

VALUE FOCUS

Exploration & Production

Third Quarter 2016 // Region Focus: Bakken

Executive Summary

Oil prices trended up for the beginning of the third quarter but ended the quarter about where they started. For the last two years companies have postponed exploration activities and cut capital projects to drill new wells. Now that oil prices show signs of recovery, production has increased across the U.S.

Although oil prices have increased slightly, oil and gas bankruptcies continued in the third quarter as 52

companies filed for bankruptcy. The majority filed for Chapter 11 protection in hopes to reorganize. Many of the firms that went bankrupt were smaller companies who had less flexibility to exchange debt or draw a second-lien.

The price of crude oil is determined by market forces: supply and demand. On pages 1 and 2, world demand and supply is analyzed in order to understand the current pricing environment.

2016

Q1: Eagle Ford

Q2: Permian Basin

Q3: Bakken

Q4: Marcellus and Utica



Energy Industry Services

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

Services Provided

- Valuation of energy companies
- Transaction advisory for acquisitions and divestitures
- Valuations for purchase accounting and impairment testing
- Fairness and solvency opinions
- Litigation support for economic damages and valuation and shareholder disputes

Industry Segments

Mercer Capital serves the following industry segments:

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

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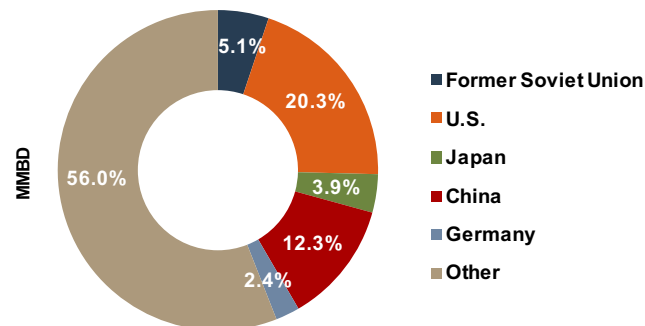
World Oil Demand

Crude Oil & Natural Gas

96.39
mboe/d

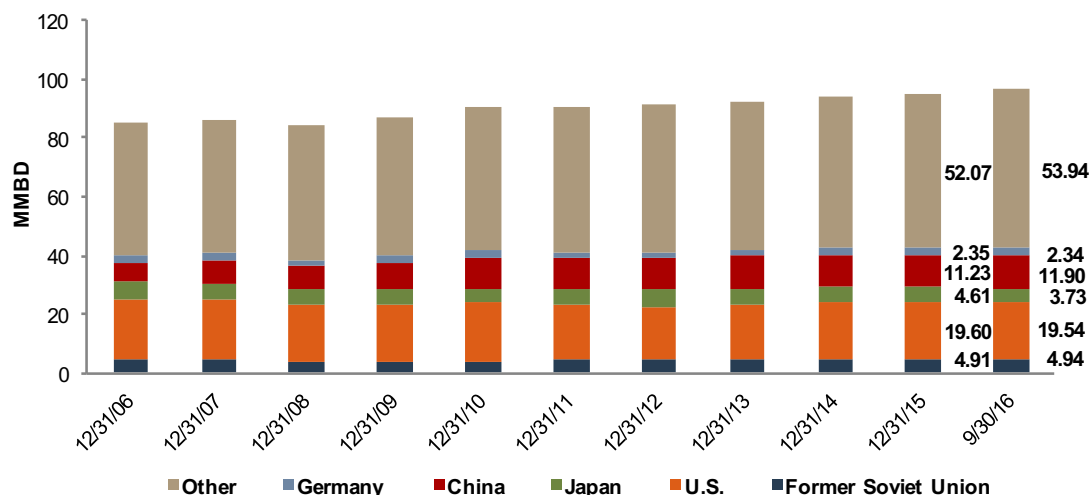
World Daily Consumption of Crude Oil and Liquid Fuels: September 2016

As of September 30, 2016, total world daily consumption equaled 96.39 million barrels per day.



Source: Bloomberg

World Daily Consumption of Crude Oil and Liquid Fuels



Source: Bloomberg

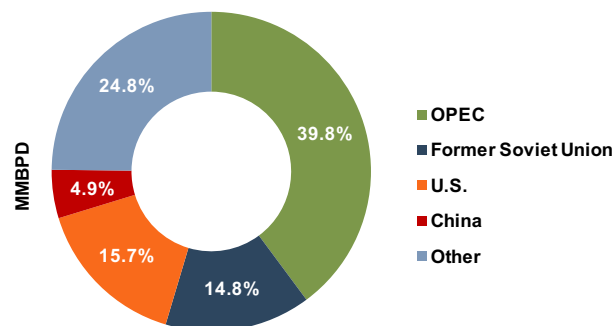
World Oil Supply

Crude Oil & Natural Gas

96.41
mboe/d

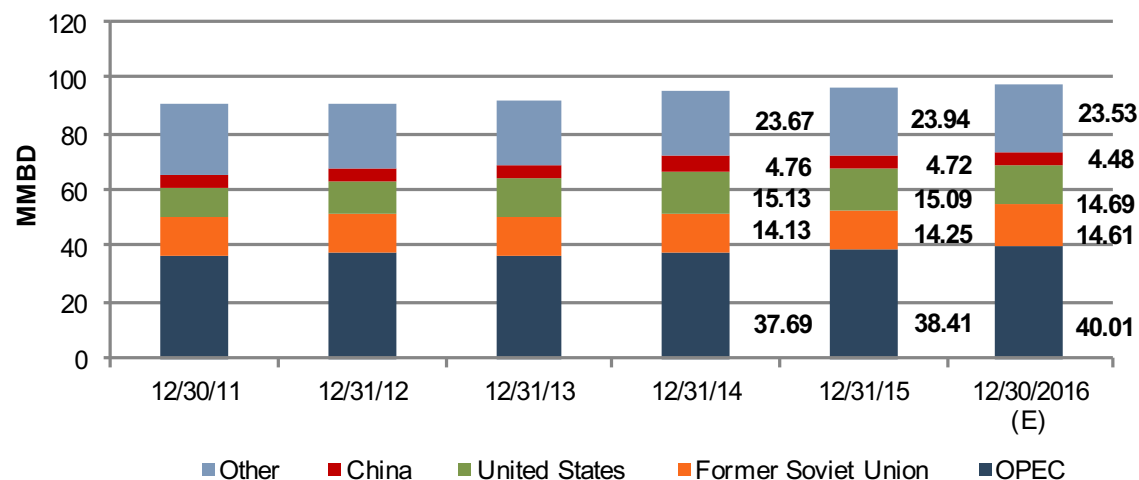
World Daily Production of Crude Oil: December 2015

As of December 31, 2015 (the most recent data available) world daily production totaled 96.41 million barrels per day.



Source: Bloomberg

World Daily Production of Crude Oil



Source: Bloomberg

Regulation Overview

BLOG

ENERGY VALUATION INSIGHTS

Updated weekly, the **Energy Valuation Insights Blog** presents issues important to the oil and gas industry.

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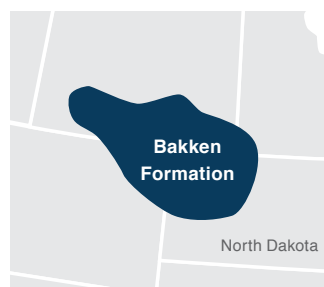
The oil and gas industry is heavily regulated. The Environmental Protection Agency (EPA), the Federal Energy Regulatory Commissions (FERC), Bureau of Land Management (BLM), the Department of the Interior (DOI), and more regulate operations of the oil and gas industry. Recent legislation includes the lifting of the export ban and the EPA's finalization of Amended Source Review Performance Standards to reduce methane emissions.

