



January 7, 2019

Covering the Weeks of December 21, 2018 to January 3, 2019

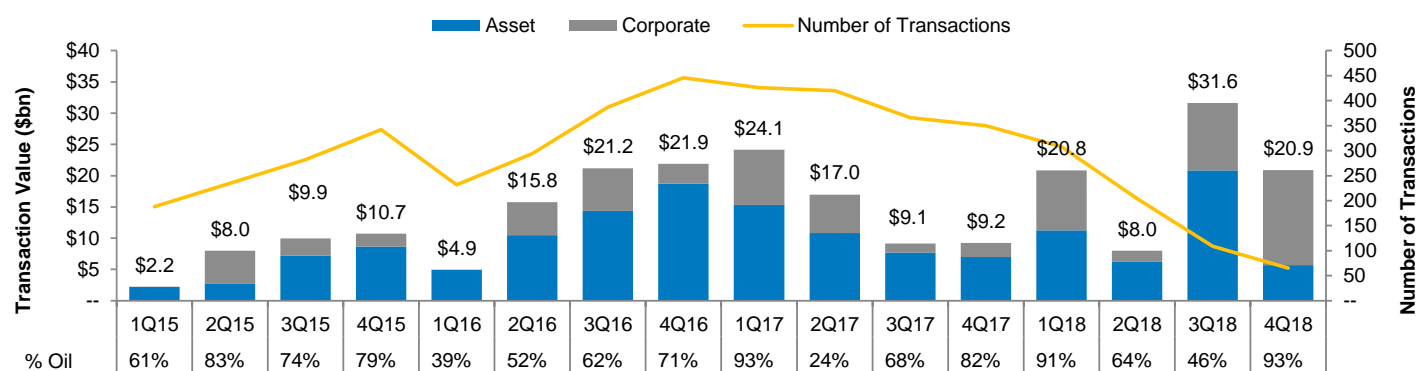
## Week in Review

- **Happy New Year from the BMO Capital Markets team! This is the first issue for 2019. This Market Monitor reflects the two week period between December 21, 2018 through January 3, 2019**
- Pantheon Resources acquired Alaskan assets from Great Bear Petroleum for \$49 million
- Eni acquires 70% working interest and operatorship of the Ooguruk oil field in Alaska from Caelus Resources Alaska LLC
- Earthstone Energy, Inc. announced the termination of the Sabalo acquisition and the cancellation of a special meeting of stockholders

## Key Industry Indicators

Indicator	Current Value	Week's Change	% Change	Direction
Prompt Oil Price (\$/bbl)	\$47.09	\$2.48	5.6%	↑
Prompt Gas Price (\$/mmbtu)	\$2.95	(\$0.69)	(19.0%)	↓
Wkly Trans. Value (\$mm)	--	(\$49)	(100%)	↓
Wkly Trans. Count	--	(1)	(100%)	↓
US Rig Count	1,075	(8)	(0.7%)	↓
US Oil Prod'n (mmbbl/d)	11.7	--	--	—
US Gas Prod'n (bcf/d) <sup>(1)</sup>	105.4	0.9	0.9%	↑
US Oil Storage (mmbbl)	441.4	0.0	0.0%	↑
US Gas Storage (tcf)	2.7	(0.0)	(0.7%)	↓

## Quarterly Deal Activity



## Commodities

- Oil ended up last week (through Thursday) up despite this year's choppy start which was likely caused by news from OPEC that Saudi December output had the largest decrease in almost two years. Saudi Arabia's deliberate cutbacks were compounded by unplanned losses in Iran and Libya, where protests halted the biggest oil field. The continued strength is likely driven by the market continuing to digest the large reduction in OPEC December output as well as the news that Saudi is increasing its oil pricing for US and Asian customers. The near-term contract closed up \$2.48, or 5.6%, at \$47.09 on Thursday
- Natural gas ended last week (through Thursday) down as storage projections have risen meaningfully over the last two weeks. It has taken the market time to digest as the volatility in the front has been taking center stage. With less deliverability concerns for the winter and no availability concerns, the market is starting at very bearish fundamentals going forward. The near-term contract closed down \$0.69, or 19.0%, at \$2.95 on Thursday

## Equity Markets

- S&P E&P<sup>(2)</sup> outperformed last week (through Thursday) 1% vs. SPX<sup>(2)</sup> (1.6)%
- The major U.S. equity indexes all finished down last week, as market volatility continued. Consumer discretionary, consumer staples, financials, health care, industrials, materials, real estate, and tech all finished lower. Tech performed the worst, down 4.3%

## Debt Markets

- No issuers priced last week (through Thursday) making this the first December since the LCD<sup>(3)</sup> began tracking the asset in 2005 that this has occurred
- U.S. high yield funds reported an outflow of \$628 million
- ETFs reported an inflow of \$535 million, while mutual funds reported an outflow of \$1.16 billion
- High yield index yield was 7.92%; high yield energy index yield was 9.46%

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 October 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.

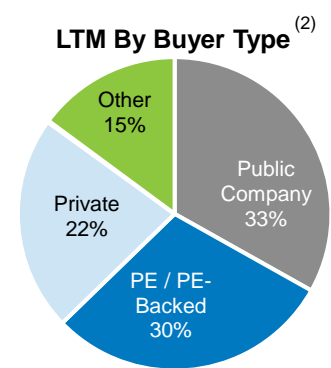
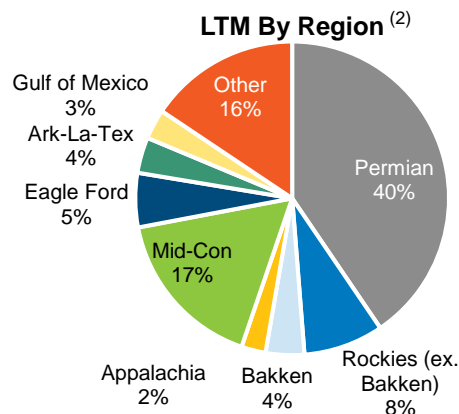
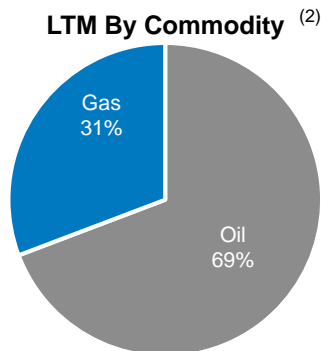


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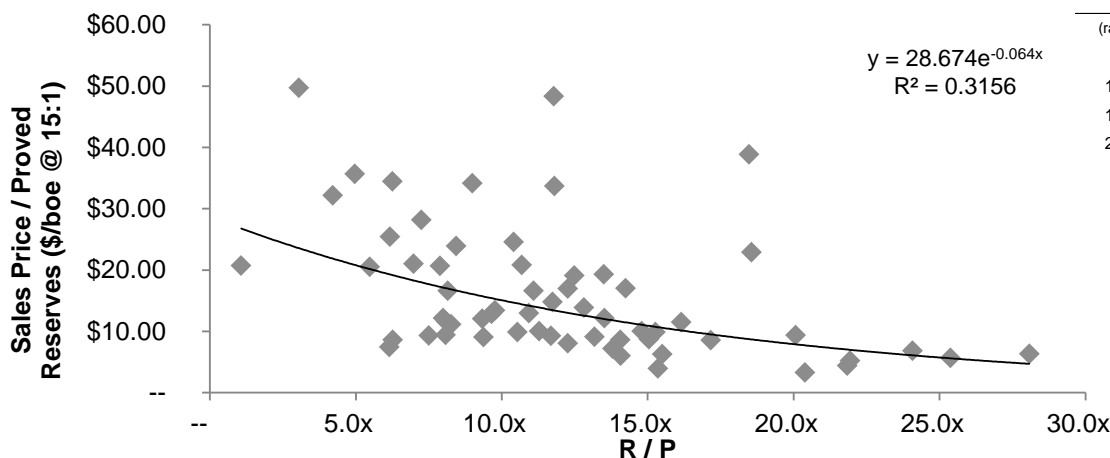
## The 10 Most Recent Asset Transactions Over \$20 Million

Ann'd Date	Buyer	Seller	Area	Asset Description	Value <sup>(1)</sup> (\$mm)	Proved Multiple (\$/boe)	Prod. Multiple (\$/boe/d)	Net Acres (\$/acre)
21-Dec-18	Pantheon Resources Plc	Great Bear Petroleum LLC	Alaska	250,000 leased acres in the North Slope	\$49	n.a.	n.a.	\$196
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

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<sup>(3)</sup>



R / P	Sales Value / Proved Reserves (15:1)	
	(\$ / boe)	(\$ / mcf)
(ratio)		
8x	\$17.14	\$1.14
10x	\$15.07	\$1.00
15x	\$10.93	\$0.73
20x	\$7.92	\$0.53

