

Company Overview

April 2023

Forward-Looking Statements

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This presentation contains projections and other forward-looking statements within the meaning of federal securities laws. These projections and statements reflect Riley Exploration Permian, Inc.'s ("Riley Permian") current views with respect to future events and financial performance. No assurances can be given, however, that these events will occur or that these projections will be achieved, and actual results could differ materially from those projected as a result of certain factors. A discussion of these factors is included in Riley Permian's periodic reports filed with the U.S. Securities and Exchange Commission ("SEC").

All statements, other than historical facts, that address activities that Riley Permian assumes, plans, expects, believes, intends or anticipates (and other similar expressions) will, should or may occur in the future are forward-looking statements. The forward-looking statements are based on management's current beliefs, based on currently available information, as to the outcome and timing of future events, including the volatility of oil, natural gas and NGL prices; the scope, duration, and reoccurrence of any epidemics or pandemics (including, specifically, the coronavirus disease 2019 ("COVID-19") pandemic and any related variants), including reactive or proactive measures taken by governments, regulatory agencies and businesses related to the pandemic, and the effects of COVID-19 on the oil and natural gas industry, pricing and demand for oil and natural gas and supply chain logistics; regional supply and demand factors, any delays, curtailment delays or interruptions of production, and any governmental order, rule or regulation that may impose production limits; cost and availability of gathering, pipeline, refining, transportation and other midstream and downstream activities; severe weather and other risks that lead to a lack of any available markets; our ability to successfully complete mergers, acquisitions and divestitures; the risk that the Company's EOR project may not perform as expected or produce the anticipated benefits; risks relating to our operations, including development drilling and testing results and performance of acquired properties and newly drilled wells; any reduction in our borrowing base on our revolving credit facility from time to time and our ability to repay any excess borrowings as a result of such reduction; the impact of our derivative strategy and the results of future settlement; our ability to comply with the financial covenants contained in our credit agreement; conditions in the capital, financial and credit markets and our ability to obtain capital needed for development and exploration operations on favorable terms or at all; the loss of certain tax deductions; risks associated with executing our business strategy, including any changes in our strategy; inability to prove up undeveloped acreage and maintain production on leases; risks associated with concentration of operations in one major geographic area; legislative or regulatory changes, including initiatives related to hydraulic fracturing, emissions, and disposal of produced water, which may be negatively impacted by regulation or legislation; the ability to receive drilling and other permits or approvals and rights-of-way in a timely manner (or at all), which may be restricted by governmental regulation and legislation; risks related to litigation; evolving geopolitical and military hostilities in other areas of the world; and cybersecurity threats, technology system failures and data security issues. These forward-looking statements involve certain risks and uncertainties that could cause the results to differ materially from those expected by the management of Riley Permian.

These forward-looking statements involve significant risks and uncertainties that could cause actual results to differ materially from those anticipated, including, but not limited to, the risk that Riley Permian may reduce, suspend or totally eliminate dividend payments in the future, whether variable or fixed, due to insufficient liquidity or other factors, potential adverse reactions or changes to the business or operations of Riley Permian resulting from the recently completed merger, including Riley Permian's future financial condition, results of operations, strategy and plans; changes in capital markets and the ability of Riley Permian to finance operations in the manner expected; the risk that the Company's EOR and CCUS projects may not perform as expected or produce the anticipated benefits; the risks of oil and gas activities; and the fact that operating costs and business disruption may be greater than expected following the consummation of the merger.

Riley Permian encourages readers to consider the risks and uncertainties associated with projections and other forward-looking statements. In addition, Riley Permian assumes no obligation to publicly revise or update any forward-looking statements based on future events or circumstances.

For additional discussion of the factors that may cause us not to achieve our financial projections and/or production estimates, see Riley Permian's filings with the SEC, including its forms 10-K, 10-Q and 8-K and any amendments thereto. We do not undertake any obligation to release publicly the results of any future revisions we may make to this prospective data or to update this prospective data to reflect events or circumstances after the date of this presentation. Therefore, you are cautioned not to place undue reliance on this information.

None of the information contained in this presentation has been audited by any independent auditor. This presentation is prepared as a convenience for securities analysts and investors and may be useful as a reference tool. Riley Permian may elect to modify the format or discontinue publication at any time, without notice to securities analysts or investors.

Use of non-GAAP Financial Information

This presentation includes certain financial measures that are not calculated in accordance with U.S. generally accepted accounting principles ("GAAP"). These measures include (i) Adjusted Net Income, (ii) Adjusted EBITDAX, (iii) Cash Margins, (iv) Free Cash Flow and (v) PV-10. These non-GAAP financial measures are not measures of financial performance prepared or presented in accordance with GAAP and may exclude items that are significant in understanding and assessing our financial results. Therefore, these measures should not be considered in isolation, and users of any such information should not place undue reliance thereon. See the Company's website, www.rileypermian.com, for the descriptions and reconciliations of non-GAAP measures presented in this presentation to the most directly comparable financial measures calculated in accordance with GAAP.

