

July, 2025



Dallas Fed Energy Survey Q2 2025:

Key Takeaways and Analysis

The Q2 2025 Dallas Fed Energy Survey shows the oil and gas activity index declined for a second consecutive quarter, moving from slowing activity to a full-on decrease in activity. Continued uncertainty and vocal frustration from energy executives remained the dominant themes, reflecting challenges from volatile markets and policy shifts.

Declines in the overall activity index as well as a continued decline in the company outlook and uncertainty indices reflect greater headwinds and more uneven sentiment than in the last quarter. Special questions in this quarter deep dive into firms' views on activity levels amid volatility, the cost impact from tariffs imposed, oil production sensitivity based on WTI prices, and water management concerns.

Figure 1: Large and small E&P wells drilled compared to expectation at start of 2025

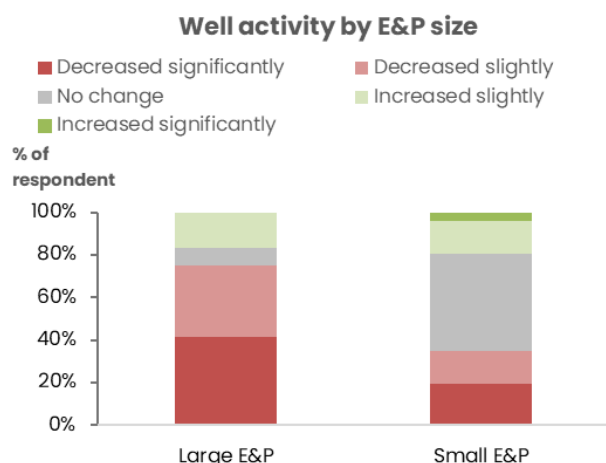
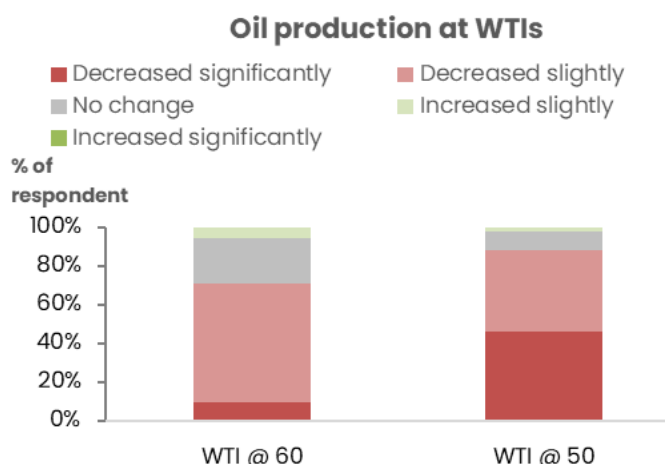


Figure 2: Expected oil production at various WTI prices



Sources for Figure 1 and 2: Dallas Federal Energy Survey

In terms of additional increases to steel tariffs, most firms are taking a wait-and-see approach on whether or not it further impacts drilling activities. 2/3 of respondents say there is no impact on 2nd half activity, or it is too soon to know. These percentages contrast with the price-related questions, illustrating that while rising costs are never preferred, their impact on activity levels is muted if prevailing prices can still support an economic return.

In addition to market uncertainty and its impact on activity levels, produced water management was another focus area for special questions. Produced water, especially in the Permian, is a major topic; however, larger E&P's are less concerned with water management as 45% of larger producers do not expect water management to constrain drilling activity at any five over the next 5 years, and 36% only expect a slight constraint. Conversely, 37% of smaller operators expect a significant constraint and 39% expect some constraint. The larger producers benefit from greater capitalization and ability to expand infrastructure for water management relative to smaller peers.

