



# **Drilling Productivity Report Supplement: Initial 180-Day Production Trends in Major U.S. Shale Regions**

February 2024

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## Initial Production 180 (IP180) in Drilling Productivity Report DPR Regions

This Drilling Productivity Report (DPR) supplement examines initial production over the first 180 days for new wells across the primary U.S. drilling regions for both oil and natural gas. This key metric (IP180) is the cumulative natural gas or crude oil output during the first six months of operation, and it provides an assessment of both well quality and reservoir potential beyond initial productivity estimates. Technology enhancements have enabled improved extraction, though recent indications point to slowing gains in some areas.

Profiles comparing IP180 across well vintages starting in 2018 provide insight into well productivity shifts occurring in response to changing conditions. The following sections graphically profile vintage IP180 trends for the DPR regions. Variance across different start years within a play carries meaningful implications for forecasting and maintaining domestic production levels amid fluctuating market dynamics.

We summarize IP180 productions for both gas and crude by region in Tables 1 and 2 below as heatmaps. The heatmaps provides a visual representation of gas and crude production across the DPR regions, offering insights into patterns and trends over time. Each color gradient signifies the percentage of that year's total IP180 production versus the largest year for gas and crude production in that region. Darker colors indicate a region's vintage year was closer to the highest production year, while lighter colors show a smaller volume in that year.

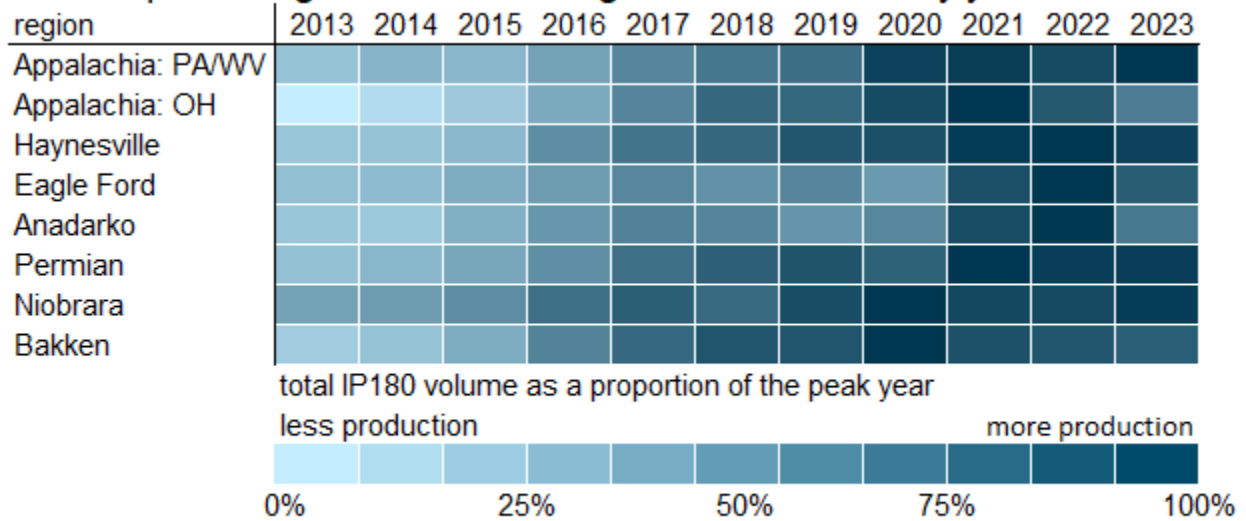
Figures 1 and 2 compares relative IP180 across all DPR regions for gas and crude. The shape of the IP180 line occurring between operating months 0 to 6 is also significant: straighter lines mean less declines in production; lines that level off indicates greater declines in production. We show regional comparisons for vintage year 2023 for both gas and crude production that illustrate regional production differences.

Figures 3 through 16 show the relative spacing of IP180 production by year and indicates variation of productivity levels. Regions exhibiting IP180 profiles that cluster near one another signify less year-to-year changes in productivity. The shape of the IP180 line occurring between operating months 0 to 6 is also significant: straighter lines, such as those in Figures 4 and 12, indicate production indicates production declines less; lines that level off, such as those in Figures 11 and 16 indicate production declines more. Meanwhile, regions with wider spreads between lines saw greater disruptions – whether from technology changes, reservoir conditions, or economic factors.

