



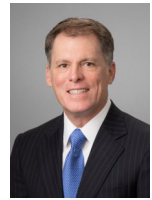
Weekly E&P Update

January 9, 2024

Vol. 2

RED@100 - Fueling the Future for a Century

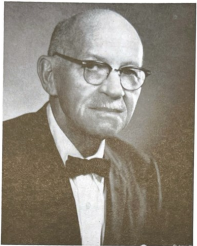
By Steve Hendrickson
President of Ralph E. Davis Associates



This year, we're celebrating a remarkable milestone - the 100th anniversary of Ralph E. Davis Associates. We proudly believe we are the world's oldest continuously operating petroleum engineering firm. In our first column of the year, we want to share a glimpse into the life of Ralph Emerson Davis, a man whose contributions are too significant to do justice in these few paragraphs.

Dedication

Davis was born in Blacksburg, Virginia, in 1884, the same year that saw the first natural gas pipelines laid to Pittsburgh, a city where Davis would later found Ralph E. Davis Associates. After spending his early years in Des Moines, Iowa, Davis pursued higher education at what is now called the University of Wisconsin - Platteville. Before his passing, he made a generous donation to the university, and today, the [football stadium](#) on campus proudly carries his name.



TO RALPH E. DAVIS,
GEOLOGIST AND "GODFATHER" OF THE
NATURAL GAS INDUSTRY,

*a pioneer whose vision led to unprecedented
growth of an industry, and who, by his
professional activities and integrity,
exemplifies the finest in petroleum geology,*

THIS SYMPOSIUM
Is Gratefully and Affectionately Dedicated
[CLICK TO ENLARGE](#)
(Source: RED Archives)

With a solid background in geology and engineering, Davis initially started his career as a "hard rock" mining geologist. But in 1912, he returned to Platteville to serve as the Director of the New State Mining School. Here, he met his future wife, Eurette, an English teacher at the school. In 1920, he made his way to Pittsburgh, transitioning into a consulting geologist role and focusing on the burgeoning oil and gas industry.

Davis became a globetrotter over the next four decades, traveling extensively for work. He even took up flying a single-engine airplane to make it easier to tend to his consulting business, which had offices in various "oil cities." During the 1940s, Davis relocated the firm's headquarters to Houston as the Gulf Coast natural gas business was taking off.

Davis's most significant impact was in the field of natural gas reserves engineering. His firm's estimates were pivotal in securing financing for several pipelines, bringing natural gas from remote fields to bustling cities and industrial hubs. In the introduction to his 1964 autobiography, "[Stories of Natural Gas.](#)" James Clark remarked, "It has been said that Davis has written the reports upon which three-fourths of the evaluations and ultimate financing of natural gas companies

in this country have been based." In 1968, the American Association of Petroleum Geologists paid tribute to him by dedicating their two-volume work, "[Natural Gases of North America.](#)" and honoring him as the "godfather" of the natural gas industry.

Today, we're proud to continue Davis's legacy, embracing his values of "candor, ability, knowledge, and integrity." As we step into the next century, we do so with enthusiasm and anticipation, excited to build on the foundations laid by this remarkable man.

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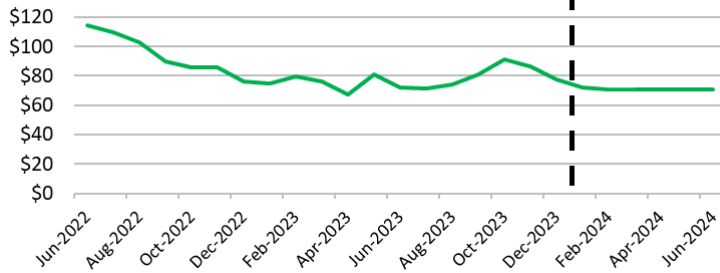
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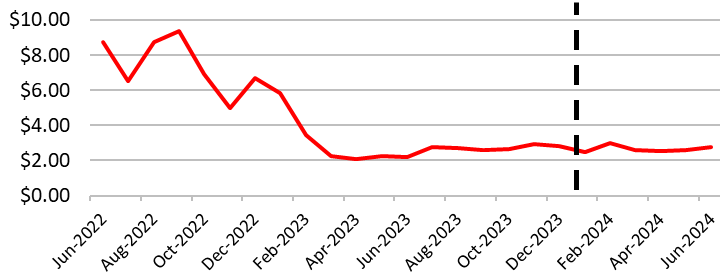


NYMEX FUTURE PRICING

WTI Spot Pricing



HH Spot Pricing



MONDAY'S MARKET CLOSE

NYMEX WTI CRUDE OIL FUTURES
as of January 8, 2024 Close (\$/bbl)

Period	Current	WoW Change	Last Week	1 Yr Ago
2024	\$70.51	(\$1.01)	\$71.52	\$70.96
2025	\$67.61	(\$0.71)	\$68.32	\$67.83
2026	\$65.07	(\$0.30)	\$65.37	\$65.19
2027	\$63.35	\$0.03	\$63.32	\$62.88
2028	\$62.39	\$0.37	\$62.02	\$60.80

