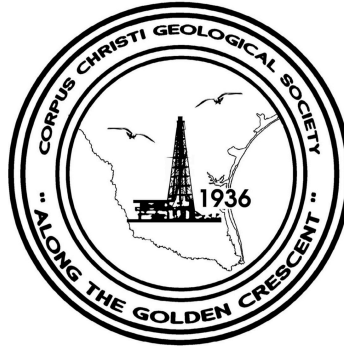


BULLETIN

Corpus Christi Geological Society



and

Coastal Bend Geophysical Society



**November
2025
ISSN 0739 5620**

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P.O. BOX 1068* C.C.TX.78403

2025-2026

www.ccgeo.org

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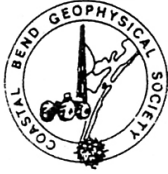
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2025-2026

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Scholarship Chairman	Charles Benson	402-319-0064	charlesljr.@icloud.com

**Visit the geological
web site at
www.ccgeo.org**

CCGS/CBGS JOINT MEETING SCHEDULE 2025-2026

September S M T W Th F S 2025							October S M T W Th F S 2025							November S M T W Th F S 2025						
1	2	3	4	5	6				1	2	3	4							1	
7	8	9	10	11	12	13	5	6	7	8	9	10	11	2	3	4	5	6	7	8
14	15	16	17	18	19	20	12	13	14	15	16	17	18	9	10	11	12	13	14	15
21	22	23	24	25	26	27	19	20	21	22	23	24	25	16	17	18	19	20	21	22
28	29	30					26	27	28	29	30	31		23	24	25	26	27	28	29

**2025-2026 Membership
Kickoff Nueces Brewing Co.
Downtown, 5 p.m.**

Meeting at Joe's Crab Shack
Downtown. 11:00 Bar,
11:45 lunch, 12:00 speaker.
David Desenberg, "3-D
Technology for Exploration."

Meeting at Joe's Crab Shack
Downtown. 11:00 Bar, 11:45
lunch, 12:00 speaker. Iris
Montero Petrophysicist &
Petroleum Engineer. "Chase
Group Formation Evaluation:
Hugoton Field, Kansas, Using
Machine Learning."

December S M T W Th F S 2025							January S M T W Th F S 2026							February S M T W Th F S 2026						
1	2	3	4	5	6				1	2	3									
7	8	9	10	11	12	13	4	5	6	7	8	9	10	1	2	3	4	5	6	7
14	15	16	17	18	19	20	11	12	13	14	15	16	17	8	9	10	11	12	13	14
21	22	23	24	25	26	27	18	19	20	21	22	23	24	15	16	17	18	19	20	21
28	29	30	31				25	26	27	28	29	30	31	22	23	24	25	26	27	28

Meeting at Joe's Crab Shack
Downtown. 11:00 Bar, 11:45
lunch, 12:00 speaker.

Meeting at Joe's Crab Shack
Downtown. 11:00 Bar, 11:45
lunch, 12:00 speaker.

CCGS/CBGS Joint Meeting Schedule 2025-2026

March 2026							April 2026							May 2026						
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	5	6	7				1	2	3	4						1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
29	30	31					26	27	28	29	30			24	25	26	27	28	29	30



Meeting at Joe's Crab Shack
Downtown. 11:00 Bar, 11:45
lunch, 12:00 speaker.

Shrimp Boil at Doc's

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..... 2nd Tues every other month in
 San Antonio

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CCGS - CBGS Bulletin Ad Space Available: Annual Rates (4 issues + directory)	
1/8 page 2.2" x 3.6" \$150	1/4 page 3.6" x 4.3" \$200
1/2 page 7.2" x 4.3" \$300	
Full page 7.2" x 8.6" \$500	Inside Front or Back Cover \$650

FOR MORE DETAILS:

EMAIL LDEVINE@SUEMAUR.COM OR CALL (361) 510-8872

The 2024-2025 season is underway, and we would like to offer very inexpensive advertising opportunities to our members and industry partners. The CCGS has four bulletins distributed to all our members each year. Ads defray the cost of producing and distributing print and PDF Bulletins.

