

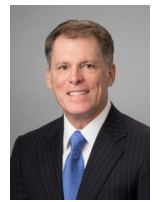
Weekly E&P Update

March 4, 2025

Vol. 9

Pipeline Pressures and Shale Realities: Can U.S. Gas Keep Up with Demand?

By *Steve Hendrickson*
President of *Ralph E. Davis Associates*



The natural gas market is entering a new phase, with two major drivers poised to reshape demand—LNG exports and the explosion of AI-driven data centers. While residential and commercial consumption remains relatively stable, the real action is unfolding in industrial and export markets. The question is: where will the additional supply come from?

LNG Exports Set to Surge

U.S. LNG exports are already a major force in global gas markets, and they're on track to nearly double over the next few years. New liquefaction facilities and expansions at existing plants will increase demand by roughly 6 Bcf/d by 2027. This alone is a massive shift, and it comes at a time when U.S. natural gas inventories are already tight.

Data Centers: A New Demand Giant

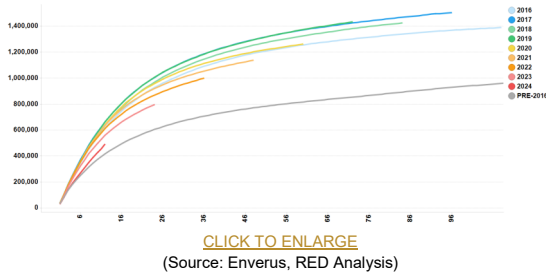
Electricity demand from AI-driven data centers is another emerging factor. Unlike traditional tech-sector power needs, AI data centers require vast amounts of energy, and natural gas is expected to be the primary fuel to meet this growing load. While the recent announcement of DeepSeek's more efficient micro-processor has raised questions about how quickly this demand will scale, history suggests that greater efficiency often leads to even greater consumption—Jevons' paradox at work.

Where Will the Gas Come From?

Three key sources will be called upon to meet rising demand:

Permian Basin Associated Gas – The Permian continues to generate significant volumes of associated gas alongside crude oil production. However, pipeline constraints remain a challenge. Kinder Morgan's planned Trident pipeline will add 1.5 Bcf/d of takeaway capacity by 2027, but in the near term, bottlenecks could limit how much Permian gas reaches the Gulf Coast.

Haynesville Shale – Located near existing LNG export infrastructure, the Haynesville is well-positioned to supply Gulf Coast terminals. But there's a catch: drilling activity slowed in 2023 and 2024 due to low prices, and the play has been showing signs of maturation. Wells drilled in 2023 are recovering on average 20% less per foot of lateral drilled compared to 2019. Some operators in the play believe that higher gas prices—likely north of \$5/MMBtu—are needed to drive a resurgence in drilling.



Marcellus Shale – The Marcellus remains one of the world's premier natural gas plays, delivering exceptional well results and maintaining a reputation for high productivity. A major development in the region in 2024 was the authorization and startup of the Mountain Valley Pipeline (MVP), a 303-mile infrastructure project capable of transporting 2 Bcf/d from West Virginia to Transco's pipeline system in Virginia. This project is expected to alleviate some of the takeaway constraints that have historically hindered Marcellus gas from reaching key markets.

However, pipeline capacity remains a limiting factor. Despite the region's vast reserves, six of the last seven planned interstate pipeline projects to move Marcellus gas to New England and other demand centers have been canceled or delayed due to regulatory hurdles. Without further pipeline expansion, increased production in the Marcellus could be constrained, despite the strong well performance and high resource potential.

Market Signals: Prices and Drilling Response

Current spot and futures prices in the mid-\$4.00/mmbtu range for Henry Hub gas are an improvement over last year's lows but may not be enough to trigger the level of drilling required in the Haynesville and Marcellus. The rig count in both plays has been in decline, and production in key basins like the Haynesville has dropped year-over-year. If gas prices move closer to \$5.00, we could see a turnaround, but for now, producers remain cautious.

The Bottom Line

The coming years will test the ability of U.S. natural gas producers to respond to rising demand. LNG exports and AI-driven power loads will require a significant production boost, but whether supply grows fast enough depends on price signals, infrastructure expansion, and producers' willingness to reinvest. With natural gas inventories already running below the five-year average, any supply shortfalls could quickly translate into price volatility.

Sources and further reading

1. U.S. Energy Information Administration. [Short-Term Energy Outlook](#), February 2025.
2. FXEmpire. [Natural Gas News: Bullish Forecast Builds as Storage Deficits Tighten](#). March 4, 2025.
3. Hart Energy. [Operators Look to the Haynesville on Forecasts for Another 30 Bcf/d in NatGas Demand](#). March 1, 2025.
4. U.S. Energy Information Administration. [U.S. Natural Gas-Directed Rigs Decreased for Second Consecutive Year in 2024](#). March 4, 2025.
5. U.S. Energy Information Administration. [U.S. Shale Natural Gas Production Has Declined So Far in 2024](#). October 24, 2024.
6. Richard McDonough. [Spotlight on Marcellus—McDonough, Pipeline & Gas Journal](#), 2024.

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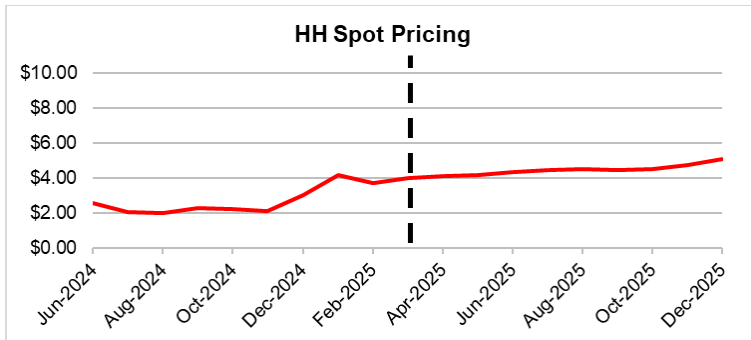
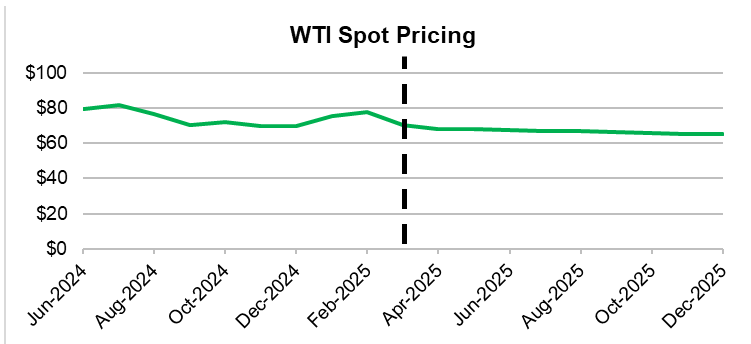
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NYMEX FUTURE PRICING



