RILEY PERMIAN

Company Overview

August 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; 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 inability or failure of the Company to successfully integrate the acquired assets into its operations and development activities; the potential delays in the development, construction or start-up of planned projects; 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; restrictions on the use of water, including limits on the use of produced water and a moratorium on new produced water well permits recently imposed by the RRC in an effort to control induced seismicity in the Permian Basin; changes in government environmental policies and other environmental risks; the availability of drilling equipment and the timing of production; tax consequences of business transactions; public health crisis, such as pandemics and epidemics, and any related government policies and actions and the effects of such public health crises on the oil and natural gas industry, pricing and demand for oil and natural gas and supply chain logistics; general domestic and international economic, market and political conditions, including the military conflict between Russia and Ukraine and the global response to such conflict; risks related to litigation; 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 and Strategy

Riley Permian is a growth-oriented, independent oil and natural gas company with operations focused in Texas and New Mexico

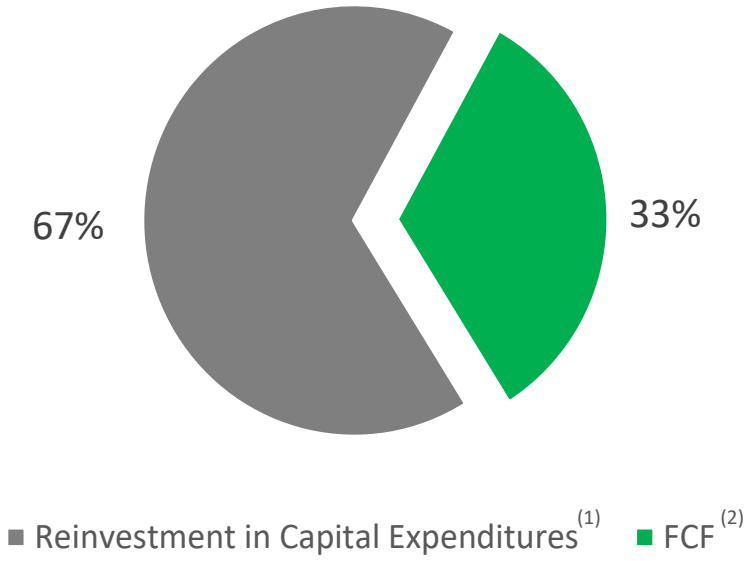
- We focus on **modern horizontal drilling and completions** applied to the **conventional formations** in the Permian Basin
- We believe our assets' **production decline rates are slower** than those of typical shale assets
- We aim to grow organically while reinvesting only a portion of our operating cash flow, which allows for **excess cash to be used for debt reduction and direct return of capital to shareholders**
- We invest capital in **new assets and ventures** that we believe can optimize our business and offer attractive rates of return

Select Company Metrics	
Net Acres	*~44K*
'23E Production(1)	*18.8 Mboed*
'23E(1) vs '22 Production Growth	*63%*
Equity Market Cap(2)	*~$750MM*
Enterprise Value(3)	*~$1.16BN*
Dividend Yield(2)	*3.6%*

(1) Based on midpoint guidance.
(2) Equity Market Cap and Dividend Yield based on share price as of 8/4/23.
(3) Based on share price as of 8/4/23, debt and cash balance as of 6/30/23.

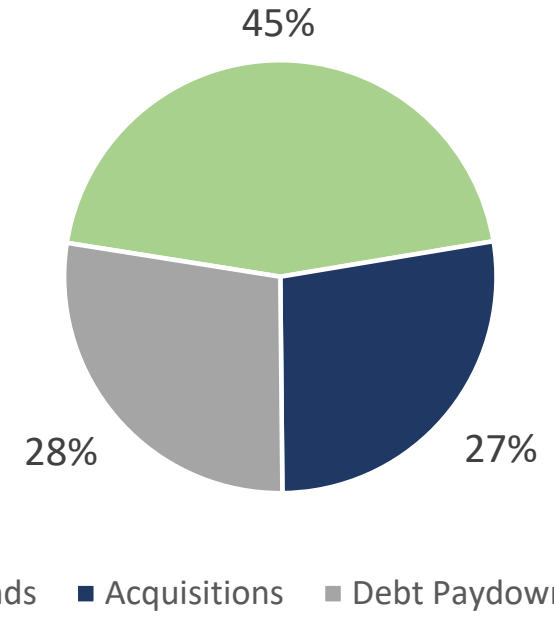
Highlights of 2022 Allocation of Cash Flow

