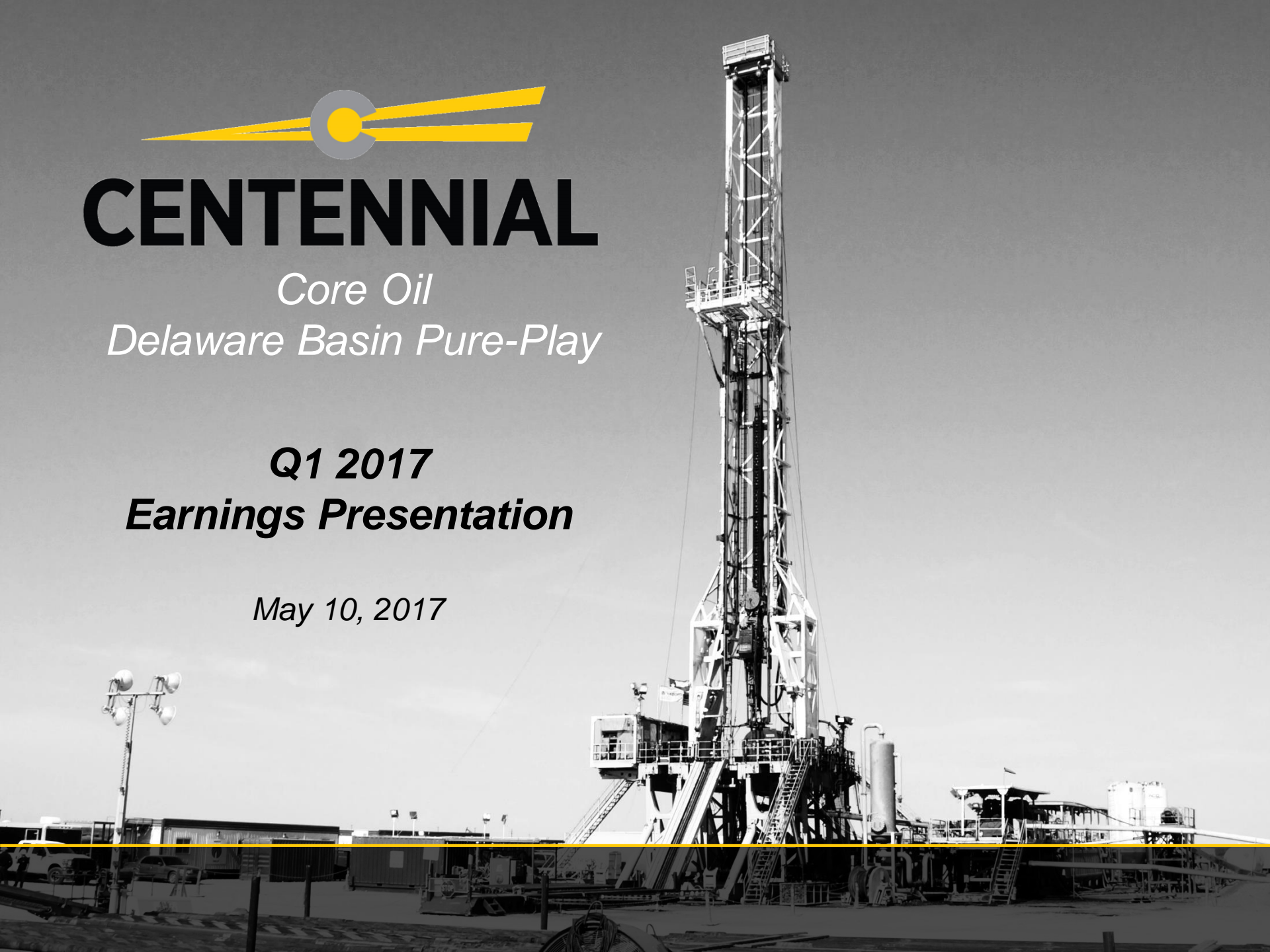


CENTENNIAL

*Core Oil
Delaware Basin Pure-Play*

**Q1 2017
Earnings Presentation**

May 10, 2017



Important Information

Forward-Looking Statements

The information in this presentation includes “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. 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 management’s 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 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, cash flow and access to capital, the timing of development expenditures and the other risks described in our filings with the Securities and Exchange Commission. 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.