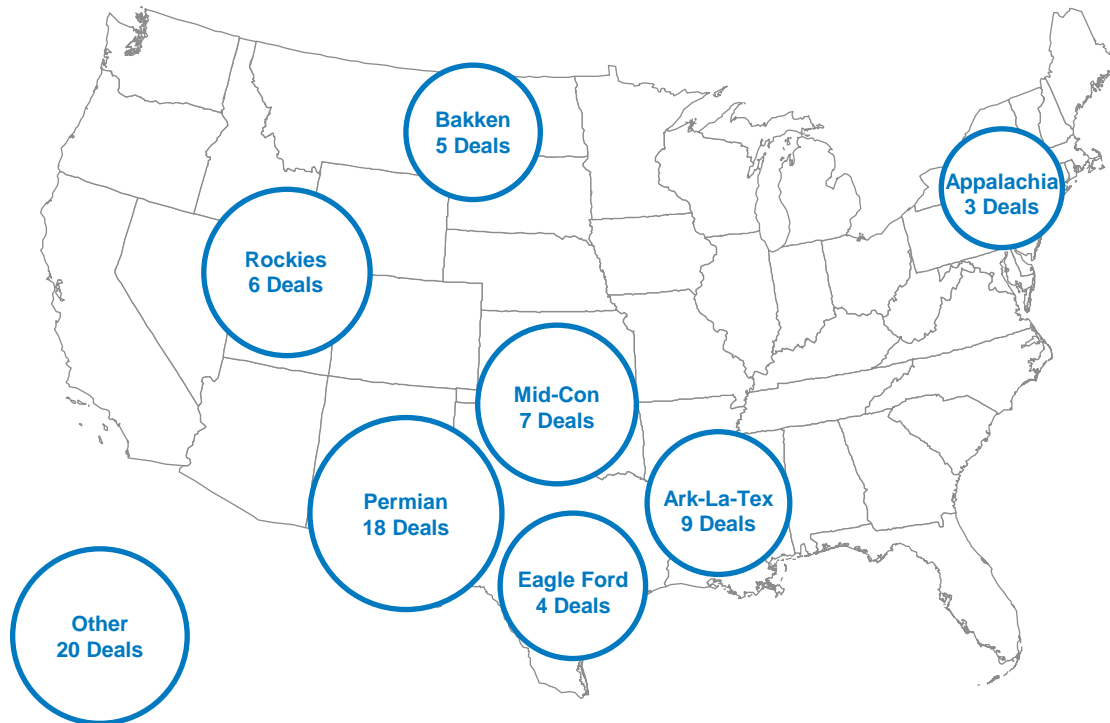
2 Source: BMO Transaction Database, Baker Hughes, BMO Commodity Products Group, Bloomberg, PLS

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 2018 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

- [Pantheon Resources Raises Funds as It Proposes Acquisition of Alaskan Assets](#)
- [Eni Acquires 70% and Operatorship of the Ooguruk Oil Field in Alaska](#)
- [Earthstone Energy, Inc. Announces Termination of Sabalo Acquisition and Cancellation of Special Meeting of Stockholders](#)

## Industry Headlines

- [Here Are Trump's Largest 'Energy Dominance' Actions of 2018](#)
- [U.S. Shale Challenges OPEC's Oil Dominance In Asia](#)
- [JP Morgan: If OPEC Doesn't Maintain its Cuts, Oil Could Stay Lower for Longer](#)
- [Colorado Collected \\$96 Million in Severance Taxes from Oil and Gas in 2018](#)
- [The Top 10 RBN Energy Prognostications For 2019 - Year Of The Pig: When Pigs Fly!](#)

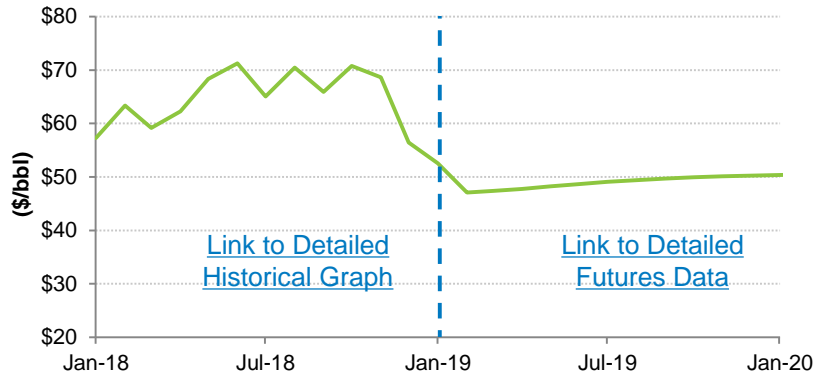
(Click headline to link to the full article)



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## Commodity Prices

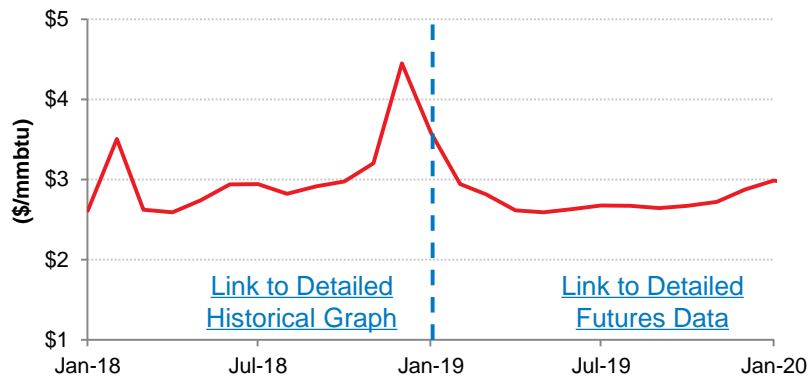
### WTI OIL (HISTORICAL / FORECAST)



**NYMEX WTI Futures as of 03-Jan-19 Close (\$/bbl)**

Period <sup>(1)</sup>	Current	Last Wk.	6 Mo. Ago	1 Yr. Ago
12 Mo. Strip	\$49.01	\$46.30	\$67.39	\$59.96
2019	\$48.88	\$46.19	\$64.55	\$56.76
2020	\$50.91	\$48.12	\$60.54	\$54.12
2021	\$51.86	\$49.41	\$57.77	\$52.40
2022	\$52.61	\$50.49	\$55.74	\$51.66
2023	\$53.38	\$51.43	\$54.44	\$51.51

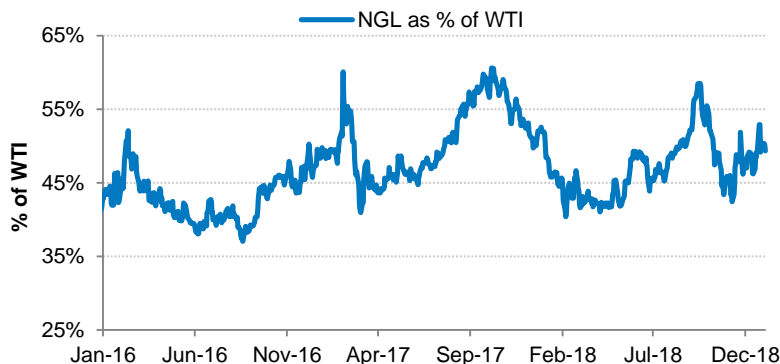
### HENRY HUB NATURAL GAS (HISTORICAL / FORECAST)



**NYMEX Gas Futures as of 03-Jan-19 Close (\$/mmbtu)**

Period <sup>(1)</sup>	Current	Last Wk.	6 Mo. Ago	1 Yr. Ago
12 Mo. Strip	\$2.74	\$3.06	\$2.85	\$2.88
2019	\$2.71	\$3.06	\$2.79	\$2.80
2020	\$2.62	\$2.71	\$2.68	\$2.81
2021	\$2.59	\$2.61	\$2.63	\$2.84
2022	\$2.77	\$2.78	\$2.76	\$3.00
2023	\$2.77	\$2.78	\$2.76	\$3.00

### NGL PRICING<sup>(2)</sup>



**Historical Prices as of 03-Jan-19 Close (\$/gal)**

NGLs	Current	Last Wk.	6 Mo. Ago	1 Yr. Ago
Ethane	\$0.32	\$0.29	\$0.36	\$0.25
Propane	\$0.63	\$0.65	\$0.96	\$0.98
Butane	\$0.66	\$0.67	\$1.07	\$0.99
Iso-butane	\$0.78	\$0.75	\$1.26	\$1.09
Pentane+	\$0.98	\$0.89	\$1.54	\$1.42

