



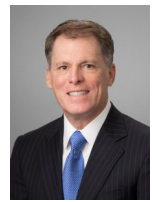
Weekly E&P Update

January 16, 2024

Vol. 3

US Upstream Industry Looks Strong

By Steve Hendrickson
President of Ralph E. Davis Associates



Recently, I've heard comments by specific national political figures that would make you think our domestic upstream business is in terrible condition. Let's take an objective look at the state of the industry.

Production - In 2023, the US not only [broke its previous record](#) for annual oil production (set before the Covid pandemic), we produced [more than any country in history](#) - ever. Likewise, [US natural gas production hit record levels](#) in 2023. In its January 9, 2024, [Short Term Energy Outlook](#), the Energy Information Agency (EIA) forecasted both US oil and gas production would set new records in 2024 and 2025.

Development Potential - While recent consolidations have highlighted operators' desire to secure additional drilling locations to bolster their undeveloped inventory, we [may see the performance of future wells decline](#) as the best acreage becomes fully developed. Nevertheless, there appears to be several years of profitable inventory ahead of us.

Financial Condition - In December, the EIA published the [Financial Review of the Global Oil and Natural Gas Industry](#) based on its analysis of the public financial statements of 142 global oil and gas companies, from majors to small independents. Although international companies are included, most are US operators. Their report shows improved stock prices and dividends, lower debt, and increasing levels of investment despite declining prices.

Prices - This is an area that gives me concern and directly results from our success in increasing production. Natural gas prices have been weak over the past year, and storage is high. Oil prices are at the mercy of OPEC decisions, and they may tire of reducing output to maintain prices while the US increases production. Increased LNG export capacity should help stabilize and increase gas prices. Still, the war in Ukraine and the potential for a broader conflict in the Mideast introduce much uncertainty.

Regulatory - The situation here is mixed. The [go-ahead](#) for the Alaskan Willow project and strong interest in the [latest GOM lease](#) sale are encouraging, but the plan to have [only three lease sales](#) over the next five years is discouraging. Also, the new methane emissions rules are structured in a way that [could seriously impact small producers](#) and perversely lead to more methane emissions if more wells become orphaned as a result. The current administration seems to be walking a tightrope between environmental concerns and the need to keep oil and gas prices at reasonable levels.

The Bottomline - Prices are a persistent source of uncertainty in this business, and it seems we're always dealing with one regulatory problem or another. Nevertheless, the US upstream industry - with record production, sound balance sheets, and ample development potential - is as strong as I've seen it during my 40-year career. Keep up the good work!

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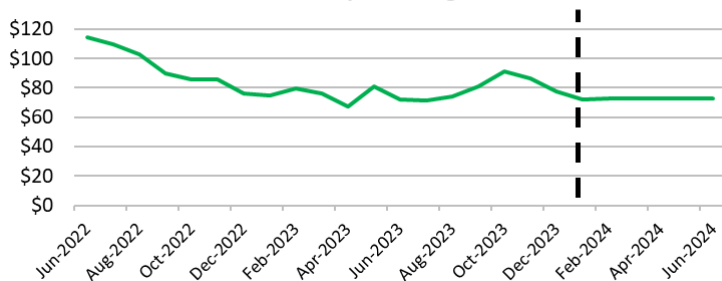
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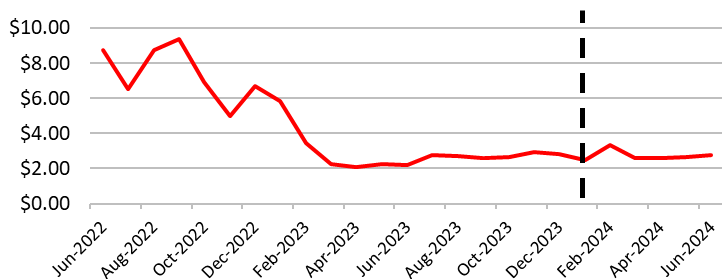


NYMEX FUTURE PRICING

WTI Spot Pricing



HH Spot Pricing



FRIDAY'S MARKET CLOSE

NYMEX WTI CRUDE OIL FUTURES
as of January 12, 2024 Close (\$/bbl)

Period	Current	WoW Change	Last Week	1 Yr Ago
2024	\$72.34	\$1.83	\$70.51	\$75.02
2025	\$69.16	\$1.55	\$67.61	\$70.79
2026	\$66.45	\$1.37	\$65.07	\$67.36
2027	\$64.63	\$1.28	\$63.35	\$64.48
2028	\$63.56	\$1.17	\$62.39	\$62.03

NYMEX HH NATURAL GAS FUTURES
as of January 12, 2024 Close (\$/MMBtu)

Period	Current	WoW Change	Last Week	1 Yr Ago
2024	\$2.99	\$0.07	\$2.92	\$4.01
2025	\$3.65	\$0.03	\$3.62	\$4.19
2026	\$3.87	(\$0.05)	\$3.92	\$4.25
2027	\$3.86	(\$0.06)	\$3.92	\$4.30
2028	\$3.82	(\$0.04)	\$3.86	\$4.39

INDUSTRY METRICS—QUICK SNAPSHOT

	Current	Last Week	WoW Change	%Change
Crude Oil Near-Month Price (\$/bbl)	\$72.63	\$70.91	\$1.72	2%
Natural Gas Near-Month Price (\$/MMBtu)	\$3.11	\$2.94	\$0.17	6%
Weekly Upstream-Deal Transaction Value (\$MM)	\$11,645.20	\$4,532.00	\$7,113.20	157%
Weekly Number of Upstream-Deal Transactions	11	5	6	120%
Current Total US Rig Count	619	621	(2)	(0.3%)
US Field Crude Oil Production (MMbbl/day)	13.2	13.2	0	-
US Field Dry Natural Gas Production (Bcf/day)	110.8	111.1	(0.3)	(0.3%)
Commercial Crude Oil Stocks-Excluding SPR (MMbbl)	432	431	1	0.3%
Natural Gas Stocks-Working Gas Underground Storage (Bcf)	3,336	3,476	(140)	(4%)
Total Drilled But Uncompleted Wells (DUC-Last Month)	4,498	4,415	83	2%

