



Consolidating

U.S. Oil & Gas Extraction Briefing

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The Payne Institute for Public Policy



The Payne Institute for Public Policy at the Colorado School of Mines produces a quarterly commentary series on the U.S. upstream oil and gas sector's financial health, activity levels, employment and outlook.



SUMMARY

As U.S. public oil and natural gas (O&G) companies continue to try to win back investors by spending less of their cash flow, the second quarter of 2021 (2Q21) marked a surge in these companies also turning to acquisitions to position themselves for longer term efficient production. The implications of industry consolidation for spending and employment can be unclear. However, the recent wave of acquisitions does include companies that were operating with cash constraints, lending to a bias that the mergers foster more oilfield activity and employment all else being equal (albeit partially offset by layoffs in corporate and regional offices) because the acquirors have more financial resources.

Thus far in 2021,

1. private companies have continued to take advantage of higher oil prices to drill more wells,
2. the industry overall has focused its spending on well completions and
3. completions have continued to get more efficient.

All three contributed to oil production continuing its recovery despite the lower rig count and suggest more production recovery is to come.

Meanwhile, strong oil prices point to further recovery in oilfield drilling activity through at least the end of the year. Please see pages 4-5 for recent activity discussion, page 6 for Merger & Acquisition discussion and page 7 for an update on the leasing review and high levels of permitting approvals on Federal lands.



Reference Table – U.S. Oil & Gas and Activity Statistics

	3Q19	4Q19	1Q20	2Q20	3Q20	4Q20	1Q21	2Q21	8/13/21
Oil Price (West Texas Intermediate, \$/bbl)	\$56.43	\$56.87	\$45.80	\$29.14	\$40.94	\$42.72	\$58.14	\$66.16	\$68.44
Nat Gas Price (Henry Hub, \$/Mcf)	\$2.38	\$2.40	\$1.90	\$1.70	\$2.00	\$2.53	\$2.77	\$2.95	\$4.12
Oil Production (Millions of Barrels per Day)	12.2	12.8	12.7	10.8	10.8	10.9	10.7	11.2	N/A
Drilled but Uncompleted Wells (DUCs)	8,376	7,895	7,720	7,720	7,670	8,020	7,295	6,387	N/A
Rig Count	895	797	763	378	240	293	374	436	486
Frac Spread Count	377	363	318	89	79	132	156	221	238
Oil & Gas Co. Bankruptcies	15	9	5	18	17	6	8	4	N/A
Oilfield Services Bankruptcies	11	6	7	11	27	17	5	8	N/A
Direct Employment In O&G Extraction (Thousands)	489.8	472.0	463.5	398.0	383.2	371.9	387.5	404.7	N/A

Sources: Macrotrends.net, Energy Information Administration, Baker Hughes, Primary Vision, Haynes and Boone LLP, Bureau of Labor Statistics

Notes:

- All reflect averages for the period except employment and DUCs, which are end of period
- Direct Employment is from the BLS' Current Employment Statistics; reflects Oil & Gas (NAICS code 211) and Support for Mining (213) segments
- NAICS code 213 includes ~5,000-10,000 employees in the coal and non-energy sectors
- Winter storm Uri weighed on 1Q21 averages. Oil production, for example, was 11.1 million b/d in January and 9.9 million b/d in February
- N/A = Not Available

SECOND QUARTER 2021 UPDATE

With the continued recovery in oil prices, the U.S. oil industry’s activity recovery also continued in 2Q21, including bringing more oil production back on-line. The U.S. onshore drilling rig count averaged 436 in the quarter, vs. 374 in 1Q21 and its low of 230 set in August 2020. The rig count rose to ~485 by mid-August 2021. Private companies are still driving the majority of the rig count growth. The U.S. onshore hydraulic fracturing (frac) spread count averaged 221 in 2Q21 (vs. its May 2020 trough of 45) and rose to ~240 by mid-August 2021 (see Reference Table and Exhibit 1). The rig and frac spread

count averages in 2Q21 were 45% and 40%, respectively, below late-2019 levels.

