PENN VIRGINIA CORPORATION

# Barclays CEO Energy-Power Conference Presentation

September 3, 2019

# Forward-Looking and Cautionary Statements

PENN VIRGINIA CORPORATION

Certain statements contained herein that are not descriptions of historical facts are “forward-looking” statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. We use words such as “anticipate,” “guidance,” “assumptions,” “projects,” “estimates,” “outlook,” “expects," "continues," "intends," “plans,” "believes," “working,” “beyond,” “forecasts," "future,“ “potential,” “may,” “foresee,” “possible,” “should,” “would,” “could” and variations of such words or similar expressions in this presentation to identify forward-looking statements. Because such statements include assumptions, risks, uncertainties and contingencies, actual results may differ materially from those expressed or implied by such forward-looking statements. These risks, uncertainties and contingencies include, but are not limited to, the following: our ability to satisfy our short-term and long-term liquidity needs, including our ability to generate sufficient cash flows from operations or to obtain adequate financing to fund our capital expenditures and meet working capital needs; negative events or publicity adversely affecting our ability to maintain our relationships with our suppliers, service providers, customers, employees, and other third parties; plans, objectives, expectations and intentions contained in this communication that are not historical; our ability to execute our business plan in volatile and depressed commodity price environments; any decline in and volatility of commodity prices for oil, natural gas liquids or NGLs, and natural gas; our anticipated production and development results; our ability to develop, explore for, acquire and replace oil and natural gas reserves and sustain production; our ability to generate profits or achieve targeted reserves in our development and exploratory drilling and well operations; our ability to renew or replace expiring contracts on acceptable terms; any impairments, write-downs or write-offs of our reserves or assets; the projected demand for and supply of oil, NGLs and natural gas; our ability to contract for drilling rigs, frac crews, materials, supplies and services at reasonable costs; our ability to meet guidance, market expectations and internal projections, including type curves; our ability to obtain adequate pipeline transportation capacity for our oil and gas production at reasonable cost and to sell the production at, or at reasonable discounts to, market prices; the uncertainties inherent in projecting future rates of production for our wells and the extent to which actual production differs from that estimated in our proved oil and natural gas reserves; use of new techniques in our development, including choke management and longer laterals; drilling and operating risks; concentration of assets; our ability to compete effectively against other oil and gas companies; leasehold terms expiring before production can be established and our ability to replace expired leases; environmental obligations, results of new drilling activities, locations and methods, costs and liabilities that are not covered by an effective indemnity or insurance; the timing of receipt of necessary regulatory permits; the effect of commodity and financial derivative arrangements, and counterparty risk related to the ability of parties to these arrangements to meet their future obligations; the occurrence of unusual weather or operating conditions, including force majeure events and hurricanes; our ability to retain or attract senior management and key employees; our reliance on a limited number of customers and a particular region for substantially all of our revenues and production; compliance with and changes in governmental regulations or enforcement practices, especially with respect to environmental, health and safety matters; physical, electronic and cybersecurity breaches; litigation that impacts us, our assets or our midstream service providers; uncertainties relating to general domestic and international economic and political conditions; actions by our shareholders; and other risks set forth in our filings with the SEC. Additional information concerning these and other factors can be found in our press releases and public filings with the SEC. Many of the factors that will determine our future results are beyond the ability of management to control or predict. In addition, readers should not place undue reliance on forward-looking statements, which reflect management’s views only as of the date hereof. The statements in this communication speak only as of the date of communication. We undertake no obligation to revise or update any forward-looking statements, or to make any other forward-looking statements, whether as a result of new information, future events or otherwise, except as may be required by applicable law.

**Oil and Gas Reserves**

Statements of reserves are only estimates and may not correspond to the ultimate quantities of oil and gas recovered. Investors are urged to consider closely the disclosure in Penn Virginia’s public filings with the SEC, including its Annual Report on Form 10-K for the fiscal year ended December 31, 2018 and subsequent Quarterly Reports on Form 10-Q, which are available on its website at www.pennvirginia.com under Investors – SEC Filings. You can also obtain these reports from the SEC’s website at www.sec.gov.

**Definitions**

Proved reserves are those quantities of oil and gas which, by analysis of geosciences and engineering data, can be estimated with reasonable certainty to be economically producible from a given date forward, from known reservoirs, and under existing economic conditions, operating methods and government regulation before the time at which contracts providing the right to operate expire, unless evidence indicates that renewal is reasonably certain, regardless of whether the estimate is a deterministic estimate or probabilistic estimate. Probable reserves are those additional reserves that are less certain to be recovered than proved reserves, but which are as likely than not to be recoverable (there should be at least a 50% probability that the quantities actually recovered will equal or exceed the proved plus probable reserve estimates). Possible reserves are those additional reserves that are less certain to be recoverable than probable reserves (there should be at least a 10% probability that the total quantities actually recovered will equal or exceed the proved plus probable plus possible reserve estimates). Estimated ultimate recovery (EUR) is the sum of reserves remaining as of a given date and cumulative production as of that date. EUR is a measure that by its nature is more speculative than estimates of reserves prepared in accordance with SEC definitions and guidelines and accordingly is less certain.

**Cautionary Statements**

The estimates and guidance presented in this presentation, including those regarding inventory of drilling locations, are based on assumptions of capital expenditure levels, prices for oil, natural gas and NGLs, current indications of supply and demand for oil, well results and operating costs. The guidance, estimates and type curves provided or used in this presentation does not constitute any form of guarantee or assurance that the matters indicated will be achieved. Statements regarding inventory are based on current information, assumptions regarding well costs, the drilling program and economics and are subject to material change. The number of locations shown as being in the Company’s current estimated inventory is not a guarantee of the number of wells that will actually be drilled and completed or the results or return that will be achieved. While we believe these estimates and the assumptions on which they are based are reasonable, they are inherently uncertain and are subject to, among other things, significant business, economic, operational and regulatory risks and uncertainties and are subject to material revision. Actual results may differ materially from estimates and guidance.

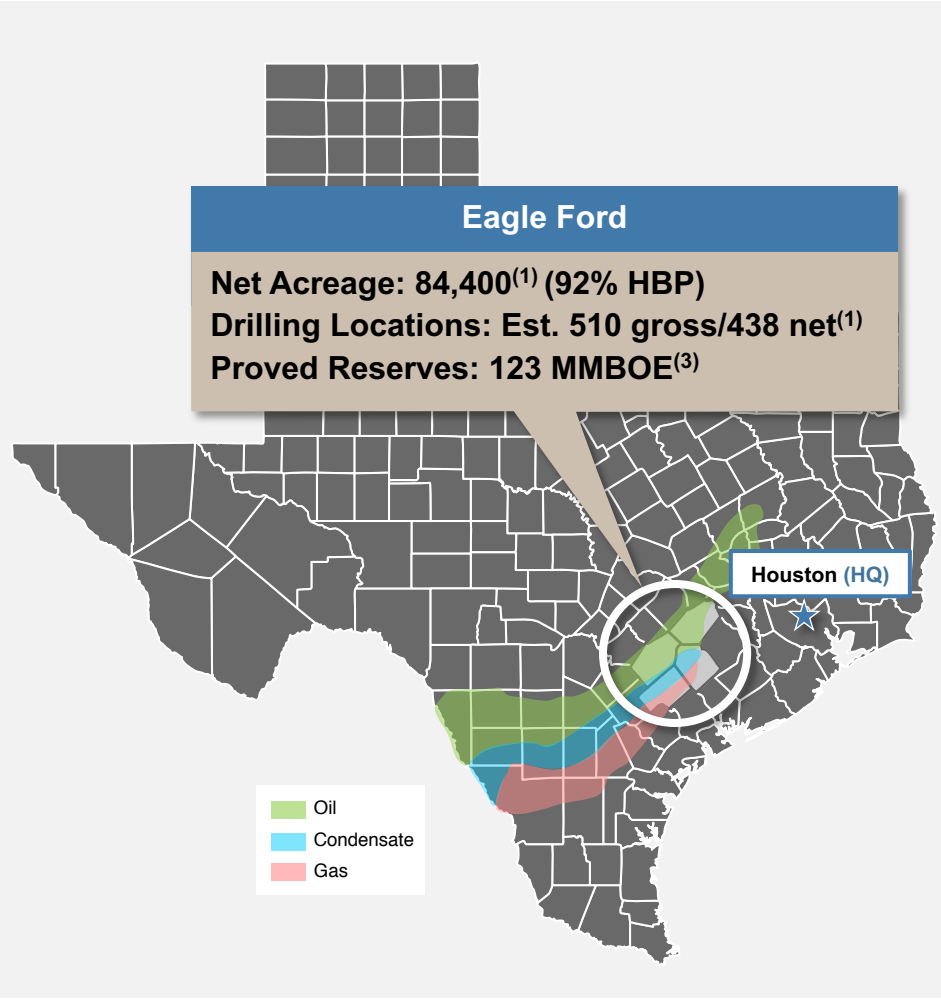
**Reconciliation of Non-GAAP Financial Measures**

This presentation contains references to certain non-GAAP financial measures. Reconciliations between GAAP and non-GAAP financial measures are available in the appendix to this presentation. The non-GAAP financial measures presented may not provide information that is directly comparable to that provided by other companies, as other companies may calculate such financial results differently. The Company's non-GAAP financial measures are not measurements of financial performance under GAAP and should not be considered as alternatives to amounts presented in accordance with GAAP. The Company views these non-GAAP financial measures as supplemental and they are not intended to be a substitute for, or superior to, the information provided by GAAP financial results.

# Company Overview

PENN VIRGINIA CORPORATION

- 98,500 gross (84,400 net) acres[1] in Gonzales, Fayette, Lavaca and DeWitt counties; 99% Operated; 92% HBP
- Substantial Lower Eagle Ford inventory estimated at 510 gross locations (438 net)[1]
- Production: 72% oil / 87% liquids[2]; access to LLS/MEH markets and robust adjusted EBITDAX margins
- Targeting Y-o-Y production growth of 25-30% for 2019 with 2-rig development program
- SEC PV-10 ($MM) $1,769[3][4]




1) As of June 30, 2019.
2) For the second quarter 2019.
3) As of December 31, 2018.
4) PV-10 value is a non-GAAP measure reconciled to GAAP standardized measure in the appendix of this presentation.

