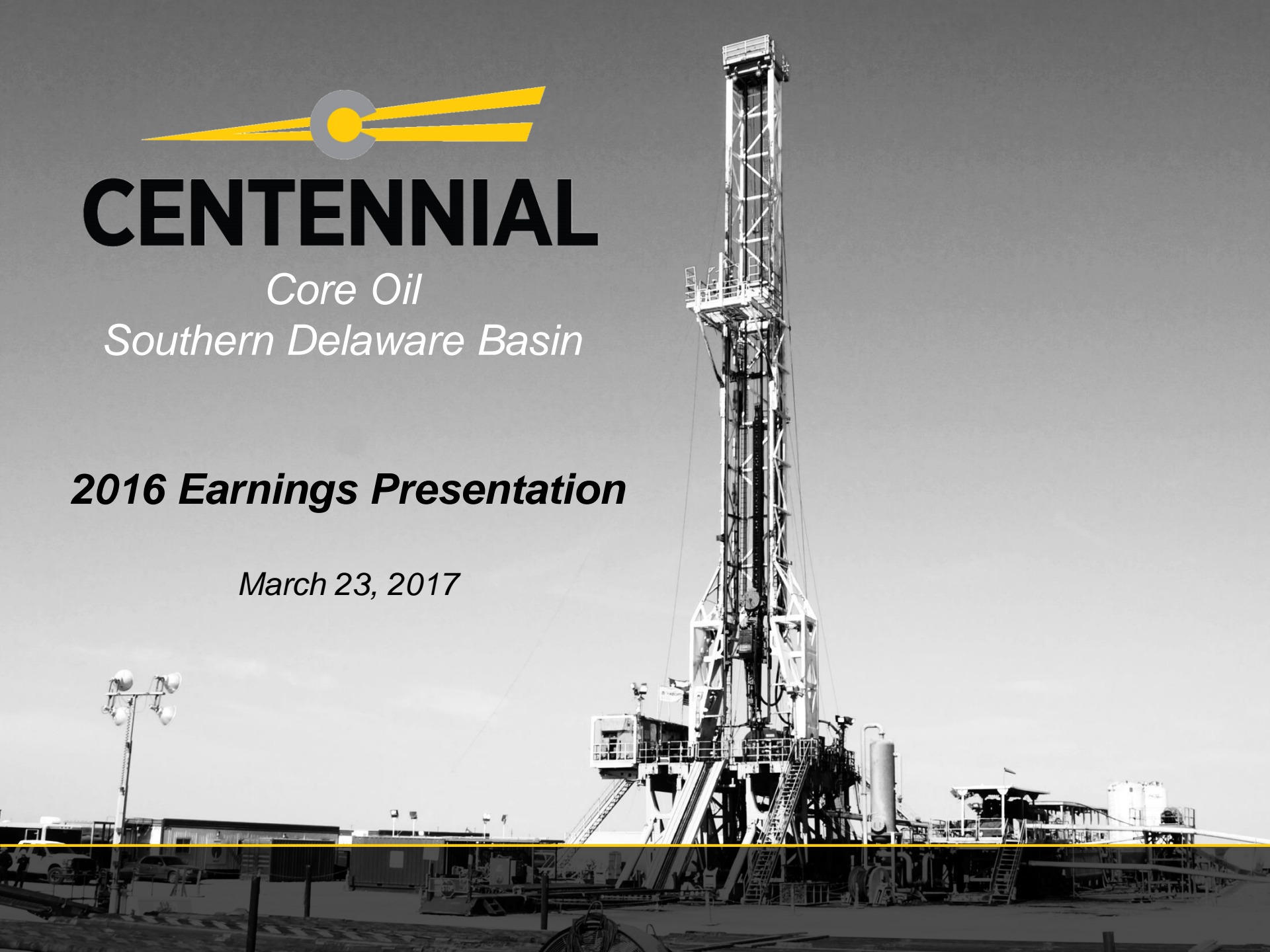


CENTENNIAL

*Core Oil
Southern Delaware Basin*

2016 Earnings Presentation

March 23, 2017



Important Information

Centennial Acquisition

On October 11, 2016, Centennial Resource Development, Inc. (“Centennial”, or “CDEV”) completed the acquisition of an approximate 89% membership interest in Centennial Resource Production, LLC (“CRP”). Centennial currently owns an approximate 92% interest in CRP, which represents Centennial’s only significant asset. This presentation provides, among other things, financial and operating results of CRP for the quarter ended September 30, 2016 prior to our ownership of CRP. References to “we,” “us” and “our” in this presentation refer to Centennial and, as the context requires, CRP.

