



February 18, 2019

Covering the Week of February 8 to February 14, 2019

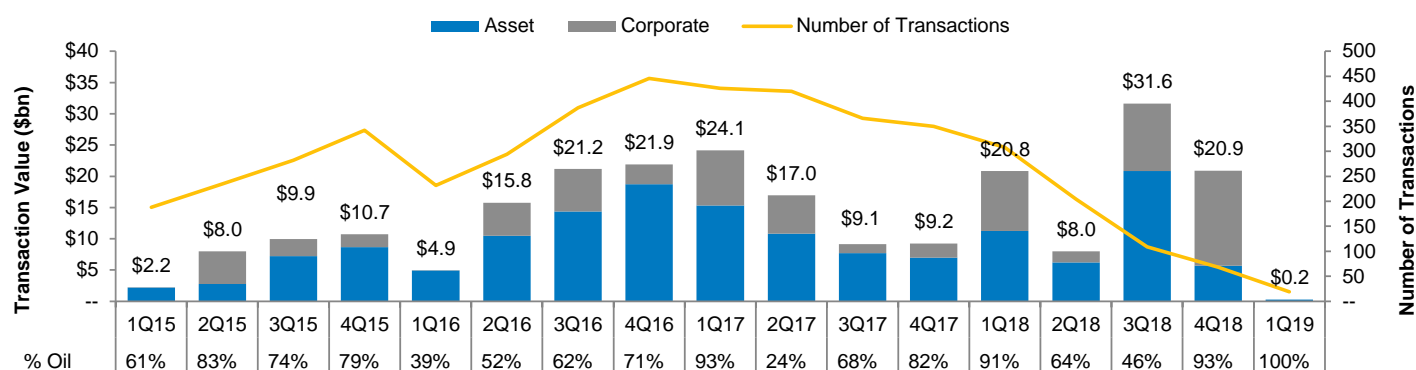
Week in Review

- Encana and Newfield's strategic combination receives shareholder approvals
- Harvest Oil & Gas Corporation announced the divestiture of its San Juan Basin position and the sale of its stock in Magnolia Oil & Gas for combined proceeds of more than \$90 million
- The BMO team enjoyed visiting with friends and colleagues last week during another eventful NAPE Summit Week, including another packed house at our annual reception at The Grove

Key Industry Indicators

Indicator	Current Value	Week's Change	% Change	Direction
Prompt Oil Price (\$/bbl)	\$54.41	\$1.77	3.4%	↑
Prompt Gas Price (\$/mmbtu)	\$2.57	\$0.02	0.7%	↑
Wkly Trans. Value (\$mm)	\$11	(\$140)	(93%)	↓
Wkly Trans. Count	1	(1)	(50%)	↓
US Rig Count	1,051	2	0.2%	↑
US Oil Prod'n (mmbbl/d)	11.9	--	--	—
US Gas Prod'n (bcf/d) ⁽¹⁾	107.4	--	--	—
US Oil Storage (mmbbl)	450.8	3.6	0.8%	↑
US Gas Storage (tcf)	1.9	(0.1)	(4.0%)	↓

Quarterly Deal Activity



All references to last week in the comments below are through Thursday

Commodities

- Oil ended last week up despite some of the recent midstream issues. It was reported that the pipeline leak near St. Louis is highly likely TransCanada's Keystone line. The extent of the problem is still unknown as well as the amount of time that Keystone may be down. In addition, Phillips 66 Wood River refinery is also down and could be out for some time. The near-term contract closed up \$1.77, or 3.4%, at \$54.41
- Natural gas ended last week up as the CFTC positioning data showed a large long liquidation in April and May 2019 futures occurred. There are still ~30 days of winter left. The near-term contract closed up \$0.02, or 0.7%, at \$2.57

Equity Markets

- S&P E&P⁽²⁾ outperformed last week 4.9% vs. SPX⁽²⁾ 1.5%
- The major U.S. equity indexes finished up last week
- Consumer discretionary, consumer staples, financials, health care, industrials, materials, real estate, tech all finished up. Industrials performed the best, up 2.4%

Debt Markets

- Four issuers priced five tranches for \$2.1 billion in proceeds
- U.S. high yield funds reported an inflow of \$1 billion
- ETFs reported an inflow of \$449 million, while mutual funds reported an inflow of \$278 million
- High yield index yield was 6.76%; high yield energy index yield was 8.03%

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 November 2018.

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

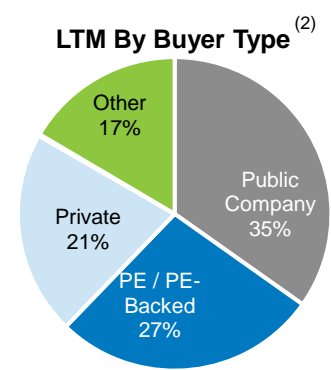
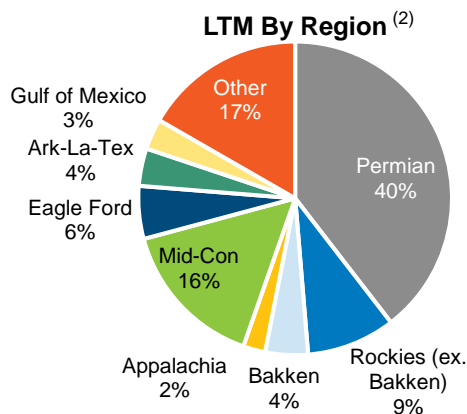
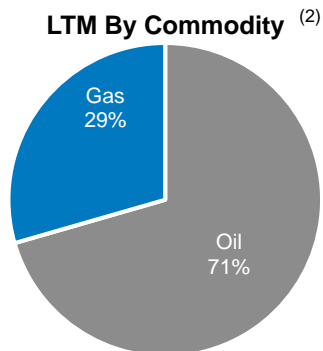


February 18, 2019

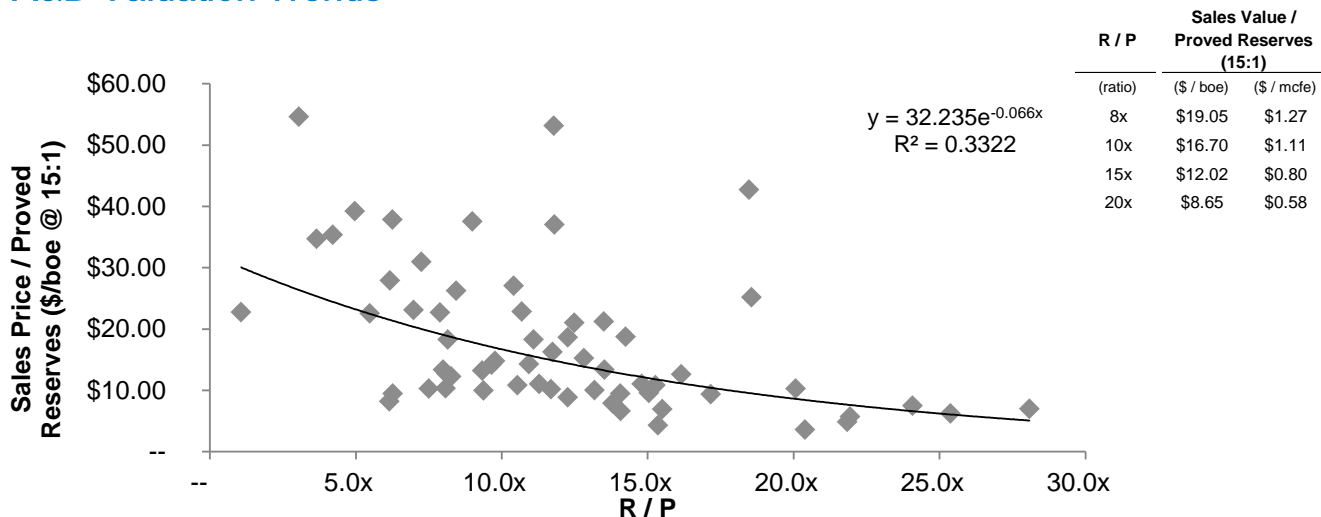
The 10 Most Recent Asset Transactions Over \$20 Million

Ann'd Date	Buyer	Seller	Area	Asset Description	Value ⁽¹⁾ (\$mm)	Proved Multiple (\$/boe)	Prod. Multiple (\$/boe/d)	Net Acres (\$/acre)
07-Feb-19	Kimbell Royalty Partners	EnCap Investments LP	Multi-Region	12,200 net royalty acres across the U.S.	\$151	n.a.	\$94,563	nmf
16-Jan-19	Talos Energy Inc	Samson Energy Co LLC	Gulf of Mexico	Non-op Gulf of Mexico working interest	\$30	\$13.45	\$17,939	n.a.
08-Jan-19	Undisclosed Buyer	MCM Energy Partners LLC	Permian	Midland Basin assets	\$20	n.a.	n.a.	n.a.
21-Dec-18	Pantheon Resources Plc	Great Bear Petroleum LLC	Alaska	250,000 leased acres in the North Slope	\$49	n.a.	n.a.	\$196
19-Dec-18	Comstock	Shelby Shale LLC	Ark-La-Tex	6,023 net acres in Haynesville	\$21	n.a.	n.a.	\$3,404
17-Dec-18	Alliance Resource Partners	Dale Operating Co	Multi-Region	42,000 net royalty acres	\$176	n.a.	n.a.	nmf
11-Dec-18	Undisclosed Buyer	Riviera Resources Inc	Mid-Continent	37,000 net acres in the Arkoma Basin	\$68	n.a.	\$17,000	\$1,838
21-Nov-18	Kimbell Royalty Partners	Undisclosed Seller	Multi-Region	16,700 net royalty acres	\$108	n.a.	\$90,588	nmf
19-Nov-18	Lonestar Resources Inc	Sabine Oil & Gas Corp	Eagle Ford	2,706 net acres in Eagle Ford	\$39	\$2.98	\$48,375	\$14,302
19-Nov-18	Aethon III	QEP Resources Inc	Ark-La-Tex	49,700 net acres in Haynesville	\$735	\$4.60	\$14,848	\$14,789

