



December 24, 2018

Covering the Week of December 14 to December 20, 2018

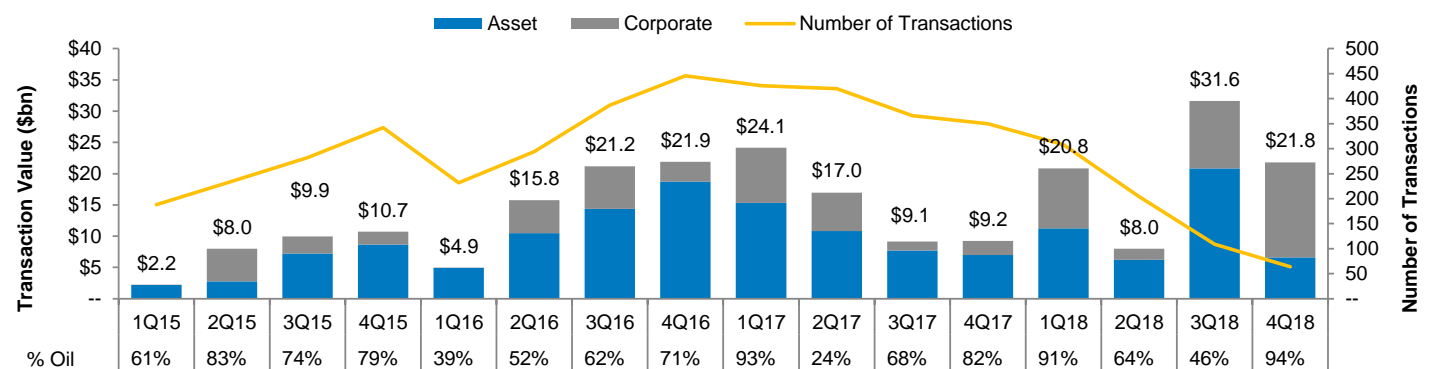
Week in Review

- **This is the final issue for 2018. The Market Monitor will return on Monday, January 7th. Happy Holidays from the BMO Capital Markets team!**
- Alliance Resource Partners announced that it entered agreements to acquire the general partner interests in AllDale Minerals and AllDale Minerals II for ~\$176 million
- Comstock Resources announced that it entered an agreement to acquire Haynesville interests from Shelby Shale, LLC for up to \$20.5 million in carried costs
- BP launched a \$3 billion sale of U.S. onshore assets to fund BHP deal
- Top 10 Toys for the Season – from BMO toy analyst Gerrick Johnson – watch [here](#)

Key Industry Indicators

Indicator	Current Value	Week's Change	% Change	Direction
Prompt Oil Price (\$/bbl)	\$45.88	(\$6.70)	(12.7%)	↓
Prompt Gas Price (\$/mmbtu)	\$3.58	(\$0.54)	(13.1%)	↓
Wkly Trans. Value (\$mm)	\$196	\$117	148%	↑
Wkly Trans. Count	4	(1)	(20%)	↓
US Rig Count	1,080	9	0.8%	↑
US Oil Prod'n (mmbbl/d)	11.6	--	--	—
US Gas Prod'n (bcf/d) ⁽¹⁾	104.5	--	--	—
US Oil Storage (mmbbl)	442.0	0.0	0.0%	↑
US Gas Storage (tcf)	2.8	(0.1)	(4.8%)	↓

Quarterly Deal Activity



Commodities

- Oil ended last week (through Thursday) down as the Federal Reserve raised interest rates. This resulted in a global equity sell off that took crude markets down with it. Crude hit below \$50/bbl for the first time since mid-October 2017. Themes of over-supply coupled with shrinking demand continue to dominate the conversation, with questions of how quickly large U.S. E&Ps will respond to the lower price signals. Large names in the Permian Basin have shut down rigs and fracking crews, while recently released 2019 capital budgets have been lower than analyst expectations. The near-term contract closed down \$6.70, or 12.7%, at \$45.88 on Thursday
- Natural gas ended last week (through Thursday) down. An increase in futures price volatility was caused by low pre-winter levels of working natural gas storage stocks and an increase in consumption relative to current production levels. Multiple sources reported the likelihood of a potential polar vortex in early January. The near-term contract closed down \$0.54, or 13.1%, at \$3.58 on Thursday

Equity Markets

- S&P E&P⁽²⁾ underperformed last week (through Thursday) (14.6)% vs. SPX⁽²⁾ (6.9)%
- The major U.S. equity indexes all finished lower last week, with continued volatility in the equity markets. Consumer discretionary, consumer staples, financials, health care, industrials, materials, real estate, and tech all finished lower. Health care performed the worst, down 8.6%

Debt Markets

- No issuers priced last week (through Thursday); if no U.S. high yield bonds price in December, this will be the first December since LCD⁽³⁾ began tracking the asset class in 2005
- The Federal Reserve raised the interest rate by 25 bps to 2.50%, representing the fourth hike this year
- U.S. high yield funds reported an outflow of \$789 million
- ETFs reported an inflow of \$130 million, while mutual funds reported an outflow of \$918 million
- High yield index yield was 7.58%; high yield energy index yield was 9.02%

Source: BMO Transaction Database, Baker Hughes, BMO Commodity Products Group, Bloomberg, EIA, PLS
Note: Current quarter's data is through the week covered by this issue.

1. EIA U.S. natural gas gross withdrawals and production reported monthly as of September 2018.
2. S&P E&P = S&P Oil & Gas E&P Select Industry, SPX = S&P 500 Index.
3. LCD = S&P's Leveraged Commentary & Data.

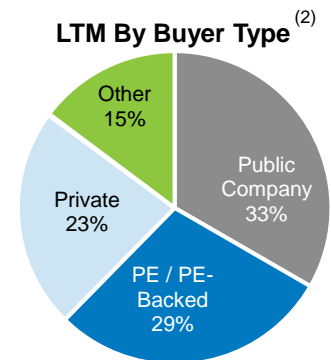
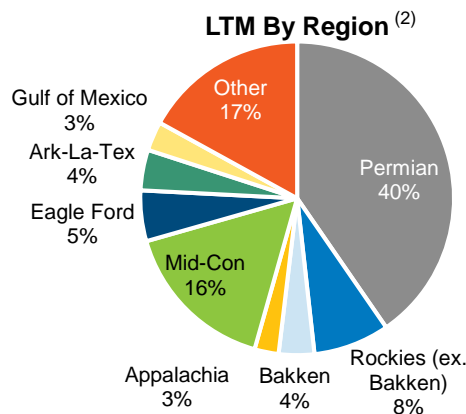
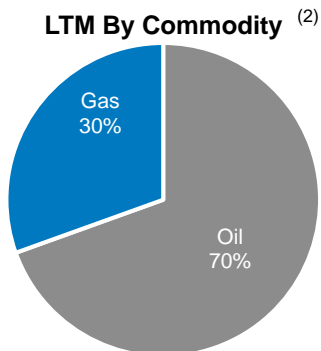


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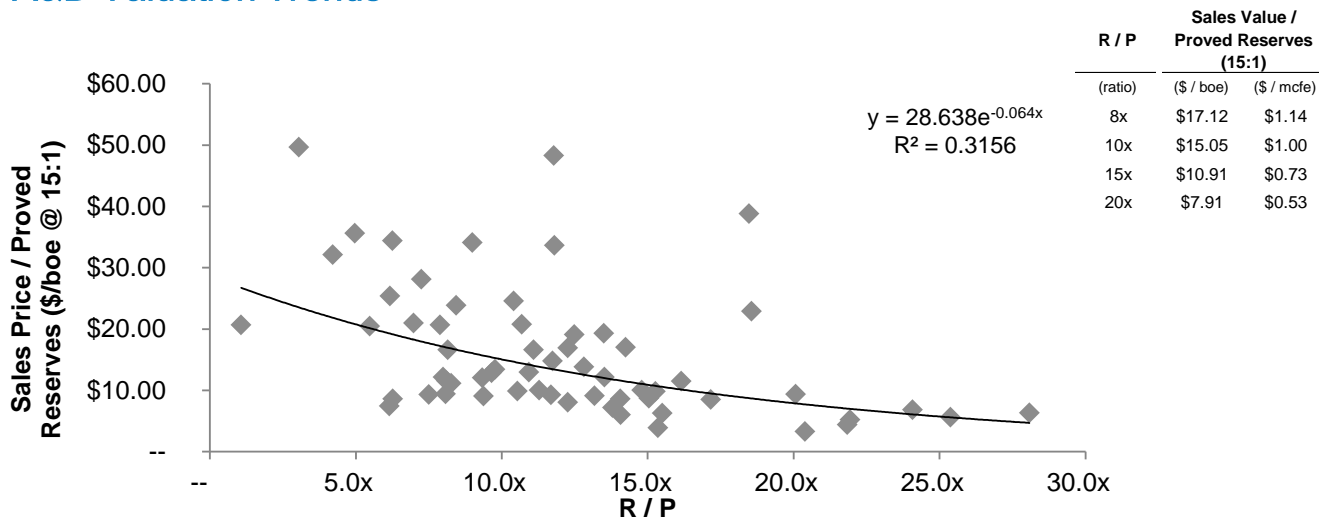
The 10 Most Recent Asset Transactions Over \$20 Million