We have lots of space available for various-sized ads, and we run business card ads at the back of each bulletin. If you have started a new business or have recently moved offices this is a great opportunity to introduce yourself. Business cards are \$30 annually. Send me a scan of your card or contact me for more information on our ad program.

RENEW YOUR MEMBERSHIP!



Questions? – contact Randy
membership@ccgeo.org

Why maintain membership in the CCGS?
Bulletins – Luncheons – Shrimp Boil – Scholarships
Fishing Tournament – Field Trip (yep!)

The easiest way to be a part of the Society is to use
our pay online website found at **[https://corpus-
christi-geological-society.square.site/](https://corpus-christi-geological-society.square.site/)**

Or use your smartphone with this QR Code



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- Booths come with a 6' table, 2 chairs, pipe & drape sides, and electric hookup**
- Additional Guest Passes can be purchased for \$100

To reserve your space contact:
Sam Leone • sleone21@gmail.com • 630-254-3745
geogulf.org

* Guest Passes have access to the Exhibition Hall, Monday evening Icebreaker, and Tuesday Evening Social Event only.

** Additional equipment can be supplied at exhibitors' expense.



GeoGulf 2026 Call for Papers

75th GCAGS/GCSSEPM Convention and Exposition
Crowne Plaza Executive Center Baton Rouge
23-25 March 2026 • Baton Rouge, Louisiana

Hosted by the New Orleans, Lafayette, and Baton Rouge Geological Societies

Potential GeoGulf 2026 Session Themes

- Gulf Coast Exploration and Production
- Salt (Onshore and Offshore)
- Deepwater
- Artificial Intelligence/Machine Learning
- Lithium
- Geothermal
- Carbon Sequestration
- Regional or Local Gulf Coast Geology
- Coastal Geology
- Environmental Geology
- Faulting, South LA & Gulf Coast
- Mississippi-Alabama-Florida (MAFLA)
- Paleontology/Biostratigraphy
- And more—We are the place for Gulf Coast Geoactivities! We'll fit you in! Got an idea for a theme session, please let us know!

Professionals and Students: We welcome you to submit an abstract for consideration of oral or poster presentation of 250-300 words by December 1, 2025.

Early abstract submissions will be reviewed within a timely manner; you will receive notification of receipt as well as acceptance/rejection notification. Please send any queries to James Willis, Technical Program Chair, jjwillis11@hotmail.com.

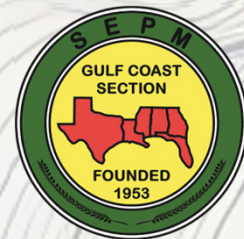
Submit abstract via a Google Form at: <https://forms.gle/yrUYWKAHkanqG67n9>
(link can also be accessed at geogulf.org)

Although not required, we encourage that all accepted presenters submit an initial draft of a full technical paper or extended abstract for publication in the *GeoGulf Transactions* by January 12, 2026. For more information, please contact the *GeoGulf Transactions* Editor, James Willis, jjwillis11@hotmail.com. Submission details will follow after acceptance of initial abstract.



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Note that all advertisements or logos will be published in full color for the digital version of the *Transactions* and Program. Bronze and higher-level sponsorships can be directed towards specific events dependent upon level of support.

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23-25 March 2026, at the Crowne Plaza Executive
Center in Baton Rouge, LA.
Hosted by the New Orleans, Lafayette, and Baton
Rouge Geological Societies.

Donate online at:
<https://geogulf.org>

Or contact Mark Wojna:
markw@llox.com

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For more information about the Desk & Derrick Club of Corpus Christi and to learn about member eligibility, go to www.addc.org or contact Jena Nelson at 361-844-6726 or email at jena@amshore.com

The Desk & Derrick Club of Corpus Christi is a proud affiliate of the Association of Desk And Derrick Clubs, www.addc.org



Greetings to One and All

Our outstanding membership chairman (Randy Bissell) has reminded me that the CCGS will be ninety years old in 2026. That is quite an accomplishment! Several folks I've spoken to have mused about how we can sustain such a great organizational legacy. I think it is a given our monthly luncheons provide great opportunities for technical interchange, as our speakers are exceptional (and speak about interesting, relevant topics). I think it also a given that our monthly meetings provide unmatched networking opportunities. But technical interchange and networking alone won't necessarily grow the CCGS. To grow our great organization, we need to encourage a new flock of geologists and earth scientists to join our ranks. To do this, our connection to area higher education remains vital.