The Trump presidency should offer a more friendly energy environment, but the opposition will likely not go away. It was reported that President-Elect Trump offered the position of Energy Secretary to Harold Hamm of the Continental Resources. However, according to news reports, Mr. Hamm declined the nominations. As of the publication of this newsletter, Mr. Trump has not chosen an Energy Secretary. Energy policy is not made by the Department of Energy but by the EPA and the Department of the Interior. Mr. Trump has chosen Scott Pruitt, Oklahoma's Attorney General and a friend of the fossil fuel industry, as EPA Administrator. His selection of Interior Secretary has not been made.

Some of the most influential legislation passed this year involves reducing methane emissions. President Obama's plan is to reduce methane emissions from the oil and gas industry from 2012 levels by 40% to 45% by 2025. He already made steps in reducing methane emissions by finalizing the Amended Source Review Performance Standards. Current legislation on the table is the Bureau of Land Management's venting and flaring rule for oil and gas wells. It is now thought that closing this loophole could be one of the Obama Administration's final administrative actions. In order to further address existing sources of methane emissions, the agency has issued **an information collection request (ICR)** in order to gather information on the existing sources of methane emissions and on the kinds of technology, and their costs, which can be used to reduce emissions. The EPA expects the ICR process to help them identify sources with high emissions and the factors that contribute to those. The EPA recently issued a **third request** for information.

Bakken Shale

Overview



The economics of oil and gas production varies by region. Mercer Capital focuses on trends in the Eagle Ford, Permian, Bakken, and Marcellus and Utica plays. 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 Bakken Shale.

The Bakken and associated Three Forks formation is the largest continuous crude oil source in the U.S. Discovered in 1951, it remained largely unproductive until 2000 when technological advances such as hydraulic fracturing and horizontal drilling enabled economically viable production of its sizable reserves. The Bakken is primarily an oil producing region. Oil is produced through unconventional drilling techniques. Underlying the Bakken shale layers is a more extensive, thicker shale play called the Three Forks. This layer is accessed using the same unconventional techniques, and it is estimated to hold a little over half the undiscovered, recoverable resources of the total Bakken/Three Forks petroleum system. The Bakken is one of the larger producers of oil in the U.S. but lags the Eagle Ford and the Permian.

Limited shipping options from the Upper Midwest create high transportation costs in the play. In combination with the high upfront cost of advanced drilling techniques, this lack of transportation pushes the cost of production above the realized wellhead price for most wells in the play. Additionally, due to the insufficient pipeline network in the region, realized wellhead prices in North Dakota are often lower than WTI because of the surplus of oil in the region. Breakeven prices in the Bakken range from \$29 per barrel to \$77 per barrel.¹ Thus when prices fell, many companies were forced to terminate operations in the region.

¹ North Dakota Dept. of Mineral Reserves Sept. 2015 county-level estimates

Bakken Shale

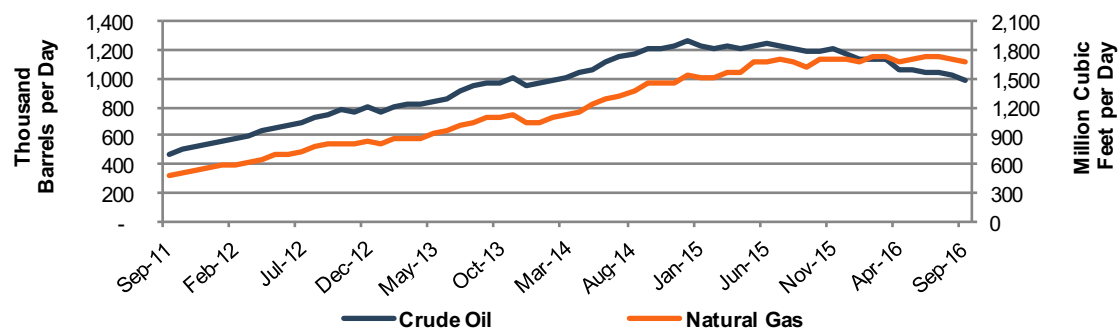
Production

Oil production has fallen in the Bakken significantly over the last two years as oil prices declined. Rig counts in the Bakken fell from 194 rigs in September 2014 to 28 rigs in September 2016. Although production per rig increased by 89% over the same time period, this did not compensate for the decline in rig counts.²

The top producers in the Bakken include Continental Resources, Whiting Petroleum Corporation, and Hess Corporation. On their third quarter earnings call, Hess Corporation reported that while they are currently operating three to four rigs in the Bakken, they plan to add more rigs in 2017 in order to generate short-term revenue. Because Hess has already developed the needed **infrastructure and well economics** in the Bakken, the company can earn similar profits in the Bakken as they could by investing in new assets in the Permian and in Eagle Ford without the additional risk of investing in a new play.

As the price of oil fell, producers moved operations from the Bakken where breakeven prices were higher than the current price of oil to more economical plays, such as the Permian, where they could afford to produce at such low prices. While the Bakken and the Eagle Ford saw similar declines in production, the Permian realized a 9% increase in production over the last two years.

Total Oil and Gas Production in the Bakken



² EIA Drilling Report by Region.

Bakken Shale

Guideline Public Company Valuation Multiples

As shown in Appendix B (pages 9-15), valuation multiples for companies focused in the Bakken are generally lower than companies operating in other domestic plays. Many companies are moving out of other regions and relocating to the Permian which is thought to have better upside potential.

Enterprise Values for companies in the Bakken, on average, increased by 1% over the last twelve months, while enterprise values in the Permian, Marcellus and Utica, and the Eagle Ford increased by 65%, 25%, and 15% respectively. Producers have not been able to increase production in the Bakken in the current price environment as they have in other plays, such as the Permian. Companies in the Bakken are currently trading at a discount to companies in the Permian where break even costs are lower and recent discoveries of oil reserves have been made. EV/ EBITDA multiples are, on average, lower in the Bakken than they are in other domestic plays. This is partially due to high drilling costs in the Bakken compared to other shale plays.

M&A Transaction Activity

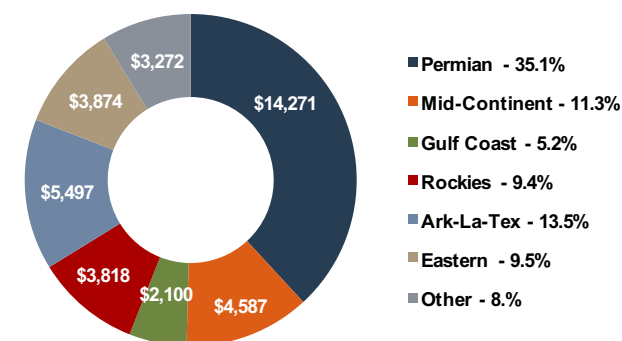
M&A activity in the E&P sector has generated approximately \$37.4 billion over the past nine months. Recent transactions in the Bakken are summarized on the next page.

There was not much M&A activity in the Bakken over the last year. In general, producers who are overwhelmed with debt are selling assets in the Bakken to generate cash, and operators who have cash to spare are using it to buy acreage cheaply. Two notable transactions were Continental Resources' sale of 80,000 acres in the Williston Basin and Oasis' purchase of 55,000 acres in the Williston Basin. Continental's Chairman and CEO, Harold Hamm, said that the proceeds from the sale would be used to reduce debt and strengthen their balance sheet. Oasis Petroleum, on the other hand, bought an estimated 226 gross operated drilling locations from SM Energy. Oasis plans to operate 75% of the properties based on proved reserves.³

³ Shale Experts.

