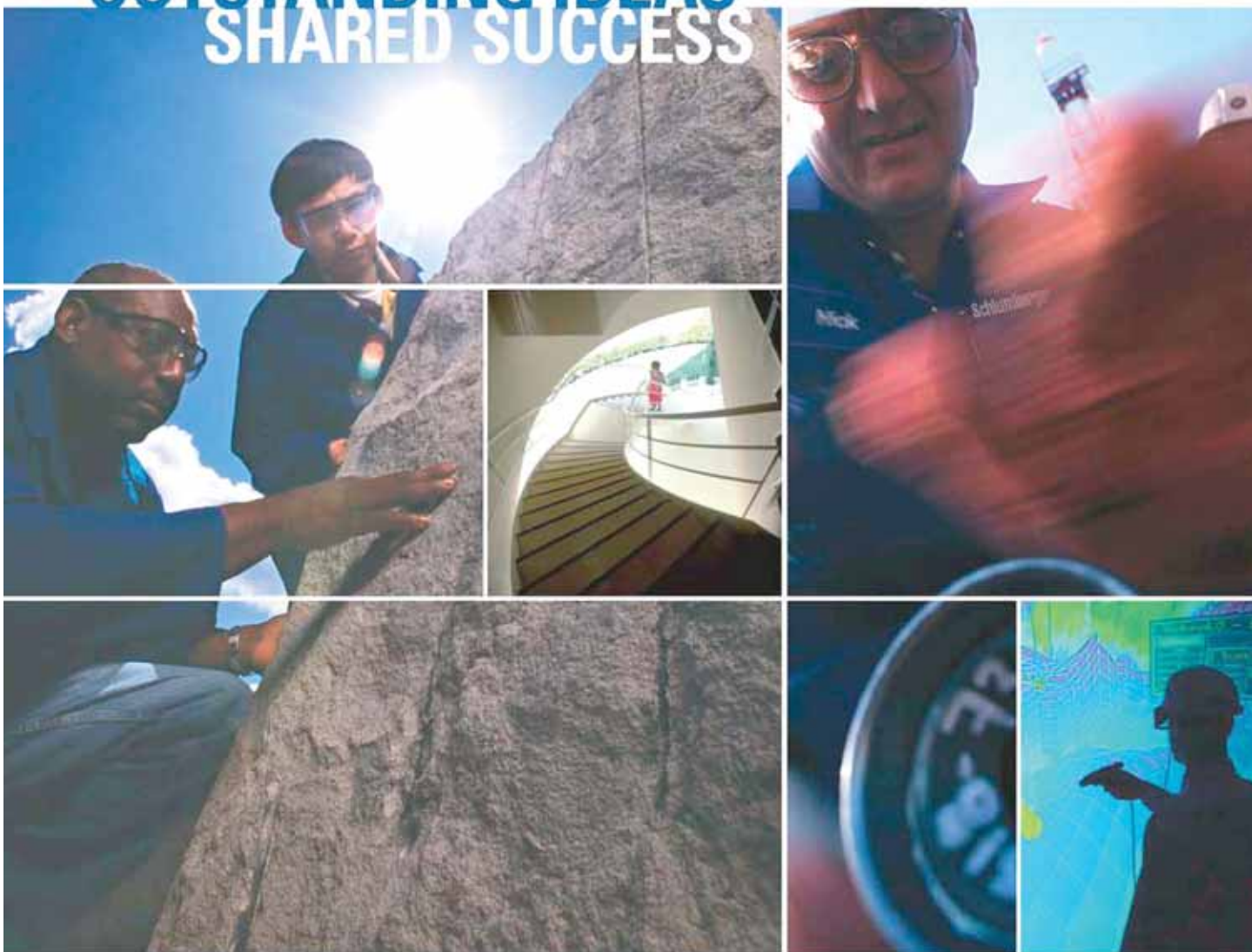
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June 8 NOGS Luncheon Presentation

☆☆☆ at the Holiday Inn Superdome ☆☆☆

Predictive Organization of Deep-Water Lobes

Presented by

Jacob A. Covault, Ph.D.

Co-Authors:

A. Madof and R. Sech

Clastic Stratigraphy R&D

Chevron Energy Technology Company

Houston, Texas



ABSTRACT

The connectivity and facies heterogeneity of low permeability, terminal deep-water lobes are important uncertainties in reservoir characterization and development. Deep-water lobes have been conceptualized as basinwide, sheet-like deposits. However, recent work has shown more complex 3D architecture and spatial variability of petrophysical properties, which can have significant impact on reservoir performance. We use high-resolution seismic-reflection data (dominant frequency ~40 Hz) from the shallow subsurface of the Niger Delta continental slope to illustrate the stratigraphic architecture and facies variability of a deep-water lobe system. The interval of interest is a package of high-amplitude seismic reflections that is lobate in plan view and externally mounded in cross section. This interval comprises at least three sub-packages of continuous, single- or multi-cycle seismic reflections, which locally exhibit bidirectional downlap and compensational stacking. Reflections bounding the uppermost sub-package represent channel avulsion, compensation and modification of initial deposits, unconfined deposition at the channel mouth, and downstream channel bifurcation. We place our interpretations within an architectural hierarchy and consider the impact of depositional heterogeneity on fluid flow behavior during hydrocarbon production. These interpretations inform the modeling and prediction of 3D heterogeneity of deep-water lobes and illustrate the importance of detailed characterization in order to understand reservoir connectivity and quality.

