CENTENNIAL

Core Oil
Delaware Basin Pure-Play

EnerCom
Oil & Gas Conference

August 16, 2021

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 and weather risks, drilling and other operating risks, regulatory changes, the uncertainty inherent in estimating oil and gas 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, free cash flow (deficit), net debt and net debt to last twelve months ("LTM") EBITDAX. Please refer to slide 20 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 20 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.

Please refer to slide 21 for a reconciliation of free cash flow (deficit) to net cash provided by operating activities, the most comparable GAAP measure. We believe free cash flow (deficit) is a useful indicator of the Company's ability to internally fund its exploration and development activities and to service or incur additional debt, without regard to the timing of settlement of either operating assets and liabilities or accounts payable related to capital expenditures. The Company believes that this measure, as so adjusted, presents a meaningful indicator of the Company's actual sources and uses of capital associated with its operations conducted during the applicable period. Our computations of free cash flow (deficit) may not be comparable to other similarly titled measures of other companies. Free cash flow (deficit) should not be considered as an alternative to, or more meaningful than, cash provided by operating activities as determined in accordance with GAAP or as indicator of our operating performance or liquidity.

The Company defines net debt as the aggregate principal amount of the Company's long-term debt, 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 20) 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.

Agenda

1) Centennial Overview

2) Review of Q2'21 Results

3) Discuss Centennial's use of data science in order to drive capital efficiency

Centennial Resource Development Overview

Core Acreage and Strong Execution Track Record

Large, contiguous acreage position in the Delaware Basin core

- Acreage in core of the Northern & Southern Delaware
- ~81,700 net acres
- ~97% operated and ~88% held by production
- Minimal Federal exposure (~4%)

Proven operational execution

- Maintaining significant improvements to cost structure
- 2021 drilling program driving increased capital efficiency and carrying operational improvements forward
- Two-rig flat drilling program for 2021

High-quality asset with significant inventory depth

- Proven development from 10 distinct zones across the Northern and Southern Delaware
- 15+ years of economic inventory[1]

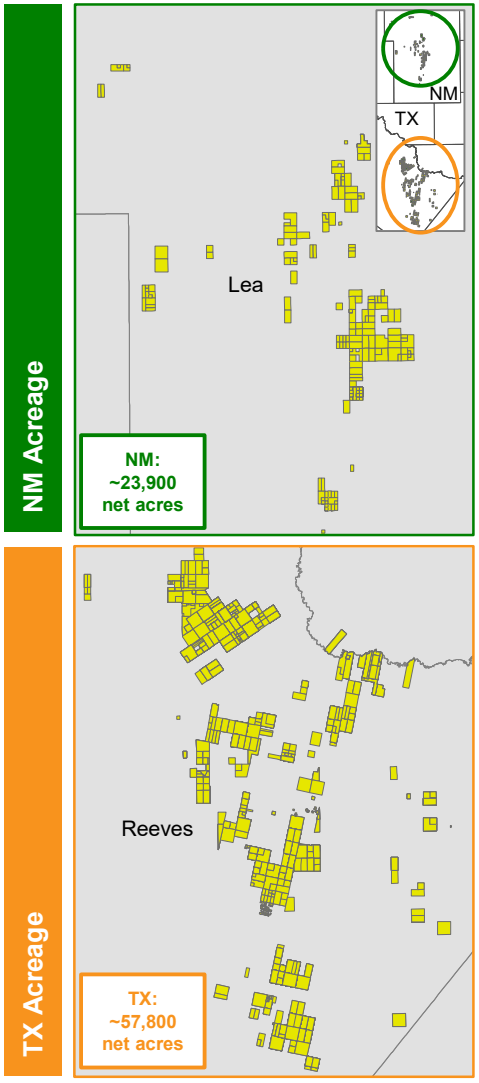
FCF profile supports organic de-leveraging and strong liquidity profile

- Generated record FCF and reduced total debt outstanding in Q2
- Expect net debt / LTM EBITDAX to be below 2.0x by YE'21
- ~$445mm of liquidity as of 6/30/21
- No senior note maturities until early 2026

Continued focus on ESG initiatives

- Minimizing emissions through increased gas capture
- Improvements in sustainability through water recycling program, minimizing water trucking and utilization of dual-fuel operations
- Published inaugural Corporate Sustainability Report

Asset Map



(1) Assuming a two-rig flat program and $45/Bbl oil pricing

Centennial Resource Development Q2'21 Highlights

- Generated free cash flow of ~$34mm, representing fourth consecutive quarter of positive FCF
  - Expect FY'21 FCF of ~$140 - 170mm[1]
- Continued debt repayment and rapid organic de-leveraging
  - Repaid $35mm of revolver borrowings[2]
  - Reduced net debt / LTM EBITDAX to 3.0x from 4.3x at 3/31/21
  - Reduced net debt / LQA EBITDAX to 2.1x from 2.7x at 3/31/21
- Increased average daily oil production 13% QoQ
- Delivered solid well results from both Northern and Southern Delaware Basins
- Continued to drive strong operational efficiencies
  - Reduced average spud to rig release days by 18% QoQ
- Initiated solid base of oil hedges for FY'22 at an average price of >$64 / Bo WTI

