Energy Indicators

Federal Reserve Bank of Dallas

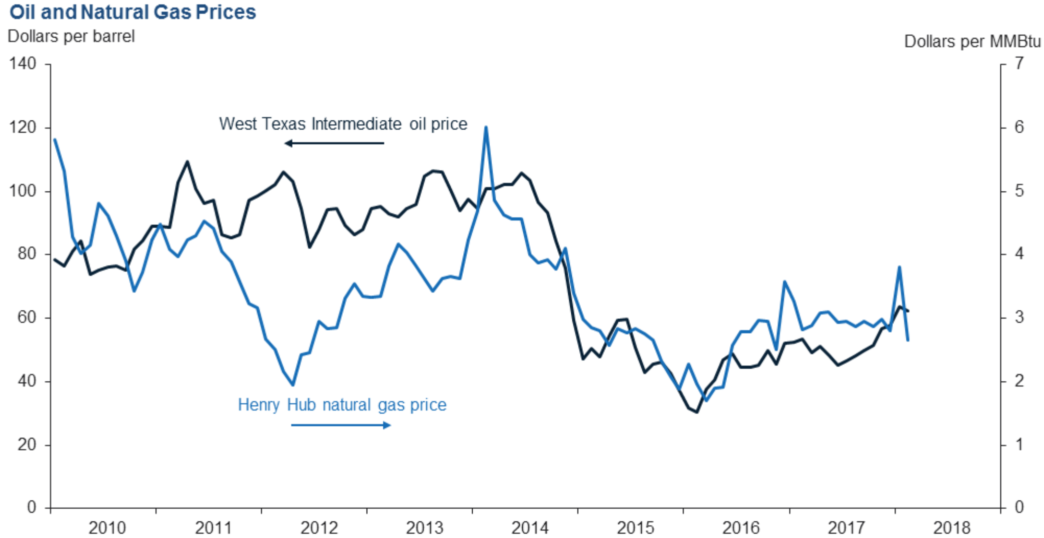
March 2018

The Texas oil and gas sector continued to remain strong through February. While prices for West Texas Intermediate (WTI) crude oil fell slightly in February from a three-year high in January, estimated production in the Permian Basin reached 3 million barrels per day (b/d). Texas oil and gas employment jumped in January. Cushing inventories fell to levels not seen since late 2014, helping tighten the WTI–Brent spread. The U.S. oil rig count continued to rise, with U.S. production reaching an all-time high in November 2017.

Oil and Natural Gas Prices

The average WTI spot price edged down from $63.70 per barrel in January to $62.23 in February (*Chart 1*). WTI prices fell in early February, coincident with heavy selling in equity markets, before rising back to above $60 per barrel. A slight decline in total U.S. crude and refined product inventories, coupled with ongoing strong OPEC compliance, provided support for prices of WTI in February.

Chart 1
Oil and Natural Gas Prices



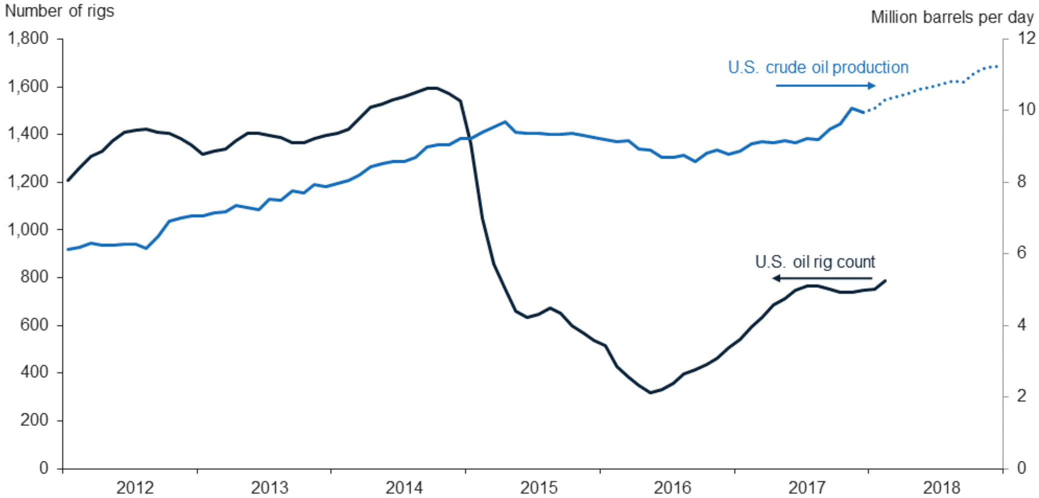
NOTE: MMBtu stands for million British thermal units.
SOURCES: Energy Information Administration (West Texas Intermediate); *Wall Street Journal* (Henry Hub).