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

Q4 2016 Corporate highlights

- In October 2016, Centennial consummated the acquisition of approximately 89% of the outstanding membership interests in CRP
- In December 2016, Centennial closed the acquisition of leasehold interests and related upstream assets in Reeves County from Silverback Exploration, LLC and Silverback Operating, LLC (collectively, "Silverback") for approximately \$855 million in cash
 - Closed a private placement of equity securities with certain accredited investors, including funds affiliated with Riverstone Investment Group LLC, for total gross proceeds of \$910 million; as a result of the private placement, Centennial's membership interest in CRP increased to approximately 92%
 - Increased the borrowing base under CRP's revolving credit facility from \$200 million to \$250 million

Summary operational statistics

Operational overview

Acreage

Total net acreage ~76,000

% Operated 85%

Drilling inventory¹

Gross horizontal drilling locations ~1,950

Gross operated horizontal drilling locations ~1,230

% extended lateral (operated locations) 55%

Production

2016 production (Boe/d) 8,429

2016 oil production (Bbls/d) 5,757

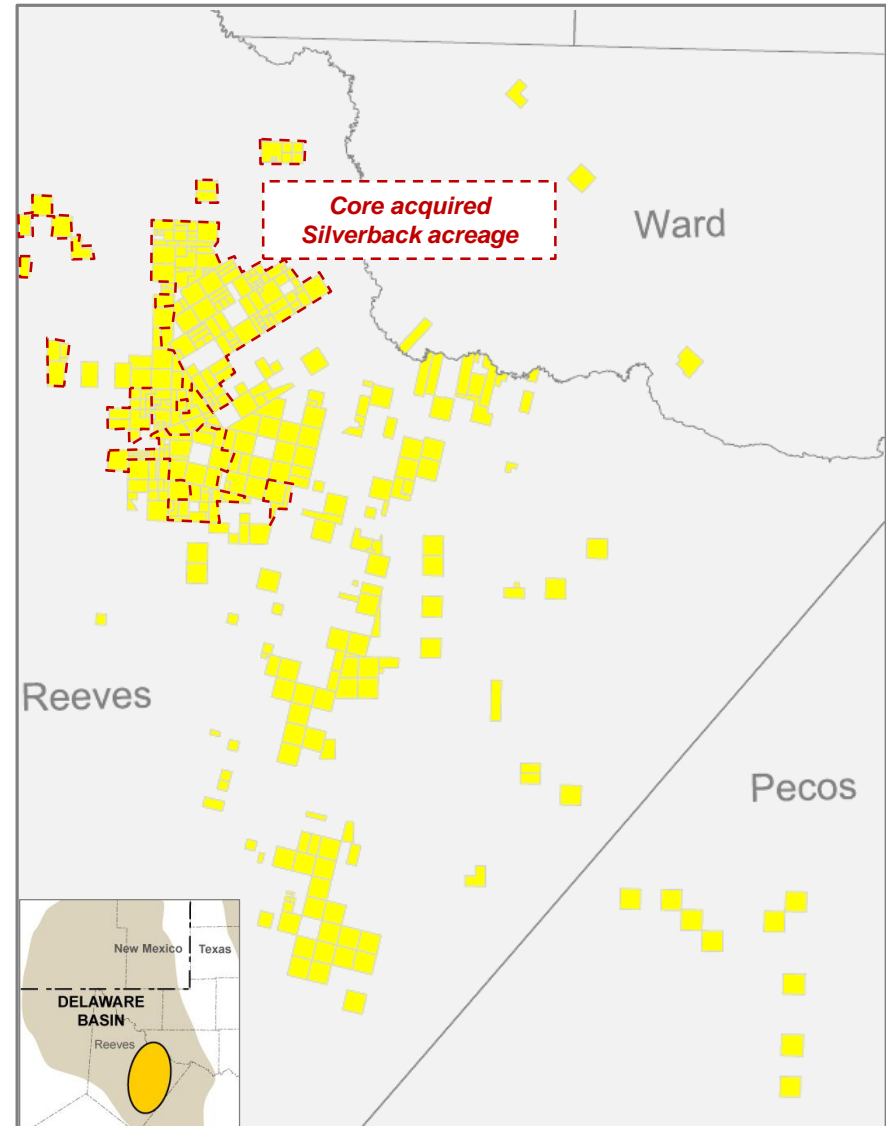
Oct. 11, 2016 - Dec. 31, 2016 production (Boe/d) 9,811

Oct. 11, 2016 - Dec. 31, 2016 oil production (Bbls/d) 6,378

Proved reserves

Total proved reserves (MBoe) 82,959

% oil 56%



(1) Assumes credit for the Upper and Lower Wolfcamp A, Wolfcamp B, Wolfcamp C and 3rd Bone Spring Sand; assumes no locations in Pecos County

Centennial 2020 Game Plan

Delivering on investor returns through operational outperformance

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

2016

- ✓ ***Selectively pursue transformative acquisition in Permian***
- ✓ ***Maintain one of the lowest net debt positions of all domestic E&P companies***
- ✓ ***Maintain clear, easy to understand financials***

2017

- Grow net oil production from 5,757⁽¹⁾ to 50,000 Bbls/d 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
- Target up to \$50-70 million per year spend for acreage acquisitions
- Achieve lowest G&A unit costs among peers
- Achieve lowest LOE unit costs among peers
- Achieve 50,000 Bbls/d average annual production






2018

2020

(1) Average daily oil production for the year ended December 31, 2016

Transformative acquisition drives shift to execution

Centennial primed for execution following the successful integration of Silverback:

