

Texas
Independent
Producers and
Royalty Owners
Association

Offshore energy development in the spotlight after the Biden Administration releases its proposed five-year offshore oil and gas leasing plan

On the eve of the Fourth of July holiday weekend, the U.S. Department of Interior quietly issued its proposed five-year plan for domestic offshore oil and gas leasing. The proposed 2023-2028 National Outer Continental Shelf Oil and Gas Leasing Program (National OCS Program) was published after the agency let the previous five-year leasing plan expire on June 30, 2022.

Under the Interior's new proposed program, the Secretary of Interior has significantly narrowed the areas that may be considered for leasing to just the Gulf of Mexico and Cook Inlet, where there is existing production and

infrastructure. Officials assert that potential lease sales, including in the Gulf of Mexico, could be further refined and targeted, based on public input and analysis, prior to program approval. The final program also may include fewer potential lease sales, including no lease sales, regulators explained in early July.

"[The Interior's] statement that the final plan may contain zero lease sales is deeply concerning and would be unprecedented," House Committee on Natural Resources Ranking Member Bruce Westerman (R-Arkansas) said in a statement. "This administration continues demolishing access to American resources, and we are paying the price at the pump, at the grocery store, and in our family budgets. There is absolutely no reasonable explanation why we cannot tap into our resources here at home and at least have a plan heading in the right direction to ease soaring energy costs."



Industry representatives and leaders have echoed similar thoughts and reaction, expressing alarm that the administration has left open the possibility of no new offshore lease sales, particularly at a time when energy supplies remain low and demand continues to rise.

Leasing for offshore oil and gas development has so far been unsuccessful with the current administration. An offshore lease sale held last November in the Gulf of Mexico was later nulled by a federal judge who said that government regulators did not properly account for emissions when conducting the drilling auction. The Interior Department also in May announced it was cancelling three upcoming offshore oil and gas lease sales -- two in the Gulf of Mexico and one in Alaska -- over a lack of interest and legal delays.

Members of the public will have until October 6th to provide feedback on the proposed five-year offshore oil and gas leasing program. Comments may be submitted through the <u>Regulations.gov</u> web portal (referencing Docket ID: BOEM-2022-0031). Following the public comment period, this Fall, the Bureau of Ocean Management (BOEM) will prepare a final program and final Programmatic Environmental Impact Statement (PEIS), which will include an analysis of the size, timing, location and number of potential lease sales in the offshore program, which may be further narrowed. Afterwards, there will be a minimum 60-day period before the secretary of the Interior can approve the program and finalize the Record of Decision. The U.S. government will not be able to hold any offshore oil and gas leases until the new plan is finalized.

Texas oil and gas production taxes break new records

The Texas comptroller announced recently the oil and gas industry is paying record amounts in state taxes. In June, the oil production tax generated \$679 million – up 87 percent from June 2021 and the highest monthly collection on record, according to the comptroller. For the same month, the natural gas production tax surpassed \$439 million – up 176 percent from June 2021 and also the highest monthly collection on record. TIPRO President Ed Longanecker said the data "once again illustrates the enormous economic contributions made by the Texas oil and natural gas industry."

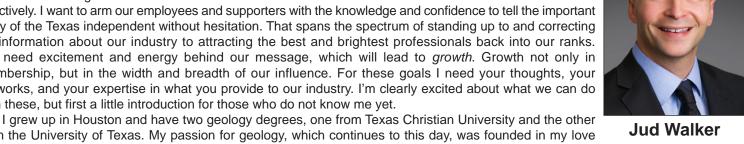
Railroad Commission Chairman Wayne Christian also applauded the industry for its economic impact, which generates funding that supports state programs. "Comptroller Hegar's announcement reinforces the fact that oil and gas literally fuels every facet of our lives from energy to food and beyond. In addition to paying record-breaking tax revenue which funds our schools, roads, first responders and more, Texas' oil and gas industry is our economy's lifeblood supporting roughly one-third of our state's economy and paying an average salary of \$130,000," said Chairman Christian. "Oil and gas production is also so much more than simply fueling our energy use and funding our government, it produces about 96 percent of everyday consumer items including electricity, gasoline, plastics, medicine and countless others," added the chairman.