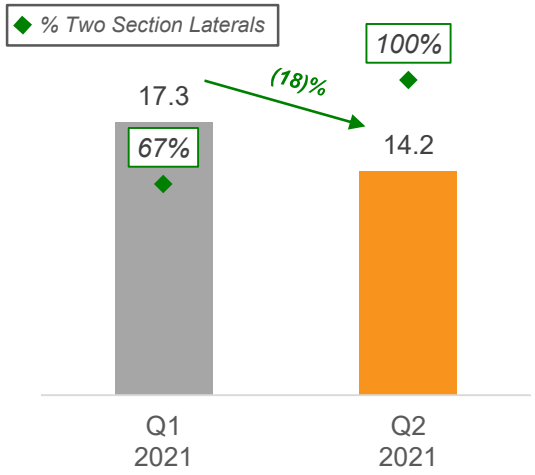
(1) Assuming current strip prices
(2) Assumes 3/31/21 borrowings of $290mm pro forma for the Senior Secured Second Lien note redemption that occurred on 4/14/21

Q2 2021 Operations Dashboard

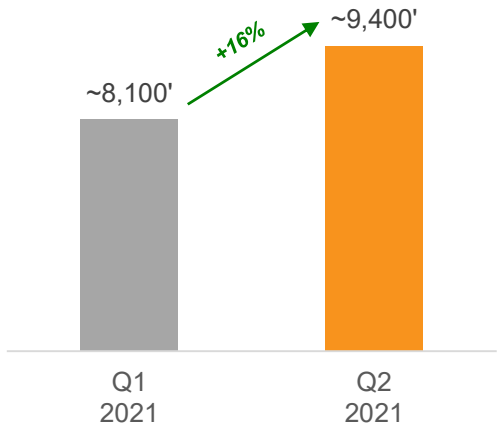
Continuing to Drive Strong Operational Efficiencies

- Q2'21 wells delivered for average gross cost of ~$800 / ft.[1]
  - 37% reduction compared to FY'19
- Continue to drive higher drilling efficiencies, resulting in significant reduction in cycle times
  - 18% decrease in spud to rig release days QoQ, while increasing lateral length by 16%
  - Recently set Company record of spud to TD in 8.6 days for ~22,500' well in New Mexico[2]
- Increased efficiencies without sacrificing well quality
  - ~97% in-zone during Q2'21
- D&C design / process refinement
  - Reduced down-days
  - Casing design improvements
  - Reduced mobilization times
  - Redesigned facilities
- Focused on driving additional efficiencies for reminder of the year

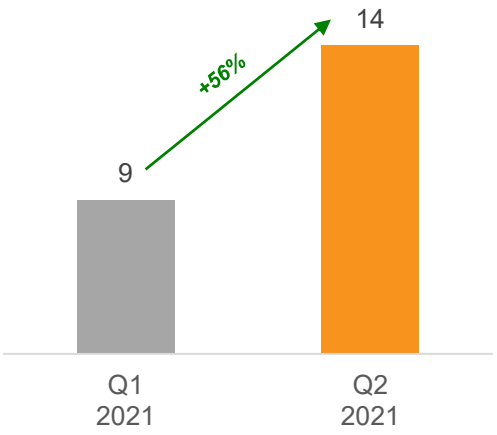
Spud to Rig Release (Days)



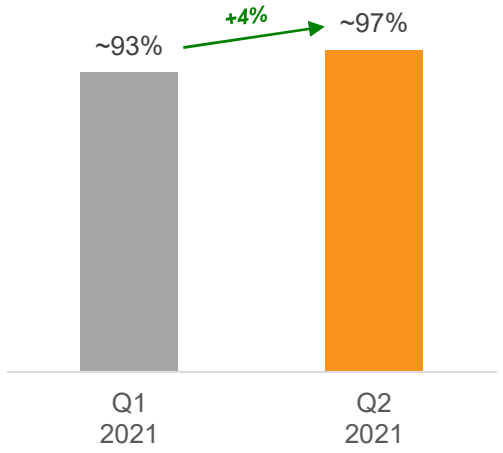
Lateral Length (Feet)



Total Spuds



% of Lateral in Target Window[3]



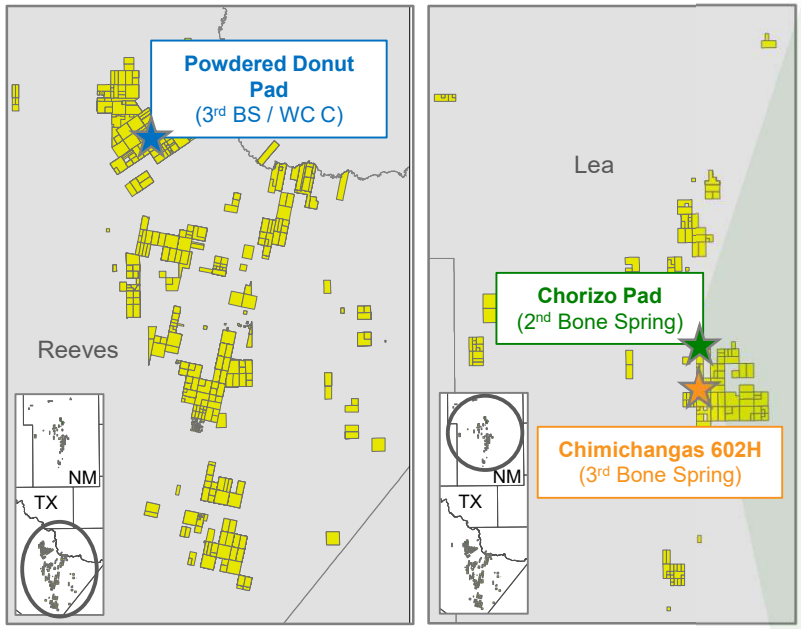
(1) Represents total completed well costs - including drilling, completion, facilities and flowback costs
(2) 22,500' represents total measured depth (includes both vertical and horizontal footage)
(3) Represents percentage within an approximately 30-foot target window