Decrease in wells drilled

Large and small E&P operators are both seeing a decrease in activity compared to the 2025 business plan. 75% of large E&P and 36% of small E&P reported a decrease. Smaller operators under 10,000 b/d have less cushion for production declines and are also likely more sensitive to borrowing covenants

\$50/bbl or \$60/bbl over 12 months

\$60/bbl appears to be the inflection point for activity levels. At \$60/bbl over the next 12 months, 61% of respondents indicated they would expect production to decrease "slightly" with an additional 10% expecting "significant" decreases. If prices were to stay at \$50/bbl for the next 12 months, the number of producers expecting a "significant" decrease in production jumps to 46% (with an additional 42% of firms indicating a slight decrease).

For reference, WTI averaged \$69.81/bbl from June 18-26 when survey responses were collected, compared to current WTI of \$67.34/bbl as of writing (July 7, 2025).

Oil activity/production outlook and water management

~47% of producers (both large and small) now expect to drill less wells in 2025 versus their expectations at the start of the year. OPEC actions and policy uncertainty increase price volatility, while tariffs impact costs. Survey responses indicate that tariffs have increased the cost of drilling and completing a well by ~5% (weighted average based on survey responses). The impact varies, though, with 23% of respondents reporting that tariff increases have had no impact on well costs, while 9% suggest a >10% increase in overall D&C costs

Overall

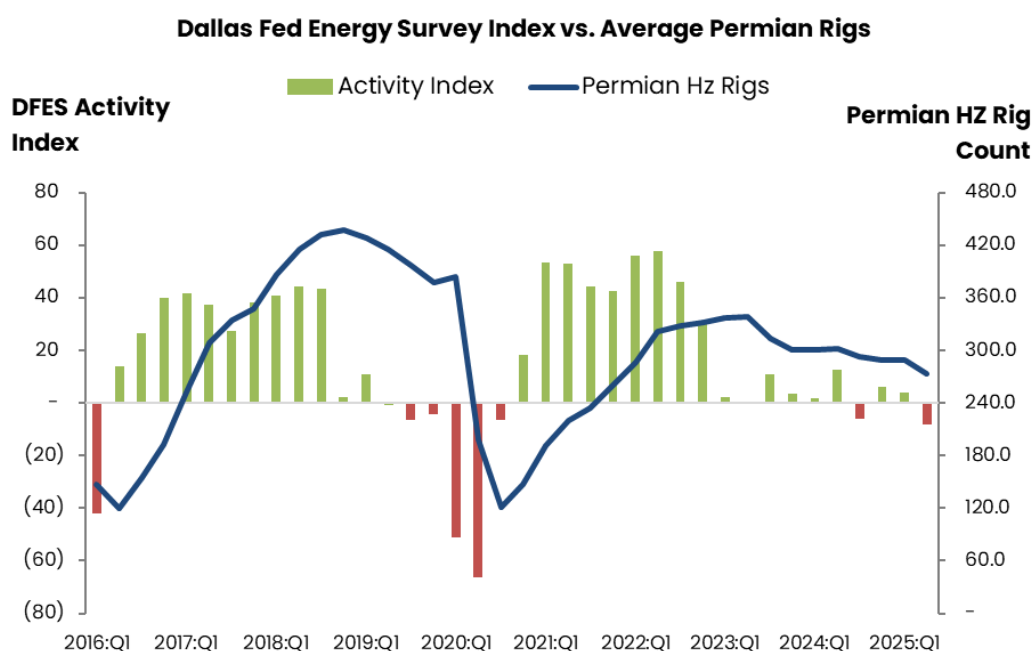
The uncertainty in the current market continues to cloud decision-making in the second quarter. The trepidation that emerged in the Q1/25 survey has only intensified. Operators big and small are now scaling back activity and bracing for the potential for continued volatility and headwinds.

This survey only focuses on oil production; however, associated gas production in oil basins would also be impacted by lower activity levels resulting from lower oil prices. The tariffs imposed have a limited impact on current oil production levels according to the survey, but a persistent low WTI (<\$60/bbl) price over the next 12 months would shift oil production in another direction and serve to solidify recent calls for US shale's peak. Novi believes a plateau is more likely, given limited room for oil prices to decline further in the absence of a demand shock, as evidenced by the observed price recovery from the softness earlier in the year.

