



INVESTOR PRESENTATION
1Q 2017

Forward Looking Statements and Cautionary Statements

Forward-Looking Statements

The information in this presentation includes “forward-looking statements” that are made pursuant to the Safe Harbor Provisions of the Private Securities Litigation Reform Act of 1995. All statements, other than statements of historical fact included in this presentation, regarding our strategy, future operations, financial position, estimated revenues and losses, projected costs, prospects, plans and objectives of management are forward-looking statements. When used in this presentation, the words “could,” “believe,” “anticipate,” “intend,” “estimate,” “expect,” “project” and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain such identifying words. These forward-looking statements are based on Parsley Energy, Inc.’s (“Parsley Energy,” “Parsley,” or the “Company”) current expectations and assumptions about future events and are based on currently available information as to the outcome and timing of future events. We caution you that these forward-looking statements are subject to all of the risks and uncertainties, most of which are difficult to predict and many of which are beyond our control, incident to the exploration for and development, production, gathering and sale of oil and natural gas. These risks include, but are not limited to, commodity price volatility, inflation, lack of availability of drilling and production equipment and services, environmental risks, drilling and other operating risks, regulatory changes, the uncertainty inherent in estimating reserves and in projecting future rates of production, the production potential of our undeveloped acreage, cash flow and access to capital, the timing of development expenditures and the risk factors discussed in or referenced in our filings with the United States Securities and Exchange Commission (“SEC”), including our Annual Report on Form 10-K and our subsequent Quarterly Reports on Form 10-Q and Current Reports on Form 8-K.

You are cautioned not to place undue reliance on any forward-looking statements, which speak only as of the date of this presentation. Except as otherwise required by applicable law, we disclaim any duty to update any forward-looking statements, all of which are expressly qualified by the statements in this section, to reflect events or circumstances after the date of this presentation.

Our production forecasts and expectations for future periods are dependent upon many assumptions, including estimates of production decline rates from existing wells and the undertaking and outcome of future drilling activity, which may be affected by significant commodity price declines or cost increases.

Industry and Market Data

This presentation has been prepared by Parsley and includes market data and other statistical information from third-party sources, including independent industry publications, government publications or other published independent sources. Although Parsley believes these third-party sources are reliable as of their respective dates, Parsley has not independently verified the accuracy or completeness of this information. Some data are also based on Parsley’s good faith estimates, which are derived from its review of internal sources as well as the third-party sources described above.

Oil & Gas Reserves

This presentation provides disclosure of Parsley’s proved reserves, which are those quantities of oil and gas, which, by analysis of geoscience 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 (using unweighted average 12-month first day of the month prices), operating methods, and government regulations—prior to the time at which contracts providing the right to operate expire, unless evidence indicates that renewal is reasonably certain, regardless of whether deterministic or probabilistic methods are used for the estimation.

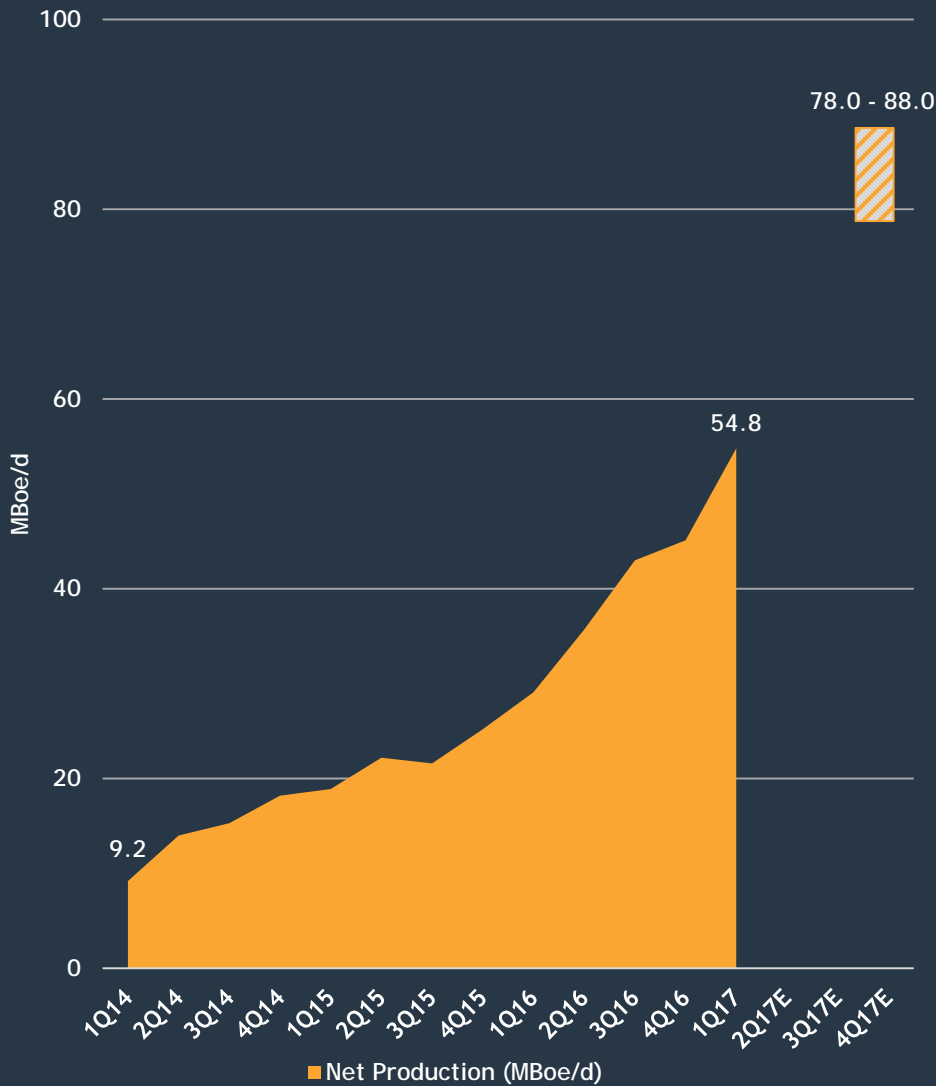
In this presentation, proved reserves attributable to Parsley as of 12/31/16 are estimated utilizing SEC reserve recognition standards and pricing assumptions based on SEC pricing, as adjusted for market differentials, transportation fees, and quality, of \$39.36 / Bbl crude, \$2.23 / Mcf gas, and \$15.03/ Bbl NGL. References to our estimated proved reserves as of 12/31/16 are derived from our proved reserve report audited by Netherland, Sewell & Associates, Inc. (“NSAI”).

We may use the term “expected ultimate recoveries” (“EURs”) or other descriptions of volumes of reserves, which terms include quantities of oil and gas that may not meet the SEC’s definitions of proved, probable and possible reserves, and which the SEC’s guidelines strictly prohibit Parsley from including in filings with the SEC. Unless otherwise stated in this presentation, such estimates have been prepared internally by our engineers and management without review by independent engineers. These estimates are by their nature more speculative than estimates of proved, probable and possible reserves and accordingly are subject to substantially greater risk of being actually realized, particularly in areas or zones where there has been limited or no drilling history. We include these estimates to demonstrate what we believe to be the potential for future drilling and production by the Company. Actual locations drilled and quantities that may be ultimately recovered from our properties will differ substantially. In addition, we have made no commitment to drill all of the drilling locations. Ultimate recoveries will be dependent upon numerous factors including actual encountered geological conditions, the impact of future oil and gas pricing, exploration and development costs, and our future drilling decisions and budgets based upon our future evaluation of risk, returns and the availability of capital and, in many areas, the outcome of negotiation of drilling arrangements with holders of adjacent or fractional interest leases. Our estimates may change significantly as development of our properties provides additional data and therefore actual quantities that may ultimately be recovered will likely differ from these estimates. Our related expectations for future periods are dependent upon many assumptions, including estimates of production decline rates from existing wells, the undertaking and outcome of future drilling activity and activity that may be affected by significant commodity price declines or drilling cost increases.

Unless otherwise noted, Net Present Value (“NPV”) estimates are before taxes and assume the Company generated EUR and decline curve estimates based on Company drilling and completion cost estimates that do not include facilities, land, seismic, general and administrative (“G&A”) or other corporate level costs.

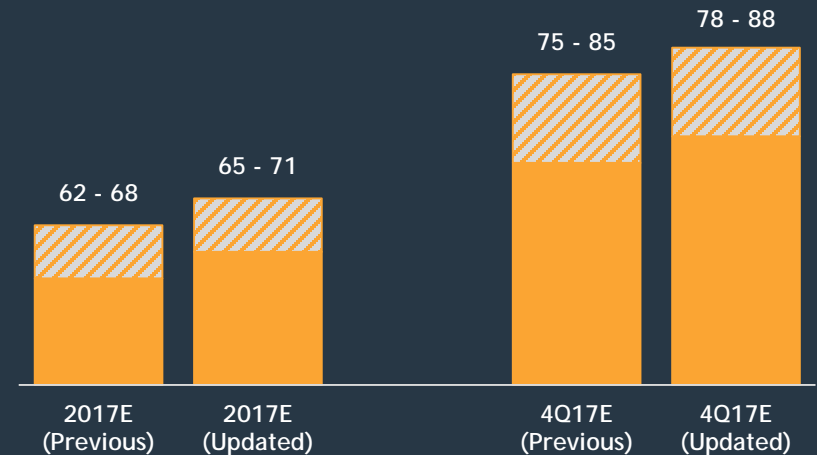
Sustained Production Momentum

Quarterly Production Trajectory



- Raising FY17 and 4Q17 production guidance ranges following strong first quarter growth
- 1Q17 daily net production up 21% versus 4Q16 and 88% Y/Y
- Sharp production trajectory in 2017, culminating in estimated 4Q17 production of 78.0 - 88.0 MBoe/d
- 16% compound quarterly production growth rate over twelve quarters as a public company⁽¹⁾

