



December 3, 2018

Covering the Week of November 23 to November 29, 2018

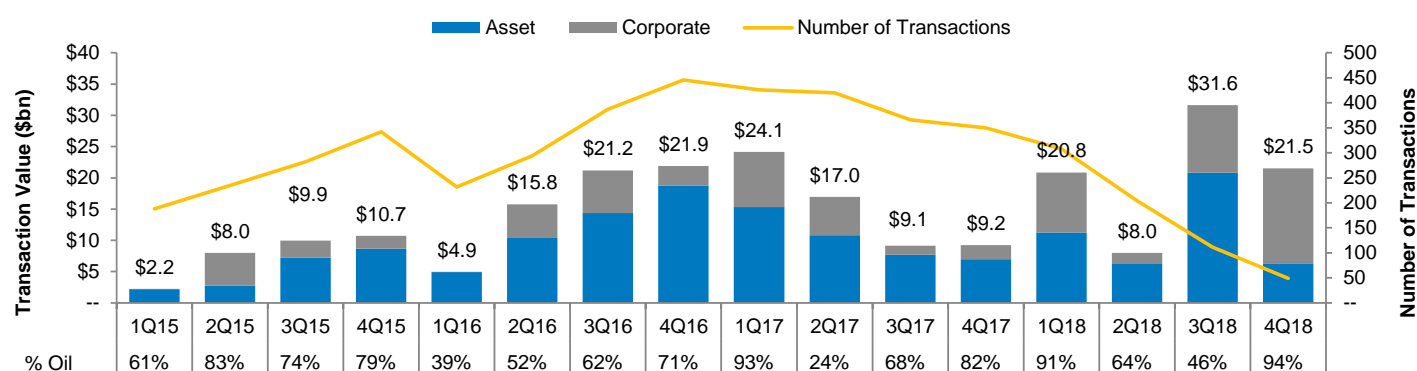
Week in Review

- Diamondback Energy and Energen Corporation announced that all proposals necessary for the parties' pending merger were approved
- Ziyen Energy acquired the mineral rights to additional oil leases in the Illinois Basin

Key Industry Indicators

Indicator	Current Value	Week's Change	% Change	Direction
Prompt Oil Price (\$/bbl)	\$51.45	(\$3.18)	(5.8%)	↓
Prompt Gas Price (\$/mmbtu)	\$4.65	\$0.20	4.5%	↑
Wkly Trans. Value (\$mm)	\$0	(\$2,498)	(100%)	↓
Wkly Trans. Count	1	(3)	(75%)	↓
US Rig Count	1,076	(3)	(0.3%)	↓
US Oil Prod'n (mmbbl/d)	11.7	--	--	—
US Gas Prod'n (bcf/d) ⁽¹⁾	102.5	--	--	—
US Oil Storage (mmbbl)	450.5	3.6	0.8%	↑
US Gas Storage (tcf)	3.1	(0.1)	(1.9%)	↓

Quarterly Deal Activity



Commodities

- Oil ended last week down with the Saudis producing record levels of crude. President Trump continued to encourage lower oil prices. The market continued to wait on the OPEC meeting. Fed Chair Jerome Powell's speech surprised the market. It was reported that Russia may join the Saudis in cutting production. Alberta announced it is prepared to buy up to 80 locomotives and 7,000 rail cars in order to ship additional oil barrels to narrow the differential by around \$4 per barrel. The near-term contract closed down \$3.18, or 5.8%, at \$51.45
- Natural gas ended last week up as weather volatility continued. There was a lower than expected storage draw. A force majeure on El Paso's Mojave Topock line set West basis on fire again as flows to Southern California were backed up. The near-term contract closed up \$0.20, or 4.5%, at \$4.65

Equity Markets

- S&P E&P⁽²⁾ underperformed last week (2.0)% vs. SPX⁽²⁾ 3.3%
- The major U.S. equity indexes finished higher last week. Sector performance was positive. Consumer discretionary, consumer staples, financials, health care, industrials, materials, real estate, and tech all ended higher

Debt Markets

- One issuer priced one tranche for \$350 million in proceeds
- Year-to-date U.S. volume is down 37% year-on-year
- November U.S. issuance is down 80% year-on-year
- High yield index yield was 7.19%; high yield energy index yield was 8.41%

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 August 2018.

2. S&P E&P = S&P Oil & Gas E&P Select Industry, SPX = S&P 500 Index.



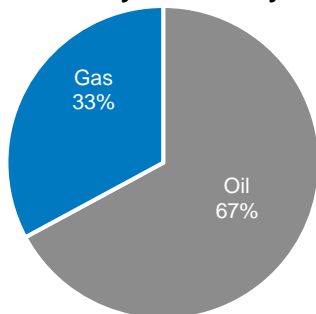
December 3, 2018

The 10 Most Recent Asset Transactions Over \$20 Million

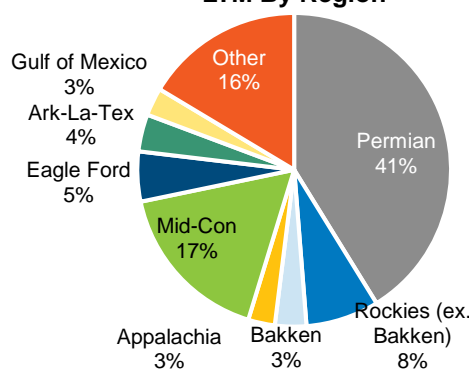
Ann'd Date	Buyer	Seller	Area	Asset Description	Value ⁽¹⁾ (\$mm)	Proved Multiple (\$/boe)	Prod. Multiple (\$/boe/d)	Net Acres (\$/acre)
21-Nov-18	Kimbell Royalty Partners	Undisclosed Seller	Multi-Region	16,700 net royalty acres	\$108	n.a.	\$90,588	nrf
19-Nov-18	Lonestar Resources Inc	Sabine Oil & Gas 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
02-Nov-18	SandRidge Energy	Undisclosed Seller	Mid-Continent	Mississippi Lime and NW STACK assets	\$25	n.a.	\$6,649	n.a.
01-Nov-18	Undisclosed Buyer	Parsley Energy LP	Permian	11,850 net acres in Midland Basin	\$170	n.a.	\$141,667	\$14,346
31-Oct-18	Undisclosed Buyer	New pek	Other	725 net acres in Live Oak Co., TX	\$33	n.a.	\$42,581	\$45,517