NYMEX HH NATURAL GAS FUTURES
as of January 8, 2024 Close (\$/MMBtu)

Period	Current	WoW Change	Last Week	1 Yr Ago
2024	\$2.92	\$0.24	\$2.68	\$3.97
2025	\$3.62	\$0.13	\$3.49	\$4.18
2026	\$3.92	\$0.10	\$3.82	\$4.31
2027	\$3.92	\$0.07	\$3.85	\$4.35
2028	\$3.86	\$0.06	\$3.80	\$4.44

INDUSTRY METRICS—QUICK SNAPSHOT

	Current	Last Week	WoW Change	%Change
Crude Oil Near-Month Price (\$/bbl)	\$70.91	\$71.99	(\$1.08)	(2%)
Natural Gas Near-Month Price (\$/MMBtu)	\$2.94	\$2.54	\$0.40	16%
Weekly Upstream-Deal Transaction Value (\$MM)	\$4,532.00	\$0.00	\$4,532.00	-
Weekly Number of Upstream-Deal Transactions	5	0	5	-
Current Total US Rig Count	621	622	(1)	(0.2%)
US Field Crude Oil Production (MMbbl/day)	13.2	13.3	(0.1)	(0.8%)
US Field Dry Natural Gas Production (Bcf/day)	111.1	111.1	0	-
Commercial Crude Oil Stocks-Excluding SPR (MMbbl)	431	437	(6)	(1%)
Natural Gas Stocks-Working Gas Underground Storage (Bcf)	3,476	3,490	(14)	(0.4%)
Total Drilled But Uncompleted Wells (DUC-Last Month)	4,415	4,415	0	-

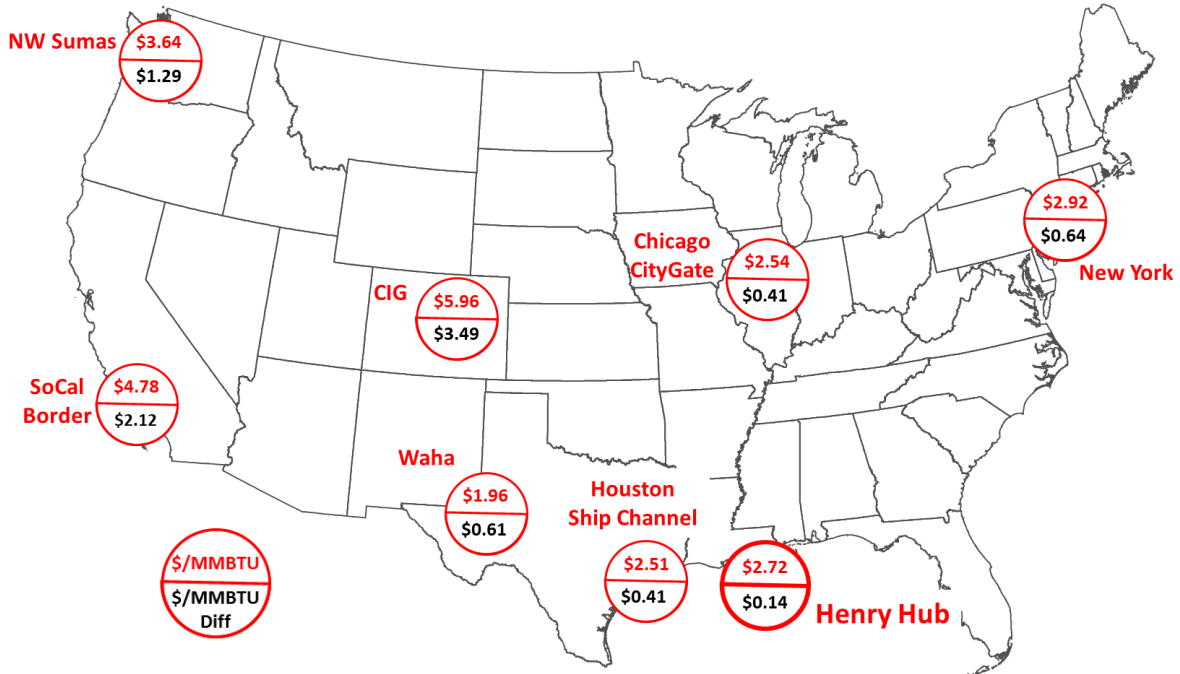
*Source—Energy Information Administration, United States (EIA)