Source: BMO Commodity Products Group, Bloomberg, FactSet

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

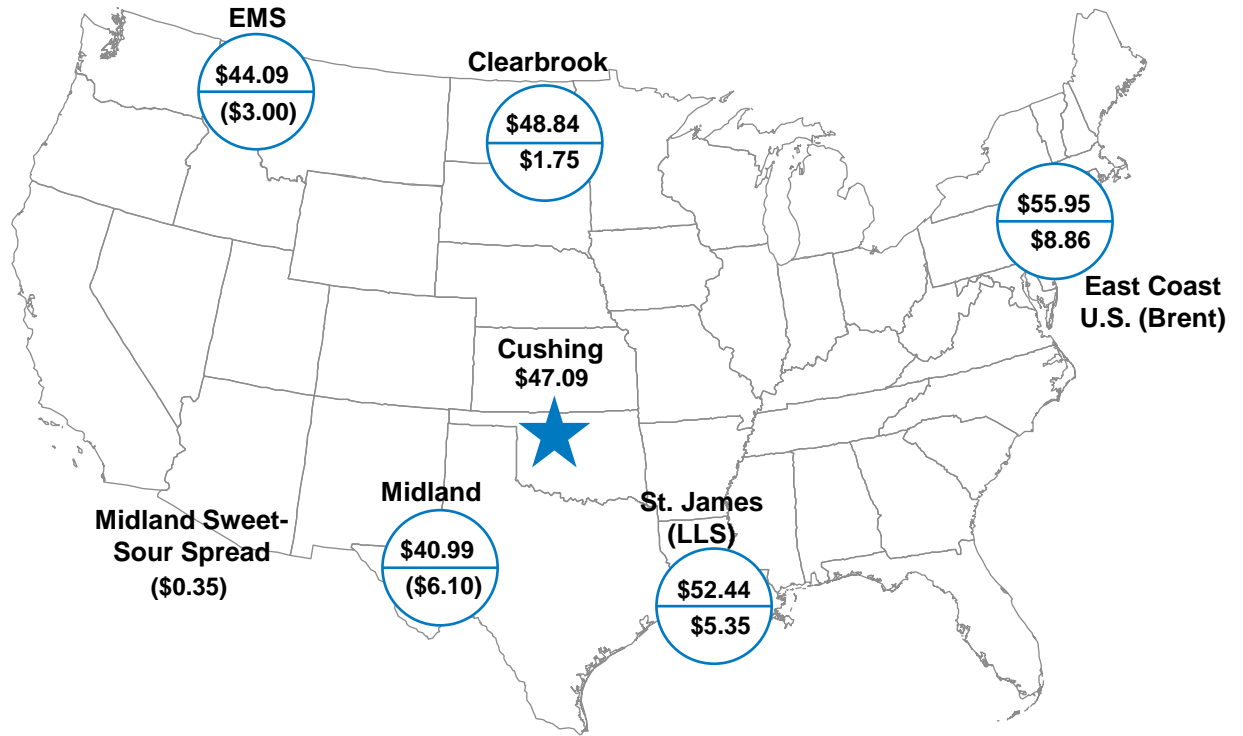


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## Commodity Prices (cont'd)

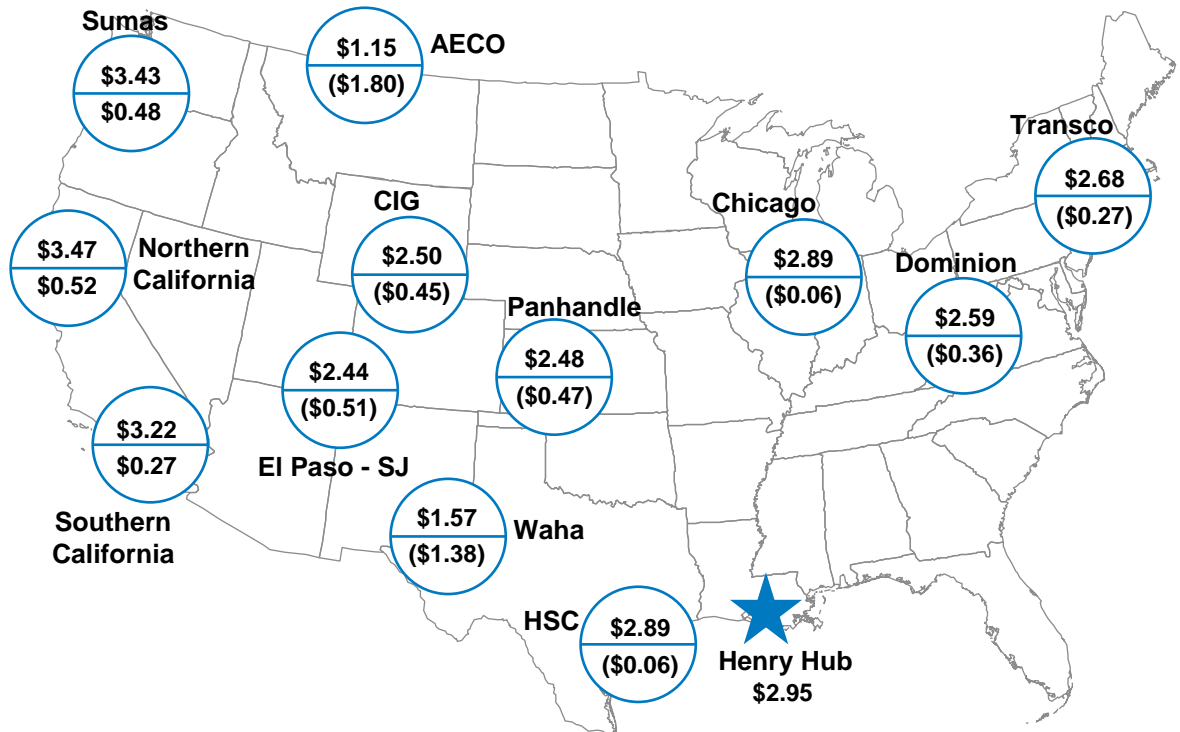
OIL PRICING & DIFFERENTIALS TO CUSHING WTI (\$ / BBL) – AS OF 03-JAN-19

### Legend



NATURAL GAS PRICING & DIFFERENTIALS TO HENRY HUB (\$ / MMBTU) – AS OF 03-JAN-19

### 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.



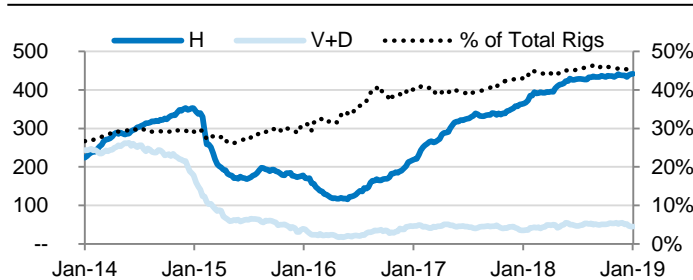
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## Permian Snapshot

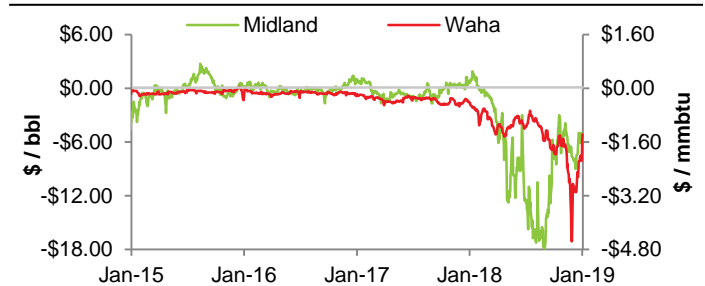
Item	Value	Wkly Change	Last Week
Rig Count	487	↑	486
Permitting Activity	16	↓ (80)	96

Item	Value	Wkly Change	Last Week
Oil Differential	(\$6.00)	↑	(\$6.10)
Gas Differential	(\$1.38)	↑	(\$2.01)

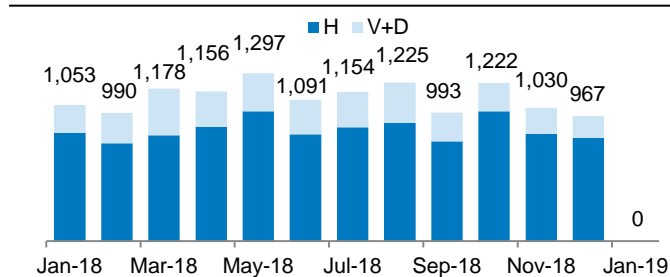
### RIG COUNT



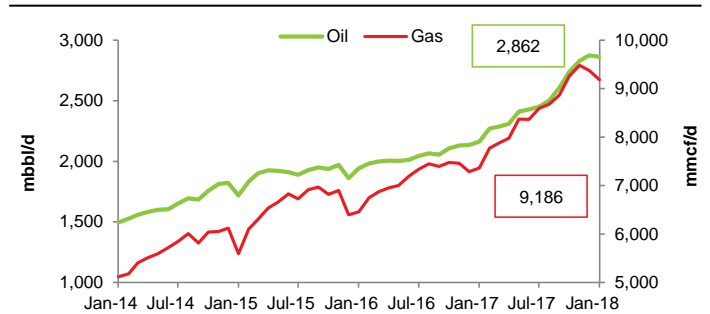
### DIFFERENTIALS



### PERMITTING ACTIVITY BY MONTH



### GROSS PRODUCTION

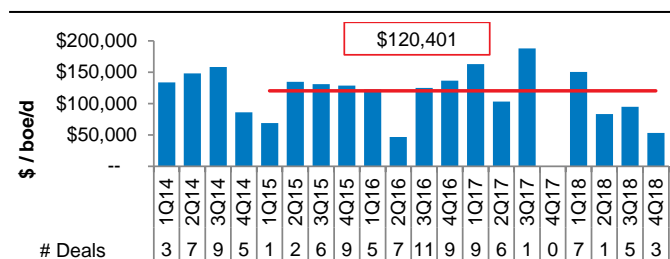


### TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

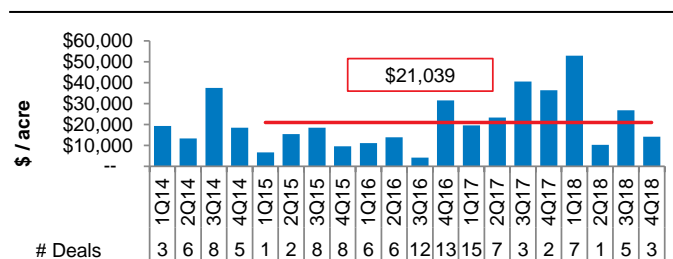
Ann'd Date	Buyer	Seller	Asset Description	Value <sup>(1)</sup> (\$mm)	Proved Multiple (\$/boe)	Prod. Multiple (\$/boe/d)	Net Acres (\$/acre) <sup>(2)</sup>
06-Nov-18	Diamondback Energy	ExL Pet.; EnergyQuest	3,646 net acres in Midland Basin	\$313	n.a.	\$89,286	\$85,710
05-Nov-18	Centennial Resource Dev.	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
30-Sep-18	Energen	Undisclosed Seller	1,700 net acres in Delaware Basin	\$38	n.a.	n.a.	\$22,235
25-Sep-18	Undisclosed Buyer	W&T Offshore	Royalty interests in 25,493 net acres	\$57	n.a.	n.a.	nmf
				<b>Mean</b>	<b>n.a.</b>	<b>\$115,476</b>	<b>\$38,500</b>
				<b>Median</b>	<b>\$57</b>	<b>\$115,476</b>	<b>\$26,971</b>

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<sup>(3)</sup>



### TRANSACTION ADJUSTED NET ACRE MULTIPLES<sup>(3,4)</sup>



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.

