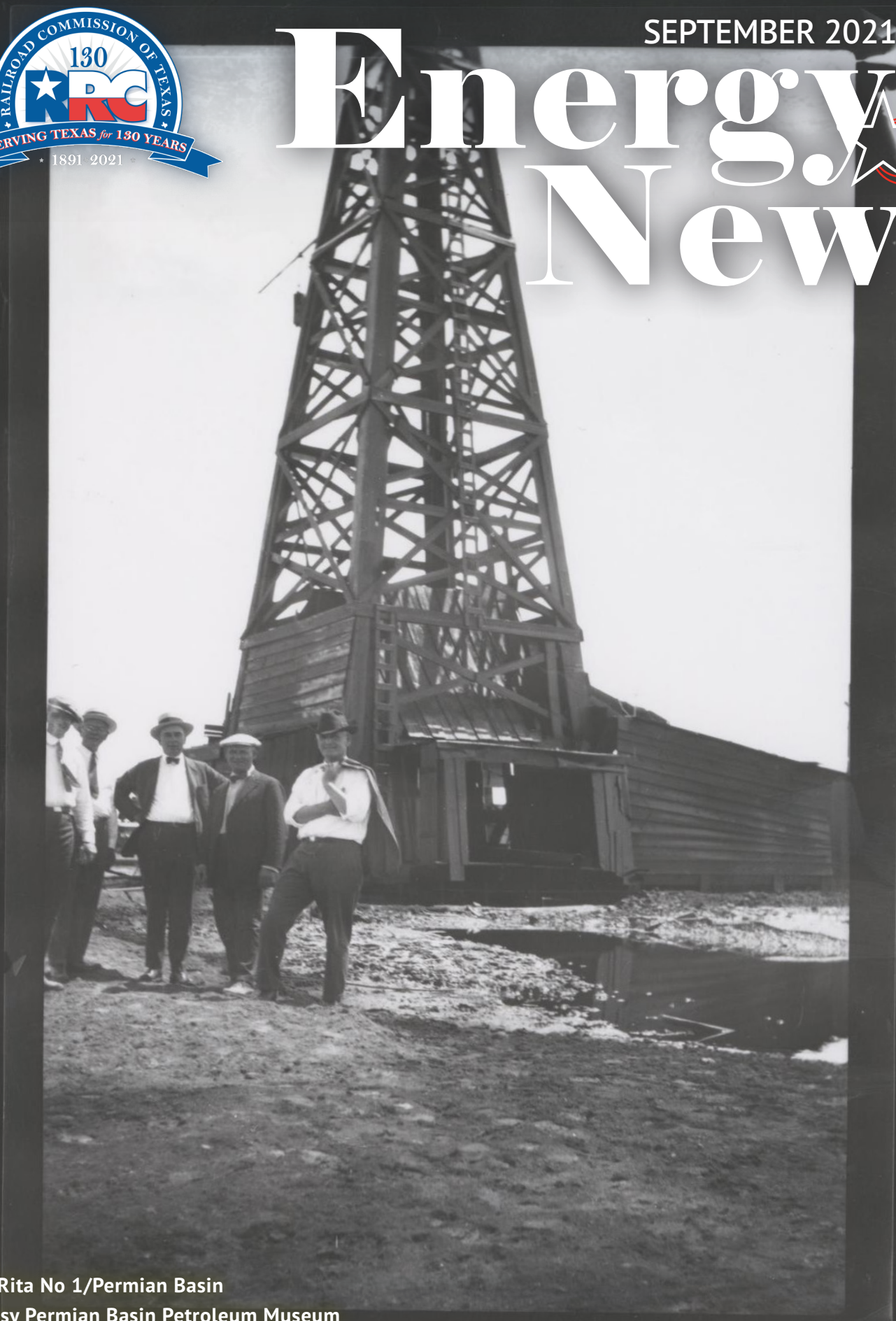
SEPTEMBER 2021

Energy News



Santa Rita No 1/Permian Basin
Courtesy Permian Basin Petroleum Museum

Contents

Upcoming Events

RRC Open Meeting	October 12, 2021
RRC Open Meeting	October 26, 2021

VIEW MORE RRC EVENTS ▸

VIEW OPEN MEETING WEBCASTS ▸

RRC Continues Track Record of Exceeding Performance Targets

No priority is higher for the Railroad Commission than protection of public safety and the environment, which is reflected in robust inspection programs across multiple divisions. The Legislature holds the RRC to high standards with performance measures the agency needs to reach.