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

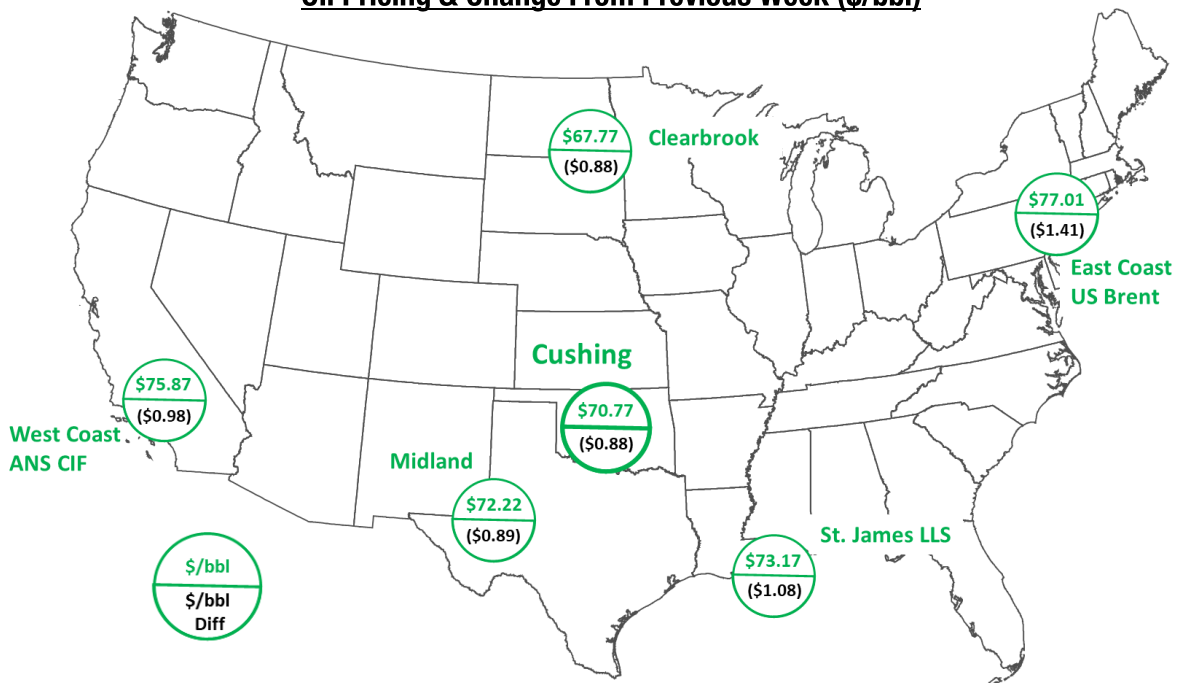


US COMMODITY PRICES CONTINUED

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



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



*Source—Bloomberg LP



SELECTED INDUSTRY HEADLINES

USA Commercial Crude Oil Inventories Drop

U.S. commercial crude oil inventories, excluding those in the Strategic Petroleum Reserve (SPR), decreased by 5.5 million barrels from the week ending December 22, 2023, to the week ending December 29, 2023.

J.P. Morgan Sees Oil Demand Growth at its Slowest in Nine Months in December

Early data indicates global oil consumption in December grew at the slowest pace in nine months, J.P. Morgan said in a note on Friday.

Oil Rises \$2 as Middle East Crisis, Inflation in Focus

Oil prices rose by more than \$2 recently on tensions in the Middle East and reduced Libyan output, but were yet to fully recovered from steep losses earlier this week.

Traders Most Bearish on Oil Since March 2023

Hedge funds and other portfolio managers ended the last week of 2023 with the most new bearish positions in futures and options contracts since March and the second-largest jump in weekly short additions since 2017.

Southwestern, Chesapeake Energy Close to Merger, Creating \$17 Billion U.S. Natural Gas Company

Southwestern Energy, and Chesapeake Energy are close to a merger that would create a roughly \$17 billion company, ranking as one of the largest natural gas producers in the U.S.

US Drillers Cut Oil, Gas Rigs for Third Week in a Row

U.S. energy firms this week cut the number of oil and natural gas rigs operating for the third time in four weeks, energy services firm Baker Hughes said in its closely followed report on Jan. 5.

February Natural Gas Surges Above \$3 Early as Projected Arctic Blast Intensifies (LOGIN CREDENTIALS REQUIRED)

Natural gas futures surged past the \$3.000/MMBtu barrier in early trading recently as recent forecasts ramped up the intensity of frigid arctic air projected to sweep through the Lower 48 next week.

Natural Gas Prices Pop as Frigid Weather May Lift Demand

The U.S. Energy Department's weekly inventory release showed a lower-than-expected decrease in natural gas supplies.

U.S. Overtakes Qatar To Become The World's Top LNG Exporter (LOGIN CREDENTIALS REQUIRED)

The U.S. has overtaken Qatar to become the world's largest exporter of liquefied natural gas for the very first time in the industry's history.

Natural Gas Producers' Game Plan for LNG: Wait Out 2024 (LOGIN CREDENTIALS REQUIRED)

Natural gas production has risen over the past decade with the potential to keep growing, but 2024 will test the market's patience as E&Ps await LNG export capacity to come online.
ESG

Biden Backs \$189 Million Loan to Spot Methane Leaks With Lasers

The Biden administration is backing a \$189 million loan commitment to a Colorado-based company for the development of a methane detection network that aims to monitor tens of thousands of oil and gas sites using lasers.

The World's Next Big Carbon Capture Challenge? Figuring Out How to Use It

Skepticism about how to commercialize — and use — carbon capture is growing. So is the debate over how to deploy it equitably and safely.



SELECTED RECENT TRANSACTIONS

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.

