BULLETIN

Corpus Christi Geological Society



and

Coastal Bend Geophysical Society



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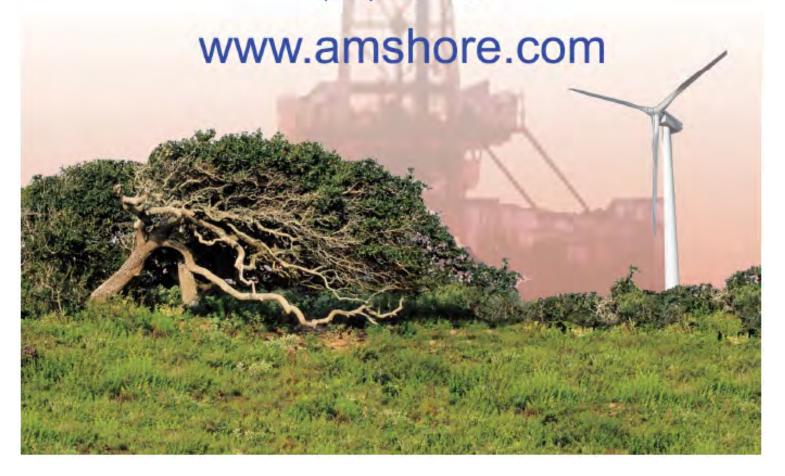


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P.O. BOX 1068* C.C.TX. 78403 2018-2019

www.ccgeo.org

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Type Logs	OPEN		



P.O. BOX 2741*C.C. TX. 78403 2017-2018

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		361-447-2381	

Visit the geological web site at www.ccgeo.org

CCGS/CBGS JOINT MEETING SCHEDULE 2018-2019

		Sep	temb	er					00	tobe	r					Nov	emb	er		
S	M	T	W	Th	F	S	S	M	T	W	Th	F	S	S	M	T	W	Th	F	S
		2	2018						2	2018						2	018			
						1		1	2	3	4	5	6					1	2	3
2	3	4	5	6	7	8	7	8	9	10	11	12	13	4	5	6	7	8	9	10
9	10	11	12	13	14	15	14	15	16	17	18	19	20	11	12	13	<mark>14</mark>	15	16	17
16	17	18	<mark>19</mark>	20	21	22	21	22	23	24	25	26	27	18	19	20	21	22	23	24
23 30	24	25	26	27	28	29	28	29	30	31				25	26	27	28	29	30	

Wednesday Sept. 19th at 5:30 BBQ Kickoff at Hoegemeyers Barbeque Barn. Meet/greet our special guest, Dr. Satinder Chopra*
*One of the most widely published geoscientists of our day.

11:30am-1:00pm Speaker Dr. Jeremy Meyer, Senior Vice President GeoMechanics. "The application of Geomechanics to Unconventional Development"

	December								January							February					
S		M	T	W	Th	F	S	S	M	T	W	Th	F	S	S	M	T	W	Th	F	S
			2	018						2	019							2019	9		
							1			1	2	3	4	5						1	2
	2	3	4	5	6	7	8	6	7	8	9	10	11	12	3	4	5	6	7	8	9
	9	10	11	12	13	14	15	13	14	15	<mark>16</mark>	17	18	19	10	11	12	13	14	15	16
	16	17	18	19	20	21	22	20	21	22	23	24	25	26	17	18	19	<mark>20</mark>	21	22	23
	23	24	ł 2	5 26	27	28	29	27	28	29	30	31			24	25	26	27	28		
	30	31	<u>l</u>																		

No meeting

11:30am – 1:00pm Speaker: Hongliu Zeng research scientist Bureau of Eco. Geology, Jackson School of Geosciesnces, The Univ. of Tx. Austin. "Seismic

Sedimentology Talk"

Collegiate Month

CCGS/CBGS Joint Meeting Schedule 2018-2019

		M	Iarch							April						N	May			
S	M	T	W	Th	F	S	S	M	T	$\overline{\mathbf{W}}$	Th	F	S	S	M	T	W	Th	F	S
		2	2019							2019	9						201	9		
									-											
					1	2		1	2	3	4	5	6				1	2	3	4
3	4	5	6	7	8	9	7	8	9	10	11	12	13	5	6	7	8	9	10	11
10	11	12	13	14	15	16	14	15	16	<mark>17</mark>	18	19	20	12	13	14	<mark>15</mark>	16	17	18
17	18	19	20	21	22	23	21	22	23	24	25	26	27	19	20	21	22	23	24	25
24 31	25	26	27	28	29	30	28	29	30					26	27	28	29	30	31	