Our State Managed Well Plugging Program is highlighted later in the newsletter. Another area where the RRC has excelled is in pipeline safety special investigations. The agency completed 2,043 investigations in Fiscal Year 2021. The Legislature's fiscal year target measure for the agency was 1,200 accident and special investigations.

This is the seventh year in a row the RRC exceeded that legislative goal.

The agency enforces both state and federal regulations for more than 248,000 miles of intrastate pipelines, including natural gas and LP-gas distribution lines, hazardous liquid and natural gas transmission lines, and hazardous liquid and natural gas regulated gathering lines.

Pipeline construction in the Hill Country

Pipeline construction in the Hill Country

In addition to regular comprehensive inspections, special investigations involve program evaluations of nearly 1,600 operators in the state on behalf of the federal Pipeline Safety and Hazardous Materials Administration.

Legislature Continues to Support RRC's Modernization Efforts

Funding Transforming Agency's Computing Systems, Improving Transparency

Thanks to the 87th Texas Legislature, the Railroad Commission will continue to steam ahead with very important computing technology modernization efforts in this new biennium. The work will further enhance efficiency for operators and RRC staff.

The Legislature recently appropriated $21.48 million for the effort. The agency started planning its technology modernization efforts in 2018 and received funding from the Legislature in 2019. RRC's Information Technology Services Division is partnering with several divisions to modernize the agency's various applications.

> "We are going from very old technology that was mainframe-based and a very old database framework that was not relational to a more modern architecture and relational database," *said Kelli Casteel, an ITS systems analyst.* "What that will allow us to do is have more real-time updates, be able to be more efficient in our processing and have efficient and timely reporting."

A general focus of the greater project is getting the agency off the mainframe-based computing system. The modernization consists of various moving parts with several major software development projects planned to last several years and require numerous resources.

RRC's mainframe applications are interconnected and must be replaced carefully. Most areas of RRC have key functions in the mainframe, including Oil and Gas, Pipeline Safety, Gas Services, General Counsel, Hearings, Central Records, and more.

The agency is replacing aging technologies that RRC has relied on since the 1970s – before advances in memory, storage, and computing power of individual devices that include desktops, laptops, tablets, and mobile phones – with cloud-based systems that improve the agency's capabilities and access to information while automatically making more data available to the public.

The new technologies RRC is working on take advantage of the internet, which was quite rudimentary when the RRC built its mainframe system in the '70s. Today, the internet is changing the way we live, including basic tasks, such as how we consume the news, shop, watch television and movies, communicate, and much more.

Success Stories

While not officially part of the more recent modernization projects envisioned in 2018, RRC launched the Inspection, Compliance and Enforcement reporting system in 2015. ICE supports the agency's Oil and Gas inspectors and allows them to file inspection reports in the field using laptops without the need for an internet connection.

OIL
ONLINE INSPECTION LOOKUP

ICE provides the basis for the award-wining website called RRC OIL (Online Inspection Lookup), which was unveiled in 2019 and is updated daily and allows the public to see inspection and violation information 24/7.

After those initial successes, the agency began its current ongoing modernization effort, creating additional compliance and enforcement applications, including the CASES portal, which stands for Case Administration Service Electronic System, and RRC PIPES, which is short for Pipeline Inspection Permitting Evaluation System, both based on the Salesforce platform.