Because of such strong tax collections from the oil and gas industry and other business sectors, the comptroller this month will provide an update to the *Certification Revenue Estimate* last published in November 2021. That update will reflect a significant increase in estimated revenue that will be available for the 2022-23 biennium, noted the comptroller's office.

Chairman's message

Greetings TIPRO members,

I am honored and excited to serve as your chairman for the next two years. We have much to accomplish together, and I am encouraged in thinking about the tools and talent we have to further TIPRO's influence and mission. TIPRO plays a vital role in advocating, educating and promoting our industry. As we all know, we need the strong and unified voice of TIPRO members now more than ever. We need to educate more effectively. I want to arm our employees and supporters with the knowledge and confidence to tell the important story of the Texas independent without hesitation. That spans the spectrum of standing up to and correcting misinformation about our industry to attracting the best and brightest professionals back into our ranks. We need excitement and energy behind our message, which will lead to growth. Growth not only in membership, but in the width and breadth of our influence. For these goals I need your thoughts, your networks, and your expertise in what you provide to our industry. I'm clearly excited about what we can do with these, but first a little introduction for those who do not know me yet.



from the University of Texas. My passion for geology, which continues to this day, was founded in my love

of the outdoors. I had the fortune of starting my career at Chesapeake Energy during the early days of unconventional exploration. Aubrey and Tom put me on the front lines in West Texas and offered me more experience and dollars than I probably deserved. I fell in love with fact that we were finding and extracting domestic products that support literally everything that makes our great country work. A few near misses with tornados and it was time to come home though. For the last 13 years, I have worked at, and now lead, EnerVest, Ltd. We have successfully raised 14 private equity funds totaling over \$10 billion and currently manage one of the largest operating companies in the country. My history with TIPRO, however, is actually longer than my professional career.

I've been attending TIPRO meetings since I was a teenager. While those first few meetings for me might have seemed to be more about cruising around the lazy river at the Hyatt Hill Country, what I unknowingly witnessed was much more impactful. A group of individuals, representing vastly different sized companies coming together to promote an industry. Name another industry where competitive rivals come together to strategize, aid and consult one another? We have a unique culture within TIPRO that we need to protect and foster. Many of you know my father, John Walker, who founded EnerVest 30 years ago. What you may not know is that he created EnerVest on a handshake deal with Jon Rex Jones at a TIPRO meeting!

Please join us at the Summer Conference in San Antonio on August 24th - 25th. We have a great line-up of speakers that will discuss the latest developments in policy changes impacting the Texas energy sector, challenges and opportunities for operators, and emerging technologies. Your opportunity to network and be a part of the dialogue is not just welcome, it's vital to our organization. Finally, if you have not stayed at the St. Anthony Hotel, you are in for a treat. Recently updated, this historic hotel in the downtown area will really impress you. I look forward to seeing you there!

Regards, Jud Walker

Just announced: Lt. Governor Dan Patrick to speak at TIPRO's Conference in August!



Texas Lieutenant Governor Dan Patrick has been added to the line-up of distinguished presenters who will address the association during TIPRO's 2022 Summer Conference next month in San Antonio. The association looks forward to welcoming guest presenters, industry executives and experts to the St. Anthony Hotel on August 24-25 for important discussions with TIPRO members on the top priorities for independent producers and royalty owners. Ahead of the next legislative session kicking off in January 2023, the lieutenant governor will highlight for TIPRO the key issues that state lawmakers have focused on during the interim and preview what stakeholders can expect for the upcoming legislative cycle.

Other confirmed speakers for the TIPRO Summer Conference include: U.S. Congressman Tony Gonzales (D-TX23), U.S. Congressman Vicente Gonzales (D-TX15), Texas Attorney General Ken Paxton, Satelytics Chief Executive Officer and President Sean Donegan and Marshall Adkins, market expert and head of energy at Raymond James.

