

Weekly E&P Update



February 14, 2023

Vol. 6

Petrodollars, Currency Reserves and Trade Deficits

By Steve Hendrickson President of Ralph E. Davis Associates



Near the end of World War II, the world's major economies formed the Bretton Woods System that stipulated each country's currencies would be convertible to dollars at fixed exchange rates and that the dollar would be redeemable in gold at \$35/ounce. This system effectively established the dollar as the world's currency and perpetuated the gold standard. Economist Robert Triffin, in 1960, identified a potential issue with the dollar as the world's reserve currency: it could cause trade deficits and make it difficult for the US to tighten its money supply without negatively affecting global liquidity and economic activity.

Another problem was that the price of gold on global markets was not fixed, so dollars could be redeemed for gold at \$35/ounce and sold at higher prices elsewhere. This arbitrage resulted in an outflow of the US's gold reserves, weakening the dollar. These and other problems led to the US abandoning the gold standard under President Nixon, which established floating exchange rates.

Not long afterward, the dollar became the primary currency for the denomination of global oil sales, and the term "petrodollars" was coined. However, there were other "petrocurrencies" before the dollar, most notably the Dutch guilder. The resulting demand for guilders to conduct oil transactions resulted in high demand for the currency, strengthening it versus other currencies and making Dutch exports uncompetitive.

While the dollar's use as the primary reserve currency has downsides, it offers several benefits, including lower borrowing costs and the ability to use economic sanctions for foreign policy. For example, for borrowing, holders of foreign reserves of dollars need to find secure, liquid investments to store them, and US treasuries are an excellent choice. This results in more dollars available to borrow and reduces interest rates. Also, because so many global transactions are denominated in dollars (even when the US or an American firm is not involved) and because those transactions require access to the US financial system to settle, the US can prevent access and place pressure on foreign countries by restricting their trading options.

There is <u>concern</u> that the US could lose its role as the primary reserve currency or as the primary currency for global oil pricing. However, the yuan, which currently accounts for only 3% of central bank reserves, is unlikely to become a competitor due to its inferior attributes compared to the dollar. China's monetary policy is opaque, and the role would weaken their manufacturing sector's export competitiveness. While there have been oil transactions in other currencies, such as Russian rubles, it is unlikely to change the practice of denominating most crude transactions in dollars anytime soon.

Table Of Contents

This Week in Oil & Gas

US Commodity Prices

Industry Headlines

Recent Transactions

Rig Activity by US Region

Deal Value by US Region

Total US Rig Count by US Region

US Daily Crude & Dry Natural Gas Production

Historical Production of US Shale Regions

Upcoming Events

About Us/Key Contacts

1





NYMEX FUTURE PRICING





MONDAY'S MARKET CLOSE

NYMEX WTI CRUDE OIL FUTURES as of February 13, 2023 Close (\$/bbl)

Period	Current	WoW Change	Last Week	1 Yr Ago
2023	\$79.43	\$5.29	\$74.14	\$78.09
2024	\$74.59	\$3.85	\$70.74	\$73.37
2025	\$70.06	\$2.88	\$67.18	\$70.52
2026	\$66.38	\$2.27	\$64.11	\$68.61
2027	\$63.27	\$1.88	\$61.39	\$67.51

NYMEX HH NATURAL GAS FUTURES as of February 13, 2023 Close (\$\text{\$/MMBtu})

Period	Current	WoW Change	Last Week	1 Yr Ago
2023	\$3.02	(\$0.02)	\$3.04	\$3.63
2024	\$3.62	\$0.01	\$3.61	\$3.35
2025	\$3.84	(\$0.02)	\$3.86	\$3.23
2026	\$3.90	(\$0.06)	\$3.96	\$3.17
2027	\$3.92	(\$0.07)	\$3.99	\$3.18