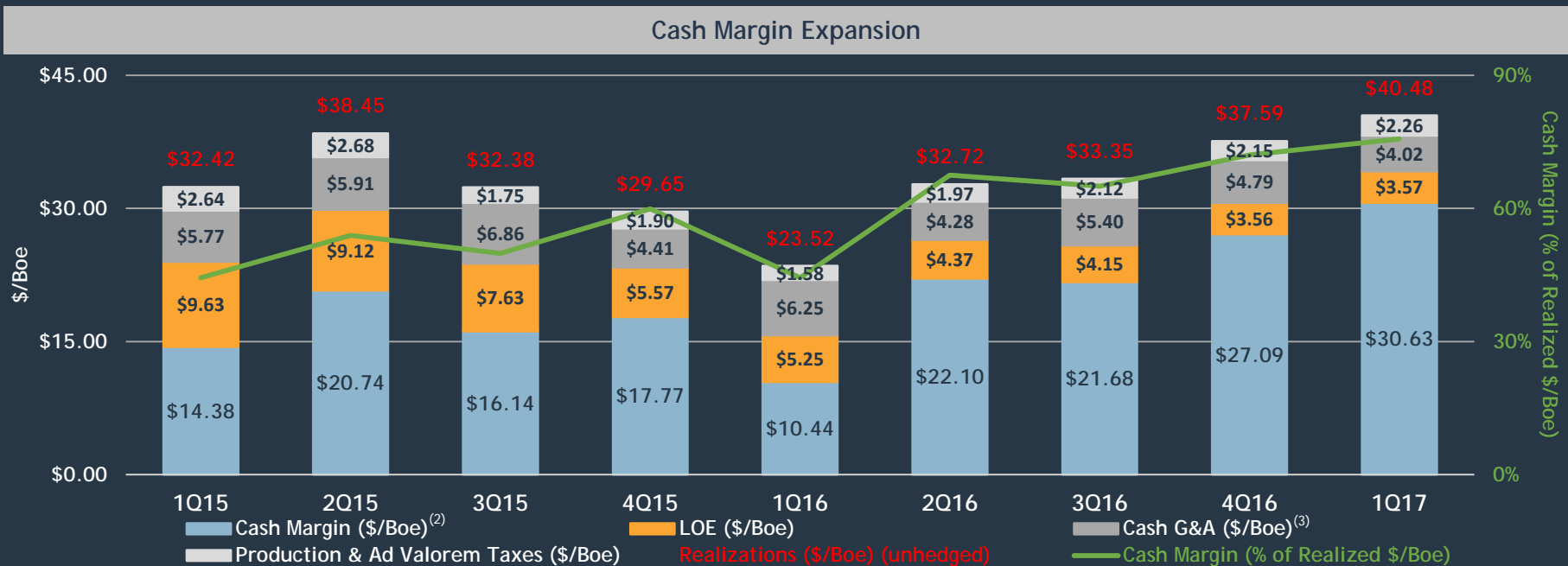
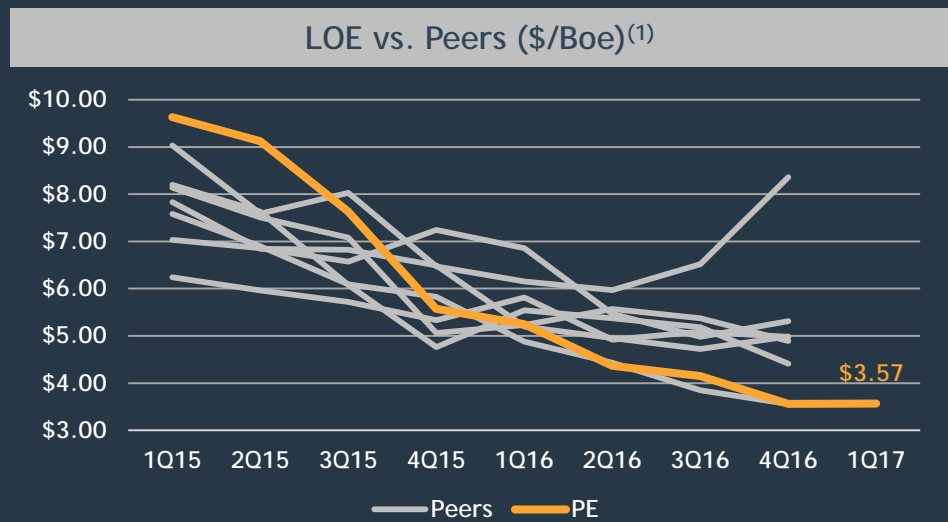
Production Guidance (Net MBoe/d)



(1) Parsley completed its initial public offering on May 29, 2014

Margin Expansion

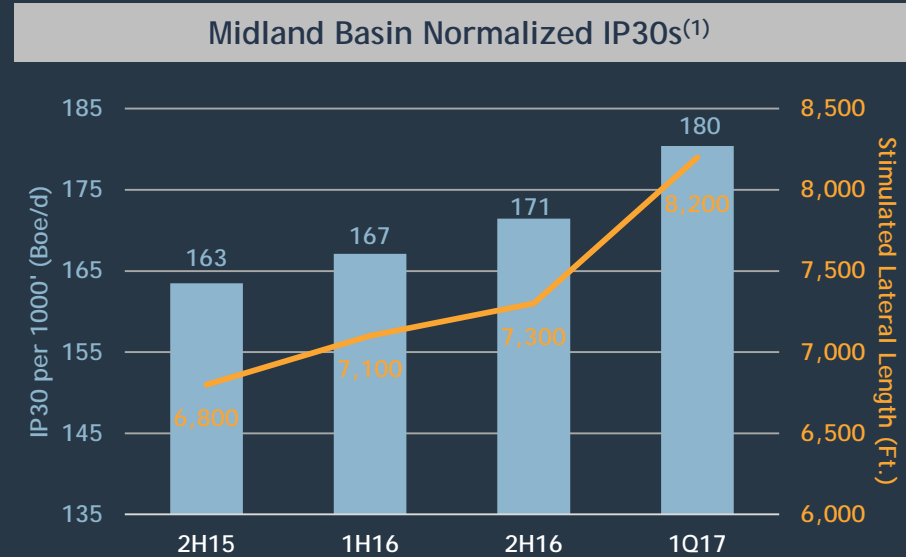
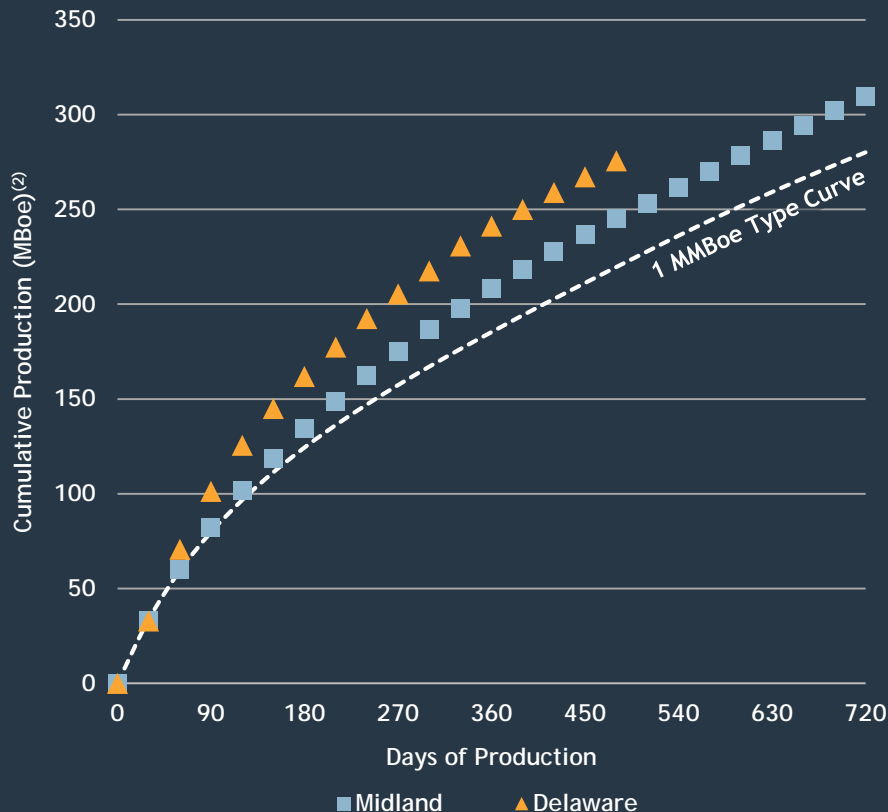
- Significant margin expansion driven by favorable trends in realizations and operating costs
 - Increasing oil volume as percent of total production
 - Reduced transport costs with more oil on pipe
 - Peer-leading LOE per BOE⁽¹⁾, with automated well control and advantaged water sourcing and disposal costs



(1) Peers include CPE, CXO, EGN, FANG, LPI, PXD, and RSP. Source: company SEC filings; (2) Cash margin is a non-GAAP measure that is defined as average sales price without realized derivatives less LOE, cash G&A, and production and ad valorem taxes; (3) Cash G&A is a non-GAAP measure that is defined as general and administrative expense less stock-based compensation expense

