

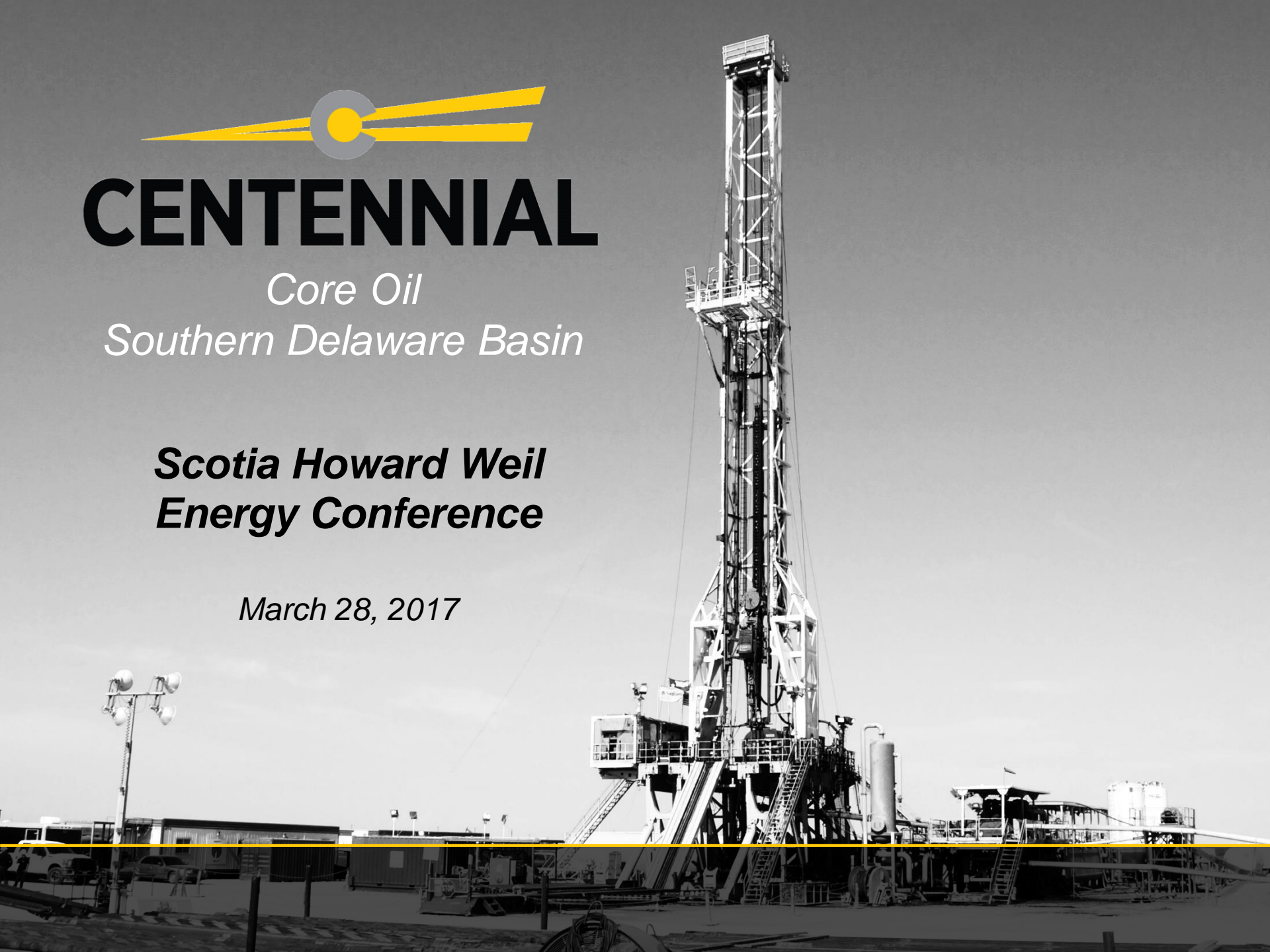


CENTENNIAL

*Core Oil
Southern Delaware Basin*

***Scotia Howard Weil
Energy Conference***

March 28, 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 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