Oil & Gas Reserves

The SEC generally permits oil and natural gas companies, in filings made with the SEC, to disclose proved reserves, which are reserve estimates that geological and engineering data demonstrate with reasonable certainty to be recoverable in future years from known reservoirs under existing economic and operating conditions, and certain probable and possible reserves that meet the SEC's definitions for such terms. In this presentation, Riley Permian may use the terms "resource potential," "resource play," "estimated ultimate recovery," or "EURs," "type curve" and "standardized measure," each of which the SEC guidelines restrict from being included in filings with the SEC without strict compliance with SEC definitions. These terms refer to Riley Permian's internal estimates of unbooked hydrocarbon quantities that may be potentially discovered through exploratory drilling or recovered with additional drilling or recovery techniques. "Resource potential" is used by Riley Permian to refer to the estimated quantities of hydrocarbons that may be added to proved reserves, largely from a specified resource play potentially supporting numerous drilling locations. A "resource play" is a term used by Riley Permian to describe an accumulation of hydrocarbons known to exist over a large areal expanse and/or thick vertical section potentially supporting numerous drilling locations, which, when compared to a conventional play, typically has a lower geological and/or commercial development risk. "EURs" are based on Riley Permian's previous operating experience in a given area and publicly available information relating to the operations of producers who are conducting operations in these areas. Unbooked resource potential or "EURs" do not constitute reserves within the meaning of the Society of Petroleum Engineer's Petroleum Resource Management System or SEC rules and do not include any proved reserves. Actual quantities of reserves that may be ultimately recovered from Riley Permian's interests may differ substantially from those presented herein. Factors affecting ultimate recovery include the scope of Riley Permian's ongoing drilling program, which will be directly affected by the availability of capital, decreases in oil, natural gas liquids and natural gas prices, well spacing, drilling and production costs, availability and cost of drilling services and equipment, lease expirations, transportation constraints, regulatory approvals, negative revisions to reserve estimates and other factors, as well as actual drilling results, including geological and mechanical factors affecting recovery rates. "EURs" from reserves may change significantly as development of Riley Permian's core assets provides additional data. In addition, Riley Permian's production forecasts and expectations for future periods are dependent upon many assumptions, including estimates of production decline rates from existing wells and the undertaking and outcome of future drilling activity, which may be affected by significant commodity price declines or drilling cost increases. "Type curve" refers to a production profile of a well, or a particular category of wells, for a specific play and/or area.

Corporate Overview

- Riley Permian is a growth-oriented, independent oil and natural gas company with operations focused in Texas and New Mexico
- Core business operations focus on **modern horizontal drilling and completions** applied to the conventional formations in the Permian Basin
- With lower production declines than typical shale assets, our production volume can grow with **lower reinvestment rates** of internal cash generation, leaving a greater percentage of cash flow available to return to investors
- Capital allocation prioritizes **reinvesting for growth within operating cash flow and paying a growing dividend** to shareholders, which we have done for the past 16 quarters
- New business ventures associated with **carbon capture (CCUS)** activities and a joint venture for **onsite power generation** using produced gas

Select Company Metrics	
Net Acres	*~40K*
'23E Production(1)	*20.7 Mboed*
'23E(1) vs '22 Production Growth	*80%*
Equity Market Cap(2)	*~$930MM*
Enterprise Value(3)	*~$1.3BN*
YE23E Leverage(4)	*~1.3x*
Dividend Yield(2)	*2.9%*

(1) Based on midpoint guidance disclosed 3/8/23 and representing pro forma full year 2023 level as if the New Mexico Acquisition closed on January 1, 2023.
(2) Equity Market Cap and Dividend Yield based on share price as of 4/14/23.
(3) Based on share price as of 4/14/23, debt and cash balance as of 12/31/22 plus $330MM of financing related to the New Mexico Acquisition.
(4) YE23 Leverage based on forecasted debt balance as of 12/31/23 divided by forecasted, pro forma Adjusted EBITDAX (pro forma as if the New Mexico Acquisition closed on January 1, 2023 and using management estimates). Estimates based on actual prices through 4/14/23 and flat price case thereafter for WTI; each case uses $2.61 for Henry Hub natural gas index price. Adjusted EBITDAX is a non-GAAP financial measure as defined in the supplemental financial tables available on the company's website at www.rileypermian.com.