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

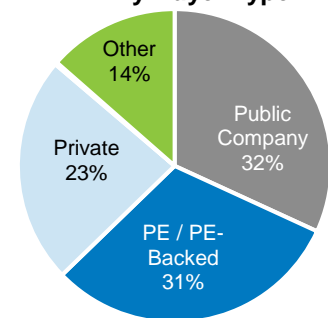
LTM By Commodity ⁽²⁾



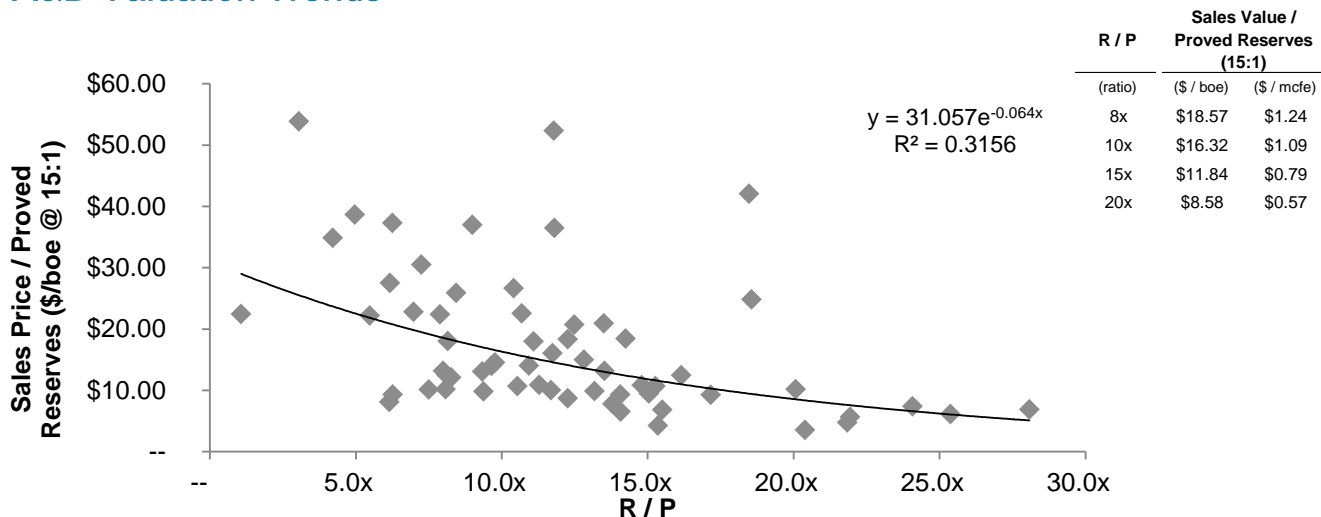
LTM By Region ⁽²⁾



LTM By Buyer Type ⁽²⁾



A&D Valuation Trends⁽³⁾



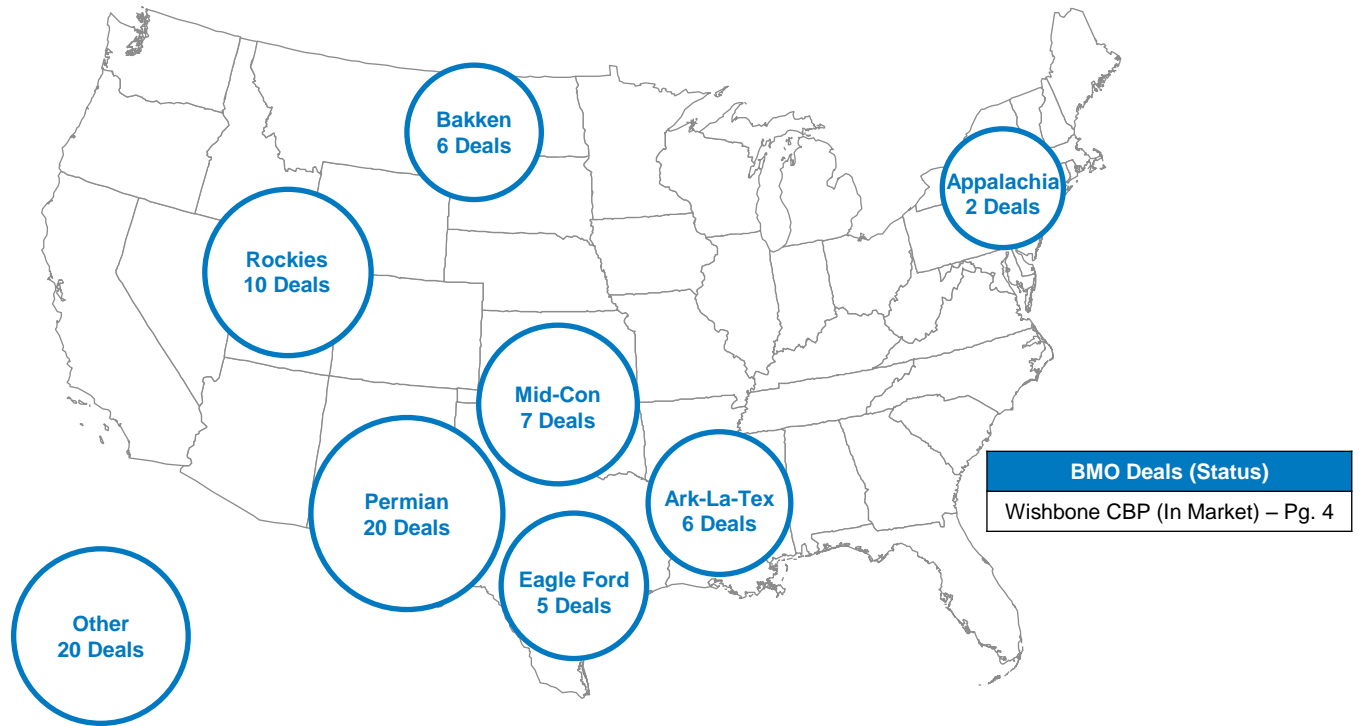
2 Source: BMO Transaction Database, Baker Hughes, BMO Commodity Products Group, Bloomberg, PLS

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.



December 3, 2018

Select Significant Deals on the Market



A&D Headlines

- [Stockholders of Diamondback Energy, Inc. and Shareholders of Energen Corporation Approve Merger](#)
- [Ziyen Energy Acquires Five New Oil Assets in the Illinois Basin](#)

Industry Headlines

- [Developers Push for Relief From the Natural Gas Moratorium](#)
- [Oil Rebounds As Russia Said to Be Willing to Join OPEC Output Cuts](#)
- [\\$50 Oil Puts Shale to the Test](#)
- [Why Lower Oil Prices Might Make Trouble for Trump](#)
- [Keystone XL Eyes February Construction Start Despite Legal Woes](#)
- [Slow Deepwater Rebound Threatened by Rising Rig Costs, Falling Oil Prices](#)
- [Companies Launch Plan to Capture Methane from Hog Manure Lagoons](#)
- [India Is Losing the Natural Gas Race to China](#)
- [Steel Import Quotas Would Cripple U.S. Oil and Gas Production](#)
- [Obama Takes Credit for U.S. Oil-and-Gas Boom](#)

(Click headline to link to the full article)



December 3, 2018

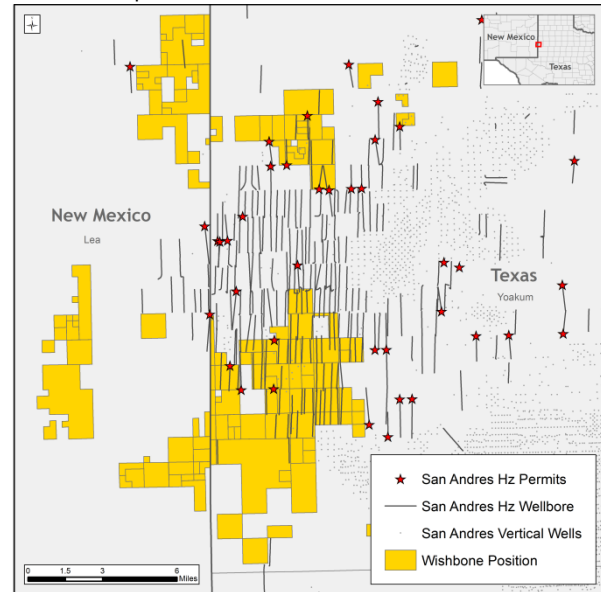
Currently on the Market from CIBC and BMO: Wishbone CBP Divestiture

ASSET OVERVIEW

- Opportunity to acquire ~37,206 net contiguous acres in the core of the San Andres horizontal play in Northern Central Basin Platform
 - Operated average WI/NRI of 77%/58%
 - Approaching 50% HBP with minimal annual drilling commitments
 - 96% operated by production
- Net production of ~8,100 boe/d (November 2018E)
 - 80% oil, 13% NGL
- 100%+ ROR oil play in the highly coveted Permian Basin
 - Future drilling opportunities have reserve models of 385 to 700 Mboe (80% oil)
- Position has largely been de-risked through active development by Wishbone and offset operators
- Extensive inventory of high return drilling remains with over 344 San Andres horizontal drilling locations
 - 5,000' laterals – 323 locations
 - 7,500' laterals – 21 locations
- Controlled surface lands/water infrastructure creates high margins and empowers the buyer to be a play consolidator
- WTS barrels and crude pipeline infrastructure in place with no takeaway issues

PROCESS OVERVIEW

- VDR available now
- Contact Mark Nelson at mark.nelson@cibc.com or 713-452-1595 to request a Confidentiality Agreement, access to the VDR, and/or a data room presentation



ASSET HIGHLIGHTS

- | | |
|---|---|
| Improved Horizontal San Andres Performance | <ul style="list-style-type: none"> • Highly oil-saturated, oil-wet, dolomite reservoir located in the core area of very active development in the horizontal San Andres play • Over the last four years, operators have developed a significant understanding of the reservoir and operational characteristics defining the play • Recent drilling activity has yielded improved well performance <ul style="list-style-type: none"> ■ Time to peak production is less than 60 days ■ Initial peak 30-day rates of 400-700 bo/d • Operators continue to commit significant capital to the play with multiple active drilling rigs and 54 horizontal San Andres permits |
| Wishbone's Premier Position | <ul style="list-style-type: none"> • Contiguous leasehold, adjacent to the prolific Wasson and Brahaney fields offering the best combination of reservoir quality, quantity, and oil saturations in the core of the horizontal San Andres play • Position has largely been de-risked through active development by Wishbone and offset operators • Most recent quarter (2Q18) annualized cash flow of \$60 MM can easily support a one rig drilling program • Acreage is approaching 50% HBP with minimal annual drilling commitments |
| High Return Inventory | <ul style="list-style-type: none"> • Extensive inventory of high return drilling remains with over 344 San Andres horizontal drilling locations • Well economics of greater than 100% ROR compete with other top Permian plays • Future drilling opportunities have reserve models of 385 to 700 Mboe (80% oil) • Spacing of 4 to 8 wells per section supported by volumetrics with a recovery factor of 12-15% of OOIP; further supported by an independent Von Gonten report • Stacked potential in San Andres could add additional drilling locations • Successful step-out completion helps prove play continuity in northern area |
| Integrated Water Infrastructure | <ul style="list-style-type: none"> • Owned and operated SWD system and fresh water source wells keep operating expenses low and enhance well economics • Water infrastructure generates additional income • Infrastructure provides flow assurance for disposal and source water • 1,385 acres of owned surface acreage allows buyer to expand system • Ample existing disposal capacity of 178,000 bw/d with excess available for third-party or commercialization |