MONDAY'S MARKET CLOSE

NYMEX WTI CRUDE OIL FUTURES as of March 3, 2025 Close (\$/bbl)

Period	Current	WoW Change	Last Week	1 Yr Ago
2025	\$66.85	(\$2.44)	\$69.29	\$71.36
2026	\$64.13	(\$2.16)	\$66.29	\$67.99
2027	\$62.96	(\$1.68)	\$64.64	\$65.95
2028	\$62.48	(\$1.22)	\$63.70	\$64.92
2029	\$62.17	(\$0.81)	\$62.98	\$64.61

NYMEX HH NATURAL GAS FUTURES as of March 3, 2025 Close (\$/MMBtu)

Period	Current	WoW Change	Last Week	1 Yr Ago
2025	\$4.48	\$0.19	\$4.29	\$3.51
2026	\$4.20	\$0.03	\$4.17	\$3.80
2027	\$3.81	\$0.06	\$3.75	\$3.80
2028	\$3.66	\$0.08	\$3.58	\$3.73
2029	\$3.56	\$0.09	\$3.47	\$3.64

INDUSTRY METRICS—QUICK SNAPSHOT

	Current	Last Week	WoW Change	%Change
Crude Oil Near-Month Price (\$/bbl)	\$69.95	\$69.80	\$0.15	0.2%
Natural Gas Near-Month Price (\$/MMBtu)	\$3.78	\$4.07	(\$0.29)	(7%)
Weekly Upstream-Deal Transaction Value (\$MM)	\$400.00	\$6,148.23	(\$5,748.23)	(93%)
Weekly Number of Upstream-Deal Transactions	3	6	(3)	(50%)
Current Total US Rig Count	593	592	1	0.2%
US Field Crude Oil Production (MMbbl/day)	13.5	13.5	0.0	0.0%
US Field Dry Natural Gas Production (Bcf/day)	110.3	111.5	(1)	(1%)
Commercial Crude Oil Stocks-Excluding SPR (MMbbl)	430	432	(2)	(0.5%)
Natural Gas Stocks-Working Gas Underground Storage (Bcf)	1,840	2,101	(261)	(12%)
All Basin Drilled But Uncompleted Wells (DUC-Last Quarter)	5,238	5,238	0	-

*Source—Energy Information Administration (EIA), Bloomberg LP

*Source—Baker Hughes North America Rotary Rig Count & Enverus M&A Database

COMMODITY FUTURES - MONDAY'S MARKET CLOSE

	Current	1-Month Change	3-Month Change	6-Month Change	Year Ago Change
WTI					
Prompt	\$68.37	-4.33 [-5.96%]	-0.17 [-0.25%]	-0.83 [-1.20%]	-10.37 [-13.17%]
Bal25	\$66.85	-3.68 [-5.21%]	-0.45 [-0.67%]	-1.75 [-2.55%]	-9.51 [-12.46%]
Cal26	\$64.13	-2.47 [-3.71%]	-0.99 [-1.52%]	-2.62 [-3.92%]	-7.23 [-10.13%]
Cal27	\$62.96	-1.82 [-2.80%]	-0.67 [-1.06%]	-2.31 [-3.54%]	-5.03 [-7.40%]
Cal28	\$62.48	-1.32 [-2.07%]	-0.17 [-0.28%]	-1.98 [-3.07%]	-3.47 [-5.26%]
Cal29	\$62.17	-1.00 [-1.58%]	+0.29 [0.46%]	-1.97 [-3.07%]	-2.75 [-4.24%]
Brent					
Prompt	\$71.62	-4.58 [-6.01%]	-0.69 [-0.95%]	-1.08 [-1.49%]	-11.18 [-13.50%]
Bal25	\$70.23	-3.71 [-5.02%]	-0.91 [-1.28%]	-2.26 [-3.12%]	-10.28 [-12.77%]
Cal26	\$67.94	-2.51 [-3.56%]	-1.44 [-2.08%]	-3.14 [-4.42%]	-8.14 [-10.70%]
Cal27	\$67.06	-1.79 [-2.59%]	-1.28 [-1.88%]	-2.83 [-4.05%]	-6.05 [-8.28%]
Cal28	\$66.98	-1.21 [-1.77%]	-0.84 [-1.24%]	-2.41 [-3.48%]	-4.34 [-6.09%]
Cal29	\$66.98	-0.80 [-1.18%]	-0.53 [-0.78%]	-2.20 [-3.18%]	-3.44 [-4.89%]
Henry Hub					
Prompt	\$4.12	+0.87 [26.71%]	+1.08 [35.46%]	+1.98 [92.17%]	+2.21 [115.14%]
Bal25	\$4.48	+0.78 [21.20%]	+1.31 [41.57%]	+1.91 [74.47%]	+1.87 [71.83%]
Cal26	\$4.20	+0.25 [6.43%]	+0.42 [11.15%]	+1.02 [32.23%]	+0.69 [19.65%]
Cal27	\$3.81	+0.02 [0.58%]	+0.01 [0.39%]	+0.25 [7.18%]	+0.01 [0.20%]
Cal28	\$3.66	+0.02 [0.47%]	-0.03 [-0.83%]	+0.04 [1.00%]	-0.14 [-3.57%]
Cal29	\$3.56	+0.02 [0.49%]	+0.04 [1.20%]	-0.03 [-0.95%]	-0.17 [-4.43%]
Heating Oil					
Prompt	\$2.26	+0.09 [4.23%]	+0.25 [12.83%]	+0.23 [11.52%]	-0.40 [-15.39%]
Bal25	\$2.20	-0.11 [-4.89%]	+0.05 [2.45%]	+0.13 [6.90%]	-0.32 [-13.22%]
Cal26	\$2.16	-0.08 [-3.85%]	-0.01 [-0.36%]	-0.05 [-2.64%]	-0.20 [-9.42%]
Cal27	\$2.12	-0.08 [-3.85%]	-0.02 [-1.13%]	-0.04 [-2.00%]	-0.17 [-8.34%]
Cal28	\$2.10	-0.08 [-3.84%]	-0.02 [-1.16%]	-0.01 [-0.71%]	-0.14 [-6.71%]
RBOB					
Prompt	\$2.19	-0.17 [-6.97%]	+0.09 [4.29%]	+0.10 [4.77%]	-0.39 [-14.61%]
Bal25	\$2.07	-0.13 [-5.66%]	+0.03 [1.47%]	+0.02 [1.01%]	-0.36 [-14.18%]
Cal26	\$1.93	-0.08 [-3.78%]	0.00 [-0.06%]	-0.03 [-1.48%]	-0.26 [-10.66%]
Cal27	\$1.90	-0.07 [-3.26%]	0.00 [-0.19%]	-0.06 [-2.79%]	-0.20 [-8.71%]
Cal28	\$1.89	-0.07 [-3.23%]	-0.01 [-0.39%]	-0.05 [-2.48%]	-0.18 [-7.70%]