If you have not already, sign up today to reserve your seat for the TIPRO Summer Conference. Also once you've registered, be sure to book your hotel room at the St. Anthony for the event — don't wait, the discounted TIPRO block rate ends on August 2, 2022.

Find other information about the TIPRO Summer Conference later in this newsletter on Page 7 or on the association's website at www.tipro.org.

TIPRO CALENDAR OF EVENTS

JULY 19, 2022 HOUSTON — TIPRO/IPAA/HPF "Leaders in Industry" Luncheon. For information, email info@houstonproducersforum.org.

AUGUST 3-4, 2022 SAN ANGELO — West Texas Legislative Summit. For information, email tricia@sanangelo.org.

AUGUST 16, 2022 HOUSTON — TIPRO/IPAA/HPF "Leaders in Industry" Luncheon. For information, email info@houstonproducersforum.org. Page 3 July 14, 2022 THE TIPRO TARGET

Democrats in the Texas House push for suspension of state's motor fuels tax

Following the lead of President Joe Biden who in late June called on the federal government to implement a gas tax holiday, state officials in Texas recently said the state should also consider suspending its motor fuels tax to address rising fuel prices and help give Texans relief at the gas pump. In the final days of June, more than 20 members of the House Democratic Caucus sent a letter to Texas Governor Greg Abbott requesting a special legislative session be called so that the legislature may take action to temporarily lift the state's motor fuels tax and pause the levy applied to gasoline.

"While Texas's economy has rebounded very well relative to the rest of the country due in large part to soaring prices of oil and natural gas, inflation has become a terrible burden on Texans," said State Representative Penny Morales Shaw (D-TX148). "This plan is about sharing the wealth of Texas' natural resources with working families by giving relief to drivers who have seen the price of gasoline nearly double in the past year."

The group of state representatives promoting the temporary roll-back of the state motor fuels tax noted growing state revenue coming from other tax streams, which they say give the legislature an enormous balance to draw upon to support such relief measures that will aid consumers in Texas.

After the letter from the House Democratic Caucus was sent to Governor Abbott, the governor has since given no indication he would support the suspension of the motor fuels tax nor shown that he intends to call a special legislative session focused on the matter. Further, a gas tax holiday, whether on the state or federal level, is unlikely to do much to rein in surging fuel prices, experts agree. The strategy to temporarily lower fuel prices, for example, could even backfire by tempting drivers to actually increase their demands on energy supplies, which would in turn mean prices rise back to where they were, or surge higher.

Nominations now open for Texas Environmental Excellence Awards

Do you know of an outstanding environmental project or leader? Consider nominating them for a Texas Environmental Excellence Award! The Texas Commission on Environmental Quality (TCEQ) is currently accepting nominations for the 2023 Texas Environmental Excellence Awards (TEEA), the state's most prestigious environmental award and highest environmental honor. There are ten diverse award categories that provide citizens, communities, businesses and organizations an opportunity to be recognized for achievements in environmental preservation and protection.

"It is a privilege to recognize these Texans for the creative and innovative efforts being made on behalf of our state's environment," said TCEQ Chairman Jon Niermann.

Since 1993, the program has honored more than 250 successful environmental projects and activities in the state of Texas. Through the TEEA, TCEQ hopes to encourage others to initiate like-minded projects and reinforce a spirit of environmental stewardship. Past winners that are also members of TIPRO include Pioneer Natural Resources Company, and others. Notably, the city of Midland was also honored last year with a TEEA award for its conservation efforts related to its partnership with Pioneer Natural Resources that led to the upgrade of the city's existing wastewater plant facility and enabled greater water reuse for the oil and gas industry operating in the area.

The deadline for submissions is September 23, 2022. For more information about the awards, please visit the TEEA website online at <u>teea.org</u>.