- 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 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 & 2019.



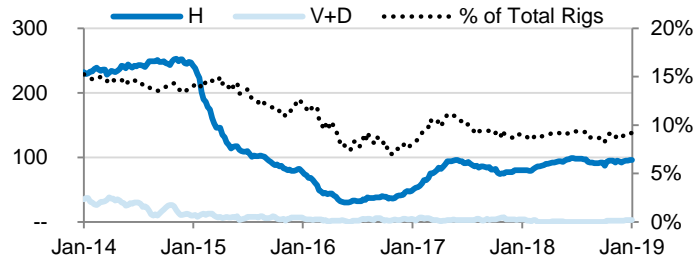
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## Eagle Ford Snapshot

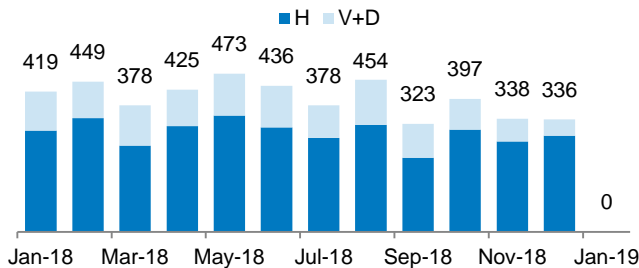
Item	Value	Wkly Change	Last Week
Rig Count	99	█	--
Permitting Activity	9	↓	(47)

Item	Value	Wkly Change	Last Week
Oil Differential	\$5.85	↑	\$0.10
Gas Differential	(\$0.05)	↓	(\$0.19)

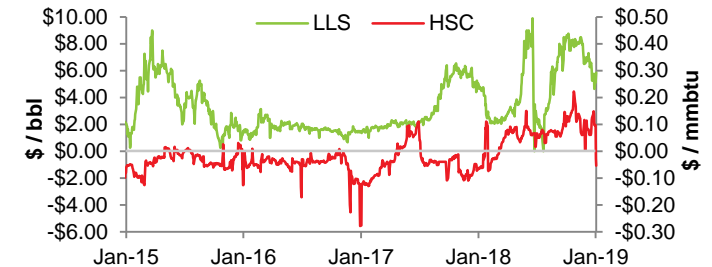
### RIG COUNT



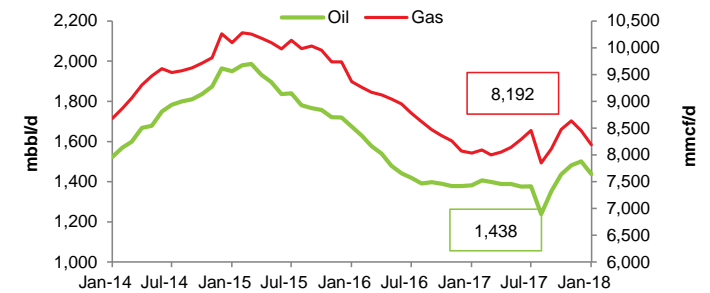
### PERMITTING ACTIVITY BY MONTH



### DIFFERENTIALS



### GROSS PRODUCTION

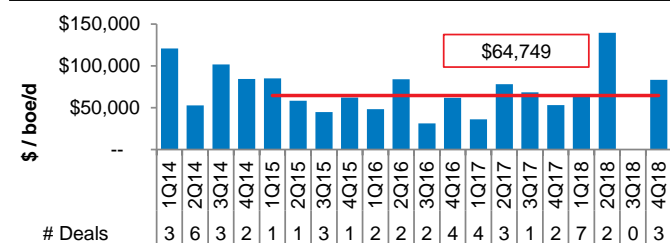


### TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

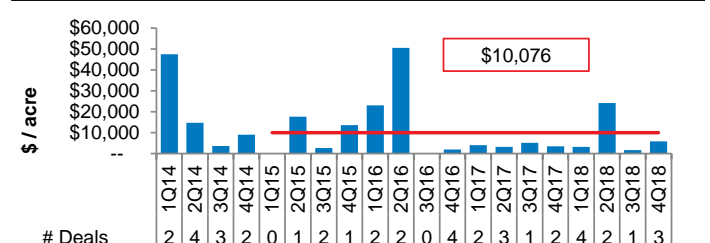
Ann'd Date	Buyer	Seller	Asset Description	Value <sup>(1)</sup> (\$mm)	Proved Multiple (\$/boe)	Prod. Multiple (\$/boe/d)	Net Acres (\$/acre) <sup>(2)</sup>
19-Nov-18	Lonestar Resources Inc	Sabine Oil & Gas Corp	2,706 net acres in Eagle Ford	\$39	\$2.98	\$48,375	\$14,302
20-Sep-18	WildHorse	Undisclosed 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.
			<b>Mean</b>	<b>\$2,127</b>	<b>\$2.98</b>	<b>\$48,375</b>	<b>\$8,022</b>
			<b>Median</b>	<b>\$35</b>	<b>\$2.98</b>	<b>\$48,375</b>	<b>\$8,022</b>

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### TRANSACTION PRODUCTION MULTIPLES<sup>(3)</sup>



### TRANSACTION ADJUSTED NET ACRE MULTIPLES<sup>(3,4)</sup>



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

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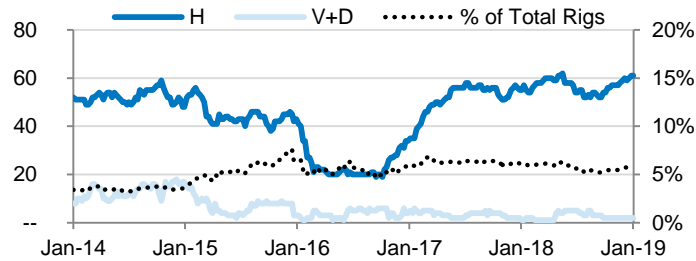
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## Ark-La-Tex Snapshot

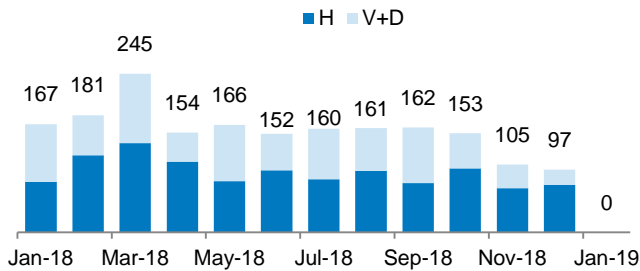
Item	Value	Wkly Change	Last Week
Rig Count	63	█ --	63
Permitting Activity	--	█ (10)	10

Item	Value	Wkly Change	Last Week
Oil Differential	\$5.85	█ ↑ \$0.10	\$5.75
Gas Differential	--	█ --	--

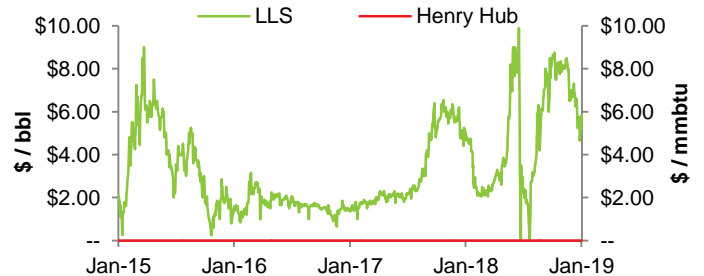
### RIG COUNT



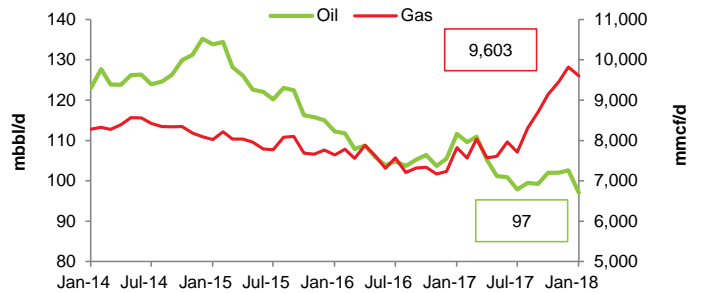
### PERMITTING ACTIVITY BY MONTH



### DIFFERENTIALS



### GROSS PRODUCTION

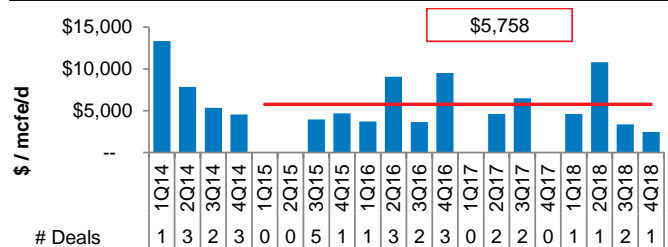


### TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

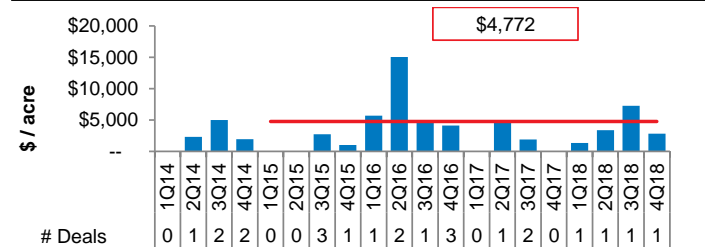
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19-Dec-18	Comstock	Shelby Shale LLC	6,023 net acres in Haynesville	\$21	n.a.	n.a.	\$3,404
19-Nov-18	Aethon III	QEP Resources Inc	49,700 net acres in Haynesville	\$735	\$0.77	\$2,475	\$14,789
05-Sep-18	Viking Energy Group	Multiple Sellers	Texas and 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
				<b>Mean</b>	<b>\$210</b>	<b>\$1.23</b>	<b>\$4,487</b>
				<b>Median</b>	<b>\$100</b>	<b>\$1.23</b>	<b>\$4,487</b>