INDUSTRY METRICS—QUICK SNAPSHOT

RY METRICS—QUICK SNAPSHOT	<u>Current</u>	<u>Last Week</u>	WoW Change	%Change
Crude Oil Near-Month Price (\$/bbl)	\$79.94	\$75.92	\$4.02	5%
Natural Gas Near-Month Price (\$/MMBtu)	\$2.58	\$2.46	\$0.12	5%
Weekly Upstream-Deal Transaction Value (\$MM)	\$250.00	\$0.00	\$250.00	-
Weekly Number of Upstream-Deal Transactions	1	2	(1)	(50%)
Current Total US Rig Count	761	759	2	0.3%
US Field Crude Oil Production (MMbbl/day)	12.3	12.2	0.1	0.8%
US Field Dry Natural Gas Production (Bcf/day)	104.4	104.1	0.3	0.3%
Commercial Crude Oil Stocks-Excluding SPR (MMbbl)	455	453	2	0.5%
Natural Gas Stocks-Working Gas Underground Storage (Bcf)	2,366	2,583	(217)	(8%)
Total Drilled But Uncompleted Wells (DUC-Last Month)	4,577	4,577	-	0%

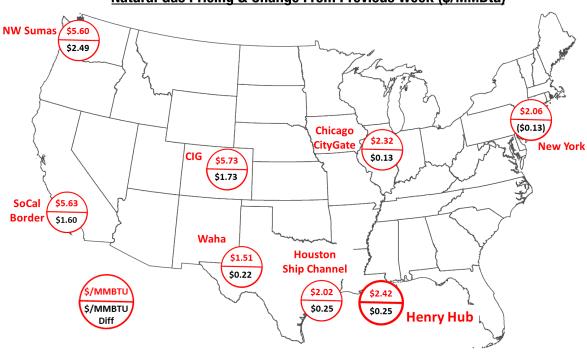
^{*}Source—Energy Information Administration, United States (EIA)
*Source—Baker Hughes North America Rotary Rig Count & PLS M&A Database

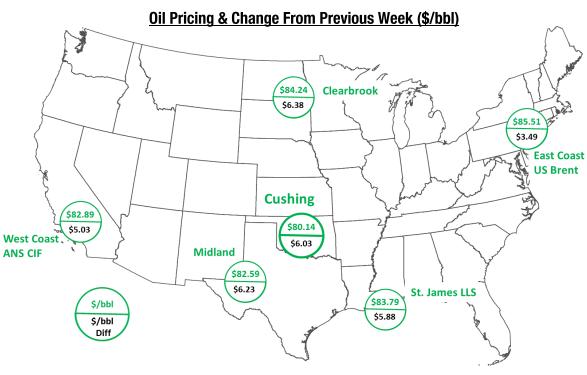




US COMMODITY PRICES CONTINUED







*Source—Bloomberg LP





SELECTED INDUSTRY HEADLINES

U.S. Shale To Set Production Record In March

The extra 26 million barrel U.S. SPR release is forcing oil prices lower on Tuesday, but OPEC, in its monthly oil report, remains bullish on oil.

Oil Supplies A Bigger Issue Than Demand For 2024

Supplies will pose a bigger issue than demand for global markets in 2024 as some countries struggle with production and investment, the United Arab Emirates energy minister said.

Oil Prices Down As U.S. Government Says It Will Release More Crude From Strategic Petroleum Reserve

The energy sector is poised for a mixed to lower start, pressured by weakness in the crude complex and in major equity futures which fell after the January CPI report showed inflation grew slightly more than anticipated.

Tanker Rates Soar 400% On Latest Round Of EU Sanctions On Russia

Tanker rates have jumped by 400% following the latest round of EU and G-7 sanctions targeting Russian petroleum exports.

API Voices Concerns About EPA's Proposed Methane Rule

The American Petroleum Institute (API) responded to the U.S. Environmental Protection Agency's (EPA) proposed methane rule during a press conference recently.

Russia Is Nearing Top Spot As Premier Oil Exporter: Bank Of America

Despite sanctions aimed at the Kremlin's oil revenue, Russia could once again become the premier global crude exporter this year.

OPEC Expects Stronger Economies to Boost Oil Demand (LOGIN CREDENTIALS REQUIRED)

The Organization of the Petroleum Exporting Countries increased its prediction for global oil demand growth this year by 100000 barrels a day.

