Energy Indicators

Federal Reserve Bank of Dallas

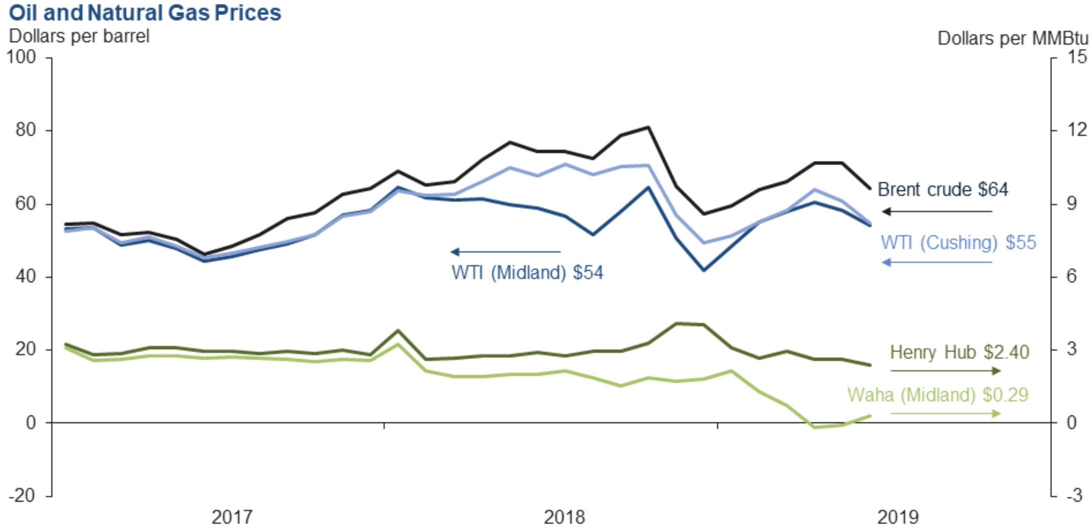
July 2019

Oil prices dipped from May to June. Drilling activity also softened, particularly for shallower wells. However, mining employment accelerated the past few months ahead of a surge in pipeline capacity and in spite of worsening company outlooks.

Oil and Natural Gas Prices

International benchmark Brent crude averaged $64 per barrel in June, down from $71 in May, as concerns over the global economy and rising U.S. production weighed on markets (*Chart 1*). West Texas Intermediate (WTI) crude priced in Cushing, Oklahoma, fell in tandem to $55, while WTI priced in Midland, Texas, slipped to $54 as the spread between the two regions narrowed.

Chart 1
Oil and Natural Gas Prices



NOTES: Prices in labels are the average daily closing price for June. Natural gas prices are per million British thermal units (MMBtu). WTI is West Texas Intermediate.
SOURCES: Energy Information Administration; Bloomberg.

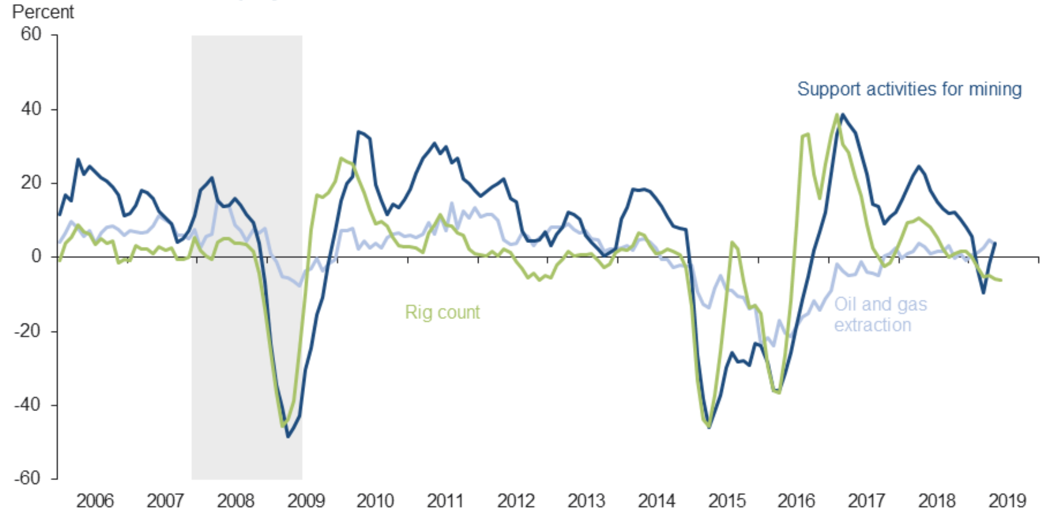
The Waha natural gas spot price in West Texas managed to average just above zero at $0.29 in June. Permian gas co-produced with oil continues to suffer due to the large volume of production overwhelming takeaway and storage capacity.