# 2Q 2019 Highlights

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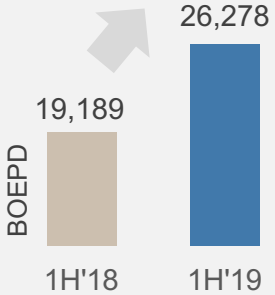
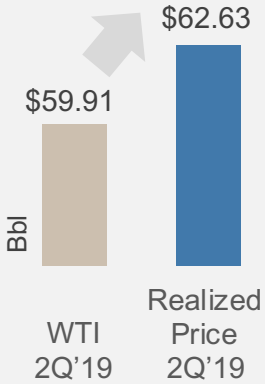
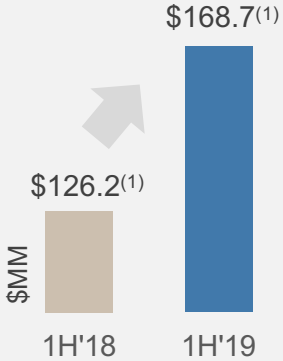
Grew Production **37%**



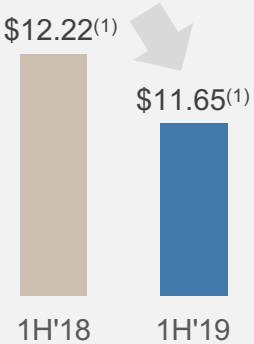

Realized **105%** of WTI



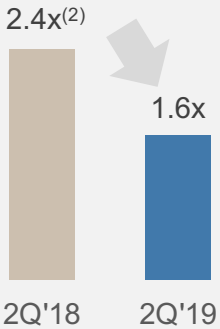

Increased Adjusted EBITDAX **34%**



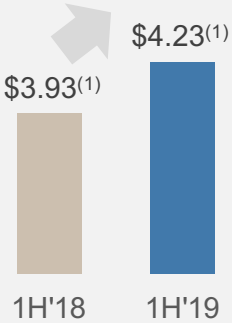

Adjusted Direct Operating Expenses per BOE Improved **5%**




Reduced Leverage Ratio **33%**




Grew Adjusted Net Income per Share **8%**




1) These non-GAAP financial measures are defined and reconciled in the appendix of this presentation.
2) Pro forma for acquisitions.

# Keys to Continued Success

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**Expect to Generate Free Cash Flow in 4Q 2019**

# 2019 Capital Plan

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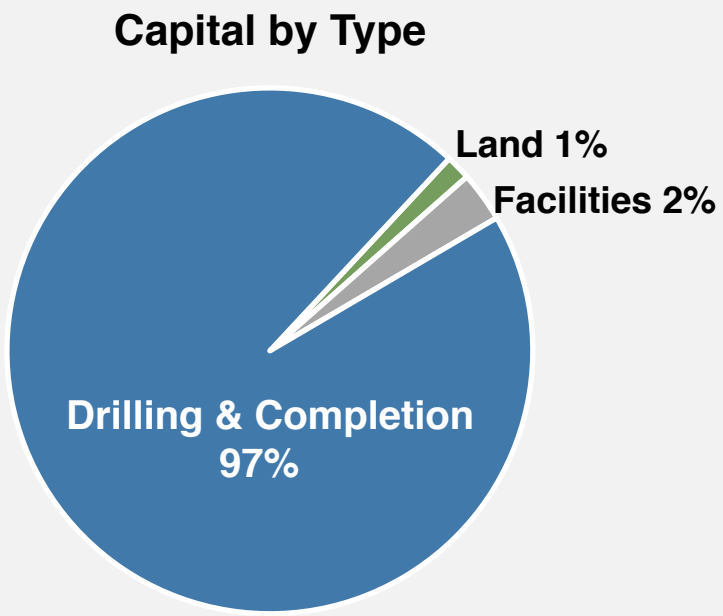
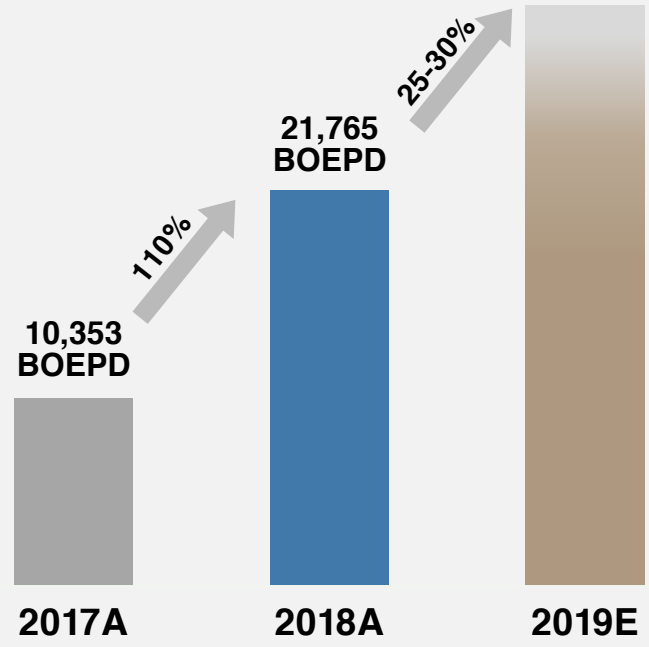
- Estimated Capital Expenditures: Between $335 MM and $355 MM
- Expect to Drill ~44 Gross Wells (~39 Net Wells)
- Expect to Turn in Line ~46 Gross Wells (~41 Net Wells)
- Plan Calls for 2-rig Development Program for the Second Half of 2019
- Elected to Defer EOR Capital, Engineering Work Continuing




**Expect to Generate Free Cash Flow in 4Q 2019**

Note: Guidance as of August 8, 2019. All guidance is subject to change without notice depending upon a number of factors, including commodity prices, industry conditions and other factors that are beyond the Company's control. The Company undertakes no obligation to update its guidance.

# Ground Game to Manage Inventory Life

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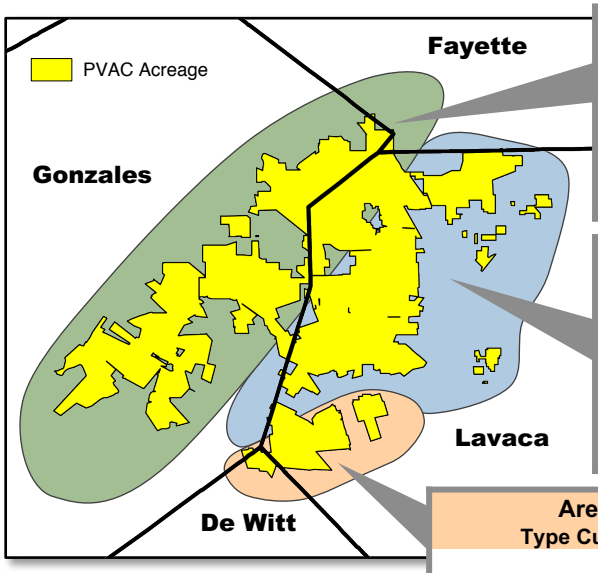



**Area 1**
**Type Curve Parameters**

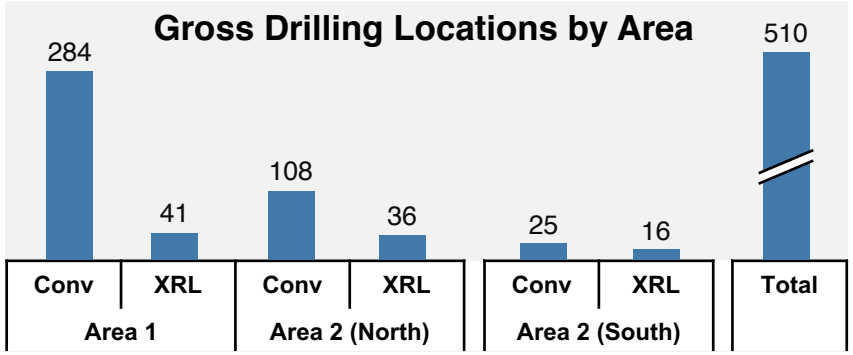
| | Conv | XRL |
|---|---|---|
| % Liquids | 94% | 94% |
| EUR/1,000 ft (MBOE) | 90 | 90 |
| Lateral Length | 6,000 | 8,800 |
| Well Cost (MM$) | 6.0 | 7.5 |

**Area 2 (North)**
**Type Curve Parameters**

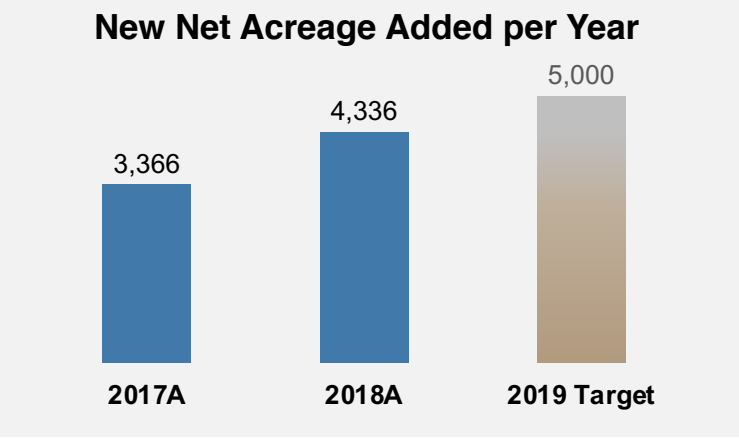
| | Conv | XRL |
|---|---|---|
| % Liquids | 87% | 87% |
| EUR/1,000 ft (MBOE) | 98 | 98 |
| Lateral Length | 6,200 | 9,200 |
| Well Cost (MM$) | 7.0 | 8.6 |

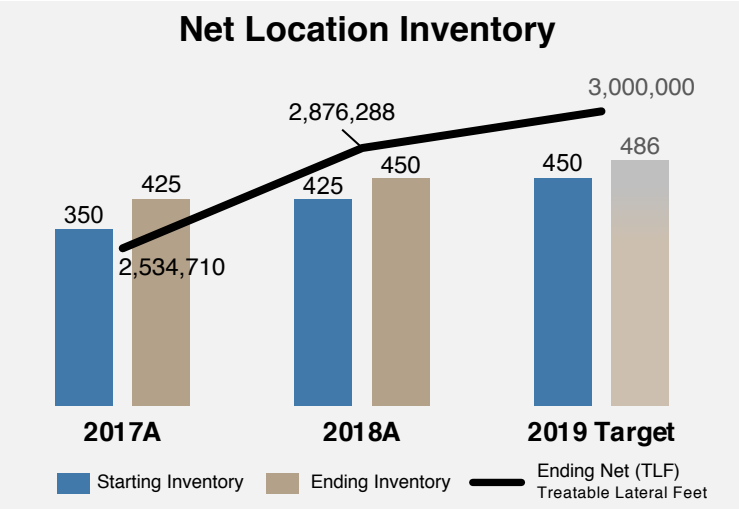
**Area 2 (South)**
**Type Curve Parameters**

| | Conv | XRL |
|---|---|---|
| % Liquids | 78% | 78% |
| EUR/1,000 ft (MBOE) | 105 | 105 |
| Lateral Length | 6,000 | 10,000 |
| Well Cost (MM$) | 6.9 | 9.1 |




Successful Track Record Of Growing Inventory Through Leasing, Swaps, Acquisitions and Delineation




Note: Based on managements' internal assumptions and estimates as of June 30, 2019. Please read "Cautionary Statements" on page 2.