*Source—Bloomberg LP

SELECTED INDUSTRY HEADLINES

US Oil and Gas Production Hit Record High in December, Says EIA

U.S. crude oil and natural gas output set records in December, and oil demand touched multi-month highs, the U.S. Energy Information Administration said in its Petroleum Supply Monthly report on Friday.

Trump Axes Chevron's Venezuela Oil License, Citing Lack of Electoral Reforms

U.S. President Donald Trump on Wednesday said he was reversing a license given to Chevron to operate in Venezuela by his predecessor Joe Biden more than two years ago, accusing President Nicolas Maduro of not making progress on electoral reforms and migrant returns.

Trump's Tariffs Threat Hits Canada's Oil and Gas Drillers

Canada's oilfield drilling and services sector is already showing signs of slowing due to U.S. President Donald Trump's threatened tariffs, triggering fears that an expected industry rebound could stall if such levies go forward.

Oil Prices Fall as Economic Fears Override Bullish Signals

Crude prices are lower this week as the Trump administration's tariff plans are front-and-center on the minds of traders.

Oil Down on OPEC+ Output Increase, Tariffs Start and US Pause in Ukraine Aid

Oil prices extended losses on Tuesday after reports of OPEC+ plans to proceed with output increase in April while further price pressure was applied by U.S. tariffs on Canada, Mexico and China as well as Beijing's retaliatory tariffs.

Operators Look to the Haynesville on Forecasts for Another 30 Bcf/d in NatGas Demand (LOGIN REQUIRED)

Futures are up, but extra Haynesville Bcfs are being kept in the ground for now, while operators wait to see the Henry Hub prices.

In a Reversal, Plans for U.S. Natural Gas Power Grow, Complicating Progress on Climate

A spike in demand for electricity from tech companies competing in the artificial intelligence race is upending forecasts for natural gas-fired power in the U.S., as utilities reconsider it as a major new power source.

Tight Fundamentals, Cooling Forecasts Fuel Natural Gas Futures Rally (LOGIN REQUIRED)

After a three-day slide to end last week, natural gas futures came roaring back on Monday as traders weighed tight fundamentals against the approaching end of the heating season.

RRC Announces 'Significant Milestone in Texas' Energy Sector'

In a statement posted on its site this week, the Railroad Commission of Texas (RRC) said it has issued its first permit for a deep geo-pressured, geothermal well to Sage Geosystems in Atascosa County.

Congress Votes to Kill Biden-era Methane Fee on Oil and Gas Producers

The Republican-controlled Congress has voted to repeal a federal fee on oil and gas producers who release high levels of methane, undoing a major piece of former President Joe Biden's climate policy aimed at controlling the planet-warming "super pollutant."

Trump's EPA Plots Single Strike Against US Climate Change Rules

President Donald Trump's top environmental regulator is recommending the US government scrap its formal conclusion that greenhouse gases endanger the public, a move that would sweep away the legal foundation for regulations limiting planet-warming pollution from power plants, automobiles and oil wells.

SELECTED RECENT TRANSACTIONS

Ring Energy Bolts On Lime Rock's Central Basin Assets for \$100 Million

Ring Energy Inc. is bolting on Lime Rock Resources IV LP's Central Basin Platform assets for \$100 million, the E&P announced Feb. 26.

Civitas Makes \$300 Million Midland Bolt-On, Plans to Sell D-J Assets

Civitas Resources is buying Midland Basin locations in a \$300 million bolt-on acquisition from an undisclosed seller, deepening its Permian inventory by about a year.

Tokyo Gas Announces Sale of Eagle Ford Shale Gas Assets

Tokyo Gas Co. has announced that its wholly-owned subsidiary, Tokyo Gas America, through its subsidiary TG Eagle Ford Resources LP, signed Heads of Agreement with Shizuoka Gas Co, to sell its Eagle Ford shale gas assets.

ConocoPhillips to Sell Interests in Ursa and Europa Fields to Shell for \$735 Million

ConocoPhillips said on Friday it would sell its interests in the Ursa and Europa Fields to Shell for \$735 million, as part of the shale producer's plan to streamline its portfolio.

Diamondback Energy, Inc. Announces Midland Basin Acquisition

Diamondback Energy, Inc. today announced that it has entered into a definitive purchase agreement to acquire certain subsidiaries of Double Eagle IV Midco, LLC in exchange for approximately 6.9 million shares of Diamondback common stock and \$3 billion of cash, subject to customary adjustments.

Diamondback Energy to Expand in Permian Basin With \$4.08 Billion Deal

Diamondback Energy said on Tuesday it would buy certain units of EnCap Investments-backed energy producer Double Eagle for \$4.08 billion in cash and stock, expanding its presence in the oil-rich U.S. Permian basin.

