



November 26, 2018

Covering the Week of November 16 to November 22, 2018

Week in Review

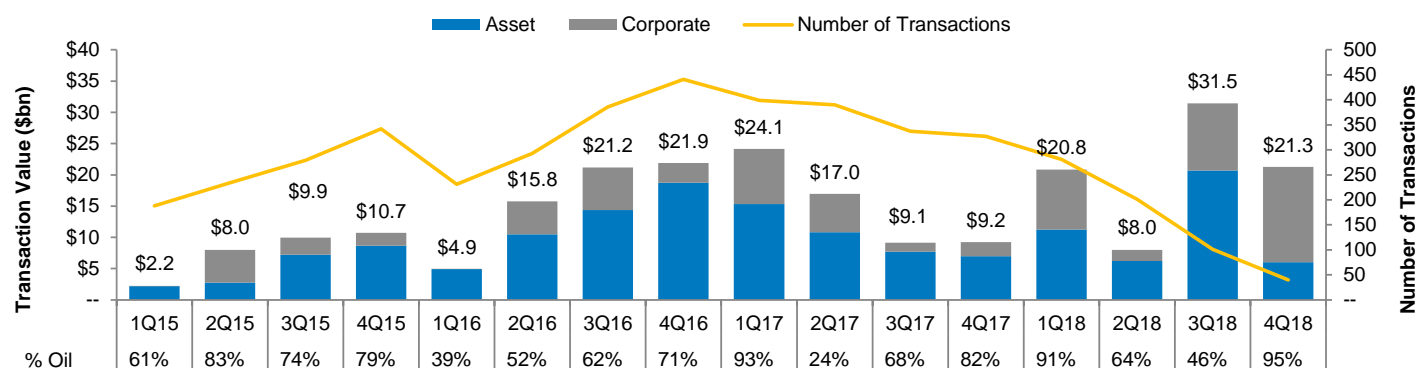
- Cimarex Energy acquired Resolute Energy for \$1.6 billion (see page 5 for more details)
- QEP Resources divested its Haynesville and Cotton Valley assets in North Louisiana to Aethon III, an affiliate of Aethon Energy, for \$735 million. **BMO Capital Markets acted as financial advisor, Left Lead Arranger, Bookrunner, and Administrative Agent to Aethon on this transaction** (see page 4 for more details)
- Kimbell Royalty Partners announced a \$107.8 million drop down acquisition
- Lonestar Resources acquired Eagle Ford assets in the Sugarkane Field from Sabine Oil & Gas Corp. for \$38.7 million
- PDC Energy and Noble Energy completed a strategic acreage swap in the DJ Basin

Key Industry Indicators

Indicator	Current Value	Week's Change	% Change	Direction
Prompt Oil Price (\$/bbl)	\$54.63*	(\$1.83)	(3.2%)	↓
Prompt Gas Price (\$/mmbtu)	\$4.45	\$0.41	10.2%	↑
Wkly Trans. Value (\$mm)	\$2,498	\$2,473	n/mf	↑
Wkly Trans. Count	4	3	300%	↑
US Rig Count	1,079	(3)	(0.3%)	↓
US Oil Prod'n (mmbbl/d)	11.7	--	--	—
US Gas Prod'n (bcf/d) ⁽¹⁾	102.5	--	--	—
US Oil Storage (mmbbl)	446.9	4.9	1.1%	↑
US Gas Storage (tcf)	3.1	(0.1)	(4.1%)	↓

*Through Thursday, as usual. On Friday, 11/23, WTI fell \$4.21/bbl, or 7.7%, to \$50.42/bbl

Quarterly Deal Activity



Commodities

- Oil ended last week down as oil fell sharply along with equities on Tuesday. Crude oil inventories continued to rise, with a sizable gain of 4.9 million barrels. In other news, President Trump tweeted “thank you to Saudi Arabia” due to the recent drop in the price of oil. The near-term contract closed down \$1.83, or 3.2%, at \$54.63 through Thursday. On Friday, 11/23, WTI fell \$4.21, or 7.7%, to \$50.42
- Natural gas ended last week up as weather forecasts continued to turn colder. Volatility continues to be high as the market tries to digest what the below average temperatures now could mean for storage levels and prices in the coming months. The near-term contract closed up \$0.41, or 10.2%, at \$4.45

Equity Markets

- S&P E&P⁽²⁾ underperformed last week (5.6%)% vs. SPX⁽²⁾ (2.9)%
- The major U.S. equity indexes finished down last week. Consumer discretionary, consumer staples, financials, health care, industrials, materials, and tech were all down, with only real estate up slightly

Debt Markets

- No issuers priced this week
- Year-to-date U.S. volume is down 36% year-on-year
- High yield index yield was 7.3%; high yield energy index yield was 8.36%

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.



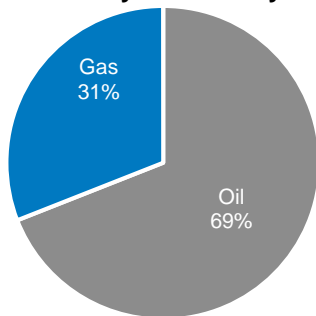
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The 10 Most Recent Asset Transactions Over \$20 Million

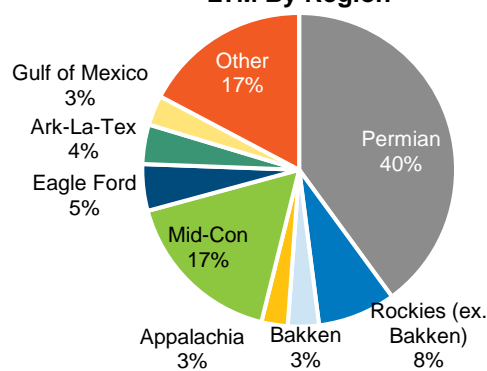
Ann'd Date	Buyer	Seller	Area	Asset Description	Value ⁽¹⁾ (\$mm)	Proved Multiple (\$/boe)	Prod. Multiple (\$/boe/d)	Net Acres (\$/acre)
21-Nov-18	Kimbell Royalty Partners	Undisclosed Seller	Multi-Region	16,700 net royalty acres	\$108	n.a.	\$90,588	nrf
19-Nov-18	Lonestar Resources Inc	Sabine Oil & Gas 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