Source: Wishbone CBP Divestiture announcement

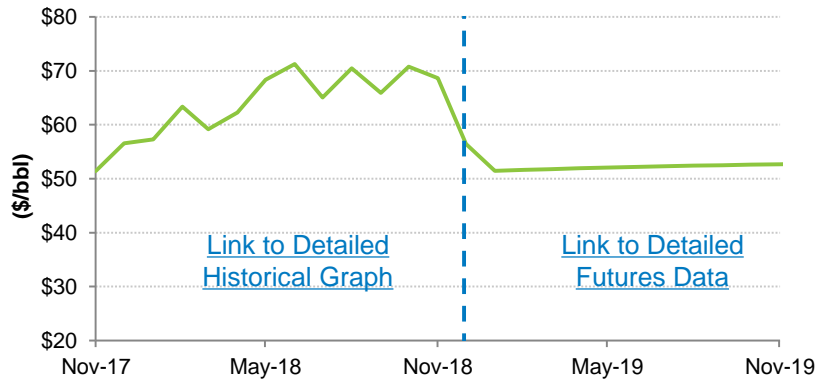




December 3, 2018

Commodity Prices

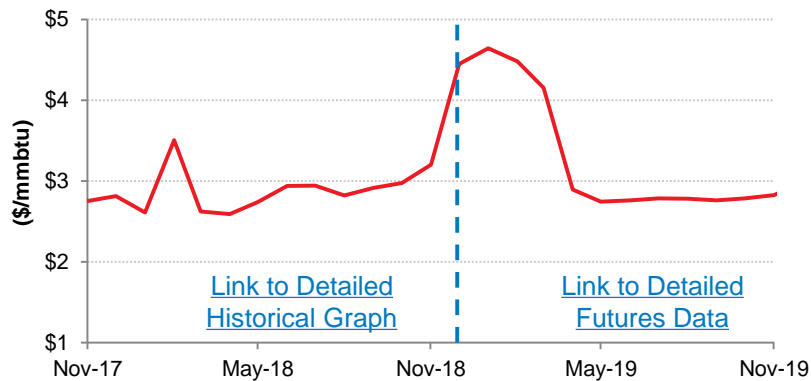
WTI OIL (HISTORICAL / FORECAST)



NYMEX WTI Futures as of 29-Nov-18 Close (\$/bbl)

Period ⁽¹⁾	Current	Last Wk.	6 Mo. Ago	1 Yr. Ago
12 Mo. Strip	\$52.20	\$55.20	\$64.97	\$55.97
2019	\$52.20	\$55.23	\$62.80	\$53.54
2020	\$53.15	\$55.20	\$59.12	\$51.93
2021	\$53.49	\$54.57	\$56.39	\$51.04
2022	\$53.67	\$54.17	\$54.49	\$50.63
2023	\$53.97	\$54.03	\$53.21	\$50.68

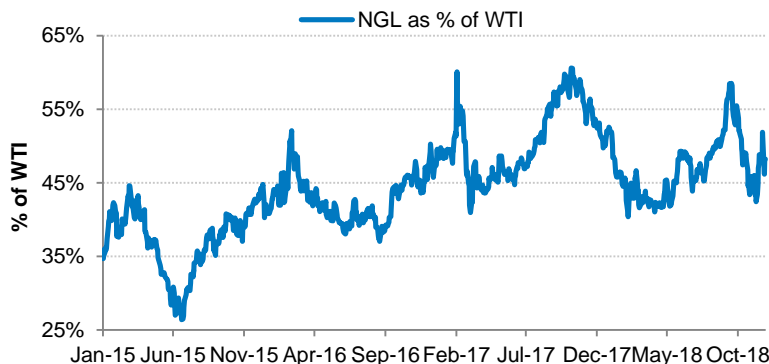
HENRY HUB NATURAL GAS (HISTORICAL / FORECAST)



NYMEX Gas Futures as of 29-Nov-18 Close (\$/mmbtu)

Period ⁽¹⁾	Current	Last Wk.	6 Mo. Ago	1 Yr. Ago
12 Mo. Strip	\$3.22	\$3.27	\$2.92	\$3.05
2019	\$3.22	\$3.14	\$2.78	\$2.91
2020	\$2.66	\$2.62	\$2.69	\$2.87
2021	\$2.64	\$2.59	\$2.66	\$2.89
2022	\$2.81	\$2.75	\$2.80	\$3.04
2023	\$2.81	\$2.75	\$2.80	\$3.04

NGL PRICING⁽²⁾



Historical Prices as of 29-Nov-18 Close (\$/gal)

NGLs	Current	Last Wk.	6 Mo. Ago	1 Yr. Ago
Ethane	\$0.34	\$0.33	\$0.28	\$0.26
Propane	\$0.69	\$0.74	\$0.92	\$0.99
Butane	\$0.68	\$0.76	\$0.93	\$0.99
Iso-butane	\$0.87	\$0.91	\$1.64	\$1.01
Pentane+	\$0.98	\$1.07	\$1.55	\$1.34

Source: BMO Commodity Products Group, Bloomberg, FactSet

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

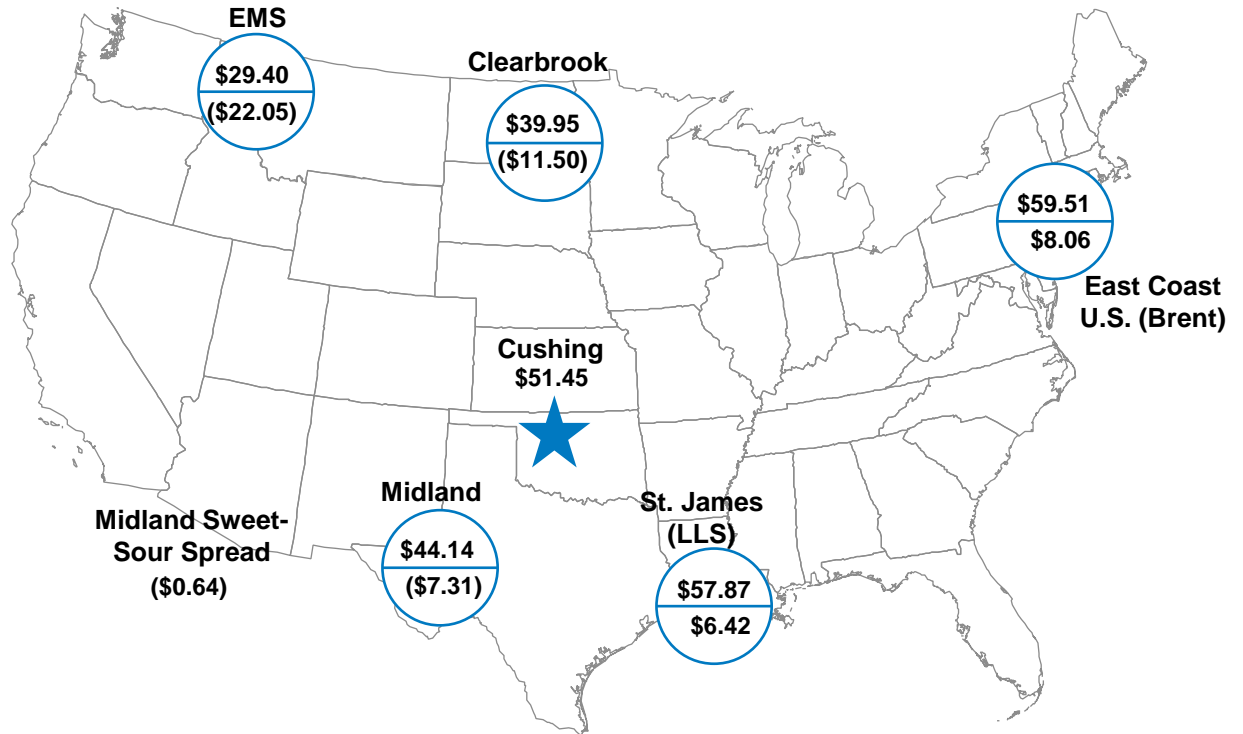


December 3, 2018

Commodity Prices (cont'd)

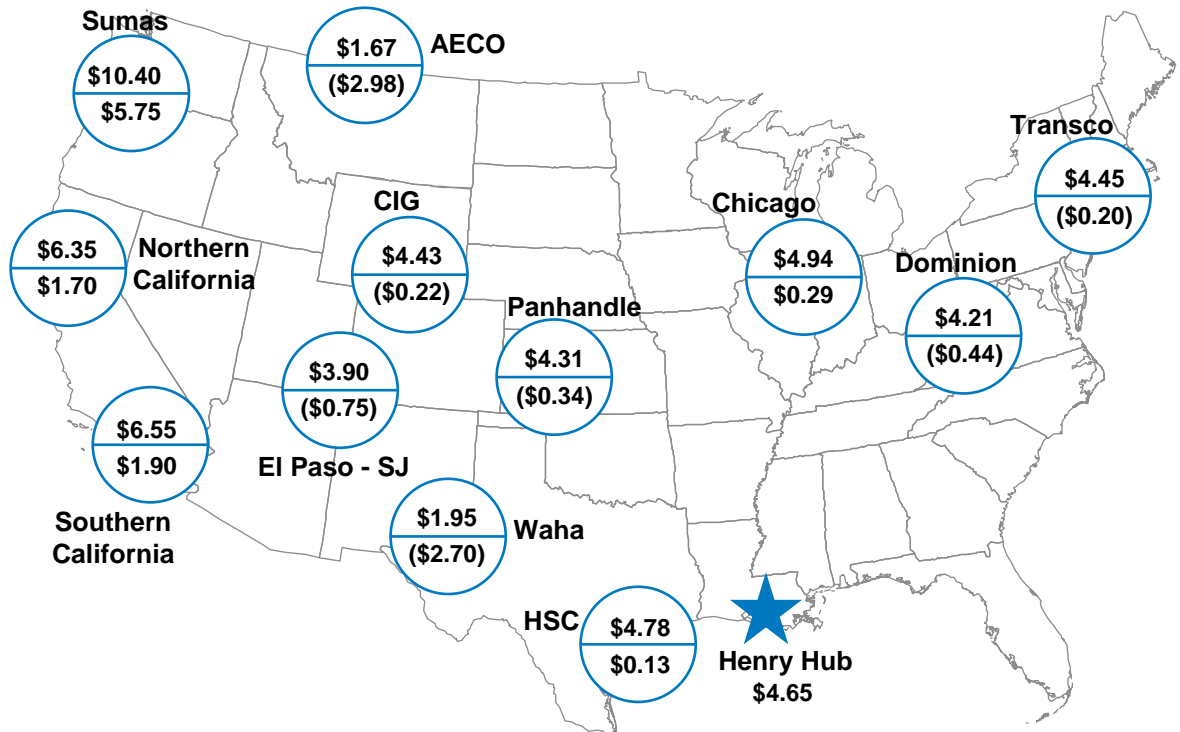
OIL PRICING & DIFFERENTIALS TO CUSHING WTI (\$ / BBL) – AS OF 29-NOV-18

Legend



NATURAL GAS PRICING & DIFFERENTIALS TO HENRY HUB (\$ / MMBTU) – AS OF 29-NOV-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.