Biden Administration Plans To Sell 26 Million Barrels Of Crude

The Biden administration plans to sell more crude oil from the Strategic Petroleum Reserve, fulfilling budget directives mandated years ago that it had sought to stop as oil prices have stabilized.

<u>Israel Sends First Oil Export To Europe From Offshore Field</u>

Israel is joining the club of oil exporters as a tanker loaded on Monday crude from the floating production storage and offloading (FPSO) developing the Karish field.

Portugal's Galp Posts Record Profit And Sells Angolan Oil Assets

Portuguese oil company Galp Energia posted record full-year profit recently thanks to higher oil prices and refining margins, with the favourable market conditions also facilitating the sale of its upstream business in Angola.

Oil Edges Higher As Market Weighs Russian Supply Cuts Amid Demand Fears

Oil prices edged higher recently, rebounding from early losses as investors weighed Russia plans to cut crude production.

Big Oil's Back In Fashion

The three biggest European oil and gas companies—BP, Shell, and TotalEnergies—all announced plans that involve a sort of return to their core business.

What Big Oil's Bumper Profits Mean For The Energy Transition (LOGIN CREDENTIALS REQUIRED)

In 2022, the six largest western oil companies made more money than in any year in the history of the industry: over \$200bn, largely from pumping and selling the fossil fuels the world must replace to avert the climate crisis.

Russia To Cut Oil Output By 5% As Sanctions Bite

Russia will cut crude oil production by half a million barrels per day starting in March, a little over two months after the world's major economies imposed a price cap on the country's seaborne exports.

Cause Found In Keystone Pipeline's Massive Oil Leak

A crude oil from the Keystone Pipeline in December in Kansas was caused by a combination of a faulty weld and "bending stress fatigue" on the pipe.





SELECTED RECENT TRANSACTIONS

Alliance Resource Partners, L.P. Announces \$72.3 Million Mineral Acquisition

Alliance Resource Partners, L.P. recently announced a \$72.3 million acquisition of oil & gas mineral interests in the Permian Basin from JC Resources LP.

INPEX Sells Eagle Ford Tight Oil Production And Development Assets To Repsol

Japan's INPEX Corporation has sold its Eagle Ford assets to Repsol Oil & Gas USA, a subsidiary of Spanish energy company Repsol.

Elk Range Royalties Announces Acquisition in the Permian Basin and Launch of Elk Range Royalties II

Elk Range Royalties, LP recently announced it has closed an acquisition of Permian Basin mineral and royalty interests pursuant to a purchase and sale agreement with Tower Rock Oil & Gas and its affiliates.

Arena Energy Acquires Gulf of Mexico Shelf Properties from Cox Operating, LLC

Arena Energy, LLC recently announced it has closed on the acquisition of Cox Operating, LLC's interest in two fields located in the shallow waters of the Gulf of Mexico.

Matador Resources Company Announces Strategic Bolt-on Delaware Basin Acquisition

Matador Resources Company recently announced that a wholly-owned subsidiary of Matador has entered into a definitive agreement to acquire Advance Energy Partners Holdings, LLC.

Black Mountain Energy Secures Earthstone Energy Oil And Gas Field, New Mexico

Black Mountain Energy has recently agreed to acquire 100 per cent of NYSE-listed Earthstone Energy's interest in an existing oil and gas field in the Permian Basin in New Mexico.

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

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.

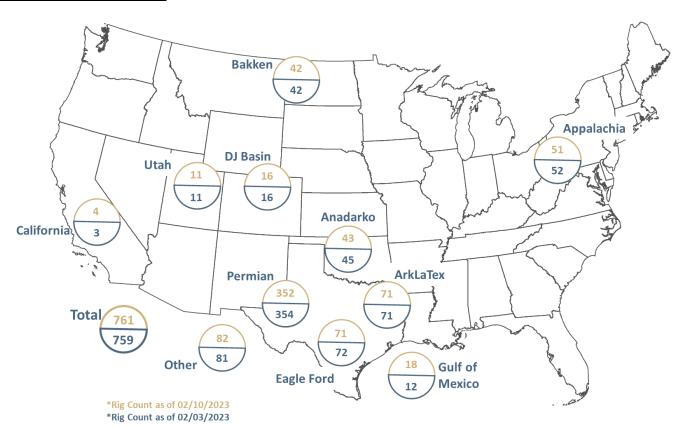
PHX Minerals Reports Fiscal 2022 Results and Haynesville, SCOOP Acquisitions

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.