## Vintage year order summary tables

**Table 1. Vintage year order for natural gas IP180 by region**

Heatmap showing levels of natural gas IP180 volume by year

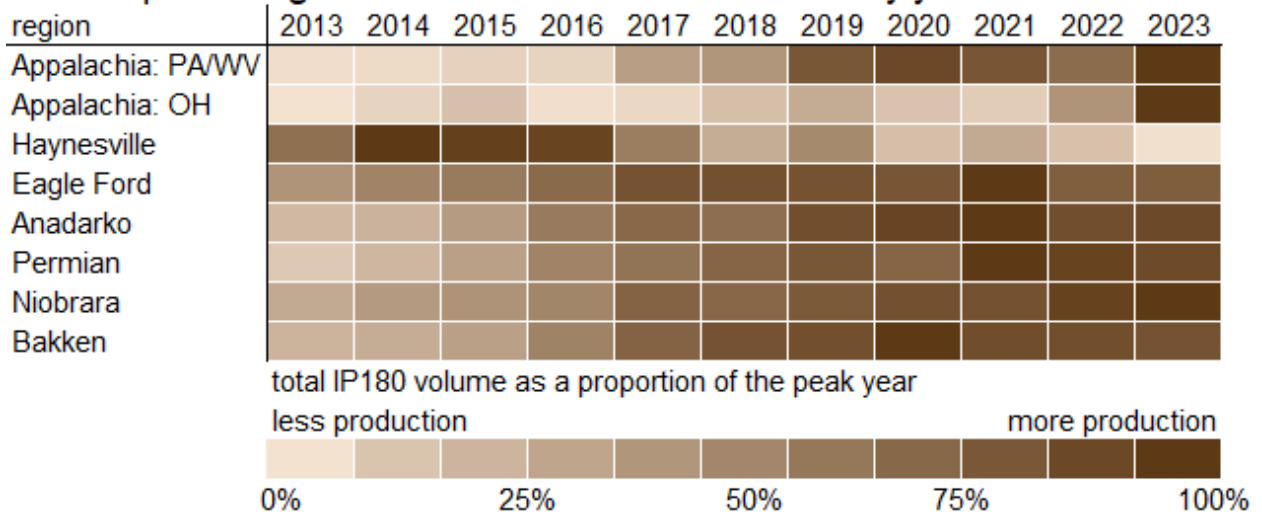


Source: U.S. Energy Information Administration, *Drilling Productivity Report*

Note: not all wells are reported and curves are subject to revision

**Table 2. Vintage year order for crude oil IP180 by region**

Heatmap showing levels of crude oil IP180 volume by year

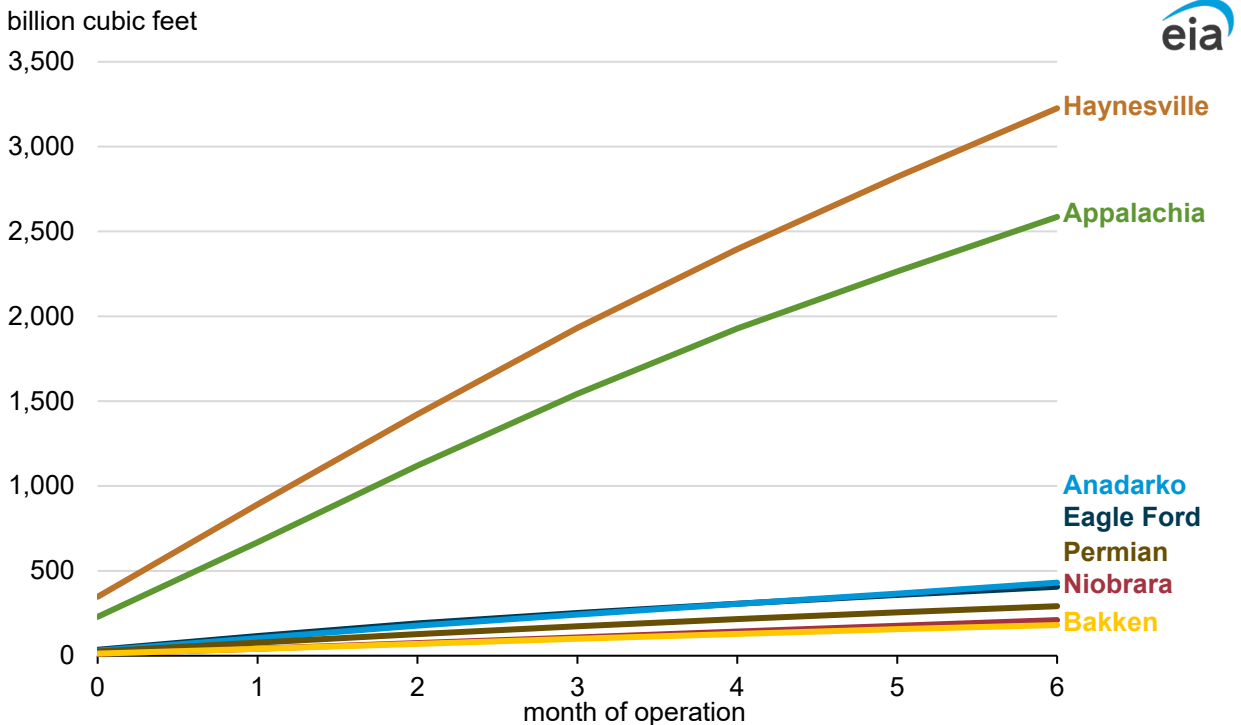


Source: U.S. Energy Information Administration, *Drilling Productivity Report*

Note: not all wells are reported and curves are subject to revision

## Major region production for vintage year 2023

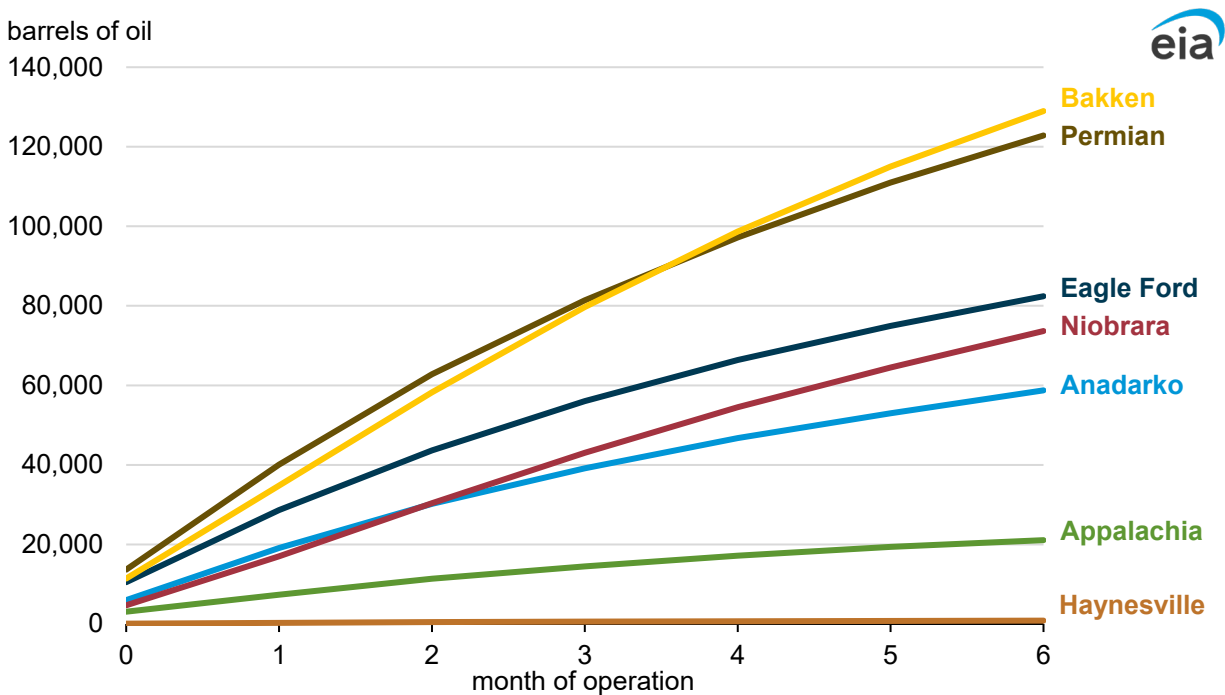
**Figure 1. Initial six-month natural gas production, top producing regions (2023)**



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

Note: Not all wells are reported, and curves are subject to revision.