Robust and Improving Well Results

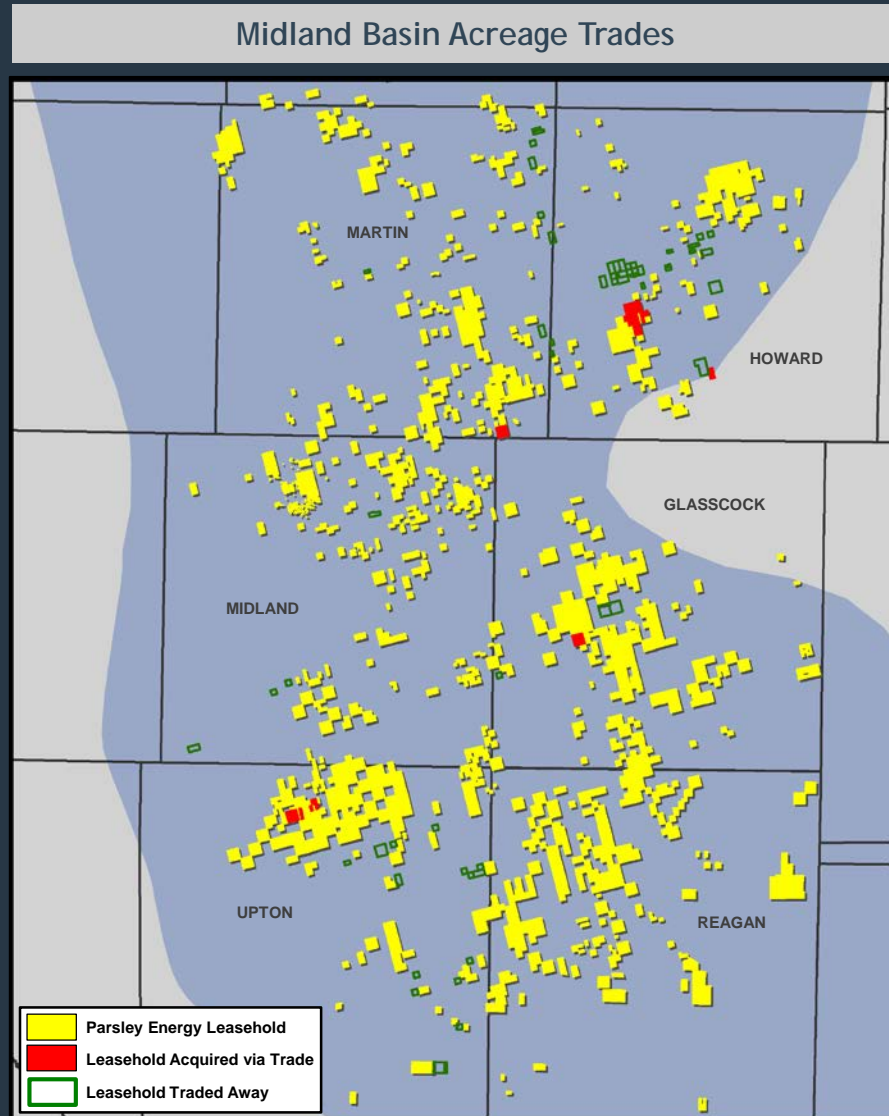
- Consistently strong well results across acreage footprint and well vintage
- Length-normalized productivity improving even as lateral lengths increase



	Midland	Delaware
Wells ⁽³⁾	18	1
Average Lateral Length	8,213'	6,374'
30-day IP (Boe/d)	1,429	1,686
30-day IP per 1,000' (Boe/d)	180	265
% Oil	71%	62%

(1) 3-stream; Normalized for downtime; Average IP30s and IP30s per 1,000' reflect unweighted average of well set; (2) Normalized to 7,000' stimulated lateral and for downtime; (3) Number of wells achieving a 30-day IP since 4Q16 quarterly update

Consolidating Acquired Acreage

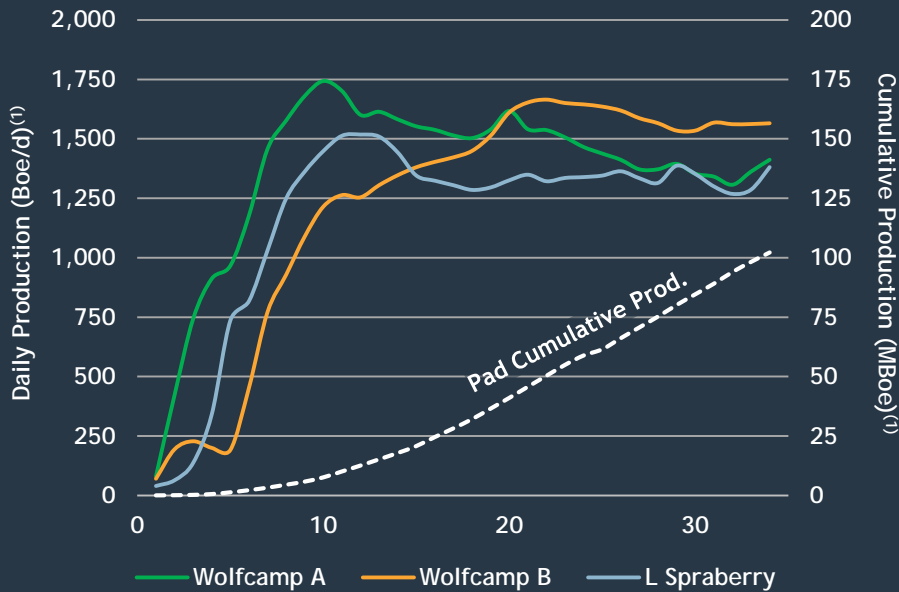


- Acreage trades increasing value of acquired assets
- Trading out of non-operated properties with low working interest into operated properties with high working interest
 - ~35% average working interest on acreage traded away
 - ~85% average working interest on acreage traded for
- Recent trades added ~155 net operated locations with an average lateral length of ~7,000' and extended ~70 net existing locations by ~4,000' on average
- Net of assets traded away, recent trades added more than 900,000 net lateral feet to Parsley's horizontal drilling inventory, equivalent to ~3,600 premium net acres with four target intervals

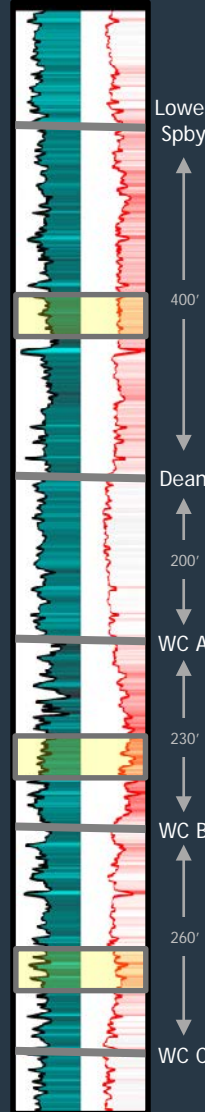
Rapid Integration Program

- Strong results from, and active plan for, newly acquired assets
- Planning for 30+ well spuds across acquired acreage in 2017
- First 3-well pad completed in southeast Martin County delivering impressive results from all three target intervals
 - 1.5-mi laterals targeting the Lower Spraberry, Wolfcamp A, and Wolfcamp B averaging 1,300+ Boe/d each

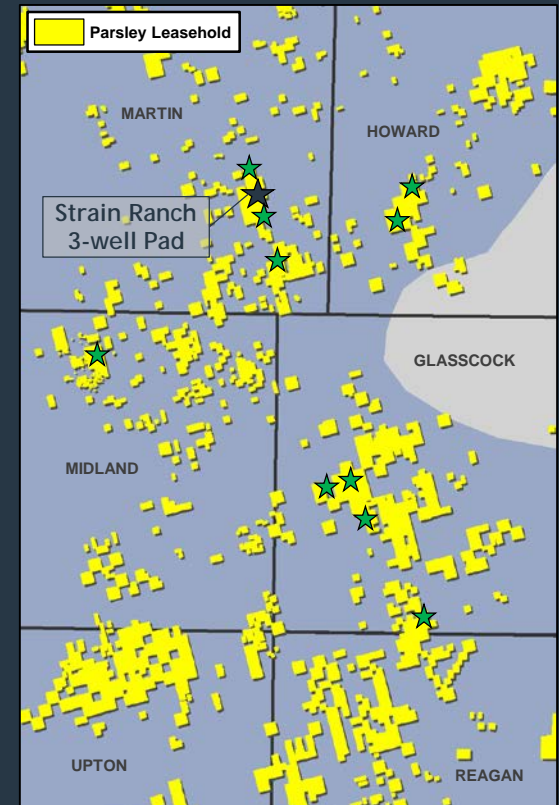
First Martin County 3-Well Pad Posting Impressive Rates



