



Weekly E&P Update

January 2, 2024

Vol. 1

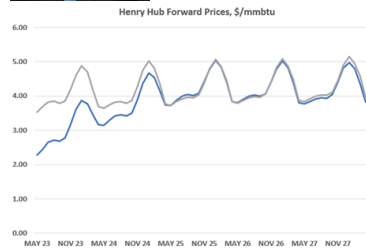
Natural Gas Update

By Steve Hendrickson
President of Ralph E. Davis Associates



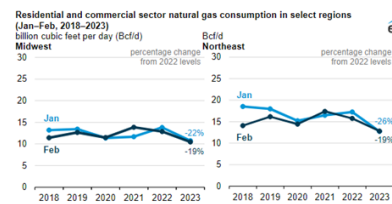
Originally published on 4.18.23 in Vol. 15 of the RED newsletter.

We last looked at natural gas trends in our first edition of the year, so it seemed a good time for an update. If you've been keeping track, US natural gas prices have been weak this winter. At the beginning of the year, we were already experiencing some price softening, but the outlook was pretty good and futures prices were over \$4 before the end of the year.



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(Source: Bloomberg)

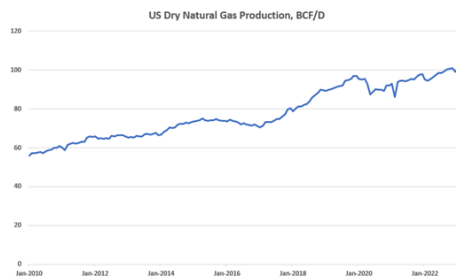
The remainder of the winter turned out to be mild across much of the country, particularly the regions that typically have high winter demand. As a result, the EIA reports that consumption in the Midwest and Northeast was approximately 20-25% lower in January and February of this year compared to the same months in 2018.



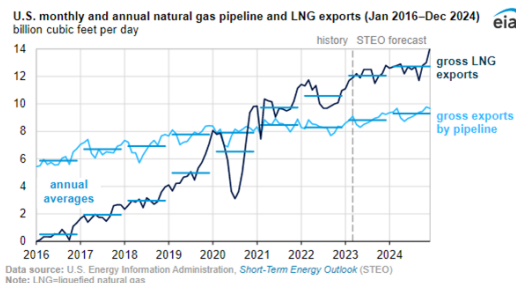
[CLICK TO ENLARGE](#)
(Source: EIA)

And while demand was lower than normal, production continued to climb. January's production was estimated to be a record 101.4 bcf/d.

Exports of natural gas, especially LNG, are a bright spot for the natural gas industry. The Freeport LNG facility has resumed operation following a fire that shut it down last year. LNG export volumes **reached a record high of 14.9 bcf/d** on April 16. Surprisingly, that exceeds the EIA's recent export projections shown below.



[CLICK TO ENLARGE](#)
(Source: EIA)



[CLICK TO ENLARGE](#)
(Source: EIA)

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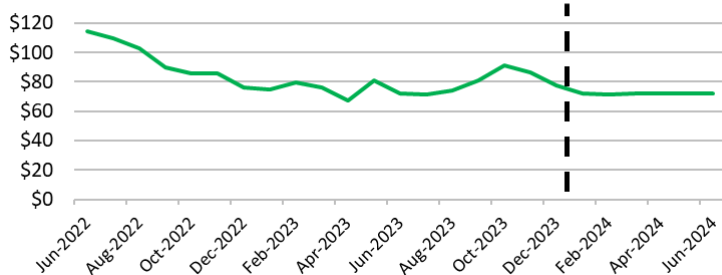
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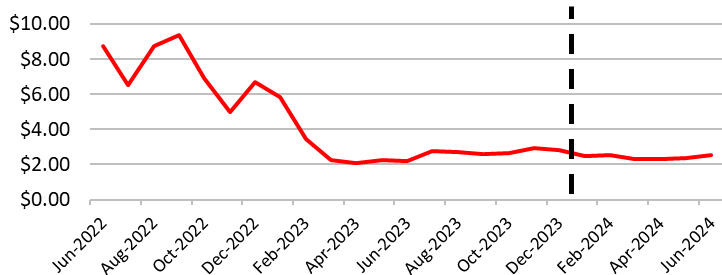


NYMEX FUTURE PRICING

WTI Spot Pricing



HH Spot Pricing



FRIDAY'S MARKET CLOSE

NYMEX WTI CRUDE OIL FUTURES
as of December 29, 2023 Close (\$/bbl)

Period	Current	WoW Change	Last Week	1 Yr Ago
2024	\$71.52	(\$1.62)	\$73.14	\$74.42
2025	\$68.32	(\$2.19)	\$70.51	\$70.16
2026	\$65.37	(\$2.18)	\$67.55	\$66.88
2027	\$63.32	(\$2.19)	\$65.51	\$64.14
2028	\$62.02	(\$2.19)	\$64.21	\$61.82

NYMEX HH NATURAL GAS FUTURES
as of December 29, 2023 Close (\$/MMBtu)

Period	Current	WoW Change	Last Week	1 Yr Ago
2024	\$2.68	\$0.01	\$2.67	\$4.27
2025	\$3.49	(\$0.01)	\$3.50	\$4.39
2026	\$3.82	\$0.00	\$3.82	\$4.46
2027	\$3.85	(\$0.04)	\$3.89	\$4.50
2028	\$3.80	(\$0.06)	\$3.86	\$4.57