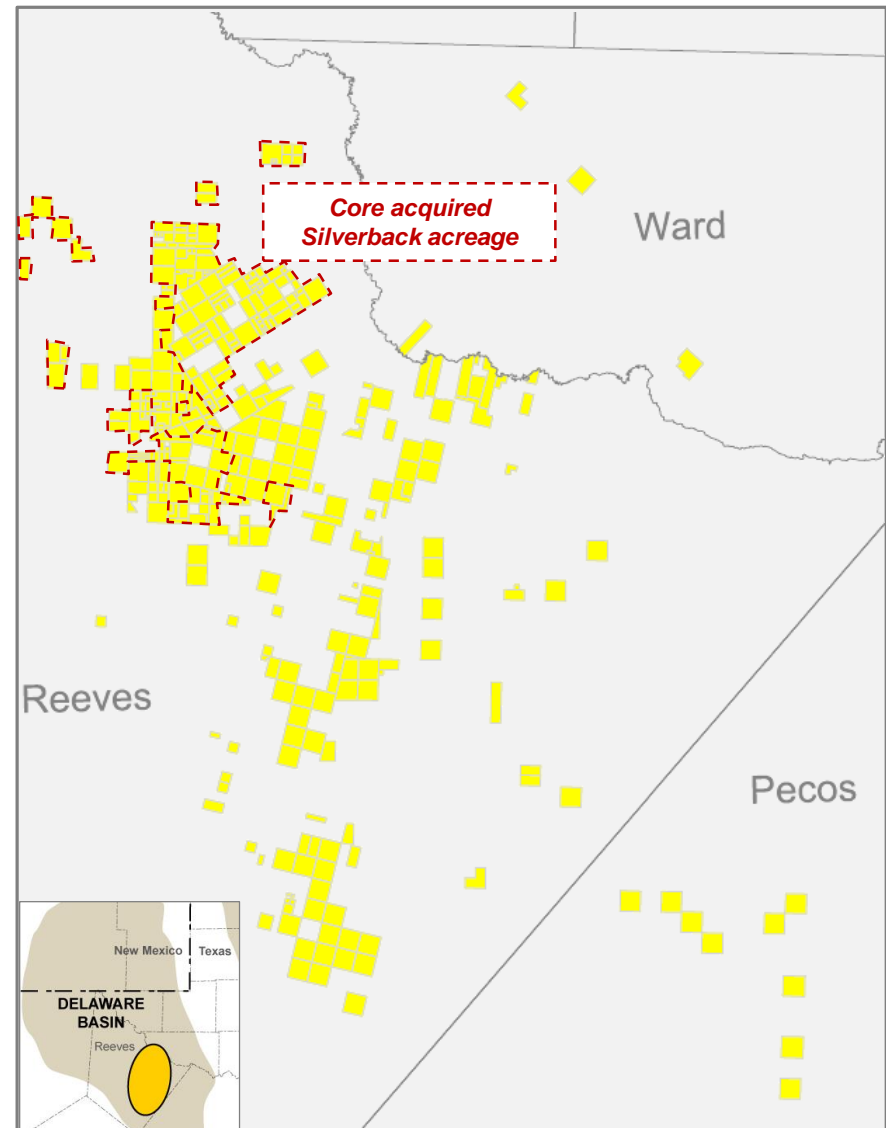
2020

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

Centennial Resource Development Overview

Core Delaware Basin Pure-Play

- Large, contiguous position located in oil-window of Southern Delaware Basin
 - ~76,000 net acres primarily in Reeves County
 - 85% operated
- Low-risk, oil-rich base with rapid growth potential
- ~1,950 gross horizontal drilling locations⁽¹⁾
 - ~1,230 operated locations
 - Assumes 880' spacing
 - Upside in Avalon and Bone Spring shales
- Best-in-class balance sheet provides significant financial flexibility
 - No debt outstanding and \$134MM in cash at year-end 2016



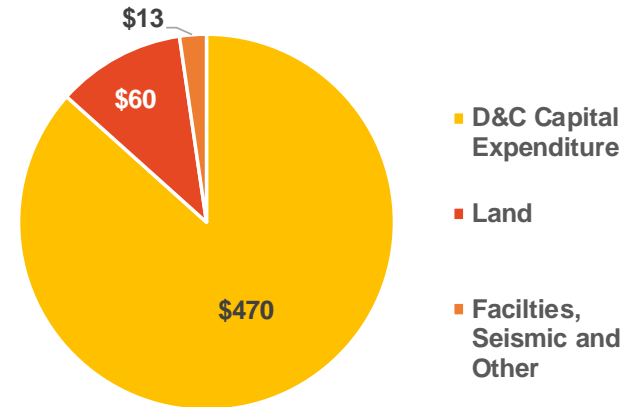
(1) Assumes credit for the Upper and Lower Wolfcamp A, Wolfcamp B, Wolfcamp C and 3rd Bone Spring Sand; assumes no locations in Pecos County.

