

VOLUME 71 ISSUE 1

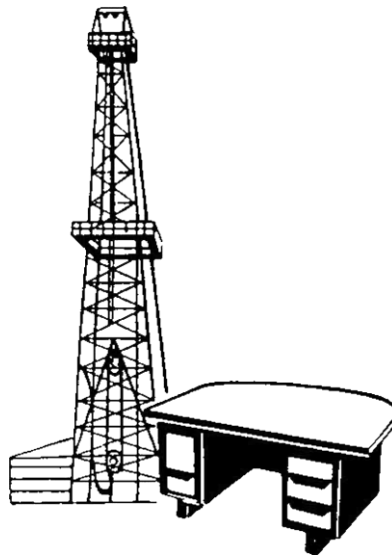
JAN/FEB 2022

GREATER KNOWLEDGE ~ GREATER SERVICE

DESERT CANDLE

THE OFFICIAL BULLETIN OF THE DESK AND DERRICK CLUB OF
FARMINGTON

ESTABLISHED JUNE 28, 1957



NEXT MEETING:

Tuesday, March 29th

11:30 am

D&D Awareness

Location:

Envirotech,
5796 US-64. Farmington NM

WHAT'S NEW:

1

Region Meetings

2

College Outreach

3

The San Juan Basin at

100 Years

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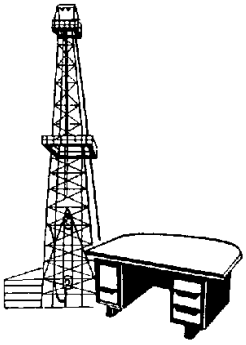
From the Editor

Click on the links! They should work. Let me know if they don’t.

Send me pictures and articles. Write about our meeting topics or random facts, anything to bring some spice to the newsletter. Note that all unaccredited photos are from Unsplash.com, clipart is from clipart-library.com

Thank you,
Shacie Murray
shacie@merrion.bz

President's Letter – January 2022



ASSOCIATION OF DESK AND DERRICK CLUBS

2022 Board of Directors

PRESIDENT

Kim Cadle
Hilcorp Energy Company

VICE PRESIDENT

Kari Burkhow
Marathon Petroleum Corporation

SECRETARY

Christine Walters
Hall Environmental Analysis Laboratory

TREASURER

Evangelena Benallie
Dugan Production Operating

DIRECTOR

Runell Seale
Retired Enterprise Products

DIRECTOR

Amanda Wangen
Dugan Production Operating

IMMEDIATE PAST PRESIDENT

Esther Greyeyes
Merrion Oil & Gas Corp

PARLIAMENTARIAN

Nell Lindenmeyer
A-Plus Well Service

Desk and Derrick Club of Farmington
P.O. Box 3984
Farmington, NM 87499-3984

January 26, 2022

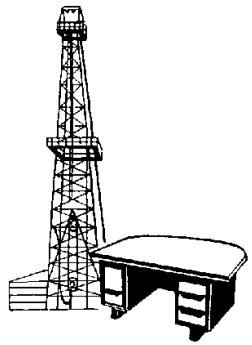
It is my absolute pleasure to be a part of the 2022 Farmington Desk and Derrick board of directors and this amazing membership. We have some first-time board members serving this year and a chance to learn and grow with one another. We will lean on our more experienced board members for guidance while we get our feet underneath us. We have some new members added to our membership and that is so exciting. We will be able to walk alongside them and help them grow in their knowledge and understanding of the energy sector. We will learn and grow with one another, sometimes fail at times and get back up with an even better understanding and new confidence. It is okay to reach for the stars and set goals that some may see as huge milestones. That is what makes us a better club and organization. Be involved and be yourself. Challenge yourself this year to take on a new role ... committee chairman, organize a meeting with myself and see what is involved, come to a board meeting (EVERYONE IS ALWAYS WELCOME), be involved with the bogey bash, energy week, regional meeting, convention, oil and gas conference, etc. This is a club that is ALIVE and we have to grow and learn to continue to survive and meet obstacles head on. No one in this club is alone. You have so much education, experience and the most genuine people that surround you.

NEVER PASS UP THAT OPPORTUNITY TO INVITE SOMEONE TO OUR MEETINGS. THAT SOMEONE COULD BE THE NEXT BOARD MEMBER, COMMITTEE CHAIR, OR MEMBER. OUR TOP PRIORITY THIS YEAR IS GROWING OUR MEMBERSHIP.

We want to hear from our membership, and I love the dynamics of this club. We are blessed to be a part of one of the best organizations in this area and have such a passion to learn and grow personally as the Desk and Derrick Club of Farmington. From my experience this club makes a difference in peoples lives and in this community. It may not be a glowing yellow light out there, but I see what we do and how this club and members are respected.

We have some new speakers that will address our membership for the first time. I am excited for our programs this year. I apologize it has taken me a little while to get things together but thank you for your trust in me that it would come together. We all have some very busy lives, not just myself, but other members have been reaching out to me to help set up some exciting topics and speakers for this year including field trips. Thank you to Tami and Kari for giving us some options also for new locations for meetings.

WOW!!! What an outstanding tour at the Farmington Museum yesterday. I was so excited to see so many of our members there in person and take the tour of the "Built By Gas" exhibit. You can tell Bart Wilsey has a true passion for our Farmington Museum and educating our members that were there. You missed out on some amazing finds in the gift shop if you passed that up on the way out. If you are looking for unique books, cookbooks, t-shirts, kitchen and grilling items, etc., their gift shop is AMAZING. Thank you, Helen, for hanging out with me for a few minutes after the meeting and helping me find some amazing gifts for my family and one of my co-worker's little boy. Any time with any of our members outside of our meetings is very precious time that I value.



**ASSOCIATION OF
DESK AND DERRICK
CLUBS**

We are so blessed to have members on the ADDC board in our membership. Philana and Heather, we will be there to support you two and we are blessed you care about hearing from all the membership as well.

As January kicks off my 2022 year as your President, may I say this will be a good year. I want to hear from you and what positive changes you see we can do to grow this club. I challenge each one of you to take on a new role, challenge yourself, do not be afraid of failure but look it in the eye and get out of the box.

May God bless all the D&D clubs, our membership, your family, our energy industry, and our country.

2022 BE ALL YOU CAN BE

Respectfully,
Kim Cadle

January Meeting Report – Helen Trujillo



Photo courtesy of Farmington Gateway Museum

Built By Gas Exhibit

By Helen Trujillo

January 25, 2022 – the Desk and Derrick Club of Farmington’s first meeting of the year was a field trip to the Farmington Gateway Museum. The Director, Bart Wilsey, was the tour guide for the “Built By Gas” exhibit, which commemorates 100 years of commercial gas in the San Juan Basin.

Just last year, October 21, 2021, the Desk and Derrick Club of Farmington celebrated the Centennial of commercial gas at their annual Industry Appreciation Banquet.

The Aztec Syndicate State #1 was located just outside of Aztec, NM. It was drilled by Aztec Oil Syndicate and oil was found at 985 feet. The company then drilled to 1,750 feet and it started producing natural gas on October 21, 1921. It blew with such force the sound could be heard up to 10 miles away.