Ann'd Date	Buyer	Seller	Area	Asset Description	Value ⁽¹⁾ (\$mm)	Proved Multiple (\$/boe)	Prod. Multiple (\$/boe/d)	Net Acres (\$/acre)
19-Dec-18	Comstock	Shelby Shale LLC	Ark-La-Tex	6,023 net acres in Haynesville	\$21	n.a.	n.a.	\$3,404
17-Dec-18	Alliance Resource Partners	Dale Operating Co	Multi-Region	42,000 net royalty acres	\$176	n.a.	n.a.	nmf
11-Dec-18	Undisclosed Buyer	Riviera Resources Inc	Mid-Continent	37,000 net acres in the Arkoma Basin	\$68	n.a.	\$17,000	\$1,838
21-Nov-18	Kimbell Royalty Partners	Undisclosed Seller	Multi-Region	16,700 net royalty acres	\$108	n.a.	\$90,588	nmf
19-Nov-18	Lonestar Resources Inc	Sabine Oil & Gas Corp	Eagle Ford	2,706 net acres in Eagle Ford	\$39	\$2.98	\$48,375	\$14,302
19-Nov-18	Aethon III	QEP Resources Inc	Ark-La-Tex	49,700 net acres in Haynesville	\$735	\$4.60	\$14,848	\$14,789
07-Nov-18	Vantage Energy Acq. Corp	QEP Resources Inc	Bakken	102,800 net acres in Williston Basin	\$1,725	n.a.	\$37,500	\$16,780
07-Nov-18	Undisclosed Buyer	Devon Energy	Barnett	100,000 net acres in Barnett Shale	\$50	n.a.	\$12,500	\$500
06-Nov-18	Diamondback Energy	ExL Pet.; EnergyQuest	Permian	3,646 net acres in Midland Basin	\$313	n.a.	\$89,286	\$85,710
05-Nov-18	Centennial Resource Dev.	Undisclosed Seller	Permian	820 net acres in Delaware Basin	\$26	n.a.	n.a.	\$31,707

Blue = BMO provided transaction advisory services Green = BMO provided acquisition financing or related services
Purple = BMO provided both transaction advisory services and acquisition financing or related services



A&D Valuation Trends⁽³⁾



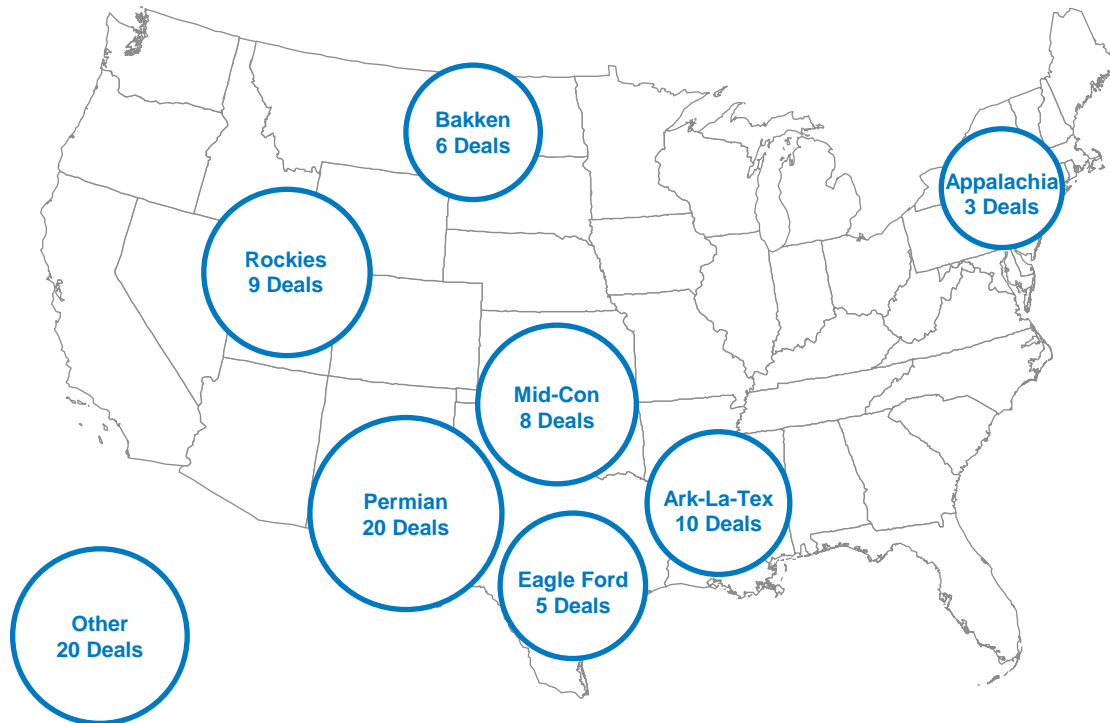
2 Source: BMO Transaction Database, Baker Hughes, BMO Commodity Products Group, Bloomberg, PLS

1. Represents total enterprise value.
2. Calculated as percentage of total LTM transaction count (number of transactions, not dollar value).
3. 62 transactions from January 2015 to 2018YTD with transaction value >\$20mm. Adjusted for changes in price outlooks. Recalculated boe reserves are on a 15:1 (gas:oil) basis. Acreage transactions excluded by using deals with PDP of >= 40% of total proved.



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Select Significant Deals on the Market



A&D Headlines

- [Alliance Resource Partners, L.P. Announces Agreement to Acquire Oil and Gas Mineral Interests and Development of Excel Mine No. 5](#)
- [Comstock Resources, Inc. Announces Haynesville Shale Acreage Acquisition](#)
- [BP Launches \\$3 Billion Sale of U.S. Onshore Assets to Fund BHP Deal: Sources](#)

Industry Headlines

- [Crude Plunges Below \\$47, to Lowest Level Since August 2017](#)
- [Saudi Arabia Optimistically Estimates 2019 at \\$80/bbl and 10.2 MMBopd](#)
- [U.S. Dominance in Oil Markets Is Only Going to Get Bigger, the IEA Says](#)
- [Poland's Goal of Ditching Russian Natural Gas Bolsters American LNG and Trump's Energy Agenda](#)
- [Permian's Growth Spurt at Risk Amid Oil-Price Collapse](#)
- [Chamber Blames Anti-Fossil Fuel Activists for Over \\$91 Billion in Economic Losses](#)
- [Colorado Regulators OK Bigger Buffer Zone for Oil, Gas Drilling Near Schools](#)
- [ExxonMobil Props Up its Output by Leading Permian in Drilling](#)

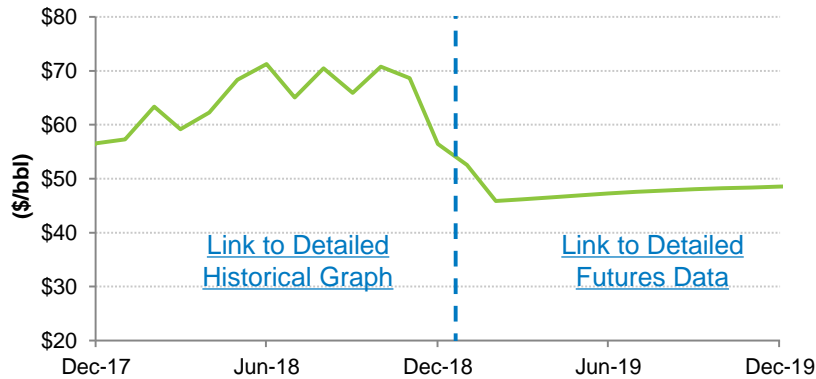
(Click headline to link to the full article)



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Commodity Prices

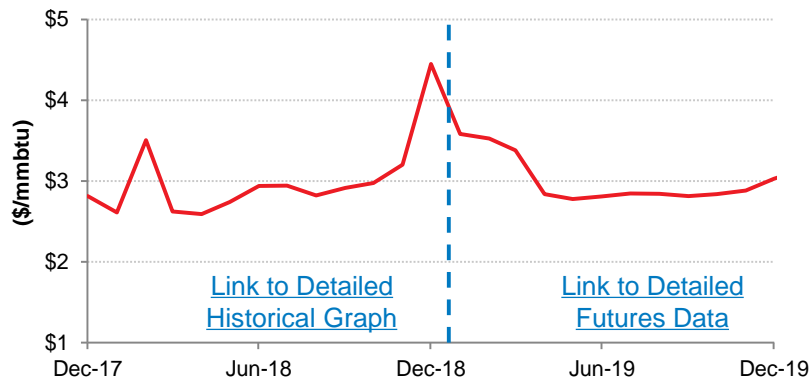
WTI OIL (HISTORICAL / FORECAST)



NYMEX WTI Futures as of 20-Dec-18 Close (\$/bbl)

Period ⁽¹⁾	Current	Last Wk.	6 Mo. Ago	1 Yr. Ago
12 Mo. Strip	\$47.49	\$53.75	\$64.07	\$57.07
2019	\$47.39	\$53.75	\$62.14	\$54.50
2020	\$49.12	\$54.09	\$59.05	\$52.47
2021	\$50.03	\$53.42	\$56.76	\$51.20
2022	\$50.59	\$52.82	\$55.09	\$50.62
2023	\$50.99	\$52.58	\$53.89	\$50.53

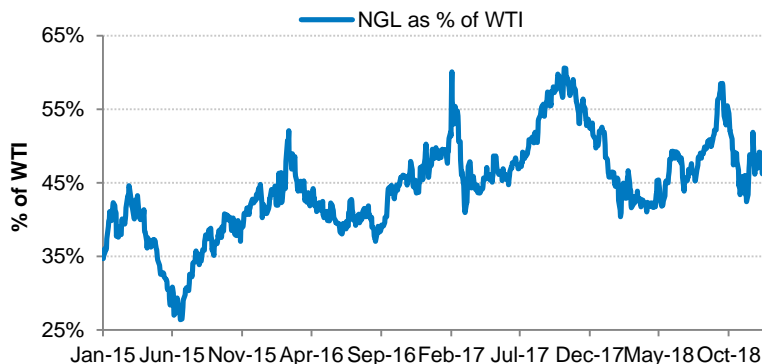
HENRY HUB NATURAL GAS (HISTORICAL / FORECAST)



NYMEX Gas Futures as of 20-Dec-18 Close (\$/mmbtu)

Period ⁽¹⁾	Current	Last Wk.	6 Mo. Ago	1 Yr. Ago
12 Mo. Strip	\$3.01	\$3.15	\$2.94	\$2.67
2019	\$3.01	\$3.15	\$2.82	\$2.75
2020	\$2.70	\$2.70	\$2.68	\$2.78
2021	\$2.62	\$2.61	\$2.62	\$2.82
2022	\$2.79	\$2.79	\$2.77	\$2.98
2023	\$2.79	\$2.79	\$2.77	\$2.98

NGL PRICING⁽²⁾



Historical Prices as of 20-Dec-18 Close (\$/gal)