Q2 2021 Well Highlights

Delivering Strong Well Results Across Position

Q2 Well Highlights

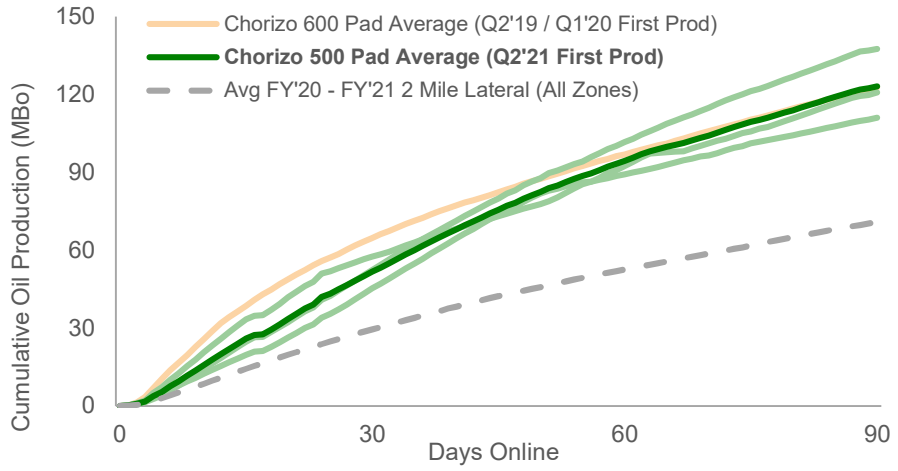
Delivered strong Q2 results across multiple formations in the Northern and Southern Delaware



	Chorizo Pad Average	Chimichangas 602H	Powdered Donut Pad Average
Lateral length (ft.)	9,800’	9,800’	9,000’
IP30 (Boe/d)	2,295	2,722	2,530
IP60 (Boe/d)	1,957	2,132	2,175
% oil[1]	*84%*	*82%*	*43%*

Chorizo 500 Pad Review

- Chorizo 500 pad: returned to an existing producing unit with significant stacked pay
  - Previously drilled the Chorizo 600 pads in the 3rd Bone Spring in Q2’19 / Q1’20
- Drilled and completed for an average well cost of ~$675 / lateral foot
  - ~45% improvement in DC&F costs vs prior Chorizo 600 pads
- Exhibits Centennial’s continued focus on capital efficiency and rate of return, driving costs lower while maintaining overall well productivity



New CDEV Development Existing Producers	Illustrative Chorizo Unit
Formation	*2nd Bone Spring development, offsetting existing 3rd Bone Spring producers*
1st Bone Spring Sand	
2nd Bone Spring Sand	● ● ●
3rd Bone Spring Sand	● ● ●

Note: Cumulative oil production curves shown on a non-normalized basis
(1) Oil cut figures shown on a two-stream basis, based on IP30 rate

2020 Review

- The impact by COVID-19 and ensuing decline in oil prices was a generational event that shook the industry
- Centennial responded quickly by reducing its rig count from five to zero in April 2020 and suspending near term D&C activity
- During this period, Centennial focused on the following items:
  - ✓ Protect the balance sheet and preserve liquidity
  - ✓ Cost control and margin improvements
  - ✓ Initiatives designed to enhance capital efficiency