Centennial Resource Development Overview

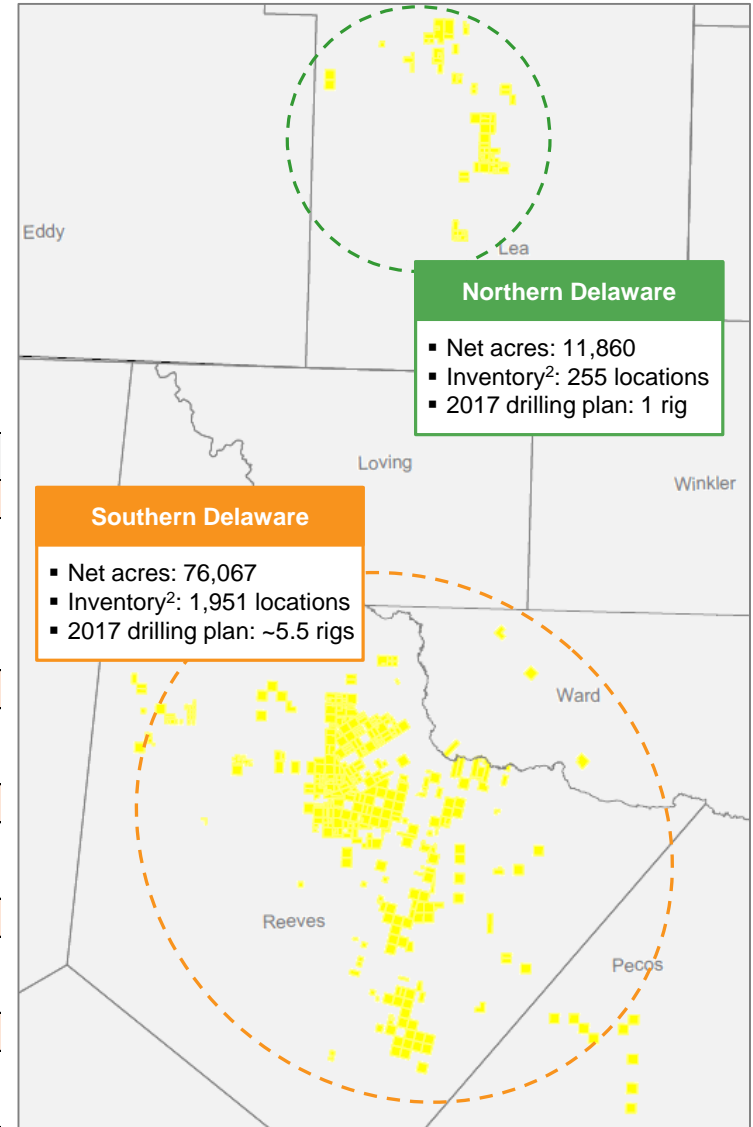
Core Delaware Basin Pure-Play

Q1 2017 highlights

- Increased first quarter 2017 average daily oil production volumes by 64% compared to the period from October 11, 2016 through December 31, 2016
- Expected to add approximately 11,860 net acres in the core of the Northern Delaware Basin from GMT Exploration Company (“GMT”); acquisition is expected to close during the second quarter 2017
- Raised the Company’s 2020 oil production target to 60,000 barrels per day in connection with the GMT acquisition
- Simplified the Company’s capital structure by calling for redemption all outstanding Public Warrants

Summary operational statistics

Q1 2017 production and development	
Total production (Boe/d)	18,469
Oil production (Bo/d)	10,489
% oil	57%
Active operated rigs running	5
2017 production guidance (midpoint)	
2017E production (Boe/d)	25,750
2017E oil production (Bo/d)	15,750
Pro forma acreage ¹	
Total net acreage	~88,000
% Operated	84%
Pro forma drilling inventory ^{1,2}	
Gross horizontal drilling locations	2,206
Gross operated horizontal drilling locations	1,394
Proved reserves	
Total proved reserves at 12/31/16 (MBoe) ³	82,959
% oil	56%

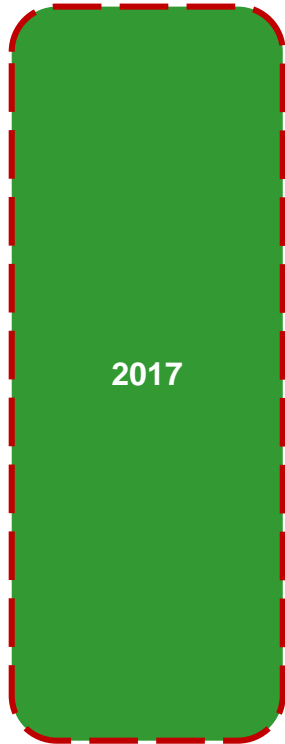


(1) As of 12/31/2016 plus incremental GMT acquisition acreage / inventory
 (2) Represents gross horizontal drilling locations; for legacy Centennial assumes credit for the Upper and Lower Wolfcamp A, Wolfcamp B, Wolfcamp C and 3rd Bone Spring Sand; assumes no locations in Pecos County; for GMT assumes credit for the Avalon Shale, 2nd Bone Spring Sand, 3rd Bone Spring Sand and Wolfcamp A
 (3) Does not include any proved reserve impact from GMT acquisition

Centennial 2020 Game Plan

Delivering investor returns through operational outperformance

Objective: Best equity performance of any U.S. Mid Cap E&P through 2020



- Grow net oil production from 5,757 Bo/d in 2016 to 60,000 by 2020
- Become mid-cap technical leader in G&G and well completion technology
- Achieve above average competence in drilling technology and execution
- Evaluate Bone Spring Shale prospectivity across acreage
- Maintain one of the lowest net debt positions of all U.S. E&P companies
- Maintain clear, easy to understand financials
- Target up to \$50-\$70 million per year spend for acreage acquisitions
- Achieve lowest unit costs among peers – LOE and G&A
- Achieve 60,000 Bo/d average annual oil production



GMT Exploration Acquisition Overview

Strategic entry into core, liquids-rich Northern Delaware Basin

GMT acquisition summary

Contiguous operated acreage position with oil-weighted production

- 11,860 net acre Northern Delaware Basin position in Lea County, New Mexico
 - 79% operated acreage; 67% of acreage is HBP; minimal existing lease obligations
 - 77% State Lands, 19% Federal and 4% Fee
- Q1 2017 net production: ~2,100 Boe/d (77% oil)¹

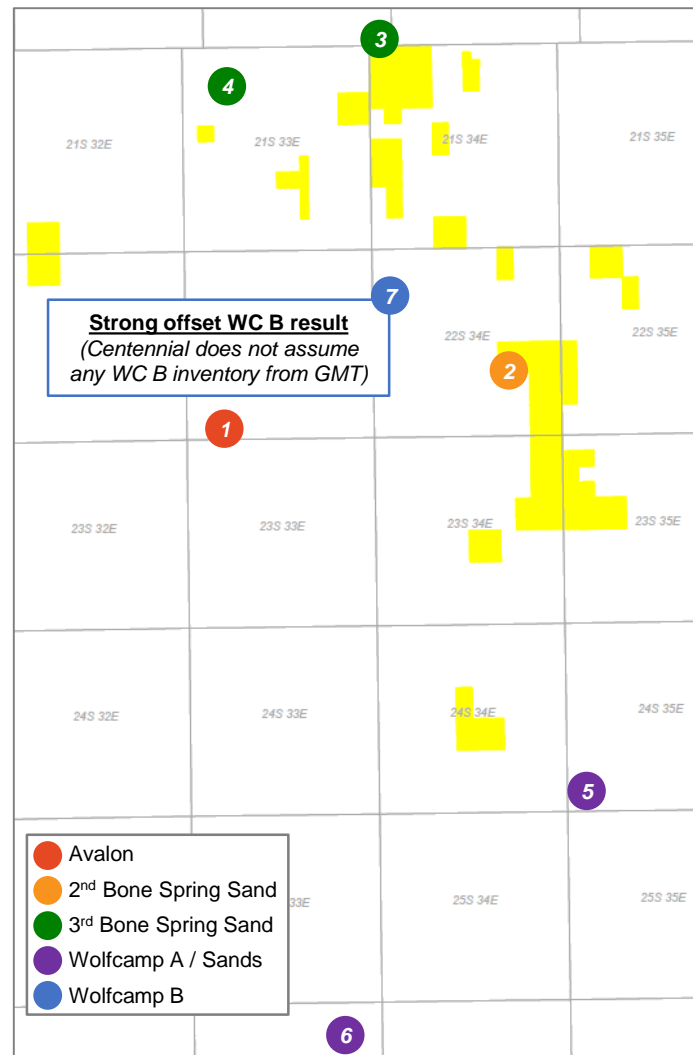
Accretive transaction structured to preserve strong balance sheet