NGLs	Current	Last Wk.	6 Mo. Ago	1 Yr. Ago
Ethane	\$0.28	\$0.29	\$0.34	\$0.22
Propane	\$0.65	\$0.70	\$0.85	\$0.96
Butane	\$0.66	\$0.73	\$0.93	\$0.98
Iso-butane	\$0.73	\$0.80	\$1.32	\$1.01
Pentane+	\$0.95	\$1.09	\$1.45	\$1.35

Source: BMO Commodity Products Group, Bloomberg, FactSet

1. Future prices are calendar year average unless stated otherwise.
2. Assumes typical Gulf Coast barrel composition.

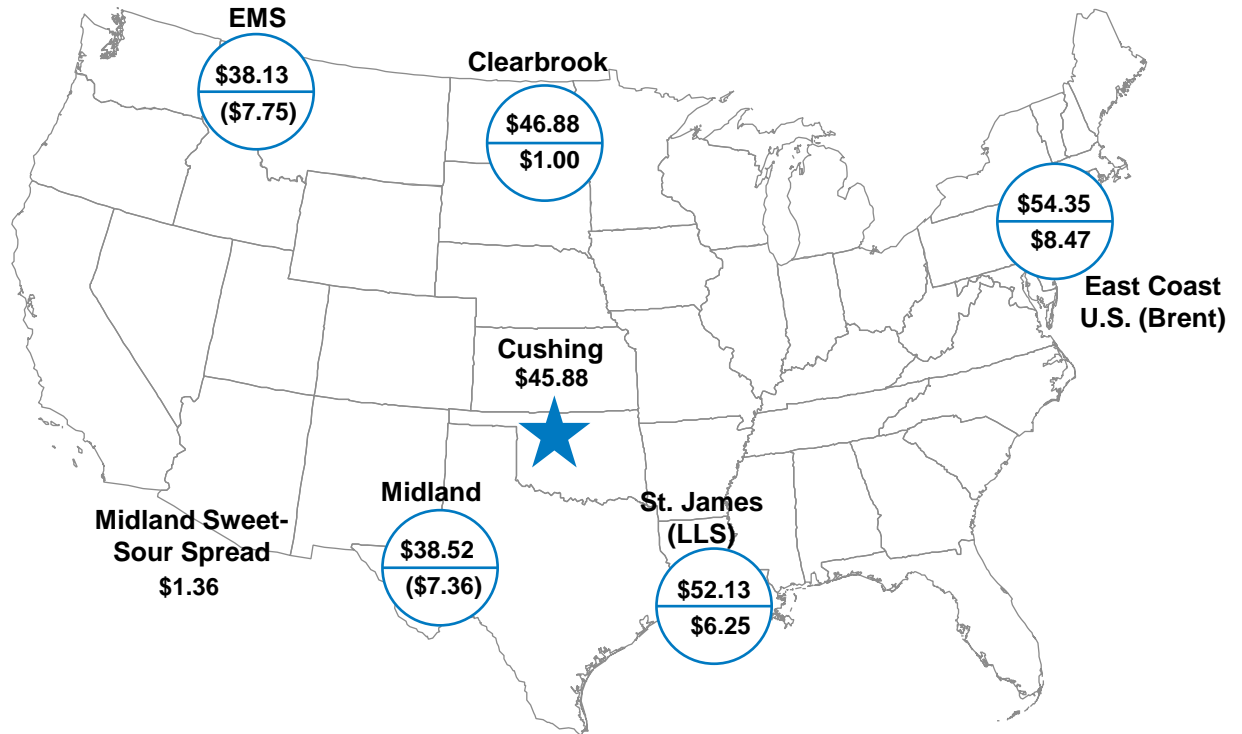


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Commodity Prices (cont'd)

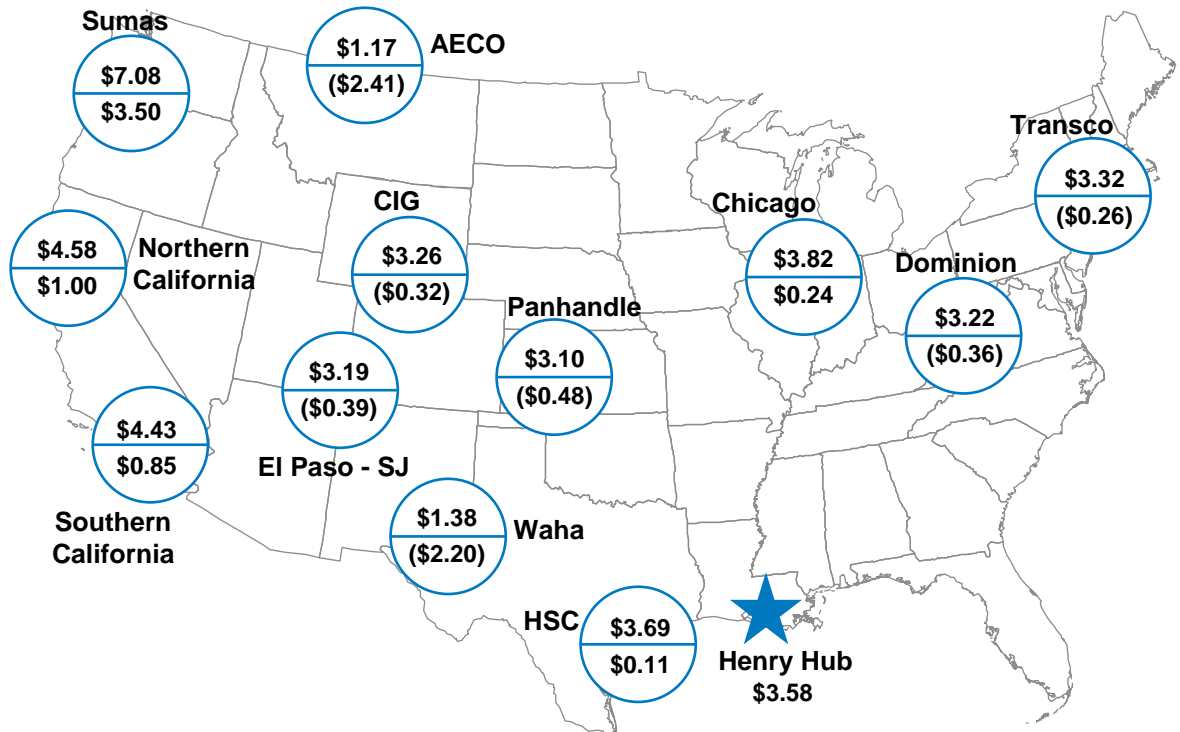
OIL PRICING & DIFFERENTIALS TO CUSHING WTI (\$ / BBL) – AS OF 20-DEC-18

Legend



NATURAL GAS PRICING & DIFFERENTIALS TO HENRY HUB (\$ / MMBTU) – AS OF 20-DEC-18

Legend



Source: BMO Commodity Products Group, Bloomberg

Note: Prices and differentials are for prompt month futures except for Clearbrook which is based on spot prices.

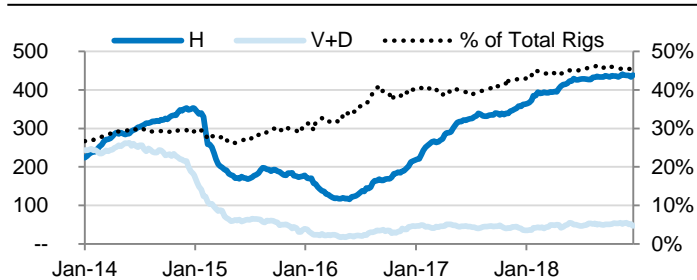


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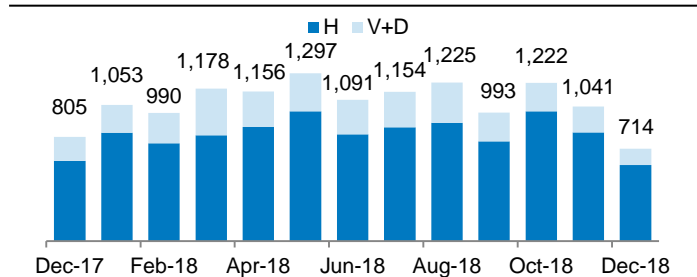
Permian Snapshot

Item	Value	Wkly Change	Last Week
Rig Count	486	█	--
Permitting Activity	201	↓	(80)

RIG COUNT

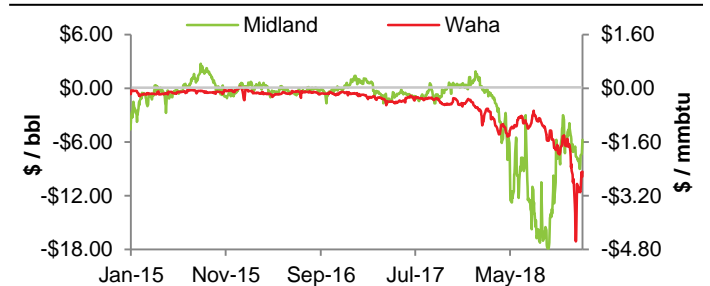


PERMITTING ACTIVITY BY MONTH

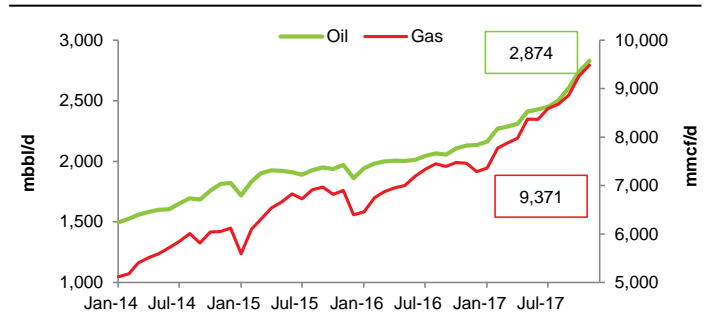


Item	Value	Wkly Change	Last Week
Oil Differential	(\$5.75)	↑	\$2.75 (\$8.50)
Gas Differential	(\$2.48)	↑	\$0.62 (\$3.10)