Riley Permian Asset Characteristics and Comparison to Shale(1)

Representative Statistics	Rock Properties	Well Cost per Completed Lateral Length	5-Yr Cumulative Oil Production per 1K ft Lateral	5-Yr Decline Rate	New Well 5-Yr MOIC	Oil EUR per 1K ft Lateral	Finding & Development Cost
		$/ft	MBo/1K ft	%	X	MBo/1K ft	$/Bbl
Riley Permian	Conventional: shallow TVD, porosity >10% and millidarcy permeability	$650 - $1,000	38 - 41	75% - 85%	2.5x – 3.3x	80 - 100	$7 - $12
Permian Shale	Unconventional: 10K ft TVD, low porosity and nanodarcy permeability	$1,000 - $1,100	30 – 50	90% - 95%	1.8x – 2.8x	55 - 95	$13 - $21

(1) Riley Permian well characteristics are a composite of Texas and New Mexico assets. Permian shale well characteristics based on public data provided by Enverus on wells drilled from 2017 to present in both the Delaware and Midland Basins. Well economics are run at a flat $80 WTI and $3.00 Henry Hub and assumes a 7,500ft lateral length for both cases.

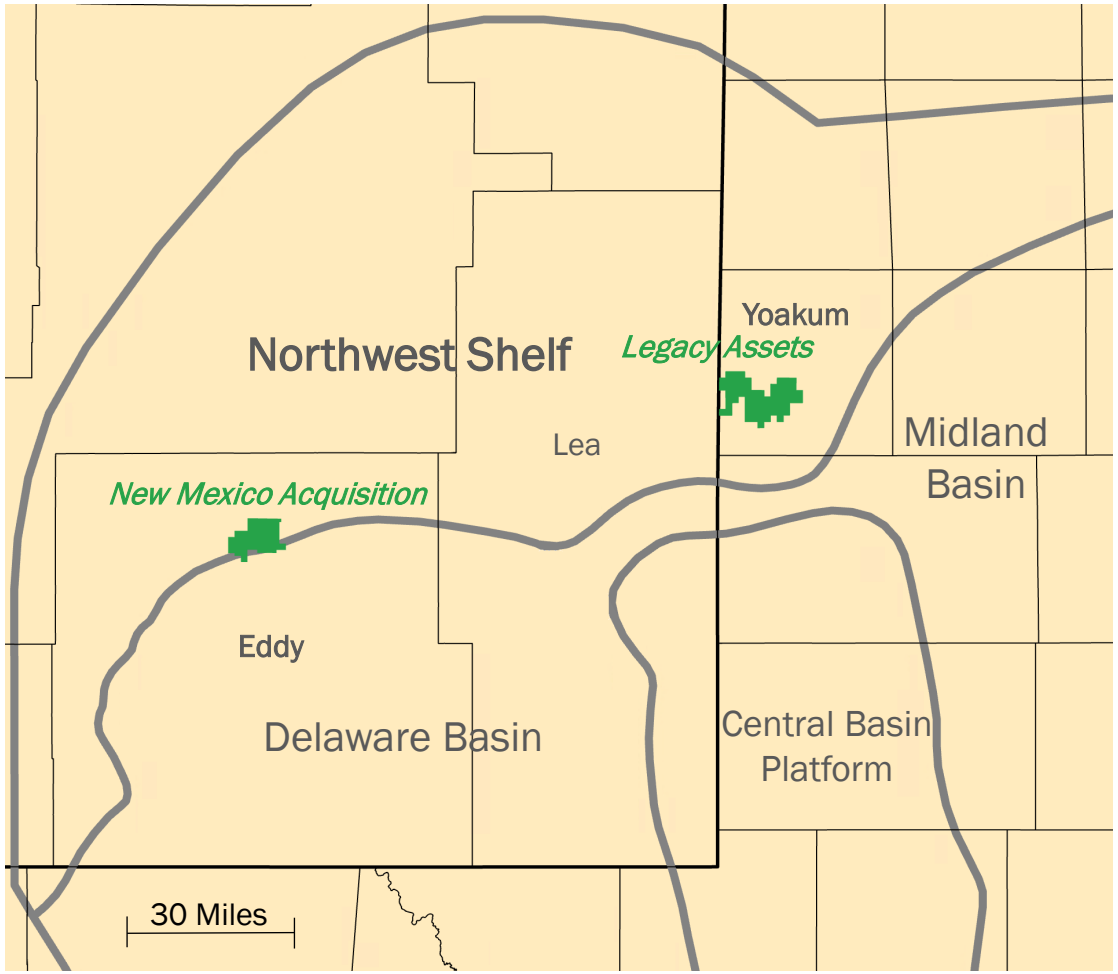
2022 Execution Highlights

1	Reinvested 70% of Adj. EBITDAX(1) to grow oil production organically Y/Y by 31%
2	Increased Adj. EBITDAX(1) Y/Y by 81% to $176MM
3	Increased FCF(1) by more than 5x Y/Y to $56MM
4	Increased dividend per share by 10% in 4Q22 to $0.34/share
5	Reduced debt by 14% Y/Y; ended year with $56MM of debt or 0.3x leverage

(1) A non-GAAP financial measure as defined in the supplemental financial tables available on the Company's website at www.rileypermian.com.

