

January 2019

January 2019 events to remember

- Jan 1- New Year's Day
- Jan 4 - Be a Mentor Day
- Jan 11 - 12 - ADDC Budget & Planning
- Jan 21 - Martin Luther King Day
- Jan 24 - National Compiment Day
- Jan 27 - Holocaust Memorial Day
- Jan 29 - Freethinkers Day

COMING IN February 2019:

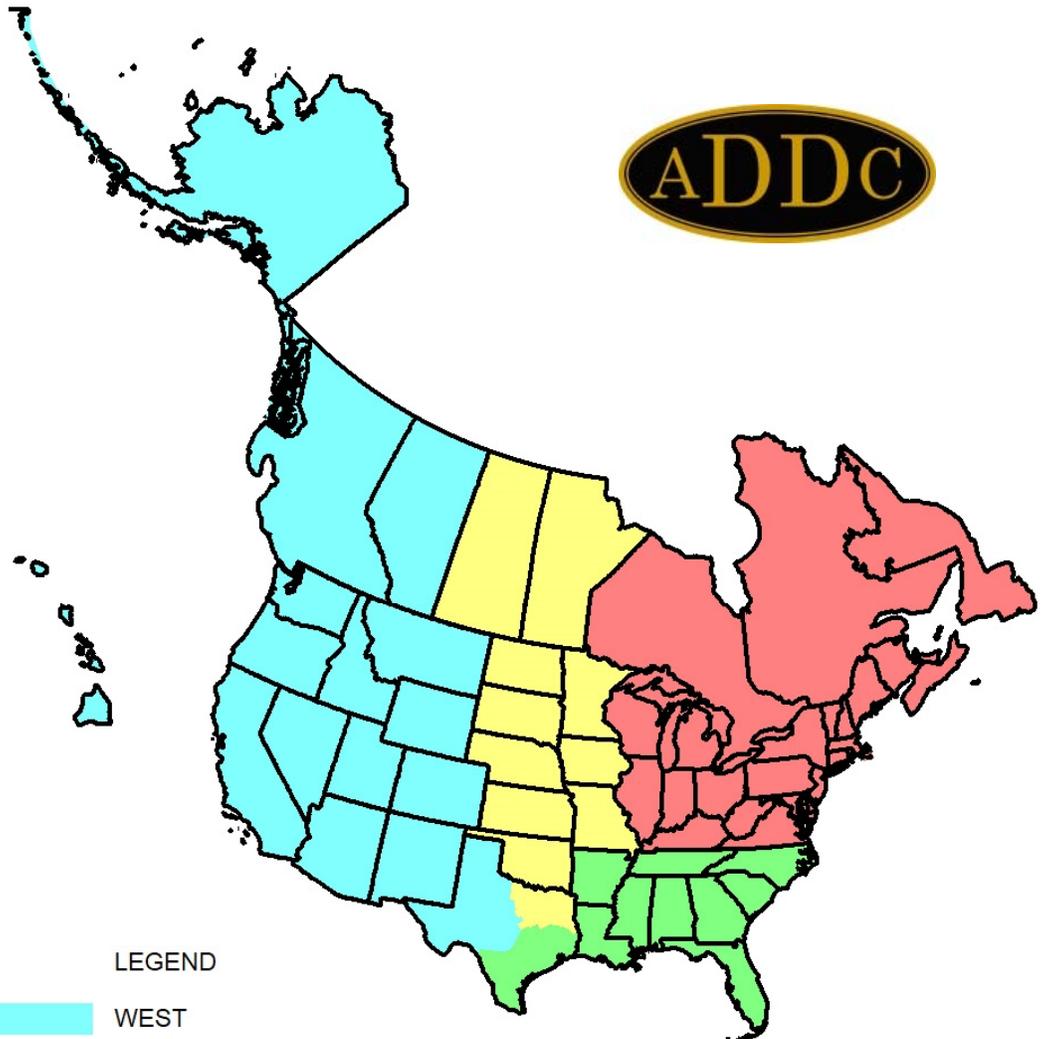
Youth Leadership Month

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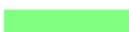
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# ADDC *Insight*

## The New Look of ADDC



LEGEND

	WEST
	CENTRAL
	SOUTHEAST
	NORTHEAST

**On the Cover:**

As of January 1, 2019 ADDC has a new look. After the 2017 Convention, a mail vote took place, and the realignment of the Seven Regions of passed. The ballot passed, and four new regions were approved with the realignment slated to go into effect January 2019. By postponing the effective date of the regions, clubs and regions were given ample time to hit the ground running. The four new regions are: Central, Northeast, Southeast and West regions.

There were several reasons why the 2017 Committee looked at realigning the Regions. One reason that weighed heavily on the decision, was the uneven number of clubs in different regions. Two of the regions were down to 3 clubs, while one region represented over 10 clubs. The realignment allowed for clubs to have an equal representation on the board.

Clubs now part of the Central Region: Butler County, Dallas, Enid, Fort Worth, Graham, Great Bend, Liberal, Lone Star Club of Dallas, Oklahoma City, Read Earth, Tulsa, Wichita, and Wichita Falls,

Representing in the Northeast Region: Bay Area, Buckeye, Heartland Southern Illinois, Ohio Valley, Oil Heritage, Penn-York Oil & Gas Affiliates, Three Rivers, Tri-State, Tuscarawas Valley, and West Virginia.

The Southeast Region is comprised of: Baton Rouge, Corpus Christi, El Dorado, Houston, Lafayette, Laurel, Morgan City, New Orleans, North Harris/Montgomery Counties, Red River, San Antonio, Victoria and West Bank.

Rounding out the Association, clubs in the West Region are: Abilene, Alberta Foothills, Amarillo, Artesia, Bakersfield, Edmonton, Farmington, Grande Prairie, Midland, Pampa, Roswell and San Angelo.

Another factor in the reorganization was to help the Board cut costs at Budget and Planning and at Convention. With the number of Regional Directors Dropping from 7 to 4, and the additional elimination of the Vice President position, Board costs should be reduced by over 30%.

# ASSOCIATION OF DESK AND DERRICK CLUBS

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**Terry Ligon**

2019 ADDC President  
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January 2019

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L Chem Tech Company Inc

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**Evelyn McCurley-Ingram**

WEST REGION DIRECTOR

**Philana Thompson**  
Merrion Oil & Gas

Happy New Year to all of you! I wish each one of you a happy, healthy and prosperous 2019. I am so excited to serve ADDC as the 2019 President. Your 2019 Board of Directors is ready and willing to serve you, the members, in the year ahead and each feels honored to represent you in the coming year.

The Board for this year is: Philana Thompson, West Region Director; Connie Bass, Central Region Director; Evelyn McCurley-Ingram, Southeast Region Director; Donna Siburt, Northeast Region Director; Evelyn Green, Treasurer; Wendy Sparks, Secretary and Executive Assistant; Keith Atkins, President-Elect; Christina Forth, Immediate Past President; Marilyn Carter, Parliamentarian; and myself, Terry Ligon, President.

