



January 14, 2019

Covering the Week of January 4, 2019 to January 10, 2019

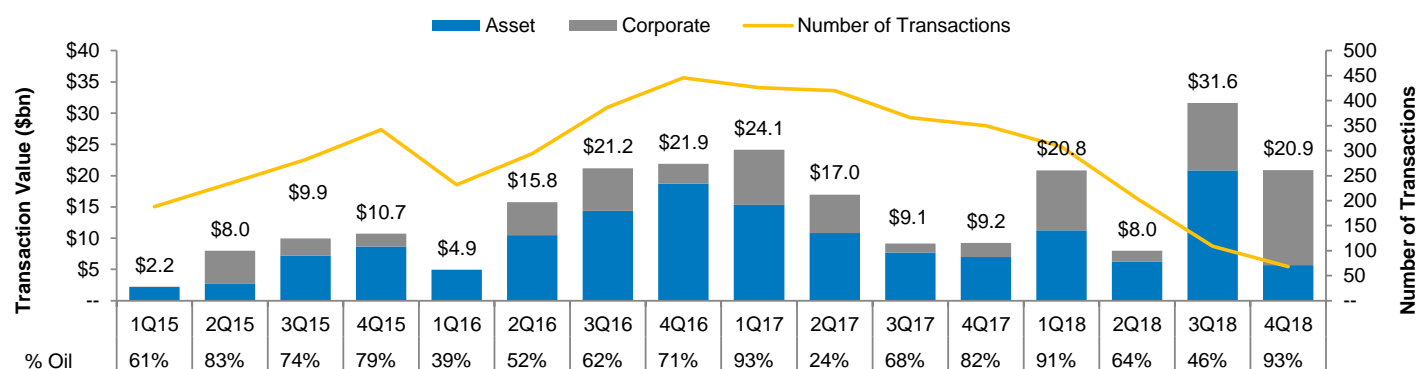
Week in Review

- Elliott Management announced that it made a \$2.07 billion all-cash bid for QEP Resources
- The January issue of BMO Calgary's A&D (Canadian) Market Monitor, including the 2018 Year in Review, went live last week – read more [here](#)

Key Industry Indicators

| Indicator | Current Value | Week's Change | % Change | Direction |
|--------------------------------------|---------------|---------------|----------|-----------|
| Prompt Oil Price (\$/bbl) | \$52.59 | \$5.50 | 11.7% | ↑ |
| Prompt Gas Price (\$/mmbtu) | \$2.97 | \$0.02 | 0.7% | ↑ |
| Wkly Trans. Value (\$mm) | \$20 | \$20 | nmf | ↑ |
| Wkly Trans. Count | 1 | 1 | nmf | ↑ |
| US Rig Count | 1,075 | -- | -- | — |
| US Oil Prod'n (mmbbl/d) | 11.7 | -- | -- | — |
| US Gas Prod'n (bcf/d) ⁽¹⁾ | 105.4 | -- | -- | — |
| US Oil Storage (mmbbl) | 439.7 | (1.7) | (0.4%) | ↓ |
| US Gas Storage (tcf) | 2.6 | (0.1) | (3.4%) | ↓ |

Quarterly Deal Activity



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

Commodities

- Oil ended last week up as market sentiment has turned relatively quickly with money finding its way back into riskier assets, including crude oil. Cuts in January OPEC exports are expected to be substantial for January, and the market is still positive on the talks between China and the U.S., despite those talks coming to an end. The near-term contract closed up \$5.50, or 11.7%, at \$52.59
- Natural gas ended last week up as production continues to flounder to start out 2019 with the most noticeable drops occurring in Texas and the Rockies. The chance for a repeat of last year's 'bomb cyclone' in January is now next to nil as the forecast carries us close to the end of the month with normal to near normal temperatures. The evolution of some colder weather 2-3 weeks out has certainly lent support to the front end, but we are still not looking at unseasonably cold temps. The near-term contract closed up \$0.02, or 0.7%, at \$2.97

Equity Markets

- S&P E&P⁽²⁾ outperformed last week 13.4% vs. SPX⁽²⁾ 6.1%
- The major U.S. equity indexes finished up last week as the markets bounced back. Consumer discretionary, consumer staples, financials, health care, industrials, materials, real estate, and tech all finished up. Industrials performed the best, up 8.2%

Debt Markets

- One issuer priced two tranches for \$1.5 billion in proceeds
- Year-to-date U.S. volume is down 75% year-on-year
- U.S. high yield funds reported an outflow of \$907 million
- ETFs reported an outflow of \$141 million
- High yield index yield was 7.21%; high yield energy index yield was 8.50%

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

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

1. EIA U.S. natural gas gross withdrawals and production reported monthly as of October 2018.

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

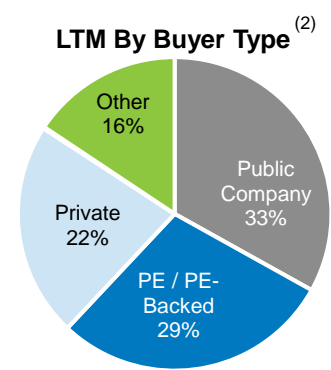
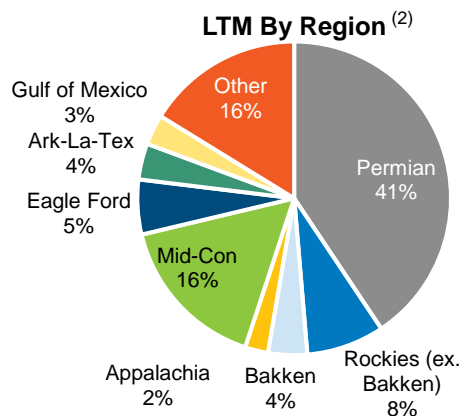
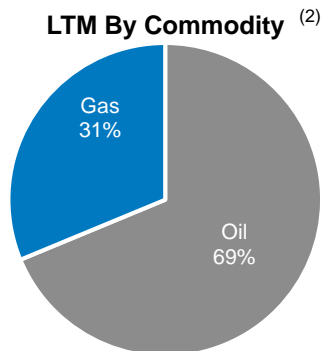


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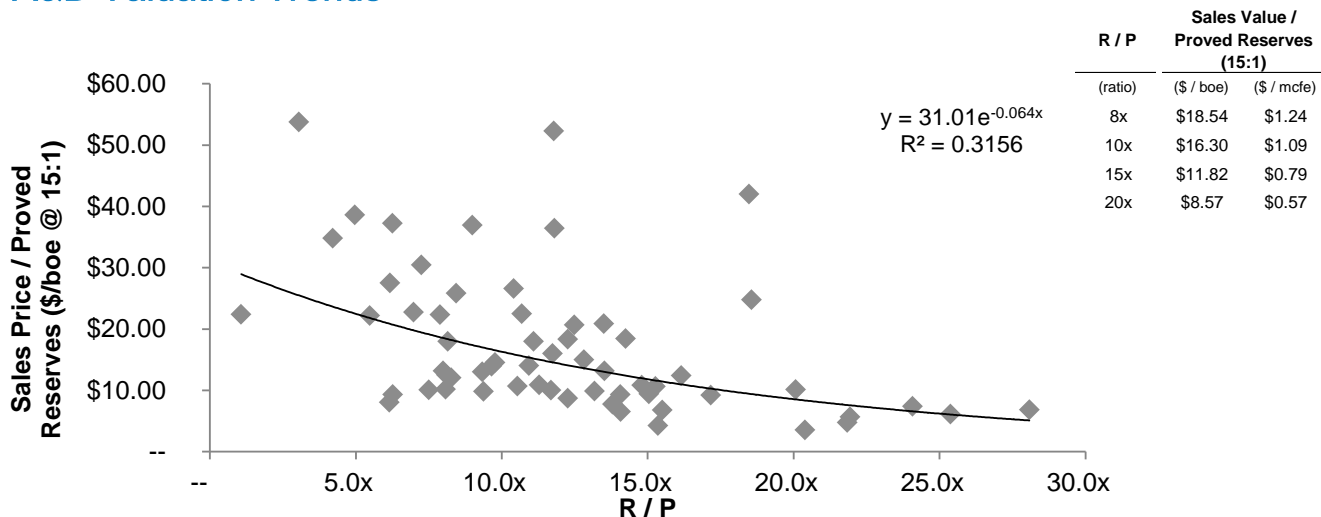
The 10 Most Recent Asset Transactions Over \$20 Million

| Ann'd Date | Buyer | Seller | Area | Asset Description | Value ⁽¹⁾ (\$mm) | Proved Multiple (\$/boe) | Prod. Multiple (\$/boe/d) | Net Acres (\$/acre) |
|------------|----------------------------|--------------------------|---------------|---|--------------------------------|-----------------------------|------------------------------|------------------------|
| 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 |
| 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 |

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 2018 with transaction value >\$20mm. Adjusted for changes in price outlooks. Recalculated boe reserves are on a 15:1 (gas:oil) basis. Acreage transactions excluded by using deals with PDP of >= 40% of total proved.