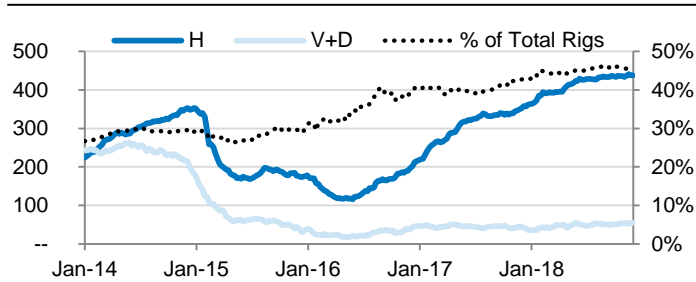
December 3, 2018

Permian Snapshot

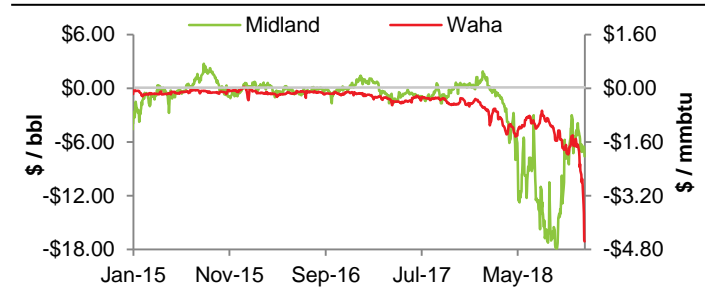
Item	Value	Wkly Change	Last Week
Rig Count	493	█ --	493
Permitting Activity	182	↓ (32)	214

Item	Value	Wkly Change	Last Week
Oil Differential	(\$7.60)	↓ (\$0.55)	(\$7.05)
Gas Differential	(\$4.56)	↓ (\$1.86)	(\$2.71)

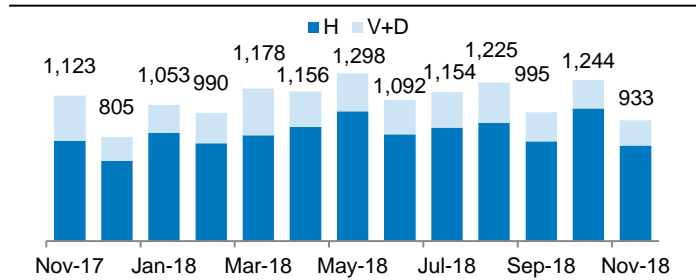
RIG COUNT



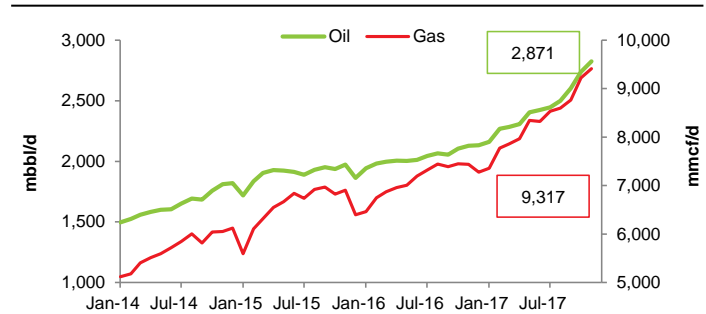
DIFFERENTIALS



PERMITTING ACTIVITY BY MONTH



GROSS PRODUCTION

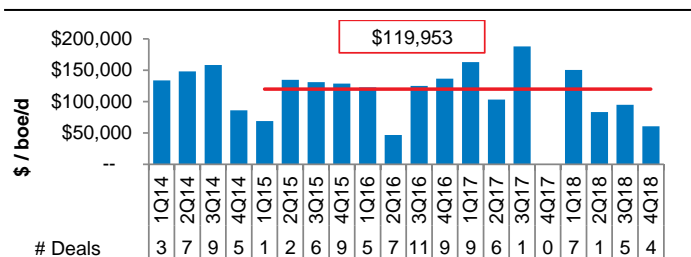


TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

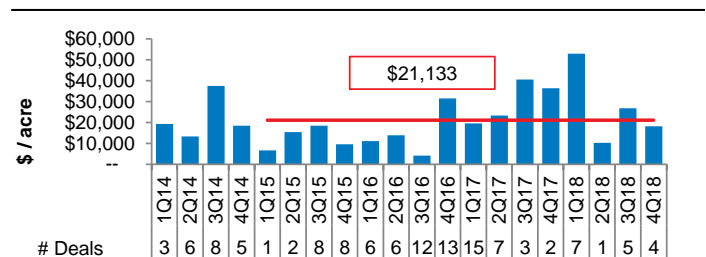
Ann'd Date	Buyer	Seller	Asset Description	Value ⁽¹⁾ (\$mm)	Proved Multiple (\$/boe)	Prod. Multiple (\$/boe/d)	Net Acres (\$/acre) ⁽²⁾	
06-Nov-18	Diamondback Energy	ExL Pet.; EnergyQuest	3,646 net acres in Midland Basin	\$313	n.a.	\$89,286	\$85,710	
05-Nov-18	Centennial Resource Dev.	Undisclosed Seller	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

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.



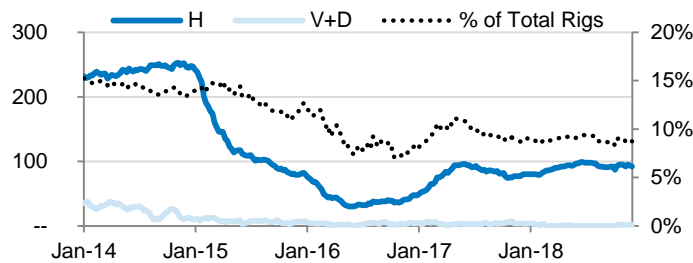
December 3, 2018

Eagle Ford Snapshot

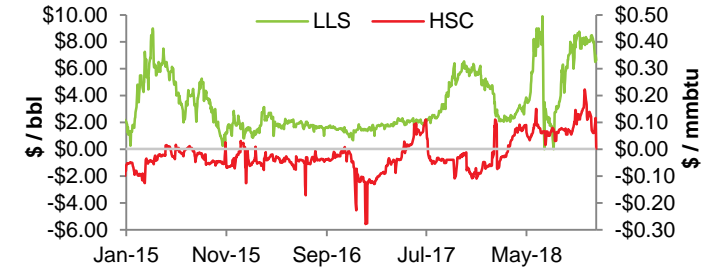
Item	Value	Wkly Change	Last Week
Rig Count	94	↓ (2)	96
Permitting Activity	72	↓ (10)	82

Item	Value	Wkly Change	Last Week
Oil Differential	\$6.65	↓ (\$1.35)	\$8.00
Gas Differential	\$0.00	↓ (\$0.06)	\$0.06