Allocation of Operating Cash Flow before Changes in W/C ("CFFO")



Reinvested 67% of CFFO to grow oil production organically by 31% Y/Y

Allocation of FCF(2)



Returned 45% of FCF(2) to shareholders in the form of dividends

(1) Includes Additions to Oil & Gas Properties and Other Additions to Property & Equipment
(2) A non-GAAP financial measure as defined in the supplemental financial tables available on the company's website at www.rileypermian.com.

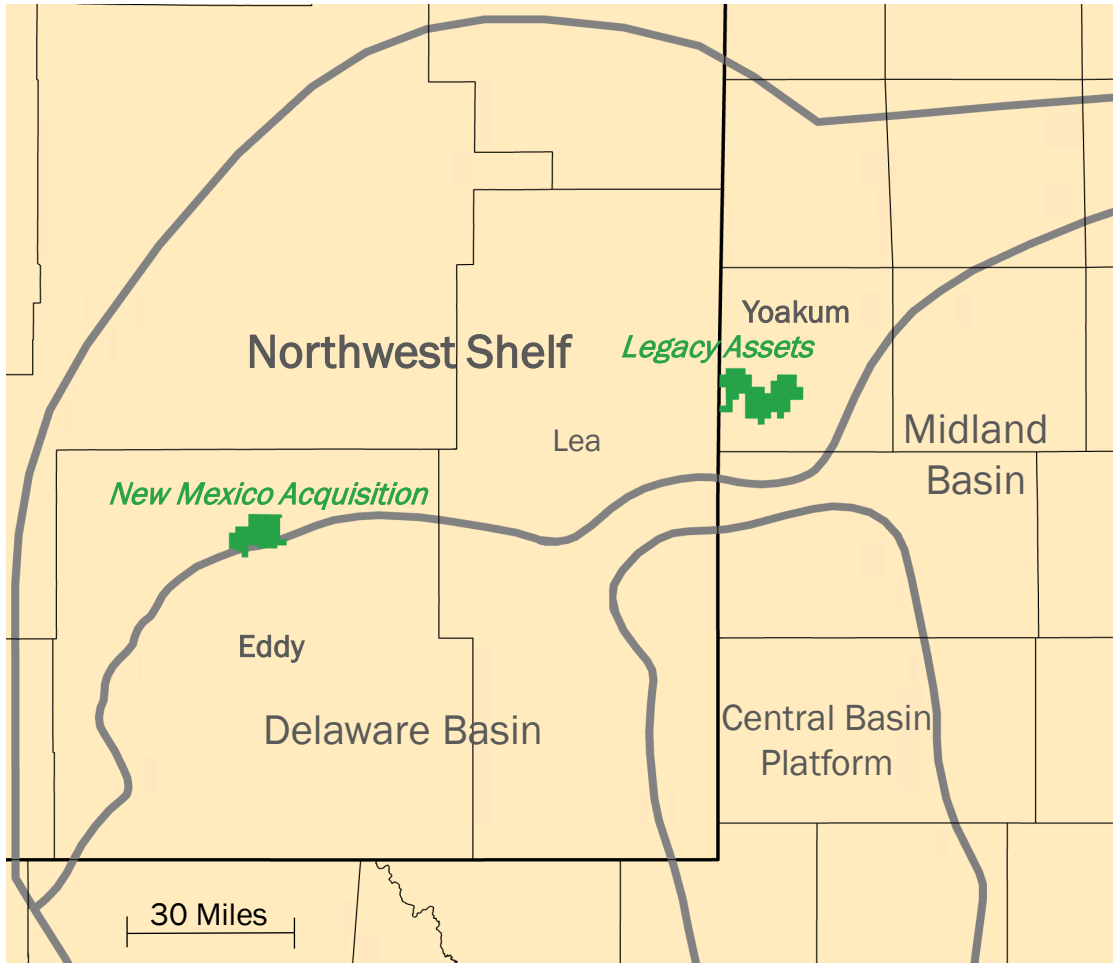
Riley Permian Asset Characteristics and Comparison to Shale[(1)]