2017 Guidance Summary

Delivering on Centennial's 2020 Game Plan

- Expect to deliver peer-leading production growth in 2017
 - >155% increase in **oil** production
 - >190% increase in **total** production
- Achieved net oil production of ~10,000 Bbls/d, as of mid-February
 - Compares to 6,378 Bbls/d during the 2016 Successor period⁽²⁾
- Currently operate a five rig program with plans to add a sixth rig in late Q2'17
 - Increase from average of one rig in Q3'16
- Expect to drill and complete 60 – 70 wells

2017 Total Capital Expenditure Budget (\$500MM – \$585MM)⁽¹⁾



2017 Cost Guidance

Production Costs (per Boe)	2017 FY Guidance	
	Low	High
Lease Operating	(\$3.25) -	(\$3.75)
Transportation, Processing, Gathering and Other	(\$3.10) -	(\$3.60)
DD&A	(\$18.00) -	(\$20.00)
Cash General and Administrative	(\$3.00) -	(\$3.75)
Severance and Ad Valorem Taxes (% of revenue)	6% -	8%

On-Track to Deliver 50,000 Bbls/d Average Annual Oil Production in 2020, Representing 4-Year CAGR of over 70%

(1) Details of 2017 Capital Budget represent the mid-point of 2017 guidance range.
 (2) Average Oil Production from October 11, 2016 through December 31, 2016.

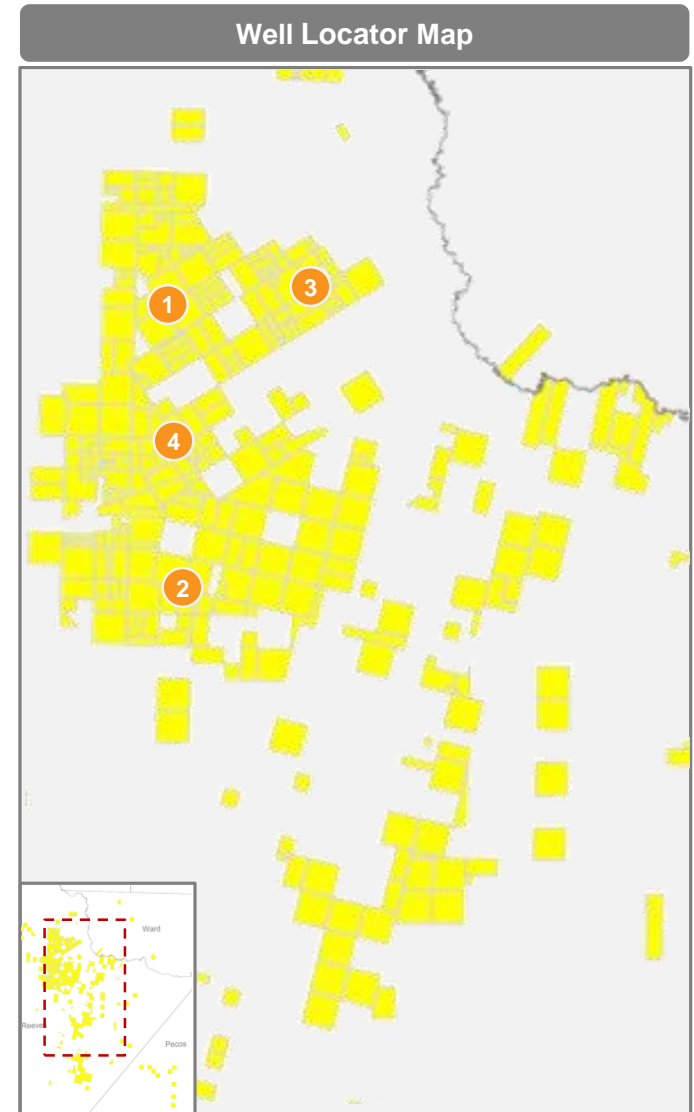
Silverback Acquisition

Supported by Strong Well Results, Delineated Across Acreage Position

- Added ~35,500 net acres through the Silverback acquisition
 - Closed on December 28, 2016
- Transforms Centennial into one of the largest Delaware Basin focused E&P companies
- Strong production results from recent wells, confirming acreage quality
- Recent well results have outperformed the average of 2015-2016 Centennial wells on an oil and oil equivalent basis

