Federal Reserve Bank of Dallas

Dallas Fed Energy Survey

Fourth Quarter | December 29, 2016

Oil and Gas Outlook Improves Dramatically, Activity Continues to Rise

Business activity continued to increase in the fourth quarter, according to oil and gas executives responding to the Dallas Fed Energy Survey. The business activity index—the survey's broadest measure of conditions facing Eleventh District energy firms—rose to 40.1 from last quarter's 26.7 reading. Several indicators expanded on a quarterly basis for the first time in 2016, including employment and production. Outlooks also improved, despite some skepticism about recent oil producer agreements, which respondents commented on in this quarter's special questions.

Oil and gas production stopped declining this quarter after falling throughout the year, according to executives at exploration and production (E&P) firms. The oil production index surged nearly 20 points to 9.0, and the natural gas production index was 3.1, up from -20.6 last quarter.

Among oilfield services firms, the equipment utilization index rose again, posting at 35.9. The index of prices received for services jumped from -23.4 to 6.8, its first positive reading in 2016.

Measures of oil and gas labor market conditions turned positive for the first time all year, although the majority of respondents continued to report unchanged headcounts. The employment index came in at 3.4, with 18 percent of firms noting net hiring and 15 percent noting net layoffs. Indexes of wages and benefits and of employee hours also turned positive at 10.3 and 13.7, respectively.

Measures of nonlabor expenses suggested some price pressure. Executives at oilfield services firms reported higher input costs, with the index rising to 13.1 from last quarter's -3.6. Executives at E&P firms reported lease operating expenses had risen, with the index up from -15.9 to 14.0.

Six-month outlooks improved markedly. The company outlook index shot up 38 points to 57.1. Capital expenditures rose at a faster quarter-over-quarter pace, as did E&P firm's expectations of 2017 capital spending.

Respondents were more bullish than last quarter about oil prices one-year ahead, but mixed on natural gas prices: 71 percent expect higher oil prices a year from now, while 50 percent expect higher gas prices.

Next release: March 29, 2017

Data were collected Dec. 14–22, and 147 energy firms responded to the survey. Of the respondents, 67 were E&P firms and 80 were oilfield services firms.

The Dallas Fed conducts the Dallas Fed Energy Survey quarterly to obtain a timely assessment of energy activity among oil and gas firms located or headquartered in the Eleventh District. Firms are asked whether business activity, employment, capital expenditures and other indicators increased, decreased or remained unchanged compared with the prior quarter and with the same quarter a year ago. Survey responses are used to calculate an index for each indicator. Each index is calculated by subtracting the percentage of respondents reporting a decrease from the percentage reporting an increase. When the share of firms reporting an increase exceeds the share reporting a decrease, the index will be greater than zero, suggesting the indicator has increased over the previous quarter. If the share of firms reporting a decrease exceeds the share reporting an increase, the index will be below zero, suggesting the indicator has decreased over the previous quarter.

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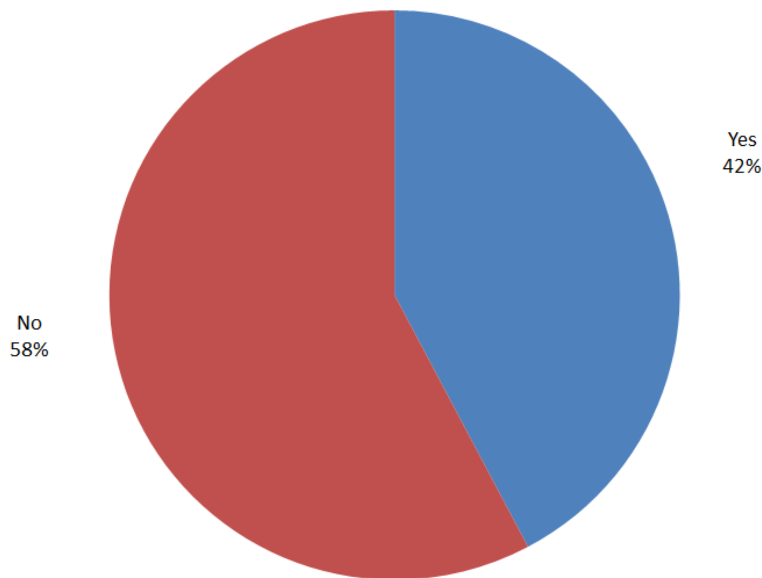
Special Questions

Data were collected December 14–22, and 147 oil and gas executives responded to the special questions survey.

OPEC reached an agreement to limit its crude oil output at its ministerial meeting on November 30. Some non-OPEC countries also committed to cutting production on December 10. Do you believe these agreements will be enforced?

Oil and gas executives were split, but most were doubtful that the Organization of the Petroleum Exporting Countries (OPEC) and other non-OPEC countries would be able to enforce agreements to limit crude oil production. Only 42 percent of respondents expect these production agreements to be enforced, while 58 percent believe they will not be enforced.

Do you believe OPEC / non-OPEC production cuts will be enforced?

