Dorchester Minerals, LP

ANNUAL MEETING

May 16, 2017

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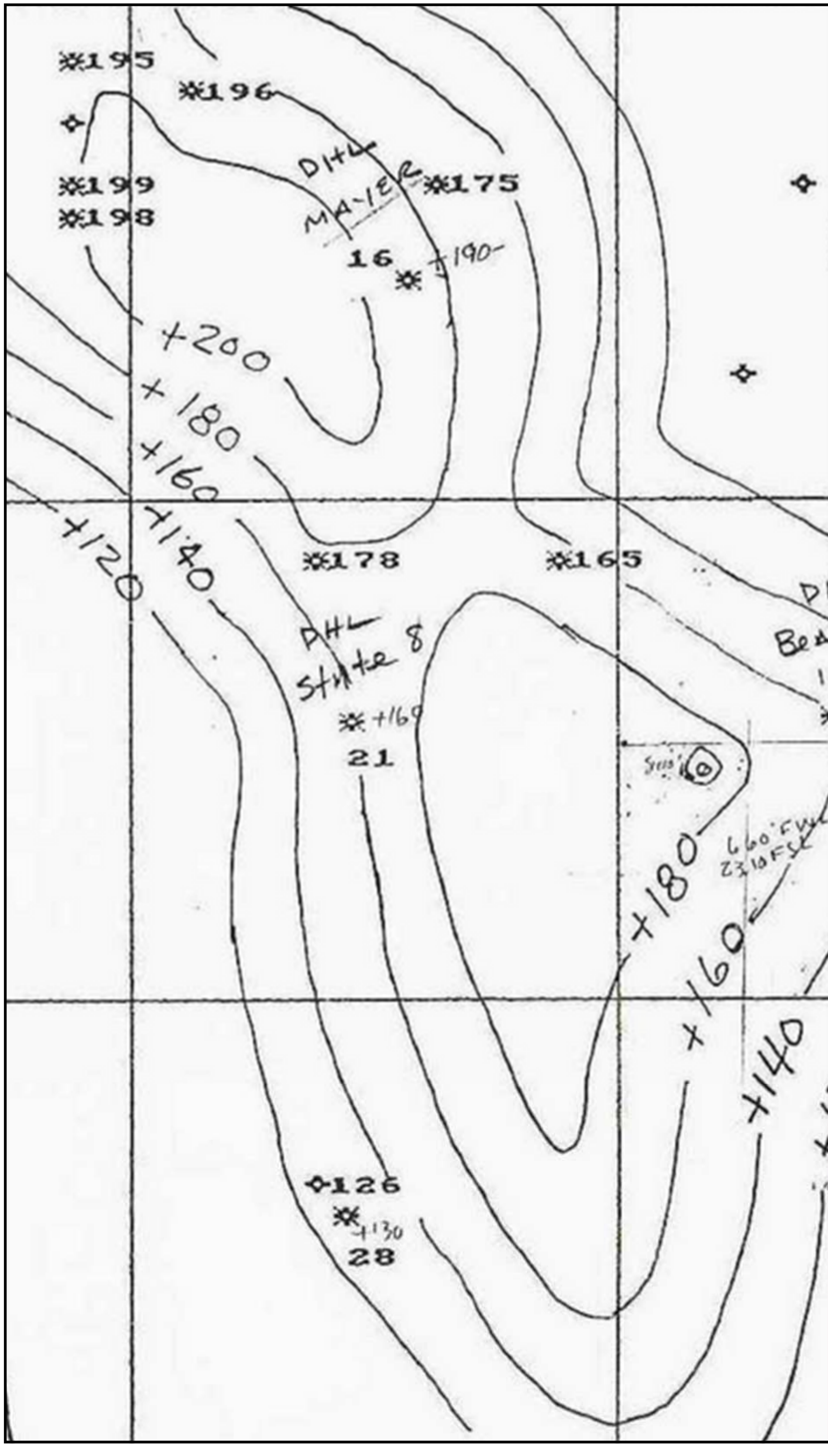
Forward-Looking Statements

Portions of this document may constitute, and our officers and representatives may from time to time make, "forward-looking statements" within the meaning of the safe harbor provisions of the U.S. Private Securities Litigation Reform Act of 1995. Forward-looking statements can be identified by words such as: “anticipate”, “intend”, “plan”, “goal”, “seek”, “believe”, “project”, “estimate”, “expect”, “strategy”, “future”, “likely”, “may”, “should”, “will” and similar references to future periods. Forward-looking statements are neither historical facts nor assurances of future performance. Instead, they are based only on our current beliefs, expectations and assumptions regarding the future of our business, future plans and strategies, projections, anticipated events and trends, the economy and other future conditions. Because forward-looking statements relate to the future, such statements are subject to certain risks, uncertainties and assumptions. Should one or more of these risks or uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary materially from those anticipated, estimated or projected. Therefore, you should not rely on any of these forward-looking statements. Examples of such uncertainties and risks include, but are not limited to, changes in the price or demand for oil and natural gas, changes in the operations on or development of the Partnership’s properties, changes in economic and industry conditions and changes in regulatory requirements (including changes in environmental requirements) and the Partnership’s consolidated financial position, business strategy and other plans and objectives for future operations. These and other factors are set forth in the Partnership's filings with the Securities and Exchange Commission. Any forward-looking statement made by us in this document is based only on information currently available to us and speaks only as of the date on which it is made. We undertake no obligation to publicly update any forward-looking statement, whether written or oral, that may be made from time to time, whether as a result of new information, future developments or otherwise.



OUTLINE

- Observations and Trends
- Distributions
- Minerals NPI Status
- Production and Reserves
- Property Discussion

Observations and Trends

Production Volatility Based on Many Factors

- Price volatility
- Rig count → Rig efficiency
- Pad drilling, longer laterals and enhanced completions

Midland Basin Activity in the Spotlight

- Significant contribution to 2016 results
- Increasing demands on partnership resources – people and time
- A "high class" problem

Increasing Activity on Legacy Resource Plays

- "Core-of-the-Core" Bakken assets
- Testing deeper formation in Fayetteville Shale area

Delaware Basin Story Still Unfolding

- Offset results will help quantify exposure
- Geology matters

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2016 Distributions

Cash Distributions Paid in Calendar 2016

- Reflects Q4 2015 to Q3 2016 activity

Royalty Revenue
$25.8 MM

NPI Revenue
$5.5 MM

Other Revenue
$2.7 MM

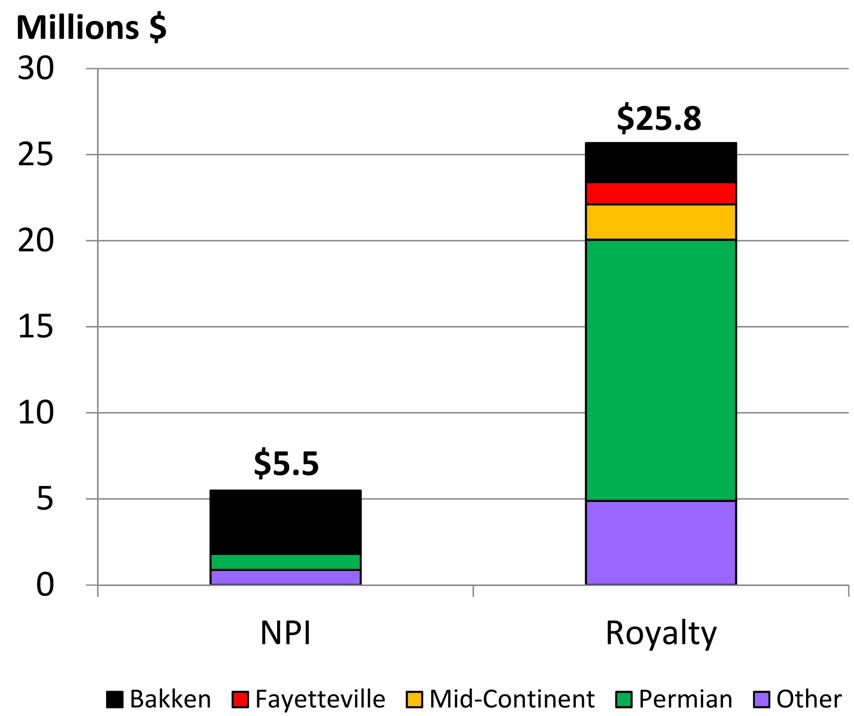
Total Revenue
$34.0 MM

LP Distribution
$26.3 MM

GP Distribution
$0.9 MM

Total Expenses
$6.8 MM

Composition of 2016 Revenue



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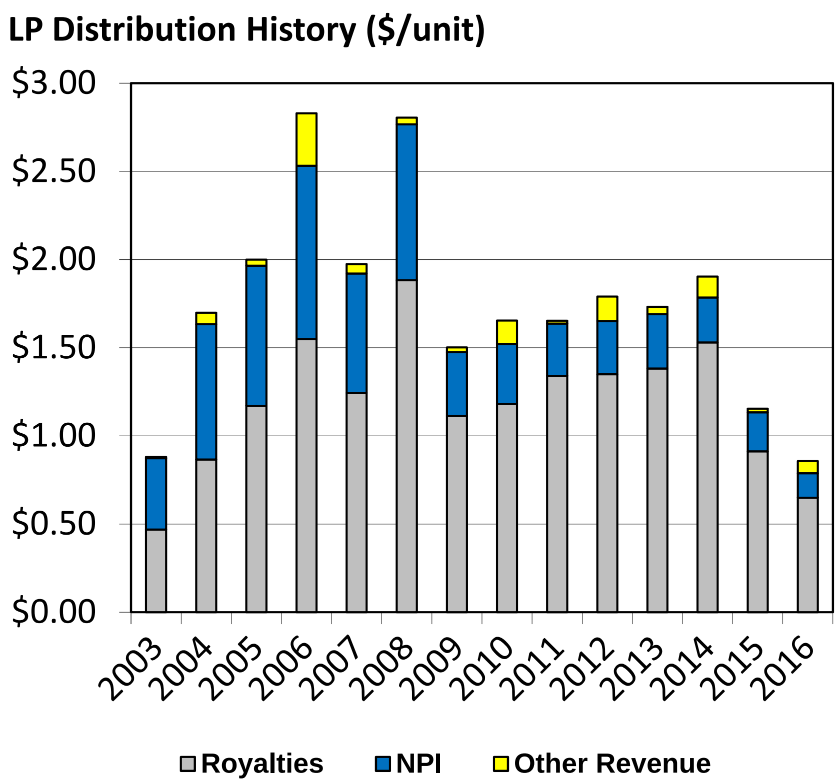
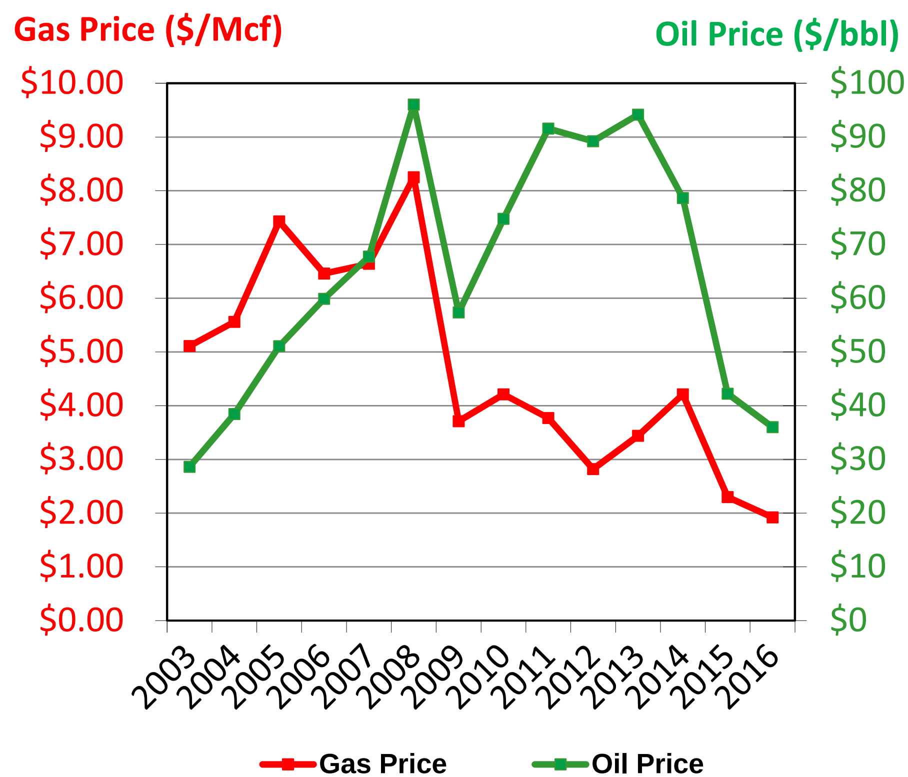
2016 Distributions

Components and Prices

- Royalty properties contributed 76% to total 2016 LP distributions
- Gross Revenue → 71% oil & liquids sales, 21% gas sales, 8% other





Note: Oil and Gas prices represent realized prices from royalty properties. Oil prices include Plant Products.

