CENTENNIAL

Core Oil
Delaware Basin Pure-Play

Barclays CEO Energy-Power Conference

September 9, 2020

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,” “goal,” “plan,” “target” 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, the COVID-19 pandemic and governmental responses thereto, 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.

Use of Non-GAAP Financial Measures

This presentation includes non-GAAP financial measures, such as Adjusted EBITDAX, Net debt and Net debt to last twelve months (“LTM”) EBITDAX. Please refer to slide 16 for a reconciliation of Adjusted EBITDAX to net income, the most comparable GAAP measure. We believe Adjusted EBITDAX is useful as it allows us to more effectively evaluate our operating performance and compare the results of our operations from period to period and against our peers without regard to financing methods or capital structure. We exclude the items listed on slide 16 from net income (loss) in arriving at Adjusted EBITDAX because these amounts can vary substantially from company to company within our industry depending upon accounting methods and book values of assets, capital structures and the method by which the assets were acquired. Adjusted EBITDAX should not be considered as an alternative to, or more meaningful than, net income as determined in accordance with GAAP or as an indicator of our operating performance or liquidity. Certain items excluded from Adjusted EBITDAX are significant components in understanding and assessing a company’s financial performance, such as a company’s cost of capital and tax structure, as well as the historic cost of depreciable assets, none of which are components of Adjusted EBITDAX. Our presentation of Adjusted EBITDAX should not be construed as an inference that our results will be unaffected by unusual or non-recurring items. Our computations of Adjusted EBITDAX may not be comparable to other similarly titled measures of other companies.

The Company defines Net debt as the aggregate principal amount of the Company's notes outstanding minus cash and cash equivalents. The Company presents this metric to help evaluate its capital structure and financial leverage and believes that it is widely used by professional research analysts, including credit analysts, and others in the evaluation of total leverage.

The Company defines Net debt to LTM EBITDAX as Net debt (defined above) divided by Adjusted EBITDAX (reconciled on slide 16) for the prior twelve-month period. The Company presents this metric to show trends that investors may find useful in understanding the Company's ability to service its debt. This metric is widely used by professional research analysts, including credit analysts, in the valuation and comparison of companies in the oil and gas exploration and production industry.

Centennial Resource Development Overview

Key Company Statistics

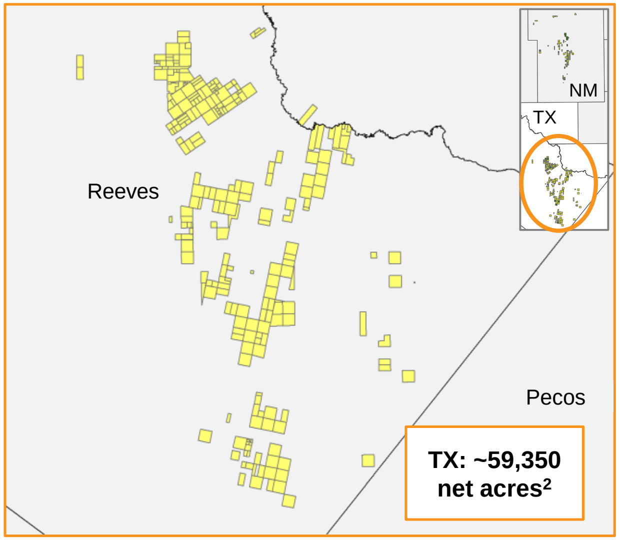
Operational Overview	
Production	
Q2 Total Production (Boe/d)	68,245
Q2 Oil Production (Bo/d)	37,411
% oil	*55%*
Capital Expenditures ($ mm)	
Q2 Total Capital Exp.	$28.0
Updated FY 2020 Total Capital Exp.	$240 - 270
1H'20 Capital Exp.	*$203*
Implied 2H'20 Capital Exp.[1]	*~$52*
Acreage (as of 12/31/19) [2]	
Total net acreage	~78,200
% CDEV Operated	*93%*
% Held by Production	*87%*
Financial Overview (Q2 2020)	
Leverage (as of 6/30/20)	
First Lien Debt / LTM EBITDAX	0.9x
Net Debt / LTM EBITDAX	2.6x
Net Debt / Book Capitalization	29%

Company Overview

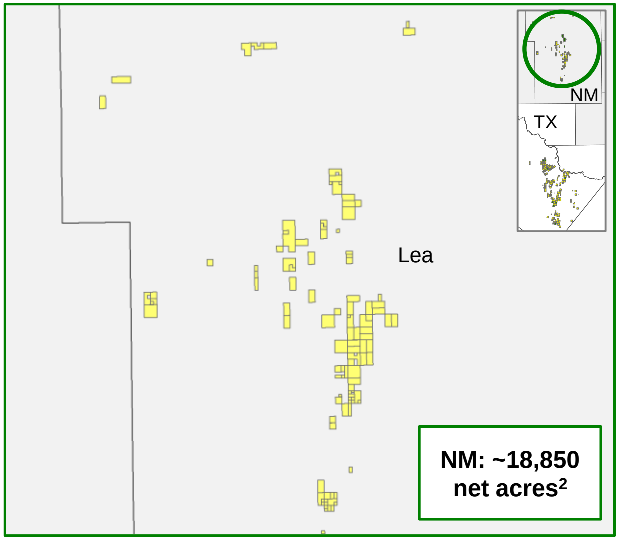
- Large contiguous oil-rich acreage in the core of the Southern and Northern Delaware Basins
- Maintaining focus on balance sheet and reducing D&C and operating costs
- Top-tier technical team with consistent track record of solid well results
- Resuming modest activity in 2H'20, with completion of DUCs and addition of one rig
- Minimal federal acreage exposure (~5% of total net acreage)