No meeting

11:30am-1:00pm

Speaker: Steve Tobias | NearFX LLC

"Applying New Technologies to Old

Areas: Relative Geologic

Time, Wheeler Diagrams and Near Field Exploration in Faulted Plays"

To be announced

Calendar of Meetings and Events

Calendar of Area Monthly Meetings

Corpus Christi Geological/Geophysical Society	
South Texas Geological Society Luncheons	
San Antonio Geophysical Society Meetings	
Austin Geological Society	First Monday
Houston Geological Society Luncheons	Last Wednesday
Central Texas Section of Society of Mining, Metalllurgy & Exp	2 nd Tues every other month in
	San Antonio



PRESIDENT'S LETTER

People of the Earth, hear my words. Since last we communicated, the mother ship has brought me back to Texas from short trips to earthly locations where they are blessed with rocks. One of these places is Hawaii, stuck in the middle of what appears to be and endless sea (Saw whales from the mother ship). These rocks stick out of the earth and touch the sky, making mountains where it snows in the tropics. In fact, while I was there it snowed for the first time in history on Maui, because the earth is warming; which you, as humans, are all responsible for and must pay the price. Buy an Elon Musk car, and drink pina coladas in your caves of the future where you will not use light at night.

Luckily, the brilliant scientists at NOAA (using models) tell us this incredibly cold winter is due to this warming called climate change. And we must listen because they are in charge of the climate prediction center, where they make accurate predictions about how warm it's going to be. For instance, last fall (find it here https://www.noaa.gov/media-release/winter-outlook-favors-warmer-temperatures-for-much-of-us) they predicted this would be an unusually warm winter and dry in the west. And so the predictions have all come true with the coldest temperatures in twenty years and so much snow out west its really gonna flood come spring.

Just observing Earth as an outsider, I want to remind everyone that you are in an interglacial cycle that has about run its course. Remember, back twenty thousand years ago when glaciers were a mile thick? Well, it's coming back I assure you. Good thing you guys found all the cheap natural gas for heat. Gonna need it. And rest assured I can predict the future as well as NOAA. So, watch One Strange Rock, its about where you live, Earth. I like it here.

A photo of rocks in Hawaii coming out of the sea and hordes of Japanese without weapons getting married and crowding the beaches



Frank G. Cornish,

Benevolent Overlord

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Nueces Energy, Inc. is a complete land services company in the business of providing professional landmen and project management to various energy related jobs primarily in the oil and gas industry.

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Yegua	Eagle Ford	Sligo
Wilcox	Buda	Cotton Valley
Olmos	Georgetown	Smackover

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Contact Walter S. Light Jr. President/Geologist 713.823.8288 EMAIL: wthunderx@aol.com

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For more information contact: Randy Bissell, randyb@headingtonenergy.com or call 361-885-0113



Offices in Corpus Christi, Sarita, and McKinney, Texas - Exploring and Developing properties In South Texas, Permian Basin, East Texas & Oklahoma

Corpus Christi Geological Society 2nd Annual Brew Pub Crawl Saturday, April 6, 2019

(Benefitting the Scholarship Fund)

SCHEDULE

1:30 PM TO 2:00 PM – Meet at Railroad Seafood Station & Brewing Company, 1214 N. Chaparral, CC, TX 78401

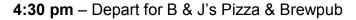


2:00 pm - Depart for Lorelei Brewing

2:15 pm to 3:15 pm – at Lorelei Brewing

3:15 pm- Depart for Lazy Beach Brewing

3:30 to 4:30 pm - at Lazy Beach Brewing

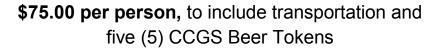




5:45 pm - Depart for Rebel Toad Brewing

6:00 to 7:00 pm - at Rebel Toad Brewing

7:15 pm - Return to Railroad Seafood Station & Brewing









Names:	
Phone Numbers:	
E-mails:	
Total Amount:	Check Number:

Please send completed form and payment (checks payable to CCGS) to:
CCGS 2019 BREW PUB CRAWL 2019
8326 Salsa Drive, Corpus Christi, TX 78414

Questions and RSVPs:

William "B.J." Thompson - 361-816-2326 - william.thompson426@gmail.com



If you come in on Friday, join us for the 2nd Annual CCGS Golf Tournament on April 5th. North Shore Country Club; 12:30 start. Contact Fermin Munoz: 361-960-1126 or fmunos04@hotmail.com for more information.