Section 2:

Activity Index and Permian Rig Count

Figure 3: DFES Business Activity Index against Permian Basin horizontal rig count



Sources: Dallas Federal Energy Survey, Baker Hughes Rig Count

A primary deliverable from this survey is the Dallas Federal Energy Survey (DFES) Activity Index, which indicates whether business activity, employment, capital expenditures, and other indicators increased, decreased, or remained unchanged compared to both the previous quarter and the same quarter of the previous year. The DFES Activity Index fell quarter over quarter from 3.8 to -8.1. The index dropped for the second quarter in a row, firmly dipping into a negative level with multiple operators quoting "uncertainty", "noise" and "chaos". Negative growth and uncertainty remain the primary concerns among operators, with some reporting to "drop rig count by 50%".

The company outlook index decreased slightly to -6.4 from -4.9, suggesting continued and worsened pessimism among surveyed firms. The prior quarter retreated 12 points to -4.9, back into negative territory. Meanwhile, the outlook uncertainty index continues to increase, moving up by ~4%, from 43.1 to 47.1. The prior quarter saw a significant jump from 22.4 to 43.1, but this further increase indicates that while the big shock occurred last quarter, operators are still even slightly more uneasy about the future than they were in the prior quarter. In other words, nothing that has occurred in the quarter has helped to calm nerves across the sector.

Section 3:

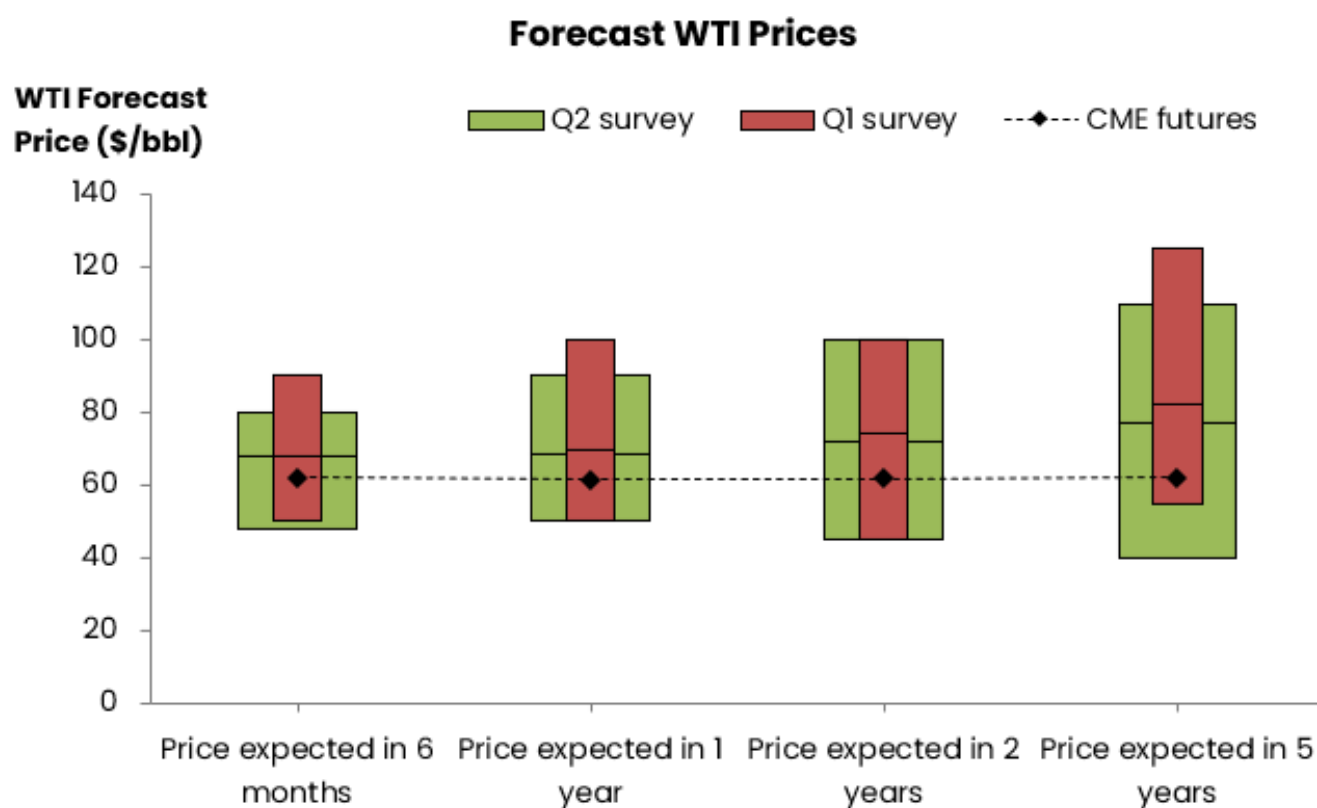
Survey Price Forecasts

Even amid growing uncertainty, short-term price expectations are largely unchanged from the previous quarter. The longer-term forecast is slightly more conservative compared to the prior quarter.

The 6-month price forecast average is \$68/bbl on par with the \$68/bbl forecast in the prior quarter. The one-year forecast and 2-year forecasts are both ~\$2/bbl lower than the prior quarter.

In past quarters, the survey forecasts largely mirrored NYMEX strip values in the near term but were increasingly bullish as the forecast extended compared to a backwardated forward curve. Backwardation has actually strengthened in the quarter, so the survey estimates for 6-month are more positive than the prevailing strip prices. For reference, WTI averaged \$69.80/bbl during the current survey collection period (Jun. 18-26, 2025) compared to \$67.60 for the prior quarters collection period (Mar. 12-20, 2025).

Figure 4: DFES WTI price expectations against CME Group futures



Sources: Dallas Federal Energy Survey, CME Group (NTM average is an average of the next 12 monthly contracts); the middle line denotes in each column denotes average, while the bottom and top of the columns reflect the minimum and maximum responses. The dotted black line reflects forward strip prices.

Even with higher uncertainty in O&G activity, surveyed Henry Hub short-term forecasts are generally in line with last quarter's estimate, only ~1% lower than the prior quarter. While long term forecast shows a slight decline of ~4-7% compared to last quarter.

Despite a lower price environment relative to Q1/25 (e.g., HH prices averaged \$3.3/MMBtu in the current survey period which is ~18% lower than previous survey period of \$4.1/MMBtu), the current price estimate is still higher than last year's Q4 estimate, continuing to signal solid momentum for pure-play gas producers and sound demand fundamentals.

Figure 5: DFES HH price expectations against CME Group futures



Sources: Dallas Federal Energy Survey, CME Group (NTM average is an average of the next 12 monthly contracts); the middle line denotes in each column denotes average, while the bottom and top of the columns reflect the minimum and maximum responses. The dotted black line reflects forward strip prices.

