



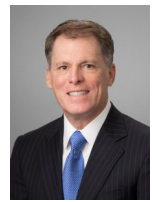
# Weekly E&P Update

November 28, 2023

Vol. 47

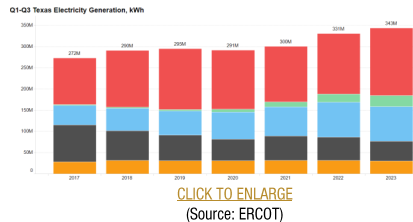
## Electricity Generation in Texas Changes Constantly

By Steve Hendrickson  
President of Ralph E. Davis Associates



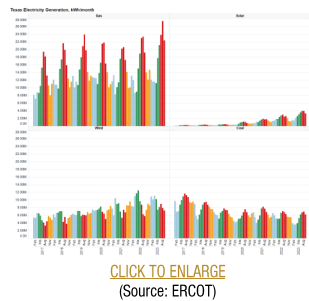
The [Electric Reliability Council of Texas](#) (ERCOT) provides a wealth of detailed information on its website about electricity generation, demand, and transmission on the Texas power grid. We downloaded several years of power generation by fuel type data at fifteen-minute intervals to see what we could learn about trends in power generation. Here's what we found -

**The Big Picture** - The bulk of Texas' electricity comes from natural gas (46%), coal (14%), nuclear (9%), wind (24%) and solar (7%). Biomass, hydropower, and other sources are insignificant. Coal continues to lose market share and is also shrinking in absolute amounts. Wind has seen tremendous growth over the last few years; while solar is growing, it's still small.

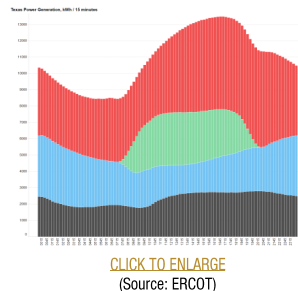


As [Texas's population](#) grows, so does its electricity demand. Although there was effectively no growth in 2020 due to the pandemic, generation for the first three quarters of this year is 4% higher than in 2022, which was 10% higher than in 2021.

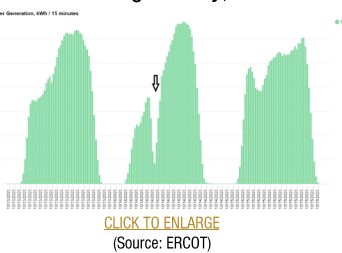
**Seasonal Variations** - Electricity demand varies during the year due to Texas' generally mild winters and hot summers, but the sources of electricity also vary. So, while wind accounts for a large share of electricity generation in Texas, the amount generated varies monthly, with the hottest months being the most calm. Because the days are longer during the summer, solar power makes up for some of the loss of wind power, but most of the extra demand and lost wind supply is picked up by natural gas. As a result, the amount of natural gas generated electricity is typically more than double in the summer compared to the winter. Nuclear isn't shown, but it tends to be relatively steady throughout the year; it does go down a bit in the winter, however, when overall demand is low.



**Daily Fluctuations** - Of course, the sun doesn't shine at night, and the wind often settles during the afternoon, so there are daily fluctuations in the source of power generation. The graph below shows the average power generation during August 2023 in fifteen-minute intervals. Note how solar expands to almost 30% of the total during the day, but wind drops to nearly 10%. These changes mean coal, and especially natural gas, swings dramatically daily.



**Final Note** - Remember the "[Ring of Fire](#)" eclipse last month? Even it shows up in the data for solar power generation!



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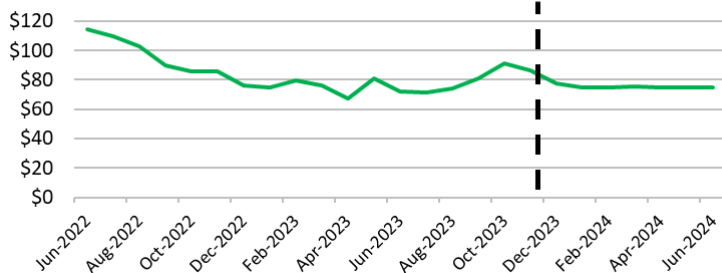
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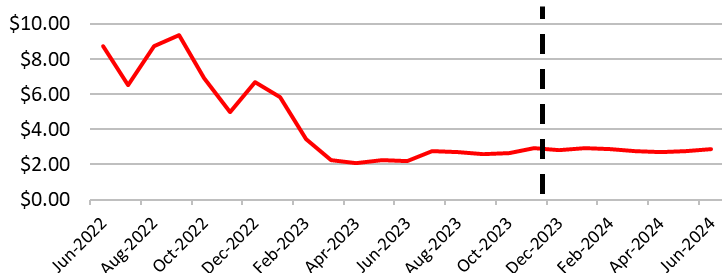


## NYMEX FUTURE PRICING

WTI Spot Pricing



HH Spot Pricing



## MONDAY'S MARKET CLOSE

**NYMEX WTI CRUDE OIL FUTURES**  
as of November 27, 2023 Close (\$/bbl)

Period	Current	WoW Change	Last Week	1 Yr Ago
2024	\$74.46	(\$2.33)	\$76.78	\$75.77
2025	\$70.79	(\$1.87)	\$72.66	\$72.09
2026	\$67.35	(\$1.76)	\$69.11	\$69.12
2027	\$64.80	(\$1.63)	\$66.43	\$66.68
2028	\$62.91	(\$1.45)	\$64.36	\$64.41