**Figure 2. Initial six-month crude oil production, top producing regions (2023)**



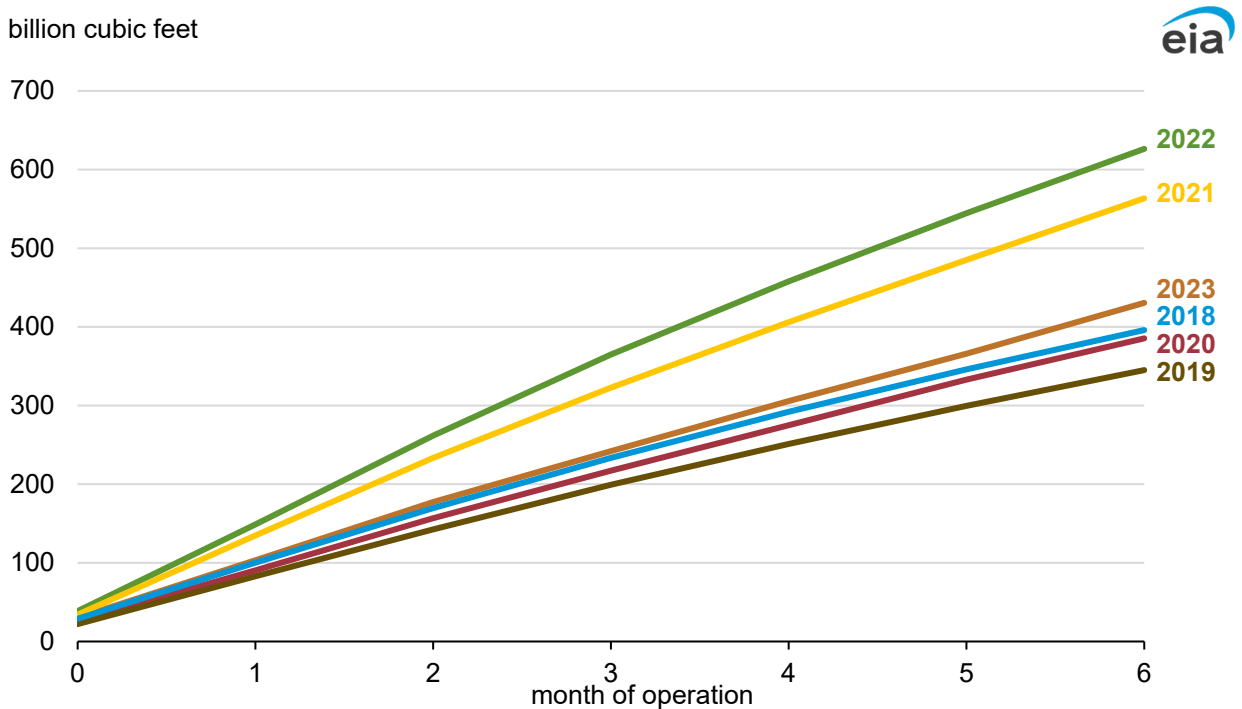
Source: U.S. Energy Information Administration, *Drilling Productivity Report*

Note: Not all wells are reported, and curves are subject to revision.



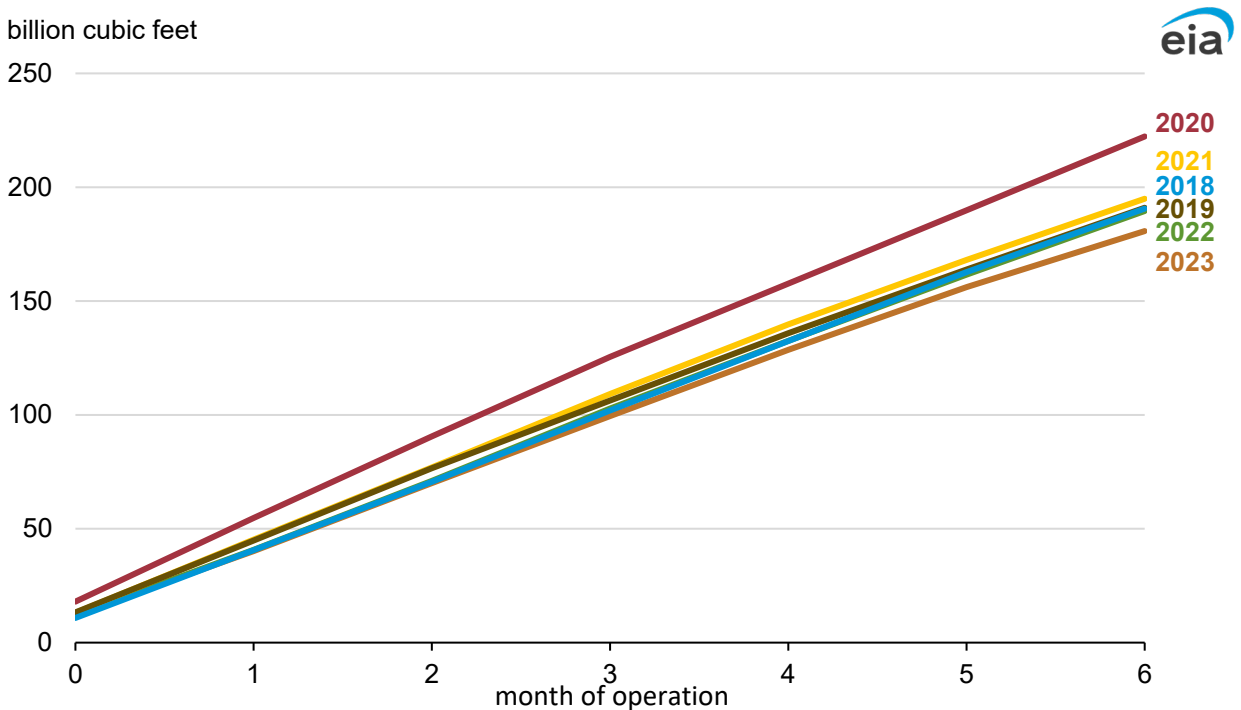
## Six-month initial production of natural gas by region

**Figure 3. Anadarko Region, six-month natural gas production by vintage year**



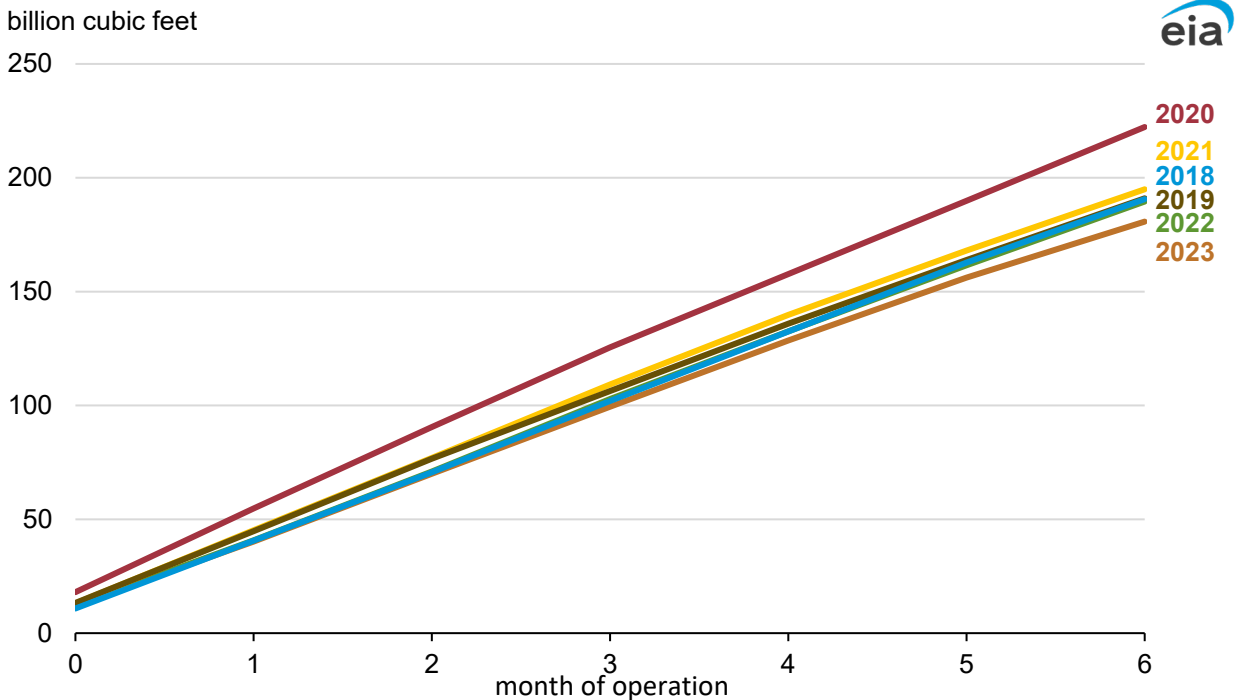
Source: U.S. Energy Information Administration, *Drilling Productivity Report*  
 Note: Not all wells are reported, and curves are subject to revision.