CASES
CASE ADMINISTRATION SERVICE ELECTRONIC SYSTEM

CASES initially launched in August 2019 for RRC staff. In March 2020, the CASES public portal launched. CASES gives authenticated parties the ability to upload documents and make payments via the system. Not only does the system make it easier on parties involved in RRC hearings to submit and receive paperwork, but the public-facing component, makes approved documents available to anyone interested in a case, reducing staff time to process open records requests. In August 2020, upgrades were made that provided more functionality.

PIPES
PIPELINE INSPECTION, PERMITTING, & EVALUATION SYSTEM

RRC PIPES, which launched in July 2021, allows for RRC's Pipeline Safety staff and operators to upload documents, including inspection and incident reports, and complaints, while automatically allowing the public to view inspection and violation information.

The new round of funding allocated by the 87th Legislature allows RRC to continue to leverage the existing Salesforce platform to automate tasks for Alternative Fuels, which regulates LNG, CNG and LPG. The new application will process complaints and inspections and allow for the digital exchange of other information.

RRC's Modernization Efforts - continued

Along with the Alternative Fuels platform, RRC is developing LoneSTAR (State Tracking and Reporting) to efficiently handle the Oil and Gas Division's business functions and make more of the agency's data transparent and user-friendly.

The LoneSTAR system is being built on the Risk-Based Data Management System (RBDMS) platform, which was developed by the Groundwater Protection Council, of which Texas is a member. It will allow for online filings and tracking of regulatory Oil and Gas Division information. LoneSTAR will be implemented in phases beginning with filings for Form P-5, Organization Report, which operators need to operate under RRC regulations, and also some well filings. Other Oil and Gas forms and permitting processes will follow in later phases.

"We have so many complex business processes," said Mark Johannsen, an ITS systems analyst. "This project shows how each of the mainframe applications are connected. It is a web of inter-connected applications. What happens when you move one of those pieces? It is very complex. Just devising ways to make that happen is hard. You have to pick it up and maintain a bunch of trails off it."

"Think of it as two games of Jenga," Casteel added.