Railroad Commission adopts revisions to Form P-16, Acreage Designation

During the last commissioner's conference held at the end of June, the Texas Railroad Commission adopted revisions to the Form P-16, *Acreage Designation*, and the instructions for both drilling permit and well compliance functions. The revisions align the form's functionality with the options afforded to operators when providing information for exceptions to 16 Texas Administrative Code §40(e)(2) [Statewide Rule 40(e)(2)]. The revised form includes changes to Section II and Section V.

The new Form P-16 and instructions went into effect on Wednesday, June 28, 2022. To download the newly changed Form P-16 and its instructions, visit the commission's website at https://www.rrc.texas.gov/oil-and-gas/oil-and-gas-forms/. When downloading the form and instructions, stakeholders are advised to note the June 2022 revision date to confirm the current files. If you do not see the revisions to Section II or Section V, then you do not have the new file and must clear your browser cache.

George Peyton appointed to the Texas Water Development Board

Texas Governor Greg Abbott in July appointed George B. Peyton V to the Texas Water Development Board (TWDB) for a term set to expire on February 1, 2027. Peyton is president of River Valley Holdings, Inc., an investment holding company. Previously, he served as president of Riverbank Operating, LLC and Remora Petroleum, LP. He is also the founder and former managing director of Fifth Well Investment Management, LLC.

The TWDB provides leadership, planning, financial and technical assistance for the responsible development of water for the state of Texas. With ongoing population growth and intensifying drought conditions across Texas, the mission and purpose of the TWDB is more critical than ever to support the orderly and responsible development, management and conservation of the state's water resources.

Texas comptroller's office creates new government affairs and programs division

The office of the Texas Comptroller this summer established a new government affairs and programs division that will streamline collaboration across multiple levels of government and private sector partnerships. The new division will be managed by Nikki Cobb. Cobb previously led the comptroller's legislative efforts as director of legislative affairs since joining the office in May 2018. Before that time, she served for 10 years in various capacities in the Texas House of Representatives. Justin Coleman has been appointed to take over Cobb's position as the new director of legislative affairs at the comptroller's office.

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TxDOT invites public input on its draft 2023 Unified Transportation Program

The Texas Department of Transportation (TxDOT) is seeking public input on the agency's draft 2023 Unified Transportation Program (UTP), the state's 10-year transportation plan. The UTP, updated annually, is used to guide the development of transportation projects around Texas. Within the UTP framework, TxDOT works with elected officials, local planning organizations and the public to select and fund the state's highest priority transportation projects. In addition to road projects, the UTP addresses public transportation, maritime, aviation, rail, and freight and international trade. The UTP is not a budget or a guarantee that projects will or can be built, but rather is part of TxDOT's comprehensive planning and programming process and serves as a bridge between long-term vision and initiation of project development. TIPRO members can download the draft 2023 UTP here: https://bit.ly/301VT2k.

"The UTP is TxDOT's road map to developing projects across the state," explained TxDOT Executive Director Marc Williams. "It is important to work with our transportation partners and hear from the public to guide transportation improvements that address congestion and enhance safety across our state."

Notably, under the updated UTP, the Texas Transportation Commission has allocated \$2.5 billion for Fiscal Years 2023–2032 to the Category 11 Energy Sector Program. This threshold has increased from the current 2022 UTP, which provides \$2.1 billion to the Category 11 Energy Sector Program for Fiscal Years 2022–2031. The funding designated for this category is used by TxDOT districts to address specific roadways impacted by traffic in five energy-producing regions around Texas: the Permian Basin, Anadarko Basin, Eagle Ford Shale, Barnett Shale, and Haynesville-Bossier Shale. The program specifically focuses on roadway safety and pavement preservation for roadway systems located near oil and gas basins.

Railroad Commission chairman urges SEC to withdraw pending climate disclosure rules

While the U.S. Securities and Exchange Commission (SEC) works to finalize new rules expected to require companies to disclose greenhouse gas emissions and other detailed climate-related data, Railroad Commission Chairman Wayne Christian in early July sent a letter to SEC regulators expressing strong opposition to the federal rulemaking effort. Chairman Christian warned in his letter that the rules constituted as federal overreach and would necessitate pointless reporting requirements for American businesses - especially small businesses - during a time of bleak economic upheaval with an ongoing energy crisis.