Transformative New Mexico Acquisition Closed April ‘23

- Strategic acquisition in the prolific Yeso trend (Eddy County, NM), along the same Northwest Shelf as legacy Yoakum County, TX properties
- ~4Mbopd and ~7Mboepd production
- 100+ gross, high-quality drilling locations including locations primarily in the Blinebry, Glorieta and Paddock formations
- Unadjusted purchase price of $330 million with 100% cash consideration
- Transaction was valued at 3.4x 2023 Adjusted EBITDAX(1) and a 15% free cash flow(1) yield
- Funded through a combination of borrowings under the Company's revolving credit facility and the proceeds from the issuance of $200MM of senior unsecured notes (10.5% annual interest, April 2028 maturity)



(1) A non-GAAP financial measure as defined in the supplemental financial tables available on the Company’s website at www.rileypermian.com.

2023 Plan Guidance (as Disclosed on 3/8/23)

Activity and Investing Guidance

		1Q23	2023 Reporting[1]
Forecasted Contribution of New Mexico Asset to Period		0%	75%
Texas Activity			
Gross Operated Wells Drilled	#	7 - 9	13 - 15
Avg. WI on Gross Oper. Wells Drilled	%	99% - 100%	98% - 99%
New Mexico Activity			
Gross Wells Drilled	#	0	7 - 9
Avg. WI on Gross Oper. Wells Drilled	%	NA	90% - 97%
Investing Expenditures by Category (Accrual)[3]			
E&P	$MM	44 - 50	150 - 165
Power JV Investment	$MM	3 - 4	10 - 15
Total Investments	$MM	47 - 54	160 - 180
E&P Capital Expenditures by Region (Accrual)[3]			
Texas	%	99% - 100%	65% - 75%
New Mexico	%	0%	35% - 25%

Assumed year-over-year inflation on service costs: 15-20%

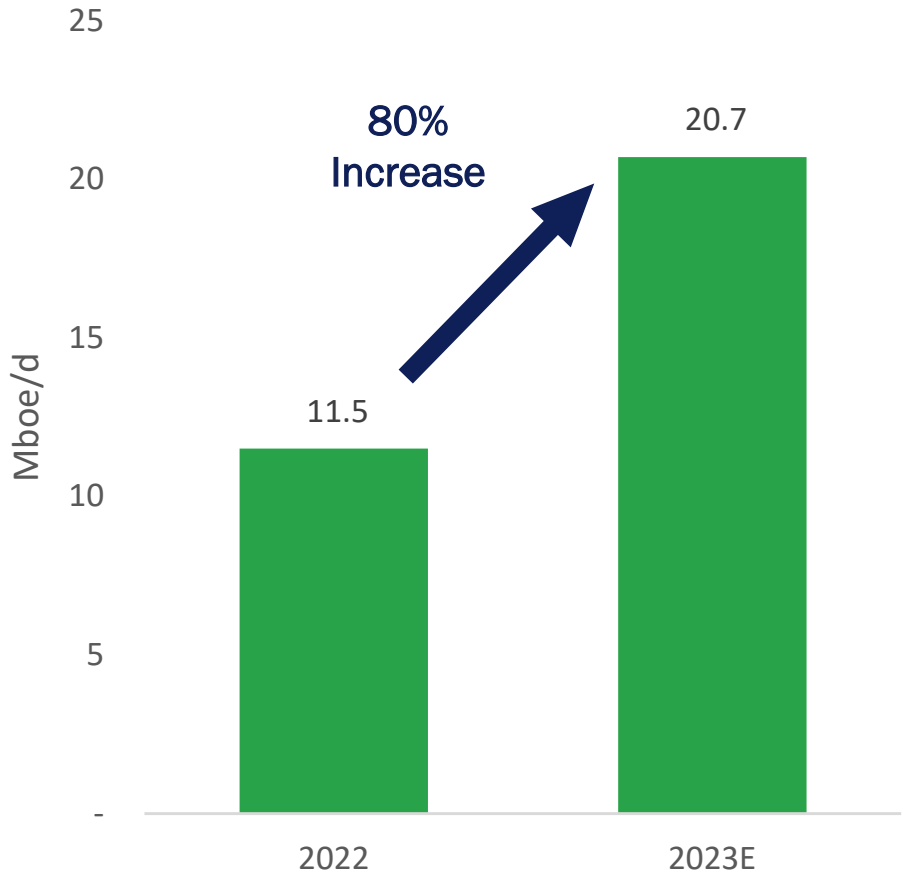
Production, Realizations and Cost Guidance