The drilling crew used a trimmed tree trunk with a two-inch pipe and shut-off valve to control the well until a wellhead was shipped from Colorado. It produced 10 million cu ft (10 MMCF) gas per day.

It was Christmas time when gas was initially piped into homes for heating and cooking gas in Aztec, then later



Durango, Farmington and Albuquerque. In 1922, natural gas could be purchased in Aztec at a flat rate of \$2 a month for a heater and \$2.25 a month for a gas stove.

No regulators on the well sometimes cause a home to burn down!

The entire area had a major boom in population and opportunities. By the 1950's, El Paso Natural Gas Company laid a transmission line from the San Juan Basin to California. In this time, the small town of Aztec grew to 7,000 people, building a courthouse, city hall, post office and began paving streets.

If it weren't for companies like these, none of us would have the continued opportunities we have today.



Museum Director Bart Wilsey discussing the exhibit.





The one well file the New Mexico Oil and Gas Conservation has on file for the
Aztec Syndicate State #1 well:

From: NM BUREAU OF GEOLOGY

5758356333

11/03/2009 09:53

#366 P.002/003

30-045-09458

Stewart
Log. No. 889

NEW MEXICO SCHOOL OF MINES
STATE BUREAU OF MINES AND MINERAL RESOURCES
SOCORRO, NEW MEXICO

WELL LOG DIVISION

COUNTY San Juan
FIELD Aztec
COMPANY AZTEC Oil Syndicate
LEASE Well No. 1
LOCATION (4) NW cor SE 1/4 SW 1/4
SEC. 16 T. 30N R. 11W
1270 feet from south line and
1370 feet from west line of Section
COMMENCED
COMPLETED
ABANDONED
REMARKS:

CASING RECORD		ELEVATION	FEET
Diam. in	Bottom		
15 1/2"	85'	Open	bbis. Oil
12 1/2"	315'	Open	4,000 cu. ft. Gas
10"	500'	Tbg.	bbis. Oil
8 1/2"	1000'	Tbg.	cu. ft. Gas

INITIAL DAILY PRODUCTION:
6 1/2" went to 1700', pulled this but had to shoot. Left 500' in hole.

FORMATION	BOTTOM, FEET	FORMATION	BOTTOM, FEET
-----------	--------------	-----------	--------------

Sand white	85
Shale, dark	115
Sand, light	145
Shale, dark	190
Shale, light	215
Sand, light, Sulphur water	300
Shale, light	365
Shale, light, gritty	400
Sand, white, sulphur water	480
Shale, dark	580
Sand, white	610
Shale, dark	650
Sand, white	700
Shale, dark	790
Sand, white, showing oil	825
Shale, gritty	835
Sand, white, showing oil	850
Shale, dark	885
Sand, white - Big GAS from 893 to 895	895
Sand making GAS	935
Shale dark	945
Sand, white	995
Shale, dark	1095
Sand - Salt water and Oil	1110
Shale, dark	1200
Sand, white, making Gas	1210
Shale, dark	1290
Sand, white, salt water	1305
Shale, last 5 feet very hard	1345

NOTE: Plugged Back to 985'.
Rock Pressure 285#.
2/10 gals. gasoline /1000 cu. ft.g.

Hole was plugged just below Big Gas.

Oil sand at 1100' made about 3 or 4 barrels of 42 gravity oil with about 25 barrels of salt water.

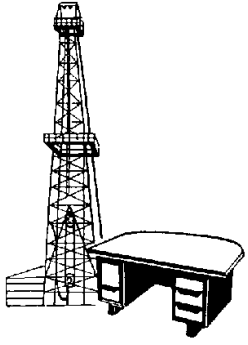
NEW MEXICO BUREAU OF MINES AND MINERAL RESOURCES
WELL LOG CARD

LOCATION 1270 feet from south line and 1370 feet from west line of Section				
NW/SE SW SEC. 16 T. 30N R. 11W				*
ELEVATION	SOURCE			
5661'				
STRATIGRAPHIC POINT	DEPTH	ELEV.		
Oil sand	785'			
Gas "	785-985'			
Oil "	985-1115'			
FORMATION	DEPTH	THICKNESS		
TOTAL DEPTH	1750'	CASING RECORD		
INITIAL PROD.	4M cu ft Gas	15 1/2"	91'	
COMMENCED		12 1/2"	315'	
COMPLETED		10"	741'	
PAY HORIZON		8 1/2"	1020'	
COMP. IN		6 1/2"	1700'	
OTHER OWNERSHIP				
Plugged back to 985' w/ cement Rock Pressure 285# 20/100 gal gasoline per 1000 cu. ft. Gas				

San Juan COUNTY
 Aztec AREA
 SEC. 16 T. 30N R. 11W
 LOG NO. 889-889
 Aztec (Gas well) WELL NO. 1
 CO.

Credits: Information provided by City of Aztec, American Oil and Gas Historical Society, State of NM OCD well files, Farmington Museum.

President's Letter – February 2022



ASSOCIATION OF DESK AND DERRICK CLUBS

2022 Board of Directors

PRESIDENT

Kim Cadle
Hilcorp Energy Company

VICE PRESIDENT

Kari Burkhaw
Marathon Petroleum Corporation

SECRETARY

Christine Walters
Hall Environmental Analysis Laboratory

TREASURER

Evangelena Benallie
Dugan Production Operating

DIRECTOR

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Retired Enterprise Products

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PARLIAMENTARIAN

Nell Lindenmeyer
A-Plus Well Service

Desk and Derrick Club of Farmington
P.O. Box 3984
Farmington, NM 87499-3984

February 9, 2022

February, the month of love. May you always know your own self-worth is valuable and you never feel unappreciated being a part of this amazing club and membership. Each one of us are needed to keep this wheel rolling and have our eyes on our map to guide us to where we want to be. We set our own standards and may we always be uplifting and strive to be better every single day. We are the ones that set our own destiny.

I am so looking forward to this year and being a part of this dynamic club. I am going to challenge you all year to spread your wings and fly. Take on new adventures and make being a part of the Desk and Derrick Club of Farmington something you make your mark on that you personally set out to accomplish, improve, learn more about or took on a project and put your all into it. Let's grow our membership in 2022 and show how much value we provide to new members and to this community. ALL OF OUR MEMBERS ARE WORTH EVERY BIT OF INVESTMENT WE PUT IN TO GROWTH AND EDUCATION. Who does not want to grow their knowledge and learn?

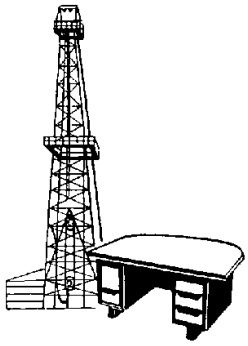
2022's board wants to hear from our members. What do you want to learn and what speakers would you like to hear from? Do you have an idea or a suggestion? We are forever working on our programs all year long. If you have someone exciting you think our membership could benefit from hearing, tell us. Even if they do not make the 2022 program, let's get them on the 2023 program and start building for the 2023 board of directors. If you found a cool meeting spot or new restaurant or food vendor, reach out and let us know. We still need a 2022 Industry Appreciation Speaker, venue, and food vendor. Maybe this will be the year you put your mark on another super successful Industry Appreciation Dinner.

