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TENTH DISTRICT ENERGY ACTIVITY DECREASED MODERATELY

Federal Reserve Bank of Kansas City Releases Third Quarter Energy Survey

KANSAS CITY, Mo. –The Federal Reserve Bank of Kansas City released the third 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 decreased moderately and expectations for future activity continued to decline.

“Firms indicated the level of energy prices was the main constraint on their activity and plans,” said Wilkerson. “The average profitable price for oil rose slightly in Q3 and was similar to recent and expected oil prices, while natural gas prices remained below profitable levels.”

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

Third quarter energy survey results revealed Tenth District energy activity decreased moderately and expectations for future activity continued to decline. Firms reported that oil prices needed to be on average \$55 per barrel for drilling to be profitable, up slightly from six months ago.

Summary of Quarterly Indicators

Tenth District energy activity decreased moderately in the third quarter of 2019, as indicated by firms contacted between September 16th and September 30th, 2019 (Tables 1 & 2). The drilling and business activity index fell from 7 to -23, indicating a significant drop in activity following a slight expansion in Q2 2019 (Chart 1). The wages and benefits index remained positive and the employee hours index remained flat. However, the revenues, supplier delivery time, profits, employment, and access to credit indexes all decreased.

Most year-over-year indexes fell as well. The year-over-year drilling and business activity index dipped further, from -11 to -21. Indexes for capital expenditures, delivery time, employment, and employee hours dropped into negative territory. However, year-over-year indexes for revenues and profits declined at a slower rate, and the access to credit index was flat. While the growth rate of the year-over-year wages and benefits index eased from last quarter, it was still highly positive.

Expectation indexes remained mostly negative. The future drilling and business activity index was -21, following a reading of -26 in Q2. The future capital expenditures, profits, employee hours, and access to credit indexes decreased further from last quarter. The future revenues and wages and benefits indexes increased, while the future delivery time and employment indexes turned negative. Meanwhile, the price expectations indexes all increased for oil and natural gas, and the price expectations index for natural gas liquids rose back up into positive territory.

Summary of Special Questions

This quarter firms were asked what oil and natural gas prices were needed for drilling to be profitable on average across the fields in which they are active (in alternate quarters they are asked what price they need for a substantial increase in drilling). The average oil price needed was \$55 per barrel, with a range from \$35 to \$75 (Chart 2). This average was up slightly from \$52 in the first quarter of 2019 and matched the price reported in the third quarter of 2018. The average natural gas price needed for profitability was \$2.91 per million Btu, with responses ranging from \$1.25 to \$4.00. For natural gas, this average was quite a bit lower than \$3.02 in the first quarter of 2019 and \$3.23 reported in the third quarter of 2018.

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 relatively similar to Q2 2019, but were still above price expectations from late 2018. The average expected WTI prices were \$58, \$60, \$63, and \$69 per barrel, respectively. Expectations for natural gas prices rebounded slightly from last quarter. The average expected Henry Hub natural gas prices were \$2.59, \$2.58, \$2.81, and \$3.20 per million Btu, respectively.

Firms were also asked about constraints limiting near-term growth in activity in the top areas where their firm is active (Chart 3). 60 percent of surveyed firms indicated that current low prices for oil and gas were the main constraints limiting near-term growth. Contacts also reported investor pressures for free cash flow, limited access to capital credit, lack of natural gas pipeline capacity, and problems finding workers as primary or secondary constraints to near-term growth.

Finally, respondents were asked about how trade tensions (tariffs) affected their business and expectations for the future. Around 70 percent of firms reported slightly or significantly negative effects from trade tensions on their business in the past year. A similar share of firms anticipated negative effects from trade policy on their business in 2020 (Chart 4).

Selected Energy Comments

“I think the U.S. oil supply will continue to increase but at a lower rate than previous years - so prices for future supply coming online will be lower.”

“There is still an oil glut and global demand growth is tepid. We may begin to see results from the current capital restrictions sometime in late 2020. Middle East is strictly a wildcard at this point.”

“There is still much oil supply, but I anticipate a slowdown in U.S. production due to tight margins resulting in some upward movement in prices.”

“Declining shale production, fewer U.S. oil & gas companies exploring for new production, and lack of new resource plays factor into our price expectations”

“There is an overabundance of natural gas. In some regions they are having to pay people to take it. More infrastructure is needed.”