BIOGRAPHY

Jacob Covault is a senior research scientist at Chevron Energy Technology Company. His expertise is the sedimentology and stratigraphy of petroleum reservoirs. Prior to his present position at Chevron, Jacob served the Department of the Interior at the U.S. Geological Survey, and he received Ph.D. and B.S. degrees in Geological and Environmental Sciences at Stanford University. Jake has published a number of peer-reviewed research papers and scientific conference abstracts pertaining to petroleum geology, reservoir characterization, sedimentology, stratigraphy, basin analysis, Earth surface processes, and marine geology.

THE LUNCHEON RESERVATION DEADLINE IS JUNE 5 - CONTACT THE NOGS OFFICE

"And Looking Ahead . . ."

The next luncheon will be held on July 6. Our guest speaker, Richard Bishop, RSK Ltd., will present "World Oil Supply in Transition." 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 2015 ~						
Sun	Mon	Tue	Wed	Thu	Fri	Sat	
	1	2	3	4	5	6	
AAPG Denver, CO							
7	8  Luncheon	9	10	11	12	13	
14 Flag Day	15	16	17 Board Mtg 	18 International Picnic Day	19	20	
		Data Driven Prod. Optimization Workshop					
21 Father's Day / Summer Solstice	22 PLANO Luncheon	23	24	25	26	27	
28	29	30					

June 8: NOGS Luncheon, Holiday Inn Superdome, 330 Loyola Ave. @11:30 am

Guest Speaker: Dr. Jacob Covault, Chevron Clastic Stratigraphy R&D

Will Present: Predictive Organization of Deep-Water Lobes

	~ July 2015 ~					
Sun	Mon	Tue	Wed	Thu	Fri	Sat
			1	2	3	4
5	6  Luncheon	7	8	9	10	11
12	13	14	15 Board Mtg 	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	Notes:
July 6: NOGS Luncheon, Holiday Inn Superdome, 330 Loyola Ave. @11:30 am Guest Speaker: Richard Bishop, RSK Ltd. Will Present: World Oil Supply in Transition						

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."

**Celebrating
60 YEARS!**

Rain, hail, flooded streets or threatened tornadoes couldn't keep a happy group of Auxiliary members from attending the Spring Social at the home of Paul and June Perret with their friends and spouses. Being indoors and missing the promised sunset across the bayou didn't dampen (no pun intended) the good times inside the lovely home and all the

good food and beverages. We were pleased that the guests included NOGS president Elect David Reiter and his wife Darby. It was fun to chat with new friends and old! Susie Baker, Elizabeth Furlong and Jean Jones were the committee who planned the good time.

Mary Walther, Judy Lemarié, Mary Ellis Hasseltine, Jean Jones, Alma Dunlap, Debra Fein, and Peggy Rogers enjoyed being NOGS guests at their monthly meeting/Luncheon May 4th at the Holiday Inn Downtown Superdome.

The last event of our 60th anniversary year was May 13th at the Café Adelaide, Lowes Hotel. Look forward to all the details of this final luncheon in the next NOGS LOG.

The Auxiliary is looking forward to helping NOGS with the Deep Water Symposium which will be August 18, 19, and 20th.

The 2015-2016 planning committee is working on another enjoyable and useful year for the Auxiliary.

A new yearbook which will have all the activities for the year is underway. Don't miss out on having you name included. Use the membership application on the bottom of the page if you would enjoy becoming a part of this group.

Peggy Rogers, *NOGS LOG*



June & Paul Perret (seated), with committee members Susie Baker, Jean Jones, Elizabeth Furlong



MaryEllis Hasseltine, Alma Dunlap, Mary Walther, Jean Jones, Peggy Rogers, Judy Lemarié, Debra Fein

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

NOGS WELCOMES

Submitted by Tom Klekamp

We welcome new and reinstated members from our recent NOGS New Geoscientist Event at the NOLA Tap Room.

Brian Bothner reinstated his membership. He holds a BS in geology from Nicholls State University(1981) and an MS in geology from UNO (1988). Brian and his wife Stephanie reside in Metairie.

Brendon Sullivan, a Chevron geoscientist living in New Orleans who enjoys hiking, camping, and all things rock related. He graduated in 2012 from the Georgia Institute of Technology and presently on assignment for Chevron's Shelf Exploration Team. Prior to the oil patch, Brendon wore many hats at technology startups.

Ben Waring, owner of Waring and Associates/Energy Data Solutions, LLC; 1101 Dealers Ave, Ste 200, New Orleans, Louisiana 70123, (504) 733-3117. Ben and his OCS BBS Website have been providing BOEM information to the OCS Gulf of Mexico Oil & Gas Industry since 1995. Ben has been head of the Delta Chapter of the American Petroleum Institute. He joins NOGS as an active member.

Charles Miller, an IT specialist with Energy Data Solutions, is the Webmaster of our new NOGS Website. Charles joins NOGS as an associate member.

From Tulane, we welcome **Michael Ramirez** as a student member of NOGS. Michael holds a BA in Earth & Environmental Science from Vanderbilt Univ. (2009) and an MS in geology from the University of Texas at Austin (2011). He is a student member of the AAPG.