DIFFERENTIALS



GROSS PRODUCTION

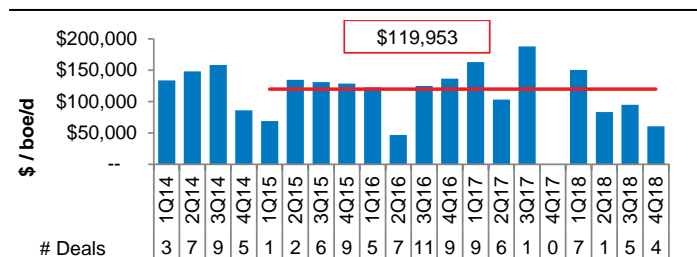


TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

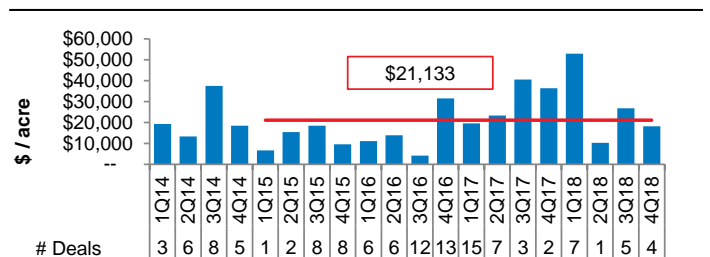
Ann'd Date	Buyer	Seller	Asset Description	Value ⁽¹⁾ (\$mm)	Proved Multiple (\$/boe)	Prod. Multiple (\$/boe/d)	Net Acres (\$/acre) ⁽²⁾	
06-Nov-18	Diamondback Energy	ExL Pet.; EnergyQuest	3,646 net acres in Midland Basin	\$313	n.a.	\$89,286	\$85,710	
05-Nov-18	Centennial Resource Dev.	Undisclosed Seller	820 net acres in Delaware Basin	\$26	n.a.	n.a.	\$31,707	
01-Nov-18	Undisclosed Buyer	Parsley Energy LP	11,850 net acres in Midland Basin	\$170	n.a.	\$141,667	\$14,346	
17-Oct-18	Earthstone Energy Inc	Sabalo Energy	20,800 net acres in Midland Basin	\$976	\$10.73	\$87,143	\$46,923	
25-Sep-18	Undisclosed Buyer	W&T Offshore	Royalty interests in 25,493 net acres	\$57	n.a.	n.a.	nmf	
				Mean	\$308	\$10.73	\$106,032	\$44,672
				Median	\$170	\$10.73	\$89,286	\$39,315

Blue = BMO provided transaction advisory services Green = BMO provided acquisition financing or related services
Purple = BMO provided both transaction advisory services and acquisition financing or related services

TRANSACTION PRODUCTION MULTIPLES⁽³⁾



TRANSACTION ADJUSTED NET ACRE MULTIPLES^(3,4)



Source: BMO Transaction Database, Baker Hughes, BMO Commodity Products Group, Bloomberg, Drilling Info, PLS

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- Red line denotes average since 10-Jan-15. Calculated as the weighted average of each quarter's transactions.
- Production valued at \$45,000/boepd in 2014, \$30,000/boepd in 2015, \$35,000/boepd in 2016 & 2017, and \$40,000/boepd in 2018.



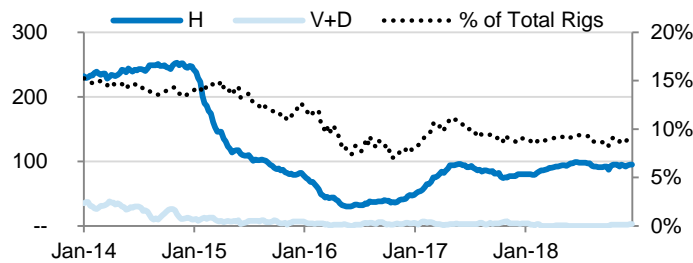
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Eagle Ford Snapshot

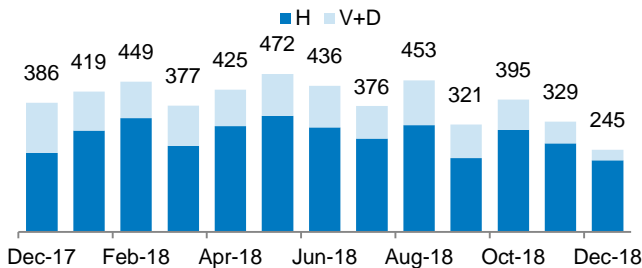
Item	Value	Wkly Change	Last Week
Rig Count	98	█	-- 98
Permitting Activity	104	↑	8 96

Item	Value	Wkly Change	Last Week
Oil Differential	\$6.00	↓	(\$0.85) \$6.85
Gas Differential	\$0.12	↑	\$0.06 \$0.06

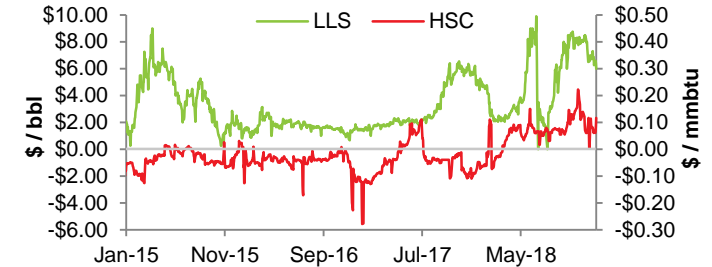
RIG COUNT



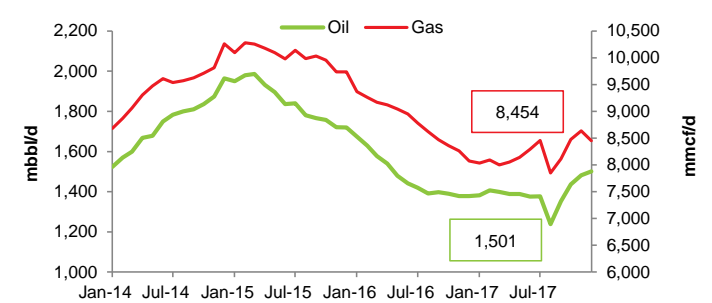
PERMITTING ACTIVITY BY MONTH



DIFFERENTIALS



GROSS PRODUCTION

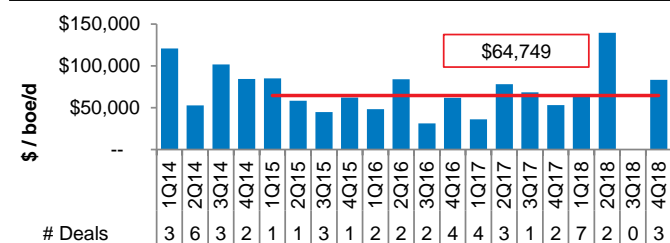


TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

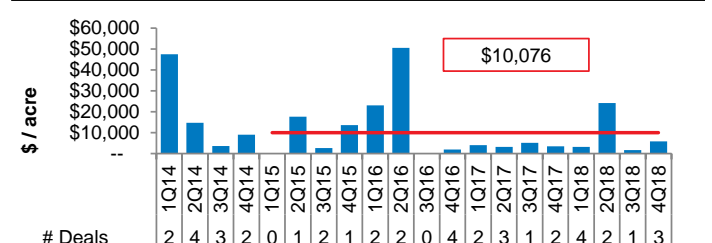
Ann'd Date	Buyer	Seller	Asset Description	Value ⁽¹⁾ (\$mm)	Proved Multiple (\$/boe)	Prod. Multiple (\$/boe/d)	Net Acres (\$/acre) ⁽²⁾
19-Nov-18	Lonestar Resources Inc	Sabine Oil & Gas Corp	2,706 net acres in Eagle Ford	\$39	\$2.98	\$48,375	\$14,302
20-Sep-18	WildHorse	Undisclosed Seller	20,305 net Eagle Ford/Austin Chalk acres	\$35	n.a.	n.a.	\$1,743
07-Sep-18	Undisclosed Buyer	Viking Minerals LLC	1,191 net royalty acres in Eagle Ford	\$28	n.a.	n.a.	nmf
31-Jul-18	EP Energy Corp	Undisclosed Seller	Additional working interests in Eagle Ford	\$31	n.a.	n.a.	n.a.
26-Jul-18	BP	BHP Billiton	Permian, Eagle Ford, and Haynesville	\$10,500	n.a.	n.a.	n.a.
			Mean	\$2,127	\$2.98	\$48,375	\$8,022
			Median	\$35	\$2.98	\$48,375	\$8,022

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TRANSACTION PRODUCTION MULTIPLES⁽³⁾



TRANSACTION ADJUSTED NET ACRE MULTIPLES^(3,4)



Source: BMO Transaction Database, Baker Hughes, BMO Commodity Products Group, Bloomberg, Drilling Info, PLS

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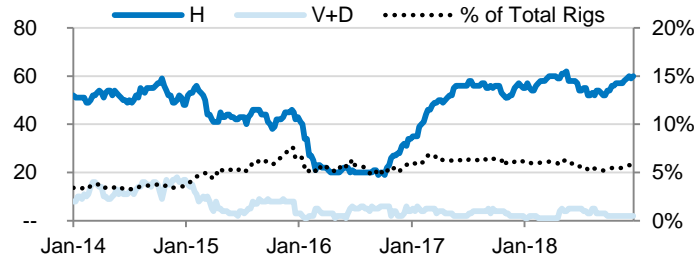
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Ark-La-Tex Snapshot

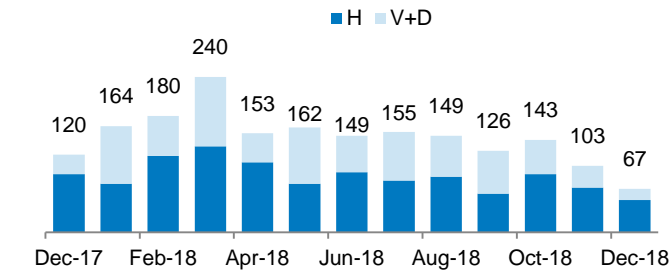
Item	Value	Wkly Change	Last Week
Rig Count	62	↑	61
Permitting Activity	17	↑	14