Strain Ranch Type Log



Active Development of Acquired Assets

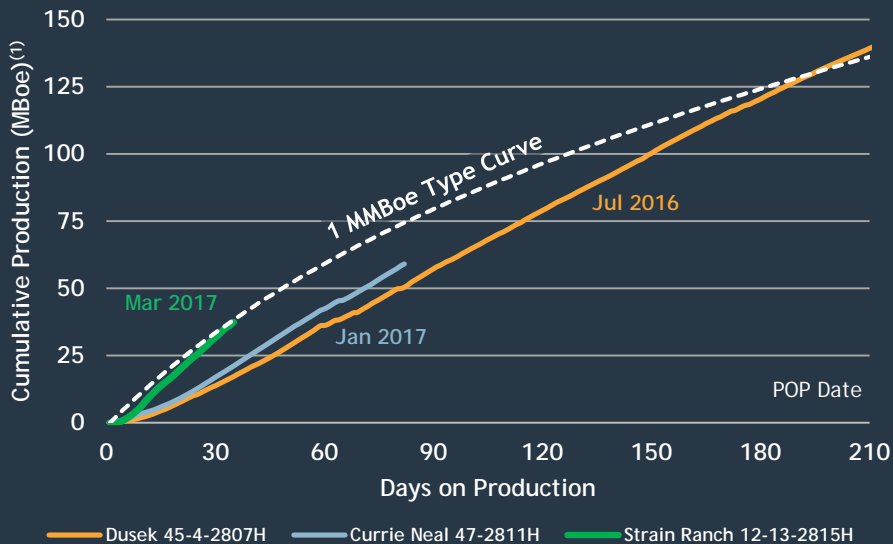


★ 2017 Planned Operated Pads on Acquired Acreage

Ramping up Lower Spraberry Development

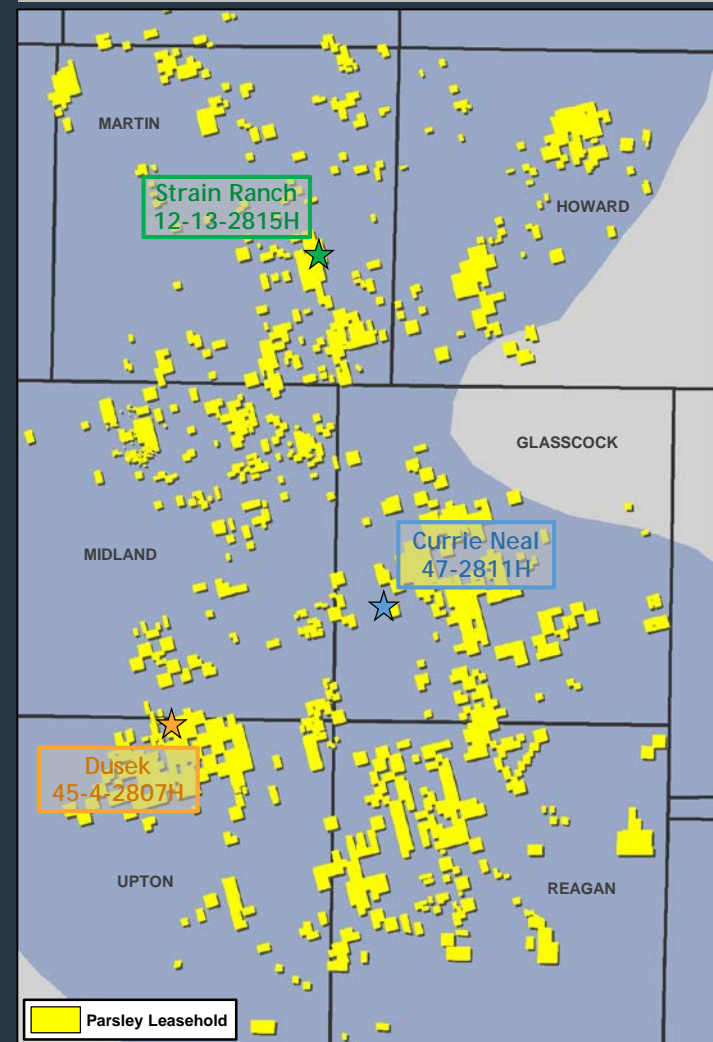
- Impressive Lower Spraberry results across Midland Basin acreage position
- Increased productivity on each successive Lower Spraberry well
- Healthy rates, high oil cuts, and relatively low drilling costs yield attractive economics
- Approximately 30 Lower Spraberry wells planned for next twelve months
- Extensive inventory with ~1,500 locations and upside potential from tighter lateral spacing and multiple landing zones

Strengthening Lower Spraberry Results

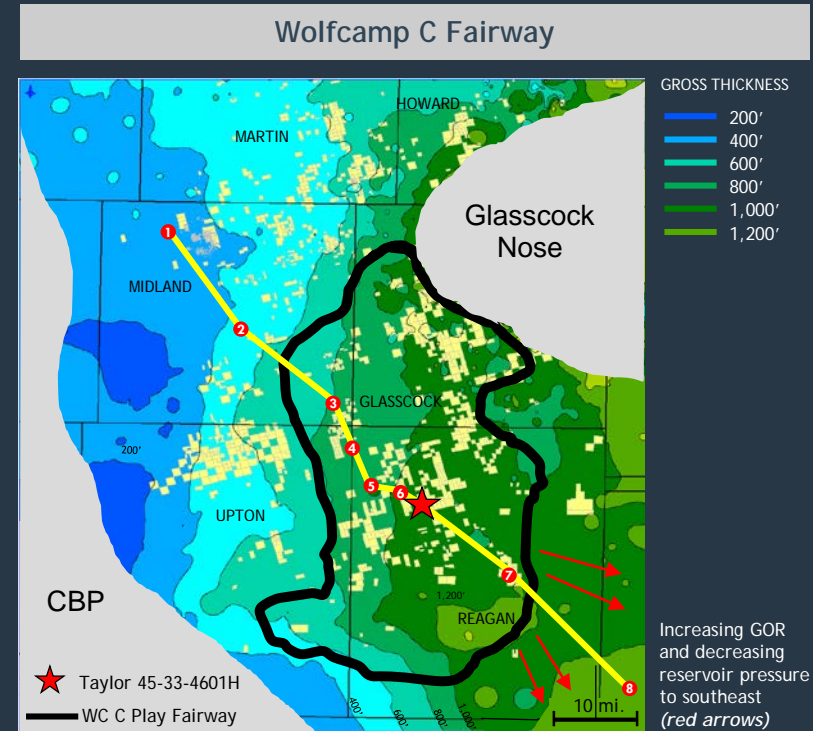
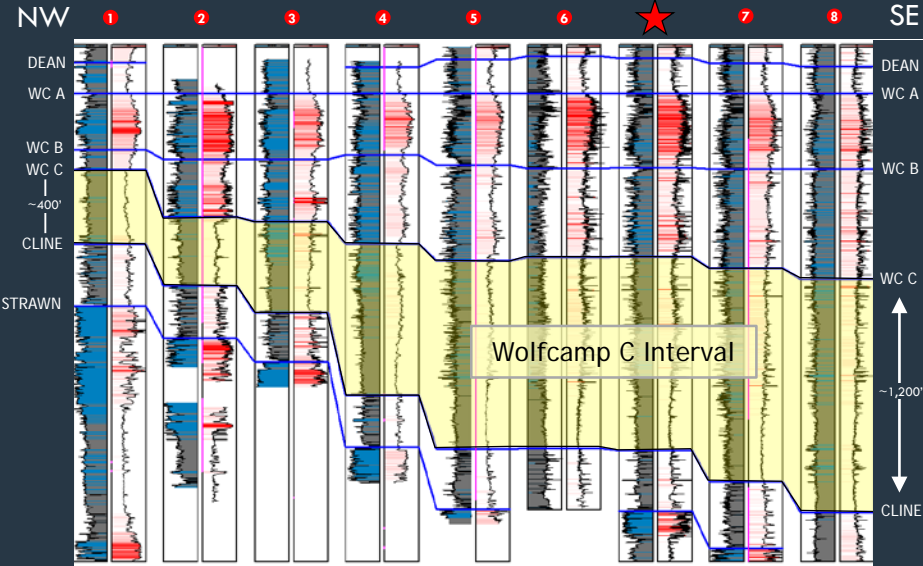


(1) 3-stream; Normalized to 7,000' stimulated lateral and for downtime

Encouraging Lower Spraberry Results Span Midland Basin Acreage

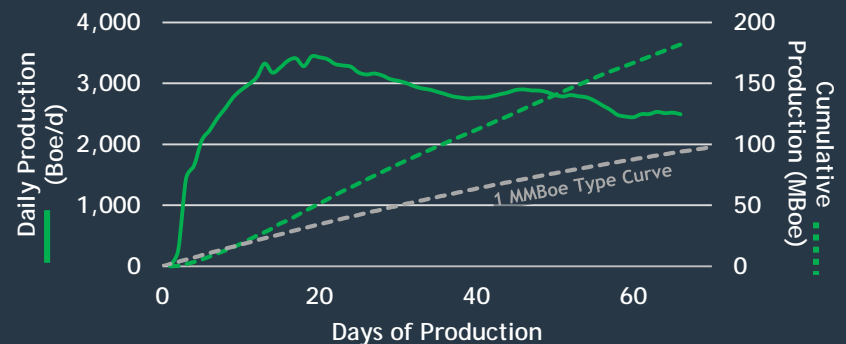


Emerging Wolfcamp C Play



- Taylor Wolfcamp C well in Reagan County among the most prolific Midland Basin wells on record through first 60 days, recovering more than 100,000 barrels of oil⁽¹⁾
- Several additional Wolfcamp C wells planned in 2017
- Wolfcamp C landing zone is discrete new target, ~600' below Lower Wolfcamp B landing zone
- Wolfcamp C play fairway characterized by:
 - 600-1,200' gross thickness
 - Substantial reservoir pressure
 - Favorable thermal maturity
 - Significant resource potential
- Recent acquisitions have supplemented substantial Wolfcamp C inventory, with more than 900 locations in the fairway of the play

First Wolfcamp C Well Outpacing 1 MMBoe Type Curve by ~95%⁽²⁾

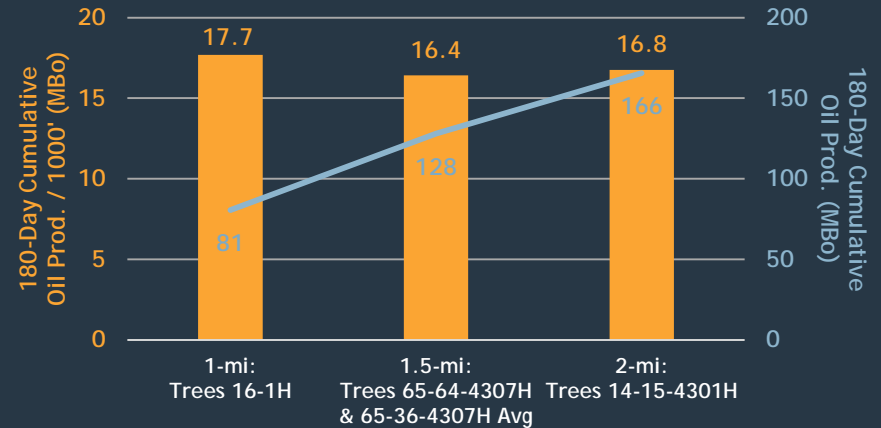


(1) Normalized for downtime; (2) 3-stream; Normalized for downtime

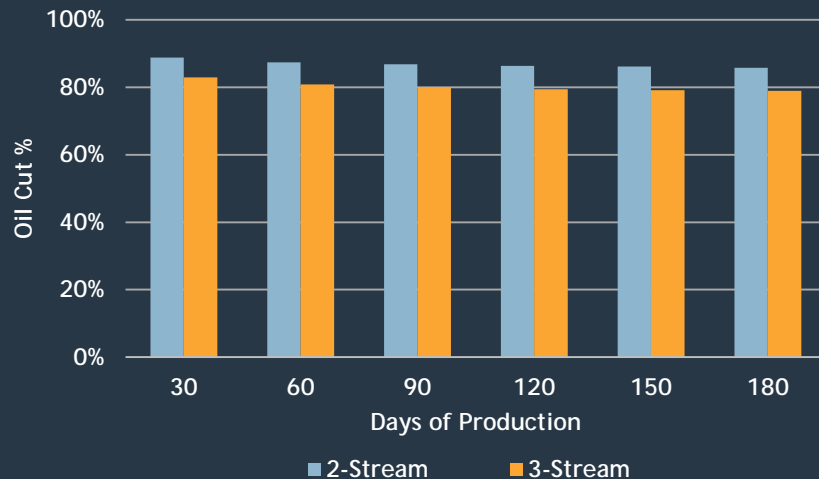
Impressive Production Trends in Northwest Pecos County