U.S. Announced Deal Value (YTD)

(\$000)



Source: 1Derick

Bakken Transactions

Announced Date	Buyer	Seller	Deal Value (\$MM)	\$ / Acre	\$ / Daily BOE	\$ / Barrel of Proved Reserves
8/18/16	Not Disclosed	Continental Resources, Inc.	\$222.0	\$275.0	\$79,285.7	na
5/27/16	Not Disclosed	Arsenal Energy Inc.	34.0	na	27,200.0	na
4/11/16	Not Disclosed	Forestar Group Inc.	60.0	6,666.7	na	na
1/5/16	Samson Oil & Gas Limited	Not Disclosed	16.0	311.9	22,222.2	1.9
12/24/15	Angelus Private Equity Group	Emerald Oil Inc.	9.8	1,000.0	na	na
10/16/15	Lime Rock Resources	Occidental Petroleum Corp.	600.0	1,980.2	34,466.9	na
Median			\$47.0	\$1,000.0	\$30,833.5	\$1.9
Average			\$157.0	\$2,046.7	\$40,793.7	\$1.9

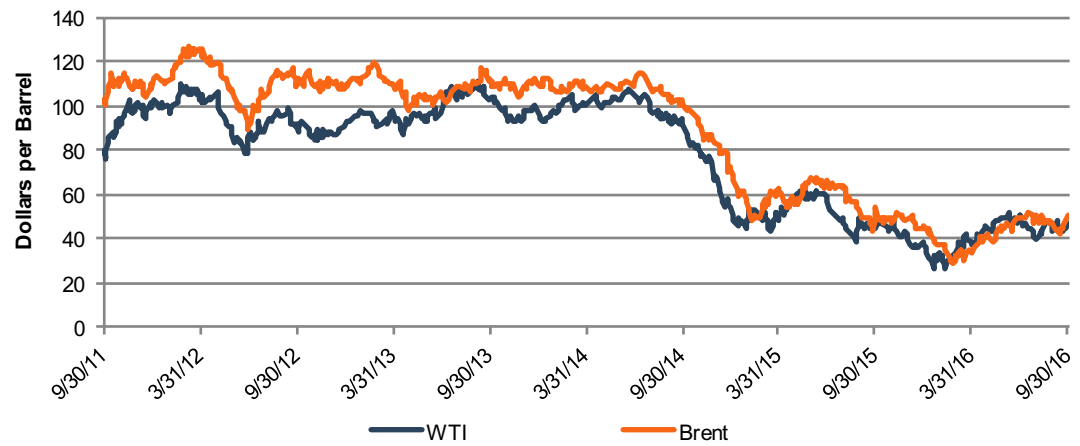
Source: Shale Experts

* Does not include all transactions in the Bakken for the last twelve months ended 9/30/2016

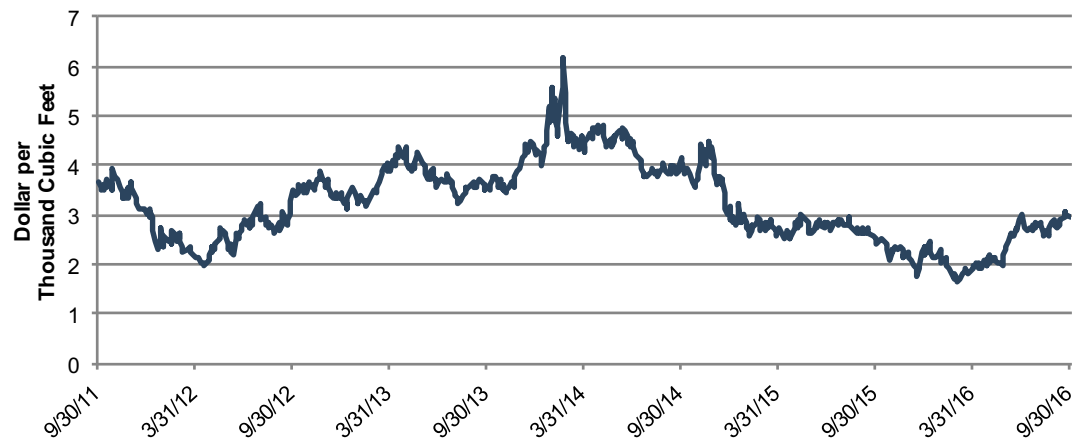
Appendix A

Commodity Prices

Crude Oil Spot Prices



Henry Hub Natural Gas Spot Price



Appendix B

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 which we follow in order to better understand performance trends across reserves and across the industry. The current pricing multiples of each company in the Index is summarized below.

Company Name	Ticker	LTM			Daily Production (MBOE/D)	Enterprise Value (\$MM)	YOY Change in EV	EV/ EBITDAX	EV/ Total Production
		Revenues 9/30/2016 (\$MM)	EBITDAX (\$MM)	EBITDAX Margin					
Global Integrated									
Exxon-XTO	XOM	196,866	23,978	12.2%	4,255	409,395	18.3%	17.1x	96,220.6x
Statoil	STO	45,794	15,532	33.9%	na	67,772	20.6%	4.4x	na
Shell	RDS/A	226,970	24,202	10.7%	4,206	287,107	63.6%	11.9x	68,261.4x
Chevron	CVX	101,162	13,980	13.8%	2,686	233,226	35.5%	16.7x	86,846.3x
Occidental Petroleum Co.	OXY	10,108	(3,227)	-31.9%	604	60,859	8.1%	nm	100,842.6x
BP	BP	181,173	12,272	6.8%	na	145,444	21.6%	11.9x	na
Average		127,012	14,456	7.6%	2,937	200,634	27.9%	12.4x	88,042.7x
Median		141,168	14,756	11.4%	3,446	189,335	21.1%	11.9x	91,533.4x

Presented in \$000,000s, as of 9/30/2016
Source: Bloomberg L.P.

Notes on Select Public Companies

Atlas Resources was delisted from the NYSE on July 12, 2016.

Arsenal Energy and Lone Pine Resources combined to form Prairie Provident Resources.

Lucas Energy must submit a plan of compliance (the "Plan") to the NYSE by August 21, 2016 in order to avoid delisting.

Ultra Petroleum filed for Chapter 11 on April 29, 2016.

Swift Energy emerged from bankruptcy on April 25, 2016.

Lonestar's shares concluded trading on the NASDAQ Global Market on Tuesday, July 5, 2016.

Appendix B

Selected Public Company Information

Company Name	Ticker	LTM			Daily Production (MBOE/D)	Enterprise Value (\$MM)	YOY Change in EV	EV/ EBITDAX	EV/ Total Production
		Revenues 9/30/2016 (\$MM)	EBITDAX (\$MM)	EBITDAX Margin					
Global E&P									
Marathon Oil	MRO	4,070	1,236	30.4%	385	18,720	14.1%	15.1x	48,667.6x
Hess	HES	4,848	241	5.0%	317	22,440	18.5%	93.1x	70,750.3x
ConocoPhillips Co.	COP	23,177	4,016	17.3%	1,551	78,489	-4.3%	19.5x	50,594.4x
Anadarko Petroleum Corp.	APC	7,845	1,293	16.5%	755	50,287	5.9%	38.9x	66,584.8x
Noble Energy	NBL	4,006	1,136	28.4%	409	21,835	9.3%	19.2x	53,398.2x
Apache Corp.	APA	5,113	(7,352)	-143.8%	494	33,205	37.9%	nm	67,280.7x
Murphy Oil	MUR	1,985	434	21.9%	169	7,379	18.3%	17.0x	43,692.9x
Newfield Exploration	NFX	1,734	(793)	-45.7%	146	10,558	34.4%	nm	72,112.9x
Average		6,597	26	-8.8%	528	30,364	16.8%	33.8x	59,135.2x
Median		4,459	785	16.9%	397	22,138	16.2%	19.4x	59,991.5x

Presented in \$000,000s, as of 9/30/2016
Source: Bloomberg L.P.