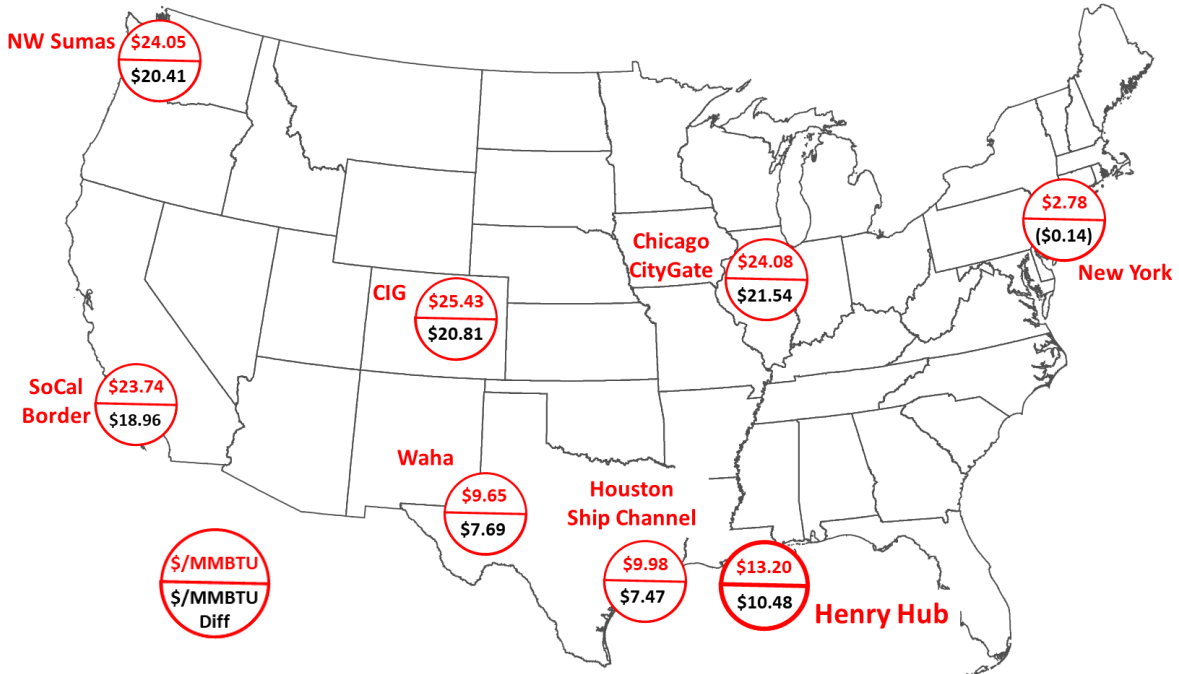
*Source—Energy Information Administration, United States (EIA)

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

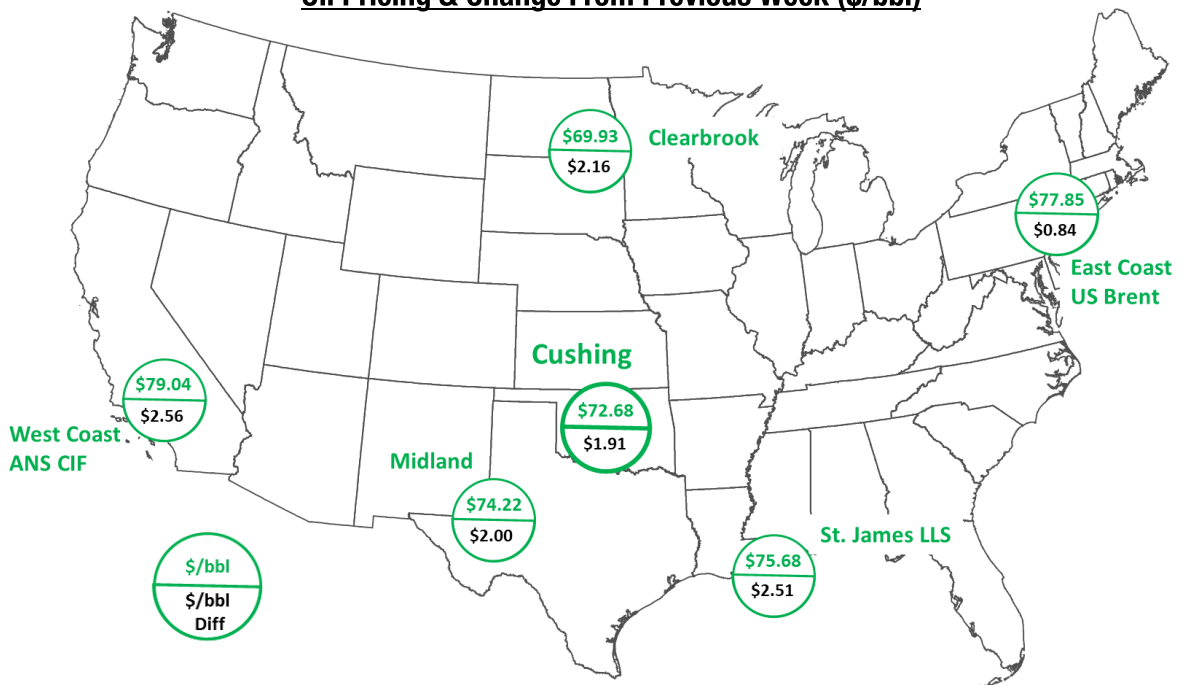


US COMMODITY PRICES CONTINUED

Natural Gas Pricing & Change From Previous Week (\$/MMBTu)



Oil Pricing & Change From Previous Week (\$/bbl)



*Source—Bloomberg LP



SELECTED INDUSTRY HEADLINES

Global Oil Demand to Rise by 2 Million bpd in 2024, Says WoodMac

Global oil demand is expected to increase by almost 2 million barrels a day in 2024, with China accounting for more than 25% of the increase, consultancy Wood Mackenzie said in a report recently.