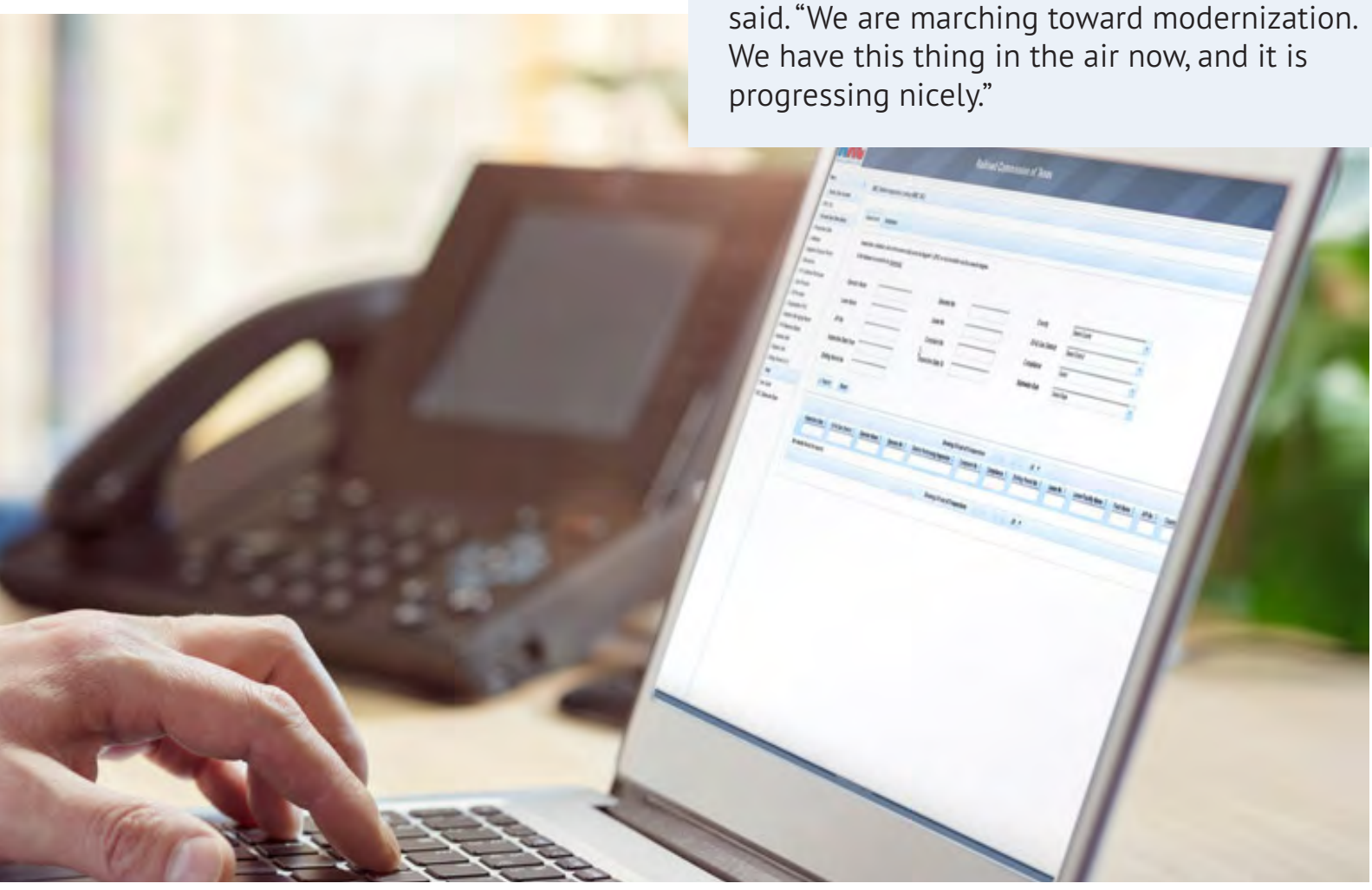
As a part of the modernization effort, the RRC is building a data warehouse which will be the centralized point of access to data contained in RRC's information systems. The data stored in the data warehouse will be uploaded from the systems that process the day-to-day transactions in the agency. The data warehouse will allow the agency to organize data and present the agency's information consistently. This project includes data analytics solutions.

"Think of it as two games of Jenga," Casteel added.

The agency is already realizing the benefits of what it has been able to accomplish thus far. The next phases of the modernization effort will continue to transform how the RRC works and the relationship operators and the general public have with the agency.

With more documents now readily accessible to the public than ever before, the RRC has been able to further expand the transparency of its functions and decrease reliance on paper record.

"You would be amazed how much paper was being used just a few years ago," Johannsen said. "We are marching toward modernization. We have this thing in the air now, and it is progressing nicely."



RRC's Orphan Well Plugging Target Exceeded for Fifth-Straight Year

The Railroad Commission does not just speak about the importance of protecting public safety and the environment, it demonstrates it through its actions.

The vast majority of operators responsibly plug their wells when production has ceased, but if operators abandon oil and gas wells, RRC's State Managed Plugging Program steps up to ensure the interests of Texans are protected. In fact, the agency has exceeded the Texas Legislature's target for plugging orphaned oil and gas wells for the fifth year running, despite challenges brought on by the COVID pandemic in 2020 and 2021.

The State Managed Plugged Program plugged 1,453 orphaned wells in Fiscal Year 2021, which ended on Aug. 31. The legislative goal was to plug 1,400 wells.

"I am proud of what our plugging program has been able to accomplish," said RRC Director of Field Operations Clay Woodul. "Our plugging staff in the district offices deserve credit for staying on top of these projects and making sure they are done properly."

Orphaned Wells Plugged

Fiscal Year	Legislative Goal	Actual Number
2017	875	918
2018	979	1,374
2019	979	1,710
2020	1,400	1,477
2021	1,400	1,453

The total for FY 21 included a notable collaboration with the National Park Service to plug 11 wells at the Padre Island National Seashore near Corpus Christi (pictures below). The work – which occurred from January to March and received funding from the Gulf Coast Ecosystem Restoration Council – helped preserve precious natural resources for visitors of the park.