January 14, 2019

Select Significant Deals on the Market



A&D Headlines

- [Elliott Management Makes \\$2.07 Billion Bid for Oil Company QEP Resources](#)

Industry Headlines

- [The Oil And Gas Industry Is Booming, But Operators Worry About Slowdown Amid Shutdown](#)
- [Saudi Arabia's Massive Oil Reserves Total 268.5 Billion Barrels, Even Bigger Than Previously Known](#)
- [U.S. Liquefied Natural Gas Hits Record Highs Again](#)
- [Trump Formally Nominates Wheeler to Head EPA](#)
- [House Democrats Introduce Bills Banning Oil, Gas Leasing in Nearly All Federal Waters](#)
- [BP Just Discovered a Billion Barrels of Oil in the Gulf of Mexico](#)

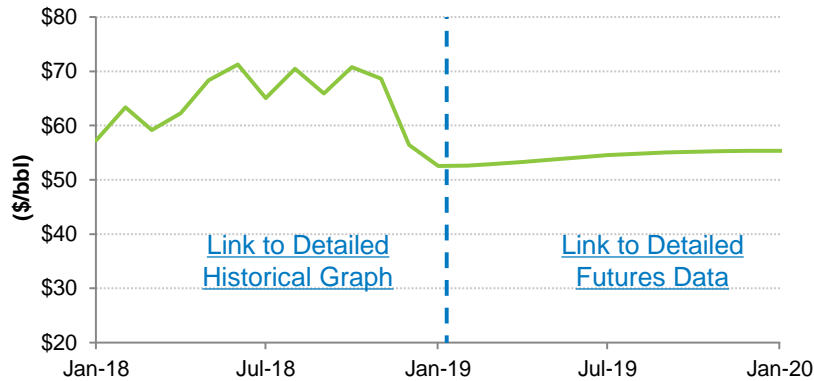
(Click headline to link to the full article)



January 14, 2019

Commodity Prices

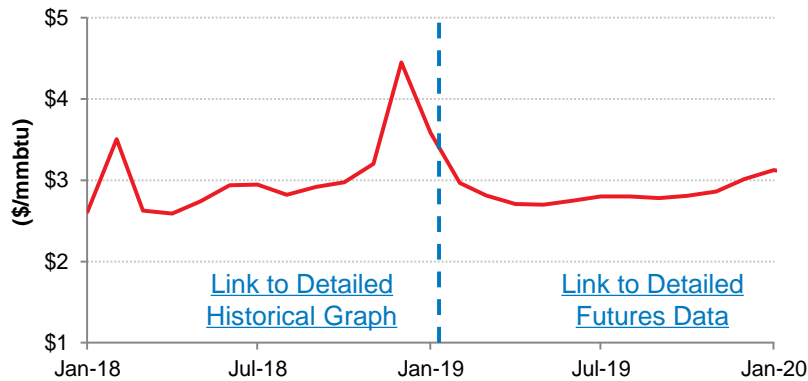
WTI OIL (HISTORICAL / FORECAST)



NYMEX WTI Futures as of 10-Jan-19 Close (\$/bbl)

| Period ⁽¹⁾ | Current | Last Wk. | 6 Mo. Ago | 1 Yr. Ago |
|-----------------------|---------|----------|-----------|-----------|
| 12 Mo. Strip | \$54.35 | \$49.01 | \$69.01 | \$61.64 |
| 2019 | \$54.26 | \$48.88 | \$66.37 | \$57.96 |
| 2020 | \$55.32 | \$50.91 | \$62.17 | \$54.97 |
| 2021 | \$55.09 | \$51.86 | \$59.04 | \$53.25 |
| 2022 | \$55.08 | \$52.61 | \$56.76 | \$52.54 |
| 2023 | \$55.23 | \$53.38 | \$55.28 | \$52.44 |

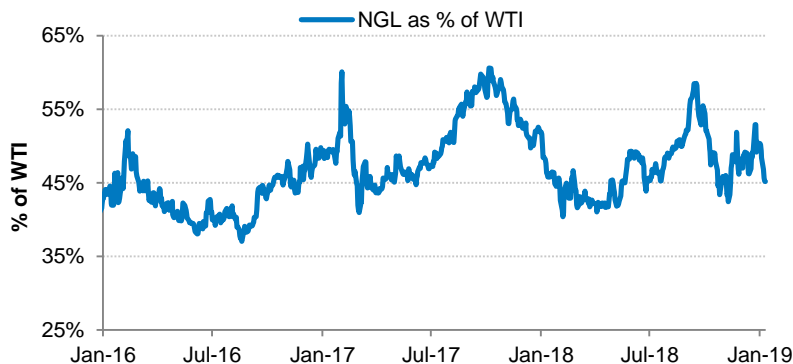
HENRY HUB NATURAL GAS (HISTORICAL / FORECAST)



NYMEX Gas Futures as of 10-Jan-19 Close (\$/mmbtu)

| Period ⁽¹⁾ | Current | Last Wk. | 6 Mo. Ago | 1 Yr. Ago |
|-----------------------|---------|----------|-----------|-----------|
| 12 Mo. Strip | \$2.84 | \$2.74 | \$2.79 | \$2.84 |
| 2019 | \$2.82 | \$2.71 | \$2.75 | \$2.80 |
| 2020 | \$2.73 | \$2.62 | \$2.66 | \$2.82 |
| 2021 | \$2.65 | \$2.59 | \$2.60 | \$2.85 |
| 2022 | \$2.83 | \$2.77 | \$2.74 | \$3.00 |
| 2023 | \$2.83 | \$2.77 | \$2.74 | \$3.00 |

NGL PRICING⁽²⁾



Historical Prices as of 10-Jan-19 Close (\$/gal)

| NGLs | Current | Last Wk. | 6 Mo. Ago | 1 Yr. Ago |
|------------|---------|----------|-----------|-----------|
| Ethane | \$0.28 | \$0.32 | \$0.40 | \$0.27 |
| Propane | \$0.67 | \$0.63 | \$0.98 | \$0.89 |
| Butane | \$0.70 | \$0.66 | \$1.07 | \$0.89 |
| Iso-butane | \$0.81 | \$0.78 | \$1.27 | \$1.06 |
| Pentane+ | \$1.09 | \$0.98 | \$1.58 | \$1.43 |