19th Annual Gulf of Mexico

Deepwater




Technical Symposium

CREATING & DELIVERING

VALUE

AUGUST
18th, 19th & 20th
2015

The Hilton New Orleans Riverside Hotel
www.deepwaternola.org

15th
ANNIVERSARY

SUPERSCIENCE SATURDAY

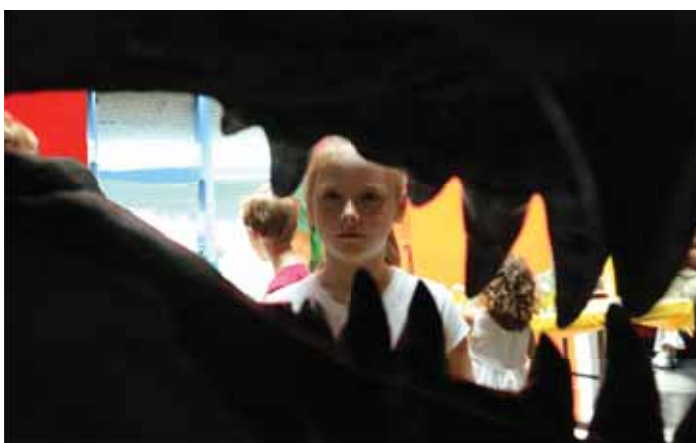
APRIL 18, 2015

Louisiana Children's Museum

The Louisiana Children's Museum (LCM) was host to over 800 people for the 15th Anniversary of our Super Science Saturday event. Major thanks go out to our co-partners in learning, the Southeastern Geophysical Society. We are very grateful to our host all these years, the LCM under the excellent direction of their Education Program Coordinator, Grace Connors.

Things kicked off with one of our best events yet. Leading the charge were very enthusiastic volunteers from UNO, LSU, and Tulane and NOGS recruits from a variety of backgrounds (oil exploration, environmental, regulatory and those retired). Thank all of you for making the event such a success.

There were plenty of junior geologists- and paleontologists-in-the-making visiting our many interactive stations. From dinosaurs to earthquakes to oil – they saw a broad spectrum of the geological sciences. Their parents were equally as curious about learning. The kids enjoyed visiting the various stations and answered scavenger hunt questions for their very own dinosaur bone fragment.



This year we brought on several exhibits including our new oil exploration station which covers hands-on displays of how oil is generated, its properties, porosity, and how an oil field forms. This exhibit has models and props to convey the key concepts, is well documented and available for NOGS members to take out to schools. Major thanks to Dave Cope who setup a complimentary 3d seismic workstation with a Gulf of Mexico exploration example for the kids to observe just how cool a job a modern day geologist has.



Our superb group of volunteers included: LSU students Tessa Hermes, Lowell Reeve, Shima Massiha, Eric and June Zhang, and Tasha Hoffman, Tulane students Jordan Adams and Michael Hopkin, UNO students Shara Clark, Nicholas Poole, Tarah Yocum, Rachel Gaspard*, Scott Hudson*, Lewis Jones*, Taylor Hux*, Jared Eppley*, Luke Smaha*, Everett Leslie*, and Rachel Carter*, and NOGS volunteers

included our invaluable trainers Art Johnson* and Bernie Regel, Mike Fein, Don and Kathy Dubose, Beth Strickland, Kelli Hardesty, David Reiter, Bill Whiting*, Brenda Reilly, Al Melillo*, Bill Vollenweider, Matt Smith, David Lynch, Jade Haug, Liz McDade, Andrea and Mark Stancin, Dave Cope*, and our excellent photographers Eric Broadbridge* and Jim Brooks*. Those a little younger who did a wonderful job with the children were Laura Broadbridge*, Wilson McDade and Peyton Madere (with his parents Carla and Brett Madere). Thanks also to a number of people who stepped forward to volunteer but had to cancel due to inclement weather (including Southeastern students), illness or last minute conflicts.

Special thanks go out to Dave Cope for the 3d workstation, Rachel Gaspard and Austin for transporting the UNO T-rex skull, Rachel Carter, Tessa Hermes and Michael Hopkin for volunteer recruiting at their respective schools, Jim Brooks and Eric Broadbridge for taking photographs, the Target® volunteers, Grace Connors of LCM and her staff, Bernie Regel for dino plants and training, and Art Johnson for graciously taking that car load of fossils.

Another year made possible by our faithful volunteers, thank you! Already looking forward to next year!

(*Denotes worked both shifts)



15th Annual Super



Science Saturday



NOGS Finds Winners at 2015 Greater New Orleans Science and Engineering Fair

by Michael N. Fein, Chairman - Awards Committee



On February 25th, NOGS members judged Junior and Senior Earth Science exhibits at the Region 9 Greater New Orleans Science and Engineering Fair. My fellow judges included Bill Whiting, George Hasseltine, and Tom Klekamp. Thank you for giving up your time, work and clients.

Seven students shared the cash prizes. The Senior Division earth sciences team 'knocked it out of the park' in the estimate of our judges.