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



A&D Valuation Trends⁽³⁾



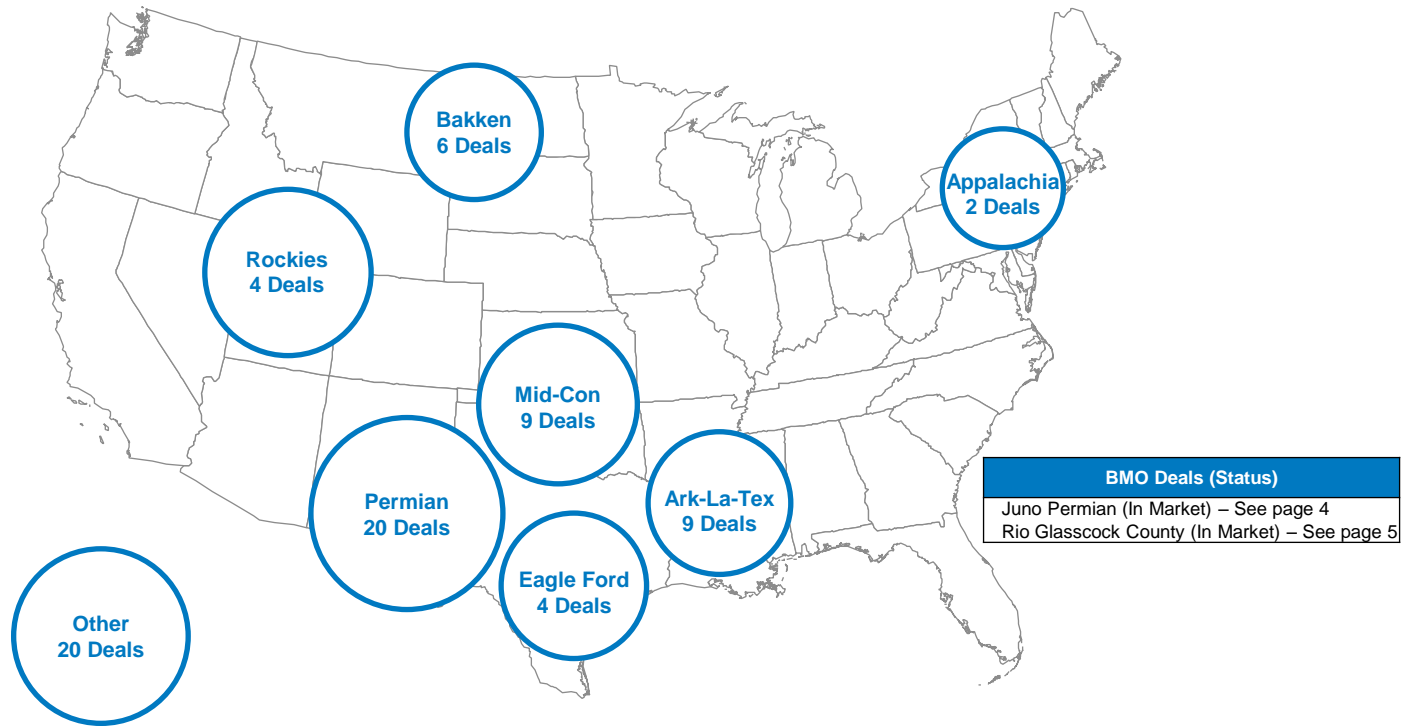
2 Source: BMO Transaction Database, Baker Hughes, BMO Commodity Products Group, Bloomberg, PLS

1. Represents total enterprise value.
2. Calculated as percentage of total LTM transaction count (number of transactions, not dollar value).
3. 62 transactions from January 2015 to 2019 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.



February 18, 2019

Select Significant Deals on the Market



A&D Headlines

- [Encana and Newfield's Strategic Combination Receives Shareholder Approvals](#)
- [Former EnerVest Affiliate Sells Magnolia Oil & Gas Stake, Exits San Juan Basin](#)

Industry Headlines

- [Iran Oil Industry Faces Bleak Outlook 40 Years After Revolution](#)
- [BLM Makes Record-Breaking \\$1 Billion From O&G Lease Sales](#)
- [Trump Raises Fracking, Abortion in Meeting with Cuomo](#)
- [U.S. Expects Record Domestic Oil Production in 2019, 2020](#)
- [Pipeline Fight Drags On, Tempting Intervention From Trump](#)
- [Is A Natural Gas Cartel Forming?](#)
- [OPEC Chief Urges Producers to Meet Pledges to Cut Oil Output](#)

(Click headline to link to the full article)



February 18, 2019

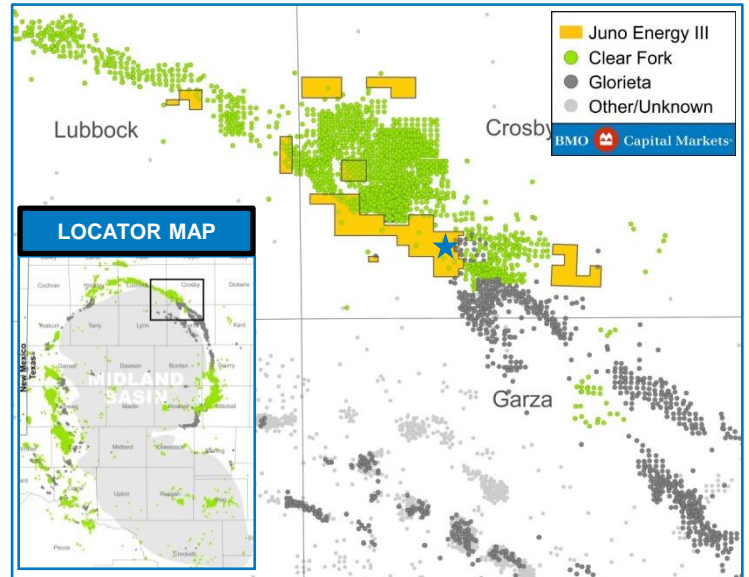
Currently on the Market from BMO: Juno Permian Divestiture

ASSET OVERVIEW

- Long-life, shallow decline oil assets located in the prolific Clear Fork Trend of the Permian Basin
- Largely contiguous 10,250 net acre position located in the Hoople Field in Crosby and Lubbock counties, Texas
 - 100% operated with high WI (100%) and NRI (>75%)
 - Favorable leasehold position with little-to-no drilling obligations until 2021; >50% of acreage position under two leases from one landowner
- Current production of ~300 net bopd (100% oil) with significant remaining drilling inventory consisting of ~200+ low-risk Clear Fork locations
- Asset provides substantial, economic running room for organic and acquisitive growth
 - Existing Clear Fork acreage only ~15% developed based on 10-acre development plan
 - Additional upside through 5-acre development, secondary recovery and Glorieta development as demonstrated in offsetting acreage; CO₂ and Wolfcamp potential
 - Multiple bolt-on acquisition opportunities and new leasing opportunities
- Acreage position largely delineated through existing and offset development; full-scale development plan in place with drill-ready infrastructure

PROCESS OVERVIEW

- VDR available late February
- Contact Chelsea Neville at juno.permian@bmo.com or 713-546-9703 for a Confidentiality Agreement, access to the VDR, and/or to request a data room presentation



ASSET HIGHLIGHTS

- | | |
|--|---|
| Large, Contiguous Acreage Position in the Prolific Clear Fork Oil Trend | <ul style="list-style-type: none"> • High quality anchor asset in the heart of the Midland Basin's Eastern Shelf with multiple stacked pay potential <ul style="list-style-type: none"> ■ Acreage situated in the Hoople Field, one of the most active Clear Fork development areas with >1,000 Clear Fork producers drilled in the last 10 years ■ Majority of Juno's acreage is situated in the core of the field with vertical offset Clear Fork EURs of ~60 MBo • Primary recovery economics provide attractive IRRs with low development costs <ul style="list-style-type: none"> ■ Secondary recovery provides an incremental increase of 150% of primary EUR based on analog fields • Clear Fork A STOOIP of up to 13 mmbo per section based on core and log analysis |
| Increased Oil Cuts and Improved Economics from Enhanced Completions | <ul style="list-style-type: none"> • Targeted, optimized fracs providing robust EURs and lower WOR vs. offset results <ul style="list-style-type: none"> ■ Fracture growth limited to ~40 feet from perf ■ Oil cuts have improved by three-fold using selective completions • Prior generation completions took the entirety of the pay zone and pumped excessive volumes, thereby increasing communication with higher WOR sand bodies |
| Asset Ready for Full-Scale Development | <ul style="list-style-type: none"> • Significant inventory of 200+ economic Clear Fork locations remaining (at 10-acre spacing) • Fast cycle times (~4-5 days spud-to-spud) and favorable land position provides the ability to accelerate development within the first year <ul style="list-style-type: none"> ■ Juno's predecessor in the Hoople Field grew production by over 25x in less than 3 years • Inexpensive access to water sources and disposal provides for low-cost waterflood and frac'ing operations • Significant investments in infrastructure, including electrical, roads, pipelines, and facilities • No deferred maintenance or P&A issues |
| Substantial Unquantified Upside | <ul style="list-style-type: none"> • Near-term development potential by exploiting the Glorieta across Juno's acreage position <ul style="list-style-type: none"> ■ Acreage position on trend with offset Glorieta development ■ Potential development opportunity to co-mingle Clear Fork and Glorieta production, yielding twice the reserves with little incremental D&C capex • Additional reserve recovery from waterflood operations and 5-acre development; future tertiary recovery • Offset operator testing horizontal Wolfcamp potential in the area |

Source: Juno Permian Divestiture announcement



February 18, 2019

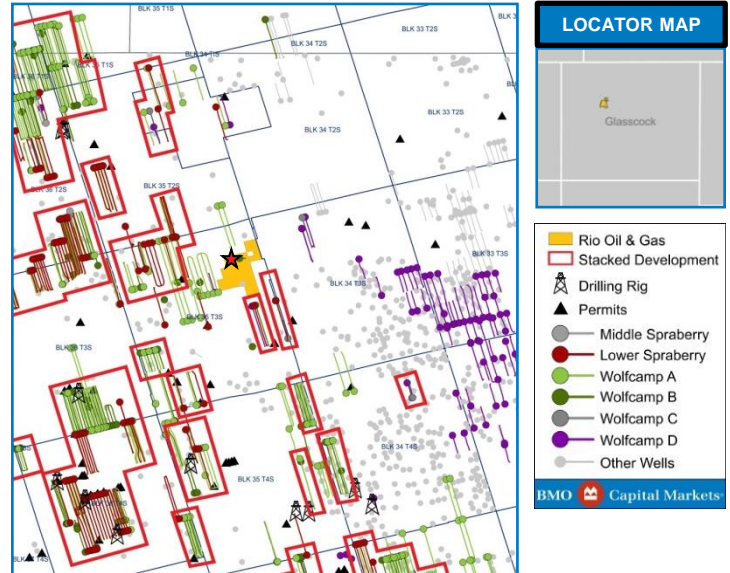
Currently on the Market from BMO: Rio Oil & Gas II Glasscock County Divestiture