The Next Challenge: Improving Capital Efficiency

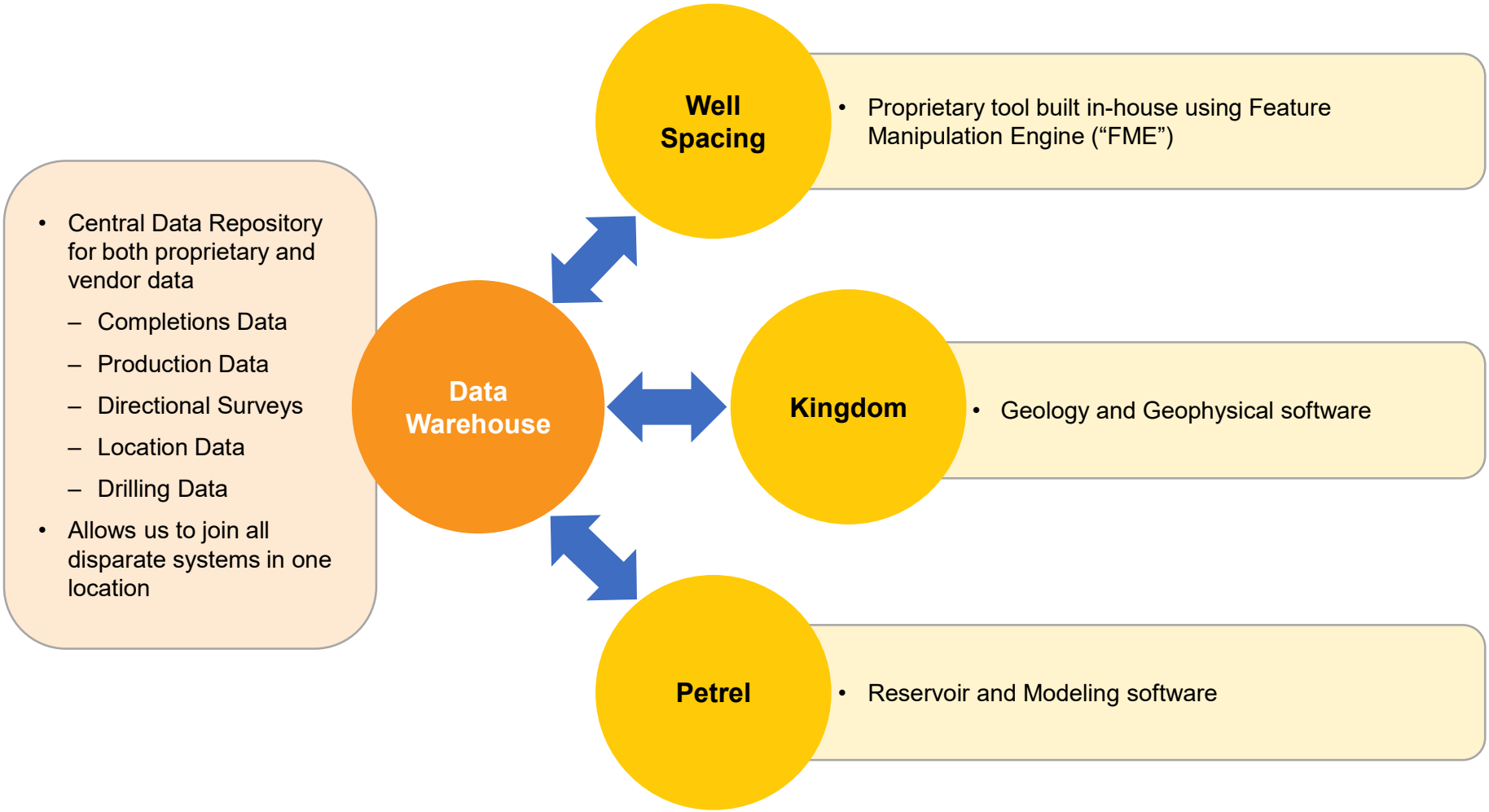
Questions:

1) Can we improve our average well result, despite increased parent / child dynamics inherent within the industry?
2) Given the variable geology in New Mexico, can we accelerate our learning curve regarding spacing / geologic testing?
3) Can we stay up-to-date on industry completion designs to ensure CDEV is always on the cutting edge?
4) Can we explore ways to spend less capital while receiving the same (or better) well result, excluding OFS cost savings?

Answer:

- Yes. Centennial built a predictive tool that enables the Company to make quick, data-driven decisions in order to improve well results and modeling efforts.
  - Achieved with ~$20,000 and a half dozen highly technical employees

Data Sources of CDEV's Machine Learning Technology



Data Sources – Well Spacing

- Proprietary well spacing tool provides 3-D spatial image and distance calculations for nearby wellbores
- Classifies wells as parent / child, in addition to computing offset depletion and well density
- Ability to analyze all wells across the Delaware Basin