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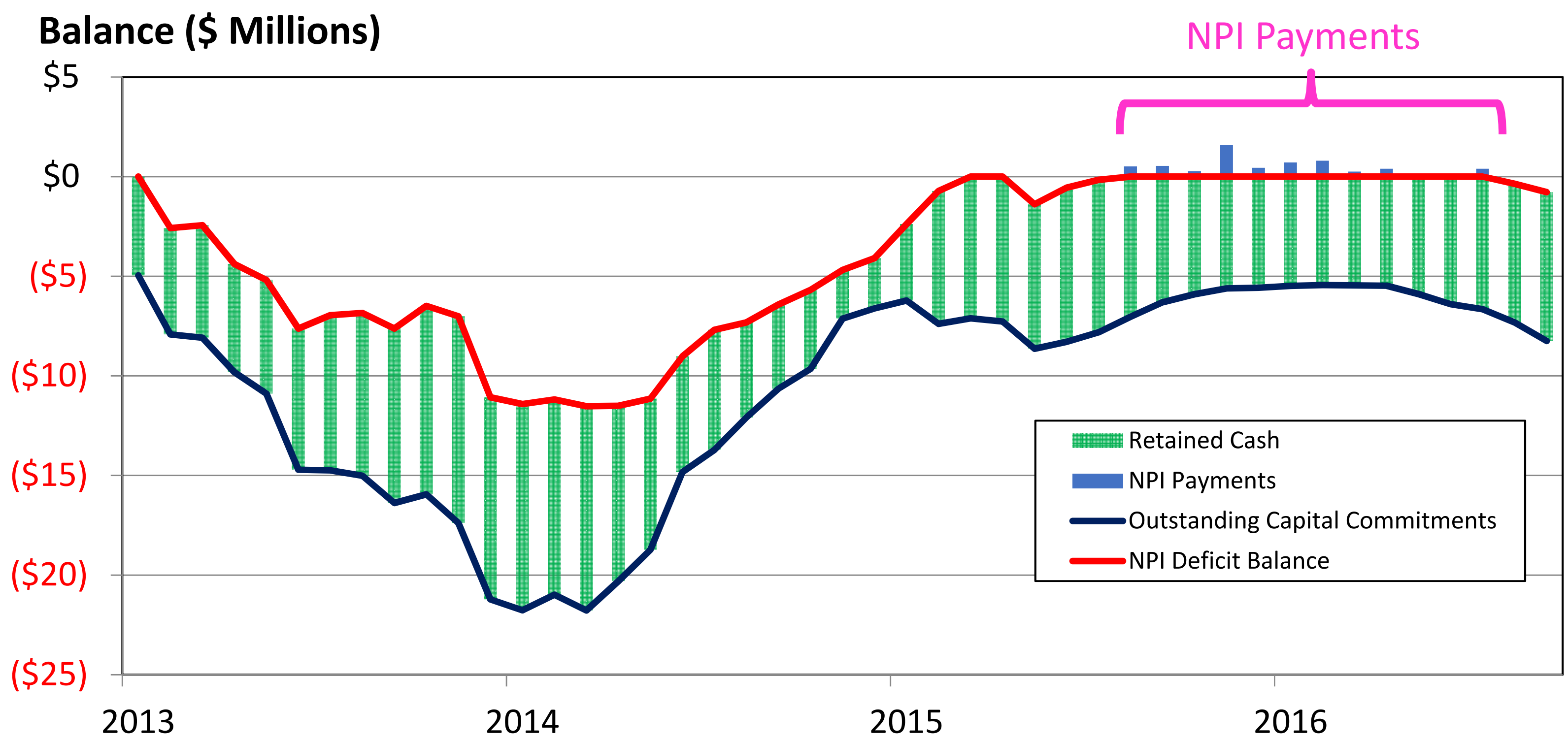
Minerals NPI

Activity from August 2013 through March 2017

- Reached surplus in September 2015 for the first time since July 2013
- NPI Payments for trailing 12 months through March 2017 total $4.9MM
- NPI in deficit Feb 2017 & Mar 2017 due to new capital commitments



Minerals NPI

Inception-To-Date Activity through March 2017

Cumulative Revenue	$126.0 MM
Cumulative Expense (LOE, taxes, etc.)	($ 31.9 MM)
Cumulative Operating Income	$ 94.1 MM
Cumulative CAPEX Spent	($ 74.5 MM)
Cumulative Cash Flow	$ 19.6 MM
Cumulative Payments	($ 12.1 MM)
Retained Cash @ 03/31/2017	$ 7.5 MM
Capital Commitments @ 03/31/2017	($ 8.3 MM)

Cumulative NPI Payments	**$ 12.1 MM**

Trailing six month average net Operating Income is approximately $0.6MM per month

Outstanding Capital Commitments

By Play	
Bakken	($ 7.2 MM)
Other Basins	($ 1.1 MM)
Total Capital Commitments	($ 8.3 MM)

By Status	
Wells in Pay Status	($ 3.8 MM)
Wells not in Pay Status	($ 4.5 MM)
Total Capital Commitments	($ 8.3 MM)

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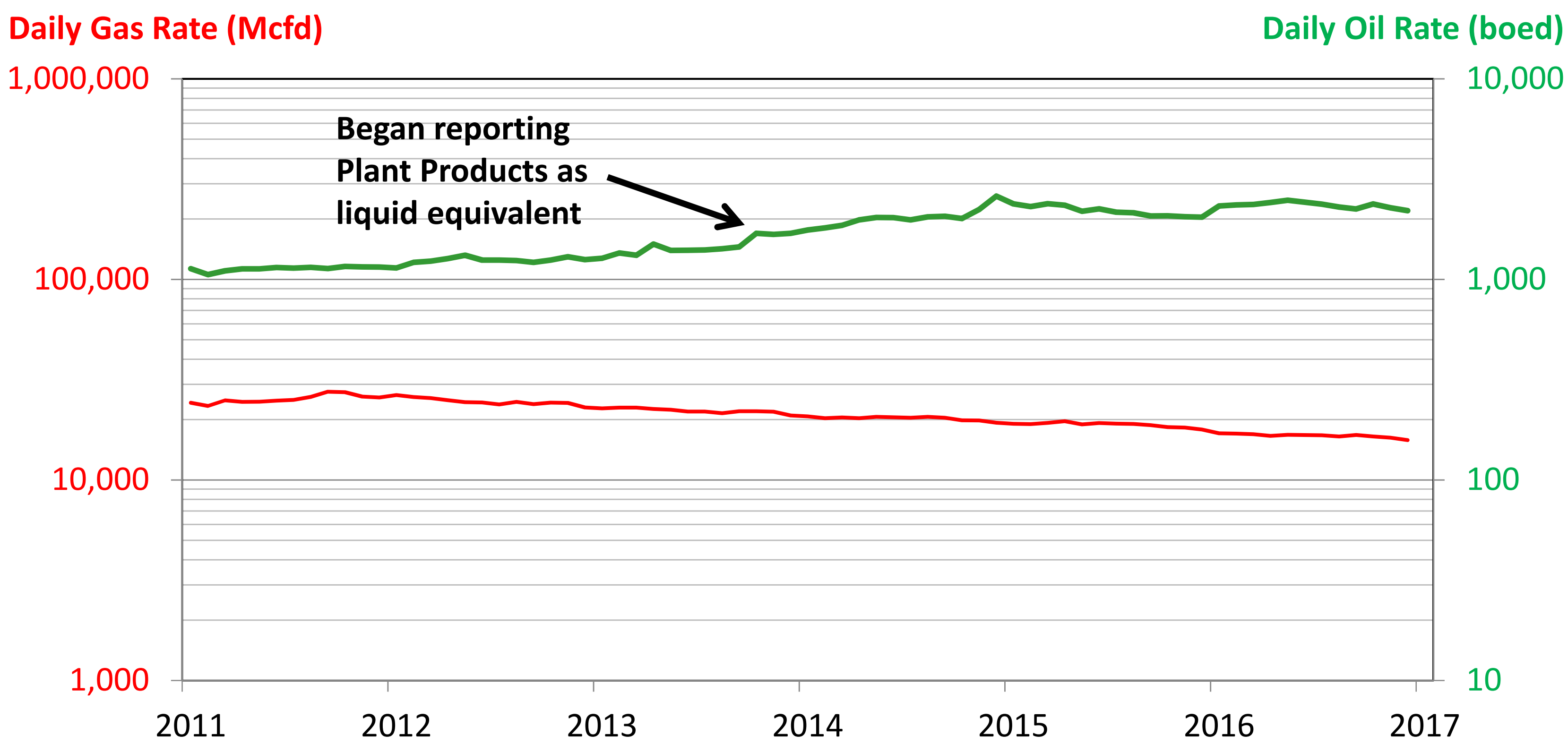
Total Production

- Oil trend volatility affected by NPI contributions
- Gas decline is due to reduced activity in dry gas basins



Note: Production graph limited to "in pay" volumes. Plant Products included as gas equivalent prior to 2014, and as oil equivalent after 2014 at 0.47:1 ratio.

Royalty and NPI Production

Royalty Production

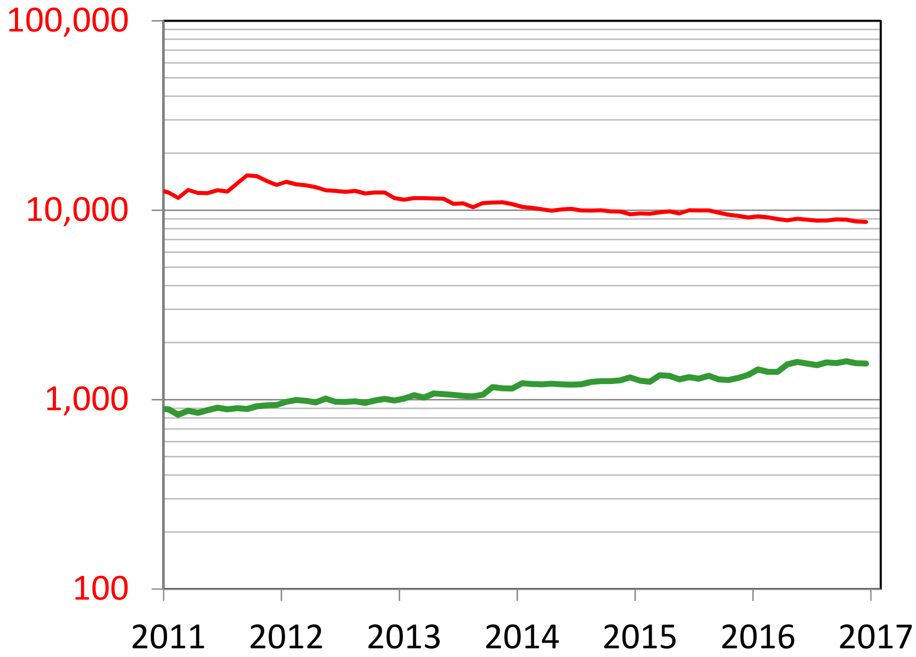
- Oil largely driven by robust Midland Basin development
- Gas decline is due to reduced activity in dry gas basins

