MERCER CAPITAL

BUSINESS VALUATION & FINANCIAL ADVISORY SERVICES

VALUE FOCUS

Exploration & Production

Fourth Quarter 2018

REGION FOCUS

Appalachia

As the new year begins, we turn our attention to the Appalachia region, and not by coincidence. Cooler temperatures in the winter months tend to lead to increased natural gas prices and consumption, and the Appalachia region is the largest natural gas producer in the country. Fourth quarter energy prices exhibited considerable volatility. Crude prices declined steadily over the period, and natural gas prices increased from about $3.0 per Mcf to a peak of $4.84 in mid-November before declining to $2.94 at year-end.

MERCER CAPITAL

Oil and Gas Industry Services

Mercer Capital provides business valuation and financial advisory services to companies in the energy industry.

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- Transaction advisory for acquisitions and divestitures
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- Litigation support for economic damages and valuation and shareholder disputes

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- Exploration & Production
- Oil Field Services
- Midstream Operations
- Alternative Energy

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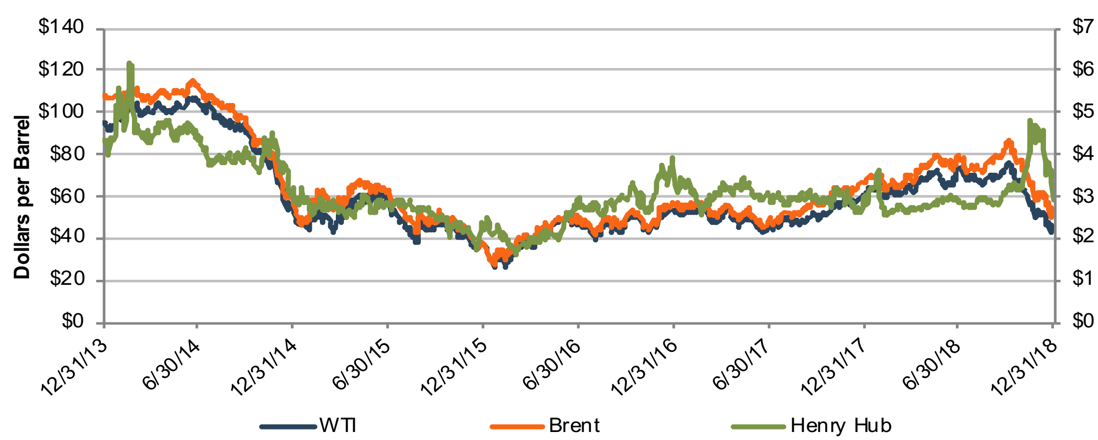
E&P Industry

Oil and Gas Commodity Prices

In the fourth quarter of 2018, U.S. crude oil prices plunged by 40%, from $75 per barrel at the beginning of the quarter to $45 at the end of December. The sanction on Iran, OPEC's third largest producer, seemed to be the last push to higher prices in late September. The recovery since 2016 had been primarily driven by the supply side of the equation: OPEC's production cut, lower inventory, and geopolitical tensions such as Iran and Venezuela. The years-long recovery ended in just three months. The reasons include concerns about swelling U.S. shale output, rising crude oil inventories, inconsistency in Russia and OPEC's execution of their production deal, and fears of global economic slowdown. OPEC's deal with Russia to cut 1.2 million barrels per day during the December 6-7 meeting couldn't stop oil prices from falling. The sharp decline once again proved higher prices driven by supply almost always have a difficult time lasting.

Crude Oil and Natural Gas Prices



Source: Bloomberg

E&P Industry

Oil and Gas Commodity Prices (Continued)

Natural gas prices soared to $4.8 per Mcf in mid-November due to several factors including an early and colder winter hitting North America. In its December edition of the *Short-Term Energy Outlook*, the EIA reported the price of Henry Hub averaged $4.15/MMBtu in November, up 27% from October. It attributed this increase to colder temperatures and lower inventory levels. Higher inventory helps to smooth price volatility in the energy market, but U.S. natural gas inventories began the season at a 15-year low. Increased production, spurred by the season and higher prices, has increased supply to meet demand to a degree. Milder weather forecasts and energy substitutes (coal) have reined in prices as well.

The price spike was also due in part to short covering by hedge funds in response to the rapid decline in crude prices. Worried investors diverted funds from oil to gas to compensate for accumulating losses in oil. Given the smaller nature of the gas market compared to oil, there was an uptick in activity and prices. Quickly rising prices led to an overbought market that subsequently corrected and has been trending downward with trading volume throughout the end of the year.

It is relatively rare to see the inverse relationship between crude oil and natural gas prices. A more than 50% increase in natural gas prices was coupled with nearly 30% downturn in crude oil prices during a seven-week period from early October to mid-November. Long oil short natural gas, **once a popular trade by speculators**, was punished during this unusual period of time. Natural gas prices ended the year at $2.94 per Mcf, a 2.3% decrease for the fourth quarter and essentially flat for the year. This roller coaster ride means that there are few long-term supply issues in natural gas in North America.

E&P Industry

Outlook for 2019

It was a dramatic quarter for the industry. The fourth quarter of 2018 marked the end of the two and a half-year oil price recovery that began in 2016, while natural gas prices reached their highest point since 2014. Volatility disrupted capital intensive industries in general. However, many producers make capex decisions based on long-term expectations. The latest **World Bank commodities price forecast** released on October 29, 2018 shows Brent crude will average $74.0 in 2019 and approximately $69.2 from 2020 to 2023.