CBGS President's Letter

CBGS Board 2018-2019

Dr. Subbarao Yelisetti- President Lonnie Blake- Vice President Matt Hammer- Secretary/ Treasurer Dr. Robert Schneider- Continuing Education Lonnie Blake- Golf Chair Ed Egger- Scholarship Chair

CBGS Scholarships

The board awarded three scholarships of \$2,000 each to undergraduate geophysics majors from Texas A&M University-College Station, University of Houston and Texas A&M University-Kingsville in 2017-2018. We will be awarding the scholarships again this year.

The following criteria is followed in awarding the scholarships.

- 1. Must be a citizen of the USA
- 2. Must have declared Major Geophysics at the main campus of the receiving university
- 3. Must have GPA 3.0
- 4. Must be in good standing with the school
- 5. Must make effort to attend a Coastal Bend Geophysical Society Meeting in Corpus Christi Texas after being awarded a scholarship to be recognized by the society.

News

- In the week of March 8th, there were 1,027 oil and natural gas rigs active in the U.S., according to Baker Hughes.
- U.S. crude futures are trading above \$56 a barrel for the balance of 2019 and calendar 2020 as reported by Scott DiSavino and Marguerita Choy on reuters.com.
- According to Baker Hughes report in early March, U.S. oil drillers cut rigs for third week in a row bringing the total count down to 834, the lowest in ten months.

CBGS Business

CBGS currently has 60 active members, 4 honorary members, and 60 student members. **CBGS workshops/talks**

- As part of the annual Kickoff Bar-B-Q, CBGS hosted Dr. Satinder Chopra on Sep 19, 2018 at the EOG conference center. His talk was entitled "Seismic reservoir

- characterization of Utica-Point Pleasant shale with efforts at quantitative interpretation a case study".
- CBGS offered a land seismic acquisition workshop on Dec 5th in EOG conference center with the following talks.

Talks:

- 1. A Brief Introduction to Seismic Acquisition (Students & New Professionals Encouraged) by Lonnie Blake, EOG
- 2. A Comparison of Long, Short, and Slip Sweep 3D Data Image Volumes Acquired And Constrained By Equivalent Source Time (KWP Phase I) by J. W. (Tom) Thomas, Kevin Werth, Tom Phillips, Chris Lindsey Dawson Geophysical Co.
- 3. A Comparison of 3D Multi-Component (9C) Data Image Volumes Acquired With Conventional and Simultaneous Source Techniques Also With Adequate Spatial Resolution For Compressive Sensing Investigation (KWP Phase 2) by J. W. (Tom) Thomas, Kevin Werth, Tom Phillips, Chris Lindsey Dawson Geophysical Co.
- 4. SAExporation More, Recent Advances in Onshore Seismic Data Acquisition Methods by Howard Watt, SAExporation, Houston

CBGS is looking forward to offer many such workshops in the future. Topic/speaker suggestions are welcome. Email your suggestions to Lonnie_Blake@eogresources.com or Subbarao.Yelisetti@tamuk.edu

Golf Tournament

CBGS organized its annual **Golf Tournament** to fund its scholarship program in the first week of October, 2018 at Northshore Country Club. Raised ~\$4,000 for the scholarship fund.

If you are interested in our next Golf Tournament, please contact Lonnie Blake at 361-887-2665 or Lonnie_Blake@eogresources.com

New Degree Tracks at TAMUK

- Texas A&M University-Kingsville (TAMUK) started its first cohort of MS Petrophysics program in Fall 2018. If you are interested in joining this program in Fall 2019, please contact the graduate coordinator for MS in Petrophysics, Dr. Subbarao Yelisetti at Subbarao. Yelisetti@tamuk.edu.
- BS degree in Geophysics, Minor in Geophysics and Certification in Geophysics
 offered at Texas A&M University-Kingsville since Fall 2017. Interested students can
 contact Dr. Subbarao Yelisetti (<u>Subbarao Yelisetti@tamuk.edu</u>) for additional
 information.