A major benefit of the State Managed Plugging Program is that it provides work to skilled contractors, which is especially important during periods of economic downturn.

The State Managed Plugging Program is funded through oil and gas industry revenue, including, but not limited to, well plugging reimbursements, fees and financial securities paid by the industry.

Santa Rita No. 1 on June 10, 1923.
Courtesy Permian Basin Petroleum Museum

Santa Rita No. 1 reunion in 1934
Courtesy Permian Basin Petroleum Museum

Historic Santa Rita № 1 Oil Rig Display in Austin Getting Makeover

If you happen to have driven down Martin Luther King Boulevard in Austin or have attended a UT football game, you may have noticed a construction project around what looks like an old-time oil rig next to the university's campus.

In fact, if you've never stopped and read the historical marker, you might not have realized that what you were looking at was, in fact, the famous Santa Rita No. 1, which helped kick off the greater exploration and development of the Permian Basin's oil reserves, the richest such deposits in the United States, that ultimately proved very profitable to the University of Texas System and the Texas A&M System, which both use funds from the Permanent University Fund.

Over the years, the weather has taken a toll on the display, which was never a full version of the Santa Rita, a reference to patron saint of the impossible. The historic rig is undergoing a $700,000 makeover to better reflect what the Santa Rita first looked like.

"The scope of the current project is to update the rig back into working form," said Mike Carmagnola, director of UT Austin Project Management and Construction Services. "The restructuring work will ensure all mechanical systems like pulley system are working properly and safely. The contractors will rebuild the actual deck and rebuild a portion of the derrick. They will also build a new section of derrick to more fully represent what an oil rig looks like."


SANTA RITA NO. 1
PHASE 1: DERRICK RECONSTRUCTION
CAPITAL PROJECT #822851
Santa Rita No. 1 blew on May 28, 1923 opening the Permian Basin to large scale oil exploration
It is the symbol for the greatest fortune that has ever befallen the University of Texas
Preservation Architect
Architexas
Structural Engineer
JQ
TEXAS
The University of Texas at Austin
For more information call PMCS | 512.471.3042
The University of Texas at Austin
Project Management and Construction Services

Santa Rita No. 1 – which struck oil on May 28, 1923, in the Big Lake Oil Field on University Lands in Reagan County – played a critical role in helping make the University of Texas at Austin one of the premier research institutions in the country, if not the world.

In fact, the Santa Rita No. 1 well, which produced oil for more than 60 years, generated about $300 million in revenues for the Permanent University Fund, Carmagnola said.

The rig was actually spudded in 1921, just four hours before the permit expired, according to the Texas State Historical Association. The original Santa Rita project was headed by El Paso native Frank T. Pickrell and Haymon Krupp who, with other friends, formed the Texon Oil and Land Co., which raised money for the drilling that took two years to complete.

The first royalty payment of $516.53 was made to the fund on Aug. 24, 1923, according to the UT System.

The original Santa Rita No. 1 rig pumped oil for about 19 years before being replaced with improved mechanical equipment. In 1939, UT history professor Walter Prescott Webb recommended moving the rig to the campus to serve as "a symbol of the great era in the history of the university."

It was dismantled in January 1949 and shipped to Austin, but it was not until 1958 that mechanical engineering professor Carl J. Eckhardt reassembled the rig at the corner of MLK and Trinity Street.

"The rig provides a tangible, visual way for campus community members, especially those new to Texas, to make a connection to Texas and its history as well as the university's," Carmagnola said. "It's an important historical piece. It underscores part of what has allowed the university to exist and thrive."

