

Weekly E&P Update



January 24, 2023

Vol. 3

Private Capital Conference Focuses on Adaptation

By Steve Hendrickson
President of Ralph E. Davis Associates



Last week, the Independent Producers Association of America (IPAA) hosted its 29th annual [Private Capital Conference](#). I've attended the event for several years, and I believe this was one of the best. The turnout was excellent, with over 300 registered attendees, and Conference Chair Buddy Clarke and Capital Markets Committee Chair David Baggett put together a fantastic line-up of speakers and panels.

The conference's central theme was the recognition of the changing landscape of energy capital markets and how capital providers and energy companies are adapting. Here are the key takeaways from a few of the sessions.

Private Equity - Equity investors are generally bullish on future commodity prices, particularly oil. Some new funds are being formed, but private equity capital availability remains constrained relative to pre-2018 levels. Internal cash flow continues to be a primary source of capital, with re-investment rates around 40%. The public equity markets continue to have lackluster interest in oil and gas, which makes it difficult for private equity providers to feel confident about a future public market exit of their investments. Also, private companies (and some sponsors) are increasingly developing "net-zero" or other sustainability plans since many private equity LPs are emphasizing them.

Commercial Lending - The reserve-based lending (RBL) market has significantly changed since 2019. Before that, there were +/- fifty lenders in the space, including regional, national, and international institutions. That number is now somewhere in the low thirties, and large European banks have essentially exited. The RBL market is still active, but increased exposure among the smaller lenders and rising interest rates put pressure on their reserve requirements. One interesting observation was that while many banks can do a \$100 million RBL on their own, the "natural size" for a syndicated loan is \$800 to 1,000 million; this leaves a hole for borrowers looking for something in between.

Non-traditional Lending - This topic generated a lot of interest, particularly asset-backed securitizations (ABS). The global ABS market is a \$40 billion market that sources funds from insurance companies and money managers. The deals are complex but can offer an investment-grade bond with a 100-150 basis point premium above comparable corporate debt. Because of the complexities (we'll cover that another day), these structures can be hard to pull off in conjunction with an acquisition, so there's a need to warehouse these deals through the closing process.

Hedging - A number of former participants have left the energy commodity hedging market; however, the size of the market continues to grow. Coupled with a demand for high levels of long-dated hedges in the ABS market, the energy derivatives market is now "larger, longer, and less liquid." Add to this the impact of rising interest rates (since a derivatives deal also involves an extension of credit), and we're in a world of broader bid/ask spreads and increased volatility. In addition, basis hedges are becoming more popular (thanks again to the ABS market). Finally, speaking as someone who used to have difficulty finding attractive NGL hedges, I was pleased to hear that the illiquidity in this market is now overrated, and deals are getting done with tenors of up to eight years.

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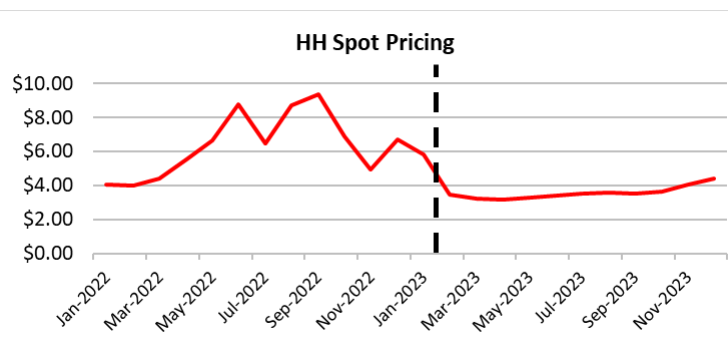
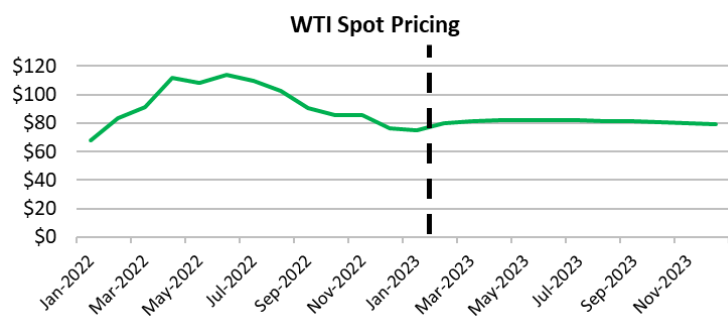
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NYMEX FUTURE PRICING



MONDAY'S MARKET CLOSE

NYMEX WTI CRUDE OIL FUTURES as of January 23, 2023 Close (\$/bbl)

Period	Current	WoW Change	Last Week	1 Yr Ago
2023	\$81.26	\$1.74	\$79.52	\$73.69
2024	\$76.33	\$1.31	\$75.02	\$68.86
2025	\$71.27	\$0.48	\$70.79	\$65.71
2026	\$67.20	(\$0.16)	\$67.36	\$63.56
2027	\$63.77	(\$0.71)	\$64.48	\$62.36

NYMEX HH NATURAL GAS FUTURES as of January 23, 2023 Close (\$/MMBtu)

Period	Current	WoW Change	Last Week	1 Yr Ago
2023	\$3.57	\$0.04	\$3.53	\$3.47
2024	\$4.02	\$0.01	\$4.01	\$3.19
2025	\$4.23	\$0.04	\$4.19	\$3.10
2026	\$4.30	\$0.05	\$4.25	\$3.09
2027	\$4.37	\$0.07	\$4.30	\$3.12