# Selling into LLS/MEH Market

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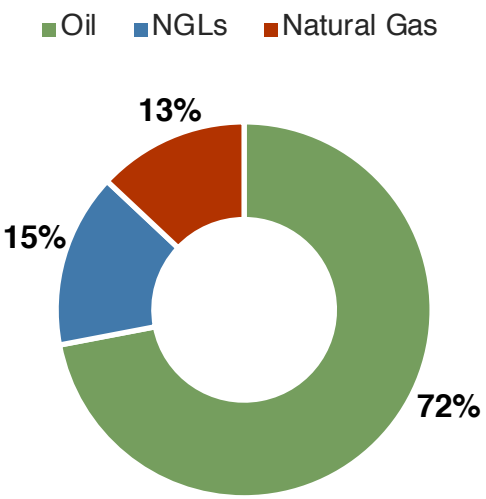
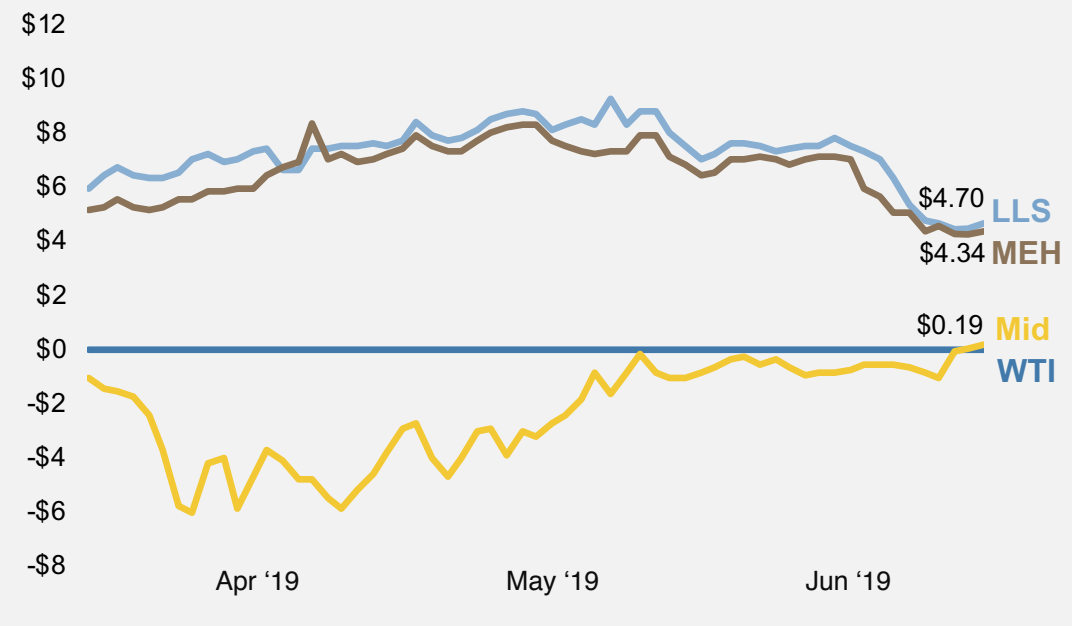
## LLS/MEH – Commanding Significant Premium Over WTI and Midland Prices

- 2Q 2019 Production: 87% Liquids; 72% Oil
- Receives LLS/MEH Pricing, Premium Over WTI and Midland
- Realized $62.63 per Barrel in 2Q 2019, or 105% of WTI
- Blended Oil Yields ~45 Degree API Gravity

### 2Q 2019 Production Mix




### 2Q 2019 – LLS vs. WTI vs. MEH and Midland Pricing



# Strategic Solutions Driving LOE Costs Lower

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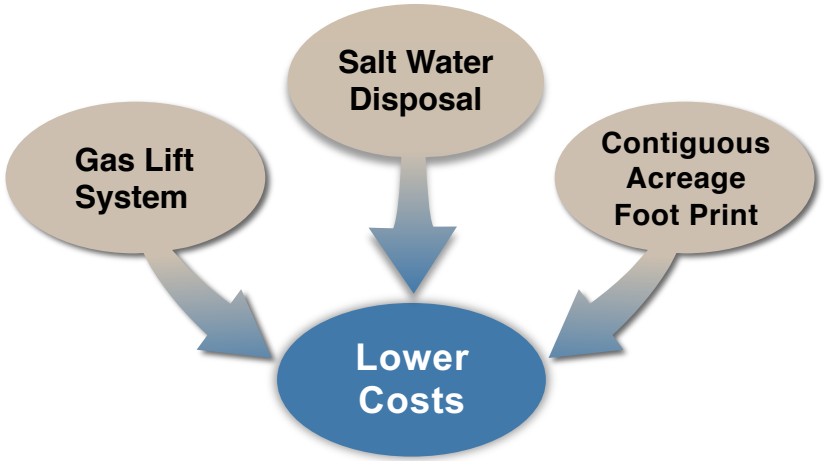
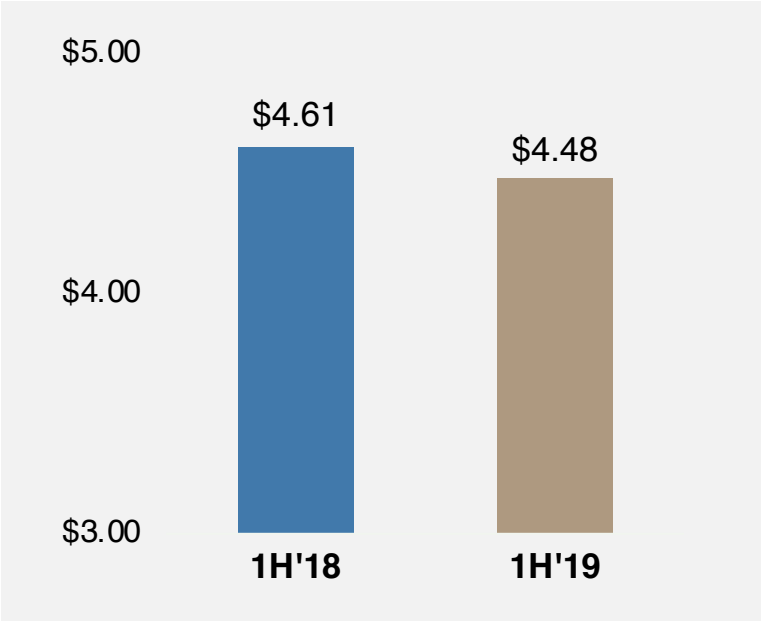
## Focused on Lowering LOE Costs




- Gas Lift System
  - ~80% of PVAC wells on gas lift
  - Minimizes downhole repairs and maximizes uptime
- Salt Water Disposal System ("SWD")
  - 30-35% of water volumes on pipe
  - Reduces LOE by ~$1.25 per barrel of water
  - ~22 miles of SWD gathering lines
- Contiguous Acreage Position Allows for Infrastructure Buildout and Competitive Edge of Low-cost Operator
- Oil / Gas Pipeline Infrastructure Buildout Cost Borne by Third Parties



# Crude Oil Delivery Optionality

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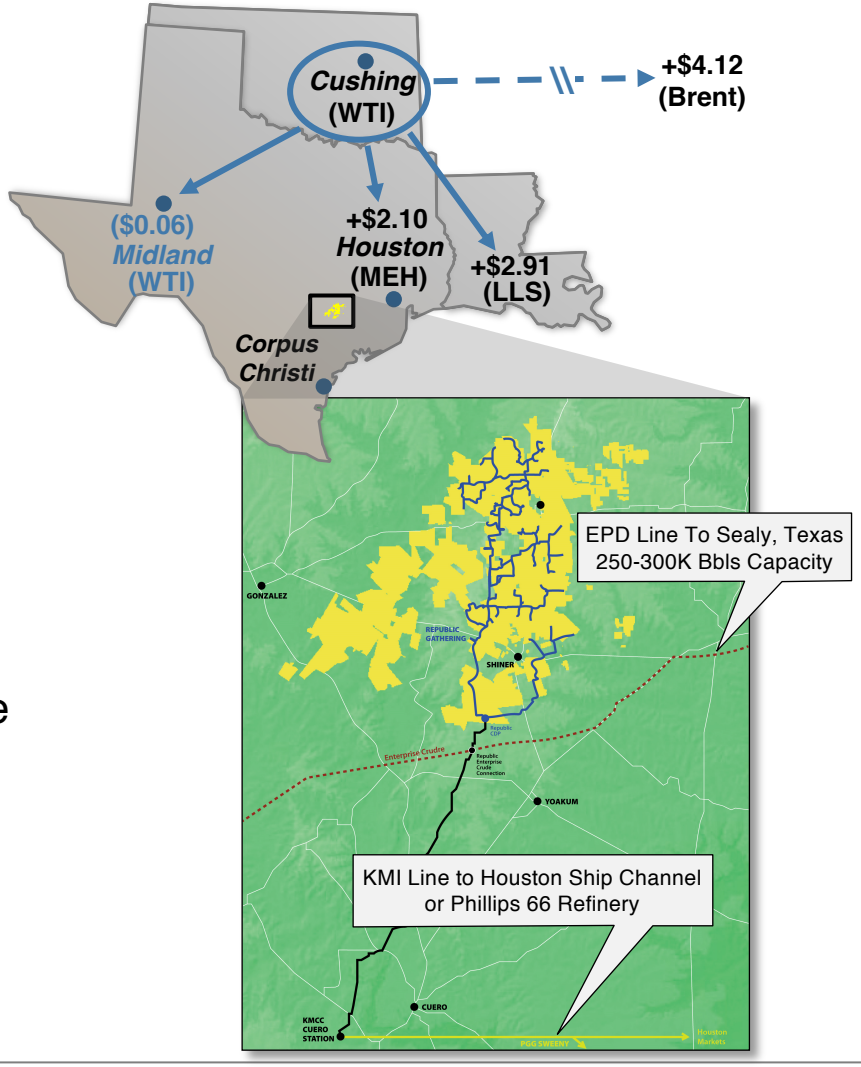
- Geographic Location Provides PVAC's Production Access to LLS/MEH Markets and Pricing
- Four Delivery Points
  - Kinder Morgan (KMI)
  - Enterprise Products (EPD) (Eagle Ford Crude Oil System)
  - Philips 66 Refinery – Sweeny Texas
  - Trucking to Texas Gulf Coast Ports
- Excess Capacity on Kinder Morgan and Enterprise Products Pipelines
- ~85% of PVAC Oil Production on Pipe

**Crude Spreads Balance of 2019[1]**




1) As of August 27, 2019.