 Scale	<ul style="list-style-type: none">• ~76,000 contiguous net acres, primarily located in the core of Reeves County• Currently running 5 rigs, adding a 6th rig in late Q2 2017• Employee base has nearly doubled to over 70 employees
 Inventory depth	<ul style="list-style-type: none">• Over 1,900 gross horizontal drilling locations (over 1,200 operated locations, of which 55% have lateral lengths of 7,500' - 9,500') representing 14+ years of inventory• Locations across the Wolfcamp A, B, C and 3rd Bone Spring Sand with additional upside potential from the Bone Spring Shale, Avalon and downspacing
 Technical and operational focus	<ul style="list-style-type: none">• Technical team in place and actively evaluating upside potential across position• Continuous completion enhancements delivering solid well results• CDEV has remained in the targeted zone 97% of the time for the last 6 locations drilled
 Financial flexibility	<ul style="list-style-type: none">• Currently no debt outstanding with over \$130mm in cash at 12/31/16• Undrawn revolving credit facility with \$250mm borrowing base
 Leadership	<ul style="list-style-type: none">• Mark Papa, Chairman and CEO, is a proven leader with over 45 years of experience• Complete senior leadership team in place across disciplines, with additional staffing essentially complete

Transition from resource capture and consolidation to execution of game plan

Silverback acquisition supported by strong well results, delineated across acreage position

Most recent results with 30+ days production

Silverback well results

	Well name	First production date	Formation	IP 30 (Boe/d)	Oil IP 30 (Bo/d)	Lateral length (ft)
1	Iceman 1H	Jan-17	Lower WC A	1,727	882	6,726
2	Parker 1H	Dec-16	Upper WC A	1,438	1,074	5,274
3	Pop 4-59 1H	Nov-16	Upper WC A	2,463	1,206	6,726
4	Admiral 4-48 47 1H	Sep-16	WC B	1,393	904	8,663
5	Williams 4-53 2H	Apr-16	Upper WC A	1,441	613	4,379
6	Folk Rolwing 4-34 33 1H	Feb-16	Upper WC A	1,482	646	6,506

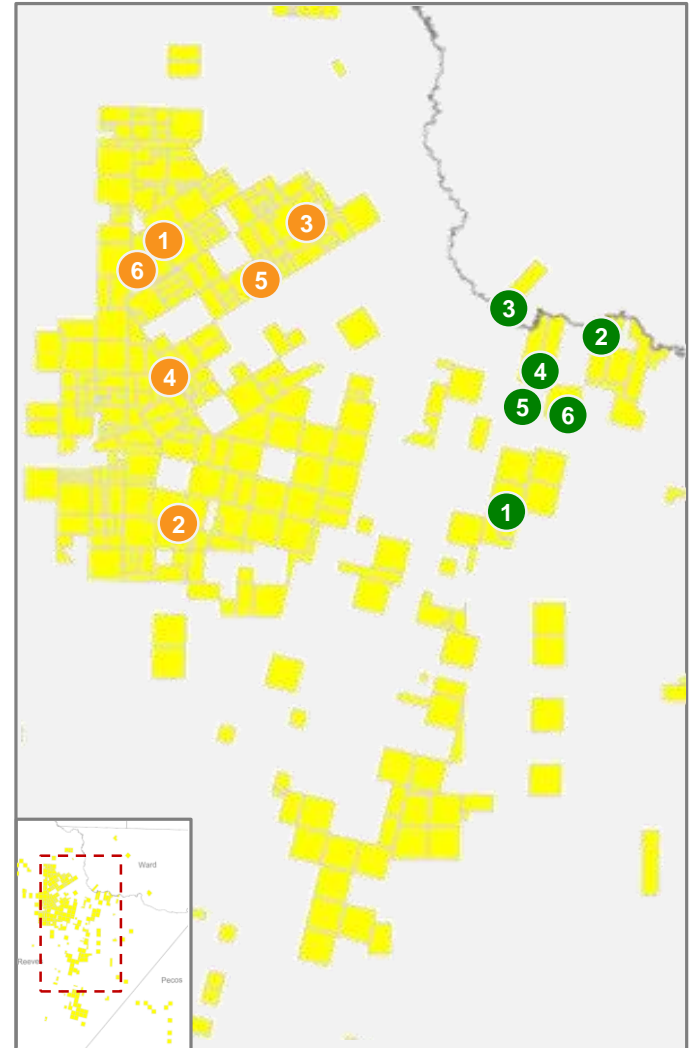
Centennial well results

	Well name	First production date	Formation	IP 30 (Boe/d)	Oil IP 30 (Bo/d)	Lateral length (ft)
1	CWI State 7H	Dec-16	Upper WC A	1,076	804	4,286
2	Sieber Trust 4H	Nov-16	Upper WC A	1,759	1,280	4,957
3	Stingray 3H	Nov-16	Upper WC A	1,530	920	4,749
4	Layden 3H	Sep-16	Lower WC A	1,149	819	5,457
5	Layden 2H	Sep-16	Upper WC A	1,150	819	5,225
6	Cabrito State 5H	Aug-16	Upper WC A	1,547	1,111	4,455

Silverback Successor Period Avg. IP 30 (per 1,000')¹: 319 Boe/d
Silverback Successor Period Avg. Oil IP 30 (per 1,000')¹: 192 Bbls/d

CDEV Successor Period Avg. IP 30 (per 1,000')²: 309 Boe/d
CDEV Successor Period Avg. Oil IP 30 (per 1,000')²: 213 Bbls/d