A direct connection to higher education is through the CCGS scholarship program. This spring, the CCGS will select students from TAMU-CC, TAMU-K, and Del Mar for scholarship awards. These promising students will be recognized at our April 2026 monthly luncheon. Our "sister" organization (CBGS) has already made scholarship awards for the fall semester (these students will be recognized at our November luncheon).

Another means of connecting higher education has been our direct support to higher education geoscience programs. In the past few years, the CCGS has helped fund microscopes/lab equipment at TAMU-K. Additionally, we have helped fund field training equipment at Del Mar College, and helped fund an on-campus geophysical field laboratory at TAMU-CC. All of these efforts have made lasting contributions to educate tomorrow's geoscientists.

One powerful way to encourage participation from area universities is through sponsorship of student attendance at our monthly luncheons. This year, those sponsors are: Viper Exploration (Brent Hopkins), Imagine Resources, (Frank Cornish), Advent Geoscience Consulting (Dawn and Randy Bissell) and Wiedmann Oil & Gas (Marian and Sebastian Wiedmann). These folks are making a difference, and we all owe them a debt of gratitude!

Recently I came across a TAMU-K Geosciences Newsletter from 2014. One story was about a student (Casey Mibb) and a mentor (CEO of Imagine Resources, Frank Cornish) collaborating on a project using 3D seismic software. Moreover, Frank offered Casey a two-year internship after her graduation. Frank, of course, is a CCGS Councilor and past President. Casey remains active in geophysics in the Coastal Bend, and rarely misses one of our monthly meetings. A powerful example of growing the CCGS through ties to higher education!

Here's to another 90 years!

Charles "Chuck" Benson
CCGS President

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CBGS President's Letter

CBGS Board 2025-2026

President- Dr. Subbarao Yelisetti

Vice President- vacant

Secretary/ Treasurer-Charles Benson

CBGS Scholarships

The Coastal Bend Geophysical Society has awarded four scholarships in Fall 2025. The next round of scholarships will be awarded in Fall 2026. Scholarships will be awarded based on merit and need. The award amounts may vary with the minimum award being \$500. The application deadline is September 1, 2026.

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

- As of October 7, Brent crude futures are averaged at \$68.64 a barrel and US West Texas Intermediate crude futures were averaged at \$65 a barrel this year, declining 15% from last year.
- According to the U.S. Energy Information Administration (EIA) forecasts, crude oil production will average 13.53 million b/d in 2025, up from its previous forecast of 13.44 million bpd. In comparison, oil output averaged 13.23 million bpd in the previous year. Next year the output is expected to decline to 13.51 million bpd.
- EIA forecasts suggest U.S. Gulf oil output to average 1.89 million bpd this year, up from its previous forecast of 1.84 million bpd.

CBGS Business

CBGS currently has 28 active members, 2 honorary members, and 40 student members. Raised \$1,450 towards student scholarships through membership revenue this past year.

CBGS workshops/talks

CBGS is organizing the November 2025 joint luncheon meeting with CCGS. The speaker is Iris Valeria Montero Rodriguez. She is going to talk about the Chase Group formation evaluation, Hugoton Field, Kansas using machine learning. CBGS is looking forward to offer more workshops/talks in the future. Topic/speaker suggestions are welcome. Email your suggestions to 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 2026, please contact the graduate coordinator for MS in Petrophysics, Dr. Subbarao Yelisetti at 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>

Education/Events

-SEG

SEG 2026 annual meeting (IMAGE) will be held in Houston, TX from August 17-20. 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

2025 Fall AGU annual meeting will be held in New Orleans, LA from December 15-19th, 2025. <https://www.agu.org/Fall-Meeting>

Monthly Saying

“Quite frankly, I think nothing could do more to immediately bolster national security then enabling us to produce more oil and gas here at home at a price consumers could afford.” - Phil Gramm