“I see an abundant supply of natural gas in the US and break-even prices for gas are very low in certain areas along with associated natural gas being produced along with oil. So overall too much supply available.”

“Prices are too low currently and will shut off more and more natural gas directed drilling. Declines are very high and once enough rigs drop, we will see HH prices start to really climb... gas that can get to Gulf Coast will sell for a premium.”

“Foreign demand for ethanol has significantly decreased from trade tensions.”

“Steel prices have gone up from tariffs which has added to our costs.”

“Costs of imported goods have increased - steel, artificial lift, etc. from trade tensions.”

“I believe oil is a couple dollars a barrel lower than it would be without trade tensions.”

“We need to finalize a trade deal with China to support global growth”

Table 1
Summary of Tenth District Energy Conditions, Quarter 3, 2019

	Quarter 3 vs. Quarter 2 (percent)*				Quarter 3 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	13	50	37	-23	24	31	45	-21	21	38	41	-21
Total Revenues	21	48	31	-10	36	21	43	-7	30	44	26	4
Capital Expenditures					27	37	37	-10	24	34	41	-17
Supplier Delivery Time	3	86	10	-7	7	66	28	-21	3	79	17	-14
Total Profits	16	45	39	-23	33	20	47	-13	23	43	33	-10
Number of Employees	10	70	20	-10	23	40	37	-13	20	57	23	-3
Employee Hours	10	81	10	0	10	63	27	-17	10	70	20	-10
Wages and Benefits	16	77	6	10	43	47	10	33	23	70	7	17
Access to Credit	6	81	13	-6	13	74	13	0	7	77	17	-10
Expected Oil Prices									39	54	7	32
Expected Natural Gas Prices									30	63	7	23
Expected Natural Gas Liquids Prices									33	47	20	13

*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 third quarter survey ran from September 16 to September 30, 2019 and included 31 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