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
		$/ft	MBo/1K ft	%	X
Riley Permian	Conventional: shallow TVD, porosity >10% and millidarcy permeability	$650 - $1,000	38 - 41	75% - 85%	2.5x – 3.3x
Permian Shale	Unconventional: 10K ft TVD, low porosity and nanodarcy permeability	$1,000 - $1,100	30 - 50	90% - 95%	1.8x – 2.8x

(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.

Transformative New Mexico Acquisition Closed April ‘23

- Strategic acquisition in the prolific Yeso trend (Eddy County, NM)
- Situation along the same Northwest Shelf as legacy Yoakum County, TX properties, approximately 75 miles apart
- Significantly extends inventory duration with high-quality drilling locations
- Unadjusted purchase price of $330 million
- 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



Updated 2023 Plan Guidance

Activity and Investing Guidance

		3Q23	Full-Year 2023 Prior	Full-Year 2023 Updated
Texas Activity				
Gross Operated Wells Drilled	#	4	13 - 15	13
Avg. WI on Gross Oper. Wells Drilled	%	98% - 100%	98% - 99%	98% - 100%
New Mexico Activity				
Gross Wells Drilled	#	0	7 - 9	4
Avg. WI on Gross Oper. Wells Drilled	%	NM	90% - 97%	91% - 98%
Investing Expenditures by Category (Accrual)[1]				
Capex, Leasehold and Cap. Interest	$MM	35 - 45	150 - 165	130 - 140
Power JV Investment	$MM	1 - 3	10 - 15	10 - 12
Total Investments	$MM	36 - 48	160 - 180	140 - 152
E&P Capital Expenditures by Region (Accrual)[1]				
Texas	%	63% - 73%	65% - 75%	74% - 84%
New Mexico	%	37% - 27%	35% - 25%	26% - 16%

Production, Realizations and Cost Guidance

		3Q23	Full-Year 2023 Prior	Full-Year 2023 Updated
Net Production				
Total	MBoe/d	18.6 - 19.8	18.4 - 19.2	18.4 - 19.2
Oil	MBbls/d	13.0 - 14.0	12.8 - 13.4	12.8 - 13.4
% Oil	%	70% - 71%	70% - 71%	70% - 71%
% Natural Gas	%	16% - 14%	16% - 15%	16% - 15%
% NGL	%	14% - 15%	14% - 14%	14% - 14%
Basis Differentials and Fees				
Oil	$/Bbl	(3.25) - (2.25)	(3.90) - (2.90)	(3.00) - (2.00)
Natural Gas	$/Mcf	(2.70) - (2.10)	(2.70) - (2.10)	(2.70) - (2.10)
NGL as a % of WTI	% of WTI	5% - 9%	10% - 14%	8% - 14%
Operating and Corporate Costs				
LOE & Workover Expense	$/Boe	8.50 - 9.50	8.00 - 9.00	8.00 - 9.00
Severance & Ad Valorem Tax	% of revenue	6.0% - 8.0%	6.0% - 8.0%	6.0% - 8.0%
Cash G&A[2]	$/Boe	3.00 - 3.50	3.00 - 3.50	3.00 - 3.50
Cash Income Taxes	$MM	3.0 - 4.0	6.0 - 8.0	8.0 - 10.0

(1) Activity-based investing expenditures before acquisitions.
(2) A non-GAAP financial measure as defined and reconciled in the supplemental financial tables available on the Company's website at www.rileypermian.com.