Well locator map

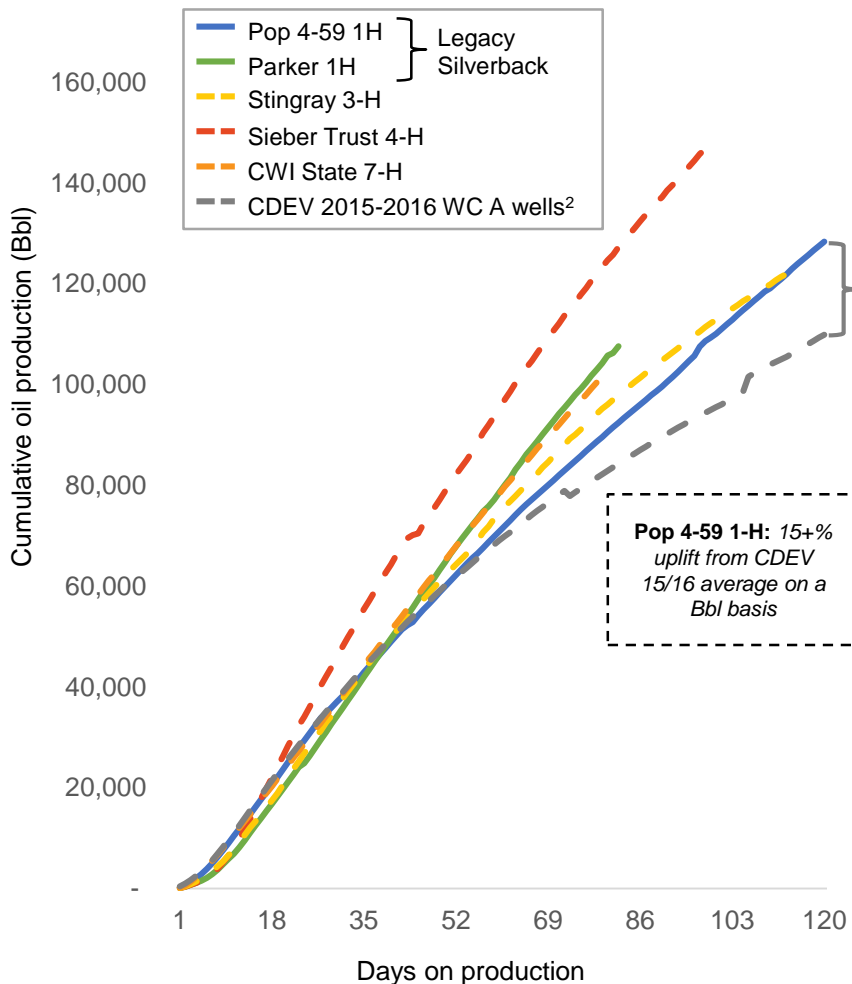


Note: IP 30 figures represent peak 30 day averages for oil and average two stream IP 30 over the same period for equivalent production
 (1) Includes the Pop 4-59 1H and Parker 1H wells; Successor period defined as October 11, 2016 – December 31, 2016
 (2) Includes the Stingray 3-H, Sieber Trust 4-H, and CWI State 7-H wells; Successor period defined as October 11, 2016 – December 31, 2016

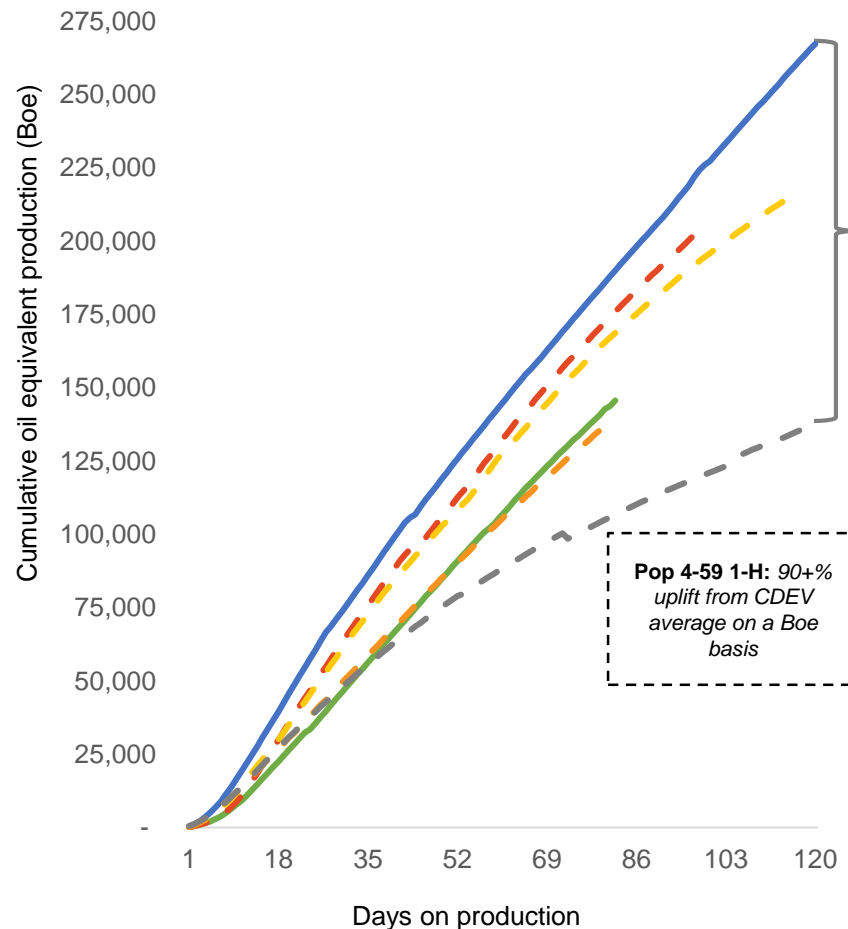
Recent Silverback well results have outperformed the average of 2015-2016 CDEV wells on an oil and oil equivalent basis