- Parsley setting the pace for long-lateral development in the Southern Delaware Basin
- Strong length-normalized production as lateral lengths increased, affirming robust long-lateral capital efficiency
 - All Trees Ranch laterals among the top-20 company highest in terms of 180-day oil production per 1000'
- Trees Ranch wells averaging 86% oil⁽¹⁾ after 180 days of production
- Currently targeting three distinct Wolfcamp flow units on Trees Ranch acreage and expect to drill across much of the position over coming months

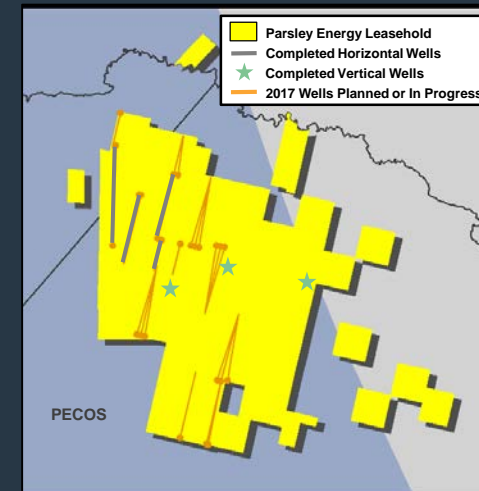
Consistently Strong Normalized Rates Across Lateral Lengths⁽²⁾



Strong, Stable Oil Cuts in Pecos County



Trees Ranch 2017 Development Program

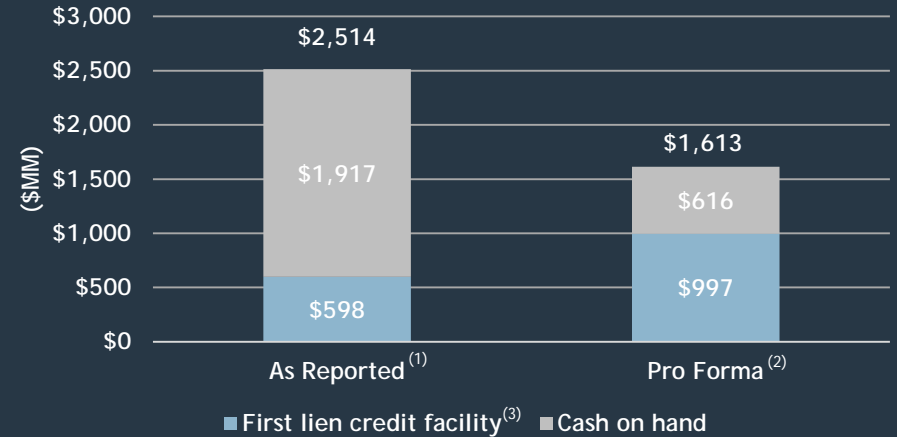


(1) 2-stream; (2) Normalized for downtime

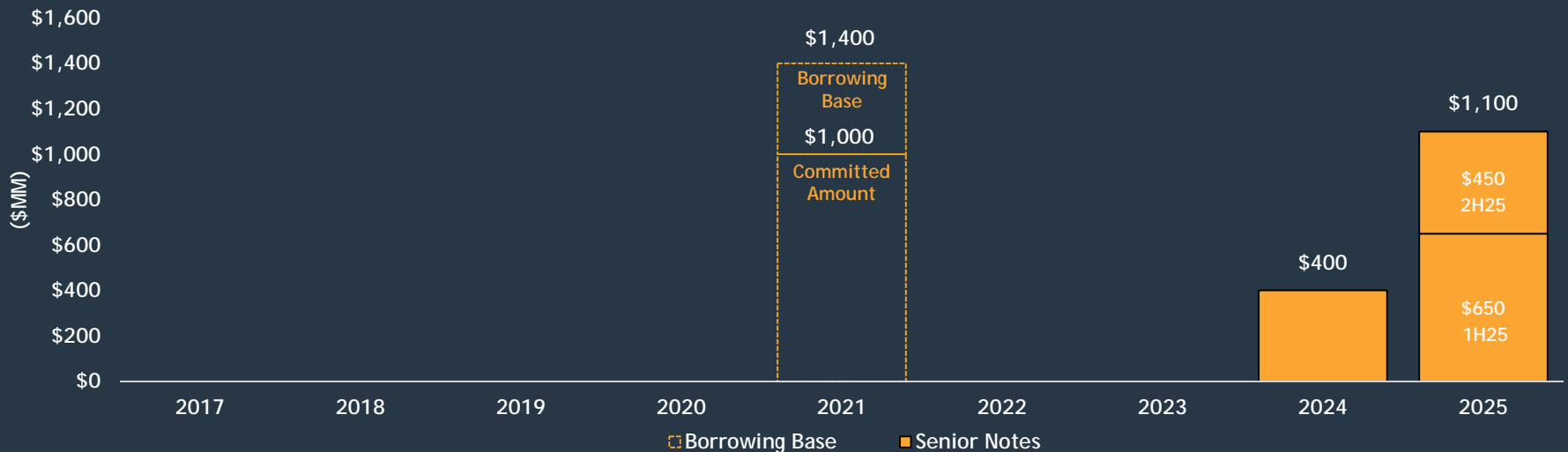
Strong Financial Position

- Healthy financial position supports accelerated development program
- More than \$1.6 billion of pro forma liquidity
- Fully undrawn borrowing base of \$1.4 billion, with company-elected commitment of \$1.0 billion
- Favorable maturity schedule, with earliest notes maturity in 2024
- In February, Moody's upgraded Parsley's Corporate Family Rating to B1 from B2

Liquidity Summary



Favorable Debt Maturity Schedule



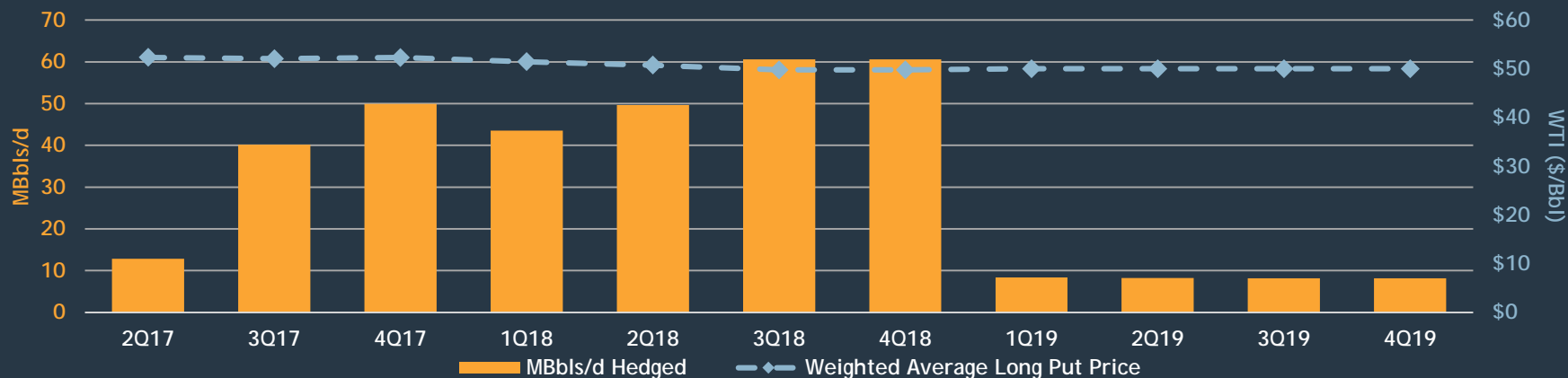
(1) As of end 1Q17; (2) As of end 1Q17 pro forma for closing of Double Eagle acquisition on April 20, 2017 and entry into the Third Amendment to Parsley's Revolving Credit Agreement on April 28, 2017; (3) Committed portion; Net of letters of credit which do not change the status of the Company's fully undrawn commitment amount

Substantial Oil Hedge Position

- Increased oil hedge position in view of anticipated production growth
- More than 80% of consensus oil volumes hedged in 2H17 with substantial protection in place in 2018