"This proposal is beyond the agency's congressionally prescribed mission. For almost a century, the SEC has dutifully operated its three-part mission to protect investors, maintain efficient and healthy markets, and help spur-on capital growth. These new rules, however, are a departure from the agency's history as a non-partisan organization and would now push a liberal agenda that lacks congressional authorization," cautioned Chairman Christian. "It would set a dangerous new precedent for businesses, particularly small ones, to comply with onerous federal regulations that they themselves may be vehemently and fundamentally opposed to," the chairman added. Members of TIPRO can view Chairman Christian's full letter at: https://bit.ly/3au8l8c.

Other state leaders from Texas have also recently raised concerns on the SEC's proposed climate disclosure regulations. As TIPRO previously reported in *The TIPRO Target* newsletter to members, Texas Attorney General Ken Paxton last month also led a multi-state letter to the SEC opposing its proposed rule. "The SEC's proposed rules are unlawful, unconstitutional, and just plain bad policy," Attorney General Paxton said in June. He also forewarned that if the SEC does enact its rules, Texas and other states will sue to overturn the regulations. TIPRO members can see more of the comments on the proposed SEC climate rule from Paxton and the other state attorneys general at: https://bit.ly/3ul7IUG.

Railroad commissioner says Texas - rather than Saudi Arabia - can solve evolving energy crisis

In a new editorial, Texas Railroad Commissioner Christi Craddick said U.S. President Joe Biden should cancel his July trip to Saudi Arabia and instead come down to the Lone Star State to visit Texas producers who can help the nation - and world - with escalating energy volatility. As the nation's largest oil and gas producing state, Texas is well positioned to deliver the energy increasingly being demanded by U.S. and global consumers, explained Commissioner Craddick.

President Biden is scheduled to travel to Saudi Arabia in mid-July, where it is widely expected he will continue to try to pressure the Saudi Arabia and other members of the Organization of Petroleum Exporting Countries (OPEC) to take further steps to ramp up production and further increase oil output. Meanwhile, President Biden to-date has not yet visited the Permian Basin or other critical oil and gas basins to see a first-hand look at industry operations, entrepreneurship and the hard work required to produce oil and natural gas.

"Texas is America's largest oil producing state, and President Biden should see with his own eyes the advanced technologies that make our industry clean and efficient. He should sit down with Texas workers who are ready to ramp up production and meet the energy and economic needs of the country and the world. This would send the important message that the solution is here at home – not overseas," stated Commissioner Craddick in her op-ed.

The commissioner also outlined five recommendations for the White House to follow that she advises would offer meaningful solutions to worsening economic conditions, including greater reliance on Texas energy output and production. Commissioner Craddick urged the federal government to resume leasing activity on federal lands; stop regulatory assaults on the energy industry; restart the Keystone XL pipeline and approve the backlog of pipeline permits; and cease misguided attacks on American energy production and instead help provide oil and gas producers with the tools they need to grow jobs and increase oil and gas supplies.

Read Commissioner Craddick's full editorial, featured in the Midland Reporter-Telegram, here: https://bit.ly/3nZMcam.

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Texas Congressman Pat Fallon files bill to stop abuse of Strategic Petroleum Reserve

Republican Congressman Pat Fallon, who represents Texas' fourth congressional district in Northeastern Texas, this summer introduced the *Strategic Petroleum Reserve (SPR) Anti-Exploitation Act*, a bill that seeks to amend existing law to put more controls on the ability of the president to tap into the SPR. The congressman advised the legislation would prevent future exploitation and unsubstantiated withdrawals of crude oil from the SPR by placing a check on the executive branch. Specifically, under the proposed policy, Congress would be required to declare a national emergency before a sale or drawdown of the SPR can occur. Congressman Fallon explained he felt compelled to file such legislation after President Biden has allowed multiple releases of oil from the SPR over the past year in an effort to increase oil supplies and control rising energy costs. Currently, the SPR is at its lowest level since 1987.