# Increasing Production

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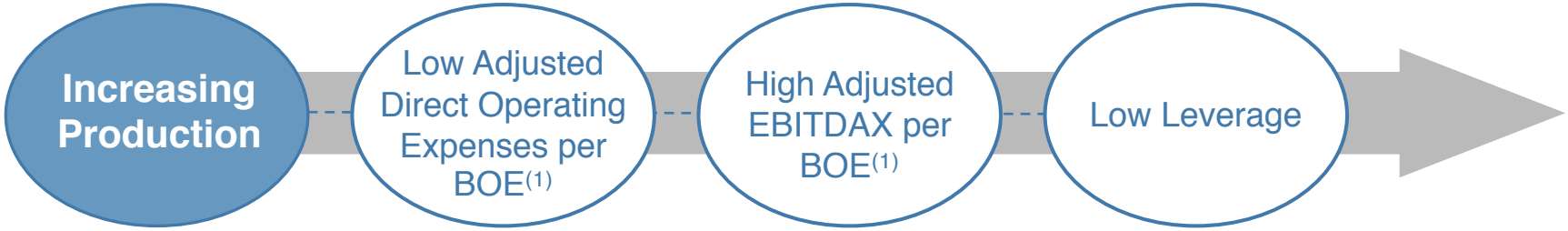
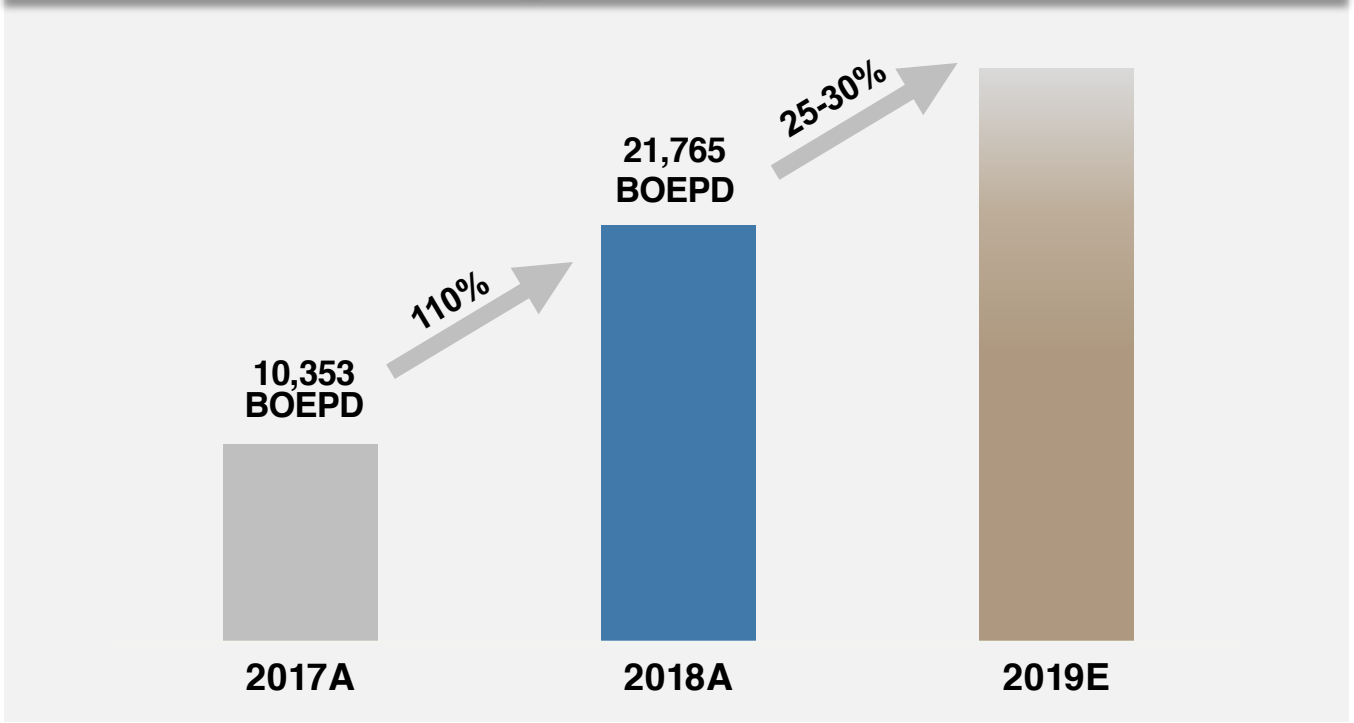



## Meaningful Production Growth

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1) These non-GAAP financial measures are defined and reconciled in the appendix of this presentation.

# Adjusted Direct Operating Expenses per BOE[1][2]

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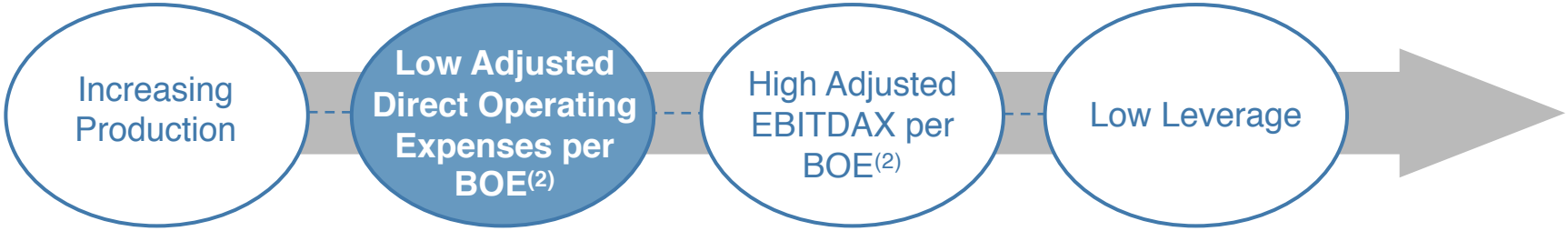
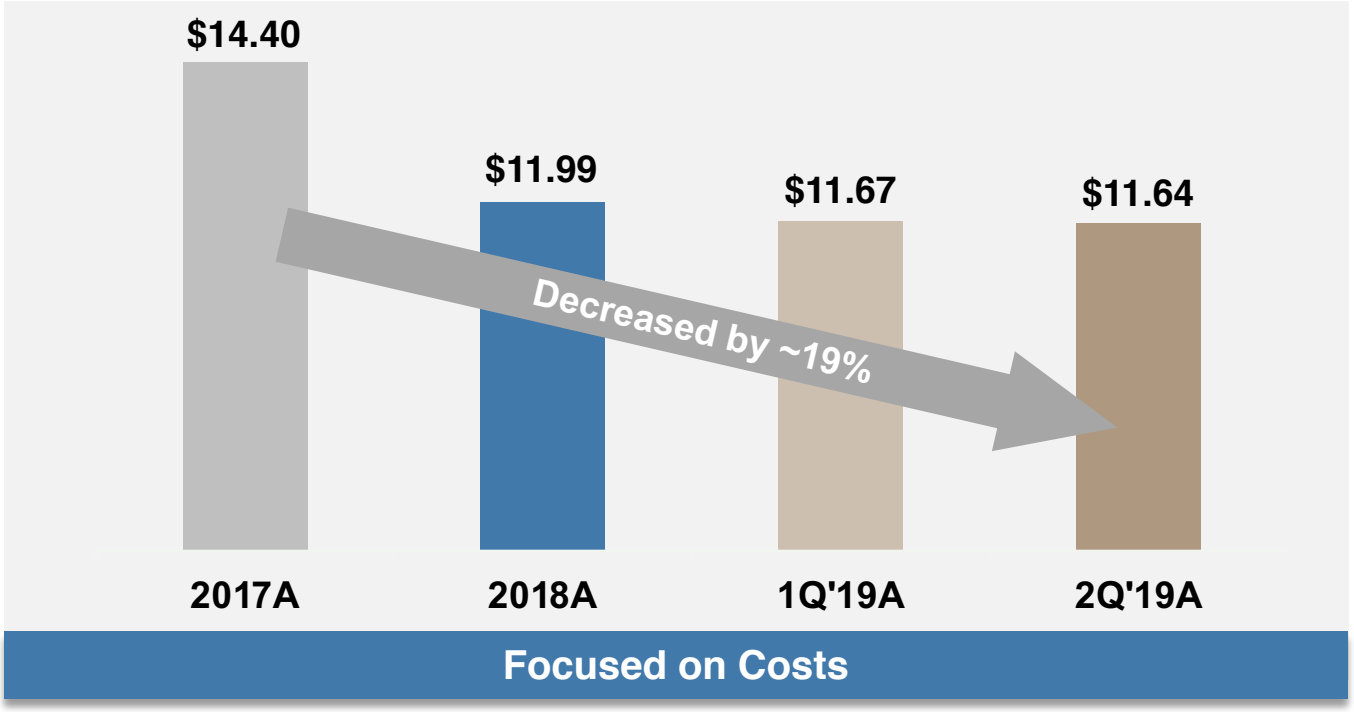



- LOE per BOE declined by ~29% from 2017
- Adjusted Cash G&A[2] per BOE declined by ~41% from 2017




1) Adjusted Direct Operating Expenses per BOE is comprised of the sum of (Lease Operating Expense + GPT Expense + Adjusted Cash G&A Expense[2] + Production and Ad Valorem Taxes)/Total Production.
2) Adjusted Direct Operating Expenses per BOE, Adjusted EBITDAX per BOE and Adjusted Cash G&A per BOE are non-GAAP financial measures. Definitions of non-GAAP financial measures and reconciliations of non-GAAP financial measures to the closest GAAP-based financial measures appear at the end of this presentation.

# PVAC vs. Eagle Ford Peers

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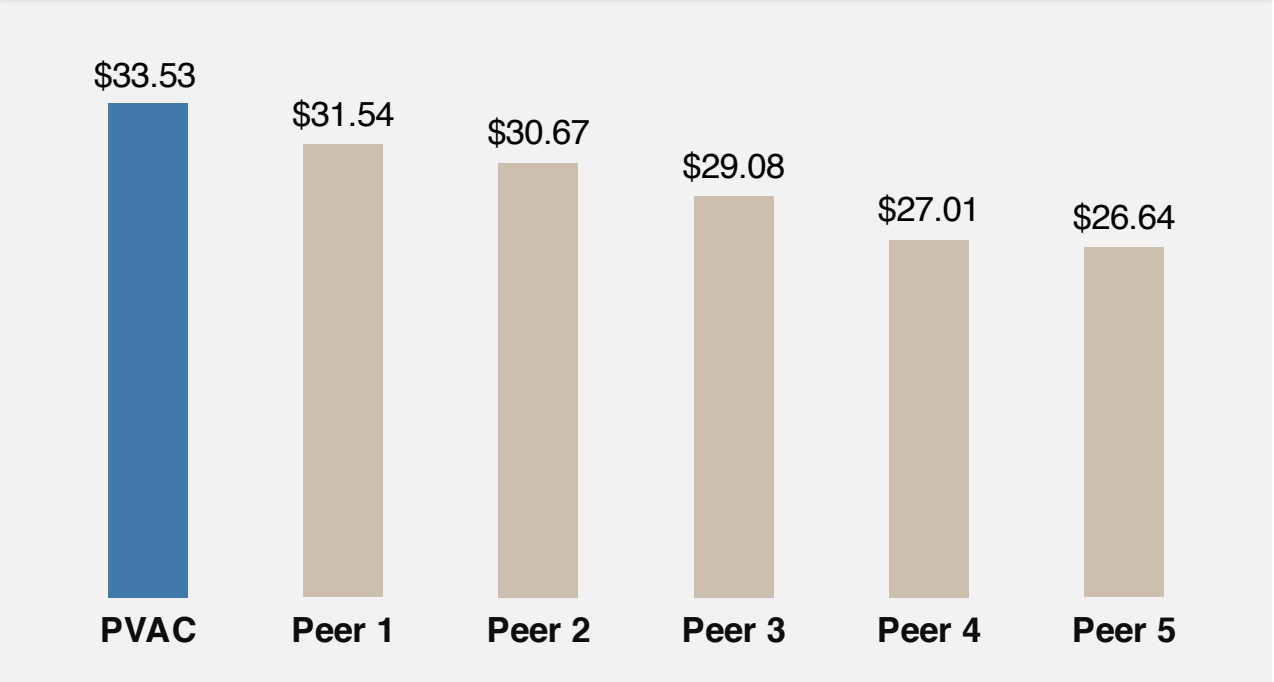
## The Highest Adjusted EBITDAX/BOE in PVAC's Peer Group[1][2]




*Disclaimer: Historical data for PVAC is based on actual reported results and historical data for peer companies are sourced from press releases, filings, presentations and other public data. Penn Virginia does not imply its endorsement of, or concurrence with, such information. The figures are provided for information purposes only and should not be relied upon in making an investment decision.*

Source: Public filings. Definitions of Adjusted EBITDAX may vary and, as such, the measure may not be directly comparable among PVAC and the peers. Adjusted EBITDAX per BOE for PVAC is defined and reconciled to GAAP measure in the appendix.