**NYMEX HH NATURAL GAS FUTURES**  
as of November 27, 2023 Close (\$/MMBtu)

Period	Current	WoW Change	Last Week	1 Yr Ago
2023	\$2.79	(\$0.09)	\$2.88	\$5.77
2024	\$3.07	(\$0.06)	\$3.13	\$4.77
2025	\$3.94	(\$0.03)	\$3.97	\$4.56
2026	\$4.09	(\$0.01)	\$4.10	\$4.51
2027	\$4.04	(\$0.00)	\$4.04	\$4.47

## INDUSTRY METRICS—QUICK SNAPSHOT

	Current	Last Week	WoW Change	%Change
Crude Oil Near-Month Price (\$/bbl)	\$75.31	\$77.65	(\$2.34)	(3%)
Natural Gas Near-Month Price (\$/MMBtu)	\$2.78	\$2.89	(\$0.11)	(4%)
Weekly Upstream-Deal Transaction Value (\$MM)	\$174.00	\$774.00	(\$600.00)	(78%)
Weekly Number of Upstream-Deal Transactions	1	4	(3)	(75%)
Current Total US Rig Count	622	618	4	0.6%
US Field Crude Oil Production (MMbbl/day)	13.2	13.2	0	-
US Field Dry Natural Gas Production (Bcf/day)	111.1	111.1	0	-
Commercial Crude Oil Stocks-Excluding SPR (MMbbl)	448	439	9	2%
Natural Gas Stocks-Working Gas Underground Storage (Bcf)	3,826	3,833	(7)	(0.2%)
Total Drilled But Uncompleted Wells (DUC-Last Month)	4,524	4,524	0	-

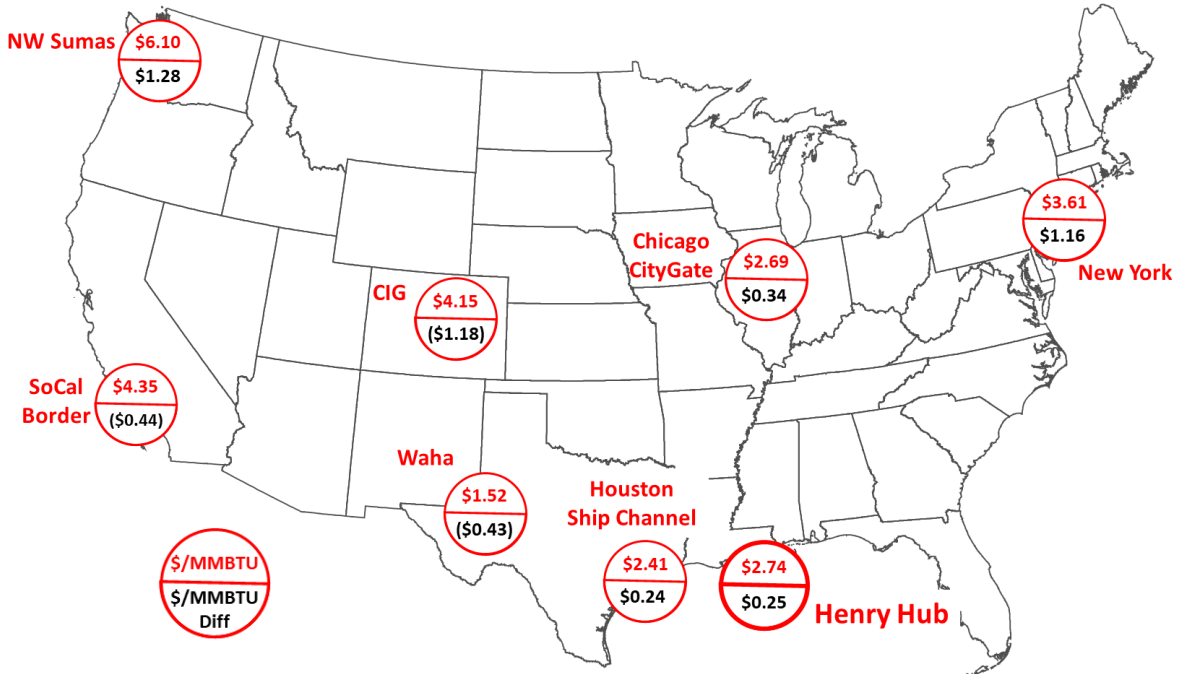
\*Source—Energy Information Administration, United States (EIA)