ASSET OVERVIEW

- Opportunity to acquire highly economic and contiguous 1,064 net acre (1,645 gross acre) position in the Midland Basin located in west-central Glasscock County, Texas
 - Assets provide high degree of operational control with 98% operated, 74% HBP, and 67% average WI
- Current net production of ~54 boe/d from ten active vertical wells holds the majority of acreage
- Proven development opportunities targeting the Lower Spraberry, Wolfcamp A, and Wolfcamp D formations
- Active development by Parsley, Oxy, Diamondback, and others highlights robust returns and de-risked drilling locations
- Continued improvement in well performance driven by completion optimization

PROCESS OVERVIEW

- VDR available late February / early March 2019
- Contact Chelsea Neville (rio.glasscock@bmo.com or 713-546-9703) for a Confidentiality Agreement, access to the VDR, and/or to request a data room presentation



ASSET HIGHLIGHTS

- | | |
|---|---|
| Active Development By Offset Operators Producing Robust Returns | <ul style="list-style-type: none"> • Outstanding position in one of the most active basins in the U.S. with 181 rigs in the Midland Basin and 14 in Glasscock County • ~3,500 feet of porous, brittle, hydrocarbon rich pay available from the top of the Spraberry to the base of the Wolfcamp • Active offsetting development in the Lower Spraberry, Wolfcamp A, Wolfcamp B, and Wolfcamp D by Parsley, OXY, Crownquest, Cinnabar, Encana, SM, Callon, Diamondback, Hunt, and others <ul style="list-style-type: none"> ■ Parsley is actively developing with strong results its directly offsetting Calverley assets in the LS, WCA, and WCB <ul style="list-style-type: none"> – Parsley brought 17 wells online in 2018; outperformed historical with peak rates up to 2,000 boepd (84% oil) – Parsley acquired Calverley position through BTA acquisition (\$40,000+/net acre) ■ OXY recently completed five wells (west of Rio) targeting the WCA and has two additional permits • IP and EURs continue to increase through optimization of completion techniques: predominantly slickwater fracs with proppant loading at ~1,900 lbs/ft • Over 30 potential stacked locations with additional unquantified upside in the Wolfcamp D |
| Operated Asset Set Up For Efficient, Stacked-Pay, Long Lateral Development | <ul style="list-style-type: none"> • Contiguous 1,064 net acres in west-central Glasscock County • 75% effective (8/8ths) net revenue interest • 74% of net acres HBP from vertical producers with remaining acreage in primary term with 2+ years remaining • Leasehold primed for efficient cube development with 100% of locations expected to support 7,500'+ laterals; 100% of acreage owns Spraberry through WCA rights and select ownership of WCD • No long term oil and gas sales dedications offer the purchaser marketing flexibility |
| Full Area Exit | <ul style="list-style-type: none"> • Full area exit for Rio • Rio's investments have been focused on assembling the position, perfecting subsurface interpretation, and readying the asset for full-field development |

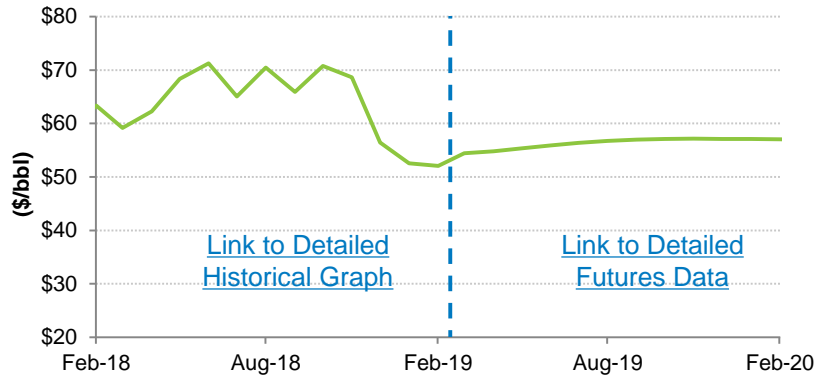
Source: Rio Oil and Gas II Glasscock County Divestiture announcement



February 18, 2019

Commodity Prices

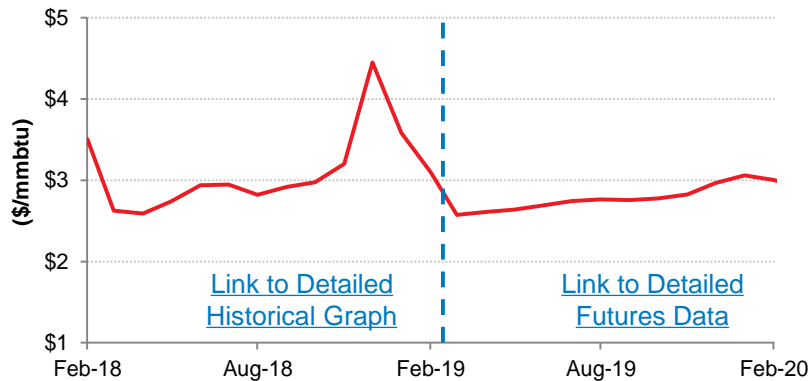
WTI OIL (HISTORICAL / FORECAST)



NYMEX WTI Futures as of 14-Feb-19 Close (\$/bbl)

Period ⁽¹⁾	Current	Last Wk.	6 Mo. Ago	1 Yr. Ago
12 Mo. Strip	\$56.33	\$54.48	\$65.09	\$54.48
2019	\$56.19	\$54.30	\$63.96	\$55.13
2020	\$56.50	\$54.99	\$60.74	\$52.47
2021	\$55.12	\$53.84	\$58.20	\$51.02
2022	\$54.17	\$53.01	\$56.52	\$50.41
2023	\$53.78	\$52.82	\$55.61	\$50.32

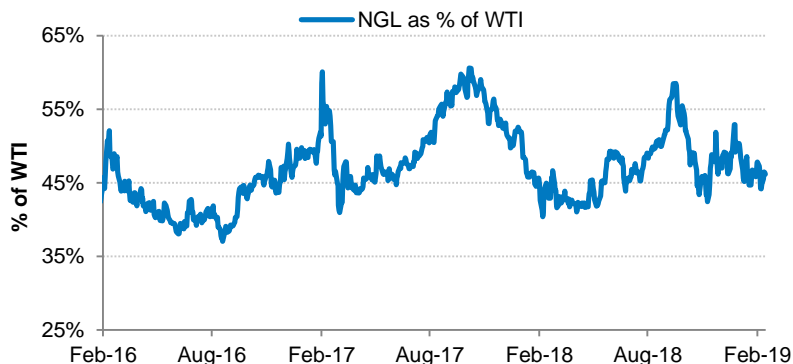
HENRY HUB NATURAL GAS (HISTORICAL / FORECAST)



NYMEX Gas Futures as of 14-Feb-19 Close (\$/mmbtu)

Period ⁽¹⁾	Current	Last Wk.	6 Mo. Ago	1 Yr. Ago
12 Mo. Strip	\$2.78	\$2.75	\$2.91	\$2.77
2019	\$2.73	\$2.70	\$2.84	\$2.77
2020	\$2.73	\$2.70	\$2.67	\$2.77
2021	\$2.65	\$2.63	\$2.61	\$2.81
2022	\$2.84	\$2.81	\$2.75	\$2.95
2023	\$2.84	\$2.81	\$2.75	\$2.95

NGL PRICING⁽²⁾



Historical Prices as of 14-Feb-19 Close (\$/gal)

NGLs	Current	Last Wk.	6 Mo. Ago	1 Yr. Ago
Ethane	\$0.30	\$0.30	\$0.39	\$0.24
Propane	\$0.66	\$0.62	\$0.95	\$0.85
Butane	\$0.80	\$0.71	\$1.00	\$0.77
Iso-butane	\$0.92	\$0.78	\$1.12	\$0.95
Pentane+	\$1.16	\$1.07	\$1.51	\$1.32

Source: BMO Commodity Products Group, Bloomberg, FactSet

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

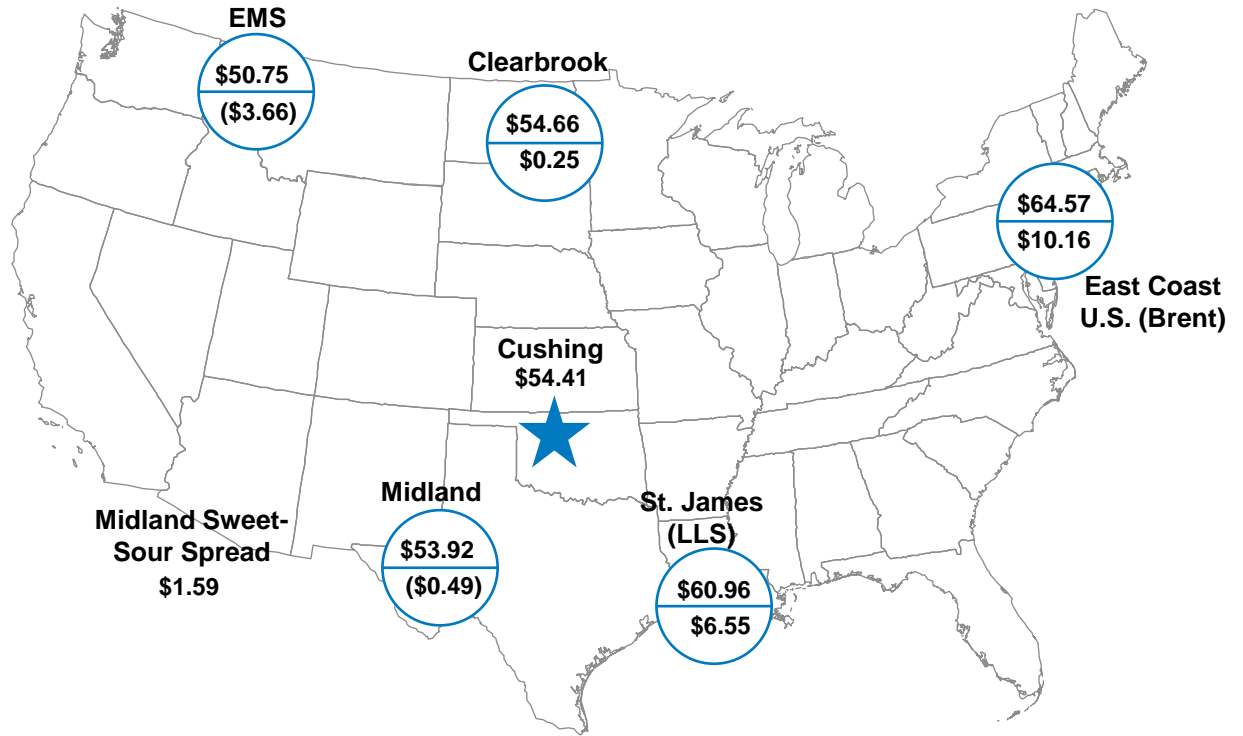


February 18, 2019

Commodity Prices (cont'd)