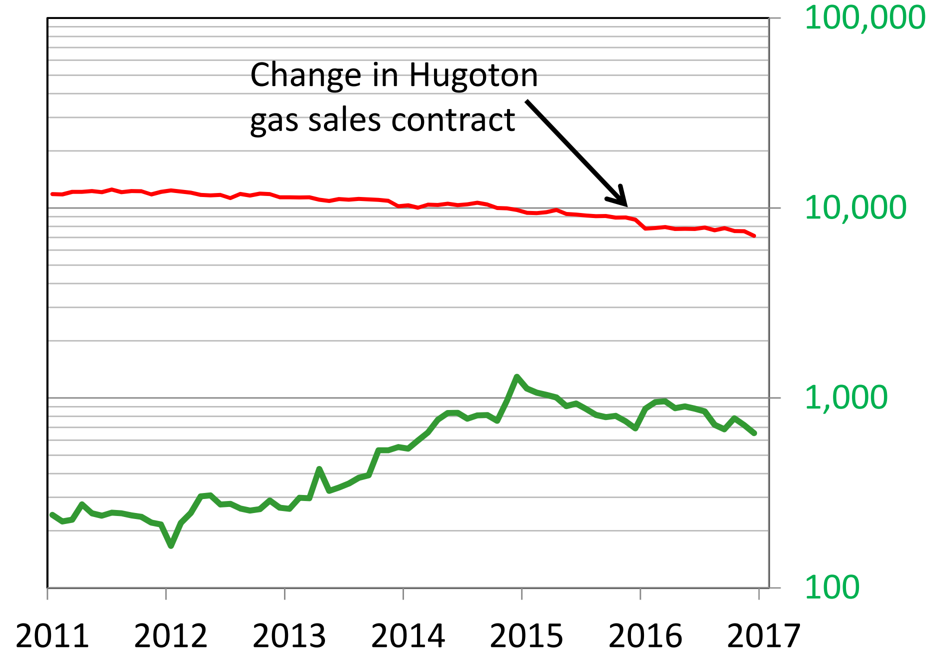
NPI Production

- Oil was driven by Bakken participation but slowed significantly in 2015 & 2016
- Gas production is dominated by Hugoton Field

Daily Gas Rate (Mcfd)

Daily Oil Rate (boed)





Note: Production graph limited to "in pay" volumes. Plant Products are included as gas equivalent prior to 2014.

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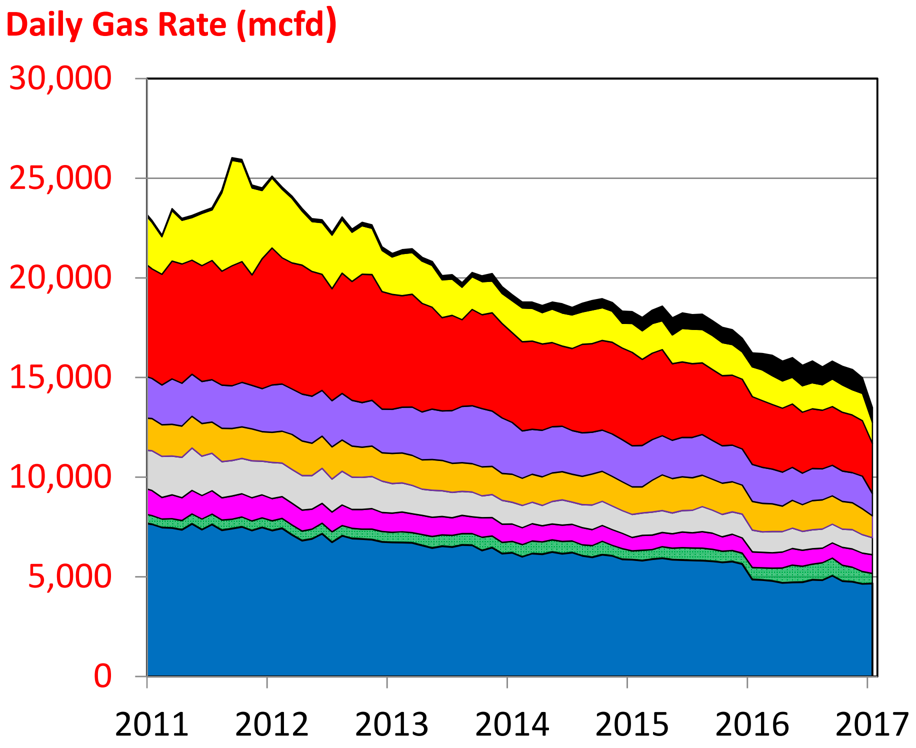
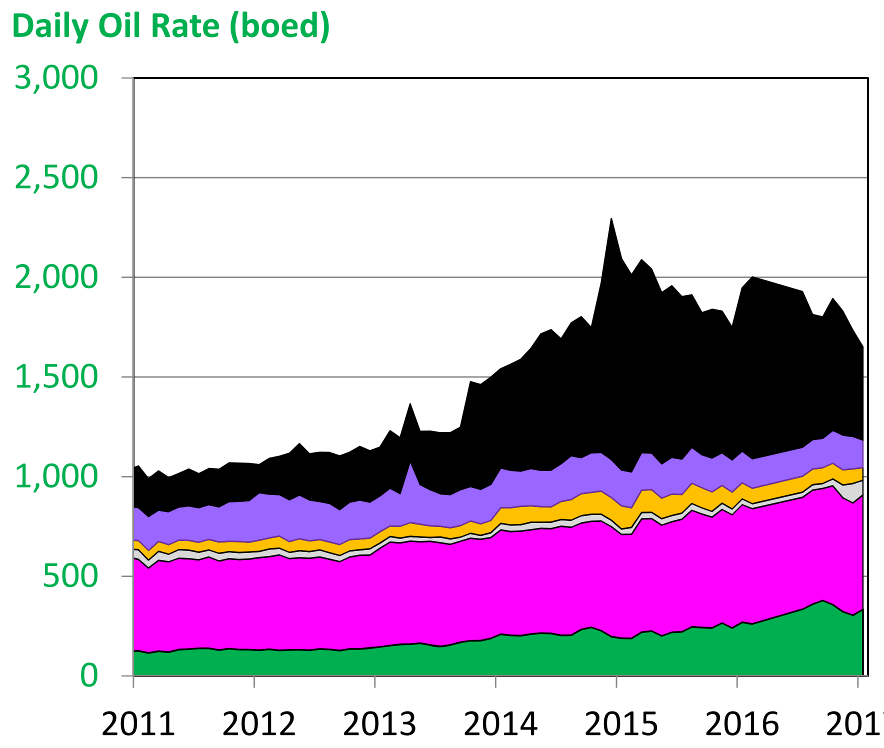
Composition of Production

Contribution from Diverse Sources

- New plays have replaced declines in legacy assets
- Opportunities for production growth in mature basins





Hugoton Core Midland Other Permian S. Texas/Gulf Coast Mid-Continent Miscellaneous Fayetteville Barnett Bakken

Note: Volumes attributable to NPI's are included regardless of surplus/deficit status and are burdened by lease operating costs and capital expenses.

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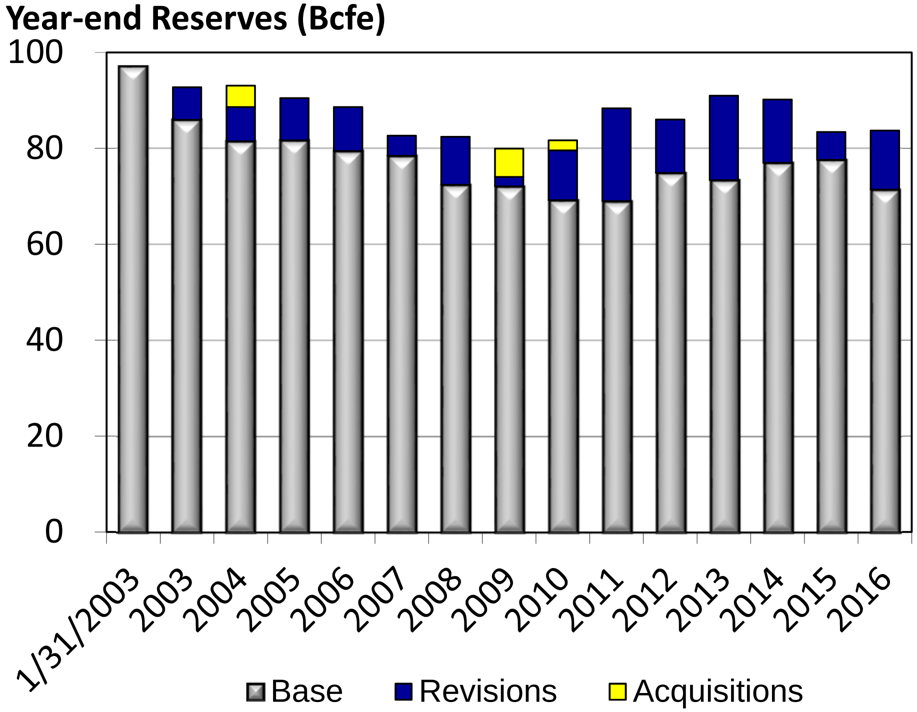
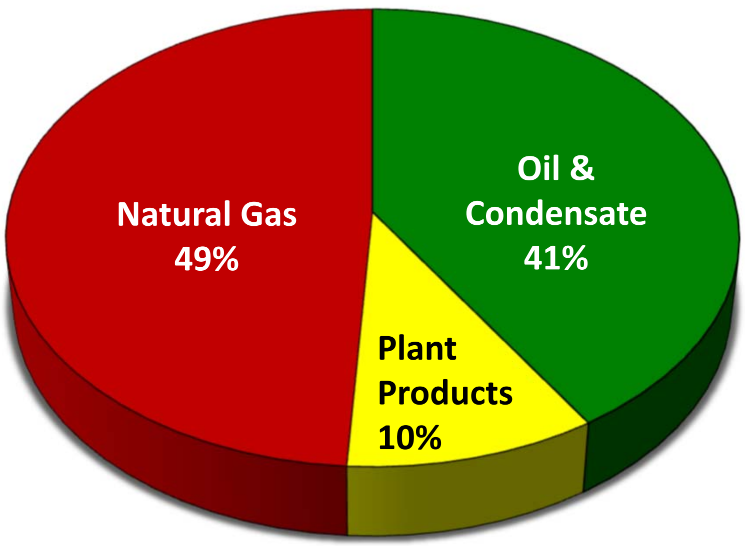
2016 Reserves

Total Proved Reserves of 83.7 Bcfe on 12/31/2016

- All reserves are Proved Developed Producing (PDP)
- Demonstrated history of positive revisions → new plays, infill drilling, and new technology
- Oil and Plant Product volumes exceed 50% of total reserves in 2016
- Significant new Plant Product volumes from 2016 Hugoton marketing contract