Exploration Geophysics and Borehole Geophysics classes

PHYS 5382 Exploration Geophysics and PHYS 5388 Borehole Geophysics classes are offered in Fall 2019 at Texas A&M University-Kingsville. This is available for the professional

community as well as our students. You can sign up as a "transient" student in order to take classes without actually enrolling in the school. If anyone in the professional community wishes to sign up for this, please contact, Dr. Subbarao Yelisetti <u>Subbarao Yelisetti@tamuk.edu</u>.

SEG Distinguished Lecture

CBGS and TAMUK SEG student chapter organized 2018 SEG Distinguished Lecture in January, 2018. We wish to organize many more lectures in the future.

Education/Events

-SEG

SEG 2019 annual meeting will be held in San Antonio, TX from Sep 15-20th. Abstract deadline is April 1, 2019. See https://seg.org/Annual-Meeting-2019 for additional details.

See https://seg.org/Education/Lectures/Distinguished-Lectures for information about upcoming SEG distinguished lecture in Houston and other locations.

See https://seg.org/Education/Lectures/Honorary-Lectures for SEG honorary lecture locations in Texas.

-AAPG

2019 AAPG annual convention and exhibition will be held in San Antonio, TX from May 19-22, 2019.

https://ace.aapg.org/2019

-AGU

2019 Fall AGU annual meeting will be held in San Francisco, CA from December 9-13th, 2019. https://fallmeeting.agu.org/2018/future-meetings/

-GSA

The Geological Society of America's 131st annual meeting will be held in Phoenix, AZ from 22-25th September 2019.

http://www.geosociety.org/GSA/Events/Annual Meeting/GSA/Events/gsa2019.aspx

Monthly Saying

"Most highly risk-averse people (and firms) never realize the high price they pay for their conservatism" - P. R. Rose

Monthly Summary

Texas Oil and Gas Info	Current Month	Last Month	Difference	
Texas Production	MMBO/BCF	MMBO/BCF	MMBO/BCF	
Oil	114.7	126.9	-12.2	November
Condensate	14.1	15.1	-1.0	November
Gas	692.4	738.6	-46.2	November
	Yr to date - 2019	Yr to date - 2018	Yr to date - 2017	
Texas Drilling Permits	961	2157	2263	February
Oil wells	246	549	527	February
Gas wells	54	107	165	February
Oil and Gas wells	597	1329	1431	February
Other	4	21	15	February
Total Completions	784	1804	1845	February
Oil Completions	584	1326	1411	February
Gas Completions	175	420	328	February
New Field Discoveries	1	2	3	February
Other	4	8	6	February

Subbarao Yelisetti President, CBGS

2nd Annual Spring Golf Tournament

NorthShore Country Club
April 5, 2019
12:30 p.m. Shotgun Start
Four-Person Scramble
100 Player Limit * Sign up Early

Contact: Fermin Munoz, fmunoz04@hotmail.com, 361-960-1126

Name		
Email		
Company Name		
Address		
City, State, Zip		
Phone		
Yes, Please Place on a Team		
I want to be on a Team with: (list below)		
Player 2:		
Player 3:		
Player 4:		
\$100 per Golfer		
\$400 per Team (4 players)		
Sponsorship Total		
TOTAL AMOUNT DUE		
PAYMENT INFORMATION		
Check Enclosed		
Make Checks payable to:		
Corpus Christi Geological Society		
Mail check to:		
CCGS Golf Tournament		
Fermin Munoz Jr.		
619 E. Broadway		
Portland, TX 78374		

Sponsorships

Total Sponsorship	\$
General Sponsor	\$
Door Prize Sponsor	\$
# Closest to Pin	\$100 ea.
# Longest Drive	\$100 ea
# Hole Sponsor	\$200 ea
# Beverage Sponsor	\$500 ea

NorthShore Country Club

801 E. Broadway St. Portland, TX 78374 Entry Fee Includes:

- Green Fees
- Range Balls
- Carts
- Beverages on the Golf Course (limited)
- Door Prizes
- Dinner



If you can stay for the weekend, join us for the Second Annual Brewery Club Crawl on Saturday, April 6th; 1:30 to 7:15 pm. Contact BJ Thompson at 361-816-2326 or william.thompson426@gmail.com for more information.