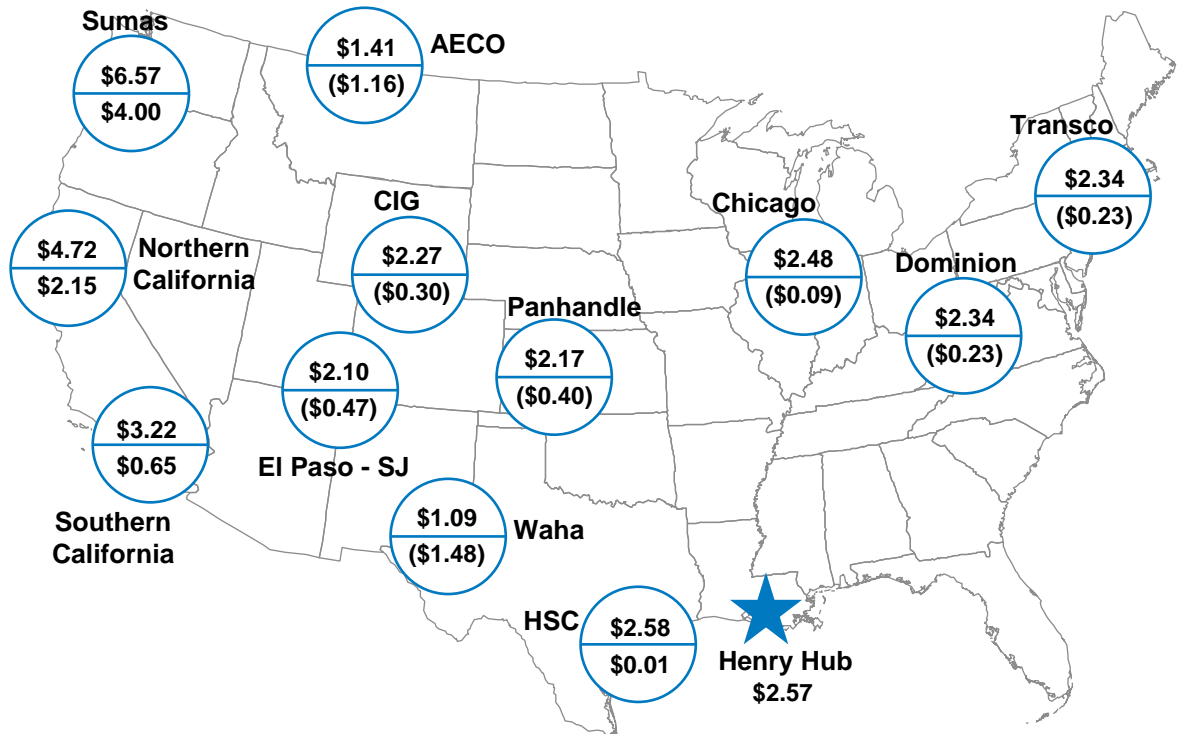
OIL PRICING & DIFFERENTIALS TO CUSHING WTI (\$ / BBL) – AS OF 14-FEB-19

Legend



NATURAL GAS PRICING & DIFFERENTIALS TO HENRY HUB (\$ / MMBTU) – AS OF 14-FEB-19

Legend



Source: BMO Commodity Products Group, Bloomberg

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

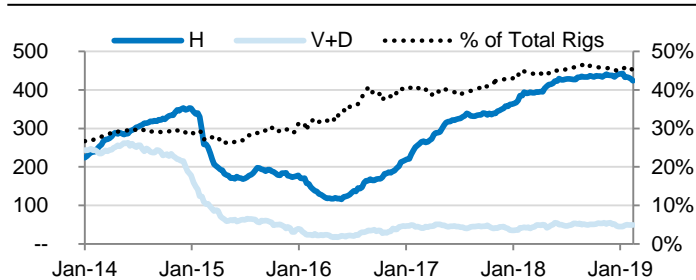


February 18, 2019

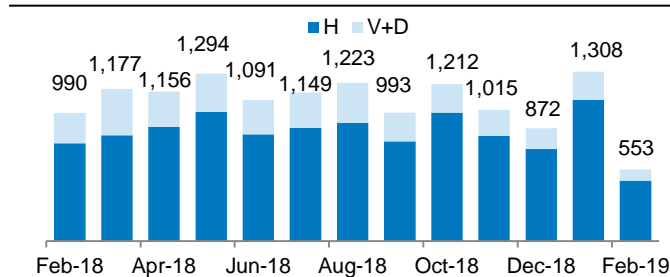
Permian Snapshot

Item	Value	Wkly Change	Last Week	Item	Value	Wkly Change	Last Week		
Rig Count	473	↓	(5)	478	Oil Differential	\$1.00	↑	\$1.60	(\$0.60)
Permitting Activity	227	↓	(99)	326	Gas Differential	(\$1.48)	↓	(\$0.07)	(\$1.41)

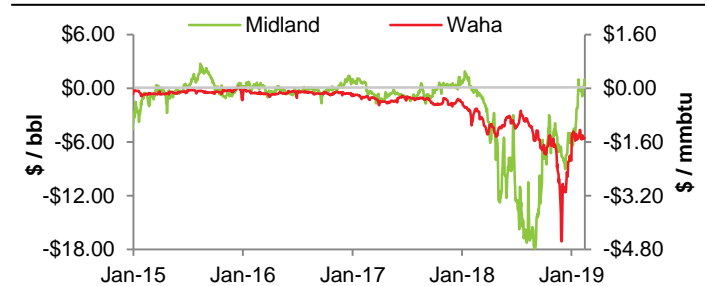
RIG COUNT



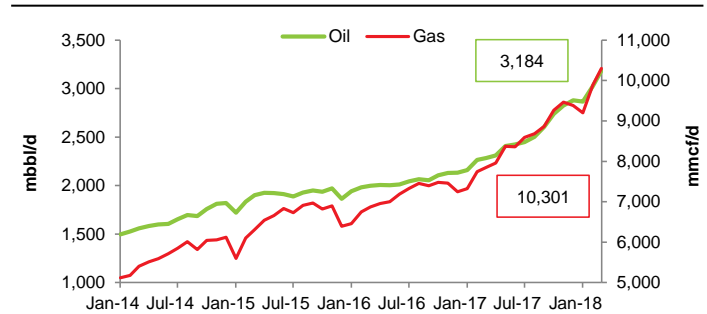
PERMITTING ACTIVITY BY MONTH



DIFFERENTIALS



GROSS PRODUCTION

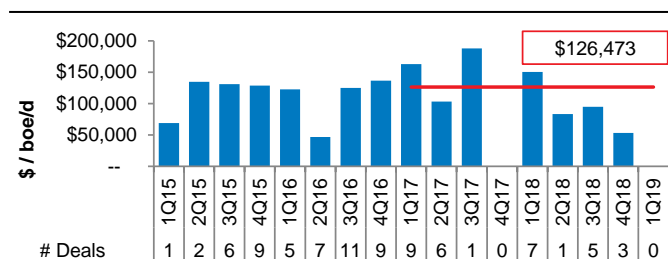


TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

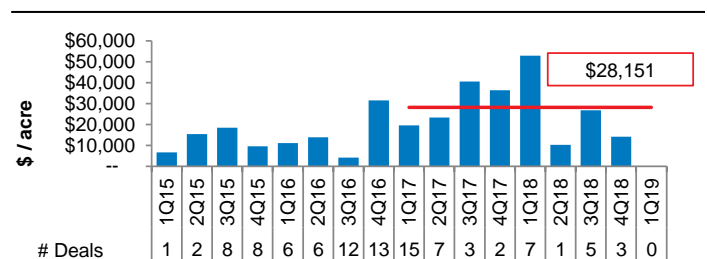
Ann'd Date	Buyer	Seller	Asset Description	Value ⁽¹⁾ (\$mm)	Proved Multiple (\$/boe)	Prod. Multiple (\$/boe/d)	Net Acres (\$/acre) ⁽²⁾
08-Jan-19	Undisclosed Buyer	MCM Energy Partners LLC	Midland Basin assets	\$20	n.a.	n.a.	n.a.
06-Nov-18	Diamondback Energy	ExL Pet.; EnergyQuest	3,646 net acres in Midland Basin	\$313	n.a.	\$89,286	\$85,710
05-Nov-18	Centennial Resource Dev.	Undisclosed Seller	820 net acres in Delaware Basin	\$26	n.a.	n.a.	\$31,707
01-Nov-18	Undisclosed Buyer	Parsley Energy LP	11,850 net acres in Midland Basin	\$170	n.a.	\$141,667	\$14,346
30-Sep-18	Energen	Undisclosed Seller	1,700 net acres in Delaware Basin	\$38	n.a.	n.a.	\$22,235
			Mean	\$113	n.a.	\$115,476	\$38,500
			Median	\$38	n.a.	\$115,476	\$26,971

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-17. Calculated as the weighted average of each quarter's transactions.
- Production valued at \$45,000/boepd in 2014, \$30,000/boepd in 2015, \$35,000/boepd in 2016 & 2017, and \$40,000/boepd in 2018 & 2019.



