

# **BULLETIN**

## **Corpus Christi Geological Society**



and

## **Coastal Bend Geophysical Society**



**January  
2023  
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**2022-2023**

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**P.O. BOX 2741 \*C.C. TX. 78403**  
**2022-2023**

**OFFICERS**

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Scholarship Chairman	Matt Hammer	361-888-4792 361-563-6137	<a href="mailto:mhammer@royalcctx.com">mhammer@royalcctx.com</a>

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## CCGS/CBGS JOINT MEETING SCHEDULE 2022-2023

September 2022							October 2022							November 2022						
S	M	T	W	Th	F	S	S	M	T	W	Th	F	S	S	M	T	W	Th	F	S
				1	2	3							1			1	2	3	4	5
4	5	6	7	8	9	10	2	3	4	5	6	7	8	6	7	8	9	10	11	12
11	12	13	14	15	16	17	9	10	11	12	13	14	15	13	14	15	16	17	18	19
18	19	20	21	22	23	24	16	17	18	19	20	21	22	20	21	22	23	24	25	26
25	26	27	28	29	30		23	24	25	26	27	28	29	27	28	29	30			
							30	31												

**2022-23 Membership Kickoff—  
Nueces Brewing Co. Downtown  
Thursday, Sept. 8, 2022  
5:00p.m.-til 8:00p.m.**

Oct 19 meeting at  
Crawdaddy's Downtown.  
11:00 Bar, 11:45 lunch,  
12:00 speaker  
Presenter: Richard S.  
Bishop. "Orgins and  
Habitats of Super-Giant  
Fields."

Nov. 16 meeting at Joe's Crab  
Shack Downtown. 11:00 Bar,  
11:45 lunch, 12:00 Speaker  
Presenter: Mohamed Ahmed-  
Texas A&M Univ. Corpus Christi.  
"Vulnerability of Coastal  
Systems to Natural and  
Anthropogenic Interventions.

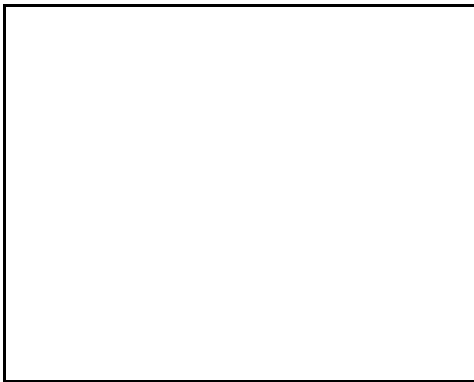
December 2022							January 2023							February 2023						
S	M	T	W	Th	F	S	S	M	T	W	Th	F	S	S	M	T	W	Th	F	S
				1	2	3	1	2	3	4	5	6	7			1	2	3	4	
4	5	6	7	8	9	10	8	9	10	11	12	13	14	5	6	7	8	9	10	11
11	12	13	14	15	16	17	15	16	17	18	19	20	21	12	13	14	15	16	17	18
18	19	20	21	22	23	24	22	23	24	25	26	27	28	19	20	21	22	23	24	25
25	26	27	28	29	30	31	29	30	31					26	27	28				

**Jan. 18 meeting at Joe's Crab  
Shack**  
Presenters: Bill Maxwell &  
Steve Emerson  
"A Follow-up, The Great Texas  
Freezeout."

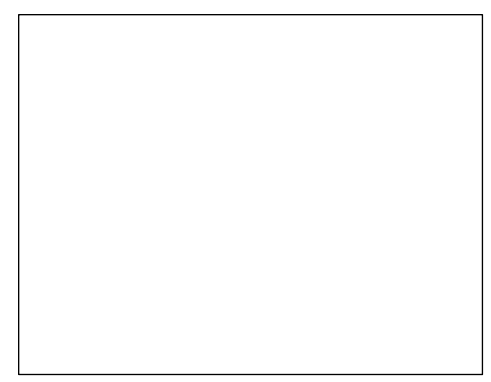
**Feb. 15 meeting at Joe's  
Crab Shack**  
Presenters: Steve Pattee  
Senior Vice Pres. At Lonquist  
& Co. LLC & LLC Lonquist  
Sequestration, LLC. Emily  
Olson Senior Geologist at  
Lonquist & Co. LLC.  
"CO2 Storage"

## CCGS/CBGS Joint Meeting Schedule 2022-2023

March 2023							April 2023							May 2023						
S	M	T	W	Th	F	S	S	M	T	W	Th	F	S	S	M	T	W	Th	F	S
			1	2	3	4							1		1	2	3	4	5	6
5	6	7	8	9	10	11	2	3	4	5	6	7	8	7	8	9	10	11	12	13
12	13	14	15	16	17	18	9	10	11	12	13	14	15	14	15	16	17	18	19	20
19	20	21	22	23	24	25	16	17	18	19	20	21	22	21	22	23	24	25	26	27
26	27	28	29	30	31		23	24	25	26	27	28	29	28	29	30	31			
							30													



**April 19 meeting at Joe's Crab Shack**  
 Presenter: John Rotzien,  
 "Deep Water Sedimentation."  
 Presentation of Scholarships



## Calendar Of Meetings and Events

- Corpus Christi Geological/Geophysical Society..... Third Wed.—11:30a.m.
- SIPES Corpus Christi Luncheons..... Last Tues.—11:30a.m.
- South Texas Geological Society Luncheons..... Second Wed—noon San Antonio
- San Antonio Geophysical Society Meetings..... Fourth Tuesday
- Austin Geological Society..... First Monday
- Houston Geological Society Luncheons..... Last Wednesday
- Central Texas Section of Society of Mining, Metallurgy & Exp..... 2<sup>nd</sup> Tues every other month in San Antonio



## President's Letter

### And a new year begins...

First of all, let me wish you a Happy New Year! I hope that your holidays were refreshing and peaceful – now back to the nitty gritty!

Unfortunately, it also seems that we are now in a winter where we deal with COVID, influenza, and RSV infections. Not to mention the common cold, something I've had for the last two weeks. Here's hoping that everyone navigates their way through the winter as healthy as possible. Our December lunch was very successful and well attended. Thirty-four people, including eighteen students, came to hear Dr. Mohamed Ahmed of TAMU-CC talk. This was easily the most people at a lunch since pre-COVID days!

Also, we had our first Christmas "event" at the Lazy Beach brewery on the south side of town on December 8. Fifteen people came, including four from TAMU-CC. This was just a time for people to get together to socialize, and by all accounts a good time was had. Perhaps we have started a new Christmas tradition!

Please remember that we will kick off our technical lunch special again right after the New Year. Mark your calendars for January 18, when Bill Maxwell and Steve Emerson will discuss "The Great Texas Freeze-Out." Note that we will continue our new venue for the lunch. Please join us at Joe's Crab Shack, 444 N. Shoreline. Looking ahead, Emily Olsen will talk in February about CO<sub>2</sub> storage.

Also, the headquarters and storage facility for the society has been moved. It is now in the Wilson building downtown. If you need to get something from there, please contact Sebastian Wiedmann.