Source: BMO Commodity Products Group, Bloomberg, FactSet

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

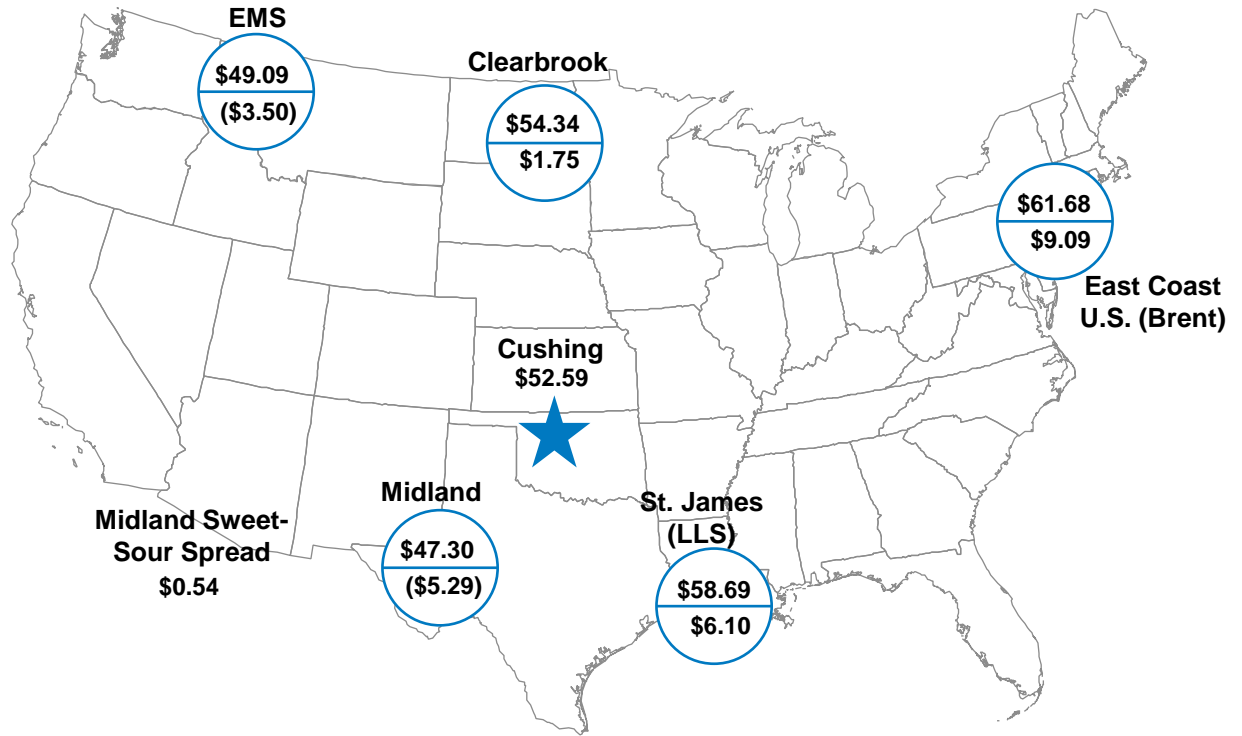


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Commodity Prices (cont'd)

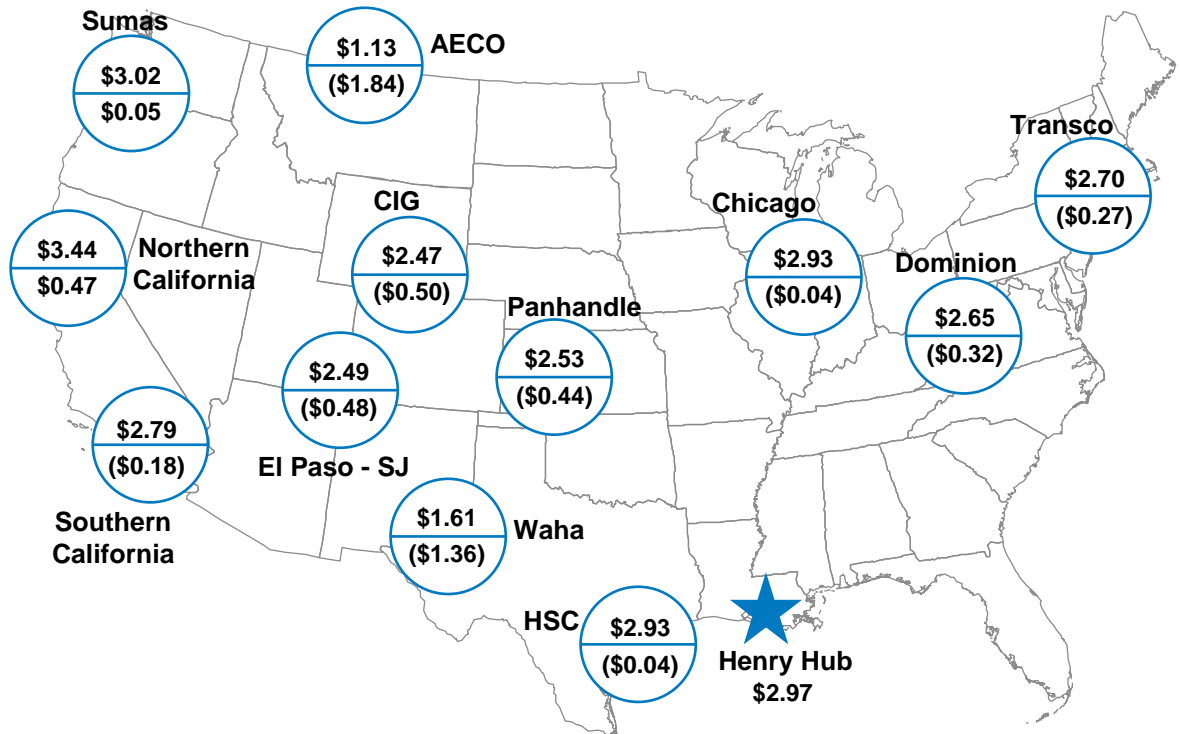
OIL PRICING & DIFFERENTIALS TO CUSHING WTI (\$ / BBL) – AS OF 10-JAN-19

Legend



NATURAL GAS PRICING & DIFFERENTIALS TO HENRY HUB (\$ / MMBTU) – AS OF 10-JAN-19

Legend



Source: BMO Commodity Products Group, Bloomberg

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



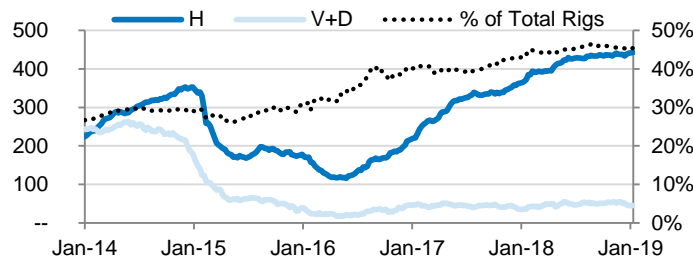
January 14, 2019

Permian Snapshot

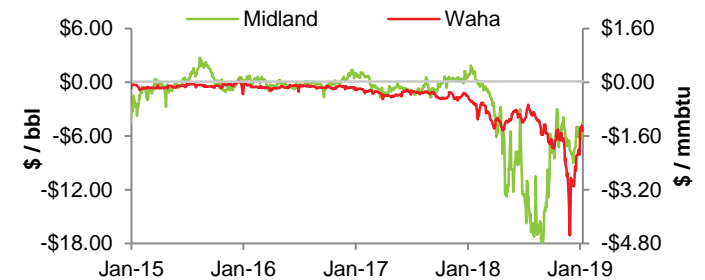
| Item | Value | Wkly Change | Last Week |
|---------------------|-------|-------------|-----------|
| Rig Count | 488 | ↑ | 487 |
| Permitting Activity | 205 | ↑ | 138 |

| Item | Value | Wkly Change | Last Week |
|------------------|----------|-------------|-----------|
| Oil Differential | (\$4.50) | ↑ | (\$6.00) |
| Gas Differential | (\$1.45) | ↓ | (\$1.38) |