According to the December ***Short-Term Energy Outlook***, the EIA expects global liquid fuels consumption to increase by 1.5 million barrels per day in 2019, with growth largely coming from China, the U.S., and India. U.S.-China trade tensions remain high entering 2019 and have shaken up most (if not all) industries, and oil and gas is no exception. China ranks the second largest in terms of oil consumption and **surpassed the U.S.** as the world's largest crude oil importer in 2017. Slower growth in China is looming for the demand side of crude oil. In 2019, the continuation of worldwide central banks tightening pressures global economic growth and the prices of assets and commodities. Higher rig counts and higher capital expenditures by major oil & gas companies worldwide during the recovery also cause concerns of oversupply. **Baker Hughes** data as of December 28, 2018 shows the U.S. total rig count stood at 1,083, 16.6% higher than last year.

E&P Industry

Outlook for 2019 (Continued)

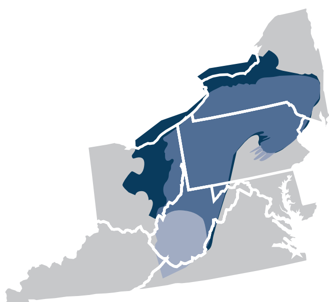
In 2019, it is expected that the U.S. will continue to lead the growth in oil supply worldwide. Improving pipeline capacity and the combination of horizontal drilling and hydraulic fracturing continue to drive higher and more efficient production in the U.S. **According to the EIA**, U.S. crude oil production recently set a record of 11.5 million barrels per day in September 2018. For one week in November 2018, the U.S. was a **net exporter** of crude oil and petroleum products. EIA expects U.S. crude oil production will average 10.9 million barrels per day in 2018, up from 9.4 million barrels per day in 2017, and will average 12.1 million barrels per day in 2019.

U.S. LNG daily production hit a record high of 5.28 Bcf the week of Christmas, **according to S&P Global Platts**. Large-scale **additions to production capacity** in 2018 included Shell's Prelude and Inpex' Ichthys, both offshore Australia, and Novatek expanded its Yamal LNG facility, while demand is slowing in Asia, the biggest LNG market in the world. Europe is likely to play the key role in absorbing the additional production given geopolitical factors, pipeline capacity issues, and the controversial **Nord Stream 2**. Also, **Gazprom's contract** for gas transit via Ukraine is expiring at the end of this year and surprises during negotiations are always possible among Russia, Ukraine, and Europe.

The EIA expects Brent spot prices will average $61 per barrel in 2019 and that West Texas Intermediate (WTI) crude oil prices will average about $7 dollar per barrel lower than Brent prices next year. Henry Hub natural gas spot prices are expected to average $3.11/MMBtu in 2019. With ongoing oversupply concerns, stabilizing geopolitical tensions, and lower forecasts for global oil demand, it appears 2019 oil prices have a long way to recover to previous highs in 2018.

Appalachian Basin

Appalachian Ethane Storage Hub



The economics of oil and gas production varies by region. Mercer Capital focuses on trends in the Eagle Ford, Permian, Bakken, and Appalachia. The cost of producing oil and gas depends on the geological makeup of the reserve, depth of reserve, and cost to transport the raw crude to market. We can observe different costs in different regions depending on these factors. This quarter we take a closer look at the Appalachia region.

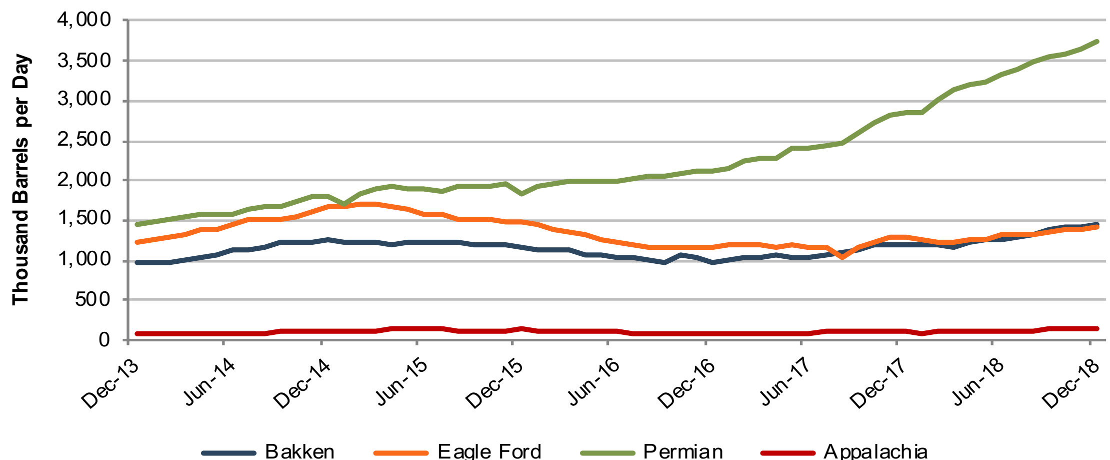
At the beginning of December, the U.S. Department of Energy **published a report to Congress** on the feasibility of establishing an ethane storage and distribution hub in the United States, specifically, the Appalachia region. The report noted that significant production growth is expected to occur in the Permian and Appalachia, though the latter trails the former in terms of current infrastructure **(95% of ethane storage in the U.S. is located near the Gulf Coast)**. Storage hubs balance seasonal supply and demand variations, and are crucial to smooth volatility, as evidenced by the November activity. The report notes that a distribution hub near the Marcellus and Utica plays would help allay geographic concentration risk along the Gulf Coast which is susceptible to severe weather events (e.g. Hurricanes Harvey and Irma). While such a hub would provide a competitive advantage, the report crucially notes it would not be in conflict with further expansion of infrastructure in the Gulf Coast.