INDUSTRY METRICS—QUICK SNAPSHOT

	Current	Last Week	WoW Change	%Change
Crude Oil Near-Month Price (\$/bbl)	\$71.99	\$73.80	(\$1.81)	(3%)
Natural Gas Near-Month Price (\$/MMBtu)	\$2.54	\$2.46	\$0.08	3%
Weekly Upstream-Deal Transaction Value (\$MM)	\$0.00	\$56.50	(\$56.50)	(100%)
Weekly Number of Upstream-Deal Transactions	0	4	(4)	(100%)
Current Total US Rig Count	622	620	2	0.3%
US Field Crude Oil Production (MMbbl/day)	13.3	13.3	0	-
US Field Dry Natural Gas Production (Bcf/day)	111.1	111.1	0	-
Commercial Crude Oil Stocks-Excluding SPR (MMbbl)	437	437	0	-
Natural Gas Stocks-Working Gas Underground Storage (Bcf)	3,490	3,490	0	-
Total Drilled But Uncompleted Wells (DUC-Last Month)	4,415	4,415	0	-

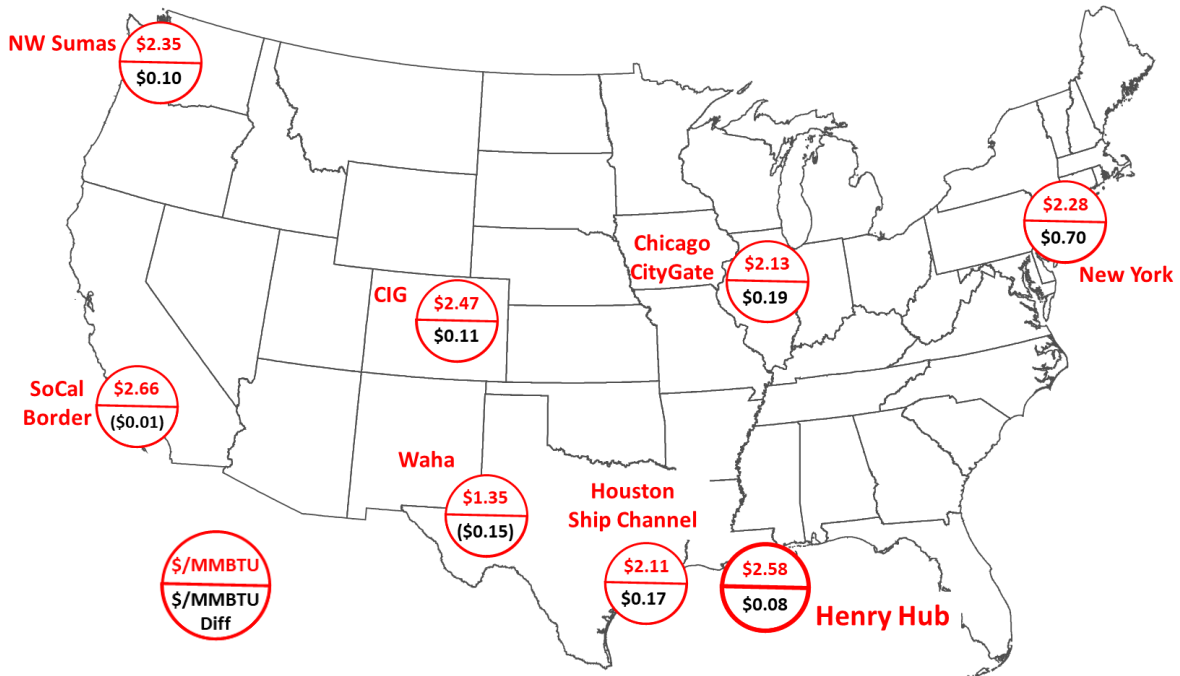
*Source—Energy Information Administration, United States (EIA)

