



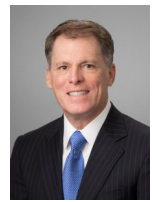
# Weekly E&P Update

August 15, 2023

Vol. 32

## Marcellus Snapshot

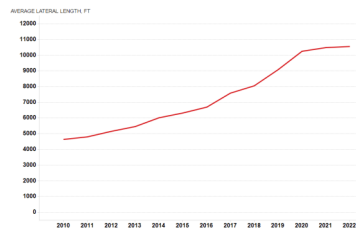
By Steve Hendrickson  
President of Ralph E. Davis Associates



As noted in some of our recent newsletters, US natural gas production continues to hit new records (despite low prices) and remains over 100 bcf/day. A significant contributor to our growth in natural gas production has been the Marcellus Shale play which averaged about 35 bcf/day in 2022. Development of the play began in 2010 and quickly rose to be the dominant gas-producing region in the US, followed by the Haynesville (14% of US production) and the Permian (16%).

Here's a quick look at some of the recent trends.

**Activity Levels** - Not surprisingly, activity levels in the play remain strong, with approximately 25 active rigs. The rate of new well completions has slowed, however. In 2020 and 2021, there were about 600 wells placed on production, followed by about 530 in 2022. This year's trend is about 40 wells per month, which could indicate another 10% decline in new wells.

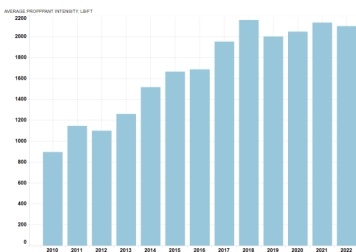


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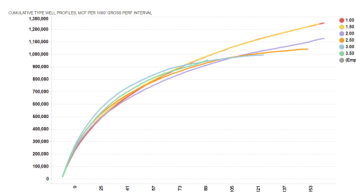
**Completion Trends** - Average lateral length in the play has steadily increased from less than 5,000 feet in 2010 to almost 11,000 feet in 2022. Likewise, proppant intensity increased from about 900 lb/ft to approximately 2,100.

**Well Performance** - One of the more interesting aspects of good performance is seen in a comparison of average cumulative recovery per lateral foot for different lateral lengths. We categorize each well's "nominal lateral length" by rounding the gross perforated interval to the nearest half mile. Typically, we see the longer lateral length groups have poorer performance on a per-foot basis, especially at the longer lateral lengths. In some plays, the decrease in the per-foot values is significant enough that the longer wells have the same EUR (on average) as those that are shorter.

Here, however, the longer laterals outperform the shorter ones on a per-foot basis for the first few years, and it's not until five years of cumulative production do their curves bend below the shorter laterals'. The outperformance in the early time may be due to the higher proppant intensities and other completion improvements, so the flattening of the curves may merely reflect that the older wells in these groups lack these improvements. More detailed analysis is needed to reach a solid conclusion, however.



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(Source: Energy Information Agency, Enverus, RED Analysis)

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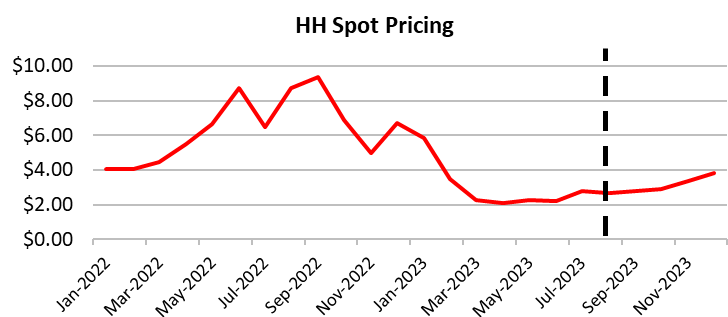
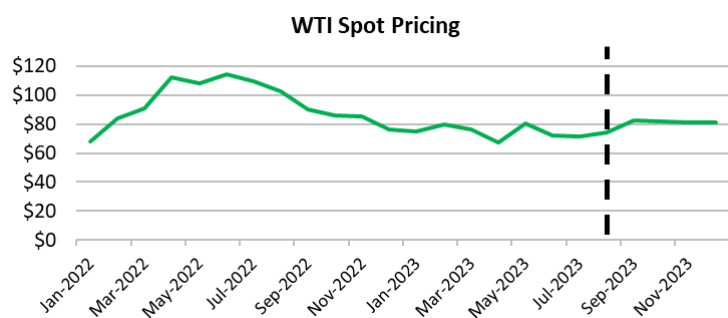
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## NYMEX FUTURE PRICING



## MONDAY'S MARKET CLOSE

### **NYMEX WTI CRUDE OIL FUTURES as of August 14, 2023 Close (\$/bbl)**

Period	Current	WoW Change	Last Week	1 Yr Ago
2023	\$81.67	\$0.42	\$81.25	\$85.58
2024	\$77.82	\$0.20	\$77.62	\$79.36
2025	\$73.00	\$0.14	\$72.86	\$74.81
2026	\$69.15	\$0.13	\$69.01	\$71.24
2027	\$65.91	\$0.09	\$65.82	\$68.50

### **NYMEX HH NATURAL GAS FUTURES as of August 14, 2023 Close (\$/MMBtu)**

Period	Current	WoW Change	Last Week	1 Yr Ago
2023	\$3.23	\$0.15	\$3.08	\$5.96
2024	\$3.62	\$0.12	\$3.50	\$4.83
2025	\$4.01	\$0.04	\$3.97	\$4.62
2026	\$4.02	(\$0.01)	\$4.03	\$4.52
2027	\$3.92	(\$0.05)	\$3.97	\$4.46