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, with a goal to reduce flaring
- 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, 2022 and 2023 YTD
- 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
- 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 8/4/23

Calendar Quarters	2023 3Q	2023 4Q	2024 1Q	2024 2Q	2024 3Q	2024 4Q	2025 1Q	2025 2Q
CRUDE OIL								
Fixed Swap - Volume, Bbls/Qtr	437,000	392,000	150,000	180,000	180,000	180,000	45,000	90,000
Weighted Average Price, $/Bbl	$68.18	$68.06	$71.17	$70.37	$70.37	$70.37	$71.25	$68.16
Collars - Volume, Bbls/Qtr	330,000	330,000	520,000	390,000	366,000	345,000	423,000	-
Weighted Average Floor Price, $/Bbl	$68.64	$68.64	$61.41	$61.08	$61.00	$60.87	$60.00	$0.00
Weighted Average Ceiling Price, $/Bbl	$88.85	$88.85	$84.00	$85.76	$83.61	$84.26	$77.23	$0.00
Total Oil Price Hedges, Bbls/Qtr	767,000	722,000	670,000	570,000	546,000	525,000	468,000	90,000
Downside Weighted Average Price, $/Bbl	$68.38	$68.32	$63.60	$64.01	$64.09	$64.13	$61.08	$68.16
CRUDE OIL BASIS								
Mid/Cush Basis Swaps - Volume, Bbls/Qtr	420,000	450,000	330,000	330,000	330,000	330,000	-	-
Weighted Average Price, $/Bbl	$1.28	$1.28	$0.97	$0.97	$0.97	$0.97	$0.00	$0.00
NATURAL GAS								
Swaps - Volume, MMBtu/Qtr	470,000	670,000	750,000	600,000	600,000	450,000	375,000	150,000
Weighted Average Price, $/MMBtu	$2.61	$3.26	$3.48	$3.21	$3.21	$3.67	$4.05	$3.54
Collars - Volume, MMBtu/Qtr	300,000	300,000	300,000	255,000	255,000	255,000	255,000	300,000
Weighted Average Floor Price, $/MMBtu	$2.55	$3.12	$3.40	$2.95	$2.95	$3.42	$3.65	$3.00
Weighted Average Ceiling Price, $/MMBtu	$3.20	$4.07	$4.50	$3.72	$3.72	$4.54	$4.95	$4.10
Total NG Price Hedges, MMBtu/Qtr	770,000	970,000	1,050,000	855,000	855,000	705,000	630,000	450,000
Downside Weighted Average Price, $/MMBtu	$2.58	$3.22	$3.46	$3.13	$3.13	$3.58	$3.89	$3.18
INTEREST RATE								
Swaps - Notional Volume (000's)	$ -	$ -	$ -	$ 80,000	$ 80,000	$ 80,000	$ 80,000	$ 80,000
1-Month Term SOFR	0%	0%	0%	3.09%	3.09%	3.09%	3.09%	3.09%

- 59% of 3Q-4Q 2023 forecasted oil production is hedged based on midpoint guidance level, including:
  - approximately 33% of forecasted oil production hedged with swaps with an average floor of $68.12/bbl
  - approximately 26% of forecasted oil production hedged with collars with an average floor price of $68.64/bbl and average ceiling price of $88.85/bbl
- $80MM/quarter of notional interest rate swaps for 2Q24 - 2Q25 at 3.1% provide risk protection in a rising rate environment

Note: Q3 2023 derivative positions shown include all contracts that have settled as of 8/4/23

Equity Ownership and Research Analyst Coverage

Equity Ownership

> 5% Holders and Insiders as of 6/30/23[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	0.78	3.9%
Board of Directors	0.06	0.3%
Estimated Public Float	4.62	22.8%
Total	**20.18**	**100.0%**
Total Insider Ownership	**6.34**	**31.4%**

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
5	Tuohy Brothers	Noel Parks	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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