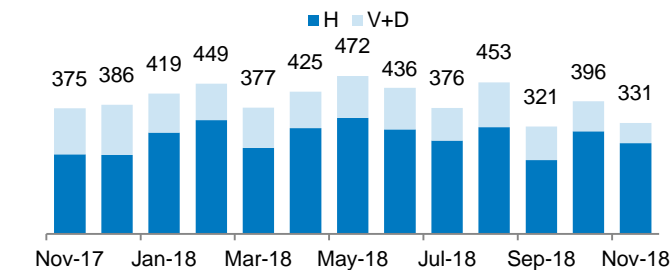
RIG COUNT



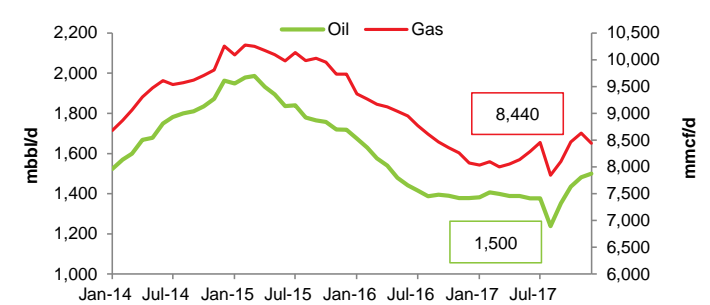
DIFFERENTIALS



PERMITTING ACTIVITY BY MONTH



GROSS PRODUCTION

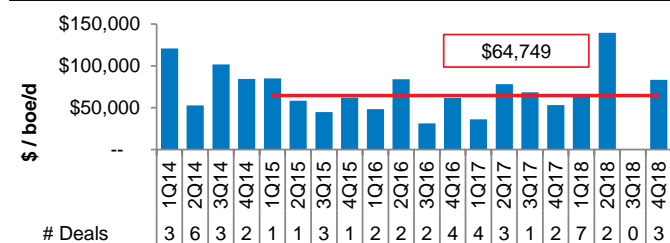


TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

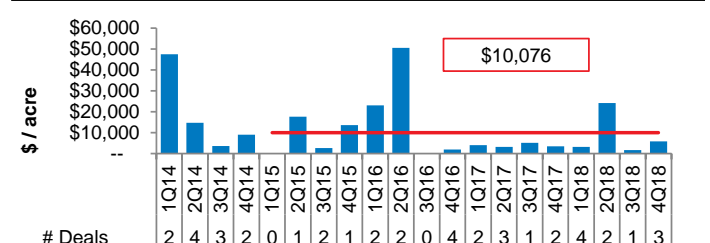
Ann'd Date	Buyer	Seller	Asset Description	Value ⁽¹⁾ (\$mm)	Proved Multiple (\$/boe)	Prod. Multiple (\$/boe/d)	Net Acres (\$/acre) ⁽²⁾
19-Nov-18	Lonestar Resources Inc	Sabine Oil & Gas Corp	2,706 net acres in Eagle Ford	\$39	\$2.98	\$48,375	\$14,302
20-Sep-18	WildHorse	Undisclosed Seller	20,305 net Eagle 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
				Median	\$35	\$2.98	\$48,375

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.

- 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.



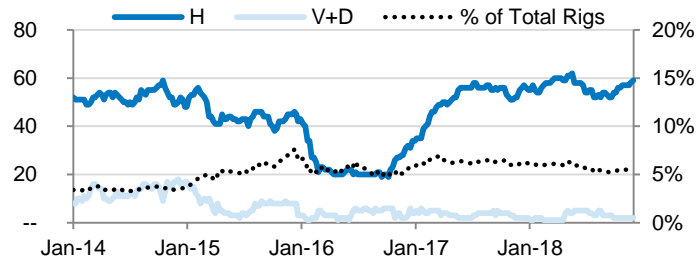
December 3, 2018

Ark-La-Tex Snapshot

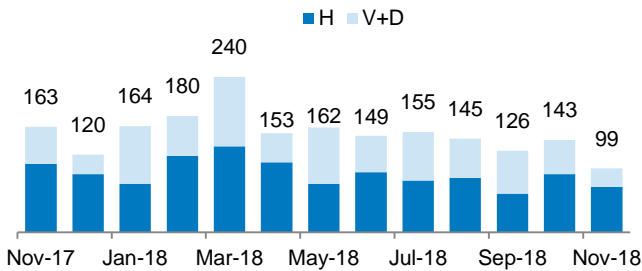
Item	Value	Wkly Change	Last Week
Rig Count	61	↑ 1	60
Permitting Activity	5	↓ (26)	31

Item	Value	Wkly Change	Last Week
Oil Differential	\$6.65	↓ (\$1.35)	\$8.00
Gas Differential	--	--	--

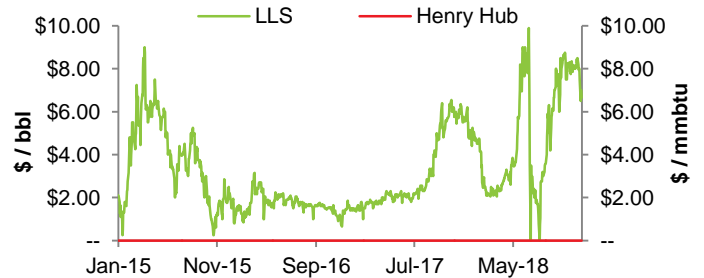
RIG COUNT



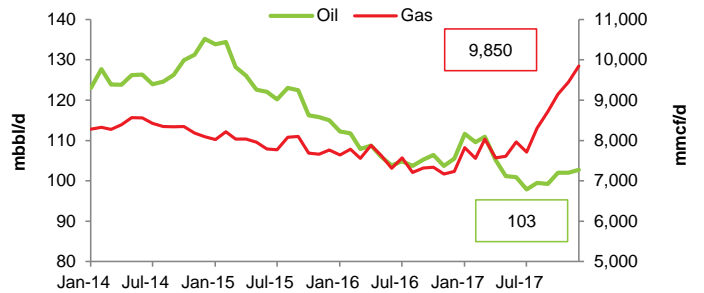
PERMITTING ACTIVITY BY MONTH



DIFFERENTIALS



GROSS PRODUCTION

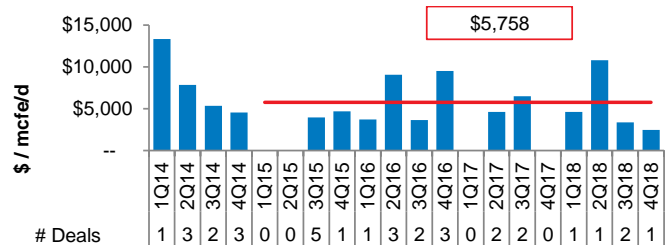


TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

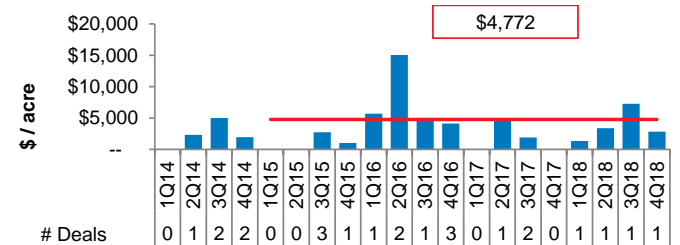
Ann'd Date	Buyer	Seller	Asset Description	Value ⁽¹⁾ (\$mm)	Proved Multiple (\$/mcf)	Prod. Multiple (\$/mcf/d)	Net Acres (\$/acre) ⁽²⁾
19-Nov-18	Aethon III	QEP Resources Inc	49,700 net acres in Haynesville	\$735	\$0.77	\$2,475	\$14,789
05-Sep-18	Viking Energy Group	Multiple Sellers	Texas and Louisiana 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
26-Jul-18	BP	BHP Billiton	Permian, Eagle Ford, and Haynesville	\$10,500	n.a.	n.a.	n.a.
				Mean	\$2,305	\$1.23	\$4,487
				Median	\$117	\$1.23	\$10,510

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.

- 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, and 2018.



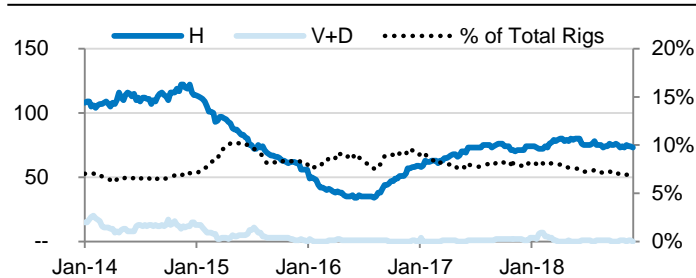
December 3, 2018

Appalachia Snapshot

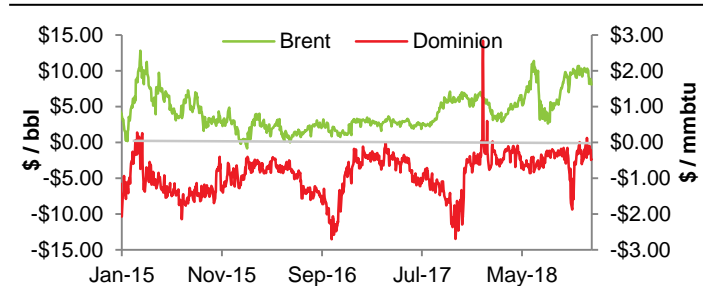
Item	Value	Wkly Change	Last Week
Rig Count	73	↓ (2)	75
Permitting Activity	20	↓ (53)	73

Item	Value	Wkly Change	Last Week
Oil Differential	\$8.06	↓ (\$0.99)	\$9.05
Gas Differential	(\$0.48)	↓ (\$0.24)	(\$0.24)