Monthly Summary

Texas Oil and Gas Info	Current Month	Last Month	Difference	
Texas Production	MMBO/BCF	MMBO/BCF	MMBO/BCF	
Oil	157.9	167.5	-9.6	June
Condensate	24.9	27.9	-3.0	June
Gas	1065.7	1113.8	-48.1	June
	Current Month	Yr to date - 2025	Yr to date - 2024	
Texas Drilling Permits	587	5752	8683	September
Oil wells	127	1032	1742	September
Gas wells	51	391	491	September
Oil and Gas wells	371	3985	5943	September
Other	11	100	143	September
Total Completions	1695	15324	21022	September
Oil Completions	1301	11951	16733	September
Gas Completions	394	3373	4289	September
New Field Discoveries	0	7	8	September
Other	534	6010	10375	September

Subbarao Yelisetti
President, CBGS
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**CORPUS CHRISTI GEOLOGICAL SOCIETY
COASTAL BEND GEOPHYSICAL SOCIETY**



LUNCHEON MEETING ANNOUNCEMENT

November 19th, 2025

Location:	Joe's Crab Shack, 444 North Shoreline Dr., Corpus Christi, TX 78401
Student Sponsors:	Viper Exploration, Imagine Resources, Advent Geoscience Consulting, Wiedmann Oil & Gas. <u>We Thank You!</u>
Time:	11:30 AM Social, 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, November 16th before the meeting! Email: 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.

SPONSORSHIP OPPORTUNITIES ARE AVAILABLE! IF YOU WOULD LIKE TO SPONSOR, PLEASE CONTACT US AT:

arrangements@ccgeo.org

CHASE GROUP FORMATION EVALUATION: HUGOTON FIELD, KANSAS, USING MACHINE LEARNING

Iris Valeria Montero Rodriguez

Department of Physics and Geosciences, Texas A&M University-Kingsville

The Hugoton Embayment is located in southwestern Kansas and is one of the main sources of natural gas in the United States. This field is considered one of the largest gas fields, not just in the United States, but in the world; its production is a source of resources not only for Kansas but also for the entire country. The Hugoton Embayment includes the Hugoton Gas Field, the Panhandle Field, and several other smaller fields. Hugoton Gas Field has produced an estimated 40 trillion cubic feet (Tcf) of natural gas since 1922 from the Chase (main focus of this thesis) and Council Groups.

Considering the importance of this field, a petrophysical characterization of the Chase Group was performed using well logs, core data, well reports and previous studies carried out in the field. However, it was noted that the studied wells did not have a complete set of basic well logs. Therefore, one of the solutions to avoid the lack of information was to apply Machine Learning to predict the data such as sonic or density logs through Python codes.

This project began with a thorough analysis and evaluation of the available subsurface and well log data. Subsequently, sonic and density logs—essential inputs for estimating petrophysical parameters such as porosity and permeability—were predicted using machine learning techniques. For the permeability calculation, it was first necessary to identify the type of lithologies, which were initially interpreted from core data and then extended across the dataset through predictive modeling.

The petrophysical analysis conducted in this thesis suggests that the Chase Group is composed of carbonate and dolomitic reservoirs. To estimate water saturation, the saturation-height model based on capillary pressure data was implemented considering the complexity and heterogeneity of carbonates; the results obtained were hydrocarbon saturations between 70% and 85%, confirming the potential of this field (at the moment of discovery). Porosity values range from 8% to 11.6%, with the presence of secondary porosity further confirmed by sonic log analysis.

Currently, the Chase Group in the Hugoton Field continues to produce natural gas, and according to new information, new exploration operations are expected.

BIOGRAPHY: Iris Montero

Iris Montero is a petrophysicist and petroleum engineer specializing in formation evaluation, well log interpretation, and reservoir characterization. She holds an M.Sc. in Petrophysics from Texas A&M University-Kingsville, where her research applied machine learning to predict missing logs and the type of lithology for the evaluation of the Chase Group in the Hugoton Field.

Passionate about continuous learning, collaboration, and analytical problem solving, she delights in working at the intersection of geology, engineering, and technology.