One of the changes we are making this year concerns our ADO office and the position of webmaster. The office will no longer be located in West Virginia and Wayne Ammons will no longer be an employee. (I do want to thank Wayne for all he has done for this Association.) We are in the process of looking at several management companies to take over the duties of the ADO office and the position of webmaster. We will make a decision at the Budget and Planning meeting, or soon thereafter. Please bear with us; the website may be slow getting updated over the next month but we will get this done.

The 2019 Board is busy preparing for the Budget and Planning meeting which will be held in Tulsa, Oklahoma, January 11-12. We will approve the annual budget and review the goals and plans of each of the committees. Please contact your Regional Director, region representatives, committee chairmen or any Board member, including me, with any ideas, suggestions or concerns.

I am honored to be "serving" as your President this year and I thank you for your support and your hard work for this Association. The key word here is "serving"; I do believe "If serving is below you, leadership is beyond you." I am here to serve you and hope in doing so I will be an effective leader for you.

I do look forward to hearing from each of you and I am ALWAYS available by email, text or phone.

Let's have a great year in 2019!

*Terry Ligon*

# Not much optimism for increase in oil prices

By Alex Mills

Accurately predicting the price of oil and natural gas can be as difficult as predicting the weather in West Texas. In some cases, the weather can have a large impact on the price of both.

Even though getting the forecast correct can be precarious, there are plenty of people out there trying their best to get it right.



The people that work at the Energy Information Administration at the U.S. Department of Energy are mandated by law to monitor energy production, consumption, and even predict the price of crude oil, natural gas, and other energy sources.

EIA released its Short-Term Energy Outlook on Tuesday and forecast a \$53 per barrel average for West Texas Intermediate (WTI) traded on the New York Mercantile Exchange (NYMEX) during the first quarter of 2019 and increasing a few dollars to \$59 by year end.

Morgan Stanley is not as optimistic. It released its projections on Jan. 8 of an average of \$49 during the first quarter and reaching \$58 during the fourth quarter 2019.

EIA's forecast also included gasoline retail price averaging \$2.47 per gallon this year, which is a 9.5 percent decline from the 2018 average of \$2.73.

Natural gas traded on the futures market will average \$2.89 per million British thermal units (mmBtu) in 2019, which is an 8 percent decline from \$3.15 average in 2018.

Meanwhile, the optimism among CEOs of oil and gas companies has declined significantly since October, according to a survey released by the Federal Reserve Bank of Dallas this month. "The business activity index...remained positive, but barely so, plunging from 43.3 in the third quarter to 2.3 in the fourth," the survey noted. "Readings near zero indicate activity was largely unchanged from the prior quarter, a break from the 10-quarter-long trend in rising activity."

Morgan Stanley points out that its price forecast for oil is a decrease of \$7 per barrel from its previous forecast of \$56 for the first quarter. Morgan Stanley attributes the softening in price to a surplus of oil and declining demand created primarily by a slowing Chinese economy and declining oil imports.

Apparently there is an unusually large amount of "oil on the water," meaning there is an excess of oil in transit from exporters and floating storage, according to Morgan Stanley, which says it has increase by 100 million barrels in the last three months and it currently "stands at an unusually high level of nearly 1.1 billion barrels."

"This is mostly due to a sharp ramp-up in production (and exports) of OPEC+ countries in November, ahead of their December meeting. Tanker-tracking data show that the 'Spare Capacity 5' – Saudi Arabia, Kuwait, UAE, Iraq and Russia – increased seaborne exports by a large 1.5 million barrels per day in November. This has slowed in December, but only modestly," Morgan Stanley said.

*Alex Mills is the former President of the Texas Alliance of Energy Producers.  
The opinions expressed are solely of the author.*



# **Hilcorp Increased Well Density Application a Win-Win-Win for the Basin**

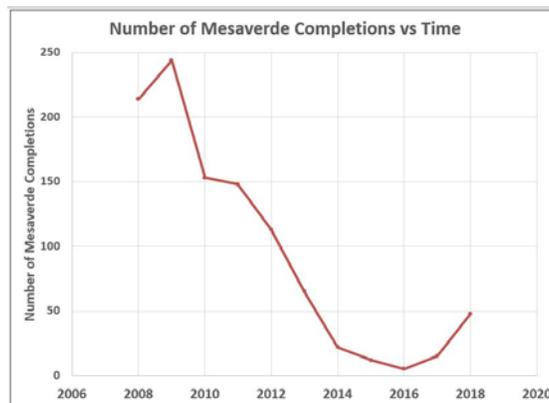
Hilcorp has applied to the New Mexico Oil Conservation Division (NMOCD) to allow twice as many wells to be completed in the Mesaverde Formation than is currently allowed. If one Googles the application, the very first link is to New Mexico Climate Action's website where the environmental organization sounds the alarm. <https://newmexicoclimateaction.org/action-needed-hilcorp-at-it-again-petitioning-for-doubling-of-wells-8-31-18/> Heavily quoted on their website is local cattle rancher, Don Schreiber, who claims this will add to the methane hotspot and turn the Four Corners into one large industrial site. He blames the closing of churches and schools in his community on the growth in the oil and gas industry. He goes on to get personal, calling Hilcorp a reckless "rip and run" corporation that fosters a "rules-be-damned" corporate culture. On another website, Mr. Schreiber implies that State Energy Secretary Ken McQueen and NMOCD director Heather Riley, both previously of WPX, are rushing through this application prior to Governor Martinez leaving office as a parting gift to the Industry. <https://www.oilandgas360.com/rule-change-would-double-well-density-in-san-juan-basin-for-hilcorp/>

Yikes, this sounds like it will absolutely ruin the Four Corners! Let me explain why Hilcorp is making the application and discuss the impacts if approved. I will then address Mr. Schreiber's objections and allegations.

## **The Effect of Increased Well Density**

Approximately 10,000 wells have been completed in the Mesaverde Formation over the last 70 years, producing 15 Trillion Cubic Feet (TCF) of gas, or approximately 1.5 BCF per well. As much gas as that is, because the reservoir has such low permeability, there is still unrecovered gas in between the wells. Unless additional wells are completed in the formation, a significant amount of gas will be left in the reservoir.

Even without the increased density, there are still some existing Mesaverde locations to develop. The problem is, because the reservoir is already significantly depleted, the average Mesaverde well drilled over the last 10 years will only recover an estimated 0.5 BCF of gas vs the 1.5 BCF historic average. The present value of 0.5 BCF produced over the 30 year life of a well is less than \$500,000, which won't pay the estimated \$1MM drilling costs for a new well. As a result, the number of Mesaverde wells completed in the last decade have dropped from over 200 per year to a low of 5 completions in 2016 (see graph below). There has been a recent uptick in activity since Hilcorp bought ConocoPhillips, as they have made 62 separate applications to add the Mesaverde in existing wellbores.