Asset Overview[2]

Southern Delaware (TX)



Northern Delaware (NM)



(1) 2H'20 implied total capital expenditure figure equal to midpoint of revised 2020 guidance range less actual capital incurred in 1H'20
(2) As of 12/31/19; does not include mineral or surface acreage positions

Centennial's Response to Macro Environment

1 Operational Initiatives

- Reduced operated rig count from five to zero in April 2020 and halted completion activity
- Total capital budget reduced by ~60% from original guidance
- Curtailed ~20% of production during May in response to weak realized prices (majority of wells back online by end of June)

2 Cost Control & Margin Improvement

- Realized significant reductions to D&C costs, lease operating expenses and G&A
  - Reduced D&C costs per well by over 20%, compared to FY 2019
  - Reduced LOE and G&A[1] unit costs by 17% and 12%, respectively from Q1 2020 to Q2 2020

3 Financial Action

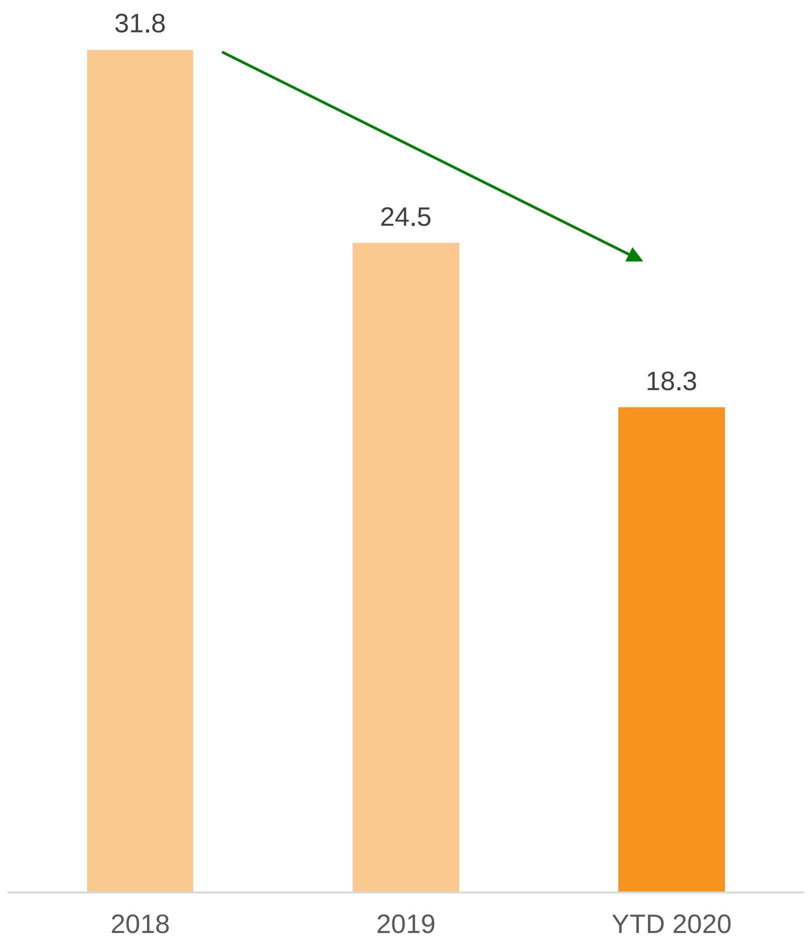
- Executed debt exchange resulting in reduction to senior unsecured notes and lower interest expense
- Amended credit facility to replace total leverage covenant through YE'21 with first lien leverage covenant of 2.75x
- Hedged significant amount of 2020 oil volume to mitigate downside risk

(1) Q2'20 Cash G&A excludes one-time severance payments related to "Reduction In Force" (RIF) of ~$2.9mm incurred in Q2 2020

Significant Reduction in Cycle Times

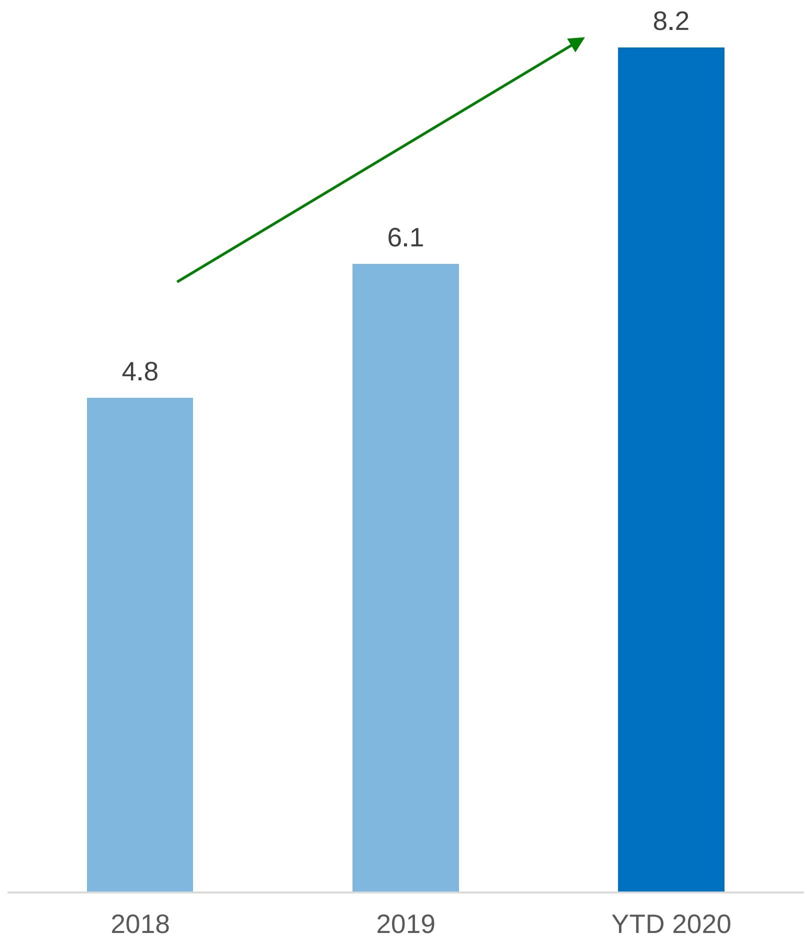
Drilling Efficiency (Spud to RR)[1]