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

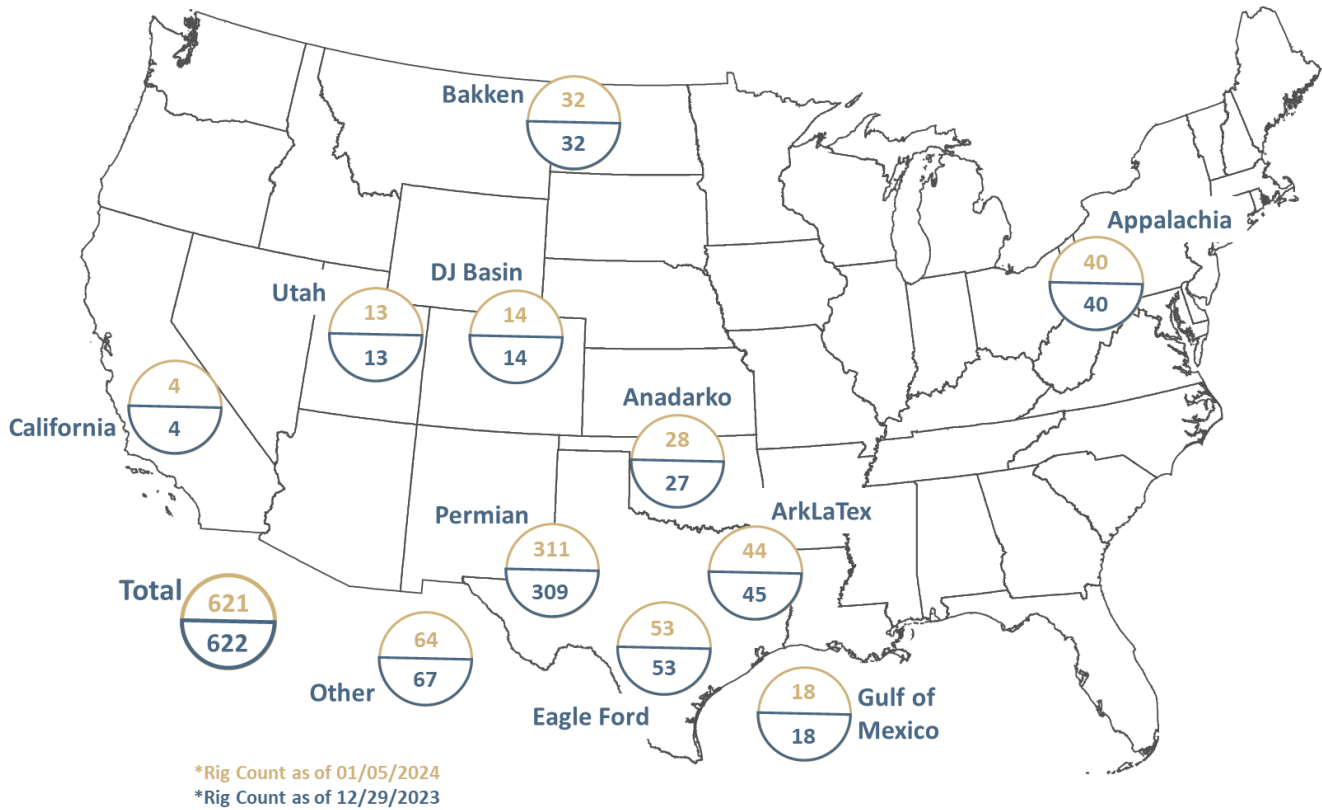
WhiteHawk Energy, LLC is acquiring additional Marcellus Shale natural gas mineral and royalty assets for a total price of \$54.0 million.

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.



