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TENTH DISTRICT ENERGY ACTIVITY DROPPED FURTHER

Federal Reserve Bank of Kansas City Releases Fourth Quarter Energy Survey

KANSAS CITY, Mo. –The Federal Reserve Bank of Kansas City released the fourth quarter Energy Survey today. According to Chad Wilkerson, Oklahoma City Branch executive and economist at the Federal Reserve Bank of Kansas City, the survey revealed that Tenth District energy activity dropped further and expectations for future activity continued to decline.

“District energy activity continued to decrease through Q4 2019 and most firms do not expect drilling activity to pick up in the near-term,” said Wilkerson. “However, slightly more firms expect their cash flow to be higher next year than expect it to be lower.”

The Kansas City Fed's quarterly Tenth District Energy Survey provides information on current and expected activity among energy firms in the Tenth District. The survey monitors oil and gas-related firms located and/or headquartered in the Tenth District, with results based on total firm activity. Survey results reveal changes in several indicators of energy activity, including drilling, capital spending, and employment. Firms also indicate projections for oil and gas prices. All results are diffusion indexes – the percentage of firms indicating increases minus the percentage of firms indicating decreases. A summary of the first quarter survey is attached. Results from past surveys and release dates for future surveys can be found at <https://www.kansascityfed.org/research/indicatorsdata/energy>.

The Federal Reserve Bank of Kansas City serves the Tenth Federal Reserve District, encompassing the western third of Missouri; all of Kansas, Colorado, Nebraska, Oklahoma and Wyoming; and the northern half of New Mexico. As part of the nation's central bank, the Bank participates in setting national monetary policy, supervising and regulating numerous commercial banks and bank holding companies, and providing financial services to depository institutions. More information is available online at www.kansascityfed.org.

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TENTH DISTRICT ENERGY SUMMARY

Fourth quarter energy survey results revealed Tenth District energy activity dropped further and expectations for future activity continued to decline. Firms reported that oil prices needed to be on average \$65 per barrel for substantial increases in drilling to occur, down slightly from six months ago but higher than both current prices and prices expected over the next year.

Summary of Quarterly Indicators

Tenth District energy activity dropped further in the fourth quarter of 2019, as indicated by firms contacted between December 16th and December 31st, 2019 (Tables 1 & 2). The drilling and business activity index fell from -23 to -48, indicating a continued, significant decrease in activity following a slight expansion earlier in 2019 (Chart 1). However, the revenues index improved slightly, the wages and benefits index remained positive, and the employment index was flat. The supplier delivery time, profits, employee hours, and access to credit indexes all declined.

Most year-over-year indexes decreased as well. The year-over-year drilling and business activity index deteriorated further, from -21 to -50. Indexes for total revenues, capital expenditures, delivery time, profits, employment, and employee hours declined again in the fourth quarter. The year-over-year index for access to credit also turned negative. Only the year-over-year index for wages and benefits remained slightly positive.

Expectation indexes remained mostly negative. The future drilling and business activity index was -16, following a reading of -21 in Q3. The future capital expenditures, delivery time, profits, employment, employee hours, and access to credit indexes decreased again in Q4. The future wages and benefits index also turned negative. On the other hand, the future profits index was flat and the future revenues index expanded. Price expectations for oil and natural gas liquids eased slightly compared to the previous quarter, but remained positive. However, price expectations for natural gas fell.

Summary of Special Questions

This quarter firms were asked what oil and natural gas prices were needed on average for a substantial increase in drilling to occur (in alternate quarters they are asked what price they need to be profitable on average across the fields in which they are active). The average oil price needed was \$65 per barrel, with a range of \$38 to \$94 (Chart 2). This average was below the price reported in the second quarter of 2019, but up slightly from the fourth quarter of 2018. The average natural gas price needed was \$3.66 per million Btu, with responses ranging from \$2.75 to \$7.00.