As I write this, the holidays are upon us. On behalf of the board members, we wish everyone a peaceful and refreshing time. May 2023 bring us success, both personally and professionally. Until we meet again, be safe. See you on the other side!

**Robert Schneider—CCGS President**

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## **CBGS President's Letter**

### **CBGS Board 2022-2023**

President- Dr. Subbarao Yelisetti

Vice President- Dr. Mohammed Ahmed

Secretary/ Treasurer-Charles Benson

### **CBGS Scholarships**

The Coastal Bend Geophysical Society (CBGS) has donated \$10,000 to the Department of Physics and Geosciences, Texas A&M University-Kingsville in support of the multidisciplinary Petrophysics Graduate Program that has been requested. These funds will be used as scholarships in attracting quality graduate students.

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. We will be awarding the scholarships again this year.

### **Scholarship Requirements**

Criteria for awarding the Scholarship from Coastal Bend Geophysical Society of Corpus Christi, Texas:

1. Scholarships are open to undergraduate or graduate students.
2. Must have declared major in Geophysics, or Geology with a concentration in Geophysics or Petrophysics.
3. Preference is given to students attending Coastal Bend schools (TAMU-K, TAMU-CC and Del Mar College), then to Coastal Bend natives attending other universities.
4. Must have a GPA of at least 3.0 and 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**

- According to Baker Hughes Co, the oil and gas rig count is 780 in the week of December 9, 2022.
- As of December 9, the U.S. crude futures were trading at ~\$71 a barrel after topping \$130 in March, as reported by Scott DiSavino on reuters.com.
- According to the U.S. Energy Information Administration (EIA) forecasts, U.S. crude output is expected to increase from 11.25 million bpd in 2021 to 11.87 million bpd in 2022 and 12.34 million bpd in 2023.

### **CBGS Business**

CBGS currently has 43 active members, 4 honorary members, and 40 student members. Raised \$1,450 towards student scholarships through membership revenue this past year.

### **CBGS workshops/talks**

CBGS hosted two luncheon meetings in February and April, 2022 featuring international speakers, Dr. Rajesh Vayavur, Canada and Dr. Snons Cheong, South Korea, respectively.

CBGS also hosted the luncheon meeting in November, 2022 featuring speaker, Dr. Mohammed Ahmed. The title of this talk was “Vulnerability of coastal systems to natural and anthropogenic interventions”.

CBGS is looking forward to offer workshops/talks in the future. Topic/speaker suggestions are welcome. Email your suggestions to [Subbarao.Yelisetti@tamuk.edu](mailto:Subbarao.Yelisetti@tamuk.edu)

### **New Degree Tracks at TAMUK and Graduate Scholarships**

- 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 Spring 2023, please contact the graduate coordinator for MS in Petrophysics, Dr. Subbarao Yelisetti at [Subbarao.Yelisetti@tamuk.edu](mailto:Subbarao.Yelisetti@tamuk.edu).
- The Department of Physics and Geosciences at TAMUK is offering competitive scholarships for MS Petrophysics students. For additional details about the program and scholarships, please visit the website:  
<https://www.tamuk.edu/artsci/departments/phge/phys/academics/gp.html>
- **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 ([Subbarao.Yelisetti@tamuk.edu](mailto:Subbarao.Yelisetti@tamuk.edu)) for additional information.

### **Education/Events**

#### **-SEG**

SEG 2023 annual meeting will be held in Houston, TX from August 27 – September 1. See <https://seg.org/Events/Upcoming-SEG-Annual-Meetings> 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.

## -AGU

2022 Fall AGU annual meeting will be held in Chicago, IL from December 12-16<sup>th</sup>, 2022.

<https://www.agu.org/Fall-Meeting>

## Monthly Saving

“New discoveries and production of resources like shale oil and gas are dramatically altering our energy supply outlook and the entire global geopolitical landscape. And the pace of change - particularly in the past few years - continues to accelerate.”- Fred Upton

## Monthly Summary

<b>Texas Oil and Gas Info</b>	<b>Current Month</b>	<b>Last Month</b>	<b>Difference</b>	
<b>Texas Production</b>	<b>MMBO/BCF</b>	<b>MMBO/BCF</b>	<b>MMBO/BCF</b>	
Oil	142.8	145.7	-2.9	August
Condensate	21.9	23.0	-1.1	August
Gas	930.2	951.2	-21	August
	<b>Current Month</b>	<b>Yr to date - 2022</b>	<b>Yr to date - 2021</b>	
<b>Texas Drilling Permits</b>	678	10218	8728	November
Oil wells	161	2291	2026	November
Gas wells	70	1006	753	November
Oil and Gas wells	419	6436	5556	November
Other	5	87	82	November
<b>Total Completions</b>	1589	16571	13729	November
Oil Completions	1279	13278	10485	November
Gas Completions	310	3293	3244	November
New Field Discoveries	1	14	27	November
Other	577	7285	6198	November

Subbarao Yelisetti  
President, CBGS





**CORPUS CHRISTI GEOLOGICAL SOCIETY  
COASTAL BEND GEOPHYSICAL SOCIETY**



## **LUNCHEON MEETING ANNOUNCEMENT**

**January 18th, 2023**

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- Location:** Joe's Crab Shack, 444 N. Shoreline Blvd.  
(downtown)
- Student Sponsor:** Viper Exploration, Panex Operating LLC, Imagine Resources. Thank you!
- Time:** 11:30 AM Bar, Lunch follows at 11:45 AM,  
Speaker at 12:00 PM
- Cost:** \$35.00 (additional \$10.00 surcharge without reservation: NO SHOW may be billed.)
- Reservations:** Please RSVP by 11:00 AM on Monday, January 16th before the meeting!

Email: [arrangements@ccgeo.org](mailto:arrangements@ccgeo.org)

**Please note that luncheon RSVPs are a commitment to Joe's Crab Shack Downtown and must be paid even if you can't attend the luncheon.**

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# The Great Texas Freeze of 2021

Steven D. Emerson, PhD, PE\*  
Emerson Technical Analysis, LLC  
and

Robert W. Maxwell, MSc  
Corpus Christi, TX

\*Presenter E-mail: [Steven.Emerson@EmersonAnalysis.com](mailto:Steven.Emerson@EmersonAnalysis.com)

## Abstract

Early in the morning of Monday, February 15, 2021, lights went out for millions of Texans. Without electricity, furnaces ceased while temperatures plunged to new lows and winds made the cold even more threatening. People were to die of hypothermia. Industry suffered at the same time. Refineries and chemical plants across the state were immediately forced into hazardous emergency shutdowns. Insured losses are predicted to exceed \$18 billion. Historically, Texas has relied on ERCOT (Electrical Reliability Council of Texas) to power almost the entire state, with market-driven incentives for thermal power stations fuelled with coal, natural gas and nuclear fission, and for subsidized windmills and solar photovoltaics. ERCOT has minimal ties to out-of-state grids, evidently to stay outside federal FERC regulation. Generally, the isolated electrical grid worked well, with base loads coming from the nuclear, coal and natural gas combined cycle plants, along with prioritized input from highly-variable wind and solar operations. Lastly, natural gas-fired peaking plants flexibly made-up shortfalls. It worked well, that is until it didn't. During the great freeze, one by one, electricity generators dropped off leading to grid frequency destabilization, and for a brief period the grid came dangerously close to 100% failure across Texas. This paper will examine the structures of the Texas electrical supply, both managerial oversight and physical plant. It will offer insight into the complicated causes of the catastrophic failure, and it will provide guidance on future risk to the Texas chemical and fuels industries due to unexpected power loss.

