RILEY PERMIAN

Company Overview

November 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, the Israel-Hamas conflict and the global response to such conflicts; 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, and (iv) Free Cash Flow. 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, oil and natural gas company with operations focused in Texas and New Mexico

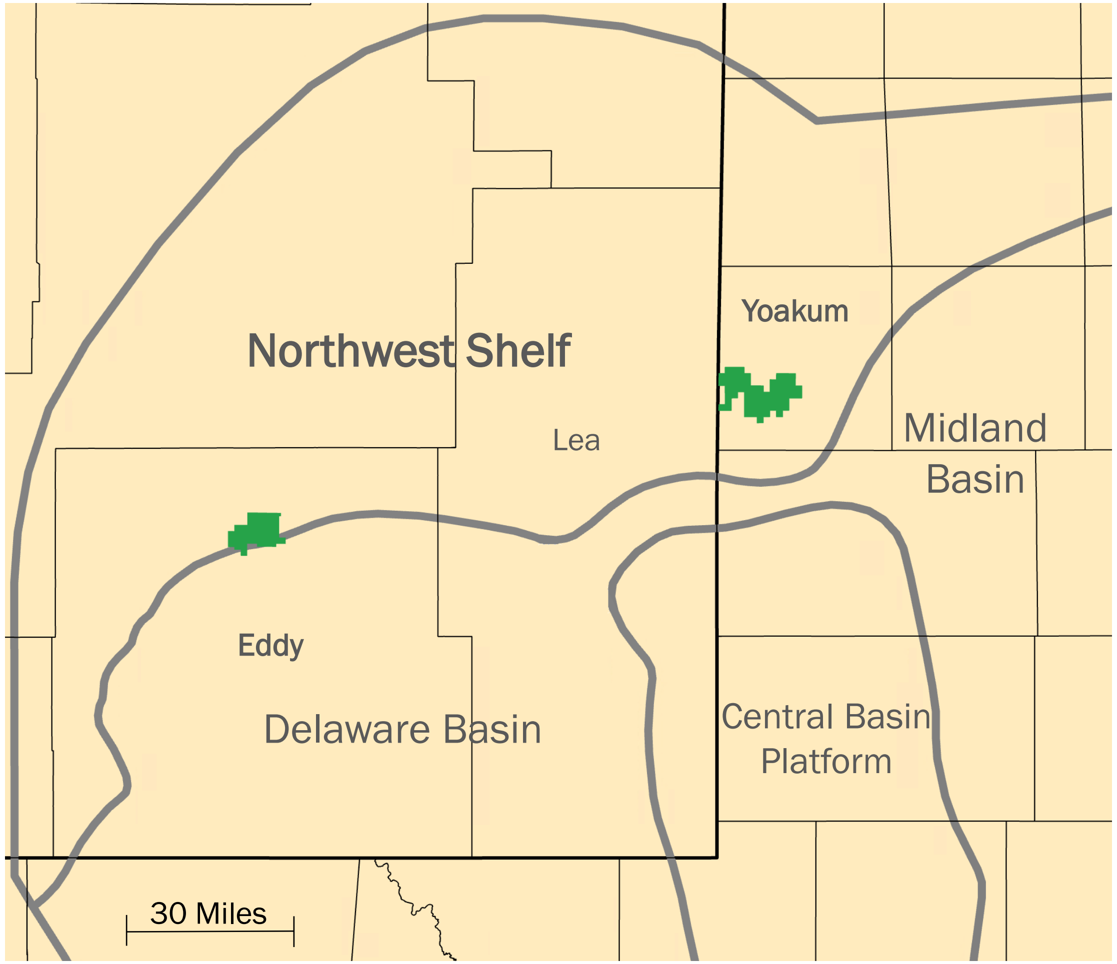
- We focus on **modern horizontal drilling and completions** applied to **conventional formations** in the Permian Basin
- We believe our assets' **economics compare favorably** to those of typical shale assets
- We have a **track record of growth** through organic development and acquisitions
- We invest in **infrastructure assets and related ventures** that we believe can optimize our business and offer attractive rates of return
- We allocate **excess cash flow to debt reduction and direct return of capital to shareholders**

Select Company Metrics	
Net Acres	*44K*
3Q23 Production(1)	*19.9 Mboed*
Equity Market Cap(2)	*$647MM*
Enterprise Value(3)	*$1.04BN*
Dividend Yield(2)	*4.6%*

(1) Based on the quarter ending 9/30/2023.
(2) Equity Market Cap and Dividend Yield based on share price and shares outstanding as of 10/31/23. Future dividends subject to approval by the board of directors.
(3) Enterprise Value based on share price and shares outstanding as of 10/31/23, debt and cash balance as of 9/30/23.

