Company Presentation

AUGUST 2019

Legal Disclaimer

This presentation includes "forward-looking statements." Such forward-looking statements are subject to a number of risks and uncertainties, many of which are not under AR's control. All statements, except for statements of historical fact, made in this presentation regarding activities, events or developments Antero expects, believes or anticipates will or may occur in the future, such as those regarding expected results, future commodity prices, future production targets, completion of natural gas or natural gas liquids transportation projects, future earnings, Adjusted EBITDAX, Adjusted Net Cash Provided by Operating Activities, leverage targets, future capital spending plans, improved and/or increasing capital efficiency, continued utilization of existing infrastructure, gas marketability, estimated realized natural gas, natural gas liquids and oil prices, acreage quality, access to multiple gas markets, expected drilling and development plans (including the number, type, lateral length and location of wells to be drilled, the number and type of drilling rigs and the number of wells per pad), projected well costs and cost savings initiatives, including with respect to potential incremental flowback and produced water services by AM, which are subject to approval by the Board of AM, and there can be no assurance that such approval will be obtained, future financial position, future technical improvements, future marketing opportunities, expectations regarding the amount and timing of jury awards, the receipt of which are subject to final orders and the resolutions of appeals processes, are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. All forward-looking statements speak only as of the date of this presentation. Although AR believes that the plans, intentions and expectations reflected in or suggested by the forward-looking statements are reasonable, there is no assurance that these plans, intentions or expectations will be achieved. Therefore, actual outcomes and results could materially differ from what is expressed, implied or forecast in such statements. Except as required by law, AR expressly disclaims any obligation to and does not intend to publicly update or revise any forward-looking statements.

AR cautions you that these forward-looking statements are subject to all of the risks and uncertainties incident to the exploration for and development, production, gathering and sale of natural gas, NGLs and oil, most of which are difficult to predict and many of which are beyond the AR's control. 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 natural gas and oil reserves and in projecting future rates of production, cash flow and access to capital, the timing of development expenditures, and the other risks described under the heading "Item 1A. Risk Factors" in AR's Annual Report on Form 10-K for the year ended December 31, 2018.

This presentation includes certain financial measures that are not calculated in accordance with U.S. generally accepted accounting principles ("GAAP"). These measures include (i) Adjusted EBITDAX, (ii) Adjusted Net Cash Provided by Operating Activities, (iii) Free Cash Flow; (iv) Net Debt, (v) PUD F&D cost per unit and (vi) leverage. Please see "Antero Definitions" and "Antero Non-GAAP Measures" for the definition of each of these measures as well as certain additional information regarding these measures, including the most comparable financial measures calculated in accordance with GAAP.

Antero Resources Corporation is denoted as "AR" in the presentation and Antero Midstream Corporation is denoted as "AM", which are their respective New York Stock Exchange ticker symbols.

Antero Resources Snapshot

Modest Growth Strategy Optimizes Value and Free Cash Flow

- Fills premium unutilized pipeline capacity by 2022, minimizing net marketing expense
- Results in $400 million more free cash flow in 2022 than going to maintenance capital in 2020 and staying there through 2022 (1)
- Results in 1.5x lower leverage in 2022 (1)
- AR's liquids-rich well economics support modest production growth

Recently Announced Well Cost Reduction Supports Strategy

- Continuing to lower well costs through service cost deflation, efficiency improvement and water initiatives
- 10% to 14% well cost reduction expected by 2020
- $1.2 to $1.3 billion D&C capital program in 2020 approximates expected cash flow plus proceeds (2)

Strong Balance Sheet Supports Strategy

- 2.3x leverage at 6/30/2019 (3)
- Ba2 / BB+ / BBB- corporate debt ratings
- Credit facility affirmed in 2Q at $4.5 billion with $2.5 billion of commitments and only $175 million drawn at 6/30/2019
- Own 31% of AM equity

Large Natural Gas Hedge Position Supports Strategy

- 90% and >35% of expected natural gas production for 2020 and 2021 already "sold" at an average price of $2.87/MMBtu and $2.88/MMBtu, respectively (4)
- Forecasted hedge value was $788 million at 7/31/19

(1) Based on strip pricing as of 7/31/2019. See next slide for further details on maintenance mode vs modest growth scenarios.
(2) Including $125 million water earn out payment from AM and $150 million in expected gas contract litigation proceeds.
(3) Leverage, which is a non-GAAP measure, is defined as net debt divided by LTM Adjusted EBITDA. For more information, please see the appendix.
(4) Assumes 10% production CAGR from 2019 production guidance midpoint.

Modest Growth Strategy is Optimal

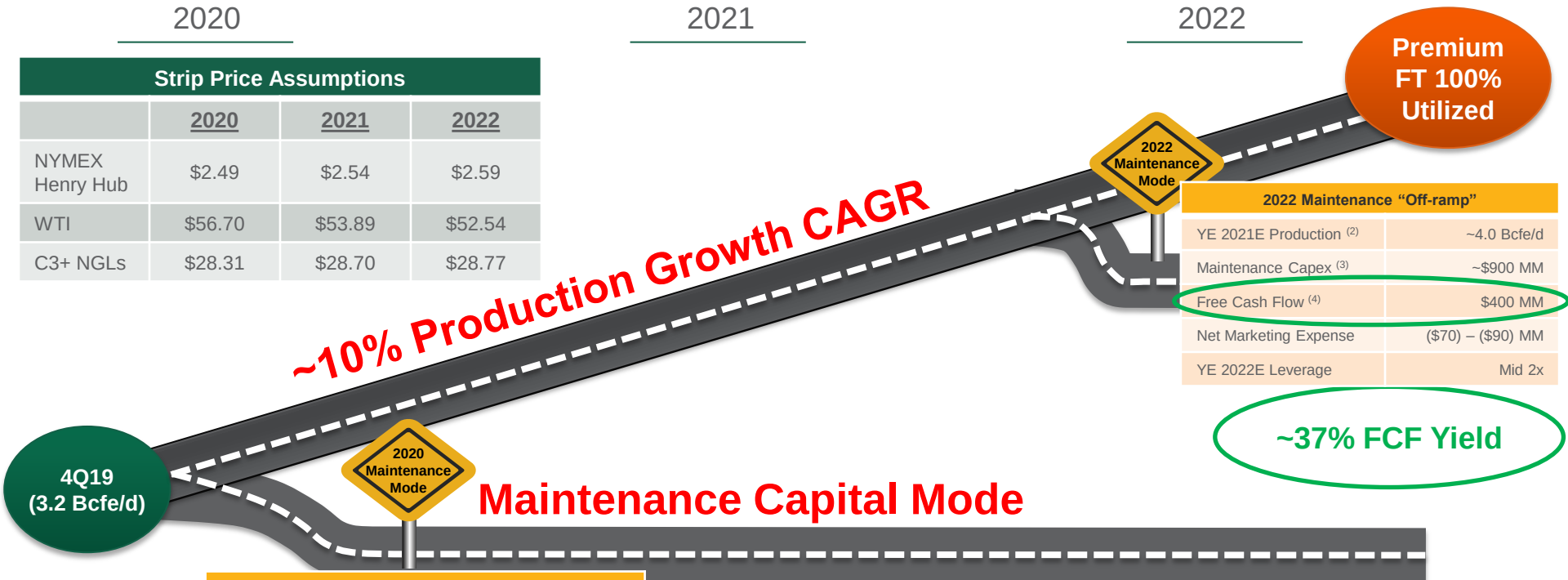
A modest growth plan through 2022 provides AR with sustainable free cash flow by filling currently unutilized FT and eliminating ~$200 MM of unutilized pipeline expenses by 2022

Maintenance Mode vs Modest Growth

2020 2021 2022

Strip Price Assumptions

	2020	2021	2022
NYMEX Henry Hub	$2.49	$2.54	$2.59
WTI	$56.70	$53.89	$52.54
C3+ NGLs	$28.31	$28.70	$28.77



2022 Maintenance "Off-ramp"

YE 2021E Production [2]	~4.0 Bcfe/d
Maintenance Capex [3]	~$900 MM
Free Cash Flow [4]	$400 MM
Net Marketing Expense	($70) – ($90) MM
YE 2022E Leverage	Mid 2x

~37% FCF Yield

2020 Maintenance "Off-ramp"

YE 2019E Production	3.2 Bcfe/d
Maintenance Capex [2]	~$700 MM
Free Cash Flow [5]	$150 MM
Net Marketing Expense	($260) – ($280) MM
YE 2020E Leverage	Low 3x

3.2 Bcfe/d Flat Production

2020 Maintenance Mode (2022 Result)

YE 2021E Production	3.2 Bcfe/d
Maintenance Capex [3]	~$700 MM
Free Cash Flow [4]	Neutral
Net Marketing Expense	($240) – ($260) MM
YE 2022E Leverage	4x

Note: All cases assume strip pricing as of 7/31/2019 and includes hedges.

(1) C3+ NGL pricing represents Mont Belvieu strip pricing based on Antero C3+ NGL component barrel consisting of 56% C3 (propane), 10% isobutane (Ic4), 17% normal butane (Nc4) and 17% natural gasoline (C5+).

(2) Assumes ~10% production CAGR on 2019 production guidance midpoint.

(3) Maintenance capex for each respective year represents the average annual drilling and completion capital required over the next three years to hold production flat from the previous year's 4Q exit rate.

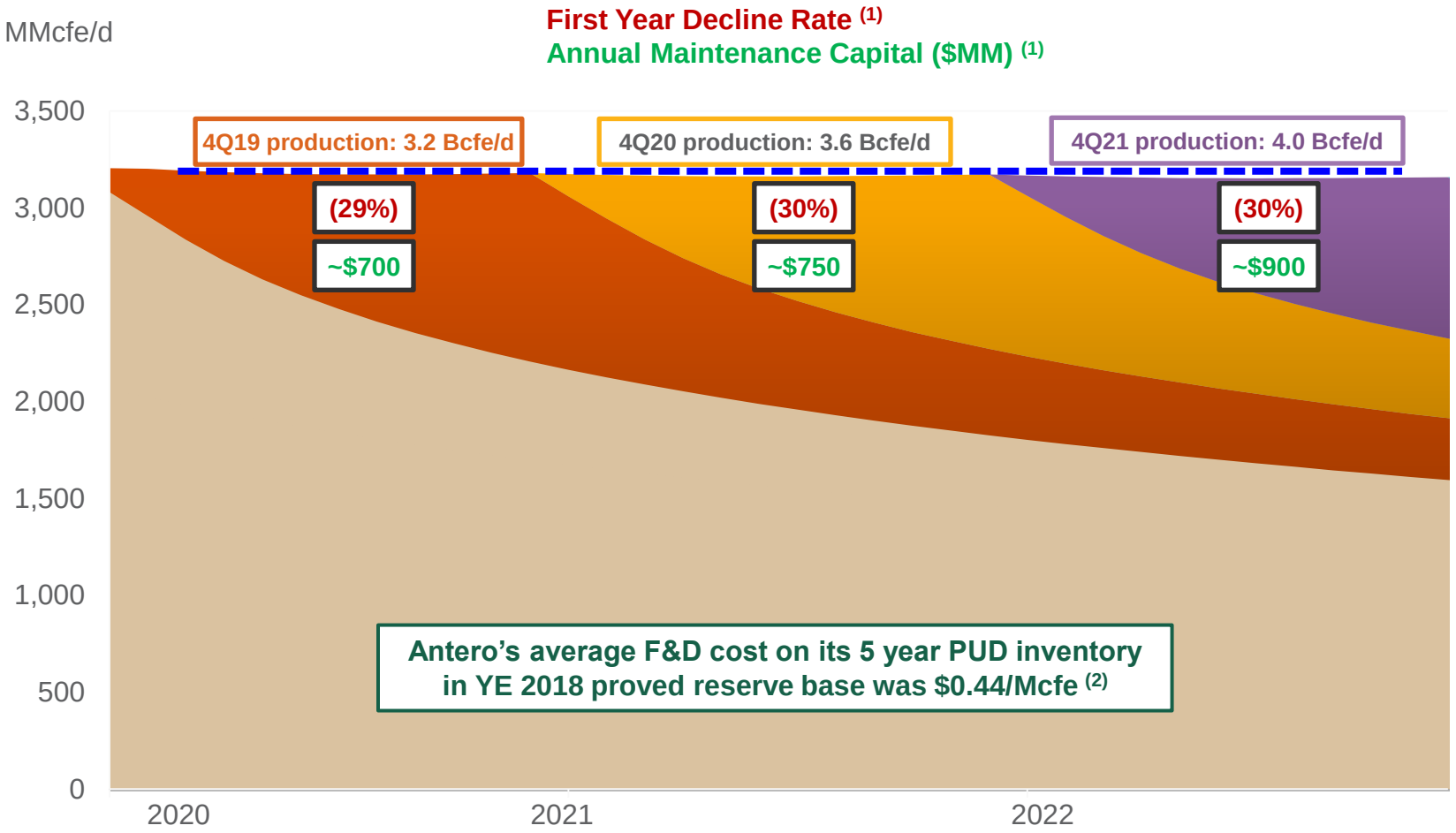
(4) Free cash flow represents adjusted net cash from operating activities less D&C and land capital expenditures. See appendix for further details.

(5) Operating free cash flow excludes $125 million water earn out payment in 1Q 2020 from AM and gas contract litigation proceeds of $150 million.

Maintenance Capital and Decline Rates

- **Capital required to maintain flat production is driven by the base decline rate, which is a function of growth over the prior 12 months, as well as the beginning production level and capital efficiency**

AR Annual 4Q Decline Rates and Maintenance Capex



Note: Based on Antero reservoir engineering team analysis.