RIG ACTIVITY BY US REGION

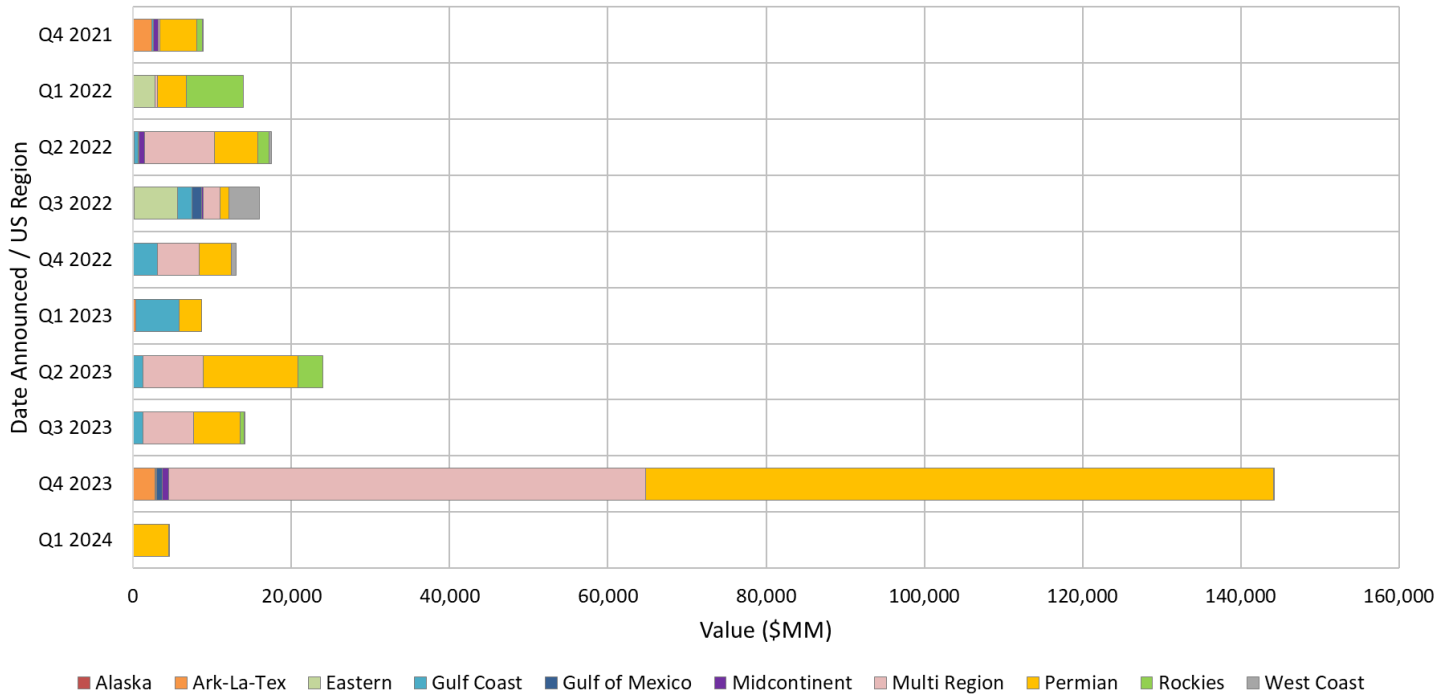


	Week Ending 01/05/2024			Week Ending 12/29/2023		Week Ending 01/06/2023
U.S. Rig Breakouts	Count	+/-	Count	+/-	Count	
Oil	501	1	500	(117)	618	
Gas	118	(2)	120	(34)	152	
Not Specified	2	0	2	0	2	
Directional	46	0	46	0	46	
Horizontal	564	(1)	565	(136)	700	
Vertical	11	0	11	(15)	26	
Land (Inc Others)	601	(1)	602	(153)	754	
Inland Waters	0	0	0	(2)	2	
Offshore	20	0	20	4	16	
US Total	621	(1)	622	(151)	772	

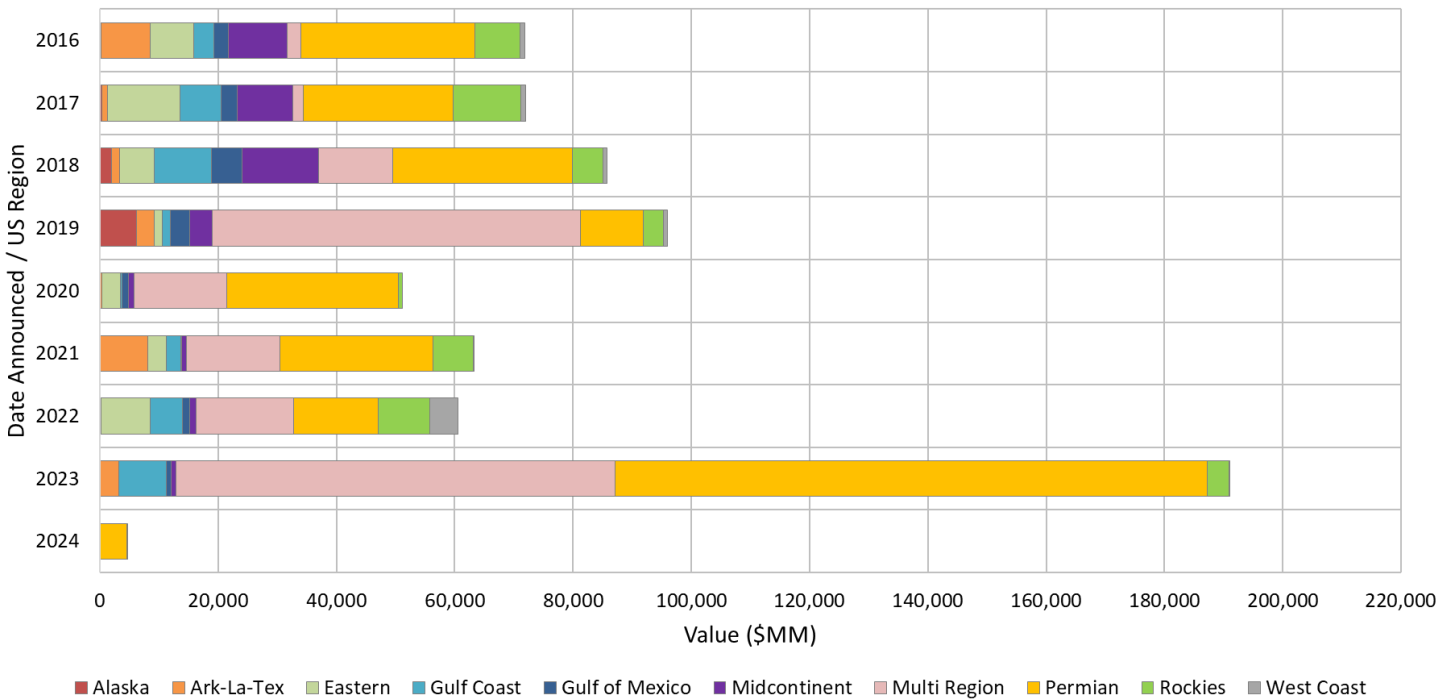
*Source—Baker Hughes Weekly Rig Counts



DEAL VALUE BY US REGION (BY QUARTER)