Oil-Based, Conventional Asset Base

- Riley Permian's focus is on horizontal well development of conventional hydrocarbon formations on the Northwest Shelf of the Permian Basin
- 44K net acres owned across Texas and New Mexico assets
- Large degree of operatorship and generally high net working interests across assets
- Reservoirs have excellent natural permeability and porosity, which allows large volumes of fluids to move through the rock to the borehole, with less intensive stimulation



Riley Permian's Assets Compare Favorably to Shale[(1)]

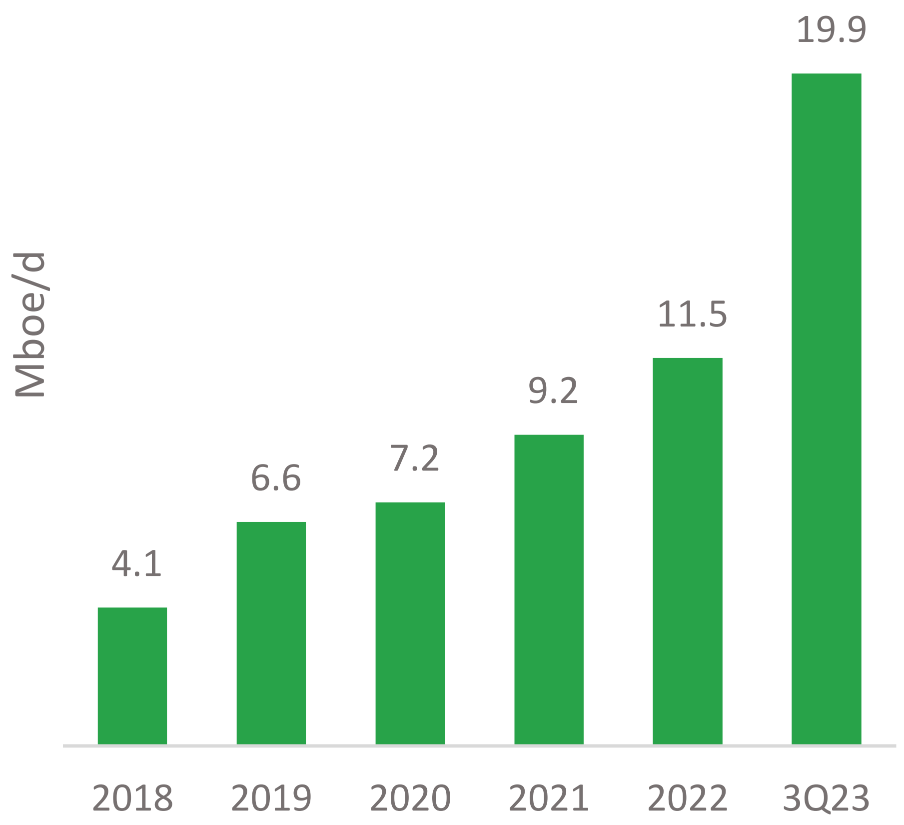
Rock Properties	Well Depth	Well Cost per Completed Lateral Length	5-Yr Cumulative Oil Production per 1K ft Lateral
Higher porosity and permeability	~50-60% shallower	~20-40% less expensive	Comparable

(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 March 2023 in both the Delaware and Midland Basins. Permian shale well costs based on 2023 activity provided by IHS.