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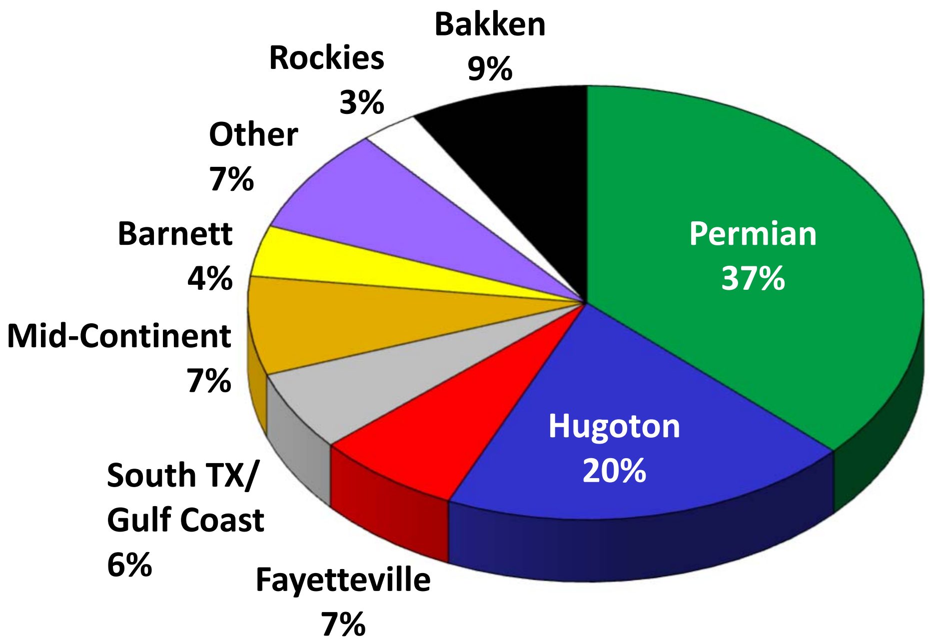
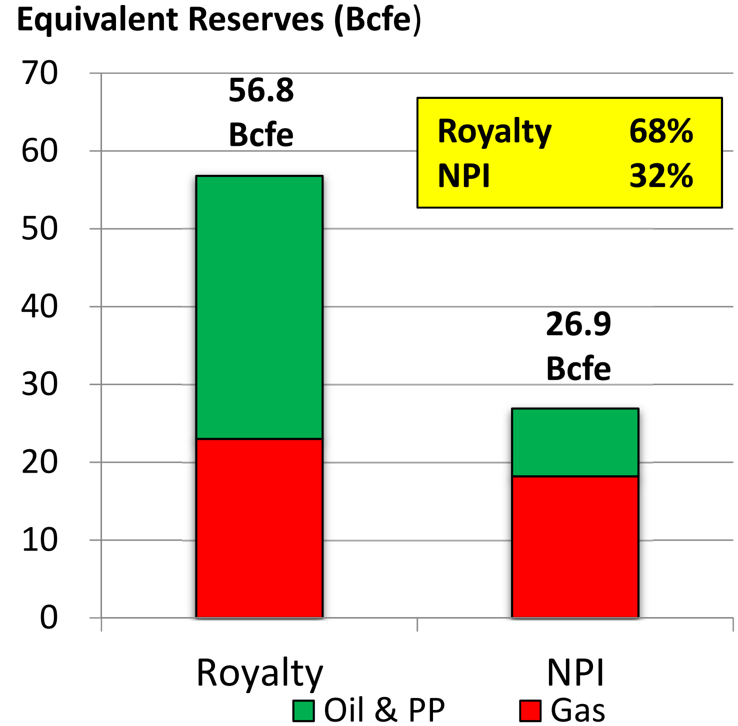
2016 Reserve Composition

- Permian and Bakken comprise 46% of total reserves
- Royalty reserves increased from 62% at YE 2015 to 68% at YE 2016

Geographic Breakdown



Royalty-NPI Split



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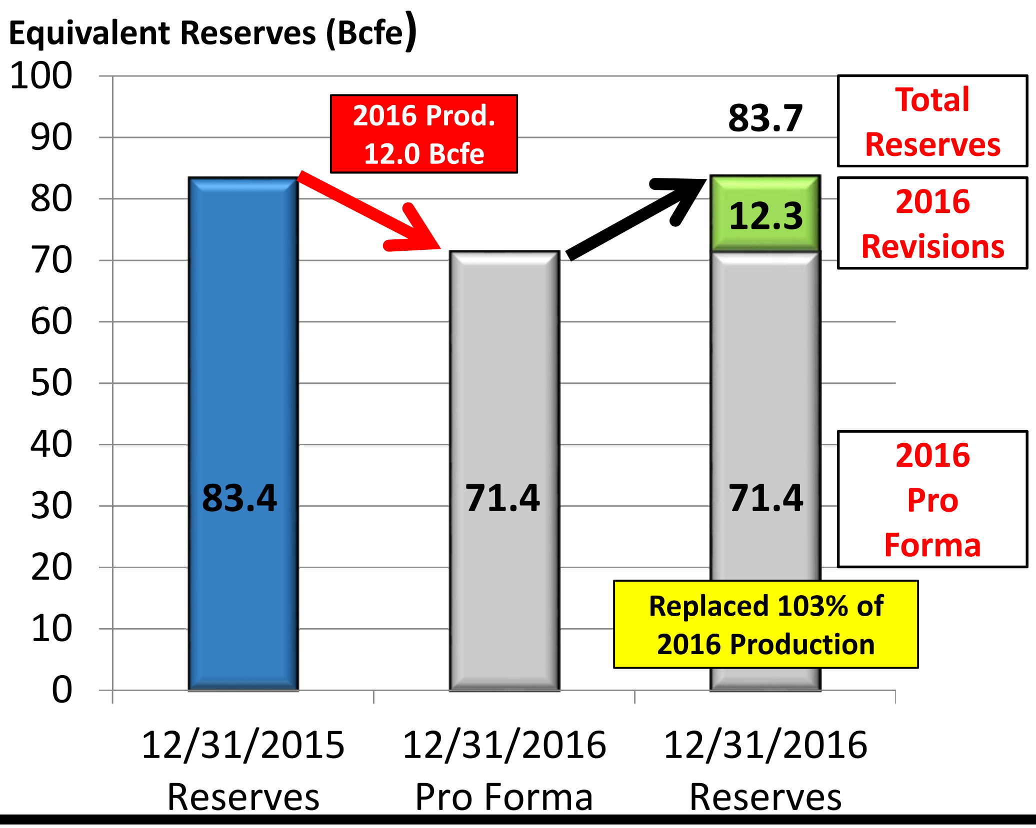
2016 Reserve Revisions

- Midland Basin was a major driver of upward oil revisions
- Natural declines and economic limits suppressed gas reserves
- Cumulative revisions since inception account for 168% of 2016 reserves



Gas Reserves (Bcf)

Year-End 2015	49.4
2016 Production	(6.5)
Revisions	(1.7)
Year-End 2016	**41.2**

17% Year-over-year Decrease

Oil Reserves (Mboe)

Year-End 2015	5,678
2016 Production	(921)
Revisions	2,335
Year-End 2016	**7,092**

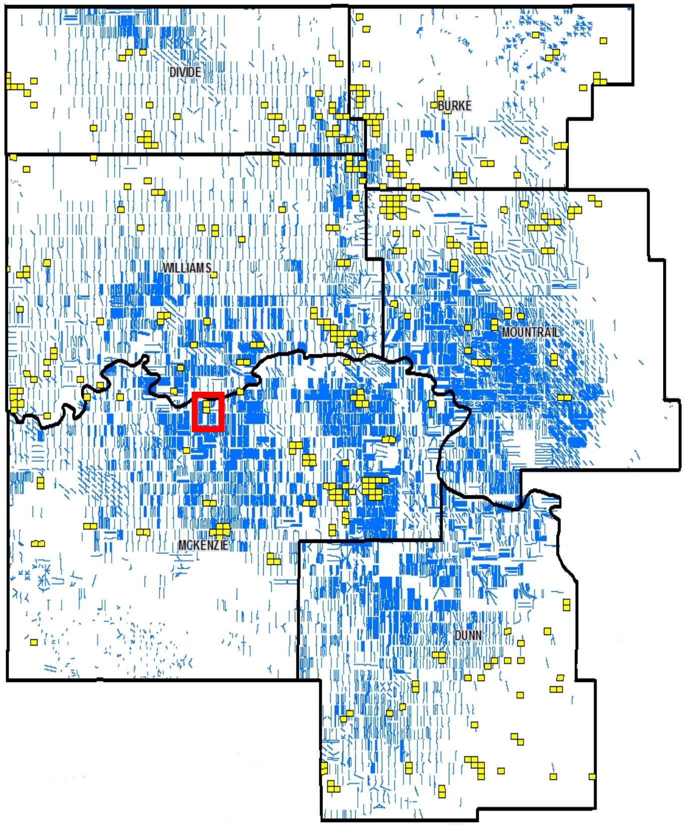
25% Year-over-year Increase

Replaced 254% of Oil Production

Bakken/Three Forks

- 70,390 gross ac (8,905 net ac) in six core ND counties
- Majority of mineral interests are unleased
- Year-end 2016 PDP reserves of 1.18 MBOE (RI & WI)

	Well Count	Average APO GWI	Average APO NRI
Completed/Producing	628	2.034%	2.062%
Drilling/DUC/Confidential	37	1.156%	1.163%
Permitted AND Proposed	30	0.943%	1.072%
Permitted NOT Proposed	89	2.947%	2.952%
Total	**784**	**2.054%**	**2.083%**

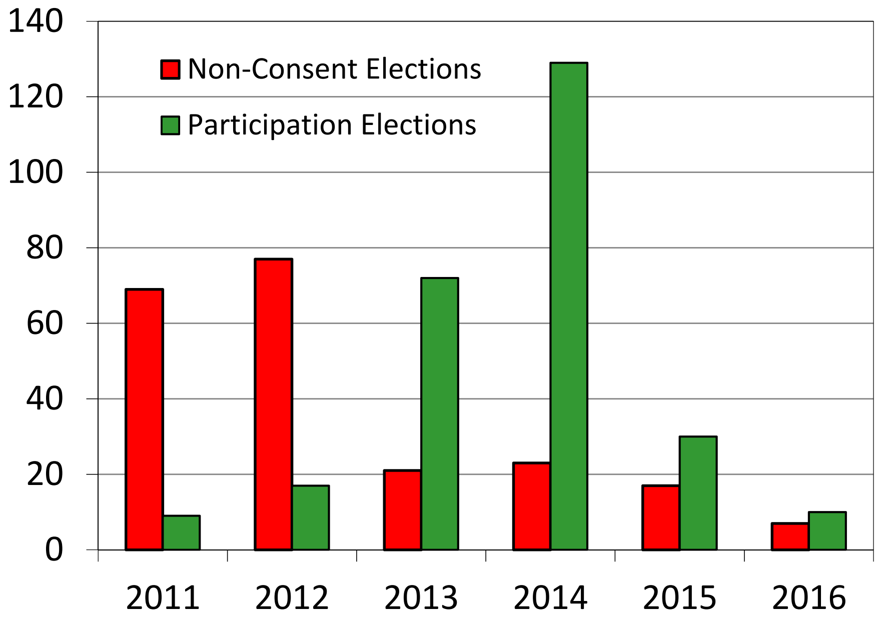


Note: NRI values are the sum of DMLP and DMOLP NRIs.

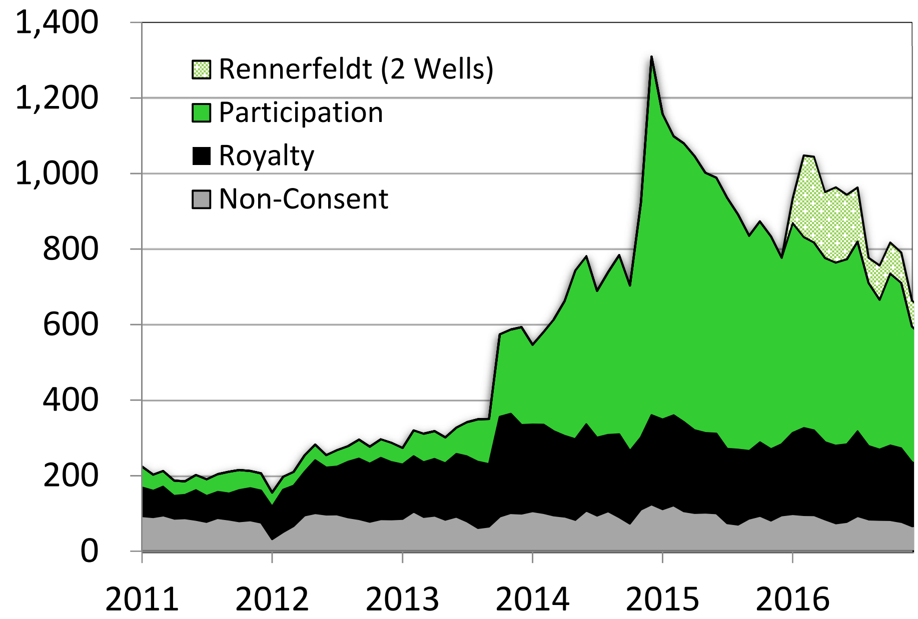
Bakken/Three Forks

- 2016 exit rate → 660 boed (75% NPI)
- 16 wells producing but not yet in pay
- 20 participation elections YTD 2017
- Rig count increased from 27 in May 2016 to 50 in May 2017

Well Count



Daily Production (boed)



Note: Production graphs limited to "in pay" volumes from six county core area.