		1Q23	2023 Reporting[1]	2023 Illustrative Pro Forma[2]
Forecasted Contribution of New Mexico Asset to Period		0%	75%	100%
Net Production				
Total	MBoe/d	13.2 - 13.8	18.4 - 19.2	20.1 - 21.2
Oil	MBbls/d	9.8 - 10.2	12.8 - 13.4	13.8 - 14.6
% Oil	%	74% - 75%	70% - 71%	68% - 69%
% Natural Gas	%	16% - 14%	16% - 15%	18% - 16%
% NGL	%	10% - 11%	14% - 14%	14% - 15%
Basis Differentials and Fees				
Oil	$/Bbl	(3.65) - (3.15)	(3.90) - (2.90)	
Natural Gas	$/Mcf	(2.90) - (2.50)	(2.70) - (2.10)	
NGL as a % of WTI	% of WTI	9% - 13%	12% - 16%	
Operating and Corporate Costs				
LOE	$/Boe	8.00 - 9.00	8.00 - 9.00	
Severance & Ad Valorem Tax	% of revenue	6.0% - 8.0%	6.0% - 8.0%	
Cash G&A[4]	$/Boe	3.80 - 4.40	3.00 - 3.50	
Cash Income Taxes	$MM	0.0 - 0.5	6.0 - 8.0	

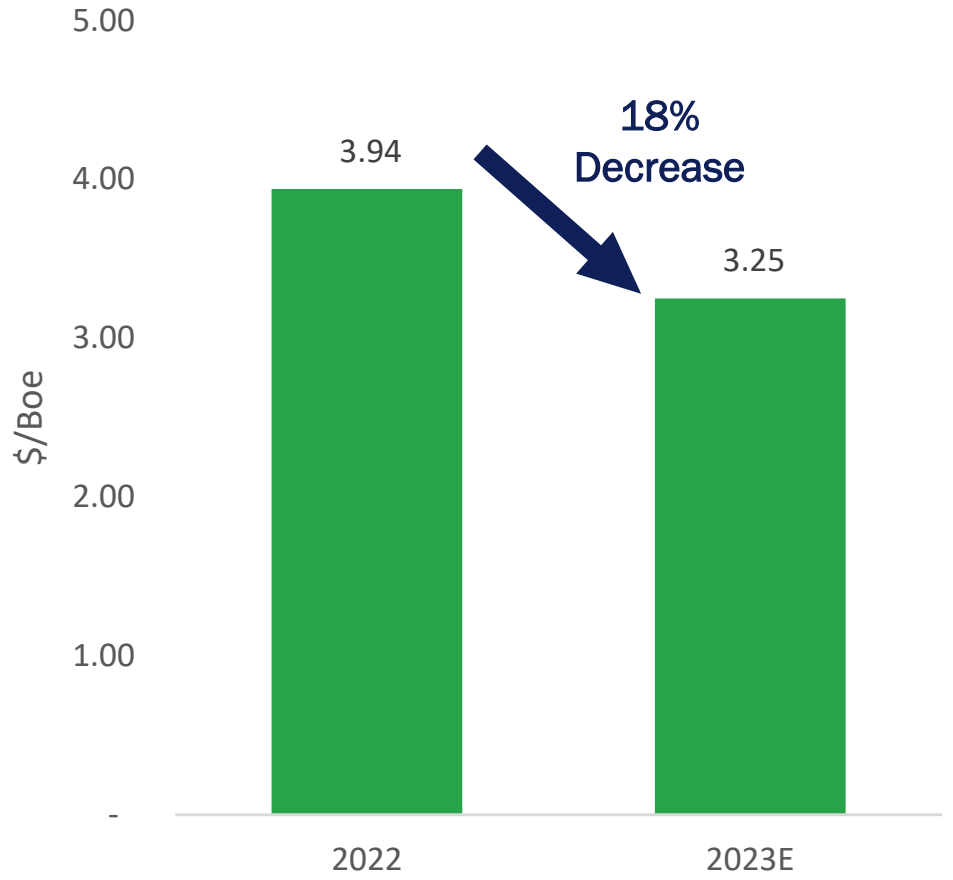
(1) Full year 2023 guidance information here reflects the impact of the New Mexico Acquisition for the second, third and fourth quarters of 2023.
(2) Pro forma full year 2023 as if the New Mexico Acquisition closed on January 1, 2023.
(3) Activity-based investing expenditures before acquisitions.
(4) A non-GAAP financial measure as defined and reconciled in the supplemental financial tables available on the Company's website at www.rileypermian.com.