## INDUSTRY METRICS—QUICK SNAPSHOT

	<b>Current</b>	<b>Last Week</b>	<b>WoW Change</b>	<b>%Change</b>
Crude Oil Near-Month Price (\$/bbl)	\$83.09	\$82.53	\$0.56	0.7%
Natural Gas Near-Month Price (\$/MMBtu)	\$2.78	\$2.74	\$0.04	2%
Weekly Upstream-Deal Transaction Value (\$MM)	\$6.70	\$495.00	(\$488.30)	(99%)
Weekly Number of Upstream-Deal Transactions	3	2	1	50%
Current Total US Rig Count	654	659	(5)	(0.8%)
US Field Crude Oil Production (MMbbl/day)	12.6	12.2	0.4	3%
US Field Dry Natural Gas Production (Bcf/day)	108.1	108.7	(0.6)	(0.6%)
Commercial Crude Oil Stocks-Excluding SPR (MMbbl)	446	440	6	1%
Natural Gas Stocks-Working Gas Underground Storage (Bcf)	3,030	3,001	29	1%
Total Drilled But Uncompleted Wells (DUC-Last Month)	4,804	4,804	0	-

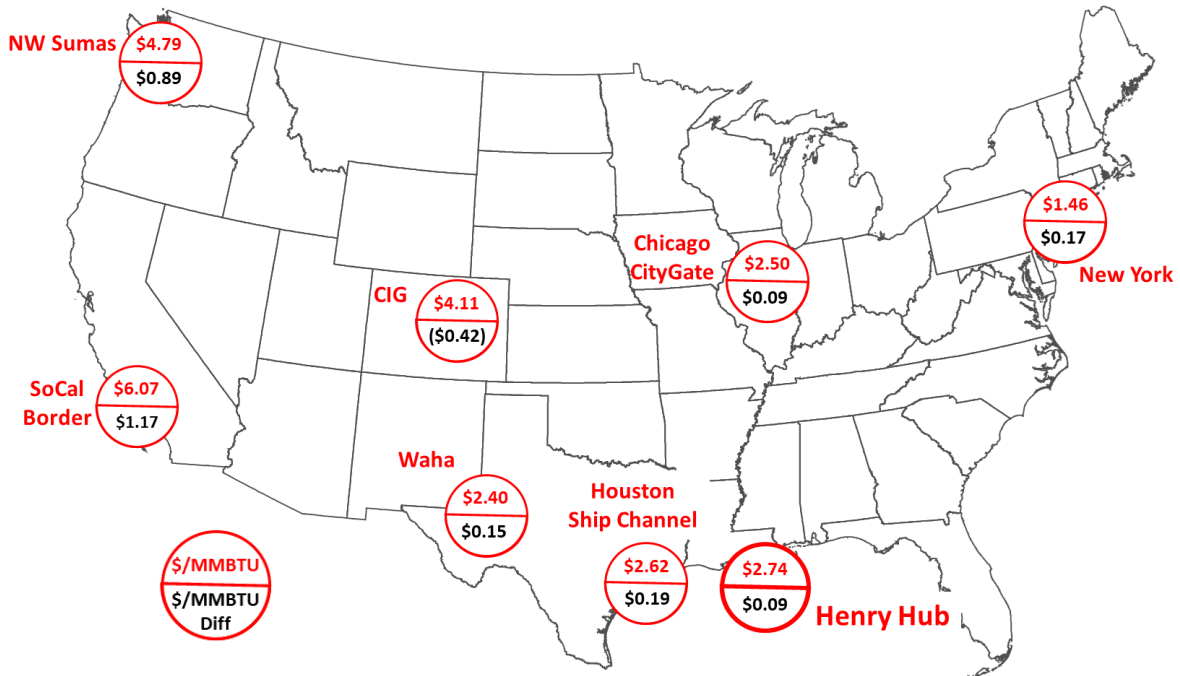
\*Source—Energy Information Administration, United States (EIA)