Bakken/Three Forks

McKenzie County Example

Continental Resources - Uhlman-Pittsburgh Unit

- Dorchester owns 320 gross ac (104 net ac)
- 2,633 ac Spacing Unit
- Average NRI → 3.96%
- Uhlman 1-7H (1st Prod 2014) → EUR: 860 MBO & 1.2 BCF
- Potential Development Plan:

Producing Wells	3
Drilled/WOC	3
Permitted not spud	4
Remaining Locations	22

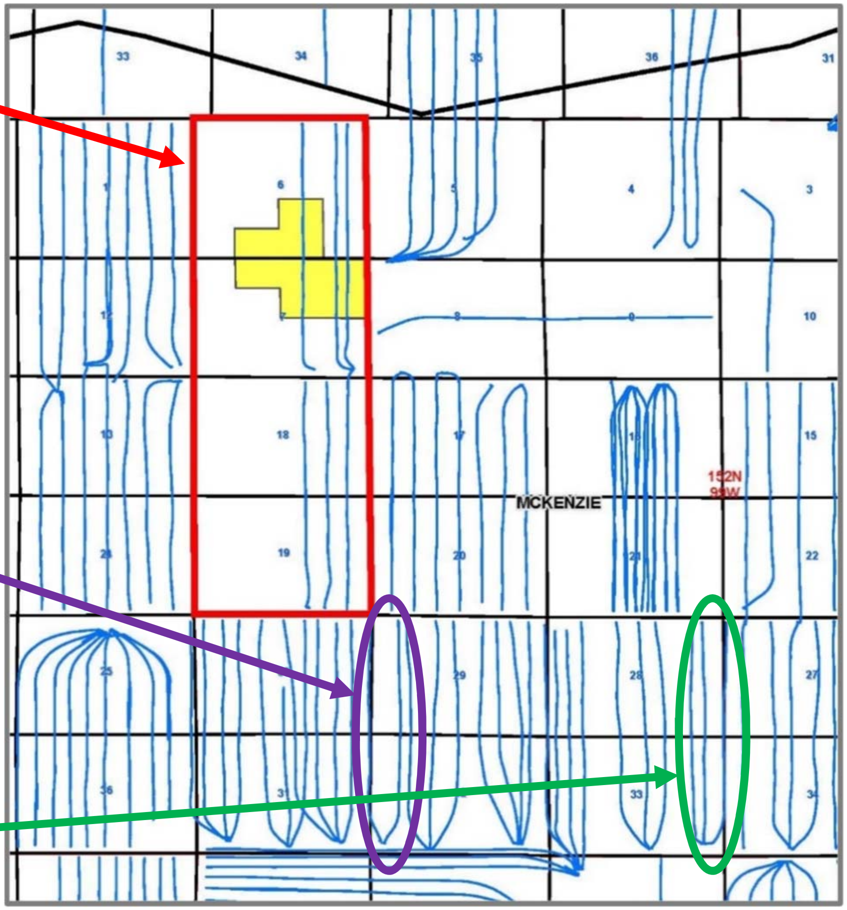
32 potential locations @ 660' offsets in MB & TF

Whiting Oil & Gas - Koala 14-32 Pad

- First Production in December 2016
- 2 Wells produced 202,000 boe in 3 months

Whiting Oil & Gas - Loomer 44-33 Pad

- Completed in February 2017
- Enhanced Completion → 8.9 MMLbs of proppant per well
- Average IP: 3,509 boed



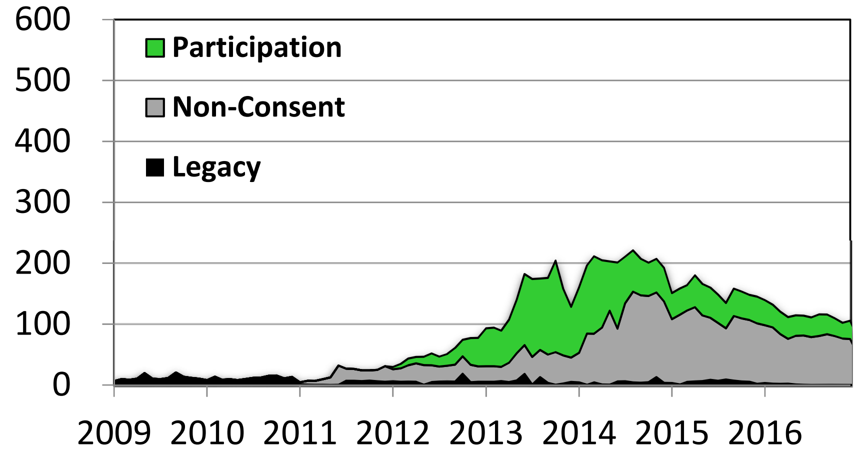
Note: Production & test rates from NDIC, DrillingInfo, & Public Company Filings.

Midland Basin

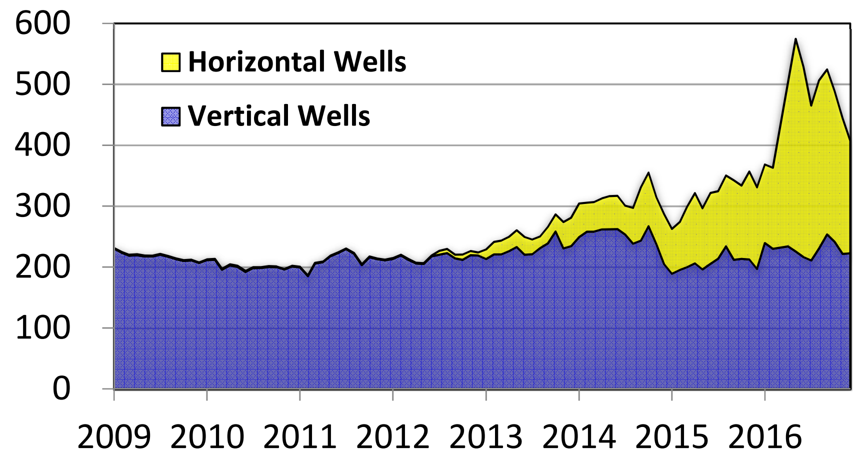
Wolfcamp/Spraberry

- 229,000 gross ac (11,500 net ac)
- Unleased at some depths in numerous tracts

NPI Production (boed)



Royalty Production (boed)



Note: Production graph limited to "in pay" volumes from Glasscock, Midland, Reagan, and Upton Counties. Acreage total limited to the same counties.

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Midland Basin

Glasscock County Example

- 10,240 gross ac (1,120 net ac) with average NRI of 1.688%
- Horizontal activity on 6 of 16 sections

RSP Permian

Calverley 9-4 (13 wells)

- 8 wells producing – all wells in pay
- 4 wells drilling/WOC
- 1 well permitted not spud
- Average IP: 1,115 boed
- Cumulative 16 month production → 1,274,000 boe

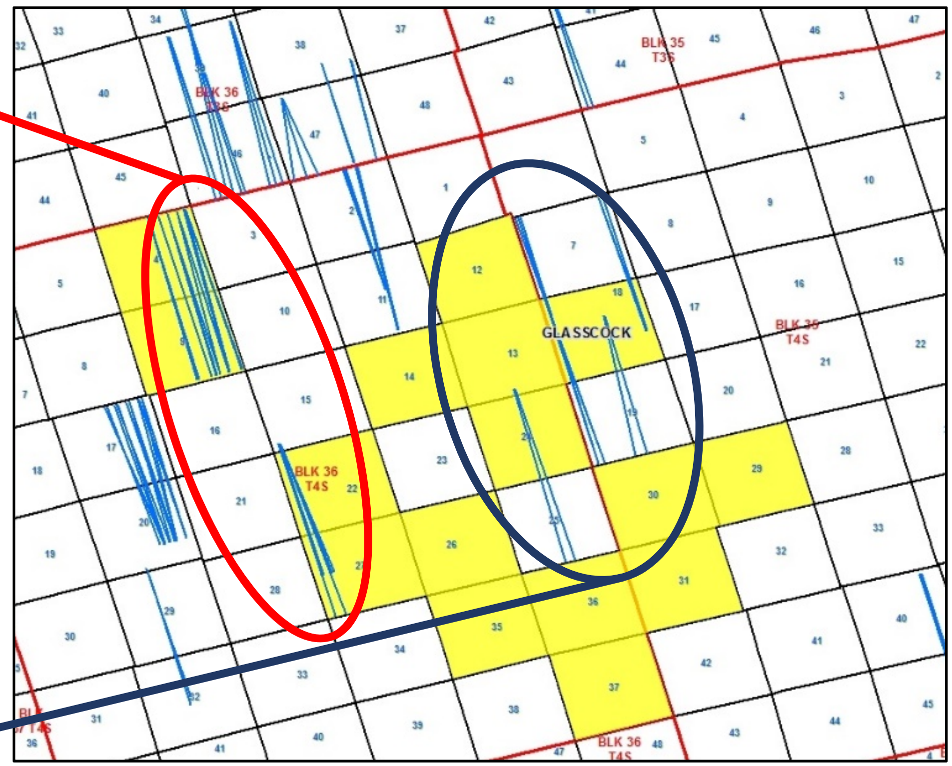
Calverley 22-27 (4 wells)

- 4 wells drilling/WOC

Diamondback

Riley & Tomahawk (13 wells)

- 6 wells producing – 4 wells in pay
- 3 wells drilling/WOC
- 4 wells permitted not spud
- Average IP: 1,299 boed
- Cumulative 13 month production → 835,000 boe



Midland Basin

Reagan County Example

- 19,760 gross ac (2,191 net ac)
- Approximately 90% of net ac HBP at 1/8th royalty, 10% unleased

<u>Parsley Energy</u>

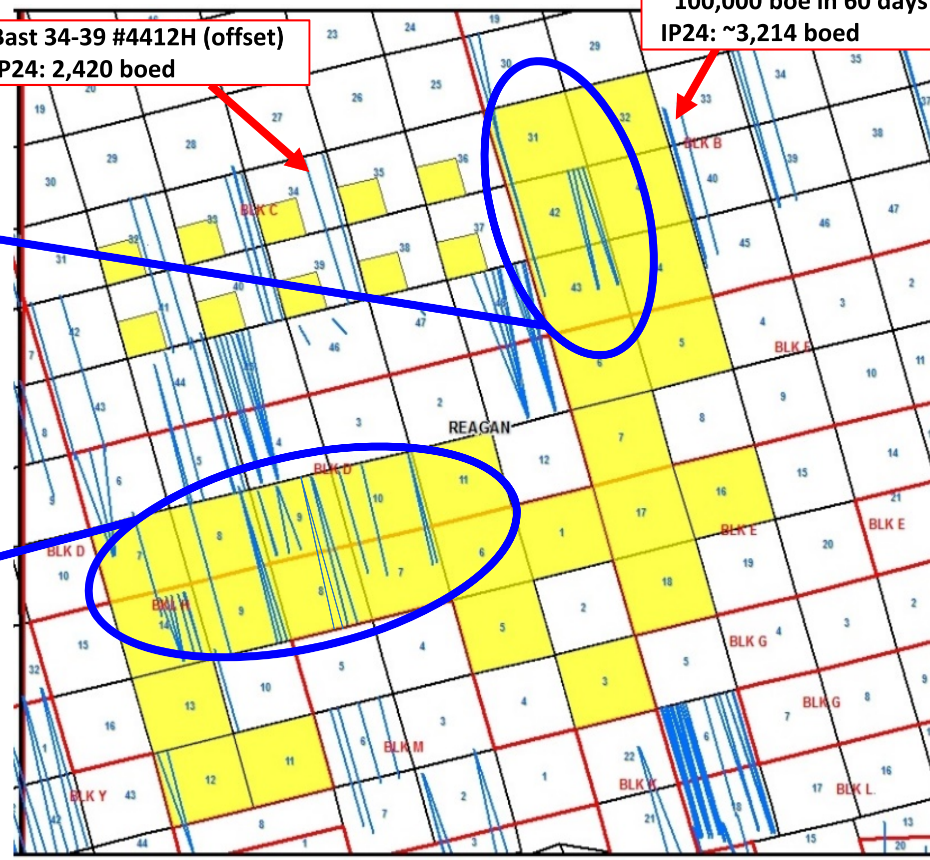
Bates (12 wells)