"Under President Trump, the SPR reached record levels and now, this administration has drained it to its lowest levels [in] almost 40 years. The SPR is meant for weather or national security emergencies, not political expediency. However, it is clear that Joe Biden is using the SPR to prop up their unfeasible Green New Deal policies... If this administration will not hold themselves accountable, Congress must," Congressman Fallon said in a statement.

Opponents of Congressman Fallon's bill express apprehension of Congress' ability to act swiftly to recognize a national emergency, as compared with unilateral presidential action that allows the commander-in-chief to respond to news events and situations far faster. To-date, the bill has not yet attracted any cosponsors and it awaits a potential vote in the House Energy and Commerce Committee.

Federal judge vacates Trump-era ESA regulations

The first week of July, U.S. District Judge Jon Tigar struck down federal regulations promulgated by the Trump Administration in 2019 that had narrowed the government's use of the Endangered Species Act (ESA). Though the Biden Administration is already working to overhaul federal ESA regulations, the judge's ruling will restore many ESA protections.

Federal agencies had asked the court presiding over the case to allow the ESA rules to remain in place while the U.S. government works to rewrite ESA polices, however environmental groups filing the lawsuit argued that the regulatory process could take months or years to complete, presenting a need for immediate legal action to ensure comprehensive federal protections for threatened and endangered species. The court sided with environmentalists, finding there was no need to keep the 2019 rules in place when the ESA policies were going to be changed by regulators anyways. "Regardless of whether this court vacates the 2019 [Endangered Species Act] Rules, they will not remain in effect in their current form," Judge Tigar wrote in his ruling.

EIA: Fossil fuels accounted for 79 percent of primary energy consumption in the U.S. in 2021

Fossil fuels—including petroleum, natural gas, and coal—accounted for 79 percent of the 97 quadrillion British thermal units (quads) of primary energy consumption recorded in the United States during 2021, the U.S. Energy Information Administration (EIA) reported recently. The EIA, the statistics and analysis branch of the Department of Energy, noted the return of activity drove up energy demand and consumption in the U.S. last year, resulting in the largest annual increase in energy consumption on record. This followed the largest annual decrease on record in 2020, when U.S. primary energy consumption experienced a 7-quad decrease as a result of economic shutdowns stemming from the coronavirus pandemic.

In 2021, petroleum was the most-consumed primary energy source in the United States, totaling 35 quads. U.S. natural gas consumption meanwhile totaled 31.3 quads in 2021, a slight decline from the previous year, according to the EIA. Consumption of renewable energy in the United States also hit a record of 12.2 guads in 2021.

The EIA earlier this year said in an outlook energy consumption will continue to increase over the next 30 years, with petroleum and natural gas remaining the most-consumed sources of energy in the United States through 2050.

In mid-year outlook, PwC projects oil and gas deal activity will accelerate in second half of 2022

High commodity prices and increased buyer confidence will likely support accelerating oil and gas deal activity in the second half of 2022, experts from international consulting firm and accounting giant PwC said in a new mid-year outlook. Withstanding inflation that's at a 40-year high and apprehension over a potential economic recession, energy mergers and acquisitions nonetheless are attracting buyers such as private equity firms, described experts from PwC.

"Concerns about the U.S. economic outlook and geopolitical unrest slowed deal activity in the first half of 2022. However, year-over-year deal activity remained strong, with a reported 123 deals valued at \$107 billion during the last 12 months (LTM) ending on May 15, 2022. This is up from the 98 deals during the previous LTM, a period which had a similar total deal value," explained PwC. The firm noted Upstream deals have accounted for most of the transactions for the energy sector so far in 2022.

As the year progresses, investors are expected to continue to focus on opportunities within onshore oil plays such as the Permian Basin, according to PwC. Natural gas projects are also likely to draw attention in the months ahead as global demand for natural gas supplies remains strong.