Spud to RR decrease of 25% from 2019



Completion Stages Pumped Per Day[1]

Stages per day increase of 34% from 2019



(1) Data through June 30, 2020

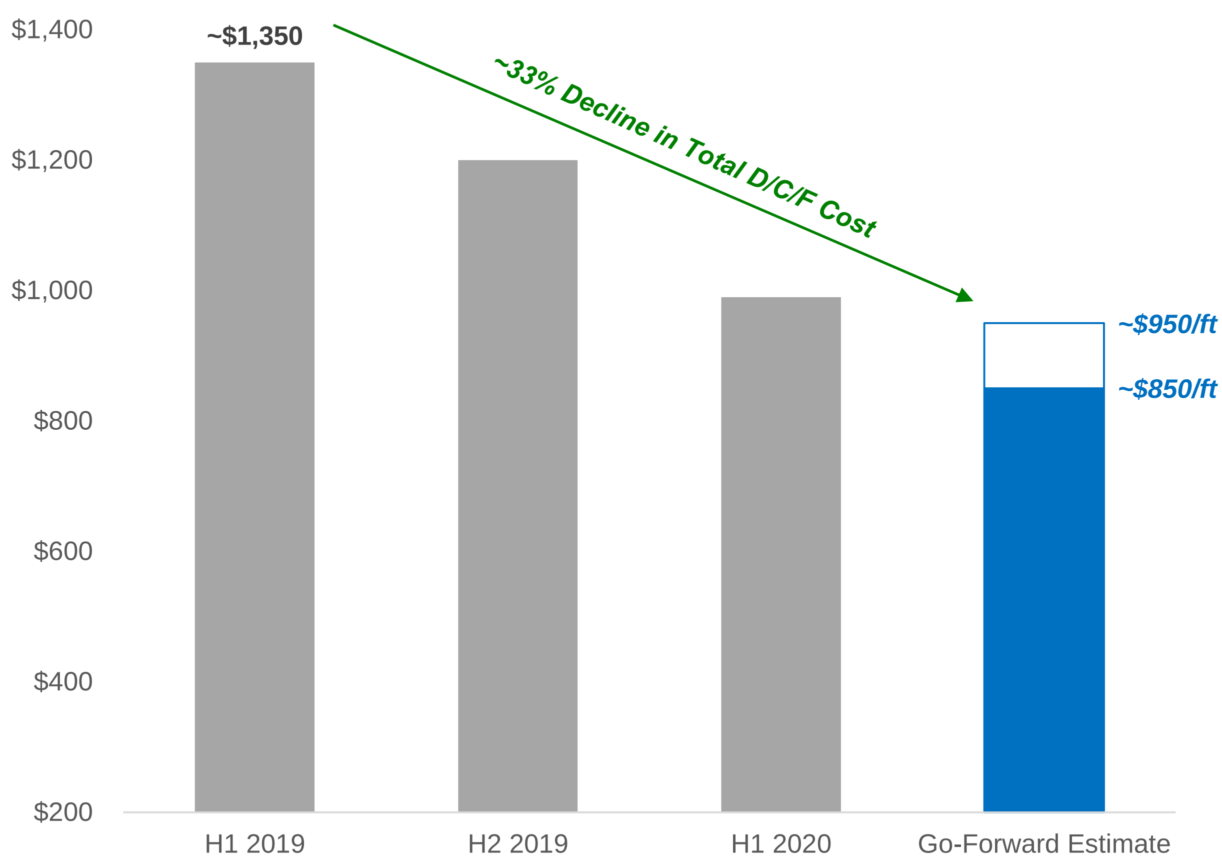
Well Cost Evolution

Lower Well Costs Driven by Higher Efficiencies and Structural Cost Reductions

Review of DC&F Cost Initiatives

- Higher drilling and completion efficiencies, resulting in significant cycle time reduction
- D&C design / process refinement
  - Implementing new casing design in Reeves County
  - Expanding water recycling program across position
- Proactive response to current commodity price environment
  - Active negotiations with service providers
  - Thorough evaluation of all on-site personnel and equipment
- Anticipate further well cost reductions with <$900 / ft. target in 2021

DC&F Cost / Lateral Foot - Extended Lateral Average (1.5 & 2 Section)[1]