INDUSTRY METRICS—QUICK SNAPSHOT

	Current	Last Week	WoW Change	%Change
Crude Oil Near-Month Price (\$/bbl)	\$81.79	\$78.32	\$3.47	4%
Natural Gas Near-Month Price (\$/MMBtu)	\$3.45	\$3.68	(\$0.23)	(6%)
Weekly Upstream-Deal Transaction Value (\$MM)	\$1,628.00	\$0.00	\$1,628.00	100%
Weekly Number of Upstream-Deal Transactions	4	0	4	100%
Current Total US Rig Count	771	775	(4)	(0.5%)
US Field Crude Oil Production (MMbbl/day)	12.2	12.2	-	0%
US Field Dry Natural Gas Production (Bcf/day)	105.9	105.8	0.1	0.1%
Commercial Crude Oil Stocks-Excluding SPR (MMbbl)	448	440	8	2%
Natural Gas Stocks-Working Gas Underground Storage (Bcf)	2,820	2,902	(82)	(3%)
Total Drilled But Uncompleted Wells (DUC-Last Month)	4,577	4,443	134	3%

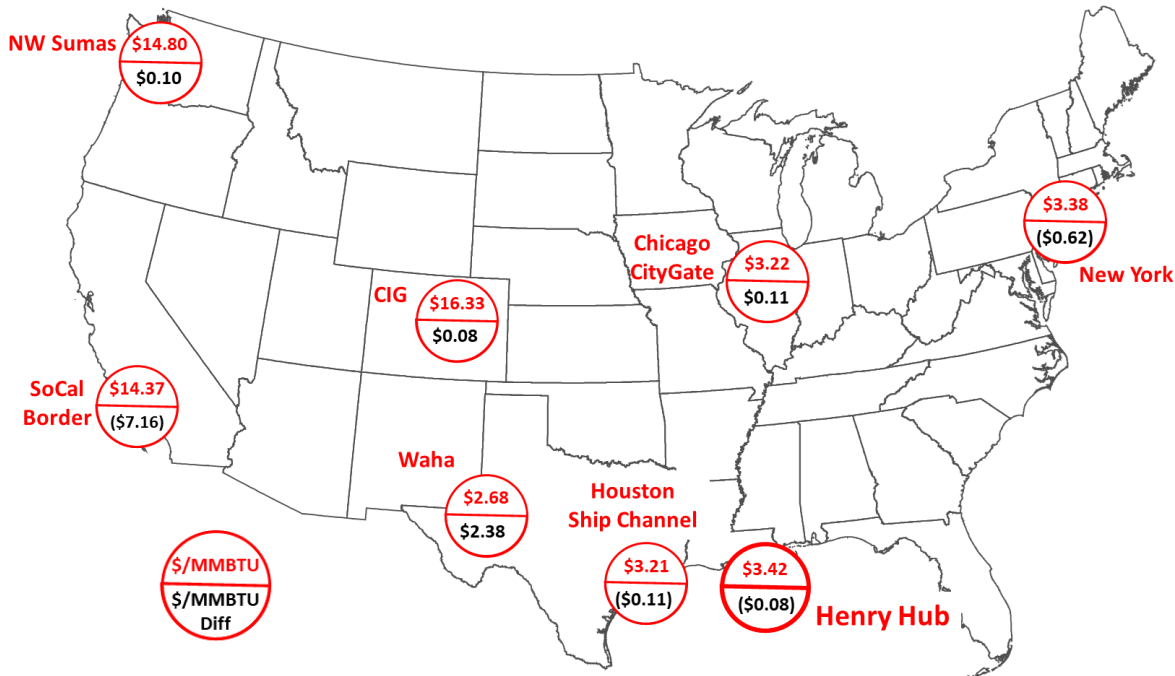
*Source—Energy Information Administration, United States (EIA)

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

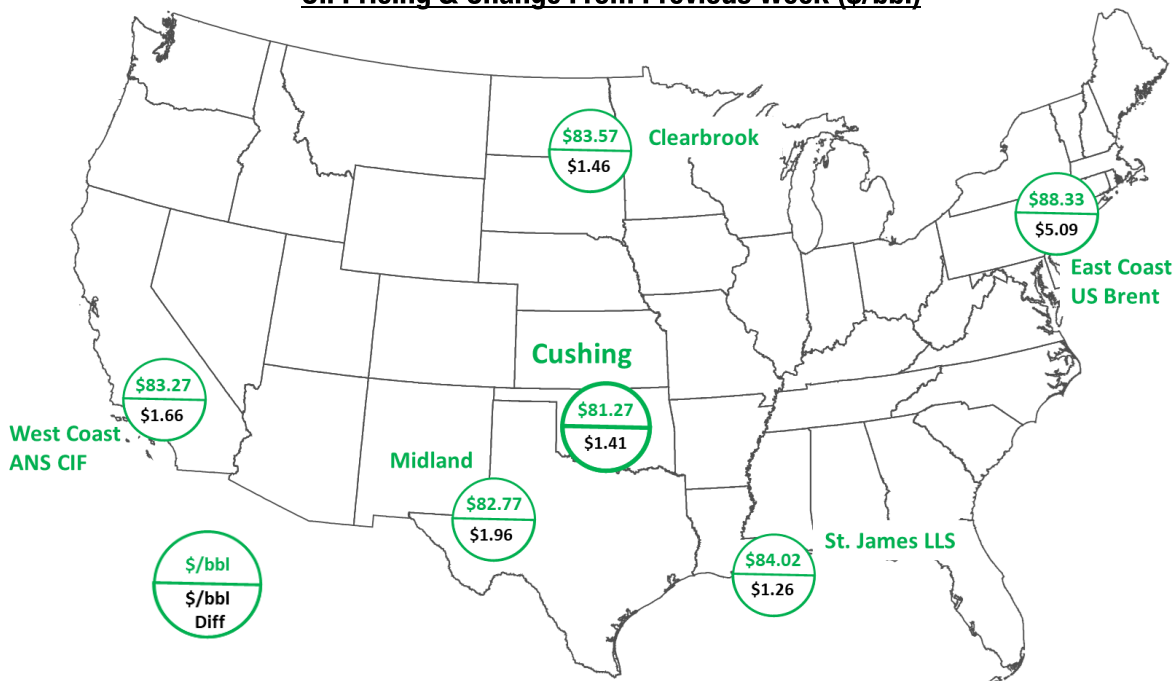


US COMMODITY PRICES CONTINUED

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



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



*Source—Bloomberg LP



SELECTED INDUSTRY HEADLINES

Europe's Ban On Russian Diesel Could Send Pump Prices Even Higher

Europe is scrambling to buy diesel fuel from Russia before a ban on imports comes into force in early February, but the frantic stockpiling is unlikely to prevent a new price shock for truckers, drivers and businesses.