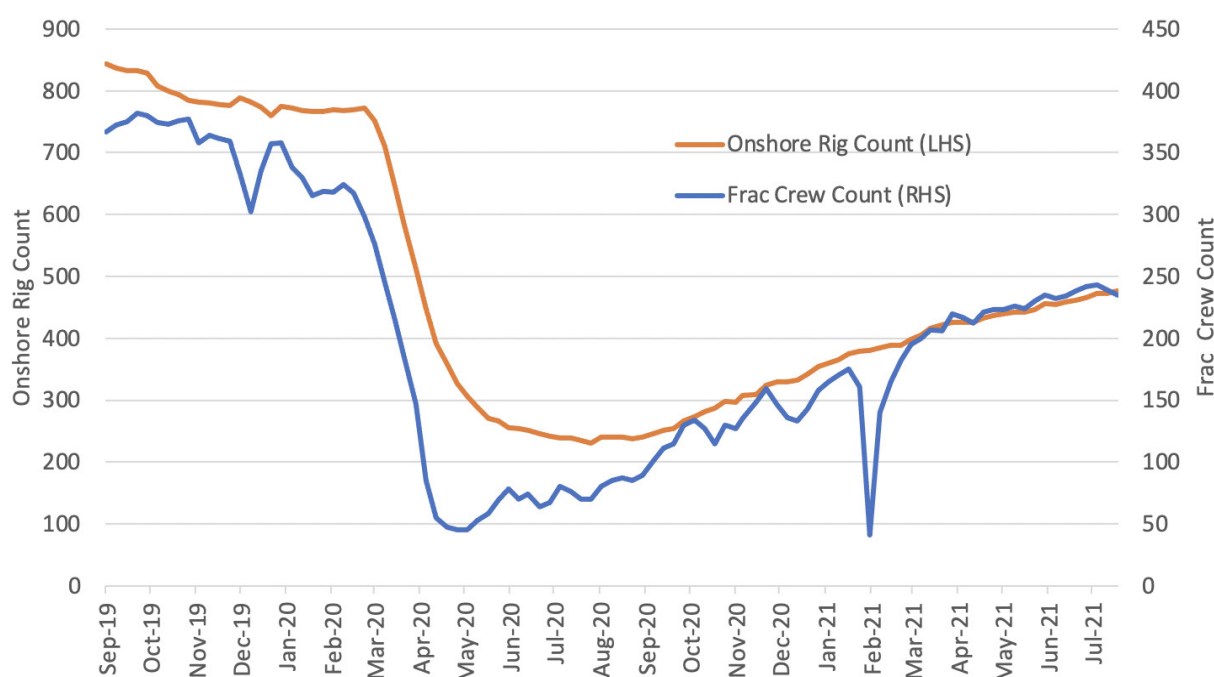
“...it is expected that production recovery can continue even with rig counts below 500

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Although the rig and frac spread counts continue to rise in lockstep (see Exhibit 1), the ratio of 2 rigs per 1 frac spread supports a faster pace of completions than drilling of new wells. Hence, the Drilled but Uncompleted (DUC) well count continued to decline in the quarter, falling to

6,387 by the end of 2Q21 from 7,295 at 1Q21-end and from a high of over 8,500 in 2020 (see Reference Table). This trend is supportive of production growth with a lower rig count. Given efficiencies in completing wells and to some degree larger frac crews, it is expected that production recovery can continue even with rig counts below 500. However, the DUC count is thought to have a natural floor, suggesting that at some point additional production would require meaningfully higher rig counts.