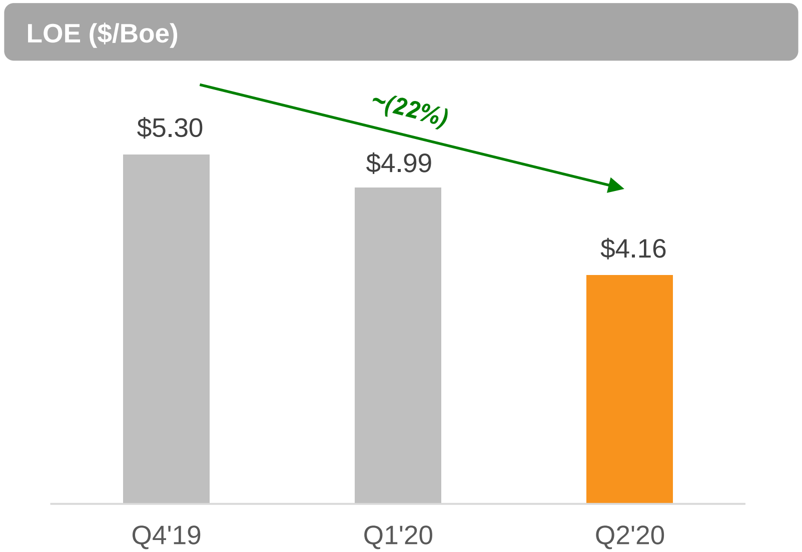


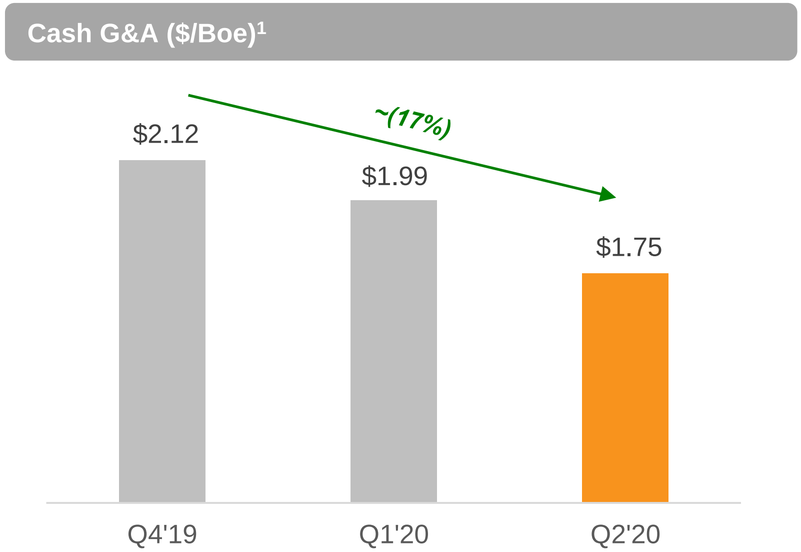
Majority of D&C cost and efficiency improvements are sustainable and not subject to future inflationary pressure

(1) Represents total completed well costs - including drilling, completion, facilities and flowback costs

Reducing Cost Structure

- **Lease Operating Expenses (LOE)**
  - — Improved operational efficiency
  - — Optimized artificial lift method
  - — Lowered electricity, rental equipment, water disposal and chemicals costs
  - — Reduced non-essential spend on workover related activity
- **General and Administrative (G&A)**
  - — Reduced workforce to better align with anticipated activity levels
  - — Reduced executive management salaries by 10% – 25% and Board of Director cash retainers by 25%
  - — Reduced non-payroll expenses, such as IT, office, professional fees, etc.





(1) Represents implied cash G&A excluding one-time severance payments related to "Reduction In Force" (RIF) of ~$2.9mm incurred in Q2 2020

Review of Key LOE Initiatives

1 **Artificial Lift:** Ongoing transition from ESPs to gas lift

— Lower failure rate, resulting in less workover expense and downtime

2 **Electricity:** Transitioning more facilities to electric power, resulting in removal of generators and lower equipment rental costs

— Phase 1 of Centennial's electric substation complete; Phase 2 to be completed end of Q3 or early Q4

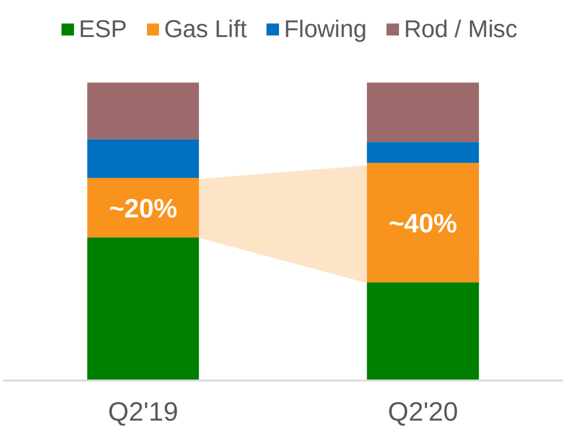
3 **Water Disposal:** Continuing to optimize CDEV operated water disposal system through electrification projects and lower dependency on trucked water volumes

— Resulted in ~35% reduction to CDEV's per Bbl disposal costs on its operated system compared to 2019