Bayswater E&P to Sell DJ Basin Assets for \$603 Million

Bayswater Exploration and Production, a Denver-based oil and natural gas development company, has entered into an agreement to sell assets in the Denver Julesburg Basin to Prairie Operating Company in a cash and stock transaction valued at approximately \$603 million.

ConocoPhillips Sells \$600 Million in Noncore Permian Basin Assets

Following its \$22.5 billion deal to buy Marathon Oil, ConocoPhillips is targeting \$2 billion in asset sales—a goal a company executive said would largely be achieved this year.

Viper Buys \$330 Million Midland Interests in Shadow of \$4.5 Billion Dropdown

Viper Energy has entered into a definitive purchase agreement to buy mineral and royalty interests from Morita Ranches Minerals LLC in a cash-and-equity deal valued at about \$330 million.

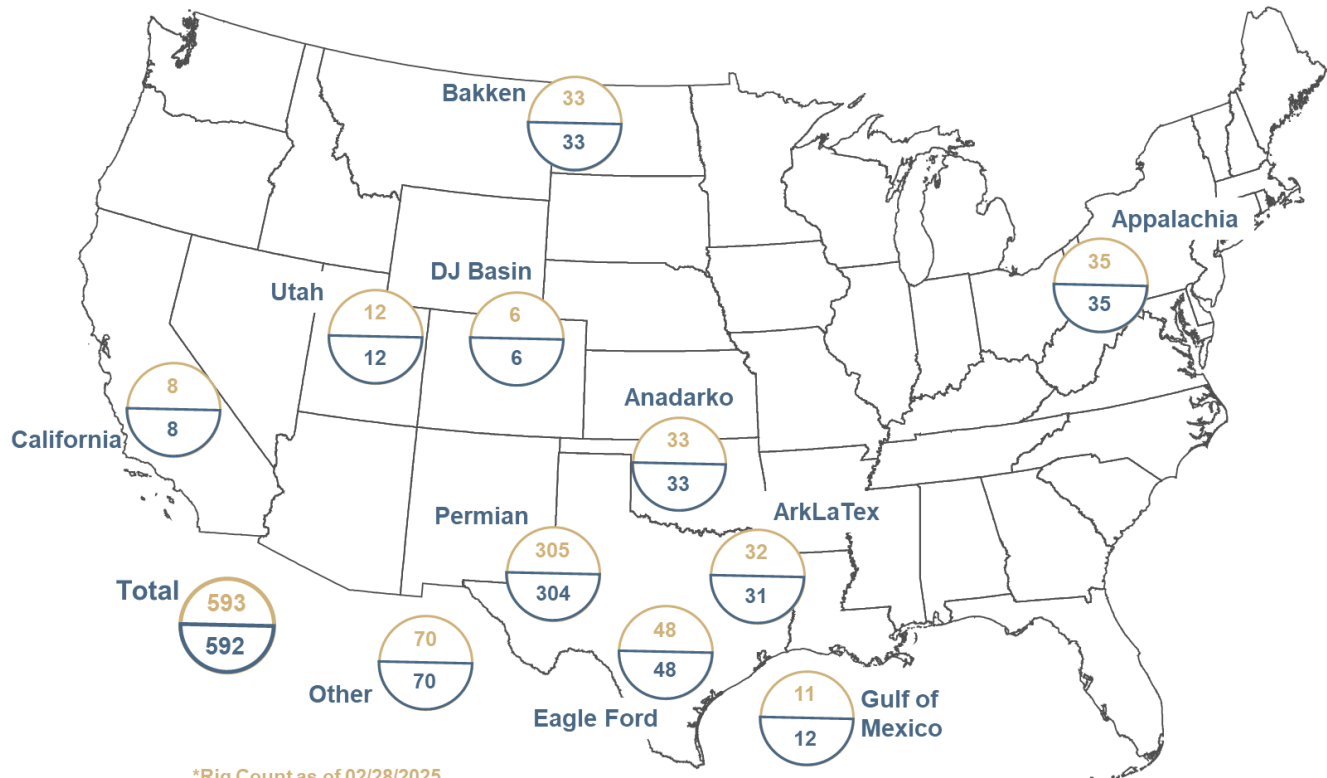
Elk Range Acquires Permian, Eagle Ford Minerals and Royalties

Elk Range Royalties LP is acquiring Newton Financial Corp., Concord Oil Co. and Mission Oil Co., which together own mineral and royalty interests across the Permian Basin and Eagle Ford Shale, Dallas-based Elk said Jan. 29.

Diversified to Acquire Maverick, Enter Permian Basin in \$1.3 Billion Deal

Diversified Energy will acquire EIG's Maverick Natural Resources, adding acreage that offsets Diversified's core Western Anadarko position and Permian Basin assets in the northern Delaware.