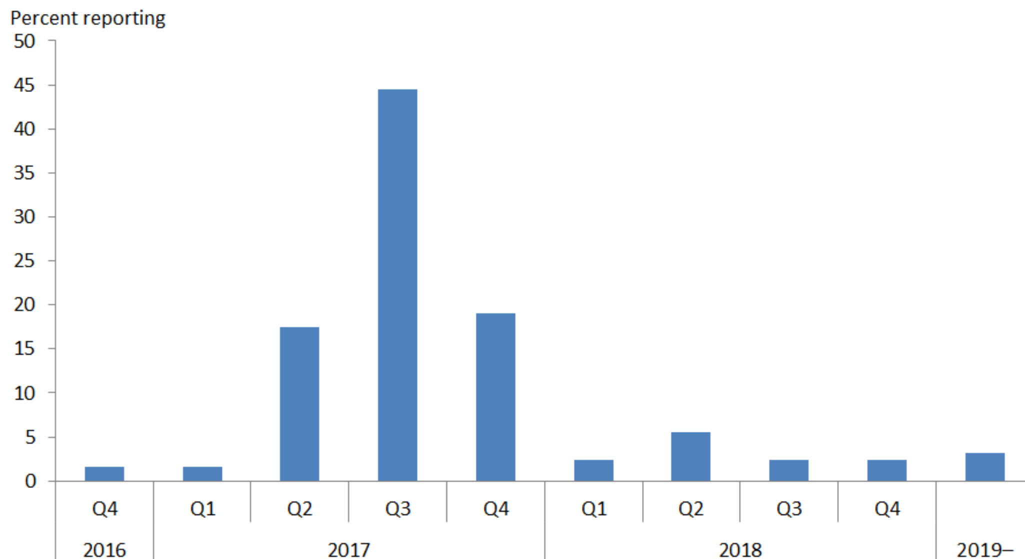


NOTES: One hundred forty-two oil and gas firms answered this question from Dec. 14–22, 2016. OPEC refers to the Organization of the Petroleum Exporting Countries.
SOURCE: Federal Reserve Bank of Dallas.

In light of the recent meetings between producing countries and other oil market developments: in what quarter do you think it most likely that the global oil market will come into balance?

Expectations centered tightly on the most frequent response—Q3 2017—which 44 percent of executives selected. Responses to the same question in the Q2 2016 survey were more dispersed and centered around late 2016 and the first half of 2017. At that time, the most frequent response was Q4 2016 with Q1 2017 a close second.

Beliefs about producer agreements seemed to affect responses, with those expecting agreements to be enforced selecting slightly earlier dates and those skeptical of enforcement selecting slightly later dates. For example, almost all of those respondents who think markets will balance in 2018 or later also doubt producer agreements will be enforced.



NOTES: One hundred twenty-six oil and gas firms answered this question from Dec. 14–22, 2016. Balance was defined as the quarter when global supply equals global demand, i.e., when global inventories stop growing.
SOURCE: Federal Reserve Bank of Dallas.

How have announced production cuts changed expectations of your firm's key business indicators in 2017?

More than half of surveyed executives revised up their 2017 oil price forecasts and company outlooks in response to announced production cuts. Nearly 40 percent of firms revised up their equipment utilization and capital expenditures plans, while just under a third revised up their expected levels of drilling activity. The vast majority—75 percent—of respondents said they had not changed their expectations about employment levels.

How have announced production cuts changed expectations of your firm's key business indicators in 2017?

	Percent reporting			
	Revised up	No change	Revised down	No. of respondents
Oil prices	58	42	1	142
Drilling activity	32	65	3	65
Equipment utilization	39	55	7	75
Employment	19	75	6	141
Capital expenditures	39	55	6	141
Company outlook	51	46	2	142

NOTES: Drilling activity question was posed to E&P firms only, while equipment utilization question was posed to oilfield services firms only. One hundred forty-two unique oil and gas firms responded to this question from Dec. 14–22, 2016. Percentages may not sum to 100 due to rounding.
SOURCE: Federal Reserve Bank of Dallas.

Transactions in the Permian Basin received significant attention in the second half of the year, with some reports of acreage being overvalued.

Do you believe acreage prices will remain or become a concern in 2017 in the Permian or elsewhere? Do you have any comments or thoughts on recent transactions and acreage prices in the Permian Basin or other areas?

Panelists were able to write in a response about acreage prices and transactions in the Permian Basin and other areas. Responses varied, with several expressing direct concern with acreage prices, some advising caution and a few indicating no concern. Many executives also discussed the nuances of acreage and transaction pricing, often related to geological characteristics of specific plays or financing differences between private and public companies. Select responses are shown below by theme. A full list of 65 publishable responses collected are available online.

Comments expressing concern over acreage prices:

> "The Permian transactions are approaching price multiples associated with a bubble or a Ponzi scheme. Multiple private equity (PE)-backed buyers are simply trading assets from one to the other—very similar to transactions we witnessed in the early '80s real estate bubble, the tech bubble of '98–'01 when venture capital firms co-invested with each other to drive up paper gains, and the oil transactions prior to 2014 when every PE fund, pension and endowment manager needed shale in their portfolios."

> "I feel that prices paid per acre in large transactions have probably gone past the reasonable economic limit. I seriously question the actual recoverable reserves that the growing public companies are projecting."

