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# Drilling Productivity Report Supplement

Base production accounts for a material share of total U.S. tight oil production

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U.S. Department of Energy

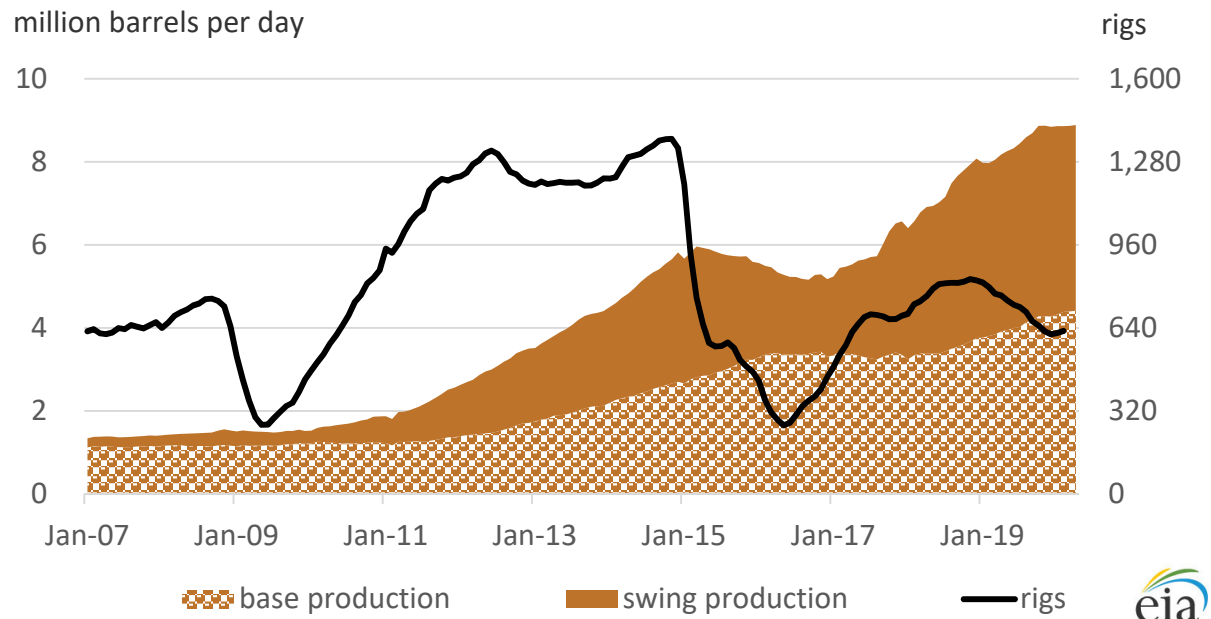
Washington, DC 20585

## Base production accounts for a material share of total U.S. tight oil production

The nation’s growing inventory of tight oil wells that are more than one year old are helping moderate the so-called *treadmill* effect of oil production. The treadmill effect of oil production relates to the constant need to drill new wells to make up for the high decline rates of recently completed existing wells to ensure that production can keep pace with current and future demand. Although advanced tight oil technologies have accelerated U.S. crude oil production, efficient horizontal wells have high initial production but fast decline rates.

Partially counteracting the effect of these high-decline rates at many wells are tens of thousands of active horizontal or non-horizontal oil wells, older than one year, drilled over the past decades that now account for more than 4 million barrels per day (b/d), or about 50% of total tight oil production in five of the more oil-focused regions reported by the U.S. Energy Information Administration’s (EIA) *Drilling Productivity Report* (DPR). Crude oil production from wells completed more than a year ago, the patterned region in Figure 1, is no longer negligible.

Figure 1. Oil production in *Drilling Productivity Report* regions



Source: U.S. Energy Information Administration, *Drilling Productivity Report*

Note: The *base production* wells have been producing crude oil for more than 12 months, whereas the *swing production* wells are wells that have been producing crude oil for less than one year.

The number of wells contained in the base group grows each month as more aging wells are added to this group because production from some of the swing wells transitions into the base production group.