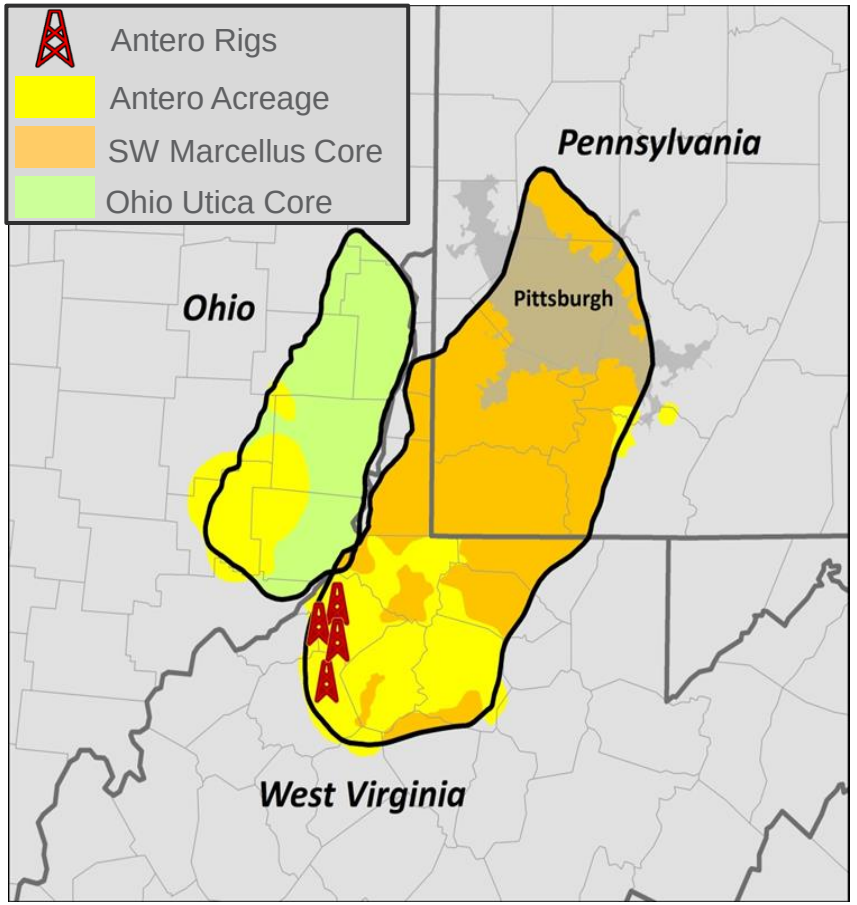
1) Represents capital required each year to maintain production at the respective target levels of each year. Decline rate represents Q4 over Q4 change in production.

2) F&D cost is a non-GAAP financial measure. For more information, please see the appendix.

The Size and Scale to Capitalize on the Resource

Antero Resources Profile

Market Cap	$1.4B
Enterprise Value(1)	$5.0B
Ownership in AM (31%)	$1.4B
Leverage(2)	2.3x
Corporate Debt Ratings	Ba2 / BB+ / BBB-
2019 Net Production Guidance(3)	3.2 Bcfe/d
Liquids/Condensate	149 MBbl/d
Proved Reserves	18.0 Tcfe
Liquids(4)	1.1 BBbls
Net Acres	584,000
Core Undrilled Locations	3,013



AR
LISTED
NYSE

Note: Equity market data as of 7/31/19. Reserves as of 12/31/2018. See 2019 Guidance page for production guidance details. Rig locations as of 7/31/2019. Net acres as of 6/30/2019.

(1) Market cap plus net debt. Includes ownership of $1.4 billion of Antero Midstream.

(2) Leverage is net debt divided by LTM Adjusted EBITDAX at 6/30/19. See appendix for details.

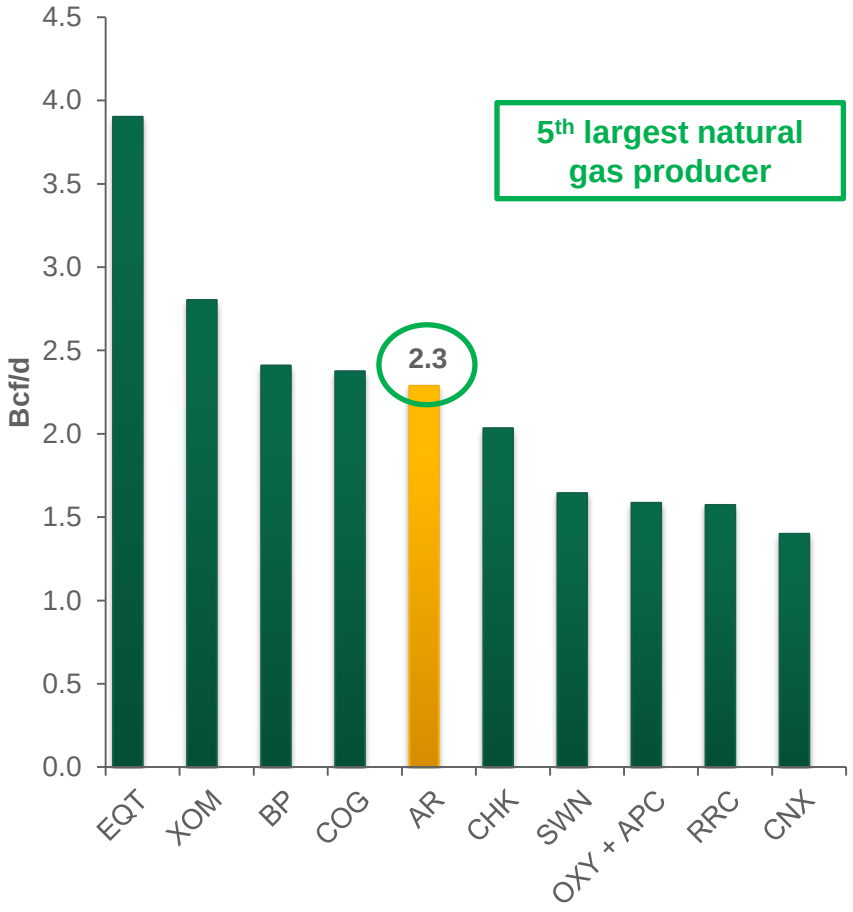
(3) Midpoint of guidance.

(4) Proved reserves contain 498 MMBbls of C3+ NGLs,554 MMBbls of ethane, and 46 MMBbls of condensate/oil. Assumes approximately 415 MMBbls of additional ethane are left in the natural gas stream.

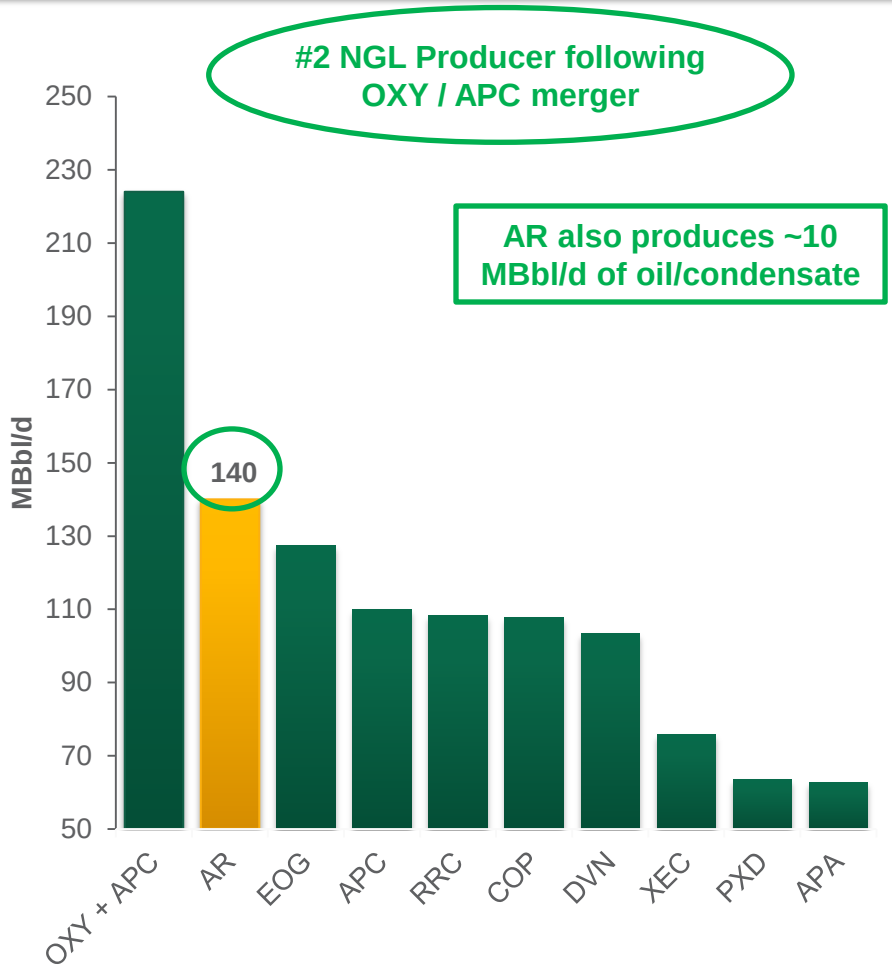
Scale and Product Diversification

AR is the 5th largest natural gas producer and 2nd largest NGL producer in the U.S.

Top U.S. Natural Gas Producers – 2Q2019



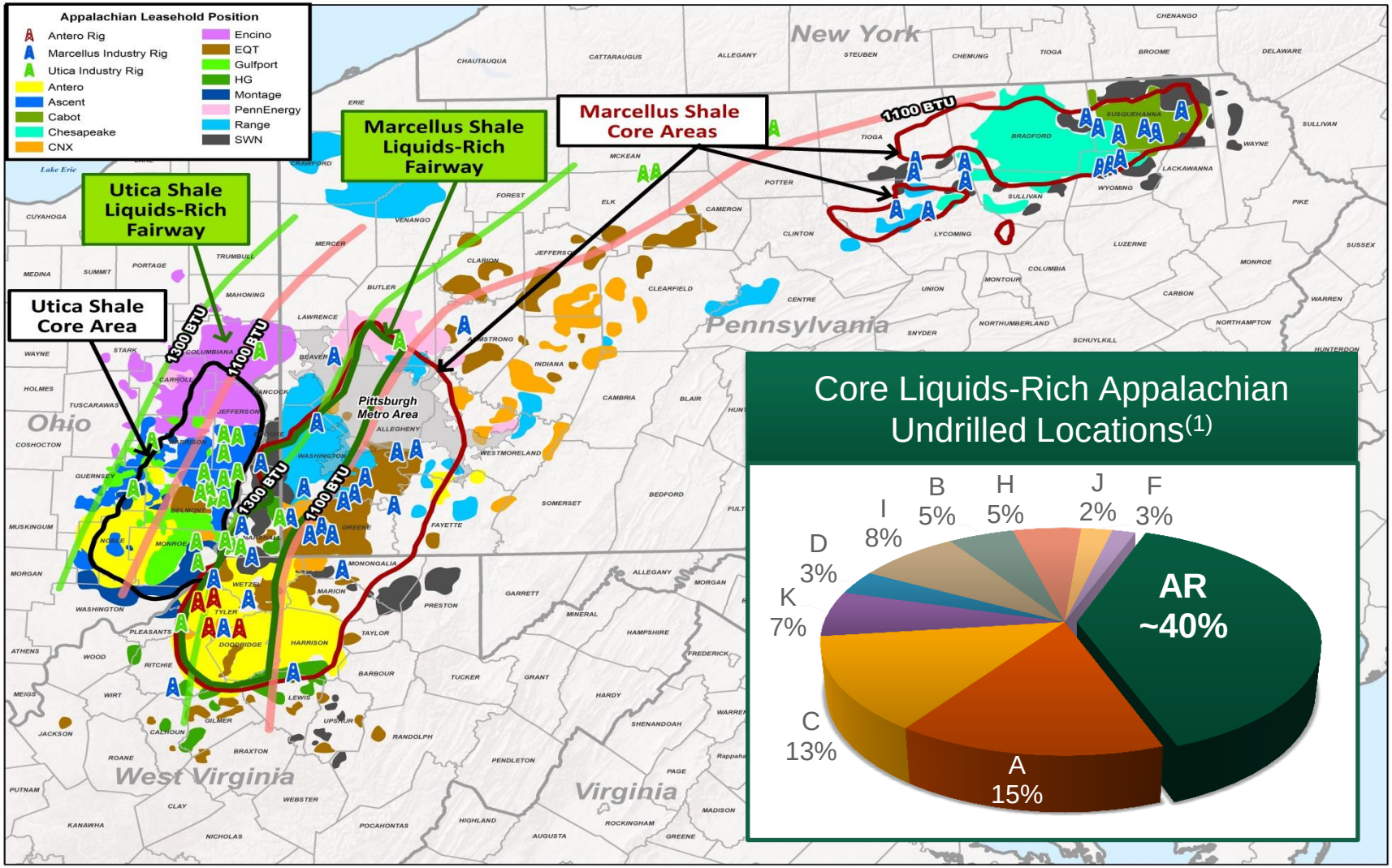
Top U.S. C2+ NGL Producers - 2019E



1) *Antero C2+ NGL production represents the midpoint of 2019 guidance. Peer C2+ NGL production represents consensus as of 7/31/2019.*

Prolific Underlying Resource Underpins Sustainable Growth

AR holds 40% of the core undrilled liquids-rich locations in Appalachia and has lower breakeven natural gas price than dry gas producers



(1) Peers include Ascent, CNX, COG, CVX, Encino, EQT, GPOR, HG, RRC and SWN. Based on Antero analysis of undeveloped acreage in the core of the Marcellus and Ohio Utica Shales. Rigs as of 7/29/19, per RigData. Locations as of 12/31/18.