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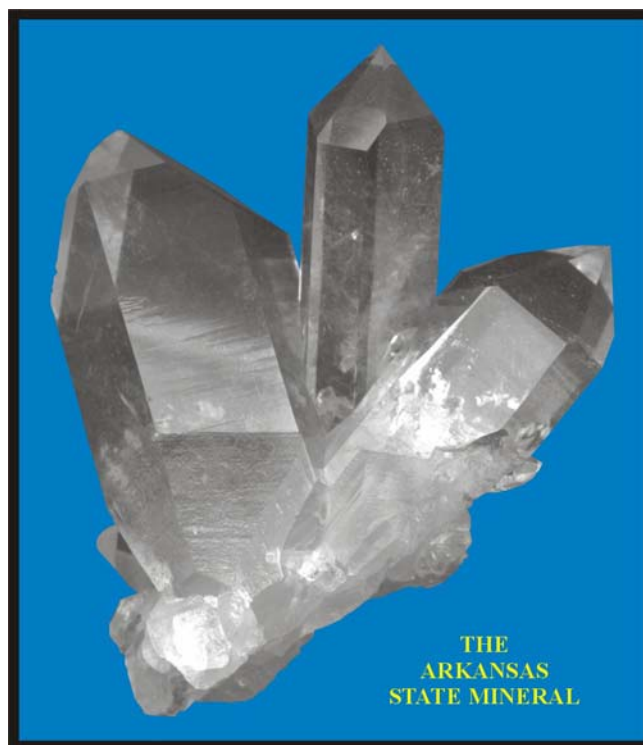


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Arkansas Quartz Crystals



J. Michael Howard
2008
Arkansas Geological Survey

Bekki White, Director and State Geologist

Introduction

Quartz, or silica (SiO_2), is a hard, brittle, durable mineral that exhibits considerable resistance to weathering. It occurs in nature in many varieties, but is best known from Arkansas as prismatic, elongate, transparent, vitreous crystals. Arkansas is known worldwide for the production of quartz crystals by both collectors and scientists. Because of this, and the popularity of quartz with the many tourists who visit Arkansas each year, the Arkansas General Assembly of 1976 established Act 128, designating quartz crystal as the official State Mineral.

History

The existence of quartz crystal in the Ouachita Mountains has been known since humans first occupied the area. According to H.D. Miser, DeSoto's men found that native Americans had chipped projectile points from quartz crystals. In 1819, nearly 300 years after DeSoto, H.R. Schoolcraft described quartz crystals from the region. The principal early source of crystal appears to have been the Crystal Mountains in Montgomery County. By 1890, crystal was also being mined from deposits in both Garland and Saline County.

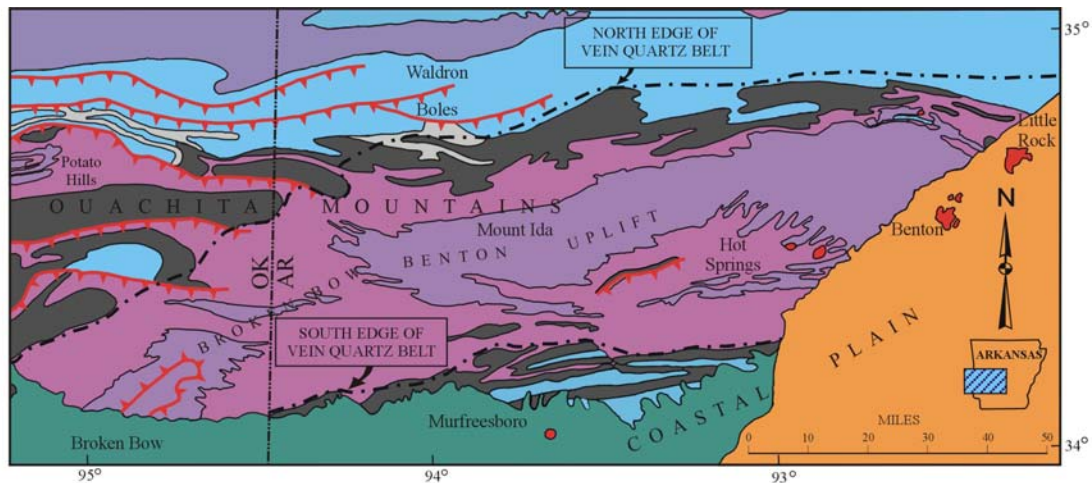
Few restrictions or legal problems hindered the early miners, even though most crystal deposits were on land owned by either the Federal Government or private timber companies. Patented claims of leases were rarely obtained by diggers. So long as timber was left undamaged and openings did not become pitfalls for livestock, the miner was free to dig where he dropped his pick and "scratcher" (an iron rod, commonly 1 to 2 feet in length and bent at a right angle several inches from the point, used to scratch out loose crystals). During World War II, the critical need for oscillator-grade quartz in communication equipment brought about a rapid expansion of prospecting and mining. With Federal agencies and private mining companies participating, mining rights received more careful scrutiny and free-for-all operations dwindled. As part of the Federal program to stimulate domestic production of oscillator quartz for the war effort, the Metals Reserved Company established a buying station at Hot Springs in June of 1943. About 75 percent of the oscillator quartz mined in the district during this year, amounting to more than 4,000 pounds, was tested at this station.