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

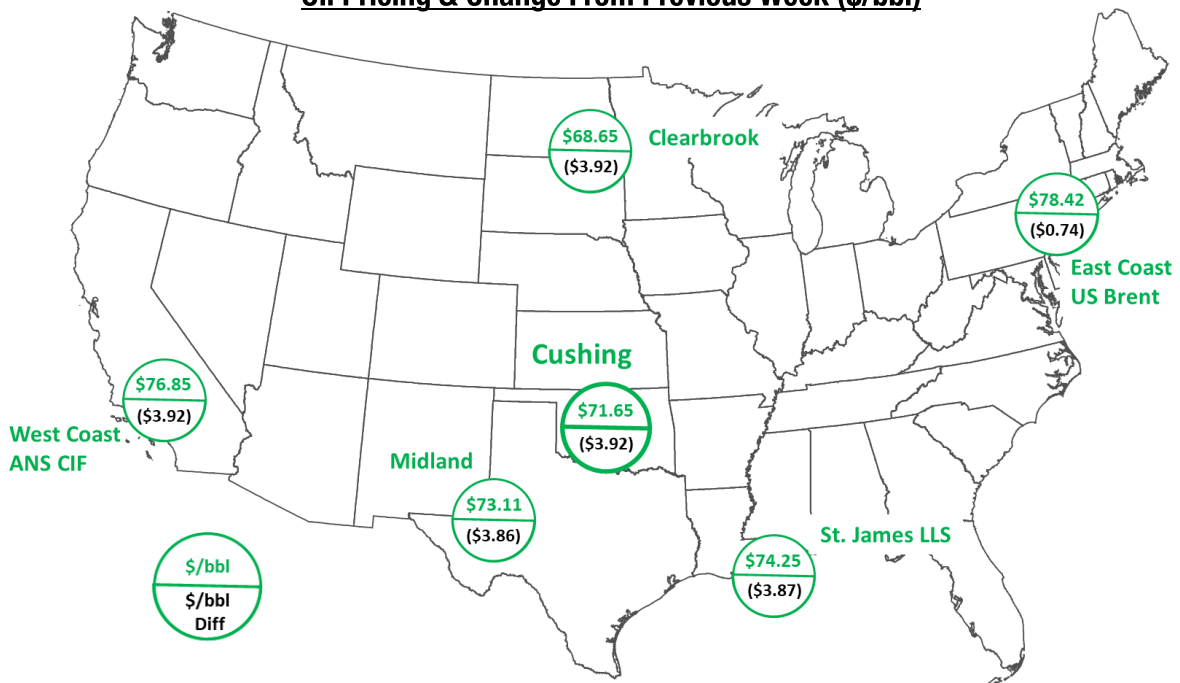


US COMMODITY PRICES CONTINUED

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



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



*Source—Bloomberg LP



SELECTED INDUSTRY HEADLINES

US Oil Output Fell in October for First Time Since April - EIA

U.S. crude oil output fell slightly in October to 13.248 million barrels per day, the first monthly decline since April, the U.S. Energy Information Administration said on Friday.

U.S. Shale Growth Could Exceed Forecasts in 2024

U.S. crude oil production has overwhelmingly exceeded earlier forecasts and has grown at a much faster pace this year, offsetting much of the OPEC+ efforts to push up prices by coordinated supply reductions.

OPEC Faces Declining Demand and Shrinking Market Share in Early 2024

OPEC is facing weakening demand for its crude in the first half of 2024 just as its global market share declines to the lowest since the Covid-19 pandemic on the back of output cuts and member Angola's exit, according to Reuters calculations and data from forecasters.

Where Will WTI Crude Oil Price be at End-2024?

\$77.68 was the average response executives from 143 oil and gas firms gave when asked what they expect the WTI crude oil price to be at the end of 2024, as part of the fourth quarter Dallas Fed Energy Survey.

Oil Prices Stable as Economic Headwinds Offset Red Sea Disruptions

Oil prices were little changed in the first session of the new year, as the impact of economic headwinds unraveled gains from potential disruptions to supply due to tensions in the Red Sea.
Nat gas supply and demand

Led by Texas, U.S. Natural Gas Production Forecast to Grow

In a recent EIA Short Term Energy Outlook, it was estimated that U.S. natural gas production in the Lower 48 states would grow by 5% in 2023, and by another 2% in 2024.

2024 Will Usher New Tech to Extract Natural Gas: Upwing Chief

Greater demand for natural gas in the United States is expected to drive the deployment of new technologies to recover otherwise inaccessible reserves in the country starting this year, according to the chief executive of Upwing Energy LLC.
Nat gas prices

New Year Brings Bullish Shift for Natural Gas Futures as Traders Eye January Cold (LOGIN CREDENTIALS REQUIRED)

Natural gas futures rallied to open 2024 after updated forecasts advertised more widespread cold into mid-January, though whether this wave of bullish momentum would endure longer than the typical New Year's resolution remained an open question.

EPA Green-Lights Louisiana CCS Permit 'Primacy'

The US Environmental Protection Agency on Thursday formally granted the state of Louisiana the authority to issue its own permits for carbon capture and storage projects, a move that industry advocates hope will hasten what has become a lengthy backlog of applications.

US Unveils Tiered Hydrogen Tax Credit Favoring Cleaner Production

The Biden Administration has announced proposed rules for a tax incentive promoting clean hydrogen production, with hydrogen derived using fossil fuels still qualifying but for lower credits.

Next-Gen Solar Cells: Smaller, Cheaper, More Efficient

University of Ottawa engineers, together with national and international partners, have achieved a world first by manufacturing the first back-contact micrometric photovoltaic cells.



SELECTED RECENT TRANSACTIONS

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.

NOG Expands Permian Presence, Enters Ohio Utica Shale With \$170 Million Acquisitions

Northern Oil and Gas, Inc. has entered into a definitive agreement with a private party to acquire non-operated interests across approximately 3,000 net acres located primarily in Lea and Eddy Counties, New Mexico.

Australia's Karoon Energy to Buy Stakes in US Offshore Assets For \$720 Million

Karoon Energy announced deals worth \$720 million recently to buy stakes in certain offshore oil and gas fields in the Gulf of Mexico from U.S.-based LLOG Exploration, in a move to diversify operations beyond Brazil and Australia.

WhiteHawk to Acquire Marcellus Assets For \$54 Million

WhiteHawk Energy, LLC is acquiring additional Marcellus Shale natural gas mineral and royalty assets for a total price of \$54.0 million.