I am looking forward to this month's meeting and hearing from George Sharpe at Merrion Oil and Gas. If you have not had the pleasure of hearing George speak or met George, please do not miss the February meeting. He packs his topics full of good information and he is a great source that shares good information about things going on in our community. This month's topic is Understanding Energy in the Face of Climate Change.

Things to be considering that are coming up in the next few months ... West Region Meeting, Energy Week, Oil and Gas Show and the summer social (open to ideas). I need a solid yes, no or potentially going to the Region Meeting please. This is a huge part of our budget, and we need to plan accordingly.

Our very own Linda Rodgers is in this year's production of Dancing with the Farmington Stars. Thank you to those that have already responded and plan to attend. Some of us will be having dinner Saturday evening at 5PM at the Chili Pod downtown. You are always welcome to just come spend some quality time with those members there and enjoy a great dinner.

T. Greg Merrion is not a member of the Desk and Derrick Club of Farmington, but he has always been one of our biggest and best supporters. T. Greg is retiring on 02/22/22 and we would like to send our very best to him and his family. May his retirement be all that he is hoping it will be. I just personally want to thank T. Greg for all this time, energy and support he had given the



**ASSOCIATION OF
DESK AND DERRICK
CLUBS**

Desk and Derrick Club of Farmington over the years. We wish Ryan the very best of success as he fills the shoes at Merrion Oil and Gas.

Thank you to everyone that has already helped to kicked off 2022 in a successful style. Those behind the scenes making things happen, answering questions, giving good advice, volunteering to take on tasks and for your warm encouragement.

Respectfully,
Kim Cadle

Wishing you all a very blessed and Happy Valentine's Day





Desk and
Derrick Club of
Farmington

San Juan Basin Regulatory Workgroup Presents:

Methane Rule Seminar

Sponsored By:



March 31, 2022, 8:00 am to 4:00 pm MST

No Fee • Lunch is On Your Own 11:30 am - 12:30 pm

At: Walsh Engineering and Production
332 County Road 3100, Aztec, New Mexico 87410

RSVP BY MARCH 25, 2022 TO

VANESSA@WALSHENG.NET OR TKNIGHT@ENVIROTECH-INC.COM

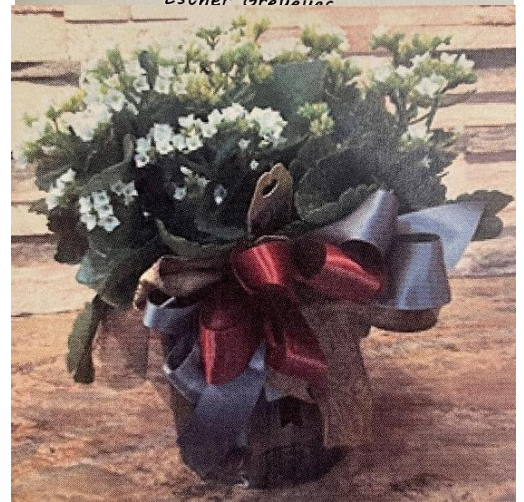
FARMINGTON
DESK AND DERRICK MEMBERS

*I am THANKFUL for the expressions of
Love, Prayers and Support you all
showed me during the passing of my
sister, Arlene.*

*I am truly GRATEFUL to have good
friends in Desk and Derrick.*

*Thank you for the beautiful bouquet of
flowers, the beauty of it
gave me Peace!*

Esther Grouver



Dear Desk & Derrick Club

Thank you so very much for your generous donation(s) during 2021 to ECHO, Inc. The wonderfully, kind contributions of caring folks like you made a difference in our varied programs ranging from the Food Bank food boxes, Backpacks for Kids Program, ECHO Aztec Preschool, and Emergency Assistance Programs to help families/individuals and impact their lives.

On behalf of the thousands of families and individuals assisted by ECHO, Inc., we thank you for caring so much and choosing to make a difference with us. Together we can empower our community to thrive!

Sincerely,

Nanette Pinckney, CEO
ECHO, Inc.

San Juan College Community Fair

By Esther Greyeyes

Helen Trujillo and I participated in The Community Fair on Tuesday, January 25th from 3 pm to 5 pm held at San Juan College. This is an event designed to introduce and encourage students to join community clubs, non-profits and organizations outside of school.

We set up our banner, membership forms (showing the \$20 student membership cost) Association and Farmington D&D pamphlets, club pins, cell phone waterproof covers, ADDC coasters and of course, candy.

A lot of students came by and visited our table. We explained what Desk and Derrick stands for; a few were interested and we are hoping that they will come and join us at one of our meetings. Some of the students were taking courses at the School of Energy and when they graduate some will get hired by different energy companies. We told them if they join D&D, they can take certification classes and go on field trips which will help further their knowledge in the energy world.

We were told by the organizer that the School of Energy just started an Energy Club on campus, so we intend to reach out to those members as well.

This was a fun afternoon and to know that the young people are concern about what is going on in the energy world and that there are people and clubs they can get involved with and expand their minds.



Dancing With The Farmington Stars

Good morning,

I wanted to take a minute to thank all of you for your support and encouragement. The text messages, emails, flowers, showing up at the show—all meant a lot to me. One thing I know for sure is that I can always count on my Desk & Derrick family to be in my corner.

Hope you all have a fabulous week!

Linda Rodgers



Can You Name It? In the Oilfield, Regulatory Compliance

Do you know what is in the picture?

The following information and pictures are from member Evangelena Benallie. The following pictures are items used in the oil field and other industries to aid land and leasing. See if you can identify what is in the photos. Answers are on the following page.

Sharing your knowledge helps everyone and that's what D&D is all about!