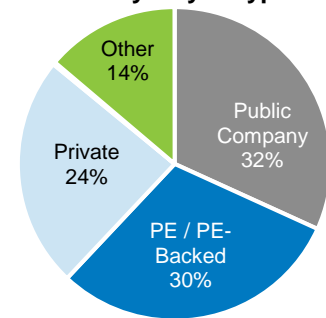
LTM By Commodity ⁽²⁾



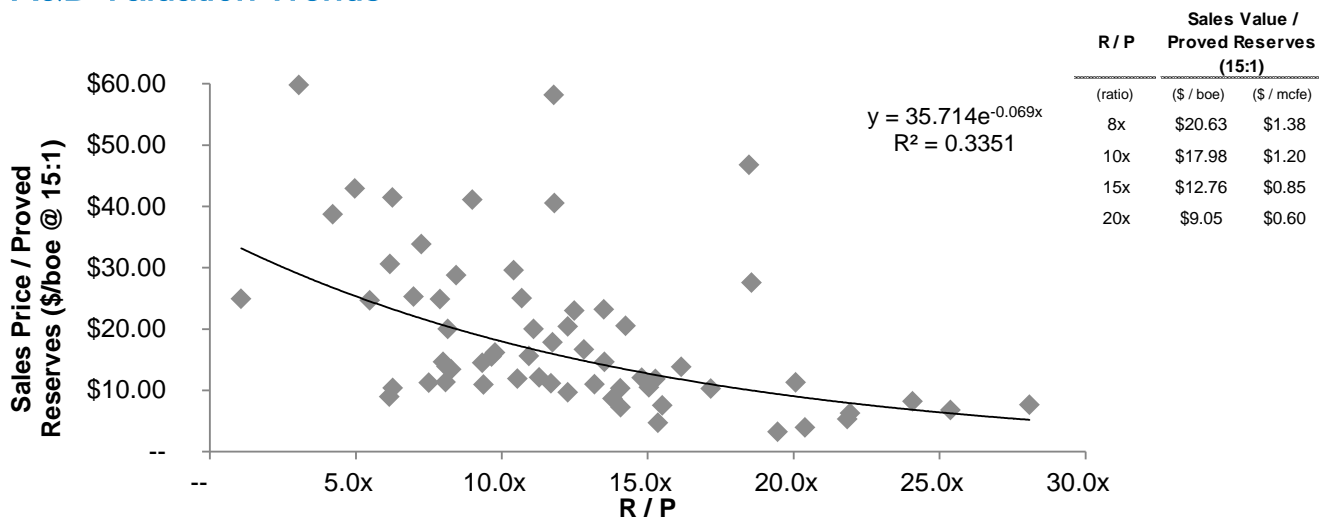
LTM By Region ⁽²⁾



LTM By Buyer Type ⁽²⁾



A&D Valuation Trends⁽³⁾



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

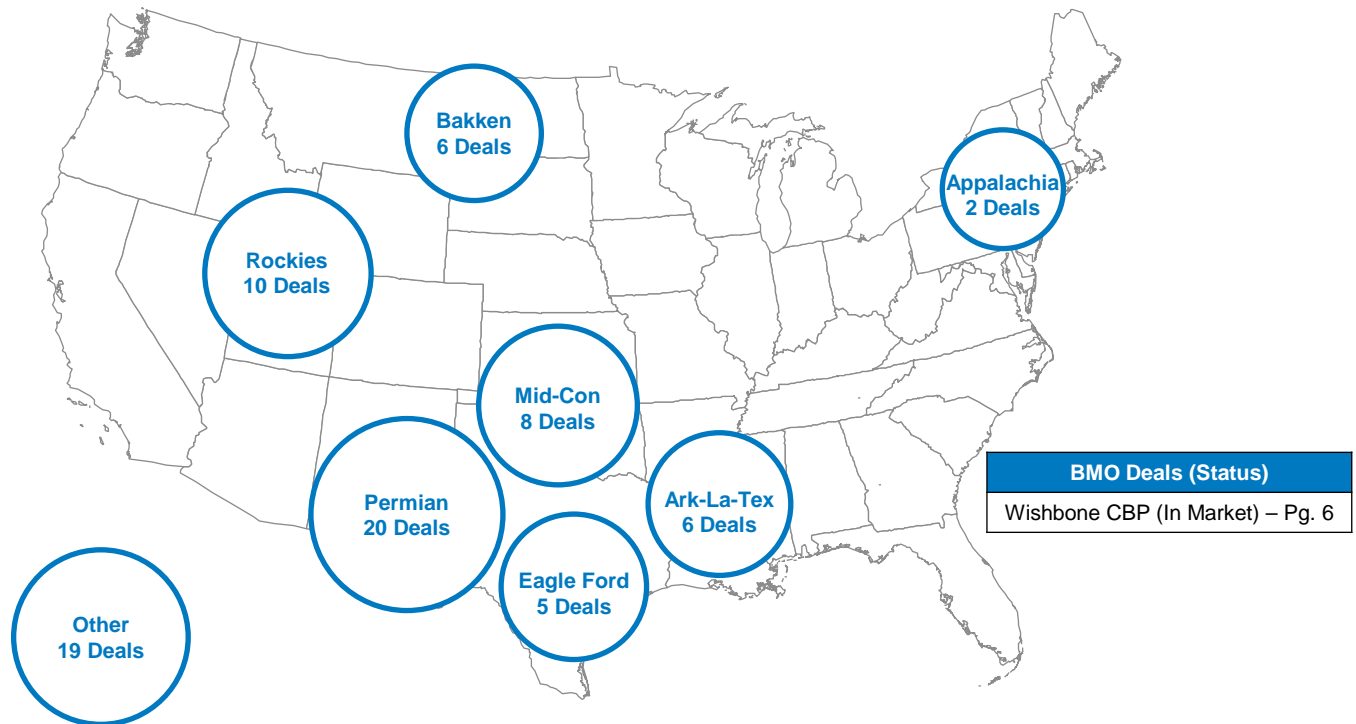
2

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



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Select Significant Deals on the Market



A&D Headlines

- [Cimarex to Acquire Delaware Pure-Play Resolute for \\$1.6 Billion](#)
- [QEP Resources Announces Agreement to Sell Northwest Louisiana Natural Gas Assets for \\$735.0 Million](#)
- [Kimbell Royalty Partners Announces \\$107.8 Million Drop Down Acquisition](#)
- [Lonestar Announces Eagle Ford Shale Acquisition, Increased Senior Secured Credit Facility](#)
- [PDC Energy and Noble Energy Complete Strategic Acreage Trade \(see slide 13 of presentation\)](#)

Industry Headlines

- [Deep Divisions Hinder Canadian Oil Patch in Fight of Its Life](#)
- [Texas Is About to Create OPEC's Worst Nightmare](#)
- [Appalachian Natural Gas Industry Hopeful After Midterm Elections](#)
- [Florida Petroleum Council Study Finds Offshore Leasing Could Provide State With \\$155 million in Tax Revenue](#)

(Click headline to link to the full article)



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BMO Deal of the Week:

Aethon Energy Acquires QEP Resources' North Louisiana Assets for \$735 Million

TRANSACTION SUMMARY

- On November 19, 2018, QEP Resources ("QEP") (NYSE: QEP) announced it entered into a definitive agreement to divest its Haynesville and Cotton Valley assets in North Louisiana to Aethon III ("Aethon"), an affiliate of Aethon Energy, for \$735 million
 - As part of this transaction, Aethon has agreed to assume all firm gas transport agreements related to the assets
 - QEP will novate natural gas derivative contracts covering ~40 bcf of gas for the last 11 months of 2019
- BMO Capital Markets served as financial advisor to Aethon**
- BMO Capitals Markets also served as Left Lead Arranger, Bookrunner, and Administrative Agent to Aethon, providing sole underwritten financing on a \$245 million reserve based lending facility**

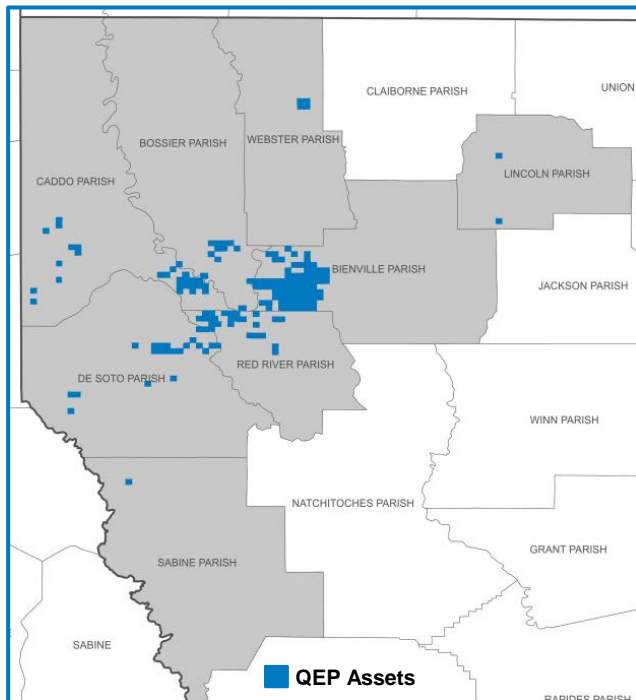
ASSET SUMMARY

- 49,700 net acres located in Bienville, Red River, De Soto, Bossier, Caddo, and Sabine Parishes in North Louisiana
 - Average working interest of 95% (73% NRI)
- Q3 2018 net production of ~297 mmcf/d (100% gas)
- The asset has 1P reserves of 959 bcf as of 31-Dec-17
- 137 gross operated producing Haynesville wells
- Includes associated gas gathering and treating systems

OBSERVATIONS

- The divestiture represents QEP's full exit from the Haynesville/Cotton Valley region and represents an important step in QEP's transition to become a pure play Permian E&P operator

ACQUIRED ASSETS



ACQUISITION METRICS

Purchase Price (US\$ mm)

Total Consideration	\$735
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Metrics

Q3 2018 Net Production (mmcf/d)	297
Proved Reserves (bcfe)	959
Net Acres	49,700

Multiples

TEV / Q3 2018 Net Production (\$/mcf/d)	\$2,475
TEV / Proved Reserves (\$/mcf)	\$0.77
TEV / Net Acre	\$14,789
TEV / Adj. Net Acre ⁽¹⁾	\$2,837

Source: press releases, company presentations

1. Value adjusted by \$2,000 per flowing mcf/d.



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Interesting Deal of the Week: Cimarex Energy Acquires Resolute Energy for \$1.6 Billion

TRANSACTION SUMMARY

- On November 19, 2018, Cimarex Energy Co. (“Cimarex”) (NYSE: XEC) announced it entered into an agreement to acquire Resolute Energy Corporation (“Resolute”) (NYSE: REN) for \$1.6 billion, including the assumption of \$710 million of long-term debt and \$63 million of preferred equity
- Resolute Shareholders have the option of receiving:
 - 0.3943 shares of Cimarex, \$35/share in cash, or 0.2366 shares of Cimarex and \$14/share in cash
 - The final amount of stock and cash is subject to proration for total stock and cash mix of 60% and 40%, respectively
- The cash portion is expected to be funded with cash on hand and with drawings under Cimarex’s revolving credit facility
- Deal is expected to close 1Q 2019

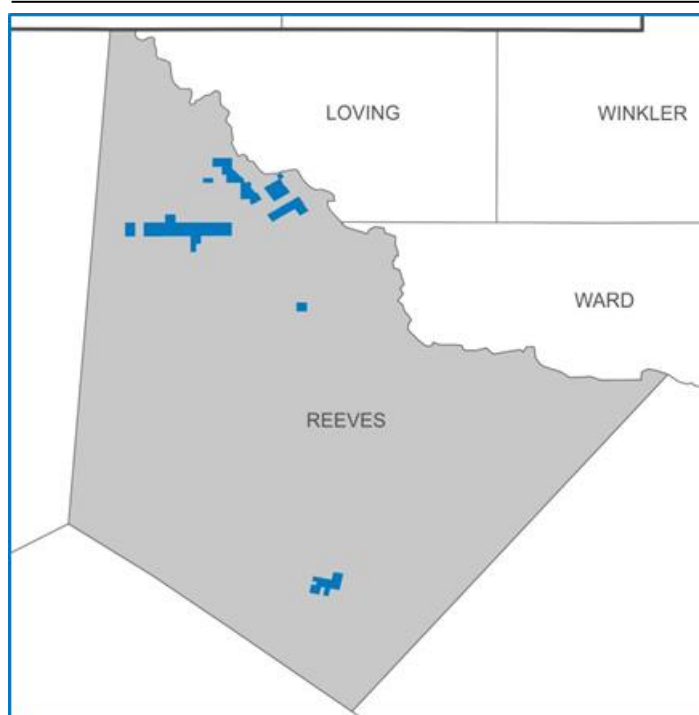
ASSET SUMMARY

- 21,100 net acres (27,100 gross acres), located primarily in northern Reeves County
- 3Q 2018 net production of 34,800 boe/d
 - 45% oil, 71% liquids
- Proved reserves of 53.4 mmboe as of 31-Dec-17
- Year-end 2017 PV-10 of \$434 million

OBSERVATIONS

- Assets line up nicely with existing Reeves footprint to increase WI and further block up acreage
- Full-cycle returns will compete for capital with Cimarex’s existing portfolio
- Acquired assets expected to be self-funding in 2019

ACQUIRED ASSETS



 Resolute Assets

ACQUISITION METRICS

Purchase Price (US\$ mm)⁽¹⁾	
Cash	\$1,047
Stock	\$569
Total Consideration	\$1,616
Metrics	
3Q 2018 Net Production (boe/d)	34,800
Proved Reserves (mmboe)	53.4
Net Acres	21,100
PV-10 (\$mm)	\$434
Multiples	
TEV / 3Q 2018 Net Production (\$/boe/d)	\$46,437
TEV / Proved Reserves (\$/boe)	\$30.26
TEV / Net Acre	\$76,588
TEV / Adj. Net Acre ⁽²⁾	\$18,863
TEV / PV-10	3.7x

Source: Press releases, company presentations

5 | 1. Consideration per 19-Nov-18 Cimarex presentation. Cash consideration and assumed debt shown as “Cash”. Common stock and assumption of preferred equity shown as “Stock”.
2. Represents illustrative total value less illustrative PDP value. Illustrative PDP value calculated as net production multiplied by \$35,000/boe/d.