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

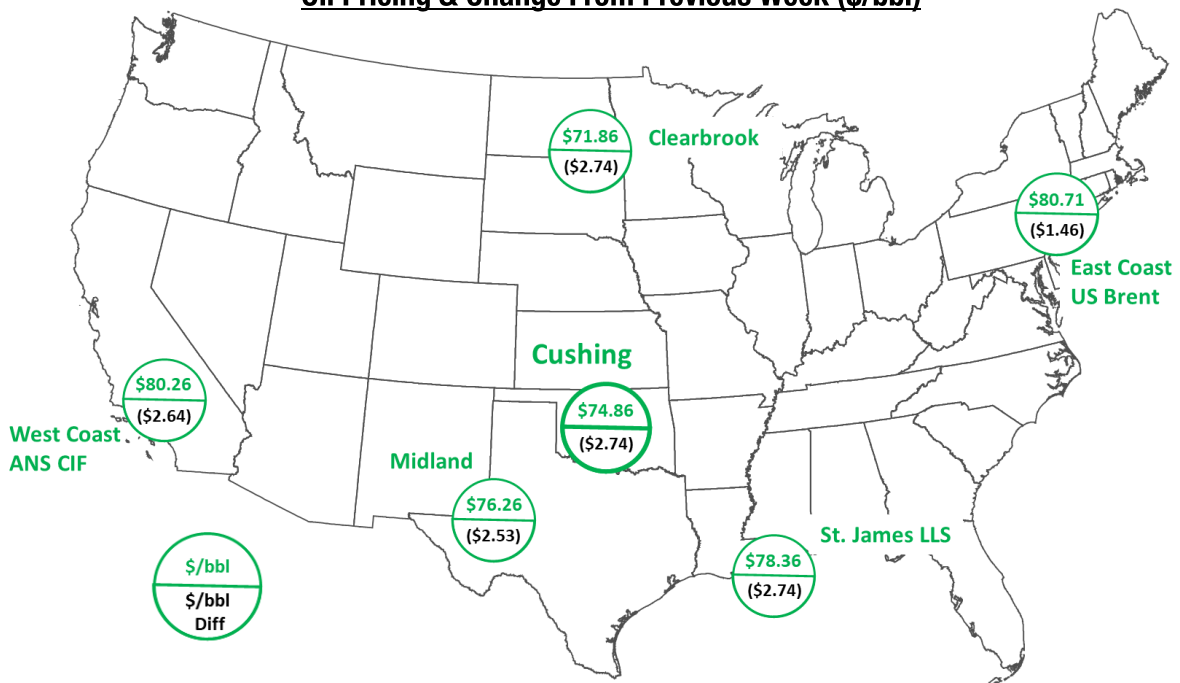


**US COMMODITY PRICES CONTINUED**

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



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



\*Source—Bloomberg LP



## **SELECTED INDUSTRY HEADLINES**

### **Oil Supply Running Ahead of Demand Before Delayed OPEC Production Policy Meeting**

Ahead of the delayed OPEC+ meeting recently, there are indications oil supply is running ahead of demand, highlighting the thorny challenge facing the group as it prepares to set production policy for 2024.

### **OPEC Meeting Pushed Back, Signaling Lack of Quota Consensus, Rystad Says**

OPEC+ members recognize the need to cut production at their ministerial meeting, now set for Nov. 30, but the question is how to shoulder the burden, a Rystad Energy analyst said.

### **Baker Hughes Says U.S. Operators Added Oil & Gas Rigs For Second Consecutive Week**

Across the U.S., operators added four rigs in the five-day period from Nov. 18 to Nov. 22, according to the Baker Hughes Rotary Rig Count.

### **Oil Prices Remain Depressed After OPEC+ Shocked Markets**

Crude oil prices remained depressed in morning trade recently in Asia following the Wednesday slump, adding to downward pressure on oil prices by showing a sizeable build in U.S. crude stocks.

### **Oil Drops as OPEC+ Meeting Looms**

Oil swung as traders wrestled with the prospects that OPEC and its allies will deepen production cuts at a meeting this week.

### **Oil Prices Are Falling. OPEC Is Reaching The Limits of Its Power (LOGIN CREDENTIALS REQUIRED)**

Oil prices were down early Monday as members of the Organization of the Petroleum Exporting Countries prepared to meet later this week.

### **US Natgas Hits Two-month Low on Ample Output, Mild Weather**

U.S. natural gas futures fell to a two-month low on Nov. 27, weighed down by record output while mild weather limited heating demand.

### **Ample Supplies Outweigh Cold Snap in Europe to Drag Down Natural Gas Prices (LOGIN CREDENTIALS REQUIRED)**

A shot of cold weather that settled in over the weekend across parts of Europe did little to lift natural gas prices in the region, where concerns about the winter heating season have continued to ease amid a surplus of supplies.

### **Natural Gas Prices Under Pressure on Higher Output & Weak Demand**

Natural gas prices remain under pressure weighed down by record production, high inventory levels, and worries over industrial and heating demand.

### **Shale Boom Foretells Energy Transition**

The shale revolution has not yet finished its course, but the boom is well past. The next boom is the energy transition, and it, too, will reward those who see and act early.

### **COP28: What Key Issues Will Be Discussed at UN Climate Change Conference?**

Following a year of record heat and drought, this year's U.N. climate summit will feature a contentious set of issues for countries working to find common ground in tackling climate change, including whether to phase out fossil fuels and how to finance the energy transition in developing countries.

### **Carbon Capture Projects, Incentives Will be Hot Topics at CO2 Conference**

A focus on greenhouse gas emissions – and particularly those emanating from the nation's oil fields – has given rise to a number of projects designed to capture and sequester emissions.



## **SELECTED RECENT TRANSACTIONS**

### **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.

### **Phoenix Capital Acquires Mineral and Royalty Acreage in Colorado From Source Rock**

Phoenix announced the completion of its purchase of 896 net royalty acres in Weld County, Colorado. The purchase encompasses mineral and royalty interests across a total of 96 permitted wells.

### **Earthstone Energy Sells Non-core Gulf Coast Assets in Texas**

Earthstone recently agreed to sell certain non-core assets located in Karnes and Gonzales counties of Texas on approximately 2,800 net acres for a purchase price of \$66.5 million.

### **Chevron to Buy Hess Corp For \$53 Billion in All-Stock Deal**

Chevron has agreed to buy Hess for \$53 billion in stock to gain a bigger U.S. oil footprint and a stake in rival Exxon Mobil's massive Guyana discoveries, the latest in a series of blockbuster U.S. oil combinations.