Oil Rises, Posts Second Week Of Gains On China Demand Outlook

Oil rose by about \$1 a barrel on Friday and posted second straight weekly gain, spurred largely by brightening economic prospects for China.

ADNOC Breaks Ground On World's First Fully Sequestered CO2 Injection Project

ADNOC has begun work on the world's first fully sequestered carbon dioxide (CO2) injection well in a carbonate saline aquifer. ADNOC facility.

Russian Crude Exports from Baltic Ports See 50% Hike In January

As Asian oil demand increases, Russian crude oil loadings from Baltic ports are on track for a 50% hike from December to January.

India's Crude Imports Hit 5-Month High In December On Cheap Russian Supply

India's crude oil imports rose to a five-month high in December, government data showed recently, as refiners stocked up discounted Russian fuel amid a steady increase in consumption in the country.

Oil Ends On A Mixed Note, But Remains Buoyed By Optimism Over China Demand (LOGIN CREDENTIALS REQUIRED)

Oil futures on a mixed note, with U.S. prices little changed and global benchmark crude settling higher on continued optimism over energy demand.

Fuel Fix: China, Russia Remain Focus For Oil, But Keep An Eye On Products

The song remains the same for the price of oil, with both Chinese and Russian developments as the main driving factors, but attention may shift refined products.

Natural Gas Prices Jump 10% In Early Trading

Natural gas prices have spiked by more than 10% in early trading, reversing a monthlong trend that saw prices drop by some 50%

Russia Sanctions: What Impact Have They Had On Its Oil And Gas Exports?

Since Russia's invasion of Ukraine, many countries have pledged to end or restrict their oil and gas imports to curtail Moscow's revenues and hinder its war effort.

Yellen Sees Success in Extending Russia Price Cap, Despite Risks

US Treasury Secretary Janet Yellen expressed confidence that restrictions on Russian sales of crude oil can be expanded to refined petroleum products in February, while acknowledging that the task will be more complicated.

Upstream Spending To Rise To \$485 Billion In 2023

Most oil companies have only modestly adjusted upstream budgets, but a recent report states that the global capex will rise 12% year on year.

Russian Oil Ban Creates Profit Opportunities For Traders In Singapore

A ban on Russian crude oil by the European Union and the US has led to a flood of cheap oil pouring into Singapore, where it is being blended and re-exported globally by traders.

Uganda Approves Construction Of \$3.5bn Pipeline Project

Uganda has approved the construction of the proposed \$3.5bn pipeline that will be used to export crude oil to international markets.

Report Urges Dramatic Scale-Up Of Engineered CO2 Removal By Midcentury

The scaling up of nascent technologies that vacuum up CO2 from the atmosphere is an "urgent priority" for governments to limit global warming by midcentury, according to a recent report.

W.Va. Bills Pass On Carbon Sequestration, Hydrogen Hubs

Two bills designed make it easier for West Virginia to attract hydrogen hubs and carbon sequestration projects to the historically coal-dependent state are headed to the desk of Gov. Jim Justice.



SELECTED RECENT TRANSACTIONS

Vitol's VTX To Acquire Delaware Basin Resources

Vitol Inc.'s US upstream company, VTX Energy Partners LLC, has agreed to acquire Delaware Basin Resources, Midland, Tex., and associated surface and water businesses. A purchase price was not disclosed.

WildFire Energy Announces Eagle Ford Acquisition From Chesapeake Energy Corporation

WildFire Energy recently announced the acquisition of approximately 377,000 net acres and approximately 1,350 wells in the Brazos Valley region of its Eagle Ford asset from Chesapeake Energy Corporation.

Whitehawk Energy Announces Agreement To Acquire Core Haynesville Shale Natural Gas Mineral And Royalty Assets For Up To \$105 Million

WhiteHawk Energy, LLC recently announced a definitive agreement to acquire up to \$105 million of natural gas mineral and royalty assets primarily located in northwestern Louisiana.

Permian Resources Announces Portfolio Optimization Transactions

Permian Resources Corporation recently announced that it has entered into a series of portfolio management transactions, comprising of a bolt-on acquisition, a divestiture of non-operated production and acreage and a divestiture of a portion of its water infrastructure assets in Reeves County, Texas.

HNCR Sponsored SPAC Files For \$120 Million Business Combination

Houston Natural Resources Corp. (HNRC) announced that its subsidiary Houston Natural Resources, Inc, through its majority owned HNRAC Sponsors, LLC, sponsored a Special Purpose Acquisition Corp (SPAC), HNR Acquisition Corp (HNRA), and entered into a membership purchase agreement with Pogo Resources and two affiliates (Pogo) for a purchase price of \$120 million dollars.

Arena Energy Announces Strategic Acquisition of Gulf of Mexico Shelf Properties from GOM Shelf, LLC

Arena Energy, LLC ("Arena"), a leading independent oil and gas exploration company focused on the Gulf of Mexico Shelf, recently announced it has closed on the acquisition of seven blocks and twelve platforms in the Gulf of Mexico from GOM Shelf, LLC.