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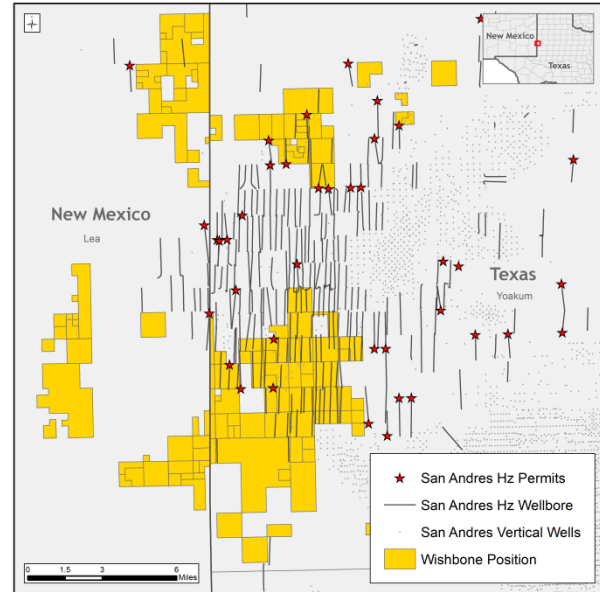
Currently on the Market from CIBC and BMO: Wishbone CBP Divestiture

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

<p>Improved Horizontal San Andres Performance</p>	<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
<p>Wishbone's Premier Position</p>	<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
<p>High Return Inventory</p>	<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
<p>Integrated Water Infrastructure</p>	<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

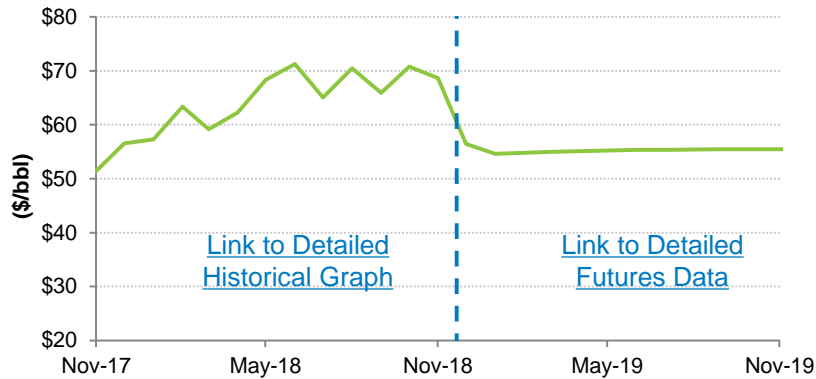
Source: Wishbone CBP Divestiture announcement



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Commodity Prices

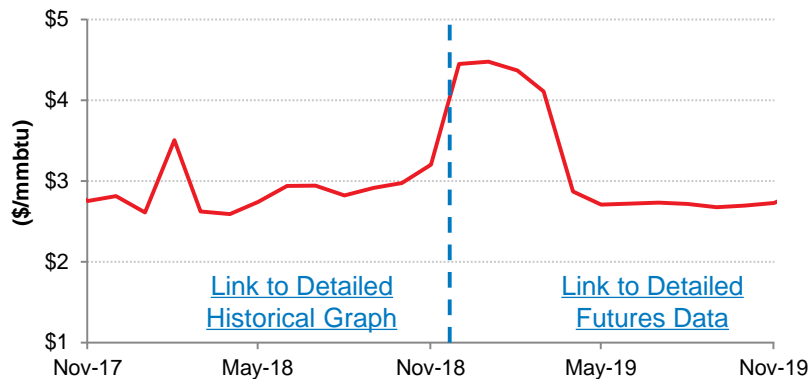
WTI OIL (HISTORICAL / FORECAST)



NYMEX WTI Futures as of 21-Nov-18 Close (\$/bbl)

Period ⁽¹⁾	Current	Last Wk.	6 Mo. Ago	1 Yr. Ago
12 Mo. Strip	\$55.23	\$57.29	\$70.12	\$55.92
2018	n.a.	\$56.25	\$71.36	\$56.07
2019	\$55.23	\$57.44	\$66.72	\$52.82
2020	\$55.20	\$58.26	\$62.18	\$50.72
2021	\$54.57	\$58.45	\$58.94	\$49.60
2022	\$54.17	\$58.46	\$56.70	\$49.26

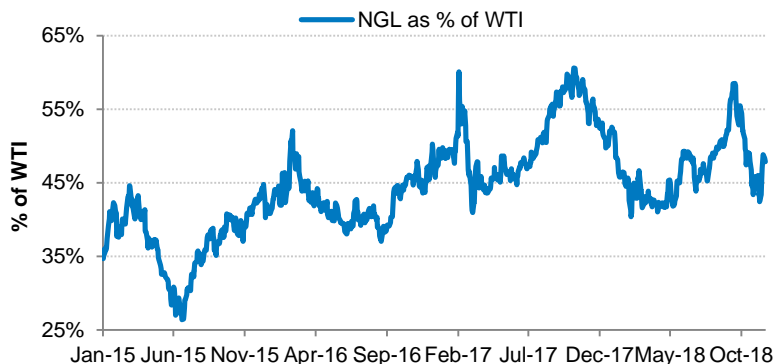
HENRY HUB NATURAL GAS (HISTORICAL / FORECAST)



NYMEX Gas Futures as of 21-Nov-18 Close (\$/mmbtu)

Period ⁽¹⁾	Current	Last Wk.	6 Mo. Ago	1 Yr. Ago
12 Mo. Strip	\$3.27	\$3.43	\$2.87	\$3.03
2018	\$4.45	\$4.84	\$2.88	\$3.03
2019	\$3.14	\$3.27	\$2.75	\$2.92
2020	\$2.62	\$2.69	\$2.69	\$2.88
2021	\$2.59	\$2.63	\$2.70	\$2.89
2022	\$2.75	\$2.77	\$2.85	\$3.04

NGL PRICING⁽²⁾



Historical Prices as of 21-Nov-18 Close (\$/gal)

NGLs	Current	Last Wk.	6 Mo. Ago	1 Yr. Ago
Ethane	\$0.33	\$0.35	\$0.26	\$0.26
Propane	\$0.74	\$0.74	\$0.94	\$1.00
Butane	\$0.76	\$0.77	\$0.96	\$1.02
Iso-butane	\$0.91	\$0.89	\$1.40	\$1.04
Pentane+	\$1.07	\$1.10	\$1.64	\$1.36

Source: BMO Commodity Products Group, Bloomberg, FactSet

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

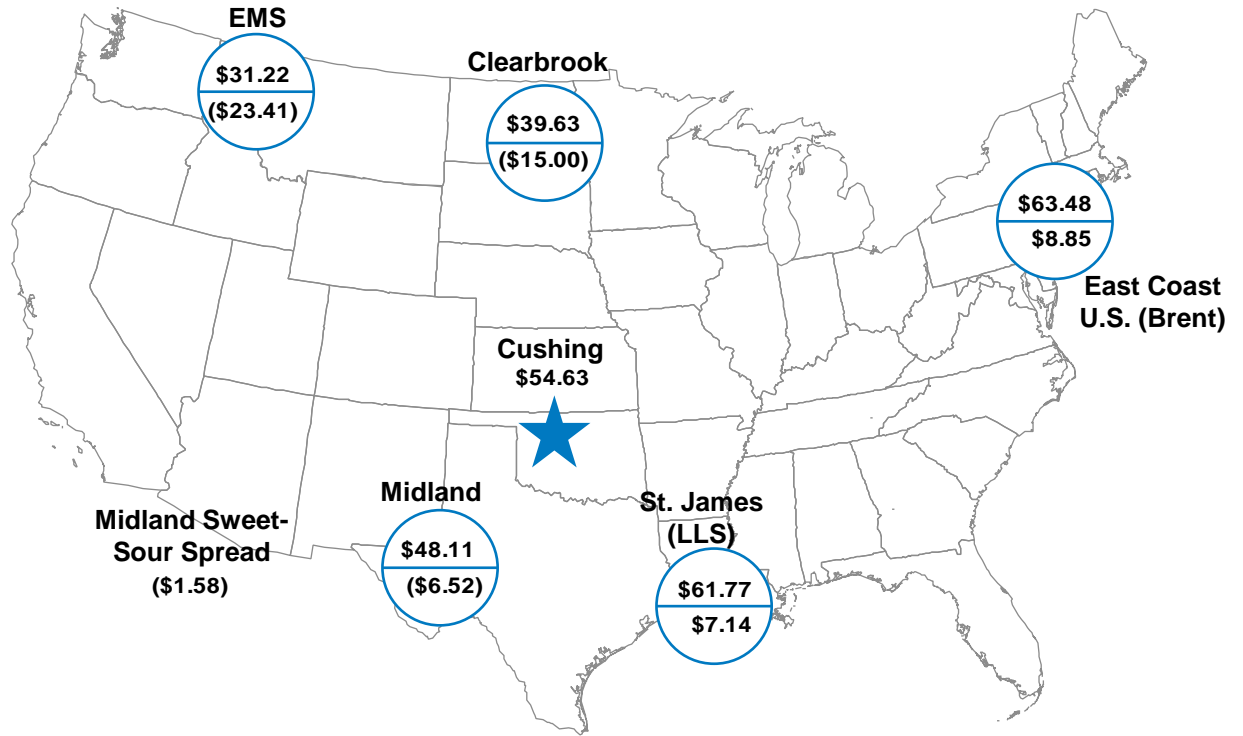


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Commodity Prices (cont'd)