Employment, Drilling and Production

Texas Support Activities Return to Growth

Job growth in support activities for mining—the sector most closely correlated with drilling activity—showed a marked acceleration over the three months ending in May, rising to a 3.7 percent annual rate (1,500 jobs) from a 9.7 percent decline over the three months ending in March (*Chart 2*). Oil and gas extraction jobs grew 3.5 percent (654 jobs) over that time frame.

Chart 2
Texas Oil and Gas Employment



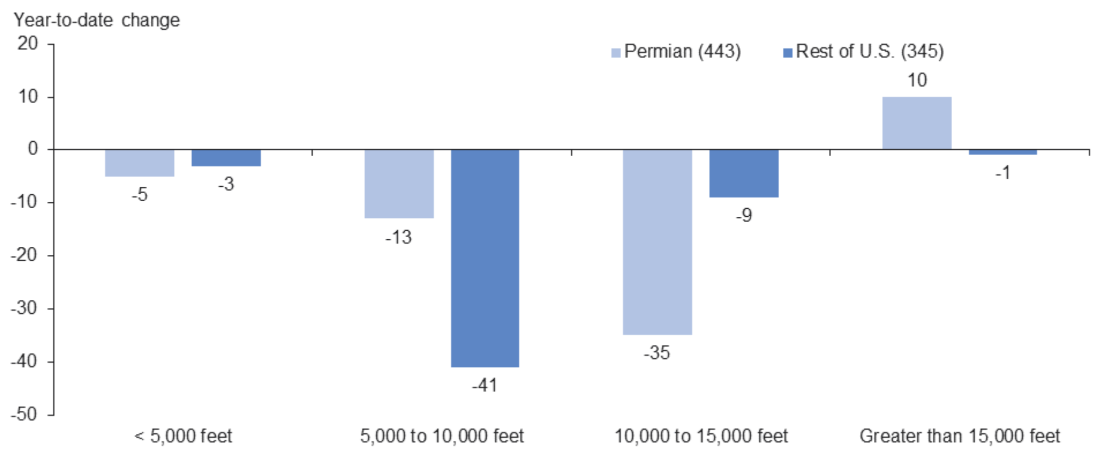
NOTES: Data are three-month annual percent changes. Shaded area is U.S. recession. Rig counts include rigs operating in New Mexico and Texas.
SOURCES: Bureau of Labor Statistics; Baker Hughes; seasonal and other adjustments by the Dallas Fed.

U.S. drilling activity has been steadily eroding in 2019. The rig count for New Mexico and Texas dropped 6.3 percent the past three months, and June marked the seventh consecutive month of declines in the region.

Rigs Targeting Shallower Wells Outside of Permian Lead Declines

The erosion in drilling activity across the U.S. so far this year has been mostly in shallower wells, targeting oil and gas deposits between 5,000 and 10,000 feet deep (*Chart 3*). This is particularly true for operations outside of the Permian where the number of rigs targeting that depth fell by 41— or nearly one-third. Permian declines have been concentrated among rigs targeting depths of 10,000 to 15,000 feet, which are down 13 percent from the start of the year.

Chart 3
Oil Rig Count by Well Depth



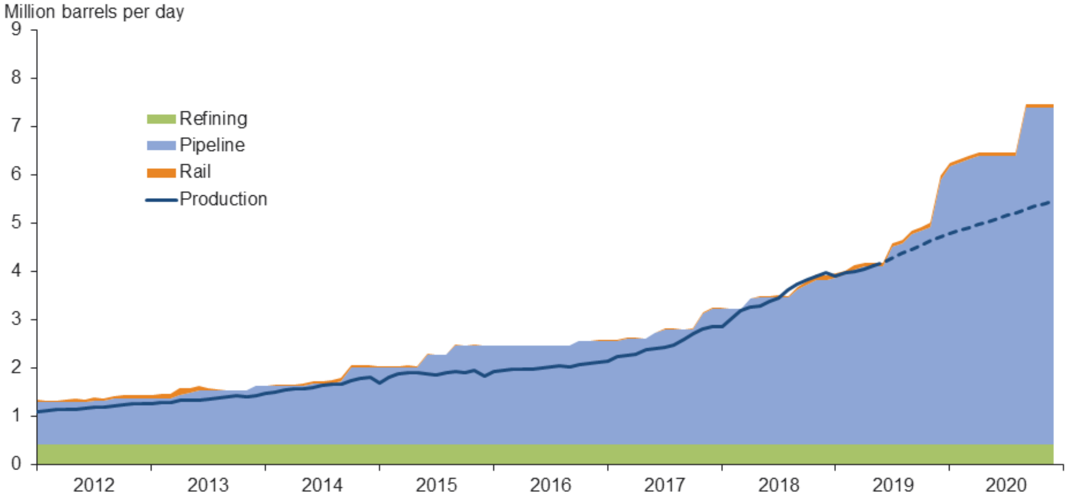
NOTES: Data show the change in oil-directed drilling from the week of Dec. 28, 2018, to July 3, 2019. Numbers in parentheses are rig counts for the week of July 3.