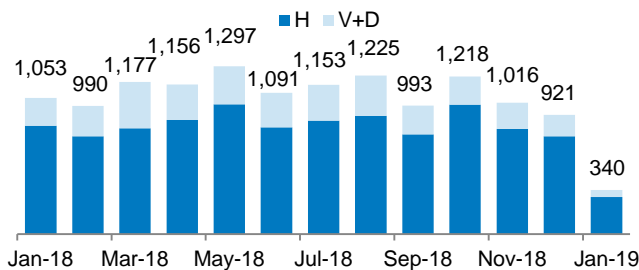
RIG COUNT



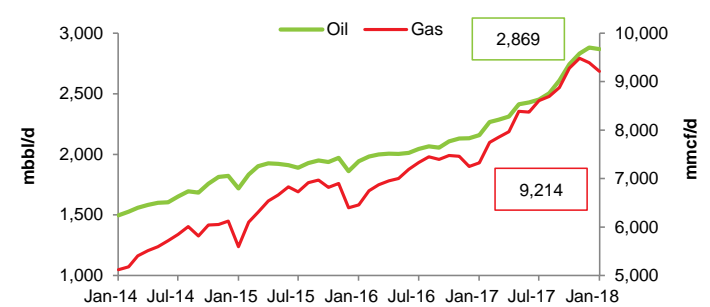
DIFFERENTIALS



PERMITTING ACTIVITY BY MONTH



GROSS PRODUCTION

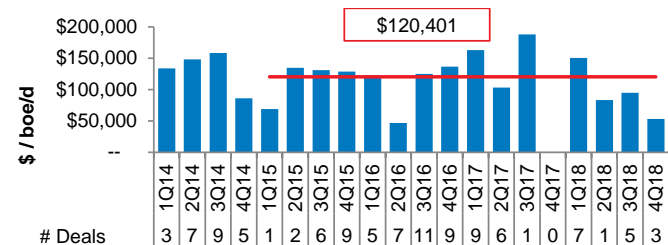


TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

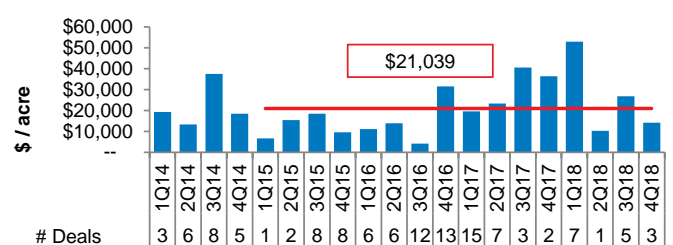
| Ann'd Date | Buyer | Seller | Asset Description | Value ⁽¹⁾ (\$mm) | Proved Multiple (\$/boe) | Prod. Multiple (\$/boe/d) | Net Acres (\$/acre) ⁽²⁾ |
|------------|--------------------------|-------------------------|-----------------------------------|--------------------------------|-----------------------------|------------------------------|---------------------------------------|
| 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

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- \$/acre multiple not adjusted for value associated with production.
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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 & 2019.



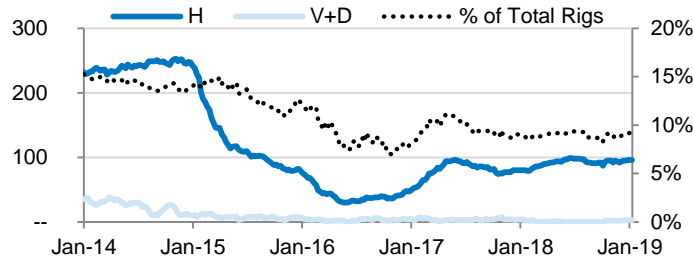
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Eagle Ford Snapshot

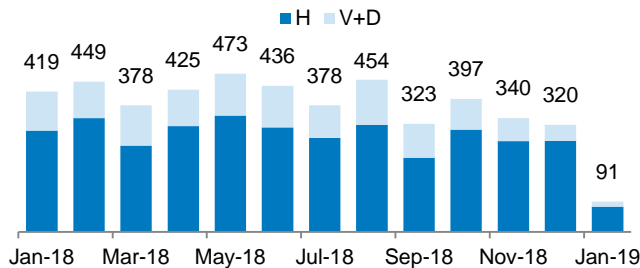
| Item | Value | Wkly Change | Last Week |
|---------------------|-------|-------------|-----------|
| Rig Count | 99 | █ | -- |
| Permitting Activity | 66 | ↑ | 39 |

| Item | Value | Wkly Change | Last Week |
|------------------|----------|-------------|-----------|
| Oil Differential | \$6.85 | ↑ | \$1.00 |
| Gas Differential | (\$0.05) | ↑ | \$0.00 |

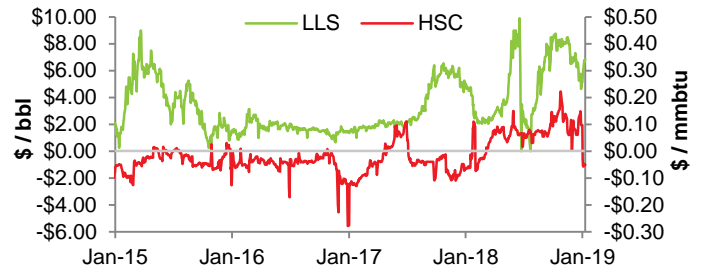
RIG COUNT



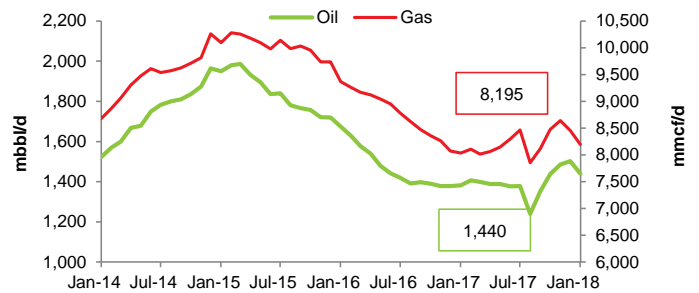
PERMITTING ACTIVITY BY MONTH



DIFFERENTIALS



GROSS PRODUCTION

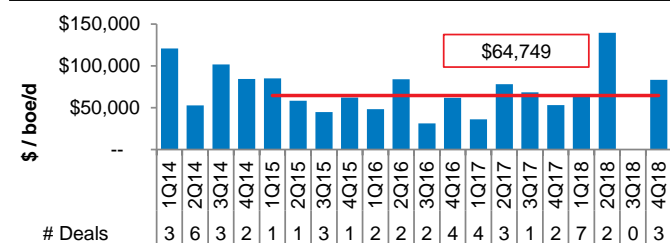


TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

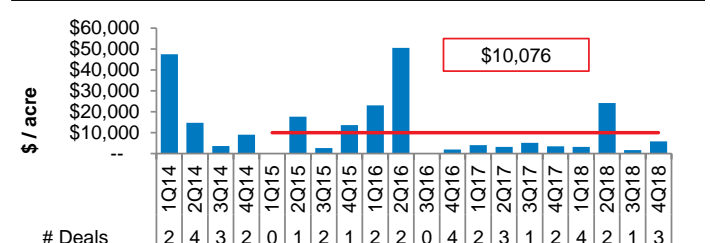
| Ann'd Date | Buyer | Seller | Asset Description | Value ⁽¹⁾ (\$mm) | Proved Multiple (\$/boe) | Prod. Multiple (\$/boe/d) | Net Acres (\$/acre) ⁽²⁾ |
|------------|------------------------|-----------------------|--|--------------------------------|-----------------------------|------------------------------|---------------------------------------|
| 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 |
| | | | | Median | \$35 | \$2.98 | \$48,375 |

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

TRANSACTION PRODUCTION MULTIPLES⁽³⁾



TRANSACTION ADJUSTED NET ACRE MULTIPLES^(3,4)



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

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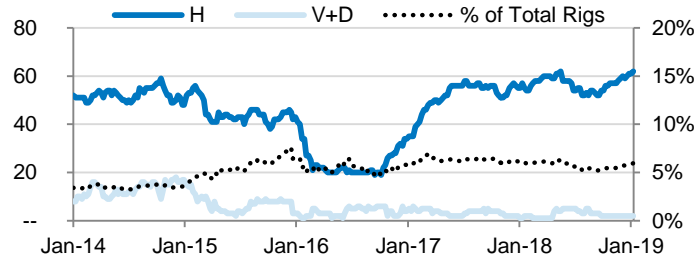
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Ark-La-Tex Snapshot

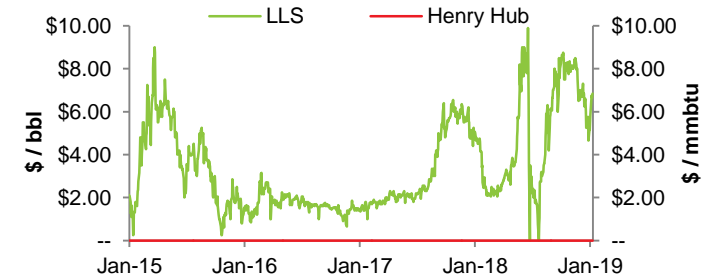
| Item | Value | Wkly Change | Last Week |
|---------------------|-------|-------------|-----------|
| Rig Count | 64 | ↑ | 63 |
| Permitting Activity | 19 | ↑ | 7 |

| Item | Value | Wkly Change | Last Week |
|------------------|--------|-------------|-----------|
| Oil Differential | \$6.85 | ↑ | \$5.85 |
| Gas Differential | -- | ▬ | -- |