U.S. Secretary of Energy Rick Perry, who signed the report said, "There is an incredible opportunity to establish an ethane storage and distribution hub in the Appalachian region and build a robust petrochemical industry in Appalachia." While the report focused on the economic benefits of a hub, detractors note the lack of consideration of environmental costs. It remains to be seen how this will impact production and pricing in the region, but it would undoubtedly be a boon for the region and the industry.

Appalachian Basin

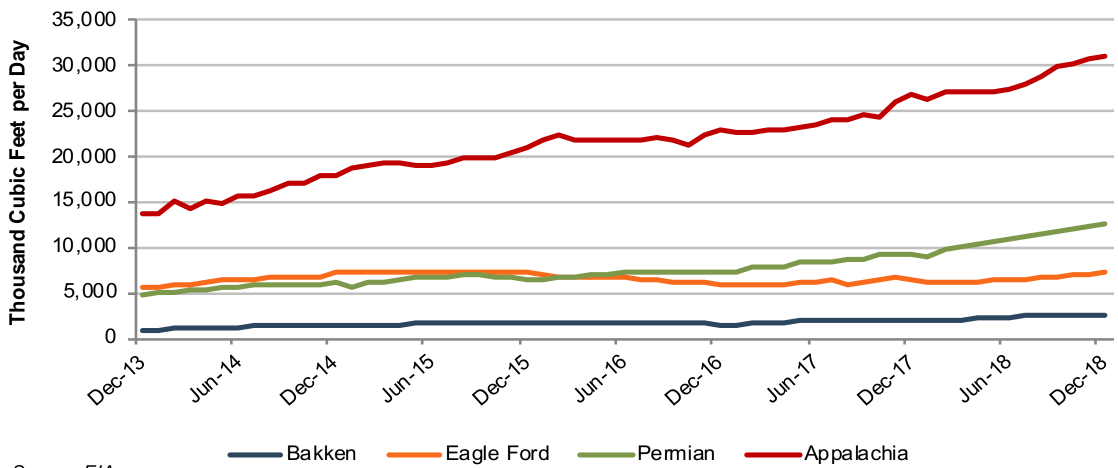
Production

Daily Production of Crude Oil



Source: EIA

Daily Production of Natural Gas



Source: EIA

Appalachian Basin

Production (Continued)

According to calculations based on data from Baker Hughes, rig counts in North America increased 2.8% in the last three months and 16.6% over the last twelve months. The Permian Basin led the way and currently has approximately 500 rigs, representing about 46% of total rigs in the U.S. By comparison, the Appalachia region has had below 80 rigs since July 2015 though it has remained relatively consistent and above 70 since last May.

Oil production in the Marcellus and Utica plays has increased by 45.1% in the past year, a growth rate even higher than the Permian. Though production has spiked, particularly in the second half of the year (up 34.8% since June alone), it's important to recognize the magnitude: Appalachia significantly lags the other regions in terms of total oil production.

Natural gas is the major focus of the region, where production has increased 15.5% in the past year, trailing both the Permian (34.1%) and the Bakken (25.1%). Again, size plays a role in these growth figures as Appalachia has about 2.5x the natural gas production than the next largest play, the Permian. **A deeper dive** into the drilled but uncompleted wells (DUCs) tells a slightly different story, however, with the inventory of these wells declining 17% in the region over the past 12 months. This could temper the rate of growth for production for the region in 2019 if drilling doesn't increase.

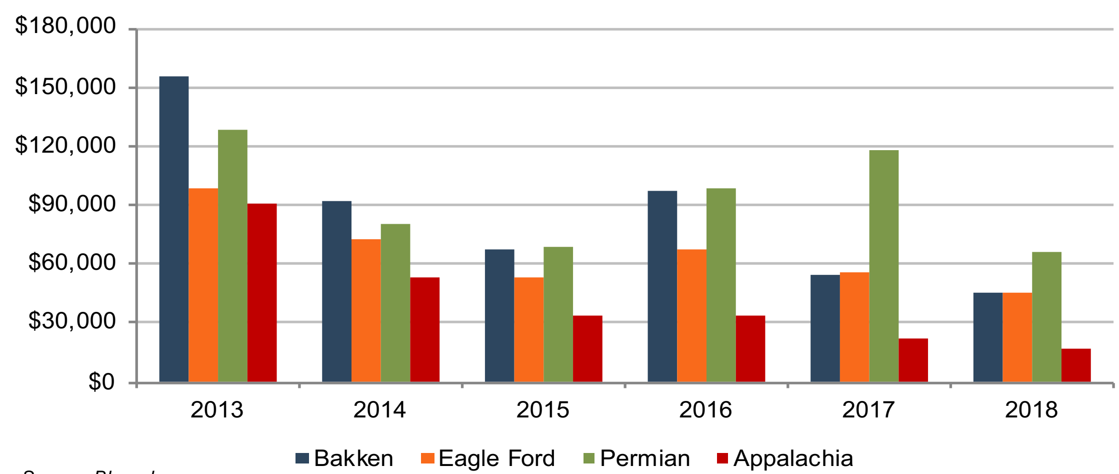
Appalachian Basin

Valuation Implications

Appalachia has consistently lagged the other regions in terms of EV/production multiples, also known as price per flowing barrel.[1] The Permian took center stage in 2017 but is now more in line with the rest of the pack. The lower multiple seen in Appalachia is largely due to declines in enterprise values, though increasing production has played a role as well. With extreme price volatility in the fourth quarter and price declines forecast by the EIA for 2019, key players in the region are seeing lower stock prices.