During the 1950's, techniques were developed by General Electric company for growing quartz artificially and the demand for Arkansas quartz was mostly limited to the expanding tourist and museum markets. Some crystals were cut into semi-precious "Hot Springs diamonds" for jewelry purposes. The present commercial use of quartz is as a high purity feedstock (lasca) for the growth of synthetic quartz crystal. These man-made crystals have many chemical, thermal and electrical applications.

With the increased demand by tourists, collectors and museums, the price for quartz crystals has risen in recent years. Some exquisitely developed quartz clusters are reportedly valued at tens of thousands of dollars.

General Geology

Most of the quartz veins/crystals are restricted to a belt about 30-40 miles wide that extends a distance of about 170 miles west southwest from Little Rock, Arkansas, to eastern Oklahoma (see map). This area corresponds to the core region of the Ouachita Mountains.



GEOLOGIC MAP OF OUACHITA MOUNTAINS SHOWING AREA OF OCCURRENCE OF VEIN QUARTZ

Adapted from H. D. Miser (1959)
Digital Compilation by Walter Mayfield
December 2001

EXPLANATION

Tertiary rocks	Atoka Formation (Pennsylvanian) includes some older rocks	Stanley Shale and Hot Springs sandstone (Mississippian)
Cretaceous rocks	Johns Valley Shale (Pennsylvanian)	Cambrian to lower Mississippian (Arkansas Novaculite and older rocks, including Blakely Sandstone and Crystal Mountain sandstone)
Hartshorne Sandstone and younger rocks (Pennsylvanian)	Jackfork Formation (Pennsylvanian) includes some younger Pennsylvanian rocks	Igneous rocks (Cretaceous)

THRUST FAULT

CONTACT

The most productive quartz veins are present in both Paleozoic sandstones and shales, but those having shale as the host rock typically are massive milky vein deposits with a smaller proportion of clear well developed crystals. Deposits in sandstone units may be in the form of veins, sheeted zones and stockworks. Sandstone-hosted deposits usually contain less quartz volumetrically than shale-hosted deposits, but often yield a higher percentage of clear crystals in cavities or pockets. Many crystal-bearing pockets were distorted or crushed by structural adjustments during the Ouachita orogeny (mountain-building episode) after initial quartz deposition. The deformation commonly caused the veins to show complex fabrics.

The quartz veins were formed by the filling of open fissures and display little evidence of significant replacement of wall rock. Milky quartz crystals and associated vein minerals of the Ouachita Mountains were deposited from hot water during the closing stages of mountain building, some 280 to 245 million years ago. The veins attain a maximum width of 60 feet in Arkansas and nearly 100 feet in Oklahoma. They are most numerous along the central core of the Ouachita Mountain region, where they are present in shale, slate, sandstone and other rock types. Along and near the borders of this region, the veins are usually confined to sandstone beds encased within thick shale units.



Quartz veins in the Blakely Sandstone, Miller Mountain, Arkansas.

Most of the collectible quartz crystal is obtained from deposits in the Blakely and Crystal Mountain Sandstones (both Ordovician), but attractive quartz crystal may occasionally be recovered from any of the Paleozoic units. The more than 25,000 feet of Paleozoic rocks exposed in the Ouachita Mountains have been deformed into complex gently plunging folds that trend nearly east-west. Steeply dipping fractures, closely related to the major folds and faults of the region controlled the location and deposition of most of the quartz.