Comments mixed on whether current acreage prices are overvalued:

> "Stacked plays and improving technology make the Permian Basin very prolific for the production of oil and gas, so relatively high acreage prices are justified. That said, current acreage prices have reached an exuberant level that leaves little protection against extended periods of sub-$60 per barrel oil. Leasing Permian acreage at current acreage prices is not something that we would do."

> "With companies suggesting that as many as 64 wellbores are possible in one section in the Delaware Basin, it is not surprising that acreage prices have skyrocketed. In many cases this is a multi-decade proposition. To suggest to investors that this is possible is probably acceptable … but to suggest that it is achievable, is, at least, suspicious. There will be a day of reckoning in how high the acreage cost goes. If we stay in the $45–$55 range, then many of these 'prospects' will be uneconomic."

> "No. I believe acreage prices are overvalued in certain areas based on speculation on what oil prices may become and what production may be proved in the future from those areas. Some areas prices are justified based on current data, but others are not. This is not atypical for oil and gas investing."

Comments not concerned with current acreage prices:

> "I do not think acreage values are or will be a concern. The market will seek the appropriate level of value commensurate with the reserves that can be developed and produced."

Comments comparing different oil-producing areas:

> "There are effectively two and possibly three areas that are economic at current crude oil prices— the Permian, the STACK and to a lesser extent the Eagle Ford. While the Permian appears pricey, it is a multibench, multiyear play and 'they aren't making any more of it.' In the long run the Permian players will look smart having created a multiyear drilling inventory in today's price environment. I do believe that the Permian premium is forcing other players to look at other plays, for example, the STACK, and we are starting to see new price points (higher) in the STACK on nearly a daily basis."

> “Some may feel acreage values are overvalued, but taking into account the number of potential zones and wells that can be drilled per section, it could be argued that they are fairly valued and could possibly continue to rise. … Outside the Permian, the only area with high lease prices is the Mid-Continent, mostly the STACK and somewhat the SCOOP. Given that these are also in high demand, and there is less acreage available due to the smaller size of those plays, you could continue to see prices rise there as well.”

Comments comparing private and public companies:

> “Acreage costs are driving smaller independents and private equity-backed companies out of the Central Permian and Delaware Basins. Current pricing for raw acreage costs cannot be justified and will most likely be forced to come down in 2017.”

> “Acreage prices are up because public stocks are using stock not cash. They are buying future locations. Private and smaller companies cannot compete with the public market.”

Historical data are available from first quarter 2016 to the most current release quarter.

Business Indicators: Quarter/Quarter

Business Indicators: All Firms
Current Quarter (versus previous quarter)

Indicator	Current Index	Previous Index	% Reporting Increase	% Reporting No Change	% Reporting Decrease
Level of Business Activity	40.1	26.7	51.0	38.1	10.9
Capital Expenditures	27.4	11.4	45.9	35.6	18.5
Supplier Delivery Time	0.7	–0.7	7.1	86.4	6.4
Employment	3.4	–6.5	18.4	66.7	15.0
Employee Hours	13.7	–1.9	24.7	64.4	11.0
Wages and Benefits	10.3	–9.7	24.8	60.7	14.5

Indicator	Current Index	Previous Index	% Reporting Improved	% Reporting No Change	% Reporting Worsened
Company Outlook	57.1	19.6	65.0	27.1	7.9

Business Indicators: E&P Firms
Current Quarter (versus previous quarter)

Indicator	Current Index	Previous Index	% Reporting Increase	% Reporting No Change	% Reporting Decrease
Level of Business Activity	40.3	21.4	49.3	41.8	9.0
Oil Production	9.0	–10.2	28.4	52.2	19.4
Natural Gas Wellhead Production	3.1	–20.6	23.1	56.9	20.0
Capital Expenditures	31.8	15.1	48.5	34.8	16.7
Expected Level of Capital Expenditures in 2017	41.8	21.8	53.7	34.3	11.9
Supplier Delivery Time	3.1	–5.9	9.4	84.4	6.3
Employment	–1.5	–13.1	13.4	71.6	14.9
Employee Hours	1.5	–5.8	13.6	74.2	12.1
Wages and Benefits	4.5	–12.8	19.7	65.2	15.2
Finding and Development Costs	–1.5	–20.9	12.1	74.2	13.6
Lease Operating Expenses	14.0	–15.9	28.1	57.8	14.1

Indicator	Current Index	Previous Index	% Reporting Improved	% Reporting No Change	% Reporting Worsened
Company Outlook	67.2	29.5	72.1	23.0	4.9

Business Indicators: O&G Support Services Firms
Current Quarter (versus previous quarter)

Indicator	Current Index	Previous Index	% Reporting Increase	% Reporting No Change	% Reporting Decrease
Level of Business Activity	40.0	30.9	52.5	35.0	12.5
Utilization of Equipment	35.9	24.1	46.2	43.6	10.3
Capital Expenditures	23.8	8.3	43.8	36.3	20.0
Supplier Delivery Time	−1.3	3.9	5.3	88.2	6.6
Lag Time in Delivery of Firm's Services	0.0	0.0	8.0	84.0	8.0
Employment	7.5	−1.2	22.5	62.5	15.0
Employment Hours	23.8	1.2	33.8	56.3	10.0
Wages and Benefits	15.2	−7.1	29.1	57.0	13.9
Input Costs	13.1	−3.6	19.7	73.7	6.6
Prices Received for Services	6.8	−23.4	20.3	66.2	13.5