**Keywords:** Case histories, reliability, risk from power loss, emergency shutdown, ERCOT, electrical grid.

## Biography's

Steven D. Emerson, PhD, PE  
President, Emerson Technical Analysis, LLC

- Specialist in safe management of hazardous explosive, energetic, and flammable materials
- American Institute of Chemical Engineers (AIChE) member (especially the Global Congress on Process Safety)
- Texas A&M University Mary Kay O'Connor Process Safety Center (Technical Advisory Committee Member since 2000)
- AIChE Fellow

Robert W. (Bill) Maxwell, MS  
Chairman, Suemaur Exploration & Production LLC (Retired)

- Florida State University Leadership Council (College of Arts and Sciences)
- Florida State University Adjunct Professor (Dept of Geology and Geosciences)
  - • Instructs graduate students in Energy and the Environment



**CORPUS CHRISTI GEOLOGICAL SOCIETY  
COASTAL BEND GEOPHYSICAL SOCIETY**



## **LUNCHEON MEETING ANNOUNCEMENT**

**February 15th, 2023**

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- Location:** Joe's Crab Shack, 444 North Shoreline Dr.,  
Corpus Christi, TX 78401
- Student Sponsor:** Viper Exploration, Panex Operating LLC, Imagine  
Resources. Thank you!
- Time:** 11:30 AM Bar, Lunch follows at 11:45 AM,  
Speaker at 12:00 PM
- Cost:** \$35.00 (additional \$10.00 surcharge without  
reservation: NO SHOW may be billed.)
- Reservations:** Please RSVP by 11:00 AM on Monday, February  
13th before the meeting!

Email: [arrangements@ccgeo.org](mailto:arrangements@ccgeo.org)

Please note that luncheon RSVPs are a commitment to Joe's Crab Shack (Shoreline Drive) and must be paid even if you can't attend the luncheon.

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[arrangements@ccgeo.org](mailto:arrangements@ccgeo.org)

## CCGS LUNCHEON PRESENTATION – Wednesday, January 15, 2023

### CO2 Storage

Steve Pattee

Senior Vice President at Lonquist & Co. LLC & LLC Lonquist Sequestration, LLC

Emily Olson

Senior Geologist at Lonquist & Co., LLC



### ABSTRACT

For decades, injection and disposal wells have utilized highly porous and permeable Gulf Coast Miocene sands as reservoirs. The implementation of CCUS policies has challenged conventional injection methods by nature of the buoyant CO<sub>2</sub> fluid properties. Sands with high vertical permeability defy conventional gas plume control and have forced the injection industry to consider these as unconventional reservoirs. Much like unconventional resource plays changed the landscape of American oil and gas operating, the utilization of high Kv/kh Gulf Coast sands will force operators to explore the development of new well designs and operating strategies in CO<sub>2</sub> storage.

### Biographies

Steve Pattee is Senior Vice President at Lonquist & Co. LLC and Lonquist Sequestration, LLC, overseeing the company's regulatory efforts and carbon sequestration projects. He has more than 25 years of experience in mining, construction and petroleum and underground storage engineering. Steve graduated from Pennsylvania State University in Mining Engineering in 1995 and received his Masters of Petroleum Engineering from Texas A&M University in 2013. He is a registered Professional Geoscientist in the state of Louisiana.

Emily Olson is a Senior Geologist at Lonquist & Co. LLC. She has over 10 years of experience in petroleum exploration, production and underground storage. Though her work has spanned projects both domestic and international, she has spent the majority of her career focused on the northern Gulf of Mexico basin. Emily earned a Bachelors of Science degree in Geology and a Masters of Science in Geology from Texas A&M University in 2009 and 2019, respectively. She is a registered Professional Geoscientist in Texas and Wyoming and a proud board member of the Corpus Christi Geological Society.



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The Desk & Derrick Club of Corpus Christi is a proud affiliate of the Association of Desk And Derrick Clubs, [www.addc.org](http://www.addc.org)



# Lets talk about insurance based financial planning

## Tools

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Cancer, Heart Attack & Stroke -  
Small Business Solutions: Business valuation,  
Health, Vision & Dental*


## **Jason Downing**

361-742-9252

Insurance Representative/Former O&G Professional

<https://tanconnects.com/jasondowning>

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**President/Geologist**  
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*Corpus Christi Geological Society*



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Flash From The Past



Corpus Christi Geological Society




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CORPUS CHRISTI GEOLOGICAL SOCIETY          VOLUME VII  
CORPUS CHRISTI, TEXAS      NOVEMBER, 1966      NUMBER 3

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**THE BULLETIN OF THE CORPUS CHRISTI GEOLOGICAL SOCIETY**  
P. O. Box 1068 -- Corpus Christi, Texas  
Published Monthly, September to June by  
Caroline Duffield



## MONDAY NOON MEETING

November 7, 1966

Driscoll Hotel

Speaker:

**J. DON HAYNES**

Geologist, Haynes & V. T. Drilling Co.  
Corpus Christi, Texas

**THE BIG CAESAR FIELD,  
KLEBERG AND NUECES COUNTIES, TEXAS**

### ABSTRACT

The Big Caesar Field and Big Caesar Complex in Southwestern Nueces and Northeastern Kleberg Counties, is one of the most significant discoveries in the Frio Trend in recent years. The Big Caesar Field proper has produced in excess of 1 million barrels of oil from the Upper Pflueger Sand since its discovery in October, 1963.

The primary trapping element in the area is stratigraphic (strandlines, bar, and lenses) complicated by faulting. These factors tend to make the area unusually difficult to interpret geologically. Since the area is still undergoing development, any interpretation shown is subject to change.

In addition to the usual presentation of a field, an effort will be made to trace the history of development of the area. This will include certain prejudices that hampered development and the reasons for them. Also the geologic thinking that led to the drilling of certain wells. Some time will be devoted to the gas cap controversy between Haynes & V. T. and Humble.



### BIOGRAPHY

Mr. Haynes' early life was spent in the various oil centers of the country. Born in Mansfield, Louisiana in the shadow of a drilling rig, he attended grammar schools in Mississippi, Louisiana, Illinois, Kilgore, Texas, and Tulsa, Oklahoma. He attended high school in Odessa, Texas, where his family established Haynes & V. T. Drilling Company. He attended the University of Texas and received a B.S. degree in Geology. Graduate work was done at Texas Tech.