Acacia Research Acquires Majority Stake in Benchmark Energy

Acacia Research Corporation today announced that it has acquired a majority interest in Benchmark Energy II, LLC.

Mach Natural Resources to Buy Anadarko Basin Assets For \$815 Million

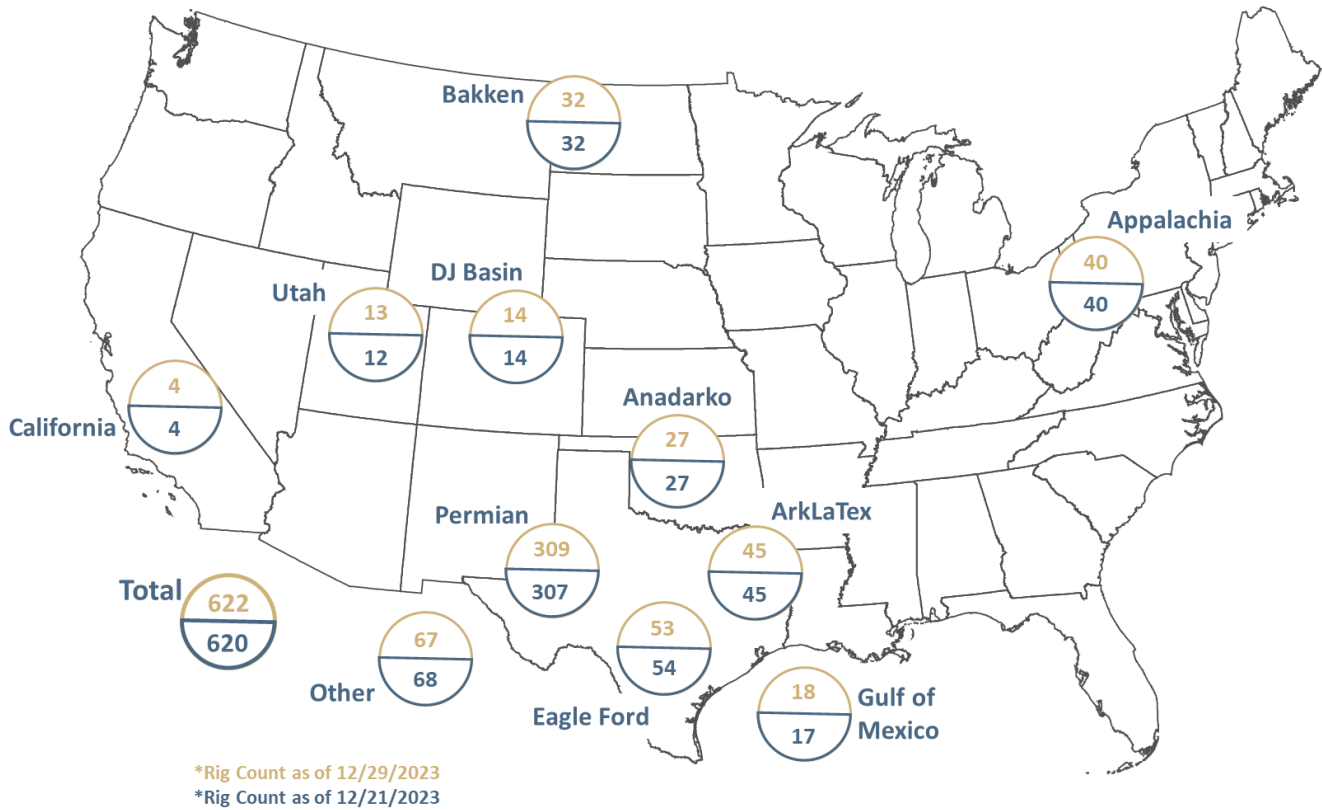
Mach Natural Resources said on Monday said it will buy certain oil and gas assets in the Anadarko Basin in Oklahoma from privately-held Paloma Partners for \$815 million in cash.

Sitio Royalties to Exit Appalachia, Anadarko Basins

With 192 acquisitions under its belt, Sitio Royalties recently inked a deal to divest all of its assets in the Appalachia and Anadarko basins for \$117.5 million.