**Figure 4. Appalachia Region, six-month natural gas production by vintage year**



Source: U.S. Energy Information Administration, *Drilling Productivity Report*  
 Note: Not all wells are reported, and curves are subject to revision

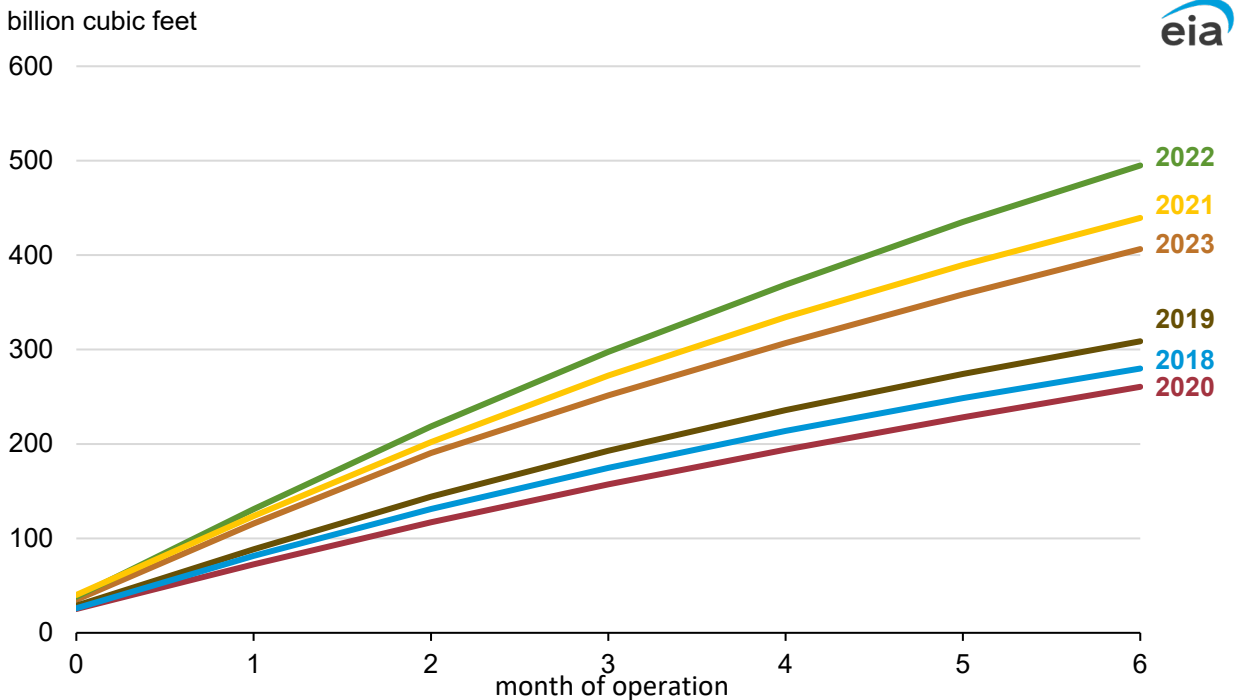
**Figure 5. Bakken Region, six-month natural gas production by vintage year**



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

Note: Not all wells are reported, and curves are subject to revision

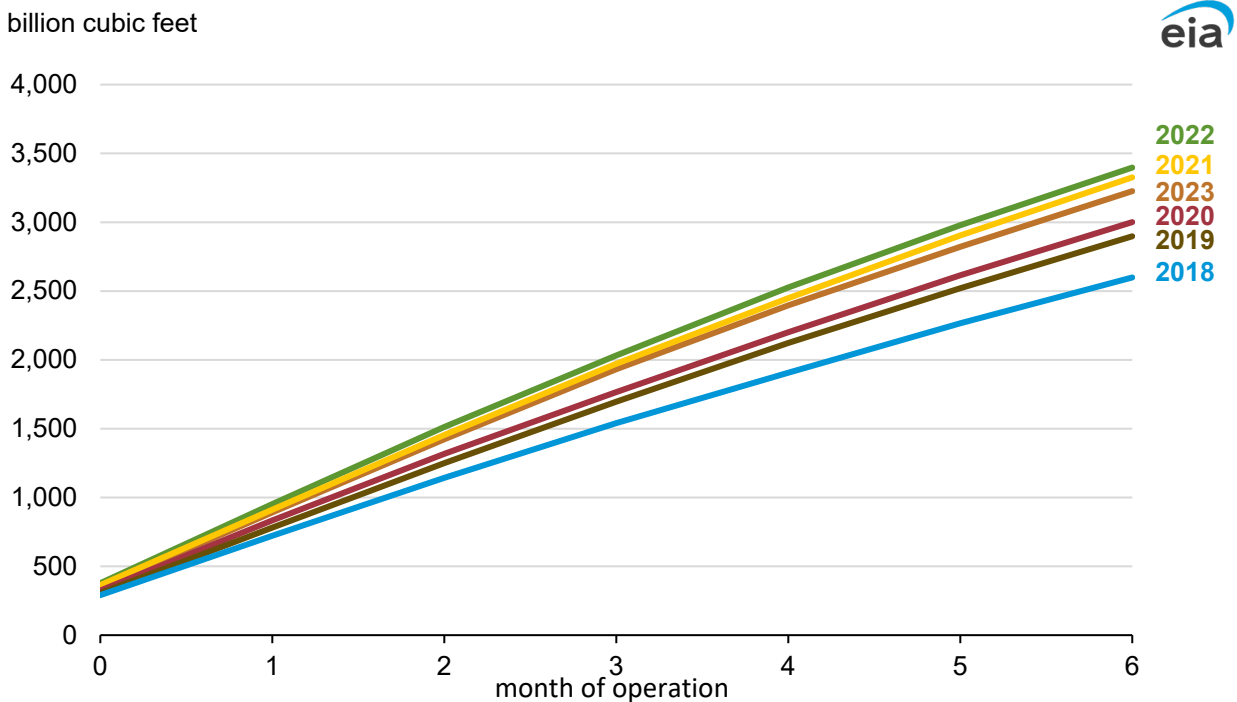
**Figure 6. Eagle Ford, six-month natural gas production by vintage year**