PHX Minerals Reports Fiscal 2022 Results and Haynesville, SCOOP Acquisitions

PHX Minerals Inc. recently announced that it acquired 923 net royalty acres in the SCOOP and Haynesville plays for approximately \$13.5 million in its fiscal fourth quarter of 2022.

Maverick Energy Group Announces Pass Creek Resources LLC Acquisition

Maverick Energy Group, Ltd. recently announced its completed a transaction whereby Maverick will acquire 100% of the units of Pass Creek Resources, LLC.

Arena Energy Awarded Eleven Blocks in Lease Sale 257. Adding Over 50,000 Acres to Existing Footprint on Gulf of Mexico Shelf

Arena Energy LLC recently announced that it was awarded eleven leases in the U.S. Gulf of Mexico by the Bureau of Ocean Energy Management (BOEM) in Lease Sale 257.

IOG Resources II Announces Acquisition

IOG Resources II LLC recently announced that it acquired producing gas assets in Appalachia operated by Seneca Resources, an affiliate of National Fuel Gas.

Royale Announces New Joint Development Agreement In Permian Basin

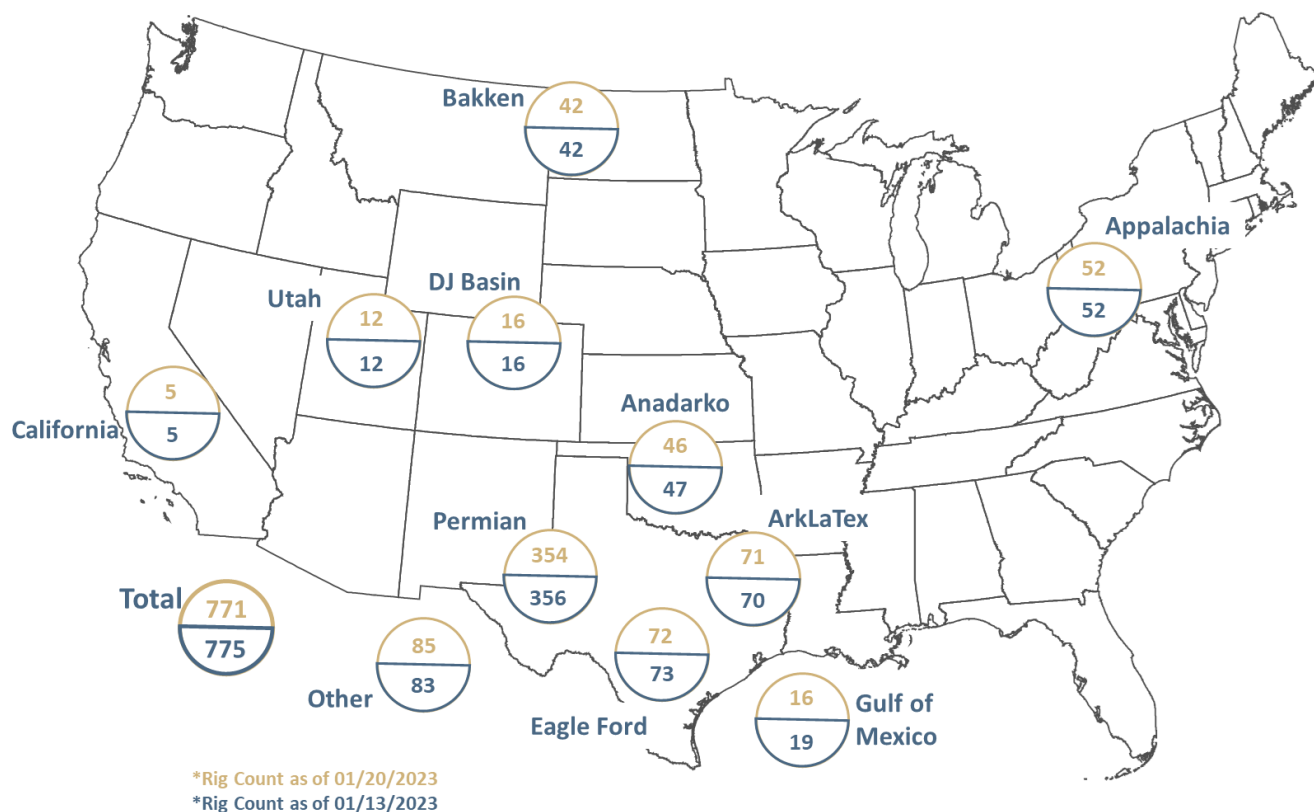
Royale Energy Inc. recently announced that it executed a Joint Development Agreement (JDA) with Ares Energy Ltd. for up to 25,000 acres in Ector and Andrews counties, Texas in the Permian Basin. This "Pradera Fuego Project" is a horizontal resource play in the Mississippian interval.

Diamondback Energy Announces Northern Midland Basin Acquisition

Diamondback Energy Inc. recently announced that it entered into a definitive purchase agreement to acquire all leasehold interest and related assets of Lario Permian LLC, a wholly owned subsidiary of Lario Oil & Gas Company, and certain associated sellers in exchange for 4.18 million shares of Diamondback common stock and \$850 million of cash.