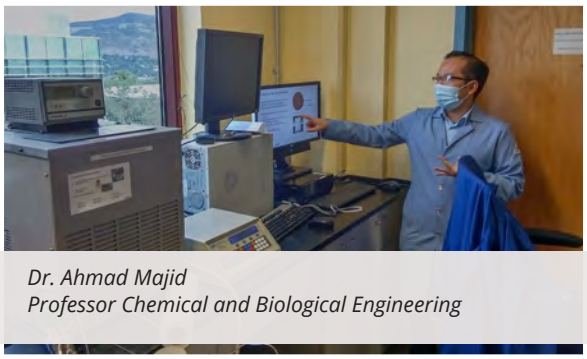
He said the historic rig is showcased at special events, such as Gone to Texas or home football games.

UT hired an architectural firm, Architexas – which conducted historical research, an analysis of the rig's condition, and conceptual plans for the site – and also a local contractor do the renovation work, which is expected to be completed by Oct. 15.

"Helping ensure the rig is maintained and cared for is an example of [our] responsibility as university stewards," Carmagnola said. "We take great pride in being entrusted to help care for this important piece of history."

Training Program Helps RRC Staff Keep Up with Changing Oil & Gas Industry

Texas' oil and gas industry has earned its reputation as a leader in technology innovation, and, as the state's primary energy regulator, it's important for the RRC to proactively train staff on those developments.



Dr. Ahmad Majid
Professor Chemical and Biological Engineering

Among the programs that RRC uses to keep its inspectors and technical staff up to speed is Topcorp, which takes place on the campuses of the University of Texas at Austin, the Colorado School of Mines, and Penn State University.

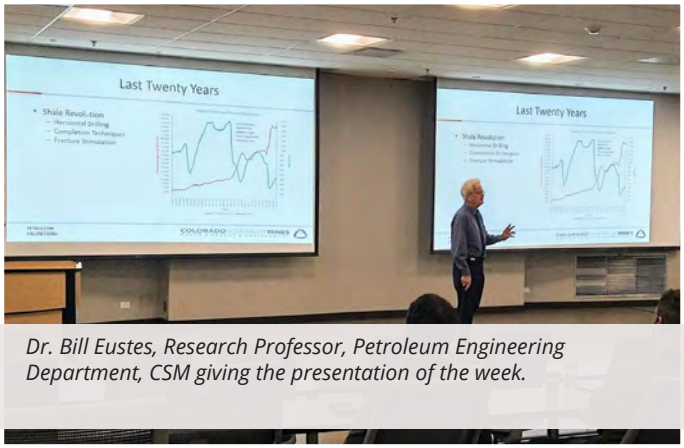
More than two dozen RRC staffers are currently working their way through the educational program that includes three workshops: Petroleum Geology and Engineering and Petroleum Technology, Environmental Management and Stewardship and Emerging Trends and Communications.

Before participants travel to one of the universities for each workshop, they take a series of online lessons to prepare themselves. Each workshop takes place over a three-day period on its host campus and includes time in the classroom, lab, and field.

Downtown Golden, CO

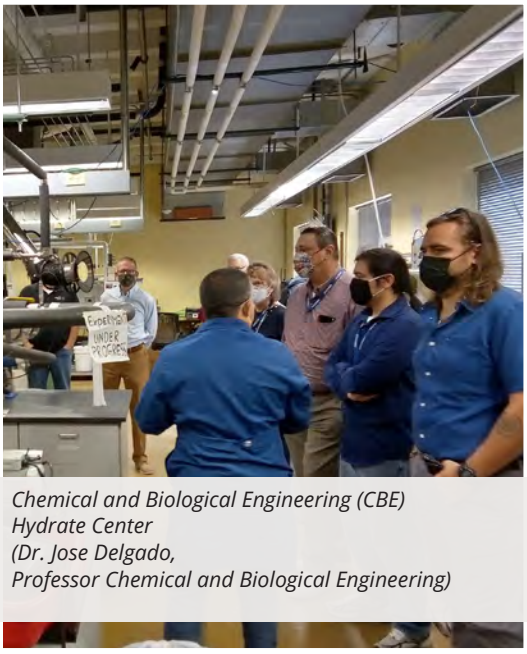
MORE INFO ON TOPCORP TRAINING

The Center for Rock and Fluid Multiphysics (CRFM) -
(Arkhat Kalbekov, Graduate Research Assistant).
Michael Sorensen & Logan Baker of RRC pictured.