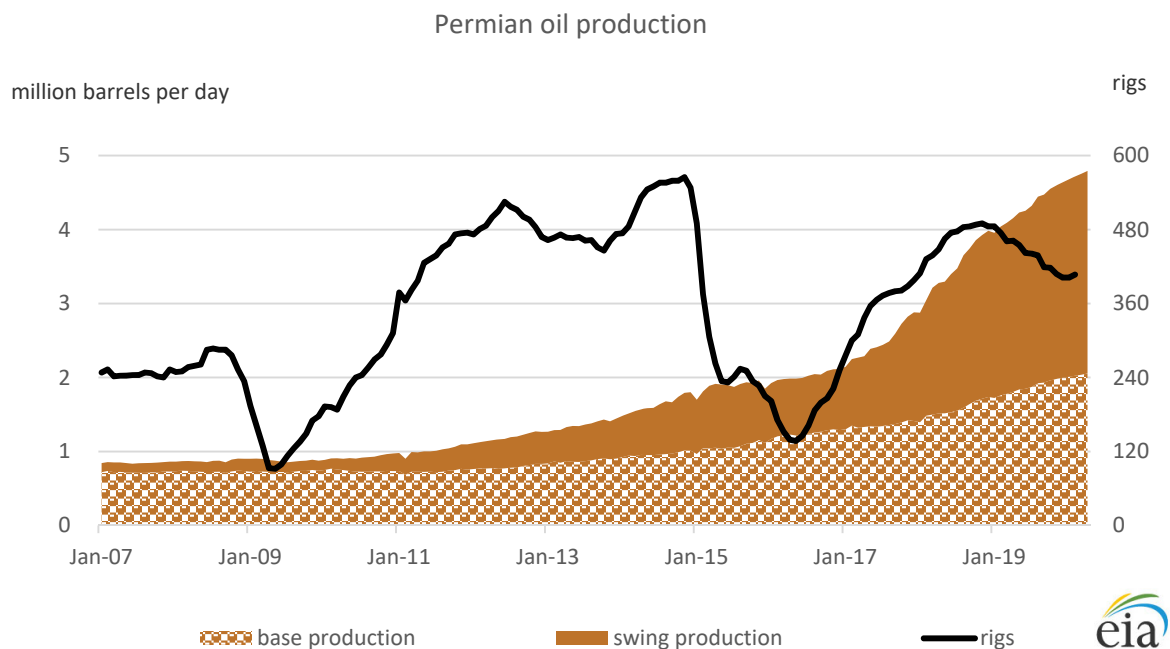
Wells from the base production group anchor a growing amount of tight oil supply for two reasons.

- Production from base wells declines slowly, which is similar to conventional oil wells.
- Base production wells are less sensitive to current rig count deployments, market prices, and drilling intensity. Therefore, the base production provides a stable strong support to U.S. tight oil production.