RIG ACTIVITY BY US REGION

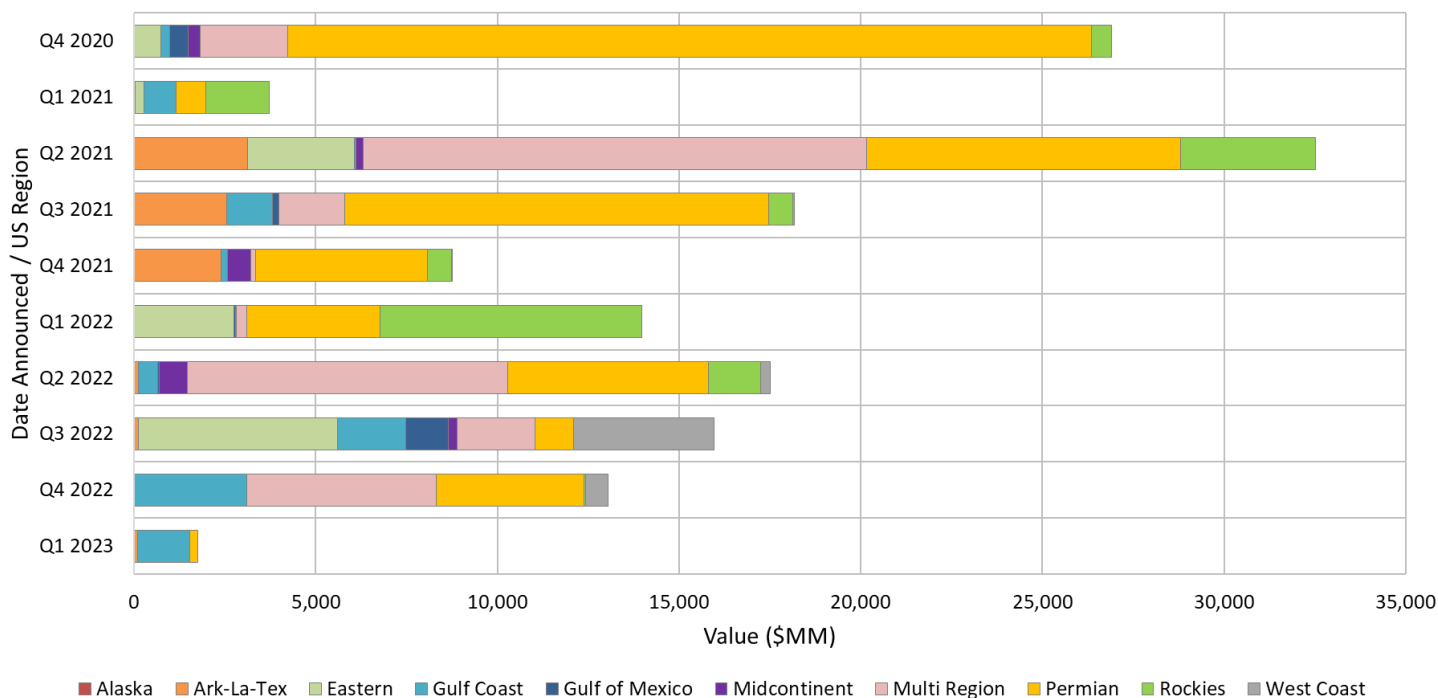


	Week Ending 01/20/2023		Week Ending 01/13/2023		Week Ending 01/21/2022
U.S. Rig Breakouts	Count	+/-	Count	+/-	Count
Oil	613	(10)	623	122	491
Gas	156	6	150	43	113
Not Specified	2	0	2	2	0
Directional	49	0	49	12	37
Horizontal	700	0	700	156	544
Vertical	22	(4)	26	(1)	23
Land (Inc Others)	753	(1)	754	169	584
Inland Waters	2	0	2	0	2
Offshore	16	(3)	19	(2)	18
US Total	771	(4)	775	167	604