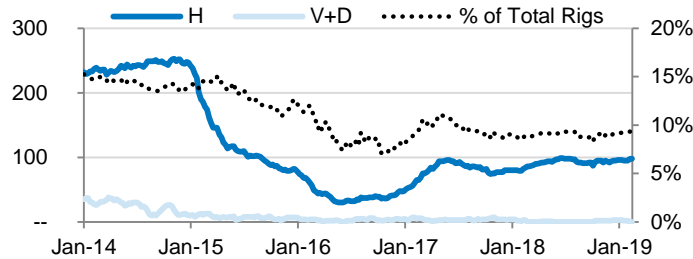
February 18, 2019

Eagle Ford Snapshot

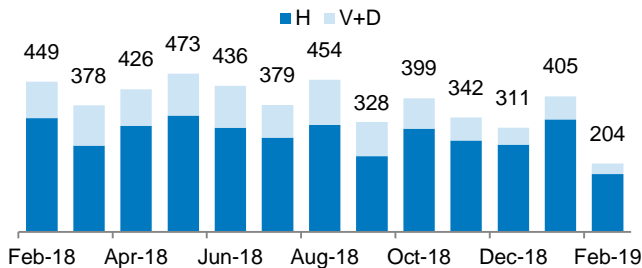
Item	Value	Wkly Change	Last Week
Rig Count	98	█ --	98
Permitting Activity	101	█ (2)	103

Item	Value	Wkly Change	Last Week
Oil Differential	\$9.10	█ \$1.10	\$8.00
Gas Differential	\$0.00	█ (\$0.02)	\$0.02

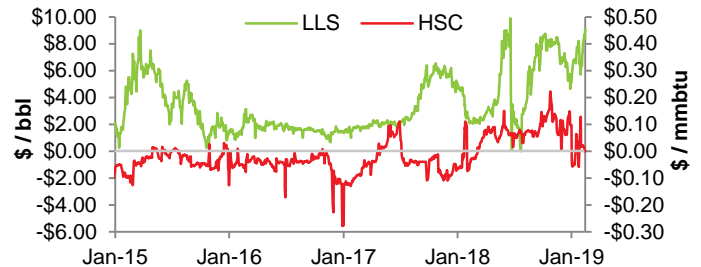
RIG COUNT



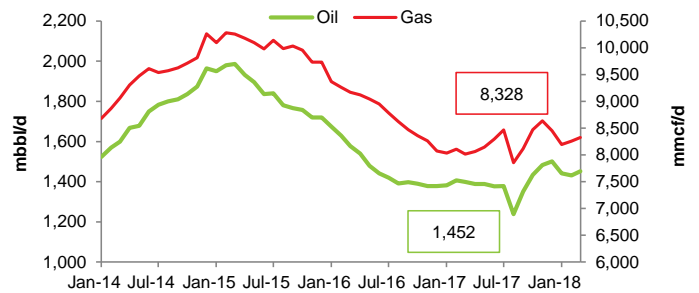
PERMITTING ACTIVITY BY MONTH



DIFFERENTIALS



GROSS PRODUCTION

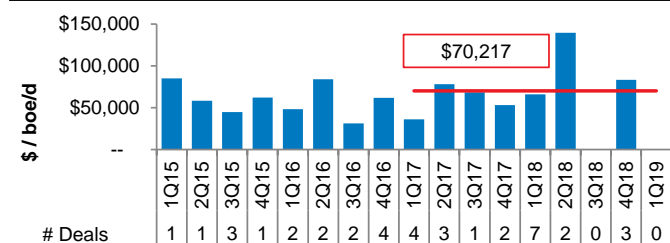


TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

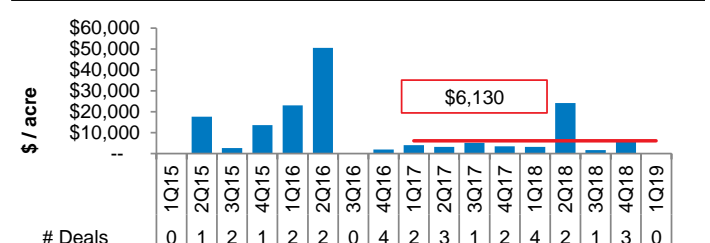
Ann'd Date	Buyer	Seller	Asset Description	Value ⁽¹⁾ (\$mm)	Proved Multiple (\$/boe)	Prod. Multiple (\$/boe/d)	Net Acres (\$/acre) ⁽²⁾
19-Nov-18	Lonestar Resources Inc	Sabine Oil & Gas Corp	2,706 net acres in Eagle Ford	\$39	\$2.98	\$48,375	\$14,302
20-Sep-18	WildHorse	Undisclosed Seller	20,305 net Eagle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

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TRANSACTION PRODUCTION MULTIPLES⁽³⁾



TRANSACTION ADJUSTED NET ACRE MULTIPLES^(3,4)



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

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2. \$/acre multiple not adjusted for value associated with production.
3. Red line denotes average since 01-Jan-17. Calculated as the weighted average of each quarter's transactions.
4. Production valued at \$45,000/boepd in 2014, \$30,000/boepd in 2015, \$35,000/boepd in 2016 & 2017, and \$40,000/boepd in 2018 & 2019.



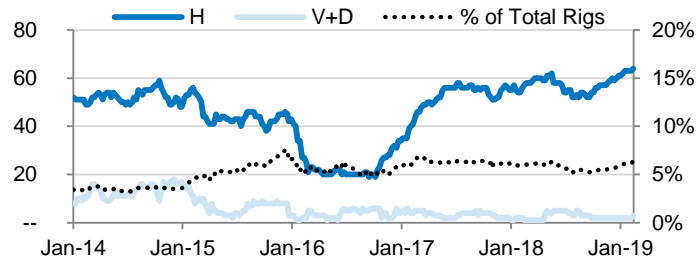
February 18, 2019

Ark-La-Tex Snapshot

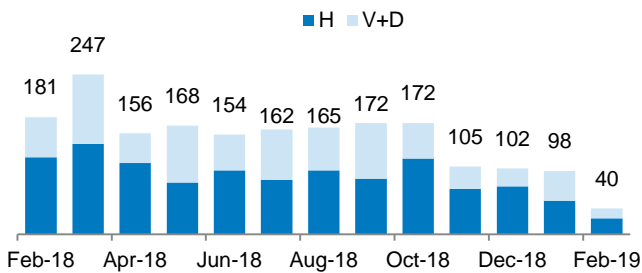
Item	Value	Wkly Change	Last Week
Rig Count	67	↑	65
Permitting Activity	22	↑	18

Item	Value	Wkly Change	Last Week
Oil Differential	\$9.10	↑	\$8.00
Gas Differential	--	▬	--

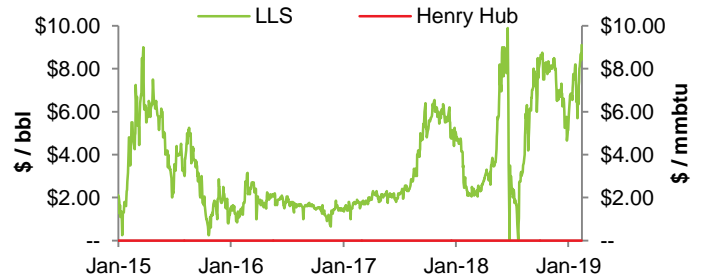
RIG COUNT



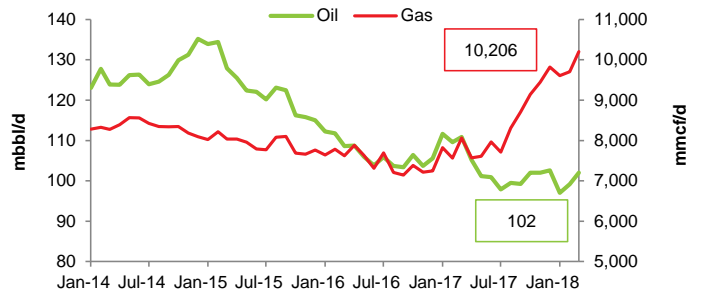
PERMITTING ACTIVITY BY MONTH



DIFFERENTIALS



GROSS PRODUCTION

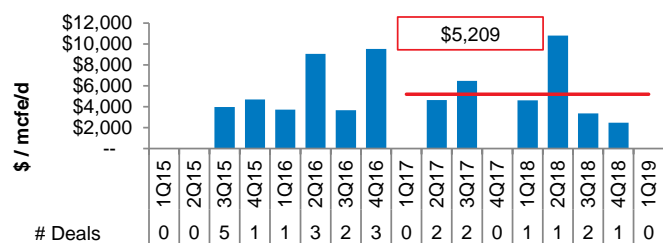


TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

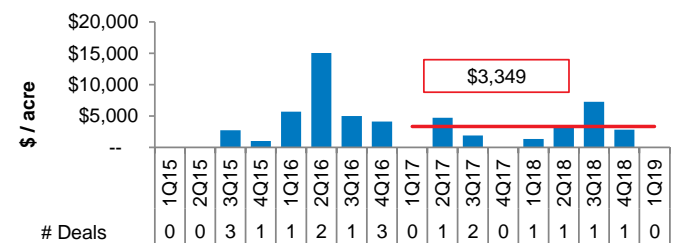
Ann'd Date	Buyer	Seller	Asset Description	Value ⁽¹⁾ (\$mm)	Proved Multiple (\$/mcf)	Prod. Multiple (\$/mcf/d)	Net Acres (\$/acre) ⁽²⁾
19-Dec-18	Comstock	Shelby Shale LLC	6,023 net acres in Haynesville	\$21	n.a.	n.a.	\$3,404
19-Nov-18	Aethon III	QEP Resources Inc	49,700 net acres in Haynesville	\$735	\$0.77	\$2,475	\$14,789
05-Sep-18	Viking Energy Group	Multiple Sellers	Texas and Louisiana assets	\$100	n.a.	n.a.	n.a.
05-Sep-18	Equinor	Texegy LLC	60,000 net acres in Austin Chalk	\$75	n.a.	n.a.	\$1,250
06-Aug-18	Mission Creek Resources	Bonanza Creek Energy Inc	11,132 net acres in the Cotton Valley	\$117	\$1.69	\$6,500	\$10,510
			Mean	\$210	\$1.23	\$4,487	\$7,488
			Median	\$100	\$1.23	\$4,487	\$6,957

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-17. Calculated as the weighted average of each quarter's transactions.
- Production valued at \$3,000/mcfepd in 2014, and \$2,000/mcfepd in 2015, 2016, 2017, 2018, and 2019.