Appendix B

Selected Public Company Information

Company Name	Ticker	LTM			Daily Production (MBOE/D)	Enterprise Value (\$MM)	YOY Change in EV	EV/ EBITDAX	EV/ Total Production
		Revenues 9/30/2016 (\$MM)	EBITDAX (\$MM)	EBITDAX Margin					
Other North American E&P									
Legacy Reserves	LGCY	388	(147)	-37.9%	43	1,491	-24.4%	nm	34,867.3x
EXCO Resources	XCO	326	(293)	-90.0%	na	1,605	-7.6%	nm	na
EV Energy Partners	EVEP	264	19	7.2%	32	726	-3.6%	38.4x	22,942.3x
Encana Corp.	ECA	3,127	(1,165)	-37.3%	321	13,465	20.2%	nm	41,913.2x
Devon	DVN	10,954	(6,324)	-57.7%	551	36,286	22.0%	nm	65,902.9x
Contango Oil & Gas	MCF	82	(23)	-28.1%	11	314	19.9%	nm	27,579.4x
US Energy Corp	USEG	na	na	na	na	14	-11.3%	nm	na
Stone Energy Corp	SGY	381	(534)	-140.2%	38	1,301	3.1%	nm	33,823.1x
Vanguard Natural Resources LLC	VNR	443	(1,001)	-226.1%	68	2,289	-20.5%	nm	33,489.3x
Bill Barrett Corp	BBG	303	189	62.4%	17	872	1.9%	4.6x	50,045.5x
Denbury Resources Inc	DNR	1,155	(1,673)	-144.9%	62	4,270	1.4%	nm	68,841.9x

Presented in \$000,000s, as of 9/30/2016
Source: Bloomberg L.P.

(continued on next page)

Appendix B

Selected Public Company Information

Company Name	Ticker	LTM			Daily Production (MBOE/D)	Enterprise Value (\$MM)	YOY Change in EV	EV/ EBITDAX	EV/ Total Production
		Revenues 9/30/2016 (\$MM)	EBITDAX (\$MM)	EBITDAX Margin					
Bonanza Creek Energy Inc	BCEI	263	(499)	-189.5%	18	940	-10.7%	nm	53,335.1x
Enerplus	ERF	642	37	5.7%	90	2,040	6.4%	55.4x	22,560.9x
QEP Resources Inc	SXL	1,724	(532)	-30.9%	146	5,667	44.0%	nm	38,815.2x
Abraxas Petroleum Corp.	AXAS	56	na	na	7	324	23.2%	nm	43,942.4x
WPX Energy	WPX	1,399	(1,741)	-124.4%	83	6,850	25.2%	nm	82,238.2x
EQT	EQT	1,691	758	44.8%	347	16,903	19.7%	22.3x	48,659.1x
Chesapeake Energy	CHK	9,137	(4,935)	-54.0%	567	17,841	-0.9%	nm	31,459.4x
Matador Resources	MTDR	289	(240)	-83.1%	28	2,709	26.1%	nm	95,405.5x
Comstock Resources	CRK	175	(212)	-121.1%	25	1,099	-10.2%	nm	44,191.2x
Average		1,726	(1,018)	-69.2%	136	5,850	6.2%	30.2x	46,667.3x
Median		388	(396)	-55.9%	52	1,823	2.5%	30.3x	42,927.8x

Presented in \$000,000s, as of 9/30/2016
Source: Bloomberg L.P.

Appendix B

Selected Public Company Information

Focused E&P Companies (>50% of Production in region)

Company Name	Ticker	LTM			Daily Production (MBOE/D)	Enterprise Value (\$MM)	YOY Change in EV	EV/ EBITDAX	EV/ Total Production
		Revenues 9/30/2016 (\$MM)	EBITDAX (\$MM)	EBITDAX Margin					
Bakken									
Continental Resources	CLR	2,114	1,318	62.4%	204	26,275	46.8%	19.9x	128,509.0x
Whiting Petroleum Corp	WLL	1,360	471	34.6%	116	6,482	-22.3%	13.8x	56,113.9x
Halcon Resources Corp	HK	723	(1,399)	-193.4%	37	1,858	-48.0%	nm	49,696.2x
Oasis Petro	OAS	657	288	43.8%	48	4,181	16.9%	14.5x	86,502.1x
Crescent Point Energy	CPG	2,729	1,714	62.8%	165	10,032	11.2%	5.9x	60,666.6x
Average		1,517	478	2.0%	114	9,766	0.9%	13.5x	76,297.5x
Median		1,360	471	43.8%	116	6,482	11.2%	14.1x	60,666.6x
Marcellus & Utica									
Range Resources	RRC	1,574	16	1.0%	293	13,403	48.5%	844.8x	45,687.8x
Cabot Oil and Gas	COG	1,173	389	33.1%	290	13,020	17.6%	33.5x	44,919.0x
Rice	RICE	874	188	21.5%	140	6,410	61.9%	34.1x	45,724.9x
REX Energy Corp	REXX	144	(123)	-85.6%	33	854	-16.0%	nm	25,727.6x
Antero Resources Corp	AR	2,906	1,138	39.2%	314	14,420	24.6%	12.7x	45,867.1x
Eclipse Resources Corp.	ECR	253	(639)	-252.4%	43	1,171	51.0%	nm	27,474.6x
Gulfport Energy	GPOR	513	(1,220)	-237.9%	129	4,139	4.8%	nm	32,065.6x
Southwestern Energy Co	SWN	2,528	(4,225)	-167.1%	367	11,732	4.3%	nm	31,926.9x
Average		1,246	(560)	-81.0%	201	8,144	24.6%	231.3x	37,424.2x
Median		1,023	(54)	-42.3%	215	9,071	21.1%	33.8x	38,492.3x

Presented in \$000,000s, as of 9/30/2016
Source: Bloomberg L.P.

Appendix B

Selected Public Company Information

Focused E&P Companies (>50% of Production in region)

Company Name	Ticker	LTM			Daily Production (MBOE/D)	Enterprise Value (\$MM)	YOY Change in EV	EV/EBITDAX	EV/Total Production
		Revenues 9/30/2016 (\$MM)	EBITDAX (\$MM)	EBITDAX Margin					
Permian Basin									
Concho	CXO	2,271	120	5.3%	157	20,919	32.8%	174.4x	132,879.2x
Callon Petroleum Co	CPE	191	(94)	-49.0%	19	2,565	167.5%	nm	131,816.7x
Parsley Energy	PEIX	425	262	61.7%	44	7,293	162.1%	27.8x	164,498.9x
Diamondback Energy	FANG	501	(124)	-24.7%	42	8,184	65.2%	nm	193,953.2x
RSP Permian Inc	RSPP	328	186	56.7%	31	4,642	86.8%	24.9x	148,270.8x
Laredo Petroleum Inc.	LPI	769	(739)	-96.1%	48	4,420	31.7%	nm	92,287.6x
Approach Resources Inc	AREX	110	56	50.7%	12	638	7.9%	11.5x	53,618.3x
Ring Energy	REI	28	(58)	-202.9%	3	457	35.2%	nm	169,477.8x
Pioneer Natural Resources Co.	PXD	4,350	606	13.9%	242	32,082	58.3%	52.9x	132,621.1x
Cimarex Energy Co.	XEC	1,191	(1,138)	-95.5%	174	13,552	31.8%	nm	77,988.5x
Clayton Williams Energy Inc.	CWEI	160	8	4.8%	14	2,095	72.7%	269.9x	151,435.3x
Energen Corp	EGN	622	(518)	-83.3%	53	5,706	22.0%	nm	108,278.8x
Average		912	(119)	-29.9%	70	8,546	64.5%	93.6x	129,760.5x
Median		463	(25)	-9.9%	43	5,174	46.8%	40.4x	132,750.2x

Presented in \$000,000s, as of 9/30/2016
Source: Bloomberg L.P.