CORPUS CHRISTI GEOLOGICAL SOCIETY COASTAL BEND GEOPHYSICAL SOCIETY



LUNCHEON MEETING ANNOUNCEMENT

April 17, 2019

Location: Water Street Events (Previously the Seafood Company

Restaurant) 300 Block N. Water Street, CC, TX 78401

Student Sponsor: Imagine Resources, Nye Exploration, Viper Exploration, Ltd.

Bar Sponsor: Sponsorship Opportunities Available!!!!!

Time: 11:30 am Bar, Lunch follows at 11:45 am, Speaker at 12:00 pm

Cost: \$25.00 (additional \$10.00 surcharge without reservation;

NO SHOW may be billed and non-RSVP attendees cannot be Guaranteed a lunch); FREE for students with reservation

(discounted by our generous sponsors)!

Reservations: Please RSVP by 4PM on the FRIDAY before the meeting!

E-Mail: arrangements@ccgeo.org

Please note that luncheons RSVPs are a commitment to the Water Street Events and must be paid even if you can't attend the luncheon.

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IF YOU WOULD LIKETO SPONSOR, PLEASE CONTACT US AT:

arrangements@ccgeo.org



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Imagine Resources, LLC

<u>Applying New Technologies to Old Areas: Relative Geologic Time, Wheeler</u> Diagrams and Near Field Exploration in Faulted Plays

Steve Tobias | NearFX LLC | steve@nearFX.com

Large 3D seismic volumes cost tens of millions of dollars to acquire, millions to process and hundreds of thousands or more to interpret. And yet more often than not, only a small percentage of seismic reflections are mapped out, typically top/ base of key reservoirs and seals, flooding surfaces and sequence boundaries. It seems intuitively obvious that a lot of useful information is being left behind, and yet what to do? Picking every horizon would be as de-focusing as it would be time consuming. And anyway, what would it give you?

This presentation explores this intriguing topic by examining an integrated data set from offshore Louisiana. Using new technologies, every peak and trough in a 3D volume can now be rapidly converted into thousands of small "mini-maps" or patches, which are then weaved into a highly detailed mapped-out volume by an interpreter. This helps in the generation of new prospects for several reasons. First, detailed maps are quickly created at levels that perhaps don't receive a lot of attention and may hold strat trap potential. Secondly, correlating 2D mapped patches with meandering stratigraphy across growth faults can help avoid typical correlation errors when a small (1D) correlation polygon would otherwise be used. Third and most importantly, each of these patches can be assigned a relative geologic time (RGT), and the computer can then sort through them and keep track. This allows the creation of the 21st century version of the 60-year old Wheeler Diagram, but with exquisite 3D detail instead of a cartoon-like representation. As will be shown, 3D Wheeler Diagrams can greatly help to break out seismic sequence boundaries that might be too subtle to otherwise see. Several excellent vendors offer RGT capability – here we use Paleoscan by Eliis.

Once sequences are broken out and tied to wells, these rock packages can be readily sifted for two things: facies patterns that make more sense than before, and reservoir prone "geobodies" whose amplitudes are tied to wells and calibrated to the local rock physics (see picture). Calibrated neural networks can then help to map out prospective areas quickly. Best of all, no reprocessing is needed for this workflow, and that includes inversion and AVO. It can be run on existing 3D surveys, as will be shown with a data set from the 1980's. Of course, integrating elastic inversion and other data always helps.

What is perhaps just as interesting for prospect generators working the Gulf of Mexico is that this approach provides an important new seismic stratigraphy tool for those exploring in faulted environments. Many must have noticed that the eustatic signatures so helpful to international seismic stratigraphers (such as onlap, downlap, toplap, etc.) are mostly missing in and around expansion faults. The reason for this is that the various onlaps terminate against fault planes instead of underlying strata. The eustatic signatures are there, but manifest in a different dimension. Only through the study of expansion profiles can these signatures be recovered and various systems tracts better described. As will be discussed, the study of expansion profiles dovetails quite well with RGT analyses.