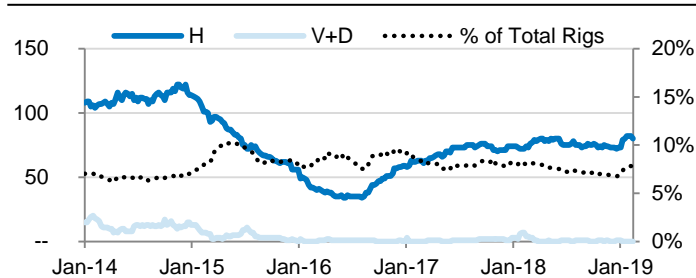
February 18, 2019

Appalachia Snapshot

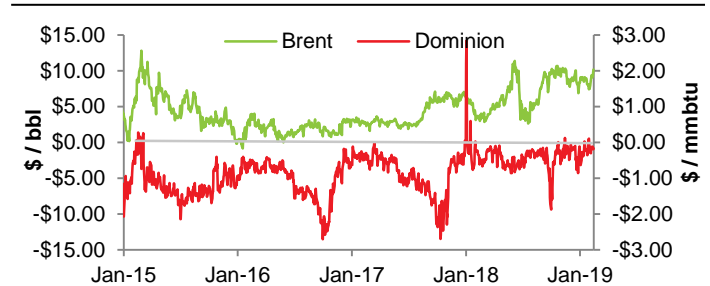
Item	Value	Wkly Change	Last Week
Rig Count	80	↓ (2)	82
Permitting Activity	43	↓ (67)	110

Item	Value	Wkly Change	Last Week
Oil Differential	\$10.16	↑ \$1.17	\$8.99
Gas Differential	(\$0.19)	↓ (\$0.06)	(\$0.13)

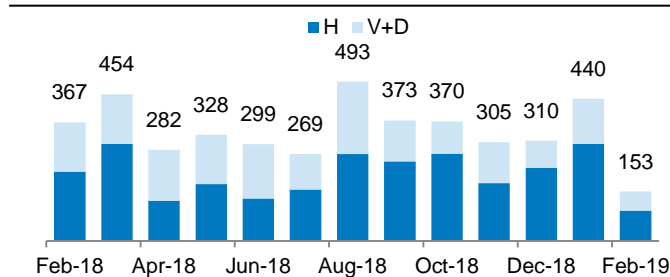
RIG COUNT



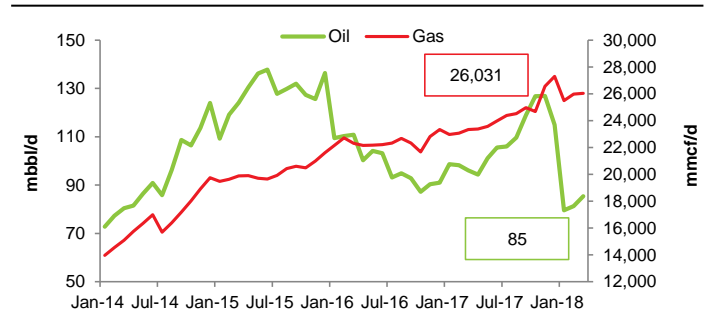
DIFFERENTIALS



PERMITTING ACTIVITY BY MONTH



GROSS PRODUCTION

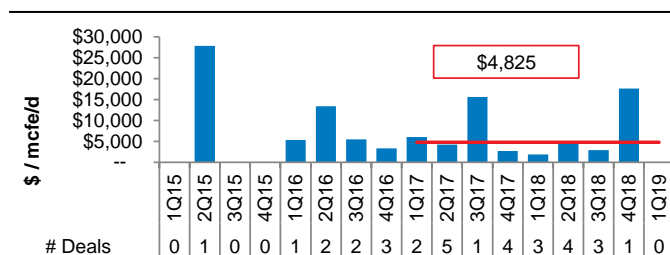


TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

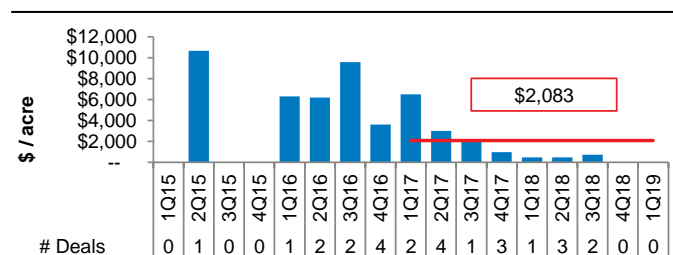
Ann'd Date	Buyer	Seller	Asset Description	Value ⁽¹⁾	Proved Multiple	Prod. Multiple	Net Acres	
				(\$mm)	(\$/mcf)	(\$/mcf/d)	(\$/acre) ⁽²⁾	
15-Oct-18	Undisclosed Buyer	Range Resources Corp	Overriding royalty interests in Appalachia	\$300	n.a.	\$17,649	n/mf	
27-Aug-18	PennEnergy Resources	Rex Energy Corp	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-17. 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, 2018, and 2019.



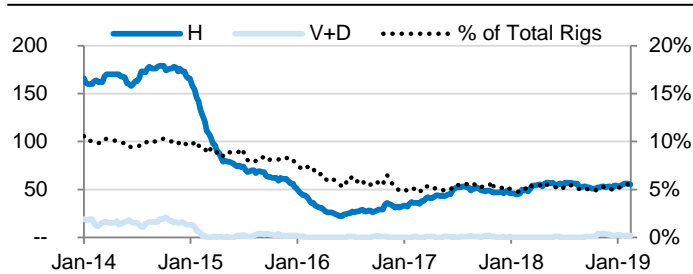
February 18, 2019

Bakken Snapshot

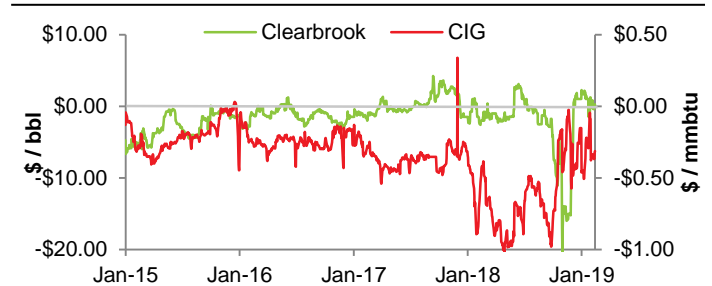
Item	Value	Wkly Change	Last Week
Rig Count	57	↓ (1)	58
Permitting Activity	26	↓ (4)	30

Item	Value	Wkly Change	Last Week
Oil Differential	\$0.25	↓ (\$0.15)	\$0.40
Gas Differential	(\$0.31)	↑ \$0.04	(\$0.36)

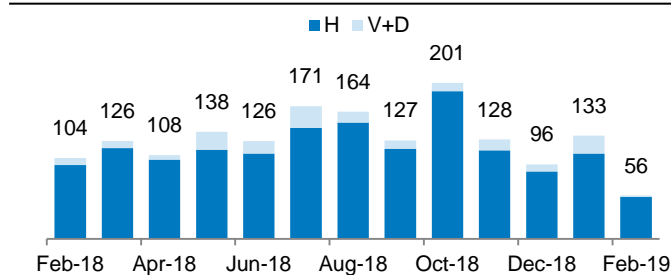
RIG COUNT



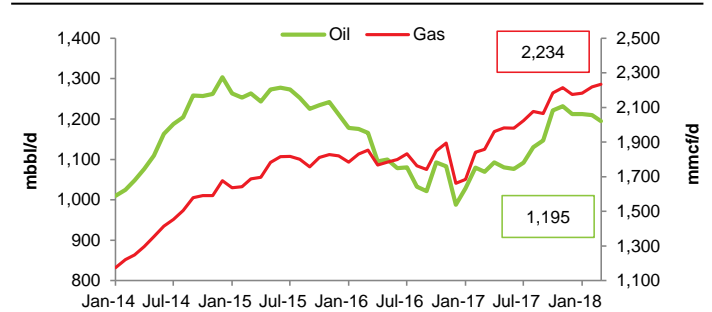
DIFFERENTIALS



PERMITTING ACTIVITY BY MONTH



GROSS PRODUCTION

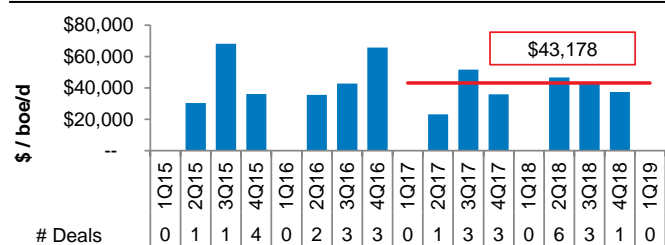


TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

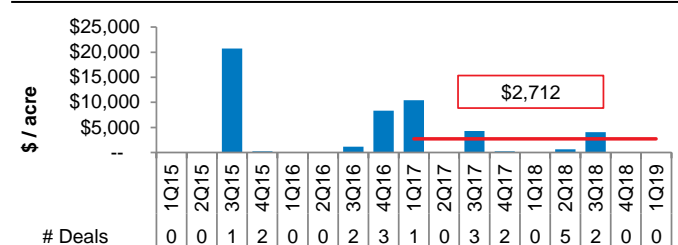
Ann'd Date	Buyer	Seller	Asset Description	Value ⁽¹⁾ (\$mm)	Proved Multiple (\$/boe)	Prod. Multiple (\$/boe/d)	Net Acres (\$/acre) ⁽²⁾
07-Nov-18	Vantage Energy Acq. Corp	QEP Resources Inc	102,800 net acres in Williston Basin	\$1,725	n.a.	\$37,500	\$16,780
31-Jul-18	Northern Oil and Gas	W Energy Partners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

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-17. Calculated as the weighted average of each quarter's transactions.
- Production valued at \$45,000/boepd in 2014, \$30,000/boepd in 2015, \$35,000/boepd in 2016 & 2017, and \$40,000/boepd in 2018 & 2019.