- 4 wells producing – 2 wells in pay
- 8 wells drilling/WOC
- IP range: 773–2,663 boed
- Cumulative 10 month production → 361,000 boe

<u>Parsley Energy</u>

Ringo & Brynlee (25 wells)

- 18 wells producing – 17 wells in pay
- 2 wells drilling/WOC
- 5 wells permitted not spud
- Average IP: 772 boed

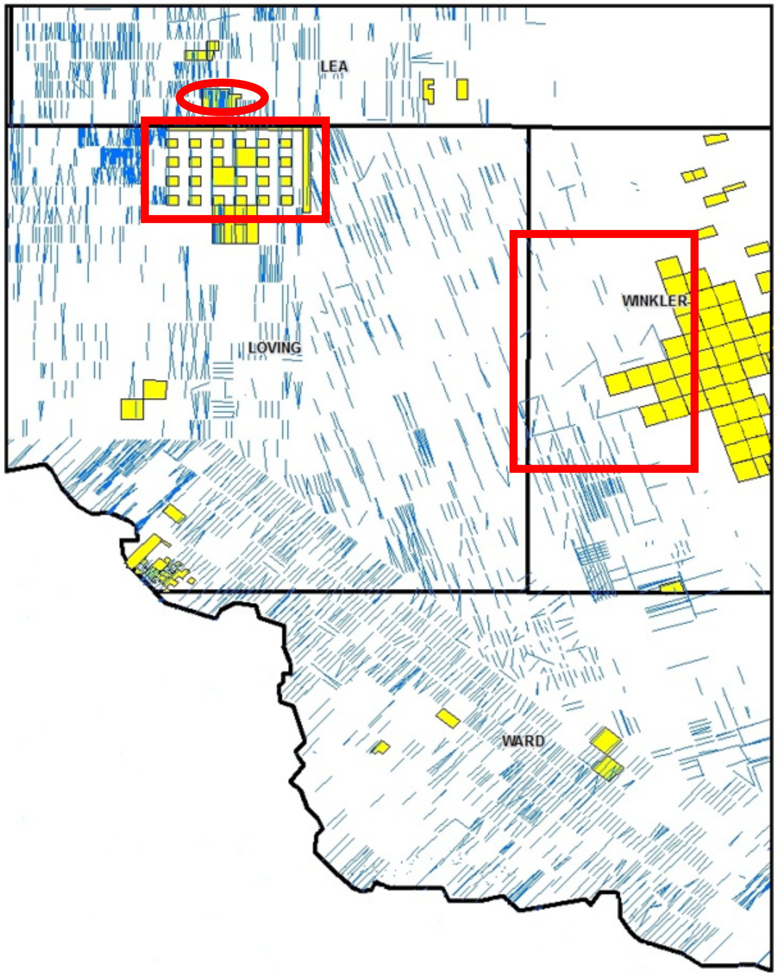


Note: Production & test rates from RRC, DrillingInfo, & Public Company Filings.

Delaware Basin

Wolfcamp / Bone Springs

- 11,618 gross ac (856 net ac) located in Loving, Reeves and Ward counties, Texas and Lea County, New Mexico
- 3,200 gross ac of NPRI's & 640 gross ac of ORRI's
- Majority of tracts are leased at 1/4 royalty
- Prospective in multiple zones within the Wolfcamp and Bone Springs plays
- Eastern extension will determine Dorchester's exposure in Winkler County, if any



Note: Acreage counts reflect Reeves and the portions of Lea, Loving, & Ward counties shown above and do not include WInkler County.

Delaware Basin

Lea and Loving counties Example

EOG Resources

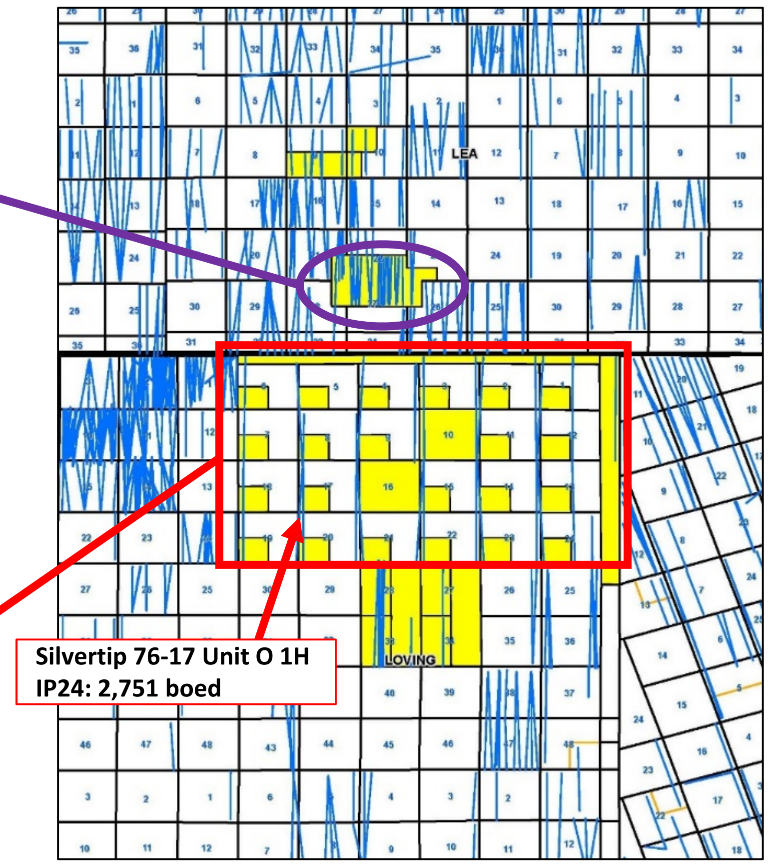
Thor 21, Rattlesnake 21 Fed Com & Ophelia 27 (16 wells)

- Dorchester owns 960 gross ac (36 net ac)
- Average NRI → 0.547%
- Development:
    - 12 wells producing – 11 wells in pay
    - 4 wells permitted
- Average IP → 1,936 boed
- Cumulative 38 month production → 3,337,000 boe
- Recently leased Lea County acreage for $20,000 per NMA

Anadarko Petroleum

Silvertip (19 wells)

- Dorchester owns 7,388 gross ac (344 net ac)
- Average NRI → 0.568%
- Development:
    - 1 well producing – in pay
    - 16 wells drilling/WOC
    - 2 wells permitted not spud
- Silvertip 76-17 Unit O 1H → Tested 2,751 boe
- 48 net acres unleased with two recent permits



Note: Dorchester NRI based on Anadarko Proposed Drilling Units (320 to 640 ac). Production & test rates from RRC, DrillingInfo, & Public Company Filings.

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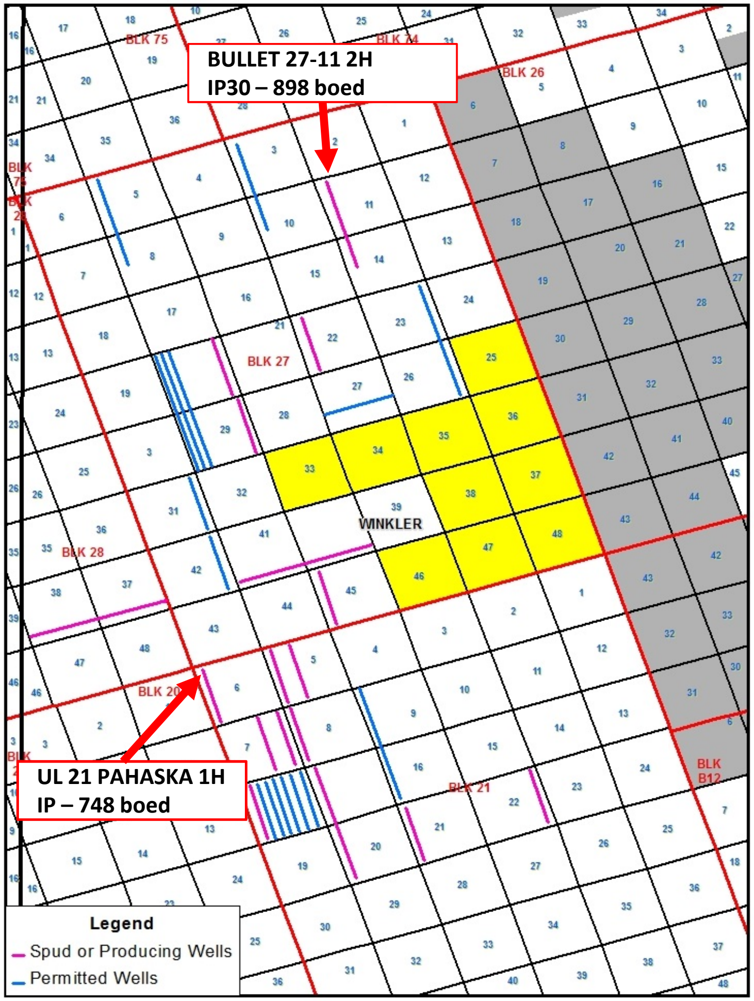
Delaware Basin

Winkler County Example

- Wolfcamp / Bone Springs
- Recent activity has extended the prospective limits of the Basin to the east
- Varying undivided mineral interests in 6,400 gross acres in Block 27
- 90% leased/HBP with average NRI of 8.94%.
- Ongoing leasehold acquisition campaigns
- Current permitting and drilling activity adjacent to and nearby DMLP position
- Operators are Felix, Forge, Mewbourne, RSP and XTO
- No clear timeline for confirmation of this area's productivity, if any



APPENDIX

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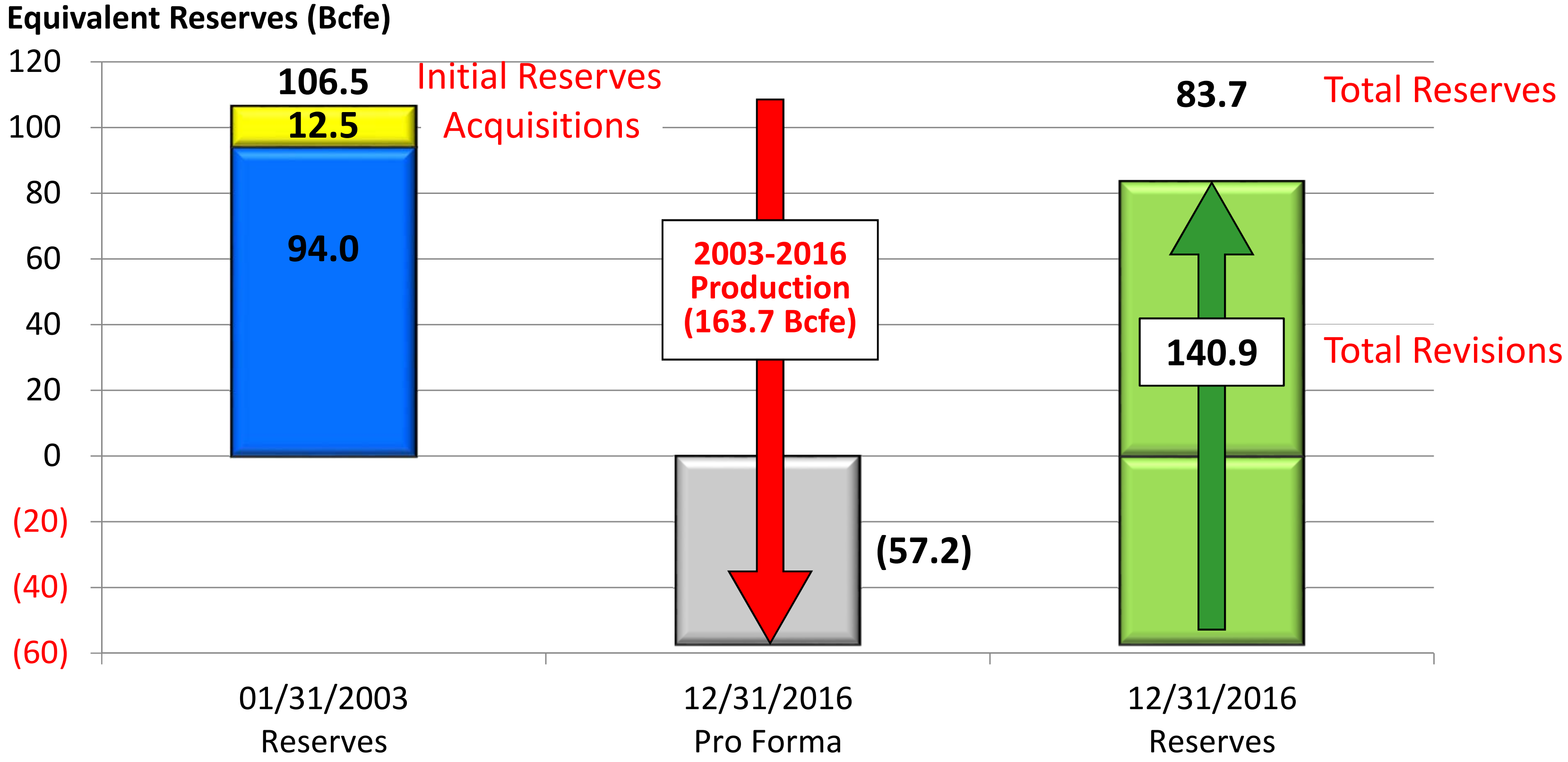
2016 Reserves