Dr. Bill Eustes, Research Professor, Petroleum Engineering Department, CSM giving the presentation of the week.

Classroom Instruction – Ancient Petroleum Landscapes & Geohazards.
(Dr. Lesli Wood, Professor of Geology & Geological Engineering)

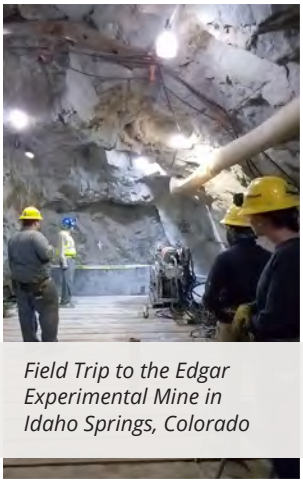


Chemical and Biological Engineering (CBE)
Hydrate Center
(Dr. Jose Delgado,
Professor Chemical and Biological Engineering)

Old equipment and the entrance into the
Edgar Experimental Mine donated to the school in 1910.

Dr. Bill Eustes giving the safety meeting prior to the mine tour.

Dr. Lesli Wood, Geology Geological Engineering Department explaining the geology of Dinosaur Ridge.



Field Trip to the Edgar Experimental Mine in Idaho Springs, Colorado

Area of the old mine that is no longer used.Red Rocks Mountain Park

Front Row L-R: Robert Schexnayder, Delora McWhirt, Greg Oliver, Neial Rosales Back Row L-R: Gene Ortiz, Kolby Durham, Dana McClendon, Greg Jones, Katie Kirby, Greg Powell, Dean Southward, Michael Cartwright

Professor by Practice James Crompton far right, is working the students researching the collection of data that will be used to develop artificial intelligence that will be able to drill wells on their own.

Red Rock Ampitheater

TOPCORP Group Dinner at The Fort Restaurant.

RRC Implements Revisions to Monthly Production Report Instructions

RRC in September implemented revisions to the instructions to Form PR, Monthly Production Report, which were approved on Feb. 23. The revisions support the RRC's regulation of flaring and venting of produced natural gas.

The adopted revisions include two changes to the Form PR instructions that apply to all new and corrected Form PR filings for production cycle months of September 2021 and later:

- "Disposition Code 4", which was used to report the volume of gas that was vented or flared, has been discontinued. "Disposition Code 4" will continue to be used for all new and corrected production reports for reporting cycle months of August 2021 and earlier.
- Two new disposition codes have been implemented to allow operators to allocate gas. For gas that was flared, use "Disposition Code 10". For gas that was vented, use "Disposition Code 11". This change will allow the RRC to quantify the legal disposition of gas that was flared and vented.

The adopted revisions included a third change to Form PR, but that change will not be required until January 1, 2022. However, and operators may begin using it now if they choose to:

- When an operator allocates gas to Disposition Codes 10 or 11, the operator will be required to enter one or more two-letter codes to the existing "REMARKS" field on the form. Those two letter codes correspond to the authority under which the gas was flared or vented, and include the following:
    * AR – Authorized by Rule
    * AE – Authorized by Exception
    * EP – Exception Pending
    * EX – Exempt

The former Form PR instructions required an operator to "Indicate why the gas was vented or flared in REMARKS on Form PR.".The revised form makes these remarks uniform by requiring categorization of the authorization for the release.

VIEW OIL & GAS FORM PR AND INSTRUCTIONS

Data Set on Production Report for Pending Leases Gets New Gas Disposition Code Fields

RRC's Production Reports for Pending Leases data set now features four new fields. The addition of the new fields is in response to the recent revisions to the instructions to the Form PR, Monthly Production Report, and support the RRC's regulation of flaring and venting of produced natural gas. These include:

- Gas disposition code 10 (flare) volume
- Gas disposition code 10 remark
- Gas disposition code 11 (vent) volume
- Gas disposition code 11 remark

Please note: Any original or corrected production filed for August 2021 and prior months will still use the disposition code 4.