	2Q17	3Q17	4Q17	1Q18	2Q18	3Q18	4Q18	1Q19	2Q19	3Q19	4Q19
Put Spreads (MBbls/d) ¹	10.4	35.7	45.5	26.7	26.4	26.1	26.1				
Put Price (\$/Bbl)	\$53.10	\$52.66	\$52.80	\$52.81	\$51.88	\$50.00	\$50.00				
Short Put Price (\$/Bbl)	\$38.10	\$41.80	\$41.95	\$41.88	\$41.88	\$40.00	\$40.00				
Three Way Collars (MBbls/d) ²				13.3	19.8	31.0	31.0	8.3	8.2	8.2	8.2
Call Price (\$/Bbl)				\$74.38	\$75.28	\$75.65	\$75.65	\$80.40	\$80.40	\$80.40	\$80.40
Put Price (\$/Bbl)				\$50.00	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00	\$50.00
Short Put Price (\$/Bbl)				\$40.00	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00	\$40.00
Premium Realization (\$MM) ³	(\$4.8)	(\$14.2)	(\$17.8)	(\$13.0)	(\$11.5)	(\$10.8)	(\$10.8)	(\$1.5)	(\$1.5)	(\$1.5)	(\$1.5)
Collars (MBbls/d) ⁴	1.5	4.0	4.0	3.0	3.0	3.0	3.0				
Short Call Price (\$/Bbl)	\$56.15	\$59.73	\$59.98	\$60.41	\$60.41	\$60.41	\$60.41				
Put Price (\$/Bbl)	\$47.00	\$46.75	\$46.75	\$45.67	\$45.67	\$45.67	\$45.67				
Swaps (MBbls/d) ⁵	1.0	0.5	0.5	0.5	0.5	0.5	0.5				
Strike Price (\$/Bbl)	\$53.42	\$55.00	\$55.00	\$55.00	\$55.00	\$55.00	\$55.00				
Total MBbls/d Hedged	12.9	40.2	50.0	43.5	49.7	60.6	60.6	8.3	8.2	8.2	8.2
Mid-Cush Basis Swaps (MBbls/d) ⁶	11.3	16.7	16.7	4.5	4.5	4.5	4.5				
Swap Price (\$/Bbl)	(\$1.00)	(\$1.00)	(\$1.00)	(\$0.91)	(\$0.91)	(\$0.91)	(\$0.91)				

Oil Volumes Hedged⁽⁷⁾



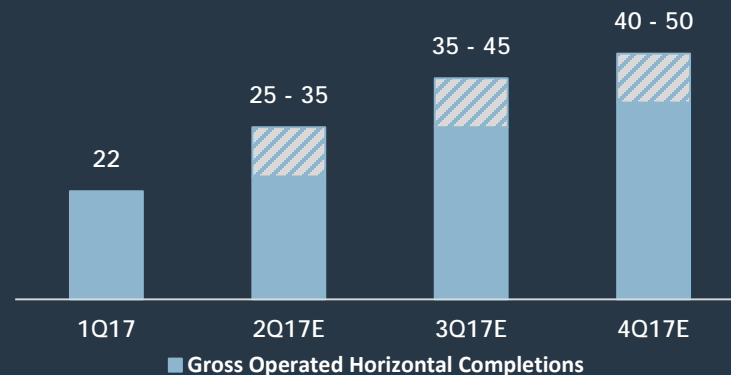
Hedge positions as of 5/4/2017; (1) When the NYMEX price is above the put price, Parsley receives the NYMEX price. When the NYMEX price is between the put price and the short put price, Parsley receives the put price. When the NYMEX price is below the short put price, Parsley receives the NYMEX price plus the difference between the short put price and the put price; (2) Functions similarly to put spreads except that when the index price is at or above the call price, Parsley receives the call price; (3) Premium realizations represent net premiums paid (including deferred premiums), which are recognized as income or loss in the period of settlement; (4) When the NYMEX price is above the call price, Parsley receives the call price. When the NYMEX price is below the put price, Parsley receives the put price. When the NYMEX price is between the call and put prices, Parsley receives the NYMEX price; (5) Parsley receives the strike price; (6) Parsley receives the swap price; (7) Excludes swaps

Updated 2017 Guidance

<u>Production</u>	<u>2017E (Previous)</u>	<u>2017E (Updated)</u>
Annual Net Production (MBoe/d)	62 - 68	65 - 71
% Oil	68 - 73%	68 - 73%
4Q17 Net Production (MBoe/d)	75 - 85	78 - 88
<u>Capital Program</u>		
Drilling & Completion (\$MM)	\$840 - \$960	\$840 - \$960
Infrastructure & Other (\$MM)	\$160 - \$190	\$160 - \$190
Total Development Expenditures (\$MM)	\$1,000 - \$1,150	\$1,000 - \$1,150
% Non-Operated		3 - 5%
<u>Activity</u>		
Gross Operated Horizontal Completions	130 - 150	130 - 150
Midland Basin	95 - 105	95 - 105
Delaware Basin	35 - 45	35 - 45
Average Lateral Length	~8,000'	~8,000'
Gross Operated Vertical Completions	5 - 10	5 - 10
Average Working Interest	85 - 95%	85 - 95%
<u>Unit Costs</u>		
LOE (\$/Boe)	\$4.00 - \$4.75	\$3.50 - \$4.50
Cash G&A (\$/Boe)	\$4.50 - \$5.25	\$4.00 - \$5.00
Production & Ad Valorem Taxes (% of Revenue)	6.5 - 7.5%	6.0 - 7.0%

- Poised for efficient production growth
- Increasing FY17 and 4Q17 production guidance
- Decreasing operating cost estimates
- No change to capital budget

Quarterly Completion Cadence

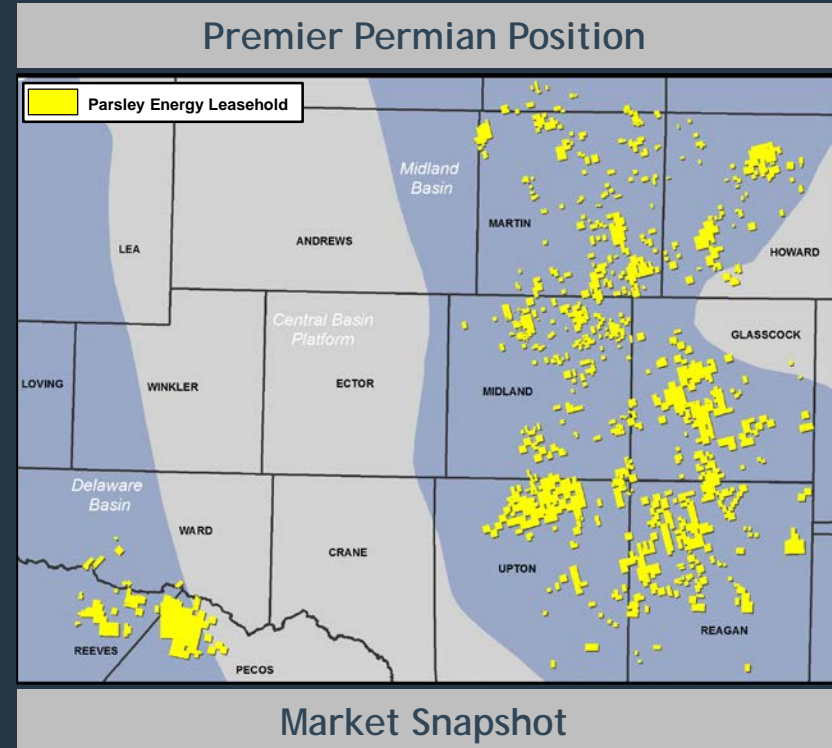


2017E Capital Allocation

	<u>Midland Basin</u>	<u>Delaware Basin</u>
Capital Allocation (% of 2017E capex)	60 - 70%	30 - 40%

Parsley Energy Investment Summary

- Premier acreage
- Leading growth profile
- Robust returns
- Abundant resource upside
- Strong financial position
- Proven execution



NYSE Symbol: PE

Market Cap: \$9,487 MM⁽¹⁾

Net Debt: \$884 MM⁽²⁾

Enterprise Value: \$10,371 MM

Share Count: 314 MM

Permian Basin Net Leasehold Acreage: ~230,000

Midland Basin: ~178,000

Delaware Basin: ~52,000

Permian Basin Net Royalty Acreage: ~7,000

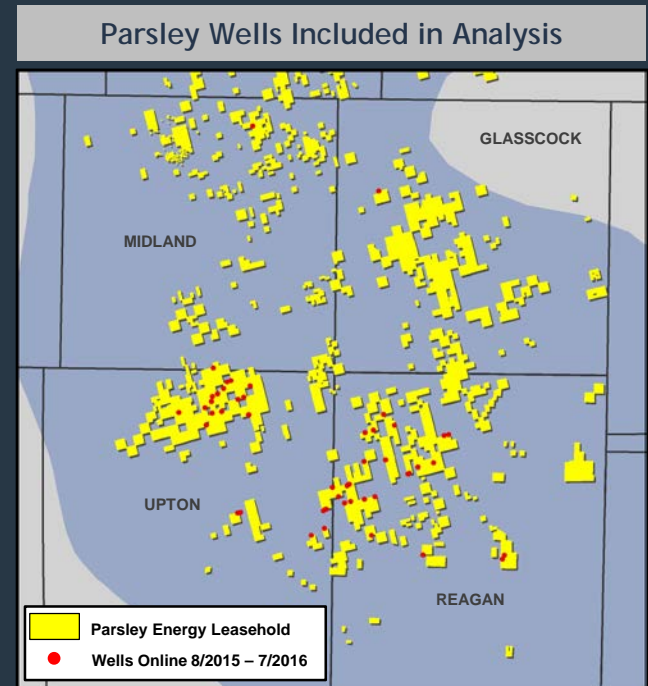
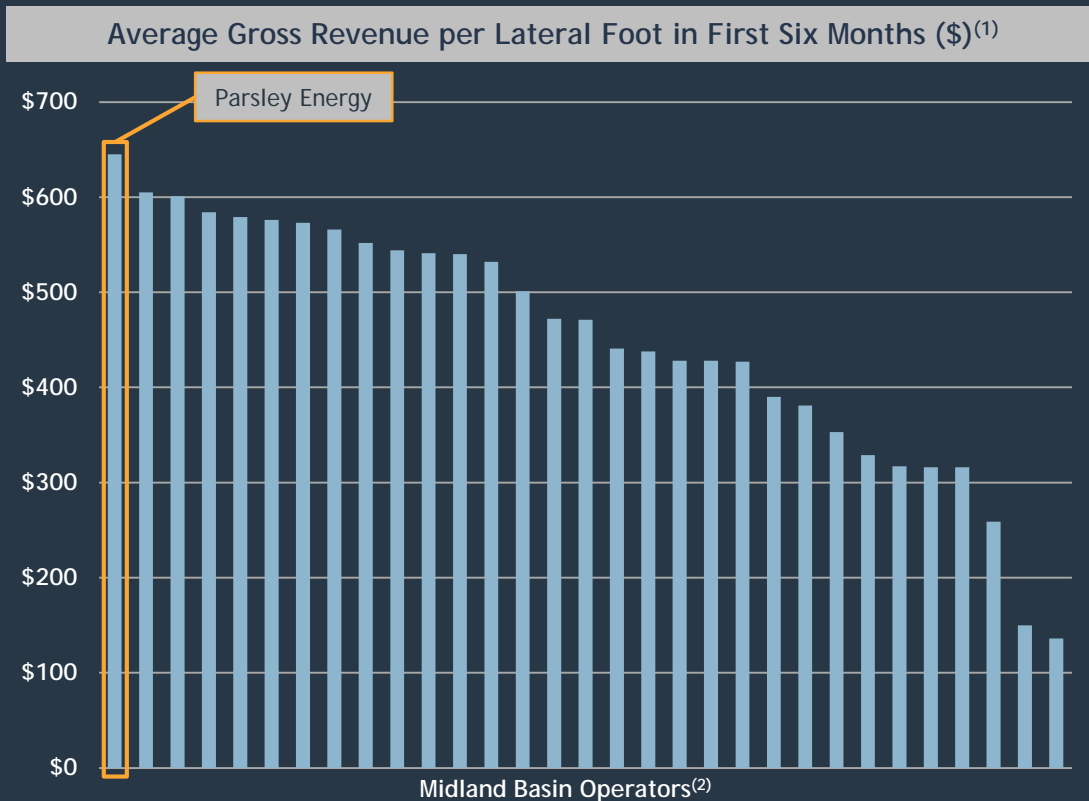
1Q17 Net Production: 54.8 MBoe/d