1) Peers include: CRZO, ESTE, LONE, MGY and SNDE.
2) For the second quarter of 2019.

# Adjusted EBITDAX per BOE[1]

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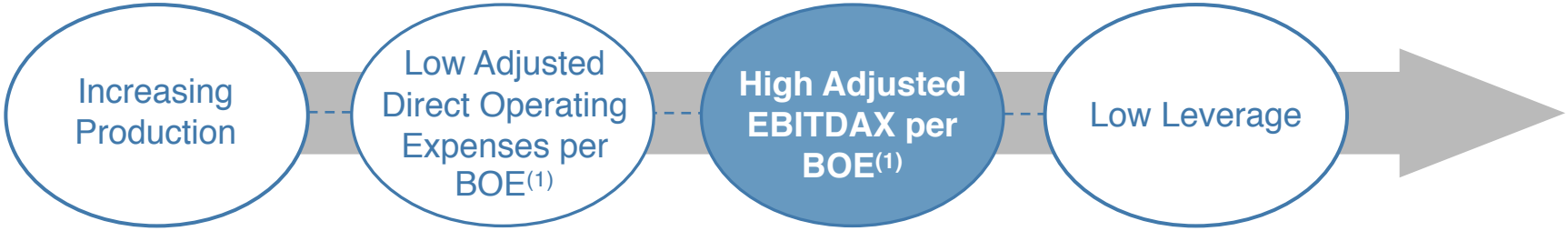
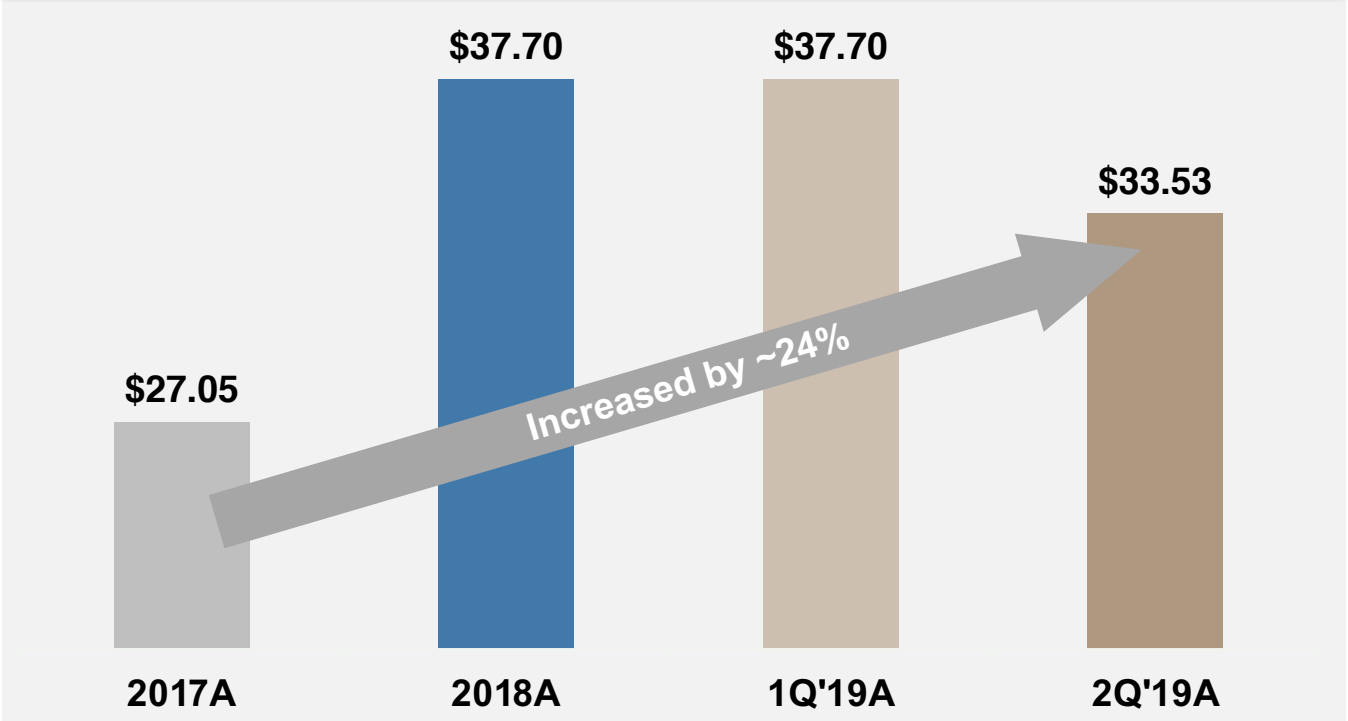



## LLS/MEH Pricing and Low Cost Structure Yield Strong Margins




1) Adjusted Direct Operating Expenses per BOE and Adjusted EBITDAX per BOE are non-GAAP financial measures. Definitions of non-GAAP financial measures and reconciliations of non-GAAP financial measures to the closest GAAP-based financial measures appear at the end of this presentation.

# PVAC vs. Eagle Ford Peers - Leverage

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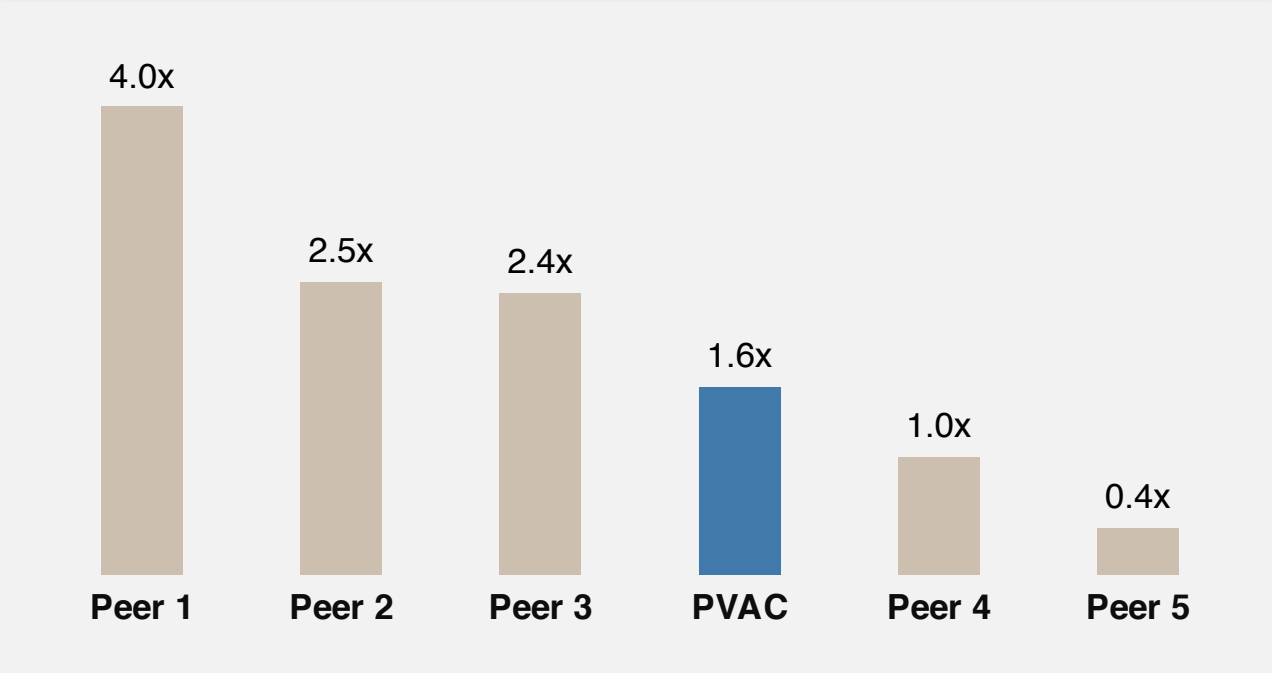
## One of the Lowest Net Debt / Adjusted EBITDAX[1][2]

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Source: Public filings. Definitions of Adjusted EBITDAX may vary and, as such, the measure may not be directly comparable among PVAC and the peers.

1) Peers include: CRZO, ESTE, LONE, MGY and SNDE.
2) For the second quarter of 2019 LTM.