Public All Systems Reports

Pub All Systems Customer Info

Pub All Systems Geo

Pub All Systems Geo Supp

Public Case Recordation Reports

+ Pub CR Case Action Info

+ Pub CR Case Info

Pub CR Case Info Cust Land

+ Pub CR Duration of Plans

Pub CR Geo Report w/ Customer

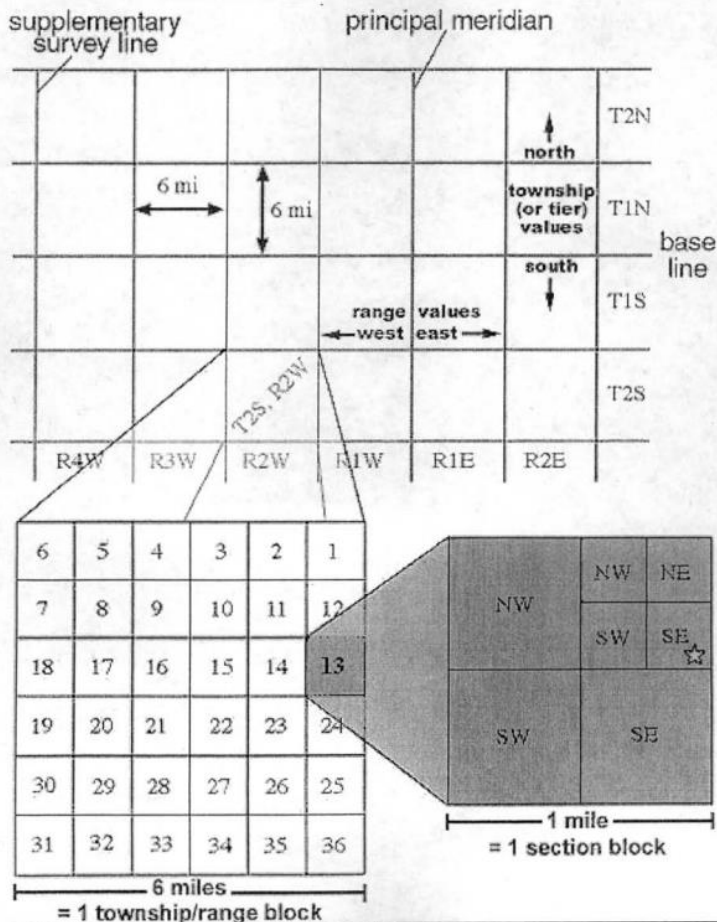
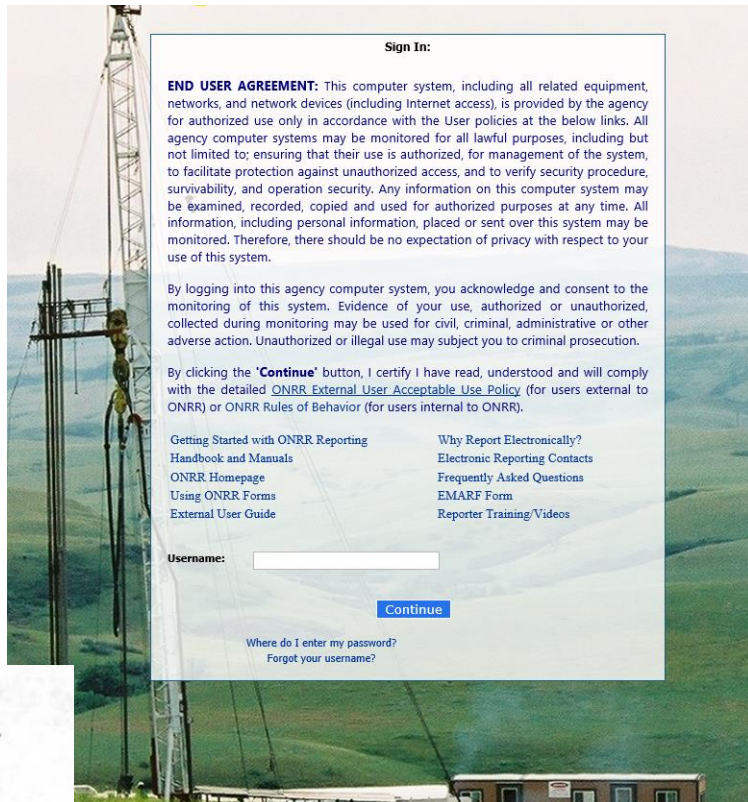
Pub CR Geo Report w/ Land

Pub CR Geothermal Nominations

+ Pub CR Oil and Gas Lease Suspensions

Pub CR Oil and Gas Leases Due to Expire

Pub CR Oil and Gas Leases Issued



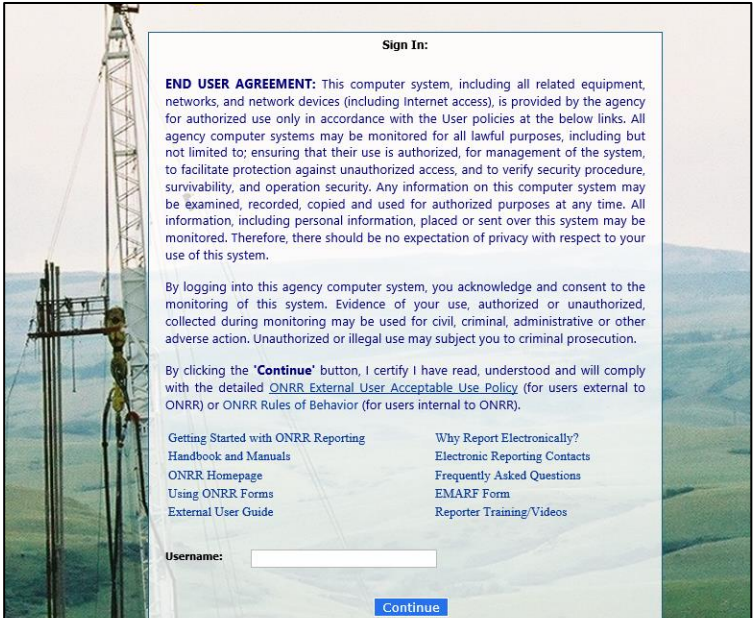
Trivia Answers

BLM's Land & Mineral System Reports – LR2000

This website is used to look up lease information, who the Record Title holder is; who has Operating Rights; Section, Township and Range

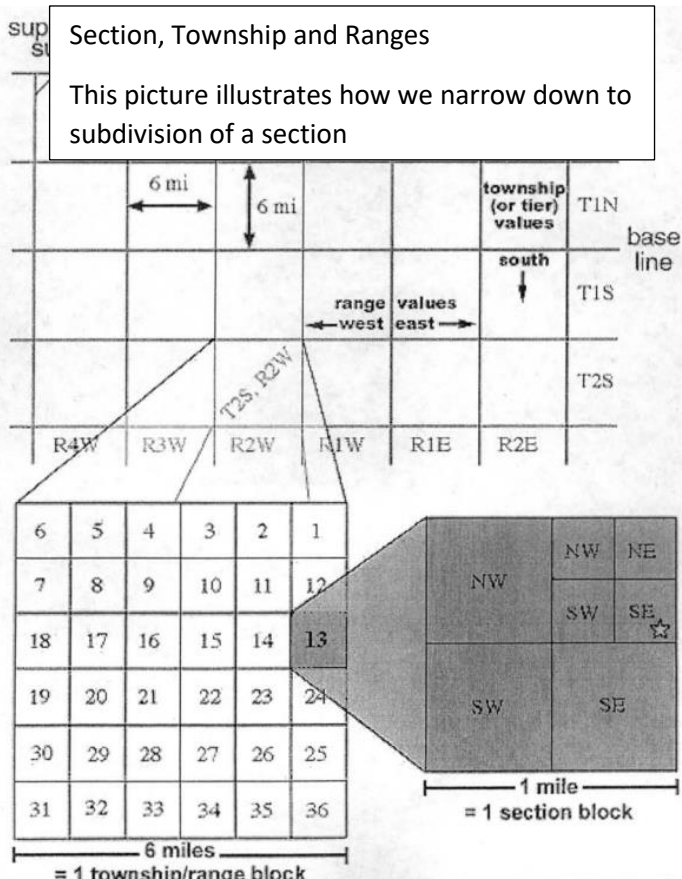
Public Case Recordation Reports

- + Pub CR Case Action Info
- + Pub CR Case Info
- Pub CR Case Info Cust Land
- + Pub CR Duration of Plans
- Pub CR Geo Report w/ Customer
- Pub CR Geo Report w/ Land
- Pub CR Geothermal Nominations
- + Pub CR Oil and Gas Lease Suspensions
- Pub CR Oil and Gas Leases Due to Expire
- Pub CR Oil and Gas Leases Issued
- Pub CR ROW Solar Energy
- + Pub CR ROW Wind Energy Projects
- + Pub CR Serial Register Page
- + Pub CR Wind Energy Applications



Office of Natural Resources Revenue

This website is used for Production, Royalty and Solids Minerals Reporting



Picture of Evangelena with her two older children who are currently both serving in the military – son in Marines and daughter in the Navy. Evangelena is a lease analyst at Dugan Production, employed just over a year. Previously a proposal specialist at Halliburton for 15 years. Thank you for sharing your knowledge with us!