The Senior Division 1st place winners were **Alexis Lang** and **Joshua Hartley** for their *"REE Mining Energy, U.S. Dependence – Method to Determine Economic Potential of Further Mining."* They studied several pegmatite sites in Wisconsin for rare earth elements (REE's). (Note: I've been chairing the science fair exhibits for 17 years; John Curtis' **Cathy Boucvalt** has delivered 1st Place exhibits to NOGS every year over the entire time span.) They have also been selected as finalists to participate in the GENIUS Olympiad 2015 which will be held in Oswego, NY June 14–19, GENIUS Olympiad is an international high school project competition about environmental issues. It was founded and organized by the Terra Science and Education and hosted by the SUNY at Oswego. 1,171 student projects applied and 253 were chosen to compete in the science category. Some interesting facts about the competition: the country that submitted the most projects was Turkey: 304 projects out of 1,171 projects. The number of projects submitted from United States was 262 (22% of all projects). Turkey's Istanbul Okyanus High Schools submitted the most, with 44 projects. The number of countries from which projects were submitted: 69.



Presented at the May 4th NOGS Meeting: John Curtis Christian Academy's Kathy Bush and her Junior Division 1st Place Winner Isabella Pita; Senior Division First Place winners Joshua Hartley and Alexis Lang and their teacher Cathy Boucvalt; and 17-year veteran NOGS Science Fair Chairman Mike Fein

Lang and Hartley's project, *"Bringing Rare Earth Element Mining Back to the USA."* REE's include 17 metallic elements that form unusually strong lightweight magnetic materials. Their diverse nuclear, metallurgical, chemical, catalytic, electrical, magnetic, and optical properties play an essential role in emerging technology, national defense, and growing renewable energy industries. China produces approximately 97% of the world's REE. The U.S., dependent upon REE imports from China, is now reevaluating existing stateside mines as well as new areas for these elements.

Their study focused on using a relatively quick and inexpensive method to evaluate existing U.S. mining areas for economically important Rare Earth Elements. Their independent variables included: methods of determining potential REE presence from three former mining areas in the Stettin Complex in Marathon Co., Wisconsin. The dependent variables included correlation of heavy minerals (ternary diagram); % by Color; and SEM Qualitative Analysis of Element

"fingerprint" (average number of occurrences from three trials of a random sample collection of ten rocks from each of the three different locations). They worked with Al Faster, a renowned pegmatologist formerly with the UNO geochemistry department.

The Junior 1st place winner was 6th grader, **Isabella Pita**, whose exhibit asked, *"What Factors Inhibit Soil Percolation?"* Isabella studied fluid movement through a various earth materials. Her teacher **Kathy Bush**, is also of John Curtis.

The 2nd and 3rd place Senior Division awardees were from Patrick Taylor Science and Technology Academy. **Johann DeJesus** studied, *"Is There a Correlation Between Sea Level Rise and Salt Water Intrusion in the Coastal Regions of South Louisiana?"* **Gorion Bush** looked into *"How Have the Mississippi River Levees Contributed to the Erosion of the Mississippi River Delta?"* Their teacher was **Janell Simpson**.

The 2nd and 3rd place Junior Division winners both came from John Curtis Christian School. **Dax Ford** updated his winner from 2014, *"Tsunami Defenses—Can We Keep the Waves Away?"* An 8th grader, his teacher is **Gabby Bridges**. **The Junior Division 3rd Place winner** was **Colton Kendrick**, a 7th grader whose project was titled, *"Can an Amateur Shark Tooth Collector Accurately Match the Fossil to the Correct Shark Species?"* His teacher was **Lauren Young**.

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South Louisiana and Offshore Gulf of Mexico Exploration and Production Activities

LAFAYETTE DISTRICT, ONSHORE AREA

By Carlo C. Christina

During the month of April the Office of Conservation issued only 11 permits to drill in the Lafayette District, Onshore Area.

There is good news to report from activity in Cameron Parish.

Shoreline Southeast LLC has completed the #13 Lacassine as an excellent gas well flowing **31,019 MCFG and 132 barrels of condensate** per day through perforations 17,458 to 17,626 feet in the lower Mio gyp sand. As reported in a previous Drill Bits reports the well was drilled 1 mile south of Marg howei production and also 2 miles southwest of the McMoRan subsalt well. (248246)

McMoRan has drilled its **subsalt well**, the #1 Lacassane Company to a depth of 21,979 feet and has received **approval to perforate the Yegua** from 19,318 to 19,344, 19,369 to 19,398, 19,411 to 19,426 and 19,493 to 19,554 feet. Tubing has been run, preparing to test. (247946)

NEW LOCATIONS

In Calcasieu Parish, **Stackpole Island Field**, (A), Petsec Energy has permitted its #1 Holcome to drill to 13,000 feet in Sec. 15, 8S-7W. This field was discovered in 1982 and produced from 2 wells until 1992. Cumulative production was 62,000 barrels of oil. (248980)

Drilling activity in **Bourg Field**, (B), Lafourche Parish, has suddenly increased. In the past 6 years only one well had been drilled in the field. Now, Badger Energy will drill the #1 Gonsoulin Farm to a depth of 16,630 feet to test the 15,400 Sand. The well is located in Sec. 43, 17S-18E, 1½ miles northwest of the Square Mile Energy #1 SL 20140, which is drilling below 13,280 feet. (248971)