RIG ACTIVITY BY US REGION

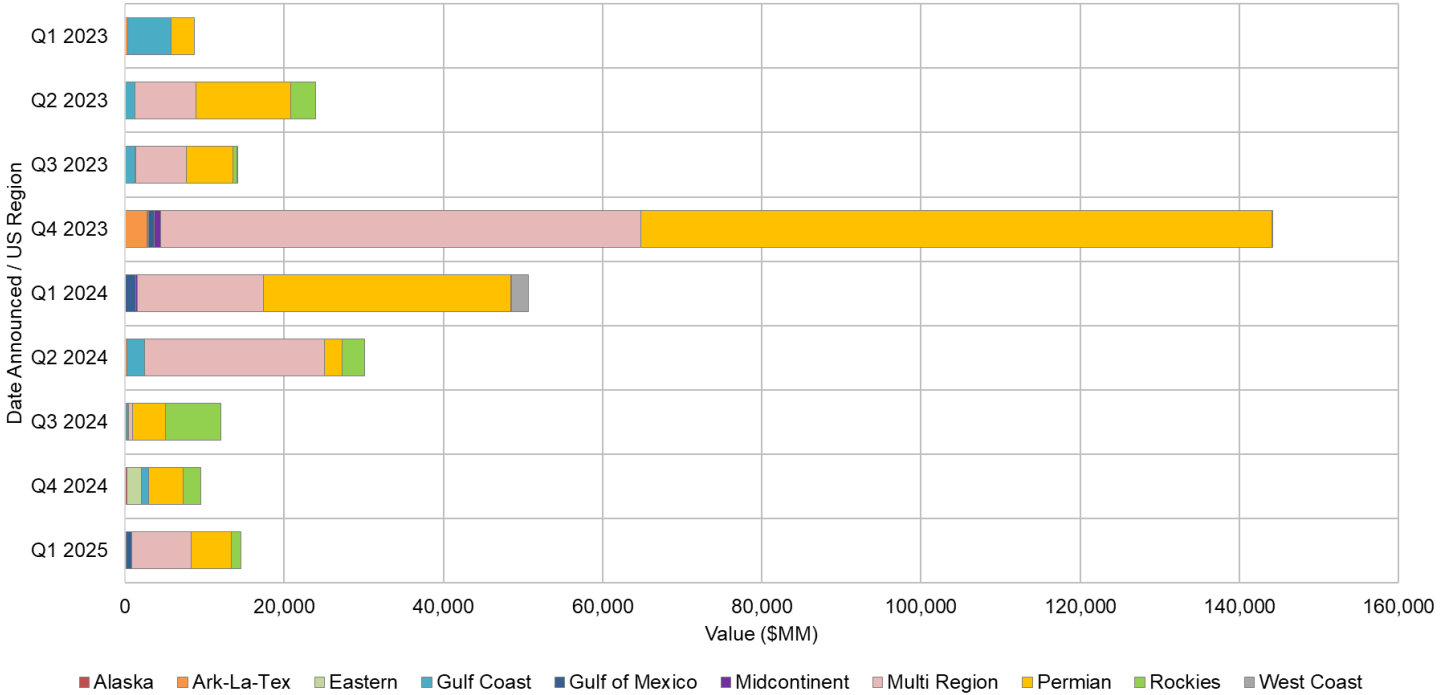


*Rig Count as of 02/28/2025
 *Rig Count as of 02/21/2025

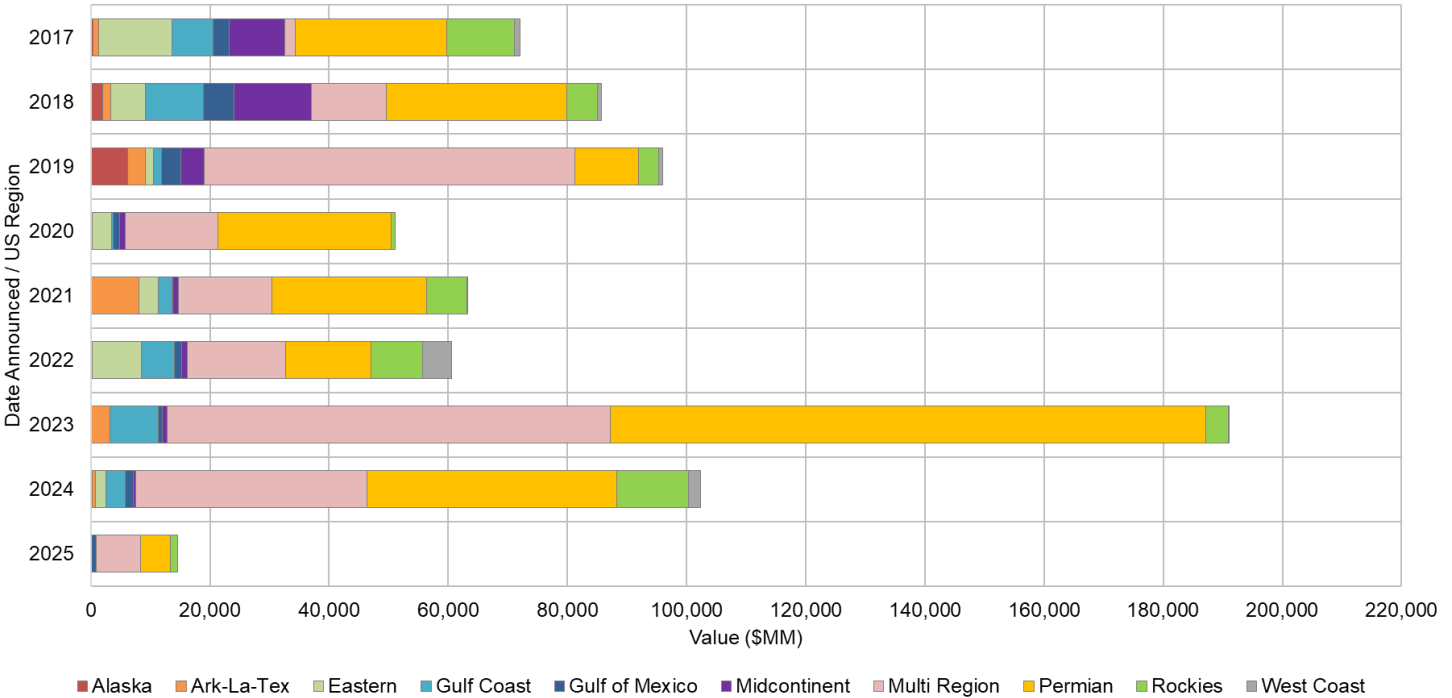
	Week Ending 02/28/2025		Week Ending 02/21/2025		Week Ending 03/02/2024
U.S. Rig Breakouts	Count	+/-	Count	+/-	Count
Oil	488	7	488	(15)	503
Gas	99	(2)	99	(21)	120
Not Specified	5	(1)	5	2	3
Directional	49	(2)	49	(1)	50
Horizontal	530	6	530	(30)	560
Vertical	13	0	13	(3)	16
Land (Inc Others)	576	4	576	(30)	606
Inland Waters	2	0	2	2	0
Offshore	14	0	14	(6)	20
US Total	592	4	592	(34)	626

*Source—Baker Hughes North America Rotary Rig Count

DEAL VALUE BY US REGION (BY QUARTER)