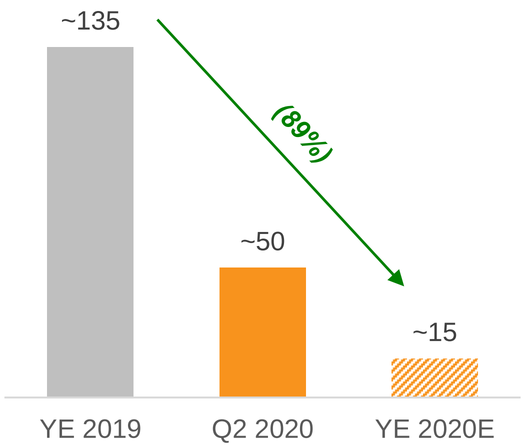
4 **Water Recycling:** Reduces produced water disposal volumes and freshwater consumption

— Positive impact to both LOE and completion costs

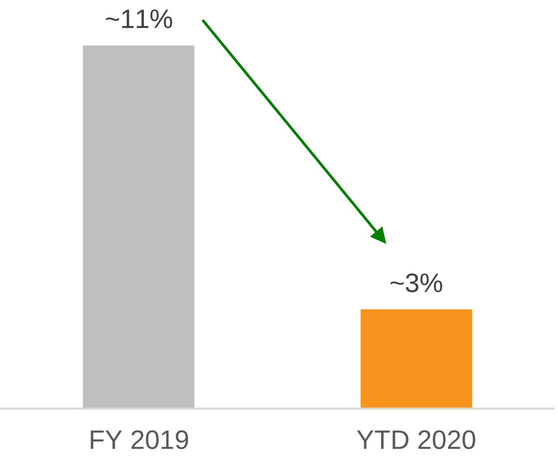
1 Historical Artificial Lift Method Allocation



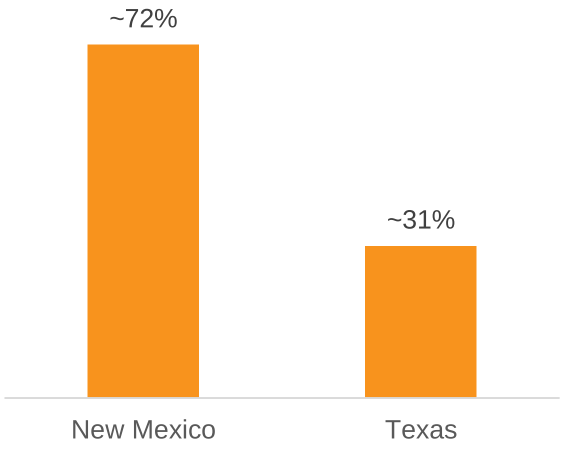
2 In-Field Generator Usage (#)



3 Trucked Produced Water (% of total)[1]



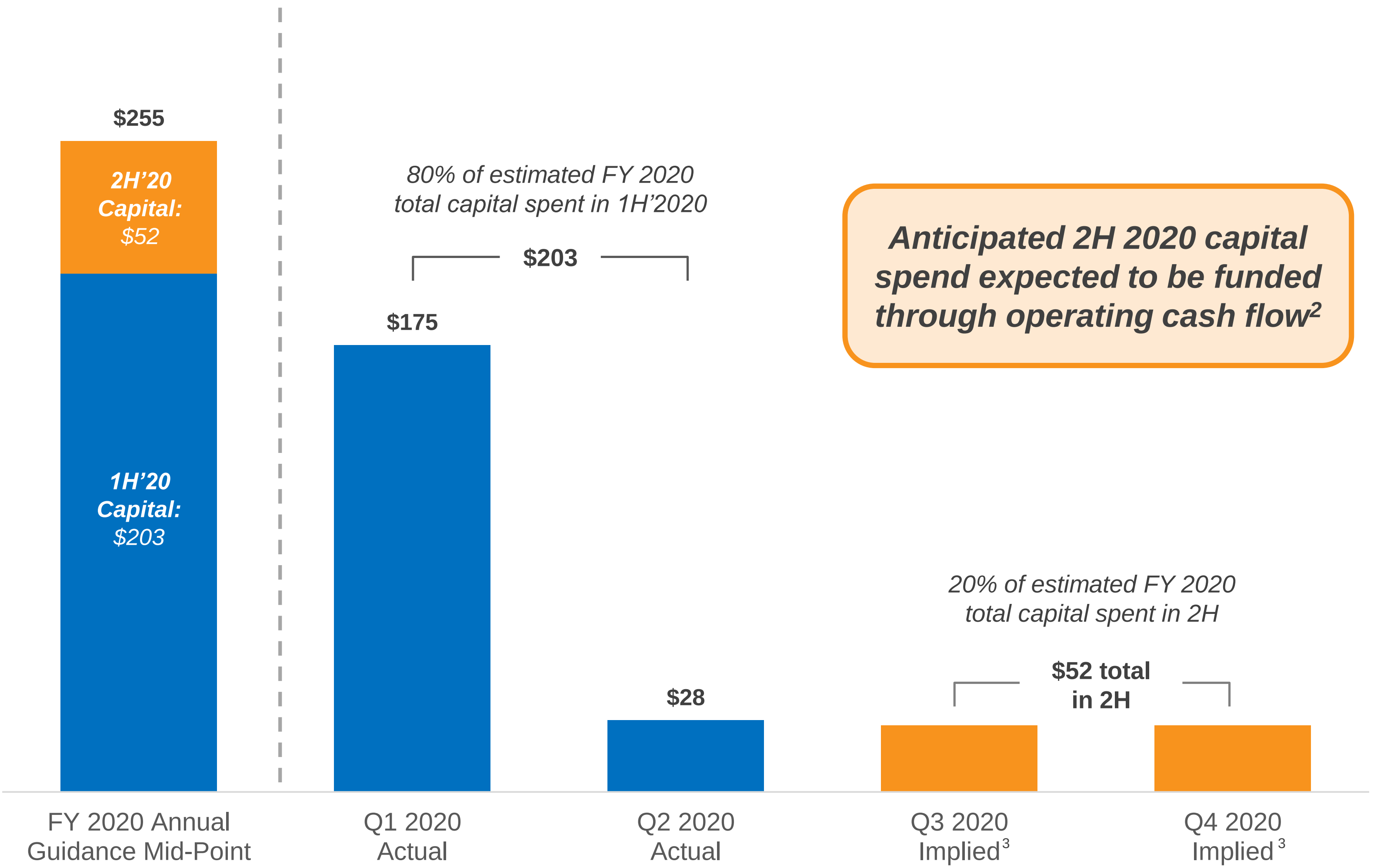
4 Recycled Water Utilized YTD (% of total)[1]