Recent Silverback Well Results

	Well Name	Formation	IP-30 (Boe/d)	Oil IP-30 (Bo/d)	IRRs ⁽¹⁾
1	Iceman 1H	Lower WC A	1,727	882	68%
2	Parker 1H	Upper WC A	1,438	1,074	59%
3	Pop 4-59 1H	Upper WC A	2,463	1,206	98%
4	Admiral 4-48 47 1H	WC B	1,393	904	42%

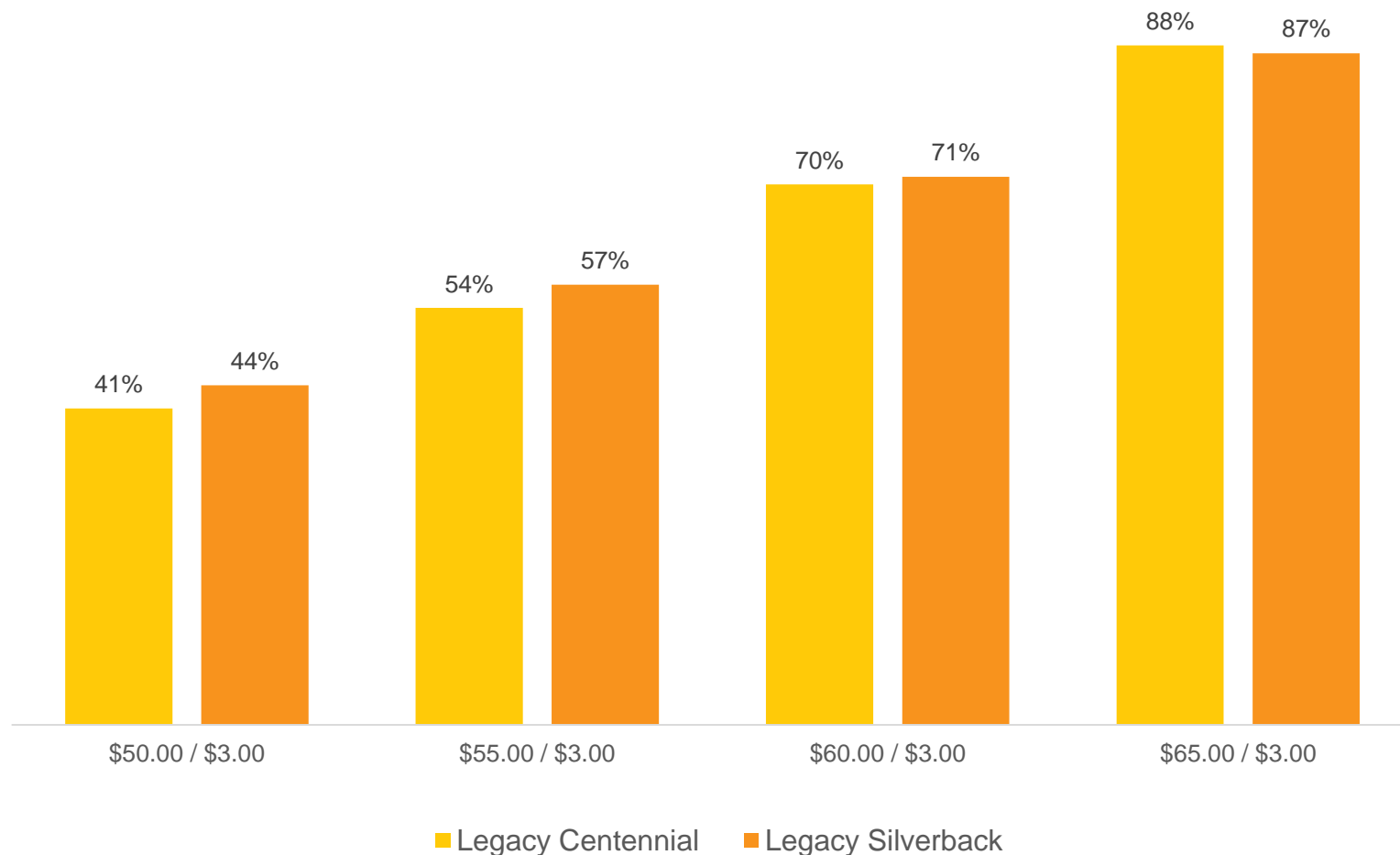


Note: IP-30 figures represent peak 30-day averages for oil and average two stream IP-30 over the same period for equivalent production.

(1) IRRs assume flat pricing of \$55.00 per barrel for oil and \$3.00 per MMBtu for gas; 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.