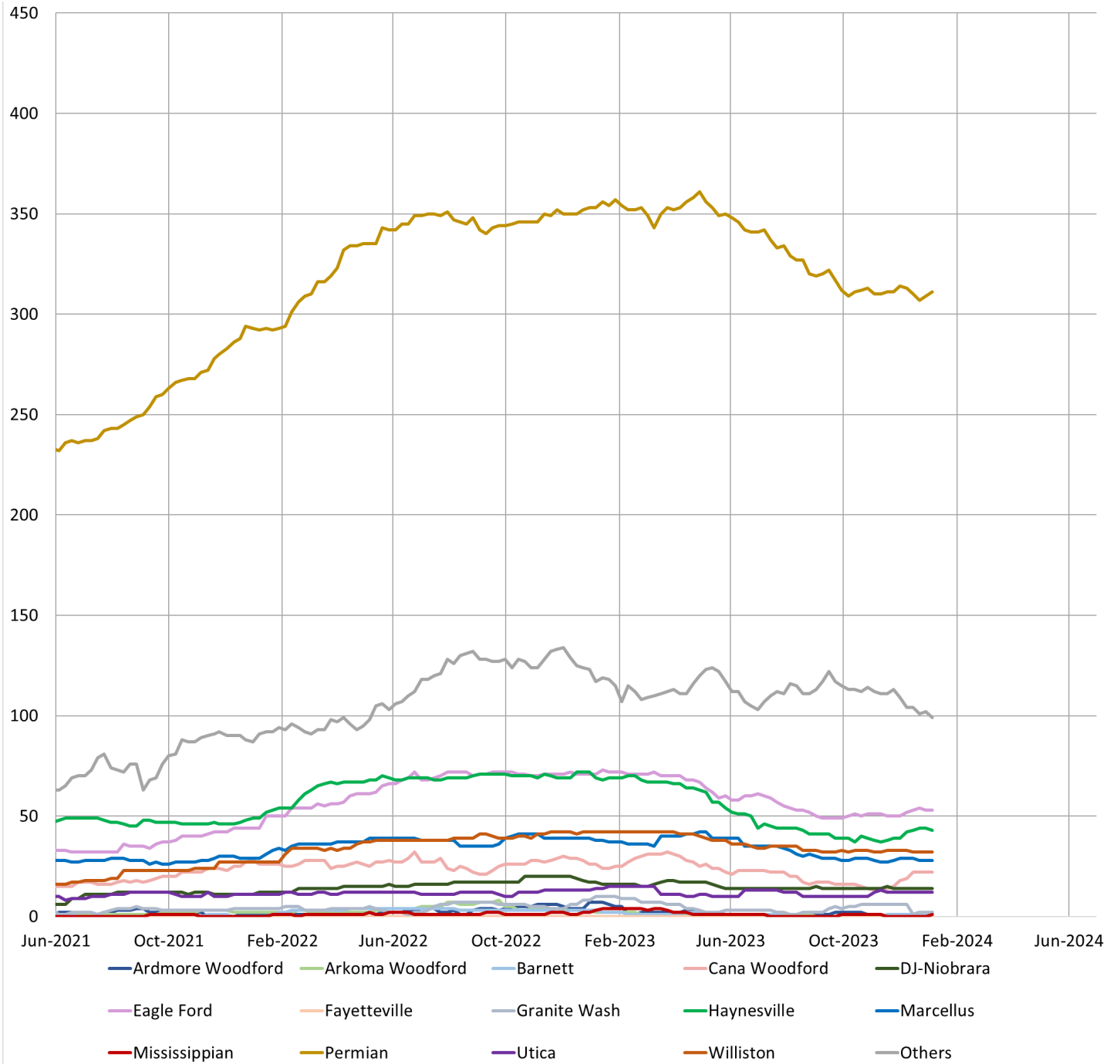
DEAL VALUE BY US REGION (BY YEAR)