2023 Plan Highlights: Enhancing Scale and Improving Cost Structure

Y/Y Production[(1)(2)]



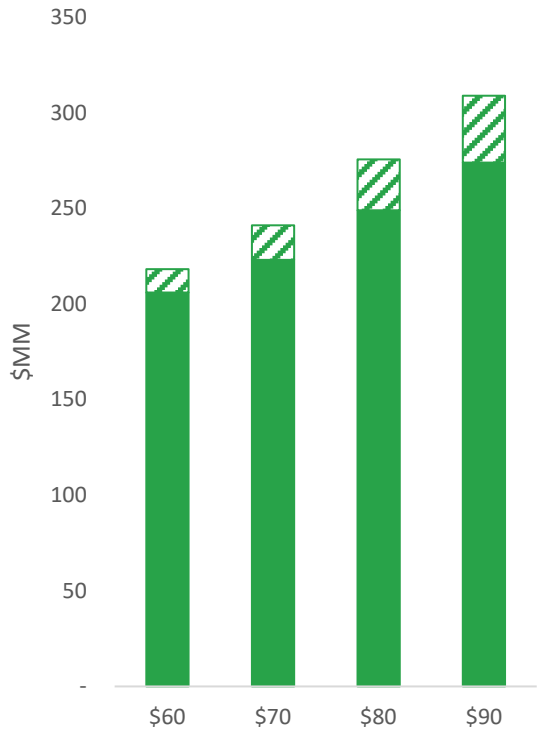
Y/Y Cash G&A[(1)(3)]



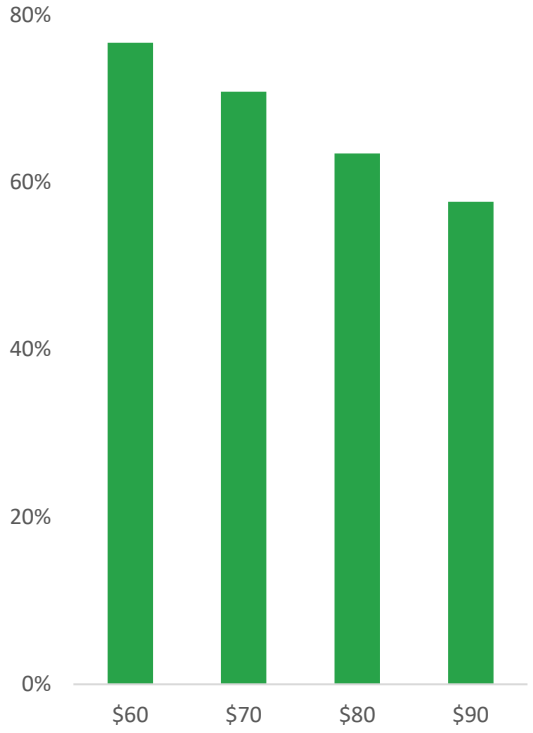
(1) Based on midpoint guidance disclosed 3/8/23.
(2) Represents pro forma full year 2023 level as if the New Mexico Acquisition closed on January 1, 2023.
(3) A non-GAAP financial measure as defined in the supplemental financial tables available on the company's website at www.rileypermian.com.

2023 Plan Forecasts Sensitizing Oil Price[(1)]

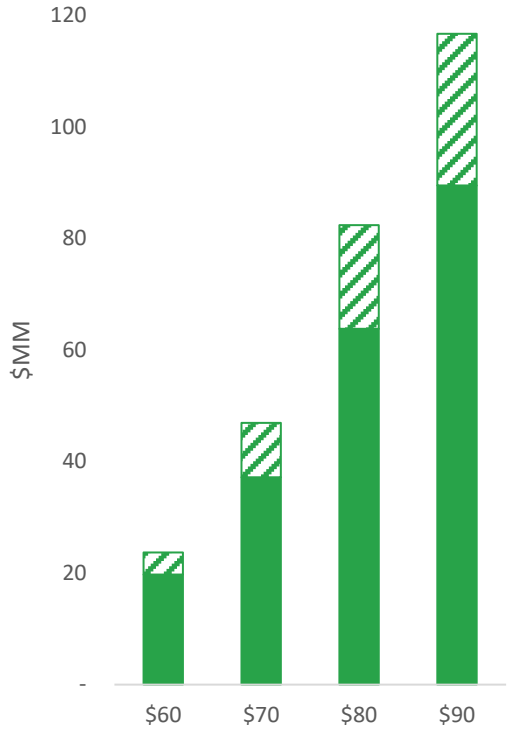
Adjusted EBITDAX[(2)]