(1) Data through June 30, 2020

2H'2020 Capital to be Funded With Cash Flow

FY 2020 Total Capital Expenditures ($mm)[1]



(1) Total capital expenditure figure represents midpoint of revised 2020 guidance ranges, published August 3, 2020
(2) Assuming current strip pricing
(3) 2H'20 implied total capital expenditure figure equal to midpoint of revised 2020 guidance range less actual capital incurred in 1H'20; quarterly breakdown is illustrative and not indicative of specific Q3 / Q4 relative spending

Capital Structure and Liquidity Overview

- **Capital Structure Overview**
  - First Lien debt / LTM EBITDAX of 0.9x and Net debt / LTM EBITDAX of 2.6x
  - ~$300mm of liquidity as of 6/30/20 (based on $700mm borrowing base and $668 facility availability)[2]
  - Amended credit facility to replace total leverage covenant through YE 2021 with first lien leverage covenant of 2.75x LTM EBITDAX, stepping down to 2.5x during 2022
  - No note maturities until 2025
- **Debt Exchange Overview**
  - Closed transaction in May 2020
  - ~$254mm of senior unsecured notes tendered, resulting in issuance of ~$127mm Second Lien senior secured notes
  - Reduced principal amount of senior notes outstanding by ~$127mm
  - Anticipate ~$6mm in annualized interest expense savings

Capitalization and Liquidity Overview ($ mm)

Capitalization	3/31/20	6/30/20
Cash and cash equivalents	$3.8	$7.2
Revolving credit facility	$235.0	$370.0
8.000% First Lien Notes due 2025[1]	$0.0	$127.1
5.375% Sr. Unsecured Notes due 2026[1]	$400.0	$289.4
6.875% Sr. Unsecured Notes due 2027[1]	$500.0	$356.4
Total debt	$1,135.0	$1,142.9
Book equity	$2,726.8	$2,734.5
Total capitalization	$3,861.8	$3,877.4

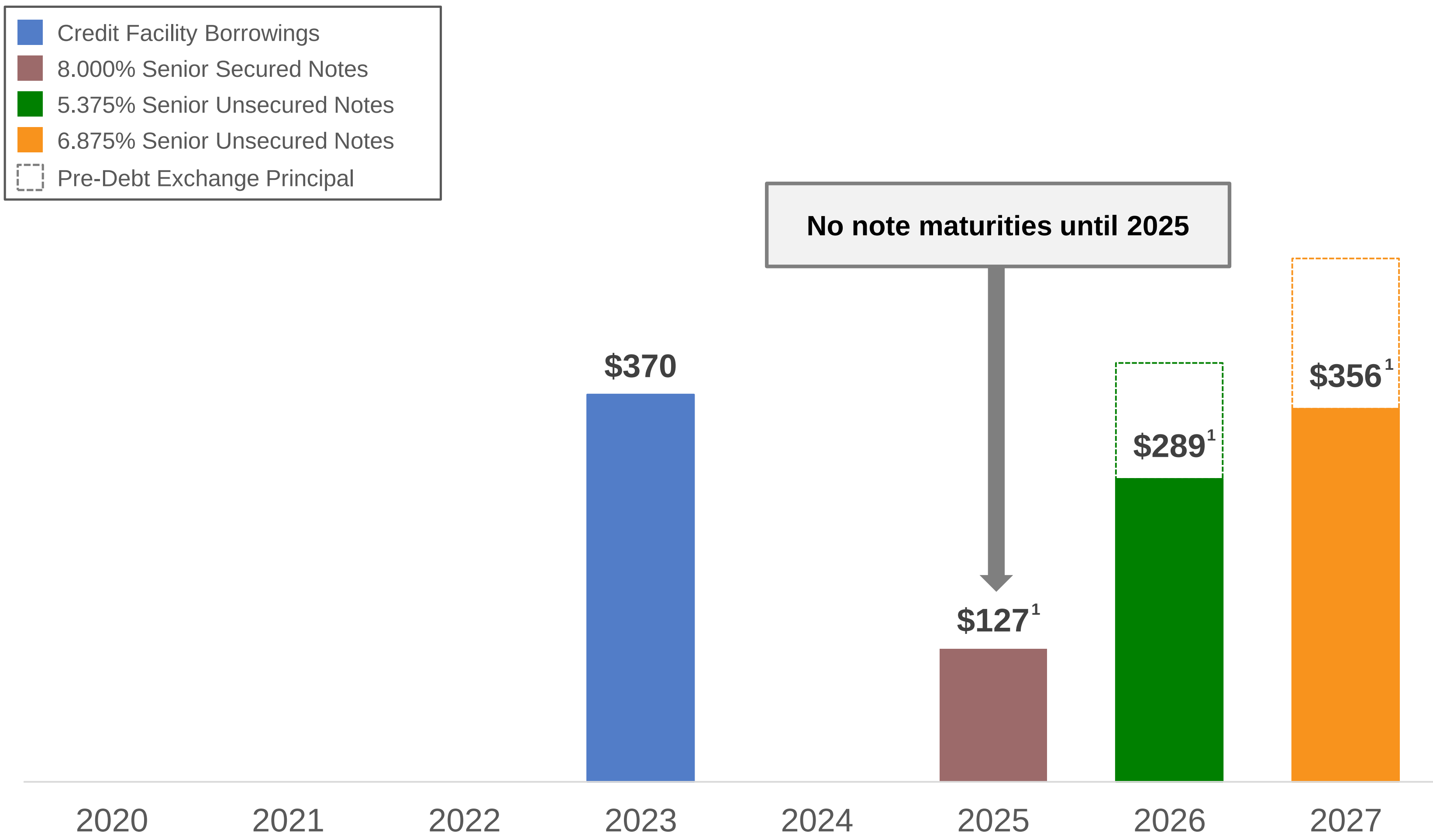
Credit statistics	
First Lien debt / LTM EBITDAX	0.9x
Net debt / LTM EBITDAX	2.6x
Net debt / book capitalization	29%