### **Trio Secures Option to Acquire Gas Prospect in Sacramento Basin**

California-based Trio Petroleum Corp. has secured a four-month option with exclusivity to acquire a natural gas prospect in the Sacramento Basin, which has the potential to produce an estimated 40 billion cubic feet of gas.

### **Ellipsis U.S. Onshore Holdings Acquires Additional Assets Located in The Delaware Basin**

Ellipsis U.S. Onshore Holdings LLC, a portfolio company of Westlawn Group LLC, recently announced the acquisition of additional assets located in the Delaware Basin of Texas and New Mexico

### **Exxon Mobil Agrees to Buy Pioneer Natural Resources For Nearly \$60 Billion in All-Stock Merger**

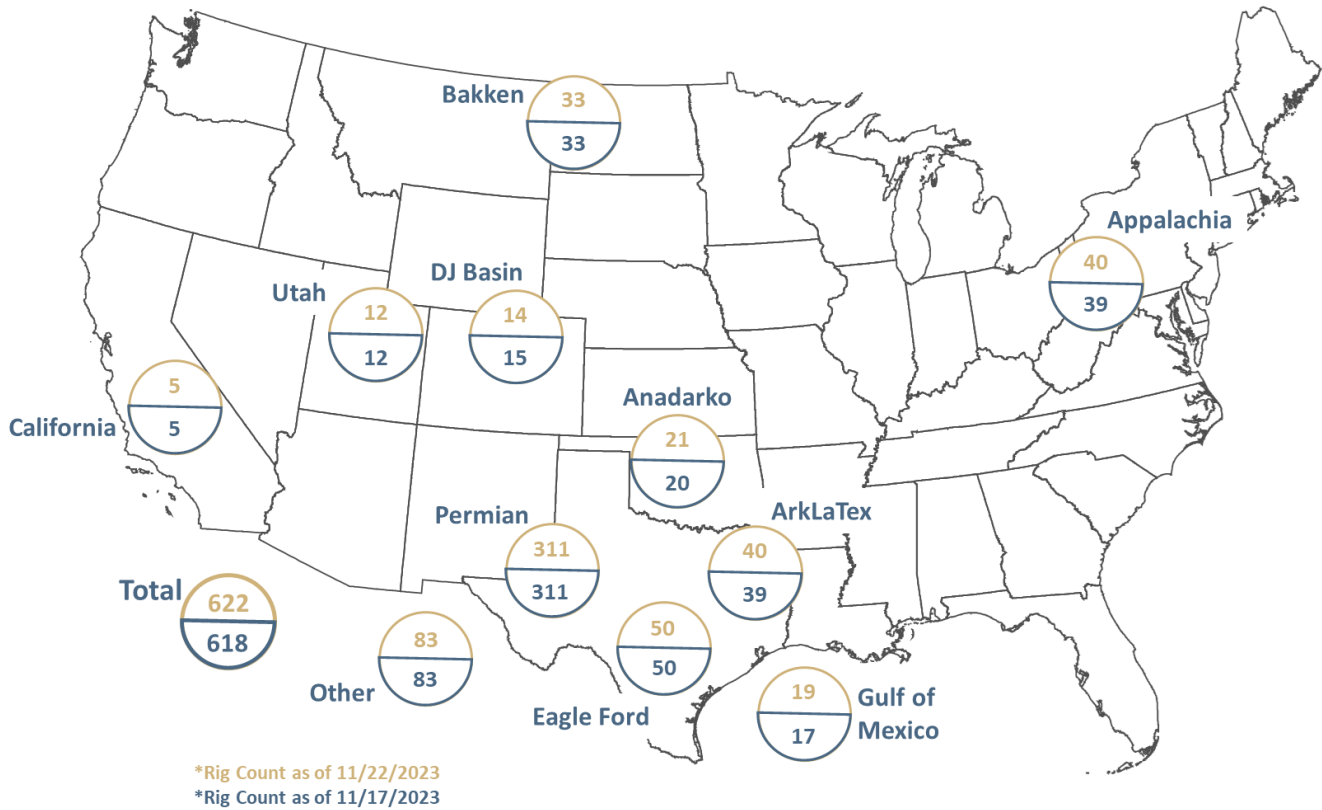
Exxon Mobil said recently that it agreed to buy shale rival Pioneer Natural Resources for \$59.5 billion in an all-stock deal, or \$253 per share.

### **Kimmeridge Signs Deals For Eagle Ford Assets, Gas Transport**

Kimmeridge Texas Gas, an affiliate of investment firm Kimmeridge, has signed a definitive agreement to acquire certain upstream assets from an undisclosed private seller in a bid to expand its footprint in the Eagle Ford shale play.