Association News

Region Meetings

Apr	Apr
20	23
Wed	Sat

Southeast Regional Meeting

Thu Apr 21 2022 to Sun Apr 24 2022

May	May
4	7
Wed	Sat

West Region Meeting

Thu May 5 2022 to Sun May 8 2022



Apr	Apr
27	30
Wed	Sat

Central Regional Meeting

Thu Apr 28 2022 to Sun May 1 2022

May	May
11	14
Wed	Sat

Northeast Regional Meeting

Thu May 12 2022 to Sun May 15 2022

For more information visit

<https://addc.org/eventlist/#!event-list>

Hello **West Region** Members and Friends!

Region Director Ingrid Burton, and the Amarillo and Pampa Clubs are so excited about welcoming you to the Texas Panhandle! We snagged a really good deal on a hotel rate at a brand-new facility here in Amarillo and wanted to pass along the booking link for you. There are two hotels, connected by the meeting facility so you can stay at either one. They are honoring these special rates for a few days before and after our event, in case you want to stay longer to shop and play. West Region Meeting packets will be forthcoming with more details as we work to finalize plans. It has been a challenge during these crazy times.

Have you LIKED the Facebook Page?

<https://www.facebook.com/WestRegionADDC/>

Watch for more information and photos as information develops.

GAC Co-Chairs

Natalie Bright, Amarillo Club, natbright3@gmail.com

Norma Pratt, Amarillo Club, npratt@riopetro.com

Elaine McDowell, Pampa Club, elainemc12@aol.com

ADDC Job Board

ADDC is excited to let you know about our newest member benefit - our new JOB BOARD!

This feature on the website gives members the opportunity to post their resumé and look through job postings.

It also allows companies to post openings and search posted resúmes at no cost. Please be sure to pass this great opportunity along to your HR department or hiring manager. The more jobs they post, the more opportunity our ADDC community has.

The Job Board can be found when you log in to the website, between Historical Archive and News & Publications.

Thank you and good luck!

ADO

ASSOCIATION OF DESK AND DERRICK CLUBS

2022 CENTRAL REGION MEETING

Hosted by the
Desk and Derrick Club
of Wichita Falls, Texas



Sheppard Air Force Base



Hatter 'N Hell Hundred



Midwestern State University



Littlest Skyscraper



Board of Directors

PRESIDENT
Philana Thompson
Merrion Oil & Gas Corporation

PRESIDENT ELECT
Barbara Pappas
Cobra Oil & Gas Corp.

SECRETARY
Wendy Sparks
Carl E Gungoll Exploration LLC

TREASURER
Heather Woods
Souder, Miller & Assoc.

IMMEDIATE PAST
PRESIDENT
Evelyn Green
GBC Minerals, Ltd

PARLIAMENTARIAN
Nell Lindenmeyer
A-Plus Well Service, Inc

CENTRAL REGION
DIRECTOR
Jamie Sabata
Gardner Cryogenics/Air
Products

NORTHEAST REGION
DIRECTOR
Samuel Thomas

SOUTHEAST REGION
DIRECTOR
Kathy Martin
Acadian Ambulance Service,
Inc

WEST REGION DIRECTOR
Ingrid Burton

To: All Club Presidents

From: 2022 ADDC Nominating Committee

Re: Nominations for 2023 ADDC Officers

The 2023 officers of the Association of Desk and Derrick Clubs will be elected at the 2022 ADDC Convention to be held in Washington, Pennsylvania.

The ADDC Nominating Committee is currently accepting nominations for the following 2023 ADDC officers:

President-Elect
Secretary
Treasurer

The deadline for all nominations to be received by the Nominating Committee Chairman is June 17, 2022. Any nominations received after that date will not be considered by the Nominating Committee.

Requirements and procedures for submitting nominations and the duties of the officers are described in the Association Bylaws and can be found on the ADDC website in the Guidelines section. All candidates for nomination to ADDC offices shall:

1. Have served or be serving as Regional Director.
2. Nominees for Association President-Elect must have served or be serving on the Association Board.
3. Nominees shall possess knowledge of Desk and Derrick history and aims, and dedication to the Association's purpose.
4. Nominees shall have sufficient time available for assigned responsibilities.
5. Be bondable.

The ADDC Officer Nomination Forms are available in the Forms section of the Members Only pages of the ADDC website (addc.org).

Please send all nominations by June 17, 2022 deadline, including NOMN1, NOMN2, and NOMN2A forms along with a photo of candidate to Terry Ligon, Nominating Committee Chairman, via mail at the address above or via e-mail at terryligon@hotmail.com.

Terry Ligon

News & Articles



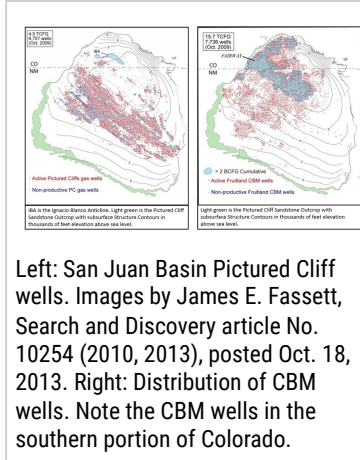
- ❖ 2021 Lafer-Alec Report Grading America's 50 Governors. Thank you NMBIZ for sharing.
 - https://nmbizcoalition.org/wp-content/uploads/2022/01/ALEC-2021Governor-Report_NM-Gov-Lujan-Grisham-worst-in-nation.pdf



- ❖ 1920's Casper WY Salt Creek Oilfield Petroleum Production Nitroglycerin Fracking
 - <https://www.youtube.com/watch?v=493-VgTJZc4>
- ❖ Video from the 100 Year Anniversary Celebration of commercial natural gas in San Juan Basin
 - <https://drive.google.com/file/d/1EBdMt7o9soht58F4XPHIpCAwZEQAQK1y/view>
 - <https://www.youtube.com/watch?v=uuDNhRF2tgo>

Please enjoy the following article from the December 2021 issue of the AAPG Explorer

operated about 6,500 dry gas wells in the prolific San Juan Basin. The main gas intervals were the Dakota, Mesa Verde, and Pictured Cliffs sandstones. (In what is now Mesa Verde National Park in southwest Colorado, the Anasazi Puebloan people constructed dwellings in the cliffs of the Mesa Verde uplifted sandstone outcrops.) The sandstones occur at depth in the San Juan Basin and are oil and gas productive from intervals named after the cliff dwellings, that is, Cliff House, Menefee and Point Lookout. The Dakota was the deepest, then the Mesa Verde Group, and then the shallowest – at about 4,500 feet – was the Pictured Cliffs. This latter sandstone crops out between Farmington and Shiprock, N.M. and has ancient hieroglyphs – hand-carved pictures, on the faces of the sandstone. Above the PC are the Fruitland coal beds. These coal beds were strip-mined farther west on the Navajo Indian Reservation and used to fuel the Four Corners Generating Station.