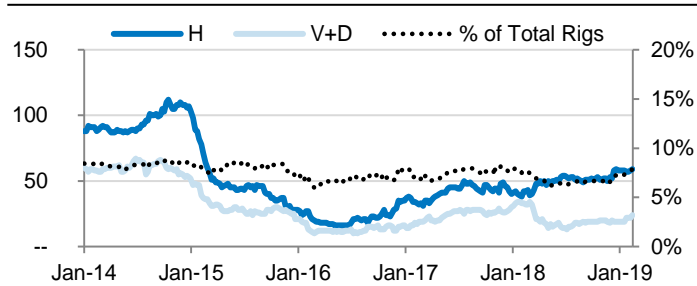
February 18, 2019

Rockies (excl. Bakken) Snapshot

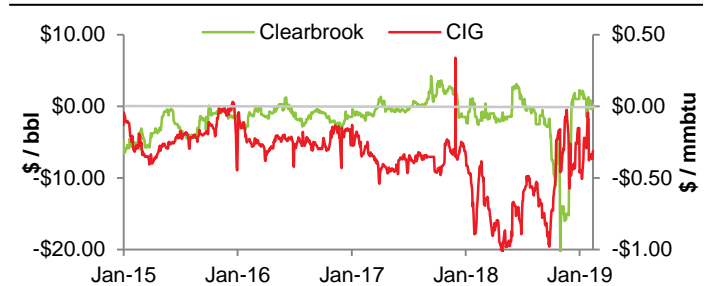
Item	Value	Wkly Change	Last Week
Rig Count	83	↑ 3	80
Permitting Activity	158	↑ 96	62

Item	Value	Wkly Change	Last Week
Oil Differential	\$0.25	↓ (\$0.15)	\$0.40
Gas Differential	(\$0.31)	↑ \$0.04	(\$0.36)

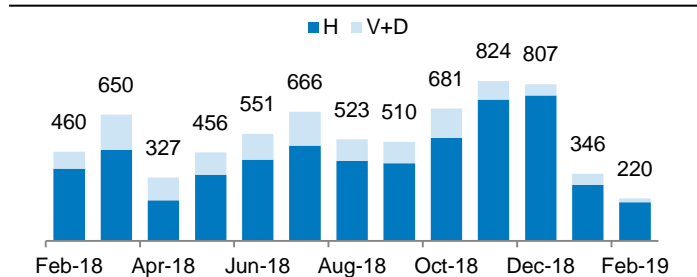
RIG COUNT



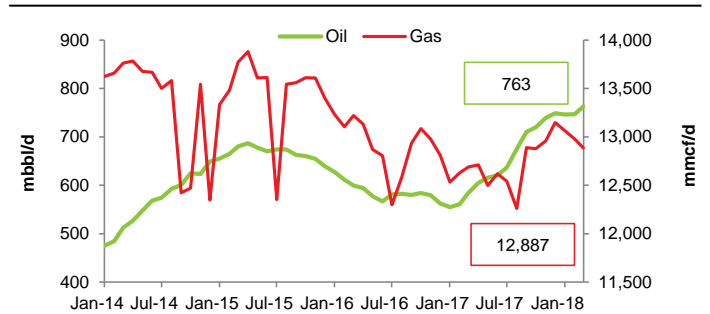
DIFFERENTIALS



PERMITTING ACTIVITY BY MONTH



GROSS PRODUCTION

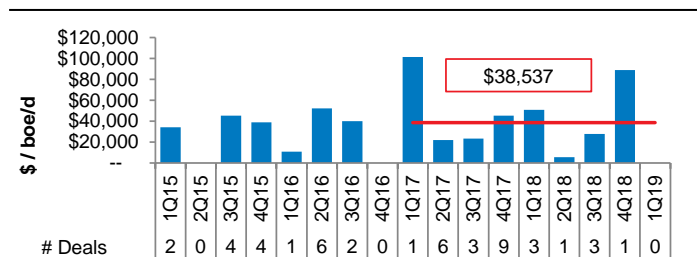


TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

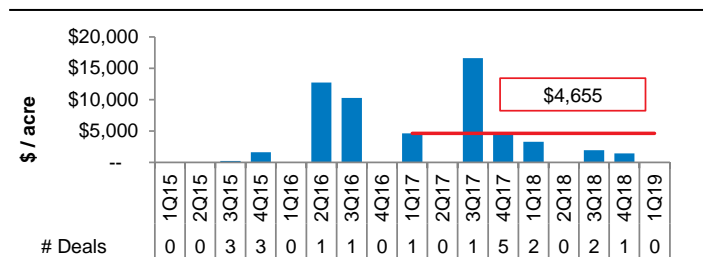
Ann'd Date	Buyer	Seller	Asset Description	Value ⁽¹⁾	Proved Multiple	Prod. Multiple	Net Acres	
				(\$mm)	(\$/boe)	(\$/boe/d)	(\$/acre) ⁽²⁾	
01-Oct-18	DJR Energy LLC	Encana	182,000 net acres in San Juan Basin	\$480	n.a.	\$88,889	\$2,637	
28-Aug-18	Vermilion Energy Inc	Massif Oil & Gas LLC	55,000 acres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

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

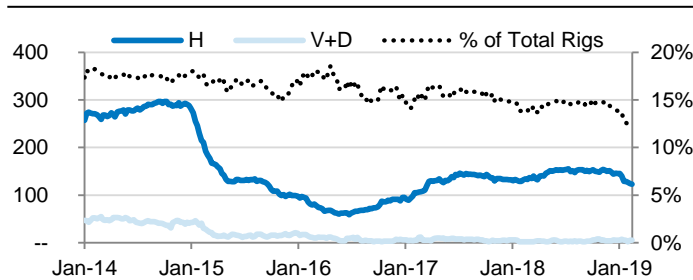


February 18, 2019

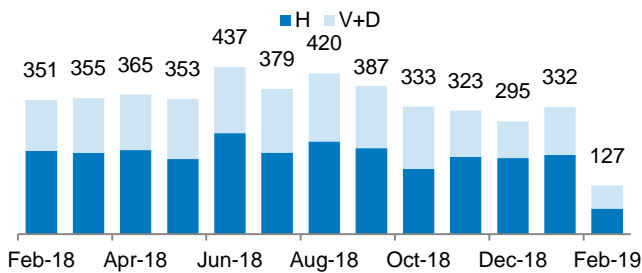
Mid-Continent Snapshot

Item	Value	Wkly Change	Last Week
Rig Count	128	↓ (1)	129
Permitting Activity	50	↓ (27)	77

RIG COUNT

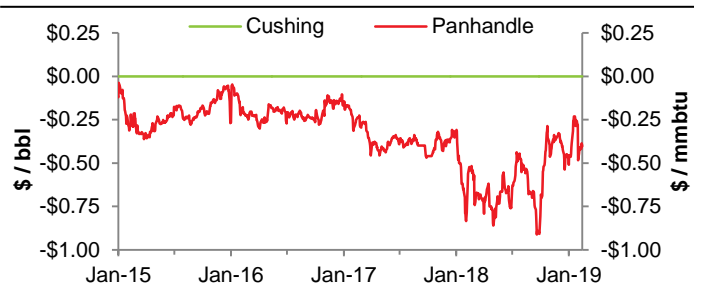


PERMITTING ACTIVITY BY MONTH

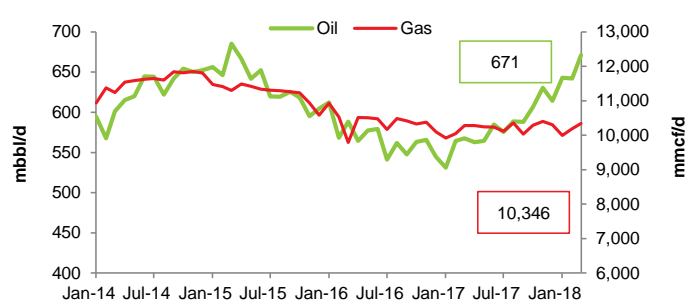


Item	Value	Wkly Change	Last Week
Oil Differential	--	█	--
Gas Differential	(\$0.40)	↑ \$0.02	(\$0.42)

DIFFERENTIALS



GROSS PRODUCTION

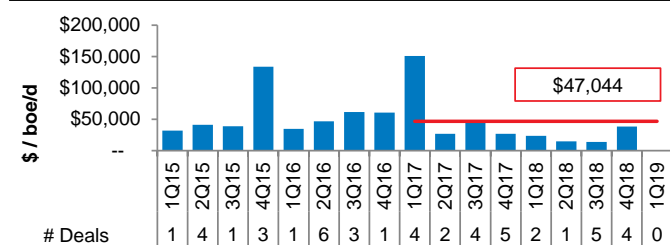


TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

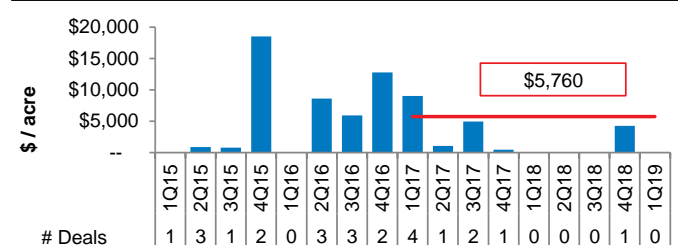
Ann'd Date	Buyer	Seller	Asset Description	Value ⁽¹⁾ (\$mm)	Proved Multiple (\$/boe)	Prod. Multiple (\$/boe/d)	Net Acres (\$/acre) ⁽²⁾	
11-Dec-18	Undisclosed Buyer	Riviera Resources Inc	37,000 net acres in the Arkoma Basin	\$68	n.a.	\$17,000	1,838	
02-Nov-18	SandRidge Energy	Undisclosed Seller	Mississippi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

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TRANSACTION PRODUCTION MULTIPLES⁽³⁾



TRANSACTION ADJUSTED NET ACRE MULTIPLES^(3,4)



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

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-17. Calculated as the weighted average of each quarter's transactions.
- Production valued at \$45,000/boepd in 2014, \$30,000/boepd in 2015, \$35,000/boepd in 2016 & 2017, and \$40,000/boepd in 2018 & 2019.