## **So How Much Gas is at Stake?**

The bottom line is that additional Mesaverde completions are economic only if added to existing wellbores already drilled to deeper formations. There are approximately 8,100 existing deep Dakota wells drilled in the Basin. Approximately 2,950 of those have already been completed in the uphole Mesaverde, leaving 5,150 Dakota wells as targets. At 0.5 BCF of gas per completion, that represents over 2.5 TCF of gas with a present value of over \$2.5 billion. That will go a long way toward sustaining some level of rig activity in the Basin, albeit workover rigs versus drilling rigs.

*(continued page 7)*

# DESK & DERRICK CLUB OF THE WESTBANK

***We Can do it .....*** those are the words with which President Angie Duplessis encouraged the 27 members of the Westbank Club in 2018.

In 2018, our club celebrated its 42nd anniversary. We are proud to say that we still have four of our founding/charter members: JoAnn Brown, Judy Guillot, Kori Allemand, and Sylvia Hohmann.

We began 2018 with a social outing to the Westwego Theatre to see the Marvelous Wonderettes. Throughout the year we were involved in many activities: volunteering at the 2018 Deepwater Technical Symposium & Exhibition in New Orleans; providing Energy Activity Books to 70 3rd Graders at Leo G. Kerner Elementary, along with an abbreviated version of Magic Suitcase – The Magic Pumpkin; collecting food and money for the Gretna Food Bank, school supplies for Kindergarteners at Bonella St. Ville Elementary, coupons for military families, holiday greeting cards for soldiers, and toys and games for Toys for Tots during Christmas time.



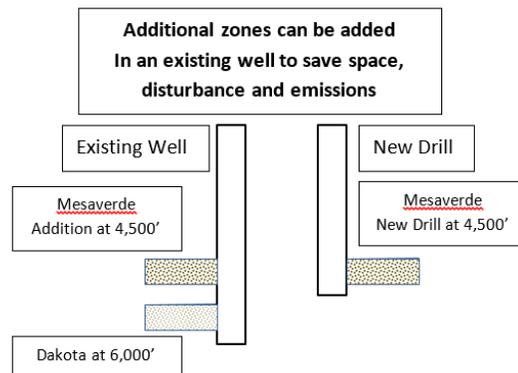
In August, the Scholarship Committee conducted our annual Bunco Party, which funds our Scholarship Fund. A crawfish boil (including a crawfish race in honor of the Kentucky Derby), Industry Appreciation Night, White Elephant Christmas in July luncheon, a field trip to a shipyard, a Family-Feud-based Orientation Program and Costume Contest, and our annual Christmas Brunch kept us busy, too.

The club was pleased to give seven \$1,000 scholarships to deserving students this year. To date, we have given out over \$130,000 in scholarships.

By year end, we had gained two members, transferring from the Laurel Club, which sadly is disbanding at the end of this year. Southeast Region 2019 Director Evelyn McCurley-Ingram and Sharon Blackwell are now members of the Westbank Club, bringing our membership total to 29.



President Angie Duplessis was installed on December 11<sup>th</sup> as our 2019 club president. So, we all know that the club will continue to be guided by very capable leadership. We are also preparing for the 2020 Southeast Region Meeting, which we will host. Oh, and Angie is working diligently with the Board and the proposed hotel site for the 2021 ADDC Convention and Educational Conference. We have a lot of great plans for these events and as Angie says, “We Can Do It!”



## **What about Mr. Schreiber's Allegations?**

Let's run through them one at a time.

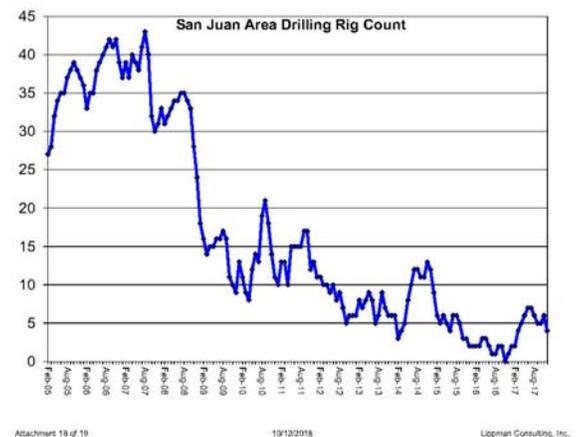
It will exacerbate the Methane hotspot, he says. Not true. Because existing wells will be recompleted, there will be no new surface disturbance, no new surface equipment, and thus, no new emission sources. Further, the majority of the methane in the area is coming from the Fruitland Coal outcrop. <https://www.daily-times.com/story/money/industries/oil-gas/2016/05/12/geologist-coal-outcrops-cause-methane-hot-spot/84291088/> If the wells were the cause, there would be methane hotspots over the Hugoton Basin in Kansas and the Permian in Texas, each of which has 10 times as many wells as the San Juan Basin. As a side note, cows emit approximately 100 kg of methane per year, the equivalent of 2.5 tons of CO<sub>2</sub>. Perhaps ranchers should look in the mirror at their own impact before pointing fingers? <https://timeforchange.org/are-cows-cause-of-global-warming-meat-methane-CO2>

Mr. Schreiber blames the closing of churches and schools in his community on too many oil and gas wells? The exact opposite is true. Over the last decade, the drilling rig count in the San Juan Basin has dropped from a peak of 43 rigs to the current level of 4. With each rig sustaining an estimated 250 jobs, that is a loss of almost 10,000 jobs in the area. Churches, schools, and ancillary businesses have all suffered as these families have left the area. If anything, to the extent that environmental activists have contributed to the reduction in oil and gas activity, THEY share in the blame for the economic demise of their own communities.

Mr. Schreiber calls Hilcorp a "rip and run" company with a "rules-be-damned" corporate culture. Don't kid yourself, NO company gets to ignore the rules, especially in New Mexico, where Federal and State lands dominate the landscape. Hilcorp is a well respected Industry player, and Farmington

is lucky to have them trying to stimulate activity in our economically challenged basin.

Mr. Schreiber implies that Ken McQueen and Heather Riley are trying to rush this through during their lame duck term as a gift to Industry. Where does THAT come from? Neither Mr. McQueen nor Ms. Riley had anything to do with Hilcorp bringing forward this application, and they are giving it the full due process it deserves. In fact if anything, the timing has been delayed to allow for proper notice to affected parties.



In closing, I'm tired of the environmental activists saying whatever they want in an attempt to shut down the production of oil and gas. Increasing the allowed density for Mesaverde wells will generate additional economic activity at a time when our area desperately needs it. It will result in more gas being recovered, more royalties and taxes being paid to the State, and more jobs being retained in the region. That will result in more churches and schools staying open and more restaurants staying in business. So don't let Mr. Schreiber scare you... it is a win-win-win for the community.