Track Record of Growth

2018 – 2022

- Growth over the past 5+ years was driven nearly entirely by organic development
- 22% cumulative annual growth rate
- Funded primarily by cash flow from operations



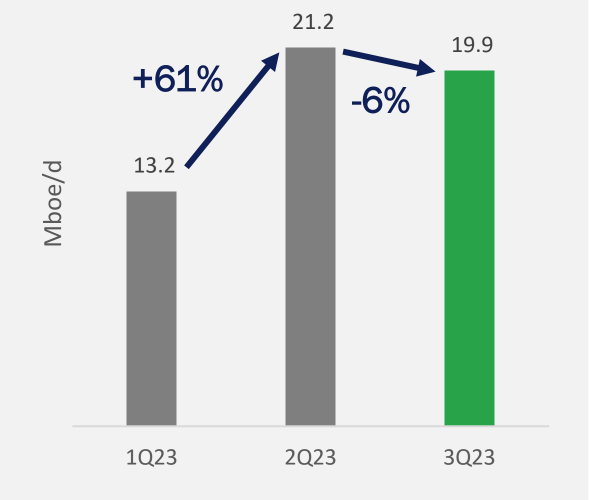
2023

- 2023 growth driven by a combination of organic development and a sizable acquisition of New Mexico properties
- Acquisition was funded through a combination of borrowings under the Company's credit facility and the proceeds from the issuance of $200MM of senior unsecured notes due 2028

Executing on Our 2023 Plan in the Second Half of the Year

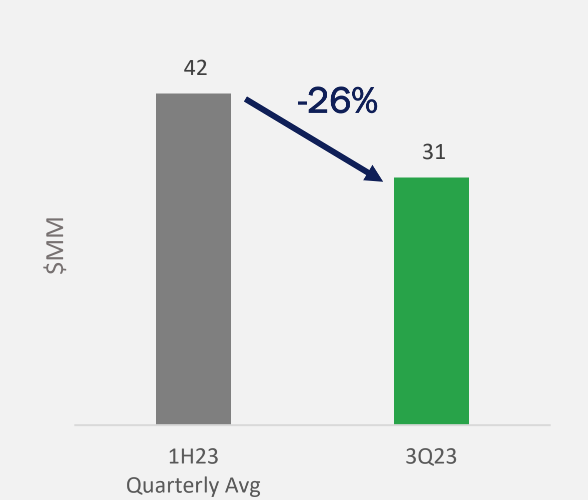
Moderating Production Volume

Planned decrease in 3Q/4Q23 volume following high level in 2Q23 relative to our full-year plan, including with the intent to maximize full-year free cash flow[(1)]



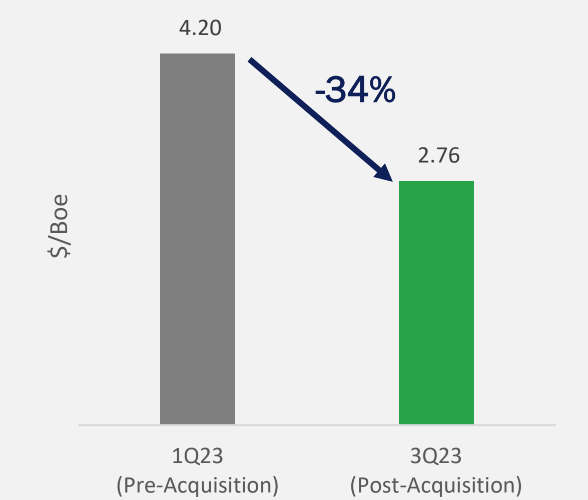
Reducing Capital Expenditures[(2)]

Planned decrease in 2H23 given development was front-weighted to 1H23 relative to our full-year plan



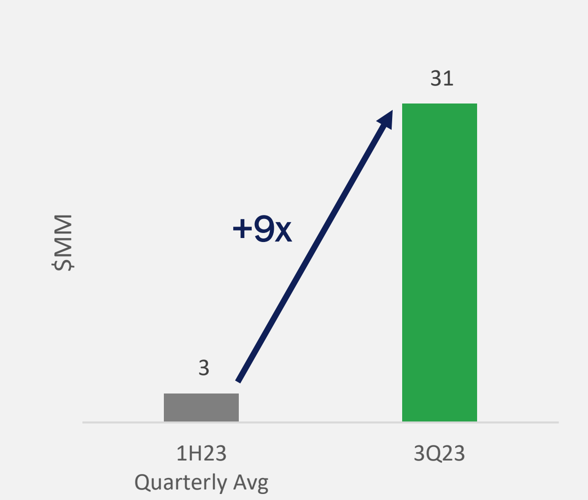
Reducing Cash G&A[(1)] per Boe

Administrative synergies realized following New Mexico acquisition



Increasing Free Cash Flow[(1)]