Range Resources is the largest natural gas producer in the Marcellus, but it has not seen a positive impact from higher prices over the past few months. The company's share price has dropped further than the overall market, but this is not solely attributable to swings in natural gas prices. Range's share price has dropped along with the recent slide, but it **did not get the same treatment** when the market spiked in mid-November. Since its long-term debt obligations do not begin to mature until 2021, the drop in share price has had a significant impact on its enterprise value. **Range is uniquely positioned** with capacity on the Mariner East 1 pipeline that will allow it to tap into the rising global demand for NGLs, so there is potentially an upside to its current price.

Price per Flowing Barrel



Source: Bloomberg

[1] Calculations based on monthly crude oil and gas production and EIA drilling report by region.

Appalachian Basin

Market Valuations & Transaction Activity

The domestic natural gas market has benefitted from large expansion in recent years, and this can be largely attributed to the growth experienced in Appalachia. **According to a Deloitte study,** Appalachia was the world's 32nd-largest natural gas producing region in 2007, with levels comparable to Bolivia and Kazakhstan. As of 2017, it was the third largest, trailing only the full United States and Russia.

Henry Hub prices have been hovering around $3/MMBtu for over three years, even with the recent price spike. Despite the long term low price environment, supply and demand have increased, driven primarily by the increased demand needs from the power sector. Economic viability of recoverability has not been impacted in light of the lower prices as **Deloitte estimates** that 50 years' worth of natural gas can be recovered for less than $3/Mcfe.

Despite the continued growth, transaction activity in the Marcellus-Utica in 2018 was slower than 2017. Some companies have been moving in to capitalize on the increased demand for natural gas, **as indicated by the energy outlook by the EIA**, while others are restructuring their balance sheets in order to focus primarily on oil. While companies may not be rushing to the Marcellus-Utica in a similar manner as the Permian, companies already with an established presence are planning to put more wells online in the coming year and increase infrastructure to supply a growing demand in the natural gas market.

Details of recent transactions in the Marcellus-Utica, including some comparative valuation metrics are shown on page 10. Overall, deal count and average deal size has decreased from twelve months ago. There have been a handful of large deals though, demonstrating increased interest in the area.

Transactions in Appalachia

Announced Date	Buyer	Seller	Deal Value ($MM)	$ / Acre	$ / Boepd
11/21/18	Kimbell Royalty Partners LP	Undisclosed Seller	$108	$6,455	$90,588
10/15/18	Undisclosed Buyer	Range Resources Corp	$300	$1,000	$1,059
10/11/18	Diversified Gas & Oil	Core Appalachia	$183	$141	$17,319
8/29/18	Pennenergy Resources LLC	Rex Energy Corp	$601	$2,901	$14,412
8/27/18	Eclipse Resources Corp.	Blue Ridge Mountain Resources Inc.	$350	$3,933	$15,789
7/26/18	Encino Acquisition Partners	Chesapeake Energy Corp	$2,000	$2,222	$20,000
6/29/18	Ascent Resources LLC	Salt Fork Resources, LLC, Utica Minerals Development	$700	$19,774	nm
6/29/18	Ascent Resources LLC	Hess Corp, CNX Resources	$800	$10,256	$57,143
6/14/18	Diversified Gas & Oil	EQT Corp	$575	$230	$17,913
3/15/18	Xpr Resources LLC	Rex Energy Corp	$17	$1,686	$12,585
3/5/18	Undisclosed Buyer	PDC Energy, Inc.	$40	$615	$17,575
1/29/18	Undisclosed Buyer	Blue Ridge Mountain Resources Inc.	$56	$2,667	nm
Median			**$325**	**$2,444**	**$17,447**
Average			**$477**	**$4,323**	**$26,438**

Source: Shale Experts
**Does not include every transaction in each region for 2018*

Appalachian Basin

Market Valuations & Transaction Activity (Continued)

Ascent Resources Acquires 113,400 Acres in Ohio

Ascent Resources, a company founded by Aubrey McClendon after he left Chesapeake Energy, **announced that it is buying** 113,400 Utica Shale acres in multiple deals along with 93 operating wells located in eastern Ohio for a total of $1.5 billion. The new acreage puts Ascent at over 300,000 Utica acres and catapults the company into one of the largest privately owned E&P drillers in the U.S. The selling companies are CNX Resources and Hess (each selling their share of a joint venture for $400 million each), Utica Minerals Development and a fourth, unnamed seller.

The CNX and Hess JV sale marks a complete exit in the play, and both companies plan to utilize proceeds to fund share repurchase programs, pay down debt, and focus on growth opportunities in other established plays, such as the Bakken.

Chesapeake Energy Sells Entire Utica Position to Encino

In an even larger deal, Chesapeake Energy disposed of its entire interest in the Utica Shale to Encino Acquisition Partners for about $2 billion. EAP is backed by the Canadian Pension Plan Investment Board and Encino Energy. Chesapeake sold its stake in the Utica shale to strengthen its balance sheet and further shift its focus from gas production to oil. **Chesapeake CEO Doug Lawler said in an interview,** "We will absolutely be driving for a greater percentage of oil production in our portfolio. We hope to achieve that through organic growth, exploration and future acquisitions."

The sale to Encino Acquisition Partners includes 320,000 net acres in Ohio's Utica shale and 920 wells that currently produce about 107,000 barrels of oil equivalent per day. The purchase price also includes a $100 million contingent payment based on future natural gas prices. With a sale price of approximately $2,222 per acre, this appears to be in line with the median transaction amount for 2018.

Appalachian Basin

Market Valuations & Transaction Activity (Continued)

Large Exits and Balance Sheet Adjustments

Similar to trends **we observed last year** in the Marcellus-Utica, large companies that have had established presences are moving out of the play entirely to focus on higher margin assets. Demand for natural gas is very high, but the inexpensive extraction costs paired with **longer laterals** for extraction have allowed supply to catch up, causing prices to remain low and relatively flat in the long term, with the exception of the high trading volume experienced in November.