What Themes Will Dominate Global Oil Market in 2024?

The major themes that will drive the global oil market in 2024 will coalesce around the ability of oil producers to find a sustainable balance between energy supply and demand.

Energy's Best Strategy for the Presidential Election? Support Both Sides

The upcoming presidential election sees energy concerns on the "second page" of the ballot, making choosing a side a necessity.

Oil Prices Rise 1% on Flaring Middle East Tensions

Oil prices rose by around 1% on Tuesday, as investors weighed the impact of tensions in the Middle East.

A Houthi Retaliation Could Send Oil Prices Soaring

The World Bank said at the end of October that a 'large disruption' in the global supply of crude oil would result in a 56-75% increase in prices to between \$140 and \$157 a barrel.

Frigid Forecast for West Texas Raises Alarm Over Permian Gas Freeze-off Risk

Sub-freezing temperatures forecast for West Texas in mid-January are threatening production freeze-offs in the Permian Basin, potentially fueling a continued rise in spot gas prices at Waha.

A \$290 Billion Investment Cements Natural Gas's Relevance for Decades (LOGIN CREDENTIALS REQUIRED)

The biggest wave ever of liquefied natural gas megaprojects is about to ramp up as the sector bets on its place in the clean-energy transition.

Natural Gas Futures Traders Look Past Near-Term Freeze as Prices Plunge on Warm-Up (LOGIN CREDENTIALS REQUIRED)

Despite intense winter weather and market disruptions in the near term, natural gas futures were down sharply in early trading Tuesday as models increased confidence in a return to milder temperatures for the final third of January.

Polar Vortex Heading for Texas Sends Natural Gas Prices Jumping Over 400%

Natural gas prices shot up more than 400% as a deep freeze is set to hit Texas, potentially sending demand for the heating fuel soaring.

EIA - We Expect Henry Hub Natural Gas Spot Price to Average Under \$3.00/MMBtu in 2024 and 2025

The annual average Henry Hub prices in 2024 and 2025 increase from 2023 in our forecast because we expect natural gas demand growth to outpace natural gas supply growth.

US Gulf Coast LNG Freight to NWE, Asia Drop Amid Bearish Fundamentals

Freight rates to ship LNG from the US Gulf Coast region to both Northwest Europe and Asia have dropped to multi-month lows as high inventories and relatively bearish sentiment across the globe weigh on shipping and trading activity.

US Proposes Fee on Methane From Big Oil and Gas Producers

The U.S. on Friday proposed a fee on emissions of methane from big oil and gas producers as required under the 2022 climate law and as a backstop to wider regulations on the greenhouse gas from energy operations.



SELECTED RECENT TRANSACTIONS

Prairie Operating Expands With \$94.5 Million Asset Acquisition

Prairie Operating Co., an oil and gas company, has announced a definitive agreement to acquire the assets of Nickel Road Operating LLC for a total consideration of \$94.5 million.

Chesapeake Energy Merges With Southwestern For \$7.4 Billion—Becomes Largest Natural Gas Producer In U.S.

Chesapeake Energy will merge with Southwestern Energy in an all-stock deal valued at \$7.4 billion, both companies announced Thursday, the latest transaction in the energy industry that would make Chesapeake the largest natural gas producer in the U.S.

U.S. Energy Corp. Announces Completion of Asset Divestitures and Provides Liquidity Update

U.S. Energy Corp, a growth-focused energy company engaged in the operation of high-quality producing oil and natural gas assets, today announced it had completed a series of non-core asset divestitures.

Evolution Petroleum Announces Acquisition of Non-operated Oil and Gas Assets

Evolution Petroleum Corporation announced that it has entered into definitive agreements to acquire non-operated oil and natural gas assets in the SCOOP and STACK plays in central Oklahoma for \$43.5 million in cash.

Trio Petroleum Announces an Option to Acquire a 20% Interest in the Asphalt Ridge Development Project in Utah

Trio Petroleum Corp, a California-based oil and gas company, announced that it has secured an option to acquire a 20% interest in a sweet, heavy-oil development project at Asphalt Ridge, located near the town of Vernal in Uinta County in northeastern Utah.

APA Corp to Buy Callon Petroleum in \$4.5 Billion All-Stock Deal

Callon Petroleum +6% pre-market recently after APA Corp. agreed to acquire the company in an all-stock deal valued at ~\$4.5B including debt, boosting its presence in the Permian Basin.

Ellipsis U.S. Onshore Acquires Oil, Gas Assets in U.S. Permian, DJ, Salt Basins

Ellipsis U.S. Onshore Holdings LLC has acquired additional assets located in multiple basins onshore the U.S.

Vital Energy Makes \$55 Million of Acquisitions in Permian Basin

Tulsa's Vital Energy Inc. is expanding its Permian Basin holdings with a \$55 million acquisition of additional working interests from Permian Basin operator Henry Energy LP, Moriah Henry Partners LLC and Henry Resources LLC.