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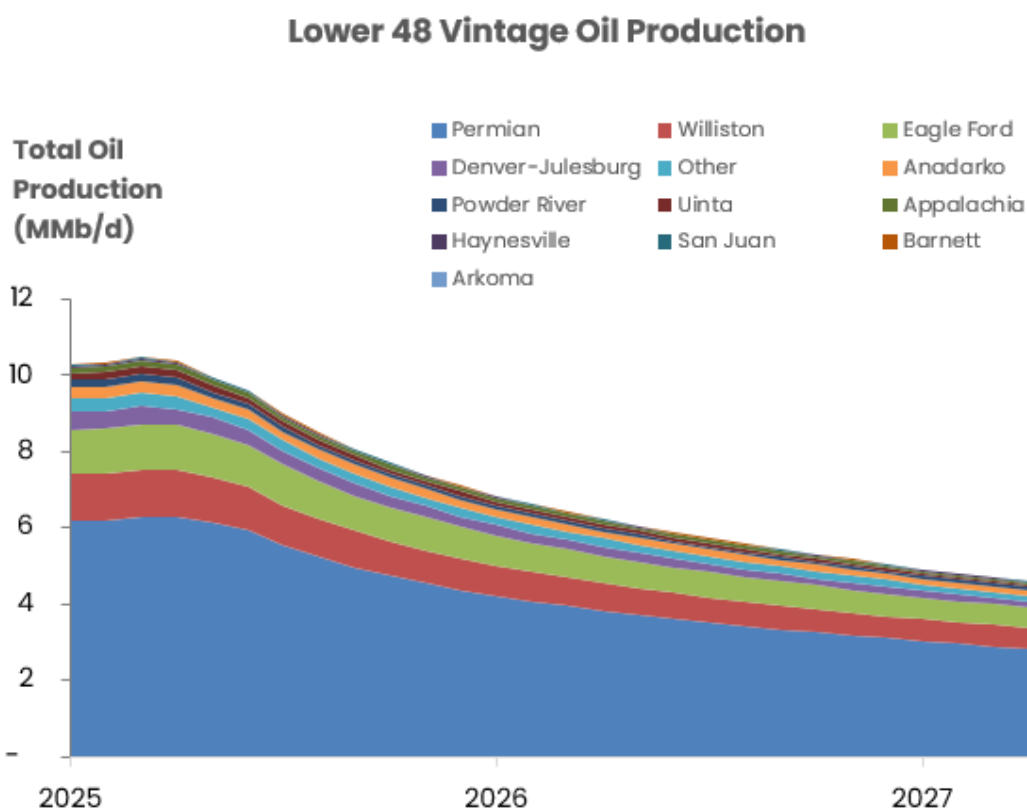
Section 4:

Declining oil production and water challenges

88% of respondents anticipate a decrease in oil production if WTI were to average \$50/bbl over the next 12 months (Figure 2). 71% of respondents expect a decrease if prices were to average \$60/bbl, albeit the pace of the decrease would not be as steep. The message is clear; most producers need stable prices above \$60/bbl to justify the investment to maintain or even slightly grow production.

Novi's proprietary PDP forecasts in Insight Engine illustrate that if all drilling were to stop, US onshore Lower 48 production would decline by ~40%, or ~3.7MMb/d, over the next 12-months. The Fed Survey does not distinguish what constitutes a significant or slight decline, that is each respondent's own interpretation, but the lower activity levels coupled with the base decline lend support to the peak-shale groundswell that has emerged in recent months.