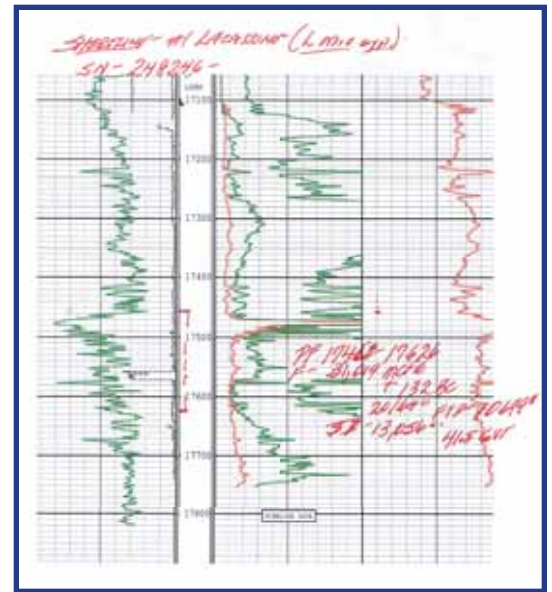
Sanchez Oil & Gas is drilling a rank **wildcat**, (C), in St. Helena Parish, to a proposed depth of 7470 feet to test the Wilcox sands. The well will be drilled in Sec. 27, 2S-4E, approximately 2 miles south of the nearest well which had been drilled to 10,508 feet. It encountered a series of Wilcox sands between 6900 feet and 7500 feet and was plugged and abandoned in 1962. (248982)

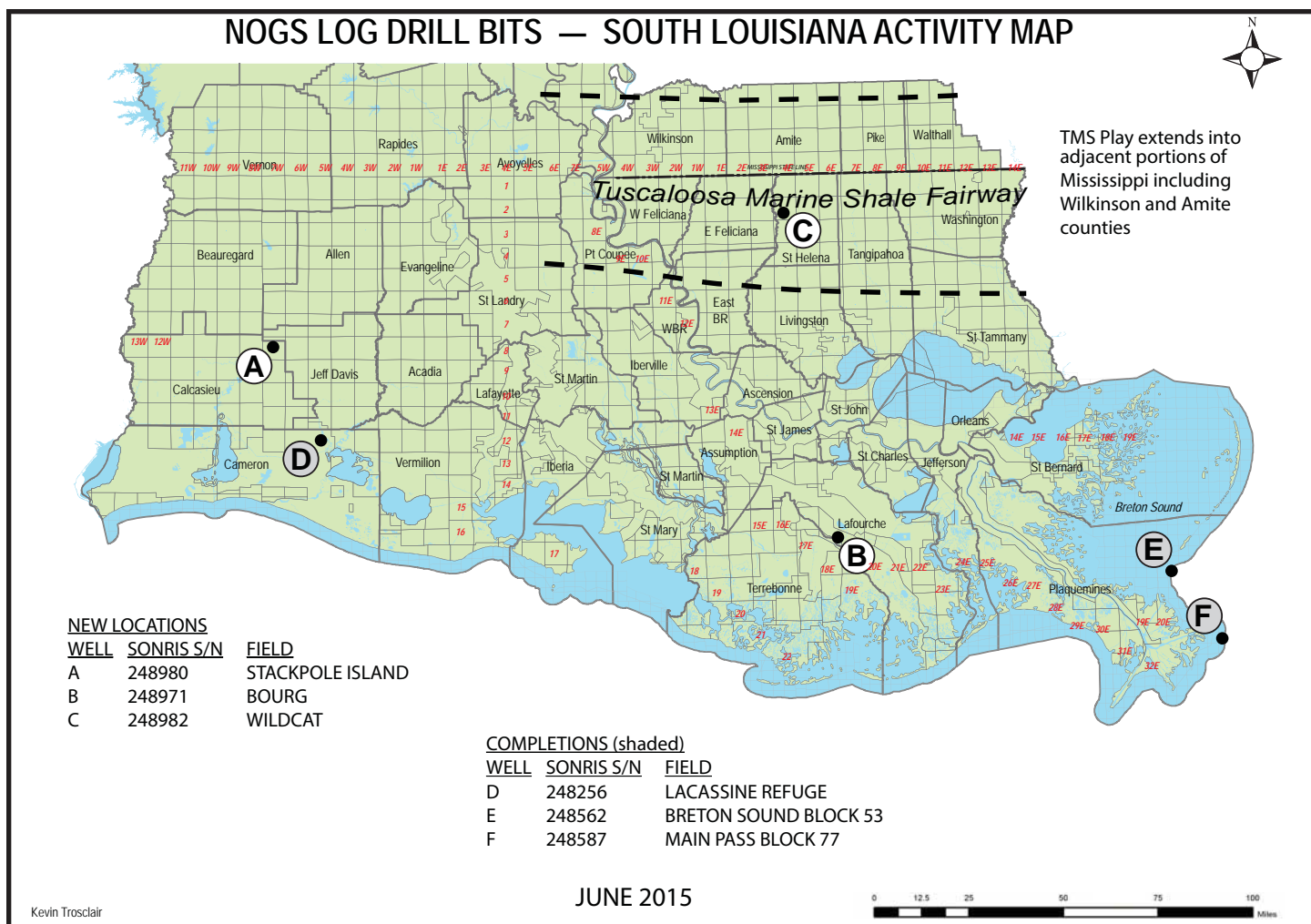
COMPLETIONS

Shoreline Southeast LLC has completed the #13 Lacassine in **Lacassine Refuge Field**, (D), as an excellent gas well flowing **31,019 MCFG and 132 barrels of condensate** per day through perforations 17,458 to 17,626 feet in the lower Mio gyp sand. Flowing tubing pressure was 10,699 pounds with shut in tubing pressure 13,056 pounds. The well was drilled to a total depth of 17,743 feet in Sec. 18, 12S-5W. (248246)

In Plaquemines Parish, **Breton Sound Block 53 Field**, (E), Energy Technology has plugged and abandoned the #1 SL 20834 at a depth of 14,724 feet. (248562)

GCER has plugged and abandoned its #1 SL 21294 in **Main Pass Block 77 Field**, (F) at a depth of 12,815 feet. (248587)





Note:

As stated earlier in this report only 11 permits to drill were issued in the month of April. Likewise, fewer completions are reported, as evidenced above.