History of Positive Reserve Revisions

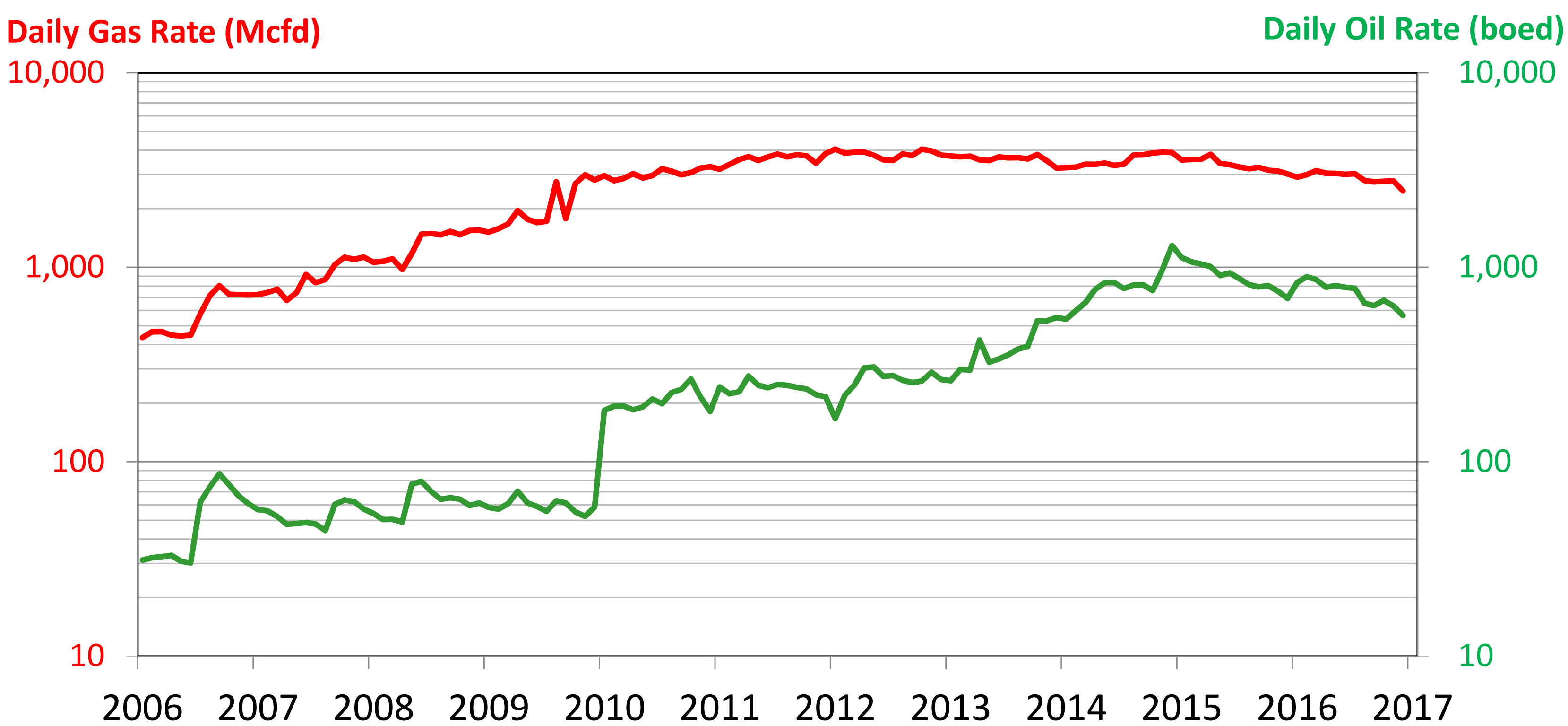
- Cumulative Reserve Revisions have exceeded 100% of Current Reserves



Minerals NPI

Production by Product

- Added 56 new wells in 2016 located in Arkansas, North Dakota, Oklahoma, and Texas
- Gas production has declined since 2012, but Oil production has increased by over 150%
- Decreased Bakken activity led to Oil decline in 2016

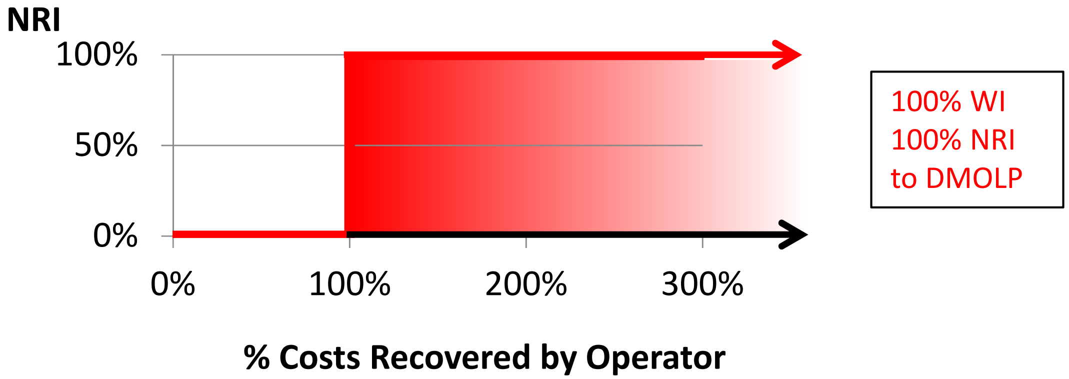


Note: Production graph limited to “in pay” volumes. Prior to 2014 Plant Products included as gas equivalent.

Non-Consent/Non-Participation

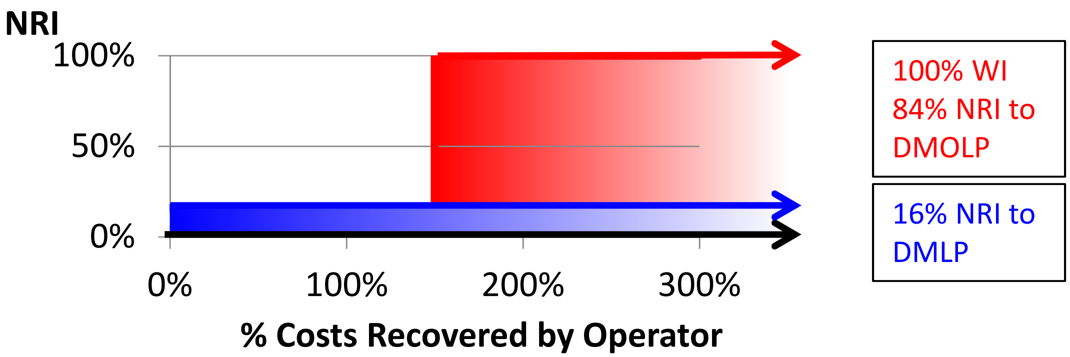
Texas

- Unleased mineral owner backs in for full working interest after operator recovers 100% of costs



North Dakota

- Unleased mineral owner receives 16% royalty and backs in for full working interest after operator recovers 150% of costs



Non-Consent/Non-Participation

Texas

- Unleased mineral owner backs in for full working interest after operator recovers 100% of costs

Selected Texas Counties	Total N/C Well Count	Paid Out Well Count	Average BPO NRI	Average APO NRI
Ector	61	29	0.000%	13.025%
Gaines	15	7	0.000%	3.423%
Midland	65	18	0.000%	3.656%
Upton	214	87	0.000%	2.798%
Total	355	141	0.000%	4.739%

North Dakota

- Unleased mineral owner receives 16% royalty and backs in for full working interest after operator recovers 150% of costs

Selected North Dakota Counties	Total N/C Well Count	Paid Out Well Count	Average BPO NRI	Average APO NRI
Burke	24	0	0.029%	0.184%
Divide	38	3	0.257%	1.542%
Dunn	29	3	0.720%	4.518%
McKenzie	80	17	0.293%	1.835%
Mountrail	76	15	0.649%	3.610%
Williams	96	9	0.453%	2.807%
Total	343	47	0.431%	2.579%

Note: Total non-consent well count includes paid out wells.

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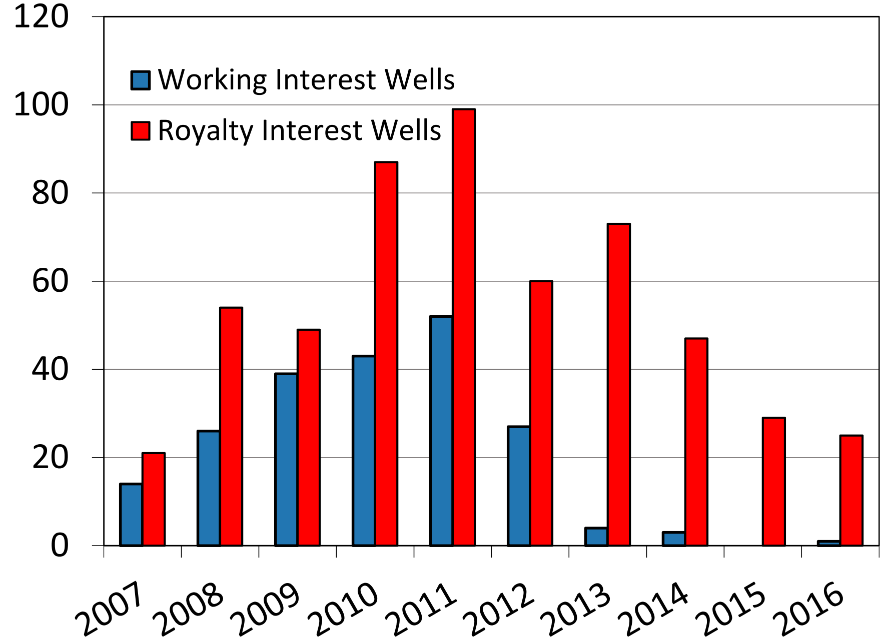
Fayetteville Shale

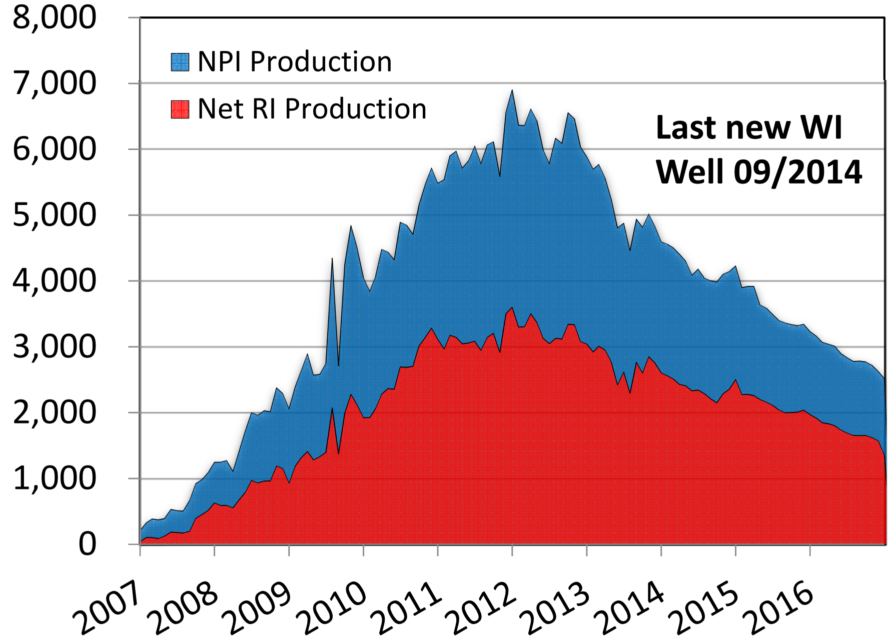
Eastern Arkoma Basin

- 23,336 gross ac (11,464 net ac) in 196 sections
- 462 wells producing at year-end
- 2016 exit rate → 2.8 MMcfd (44% WI)
- Rig Count dropped to zero in 2016

New Wells on Production



Daily Production (Mcfd)



Note: Production graphs limited to "in pay" volumes.