# Balance Sheet Improvement

*Net Debt to LTM Adjusted EBITDAX*

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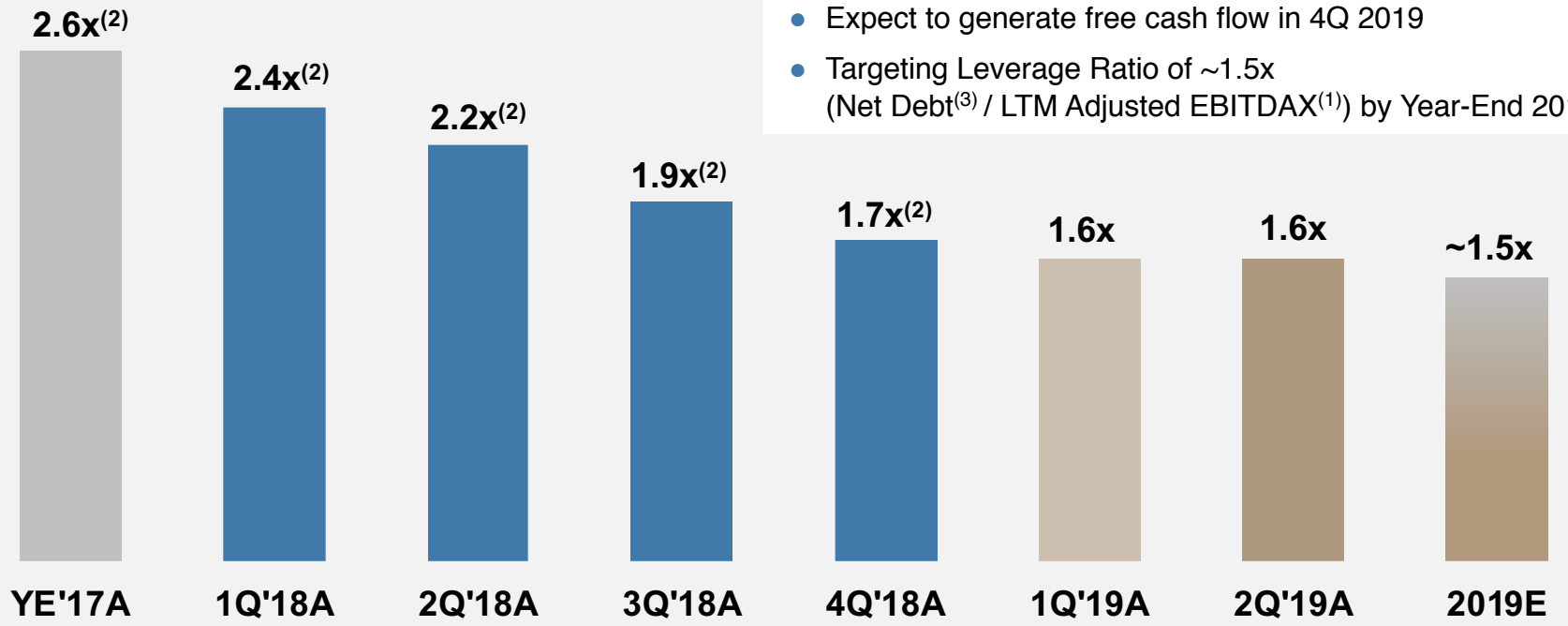
- Expect to generate free cash flow in 4Q 2019
- Targeting Leverage Ratio of ~1.5x (Net Debt(3) / LTM Adjusted EBITDAX(1)) by Year-End 2019




**Cash Flow Growth Continues to Improve Balance Sheet**

1) These non-GAAP financial measures are defined and reconciled in the appendix of this presentation.
2) Pro forma for acquisitions and divestitures.
3) Net Debt is defined as total debt less cash and cash equivalents.

# PVAC vs. Eagle Ford Peers - Valuation

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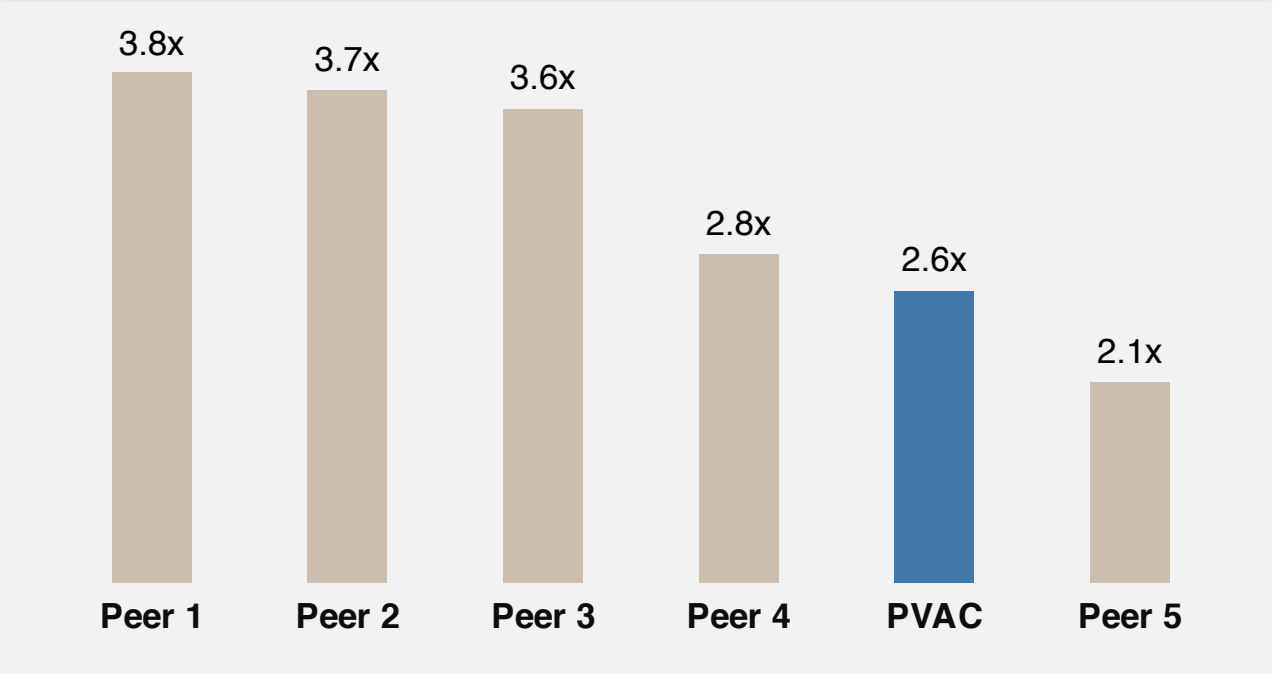
## EV/EBITDA Penn Virginia Provides Attractive Valuation[1][2]




*Disclaimer: Forward looking data for PVAC and peers are based on the arithmetic average of all consensus estimates publicly available at the time of publication of the consensus figures on Nasdaq Insight. Any opinions, forecasts, estimates, projections or predictions regarding Penn Virginia and its peers' performance made in such public data by our peers or by the analysts are theirs alone and do not in any way represent the opinions, forecasts, estimates, projections or predictions of Penn Virginia or its management. In providing these figures, Penn Virginia does not imply its endorsement of, or concurrence with, such information. The figures are provided for information purposes only and should not be relied upon in making an investment decision.*

Source: Public filings. Definitions of EBITDA may vary and, as such, the measure may not be directly comparable among PVAC and the peers.

1) Peers include: CRZO, ESTE, LONE, MGY and SNDE.
2) TEV/2020E EBITDA = Total Enterprise Value / 2020 EBITDA.

# PVAC Investment Qualities

PENN VIRGINIA CORPORATION

1

**Low Cost Structure**

2Q'19 Adjusted Direct Operating Expense per BOE

$11.64

2

**Premium Pricing**

2Q'19 Realized Price

105% WTI

3

**High Margins**

2Q'19 Adjusted EBITDAX per BOE

$33.53

4

**Strong Balance Sheet**

2Q'19 Net Debt to EBITDAX

1.6x

5

**Production Growth**

2Q'19

13% Q-O-Q

**Expect to Generate Free Cash Flow in 4Q 2019 and Beyond**

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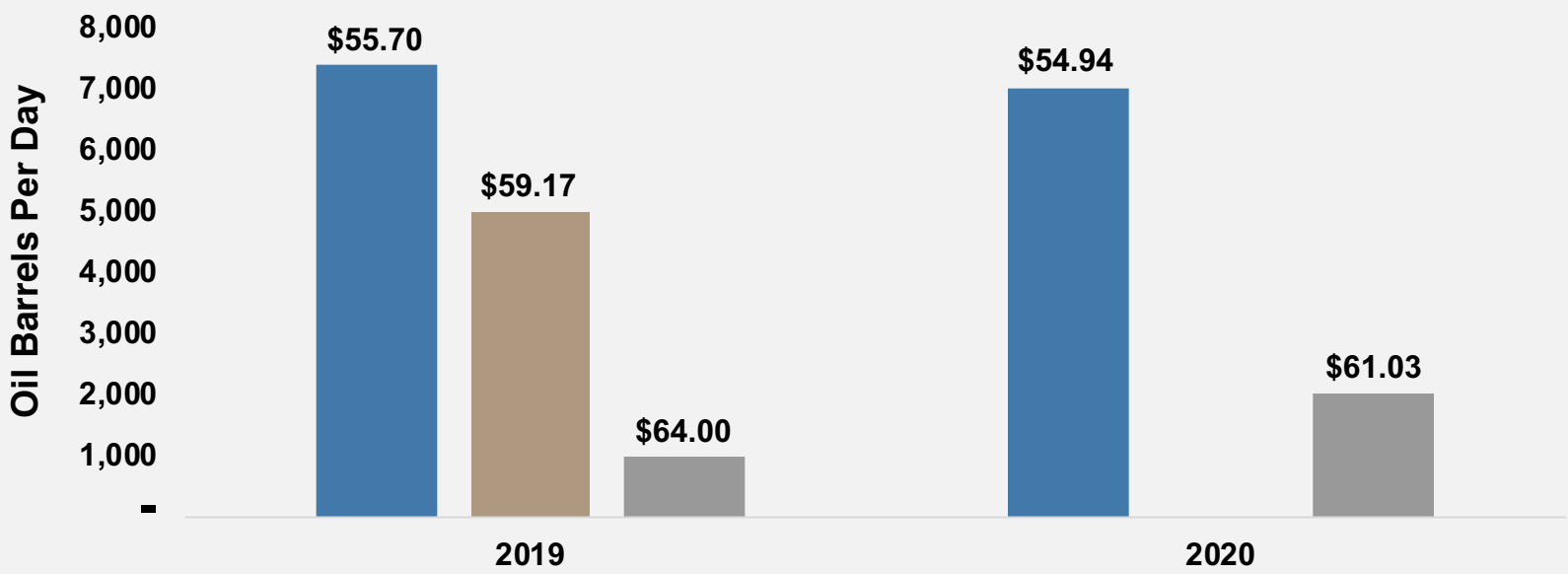
# Appendix

# Updated Hedge Portfolio[1]

PENN VIRGINIA CORPORATION

## Mitigating Commodity Price Volatility Through Proactive Hedging Program




| | WTI Volumes *(Bbls / Day)* | WTI Average Price *($ / Bbl)* | LLS Volumes *(Bbls / Day)* | LLS Average Price *($ / Barrel)* | MEH Volume *(Bbls/Day)* | MEH Average Price *($/Bbls)* |
|---|---|---|---|---|---|---|
| **Q3-Q4 2019** | 7,400 | $55.70 | 5,000 | $59.17 | 1,000 | $64.00 |
| **2020** | 7,000 | $54.94 | – | – | 2,000 | $61.03 |

1) As of June 30, 2019.