As part of its outlook, analysts from PwC noted ongoing uncertainty from supply chain disruptions, inflation and labor issues which continue to present challenges to the oil and gas industry. "The higher cost of capital and growing concern about where the economy is headed — and whether the Federal Reserve can tame inflation without triggering a recession — could put a damper on deal activity. Geopolitics also could put the brakes on potential deals during the second half of the year," the group cautioned. "The uncertainty surrounding commodities prices makes it difficult for companies and investors to make decisions. Adding to those concerns is the potential for regulatory reaction to the higher prices, such as capping gasoline prices. Higher prices could lead to easing restrictions for domestic drilling, although it's not clear how long such policy reversals might last. However, high pump prices could create a consumer backlash, which — especially in a mid-term election year — could lead to policies that make deals less attractive."

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Apache Corp. accepting applications for company's annual Tree Grant Program

Apache Corporation, a subsidiary of APA Corporation and member of the Texas Independent Producers & Royalty Owners Association (TIPRO), is now welcoming applications for the company's annual Tree Grant Program. Through the initiative, first launched in 2005, Apache each year donates trees to a wide range of partners, which supports development and improvement of public parks and greenspaces, as well as extends conservation efforts, including preservation of natural habitats and reforestation. According to the company, over the course of the program, Apache has donated more than 4.8 million trees to over 900 non-profit organizations and government agencies. "Enhancing green spaces, conserving critical habitats and accelerating large scale reforestation projects are meaningful initiatives that highlight the incredible importance of trees to our everyday lives," commented John J. Christmann IV, Apache's chief executive officer and president. "As we kick off the 17th year of the Apache Tree Grant Program, we look forward to working with partners across our operating areas who are dedicated to planting and caring for trees where they are most needed."

The Apache Tree Grant Program is open to U.S. non-profit organizations and government agencies in states where Apache has operations — currently Texas, New Mexico, Louisiana and Wyoming. Grant recipients must request a minimum of 50 one gallon, three gallon or five gallon trees per project or a minimum of 1,000 bareroot seedlings, according to the company.

For more information on the 2022-2023 Apache Tree Grant Program, please visit <u>www.apachelovestrees.com</u>. Note the deadline to submit an application is August 14, 2022. Grant awards will be announced by Apache in September 2022.

"Breakthrough shale oil enhanced recovery processes"

Guest article contributed by Robert Downey, founder and CEO of Shale Ingenuity

Shale oil resources are by far our nation's largest current and future source of oil and gas. A recent Texas Bureau of Economic Geology report estimated about 3,100 billion barrels of oil in place in the three largest oil basins – Permian, Williston and Eagle Ford. But that report also noted that with current technology - horizontal wells with large, multi-stage hydraulic fracture stimulation treatments - we can recover only about 6 percent of that oil resource.

There are 94,000 producing horizontal shale oil wells in the US, and about 30 percent of them are now producing at less than 10 BOPD. About 7,000 wells are now shut in, and about 1,200 have already been plugged and abandoned. A February 3, 2022 *Wall Street Journal* article, "Frackers Brace for the End of the US Shale Boom," cited data and reports from FLOW Partners, Rystad Energy, Bernstein Research and Wood McKenzie, indicating that there are only about 35,000 "top tier" drilling locations left to drill, most of them in the Permian Basin. The oil industry will need to innovate to produce more oil in the coming years, and the most obvious place to innovate is in our massive shale oil resources.

Recently, refracs have been touted as a cost-effective method to recover more oil from shale oil wells. However, refracs have been shown to have highly variable success, on average recovering about 50 percent more oil than primary recovery, but with about the same or higher cost as the initial fracture stimulation.

To date, 16 companies have developed 39 shale oil enhanced oil recovery (EOR) projects, mostly in the Eagle Ford, to recover some of this oil, and mostly via natural gas cyclic injection, aka "Huff n' Puff", but at best about 40 percent more oil than primary is recovered, still leaving about 92 percent of the oil in place. And many of these projects have been unsuccessful due to the presence of fractures that channel the injected gas away at high bottomhole pressures, preventing good oil recovery.