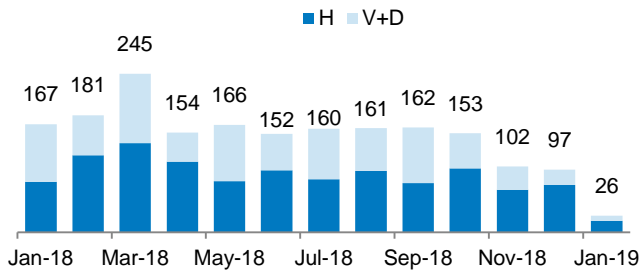
RIG COUNT



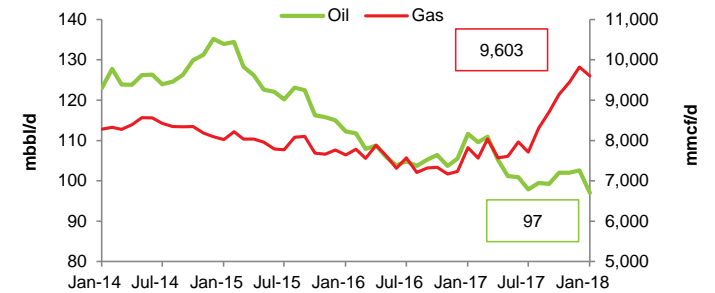
DIFFERENTIALS



PERMITTING ACTIVITY BY MONTH



GROSS PRODUCTION

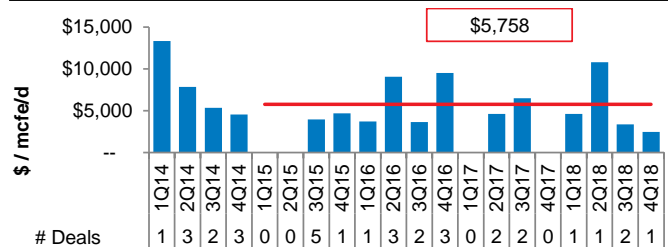


TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

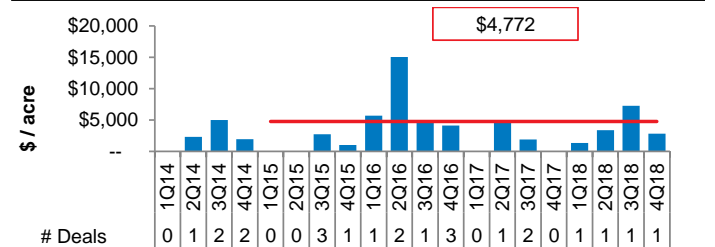
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|------------|-------------------------|--------------------------|---------------------------------------|--------------------------------|-----------------------------|------------------------------|---------------------------------------|
| 19-Dec-18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

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TRANSACTION PRODUCTION MULTIPLES⁽³⁾



TRANSACTION ADJUSTED NET ACRE MULTIPLES^(3,4)



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

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- Red line denotes average since 01-Jan-15. Calculated as the weighted average of each quarter's transactions.
- Production valued at \$3,000/mcfepd in 2014, and \$2,000/mcfepd in 2015, 2016, 2017, 2018, and 2019.

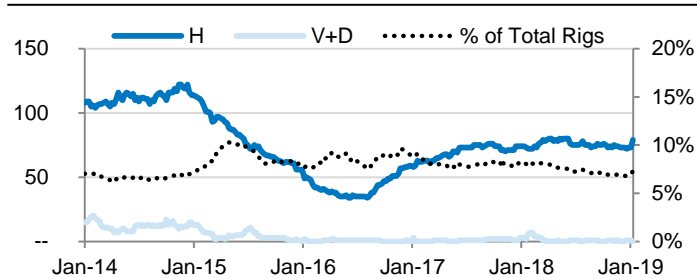


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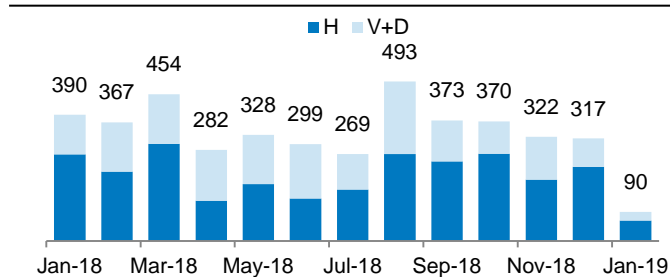
Appalachia Snapshot

| Item | Value | Wkly Change | Last Week |
|---------------------|-------|-------------|-----------|
| Rig Count | 79 | ↑ 5 | 74 |
| Permitting Activity | 29 | ↓ (49) | 78 |

RIG COUNT

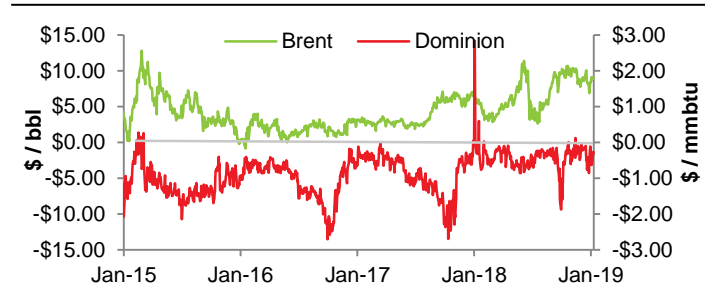


PERMITTING ACTIVITY BY MONTH

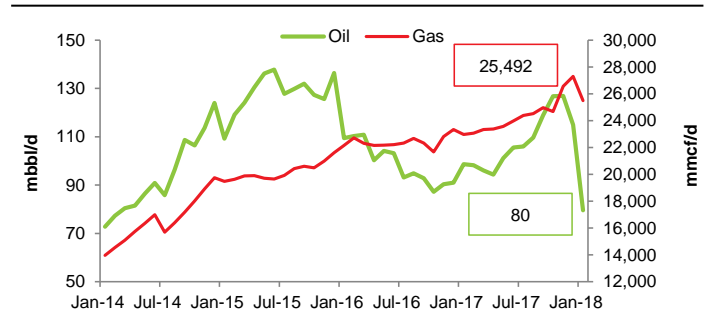


| Item | Value | Wkly Change | Last Week |
|------------------|----------|-------------|-----------|
| Oil Differential | \$9.09 | ↑ \$0.23 | \$8.86 |
| Gas Differential | (\$0.27) | ↑ \$0.29 | (\$0.56) |

DIFFERENTIALS



GROSS PRODUCTION

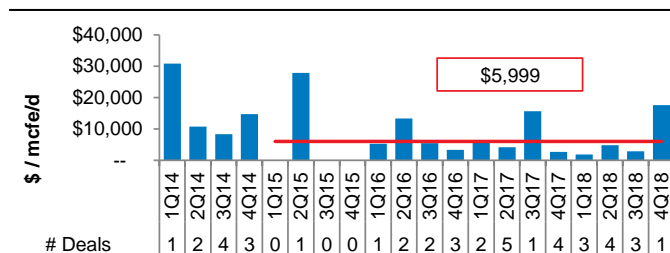


TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

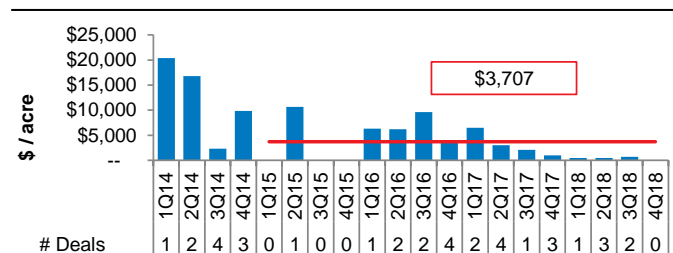
| Ann'd Date | Buyer | Seller | Asset Description | Value ⁽¹⁾ (\$mm) | Proved Multiple (\$/mcf) | Prod. Multiple (\$/mcf/d) | Net Acres (\$/acre) ⁽²⁾ |
|------------|-----------------------------|-----------------------------|--|--------------------------------|-----------------------------|------------------------------|---------------------------------------|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

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

TRANSACTION PRODUCTION MULTIPLES⁽³⁾



TRANSACTION ADJUSTED NET ACRE MULTIPLES^(3,4)



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

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

1. Represents total enterprise value. Excludes transactions with deal value <\$20 million.
2. \$/acre multiple not adjusted for value associated with production.
3. Red line denotes average since 01-Jan-15. Calculated as the weighted average of each quarter's transactions.
4. Production valued at \$3,000/mcfepd in 2014, and \$2,000/mcfepd in 2015, 2016, 2017, 2018, and 2019.