Indicator	Current Index	Previous Index	% Reporting Improved	% Reporting No Change	% Reporting Worsened
Company Outlook	49.4	11.2	59.5	30.4	10.1

Price Expectations

Price Expectations: Firms

Indicator	Current Index	Previous Index	% Reporting Higher	% Reporting Same	% Reporting Lower
Expected Oil Price a Year from Now	70.0	58.5	71.4	23.8	1.4
Expected Natural Gas Price a Year from Now	42.5	45.0	50.0	38.4	7.5

Price Expectations: E&P Firms

Indicator	Current Index	Previous Index	% Reporting Higher	% Reporting Same	% Reporting Lower
Expected Oil Price a Year from Now	68.6	62.8	71.6	23.9	3.0
Expected Natural Gas Price a Year from Now	32.9	36.7	44.8	37.3	11.9

Price Expectations: O&G Support Services Firms

Indicator	Current Index	Previous Index	% Reporting Higher	% Reporting Same	% Reporting Lower
Expected Oil Price a Year from Now	71.3	54.7	71.3	23.8	0.0
Expected Natural Gas Price a Year from Now	50.6	51.8	54.4	39.2	3.8

Business Indicators: Year/Year

Business Indicators: All Firms
Current Quarter (versus same quarter a year ago)

Indicator	Current Index	Previous Index	% Reporting Increase	% Reporting No Change	% Reporting Decrease
Level of Business Activity	19.7	−8.7	47.0	25.8	27.3
Capital Expenditures	13.8	−12.7	42.0	29.8	28.2
Supplier Delivery Time	−1.6	−6.1	9.6	79.2	11.2
Employment	−6.0	−29.4	22.6	48.9	28.6
Employee Hours	4.6	−23.1	27.5	49.6	22.9
Wages and Benefits	10.9	−25.6	31.8	47.3	20.9

Indicator	Current Index	Previous Index	% Reporting Improved	% Reporting No Change	% Reporting Worsened
Company Outlook	47.1	0.8	64.2	18.7	17.1

Business Indicators: E&P Firms
Current Quarter (versus same quarter a year ago)

Indicator	Current Index	Previous Index	% Reporting Increase	% Reporting No Change	% Reporting Decrease
Level of Business Activity	20.7	−4.8	41.4	37.9	20.7
Oil Production	−1.7	−22.9	32.8	32.8	34.5
Natural Gas Wellhead Production	−16.1	−18.0	25.0	33.9	41.1
Capital Expenditures	15.8	−6.7	42.1	31.6	26.3
Expected Level of Capital Expenditures in 2017	44.0	3.3	57.6	28.8	13.6
Supplier Delivery Time	3.6	−6.7	10.9	81.8	7.3
Employment	−11.9	−30.6	16.9	54.2	28.8
Employee Hours	−12.3	−19.3	14.0	59.6	26.3
Wages and Benefits	7.0	−12.7	28.1	50.9	21.1
Finding and Development Costs	−27.6	−45.0	10.3	51.7	37.9
Lease Operating Expenses	−3.6	−39.4	27.3	41.8	30.9

Indicator	Current Index	Previous Index	% Reporting Improved	% Reporting No Change	% Reporting Worsened
Company Outlook	57.4	17.0	66.7	24.1	9.3

Business Indicators: O&G Support Services Firms
Current Quarter (versus same quarter a year ago)

Indicator	Current Index	Previous Index	% Reporting Increase	% Reporting No Change	% Reporting Decrease
Level of Business Activity	19.0	–12.0	51.4	16.2	32.4
Utilization of Equipment	24.3	–17.8	47.3	29.7	23.0
Capital Expenditures	12.2	–17.6	41.9	28.4	29.7
Supplier Delivery Time	–5.7	–5.6	8.6	77.1	14.3
Lag Time in Delivery of Firm's Services	–4.4	–7.0	10.1	75.4	14.5
Employment	–1.4	–28.3	27.0	44.6	28.4
Employment Hours	17.5	–26.4	37.8	41.9	20.3
Wages and Benefits	13.9	–36.4	34.7	44.4	20.8
Input Costs	–1.4	–20.5	23.6	51.4	25.0
Prices Received for Services	–19.1	–43.6	19.1	42.6	38.2

Indicator	Current Index	Previous Index	% Reporting Improved	% Reporting No Change	% Reporting Worsened
Company Outlook	39.1	–13.0	62.3	14.5	23.2

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Comments from Survey Respondents

These comments are from respondents' completed surveys and have been edited for publication. Comments from the Special Questions survey can be found below.