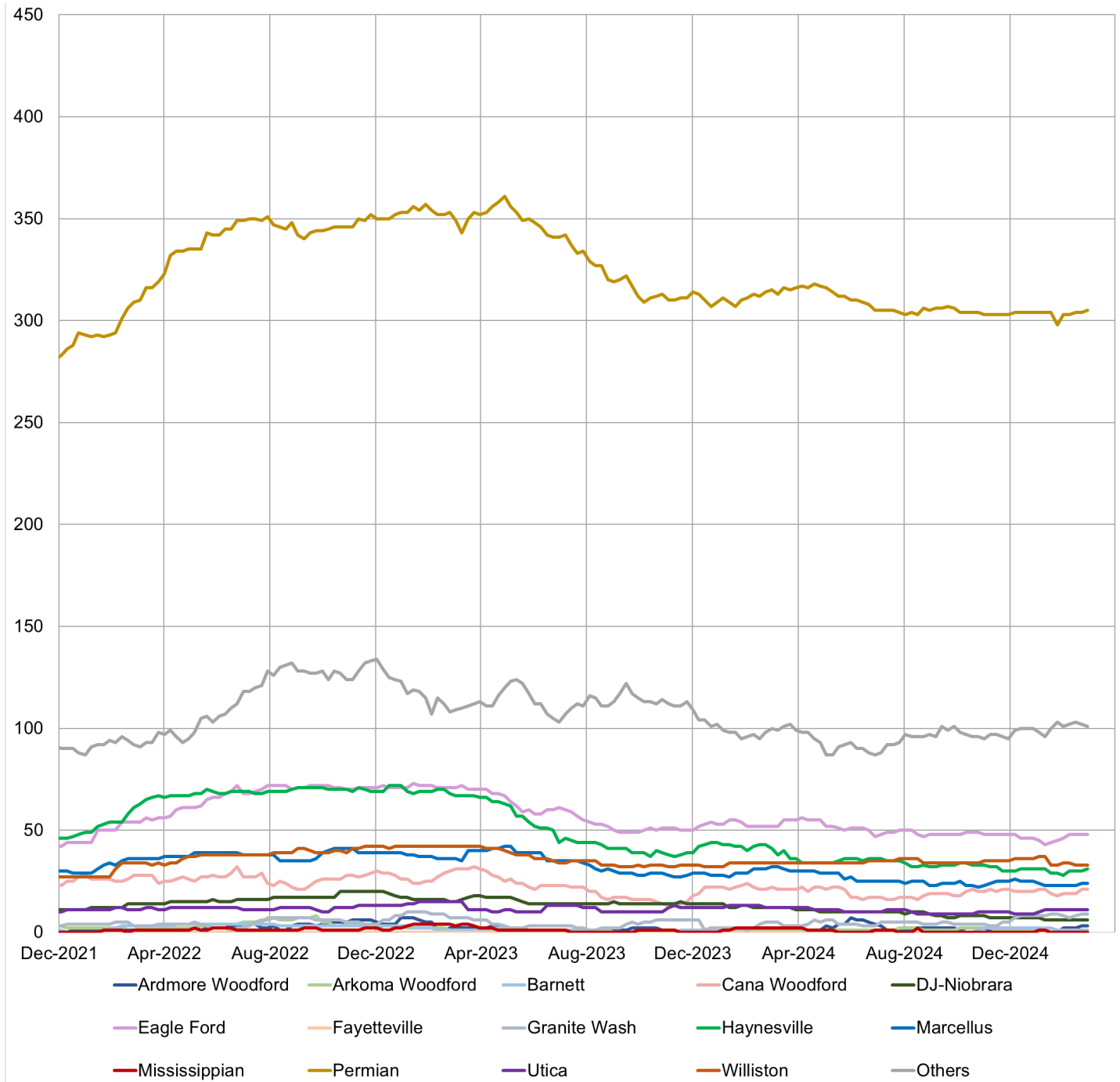


DEAL VALUE BY US REGION (BY YEAR)



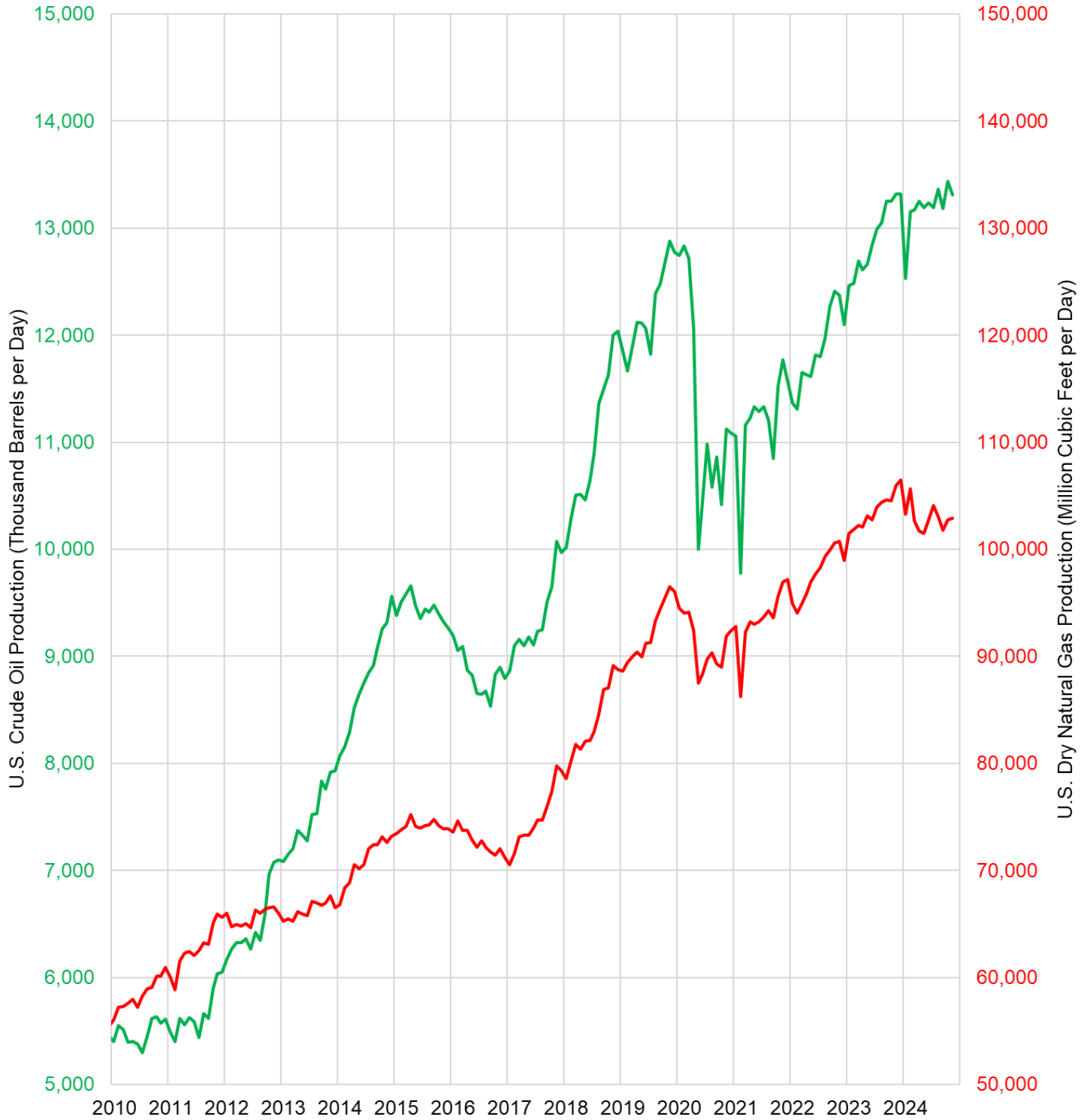
*Source—Enverus M&A Data- (Charts exclude terminated deals)