RIG ACTIVITY BY US REGION



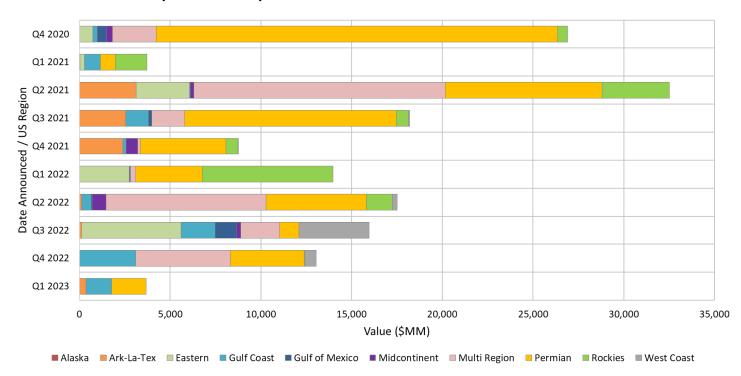
	Week Ending 02/10/2023		Week Ending 02/03/2023		Week Ending 02/11/2022	
U.S. Rig Breakouts	Count	+/-	Count	+/-	Count	
Oil	609	10	599	93	516	
Gas	150	(8)	158	32	118	
Not Specified	2	0	2	1	1	
Directional	43	5	38	10	33	
Horizontal	700	0	700	126	574	
Vertical	18	(3)	21	(10)	28	
Land (Inc Others)	741	(4)	745	124	617	
Inland Waters	2	0	2	0	2	
Offshore	18	6	12	2	16	
US Total	761	2	759	126	635	

*Source—Baker Hughes Weekly Rig Counts

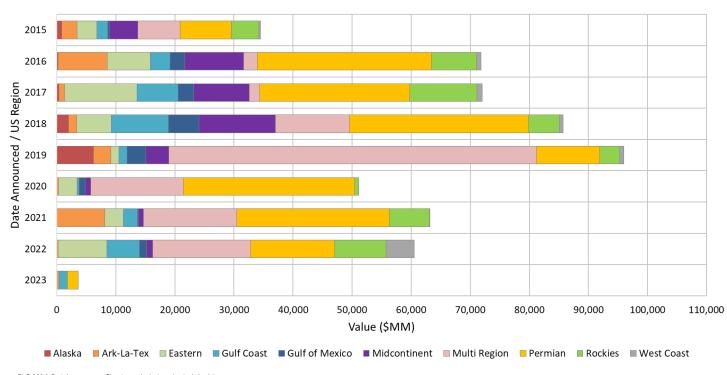




DEAL VALUE BY US REGION (BY QUARTER)



DEAL VALUE BY US REGION (BY YEAR)