Types

Most of the quartz in the Ouachita Mountains occurs as milky veins. The principal difference between milky quartz and clear rock crystal is the presence of innumerable

microscopic bubbles in fluid-filled cavities in the former. These cavities scatter the light that otherwise would pass through as in clear crystal.

In addition to rock crystal and milky quartz, other varieties are present in this region. Smoky quartz occurs adjacent to Cretaceous igneous rocks near Magnet Cove in Hot Spring County. The dark color is due to defects in the crystal lattice caused by radioactivity that irradiated the crystal during or shortly after its formation. Growth zoning is common in crystals from this area. Some natural smoky quartz has also been recovered from sites in Garland County, although most smoky quartz present in local rock shops is rock crystal that has been artificially irradiated. Quartz with fluid inclusions (locally termed “bubble” quartz) and negative or skeletal crystal are present in the younger formations (Stanley and Atoka) of the Ouachita Mountains. Generally, these types resemble quartz from Herkimer, New York, and formed in calcite veins which commonly weather away, leaving the crystals suspended in clay.



Smoky Quartz, Hot Spring Co.
(1.4 cm crystals)



Chlorite in milky quartz, Garland Co
(9.5 cm long)

Phantom quartz is caused by temporary interruption(s) of the growth process resulting in small bubbles which adhered to the crystal faces or by the settling of particles of shale or fine-grained minerals onto the crystal faces of the forming quartz. Phantoms, therefore, express some of the complex growth history of the mineral.



Quartz with chlorite phantom,
Garland Co. (9 cm long)



Quartz with phantoms
Montgomery County

Amethyst (purple or blue-violet quartz) occurs associated with Cretaceous igneous intrusive rocks, particularly in calcite veins at the Crater of Diamonds State Park in Pike County, and as veins associated with serpentine bodies in northern Saline County.



Amethyst, Saline Co.
(crystals 4 mm diameter)

Across the northern limits of major vein-quartz deposition (see Map), “solution” quartz is present. This variety was so called because it was first thought by local collectors to still be forming in the original clay mineral host. This variety is unusual because much of it grew as suspended or unattached crystals or cluster (burrs) in a clay mineral—rectorite. Specimens of these more unusual varieties from Arkansas are prized by collectors for their beauty and scarcity.

Several minerals are associated with Arkansas quartz, although quartz usually composes 90 percent or more of the cavity fillings. Clay minerals, including dickite and nontronite, are widespread. Calcite is a common associate, especially in veins cutting limestone or calcareous siltstone beds. Adularia and chlorite are present in veins cutting certain shales. Black shale particles, commonly mistaken for carbon or manganese oxides are often captured during crystal growth. Less common accessory minerals are brookite, rectorite, cookeite, the carbonates ankerite and siderite, and the sulfides of lead, zinc, antimony and mercury.



Shale inclusions in quartz,
Montgomery Co. (7.5 cm long)



Ankerite on quartz, Pulaski Co.
discoids 2 cm diameter)



Iron oxide on quartz with calcite
Garland Co. (17.8 cm across)



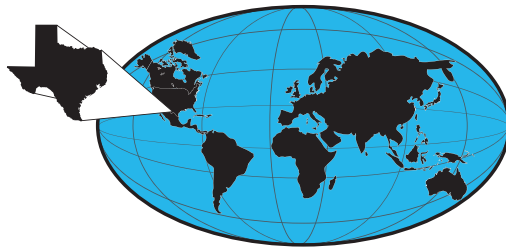
Iron oxide stained cookeite on quartz,
Pulaski Co. (rosettes 2.5 mm diameter)

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[CCGS 002S](#) \$15.00

Type Logs of South Texas Fields, Vol. I, Frio Trend. Compiled by Don Kling. Includes 134 fields. 158 p., 1972. Ring binder.
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Field Trip Guidebooks