## RIG ACTIVITY BY US REGION

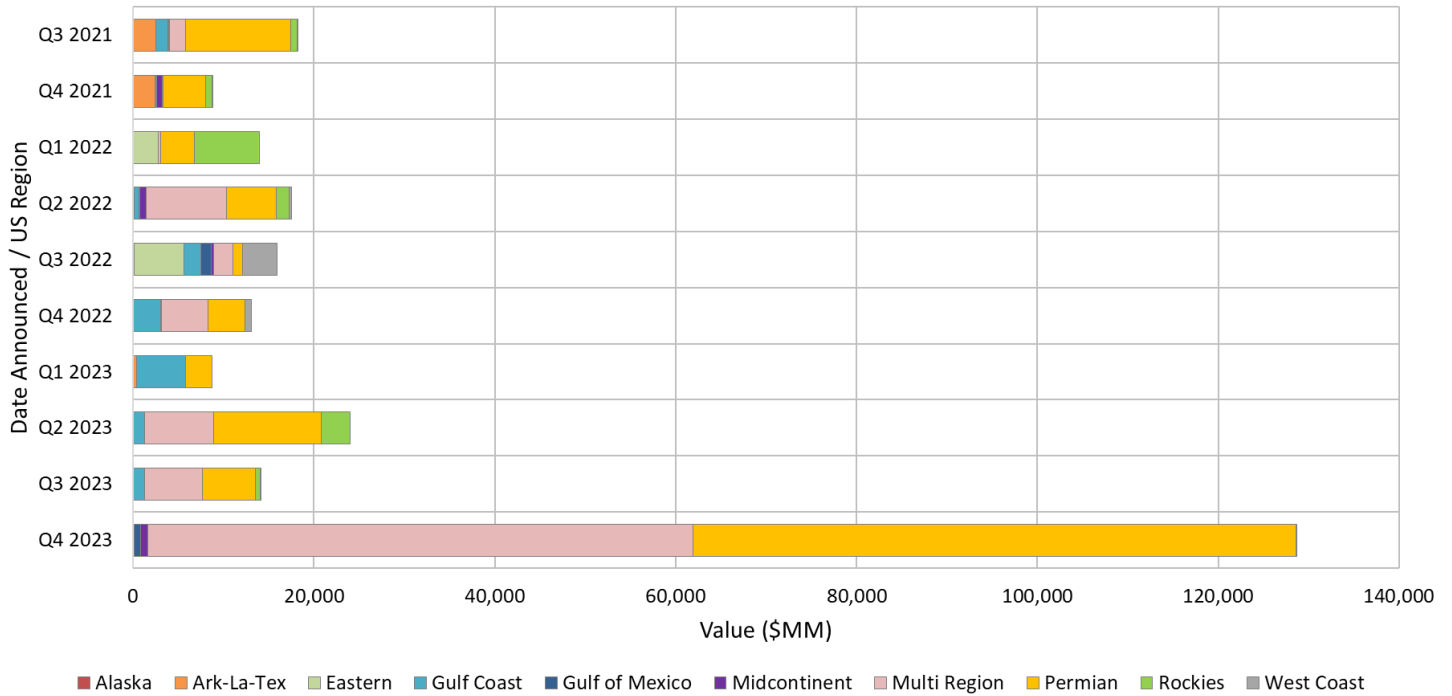


U.S. Rig Breakouts	Week Ending 11/22/2023			Week Ending 11/17/2023		Week Ending 11/23/2022
	Count	+/-	Count	+/-	Count	
Oil	500	0	500	(127)	627	
Gas	117	3	114	(38)	155	
Not Specified	5	1	4	3	2	
Directional	55	3	52	8	47	
Horizontal	554	1	553	(160)	714	
Vertical	13	0	13	(10)	23	
Land (Inc Others)	600	3	597	(164)	764	
Inland Waters	1	(1)	2	(2)	3	
Offshore	21	2	19	4	17	
<b>US Total</b>	<b>622</b>	<b>4</b>	<b>618</b>	<b>(162)</b>	<b>784</b>	