Cumulative production plots (normalized to 7,500' lateral length) for wells with first production in Q4 2016¹

Cumulative oil production (Bbls)



Cumulative oil equivalent production (Boe)



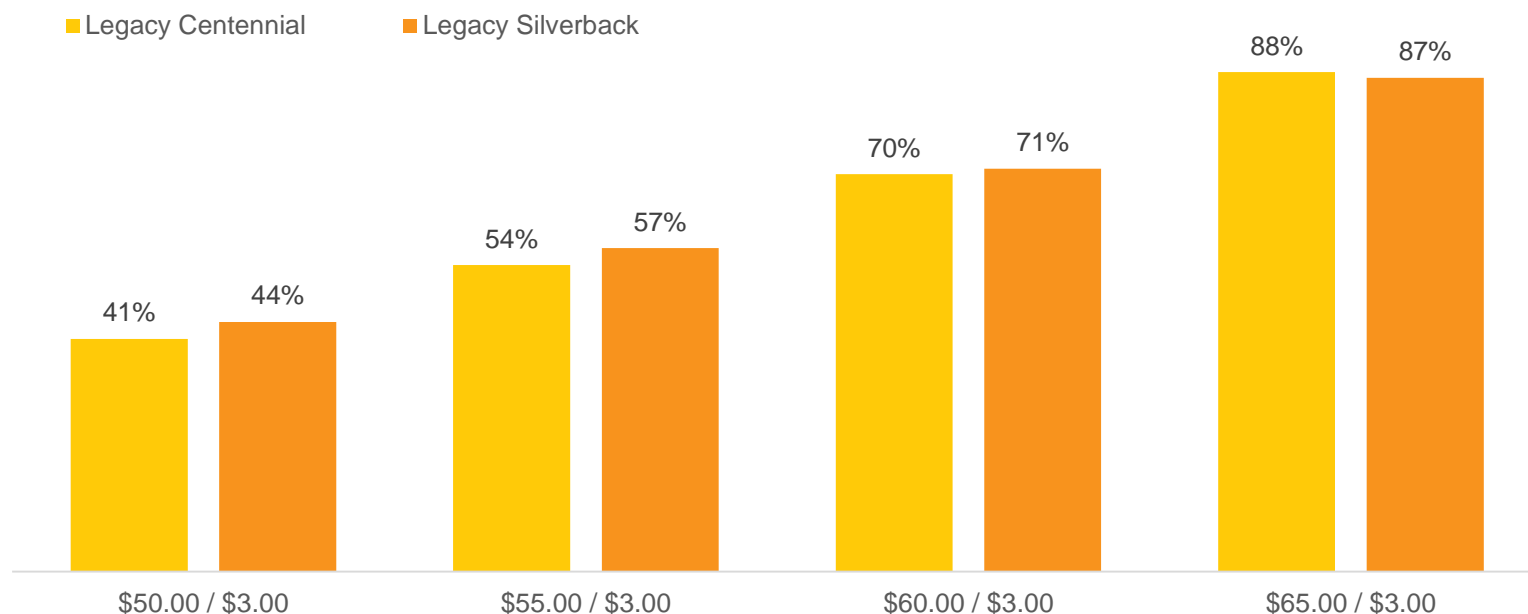
(1) Normalized to 7,500'; adjusted for downtime; oil equivalent volumes shown on a 2-stream basis
 (2) CDEV average includes all Wolfcamp A wells drilled in 2015 and 2016 – does not include any Silverback wells

Balanced portfolio: Resource and returns

Projected EURs for recent well results on Centennial and Legacy Silverback acreage¹

	Lateral length	Average EUR (Mboe)	Average EUR / 1,000 (Mboe)	Average Oil EUR (Mbo)	Average Oil EUR / 1,000 (Mbo)
Legacy Centennial	4,855	1,030	212	632	130
Legacy Silverback	6,379	1,803	283	751	118
Blended portfolio of recent wells	5,617	1,417	252	692	123

Projected average IRRs at various flat price decks – assuming actual / field estimated drilling and completion costs^{1,2}



(1) CDEV wells include Cabrito State 5H, Layden 2H, Layden 3H, Stingray 3H, Sieber Trust 4H, CWI State 7H; Silverback wells include Williams 4-53 2H, Folk Rolwing 4-34 33 1H, Admiral 4-48 47 1H, Pop 4-59 1H, Parker 1H, Iceman 1H; Expected EUR based on actual production to date and forecasted future production; Oil equivalent EUR shown on a 3-stream basis