RIG ACTIVITY BY US REGION

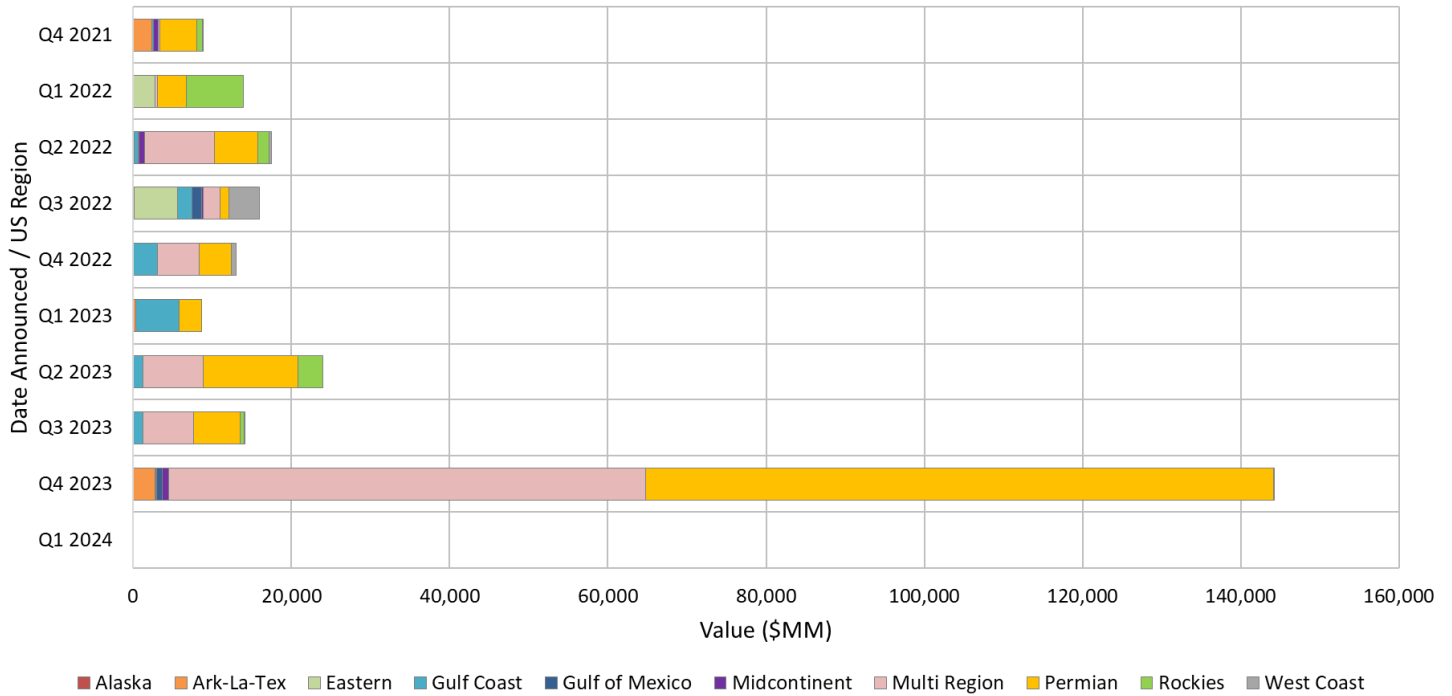


U.S. Rig Breakouts	Week Ending 12/29/2023			Week Ending 12/21/2023		Week Ending 12/30/2022
	Count	+/-	Count	+/-	Count	
Oil	500	2	498	(121)	621	
Gas	120	0	120	(36)	156	
Not Specified	2	0	2	0	2	
Directional	46	0	46	0	46	
Horizontal	565	2	563	(141)	706	
Vertical	11	0	11	(16)	27	
Land (Inc Others)	602	1	601	(160)	762	
Inland Waters	0	0	0	(2)	2	
Offshore	20	1	19	5	15	
US Total	622	2	620	(157)	779	