A review of the Scout Detail Status Summary shows the following:

Permitted wells-----52--(permits approved with no current activity)

Drilling in progress-----13

Waiting on completion rigs ---21

Recompletions-----21 --(work completed but results not filed with DNR.)

OFFSHORE GULF OF MEXICO SHELF AND DEEPWATER ACTIVITIES

by Al Baker

During April 2015, the BOEM approved **80** Gulf of Mexico drilling permits. Of these, **19** were for shelf wells, and **61** were for deepwater wells. Of the total number of permits, there were **12 new well permits** issued: 1 new development well situated on the shelf and 9 new exploration wells plus 2 new development wells in deepwater.

The one shelf development new well permit was issued to **Arena Offshore** for their **Eugene Island 338 #K-14** well.

The nine deepwater exploration new well permits were awarded to **LLOG Exploration Offshore** for their **Viosca Knoll 959 #1**, **Mississippi Canyon 252 #1** and **Mississippi Canyon 300 #3** wells, to **Freeport McMoRan**

Oil & Gas for their **Green Canyon 643 #SS-3** and **Mississippi Canyon 127 #SS-2** wells, to **Anadarko Petroleum** for their **Green Canyon 561 #3** well, to **BP Exploration and Production** for their **Green Canyon 825 #3** well, to **Cobalt International Energy** for their **Garden Banks 959 #3** well and to **Statoil Gulf of Mexico** for their **Mississippi Canyon 814 #1** well. The two deepwater development well permits were granted to **BHP Billiton Petroleum (GOM)** for their **Green Canyon 609 #SS-2** well and to **LLOG Exploration Offshore** for their **Mississippi Canyon 546 #5** well.

On May 1st, IHS-Petrodata reported that the Gulf of Mexico mobile offshore rig supply stood at **113**, which is **1** rig greater than last month. The marketed rig supply consisted of **74** rigs, of which **58** were under contract. The contracted versus total rig supply utilization rate is **51.3%**, while the marketed contracted versus marketed supply utilization rate stands at **78.4%**. The marketed rig supply number is flat in comparison to the figure reported last month, whereas the contracted rig supply number decreased by 4 rigs during the same time period. In contrast, the March 2014 fleet utilization rate stood at 70.2% with 80 out of the 114 rigs under contract.

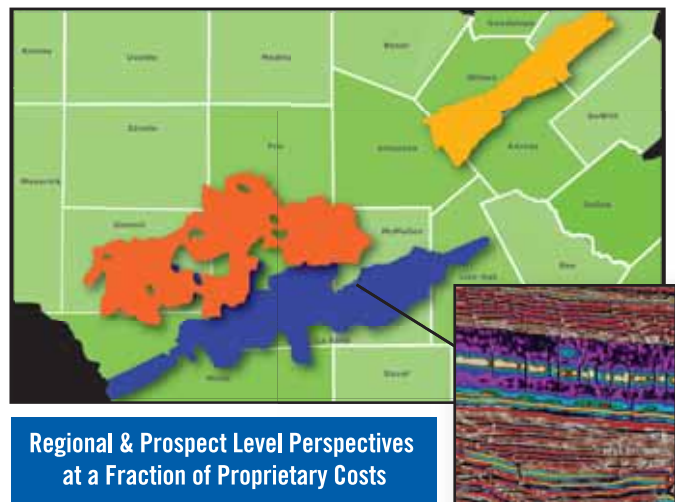
On May 1st, BakerHughes indicated that there were **34** active mobile offshore rigs in the Gulf, which is **58.6%** of the rigs under contract mentioned above. This active rigs number is the same as reported last month. The current active rigs count compares to 54 active rigs during the same period last year, representing an impressive **37.0%** decrease in yearly rig activity.

On April 9th, **Statoil** announced that it had made an oil discovery at its Miocene **Yeti Prospect** on **Walker Ridge Block 160**. This discovery extends the proven sub-salt Miocene play further south and west of Chevron's Big Foot Field. The new discovery is located approximately 15 miles south of the Big Foot Field and 7 miles from the Cascade Field. Statoil is the operator of Yeti with a 50% working interest; its partners include Anadarko with 37.5% and Samson with 12.5% working interests, respectively.

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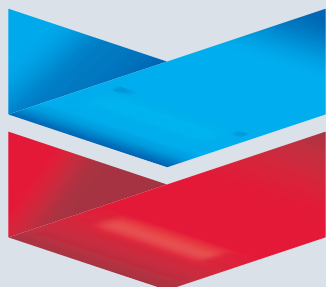
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Submitted by Tom Klekamp and Jessica Barnes

Rare African plant signals diamonds beneath the soil

<http://news.sciencemag.org/africa/2015/05/rare-african-plant-signals-diamonds-beneath-soil>



There's diamond under them thar plants! A geologist has discovered a thorny, palmlike plant in Liberia that seems to grow only on top of kimberlite pipes—columns of volcanic rock hundreds of meters across that extend deep into Earth, left by ancient eruptions that exhumed diamonds from the mantle. If the plant is as choosy as it seems to be, diamond hunters in West Africa will have a simple, powerful way of finding potentially diamond-rich deposits. Prospectors are going to “jump on it like crazy,” says Steven Shirey, a geologist specializing in diamond research at the Carnegie Institution for Science in Washington, D.C.