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### TRANSACTION ADJUSTED NET ACRE MULTIPLES<sup>(3,4)</sup>



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- Production valued at \$3,000/mcfepd in 2014, and \$2,000/mcfepd in 2015, 2016, 2017, 2018, and 2019.





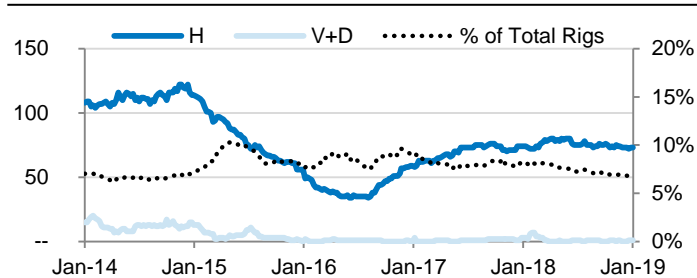
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## Appalachia Snapshot

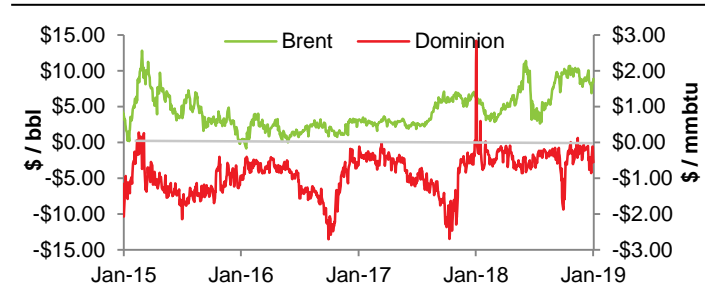
Item	Value	Wkly Change	Last Week
Rig Count	74	█ --	74
Permitting Activity	23	█ (46)	69

Item	Value	Wkly Change	Last Week
Oil Differential	\$8.86	↑ \$1.31	\$7.55
Gas Differential	(\$0.56)	↑ \$0.31	(\$0.86)

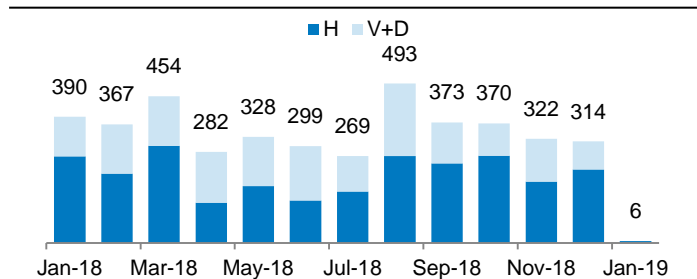
### RIG COUNT



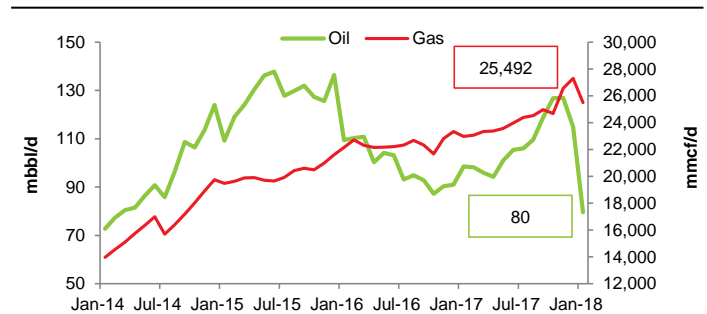
### DIFFERENTIALS



### PERMITTING ACTIVITY BY MONTH



### GROSS PRODUCTION

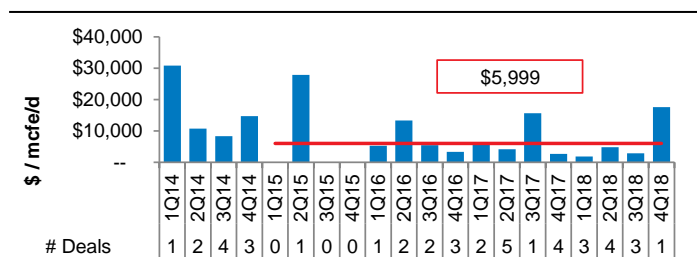


### TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

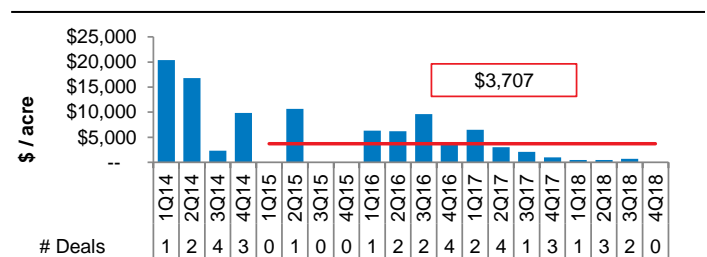
Ann'd Date	Buyer	Seller	Asset Description	Value <sup>(1)</sup> (\$mm)	Proved Multiple (\$/mcf)	Prod. Multiple (\$/mcf/d)	Net Acres (\$/acre) <sup>(2)</sup>
15-Oct-18	Undisclosed Buyer	Range Resources Corp	Overriding royalty interests in Appalachia	\$300	n.a.	\$17,649	n/mf
27-Aug-18	PennEnergy Resources	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
			<b>Mean</b>	<b>\$860</b>	<b>\$0.62</b>	<b>\$8,674</b>	<b>\$9,079</b>
			<b>Median</b>	<b>\$700</b>	<b>\$0.62</b>	<b>\$4,762</b>	<b>\$7,257</b>

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<sup>(3)</sup>



### TRANSACTION ADJUSTED NET ACRE MULTIPLES<sup>(3,4)</sup>



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.

- 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.
- Production valued at \$3,000/mcfepd in 2014, and \$2,000/mcfepd in 2015, 2016, 2017, 2018, and 2019.



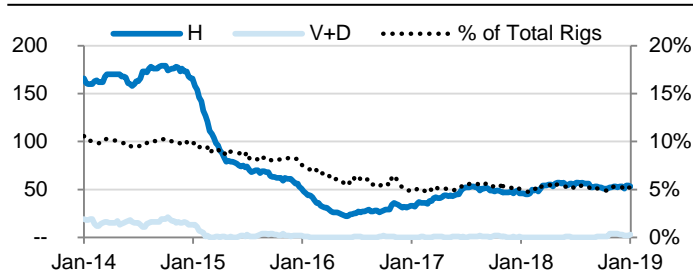
January 7, 2019

## Bakken Snapshot

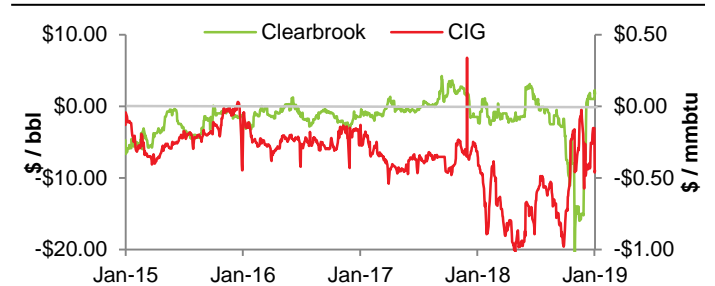
Item	Value	Wkly Change	Last Week
Rig Count	56	█ --	56
Permitting Activity	4	↓ (5)	9

Item	Value	Wkly Change	Last Week
Oil Differential	\$1.75	↑ \$0.75	\$1.00
Gas Differential	(\$0.45)	↓ (\$0.28)	(\$0.17)