Large Well-Delineated Core Drilling Inventory

10+ Years of Premium Drilling Inventory

- Does not assume infill drilling

Contiguous Acreage Position Delivers Efficient Development

- Long-laterals average 12,100' in Marcellus rich-gas drilling inventory
- Efficient gathering, compression and processing utilization
- Efficient water delivery and produced water handling

High Net Revenue Interest

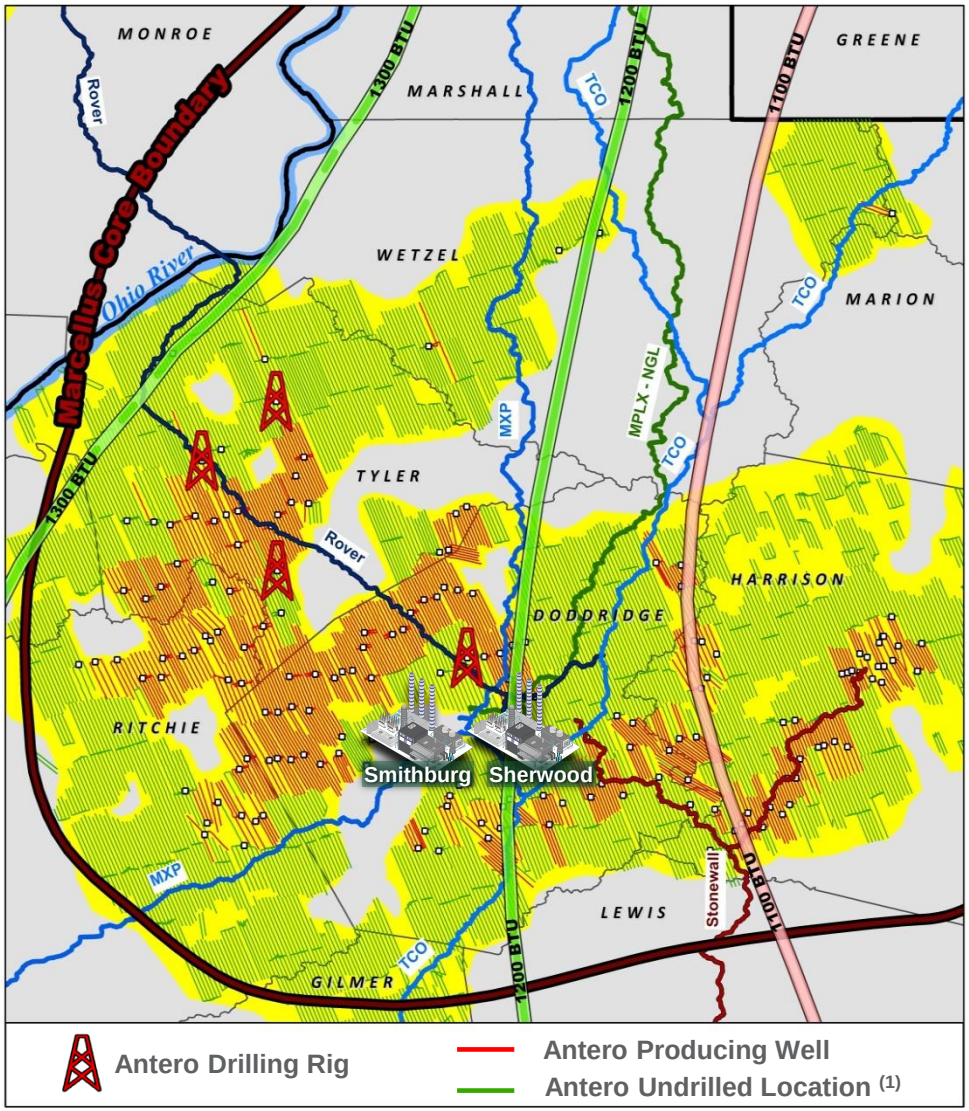
- AR has 84% average NRI in the Marcellus

Stacked Pay Resource in West Virginia

- Both deep Utica and Upper Devonian development potential over the long-term

Abundant Natural Gas and NGL Takeaway

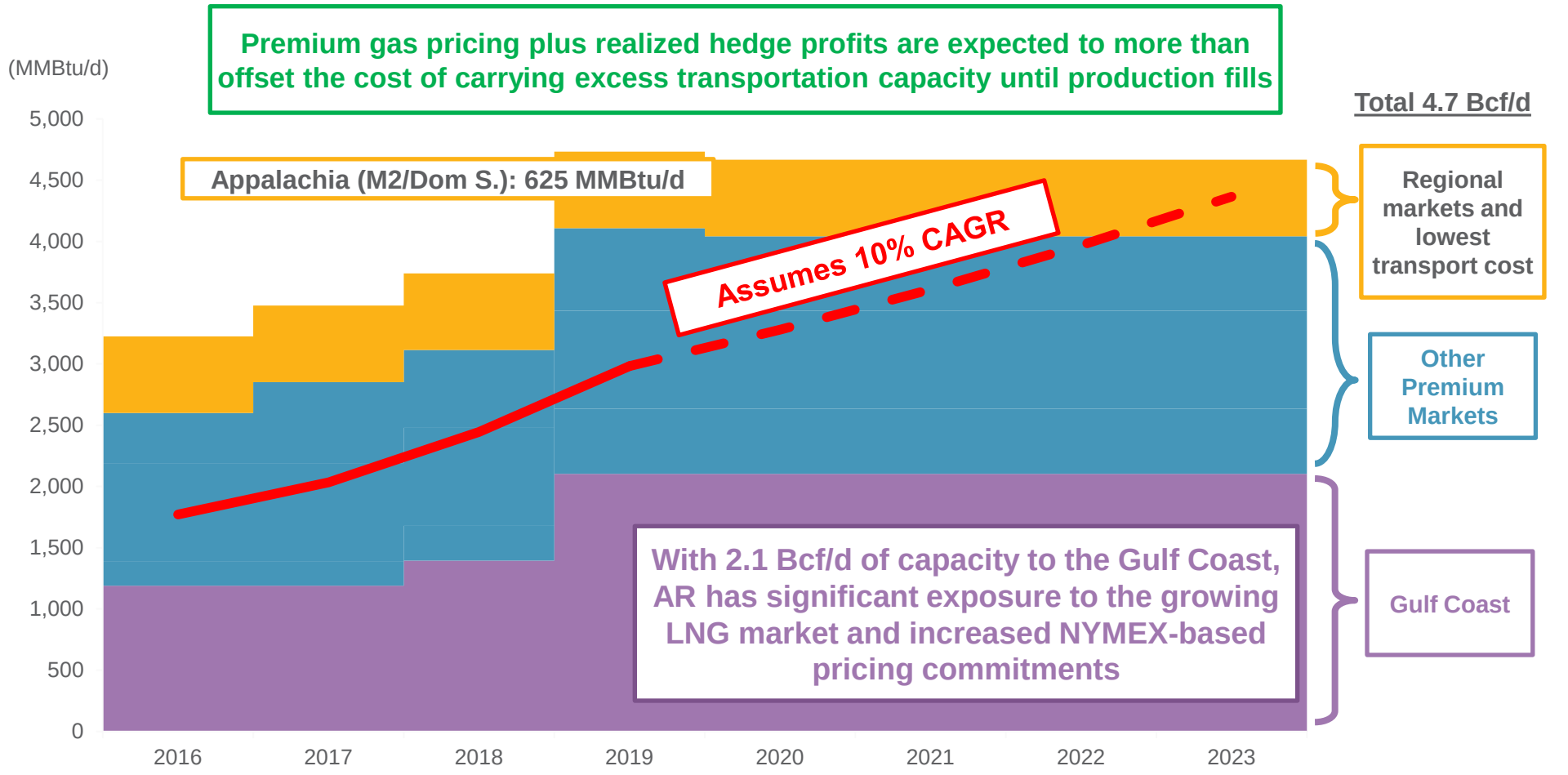
- Underutilized transportation capacity to premium markets



Note: Rigs as of 7/29/2019.
(1) 76 wells in various stages of drilling, waiting on completion and completing are shown as undrilled locations on map.

AR's FT portfolio has delivered Appalachia-leading realized natural gas pricing quarter after quarter

Antero Resources Firm Transportation Portfolio vs. Gross Gas Production (MMcf/d)



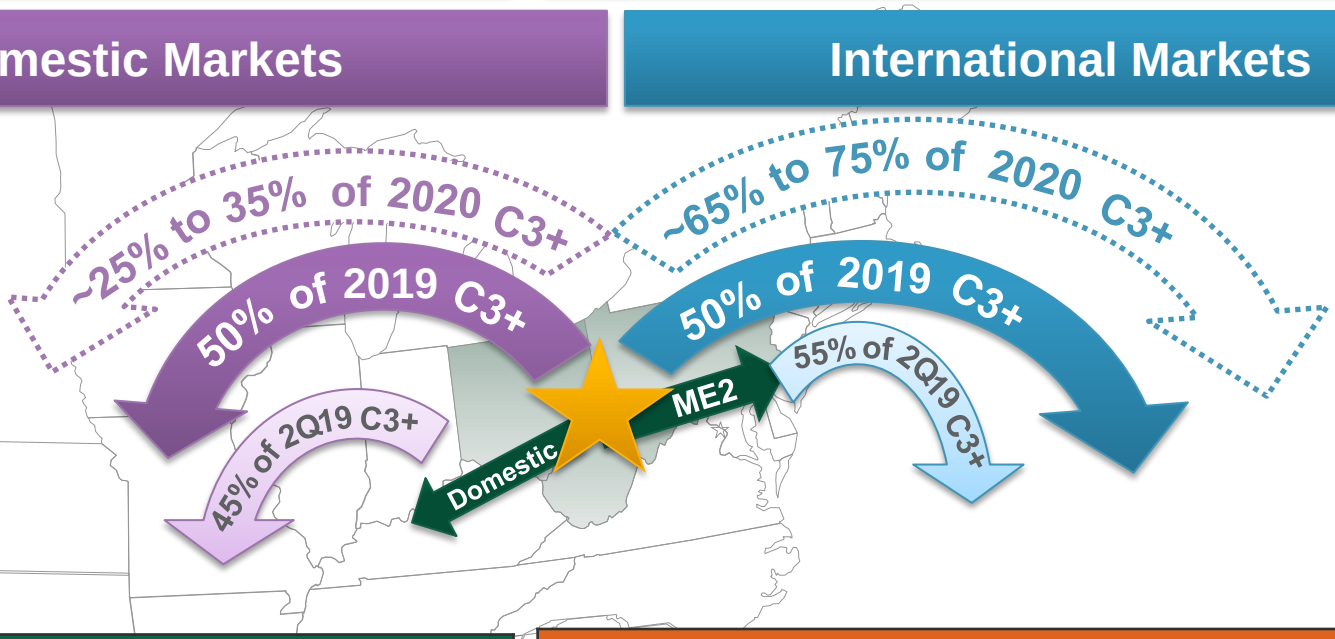
NGL Transportation Delivers Premium Pricing

With the first full quarter of the ME2 pipeline in service in 2Q, Antero realized a $0.19 per gallon premium to Mont Belvieu on 55% of its C3+ NGLs

Diversified exposure to both international and domestic markets results in blended C3+ NGL pricing at a premium to Mont Belvieu

Domestic Markets

International Markets



AR 2Q 2019 C3+ NGL Realized Pricing Breakdown (1)

	Domestic	International	2Q 2019 Average
Sales Point	Hopedale	Marcus Hook	Blended
% of AR C3+ Volume	45%	55%	100%
Premium / (Discount) to Mont Belvieu ($/Gal)	**($0.14)**	**$0.19**	**$0.04**

Antero 2019 C3+ NGL Pricing Guidance (1)

	Domestic	International	Combined
Sales Point	Hopedale	Marcus Hook	Blended
% of AR C3+ Volume	50%	50%	100%
Expected Premium / (Discount) to Mont Belvieu ($/Gal)	**($0.075) – ($0.125)**	**$0.10 - $0.15**	($0.01) - $0.04

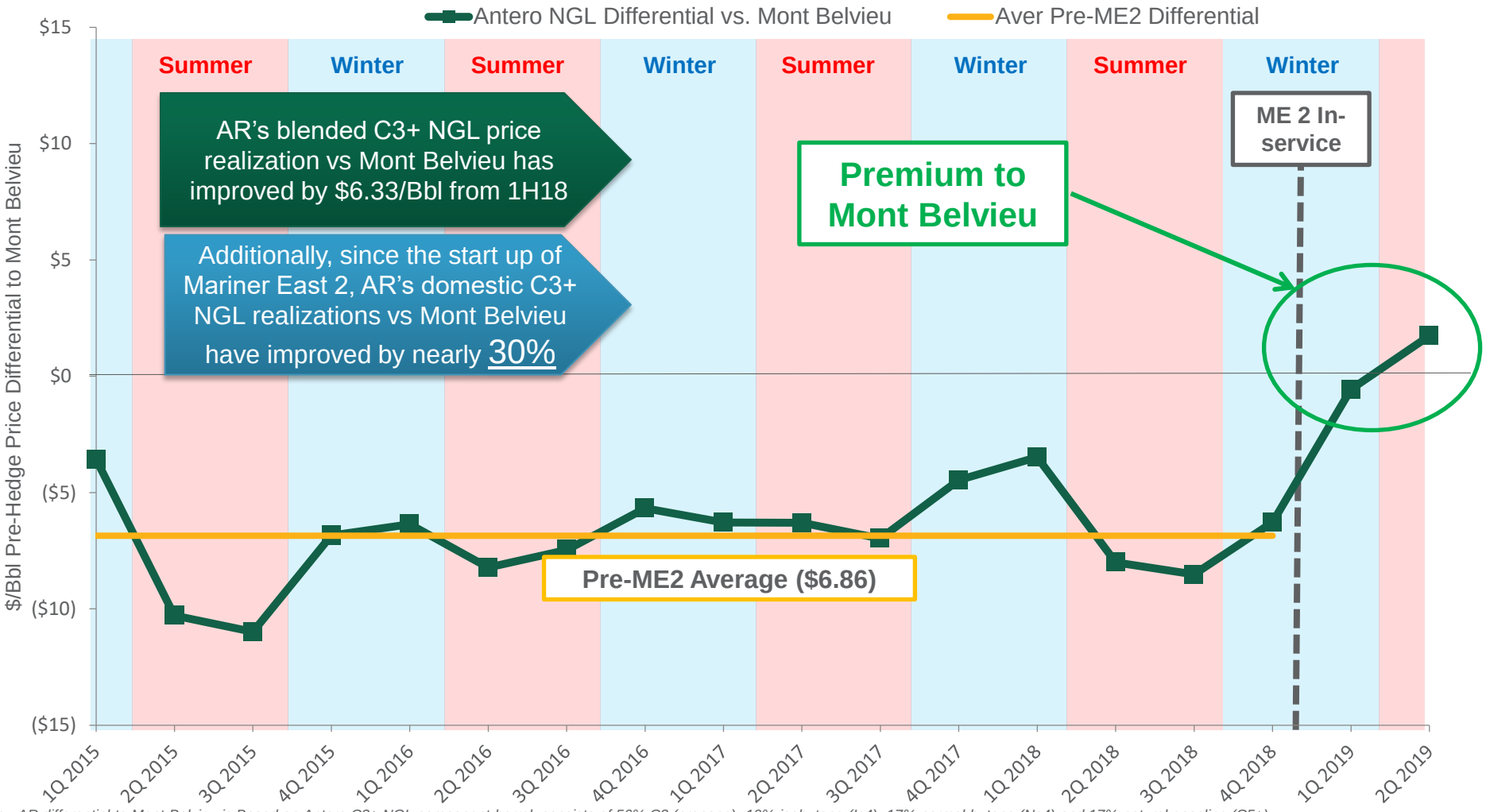
Note: 2020 blend of 70% international / 30% domestic assumes ME2 is fully in service with 275,000 Bbl/d of capacity.

1) Based on Antero C3+ NGL component barrel consists of 56% C3 (propane), 10% isobutane (Ic4), 17% normal butane (Nc4) and 17% natural gasoline (C5+).