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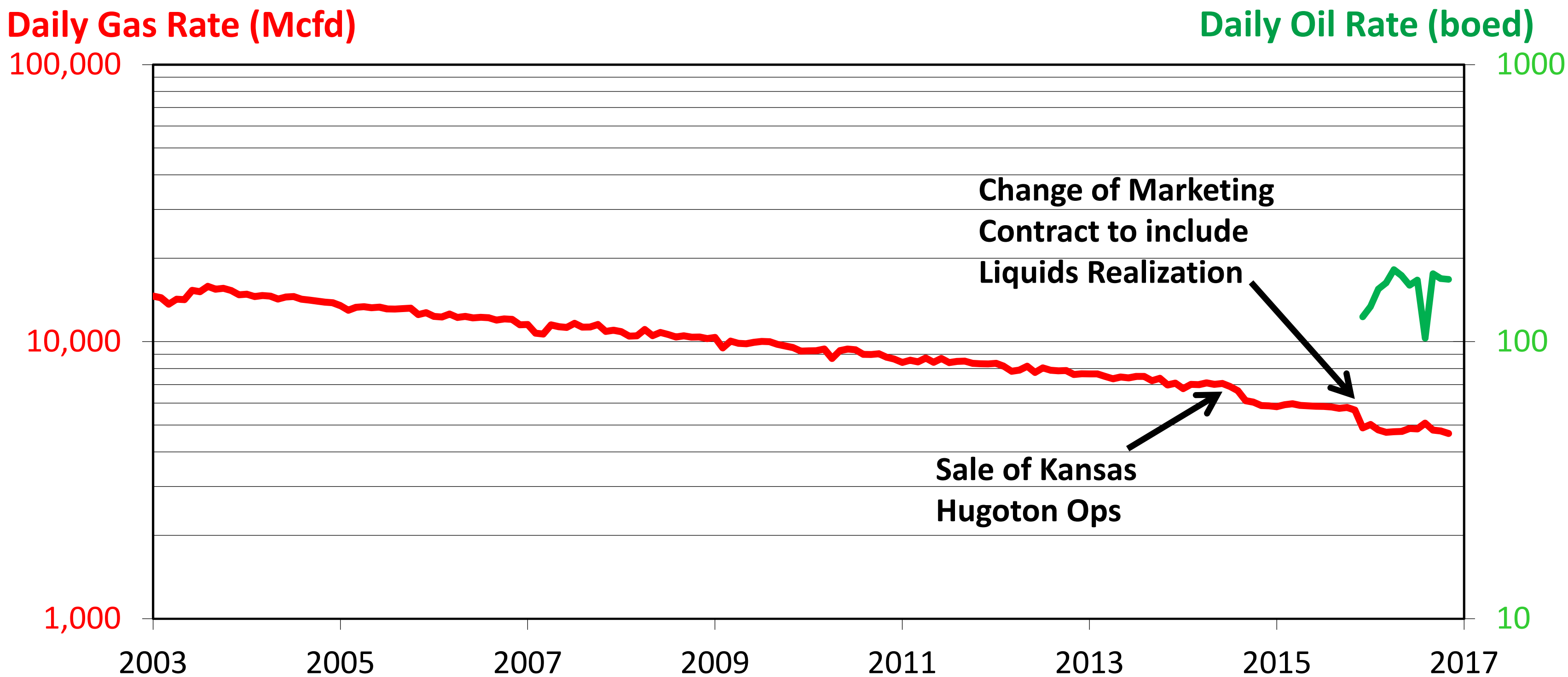
Hugoton Operated Properties

Hugoton Field – Oklahoma Panhandle

- Divested Kansas operations in Sept 2014 – average net sales of 2.8 MMcfd
- Ongoing well optimization and cost-saving initiatives, but limited upside potential

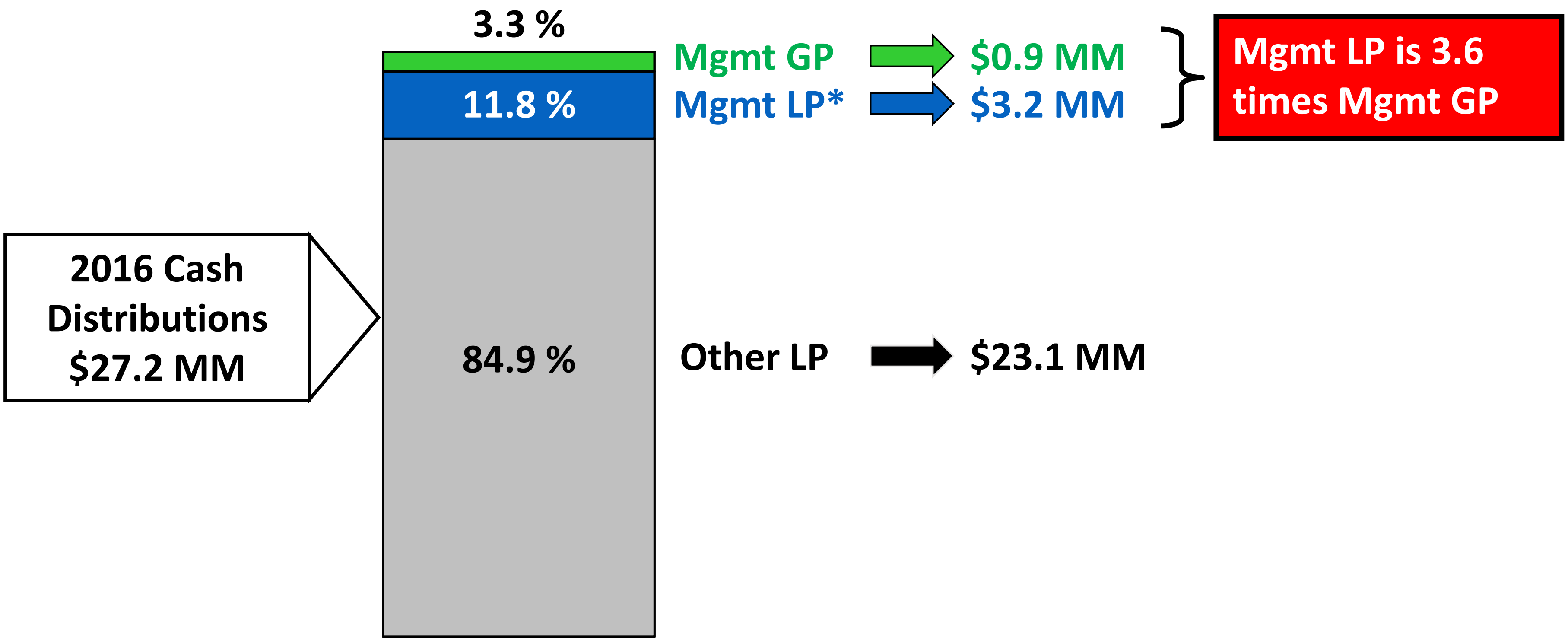


Note: Gas rate based on sales volumes.

Management Ownership

Alignment of GP and LP interests

- GP has no incentive distribution rights – fixed sharing ratio
- Management’s LP interest exceeds its GP interest
- Not incentivized to make dilutive transactions



Note: Management LP interest includes LP units owned by officers, managers and their immediate families.

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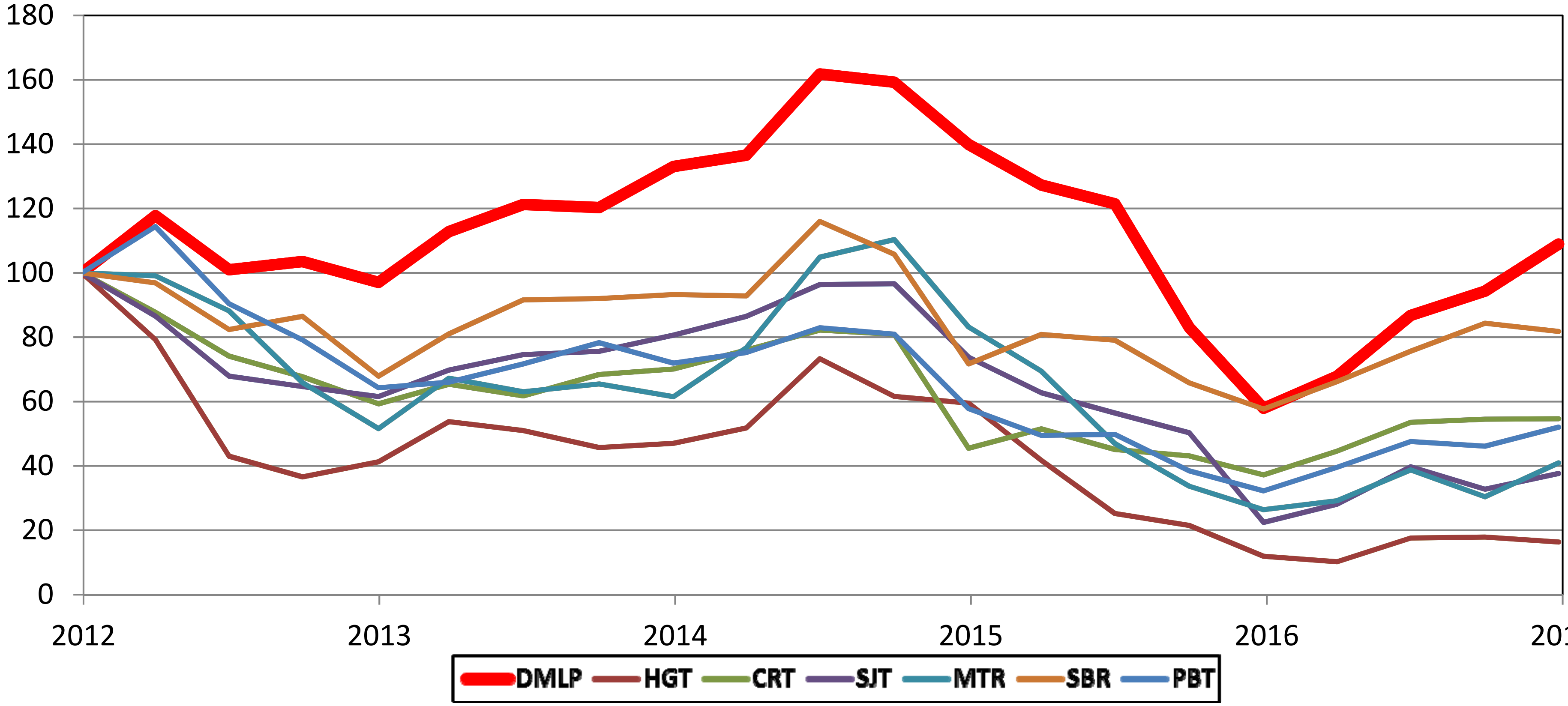
Peer Group Comparison

Market Performance

- Pure royalties lack operating leverage inherent in net profits interests → Less volatility
- Outperformance in low price environment due to lower fixed cost structure

5-Year Normalized Returns (distributions reinvested)



Note: Distributions reinvested on last day of quarter.

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