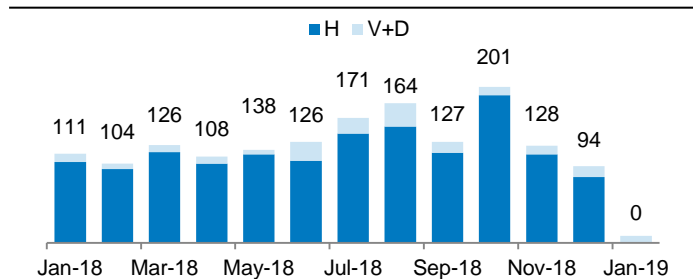
### RIG COUNT



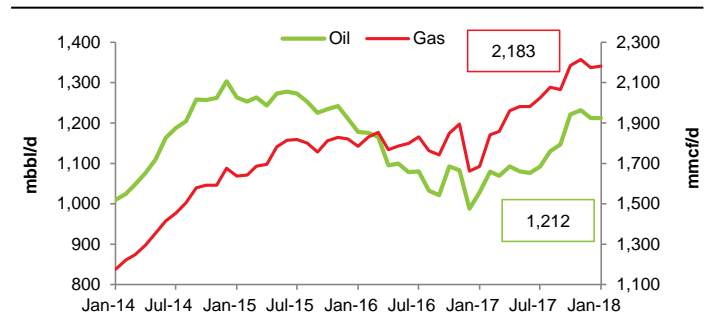
### DIFFERENTIALS



### PERMITTING ACTIVITY BY MONTH



### GROSS PRODUCTION

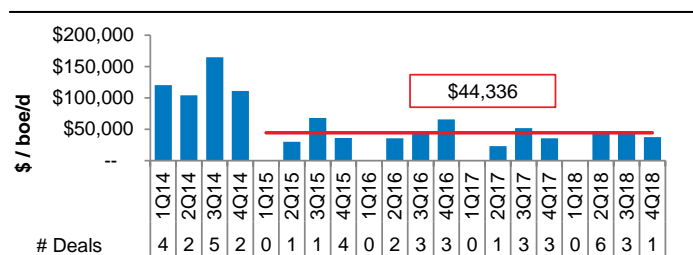


### TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

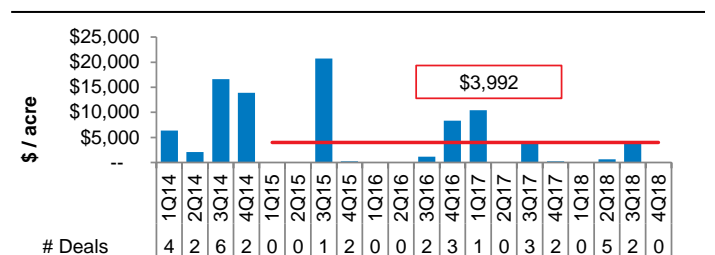
Ann'd Date	Buyer	Seller	Asset Description	Value <sup>(1)</sup> (\$mm)	Proved Multiple (\$/boe)	Prod. Multiple (\$/boe/d)	Net Acres (\$/acre) <sup>(2)</sup>
07-Nov-18	Vantage Energy Acq. Corp	QEP Resources Inc	102,800 net acres in Williston Basin	\$1,725	n.a.	\$37,500	\$16,780
31-Jul-18	Northern Oil and 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.
			<b>Mean</b>	<b>\$461</b>	<b>\$6.04</b>	<b>\$54,310</b>	<b>\$23,913</b>
			<b>Median</b>	<b>\$152</b>	<b>\$6.04</b>	<b>\$40,104</b>	<b>\$27,196</b>

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

### TRANSACTION PRODUCTION MULTIPLES<sup>(3)</sup>



### TRANSACTION ADJUSTED NET ACRE MULTIPLES<sup>(3,4)</sup>



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 \$45,000/boepd in 2014, \$30,000/boepd in 2015, \$35,000/boepd in 2016 & 2017, and \$40,000/boepd in 2018 & 2019.



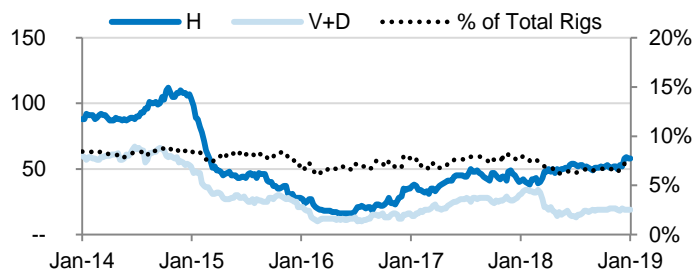
January 7, 2019

## Rockies (excl. Bakken) Snapshot

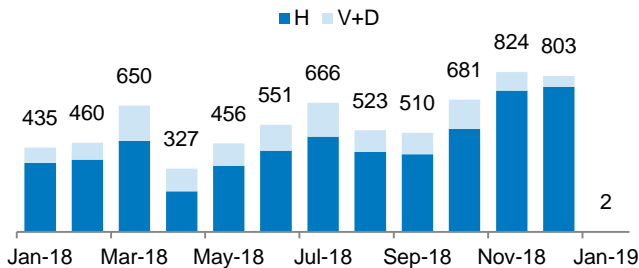
Item	Value	Wkly Change	Last Week
Rig Count	77	█ --	77
Permitting Activity	112	█ (38)	150

Item	Value	Wkly Change	Last Week
Oil Differential	\$1.75	█ ↑ \$0.75	\$1.00
Gas Differential	(\$0.45)	█ ↓ (\$0.28)	(\$0.17)

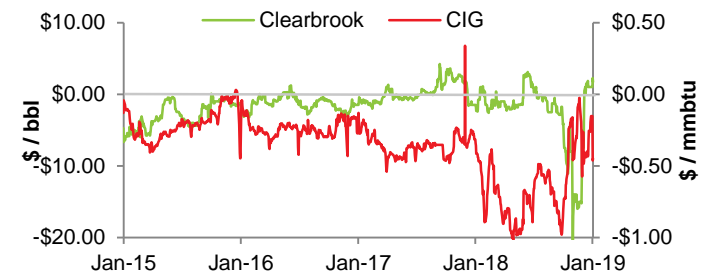
### RIG COUNT



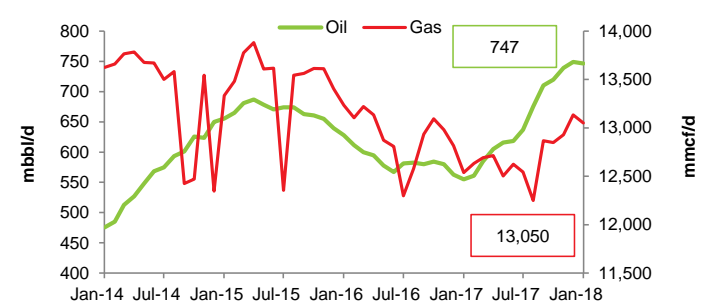
### PERMITTING ACTIVITY BY MONTH



### DIFFERENTIALS



### GROSS PRODUCTION

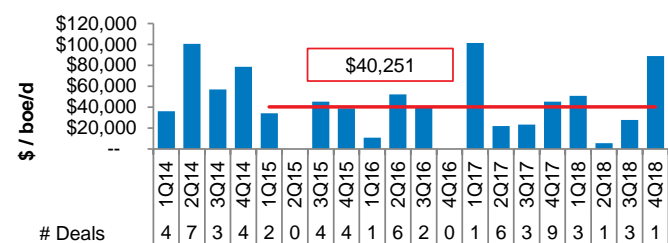


### TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

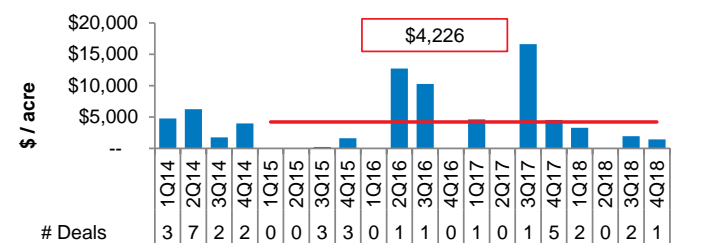
Ann'd Date	Buyer	Seller	Asset Description	Value <sup>(1)</sup>	Proved Multiple	Prod. Multiple	Net Acres	
				(\$mm)	(\$/boe)	(\$/boe/d)	(\$/acre) <sup>(2)</sup>	
01-Oct-18	DJR Energy LLC	EnCana	182,000 net acres in San Juan Basin	\$480	n.a.	\$88,889	\$2,637	
28-Aug-18	Vermilion Energy Inc	Massif Oil & 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	
				<b>Mean</b>	<b>\$192</b>	<b>\$1.54</b>	<b>\$50,054</b>	<b>\$4,135</b>
				<b>Median</b>	<b>\$150</b>	<b>\$1.54</b>	<b>\$47,052</b>	<b>\$2,727</b>

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

### TRANSACTION PRODUCTION MULTIPLES<sup>(3)</sup>



### TRANSACTION ADJUSTED NET ACRE MULTIPLES<sup>(3,4)</sup>



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.

- 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.
- 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 & 2019.