Firms were again asked what they expected oil and natural gas prices to be in six months, one year, two years, and five years. Expected oil prices were slightly higher than Q3 2019, but similar to Q1 2019 price expectations. The average expected WTI prices were \$60, \$62, \$65, and \$71 per barrel, respectively. Expectations for natural gas prices decreased from last quarter. The average expected Henry Hub natural gas prices were \$2.38, \$2.49, \$2.69, and \$3.09 per million Btu, respectively.

Firms were also asked about their cash flow expectations for 2020 compared to 2019 (Chart 3). Nearly 37 percent of surveyed firms indicated they anticipate higher cash flow for 2020 compared to 2019, while 33 percent expect it will be down, and 30 percent expect no material change.

Finally, respondents were asked in what quarter they expect the U.S. rig count to begin rising again (Chart 4). Over 20 percent predicted an uptick in rig counts in Q2 2020 and 25 percent expected the U.S. rig count to increase in Q3 2020. However, over 33 percent reported they do not believe the rig count will increase in 2020 and listed timeframes extending into 2021 or later.

Selected Energy Comments

“We have an abundant supply of natural gas. The shale production has produced a lot of gas with the oil. In some instances companies have had to pay people to take the gas (negative price). We need more infrastructure (pipe lines).”

“I see a stable supply of oil and limited demand growth.”

“Abundant supply of oil and there is lots of spare capacity in the world to produce more oil.”

“It seems like US shale is the swing producer of crude and that a long term price of \$65 will keep the market balanced for the foreseeable future.”

“Middle East conflicts/demand are driving our expectations.”

“OPEC+ desires a higher price and have made cuts to achieve the same. Markets are slowly reaching a balance.”

“The mid-continent infrastructure is fading rapidly. No people, no services, no investment, no oil.”

“New technology and techniques, along with better coordination with the drilling team, have decreased completion times.”

“An uptick in pricing will lead to a small pickup [in rig count]. There are a few on the sidelines who’ve waited for price stability.”

“Current rig efficiency should keep a large recovery in rig count from increasing anytime soon.”

“Credit is drying up for large exploration companies. Less capital is on hand for exploration.”

“Production declines will push E&P customers to start to complete previously drilled wells and start to build inventory of uncompleted wells.”

Table 1
Summary of Tenth District Energy Conditions, Quarter 4, 2019

	Quarter 4 vs. Quarter 3 (percent)*				Quarter 4 vs. Year Ago (percent)*				Expected in Six Months (percent)*			
	No	Diff	Increase	Decrease	No	Diff	Increase	Decrease	No	Diff	Increase	Decrease
Energy Company Indicators												
Drilling/Business Activity	12	27	61	-48	9	31	59	-50	25	34	41	-16
Total Revenues	42	21	36	6	32	16	52	-19	39	35	26	13
Capital Expenditures					34	19	47	-13	28	31	41	-13
Supplier Delivery Time	3	87	10	-6	6	74	19	-13	0	77	23	-23
Total Profits	24	30	45	-21	30	9	61	-30	36	27	36	0
Number of Employees	15	71	15	0	18	45	36	-18	13	59	28	-16
Employee Hours	15	59	26	-12	15	52	33	-18	9	64	27	-18
Wages and Benefits	18	73	9	9	28	47	25	3	16	61	23	-6
Access to Credit	3	74	24	-21	9	66	25	-16	12	67	21	-9
Expected Oil Prices									34	59	6	28
Expected Natural Gas Prices									9	75	16	-6
Expected Natural Gas Liquids Prices									23	65	13	10

*Percentage may not add to 100 due to rounding.

^Diffusion Index. The diffusion index is calculated as the percentage of total respondents reporting increases minus the percentage reporting declines.

Note: The fourth quarter survey ran from December 16 to December 31, 2019 and included 34 responses from firms in Colorado, Kansas, Nebraska, Oklahoma, Wyoming, northern New Mexico, and western Missouri.