An excerpt from *The Economist* book reviews:

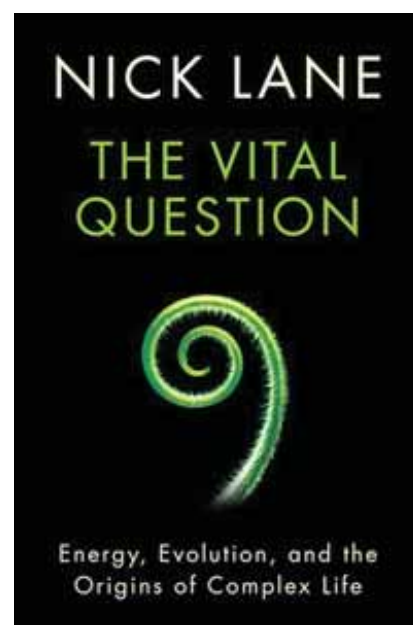
The Vital Question: Why Is Life the Way It Is? By Nick Lane.
Norton Publishers; 360 pages; \$27—due in U.S. mid-summer.

“THERE is a black hole at the heart of biology.” Grandiose openings like this are often a warning sign in popular science books, a signal that the author is trying to gussy up a collection of unremarkable observations. Not in this case. Nick Lane, a biochemist at University College London, knows whereof he speaks. His latest book is a persuasive, demanding attempt to answer some of the most fundamental questions in biology.

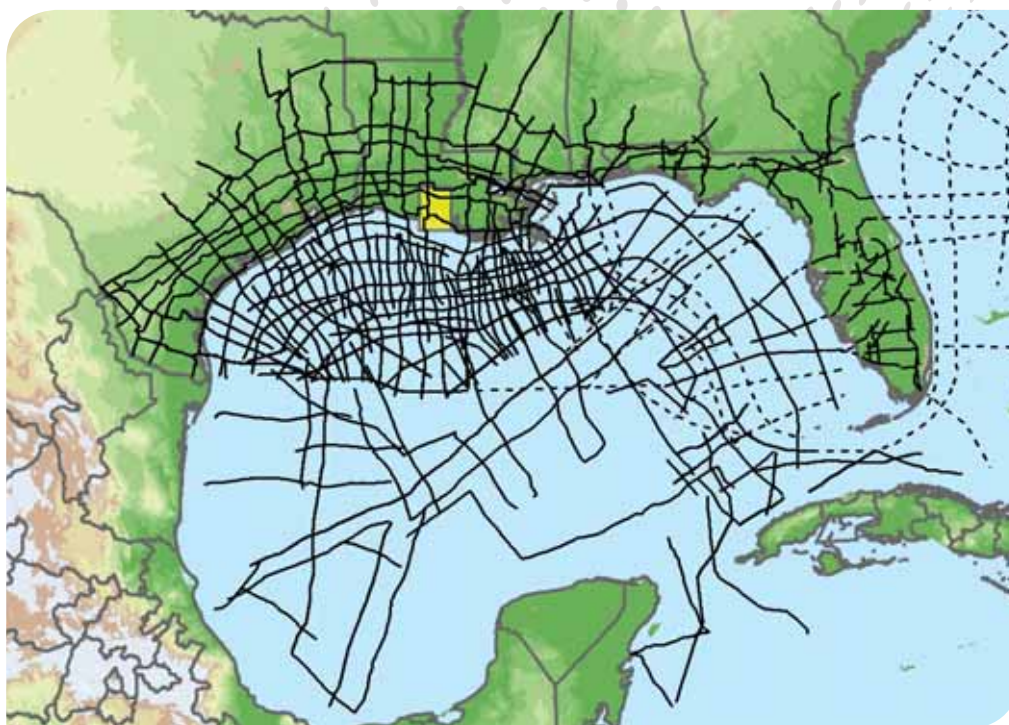
The book's overarching argument is that life is a natural, chemical process, and therefore faces constraints imposed by the iron laws of physics or chemistry. Despite its spectacular surface diversity, those constraints restrict its chemical underpinnings, and that affects how life develops. Such considerations, says Mr Lane, can shed light on some of biology's most profound questions.

The most accessible of those is how life got started in the first place. Most people learn some version of the “primordial soup” theory, which posits that Earth's early oceans contained enough organic chemicals to form spontaneously some kind of primitive self-replicator. But biology has moved on, and Mr Lane gives a convincing account, based on basic chemical principles, of why this theory is almost certainly wrong. There is simply not enough energy available in such a system, he points out, to produce complicated chemicals at anything like the required rate.

Mr. Lane never patronises his readers, and those willing to make the effort to think about what he is saying will be rewarded with one of the deepest, most illuminating books about the history of life to have been published in recent years.