- Attractive purchase price of \$350mm (~\$22,400 / net acre²) represents a discount to Southern Delaware and recent New Mexico transactions and drives immediate NAV and cash flow accretion on a per share basis
- Transaction to be funded through \$341mm private placement of equity, expected to close concurrent with the acquisition
- Competitive returns relative to legacy Centennial locations - 1 rig expected starting in August 2017 through 2018, with a view for increased activity longer term
- Acreage located in an area with excellent offset results
- ~4,500 vertical feet of proven, geo-pressured pay zone, extending from the Avalon to the Wolfcamp

GMT and offset operator well results

Well:	Operator	Target	Lateral Length (ft.)	IP30 (Boe/d) ³	% Oil ³
1 Leghorn 32 State 201H	EOG	Lower Avalon	4,500'	3,630	70%
2 Tour Bus 23 State Com 502H	GMT	2 nd BS Sand	4,350'	972	84%
3 Della 29 FC 602H	EOG	3 rd BS Sand	4,500'	2,413	79%
4 Goose State Com 2H	CXO	3 rd BS Sand	10,100'	1,196	85%
5 Stove Pipe FC 2H	CXO	Wolfcamp Sands	6,750'	2,258	83%
6 Whirling Wind (4 well average) ⁴	EOG	Wolfcamp A / Sands	7,100'	5,060	69%
7 Grama 8817 JV-P Fed 2-H	BTA	Wolfcamp B	9,300'	1,593	95%

Well locator map



Source: Company filings and presentations; IHS Herold

(1) Percentage oil figure based on two-stream production

(2) Equal to total transaction value less proved developed producing reserves ("PDP") production of 2,100 Boe/d valued at \$40,000 Boe/d divided by total net acres

(3) Based on two-stream production results

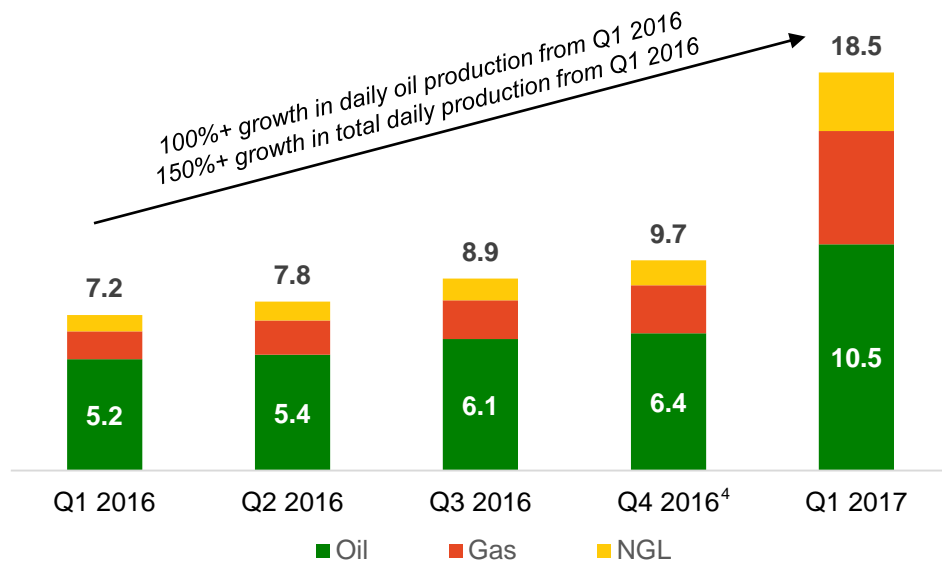
(4) Represents average of four well package

Delivering robust production growth

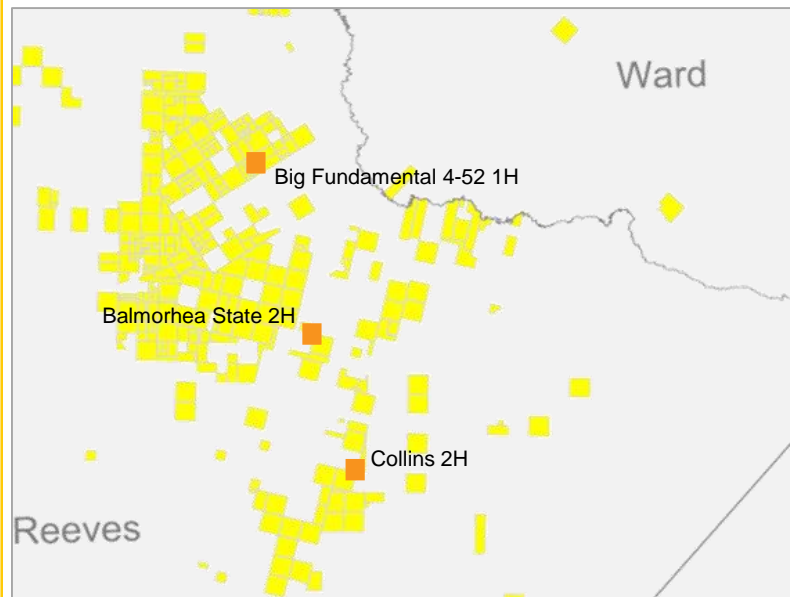
Q1 2017 production overview

- Q1 2017 oil production of 10,489 Bo/d and total production of 18,469 Boe/d
 - On-track for FY 2017 guidance of 15,750 Bo/d and 25,750 Boe/d¹
- Increased first quarter 2017 average daily oil production volumes by 64% compared to the period from October 11, 2016 through December 31, 2016
- Drilled 15 operated wells with ~5 rigs running for the majority of the quarter, 11 operated wells placed on production
- Big Fundamental 4-52 1H: IP30 / 1,000' of 247 Bo/d and 370 Boe/d
- Strong results from the Balmorhea State 2H and Collins 2H (~82% oil)

Production history (MBoe/d)