Exploration and Production Firms

- Commodity prices in 2017–18 appear likely to be significantly higher than in 2015–16, which is encouraging us to commit more capital to exploration drilling.
- I expect that the influx of new liquefied natural gas supplies on the world market will be a limiting factor for the price of oil regardless of the Organization of the Petroleum Exporting Countries' (OPEC's) ability to adhere to the production cuts. I also expect that OPEC and non-OPEC members will cheat on the agreement, so I will be watching worldwide inventory levels closely.
- The election results have cast a very positive attitude on the entire business sector both large and small. The initial cabinet selections are very encouraging as to both deregulation and the Environmental Protection Agency's (EPA's) overreach. Finally, some common sense at the top of the food chain.
- We are selling non-core properties to fund growth in leasing and drilling and completions expenditures in our core property.
- Because of reaction time vis-a-vis prices to drilling, we believe that prices will be range-bound during the next year to 18 months between $50 and $60.
- I am excited about the new president and his pro-business attitude. We may finally have a domestic energy policy.
- We currently have a temporary spike in oil prices due to OPEC's planned production reduction. Gas has spiked higher due to lower temperatures in the northern portion of the country than predicted.
- We have been very active drilling conventional vertical wells to depths ranging from 4,200 ft. to 7,200 ft. We are currently drilling our 14th and 15th wells with two more to go.
- Delivery time and price for supplies are increasing.
- Our level of activity will pick up if natural gas remains at or above $3.50 per million British thermal units (MMBtu), and if oil can get back to $60 per barrel. I am optimistic about both of those happening at this point.
- The big problem regarding pricing of oil and gas is that U.S. companies are continuing to ignore actual pricing in their upstream drilling activities. Ignoring the rate of return on drilling will lead them to drill and keep the prices depressed.
- Pressure pumping service delivery time is stretching out due to reduced availability of frac spreads.
- Low oil prices continue to drastically affect the domestic oil industry.

Oil and Gas Support Services Firms

- OPEC's recent agreement is suspect. They have rarely lived up to their agreements in the past, and the increase in the price of oil because of their meetings and agreement is temporary. If OPEC does curtail production, we will see an increase in drilling in the U.S., and U.S. oil companies can easily replace all the barrels OPEC cuts. Therefore, the price of oil will remain about the same until there is a real reduction in global supply.
- We are hearing about increased levels of activity in all of our shale operations in Texas, even the Barnett, which is gas-driven, all coming our way in 2017. We've also been awarded a couple of key contracts on projects that both we and the exploration and production (E&P) companies have been working on jointly for months and it is finally coming to fruition in early 2017.
- The North American onshore seismic market had seen a slight improvement pre-OPEC meeting. Post-OPEC meeting and with the improvement in pricing for both oil and gas we have seen an appreciable improvement in our customers' interest in year-end seismic deals.
- We are seeing month-over-month improvement in business activity, even without seasonal adjustment. As we head into the colder winter months, we remain cautiously optimistic and are anxious to see spring tidings.
- We are seeing an increase in overall activity and outlook for the current quarter, and more drilling and mergers and acquisitions activity throughout the Permian Basin. With the OPEC deal closing, we anticipate an increase in prices, which will spur drilling activity.
- Activity has seen an increase, improving utilization rates, but we have not been able to implement any price increases to improve our margins.

- The regulatory climate in Oklahoma following earthquakes has drastically increased salt water disposal (SWD) costs as well as reduced the number of SWD wells, simultaneously collapsing our oil and gas production volumes and increasing our disposal. The number of lawsuits following earthquakes is increasing (some credible, most are insane). Access to capital has been crippled. RBL (reserve-based lending) is nearly impossible with banks now; talk on the street is there will only be four to six RBL lending banks left in that space by the first half of 2017 redeterminations. Consulting work is getting scarce as clients no longer have free cash flow. All are repairing balance sheets. Expectations are that the OPEC/non-OPEC production agreement will fall apart, and we'll have another trough in oil prices. Gas prices are unhinged from oil prices. We are spending too much time and effort working with tax accountants to get returns done—more than last year, yet numbers are down and the number of reporting projects is down due to pluggings, regulations, asset sales and depletion.
- Discussions around lowering the federal tax rate are encouraging and will dip more for our business than anything else.
- I believe we are in a period of general stability in product pricing and business costs. The key for improved economics lies in increased efficiency of utilizing goods and services to provide better well recoveries primarily through completion technology and execution performance.
- Oil companies are taking longer to pay and there is a ripple effect; I have to pay late as well. 2017 is going to be a better year.
- There is no clarity on the Affordable Care Act—only increases to a shoddy program.
- I expect the new administration to be great for business in general, but I have no idea what it will do for the price of oil.
- Conflicting data on OPEC production cuts, increased U.S. production, decreased demand and continuing capital investment in drilling projects tends toward pessimism on prices. There is no apparent economic motive to support the current level of drilling activity other than that of short term gain through "pump and dump" private equity driven activity. So long as this continues it is hard to understand how oil prices could move significantly higher. Regardless of the irrationality of current investment, the consumer continues to be the big winner in the form of low energy prices, and the economy wins as domestic production continues to back out oil imports.
- Tax breaks for natural gas conversion will hopefully be coming with new leaders. This will increase our industry output.
- Being in the rental business, we are seeing the usual downturn at this time of year, budgets are spent, and everyone is putting work off until after the first of the year. The election magnified the usual, as everyone wanted to see what direction the country is going from the leadership role. Now that is over, and there is a cautious optimism moving into the new year. We expect things to pick up in 2017. A better price for oil means a better price for our equipment, but benefits and wages are still a concern. Rising health care and wages are a stifle for our profit, and we are being squeezed from cutting our rates to our customers and still being competitive from a wage and benefit position. Overall, we are still viable and are moving forward. Capital is going to be an issue moving forward as the banks are running scared from the oil and gas industry and have been told from examiners to limit loans to oilfield related businesses.
- Our third quarter 2016 was almost flat with third quarter 2015, but we had 100 less rigs running this year versus last year. Rigs are more efficient and we get more lateral feet drilled per rig. Most of our business is related to footage drilled. We expect the rig count to continue to improve through 2017, with a much better second half.
- Our parts and service business has increased with slight improvement in new sales.