George Sharpe  
Investment Manager – Merrion Oil & Gas

# Fossil Fuels Power the Winter Season



The holiday season is filled with a great deal of warmth and light—not only from the joy and generosity that the season brings, but also from the start of darker, colder days, which require significantly more heat and electricity to keep homes warm and illuminated.

Although winter is barely underway, many Americans have already been feeling the freeze brought on by recent winter storms. Since Thanksgiving, the Northeast, Midwest, Mid Atlantic, South, Rocky Mountains, and Great Plains have all experienced significant winter storms bringing cold temperatures and energy disruptions.

Not only does December bring winter [storms](#), it also brings the holiday season, resulting in Americans using more energy. Heating our homes, decorating with holiday lights, cooking large meals—all of these can cause spikes in residential energy usage.

This increased demand requires a steady and reliable energy supply, and [fossil fuels](#) play an important role in meeting that demand. In fact, nearly half of all U.S. households use natural gas to heat their homes, and another 5 percent of households use home heating oil, while 5 percent of homes use propane.

Electricity accounts for another 40 percent of home heating, and fossil fuels are the primary fuel source for generating electricity. For instance, in 2017, fossil fuels were among the most-used sources for electricity generation in [35 states](#). In 18 of those states, coal provided the greatest share of fuel for generating electricity.

This need for more heating and electricity can put a strain on the electric grid—especially during extreme weather events. But, fossil fuels provide a stable source of power generation to keep the grid up and running. And should severe storms disrupt the delivery of home heating fuels, the Energy Department has programs in place to help.

For example, the Office of Fossil Energy's [Office of Petroleum Reserves](#) is home to the [Northeast Home Heating Oil Reserve](#) (NEHHOR). The NEHHOR is a 1 million barrel supply of diesel that serves as an extra supply of heating oil for homes and businesses in northeastern United States in the event of a supply disruption. Since most homes that use heating oil are located in the northeastern United States, the NEHHOR provides those residents with a reserve supply of heating oil that can be released under certain conditions.

To learn more about how fossil fuels help power American homes and businesses during the holidays and throughout the winter season, visit the Office of Fossil Energy [website](#).



# Two shale plays moving out of Permian's shadow

Jordan Blum Jan. 11, 2019

Permian, schmermian.

While the reborn Permian Basin in West Texas has so overshadowed every other oil and gas field in the country that analysts invented a new word — Permania — to explain the phenomenon, two other shale plays, each straddling the Texas border, are experiencing their own rebirth, according to reports released Friday.

Oklahoma's Anadarko Basin, which extends into the Texas Panhandle, may emerge as the most prolific onshore oil and gas play outside of the Permian, according to a study by the global research and accounting firm, IHS Markit. On the other side of the state, the Haynesville shale has roared back to life due to higher natural gas prices and liquefied natural gas export terminals coming online along the Gulf Coast, the Norwegian research firm Rystad reported.

## Billions of barrels

IHS Markit estimates that the Greater Anadarko Basin still holds an estimated 16 billion barrels of oil and more than 200 trillion cubic feet of natural gas. The region previously boomed in the 1970s and into the 1980s, but modern horizontal drilling techniques coupled with hydraulic fracturing, called fracking, are pushing Oklahoma to new oil production records.

The majority of the activity in the basin is focused on the shale rock plays known as the SCOOP - South Central Oklahoma Oil Province - and STACK - Sooner Trend Anadarko Canadian and Kingfisher (counties) - plays.

Oklahoma is now a distant second to Texas in the number of rigs actively drilling with 140, above third-place New Mexico's 105 rigs. Texas has more than 500 rigs in operation, according to the Houston oilfield services company Baker Hughes.



Improvements in drilling and fracking techniques are contributing to the revival of the Haynesville shale. Natural gas production is expected to hit a new record there later this year. Photo: Elizabeth Conley, Staff photographer

The potential of the Anadarko is beginning to spur a new Oklahoma land rush, according to IHS Markit. Only about 20 percent of the basin's STACK sweet-spot locations have been drilled or developed. IHS Markit estimated that an additional 4,000 to 5,000 horizontal wells could easily be drilled.

"We are now witnessing a new kind of Oklahoma land rush," said John Roberts, IHS Markit executive director for global subsurface operations. "But unlike what happened in 1889 when lands were opened to settlement, this time the competition is for access to the energy resources that lie below the surface."

## Sustainable revival

On the other side of the state, natural gas production in the Haynesville shale, which straddles East Texas and northwestern Louisiana, is at the highest level since its recent peak in 2011. Gas output should hit a new record later this year, according Rystad.

The continental U.S. began exporting LNG in early 2016 when Cheniere Energy's Sabine Pass terminal in Louisiana came online. Cheniere, of Houston, has continued to expand the terminal, increasing the demand for Haynesville gas throughout 2016 and 2017.

More than 50 drilling rigs are running in the Hayneville, according to Baker Hughes

## **DESK AND DERRICK CLUB OF BATON ROUGE**

Greetings from the Red Stick! I am Lois Folse, president of the Desk and Derrick Club of Baton Rouge, the capital of our great state of Louisiana. Our Club was chartered in 1951.

We have 29 members. I might mention that four of them live out of state in Arkansas, Tennessee and two in Texas. We are so glad that these members continue to support Desk and Derrick years after they moved away.

Club members are very generous when it comes to helping others. By just “passing the hat” at our meetings, we take up a collection for the Greater Baton Rouge Food Bank and for our Holiday Service project. Last year’s Christmas collection provided backpacks stuffed with necessities as well as some fun items for children at St. Vincent DePaul, a shelter for women and children. The cosmetic and toiletry items we collected were enough for 25 cosmetic bags and five purses filled with these items for the women at St. Vincent DePaul. But we even surprised ourselves when last November we had collected \$1,000 to give to the Food Bank. This year we are well on our way to matching our donations to the Food Bank. Our Holiday Service project will be contributions to Braveheart, an organization that provides support for young children removed from their homes due to abuse or neglect with necessities and a cuddly stuffed animal.

The Baton Rouge Club celebrates Industry Appreciation with a full-out Mardi Gras Ball. This January our theme was “A Salute to our Men and Women in Uniform” and we were delighted to see some men in our court as well as guests in uniform. Even one of our maids was a veteran. Earl Heard, CEO and founder of BIC Alliance, was our gracious king and we had over 200 in attendance. February 23, 2019 we will be presenting our 58<sup>th</sup> Annual Ball entitled “Along the Mighty Mississippi.” Those participating in the pageant are past speakers, supporters, local TV and radio personalities, members of industry, family members as well as state officials. We extend an invitation to all Desk and Derrick members to join in the fun with us.