Westlawn Group Announces Company Formation and the Closing of Multiple Investments in the Gulf of Mexico

Westlawn Group announced the successful launch of Westlawn Americas Offshore following the acquisition of multiple assets across deepwater Gulf of Mexico with current production in excess of 10,000 BOEPD and multiple near-term growth opportunities.

Tokyo Gas To Acquire Rockcliff Energy for \$2.7 Billion

A unit of Tokyo Gas is buying private equity funded Rockcliff Energy II for \$2.7 billion in a bid to expand its overseas exposure to natural gas markets.

Fury Resources to Acquire Delaware Basin Operator Battalion Oil

Privately held Fury Resources Inc. agreed to acquire Delaware basin-operator Battalion Oil Corp., Houston, for \$9.80/share, a deal valued at \$450 million.

Occidental Leans Into Midland Basin With \$12 Billion Acquisition

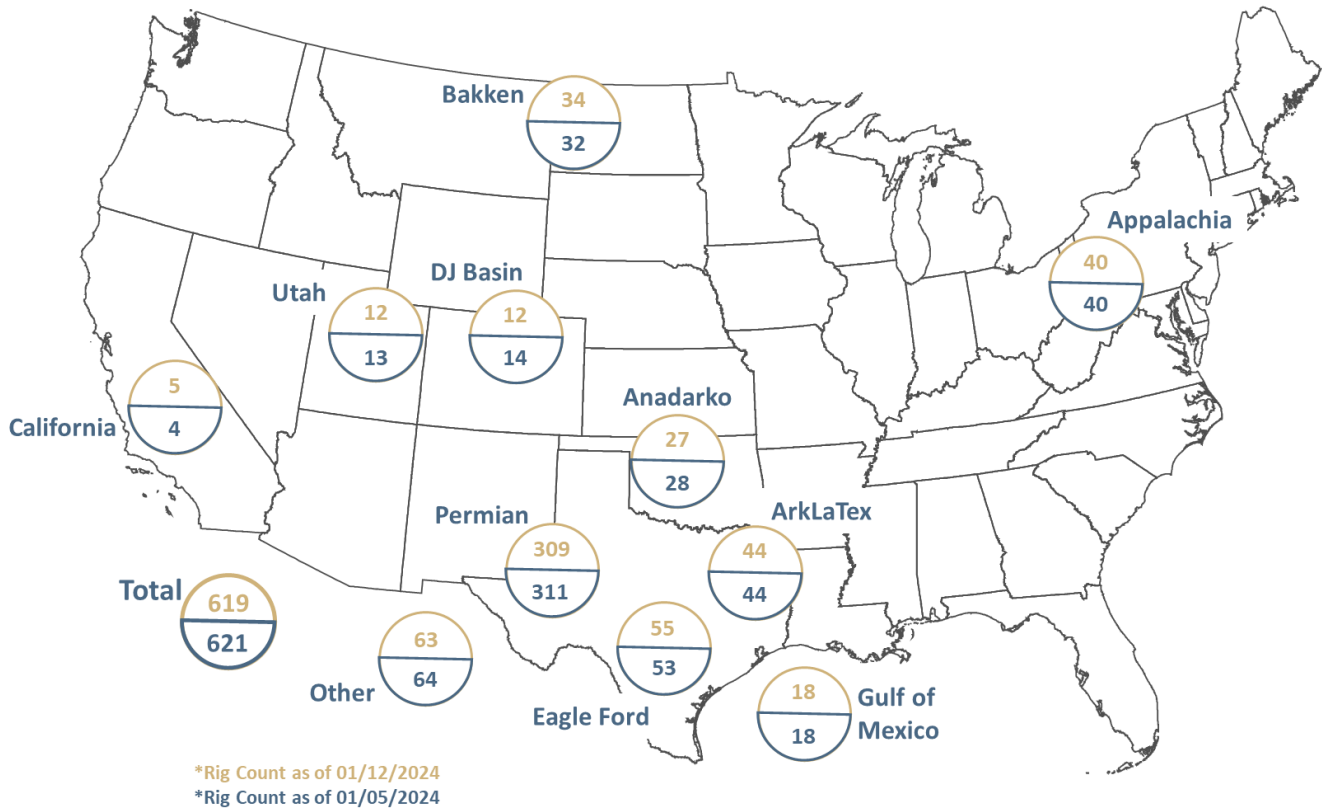
In yet another move to consolidate the US shale sector, Occidental Petroleum (Oxy) has announced its plan to buy the private Permian Basin producer CrownRock for \$12 billion.

Freehold Royalties to Acquire Permian Basin Interests for \$82 Million

Freehold Royalties entered into agreements with two private sellers to acquire Permian Basin mineral and royalties interests in the Midland and Delaware basins for \$82.5 million.