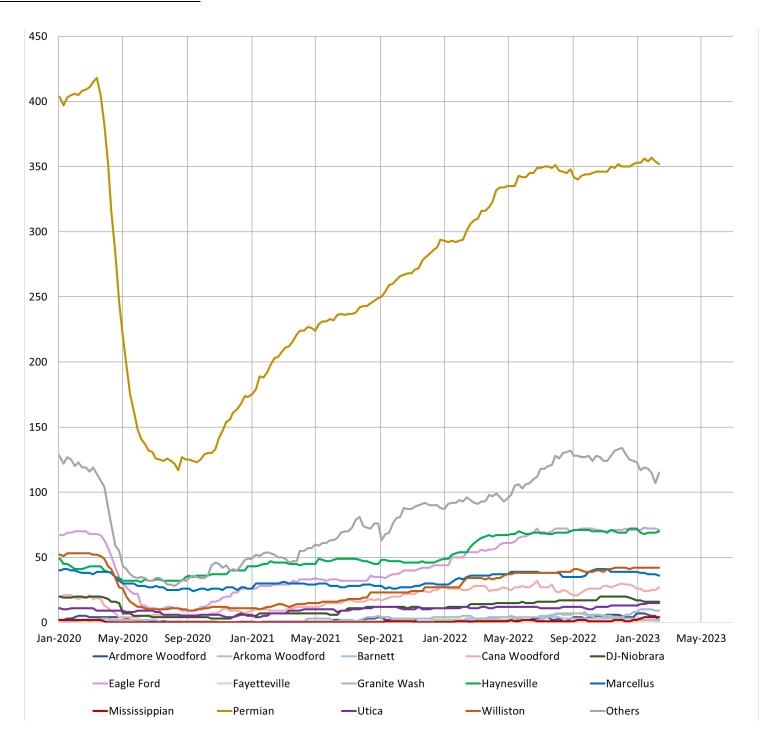


*Source—PLS M&A Database (Charts exclude terminated deals)





RIG ACTIVITY BY US REGION







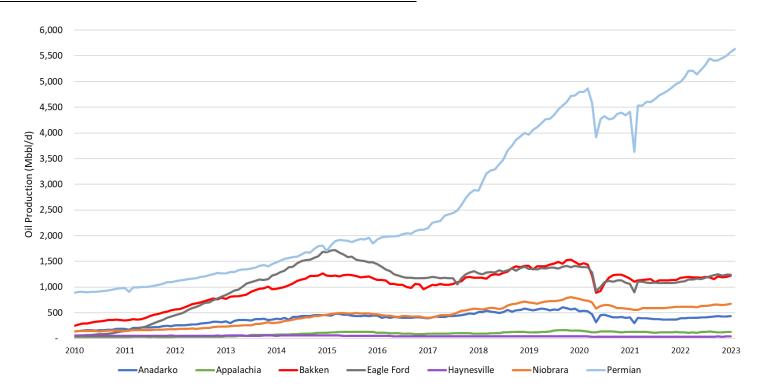
US DAILY CRUDE (MMbbl) & DRY NATURAL GAS PRODUCTION (MMcf)

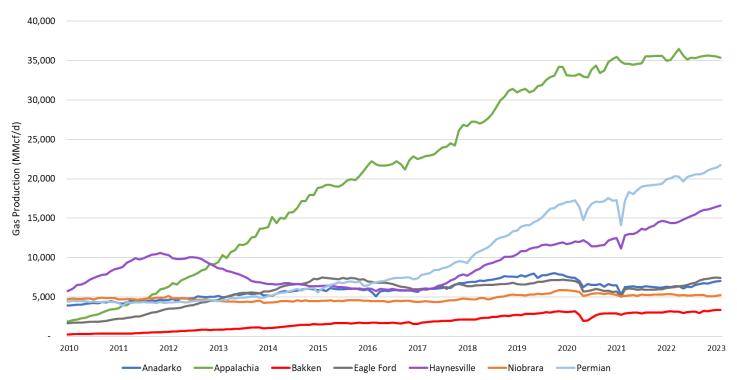






HISTORICAL PRODUCTION OF SELECTED US SHALE REGIONS









UPCOMING EVENTS

February 2023		
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
Qnections 2023	March 27-29	Las Vegas, NV
DUG Haynesville Conference & Exhibition	March 28-29	Shreveport, LA
<u> April 2023</u>		
US Men's Clay Court Championship 2023	April 1-9	Houston, TX
World Oilman's Minerals & Royalty Conference (MARC)	April 10-11	Houston, TX
2023 World Oilman's Poker Tournament	April 26-28	Las Vegas, NV
World Oilman's Tennis Tournament (WOTT)	April 26-29	Hosuton, TX
<u>May 2023</u>		
Offshore Technology Conference 2023	May 1-4	Houston, TX
DUG Permian Basin & Eagle Ford Conference & Exhibition	May 22-24	Fort Worth, TX





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 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.

the Engineering from the oniversity of oxidionia.