Q1 2017 highlights



	Big Fundamental 4-52 1H	Collins 2H	Balmorhea State 2H	Q1 2017 average ²
Lateral length (ft.)	4,600	6,315	5,750	6,250
Targeted zone	WC UA	WC UA	WC UA	-
IP30 (Bo/d)	1,135	976	1,079	959
IP30 (Boe/d) ³	1,700	1,183	1,311	1,363
% oil ³	67%	83%	82%	70%
IP30 / 1,000' (Bo/d)	247	155	188	153
IP30 / 1,000' (Boe/d) ³	370	187	228	218

(1) Represents midpoint of updated FY 2017 production guidance pro forma for the GMT acquisition

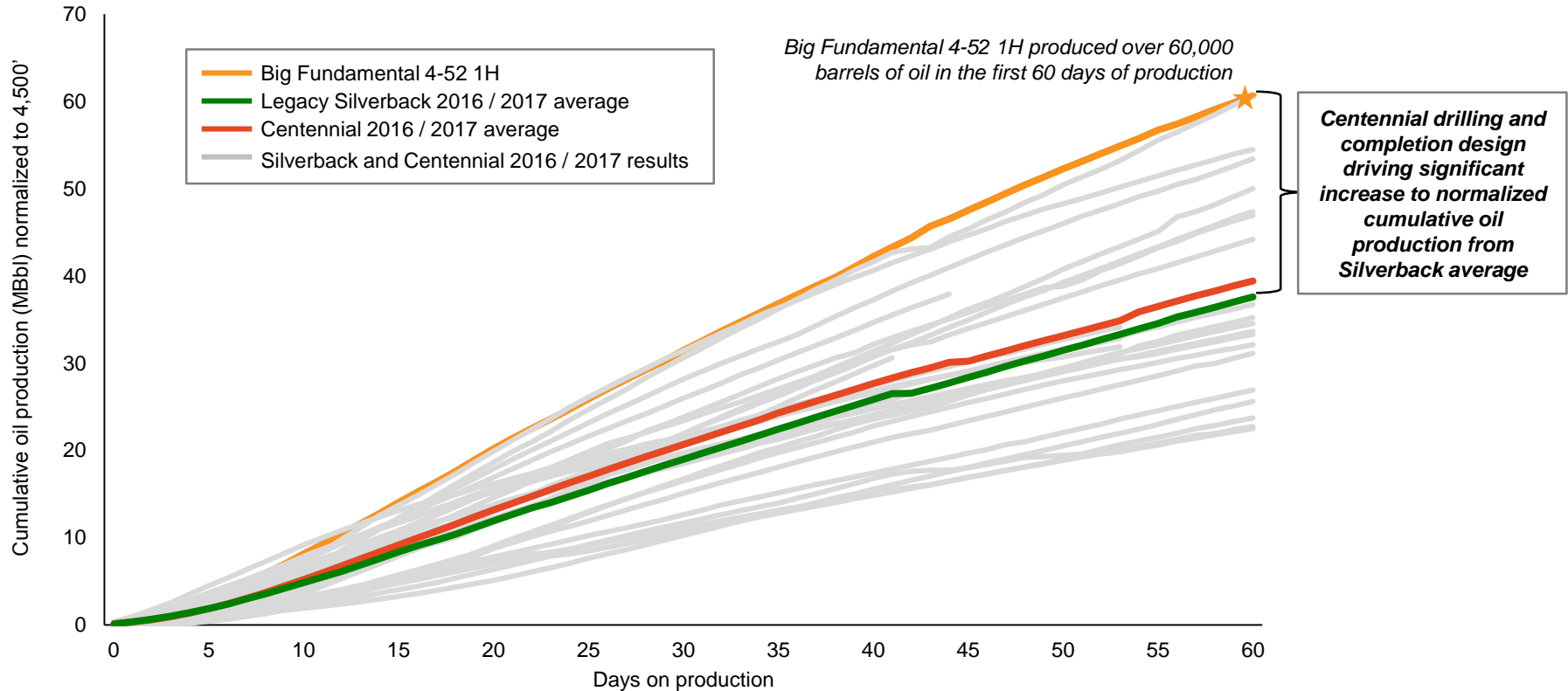
(2) Average includes results from 11 operated wells placed on production in Q1 2017

(3) Based on two-stream production results

(4) Represents predecessor period from October 1, 2016 through October 10, 2016 and successor period from October 11, 2016 through December 31, 2016

Big Fundamental – Best oil well drilled on Centennial acreage

- Big Fundamental 4-52 1H (~4,600' lateral length, Wolfcamp Upper A) represents the first well on the acquired Silverback acreage that was 100% drilled and completed by the Centennial technical team
 - Oil IP30: 1,135 Bo/d; oil equivalent IP30¹: 1,700 Boe/d (67% oil)
 - Oil IP60: 997 Bo/d; oil equivalent IP60¹: 1,498 Boe/d (67% oil)
- Year-to-date results continue to support the quality of the Silverback acreage and the upside from applying the latest Centennial completion techniques to the position



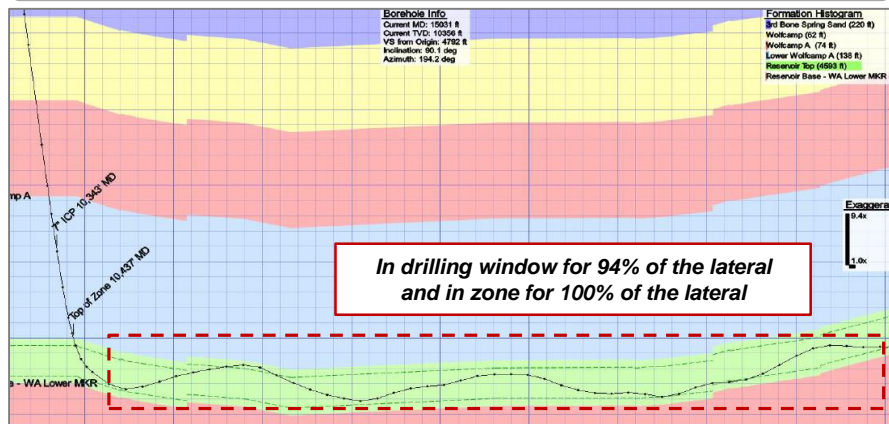
(1) Based on two-stream production results

Advancements in geosteering and cluster spacing driving progress towards technical leadership

Geosteering advancements

- Centennial recently brought the geosteering function in-house and recent results indicate a material improvement in the ability to land laterals in the intended drilling window
- Isolating where the lateral is landed limits the number of variables in the equation, driving more efficient analysis of results and stronger well performance
- Q1 2017 average of 93% in-zone represents a material improvement relative to legacy wells
- Targeting a specific drilling window of ~30 feet within the target zone, determined by technical team as optimal landing zone