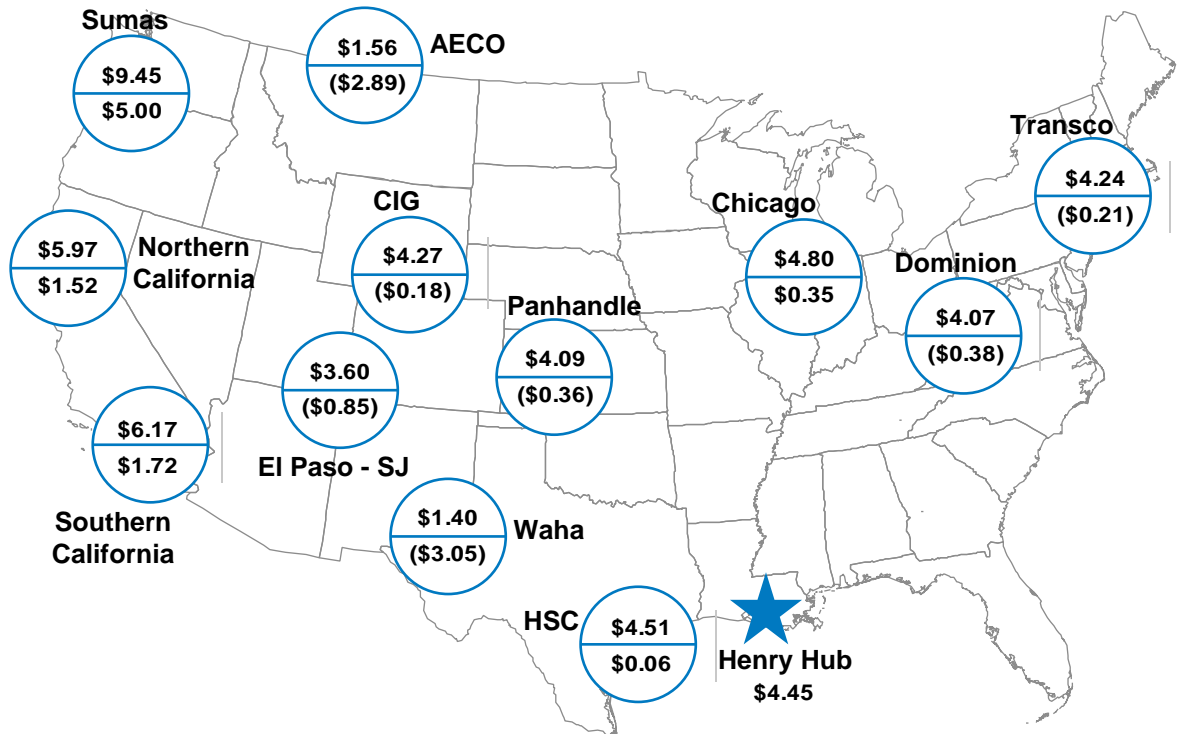
OIL PRICING & DIFFERENTIALS TO CUSHING WTI (\$ / BBL) – AS OF 21-NOV-18

Legend



NATURAL GAS PRICING & DIFFERENTIALS TO HENRY HUB (\$ / MMBTU) – AS OF 21-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.



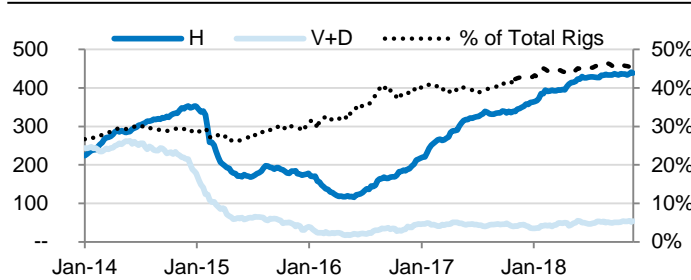
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Permian Snapshot

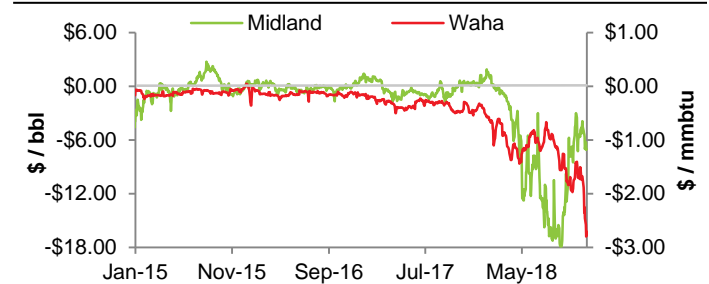
Item	Value	Wkly Change	Last Week
Rig Count	493	█	-- 493
Permitting Activity	100	↓	(120) 220

Item	Value	Wkly Change	Last Week
Oil Differential	(\$7.05)	↓	(\$1.35) (\$5.70)
Gas Differential	(\$2.71)	↓	(\$0.45) (\$2.26)

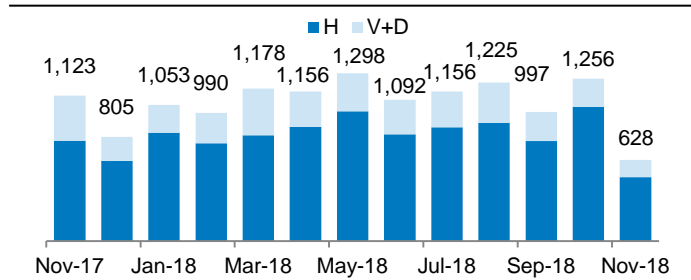
RIG COUNT



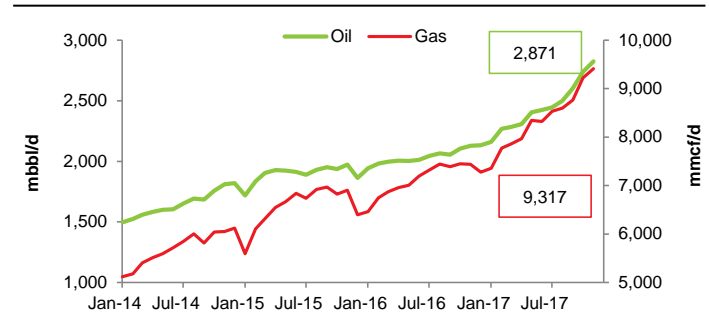
DIFFERENTIALS



PERMITTING ACTIVITY BY MONTH



GROSS PRODUCTION

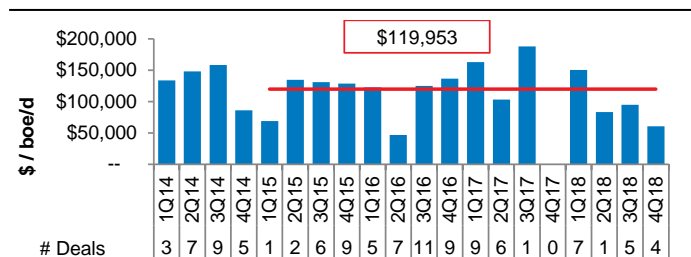


TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

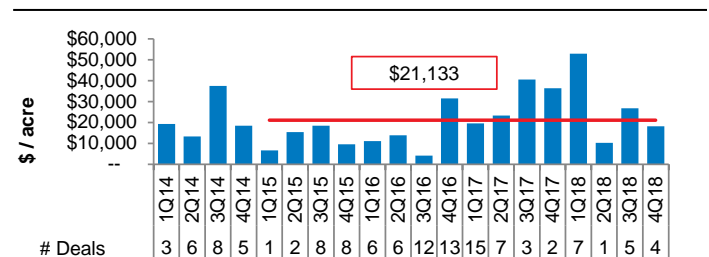
Ann'd Date	Buyer	Seller	Asset Description	Value ⁽¹⁾ (\$mm)	Proved Multiple (\$/boe)	Prod. Multiple (\$/boe/d)	Net Acres (\$/acre) ⁽²⁾	
06-Nov-18	Diamondback Energy	ExL Pet.; EnergyQuest	3,646 net acres in Midland Basin	\$313	n.a.	\$89,286	\$85,710	
05-Nov-18	Centennial Resource Dev.	Undisclosed Seller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



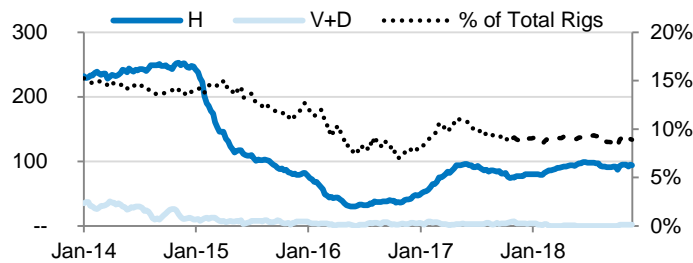
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Eagle Ford Snapshot