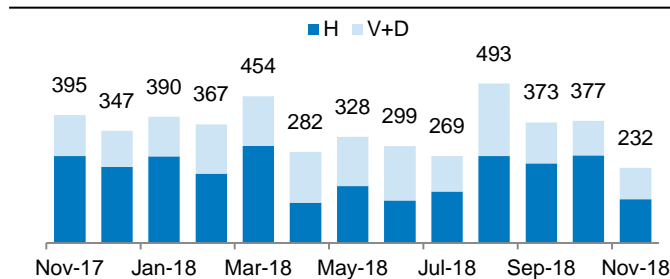
RIG COUNT



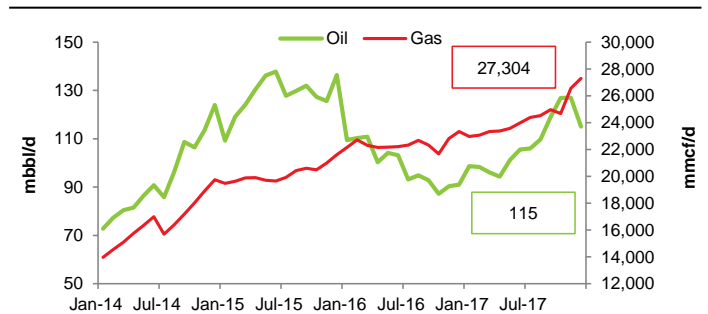
DIFFERENTIALS



PERMITTING ACTIVITY BY MONTH



GROSS PRODUCTION

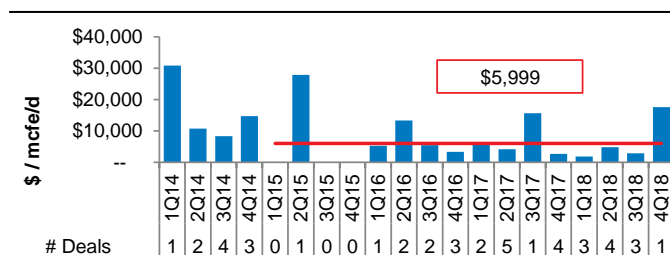


TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

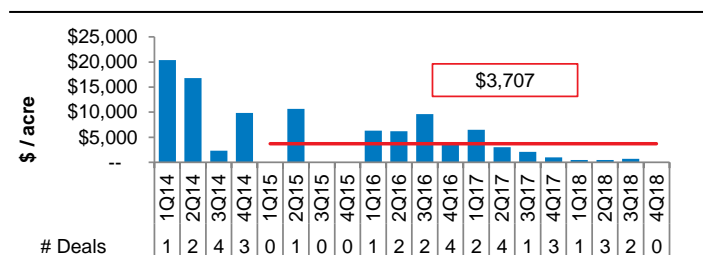
Ann'd Date	Buyer	Seller	Asset Description	Value ⁽¹⁾	Proved Multiple	Prod. Multiple	Net Acres	
				(\$mm)	(\$/mcf)	(\$/mcf/d)	(\$/acre) ⁽²⁾	
15-Oct-18	Undisclosed Buyer	Range Resources Corp	Overriding royalty interests in Appalachia	\$300	n.a.	\$17,649	n/mf	
27-Aug-18	PennEnergy Resources	Rex Energy Corp	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	
				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.



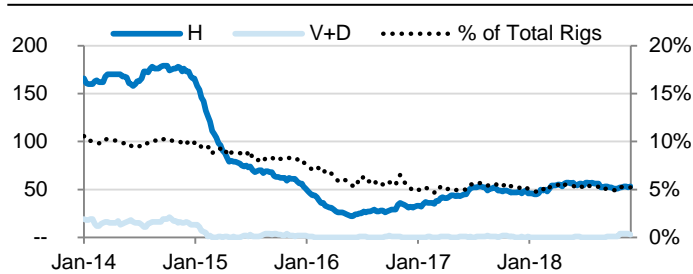
December 3, 2018

Bakken Snapshot

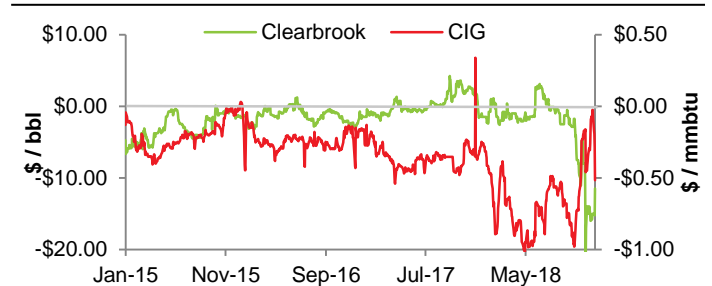
Item	Value	Wkly Change	Last Week
Rig Count	56	█ --	56
Permitting Activity	14	↓ (13)	27

Item	Value	Wkly Change	Last Week
Oil Differential	(\$11.50)	↑ \$3.50	(\$15.00)
Gas Differential	(\$0.52)	↓ (\$0.49)	(\$0.02)

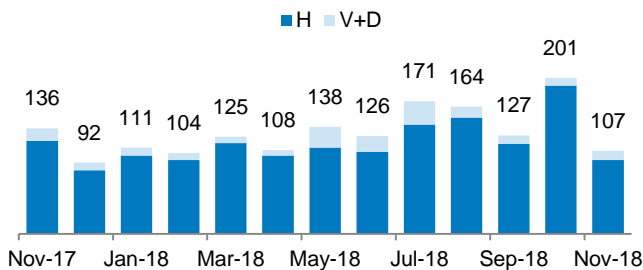
RIG COUNT



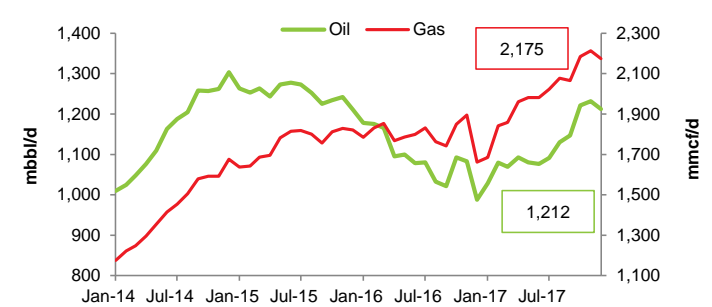
DIFFERENTIALS



PERMITTING ACTIVITY BY MONTH



GROSS PRODUCTION

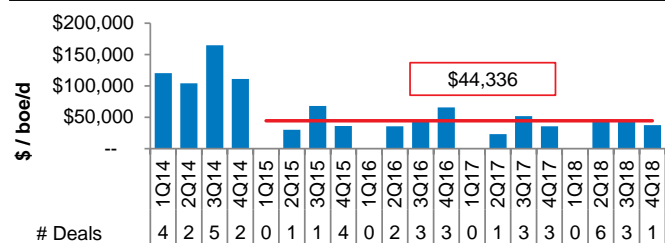


TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

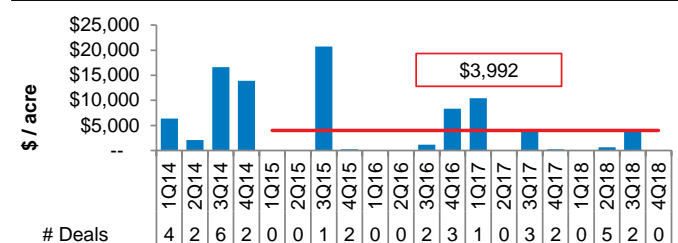
Ann'd Date	Buyer	Seller	Asset Description	Value ⁽¹⁾ (\$mm)	Proved Multiple (\$/boe)	Prod. Multiple (\$/boe/d)	Net Acres (\$/acre) ⁽²⁾
07-Nov-18	Vantage Energy Acq. Corp	QEP Resources Inc	102,800 net acres in Williston Basin	\$1,725	n.a.	\$37,500	\$16,780
31-Jul-18	Northern Oil and Gas	W Energy Partners	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

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.

- 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.



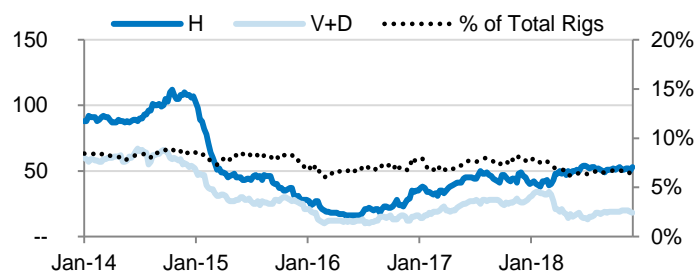
December 3, 2018

Rockies (excl. Bakken) Snapshot

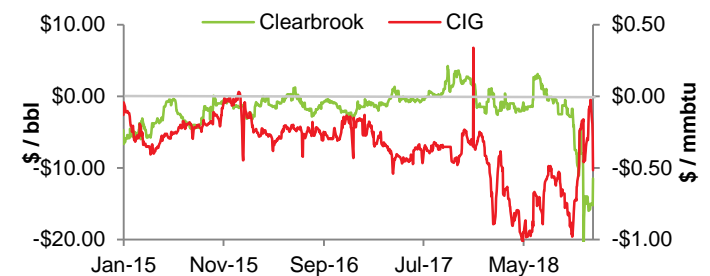
Item	Value	Wkly Change	Last Week
Rig Count	71	↑	69
Permitting Activity	79	↓ (44)	123

Item	Value	Wkly Change	Last Week
Oil Differential	(\$11.50)	↑ \$3.50	(\$15.00)
Gas Differential	(\$0.52)	↓ (\$0.49)	(\$0.02)