Sample cross-section: (4,650' lateral length)

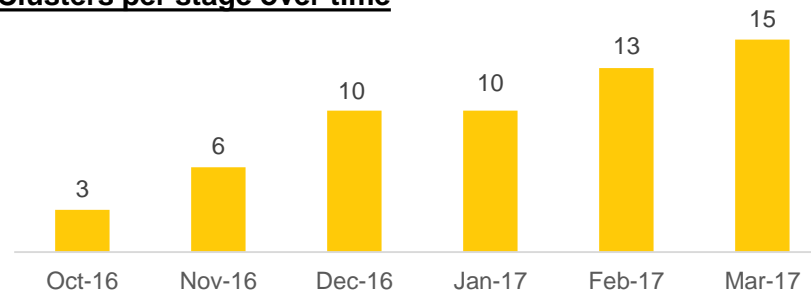


Centennial Q1 2017 average: 93% in zone

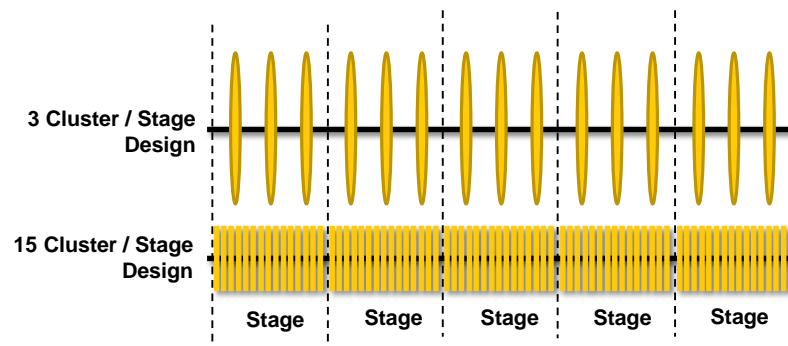
Cluster spacing evolution and design overview

- Tighter cluster spacing increases near-wellbore stimulation and produces shorter frac wings, resulting in increased well performance and potential for tighter well spacing
- Centennial has moved from 3 clusters per stage up to 15 clusters per stage over the last 6 months
- Increasing clusters per stage, but decreasing total stages results in meaningful completion cost savings

Clusters per stage over time









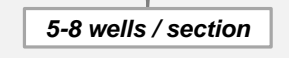




Cluster design evolution



High-quality inventory across 7+ proven zones in the Northern and Southern Delaware

Assumed spacing summary

Formations	 Standalone	GMT Exploration
Avalon		
1 st Bone Spring Sand	Actively evaluating	<i>Prospective</i>
2 nd Bone Spring Shale		<i>Prospective</i>
2 nd Bone Spring Sand	Actively evaluating	
3 rd Bone Spring Carb	Actively evaluating	<i>Prospective</i>
3 rd Bone Spring Sand		
Upper Wolfcamp A		
Lower Wolfcamp A		
Wolfcamp B		<i>Prospective</i>
Wolfcamp C		

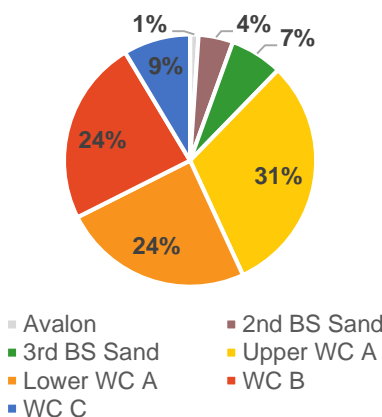
Additional upside from downspacing and additional prospective formations across pro forma position

Inventory summary (gross horizontal drilling locations)

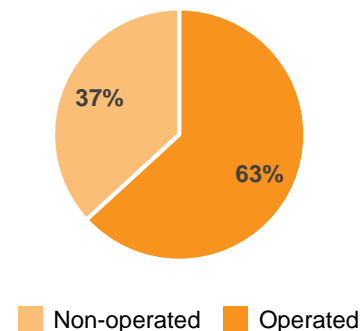
	Operated		Non-operated		Total
	GMT	PF CDEV	GMT	PF CDEV	
Avalon	15	15	–	–	15
2nd Bone Spring Sand	62	62	54	54	116
3rd Bone Spring Sand	55	94	37	62	156
Upper Wolfcamp A	32	430	–	201	631
Lower Wolfcamp A	–	341	–	163	504
Wolfcamp B	–	332	–	177	509
Wolfcamp C	–	120	–	155	275
Total	164	1,394	91	812	2,206