Henry Hub natural gas prices slumped to $2.65 per million British thermal units (MMBtu) in February. Prices continue to be subdued due to expectations that U.S. dry natural gas production will rise significantly in 2018 and provide ample supply to meet demand. The Energy Information Administration (EIA) currently expects Henry Hub spot prices to average $2.99 per MMBtu in 2018.

U.S. Crude Production

After stalling in January, the U.S. oil rig count jumped from 750 to 788 in February (*Chart 2*). Meanwhile, U.S. production reached a historic high level of 10.0 million b/d in November 2017. The EIA expects production to top 11.0 million b/d by the end of 2018.

Chart 2
U.S. Crude Production

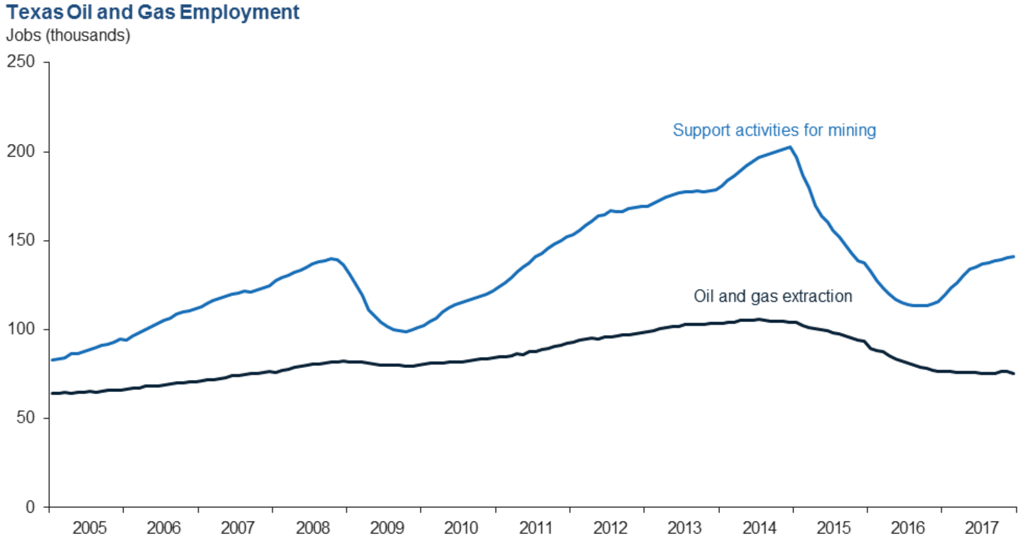


NOTES: All monthly values for the rig count are calculated by taking the average of the weekly data. Dotted line denotes estimates/forecasts from January 2018 to December 2018 taken from the *Short-Term Energy Outlook*.
SOURCES: Baker Hughes; Energy Information Administration, *Short-Term Energy Outlook*, March 2018.

Employment

Texas oil and gas employment increased by 3,900 jobs in January to roughly 220,900, the largest monthly increase since February 2017 (*Chart 3*). This marks the 14th consecutive monthly increase in Texas energy-sector employment. Support activities for mining added 2,800 jobs, and payrolls in oil and gas extraction increased by 1,100. U.S. oil and gas employment stood at 395,500 in January, with Texas accounting for 56 percent of the total.