Improvement in Northeast NGL Differentials

The 1Q 2019 in-service of Mariner East 2 improved AR's 1H 2019 NGL price differentials to Mont Belvieu by $6.33/Bbl vs 1H18, flipping to a premium to Mont Belvieu

Antero Blended NGL Differential vs. Mont Belvieu

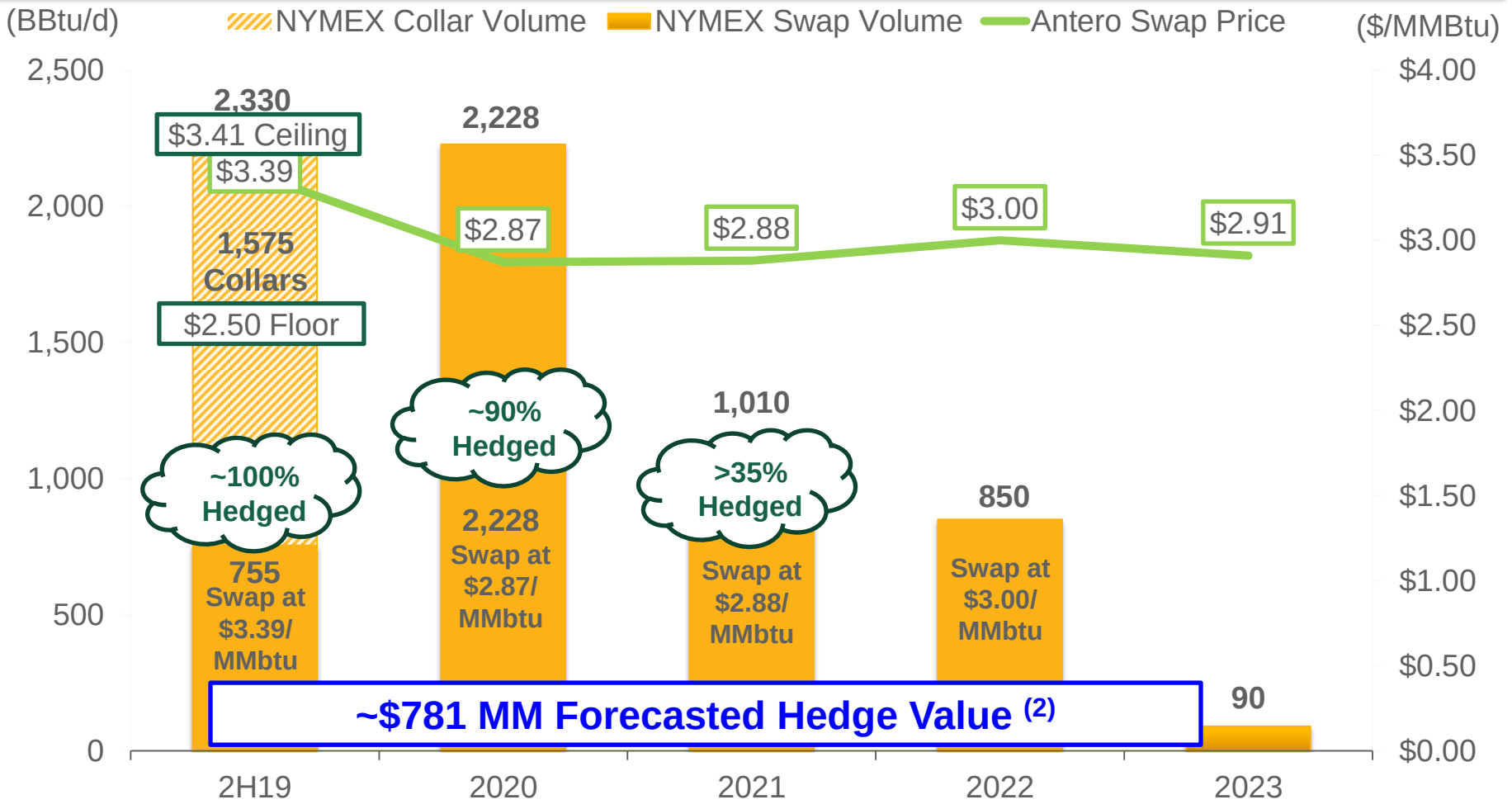


Note: AR differential to Mont Belvieu is Based on Antero C3+ NGL component barrel consists of 56% C3 (propane), 10% isobutane (Ic4), 17% normal butane (Nc4) and 17% natural gasoline (C5+).

Industry Leading Natural Gas Hedge Position

AR has consistently executed a comprehensive commodity hedging program with $4.5 billion of realized hedge gains since 2008 (1)

Antero Natural Gas Hedge Profile



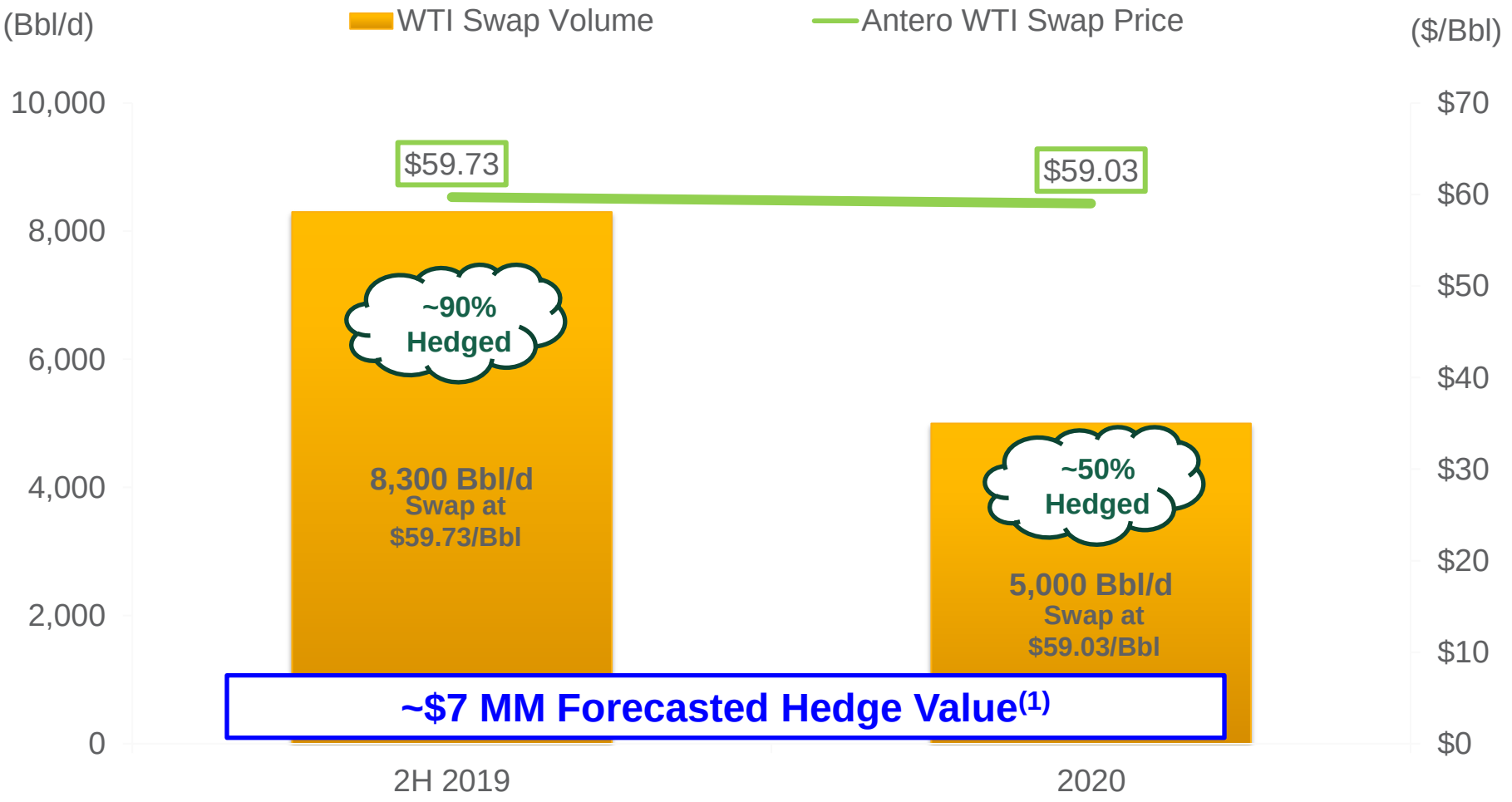
Note: Percentage hedged represents percent of expected natural gas production hedged based on a 10% CAGR from the midpoint of 2019 natural gas production guidance.

1) *Through 6/30/19.*
2) *Based on hedge position and strip pricing as of 7/31/19.*

Antero Oil Hedge Position

AR has hedged approximately 90% and 50% of its expected oil production for 2H 2019 and 2020, respectively, at attractive prices above current strip

Antero Oil Hedge Profile



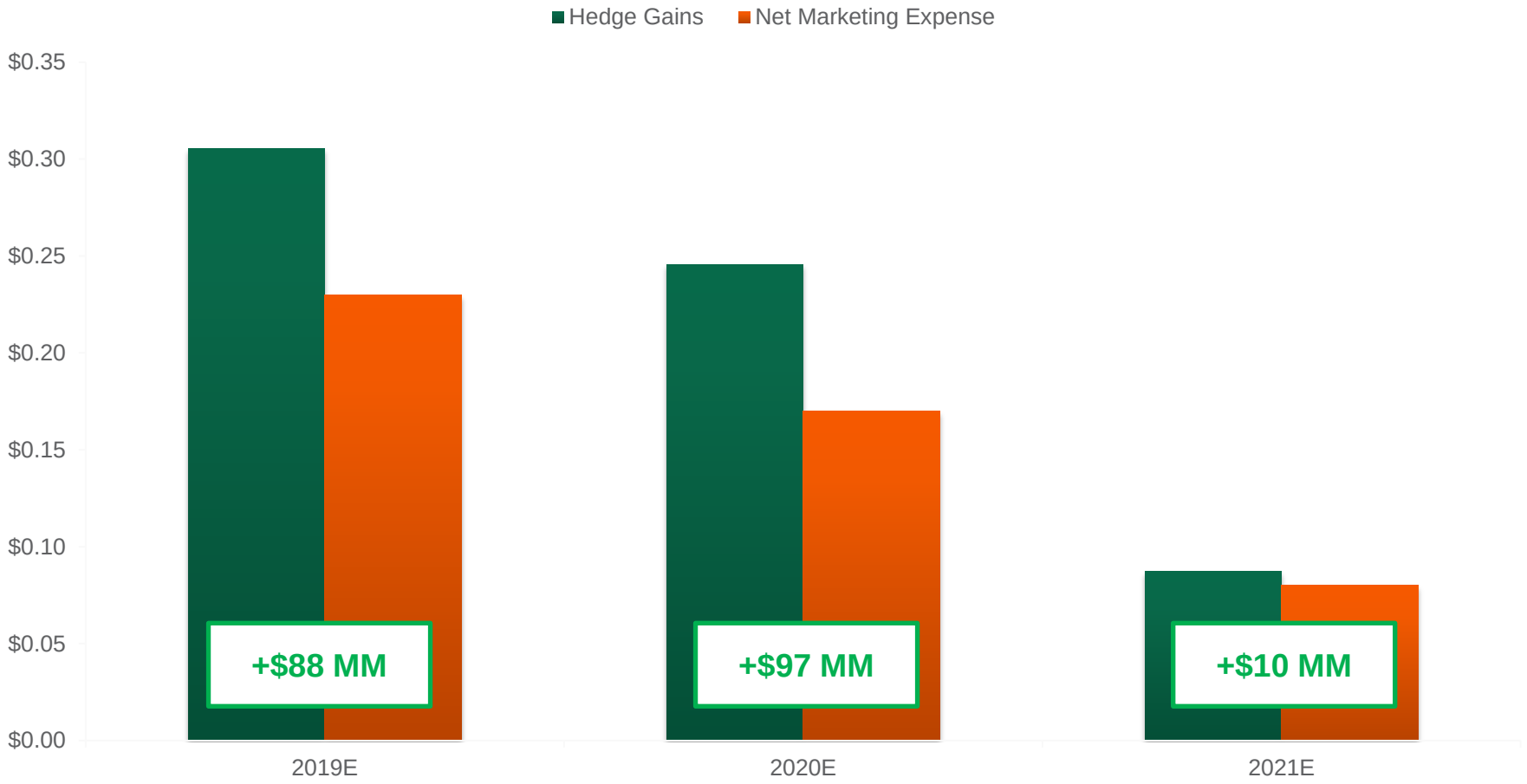
Note: Percentage hedged represents percent of expected oil production hedged based on a 10% CAGR from the midpoint of 2019 production guidance.

1) Based on hedge position and strip pricing as of 7/31/19.

AR Hedge Gains Offset Net Marketing Expense

Antero's expected hedge gains offset net marketing expense through 2021 until the point in 2022 when the firm transportation is essentially filled

Hedge Gains vs Net Marketing Expense ($/Mcfe) (1)(2)



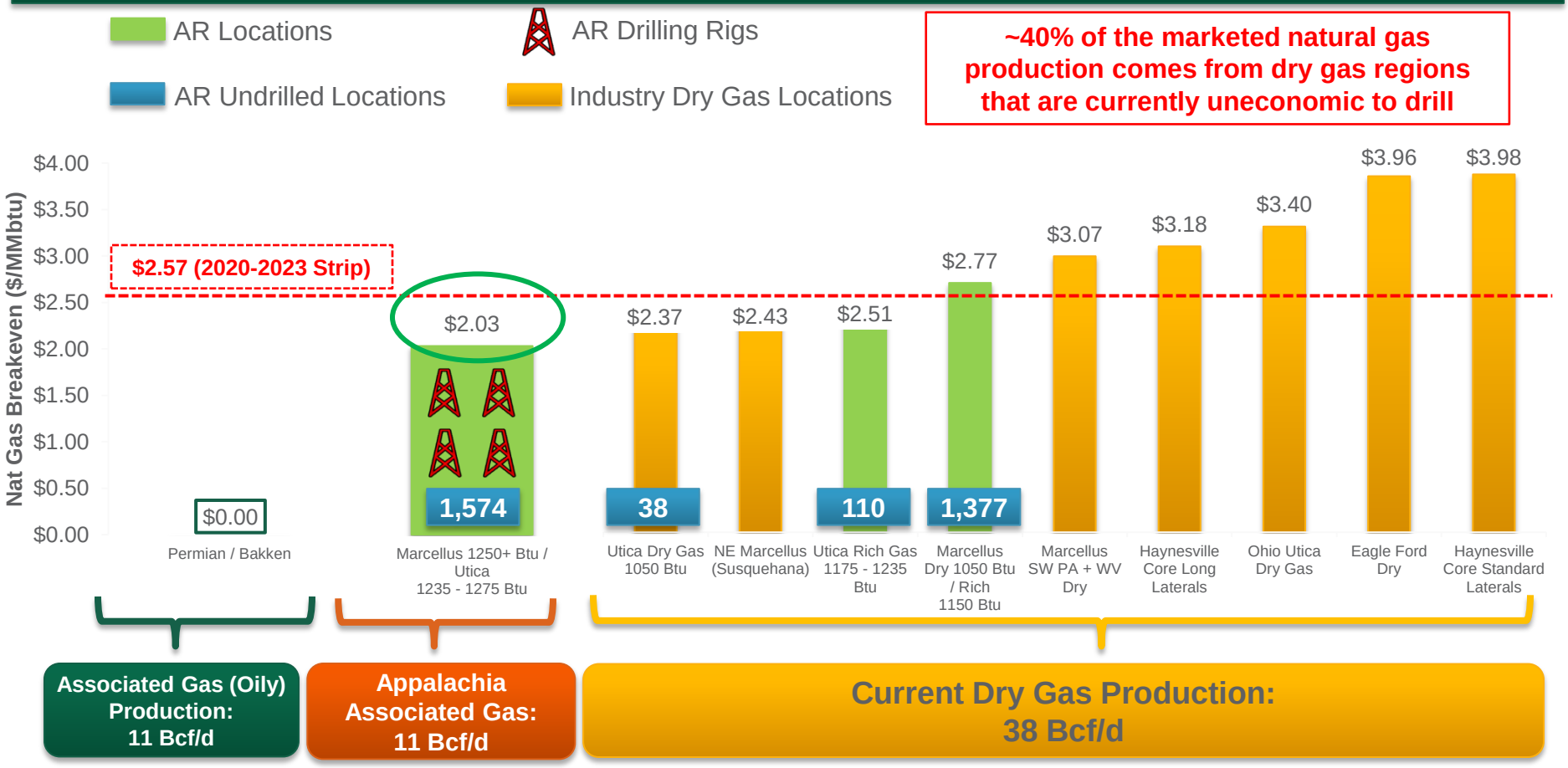
Note: 2019 expected net marketing expense based on updated 2019 guidance