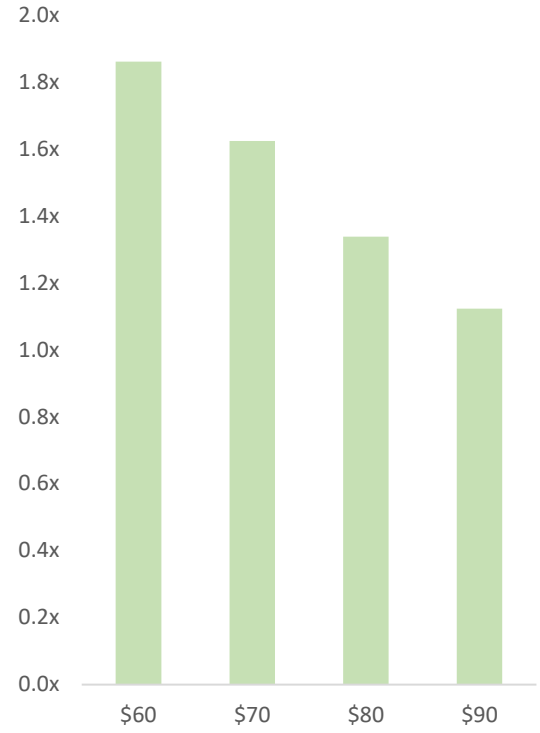
E&P Reinvestment Rate vs. EBITDAX[(2)(3)]



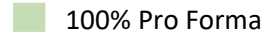
E&P FCF[(2)(4)]



YE23 Leverage[(5)]







(1) Based on management estimates and midpoint guidance. Price sensitivity uses actual prices through 3/31/2023 and flat price case thereafter; each case uses NYMEX strip as of 4/12/23 for Henry Hub natural gas index price. "75% As Reported" metrics reflect the impact of the New Mexico Acquisition for the second, third and fourth quarters of 2023. "100% Pro Forma" metrics represent illustrative, run-rate metrics as if the New Mexico Acquisition closed on January 1, 2023.
(2) A non-GAAP financial measure as defined in the supplemental financial tables available on the company's website at www.rileypermian.com.
(3) E&P Reinvestment Rate defined as accrual-based capital expenditures associated with E&P activity (excluding Power JV Investment), divided by Adjusted EBITDAX.
(4) E&P FCF is defined as EBITDAX less interest expense and midpoint E&P accrual capex. Excludes Power JV investment.
(5) YE23 Leverage based on forecasted debt balance as of 12/31/23 divided by Adjusted EBITDAX, which is a non-GAAP financial measure as defined in the supplemental financial tables available on the company's website at www.rileypermian.com.

Potential Upside and Diversification through New Ventures

	Description and Strategy	Status
Onsite Power JV	• Onsite power generation using produced gas • Objective to improve operations with consistent, quality electric power, which should help control costs and reduce emissions from produced gas	• Generators and others equipment ordered • Site preparation and infrastructure buildout underway
EOR	• Enhanced Oil Recovery pilot begun on a half-section in Yoakum County, Texas • Will use a combination of water and CO_2 for injection, applied to three horizontal producing wells	• Began injecting CO_2 in November 2022 • Early in the process of repressurizing the reservoir
CCUS	• Yoakum County asset geology has characteristics suitable for CO_2 storage, whether through EOR activity or permanent storage • Can lead to additional revenue stream, reduced CO_2 cost for EOR and reduced emissions profile	• Advancing with partners on the potential development of a large-scale CO_2 storage hub in our immediate region of the Permian Basin

Investment Highlights: Inflation Hedge, Yield-Oriented Growth Story

Multi-year track record of organic growth in production, cash flow and reserves across commodity cycles

Premier, oil-based, conventional assets with low decline rates that enables capital efficiency

Proven and aligned management team with substantial expertise across disciplines and long-term perspective

Operating and financial performance metrics compete with top E&Ps

Potential upside through new ventures such as our power JV, EOR and CCUS

Consistent dividend payer with 2.9% current yield; corporate objective to grow the dividend annually(1)

(1) Future dividends are subject to approval by the board of directors. Yield based on share price as of 4/14/23.