I would be remiss if I didn’t mention our Facebook page managed by member Cherri Kinsey. She is a wiz. At our March meeting she had us all pull out our cellphones, so she could demonstrate how to invite our friends to like our club’s page. After each meeting or event, she updates our page with photos and explains what took place. Launched in February 2015, we currently have 328 followers and 326 likes! We have reached 1,045 folks and we’d love to have you like us, too. Just search for Desk and Derrick Club of Baton Rouge.



**2018 NAPE QUICK FACTS** NACE

**23,000,000 PROSPECT ACRES**  
REPRESENTING 24 STATES

**933 EXHIBITORS**

**71% EXPLORATION**  
16% SERVICE PROVIDERS  
7% CAPITAL PROVIDERS  
6% ENDORSER

**15,165 ATTENDEES**

**80% INTERNATIONAL**

**26% LEARN MORE**  
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11 – 15 FEB 2019  
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# INTERNATIONAL CONFERENCE ON GAS, OIL AND PETROLEUM ENGINEERING

SAN FRANCISCO, CA, USA    □    FEBRUARY 18-20, 2019



**18<sup>TH</sup> Annual Petcoke Conference  
March 8-9, 2019**

# Industry leaders predict increased activity this year

By Alex Mills

The oil and gas industry expects to increase drilling, production and capital expenditures during 2019, according to a variety of surveys of leaders of oil and gas companies released recently.

The American Oil & Gas Reporter, a national trade magazine, released its January issue this week revealing that respondents said they plan to drill 22.1 percent more wells this year than in 2018.

Deloitte, a professional accounting and business firm, said its survey finds that 61 percent of the executives said they anticipated an increase in rig deployment and 56 percent project increased exploration spending this year.

DNV, a technical adviser to the energy industry, surveyed 791 senior professionals and 70 percent of respondents said they planned to maintain or increase capital spending in 2019, compared to 39 percent in 2017, according to a report from Reuters.

“Those expecting to sustain or increase operating expenditure also grew to 65 percent in 2019 from 41 percent in 2017,” the report said. “In addition, 67 percent believed more large, capital-intensive oil and gas projects would be approved this year.”

“Despite greater oil price volatility in recent months, our research shows that the sector appears confident in its ability to better cope with market instability and long-term lower oil and gas prices,” said Liv Hovem, who heads DNV’s oil and gas division. “For the most part, industry leaders now appear to be positive that growth can be achieved after several difficult years,”

The survey indicated that the industry’s focus on cost control was easing, with 21 percent of respondents saying cost efficiency would be a top priority in 2019, down from 31 percent in 2018 and 41 percent in 2016.

Even though industry leaders expect continued growth in 2019, the optimism has declined significantly since October when oil prices peaked at \$75 per barrel and dropped some 40 percent in 90 days, according to a survey released by the Federal Reserve Bank of Dallas this month. “The business activity index...remained positive, but barely so, plunging from 43.3 in the third quarter to 2.3 in the fourth,” the survey noted. “Readings near zero indicate activity was largely unchanged from the prior quarter, a break from the 10-quarter-long trend in rising activity.”

Obviously, crude oil and natural gas prices dictate the level of activity in the exploration-and-production sector. The American Oil & Gas Reporter reported that the magic numbers are \$65 per barrel for oil and \$3 per thousand cubic feet for gas. Crude oil closed at \$52.43 and natural gas closed at \$3.029 on the New York Mercantile Exchange Wednesday.

*Alex Mills is the former President of the Texas Alliance of Energy Producers. The opinions expressed are solely of the author.*



# US Crude Oil Exports Continue to Grow

by Jude Clemente  
Rigzone Contributor  
Thursday, January 17, 2019



The US DOI now reports that domestic crude production could surge to 14 MMbpd by 2020.

U.S. crude oil exports have soared due to a combination of:

- rising domestic crude oil production
- high but flat domestic demand

a law change in December 2015 that allowed sales beyond just neighbor Canada

Since the shale revolution started in 2008, U.S. crude production has increased almost 125 percent to around 11.2 million barrels per day (MMbpd). Yet, this light, tight oil boom has not been a great match for the massive 18.6 MMbpd U.S. refining system. U.S. refineries are generally configured to process the heavier crudes imported from longtime suppliers Canada, Mexico and Venezuela.

So today, 65 percent of U.S. crude oil production has a very high 40 degree API gravity or above. This has left huge amounts of surplus shale oil available for export. This mismatch between what the U.S. is producing and what it is typically built to process also explains why the country still imports a significant amount of oil, taking in an average of 8 MMbpd in late 2018.

Since January 2018, higher prices have helped increase U.S. crude production nearly 20 percent. U.S. crude exports therefore more than doubled year-over-year to average 1.9 MMbpd in 2018. The rise in production, augmented by takeaway constraints in West Texas that have depressed local prices, has offered a key advantage for U.S. exporters by keeping WTI prices in check. In contrast, mounting global demand and geopolitical concerns (e.g., U.S. sanctions returning to Iran) have pressured Brent, the international benchmark, to the upside.

Rising from nothing prior to 2016 to 510,000 bpd in June 2018, China has accounted for 20 percent of U.S. crude exports in recent years. But a U.S.-China trade war that officially kicked off that very month has China implementing a 25 percent tariff on U.S. crude. By August, purchases from the U.S. had dropped to zero.

For China, similar quality West African oil is a practical replacement for American crude. But for the United States, an alternative market for China is a much harder find. India could help but its oil market is just a third the size of China's, and India has bought just 10 percent of the U.S. crude that China has.

Looking forward, if China continues to reduce purchases from the United States, it would increasingly put downward pressure on WTI and help extend the discount to Brent. In any event, EIA models a \$3 to \$5 premium for Brent for years to come, a large enough gap where U.S. exporters can still make money. With flat demand freeing up even more for export, the U.S. DOI now reports that domestic crude production could surge to 14 MMbpd by 2020.

The U.S. Gulf Coast ports, however, need to be expanded and deepened to fully load the Very Large Crude Carriers (VLCC), some of which can hold over 3 MMbpd. Currently, there is just one port in the region that can carry a VLCC holding 2 MMbpd. Overall, U.S. crude exports could reach 5 MMbpd over the next five years.

U.S. policy wise, American consumers should realize that the capacity to export is a good thing. Exports encourage more production in times of flat demand to keep our own prices low. Without the export option, many in the U.S. oil industry could be forced out, and imports would play a larger role. And if more electric cars could eventually lower U.S. oil demand in a significant way, even more crude would be allowed to leave the country.

Globally, U.S. oil exports have continued to change the dynamics of the international oil market, helping to weaken OPEC's grip on prices. More U.S. shale will help buyers further diversify supply sources to enhance their own oil security. Indeed, a U.S.-China trade deal is expected soon.



# Alberta Seeks Refineries, Could Cut Oil Output, Notley Says

Published in [Oil Industry News](#) on Friday, 23 November 2018



Alberta will pursue building new refineries as the oil-rich Canadian province looks to weather a crude price crunch, while a forced production cut also remains an option, Premier Rachel Notley said.