SUPPLEMENTARY SLIDES



Top Midland Basin Well Performance

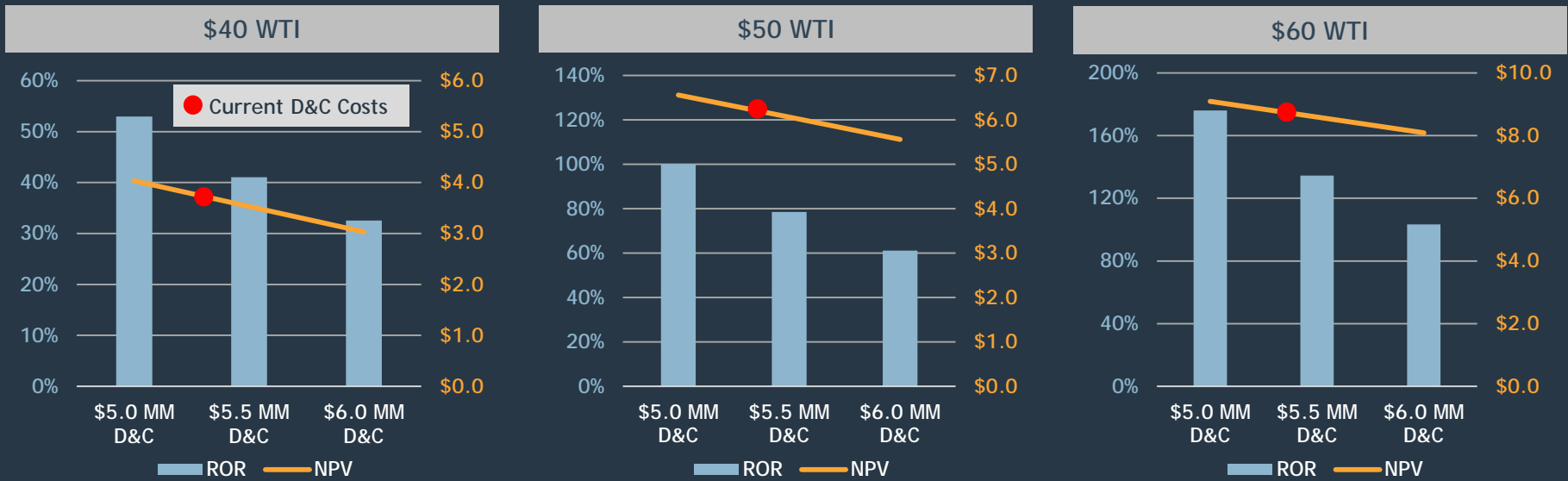


- Parsley has the highest average gross revenue per lateral foot among select Midland Basin operators, reflecting strong production rates and favorable product mix
- Broadly distributed well set indicates consistent acreage quality and operational excellence

(1) Sources: IHS, FBR & Co. *Midland Basin: Operator Productivity and Location Analysis* dated April 19, 2017; Assumes realized oil price of \$50/Bbl and realized natural gas price of \$3.00/Mcf; based on first six months of production data for wells with first production between August 2015 – July 2016; (2) Midland Basin operators include Apache, Approach, Broad Oak Energy, Callon, Chevron, Concho, ConocoPhillips, CrownQuest, Diamondback, Discovery Resources, Elevation Resources, Encana, Endeavor Energy, Energen, EP Energy, ExxonMobil, Forge Energy, Henry Resources, Laredo, Legacy Reserves, Occidental, Parsley Energy, Permian Resources, Pioneer, PT Petroleum, QEP, RSP Permian, SM Energy, Summit Petroleum, Surge Energy, and W&T Offshore

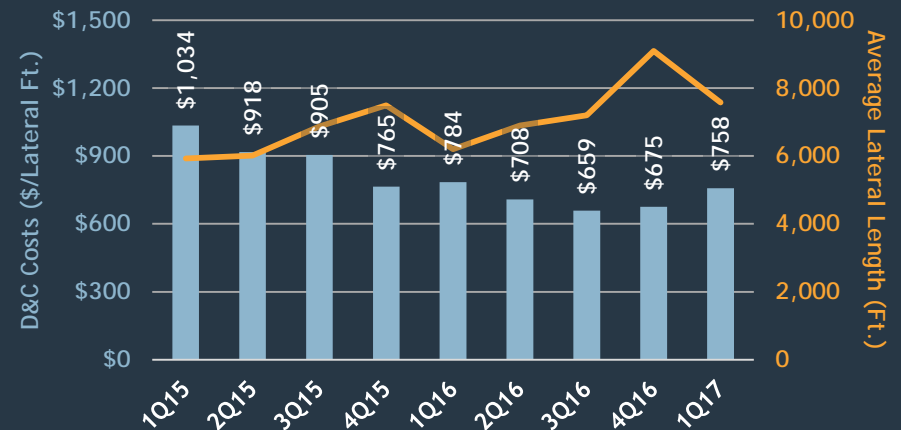
Robust Well Economics

Midland Basin ROR and NPV Sensitivities



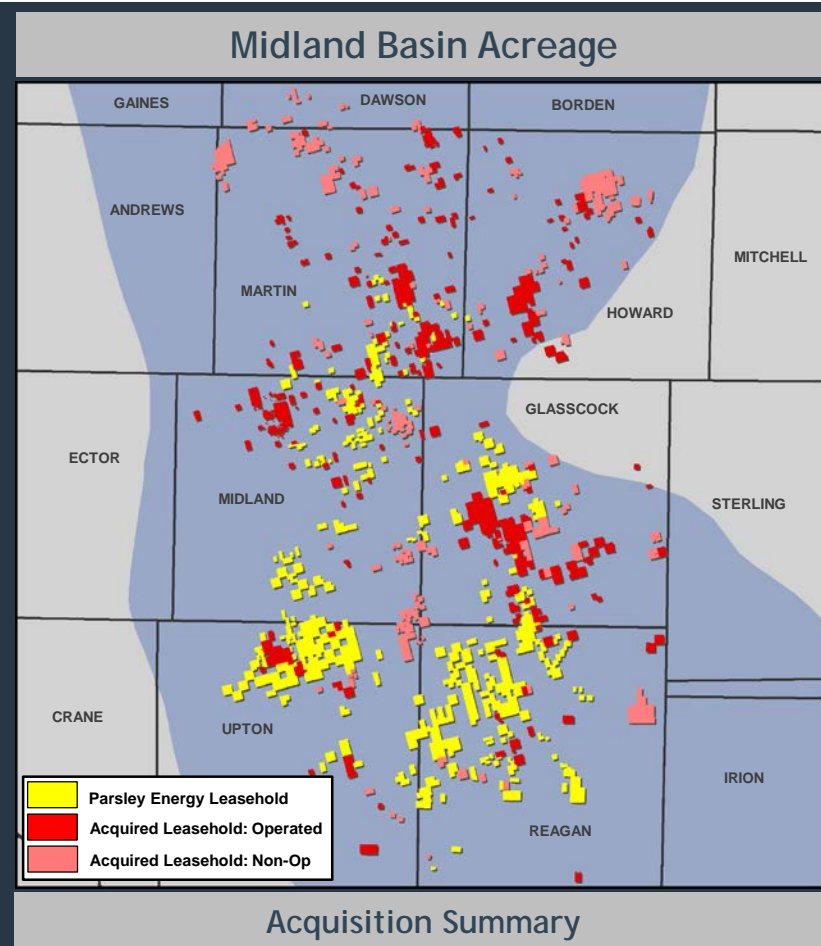
- Strong well economics would remain compelling even with lower oil prices and/or higher costs
- Drilling and completion costs remain favorable; 1Q17 D&C costs per foot impacted by increased R&D spending and lower average lateral lengths

Midland Basin Drilling & Completion Costs (\$/Lateral Ft.)