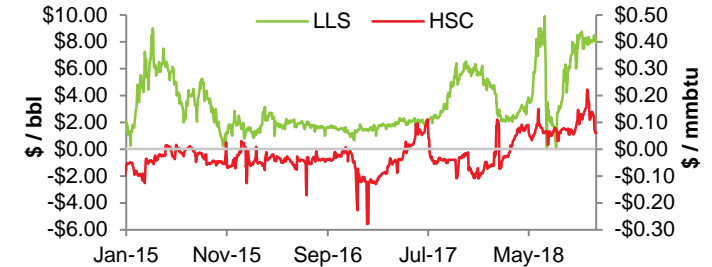
Item	Value	Wkly Change	Last Week
Rig Count	96	↓ (1)	97
Permitting Activity	46	↓ (61)	107

Item	Value	Wkly Change	Last Week
Oil Differential	\$8.00	↓ (\$0.25)	\$8.25
Gas Differential	\$0.06	↓ (\$0.03)	\$0.09

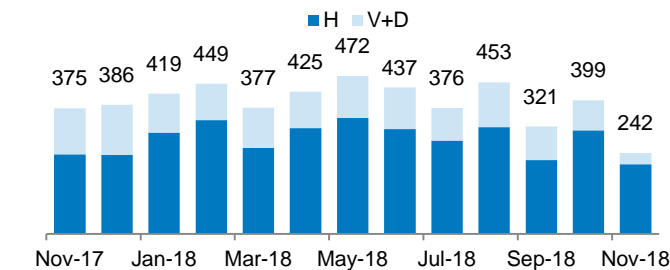
RIG COUNT



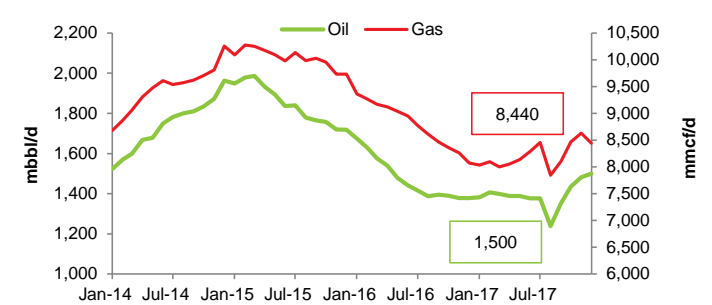
DIFFERENTIALS



PERMITTING ACTIVITY BY MONTH



GROSS PRODUCTION

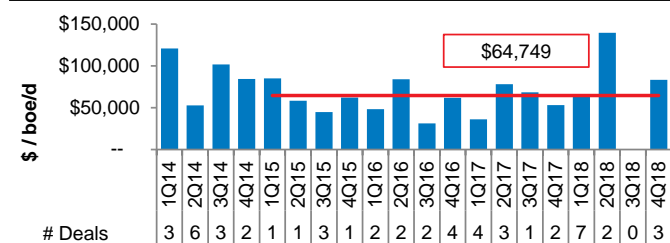


TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

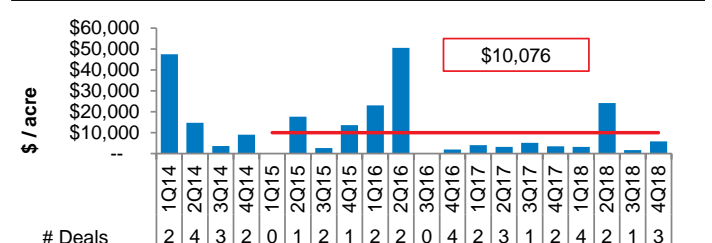
Ann'd Date	Buyer	Seller	Asset Description	Value ⁽¹⁾ (\$mm)	Proved Multiple (\$/boe)	Prod. Multiple (\$/boe/d)	Net Acres (\$/acre) ⁽²⁾
19-Nov-18	Lonestar Resources Inc	Sabine Oil & Gas Corp	2,706 net acres in Eagle Ford	\$39	\$2.98	\$48,375	\$14,302
20-Sep-18	WildHorse	Undisclosed Seller	20,305 net Eagle 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
26-Jul-18	BP	BHP Billiton	Permian, Eagle Ford, and Haynesville	\$10,500	n.a.	n.a.	n.a.
03-May-18	Apollo Global Management	EP Energy Corp	Eagle Ford JV in La Salle County, TX	\$38	n.a.	n.a.	n.a.
				Mean	\$2,128	\$2.98	\$48,375
				Median	\$38	\$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.

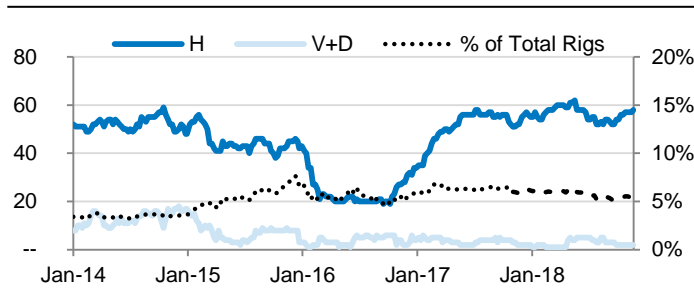


November 26, 2018

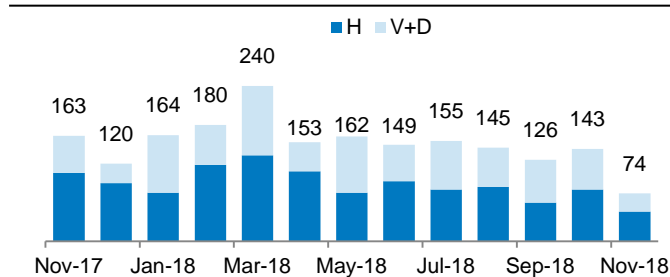
Ark-La-Tex Snapshot

Item	Value	Wkly Change	Last Week
Rig Count	60	↑	59
Permitting Activity	13	↓ (13)	26

RIG COUNT

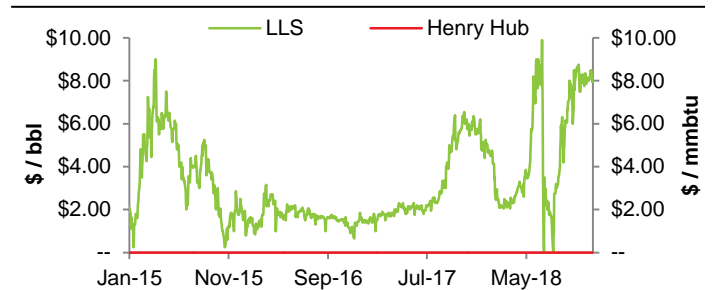


PERMITTING ACTIVITY BY MONTH

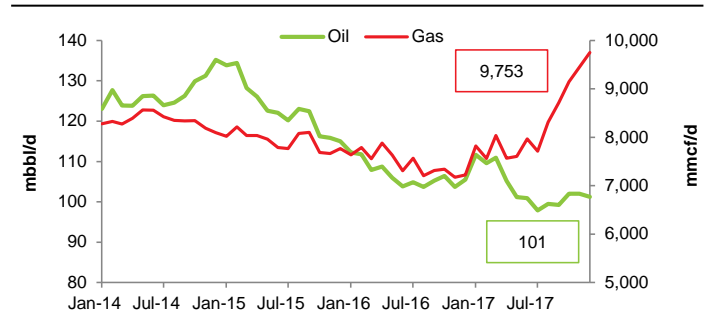


Item	Value	Wkly Change	Last Week
Oil Differential	\$8.00	↓ (\$0.25)	\$8.25
Gas Differential	--	--	--

DIFFERENTIALS



GROSS PRODUCTION

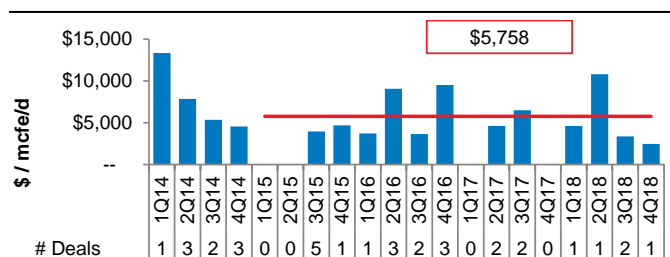


TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

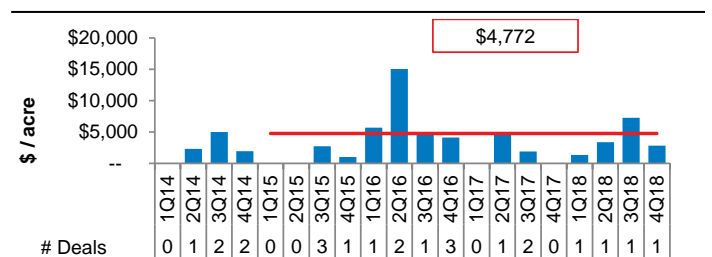
Ann'd Date	Buyer	Seller	Asset Description	Value ⁽¹⁾ (\$mm)	Proved Multiple (\$/mcf)	Prod. Multiple (\$/mcf/d)	Net Acres (\$/acre) ⁽²⁾
19-Nov-18	Aethon III	QEP Resources Inc	49,700 net acres in Haynesville	\$735	\$0.77	\$2,475	\$14,789
05-Sep-18	Viking Energy Group	Multiple Sellers	Texas and Louisiana 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

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

TRANSACTION PRODUCTION MULTIPLES⁽³⁾



TRANSACTION ADJUSTED NET ACRE MULTIPLES^(3,4)



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

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

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- \$/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.