The price run up in November, however, appears to be short-lived, and the **commodity appeared to be overbought**. High expectations and rising EIA forecasts for domestic production explain why the U.S. gas futures market has held backwardation even though near-term pricing has spiked. Futures prices for 2019 and 2020 have declined back to the $2.50 to $3.00 range, and with margins remaining low for the foreseeable future, it makes sense for companies to adjust their balance sheets and unload assets that are not meeting their margin goals.

Continued Ease of M&A

Although the low price and low margin environment has caused some to exit the Marcellus and Utica plays, the stable price environment makes mergers and acquisitions easier, with public companies in a better position to make deals than private equity investors.

According to Robert Hagerich, Senior Vice President at Macquarie Capital (USA) Inc., established public companies are looking to expand acreage and existing holdings and can use their stock as currency to buy leases that are adjacent to their holdings with operating midstream infrastructure and production volumes that can be immediately booked with the purchasing company. On the other hand, private equity buyers are usually financing the exploratory drilling that expands the core fairways of the shale plays essentially buying an option on improved prices.

Appalachian Basin

Market Valuations & Transaction Activity (Continued)

This trend began in the later part of 2017, and it has continued into 2018. "Stable pricing brings buyers to the table," says Hagerich. "Buyers are looking for leases that are exposed to the core areas of the shales, contiguous acreage, leases held by production, ownership of the gathering system and access to more than one transportation pipeline."

Despite the recent price spike, the natural gas market has generally displayed lower volatility compared to oil or LNG, which helps facilitate M&A activity and allows for consolidation opportunities as observed from the **merger** of Blue Ridge Mountain Resources and Eclipse Resources Corp. in August and the heavy **consolidation activity from EQT** in 2017.

The Marcellus-Utica continues to be a powerhouse for natural gas production and doesn't show signs of slowing down anytime soon. Strategic transactions in the area allow for companies to focus on assets that driving their core business and others to consolidate in the area and supply the increasingly growing demand for natural gas in the U.S.

Appendix A

Selected Public Company Information

Mercer Capital tracks the performance of Exploration and Production companies across different mineral reserves in order to understand how the current pricing environment affects operators in each region. We created an index of seven groups to better understand performance trends across reserves and the industry. The current pricing multiples of each company in the index are summarized below.

					as of 12/31/2018		
Company Name	**Ticker**	**12/31/2018 Enterprise Value**	**YOY % Change in EV**	**EBITDAX Margin**	**EV/ EBITDAX**	**Daily Production (mboe/d)**	**Price per Flowing Barrel***
Global Integrated							
Exxon Mobil Corp	XOM	$329,537	-17.13%	14.6%	8.1x	3,823	$86,191
Royal Dutch Shell PLC	RDS/A	$306,996	4.34%	14.2%	5.8x	3,634	$84,474
Chevron Corp	CVX	$235,335	-14.20%	20.8%	7.4x	2,916	$80,699
Occidental Petroleum Corp	OXY	$53,707	-16.59%	53.6%	6.1x	662	$81,081
BP PLC	BP	$166,544	-7.53%	11.0%	5.2x	3,671	$45,367
Group Median			**-14.20%**	**14.6%**	**6.1x**	**3,634**	**$81,081**
Global E&P							
Marathon Oil Corp	MRO	$15,854	-16.90%	64.3%	4.2x	419	$37,831
Hess Corp	HES	$17,659	-16.48%	10.1%	27.7x	267	$66,230
ConocoPhillips	COP	$82,315	6.58%	41.4%	5.7x	1,267	$64,980
Anadarko Petroleum Corp	APC	$39,454	-7.84%	56.0%	5.7x	670	$58,903
Noble Energy Inc	NBL	$16,023	-25.97%	80.7%	4.2x	351	$45,704
Apache Corp	APA	$18,907	-21.50%	65.6%	4.0x	468	$40,397
Murphy Oil Corp	MUR	$6,025	-17.34%	66.2%	3.8x	175	$34,406
Group Median			**-16.90%**	**64.3%**	**4.2x**	**419**	**$45,704**

Source: Bloomberg L.P.

- Price per Flowing Barrel is EV/ daily production ($/boe/d)
- Companies included in the Guideline Group were selected from a broader guideline group, detailed **here**. The selected companies' market caps exceed $1 billion and revenues exceed $500 million.
- Statoil (Norway's government owned oil company) changed its name to Equinor signaling its emergence as a broad energy company, not one just focused on oil. We have removed Statoil from our guideline group as its expansion into the broader energy market makes it less comparable to traditional E&P companies.