RIG ACTIVITY BY US REGION



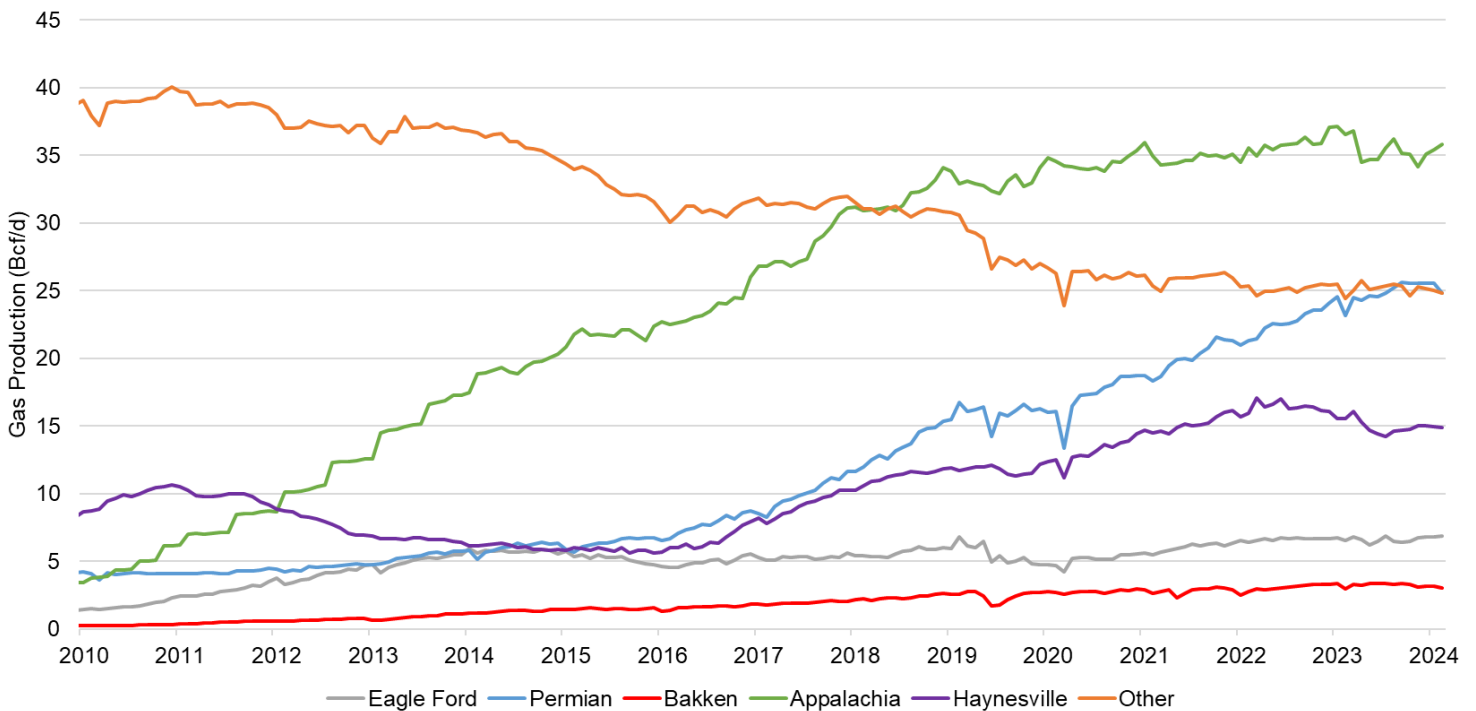
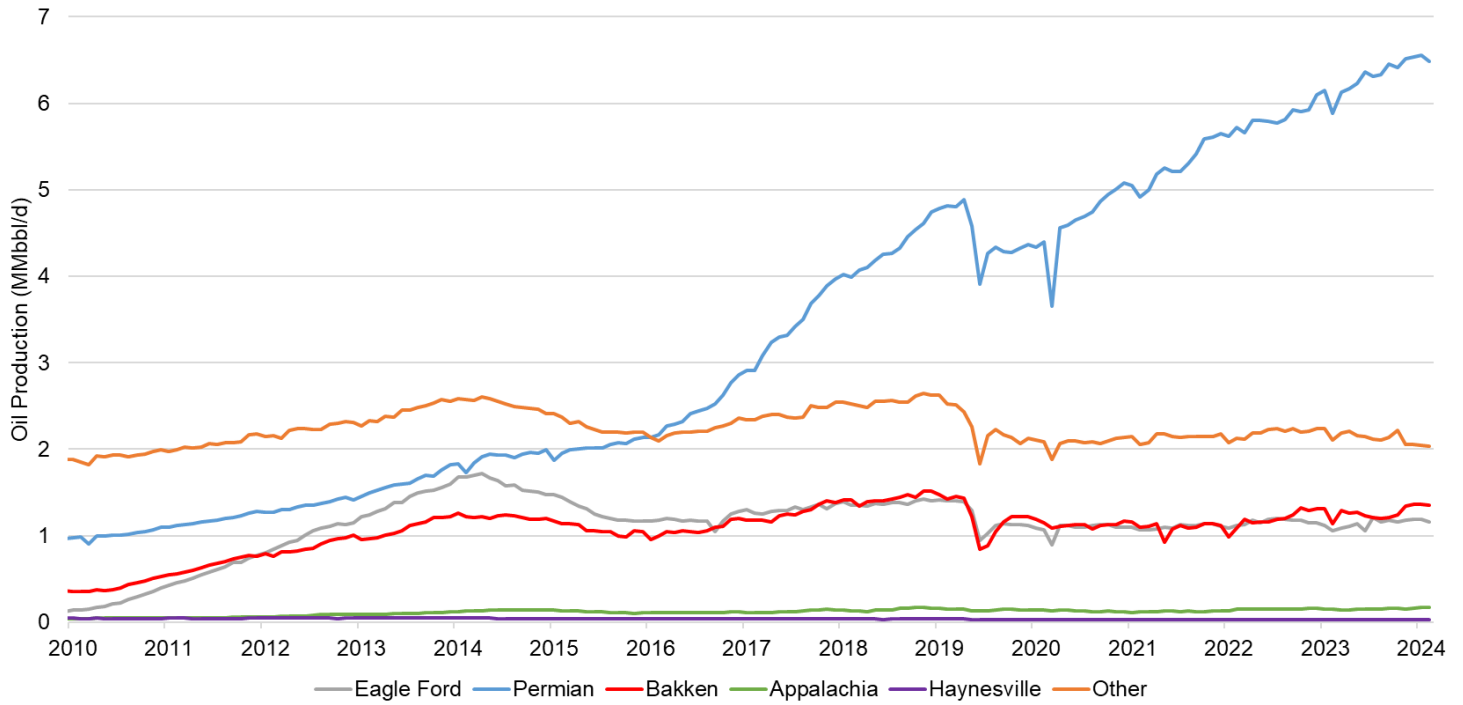
*Source—Baker Hughes North America Rotary Rig Count