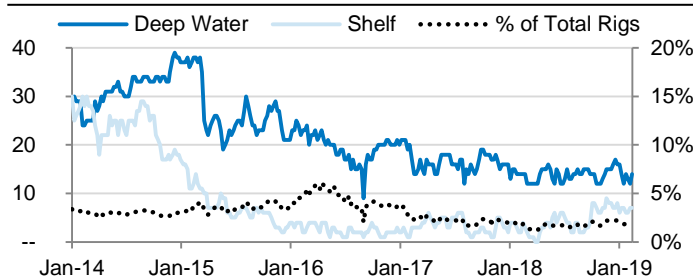
February 18, 2019

Gulf of Mexico Snapshot

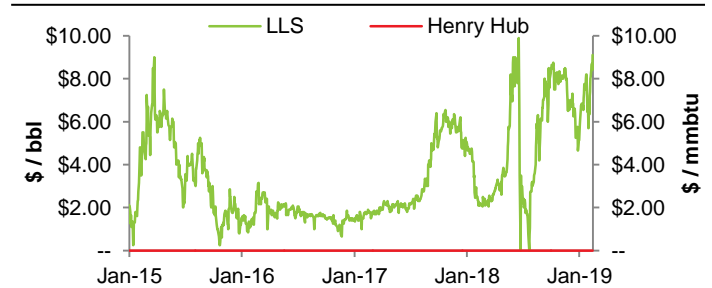
Item	Value	Wkly Change	Last Week
Rig Count	21	↑	19
Permitting Activity	4	↓	11

Item	Value	Wkly Change	Last Week
Oil Differential	\$9.10	↑	\$8.00
Gas Differential	--	—	--

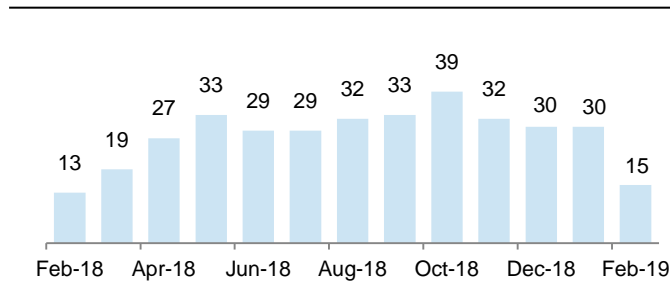
RIG COUNT



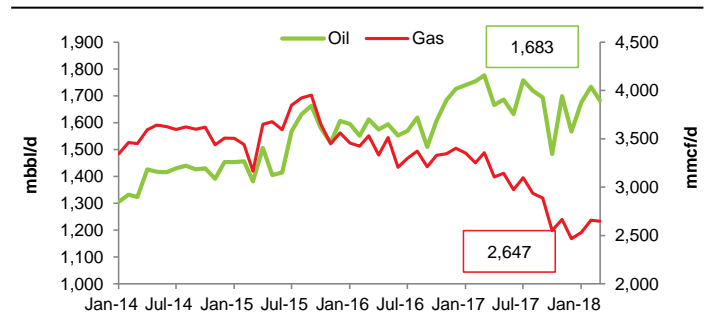
DIFFERENTIALS



PERMITTING ACTIVITY BY MONTH⁽¹⁾



GROSS PRODUCTION

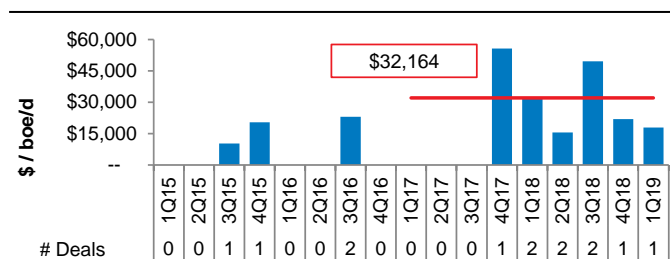


TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

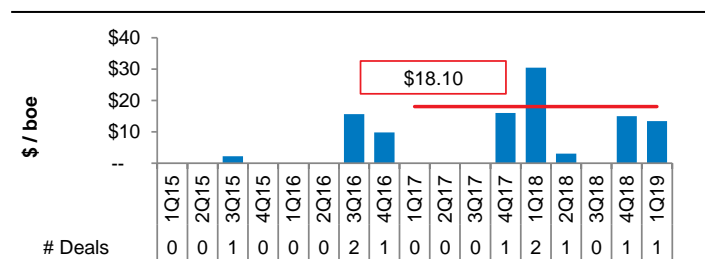
Ann'd Date	Buyer	Seller	Asset Description	Value ⁽²⁾ (\$mm)	Proved Multiple (\$/boe)	Prod. Multiple (\$/boe/d)	Net Acres (\$/acre) ⁽³⁾	
16-Jan-19	Talos Energy Inc	Samson Energy Co LLC	Non-op Gulf of Mexico working interest	\$30	\$13.45	\$17,939	n.a.	
10-Oct-18	Murphy	Petrobras	Gulf of Mexico joint venture	\$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.	
				Mean	\$257	\$17.46	\$29,653	n.a.
				Median	\$91	\$15.00	\$21,951	n.a.

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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.
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- Red line denotes average since 01-Jan-17. Calculated as the weighted average of each quarter's transactions.



February 18, 2019

[Click event to open](#)

Upcoming Industry Events

February 2019

[Feb 19](#) [Houston Producers Forum Luncheon](#)
[Feb 19-20](#) [DUG Haynesville \(Shreveport\)](#)

March 2019

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

April 2019

[Apr 8-10](#) [IPAA Oil & Gas Investment Symposium](#)
[Apr 15](#) [DUG Sand \(Fort Worth\)](#)
[Apr 15](#) [DUG Water \(Fort Worth\)](#)
[Apr 15-17](#) [DUG Permian \(Fort Worth\)](#)
[Apr 16](#) [Houston Producers Forum Luncheon](#)
[Apr 19](#) [ADAM-Houston Monthly Luncheon](#)

May 2019

[May 6-9](#) [Offshore Technology Conference](#)
[May 10](#) [Petroleum Resources Economics Conference](#)
[May 13-17](#) [SPE Electric Submersible Pumps Symposium](#)
[May 14-15](#) [DUG Rockies \(Denver\)](#)
[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 \(Pittsburgh\)](#)
[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 \(San Antonio\)](#)
[Sep 30-Oct 2](#) [SPE Annual Technical Conference and Exhibition](#)

October 2019

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

November 2019

[Nov 4-6](#) [Executive Oil Conference & Exhibition](#)
[Nov 15](#) [ADAM-Houston Monthly Luncheon](#)
[Nov 19](#) [IPAA Oil & Gas for Newcomers](#)
[Nov 19](#) [Houston Producers Forum Luncheon](#)
[Nov 19-21](#) [DUG Midcontinent \(Oklahoma City\)](#)

December 2019

[Dec 17](#) [Houston Producers Forum Luncheon](#)
[Dec 20](#) [ADAM-Houston Monthly Luncheon](#)

January 2020

[Jan 23](#) [IPAA Private Capital Conference](#)
[Jan 17](#) [ADAM-Houston Monthly Luncheon](#)
[Jan 21](#) [Houston Producers Forum Luncheon](#)

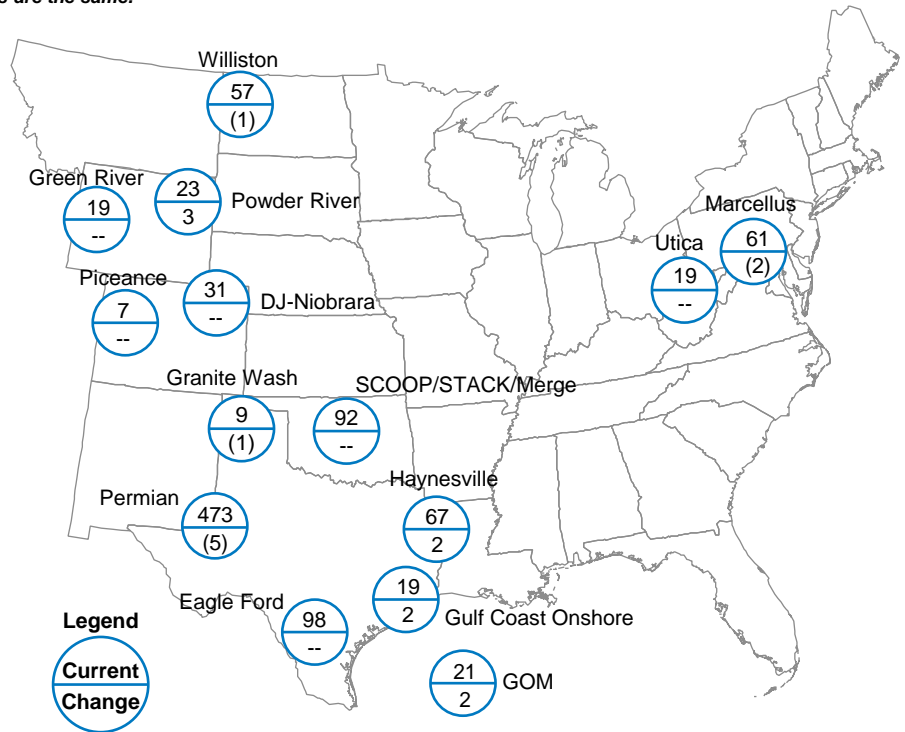


February 18, 2019

Rig Count Summary

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

	This Week	Change	Last Week	Last Year
Total Rigs	1,051	2	1,049	975
Oil	857	3	854	798
Gas	194	(1)	195	177
Miscellaneous	--	--	--	--
Directional	70	12	58	71
Horizontal	915	(8)	923	839
Vertical	66	(2)	68	65
Basin				
Permian	473	(5)	478	433
SCOOP/STACK/Merge	92	--	92	101
Granite Wash	9	(1)	10	19
Eagle Ford	98	--	98	87
Haynesville	67	2	65	58
Marcellus	61	(2)	63	56
Utica	19	--	19	22
Williston	57	(1)	58	49
DJ-Niobrara	31	--	31	25
Green River	19	--	19	20
Powder River	23	3	20	16
Piceance	7	--	7	8
Gulf Coast Onshore	19	2	17	16
GOM	21	2	19	18
Alaska	12	1	11	9
Other	43	1	42	38
Mid-Con	27	--	27	16
Rockies	3	--	3	5
Western	11	1	10	14
Eastern	2	--	2	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
MD & Transactions Mgr.
713-546-9727
rob.priske@bmo.com

Marian Yu
Associate

Aaron Moeller
Associate

Jennifer Boudreaux
Analyst

Chelsea Neville
Transactions Coordinator

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Source of rig count stats: Baker Hughes