Appendix

ESG Highlights

Committed to ESG engagement while responsibly producing some of the world's most demanded natural resources

Environmental

- Formed JV to use produced gas for onsite power generation which will reduce emissions
- Pursuing CCUS activities to capture and storage industrial CO_2
- Onsite pipelines transport nearly all of our Texas production volumes, eliminating trucking and associated emissions
- Our 2022 pneumatic device replacement project has resulted in a 92% reduction in methane emissions from pneumatic devices

Social

- Providing low-cost, reliable and secure energy to society
- U.S.-based workforce, with zero offshoring of employed labor, producing U.S. natural resources
- Zero recordable employee injuries in 2021 and 2022
- Large majority of employees are also stockholders, granted through long-term incentive plans

Governance

- Prioritizing long-term corporate sustainability and creating value for shareholders
- Balanced board of directors: significant shareholder representation; 4 of 6 directors are independent; 3 of 6 diverse (gender or ethnicity)
- 100% of committee representation is from independent directors
- Executive alignment with shareholders as 2/3rds of executive's target incentive compensation is in the form of stock

Hedging Positions as of 4/14/23

Calendar Quarters	2023 1Q	2023 2Q	2023 3Q	2023 4Q	2024 1Q	2024 2Q	2024 3Q	2024 4Q	2025 1Q
CRUDE OIL									
Fixed Swap - Volume, Bbls/Qtr	225,000	498,000	407,000	347,000	105,000	105,000	105,000	105,000	-
Weighted Average Price, $/Bbl	$53.65	$67.32	$67.97	$67.68	$71.77	$71.77	$71.77	$71.77	$0.00
Collars - Volume, Bbls/Qtr	210,000	300,000	330,000	330,000	520,000	390,000	366,000	345,000	423,000
Weighted Average Floor Price, $/Bbl	$70.95	$71.50	$68.64	$68.64	$61.41	$61.08	$61.00	$60.87	$60.00
Weighted Average Ceiling Price, $/Bbl	$89.96	$88.98	$88.85	$88.85	$84.00	$85.76	$83.61	$84.26	$77.23
Total Oil Price Hedges, Bbls/Qtr	435,000	798,000	737,000	677,000	625,000	495,000	471,000	450,000	423,000
CRUDE OIL BASIS									
Mid/Cush Basis Swaps - Volume, Bbls/Qtr	240,000	360,000	360,000	360,000	240,000	240,000	240,000	240,000	-
Weighted Average Price, $/Bbl	$1.28	$1.28	$1.28	$1.28	$0.87	$0.87	$0.87	$0.87	$0.00
NATURAL GAS									
Swaps - Volume, MMBtu/Qtr	-	450,000	450,000	400,000	375,000	375,000	375,000	375,000	375,000
Weighted Average Price, $/MMBtu	$0.00	$2.60	$2.60	$3.23	$3.61	$3.17	$3.17	$3.75	$4.05
Collars - Volume, MMBtu/Qtr	-	300,000	300,000	300,000	300,000	255,000	255,000	255,000	255,000
Weighted Average Floor Price, $/MMBtu	$0.00	$2.55	$2.55	$3.12	$3.40	$2.95	$2.95	$3.42	$3.65
Weighted Average Ceiling Price, $/MMBtu	$0.00	$3.20	$3.20	$4.07	$4.50	$3.72	$3.72	$4.54	$4.95
Total NG Price Hedges, MMBtu/Qtr	-	750,000	750,000	700,000	675,000	630,000	630,000	630,000	630,000
INTEREST RATE									
Swaps - Notional Volume (000's)	$ -	$ -	$ -	$ -	$ -	$ 80,000	$ 80,000	$ 80,000	$ 80,000
1-Month SOFR	0%	0%	0%	0%	0%	3.09%	3.09%	3.09%	3.09%

- Company added derivative positions in conjunction with the New Mexico Acquisition
- 57% of 2Q-4Q 2023 forecasted oil production is hedged based on midpoint guidance level
- 42% of 2Q-4Q 2023 forecasted natural gas production is hedged based on midpoint guidance level

Note: Q1 2023 derivative positions shown include all contracts that have settled as of 4/14/23

Equity Ownership and Research Analyst Coverage

Equity Ownership

> 5% Holders and Insiders as of 4/1/23[1]	Shares (MM)	Ownership %
Yorktown Energy Partners[2]	5.51	27.3%
Bluescape Energy Partners	5.22	25.9%
Balmon Investments[2]	2.02	10.0%
VandenBrink Estate[2]	1.97	9.8%
Riley Permian Management	0.81	4.0%
Board of Directors	0.04	0.2%
Estimated Public Float	4.60	22.8%
Total	**20.17**	**100.0%**
Total Insider Ownership	**6.36**	**31.5%**

Total shares inclusive of restricted stock awards

Research Analyst Coverage

	Firm	Analyst	Access
1	Roth	John White	Public Link
2	Truist	Neal Dingmann	Contact firm
3	Water Tower	Jeff Robertson	Public Link
4	Energy Prospectus Group	Daniel Steffens	Contact firm

(1) Source: SEC Filings. Insiders include Yorktown, management and the board of directors.
(2) Includes affiliated entity holdings aggregated from Form 4 filings.

Additional Information

Company

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