Exhibit 1: Rig and Frac Crew Counts, September 2019 – July 2021



Note: February 2021 crew count impaired by ice storms

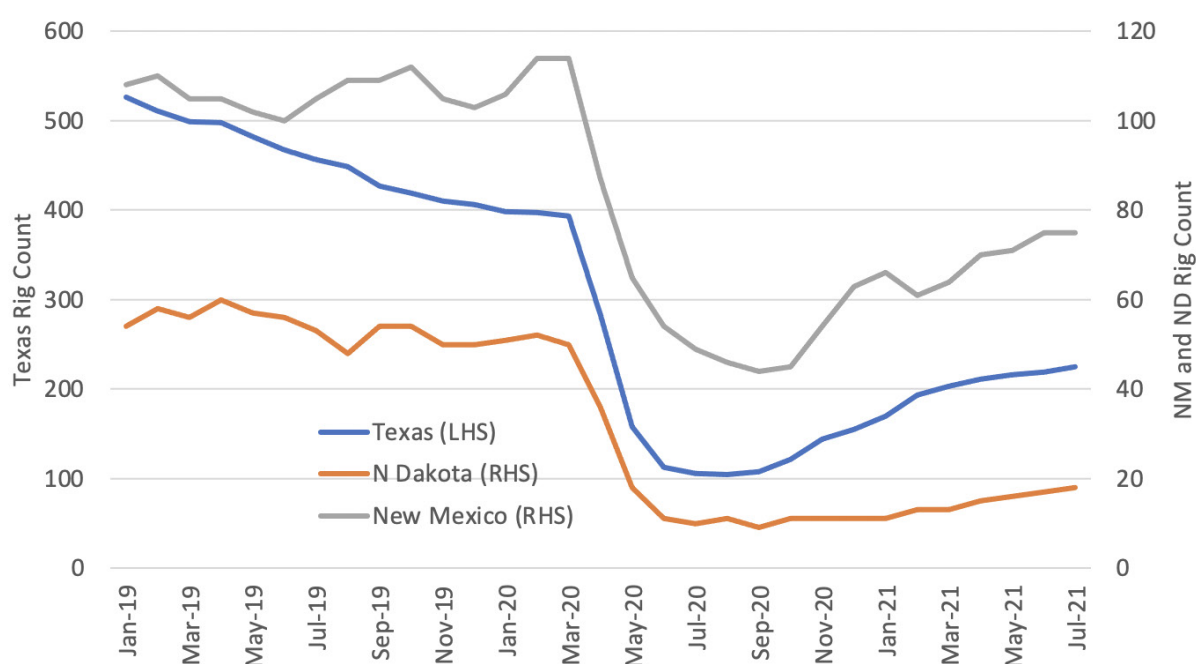
Source: Baker Hughes, Primary Vision

As discussed in earlier quarterlies, the activity recovery has been led largely by private companies as public companies are restraining their capital spending. These public companies are seeking to convince lenders and investors that they are disciplined stewards of capital; the companies are instead allocating more of their cash flow to debt paydown, dividends and stock buybacks. To some degree they are also holding back on investing in growth because of spare capacity held currently by OPEC members and the risk to demand presented by the resurgence in COVID-19 cases.

The growth in oilfield activity has not been even across basins. New Mexico, driven by the Delaware Basin, has seen the most dramatic recovery and its rig count in July is 35% below its pre-pandemic peak. By comparison the North Dakota rig count is down 65% from the beginning of 2020 as operators question the longer term prospects in the Williston basin; Texas, with just under ½ of the nation's rig count, is down ~45% (see Exhibit 2 and Appendix 1 for reference).

“...the activity recovery has been led largely by private companies as public companies are restraining their capital spending.”

Exhibit 2: Rig Counts NM, ND, TX, September 2019 – July 2021



Source: Baker Hughes

As might be expected given the dramatically higher oil prices, bankruptcies were at a recent low in 2Q21, with 4 oil companies and 8 oilfield service companies filing. This compares to combined peaks of 35-40 per quarter in 2Q20-3Q20 (see Reference Table).

Per the Bureau of Labor Statistics, the upstream oil industry had added back 35,200 direct jobs, to 404,700, by the end of 2Q21 from its trough in 3Q20. These (re-)hires have all been by the service sector; oil company employment has remained flat at 130,000-140,000. Direct employment in the upstream remains nearly 20% below the recent peak set in 1Q19 and nearly 40% below levels experienced in 2014 (see Reference Table).

THEMES

MERGERS & ACQUISITIONS

2Q21 saw significant Merger & Acquisition activity in U.S. upstream. Enverus, an energy information service company, [tracked 40 transactions in 2Q21](#) valued at \$33 Billion, including seven worth over \$1 Billion each. This more recent consolidation points to incrementally more oilfield activity as the buyers shore up years' worth of development prospects, create conditions to get more efficient and, at least in some cases, have owners inclined and able to invest more.

The U.S. upstream market has experienced two “waves” of consolidating M&A in the last 12-15 months. The first, experienced largely in 3Q20, included multi-billion-dollar mergers between public companies — e.g., Chevron-Noble Energy and ConocoPhillips-Concho Resources, to name just two. Broadly, as was described in a [previous quarterly](#), the rationale for these tie-ups was to realize efficiencies/lower costs by adding scale to their (broad) operations and reducing redundant jobs (largely in corporate functions and thus more in urban centers). By implication, there was no clear impact on future oilfield activity.

The second wave, which commenced in December 2020 and then resumed in 2Q21, has been more localized. The focus has been on adding complementary acreage in the same field/basin, while efficiencies are still created and cost savings can be achieved at corporate/management levels. Some of these transactions are still very large — e.g. Pioneer Natural Resources buying Permian operator DoublePoint Energy for \$6.4 Billion and Southwestern buying Haynesville player Indigo Natural Resources for \$3 Billion (see Exhibit 3).

In some cases, the companies or acreage being acquired have been cash constrained and thus it is plausible that the transactions in this second wave spur more development activity. This includes that Private Equity owners have been finally able to sell out of their Oil & Gas

holdings, albeit generally largely for equity stakes in the acquiring companies (for more on Private Equity's recent reticence in upstream Oil & Gas, please see a recent quarterly [here](#)).