I was a pumper assigned to maintain and monitor 71 gas wells in an area known as Angel Peak, southeast of Bloomfield, N.M. Some of the wells were in PC sandstone in the shallow Fulcher-Kutz field. These wells were drilled in the early 1940s by companies looking for potash. Natural gas was discovered instead. The wells were drilled to the top of the sandstone, then casing was run and cemented in-place. Wells were then “drilled in” and the sandstone was produced in an open hole. This type of completion was termed a “barefoot” completion. To augment the gas production, nitroglycerin was detonated in the open-hole section to fracture the rock face. Gravel was also placed in the open hole to prevent sand from building up in the formation and blocking the flow. Small tubing, called a syphon string, was run to produce the gas, and for years the wells were in that condition when they were purchased by Amoco.

My job also included doing anything I could to maintain or increase gas production. Over time, water would build up in the well and the gas pressure and volume could not lift it out – a condition termed “logged off.” So, I would drop soap into the well and shut it in for about a week or two and try to unload



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the well. The shut-in allowed the bottom-hole pressure to build up and the soap foamed and formed bubbles and allowed the “gaseous water” to flow out of the well when I opened it back up for production.

A New Idea

I followed this process for a few years and became frustrated. Something was choking a certain well, so I decided to try a different approach. These wells had well heads with old designs: two lines off the casing and one off the tubing and all had valves to open or close. Gas was produced through the tubing valve and/or a casing valve. The second casing valve was bull-plugged and closed off. I obtained a few fittings and configured an eight-foot elbow connected to the casing valve and extending vertically above my head. The well had been “soaped” and shut in for about a month.

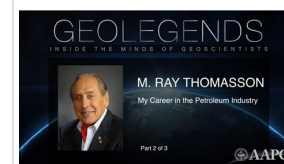
The day came and I set aside a few hours in the afternoon to focus on the well and try my new idea, with everything to gain and nothing to lose. I installed the fittings, put on hearing protection, used a 24-inch wrench, quickly opened the valve to atmosphere and then walked off a safe distance to my pickup truck to have lunch. At first, the well blew gas fairly hard but quickly faded and died. For the next half hour, it would breathe – huff and puff – but nothing else. I thought, “Ok, you killed it.” I finished lunch and started preparing to shut the whole thing down and call it a day.

Then the well started a steady blow with a fine water mist, followed by a small stream of water and surges of gas. It blew a solid two-inch stream of soapy brackish water, drilling mud, sand and some rocks, with the sound of a jet engine. Within 10 minutes, the well blew clean dry gas. I shut the well in, removed the fittings and opened it to production through the tubing. The gas flow was severely restricted, and I concluded the tubing was plugged downhole. So, I opened the casing side fitted into the flow line to the meter-run. I could hear the gas in the pipeline and went to the meter house to see that the readings were now off the chart. I went back and pinched the well using the casing valve to get the readings back on the chart – anything off the chart was free unmeasured gas to the purchaser.



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GeoLegends: M. Ray Thomasson (Part 2)

M. Ray Thomasson -
My Career in the
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For the next month, the well produced at a steady rate. The meter run tube, orifice size and static spring were set to measure a maximum of about 30 thousand cubic feet per day. The well was now capable of producing a lot more than that. I called Southern Union Gas Company and a gas measurement specialist came to the well and we took tubing and casing pressure readings. He calculated that the Barton meter run could accommodate a larger orifice plate and static spring. An eighth-inch orifice plate had been in use for more than 20 years because of the small volume. He enlarged the plate and spring. I opened the casing valve a little more to set it to stay on the chart. A circular paper chart was changed every seven days and sent to be integrated for gas sales volume. At the end of each month, Amoco would get paid, and the volumes were continuously graphed by the production engineering department over the life of a well.

Southern Union eventually installed an inch-and-a-half wide orifice as the gas sales increased. As a pumper in the field, I had radio communications with the office in Farmington. One day the production engineer contacted me and wanted to know why the well had increased in production. Did Southern Union reduce the pipeline gathering pressure? He indicated how odd it was, because no other PC wells had increased in gas sales and my well was producing more gas than when it was originally drilled. I invited him to the well location for discussion, as I did not want to broadcast over the company radio system what I had done to achieve the new production levels.

He came out a few days later and I explained in detail what I had done and the results leading up to the increased gas sales measurements by incrementally increasing orifice plates and static spring sizes. The well continued to perform and out-produce every well in the Fulcher-Kutz PC field.

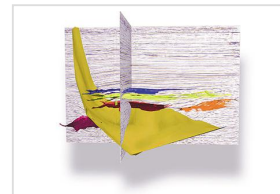
The Amoco engineer had obtained all the field data he needed and went back to the office. He reviewed all the existing well files and the methods of individual well completion and found that all the Fulcher-Kutz Pictured Cliff wells had been completed "barefoot." He proposed and received approval from management to re-work all the wells and modernize the completions.

The first step in the work-over program called for the wells to be shut-in, and fluid was pumped onto the wells to kill the pressure and prep for recompletion. An industry standard work-over rig was used, contracted from Drake Well



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Service. The wells were entered, and the existing old one-inch production tubing was removed. In the case of the well whose production I had initially increased, we found that the tubing had parted, was rusted and corroded and had no material strength. The tubing was actually milled out to total depth. The wells were cleaned out, removing sand, drilling mud and gravel, and then deepened to open the full sandstone pay intervals. Four-inch tubing was run and cemented back to surface, then the wells were perforated and sand-gelled water fracture-stimulated. Inch-and-a-half tubing was run and landed, and the new well head fittings were installed. A 24-hour shut-in period allowed the reservoir to stabilize and then the tubing was swabbed. When enough fluid had been recovered, the wells started flowing on their own. A five-day flow back was initiated in which the well was shut-in for twenty-one hours and flowed for three hours. Total fluid recovered and gas volumes were recorded. All the wells cleaned up, recovering most of the frac water, but not all, and were put on production down the pipeline.

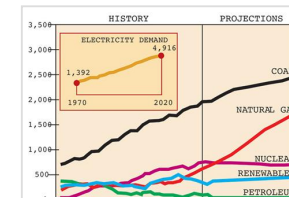
At the end of the project, Amoco owned approximately 15 percent of all the Fulcher-Kutz PC wells, but produced 87 percent of the total gas from the field. All the PC well recompletions were successful, but then there was one peculiar well. A few other wells acted in a similar fashion, but one well performed in a very anomalous way.