Appendix A

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Company Name	Ticker	12/31/2018 Enterprise Value	YOY % Change in EV	EBITDAX Margin	EV/ EBITDAX (as of 12/31/2018)	Daily Production (mboe/d) (as of 12/31/2018)	Price per Flowing Barrel* (as of 12/31/2018)
North American E&P							
Ultra Petroleum Corp	UPL	$2,260	-42.17%	62.7%	4.2x	127	$17,834
Encana Corp	ECA	$9,108	-44.11%	37.5%	5.1x	368	$24,747
Devon Energy Corp	DVN	$13,499	-60.51%	21.9%	5.0x	535	$25,228
Enerplus Corp	ERF	$2,134	-18.73%	58.1%	3.9x	93	$22,959
QEP Resources Inc	QEP	$3,784	6.66%	30.8%	6.8x	139	$27,184
WPX Energy Inc	WPX	$6,977	-19.72%	44.0%	9.5x	126	$55,228
EQT Corp	EQT	$18,527	-11.45%	9.8%	41.8x	672	$27,571
Chesapeake Energy Corp	CHK	$13,521	-12.30%	25.2%	5.3x	518	$26,114
Newfield Exploration Co	NFX	$5,109	-38.44%	61.0%	3.7x	193	$26,469
Group Median			**-19.72%**	**37.5%**	**5.1x**	**193**	**$26,114**
Bakken							
Continental Resources Inc/OK	CLR	$21,057	-20.48%	74.0%	6.2x	296	$71,155
Whiting Petroleum Corp	WLL	$4,886	-8.20%	21.7%	11.6x	129	$37,738
Oasis Petroleum Inc	OAS	$4,516	-4.19%	35.8%	7.4x	83	$54,330
Crescent Point Energy Corp	CPG	$4,822	-35.04%	63.1%	2.9x	177	$27,180
Group Median			**-14.34%**	**49.4%**	**6.8x**	**153**	**$46,034**

Source: Bloomberg L.P.

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Appalachia							
Range Resources Corp	RRC	$6,548	-20.29%	28.4%	7.8x	374	$17,486
Cabot Oil & Gas Corp	COG	$10,607	-25.51%	31.4%	17.9x	347	$30,591
Antero Resources Corp	AR	$9,222	-17.77%	30.0%	7.4x	451	$20,444
Gulfport Energy Corp	GPOR	$3,112	-25.36%	63.1%	3.6x	229	$13,597
Southwestern Energy Co	SWN	$5,545	-30.96%	34.6%	4.5x	433	$12,820
Group Median			**-25.36%**	**31.4%**	**7.4x**	**374**	**$17,486**
Permian Basin							
Concho Resources Inc	CXO	$24,790	-1.41%	87.7%	7.9x	266	$93,118
Parsley Energy Inc	PE	$7,078	-32.65%	74.4%	5.9x	111	$63,928
Diamondback Energy Inc	FANG	$17,531	22.53%	77.2%	12.5x	133	$131,569
Halcon Resources Corp	HK	$941	-2.09%	20.0%	23.2x	14	$65,776
Laredo Petroleum Inc	LPI	$1,759	-55.94%	49.5%	3.2x	68	$25,727
Pioneer Natural Resources Co	PXD	$23,229	-22.97%	33.9%	8.0x	319	$72,774
Cimarex Energy Co	XEC	$6,519	-48.61%	61.4%	4.7x	223	$29,218
Group Median			**-22.97%**	**61.4%**	**7.9x**	**133**	**$65,776**

Source: Bloomberg L.P.

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Eagle Ford							
Carrizo Oil & Gas Inc	CRZO	$2,610	-29.08%	70.4%	3.8x	58	$45,053
SM Energy Co	SM	$4,152	-15.75%	61.6%	4.2x	122	$33,927
EOG Resources Inc	EOG	$55,734	-17.96%	46.5%	7.4x	723	$77,068
Group Median			**-17.96%**	**61.6%**	**4.2x**	**122**	**$45,053**
Overall Median			**-17.87%**	**45.2%**	**5.7x**	**308**	**$39,114**

Source: Bloomberg L.P.

- Price per Flowing Barrel is EV/ daily production ($/boe/d)
- Companies included in the Guideline Group were selected from a broader guideline group, detailed **here**. The selected companies' market caps exceed $1 billion and revenues exceed $500 million.
- Statoil (Norway's government owned oil company) changed its name to Equinor signaling its emergence as a broad energy company, not one just focused on oil. We have removed Statoil from our guideline group as its expansion into the broader energy market makes it less comparable to traditional E&P companies.

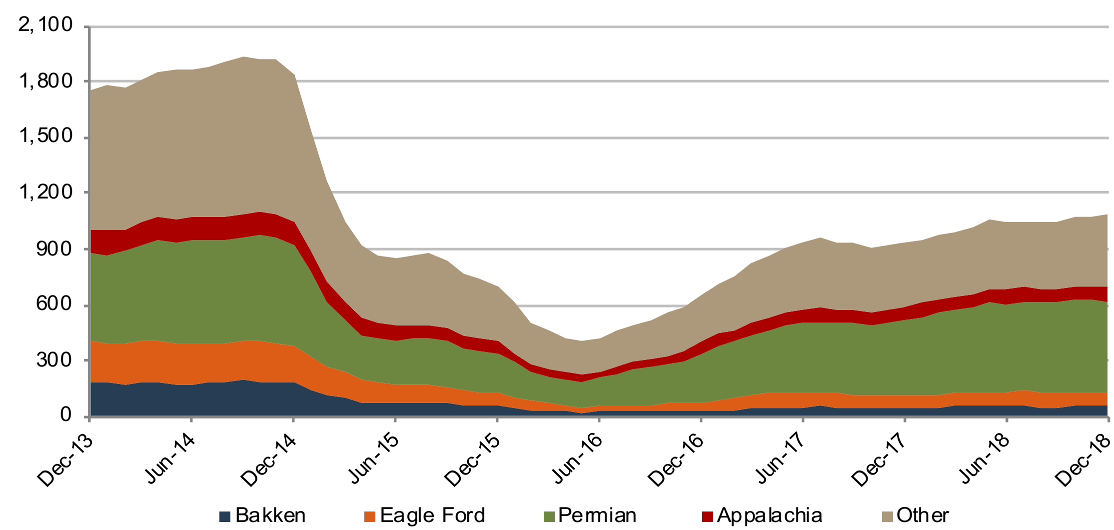
Appendix B

Rig Count

Baker Hughes collects and publishes information regarding active drilling rigs in the United States and internationally. The number of active rigs is a key indicator of demand for oilfield services and equipment. Factors influencing rig counts include energy prices, investment climate, technological changes, regulatory activity, weather, and seasonality.