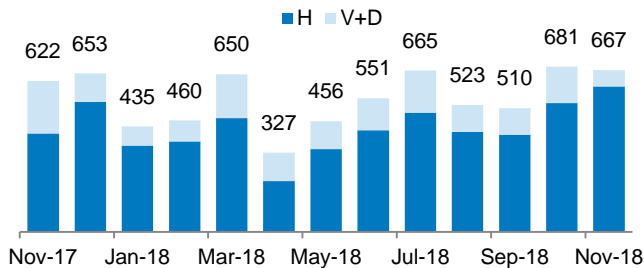
RIG COUNT



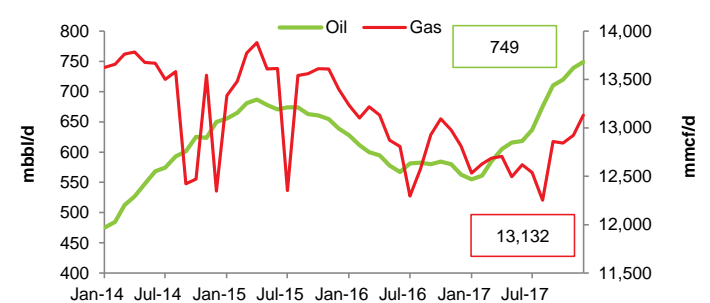
DIFFERENTIALS



PERMITTING ACTIVITY BY MONTH



GROSS PRODUCTION

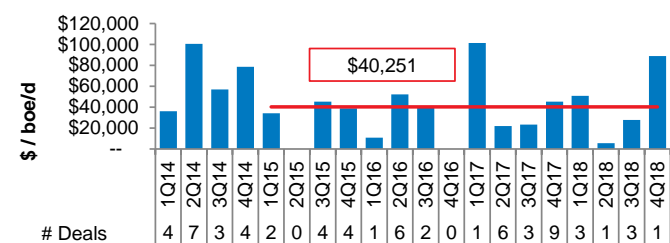


TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

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

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



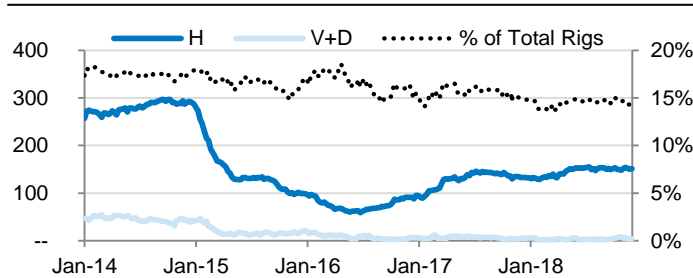
December 3, 2018

Mid-Continent Snapshot

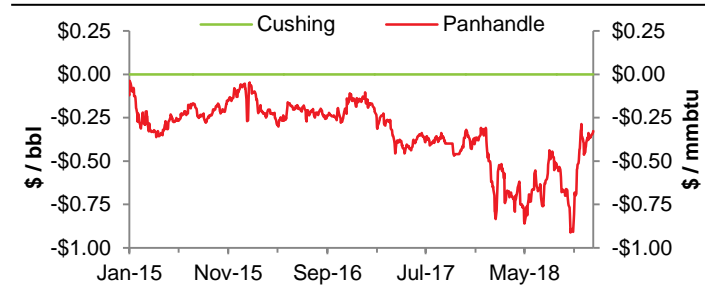
Item	Value	Wkly Change	Last Week
Rig Count	155	↑	154
Permitting Activity	39	↓ (49)	88

Item	Value	Wkly Change	Last Week
Oil Differential	--	█	--
Gas Differential	(\$0.33)	↑ \$0.04	(\$0.36)

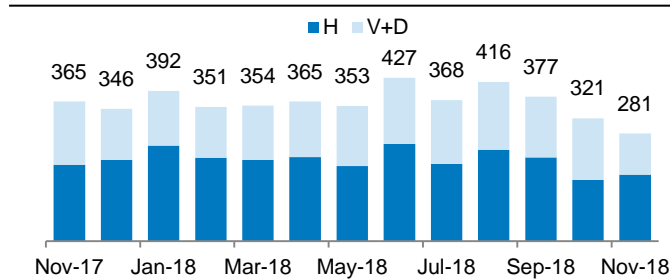
RIG COUNT



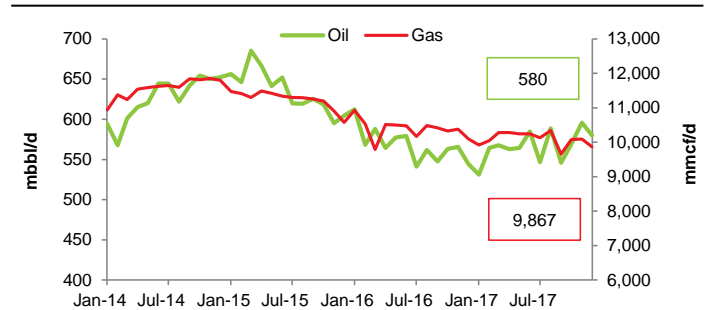
DIFFERENTIALS



PERMITTING ACTIVITY BY MONTH



GROSS PRODUCTION

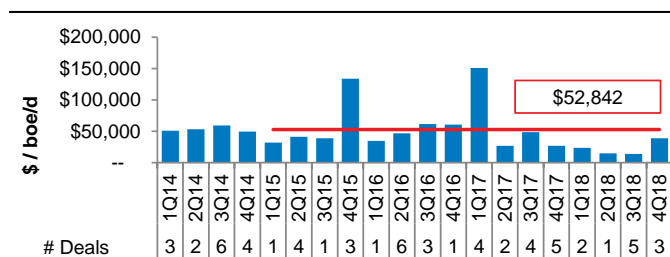


TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

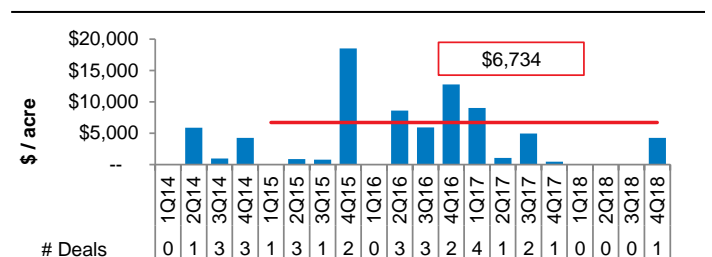
Ann'd Date	Buyer	Seller	Asset Description	Value ⁽¹⁾ (\$mm)	Proved Multiple (\$/boe)	Prod. Multiple (\$/boe/d)	Net Acres (\$/acre) ⁽²⁾	
02-Nov-18	SandRidge Energy	Undisclosed Seller	Mississippi Lime and NW STACK assets	\$25	n.a.	\$6,649	n.a.	
31-Oct-18	Casillas Petroleum Corp	Sheridan Production Partners	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	
02-Aug-18	Sanguine Gas Exploration	Vanguard Natural Res.	9,530 net acres in the Arkoma Basin	\$23	\$4.79	\$24,981	\$2,403	
				Mean	\$479	\$3.91	\$31,334	\$4,408
				Median	\$220	\$3.91	\$20,305	\$2,403

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.

- 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.



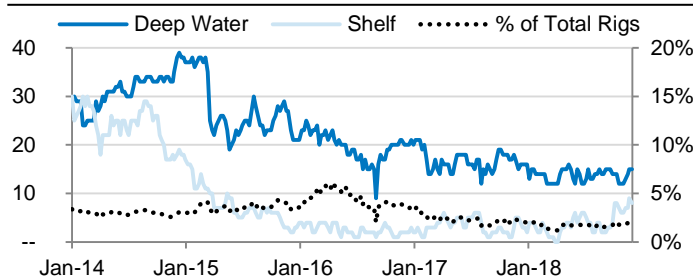
December 3, 2018

Gulf of Mexico Snapshot

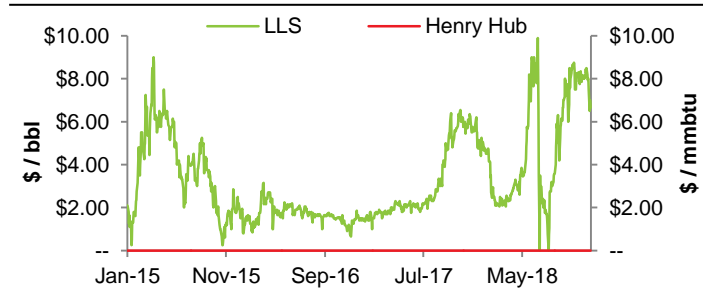
Item	Value	Wkly Change	Last Week
Rig Count	23	↓ (1)	24
Permitting Activity	0	█ --	0

Item	Value	Wkly Change	Last Week
Oil Differential	\$6.65	↓ (\$1.35)	\$8.00
Gas Differential	--	█ --	--