SOURCE: Baker Hughes.

Permian Takeaway Capacity

Takeaway capacity additions in the Permian such as the EPIC, Cactus II, Grey Oak and Jupiter pipelines are scheduled to surge in the second half of 2019 and into 2020 (*Chart 4*). With new liquids and natural gas transport capacity becoming available, local discounts on crude oil and natural gas relative to benchmarks Brent crude and Henry Hub may ease, potentially improving the wellhead prices received by many producers.

Chart 4
Permian Takeaway Capacity

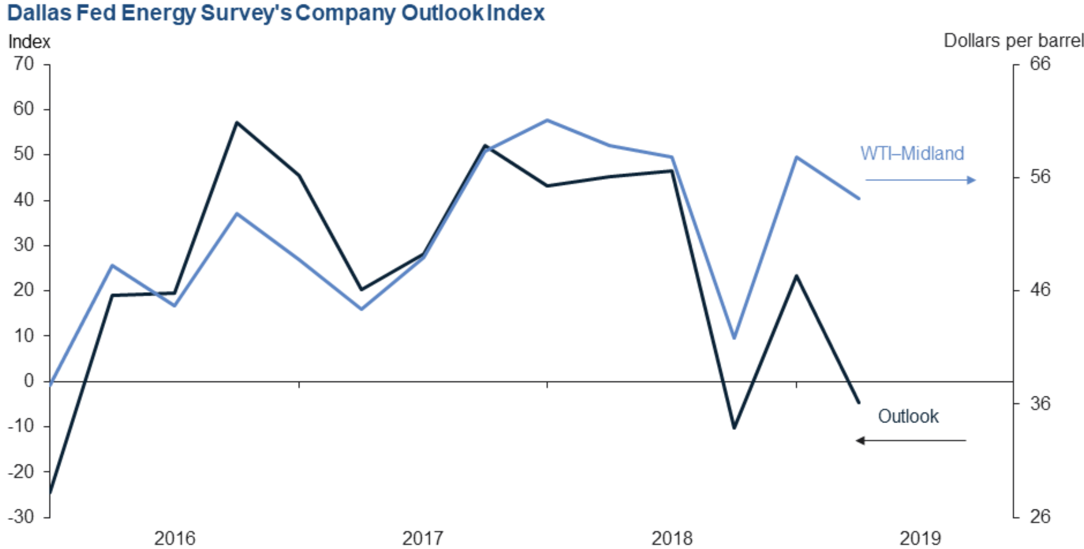


NOTES: Dashed line assumes Permian production growth of 750,000 barrels per day for 2019 and 2020. Forecasted rail volume is equal to the previous three-month average.
SOURCES: Company reports and presentations; Energy Information Administration; Dallas Fed.

Company Outlooks

The 161 firms that participated in the June Dallas Fed Energy survey indicated that their outlooks had worsened (*Chart 5*). Oilfield services firms were particularly negative, with their outlook index value falling below zero for the second time since 2016. Outlooks and sentiment in the oil industry tend to correlate with oil prices. The dip in WTI–Midland over the second quarter likely contributed to a lower index. However, comments in the survey—as well as a coincident surge in uncertainty—suggest the prospects of an oversupply of crude, mounting concerns for the global economy, and ongoing challenges securing capital from lenders and investors are weighing on outlooks.

Chart 5
Dallas Fed Energy Survey's Company Outlook Index



NOTE: WTI is West Texas Intermediate crude priced in Midland, Texas.
SOURCES: Bloomberg; Dallas Fed.

About Energy Indicators

Questions can be addressed to Jesse Thompson at jesse.thompson@dal.frb.org. *Energy Indicators* is released monthly and can be received by signing up for an email alert. For additional energy-related research, please visit the Dallas Fed's energy home page.