# Increased Proved Reserves by 69% Year over Year

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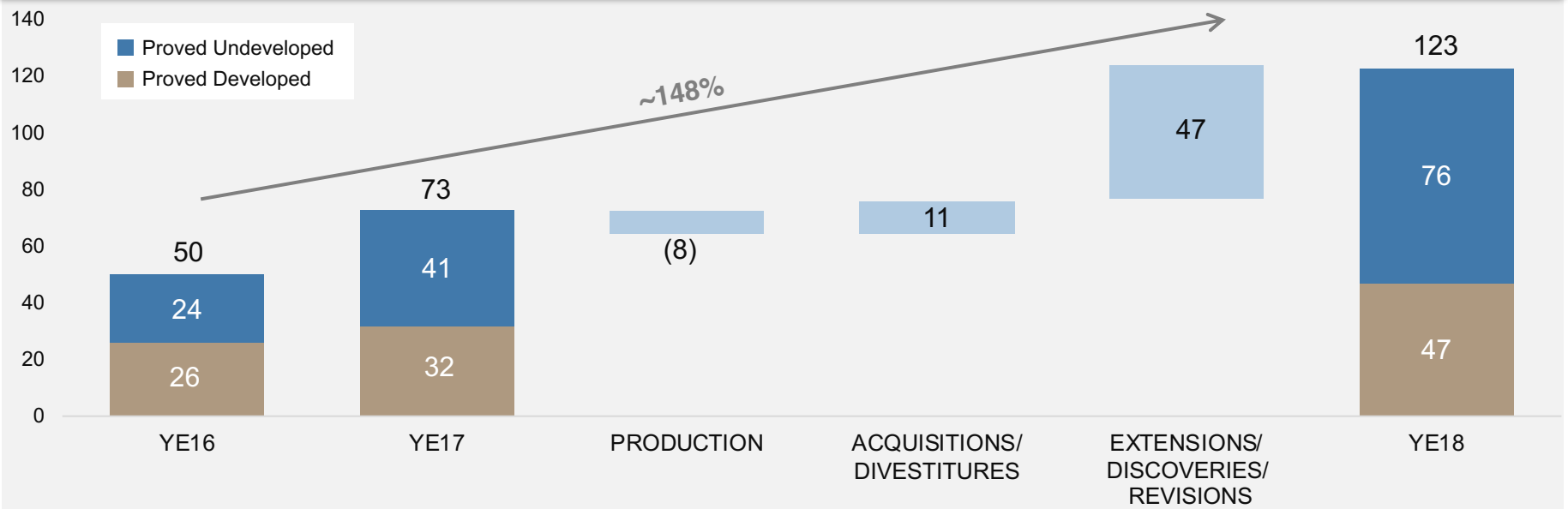
- YE18 total proved reserves up 69% year over year
  - Proved developed reserves up 47% from year-end 2017
  - Proved reserves up 148% from year-end 2016
- Total reserves replacement[1] of 734%
- SEC PV-10 ($MM) of $1,769[2][3]

## Proved Reserves Summary

| YE18 | Oil MMBbl | Gas MMcf | NGL MMBbl | Total MMBoe |
|---|---|---|---|---|
| PDP | 35.2 | 31.8 | 6.2 | 46.8 |
| PUD | 54.5 | 59.7 | 11.8 | 76.2 |
| **Total Proved** | **89.7** | **91.5** | **18.0** | **123.0** |

## Reserves Roll-Forward




1) For an explanation of this supplemental measure, see the section titled "Reserve Replacement Ratio Definition" at the end of this presentation.
2) As of December 31, 2018.
3) PV-10 is a Non-GAAP measure reconciled to GAAP standardized measure in the appendix of this presentation.

# Guidance

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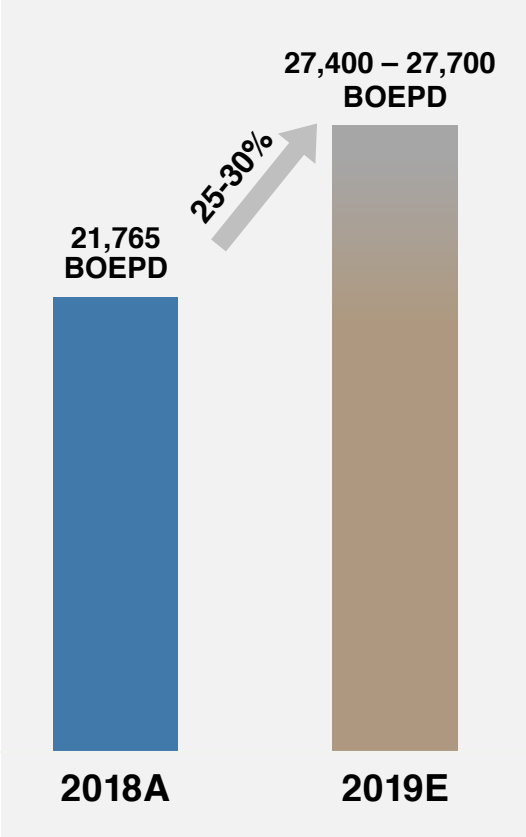
**The table below sets forth the Company's guidance for 2019:**

| | | % oil |
|---|---|---|
| **Production (BOEPD)** | | |
| Third Quarter | 28,400 - 29,100 | 75% |
| Full Year | 27,400 - 27,700 | 75% |
| **Realized Price Differentials** | | |
| Oil (premium to WTI, per barrel) | $0.00 - $2.00 | |
| Natural gas (off Henry Hub, per MMBtu) | $0.10 - $0.20 | |
| **Direct Operating Expenses** | | |
| Lease operating expenses (per BOE) | $4.30 - $4.50 | |
| GPT expenses (per BOE) | $2.25 - $2.75 | |
| Ad valorem and production taxes (percent of product revenue) | 6.0% - 6.5% | |
| Cash G&A expenses (per BOE) | $2.00 - $2.50 | |
| **Capital Expenditures (millions)** | $335 - $355 | |




**Expect to Grow Production by 25-30% in 2019**

Note: Guidance as of August 8, 2019. All guidance is subject to change without notice depending upon a number of factors, including commodity prices, industry conditions and other factors that are beyond the Company's control. The Company undertakes no obligation to update its guidance.

# Non-GAAP Reconciliation – "PV-10"

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**Reconciliation of GAAP "Standardized Measure of Discounted Future Net Cash Flows" to Non-GAAP "PV-10"**

Non-GAAP PV-10 value is the estimated future net cash flows from estimated proved reserves discounted at an annual rate of 10 percent before giving effect to income taxes. The standardized measure of discounted future net cash flows is the after-tax estimated future cash flows from estimated proved reserves discounted at an annual rate of 10 percent, determined in accordance with generally accepted accounting principles (GAAP). We use non-GAAP PV-10 value as one measure of the value of our estimated proved reserves and to compare relative values of proved reserves among exploration and production companies without regard to income taxes. We believe that securities analysts and rating agencies use PV-10 value in similar ways. Our management believes PV-10 value is a useful measure for comparison of proved reserve values among companies because, unlike standardized measure, it excludes future income taxes that often depend principally on the characteristics of the owner of the reserves rather than on the nature, location and quality of the reserves themselves.

**Discounted Future Net Cash Flows" to Non-GAAP "PV-10"**

| | December 31, | |
|---|---|---|
| | 2018 | 2017 |
| | (in thousands) | |
| Standardized measure of future discounted cash flows | $1,623,890 | $590,484 |
| Present value of future income taxes discounted at 10% | 145,462 | 18,486 |
| PV-10 | $1,769,352 | $608,970 |

# Non-GAAP Reconciliation – Reserve Replacement Ratio

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**Reserve Replacement Ratio - Definition**

The Company uses the reserve replacement ratio as an indicator of the Company's ability to replenish annual production volumes and grow its reserves, thereby providing some information on the sources of future production. The reserve replacement ratio is a statistical indicator that is limited because it typically varies widely based on the extent and timing of discoveries and property acquisitions. Its predictive and comparative value is also limited for the same reasons. In addition, since the ratio does not embed the cost or timing of future production of new reserves, it cannot be used as a measure of value creation. The reserve replacement ratio of approximately 734% was calculated by dividing net proved reserve additions of 58.3 MMBOE (the sum of extensions, discoveries, revisions, purchases and sales) by production of 7.9 MMBOE.

# Non-GAAP Reconciliation – Adjusted Net Income - Unaudited

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**Reconciliation of GAAP "Net income (loss)" to Non-GAAP "Adjusted net income"**

Adjusted net income is a non-GAAP financial measure that represents net income (loss) adjusted to include net cash settlements of derivatives and exclude the effects, net of income taxes, of non-cash changes in the fair value of derivatives, net gains on the sales of assets, acquisition, divestiture and strategic transaction costs, executive retirement costs and alternative minimum tax credit adjustments. We believe that Non-GAAP adjusted net income and non-GAAP adjusted net income per share amounts provide meaningful supplemental information regarding our operational performance. This information facilitates management's internal comparisons to the Company's historical operating results as well as to the operating results of our competitors. Since management finds this measure to be useful, the Company believes that our investors can benefit by evaluating both non-GAAP and GAAP results. Adjusted net income non-GAAP is not a measure of financial performance under GAAP and should not be considered as a measure of liquidity or as an alternative to net income (loss).

| | Three Months Ended | | | Six Months Ended | |
|---|---|---|---|---|---|
| | June 30, 2019 | March 31, 2019 | June 30, 2018 | June 30, 2019 | June 30, 2018 |
| | (in thousands, except per share amounts) | | | | |
| **Net income (loss)** | $ 51,625 | $ (38,697) | $ (2,521) | $ 12,928 | $ 7,774 |
| Adjustments for derivatives: | | | | | |
| Net losses (gains) | (13,603) | 68,017 | 52,241 | 54,414 | 71,036 |
| Cash settlements, net | (8,301) | 4,394 | (12,401) | (3,907) | (19,977) |
| Gain on sales of assets, net | (16) | (25) | (4) | (41) | (79) |
| Acquisition, divestiture and strategic transaction costs | 76 | 724 | 56 | 800 | 487 |
| Executive retirement costs | - | - | - | - | 250 |
| Alternative minimum tax credit adjustments to income taxes, net | - | - | - | - | 163 |
| **Adjusted net income** | $ 29,781 | $ 34,413 | $ 37,371 | $ 64,194 | $ 59,654 |
| **Net income (loss), per diluted share** | $ 3.40 | $ (2.56) | $ (0.17) | $ 0.85 | $ 0.51 |
| **Adjusted net income, per diluted share** | $ 1.96 | $ 2.25 | $ 2.46 | $ 4.23 | $ 3.93 |

# Non-GAAP Reconciliation – Adjusted EBITDAX - Unaudited

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**Reconciliation of GAAP "Net income (loss)" to Non-GAAP "Adjusted EBITDAX"**

Adjusted EBITDAX represents net income (loss) before interest expense, income taxes, depreciation, depletion and amortization expense and share-based compensation expense, further adjusted to include the net cash settlements of derivatives and exclude the effects of gains on sales of assets, non-cash changes in the fair value of derivatives, and special items including acquisition, divestiture and strategic transaction costs and executive retirement costs. We believe this presentation is commonly used by investors and professional research analysts for the valuation, comparison, rating, investment recommendations of companies within the oil and gas exploration and production industry. We use this information for comparative purposes within our industry. Adjusted EBITDAX is not a measure of financial performance under GAAP and should not be considered as a measure of liquidity or as an alternative to net income (loss). Adjusted EBITDAX as defined by Penn Virginia may not be comparable to similarly titled measures used by other companies and should be considered in conjunction with net income (loss) and other measures prepared in accordance with GAAP, such as operating income or cash flows from operating activities. Adjusted EBITDAX should not be considered in isolation or as a substitute for an analysis of Penn Virginia's results as reported under GAAP.