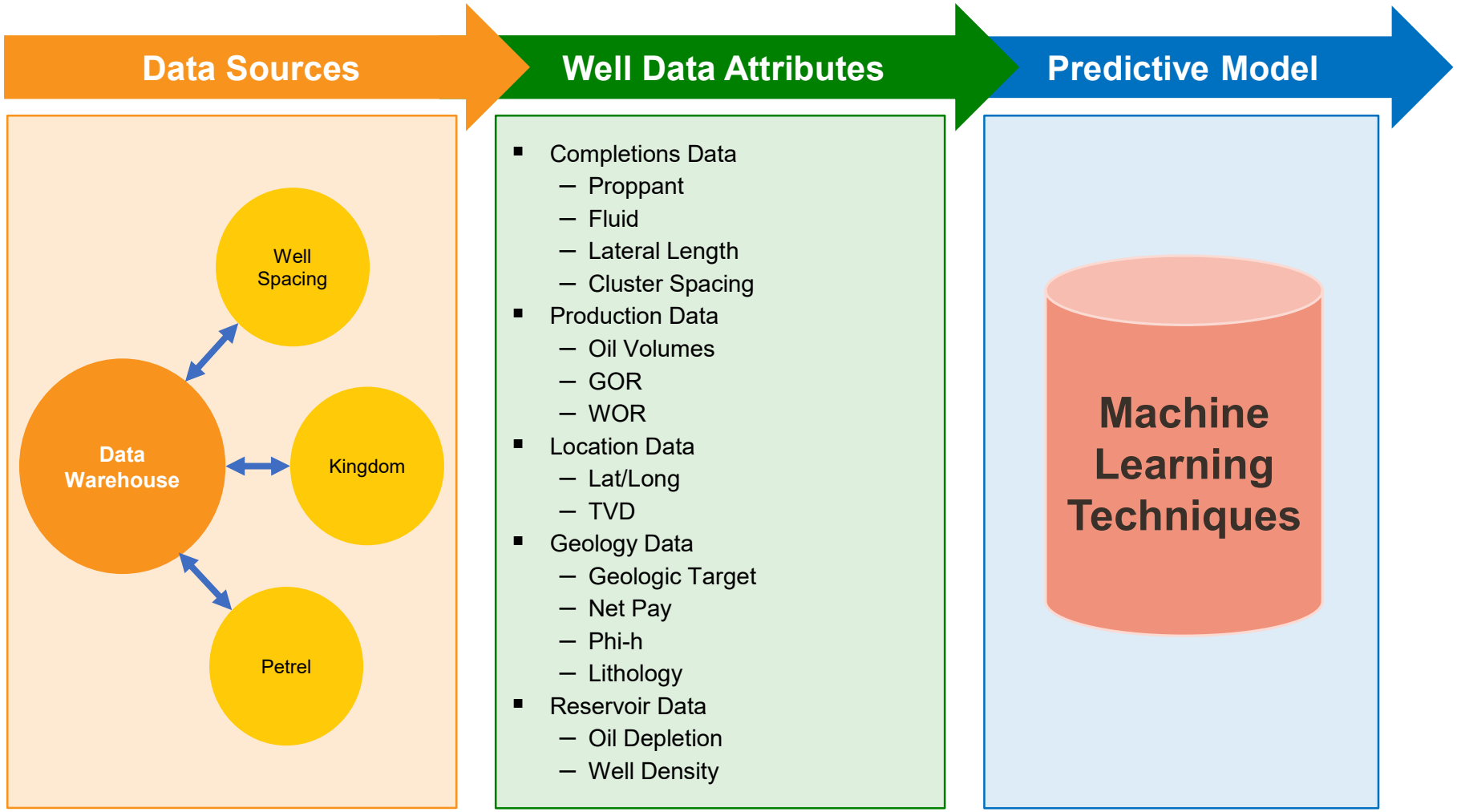
Example Well Spacing Output

3-D Spatial Imagery

Distance Calculations

Well Name	Offset Well	Overlap	HZ Distance	VT Distance	Diagonal Distance
Well A	Well B	18%	890’	-42’	895’
Well B	Well A	26%	890’	+42’	895’
Well B	Well C	95%	898’	-40’	899’
Well C	Well B	100%	898’	+40’	899’

Data Science Workflow



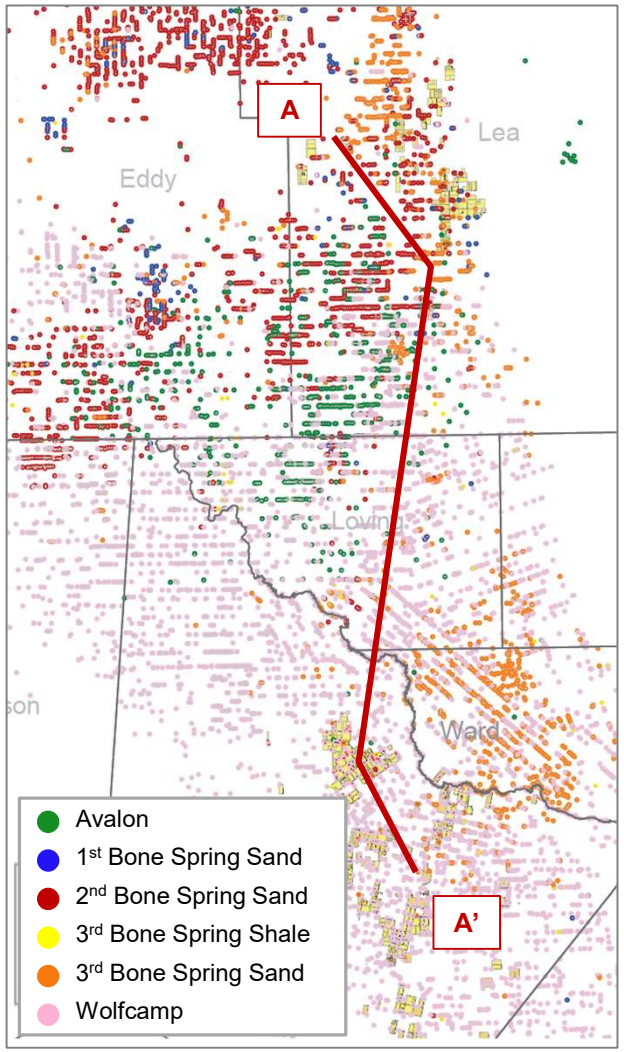
How Do We Use This Data?

1. Predict production results across the basin given the following:
   - Geologic reservoir
   - Completions and depletion characterization
2. Use internal and industry data to modify completions for:
   - Changes in geology along the lateral
   - Spacing and depletion scenario