RIG ACTIVITY BY US REGION

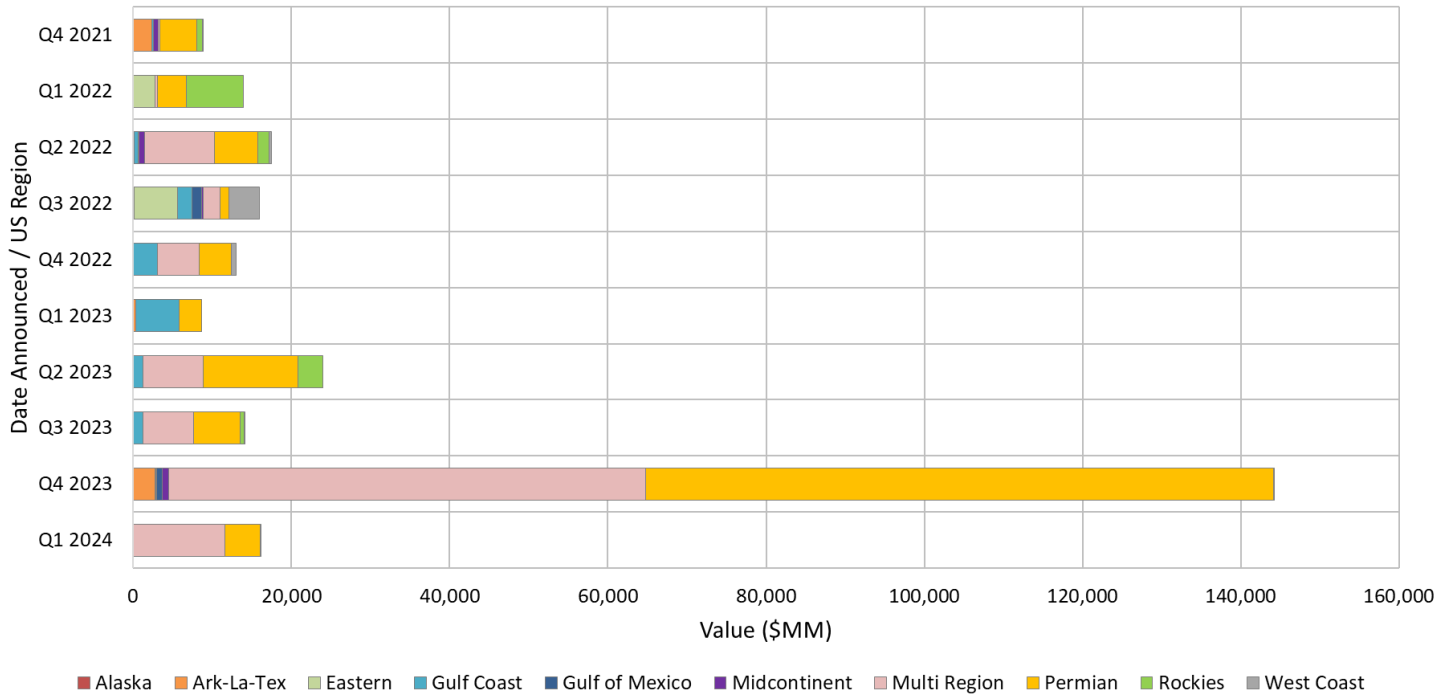


U.S. Rig Breakouts	Week Ending 01/12/2024			Week Ending 01/05/2024		Week Ending 01/13/2023
	Count	+/-	Count	+/-	Count	
Oil	499	(2)	501	(124)	623	
Gas	117	(1)	118	(33)	150	
Not Specified	3	1	2	1	2	
Directional	48	2	46	(1)	49	
Horizontal	561	(3)	564	(139)	700	
Vertical	10	(1)	11	(16)	26	
Land (Inc Others)	599	(2)	601	(155)	754	
Inland Waters	0	0	0	(2)	2	
Offshore	20	0	20	1	19	
US Total	619	(2)	621	(156)	775	

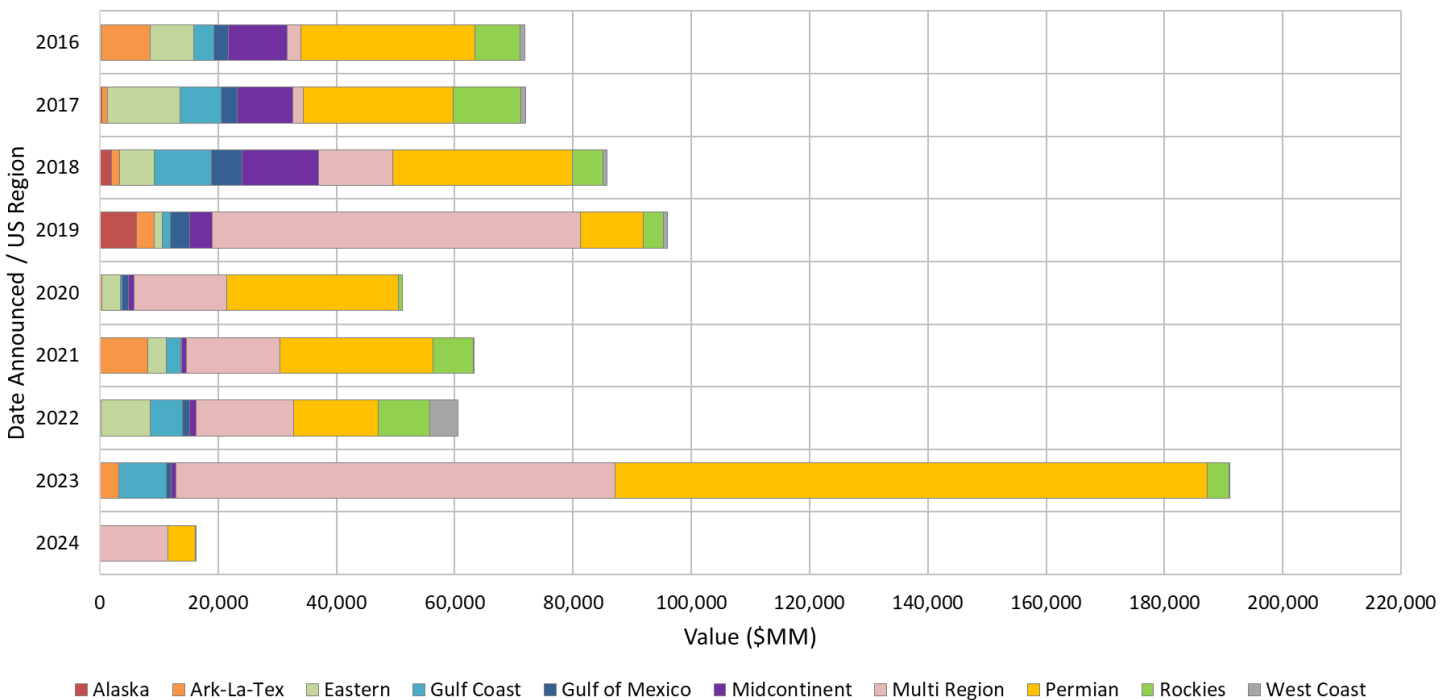
*Source—Baker Hughes Weekly Rig Counts



DEAL VALUE BY US REGION (BY QUARTER)