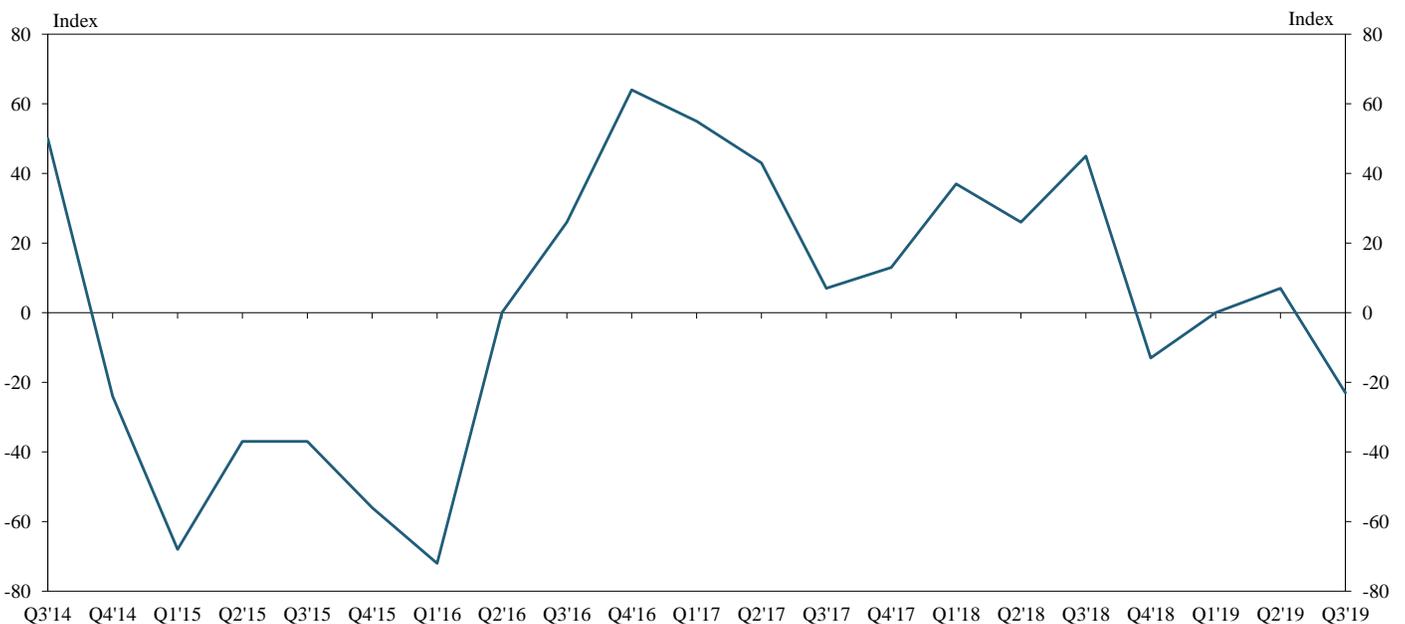


Table 2
Historical Energy Survey Indexes

	Q3'16	Q4'16	Q1'17	Q2'17	Q3'17	Q4'17	Q1'18	Q2'18	Q3'18	Q4'18	Q1'19	Q2'19	Q3'19
<i>Versus a Quarter Ago</i>													
(not seasonally adjusted)													
Drilling/Business Activity	26	64	55	43	7	13	37	26	45	-13	0	7	-23
Total Revenues	5	62	52	20	23	39	50	53	50	6	13	-14	-10
Capital Expenditures	n/a												
Supplier Delivery Time	-8	-7	4	11	-10	-4	19	16	7	0	3	7	-7
Total Profits	-10	42	41	3	21	29	50	53	37	-18	6	-18	-23
Number of Employees	-11	26	31	23	17	19	20	29	23	9	3	0	-10
Employee Hours	-10	20	16	20	0	19	24	24	23	6	6	0	0
Wages and Benefits	-22	17	13	20	7	16	34	39	33	30	28	15	10
Access to Credit	-5	0	3	-3	13	0	3	15	10	-19	-10	-7	-6
<i>Versus a Year Ago</i>													
Drilling/Business Activity	-21	41	59	70	44	54	54	41	57	17	17	-11	-21
Total Revenues	-31	15	52	62	37	56	68	56	61	50	23	-22	-7
Capital Expenditures	-58	14	43	59	50	50	68	58	62	27	3	4	-10
Supplier Delivery Time	-11	-14	-4	11	-14	-7	19	16	10	3	3	7	-21
Total Profits	-49	23	55	59	21	38	53	50	47	42	6	-24	-13
Number of Employees	-50	-7	13	31	23	40	31	36	27	27	24	4	-13
Employee Hours	-37	3	0	28	10	27	30	34	31	19	16	3	-17
Wages and Benefits	-33	17	9	31	37	34	48	69	67	55	47	43	33
Access to Credit	-30	-17	13	-3	20	7	0	15	25	9	3	-7	0
<i>Expected in Six Months</i>													
(not seasonally adjusted)													
Drilling/Business Activity	21	73	57	26	30	33	50	61	50	-19	17	-26	-21
Total Revenues	6	67	52	18	44	44	52	50	56	-23	47	-4	4
Capital Expenditures	9	79	37	19	37	43	56	48	43	-13	19	-4	-17
Supplier Delivery Time	-8	-7	11	4	-11	-11	15	17	-4	9	14	14	-14
Total Profits	5	76	45	12	28	43	53	48	59	-27	35	-7	-10
Number of Employees	-22	32	16	21	20	21	34	33	21	15	14	0	-3
Employee Hours	-8	28	16	21	17	27	43	31	17	3	13	-4	-10
Wages and Benefits	3	52	23	7	30	50	34	39	34	42	28	15	17
Access to Credit	-6	3	0	4	10	14	3	6	30	3	0	-3	-10
Expected Oil Prices	49	72	3	4	54	50	31	12	48	29	34	15	32
Expected Natural Gas Prices	44	26	6	3	24	28	3	21	20	-33	3	10	23
Expected Natural Gas Liquids Prices	31	64	14	21	38	30	7	27	32	-3	18	-7	13
<i>Special Price Questions</i>													
(averages)													
Profitable WTI Oil Price (per barrel)	\$53		\$51		\$51		\$52		\$55		\$52		\$55
WTI Price to Substantially Increase Drilling		\$60		\$56		\$62		\$69		\$63		\$66	
WTI Price Expected in 6 Months			\$51	\$47	\$52	\$58	\$63	\$67	\$71	\$54	\$60	\$57	\$58
WTI Price Expected in 1 Year			\$54	\$49	\$55	\$60	\$64	\$70	\$72	\$59	\$61	\$60	\$60
WTI Price Expected in 2 Years			\$60	\$54	\$58	\$62	\$66	\$73	\$73	\$61	\$65	\$63	\$63
WTI Price Expected in 5 Years			\$69	\$61	\$65	\$70	\$72	\$78	\$79	\$66	\$72	\$70	\$69
Profitable Natural Gas Price (per million BTU)	\$3.45		\$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	
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
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
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
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

Chart 2. Special Question - What price is currently needed for drilling to be profitable 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?