Item	Value	Wkly Change	Last Week
Oil Differential	\$6.00	↓	\$6.85
Gas Differential	--	█	--

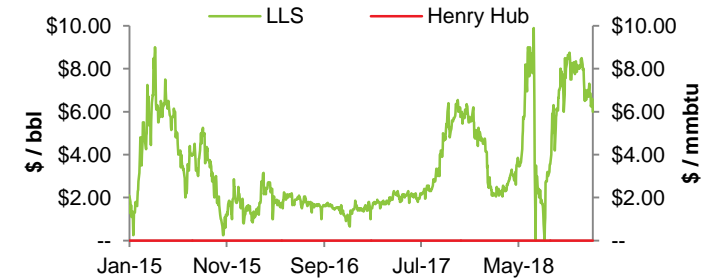
RIG COUNT



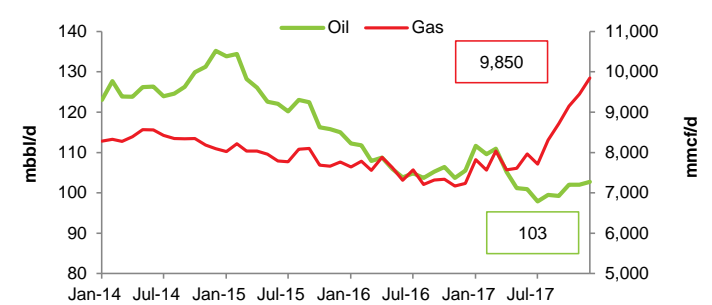
PERMITTING ACTIVITY BY MONTH



DIFFERENTIALS



GROSS PRODUCTION

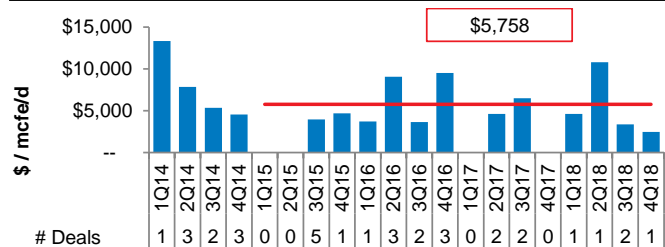


TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

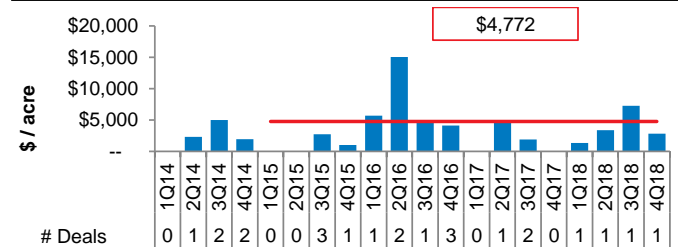
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19-Nov-18	Aethon III	QEP Resources Inc	49,700 net acres in Haynesville	\$735	\$0.77	\$2,475	\$14,789
05-Sep-18	Viking Energy Group	Multiple Sellers	Texas and Louisiana assets	\$100	n.a.	n.a.	n.a.
05-Sep-18	Equinor	Texegy LLC	60,000 net acres in Austin Chalk	\$75	n.a.	n.a.	\$1,250
06-Aug-18	Mission Creek Resources	Bonanza Creek Energy Inc	11,132 net acres in the Cotton Valley	\$117	\$1.69	\$6,500	\$10,510
			Mean	\$210	\$1.23	\$4,487	\$7,488
			Median	\$100	\$1.23	\$4,487	\$6,957

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TRANSACTION PRODUCTION MULTIPLES⁽³⁾



TRANSACTION ADJUSTED NET ACRE MULTIPLES^(3,4)



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- \$/acre multiple not adjusted for value associated with production.
- Red line denotes average since 01-Jan-15. Calculated as the weighted average of each quarter's transactions.
- Production valued at \$3,000/mcfepd in 2014, and \$2,000/mcfepd in 2015, 2016, 2017, and 2018.

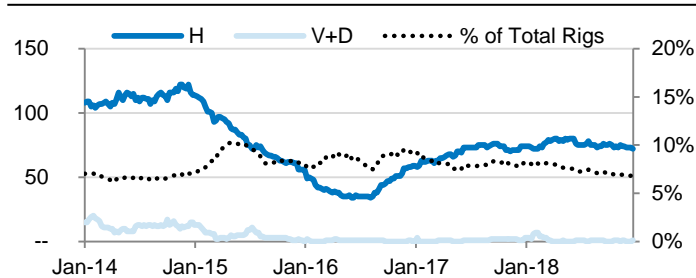


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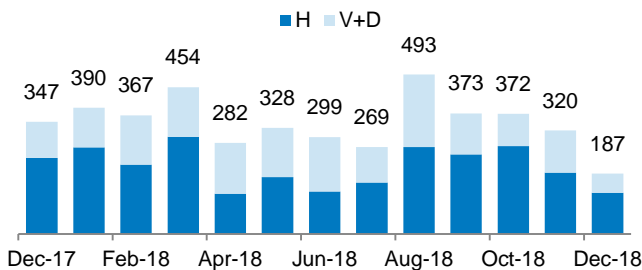
Appalachia Snapshot

Item	Value	Wkly Change	Last Week
Rig Count	73	█	--
Permitting Activity	56	↓	(4)

RIG COUNT

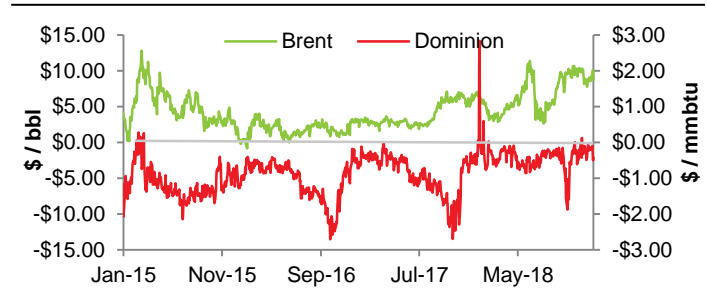


PERMITTING ACTIVITY BY MONTH

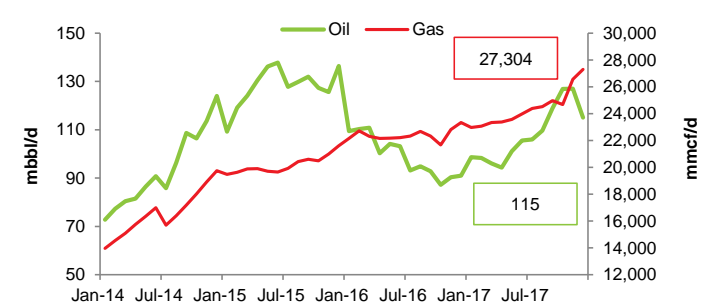


Item	Value	Wkly Change	Last Week
Oil Differential	\$8.72	↓	(\$0.15)
Gas Differential	(\$0.42)	↓	(\$0.24)

DIFFERENTIALS



GROSS PRODUCTION

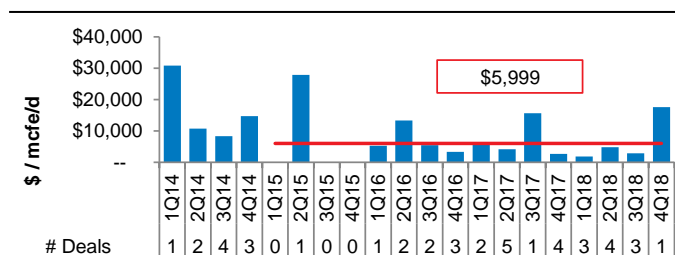


TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

Ann'd Date	Buyer	Seller	Asset Description	Value ⁽¹⁾	Proved Multiple	Prod. Multiple	Net Acres	
				(\$mm)	(\$/mcf)	(\$/mcf/d)	(\$/acre) ⁽²⁾	
15-Oct-18	Undisclosed Buyer	Range Resources Corp	Overriding royalty interests in Appalachia	\$300	n.a.	\$17,649	n/m	
27-Aug-18	PennEnergy Resources	Rex Energy Corp	141,026 net acres in PA and OH	\$601	\$0.58	\$2,781	\$4,258	
26-Jul-18	Encino Acquisition Partners	Chesapeake	938,000 net acres in the Utica	\$1,900	\$0.66	\$2,960	\$2,026	
29-Jun-18	Ascent Resources LLC	Utica Minerals; Undisclosed	35,400 acres in the Utica	\$700	n.a.	\$15,217	\$19,774	
29-Jun-18	Ascent Resources LLC	CNX Resources; Hess	78,000 acres in the Utica	\$800	n.a.	\$4,762	\$10,256	
				Mean	\$860	\$0.62	\$8,674	\$9,079
				Median	\$700	\$0.62	\$4,762	\$7,257

Blue = BMO provided transaction advisory services Green = BMO provided acquisition financing or related services
Purple = BMO provided both transaction advisory services and acquisition financing or related services

TRANSACTION PRODUCTION MULTIPLES⁽³⁾



TRANSACTION ADJUSTED NET ACRE MULTIPLES^(3,4)



Source: BMO Transaction Database, Baker Hughes, BMO Commodity Products Group, Bloomberg, Drilling Info, PLS

Note: Current quarter's data is through the week covered by this issue.

1. Represents total enterprise value. Excludes transactions with deal value <\$20 million.
2. \$/acre multiple not adjusted for value associated with production.
3. Red line denotes average since 01-Jan-15. Calculated as the weighted average of each quarter's transactions.
4. Production valued at \$3,000/mcfepd in 2014, and \$2,000/mcfepd in 2015, 2016, 2017, and 2018.