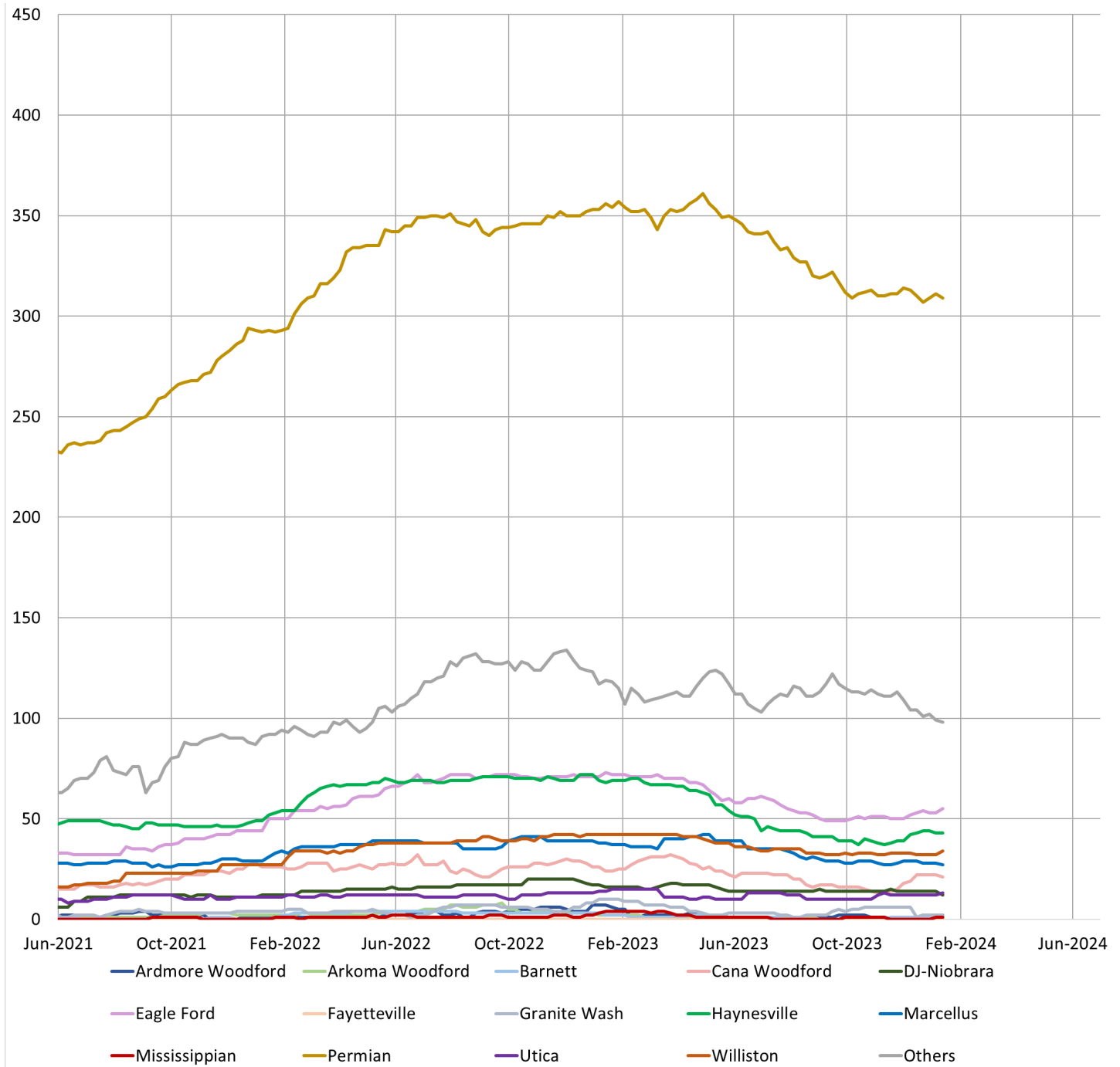
DEAL VALUE BY US REGION (BY YEAR)



*Source—PLS M&A Database (Charts exclude terminated deals)