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

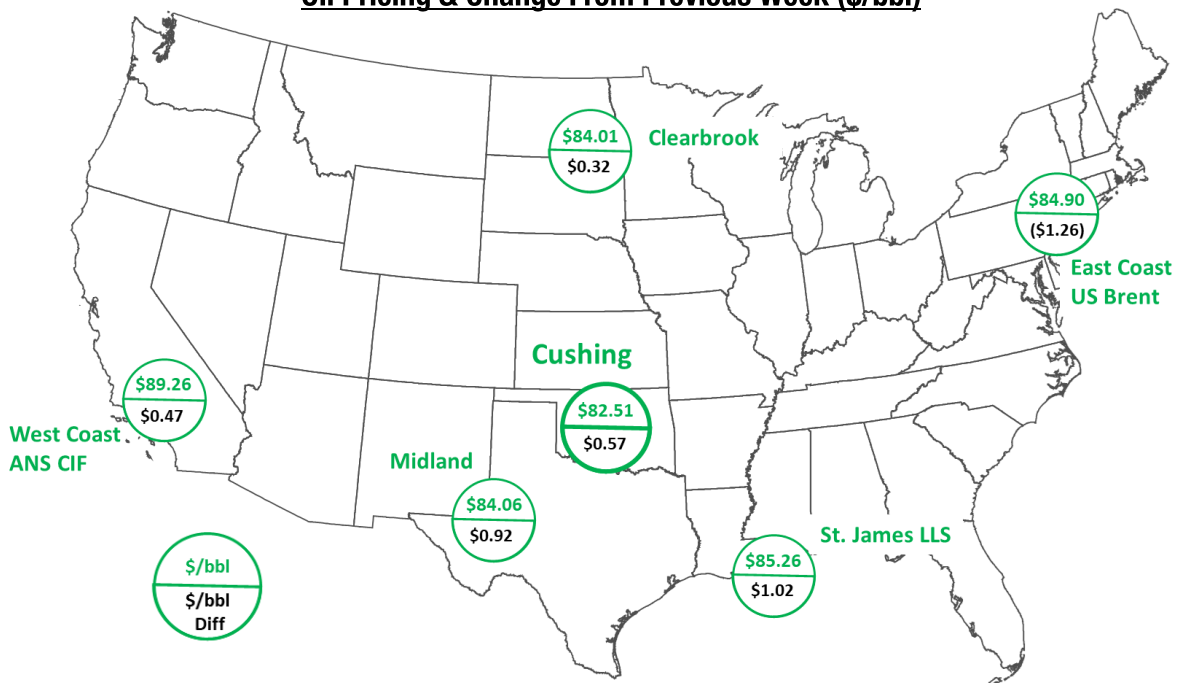


**US COMMODITY PRICES CONTINUED**

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



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



\*Source—Bloomberg LP



## **SELECTED INDUSTRY HEADLINES**

### **U.S. Production On Track For First Two-Month Decline Since 2022 As Operators Dial Back Shale Drilling**

U.S. shale expansion has come to an end for now with production set to shrink for a second straight month in September, according to a government report.

### **U.S. Shale Shakes Off Slowdown Predictions**

Several major U.S. oil producers, including Chevron and ExxonMobil, reported record outputs for Q2, leading to increased production forecasts.

### **Oil Falls Amid Lower Summer Trading and China Concerns**

Oil's rally sputtered amid a slump in summertime liquidity, leaving the commodity at the mercy of volatile, broader markets.

### **North America Drops Rigs Again**

North America has dropped rigs again week on week, according to the latest Baker Hughes rotary rig count, which was released recently.

### **USA Oil Output to Hit Record This Year**

US oil production this year will rise faster than previously expected, providing additional crude supplies to a market that has tightened because of Saudi Arabian output cuts, according to a new government forecast.

### **Speculators Cut U.S. Crude Oil Net Longs-CFTC**

Money managers cut their net long U.S. crude futures and options positions in the week to August 8, the U.S. Commodity Futures Trading Commission (CFTC) said recently.

### **When Will Gas Prices Stop Rising? Experts Weigh In**

Drivers have enjoyed relief at the gas pump this summer compared with eye-popping prices a year ago, but an alarming trend has emerged in recent weeks: Prices are rising once again.

### **Chinese Refiners Ramp Up Processing In July**

Chinese refiners ramped up the processing of crude oil in July due to stronger demand for fuels both at home and abroad.

### **New Mexico Looks To Become A Renewable Powerhouse**

New Mexico, traditionally known for its oil and gas production, is emerging as a significant player in the renewable energy sector, backed by governmental support.

### **EV Adoption Could Spell Trouble For Oil Exporters**

The rapid growth of electric vehicles (EVs) is anticipated to significantly impact the global oil industry, with potential fuel displacement creating a potential challenge to the future of the industry.

### **Green Power Gets Pricier After Years of Declines (LOGIN CREDENTIALS REQUIRED)**

The renewable-power price increase is creating headaches for some utilities and companies.



## **SELECTED RECENT TRANSACTIONS**

### **Empire Petroleum Announces Acquisition Of Additional Interests In New Mexico Units**

Empire Petroleum recently announced that it closed on the acquisition of COERT Holdings 1 LLC's interests in Empire's three New Mexico assets, Eunice Monument South Unit A, Eunice Monument South Unit B, and Arrowhead Grayburg Unit, all of which are located in Lea County. The purchase price for the Transaction was approximately \$6.7 million.

### **ExxonMobil Announces Acquisition Of Denbury**

Exxon Mobil Corporation (NYSE: XOM) today announced it has entered into a definitive agreement to acquire Denbury Inc., an experienced developer of carbon capture, utilization and storage (CCS) solutions and enhanced oil recovery. The acquisition is an all-stock transaction valued at \$4.9 billion, or \$89.45 per share based on ExxonMobil's closing price recently.

### **Sandridge Energy, Inc. Announces The Closing Of An Acquisition Which Increases Its Interest In Wells It Operates In The Northwest Stack**

SandRidge Energy, Inc. today announced the closing of an acquisition which increases its interest in twenty-six producing wells operated by the Company within the Northwest Stack play for approximately \$11.25 million.

### **Ring Energy Announces Accretive All Cash Asset Acquisition Strategically Expanding Core Operating Area**

Ring Energy, Inc. today announced it has entered into an agreement to acquire the Central Basin Platform assets of Founders Oil & Gas IV, LLC for \$75 million in cash. Founders' CBP operations are located in the Permian Basin in Ector County, Texas and are focused on the development of approximately 3,600 net acres that are similar to Ring's CBP assets acquired in 2022 from Stronghold Energy Operating II, LLC and its affiliate.

### **Zenith Energy Expands Its US Presence With Stateside Energy LLC Deal**

Zenith Energy Ltd. the international energy production company with assets in Africa and Europe, has announced that it has entered into an agreement with Stateside Energy LLC, an Oklahoma-based oil and gas operator, to acquire and operate a portfolio of oil production and development licences in Oklahoma, as well as certain other states in the USA.

### **Civitas Resources to Enter Permian Basin through Transformative Transactions**

Civitas has also agreed to purchase Hibernia's Midland Basin assets for \$2.25 billion in cash, subject to customary purchase price adjustments.