Planned increase in 2H23 following moderating capital expenditures[(2)]



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

Capital Allocation Priorities

	MAINTAIN & GROW	DELEVER	RETURN CAPITAL TO SHAREHOLDERS
Objectives	*Reinvest to maintain and grow cash flow from operations and Free Cash Flow[(1)]*	*Strengthen balance sheet to optimize capital structure, maintain flexibility and increase liquidity*	*Provide sustainable and growing return of capital*
Performance Metrics	• **67%** reinvestment rate of 2022 CFFO in capital expenditures[(2)] • **76%** reinvestment rate of 2023 YTD (through 9/30/23) CFFO in capital expenditures[(2)] • Full-year 2023 reinvestment rate[(2)] **forecasted to decrease** with development plan weighted to 1H23[(3)]	• **39%** debt to enterprise value[(4)] • **45%** of 2023 YTD (through 9/30/23) Free Cash Flow[(1)] allocated to debt reduction or the balance sheet (cash and working capital) • Full-year 2023 allocation to debt reduction as a percentage of FCF[(1)] **forecasted to increase**[(3)]	• **10%** cumulative annual growth rate in dividends per share in the 2.5 years since merger into current public entity[(5)] • **55%** of 2023 YTD (through 9/30/23) Free Cash Flow[(1)] allocated to dividends • Full-year 2023 allocation to dividends as a percentage of FCF[(1)] **forecasted to decrease**[(3)]

(1) A non-GAAP financial measure as defined in the supplemental financial tables available on the company's website at www.rileypermian.com
(2) Reinvestment rate calculated as cash-based capital expenditures (includes Additions to Oil & Gas Properties and Other Additions to Property & Equipment) divided by Cash Flow From Operations before the impact of changes in working capital.
(3) Based on Riley Permian management estimates, consistent with 4Q23 guidance
(4) Debt as of 9/30/23. Enterprise Value based on share price and shares outstanding as of 10/31/23, debt and cash balance as of 9/30/23.
(5) February 2021 merger of Riley Exploration – Permian LLC and Tengasco, Inc.

Appendix

Equity Ownership and Research Analyst Coverage

Equity Ownership

> 5% Holders and Insiders as of 10/31/23[1]	Shares (MM)	Ownership %
Yorktown Energy Partners[2]	5.51	27.0%
Bluescape Energy Partners	5.22	25.6%
Balmon Investments[2]	2.12	10.4%
Riley Permian Management	0.95	4.6%
Board of Directors Excl. Yorktown	0.06	0.3%
Estimated Public Float	6.57	32.1%
Total	**20.43**	**100.0%**
Total Insider Ownership	**6.51**	**31.9%**

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.

Debt Summary

Facility	Principal Amount Outstanding at 9/30/23	Borrowing Base at 9/30/23	Annual Interest Rate	Amortization	Final Maturity
Sr. Secured Credit Facility	$210MM	$325MM	Term SOFR + 2.85% – 3.85%; most recent quarter was 3.25% margin	None; Company intends to periodically pay down balance with excess cash flow	April 2026
Sr. Unsecured Notes	$190MM	NA	10.5%	$5MM/quarter	April 2028

Managing Business Risks Amid Volatility

OIL PRICE

96% of 3Q23 revenue related to oil sales volumes

- 2024 hedged oil volume of ~7 Mbo/d[1] corresponds to ~50% of 3Q23 production level for comparison
- Mix of 65% collars / 35% swaps by volume in 2024[1] allows for downside protection while maintaining optionality for higher prices
- 2024 weighted average floor price of $65/Bbl and ceiling price of $80/Bbl[1]

PROCUREMENT

Capital budget materially impacted by industry supply / demand dynamics and pricing changes

- > 100% of anticipated steel casing and production tubing needs for 1H24 development plans[2] have been purchased or contracted as of November 2023
- ~60% of anticipated rig needs 1H24 development plans[2] have been contracted as of November 2023
- Roustabouts, used for daily field work, are employed in-house, ensuring availability

CAPITAL

Ensuring long-term access to capital is paramount for the Company and the E&P industry as a whole