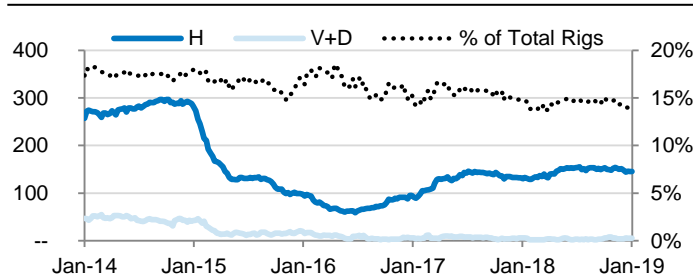
January 7, 2019

## Mid-Continent Snapshot

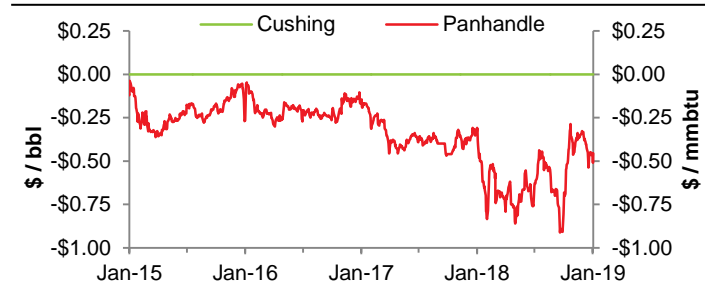
Item	Value	Wkly Change	Last Week
Rig Count	150	█	-- 150
Permitting Activity	37	↓ (9)	46

Item	Value	Wkly Change	Last Week
Oil Differential	--	█	-- --
Gas Differential	(\$0.46)	↑ \$0.01	(\$0.47)

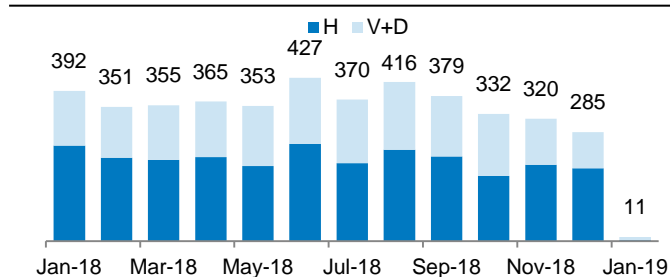
### RIG COUNT



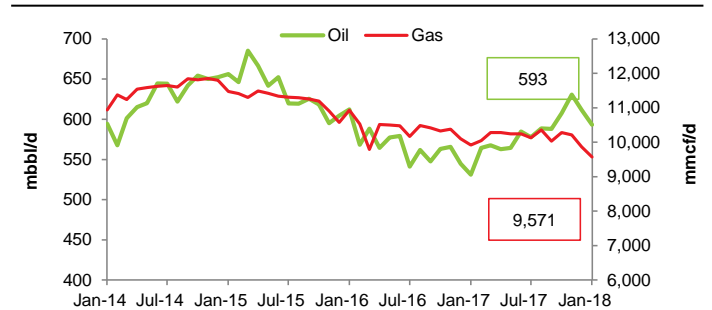
### DIFFERENTIALS



### PERMITTING ACTIVITY BY MONTH



### GROSS PRODUCTION

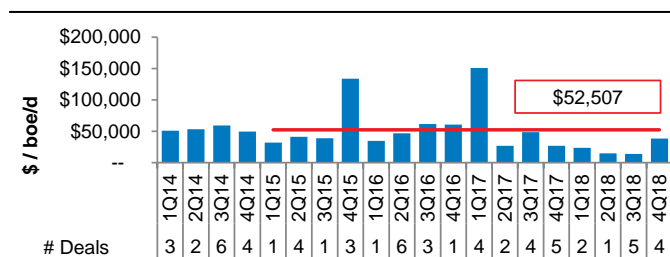


### TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

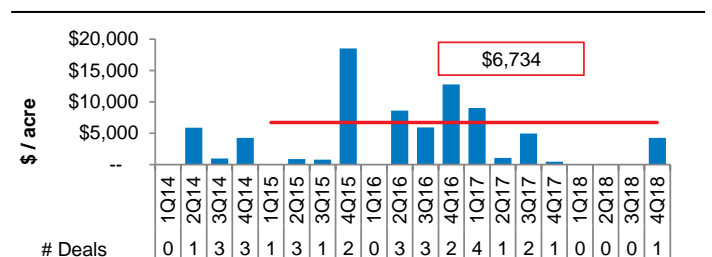
Ann'd Date	Buyer	Seller	Asset Description	Value <sup>(1)</sup> (\$mm)	Proved Multiple (\$/boe)	Prod. Multiple (\$/boe/d)	Net Acres (\$/acre) <sup>(2)</sup>	
11-Dec-18	Undisclosed Buyer	Riviera Resources Inc	37,000 net acres in the Arkoma Basin	\$68	n.a.	\$17,000	1,838	
02-Nov-18	SandRidge Energy	Undisclosed 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	
				<b>Mean</b>	<b>\$488</b>	<b>\$3.04</b>	<b>\$29,339</b>	<b>\$4,220</b>
				<b>Median</b>	<b>\$220</b>	<b>\$3.04</b>	<b>\$16,314</b>	<b>\$2,038</b>

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

### TRANSACTION PRODUCTION MULTIPLES<sup>(3)</sup>



### TRANSACTION ADJUSTED NET ACRE MULTIPLES<sup>(3,4)</sup>



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.

- 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.
- 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 & 2019.



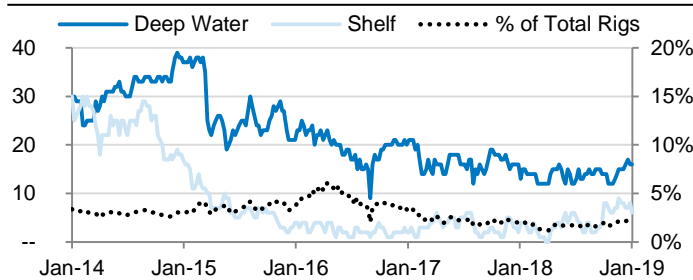
January 7, 2019

## Gulf of Mexico Snapshot

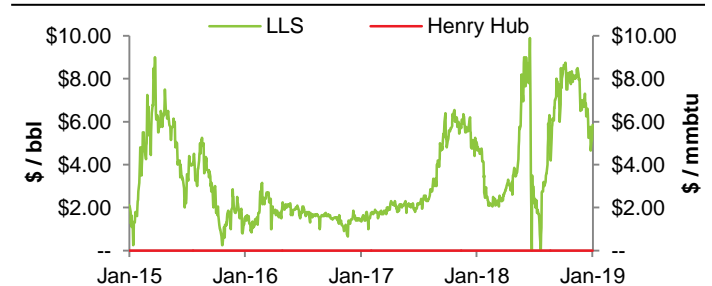
Item	Value	Wkly Change	Last Week
Rig Count	22	↓ (2)	24
Permitting Activity	2	↑ 1	1

Item	Value	Wkly Change	Last Week
Oil Differential	\$5.85	↑ \$0.10	\$5.75
Gas Differential	--	---	--

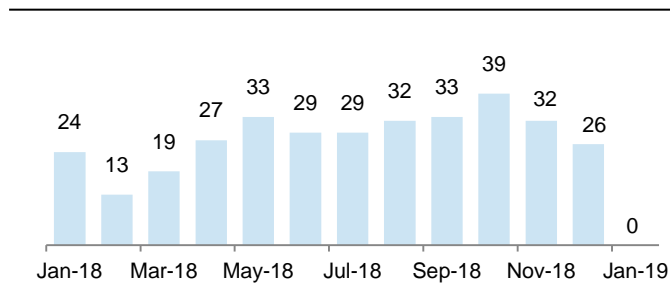
### RIG COUNT



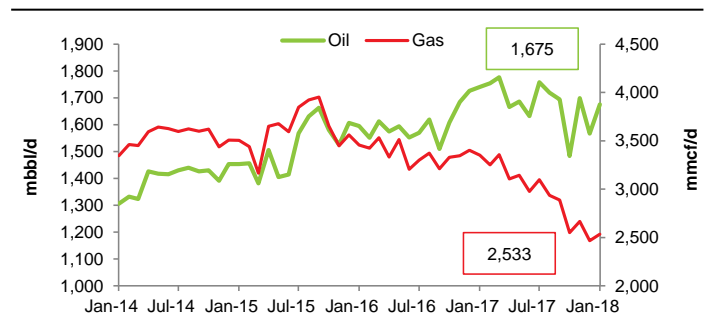
### DIFFERENTIALS



### PERMITTING ACTIVITY BY MONTH<sup>(1)</sup>



### GROSS PRODUCTION

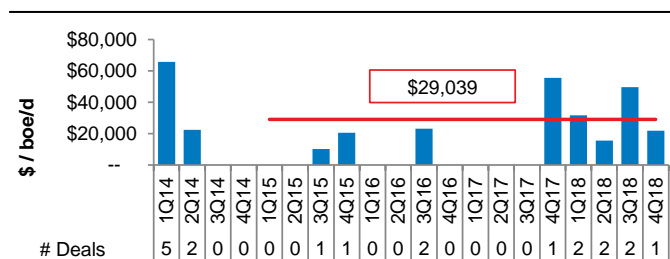


### TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

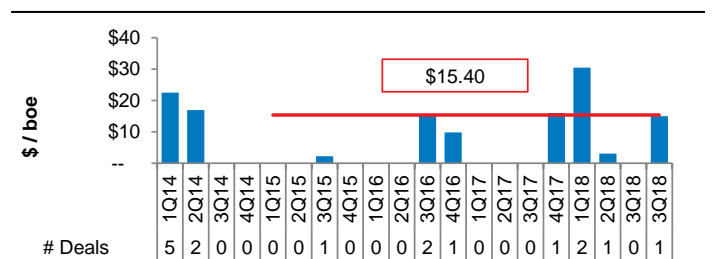
Ann'd Date	Buyer	Seller	Asset Description	Value <sup>(2)</sup> (\$mm)	Proved Multiple (\$/boe)	Prod. Multiple (\$/boe/d)	Net Acres (\$/acre) <sup>(3)</sup>
10-Oct-18	Murphy	Petrobras	Gulf of Mexico joint venture	\$900	\$15.00	\$21,951	n.a.
04-Sep-18	Talos Energy Inc	Whistler Energy II LLC	Leases in Green 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.
				<b>Mean</b>	<b>\$256</b>	<b>\$32,581</b>	<b>n.a.</b>
				<b>Median</b>	<b>\$91</b>	<b>\$30,156</b>	<b>n.a.</b>

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### TRANSACTION PRODUCTION MULTIPLES<sup>(4)</sup>



### TRANSACTION PROVED RESERVE MULTIPLES<sup>(4)</sup>



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.