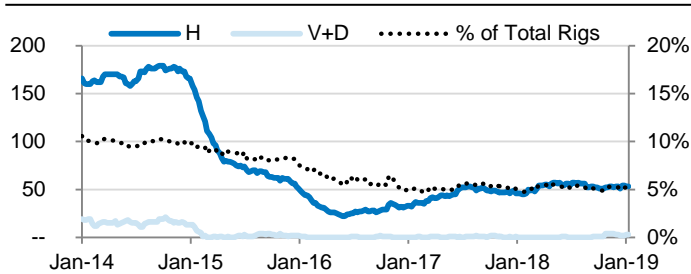
January 14, 2019

Bakken Snapshot

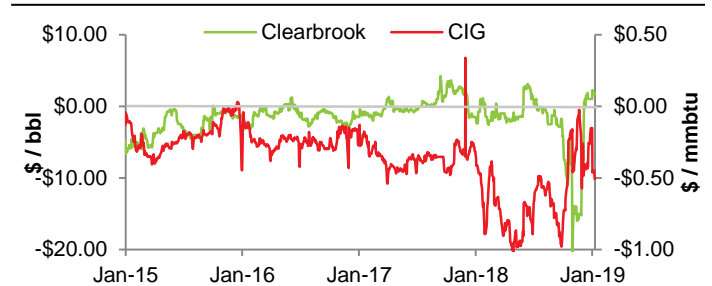
| Item | Value | Wkly Change | Last Week |
|---------------------|-------|-------------|-----------|
| Rig Count | 56 | █ -- | 56 |
| Permitting Activity | 15 | █ ↓ (10) | 25 |

| Item | Value | Wkly Change | Last Week |
|------------------|----------|--------------|-----------|
| Oil Differential | \$1.75 | █ -- | \$1.75 |
| Gas Differential | (\$0.50) | █ ↓ (\$0.06) | (\$0.45) |

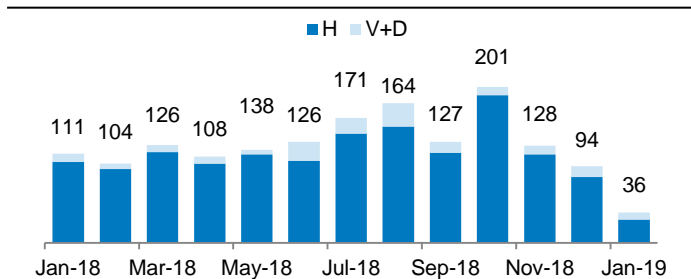
RIG COUNT



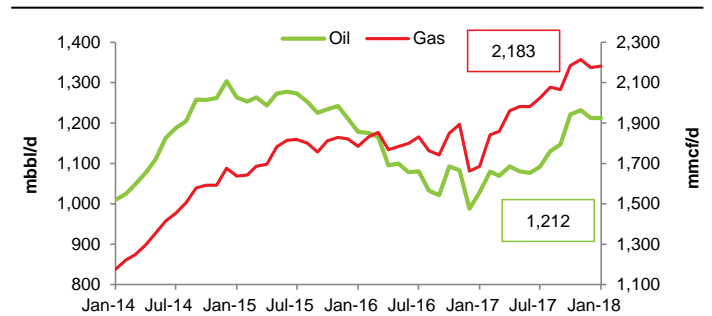
DIFFERENTIALS



PERMITTING ACTIVITY BY MONTH



GROSS PRODUCTION

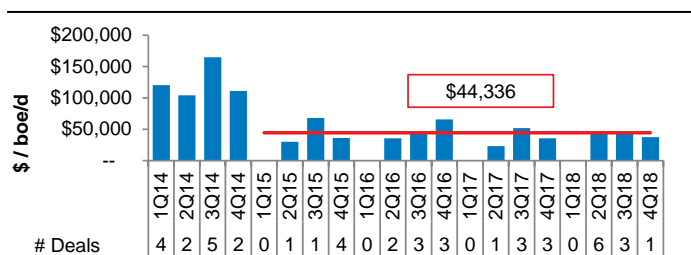


TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

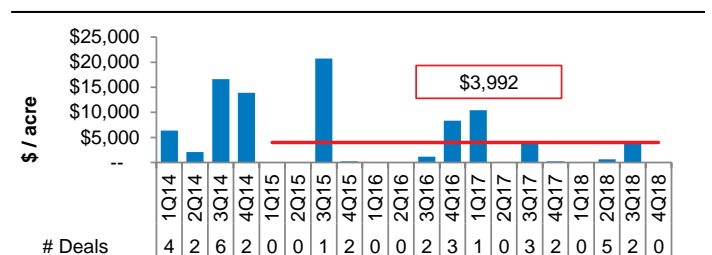
| Ann'd Date | Buyer | Seller | Asset Description | Value ⁽¹⁾ (\$mm) | Proved Multiple (\$/boe) | Prod. Multiple (\$/boe/d) | Net Acres (\$/acre) ⁽²⁾ |
|------------|--------------------------|-------------------------------|---------------------------------------|--------------------------------|-----------------------------|------------------------------|-----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

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

TRANSACTION PRODUCTION MULTIPLES⁽³⁾



TRANSACTION ADJUSTED NET ACRE MULTIPLES^(3,4)



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

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

- Represents total enterprise value. Excludes transactions with deal value <\$20 million.
- \$/acre multiple not adjusted for value associated with production.
- Red line denotes average since 01-Jan-15. Calculated as the weighted average of each quarter's transactions.
- Production valued at \$45,000/boepd in 2014, \$30,000/boepd in 2015, \$35,000/boepd in 2016 & 2017, and \$40,000/boepd in 2018 & 2019.



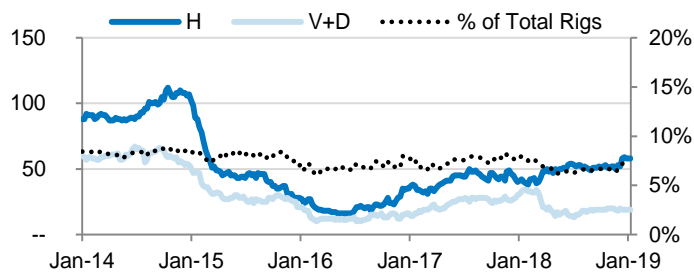
January 14, 2019

Rockies (excl. Bakken) Snapshot

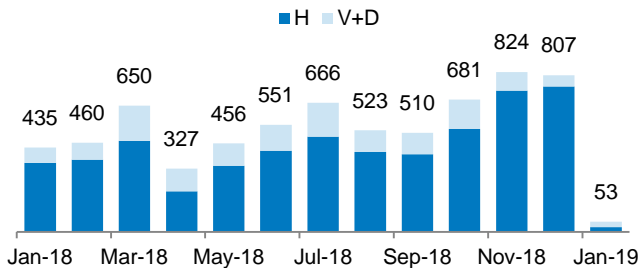
| Item | Value | Wkly Change | Last Week |
|---------------------|-------|-------------|-----------|
| Rig Count | 77 | █ -- | 77 |
| Permitting Activity | 29 | █ (105) | 134 |

| Item | Value | Wkly Change | Last Week |
|------------------|----------|-------------|-----------|
| Oil Differential | \$1.75 | █ -- | \$1.75 |
| Gas Differential | (\$0.50) | █ (\$0.06) | (\$0.45) |