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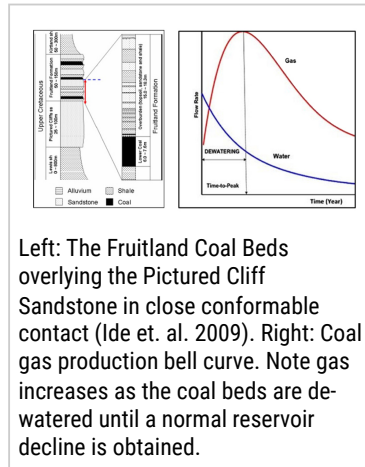
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A Peculiar Well

The peculiar well had been swabbed and flowed, and the total barrels of water used in the reservoir stimulation was 100-percent recovered. This is rare, especially when the PC wells seldom produced any formation water. The well continued to flow gas at low rates along with the new water. Gas was produced from the casing side, and the tubing produced water to the pit slowly and steadily. Over the next few months, the gas production gradually increased and the water volume slightly decreased. The gas production steadily increased day after day after day.

The big question became, “Where was the water coming from?”, along with, “How does a well continually increase in gas production?”

It was observed that the water production pit had a conspicuous black covering of some sort. A sample was taken and sent to the lab and found to be coal dust. The only source for coal dust would be from the overlying Fruitland formation.

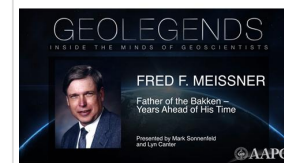


Left: The Fruitland Coal Beds overlying the Pictured Cliff Sandstone in close conformable contact (Ide et. al. 2009). Right: Coal gas production bell curve. Note gas increases as the coal beds are de-watered until a normal reservoir decline is obtained.



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Laboratory analysis indicated that the water was not the same as PC reservoir water. They differed in salinity, dissolved solids and mineral content. The gas was almost 100-percent methane – again, not the same as the PC gas, which was mostly methane but also had lesser percentages of the minor components such as ethane, butane, propane and pentane. Clearly, the gas was not PC reservoir gas. It was determined that the gelled-water and sand fracture treatment had gone vertically “out of zone” and upward into the Fruitland coal, or the perforations were off-depth, and the Fruitland coal was inadvertently completed. If on depth, the path for the coal gas was somewhat tortuous, having to transit to the well bore back through the PC sandstone fracture pattern. As the coal de-watered, the gas volumes increased, creating a production curve eventually shaped like a bell curve.

This anomalous Pictured Cliff well was the first indicator of commercial volumes of coal bed methane production in the San Juan Basin, and Amoco was the initiator of what became the largest coal gas production area in the world. The highly successful recompletions of the Fulcher-Kutz PC wells and the observation of methane gas from the overlying Fruitland Coal marked the beginning of a new phase of San Juan Basin development. The Denver office for Amoco began a focused effort to evaluate the potential. A complete staff of geologists, engineers of all types, landmen, finance specialists and management formed a team to develop the coal gas.

CBM to the Fore

Based on this teamwork, Amoco chose a location not in the Fulcher-Kutz area, but north, close to the Colorado state line on Cedar Hill just off Highway 550 to Durango, Colo. The first well drilled and completed specifically for CBM was in 1975 by Amoco, in the Cedar Hill field northeast of Aztec. The well was the Cahn No. 1 – as an open-hole test, a “barefoot completion.”

Amoco completed the initial Fruitland coal-bed gas well in Cedar Hill CBM field in May 1977, producing from the thick (up to about 25 feet) basal coal of this formation. Public records show that by Oct. 31, 1993, the field had produced nearly 54 billion cubic feet of gas from only 23 producing Fruitland Coal wells. During that month, average daily production per well was approximately 714 thousand cubic feet. (The most productive wells in this field are characterized



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by high fracture permeability.) Amoco was the first company in the western United States sufficiently daring to produce large amounts of water from coal beds to stimulate CBM production, as a direct result of the Fulcher-Kutz PC well recompletions.

The Amoco Cahn No. 1 well was reported to begin initial production of a few thousand cubic feet of gas per day and many barrels of water. Over time, as the well de-watered, the gas increased to more than 55 million cubic feet per day.

One of the most prolific CBM wells in the region was the Amoco (now IKAV) Gardner A-1 well, which had already produced over 20 billion cubic feet of gas by 2000. Production through coal seam gas processing plants averaged 1.835 billion cubic feet of gas per day at the turn of the century. The basin still produces about 1.7 trillion cubic feet of gas per year as of 2020.

In 1988, the first year that production records for the Basin Fruitland pool were kept, coal-bed methane production from the San Juan Basin of New Mexico was 14 billion cubic feet from a year-end total of 77 wells. Annual production in 1989 increased to 55 billion cubic feet from 323 wells and in 1990 was 131 billion cubic feet from 734 wells. By December 1990, Fruitland coal-bed methane production made up about 31 percent of the total monthly gas production from the San Juan Basin, and 17 percent of the monthly gas production from all of the state of New Mexico.

In the years that followed, the success of the Amoco Cahn No. 1 well resulted in thousands of coal-bed methane wells being drilled.

How Did They Know?

On one particular day, I was standing next to that well, talking with the project's petroleum engineer, and I asked him, "How did Amoco know that 7,285 feet below this location, they would find oil and gas in the Dakota? They can't see down there."

He said, "Well, geologists are the ones that figure that out."

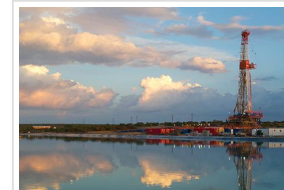
I then asked him, "How could they know? They can't see down there either."

He answered, "Well, in a way they can."



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"How can they do that," I asked.

"I suggest that you go to the local community college and take a course in geology," he answered.

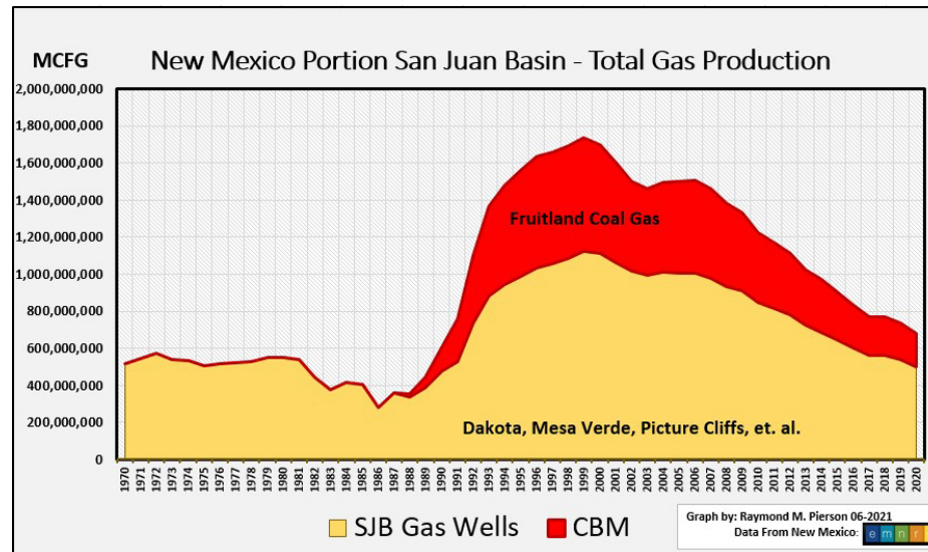
Before that day, I was not sure I had even heard about geologists, other than rock collectors, or their relationship to oil and gas. I will never forget what I said to him. I was sort of a country guy, and as I was standing there in my steel-toed boots, Levi's and hardhat with my thumbs hooked in my belt loops, I looked over at him and said, "They teach that stuff?"