Consistent Well Results Across Centennial's Acreage

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.

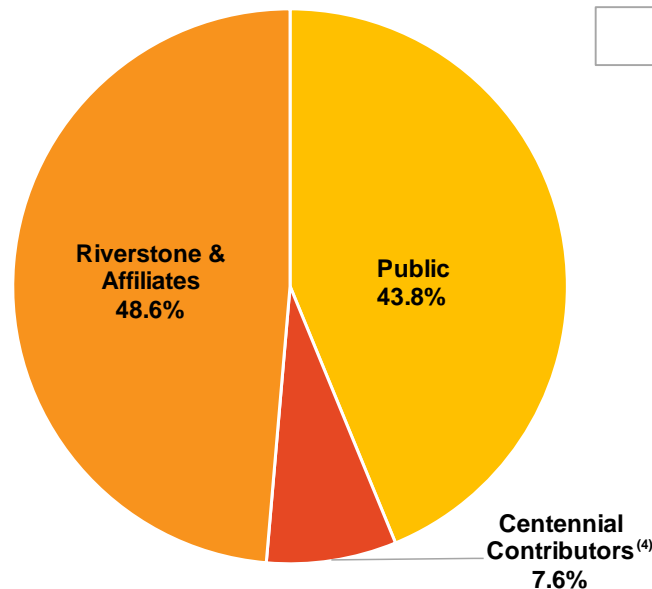
(2) IRRs shown before tax; assumes actual / field estimated D&C costs and projected 3-stream production streams based on CDEV analysis and actual production to date; assumes consistent operating assumptions across legacy Centennial and Silverback locations, respectively.

Redemption of Public Warrants

Simplifying Centennial's Capital Structure

- In February 2016, Silver Run issued 16.7MM Public Warrants in connection with its IPO
- On March 1, 2017, Centennial delivered a notice of redemption to holders of the Public Warrants
 - Expect to issue 6.3MM shares of Class A Common Stock⁽¹⁾
- Benefits:
 - Simplifies capital structure
 - Clarifies number of shares outstanding
 - Minimizes potential future dilution to shareholders

Pro-Forma Ownership Structure⁽²⁾⁽³⁾



~252.8MM Shares Outstanding

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

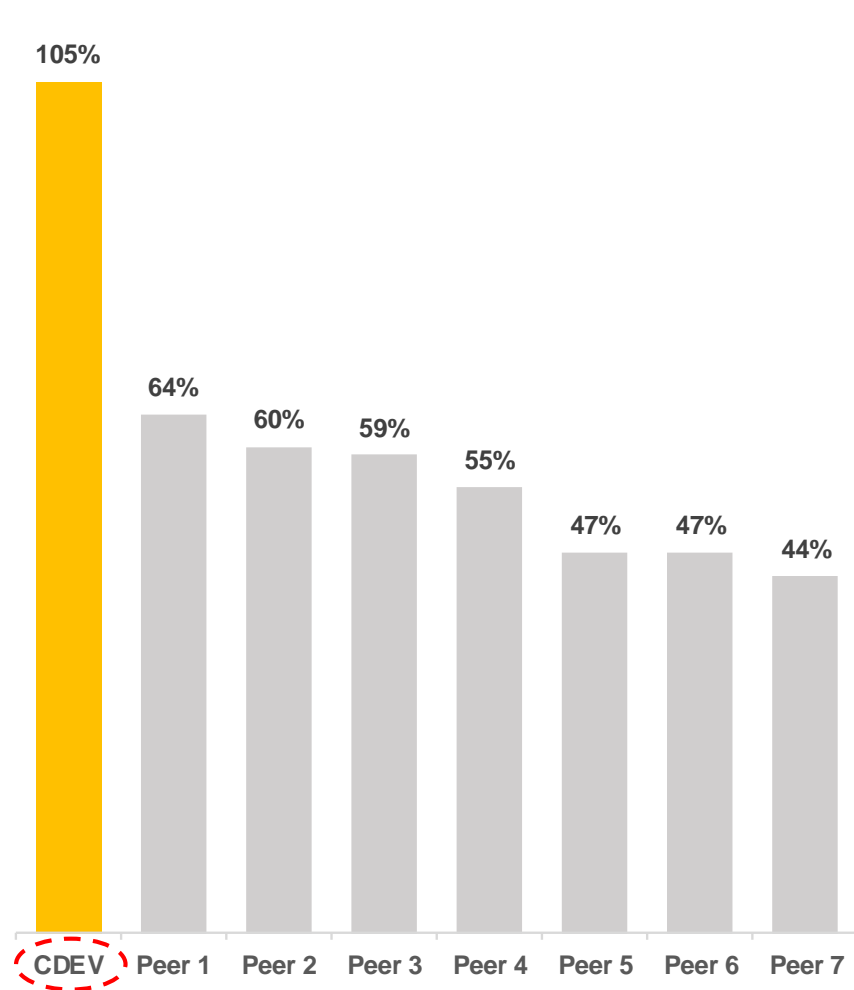
(2) Assumes conversion of Riverstone Series B preferred into Class A Common Stock at a 250-1 ratio, assuming successful shareholder vote at future special meeting.