The data set is updated monthly and available for free download from the RRC website.

VIEW PRODUCTION DATA SET

VIEW UPDATED USER GUIDE

Chairman Christian

COMMISSIONERS' CORNER

Last week, Commissioner Wayne Christian checked out the latest oil field technology at British Petroleum's (BP) Grand Slam facility in West Texas with Senate Committee on Natural Resources and Economic Development Chairman Brian Birdwell and Texas Oil and Gas Association President Todd Staples.

After concluding the tour, Commissioner Christian said: "Technological innovation — not government overreach — is the key to environmental progress. A thriving energy sector and a clean environment are not mutually exclusive, and the Texas oil and gas industry has proven this."

Commissioner Craddick

COMMISSIONERS' CORNER

In September, Commissioner Craddick participated in several speaking engagements across the state. At the Texas Lyceum conference in Midland, Craddick was honored to give an update on state and federal relations, as well as rulemakings and agency programs. Additionally, Craddick presented an industry update at the Texas Alliance of Energy Producers' conference in Fort Worth. Along the way, the agency rolled out draft rule language in response to SB 3, the omnibus Winter Storm Uri bill, and is actively receiving feedback while the comment period is open.

Finally, Craddick had the opportunity to nominate her fellow Commissioner, Wayne Christian, to Chairman of the Railroad Commission. Chairman Christian's proven leadership has provided the agency with the ability to advance several key initiatives and his return to Chairman will keep the important work we do on the right track.

Commissioner Wright

COMMISSIONERS' CORNER

As a statewide elected official, I don't have much say about what goes on in Washington, but what happens in our nation's capital can have a very real and direct impact on our state. As such, it is important that we make our views known and engage with our federal representatives on those issues that are important to the state and provide input or alternatives beneficial to our state.

Since joining the Commission, I have advocated for ways to productively utilize stranded natural gas through market solutions. Texas is doing a fantastic job in reducing the percentage of gas that is flared, but I believe there is always room for further improvement if the economics work.

Just recently, I worked with Congressman Michael Burgess (TX-26) on a possible market solution to flaring through an amendment to the budget reconciliation bill. While I oppose the larger reconciliation bill because I believe it to be harmful to consumers, our economy, and the oil and gas industry here in Texas, the amendment authored by Congressman Burgess was a step in the right direction to provide a market incentive to further reduce flaring.

continued...

Commissioner Wright
-continued

The amendment offered was designed to provide economic incentives to use stranded natural gas that would otherwise be vented or flared for electrical generation. The carbon emissions from the electrical generation would then be captured and permanently sequestered, and by so doing, the process is effectively carbon neutral.

This only works if the infrastructure is available or easily obtainable. Fortunately, Texas is home to thousands of miles of abandoned pipelines, many of which traverse from the large oil and gas producing regions to the population centers throughout the state. With the right economic incentives, these pipelines or the rights-of-way could be utilized to transport stranded gas to the market for use in electrical production.

While the amendment was not ultimately adopted, I will continue to work with our federal representatives to examine creative, market-based solutions to better manage our natural resources and improve our environment without sacrificing reliability or increasing consumer costs.

Oil & Gas Production Statistics

View monthly production totals of crude oil, condensate and total oil; and of gas well gas, casinghead gas, and total natural gas.

VIEW CURRENT PRODUCTION STATISTICS ▸

Enforcement Actions

The Commission has primary oversight and enforcement of the state's oil and gas industry and intrastate pipeline safety. View RRC's Latest Enforcement Actions here.

VIEW LATEST ENFORCEMENT ACTIONS ▸

Public GIS Viewer

The Public GIS Viewer allows users to view oil, gas and pipeline data in a map view.

LAUNCH THE PUBLIC GIS VIEWER ▸