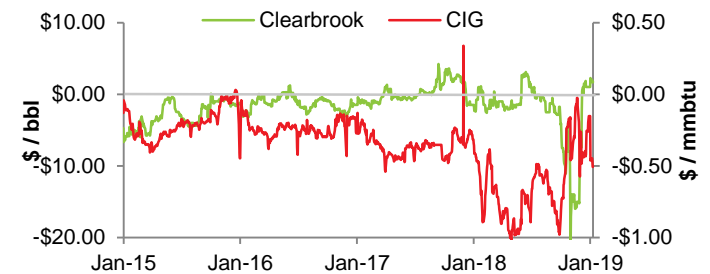
RIG COUNT



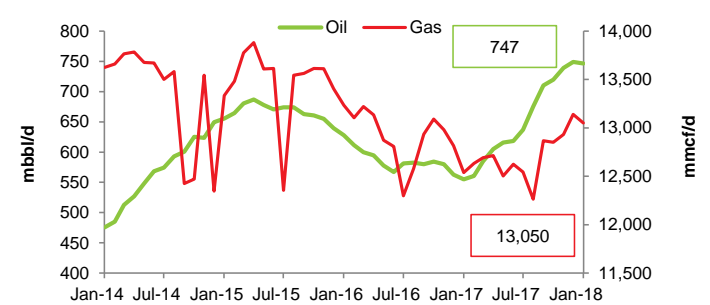
PERMITTING ACTIVITY BY MONTH



DIFFERENTIALS



GROSS PRODUCTION

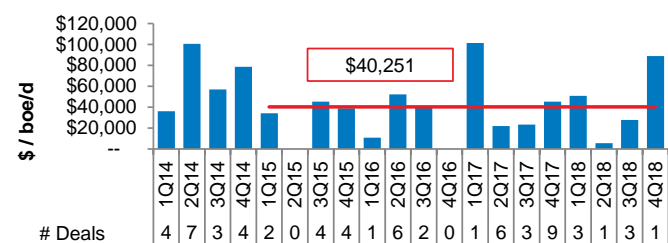


TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

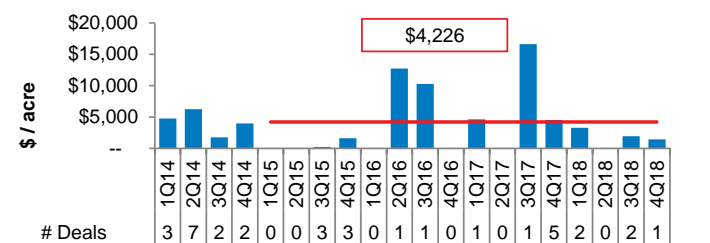
| Ann'd Date | Buyer | Seller | Asset Description | Value ⁽¹⁾ (\$mm) | Proved Multiple (\$/boe) | Prod. Multiple (\$/boe/d) | Net Acres (\$/acre) ⁽²⁾ |
|------------|--------------------------|--------------------------|--|--------------------------------|-----------------------------|------------------------------|---------------------------------------|
| 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
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 & 2019.



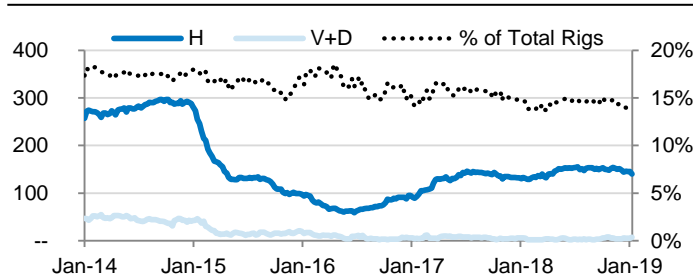
January 14, 2019

Mid-Continent Snapshot

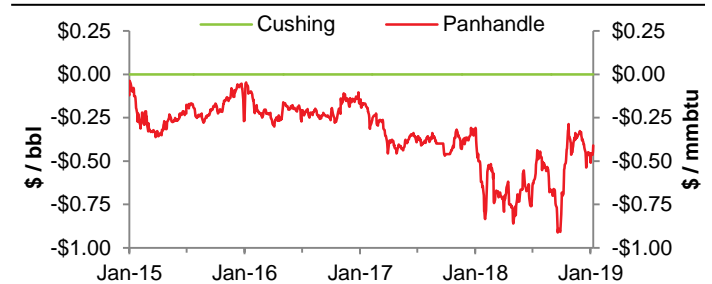
| Item | Value | Wkly Change | Last Week |
|---------------------|-------|-------------|-----------|
| Rig Count | 147 | ↓ (3) | 150 |
| Permitting Activity | 52 | ↑ 9 | 43 |

| Item | Value | Wkly Change | Last Week |
|------------------|----------|-------------|-----------|
| Oil Differential | -- | █ | -- |
| Gas Differential | (\$0.41) | ↑ \$0.05 | (\$0.46) |

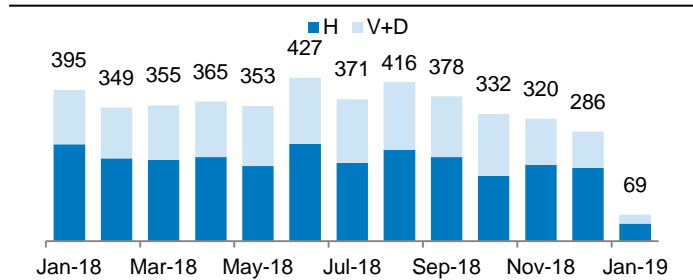
RIG COUNT



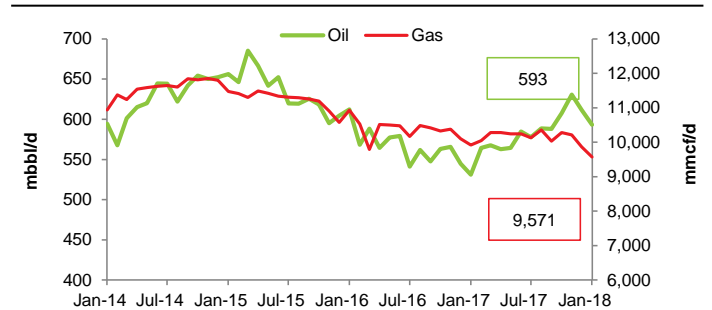
DIFFERENTIALS



PERMITTING ACTIVITY BY MONTH



GROSS PRODUCTION

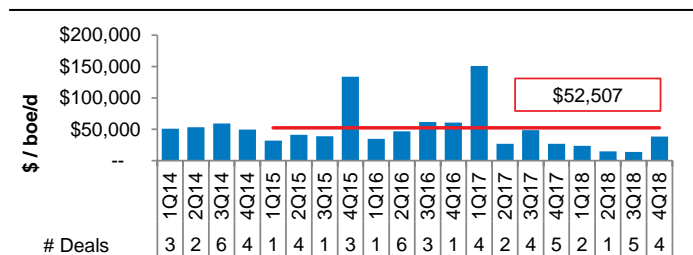


TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

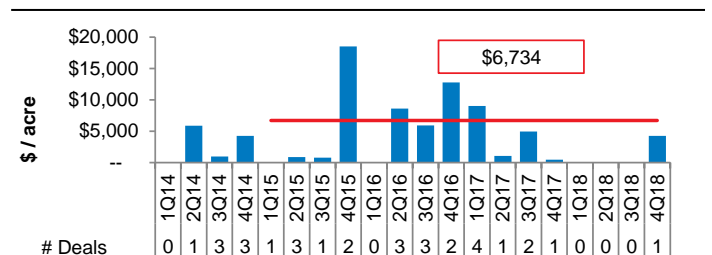
| Ann'd Date | Buyer | Seller | Asset Description | Value ⁽¹⁾ (\$mm) | Proved Multiple (\$/boe) | Prod. Multiple (\$/boe/d) | Net Acres (\$/acre) ⁽²⁾ | |
|------------|-------------------------|------------------------------|---|--------------------------------|-----------------------------|------------------------------|---------------------------------------|----------------|
| 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 |

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 & 2019.