January 7, 2019

[Click event to open](#)

## Upcoming Industry Events

### January 2019

<a href="#">Jan 15</a>	<a href="#">Houston Producers Forum Luncheon</a>
<a href="#">Jan 24</a>	<a href="#">IPAA Private Capital Conference</a>
<a href="#">Jan 25</a>	<a href="#">ADAM-Houston Monthly Luncheon</a>
<a href="#">Jan 31</a>	<a href="#">SPE A&amp;D Symposium</a>

### February 2019

<a href="#">Feb 5-7</a>	<a href="#">SPE Hydraulic Fracturing Technology Conference</a>
<a href="#">Feb 11-15</a>	<a href="#">NAPE Summit Week</a>
<a href="#">Feb 12</a>	<a href="#">Women in Energy Luncheon</a>
<a href="#">Feb 15</a>	<a href="#">ADAM-Houston Monthly Luncheon</a>
<a href="#">Feb 19</a>	<a href="#">Houston Producers Forum Luncheon</a>
<a href="#">Feb 19-20</a>	<a href="#">DUG Haynesville</a>

### March 2019

<a href="#">Mar 5</a>	<a href="#">Energy Capital Conference</a>
<a href="#">Mar 5-7</a>	<a href="#">IADC/SPE Drilling Conference</a>
<a href="#">Mar 15</a>	<a href="#">ADAM-Houston Monthly Luncheon</a>
<a href="#">Mar 19</a>	<a href="#">Houston Producers Forum Luncheon</a>
<a href="#">Mar 26-28</a>	<a href="#">International Petroleum Technology Conference</a>

### April 2019

<a href="#">Apr 8-10</a>	<a href="#">IPAA Oil &amp; Gas Investment Symposium</a>
<a href="#">Apr 15</a>	<a href="#">DUG Sand</a>
<a href="#">Apr 15</a>	<a href="#">DUG Water</a>
<a href="#">Apr 15-17</a>	<a href="#">DUG Permian</a>
<a href="#">Apr 16</a>	<a href="#">Houston Producers Forum Luncheon</a>
<a href="#">Apr 19</a>	<a href="#">ADAM-Houston Monthly Luncheon</a>

### May 2019

<a href="#">May 6-9</a>	<a href="#">Offshore Technology Conference</a>
<a href="#">May 10</a>	<a href="#">Petroleum Resources Economics Conference</a>
<a href="#">May 13-17</a>	<a href="#">SPE Electric Submersible Pumps Symposium</a>
<a href="#">May 14-15</a>	<a href="#">DUG Rockies</a>
<a href="#">May 14</a>	<a href="#">Houston Producers Forum Luncheon</a>
<a href="#">May 16</a>	<a href="#">IADC Drilling Onshore Conference &amp; Exhibition</a>
<a href="#">May 17</a>	<a href="#">ADAM-Houston Monthly Luncheon</a>

### June 2019

<a href="#">Jun 5-6</a>	<a href="#">Midstream Texas Conference &amp; Exhibition</a>
<a href="#">Jun 18</a>	<a href="#">Houston Producers Forum Luncheon</a>
<a href="#">Jun 18-20</a>	<a href="#">DUG East</a>
<a href="#">Jun 19-20</a>	<a href="#">IADC World Drilling Conference &amp; Exhibition</a>
<a href="#">Jun 21</a>	<a href="#">ADAM-Houston Monthly Luncheon</a>
<a href="#">Jun 24-26</a>	<a href="#">IPAA Midyear Meeting</a>

### July 2019

<a href="#">Jul 16</a>	<a href="#">Houston Producers Forum Luncheon</a>
<a href="#">Jul 19</a>	<a href="#">ADAM-Houston Monthly Luncheon</a>

### August 2019

<a href="#">Aug 16</a>	<a href="#">ADAM-Houston Monthly Luncheon</a>
<a href="#">Aug 20</a>	<a href="#">IPAA Oil &amp; Gas Overview Course</a>
<a href="#">Aug 20</a>	<a href="#">Houston Producers Forum Luncheon</a>
<a href="#">Aug 21-22</a>	<a href="#">Summer NAPE</a>

### September 2019

<a href="#">Sep 17</a>	<a href="#">Houston Producers Forum Luncheon</a>
<a href="#">Sep 20</a>	<a href="#">ADAM-Houston Monthly Luncheon</a>
<a href="#">Sep 24-26</a>	<a href="#">DUG Eagle Ford</a>
<a href="#">Sep 30-Oct 2</a>	<a href="#">SPE Annual Technical Conference and Exhibition</a>

### October 2019

<a href="#">Oct 9</a>	<a href="#">IPAA Leaders in Industry Luncheon</a>
<a href="#">Oct 15</a>	<a href="#">Houston Producers Forum Luncheon</a>
<a href="#">Oct 18</a>	<a href="#">ADAM-Houston Monthly Luncheon</a>
<a href="#">Oct 22-23</a>	<a href="#">A&amp;D Strategies and Opportunities Conference</a>

### November 2019

<a href="#">Nov 4-6</a>	<a href="#">Executive Oil Conference &amp; Exhibition</a>
<a href="#">Nov 15</a>	<a href="#">ADAM-Houston Monthly Luncheon</a>
<a href="#">Nov 19</a>	<a href="#">IPAA Oil &amp; Gas for Newcomers</a>
<a href="#">Nov 19</a>	<a href="#">Houston Producers Forum Luncheon</a>
<a href="#">Nov 19-21</a>	<a href="#">DUG Midcontinent</a>

### December 2019

<a href="#">Dec 17</a>	<a href="#">Houston Producers Forum Luncheon</a>
<a href="#">Dec 20</a>	<a href="#">ADAM-Houston Monthly Luncheon</a>

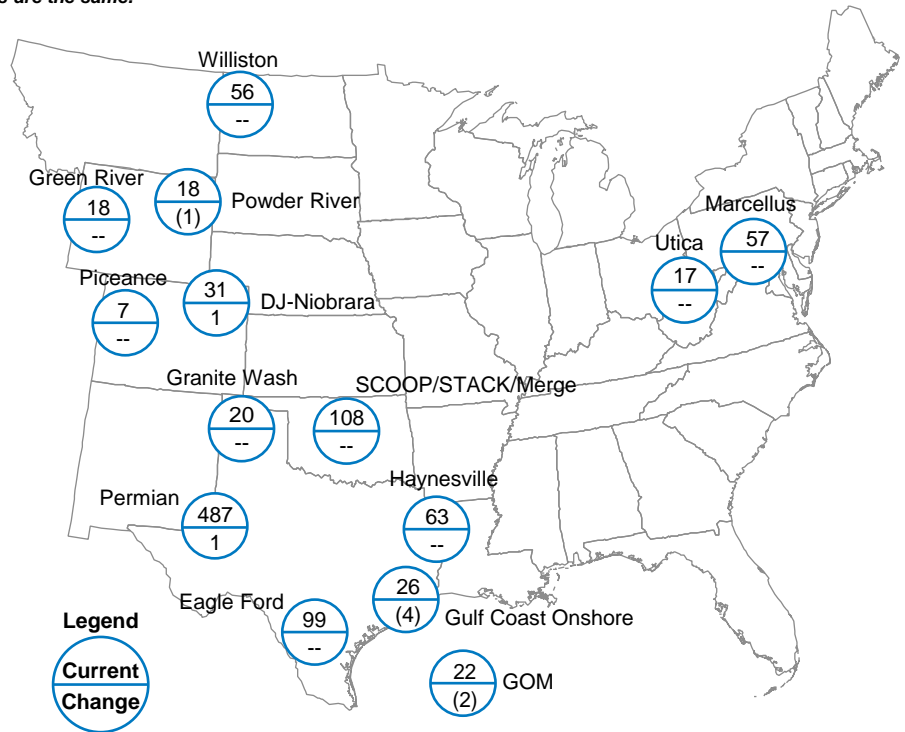


January 7, 2019

## 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
<b>Total Rigs</b>	<b>1,075</b>	<b>(8)</b>	<b>1,083</b>	<b>924</b>
Oil	877	(8)	885	742
Gas	198	--	198	182
Miscellaneous	--	--	--	--
Directional	66	(4)	70	64
Horizontal	945	--	945	798
Vertical	64	(4)	68	62
<b>Basin</b>				
Permian	487	1	486	400
SCOOP/STACK/Merge	108	--	108	96
Granite Wash	20	--	20	19
Eagle Ford	99	--	99	84
Haynesville	63	--	63	56
Marcellus	57	--	57	49
Utica	17	--	17	28
Williston	56	--	56	46
DJ-Niobrara	31	1	30	26
Green River	18	--	18	25
Powder River	18	(1)	19	9
Piceance	7	--	7	7
Gulf Coast Onshore	26	(4)	30	14
GOM	22	(2)	24	17
Alaska	9	2	7	5
Other	37	(5)	42	43
Mid-Con	22	--	22	21
Rockies	3	--	3	5
Western	10	(5)	15	14
Eastern	2	--	2	3



## Contacts

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