Chart 1. Drilling/Business Activity Index vs. a Quarter Ago

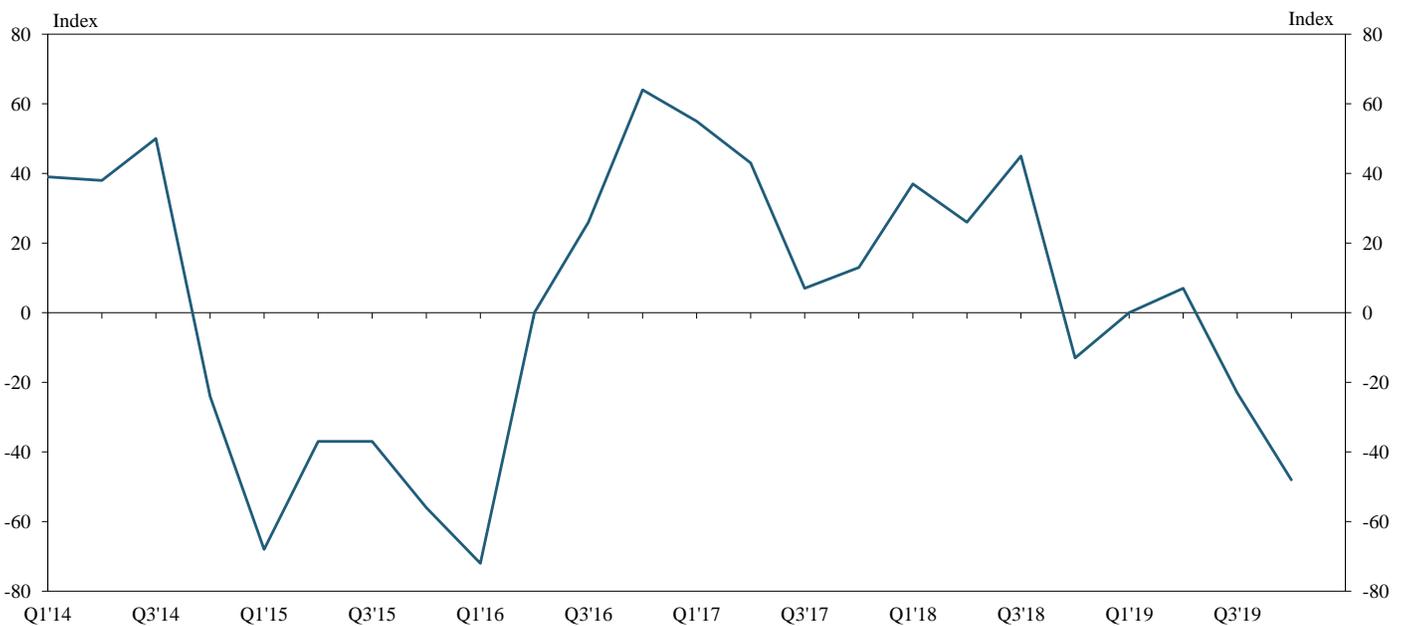


Table 2
Historical Energy Survey Indexes

	Q4'16	Q1'17	Q2'17	Q3'17	Q4'17	Q1'18	Q2'18	Q3'18	Q4'18	Q1'19	Q2'19	Q3'19	Q4'19
<i>Versus a Quarter Ago</i>													
(not seasonally adjusted)													
Drilling/Business Activity	64	55	43	7	13	37	26	45	-13	0	7	-23	-48
Total Revenues	62	52	20	23	39	50	53	50	6	13	-14	-10	6
Capital Expenditures	n/a												
Supplier Delivery Time	-7	4	11	-10	-4	19	16	7	0	3	7	-7	-6
Total Profits	42	41	3	21	29	50	53	37	-18	6	-18	-23	-21
Number of Employees	26	31	23	17	19	20	29	23	9	3	0	-10	0
Employee Hours	20	16	20	0	19	24	24	23	6	6	0	0	-12
Wages and Benefits	17	13	20	7	16	34	39	33	30	28	15	10	9
Access to Credit	0	3	-3	13	0	3	15	10	-19	-10	-7	-6	-21
<i>Versus a Year Ago</i>													
Drilling/Business Activity	41	59	70	44	54	54	41	57	17	17	-11	-21	-50
Total Revenues	15	52	62	37	56	68	56	61	50	23	-22	-7	-19
Capital Expenditures	14	43	59	50	50	68	58	62	27	3	4	-10	-13
Supplier Delivery Time	-14	-4	11	-14	-7	19	16	10	3	3	7	-21	-13
Total Profits	23	55	59	21	38	53	50	47	42	6	-24	-13	-30
Number of Employees	-7	13	31	23	40	31	36	27	27	24	4	-13	-18
Employee Hours	3	0	28	10	27	30	34	31	19	16	3	-17	-18
Wages and Benefits	17	9	31	37	34	48	69	67	55	47	43	33	3
Access to Credit	-17	13	-3	20	7	0	15	25	9	3	-7	0	-16
<i>Expected in Six Months</i>													
(not seasonally adjusted)													
Drilling/Business Activity	73	57	26	30	33	50	61	50	-19	17	-26	-21	-16
Total Revenues	67	52	18	44	44	52	50	56	-23	47	-4	4	13
Capital Expenditures	79	37	19	37	43	56	48	43	-13	19	-4	-17	-13
Supplier Delivery Time	-7	11	4	-11	-11	15	17	-4	9	14	14	-14	-23
Total Profits	76	45	12	28	43	53	48	59	-27	35	-7	-10	0
Number of Employees	32	16	21	20	21	34	33	21	15	14	0	-3	-16
Employee Hours	28	16	21	17	27	43	31	17	3	13	-4	-10	-18