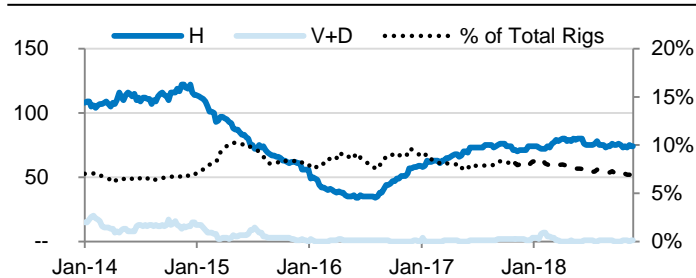
November 26, 2018

Appalachia Snapshot

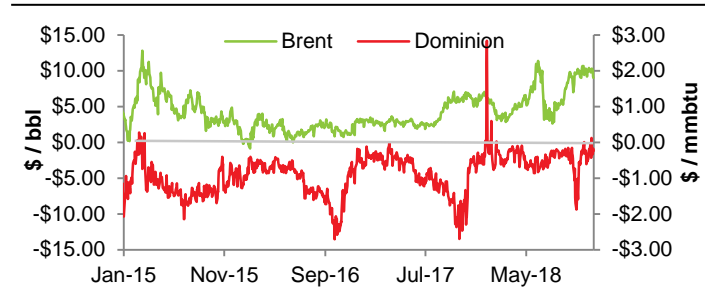
Item	Value	Wkly Change	Last Week
Rig Count	75	█ --	75
Permitting Activity	7	↓ (34)	41

Item	Value	Wkly Change	Last Week
Oil Differential	\$8.17	↓ (\$1.99)	\$10.16
Gas Differential	(\$0.24)	↓ (\$0.36)	\$0.12

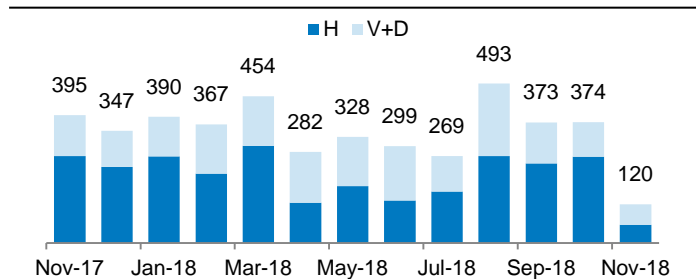
RIG COUNT



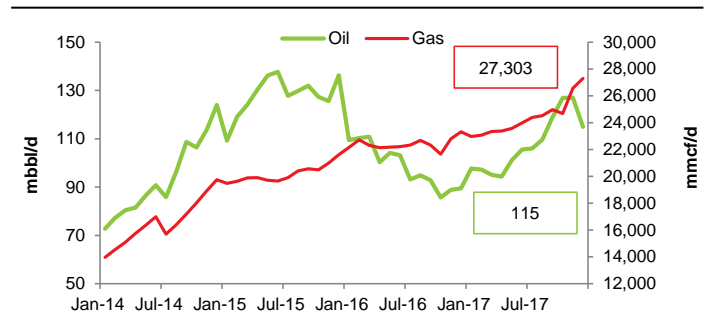
DIFFERENTIALS



PERMITTING ACTIVITY BY MONTH



GROSS PRODUCTION

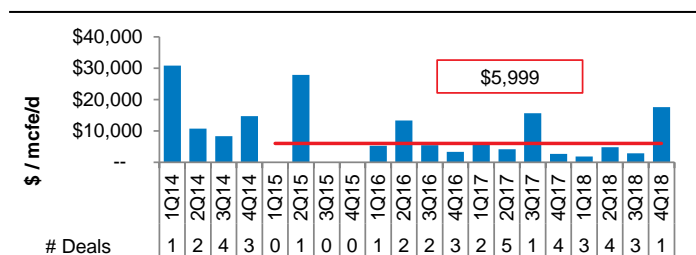


TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

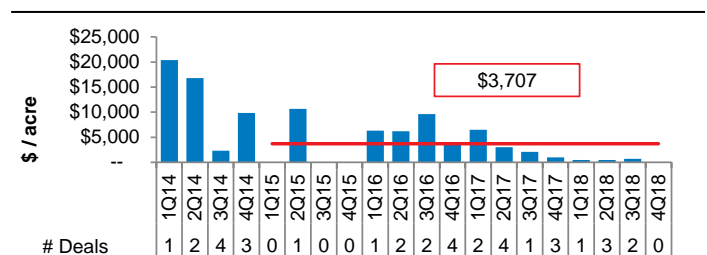
Ann'd Date	Buyer	Seller	Asset Description	Value ⁽¹⁾ (\$mm)	Proved Multiple (\$/mcf)	Prod. Multiple (\$/mcf/d)	Net Acres (\$/acre) ⁽²⁾
15-Oct-18	Undisclosed Buyer	Range Resources Corp	Overriding royalty interests in Appalachia	\$300	n.a.	\$17,649	nrf
27-Aug-18	PennEnergy Resources	Rex Energy Corp	141,026 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

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TRANSACTION PRODUCTION MULTIPLES⁽³⁾



TRANSACTION ADJUSTED NET ACRE MULTIPLES^(3,4)



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

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

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.



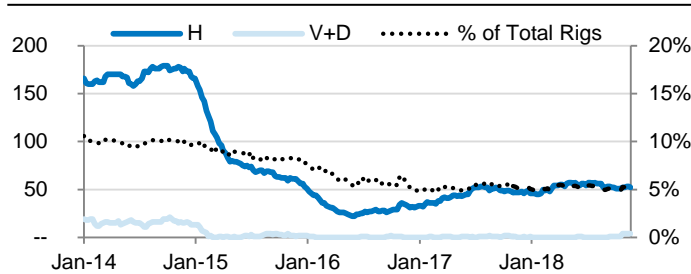
November 26, 2018

Bakken Snapshot

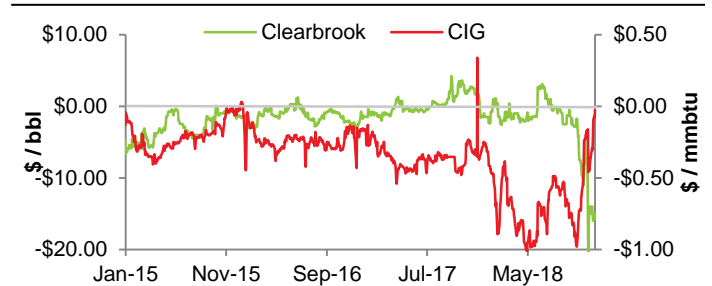
Item	Value	Wkly Change	Last Week
Rig Count	56	↓ (1)	57
Permitting Activity	8	↓ (12)	20

Item	Value	Wkly Change	Last Week
Oil Differential	(\$15.00)	↑ \$1.00	(\$16.00)
Gas Differential	(\$0.02)	↑ \$0.14	(\$0.17)

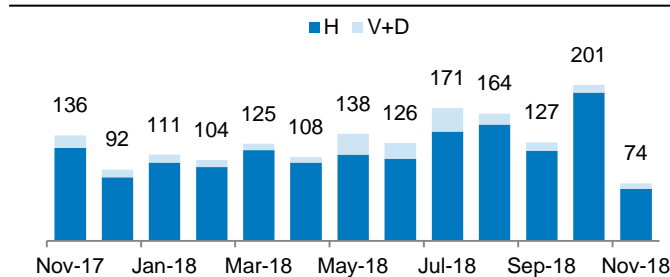
RIG COUNT



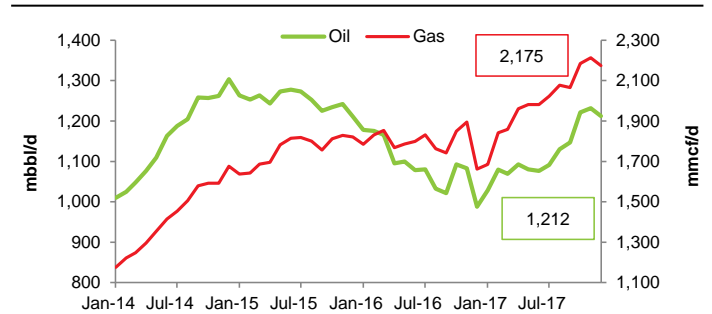
DIFFERENTIALS



PERMITTING ACTIVITY BY MONTH



GROSS PRODUCTION

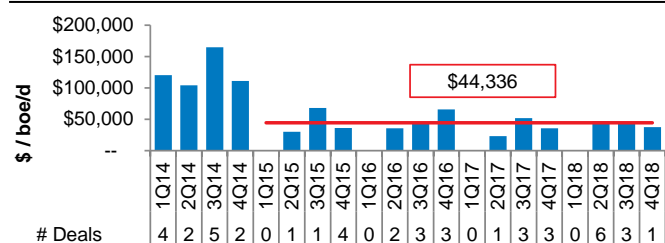


TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

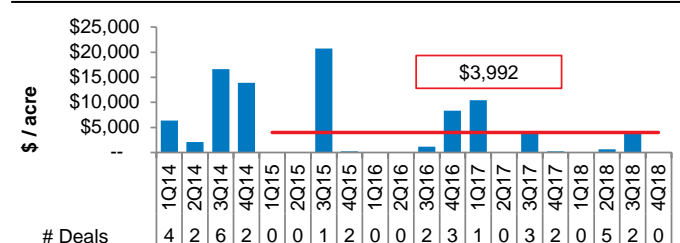
Ann'd Date	Buyer	Seller	Asset Description	Value ⁽¹⁾ (\$mm)	Proved Multiple (\$/boe)	Prod. Multiple (\$/boe/d)	Net Acres (\$/acre) ⁽²⁾
07-Nov-18	Vantage Energy Acq. Corp	QEP Resources Inc	102,800 net acres in Williston Basin	\$1,725	n.a.	\$37,500	\$16,780
31-Jul-18	Northern Oil and Gas	W Energy Partners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

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

TRANSACTION PRODUCTION MULTIPLES⁽³⁾



TRANSACTION ADJUSTED NET ACRE MULTIPLES^(3,4)



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

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- 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.