Shale Scale in the Midland Basin Core

- On April 20, closed acquisition of acreage and associated assets from Double Eagle Energy Permian LLC
 - ~71,000 net leasehold acres
 - ~3,600 net Boe/d as of January 1, 2017
 - 23 drilled uncompleted wells
 - ~3,300 net horizontal drilling locations, including ~1,800 net locations in high priority target intervals (Lower Spraberry, Wolfcamp A, Wolfcamp B)
- Strategic acquisition enhances quality, scale, and scope of Midland Basin acreage portfolio
- All depth rights across majority of acquired acreage
- Mostly operated with non-op acreage mainly distributed around the perimeter of acquisition footprint; average 25% working interest on non-op acreage
- Assets concentrated in oil-rich basin core with strong offset well performance in all areas
- Significant footprint expansion increases operational capacity, translating to a stronger-for-longer growth profile
- Incremental value potential through ongoing asset evolution and high-grading potential

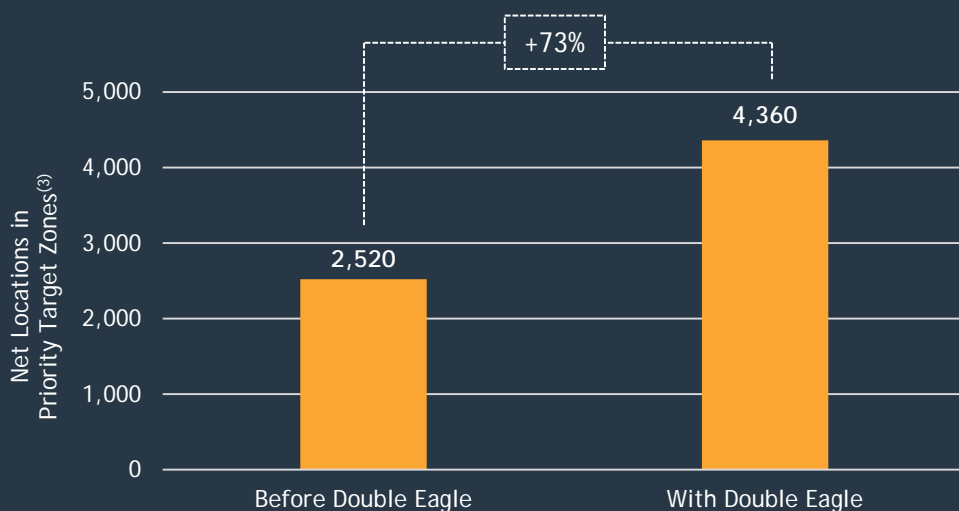


(1) LLC Units and shares of Class B common stock

Expansive, High-quality Drilling Inventory

- Extensive inventory of premium drilling locations provides visibility to years of high-return production growth
- Substantial inventory upside in Midland Basin with higher well density potential in Wolfcamp and Spraberry formations
- Nearly 600 net Wolfcamp locations in the Southern Delaware Basin with a low average royalty burden of 15%
- Double Eagle acquisition boosted priority net locations by more than 70%, significantly increasing peak production potential

Double Eagle Net Inventory Uplift



Horizontal Drilling Inventory⁽¹⁾

	Gross	Net	Wells per Section
<u>Midland Basin</u>			
Middle Spraberry	990	560	5 / 6
Lower Spraberry	1,490	860	8
Wolfcamp A	1,870	1,070	8
Wolfcamp B	3,180	1,860	8 / 16 ⁽²⁾
Wolfcamp C	1,470	920	8
Cline	1,910	1,120	8
Atoka	1,460	860	6
<u>Delaware Basin</u>			
2 nd Bone Spring	160	150	4
3 rd Bone Spring	160	150	4
Wolfcamp	620	580	16 ⁽²⁾
Total	13,310	8,130	

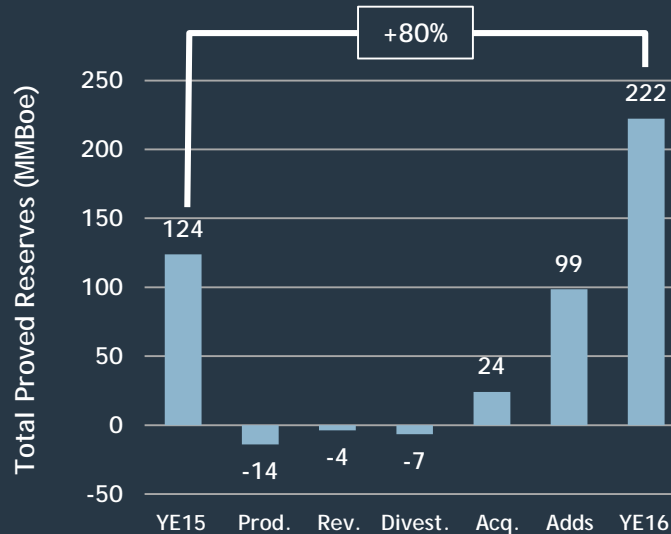
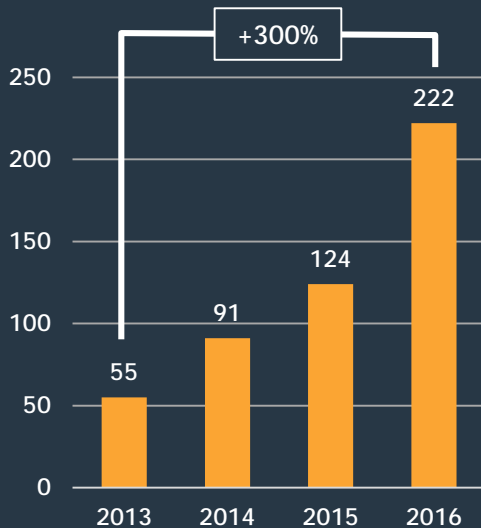
(1) As of end 1Q17 pro forma for Double Eagle acquisition closed 4/20/17 as well as for recently executed acreage trades; Location counts rounded to the nearest ten; (2) 16 wells per section reflects two landing zones; (3) Priority target zones include Lower Spraberry, Wolfcamp A, Wolfcamp B, and Delaware Wolfcamp

Robust Reserve Growth

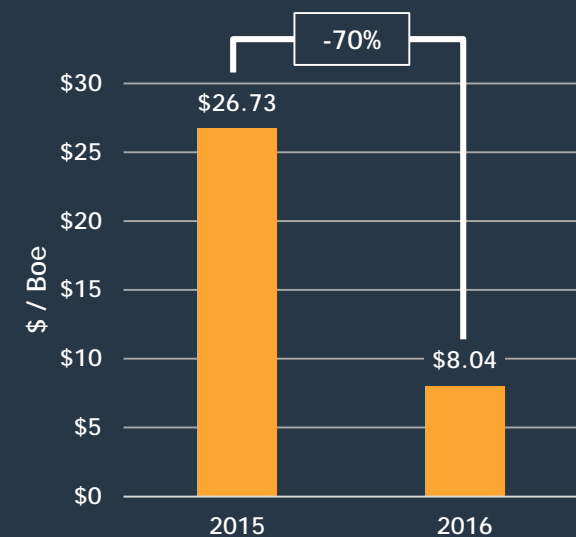
- Proved reserves up 80% Y/Y (oil up 85% Y/Y) despite writing off remaining ~18 MMBoe of vertical PUD reserves
- Strong organic reserve replacement ratio of approximately 680%⁽¹⁾
- PD F&D down 70% Y/Y to \$8.04/Boe⁽²⁾

	Oil (MMBbl)	Gas (Bcf)	NGL (MMBbl)	Total (MMBoe)
PDP	59.3	121.8	23.7	103.3
PDNP	1.9	2.2	0.6	2.8
PUD	75.4	99.7	24.2	116.2
Total Proved	136.6	223.7	48.5	222.3

Strong Growth in Proved Reserves



Compelling PD F&D Costs⁽²⁾



Note: Reserve summary as of 12/31/2016 and audited by Netherland, Sewell & Associates, Inc.; Data for Parsley only; not pro forma for pending acquisitions; (1) Organic reserve replacement ratio calculated as total 2016 reserves additions and revisions (technical and pricing) divided by total 2016 production; excludes acquisitions and divestitures; (2) PD F&D calculated as total 2016 Capex (including Infrastructure and Other) divided by total 2016 proved developed reserves additions and revisions (technical and pricing); excludes acquisitions and divestitures

Selected Operating Data - 1Q17

	Three Months Ended		
	March 31, 2017	Dec. 31, 2016	March 31, 2016
Net production volumes:			
Oil (MBbls)	3,394	2,811	1,731
Natural gas (MMcf)	4,419	3,812	2,944
Natural gas liquids (MBbls)	800	704	425
Total (MBoe)	4,931	4,150	2,647
Average net daily production (Boe/d)	54,789	45,109	29,088
Average sales prices:⁽¹⁾			
Oil, without realized derivatives (per Bbl)	\$ 50.01	\$ 46.76	\$ 30.06
Oil, with realized derivatives (per Bbl)	\$ 48.52	\$ 49.41	\$ 46.73
Natural gas, without realized derivatives (per Mcf)	\$ 2.82	\$ 2.91	\$ 1.88
Natural gas, with realized derivatives (per Mcf)	\$ 2.80	\$ 2.91	\$ 1.88
NGLs (per Bbl)	\$ 21.77	\$ 19.12	\$ 11.04
Total, without realized derivatives (per Boe)	\$ 40.48	\$ 37.59	\$ 23.52
Total, with realized derivatives (per Boe)	\$ 39.44	\$ 39.39	\$ 34.42
Average costs (per Boe):			
Lease operating expenses	\$ 3.57	\$ 3.56	\$ 5.25
Production and ad valorem taxes	\$ 2.26	\$ 2.15	\$ 1.58
Depreciation, depletion and amortization	\$ 13.99	\$ 15.10	\$ 18.66
General and administrative expenses (including stock-based compensation)	\$ 4.88	\$ 5.61	\$ 7.29
General and administrative expenses (cash based)	\$ 4.02	\$ 4.79	\$ 6.25

(1) Average prices shown in the table include transportation and gathering costs and reflect prices both before and after the effects of the Company's realized commodity hedging transactions. The Company's calculation of such effects includes both realized gains and losses on cash settlements for commodity derivative transactions and premiums paid or received on options that settled during the period