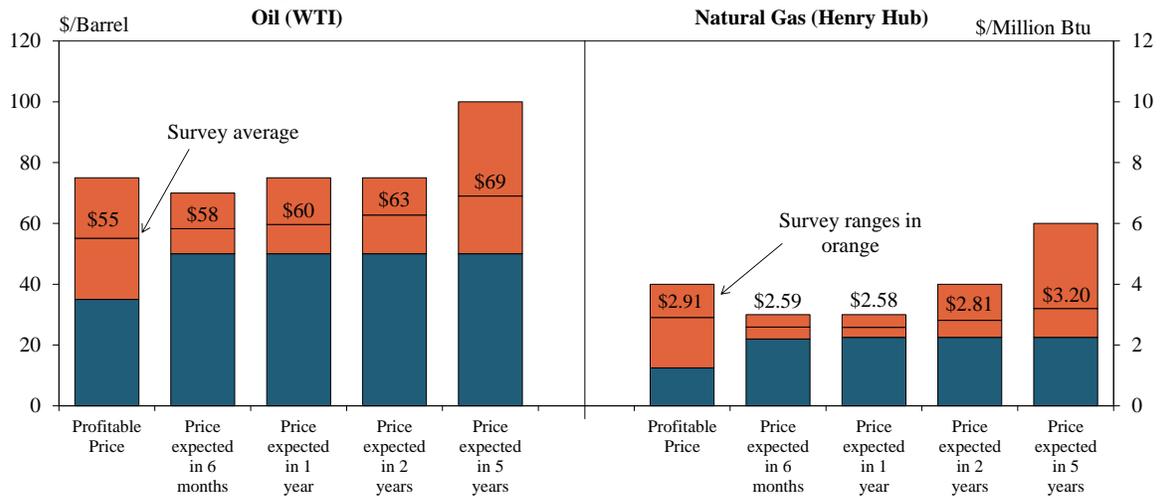


Chart 3. Special Question - Which of the following is the main constraint that is limiting near-term growth in activity in the top area in which your firm is active? Secondary constraint?

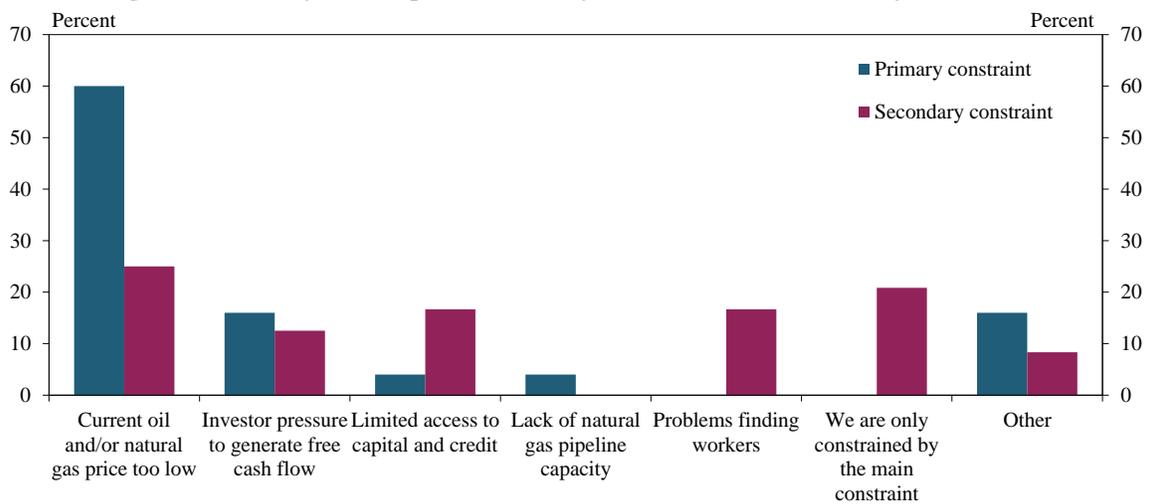


Chart 4. Special Question - How have trade tensions (tariffs) affected your business in the last year and how do you anticipate trade policy will affect your business in 2020?