He worked for Lion Oil Company (Monsanto) as a geologist in Albuquerque, New Mexico, Wichita Falls, Texas and Midland, Texas from 1957 to 1961. In 1961, he accepted a retainer from Haynes & V. T. Drilling Company and moved to Alice, Texas. In 1963, he moved to Corpus Christi as a geologist for Haynes & V. T. Drilling Company.

Mr. Haynes efforts resulted in discoveries for Haynes & V. T. Drilling Company in the West Bishop Field, Southwest Bishop Field, and Big Caesar Field in the Bishop-Stratton area of the Frio Trend. The personal supervision of the drilling wells qualifies him to speak on the Big Caesar Field and the development of the Bishop area.

---

## **MONDAY NOON MEETING**

**November 28, 1966**

**Driscoll Hotel**

Joint Meeting With Corpus Christi Geophysical Society

Speaker:

**CURTIS MASON**

National Aeronautics and Space Administration,  
Houston, Texas

### **LUNAR SURFACE TOPOGRAPHY**

Mr. Mason will give an informal talk on lunar surface topography and strength as determined from the latest surveyor data. He will also show some slides and a short 16mm film.

### **BIOGRAPHY**

Curtis C. Mason, Lunar Geologist (AST) in the Geophysics Section, works in the area of lunar soil mechanics and mission simulations. He was born in Enid, Oklahoma in 1928. After graduating from University of Texas with a Bachelor of Science degree and a Master of Arts degree in 1957, he worked with the U. S. Department of Geological Survey for six years in Texas on ground water studies.

Mr. Mason joined the National Aeronautics and Space Administration at the Manned Spacecraft Center in 1962.

He is a member of the Geological Society of America.



## THE FUTURE OF WILCOX EXPLORATION

By Roy Jindra, Geologist, Harkins & Co., Alice, Texas

Exploration programs have been revised in all major South Texas trends with current emphasis on off-shore drilling and deeper drilling on flanks of old established fields in the Frio-Vicksburg Trend.

With some few exceptions, another important producing trend has been sadly neglected. This article is written to call attention to the Wilcox Trend of South Texas and its future development.

Numerous technical reports have been written on both specific areas and general Wilcox Trends. The Texas Petroleum Research Committee, Bulletin 44, published in April, 1955 was devoted entirely to the Wilcox Trend. Another technical paper would serve no particular purpose. Therefore, this report will generally point out what has and what can be done in the subject area.

### GEOLOGICAL HISTORY:

Generally speaking, the Wilcox has been broken into upper, middle, and lower Wilcox. The sands are characteristically shallow marine and continental facies. Deposition took place on flood plains and in near shore waters, lakes, swamps and embayments. Shifting stream beds eroded and redeposited sands resulting in erratic on-strike deposition. Off shore bars were created and, in general, environmental conditions approximate our present Gulf Coast.

Retreating seas prevailed in early Wilcox time, fluctuating seas with coastal subsidence occurred in middle Wilcox time and late Wilcox was characterized by encroaching seas. All of these conditions are conducive to sand deposition.

### DRILLING HISTORY:

In discussion of the Wilcox Trend, we must recognize that we are dealing with a new baby. Although Wilcox production was established in 1928, few fields were discovered before 1940 and really active interest didn't come until 1947.

Most Wilcox Fields are gas or gas/condensate producers. Marketing facilities were virtually non-existent until 1947 and not until the middle 1950's did adequate pipelines cover most of the trend. With the advent of the pipelines a rather extensive drilling program started, resulting in over 200 fields extending in a narrow arcuate band from Mexico northeasterly across the whole South Texas area.

Most drilling penetrated those zones of the Wilcox known as Slick, Luling, Mackhank and Massive. Unless production was established in one or more of these zones, drilling ceased. To date, very few of the old Wilcox Fields have been explored throughout the entire Wilcox section.



In any discussion among geologists as to deeper possibilities within the Wilcox, pessimism has been the rule rather than the exception. The general concensus of opinion has been that the sands at depth would be shaley, non-porous, non-permeable, non-commercial or non-existent. It is extremely disheartening to hear geologists automatically write off a whole province for production. Geologists must be optimists and imaginative to find production. Pessimism is a best trait reserved for engineers and economists.

In the past few years, far-sighted geologists with Mobil, Argo Oil Co. and Lone Star extended their exploratory efforts to the Middle Wilcox section and discovered sizeable reserves in what is now known as the Roeder Series. Roeder, South Cook, and Cuero Fields were discovered in DeWitt County. The success of these ventures kicked off a new drilling program to explore for these zones. More recently Lone Star and Humble have drilled deeper in the old Emma Haynes Field area of Goliad County and Harkins & Co. has deepened old Wilcox wells in the West Mission Valley area of Goliad and Victoria Counties.

To the credit of the pessimists, these Middle Wilcox sands are more hazardous areas of exploration than the upper Wilcox Trend. The sands are more erratically developed and vary extremely in porosity and permeability. Drilling costs are increased by abnormally high pressure and temperature conditions.

There is a positive side, however. The high pressure increases the ultimate recovery per acre foot productivity and a greater yield of condensate per MMCFG may be expected. Fifty or more barrels of condensate per MMCFG is not unusual. Greater yields per well can compensate for the increased costs.

So far, the middle Wilcox drilling has been sporadic and confined to isolated areas. Sand development maps should be made on these wells on a regional basis. Until all these wells have been analyzed regionally, exploration efforts must necessarily be haphazard. Enough wells have been drilled to date to establish a fair idea of the trend. More intelligent exploration programs can be set up to delineate maximum sand development as well as structure.

#### LOWER WILCOX EXPLORATION:

Very few wells along the down-dip trend have been drilled through the entire Wilcox section.

In 1959, Shell Oil Co. drilled their No. 1 Mary Carroll well in the Brushy Creek Field of DeWitt County, Texas to a depth of 19,600'. The upper Wilcox was encountered at 7600' and Wilcox sands with porosity and permeability were found to 14,600'. 7000' of Wilcox section is, therefore, prospective in this area. (See log section across producing sand interval).

A current well of great interest is the Atlantic Richfield deep test on the Marrs McLean lease in the Northeast Thompsonville Area of Jim Hogg County. Sands are well developed and prospective 6500' below the top of the Wilcox.



With academically successful exploration efforts on both East and West edges of this area, it is logical to assume that other wells of this nature will be drilled in the near future.

#### DOWN-DIP WILCOX:

In Goliad County, Shell recently drilled their No. 1 Bego in the Maetze Field area. The well was unsuccessful but it did establish an idea that no limit has yet been established as to the down-dip limits for Wilcox exploration. More wells should be drilled in areas where upper Wilcox sands will be encountered at 10,000' or more.

#### CONCLUSIONS:

Because of the depositional nature of Wilcox sands, traps of every nature can be expected at virtually every horizon. Exploration should continue in the following areas:

1. Present trends of normal upper Wilcox.
2. Down-dip Wilcox beyond limits presently explored.
3. Middle Wilcox exploration in areas presently producing from upper Wilcox horizons.
4. Lower Wilcox to 15,000' and 16,000' and again in areas of previous successful operations.