Notley said she'll announce a plan to expand "made in Alberta" crude upgrading and refining in the coming days and has appointed three envoys to work with the industry and federal government to seek solutions for the dramatic discount earned for domestic oil. Asked if the province is considering mandating a production curtailment to help boost prices, she said no option has been discarded.

"At this point, all I will say is that there are a number of options in the suite of options and there is no option that has been taken off the table at this point," Notley said at a news conference in Edmonton. Alberta is being treated as a "branch plant for the U.S.," she said.

Canadian crude is trading near record lows amid pipeline bottlenecks, rising inventories and a decline in global oil prices. The Western Canada Select benchmark fell to under \$14/bbl last week, the lowest in Bloomberg data stretching back a decade. The depressed prices have prompted some oil companies including Canadian Natural Resources to cut production and some to suggest that Alberta's government should require companies to cut output.

The discount that Canadian producers receive for their heavy crude relative to the West Texas Intermediate benchmark, of about \$40/bbl, is costing the Canadian economy C\$80 million (\$60 million) a day, she said.

The envoys she appointed are Robert Skinner, a policy professor at the University of Calgary; Coleen Volk, the province's deputy minister of energy; and Brian Topp, Notley's former chief of staff.

Cenovus welcomed the premier's announcement but said industry-wide cuts are needed, according to an emailed statement.

"While more pipelines and rail capacity are the long-term solution, we continue to believe that the only effective way to address wide differentials in the short term is through temporary industry-wide production cuts, which can only be mandated by government," the company said.

Cuts totaling 200,000 to 300,000 bpd is a "viable idea" and would help all the companies, including the integrated oil producers who export more than they process in their own refineries, Tim Pickering, founder of Auspice Capital Advisors, said in a phone interview.

"It's the only immediate, short-term solution," he said.

Source: [www.worldoil.com](http://www.worldoil.com)

# America Needs More Oil And Natural Gas

## Pipelines



January 27, 2019, 07:05pm

**Jude Clemente** Contributor  
*Energy I cover oil, gas, power, LNG markets, linking to human development.*

Pipeline to carry crude oil is shown Friday, June 29, 2018 at the Superior terminal of Enbridge Energy in Superior, Wis. Fresh off approval by Minnesota regulators, officials with Enbridge Energy said Friday they're on track to finish construction and put the company's disputed Line 3 replacement crude oil pipeline into service in the second half of next year, assuming all goes well for them. (AP Photo/Jim Mone)ASSOCIATED PRESS



With Friday's headline, "[Trump Eyes Action to Limit States' Powers to Block Pipelines](#)," an oil and gas blog is due.

Despite a 140% boom in U.S. crude oil production and a 50% jump in natural gas output since shale took flight in 2008, the midstream infrastructure to pipe this new supply around the country has simply not kept up. This is a major problem for us because pipelines are easily the [safest](#) and most economical way to transport energy.

In addition, hardly “going away,” oil and gas will still supply the bulk of U.S. energy through at least 2050, according to just released modeling from the U.S. Department of Energy in the [Annual Energy Outlook 2019](#).

The Permian basin in West Texas, giving a third of all U.S. crude production, confronts a pipeline bottleneck from a surge of activity. Yet, most of this will be rectified as the build-out in our largest oilfield continues to catch up. After all, although stronger than you might think, the pipeline pushback in oily Texas from “environmental groups” is not as potent as in other states.

In contrast, New York and the six New England states are really ground zero for our pipeline problem where “environmentalists” – despite significantly relying on oil and gas themselves in their daily lives – remain steadfast against new builds.



Energy, one of the biggest utilities in the U.S., announced a carbon-free commitment by 2050 (80% by 2030). [renewable sources by 2045.](#)

### **100% Clean Energy Commitments From Corporations, States**

Corporate renewable energy procurement in the U.S. reached record levels by last October. From big investment banks to auto manufacturers, IT firms to retailers, a broad range of corporations have committed to 100% renewable energy initiatives. Apple, Google and Microsoft are powered by 100% renewable electricity, helping to accelerate the trend.

[Many more corporations around the globe are on track to follow suit](#), making renewable energy commitments that have the power to reshape how entire industries operate. For example, this past April, Apple announced that its entire worldwide operation ran on 100% renewable energy, including retail stores, data centers and its huge campus in Cupertino, which has one of the world's largest rooftop solar arrays. The IKEA Group has committed to produce as much renewable energy as the total energy it consumes in its buildings by 2020. Maersk, the world's largest container shipping company, issued its commitment to be carbon neutral by 2050 after many years of meeting with non-governmental organizations (NGOs) and environmental groups to discuss alternatives like hydrogen fuel cells and emerging technologies.

States are establishing significant goals, too. California, the world's 5th largest economy, approved a measure requiring all energy used statewide [to be produced from](#)

### **What's Next In 2019?**

The coming energy transition cannot be denied with decades of anticipated exponential growth for new energy resources and technologies. 2019 is expected to have record growth for solar and wind due to the last year of the full federal tax incentives for both technologies.

Advancing technologies are also expected to accelerate the growth and efficiencies of these projects through software platforms, digital applications, and analytic programs.

Renewable Portfolio Standards are expected to increase and voluntary commitments to renewable projects from the utility market are expected to grow as utilities develop greater experience with renewable projects.

Renewable +Storage announcements are expected to be exponentially higher than previous years due to the rapidly decreasing cost of battery storage and ability to allow renewables to be a dispatchable resource.

### **Emily Easley**

For over 15 years, Emily Easley has worked with companies across a broad range of activities in the energy business. Beginning with renewable energy, Emily led strategic partnerships and business development at both the Solar Energy Industries Association (SEIA) and the Smart Electric Power Association (SEPA). Following her tenure with both organizations, Emily transitioned to providing strategic counsel and investor services to oil and gas companies.



# The top Oil & Gas industry trends to watch in 2019

Posted by [Matt Donnelly](#)  
15-Jan-2019

The last year has seen significant transformations for the global oil and gas industry, and we're expecting 2019 to herald even more transformative changes. The oil and gas industry has weathered the crash in oil prices since 2014/15 thanks to a variety of factors including improved break-even points, the utilisation of technology to reduce production costs, and the continued growth in global demand for energy.

2019 looks set to be an even more positive year than last, but what are the key oil and gas industry trends to watch? Read on to find out...



*(A Marcellus shale drilling rig site. Image via Wikimedia user Nicholas A. Tonelli).*

## U.S. shale versus OPEC

For decades OPEC has been the determining factor in oil prices. As the swing producer, and largest source of conventional petroleum reserves, the nations of OPEC could adjust production to balance the market in case of abrupt supply or demand changes.

The arrival of the U.S. shale industry has added an interesting new dynamic to this situation.

Whilst OPEC is still able to withdraw millions of barrels from the market within only a few months, U.S. shale offers a medium-term oil supply balancing mechanism which is able to respond quickly to changes in supply and demand and thus offer a counterbalance to OPEC.