South Texas Uranium. J. L. Cowdrey, Editor. 62 p., 1968.
[CCGS 102G](#) \$12.00

Hidalgo Canyon and La Popa Valley, Nuevo Leon, Mexico. CCGS 1970 Spring Field Conference. 78 p., 1970.
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Padre Island National Seashore Field Guide. R. N. Tench and W. D. Hodgson, Editors. 61 p., 1972.
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Triple Energy Field Trip, Uranium, Coal, Gas—Duval, Webb & Zapata Counties, Texas. George Faga, Editor. 24 p., 1975.
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Structure and Mesozoic Stratigraphy of Northeast Mexico, prepared by numerous authors, variously paginated. 76 p., 38 p., 1984.
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Geology of the Big Bend National Park, Texas, by C. A. Berkebille. 26 p., 1984.
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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

CALHOUN COUNTY

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

CAMERON COUNTY

Holly Beach
Lutties
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

Maurbro

StewartSwan Lake

Swan Lake, East

Texana, North

West Ranch

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Chaparosa

Thompsonville,N.E.

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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

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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

MATAGORDA COUNTY

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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

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Redfish Bay

Riverside

Riverside, South

Saxet

Shield

Stedman Island

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REFUGIO COUNTY

Bonnieview/Packery Flats

Greta

La Rosa

Lake Pasture

Refugio, New

Tom O'Connor

SAN PATRICIO COUNTY

Angelita East

Commonwealth

Encino

Enos Cooper

Geronimo

Harvey

Hiberia

Hodges

Mathis, East

McC Campbell Deep/Aransas Pass

Midway

Midway, North

Odem

Plymouth

Portilla (2)

Taft

Taft, East

White Point, East

STARR COUNTY

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Garcia

Hinde

La Reforma, S.W.

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Ricaby

Rincon

Rincon, North

Ross

San Roman

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Yturria

VICTORIA COUNTY

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Keeran, North

Marcado Creek

McFaddin

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Aquilares/Glen Martin

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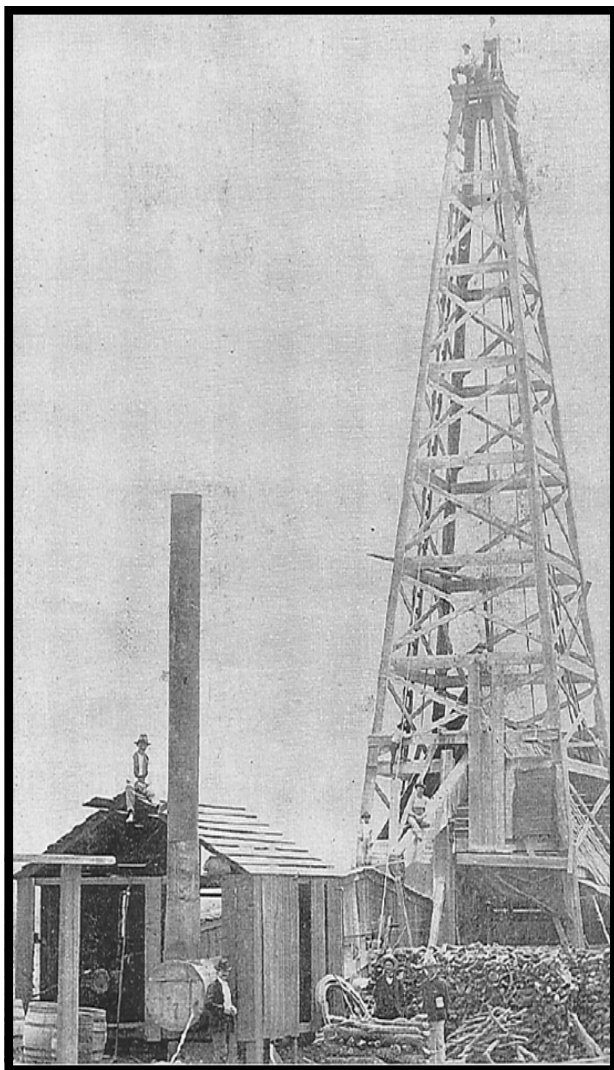
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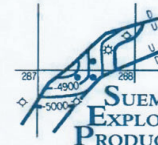
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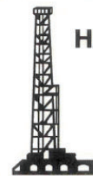
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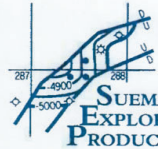


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