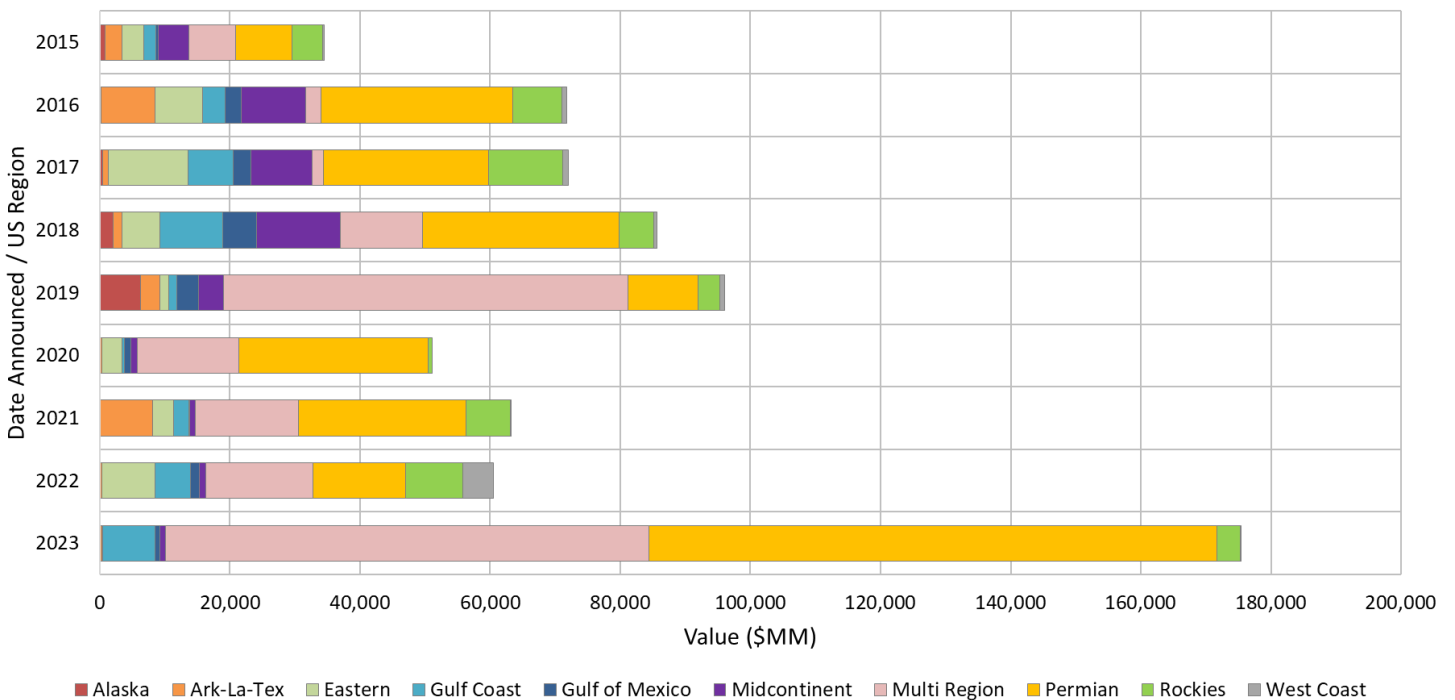
\*Source—Baker Hughes Weekly Rig Counts



## DEAL VALUE BY US REGION (BY QUARTER)



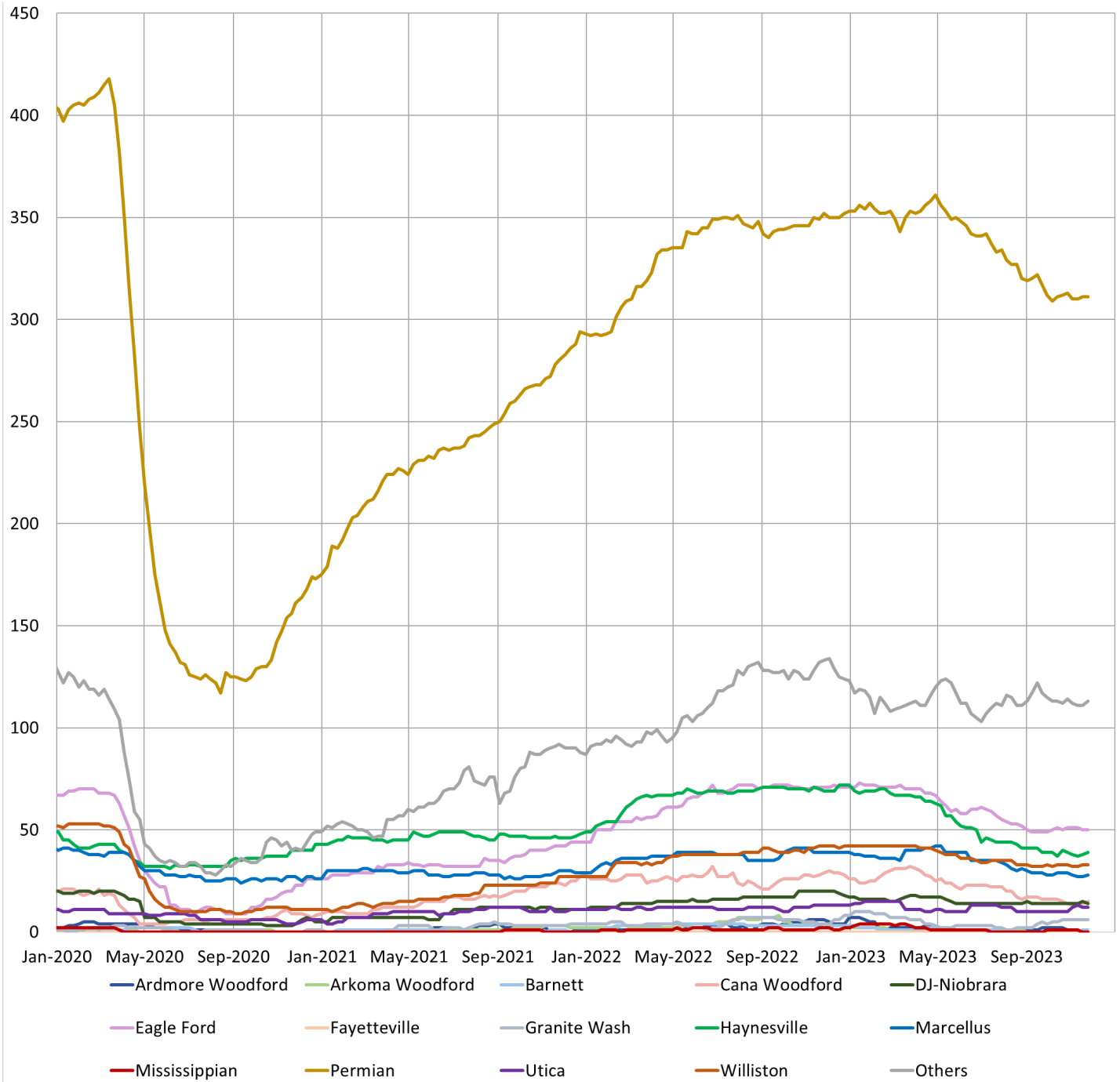
## DEAL VALUE BY US REGION (BY YEAR)