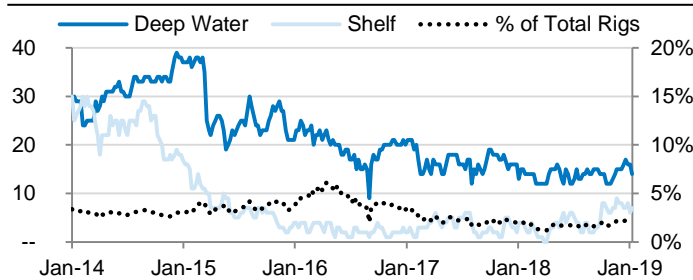
January 14, 2019

Gulf of Mexico Snapshot

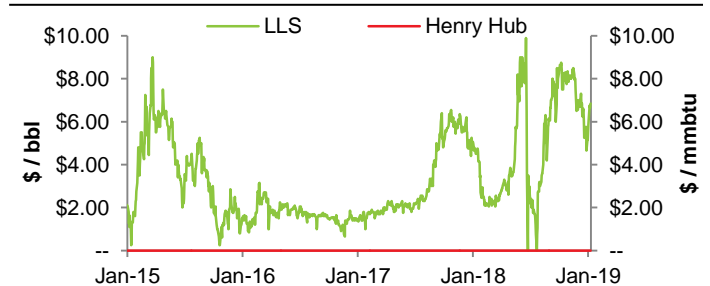
| Item | Value | Wkly Change | Last Week |
|---------------------|-------|-------------|-----------|
| Rig Count | 21 | ↓ (1) | 22 |
| Permitting Activity | 0 | ↓ (2) | 2 |

| Item | Value | Wkly Change | Last Week |
|------------------|--------|-------------|-----------|
| Oil Differential | \$6.85 | ↑ \$1.00 | \$5.85 |
| Gas Differential | -- | --- | -- |

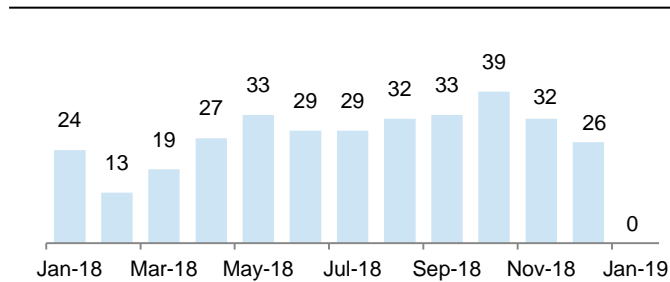
RIG COUNT



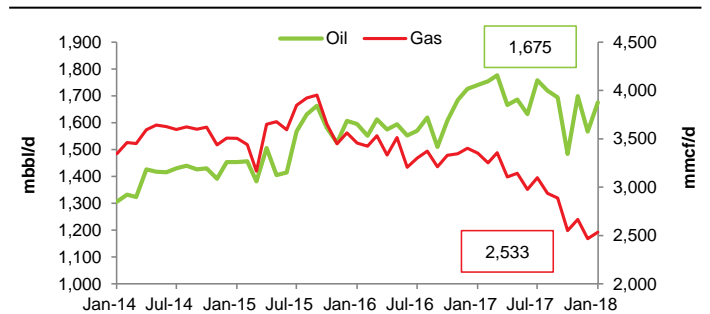
DIFFERENTIALS



PERMITTING ACTIVITY BY MONTH⁽¹⁾



GROSS PRODUCTION

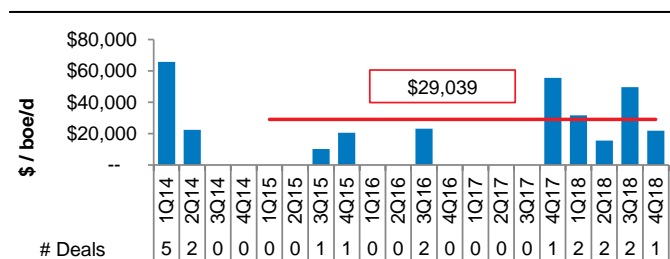


TRANSACTION ACTIVITY (EXCLUDES CORPORATE DEALS)

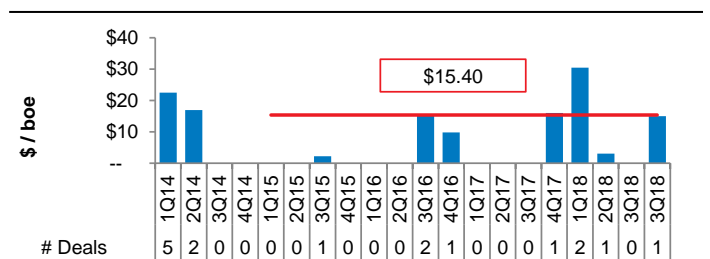
| Ann'd Date | Buyer | Seller | Asset Description | Value ⁽²⁾ (\$mm) | Proved Multiple (\$/boe) | Prod. Multiple (\$/boe/d) | Net Acres (\$/acre) ⁽³⁾ |
|------------|------------------|-----------------------------|---|--------------------------------|-----------------------------|------------------------------|---------------------------------------|
| 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 | \$32,581 | n.a. |
| | | | | Median | \$91 | \$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.



January 14, 2019

[Click event to open](#)

Upcoming Industry Events

January 2019

| | |
|------------------------|--|
| Jan 15 | Houston Producers Forum Luncheon |
| Jan 24 | IPAA Private Capital Conference |
| Jan 25 | ADAM-Houston Monthly Luncheon |
| Jan 31 | SPE A&D Symposium |

February 2019

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

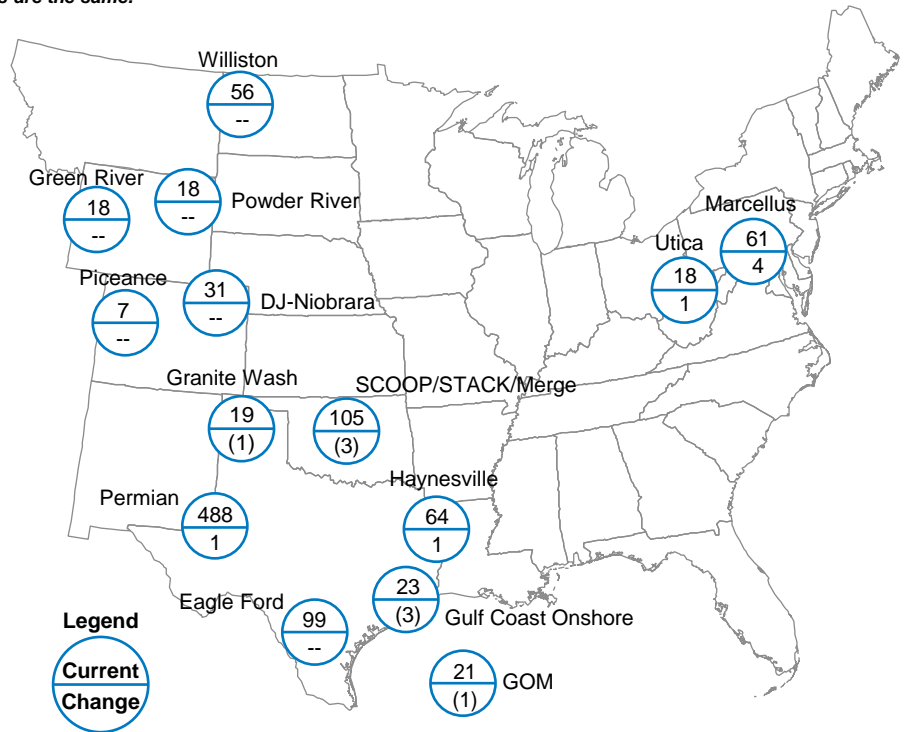


January 14, 2019

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 | 1,075 | -- | 1,075 | 939 |
| Oil | 873 | (4) | 877 | 752 |
| Gas | 202 | 4 | 198 | 187 |
| Miscellaneous | -- | -- | -- | -- |
| Directional | 62 | (4) | 66 | 72 |
| Horizontal | 948 | 3 | 945 | 805 |
| Vertical | 65 | 1 | 64 | 62 |
| Basin | | | | |
| Permian | 488 | 1 | 487 | 403 |
| SCOOP/STACK/Merge | 105 | (3) | 108 | 97 |
| Granite Wash | 19 | (1) | 20 | 20 |
| Eagle Ford | 99 | -- | 99 | 84 |
| Haynesville | 64 | 1 | 63 | 58 |
| Marcellus | 61 | 4 | 57 | 49 |
| Utica | 18 | 1 | 17 | 28 |
| Williston | 56 | -- | 56 | 46 |
| DJ-Niobrara | 31 | -- | 31 | 27 |
| Green River | 18 | -- | 18 | 26 |
| Powder River | 18 | -- | 18 | 9 |
| Piceance | 7 | -- | 7 | 8 |
| Gulf Coast Onshore | 23 | (3) | 26 | 15 |
| GOM | 21 | (1) | 22 | 19 |
| Alaska | 9 | -- | 9 | 6 |
| Other | 38 | 1 | 37 | 44 |
| Mid-Con | 23 | 1 | 22 | 22 |
| Rockies | 3 | -- | 3 | 5 |
| Western | 10 | -- | 10 | 14 |
| Eastern | 2 | -- | 2 | 3 |



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Transactions Coordinator

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