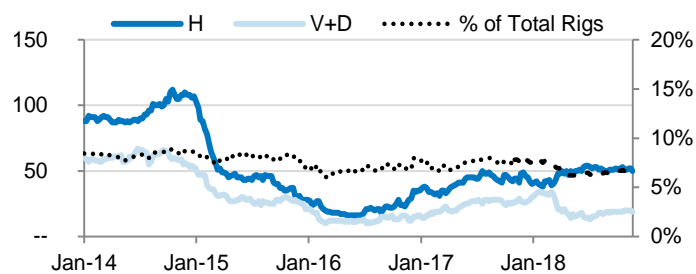
November 26, 2018

Rockies (excl. Bakken) Snapshot

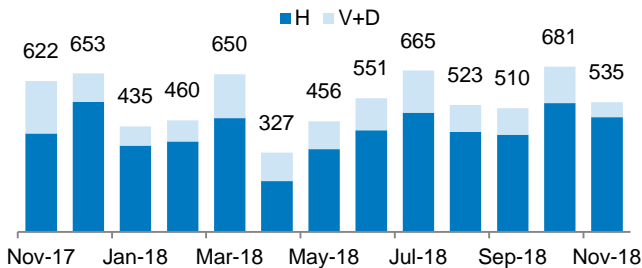
Item	Value	Wkly Change	Last Week
Rig Count	69	↓ (3)	72
Permitting Activity	72	↓ (86)	158

Item	Value	Wkly Change	Last Week
Oil Differential	(\$15.00)	↑ \$1.00	(\$16.00)
Gas Differential	(\$0.02)	↑ \$0.14	(\$0.17)

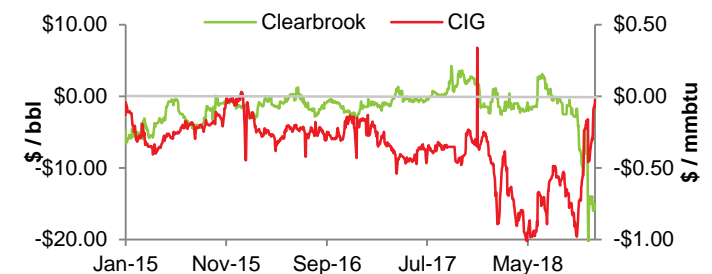
RIG COUNT



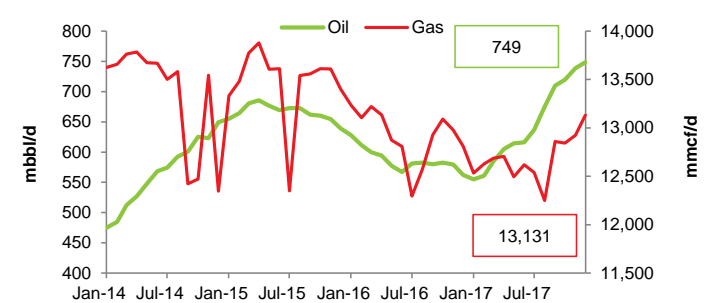
PERMITTING ACTIVITY BY MONTH



DIFFERENTIALS



GROSS PRODUCTION

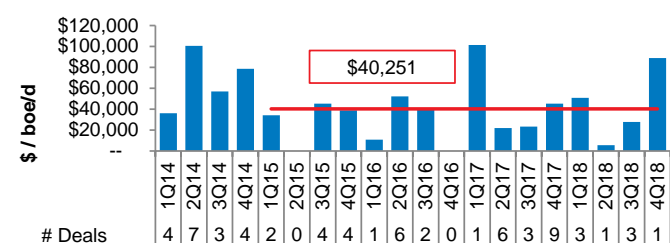


TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

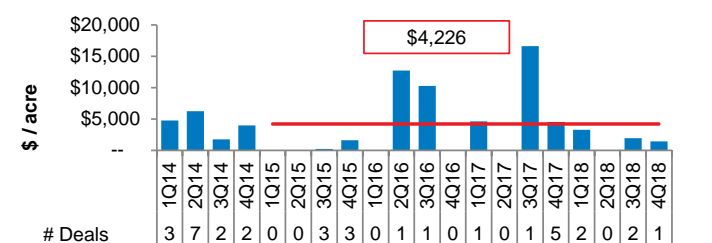
Ann'd Date	Buyer	Seller	Asset Description	Value ⁽¹⁾ (\$mm)	Proved Multiple (\$/boe)	Prod. Multiple (\$/boe/d)	Net Acres (\$/acre) ⁽²⁾	
01-Oct-18	DJR Energy LLC	EnCana	182,000 net acres in San Juan Basin	\$480	n.a.	\$88,889	\$2,637	
28-Aug-18	Vermilion Energy Inc	Massif Oil & Gas LLC	55,000 acres in Powder 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
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TRANSACTION PRODUCTION MULTIPLES⁽³⁾



TRANSACTION ADJUSTED NET ACRE MULTIPLES^(3,4)



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

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

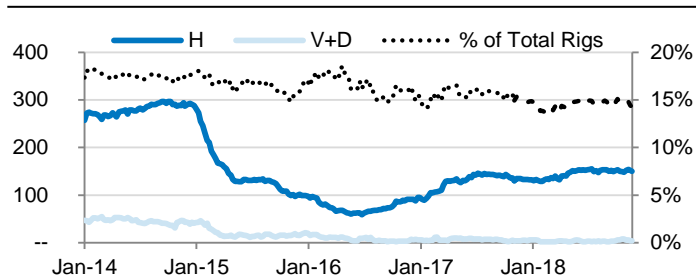


November 26, 2018

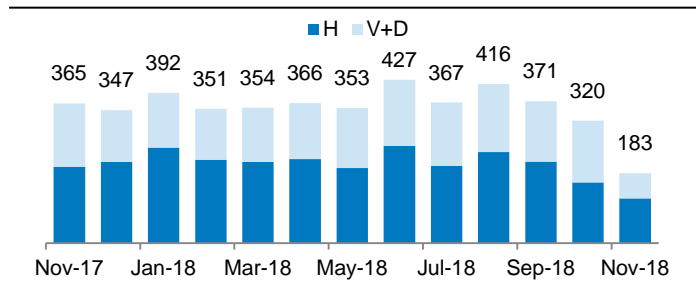
Mid-Continent Snapshot

Item	Value	Wkly Change	Last Week
Rig Count	154	↓ (2)	156
Permitting Activity	31	↓ (12)	43

RIG COUNT



PERMITTING ACTIVITY BY MONTH

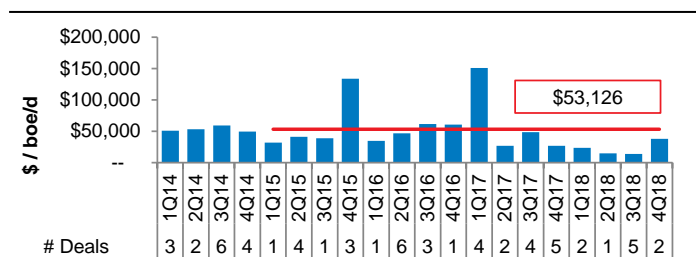


TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

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.	
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	
31-Jul-18	Undisclosed Buyer	Chaparral Energy	Non-core assets in TX and OK	\$27	n.a.	\$19,536	n.a.	
				Mean	\$432	\$3.91	\$16,699	\$2,221
				Median	\$27	\$3.91	\$17,582	\$2,221

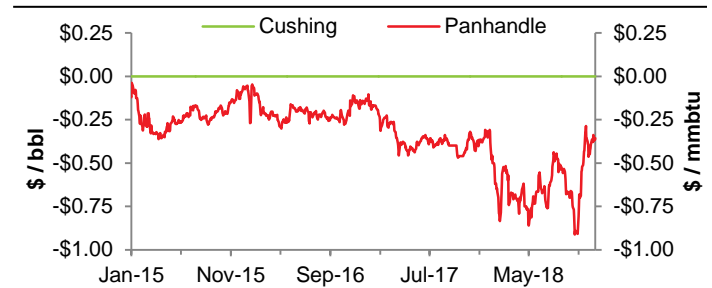
Blue = BMO provided transaction advisory services Green = BMO provided acquisition financing or related services
Purple = BMO provided both transaction advisory services and acquisition financing or related services

TRANSACTION PRODUCTION MULTIPLES⁽³⁾

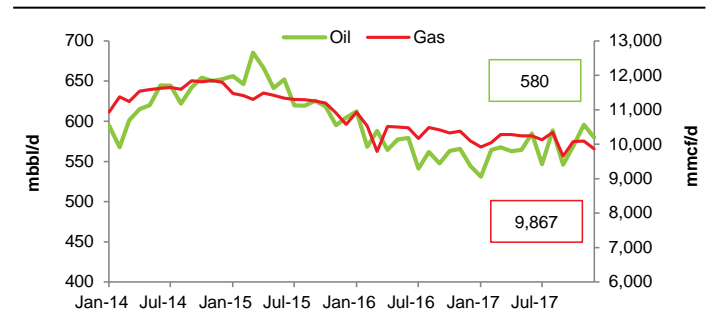


Item	Value	Wkly Change	Last Week
Oil Differential	--	█	--
Gas Differential	(\$0.36)	↓ (\$0.02)	(\$0.34)