- Maintaining a large number of participants in the credit facility syndicate to mitigate impacts from potential changes among individual members
- 2028 maturity on senior unsecured notes allows for several years to refinance (and to reduce the principal balance)
- Registered At-the-Money (“ATM”) shelf offering to allow for opportunistic equity issuances should capital needs develop

INTEREST RATES

3Q23 interest expense of $10MM corresponded to 18% of operating earnings

- 48% of principal value of debt at 9/30/23 was fixed rate debt
- SOFR swaps in place for $80MM per quarter of notional value for 2Q24 - 3Q25 at 3.1%, corresponding to 38% of principal value of floating-rate debt at 9/30/23
- Approximately 66% of the principal value of debt would be fixed rate or hedged by 2Q24, absent any paydown on the credit facility

(1) Hedge volumes as of 11/2/23
(2) Based on anticipated needs for 2024 development activity per preliminary development plans.

Hedging Positions as of 11/2/23

	2023	2024				2025		
Calendar Quarters	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q
CRUDE OIL								
Fixed Swap - Volume, Bbls/Qtr	437,000	195,000	225,000	225,000	225,000	45,000	285,000	-
Weighted Average Price, $/Bbl	$69.35	$73.35	$72.12	$72.12	$72.12	$71.25	$71.96	$0.00
Collars - Volume, Bbls/Qtr	330,000	520,000	390,000	366,000	345,000	423,000	150,000	-
Weighted Average Floor Price, $/Bbl	$68.64	$61.41	$61.08	$61.00	$60.87	$60.00	$68.00	$0.00
Weighted Average Ceiling Price, $/Bbl	$88.85	$84.00	$85.76	$83.61	$84.26	$77.23	$77.41	$0.00
Total Oil Price Hedges, Bbls/Qtr	767,000	715,000	615,000	591,000	570,000	468,000	435,000	-
Downside Weighted Average Price, $/Bbl	$69.04	$64.67	$65.12	$65.23	$65.31	$61.08	$70.59	$0.00
CRUDE OIL BASIS								
Mid/Cush Basis Swaps - Volume, Bbls/Qtr	450,000	330,000	330,000	330,000	330,000	-	-	-
Weighted Average Price, $/Bbl	$1.28	$0.97	$0.97	$0.97	$0.97	$0.00	$0.00	$0.00
NATURAL GAS								
Swaps - Volume, MMBtu/Qtr	670,000	750,000	600,000	600,000	450,000	375,000	225,000	-
Weighted Average Price, $/MMBtu	$3.26	$3.48	$3.21	$3.21	$3.67	$4.05	$3.54	$0.00
Collars - Volume, MMBtu/Qtr	300,000	300,000	405,000	405,000	405,000	405,000	300,000	-
Weighted Average Floor Price, $/MMBtu	$3.12	$3.40	$3.01	$3.01	$3.50	$3.74	$3.00	$0.00
Weighted Average Ceiling Price, $/MMBtu	$4.07	$4.50	$3.68	$3.68	$4.45	$4.84	$4.10	$0.00
Total NG Price Hedges, MMBtu/Qtr	970,000	1,050,000	1,005,000	1,005,000	855,000	780,000	525,000	-
Downside Weighted Average Price, $/MMBtu	$3.22	$3.46	$3.12	$3.12	$3.59	$3.89	$3.23	$0.00
INTEREST RATE								
Swaps - Notional Volume (000's)	$ -	$ -	$ 80,000	$ 80,000	$ 80,000	$ 80,000	$ 80,000	$ 80,000
1-Month Term SOFR	0%	0%	3.09%	3.09%	3.09%	3.09%	3.09%	3.09%

- 63% of 4Q 2023 forecasted oil production is hedged based on midpoint guidance level, including:
  - Approximately 36% of forecasted oil production hedged with swaps with an average floor of $69/Bbl
  - Approximately 27% of forecasted oil production hedged with collars with an average floor price of ~$69/Bbl and average ceiling price of $89/Bbl
- SOFR swaps in place for $80MM per quarter of notional value for 2Q24 - 3Q25 at 3.1%, corresponding to 38% of principal value of floating-rate debt at 9/30/23

Note: Q4 2023 derivative positions shown include all contracts that have settled as of 11/2/23

Additional Information

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