US DAILY CRUDE (MMbbl) & DRY NATURAL GAS PRODUCTION (MMcf)



*Source—Energy Information Administration (EIA)

HISTORICAL PRODUCTION OF SELECTED US SHALE REGIONS



*Source—Energy Information Administration (EIA)



UPCOMING EVENTS

March 2025

SPE GCS - Mega Mergers Panel	March 26	Houston, TX
U.S. Men's Clay Court Championship	March 29 - April 6	Houston, TX

April 2025

Texas Bankruptcy Bench/Bar Conference	April 2	Houston, TX
SPE GCS - New Ventures Panel	April 16	Houston, TX
Quorum Qnections 25	April 22-24	Las Vegas, NV
World Oilman's Poker Tournament	April 23-25	Las Vegas, NV
Hunger Free Golf Classic	April 25	Houston, TX

*Denotes an Opportune Sponsored Event

ABOUT RALPH E. DAVIS ASSOCIATES

Ralph E. Davis Associates LLC (RED) is an industry-leading petroleum engineering and geosciences firm committed to satisfying the individual needs of clients. We accomplish this by holding ourselves to the highest standards of integrity and professionalism to deliver honest, direct and actionable insights to help clients achieve their strategic objectives. We distinguish ourselves by combining reservoir engineering, geoscience evaluation techniques and advanced data analytics with economic analyses to provide our clients with individual, customized solutions.

Banks, bondholders, private equity firms, financial institutions and law firms around the world trust in RED's diverse services and unrivaled upstream oil and gas expertise to deliver comprehensive solutions that help clients make informed decisions. We add value to every engagement by employing a team approach, leveraging Opportune LLP's experienced bench of experts in transactional due diligence, tax advisory, investment banking, restructuring and valuation.

We offer technical and economic analyses to deliver our clients a complete, independent, accurate and detailed assessment of the value of their assets. We apply a robust set of technical capabilities to assist our clients. Our capabilities include:

- Reservoir engineering and geosciences
- Economic forecasting and reporting
- Data analytics and geospatial analysis

KEY CONTACTS



Steve Hendrickson is the President of Ralph E. Davis Associates, an Opportune LLP company. Steve has over 35 years of professional leadership experience in the energy industry with a proven track record of adding value through acquisitions, development and operations. Steve is a licensed professional engineer in the state of Texas, and holds an M.S. in Finance from the University of Houston and a B.S. in Chemical Engineering from The University of Texas at Austin. He recently served as a board member of the Society of Petroleum Evaluation Engineers (SPEE) and is a registered FINRA representative.



John Beaird is Vice President of Ralph E. Davis Associates, an Opportune LLP company. John has 39 years of oil and gas management, reservoir engineering, and petroleum economics evaluation experience. Recent relevant experience includes the Permian, Western Gulf, Tx-La-Miss Salt, Mid-Continent, Denver-Julesburg, Wind River, Williston Basin, and Appalachian Basins. John is a registered Petroleum Engineer in the State of Texas and holds a B.S. in Petroleum Engineering from Louisiana Tech University. He is also an active member of the Society of Petroleum Evaluation Engineers (SPEE).



David Edwards is a Petroleum Engineer at Ralph E. Davis Associates, an Opportune LLP company. David has over four years of reserves engineering experience in conventional and unconventional reservoirs. Before RED, David was a Petroleum Engineer at a lower middle market A&D advisory firm where he handled the technical processes for marketed assets. He began his career with an operator in Dallas, where he contributed to its engineering, operations, and A&D teams. David holds an M.B.A. from The University of Texas Permian Basin and a B.S. in Petroleum Engineering from The University of Oklahoma.