1) *Hedge position as of 6/30/2019 and hedge gains based on strip pricing as of 7/31/2019.*
2) *Net marketing expense for 2020 and 2021 assumes 10% production CAGR off of midpoint of 2019 guidance.*

Superior Well Economics to Dry Gas Producers

Liquids producers with associated gas have superior well economics in the current commodity price environment

Natural Gas Breakeven Price by Region – 25% ROR Half Cycle Breakeven Prices[1][2]



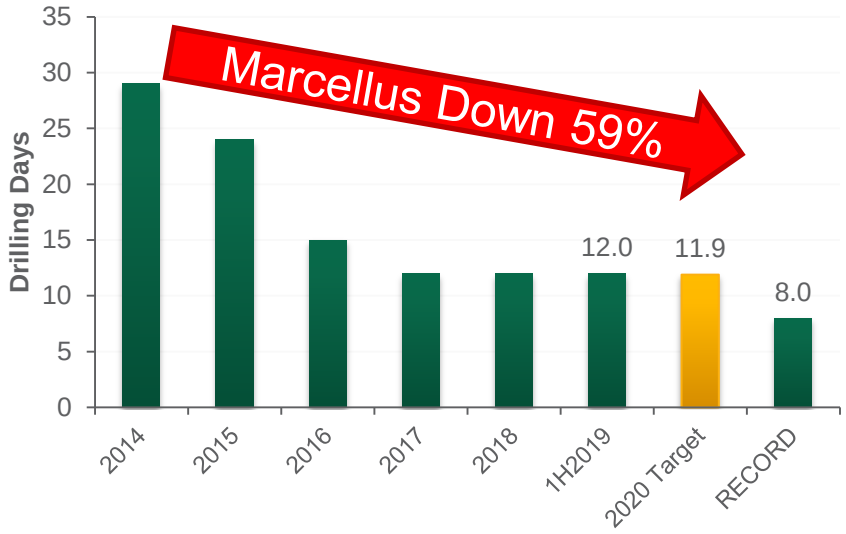
67% of current natural gas supply [3]

JP Morgan Equity Research breakeven analysis for best industry dry gas drilling locations. Excludes associated gas inventory with >50% liquids.
Breakeven analysis for AR prepared by management and excludes AR hedges. AR drilling inventory as of 12/31/18. Assumes midpoint of well cost savings target range at $850/foot of lateral.

1) *Breakeven price is defined as half cycle pre-tax ROR of 25%. Assumes average 2020-2023 strip WTI oil price of $54.42/Bbl as of 6/30/2019 and C3+ NGL pricing of $29/Bbl. Assumes 12% lower well costs than 2018 budgeted Marcellus costs and 20% lower LOE per unit costs.*
2) *AR half cycle well economics assume 12,000' lateral lengths and 69% of AM gathering and compression fees paid by AR to AM to account for AR's midstream dividend stream from AM (based on 31% ownership of AM).*
3) *Based on Platts current lower 48 natural gas production of 89 Bcf/d at 7/31/2019.*

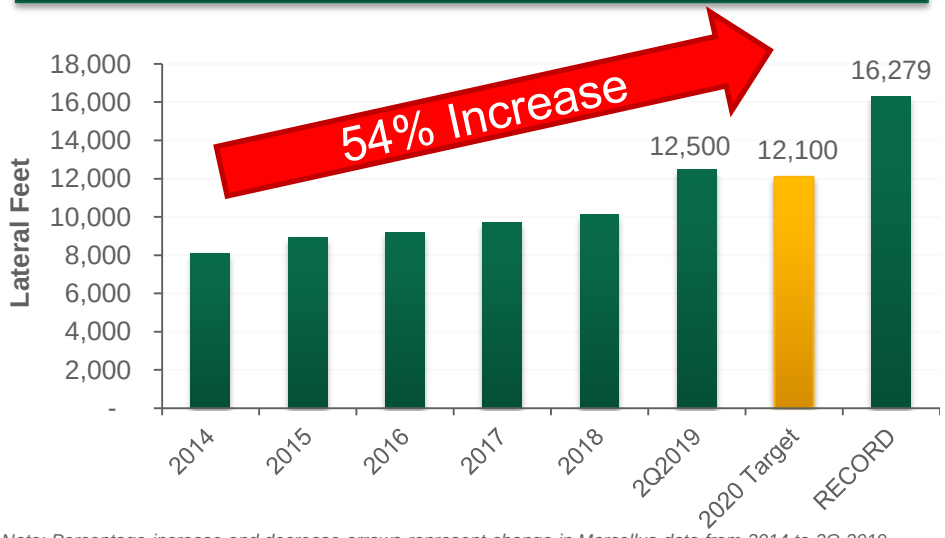
Marcellus Drilling and Completion Efficiencies Continue

Marcellus Drilling Days

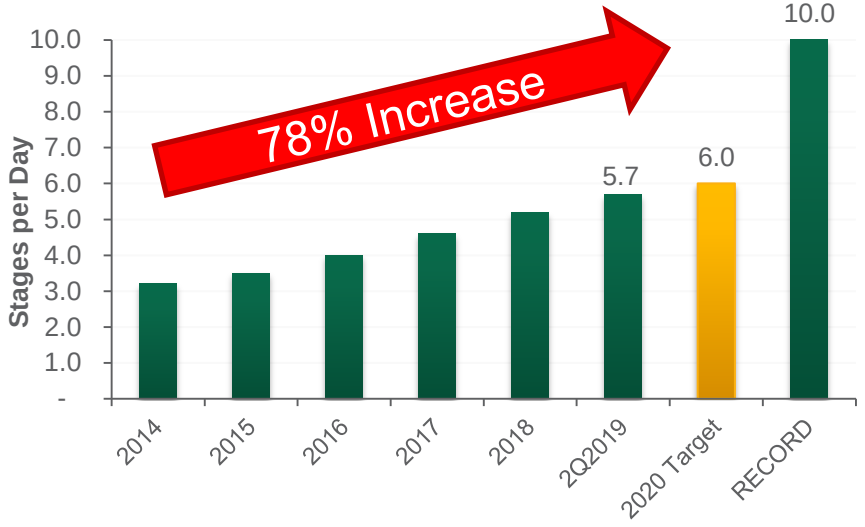


Marcellus Avg. Lateral Feet Drilled per Day

Marcellus Avg. Lateral Length Drilled per Well



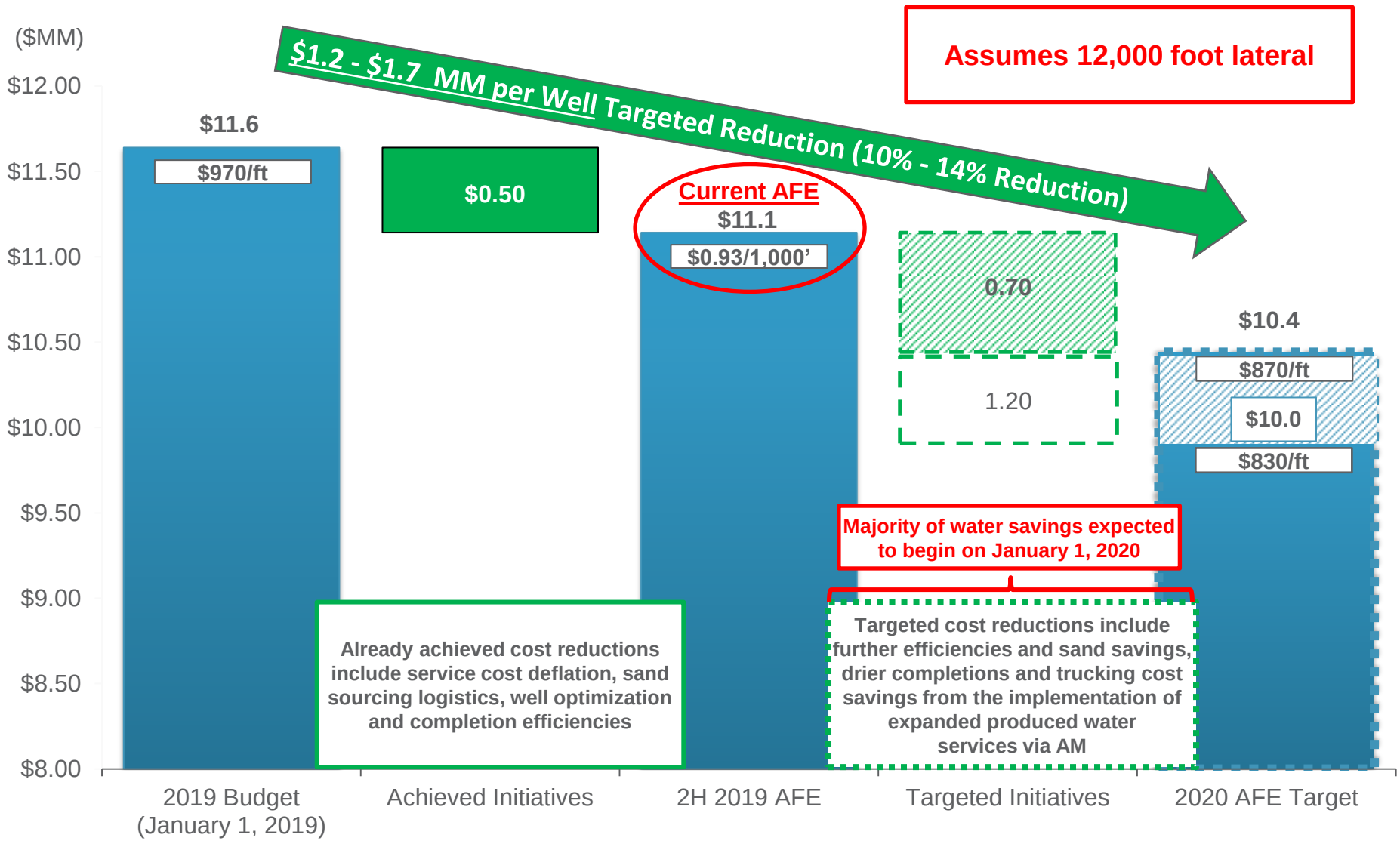
Marcellus Completion Stages per Day



Note: Percentage increase and decrease arrows represent change in Marcellus data from 2014 to 2Q 2019.

Targeted Marcellus Well Cost Reductions

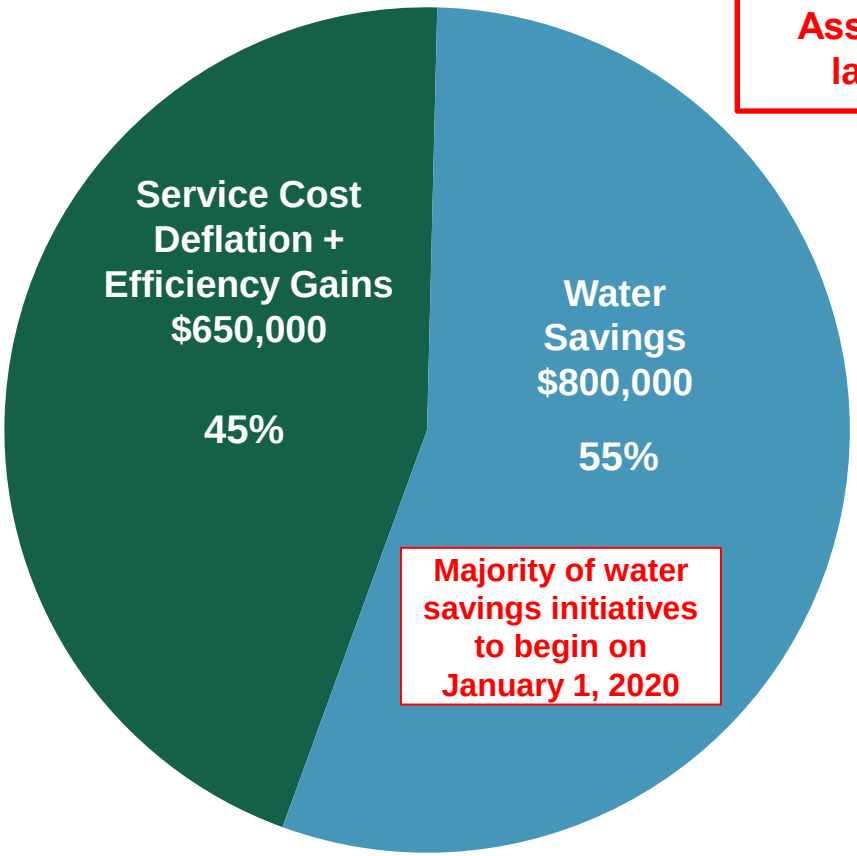
Targeted Marcellus Well Cost Reductions (January 2019 AFE to 2020 Target)



Cost Reduction Initiatives Breakdown

AR has achieved approximately $500,000 per well in cost reductions since the January 2019 budget with the remaining ~$950,000 per well expected to begin in 2020

Targeted Marcellus Well Cost Reductions Percentage Breakdown (1)