| | Three Months Ended | | | Six Months Ended | |
|---|---|---|---|---|---|
| | June 30, 2019 | March 31, 2019 | June 30, 2018 | June 30, 2019 | June 30, 2018 |
| | (in thousands, except per unit amounts) | | | | |
| **Net income (loss)** | $ 51,625 | $ (38,697) | $ (2,521) | $ 12,928 | $ 7,774 |
| Adjustments to reconcile to Adjusted EBITDAX: | | | | | |
| Interest expense, net | 9,056 | 9,478 | 6,150 | 18,534 | 10,751 |
| Income tax (benefit) expense | 818 | (24) | - | 794 | 163 |
| Depreciation, depletion and amortization | 44,298 | 38,870 | 31,273 | 83,168 | 53,354 |
| Share-based compensation expense (equity-classified) | 1,017 | 1,038 | 875 | 2,055 | 2,451 |
| Gain on sales of assets, net | (16) | (25) | (4) | (41) | (79) |
| Adjustments for derivatives: | | | | | |
| Net losses (gains) | (13,603) | 68,017 | 52,241 | 54,414 | 71,036 |
| Cash settlements, net | (8,301) | 4,394 | (12,401) | (3,907) | (19,977) |
| Adjustment for special items: | | | | | |
| Acquisition, divestiture and strategic transaction costs | 76 | 724 | 56 | 800 | 487 |
| Executive retirement costs | - | - | - | - | 250 |
| **Adjusted EBITDAX** | $ 84,970 | $ 83,775 | $ 75,669 | $ 168,745 | $ 126,210 |
| **Adjusted EBITDAX per BOE** | $ 33.53 | $ 37.70 | $ 37.46 | $ 35.48 | $ 36.34 |

# Non-GAAP Reconciliation – Adjusted EBITDAX - Unaudited

PENN VIRGINIA CORPORATION

## Reconciliation of GAAP "Net income" to Non-GAAP "Adjusted EBITDAX"

Adjusted EBITDAX represents net income before interest expense, income taxes, depreciation, depletion and amortization expense and share-based compensation expense, further adjusted to include the net cash settlements of derivatives and exclude the effects of gains and losses on sales of assets, non-cash changes in the fair value of derivatives, and special items including acquisition, divestiture and strategic transaction costs, executive retirement costs, restructuring expenses and net reorganization items. We believe this presentation is commonly used by investors and professional research analysts for the valuation, comparison, rating, investment recommendations of companies within the oil and gas exploration and production industry. We use this information for comparative purposes within our industry. Adjusted EBITDAX is not a measure of financial performance under GAAP and should not be considered as a measure of liquidity or as an alternative to net income (loss). Adjusted EBITDAX as defined by Penn Virginia may not be comparable to similarly titled measures used by other companies and should be considered in conjunction with net income (loss) and other measures prepared in accordance with GAAP, such as operating income or cash flows from operating activities. Adjusted EBITDAX should not be considered in isolation or as a substitute for an analysis of Penn Virginia's results as reported under GAAP.

| | Twelve Months Ended | |
|---|---|---|
| | December 31, 2018 | December 31, 2017 |
| | (in thousands, except per unit amounts) | |
| **Net income** | $ 224,785 | $ 32,662 |
| Adjustments to reconcile to Adjusted EBITDAX: | | |
| Interest expense, net | 26,462 | 6,392 |
| Income tax (benefit) expense | 523 | (4,943) |
| Depreciation, depletion and amortization | 127,961 | 48,649 |
| Share-based compensation expense (equity-classified) | 4,618 | 3,809 |
| (Gain) loss on sales of assets, net | 177 | 36 |
| Adjustments for derivatives: | | |
| Net losses (gains) | (37,427) | 17,819 |
| Cash settlements, net | (48,291) | (3,511) |
| Adjustment for special items: | | |
| Acquisition, divestiture and strategic transaction costs | 3,960 | 1,340 |
| Executive retirement costs | 250 | - |
| Other, net | (193) | - |
| Restructuring expenses | - | (20) |
| Reorganization items, net | (3,322) | - |
| **Adjusted EBITDAX** | $ 299,503 | $ 102,233 |
| **Adjusted EBITDAX per BOE** | $ 37.70 | $ 27.05 |

# Non-GAAP Reconciliation – Adjusted Direct Operating Expenses - Unaudited

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**Reconciliation of GAAP "Operating expenses" to Non-GAAP "Adjusted direct operating expenses and Adjusted direct operating expenses per BOE"**

Adjusted direct operating expenses and adjusted direct operating expenses per BOE are a supplemental non-GAAP financial measure that excludes certain non-recurring expenses and non-cash expenses. We believe that the non-GAAP measure of Adjusted total direct operating expense per BOE is useful to investors because it provides readers with a meaningful measure of our cost profile and provides for greater comparability period-over-period.

| | Three Months Ended | | | Six Months Ended | |
|---|---|---|---|---|---|
| | June 30, 2019 | March 31, 2019 | June 30, 2018 | June 30, 2019 | June 30, 2018 |
| | (in thousands, except per unit amounts) | | | | |
| **Operating expenses - GAAP** | $ 74,879 | $ 66,560 | $ 55,694 | $ 141,439 | $ 98,993 |
| Less: | | | | | |
| Share-based compensation - equity-classified awards | (1,017) | (1,038) | (875) | (2,055) | (2,451) |
| Depreciation, depletion and amortization | (44,298) | (38,870) | (31,273) | (83,168) | (53,354) |
| **Total cash direct operating expenses** | 29,564 | 26,652 | 23,546 | 56,216 | 43,188 |
| Significant special charges: | | | | | |
| Acquisition, divestiture and strategic transaction costs | (76) | (724) | (56) | (800) | (487) |
| Executive retirement costs | - | - | - | - | (250) |
| **Non-GAAP Adjusted direct operating expenses** | $ 29,488 | $ 25,928 | $ 23,490 | $ 55,416 | $ 42,451 |
| **Non-GAAP Total cash direct operating expenses per BOE** | $ 11.67 | $ 11.99 | $ 11.66 | $ 11.82 | $ 12.43 |
| **Non-GAAP Adjusted direct operating expenses per BOE** | $ 11.64 | $ 11.67 | $ 11.63 | $ 11.65 | $ 12.22 |

# Non-GAAP Reconciliation – Adjusted Direct Operating Expenses - Unaudited

PENN VIRGINIA CORPORATION

**Reconciliation of GAAP "Operating expenses" to Non-GAAP "Adjusted direct operating expenses and Adjusted direct operating expenses per BOE"**

Adjusted total direct operating expenses and adjusted total direct operating expenses per BOE are a supplemental non-GAAP financial measure that excludes certain non-recurring expenses and non-cash expenses. We believe that the non-GAAP measure of Adjusted total direct operating expense per BOE is useful to investors because it provides readers with a meaningful measure of our cost profile and provides for greater comparability period-over-period.

| | Twelve Months Ended | |
|---|---|---|
| | December 31, 2018 | December 31, 2017 |
| | (in thousands, except per unit amounts) | |
| **Operating expenses** | $ 232,077 | $ 108,182 |
| Less: | | |
| Share-based compensation - equity-classified awards | (4,618) | (3,809) |
| Depreciation, depletion and amortization | (127,961) | (48,649) |
| **Non-GAAP Total cash direct operating expenses** | 99,498 | 55,724 |
| Significant special charges: | | |
| Acquisition, divestiture and strategic transaction costs | (3,960) | (1,340) |
| Executive retirement costs | (250) | - |
| Restructuring expenses | - | 20 |
| **Non-GAAP Adjusted direct operating expenses** | $ 95,288 | $ 54,404 |
| **Non-GAAP Total cash direct operating expense per BOE** | $ 12.52 | $ 14.75 |
| **Non-GAAP Adjusted direct operating expenses per BOE** | $ 11.99 | $ 14.40 |

# Non-GAAP Reconciliation – Adjusted Cash G&A - Unaudited

PENN VIRGINIA CORPORATION

**Reconciliation of GAAP "General and administrative expenses" to Non-GAAP "Adjusted cash general and administrative expenses"**

Adjusted cash general and administrative expenses is a supplemental non-GAAP financial measure that excludes certain non-recurring expenses and non-cash share-based compensation expense. We believe that the non-GAAP measure of Adjusted cash general and administrative expenses is useful to investors because ii provides readers with a meaningful measure of our recurring G&A expense and provides for greater comparability period-over-period.

| | Three Months Ended | | | Six Months Ended | |
|---|---|---|---|---|---|
| | June 30, 2019 | March 31, 2019 | June 30, 2018 | June 30, 2019 | June 30, 2018 |
| | (in thousands, except per unit amounts) | | | | |
| General and administrative expenses - direct | $ 5,215 | $ 6,027 | $ 4,447 | $ 11,242 | $ 9,342 |
| Share-based compensation - equity-classified awards | 1,017 | 1,038 | 875 | 2,055 | 2,451 |
| **GAAP General and administrative expenses** | 6,232 | 7,065 | 5,322 | 13,297 | 11,793 |
| Less: Share-based compensation - equity-classified awards | (1,017) | (1,038) | (875) | (2,055) | (2,451) |
| Significant special charges: | | | | | |
| Acquisition, divestiture and strategic transaction costs | (76) | (724) | (56) | (800) | (487) |
| Executive retirement costs | - | - | - | - | (250) |
| **Adjusted cash general and administrative expenses** | $ 5,139 | $ 5,303 | $ 4,391 | $ 10,442 | $ 8,605 |
| **GAAP General and administrative expenses per BOE** | $ 2.46 | $ 3.18 | $ 2.63 | $ 2.80 | $ 3.40 |
| **Adjusted cash general and administrative expenses per BOE** | $ 2.03 | $ 2.39 | $ 2.17 | $ 2.20 | $ 2.48 |

# Non-GAAP Reconciliation – Adjusted Cash G&A - Unaudited

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**Reconciliation of GAAP "General administrative expenses" to Non-GAAP "Adjusted cash-based general and administrative expenses"**

Adjusted cash-based general and administrative expense ("Adjusted G&A") is a supplemental non-GAAP financial measure that excludes certain non-recurring expenses and non-cash share-based compensation expense. We believe that the non-GAAP measure of Adjusted G&A is useful to investors because it provides readers with a meaningful measure of our recurring G&A expense and provides for greater comparability period-over-period.

| | Twelve Months Ended | |
|---|---|---|
| | December 31, 2018 | December 31, 2017 |
| | (in thousands, except per unit amounts) | |
| General and administrative expenses - direct | $ 21,446 | $ 14,392 |
| Share-based compensation - equity-classified awards | 4,618 | 3,809 |
| **GAAP General and administrative expenses** | 26,064 | 18,201 |
| Less: Share-based compensation - equity-classified awards | (4,618) | (3,809) |
| Significant special charges: | | |
| Acquisition, divestiture and strategic transaction costs | (3,960) | (1,340) |
| Executive retirement costs | (250) | - |
| Restructuring expenses | - | 20 |
| **Adjusted cash-based general and administrative expenses** | $ 17,236 | $ 13,072 |
| **GAAP General and administrative expenses per BOE** | $ 3.28 | $ 4.82 |
| **Adjusted cash-based general and administrative expenses per BOE** | $ 2.17 | $ 3.46 |