### **SM Energy Company Announces Certain Second Quarter 2023 Activity And Acquired 6,300 Net Acres In The Midland Basin**

The Company's Midland Basin assets are located in the Permian Basin in West Texas is comprised of approximately 80,000 net acres.

### **Riverbend Energy Group Announces Acquisition to Mark the Rebuilding of Its Non-Operated Energy Strategy**

Riverbend Energy Group, via certain of its affiliates, announced today the acquisition of a sizeable non-operated working interest position in the core of the Williston Basin.

### **Earthstone Energy Announces \$1.0 Billion Delaware Basin Acquisition**

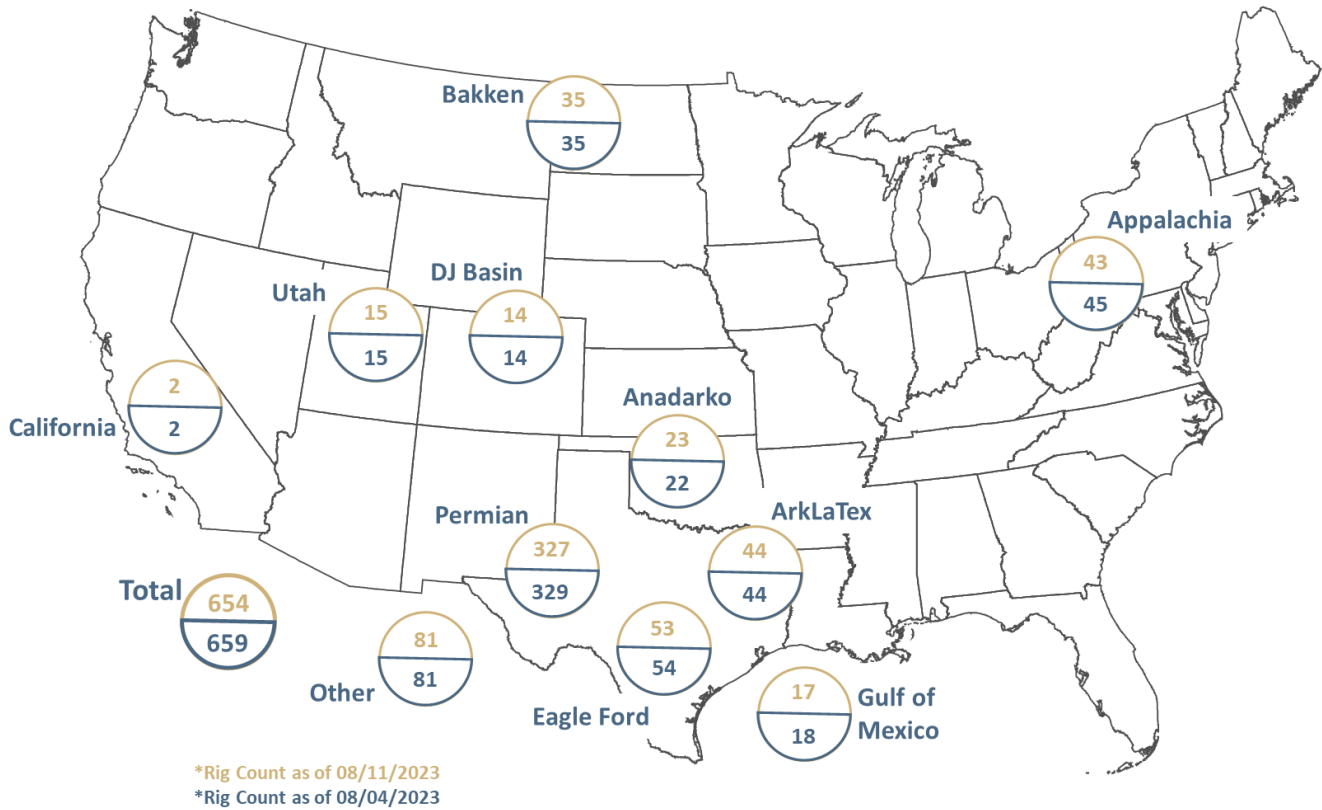
Earthstone Energy, Inc. recently announced that it has entered into an agreement to acquire Novo Oil & Gas Holdings, LLC, a privately-held Delaware Basin focused E&P company backed by EnCap Investments L.P., for \$1.5 billion.

### **Westlawn Group Forms Ellipsis U.S. Onshore Holdings To Acquire Assets Located In The Delaware Basin**

Westlawn Group, LLC is pleased to announce the formation of Ellipsis U.S. Onshore Holdings, LLC. Headquartered in Dallas, Texas, Ellipsis is a private energy company formed to pursue the acquisition and development of large, producing oil and natural gas assets in the United States.