Special Questions Comments

Exploration and Production Firms

- With the new administration, there is a real chance for an energy policy that is great for the industry and even better for the country. For this to be significant, demand must be increased for both oil and gas. Specifically, ethanol must be phased out and incentives created for gas.
- On enforceability of the OPEC and non-OPEC limit agreements, I do not know if these will be enforced. I am hopeful that they will, as the lack of an agreement and a lack of production restraint globally has resulted in a protracted recession for our industry, far longer than many predicted or desired. As we look ahead, we are focused on balancing growth with underlying well economics at current prices and will continue to maintain discipline in our capital spending to ensure asset values are preserved and enhanced. There is still a lingering question as to whether these higher prices will remain in place and where they go from here.
- Economic growth is the answer to oil oversupply. Weather will push natural gas higher due to depletion of existing gas wells. Much like a person with a great savings account, but his monthly income is much lower—so goes the natural gas market. LNG and exports to Mexico will also pressure natural gas prices higher.
- In order to bring supply into balance, U.S. companies will eventually have to make the hard choice of reducing drilling to preserve reserve value. It's better to have a higher value commodity in the long term than a low price that will deplete the reserves at a faster rate than can be replaced.
- OPEC has never honored its quotas. Why is this time different!? Russia's production cuts are a joke. Remember, they have a war and defense buildup they must finance.

Oil and Gas Support Services Firms

- The only thing harder to predict than oil prices are OPEC actions. If free markets end up in control instead of OPEC actions, we will see limited oil activity outside of the Permian Basin and moderate activity in the Permian Basin.
- If we can't make it with the new administration, we are not going to make it.
- The time is ripe for making the U.S. energy independent. We have the ability to do that, but probably not the political will. Based solely on the domestic supply of oil and gas, the drilling and conservation energy independence will promote, alternative sources of electricity, and possibly oil from Canada and Mexico, we could be free from the Middle East.
- I don't believe that we have necessarily seen the bottom of the oil price curve, and we could see yet another decline in price before we see a significant improvement. We still need to plan on $50–$55 per barrel oil for a while.

Comments about the Permian Basin and Acreage Prices

Do you believe acreage prices will remain or become a concern in 2017 in the Permian or elsewhere? Do you have any comments or thoughts on recent transactions and acreage prices in the Permian Basin or other areas?

- Yes, average metrics in the Permian Basin will continue to trade at an elevated valuation in 2017.
- The Permian transactions are approaching price multiples associated with a bubble or a Ponzi scheme. Multiple private equity (PE)-backed buyers are simply trading assets from one to the other—very similar to transactions we witnessed in the early '80s real estate bubble, the tech bubble of '98–'01 when venture capital firms co-invested with each other to drive up paper gains, and the oil transactions prior to 2014 when every PE fund, pension and endowment manager needed shale in their portfolios. The prices were bid so high that rates of return were bid down to nil—witness the write-off by Statoil of its purchase of Brigham (Bakken) or the write-off by BHP Billiton of its purchase of Petrohawk (Eagle Ford). We are seeing this spill over into the DJ Basin where one PE firm just bought back acreage it had jettisoned in 2009 but paid thousands-of-times the original cost of the acreage. The only losers will be that PE sponsor's limited partners.
- I personally believe they are overvalued.
- My only thought is I wish I had some acreage purchased at prices from about 10 years ago! Seriously though, the price-per-acre upswing is both encouraging and alarming. Overvalued acreage in the Haynesville area caused problems during the early days, and some are still ongoing today. I would advise caution and restraint.
- Prices will remain the same and probably increase due to the competition for acreage positioning.
- I can see as far down the well as you can!
- Some may feel acreage values are overvalued, but taking into account the number of potential zones and wells that can be drilled per section, it could be argued that they are fairly valued and could possibly continue to rise. I think it is most likely that lease acreage prices will stay in about the same range as they currently are, as there are not as many private companies left for public companies to buy. But prices for purchasing rather than leasing mineral acres are still below the headline acreage prices we see reported, so these could continue to rise to parity with those and beyond (mineral acres usually trade at a premium to leased acres but this is currently not the case). Also contributing to these high lease prices is the fact that public companies paying these large per-acre multiples are valued, using their enterprise value divided by number of acres held, at even higher values, so all of these transactions are accretive to them. Should this change, it might perhaps bring acreage prices down. Outside the Permian, the only area with high lease prices is the Mid-Continent, mostly the STACK and somewhat the SCOOP. Given that these are also in high demand, and there is less acreage available due to the smaller size of those plays, you could continue to see prices rise there as well. Other plays have not had the same things happen, so with rising commodity prices you should continue to see rising acreage prices across the board.
- The recently published transactions are still at a premium for prime acreage. We don't anticipate any change during 2017.
- I have heard of some northern Delaware Basin undeveloped acreage lease bonuses hitting $62,000 per acre. That's insane and unsustainable. I also hear it's with money from out of state (mad money), and locals aren't playing in that game, so I expect it to fall.
- Much of the Wolfcamp shale still is not currently economic, yet leasehold prices have increased in the basin. Hopefully technology will make it economic.
- No.
- I believe acreage prices will continue to increase because of the reserves from multiple pay zones.
- There are effectively two and possibly three areas that are economic at current crude oil prices— the Permian, the STACK and to a lesser extent the Eagle Ford. While the Permian appears pricey, it is a multibench, multiyear play and "they aren't making any more of it." In the long run the Permian players will look smart having created a multiyear drilling inventory in today's price environment. I do believe that the Permian premium is forcing other players to look at other plays, for example, the STACK, and we are starting to see new price points (higher) in the STACK on nearly a daily basis.
- They will come down in 2017.
- Yes.
- No. I believe acreage prices are overvalued in certain areas based on speculation on what oil prices may become and what production may be proved in the future from those areas. Some areas prices are justified based on current data, but others are not. This is not atypical for oil and gas investing.
- I believe the Permian Basin acreage prices will be a significant concern in 2017. We recently sold 200+ acres of leasehold for a moderate five figures per acre. Any wells drilled will have to be giant producers to be economic at current prices.