Appendix B

Selected Public Company Information

Focused E&P Companies (>50% of Production in region)

Company Name	Ticker	LTM			Daily Production (MBOE/D)	Enterprise Value (\$MM)	YOY Change in EV	EV/EBITDAX	EV/Total Production
		Revenues 9/30/2016 (\$MM)	EBITDAX (\$MM)	EBITDAX Margin					
Eagle Ford									
Carrizo Oil & Gas Inc.	CRZO	550	(626)	-113.8%	42	3,726	24.3%	nm	89,184.0x
Baytex Energy	BTE	723	(162)	-22.4%	63	2,284	15.2%	nm	36,211.9x
Earthstone Energy, Inc.	ESTE	40	na	na	6	190	5.3%	nm	33,579.9x
Sanchez Energy	SN	577	126	21.9%	52	2,233	1.6%	17.7x	42,542.6x
SM Energy (St. Mary Land & Exploration)	SM	1,133	(341)	-30.1%	157	5,265	11.8%	nm	33,553.1x
EOG Resources	EOG	6,954	2,160	31.1%	564	59,190	29.6%	27.4x	104,948.9x
Swift Energy Co.	SWTF	164	302	183.8%	na	562	na	1.9x	na
Average		1,449	243	11.7%	147	10,493	14.6%	15.6x	56,670.0x
Median		577	(18)	-0.2%	58	2,284	13.5%	17.7x	39,377.2x
Focused E&P									
Average		1,207	(66)	-29.9%	126	9,062	34.3%	93.4x	83,162.2x
Median		690	16	4.8%	53	4,954	24.6%	24.9x	60,666.6x
E&P									
Average		2,105	(354)	-39.3%	186	10,832	22.4%	70.8x	68,265.3x
Median		723	(58)	-24.7%	83	4,954	18.3%	22.3x	50,594.4x
All									
Average		13,635	1,057	-34.9%	366	28,086	22.9%	61.7x	69,562.2x
Median		1,133	8	1.0%	116	6,058	18.5%	19.4x	53,398.2x

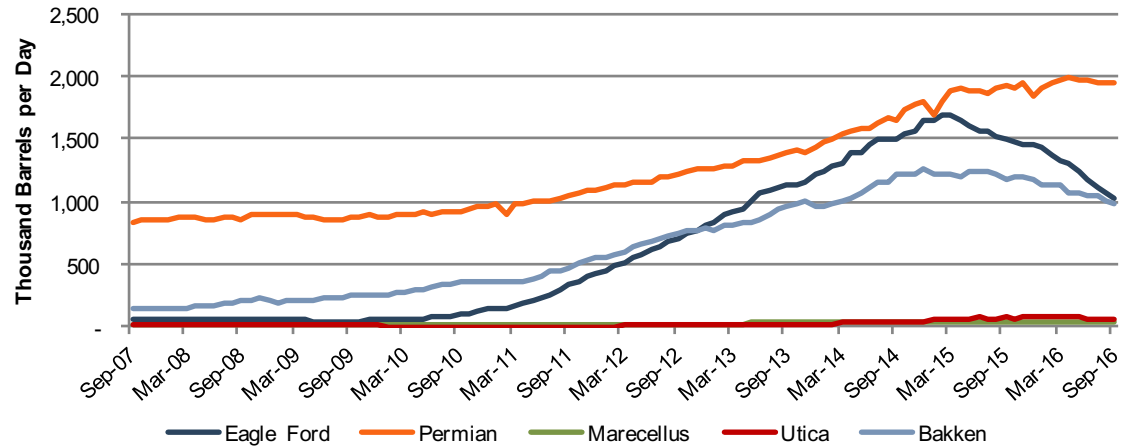
Presented in \$000,000s, as of 9/30/2016

Source: Bloomberg L.P.

Appendix C

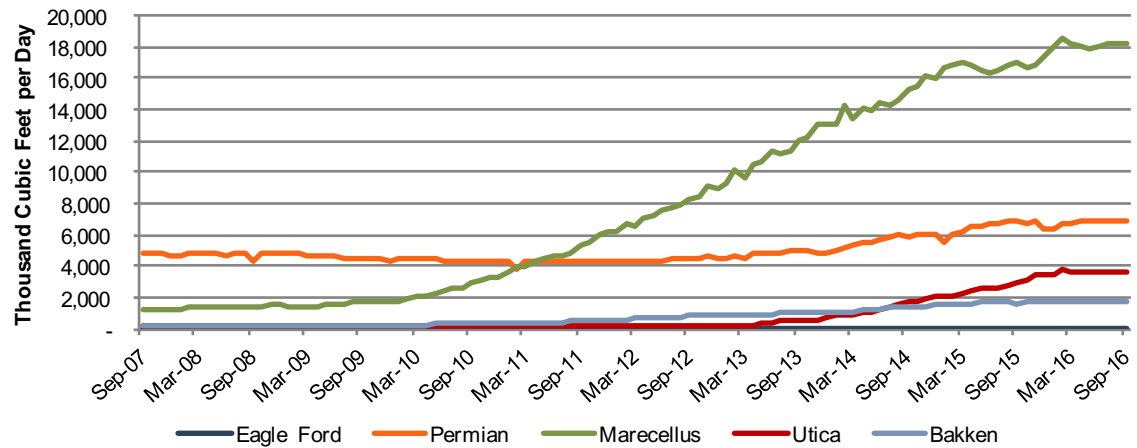
Production by Region

Crude Oil Production



Source: EIA

Natural Gas Production

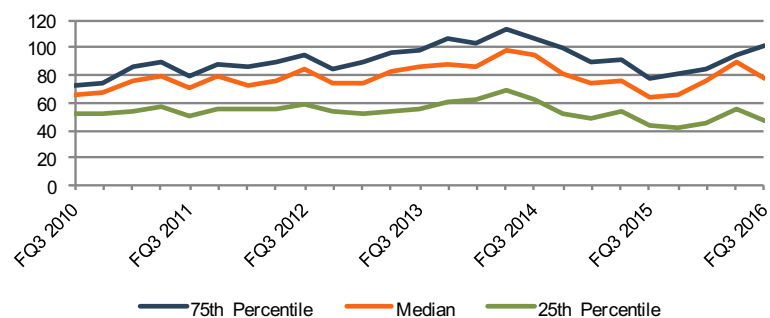


Source: EIA

Appendix D

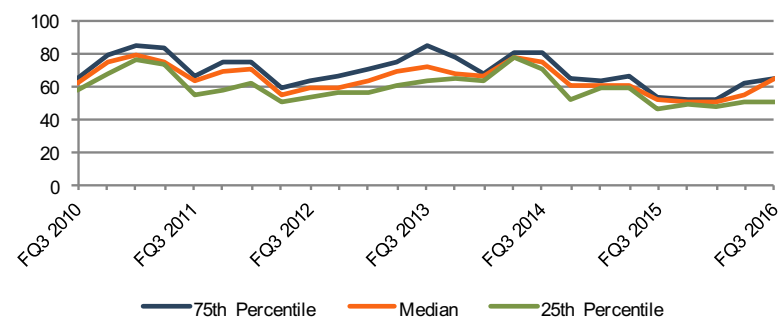
Historical Valuations

Global Integrated EV/Total Production



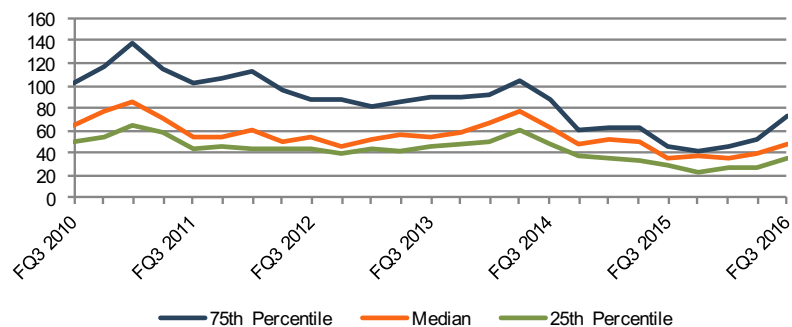
Source: Bloomberg L.P.

Global E&P EV/Total Production



Source: Bloomberg L.P.