As one industry commentator puts it, "It is clear that U.S. shale oil production is the most responsive free market oil to changes in oil prices".

Production from the U.S. shale industry [continues to grow too](#). According to the U.S. Energy Information Administration (EIA) in December 2014 U.S. shale oil production stood at 5.23m barrels per day. By December 2018 this production figure had risen to over 8m barrels per day (to put this into context, estimated global daily demand for oil was 99.3 million barrels in 2018).

Last year also saw the majors rushing to either [get back into](#), or grow their presence in, shale. BP, ExxonMobil and Chevron are amongst those that are rushing into the shale industry. For example, Chevron has [announced plans](#) to invest \$3.6 billion in the Permian and \$1.6 billion in other shale and tight oil plays throughout 2019.

As a caveat however, it's important to note that U.S. shale oil production is expected to plateau in the 9-10m barrels per day range in the early 2020s. Other industry analysts have also pointed out the extremely high depletion rates associated with shale production, especially in comparison to conventional sources. If depletion rates continue to be as high throughout 2019, then this will have a negative impact upon the contribution of U.S. shale to the overall net growth of U.S. supply.

Energy consultant Art Berman has also pointed out the difficulty that many U.S. shale producers are experiencing in making their operations profitable. As he recently stated, "U.S. tight oil lost money in the 3rd quarter of 2018. Capital expenses have exceeded cash from operations in almost every quarter for the last decade". Indeed, as a report from PWC highlights, "U.S. tight oil operators are under mounting pressure from investors to shift from an all-out production growth model to more profitable operations".

Whilst it seems highly unlikely that the U.S. shale industry will be able to break OPEC's dominance over global oil prices, it has reinvigorated the US energy industry and has become an important consideration when it comes to the geopolitics of oil prices. It's certainly an industry to watch during 2019.

## The growth of natural gas production

Cast your eyes over BP's recent Global Energy Outlook 2018 and you'll see an interesting point emerge; that global demand for natural gas is expected to grow strongly and overtake coal as the second largest source of energy.

Increasing levels of industrialisation and power demand in Asia and Africa, continued coal-to-gas switching (especially in China) and the increasing availability of low-cost supplies from North America, Australia and the Middle East, mean natural gas is set to have a positive 2019.

A major source of growth for the natural gas market in 2019 is expected to come from exports. In 2017, the U.S. became a net exporter of natural gas and over the next decade will surpass every other nation to become the world's largest natural gas producer.

The growth in natural gas production is also having a material impact upon the petrochemical and chemicals

sector, both in the United States and elsewhere. The significant ethane surpluses being generated from the Marcellus and Permian Basins (amongst others) is producing large volumes of low-cost feedstock for refineries and plants across the U.S. Gulf Coast region. 2018 saw [new developments being sanctioned](#) and foreign companies eyeing facilities in the U.S. thanks to the abundance of low-cost natural gas. Expect this trend to continue through 2019.

Growing natural gas production will also lead to growth in LNG projects, which brings us onto our next trend to watch in 2019...



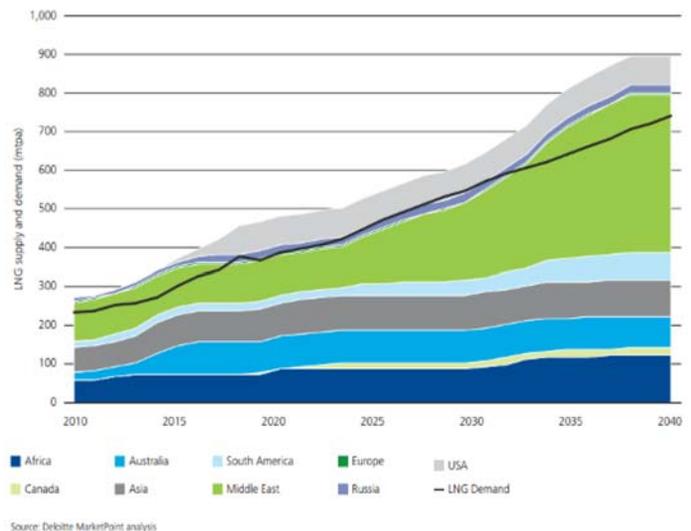
(A liquefied natural gas tanker arrives in Boston, MA. Image via Flickr user Lightgraphs).

### Liquefied Natural Gas (LNG) as an export commodity

As we've recently [reported here](#) at EngineeringPro, there are several very large LNG projects expected to receive FID in 2019. The U.S. and Canada have several large-scale projects that are either in the process of being commissioned or in the early stages of operation such as the \$40 billion Canada LNG project, the \$10 billion Jordan Cove LNG project in Oregon, and the \$30 billion Driftwood LNG project in Louisiana. Thanks to these projects and others, U.S. LNG export capacity is set to [double by the end of 2019](#).

Elsewhere in the world, Africa has two LNG projects worth watching in 2019 including the \$20 billion Mozambique LNG project, and the Fortuna LNG project situated offshore Equatorial Guinea. Russia is also securing its future as a gas-exporting giant with the development of the massive \$25.5 billion Arctic LNG 2 project which is situated close to the currently operational Yamal LNG project.

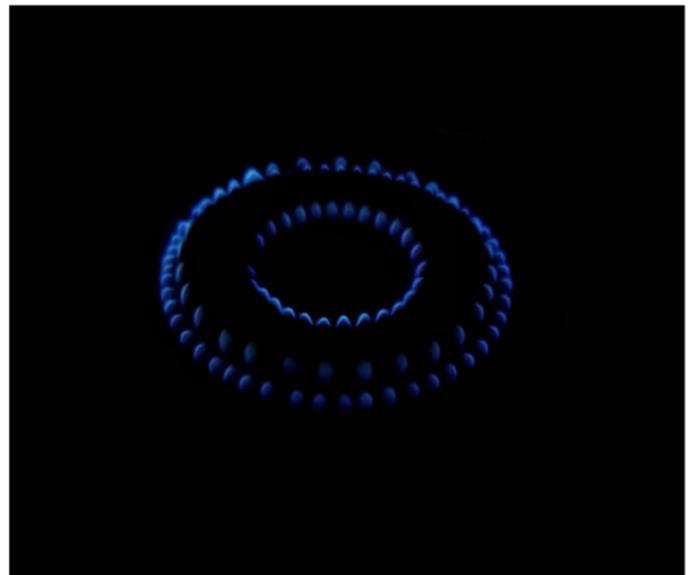
Whilst most of the LNG projects outlined above encompass land-based terminals, 2019 is also expected to see the emergence of other types of LNG projects such as floating storage and regasification (FSRU) facilities and Floating Liquefied Natural Gas (FLNG) operations.



(Both LNG supply and demand are expected to grow steadily. Image via Deloitte).