This presentation attempts to be very applied in nature, and not academic.

Biography

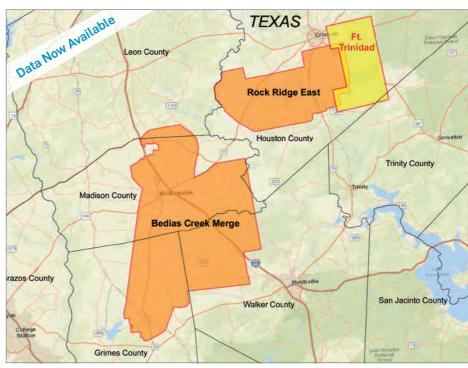
Steve holds degrees in geology and geophysics and has had a long career in both New Ventures and Near Field Exploration. He started with Mobil, and later worked with Tenneco in the GOM and Colombia and BHP Petroleum in the GOM and Australia. He was Pogo Producing's first international exploration manager during the time that they drilled up the highly prolific Gulf of Thailand. Steve led an international consulting group for seven years, and then co-founded South Bay Resources in 2003. It was extremely successful in using neural networks in the exploration of onshore Texas and Alberta, until it wasn't. Steve then joined Hess where he served in various roles, including subsalt production, Manager of Exploration Excellence and Denmark Exploration manager for three years. For the past year, Steve has provided exploration services for a variety of clients in the GOM and the North Sea. His current area of focus is offshore Gulf of Mexico on the outer shelf and deep water, with emphasis on subsalt plays. Steve also consults in the use of Paleoscan workflows.

Steve@NearFX.com www.NearFX.com +1-281-908-9072





New Ft. Trinidad 3D Survey Houston and Trinity Counties, TX



CGG continues to expand its East Texas footprint with high-quality 3D projects while illuminating the stacked pay formations.

Data is already available from our Bedias Creek Merge and Rock Ridge East projects. Orthorhombic PSTM from our newest project Ft. Trinidad is also now available.

The right data, in the right place, at the right time

Scott Tinley

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Cheryl Oxsheer

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Fluid Flow and BSR Distribution off Oregon

Lenora Perkins^{1*}, Subbarao Yelisetti¹, Dibakar Ghosal², and RR1718 Science Party[§]

¹Department of Physics and Geosciences, Texas A&M University—Kingsville, Texas, USA

²Department of Earth Sciences, Indian Institute of Technology-Kanpur, India

Abstract:

Multichannel seismic data were acquired near the deformation front off Oregon as part of the National Science Foundation (NSF) sponsored University-National Oceanographic Laboratory System (UNOLS) chief scientist training cruise from September 26th-October 2nd, 2017. The data gathered during this cruise were processed out to migration. The migrated seismic sections indicate the presence of hydrates based on the observation of prominent bottom simulating reflectors (BSRs) at depths ranging from 95-316 m below the seafloor (mbsf). The shallowest BSR is noted ~103 km north of Hydrate Ridge at ~95-100 mbsf beneath a frontal accretionary ridge crest that deepens to ~200-210 mbsf below the ridge flanks. In this area beneath the ridge crest, extensional cracks or perpendicular normal faults are also observed. Southwest of Hydrate Ridge, the deepest BSRs ranging from ~273-316 mbsf are noted. Within some of the seismic lines, the presence and accumulation of free gas in the sediment are indicated by strong reflections with opposite polarity beneath the BSR. Additional observations made south of Hydrate Ridge include disrupted BSR, a potential double BSR, methane bubbles in the water column and high amplitude signatures in the spectral decomposed sections.

Several seepage sites through the entirety of the sediment column were observed in the vicinity of Deep Sea Drilling Project Leg 18-site 176, which show strong amplitudes at the seafloor on spectral decomposed sections. These are likely sites of past gas columns that currently have carbonate caps at the seafloor. The noted absence of BSR beneath these sites is possibly indicative that hydrate stability field conditions changed due to erosion, and the BSR depth is readjusting to current conditions. The BSR is absent beneath the seep site ~15 km south of Hydrate Ridge, and the BSR depth increases outward from ~105 to 165 mbsf. This is likely indicative of the upward migration of warm fluids through the seafloor via short wavelength heat flow variations. Estimated heat flow values from the BSR depth reflect higher values compared to the background heat flow values of the region.