Pro forma inventory allocation

Operated inventory by formation



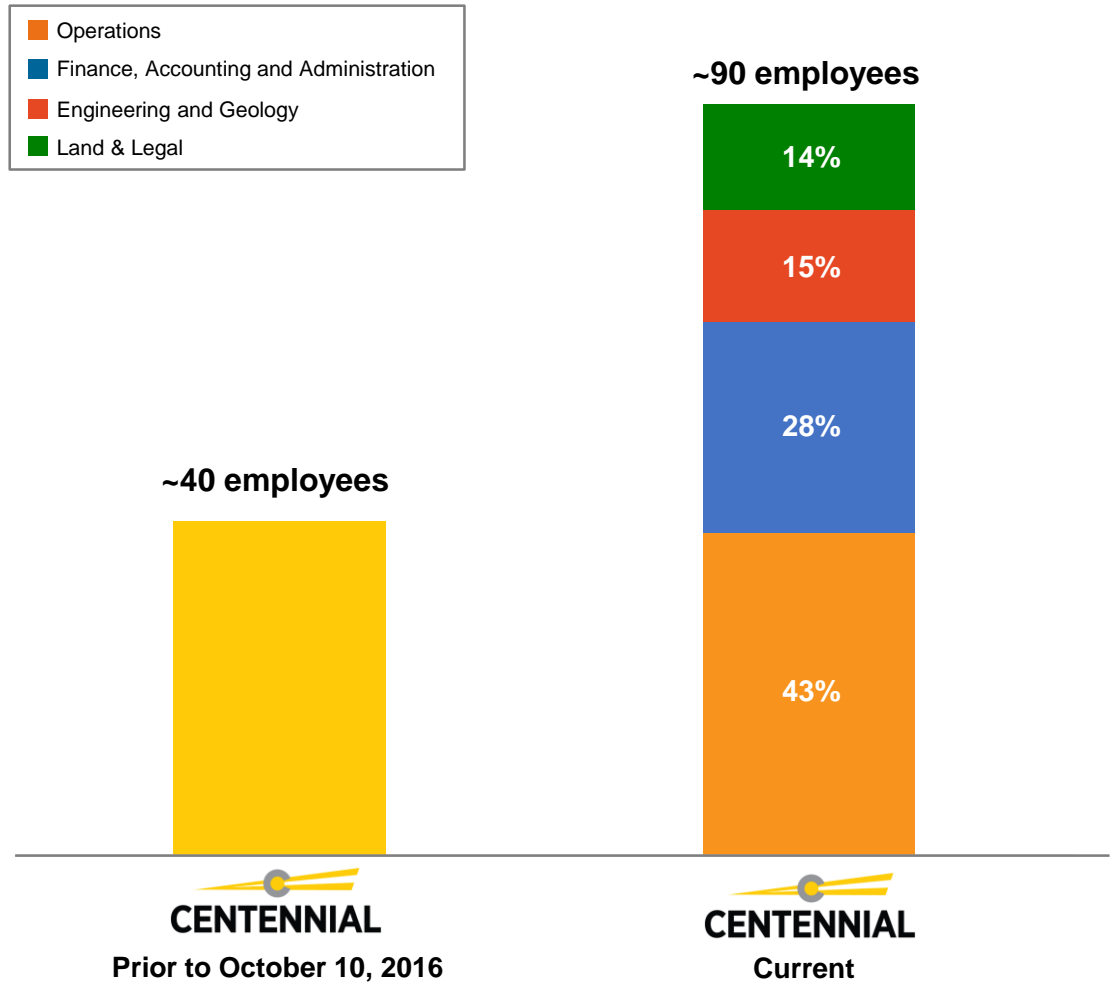
Operated vs. Non-operated



Team in place to execute 2020 game plan

- Centennial has more than doubled in terms of total employee count since closing its initial business combination in October 2016
- High-quality senior staff in place to execute game plan, built to scale with the forecasted production growth through 2020
- Majority of new hires come with significant Permian Basin operating experience
- Currently building new Pecos field office to support field personnel

Evolution of CDEV employee base



Summary Q1 2017 Financial Results

Financial summary (\$mm)¹

(\$ in millions, unless specified)	Q1 2017		Successor period	
	3 months ended Mar. 31, 2017		Oct. 11 - Dec. 31, 2016	
Average Daily Production (Boe/d)	18,469		9,811	
Average Daily Oil Production (Bo/d)	10,489		6,378	
% Oil	57%		65%	
Average Realized Prices (before the effect of derivative settlements)				
Oil (\$/Bbl)	\$ 49.45		\$ 46.49	
Gas (\$/Mcf)	2.91		3.10	
NGL (\$/Bbl)	25.10		20.36	
Total Revenue (\$/Boe)	\$ 36.76		\$ 36.92	
Oil Differential (\$/Bbl)	(\$2.37)		(\$2.72)	
Gas Differential (% of NYMEX HHHub)	95%		97%	
NGL Differential (% of NYMEX WTI)	48%		41%	
Total Revenue	\$ 61.1		\$ 29.7	
Adjusted EBITDAX ²	\$ 36.4		\$ 15.1	
Cash Expenses				
	(\$/Boe)	(\$ mm)	(\$/Boe)	(\$ mm)
Lease Operating Expenses	\$ 4.38	\$ 7.3	\$ 4.40	\$ 3.5
Transportation, Gathering & Processing	3.16	5.2	2.72	2.2
Severance & Ad Valorem Taxes	1.92	3.2	2.03	1.6
Cash G&A	5.69	9.5	15.58	12.4
Total Cash Expenses	\$ 15.14	\$ 25.2	\$ 24.73	\$ 19.7
Capital Expenditures Incurred				
Drilling & Completion	\$ 89.4		\$ 40.6	
Land and Other	9.2		13.2	
Facilities, Seismic and Other	2.2		3.9	
Total Capital Expenditures	\$ 100.8		\$ 57.6	
Total Debt Balance	\$ -		\$ -	
Cash and Cash Equivalents	\$ 54.9		\$ 134.1	

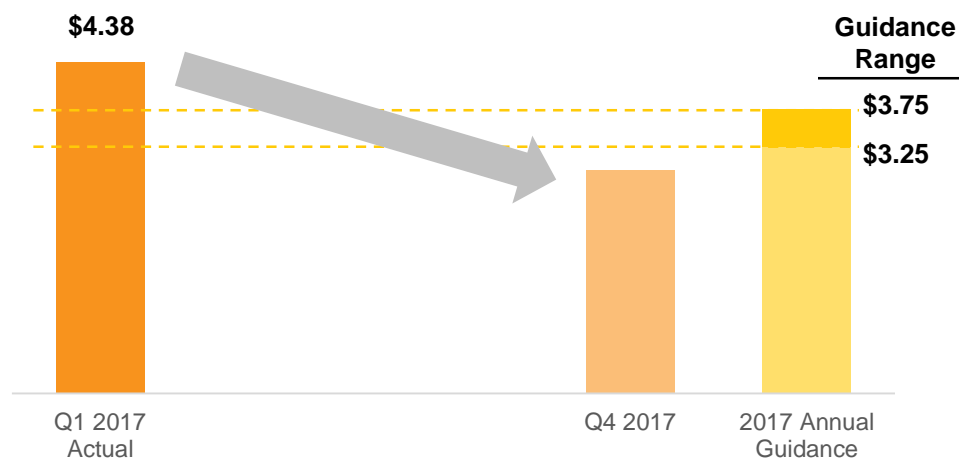
(1) Amounts may not sum due to rounding

(2) Adjusted EBITDAX is not presented in accordance with generally accepted accounting principles in the United States. Please see slide 16 for a reconciliation to net income, our most directly comparable financial measure calculated and presented in accordance with GAAP.