“ This more recent consolidation points to incrementally more oilfield activity as the buyers shore up years' worth of development prospects...”

Consolidation appears likely to continue, although with higher oil prices and thus higher company sales prices, oil companies during their recent public commentaries [were more circumspect](#). In early August another merger was announced ([Callon Petroleum buying Permian player Primexx](#)) and the financial press has suggested that companies are eyeing the [\\$10+ Billion](#) of Shell's Permian assets as the company divests to meet directional requirements set by the recent [Dutch court ruling](#).

Meaningful amounts of consolidation going forward has an uncertain impact on oilfield activity. (As noted above, each of the two waves over the past year appears to have a different impact.) Further, continued efficiency efforts in shale development encourage the bias that the industry will continue to learn how to “do more with less” i.e. require fewer workers per barrel of production.

Exhibit 3: M&A Transactions over \$1 Billion, 2Q21

Date Announced	Buyer	Seller	Value (\$B)	Is Seller Private Equity Backed?	Basin
5/24/21	Cabot Oil & Gas	Cimarex Energy	9.3	N	Permian/MidCon
4/1/21	Pioneer Natural Resources	DoublePointe Energy	6.4	Y	Permian
6/8/21	Contango O&G	Independece Energy	4.5	Y	Multiple
6/2/21	Southwestern Energy	Indigo Natural Resources	3	Y	Haynesville
5/10/21	EQT	Alta Resources	2.9	Y	Marcellus
5/10/21	Bonanza Creek Energy	Extraction O&G	1.4	N	Niobrara
6/7/21	Civitas Resources	Crestone Peak Resources	1.3	N	Niobrara