The number of active rigs in the United States as of December 28, 2018, stood at 1,083, a 16.6% increase from December 29, 2017. The increase reflects a pickup in drilling activity from the increase of oil prices from $60/bbl to begin the year to over $76 in early October, enabling companies to increase drilling activities.[2] Despite steep declines in crude prices in the fourth quarter and volatility in natural gas prices, rig counts increased 2.8% for the quarter. Activity was steady in Appalachia with the number of active rigs decreasing from 75 to 74 rigs in December 2018.

Rig Count by Region



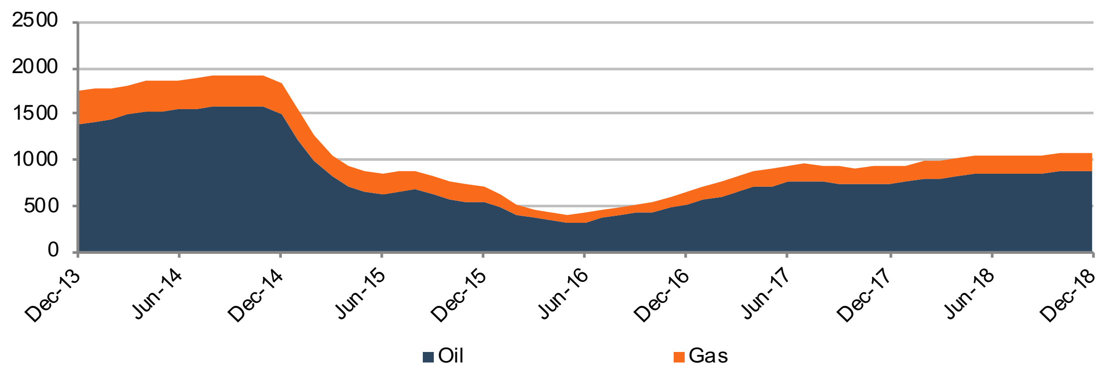
Source: Baker Hughes

[2] Data provided by Baker Hughes.