## RIG ACTIVITY BY US REGION

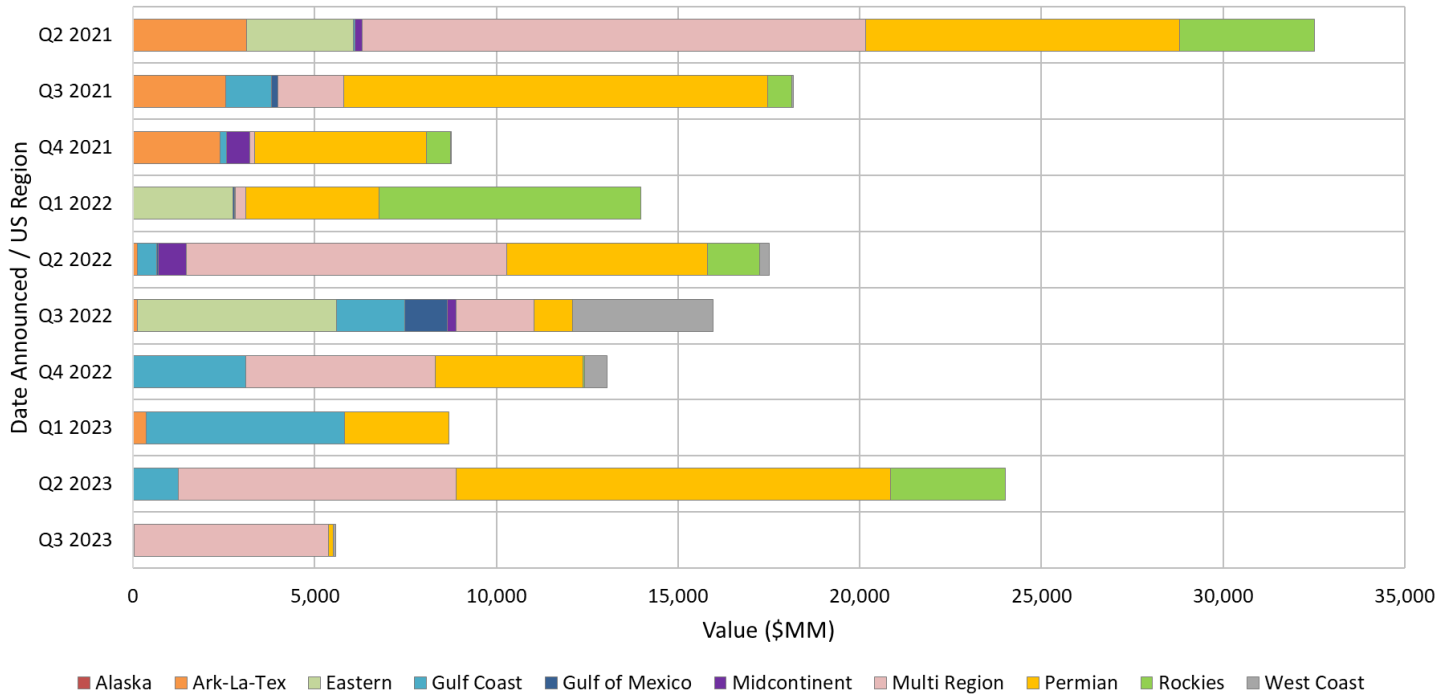


	Week Ending 08/11/2023		Week Ending 08/04/2023		Week Ending 08/12/2022
U.S. Rig Breakouts	Count	+/-	Count	+/-	Count
Oil	525	0	525	(76)	601
Gas	123	(5)	128	(37)	160
Not Specified	6	0	6	4	2
Directional	53	0	53	14	39
Horizontal	579	(6)	585	(114)	693
Vertical	22	1	21	(9)	31
Land (Inc Others)	632	(3)	635	(110)	742
Inland Waters	4	(1)	5	1	3
Offshore	18	(1)	19	0	18
<b>US Total</b>	<b>654</b>	<b>(5)</b>	<b>659</b>	<b>(109)</b>	<b>763</b>