I took his advice and enrolled in a Physical Geology 101 class at the San Juan campus of New Mexico State University. The professor was Bruce Black of Colorado Plateau Geological Service and a consultant to Shell Oil Company. Everything he taught just made sense, and I developed a desire to go to a university and become a petroleum geologist. I received my degree from the University of Northern Colorado in 1980. The Amoco engineer was duly promoted and transferred on to bigger and better things. My career and the San Juan Basin had changed forever, too.

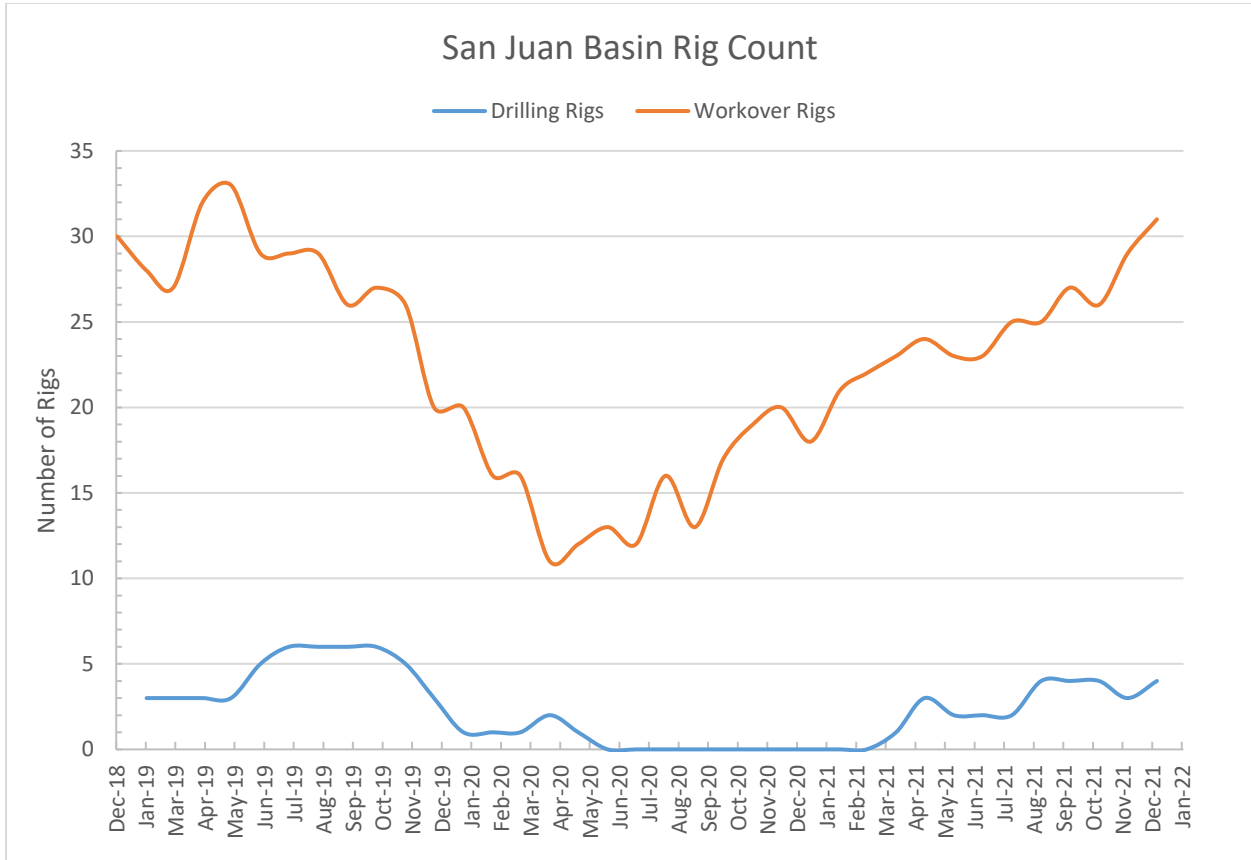


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Cumulative production of the Fruitland CBM beginning in 1988 in relationship to all the other conventional sandstone producing reservoirs in the San Juan Basin, N.M. Fruitland CBM production may ultimately exceed 50 TCFG. Data from New Mexico Oil Conservation Division.



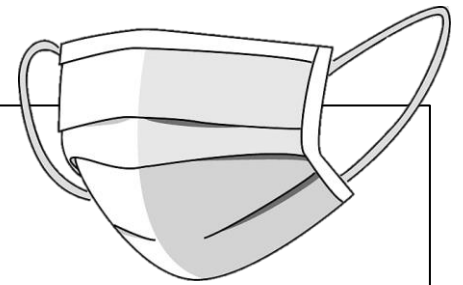
Data received from Randall Parker. Desk & Derrick Club of Farmington is not liable for the accuracy of this data.

New Mexico indoor mask mandate lifted

Feb 17, 2022 | COVID-19, Press Releases

Governing school bodies will decide local masking policy

SANTA FE – Governor Michelle Lujan Grisham on Thursday announced she has lifted the requirement for face coverings to be worn in most indoor spaces, effective immediately.



More information can be found here:

<https://www.governor.state.nm.us/2022/02/17/new-mexico-indoor-mask-mandate-lifted/>

Farmington Club Information

Meeting Schedule			
Date 2021	Speaker/Topic	Location	Time
January 25	Bart Wilsey/ 100 yrs O&G	Farmington Museum	11:15 am
February 23	George Sharpe/ Understanding Energy in the Face of Climate Change	Merrion Oil & Gas 610 Reilly Ave	11:30 am
March 29	D&D Awareness	Envirotech	11:30 am
April	TBD		
May 5-8	West Region Meeting	Amarillo, TX	
May 11-12	Oil & Gas Show	Fairgrounds	
June	TBD		
July 12	TBD		
August 9	TBD		
August 18	EPA/ SPCC Seminar	TBD	TBD
September	Bogey Bash Golf Tournament		
September 21-25	ADDC Convention	Pittsburgh, PA	
October	Industry Appreciation Banquet		
November 17	Closed Meeting for Elections		
December 15	Christmas Party		

If you have any suggestions for meeting topics or speakers please let Kim know at laddee1@msn.com

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PURPOSE

The Association of Desk and Derrick Clubs (ADDC) is a non-profit, international organization whose Visit us on Facebook under “Desk and Derrick Club of Farmington”

MISSION STATEMENT

Our mission is to enhance and foster a positive image to the global community by promoting the contributions of the petroleum, energy and allied industries through education by using all resources available.

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