North American E&P EV/Total Production

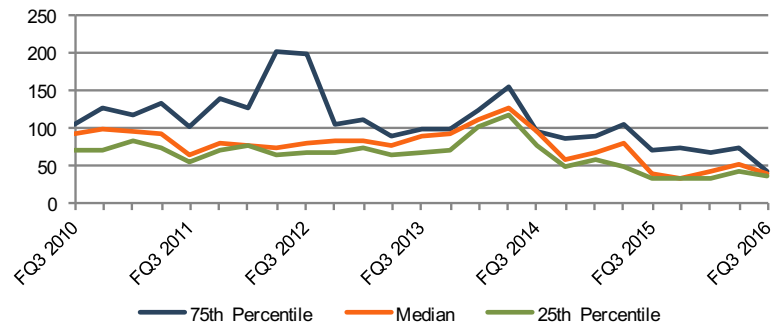


Source: Bloomberg L.P.

Appendix D

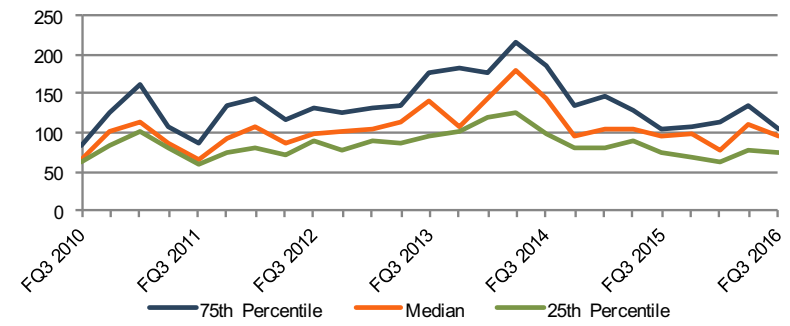
Historical Valuations

Eagle Ford EV/Total Production



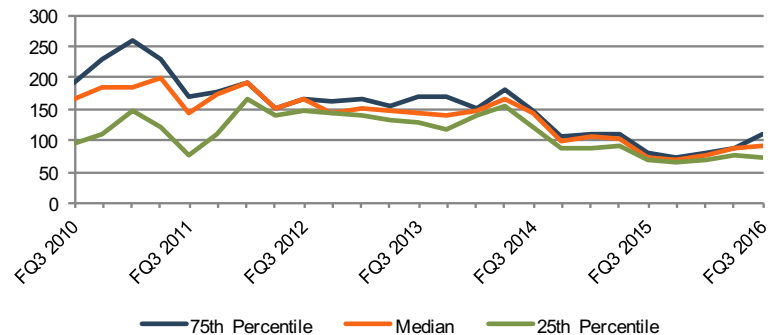
Source: Bloomberg L.P.

Permian Rig EV/Total Production



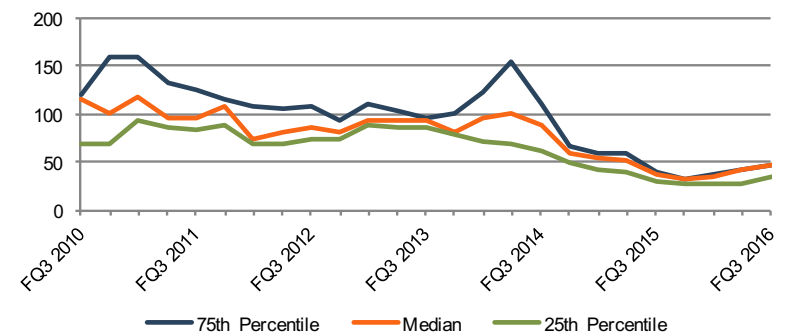
Source: Bloomberg L.P.

Bakken Rig EV/Total Production



Source: Bloomberg L.P.

Marcellus & Utica EV/Total Production

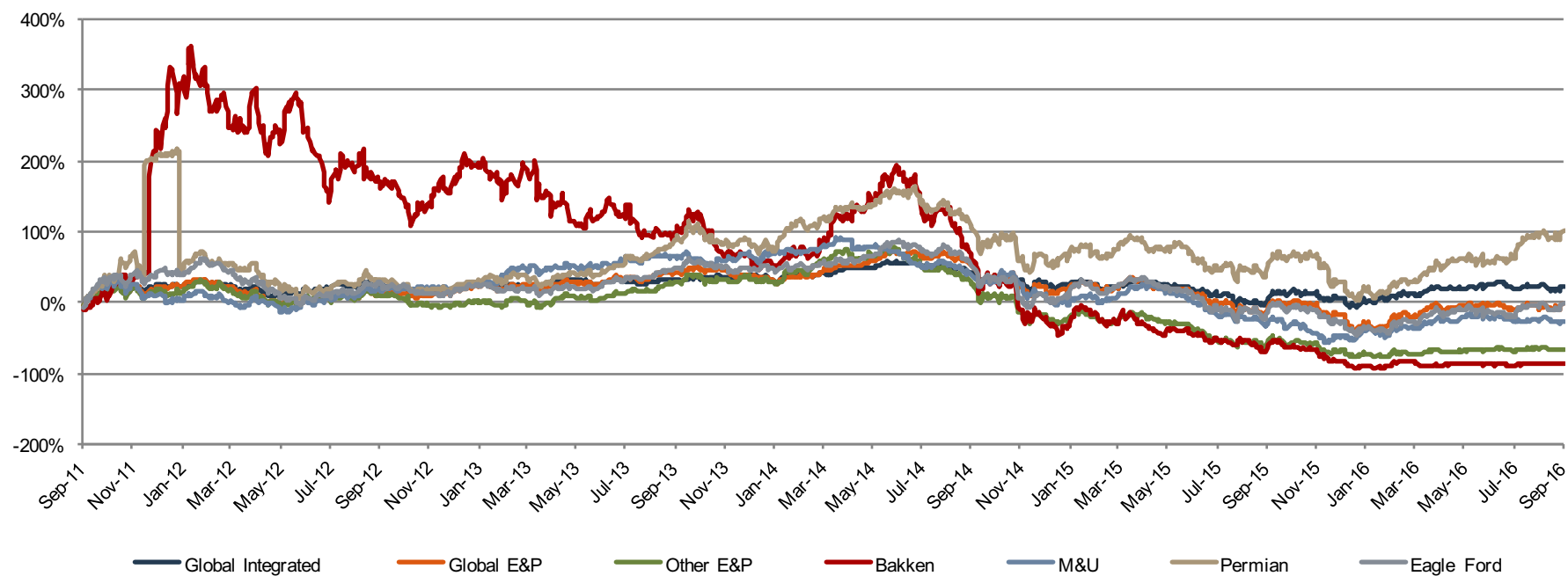


Source: Bloomberg L.P.