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

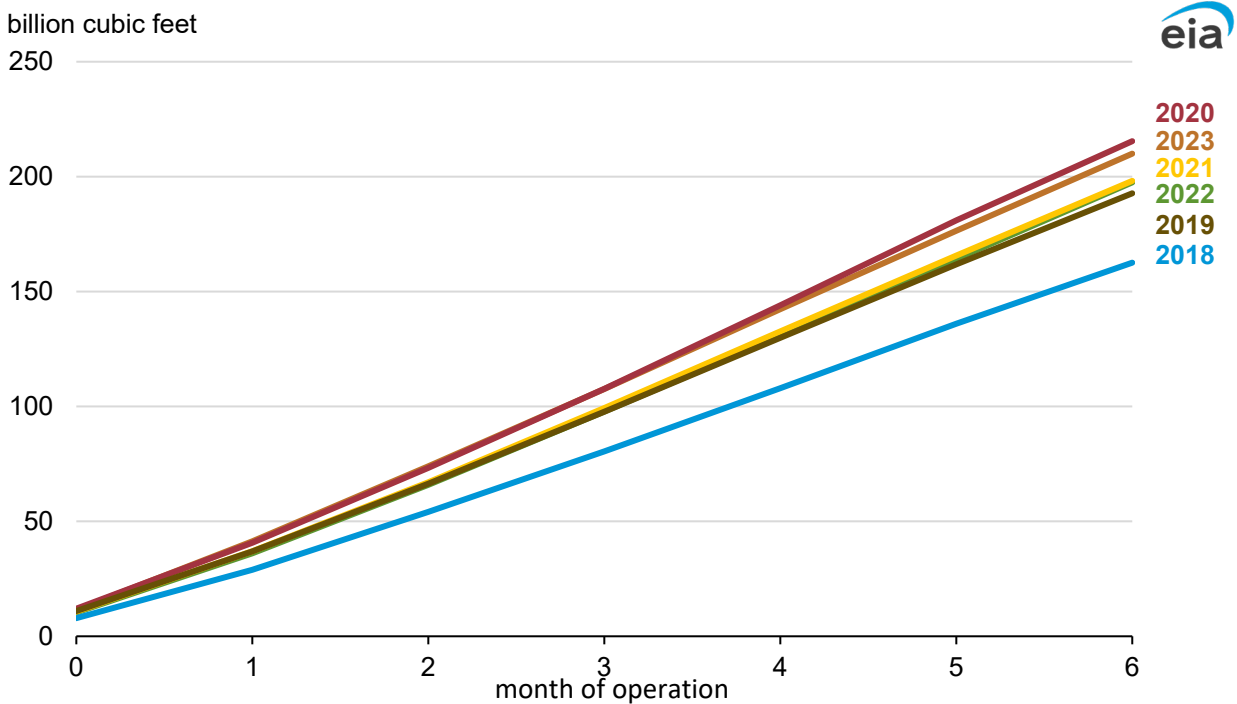
Note: Not all wells are reported, and curves are subject to revision.

**Figure 7. Haynesville Region, six-month natural gas production by vintage year**



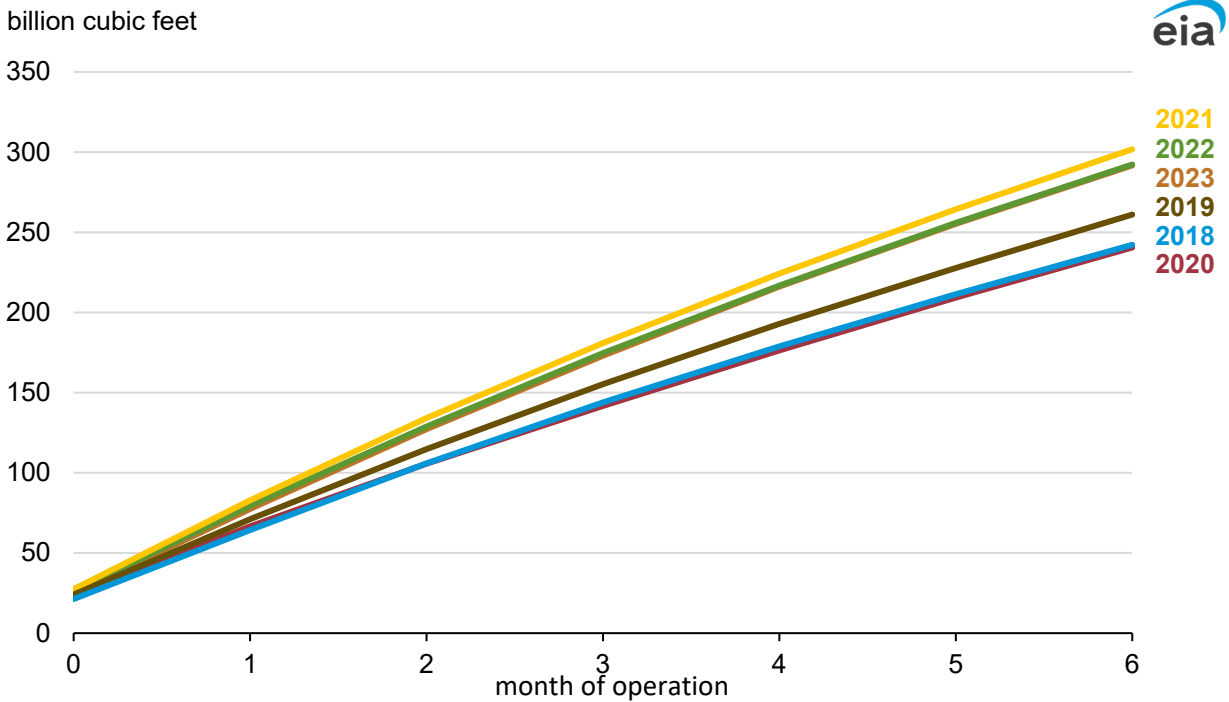
Source: U.S. Energy Information Administration, *Drilling Productivity Report*  
 Note: Not all wells are reported, and curves are subject to revision.

**Figure 8. Niobrara Region, six-month natural gas production by vintage year**



Source: U.S. Energy Information Administration, *Drilling Productivity Report*  
 Note: Not all wells are reported, and curves are subject to revision.