Two novel shale oil EOR processes have been developed, that could solve the low oil recovery problem and significantly boost oil production and reserves. Compositional reservoir simulation modeling of these processes has been conducted on nearly every shale basin, followed by core tests that validated the physics of the process, and then field tests, that proved the process in the field. The processes have been shown to work very well, and are projected to recover as much as 300 percent to 500 percent more oil than primary, and at about half the cost/barrel of new wells. And, implementing these processes can also lower GHG emissions and water costs by about 75 percent. Unlike natural gas or CO2 Huff and Puff, high bottomhole pressures are not required, and so fractures are not as likely to prevent good oil recovery.

These processes, called SuperEOR and UltraEOR, are complex to design but fairly simple to operate in the field, and can slow production declines and extend well lives by 10-25 years. SuperEOR and UltraEOR use a simple, low cost liquid solvent solution, in a cyclic injection or Huff n' Puff process. The solvent is pumped into the shale oil well using a triplex pump where it is instantly miscible in the matrix oil. The well is then flowed, and the solvent is fully recovered from the production stream, and stored on location for reinjection. Because the wells flow during the "Puff" portion of the process, artificial lift is not needed. At the conclusion of the project, the equipment and the solvent can be moved to another project, or sold. UltraEOR is an enhancement to the SuperEOR process that takes advantage of the rock stress state around the multi-stage hydraulically fractured horizontal well, to efficiently create a complex fracture network between the fracture stages. The complex fracture network allows more of the solvent to contact the rock matrix and thus extract more oil. UltraEOR has not yet been field tested, however compositional reservoir simulation modeling indicates it could enable double the oil recovery of SuperEOR.

Shale Ingenuity LLC of Centennial, Colorado, invented and owns the IP on these processes. The company was formed to help shale oil producers implement these processes to boost oil and gas production, deriving their income from engineering, development and operating services. Implementing SuperEOR or UltraEOR in shale oil producing wells requires a comprehensive approach that includes reservoir, completion, production and facilities engineering, project management and operations skills and experience. The company has teamed with other engineering and services providers to enable a turnkey solution, recognizing that most shale oil producers are focused on drilling, completions and primary recovery production.

The company believes these processes can significantly increase our nation's oil production and reserves from the shale oil wells we have already drilled and will drill, while reducing GHG emissions and other environmental impacts. However, it will require shale oil producers to shift their thinking more toward reservoir engineering. More information is available at www.shaleingenuity.com, and the company's president, Robert Downey, can be reached at downey.robert@shaleingenuity.com or (720) 431-4108.



REGISTER FOR TIPRO'S 2022 SUMMER CONFERENCE!

JOIN THE DISCUSSION IN SAN ANTONIO THIS AUGUST

As the oil and gas regulatory environment continues to shift -- and market conditions remain volatile -- hear from leading officials and experts on expectations for the oil and gas industry during TIPRO's 2022 Summer Conference. The annual meeting will take place on August 24-25 at the historic St. Anthony hotel located in downtown San Antonio near the Alamo and famed Riverwalk.

TIPRO has a strong tradition of hosting forums with prominent public and private sector speakers to keep our members informed of important policy priorities and trends facing the Texas oil and natural gas industry. Make plans to attend this year's Summer Conference to be part of the conversation.

AGENDA HIGHLIGHTS INCLUDE:

- State Issues Update
- Federal Energy Policy Insights
- Oil & Natural Gas Market Outlook
- Innovations in Emissions Monitoring
- And More!



SIGN UP AS AN EVENT SPONSOR!

Sponsorship opportunities are also still available for this year's Summer Conference. Take advantage of the special chance to showcase and promote your company to TIPRO's membership -- sign up today as a Gold, Silver or Bronze level supporter of the event. Select item sponsorships are also available for a limited time. To view full sponsorship details, visit the association's website or contact TIPRO at info@tipro.org.

VIEW FULL EVENT DETAILS AND SIGN UP FOR THE CONFERENCE AT <u>WWW.TIPRO.ORG!</u>

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