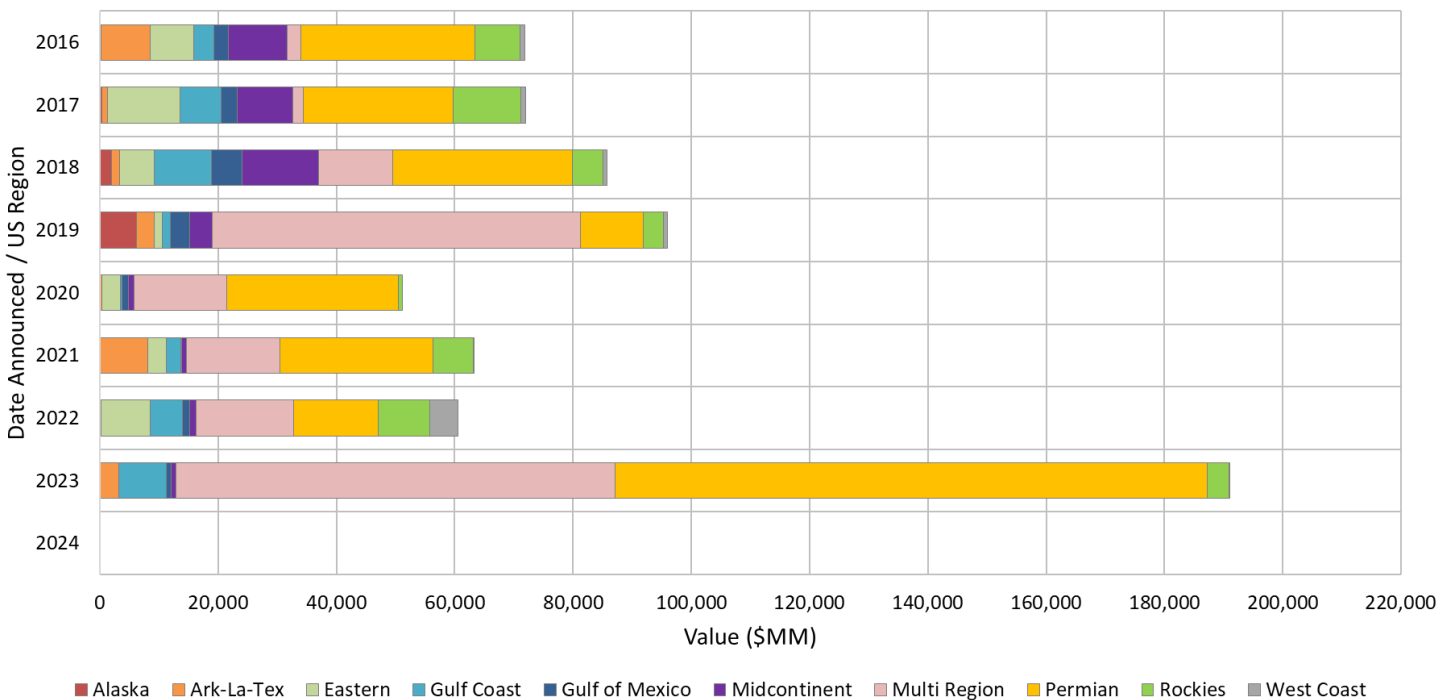
*Source—Baker Hughes Weekly Rig Counts



DEAL VALUE BY US REGION (BY QUARTER)



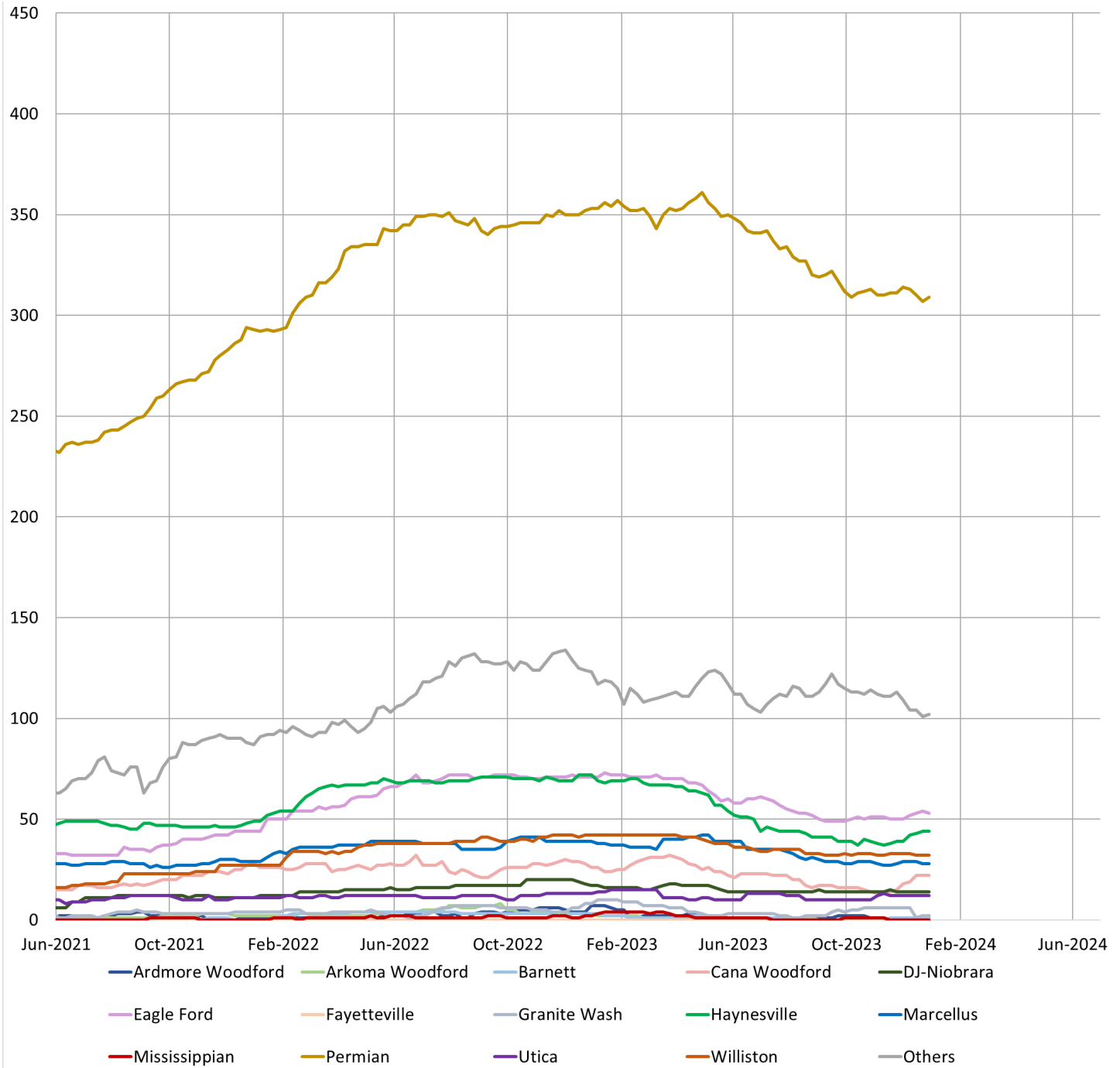
DEAL VALUE BY US REGION (BY YEAR)