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



## RIG ACTIVITY BY US REGION

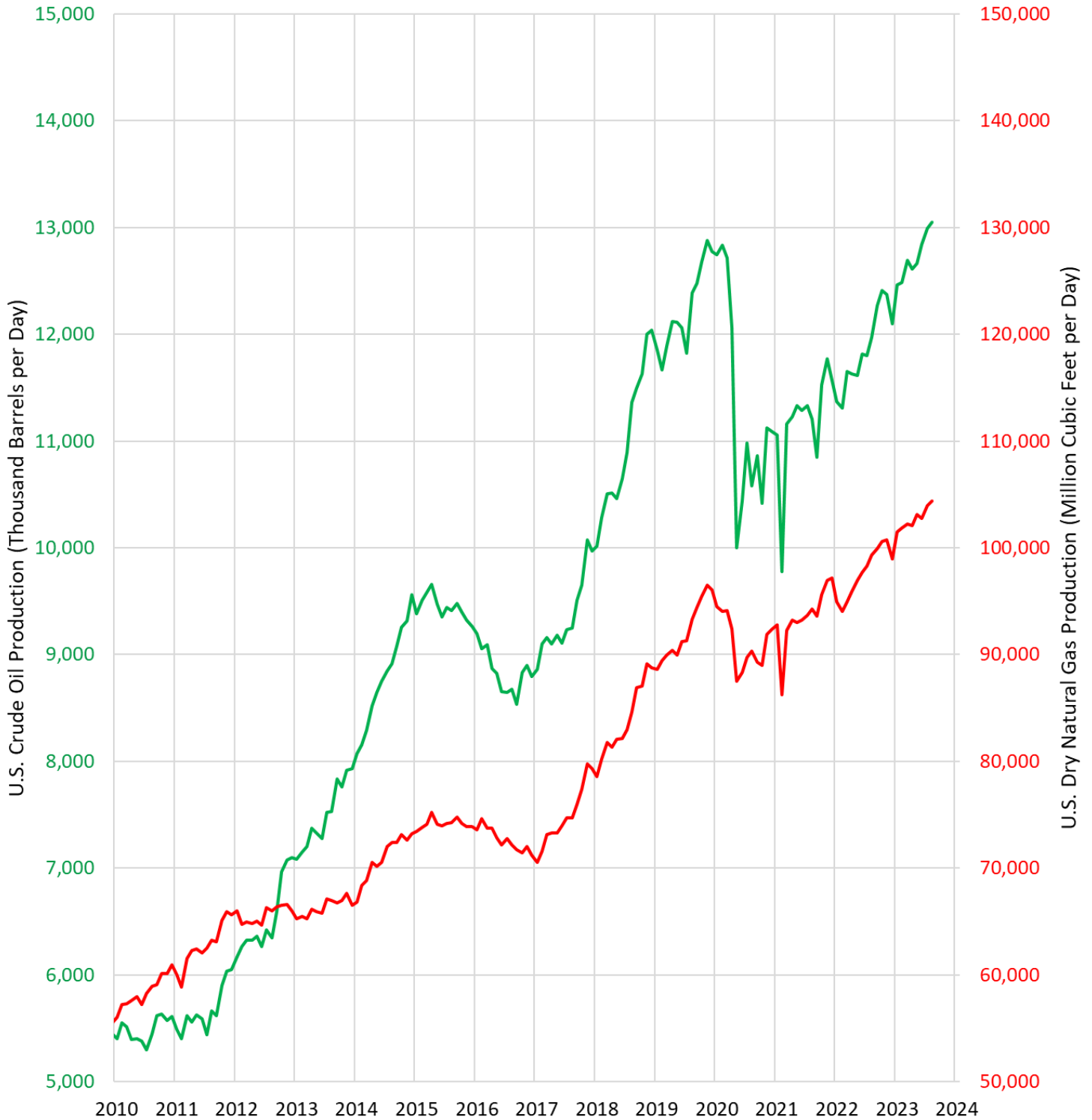


\*Source—Baker Hughes Weekly Rig Counts





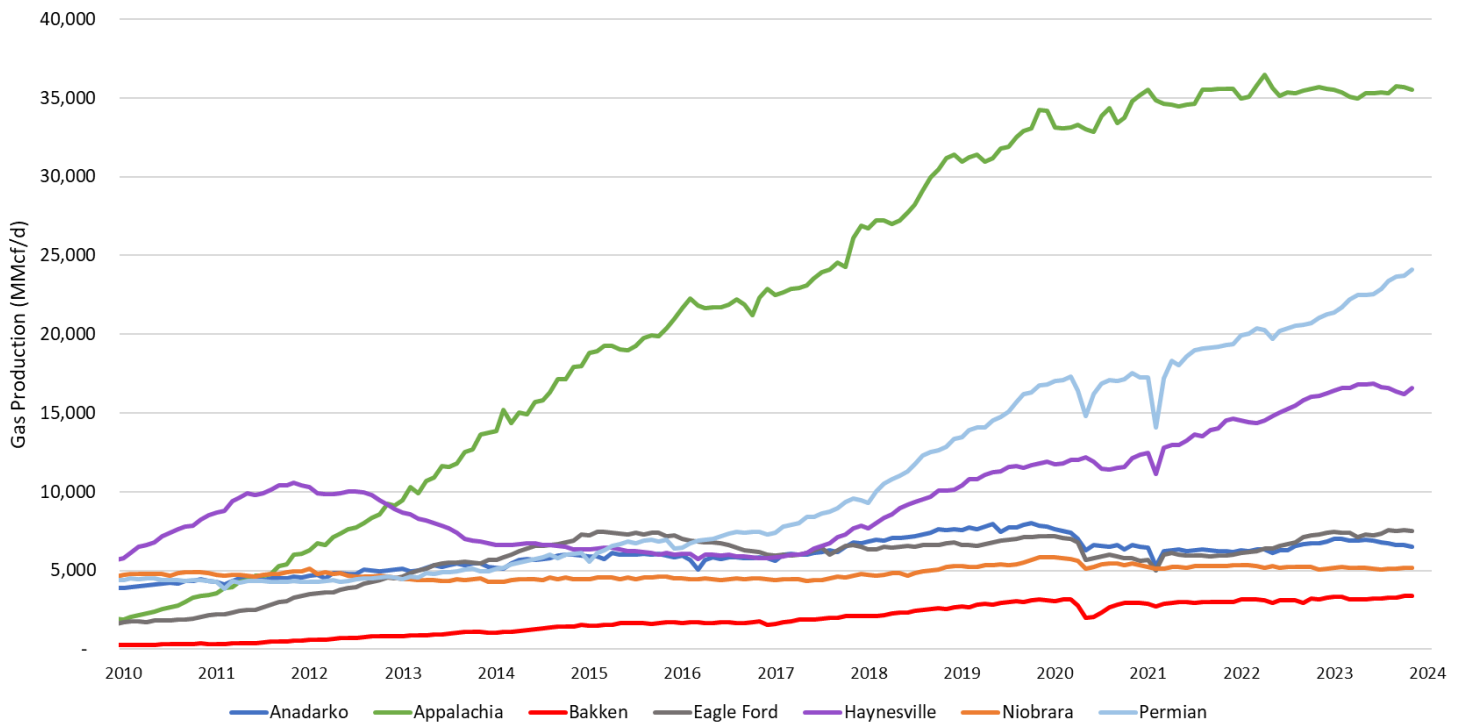
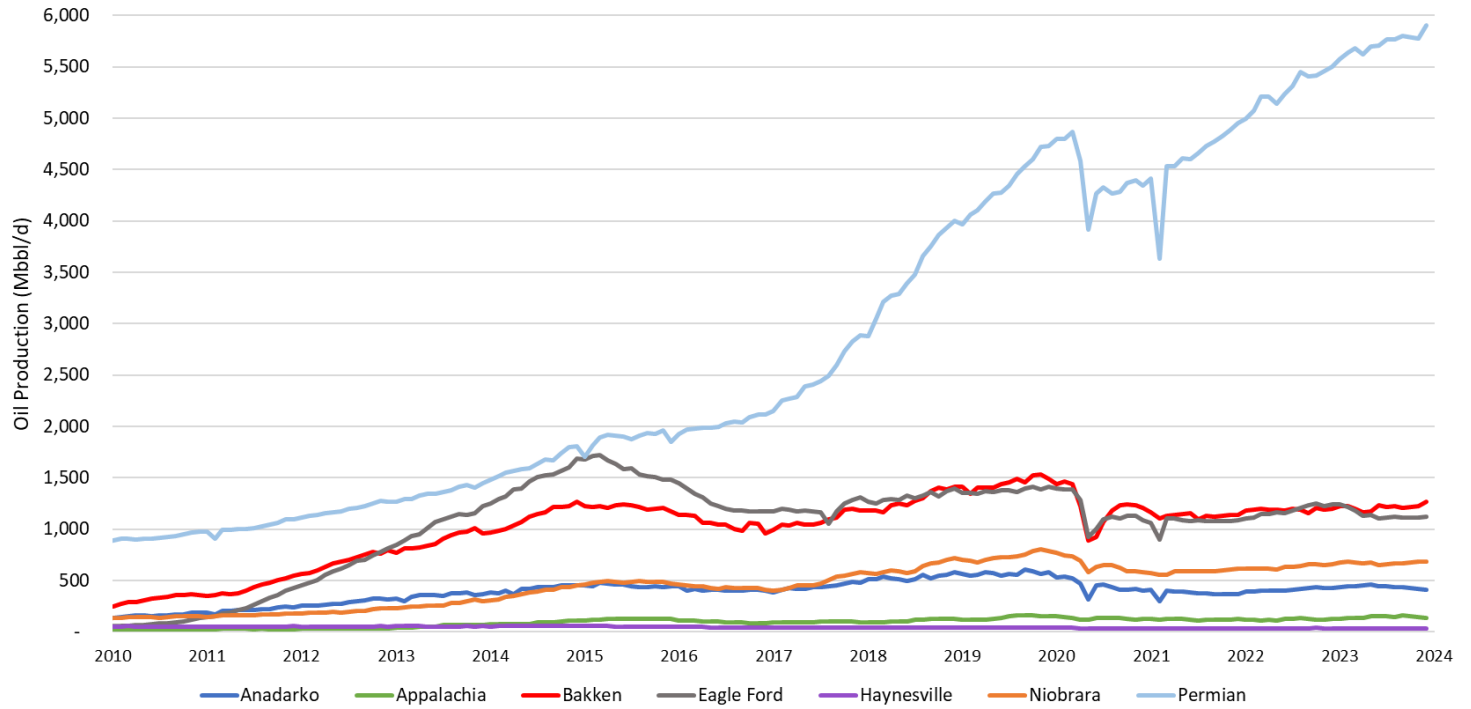
**US DAILY CRUDE (MMbbl) & DRY NATURAL GAS PRODUCTION (MMcf)**



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



## HISTORICAL PRODUCTION OF SELECTED US SHALE REGIONS



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



## **UPCOMING EVENTS**

### **November 2023**

[SPE Denver - State of the Rockies](#)  
[IPAA Texas Hold'Em Tournament](#)

November 28  
November 30

Denver, CO  
Houston, TX

### **December 2023**

[Hart Energy—Hall of Fame Awards](#)  
[SPE—Unpacking ESG and Its Drivers](#)

December 5  
December 6

Houston, TX  
Houston, TX

### **January 2024**

[Paul “Bear” Bryant Awards](#)  
[IPAA—Private Capital Conference](#)

January 10  
January 17

Houston, TX  
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.