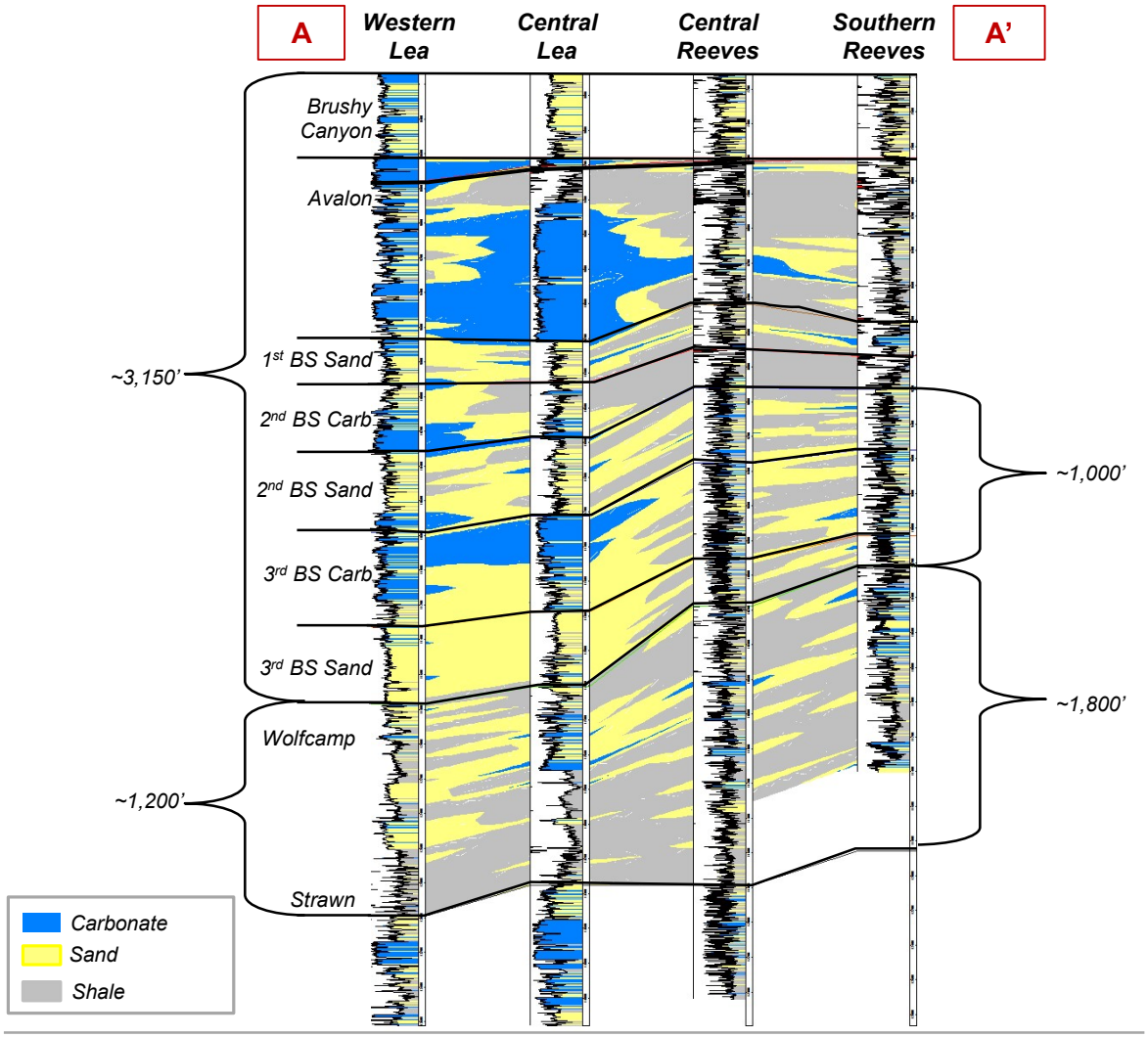
1 New Mexico / Texas Geologic Comparison

Significant Geologic Differences Between Assets

Historical Industry Wells by Formation



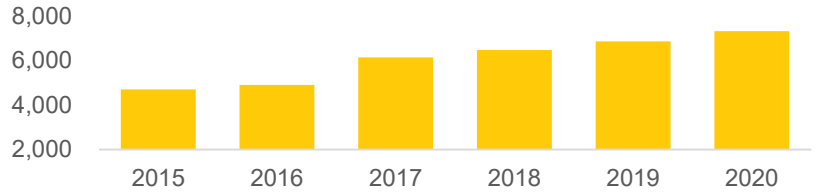
Geologic Target Distribution Across the Centennial Position



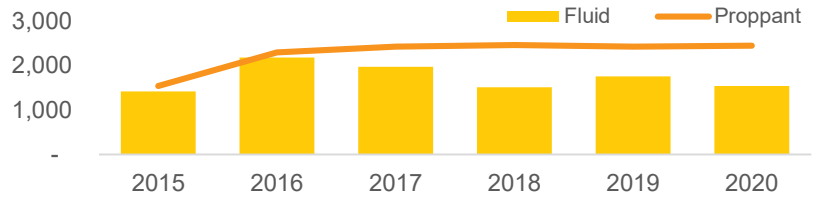
1 Using Industry Trends as an Information Tool

Industry Results – Three Largest E&Ps in Southern Lea County, NM

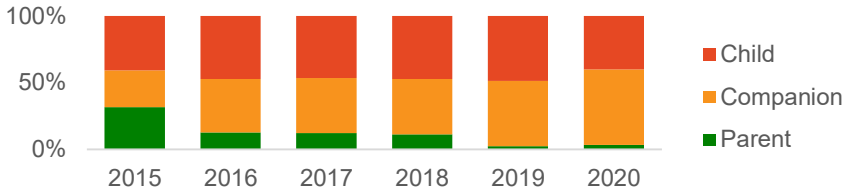
Lateral Length (Ft.)



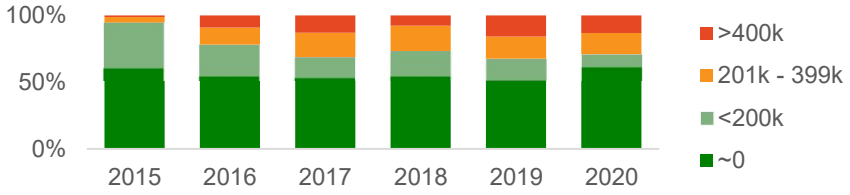
Fluid (Gal / Ft.) & Proppant (Lbs / Ft.)