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



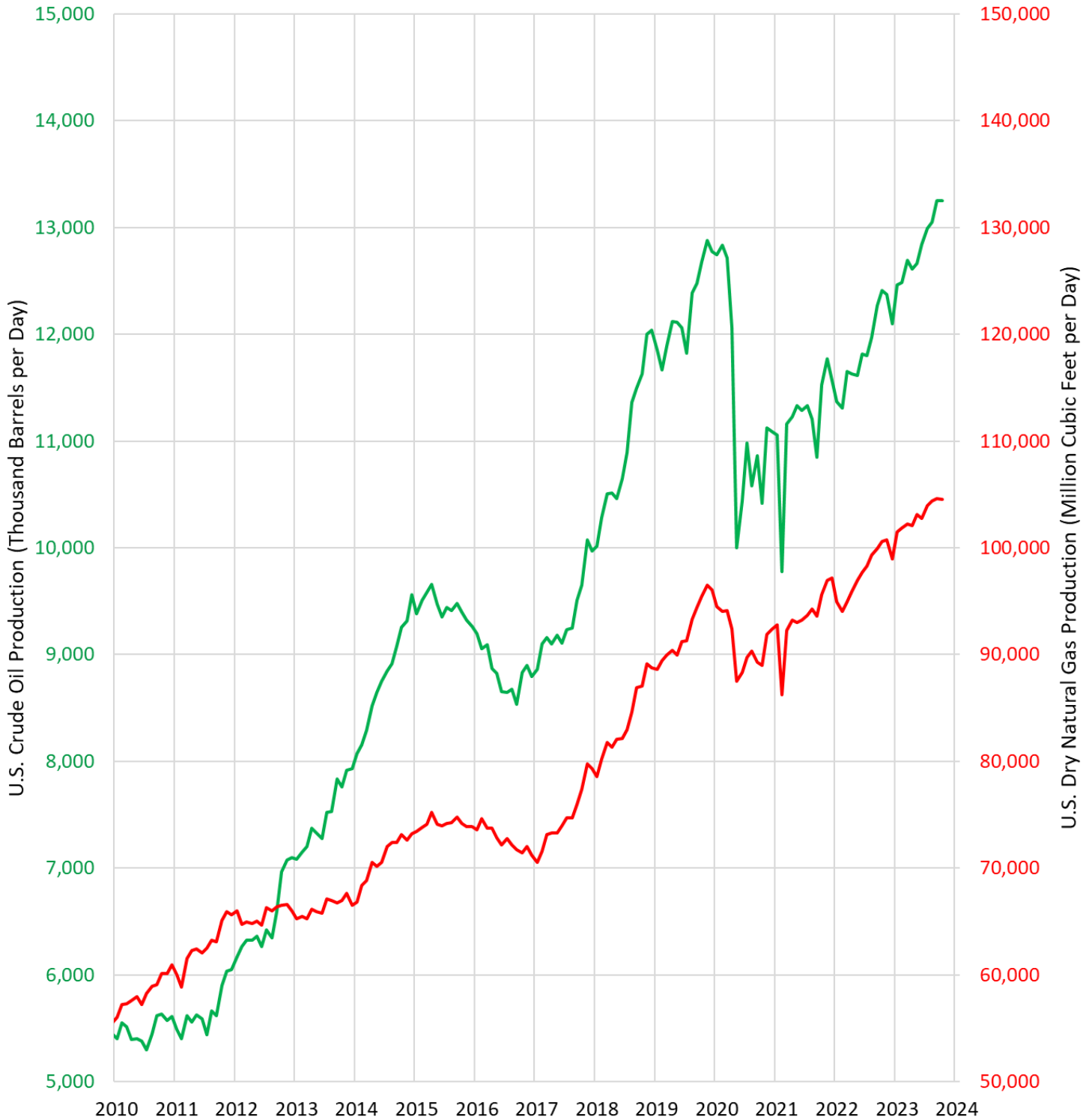
RIG ACTIVITY BY US REGION



*Source—Baker Hughes Weekly Rig Counts