#### SUGGESTED AREAS FOR DEEPER DRILLING:

Duval County  
Piedre Lumbré  
Hagist Ranch

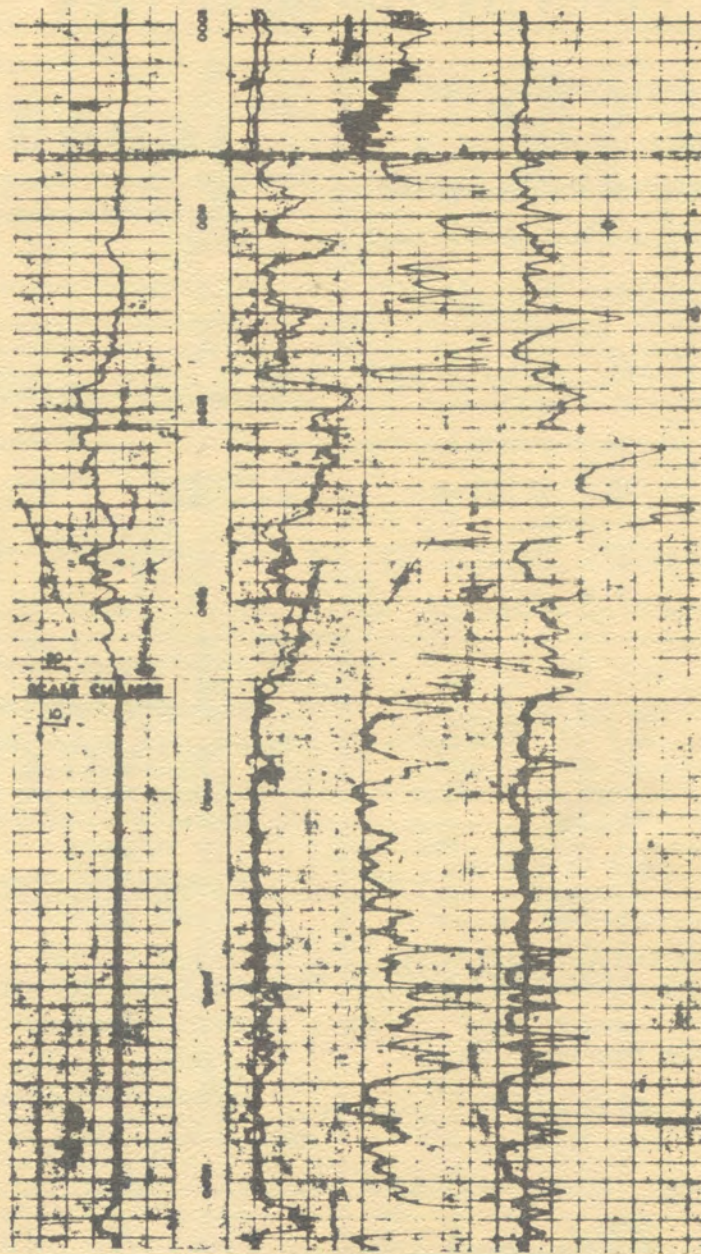
McMullen County  
Hostetter  
Rhode Ranch

Live Oak  
Texam  
Clay West  
Chapa

Bee County  
Tuleta  
Normanna

Goliad County  
Cabeza Creek  
Hordes Creek  
Marshall





TYPE LOG  
 Bushy Creek Field (deep)  
 DeWitt-Lavaca Counties  
 Shell Oil Co. #1 W. M. Carroll  
 TD 19,765 Pfs. 11,187-11,203  
 AOF 13,000 MCFGPD, SITP 7065#  
 Gr. 44.4 GLR 62,500-1  
 Top CZO-WX 7597



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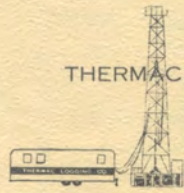
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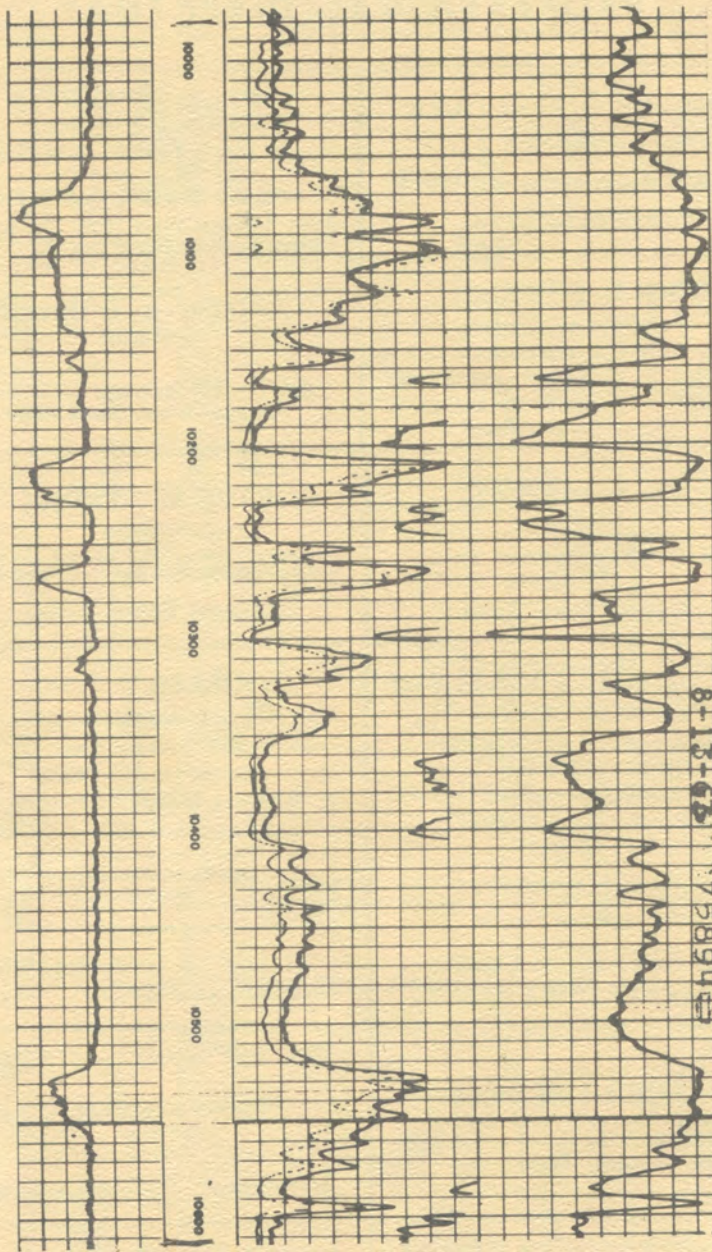
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<p style="text-align: center;">Seismic Evaluations - Crew Supervision Trade Negotiations <b>NEAL CLAYTON</b> Geophysicist 1614 Vaughn Plaza TU 4-6052 P. O. Box 1795 Corpus Christi, Texas</p>	<p style="text-align: center;"><b>PORTER A. MONTGOMERY</b> Montgomery Stratigraphic Service 1517 Milam Bldg. CA 3-9861 San Antonio, Texas</p>