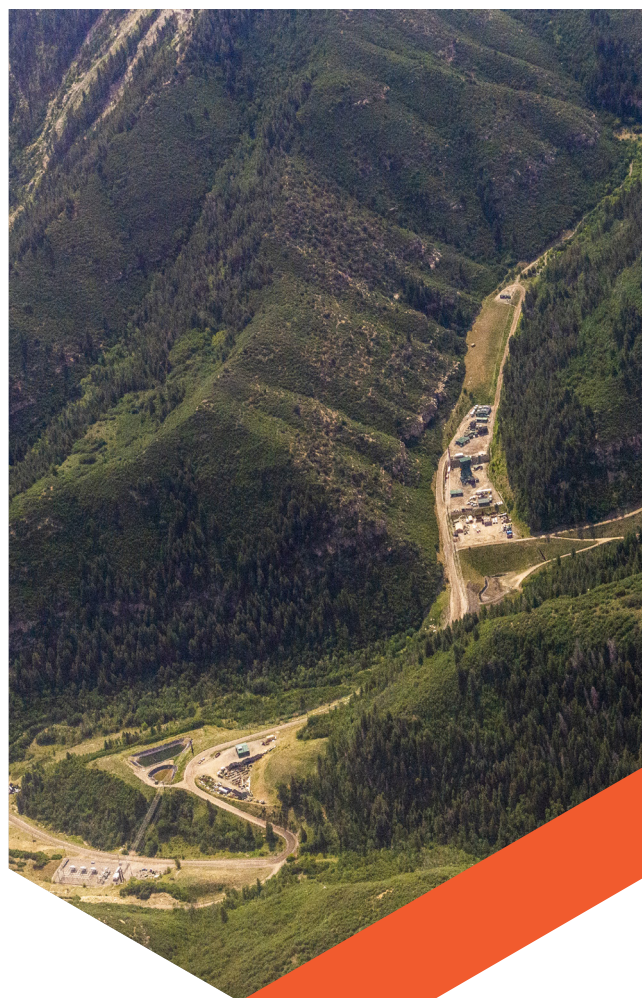
Source: *Enervus, Company Reports*

NEW LEASING AND PERMITTING ON FEDERAL LANDS

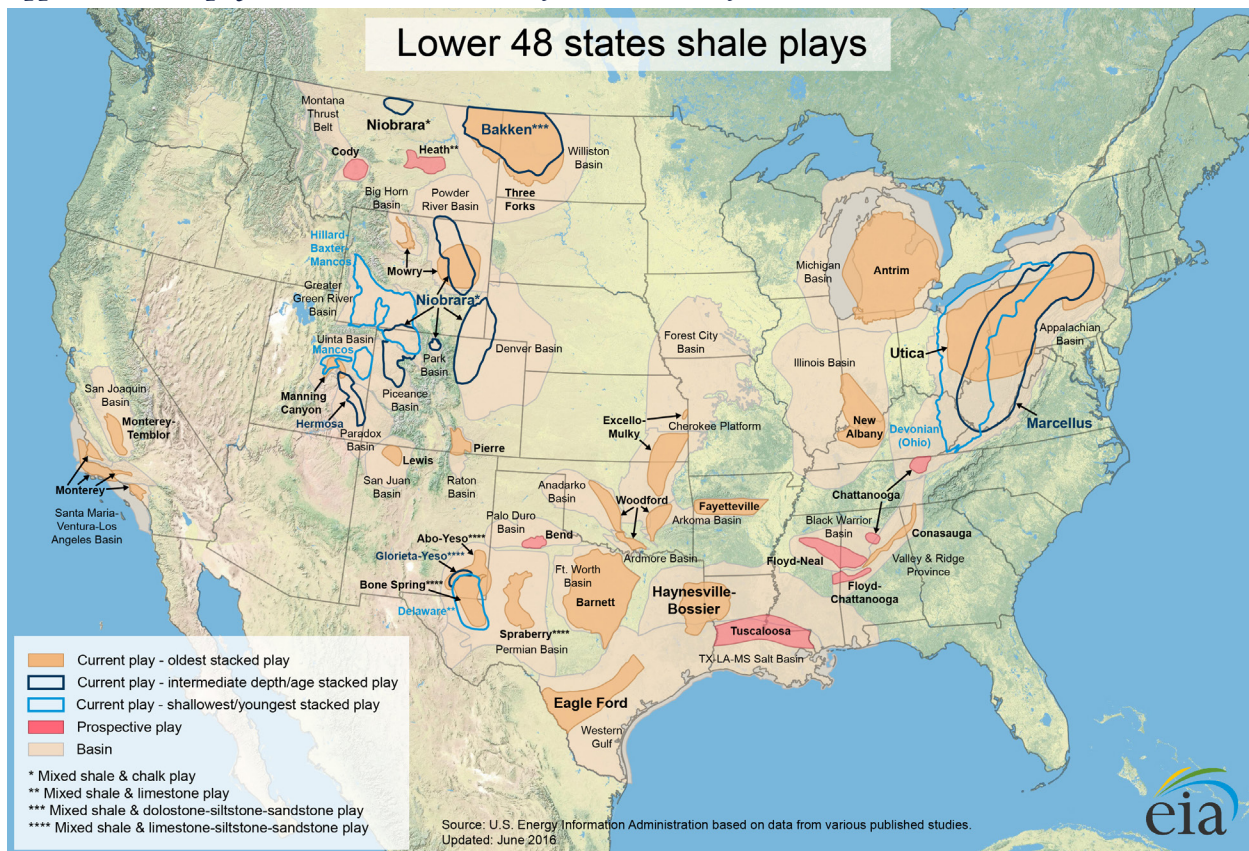
With the court order in June that blocked the suspension of leasing on Federal lands, the Department of the Interior announced in mid-August that it will [restart leases](#) while it appeals the decision and continues its review of leasing practices and the environmental impact of O&G development on Federal land.

O&G permitting approvals on Federal lands, which resumed in March, have been robust. Analysts have noted that the pace through mid-year (2,500 approvals in total) and the number of pending applications (4,700) point to the [highest permitting levels since 2008](#).

Although industry groups continued to [express concern](#) throughout the first half of 2021 about the impact of the leasing moratorium on their constituents and the broader economy, public company commentary has been notably unconcerned, generally citing years of drilling inventory in hand. The larger companies also have access to non-federal lands and thus have the opportunity to switch drilling programs, should Federal access be constrained for whatever reason.



Appendix 1: Map of U.S. Unconventional Hydrocarbon Plays



Source: U.S. Energy Information Administration

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ABOUT THE AUTHOR

Brad Handler is a Senior Fellow at the Payne Institute and is the Principal and Founder of Energy Transition Research LLC. At Payne he is researching the Oil & Gas industry's role and vulnerability in the global transition to lower-carbon energy as well as how finance can catalyze that transition. He has recently had articles published in the Financial Times, Nasdaq.com, Petroleum Economist, POWER Magazine and The Hill. Brad is a former Wall Street Equity Research Analyst with 20 years' experience covering the Oilfield Services & Drilling (OFS) sector at firms including Jefferies and Credit Suisse. He has an M.B.A from the Kellogg School of Management at Northwestern University and a B.A. in Economics from Johns Hopkins University.

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