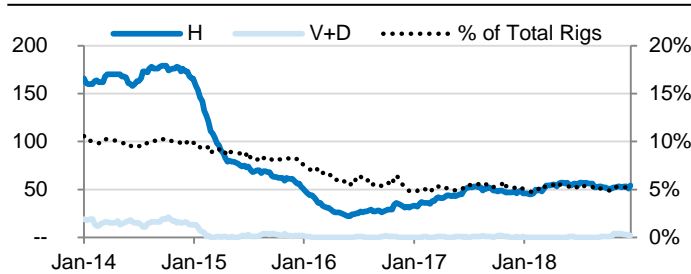
December 24, 2018

Bakken Snapshot

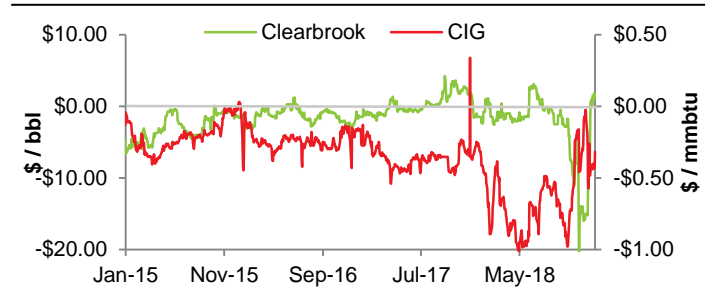
Item	Value	Wkly Change	Last Week
Rig Count	56	↑	53
Permitting Activity	26	↑	25

Item	Value	Wkly Change	Last Week
Oil Differential	\$1.00	↓	\$1.50
Gas Differential	(\$0.32)	↑	(\$0.41)

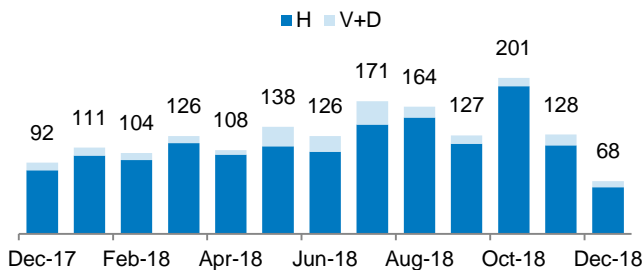
RIG COUNT



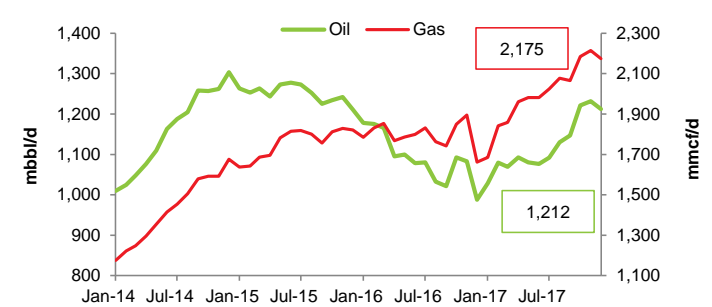
DIFFERENTIALS



PERMITTING ACTIVITY BY MONTH



GROSS PRODUCTION

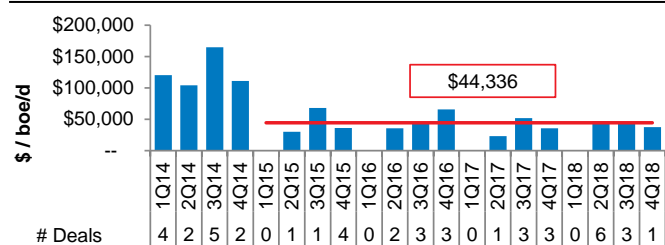


TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

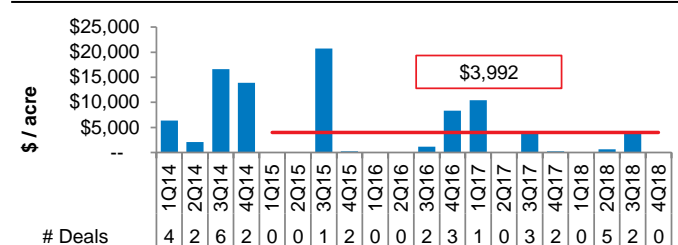
Ann'd Date	Buyer	Seller	Asset Description	Value ⁽¹⁾ (\$mm)	Proved Multiple (\$/boe)	Prod. Multiple (\$/boe/d)	Net Acres (\$/acre) ⁽²⁾
07-Nov-18	Vantage Energy Acq. Corp	QEP Resources Inc	102,800 net acres in Williston Basin	\$1,725	n.a.	\$37,500	\$16,780
31-Jul-18	Northern Oil and Gas	W Energy Partners	10,600 net acres in Williston Basin	\$288	n.a.	\$42,708	\$27,196
18-Jul-18	Northern Oil and Gas	Pivotal Petroleum Partners LP	Producing assets in Williston Basin	\$152	n.a.	\$37,032	n.a.
12-Jul-18	PetroShale Inc	Slawson Exploration Co	1,981 net acres in Williston Basin	\$55	\$6.04	\$100,000	\$27,764
06-Jul-18	Energy Resources 12 LP	Bruin E&P Partners LLC	2.8% non-operated WI in Bakken assets	\$83	n.a.	n.a.	n.a.
			Mean	\$461	\$6.04	\$54,310	\$23,913
			Median	\$152	\$6.04	\$40,104	\$27,196

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TRANSACTION PRODUCTION MULTIPLES⁽³⁾



TRANSACTION ADJUSTED NET ACRE MULTIPLES^(3,4)



Source: BMO Transaction Database, Baker Hughes, BMO Commodity Products Group, Bloomberg, Drilling Info, PLS

Note: Current quarter's data is through the week covered by this issue.

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- \$/acre multiple not adjusted for value associated with production.
- Red line denotes average since 01-Jan-15. Calculated as the weighted average of each quarter's transactions.
- Production valued at \$45,000/boepd in 2014, \$30,000/boepd in 2015, \$35,000/boepd in 2016 & 2017, and \$40,000/boepd in 2018.



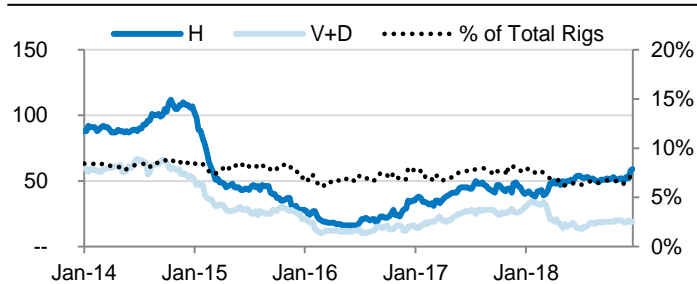
December 24, 2018

Rockies (excl. Bakken) Snapshot

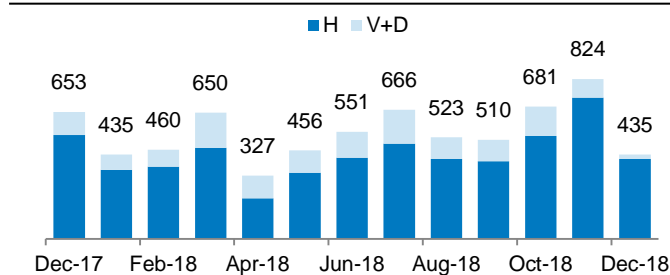
Item	Value	Wkly Change	Last Week
Rig Count	78	↑	77
Permitting Activity	115	↓ (97)	212

Item	Value	Wkly Change	Last Week
Oil Differential	\$1.00	↓ (\$0.50)	\$1.50
Gas Differential	(\$0.32)	↑ \$0.09	(\$0.41)

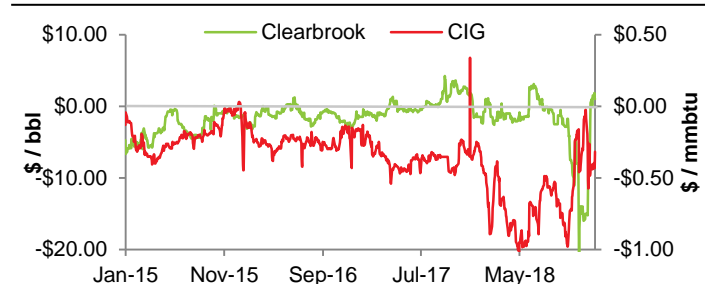
RIG COUNT



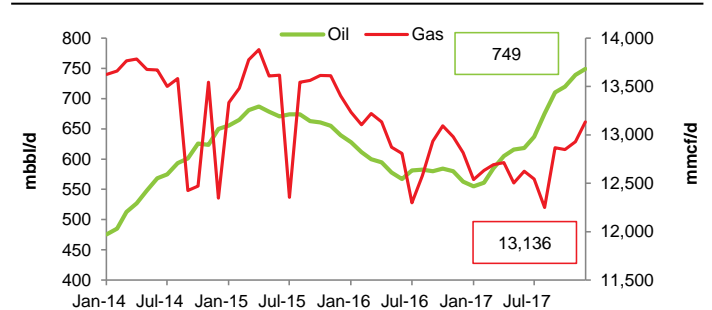
PERMITTING ACTIVITY BY MONTH



DIFFERENTIALS



GROSS PRODUCTION

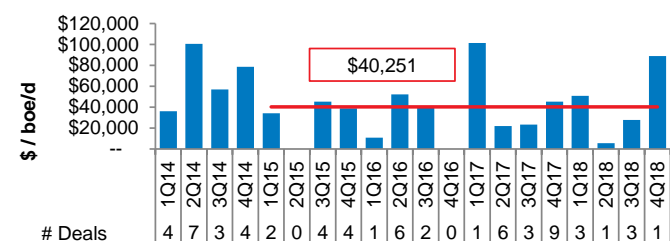


TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

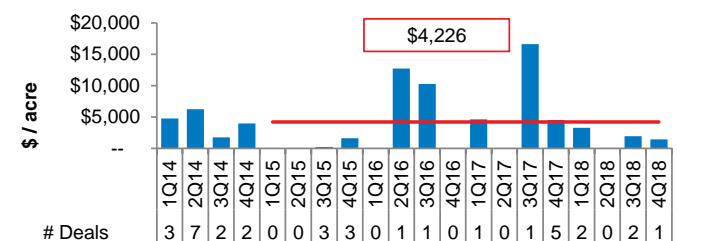
Ann'd Date	Buyer	Seller	Asset Description	Value ⁽¹⁾	Proved Multiple	Prod. Multiple	Net Acres	
				(\$mm)	(\$/boe)	(\$/boe/d)	(\$/acre) ⁽²⁾	
01-Oct-18	DJR Energy LLC	EnCana	182,000 net acres in San Juan Basin	\$480	n.a.	\$88,889	\$2,637	
28-Aug-18	Vermilion Energy Inc	Massif Oil & Gas LLC	55,000 acres in Powder River Basin	\$150	n.a.	\$56,604	\$2,727	
28-Aug-18	Rebellion Energy II LLC	Liberty Resources II LLC	19,000 net acres in Powder River Basin	\$100	n.a.	n.a.	\$5,263	
09-Aug-18	Undisclosed Buyer	Ultra Petroleum	~8,000 net acres in the Uinta	\$75	n.a.	\$37,500	\$9,375	
10-Jul-18	Middle Fork Energy Part.	QEP Resources Inc	~230,000 net acres in the Uinta	\$155	\$1.54	\$17,222	\$674	
				Mean	\$192	\$1.54	\$50,054	\$4,135
				Median	\$150	\$1.54	\$47,052	\$2,727