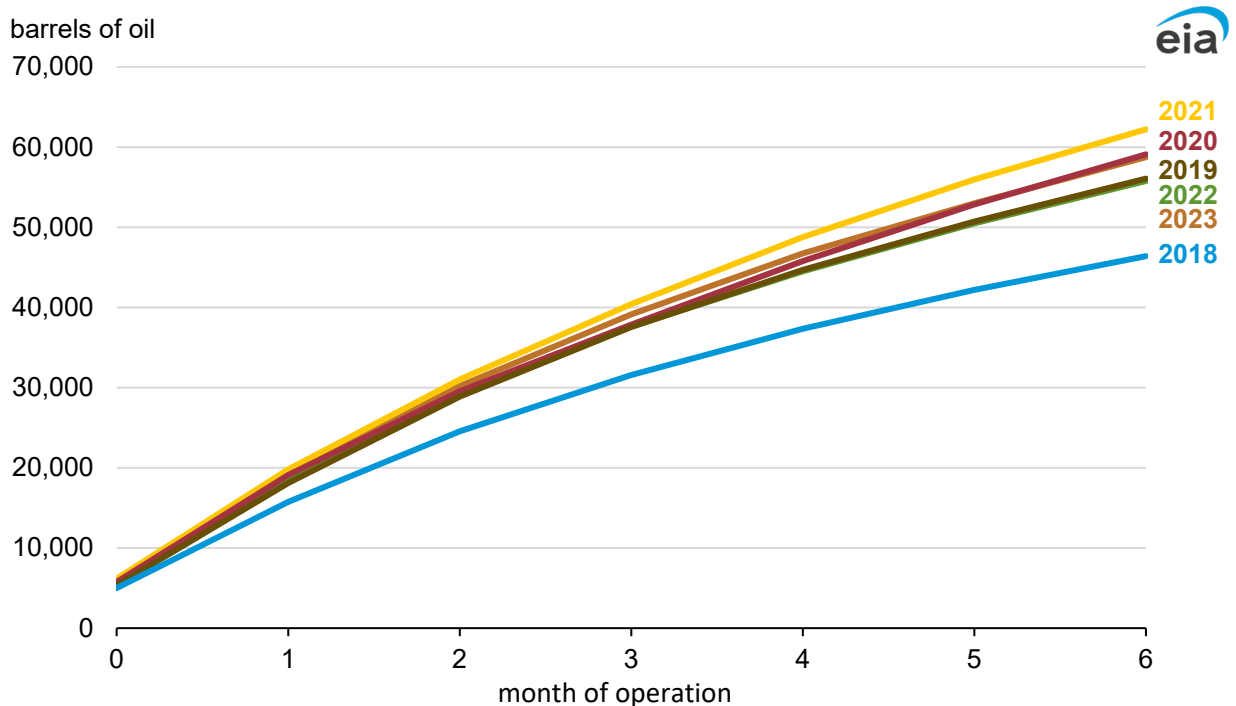
**Figure 9. Permian Region, six-month natural gas production by vintage year**



Source: U.S. Energy Information Administration, *Drilling Productivity Report*  
Note: Not all wells are reported, and curves are subject to revision

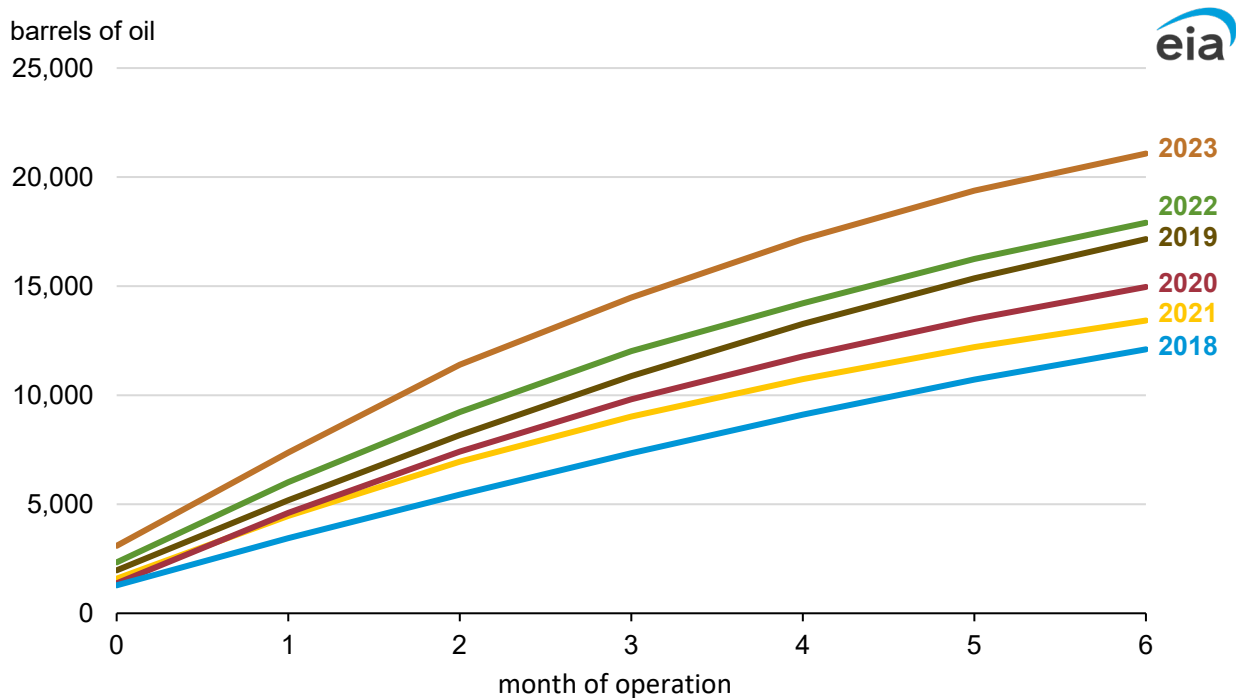
## Six-month initial production of crude oil by region

**Figure 10. Anadarko Region, six-month crude oil production by vintage year**



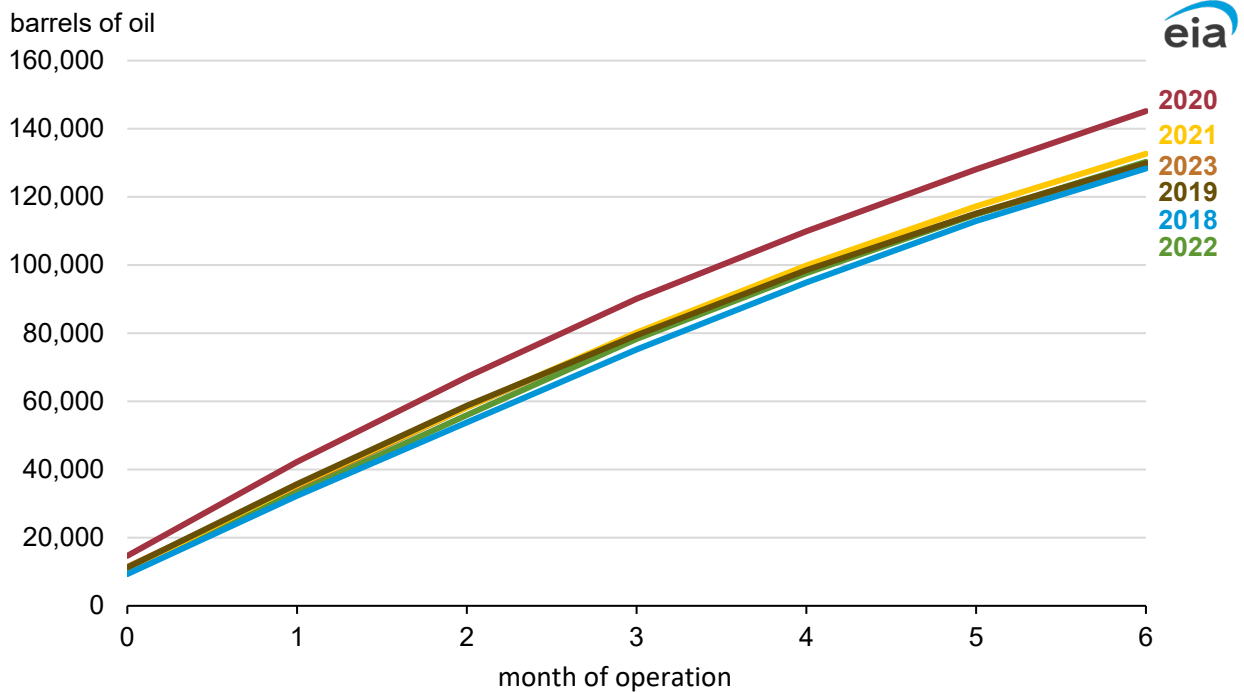
Source: U.S. Energy Information Administration, *Drilling Productivity Report*  
 Note: Not all wells are reported, and curves are subject to revision.