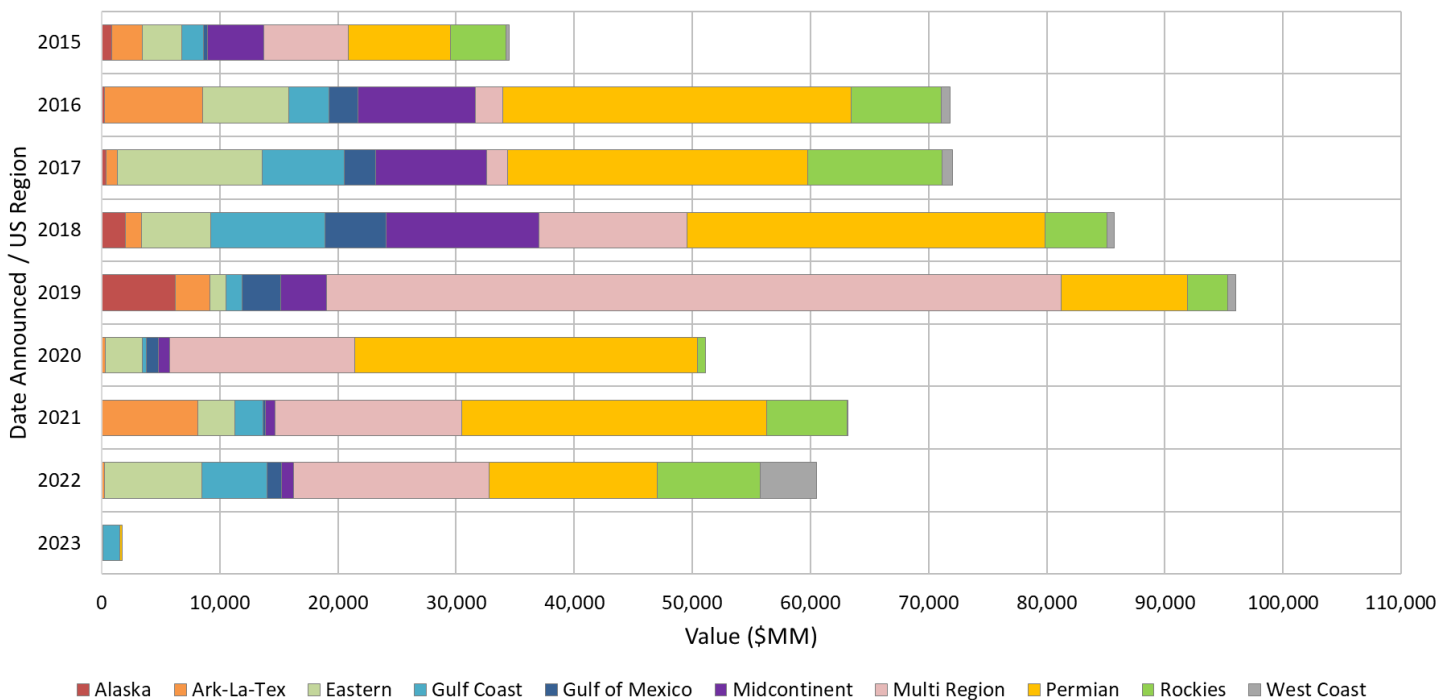
*Source—Baker Hughes Weekly Rig Counts



DEAL VALUE BY US REGION (BY QUARTER)



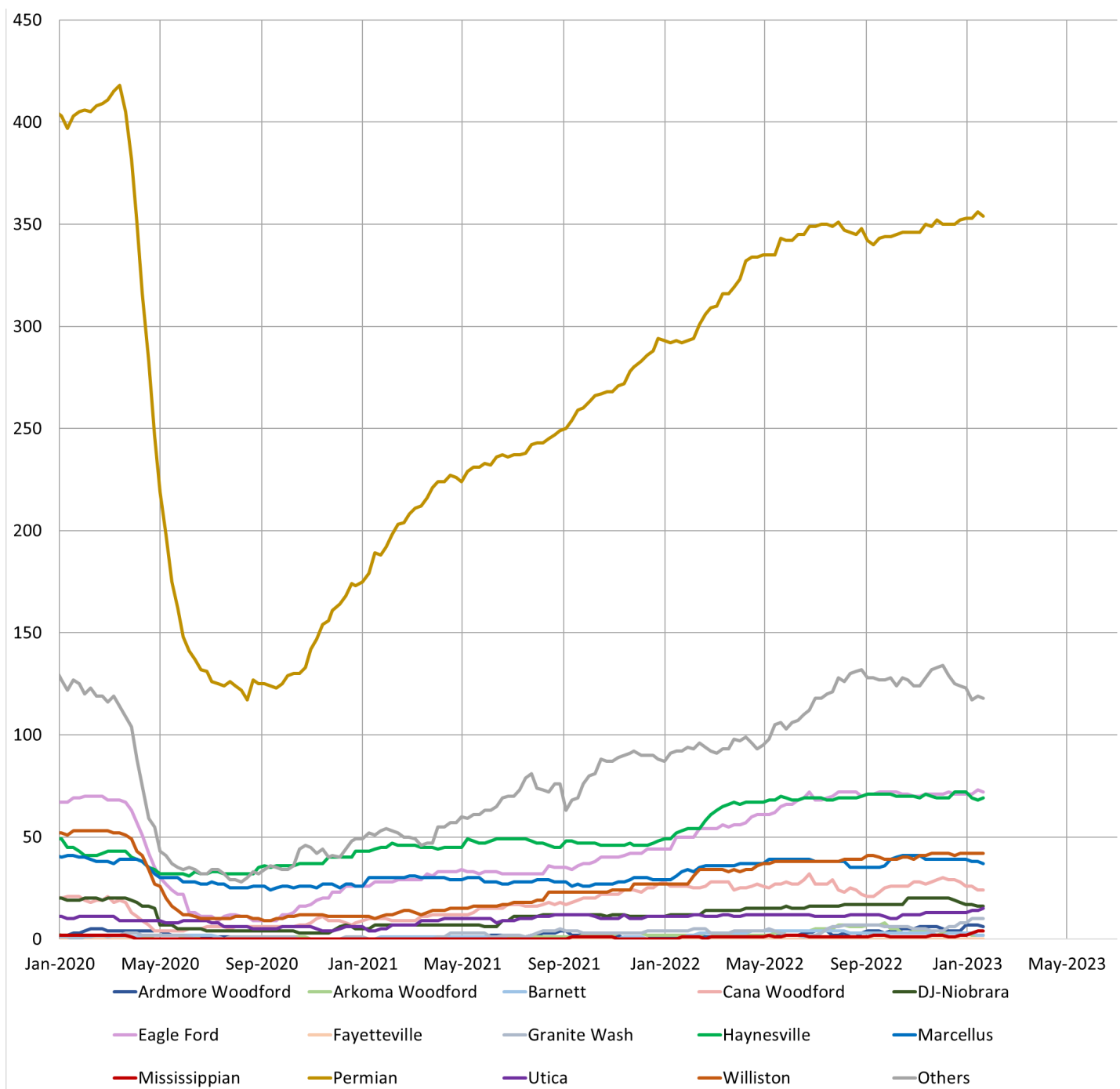
DEAL VALUE BY US REGION (BY YEAR)