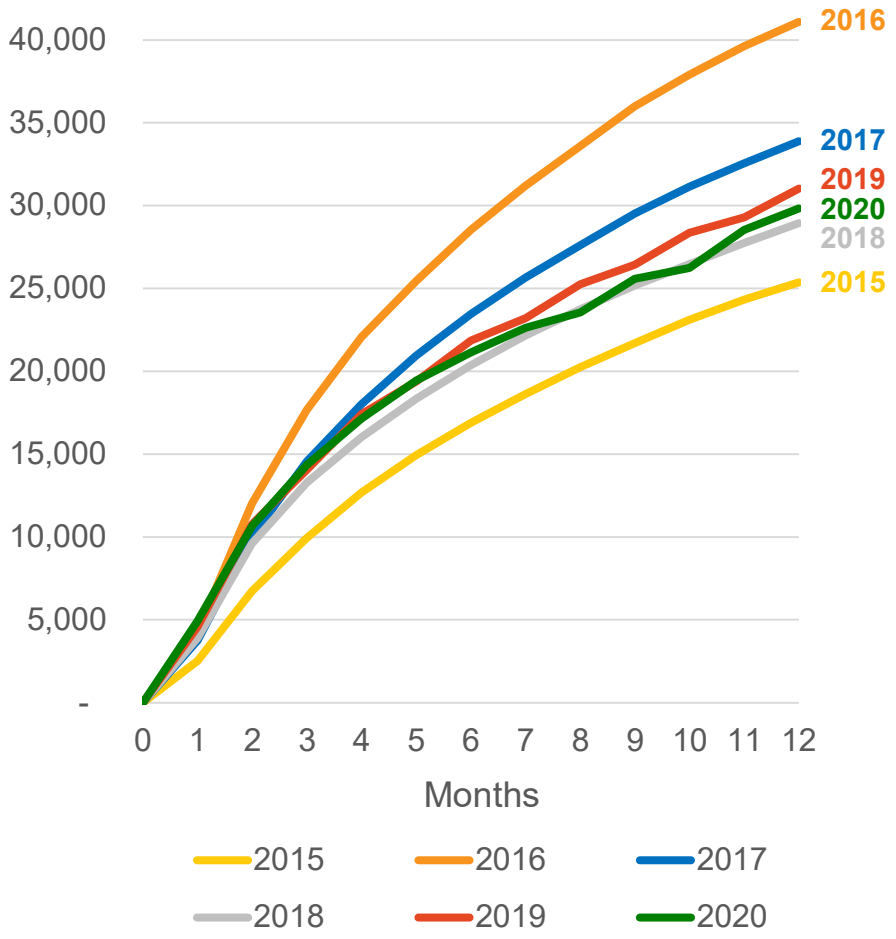
% Parent / Child



Offset Oil Depletion (Bbls)



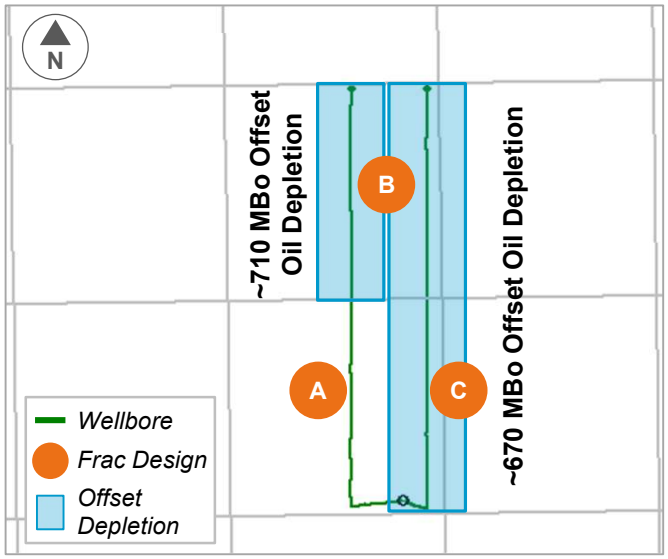
Cumulative Oil Production per 1,000' of Lateral



2 Using Parent/Child Study to Modify Completion Design

- Predictive model utilized to estimate impact of offset depletion on future well performance
- Slide example:
  - Model recognized and calculated offset depletion, in addition to predicting future type curve
  - Allowed technical team to modify completion design in certain portions of each lateral in effort for fluid to stay near-wellbore
  - Overall, pumped an average of ~15% less fluid in each well compared to standard design
  - Result: Both wells performing at predictive type curve while saving ~$300k in completion costs as a result of less fluid pumped

CDEV 2-Well Pad (Lea County, NM)