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



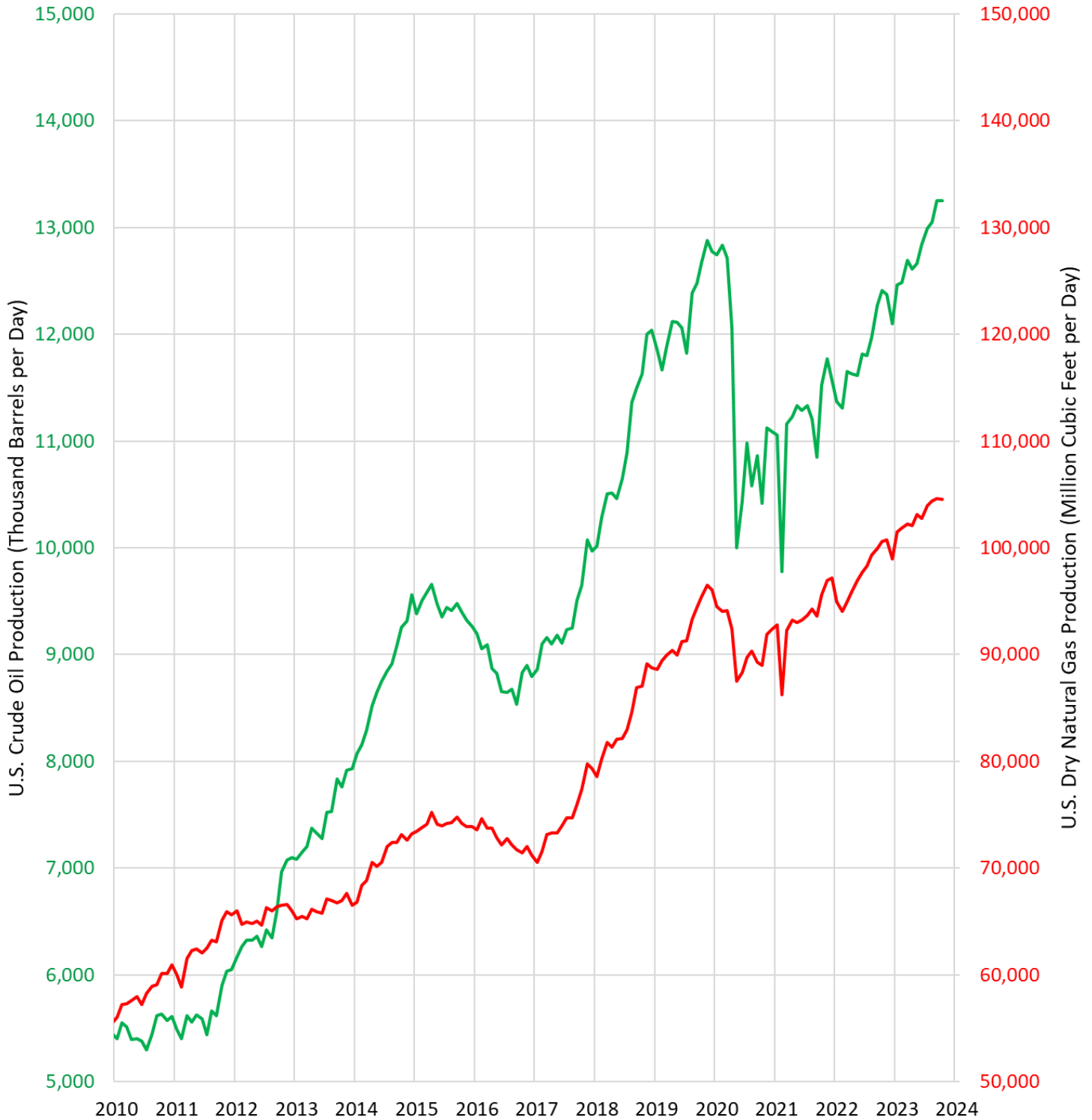
RIG ACTIVITY BY US REGION



*Source—Baker Hughes Weekly Rig Counts



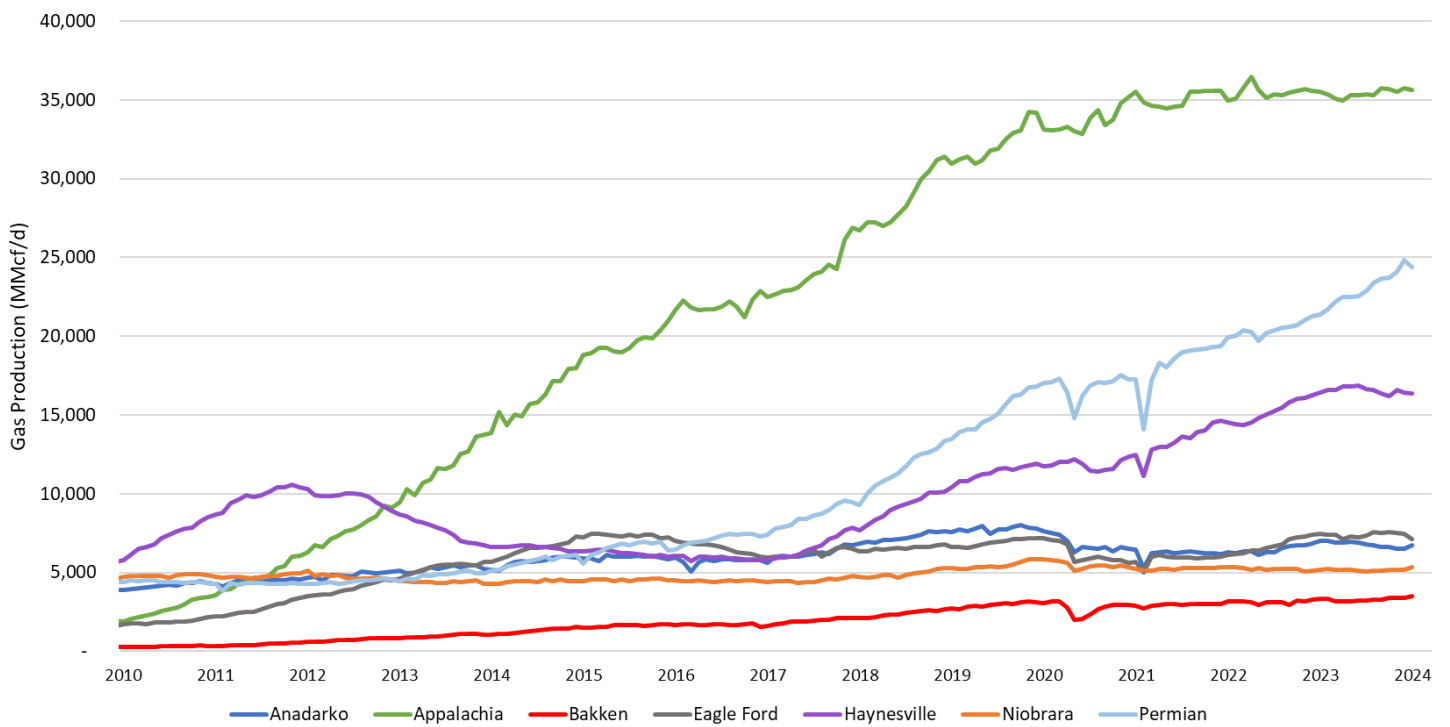