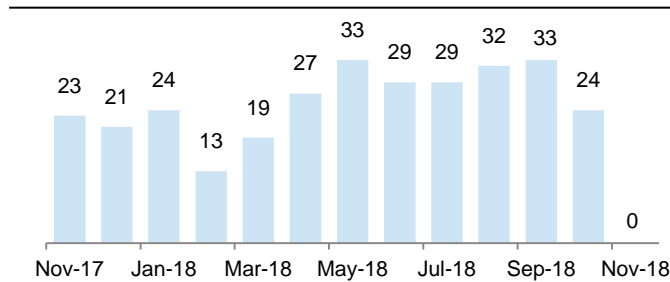
RIG COUNT



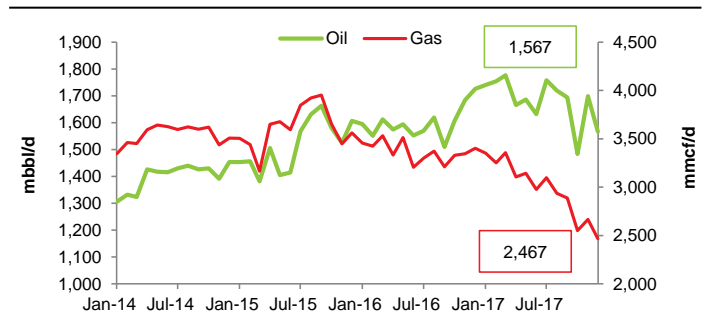
DIFFERENTIALS



PERMITTING ACTIVITY BY MONTH⁽¹⁾



GROSS PRODUCTION

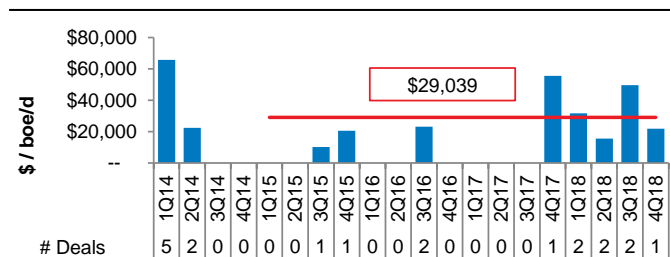


TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

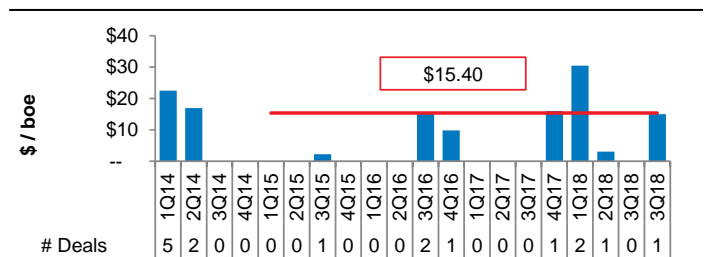
Ann'd Date	Buyer	Seller	Asset Description	Value ⁽²⁾ (\$mm)	Proved Multiple (\$/boe)	Prod. Multiple (\$/boe/d)	Net Acres (\$/acre) ⁽³⁾	
10-Oct-18	Murphy	Petrobras	Gulf of Mexico joint venture	\$900	\$15.00	\$21,951	n.a.	
04-Sep-18	Talos Energy Inc	Whistler Energy II LLC	Leases in Green Canyon federal 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.

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⁽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 3, 2018

[Click event to open](#)

Upcoming Industry Events

December 2018

Dec 6	175th OPEC Meeting
Dec 12	IPAA Leaders in Industry Luncheon
Dec 18	Houston Producers Forum Luncheon
Dec 21	ADAM-Houston Monthly Luncheon

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 15	ADAM-Houston Monthly Luncheon
Feb 19	Houston Producers Forum Luncheon
Feb 19-20	DUG Haynesville

March 2019

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 15-17	DUG Permian
Apr 16	Houston Producers Forum Luncheon
Apr 19	ADAM-Houston Monthly Luncheon

May 2019

May 6-9	Offshore Technology 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 15	ADAM-Houston Monthly Luncheon
Nov 19	IPAA Oil & Gas for Newcomers
Nov 19	Houston Producers Forum Luncheon
Nov 19-21	DUG Midcontinent



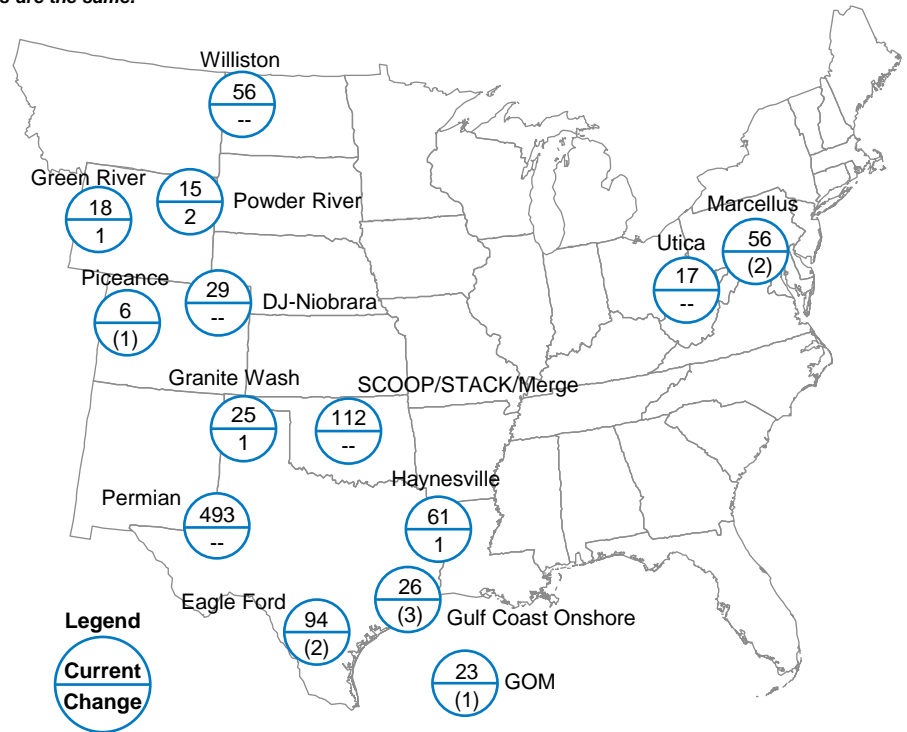
December 3, 2018

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	1,076	(3)	1,079	931
Oil	887	2	885	751
Gas	189	(5)	194	180
Miscellaneous	--	--	--	--
Directional	68	(5)	73	71
Horizontal	934	5	929	796
Vertical	74	(3)	77	64

Basin	This Week	Change	Last Week	Last Year
Permian	493	--	493	400
SCOOP/STACK/Merge	112	--	112	100
Granite Wash	25	1	24	17
Eagle Ford	94	(2)	96	84
Haynesville	61	1	60	58
Marcellus	56	(2)	58	45
Utica	17	--	17	27
Williston	56	--	56	47
DJ-Niobrara	29	--	29	23
Green River	18	1	17	23
Powder River	15	2	13	13
Piceance	6	(1)	7	8
Gulf Coast Onshore	26	(3)	29	18
GOM	23	(1)	24	20
Alaska	6	1	5	5
Other	39	--	39	43
Mid-Con	18	--	18	21
Rockies	3	--	3	5
Western	15	--	15	14
Eastern	3	--	3	3



Contacts

Geoff Roberts
MD & Co-Head of U.S. A&D
713-518-1268
geoff.roberts@bmo.com

Jason Martinez
MD & Co-Head of U.S. A&D
713-546-9771
jason.martinez@bmo.com

Howard Barnwell
MD & Transactions Mgr.
713-546-9767
howard.barnwell@bmo.com

Rob Priske
Director & Transactions Mgr.
713-546-9727
rob.priske@bmo.com

Elliott Finch
Analyst

Aaron Moeller
Analyst

Jennifer Boudreaux
Analyst

Chelsea Neville
Transactions Coordinator

Disclaimer

This material is prepared by the BMO Capital Markets' Investment and Corporate Banking Department, for distribution to BMO Capital Markets' clientele. It is not a product of BMO Capital Markets' Research Department. The views of the Investment and Corporate Banking Department may differ from those of the Research Department. BMO Capital Markets is a trade name used by BMO Financial Group for the wholesale banking businesses of Bank of Montreal, BMO Harris Bank N.A. (member FDIC), Bank of Montreal Ireland p.l.c., and Bank of Montreal (China) Co. Ltd and the institutional broker dealer businesses of BMO Capital Markets Corp. (Member FINRA and SIPC) in the U.S., BMO Nesbitt Burns Inc. (Member Investment Industry Regulatory Organization of Canada and Member Canadian Investor Protection Fund) in Canada and Asia and BMO Capital Markets Limited (authorized and regulated by the Financial Conduct Authority) in Europe and Australia. "Nesbitt Burns" is a registered trademark of BMO Nesbitt Burns Inc., used under license. "BMO Capital Markets" is a trademark of Bank of Montreal, used under license. "BMO (M-Bar roundel symbol)" is a registered trademark of Bank of Montreal, used under license. © Registered trademark of Bank of Montreal in the United States, Canada and elsewhere. ™ Trademark of Bank of Montreal in the United States and Canada. Bank of Montreal or its subsidiaries ("BMO Financial Group") has lending arrangements with, or provide other remunerated services to, many issuers covered by BMO Capital Markets. The opinions, estimates and projections contained in this report are those of BMO Capital Markets as of the date of this report and are subject to change without notice. BMO Capital Markets endeavors to ensure that the contents have been compiled or derived from sources that we believe are reliable and contain information and opinions that are accurate and complete. However, BMO Capital Markets makes no representation or warranty, express or implied, in respect thereof, takes no responsibility for any errors and omissions contained herein and accepts no liability whatsoever for any loss arising from any use of, or reliance on, this report or its contents. Information may be available to BMO Capital Markets or its affiliates that is not reflected in this report. The information in this report is not intended to be used as the primary basis of investment decisions, and because of individual client objectives, should not be construed as advice designed to meet the particular investment needs of any investor. This material is for information purposes only and is not an offer to sell or the solicitation of an offer to buy any security. BMO Capital Markets or its affiliates will buy from or sell to customers the securities of issuers mentioned in this report on a principal basis. BMO Capital Markets or its affiliates, officers, directors or employees have a long or short position in many of the securities discussed herein, related securities or in options, futures or other derivative instruments based thereon. BMO Capital Markets may act as financial advisor and/or underwriter for the issuers mentioned herein and may receive remuneration for same. The reader should assume that BMO Capital Markets or its affiliates may have a conflict of interest and should not rely solely on this report in evaluating whether or not to buy or sell securities of issuers discussed herein. All values in this document are in US\$ unless otherwise specified.

Source of rig count stats: Baker Hughes