Appendix B

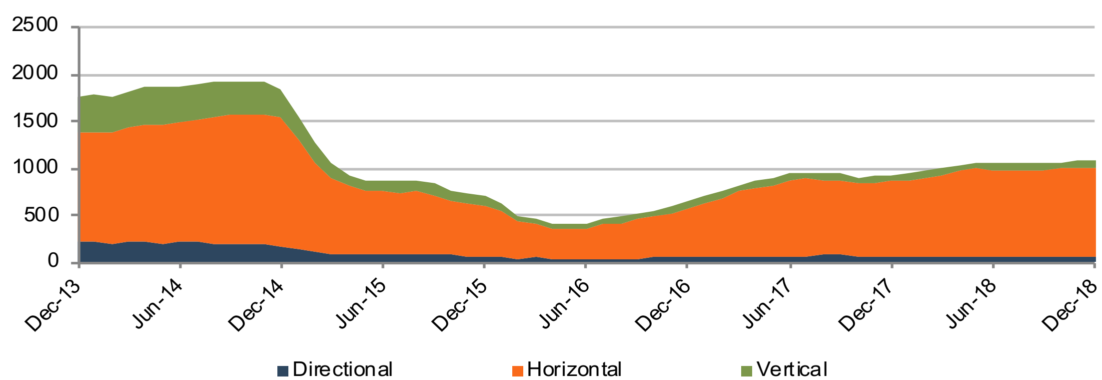
Rig Count

U.S. Rig Count by Oil vs. Natural Gas



Source: Baker Hughes

U.S. Rig Count by Trajectory

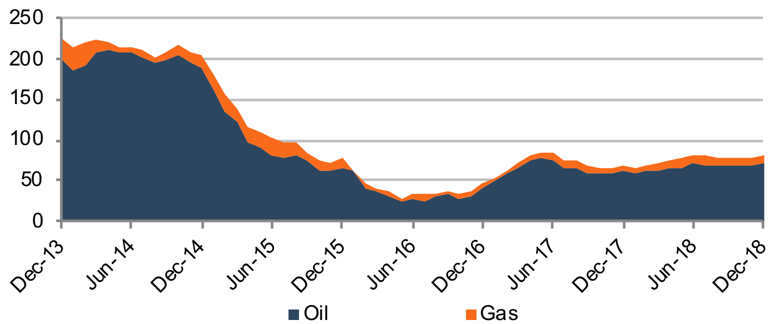


Source: Baker Hughes

Appendix B

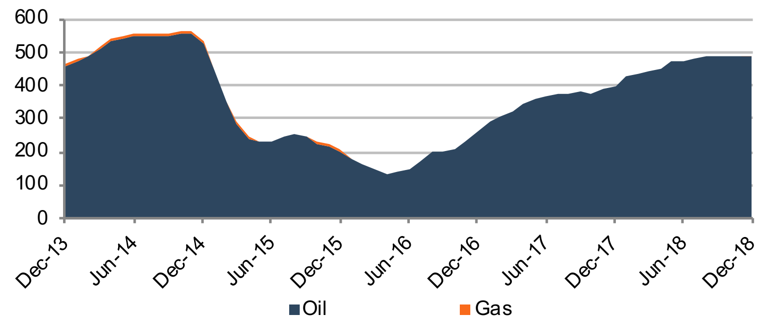
Rig Count // Oil vs. Natural Gas

Eagle Ford Rig Count by Oil vs. Natural Gas



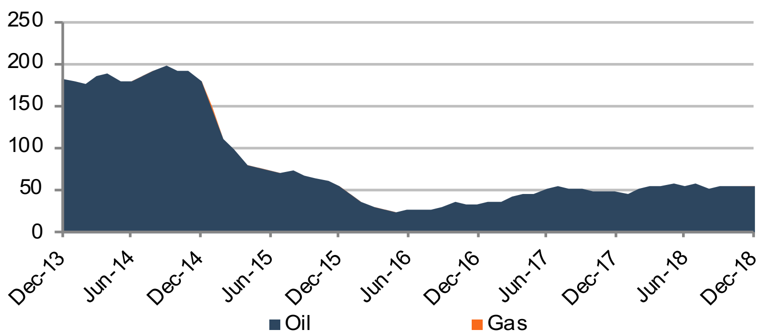
Source: Baker Hughes

Permian Rig Count by Oil vs. Natural Gas



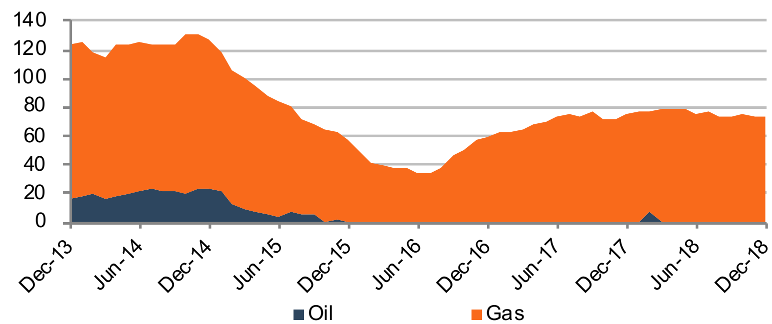
Source: Baker Hughes

Bakken Rig Count by Oil vs. Natural Gas



Source: Baker Hughes

Marcellus & Utica Rig Count by Oil vs. Natural Gas

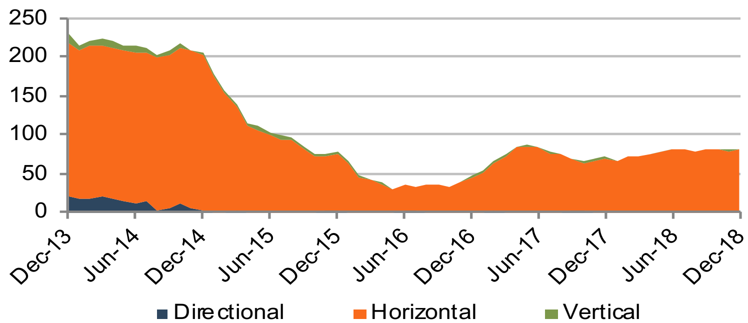


Source: Baker Hughes

Appendix B

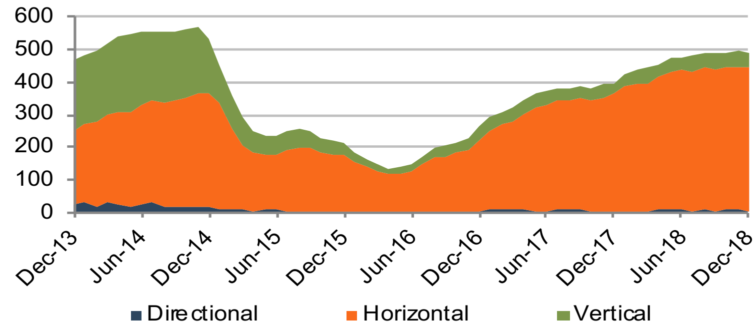
Rig Count // Trajectory

Eagle Ford Rig Count by Trajectory



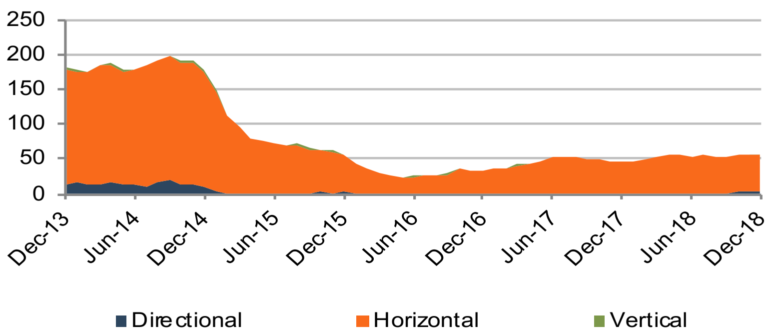
Source: Baker Hughes

Permian Rig Count by Trajectory



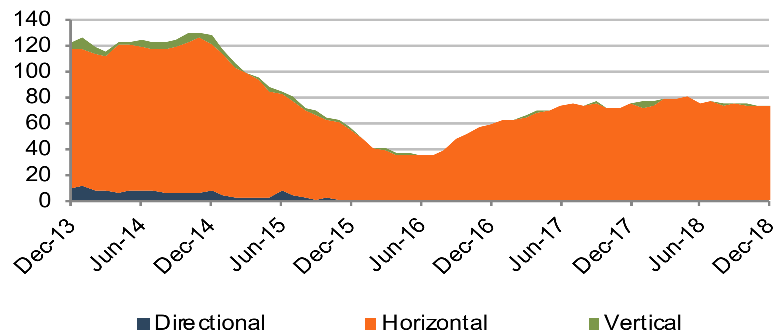
Source: Baker Hughes

Bakken Rig Count by Trajectory



Source: Baker Hughes

Marcellus & Utica Rig Count by Trajectory



Source: Baker Hughes

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