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Purple = BMO provided both transaction advisory services and acquisition financing or related services

TRANSACTION PRODUCTION MULTIPLES⁽³⁾



TRANSACTION ADJUSTED NET ACRE MULTIPLES^(3,4)



Source: BMO Transaction Database, Baker Hughes, BMO Commodity Products Group, Bloomberg, Drilling Info, PLS

Note: Current quarter's data is through the week covered by this issue.

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- Production valued at \$45,000/boepd in 2014, \$30,000/boepd in 2015, \$35,000/boepd in 2016 & 2017, and \$40,000/boepd in 2018.

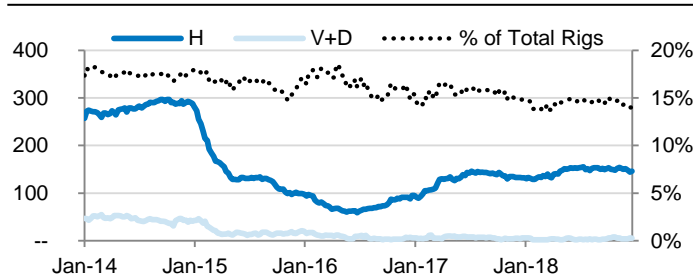


December 24, 2018

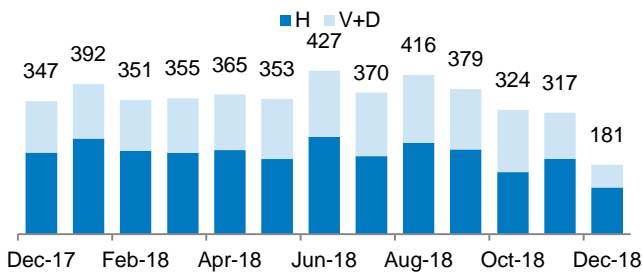
Mid-Continent Snapshot

Item	Value	Wkly Change	Last Week
Rig Count	151	↑	150
Permitting Activity	46	↓ (25)	71

RIG COUNT

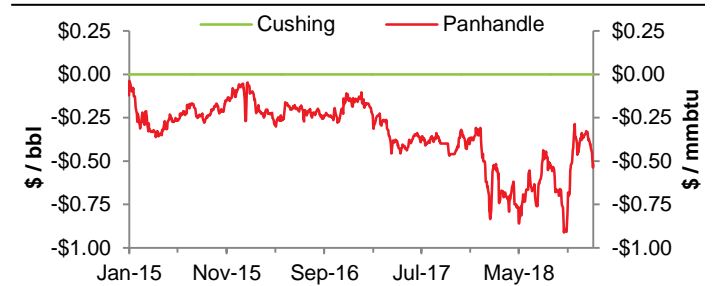


PERMITTING ACTIVITY BY MONTH

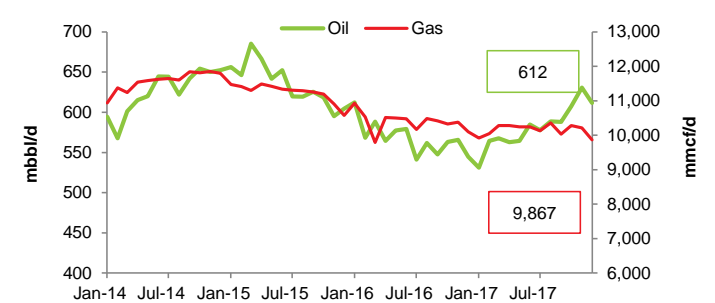


Item	Value	Wkly Change	Last Week
Oil Differential	--	█	--
Gas Differential	(\$0.52)	↓ (\$0.10)	(\$0.42)

DIFFERENTIALS



GROSS PRODUCTION

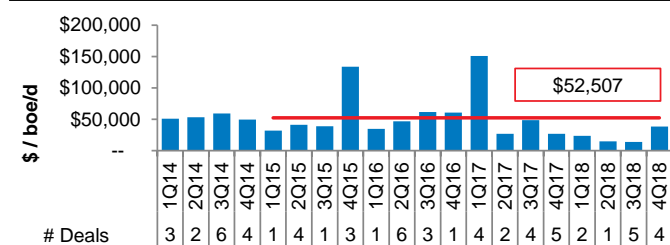


TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

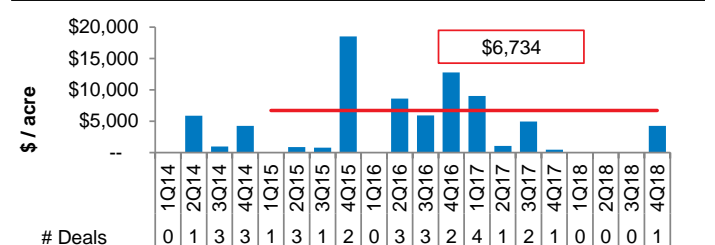
Ann'd Date	Buyer	Seller	Asset Description	Value ⁽¹⁾ (\$mm)	Proved Multiple (\$/boe)	Prod. Multiple (\$/boe/d)	Net Acres (\$/acre) ⁽²⁾	
11-Dec-18	Undisclosed Buyer	Riviera Resources Inc	37,000 net acres in the Arkoma Basin	\$68	n.a.	\$17,000	\$1,838	
02-Nov-18	SandRidge Energy	Undisclosed Seller	Mississippi Lime and NW STACK assets	\$25	n.a.	\$6,649	n.a.	
31-Oct-18	Casillas Petroleum Corp	Sheridan Production Partners	29,600 net acres in SCOOP assets	\$260	n.a.	\$78,078	\$8,784	
04-Sep-18	Flywheel Energy LLC	Southwestern Energy	915,000 net acres in Fayetteville Shale	\$1,865	\$3.04	\$15,629	\$2,038	
06-Aug-18	Franco Nevada Corp	Continental Resources Inc	Mineral rights JV in the SCOOP/STACK	\$220	n.a.	n.a.	nmf	
				Mean	\$488	\$3.04	\$29,339	\$4,220
				Median	\$220	\$3.04	\$16,314	\$2,038

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TRANSACTION PRODUCTION MULTIPLES⁽³⁾



TRANSACTION ADJUSTED NET ACRE MULTIPLES^(3,4)



Source: BMO Transaction Database, Baker Hughes, BMO Commodity Products Group, Bloomberg, Drilling Info, PLS

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- Production valued at \$45,000/boepd in 2014, \$30,000/boepd in 2015, \$35,000/boepd in 2016 & 2017, and \$40,000/boepd in 2018.

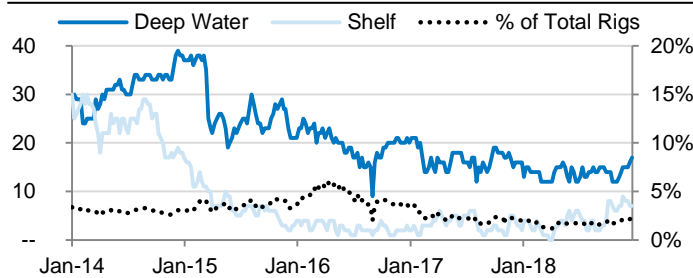


December 24, 2018

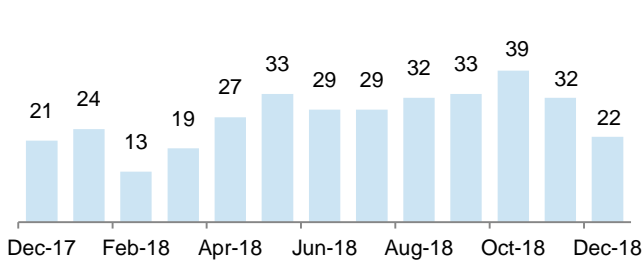
Gulf of Mexico Snapshot

Item	Value	Wkly Change	Last Week
Rig Count	24	↑	23
Permitting Activity	2	↓	10

RIG COUNT

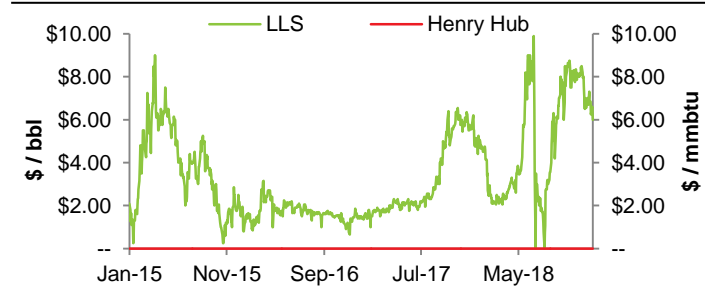


PERMITTING ACTIVITY BY MONTH⁽¹⁾

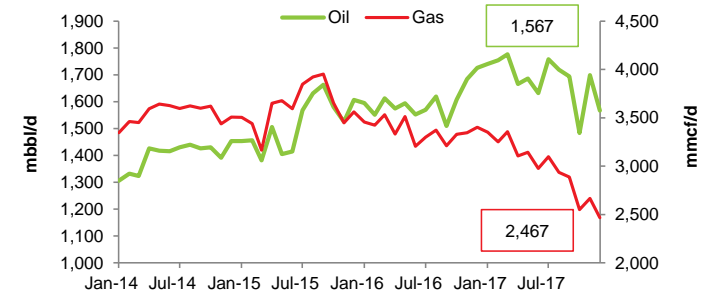


Item	Value	Wkly Change	Last Week
Oil Differential	\$6.00	↓	\$6.85
Gas Differential	--	█	--