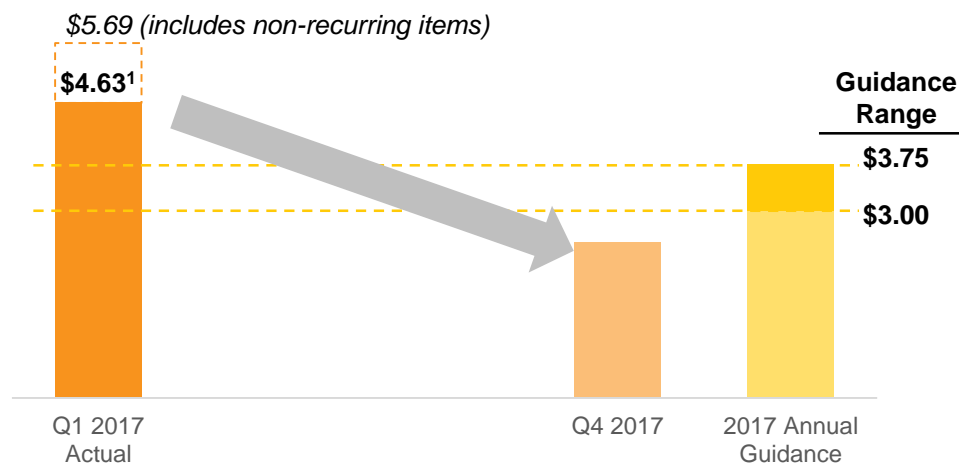
Production growth drives unit costs lower

- Lease operating expenses and cash G&A for 2017 remain in-line with public guidance on a per unit basis due to projected declines throughout the year
- Declining unit costs driven by increased development activity and significant production growth
- Q1 2017 G&A includes multiple non-recurring items related to the Silverback acquisition and other employee related matters
 - ~\$830,000 related to one-time payment under the Silverback transition services agreement
 - ~\$930,000 related to the initial adoption of Centennial's new paid time off policy
- Centennial technical team highly focused on operational efficiency and cost synergy realization in the field

Lease operating expenses (\$ / Boe)



Cash G&A (\$ / Boe)



(1) Adjusted per-unit cash G&A equal to total cash G&A number less ~\$1.8mm in one-time / non-recurring charges

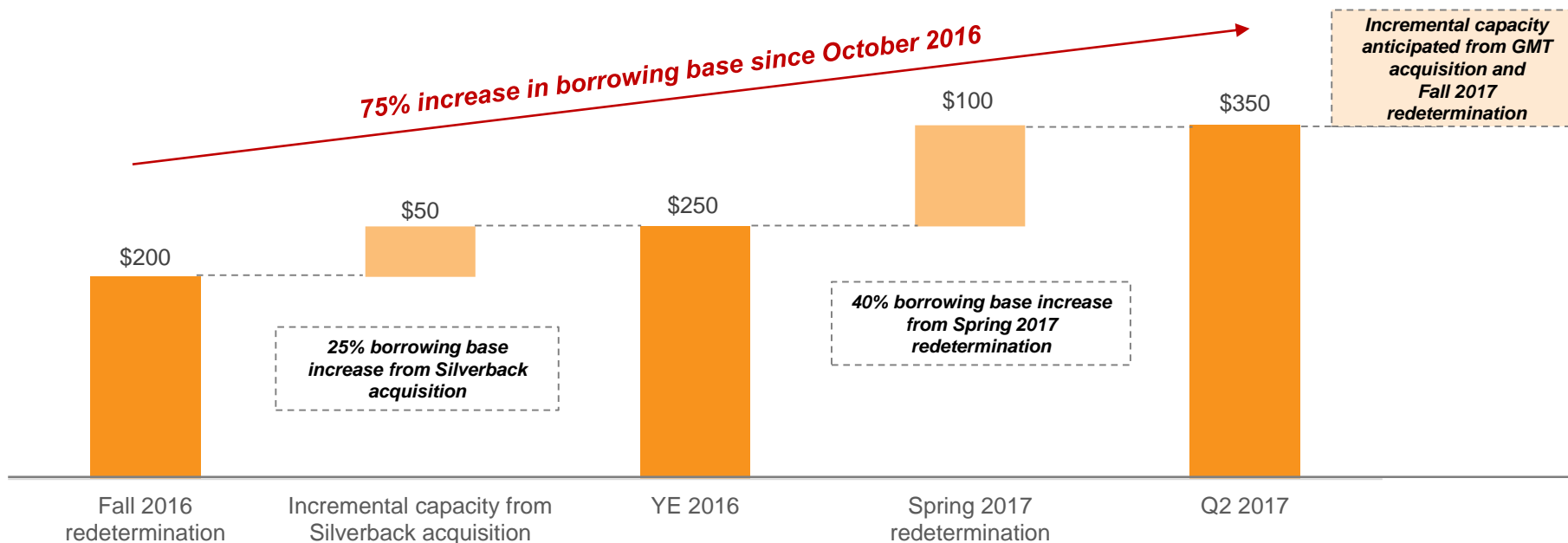
Strong liquidity position

- Significant borrowing base increases driven by organic production growth and Silverback acquisition
 - \$50mm incremental borrowing base capacity following closing of Silverback acquisition
 - Completed Spring 2017 redetermination process: \$100mm increase, which raises the total borrowing base to \$350mm
 - No borrowings outstanding as of March 31, 2017
- Continued production ramp on Centennial acreage and current GMT assets / production expected to drive further borrowing base growth by year-end 2017

Liquidity summary (\$ mm)¹

	As of 3/31/2017	Pro forma 3/31/2017 ²
Borrowing base	\$250.0	\$350
Less: amount drawn	-	-
Borrowing base availability	\$250.0	\$350
Plus: Cash and cash equivalents	54.9	54.9
Less: Letters of credit	(0.4)	(0.4)
Total liquidity	\$304.4	\$404.4

Borrowing base growth (\$ mm)