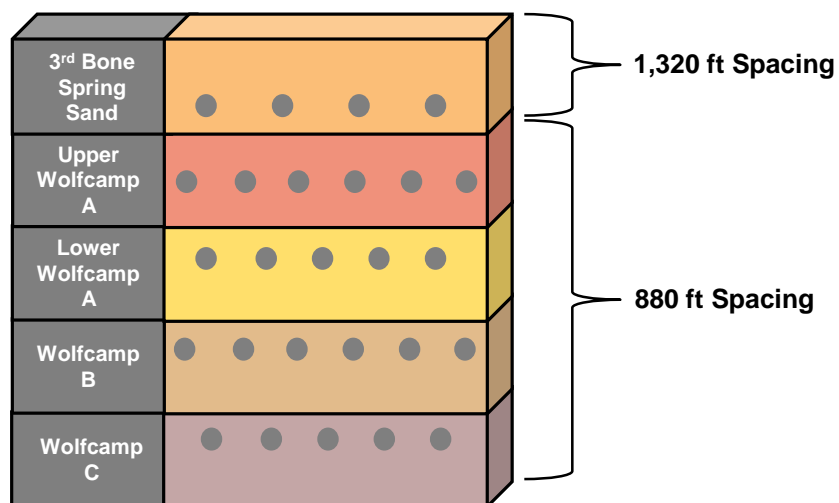
(2) IRRs shown before tax; assumes actual / field estimated D&C costs and projected 3-stream production streams based on CDEV analysis and actual production to date; assumes consistent operating assumptions across legacy Centennial and Silverback locations, respectively

Conservative inventory of operated, extended lateral locations with additional upside potential through downspacing

Gross horizontal location inventory summary

	Operated	Non-operated	Total
Upper Wolfcamp A	398	201	599
Lower Wolfcamp A	341	163	504
Wolfcamp B	332	177	509
Wolfcamp C	120	155	275
3rd Bone Spring Sand	39	25	64
Total	1,230	721	1,951

Illustrative spacing assumptions

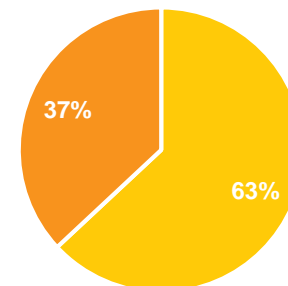


Conservative approach to inventory allocation provides upside potential from downspacing and additional zones (Bone Spring / Avalon)

Inventory allocation

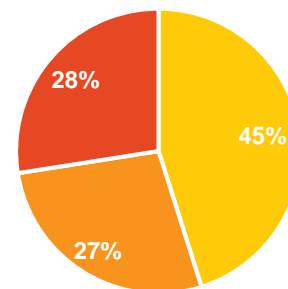
Operated vs. Non-Op

- Operated
- Non-operated



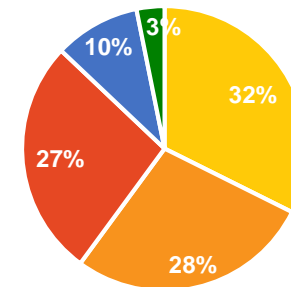
Lateral Length¹

- 4,500' lateral
- 7,500' lateral
- 9,500' lateral



Formation¹

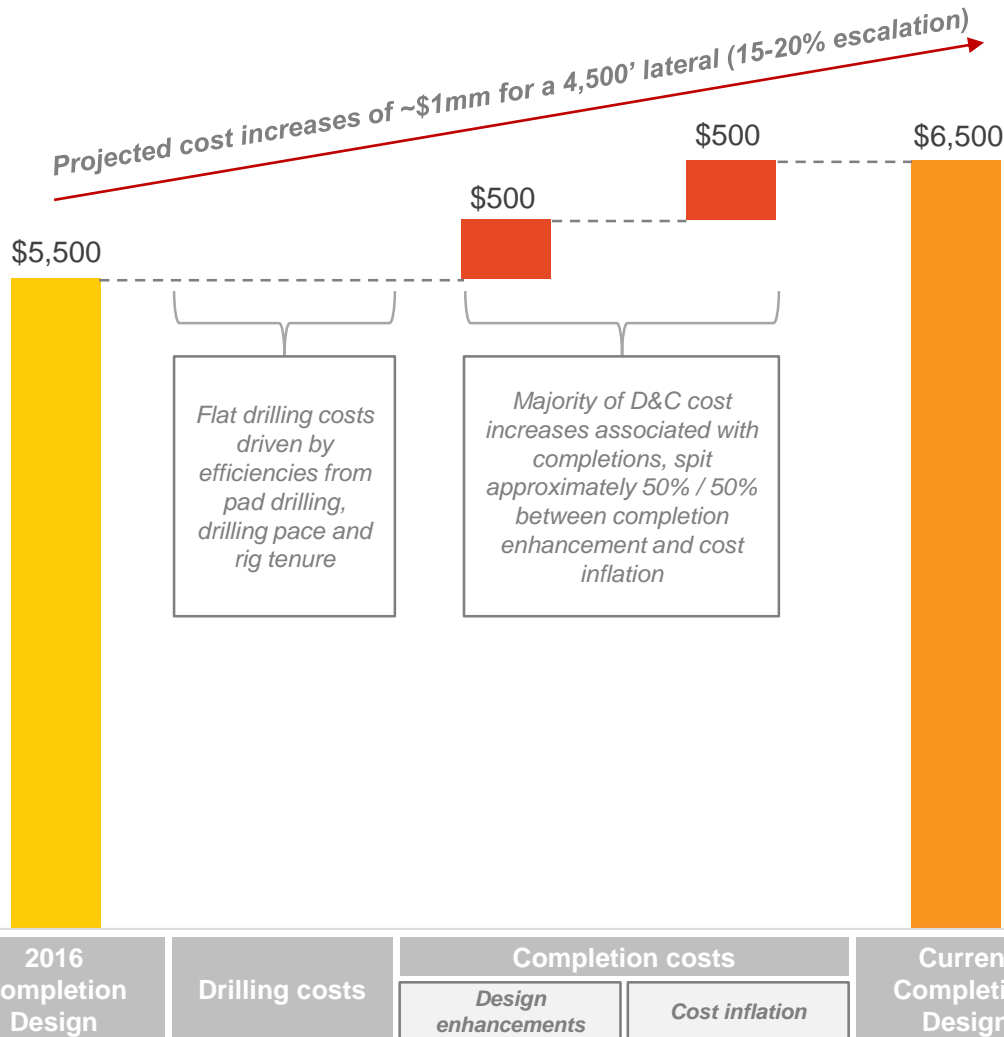
- Upper Wolfcamp A
- Lower Wolfcamp A
- Wolfcamp B
- Wolfcamp C
- 3rd Bone Spring Sand