DIFFERENTIALS



GROSS PRODUCTION

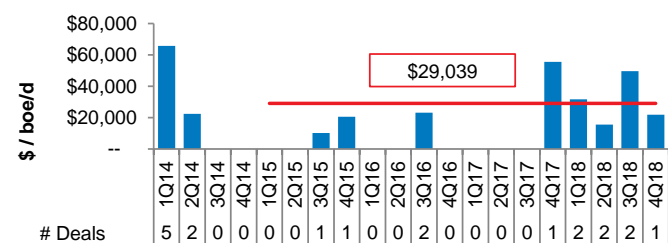


TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

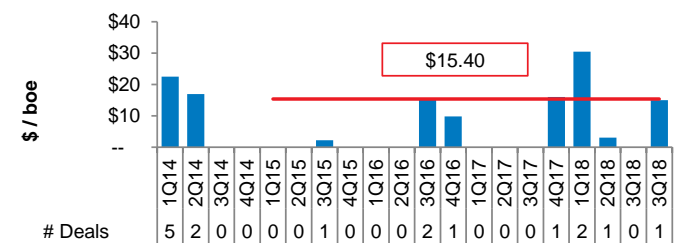
Ann'd Date	Buyer	Seller	Asset Description	Value ⁽²⁾ (\$mm)	Proved Multiple (\$/boe)	Prod. Multiple (\$/boe/d)	Net Acres (\$/acre) ⁽³⁾	
10-Oct-18	Murphy	Petrobras	Gulf of Mexico joint venture	\$900	\$15.00	\$21,951	n.a.	
04-Sep-18	Talos Energy Inc	Whistler Energy II LLC	Leases in Green Canyon federal waters	\$91	n.a.	\$60,667	n.a.	
27-Apr-18	Stone Energy	Shell; ExxonMobil; Anadarko	GOM Ram Powell assets	\$234	n.a.	\$38,361	n.a.	
28-Mar-18	W&T Offshore	Cobalt International Energy	9.375% non-op WI in the Heidelberg unit	\$31	\$23.92	\$9,345	n.a.	
12-Mar-18	Total	Cobalt International Energy	Non-op interest in 13 blocks	\$25	n.a.	n.a.	n.a.	
				Mean	\$256	\$19.46	\$32,581	n.a.
				Median	\$91	\$19.46	\$30,156	n.a.

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TRANSACTION PRODUCTION MULTIPLES⁽⁴⁾



TRANSACTION PROVED RESERVE MULTIPLES⁽⁴⁾



Source: BMO Transaction Database, Baker Hughes, BMO Commodity Products Group, Bloomberg, Drilling Info, PLS

Note: Current quarter's data is through the week covered by this issue.

- Permits include directional and unidentified drilling permits.
- Represents total enterprise value. Excludes transactions with deal value <\$20 million.
- \$/acre multiple not adjusted for value associated with production.
- Red line denotes average since 01-Jan-15. Calculated as the weighted average of each quarter's transactions.



December 24, 2018

[Click event to open](#)

Upcoming Industry Events

January 2019

Jan 15	Houston Producers Forum Luncheon
Jan 18	ADAM-Houston Monthly Luncheon
Jan 24	IPAA Private Capital Conference
Jan 31	SPE A&D Symposium

February 2019

Feb 5-7	SPE Hydraulic Fracturing Technology Conference
Feb 11-15	NAPE Summit Week
Feb 12	Women in Energy Luncheon
Feb 15	ADAM-Houston Monthly Luncheon
Feb 19	Houston Producers Forum Luncheon
Feb 19-20	DUG Haynesville

March 2019

Mar 5	Energy Capital Conference
Mar 5-7	IADC/SPE Drilling Conference
Mar 15	ADAM-Houston Monthly Luncheon
Mar 19	Houston Producers Forum Luncheon
Mar 26-28	International Petroleum Technology Conference

April 2019

Apr 8-10	IPAA Oil & Gas Investment Symposium
Apr 15	DUG Sand
Apr 15	DUG Water
Apr 15-17	DUG Permian
Apr 16	Houston Producers Forum Luncheon
Apr 19	ADAM-Houston Monthly Luncheon

May 2019

May 6-9	Offshore Technology Conference
May 10	Petroleum Resources Economics Conference
May 13-17	SPE Electric Submersible Pumps Symposium
May 14-15	DUG Rockies
May 14	Houston Producers Forum Luncheon
May 16	IADC Drilling Onshore Conference & Exhibition
May 17	ADAM-Houston Monthly Luncheon

June 2019

Jun 5-6	Midstream Texas Conference & Exhibition
Jun 18	Houston Producers Forum Luncheon
Jun 18-20	DUG East
Jun 19-20	IADC World Drilling Conference & Exhibition
Jun 21	ADAM-Houston Monthly Luncheon
Jun 24-26	IPAA Midyear Meeting

July 2019

Jul 16	Houston Producers Forum Luncheon
Jul 19	ADAM-Houston Monthly Luncheon

August 2019

Aug 16	ADAM-Houston Monthly Luncheon
Aug 20	IPAA Oil & Gas Overview Course
Aug 20	Houston Producers Forum Luncheon
Aug 21-22	Summer NAPE

September 2019

Sep 17	Houston Producers Forum Luncheon
Sep 20	ADAM-Houston Monthly Luncheon
Sep 24-26	DUG Eagle Ford
Sep 30-Oct 2	SPE Annual Technical Conference and Exhibition

October 2019

Oct 9	IPAA Leaders in Industry Luncheon
Oct 15	Houston Producers Forum Luncheon
Oct 18	ADAM-Houston Monthly Luncheon
Oct 22-23	A&D Strategies and Opportunities Conference

November 2019

Nov 4-6	Executive Oil Conference & Exhibition
Nov 15	ADAM-Houston Monthly Luncheon
Nov 19	IPAA Oil & Gas for Newcomers
Nov 19	Houston Producers Forum Luncheon
Nov 19-21	DUG Midcontinent

December 2019

Dec 17	Houston Producers Forum Luncheon
Dec 20	ADAM-Houston Monthly Luncheon



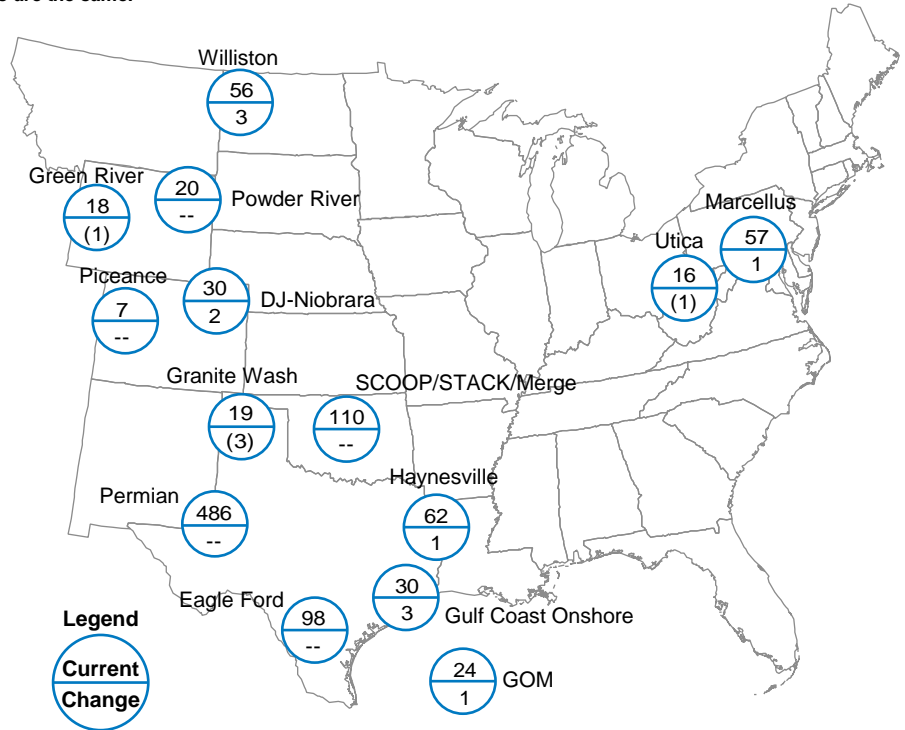
December 24, 2018

Rig Count Summary

BMO uses updated basin outlines, and the resulting rig counts, to more accurately represent current basin knowledge. The data below reflect these changes and is different than those shown by Baker Hughes. The totals are the same.

	This Week	Change	Last Week	Last Year
Total Rigs	1,080	9	1,071	931
Oil	883	10	873	747
Gas	197	(1)	198	184
Miscellaneous	--	--	--	--
Directional	71	(2)	73	66
Horizontal	940	13	927	801
Vertical	69	(2)	71	64

Basin	This Week	Change	Last Week	Last Year
Permian	486	--	486	398
SCOOP/STACK/Merge	110	--	110	98
Granite Wash	19	(3)	22	19
Eagle Ford	98	--	98	84
Haynesville	62	1	61	58
Marcellus	57	1	56	48
Utica	16	(1)	17	27
Williston	56	3	53	49
DJ-Niobrara	30	2	28	23
Green River	18	(1)	19	24
Powder River	20	--	20	10
Piceance	7	--	7	8
Gulf Coast Onshore	30	3	27	18
GOM	24	1	23	19
Alaska	5	(1)	6	5
Other	42	4	38	43
Mid-Con	22	4	18	21
Rockies	3	--	3	5
Western	15	--	15	14
Eastern	2	--	2	3



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Source of rig count stats: Baker Hughes