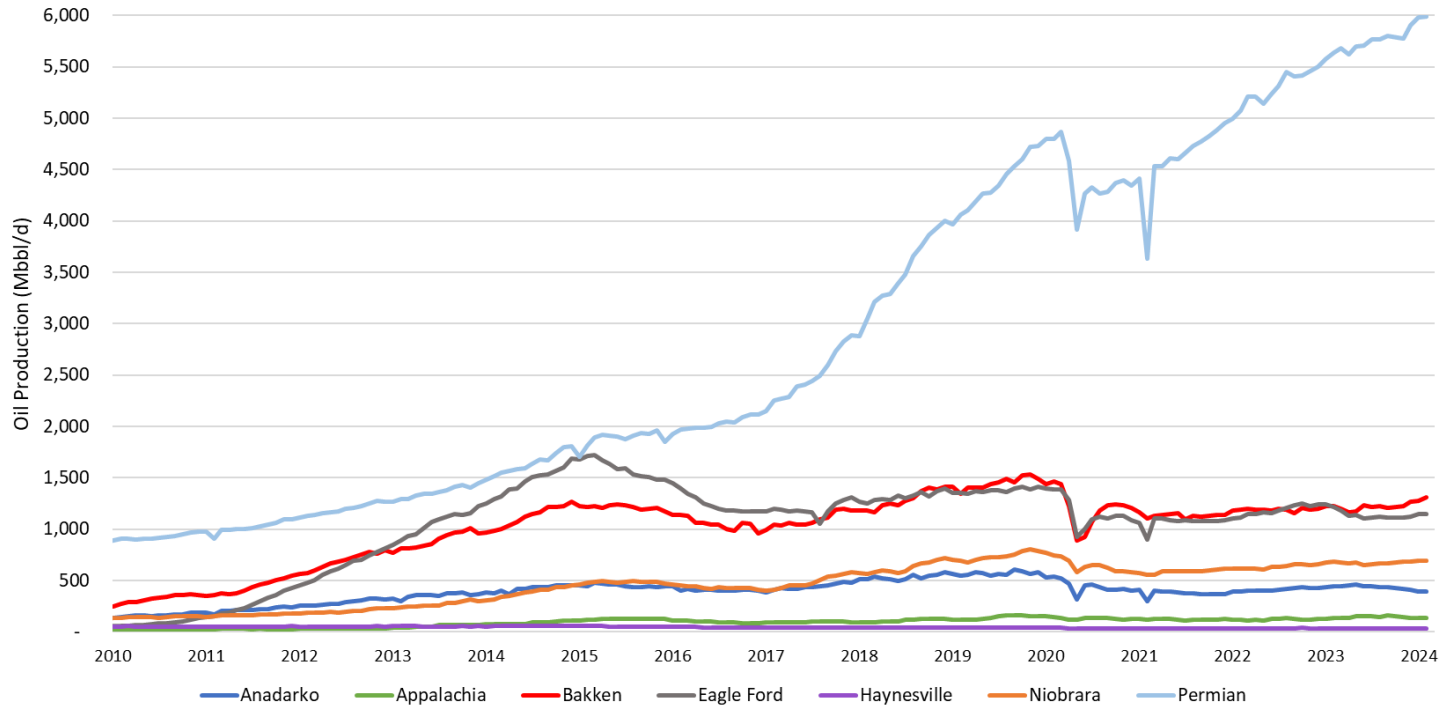
US DAILY CRUDE (MMbbl) & DRY NATURAL GAS PRODUCTION (MMcf)



*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

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.