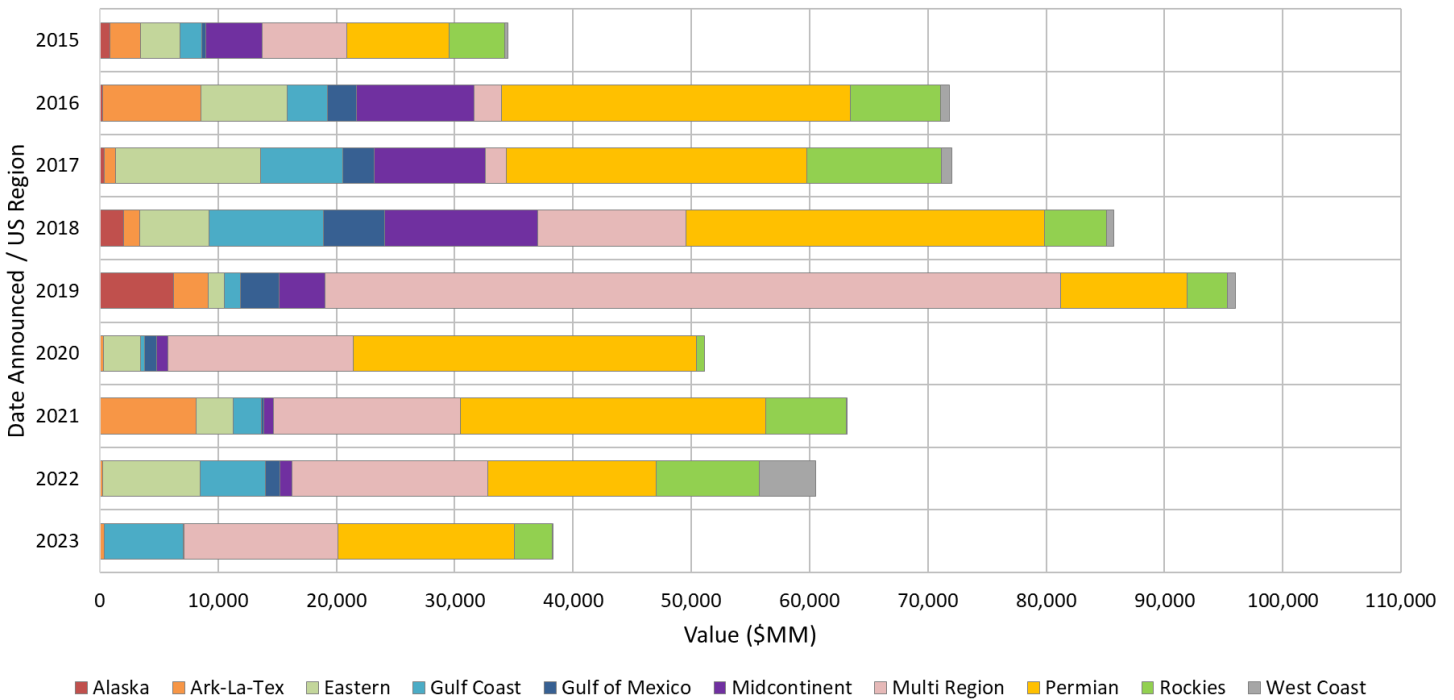
\*Source—Baker Hughes Weekly Rig Counts



## DEAL VALUE BY US REGION (BY QUARTER)



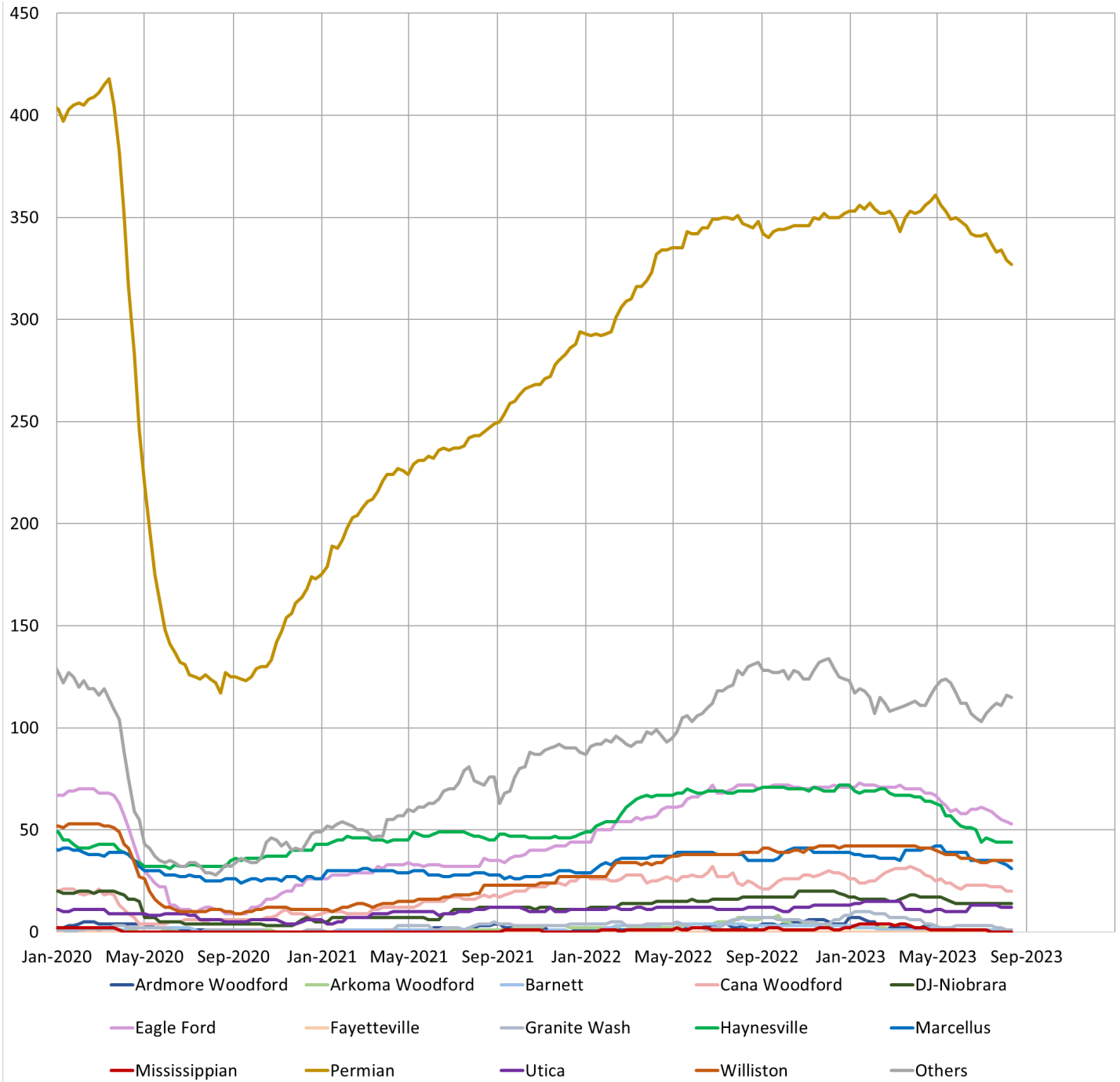
## DEAL VALUE BY US REGION (BY YEAR)