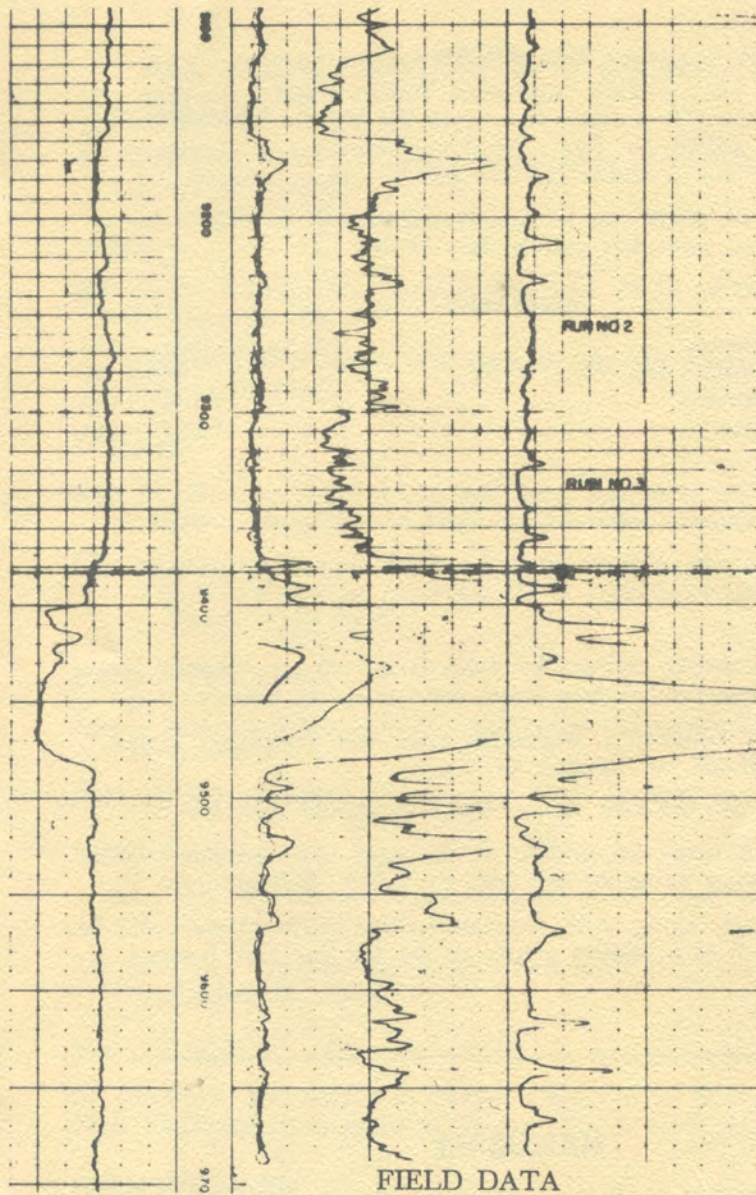


TYPE LOG  
 Orangedale Field  
 Bee County

Tidewater #1 Cox-Ayers

TD 12,279 Pfs. 10,211-10,216  
 AOF 3,940 MCFGPD SITP 5272#  
 Gr. 45.5 GLR 392,000-1 BHSIP 6561#  
 Top CZO-WX 9430





FIELD DATA

Productive Acreage	8,000 Acres
Number of Wells	21
Average pay	64'
Gas Column	490'
Orig. Res. Pressure	6855# @8700'
Av. Por.	23%
Av. Perm.	154 millidarcies
GOR	350,000-1
1965 Prod.	27,750,000 MCFG
Cum. Prod.	
1959-1965	147,350,000 MCFG
Est. Recov. Gas	630,000,000 MCFG

TYPE LOG

Northeast Thompsonville Field  
 Jim Hogg-Webb Counties  
 Atlantic Ref. Co. #3 Mars McLean  
 TD 10,110' Pfs. 9400-13 and 9419-36 (1st Hinnant)  
 AOF 78,000 MCFGPD SITP 5827# (Dry Gas)



### ROY JINDRA

Roy Jindra has probably "sat" more Wilcox trend wells than any other person. Indeed, it is difficult to work the Wilcox without finding a nearby well drilled by Roy's employer, Harkins & Company of Alice, Texas, or one in which Harkins has a working interest.

If the Wilcox trend can be reactivated, it will be due to the efforts of competent geologists such as Roy Jindra.

### BIOGRAPHY

University of Kansas .....	B.S. in Geology, 1948
Amerada Petroleum Corp .....	1948-1951
Kirkwood & Company .....	1951-1956
Harkins & Company .....	1956-Present

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### ERRATA:

In the fine article written by John Griesbach on "Selling Your Gas and Oil Properties", a few errors were made in transcription.

In Figure 1, Column 1, beginning with and including "2 mos.", the "months" should be changed to "years".

In Column 10, the first figure, \$26,804, should read \$25,804.

On page 13 near the middle of the page the sentence should read . . . . "average value 20 bbls./Ac. Ft.". Not "200 bbls./Ac. Ft."

John's article, along with the corrections listed above, will be reprinted this fall as a feature article in the Oil and Gas Journal.

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### HANDBALL

Anyone wanting to participate in a Novice Handball Singles Tournament, please contact Jim Morren at Southern Minerals, — TU 4-0311. A week or ten days after receipt of this bulletin, a schedule will be prepared that best suits all participants, who will then be notified by phone or mail. The main purpose of this tourney will be a chance for handball players to become better acquainted, and we hope that enough interest will be shown that future tourneys will result.



## ACCRETION, EROSION AND RECENT DEPOSITS

### SCHLUMBERGER

H. L. (Dutch) Dodd has been transferred to Corpus Christi from Alice effective November 1.

### MOBIL

Married — Marvin Machovec and Barbara Davis on October 15, 1966, in Houston, Texas.

A daughter, Helen Marie, was born to Mr. and Mrs. Peter Boone on August 9, 1966.

### TENNECO

Ken N. Durham, exploration geologist, has been transferred to the Corpus Christi District from the Overseas Department.

Marvin Rathke, a new employee, is assigned to the exploitation section as a geological engineer. He is a graduate of the University of Texas in El Paso.

### UNION PRODUCING

Jim Champion, geophysicist, transferred to Corpus Christi from Shreveport, Louisiana.

Earl Melton, geologist, has resigned to go to work for Texas Eastern.

### SUNRAY-DX

A baby boy, Christopher Lee was born to Mr. and Mrs. J. L. Burke on October 21, 1966.

Mr. and Mrs. Charles Plant have a new baby girl, Deborah Ann, born September 24, 1966.

### SUN

Ed Matulich, transferred to Corpus Christi from San Antonio.