Assumes 12,000' lateral length

Well Cost Reduction Calculation
(Midpoint of Target Range)

$$\frac{\$1.45\ MM}{12{,}000'} = \$120 / ft\ Reduction$$

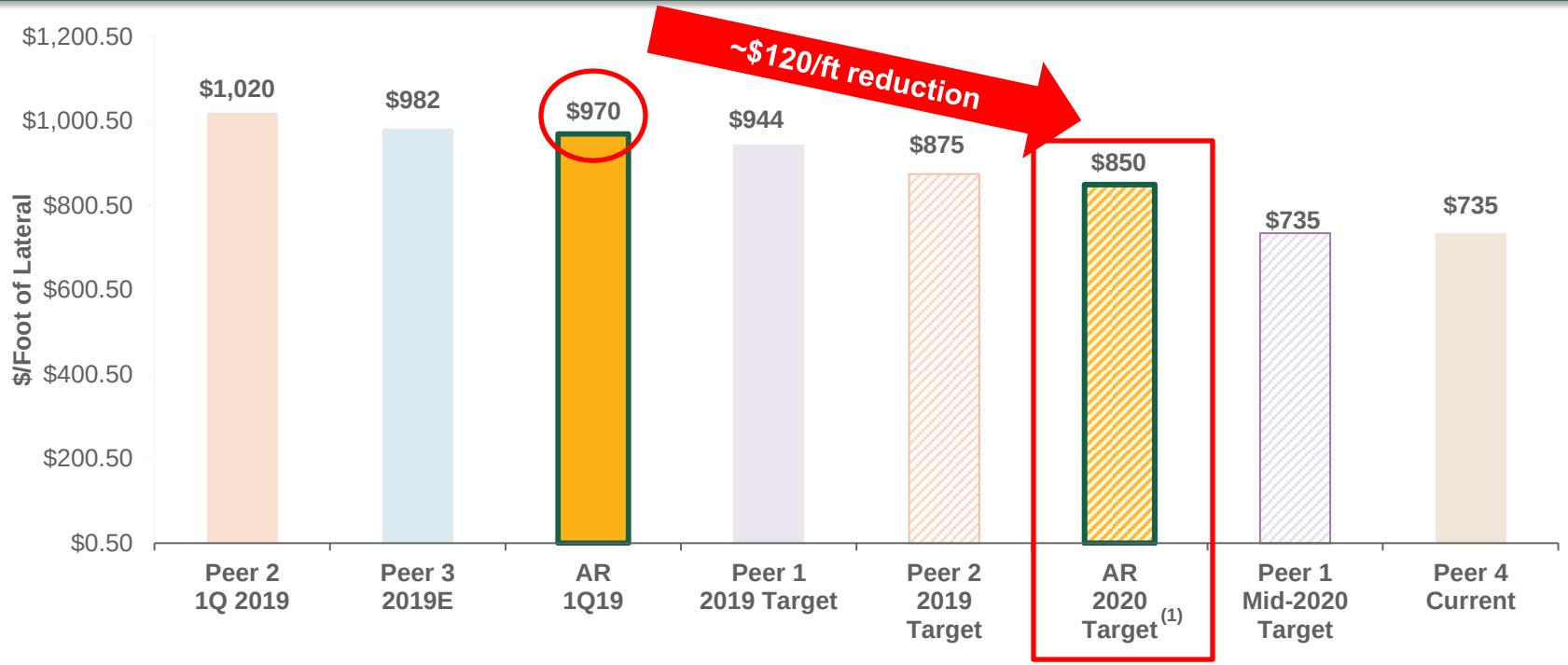
$970 – $120 = $850 / ft

$1.45 MM per well Cost Reduction (1)

1) *Total per well cost reduction of $1.45 MM and percentages breakout are based on the midpoint of total targeted well cost savings.*

Appalachian Peer Marcellus Well Cost Comparison

Southwest Marcellus Peer Well Costs ($/Foot of Lateral)



Average Lateral Length	10,000	9,300	12,000	10,462	10,000	12,000	12,000	10,000
Proppant (lbs/ft) (2)	2,167	2,315	2,000	2,700	?	2,000	2,200	**1,451**
Water (Bbls/ft) (2)	35	38	42	37	?	35	47	37

Note: Based on company public data via press releases and investor presentations unless denoted as otherwise.

1) *AR 2020 target based on midpoint of $830/ft. to $870/ft. well cost target range. See previous slide for details.*
2) *Represents IHS data. Peers include CNX, EQT, RRC and SWN.*

Strong Financial Position for Low Price Environment

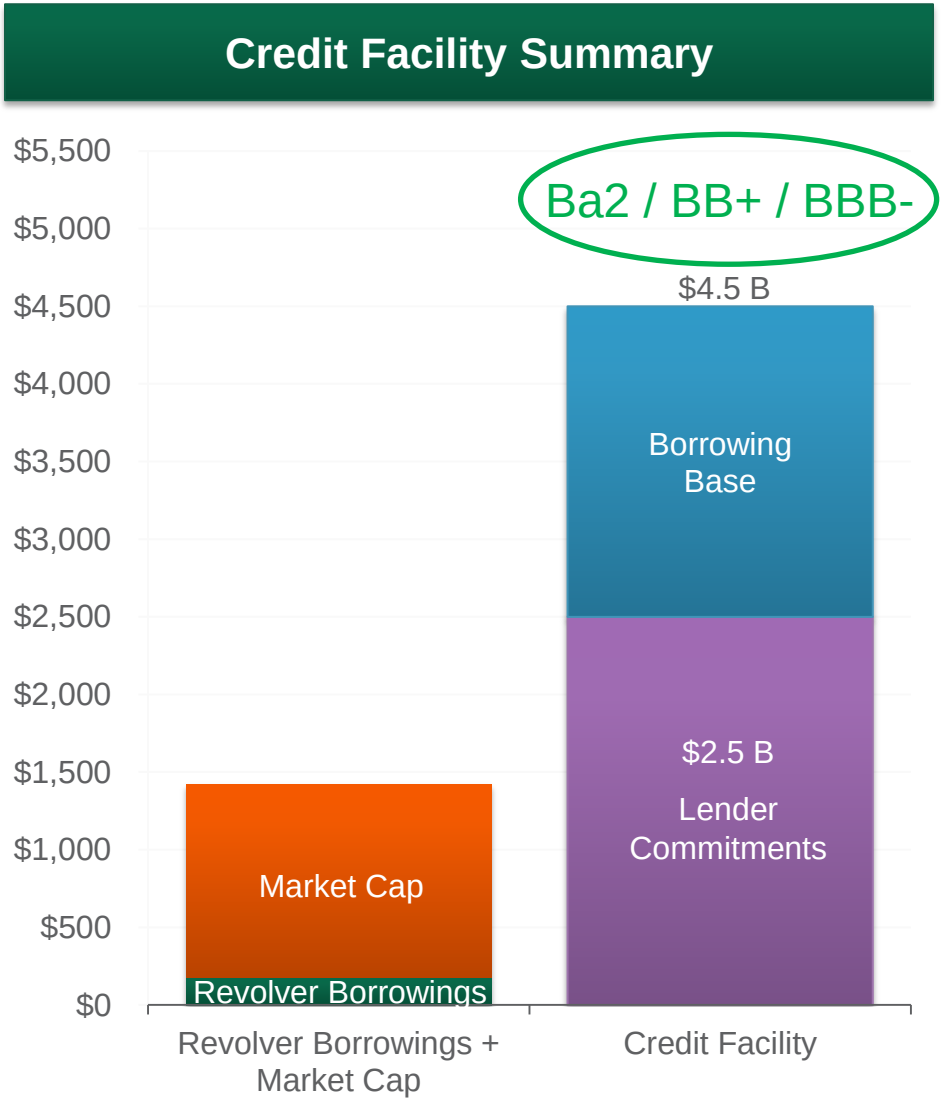
Antero has the liquidity, scale, deep inventory and capital efficiency to continue to develop in today's commodity price environment

Strong Financial Position

- Low 2x leverage with $730 MM absolute debt reduction since 2014 (1)
- AM share ownership of $1.4 B provides ~$200 MM of annual cash flow via dividends
- World class hedge book with ~$788 MM forecasted hedge value (1)
- $4.5 B credit facility reaffirmed in 2Q19
- Only $175 MM drawn on revolver with $2.5 B in lender commitments
- Strong corporate debt ratings of Ba2/BB+/BBB-

Scale and Capital Efficiency

- Large, growing production base with capital spending approximately within cash flow
- Low average annual maintenance capital on sizable production base
- Peer-leading liquids-rich inventory provides running room and diversified, resilient commodity mix through price cycles



Note: Revolver borrowings as of 6/30/2019. AR market cap and AM share value as of 7/31/2019.

1) Leverage and liquidity as of 6/30/2019. Hedge value as of 7/31/2019. See appendix for Non-GAAP items and reconciliation. Leverage is calculated as net debt / LTM adjusted EBITDAX.

Antero's Sustainability Focus

Environmental Stewardship

- **Active member of industry leading greenhouse gas reduction partnerships** that promote a science-based, active approach to reduce emissions and improve environmental performance

ONE OUR NATION'S ENERGY FUTURE

THE ENVIRONMENTAL PARTNERSHIP
An Initiative of the U.S. Natural Gas and Oil Industry

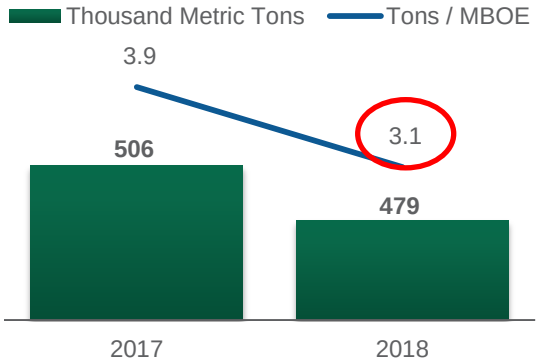
NaturalGas EPA POLLUTION PREVENTER

- **Antero's Leak Detection and Repair (LDAR)** program exceeds OH and WV standards

GHG Emissions

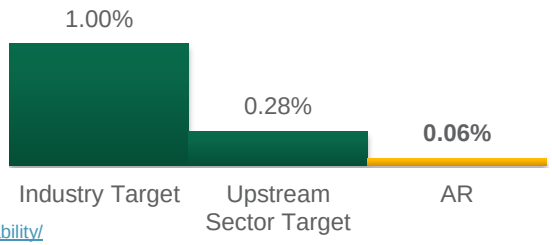
- **21% decrease** in greenhouse gas (GHG) emissions intensity since 2017 to 3.1 tons CO2e / MBOE in 2018

Total GHG Emissions and Intensity (CO_2e)



- Methane leak loss rate of **0.06% in 2018**, well below ONE Future industry and upstream sector targets of 1.00% and 0.28%, respectively, by 2025

Methane Leak Loss Rate

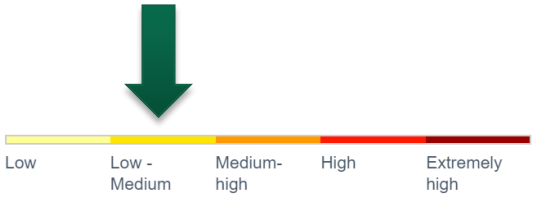


Water Management

- Antero Clearwater Facility recycles wastewater and reduces deployment of local trucks by **10 million miles annually,** reducing GHG emissions by **30K tons CO_2 annually**

- Extensive freshwater pipeline network **eliminated 790,000 water truck trips** in 2018.

- AR's land receives a **Low-Medium Water Risk** rating from World Resources Institute



For more information, please visit: https://www.anteroresources.com/sustainability/

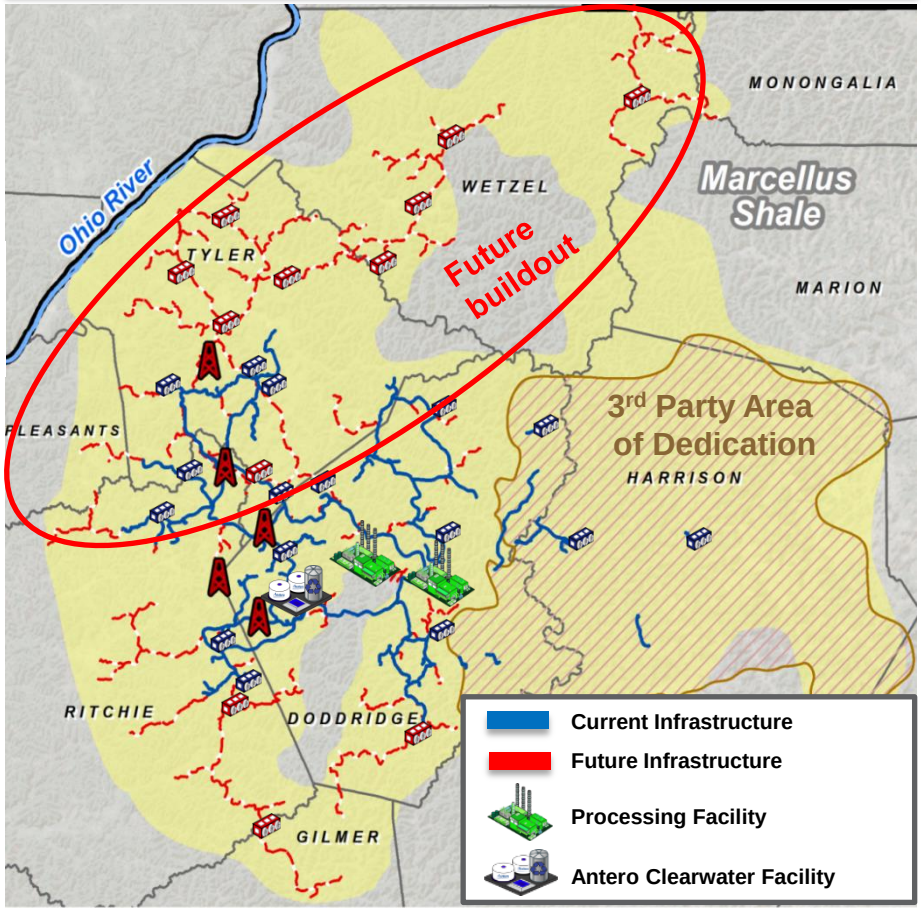
Midstream Driving Value for AR Since Inception

Owning and controlling the infrastructure is critical to sustainable development; Antero Midstream provides a customized midstream solution

Midstream Ownership Benefits

- **Takeaway assurance and reliable project execution**
- **Never missed a completion date with fresh water delivery system**
- **Just-in-time capital investment**
- **Unparalleled downstream visibility**
- **Attractive return on investment (3.8x ROI for AR) (1)**

AM Infrastructure Buildout



(1) *ROI reflects cash proceeds received by AR from (1) the sale of AM shares via the AM IPO, (2) proceeds from the water drop down transaction and (3) current market value of AR's ownership in AM as of 7/31/2019, all divided by the capital invested by AR prior to AM's IPO*