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



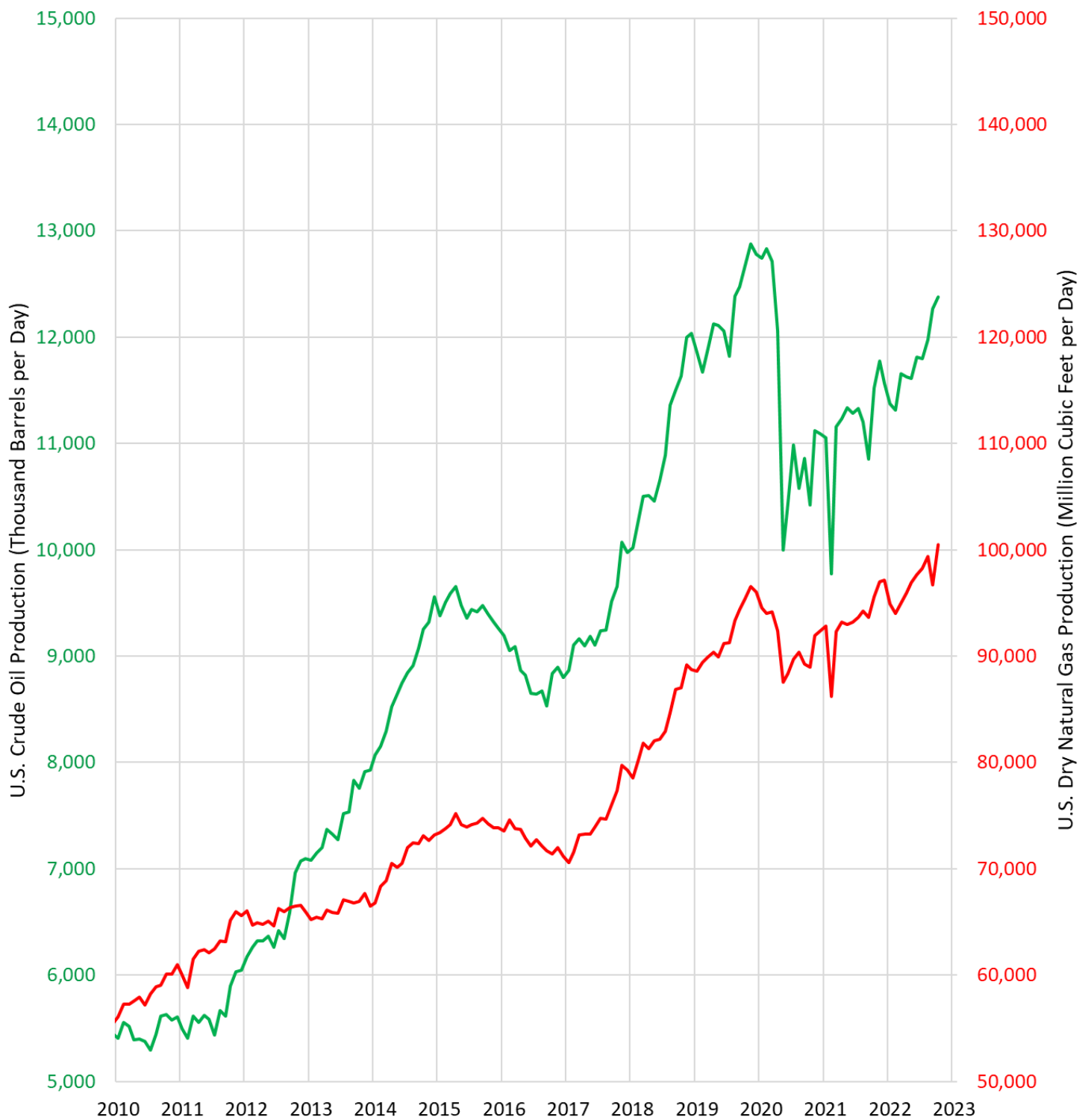
RIG ACTIVITY BY US REGION



*Source—Baker Hughes Weekly Rig Counts



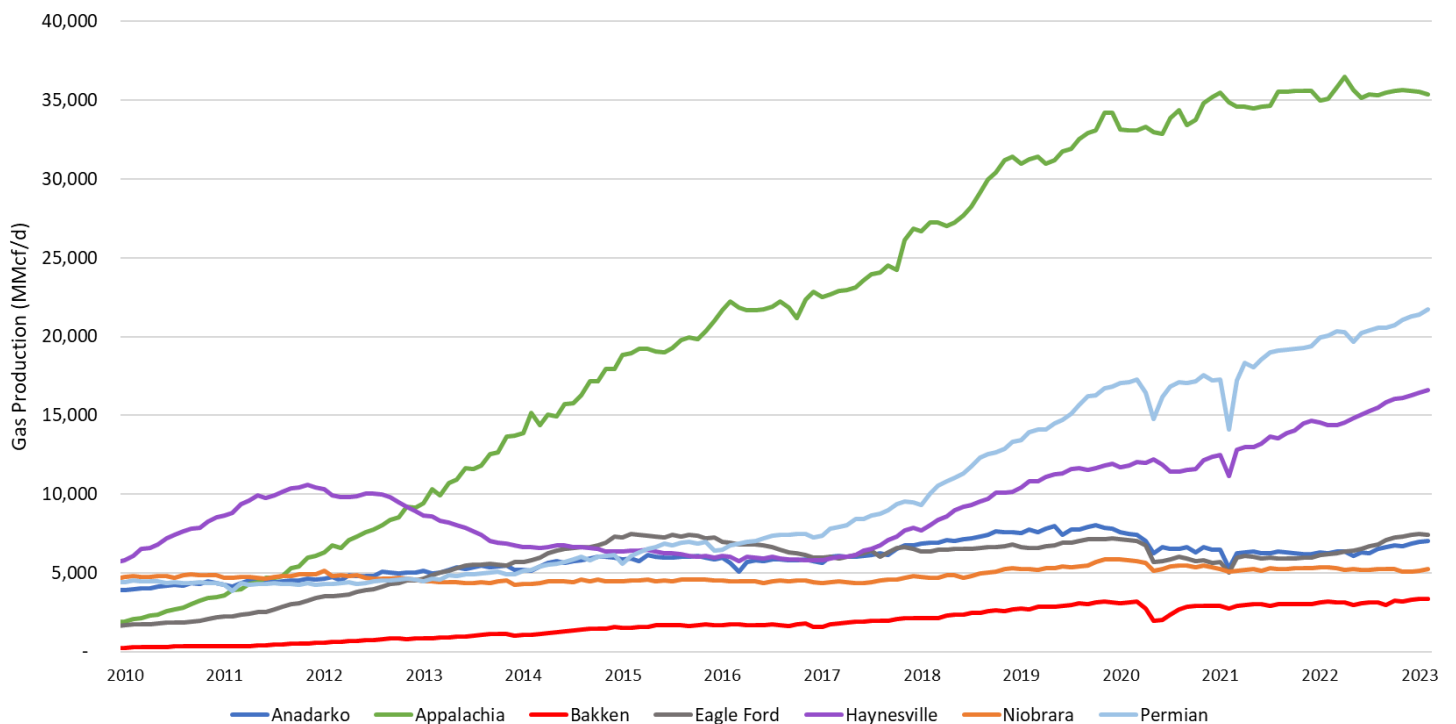
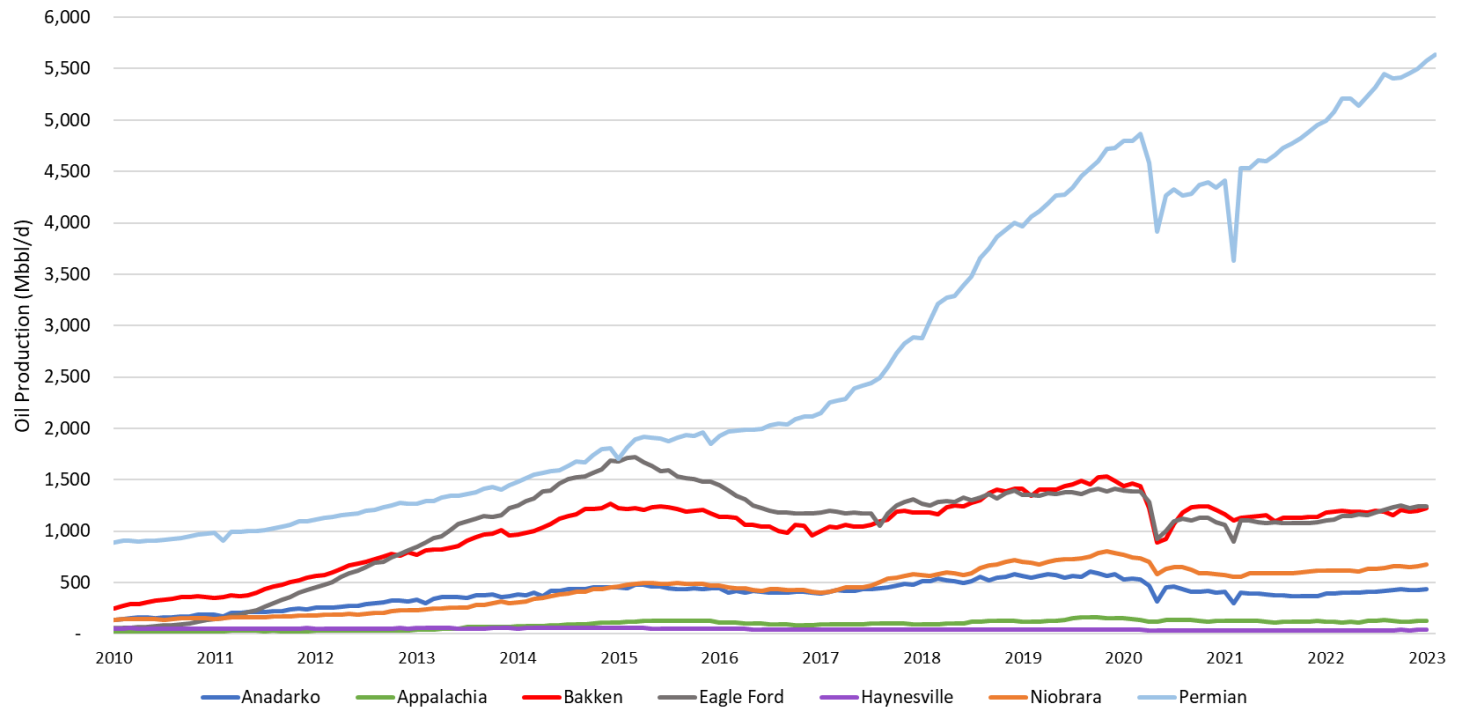
US DAILY CRUDE (MMbbl) & DRY NATURAL GAS PRODUCTION (MMcf)



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



HISTORICAL PRODUCTION OF SELECTED US SHALE REGIONS



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



UPCOMING EVENTS

January 2023

[SPE Hydraulic Fracturing Technology Conference & Exhibition](#)

January 31-
February 1

The Woodlands, TX

February 2023

[NAPE Summit 2023](#)

February 1-3

Houston, TX

[Argus Americas Crude Summit](#)

February 15-17

Houston, TX

[GoM Energy Transformation Conference](#)

February 21

Houston, TX

March 2023

[CERAWeek 2023](#)

March 6-10

Houston, TX

[4th American LNG Forum](#)

March 13-14

Houston, TX

[DUG Haynesville Conference & Exhibition](#)

March 28-29

Shreveport, LA

May 2023

[Offshore Technology Conference 2023](#)

May 1-4

Houston, TX

[DUG Permian Basin & Eagle Ford Conference & Exhibition](#)

May 22-24

Fort Worth, TX

*Denotes an Oppertune 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 up-stream 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 Oppertune 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 Oppertune 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 Oppertune 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 Oppertune 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 Oppertune LLP company. David has over two years of reserves engineering experience. Before RED, David was a Petroleum Engineer at Energy Advisors Group where he handled the technical processes for marketed conventional and unconventional assets across the Lower 48. He began his career with Longfellow Energy where he contributed to its engineering, operations, and A&D teams. David holds an MBA from The University of Texas Permian Basin and a B.S. in Petroleum Engineering from The University of Oklahoma.