Fred Goodwin, transferred to Corpus Christi from San Antonio.

### CONTINENTAL OIL

Dan Johnson, geologist, was transferred to Corpus Christi from Ponca City, Oklahoma.

### ATLANTIC REFINING

Gene Martin moved from New Orleans, Louisiana and is now Paleontologist in Corpus Christi.



## IT'S TAX-TALK TIME IN TEXAS

Guest Article for the Corpus Christi Geological Society

By: Ronald W. Bridges

Member, Texas House of Representatives

Talking "taxes" in Texas is always a precarious political subject — particularly for politicoes — but come January, 181 legislators will have to ponder the problem.

Some legislators will simply vote on the issues, some will suffice the whole problem simply by saying (to the folks back home, at least!), "All we have to do is cut back state expenditures." Still others may balk at voting for any tax bill and for all spending, and a few will be so committed that they cannot reason beyond their campaigns, and fewer still of the more ebullient Representatives and Senators will try to come up with realistic answers to Texas' fiscal problems.

I speak from experience during the "tax sessions" of 1959 and 1961, my first couple of terms in the Legislature, when many of us did not want Texas to become one of the nation's states to have either a general sales tax or a state income tax. While admittedly I have never been labeled as a "conservative," I cannot forget those days of being a co-sponsor of the alternative tax bill and, as it ended up, voting against the vast spending bill. Nor, however, can I forget the antithesis of my position, those members of the Legislature who perhaps, popularly and politically, voted for the appropriation bills and not the tax bills.

None of us really like taxes, unless philosophically we enjoy the privilege of participating in our free enterprise system . . . and may I add, I hope whether liberal or conservative, that all Texans continue to believe in this system.

You know, actually and honestly "we politicians" (at least some of us, regardless of political persuasion) have an answer to the constant and consistent critic who always finds a way to criticize any and all government spending and who advocates cutting appropriations across the board. While my personal philosophy, without benefit of elucidation, is that the purpose of government is to intervene only when our system of free enterprise doesn't work properly, I still would advocate that it is no easier to come up with ways to cut back spending in a growing state than it is for you to spend less in your family budget while having more children. In fact, it is a more difficult problem in Texas because of our expanding economy, a population explosion (the Malthusian theory just hasn't worked!), and our drive for excellence in the areas of education, tourism, industrial appeal et cetera.

Now, my adversary would say in essence that such a statement sounds like a politician "covering all the needs of everybody." Maybe such a criticism would be right, although as a father with three



daughters, and as a businessman in one of the most conservative professions in America, I worry like any father, businessman or Texan whether or not I can afford the bill. Yet, in all of this and still as a legislator, I want all the things, like you, which can give the advantages we seek.

If my adversary, then, should ask: "Okay, Bridges . . . enough of this 'cornbread and black-eyed peas' talk . . . what and how am I going to have to pay these costs?"

Well, the estimates aren't in yet, as to what we can expect in the way of additional tax burdens. All "guesstimates" range over \$100 million and most short of \$200 million, depending on whether the Legislature votes to increase school teachers' pay, state employes' salaries, whether to give the Department of Public Safety their requested, and probably needed, over 100 new highway patrolmen, as well as scores of other monetary legislative decisions, many of them very worthy. After all, don't you like to get a pay raise once in a while, too? The price of milk and bread does continue to go up.

A prominent proposal to meet these needs is one to increase our sales tax from two to three per cent, retaining the present statutory exemptions of food and medicine. Another proposal, I'm sure will be advanced, is a straight two per cent across-the-board sales tax eliminating the present exemptions. There will be a proposal to raise college tuition (state-owned colleges and universities) from \$50 to \$100 a semester.

There will be, I am sure, some proposal on the oil industry. Usually it is suggested that the Legislature either increase the overall production tax, which has varied during the last few years from 7%-9%, or as an alternative on the oil industry, pass a bill to tax on severance beneficiary.

The severance beneficiary tax, whether or not constitutional at the present time, would propose basically a tax on the pipeline companies.

However, depending on the contract written, this tax burden would fall largely on the "majors". But the added tax would in most cases, probably be passed on, if possible, to the end-of-the-line user of gas, which often times is an out-of-the-state recipient.

There may well be proposals to tax on the basis of a personal income tax or a corporate income tax; however, the complexion of the Legislature is such that I consider the issues very moot.

There could be special excise taxes introduced on such items as beer, liquor, wine, cigarettes, gasoline and a score of other items — all of which in my judgment will have little more than some consideration.

While I profess to be no Michael Nostradamus to predict the wisdom of any Legislature, I know there will be consideration of Liquor-by-the-drink and parimutuel horse-racing, although I see no more than "serious" consideration during the next Legislative session.



Also, there will be a managerie of other divergent interests, but largely I think it will be ultimately how to adjust the sales tax to fit the "scheme of things" in Texas, whether you or I like it or not.

But like the recent and renowned cartoon (changed a bit to fit this pattern):

"Ten yars ugo I culdn't evn spel Legislutar. . .

"And now i ar one. . ."

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### GEOLOGIST'S WIVES CLUB

The Geologist's Wives' Club held a luncheon and fashion show, Thursday, Oct. 13, in the Crown Room of the Sheraton Marina Inn. Before the noon luncheon, Mrs. Dale Mueller and Mrs. Jon Spradley modeled furs from Bein Royal Fur Co. Following the luncheon, "day-time and at home and cocktail" fashions from the Wahini Shop, located in the Sheraton Marina Lobby, were modeled by the following club members: Mrs. Robert Brady, Mrs. John Griesbach, Mrs. Cameron Gates, Mrs. Clifford Murphy, Mrs. Daniel Pedrotti, Mrs. Roland Robertson, Mrs. James Sullivan, and Mrs. Spradley. Hair Stylings compliments of Stevenson's Beauty Salons and Shoes by Bill's Shoe Box.

Co-Chairmen for the event were Mrs. J. Don Haynes and Mrs. Mueller. One-hundred-twenty members and guests attended.

Geologist's Wives Club plan a Christmas Shopping trip to Laredo on Wednesday, Nov. 9, 1966. Buses will leave from Parkdale Shopping Center in front of H.E.B. at 8:30 a.m. sharp and return by 8:30 p.m.

Co-Chairmen are Mrs. Troy Williams and Mrs. George Thomas.

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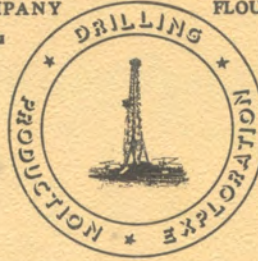
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Bartell Pass  
Blackjack  
Burgentine Lake  
Copano Bay, South  
Estes Cove  
Fulton Beach  
Goose Island  
Half Moon Reef  
Nine Mile Point  
Rockport, West  
St. Charles  
Tally Island  
Tract 831-G.O.M. (offshore)  
Virginia

**BEE COUNTY**

Caesar  
Mosca  
Nomanna  
Orangedale(2)  
Ray-Wilcox  
San Domingo

**Tulsita Wilcox**

Strauch\_Wilcox

**BROOKS COUNTY**

Ann Mag  
Boedecker  
Cage Ranch  
Encintas  
ERF

Gyp Hill  
Gyp Hill West

Loma Blanca

Mariposa

Mills Bennett

Pita

Tio Ayola

Tres Encinos

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Appling  
Coloma Creek, North  
Heyser

Lavaca Bay

Long Mott

Magnolia Beach

Mosquito Point

Olivia

Panther Reef

Powderhorn

Seadrift, N.W.