Liquidity ($ mm)	
Borrowing base	$700.0
Facility availability[2]	668.2
Less: Revolver borrowings	(370.0)
Less: Letters of credit	(8.2)
Plus: Cash	7.2
Liquidity	$297.2
Facility availability utilization	*56%*

Note: Amounts may not sum due to rounding
(1) Reflects the aggregate principal amount of notes outstanding
(2) Borrowing base subject to an availability blocker $31.8 million as a result of the debt exchange transaction

No Near-Term Debt Maturities

Debt Maturity Schedule ($ mm)



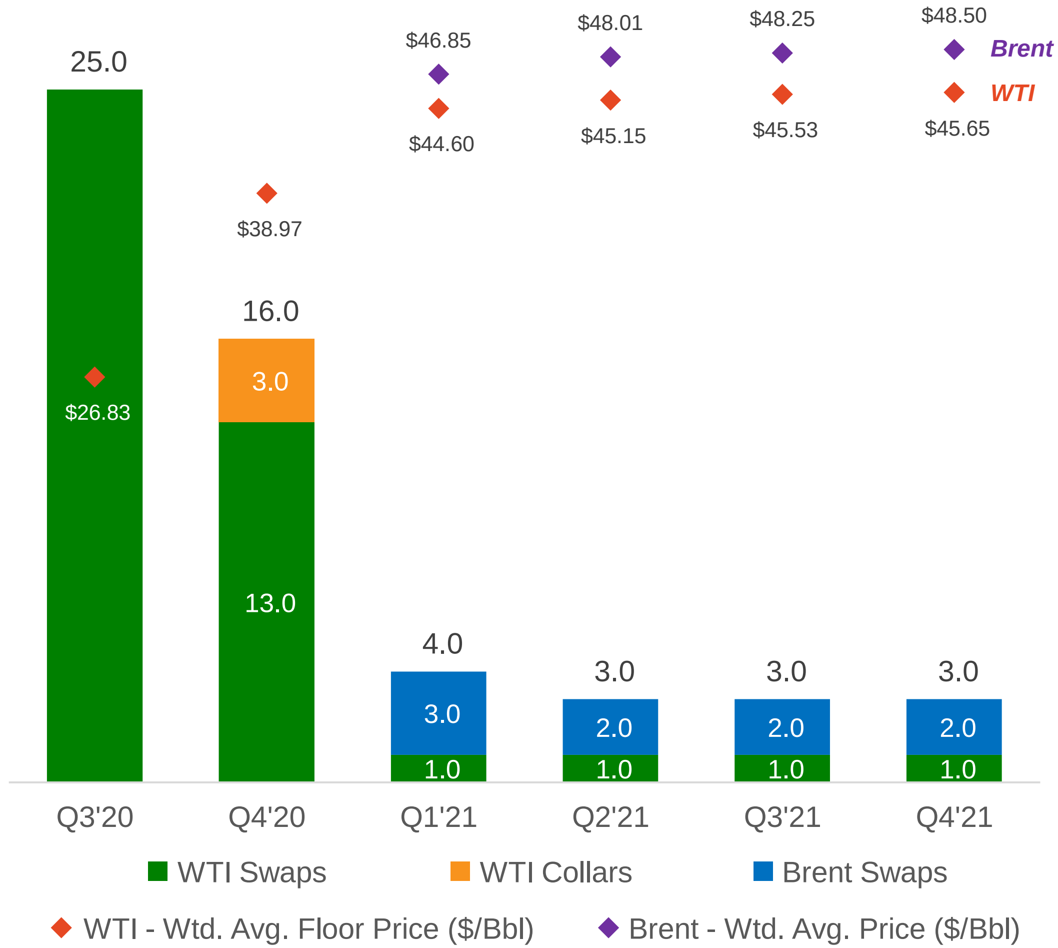
(1) Reflects the principal amount of notes outstanding