Wages and Benefits	52	23	7	30	50	34	39	34	42	28	15	17	-6
Access to Credit	3	0	4	10	14	3	6	30	3	0	-3	-10	-9
Expected Oil Prices	72	3	4	54	50	31	12	48	29	34	15	32	28
Expected Natural Gas Prices	26	6	3	24	28	3	21	20	-33	3	10	23	-6
Expected Natural Gas Liquids Prices	64	14	21	38	30	7	27	32	-3	18	-7	13	10
<i>Special Price Questions</i>													
(averages)													
Profitable WTI Oil Price (per barrel)		\$51		\$51		\$52		\$55		\$52		\$55	
WTI Price to Substantially Increase Drilling	\$60		\$56		\$62		\$69		\$63		\$66		\$65
WTI Price Expected in 6 Months		\$51	\$47	\$52	\$58	\$63	\$67	\$71	\$54	\$60	\$57	\$58	\$60
WTI Price Expected in 1 Year		\$54	\$49	\$55	\$60	\$64	\$70	\$72	\$59	\$61	\$60	\$60	\$62
WTI Price Expected in 2 Years		\$60	\$54	\$58	\$62	\$66	\$73	\$73	\$61	\$65	\$63	\$63	\$65
WTI Price Expected in 5 Years		\$69	\$61	\$65	\$70	\$72	\$78	\$79	\$66	\$72	\$70	\$69	\$71
Profitable Natural Gas Price (per million BTU)		\$3.38		\$3.05		\$2.92		\$3.23		\$3.02		\$2.91	
Natural Gas Price to Substantially Increase Drilling	\$3.97		\$3.65		\$3.59		\$3.60		\$3.48		\$3.40		\$3.66
Henry Hub Price Expected in 6 Months		\$2.85	\$3.05	\$3.01	\$2.88	\$2.70	\$2.85	\$2.89	\$3.06	\$2.85	\$2.52	\$2.59	\$2.38
Henry Hub Price Expected in 1 Year		\$3.01	\$3.06	\$3.11	\$3.10	\$2.83	\$2.90	\$2.92	\$3.12	\$2.91	\$2.59	\$2.58	\$2.49
Henry Hub Price Expected in 2 Years		\$3.22	\$3.25	\$3.30	\$3.30	\$2.98	\$3.05	\$3.10	\$3.23	\$3.05	\$2.79	\$2.81	\$2.69
Henry Hub Price Expected in 5 Years		\$3.64	\$3.51	\$3.73	\$3.65	\$3.33	\$3.34	\$3.42	\$3.54	\$3.18	\$3.16	\$3.20	\$3.09

Chart 2. Special Question - What price is currently needed for a substantial increase in drilling to occur for oil and natural gas, and what do you expect the WTI and Henry Hub prices to be in six months, one year, two years, and five years?