Figure 6: Oil PDP curve for L48



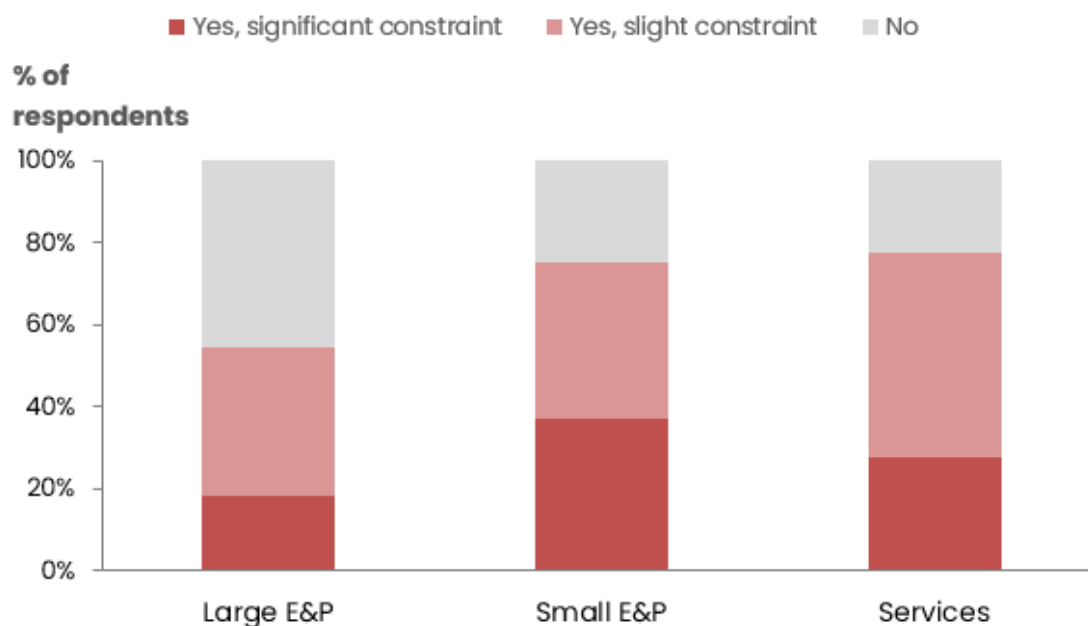
Source: Novi Insight Engine

In this survey, special question 9 also asked executives on future drilling and completion constraints spurred by the volume of produced water: *"Sometime over the next five years, do you expect challenges related to produced water management to constrain drilling and completion activity in the Permian?"*

Though the survey is a good indicator of market trend, it is important to understand the constituent of the respondents. In this question, 36 O&G services firms and 68 E&P firms answered with 57 from small E&P and 11 from large E&P. Large E&P firms seem to be less concerned with D&C constraint from produced water as they are more capable of deploying incremental CAPEX and/or OPEX to plan for additional water management solutions.

Smaller E&P and service companies on the other hand are more concerned with the potential impact from produced water. Over 75% of these respondents answered differently, suggesting that water presents a more significant impediment to future activity. This discrepancy suggests that the scale of produced water is a material concern, it's just simply that the larger producers are more equipped to deal with it. The challenge is scale, and the solution requires an operator with scale.

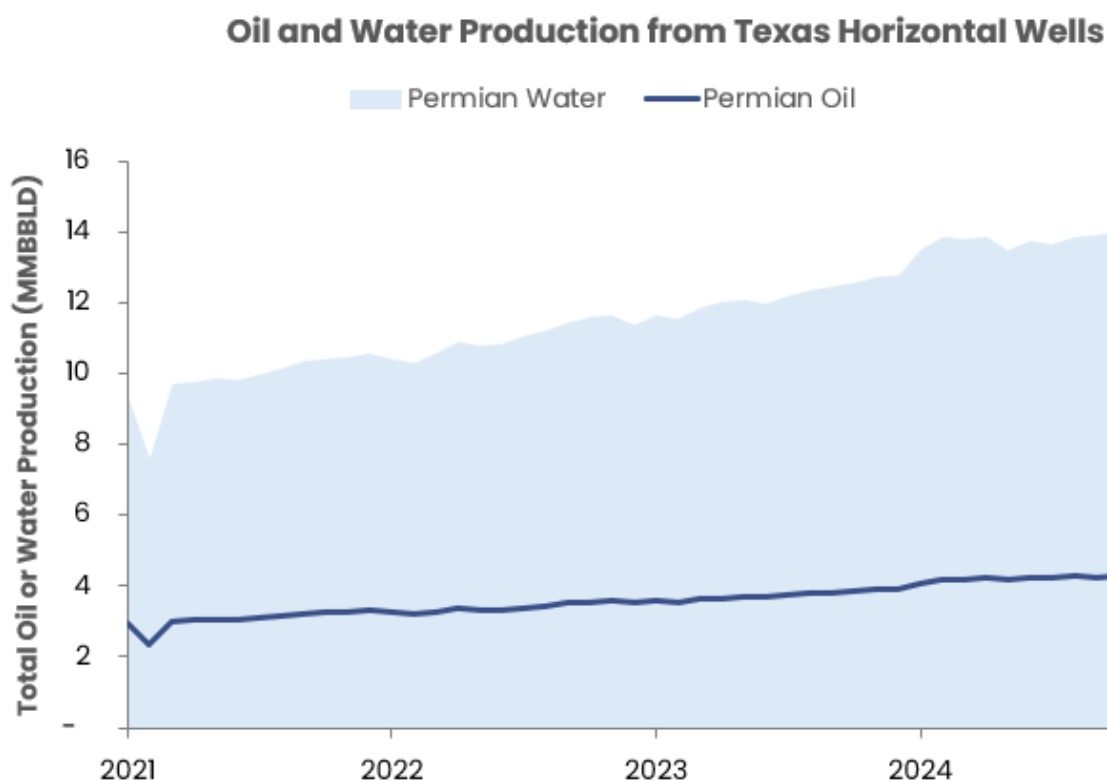
Figure 7: Constraints in drilling and completion from produced water