AR Has Built a Resilient Business Model

Producer resiliency is a key attribute for a sustainable development plan:

Scale / Liquids Diversification	2nd Largest NGL producer and 5th largest gas producer with ~1,700 premium undrilled core locations with breakeven natural gas prices below current strip pricing (1)
Ongoing Capital Efficiency Initiatives	Targeting 10% - 14% lower well costs and lower D&C capital in 2020 (2) and at least 20% lower per unit LOE over the next 12 months
World Class Hedge Book	100% of natural gas hedged in 2019 and ~90% and over 35% of projected natural gas production hedged in 2020 and 2021, respectively
Industry-Leading FT Portfolio	Delivers NYMEX+ natural gas pricing (3) and Mont Belvieu+ NGL pricing on LPG exported volumes
Strong Balance Sheet	2.3x leverage, $1.6 B of liquidity and strong credit ratings of Ba2/BB+/BBB- (4)

The AR business model delivers multiple ways to "Win"

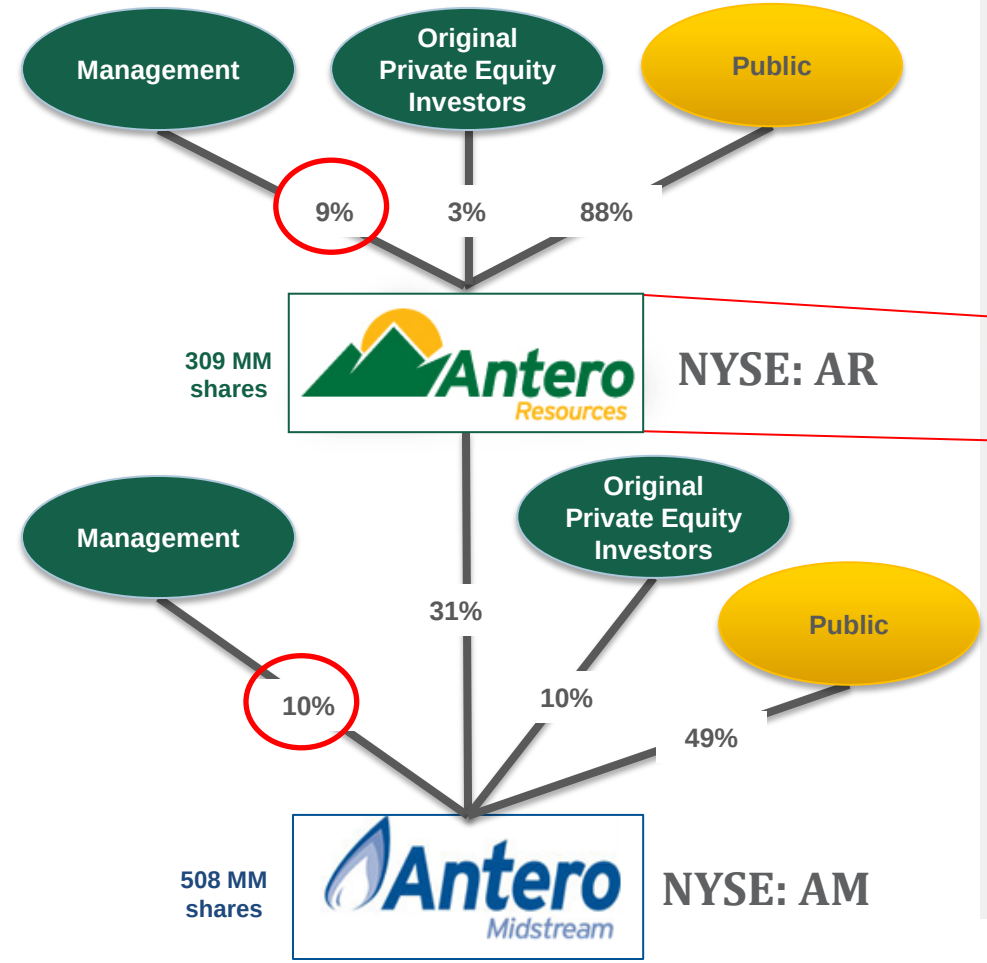
(1) *Strip pricing as of 7/31/2019.*
(2) *Refer to slide 18 for details. Assumes similar well completion activity to 2019 guidance of ~120 wells turned in line.*
(3) *After adjusting for Btu.*
(4) *See appendix for Non-GAAP items and reconciliation. Leverage is calculated as net debt / LTM adjusted EBITDAX. Leverage as of 6/30/19.*

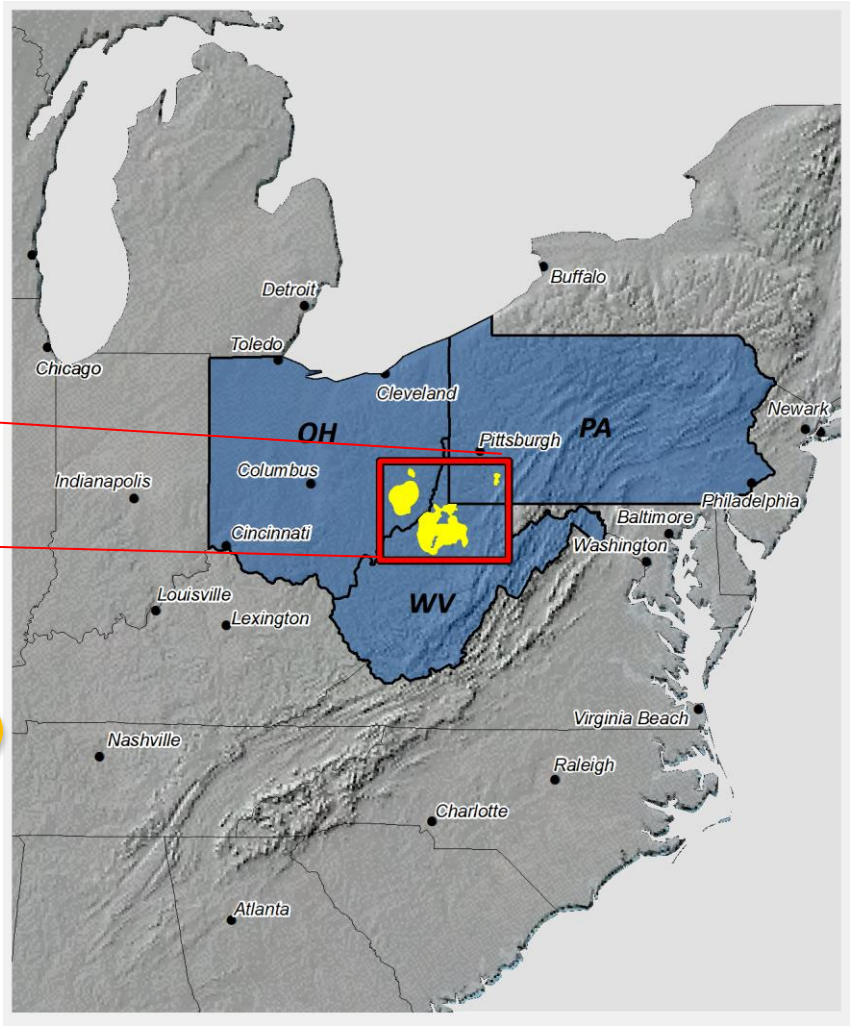
Appendix

Repositioned With Simplified Structure

Midstream simplification transaction results in ownership of one publicly traded midstream entity and better aligns management ownership between the two entities

Simplified Structure



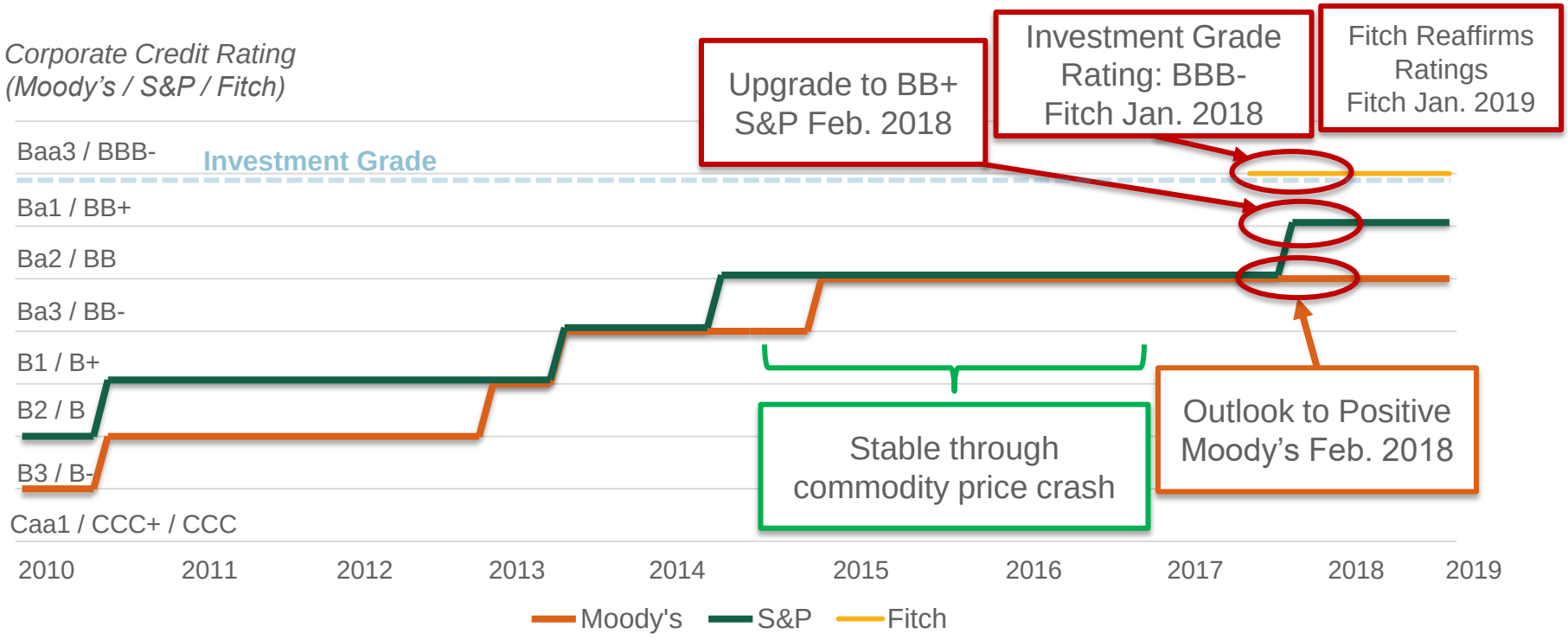


Note: Ownership levels as of June 12, 2019.

Corporate Credit Ratings History

Stable Credit Ratings with Consistent Upgrades from the Beginning of the Decade Through the Downturn

Investment Grade Rating from Fitch (BBB-) and Upgrade from S&P (BB+)



Credit Markets Have a Strong Appreciation for Antero Momentum

Antero Capitalization – 6/30/19

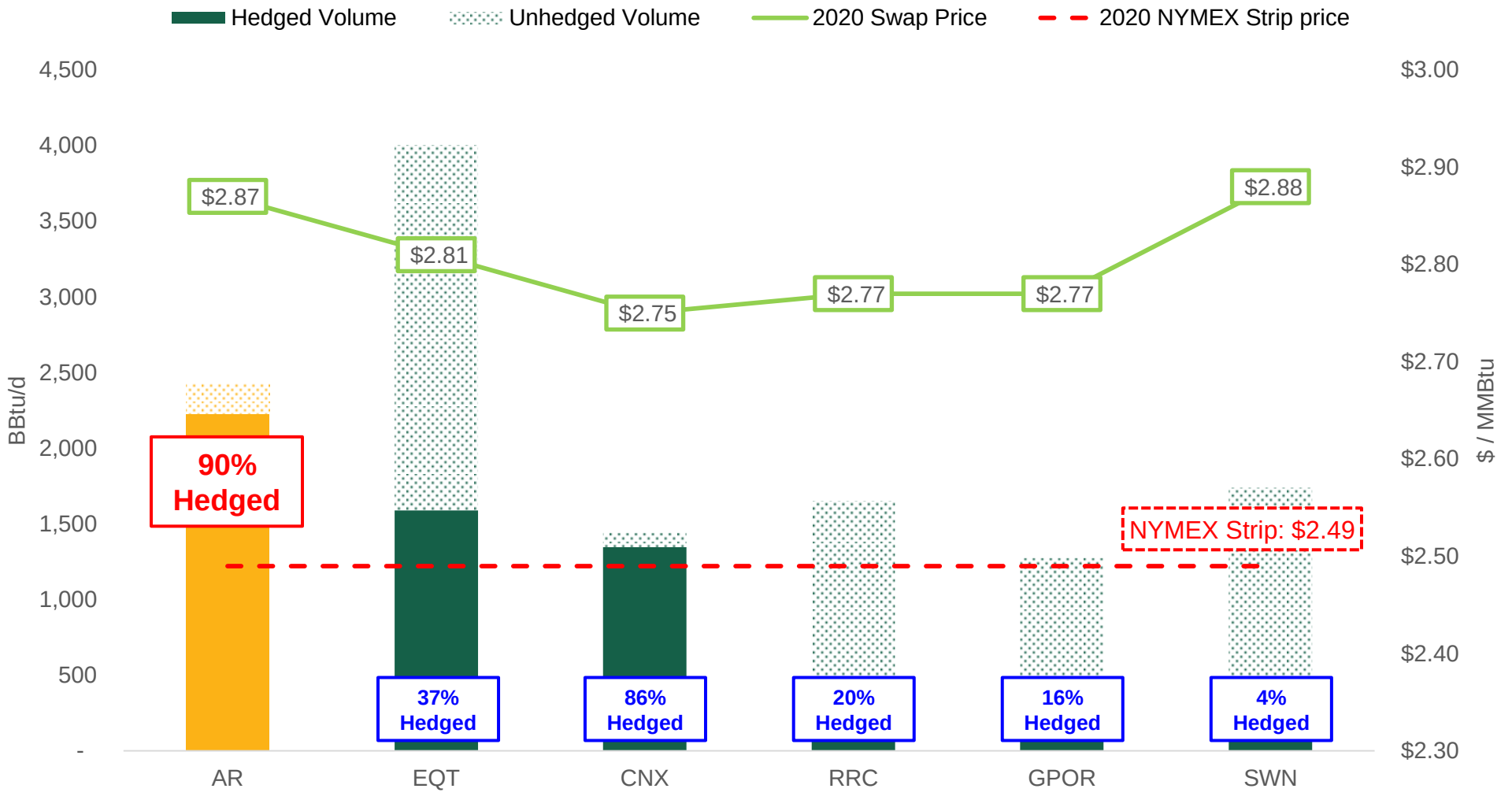
As of June 30, 2019 ($MM)	Antero Resources
Cash	$0
Debt	
Revolving Credit Facility	$175
5.375% Senior Notes Due Nov. 2021	$1,000
5.125% Senior Notes Due Dec. 2022	$1,100
5.625% Senior Notes Due Jun. 2023	$750
5.000% Senior Notes Due Mar. 2025	$600
Net unamortized premium	$1
Net unamortized debt issuance costs	($24)
Total Debt	**$3,602**
Net Debt (Total Debt - Cash)	**$3,602**
LTM Adjusted EBITDA	**$1,589**
Debt / LTM Adjusted EBITDA	**2.3x**
Credit Facility Capacity	**$2,500**
Liquidity[(1)]	**$1,624**

(1) Net of $701 million in letters of credit as of June 30, 2019.