Chart 3
Texas Oil and Gas Employment

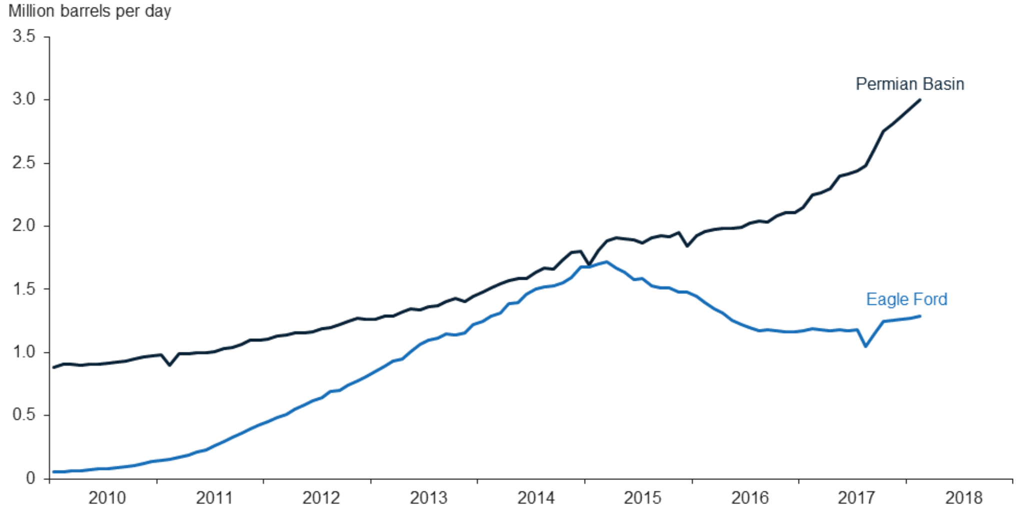


SOURCES: Bureau of Labor Statistics; seasonal and other adjustments by the Dallas Fed.

Eleventh District Production

Estimated Permian Basin production rose in February by 68,100 barrels per day (b/d) to 3.0 million, marking the 17th consecutive monthly increase (*Chart 4*). The rising production is incentivizing additional pipelines in the basin; for instance, Plains All American announced that it received full shipper commitment to proceed with its Cactus II Pipeline, which will add 585,000 b/d of takeaway capacity when completed in third quarter 2019. Eagle Ford production was also up 15,300 b/d to 1.29 million. The EIA reported that drilled but uncompleted wells in the Permian increased by 122, leading to a total monthly increase of 110. Operating rigs numbered 435 in the Permian Basin and 70 in the Eagle Ford at the end of February.

Chart 4
Eleventh District Oil Production

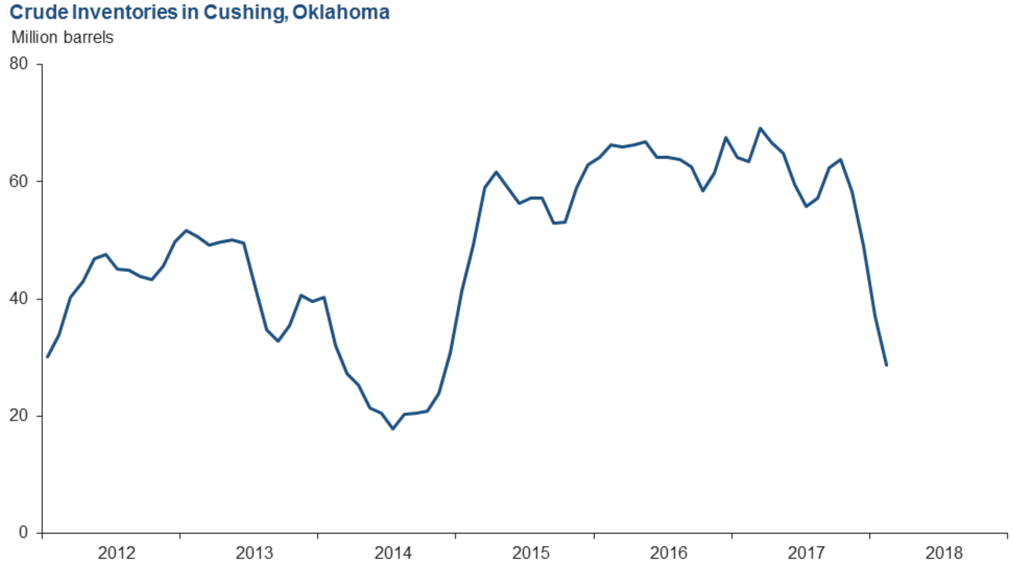


SOURCE: Energy Information Administration, Drilling Productivity Report, March 2018.