Completion Design

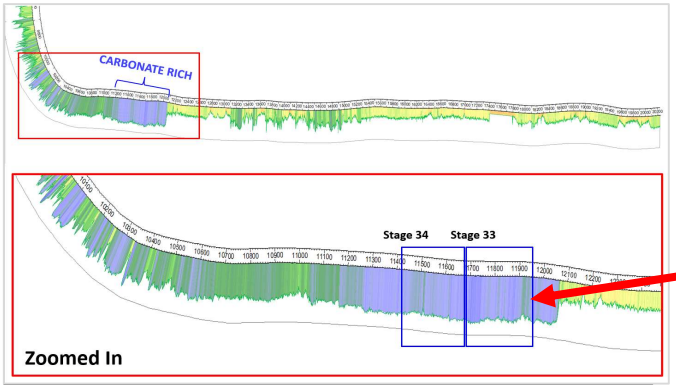
	A Heel Design (West Well)	B Toe Design (Both Wells)	C Heel Design (East Well)
Lbs/Ft.	~2,600	~2,600	~2,600
Gals/Ft.	~2,300	~1,800 ↓	~2,100 ↓
Total Savings		-$290k	

2 Modifying Completions Design Based on Variable Geology

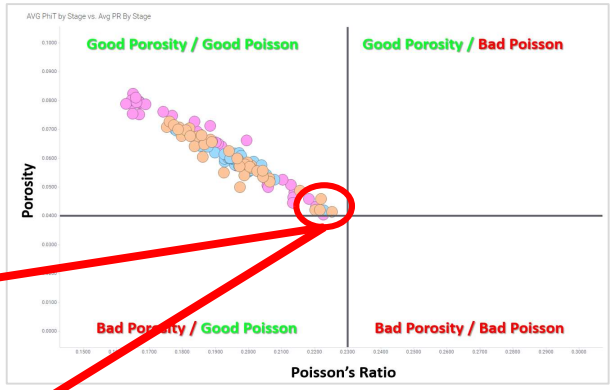
- Proprietary 3D Porosity Attribute Model:
  - Confirms geosteering interpretation of lateral heterogeneity
  - Real-time evaluation of reservoir quality (porosity) and reservoir mechanics (Poisson) across lateral
  - Provides ability to modify frac design
- Slide example:
  - Identified tight carbonate zone near heel of well
  - Live monitoring of frac metrics led to modification to reduce cost
  - Purposely skipped / modified stage designs in carbonate rich zones
  - Result: Achieved type curve well with below AFE costs as a result of altered frac stages

CDEV Bone Spring Well (Lea County, NM)

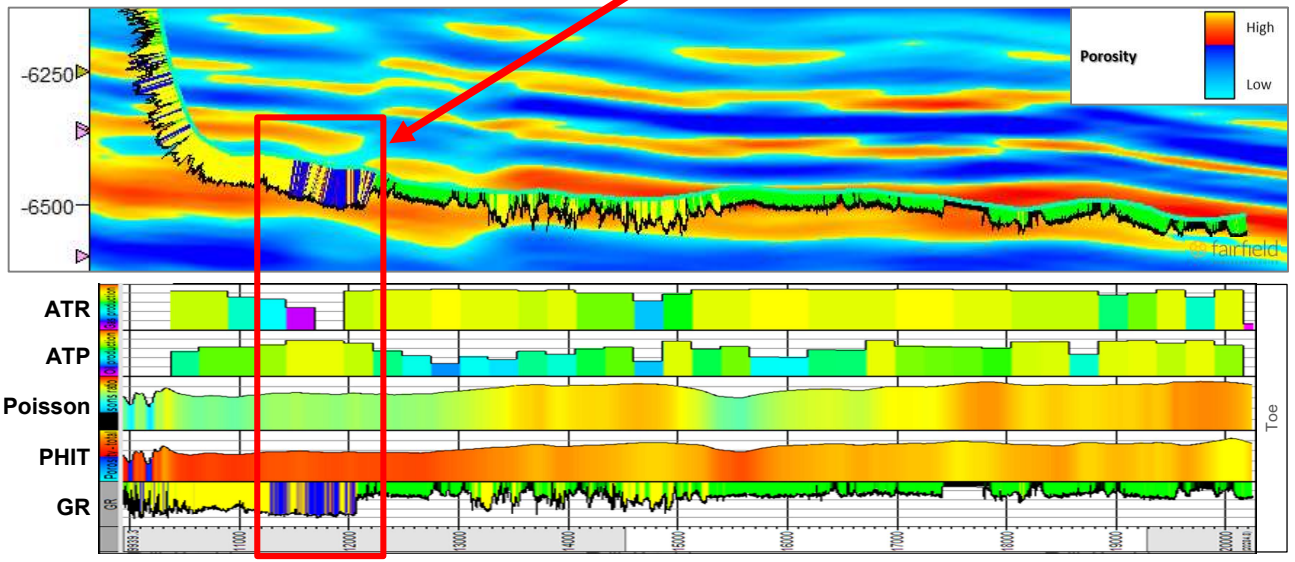
Geosteering X-Section



Rock Property Optimization X-Plot



Porosity Target Attribute[1] & Treatment Window



(1) Original seismic data licensed through Fairfield Geotechnologies

Wrap-Up and Investment Thesis

CENTENNIAL *2.0*

A Commitment to Capital Efficiency

- For Centennial, having this data science tool in house is a matter of pride for our organization
- Drives us to make data-driven decisions and incorporates information we feel is vital to the organization
- Allows us to study trends and ensures we are staying up-to-date with a rapidly evolving industry

Investment Highlights

- Delaware Basin Pure-Play
- > 15 Years of High-Quality Inventory
- Proven Operational Execution
- Sustainable Free Cash Flow Generation
- Significantly Lower Cost Structure
- Rapid Organic De-Leveraging
- Strong Liquidity
- No Near-Term Debt Maturities