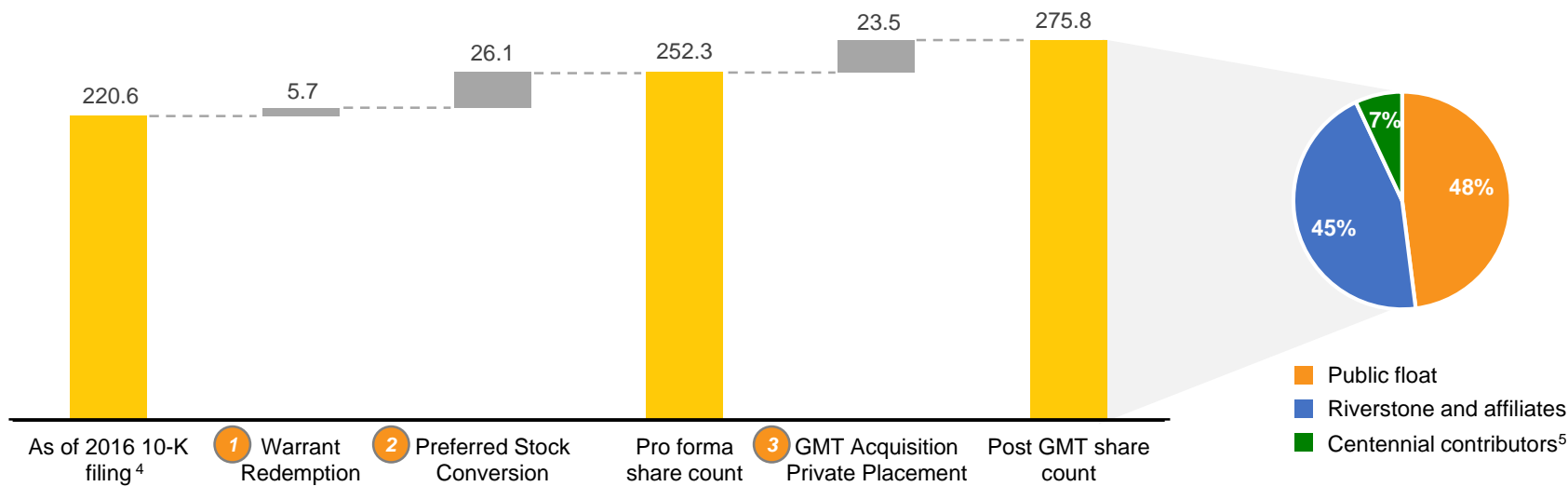
(1) Amounts may not sum due to rounding

(2) Pro forma for \$100mm borrowing base increase; does not reflect any adjustments related to GMT acquisition

Centennial share count overview

- 1 Warrant Redemption**
 - As announced in early April 2017, Centennial has successfully completed the cashless exercise and redemption of the 16.7mm outstanding public warrants issued as a result of the initial Silver Run SPAC structure
 - The warrants became exercisable March 1, 2017 (12 months from the closing of the Silver Run IPO) and at the commencement of the redemption period 99.4% of the public warrants were exercised, resulting in an incremental 6.2mm shares outstanding (5.7mm incremental following 10-K filing¹)
- 2 Preferred Stock Conversion²**
 - Special meeting of shareholders to be held May 25, 2017 in order to vote on the conversion of the 104,400 outstanding shares of preferred stock
 - Conversion (250:1 conversion ratio) of the preferred stock will result in an incremental 26,100,000 shares of common stock outstanding
- 3 GMT Acquisition Private Placement**
 - In early May Centennial entered into an agreement to issue and sell 23.5 million shares of common stock to third-party investors in a private placement for gross proceeds of ~\$341 million which will be used to fund the GMT acquisition
 - Expected closing to occur on or about June 8, 2017, concurrent with the acquisition closing

CDEV total shares outstanding reconciliation³



(1) Approximately 0.5mm shares issued as part of warrant redemption process at time of 10-K filing
 (2) Illustrative conversion of Riverstone Series B preferred into Class A Common Stock at a 250-1 ratio, assuming successful shareholder vote
 (3) Excludes 8mm Private Placement warrants
 (4) Total shares outstanding as of March 7, 2017, excluding restricted stock
 (5) Represents CRD, NGP Follow-On and Celero, collectively

2017 Guidance Summary

Guidance summary

- CDEV is currently running 5 rigs, 1 additional rig to be added in Q2 2017
- 1 additional rig will be added on the acquired GMT acreage in Q3 2017
- Production guidance updated to reflect incremental oil-weighted production from GMT acquisition
 - Mid-point of average daily production guidance increased by 5%, representing over 200% growth from 2016 production
 - Mid-point of average daily oil production guidance increased by 6%, representing ~175% growth from 2016 production
- Operated drilling program increased from 60-70 wells spud and completed, to 65-75 wells spud and completed
- Drilling & completion capital increased by ~\$38mm at the mid-point driven by GMT development

Updated FY 2017 guidance

	Initial 2017 FY Guidance	Post - GMT 2017 FY Guidance
Net Average Daily Production (Boe/d)	22,500 - 26,500	23,600 - 27,900
Oil Net Average Daily Production (Bo/d)	14,000 - 15,700	14,850 - 16,650
Production Costs (per Boe)		
Lease Operating	(\$3.25) - (\$3.75)	(\$3.25) - (\$3.75)
Transportation, Processing, Gathering and Other	(\$3.10) - (\$3.60)	(\$3.10) - (\$3.60)
Depreciation, Depletion, Amortization and Accretion of Asset Retirement Obligations	(\$18.00) - (\$20.00)	(\$18.00) - (\$20.00)
Cash General and Administrative	(\$3.00) - (\$3.75)	(\$3.00) - (\$3.75)
Severance and Ad Valorem Taxes (% of revenue)	6% - 8%	6% - 8%
Capital Expenditure Program (\$MM)	\$500 - \$585	\$535 - \$625
D&C Capital Expenditure	\$440 - \$500	\$475 - \$540
Land	\$50 - \$70	\$50 - \$70
Facilities, Seismic and Other	\$10 - \$15	\$10 - \$15
Operated Drilling Program		
Wells Spud (Gross)	60 - 70	65 - 75
Wells Completed (Gross)	60 - 70	65 - 75

Reconciliation of Adjusted EBITDAX to Net Income

Adjusted EBITDAX reconciliation (\$ thousands)

	Successor For the three months ended March 31, 2017	Successor October 11, 2016 through December 31, 2016
Adjusted EBITDAX reconciliation to net income:		
Net income (loss) attributable to Centennial Resource Development, Inc.	\$9,823	(\$8,081)
Net income attributable to noncontrolling interest	884	(904)
Interest expense	410	378
Income tax expense (benefit)	-	-
Depreciation, depletion and amortization	26,160	14,877
Abandonment expense (benefit) and impairment of unproved properties	(29)	-
Exploration	-	844
Loss (gain) on derivative instruments	(3,759)	1,548
Net cash receipts (payments) on settled derivatives	(397)	1,054
Equity based compensation expense	2,610	1,333
Transaction costs	887	4,097
(Gain) loss on sale of oil and natural gas properties	(166)	(24)
Adjusted EBITDAX	36,423	15,122