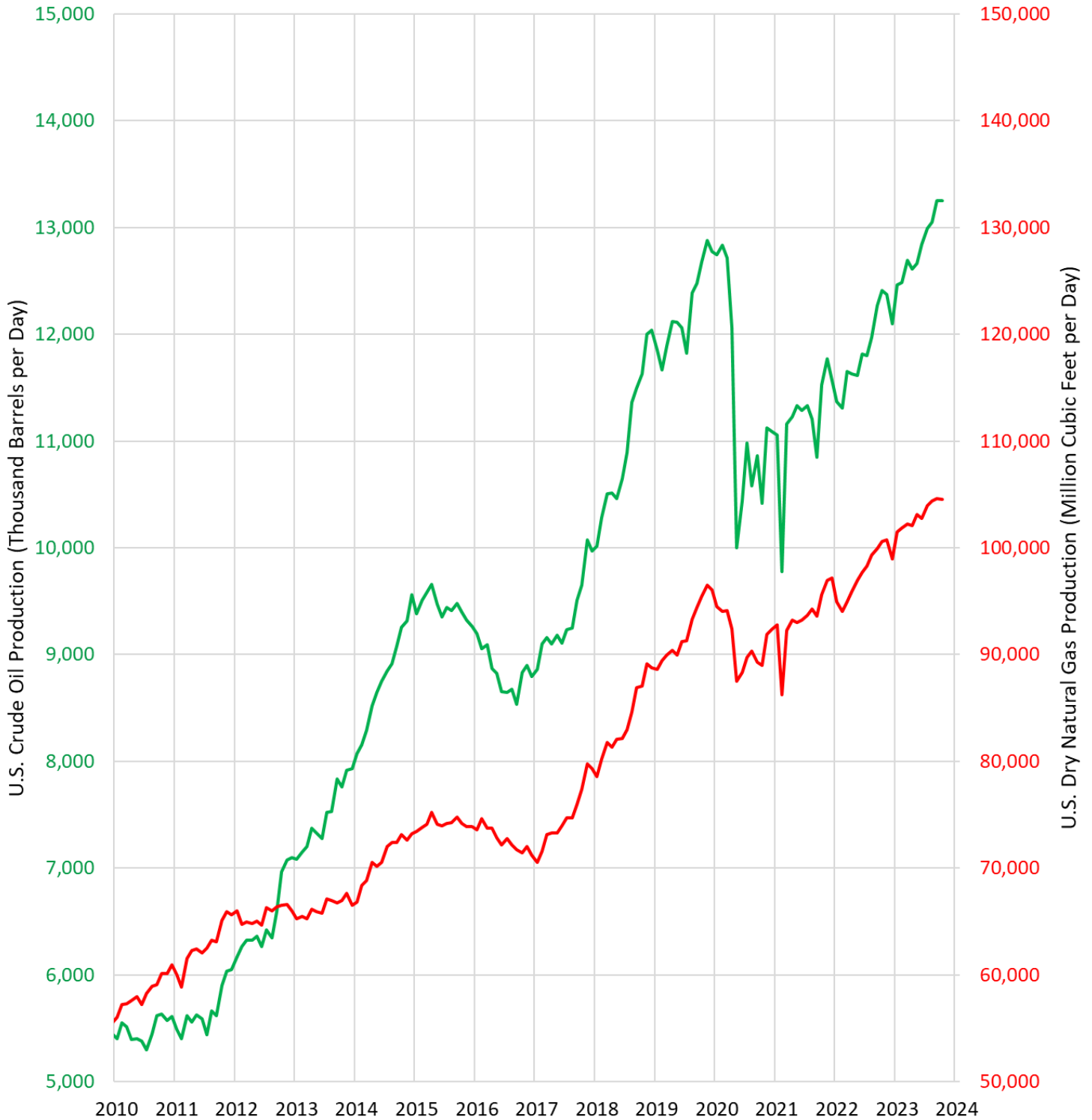
RIG ACTIVITY BY US REGION



*Source—Baker Hughes Weekly Rig Counts



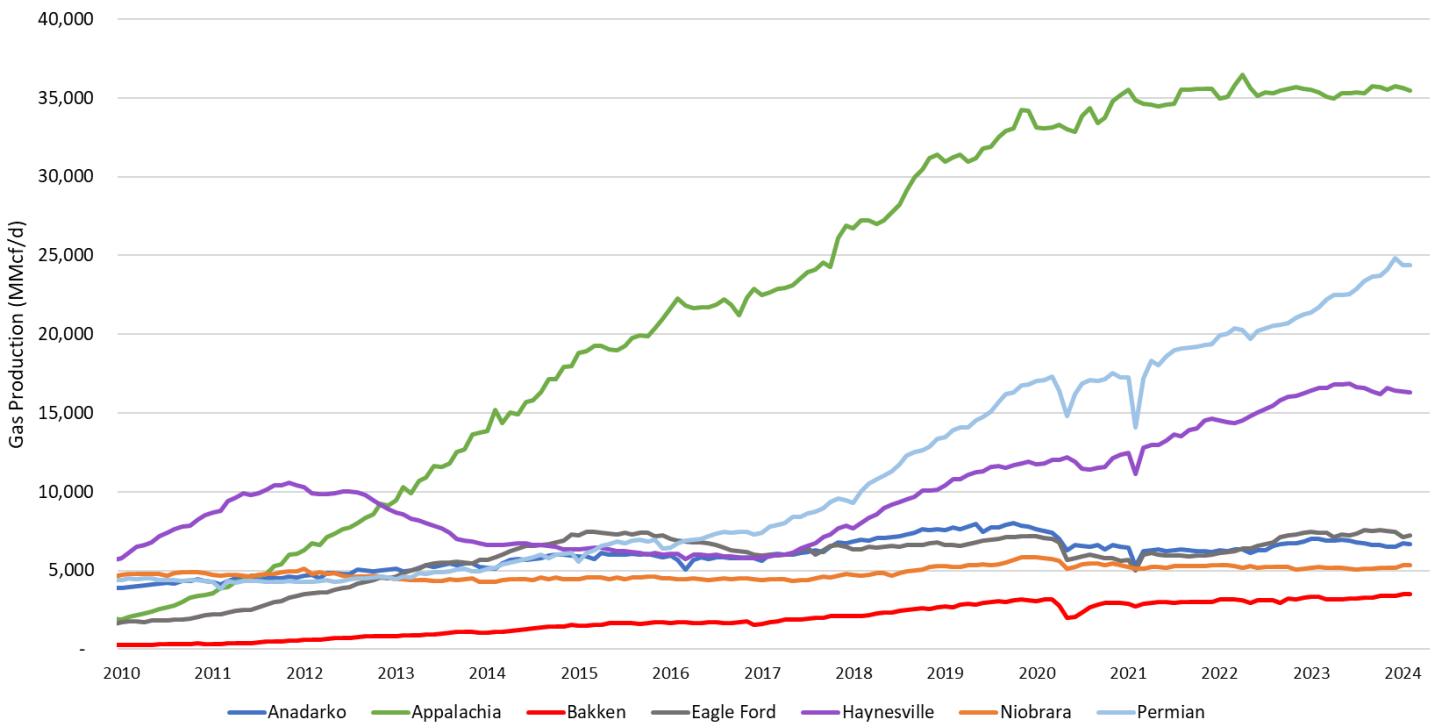
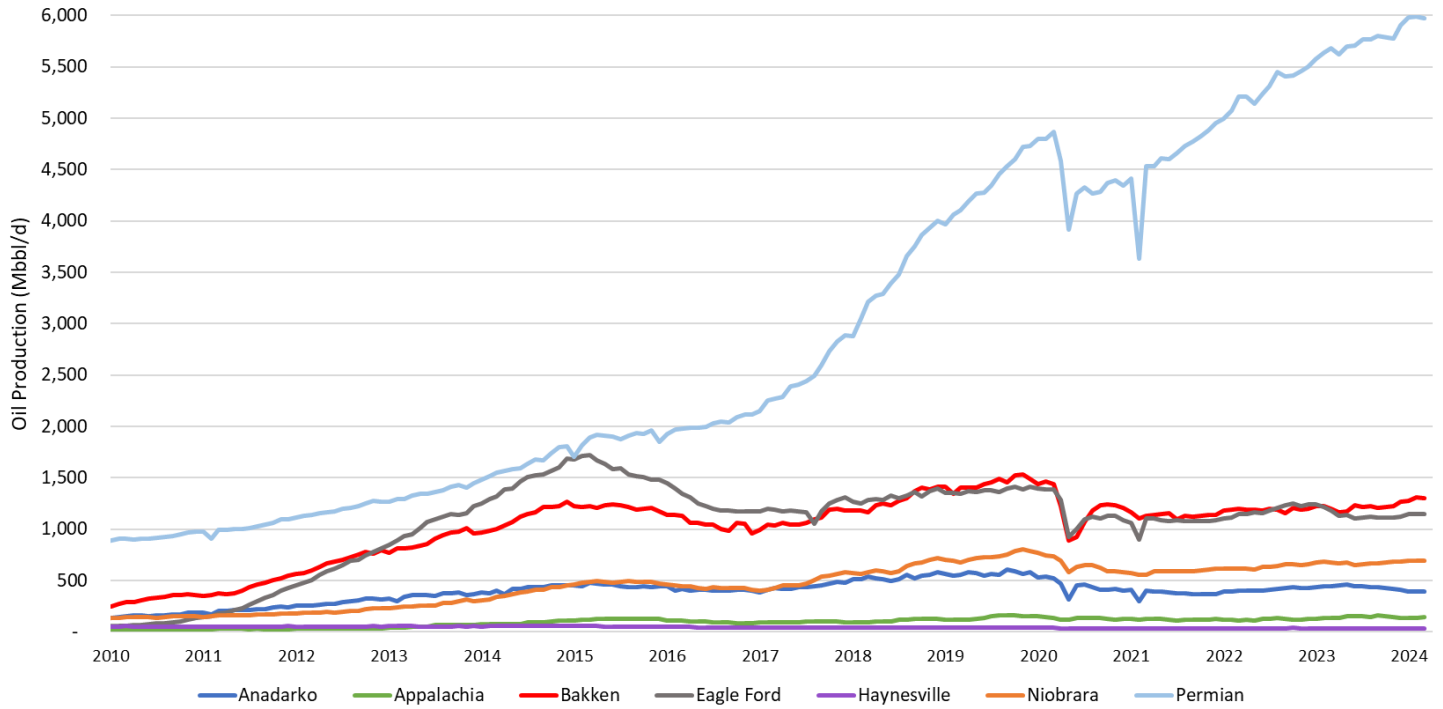
US DAILY CRUDE (MMbbl) & DRY NATURAL GAS PRODUCTION (MMcf)



*Source—Energy Information Administration, United States (EIA)



HISTORICAL PRODUCTION OF SELECTED US SHALE REGIONS



*Source—Energy Information Administration, United States (EIA)



UPCOMING EVENTS

January 2024

[Paul “Bear” Bryant Awards](#)

January 10

Houston, TX

[IPAA—Private Capital Conference](#)

January 17

Houston, TX

February 2024

[NAPE Summit](#)

February 7-9

Houston, TX

[SPE Business Development A&D Symposium](#)

February 28

Houston, TX

March 2024

[Big Energy! Gala 2024](#)

March 2

Houston, TX

[Tulsa Irish Festival](#)

March 8-10

Tulsa, OK

[ROCC US Men's Clay Court Championship](#)

March 30 - April 7

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).



Yvonne Trujillo is a Senior Petroleum Engineer at Ralph E. Davis Associates, an Opportune LLP company. Yvonne has over 25 years experience in the oil and gas industry with extensive expertise in reserves engineering, SEC and PRMS/SPE reporting and economics and asset evaluation in conventional and unconventional reservoirs in the U.S. Lower 48. Yvonne earned a B.S. in Mechanical Engineering at Simon Bolivar University in Caracas, Venezuela and an M.S. in Petroleum Engineering at the University of Houston.



David Edwards is a Petroleum Engineer at Ralph E. Davis Associates, an Opportune LLP company. David has over three 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.