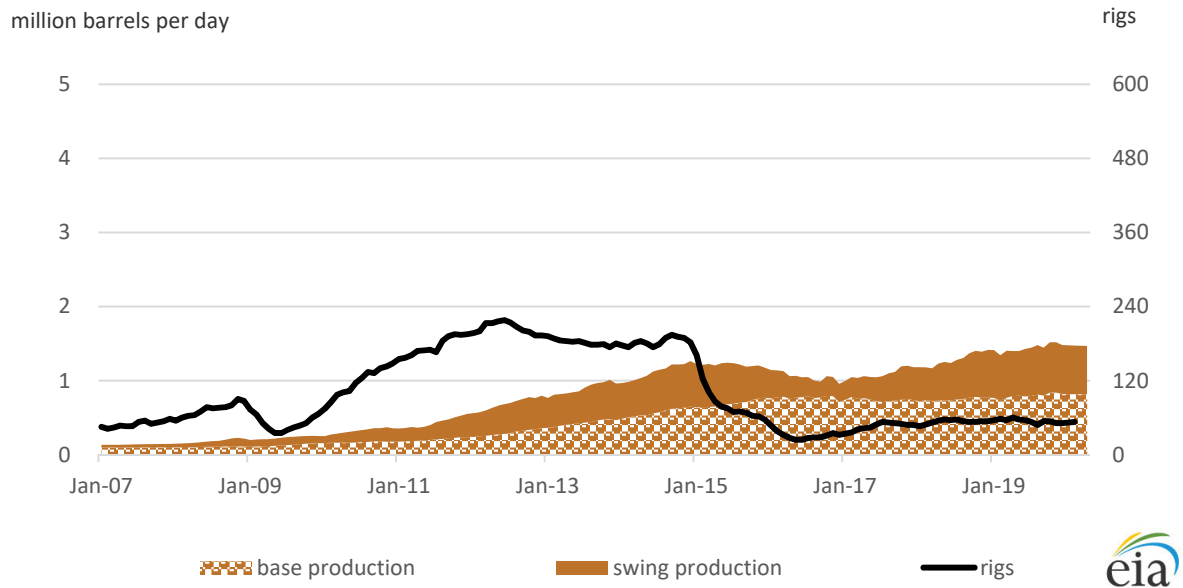
In contrast, oil production from the swing group of wells is more sensitive to changes in market prices and rig availabilities.

Figure 2 shows the relationship between the growth in base and swing oil production in several DPR regions. The patterned area in Figure 2 shows that base production has created a stable level of monthly oil production in the Permian, Bakken, and Eagle Ford DPR regions.

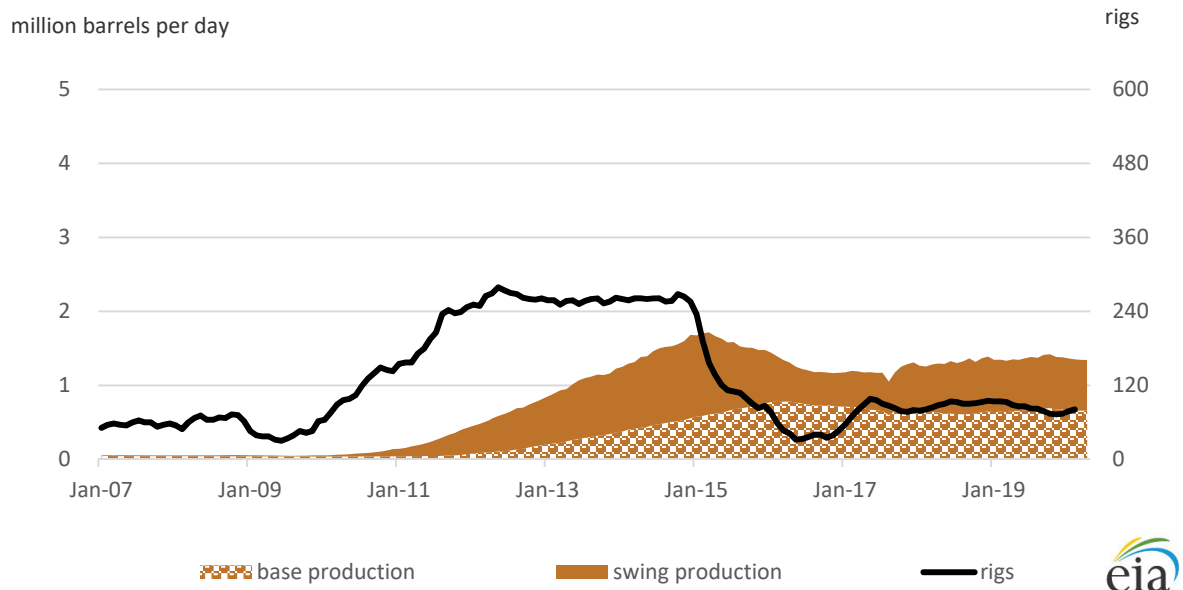
**Figure 2. Oil production in specific *Drilling Productivity Report* regions**



### Bakken oil production



### Eagle Ford oil production



Source: U.S. Energy Information Administration, Drilling Productivity Report