- In my opinion, prices of up to a reported $48,000 per acre are unsustainable and will prove to be unprofitable when suppliers and contractors increase prices.
- If the overall economy begins heating, then investment opportunities in other sectors may compete for current oil and gas capital.
- Acreage prices are crazy! $40,000 per acre isn't economically sustainable and will result in many leases expiring as companies can't get enough wells to perform at modeled rates.
- Our firm is able to acquire acreage on the Central Basin Platform at the same costs as last year, but the transaction multiples paid by public companies to buy leaseholds from other operators in the Midland and Delaware Basins do not make economic sense unless they drill multiple landing zones in the next two to three years with results that do not deteriorate as they complete the secondary objectives.
- Acreage prices will remain a concern. Recent transactions are a bit optimistic, given the fact that shale comes online quickly and can depress pricing.
- As with any uptick in the oil and gas industry in an area, there will be instances where individuals and/or entities will seek quick profits, thus possibly inflating prices based on projected reactions to world events in a particular area such as the Permian Basin. From that standpoint, yes, it will remain a concern during the period of volatile oil prices.
- The Permian Basin in Texas and the Anadarko Basin in Oklahoma provide stronger economics than other plays. As such, both should continue to drive higher per-acre prices than other basins.
- As a Permian operator, recent favorable valuations help in the value of our acreage which is positive. It will make any targeted acquisitions more costly.
- The Permian will be the new Saudi Arabia.
- We do have activity in the Permian, and there is no doubt that asset values are significantly overvalued for anyone other than companies with access to public equity markets. The private equity model, as well as the private independent model, does not work in the Permian right now as returns have been driven below 10 percent. The public equity market is rewarding companies with decent balance sheets with cost of equity below 5 percent, allowing them to pay $25,000 to $40,000 per acre and valuing it in their equity prices at $50,000 per acre or higher. I don't see this trend ending anytime soon at current commodity prices, which have served to focus and concentrate spending in the core of the core of the Permian, resulting in overpriced assets. The core of the core of other basins, except maybe the Eagle Ford, are simply not attractive enough, return wise, to attract the capital expenditures and therefore the competition for acreage.
- We believe as long as indigenous public E&P companies have stock valuations that equate to $50,000 per acre that the consolidation of smaller players (public and private) will continue through issue of equity. Asset valuations at or above $30,000 per acre plus proved-developed-producing ($30,000 per flowing barrel) will be maintained until sufficient drilling has determined the true economic value in the Midland and Delaware basins.
- I believe acreage prices will remain high throughout 2017.
- Acreage is overpriced. Not buying.
- The price of acreage is a gamble. How can people compare land versus mineral rights on land? For example, if I own 50 acres versus 300 acres, how can the value be the same if 50 acres is only land and the 300 is land and mineral rights?
- I believe that at today's crude oil and natural gas market pricing some of the per net acre values are inflated. However, as history shows, with improved drilling and completion techniques, there is a better than even possibility that that will not be the case in the long term.
- Acreage prices in the Permian will continue to increase. Prices will increase less, if at all, in other environments with no new discoveries to inflate acreage demand.
- The Permian Basin has long been the benchmark for activity. Recent discoveries will jump-start acreage prices as soon as there is a clear cut direction for the oil price.
- Activity in the Permian Basin will be impacted more by increasing service costs and diminished takeaway infrastructure than acreage prices.
- Stacked plays and improving technology make the Permian Basin very prolific for the production of oil and gas, so relatively high acreage prices are justified. That said, current acreage prices have reached an exuberant level that leaves little protection against extended periods of sub-$60 per barrel oil. Leasing Permian acreage at current acreage prices is not something that we would do.
- There is a concern.