AR Hedge Book Leads Appalachian Peers

During 2Q 2019, AR layered on 810 MMBtu/d of 2020 natural gas hedges increasing its percentage of expected natural gas production volume to ~90%

2020 Appalachian Peer Hedge Profile

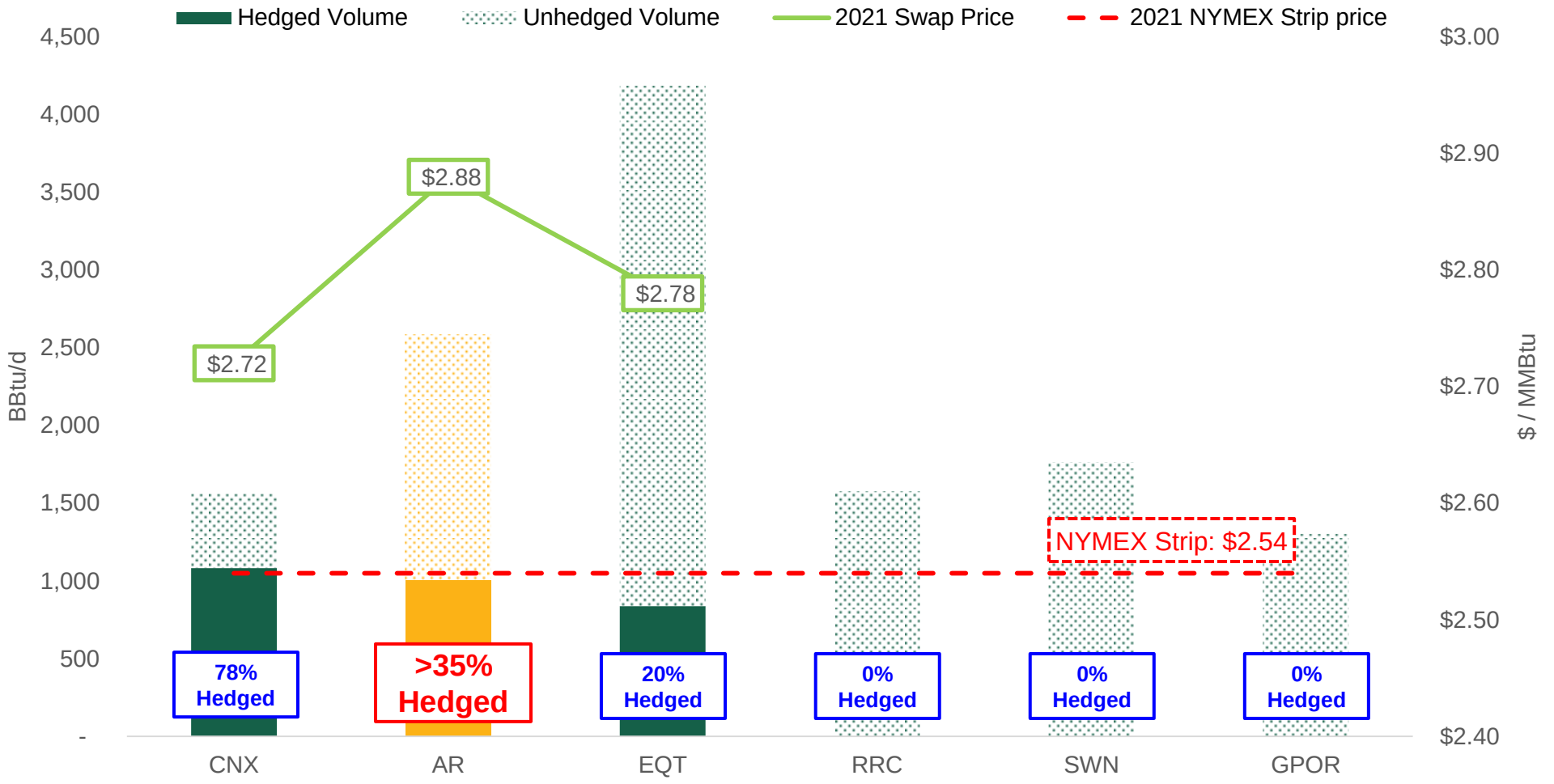


Source: Bloomberg, Public Data; AR internal estimates.
Note: NYMEX Strip Price as of 7/31/2019. AR production based on 10% growth from the midpoint of 2019 guidance and peer percentage of production hedged is based on consensus natural gas production as of 7/31/2019.

AR Hedge Book Leads Appalachian Peers

During 2Q 2019, AR layered on 300 MMBtu/d of 2021 natural gas hedges increasing its percentage of expected natural gas production volume to over 35%

2021 Appalachian Peer Hedge Profile



Source: Bloomberg, Public Data; AR internal estimates.
Note: NYMEX Strip Price as of 7/31/2019. AR production based on 10% growth CAGR from midpoint of 2019 production guidance. Peer percentage of production hedged is based on consensus natural gas production as of 7/31/2019.

Antero Definitions

Adjusted EBITDAX: Represents income or loss, including noncontrolling interests, before interest expense, interest income, gains or losses from commodity derivatives and marketing derivatives, but including net cash receipts or payments on derivative instruments included in derivative gains or losses other than proceeds from derivative monetizations, income taxes, impairment, depletion, depreciation, amortization, and accretion, exploration expense, equity-based compensation, gain or loss on early extinguishment of debt, gain or loss on sale of assets, gain or loss on changes in the fair value of contingent acquisition consideration, contract termination and rig stacking costs, and equity in earnings or loss of Antero Midstream. Adjusted EBITDAX also includes distributions received from limited partner interests in Antero Midstream common units prior to the closing of the simplification transaction on March 12, 2019.

Adjusted Net Cash Provided by Operating Activities: Represents net cash provided by operating activities excluding net cash provided by operating activities from Antero Midstream Partners consolidated from January 1, 2019 through March 12, 2019.

Free Cash Flow: Represents Adjusted Net Cash Provided by Operating Activities, less drilling and completion capital, less drilling and completion capital paid to Antero Midstream Partners consolidated through March 12, 2019, less land capital.

Net Debt: Net Debt is calculated as total debt less cash and cash equivalents. Management uses Net Debt to evaluate its financial position, including its ability to service its debt obligations.

Proved Undeveloped (PUD) F&D Cost Per Unit: Proved undeveloped F&D costs per unit is a non-GAAP metric commonly used in the exploration and production industry by companies, investors and analysts in order to measure a company's ability of adding and developing reserves at a reasonable cost. Proved undeveloped F&D costs per unit is a statistical indicator that has limitations, including its predictive and comparative value. This reserve metric may not be comparable to similarly titled measurements used by other companies. There are no directly comparable financial measures presented in accordance with GAAP for proved undeveloped F&D costs per unit, and therefore a reconciliation to GAAP is not practicable.

The calculation for proved undeveloped F&D cost per unit is based on future development costs required for the development of proved undeveloped reserves, divided by total proved undeveloped reserves.

Antero Non-GAAP Measures

Adjusted EBITDAX

Adjusted EBITDAX as defined by the Company represents income or loss, including noncontrolling interests, before interest expense, interest income, gains or losses from commodity derivatives and marketing derivatives, but including net cash receipts or payments on derivative instruments included in derivative gains or losses other than proceeds from derivative monetizations, income taxes, impairment, depletion, depreciation, amortization, and accretion, exploration expense, equity-based compensation, gain or loss on early extinguishment of debt, gain or loss on sale of assets, gain or loss on changes in the fair value of contingent acquisition consideration, contract termination and rig stacking costs, and equity in earnings or loss of Antero Midstream. Adjusted EBITDAX also includes distributions received from limited partner interests in Antero Midstream common units prior to the closing of the simplification transaction on March 12, 2019.

The GAAP financial measure nearest to Adjusted EBITDAX is net income or loss including noncontrolling interest that will be reported in Antero's condensed consolidated financial statements. While there are limitations associated with the use of Adjusted EBITDAX described below, management believes that this measure is useful to an investor in evaluating the Company's financial performance because it:

- is widely used by investors in the oil and gas industry to measure a company's operating performance without regard to items excluded from the calculation of such term, which can vary substantially from company to company depending upon accounting methods and book value of assets, capital structure and the method by which assets were acquired, among other factors;
- helps investors to more meaningfully evaluate and compare the results of Antero's operations from period to period by removing the effect of its capital structure from its operating structure; and
- is used by management for various purposes, including as a measure of Antero's operating performance, in presentations to the Company's board of directors, and as a basis for strategic planning and forecasting. Adjusted EBITDAX is also used by the board of directors as a performance measure in determining executive compensation.

There are significant limitations to using Adjusted EBITDAX as a measure of performance, including the inability to analyze the effect of certain recurring and non-recurring items that materially affect the Company's net income, the lack of comparability of results of operations of different companies and the different methods of calculating Adjusted EBITDAX reported by different companies. In addition, Adjusted EBITDAX provides no information regarding a company's capital structure, borrowings, interest costs, capital expenditures, and working capital movement or tax position.

Antero Non-GAAP Measures Continued

Adjusted Net Cash Provided by Operating Activities and Free Cash Flow

Adjusted Net Cash Provided by Operating Activities as presented in this presentation represents net cash provided by operating activities excluding net cash provided by operating activities from Antero Midstream Partners consolidated from January 1, 2019 through March 12, 2019. Adjusted Net Cash Provided by Operating Activities is widely accepted by the investment community as a financial indicator of an oil and gas company's ability to generate cash to internally fund exploration and development activities and to service debt. Adjusted Net Cash Provided by Operating Activities is also useful because it is widely used by professional research analysts in valuing, comparing, rating and providing investment recommendations of companies in the oil and gas exploration and production industry. In turn, many investors use this published research in making investment decisions. Free Cash Flow as defined by the Company represents Adjusted Net Cash Provided by Operating Activities, less drilling and completion capital, less drilling and completion capital paid to Antero Midstream Partners from January 1 to March 12, 2019, less land capital.

There are significant limitations to using Adjusted Net Cash Provided by Operating Activities and Free Cash Flow as measures of performance, including the inability to analyze the effect of certain recurring and non-recurring items that materially affect the company's net income, the lack of comparability of results of operations of different companies and the different methods of calculating Adjusted Net Cash Provided by Operating Activities and Free Cash Flow reported by different companies. Adjusted Net Cash Provided by Operating Activities and Free Cash Flow do not represent funds available for discretionary use because those funds may be required for debt service, land acquisitions and lease renewals, other capital expenditures, working capital, income taxes, exploration expenses, and other commitments and obligations.

Adjusted Net Cash Provided by Operating Activities and Free Cash Flow are not measures of financial performance under GAAP and should not be considered in isolation or as a substitute for cash flows from operating, investing, or financing activities, as an indicator of cash flows, or as a measure of liquidity. Furthermore, we may calculate such measures differently from similarly titled measures used by other companies.

LTM Adjusted EBITDAX Reconciliation

(in thousands)		Twelve months ended June 30, 2019
Net income and comprehensive income attributable to Antero Resources Corporation	$	744,966
Commodity derivative fair value gains		(85,692)
Gains on settled commodity derivatives		187,678
Marketing derivative fair value gains		43
Losses on settled marketing derivatives		(21,471)
Gain on sale of assets		951
Gain on deconsolidation of Antero Midstream Partners LP		(1,406,042)
Interest expense		226,390
Income tax expense		193,555
Depletion, depreciation, amortization, and accretion		909,012
Impairment of unproved properties		567,707
Exploration expense		2,042
Gain on change in fair value of contingent acquisition consideration		100,840
Equity-based compensation expense		34,167
Equity in (earnings) loss of Antero Midstream Partners LP		(58,411)
Equity in (earnings) loss of unconsolidated affiliates		(15,402)
Distributions from Antero Midstream Partners LP		178,925
Contract termination and rig stacking		13,964
Simplification transaction fees		6,297
Adjusted EBITDAX	$	1,588,519
AR bank credit facility	$	175,000
5.375% AR senior notes due 2021		1,000,000
5.125% AR senior notes due 2022		1,100,000
5.625% AR senior notes due 2023		750,000
5.000% AR senior notes due 2025		600,000
Net unamortized premium		1,095
Net unamortized debt issuance costs		(23,716)
Total debt		3,602,379
Less: AR cash and cash equivalents		—
Net Debt	$	3,602,379

Net Debt to Adjusted EBITDAX Reconciliation (Annual)

	2014	2015	2016	2017	2018	2Q19
$ Millions						
Debt	$ 4,248	$ 4,082	$ 3,890	$ 3,635	$ 3,855	$3,602
Less: Cash	(16)	(17)	(18)	(20)	--	--
Net Debt	$ 4,232	$ 4,065	$ 3,872	$ 3,615	$ 3,855	$3,602
Production Volumes (Bcfe)	368	545	676	822	989	294
$ Millions						
Natural Gas, Oil, Ethane and NGL sales	$ 1,741	$ 1,379	$ 1,757	$ 2,751	$ 3,659	$ 906
Realized commodity derivative (losses)	136	857	1,003	214	243	45
Distributions from Antero Midstream		89	112	132	159	48
All-In Revenue	**$ 1,877**	**$ 2,324**	**$ 2,872**	**$ 3,097**	**$ 4,061**	
Gathering, compression, processing, and transportation	537	853	1,146	1,441	1,793	567
Production and ad valorem taxes	86	77	69	91	122	31
Lease operating expenses	28	36	51	94	142	41
Net Marketing Expense / (Gain)	50	123	106	108	154	74
General and administrative (before equity-based compensation)	86	108	110	119	132	36
Total Cash Costs	**$ 786**	**$ 1,196**	**$ 1,483**	**$ 1,853**	**$ 2,344**	**$ 749**
Adjusted EBITDAX	**$ 1,091**	**$ 1,128**	**$ 1,384**	**$ 1,244**	**$ 1,717**	**$ 252**
Net Debt to Adjusted EBITDAX	**3.9x**	**3.6x**	**2.8x**	**2.9x**	**2.2x**	**2.3x**