(3) Excludes 8.0 million Private Placement Warrants, which were purchased by our Sponsor in a private placement simultaneously with the closing of our IPO.

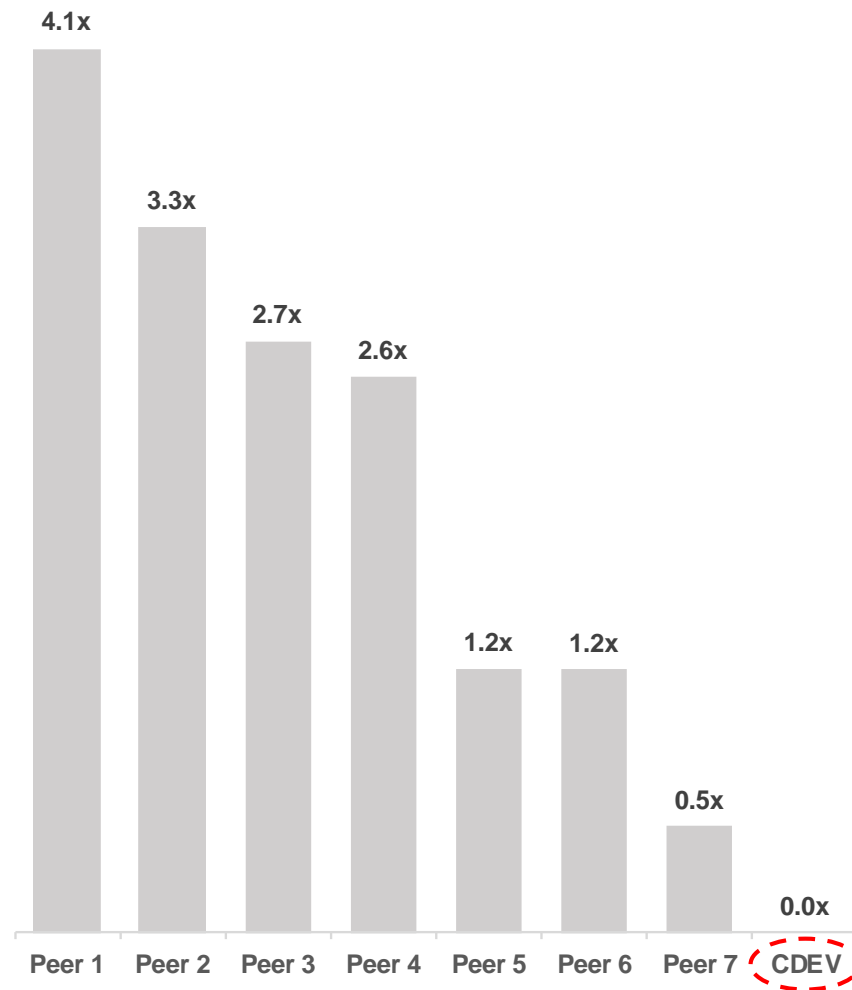
(4) Represents CRD, NGP Follow-On and Celero, collectively.

Centennial Provides Investors with Peer Leading Growth Combined with Best-In-Class Leverage Metrics

Est. Cash Flow Per Debt-Adjusted Share Growth
(2-Year CAGR)⁽¹⁾



Net Debt / TTM Adjusted EBITDAX⁽²⁾



Note: Peer group includes: CPE, CXO, EGN, FANG, MTRD, PE, and RSPG.

(1) Source: Canaccord Genuity Equity Research; NYMEX strip pricing as of March 24, 2017.

(2) Peer data as of 12/31/16; Pro forma for capital markets and A&D activity post 12/31/16. Other companies may calculate Adjusted EBITDAX differently and, therefore, Centennial's Adjusted EBITDAX may not be directly comparable to similarly titled measures of other companies.

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