**Figure 11. Appalachia Region, six-month crude oil production by vintage year**



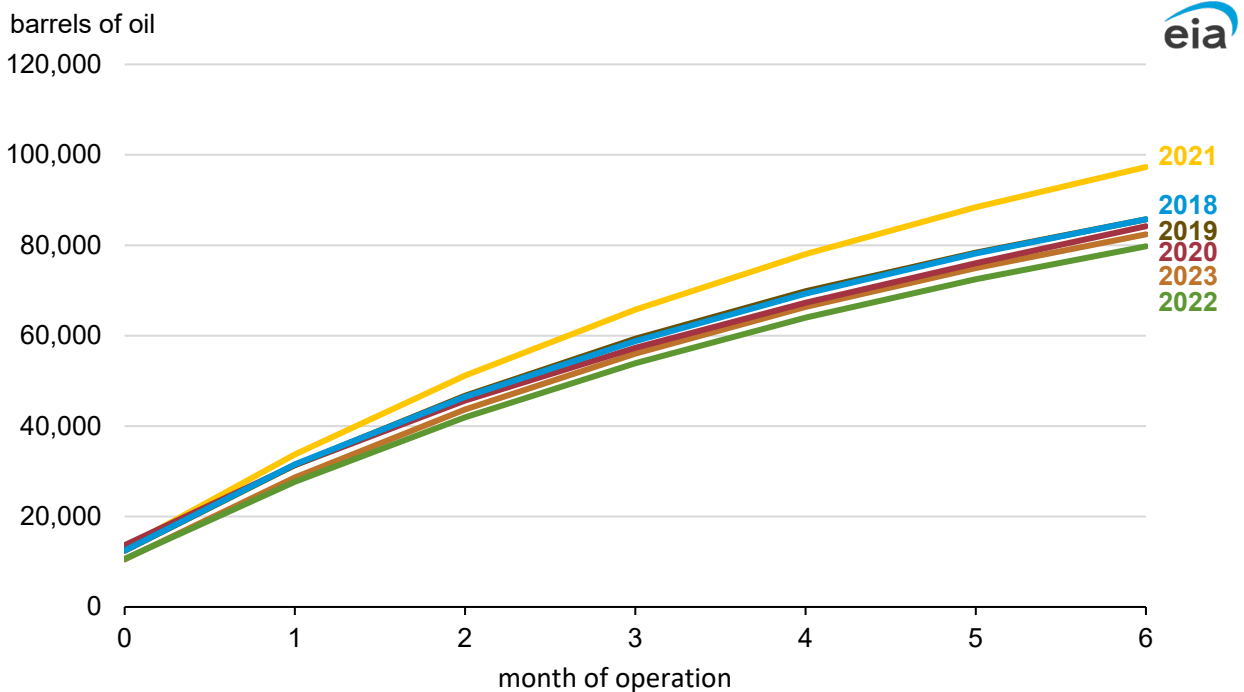
Source: U.S. Energy Information Administration, *Drilling Productivity Report*  
 Note: Not all wells are reported, and curves are subject to revision.

**Figure 12. Bakken Region, six-month crude oil production by vintage year**



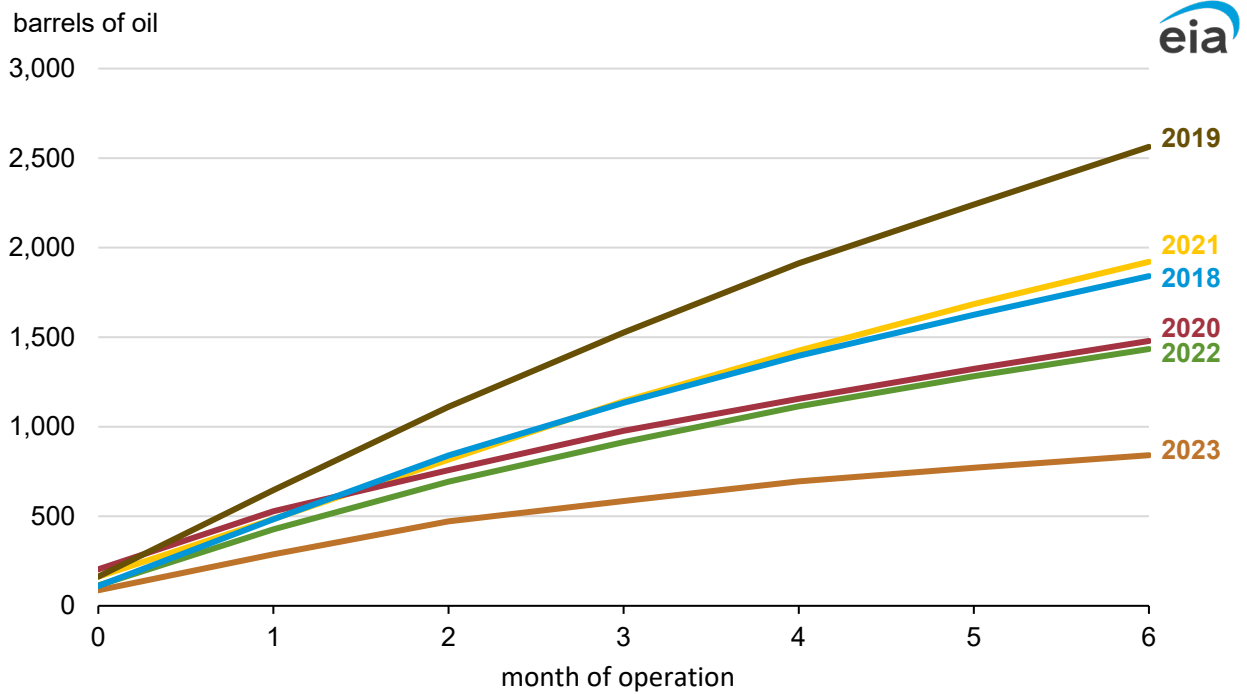
Source: U.S. Energy Information Administration, *Drilling Productivity Report*  
 Note: Not all wells are reported, and curves are subject to revision.