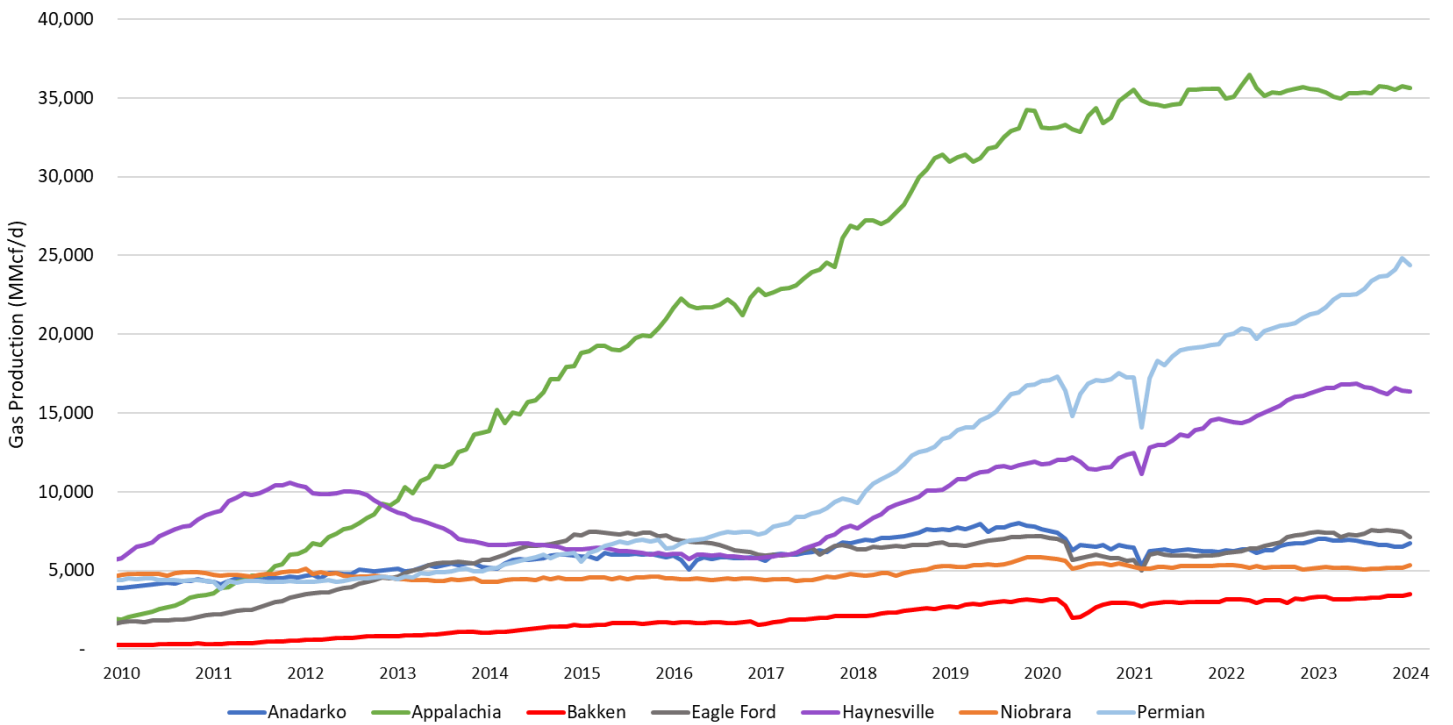
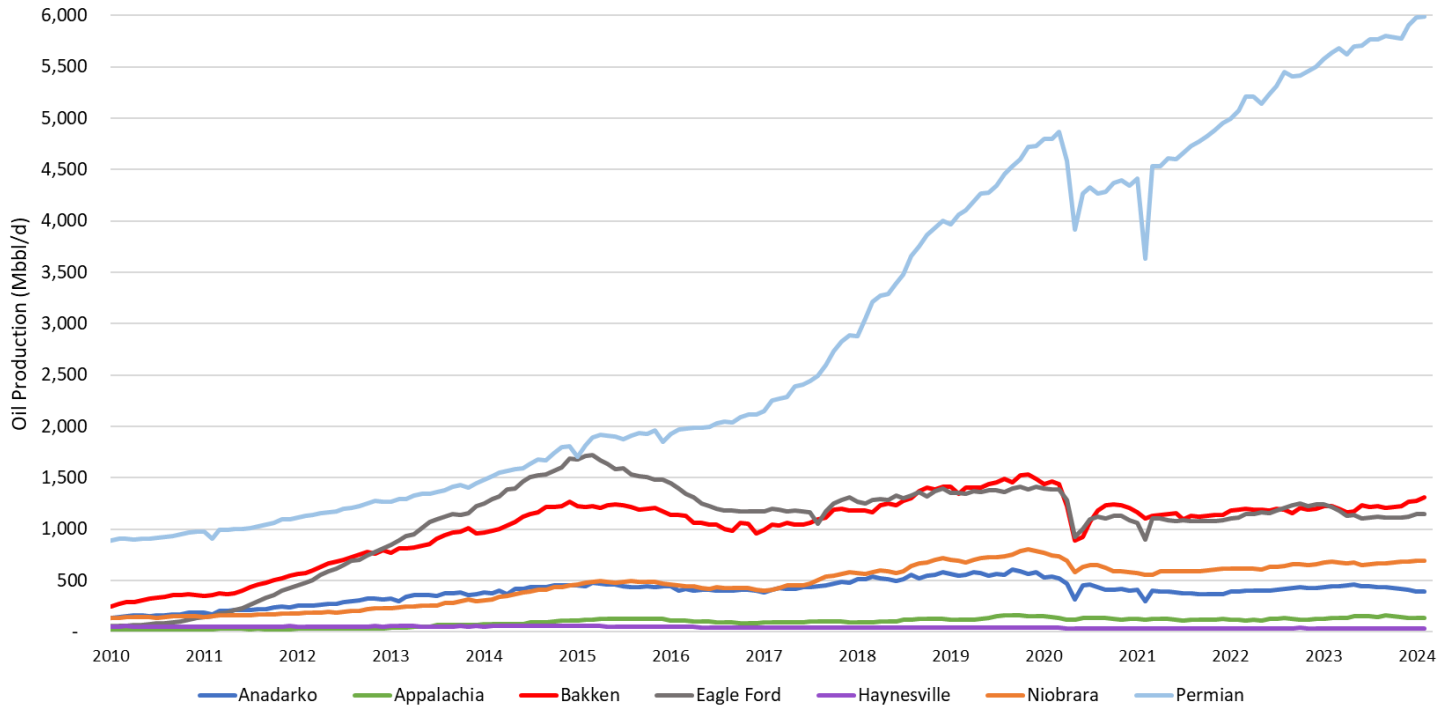
US DAILY CRUDE (MMbbl) & DRY NATURAL GAS PRODUCTION (MMcf)



*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.