Cushing Inventories

Cushing crude inventories fell markedly from 37.0 million barrels in January to 28.8 million barrels in February, the lowest level since December 2014 (*Chart 5*). The Diamond Pipeline, which runs from Cushing, Oklahoma, to Memphis, Tennessee, began service in December 2017, providing roughly 200,000 b/d of takeaway capacity from the Cushing storage hub. The WTI–Brent spread has since narrowed in February to -$3.09 per barrel, less than half of what it was in December 2017.

Chart 5
Crude Inventories in Cushing, Oklahoma

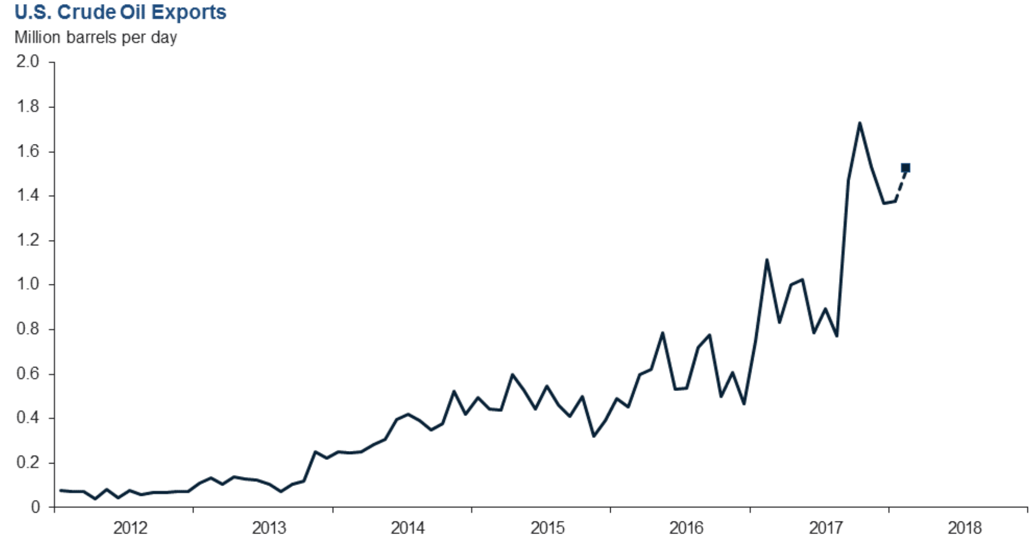


SOURCE: Energy Information Administration, *Weekly Petroleum Status Report*.

Crude Exports

U.S. crude exports increased from 1.38 million b/d in January to 1.52 million b/d in February, close to the all-time high recorded in November 2017 (*Chart 6*). U.S. exports in 2017 reached 37 countries; the top three destinations were Canada (29 percent), China (20 percent) and the United Kingdom (9 percent). The Louisiana Offshore Oil Facility, which has historically only been used for crude imports, loaded its first very large crude carrier (VLCC) for export in February. The ability to load VLCCs should help U.S. exports become more competitive in the global market as these larger ships generally have a lower per-barrel transportation cost.

Chart 6
U.S. Crude Oil Exports



NOTE: Square represents the February 2018 export estimate as the average of weekly values from the *Weekly Petroleum Status Report*.
SOURCE: Energy Information Administration, *Monthly Energy Review* and *Weekly Petroleum Status Report*.

Additional charts of interest can be found in the Dallas Fed's monthly energy slideshow.
https://www.dallasfed.org/research/energy/slideshow.aspx

About Energy Indicators

Questions can be addressed to Kunal Patel at kunal.patel@dal.frb.org. *Energy Indicators* is released every third Thursday of the month 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.