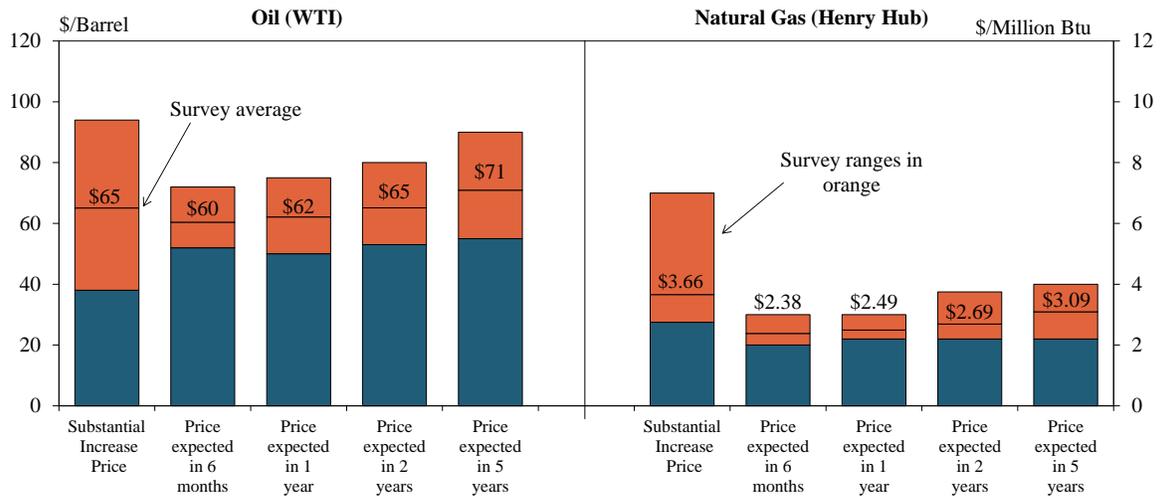


Chart 3. Special Question - What are your firm's cash flow expectations for 2020 compared to 2019?

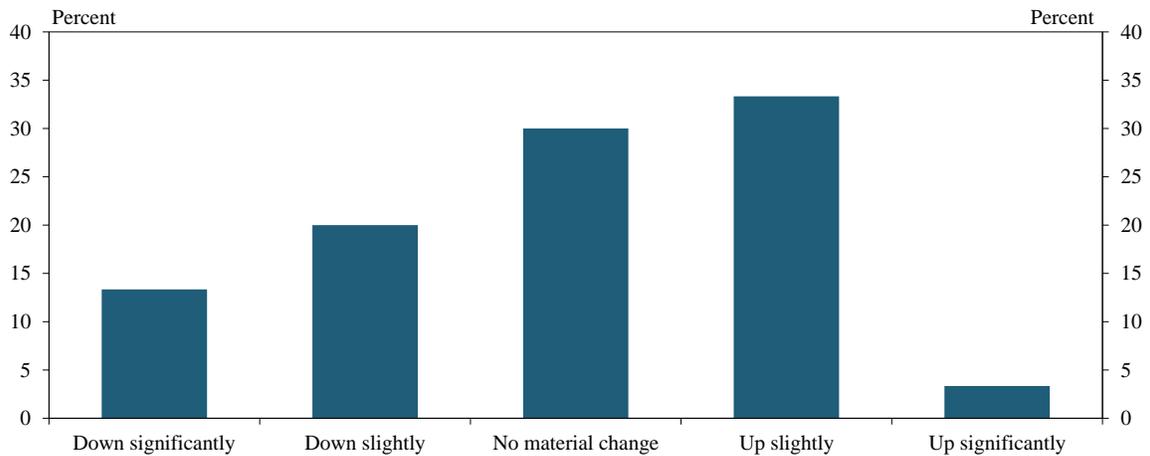


Chart 4. Special Question - In what quarter does your firm expect the U.S. rig count to begin rising again?