Steamboat Pass

Webb Point

S.E. Zoller

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Holly Beach  
Luffles  
San Martin (2)  
Three Islands, East

Vista Del Mar

**COLORADO COUNTY**

E. Ramsey  
Graceland N. Fault Blk  
Graceland S. Fault Blk

**DEWITT COUNTY**

Anna Barre

Cook

Nordheim

Smith Creek

Warmley

Yorktown, South

**DUVAL COUNTY**

DCR-49

Four Seasons

Good Friday

Hagist Ranch

Herbst

Loma Novia

Petrox

Seven Sisters

Seventy Six, South

Starr Bright, West

**GOLIAD COUNTY**

Berclair

North Blanconia

Bombs

Boyce

Cabeza Creek, South

Goliad, West

**St Armo**

Terrell Point

**HIDALGO COUNTY**

Alamo/Donna

Donna

Edinburg, West

Flores-Jeffress

Foy

Hidalgo

LA Blanca

McAllen& Pharr

McAllen Ranch

Mercedes

Monte Christo, North

Penitas

San Fordyce

San Carlos

San Salvador

S. Santallana

Shary

Tabasco

Weslaco, North

Weslaco, South

**JACKSON COUNTY**

Carancahua Creek

Francitas

Ganado & Ganado Deep

LaWard, North

Little Kentucky

**lost now found**

Maurbro

StewartSwan Lake

Swan Lake, East

Texana, North

West Ranch

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Chaparosa

Thompsonville,N.E.

**JIM WELLS COUNTY**

Freeborn

Hoelscher

Palito Blanco

Wade City

**KARNES COUNTY**

Burnell

Coy City

Person

Runge

**KENEDY COUNTY**

Candelaria

Julian

Julian, North

Laguna Madre

Rita

Stillman

**KLEBERG COUNTY**

Alazan

Alazan, North

Big Caesar

Borregos

Chevron (offshore)

Laguna Larga

Seeligson

Sprint (offshore)

**LA SALLE COUNTY**

Pearsall

**HAWKVILLE:EAGLEFORD**

**LAVACA COUNTY**

Hallettsville

Hope

Southwest Speaks

Southwest Speaks Deep

**LIVE OAK COUNTY**

Atkinson

Braslau

Chapa

Clayton

Dunn

Harris

Houdman

Kittie West-Salt Creek

Lucille

Sierra Vista

Tom Lyne

White Creek

White Creek, East

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Collegeport

**MCMULLEN COUNTY**

Arnold-Weldon

Brazil

Devil's Waterhole

Hostetter

Hostetter, North

**NUECES COUNTY**

Agua Dulce (3)

Arnold-David

Arnold-David, North

Baldwin Deep

Calallen

Chapman Ranch

Corpus Christi, N.W.

Corpus Christi West C.C.

Encinal Channel

Flour Bluff/Flour Bluff, East

GOM St 9045(offshore)

Indian Point

Mustang Island

Mustang Island, West

Mustang Island St.

889S(offshore)

Nueces Bay/Nueces Bay

West

Perro Rojo

Pita Island

Ramada

Redfish Bay

Riverside

Riverside, South

Saxet

Shield

Stedman Island

Turkey Creek

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Bonnieview/Packery Flats

Greta

La Rosa

Lake Pasture

Refugio, New

Tom O'Connor

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Angelita East

Commonwealth

Encino

Enos Cooper

Geronimo

Harvey

Hiberia

Hodges

Mathis, East

McCampbell Deep/Aransas Pass

Midway

Midway, North

Odem

Plymouth

Portilla (2)

Taft

Taft, East

White Point, East

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Hinde

La Reforma, S.W.

Lyda

Ricaby

Rincon

Rincon, North

Ross

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Sun

Yturria

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Helen Gohike, S.W.

Keeran, North

Marcado Creek

McFaddin

Meyersville

Placedo

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Cabezon

Carr Lobo

Davis

Hirsch

Juanita

Las Tiendas

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O'Hem

Olmitos

Tom Walsh

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Black Owl

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Chile Vieja

La Sal Vieja

Paso Real

Tenerias

Willamar

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Benavides

Davis, South

Jennings/Jennings, West

Lopeno

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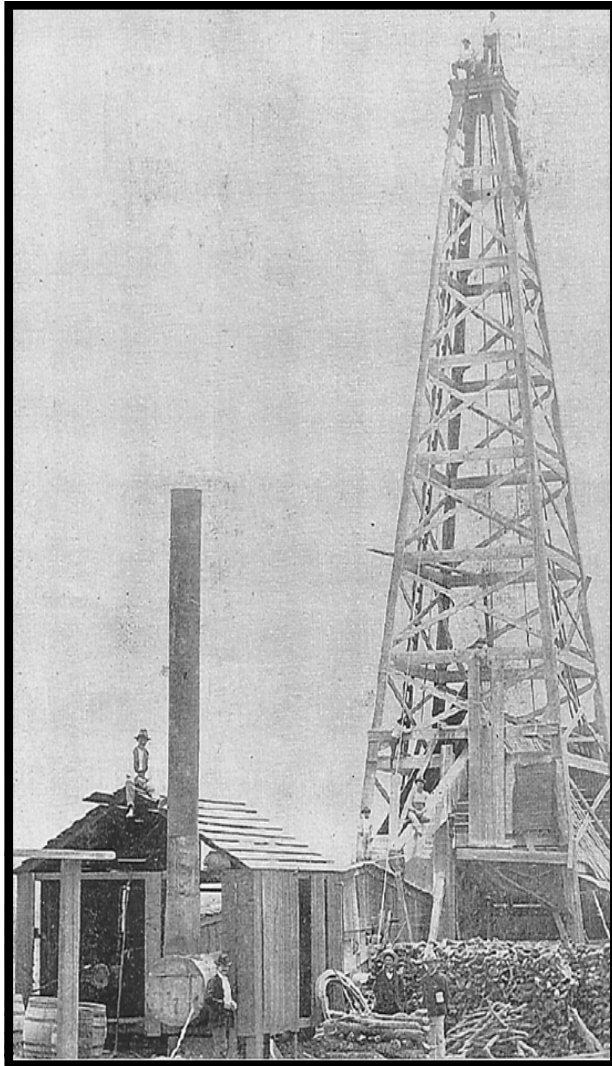
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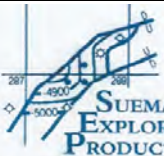
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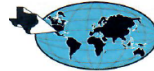
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