Appendix E

Stock Performance

Mercer Capital's Energy Indices Stock Performance



Source: Bloomberg

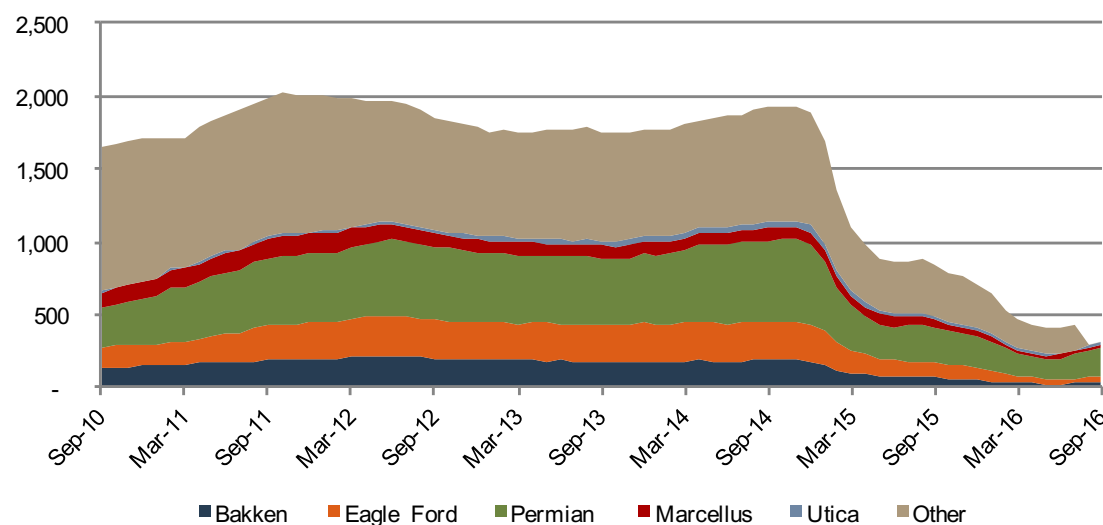
Appendix F

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 & 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 September 30, 2016, stood at 487, representing a 45% decrease compared to one year prior and a 74.5% decrease to two years prior. But over the last three months, the number of rigs increased by 20.8%. The recent increase reflects a slight pickup in drilling activity.⁴ The Permian remains the most active play for drilling followed by the Bakken and Eagle Ford, which has less than one-sixth the active rigs in the Permian.

Rig Count by Region



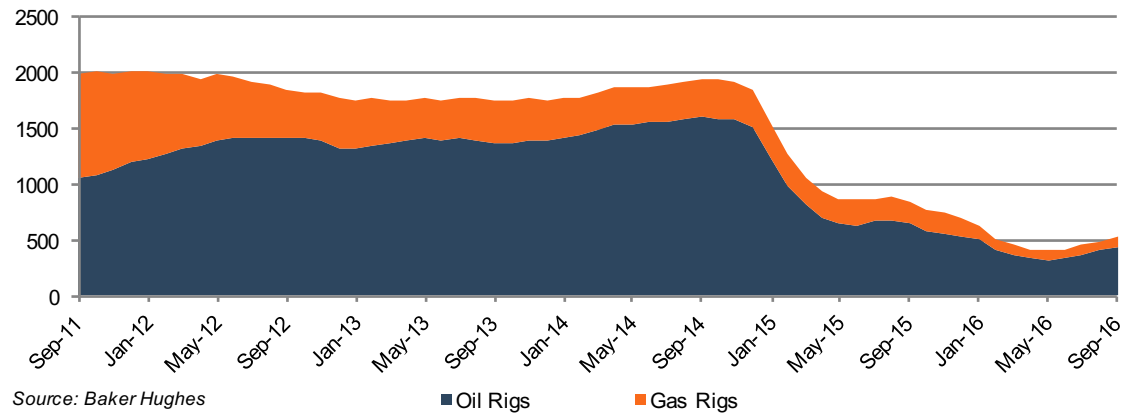
Source: Baker Hughes

⁴ Data provided by Baker Hughes.