**Figure 13. Eagle Ford Region, six-month crude oil production by vintage year**



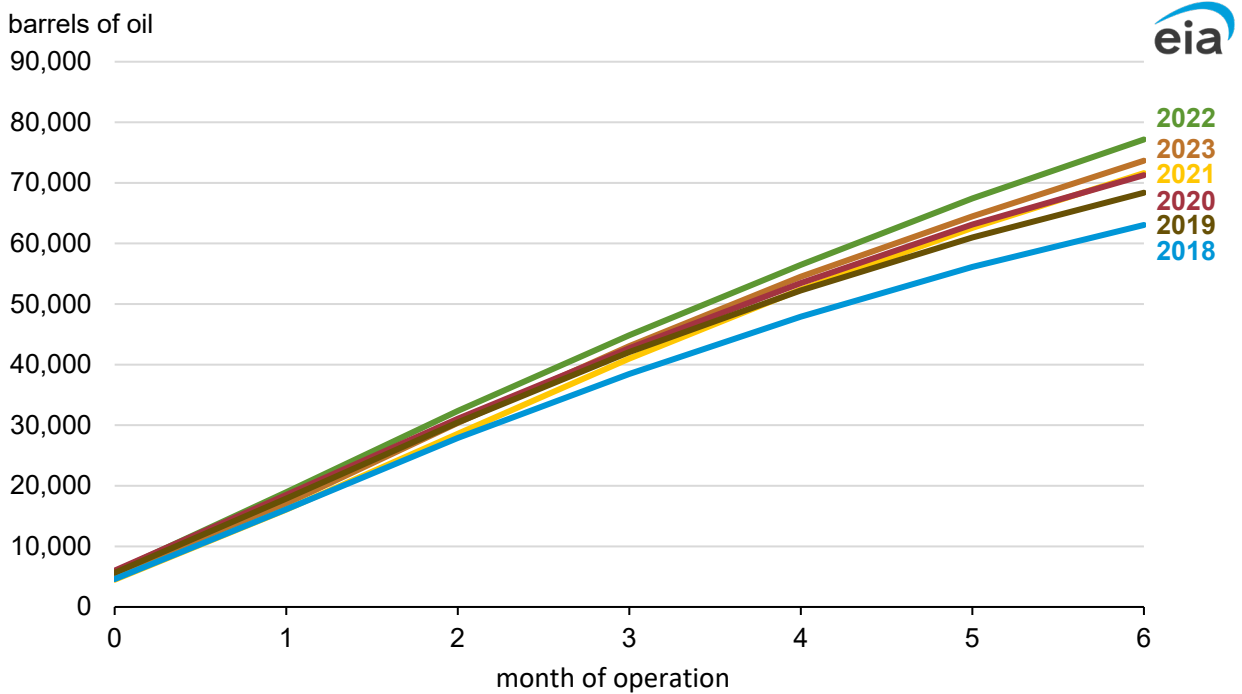
Source: U.S. Energy Information Administration, *Drilling Productivity Report*  
 Note: Not all wells are reported, and curves are subject to revision.

**Figure 14. Haynesville Region, six-month crude oil production by vintage year**



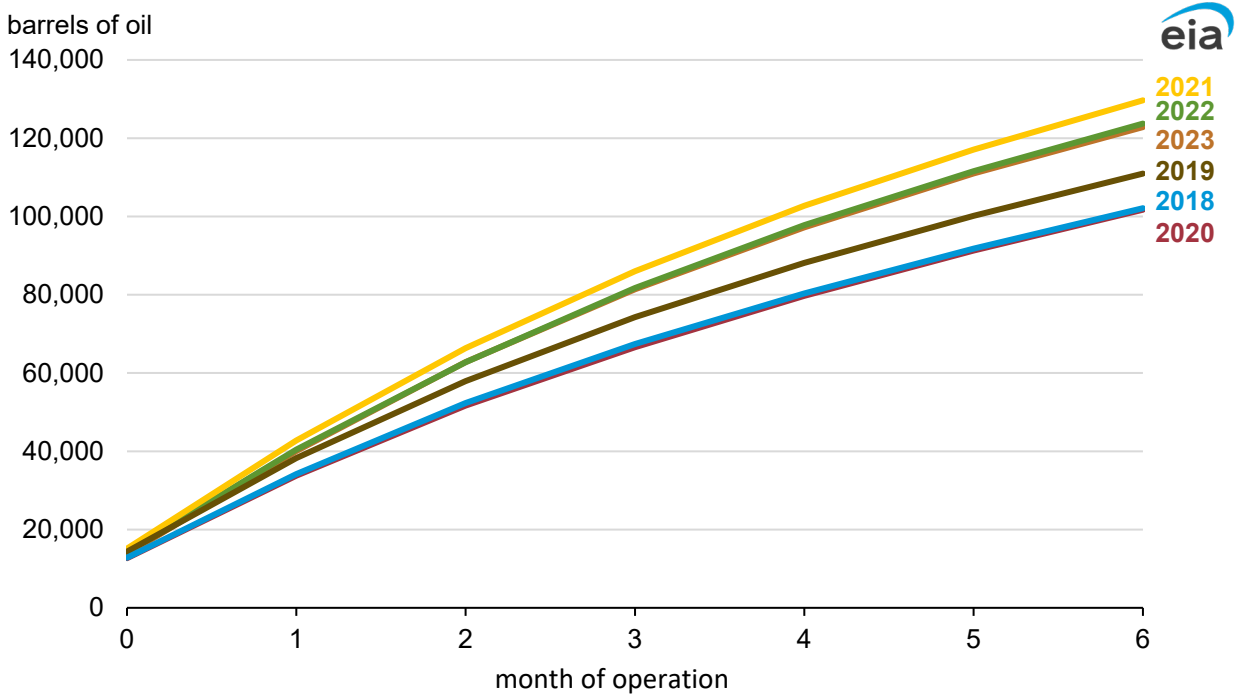
Source: U.S. Energy Information Administration, *Drilling Productivity Report*  
 Note: Not all wells are reported, and curves are subject to revision.

**Figure 15. Niobrara Region, six-month crude oil production by vintage year**



Source: U.S. Energy Information Administration, *Drilling Productivity Report*  
 Note: Not all wells are reported, and curves are subject to revision.

**Figure 16. Permian Region, six-month crude oil production by vintage year**



Source: U.S. Energy Information Administration, *Drilling Productivity Report*  
 Note: Not all wells are reported, and curves are subject to revision.