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



## RIG ACTIVITY BY US REGION

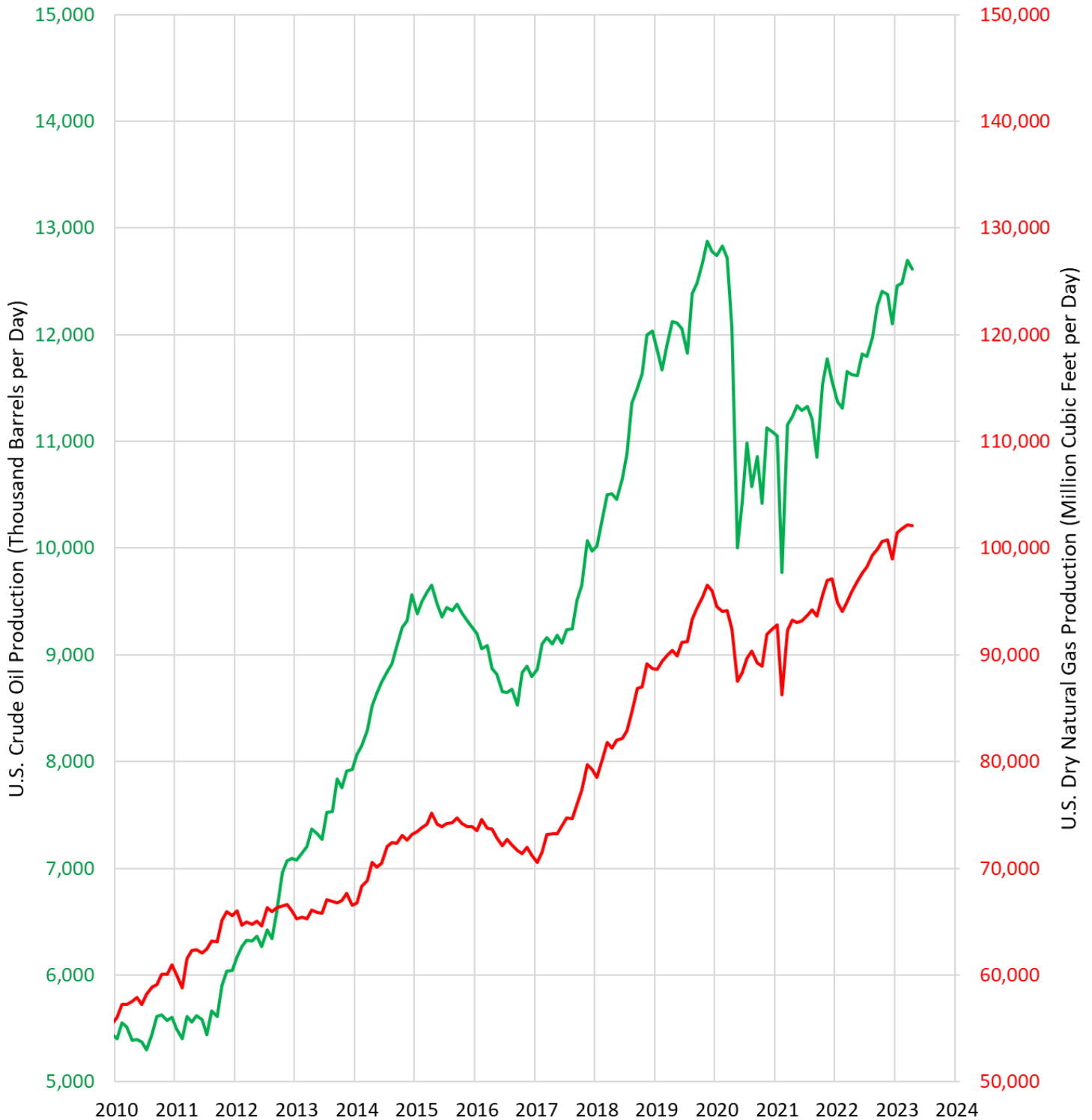


\*Source—Baker Hughes Weekly Rig Counts





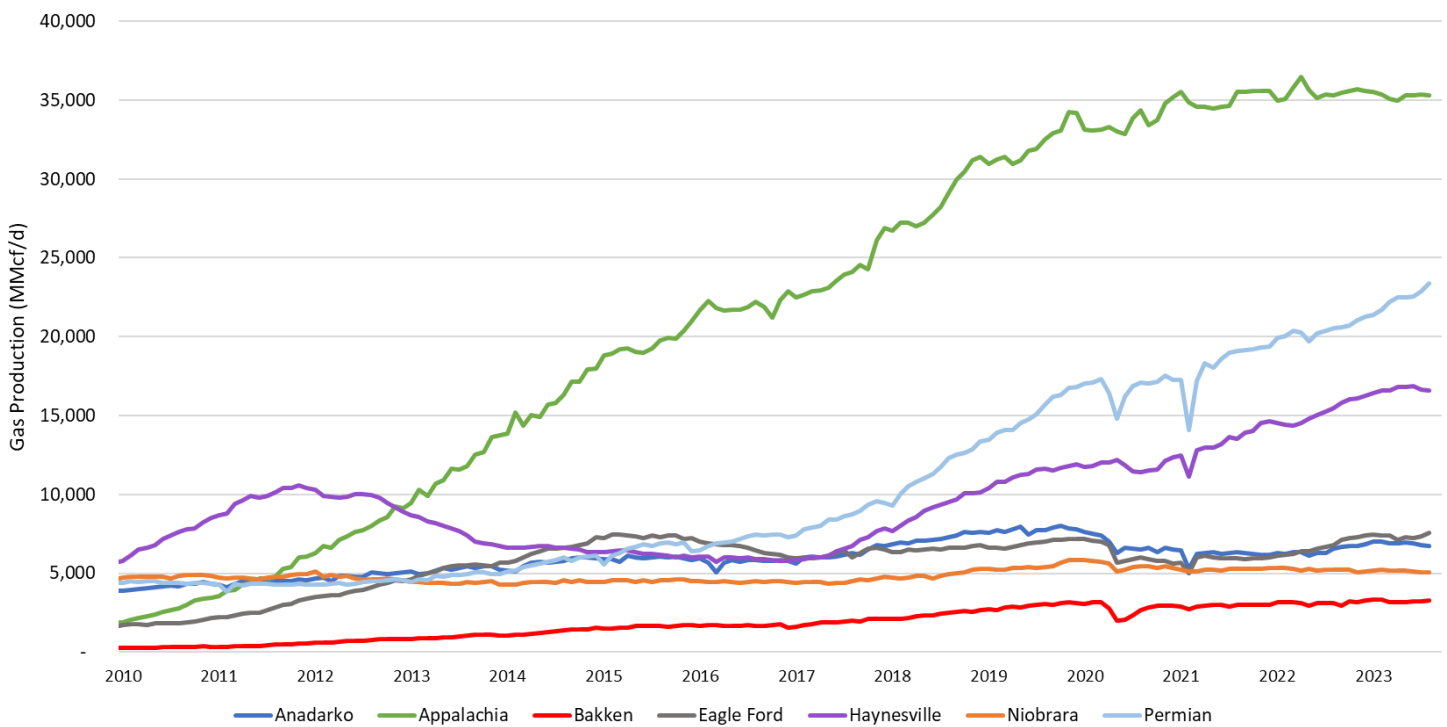
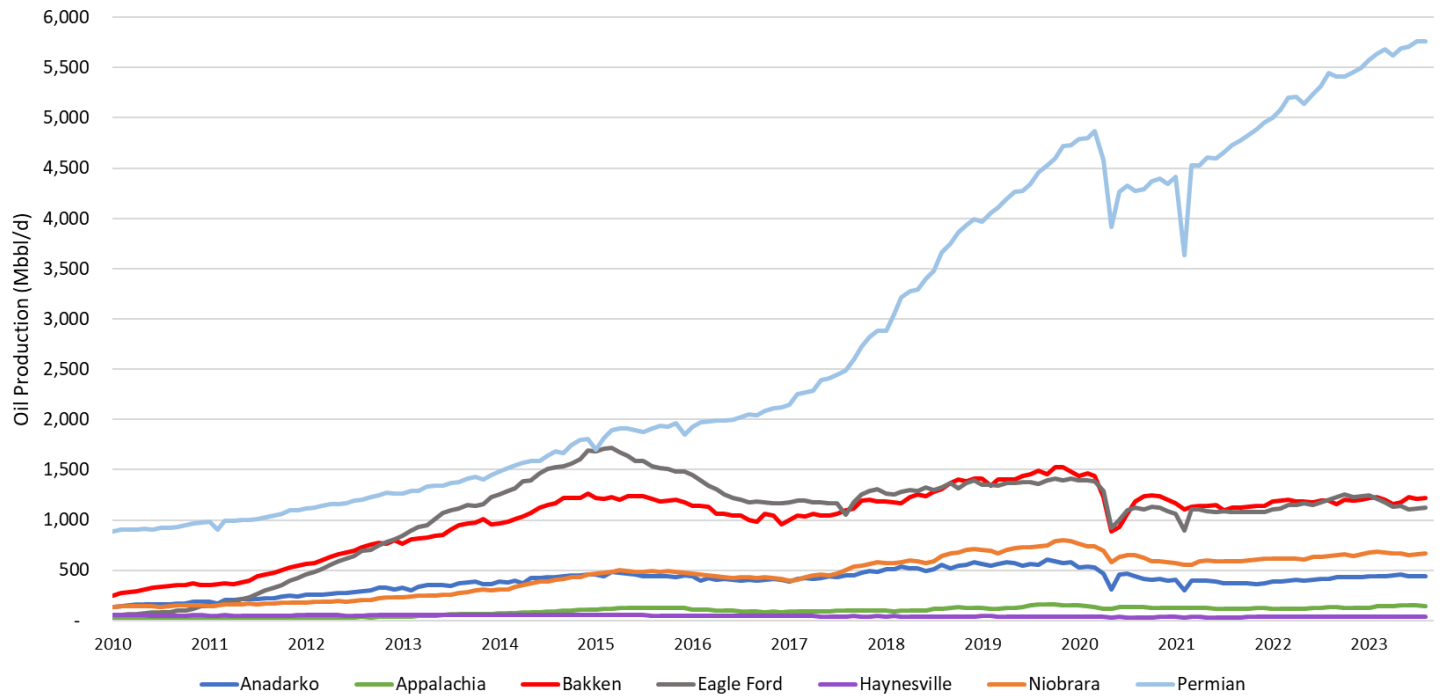
**US DAILY CRUDE (MMbbl) & DRY NATURAL GAS PRODUCTION (MMcf)**



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



## HISTORICAL PRODUCTION OF SELECTED US SHALE REGIONS



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



## **UPCOMING EVENTS**

### **August 2023**

[Enercom Denver](#)

August 14-16

Denver, CO

[Women In Minerals – Dine n Deal](#)

August 16

Denver, CO

[TXCPA Energy Conference](#)

August 25

Houston, TX

[Society of Petroleum Engineers \(SPE\) - Saint Arnold's Season Kick-Off Social](#)

August 30

Houston, TX

### **September 2023**

[Enertia User Conference](#)

September 21-22

Fort Lauderdale, FL

[HPF 29th Annual Golf Tournament](#)

September 25

Cypress, TX

[World Oilman's Overnight Poker Tournament \(WOOP\)](#)

September 28-29

Lake Charles, LA

### **October 2023**

[Hart Energy—Energy Capital Conference](#)

October 2

Dallas, TX

[Hart Energy—A&D Strategies and Opportunities Conference](#)

October 3

Dallas, TX

[2023 National Conference of Bankruptcy Judges \(NCBJ\)](#)

October 11-14

Austin, TX

[Tulsa Octoberfest](#)

October 19-22

Tulsa, OK

\*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.