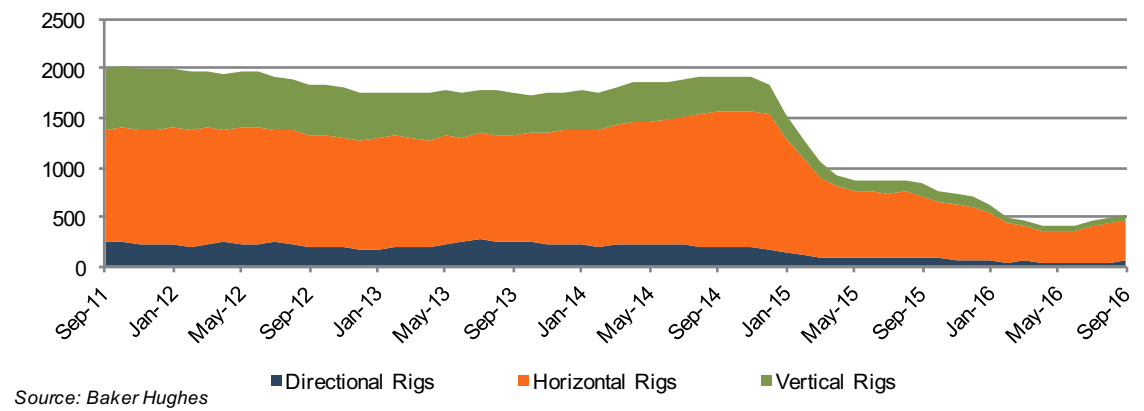
Appendix F

Rig Count

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



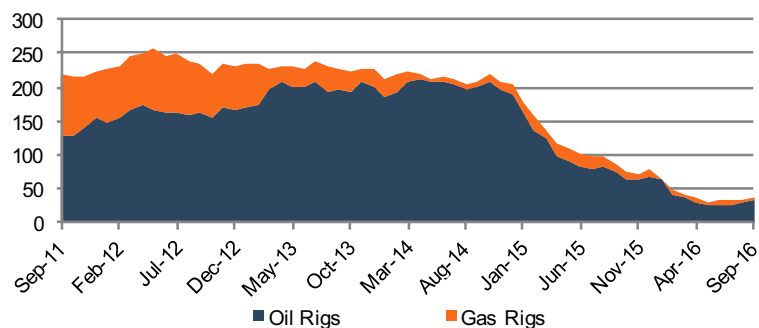
U.S. Rig Count by Trajectory



Appendix F

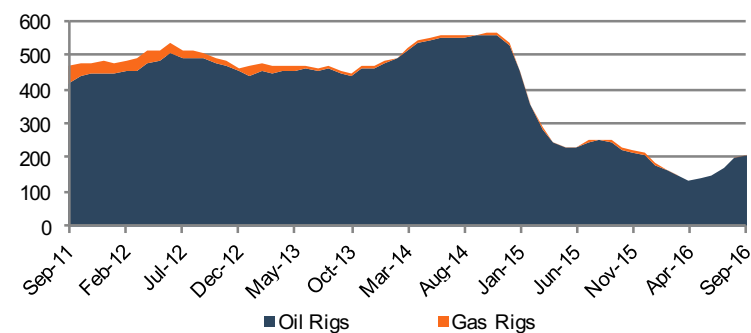
Rig Count // Oil vs. Natural Gas

Eagle Ford Rig Count by Oil vs. Natural Gas



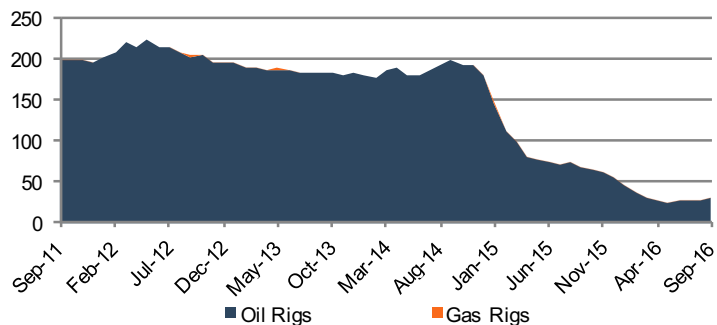
Source: Baker Hughes

Permian Rig Count by Oil vs. Natural Gas



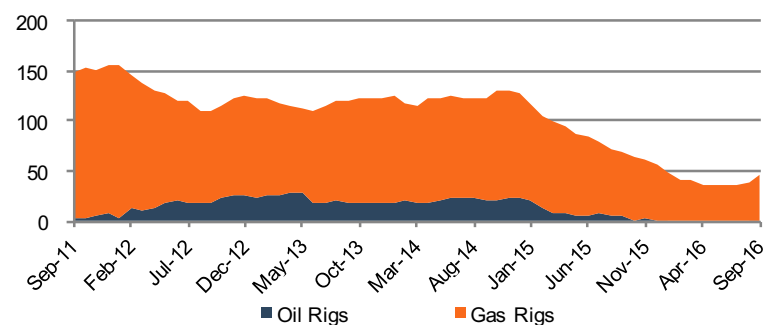
Source: Baker Hughes

Bakken Rig Count by Oil vs. Natural Gas



Source: Baker

Marcellus & Utica Rig Count by Oil vs. Natural Gas

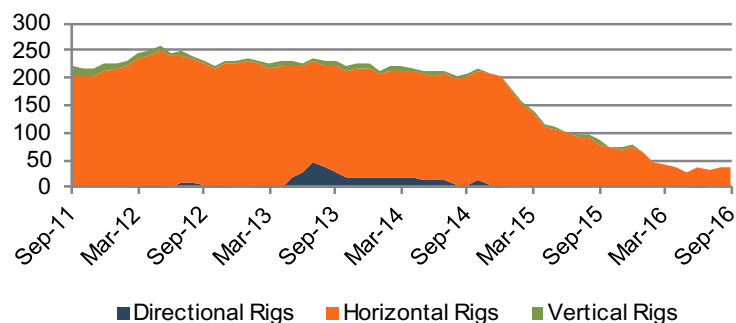


Source: Baker Hughes

Appendix F

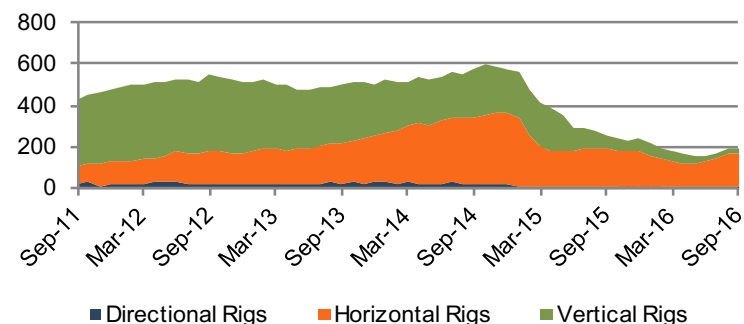
Rig Count // Trajectory

Eagle Ford Rig Count by Trajectory



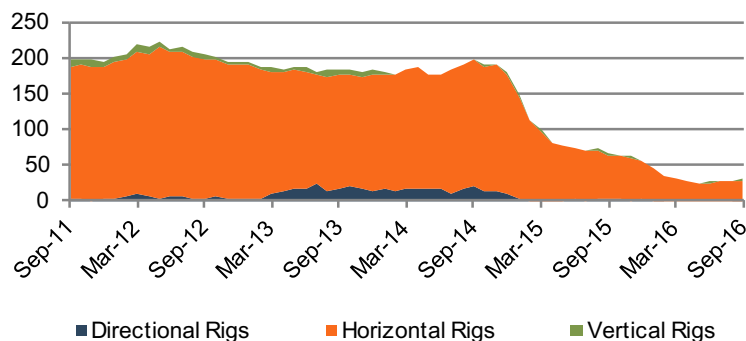
Source: Baker Hughes

Permian Rig Count by Trajectory



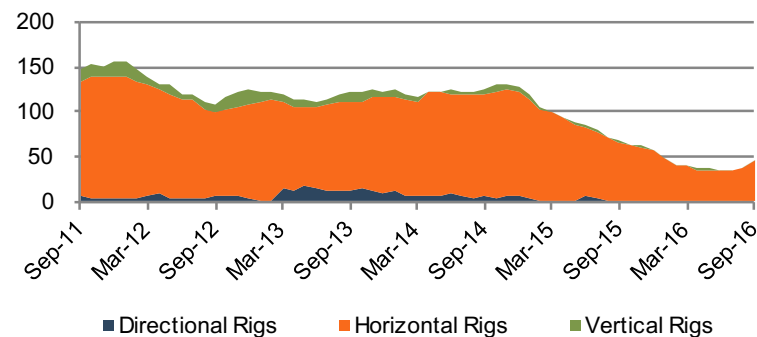
Source: Baker Hughes

Bakken Rig Count by Trajectory



Source: Baker Hughes

Marcellus & Utica Rig Count by Trajectory

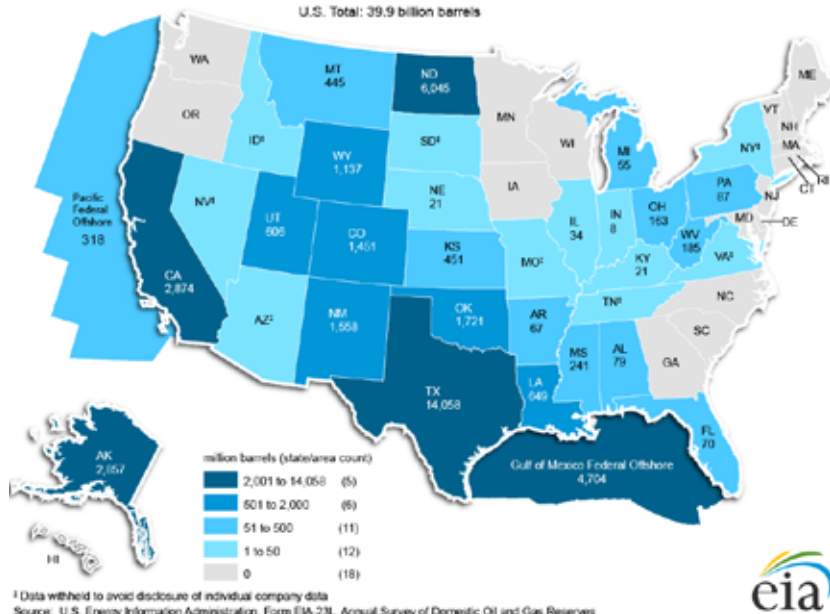


Source: Baker Hughes

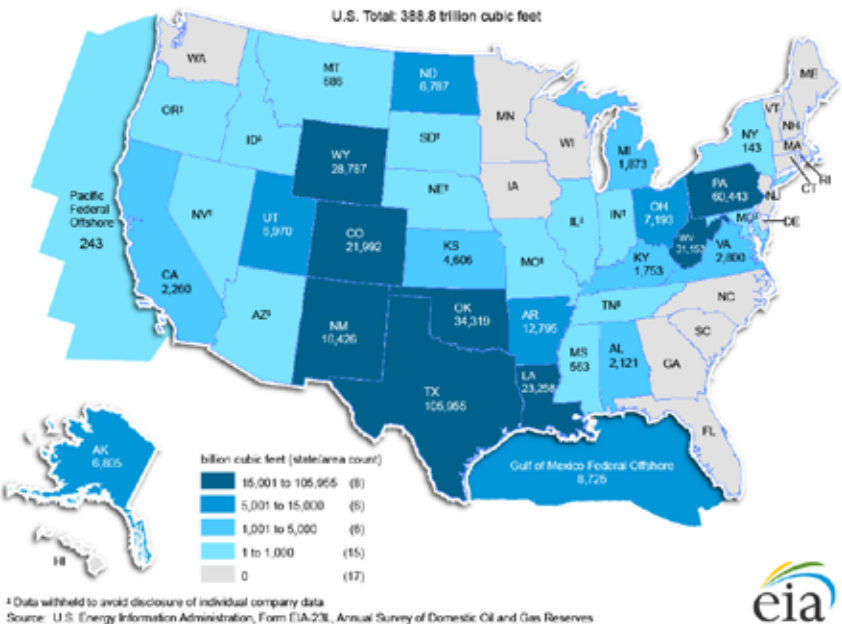
Appendix G

U.S. Oil and Gas Resources

U.S. Crude Oil and Lease Condensate Proved Reserves Map
2014



U.S. Wet Natural Gas Proved Reserves Map
2014



The EIA's Annual Survey of Oil and Gas Reserves is available in November. The most recent data available was used.



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