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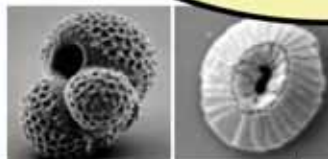
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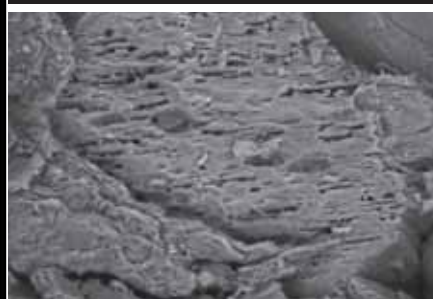
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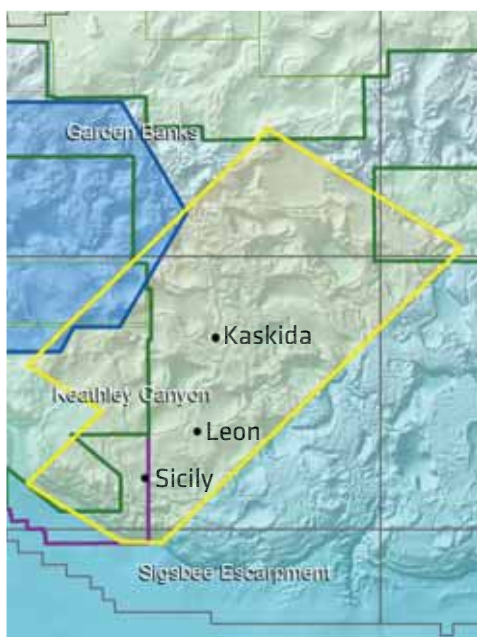
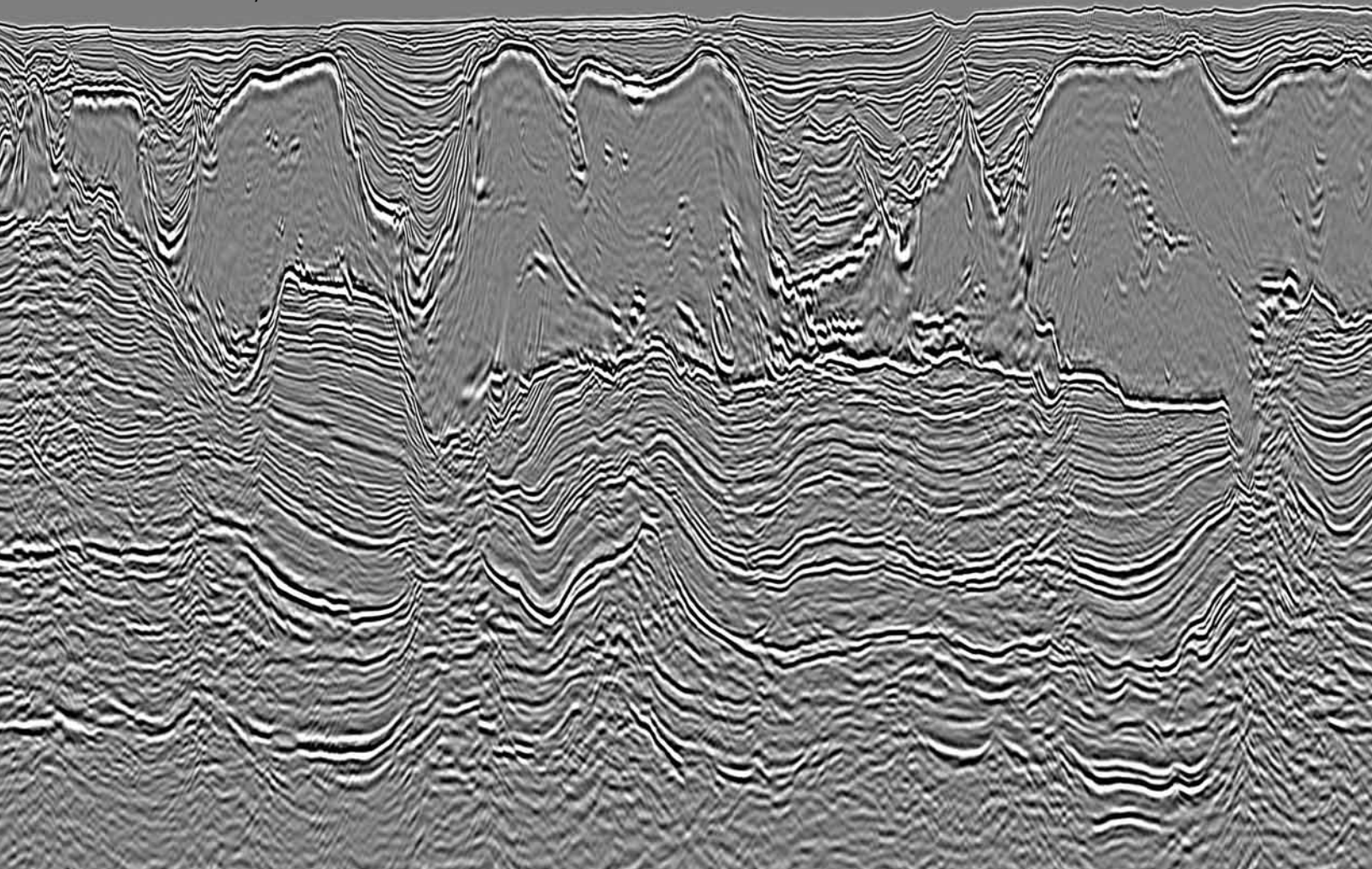


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