- In great respect, the gorilla in the room is the Federal Reserve and its free money policies. Thank god, it is the equity money managers who seem to be fueling these exorbitant bonus prices, inefficient drilling ventures and not the banks. A reincarnation of the gold rush days and it is not going to end pretty. These wells are very expensive. Do not focus on the hype about drilling efficiencies; look at the completion costs, lease hold costs and debt service. No one seems to be asking how much all this costs. Who are these no name players in these various plays that are able to borrow 100s of millions and then take Chapter 11? Except for a very few operators and in a few areas, no one is making money at these prices.
- High acreage costs will possibly impact overall profitability.
- Yes, I believe acreage prices in the Permian will remain a concern in 2017, especially in the second half of 2017.
- This has happened before and will eventually stymie E&P companies' ability to be profitable. It's amazing that lessons have not been learned from our past failures.
- I'm not involved in that area. But prices will move higher as the oil price moves.
- Limited acquisitions and divestitures opportunities in the most economically resilient plays, combined with ample available capital and strengthening price outlooks, will likely lead to further transaction price inflation in 2017.
- The Permian is the only area where increased acreage prices are sustainable. The drilling deals we have seen for the Permian are based on $45 oil with a 50 percent initial rate of return.
- I think the prices in the Permian Basin are overvalued and require significantly higher oil prices to justify the prices being paid now.
- Because of the success in the Permian Basin, companies will continue to drill, which will inevitably cause lease prices to increase further.
- I do not think acreage values are or will be a concern. The market will seek the appropriate level of value commensurate with the reserves that can be developed and produced.
- Acreage costs are driving smaller independents and private equity-backed companies out of the Central Permian and Delaware Basins. Current pricing for raw acreage costs cannot be justified and will most likely be forced to come down in 2017.
- Permian prices are unsustainable at current levels.
- Acreage prices have reached prices that are not sustainable to the traditional and existing players. New entrants to the Permian Basin may pay these high prices to gain a foothold, but will increasingly have difficulty showing an adequate return on capital employed at these acquisition costs.
- The cost of oil and gas leases is a major concern. Many of us feel that leases are overpriced, and the enormously expensive acreage deals reported in the press cannot possibly be drilled before the majority of this acreage begins to expire, so we wonder how these large deals can be justified. Current pricing has made putting a deal together with new leases very expensive, to the point that new prospects are uneconomical.
- No. And, no.
- The Permian will probably have the highest lease acreage cost. Our models on what they are paying today in the Permian will not work at these prices and need to be $100 for the models to work.
- Acreage prices are up because public stocks are using stock not cash. They are buying future locations. Private and smaller companies cannot compete with the public market.
- With companies suggesting that as many as 64 wellbores are possible in one section in the Delaware Basin, it is not surprising that acreage prices have skyrocketed. In many cases this is a multidecade proposition. To suggest to investors that this is possible is probably acceptable, … but to suggest that it is achievable, is, at least, suspicious. There will be a day of reckoning in how high the acreage cost goes. If we stay in the $45–$55 range, then many of these "prospects" will be uneconomic.
- The Permian is where almost all of us are working now. Unfortunately some companies do not limit payout for leases and this is bad for our industry. Around $650-an-acre bonus for a three-year term is fair; if we get back to over $1000, we may be looking for another drop in activity.
- Excessive amounts of outside capital are driving acreage prices. There appears to be unlimited amounts of money.
- The price per acre is extravagant. Some of the companies I have talked to do not consider acreage or facility cost when they quote their breakeven cost. I am glad I am not their stockholder or banker.
- Traditional acreage will increase. Unconventional acreage will decrease.
- I feel that prices paid per acre in large transactions have probably gone past the reasonable economic limit. I seriously question the actual recoverable reserves that the growing public companies are projecting. In the vertical phase of the Wolfberry development, it has been found that early estimated ultimate recoveries (EURs) were totally unrealistic. Wells that were projected to make 125,000–150,000 barrels are in fact going to make in the 70,000–80,000 barrel range. My belief is that the horizontals will have 25–40 percent lower EURs than companies are currently projecting.

- Acreage prices in all of the active shale basins are speculation driven and too high.
- Permian acreage prices should plateau in 2017. We sold Permian assets in 2016 at what was a fair, but not overly aggressive price. I do think you will see the footprint of the Permian, particularly the Delaware Basin, continue to push south and west until the boundary has been found. Once the play is delineated, you will find prices retreat in the areas outside the productive core. The risk to the core is several years out after regional pressure has been depleted, but again, we will not know for several years.
- I expect that properties will be once again overvalued when oil prices improve to $60 per barrel.
- Significantly increased gas production will not materialize for two to three years while field development is being undertaken.
- The Permian is the hottest market out there! Prices will level off this year.

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