(1) Represents operated gross horizontal drilling locations.

Proactively managing costs in light of ongoing completion optimization and expected cost inflation

Illustrative D&C cost evolution – 4,500' lateral (\$ 000s)



Completion optimization

2H 2016 Completion design

Design Parameter	
Stage spacing	160 ft.
Proppant	1,500 Lbs/ft
Proppant type	30/50 White (75%) 100 Mesh (25%)
Clusters per stage	3
Fluid Type	Slickwater (85%)
Pump rate	70 Bbls/min

Current Completion design

Design Parameter	
Stage spacing	225 ft.
Proppant	2,000 Lbs/ft
Proppant type	100 Mesh (80%) 40/70 CRC (20%)
Clusters per stage	Up to 15
Fluid Type	Slickwater (100%)
Pump rate	90 Bbls/min

Summary 2016 Financial Results

Financial summary (\$ 000s)

	Successor October 11, 2016 through December 31, 2016		Predecessor January 1, 2016 through October 10, 2016		Combined Year ended December 31, 2016	
Average daily production volume:						
Oil (Bbls/d)		6,378		5,577		5,757
Natural gas (Mcf/d)		13,573		9,366		10,309
NGLs (Bbls/d)		1,171		891		954
Total (Boe/d)¹		9,811		8,029		8,429
Production:						
Oil (MBbls)		523		1,584		2,107
Natural gas (MMcf)		1,113		2,660		3,773
NGLs (MBbls)		96		253		349
Total (MBoe)¹		805		2,280		3,085
Average NYMEX price						
Crude oil (per Bbl)		\$49.21		\$41.75		\$43.43
Natural gas (per MMBtu)		\$3.18		\$2.37		\$2.55
Average sales price ²						
Oil (per Bbl)		\$46.49		\$37.74		\$39.91
Natural gas (per Mcf)		\$3.10		\$2.27		\$2.52
NGL (per Bbl)		\$20.36		\$12.98		\$15.01
Total (per Boe)		\$36.92		\$30.31		\$32.04
<i>Oil differential (\$/Bbl)</i>		<i>(\$2.72)</i>		<i>(\$4.01)</i>		<i>(\$3.52)</i>
<i>Gas differential (% of NYMEX Henry Hub)</i>		<i>97%</i>		<i>96%</i>		<i>99%</i>
<i>NGL differential (% of NYMEX WTI)</i>		<i>41%</i>		<i>31%</i>		<i>35%</i>
Revenues (in thousands):						
Oil sales		\$24,313		\$59,787		\$84,100
Natural gas sales		3,449		6,045		9,494
NGL sales		1,955		3,284		5,239
Total Revenues		\$29,717		\$69,116		\$98,833
Drilling & completion capital expenditures incurred ³		\$44,416		\$53,306		\$97,722
Operating Expenses (in thousands):						
	(\$ / Boe)	(\$ 000s)		(\$ / Boe)	(\$ 000s)	(\$ / Boe)
Lease operating expenses	\$4.40	3,541		\$4.84	11,036	\$4.73
Severance and ad valorem taxes	\$2.03	1,636		\$1.62	3,696	\$1.73
Transportation, processing and gathering	\$2.72	2,187		\$2.01	4,583	\$2.19

For reference: 3 months ended September 30, 2016 production equal to 8,903 Boe/d and 6,109 Bbl/d

(1) Total may not sum or recalculate due to rounding

(2) Average prices shown in the table reflect prices before the effects of our realized commodity derivative transactions