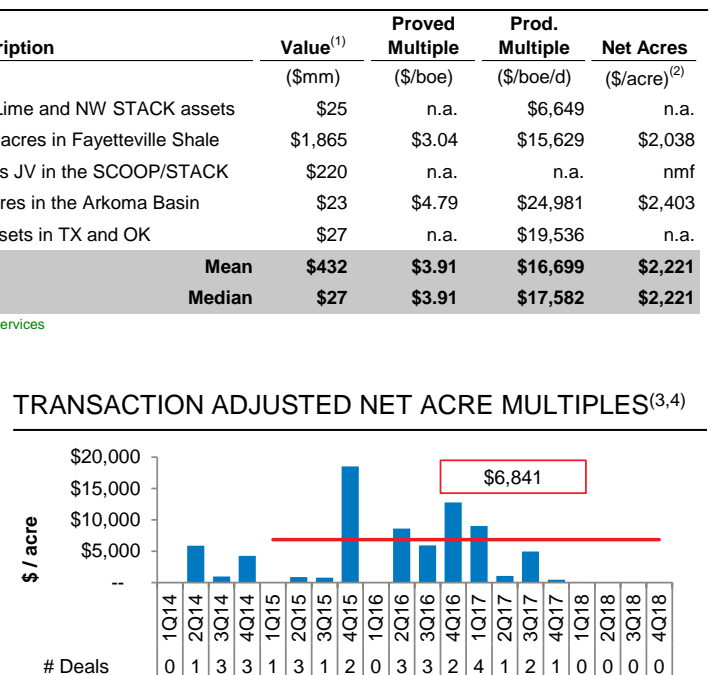
DIFFERENTIALS



GROSS PRODUCTION



TRANSACTION ADJUSTED NET ACRE MULTIPLES^(3,4)



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

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

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



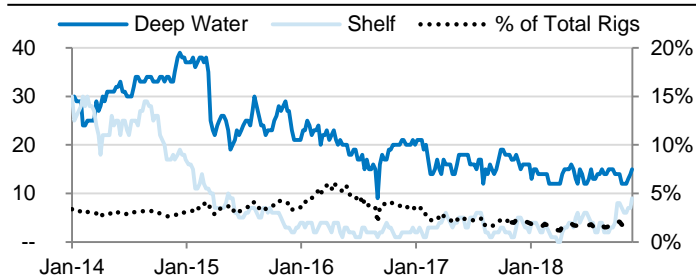
November 26, 2018

Gulf of Mexico Snapshot

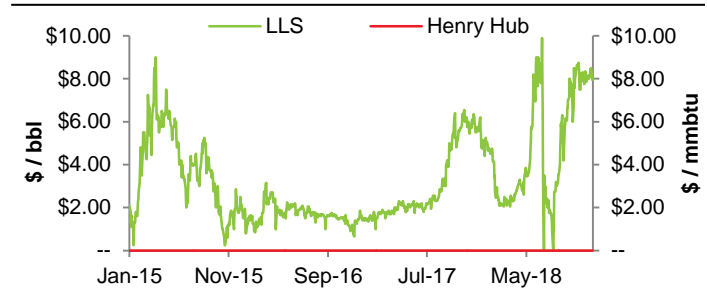
Item	Value	Wkly Change	Last Week
Rig Count	24	↑	21
Permitting Activity	0	—	0

Item	Value	Wkly Change	Last Week
Oil Differential	\$8.00	↓	\$8.25
Gas Differential	--	—	--

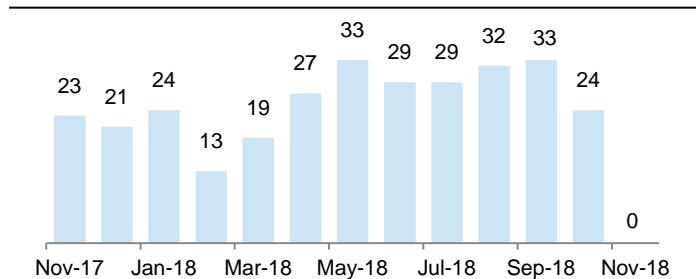
RIG COUNT



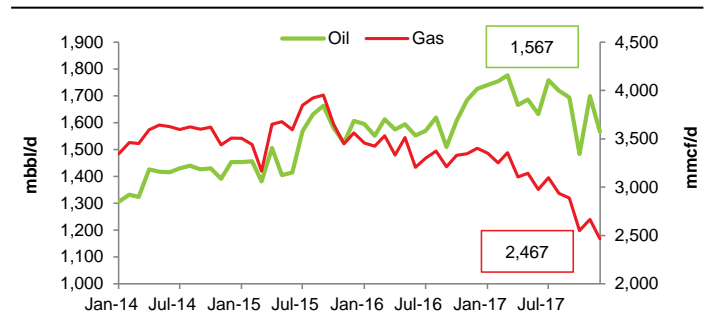
DIFFERENTIALS



PERMITTING ACTIVITY BY MONTH⁽¹⁾



GROSS PRODUCTION

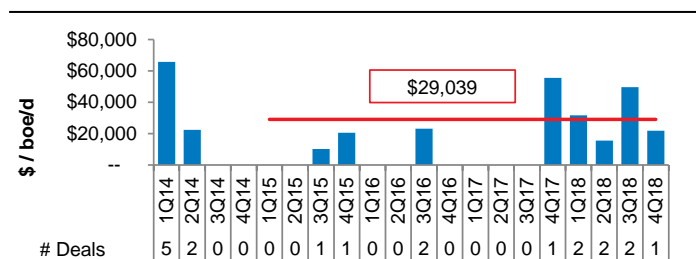


TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

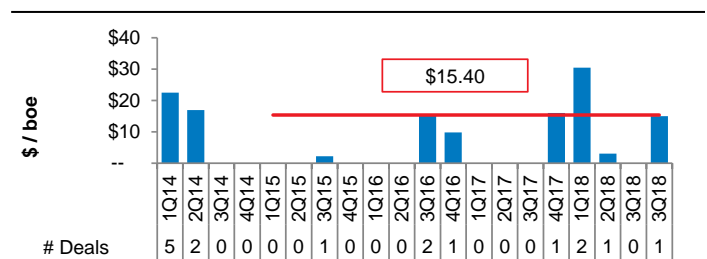
Ann'd Date	Buyer	Seller	Asset Description	Value ⁽²⁾ (\$mm)	Proved Multiple (\$/boe)	Prod. Multiple (\$/boe/d)	Net Acres (\$/acre) ⁽³⁾	
10-Oct-18	Murphy	Petrobras	Gulf of Mexico joint venture	\$900	\$15.00	\$21,951	n.a.	
04-Sep-18	Talos Energy Inc	Whistler Energy II LLC	Leases in Green Canyon federal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



November 26, 2018

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Upcoming Industry Events

November 2018

[Nov 28](#) [Houston Producers Forum Luncheon](#)

December 2018

[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](#)



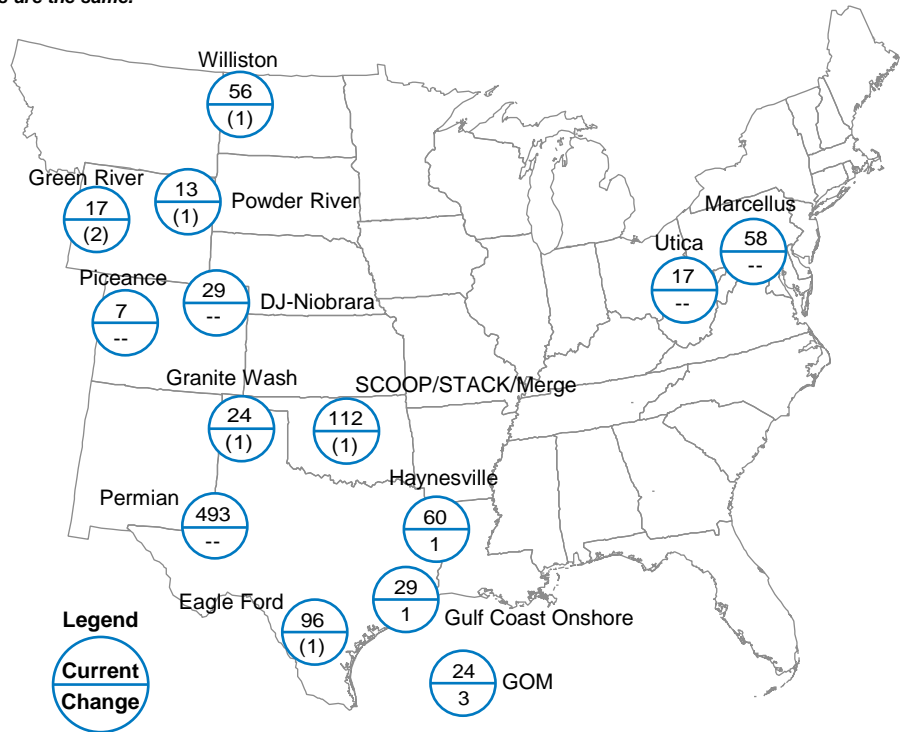
November 26, 2018

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	1,079	(3)	1,082	923
Oil	885	(3)	888	747
Gas	194	--	194	176
Miscellaneous	--	--	--	--
Directional	73	2	71	71
Horizontal	929	(10)	939	786
Vertical	77	5	72	66

Basin	This Week	Change	Last Week	Last Year
Permian	493	--	493	393
SCOOP/STACK/Merge	112	(1)	113	100
Granite Wash	24	(1)	25	16
Eagle Ford	96	(1)	97	81
Haynesville	60	1	59	54
Marcellus	58	--	58	42
Utica	17	--	17	31
Williston	56	(1)	57	47
DJ-Niobrara	29	--	29	26
Green River	17	(2)	19	22
Powder River	13	(1)	14	13
Piceance	7	--	7	8
Gulf Coast Onshore	29	1	28	17
GOM	24	3	21	22
Alaska	5	(1)	6	5
Other	39	--	39	46
Mid-Con	18	--	18	23
Rockies	3	--	3	6
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

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Source of rig count stats: Baker Hughes