Hedge Strategy and Position Overview

Hedge Strategy Summary

- Hedge strategy represents a shift in corporate philosophy
- Manage potential downside risk to commodity prices while preserving upside optionality
  - Systematically add hedges on a rolling forward basis
  - Shifting focus to FY 2021
- Align hedges with firm sales & regional price index exposure
- Maintain a simple hedge portfolio comprised primarily of fixed price swaps & two-way collars
- Utilize hedges to protect liquidity

Oil Hedges (MBbls/d) and Weighted Average Price ($/Bbl)[1]



Note: See Appendix for full table of Centennial's derivative contracts
(1) Hedge positions as of September 8, 2020

Final Thoughts: Centennial 2.0

- Sustained Well Cost Reductions
- Lower Unit Cost Structure
- Shallowing Corporate Decline Rate
- High-Quality Asset Base
- No Near-Term Debt Maturities
- Ample Liquidity

Structural cost and operational improvements made year-to-date will provide enhanced margins and higher capital efficiency in 2021+

Appendix

Hedge Position Overview

Hedge Position Overview (as of Sept 8, 2020)

	FY 2020			FY 2021				
	Q3	Q4	Bal. 2020	Q1	Q2	Q3	Q4	2021
WTI Fixed Price Swaps								
Total Volume (Bbl)	2,300,000	1,196,000	3,496,000	90,000	91,000	92,000	92,000	365,000
Daily Volume (Bbl/d)	25,000	13,000	19,000	1,000	1,000	1,000	1,000	1,000
Weighted Average Price ($ / Bbl)	$26.83	$38.89	$30.95	$44.60	$45.15	$45.53	$45.65	$45.24
Brent Fixed Price Swaps								
Total Volume (Bbl)	--	--	--	270,000	182,000	184,000	184,000	820,000
Daily Volume (Bbl/d)	--	--	--	3,000	2,000	2,000	2,000	2,247
Weighted Average Price ($ / Bbl)	--	--	--	$46.85	$48.01	$48.25	$48.50	$47.79
WTI Collars								
Total Volume (Bbl)	--	276,000	276,000	--	--	--	--	--
Daily Volume (Bbl/d)	--	3,000	1,500	--	--	--	--	--
Weighted Average Floor ($ / Bbl)	--	$39.33	$39.33	--	--	--	--	--
Weighted Average Ceiling ($ / Bbl)	--	$45.02	$45.02	--	--	--	--	--
Mid-Cush Basis Swaps								
Total Volume (Bbl)	1,472,000	1,196,000	2,668,000	--	--	92,000	92,000	184,000
Daily Volume (Bbl/d)	16,000	13,000	14,500	--	--	1,000	1,000	504
Weighted Average Price ($ / Bbl)	$0.52	$0.51	$0.52	--	--	$0.20	$0.20	$0.20
Henry Hub Fixed Price Swaps								
Total Volume (MMBtu)	2,760,000	2,760,000	5,520,000	2,700,000	--	--	--	2,700,000
Total Volume (MMBtu/d)	30,000	30,000	30,000	30,000	--	--	--	7,397
Weighted Average Price ($/MMBtu)	$2.03	$2.54	$2.28	$2.80	--	--	--	$2.80
Henry Hub Collars								
Total Volume (Bbl)	--	1,220,000	1,220,000	1,800,000	--	--	--	1,800,000
Daily Volume (Bbl/d)	--	13,261	6,630	20,000	--	--	--	4,932
Weighted Average Floor ($ / Bbl)	--	$2.90	$2.90	$2.90	--	--	--	$2.90
Weighted Average Ceiling ($ / Bbl)	--	$3.64	$3.64	$3.64	--	--	--	$3.64
Waha Differential Basis Swaps								
Total Volume (MMBtu)	2,760,000	930,000	3,690,000	--	--	--	--	--
Daily Volume (MMBtu/d)	30,000	10,109	20,054	--	--	--	--	--
Weighted Average Price ($/MMBtu)	($1.62)	($1.62)	($1.62)	--	--	--	--	--

Reconciliation of Adjusted EBITDAX to Net Income (Loss)

Adjusted EBITDAX reconciliation ($ thousands)[1]

	FY 2019				FY 2020	
($ in thousands, unless specified)	Q1	Q2	Q3	Q4	Q1	Q2
Net income (loss) attributable to common shareholders	($8,112)	$17,877	($3,585)	$9,618	($547,983)	$5,330
Net income (loss) attributable to noncontrolling interest	(425)	1,125	(128)	44	(2,362)	0
Interest expense	10,160	14,437	15,246	16,148	16,421	17,371
Income tax expense (benefit)	(2,263)	5,928	1,393	739	(83,208)	(1,916)
Depreciation, depletion and amortization	96,558	112,114	112,720	122,851	101,258	93,020
Impairment and abandonment expenses	31,264	4,418	6,745	4,818	611,300	19,425
Gain on exchange of debt	0	0	0	0	0	(143,443)
Non-cash portion of derivative loss (gain)	5,494	4,260	(9,740)	(4,108)	8,452	22,963
Stock-based compensation expense	5,884	6,076	7,357	6,998	5,892	4,270
Exploration expense	2,516	3,861	2,869	2,144	4,009	4,051
Workforce reduction severance payments	0	0	0	0	0	2,884
Transaction costs	0	0	0	0	0	476
(Gain) loss on sale of long-lived assets	2	(9)	22	842	(245)	2
Adjusted EBITDAX	$141,078	$170,087	$132,899	$160,094	$113,534	$24,433

(1) Adjusted EBITDAX is a non-GAAP financial measure