(3) Includes facilities and capital workovers

Strong balance sheet provides significant financial flexibility

- As of December 31, 2016, Centennial had no debt outstanding and a total of \$134mm in cash and cash equivalents on the balance sheet¹
- Concurrent with the closing of the Silverback acquisition, Centennial's borrowing base under the credit facility was increased from \$200 million to \$250 million
 - Total liquidity at year-end 2016 totaled \$384mm after taking into account the \$250mm borrowing base, \$134mm of cash on hand and \$0.4mm in letters of credit
 - Spring borrowing base redetermination currently underway

Liquidity summary (\$ mm)		Cash and debt summary (\$ mm)	
Liquidity overview		Debt overview	
Borrowing base	\$250	Total debt	\$0
Less: amount drawn	-	Less: Cash and cash equivalents	(134)
Borrowing base availability	\$250	Total net debt	(\$134)
Plus: Cash and cash equivalents	134		
Less: Letters of credit	(0)		
Total liquidity	\$384		

CDEV management remains focused on maintaining one of the lowest leverage profiles of all domestic E&P companies

(1) Cash and cash equivalents balance includes funds earmarked for paying off the \$32.3 million payable to Silverback associated with properties that still required consents to assign

Review of Centennial equity capital structure

- 1 On March 1, 2017, Centennial delivered a notice of redemption for all its outstanding warrants originally sold as part of units in its initial public offering in February 2016 (the "Public Warrants")
 - Provided there is 100% participation from warrant holders, Centennial will issue an incremental 6.3mm shares of Class A Common Stock to warrant holders and will not receive any cash proceeds from the exercise
- 2 Riverstone was issued 104,400 shares of Series B preferred stock as part of the \$910mm private placement of equity that Centennial closed on December 29, 2016
 - Shares of Series B preferred stock are automatically convertible into shares of Class A Common Stock on a 250-to-1 basis (subject to certain adjustments) upon the approval of the Company's stockholders of such conversion at a special meeting

Review of cashless exercise of warrants

As of March 1, 2017

Fair market value ¹	\$18.44
Exercise price	\$11.50
Net settlement per Public Warrant held	\$6.94
Total Public Warrants outstanding	16,666,643
Total net settlement value of Public Warrants (\$ mm)	\$115.7
Shares of Class A Common Stock issued to Public Warrant holders	6,273,714

CDEV total shares outstanding reconciliation

Shareholder	Classification	As of March 7, 2017 (unadjusted)		1 As of March 7, 2017 (assuming warrant exercise) ²		2 As of March 7, 2017 (assuming preferred conversion) ³	
		Total (#)	%	Total (#)	%	Total (#)	%
Common stock							
Public / Institutional investors	Class A	105,023,492	47.5%	110,720,281	48.8%	110,720,281	43.8%
Riverstone and affiliates	Class A	96,858,590	43.8%	96,858,590	42.7%	122,958,590	48.6%
Centennial Contributors ⁴	Class C	19,155,921	8.7%	19,155,921	8.4%	19,155,921	7.6%
Total shares outstanding		221,038,003		226,734,792		252,834,792	
Preferred stock							
Riverstone and affiliates	Series B	104,400		104,400		-	
Total preferred stock outstanding		104,400		104,400		-	
Warrants outstanding							
Private placement warrants ⁵		8,000,000		8,000,000		8,000,000	
Public warrants		15,133,995		-		-	
Total warrants outstanding		23,133,995		8,000,000		8,000,000	

(1) Fair market value equal to the average last sale price of the Class A Common Stock for the 10-trading day period commencing on February 10, 2017 and ending on February 24, 2017

(2) Assumes 100% participation from existing CDEV public warrant holders by March 31, 2017. Does not give effect to the round down of fractional shares that would otherwise be issuable upon exercise of the Public Warrants

(3) Illustrative conversion of Riverstone Series B preferred into Class A Common Stock at a 250-1 ratio, assuming successful shareholder vote at future special meeting

(4) Represents CRD, NGP Follow-On and Celero, collectively

(5) Represents outstanding warrants, which were purchased by our Sponsor in a private placement simultaneously with the closing of our IPO

2017 Guidance Summary

- CDEV is currently running 5 rigs, 1 additional rig expected in late Q2 2017
- Production guidance points to Centennial's robust near-term growth profile
 - Midpoint of average daily production guidance represents annual production growth of over 190% during 2017
 - Midpoint of average daily oil production guidance represents over 155% growth from 2016 oil production levels
- Capital program assumes gross horizontal well costs of \$6.0 - \$7.0mm for a 4,500' lateral and \$7.0 - \$9.0mm for a 7,500' – 9,500' lateral
 - Estimated wells costs include expected cost increases related to cost escalation from service providers as well as enhancements in completion
 - Over 90% of estimated D&C costs will be associated with operated activity

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

The Centennial Strategy

Delivering shareholder returns:



Best-in-class production growth

High quality asset in one of the world's premier basins

Technical leadership in mid-cap space

Upside associated with Avalon and Bone Spring shales

Target lowest unit costs versus Permian peers

Maintain lowest net debt versus other E&Ps

Long-term focus on GAAP earnings