This growth in LNG supply is matched by growing demand especially amongst the emerging markets of Asia. Consider the following- total Asia-Pacific LNG demand is set to grow a further 60% to reach 337 mtpa by 2030. Compare this to the fact that the rest of the global market is only 75 mtpa currently. Demand is also increasing from so-called second tier markets; those with intermittent or limited year-round demand. It's markets such as these that will most likely utilise FRSU facilities to the fullest extent. An analysis of the LNG market by Deloitte also points out that LNG growth in 2019 will also come from an increase in short-haul trading within regions such as the Middle East, South-east Asia, and the Caribbean.

With all this activity throughout 2019, the LNG market will surely be a strong source of engineering and technical jobs across the world.





(The Bonga FPSO vessel, offshore Nigeria. Image via Shell).

### Deepwater Exploration & Production makes a comeback

After years of limited deepwater exploration and production activity, 2019 is likely to see a resurgence for this part of the global oil and gas industry.

Just prior to the oil price crash in 2014, oil majors were investing over \$300 billion into deepwater projects. Since then, investment in these projects has collapsed, reaching a low of \$155 billion last year. However, a more optimistic view of the future has returned to the industry, and investment in deepwater projects is set to climb again. Rystad Energy estimate that from 2019 through to 2022 investments will break the \$230 billion per year mark.

(Global offshore investments. Image via Rystad Energy).

The relative recovery in oil prices, improved break-even prices and the opening up of new leases offshore the Gulf of Mexico, West Africa and other global locations have once again made capital-intensive deepwater projects an attractive proposition to the majors. In the immediate future we'll see projects such as Mad Dog Phase 2, ACG, Tortue and Bonga Southwest grow in prominence.

On the production side, global deepwater production remained strong even through the downturn. Total production has been increasing since 2013, with Rystad Energy estimating a continuation in this growth until a peak in 2020. Much of this strong production performance is due to projects that were sanctioned before the price collapse, coming online during the downturn.

A key trend to note within the wider trend of renewed deepwater exploration and production activity, is that projects have become cheaper, simpler and often smaller than those sanctioned pre-crash. In addition, projects are making more use of existing infrastructure, renegotiating terms with contractors and using new technologies to drive efficiencies and improve production volumes and rates.

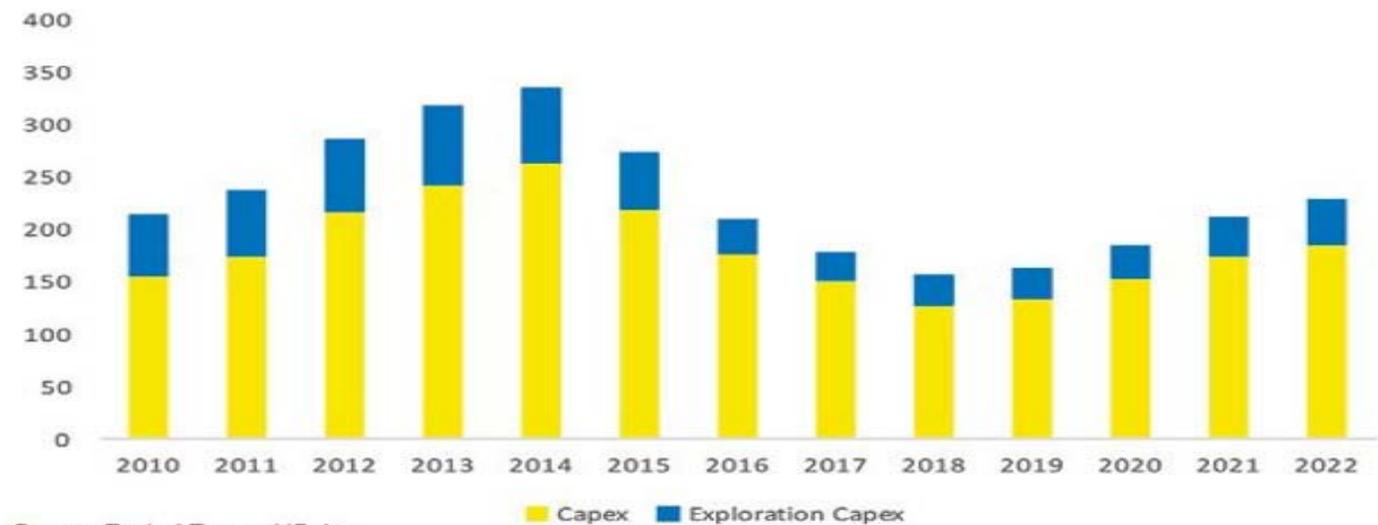
With U.S. shale production expected to plateau in the early 2020s, deepwater offshore projects will become more viable still, as supply struggles to meet demand. It's a situation neatly summed up by Patrick Schorn, a senior executive at Schlumberger:

“Looking at the longer-term supply-demand, there is a certain amount of (deepwater) assets that will have to be developed. We are going to go back... to deepwater activity”.

### New year, new job with Fircroft

Since 1970 Fircroft has been recruiting technical and engineering professionals for the world's leading oil companies. If you're looking to start the new year with a new job, then [register with Fircroft now](#), and [explore our wealth of oil industry jobs](#) across the globe.

Figure 1. Global offshore investments (US\$ billion).



Source: Rystad Energy UCube

# **ADDC STORE**



## **Welcome Back to the ADDC Store**

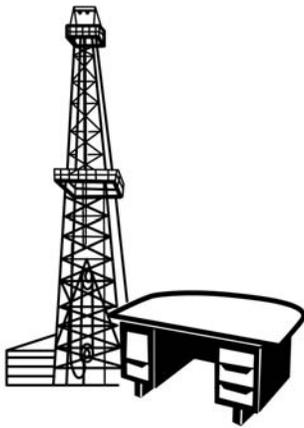
**Have you always wanted an ADDC shirt, and just didn't know where to get it? How about a cap with our Logo. Or maybe just something small to put on your desk.**

**Now you can!!!**

Three times this year we will be taking orders for a modest offering of ADDC promotional good . Orders will be placed on May 15<sup>th</sup>, August 15<sup>th</sup> and November 15<sup>th</sup>, and shipped within 10-15 days. Just think you can have a new Polo Shirt by Convention or Christmas! Items are available to members only. Orders must be place by the 10<sup>th</sup> of the order months. No stock will be carried at ADO, so if you place a request after the order dates, your order will fall into the next quarter's order.

There will be new items available this year, along with the caps, shirts and magnets offered in 2018. See the March Insight for the current listing!

## About Our Association



### MOTTO

Greater Knowledge—Greater Service

### PURPOSE

The Association of Desk and Derrick Clubs (ADDC), an international non-profit organization, is a premier provider of energy education and professional development. ADDC's purpose shall be to promote the education and professional development of individuals employed in or affiliated with the petroleum, energy and allied industries, and to educate the general public about these industries as well as the companies and global communities the members serve.

### MISSION STATEMENT

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

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