Source: Novi Insight Engine

Novi's Insight Engine illustrates that TX produced water from horizontal wells in the Permian has grown faster than oil production. From 2021 to 2024, TX produced water from horizontal wells in Permian has grown from 9.4 MMb/d to 14.4 MMb/d (+49% increase) while oil production grew from 2.9 MMb/d to 4.2 MMb/d (+44% increase). This indicates the average WOR increases from 3.2 to 3.3 across Texas horizontal wells. Multiple sources (Texas Water Consortium, Texas Panhandle Water Conservation Final Draft Report) have modelled a continued increase in future produced water production in Delaware and Midland basin.

Figure 8: O&G production from Hz wells



Source: Novi Insight Engine

Section 5:

From the comments section

The Q2 2025 Dallas Fed Energy Survey comments section reveals widespread concern among energy executives. Selected comments underscore heightened uncertainty amid geopolitical instability, policy challenges, and rising costs. The survey self-selected 36 different comments (20 from E&P companies, 16 from OFS).

1. Geopolitical risk, market uncertainty and price volatility

Energy executives expressed concerns about global conflicts, political turmoil, and price volatility shaping the uncertainty in their outlooks. Many noted that such instability complicates planning and investment decisions, leading to cautious capital spending.

- *"Price volatility and the ability to plan is an issue, more so than previous years."*
- *"Everyone should understand that \$50 oil is not sustainable. It needs to be in the mid-\$60s."*
- *"Oil and gas markets look good in the long term (two to five years out). Short term 2025 and 2026 will have a lot of volatility."*
- *"The recent volatility in commodity futures has made it challenging to reach agreement on transaction pricing."*
- *"Macro and geopolitical issues are creating significant uncertainty, hence E&P spending is going down."*
- *"All bets are off if Iran escalates attacks and the conflict spreads to other countries in the Middle East."*
- *"The Middle East situation is unpredictable, causing uncertainty for oil prices based on access to open oil markets."*
- *"With the pending Middle East conditions and war events, it is not possible to predict the future."*

2. Cost impact from tariffs

Increased costs for steel, aluminum, power, and water disposal are compressing margins, with some smaller vendors struggling to survive.

- *"Despite mitigation efforts, the scale of tariffs has forced us to pass costs on to customers."*
- *"Our biggest issues are the steel tariffs we are absorbing as an oilfield services company."*
- *"Tariffs are increasing our tubular costs and electrical power rates in Texas and Oklahoma."*

3. Declining activity levels

Firms are responding to the challenging environment with rig count reductions, cautious M&A activity, and a focus on operational efficiency.

- *"Industry mergers and acquisitions are expected to remain lukewarm in the second half of 2025 due to uncertainty on several fronts."*
- *"We dropped our rig count 50 percent. Suppliers are being squeezed, and some may not survive."*
- *"Private and smaller oilfield services firms are rapidly failing, which will eventually undermine the ability to ramp up production."*

Some smaller operators see opportunities amid the downturn.

- *"While the overall rig count dropped, we see a chance for smaller operators to pick up rigs at better prices."*

4. Policy and regulatory environment

Policy uncertainty continues to weigh on sentiment.

- *"The current political uncertainty is causing apprehension about small, independent oil and gas companies' economic viability."*
- *"Encouraging natural gas exports to Europe and Asia would help Texas and balance trade."*
- *"If the Federal Reserve would lower interest rates, the oil patch would see a jump as the economy recovers."*



Novi Labs
7800 Shoal Creek Blvd # 120W,
Austin, TX 78757
United States

512.368.9042
intro@novilabs.com
www.novilabs.com

Written by:
Tim Chan
Principal Analyst
tchan@novilabs.com

Robert Polk
Director - Corporate Research
rpolk@novilabs.com

Brandon Myers
Head of Research
bmyers@novilabs.com

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