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Personal Summary

Lenora Perkins is a senior at Texas A&M University – Kingsville, graduating Cum Laude with Honors on May 17, 2019. She will be the first to graduate from TAMUK with a Geophysics concentration, in addition to two minors (Physics and Mathematics). She is currently copresident of the TAMUK Geophysical Society, a student chapter of the Society of Exploration Geophysicists (SEG), and is a past president of TAMUK's AAPG student chapter. She has worked on six different research projects with three different mentors, and has presented research posters in four different states, and on a national and international level. She is a current student member of both the Corpus Christi Geological Society and the Coastal Bend Geophysical Society, as well as a previous scholarship recipient of both societies. In 2018 she was awarded the Foss scholarship, and the Texas A&I Rising Scholar award. She is also an alumnus of Texas A&M University – Corpus Christi with a Bachelor's degree in Biology, concentration in Marine Science. In her available time, Lenora is a competitive strength athlete and competes in both powerlifting and strongman competitions. Primarily through strongman competitions, she participates in numerous charity events and raises money for causes such as breast cancer awareness, lupus awareness, and children's homes.

Lenora has been accepted into the graduate program at Stephen F. Austin State University in Nacogdoches, Texas, and has been granted a Graduate Teaching Assistantship beginning with Summer Field Camp 2019.



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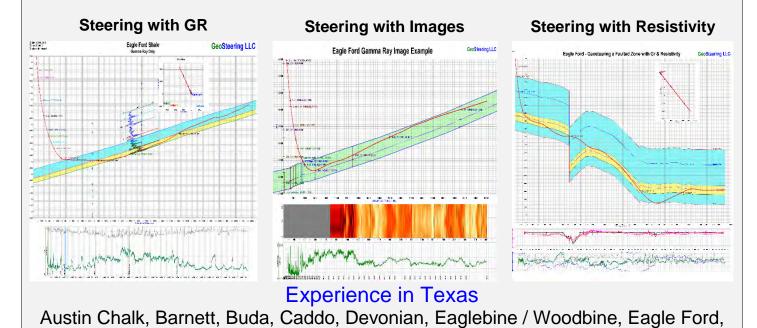
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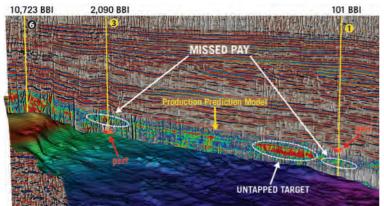
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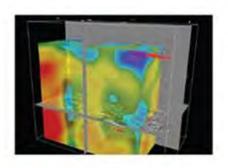
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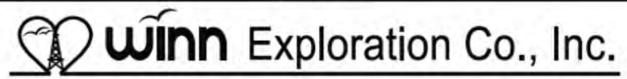


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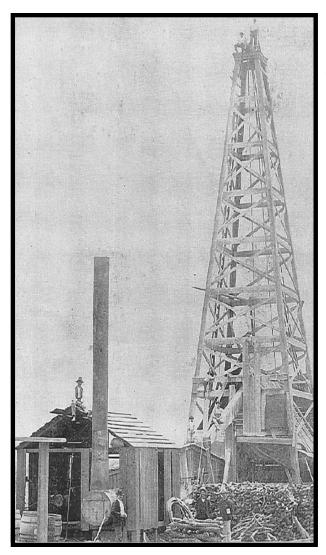
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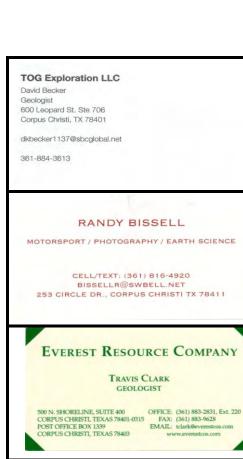
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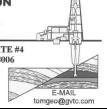
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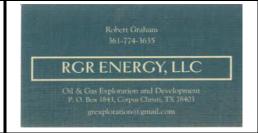


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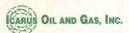
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